DOCUMENT RESUME

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ABSTRACT

Documents announced with VT numbers only in the Summer 1970 issue (VT 011 509) of "Abstracts of Research and Related Materials in Vocational and Technical Education" (ARM) are included in this microfiche set. Microfiche availability for these documents is shown on the ARM resume as MF AVAILABLE IN VT-ERIC SET. The microfiche set is arranged in the following sequence: (1) a Vocational Technical (VT) number index to documents in the microfiche collection, (2) the author index, the vocational and supporting services index, and the subject index from ARM, and (3) the full text of documents listed in the VT number index. The tests are filmed continuously in VT number sequence. (CD)

ED042060

Microfiche Collection of Clearinghouse Documents

Reported in Abstracts of Research and Related Materials in Vocational and Technical Education

(ARM)

Compiled and Indexed by The ERIC Clearinghouse
on Vocational and Technical Education

Summer 1970

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ERIC Clearinghouse on Vocational and Technical Education
The Center for Vocational and Technical Education
The Ohio State University
1900 Kenny Road, Columbus, Ohio 43210

VT 011 733

INTRODUCTION

This collection of microfiche consists of the documents which are announced with VT number only in the Summer 1970 issue of Abstracts of Research and Related Materials in Vocational and Technical Education (ARM). Microfiche availability is shown in the resume as MF AVAILABLE IN VT-ERIC SET. The documents are grouped in VT number sequence and filmed continuously as a microfiche set. These documents are not available on microfiche as individual items, but are obtainable only through purchase of this set, or from agencies who have this set and have the capability of reproducing microfiche. The microfiche set includes the following sections:

1. Vocational Technical (VT) Number Index to Microfiche Collection of Clearinghouse Documents Reported in ARM, Summer 1970.

2. Selected indexes from ARM, Summer 1970.

   a. Subject and Identifier Index.
   b. Personal and Institutional Author Index.
   c. Vocational and Supporting Services Index.

   The documents identified in the indexes with an ERIC Document (ED) number are usually available as separate documents from the ERIC Document Reproduction Service (EDRS). Information about EDRS Service can be found in ARM or Research in Education (RIE).[1] Items not available through EDRS will include a source of availability. The page numbers shown in these indexes refer to the location of the abstracts in ARM, Summer 1970.

3. The full text of documents listed in the Vocational Technical (VT) Number Index to Microfiche Collection of Clearinghouse Documents Reported in ARM, Summer 1970.

[1] Research in Education is published 12 times a year. The first issue was no. 11, November 1966. Subscription: Domestic $21.00 a year; foreign $5.25 additional. Single copy: Domestic, $1.75. Send a check or money order (no stamps) to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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VT 000 477
A Study of Vocational-Technical Education for High School Age Students in Clackamas County.

Clackamas County Intermediate Education District, Oregon
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Aug65 70p.

*VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; *HIGH SCHOOL STUDENTS; *FOLLOWUP STUDIES; SCHOOL INDUSTRY RELATIONSHIP; EMPLOYMENT POTENTIAL; EMPLOYMENT QUALIFICATIONS; PROGRAM EVALUATION; QUESTIONNAIRES
CLACKAMAS COUNTY; OREGON

The study proposed: (1) to determine whether those who sought permanent employment upon graduation from high school were being adequately prepared, and (2) to determine whether a vocational-technical high school curriculum might increase the percentage of students completing high schools. The findings of the Portland Metropolitan Area Manpower Resources Study were supplemented by going directly to local industries for additional data by use of an interview instrument asking employers the pros and cons of vocational-technical education, and obtaining specific curriculum suggestions from those favoring such education. The eight industries were: construction, manufacturing, wholesale trade, retail trade, transportation-communication-utilities, finance and insurance-real estate, service industries, and government. The findings include: (1) Almost unanimously, industrialists and local governmental spokesmen strongly favored increased high school offerings of vocational-technical education courses, (2) A majority of employers insisted on graduation from high school for jobs above unskilled labor, (3) There was criticism of deficiencies in writing, reading, spelling, and arithmetic as evidenced by recent graduates, and (4) Second highest in potential in job openings for those under age 25 was the service industrial group. (CH)

VT 000 477

ED042060

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A STUDY OF

VOCATIONAL - TECHNICAL EDUCATION

FOR

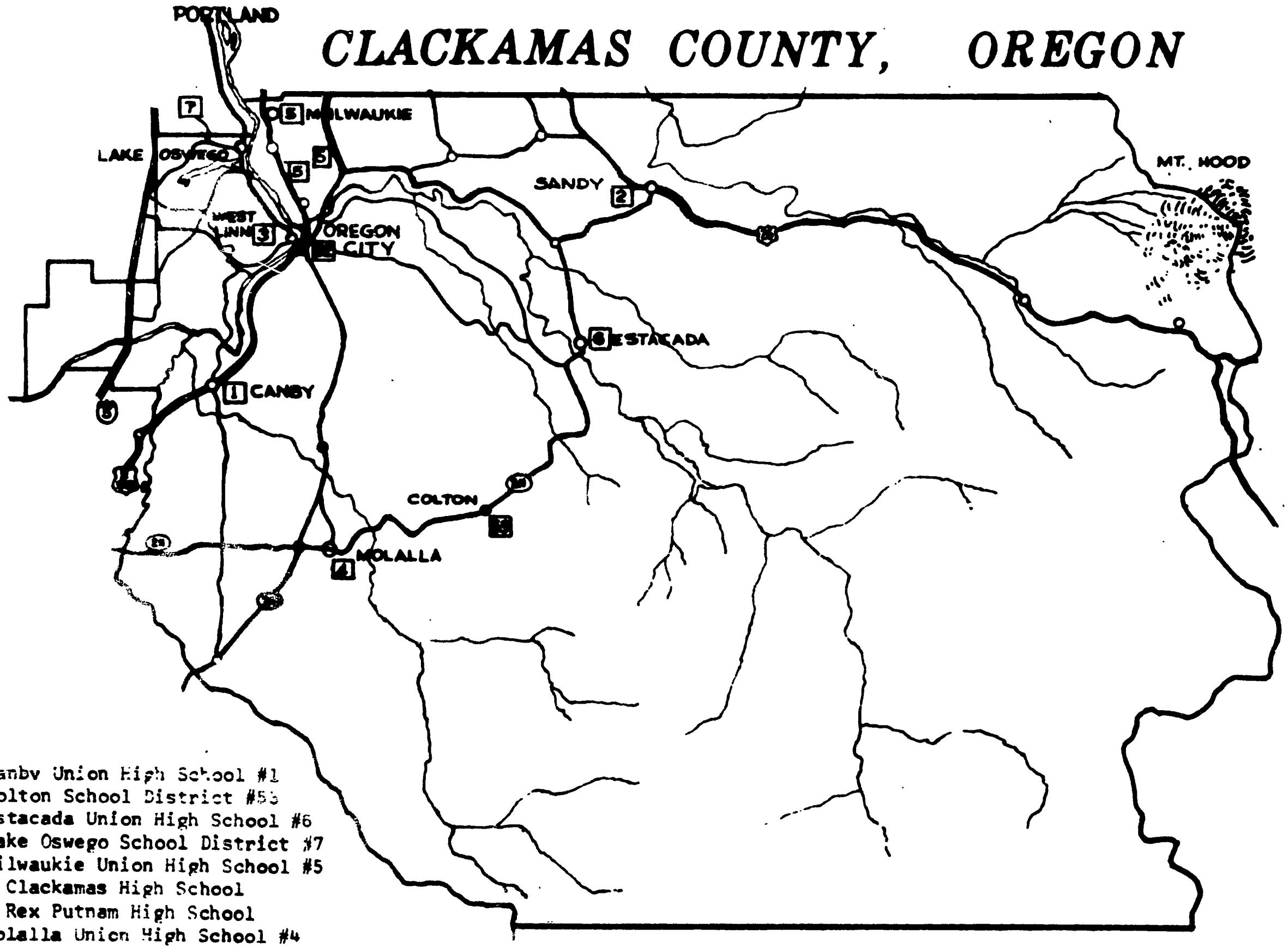
HIGH SCHOOL AGE STUDENTS

IN

CLACKAMAS COUNTY

VT000477

CLACKAMAS COUNTY, OREGON



Canby Union High School #1
Colton School District #55
Estacada Union High School #6
Lake Oswego School District #7
Milwaukie Union High School #5
  Clackamas High School
  Rex Putnam High School
Molalla Union High School #4
Oregon City School District #62
Sandy Union High School #2
West Linn School District #3

F O R E W O R D

GENERAL CONCERN OF STUDY

1. To determine whether those who sought permanent employment upon graduation from high school were being adequately prepared.
2. To determine whether a vocational-technical high school curriculum might increase the percentage of students completing high school.

Three general questions appeared germane to this concern:

1. What is now being done in such education in our Clackamas County High Schools?
2. What more needs to be done in view of known job opportunities?
3. How can it best be achieved?

The Portland Metropolitan Area Manpower Resources Study was first thoroughly reviewed to utilize from it all applicable primary information and to avoid any form of duplication. This provided an excellent base for additional study. For example, the Metropolitan study:

1. Outlined hiring requirements within occupational groups in terms of necessary education: Grade school vs. high school, college, vocational school, trade school, and experience.
2. Offered, however, no data as to types of curricula needed where vocational-technical educations were indicated.
3. Listed numbers of persons presently employed in each of nine occupational groups within nine basic classes of industry; establishing a fine set of guidelines for Clackamas County's purposes.
4. Presented a column showing the number of workers under age 25, where investigations could be concentrated within each of the 9 x 9 or 81 tabulations.
5. Revealed which occupational groups could be deleted from practical consideration.
6. Showed that questioning of industrial employers would be desirable, but could be restricted to four or five of the most likely or appropriate occupations within a given industry.

It was next determined that the most practical approach toward conclusions and recommendations would be to go directly to local industries for sufficient additional data to amplify the existing information to a point where the requirements of this study could be met.

It was agreed in committee that the most significant research would be accomplished by avoiding the question, "What is now being done in vocational-technical education in our Clackamas County high schools?" until after the industry contacts were completed, so that degrees of comparison would be strengthened. At the same time, it was suggested that,"If more needs to be done, how can it best be achieved?", should be reserved for answer under "RECOMMENDATIONS" toward the conclusion of this report.

As an early phase of this study, an investigative or inquiry instrument was deemed essential to be taken to a selected list of firms: (1 Asking employers the pros and cons of vocational-technical education (2 Obtaining specific suggestions for curricula from those favoring such education. To facilitate response and to help develop suggestions germane to each kind of industry, eight different sub-questionnaires were devised and used accordingly.

Originally programmed for execution through three months from May 1, 1965 to July 31; this study was commenced June 7, following a June 3 meeting in which a project director was appointed. Completion was rescheduled for about the end of August.

INDUSTRY TRENDS RELATIVE TO EMPLOYMENT OF HIGH SCHOOL GRADUATES

In column "A" are the eight broad basic industrial classifications contacted for information.* Column "B" shows the number of each type firm contacted. Answers to the interview's first question, "Should vocational education be offered by our high schools to students who desire it?" are reflected in column "C" by number of firms, in column "D" by quantity of employees represented by the same firms. It will be noted that the proportions are similar.

Column "E" offers observations on routes by which initial employment takes place. Analysis could prove fruitful in several ways - a topic for discussion under "conclusions" of this report.

Column "F" is in generalities. A few industries have firmly established age restrictions. For example, wherever alcoholic beverages are dispensed, whether tavern or supermarket, state law requires age 21, regardless of degree of education. In others, present insurance specifications (some subject to change soon) require age 21. A few other firms require individual maturity and report occasionally employees qualify at 16 or 17, but more often do not qualify until 20 or more.

Relative to column "G", the tendency is toward pre-hiring tests, especially with the larger firms. A number of the smaller firms plan to utilize tests in the future. Where vocationally-trained employees are needed, pre-hiring tests are more often found. Significantly, a majority of the tests are designed to eliminate applicants below par in writing, spelling, and arithmetic.

Column "H" also must be viewed in general terms. Organized, formalized, or written training programs within business firms are fewer than might be expected. Smaller firms are less likely to have programs. Most all express a need for more and better training, and many would like to have more of the training done for them elsewhere, such as in high school.

* The nine classes of industry mentioned earlier were reduced to eight by combining the two forms of Manufacturing - Durable and Non-Durable - into one for practical simplification.

ANALYSIS OF EMPLOYER HIRING CONSIDERATIONS - UNDER AGE 25

A	B	C	D	E								F	G	H
GENERAL INDUSTRIAL CLASSIFICATION	NUMBER OF FIRMS INTERVIEWED	NUMBER OF FIRMS FAVORING VOCATIONAL OR TECHNICAL EDUCATION	FAVORABLE TO VOCATIONAL EDUCATION BASED UPON NUMBER OF EMPLOYEES REPRESENTED BY INTERVIEW	EMPLOYEE RECRUITMENT SOURCES VIA: WALK IN	STATE EMPLOYMENT OFFICE	PRIVATE EMPLOYMENT OFFICE	UNIONS	CONTACT WITH HIGH SCHOOLS	TRADE OR BUSINESS SCHOOLS	ADVERTISEMENT	OTHER	USUAL MINIMUM EMPLOYMENT AGES	NUMBER OF FIRMS USING PRE-HIRING TESTS	NUMBER OF FIRMS HAVING ORGANIZED TRAINING PROGRAMS
CONSTRUCTION	5	4/5 or 80 %	88.0 %	8.0 %	1.0 %	0	83.0 %	0 %	3.0 %	2.0	3.0 %	16 - 1 18 - 2 21 - 2	1/5	1/5
MANUFACTURING DURABLE & NON-DURABLE	18	16/18 or 89 %	86.4 %	45.5 %	24.4 %	5.6 %	2.0 %	1. %	2. %	7.5	12.0	16 - 1 18 - 14 21 - 3	6/18	9/18
WHOLESALE TRADE	8	7/8 or 87.5 %	90.6 %	64.3 %	8.3 %	8.1 %	2.0 %	1. %	2.5 %	2.5	11.3	18 - 7 21 - 1	1/8	3/8
RETAIL TRADE	12	10 12 or 82.5 %	90.1 %	55.7 %	17.9 %	1.3 %	0	2.1 %	3. %	7.0	13.0	16 - 4 18 - 6 21 - 2	5/12	6/12
TRANSPORTATION COMMUNICATION & UTILITIES	7	7/7 or 100 %	100.0 %	61.0 %	15.0 %	1. %	1.5 %	1. %	3. %	6.0	11.5	16 - 2 18 - 3 21 - 2	3/7	5/7
FINANCE INSURANCE REAL ESTATE	7	6/7 or 86 %	98.0 %	40.7 %	14.3 %	6.4 %	3.6 %	5. %	7.1 %	5.7	17.2	16 - 3 18 - 4	4/7	3/7
SERVICE	17	14/17 or 82.5 %	98.0 %	42.0 %	14.7 %	5.3 %	1.5 %	3. %	3.2 %	5.0	25.3	16 - 4 18 - 9 21 - 4	4/17	5/17
GOVERNMENT	8	6/8 or 75 %	90.2 %	44.0 %	17.0 %	1. %	0	1. %	1. %	18.0	18.0 %	16 - 1 18 - 4 21 - 3	3/8	2/8

INDUSTRY ATTITUDES TOWARD WORKING APPRENTICESHIP AS COMPARED TO HIGH SCHOOL VOCATIONAL EDUCATION

If the question had not been asked about apprentices, the infrequency of their employment would not have been so apparent. With rare exception, there seems to be a lack of understanding, cooperation, and enthusiasm between employers, unions, apprentice candidates and apprentice schools. (Columns "J" and "K").

Column "L" encompasses an idealistic proposal. Having junior or senior high school students work short scheduled periods in business or industry during the school term, primarily for experience and secondarily for pay, is accepted in theory as an excellent means of stimulating much needed "Motivation", along with other benefits. But from a stand-point of being practical for business firms, various objections overrule the idea for the present; also discussed under "recommendations".

Columns numbered "9" through "15" correspond to questions asked on page headed "Part II" of the investigative instruments, as follows. Because no one responded with "Strongly Disagree", that choice is deleted here for simplicity. SA - Strongly Agree; A - Agree; U - Uncertain; D - Disagree

9. High schools should make pre-employment vocational training available to high school students.
10. In general, I would recommend vocational education as a part of the public school system.
11. If time were available, I would be willing to work on a vocational education advisory committee.
12. High school training in occupational skills and technical information would be of value to a young person before he enters an apprenticeship.
13. I would recommend vocational education for any community feeling a need for, and capable of supporting it.
14. The high school graduate, who has successfully completed vocational education training in high school, is ordinarily better qualified for entry into the world of work than the student who has not had this specialized training.
15. Our firm would prefer to hire a high school graduate with one or two years of vocational training applicable to our business over a student with no vocational training, other attributes of the individual being equal.

Item "16" was answered 75.6% in favor of the first choice, that of offering vocational-technical education 50% or more of each day, within the last two years of high school. Amplification of opinions on this topic, among others, will derive from reading "Comments" reported on nearly all interviews.

Item "17" was answered, "yes", by 59 of the 82 people interviewed.

GENERAL INDUSTRIAL CLASSIFICATION	J	K	L			9				10				11				12				13				14				15			
	NUMBER OF FIRMS EMPLOYING INDENTURED APPRENTICES	NUMBER OF APPRENTICES REGISTERED.	COOPERATIVE WORK EXPERIENCE PROGRAM			HIGH SCHOOLS SHOULD OFFER VOCATIONAL EDUCATION: SA= STRONGLY AGREE A= AGREE U= UNCERTAIN D= DISAGREE				IN GENERAL RECOMMEND VOCATIONAL EDUCATION AS A PART OF HIGH SCHOOL SYSTEM				IF TIME PERMITS WOULD WORK ON AN ADVISORY COMMITTEE				H.S. TRAINING IN OCCUPATIONAL SKILLS WOULD BENEFIT YOUNG PERSONS BEFORE ENTERING AN APPRENTICESHIP				RECOMMEND VOCATIONAL EDUCATION FOR ANY COMMUNITY FEELING A NEED AND CAPABLE OF SUPPORTING				A HIGH SCHOOL GRADUATE, VOCATIONALLY-TRAINED IS BETTER QUALIFIED FOR WORLD OF WORK THAN A GRAD, NOT SO TRAINED.				FIRM WOULD PREFER TO HIRE H.S GRAD WITH VOC. TR. OVER A GRAD WITH NO VOC. TR., OTHER INDIVIDUAL ASSETS BEING EQUAL			
			WOULD CONSIDER	UNCERTAIN	WOULD NOT CONSIDER	SA	A	U	D	SA	A	U	D	SA	A	U	D	SA	A	U	D	SA	A	U	D	SA	A	U	D	SA	A	U	D
CONSTRUCTION	5	25	0	0	5		3	2				5			1	4			2	3				5			2	3			1	4	
MANUFACTURING DURABLE & NON-DURABLE	5	77	7	6	5	5	7	6		2	6	8	2	2	10	6		3	9	6			6	12		2	6	8	2	3	9	6	
WHOLESALE TRADE	0	0	0	4	4	2	5	1			6	2			6	2		1	6	1			5	3			7	1		2	5	1	
RETAIL TRADE	0	0	8	2	2	2	9	1			9	3		1	9	2			9	3			9	3		2	9	1		2	9	1	
TRANSPORTATION COMMUNICATION & UTILITIES	3	80	0	3	4	2	5				4	3		2	3	2			7				3	4			7				7		
FINANCE INSURANCE REAL ESTATE	0	0	5	0	2	2	4	1			5	2		2	3	2			4	3			3	4			5	2		1	5	1	
SERVICE	0	0	5	5	7	3	10	4			11	6		1	8	8		1	2	4			10	7		2	11	4		3	9	5	
GOVERNMENT	0	0	1	3	4	3	2	3			5	3			3	5		3	1	4			4	4		2	3	3		2	3	3	
	13	182	26	23	33	19	45	18		2	46	32	2	8	43	31		8	40	24		40	42			8	50	22	2	13	48	21	

TABULATION OF RECOMMENDED VOCATIONAL EDUCATION SUBJECTS ACCORDING TO INDUSTRIES CONTACTED

The opening pages of this report mentioned that no primary data from previous reports are available to establish types of curricula or specific courses which should be offered where vocational-technical education was indicated. Therefore, to each of the eight general classifications of industry contacted, a listing of the most probable courses appropriate to that industry was presented for approval and to stimulate suggestions for any desirable courses which might otherwise have been overlooked.

Guided by statistics evolved in the Portland Metropolitan Area Manpower Resources Study, no potential courses were investigated for occupations where the reported numbers were too few to merit consideration. Thus, in the case of "Construction Industry" where only 13 persons out of a total of 4,553 under age 25 were employed in a "managerial" capacity, there was too little significance in evaluating applicable courses.

The ensuing eight pages of tabulations represent the relative appropriateness of vocational subjects or courses most needed in each industry. Numbers listed in the right-hand column are derived from employers' recommendations as follows: When an interviewed firm employed 1000, and the Metropolitan Study had determined that in this type industry 18.6 percent were in "clerical" occupations, an employer approval of "typing" as a subject would project the figure of 186 positions as having typing a prerequisite. The sum of all such "votes" for a given subject is reflected for each industry.

Details of developing the individual percentage figures are covered under "INVESTIGATIVE METHODS", appearing later in this report.

VOCATIONAL EDUCATION SUBJECTS
CONSTRUCTION INDUSTRY

From interviews representing 1700 employees, employers estimate these potential courses could have favorably affected hiring of the proportionate numbers indicated:

OCCUPATIONAL GROUP		TYPE OF VOCATIONAL-TRAINING	QUANTITY OF TRAINEES
SEMI-SKILLED	1.	Basic Mechanical Principles	373
	2.	Operation of Dozers, Graders, Shovels, Earth Movers, etc.	373
	3.	Cleaning & Maintenance of dozers, graders, shovels, earth-movers, etc.	373
	4.	Industrial Safety - safe working practices	373
	5.	Utilization of Common Tools - hand & power	373
	6.	Welding & Cutting Methods	373
	7.	Basic Construction Methods - wood, steel, concrete	373
SKILLED	1.	Ability to read "blueprints", charts, maps, diagrams	143
	2.	Ability to operate sliderule	143
	3.	Ability to qualify as Journeyman-apprentice in one craft	143
	4.	Ability to qualify as Journeyman-apprentice in more than one craft	143
	5.	Academic preparation to commence on-job-training	31
	6.	High-pressure Oil Hydraulics Systems	143
	7.	Mechanical Principals - Basic Surveying	143
CLERICAL	1.	Ability to read "blueprints", charts, maps diagrams	40
	2.	Ability to "take off" material quantities, estimate jobs	40
	3.	Bookkeeping - Elementary Accounting	40
	4.	Typing	40
	5.	Shorthand	40
	6.	Operate copying machines - Zerox - Thermofax - Ozalid	40
	7.	General Office Practice - filing - catalog libraries, etc.	40

VOCATIONAL EDUCATION SUBJECTS
MANUFACTURING INDUSTRY

From interviews representing 4,668 employees, employers estimate these potential courses could have favorably affected hiring of the proportionate numbers indicated.

OCCUPATIONAL GROUP		TYPE OF VOCATIONAL-TRAINING	QUANTITY OF TRAINEES
SEMI-SKILLED	1.	Basic Mechanical Principles	760
	2.	Principles of Materials - Handling & Storing	502
	3.	Equipment Cleaning	486
	4.	Industrial Safety	1041
	5.	Utilization of Hand Tools	444
	6.	Utilization of Special Tools	471
	7.	Reading Instructions & Prints	160
	8.	Characteristics of Metals	437
	9.	Characteristics of Cutting Metals	275
	10.	Characteristics of Forming Metals	275
	11.	Characteristics of Joining Metals	447
	12.	Identify "In-Plant" Tools	447
	13.	Measure - Arithmetic	125
	14.	Understand Processes	452
	15.	Attitude - Motivation	92
CLERICAL	1.	Ability to Read Blueprints	224
	2.	Ability to Operate Slide rule	64
	3.	General Accounting & Bookkeeping	184
	4.	Typing	631
	5.	Shorthand & Dictating Machines	563
	6.	Calculating Machine	417
	7.	Switchboard, etc.	215
	8.	Stock	352
	9.	Filing	581
	10.	Motivation - Attitude	5
	11.	Photo Work	27
SKILLED	1.	Qualify as Apprentice	300
TECHNICAL	1.	Draftsman	10

VOCATIONAL EDUCATION SUBJECTS
WHOLESALE TRADE

From interviews representing 1056 employees, employers estimate these potential courses could have favorably affected hiring of the proportionate numbers indicated:

OCCUPATIONAL GROUP		TYPE OF VOCATIONAL-TRAINING	QUANTITY OF TRAINEES
CLERICAL	1.	Bookkeeping	221
	2.	Typing	407
	3.	Shorthand - Dictating Machine	352
	4.	Switchboard - Telex	303
	5.	Calculating Machine	407
	6.	Ship - Receive - Stock	303
	7.	Filing	160
	8.	Inventory - Cardex, etc.	358
	9.	Adding Machine (10 key)	78
	10.	Computer - Data Processing - Key Punch	229
	11.	Credit Management	49
SEMI-SKILLED	1.	Order Filling - Grading - Sorting	119
	2.	Operating Truck & Fork Truck	103
	3.	Maintenance - Equipment	96
	4.	Maintenance - Facilities	42
	5.	Material Handling	119
	6.	Cleaning & Painting	103
SKILLED	1.	Plant Facilities Operation	71
	2.	Meat Cutter - Baker, etc.	22
	3.	Tractor Mechancis	24
	4.	Plant Facilities Maintenance - Repair	38
SALES	1.	Basic Electricity	14
	2.	Penmanship	14
	3.	General Sales Attitudes	9

VOCATIONAL EDUCATION SUBJECTS

RETAIL TRADE

From interviews representing 9459 employees, employers estimate these potential courses could have favorably affected hiring of the proportionate numbers indicated:

OCCUPATIONAL GROUP	TYPE OF VOCATIONAL-TRAINING	QUANTITY OF TRAINEES
SERVICE	1. Professional Cook - Chef	480
	2. Baking	90
	3. Meat Cutting	90
	4. Industrial Cleaning & Maintenance	1129
	5. Tailoring - Alterations, etc.	369
	6. Sign Writing - Display-Window Dressing	216
SALES	1. General Sales Techniques	2184
	2. Retail Sales Fundamentals	2311
	3. Sales Records	2176
	4. Cash Register Operation	888
	5. Service Station Sales & Details	220
	6. Reading - Writing - Arithmetic Improvement	433
	7. Credit Management	310
	8. Accounting - Bussiness Law - Mathematics	5
SEMI-SKILLED	1. Truck Driving	864
	2. Tractor Maintenance - Cleaning - Lubricating	321
	3. Minor Mechanical Tune-up	1013
	4. Automobile & Truck Lubricating	898
	5. Tires - Alignment	597
CLERICAL	1. Bookkeeping	882
	2. Typing	1336
	3. Shorthand or Dictating Machine	305
	4. Calculating Machine	1336
	5. Data Processing - Key Punch	450
	6. Ship - Receive - Stock	1021
	7. Inventory - Cardex	887
	8. Switch Board - P.B.X.	454
	9. Mathematics	453
	10. Filing	987
SKILLED	1. Industrial Measurements - Tolerances	35
	2. Diesel Engines - Oil Hydraulics	45
	3. Appliance - Radio - Television Technicians	85
	4. Automotive Mechanic	33

VOCATIONAL EDUCATION SUBJECTS
TRANSPORTATION - COMMUNICATION · UTILITIES

From interviews representing 11,351 employees, employers estimate these potential courses could have favorably affected hiring of the proportionate numbers indicated:

OCCUPATIONAL GROUP		TYPE OF VOCATIONAL-TRAINING	QUANTITY OF TRAINEES
CLERICAL	1.	Safety	3290
	2.	Filing	2423
	3.	Typing	7281
	4.	Shorthand - Dictating Machine	7281
	5.	Shipping - Receiving - Stock	5018
	6.	Inventory - Cardex, etc.	2188
	7.	Accounts - Claims	4035
	8.	Calculator Machine - Adding Machine (10 key)	7268
	9.	Data Processing - Key Punch	2420
	10.	Accounting - Basic	1850
SEMI-SKILLED	1.	Operating Truck & Fork Truck	701
	2.	Equipment Maintenance & Lubricating	1191
	3.	Mechanic Helper - Installer	1031
	4.	Safety	1193
	5.	Hostler	236
SKILLED	1.	Lineman - Rigger	86
	2.	Electronic Electrician	86
	3.	Read & Understand Instructions	839
	4.	Read Blueprints & Diagrams	839
	5.	Sliderule	839
	6.	General Mechanical Aptitude	300
	7.	Basic Electricity	747
	8.	Safety	380

VOCATIONAL EDUCATION SUBJECTS
FINANCE INSURANCE REAL ESTATE

From interviews representing 4,708 employees, employers estimate these potential courses could have favorably affected hiring of the proportionate numbers indicated:

OCCUPATIONAL GROUP		TYPE OF VOCATIONAL-TRAINING	QUANTITY OF TRAINEES
CLERICAL	1.	Basic Accounting	2720
	2.	Typing	3920
	3.	Shorthand or Dictating Machine	3920
	4.	Office Practice - Filing - Machines - P.B.X.	2760
	5.	Loans - Notes - Mortgage - Economics	1200
	6.	Money & Banking	3786
	7.	Calculator Machine - Adding Machine (10 key)	3809
	8.	Public Speaking	49
	9.	Maturity - Motivation	1000
	10.	Computer - Data Processing	1000
	11.	Bookkeeping	115
	12.	Writing - Spelling - Arithmetic	115
SALES	1.	General Sales Techniques	318
	2.	Money - Banking - Economics	318
	3.	Banking Terms - Regulations	93
	4.	Maturity - Motivation	89
MANAGERIAL	1.	Public Speaking	3
	2.	Advertising Techniques	3
	3.	Stimulation of Motivation - Personal Maturity or "Human Engineering"	66

VOCATIONAL EDUCATION SUBJECTS
" SERVICE "

From interviews representing 888 employees, employers estimate these potential courses could have favorably affected hiring of the proportionate numbers indicated.

OCCUPATIONAL GROUP		TYPE OF VOCATIONAL-TRAINING	QUANTITY OF TRAINEES
SERVICE	1.	Hospital Service - Cooking	118
	2.	Orderlies - Hospital Record Keeping - Nurses Aide Instruction	142
	3.	Commercial Cleaning - Housekeeping - Maintenance	154
	4.	Hotel Cooking - Catering	125
	5.	Hotel Waiter - Bell-man	115
CLERICAL	1.	Bookkeeping	176
	2.	Typing	202
	3.	Shorthand or Dictating Machine	199
	4.	Calculating Machine or Adding Machine (10 key)	81
	5.	Switchboard - P.B.X.	174
	6.	Office Practice - Filing - Copy Machines - Stockroom	135
	7.	Motel & Hotel Operation - Receptionist	139
	8.	Spelling - Grammar	8
SEMI-SKILLED	1.	Safety	41
	2.	Driver Training	22
	3.	General Mechanical Familiarity	34
	4.	Basic Electricity	34
	5.	Willingness to Work Attitude - Motivation	3
	6.	Carpentry - Repair - Maintenance	21
SKILLED	1.	Radio - T.V. Repair	1
	2.	Refrigeration - Air Conditioners - Appliances	1
	3.	Use of Special Tools	3
	4.	Large Heating - Air Conditioned Plant Operation	11
	5.	X-Ray Technicians	7
	6.	Automotive Mechanic	10
SALES	1.	Advance Promotion	3

VOCATIONAL EDUCATION SUBJECTS
GOVERNMENT

From interviews representing 753 employees, employers estimate these potential courses could have favorably affected hiring of the proportionate numbers indicated:

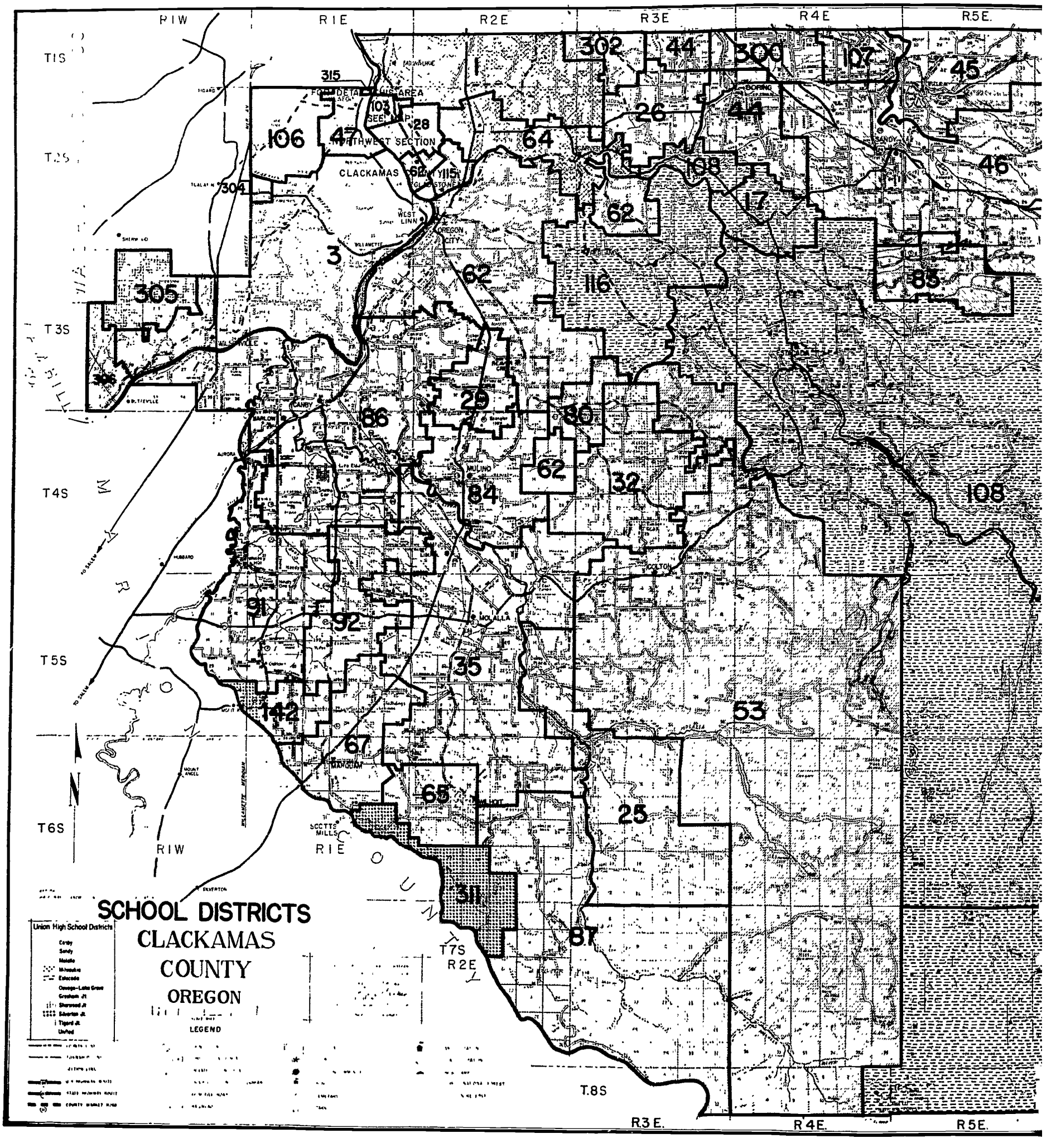
OCCUPATIONAL GROUP		TYPE OF VOCATIONAL-TRAINING	QUANTITY OF TRAINEES
PROFESSIONAL	1.	Accounting Clerk	19
	2.	Practical Engineering	6
	3.	Engineering Technician	200
CLERICAL	1.	Budgets, Accounting & Bookkeeping	175
	2.	Typing	195
	3.	Shorthand or Dictating Maching	182
	4.	Calculating Maching or Adding Machine (10 key)	173
	5.	Switchboard or P.B.X.	66
	6.	Office Practices - Filing - Copying Machines - Stockroom	151
	7.	Computer - Keypunch - Data Processing	117
	8.	Posting - Sensimatic Machines, etc.	15
	9.	Real Estate Terms	29
	10.	Basic Law Terms	176
	11.	Storekeeper	22
	12.	Library Pages	22
SERVICE	1.	Fire-fighting	75
	2.	Pre-Police Training	75
	3.	Park - Conservation	74
	4.	Equipment Maintenance Mechanic	13
	5.	Waterworks - Sewage Plant Operation & Maintenance	10
	6.	Heavy Equipment Operator	17
	7.	Practical Nurses	51
TECHNICAL	1.	Commercial Photography	53
	2.	Drafting	67
	3.	Engineering - Surveying Aide	61
	4.	Building Inspection	10
	5.	Alarm - Traffic Light Electrical Maintenance	8

SUMMATION OF SUGGESTED VOCATIONAL-TECHNICAL EDUCATION SUBJECTS

In Order of Quantitative Demand, Combining the Figures Previously Reported Individually For All Eight Classes of Industry, Covering 31,443 Employees Represented by Interviews

1.	Typing	14,012
2.	Calculating Machines - Full & 10 Key Adding Machines	13,569
3.	Shorthand - Dictating Machines	12,802
4.	General Accounting - Bookkeeping	10,626
5.	Kardex - Inventory Systems - Stock-room Practices	10,149
6.	Industrial Safety - Accident Prevention	6,318
7.	Advanced Accounting - Insurance and/or Freight Claims, etc.	5,885
8.	General Office Practice - Filing - Copy Machines	4,814
9.	Keypunch - General Data Processing - Computers	4,216
10.	Money - Banking	4,104
11.	Auto. Mechanics & General Machinists	3,582
12.	General Sales Attitudes - Techniques	2,511
13.	Machine & Equipment Cleaning - Painting	2,485
14.	Office Filing Practice	2,423
15.	Retail Sales Fundamentals	2,311
16.	Sales Records	2,176
17.	Truck & Fork Truck Operation	1,690
18.	Basic Mechanical Principles	1,467
19.	Industrial Cleaning - Maintenance	1,283
20.	Motivation - Maturity - Business Attitudes	1,274
21.	Ability to Read Blueprints - Charts - Maps - Diagrams	1,246
22.	Switchboard - P.B.X. - Intercom, Etc.	1,212
23.	Business Economics	1,200
24.	Ability to Operate Slide rule	1,086
25.	Ability to Operate Cash Register	888
26.	Reading & Understanding Working Instructions	839
27.	Professional Cooking	835
28.	Utilization of Common Tools	817
29.	Basic Electricity	795
30.	Electric & Gas Welding - Metal Cutting	648
31.	Principles of Materials Handling - Storing - Warehousing	621

32.	Pre-schooling for Trade Apprenticeships	574
33.	Introduction to Special Tools	471
34.	Identification & Characteristics of In-Plant Machine Tools	447
35.	Basic Industrial Processes	447
36.	Industrial Metal Working	447
37.	Heavy Equipment Operation, Dozers - Shovels - etc.	390
38.	Basic Construction Methods	373
39.	Tailoring & Garment Alterations	369
40.	Credit Management	359
41.	Tractor Mechanics, Maintenance, Cleaning, Lubrication	358
42.	Engineering Aide - Technician - Survey Assistant	261
43.	Service Station Operations & Mechanics	220
44.	Display Design - Signwriting - Window Dressing	216
45.	Introduction to Business Law & Real Estate	210
46.	Practical Nurse - Aide - Orderly	193
47.	High Pressure Oil Hydraulics - Systems	188
48.	Industrial Mechanical Measurements	180
49.	Electronics - Radio - T.V. - Appliance Technicians	173
50.	Qualifications in More Than One Craft	143
51.	Heating - Air Conditioning - Large Plant Operation	120
52.	Waiter - Bell-man	115
53.	Meat Cutting	112
54.	Commercial Photography	80
55.	Drafting	77
56.	Police Preparatory Instruction	75
57.	Fireman Preparatory Instruction	75
58.	Park & Conservation Management	74
59.	Public Speaking	52
60.	Carpentry	21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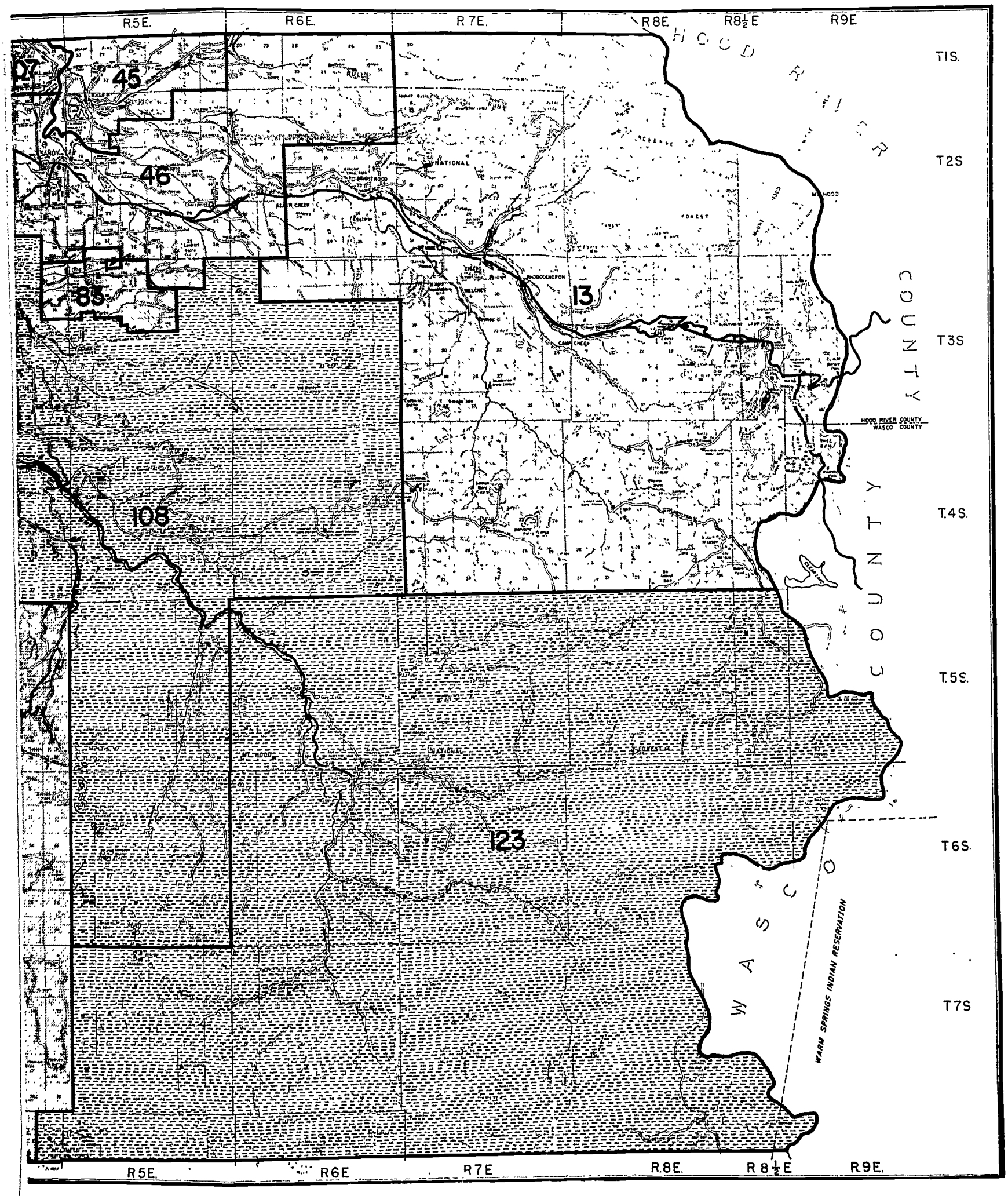
1
SCHOOL DISTRICTS
CLACKAMAS
COUNTY
OREGON
Union High School Districts
Canby
Sandy
Molalla
Milwaukie
Estacada
Oswego-Lake Grove
Gresham Jt.
Sherwood Jt.
Silverton Jt.
Tigard Jt.
Unified
LEGEND
TO SALEM
PORTLAND
WILSONVILLE
CANBY
AURORA
HUBBARD
MOUNT ANGEL
SILVERTON
SCOTTS MILLS
MOLALLA
MULINO
COLTON
SANDY
BORING
GRESHAM
FAIRVIEW
TROUTDALE
WEST LINN
OREGON CITY
TUALATIN
SHERWOOD
TIGARD
WILLAMETTE
WILLAMETTE MERIDIAN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T7S
HOOD RIVER COUNTY
WASCO COUNTY
HOOD RIVER COUNTY
WASCO COUNTY
WARM SPRINGS INDIAN RESERVATION
NATIONAL FOREST
MT. HOOD
ALLEN CREEK
BOODOCHOTON
WELCHES
CAMP CREEK
CLEAR LAKE
27
45
46
85
13
108
123

SUMMARY OF VOCATIONAL SUBJCETS CURRENTLY OFFERED IN CLACKAMAS COUNTY HIGH SCHOOLS

1. To provide a concise, composite picture of "What is now being done along Vocational-Technical Education lines in our Clackamas County High Schools", a survey was made toward the close of this study. Data obtained is presented by the accompanying tabulation.

2. Course offerings are very similar among all the county hgih schools. Capacity for enrollment tends to be the major limiting factor. In some cases a lack of equipment limited offerings. This is notably apparent in metal shop, machine, and mechanical shop facilities.

3. Initial comparison of "what is offered now" and "what employers asked for", seems to show the two are close. However, educators in making a more searching investigation of individual courses, would often find the two are not close. "Homemaking" is not oriented toward wage earning. While food preparation is taught, it does not adequately encompass commercial cooking, meal or banquet planning as needed by hotels and institutions. Residential housekeeping is not expanded to the commercial variety practiced by hotels, motels, hospitals, etc.

4. Commercial (office practice, clerical, and secretarial) generally had very complete facilities. Merely because so few boys choose these courses, it should not be assumed that the educational system thus offers a better vocational setup for girls than for boys. Inversely, very few girls choose Agriculture, one of the most widely offered vocational subjects elected by boys.

5. Most educators interviewed felt that woodworking classes were currently oriented to a very limited degree toward future employment of students. Metal shop classes appeared to contain more employable skills training than wood shop classes.

6. For this phase of study, school conselors or administrators were contacted. Each expressed a hope that improvements in vocational education would soon be scheduled.

SURVEY OF ENROLLMENT FORECAST OF CERTAIN CLASSES IN 11 CLACKAMAS COUNTY HIGH SCHOOLS

(Survey indicates offerings and popularity of choice, August 1965)

Vocational Subjects	Canby	Colton	Clack-amas	Estacada	Mil-waukie	Molalla	Oregon City	Sandy	West Linn	Lake Oswego	Rex Putnam
Distributive Education	18		28		57		77		20		22
Office Practice	24	7	28	8	10+	37	34		30	80	
Auto. Mechanics						48	45			43	
Ore. City Vocational Sch. (2 Yr.)							50		9		
Agriculture I	17							50	24		
Agriculture II	25		41	24		33		17	18		
Agriculture III	23		26	20		30		17	16		
Agriculture IV	9		21	11		19					
	15		13	9		13					
Subjects With Occupational Skills Implications											
Homemaking I	59	10	103	51	85	79	Jr.H.	57	124	Jr.H	68
Homemaking II	43	12	57	39	30	33	52	20	46	34	21
Homemaking III	24		51	18	29	25	35	19	25	55	19
Homemaking IV	29		43	25	13	31	12		19	28	29
Industrial Arts I	58		148	100	163	36		63	96		93
Wood Shop II	41	16	52	17	50	35	81	46	49	27	43
Wood Shop III	20		44	12	17	14		24	42	20	25
Wood Shop IV	4								6		8
Metal Shop I						45			36	53	
Metal Shop II			40	48	36				18	20	21
Metal Shop III			16		20						8
Metal Shop IV			9								6
Mechanical Drawing I	48		IA	18	IA	28	104	76	111	70	IA
Mechanical Drawing II		30	75	13	75	8	46	10	21	23	40
Mechanical Drawing III			40	23	24		20				14
Mechanical Drawing IV			35		14				18		8
Electronics I				10(new)		32			48		
Electronics II									10		
Vocations ($\frac{1}{2}$ Yr.)					63						
Forestry						28					
General Shop						72	77				
Bookkeeping I	120	11	127	37	64	62	81	64	90	31	74
Shorthand I	25	12	103	26	47	40	34		21	27	31
Shorthand II	20		54	15	15	14	27		15	19	11
Clerical Practice			28		10		54			32	44
Typing I	165	30		109	210	103	229	91	245	140	168
Typing II	75	3		35		19	32	75	80	32	
Approximate Student Body Size.	650	150	1500	600	1100	690	930	700	1150	1150	820
Usual % of Graduates Entering College.	45-48	26-41	40%	30%	54%	35%	42%	35-40	47%	72%	-
Usual % entering further non-academic training	28%	9-13	10%	?	27%	26%	18%	20%	7%	5%	-
Number of students a full-time counselor serves	276	300	360	396	312	342	396	300	456	438	351

CONCLUSIONS

1. VOCATIONAL PROGRAM FAVORED

Almost unanimously, industrialists and local government spokesmen strongly favored increased high school offerings of vocational-technical education courses. (The few "undecided" contended their businesses required only average graduates from high school - and - or - whatever additional instruction was needed could be imparted "on-the-job").

2. EMPLOYER REQUIREMENTS TIGHTENING

A majority of employers insist on graduation from high school for jobs above unskilled labor. Not only are "dropouts" usually eliminated from consideration, but frequent school absence, tardiness, or poor driving records are sometimes checked, disqualifying job applicants as likely to be unreliable as employees.

3. INCREASING THE PERCENTAGE WHO COMPLETE SCHOOL

At least twenty employers volunteered that from their experience, students who otherwise would not finish high school would do so if appropriate training for "a trade" or employable skill was offered them. This analysis was on the basis that students poorly assimilating academic subjects in many instances would gain the necessary motivation through a change to vocational-technical education.

During interviews the topic of students finishing high school versus dropping out was raised in a manner that would encourage the relating of experiences or individual case histories, in preference to merely obtaining opinions by asking a direct question. Consequently the twenty or so affirmatives obtained from 82 contacts are considered more indicative than would be implied by strict percentage.

4. EMPLOYMENT IS COMPETITIVE

It was repeatedly pointed out that employment is highly competetive. Typically there are more applicants than jobs. For a job opening requiring only high school graduation it is not unusual to find applicants with one or more years of college competing with high school graduates, or those with some experience, or good vocational or academic training. Grades earned in school are not overlooked in competitive hiring. Some firms obtain grade transcripts as a deciding factor for selection. Normally, candidates having the most to offer for the established wage rate receive preference in this competitive situation.

5. "THREE R" DEFICIENCY

In the course of some fifteen interviews there was criticism of deficiencies in "Reading", "Writing", "Spelling" and "Arithmetic" as evidenced by recent graduates. There was comment to the effect that "If the 16 to 19 year old cannot meet acceptable standards in these basics, the offering of additional subjects is questionable". Some possible answers to this problem are offered in the "Recommendations" section of this report.

6. "SERVICE INDUSTRY" FINDINGS

Second highest in potential of job openings for those under age 25 was the "Service" Industrial Group, according to the Portland Metropolitan Area Manpower Resources Study, which also established this industrial group as one of the fastest growing. This Clackamas County study develops no contradiction - but does reveal a real need for further review of existing facts before setting up vocational education courses for this field.

For example, when 1,089 employed as either "professional" or "unskilled" was subtracted from the 7,384 that the earlier Metropolitan Study found employed under age 25 in this group, the remaining 6,295 were originally assumed reasonable prospects for vocational-technical education with-in high school.

But interviews revealed practical reasons why this number should be reduced materially. Certain jobs defined as "Service" occupations, comprising 37.5% of the "Service" Industry, require age 21. (Waiters, bell-boys, bartenders, etc., where liquor is served) Hotels and motels strongly prefer age 21 or over for maids and housekeepers. In a good percentage of "managerial" and "technical" "Service" position, the preference for those over 21 predominates.

These circumstances must be recognized by any educational program. Economic value would be questionable in any specialized high school education for a vocation or occupation which must be postponed until the 18 or 19 year old graduate attains age 21. There seems to be no satisfactory answer in such cases for "What should he or she do during the interim"?

Also in the "Service" category there appears possibility of confusing work definitions. "Service Stations", for instance, are classed not under "Service", but as "Retail Trade", and their employees are not termed "service", but rather, "semi-skilled". Similarly, even large service departments of automobile dealers are encompassed by "Retail Trade". Mechanics working in them are generally considered "skilled". though "semi-skilled" or "service" might apply to trainees.

The above problems of definition tend to obscure a real need for trained auto mechanics, body men, and general machinists. Satisfactory workers can be produced within high school facilities and ages. The wages are above average, and the demand for competent people exceeds the supply. Same is true for small engine (lawnmowers, chain saws, outboards, etc.) repairmen, and for servicing of appliances such as washers, dryers, refrigerators, etc.

Further investigation of the "Service Industry" may be justified because of its decentralization - the typical smallness of each business. Often only two or three persons comprise an accounting firm or law office - one or two a shoe repair or appliance repair shop - or a building maintenance service. Even in a private club, total employees are relatively few Although the "Service Industry" may represent a large total employee potential, the variety of skills required is so wide as to preclude further analysis within the schedule of this study.

7. APPRENTICE PROGRAM

The program, as it currently exists, is not popular with employers, who generally feel that excessive restrictions and burdens are placed upon them. With electrician apprenticeship among the few notable exceptions, in most industries there is no organized plan of instruction for apprentices. As a result, the period of apprenticeship is "drawn out" longer than it need be.

8. BUSINESS ATTITUDE TOWARD INTERVIEWS

Before contacts with businessmen began, to sound their experiences pro or con for vocational education, it was thought that many would resist taking the time or giving the requested information. Entirely and pleasantly to the contrary, all were most hospitable and cooperative. A majority felt that education people had called on them too seldom and had been too little concerned with needed employee attributes in the past; that the school system should contact industry more often - and would be most welcome to do so hereafter. Quite a few of the firms stand ready to offer individual services in one form or another upon appropriate request.

9. AGRICULTURE

This study admittedly fails to cover the field of agriculture adequately. It is impossible to visit a half dozen farms and obtain data significant to future personnel needs of this basic industry.

Agriculture in many ways has integrated with industry and business in such a manner that it is difficult to "pin-point" where one starts and the other ends. Agriculture is a twenty-eight million dollar industry in Clackamas County and involves over four thousand farm operations. There is a need for workers and operators therein to meet the demands of a growing population.

INVESTIGATIVE METHODS

Full utilization was made of the Portland Metropolitan Area Manpower Resources Study, using all pertinent data within its findings as secondary information. To further relate these sutdies, the same basic classifications were employed. However, "Durable" and "Non-durable" manufacturing were combined into one group, making a total of eight now to be examined.

From a working knowledge of area industries, a list of 230 potential contacts were prepared in the eight classifications. Perference was given to contact firms within, doing business in, or located close to Clackamas County.

Direct contact in person was programmed for 75 to 100 of the 230, selecting wherever possible those believed to be most representative or indicative in size or character. The surplus of names provided alternates as might be needed for either balance or convenience.

A control for the sampling was planned so that numbers of firms or employees representing each business or occupation would be in near proportion. Pages 13 through 21 of the Manpower Resources Study accounted for a total area employment of 39,191 in the "under 25" age group. After deductions were made for occupations "Professional" (college education required) "Unskilled" (practically no education required) and partial "Technical" and "Managerial", there remained 31,443 positions which presumably might be filled by a high school graduate.

Taking figures only from the "Under 25" column, on page 13, "Construction Industry", for example; total employed was 1,437. The 421 shown as "Unskilled" was deducted because no vocational education would be needed. The largest numbers of employees, from the remaining 3 or 4 occupations, were expressed in terms of percentage. Thus "Semi-skilled" accounted for 41.5% of the positions for which vocational education might be indicated, and "Skilled" 20.5%, etc.

Similarly, the total numbers of vocational education-based occupations in each industry was divided by the 31,443 sum for all 8 industry types to determine the relative percentage of attainable jobs for vocationally-educated high school graduates. Accordingly, for example, the Construction Industry accounted for only 3.23% of the opportunities. Therefore, in directly interviewing people in this industry, the sampling was confined to about 3.2% emphasis in either number of firms or employees represented.

VOCATIONAL EDUCATION SURVEY

Primary Guidance in Ratios of Industry Classification For Direct Contact

NOTES:

1. The Portland Metropolitan Area Man Power Resources Study of 1964 provided:
   a. The classifications of industry to be observed.
   b. Secondary statistics as to numbers of employees under age 25 working in each industry, and in what types of occupations they were working.
   c. Guidance by statistics and comment to indicate that certain positions were practically unattainable by high school graduates regardless of vocational-technical education within high school - usually because a college degree was required, and therefore our inquiries could be more productively directed toward other types of industry or occupation.
   d. For this reason, interviews were "weighted" as methodically as possible away from such occupations as "Professional","Technical", "Managerial". Obviously,"Unskilled" was avoided as an area of investigation for the reason that grade-school education was sufficient - at least no vocational training needed.

2. From pages 13 thru 21 of above study, the following guidance figures were excerpted:

Page 13 "Construction"

Total employed under 25		1,437	
Total "unskilled" employed		- 421	
		1,016	
Semi-skilled	593 / 1,437 = 41.5%)	Other Occupations too negligible for consideration	$\frac{1,016}{31,443} = 3.23$
Skilled	295 / 1,437 = 20.5%)		
Clerical	110 / 1,437 = 7.7%)		

Page 14 "Manufacturing-Durable"

Total employed under 25		4,553	
Total "unskilled" employed		1,505	
		3,048	
Semi-skill	1,433 / 4,553 = 31.5%)	Other Occupations too negligible for consideration	$\frac{3,048}{31,443} = 9.7\%$
Clerical	884 / 4,553 = 18.6%)		
Skilled	504 / 4,553 = 11.5%)		
Technical	94 / 4,553 = 2.06%		
Sales	44 / 4,553 = .96%		

Page 15 "Manufacturing-Non-Durable

Total employed under 25	3,211	
Total "unskilled" employed	-1,314	
	1,897	
Semi-skilled	771 / 3211 = 24.0%	
Clerical	575 / 3211 = 18.0%	
Skilled	280 / 3211 = 8.7%	
Sales	114 / 3211 = 3.6%	
Technical	47 / 3211 = 1.5%	

$\frac{1,897}{31,443} = 6,03\%$

(Last two above were combined and percentages averaged) Thus 9.7% + 6.03% = 15.73%

Page 16 "Wholesale Trade"

Total employed under 25	2,957	
Total "unskilled" employed	-618	
	2,339	
Clerical	1,195 / 2,957 = 41%	
Semi-skilled	367 / 2,957 = 12.4%	
Skilled	324 / 2,957 = 11.0%	
Sales	314 / 2,957 = 10.6%	
Service	87 / 2,957 = 3.0%	

$\frac{2,339}{31,443} = 7,44\%$

Page 17 "Retail Trade"

Total employed under 25	10,152	
Total "unskilled" employed	-934	
	9,218	
Service	3,020 / 10,152 = 29.8%	
Sales	2,519 / 10,152 = 24.8%	
Semi-skilled	1,675 / 10,152 = 16.5%	
Clerical	1,440 / 10,152 = 14.2%	
Skilled	367 / 10,152 = 3.6%	

$\frac{9,218}{31,443} = 29.30\%$

Page 18 "Transportation - Communications - Utilities"

Total employed under 25	2,319	
Total "unskilled" employed	-240	
	2,079	
Clerical	1.491 / 2,319 = 64.4%	
Semi-skilled	243 / 2,319 = 10.5%	
Skilled	171 / 2,319 = 7.4%	
Service	40 / 2,319 = 1.7%	
		$\frac{2,079}{31,443}$ = 6,61%

Page 19 " Finance - Insurance - Real Estate"

Total employed under 25	3,831	
Total "unskilled" employed	-2	
	3,829	
Clerical	3,255 / 3,831 = 85%	
Sales	287 / 3,831 = 7.5%	
Managerial	214 / 3,831 = 5.6%	
		$\frac{3,829}{31,443}$ = 12,16%

Page 20 "Service"

Total employed under 25	7,384	
Total "unskilled" employed 250)	-1,089	
Total "professional 839)	6,295	
Service	2,769 / 7,384 = 37.5%	
Clerical	2,129 / 7,384 = 28.9%	
Semi-skilled	477 / 7,384 = 6.5%	
Technical	536 / 7,384 = 7.3%	
Skilled	186 / 7,384 = 2.5%	
		$\frac{6,295}{31,443}$ = 20.03%

Page 21 "Government"

Total employed under 25	3,347	
Total "unskilled" employed 130)	-1,625	
Total "professional 1495)	1,722	
Clerical	869 / 3347 = 26.0%	
Service 38	381 / 3347 = 11.4%	
Technical	304 / 3347 = 9.1%	
		$\frac{1,722}{31,443}$ = 100.00%

Total under 25 employed as high school graduates 31,443 with vocational education.

This total used as denominator for percentages above shown in right hand column.

C L O S U R E

This work was a cooperative undertaking of and for nine school districts in Clackamas County, and the Clackamas County Intermediate Education District Office.

Recognition is here made for the guidance of and frequent meetings with the Advisory Commission consisting of:
Charles MacKenzie, Chairman, Superintendent, Canby Union High
Warren S. Adams, Deputy Superintendent, Clackamas County I.E.D.
Owen O. Sabin, Superintendent, Union High School District No. 5
Al Pfahl, Director, Vocational Education, West Linn
Leonard Kunzman, Director, Agriculture, State Department of Educ.

For detailed assistance in facilities and production equipment for publication, thanks are expressed to Warren S. Adams and to L. G. Rood, and staff. Also to Al Pfahl for his work with advisors and administrators of the participating high schools in summarizing the current vocational offerings.

It is hoped that the foregoing study will prove fully adequate for commencing the initial phases of positive, material action.

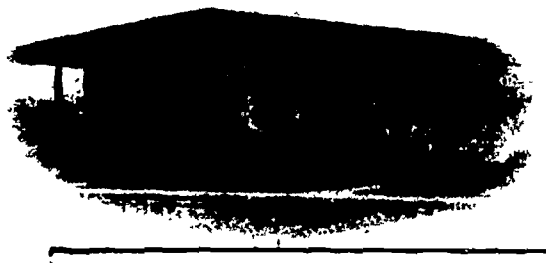
Respectfully submitted,

Elliott B. Higgins

ELLIOTT B. HIGGINS
Registered Consulting Engineer
Study Project Director

CLACKAMAS COUNTY

INTERMEDIATE EDUCATION DISTRICT



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SUPERINTENDENT

WARREN S. ADAMS
DEPUTY SUPERINTENDENT

JESSIE ALLEN
CURRICULUM SUPERVISOR

Our high schools of today provide a broad scale coverage of general academic subjects. Do you, as a business man fully subscribe to this - or in your opinion, should vocational education be offered by our high schools to students who desire it?

The high school administrators of Clackamas County are conducting a study of Vocational-Technical Education. Purpose is to collect and analyze data that will assist the schools in better preparing graduates for occupational opportunities. This concerns some 50% who must work, rather than attend college.

For the purpose of this study, vocational education is defined as all formal instruction for students at the high school level which prepares individuals for initial entrance into and advancement within an occupation.

Your cooperation in answering the questions in the interview will permit us to more closely relate educational programs to the needs of business and industrial firms. Your business experiences and views can help tell us how education of high school students can be improved toward maximum suitability for employment in industry following graduation.

The first part of the interview asks some general facts about your firm and your employees. Following these we ask for specific recommendations from you on vocational education and your opinion on its place within the public high school curriculum.

These same questions are being asked of other manufacturers and business firms in Clackamas County. This is not an employment campaign in any sense whatever - rather it is definitely a study toward making educational tax dollars more useful to students - employers - taxpayers. Please be assured that the information will be treated as a confidential report and that the individual firm data will not be disclosed in any manner.

THIS AND THE FOUR PAGES WHICH FOLLOW IS THE "INSTRUMENT" USED FOR SAMPLING, OR CONDUCTING INTERVIEWS WITH EMPLOYERS. THE RESPONSES, PLUS COMMENTS THUS OBTAINED, PROVIDED MUCH OF THE BASIC DATA FOR THIS STUDY.

Type of firm - (Major product or service)

_____

Name of firm _____ Total number of employees _____

Address _____ Telephone _____

Person(s) interviewed:

Name _____ Title _____

Name _____ Title _____

Interviewer _____ Date _____

Part I

1. How many years has your firm been in business in this county?

_____ 1 - 5 years	_____ 16 - 25 years
_____ 6 - 10 "	_____ 26 - 35 "
_____ 11 - 15 "	_____ 36 - or over

2. For your employee recruitment approximately what percent is by:

_____ Voluntary application	_____ Colleges
_____ State Employment Office	_____ High Schools
_____ Private Employment Office	_____ Trade or Business Schools
_____ Personal contact by representatives of the firm.	_____ Advertising by firm
_____ Through Unions	_____ Other (specify)_____
_____ Informal associations with current employees	_____

3. Does your firm have a minimum age requirement for the initial entry job opportunities which might be filled by well-rated graduates of a Vocational-Technical High School?

_____ Yes _____ Age _____ No.

4. Are tests of any sort usually used as a selection-for-hiring factor?_____

5. Do you have an organized training program (excluding apprenticeship training) for skilled workers in your firm? _____Yes _____No

Interviewer Note: If "No" above - skip to number 6.

Does it contain a written plan or program of instruction? ____Yes ____No
Is it concerned with hand and/or manipulative skills? ____Yes ____No
Is it concerned with related technical information? ____Yes ____No
Ordinarily, who trains the workers?

_____ Instructor specifically trained for that purpose
_____ Supervisor
_____ Instructor and supervisor
_____ Supervisor and fellow worker
_____ Fellow worker
_____ Other (specify)

6. Does your firm currently employ indentured apprentice workers?

_____ Yes _____ Almost exclusively _____Or percent _____No

Interviewer Note: If answered "No" above - skip to number 8.

7. Are your apprentices registered under the State Apprenticeship Program with the Oregon Apprenticeship Council?

In which occupations are your apprentices employed?

_____Number_____
_____Number_____

"Cooperative work experience program" - Part-time cooperative student-learners usually attend school one-half day and train in industrial and business establishments the other half-day. The program is designed to assist young people to begin learning a trade or occupation while they are still in school.

8. Would your firm consider a cooperative program with the Clackamas County High Schools by providing work for acceptable students for periods of one to two weeks (or_____ months) in order to help introduce potential employees to the world of work in general and to the nature of work conducted by your firm? It is assumed that the problems relative to the State Industrial Accident Commission, and work permits could be resolved. The students would be expected to maintain regular hours and conscientiously devote their time and energy to the tasks assigned them.

_____ Definitely would consider

_____ Would consider

_____ Uncertain

_____ Would not consider

Part II

Next, we would like to know your opinions about Vocational Education in general. Please answer each item as well as you can. There is no "right" or "wrong" answer. Kindly circle the response representing your opinion on each item.

SA - Strongly agree
A - Agree
U - Uncertain
D - Disagree
SD - Strongly disagree

SA A U D SD 9. High schools should make pre-employment vocational training available to high school students.

SA A U D SD 10. In general, I would recommend vocational education as a part of the public school system.

SA A U D SD 11. If time were available, I would be willing to work on a vocational education advisory committee.

SA A U D SD 12. High school training in occupational skills and technical information would be of value to a young person before he enters an apprenticeship.

SA A U D SD 13. I would recommend vocational education for any community feeling a need for and capable of supporting it.

SA A U D SD 14. The high school graduate who has successfully completed vocational education training in high school is ordinarily better qualified for entry into the world of work than the student who has not had this specialized training.

SA A U D SD 15. Our firm would prefer to hire a high school graduate with one or two years of vocational training applicable to our business over a student with no vocational training, other attributes of the individual being equal.

16. Which, in your opinion, would be most beneficial, and yet practical for both industry and the graduate:

_____ Vocational-technical education 50% or more of each day within the last two years of high school?

_____ Same, but with one additional year of full-time vocational-technical education following high school

_____ Same, but with two additional years.

_____ Four years of Vocational-Technical Education, instead of college, following graduation from high school.

17. Would you accept an invitation to attend a group meeting with high school administrators to discuss these subjects, perhaps on completion and summation of this study?

Finally, it would be greatly helpful to have your opinions of what specific types of vocational - technical subjects should be taught, for some seven occupational classifications; (1) Technical (2) Managerial (3) Clerical (4) Sales (5) Service (6) Skilled (7) Semi-skilled.

To facilitate your response, we have prepared a listing of most probable subjects in vocational training for a majority of occupations within your industry, which for grouping within this study, is one of eight classifications:

1. Construction
2. Manufacturing
3. Wholesale Trade
4. Retail Trade
5. Transportation, Communication, and Utilities
6. Finance, Insurance, Real Estate
7. Service
8. Government

You are requested to offer suggestions for Vocational Education curriculum subjects in the classification above most appropriate for your industry. We have separate guidline listings for each one of the 8 above. You are welcome to examine all or to respond to more than one if you wish.

POSSIBLE VOCATIONAL TRAINING SUBJECTS FOR

"MANUFACTURING" (15.73%)

CLASSIFICATION AMONG INDUSTRIAL GROUPS

1. For "semi-skilled" type occupations, (28% such a machine operator, assembler, feeder, process tender, sewing machine operators, hand-icer (in bakery), spray booth operator, sander, polisher - should training include in general:

Basic Mechanical Principles

Safety Techniques

Materials Handling Fundamentals

Hand Tools, Common Tools and their Uses

Equipment Maintenance, Lubrication, Cleaning

Other _____

And for durable - mechanical manufacturing:

Characterisitcs of Metals - brass, steel, stainless, aluminum, etc.

Elements of Cutting Metals - shearing, sawing, milling, drilling, burning.

Elements of Forming Metals - bending, pressing, forging, casting, spinning.

Elements of Joining Metals - welding, brazing, soldering, riveting, bolting.

Be able to identify the more common shop tools; shear, brake, punch, lathe, drill press, power hack saw, milling machine, planer, cutting torch, welding outfit, etc?

Other _____

Or for durable - materials manufacturing:

Understand general terms, processes, and machinery in woodworking plants.

Understand general terms, processes, and machinery in metalworking plants.

Understand in full detail how to operate one specific machine.

Other _____

Or for non-durable manufacturing:

Understand sanitation techniques in food plants.

Understand process techniques in general, such as printing-lithographing; pulp and paper manufacturing; industrial chemistry?

Other _____

FOR EACH OF THE EIGHT TYPES OF INDUSTRIAL GROUPS CONTACTED A LIST (SUCH AS THIS FOR THE MANUFACTURING INDUSTRY) OF SUBJECTS WAS SUBMITTED TO THE EMPLOYER FOR VERIFICATION OR ADDITIONS.

2. For "clerical" type occupations (18.3%) should training include:

Ability to Read Blue Prints	Switch-board or P.B.X.
Ability to Estimate	Operate Copying Machines
Bookkeeping	Microfilming
Typing	Shipping and Stock Room Ability
Shorthand or - operate Dictating Machines, Calculating Machines, Bookkeeping Machines	Stock Record Systems
	Filing Systems

Other _____

3. For "skilled" type occupations (10.1%) such as manufacturing plant carpenters, cabinet makers, finishers, painters, pipefitters, mechanics, machinists, tool and die makers, electronic technicians, electricians, crane operators, operating engineers, photograph finishers, bakers, grain millers, meat cutters - should vocational training within high school:

Enable the graduate to enter your employment as fully qualified in such trades? _____

Or fully qualified to enter as apprentice - under non-union _____ or union _____ rules?

Or in your opinion, what additional vocational training is required to up-grade an individual from semi-skilled to skilled? _____

Or is it essential that a portion of the training must be on-the-job experience? _____

4. Should some vocational training be offered for occupations (2%) in "sales"?

5. Should some vocational training be offered for occupations (1.8%) in "technical" positions?

CONSTRUCTION INDUSTRY

Employer A - 450 employees

Part 1. No. 8. Too many unions involved (11); too many problems for this reason.

Part III. For this many-phased firm, vocational training is basically and theoretically ideal. However, it is practical on only a very few occasions to initial job entry to hire apt high school graduates. With most of the eleven unions involved, such new-hires must become indentured apprentices. With the wide fluctuations in numbers of workers required in the contract-construction business, only a very limited number of apprentices can be retained, for economic reasons.

Another problem in hiring trained high school graduates is that although Taft-Hartley law provides that anyone considered desirable may be hired, union relationships are far less complex when needed employees are obtained by merely calling the union.

Competence of men sent out by union is sometimes so poor that employer must dismiss after one day's work and call the union for another. Most unions have no training program. If some cooperative effort could be arranged between union and vocational schools, it would be welcomed by employers.

Employer B - 100 employees

Part I. No. 8 Cannot employ anyone under 18. Unions object to any non-classified workers.

Part III. General Contractor: medium to large jobs and joint ventures. All workers 100% union; all employment through unions. Principal locals involved: Operators, laborers, carpenters, teamsters. Occasionally involved: Concrete finishers, steelworkers, pipefitters.

To obtain plumbers, must subcontract to a plumbing contractor and similarly where electricians are concerned there is no control over or selection of individuals employed. The unions generally refuse to allow a needed worker to be called for by name. Instead, the man next in line on the waiting list or "extra board" gets the assignment.

In calling the union for a man, the job he is to do, the machine he is to operate, is closely defined. If the man is clearly untrained for the job, all the contractor can do is pay for a half day minimum, discharge him and call for a replacement. As a rule, the unions are careful to send satisfactory men.

Since a 6-yard shovel costs $300,000 and a D-9 tractor costs $75,000 a contractor is strongly in favor of vocational training, even though he has no direct control of it. This employer strongly recommends cont[illegible]t between high schools and unions on the subject.

Employer C - 150 employees

Part I. No. 8. Not practical due to hazardous nature of work.

Part III. Again, as one of the larger construction contractors, is obliged by practical considerations to engage majority of their workers thru union hiring halls. But the competence of men thus available is often poor.

Whenever they find an especially good man, they usually manage to keep him on the payroll nearly full time.

To make available a supply of good heavy equipment operators, this firm and others similiar have underwritten the establishment of a special equipment operators school in Weiser, Idaho know as "Western School".

The unions involved have done little to train men--expect the contractor to do the training. On-job training is costly, as well as the equipment involved; though hazardous, the school has been a good investment.

Suggests contacting the A.G.C. for more information.

Contends that vocational training within high school could shorten a students time needed at the "Western School".

Employer D - 200 employees

Part I. No. 8 Union precludes.

Part III. Union contracts require all employment be through union.

The involved unions have no training program for journeymen or apprentices. If the unions could be influenced to embark upon a cooperative vocational education program with high schools then vocational education would be a recommendation by management. But under existing circumstances, the vocationally trained high school graduate has no employment advantage in this industry.

Employer E - 800 employees

Part I. No. 8. Not permissible under union agreements.

Part III. The electricians' training program is well organized under union-state-industry rules and regulations. Pre-apprentice training has been found of little value.

In this areaelectrician-students attend a state school conducted at Benson, tuition $10.00 per term, plus books at cost purchased by students. Joint industry-metro-labor-management council furnishes tools and equipment.

Annual contests and scholarships are provided

Electrical contractors operate under union shop management--can hire direct "off the bank", but do only as a rule when union cannot provide additionally needed referrals. A new hire goes on probation for six months, cannot join union until satisfactory as apprentice for six months. Then 3½ years of further apprenticeship follow. State examination must then be passed to become journeyman.

Because employer and union are jointly responsible for continued employment of apprentices, limits are closely held for influx. Only about 100 per year in this area can be absorbed by the industry.

Also, unions allow a contractor a ratio of one apprentice to one journeyman, initially, then one apprentice to three journeymen.

Suggested contact with State Apprentice Supervisors, State Office Building, Portland.

Doug Ellis (electrician)

Chuck Hoffman

Sears (director)

MANUFACTURING INDUSTRY

Employer A - 240 employees

Part I. No. 8. Personal, individual initiative is valuable--plus the desire to continue education after employment here.
Firm is non-union-- apt high school graduates have good opportunities here.
Mathematics, physics, chemistry in high school should receive more emphasis.

Employer B - 50 employees

Part I. No. 8. Feels firm not large enough to absorb such a program.

Employer C - 100 employees

Part I. No. 8. Summer okay, but winter--with reservations. UNION MUST BE AGREEABLE.

Employer D - 300 employees

Part I. No. 8.

Part III. Very much in favor of vocational education, but feels that the average eighteen year old high school graduate is insufficiently mature, generally, to make a good employee.

Recognizes that even the most intense or complete vocational-technical education cannot very well produce an acceptable "journeyman" classification at age eighteen; that were he to try, the graduate could be greatly disappointed in obtaining work on initial job entry at that level, and study should be given toward this attitude.

Believes that most vocational-technical courses could be vastly improved by designing into them more such basics as English, Composition, Reading, Arithmetic, etc. Thru requiring reports, written summaries, etc., rather than endeavoring to teach the basics separately. Feels that would improve student interest, reduce "dropouts".

Background training should be broad and general to avoid false hope of starting as a "journeyman". Should know what is going to be expected.

Employer E - 150 office, 200 manufacturing employees

Part I. No. 8. For factory job education requirements, here, very little more than current high school subjects are needed, except very specialized training in sewing on commercial machines.

For trained operators their need is current, and extensive; will be more so in future. There is presently no training facility available in this area, and yet the sewing industry is relatively large, when Jantzen, Pendleton Mills, and others are considered.

Would hire fifty operators trained in the following today if available.
Single needle.
Overlock needle (single).
Three needle safety lock.
Two needle felling.
Blind stitch, etc.

These machines, he says, are not expensive, are available used ($200.00) each or less, and the industries would cooperative with schools.

Part III. Commercial sewing, basic single needle, overlock needle, overlock two needle, three needle safety lock machine, two needle felling. $1.25 to over $2.00 per hour. Blind stitch.

Employer F - 120 employees

Part I. No. 8

Part III. Practically all in-plant employees are required to join cement-line-gypsum workers union within thirty days after hire. They start as general laborers. Thenceforth advancement is strictly by seniority--unless there is a very valid apparent physical or mental disability of a man for the next higher opening--in which case the "job bid" goes to the next man in line from seniority. Advancement is slow, and restricted.

No vocational training has any initial value--only after some length of time when openings may occur per above.

Employer G - 150 employees

Part I. No. 8. No comment

Part III. Except for headlines and special inserts, this paper is produced by photo-offset, using adjusto-writer machines. All this production or mechanical work must be done by members of typographical union. All such employees are furnished by that union.

Likewise, repair or maintenance of mechanical equipment by machinists only from same union.

But there are opportunities in office, mailers, stuffers, circulation, reporting, photography, developing, processing, for high school graduates.

High school graduates need improvement in spelling, typing, speedwriting.

Suggested also contacting the Frieden Company, who furnish and install and guarantee adjusto-writers.

Employer H - 225 employees

Part I. No. 8. No comment

Part III. No comment

Employer I. - 3 employees

Part I. No. 8. The editor is very outspoken advocate of vocational-technical training in high school. So much so that he has offered to set up and teach in a complete printing workshop.

Says that in Oregon typographical union "tightness" is no great barrier to employment of high school graduates--in that there are many small to moderate sized independent newspapers--non union-- where a vocationally trained graduate can commence work. Then after two years working experience, union must take him in as an apprentice if he finds an opening in a union shop.

Part III. No comment

Employer J. - 615 employees

Part I. No. 8. For reasons of: age restriction of twenty-one or over, and union has negative viewpoint on such programs.

Part III. Of 500 hourly paid employees, 18% or 90 are "skilled" or apprentice "skilled" in plant maintenance department. These are carpenters, millwrights, mechanics, machinists, electricians, painters. A twenty-one year old high school graduate (preferably with both vocational training and some working experience) can enter employ here in these specialties. Usually a three year apprenticeship, with training provided by the firm is required to qualify as journeyman. Promotions are based more on merit than on seniority. Must join union within thirty days. No vocational training offered by union.

Remaining 410 are semi-skilled mill workers, machine operators, etc. Entering workers go on "extra board"--advance principally by seniority as openings occur. But company favors promotions from within--and exceptional employees from this classification can attain promotion to management. Present mill manager started as night timekeeper.

135 additional clerical office (non-union) employee level provides additional high school graduate opportunities.

Employer K - 30 employees

Part I. No. 8. Would consider to a very limited extent.

Part III. Favorable to employing high school graduates and part-time (summer) college students. Highly specialized production manufacture of fiberglas-plastic products (boats, architectural panels, burial vaults) - for which there would be no appropriate specialized vocational courses practical within high schools at present.

In a high precentage of high school graduate job applicants finds a marked lack of attitude toward work--poor motivation, as a general tendency. Too many ask "what do you pay" before any mention of "what's to be done".

Feels that somehow a combination of high school advisors work, plus special attention to appropriate phases of psychology and sociology.

Employer L - 80 employees

Part I. No. 8 Uncertain.

Part III. Manufacturers wooden trusses--laminated--bowstring--angular, etc. Also delivers and erects.

Union shop--does his own hiring as needs arise. New hires must join one of four unions within 30 days:

Carpenters
Pilebucks (piledrivers for erecting)
Millmen
Mechanics

Employer M - 1100 employees

Part I. No. 8. This might be worked out in connection with their school--placing co-op student first in school--then on a job. Open for future discussion.

Part III. Reason for "undecided" in Part II is that the company official contacted has no business relationship to a need for vocational or technical education within high schools. All a high school graduate needs to qualify for work here is the sincere desire to work. Previous training may be a hinderance, rather than a help, as the company prefers to conduct the training using their own methods.

All but a few factory workers are women or girls. Keeping them "on the job" is one major problem. Another problem, especially with girls recently from high school is poor attitude toward "work". Many seem to feel they should be treated as they were still in high school--as to individual attention--popularity--"school type" politics, etc.

Employer N - 470 employees

Part I. No. 8. Appears rather costly--but might be possible

Part III. Approves type of vocational education offered at Benson--but finds that many of their graduates expect too much too soon of the company.

Employer O - 550 in plant, 60 employees in office

Part I. No. 8. Not considered practical in a strictly production process plant.

Part III. No Comment.

Employer P - 90 employees

Part I. No. 8. Program not presently acceptable to union.
Experience indicates younger than twenty-one are more accident prone.

Part III. Feels that very little could be offered in special education in high school of special value to a sawmill worker.

Feels that within the current academic courses both educators and students fail in practical economics. Too many recent high school graduates seem to believe that PROFIT is a "dirty" word.

Prefers not the big and brawny young job applicant--but the average in size; above average in intelligence, agility, and willingness to work.

Promotions, under what he feels are fair union rules, based upon combination of ability and seniority.

Prefers to do their own on-the-job training in most cases.

Employer Q - 60-80 employees

Part I. No. 8. No comment.

Part III. No comment.

Employer R. - 75 employees

Part I. No. 8. Cost of in-plant training too high to consider such a program.

For permanent shop employees--estimate it costs $2,200.00 per man for on-the job training.

Part III. Within thirty days all new shop employees must join metal trades union--Local 544.

Within that period new workers must prove satisfactory or are discharged.

"Turnover" of employees is small here.

Most young applicants are very short on prior vocational education.

Usually the only time they hire direct from union is for fully skilled journeyman machinist, etc. Otherwise they do own training.

WHOLSALE TRADE

Employer A - 350 employees

Part I. No. 8. $2.84 minimum scale precludes.
Also union regulations - in that not less than union scale can be paid - and at nearly $3.00 per hour., cannot afford two-week trainees.

Part III. 1. Notes that loyalty to employer should be emphasized as part of vocational education.

2. Feels that the training topics listed are all good. Has no additional ones to suggest.

3. Their entire merchandise flow - orders - shipments, stock control - will go to IBM - computer system within six months.

Employer B - 100 employees

Part I. No. 8. No comment.

Part III. 1. First investigated at District Sales Office - 3800 N. W. St. Helens Road. There are only about 15-20 persons in the office organization, and hiring is done so seldom, there were no criteria, as to office workers.

All outside salesmen must be college graduates, any type degree, except that industrial salesmen must be engineering graduates.

Service stations are all leased out, and individual lessees do their own hiring.

2. For plant operation, receiving petroleum products by tanker and pipeline. Again only one or so people per year are hired, due to increasing automation. Therefore, information not very indicative here.

3. For delivery truck drivers, college graduates or 2-3 years of college preferred, because such drivers do "selling" also, and the superior ones are considered prime material for promotions to sales, plant operation, or executive positions.

Employer C - 90 employees

Part I. No. 8. Office workers and stockroom employees are union members. Salesmen are not. Unions disfavor cooperative work experiment programs especially at less than "scale". But for employer to pay "scale" for temporary trainees would be too costly.

Part III. Employment experience very slight - enter one or less per year. However, quite a number of employees are approaching retirement. Soon will have increased interest in young people with vocational training.

Employer D - 136 employees

Part I. No. 8. The number of employees in each of the four "houses" is so relatively small that to carry trainees in one or more would be something of a problem.

Part III. 1. Used to start most office personnel and salesmen with a year or two in warehouse, to gain complete familiarity with items handled. Still can - but warehousemen (and truck drivers) become union men within 30 days, with wage rates (about 500/month) health, welfare, retirement benefits such that employees are strongly tempted to remain in this department, rather than transfer to office or sales (salaried) which starts at somewhat less wage and benefits.

2. Observed that far too many high school graduates had to be rejected due to inability to write or print legibly and/or rapidly. All sales orders are hand written and billing is done by marking Zerox copies after p icing original, rather than by typing.

3. Suggests that training might be given in operation of "cardex" systems.

4. Main office in Salem; branches in Eugene, Portland, Vancouver.

Employer E - 120 employees

Part I. No. 8. No comment.

Part III. This wholesale division distributes farm tractors and related equipment, attachments and parts to: Alaska, Washington, Oregon, parts of Montana, Idaho, Northern California.

Employer F - 100 employees

Part I. No. 8 No comment.

Part III. 1. Mentioned good work being done by community colleges.
2. For a high-school graduate seeking work, his or her demonstrable maturity; favorable attitude; evident motivation toward progressive future - are highly important. The more of such assets vocational education can impart, the better it will serve all concerned.

Employer G - 200 employees

Part I. No. 8 Might be arranged.

Part III. 1. Born and schooled in Denmark, where vocational-technical apprenticeships begin at age 14, for those not intending to go to college.
2. Contends that here, every encouragement should be extended to induce students to attend and complete college and only after very careful evaluation to qualify those who cannot, vocational-technical education would then be of read value for those so determined.
3. His observations during Business Education Week indicate that many educators are not sufficiently realistic toward current economics. More emphasis should be placed on the fact that "profit" is not a "dirty" work, and that the profit - competitive system is still the basis of national prosperity - not Government "handouts".
4. Union Shop. Hire whom they wish - but must join appropriate one of some 14 unions within 30 days.

Employer H - 60 employees

Part I. No. 8 Not practical in their operations.

Part III. 1. From an educational standpoint, high school graduates OK for sales positions inside and out - but usually only young men with previous experience are hired.
2. For warehouse - no vocational training is indicated - only ability to work, read, write, spell - do basic arithmetic. Must join Teamsters Local 206 in 30 days.

RETAIL TRADE

Employer A - 55 employees

Part I. No. 8. No comment.

Part III. 1. Auto mechanics, body-fender-frame men, painters - all scarce. Modern, practical training courses within high school would be helpful and welcome. At best, though, some on-the-job training and factory service school plus experience is needed to produce a competent workman.

2. Prefer salesmen 21 years or older.

Employer B - 25 employees

Part I. No. 8. No comment.

Part III. 1. Generally no need of vocational education in this type store work. Believes that any above-average high school graduate can meet their requirements.

2. All service or installation work on items they sell is contracted out.

3. Feels that ability to communicate well and agreeably with others is highly important.

Employer C - 30 employees

Part I. No. 8. No comment.

Part III. Better training in an attitude toward work.

Arithmetic - Speed Tests
Use of cash register - use of adding machine
Salesmanship

Even boys should learn to type.

Notes that many high school graduates are inadequate in simple addition and subtraction. Feels this is in some measure due to newer methods of instruction.

Would be pleased to cooperate in any programs between store and high school.

Generally, high school graduates with above-average grades can enter and advance in the organization.

Employer D - 900 employees

Part I. No. 8. Above might be considered at minimum wage of $1.25. But union rules do not permit paying less than union scale, or about double the $1.25. At this rate, a one to four-week trainee is too costly. Employment beyond 30 days requires joining union.

Part III. 1. Within 2-3 months the company will no longer receive initial job entry applicants. Those 21 or younger will be referred to Youth Opportunity Center, Oregon State Employment Office will initially screen all other applicants.

2. Can employ any wanted applicant, but employee must join union after 30 days.

3. Seldom employ men under 25 as truck drivers (Teamsters) due to higher insurance rates for 18-25 age group.

4. Generally, the company would be satisfied to do its own vocational training of high school graduates; but complains that only one out of four applicants are up on standards on arithmetic, spelling, handwriting, and typing.

5. For their operations, the most needed vocational training would be in BAKING and MEAT CUTTING. (Says there are private meat-cutting schools, charging up to $600.00 for a 6-week course - which provides less than 1 week of actual practice!)

6. Notes that all too few job applicants come with written (preferably typewritten) resumes. The few who did present them usually were hired. Such resumes included: School activities, class offices held, constructive hobbies, part time job or other work experiences, etc.

Employer E - 1800 employees

Part I. No. 8. No comment.

Part III. High schools should do much more to assist students in selection of future occupation. This is considered especially important prior to entering any type of vocational training. In other words, more aptitude tests, sampling, etc. should be administered - preferably about end of second year of high school.

Student should not train extensively in specialized field until reasonably sure of choice in future occupation.

Employer F - 900 employees

Part I. No. 8. Currently working to arrange a cooperative education program with Portland City High Schools, in which each assigned student would work.

Part III. 1. Mr. Carlson very much in favor of vocational education generally, as well as particularly for this business. Recognizes a lack of appropriate business education in high school graduates who go to work instead of college.

2. Says Oregon State Employment Office considers gas-oil service station attendant occupation as being only one step above that of "dishwasher".

His industry is vigorously working to change this - to greatly "upgrade" the occupation - to increase the services and goods offered - to increase the training and skills of personnel.

3. Therefore they are expanding their own training program, and feel that vocational education would accelerate the advancement of service station attendants, either to management or into higher positions in other industries.

4. Confirmed that in their bulk plant, tank yards and wholesale distribution, new hirees were insignificant -one or two a year - due to increased automation.

Employer G - 550 employees

Part I. No. 8. Might be feasible, since employees are non-union, except in appliance and electrical repair.

Part III. 1. Over half the high school graduates applying for work here are below acceptable standards in writing, spelling, or arithmetic. This deficiency should be remedied in combination with any sort of vocational education.

2. Skilled appliance mechanics; TV, record-player, tape recorder technicians so scarce that Sears has its own school in California. Apt employees are sent there from here at Sears expense whenever appropriate.

Employer H - 19 employees

Part I. No. 8. No comment.

Part III. 1. Especially for high school graduates going into "sales" work, courses in "human engineering" and general psychology are recommended.

2. Suggests thorough aptitude tests about midway through high school, followed by counselling for better guidance of students in selection of vocations or life work.

3. Suggests, further, that high school educators might investigate freshman college records to evaluate how many students (lacking prior guidance) changed major subject at end of first year.

Employer I - 700 employees

Part I. No. 8. No comment.

Part III. 1. Dealers often place personnel requests with this area distribution center - especially for talented or trained people.

2. Noted that current models of tractors are far more complex than automobiles. Transmissions are more complex - multi-speed - hydraulic shifting. Assembly tolerances are much more critical than automotive. Likewise are diesel fuel systems. Most high school graduate mechanics have difficulty comprehending close micrometric dimensions. Vocational education along such lines would be helpful.

Employer J - 1250 employees

Part I. No. 8.

1. Retail sales are thru independent dealers, except at Portland, Seattle, Lewiston, Walla Walla, Salem, Medford, where retailing is corporation owned.

2. Almost a constant need for male clerical people who can type; also who can learn to handle credit and parts details. Promotion possibilities good, leading to assistant manager or manager.

3. Dealers often file personnel needs with Portland Central Sales Office. Currently have unfilled jobs.

4. Notes that "city" boys don't like to train for "county" jobs.

Part III. No comment.

Employer K - 3200 employees

Part I. No. 8. Currently working about 15 high school seniors on such a program. About 60% of these go on to college; about 40% become employees on graduation from high school.

Part III. 1. Generally no great amount nor specialized vocational-technical education is necessary for a middle-to-top grade high school graduate to be employable.

2. Mr. Parker feels that any high school student intending to seek employment upon graduation should give special attention to 3 R's in senior year, with emphasis on commercial English, Spelling and Arithmetic.

3. Those high school graduates intending to work premanently should be educated to an awareness of importance of proper attitude and responsibilities.

4. Shortages exist in supply of good stenographers-typist; tailors for mens and womens clothing alterations (have to bring in foreigners via Vancouver, Canada) and cooks (for restaurant, cafeteria, etc.)

5. Have found Girls' Polytechnic School a good source for certain trained employees. (Salad makers, keypunch, sewing repairs and alterations.)

6. For future sales personnel, the distributive education program is considered excellent.

7. Practically all future "executives" require college graduates.

Employer L - 30 employees

Part I. No. 8. No comment.

Part III. 1. High school education OK for salesmen - but must obtain appropriate experience between graduation age and 25 years.

2. Trying to employ as many as 4 boys at a time after school each day to wash and clean cars and shop - but "turn-over" is high - because many boys feel this kind of work is "too hard" or "beneath them". But those who "stick with it" are usually the ones who work up in their business - or who have enough ambition to go on to college.

TRANSPORTATION - COMMUNICATIONS - PUBLIC UTILITIES

Employer A - 20 employees

Part I. No. 8. No comment.

Part III. No comment.

Employer B - 3 employees

Part I. No. 8. Though small, might be able to help.

Part III. 1. Feels that this industry is so highly specialized that it must do most of its own vocational-technical training.

2. But that job-entry applicants of high school graduate status can stand considerable improvement in preparation, with special emphasis on mathematics, spelling, writing, and typing.

Employer C - 3500 employees

Part I. No. 8. High school educators should think about setting up a co-op program with principal industrial personnel men. Possibly schedule them to come to schools as speakers, with a view to increasing motivation toward work attitudes, trying to better assimilate existing educational opportunities.

Believes industrial personnel people would welcome the invitation.

Part III. 1. The company has rather thorough instruction and training set up for all its operations. Therefore it is their preference that pre-employment vocational education of high school graduates be rather general, in preparation for the company to teach the specifics.

2. Had five or six employment "rejects" brought from files to characterize reasons these high school graduates were not employed. Predominant causes for rejection were: Very poor arithmetic, spelling, filing, and daily class attendance. On this latter the company actually checks back with high schools before employing, reasoning that if school attendance was poor or frequently tardy, same tendencies would carry over into working. Rejections for above are much higher in percentage than they should be.

3. Also, especially in employment of young men, says that for 25¢ his firm can get from State Department of Motor Vehicles a transcript of applicants driving recor. A record of accidents, speeding, and other violations is considered good reason for rejection.

4. Considers that counselors in high schools are doing a remarkable job - but there should be twice as many - or more time should be assigned to this - and less to some other activities.

Employer D - 2250 employees

Part I. No. 8. Not practical, except for temporary summer help.

Part III. Most all except office clerical entry jobs require joining appropriate union after 60 days.

Employer E - 2900 employees

Part I. No. 8. Not practical - except for summer help.

Part III. 1. Feels that railroad provides <u>good</u> opportunities for vocationally trained high school graduates.

2. A number of applicants turn away when reminded that a railroad operates full schedules 24 hours a day, every day in the year. There are many who decline to accept work at night and on holidays.

3. Can employ anyone over 18 it wishes - but union must be joined within <u>60 days</u>.

4. It should be noted that railroading - even clerical positions - is traditionally considered men's work (relatively few women employed).

5. Suggests that every male high school graduate be proficient at typing - shorthand or speedwriting helpful also.

Employer F - 1518 employees

Part I. No. 8. Recognizes above problem - His own children could thus benefit. But obstacles would have to be overcome:

1. Company <u>might</u> be willing to accommodate 2 to 6 total at a time, for a period of two weeks, except that:
   (a) Unions would have to approve of paying less than union scale normally they will not approve.
   (b) Their own insurance underwriters would have to approve.
   (c) State and Federal work laws and rules would have to permit.
   (d) Any such program would require executive organization, cooperation and approval.

Part III. 1. Due to great strides in mechanization, their labor force is about 150 less than it was 10 years ago.

2. Actually hire about 100 people per year. Nearly 75 of these are during summer - temporarily - most of them are college students. A good percentage in engineering (electrical, usually).

3. Much of the summer work involves their nine public parks - caretaking, lifeguards, etc.

4. The remaining 25 permanent entries are usually in the following classifications:

Male:	Emphasis	Tests	Min. Percent
Meter reader	Arithmetic, personable	Wonderlic 22 set (V)35	Math - 16
Chainman	Math, drafting, physical	Wonderlic 22	----------
Electrical draftsman	Elect. Math.-drafting	Wonderlic 25	----------
Store room man	Typing-bookkeeping, phys.	Wonderlic 20	Ben. mech. comp 65
Underground helper	Physical-mechanical, Personable	Bennett - mech. comp.	60
Hydro maint. man	Physical-mechancial, Safety	Bennett - mech. comp.	65
Asst. garage man	Physical and Service		
	State exp. + records	Bennett - mech. comp.	65
Journeyman lineman-current	"card"-physical + 5 years service	Oral test	85
Hole digger	Physical, safety-minded	Bennett - mech comp.	65
Female:			
Mail room messenger	Office machines + 45-50wpm	Wonderlic 22,S.R.A.	50-60
Key Punch Operator	Office machines + IBM	IBM Aptitude, Wonderlic 20	
Unit Bookkeeper	Filing, Arithmetic + 45-50 wpm.	Wonderlic 22, S.R.A.	60
Relief Telephone Operator	W.U. Telefax, grammar, voice, personable	Wonderlic 20 P.N.B. Aptitude	
Typist "B"	Spelling, Business English, 45-50 wpm.	Wonderlic 22 S.R.A.	60
Office Equipment Operator	Multigraph, mech. file	Wonderlic 20 S.R.A.	50
Mapping Clerk, Jr.	Mech. Drawing, neatness	Wonderlic 25	
File Clerk	Filing, neatness	Wonderlic 22 S.R.A.	50

Employer G - 1160 employees

Part I. No. 8. Not practical with less than 18-year olds due to heavy and dangerous nature of work. Union objections also.

Part III. 1. Feels merit in broad range vocational-technical education. Gas Company has good schools for specifics. A graduate of Benson; not college.

2. Their entry requirements emphasize mechanically-minded applicants.

3. Two unions involved - "clerical" people associate with "professional technical office employees union". Advancements are based chiefly on ability. "Operating people join "international chemical workers" where seniority is prime consideration for advancement.

4. Note - job application forms are filed in sequence. First received are first considered - back thru 6 months. Those older than 6 months are discarded.

5. In hiring, references and prior employers, and reasons for termination are always carefully verified.

6. Once employed, employee is given prime opportunity to advance education at company expense. Example - to advance from equipment maintenance mechanic apprentice to journeyman - $2\frac{1}{2}$ years or 2080 related hours + I.C.S. correspondence course for home study.

FINANCE - INSURANCE - REAL ESTATE

Employer A - 130 employees

Part I. No. 8. No comment.

Part III. No comment.

Employer B - 10 employees

Part I. No. 8. No comment.

Part III. 1. Relatively small organization of mature adults.
2. Unlikely to have job-entry openings for high school graduates.
3. Exception: Shortage of trained grounds-keepers who know how to care for shrubs, flowers, grounds, etc. There is a need for skilled people in such occupations, and this firm could keep one or two busy at wage rates up to $2.50 per hour.

Employer C - 135 employees

Part I. No. 8. No comment.

Part III. 1. Very much in favor of: (a) vocational training (b) closer relationship and understanding between high school educators and businessmen (c) providing better working opportunities for deserving high school graduates.

2. Recently moved from City of Portland to Beaverton, with high school children. Reports Washington County High School one half year advanced over Portland.

3. Complains that too much time and emphasis is given to extra-curricular subjects - school class elections, field trips, clubs, plays, pep rallies, etc. Feels athletics receiving correct percentage of attention, currenctly, but, in general too many non-essentials take place "to please the students, rather than educate".

4. As evidence of this, he says only 1 out of 5 high school graduate job applicants can write sufficiently well to merit employment in his firm. Adds that spelling and arithmetic are weak, also.

5. Mentions that high school instructors should advise more on business etiquette, also. For example, when 2 or 3 girls, (friends) come together to apply for a position, they automatically nullify acceptance. He is surprised that applicants are not instructed that job application is an individual, not a group effort.

6. Feels that 2 or 3 levels of aptitudes established within a given grade is conducive to mediocrity, as opposed to the realism of competition in the business world -- that the need for real competition in all things - including school work - needs more emphasis.

Employer D - 1275 employees

Part I. No. 8. No comment.

Part III. 1. From this Bank's standpoint, the present high school curricula is satisfactory. Few, if any, subjects need be added.

2. The great problem, they feel, is to somehow materially increase motivation for the average student. The subjects, the instructors, the facilities are all available and are offered - but the unanswered question is how to inspire the average (or lower) students to make full use of them. Obviously, the superior students do.

3. Motivation and maturity (despite actual age) are closely related.

4. There are numerous good opportunities in this institution for high school graduates, especially those displaying upper-level intelligence, energy & personality. For these, only the broadest, most basic of high school vocational education is indicated as the American Bankers Association has its own excellent vocational classes, provided free to apt employees. And within United States National Bank is an additional training program on all appropriate subjects.

5. Work very closely with local high schools and with the colleges. Have sponsored programs in high schools to assist sub-standard students and reduce "drop-outs".

6. Would be willing to appear at high school assemblies in effort to increase motivation.

7. No full solution for the motivation problem - contend that schools should provide more time for advisors to work on it - also contend that part of the problem lies beyond the schools - in the students home.

Employer E - 58 employees

Part I. No. 8. 1. To a limited degree.

2. Mentioned that North Carolina takes very positive viewpoint on above - will pay first two weeks of trainees wages on approved programs.

3. Has had three 16 year old high school students working in the three banks.

Part III. 1. A previous school board member advocates vocational education. States L.O.H.S. has excellent facilities and instructor.

2. Volunteered opinion that if program is expanded to any marked degree it would be better centrally located in or adjacent to one of the existing high schools..

3. Feels that a well selected amount of vocational-technical education in high schools will strengthen students going on to college; also provide a "trial area" to better guide choice of future careers.

4. Highly regards O.T.I. at Klamath Falls.

5. Tries to encourage apt high school graduates as much as possible, through personal contact has hired six; two still with his bank.

Employer F - 100 employees

Part I. No. 8. No comment.

Part III. 1. Primarily in business of owning, developing, managing, leasing business properties. Very little opportunity to realize hiring experiences with high school graduates.

2. Office and clerical help hence require experience and maturity.

3. Building maintenance, repairs, etc. subcontracted.

4. Actual construction subcontracted to union contractors or handled directly by hiring through union halls.

Employer G - 3000 employees

Part I. No. 8. In cooperation with distributive education program, have currently eight or ten high school seniors working on an hourly basis each afternoon.

Part III. 1. The majority of female help comes to them unskilled, or cannot type well. Words per minute below satisfactory rate. Bank notes severe shortage of qualified stenos and secretaries.

2. Their organized training program for skilled workers relates to American Institute of Banking. Can run to a two-year course four nights a week, at old Lincoln High School Building.

3. For further post high school or post college education, bank will allow tuition at Portland State College for those qualified.

SERVICE

Employer A - 4 employees

Part I. No. 8. Within the Chamber of Commerce proper, too small but would like to help any way possible.

Part III. No comment.

Employer B - 161 employees

Part I. No. 8. No comment.

Part III. Potential employment fields for trained high school graduates:

Building maintenance
Operating "engineers"
for heating - air conditioning plant
Orderlies
Nurses Aids
Cooks (not dieticians)
X-Ray technicians
for set-up, developing, etc.

Employer C - 30 employees

Part I. No. 8. No comment.

Part III. Very much in favor of vocational education - mentioned Antioch, California Vocational Training System and George Dean Act (Federal).

1. Potential fields for trained high school graduates:
   Nurses Aids
   Possibly high school vocational schooling could qualify for training of licensed practical nurses.
   Institutional cook.
2. High school graduates who can type are plentiful - but lacking in (a) knowledge of industrial, legal, medical vocabularies; (b) spelling.
3. High school graduates generally OK on arithmetic, but poor in grammar and spelling.
4. Courses should include:
   (a) record keeping; (b) legal aspects of records; (c) measurements - (liquids, weights, temperatures, etc.)

Employer D - 20 employees

Part I. No. 8. No comment.

Part III. No comment.

Employer E - 300 employees

Part I. No. 8. Considering the occupations of room and floor maids, bell boys, bus boys and office clerks, trainees under 18 could not very well be placed for work in this business.

Part III. 1. Classifications per metropolitan area manpower resources study place "food service" in "retail trade". But a large hotel considers this as an essential part of the service classification. In preparation for same, high school vocational courses might include:

(a) Table setting.
(b) Food serving
(c) Food preparation - portions - planning
(d) Training for assistant chef.

2. Notes that in order to obtain competent chefs, must obtain over 50% directly from European countries - because no adequate training is provided here.

3. The employer started in hotel business as a bell boy - with only high school education. Even today, if a high school graduate is willing to work and learn and study on his own, he can progress well in this business.

4. For those who show aptitude, this employer has management training courses available.

Employer F - 50 employees

Part I. No. 8. No comment.

Part III. No. comment.

Employer G - 35 employees

Part I. No. 8. Not too practical.
Rather small operation in each department for absorption of trainees.
All union in coffee house and kitchen.

PART III. 1. Generally, there is no "public school" vocational training available for this industry. In most hotels-motels operating own restaurant-coffee shop-banquet rooms as does this one, major portion of employment is in that department.

2. For above major department - or any others - there are very few local area private training schools; unions provide no training. In fact after anyone does any cooking during first 6 months initial hire, union qualifies him for full pay scale regardless of actual ability. Same applies in "waitress" category after 30 days. Consequently, hotel-motel industry really needs and would endorse a training program.

3. Top consideration should be given to cooking-chef-training on a professional (non-domestic) basis. Merits should be up-graded to interest boys, especially, emphasizing varieties, condiments, etc. Shortages of competent chefs are increasing.

4. All boys should learn to type.

5. Says company will not train employees of subscribers except when a new installation is placed. (There is a private fee school available).

Employer H - 8 employees

Part I. No. 8. Too small.

Part III. 1. This is a service organization for the general contractors.

2. Related to it is the Western School of Heavy Equipment at Weiser, Idaho.

3. A.G.C. is the bargaining agency for general contractors, especially with: operating engineers; teamsters; laborers; carpenters; ironworkers.

4. Although operating engineers rate $4.27 to $5.43 per hour, neither union nor state provide any training program; hence the school in Idaho. For this vocational training in high school could be a very helpful preparation.

5. Noted that carpenters have one of the best Federal and State sanctioned programs. Apprenticeship runs four years. Ironworkers will soon set up a training program.

Employer I - 47 employees

Part I. No. 8. No comment.

Part III. 1. Largest strictly service organization for appliances, T. V., radio, coin operated laundries, etc. west of Mississippi, north of Los Angeles, operates twenty seven trucks.

2. Needs three more technicians, now. Difficult to find. Offers on-job training. With vocational-technical education in high school can start new hires at $1.75 per hour - but cannot expect to make a profit on work production of such men until after two years' experience.

3. Non union shop. Experienced servicemen earn about $2.50 per hour.

4. Says many high school graduates who apply are atrocious spellers; or writing is equally poor. Writing difficult to read is cause for rejection. Customers resent repair charges for items illegible.

5. This firm has contract with large refrigerator manufacturer for all service-in-warranty on appliances. Also contract to install and service radio communications systems (police-county-etc.) They service work for several large Portland firms.

Employer J - 40 employees

Part I. No. 8. Not practical due to size and types of work.

Part III. 1. In this particular establishment, opportunities for high school graduates with or without vocational-technical education are very limited - or few.

2. The entry jobs of diswasher or bus boy require minimum education. Either job might lead upward to assistant cook, etc., but not rapidly and pay scale is low.

3. Waiters here must be 21, because of liquor service, colored preferred. No vocational training indicated.

4. Prefer young men 21-22 for bartenders - club does its own training for this.

5. Outside jobs usually held by men of middle-age - plus - gardening, greenskeeper, etc.

6. Good cooks are hard to find. Only schooling known to be available is at Clark College.

Employer K - 6 employees

Part I. No. 8. No comment.

Part III. No vocational-technical education whatever is needed in this type operation with one exception - that of projectionist.

Where theaters employ a union projectionist, they must hire him thru the union. Admission to this union is so restricted that a seven year "probation" period is not unknown.

Employer L - 90 employees

Part I. No. 8. No comment.

Part III. Except for registered nurses, most job specifications can be met with normal high school educations in this business.

Age 30-35 or older employees have been more satisfactory than 17-18-19 year olds - who seem to lack the motivation and human or general understanding - along with a lack of maturity.

Feels there would be a higher percentage of acceptance in a larger hospital for young people who are interested.

Employer M - 50 employees

Part I. No. 8. No comment.

Part III. No. comment.

Employer N - 4 employees

Part I. No. 8. Operating requirements too small.

Part III. Owner and wife plan and manage most of the work - balance could be classed as "unskilled".

Employer O - 10 employees

Part I. No. 8. No comment.

Part III. 1. In this business, skilled help is difficult to get - and in short supply. Only trade school known to be nearest is that operated by National Institute of Dry Cleaners at Springfield, Ohio. Yet it is a subject which could be taught in high school.

2. Union shop - Members of Laundry, Dry Cleaners and Dye House Workers.

Employer P - 50 employees

Part I. No. 8. No comment.

Part III. 1. Good mechanics - body - paint men badly needed in auto repair and service end of business.

2. Has had many high school graduates apply for work - with no qualifications or experience - can afford to hire relatively few of these.

3. Notes lack of ambition or motivation in many high school graduatesapplicants, - not really willing to work, especially for what they are worth to the business.

Employer Q - 8 employees

Part I. No. 8. No comment.

Part III. 1. Strictly a "service" business.

2. No vocational training indicated for this work, other than above-average:
   (a) Mechanical aptitude
   (drivers do minor maintenance on trucks (4) in company garage)
   (b) Ability to write legibly, record and report customer requests or changes.
   (c) Ability and maturity to meet people and be personable in relationship with customers.

GOVERNMENT

Employer A - 85 employees

Part I. No. 8. No comment.

Part III. No comment.

Employer B - 16 employees

Part I. No. 8. No comment.

Part III. 1. No more than a high school diploma is currently required to fill any of the existing positions held, other than the ability to perform the duties.
Fire Chief, Police Chief, Utilities Superintendents and Recorders are not college men. Most have subsequently, or during their employment, attended special schools.

2. City Staff:

Utilities Superintendent	(1)	(Graduate of Oregon Technical Institute)
Assistant Utilities Superintendent	(1)	
Water Department	(1)	
Sewage Department	(1)	
Street Department	(1)	
Light and Power	(3)	
Fire Chief		
+ 28 Volunteers		
Police Chief	(1)	
Policemen	(3)	
Recorder	(1)	
Clerks	(3)	

3. A young man trained in park and recreation management will soon be needed, but job cannot afford a college graduate.

4. There appears to be an upcoming need for one or more trained people for sanitary disposal (garbage); sanitary fill operators who understand methods of meeting state regulations, salvage, etc.

5. There will be needs for competent mechanics to maintain mechanized equipment.

6. Persons adequately trained in carpentry and construction to serve as building inspectors are in short supply.

Employer C - 30 employees

Part I. No. 8. Not considered practical, due to economics.

Part III. 1. Vocational - Technical education shpuld be offered with reservation - safeguards to deter insincere students from taking certain courses having little or no relationship to future. Fears that some courses might be sought as "an easy out".

2. Similarly, before allowing students to elect a vocational-technical type of final high school education, a fully adequate amount of special counselling should be arranged to assure that the objective and the student are fully compatible.

Employer D - 62 employees

Part I. No. 8. Except certain summer jobs in some departments.

Part III. All city positions except executive are via civil service examinations.

Employer E - 12 employees

Part I. No. 8. No comment.

Part III. 1. Too small an operation to be in position to recommend pro or con for vocational education etc. in relation to city government.

2. Too little change or addition to personnel to provide experience.

Employer F - 13 employees

Part I. No. 8. Too small in each department.

Part III. No comment.

Employer G - 450 employees

Part I. No. 8. Might be possible - but a number of special arrangements would first need to be worked out.

Part III. 1. Many county jobs can be filled by high school graduates - girls and boys.
2. Vocational education in high school as offered generally satisfactory for girls - but very inadequate for boys.
3. Quite a number of jobs are hard to fill. For example "engineering aide". This would be an excellent job for a high school graduate; and a job with a future. These aides often get lured away by offers of more money from larger cities - Federal Government - large industry.

Employer H - 85 employees

Part I. No. 8. Library currently employs some 6 pages, working 30 hours a month @ $.85 per hour. No current plans to expand to other departments, except summer work.

Part III. No comment.

AGRICULTURE - SPECIAL

Employer A - 40 employees

Part I. No. 8. No comment

Part III. 1. For girls, there is a business need for floral design - arranging, (professionally).

2. For young men, there are unfilled needs for those with a knowledge of:
   (a) Landscape gardening
   (b) Reading architects' prints, contour-elevation maps
   (c) Basic Plants - plant habitats
   (d) Basic Plants - foods
   (e) Basic Plants - materials - types
   (f) Plant propagation
   (g) Nursery materials
   (h) Greenhouse operation and management
3. This is not seasonal agricultural work; winter and spring are busiest.

VT 001 231
Liebert, Lisa
New Careers and Model Cities: A Partnership for Human Renewal.

New York Univ., N.Y. New Careers Development Center
MF AVAILABLE IN VT-ERIC SET.
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*COMMUNITY SERVICES; PROFESSIONAL PERSONNEL; *SUBPROFESSIONALS; ENTRY WORKERS; *VOCATIONAL EDUCATION; OCCUPATIONAL MOBILITY; *VOCATIONAL DEVELOPMENT; EMPLOYMENT
MODEL CITIES; *NEW CAREERS

Model Cities legislation makes possible experimentation and innovation on a scale not available before. The program places emphasis upon meeting the needs for employment and human services--health, education, and welfare--of families and individuals in the model communities. A way of utilizing the latent capabilities of persons to provide the necessary human services in their own communities is present in the New Careers program which proposes: (1) Many tasks now performed by professionals can be satisfactorily and more appropriately performed by non-professionals, leaving the professional free to devote himself to creative and supervisory duties at his own level of advanced training, and (2) Non-professionals initially hired as aides should be motivated and helped to ascend the career ladder to professional standing via on-the-job programs. The New Careers program could serve as a central integrative force within the Model Cities project as large numbers of productive people would be placed at the service of the community. (JK)

VT 001231

ED042060

C.

NEW CAREERS AND MODEL CITIES: A PARTNERSHIP FOR HUMAN RENEWAL

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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August, 1967

VT001231

ERIC

The Model Cities Program commits social energies and economic resources to the discovery of new solutions for the age-old problems of poverty and urban blight. The need for new answers is urgent, because traditional methods of approach have proved inadequate. Thus, Model Cities legislation calls for a "Total Attack" which will create a meaningful life for thousands of disadvantaged Americans via an improvement of their physical enviroment, better social services, and magnified opportunities for employment. It makes possible experimentation and innovation on a scale not available before.

The Program's provisions for the development of human resources place major emphasis on meeting the needs for employment and human services (health, education and welfare) of the families and individuals in the Model communities. Here may be found an innovative way to create many new opportunities for meaningful and permanent work and simultaneously to provide greatly expanded social services.

If Model Cities projects expect to recruit the staffs they need to supply the expanded social services called for in the Program by following traditional methods, they will run into serious difficulties. Throughout the nation, health, education and social welfare agencies suffer from an increasingly serious lack of skilled personnel.

Mitchell Ginsberg, New York City Public Welfare Commissioner, points out this problem:

" ... these shortages cannot be met simply by recruiting more students, expanding or setting up new schools, providing more fellowships, raising professional pay ... By and large, the professions are competing mainly for the same people, and the supply is and will continue to be inadequate ..."

Health Services The National League of Nursing estimates a deficit of 344,000 registered nurses by 1960. (Current deficit, 125,000). For that same year mental health services predict a deficit of 200,000 employees for state and county hospitals.

Social Work Some 15,000 persons are needed yearly to replace those leaving the field and to staff new services. The total number of graduates from schools of social work throughout the nation is only 3500 yearly. The HEW Task Force on Social Welfare, Education and Manpower predicts a need for 100,000 social workers plus 50,000 additional workers for HEW agencies alone by 1970.

Education The U.S. Dept. of Labor forsees a deficit of 500,000 elementary and secondary school teachers by 1970.

It is obvious that new resources must be tapped to obtain the workers so pressingly needed in these areas. Now wasted in poverty are millions of persons with the potential and desire to make significant contributions to the economic and social life of their communities as employees of human service agencies. A way of utilizing the latent capabilities of such individuals can be found in the New Careers Program which proposes that the human services be reorganized and restructured to produce a vast number of permanent jobs at differing levels of skill while simultaneously improving the services provided. It proposes that many tasks now performed by professionals can be satisfactorily and more appropriately performed by non-professionals, leaving the professional

free to devote himself to creative and supervisory duties at his own level of advanced training. Thus it also implies that many tasks which are sorely needed but are not now being performed by anyone can be efficiently accomplished by the non-professional.

Equally basic to the New Careers Program is the proposition that non-professionals initially hired as Aides to the professional staff, be motivated and helped to lift themselves up the career ladder to professional standing via on-the-job programs for appropriate training and education. This approach provides motivation for the best possible job performance by the non-professional through offering him the same possibilities for advancement that motivate the more advantaged, without making demands on him which are unrealistic. It has real pay-off in terms of improvement of services to the community, increasing the number of taxpayers, and creating a source of work that is meaningful, permanent and dignified.

Non-professionals as Aides and trainees have long proved their worth both in public and private enterprises, and the trend is toward an ever greater utilization of these workers.

> The President's Commission on Technology, Automation and Economic Progress has proposed that 500,000 full-time jobs for the unskilled be created.
>
> Americans for Democratic Action has proposed the creation of 5 million such jobs.
>
> Proposed legislation, such as the Safe Streets and Crime Control Act of 1967, the Juvenile Delinquency Prevention Act of 1967, and the National Institute of Criminal Justice Act of 1967, have the potential to provide jobs for non-professionals as aides in

in the law enforcement system.

The Office of Economic Opportunity has authorized 131,000 non-professional positions in its network of community action agencies, of which 106,000 have been filled.

The New Careers concept of upgrading via higher education on the job to create real life-long careers for non-professionals is also gaining rapid approval.

The Suffolk County Economic Opportunity Commission has developed a career employment program for the unskilled, whereby placement will be made primarily in agencies which offer permanent work and career advancement opportunities through continued education and training.

The MUST (Maximum Utilization of Skills & Training) Program of the Civil Service Commission is experimenting with redesigning its job classifications to create new opportunities for non-professionals.

New York City's District Council 37, AFSCME, representing 16,500 municipal hospital aides, has developed a new careers program in conjunction with the municipal hospitals and funded under an MDTA grant. This October, 450 nurses' aides may be upgraded to Licensed Practical Nurses via a work-study program of 20 hours of work and 25 hours of study weekly. Union negotiations with hospitals have also led to the creation of a new category of Senior Aide in nursing, dietary and housekeeping services with special training to upgrade employed aides.

The Illinois Department of Mental Health and the Chicago YMCA Community College are working to establish a 2-year program to train Mental Health personnel including courses in academic subjects and the behavioral sciences. The students would work three days and attend classes two half-days per week.

Seattle Hospital is working with the Department of Labor to Create a work-study program for training orderlies to become surgical assistants and surgical technicians.

Multi-service neighborhood centers in Model Cities projects could create, for example, such entry-level jobs for non-professionals

as:

1. Neighborhood Center Community Aide, to hold meetings for informing community members about the Center's services; to discover, through direct investigation community members in need of the Center's services and to put them into contact with the Center. To arrange for child care, transportation or other facilities for persons going to the Center, to take direct action in favor of the client, to provide feedback to supervisory personnel about the needs and feelings of the community relevant to the Center's projects.

2. Center-Expeditor to guide clients to the appropriate services, to check and assemble records, to provide information to the public.

These two job models provide essentially new services which are badly needed in target areas if the poor are to be encouraged and enabled to use the multi-service neighborhood center fully. These jobs require little (professional) training, but do require a kind of involvement which utilizes the special skills of the non-professional -- his community know-how and peer relationships.

The New Careers Program strengthens the usefulness to society of the nonprofessional worker by making it possible for him to take on greater responsibilities as his training and skills increase.

In the field of housing and relocation the following job ladder is possible:

1. Entry-level: Relocation Aide. Responsible for organizing meetings to explain the relocation process, why it will take place and its significance. He will prepare and educate the community as to the nature of relocation and its consequences.

2. Second level: Relocation Field Representative. To help residents plan for their relocation needs. He will explore possible new places to live, help with financial planning and arrangements for moving, and will help residents with the transition. He will work with residents from several neighborhood blocks.

3. Relocation Officer: Responsible for the entire neighborhood; will work on the most difficult relocation problems, legal questions, budgeting and management problems related to rental costs. Will supervise Relocation Aides and Field Representatives.

At each level of functioning the work week will include time for additional training and education so that each employee can improve his skills and prepare himself to qualify for the next higher position.

In education Teacher Aides (116,000 under Title I alone, employed by the end of 1967) are already successfully helping the nation's overburdened teachers with such custodial tasks as playground and lunchroom supervision, attendance taking, contacting parents, etc.

> The Bank Street College of Education recently made a nation-wide study of teacher aides, teacher assistants, family workers and other auxiliary educational personnel employed from California to Puerto Rico. It found "great possibilities in the professional-nonprofessional team in enabling the teacher . . . to meet individual needs of pupils." The multi-level approach was found to provide "an escape from rigid structuring in the classroom . . . with more small groupings and independent activities possible." The report says that any classroom can benefit from "effective utilization of auxiliaries, regardless of the composition of the school population or the socio-economic background of the auxiliaries."

Based on the New Careers approach human service agencies in various areas are pioneering to establish the routes whereby an Aide can achieve professional standing.

> Oakland, Calif., has created a "ladder of skills" whereby a Teacher Aide can rise to Assistant Teacher, combining work experience with college courses. The local community college administering the Teacher Assistant program is working with a 4-year college to develop career lines leading to certified teacher.

> The Women's Talent Corps at the completion of its first training program, graduated a group of trainees who had previously been on relief "from hard-core poverty into expanding futures", according to the New York Times. They will fill subprofessional positions in the school system as Teacher Assistants and Guidance Assistants.

Following such guideline schools in Model Cities could create a career ladder with the following steps after the entry-level position of Aide:

1. Teacher Assistant - to run audio visual equipment, prepare materials;

2. Associate Teacher - to possibly teach under the guidance of supervising teacher. This would provide a teaching capability not now feasible using current staffing procedures which is urgently needed by disadvantaged communities.

The use of the New Careers program in Model Cities projects as a primary employment technique would place large numbers of productive people at the service of the community early in its development. For the disadvantaged this would make real and visible the promise of change embodied in the Model Cities legislation. As those who start work as nonprofessional do in fact move up the career ladder, they will provide models of improvement and supply encouragement and stimulation to others. The multiplier factor of this progression in terms of breaking down the frustration which paralyzes so many of the poor is another genuinely innovative aspect of the New Careers approach.

The spin-off values in terms of feelings of self worth, status in the community, increased spending power, and the sensation of productive citizenship are far-reaching. The fact that the employment provided by New Careers is permanent means a major contribution to the general stability of the community and makes economically possible the kind of long-range planning which job instability so often makes impossible for the poor.

There is much current discussion about the difficulties involved in communication between people in disadvantaged communities and the agencies designed to meet their needs. The use of non-professionals as a liaison between agencies and the community is becoming a convention of social planning as the nonprofessionals demonstrate their skill in reaching the disadvantaged, and as it becomes increasingly evident that the insights and know-how of those who understand the impoverished communities from the inside can help the agencies to identify and meet the needs of the poor.

> At New York's Lincoln Neighborhood Service Center Project mental health Aides serve over 25,000 persons per year, providing such services as information and referral; direct action intervention; organization of neighborhood meetings, committees, campaigns and special programs.
>
> The Chicago Planned Parentood program involving 14,000 low-income women and the Mecklenburgh County, N.C. pilot project for public welfare recipients found that nonprofessionals were particularly effective in interpreting family planning to potential clients.
>
> A family planning project in rural Alabama was able to spread information about birth control by hiring "family planning educators" as Aides in 13 counties. The educators were all Negro women, widely known, liked and respected in their communities who could talk informally with the clients.

While the use of nonprofessionals in these areas does work toward the achievement of Model City goals, it is also true that as long as the jobs remain single level jobs they may eventually increase the frustration and feelings of exclusion of those so employed, particularly as the more capable and motivated of the poor are likely to be chosen for employment, at least at the inception of the program. A program which seeks only to make jobs can therefore be viewed, with some legitimacy, as a " cooling" device or still another fancy system to keep people off the streets but out of the system.

The New Careers approach to employment allows poor people to gain access to the fullest rewards on the basis of real achievement and to influence it in a working as well as an advisory capacity. This can give a greatly enriched and expanded meaning to the "maximum feasible participation" of the poor. New careerists can be a real force in combating the feelings of alienation and exploitation experienced in disadvantaged communities as the system against which these feelings is directed is opened as a source of employment and particpation. Therefore, what is needed to fulfill the new career concept in Model Cities is a comprehensive development of job and career opportunities in all areas of the Model Cities program. These opportunities must be designed to provide the maximum number of entry level jobs to people capable of job performance without requiring conventional credentials, and including built-in education to effect the maximum possible upgrading to a fully professional position in each career line.

Entry level jobs can be created at every level. Aside from possibilites suggested above, New Career opportunities could also be created in:

Education: Day care centers, libraries and recreational facilities;

Health: Maternal and prenatal care, family planning, addiction, programs for the aged;

Social Work: Case work aides, homemaker and home care services;

Crime Prevention: Research, enforcement, community relations, youth programs;

Public Works: Surveying, architectural drafting, landscape gardening.

This is by no means a complete list of possible entry level jobs. For each of these jobs a career ladder is possible through built in training and work experience directed toward a fully professional position.

The development of such a program is a major undertaking and will require the most creative kind of planning to become a reality. It requires the designing of the jobs themselves, of job models and of the training programs needed to implement the career design.

Because the development of a New Careers Program for urban redevelopment requires creative planning and close coordination between all aspects of the Model Cities program and the various human service agencies involved, it would seem necessary to create an executive position of "New Careers Coordinator" at the inception of the combined project. This person would be responsible for

the development of the New Careers Program in each Model Cities program, and for its implementation within the agencies involved. The Coordinator would work with the agencies to assist them in determining their needs and capacities for employing nonprofessionals, to help plan a career line for each agency, and to cooperate with them on their problems.

With careful development, the New Careers Program can be a central integrative force giving meaning to the Model Cities guidelines for innovative techniques which will halt and remove urban blight, increase the number of jobs available, provide better and more significant employment for all -- professionals and non-professionals -- improve social services, and expand citizen participation in both the planning and utilization of Model City facilities.

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Vocational-Technical Education in Washington.

Washington State Board for Vocational Education, Olympia
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*VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; STUDENT ENROLLMENT; ENROLLMENT TRENDS; HIGH SCHOOLS; POST SECONDARY EDUCATION; *PROGRAM DESCRIPTIONS; *STATE PROGRAMS; EDUCATIONAL NEEDS; PROGRAM DEVELOPMENT; ADULT VOCATIONAL EDUCATION; POPULATION TRENDS; LABOR FORCE; DROPOUTS; UNEMPLOYMENT
WASHINGTON

This report was published in answer to many requests for information about the total field of vocational education in the state. Contents include: (1) a definition and description of each of the service areas of vocational-technical education, (2) enrollment in vocational-technical education from 1920 to 1963, (3) the need for, and details of, vocational-technical education at all levels, and (4) general statistical information on the labor force, population trends, unemployment, dropouts, and education. The State presently has vocational education in most of the high schools, in seven vocational-technical institutes or schools, and in 15 community colleges. The total enrollment in all of these schools, day or evening, is more than 140,000 individuals per year, or five percent of Washinton's total population. (PS)

VT 001 624

ED042060

VOCATIONAL-TECHNICAL EDUCATION in WASHINGTON.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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The State Board for Vocational Education has published this book in answer to many requests for information about the total field of vocational education in the State of Washington. Part of this material will be used in a booklet that will be published by the Washington Congress of Parents and Teachers describing opportunities beyond high school in this state.

VT01624

State of Washington
STATE BOARD FOR VOCATIONAL EDUCATION
Olympia,
May 1964

FOREWORD

The training needs in the world of work have created, nationally, vocational-technical education that is more varied and extensive than any such education in the past. The purpose of this publication is to present information about today's vocational education in the State of Washington.

Never in the history of our nation has the American economy been so dependent on the creative genius and technical skills of our manpower resources.

Ten years ago the youth who dreamed of becoming an aerospace mechanic was suspected of living in a world of fantasy. Today we may accept his choice of vocation as a realistic one which is vital to our country's progress. Young people in our schools today face a world changing at an ever-accelerating rate. Their world of work in a few short years will be far different from what it was ten years ago, or what it is today. Changes in family living patterns parallel these developments, thus creating a need for planned education of youth and adults for responsible family membership. There is at present an ever increasing demand for competently trained young people, with fewer and fewer jobs open to the unskilled worker. The technological race in which we find ourselves demands that students be aware of the vital position they will soon hold and be aware of the training opportunities available to them.

Youth of today may be living in challenging times, but these young men and women also have the finest training opportunities ever offered. It is fortunate that these opportunities are also available to adults who desire to retrain themselves for new skills or to fit themselves for challenging new jobs emerging from the changing economy.

For those who do not plan a four-year college degree but wish to become a part of the skilled and educated labor force soon after high school, the State of Washington offers training at twenty vocational-technical schools or community colleges located in various population centers of the state.

Since the Smith-Hughes legislation in 1917, Washington State has maintained a position of leadership in vocational-technical education through promotion and development of curricula assuring the best training possible to meet individual needs.

Over the years, the areas of vocational education have broadened. Not only skills and technical knowledge are involved, but attitudes, values, and a way of life are growing concerns in the total field of vocational-technical education.

Louis Bruno
State Superintendent
of Public Instruction

H. N. Miller
Assistant Superintendent
for Vocational Education

VOCATIONAL - TECHNICAL EDUCATION

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INTRODUCTION

WHAT'S NEW IN VOCATIONAL EDUCATION?

The President's Panel of Consultants on Vocational Education, consisting of leaders throughout the nation, recently conducted a major study which gave direction and a new look to vocational education. They made recommendations for expanding and improving our country's vocational education. Even though this study laid the foundation for the most far reaching education bill ever passed by Congress, at this date little has been written about the "Vocational Education Act of 1963".

To train youth and adults for jobs, in those occupations not requiring a bachelor's degree is the purpose of the new act. Training for the unemployed, training to update and upgrade the present work force, and training to pass the skills and technologies of America's workers from one generation to the next are also responsibilities of vocational education.

Early in the growth and development of our country, the federal government made land grants and special appropriations to help meet the needs of education. With the changing industrial and economic conditions in this century, more attention has been given to training people to be effective workers on the job. The Vocational Education Act of 1963 authorizes grants to states to assist them to maintain, extend and improve existing programs, and to develop new programs of vocational education, so that persons of all ages throughout the state will have ready access to high quality vocational training and retraining that is realistic in the light of actual or anticipated employment and which is suited to their needs, interest and ability to benefit from such training.

This new vocational education law will make it possible to carry out programs that have not been possible before. More attention will be given to individual needs and more people will be trained. Its sweeping mandate will provide opportunity for a better way of life for the majority of our people.

The President's Panel of Consultants on Vocational Education has made a very important contribution -- it has emphasized that only about 20 per cent of our young people go on to college, about 8.6 per cent are found in the professions. We are becoming increasingly aware of the responsibility of schools to train young people for the world of work.

HOW WILL THIS CHANGE TODAY'S VOCATIONAL EDUCATION?

First, vocational programs will be greatly expanded throughout our nation. Buildings, equipment, teaching staffs, classrooms and shop space should double in the next three to four years.

Second, vocational programs will be adjusted to meet today's job needs. Subjects which are virtually ignored today will be included--such as secretarial training, radiography, nucleonics, instrumentation technology, computer programming and many other "high skill" trades, and a whole range of new personal and public service jobs for men and women.

Third, vocational education will gain new status as an important part of the total educational program. This has already happened in many schools.

TWO NEW ASPECTS OF THE ACT ARE:

A work-study program which will be directed toward the high school dropout, between the ages of 15 to 21, who does not have the money to stay in school.

The most experimental part of the entire vocational education act will be in a few new residential or boarding schools built in slum areas, which will be geared to the special needs of the under-motivated, under-educated, economically-deprived community minorities. Students will get room, board, vocational training, and will also be paid for working at part-time jobs. Experts believe that only through "round-the-clock" intensive school environment can these out-of-school, unemployed youths be helped.

WHAT ABOUT THE FORGOTTEN 80%?

Today 80 per cent of our high school youth follow a college preparatory program in high school. This is mainly because either they or their parents think it is the thing to do and that it is fashionable to work at some type of professional job. Yet, the cold facts of life prove that this percentage is actually reversed.

Our work force requires that only 20 per cent work at the professions. In this area we need the student of ability, aptitude, energy and with adequate finances to attend and finish at least four years of college. Our education program for the 80 per cent of our youth who will be going into the world of work should include specialized training for the skilled and technical jobs. High school vocational education or two years of post-high school occupational training in a vocational-technical institute or community college will be more realistic for most.

Our national effort in education is tending to more nearly reflect the same balance as that of the structure of our work force.

WHO WILL IT HELP?

Of most concern is the tidal wave of youngsters, born in the post-World War II years, and soon to finish high school. They are about to enter our work force in numbers that will smash all records in our history and at a time when there will be more unskilled applicants than unskilled jobs.

FIVE MAIN GROUPS this vitally important law is designed to help are:

1. the young person in high school or just out of high school who needs specialized training to fill the technical jobs available across the country today.

2. the school dropout who is unskilled, unemployed and virtually unemployable without additional training.

3. employed adults who want to upgrade their skills and increase their technical know-how because their present jobs are changing.

4. unemployed men and women of all ages who must learn new skills to find and hold jobs.

5. persons with academic, socio-economic or other handicaps that prevent them from succeeding in the regular vocational educational program.

This new Act will provide funds to help both young adults and older workers acquire the skills the labor market will demand. The law will provide the impetus to develop programs to meet the present and future needs of the worker.

Never before has this type of education received so much attention. In 1963, Federal funds expended on vocational education were about $54 million. Including the $54 million presently appropriated the national authorization for 1965 is $202.5 million. In 1967 it levels out and continues at about $314 million, providing Congress appropriates the full amount authorized. The funds are to be allocated to the states for expansion and improvement of existing vocational education programs, development of new programs, teacher salaries and teacher training, construction of schools, purchases of supplies, equipment, materials, and research and vocational guidance.

Lifetime earnings are greatly increased as a result of early training. Statistics show that the lifetime earnings will be from $35,000 to $40,000 greater for every $1,000 invested in training.

WHAT IS VOCATIONAL-TECHNICAL EDUCATION?

Vocational-technical education is that type of education which trains people directly for useful employment and aids in keeping them employable. It is not designed to lead to a college degree but is concerned with the development of skills, abilities, understanding, knowledges, attitudes, working habits, and appreciations needed by workers to progress in employment. It covers five basic areas: agricultural education, distributive education, home and family life education, business and office occupations, and trade-industrial and technical education.

The term vocational-technical refers to occupational programs which qualify under federal and state legislative acts. The program prepares people for employment.

The term occupational education is similar to vocational-technical education but broader in meaning and includes all education designed especially for employment in any occupation other than professional.

WHERE IS IT FOUND?

-- in the high schools
-- in the vocational-technical institutes or schools
-- in the community colleges

WHAT ARE ITS AIMS?

-- to supplement general education by teaching the individual specialized, marketable skills,
-- to provide a technical, trained work force for our state and nation,
-- to transmit the accumulation of basic and new technical knowledge and skills of our work force to each new generation of workers,
-- to improve an individual's self-worth in social, personal, and civic activities and aid him in adjusting to new demands which our way of living makes on the home, the farm, and the work group.

VOCATIONAL EDUCATION IN AGRICULTURE

There is a broad horizon of opportunities in agriculture, for agriculture is more than farming. It includes not only the 8 million farmers and farm workers, but also 6 million who service and supply the farmers with the materials needed in production and the 11 million workers who handle, process and distribute farm produce. Some 24 million persons are employed somewhere in agriculture, in a job where background, training and knowledge of agriculture is either essential or highly advantageous.

Many of the off-farm agriculture occupations reach into distributive, trade and technical fields, and affect cooperation among services of vocational education.

Twenty years ago a farmer fed himself and 11 other persons; today he feeds himself and 27 others; in 1975 he will be expected to feed himself and 42 others. The farmer of tomorrow must be better trained in production, in farm management, in farm business and management, and in the related sciences, than ever before. He must be more efficient.

The center link of agriculture is farming:

> Farm Operators, Farm Managers, Part-time Farmers, Full-time hired Farm Labor, Season hired Farm Labor.

Agriculturists provide supplies used by farmers:

> Agricultural Scientists, Product Development Engineers, Manufacturing Management Personnel, Sales and Service Personnel for the producers and distributors of the host of input items of farming including fertilizers, farm chemicals, feed, seed, petroleum products, farm machinery and equipment, electricity, motor vehicles and others.

Agriculturists provide service to farmers:

> Opportunities would include agricultural teachers, county agricultural agents, experiment station scientists, grain-, seed-, feed-, and milk-inspectors, farm loan and credit advisors, farm insurance, farm tax advisors, land appraisers, farm news writers, farm radio and TV directors, farm power contractors, spray applicators, veterinarians, soil conservation technicians, farm foresters, dairy herd improvement testers, artificial inseminators, irrigation specialists, farm record analysis experts and many others.

Agriculturists handle the produce of the farms.

> Farm to Market Transporters, Contractors and Buyers of Farm Products, Salesmen representing Farmers and Processors of Farm Goods, Quality Control Men, Fieldmen and many others.

Vocational education in agriculture serves:

--high school students preparing for farming and ranching,
--high school students preparing for direct entry into off-farm agricultural occupations,
--high school students who need agricultural education preparatory to continuing study in technical schools, colleges and universities,
--high school students who need assistance in making a valid vocational choice concerning an agricultural occupation,
--out-of-school youth who are striving to become established in farming -- evening school courses offered at high school,
--out-of-school youth who are preparing for other agricultural occupations, such as technicians and agricultural services personnel. Full-time courses generally offered on a two-year basis at community colleges or area vocational-technical schools.
--working youth and adults who need or desire training and retraining in farming, ranching or other agricultural occupations,
--short, intensive courses offered at the high schools, community college, or area-technical school.

A youth organization, the Future Farmers of America, provides activities which develop poise, self-confidence, able leadership, and is an integral part of the day school program. The Future Farmer develops a sense of responsibility for his family, community and his country. Scholarship, cooperation, good citizenship and patriotism are developed through the FFA.

DISTRIBUTIVE EDUCATION

1. What is Distributive Education?

Distributive education is vocational education for marketing, merchandising and management. It serves one of the largest segments of employment in our economy.

2. Where is Distributive Education offered?

It is available in high schools, vocational-technical schools and community colleges throughout the State, as well as in evening extension programs administered by any of the three.

3. What is the high school program?

There are now two kinds of offerings available in high school. One, made available through the Vocational Act of 1963, is preparatory or pre-employment in nature. It provides the first step toward both employment and further training. The other is the cooperative programs, known variously as DE, Merchandising, Retail Selling, which combines classroom instruction in distribution with supervised, planned occupational experience in the business community.

4. What is the community college and vocational-technical institute program?

The Distributive Education program in these schools is called Mid-Management. It trains for occupational competency at the junior-executive or middle-management level -- buyers, department managers, small business managers, and assistant managers -- in marketing and merchandising, and for technical and specialized sales positions -- wholesaling, insurance, real estate, heavy equipment, drugs, stocks and bonds. Here, also, the classroom instruction, including a special, high-level, seminar-type course, is combined with planned on-the-job training in which the student gains the type of experience necessary for him to progress toward his career goal.

5. Is there anything for the person who has left high school and is working full time but wants to continue his or her education for retailing, wholesaling, or some service industry?

Yes. It is for these people that the evening extension courses are available. If a person is either:

-- employed in a distributive occupation, or
-- definitely going to enter some phase of distribution,

he or she can take advantage of this kind of education. Any school district, with approval from the State Board for Vocational Education, can conduct these courses.

6. What kinds of courses and what kind of training is available?

Courses cover such fields as retailing, wholesaling, transportation, financing, warehousing, insurance, real estate, and even the marketing, distribution and management jobs in manufacturing. They might concentrate on a single type of business or cover small business, generally. They might be for the new employee, the experienced person, the supervisor, or the owner or manager who wants to do a better job. If a need exists in distribution, a course or series of courses can be developed to meet it.

7. What is DECA? -- DISTRIBUTIVE EDUCATION CLUBS OF AMERICA --

DECA is a youth organization designed to develop future leaders for marketing and distributing which functions on both the high school and post-secondary levels.

8. What are the major categories of Distributive Education?
   -- Preparatory or Pre-Employment Training for entry into careers in distribution,
   -- High School Cooperative Programs which combine school instruction with on-the-job training,
   -- Mid-Management Programs at the post-secondary level, and
   -- Evening Extension Classes for employed workers.

HOME AND FAMILY LIFE EDUCATION -HOME ECONOMICS-

1. Why Home and Family Life Education?

   Today: - families "buy" rather than "make" their living and buying can be arranged for on easy terms,
   - young people marry earlier and have more children,
   - the divorce rate is soaring.
   - more mothers work out of the home,
   - one out of five families change location each year,

   These and other changes in family living point to the need to teach for the skills of consumption and for competence in relationships and management which can contribute to a satisfactory family life.

2. What are the purposes of Home and Family Life Education?

   Education in home and family life is to prepare young people for the vocation of homemaking and to supplement the homemaking skills of adults. In addition, programs are now being developed to give basic training to both youth and adults for wage earning in home and community service occupations.

3. Where is Home and Family Life Education offered?

   This instruction is given in secondary schools, adult programs -evening and day- community colleges and vocational-technical institutes.

4. What is the program for SECONDARY SCHOOL YOUTH?

   Courses including child development, family relationships, family health, home management, family economics, housing and home furnishings, consumer education, nutrition, family meal management, clothing, personal care and textiles are taught in the ninth grade of the junior high school and in the senior high school with extended learnings planned with parents. The youth organization, FUTURE HOMEMAKERS OF AMERICA, the national organization of students studying home and family life in junior and senior high schools is an integral part of the homemaking program. It provides opportunities for developing individual and group initiative in planning and carrying out activities related to the home. The goal of FUTURE HOMEMAKERS OF AMERICA members is to help individuals improve personal, family and community living. Any student who is taking or has taken a homemaking course in junior or senior high school may become a member.

5. What is available for HOMEMAKERS?

   Education for adults is offered for persons engaged in homemaking who need help in choosing, using and caring for new equipment; in applying new knowledge about child development; and in adjusting to new demands which our way of living makes in homes and families. This preparation includes not only the development of skills in housekeeping tasks, but the acquiring of skills in relationships and in managing the family's time, energy and money to achieve family goals.

6. What OCCUPATIONS use the skills and knowledge of home economics?

The family today is considered a consuming unit rather than a producing unit. Many of the services formerly performed in the home are now provided by business and industry. Workers in the production and distribution of food, clothing, household goods and services use the knowledge and skills of home economics. Instruction to acquire knowledge and skills in these occupations is available to both youth and adults.

7. Are there PROFESSIONAL CAREERS in Vocational Home and Family Life Education?

Teachers are needed for programs of Home and Family Life Education for secondary youth, homemakers and wage earners. This education is available in Washington's colleges and universities and through specific vocational training.

TRADE-INDUSTRIAL AND TECHNICAL EDUCATION

1. What is trade-industrial and technical education?

Trade-industrial and technical education is training before employment and retraining after employment for craftsmen and technicians. It is designed to develop basic manipulative skills, technical knowledge, and give related industrial information essential to a trade-industrial job or service occupation.

2. Are these types of programs serving a purpose?

The enrollment in these types of programs has doubled in the last ten years and is expected to double again in the next five. Because of the rapid growth in some industries and the need for special types of workers, in 1962, Washington's industries had to recruit large numbers of technicians from out of the state. Many of Washington's youth were untrained and unemployed.

3. Where is it offered?

The regular pre-employment day program is available in comprehensive high schools, in all vocational-technical schools and institutes, and in most community colleges. Evening extension courses to upgrade employed individuals and to retrain individuals displaced by changes in work, are conducted in all three types of schools.

4. What is the high school program?

Students spend approximately half of their day in the shops and laboratories in the practical work for their occupations, and the other half day completing other subjects for high school graduation. The training is mainly in automotive,

4. What is the high school program? (continued)

machine shop, carpentry, welding, and drafting occupations. Many high school graduates continue for another year or two in post-high school training. Only six per cent of the total state-wide enrollment in these courses is in the high school. There is a trend to increase high school trade-industrial and technical education.

5. What is the vocational-technical institute program?

These institutions are designed specifically for vocational education and provide the largest of the state-wide craftsman and technician training programs. Students usually spend six hours per day, for one or two years, in the shop or laboratory concentrating on the occupational objective. These training programs include some 57 major occupational areas including such diverse occupations as the aerospace technician, the practical nurse and the welder.

6. What is the community college program?

Each community college offers some specialized occupational training varying from one to fourteen programs. The objectives of the programs in the community colleges are similar to those of the vocational-technical institutes but the method of operation is different. In community colleges the students spend half the day in the laboratory and half the day in related courses.

7. What kinds of courses and training are available?

Throughout the state, trade-industrial and technical education programs offer preparatory training in over 50 individual occupations and evening extension training is given in over 125 individual occupations.

8. What are the major categories in trade-industrial and technical education?

Pre-employment Training - an organized, intensive, instructional program to prepare for entrance into employment in specific industries and occupations. It includes retraining workers for different occupations.

Part-time Cooperative Training - a program that provides for studies in school and work in industry, on a part-time school, part-time work basis.

Evening Extension - a program of instruction for employed, or formerly employed workers. It must relate directly to the occupation of the group of workers, and must supplement their employment.

Apprentice Training - a program where on-the-job training is supplemented with courses related to the occupation.

Health Occupations - a program to prepare for the occupation of licensed practical nurse, or to upgrade those working as practical nurses. It also prepares for other health occupations such as dental assistant, physician's assistant, and medical secretary.

Technical Occupations - a program to train highly skilled technicians in recognized occupations requiring scientific and technical knowledge, in fields necessary to the national defense.

Fire Service Training - a program operated and supervised by the State Board for Vocational Education in many cities and fire districts, with the assistance of local fire chiefs and other fire officers, designed to train in fire prevention and fire fighting.

OFFICE OCCUPATIONS

A new major area to be covered under the "Vocational Education Act of 1963".

"Office occupations" means those pursued by individuals in public and/or private enterprises or organizations which are related to the facilitating function of the office and includes such activities as recording and retrieval of data, supervision and coordination of office activities, internal and external communication and reporting of information.

Office education is "education for office careers", the learning experiences in this program are vocational oriented, stressing the career objective of the individual student. This program prepares high school, post-high school and adult students for office employment. Instruction includes skill courses, business courses and those related courses appropriate to preparation for office employment. An invaluable part of the preparatory program is the supervised office work experience.

It is predicted by the U. S. Department of Labor, that by 1970, jobs in the field of office work will expand by 27 per cent. This is in addition to a 58 per cent increase between 1940 and 1950 and a 33 per cent increase between 1950 and 1960. The growing demand for more information about more items more rapidly has produced the present shortage of adequate office workers as is evidenced by the want ad sections of the daily newspapers.

Office workers are employed in nearly all activities, since some office work is essential in nearly every organization. The increasing proportion of clerical workers are employed in finance, service and related industries - principally in banks, in insurance and real estate companies and professional and business services. Wholesale and retail trade, government, transportation, communication and public utilities also employ large numbers of office workers.

The increasing technical skill levels expected of office personnel call for an expansion of vocational education offerings far beyond the basic clerical and stenographic training available through the secondary schools.

Previously there was no special vocational support for high school office training in Washington. In the post-high school level there was special State Vocational support for office training in the technical institutes and community colleges. Last year there were more than 12,000 youth and adults enrolled in these programs. The new Federal legislation makes it possible for Federal support of office occupations on all levels and it would be expected that this would make possible a considerable expansion in this needed occupational area.

HOW CAN YOUNG PEOPLE PREPARE FOR THE WORLD OF WORK?

What is the world of work like today?

Occupations young people enter today are quite different from those of former years and further changes can be expected in the years ahead. Many changes are taking place in occupations that will affect career planning and employment opportunities. Changes in the economy and scientific developments are creating new occupations. It is expected that the skilled, technical and service occupations will grow at a faster rate than other facets of the work force in the 1960's. There is a gradual shift in needs from blue collar workers to white collar workers.

How will anyone go about planning a career?

In making plans for one's life work, it is important to take short-term and long-term employment into consideration. To train for a lifetime career is less and less possible. It is anticipated that employed people may have to retrain four or five times during their working years unless they plan a program of continuous education and training to keep up with changes.

Learning as much as a student can about himself is the first step in making an occupational choice. Interests, general education development, temperament, physical capacities and other characteristics are important in matching people with jobs. Counseling services are available in schools, the local Employment Service and educational institutions beyond the high school. Counselors use tests that help people discover their potential for success in a number of broad fields. They sometimes reveal capacities for success in fields that a person may not know about.

Young people should:

-- study many occupations before making a choice,
-- carefully study the advantages and disadvantages of various jobs and find out the recent trends in the job.
-- get the necessary education and training for the job.
-- prepare for their dual vocation of homemaking and wage earning.

Today it is important to at least finish high school - better yet to continue education beyond high school.

These are the cold facts:

-- he will find it easier to get a job
-- he will get a better job
-- he will be promoted faster
-- he will make more money
-- he will be eligible for apprenticeship training
-- he will be prepared to "get ahead" in the armed forces
-- he will build a foundation for additional training
-- he may have a fuller, richer and more satisfactory life
-- he will be better able to compete

HOW CAN A PERSON FIND OUT MORE ABOUT THE WORLD OF WORK?

Visit with people who are employed on the job.

Read material on occupations such as the following, published by:

Bellman Publishing Company, P.O. Box 172, Cambridge 38, Massachusetts

B'nai B'rith Vocational Service, 1640 Rhode Island Ave., N.W. Washington 6, D.C.

Careers, Box 522, Largo, Florida

United States Department of Labor, Bureau of Labor Statistics, Occupational Outlook Bulletins, Superintendent of Documents, Washington 25, D.C.

Chronicle Guidance Publications, Inc., Moravia, New York.

The Institute for Research, 537 South Dearborn Street, Chicago 5, Illinois

New York Life Insurance Company, Public Relations Department, 51 Madison Avenue, New York 10, N.Y.

Personnel Services, Inc., Peapack, New Jersey.

Science Research Associates, Inc., 57 West Grand Avenue, Chicago, Illinois

State Board for Vocational Education, P. O. Box 250, Olympia, Washington

GENERAL REFERENCES FOR CAREER PLANNING:

Choosing Your Occupation. 0581257. United States Department of Labor, Bureau of Employment Security, Washington 25, D.C. 1961. 16 pages.

Facts You Should Know Series. American Vocational Association, 1010 Vermont Avenue, N. W., Washington 5, D. C.

These publications are 10¢ each, $6.00 per hundred for one-hundred or more.

1. Vocational Education: Gateway to Opportunity
2. Sound Public Education
3. Home Economics Education
4. New Developments, and Their Impacts on Trade and Industrial Education
5. Relation of Vocational and Practical Arts Education to Economic Well Being
6. Occupational Distribution, a Factor in Educational Planning
7. Agricultural Education in the Public School
8. Facts You Should Know About Distributive Education

Job Guide for Young Workers. 1963-64 Edition, United States Department of Labor. Bureau of Employment Security, Washington 25, D. C. 77 pages. 45¢

Mapping Your Education. 1963-64 Edition. Abbot, Kerns and Bell Company, Portland, Oregon. 240 pages. $2.95.

Mapping Your Occupational Training. State Superintendent of Public Instruction, Olympia, Washington.

SPECIFIC REFERENCES:

FOR THE FOLLOWING SEE THE SCHOOL COUNSELOR OR SUBJECT MATTER TEACHER:

Agriculture Occupations Information. State Board for Vocational Education. Olympia, Washington. 1964. 11 pages.

Careers in Data Processing in the State of Washington. State Board for Vocational Education, Olympia, Washington

Career Opportunities in National General Merchandise Chains. Institute of Distribution, Inc., 1441 Broadway, New York 18, New York. 8 pages.

Distributive Education: Training for Business the Practical Way. State Board for Vocational Education, Olympia, Washington.

Homemaking Education. State Board for Vocational Education, Olympia, Washington. 31 pages.

Mid-Management Training for YOU in 1962. State Board for Vocational Education. Olympia, Washington. 7 pages.

Nursing Careers in Washington. Committee on Careers in Nursing, Washington State League for Nursing, 512 First Avenue North, Seattle 9, Washington. 1962 - 8 pages.

Technical Education Opportunities. State Board for Vocational Education, Olympia, Washington. 1961. 6 pages.

FOR DETAILED INFORMATION ON OCCUPATIONAL TRAINING:

CALL YOUR NEAREST PUBLIC SCHOOL AND ASK FOR THE HIGH SCHOOL VOCATIONAL DEPARTMENT, THE COMMUNITY COLLEGE VOCATIONAL DEPARTMENT OR THE NEAREST VOCATIONAL-TECHNICAL SCHOOL.

WHAT WILL IT COST?

A student can expect his vocational-technical education costs in a community college or vocational-technical institute to vary from $40 to $250 per year. Costs vary because of differences in student fees among the schools and the variation in cost of books, tools, and supplies required in different types of occupational courses.

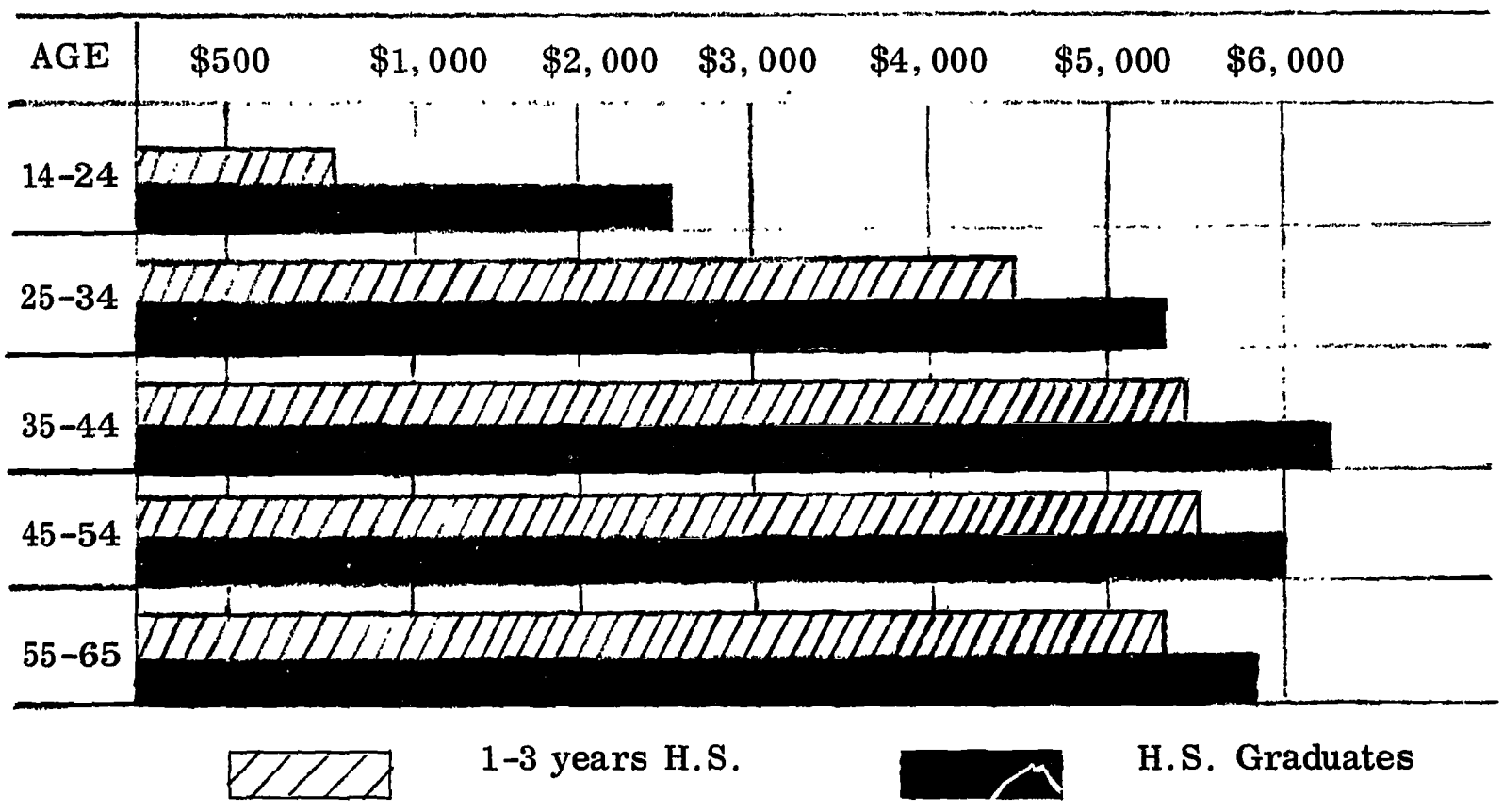
Student fees represent about 12 per cent of the cost of operating these types of programs. The main support for providing this education comes from federal, state and local taxes.

What are the dollar returns?

A high school graduate will earn from $30,000 to $45,000 more in a lifetime of work; for each year of post-high school vocational-technical education or higher education, the individual's lifetime earnings are substantially increased.

Government money spent for vocational-technical education is more than returned to the government in taxes as the individual's full productivity and wages increase. All education has a dollars and cents value to the public and to the individual.

Average salaries in the age groups of dropouts compared with graduates.



Financial Aid to Students:

Scholarships and special activity grants in varying numbers and amounts are provided by schools, civic and professional groups, business and industry.

Financial assistance is available under special conditions to people for training or retraining.

The 1963 Vocational Education Act provided for a study-work program. This would make it possible for young people who need financial assistance to work part time and continue their vocational-technical training on a full time basis.

Through state and local offices of vocational rehabilitation, financial assistance is available for people with handicaps. People who need to be retrained because of injury are helped under this program. This assistance will cover cost of training and provide a subsistence allowance.

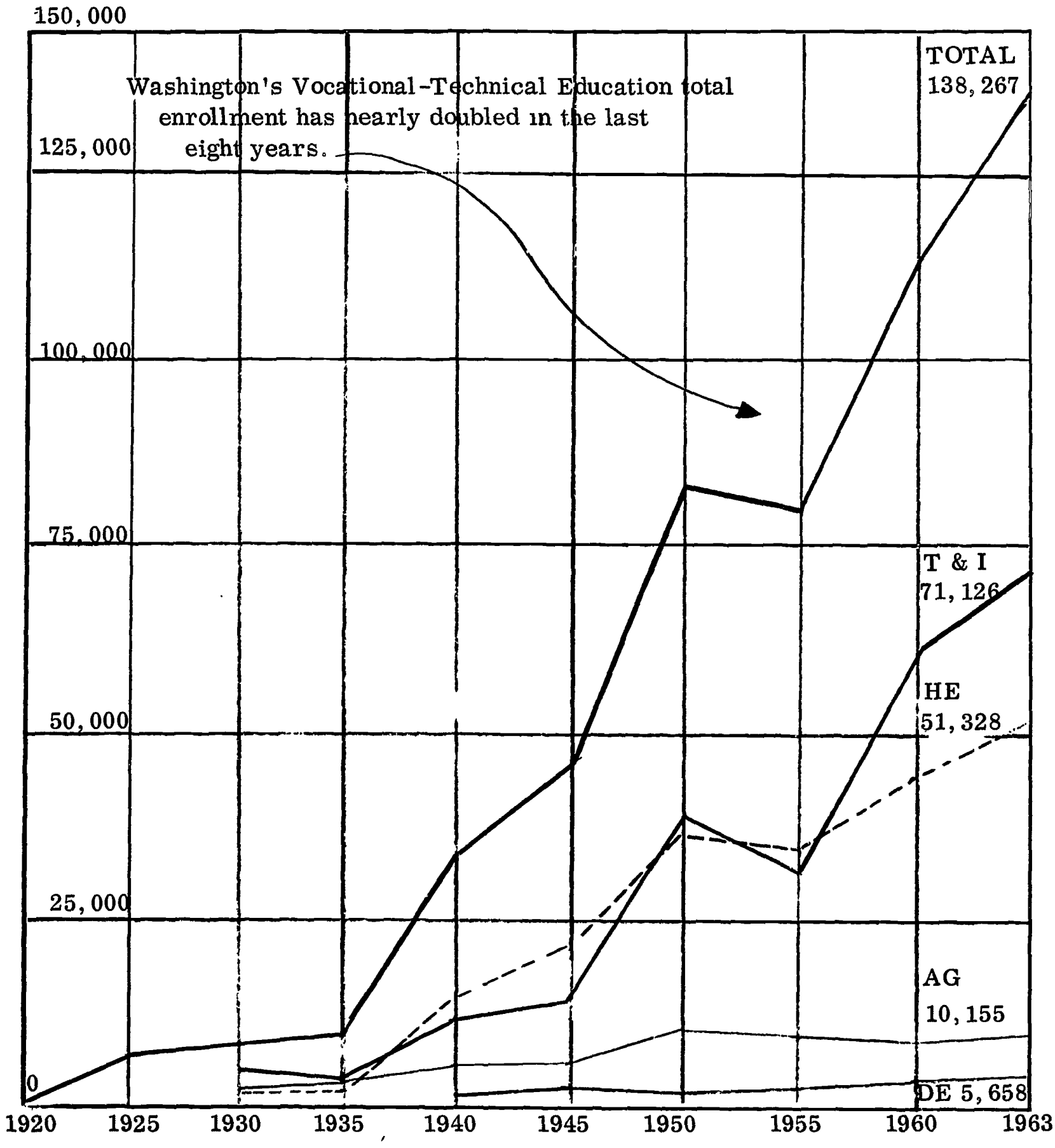
Programs can be worked out between the Departments of Public Assistance, Vocational Education, and Vocational Rehabilitation to provide assistance while a person is learning an occupation.

Through the local Employment Security office, unemployed people may qualify to receive training under Manpower Development and Training Act. Under some conditions, students may also receive a cost of living allowance.

SECTION II

CHARTS

A HALF CENTURY OF DEVELOPMENT



HISTORY OF VOCATIONAL-TECHNICAL ENROLLMENT IN WASHINGTON

Includes vocational enrollment -- both day and evening -- in the high school, the technical institute, and the community college.

A DECADE OF DEVELOPMENT

Washington State enrollment totals in the four principal divisions of vocational-technical education are:

	1952	1962	1964 (Estimate)
AGRICULTURE	7,643	9,360	10,264
DISTRIBUTIVE	3,699	4,892	5,280
HOME AND FAMILY LIFE	31,066	49,607	52,800
TRADE AND INDUSTRIAL	31,067	70,805	73,000
TOTAL	73,575	134,664	141,344

According to the United States Office of Education, in comparison with the rest of the country: - for the school year 1961-62;

Washington ranked 23rd in population and
10th in vocational enrollment

Washington vocational-technical education instructional hours have nearly doubled in the past ten years. If present plans in the different local centers develop, Washington's total vocational-technical education program will double again in the next five years.

One out of every 13 employed workers in Washington is annually enrolled in evening extension adult vocational courses. This is twice the national average.

Compared with our growth rate and rank, Washington can be proud of its vocational education program. Now, under the provisions of the 1963 Vocational Education Act, programs can be set up to meet present and future needs. Many of these programs will be substantially increased each year for the next few years and many new occupational programs will be started if Washington's state-wide work force training needs are to be met.

STATISTICAL REPORT OF VOCATIONAL EDUCATION SCHOOLS AND CLASSES

	1961-62 Enrollment	1962-32 Enrollment	Increase or Decrease	Number of Teachers
AGRICULTURE				
Day School --------	8,003	8,515	+ 512	159
Evening School ----	1,132	1,308	+ 176	58
Teacher Training --	225	332	+ 107	30
Total Agriculture	9,360	10,155	+ 795	247
DISTRIBUTIVE EDUCATION				
Part-Time Cooperative--	740	857	+ 117	37
Evening School ---------	3,902	4,517	+ 615	178
Teacher Training -------	24	27	+ 3	2
Mid-Management -------	226	257	+ 31	18
Total Distributive Education	4,892	5,658	+ 766	235
HOME ECONOMICS				
Day School ----------	29,826	29,898	+ 72	322
Evening School ---------	13,892	14,771	+ 879	249
Part-Time Extension ---	5,450	6,056	+ 606	54
Teacher Training -------	439	603	+ 164	8
Total Home Economics	49,607	51,328	+ 1,721	633
TRADES & INDUSTRIES (Including Titles I, II & III)				
Day School ----------	6,443	7,397	+ 954	348
Evening School ----------	46,670	45,060	-1,610	1,237
Part-Time Cooperative---	1,057	1,170	+ 113	74
Part-Time Extension(Appr.)	4,278	4,463	+ 185	220
Teacher Training --------	356	313	- 43	10
Total Trades & Industries	58,804	58,403	- 401	1,889
SUBTOTAL (Fed. Reimbursed)	122,663	125,544	+2,881	3,004
STATE REIMBURSED PROGRAMS				
General Office Practice and Business Machines (T & I)				
Day ----------	3,835	3,465	- 370	64
Evening ----------	8,166	9,139	+ 973	220
Registered Nurse Trng	------	119	+ 119	--
Total State-Reimbursed Only	12,001	12,723	+ 722	284
Total Trades & Industries	70,805	71,126	+ 321	2,173
GRAND TOTAL ----------	134,664	138,267	+ 3,603	3,288

SCHOOLS MUST HELP 26 MILLION YOUNGSTERS WORK THEIR WAY THROUGH THE CHALLENGING DECADE AHEAD

OF EVERY TEN YOUNGSTERS NOW IN GRADE SCHOOLS

THREE WILL NOT FINISH HIGH SCHOOL

———————DROPOUTS

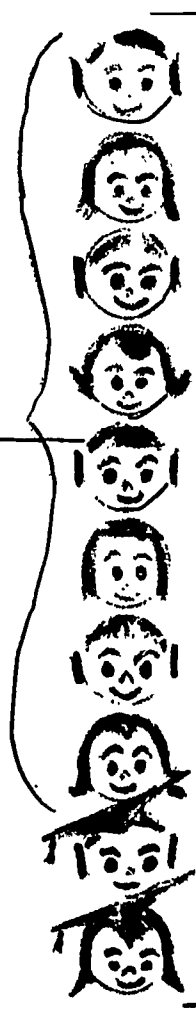
SEVEN WILL EARN A HIGH SCHOOL DIPLOMA

THREE WILL GO TO WORK, SOME AS WIVES, AND MOTHERS

FOUR WILL CONTINUE THEIR EDUCATION

EIGHT OUT OF TEN WILL NOT COMPLETE COLLEGE

....even though college enrollments will double!



DROPOUTS

HOW WILL THEY FARE IN THE CHANGING WORLD OF WORK

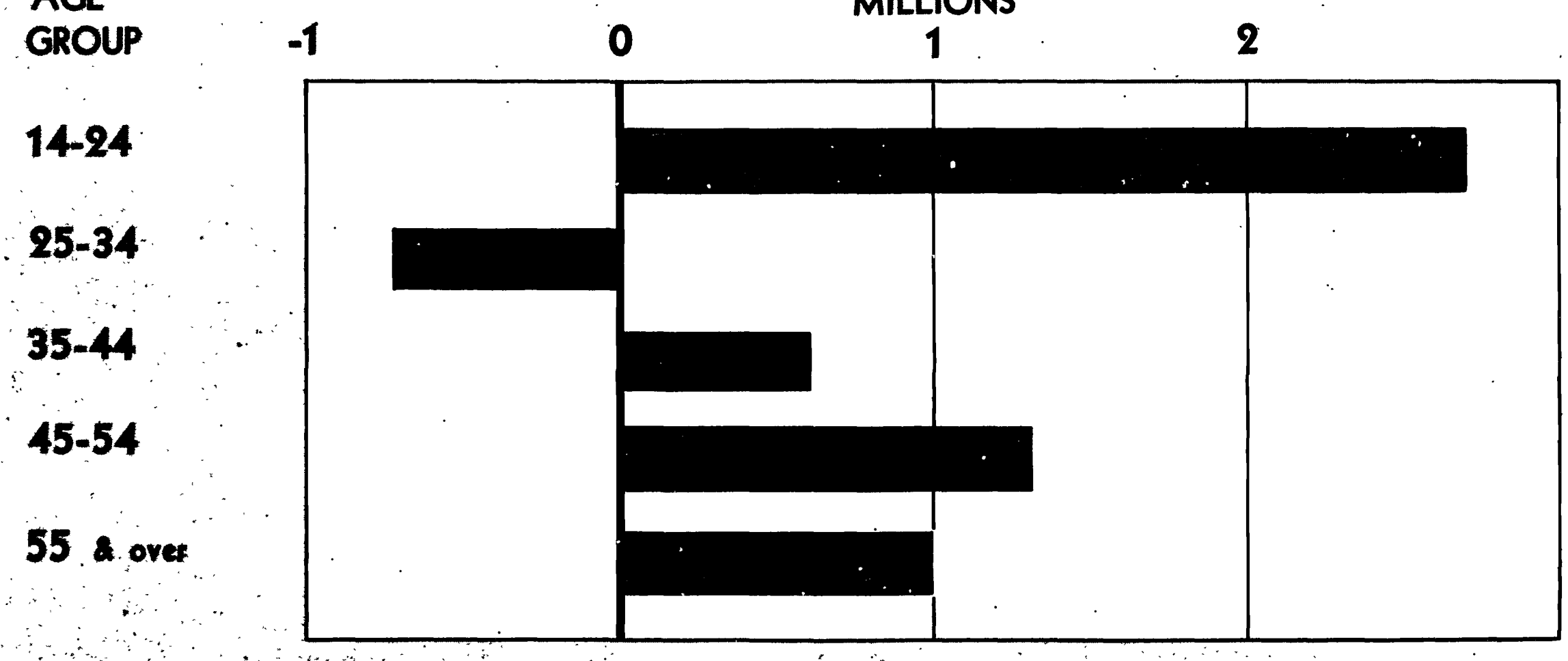
———DROPOUTS

ONLY TWO WILL FINISH FOUR YEARS OF COLLEGE

Source: President's Panel of Consultants on Vocational Education

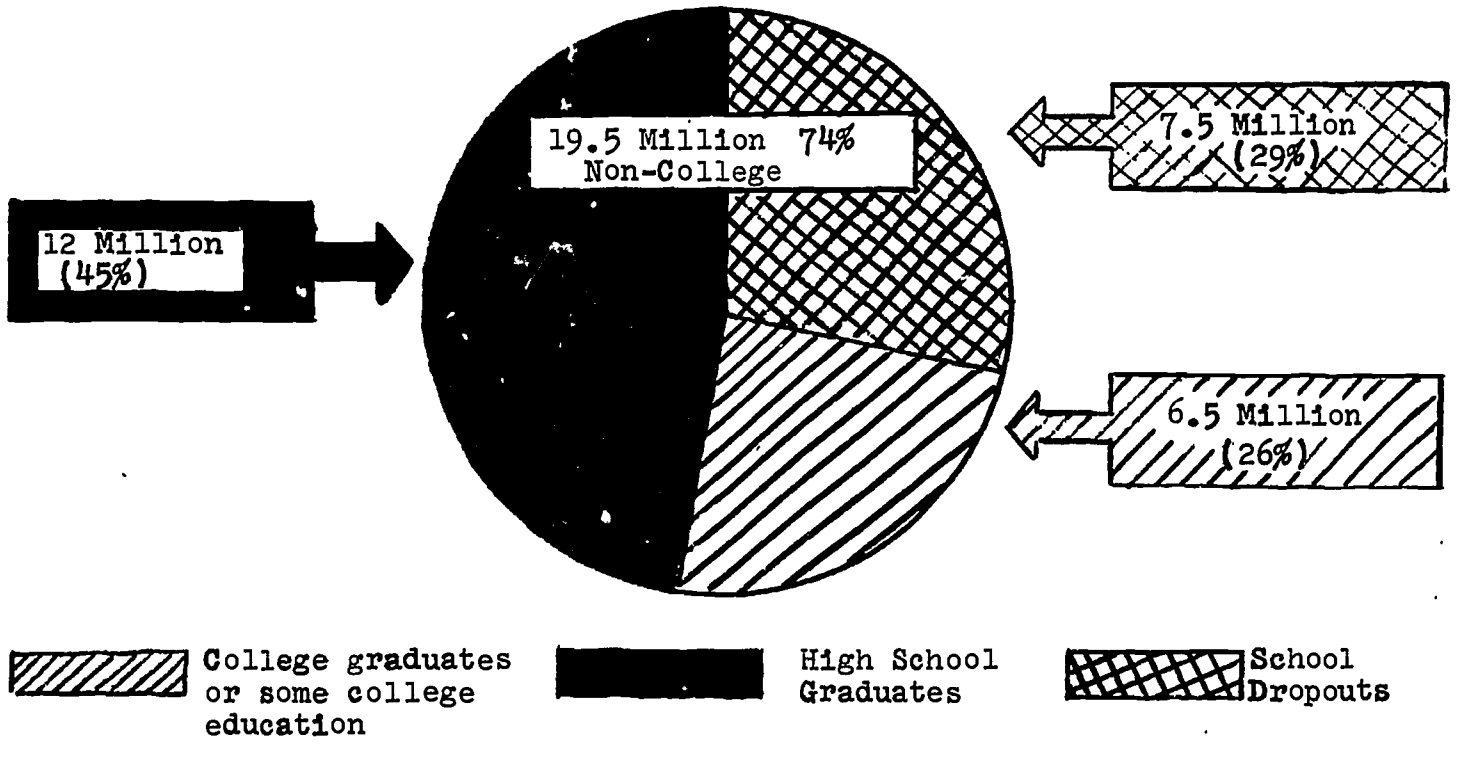
- *The male labor force will increase by 5 million — all in the younger and older age groups.*

MEN IN THE LABOR FORCE
Change in size of age groups, 1955-65



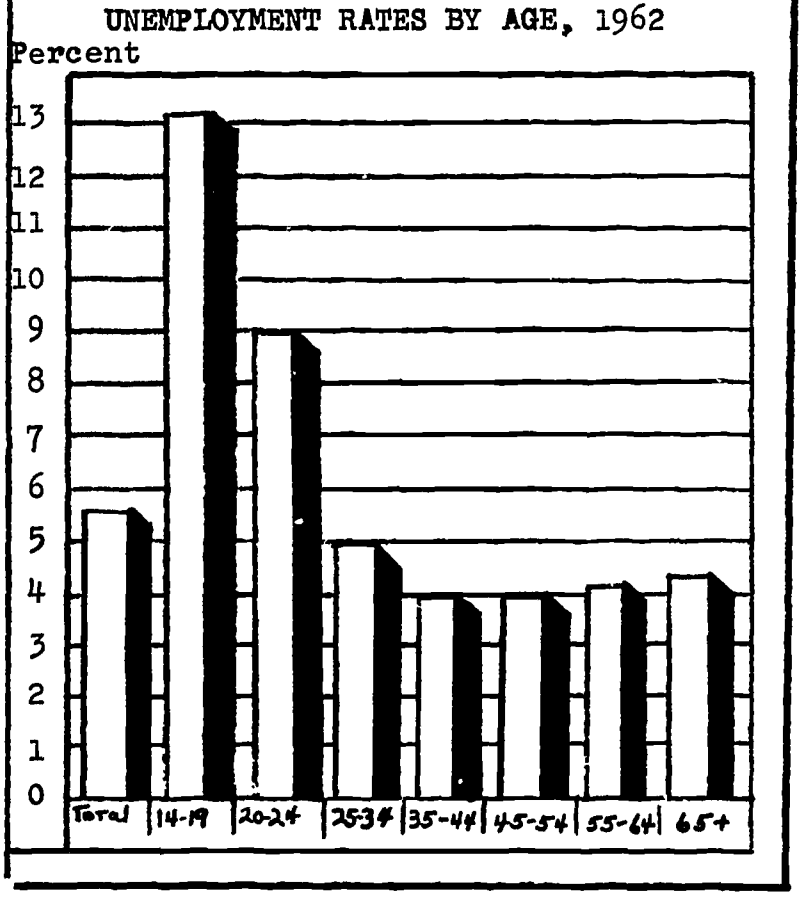
ALMOST 3 OUT OF EVERY 4 NEW YOUNG WORKERS IN THE 1960's WILL HAVE A HIGH SCHOOL EDUCATION OR LESS

(Percent and numerical distribution of the 25 million new young workers)

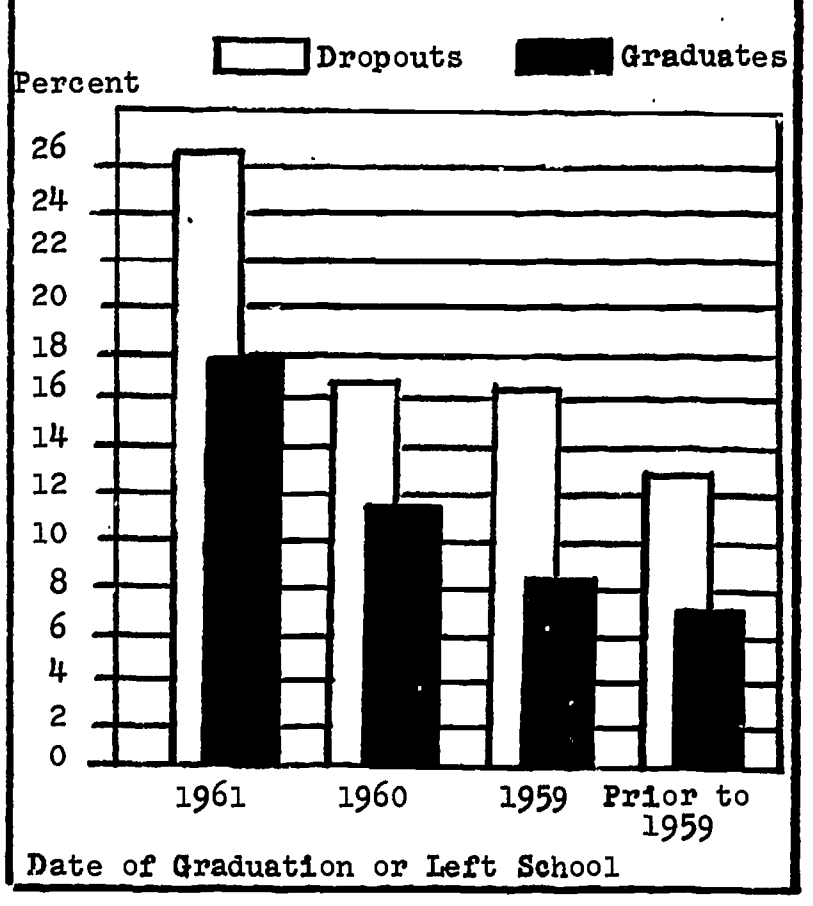


Source: U.S. Department of Labor

Young Workers have the Highest Unemployment Rates



Unemployment Rates in October 1962 for High School Graduates Not Enrolled in School and for Dropouts. (Ages 16-24)



SECTION III

THE NEED FOR AND DETAILS OF VOCATIONAL-TECHNICAL EDUCATION

WHAT MAKES EDUCATION VOCATIONAL-TECHNICAL

Vocational-technical education is that type of education which trains people directly for useful employment and aids in keeping them employable. It is not designed to lead to a college degree but is concerned with the development of skills, abilities, understanding, knowledges, attitudes, working habits, and appreciations needed by workers to progress in employment. It covers five basic areas: agricultural education, distributive education, home and family life education, office occupations, and trade-industrial and technical education.

The following characteristics of education make it distinctly vocational:

1. Education is vocational-technical when it is designed specifically to improve the efficiency of an individual in a specific occupation -- either as a preparation for work or supplementary to the duties of employed workers.

2. Education is vocational-technical when it is taught and learned in its relation and application to the actual work of a specific occupation.

3. Education is vocational-technical when it is of more value to one who will pursue or is pursuing a specific occupation.

4. Education is vocational-technical when the learner needs it and will apply it to useful and productive work.

5. Education is vocational-technical when the necessary skills and knowledge of a specific occupation are being taught and learned in their practical relationships.

The content of a vocational-technical course should include everything, from every source, that will add specifically to the individual's proficiency in the occupation. Such a course may include related physics, English, mathematics, chemistry or biology, if needed to make him a more efficient worker. Only the information that can be shown to make a direct and specific contribution to the efficiency of the learner in the occupation should be incorporated.

Learning goes on all the time; each pupil learns at his own rate in terms of what he perceives and considers significant. Learning is a personal process.

In any learning situation there are certain limitations on the learning that pupils can do. A pupil is limited in what he can learn in any given situation by his previous experiences.

It has long been known that learning takes place more readily and is more permanent when there is strong motivation for learning. It has been well established that one can learn by doing and that the greater number of senses that are employed in learning the more permanent learning becomes. The U. S. Navy during World War II, concluded that people generally retain 10 per cent of what they hear, 20 per cent of what they see, 50 per cent of what they hear and see demonstrated, and 90 per cent of what they themselves actually apply to a useful and practical situation.

The skills of an occupation are developed in a vocational course. Skills are the means through which technical knowledge is applied to the work of an occupation. Skills are the incentives and motivations for the mastery and use of technical information. Today's skilled craftsman must concentrate as much time upon the mastery and application of knowledge directly related to the occupation as upon the mastery of the skills.

It is this concept which brought vocational-technical education into existence and upon which vocational-technical education will continue to grow in effectiveness. The criteria for vocational-technical education are -- is it specific, is it practical, is it applicable to the immediate usefulness in the development of a competent worker in his chosen occupation. It is this concept which differentiates between the functions of vocational-technical and general education in the public schools of America. It creates a role for vocational-technical education which marks its importance to our future security and welfare, because it assures that vocational-technical education will equip our people for useful and satisfying lives as productive citizens in our technical society.

DEVELOPMENT OF VOCATIONAL EDUCATION

Vocational education is as old as man himself. A type of vocational education has been practiced since the time of the cavemen, when they hunted, fished, built shelters and in turn passed these skills on. During the colonial period of our country, materials were produced by the creative craftsman. As needs for more materials developed, the craftsman added apprentices and developed a work force. Early vocational education was entirely in the shop of the craftsman. There was very little change until the Industrial Revolution.

The development of vocational education has always been in response to a national need. This educational need was recognized with the passage of the Smith-Hughes Act of 1917, during the World War I period; the George Dean Act of 1937, during the depression of the 30's; the George-Barden Act of the World War II period; the National Defense Education Act of the cold war period and the 1962 Manpower Development Training Act to meet the crisis of training unemployed. The purpose of the 1963 Vocational Education Act is to improve and expand and make vocational education available to persons of all ages in all communities.

In Washington, around the turn of the century, a number of our larger high schools pioneered vocational education. Between World War I and World War II most of the high schools in the State added substantial numbers of courses in vocational education. During and after World War II these high-school vocational departments offered vocational courses for adults in the evening; this led to the development of the adult education program. From these adult education programs grew the State's post-high school vocational-technical schools. A number of these vocational schools later developed into community colleges.

Presently Washington has vocational education programs in most of the high schools, in seven vocational-technical institutes or schools and in 15 community colleges. The total enrollment in all of these schools -- day or evening -- is more than 140,000 individuals per year, or five percent of Washington's total population. No other state in the nation is serving their state to this extent.

NEED FOR VOCATIONAL-TECHNICAL EDUCATION

Vocational education is facing its most significant development since its beginning with the Smith-Hughes Act in 1917. The demands of the home, business and industry have had their impact upon state legislatures and the United States Congress. Considerable legislation affecting vocational-technical education has been enacted in these early 1960's.

Two recent forces have affected vocational education. The first, recognition of the nature of the space age, which accented science and academic excellence. The second, the changing world of work and the realization that only 12 per cent of our society do aspire to professional status, and that most tasks in the United States require skills and knowledge which can be developed by an expansion of vocational education. Previously, post-high school education concerned itself primarily with the 12 per cent to be employed in the professions, but now, industry has become so complex that most of the skilled and semi-skilled jobs require substantial vocational training. No longer can job training be passed from father to son or mother to daughter, because many of the jobs in our work force are new and require complex specialized technical training.

Unemployment is presently a problem in America. At the same time there is a critical shortage of qualified skilled workers. Manpower surveys show a continual decreasing demand for the unskilled workers. Our technological development is constantly and urgently requiring additional skills and knowledge. America's economic future depends on her ability to train a work force of skilled and technically qualified people.

Throughout this state and nation, vocational education faces a real challenge. Occupations in business, agriculture, industry and home are being changed by our use of automatic, self-correcting machinery and electronic computers. The whole process of production is being accelerated by research. For instance, in the 1960's there will be more money spent each year on research than was spent from the colonial days through World War II. Our productivity has increased three per cent a year; during each generation, man's productivity doubles. People do much more work in a forty-hour week than our grandfathers did in seventy hours. By the year 2000 people will do more work per day than they presently do in a week. Men and women will be going to school longer and retiring earlier. Present surveys indicate that man will have to be trained three to five times during this short work span; he will spend most of his work life going to school part time. In view of these facts, youth today should take a much more organized and serious look at themselves.

The needs of industry are changing rapidly. A greater degree of flexibility in program will be necessary in the future. Vocational educators in this state have adjusted to the needs of industry.

An example of this change in program planning has been in the rapid development of Data-Processing Training in 1960. In 1962, more than 2,000 students were enrolled in public school training centers in data processing programs.

The dramatic population growth of the 1950's will continue through the 1960's. Nationally the increase will be about three million per year for a total increase of 28 million for the decade. The labor force will grow even faster than the population in the next ten years. It is expected that the number of workers will increase by 13.5 million to a total of 87 million. Many changes in the age of the labor force will accompany this growth. Young persons under 25 and workers over 45 will account for 90 per cent of the increase in the labor force. By 1970, almost 50 per cent of the women aged 35 to 64 will be in the labor force. The largest increase will be in the 45 to 54 age group. Women 35 years and over, whose children are in school or have left home, find it easier to accept employment outside the home. Changes in industry and the growth of trade and services are providing increasing employment opportunities for women. Three million more women will add a wage earning occupation to their homemaking responsibilities by 1970.

Current trends indicate that 70 per cent of the young workers will be high school graduates. The school dropouts get the lowest paid jobs and account for a high percentage of unemployed. We find that approximately 24 per cent of high school dropouts are unemployed. This is the same percentage of unemployment as during the height of the depression of the 30's.

In all services of vocational education in our state we have presently enrolled 13,000 out-of-high-school youth and adults taking full-time preparatory training for employment. On the other hand we have more than 60,000 unemployed adults in this state.

Nearly half of the work force for the 70's will have to complete their training within the remaining years of the 60's. In fact, we are now starting to train the work force for the year 2000. These are the leaders of the work force for the year 2000. An 18 year-old student today will be a 55 year-old worker in the year 2000.

These projections of the need for trained manpower during the 1960's, indicate that vocational education must be continually changed and increased to meet the needs of this growing state and nation.

TYPES OF INSTITUTIONS OFFERING VOCATIONAL-TECHNICAL EDUCATION

Washington's vocational-technical education is offered in these educational institutions -- the high school -- the vocational-technical institute or school -- and the community college.

Functions of Vocational-Technical Education:

-- orientation courses or general information courses, for the beginner, to impart general understanding and appreciation of the occupation, are offered in the high schools,

-- full-time day preparatory programs stressing competency, which prepare students to enter an occupation, are offered in high schools, community colleges and vocational-technical institutes,

-- evening extension upgrading, updating or retraining in vocational education programs for employed adults is available in all of the above schools as the need occurs.

Students who have completed their high school education or are 18 years or older may enroll in a community college or at 16 years of age in the vocational-technical institute. A student entering either one of these types of schools usually receives a counseling and testing program to determine his ability to profit from this type of instruction. These tests are mainly to measure his potential to learn rather than his knowledge to enter these programs. Some of the schools have waiting lists and it is desirable to contact the school as far in advance as possible to secure a convenient entry date.

Vocational instructors for these programs are recommended by the local schools for certification by the State Board for Vocational Education. Professional education qualifications, and/or demonstrated knowledge through evidence of successful employment in the occupation in which they are to teach are criteria used for selection of instructors.

These occupational programs are guided by advisory committees consisting of employers and employees who understand the requirements of the occupation. The advice from this committee insures that the training program operated by the school is designed to meet the needs of that occupation in that community.

The shop or laboratory facilities, equipment and instruction simulates as near as possible the conditions and practices used in the occupation.

More and more, vocational students should plan to continue their education after employment through study in high schools, at technical institutes, community colleges or programs sponsored by industry.

HIGH SCHOOL VOCATIONAL EDUCATION

Vocational education in Washington's high schools is offered in the comprehensive high schools throughout the state and not in specialized vocational-technical high schools as in some other states. High school vocational program objectives are as follows:

1. to provide the basic education for our society and the educational foundation upon which specialized vocational education can be built,
2. to provide exploratory experience for the world of work so the student can better select his occupational goal,
3. to provide vocational education designed to prepare the student for an advantageous entry into an occupation or to start a vocational program to be continued in post-high school institution,
4. to provide evening adult education when there is no post-high school institution in the vicinity.

Most comprehensive high schools offer substantial vocational education programs in the fields of agriculture, home and family life and distributive education. In these fields exploratory training for the industrial occupations is usually done through the industrial arts program. Some high schools offer vocational training in this field following the industrial arts program. Where a high school offers little or no vocational training and there is a post-high school vocational program near, students may find it possible to spend half a day in the vocational school and the other half day completing his high school.

Depending on his interests, abilities, energies and occupational goal, there are three basic plans from which students can select. In some cases these plans can be combined. Not all schools have these three plans but in many cases similar arrangements can be made on an individual student basis:

Plan 1 -- is designed to provide broad exploratory work in several or all of the five basic areas: agriculture, distributive education, home and family life, industrial arts and business and office occupations. Usually the student will follow this plan for one hour daily receiving an exploratory experience in each of the five areas while the remainder of the day is spent in the regular academic program.

Plan 2 -- is designed to provide exploratory experiences along with some skill training as a student narrows his goal to work in one of the basic fields. Usually the student will attend occupational classes for one or two hours daily along with an academic program.

Plan 3 -- is designed to provide broad skills and technical knowledge within one of the five basic areas after a student has selected the occupational area through which he wishes to enter the world of work. Usually he will follow this plan for two or three hours daily along with regular academic work.

There are indications that most students will find it necessary to continue their occupational training programs in post-high school institutions to reach the level of training required in the changing world of work.

After high school a vocational student has three choices:

1. he can go into the world of work upon graduation,
2. he can continue his occupational training and/or follow a new occupational training program in a vocational-technical institute or community college,
3. he can enroll in a 4-year university to follow a professional 4-year degree program providing he meets the entry requirements.

VOCATIONAL-TECHNICAL INSTITUTES IN WASHINGTON

Washington currently has seven vocational-technical institutes or schools and they have the following basic objectives:

1. to offer training in specific skills,
2. to provide training or retraining to workers whose skills and technical knowledge must be updated,
3. to provide retraining to workers whose present jobs will change due to automation or economic conditions,
4. to complement general education by offering specialized training with/or after the high school general education program,
5. to provide specialized training for groups such as: related training for apprentices or other employed workers and to assist in the development and improvement of supervisory personnel in all areas served by vocational-technical education.

The first of these schools was established over half a century ago and the last in 1962. Their training programs have doubled in the last ten years. They offer specialized vocational-technical education for all ages from senior high school to senior citizens.

Because of the specialized nature and the singleness of purpose the vocational-technical institute gives the student a more intensive training toward his occupational objective; he is able to go to work in a shorter period of time. These institutions are well-housed and are well equipped with the latest instructional equipment and training aids.

A student can choose from four basic plans depending upon his interests, abilities, energies and occupational goal:

Plan 1 -- is designed in cooperation with surrounding high schools. Schools that have limited or no vocational programs can send their students to the vocational-technical institute on a half-day basis for their occupational training and the student can return to his high school the balance of the day to complete requirements for high school graduation.

Plan 2 -- is designed as a part-time occupational training program where the student spends approximately half his time at the school taking vocational subjects and the other portion of his time working on the farm, in the home, in business, or in industry. This cooperative plan between the school and industry can follow a variety of scheduling techniques; length of time depends upon the occupation for which the cooperative training is designed.

Plan 3 -- is designed as a full-time preparatory pre-employment training program. The student spends six hours per day for approximately two years. Some schools operate during the summer. This provides approximately 2500 clock hours of instruction -- most of which is spent in the shop or laboratory. Related subjects such as science, mathematics and English are integrated with this instruction.

Plan 4 -- is designed to provide an opportunity for employed individuals to improve update and expand their skills and to provide retraining for unemployed adults. These courses are offered at various times of the day or night depending on the availability of the facilities and the times suitable to the employee's schedule..

These institutions operate on a unique educational system -- the ungraded program -- individual instruction - - enrollment at any time and graduation throughout the year. The following points explain this system.

1. ungraded program - means a student's instruction starts from where the student's knowledge and experiences are and he stays in the institution until his skills and knowledge reach the necessary level for employment, providing he is profiting from the instruction.

2. individual instruction - means that the student progresses through his training program as fast as his abilities and energies will carry him. The whole class does not move at the same rate. Each student has his own training projects to perform. This provides for individual differences in the student's background and rate of learning.

3. continuous enrollment - means that it is possible for a student to enroll at any time during the year when there is an opening in the class.

4. graduation - graduates will leave the institution as they complete their program. This enables them to take jobs as they are available.

Vocational-technical schools generally award their students a Certificate of Proficiency for short courses, a Certificate of Completion for the one- or two-year programs, and in some cases, may award a diploma after six months of successful employment.

VOCATIONAL-TECHNICAL EDUCATION IN THE COMMUNITY COLLEGE

Washington has 15 - 17 by 1965 - community colleges. The community college developed from two directions - upward from the high school and downward from the university. It is distinctly an American institution to help bridge the gap between high school and university and to make post-high school education available to more people. It has the following basic objectives, although this booklet will deal in detail only with the last two:

1. lower division, university parallel programs for those who seek extended education required by the professions,
2. to provide additional education for youth and adults in the day and evening courses for those seeking to upgrade or change employment,
3. general education to increase civic and social competence,
4. to provide a concentrated program of vocational or semi-professional education for students who wish to enter business, industry, agriculture or the home,
5. guidance for those who need it.

Vocational-technical education in the community colleges is occupationally centered education. It is designed to aid students in obtaining gainful employment, to improve their skills and technical knowledge and to provide a source of skilled manpower for business, industry, the farm and home.

The community college in the State of Washington is a relatively new development. It is designed to provide for the total educational needs of the community. Originally junior colleges offered only education designed for transfer to four-year universities. When the college offers the occupational training needed for the world of work in that community, adult education and community service programs, it becomes a community college.

Some community colleges offer a variety of occupational courses, but in others the vocational training opportunities are limited. There are a number of similarities in vocational education in the community colleges and the vocational-technical institute. The student objective in each institution is basically the same. The difference is in the way the instructional program is operated.

There are four basic plans from which a vocational student can make a choice, depending upon his interests, abilities, energies and occupational goals:

Plan 1 -- is designed to prepare students for employment in a minimum length of time. Such training concentrates on shop and laboratory without general education. Periods vary from three to six hours per day to meet specific requirements for employment. Some courses may also be taken in connection with present employment for upgrading or retraining. Students who successfully complete a minimum program are awarded Certificates of Completion.

Plan 2 -- is designed to provide an occupational centered vocational-technical education program of two years in length for the student who plans to go to work immediately upon fulfilling the requirements for an Associate Degree. The student will usually follow occupational courses in the shops or laboratories three hours per day, the remainder of the day is spent in occupationally related courses such as mathematics, science, communication skills, economics, drafting, etc., designed specifically around requirements of his chosen occupation.

Plan 3 -- is designed for the student who may wish to transfer with advanced standing to a senior college which offers a four-year degree program. He will usually earn an Associate Degree at the end of the second year. The student will spend three hours in occupational centered laboratory or shop training courses and spend the remaining two or three hours of his day taking academic, college transfer courses in general education.

Plan 4 -- is designed to help a worker improve his competence. It is offered in a part-time vocational education program to employed or unemployed adults at times when they are free to receive vocational instruction in any of the fields of agriculture, distributive education, office occupations, home and family life and trade-industrial and technical education.

Community colleges also offer a variety of student activities including inter-collegiate athletic programs, drama, forensics, music, lecture series, student publication, student government and a variety of social events which help him grow as an individual.

VOCATIONAL EDUCATION FOR ADULTS

The part-time training programs for employed people, usually offered in the evening, have expanded at a tremendous rate in the past few years. This is an indication of the growing need.

There is much evidence to indicate that this type of education will become an integral part of each adult's work life. Much of the updating and retraining of our work force will be done through these programs. Some of this retraining will be in short, concentrated courses, but most of it will be a continuous and gradual re-training as an individual's job requirements change.

This type of vocational education is complex and varied and it is difficult to briefly explain its full coverage and impact. Washington is leading the nation in this type of education. Presently, in all divisions of vocational education there are 80,000 employed workers enrolled. This means one out of every thirteen workers is annually enrolled in these programs. This is almost twice the ratio of any other state in the nation and is a significant reason why Washington has one of the best trained and highest paid work forces in the United States.

Basically, these evening vocational education classes for adults are designed for improving employed person's competence in their present jobs or for preparing these persons for advancement. These classes may be offered by a school district in the high school's facilities, in the community colleges, or at the vocational-technical schools and institutes. Classes are offered around-the-clock or whenever adults are able to attend. Instruction is offered to develop laboratory or manipulative skills and may present scientific or technical and related information. The classes may be held for short periods of intensified instruction to meet the needs of workers for training in special phases of job competence; or they may be extended over a period of several years as are the apprentice classes. Many are offered at the request of work groups.

There is a growing trend to offer evening vocational courses on a continuous part-time basis; a series of courses are designed to lead to a student's major objective or occupational goal. These series of courses might extend to periods of one, two, or six years of part-time education; a certificate or an Associate Degree is granted upon completion of the program.

Vocational courses for adults are often taken continuously throughout the employee's life. Examples of courses are sales and mid-management training in business, courses for students in agriculture for farming and off-farm agricultural occupations, agricultural sales and services, child psychology, home and family living, trade extension, apprenticeship, nuclear and space technologies.

INFORMATION TO USE IN

THINKING ABOUT YOUR EDUCATION AND FUTURE

IN THE WORLD OF WORK

GENERAL INFORMATION ON THE WORLD OF WORK

Automation, mechanization, and scientific advances are causing many unskilled jobs to disappear.

Today's and tomorrow's jobs require higher skills, more maturity and judgment, and more experience.

More and more workers, both blue-collar and white-collar, are finding that their occupations differ materially from those of a decade ago.

Today, retraining and re-education are being demanded.

The Department of Labor currently lists 60 skills which are in short supply, each requires at least a high school education.

The Western and Southern States experienced the greatest relative increases in non-farm employment since World War II.

The Western and Southern States have had the highest percentage changes in manufacturing employment during the period following World War II.

In two-thirds of the states, farm employment is more than 10 per cent of the total.

The Agricultural occupations employ 40% of the working population. The Department of Agriculture estimates that more than 10 million workers are engaged in transporting, processing, manufacturing and selling farm goods.

The growing complexities in operating practices of the distributive trades accentuate the need for greater skills in the management and ownership of business.

A person employed in a distributive occupation is engaged primarily in marketing or merchandising goods or services.

Employment in the distributive field is widening in scope and increasing in number.

Programs in distribution are generally geared to specific types of merchandising industries.

Unless there is a substantial expansion in the training programs for those who enter the labor force, there will be 1,150,000 unmet needs by 1970.

Technological changes have occurred with such rapidity in recent years that the supply of technical manpower has failed to meet the demand.

At present, the number of technicians employed as supporting personnel is approximately three-fourths of the number of engineers and scientists together.

To adequately meet the needs, the number of technicians should be about 5 times the number of engineers and scientists added together.

It is estimated that 200,000 new technicians will be needed annually for new jobs and replacements. This does not include technicians in agriculture, business and the health and medical fields.

Changes occurring in society always reflect in the home.

The woman in the home today is likely to be both homemaker and wage earner.

The need for new patterns of homelife are widely accepted.

Homemaking education for adults can help homemakers adjust to change.

New jobs are being created daily by industries in this technological age.

The President's Committee on Migratory Labor estimates that there are 800,000 migrant farm workers -- 450,000 workers, male and female and 350,000 children. 18,000 of these are in the State of Washington.

The needs of industry are far beyond the capacity of present programs which provide training for the skilled crafts and other industrial occupations.

The expanding field of technical occupations offers many and varied employment opportunities to women.

In data processing, women will also be employed as programmers.

4,600,000 working women are the sole support of their families in the U.S. Almost 2 million have children under 18 years of age.

THE CHALLENGE OF THE 1960's

The United States has the manpower resources for a much higher standard of living in the 1960's.

The number of workers will grow fast, by nearly 20 per cent -- 13.5 million to 87 million by 1970.

Young workers will account for the greatest share of the working population in the 1960's.

The number of women workers will increase by nearly twice the rate for men.

Industry will need workers for new types of jobs.

The United States has a highly mobile labor force.

During the 1960's, 2 out of 5 workers will be 45 years or older.

More people will choose to work part time.

Negro workers represent an important manpower resource.

In the 1960's, we will have more people needing more goods and services.

The rate of population growth in our state will be greater in each age group than in the rest of the United States.

Our population will increase from 180 million to 208 million, up 28 million, or 15 per cent in the decade.

There will be 10 million more families.

WE MUST:

Improve individual competence, both present and prospective, and across the board to all people.

WE MUST:

Expand and improve all forms of training for workers on the jobs, this includes retraining, upgrading, updating, and related instruction for apprentices and other skilled workers.

POPULATION TRENDS

A person's average working life has increased from 32 years to 42 years.

If births continue at recent rates our total population will rise to 190 million by 1965, 214 million by 1970 and over 300 million by the year 2000. The United States population is growing at a rate of 1.7% per year.

Between 1945 and 1955, the elementary school enrollment was 27.7 million; by 1965 it is expected to soar to 35.7 million.

By 1965 the secondary school enrollment is expected to rise to 11.9 million -- a "whopping" 60 per cent increase in a decade.

A rapidly growing population demands more food goods and services.

Women outnumber men by 3 million and outlive them five to ten years.

LABOR FORCE

Three out of the four of those who enter the new labor force during the 1963-65 period will be young people.

Young people between the ages of 14 to 19 in the labor force in this state will be 142,500 by 1965; and 157,700 by 1970.

During the entire decade of the 1960's, about 19.5 million of the 26 million new workers entering the labor force are expected to have a high school education or less.

Studies by the National Science Foundation indicate that less than one-half of the top third of our high school graduates do not go on to college. They take jobs at less than their potential capacity, overshadowing other young people who could handle the jobs adequately.

By the late 1960's, 3 million young people will be entering the labor force each year.

During the school months of 1962, from 600,000 to 800,000 young people between the ages of 16 to 21 -- as many as the entire population of San Francisco, St. Louis or Boston -- were out of school looking for jobs.

In manufacturing, the number of production workers declined significantly in recent years; the production of workers has continued to rise.

During the 1960's, 13 million more jobs will be needed to provide for labor force growth alone.

Employment in service industries -- mainly trade, finance, State and local government, and other services -- may increase nearly 30 per cent during this decade.

By the middle of 1963, employment increased to over 70 million.

One worker in every three is a woman.

In a recent year, 8 million workers made 11-1/2 million job changes.

About seven per cent of all male workers are living in a county different from the one they were in the year before.

Industry will need workers for new kinds of jobs.

The biggest increases will occur in occupations requiring the most education and training.

EDUCATION

Research has shown that those who have studied in vocational education programs in high school do equally well in college.

In recent years, a tenth of the pupils entering school left before finishing their ninth year.

Basic education has become increasingly important in the economy in which the proportion of white-color jobs are growing.

Vocational education is the formal instruction intended to fit persons for work in specific occupations or a group of occupations.

The Federal role is to encourage States to establish and expand needed vocational education programs; to provide guidance, assistance, research and publications to help the states in developing programs.

Under the work-study programs, students spend half the day in school and half in paid employment.

Programs in distribution are organized on the work-study basis; they are usually geared to specific types of merchandising.

The technical training courses fall within the fields of electricity, electronics, mechanical design, mechanical production, civil and highway construction, industrial chemistry, aeronautics, instrumentation, business and scientific data processing, and forest products.

Skilled workers in some 300 occupations under 90 trade classifications are developed through apprenticeship training in the United States.

Federally assisted training and retraining for specific occupations were given major impetus by the Area Redevelopment Act of 1961.

An objective of the Manpower Development and Training Act of 1962 is to train or retrain 400,000 persons between 1963 and 1965.

The Trade Expansion Act makes broad provisions for the retraining of workers adversely affected by the reduction of foreign trade.

The purpose of the 1963 Vocational Education Act is to maintain, extend and improve existing vocational education programs and to develop new programs of vocational education for persons of all ages in a community -- those in high schools, those who have discontinued their formal education but who wish to enter the labor market, and need to upgrade their skills or learn new ones, and those with special vocational handicaps.

Virtually all of the industry and occupational trends foreseeable for the next decade or more underlie the need for increased education for all entering the labor force.

Most of the unemployed who have reached or passed their 45th year lack education.

Our state enrollment of students increased by 20,000 during the 1963-64 school year.

Approximately 12 million youngsters under the age of 18 were in families whose total money income was less then $3,000 in 1961. Many of these young people left school in order to supplement the family income.

Children of migratory families face particularly difficult problems of education and training.

Occupations that require the most education and training have grown the most rapidly.

It is estimated that people will retrain four or five times during their work life.

National statistics show that not only does a high proportion of vocational education graduates enter occupations for which they have trained, but there is also evidence that they earn more money than those who have not had formal preparation for employment.

The impact of national crises, emergencies and recessions has been lessened by the public vocational education program.

An ideal program of vocational education for high school youth would provide for every student an opportunity to undertake training in the occupational field of his choice, based upon sound vocational guidance.

Vocational education programs are geared to the needs of the employers.

One of the major factors in promoting economic growth is adequate provision for developing and upgrading the vocational competency of the people.

We must increase the supply of workers; we must raise the qualifications of the labor force. The key is education and training.

Unless there is a substantial expansion in the training programs for those who enter the labor force there will be 1,150,000 unmet needs by 1970.

Education for occupational competency is a lifelong process that starts when one acquires his first basic skills and concepts and ends when he quits his last job.

People adapt to the world of work in direct relation to the quality of their basic education.

Better schools should be provided for children in communities of limited resources.

Money spent to improve and expand the education available to Americans is a wise investment of tax money.

Evening classes in local schools can provide further education economically and conveniently without loss of work time.

Education will have to change more in the decades ahead to keep pace with changing conditions.

Society must make a greater effort to increase the productivity of those who are in the low wage bracket and most often are unemployed.

Education helps remove the disparity in income and employment opportunity.

A problem arises when people find their skills become obsolete in the late years of their career.

The reason a teenager has difficulty finding a job is basically that he failed to get the education and skills necessary for employment.

Vocational education programs complement the general education programs.

There are many vocational education programs in high schools throughout the state.

Washington has seven vocational-technical institutes; the most recent was established in 1962.

The four divisions of vocational education -- Agriculture, Distributive Education, Home and Family Life Education and Trade and Industries -- are found in vocational-technical institutes as well as high schools and community colleges.

Total enrollment in vocational education is in round numbers about twice the total enrollment of the five public higher institutions.

Total enrollment in vocational education classes in our state is about the same as the enrollment in public high schools of this state.

Readjustment to new occupations involves the development of a set of attitudes toward change as well as new knowledge and skills.

Vocational education helps to give definite purpose and meaning to education by related training to specific occupational goals.

Vocational education for adults plays an essential role in maintaining America's efficiency in production, distribution and consumption, and, as a consequence, its high standard of living.

Vocational education protects our national prosperity.

Students must have ability and interest to learn. Students learn by doing.

Learning by doing must be done on realistic jobs and equipment.

If some 141,000 persons are to be graduated from technical training programs annually to meet the needs of American industry, great expansion will be required in enrollments, in present programs and in new programs.

The changing geography of industry is bringing the need for training to areas of the country not previously concerned.

A greatly expanded program in research in vocational education is needed.

The ultimate quality of vocational education depends largely on the quality of the faculty.

The occupational future of workers will depend as much upon their ability to communicate ideas as their manipulative skills.

The library supporting vocational education should be one which will encourage a student to develop habits of consulting the press and journals in his field.

Employment counseling in the public employment service is a specialized service provided to applicants who need help in choosing a vocation, in making a vocational change, or in solving problems which may be preventing them from obtaining or holding jobs in fields for which they are otherwise qualified.

Counseling services in the schools and public employment offices should be expanded.

THE CHALLENGE OF THE 1960's

Education and training will get more emphasis in the 1960's.

The kind and amount of education young persons receive affects their lifetime careers.

WE MUST:

Improve individual competence, both present and prospective, and across the board to all people.

WE MUST:

Expand and improve all forms of training for workers on the job; this includes retraining, upgrading, updating, and related instruction for apprentices and other skilled workers.

DROPOUTS

A dropout is a pupil who leaves school before graduation or completion of a program of studies and without transferring to another school.

Dropouts do not form a neat homogeneous group with unique problems.

In 1956-57, 41,144 pupils enrolled in grade nine of this state, four years later 11,449 of the 41,144 did not graduate. This means about 28 per cent did not complete high school.

A survey of dropouts by the Office of Superintendent of Public Instruction in this state in grades 10, 11 and 12 - total enrollment of 101,424 - for the year 1960 - 1961 showed a dropout of 5,616 or 5.5 per cent: the number of boys who dropped out of grades 10 and 11 exceeded the girl dropouts; in grade 12 it was almost identical for both boys and girls. For 1963, these figures totaled 2,345 juniors and 1,670 seniors - less than the 1962 figures of 2,413 juniors and 1,699 seniors.

Washington ranks 14th among the states in number of high school graduates.

The problems which finally result in a dropout begin in the elementary school.

On the national level, the trend shows there will be 7.5 million dropouts - 29% who will not have completed high school.

A dropout will find that there are many avenues open to him to get an adequate education and training for employment.

A dropout may go back to high school and earn his high school diploma.

A dropout may attend an evening adult education program.

A dropout may attend a vocational-technical school or some post-high school program and transfer his credits back to high school for graduation.

A dropout can contact a local Employment Security Office for occupational counseling, information on training opportunities and job information.

Tests indicate that many dropouts have the capacity to complete their high school studies.

He can pass the "general education development" test which is the high school equivalent.

He can enroll in a community college and graduate with an Associate in Arts Degree without graduating from high school if he is 18 years of age.

School dropouts suffer most from unemployment and have greater difficulty finding work.

Young people of low educational attainment find it difficult to qualify for entrance in many programs under the Manpower Development and Training Act.

THE CHALLENGE OF THE 1960's

Changes in the economy and scientific developments are creating many new occupations.

In 1970 a farmer will produce food for himself and 35 others; he now produces food for himself and 27 others.

The entry of America into the space age is creating thousands of new jobs.

Many industries will continue to grow at the same rate as the population.

As the economy grows, changes will take place in its industrial make-up.

WE MUST:

Improve individual competence, both present and prospective, and across the board to all people.

WE MUST:

Expand and improve all forms of training for workers on the job; this includes retraining, upgrading, updating and related instruction for apprentices and other skilled workers.

UNEMPLOYMENT

About 1 in 6 of all the unemployed who are out of school are 16 to 21 years old.

Young people who are unprepared to take jobs available today will be less prepared tomorrow as hiring requirements rise.

These young people differ widely in many personal characteristics. They have a wide range of abilities and attitudes toward work and the world about them.

The average per cent of unemployment in this state is 5.5 to 6.2 per cent; it affects 74,900 people. The incomes of these people are low, giving them very little to carry them through the unemployment period.

Unemployment among unskilled workers in 1962 was 12.4 per cent.

In 1962 non-white made up 11 per cent of the labor force, 22 per cent of the unemployed and 26 per cent of the long-term unemployed.

About 13 per cent of all the unemployed in 1962 who had been jobless for 15 weeks or more were young people under the age of 20.

The average migrant worker is underemployed.

Approximately three out of four - 73 per cent - of high school nongraduates are unemployed.

Recent studies have shown close correlation between youth unemployment and major social problems.

According to the United States Department of Labor, 18 per cent of the June, 1961 high school graduates who entered the labor force were unemployed four months later.

A similar survey in October, 1960, found that 5 per cent of the 1959 and 1960 graduates were unemployed 27 weeks or longer.

THE CHALLENGE OF THE 1960's

WE MUST:

Improve individual competence, both present and prospective, and across the board to all people.

WE MUST:

Expand and improve all forms of training for workers on the job; this includes retraining, upgrading, updating and related instruction for apprentices and other skilled workers.

YOUNG PEOPLE TODAY

There are over a million academically gifted teenagers... There are over a million married teenagers.

There are 11 million teenagers today... They spend $6 billion a year of their own money.

Young people today have to make more decisions.

Many of our young people do not understand the sociological and economic values of work.

There is a greater eagerness on the part of adolescents today to become responsible members of adult society.

Adolescents are willing to break with the past.

Young people today have the responsibility and opportunity to make more choices.

A large group - 35 per cent will enter into the conduct of affairs of society. These young people will be very productive workers.

About 50 per cent of our young people will be content to accept the status quo. They do not take work so seriously.

Then there are 15 per cent that do not accept the commitment to work; some are hostile to organized society.

Many young people are not ready to accept adult life on the condition it is offered to them.

There are development tasks that young people must assume in order to grow up successfully.

A young person must set a reasonable goal for himself. He needs to organize his time and energy to achieve his goal.

Each young person is entitled to become a person in his own right.

Growing up is a matter of pushing out the limits of one's freedom of action.

Human talent is our greatest natural resource.

Young people are not locked to the status of their families.

Young people are observing creatures; they gain information about themselves and others through interaction with others.

A young person's level of aspiration is the level of expectations he perceives others hold for him.

Young people are influenced by the culture of their society.

Children select from their environment things that are meaningful to them.

What he selects from his environment depends upon what his upbringing has been.

Environment and attitude of elders in the environment exert a real influence upon young people.

Young people experience considerable struggle to become independent or to identify self.

Parents need to exert patience and fortitude in helping young people cope with their conflicts.

Young people need help to understand the relationship between their school experience and the world of work or life as a citizen in our society.

The parent's job is to inspire confidence, to encourage and express pride in their young peoples' achievement.

Education will get more emphasis in the 1960's.

WE MUST:

Improve individual competence, both present and prospective, and across the board to all people.

WE MUST:

Expand and improve all forms of training for workers on the job; this includes retraining, upgrading, updating, and related instruction for apprentices and other skilled workers.

BY 1970

People on the whole will be younger. There will be 20 million more of them; 47 million will be between the ages of 15 through 29.

The drift of people toward the West will continue.

There will be a real drift from the suburbs to the central cities.

Income after taxes will be higher.

Two out of three people will live in cities of 50,000 or more population; 88 per cent of our people will be living on 9 per cent of our land.

Police and fire departments will expand.

Street, water, engineering, electrical departments will expand.

Manufacturing industries will not add as many workers; automation tends to offset the growth.

The biggest gains in payrolls are seen in the service industries, in government, in finance, and real estate.

More workers will be employed in construction and trade.

The percentage of women in the work force will be 50 per cent.

Families will spend as much for services as they do for food, clothing, gasoline and soft goods.

Spending for services, also, will include outlays for hospital care, medical care, barber and beauty care, household utilities, rents and repairs, travel and recreation.

If worker-training programs are neglected, society can create a permanent pool of middle aged unemployables.

More workers will be over 45 years of age in 1970.

There will be 30 million women workers.

Employment will grow faster in the service industries; hotels, motels, restaurants, fire, police, sales, office, education, medicine - than in the production industries.

Business organization will increase in size and complexity.

Many people will enter the labor force for a short time only.

DURING THE DECADE OF THE 1970's

Basic research will be undertaken to determine the education needs of young people.

* How can each individual realize his creative potential?
* How is self-direction effectively developed?
* What skills are needed to equip one for the world of work?
* What pupil growth should be expected in the secondary school?

IN THE FUTURE

According to a recent report of Secretary of Labor, Willard Wirtz, in 1975:

* the nation'a labor force will reach 93 million - 27 per cent more than today.
* a much higher proportion of young people will be in the work force.
* increased importance of women - nearly half the women between 35 and 65 will be in the work force.
* construction employment will increase 52 per cent.
* State and County and City government employment will increase 51 per cent in all areas.
* employment in finance, insurance and real estate will increase 44 per cent.
* one/third more people will be in wholesale and retail trade.
* one/fifth more workers will be in manufacturing.
* one in twelve will make his living in farming as an owner or laborer.

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Eason, Fred J.; Porter, G. Herman
A Guide for the Establishment of Comprehensive Community Colleges in North Carolina.

North Carolina State Board of Education, Raleigh. Dept. of Community Colleges
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NORTH CAROLINA

The purpose of this bulletin is to help the people of a community make a survey of the need for a comprehensive community college in their area. The bulletin, arranged in question and answer form, supplies information about the origin, nature, purpose, and structure of such an institution, and is designed: (1) to aid local communities in determining whether conditions in the area are such that application for the establishment of a community college is feasible, (2) to guide them in their applications and to provide structure to their preliminary surveys (for this purpose a survey form is included), (3) to provide a step-by-step procedure to be followed, from the preliminary application to the granting of the charter, and (4) to suggest some representative types of programs to be offered. A sample one-year curriculum in automobile mechanics and a two-year curriculum in mechanical drawing and design, with course hours per week and quarter hours credit, are shown. (PS)

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A GUIDE FOR THE ESTABLISHMENT OF COMPREHENSIVE COMMUNITY COLLEGES IN NORTH CAROLINA

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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VT014669

Department of Community Colleges
State Board of Education
Raleigh, North Carolina

FOREWORD

The purpose of this bulletin is to help the people of a community make a survey of the need for a comprehensive community college in their area. Written by Fred J. Eason and G. Herman Porter of the staff of the Department of Curriculum Study and Research, it brings together the best thinking of authorities in the field and profits from experience in other states.

In most places, the people of one county will make up the proposed local administrative area. It is possible, however, for two or more counties to join together in seeking to establish a community college (See G.S. 115A-37).

Whatever the local support area, it is expected that student tuition rates will be equalized, state-wide. Out-of-state students, however, will pay a higher rate that reflects actual costs.

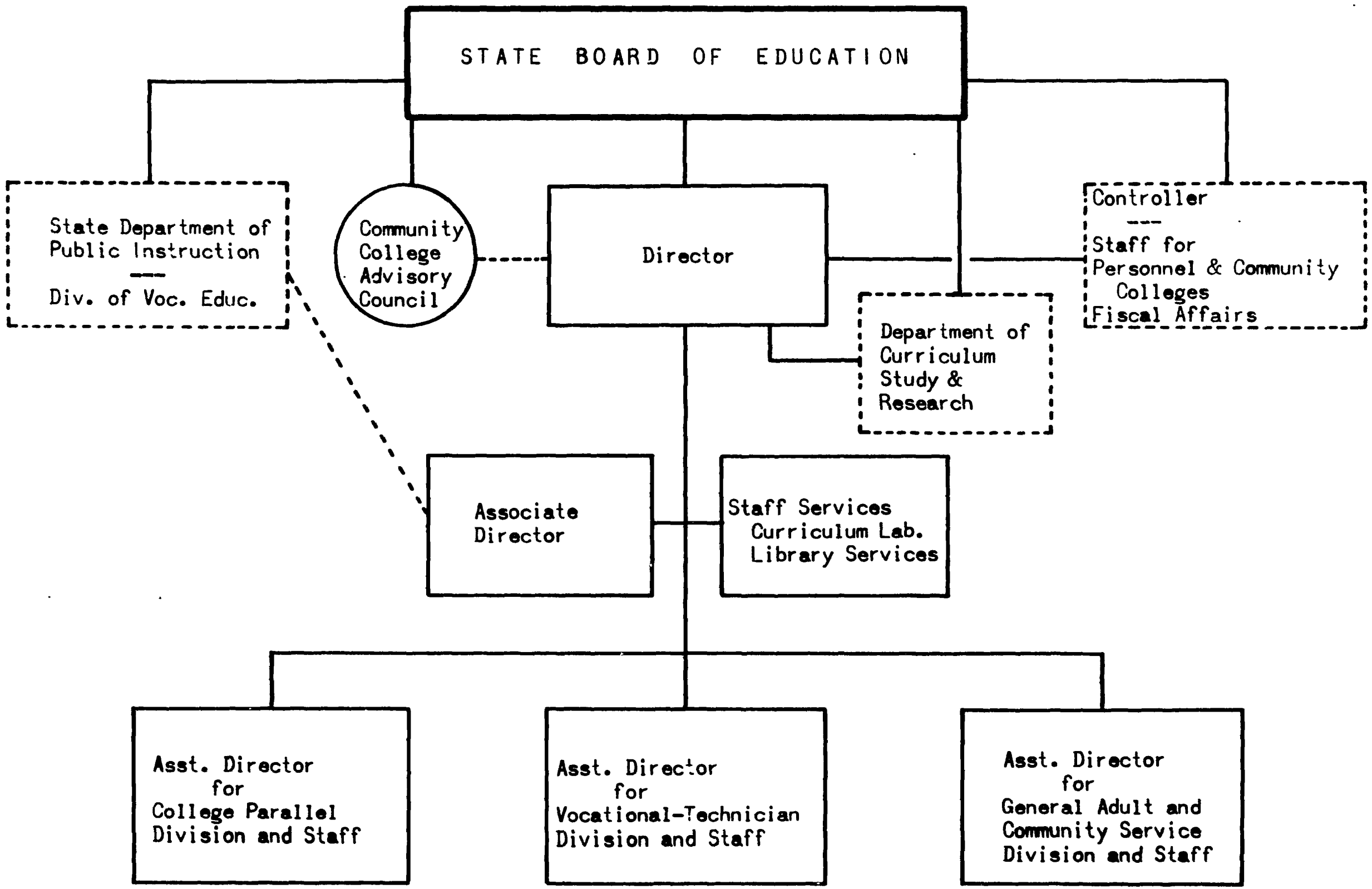
The organizational plan for the department set up by the State Board of Education to provide state-level administration of the system of community colleges, technical institutes, and industrial education centers is shown on the next page. Communities interested in establishing community colleges should contact this department for help in conducting surveys.

Signed

July 1, 1963

I. E. Ready, Director
Department of Community Colleges
State Board of Education
Raleigh, North Carolina

DEPARTMENT of COMMUNITY COLLEGES



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THE COMPREHENSIVE COMMUNITY COLLEGE

The future of North Carolina and the welfare of her people require that every citizen be given the opportunity to receive the kind of education and training that will best fit his needs. Free public schools have been provided for all, and an increasing number of young people are now being graduated from the high schools of the State. The number of these graduates who need and desire education beyond the high school has increased far faster than have provisions for this education. Over the next several years, facilities for education beyond the high school must be expanded rapidly, or many of our most capable people will never have an opportunity to reach their potential.

The need for such expansion and the methods by which it should be accomplished were studied by the Governor's Commission on Education Beyond the High School, or as it was popularly called, the Carlyle Commission. This commission completed its comprehensive report[1] in 1962, and recommended that the State develop one system of public two-year post-high school institutions offering college parallel, technical-vocational-terminal, and adult education instruction, tailored to area needs.

The 1963 General Assembly, following closely the recommendations of the Governor's Commission, enacted into law the necessary provisions for the development of such a system of institutions in the State.

This law (G.S. 115A) provides for the organization and administration of the twenty existing industrial education centers, some of which could expand into technical institutes or community colleges; for the existing public community colleges, which will remain as two-year institutions; and for the establishment of comprehensive community colleges. The responsibility for carrying out the provisions of the law is assigned to the State Board of Education.

Since a great deal of the information essential to the understanding of this program is written into law, a copy of Chapter 115A of the General Statutes of North Carolina is included with this bulletin.

This bulletin, arranged in question and answer form, supplies information about the origin, nature, purpose, and structure of such an institution, and is designed to render the following services:

1. To aid local communities in determining whether conditions in the area are such that application for the establishment of a community college is feasible.

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[1]The Governor's Commission on Education Beyond the High School, Education Beyond the High School, Raleigh, N. C., 1962, 133 pp.

2. To guide them in their applications and to provide structure to their preliminary surveys. For this purpose a survey form is included.

3. To provide a step-by-step procedure to be followed, from the preliminary application to the granting of the charter.

4. To suggest some representative types of programs to be offered.

I. WHAT IS A COMPREHENSIVE COMMUNITY COLLEGE?

A comprehensive community college is a non-resident, multi-purpose and community-centered institution that offers to high school graduates, and others who are not high school graduates but are older than the normal high school age, opportunities as follows:

1. College parallel programs, consisting of the first two years of regular college studies.

2. Technician programs, preparing students for jobs of this level in industry, agriculture, business, and service occupations.

3. Vocational programs of less than technician level, preparing students for jobs requiring different levels of ability and skill.

4. Short courses, that will meet the general adult and community service needs of the people of the community.

The programs which a comprehensive community college might provide are shown in Figure 1. The degrees to be awarded and the major objective for each type of program are also shown. The Figure shows the same type of information for technical institutes and industrial education centers.

These programs are discussed at some length in Question V.

In developing a system of community colleges for North Carolina, the following basic assumptions are made:

... that every individual should have the opportunity to pursue education to the full extent of his ability and competence.

... that the two-year community junior college is an effective and economical means of extending full opportunity for education beyond the high school.

... that the two-year community junior college must be a multi-purpose institution if it is to serve its function fully.

... that the community college's specific purposes and programs must be determined by the needs of its constituency.

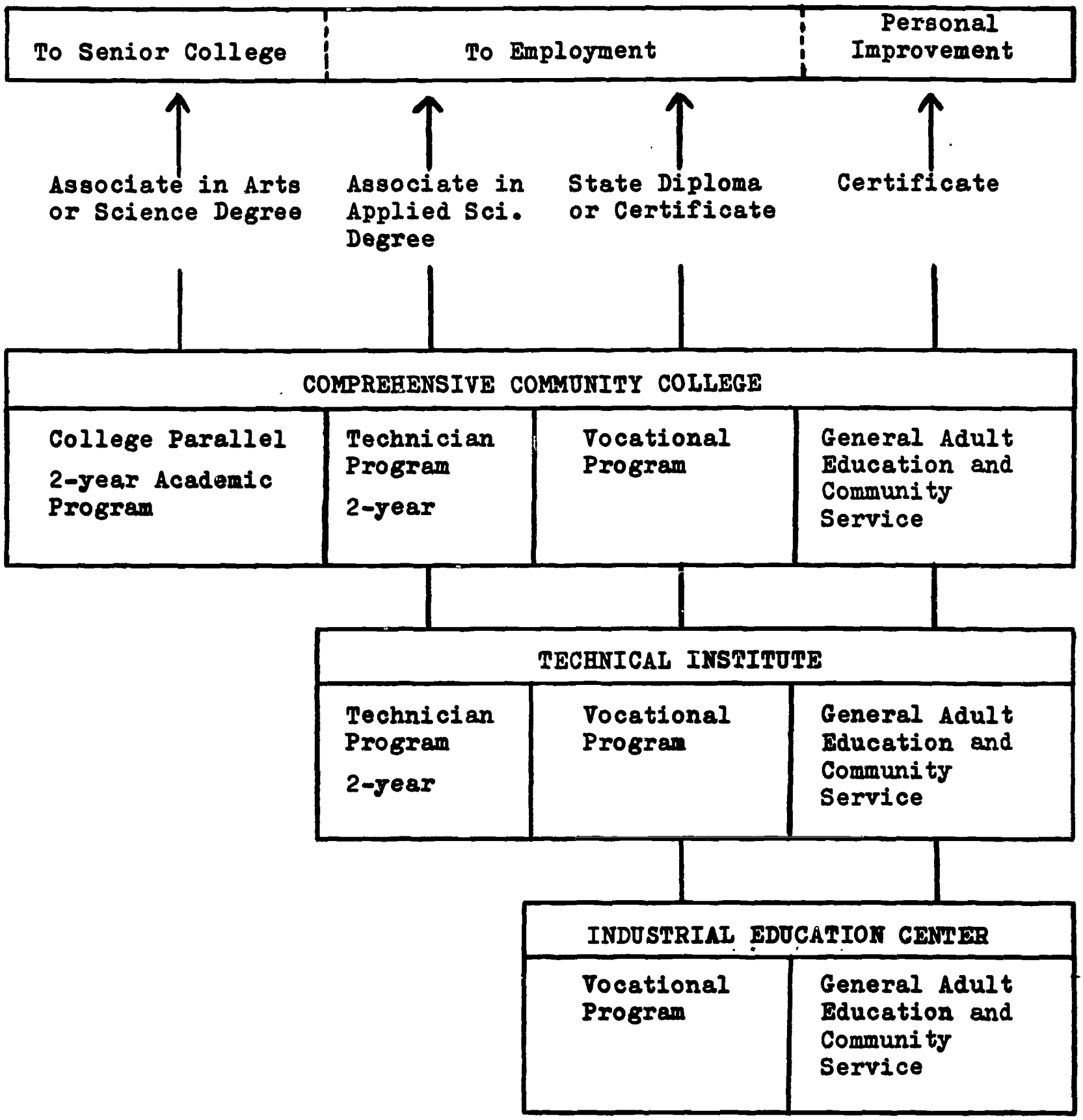

FIGURE 1. PROGRAMS FOR THREE TYPES OF INSTITUTIONS

... that financial support for the colleges should be provided on a predetermined basis by both the community and the state.

... that the community junior college should operate under local administrative control to afford the necessary degree of flexibility but also should be part of a coordinated state pattern of higher education established and directed by a state agency.[2]

In addition to offering a broad curriculum, a comprehensive community college has certain other characteristics, as follows:

1. Careful guidance services that will enable students to make wise choices of the courses they choose, and in transferring to other courses if they fail to succeed in those first chosen.

2. High quality teaching that makes every effort to help each individual overcome his deficiencies, so that he can prove himself able to meet the standards of the course.

3. High quality standards in the courses taught, so that students who successfully complete the program of studies are fully prepared for success in the next step, whether this be transfer to a four-year college, or a job, depending upon the program completed.

II. HOW WAS THE COMMUNITY COLLEGE CONCEPT DEVELOPED?

The first step toward the establishment of community colleges began with the junior college movement. The first junior college was not founded until about 1900. Although the first junior colleges restricted their offerings to the first two years of regular college courses, they did successfully establish the idea of a community institution.

By 1915, there were about 75 junior colleges established. During the 1920's and 1930's, considerable growth occurred. Just prior to World War II there were 600 public and private junior colleges in the Nation. Currently the number established is about 700, with about 60 per cent of these being public institutions.

The real start of a comprehensive community college concept began about 1920. It was at this time that several teachers in junior college education began expressing the need for expanding the function of junior colleges to include courses in the areas of vocational training and adult education.

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[2] A. J. Brumbaugh, Guidelines for the Establishment of Community Junior Colleges, Southern Regional Education Board, Atlanta, Ga., 1962, p. 3.

For example, Fields[3] in discussing the junior college movement quoted David MacKenzie, dean of the Detroit Junior College, who made the following statement at the 1920 National Conference of Junior Colleges.

> "I think that it is a great mistake to limit the scope of the junior college. The gentleman from Texas has referred to two forms of the college, the academic and the vocational, one preparing for the school of agriculture and the other for the university; but I think the junior college should occupy a much larger field than that. If democracy is to be preserved by education it will be by bringing education down to the masses. There are many intelligent people in large communities who are capable of profiting by college work but who are in no way fitted for college according to the typical entrance examinations. The junior college ought to offer a large number of courses that will appeal to such persons. The community as a whole supports the junior college. Is it justifiable, then, to give only those courses which appeal to those who are going on to larger colleges, or should the community be helped by raising the general intelligence?"

Subsequently, many junior colleges expanded their programs; two-year institutions were established to offer a comprehensive program; and technical institutes occasionally developed more comprehensive programs and became community colleges. This movement of providing comprehensive two-year colleges began in the 1920's with California contributing the first major development, and it received new emphasis during the depression years of the 1930's. With the emergence of new technician occupations after World War II, the movement received still greater emphasis.

Paralleling this movement has been the increased use of the term "Community College" to describe a community-centered, multi-purpose institution which provides two years of work beyond the high school. The term "Junior College" in many instances has become inappropriate because it suggests a small edition of a college and a single-purpose institution in terms of program offerings. Many two-year comprehensive colleges, especially the older ones, still use the term "Junior College." Some other institutions are using the term "Community Junior College."

Many states, including Florida, California, and Texas, already have a well-developed system of public community colleges. In fact, the development of these institutions in recent years has been so extensive that it is referred to as "the community college movement." This movement and the importance of community colleges were described by Fields[4] as follows:

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[3]Ralph R. Fields, The Community College Movement, McGraw-Hill Book Company, Inc., New York, N.Y., 1962, pp.34-35.

[4]Ibid.

> "The community college is the liveliest, most talked about development in the field of higher education. Born in the years immediately following World War II, this baby of the post-secondary school family is in many ways the lustiest and fastest growing member. No one member of a family is of greater importance than another, but at times one or another tends to be the center of attention. The present seems to be such a time for the community college."

III. WHY ARE COMMUNITY COLLEGES BEING DEVELOPED IN NORTH CAROLINA?

A short and simple answer to this question might be that the State education officials, the State administration, the General Assembly, and most important, the citizens of North Carolina, feel that a need for such institutions exists. However, this is not a satisfactory answer; it is necessary to examine that need more closely. There are several factors involved, some of which are discussed in the following paragraphs.

Increased Emphasis on Education

The GI Bill of Rights gave millions of Americans the opportunity to seek education beyond the high school. The result has been a dramatic upgrading of the educational level of Americans in general. Americans now recognize the need for education and are determined to provide it for their children. Russia's launching of the first satellite jarred the nation into increased action, and after some of the panic had worn off, made us take a closer look at our system of education.

In North Carolina the gain in the general status of education within the past several years has been enormous. The idea that education and prosperity walk hand-in-hand is slowly beginning to permeate our thinking.

Increasing College Age Population

As the population of North Carolina increases, so does the number of youths of college age (18-21).

... In 1960 there were 290,000.

... In 1965 there will be 338,000.

... In 1970 there will be 384,000.

It is expected that a steadily increasing number of these will attend college. A college enrollment projection to 1980 follows:

1961 - 75,200 (actual)

1965 - 96,000

1970 - 117,700

1975 - 139,600

1980 - 151,700

Somehow this increased number of students must be provided for. It is unlikely that resident colleges will be able to take care of them. In view of construction costs and other factors, the community college concept seems to offer the best solution.

Increasing Student Costs at Residence Colleges

The costs of attending residence colleges has risen steadily since World War II, especially during the past ten years. It now costs about 20% more to attend a public college in North Carolina than it did in 1952. Costs at many of the private colleges have risen even more. It has become increasingly difficult for a family of average income to educate even one son or daughter. A large family creates a real problem. The cost of attending a community college will be a small fraction of the cost of attending a resident college.

Changing Nature of Training Needs

Training in technical and skilled occupations is an essential part of the community college plan. Occupations now require better trained people than at any time in the past. In fact, many of today's major occupations did not exist a few years ago. The community college is designed to supply a steady stream of these workers to the world.

A survey of the skilled manpower needs of North Carolina industry, conducted in 1961 by the Employment Security Commission, showed that the 1,200 employers interviewed employed 14,200 technicians in some 55 occupational specialities. Those employers estimated that by mid-1966, they must have 21,400 technicians on their payrolls. Industrial expansion and employee replacement will require the addition to the labor force of a total of over 8,300 new technicians during the next four years. Industry itself will train less than one-fifth of that number. This means that at least 1,700 people must be graduated annually from the technician curricula of our industrial education centers just to meet this need. We are currently producing technicians at a rate of about 900 a year.

Furthermore, North Carolina industry must have at least 29,600 more skilled workers by mid-1966, of whom 18,100 must be trained in public institutions.

The "Open Door" Policy

There is a definite need for an institution in which almost anyone has a fair chance of succeeding in some type of training. The comprehensive community college can offer this opportunity without compromising any of its more formal programs.

Educational Advantages to Be Gained

1. The cost to the State and to the Student for the first two years of college study is much less than it would be in residence institutions.

2. The residence institutions can concentrate their efforts much more in upper college and graduate studies.

3. The "late bloomers" can be given the opportunity in favorable circumstances to prove themselves in college level study.

4. Many more people can have the advantage of up to two years of college level study than at present.

5. Technical and vocational training beyond the high school can be offered students who should go beyond the high school but should not attempt to complete regular college degree programs. Also the need of industry, agriculture, and business can be met.

6. Up-grading and retraining vocational needs can be met.

7. The cultural level of the community can be raised.

IV. WHAT GROUPS WILL A COMMUNITY COLLEGE SERVE?

The community college program is designed to meet the needs of the following:

... The high school graduate who plans to attend college but would prefer to live at home.

... The high school graduate who is capable of and prepared for the first two years of college level work but will not enroll in a resident college for whatever reason.

... The high school graduate who is capable of becoming and desires training as a technician, highly skilled craftsman, or other semi-professional specialist requiring specialized study beyond the high school but whose objectives are below the professional level.

... The high school graduate who goes to work or becomes a home-maker on graduation but has educational needs that can be met in night classes.

... The public school drop-out who might return for special training, upgrading, or re-training vocational and/or general education programs of whatever level appropriate to his ability and his needs.

... The older citizen who, for personal or vocational reasons, desired continuation or other type educational opportunities.

V. WHAT PROGRAMS WILL BE OFFERED?

A comprehensive community college will offer a wide variety of programs. These programs fall into three general classifications -- college parallel, occupational (including technical and vocational training), and adult education. Although each type is discussed separately here, there will be no rigid separation within the institution. Many students, especially those not planning to go on to senior college or not enrolled in a technician course, may desire to take courses in several departments. The community college program is designed to supply terminal education to these students.

College Parallel Education

The college parallel program will provide those courses which will enable students to transfer their earned college credits (usually "C" average grades required) to a senior college or university and to enter the junior year in a bachelor's degree curriculum.

The first two years of general college courses are quite similar at most colleges. There are, however, variations in the courses required for students in different pre-professional fields. This is especially true in the amount and types of science and mathematics courses required. For instance, pre-engineering students need extra mathematics courses in the first two years; pre-medical students need a good foundation in science.

Community colleges usually offer several college parallel curricula, each of which lead to a "Bachelor of Science" or a "Bachelor of Arts" degree in a four-year college or university. The college parallel curriculum should be sufficiently broad to enable the students to take the courses needed to transfer to a senior institution and enter such curricula as liberal administration, and education. Students successfully completing the courses required for such curricula in a community college are awarded an "Associate in Arts" or "Associate in Science" degree. Examples of various college parallel courses in a community college are as follows:

English Composition
English Literature
American Literature
Speech
Dramatics
College Algebra
Trigonometry
Analytic Geometry
Calculus
Other Mathematics as needed
Foreign Languages
Biology
Botany
Chemistry
Physics
Zoology
Various History Courses
Economics
Sociology
Political Science
Philosophy
Psychology
Physical Education

The variety and number of college parallel courses that can be provided will depend upon the number of students enrolled. Generally, a minimum enrollment of about 400 students is needed in the college parallel program in order to economically provide an adequate variety of courses, taught by instructors qualified in each subject area.

The administration and faculty of the community college should plan the specific courses and curricula to be provided. Such planning will require a knowledge of the lower division course requirements in the colleges and universities to which most of the students will transfer.

Occupational Education

The term occupational education is used here to refer to all courses of study offered in a community college for the purpose of preparing students to enter an occupation at the end of the course. Other terms commonly used, though they are less inclusive, are technical, vocational, semi-professional, and terminal education.

Community colleges usually provide a number of occupational curricula. The types of curricula offered, however, vary widely from college to college. Generally the types of occupations in the economy of each community will determine the curricula offered.

The types of occupational education provided in community and junior colleges throughout the nation are shown in Table 1.

Two types of occupational education that may be provided in a community college are the technician and vocational programs. Courses and curricula in each of these programs are now being provided in most of the industrial education centers.

A brief description of these programs follows. For more thorough discussion, see a report of a study of the IEC.[5]

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[5]Lynn A. Emerson and G. Herman Porter, A Guide to the Further Development of Industrial Education Centers in North Carolina, Department of Curriculum Study and Research, State Board of Education, Raleigh, N.C., 1963.

TABLE I. NUMBER OF ACCREDITED TWO-YEAR COLLEGES OFFERING NAMED OCCUPATIONAL COURSES OF STUDY, 1958-1959[a]

Course of Study	Number of Colleges	Course of Study	Number of Colleges
Business, Secretarial	318	Mechanics, General	72
Business Education, General	217	Building Trades	71
Drafting	155	Journalism	67
Art	129	Metal Work	65
Engineering, General	113	Nursing, 2-year	59
Medical Lab. Techniques	113	Physical Education	56
Home Economics	108	Architecture	53
Mechanics, Auto	98	Dental Lab. Techniques	46
Electricity, General	93	Woodworking	39
Agriculture, General	86	Social Service	37
Medical Secretarial	85	Recreational Leadership	27
Nursing, 1-year	80	Mechanics, Aviation	23
Music	78	Forestry	16
Salesmanship	78	Aviation, Flight	13

[a]Source: Appendix IV, "Curricula Offered by Junior Colleges, 1958-59," American Junior Colleges, 1960.

Technician Program

The various curricula that may be provided in this program are usually two years in length. Those completing the requirements of a technician curriculum will be awarded an "Associate in Applied Science" degree.

Technician curricula for a community college will likely follow very closely those developed for the industrial education centers. The curriculum pattern for the IEC as discussed in "A Study of the IEC" follows:

> The usual curriculum pattern for technician programs provides that a considerable portion of the work of the first two terms consist of basic science, mathematics, and drawing, together with some special technology. Foundations must be laid for the more advanced courses. To maintain student interest in the program some of the specialized technology needs to be offered during the early part of the curriculum, and a proper balance must thus be worked out between the basic courses and the technology. To the extent that it is practicable to do so, the curriculum content should be arranged so that the student who has to drop out of school after the first year has some marketable technical skill, such as drafting.[6]

The four major fields of the world of work -- agriculture, business, industry, and service -- all have their technologies. Some examples of technician curricula follow. This list is by no means complete, nor will any single institution be likely to offer all of them.

Agricultural Business	Electronics
Air Conditioning	Mechanical Drafting
Architectural Drafting	Mechanical
Automotive	Medical
Chemical	Production
Civil	Tool Design
Commercial Art and Design	Technical Drafting
Data Processing	Technical Writing
Dental Laboratory	Textile
Dental Assistant	Technological Secretary
Distribution and Management	Transportation Maintenance
Electrical	

The specific courses that are required for a technician curriculum usually vary greatly from curriculum to curriculum. To give some idea of the kinds of courses required, a sample curriculum, that of Mechanical Drafting and Design offered in an IEC, is shown in Table 2.

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[6] Ibid.

TABLE 2. COURSES FOR A MECHANICAL DRAFTING AND DESIGN CURRICULUM

		Course Title	Clock Hours Per Week		Quarter Hours Credit
			Class	Lab.	
FIRST QUARTER					
DD	301	Technical Drafting	2	6	4
MA	301	Technical Mathematics	5	0	5
ENG	301	Communicative Skills: Reading Improvement	2	0	2
PHY	301	Physics: Properties of Matter	3	2	4
MECH	301	Materials, Tools and Processes	2	2	3
			14	10	18
SECOND QUARTER					
DD	302	Technical Drafting	2	6	4
MA	302	Technical Mathematics	5	0	5
ENG	302	Communicative Skills: English	3	0	5
PHY	302	Physics: Work, Energy, Power	3	2	4
MECH	302	Materials, Tools, and Processes	2	2	3
			15	10	19
THIRD QUARTER					
DD	303	Technical Drafting	2	6	4
MA	303	Technical Mathematics	5	0	5
ENG	303	Communicative Skills: Technical Writing	3	0	3
PHY	303	Physics: Electricity	3	2	4
MECH	303	Materials, Tools, and Processes	2	2	3
			15	10	19
FOURTH QUARTER					
DD	304	Technical Drafting	2	6	4
DD	310	Descriptive Geometry	2	4	4
ENG	304	Communicative Skills: Speech	2	0	2
ELN	301	Industrial Controls	3	2	4
MECH	304	Metallurgy	3	2	4
			12	14	18
FIFTH QUARTER					
DD	305	Design Drafting	2	6	4
MECH	305	Strength of Materials	3	2	4
PHY	305	Hydraulics and Pneumatics	2	4	4
DD	311	Mechanisms	3	2	4
			10	14	16
SIXTH QUARTER					
DD	306	Design Drafting II	4	6	6
DD	312	Jig and Fixture Design	2	4	4
SOC	302	Economics	3	0	3
ISC	301	Industrial Organization and Management	3	0	3
SOC	301	Human Relations	2	0	2
			14	10	18

Vocational Program

Courses and curricula in this program are usually about one year in length and designed to train workers of less than the technician level. The demand for these workers has always been great; increasing industrialization makes the demand critical. Instead of a degree, students completing the course or curriculum in the vocational program are given a certificate or diploma.

A representative list of various vocational training curricula follows:

- Air Conditioning and Refrigeration Mechanics
- Auto Mechanics
- Baking
- Cabinet Making
- Carpentry
- Cosmetology
- Diesel and Truck Mechanics
- Electrical Installation and Maintenance
- Furniture Finishing
- Electroplating
- Machine Shop Practice
- Plumbing and Steam Fitting
- Power Machine Sewing
- Practical Nursing
- Printing
- Radio and Television Repair
- Sheetmetal Work
- Textile Machinery Repair
- Tool-and-Die Making
- Upholstery
- Welding

Except for a few general education courses, the courses required for one specific vocational curriculum may differ greatly from that of any other. Table 3 shows a sample one-year curriculum in automotive mechanics.

Adult Education and Community Service

Adult education courses vary in type and length. Two important types are general adult courses and occupational-training adult courses.

The general adult courses include vocational, cultural, and academic courses which may range from high school level to college level, depending upon the interest and needs of those desiring such courses. Except in those rare cases in which transfer credit is given students, course length and content can be flexible enough to meet the convenience of the enrollees, as well as the interests and needs.

The occupational-training adult courses are designed for the employed adult who desires to upgrade himself in his occupation or to prepare himself for advancement or promotion. Courses may be provided in any of the four major fields of work, according to interest and need.

The community college should be the cultural center of the community. The institution will sponsor music concerts, plays, art exhibits, and other activities which will provide cultural services to the community.

TABLE 3. COURSES FOR AN AUTOMOTIVE MECHANICS CURRICULUM

			Course Hours Per Week			Quarter Hours Credit
FIRST QUARTER			Class	Lab.	Shop Prac.	
AUTO	121	Automotive Theory and Practice	3	0	12	7
MATH	121	Mathematics	5	0	0	5
ENG	101	Reading Improvement	2	0	0	2
PHY	104	Applied Physics	1	2	0	2
			11	2	12	16
SECOND QUARTER						
AUTO	122	Automotive Theory and Practice	3	0	12	7
PHY	105	Applied Physics	1	2	0	2
ENG	102	Communication Skills	2	0	0	2
DD	121	Blueprint Reading	3	0	0	3
			9	2	12	14
THIRD QUARTER						
AUTO	123	Automotive Theory and Practice	3	0	12	7
AHR	101	Automotive Air Conditioning	3	0	0	3
SOC	101	Human Relations	2	0	0	2
MECH	112	Welding	0	0	3	1
PHY	106	Applied Physics	1	2	0	2
			9	2	15	15
FOURTH QUARTER						
AUTO	124	Automotive Theory and Practice	3	0	9	6
SOC	103	Management Procedures	3	0	0	3
AUTO	125	Automotive Testing and Service	3	0	9	6
			9	0	18	15

In 1956, a study was made of adult enrollment in 37 representative two-year colleges across the Nation. Table 4 gives the results of this study, by category and by percentage of enrollment.[7]

Each community may use any method it considers effective to determine what adult courses are needed. One simple method is to include a survey for parents with the pupil survey. Non-parents may be surveyed at their places of employment. Some communities may even conduct a house-to-house canvass; but, if proper publicity is given, this should not be necessary.

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[7]Leland L. Medsker, The Junior College Progress and Prospect, McGraw-Hill Book Company, Inc., New York, N. Y., 1960, p. 74.

However, the adult education program is handled, it is one of the most important phases of community college operation, for it may well be the closest link with the general public, whose enthusiastic support is essential.

TABLE 4. DISTRIBUTION OF ADULT EDUCATION ENROLLMENTS BY SUBJECT MATTER CATEGORIES IN 37 JUNIOR COLLEGES, FALL, 1956

Categories	Enrollments in each category	Percentage of total enrollment
Business	16,951	18
Trade, technical, and industrial arts	15,988	17
Language, communication arts, and humanities	14,049	15
Social science	12,209	13
Arts and crafts	7,569	8
Mathematics	7,042	8
Home economics: homemaking, family living	6,416	7
Natural science	4,596	5
Recreational and physical education	3,443	4
Undescribed courses in general education	3,051	3
Agriculture, landscape gardens, etc.	718	1
Police and fire training	620	1
Total	92,632	100

VI. HOW WILL THE COMMUNITY COLLEGES BE FINANCED?

The establishment of a community college will require a considerable amount of financial support. These funds should not be supplied at the expense of the public schools or other essential services. An adequate public school system makes a poor base for education beyond the high school. Many communities already providing good schools can support a community college.

The Commission on Education Beyond the High School recommended that the local authorities provide the site and buildings and that operating support be shared approximately as follows:

State	65%
Local	15%
Student	20%

Since many problems are inherent in such an exact plan of prorating, a modification was made, which should result in about the same ratio of costs. Under the present plan the local tax-levying body provides the site, buildings, and operation and maintenance of buildings, while the State Board of Education provides equipment, library books, and instructional costs. Student tuition fees are considered State Board funds. This division of costs is only generally accurate--there are capital outlay items from State funds, and current expense items from local funds. G.S. 115A-18 gives in detail the costs borne by the State, and G.S. 115A-19 lists those costs borne by local authorities.

G.S. 115A-18 authorizes the State Board to provide matching funds up to $500,000 for the purchase, remodeling, and construction of buildings. These funds are contingent upon appropriation by the General Assembly.

Cost of Plant - Capital Outlay

There will be a wide variation in the costs of community college plants. Some communities may already have Industrial Education Centers or other available property that can be made to meet required building standards, and can be converted to the use of a community college. Others may need to build entirely new plants. Since it is difficult to estimate remodeling costs, figures given here are for new construction only, and are based upon average costs for similar buildings in the Southeast.

This average cost in 1959 was approximately $15 per square foot. Changes in construction costs since 1959 have not been significant. The average amount of space needed per student is 140-150 square feet (Florida estimates 144, California, 150).

This makes the per student cost for construction about $2100-2250. Table 5 shows an estimate of the space needs and the total construction costs of buildings designed for student bodies of 400-2000. Costs of sites, auditoriums, and cafeterias are not included.

TABLE 5. ESTIMATED CONSTRUCTION COSTS OF COMMUNITY COLLEGE FACILITIES

No. Students	Space 140 Sq. Ft. Per Student	Space 150 Sq. Ft. Per Student	Cost - 140 Sq. Ft. Per Student @ $15 Per Sq. Ft.	Cost - 150 Sq. Ft. Per Student @ $15 Per Sq. Ft.
400	56,000	60,000	$ 840,000	$ 900,000
500	70,000	75,000	1,050,000	1,125,000
600	84,000	90,000	1,260,000	1,350,000
750	105,000	112,500	1,575,000	1,687,500
1000	140,000	150,000	2,100,000	2,250,000
1250	175,000	187,500	2,625,000	2,812,500
1500	210,000	225,000	3,150,000	3,375,000
2000	280,000	300,000	4,200,000	4,500,000

It should be pointed out, however, that certain facilities are required, regardless of the size of the plant, and that per-student costs are almost certain to be higher in a small institution than in a larger one. Hence, the $840,000-$900,000 estimate for a student body of 400 should be viewed with some suspicion. A minimum of $1,000,000 for 400 students would probably be more accurate. There will be some variation in costs from one locality to another due to local situations such as labor and building materials costs. The topography of the site will also be a factor.

Cost of Site - Capital Outlay

The cost of the site depends upon so many local conditions that no attempt is made to estimate this cost. The size of the site will depend upon location, local land values, and availability of suitable land. Enough space should be provided to take care of future growth as well as present needs. It seems reasonable that a growing community college should have

a campus of at least 50 acres, more if possible. Local considerations, however, make it unwise to set a hard and fast standard. The site should be attractive, in a desirable neighborhood, well-drained, and readily accessible.

Costs of Operation - Current Expense

Experience in North Carolina and in other states indicates that the operating costs per student will be approximately $600 per school year, varying somewhat with the size and major emphasis of the institutions, since trade courses and technician training are more expensive than college parallel education. Thus the approximate cost in dollars will be:

State	$390
Local	$ 90
Student	$120

Table 6 shows the approximate operating costs of institutions with student bodies ranging from 200 to 2000. While it is not suggested that community colleges operate with fewer than 400 students, during the first year of operation there well may be 200-300 enrolled.

It should be understood that these are minimum figures. Doubtless each community college area will wish to provide a better program by supplementing this total.

TABLE 6. ESTIMATED OPERATING COSTS FOR COMMUNITY COLLEGES

No. Students	Total Costs	Local Costs	State Costs	Student Costs
200	120,000	18,000	78,000	24,000
300	180,000	27,000	117,000	36,000
400	240,000	36,000	156,000	48,000
500	300,000	45,000	195,000	60,000
600	360,000	54,000	234,000	72,000
750	450,000	67,500	292,500	90,000
1000	600,000	90,000	390,000	120,000
1250	750,000	112,500	487,500	150,000
1500	900,000	135,000	585,000	180,000
2000	1,200,000	180,000	780,000	240,000

Method of Financing

The tax-levying authorities may provide for the support of a community college in the following ways:

1. Non-tax revenues
2. Special tax levy
3. Issuance of bonds (capital outlay only)

In any case, a vote of the people is required. Provisions for local financing and for local elections for this purpose will be found in G.S. 115A-20.

In addition, the Trustees may accept donations to be used for purposes which the donor may prescribe so long as these purposes are consistent with the statutes and the regulations of the State Board of Education. (G.S. 115A-14(5)).

VII. WHAT WILL BE THE ADMINISTRATIVE ORGANIZATION OF THE COMMUNITY COLLEGES?

State Level

The responsibility for State-level administration and supervision of community colleges is vested in the State Board of Education. A new department created by the State Board will provide this supervision, in accordance with policies and regulations adopted by the State Board. A community College Advisory Council, appointed by the Board, will make recommendations to the Board on matters concerning the community college program.

The State Board will adopt such policies, regulations, and standards as are deemed necessary to insure the quality of educational programs, to meet the educational needs of the State, and to provide for the equitable distribution of funds to the various institutions. The administrative duties of the State Board of Education are detailed in G.S. 115A-5, in the appendix.

Local Level

Responsibility for local-level control of each community college is vested in a board of trustees of twelve members, four to be appointed by the county commissioners, four by the local board of education, and four by the Governor. Details concerning appointment and terms of office of trustees are in G.S. 115A-7 and 8, in the appendix.

The chief administrative officer of the college is elected by the Trustees, after approval by the State Board, and is responsible only to the State Board and the Trustees.

Selection of college personnel, design and construction of facilities, and establishment of policies, procedures, and curricula are the responsibility of the Trustees, subject to policies and regulations of the State Board. The powers and duties of the Trustees are enumerated in G.S. 115A-14.

The board of trustees is a body corporate and members are considered commissioners for special purposes within the meaning of Article XIV, Section 7, of the Constitution of North Carolina. Trustees will elect their own officers, and will meet as often as may be necessary, but not less than once every three months. For details see G.S. 115A-9 through 13.

Staff

The size of the staff of the college will naturally depend upon the enrollment. However, there are certain administrative positions which must be filled in a college of any size. In the beginning, the president may act as business manager; in fact, there may be other situations of dual responsibility. In addition to these personnel, other staff members will be employed as needed.

The State Board of Education will establish standards for the employment of all personnel. The Trustees, acting within the framework of these standards, and upon nomination by the President, will employ personnel. Only the President requires the direct approval of the State Board.

The State Board of Education will establish standards and scales for salaries and allotments paid from funds administered by the Board. All employees of the institutions are exempt from the provisions of the State Personnel Act. In accordance with this exemption, the Trustees may determine salaries, working conditions, leave policies, and other personnel matters, subject to regulations set by the State Board of Education.

VIII. HOW WILL THE INSTITUTIONS BE ACCREDITED?

No institution is accredited before it opens. Accreditation requires lengthy self study, inspection by a visiting committee, and finally approval by the appropriate accrediting agencies. Since the community colleges will have a comprehensive and somewhat unrelated set of programs, accreditation will necessarily be by programs. It is expected that the preliminary steps toward accreditation of the college parallel program will be taken during the first year of operation. Credits earned during the period before accreditation normally will be transferable to most senior colleges, provided the marks are satisfactory and the transferring students are eligible.

IX. HOW MUCH WILL IT COST EACH STUDENT TO ATTEND?

It is estimated the total costs of operation of a community college will be about $600 per year. The tuition fee will be 20 per cent of this, or about $120 per year. The breakdown of costs to the student should be approximately as follows:

Tuition	$120
Books and Supplies	60
Miscellaneous Expenses	20
Total Cost	$200

Commuting costs will, of course, depend upon distance traveled and individual travel arrangements. Costs of lunches are not included in this estimate either.

X. HOW WILL THE LOCATION OF THE COMMUNITY COLLEGES BE DETERMINED?

The statutes assign to the State Board of Education the responsibility for the location and establishment of community colleges. To help guide its decisions in establishing these institutions, the State Board requires that each applicant community conduct a local survey, the results of which should demonstrate whether conditions in that area are conducive to the success of such an institution.

It should be emphasized that the initiative for the establishment of a community college rests with the local community. Upon request, the State Board will advise and offer consultative help but the survey and other developmental work are to be done by local citizens.

The following criteria for establishing community colleges have proven wise in other states, and are specified in the statutes (G.S. 115A-4).

Criterion One

A genuine educational need exists within a proposed administrative area, and existing public and private post-high institutions in the area will not meet that need.

The community college program is designed to meet the needs of high school graduates and others who are not high school graduates but are older than the normal high school age. The specific groups who might be served are listed in Question IV.

Many of these people will be found in every community, but not always in sufficient numbers to justify the establishment of a community college. A discussion of the number of students deemed necessary to insure the success of an institution is in Question XI in this bulletin.

In many areas there may be existing post-high school institutions which, with some additions and adaptations, could take care of these educational needs. In this case, it may be wise to make use of these institutions instead of establishing a community college.

Other communities have no nearby facilities, and their students must leave the area to further their education. The need in these communities may be greater than in some others.

Criterion Two

Adequate local support for the institution will be provided.

It is estimated that capital outlay costs for plant construction (new construction) will be $2,000 - $2,500 per student. The yearly local share of current operating costs will be about $90 per student. Costs are discussed more fully under Question VI. A community must be able to provide this support without handicapping other essential services.

Criterion Three

Public schools in the area will not be affected adversely by the local financial support required for the institution.

Community colleges must not be built and operated at the expense of the public schools. Public schools continue to have first priority on available education funds. A community desiring a community college should be prepared to show that its support of its public schools is adequate and this support can be maintained at this level without undue difficulty. Following are the major areas of support to be measured:

... Per-pupil expenditure for current expense items, total, and from local funds

	Local	Total
State Average (Counties)	38.66	272.05
State Average (Cities)	60.99	282.84
State Average (Total)	45.29	275.34

In comparison, the national average for current expense items is $414.

... Per-pupil valuation of plants and facilities. In 1961-62, the average valuation in North Carolina was $726.79.

... Accreditation of the high schools by State and Regional accrediting agencies. In 1961-62, of the 767 high schools (this figure does not include the junior high schools with ninth grade students) 737 were accredited by the State Department of Public Instruction, and 176 by the Southern Association of Colleges and Secondary Schools. About 25 more schools will be accredited by the Southern Association by January, 1964. In addition, the elementary schools should compare favorably with the high schools in accreditation.

... Funds available for extra teachers paid locally. In the State in 1961-62, 6.13% of all professional personnel were paid entirely from local funds.

... Local salary supplements for the staff. In North Carolina in 1961-62, 46.14% of the staff (84.52% in city units, and 28.44% in county units) received salary supplements.

... Certificates held by staff members. In the State in 1961-62, 3.71% of the professional personnel held certificates lower than Class A. In 16 of the 173 units, 15% of the professional personnel hold Graduate certificates.

... Guidance services available.

Criterion Four

Funds sufficient to provide State financial support of the institution must be available.

Each biennium the General Assembly will appropriate funds for the operation of the system of community colleges. The State Board of Education must limit its allocations to the amount of money appropriated. Therefore, regardless of the presence of all other favorable conditions, this criterion may be the deciding factor.

XI. WHAT IS MEANT BY STUDENT POTENTIAL AND WHY IS IT IMPORTANT?

Although it would be desirable to locate a community college near every North Carolina high school graduate who does not live within a reasonable commuting distance of an established public or private institution, it is not economically possible nor educationally feasible to do so. In the first place, the State cannot afford that many institutions; and in the second place, small institutions cannot offer the comprehensive curriculum that the very nature of the community college demands. Therefore, it is necessary to establish these institutions in areas containing enough potential students to insure a successful operation. No community can afford such an expensive white elephant as a mediocre community college.

Service Area

The comprehensive community college can serve adequately only those students living within reasonable commuting distance. Forty-five minutes or about 30 road miles each way is considered the maximum practical daily commuting range.

Potential Enrollment

Although there is some variation in minimum enrollment standards in other states, authorities generally agree that a potential full-time equivalent enrollment in college parallel courses of 400 is a desirable minimum. This figure is recommended by the Governor's Commission on Education Beyond the High School.

There are at least three methods which may be used to estimate potential enrollment.

1. A survey of youth and adults to determine their desire to enroll in various community college programs.

2. Follow-up studies of high school graduates in the area for the past several years.

3. Estimates of the number of students who will graduate from high school for the next several years.

The first two of these methods are covered at some length in Section IV of the preliminary survey form in Question XIV. The third is discussed here.

Public school enrollment is important mainly in the number of graduates in the area each year. By comparing the number of graduates in any given year to the number who entered the first grade twelve years before, it is possible to learn the holding power of that particular school or group of schools for that particular class. Analyzing this holding power for several graduating classes will give the "survival ratio." By applying this "survival ratio," with certain statistical corrections, to any single age group it is possible to make surprisingly accurate predictions of the number of graduates in any given year.

It is estimated that one-half of all high school graduates will seek further education, and that half of this number, or 25% of the total, would attend a local community college.

Other states with a well-developed community system have found this figure to be conservative. In Florida in areas with community colleges, 55.5% of the high school graduates are going to college, compared with 36.3% for areas without these institutions.

XII. WHAT WILL HAPPEN TO EXISTING COMMUNITY COLLEGES AND INDUSTRIAL EDUCATION CENTERS?

G.S. 115A-4 provides for the transferral of existing community colleges and industrial education centers to the newly created department.

Community Colleges

The operation and administration of all public community colleges designated by the General Assembly will be transferred from the provisions of Article 3, Chapter 116 of the General Statutes to the provisions of Chapter 115A. The North Carolina Board of Higher Education and the State Board of Education are directed to cooperate in effecting this transfer, according to G.S. 115A, and regulations adopted jointly by the two Boards. Title to all property, funds, and unexpended appropriations heretofore held by the boards of trustees of the existing colleges are to be created by G.S. 115A.

One of the main effects of this legislation is the transfer of the general supervision of community colleges from the Board of Higher Education to the State Board of Education.

Industrial Education Centers

The operation and administration of the twenty existing industrial education centers will be transferred from the local boards of education to the boards of trustees provided for in G.S. 115A. Details of the transfer, and special considerations are written into the law, and may be found in G.S. 115A-4. The State Board of Education will establish regulations and procedures for this transfer.

XIII. IF A COMMUNITY IS INTERESTED IN THE ESTABLISHMENT OF A COMMUNITY COLLEGE, WHAT STEPS SHOULD BE TAKEN?

The first requirements for the establishment of a community college are local enthusiasm and public demand. Regardless of need or ability to provide adequate financial support, without this enthusiasm any such institution is doomed to indifferent success at best.

To convert this enthusiasm into active support, some organization or group of interested citizens must provide leadership. From these interested groups should be selected a steering committee to plan and coordinate the work which must be done.

First, the issue must be brought to the attention of the public. Very few communities refuse to satisfy needs that are clearly recognized as needs; somehow the necessary support usually is found. Local newspapers and radio and television stations can give valuable assistance in getting the message across. Speakers may be provided for meetings of civic clubs, PTA's, church groups, and any other groups who will listen.

The support of the local school authorities and the county commissioners is essential. It might be wise to include representatives from these groups on the steering committee. At any rate, they should be consulted frequently.

When the interest of the community is aroused, and when the attitude appears favorable, then is the time to take the first formal step. A list of the steps to be taken follows:

1. Preliminary Request to the State Board

   The steering committee will initiate action by submitting a preliminary request to the State Board of Education for the establishment of a community college.

2. Local Survey

   The State Board will then request that a community survey be made. The Board will set the criteria for this survey and will provide consultant help. The survey must establish to the satisfaction of the Board that local conditions meet these criteria.

3. Conducting the Survey

   The steering committee will select a chairman who will appoint the necessary sub-committees. The number of sub-committees to be appointed is a question for each steering committee to decide, but the following will probably be advisable:

   ... An enrollment committee to determine the number of potential students in the immediate area.

   ... A finance committee to study the financial and tax structure of the supporting area to determine ability to support a community college.

   ... An educational status committee to study the education beyond the high school now provided in the area and to appraise the effect of a community college on existing institutions.

   ... A site and building committee.

   ... A public relations committee to interpret the proposed program to the voters.

4. Preliminary Report to the State Board

   When the survey is completed, it will be submitted for approval to the State Board of Education. If the required conditions have been met, the State Board may give preliminary approval, and authorize the local board to proceed with the next step, the financing.

5. Local Elections

A bond issue or a special tax may be necessary for adequate financing. In either case, a local election is necessary according to G.S. 115A-20. The local election will be held according to the State's statutes on local elections.

6. Issuance of Charter

If the required financing is provided, the State Board may, if State funds are available, approve the application and authorize the issuance of a charter.

XIV. WHY IS A LOCAL COMMUNITY SURVEY IMPORTANT, AND WHAT IS TO BE INCLUDED IN THE SURVEY?

The preliminary survey form is included here. Since it was designed as an independent unit, there is some repetition between it and the text of this general bulletin.

THE COMMUNITY COLLEGE PRELIMINARY SURVEY

In order that the State Board of Education may determine whether to authorize the establishment of a comprehensive community college in any area, local communities are required to conduct a survey, the results of which must demonstrate to the satisfaction of the Board that the following conditions exist:

1. A genuine educational need exists within a proposed community college area,

2. Existing public and private post-high school institutions in the area will not meet that need,

3. Adequate local support for the institution will be provided, and

4. Public schools in the area will not be affected adversely by the local financial support required for the institution.

To facilitate this survey, information which the State Board requires from the survey is arranged here under various headings. The suggestions included may help the local committees find the necessary answers.

I. INITIATING THE SURVEY

Some local organization, or group of interested citizens must assume the role of leadership in getting the survey started. This group may act as the steering committee or may appoint this committee. The steering committee should select a chairman and appoint the necessary sub-committees and coordinate their work. How many sub-committees are appointed is a question for the steering committee to decide, but the following will probably be advisable:

- An enrollment committee to determine the number of potential students in the immediate area.

- A finance committee to study the financial and tax structure of the supporting area to determine ability to support a community college.

- An educational status committee to study the education beyond the high school now provided in the area and to appraise the effect of a community college on existing institutions.

- A site and building committee.

- A public relations committee to interpret the proposed program to the voters.

II. COMMUNITY ATTITUDE

The first requirements for the establishment of a community college are local enthusiasm and public demand. Regardless of need or ability to provide adequate financial support, without this enthusiasm any such college is doomed to indifferent success at best. It is essential to have the support of the county commissioners and other governing bodies, the local school boards and school officials, the chambers of commerce, the civic clubs, the leaders in business and industry, the major property owners, and any others whose support, or lack of it, will greatly affect the success of the institution.

What evidence is there of community support? Include with the written endorsements any other pertinent information you think applicable.

Is there an appreciable amount of opposition? _____
If so, what are the reasons for this opposition? _____
_____
_____

III. MAPS OF THE AREA

One or more maps of the community college area should be prepared to show the following:

1. The proposed location of the college.
2. The road system in the commuting area.
3. Major concentrations of population.

IV. STUDENT POTENTIAL

Three types of information needed for estimating the student potential for a community college are as follows:

1. A survey of youth and adults to determine their desire to enroll in various community college programs.

2. Information on what previous students did after graduating from high school.

3. Estimates of the number of students who will graduate from high school for the next several years.

Survey of Youth and Adults

All ninth, tenth, and eleventh grade students who are enrolled in schools located within the proposed community college area should be surveyed. The parents of these students also should be surveyed to obtain some indication of the demand of adults for community college courses.

Before the students and their parents express any opinions, they should be thoroughly oriented about the nature of a community college and the educational opportunities that it would provide.

One approach is to prepare an informational bulletin with survey forms attached. Some suggested information for such a bulletin and the types of survey forms needed are attached.

A summary of the survey of students and their parents together with a knowledge of the community should suggest the probable demand for the various community college programs of college parallel, technical, vocational, and adult education.

Follow-up Study of Former High School Graduates

This follow-up study should indicate what the high school graduates for the years 1960-1962 did after graduation. High school principals have this information in the school records. A suggested summary sheet which indicates the type of information needed is on the next page.

Projection of the Number of High School Graduates

This projection is needed to estimate the potential enrollment for a community college for the next several years. Estimates should be made for the years 1963 through 1967. Actual number of students graduating for the years 1960-1962 should be presented also to show comparisons. Suggested methods of presenting this information are shown here. Techniques for estimating the number of high school graduates will be provided at a later date.

NUMBER OF HIGH SCHOOL GRADUATES FOR THE YEARS 1960-1967
GRADUATING FROM SCHOOLS LOCATED WITHIN 10, 20, and 30-MILE DISTANCES
FROM THE PROPOSED COMMUNITY COLLEGE SITE

Year	Number Students Graduating from Schools Located Within:		
	10 Miles	20 Miles	30 Miles
1960	_____	_____	_____
1961	_____	_____	_____
1962	_____	_____	_____
1963	_____	_____	_____
1964	_____	_____	_____
1965	_____	_____	_____
1966	_____	_____	_____
1967	_____	_____	_____

Follow-up of High School Graduates of Schools in 30 Mile Radius of Proposed Site - 1960-1962

Year	Number Graduates	Attended Sr. College		Attended Jr. College		Attended Technical or Trade School		Entered Military Service		Other	
		No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
1960											
1961											
1962											

Prepare a map to show the proposed general location of the college. Plot on the map the high schools located with 10, 20, and 30-mile distances from the location, and indicate the number of high school graduates estimated for the year 1965 by each school.

V. EDUCATIONAL PROGRAMS BEYOND THE HIGH SCHOOL NOW PROVIDED

Identify the institutions providing education beyond the high school now located within the proposed community college commuting area, and indicate the types of educational programs they provide. (e.g. college, technical, vocational, adult, etc.)

Appraise the probable effect a community college would have on the institutions and obtain from the heads of the institutions their opinions of the appraisal.

VI. SITE AND PLANT

Some communities may already have facilities which can be made to meet the standards set by the State Board; other communities may need to build an entirely new plant. Please supply the following information wherever it is applicable to the local situation.

Existing Facilities

1. Location _____

_____

2. Size of Site _____

3. Former Use _____

_____

4. Size of Plant
   Total Square Feet _____

5. Plans for Remodeling
   Summarize what remodeling is necessary to make the plant suitable for a community college.

6. Costs of Remodeling
   Estimate the total costs of repairs and improvements
   To Plant _____ To Site _____

New Facilities

1. Site -
   Location _____

   _____
   Size _____
   Cost _____

2. Plant -
   Size _____
   Estimated Cost _____

3. Any other pertinent information on facilities. _____
   _____
   _____
   _____

VII. ABILITY TO SUPPORT A COMMUNITY COLLEGE

The establishment of a community college will require the expenditure of a considerable amount of local funds. Funds should not be supplied at the expense of the public schools or other essential services. Ability to provide these funds is one of the criteria written into the law. Evidence of this ability to pay should be furnished in the survey report. Information submitted is for the supporting area only.

1. Property valuation _____

2. Present tax rate _____

3. Bonded indebtedness _____

4. Additional tax rate necessary to finance this institution
   _____

5. Statement from local board of education on ability to support this institution without handicapping the public schools.

6. Statement from county commissioners on ability to support this institution without handicapping other essential services or endangering the financial standing of the county.

VIII. SUPPORT OF THE PUBLIC SCHOOLS

Evidence of adequate support for the public schools should be submitted. Information is needed in the following categories:

1. Per Pupil Expenditure for Current Expense in A.D.A.

	Local	State	Federal	Total
State Average (counties)	$38.66	$222.92	$10.75	$272.03
State Average (cities)	60.99	212.32	9.53	282.84
State Average (Total)	45.29	219.68	10.37	275.34
_____ County	____	____	_____	____
Applicant				

2. Special School Tax in Supporting Area
_____per $100 valuation

3. Salary Supplement for Teachers

_____

_____

4. Number of Teachers Paid from Local Funds

_____

5. Accreditation of High Schools by Southern Association
Number Accredited _____
Number Not Accredited _____

6. Present Capital Outlay Needs in Public Schools, Including Costs of Proposed Consolidation

_____

_____

7. Other Pertinent Factors Concerning Local Support of Public Schools

_____

_____

IX. PLAN FOR FINANCING

The General Statutes and the State Board of Education require that the question of financial support of a community college be submitted to a vote of the citizens of the supporting area. Funds may be supplied from non-tax revenues, a special tax levy, or a bond issue (capital outlay only). Information on average costs of new construction, and the local share of current expense costs is in the General Information Bulletin.

What are your plans for providing the necessary funds for capital outlay and current expense?

X. TENTATIVE TIME SCHEDULE

Estimate the approximate dates of the following:

1. Special Tax and Bond Election _____

2. Opening of the Community College _____

XI. ANY OTHER PERTINENT STATEMENTS THAT THE SURVEY COMMITTEE WISHES TO SUBMIT

_____

_____

_____

_____

_____

XV. IF THE STATE BOARD OF EDUCATION APPROVES THE APPLICATION AND AUTHORIZES THE CHARTER, WHAT ARE THE NEXT STEPS TO BE TAKEN?

There is no rigid pattern to be followed from the time the charter is granted until the institution opens to students. In view of what must be done, however, the following steps seem logical:

1. Selection of Trustees

   As soon as State Board approval is secured and the new institution receives a charter, the trustees will be appointed as required by G.S. 115A-7.

2. Selection of President

   One of the first acts of the trustees should be to employ a president who must be approved by the State Board. The State Board, if requested, will give consultative services in the selection of a president.

3. Early Employment of President

   The president should be employed before construction begins in order that he might exercise his leadership from the beginning. It will be at least one year, possibly two, from the time the charter is granted until the opening of the college.

4. Other Personnel

   It may be helpful to employ the Dean and the Business Manager at least one year before the opening of the college, and the librarian six months in advance.

5. Survey of Educational Needs

   A general survey of educational needs will be covered in the preliminary survey. Yet it will be necessary for the new president to conduct a more detailed investigation as a basis for later decisions such as specific courses to offer, staff to employ, and type and amount of facilities to provide.

6. Making Building Plans

   The board of trustees, with the advice of the president, will employ an architect and indicate to him the general requirements for the plant with whatever ideas and specifications they may have. The State Board will offer consultative services upon request in developing building plans.

7. Approval of Plans

   The architect's plans, if approved by the trustees, will be submitted to the State Board for approval.

8. Beginning of Construction

Whenever the State Board approves the site and the building plans, the trustees may advertise for bids and begin construction.

9. Tentative Budget

Using information obtained from the surveys, the president will make up a tentative budget to be approved by the trustees, the county commissioners, and the State Board of Education so they can begin employing a faculty. This faculty will report when needed or when the institution goes into operation.

10. The Catalog

The president and his staff, using information obtained from the surveys and other available information and with the approval of the State Board, will determine the curriculum, write the catalog, and start recruiting students.

11. Approval of Plant

The completed plant must be approved by the State Board before acceptance by the trustees.

12. The Budget

The president with the advice of his staff will make up the budget for the approval of the trustees. The trustees, after approval, will file the budget with the tax levying authorities on or before May 1, using forms provided by the State Board. The tax levying authorities, after approval of that part of the budget dealing with local funds, will return the budget to the trustees who will submit it to the State Board for approval. After approval of the budget by the State Board, the president, under regulations set by the State Board and with approval of the trustees, may execute the budget.

QUESTIONS TO ANSWER BEFORE MAKING PLANS FOR A COMMUNITY COLLEGE

There are many questions which a community must answer before making formal application for the establishment of a comprehensive community college. Here are a few of these questions.

Understanding the Nature of Such an Institution

1. Do the sponsors have a clear understanding of the special nature and function of such an institution?

2. Are the sponsors and leaders of this move familiar with the statutes concerning community colleges (G.S. 115A)?

Need for the Institution

3. Are the high schools within a 30 mile radius of the proposed college graduating at least 800 students each year?

4. Are existing colleges failing to provide an opportunity for all those who wish to attend college?

5. Could a community college operate there without endangering the success of an existing college?

6. Has an effort been made to help existing institutions meet the needs of the community?

7. Are many of the graduates in your area failing to attend college because of finances, or the need to remain at home?

8. Does all the evidence indicate that there will be a minimum of 400 college parallel students enrolled within five years, and that the enrollment will not drop below 400?

9. Is there a need for providing courses to train technicians and skilled workers?

10. Does the community feel a need for short courses and special adult education courses?

Community Attitude Toward the Institution

11. What is the attitude toward a college in your community? Are the people enthusiastic about the idea? Will a majority vote in favor of establishing a community college in your area?

12. Are the county commissioners and other governing bodies in favor of the plan?

13. Are the local boards of education and school authorities in favor of the plan?

14. Are the local chambers of commerce and civic clubs in favor? The newspapers? Radio and television stations?

15. Are the major property owners and business and industry heads in favor of the plan?

16. Is there an absence of strong and vociferous opposition?

Public Schools in the Community

17. Is adequate support given at present to the public schools in the area? Is there a special school tax? A pay supplement for teachers? Enough money for instructional supplies and services?

18. Are the public schools accredited by State and Regional accrediting associations?

19. If there is a special school tax, is it considered a burden?

Financial Support for the Institution

20. The capital outlay required in the beginning for the site and the plant is the first financial hurdle. Can the community afford this expenditure? Will the voters approve it by voting a bond issue? Will the Local Government Commission approve the bond issue?

21. Are the people willing to back up their enthusiasm with the necessary financial support for current expense?

22. Is there enough taxable wealth in the tax-levying district to provide this support without handicapping other services?

23. Do population and industry trends give reason to be optimistic about the future of the area? Is it a growing community? Is it reasonably certain that the community will retain and increase its ability to support public education, including the proposed institution?

Leadership

24. Organizing a community college requires a great deal of leadership and a good public information campaign. Is such leadership available?

Site

25. Would a suitable and readily accessible site be available?

The Next Step

If these questions do not pose any insurmountable problems, there is a good chance that the community may qualify for a comprehensive community college. The groups providing the local leadership will then make application to the State Board of Education. The State Board will authorize a survey and provide consultant aid for this survey.

APPENDIX B

STUDENT INFORMATIONAL BULLETIN AND STUDENT-PARENT QUESTIONNAIRE

You have heard a great deal recently about community colleges and the prospects of the establishment of such an institution in your area. Since you are the people who will be using a community college, you probably have many questions. You will find many of these questions, and their answers, here.

1. What is a comprehensive community college?

   It is a non-resident institution that offers to high school graduates, and others who are not high school graduates but are beyond high school age the opportunity to get further education and training. "Non-resident" means that there are no students living in dormitories on the campus; this is a "drive-in" college. "Comprehensive" means that this is not just another junior college, but one offering several types of programs, or courses of study. We will examine these types in the next questions.

2. What courses will be offered?

   Four kinds of programs, or curriculums will be offered--college parallel, technical, vocational, and short courses.

3. What is a college parallel curriculum?

   This consists of the first two years of college work, the same courses you would take at a senior college or a private junior college. It includes English grammar, composition, literature, mathematics, science, social science, foreign language, music, and other regular freshman and sophomore courses. This curriculum is called college parallel because it goes along with, or parallels the program you would study at any college.

4. What is a technical curriculum?

   This consists of a two-year course designed to provide highly skilled technicians in industry, business, agriculture, and service occupations. About one-third of the required courses are similar to the college parallel courses; the other two-thirds are special courses in a chosen field. The technician is an expert in his field, one who can install and maintain machinery and equipment, and even help design it. There are hundreds of technicians at Cape Canaveral, checking equipment, watching gauges, and doing the many special jobs that require skill and understanding.

There are good job opportunities for technicians in North Carolina. In a survey of industry, the employers said they would need to hire about 2,000 technicians each year.

Not all technicians work in the fields of mechanics and electronics. Some study foods and become cafeteria or restaurant managers or assistants; some study chemistry and work in chemical laboratories; some become medical technologists and do laboratory work for doctors; some work with dentists; in fact, most occupations need people with the skill and know-how to get things done.

Generally, the field in which a technician works is called a "Technology." Technology may be defined simply as applied science. Here are listed a few of the technologies which may be offered in a community college.

Technologies

Agricultural Business
Architectural Drafting
Air Conditioning
Automotive
Business Management
Chemical
Civil
Commercial Art and Design
Data Processing
Dental Laboratory
Electrical
Electronics
Mechanical Drafting
Mechanical
Medical
Production
Tool Design
Technical Drafting
Technical Writing
Textile
Technological Secretary
Transportation and Traffic Management
Transportation Maintenance

Of course, there are many more. All of these programs will not be offered at the same institution. What will be offered depends upon the needs and desires of the students.

It is not easy to estimate how much money you will make after you finish the two-year technical course. Pay scales vary from one part of the country to another, and also from one field to another. The average starting yearly salary of technological school graduates is about $4800. After five years of experience the average pay is about $7000. Many make more, but many others make less. At any rate, technician training leads to a useful, respectable, and fairly well-paid career. Those who do not wish to attend college for four years will do well to consider it.

5. What is a vocational curriculum?

This is a program to train skilled workers of less than technician level. It is a one-year course and consists almost entirely of work in the field you select. This program teaches you a trade and prepares you for a job just one year after high school graduation. Some of the trades courses are listed here.

Vocational Programs

Air Conditioning and Refrigeration Mechanics
Auto Mechanics
Baking
Cabinet Making
Carpentry
Cosmetology
Diesel and Truck Mechanics
Electrical Installation and Maintenance
Farm Machinery
Furniture Finishing
Machine Shop Practice
Plumbing and Steam Fitting
Practical Nursing
Printing
Radio and TV Repair
Sheetmetal Work
Tool and Die Making
Upholstery
Welding

Since skilled workers are almost always in demand, job opportunities are good. Thousands are hired each year. Pay rates differ from job to job but are usually high enough to supply an adequate standard of living. Pay will be somewhat below that of technicians.

Applicants who can meet the entrance requirements can be admitted to these programs whether or not they have high school diplomas.

6. What are short courses and what may be offered?

These are courses designed to meet the vocational and cultural needs of the community. Courses may range from two weeks to a year and may consist of almost any subject. There may be refresher courses for the trades and technologies, courses introducing new information, such as Color TV Servicing, and courses in any of the hundreds of vocations by which people make a living. There may be courses in citizenship, art, music, dramatics, speech, ceramics, dancing, and many other areas of a cultural nature. These courses are considered adult education and are scheduled as needed. Special tuition charges will be paid for these courses.

7. What will it cost to attend?

The tuition fee will be about $120 per year for these students in a degree program. Books and supplies should cost $50 - $75, depending on the curriculum. The total cost should be $200 or less, plus commuting costs and lunches.

8. What kind of degrees will be awarded to the graduates?

Students who successfully complete the college parallel course will be awarded the Associate in Arts degree. Those who complete the two-year technical curriculum will be awarded the degree Associate in Applied Science. Those who complete other courses will be awarded certificates.

9. Can I transfer credits from a community college to other colleges?

Yes. The community colleges will be accredited, and senior colleges

will accept transfer credits for college parallel work.

10. Will there be a cafeteria on the campus?

    Probably not. There may be a snack bar and vending machines.

11. How large will the community college be?

    There is no maximum limit on the number of students. There should be at least 400 full-time students.

12. Can I be admitted?

    Probably. The main idea of the community college is to put higher education where it is needed. There should be a program in which almost everyone can achieve some degree of success.

13. What are the main advantages of the community college?

    - It is near your home.
    - It is inexpensive.
    - It offers many different kinds of courses.
    - Remedial courses will be offered.
    - More individual attention can be given to students.
    - Guidance will be available.
    - You can prepare for a technical career without leaving your area.
    - College parallel credits may be transferred to other colleges

Name of Student _____ Boy _____ Girl _____

School _____ Grade _____

1. After graduation from high school, do you now plan to go to college?

Yes _____

No _____

Uncertain _____

2. If you do not plan to go to college, do you plan to enroll in some special school that offers technical or vocational training courses, such as nursing, commercial, electronics, automobile mechanics, etc.?

Yes _____

No _____

Uncertain _____

3. If a community college offering the first two years of college work and technical and other vocational courses were established in your area, would you enroll?

Yes _____

No _____

Uncertain _____

4. If you did enroll, in which program would you be interested?

College Parallel _____

Two-year Technician _____

One-year Trades _____

Short Courses _____

COMMENTS:

PARENT OR GUARDIAN QUESTIONNAIRE

1. Do you agree with the opinions expressed on the reverse side?

Yes _____

No _____

2. Are you interested in furthering your own education?

Yes _____

No _____

3. If yes, in which of these programs would you like to have the opportunity to enroll?

College Parallel _____

Two-year Technician _____

One-year Trades _____

Short Courses _____

To Finish High School _____

COMMENTS:

Signature of Parent _____ Address _____

Date _____

APPENDIX C

SELECTED READINGS

1. Brumbaugh, A. J., Guidelines for the Establishment of Community Colleges, Southern Regional Education Board, Atlanta, Georgia, 1962.

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4. Medsker, Leland L., The Junior College Progress and Prospect, McGraw-Hill Book Company, Inc., New York, New York, 1960.

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VT 001 967
Cooperman, Irene G.; Sonne, Thomas R.
The Employment Adjustment of Veterans with Histories of Psychosis and Psychoneurosis. Technical Report.

Veterans Administration, Washington, D.C. Dept. of Veterans Benefits
MF AVAILABLE IN VT-ERIC SET.
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*SURVEYS; *EMOTIONALLY DISTURBED; *VOCATIONAL ADJUSTMENT; *EMPLOYMENT; RESEARCH METHODOLOGY; TABLES (DATA)
*VETERANS; WORLD WAR II; KOREAN CONFLICT

World War II and Korean Conflict veterans with histories of functional psychiatric conditions were surveyed to determine employment status and employment adjustment. The stratified random sample of 2,707 veterans, drawn from a population estimated to number 290,000 was similarly distributed on the variables of military service period, age, psychosis-psychoneurosis classification, and severity of impairment as measured by percentage disability rating. In line with the objectives of the study, 355 veterans known not to be employed were eliminated from the sample. Of the remaining 2,352 veterans, data were collected by questionnaire from 1,819 or 77.3 percent. The findings revealed that seven of every 10 veterans in the sample were employed: 84 percent were employees and 16 percent were self-employed. Also, satisfactory job adjustment was being made by 90 percent of the sample: 35 percent were considered to be both satisfactorily adjusted and advancing on the job; 55 percent were making a satisfactory adjustment but not advancing. The degree of vocational adjustment achieved by these veterans provides a basis for questioning the validity of any negative stereotyped view regarding the vocational potential of persons with histories of functional psychiatric conditions. A publication of 337 related case briefs is available as VT 004 837 (also in this issue). (CH)

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DEPARTMENT OF VETERANS BENEFITS

TECHNICAL REPORT

THE EMPLOYMENT ADJUSTMENT OF VETERANS WITH HISTORIES OF PSYCHOSIS AND PSYCHONEUROSIS

U.S. DEPARTMENT OF HEALTH, EDUCATION
& WELFARE
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VETERANS ADMINISTRATION

WASHINGTON 25, D.C.

JANUARY 1963

VT001967

Serving as Principal and Associate Investigators, respectively, for the study were Irene G. Cooperman, Ph.D., Supervisory Staff Psychologist, Vocational Counseling, Training and Adjustment, VR&E Service, DVB, and Thomas R. Sonne, Ed.D., Chief, Counseling and Training in the Buffalo, New York, regional office. Dr. Sonne collaborated primarily in the planning and data gathering phase of the study. Dr. Cooperman had major responsibility for the analysis of the data and prepared the report.

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington 25, D.C. - Price 25 cents

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SUMMARY

A survey was made in the spring of 1960 to determine the employment status and employment adjustment of veterans with histories of functional psychiatric conditions. The study was based on a 1 percent random sample of all World War II and Korean conflict veterans with current VA disability ratings for service-connected functional psychoses and psychoneuroses. An initial brief letter inquiring about employment status was sent to nonhospitalized veterans in the sample. More detailed information was subsequently collected, in seven out of eight cases by means of personal interview, for the 1,421 veterans who reported themselves to be employed.

The employed group constituted 7 of every 10 nonhospitalized veterans in the study population. Their average (mean) age was 42.0 years; almost four-fifths had been discharged from military service 15 or more years ago. They were found to be working in a wide range of jobs whose distribution closely approximates that of the employed male population as a whole. In nearly all (9 out of 10) cases, these disabled veterans reported having gotten their jobs on their own or with the help of relatives or friends. Fifteen percent had a history of psychosis; 85 percent were rated for psychoneurosis. Three of every 10 had disability ratings of 30 percent or higher for psychiatric impairment. The employed group, however, included a significantly smaller proportion of seriously disabled veterans and veterans rated for psychosis than did the unemployed.

Employers had preemployment knowledge of the character of the veteran's disability in half the cases; an additional 8 percent of veterans disclosed the information to their employers some time after being hired, without resulting prejudice.

Ninety percent of all employed veterans in the study were judged to be making a satisfactory job adjustment. Thirty-five percent were considered to be both satisfactorily adjusted and advancing on the job; 55 percent were making a satisfactory adjustment, but not advancing. Employment adjustment was considered less than satisfactory in 10 percent of the cases. Contrary to the stereotype of the psychiatrically disabled individual as a chronic "job hopper," the study indicates that most of these veterans have maintained a considerable degree of job stability.

About half of the total employed group had had training under one of the Vocational Rehabilitation and Education programs administered by the VA. Comparison of the current employment of those with VR&E training and those with no training subsequent to discharge from military service shows that significantly more of the former are employed in professional, technical and managerial occupations; also significantly fewer of the VR&E trained are working at semiskilled and unskilled levels. Furthermore, "occupational advancement" (e.g., job promotions, wage increases, added job responsibility), was reported significantly more often among veterans who had pursued VR&E training than among those who had not. These data are noteworthy, even though it is not possible, since other pertinent variables were not controlled, to ascribe the differences between the groups to the fact of postservice training.

BACKGROUND OF THE STUDY

Although the total incidence of psychiatric disorders in the population is not known and estimates of their frequency have varied widely, there is general agreement that mental illness and serious emotional disturbance constitute one of the Nation's major public health problems. As Felix and Kramer (8) point out, while available estimates of the extent of mental disorders have many limitations, they all indicate that such disorders are a major cause of illness and disability in this country.

The magnitude of the problem is at least suggested by available partial data. It is known, for example, that of all the people in the United States who are in hospitals at any one time, about half of them--or 750,000 persons--are in hospitals for the mentally ill (2). A larger number, estimated at 1 million, receive treatment in mental hospitals during the course of a particular year (1). To these figures on hospitalized mental patients must be added the very much larger group of emotionally disabled persons who are not in hospitals. The latter are estimated (17) to outnumber the psychiatric hospital population by 10 or possibly even 20 to 1. Another recent source (15) places at 17 million the number of persons in the United States suffering from some form of mental illness. The direct and indirect costs of mental illness are estimated to total at least $2.4 billion, and perhaps more than $3 billion, per year (7).

As one of the largest, if not the single largest, of all disability groups, the psychiatrically disabled obviously present a major challenge to rehabilitation efforts. A notable response is being made to this challenge as the result of the application in recent years of new concepts and methods of treatment of mental illness. These advances may prove to equal in impact and significance, though perhaps not in sheer drama, the history-making innovation represented by Pinel's striking the chains from the insane at the Bicêtre (25). For as a result of the use of ataractic drugs in combination with individual and group psychotherapy, the institution of total milieu therapy and of open ward and open hospital policies, the establishment of halfway houses, foster homes, daycare programs and other transitional aids, and the increased mobilization and involvement of the community and its facilities, the possibilities for the reintegration of the mentally ill into community living have been greatly enhanced. According to Bockoven et al. (3, p. 353) "Further development and wider application of these treatment methods . . . can reasonably be expected to result in the discharge of nine-tenths of the patients committed to mental hospitals for functional psychosis."

Along with this progress in medical and social rehabilitation has come an increasing recognition of the significant role of work and work adjustment in the overall process of rehabilitating the emotionally disturbed. This recognition is based both on theoretical considerations and recent accumulating objective evidence. For men in general, work is seen as providing opportunity for the fulfillment of a variety of basic individual needs and values (e.g., for belongingness and love, self-esteem, interesting activity) in addition to the obvious economic needs of earning a living and achieving financial security. In our culture, moreover, work is central to the male role and status and prestige are closely associated with

occupation (21, 24). It is hardly surprising, therefore, that successful employment experience and the need gratifications it provides is an important instrumentality for - is, in fact essential to - the rehabilitation of the psychiatrically disabled, whose problems so frequently involve inadequate or inappropriate need satisfaction and need conflict resolution. Maslow (13) has described the basic psychopathological constellation as characterized by feelings of worthlessness and helplessness, hostility, fear of abandonment, injury, and humiliation, and complete frustration in bodily needs. As long ago as 1941 he pointed out that personality changes which occur as a result of prolonged unemployment (e g., anxiety, loss of self-confidence, feelings of insecurity) represent a development toward this basic pathological constellation. Data from more recent studies by Markowe et al. (12) of behavioral reactions to unemployment are consistent with this point of view.

There is some basis for believing, moreover, that the benefits of successful work adjustment transcend its direct values and have a therapeutic effect on general adjustment. Super (24, p. 300) speaking not of the mentally ill, but about people in general, hypothesizes that "by relieving tensions, clarifying feelings, giving insight, helping attain success, and developing a feeling of competence in one important area of adjustment, the vocational, it is possible to release the individual's ability to cope more adequately with other aspects of living, thus bringing about improvement in his general adjustment." A similar belief that successful employment contributes to the general adjustment of the individual who is recovering from mental illness has been expressed by a number of writers (10, 19, 20).

Although there has been as yet no direct experimental confirmation of the above thesis, related evidence is beginning to accrue to the effect that unemployment retards recovery and is a factor in the rehospitalization of mental patients (5, 23). Since rehospitalization constitutes a serious, in fact, a growing problem in that readmission rates are increasing (9) the latter finding alone substantiates the need for increased emphasis on efforts to meet the vocational needs of the psychiatrically disabled.

The fact remains, however, that relatively little systematic information is available about the vocational potential and work adjustment capacity of persons with psychiatric disabilities. Except for the large scale followup study of war neuroses by Brill and Beebe in 1949 (4), most of the investigations to date have been of small groups or have been limited to posthospital psychotics (e.g., 3, 11, 14, 16, 18, 19). Current empirical data based on a broader population would seem to be crucial for pointing the direction toward more effective counseling, training, and selective job placement services. Such information would also be useful in altering stereotypic attitudes about the psychiatrically disabled which persist to a significant degree and are prejudicial to their employment. Thus, Salzberg et al. (22), surveying employer attitudes toward hiring the emotionally handicapped, found that while the employers in the sample were on the whole interested in hiring the handicapped, they could not accept emotional handicaps as comparable to physical, were uncertain as to how they would integrate such a person into their place of business and how their other employees would react to working with him. Olshansky, Grob and Ekdahl (16, p. 518)

report that one-fourth of the ex-patients whom they followed up began their job hunting experience by informing the prospective employer of their history of mental illness, but "soon learned that if they were to find employment, then discretion is the better part of candor. After experiencing several rejections, they learned to emphasize their assets."

The present study was carried out in response to the above needs. It was undertaken at the request of the President's Committee for the Employment of the Handicapped which has recently extended its area of effort to include promoting the employment of individuals with mental handicaps and emotional disturbances. Specific purposes of the study were to determine the extent to which veterans with a history of functional psychiatric conditions (the functional psychoses and psychoneuroses) have succeeded in finding and maintaining employment, the kinds of jobs in which they are employed, and the nature of their job adjustment. It is the fourth in a series of VA studies dealing with the employment of veterans of World War II and the Korean conflict in various disability categories. The first of this series was reported in VA Pamphlet 7-10 which described the occupations of totally blinded veterans; VA Pamphlet 7-12 concerned the occupational adjustment of paraplegic veterans; and the most recent, VA Pamphlet 22-6, presented information about employment of veterans with epilepsy.

METHOD

In April 1960 all VA regional office VR&E activities in the continental United States cooperated in a survey of the employment experiences of World War II and Korean conflict veterans with functional psychoses and psychoneuroses. The specific diagnostic categories included in the study are listed in exhibit 1 of appendix B. In each office a 1 percent sample was randomly selected 1/ from the file of veterans with current disability compensation ratings 2/ for these psychiatric conditions. The population from which the sample was drawn was estimated to number 290,000.

This random sampling procedure yielded a total of 2,885 cases. 3/ Of these, 178 were dropped because their case records, which contained information essential to the study, were temporarily unavailable to the regional office in whose territory the veteran resided. Although the reasons for nonavailability were not reported, it is assumed that these were instances of hospitalized veterans whose records had been temporarily transferred to VA hospitals, veterans whose records had been forwarded to Central Office for purposes of administrative review, and veterans whose records were in transit at the time of the study. The 178 veterans thus excluded and the remaining 2,707 were essentially similarly distributed on the variables of military service period, age, psychosis-psychoneurosis classification, and severity of impairment, as measured by percentage disability rating.

Review of the remaining 2,707 case records disclosed that 355 of these veterans were not employed (113 were known to be hospitalized, 12 were pursuing full-time school or college training under a VR&E program, and 230, for other reasons, had not been employed for the 6 months preceding the study). Since the major aim was to survey the experience of employed veterans, these 355 veterans known not to be employed were eliminated from further followup.

Each of the remaining 2,352 veterans was sent a brief form letter inquiring about his employment status. (A copy of this letter is reproduced as exhibit 2 in appendix B.) Veterans who failed to respond to this first inquiry were sent the same form letter marked "Second request" 2 weeks after the first mailing date. In all, responses were received from 1,819 veterans, or 77.3 percent of the group. Although this relatively high response rate was reassuring regarding the adequacy of population coverage, the further

---

1/ Randomization was on the basis of the two terminal digits of the claims number assigned each veteran.

2/ Compensation is the term used to describe payments made for disabilities incurred or aggravated during military service. Rate of compensation is based on the veteran's degree of disability which is evaluated in percentage terms, in multiples of 10, from 0 percent (service connected, but not compensable) to 100 percent.

3/ The reliability of the estimates based on the study sample is discussed in appendix C.

step was taken of comparing the data available for respondents and nonrespondents to determine whether differences existed suggestive of selectivity or bias in the former. As table 1 shows, the

TABLE 1

Respondent and Nonrespondent Veterans Compared by Military Service Period, Disability Classification and Degree, and Age

Item	1,819 Respondents		533 Nonrespondents	
	Number	Percent	Number	Percent
Military Service Period:				
World War II	1,684	92.6	487	91.4
Korean conflict	135	7.4	46	8.6
Disability Classification:				
Psychosis	342	18.8	102	19.1
Psychoneurosis	1,477	81.2	431	80.9
Degree of Disability*				
100%	81	4.4	13	2.4
90%	3	.2	-	-
80%	11	.6	-	-
70%	43	2.4	10	1.9
60%	38	2.1	8	1.5
50%	108	5.9	32	6.0
40%	112	6.2	29	5.5
30%	363	20.0	103	19.3
20%	159	8.7	50	9.4
10%	901	49.5	288	54.0
Age:				
65-69 years	3	.2	-	-
60-64 years	10	.5	-	-
55-59 years	36	2.0	3	.6
50-54 years	174	9.6	40	7.5
45-49 years	307	16.9	99	18.6
40-44 years	535	29.4	165	30.9
35-39 years	594	32.6	170	31.9
30-34 years	115	6.3	39	7.3
25-29 years	45	2.5	17	3.2
Median age	41.5 years		41.2 years	
Mean age	42.1 years		41.4 years	

*For veterans with more than one rated disability, the ratings represent "combined degree of impairment."

two groups were compared with respect to disability classification, severity of disability, age, and period of military service. No significant differences 4/ were found. Insofar as these characteristics (the first three of which are highly pertinent to employability) are concerned, it may be said, therefore, that the respondents are representative of the total population queried.

Of the 1,819 respondents, 1,421 reported themselves to be employed 5/. These 1,421 employed veterans were the main focus of the study. Table 2 recapitulates the steps followed in arriving at this final study population.

TABLE 2

Derivation of the Study Population From the Original Sample of World War II and Korean Conflict Veterans Rated for Selected Psychiatric Disability Categories

Steps in Drawing Sample		Number
Original 1 percent sample		2885
Discarded (records unavailable)	-178	
Eliminated on basis of review of records	-355	
Hospitalized	113	
In full-time training	12	
Not employed	230	
Resulting sample to whom form letter was mailed		2352
Did not respond	533	
Responded	1819	
Not employed	398	
Employed	1421	
Employed veterans constituting the study population		1421

For each of the 1,421 employed veterans, regional office VR&E staff gathered detailed information about present job and about work and psychiatric history. In 7 out of 8 cases the information was obtained by means of personal contact with the

4/ On the variables of military service period and disability classification, the distributions of the respondents and nonrespondents were so closely similar as to make unnecessary a statistical test of the significance of the differences between the groups. With respect to degree of disability and age, the differences between the groups were evaluated by means of chi square. P values between .30 and .20 and .20 and .10, respectively, indicated that the overall distributions were not significantly different.

5/ The term "employed" is used throughout to include self-employment.

veteran (face-to-face interview in 73.5% cases and telephone interview in 13.7% cases), as well as from the study of agency records. In the remaining 12.8 percent of cases, information was derived from agency records or other reliable sources. The outline which served as a guide for regional offices in compiling the data and preparing a narrative report for each case is presented in exhibit 3 in appendix B. In addition to the narrative, a code sheet (exhibit 4, app. B) was completed for each case, to permit the machine tabulation of group data; codes were subsequently entered into punchcards and tabulated. These tabulated group data are the basis of the present report. A companion report (VA Pamphlet 22-9, "They Return To Work") presents individual case briefs for 337 selected cases, along with a summary of the major findings for the entire group.

RESULTS AND DISCUSSION

Employment Status. Approximately 7 of every 10 veterans 6/ in the sample of World War II and Korean conflict veterans with current disability compensation ratings for functional psychiatric conditions (exclusive of those in hospitals and in full-time training, i.e., those known not to be available for work) were found to be employed in the spring of 1960. 7/ Of the total who were working, 84 percent were employees and 16 percent were self-employed. As shown in table 3, their employment was distributed over the entire range of major occupational groups. 8/ For comparison purposes, the table also presents the occupational distribution of all employed males in the civilian labor force in the United States in April 1960. 9/

6/ This proportion takes account of the 230 veterans whom the preliminary screening of records indicated to be unemployed, as well as the 398 unemployed among the respondent group.

7/ The employed group includes all veterans who, at the time of survey, were working full- or part-time for pay or profit (including those working in family enterprises) and veterans who had jobs or businesses from which they were temporarily absent because of illness, bad weather, vacation, labor-management dispute or temporary layoff, but to which they expected to return. There were only a few veterans in the last-named category. Examples include a veteran employed as a truck-driver, who was not working at the time of survey because of a recent back operation but who was being carried on sick leave on the company payroll. One veteran was on temporary layoff but awaiting recall by the company where he had been employed for 12 years; another, now on layoff, was expecting recall within a month by the firm which had employed him for the past 15 years. In both these instances, such seasonal layoff had been the pattern during the years of the veteran's sustained employment with the same employer.

8/ The occupational classification and code structure of the Dictionary of Occupational Titles, Volume II, is used throughout this report.

9/ There are, of course, a number of variables, notably age and educational level, which are pertinent to status within the occupational hierarchy. Comparative group data with respect to attained education are not available. In April 1960, the median age of the total population of employed males was 40.6 years, that of the study population 41.3 years. The former group includes a sizeable proportion (14%) of workers under 25 years of age; there were none this young among the veterans of the study. Excluding this youngest group, the median age of the remainder of the total employed male population is 43.7 years. The groups also differ markedly at the older end of the age scale: 11 percent of all employed males, compared with only 0.3 percent of the veterans, were 60 or more years old. The majority (63%) of veterans were in the age bracket 35-44 years.

TABLE 3

Employed Psychiatrically Disabled Veterans and Total U.S. Employed Males, by Major Occupational Group

Major Occupational Group	Employed Psychiatrically Disabled Veterans	All Employed Males*
	Percent	
Professional and managerial	16.7	24.0
Clerical and sales	20.8	13.1
Service	7.5	6.6
Agricultural, fishery and forestry	4.6	9.8
Skilled	26.1	19.1
Semiskilled	14.9	19.5
Unskilled	9.4	7.9
Total	100.0	100.0

*Data for April 1960 from Employment and Earnings, U.S. Department of Labor, Bureau of Labor Statistics, May 1960.

It will be seen from table 3 that skilled and semiskilled craft and manual occupations together included approximately two-fifths of both the employed veteran group and the total employed male population. Of the number so employed, however, a larger proportion of veterans than of men in general were working at the skilled level, as compared with semiskilled jobs. Clerical and sales occupations ranked second among veterans and were relatively more frequent in the veteran group than among all male workers, the proportions being 1 in 5 and 1 in 8, respectively. Next most frequent among veterans, but relatively somewhat less numerous than among men in general, were professional, managerial and technical jobs. Employment in this category accounted for 1 of 6 veterans, compared with 1 of 4 employed males. Service jobs (personal, protective, building, and domestic) and unskilled manual occupations occurred in the veteran and total male population with approximately equal relative frequency. Fewer veterans (about 1 in 20) were employed in agricultural, fishery and forestry occupations that in any of the other major groups.

A further breakdown of the distribution of veterans' employment by divisions within the major occupational groups is presented in table 4. As shown there, the jobs held by psychiatrically disabled veterans are dispersed over the entire array of occupational divisions, with the exception of forestry, hunting and trapping, and there is no heavy concentration in any one area. The largest single group of occupations is the clerical which constitutes 12 percent of the total. (Of men in general, 7% are employed in clerical jobs.) It is especially worth noting that a substantial proportion (more than 20%) of employed psychiatrically disabled veterans work in occupations in which direct person-to-person relationships figure importantly in the job duties. Thus, 11 percent of the employed group are employed in managerial and official occupations and foreman jobs, i.e., in jobs which involve supervising, coordinating or guiding the work of others, either directly or through intermediate

supervisors; an additional 11 percent hold sales jobs involving contact with prospective customers and personal service jobs requiring either direct contact or close association with the individuals for whom the service is being performed.

TABLE 4

Employed Psychiatrically Disabled Veterans
by Major Occupational Group Division

Major Occupational Group Division	Veterans (N-1421) Percent
Professional and managerial:	
Professional	5.5
Semiprofessional	2.0
Managerial and official	9.2
Clerical and sales:	
Clerical and kindred	12.3
Sales and kindred	8.5
Service:	
Domestic service	.1
Personal service	2.8
Protective service	1.9
Building service workers and porters	2.7
Agricultural, fishery, forestry, and kindred:	
Agricultural, horticultural, and kindred	4.3
Fishery	.3
Forestry, hunting, and trapping	-
Skilled:	
Manufacturing and related	9.4
Nonmanufacturing	7.3
Miscellaneous	7.9
Foremen	1.5
Semiskilled:	
Manufacturing and related	5.4
Nonmanufacturing	7.3
Miscellaneous	2.1
Apprentices	.1
Unskilled:	
Manufacturing and related	3.8
Nonmanufacturing	2.1
Miscellaneous	3.5
Total	100.0

The heterogeneity of the occupations in which the veterans in the study population are employed, and their wide dispersion throughout the occupational structure, become even more apparent from the detailed table in appendix A showing employment by

three-digit occupational groups within the professional and managerial, clerical and sales, service, and agriculture categories and by three-digit industrial groups within the skilled, semiskilled, and unskilled categories. In professional occupations, for example, the total frequency is distributed among 19 of the 31 three-digit occupational groups identified in the Dictionary of Occupational Titles. In the semiprofessional division, the total number of veterans is small and there is a greater relative concentration in one group than was true for the professional occupations, almost half of the total being employed as draftsmen. Among managerial occupations, all except two of the three-digit groups are represented, with the largest frequencies occurring in retail managers and managers and officials, n.e.c. In the group of occupations employing the largest number of veterans, namely, clerical, two-fifths of the total are employed as post office clerks and mail carriers, with the remainder widely distributed over an array of clerical occupations. Veterans employed in sales work are both numerous and well distributed among a variety of sales occupations. Of the veterans in agricultural occupations, one-half are general farmers.

Veterans working in skilled, semiskilled, and unskilled occupations are employed in all major industrial subdivisions. The largest frequencies are found in metalworking, transportation, and construction occupations and in the several three-digit groups of mechanics and repairmen.

Twenty-one percent of the employed psychiatrically disabled group were employed by Federal, State, and local government agencies. It would be most appropriate to compare this with the corresponding percentage for veterans in all disability categories, because other disabled veterans, like the ones in the present study, are given additional preference in employment (beyond that extended to all veterans) by the Federal Government and a number of States. This statistic is not available, however. Less directly comparable, but relevant, nevertheless, is the proportion of all employed World War II and Korean conflict veterans, disabled and nondisabled, who are government employees. In March 1959, this figure was about 14 or 15 percent. The extent to which differences between the psychiatrically disabled and other disabled veterans in age, occupational distribution and other relevant characteristics may help to account for the difference in relative frequency of government employment is not known, but it is interesting to speculate whether the reputed greater security offered by such employment is especially valued by the individual with emotional difficulties.

The Employed Group. Of the employed group, 93 percent were veterans of World War II; the remainder had served during the period of the Korean conflict. As might be expected, therefore, the group was no longer young: the mean age was 42.0 years, the median 41.3 years. All, with the exception of a single individual, were males and had been out of the military service at least 5 years at the time of the study; almost four-fifths had been discharged 15 or more years ago. Seven out of eight 10/ were married. The remainder were almost equally divided between those who had never

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10/ Marital status was reported for 1386 veterans.

been married and the separated or divorced. In the group as a whole, 11/ one of every eight veterans was currently receiving psychiatric care from a VA mental hygiene clinic or other source; not surprisingly, the incidence of such treatment was significantly higher 12/ among the more seriously disabled (those with psychiatric disability rated at 30 percent or more) than among those with lesser degree of disability, the percentages in treatment being 18.3 and 8.9, respectively.

In terms of disability classification, the employed group consisted of 208 individuals (14.6%) with a history of psychosis and 1,213 (85.4%) rated for psychoneurosis. More than three-fourths (77.2%) were rated for psychiatric disability only; 13/ 22.8 percent had one or more rated physical disabilities, as well as a rated psychiatric condition. The latter (i.e., those with multiple rated disabilities) included cases in which the psychiatric condition was the major rated disability and cases in which the psychiatric disability was rated secondary in importance to a physical disability. These subgroups comprised 14.8 percent and 8.0 percent, respectively, of the total.

The entire range of severity of rated disability 14/ is encompassed by the employed group, as shown in table 5. This is true whether one considers degree of psychiatric disability alone or "combined degree of impairment" which, in the case of veterans with multiple disabilities, reflects the degree of disablement imposed by the several disabling conditions in combination. If a

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11/ Reporting N = 1378.

12/ The formula $CR = \frac{Dp}{\sqrt{pq\left(\frac{1}{N_1} + \frac{1}{N_2}\right)}}$ for evaluating the reliability of the difference between percentages and the .01 level of significance were used in all comparisons cited in this report unless otherwise indicated.

13/ Some of these veterans may have physical disabilities which were not the result of or incident to military service. Information about such non-service-connected disabilities was not available.

14/ Under the VA Schedule for Rating Disabilities for purposes of compensation, the degree of disability from the psychoses and psychoneuroses was determined, "in general, by the extent of social and industrial inadaptability, i.e., the extent to which the symptomatology would permit the patient to adjust himself to his social and industrial environment." "Social and industrial inadaptability" contemplated those abnormalities of conduct, judgment and emotional reactions which would affect economic adjustment, i.e., produce impairment of earning capacity. The severity of disability was based upon actual symptomatology, in relation to the social and industrial inadaptability which would be expected to result in the case of the average person affected.

rating of 30 percent or higher is taken to represent serious disability, 15/ 3 out of 10 of the employed group may be so characterized on the basis of rated psychiatric disability. Most of these are in the 30 to 60 percent category; only a small proportion (2.7%) of employed individuals are rated 70 to 100 percent disabled.

TABLE 5

Employed Psychiatrically Disabled Veterans
by Degree of Rated Disability
(N = 1421)

Disability Rating (Degree of Impairment)	Psychiatric Disability	Combined Impairment
	Percent	
70%-100%	2.7	3.0
30%-60%	27.7	33.1
Less than 30%	69.6	63.9
Total	100.0	100.0

It is of considerable significance to note that marked improvement has occurred in the psychiatric status of the employed group, as reflected by differences between the distribution of initial ratings and the distribution of current ratings for psychiatric disability (table 6). Whereas only 3 out of 10 are now rated as 30 percent or more disabled, 6 out of 10 were so classified at the time of initial rating. Thus, the majority of the employed group were formerly evaluated as seriously disabled. The possibility that successful employment contributed to improved adjustment requires further study.

TABLE 6

Employed Psychiatrically Disabled Veterans
by Degree of Initial and Current Psychiatric Disability Rating
(N = 1365)

Disability Rating (Degree of Impairment)*	Initial	Current
	Percent	
100%	7.4	.5
80%	.4	.1
70%	1.2	1.4
50%	31.1	4.2
30%	20.6	21.9
10%	33.9	70.0
0%**	5.4	1.9
Total	100.0	100.0

*The VA rating schedule does not assign 90, 60, 40, or 20 percent ratings for psychiatric disability.

**A rating of 0 percent signifies that the condition is evaluated as service-connected but not disabling and, therefore, noncompensable.

15/ This criterion has been used in the VA for the purpose of certain administrative determinations.

The Employed and Unemployed Compared. The preponderance of veterans with disability ratings under 30 percent in the employed group raises a question as to whether low ratings are similarly characteristic of the total sample of psychiatrically disabled veterans and, more especially, whether the employed and unemployed differ in respect to disability. It was found that 55 percent of veterans in the sample as a whole, compared with 64 percent of the employed group, were rated 10 and 20 percent for combined degree of impairment. Low ratings are thus currently predominant among the psychiatrically disabled World War II and Korean conflict veteran population, probably reflecting, among other things, the fact that many veterans have achieved improved adjustment during the years since discharge from military service. Nevertheless, as may be seen from table 7, the employed and unemployed groups within the total sample differ markedly on the disability dimension. Relatively almost twice as many among the employed group have combined degree of impairment disability ratings of 10 and 20 percent; the very seriously disabled (those

TABLE 7

Employed and Unemployed Psychiatrically Disabled Veterans Compared by Military Service Period, Disability Classification and Degree, and Age

Item	Employed (N=1421)	Unemployed (N=628)
	Percent	
Military Service Period:		
World War II	93.2	89.3
Korean conflict	6.8	10.7
Disability Classification:		
Psychosis	14.6	40.3
Psychoneurosis	85.4	59.7
Combined Degree of Impairment:		
70%-100%	3.0	30.2
30%-60%	33.1	35.7
10%-20%	63.9	34.1
Degree of Psychiatric Disability:		
70%-100%	2.7	28.8
30%-60%	27.7	33.4
Less than 30%	69.6	37.8
Age:		
55-69 years	3.0	5.2
45-54 years	24.3	29.0
35-44 years	64.4	54.1
25-34 years	8.3	11.7
Median age	41.3 years	41.7 years
Mean age	42.0 years	42.5 years

rated 70% and over) comprise 3 percent and 30 percent of the employed and unemployed, respectively. Similarly, when only the psychiatric disability component is considered, the unemployed, in comparison with the employed, are seen to include a much larger proportion of very seriously disabled individuals. More than 1 of every 4 among the unemployed, contrasted with only 1 of every 50 employed veterans, is rated 70 percent or higher for psychiatric disability.

It is not surprising, in view of the above differences in degree of disability, to find that the unemployed and employed also differ significantly with respect to the psychosis-psychoneurosis classification. Forty percent of the unemployed group, compared with fifteen percent of the employed, have a history of psychosis. (In the total sample, the comparable percentage is 25.) The percentage of unemployed among those rated for psychosis is 54.9; among those with psychoneurosis, it is 23.6 percent.

Exploration of the implications of these differences in disability between the employed and unemployed groups--the extent to which they may reflect, for example, nonreadiness for work on the part of individual seriously disabled veterans, deficiencies in available rehabilitation services, special placement problems, etc.,--would seem to be of critical importance. This would require followup of the unemployed, a task which was not within the scope of the present study. The employed group did, however, include some seriously disabled individuals and it may be expected that the experiences of those who have been successful in finding employment are, to some extent, relevant to the problems of the seriously disabled group as a whole. In analyzing the data, special attention will, therefore, be paid to the factor of severity of disability.

On the other factors for which comparative data are available, namely, age and period of military service, the differences between the employed and unemployed are less marked. Agewise, the unemployed group contains significantly more veterans 45 years old or over than does the employed (the proportions are 34% and 27%, respectively.) 16/ The average (mean and median) ages of the two groups are not significantly different, however. 17/ More of the unemployed (11%) than of the employed (7%) are Korean conflict veterans; this difference, though statistically significant, is not large.

Job Adjustment. Ninety percent of all the employed veterans in the study were judged by VR&E staff to be making a satisfactory

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16/ Prior to testing the significance of the difference between these proportions, calculation of the overall chi square P showed the age distribution of the two groups to be significantly different.

17/ Formulas used were $CR = \frac{D_M}{\sqrt{\sigma^2_{M_1} + \sigma^2_{M_2}}}$ and $CR = \frac{D_{Mdn}}{\sqrt{\sigma^2_{Mdn_1} + \sigma^2_{Mdn_2}}}$

job adjustment (35% were considered to be both satisfactorily adjusted and advancing on the job; 55% were making a satisfactory adjustment, but not advancing). This evaluation was made in each instance by the vocational counselor or rehabilitation specialist who had interviewed the veteran or otherwise carried major responsibility for developing the case data and who, therefore, had detailed knowledge about both the veteran's work history and current employment. The judgment, however, represented a subjective evaluation of a number of factors, and it is not known how these various elements (e.g., job satisfaction vs. more tangible aspects such as having maintained stability and security of employment) were weighted by the various raters in arriving at a final global rating. Nor can the effect of possible positive and negative biases on the part of raters be ruled out. Some individuals, for example, are known to have generalized negative attitudes toward and about the psychiatrically disabled. As rehabilitation workers, on the other hand, the raters may in some instances have been especially oriented toward positive judgments regarding success. Desirable though it would have been, it was, unfortunately, not feasible to train the raters in a uniform set of procedures, to have each case rated independently by more than one rater, nor to obtain validating information about job adjustment from the employers of the veterans. Despite these admitted limitations, it is impressive that in only 1 of every 10 cases in the total group was the employed psychiatrically disabled veteran's job adjustment evaluated by the rehabilitation worker as "less than satisfactory" or "unsatisfactory."

Less than satisfactory job adjustment was reported with significantly greater relative frequency for the more seriously disabled members of the employed group than for those with lesser degrees of psychiatric impairment (table 8), but the difference was not large. The great majority of the more seriously disabled, as well as the less seriously impaired, was considered to be making a satisfactory job adjustment.

TABLE 8

Job Adjustment of Employed Veterans, by Degree of Psychiatric Disability, Age and Marital Status

Item	N	Adjustment to Job	
		Satisfactory	Less than Satisfactory and Unsatisfactory
		Percent	
Degree of Psychiatric Disability:			
Less than 30%	967	91.3	8.7
30%-100%	420	86.4	13.6
Age:			
Under 45 years	1009	90.6	9.4
45 years and over	378	87.8	12.2
Marital Status:			
Married	1216	91.2	8.8
Not married	170	80.0	20.0

In view of the current considerable concern regarding the older worker, it is worthy of note that the relative frequency of "satisfactory" job adjustment was not significantly different for the older and younger members of the employed group (those 45 years of age or over vs. those under 45.) (Table 8.) The median age (41.3 years) of the group whose adjustment was rated "satisfactory" differed only slightly from the median age (41.5 years) of those rated "less than satisfactory" and "unsatisfactory."

Marital status, on the other hand, does appear to be associated with job adjustment. The proportion of the "married" group whose job adjustment was rated "less than satisfactory" or "unsatisfactory" is less than half the corresponding proportion among the "unmarried" group (table 8). This is a highly significant difference, the probability being less than .001 that a difference of this size would arise by chance. Similarly, there is a significantly larger proportion of married individuals among the satisfactorily adjusted than among the others. A related finding is reported by Olshansky et al. (16) for ex-patients from mental hospitals: the proportion of married individuals was significantly higher among those who achieved stable employment or reemployment than among the marginally employed and unemployed. To the extent, of course, that being married is associated with personal and emotional adjustment, it is not surprising to find that it is associated with adjustment in the vocational sphere.

Job Stability. Contrary to the frequently held stereotype of the psychiatrically disabled individual as a chronic "job hopper," the veterans of the present study appear to have maintained a considerable degree of job stability. At the time of survey, three-fifths (61%) of all "employee" veterans had been working for their current employers for 5 years or more; 12 percent for 3 to 4 years, 15 percent from 1 to 2 years, and only 12 percent for less than 1 year (table 9). Promotion in the course of this employment with the same employer to more responsible, better-paying jobs was frequently reported. Among the self-employed, job stability, as measured by years of self-employment in the same kind of business, is similar to that for employees. Although it is not possible to evaluate these data in terms of norms which take into account pertinent variables such as occupation, age of worker, skill level, and economic conditions, the general conclusion seems warranted that, for our group as a whole, emotional and personality instabilities have not precluded the achievement of a considerable degree of employment stability.

TABLE 9

Length of Employment With Present Employer

Years With Present Employer	Employed Psychiatrically Disabled Veterans		
	Total (N = 1329)	Employees (N = 1135)	Self-Employed (N = 194)
	Percent		
10 or more	35.6	34.0	44.8
5-9	26.4	26.5	25.8
3-4	12.0	12.0	11.9
1-2	14.7	15.1	12.9
Less than 1	11.3	12.4	4.6
Total	100.0	100.0	100.0

Occupational Advancement. Two-fifths of the employed veterans considered to be making a satisfactory job adjustment were also reported to be advancing occupationally, as represented by wage increases, increased job responsibilities, or promotions. It is relevant to note in this connection the frequently encountered statement in the case summaries that the veteran tended to avoid the assumption of additional job responsibilities. Occupational advancement was reported somewhat less often for more seriously disabled veterans than for the less seriously disabled (table 10), but the difference was not significant. Among older workers, on the other hand, advancement was significantly less frequent than among younger ones (table 10).

TABLE 10

Occupational Advancement of "Satisfactorily Adjusted" Employed Veterans, by Degree of Psychiatric Disability and Age

Item	N	Occupational Advancement	
		Advancing	Not Advancing
		Percent	
Degree of Psychiatric Disability:			
Less than 30%	883	41.6	58.4
30%-100%	363	34.2	65.8
Age:			
Under 45 years	914	41.8	58.2
45 years and over	332	32.8	67.2

Informing the Employer. Employers had preemployment knowledge of the character of the veteran's disability in half of the cases. An additional 8 percent who were hired without the employer's having knowledge of the disability later disclosed the information to the employer without prejudice. Veterans with more serious psychiatric disabilities (those rated 30% or more) revealed the information as often as did the lesser disabled.

Although they cannot be compared directly with the findings of the present study, the analogous data reported by Olshansky et al. (16) for mental hospital ex-patients are of interest. About three-fourths of these patients did not identify themselves as such in the labor market but, when they did, the disclosure did not necessarily bar them from employment. Among the group (41%) of veterans in the present study whose employers still did not know of the disability, many individuals indicated concern about the possible effects of disclosure and reported using various subterfuges to conceal the nature of their illness.

The extent to which these fears are based on a realistic evaluation of employer and coworker attitudes and probable reactions, as opposed to misapprehensions, is problematical. While the present study offers no data directly pertinent to this problem, certain of the findings (table 11), which suggest that employer knowledge concerning the disability does not disadvantage the psychiatrically disabled employee, do have an indirect bearing. First, of course, is the fact that, in 59 percent of cases, these veterans are maintaining

employment in the face of employer knowledge of the disability. Second, as shown in table 11, there is no difference between the two groups (i.e., between those whose employers know of the disability and those whose employers do not know) in the proportions who are considered to be "satisfactorily adjusted" nor in the proportions whose jobs are evaluated as "stable." Further, employer knowledge of the disability does not preclude the disabled individual's advancement on the job, as evidenced by the fact that the proportion of veterans advancing occupationally was significantly larger among veterans whose employers had this information than it was among veterans whose employers were not so informed (42% vs. 32%).

TABLE 11

Comparison of Job Adjustment, Advancement and Stability of Veterans Whose Employers Currently Know of Their Psychiatric Disability and Veterans Whose Employers Do Not Know

Item	Employer Knowledge of Disability	
	Yes (N = 707)	No (N = 500)
	Percent	
Adjustment to job:		
Satisfactory	91.9	89.4
Less than satisfactory or unsatisfactory	8.1	10.6
Job Stability:		
Stable	95.5	93.2
Not stable	4.5	6.8
	(N = 650)	(N = 447)
Job Advancement:*		
Advancing	41.7	32.2
Not advancing	58.3	67.8

*This tabulation limited to veterans with ' satisfactory" job adjustment.

Job Placement Assistance. As shown in table 12, the large majority (67%) of veterans reported obtaining their present employment through their own efforts. Assistance from friends and assistance from relatives were the next most frequently cited; together, these accounted for almost one-fourth of the total. Only 4 percent of the group reported finding employment through public agencies. These data, based as they are on the veterans' own perceptions and recollections, probably reflect some measure of distortion and forgetting. They have a degree of face validity, however, in that they are generally consistent with the findings of other studies regarding placement aid to the handicapped (e.g., 6, 16).

TABLE 12

Sources of Assistance Used by Psychiatrically Disabled Veterans in Obtaining Their Present Employment (N = 1216)

Source of Assistance	Veterans (Percent)
Own efforts	66.6
Friends	13.7
Family	10.4
Public agency	4.3
Private employment agency	2.9
Other	2.1
Total	100.0

Because of their finding that the majority of mental hospital ex-patients found jobs through their own efforts or those of friends and relatives, Olshansky, Grob, and Ekdahl (16, p. 521) question the commonly held assumption ". . . that ex-patients as a group need and/or want active professional intervention in negotiating their return to the labor market." This inference was bulwarked by information regarding the unemployed group,--information which suggested that three-fourths of them might properly be designated "unemployable." Insofar as the present study data are concerned, it would seem unwarranted, in the absence of information regarding the work potential among the unemployed group and their job seeking experiences, to rule out an alternative implication of possible need for improvement of the placement services of public agencies on behalf of clients with a history of mental or emotional disturbance.

Training and Education Following Service. Of the total group of employed veterans, one-half (53.6) had taken some education or training subsequent to discharge from military service, 49.0 percent under one of the VR&E programs administered by the VA and 4.6 percent not under VA auspices. The current occupations (classified by major occupational group) of veterans who took VR&E training and those who had no postservice training are shown in table 13. The occupational distributions of these two groups (which include equal proportions of veterans who are psychiatrically seriously disabled) differ significantly. 18/ This is noteworthy, even though it is not possible, in the absence of comparative group data and control with respect to a number of other pertinent variables, e.g., educational level at time of discharge, to ascribe the differences to the fact of postservice education. The largest difference--and one which is highly significant--occurs between the proportions of veterans with and without postservice training who are employed at semiskilled and unskilled levels. Among veterans who had taken no training after discharge from service, 30.6 percent were working at semiskilled and unskilled jobs, as compared

18/ The overall distributions were compared by means of chi square. When these were found to differ significantly, the differences between the proportions in the several categories were evaluated using the critical ratio technique.

with 18.8 percent of veterans with VR&E training. Also, significantly more VR&E trained veterans, compared with those with no postservice training, were employed at the professional, technical and managerial level.

TABLE 13

Current Occupations of Veterans Who Pursued Training Under the VR&E Program and Veterans Who Had No Postservice Training

Major Occupational Group	Veterans With VR&E Training (N = 679)	Veterans With No Postservice Training (N = 643)
	Percent	
Professional, managerial, and technical	19.3	13.4
Clerical and sales	20.6	21.9
Service	6.5	7.5
Agricultural	6.1	3.6
Skilled	28.7	23.0
Semiskilled	11.9	18.2
Unskilled	6.9	12.4
Total	100.0	100.0

Although approximately equal proportions of veterans with and without VR&E training were reported to be making satisfactory adjustment to their jobs, significantly more of the former were advancing occupationally. Among those whose job adjustment was evaluated as satisfactory, 44 percent of veterans with VR&E training were advancing; the comparable percentage for veterans who had not had VR&E training was 35 percent.

Comparative data regarding the vocational objectives toward which VR&E training was directed and current employment are available for 528 of the 679 veterans who took such training (table 14). Of the veterans in this group who embarked upon a program of professional or technical education or managerial training, 52 percent are now employed in a professional, technical or managerial occupation, with an additional 24 percent employed in clerical-sales occupations. The latter frequently are a rung on the ladder leading to managerial jobs. Of former clerical-sales trainees, two-thirds are now clerical-sales employees; this proportion is less reliable, however, since it is based on such a small number of cases. Among the veterans who took some training for a skilled level objective, 58 percent are currently working in a skilled level occupation. Among agriculture trainees, the correspondence between training and current occupation is lower, only 39 percent of trainees being employed in agricultural occupations. However, an additional 21 percent are working at skilled occupations, and it seems reasonable to hypothesize that a number of these individuals may be making use in their jobs of mechanical skills which were acquired in the course of form training. For the remaining categories (service and semiskilled), the numbers who pursued training are too small to permit any reliable conclusions.

TABLE 14

Comparison of VR&E Training Objectives and Present Occupation
(by Major Occupational Group)

Present Occupation	Total (N = 528)	Training Objective: Professional-Managerial (N = 148)	Clerical-Sales (N = 49)	Agricultural (N = 80)	Skilled (N = 212)	Other* (N = 39)
	Percent					
Professional-managerial	19.5	52.0	10.2	12.5	3.3	10.3
Clerical-sales	18.0	24.3	67.4	6.2	9.0	5.1
Service	5.1	4.1	2.0	1.2	6.1	15.4
Agriculture	7.2	1.3	2.0	38.8	1.9	--
Skilled	30.9	11.5	2.0	21.3	57.5	15.4
Semiskilled	13.1	4.1	12.3	15.0	15.1	33.3
Unskilled	6.2	2.7	4.1	5.0	7.1	20.5
	100.0	100.0	100.0	100.0	100.0	100.0

*Includes objectives in the service and semiskilled groups.

IMPLICATIONS

1. The degree of vocational adjustment achieved by the veterans of the present study shows clearly the lack of validity of any stereotypic negative view regarding the vocational potential of persons with histories of functional psychiatric conditions.

2. The fact that the employed veterans surveyed were distributed throughout the occupational hierarchy in much the same way as workers in general runs counter to the thesis that only certain kinds of jobs are appropriate for the psychiatrically disabled. It underscores instead, for rehabilitation workers, placement personnel, and employers alike, the importance of careful evaluation and consideration of the particular needs and capacities of each individual.

3. The generalization that employers run the risk of excessive employee turnover in hiring persons who have a history of mental or emotional disturbance is not borne out by the study data. Instead, the findings suggest the possibility of a parallel with the good record achieved by the physically handicapped in respect to stability of employment. More specific comparative data in this regard would be useful, as would comparison of the two groups in respect to such factors as work attitudes and values, absenteeism, safety, and production records.

4. A major implication emerging from the present study concerns the need for followup of those psychiatrically disabled veterans who were found not to be employed. For while the findings present a relatively optimistic picture of the employment adjustment achieved by veterans with functional psychiatric disability, they are not such as to encourage complacency that the rehabilitation needs of this group have been met or their potential as productive, contributing members of society fully exploited. It is encouraging that 7 out of 10 nonhospitalized veterans in the total group are working and that 6 out of 10 are considered to be making a satisfactory adjustment. On the other hand, the percent unemployed (31%) is high in comparison to the 5.6 percent rate of unemployment in the labor force as a whole in 1960. Moreover, the overall unemployment rate for the group masks significant intragroup differences. Among veterans rated for psychosis, one of every two is unemployed, compared with one of every four rated for psychoneurosis. The facile generalization may not be made, however, that competitive employment is not feasible for the more seriously disabled, because of the contrary evidence that there is among the employed group a number, albeit small, of veterans with serious disabilities. It would seem imperative, therefore, to ascertain the characteristics and needs of the unemployed group as a basis for planning, on the part of the VA and other agencies concerned, such further medical rehabilitation, resocialization, training, placement assistance and other readjustment services as these veterans may need. It would be helpful also, in this respect, to make a more intensive study of the seriously disabled individuals among the employed group in an effort to determine what factors and measures have been effective in bringing about their vocational adjustment and might be useful in similarly assisting those who are not employed.

5. Since it is implicit in the data that training under the VR&E programs has helped the psychiatrically disabled veterans of the study sample to achieve improved employment status and adjustment, the possibility of extending such rehabilitation assistance to other psychiatrically disabled persons should be considered.

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APPENDIX A

Employment of Psychiatrically Disabled Veterans, by Three-Digit Occupational and Industrial Group

Professional and Managerial Occupations		**237**
Professional Occupations:		**78**
0-01	Accountants and Auditors	10
0-03	Architects	2
0-06	Authors, Editors and Reporters	5
0-07	Chemists	3
0-08	Clergymen	7
0-11	College Presidents, Professors and Instructors	4
0-13	Dentists	2
0-17	Engineers, Electrical	3
0-18	Engineers, Industrial	3
0-19	Engineers, Mechanical	4
0-22	Lawyers and Judges	7
0-24	Musicians and Teachers of Music	5
0-25	Pharmacists	3
0-27	Social and Welfare Workers	3
0-30	Teachers, Primary School and Kindergarten	3
0-31	Teachers, Secondary School and Principals	6
0-32	Teachers and Instructors, n.e.c.	4
0-35	Natural Scientists, n.e.c.	1
0-39	Professional Occupations, n.e.c.	3
Semiprofessional Occupations:		**28**
0-43	Decorators and Window Dressers	4
0-44	Commercial Artists	1
0-48	Draftsmen	13
0-50	Laboratory Technicans and Assistants	5
0-56	Photographers	1
0-66	Technicians, Except Laboratory	1
0-68	Semiprofessional Occupations, n.e.c.	3
Managerial and Official Occupations:		**131**
0-71	Hotel and Restaurant Managers	11
0-72	Retail Managers	29
0-73	Wholesale Managers	2
0-74	Buyers and Department Heads, Stores	7
0-79	Inspectors, Managerial and Official	2
0-81	Advertising Agents	1
0-83	Officials of Lodges, Societies, Unions, etc.	1
0-85	Credit Men	3

0-87	Managers and Superintendents, Buildings	3
0-91	Purchasing Agents and Buyers, n. e. c.	6
0-92	Conductors, Railroad	1
0-94	Public Officials, n. e. c.	13
0-95	Inspectors, Public Service, n. e. c.	3
0-97, 0-98, 0-99	Managers and Officials, n. e. c.	49

Clerical and Sales Occupations - - - - - - - - - - - - - - - - - 295

Clerical and Kindred Occupations: - - - - - - - - 174

1-01	Bookkeepers and Cashiers, Except Bank Cashiers	12
1-04	Clerks, General	6
1-05	Clerks, General Office	12
1-06	Financial Institution Clerks, n. e. c.	3
1-07	Hotel Clerks, n. e. c.	1
1-16	Correspondence Clerks	2
1-17	File Clerks	4
1-18, 1-19	General Industry Clerks	10
1-25	Office Machine Operators	5
1-26	Paymasters, Payroll Clerks and Timekeepers	5
1-27	Post Office Clerks	33
1-28	Mail Carriers	41
1-34	Shipping and Receiving Clerks	11
1-35	Technical Clerks, n. e. c.	1
1-36	Statistical Clerks and Compilers	1
1-38	Stock Clerks	19
1-43	Baggagemen, Transportation	1
1-44	Ticket, Station, and Express Agents, Transportation	2
1-48	Agents and Appraisers, n. e. c.	2
1-49	Clerks and Kindred, n. e. c.	3

Sales and Kindred Occupations: - - - - - - - - - - - - 121

1-52	Salesmen, Brokerage and Commission firms, n. e. c.	3
1-55	Canvassers and Solicitors	7
1-57	Salesmen, Insurance	13
1-61	Hucksters and Peddlers	3
1-63	Salesmen, Real Estate	9
1-65	Salesmen, Stock and Bond	1
1-70	Sales Clerks	8
1-75	Salespersons	17
1-80	Salesmen, to Consumers	26
1-85, 1-86, 1-87	Salesmen and Sales Agents, Except to Consumers	34

Service Occupations - 107

Domestic Service Occupations: - - - - - - - - - - - 2

2-04 Housemen and Yardmen - - - - - 2

Personal Service Occupations: - - - - - - - - - - - - 40

2-21 Bartenders - - - - - - - - - - - - 4
2-22 Bellmen and Related Occupations - - - - - - - - - - - - - - - 1
2-23 Boarding-House and Lodging-House Keepers- - - - - 1
2-26 Cooks, Except Private Family - - 6
2-27 Waiters and Waitresses, Except Private Family - - - - - - - - - 2
2-29 Kitchen Workers in Hotels, Restaurants, Railroads, Shipyards, etc., n. e. c. - - - - 3
2-32 Barbers, Beauticians, and Manicurists - - - - - - - - - - - 14
2-38 Midwives and Practical Nurses- - 1
2-42 Attendants, Hospitals and Other Institutions - - - - - - - - 7
2-43 Attendants, Professional and Personal Service, n. e. c. - - - - 1

Protective Service Occupations: - - - - - - - - - - 27

2-61 Guards and Watchmen, Except Crossing Watchmen - - - 8
2-63 Firemen, Fire Department - - - - 10
2-66 Policemen and Detectives, Public Service- - - - - - - - - 9

Building Service Workers and Porters: - - - - - - 38

2-82 Charwomen and Cleaners - - - - - 3
2-84 Janitors and Sextons- - - - - - - - 15
2-86 Porters, n. e. c. - - - - - - - - - - 18
2-95 Elevator Operators - - - - - - - - 2

Agricultural, Fishery, Forestry, and Kindred Occupations - 65

Agricultural, Horticultural, and Kindred Occupations: - - - - - - - - - - - - - - - - - - - 61

3-03 Crop Specialty Farmers- - - - - - 1
3-04 Dairy Farmers - - - - - - - - - - 2
3-05 Fruit Farmers - - - - - - - - - - 2
3-06 General Farmers - - - - - - - - - 32
3-07 Animal and Livestock Farmers- - 2
3-08 Poultry Farmers - - - - - - - - - 1
3-16 Farm Hands, General Farms - - - 5
3-17 Farm Hands, Animal and Livestock - - - - - - - - - - - - 1
3-18 Farm Hands, Poultry - - - - - - - 1
3-35 Farm Mechanics- - - - - - - - - - 1

3-37	Farm Managers and Foremen - -	1
3-39	Nursery and Landscaping Laborers - - - - - - - - - - - -	3
3-40	Gardeners and Grounds Keepers, Parks, Cemeteries, etc. - - - - - - - - - - - - - - -	9
	Fishery Occupations: - - - - - - - - - - - - - - - - -	4
3-87	Fishermen and Oystermen - - - -	3
3-89	Fishing Occupations, n.e.c. - - -	1
	Skilled Occupations -	371
	Occupations in Manufacturing and Related Activities: -	134
4-01 to 4-10	Occupations in Production of Food Products- - - - - - - - - -	5
4-14 to 4-19	Occupations in Production of Textiles - - - - - - - - - - - - -	3
4-21 to 4-27	Occupations in Production of Fabricated Textile Products - -	2
4-29 to 4-39	Occupations in Production of Lumber and Lumber Products -	8
4-44 to 4-49	Printing Occupations - - - - - - - -	11
4-50 to 4-54	Occupations in Production of Chemicals and Chemical Products - - - - - - - - - - - -	3
4-57	Occupations in Production of Rubber Goods - - - - - - - - - -	3
4-59 to 4-62	Occupations in Manufacture of Leather and Leather Products -	2
4-65 to 4-70	Occupations in Production of Stone, Clay, and Glass Products -	2
4-71 to 4-95	Metalworking Occupations- - - - -	68
4-97 to 5-00	Electricians and Occupations in Manufacture of Electrical Equipment - - - - - - - - - - -	19
5-02 to 5-05	Occupations in Manufacture of Transportation Equipment - - -	1
5-08 to 5-13	Occupations in Manufacture of Miscellaneous Products- - - - -	1

5-16, 5-19	Miscellaneous Manufacturing Occupations	6
Occupations in Nonmanufacturing Activities:		**103**
5-20, 5-22	Occupations in Extraction of Minerals	2
5-23, 5-33	Construction Occupations	77
5-36, 5-49	Transportation Occupations	14
5-51, 5-54	Communication and Utility Occupations	5
5-55, 5-60	Trade and Service Occupations	5
Miscellaneous Occupations:		**112**
5-72	Engineers, Stationary	5
5-73	Cranemen, Derrickmen, Hoistmen, and Shovelmen	4
5-75	Drillers, Extraction of Minerals and Construction	1
5-76	Inspectors, n. e. c.	1
5-77	Glaziers	2
5-78	Millwrights	1
5-80	Mechanics and Repairmen, Airplane	2
5-81	Mechanics and Repairmen, Motor Vehicle	35
5-83	Mechanics and Repairmen, n. e. c.	57
5-84	Tool Sharpeners and Dressers	4
Foremen:		**22**
5-91, 5-92	Foremen, Manufacturing	13
5-93	Foremen, Extraction of Minerals	1
5-94	Foremen, Construction	1
5-95	Foremen, Transportation, Communication and Utilities	1
5-97	Foremen, Services, Amusements	2
5-99	Foremen, n. e. c.	4
Semiskilled Occupations		**212**
Occupations in Manufacturing and Related Activities:		**77**

6-01, 6-10 Occupations in Production of Food Products - - - - - - - - - 3

6-12 Occupations in Manufacture of Tobacco Products - - - - - - - - 2

6-14, 6-19 Occupations in Production of Textiles - - - - - - - - - - - 3

6-21, 6-27 Occupations in Production of Fabricated Textile Products - - 5

6-29, 6-39 Occupations in Production of Lumber and Lumber Products - 11

6-41, 6-42 Occupations in Production of Paper and Paper Goods - - - - - 1

6-44, 6-49 Printing Occupations - - - - - - - 1

6-50, 6-54 Occupations in Production of Chemicals and Chemical Products - - - - - - - - - - - - - 4

6-55, 6-56 Occupations in Production of Petroleum and Coal Products - - 2

6-57 Occupations in Production of Rubber Goods - - - - - - - - - - 1

6-59, 6-62 Occupations in Manufacture of Leather and Leather Products - 6

6-65, 6-70 Occupations in Production of Stone, Clay, and Glass Products - - - - - - - - - - - - 3

6-72, 6-95 Metalworking Occupations - - - - - 24

6-97, 7-00 Electricians and Occupations in Manufacture of Electrical Equipment - - - - - - - - - - - - 2

7-02, 7-05 Occupations in Manufacture of Transportation Equipment - - - 5

7-08, 7-13 Occupations in Manufacture of Miscellaneous Products - - - - - 2

7-16, 7-19 Miscellaneous Manufacturing Occupations - - - - - - - - - - - 2

Occupations in Nonmanufacturing Activities: - - - 104

7-23, 7-33 Construction Occupations - - - - - 17

7-35, 7-49	Transportation Occupations	67
7-55, 7-60	Trade and Service Occupations	18
7-61	Public Service Occupations, n. e. c.	2
Miscellaneous Occupations:		29
7-70	Firemen, Other Than Process Firemen	2
7-71	Oilers of Machinery	3
7-75	Drillers, Extraction of Minerals and Construction	1
7-79	Mechanics and Repairmen, Railroad and Carshop	1
7-81	Mechanics and Repairmen, Motor Vehicle	7
7-83	Mechanics and Repairmen, n. e. c.	6
7-84	Tool Sharpeners and Dressers	1
7-85	Transportation Equipment Laborers, Washers and Greasers	1
7-87	Chainmen, Rodmen, and Axmen, Surveying	2
7-88	Warehousing, Storekeeping, Handling, Loading, Unloading, and Related Occupations, n. e. c.	2
7-89	Miscellaneous Occupations, n. e. c.	3
Apprentices:		2
7-95	Electricians' Apprentices	1
7-99	Apprentices to Other Trades	1
Unskilled Occupations		134
Occupations in Manufacturing and Related Activities:		54
8-01, 8-10	Occupations in Production of Food Products	11
8-12	Occupations in Manufacture of Tobacco Products	2
8-14, 8-19	Occupations in Production of Textiles	3
8-21, 8-27	Occupations in Production of Fabricated Textile Products	2

8-29, 8-39	Occupations in Production of Lumber and Lumber Products	4
8-41, 8-42	Occupations in Production of Paper and Paper Goods	2
8-50, 8-54	Occupations in Production of Chemicals and Chemical Products	3
8-55, 8-56	Occupations in Production of Petroleum and Coal Products	1
8-65, 8-70	Occupations in Production of Stone, Clay, and Glass Products	2
8-72, 8-95	Metalworking Occupations	17
8-98, 9-00	Electricians and Occupations in Manufacture of Electrical Equipment	3
9-02, 9-05	Occupations in Manufacture of Transportation Equipment	4
	Occupations in Nonmanufacturing Activities:	30
9-20, 9-22	Occupations in Extraction of Minerals	2
9-23, 9-32	Construction Occupations	17
9-35, 9-49	Transportation Occupations	3
9-51, 9-54	Communication and Utility Occupations	5
9-55, 9-60	Trade and Service Occupations	2
9-61	Public Service Occupations, n. e. c.	1
	Miscellaneous Occupations:	50
9-68	Packing, Filling, Labeling, Marking, Bottling, Washing, and Related Occupations, n. e. c.	9
9-71	Oilers of Machinery	2

9-73	Cranemen, Derrickmen, Hoistmen, and Shovelmen	3
9-83	Mechanics and Repairmen, n. e. c.	5
9-85	Transportation Equipment Laborers, Washers, and Greasers	6
9-88	Warehousing, Storekeeping, Handling, Loading, Unloading and Related Occupations, n. e. c.	24
9-89	Miscellaneous Occupations, n. e. c.	1

APPENDIX B
EXHIBIT 1

Diagnostic Categories of Functional Psychiatric Disorder Represented in the Study Sample

Psychotic Disorders

Schizophrenic reaction, simple type

Schizophrenic reaction, hebephrenic type

Schizophrenic reaction, catatonic type

Schizophrenic reaction, paranoid type

Schizophrenic reaction, mixed type

Manic depressive reaction

Paranoid reaction

Psychoneurotic Disorders

Hysteria, conversion

Neurasthenia

Hypochondriasis

Psychasthenia

Anxiety hysteria

Anxiety state

Psychoneurosis, mixed types

Neurocirculatory asthenia

Neurosis, cardiac

Anorexia nervosa

APPENDIX B
EXHIBIT 2

VETERANS ADMINISTRATION

Dear

We are making a study of the employment problems of veterans with a disability like yours. You can help us and at the same time help other veterans by answering the question below.

If you are working for an employer or self-employed we would like to call you, or arrange an interview, to get further details about the type of work you are doing.

Please remember, any information you give us will be held confidential. We will not talk with anyone but you in this matter. The information we collect will not identify you by name, place of employment, or in any other way. Furthermore, this letter will not be placed in your permanent VA records.

With your help, our study should result in wider knowledge of the type of jobs held by disabled veterans. Just fill in your reply and return this letter in the enclosed post-free envelope. Thank you.

Sincerely yours,

Chief, Vocational Rehabilitation
and Education Division

ARE YOU EMPLOYED? ☐ YES ☐ NO	IF EMPLOYED, GIVE JOB TITLE
PLACE OF EMPLOYMENT *(City and State)*	

Encl.

FL 22-326(NR)
Dec 1959

FORM APPROVED
BUDGET BUREAU NO. 76-5904
EXPIRATION DATE 6-30-60

VETERANS ADMINISTRATION
DEPARTMENT OF VETERANS BENEFITS
WASHINGTON 25, D. C.

April 7, 1960

YOUR FILE REFERENCE:
Ltr. No. 22-18
IN REPLY REFER TO:
223

TO: Managers
All VA Regional Offices and Centers having
VR&E Activities and Veterans Benefits Office

SUBJ: Obtaining information concerning the employment of veterans of World War II and Korea with psychiatric disabilities

1. This is the fifth in a series of requests for information about the successful employment of disabled veterans of World War II and Korea. The first four had to do with blinded veterans (All Station Letter of November 1954), paraplegic veterans (All Station Letter of June 1956), homebound veterans (All Station Letter of April 1958) and epileptic veterans (All Station Letter of July 1958). This request concerns veterans with psychiatric disabilities.

2. The President's Committee on Employment of the Physically Handicapped has decided to engage in projects promoting job opportunities for persons with histories of mental disturbances as well as for those with physical disabilities. Maj. Gen. Melvin J. Maas, Chairman of that Committee, asked us to prepare a documentary pamphlet on veterans with histories of mental illness who have obtained and held useful employment. The pamphlet will be used to demonstrate to employers and the general public that mental illness need not be a roadblock to successful employment. Such information will also be important in our own rehabilitation programs.

3. We suggest that a small committee in your VR&E Division be given the responsibility for collecting, recording and reporting the required information. This Committee may find it helpful to call upon specialists on the Vocational Rehabilitation Board for technical assistance in preparing sections of the report. Attachment "A" to this letter provides instructions for collecting and reporting the desired information. It includes instructions for the use of VA Form Letter 22-326 (NR) recently mailed to you under separate cover and the punch cards delivered to your VR&E Division following our teletype of October 29, 1959 relative to TMS Job No. 21-121, RCS 231-50-S.

4. A tally will be kept of manhours spent by VR&E personnel in this project and the total reported on line 89, VA Form 20-6544-22.

An inquiry by or concerning a veteran or person in service should include full name and any VA file number preceded by a letter, such as C, XC, K, N, V, H, RH, RS, W, or loan number. If VA number is unknown, service number should be given.

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EXHIBIT 3

Operating Performance Report. This will include manhours spent by Vocational Rehabilitation specialists, and their time will also be shown, on VA Form 22-6545-22, Operating Performance Report, as loaned to the Counseling Activity.

5. We will expect to receive the material prepared by your office within 90 days of your receipt of this letter. Reports Control Symbol 231-50-S has been assigned this one-time report. Replies should be addressed to the Chief Benefits Director (223).

W. J. DRIVER
Chief Benefits Director

Encl.
Att. "A"

ATTACHMENT "A"

COLLECTING INFORMATION CONCERNING THE EMPLOYMENT OF VETERANS WITH PSYCHIATRIC DISABILITIES

1. For each case represented by a punch card received in the VR&E Division (TMS Job No. 21-121), the Claims Folder and, as necessary, other available agency records will be searched for information concerning the veteran's employment status. Cases in which any of the following is found to obtain will be eliminated from further steps in the study:

a. There is reliable evidence that the veteran has been unemployed for the 6 months preceding the date of the search.

b. The search of records discloses other information contra-indicating further contact with the veteran for the purposes of the study, e.g., the veteran, although employed until shortly before the search, is found to be confined in an institution for an indeterminate period of time.

c. The Claims Folder has been transferred to another area.

The claims punched cards for cases thus eliminated will be marked 0, 1, 2, or 3 as applicable under paragraph 4 below.

2. Form Letter 22-326(NR) will be mailed in all remaining cases, except for trainees in on-the-job or apprenticeship training programs (see paragraph 3 below). One followup in the form of a second mailing, using the same form letter marked "Second Request," will be made in the case of those veterans who do not respond within two weeks to the first mailing. The date of first and/or second mailing and the date a reply is received will be marked on each claims punched card as a control. Each of these cards will be marked 5, 6, 7, 8, or 9 as applicable under paragraph 4 below.

3. Trainees in on-the-job or apprenticeship training programs will be regarded as employed, for purposes of this study, and will be subject to the preparation of a narrative report and code sheet as outlined in paragraphs 5, 6 and 7 below. However, as indicated previously, FL 22-326(NR) will not be mailed to them. The claims punched cards for these cases will be marked 4 as prescribed in paragraph 4.

4. The claims punched cards received in the VR&E Division (TMS Job 21-121) will be marked in the upper right-hand corner with the following code number, as applicable:

*Regional offices with VR&E jurisdiction over areas served by other regional offices will route to the offices within their jurisdiction the pertinent claims punched cards, in order that the search of folders and necessary followup and preparation of reports may be accomplished by VR&E Staff in the regional territory where the veteran lives. The material will be routed to the VR&E Division for transmittal to Central Office.

APPENDIX B
EXHIBIT 3

0. No letter mailed - records transferred out of the area.

1. No letter mailed - unemployed - hospitalized.

2. No letter mailed - unemployed - attending school full time under VA Vocational Rehabilitation or Readjustment Training program.

3. No letter mailed - unemployed - other reason or reason unknown.

4. No letter mailed - trainee is in an on-the-job or apprenticeship training program.

5. One letter mailed - response received - veteran is employed.

6. One letter mailed - response received - veteran states he is unemployed.

7. Follow-up letter mailed - response received - veteran is employed.

8. Follow-up letter mailed - response received - veteran states he is unemployed.

9. Follow-up letter mailed - no response received.

After the punched cards have been marked with the above codes, they will be grouped in accordance with the code numbers and forwarded to the servicing TMS to be held for subsequent mailing to Central Office.

5. For each veteran who is reported to be employed, effort will be made to get the information outlined in the paragraph following. The veteran should ordinarily be contacted by a VR&E counselor or rehabilitation specialist, but when this is not practicable or believed to be necessary, the information may be obtained by telephone, agency record or other means, provided your office can be reasonably sure of its reliability. An employer will not be contacted unless it is necessary and the veteran's prior assent is obtained.

6. Each case study is to be submitted in narrative form, following the outline and sequence in the subparagraphs below. The statements should be as complete and detailed as data will permit. Each case study will be typed on one or more separate sheets, so that no two veteran's cases appear on the same sheet.

a. Name and station number of regional office preparing the statement.

b. Veteran's name and C number.

c. Marital status and number of dependent children, if any.

d. A list of the veteran's ratings from the initial award, including the current rating. This should be arranged in tabular form showing: (1) Date of rating; (2) disability; and (3) percentage.

e. DOT title and Vol. I 5-digit code number of the veteran's occupation. If DOT does not adequately describe the occupation, give payroll, or special title of his job.

f. The industry and type (not name) of establishment or other work setting in which he is employed; approximate number of employees. If self-employed the nature of his business or profession; where he works (home, office, shop, etc.).

g. Length of time he has been employed in his present position and length of time he has been employed in this same occupation.

h. How the veteran prepared for and attained his present position. Describe his significantly related work experience and all significant training he has had since military service (if any of this training was under the VR&E program, name the applicable Public Laws). Describe any special training problems and how solved; the nature of any special difficulties encountered in finding his present position and in finding and keeping earlier ones, or in developing his own business, and how these were resolved; any opportunities or advantages not ordinarily available to all disabled veterans such as unusual financial support, employment in a family enterprise, or reemployment by a previous employer. How did the veteran get his present position? Describe any special placement assistance he received in connection with his present position, getting started in the occupation, etc. - e.g., from a VR&E employee, through a hospital rehabilitation or placement program, from friends, public or private employment agencies, or other sources.

i. Does the veteran's present employer know the character of his disability? Was the employer informed about the disability before hiring him?

j. A description of what the veteran does on the job, including product made or contributed to, or service rendered; major or typical job activities, hours per week; any limitations or concessions in work schedule or tasks due to disability. Significant persons in his work situation and character of his relationships with these persons: Supervisors, co-workers, etc. How do they relate to him, their attitudes toward him.

k. Evaluation of job and veteran's adjustment to it; how secure, steady, remunerative; opportunity for advancement; occupational outlook; job satisfaction; promotions, wage increases, increased responsibilities awarded since beginning the job.

l. A descriptive statement of the veteran's work history from the date of his separation from the Armed Forces until he obtained his present employment. Give job titles and type of industry, approximate number of months employed on each job, how each job was obtained, and reason for leaving. Also give the title and 3-digit Code (DOT, vol. I) of the veteran's principal preservice occupation.

m. A descriptive statement of the veteran's psychiatric history. In preparing this statement no attempt should be made to obtain or report information contained in clinic or hospital records. Our purpose will be served by a description equivalent to a well-documented, comprehensive item 3, Part I, VA Form 22-1902i. It is recognized that the available descriptions of behavior may be poor and the recording of observations inadequate. However, we are interested in those measures, incidents or techniques which seemed to contribute significantly to vocational adjustment. We

APPENDIX B
EXHIBIT 3

are also interested in an evaluation of the predominant personality characteristics manifested in social interaction on the job which are effective or ineffective in meeting the job requirements. Available sources for this information will be C-files, counseling and training records, personal interviews with the veteran, and consultations with members of the Vocational Rehabilitation Board.

n. Is he currently receiving psychiatric treatment through a mental hygiene clinic or other source?

o. Source of information. Personal interview, telephone conservation, agency records.

p. Make any other comment about the case you feel may be useful to us.

7. In addition to the above narrative statement for each veteran who is reported employed, a code sheet, VA Form 22-6577-(NR), will also be prepared. A supply of these forms is being mailed to you under separate cover. These code sheets will be used for transmitting information to TMS for use in establishing a punched card which is to be forwarded to Central Office. Information for the code sheets will be obtained from the narrative report. Item numbers on the code sheet correspond to subparagraphs of the narrative report as follows:

Item 1 - subparagraph 6b.
Item 2 - subparagraph 6c. Children under code 3 refers to dependent children.
Item 3 - subparagraph 6e. Use 5-digit code number obtained from the Dictionary of Occupational Titles Vol I, 2nd Edition.
Item 4 - subparagraph f.
Items 5 and 6 - subparagraph g.
Items 7, 8, 9 and 10 - subparagraph h. Use 5-digit code numbers obtained from the Dictionary of Occupational Titles, 2nd Edition for objectives pursued under the Vocational Rehabilitation program and for on-job training under the Readjustment program. Use 3-digit codes obtained from Appendix E, Manual M7-1, Part V for objectives pursued in institutional training under the Readjustment program.
Items 11 and 12 - subparagraph i.
Items 13 and 14 - subparagraph k. Selection of code for either of these two items is based on the evaluation or judgment of the counselor and/or rehabilitation specialist.
Item 15 - subparagraphs g, h, l, and m. The number of months coded under this item should total 60.
Item 16 - subparagraph n.
Item 17 - subparagraph o. Code 1 will be used in all cases where at least some of the information has been obtained by means of personal interview with the veteran. Code 2 will be used where there has been contact with the veteran via the telephone and a review of agency records, but no personal interview. Code 3 will be used where the information has been derived from the review of agency records and the veteran has not been contacted either by telephone or personal interview.

Applicable code numbers in the "Description" column for line items 2, 4, 7, 8, 11, 12, 13, 14, 16 and 17 will be entered in the coding column.

All code blocks will be filled. Where the information is not applicable or available, zeros will be used. Code blocks will also be prefixed by zeros where necessary. For example, item 5 has 3 code blocks for number of months employed in present job. If the veteran was employed 9 months, the code entered in this block would be 009.

8. TMS will prepare punched cards from the code sheets received from the VR&E Divisions, using 5280 manila card stock. Station number is to be gang punched in columns 48-49. TMS will forward these punched cards properly identified to Central Office in accordance with M23-2, Part I. The claims cards which were forwarded to TMS by the VR&E Division as directed under paragraph 4 will be mailed to Central Office at the same time. All cards should be mailed to reach Central Office not later than 90 days from the receipt of this instruction.

9. VR&E Division will forward to the Chief Benefits Director (223) the narrative statements for employed veterans. These should be mailed to reach Central Office not later than 90 days from the receipt of this instruction.

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EXHIBIT 4

CODE SHEET FOR EMPLOYMENT STATUS INQUIRY

REPORTS CONTROL SYMBOL 231-50-S

STATION CODE NO.

ITEM NO.	DESCRIPTION	COLUMN NO.	CODING
1	CLAIM NUMBER	1-8	
2	MARITAL STATUS: 1. NEVER MARRIED 2. MARRIED 3. MARRIED (with children) 4. WIDOWED 5. SEPARATED OR DIVORCED	9	
3	DOT CODE NUMBER OF PRESENT OCCUPATION	10-14	
4	EMPLOYEE STATUS: 1. EMPLOYEE 2. SELF EMPLOYED	15	
5	NUMBER OF MONTHS EMPLOYED IN PRESENT POSITION	16-18	
6	NUMBER OF MONTHS EMPLOYED IN PRESENT OCCUPATION	19-21	
7	TRAINING FOLLOWING SERVICE WAS RECEIVED FROM: 1. VA 2. OTHER THAN VA 3.VA AND OTHER 4.NONE	22	
8	VA TRAINING WAS RECEIVED UNDER THE: 1.VOC. REH. PROGRAM 2.READJUSTMENT PROGRAM 3.VOC. REH. AND READJUSTMENT PROGRAM	23	
9	MAJOR OBJECTIVE FOR WHICH TRAINED: (Item 9 or 10) DOT CODE NUMBER	24-28	
10	SCHOOL COURSE CODE (Readjustment training)	29-31	
11	PRESENT EMPLOYER KNEW CHARACTER OF VETERAN'S DISABILITY AT TIME OF HIRING: 1.YES 2.NO	32	
12	PRESENT EMPLOYER NOW KNOWS CHARACTER OF VETERAN'S DISABILITY: 1.YES 2.NO	33	
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APPENDIX C

RELIABILITY OF SAMPLE ESTIMATES*

Sampling Errors. Since the estimates in this study are based on sample data, they may differ somewhat from results that would have been obtained if all veterans with current VA disability ratings for service-connected functional psychiatric conditions had been included in the study. The unit for measuring sampling variability is the standard error. The chances are about 2 out of 3 that a sample estimate will not differ from the result of a complete count by more than one standard error. The chances are about 19 out of 20 that the difference will not be more than 2 standard errors. Approximate values of the standard errors applicable to the sample percentages shown in this study are given below.

If the Sample Percentage is	And the sample base is				
	2,000	1,400	800	500	200
	Then the standard error of the sample percentage is approximately:				
2 or 98	0.3	0.4	0.5	0.6	1.0
5 or 95	0.5	0.6	0.8	1.0	1.5
10 or 90	0.7	0.8	1.1	1.3	2.1
15 or 85	0.8	0.9	1.3	1.6	2.5
25 or 75	1.0	1.1	1.5	1.9	3.1
50	1.1	1.3	1.8	2.1	3.5

Nonresponse. In addition to sampling variability, the estimates are subject to bias due to nonresponse. The extent of this bias cannot be determined. However, the fact that respondents and nonrespondents are not significantly different with respect to known characteristics (table 1, p. 6) indicates that the bias due to nonresponse may not be too serious.

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*This technical note was prepared by O. O. Price, Mathematical Statistician, Systems and Standards Service, Department of Veterans Benefits.

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*ANNUAL CONFERENCE ON INDUSTRIAL EDUCATION, SACRAMENTO, CALIFORNIA, MARCH 14-16, 1967

The theme of this conference, attended by 280 teachers and administrators, was "Industrial Education--the Bridge Between Man and His Work." Presentations included: (1) "Progress, Achievement, and Assessment--An Analysis of California's Program of Industrial Education," by Richard S. Nelson, (2) "Needed in Vocational Education: A Substantial Heresy," by Wallace T. Homitz, (3) "Advisory Council on Vocational Education," by Melvin L. Barlow, (4) "The Changing Scene in Vocational Education," by Wesley P. Smith, and (5) an address by Grant Venn with the theme as its title. Group and panel presentations included: (1) Counseling and Guidance, (2) Programs in the High Schools, (3) Articulation with Other Subject Areas, (4) Articulation--K through 14, (5) Programs Within Industrial Education for Persons with Special Needs, (6) Adult and Continuing Education, (7) Teacher Education, (8) Evaluation and Follow-Up, (9) Advisory Committees, and (10) Programs in the Junior College. One session was devoted to "What's New" in several service fields and programs. (EM)

VT 002 214

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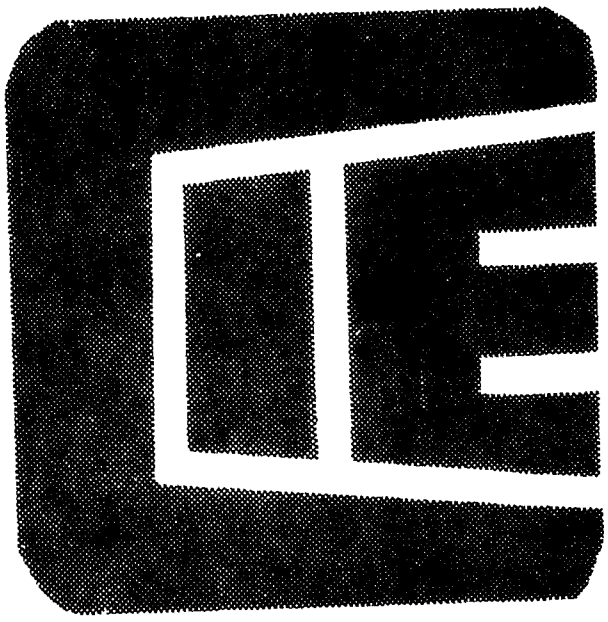
29TH ANNUAL* CONFERENCE REPORT



BUREAU OF INDUSTRIAL EDUCATION

CALIFORNIA STATE DEPARTMENT OF EDUCATION
SACRAMENTO 1967

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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VT002214

REPORT OF THE

TWENTY-NINTH ANNUAL CONFERENCE ON INDUSTRIAL EDUCATION

SACRAMENTO, CALIFORNIA

March 14-16, 1967

CALIFORNIA STATE DEPARTMENT OF EDUCATION

MAX RAFFERTY

Superintendent of Public Instruction

Sacramento, 1967

INTRODUCTION

Our theme for the Twenty-Ninth Annual Conference on Industrial Education, "Industrial Education--the Bridge Between Man and his Work", is most timely. Also timely is today's version of Industrial Education seeking answers for tomorrow's questions. The new breed of Industrial Education leadership is aware of the constant changes, the greater challenges, and increased needs of a modern dynamic society.

It is during these conferences where there are opportunities to explore, examine, and discuss mutual concerns that new insights are shared and made public. Through this annual report, then, an attempt is made to offer the reader an overview of the conference proceedings.

In conclusion, it is certainly most appropriate to offer appreciation and congratulations to those responsible for the Twenty-Ninth Conference on Industrial Education.

Chief, Bureau of Industrial Education

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Abbott, Ellen M.	Grossmont School District	La Mesa
Acosta, Joseph	San Joaquin County Schools	Stockton
Akers, Bruce	Burbank Unified Schools	Burbank
Allen, David	University of California	Los Angeles
Allen, William D.	Pasadena City Schools	Pasadena
Allison, James	State Department of Education	Los Angeles
Allman, Walter E.	Riverside County Schools	Riverside
Anderson, Hugh M.	Philco-Ford Corporation	Palo Alto
Anderson, Jack L.	San Jose Unified School District	San Jose
Ansted, Donald F.	Folsom State Prison	Represa
Atkins, Bill	ABC Unified School District	Artesia
Baer, Fred A.	Los Angeles City Schools	Los Angeles
Bairo, Aldo	West Coast Trade Schools	Los Angeles
Baldwin, Leland P.	State Department of Education	Sacramento
Barillier, C. W.	Los Angeles Trade-Technical College	Los Angeles
Barkhouse, Bob	Yuba College	Marysville
Barlow, James R.	San Luis Obispo County Office of Education	San Luis Obispo
Barlow, Melvin L.	University of California	Los Angeles
Barnett, E. T.	San Joaquin Delta College	Stockton
Bates, Horace W.	El Camino Junior College	El Camino College
Batmale, Louis F.	City College of San Francisco	San Francisco
Beam, Roger D.	Compton Junior College District	Compton
Belden, Charles	Santa Rosa Junior College	Santa Rosa
Bellenger, Joseph C.	San Jose Unified Schools	San Jose
Bennion, Kent	State Department of Education	Sacramento
Benson, Herbert L.	U.S. Office of Education	San Francisco
Bent, Edward W.	State Department of Education	Sacramento
Berruezo, Joseph E.	College of Marin	Kentfield
Biebesheimer, Howard	San Jose Junior College District	San Jose
Bilyeu, J. Wilson	Contra Costa County Department of Education	Pleasant Hill
Bodkin, Lee D.	State Department of Education	Oakland
Boeger, Earl E.	Folsom State Prison	Represa
Bogetich, Thomas M.	Orange County Schools	Santa Ana
Boortz, Nathan H.	Foothill Junior College District	Los Altos Hills
Boyer, Gaylord	Modesto City Schools	Modesto
Brady, Charles C.	Ventura County Schools	Ventura
Bratset, Edward	Laney College	Oakland
Brierley, Frederick J.	Santa Monica City College	Santa Monica
Brooks, Victor M.	Santa Monica Unified Schools	Santa Monica
Bull, Thomas W.	Mt. San Antonio College	Walnut
Bumpus, Ralph E.	Eureka City Schools	Eureka
Bushnell, Claud L.	Folsom State Prison	Represa
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Carter, Patrick C.	Diablo Valley College	Pleasant Hill
Casteel, Kenneth	Santa Clara County Office of Education	San Jose
Cavanagh, John A.	Los Angeles City Schools	Los Angeles
Chadwick, Ralph G.	Cerritos College	Norwalk
Chambers, George F.	Richmond Unified School District	Richmond
Clapp, Virginia	Grossmont Union High School District	La Mesa
Clines, F. James	Los Angeles Harbor College	Wilmington
Collins, W. J.	Fremont-Newark Junior College	Newark
Colt, Irvin	Mt. San Antonio College	Walnut
Conley, John	State Department of Education	Sacramento
Damon, Thomas F.	Cubberley Adult School	Palo Alto
Darling, Robert	State Department of Education	Sacramento
Davis, John C.	Fresno City Unified School District	Fresno
Deal, Robert W.	Modesto Junior College	Modesto
Dean, C. Thomas	California State College at Long Beach	Long Beach
DeBord, Robert	Stockton Unified School District	Stockton
DeFranco, F. Peter	Los Angeles Trade-Technical Evening School	Los Angeles
DeGabriele, Eugene M.	State Department of Education	Sacramento
Deggendorfer, N. V.	San Francisco Unified School District	San Francisco
Demmler, Ralph R.	Los Angeles City Schools	Los Angeles
Densley, Kenneth	State Department of Education	Sacramento
Dobson, Clifford	Rio Hondo Junior College	Whittier
Douglass, R. A.	Folsom State Prison	Represa
Eckstein, Jackson E.	Los Angeles City Schools	Los Angeles
Edington, Everett D.	State Department of Education	Sacramento
Edler, Lawrence A.	Santa Cruz County Schools	Santa Cruz
Edwards, Arthur	San Mateo Union High School District	San Mateo
Ellmore, Joseph F.	Philco-Ford Corporation	Palo Alto
Elmgren, Theodore G.	El Camino College	El Camino College
Esposti, Rudolph E.	Folsom State Prison	Represa
Estrada, Mel	Campbell Union High School	Campbell
Farrar, Edward R.	San Jose Unified School District	San Jose
Felsch, Frederick O.	Chaffey College	Alta Loma
Fielding, Harold R.	Riverside County Schools	Riverside
Fisher, Richard E.	Pacific Union College	Angwin
Fitzgerald, Robert S.	Santa Monica City College	Santa Monica
Flagg, Carl P.	U.S. Naval Ordnance Test Station	China Lake
Fleckles, David E.	Sweetwater Union High School District	Chula Vista
Foxx, James E.	Santa Barbara City College	Santa Barbara
Fuller, Edward E.	Imperial County Schools	El Centro

Fuller, Mary M.	Contra Costa County Department of Education	Pleasant Hill
Fullmer, M. C.	Napa Junior College (Retired)	Napa
Funk, B. Gordon	Los Angeles City Schools	Los Angeles
Gemmil, Fred D.	Folsom State Prison	Represa
Gensiracusa, Joseph	San Jose Unified Schools	San Jose
Gillette, Maxwell C.	San Francisco Unified School District	San Francisco
Goldman, E. D.	San Francisco Unified School District	San Francisco
Goldsmith, J. Lyman	Los Angeles City Schools	Los Angeles
Gonzalez, Robert R.	San Francisco Unified Schools	San Francisco
Goolsby, Howard	Fresno City College	Fresno
Gordon, William G.	State Department of Education	Oakland
Guldberg, Glen R.	Citrus Junior College District	Azusa
Grainge, Floyd M.	Long Beach State College	Long Beach
Green, Cecil D.	Riverside City College	Riverside
Gromacki, Chester	Fullerton Junior College	Fullerton
Gruber, Harvey N.	State Department of Education	Sacramento
Guarisco, Joseph A.	College of the Sequoias	Visalia
Hankins, M. V.	Contra Costa College	San Pablo
Hansler, Robert P.	Fresno City Unified Schools	Fresno
Harlan, Owen	Alameda County Schools	Hayward
Harris, Wayne M.	State Department of Education	Sacramento
Harvey, Robert E.	State Department of Education	Sacramento
Helm, Eldon L.	Modesto Junior College	Modesto
Herman, James A.	State Department of Education	Sacramento
Hernandez, Ray	Merritt College	Oakland
Hewlett, Eleanor C.	Laney College	Oakland
Hill, Glenn L.	State Department of Education	Sacramento
Hinds, Ariel P.	Sacramento City Unified Schools	Sacramento
Hoerner, James	West Valley College	Campbell
Hofmann, Carl (Jr.)	Modesto Junior College	Modesto
Hopkins, Floyd G.	Alameda Unified Schools	Alameda
Hornbeck, William J.	Los Angeles City Schools	Los Angeles
Howell, J. Brady	Santa Barbara City Schools	Santa Barbara
Hull, J. H.	Torrance Unified School District	Torrance
Hunter, Floyd M.	South San Francisco Unified School District	So. San Francisco
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Imes, Orley B.	Contra Costa College	San Pablo
Irgang, Frank	San Diego State College	San Diego
Jacobson, Karl F.	State Department of Education	Sacramento
James, Joseph	Fullerton Junior College	Fullerton
James, Keith F.	Long Beach Unified Schools	Long Beach
James, Stephen A.	Monterey Peninsula College	Monterey
Johnson, Carl A.	John O'Connell Evening Vocational and Technical Institute	San Francisco

Johnson, Franklin R.	Los Angeles Trade-Technical College	Los Angeles
Jones, Mark	Tulare County Schools	Visalia
Journigan, Russell P.	Sierra College	Rocklin
Knighton, Otis	Santa Ana College	Santa Ana
Koehler, Lawrence E.	State Department of Education	Sacramento
Konnoff, Nick	Modesto Junior College	Modesto
Krebs, James C.	Inglewood Unified Schools	Inglewood
Kvam, Robert C.	San Leandro Unified Schools	San Leandro
Lachman, Millard S.	San Diego County Schools	San Diego
Lackey, Curtis E.	State Center Junior College	Fresno
Ladda, R. Fredric	U.S. Naval Ordnance Test Station	China Lake
Lano, Richard L.	University of California	Los Angeles
LaPerle, Gerald	Contra Costa County Schools	Pleasant Hill
Larsen, Glen	San Bernardino County Schools	San Bernardino
Larson, Francis	Humboldt County Schools	Eureka
Lawrence, Van B.	State Department of Education (Retired)	Sacramento
Leal, Joseph R.	San Jose Junior College	San Jose
Lefmann, Normann E.	Los Angeles City Schools	Los Angeles
Livingston, Lloyd	Shasta College	Redding
Lofgren, Paul V. W.	State Department of Education	Berkeley
Lorbeer, Wilbur W.	Torrance Unified School District	Torrance
Lorenzoni, Larry N.	Don Bosco Technical Institute	South San Gabriel
Loucks, Harry J.	Sonoma County Schools	Santa Rosa
Lynn, Bert M.	Torrance Unified Schools	Torrance
Malchow, Bruno	Santa Rosa Schools	Santa Rosa
Marlais, Mark J.	Laney College	Oakland
Mays, William A.	California State College	Los Angeles
McCaw, Sidney E.	San Jose City College	San Jose
McKinstry, Jack	Redlands Audio-Visual	Redlands
Mestler, Floyd C.	San Bernardino Valley College	San Bernardino
Meyer, John M.	University of California	Los Angeles
Meyer, Leo	Chabot College	Hayward
Miller, Burel R.	Folsom State Prison	Represa
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Mills, Ray H.	Allan Hancock College	Santa Maria
Monroe, Lynne C.	University of California	Los Angeles
Montiel, Ernest L.	San Diego City Schools	San Diego
Moore, Douglas P.	Coachella Valley Junior College	Palm Desert
Morphew, Jesse	San Diego City Schools	San Diego
Moseley, D. W.	Jefferson High School	Daly City
Mulkey, Charles R.	Monterey Peninsula College	Monterey
Myers, Cloice E.	Rio Hondo Junior College	Whittier
Nelson, Richard S.	State Department of Education	Sacramento
Nevins, Richard W.	State Department of Education	Fresno
Nickerman, Ed	Mendocino County Schools	Ukiah

Obrey, Robert L.	San Mateo County Schools	Redwood City
Opperman, H. J.	State Department of Education	Sacramento
Orr, Fred E.	Santa Barbara County Schools	Santa Barbara
Ott, Walter H.	Pierce College	Los Angeles
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Owens, John S.	Orange Coast College District	Costa Mesa
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Peters, Charlotte	Sacramento County Welfare	Sacramento
Peters, G. Frederick	State Department of Education	Sacramento
Phillips, Alden	Ventura County Junior College	Ventura
Plusch, James O.	Long Beach City College	Long Beach
Poole, Robert W.	State Department of Education	Sacramento
Pratt, William A.	Solano County Junior College District	Vallejo
Quint, Louis	American River Junior College	Sacramento
Rajander, Robert A.	Berkeley Unified School District	Berkeley
Ralston, Lee W.	Los Angeles County Schools	Los Angeles
Rathbun, Jess	San Francisco Unified School District	San Francisco
Redden, George L.	San Francisco Unified School District	San Francisco
Richardson, Kemp	Orange County Schools	Santa Ana
Ricker, Phillip E.	University of California	Los Angeles
Rielley, Michael J.	State Department of Education	Sacramento
Riendeau, A. J.	West Valley College	Campbell
Roberts, Edward R.	State Department of Education	Los Angeles
Ross, Stan	Downey Unified School District	Downey
Roth, William E.	Los Angeles Trade-Technical College	Los Angeles
Rowntree, Cedric	State Department of Education	Danville
Royalty, John	Hayward Unified Schools	Hayward
Rutherford, William	Chico State College	Chico
Ryan, Thomas S.	Glendale Unified District	Glendale
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Sappington, Jack P.	Cerritos Junior College District	Norwalk
Satterstrom, John P.	Santa Clara County Schools	San Jose
Schicketanz, Gary	Sweetwater Union High School District	Chula Vista
Schnell, Dorothy M.	State Department of Education	Sacramento
Schroeter, Frank E.	Fresno State College	Fresno
Schwalm, George H.	San Lorenzo Unified School District	San Lorenzo
Schwark, Louis A.	Modesto Junior College	Modesto
Sciranka, Paul	State Department of Education	Berkeley

Seefeld, Kermit A.	University of California	Santa Barbara
Shapiro, Maurice E.	Folsom State Prison	Represa
Shaw, Robert H.	State Department of Education	Modesto
Sherman, Maurice	National Technical Schools	Los Angeles
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Smith, Edgar L.	State Department of Education	Oakland
Soltys, Robert G.	Los Angeles County Schools	Los Angeles
Sorenson, Clarence L.	San Bernardino City Unified School District	San Bernardino
Sorenson, Warren	Fremont Unified School District	Fremont
Soules, James G.	Palomar College	San Marcos
Spaulding, Vernon H.	Pasadena City College	Pasadena
Stanger, Norman	Orange County Schools	Santa Ana
Stanton, William A.	College of the Redwoods	Eureka
Stead, John H.	Ventura Unified School District	Ventura
Stegeman, Arthur L.	Humboldt State College	Arcata
Steinberg, William B.	San Diego City Schools	San Diego
Stephenson, Joseph H.	San Diego Junior Colleges	San Diego
Stephenson, L. E.	San Jose State College	San Jose
Stevenson, Jack L.	Reedley College	Reedley
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Stoker, Mack	State Department of Education	Los Angeles
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Sweetnam, Kenneth	California State College	Los Angeles
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Thompson, Arthur K.	Shasta Joint Junior College	Redding
Tibbetts, Russell	State Department of Education	Sacramento
Tissue, Euel L.	State Department of Corrections	Sacramento
Tobi, Robert	State Department of Education	Los Angeles
Tonini, Carl M.	Laney College	Oakland
Toothaker, J. R.	Pasadena City College	Pasadena
Tucker, Roger K.	State Department of Education	Sacramento
Van Doren, W. A.	Yuba College	Marysville
Van Noy, Glenn R.	Laney College	Oakland
Van Osdel, John	Bakersfield College	Bakersfield

Vogt, Warren C.	Southwestern College	Chula Vista
Wagenhalls, John	Fresno City College	Fresno
Waltz, Al	San Francisco Unified School District	San Francisco
Ward, Thomas S.	State Department of Education (Retired)	Sacramento
Warren, Howard J.	Monterey County Schools	Salinas
Warrick, Glenn D.	Long Beach Unified School District	Long Beach
Waters, James A.	Grant Joint Union High School District	Sacramento
Weems, Tom	Sacramento Unified School District	Sacramento
Welty, Don	College of the Desert	Palm Desert
Whelan, William E.	Laney College	Oakland
White, Russell N.	Folsom State Prison	Represa
Wight, Milan	Mt. Diablo Unified School District	Concord
Williams, Carlton	State Department of Education	El Monte
Williams, Richard	State Department of Education	Oakland
Winder, George	Los Angeles City Schools	Los Angeles
Wirta, Elmer	State Department of Education	Los Angeles
Wixon, John L.	Contra Costa College	San Pablo
Woodruff, Angus Q.	Sacramento City Schools	Sacramento
Wormley, Lorentz	State Department of Corrections	Sacramento
Yudell, David	Sacramento County Schools	Sacramento
Zuck, Thomas F.	Compton Union High School District	Compton

Proceedings of the

Twenty-Ninth Annual Conference on Industrial Education

***

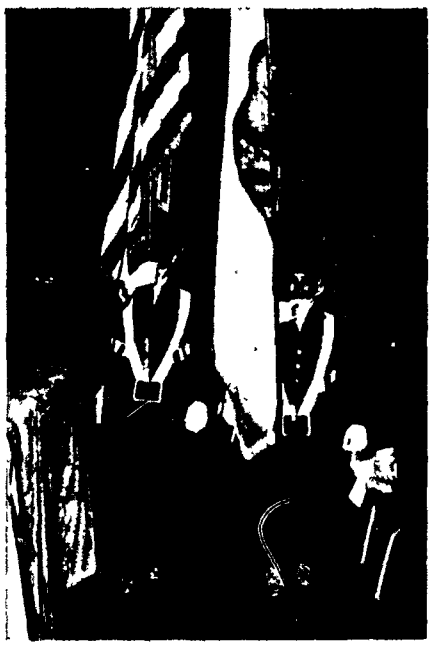
Tuesday, March 14, 1967

FIRST GENERAL SESSION

Chairman: James A. Herman
Assistant Chief
Bureau of Industrial Education

Recorder: Robert Craig
San Francisco State College

James A. Herman



Color Guard

Opening Ceremonies:

Pledge of Allegiance -

Color Guard, McClellan AFB

Invocation -

Lt. Col. Rex Thompson, USAF
Chaplain, McClellan AFB

"Holy Father, we invoke Thy presence and Thy blessings upon this very vital conference. May days spent together be profitable, indeed, as each conferee shares with one another. As we may continue advancements intellectually, educationally, and from a technological standpoint, may our advancement spiritually keep pace. Indeed, lead us to make long-term investments in Thy great field of spiritual realities in order that we might be rich, and in our richness become a blessing to all mankind in this crucial hour."

Communications -

Ronald Reagan
Governor, State of California

"I am very pleased to extend my greetings and best wishes to the meeting in Sacramento of industrial educators during California Industrial Education Week, March 13 through 19. Industrial education is a vitally important segment of education offering youth and adults the opportunity to learn skills that will qualify them for jobs. It is a part of our educational system which can make a substantial contribution toward the solution of economic problems resulting from unemployment. The teachers and the administrators in industrial education have my best wishes for success in their work."

(Signed)

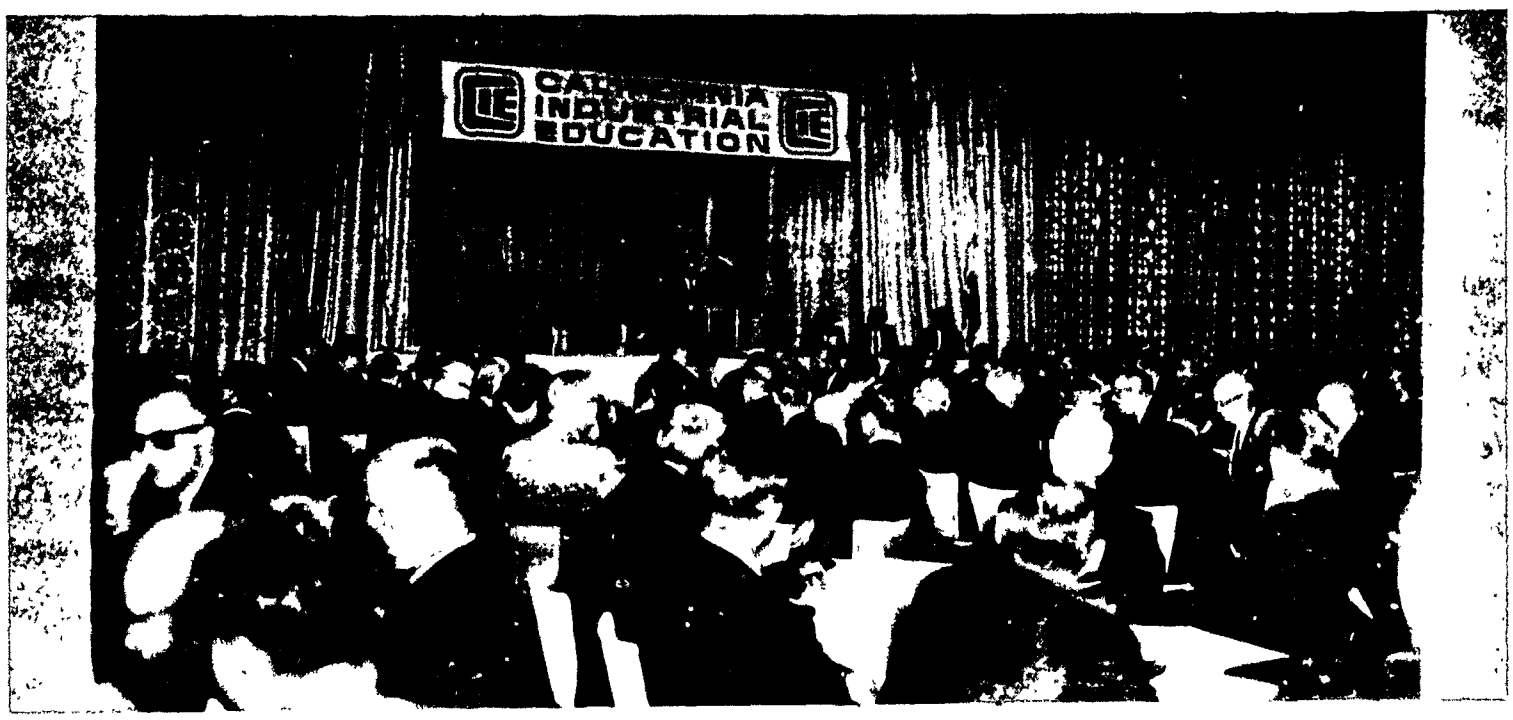
Ronald Reagan, Governor

Greetings -

T. R. Smedberg, Superintendent
Sacramento County Schools

Mr. Chairman, guests, and members of the conference, I am delighted to greet you from the governing boards, administrators and teachers in the Sacramento County Schools and from the County Board of Education and staff of the County Office. We look with considerable appreciation upon the work that you are doing in the field, and in particular upon some of the excellent programs that you have developed.

We sincerely hope that this conference will become a landmark among Industrial Educational Conferences, and that it will spark a new and



Conference Chairman Herman Introduces Head Table Guests

dynamic role in industrial education as an integral part of all education. I believe that you in industrial education stand on the threshold of a new and exciting role, a role that emanates from the technological and scientific and innovative society in which we live, society which is caught up in the swirl of internal and external forces which it cannot understand nor can it control. I hope that this conference will look forward to the 70's, and maybe even to the 80's when nearly 50 million more people will populate this great nation.

Technology will continue to accelerate its rate of innovation and new fields will open up. Job complexities as we may define them today will make current skills seem thin indeed. Like it or not, you in education, and particularly you in industrial education are in the middle and need to don your thinking caps and get into the arena of today's progressive thinking and planning and organizing to step forward into that growing edge and lead the way.

Yesterday's industrial education, just as all education, is not sufficient for tomorrow's technological needs nor the jet propelled societal change. I hope that you will explore, debate, and exchange, and share ideas--and most of all that you will not allow this conference to die at four o'clock Thursday afternoon, that you'll assign task forces to give action to the best thinking that you can develop.

Walter Coultas, Superintendent
Los Rios Junior College District

I think many of my friends in the audience know how I feel about vocational education and industrial education. It is a real privilege for

a person to get into a situation where he can realize the possibilities in this particular area. We have just had letters from the General at the

McClellan Air Force Base. They want us to train 4,000 skilled workmen by 10:30 tomorrow and have them ready to go on the job day after tomorrow. You know as well as I that this takes some planning.

It is a responsibility, I am sometimes ashamed to say, that we have not met altogether in the junior colleges. We have had a tendency throughout the years to think too much of the academic side of the picture. Now we are facing the realization that this can no longer be done. We have to do something, and you are the people that are going to make it possible. Whether it is high school, or junior college, or area vocational schools--isn't really important. There is such a great need that all of us have to share, and we do not have time for jurisdictional disputes or anything that is going to void or slow down the process for us in California.

I am sure that one of the things that we also have to do in this whole area of industrial education is to take advantage of the innovations that are taking place every day. Sometimes we have a tendency to think of how we have instructed in this particular field for the last 10 years, or 5 years, or 20 years. Times have changed! We have to take advantage of these new things. This is what all of us have to do if we are really going to accomplish the chore ahead. Welcome to Sacramento!

Comments and Introduction -
James A. Herman

The Bureau of Industrial Education is quite pleased and happy to host this annual conclave in California's capitol city.

During colonial times literacy was required for responsible social membership. The last century has demanded competency in the three R's, and the last decade has required high school graduation. Today we demand manipulative skills and an educational background so that the worker can fit the new and changing demands within the society, within the world of work. The average worker will transfer three or four times from one job to another. This forces education to provide him with the mobility with which he will need to survive in his merry-go-round of experience.

Today America finds itself in an incongruous position at a time of unprecedented prosperity. There are few employment opportunities for some members of our society. Output and employment have risen to new record levels, but employment continues to be a major social and economic problem for almost four million potential workers and their dependents. Contributing to this situation is the fact that people are unemployable because they lack employable skills. There is a desperate need to equip them with a level of knowledge and skill required for new and different job opportunities. Optimal employment cannot be achieved if workers are idle because they do not qualify or do not know how to meet job requirements. With ever increasing numbers of young people, and with a simultaneous decrease in number of jobs to fill, it poses a challenge in itself. Two others add to the seriousness of the situation. One is the problem of retraining adult workers and updating their skills as the need arises. Because of increasing technological and scientific advances, it is possible that many workers

need to be retrained two, or even three times during their working life. A second factor is the demand for technicians and semiprofessional workers.

1. What type of program would benefit industrial education in general?

2. What type of program would provide the leaders of industrial education real information and guidance so that they may develop new and improved existing programs of industrial education back home?

In discussing these with my advisory committee, it was almost immediately agreed upon that the conference should be a developmental conference. The participants should have an opportunity to discuss current problems and develop sound ideas in plans of action to meet emerging issues. The conference agenda was then formulated. You, the conferees, will have an opportunity several times in the next few days to search for answers that may be facing you concerning industrial education, to expound upon your ideas for better programs of industrial education, and have a word or two to say about the direction industrial education will take in the next decade. You, as industrial educators, have an obligation to help maintain an expanding economy.

A concerted attack upon the problems common to all is envisioned as providing the stimulous to further action on the part of each. "Industrial Education, the Bridge Between Man and Work" is this year's theme--and the curtain is going up on the first general session. I welcome you to the Twenty-Ninth Annual Conference on Industrial Education.

It is now my privilege to introduce Richard S. Nelson, Chief of the Bureau of Industrial Education, who will speak on Progress, Achievement, and Assessment--An Analysis of California's Program of Industrial Education.

* * *

Presentation: PROGRESS, ACHIEVEMENT, AND ASSESSMENT--

AN ANALYSIS OF CALIFORNIA'S PROGRAM OF INDUSTRIAL EDUCATION

Richard S. Nelson, Chief
Bureau of Industrial Education
State Department of Education
Sacramento

Richard S. Nelson

Why should we be concerned about occupational education in our schools? There are those who say that it is the responsibility of the schools to provide every student with a sound basic education in reading, writing, and arithmetic--a broad general education in the liberal arts--and to provide a comprehensive program of counseling and guidance that will assist the student in selecting the best possible vocation. Still others say we should postpone the choice of a vocation as long as possible. After all, job requirements are changing so rapidly that any preparation he might receive in school would be obsolete in a short time; and furthermore, specific preparation for an occupation can and should be done by employers.

These are common points of view and constitute the main reason for issues and concerns in industrial education. In my opinion, these views are based in varying degrees on ignorance, misconceptions, ancient and obsolete philosophical considerations, intellectual snobbery, mental and physical lethargy, or professional selfishness. It conceives of occupational education, as an antidote, for those who cannot, or will not, successfully complete a broad general education in the liberal arts. It is therefore devoid of intellectual discipline, and cannot contribute significantly to critical thinking and good citizenship.

We can no longer ignore the fact that successful employment is one of the most important ingredients of good citizenship.

Industrial education has been and is a combined effort of public schools, industry, labor, and private schools, each making a contribution to the reservoir of skilled workers needed by American industry. Industrial education is on the march throughout the nation--and especially in the State of California where our population growth has been matched by our development of new industries, new materials, and new processes. It has become common knowledge that the world is experiencing a scientific and technological revolution. Stock phrases, such as knowledge explosion, second industrial revolution, automation revolution, express this belief. The change we are witnessing in California includes the rapid growth of population; the massive flow of peoples from rural areas to the cities; the steady growth of state wealth and income; the spread of mass education; the expansion of leisure time; and the venture into space.

Let us set the stage of this analysis of industrial education by reviewing several basic concepts. Industrial education is an integral part of the total program of education and has as its major purpose the preparation of youth and adults for responsible participation in our industrial society and the training of youth and adults for occupations and professions that include the traditional trades, services, and technical classifications in industry. Industrial education derives its content from the tools, instruments, machines, materials, processes, power, occupations, and know-how that makes industry function. Industrial education requires shops and laboratories that are unique educational facilities designed to provide a place for students to have realistic industrial experiences consistent with the program objectives. Industrial education provides an environment for the development of appreciation for the dignity of work and the value of good craftsmanship. Industrial education makes extensive use of advisory committees involving labor, management, business, industry, and government. Industrial education needs special emphasis on student recruitment, selection, placement, and follow-up--especially for students with occupational objectives.

Industrial education was greatly strengthened in the California high schools last year. It is recognized by educators and social workers that the high school usually offers the only opportunity for the potential high school dropout and the student with special needs to receive any occupational training that will allow him to enter the labor market.

One of the major functions of the California junior college is to provide education for the vocational needs of the thousands of high school graduates and older non-graduates within its community. They provide one of the most logical situations in which to offer the growing number of retraining programs for workers displaced by automation in business and industry.

All 76 California junior colleges offer some occupational-centered curriculums designed to prepare students for employment.

There were enrollments reported for 210 occupations to the Bureau of Industrial Education last year. These classes were offered in the high schools, junior colleges, and adult centers. The following figures indicate the growth in the last two years:

Pre-Employment	From	44,590	to	80,765
Extension	From	139,190	to	149,513

A further breakdown indicates the following increase in reported enrollments compared to 1965:

Health Occupations	From	8,170	to	11,495
Technical Occupations	From	50,969	to	55,267
Trade & Industrial Occupations	From	142,971	to	163,819

Last year California's program of vocational education expended more than $61 million, exclusive of the Manpower Development and Training Program. State and local funds matched Federal funds three to one.

An analysis of expenditures last year indicates that occupational education in the industrial field represented over 50% of the total program of vocational education.

Health Occupations	$ 2,821,971	4.6%
Technical Occupations	$ 7,417,416	12%
Trade & Industrial Occupations	$23,145,333	38%

New health programs such as Medicare and Medical have emphasized the shortages of personnel that exist in the health services. One way to improve the utilization of physicians, dentists, and professional nurses to the maximum extent is to employ many more health service personnel. California schools have recognized this need and are developing programs that are designed to prepare technical assistants for the health occupations. Through these, they extend the campus to the hospital and to other community agencies for supervised clinical practice.

The Fire Training Program involves conducting training courses in fire prevention and control for members of rural, municipal, industrial, and military base fire departments, and for the California Division of Forestry and the United States Forest Service. The staff of the Fire Training Program conducts fire prevention seminars, fire training officers' workshops, arson and fire investigation seminars, fire alarm schools, and oil fire control schools. Instruction is also offered through extension classes in the local school districts by itinerant instructors.

The junior college fire science program is growing. One member of the Bureau staff has been assigned to coordinate this program. He assists in developing instructor training classes for junior college instructors and encouraging area planning. Instructional material developed at the fire training officers' workshops has been widely distributed for use in the junior college fire science courses. This material has also been used extensively throughout the United States, Canada, and Mexico.

In the Peace Officers' Training Program, consultant services are provided to assist in the planning, development, and improvement of the program in order to raise and maintain the level of competence of California law enforcement officers. California leads the nation in the number of officers being trained in Police Science. During the last year, sixty-six junior colleges offered pre-employment training programs. Enrollment in police science courses totaled 23,150 students last year. Two basic schools in police science are conducted twice a year at Oroville and Hollister. The purpose of these basic schools is to furnish a central recruitment training program for police officers with less than eighteen months of experience from rural areas where academy programs are not provided.

This year the Bureau of Industrial Education is making a special effort to work with the representatives of labor and management, and to assist them in every way possible with their education and training programs. We have scheduled meetings of statewide educational advisory committees to discuss their training needs.

Several workshops for teachers have been conducted by the Bureau at the request of these committees, and plans are being made to expand this activity.

Five revised apprentice publications have been released this year, and eight more are now being prepared.

The anomaly of high unemployment and pockets of poverty in the midst of economic plenty in California makes obvious the need for a dynamic manpower development and training program. Changes in the labor force, shifts in skill needs, immigration, technological change, minority and youth groups make the need for education and retraining in California imperative.

The Department of Education, under the Manpower Development and Training Act, has developed three specific types of training programs:

1. Institutional training--228 projects were initiated in 36 occupations with a total enrollment of 18,716 trainees at an educational cost of $15,500,000.

2. On-the-job coupled training classes, initiated by the apprenticeship agencies, were given in many occupational areas for over 600 trainees.

3. Individual referrals to existing courses in private and public schools were made to 1,000 trainees in approximately 41 occupations.

A number of changes are occuring in MDTA:

Institutional training is shifting from the individual public and private schools to skill centers. Last year five such centers were established--three in Los Angeles, one in Pacoima, and one in Oakland. In addition, multi-occupational programs will be developed in nine cities.

This year the five skill centers will train 5,600 adults and 2,200 youth in 31 occupational areas.

The total educational cost is $16 million, or an average per trainee cost of $2,051.

Educators frequently confuse the program of industrial arts education with trade and technical education. They think of both programs as "the shops" and thus effectively deny students educational opportunities provided by each of the programs. The two programs are different in purpose--however, there are many commonalities and relationships. Because teachers

of trade and technical subjects are recruited from the entire spectrum of occupations (they teach in over 268 different types of courses), they are not conveniently served by other programs of teacher education.

One of the principles of trade and technical education indicates that the teacher must have had a background of actual work experience in the subject he is to teach. This principle has been honored consistently throughout the nation for over half a century.

This teacher education program is directed toward instructional proficiency and is not a part of the baccalaureate program. Some people are making value judgments of the quality of teacher education on the basis of whether or not the teacher holds a college degree. This is about as accurate as measuring the length of an automobile to determine if the gas tank is full.

Plans for the future indicate a program of teacher education operating in selected geographic areas throughout the state. These satellite programs will utilize home study assignments incorporating film strips, workbooks, and programmed instruction. There will be planned discussion sessions where the learning from the home study efforts will be tested and further amplified. These discussion sessions will introduce and develop other pertinent teacher education learnings. In addition, teachers will present three one-hour lessons in their own classrooms, at which time closely sequenced slides of their activities will be made. The method used for the slide presentations will be an improved version of the experimental demonstration project now going on at a selected junior college. Dr. David Allen, who is on the Bureau of Industrial Education staff, is giving leadership and direction to this demonstration project.

An outstanding feature of teacher selection in California is the statewide occupational proficiency testing program that maintains a standard for subject matter proficiency. This program was established in the early 1920's and has evolved to its present-day sophistication. This testing program consists of both a written and performance examination. Many school administrators rely to a great extent on the results of these tests in making judgments when hiring new teachers.

Recent legislation has proved favorable to increasing the efforts of in-service teacher education. Congressman Perkins introduced H.R. 2366 on January 16, 1967, which amends the Vocational Education Act of 1963. This amendment would provide funds for the training of experienced vocational education personnel. There is no greater need in the field of industrial education than an expanded, updated, innovative program of teacher education.

Yes, we have a fine education program in California--and we <u>are</u> doing a fair job in industrial education. But how good is it, really? Are the public and private schools of California providing occupational education for persons of <u>all</u> ages in <u>all</u> communities in <u>all</u> occupations? I think not. In my opinion, California schools will not be fulfilling their responsibility to the people in California until something is done about the following three social indictments--

1. In California, 40% of all youth age 18-25 who enter the labor force do so with a high school education or less--without occupational preparation.

2. In California, 100,000 students drop out of school each year. More than one million students drop out of school each year nationally. (Source: Department of Health, Education, & Welfare Fact Sheet #111, Innovation in Vocational Education.)

3. In California, during the last few years, over $100 million in Federal educational programs (MDTA) was expended to fill the gap left by the educational establishment because Californians do not have the employability skills necessary for employment in the world of work.

Something can be done if the educational establishment can "deliver" in the following four areas--

1. Students in junior high schools have experiences designed to understand the world of work and the realities of occupational choice.

2. Occupational education opportunity is available to <u>all</u> high school students, including a work experience program.

3. Junior colleges accept, in fact, their obligation to the community they serve--to provide a comprehensive occupational education program.

4. Adult education centers are expanded and geographically located to primarily serve the urban areas--the "inner city." These centers should provide, on full-time basis, programs designed for persons who have been denied educational opportunity.

Is occupational education a necessary component in the schools of California--the elementary and secondary schools--the junior or community college--the adult education center? Why, certainly it is--it has to be! And an occupational education program must provide:

An understanding and appreciation of the world of work

A choice of an occupational objective

Preparation for realistic employment--only 12% of American occupations <u>require</u> a college education

Placement in available jobs

Training for advancement or technical change in an occupation

That the nature of the world of work be effectively included in determining the objectives of the program

That the content, methods and techniques, the instructional materials, aids, and the evaluation of instruction be appropriate to the accomplishment level of each individual student

The products of the school are educated persons. Youth are prepared for occupational life in keeping with their abilities, aptitudes, and for living in a constantly changing world--adults with improved occupational skills and understandings.

Assessment is needed of the product, and of the educational establishment and its operation. By assessment, I mean to analyze critically and judge definitively the nature, significance, and status of merit of the educational endeavor. The responsibility for this appraisal task is shared by the administrators, the supervisors, directors, and coordinators, and the teachers.

Vocational education institutions, whether they be high schools, junior colleges, or adult schools, must constantly evaluate if they are to stay in business. If they reach the point where their product no longer achieves the skills and knowledges necessary to successfully enter into and compete in the labor market, they are replaced by more desirable institutions. Evaluation of industrial education means critically examining and definitively judging the nature, effectiveness, and importance of the educational program in six areas.

1. The students:

   Is there effective vocational guidance service provided within the schools from which students are recruited--within the schools which provide vocational education programs? Is there effective placement and follow-up service for persons trained in pre-employment programs?

2. The instruction--do the instructional staffs have adequate teaching competencies based upon:

   Occupational experience
   Technical training
   General education
   Teacher education
   Keeping current with the state of the art
   Ability to inspire and lead students

3. The curriculum--to what extent:

   Is an adequate, up-to-date course of instruction used?
   Is the specific and general education appropriate for the age, aptitude, and grade level of the trainee?

Is the program of sufficient duration and intensity to insure entry into the occupation?
Is there actual performance of simulated experience in classrooms, laboratories, or shops?

4. The facilities--to what extent:

Do they meet the specific needs of the program?
Are they attractive enough to merit the respect of the community?
Are they readily accessible to full-time students and working persons?

5. Instructional equipment and supplies--to what extent:

Are the instructional equipment and supplies based upon specific teaching needs and occupational requirements?
Is new media of instruction, such as programmed learning, included?
Is the instructional equipment up-to-date and in good condition?

6. Administration and supervision:

Are there administrative and supervisory services such as providing for teacher improvement, assistance in selecting and preparing instructional materials, and fostering good community relationships of a quality and amount sufficient to assure satisfactory operation of the various programs?

The results of evaluation will show to what extent the basic objectives and goals established for industrial education in California have been accomplished.

Last year I indicated to you that emphasis would be given to eleven areas of concern. An ad hoc steering committee was appointed with Lee Ralston as chairman. This committee involved 80 leaders of industrial education, and gave further direction to those areas through its report titled Roadmap for A Decade of Progress in Industrial Education. Additional copies of this report are available here during the Conference.

This year the Bureau of Industrial Education will direct its attention to the following areas--

1. A review and evaluation of the 8.1 credential by special task force.

2. Expand in-service teacher education. Provisions are being made to offer programs for at least 300 trade-technical teachers.

3. Establish an experimental demonstration project providing a new approach to teacher education in selected geographic areas of the state. The first of these experimental courses started ten days ago, serving teachers in Riverside, San Bernardino, and Imperial Counties. This nine quarter-unit course is called "The Instructional Process in Vocational Education."

4. Plan and develop one industrial education credential designed for grades 7-12.

5. The establishment of a task force to study the role of occupational education in the junior high school.

6. Study of industrial arts education in California to consider the following areas:

   The development of more realistic objectives for the program
   The development of a closer relationship with industry
   An analysis of the various patterns of industrial arts at different educational levels
   The development of a strong teacher recruitment program
   The development of a more sophisticated teacher education program

There are several items of interest that will affect the industrial education program this next year--

On July 1, 1967, National Defense Education Act funds may be used for the purchase of instructional equipment and supplies for industrial arts programs. The Bureau of Industrial Education will administer the program development responsibilities in working with local school districts and county offices.

There will be substantial changes in the reporting procedures for all vocational classes--check with your regional supervisor.

There will be an expansion of correspondence courses for both apprenticeship related instruction and teacher education requirements for those in isolated locations.

A student placement and follow-up system will be used in several districts on a trial basis. This system has been designed this year under the direction of Wayne Harris, who is on loan to the Bureau of Industrial Education from the San Diego City Schools.

We have prepared a brief analysis of current legislation of interest to industrial educators.

Industrial education must provide additional dynamic leadership in developing programs of occupational education--occupational education appropriate for <u>all</u> students, and participated in by <u>most</u> students--these programs to be in the elementary, junior high and senior high schools, as well as the junior colleges and adult schools. Importance of occupational education to the individual student cannot be over-emphasized. Specific and salable occupational competence is the surest guarantee that they have of getting their toe in the economic door. It may well be that getting their first "real" job--or not getting it--will be the most crucial event in their lives. The role of dynamic leadership in industrial education is bridging the gap between man and his work.

* * *

First General Session

Presentation: NEEDED IN VOCATIONAL EDUCATION: A SUBSTANTIAL HERESY

Wallace T. Homitz

Wallace T. Homitz
President, Laney College
Oakland, California

Gentlemen, I have you at a disadvantage. I have just come from a National Invitational Seminar on the Experimental Junior College in Palo Alto, where for the better part of four days and nights, twenty-five wild-eyed hedonists who call themselves college presidents literally destroyed the reigning notion that American higher education is thriving. We found the groves of Uncle Sam's academe faltering, moribund, unrealistic, and, in the words of one eminent colleague from Ann Arbor "totally paralyzed." In the restive afterglow of such a delicious attack upon the ills besetting what amounts to "the other side of the aisle" in U.S. education, you ask me to visit a critical analysis upon the other side of the house--vocational education.

The temptation is too much to resist. I also have, you see, the singular pleasure of being president of a large urban community college with one of the strongest programs of trade and industrial education of any such institution in the State--or the country, for that matter. And in building a new $25 million facility to house our programs, I have had to come to grips with problems in this sector of education which had heretofore only touched me superficially. Beset by a great many frustrations arising out of the contemplation of the value and position of trade patterns in our program, and reinforced by a captious cynicism born of that Palo Alto conference, I am prepared to invoke a catharsis of an analysis, in the hopes I can, at least for myself, purge my way to a fresh access of thought on the serious problems before us in this conference.

To that end, this critique will doubtless be overdrawn, overemotional, and under-researched. But it will not be insincere. For I do not wish by any ploy of cynicism to divorce myself from the responsibility for concern over the issues I wish to bring to your attention. I am one of you, and your concerns must be my concerns. I trust simply that you will not mistake the spirit in which these concerns are represented.

Vocational education is, in my particular segment of higher education, often associated with terminal education. And I think that is tantamount to a synopsis, except that the substantives need to be put into a different relationship: I think vocational education, at most levels, is a terminal case. I think the next decade, if its influences do not move us to

institute some drastic remedies, will see the demise of vocational education as we know it.

Such a sweeping condemnation is challenged to substantiate its finality, and I imagine, if I were so disposed that I could find some support in legitimate research for most of what I judge vocational education's mortal symptoms to be. But I don't want to have to feel that that's necessary here today. I think a new way of thinking--isn't that what we're after?--would by itself legitimize a frame of reference which began with an assumption which required radical action.

But perhaps some observations are in order, at least to stir some as yet unwilling chords of affirmation. And if I don't sense some covert or actual nodding of heads while I recite this brief litany of vocational vices, I shall be inordinately surprised. To wit:

1. If a test were administered right here and now on the differences, if any, between and among the definitions of "vocational education," "practical arts education," "occupational education," "trade and industrial education," "technical education," "pre-employment training," "manual training," "industrial education," and "technological education;" and those differences had to be understood--perhaps even appreciated--by a less than breathtakingly brilliant high school sophomore--would more than 10% of us pass at the 80% level of performance?
   (How can we crystallize the image of our own life's work when we defy anybody outside the fraternity to call it by its rightful name?)

2. Do you know of any program in your school which has changed in 15 years? Really changed its organization or direction in 15 years? its equipment? Would you believe teachers who haven't changed their methods or experience in 15 years?

3. Do you know <u>anybody</u>--including yourself--who doesn't believe that vocational education is the kind you take if you can't do "that <u>other</u> kind" of education?

4. Do you know any T & I instructor who has taken teacher training at Cal or U.C.L.A. who <u>hasn't</u> recommended lumping all those courses into a two-week summer seminar and discouraging attendance?

5. Do you know any vocational counselor who doesn't feel absolutely naked without the Dictionary of Occupational Titles and the Kuder Preference Record?

6. Has any of you ever really met a former student who was actually doing the job for which you thought you trained him?

7. Has any of you ever really seen an advisory committee that didn't recommend welding for students in its programs?

8. Is there anybody in the room who really made a career decision about the job he is now doing? (What, pray tell, is a career decision?)

9. Is there anybody here who would stake his life on the fact that every placement report he ever filed was absolutely accurate?

10. If you're an industrial arts man, have you ever really done anything about what I'm doing (or <u>not</u> doing) to your future students in my fourth grade arithmetic class?

11. Is there anybody here who doesn't feel he's missed some Federal money for his programs because there are so many Federal sources he can't remember them all?

12. Is there anybody here who won't ignore the next study of occupational training needs in his area?

13. Is there anybody here who has more students than he wants in all of his vocational programs?

I could ask myself a hundred questions like that--but I won't, because I'm getting on, as they say, and I can't fool myself any longer. I have the feeling I'm transacting, in my responsibility with vocational education, with an archaic and dying form of something which was once vital and important and terribly necessary.

Please, don't misunderstand me. I don't mean to imply that we are not conscientious, nor perceptive, nor diligently looking for the means of our deliverance. I simply mean to indicate that we are working in an area of multi-dimensional significance without the benefit of a central mainspring of integrity in our mission. Our task seems always to be threatened by the very multiplicity of our purposes, the seemingly infinite publics which we must serve, and the endless capricious transmutations of a technology which gives us our reason to be.

If we are to confine ourselves within narrow problem-oriented parameters for solutions to our problems, it seems to me we shall only lose ourselves again in a plethora of minor grievances and cynicisms--of the kind I have locked into facetious questions and which yield such shattering panaceas as:

> "an active program of placement and follow-up should be an integral part of the program."
> or....
>
> "a strong program of vocational guidance and counseling should be maintained."

Which suffocate every report from every panel of consultants reviewing vocational education that I have ever seen. And are just useful enough to produce such staggering conclusions as:

> "the limited evidence available indicates that placements from many programs may be somewhat lower than desirable."
> or....
>
> "vocational education is not available in many schools."

If <u>any</u> of this makes sense, then perhaps you'll allow me to draw what I feel are the larger rubrics within which we might look for some direction for discerning action lines along which there is larger hope for restoring the integrity of our task and our tradition.

IMAGE

The resounding handicaps under which we labor are no better apostrophized for me than in the results of a recent study--done at the University of Michigan, I think--which sought to measure differences in the image of vocational education as perceived by different segments of the community. The conclusion I read into the study is that the stigma we assign to those who pursue a "practical" education vis-à-vis those who choose a "liberal arts" or "professional" (whatever that is) education is as profound--and pervasive--a prejudice as racial discrimination. Not only the students, but principals, counselors, parents, vocational teachers and even trades artisans themselves think vocational education so-called is less desirable than college preparatory or "general" education.

This is a startling antinomy, in view of some incipient findings in the literature about behavioral ratification of general education objectives. We say the aims of general education should tend to such desirable behavioral outcomes as "improved citizenship, greater personality adjustment, dependability, punctuality, responsibility" and so on. From what I have seen, the only truly dependable route leading toward measurable achievement of these objectives is in vocational training, not general education. Studies I recall tell me that the journeyman and apprentice in the trades is:

(1) a better credit risk than you or I;

(2) more stable in marriage than the average citizen;

(3) less likely to move from job to job than the average job-holder;

(4) less likely to move from residence to residence than the average citizen;

(5) less likely to be deviant in his sexual behavior than other categories of males (Kinsey);

(6) likely to match or exceed income levels of all but the highest professional protocols.

And, less likely, I'm thinking, to contract cancer, emphysema, chronic alcoholism, random neuroses, or blatant disaffection for his children.

What are the implications of such insights? Are we not deluding ourselves when we support, tacitly or otherwise, the canard that "vocational" education is less than some other mythical kind of education? It was James B. Conant himself who said that education in the United States has traditionally worked within a context which moves toward the social equality of all useful labor. In that sense, Conant was admitting that Harvard is the premier vocational school of all. How can we invert this paradoxical--do I mean paranoid?--view of what we're about? Perhaps some illumination may come from a consideration of our objectives.

OBJECTIVES

Education anywhere has always been guilty of emphasizing at one time or another one of several purposes: education of human beings to <u>do</u> something, as to read, write, or to do chemistry, tool and die work, or dentistry; education to <u>improve</u> something, as social conditions; or education to <u>feel</u> something, as responsibility for civic duty, or charity for one's neighbor. Seldom has it emphasized just assisting human beings to become more human or to find their individual identities, even while it has always emphasized intellectual and verbal <u>methods</u> to educate the human being to do the things held to be so desirable for him to do.

Now, if we read people like McLuhan, Gardner Murphy, Benjamin Bloom, or the Uptons, we get the suspicion that the real key to education is to assume it has to fuse <u>all</u> of the objectives it has traditionally fragmented as one or another unilateral function only.

If that be true--and recent movements in many salients of the educational enterprise indicate it may be--we come to another curious paradox: vocational education, and not general education, so-called, is the real locus for the opportunity for such fusion. Only in engaging one's body in an activity which demands attention, motivation, cerebration, and physical coordination of parts can one achieve the consistent, proper commitment of energies required to transact with one's experience realistically, so that one "finds" himself. And only if one "finds" himself is that creativity available to him which makes him learn better, do things better, see what needs improving better, and truly feel his experience more acutely.

We have typically striven for balance in our educational programs: physical education for the body, math and Latin for the mind, art and music for the emotions, and moral and spiritual values to encapsulate, rather

indeterminately, the entire corpus of our effort. But we have always done this artificially--a course here, a course there--never, I think, seeing that every action, if it can engage all parts of one's self, is the true experience to incorporate being. Is there any better training ground than "vocational" tasks to serve as laboratories for this movement of humans toward the more human? What commands, simultaneously, such discipline of our disconnected, disintegrated selves as the eye-hand coordination, the motivation for organization, pattern, arrangement, the logical intelligence or spirited respect for tradition as, say, the repair of a fine timepiece? Does the figuring of a function in differential calculus hold such promise? Or an off-tackle power sweep? It might, but the odds are surely against it.

TECHNIQUE

Teaching, in a sense, is a lie. One teaches, as Whitehead used to say,"Whitehead[1], Whitehead[2], or Whitehead[3]." One teaches, or sells, himself. To the extent that this is undesirable--and mostly, it is--then the success of teaching depends upon the dissociation of the teacher's personality from the learning process, which becomes, in turn, dependence upon techniques. Teaching, at base, is technique.

If we had an appreciation of the equality of all education and a passionate desire to teach people rather than subject matter, what might be the techniques we would employ which would be different from the modes and approaches we use now? Would we teach our trade students to be captives of a machine, an occupation, or a union? Would we be bound by study guides, by California plans for Trade and Industrial Education, by codicils in Federal subsidies which insist students be engaged in a trade laboratory for at least half their school day? Would we be so insistent on matching a test score to a lifetime choice of occupation? Would we abdicate our responsibility for insuring experiences in grades K-9 for our students which would bring them to us in some natural pattern of development rather than as dropouts, misfits, or rejects to our doors? Would we tolerate narrow involvements in one-trade shops for students who won't make a choice of a one-occupation modality ever in their lives? Would we worry about placement reports as evaluators of our effectiveness? Would we duplicate programs in high schools, area vocational schools, skill centers and junior colleges in the same community? Would we tolerate advisory committees which were only the battleground for union jurisdictional disputes? Would we deprive any student of a chance to find at least the direction in which he could search for his own identity?

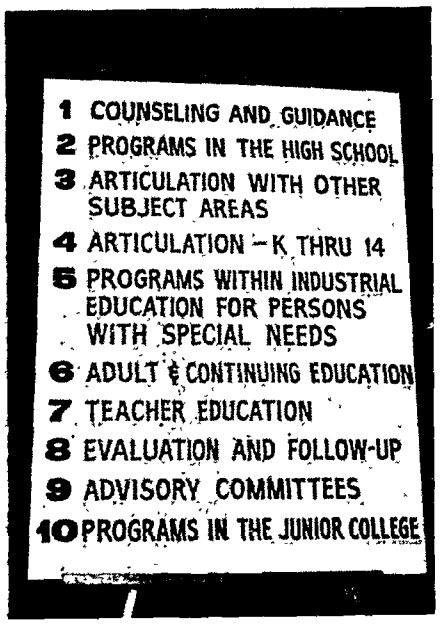
These are the things, from my point of view, at least, which we must discuss. This is why we are here. Vocational education, if we must use that term, is our life. And our life is slowly ebbing away.....

Come, we have yet 48 hours to save it.....

* * *

WHITE HOUSE CONFERENCE

Tuesday Afternoon, March 14, 1967



Chairman: Robert Tobi

Moderator: J. Lyman Goldsmith

Recorder: Normann Lefmann

Conference Orientation:

J. Lyman Goldsmith, Supervisor, Vocational and Practical Arts Education. Los Angeles City Schools, moderated and described the procedures to be followed:

White House Conference Chairman Robert Tobi briefs his crew

1. Individuals were assigned to specific groups and seated at one of twenty tables.

2. Topic sheets were passed out to each table.

3. Participants were instructed to listen for comments pertinent to the assigned topic.

4. Table groups were asked to remain upon conclusion of the presentation by Wallace T. Homitz in order to assist each chairman isolate key points.

5. Chairmen were asked to prepare a three-minute oral report which was to

be presented the following morning.

6. The conference participants filled out "Let's Try To..." cards which were then collected.

7. Group meetings were held in ten separate rooms to develop a list of actions to be taken in each subject area.

8. Written copy was to be delivered to Robert Tobi by 7:00 p.m. for final editing and duplication. Distribution would be made the following day.

Tobi, Payne, Gromacki, Moseley, Berruezo, Riendeau

(Editor's note: It was felt that the oral and written presentations which were corrected by later editing and design would duplicate the following material. Therefore, this report contains only the final draft of the committee's efforts.)

Clock-Watcher Dick Nevins Allows "Equal Time"

LUNCHEON

Wednesday, March 15, 1967

Address: "Advisory Council on Vocational Education"
Melvin L. Barlow, Council Director

Nelson - Barlow

Recently I had a call from Charlie Patrick of San Diego advising me that he had just been appointed as a member of the Advisory Council on Vocational Education...could I recommend members of the staff to work in that field? I gave him a few names, and about twenty minutes later the telephone rang. It was Grant Venn calling and asking exactly the same question. So I gave him the same list of names.

The next day Grant called back and said, "I forgot to tell you that yesterday the executive committee of the Advisory Council appointed you Staff Director of this project." I said, "Well that's interesting; I'm not going to be there." I said, "I can't get away, it's impossible, I just can't do it, there's too much under way." So, he called back the next day and said that they had another meeting and they still insisted I was the Staff Director of the study. And then he asked what would happen if LBJ called the president of the University. I said, "Well, you've been in this business long enough to know that that always works."

Well, it turned out that the Council on Education had chats with the appropriate people and I was asked if I could adjust my schedule sufficiently so I could take on this responsibility. Under these conditions, you of course find the time.

Four years ago I had a chance to talk to this group about the Panel of Consultants on Vocational Education. We were all seated in the audience to hear a speaker discuss this particular program, and the speaker didn't show up. Ernie Kramer was somewhat beside himself. He came down and asked me if I'd make a speech. Either they send the people out on their own or I make a speech. I made a speech. I think in this case everything was fine, except that no one thought to invite the speaker--which always helps.

On November 22, 1966, President Johnson announced the appointment of an Advisory Council on Vocational Education to review and evaluate the

the programs under the Vocational Education Act and to make recommendations for further improvement. The first major study of Vocational Education in this country on a national basis was the study of the National Committee on Vocational Education in 1914. This report finally triggered the formation of the Smith-Hughes Act in 1917. The Act provided that the Federal Board should make an annual report to Congress. This was pretty much a factual report on numbers of students, dollars, and things that are easy to count. Later the U.S. Office of Education became responsible for this, and you're familiar with its Annual Descriptive Report.

But it was not until 1961 that another substantial study was made, and this was the study of the Panel of Consultants on Vocational Education. One section in the report really triggers the situation that I'm faced with now. All I have to do is try to interpret what you people have been doing.

Under the section headed Evaluation, annual and periodic reports are to be made by all the states. The school districts shall furnish information which makes it possible to determine the extent of these programs and the ways in which they are serving the community and the nation. This information will be tabulated and modern processes used to develop the data which should be available by the first of the year. In order to make this program more effective, a national committee will be convened every five years to review and evaluate the services of Vocational Education to the nation and its people. The committee will consist of not more than fifteen persons who have been appointed to represent Federal departments, educational leaders, labor and management. A special report is being made to Congress each year by the U.S. Office of Education to indicate the activities, achievements, and the limitations of Vocational Education funds.

This section in the report, then, triggered a similar section in Public Law 88-210; and Section 12 merely says that the Secretary shall, during 1966, appoint an Advisory Council on Vocational Education. The Council is to make a report of its findings and recommendations to the Secretary for changes in the provisions of this part, or other Vocational Education acts. Such reports are to be submitted no later than January 1, 1968, after which date the Council ceases to exist.

The Office of Education developed a list of people appointed by the president. The Advisory Council held their first meetings on December 19 and 20. They held another meeting the latter part of January, another one the latter part of February, and they will hold another during the third week of April.

The Council consists of: Mr. James T. Harris, Vice-President of the the African-American Institute in New York. He was Training Director of Corning Glass Company.

Mr. Otto Crager, Assistant Director of Education, AFL-CIO.

Dr. Martin Essex, the State Superintendent of Public Instruction, State of Ohio, is Chairman.

Mr. C. Van Noy Stewart, a teacher trainer in agriculture at Sam Houston State College in Huntsville.

Mr. John Letsin, Superintendent of Schools, Atlanta, Georgia.

Dr. Leila O'Toole, Dean of Home Economics at Oklahoma State University, Stillwater.

Mr. Leonard Rosenberg, President of the Chesapeake Life Insurance Company, Baltimore.

Mr. Charles Patrick, President of San Diego Junior Colleges.

Mr. Malcolm Hunt, State Director of Vocational Education, Santa Fe, New Mexico.

Mr. Garth Mangim, Director of Manpower Policy Evaluation Projects of the W. E. Upjohn Institute for Employer Research.

Mr. Rupert Evans, Dean of Education, University of Illinois.

These people are very favorably disposed to Vocational Education, and some of them are well informed about the area.

There are a number of studies available about the evaluation of Vocational Education. This has been looked at from as many different ways as possible. One of the problems is that we only have a very short period of time in which data are available under the funds from VEA '63, because there simply wasn't any money until late in 1964.

Every State Director in the United States has received a letter asking to send the Advisory Council any information they desire to contribute. Now this is over and beyond the official statistical data that they submit normally. My guess is that in a period of time we'll be knee-deep in reports and data from the various states.

About 20 or 25 national organizations have been asked to participate in advising the Advisory Council. The thing that the Council must be able to do is to get its hand on the pulse of Vocational Education from as many different people as it possibly can. And, so, the Trade and Industrial Division of AVA, in co-operation with the University of Texas, will take an official stand on recommendations and direction. Other divisions of AVA will have the same type of meeting.

We need to know what has happened because of VEA '63. And some of these stories that really tell what has happened in a local district can't be found in the tabulated data. It's really interesting how embarrassing a simple question can get sometimes when Congressman Perkins will say, "Well, now just what evidence do you have that this is the case?" Meaning that your opinion probably isn't worth a hoot. But what is the evidence that this is the trend or these are the facts, and so this is what I think we're saying is evidence?

I don't think this task is going to be too easy for this particular Council. You know that the Council will repeat every five years, and sooner or later we should have gained enough experience so that we'll be able to count everything we need. The law says this report shall be made to the President and the Congress no later than January 1, 1968. I've given Dr. Essex a time schedule for doing this particular job. The report should go to the printer in October. Now the only problem is--to get it ready by that time.

* * *

GROUP MEETINGS

Wednesday Afternoon, March 15, 1967

Group I

Counseling and Guidance
William D. Allen, Recorder

The problem of sound career planning in an increasingly complex society assumes difficult proportions for both a student and his parents. The number of possible occupational endeavors open to youth, as well as the identification of appropriate potential for skill, represent two vital aspects of vocational guidance. Unfortunately, the process of assisting boys and girls with the problem of the proper choice of a career is far from simple, and often requires not only the competency of a well-qualified professional counselor, but the intelligent use of accurate sources of occupational information.

To improve Counseling and Guidance, the following actions are suggested:

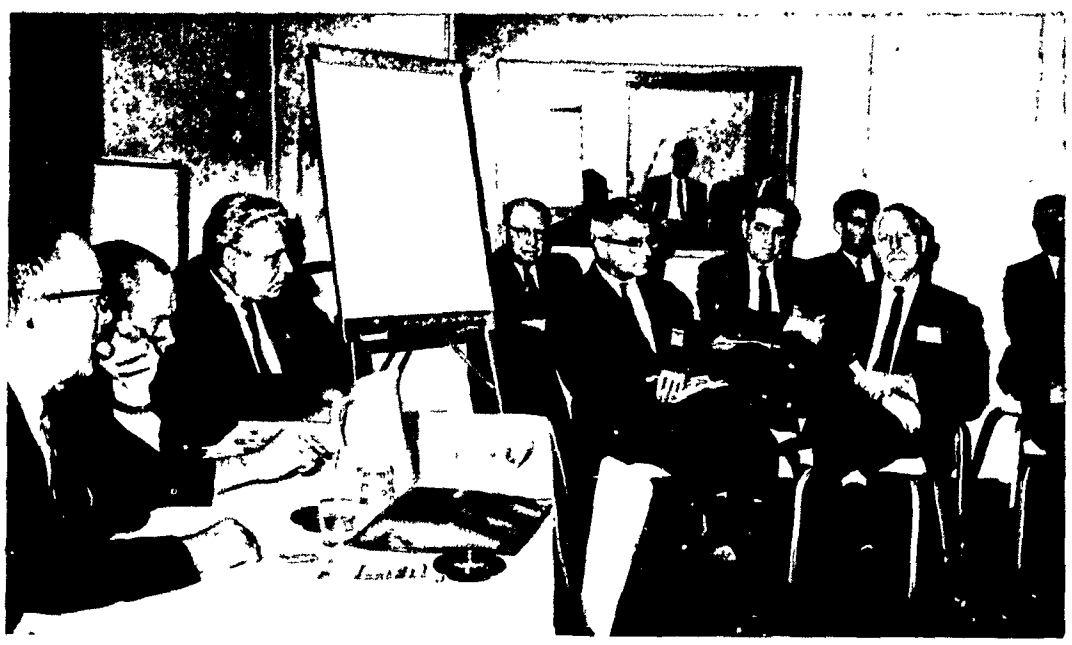
.... Use in-service education as an immediate method of upgrading the present counseling staffs in the area of occupational information.

.... Utilize the California Counseling and Guidance Association to lead the in-service training of guidance personnel.

.... Promote the inclusion of an area of specialized study of the vocational aspects of guidance within the pupil personnel credential.

.... Encourage industrial education personnel to enter the guidance field to promote and upgrade the vocational guidance programs.

.... Urge each industrial educator to endeavor to establish a healthy avenue of communications between himself and the counseling office.



Typical Conference Group in Session

.... Promote the idea that more valid tests and procedures be created to test the vocationally oriented student, stressing the non-verbal approach.

.... Implement vocational guidance for the elementary grades.

.... Develop new, fresh, innovative "tools" to assist the vocational counselor.

.... Encourage counselors to attend advisory committee meetings.

.... Suggest that each school have an identified counselor who is responsible for vocational guidance.

.... Establish an ad hoc committee to determine the present conditions and future needs of vocational guidance.

Group II

Programs in the High School

Stanley Ross, Recorder

There are two types of programs on the high school level. Industrial arts is the first contact the student has with the industrial education program. Industrial arts provides general and exploratory educational experiences for the student, and should be followed by a vocational industrial education program. The vocational education program provides the student with opportunities to develop his abilities for employment in an occupation.

Increased efforts are necessary to meet the needs of employment opportunities and to stimulate more efficient and diverse industrial education experiences for high school students.

To improve Programs in the High School, the following actions are suggested:

.... Teach after school short-term courses using people from industry and supervised by a teacher.

.... Establish regional occupational center offices, hire staff, and place them into existing schools.

.... Provide occupational programs on Saturdays for no credit on a voluntary basis.

.... Hire students to take movies of various occupations, conduct interviews of workers, and make audio tapes of various occupations.

.... Bus students from one school to another to receive specialized occupational programs.

.... Admit all students to regional occupation centers.

.... Relate general education subjects to occupational education.

.... Use mobile classrooms, laboratories, and shops for concentrated instructional programs.

.... Develop instructional packages including objectives, course outlines, projects, instructional materials, organizational plans, equipment and material lists.

.... Start vocational education programs in small schools by having one teacher handle three groups of students in different occupational tracks.

.... Recommend an in-depth study by the Bureau of Industrial Education to identify vocational education programs for students of lower ability.

.... Start new programs such as: vending machines, foods program (no equipment cost), small appliance repair, large appliance repair, fiber glass fabrication, closed circuit television (electronic communications).

.... Show business people how they can help you with guidance functions, materials, equipment, and services.

.... Rebuild or remodel houses that have been moved from original locations due to freeway or other construction.

.... Provide three minimum days per year for in-service education.

.... Expand work experience programs.

Group III

Articulation with Other Subject Areas
Carl Hofmann, Jr., Recorder

Since the learning process is a continuum, efforts must be made to improve the articulation among all levels and areas of vocational instruction. There must be an evolving inter-relationship between all curriculum categories in order to get the useful, occupational, and personal goals of vocational education to the learner.

To improve Articulation with Other Subject Areas, the following actions are suggested:

.... Provide funds for supervision.

.... Involve general education teachers and counselors in the planning and development of vocational programs.

.... Obtain administrative personnel for vocational education

responsibilities who have appropriate training, experiences, and knowledge of this program.

.... Devise and develop procedures so that entering students may begin a program at an appropriate level. This may be done in the form of tests or demonstrated performance.

Hofmann Scribes as
Soltys Moderates

.... Encourage general education for vocational students. The advantage is a more totally educated individual. It is the basis for retraining or additional training.

.... Interrelate industrial education with other subject matter no later than grade 7.

.... Fit the school and its curriculum to the student; avoid jamming the student into the curriculum squares.

.... Convince the student that the mastery of certain academic areas is mandatory to successfully completing certain technical programs.

.... Help the student establish areas of interest that may evolve into an occupation direction as early as possible.

Group IV

Articulation - K Through 14
William A. Stanton, Recorder

The concept of education for <u>all</u> American youth can only be implemented through recognition of all segments of school experience. It is easy to say that not all youth can profit from college prep course work and just as easy to say that the college bound do not have time for vocational education. It ought to be easy to promote the idea that all youth will be involved with

the world of work, and therefore should be oriented to this reality all through their educational experience.

To improve Articulation K Through 14, the following actions are suggested:

.... Approach articulation on a "school to job" basis.

.... Provide for continuous built-in evaluation of articulation.

.... Build subject-program and horizontal-vertical relationships.

.... Involve inter-action between grade levels.

.... Involve "cross pollination" of teachers from all levels and agencies.

.... Invite participation by "outside" people from industry--public and private agencies of all sorts.

.... Provide for acceptance of skills and knowledges learned at other levels.

.... Encourage local supervisors to involve the top administrators in the need for articulation.

Group V

Programs Within Industrial Education for Persons with Special Needs
Virginia Clapp, Recorder

Regular programs within industrial education meet the specific needs and requirements of selected occupations. In these programs there may be individuals or groups of persons with special needs. These special needs may be categorized as aging, disabled, culturally deprived, economically

John Royalty "Ponders" as Virginia Clapp "Charts"

deprived, emotionally disturbed, low ability, mentally retarded, physically handicapped, and minority groups.

To improve Programs Within Industrial Education for Persons with Special Needs, the following actions are suggested:

.... Use more community resources in the instructional program.

.... Stimulate within the curriculum more effective method of starting special programs.

.... Organize short courses to meet identified special needs for students.

.... Develop programs that are practical, exciting, and interesting.

.... Involve the student whenever possible when developing new programs or reorganizing old programs.

.... Meet identified needs by developing specialized certificate programs at the junior college level; for example, certificate program in machine technology that can be completed in one year of day attendance.

.... Involve more persons in the total counseling program (teachers, citizens) as it applies to programs of "special needs."

.... Identify school personnel responsible for identifying the student with special needs.

.... Encourage students with special needs to become aware of their responsibilities for their education.

.... Initiate functioning advisory committees.

.... Establish financial structure and support needed.

Group VI

Adult and Continuing Education
Richard C. Payne, Recorder

Adult and Continuing Education, more than any other part of the education system, recognizes education as a continual lifelong process. It is concerned with the training, upgrading, and retraining of the adults of all ages in order that they may survive and grow in a society of ever-increasing complexity in which change is the rule rather than the exception. Adult and continuing education is not the answer to all our ills, but is a vehicle through which the maturing individual can progress, can change, and can become a useful, better informed, and more productive citizen.

To improve Adult and Continuing Education, the following actions are suggested:

.... Develop more short unit courses and accelerate the time schedule for many now offered.

.... Provide for flexible programming--offer courses more times per day--make use of the 8 a.m. to 10 p.m. span, Monday through Saturday.

Payne and Sorenson
Lead a Lively Group

.... Develop the time calendar for a particular course to fit course demands.

.... Concentrate and compress courses designed for "job entry."

.... Encourage exchange programs with industry--teacher works, man from industry teaches.

.... Encourage greater state and local support for programs of adult education.

.... Provide for the loan or donation of up-to-date equipment.

.... Take advantage of the provisions in adult education legislation which allows lecture series to be given.

Group VII

Teacher Education
Chester Gromacki, Recorder

Teacher education and preparation for industrial education subjects continues to be one of the crucial problems facing the profession. Quality and efficiency of preparation programs is often questioned, and the too

small quantity of candidates entering the profession is a concern. There is a continuing need for more and more imaginative in-service education programs.

The preparation program for teachers of industrial-technical subjects must integrate two main background areas. These are (1) academic preparation, and (2) technical (skills) preparation. How can these two areas of learning be best integrated into a program which will prepare successful industrial education teachers? What is an adequate academic preparation, and what should constitute adequate technical preparation? Can these be measured in terms of years of experience, of degrees earned, or by trade tests?

To improve Teacher Education, the following actions are suggested:

.... Develop a program of in-service education for industrial education through: summer industrial work, sabbatical leaves, subsidizing in-service programs, a program of one summer in industry for three years' teaching.

.... Initiate workshops on the following basis: regional basis, with industry, with A-V companies, for the part-time teacher trainer.

.... Provide a team of specialists to visit schools and present in-service programs.

.... Establish a plan for teacher exchange between: schools, industry, and colleges.

.... Arrange for credit that would count on salary schedule for acceptable institutes or supervised work experience.

.... Recommend that the Bureau of Industrial Education should study credentialing with the assistance of representative ad hoc committees.

.... Stress the plan (Swan Bill) for technical work experience at the undergraduate level that provides credit toward the Baccalaureate degree.

.... Require student teaching prior to the 5th year of the teacher preparation program.

.... Provide student teaching for trade-technical teachers prior to their employment as instructors.

.... Re-evaluate the training given by the police science and fire science programs for possible credit toward credentials and/or credit.

Group VIII

Evaluation and Follow-Up
Durant W. Moseley, Recorder

Evaluation implies determination of the value of an industrial education program. Methods are needed to determine the value of educational plans before a program starts. Programs should be evaluated while they are in o eration, and the products and values of programs should be judged after completion of the program.

To improve Evaluation and Follow-Up, the following actions are suggested:

.... Initiate an "on-going" system of evaluation that is both immediate and current.

.... Stress statistical accuracy in all reports.

.... Use social security numbers for purposes of identification of individuals involved in studies.

Group on Evaluation
Evaluates a Hand-Out

.... Consider factors such as military service, labor lay-offs and strikes, and job change-overs when reporting placements.

.... Agree on the definition of the term "completed" in terms of courses and programs of occupational preparation.

.... Involve the individual student in terms of personal responsibility for evaluation and follow-up.

.... Investigate the validity of area or regional evaluation sampling.

.... Stress the importance of annual or periodic evaluation and reporting.

.... Encourage all vocational instructors to take an active role of evaluation and follow-up.

.... Work to simplify all evaluation and follow-up reports.

Group IX

Advisory Committees
Joseph E. Berruezo, Recorder

The use of local representative advisory committees is traditional and almost universal in all areas of vocational education--in agricultural, business, distributive, homemaking, and trade and technical education. Some advisory committees are continuing in nature, others are used for a short duration of time. Some are general in nature, and others are special and specific. Tested experience over many years of operation has demonstrated the value of representative local advisory committees. When properly conceived, organized, and used they become indispensable to the successful conduct of local programs of vocational education.

To improve Advisory Committees, the following actions are suggested:

.... Involve teachers, program directors, committee members, and representatives of organized groups and the Department of Employment in the selection and appointment of advisory committee members.

.... Outline the specific duties and responsibilities of the advisory committee in relation to curriculum development, evaluation and assessment of the program, and student placement and follow-up.

.... Assign responsibility for the follow-up on advisory committee recommendations.

.... Encourage the establishment of local or regional advisory committees to service larger geographical areas than those currently served.

.... Develop and make available a brochure outlining the duties and responsibilities of advisory committees.

Group X

Programs in the Junior College
Albert J. Riendeau, Recorder

The development of occupational programs on the junior college level will have significant impact on the prestige level of occupational education, the movement of the occupationally trained in the labor force, the training for middle level youth, the slow learner, academically superior youth; and how

the occupational education is identified with broader fields of education, government, business, industry, labor, and other professions.

To improve Programs in the Junior Colleges, the following actions are suggested:

.... Use standard courses only as guidelines and suggestions.

.... Provide articulation of high school and junior college programs.

.... Provide articulation between all California two-year junior college programs.

.... Meet local needs, even at the expense of articulation.

.... Work to prevent costly duplication of programs.

.... Plan programs with other junior colleges within community area.

.... Initiate an annual junior college vocational conference.

.... Encourage affiliation of school personnel with the California Junior College Association.

.... Examine existing courses in terms of possible shortening of course time.

.... Clarify all course requirements.

.... Publicize results of follow-up studies.

.... Increase industry involvement.

.... Provide more than manipulative skills in all course offerings.

.... Stress importance of the A.A. degree or unit approach to occupational preparation.

* * *

THIRD GENERAL SESSION

Thursday, March 16, 1967

Chairman: Karl Jacobson

Recorder: E. T. Barnett

Karl Jacobson

E. T. Barnett

"WHAT'S NEW...?"

Mr. Jacobson:

We are asking if there are any new developments and innovations which should be brought to the attention of this conference. The committee thought that there were certain segments of the total industrial education program in California which are either overlooked or unknown. We have asked persons that you see listed on your program to give you glimpses of the programs they represent.

"WHAT'S NEW IN...WOMEN'S OCCUPATIONS?"

Velma Johnston
State Department of Education

Velma Johnston

Because traditions are changing and because our entire society is changing economically and in many other ways, women--especially young women--should know their work-life expectancy. They should understand that few young women in today's world will escape work outside the home for much of their lifetime. They must be alerted to the necessity of preparing for employment.

Predictions indicate that eight out of ten girls will work for pay at some time during their lives, and a majority will be active in the labor force for many years. The high school girl of today has a work-life expectancy of as many as 40 years.

Women and girls seeking employment in the future will find the largest number of job openings in fields requiring the most education and training. The need for highly skilled and trained workers is increasing because scientific and technological improvements are changing the methods of business operations and the types of equipment used in

offices, laboratories, and factories. Those with the best training and education will be in a position to get the best jobs.

As each new phase of technology is developed, there is a concomitant need for more technicians and semiprofessional workers. Training and retraining is necessary to fit both men and women for these new jobs.

Womanpower is the greatest untapped resource of workers. It is particularly essential that women be encouraged to prepare themselves for technical and semiprofessional jobs. Women are routed to technical and semiprofessional positions by: educational background, training and retraining, proximity or availability when the job opens, competitive examinations, licensure.

It appears that women who want technical or semiprofessional jobs either must have had science and mathematics in high school, or must plan to go back to school to take them later, whether the job is business related or engineering and science related.

The plans made in school--to marry or not, to work or not, to go on to college or not--often are changed. Few girls really do with their lives what they planned to do when they were in school. Therefore, high school training should be aimed at preparing girls for any contingency.

Education has a responsibility not only to counsel girls into courses of study which will help them become good wives, mothers, and homemakers, and to direct some into college preparatory courses and the professions, but also to counsel many into practical pre-training as technicians. Interviews with personnel in industry, business, and agencies clearly established that employers believe the need is for women and men to have the same educational opportunity in existing programs as well as in new educational programs, rather than to have special pre-employment classes or special curriculums just for women. If women are to compete in the labor market, they need to arrive there with the same knowledge and competencies as do men.

If it is to survive the groundswell of technology, industry must recruit technicians and semiprofessional workers among women. This means industry must be willing to accept qualified women workers, and perhaps must arrange for in-service training of women already employed in lesser skilled jobs. Industry should recognize the unique feminine qualities which make women exceptionally able technicians in certain fields.

As the majority of workers in industry are men, men must learn to accept women as co-workers and to respect them as competent individuals.

* * *

"WHAT'S NEW...IN FIRE SCIENCE?"

Edward W. Bent
State Department of Education

For almost 35 years now, through the Bureau of Industrial Education, organized fire departments all over the State of California have been offering Fire Training programs. All of us should realize that firemen are no different than any other type of occupation when it comes to the problem of trying to keep up with technological advances, because with each advance comes a new problem in the field of fire fighting. When new materials are developed, new hazards are developed. We have found that we have to keep pace with these advances by increasing the training and education being offered to our firemen.

Several years ago junior colleges started offering fire science classes. This is the most rapidly growing field in junior colleges today. In 1961 we only had 4 junior colleges offering fire science classes; as of this semester we have 42. We have been contacted by 8 or 9 additional junior colleges that will be ready next September. At the present time, we have approximately 8,000 firemen attending junior college classes throughout the State.

We found that we didn't have qualified instructors to handle this teaching load. Through our department, we are at the present time offering on a zone-school basis a 63-hour instructor training course. After successful completion it enables a man to apply for a part-time teaching credential. So many junior colleges are entering the field that they are actually beginning to hurt each other's programs. We are, therefore, setting up area planning committees where junior colleges may meet to work out a program that will satisfy each. If you represent a junior college anticipating fire science classes, we would appreciate a call to our office.

Edward W. Bent

A year ago the city of Turlock conducted an oil fire control school. This was the largest school of its type held anywhere in the world. We enrolled 810 firemen. In addition to firemen from California, we had 75 Mexican Bombero firemen in training. These firemen came from all over Mexico and were invited to California as guests of the California Fire Service. They travelled to the border on their own--some of them came 2700 miles. When they arrived in Mexicali, we transported them from Mexicali to Turlock. We then housed and fed them in Turlock for the three days. We feel that this particular program did a terrific public relations job.

If there is anything that the Fire Training program in the Bureau of Industrial Education can do to help you, we are ready to serve.

* * *

"WHAT'S NEW IN...PEACE OFFICER TRAINING?"

Winston Silva
State Department of Education

California has been in the process of developing the Peace Officer Training for thirty years. Our program has become the model for police training throughout the United States. We are considered to be some twenty years ahead of many other states, and in order to stay ahead, we have to constantly be developing new ideas, new techniques, and new programs.

Consider that a peace officer, like a doctor, has in the palm of his hand the matter of life or death of an individual, then the program will have some meaning to you. The peace officer must make split-second decisions that sometimes take our courts of law many years to decide. This is another reason for the development of the program. Today, court decisions are making it more difficult for the officer to perform efficiently and effectively.

Winston Silva

About four years ago the California Optometric Association, headed at that time by Dr. Arthur Heinsen who was the Health Educator for the Association, several officers of the law and the Bureau of Industrial Education got together in a series of conferences. Out of these conferences was developed a program which we have called the Visual Science as Applied to Law Enforcement. A peace officer must be able to detect and accurately describe things in a short period of time if he is going to decide whether a person he is facing must face life or death. So, with the development of the Visual Science program, we have attempted to train the peace officer's ability to visualize and perceive those things.

The thirty-hour course has been given as a pilot program at the Rio Hondo Junior College in Santa Fe Springs. Each two-hour session has four segments. The first is used to develop the person's speed of perception with slides flashed for a split second. We have one hundred optometrists in the State of California that offer this particular program. The third phase is called the "buddy" system of training. Officers are paired, working to develop their visual training.

Although political science will improve the efficiency of law enforcement, we must complete a sufficient number of classes in this area before an evaluation can be made.

* * *

"WHAT'S NEW IN...INDUSTRIAL ARTS?"

Frank E. Schroeter
Fresno State College

The American Industrial Arts Association, which is a Department of the National Education Association, in its publication entitled "This We Believe" states that industrial arts should be a part of the learning experience of all students at all levels of grade and ability in order that they may understand and learn to control their industrial-technological environment. It further states that industrial arts content deals with the principles and concepts of industry. It concerns itself with industrial production and servicing, including the study of principles and applications of mechanisms, influence of automation and mass production, implications for consumer literacy, and fosters an awareness of the world of industry and its place in American culture. All members of society must learn to be aware of, and to live effectively in, today's technical culture. But how are we to reach the many students who presently do not enroll in industrial arts courses? How are we to develop in these students an interest in this man-made world its materials, its products, and its processes? One example of this concept is industrial arts power mechanics as an interdisciplinary approach. There are two things that I want to stress:

(1) The term power mechanic as used here does not refer to only the small engine type power mechanics as many of us know it today. It covers seven broad areas of power, energy, and force: natural power, mechanical power, steam power, explosive power, magnetic power, electric power, and hydraulic and pneumatic power.

(2) The approach being used is an interdisciplinary approach.

Frank Schroeter

Instructional units for use in establishing courses in industrial arts power mechanics and improving existing courses in secondary schools of California were developed at the industrial arts power mechanics science curriculum workshop which was held in Fresno State College. This workshop was conducted under Title III(d) of the National Defense Education Act. Specialists in power and automotive mechanics from the ten California colleges with accredited industrial arts departments, and other educators and supervisors from local school districts, were selected to participate in the workshop as members of the MDTA, Industrial Arts Power Mechanics Science Curriculum Committee. Dr. Robert L. Woodward, consultant in Industrial Arts Education, California State Department of Education, was designated as project coordinator.

Each workshop participant used many of the scientific principles relating to power, energy, and force covered in the basic science textbook

adopted by the school district in his region of California in the preparation of industrial arts instructional units. In addition, each participant incorporated feasible examples of applications of selected scientific principles submitted by members of the Statewide Industrial Arts Science Committee. The instructional units developed were classified under the seven broad areas of power, energy, and force. These classifications are your natural power, and hydraulic and pneumatic power. Each unit under classification presents specific information about the topic covered in the unit, the scientific principle or principles involved, and application in an industrial arts course.

The instructional units prepared by the participants in the December workshop are now being edited, and additional illustrative material is being requested from manufacturing concerns. Copies of these units will be reproduced in an experimental edition and sent to power and automotive mechanic teachers, industrial arts supervisors and teacher educators, as well as members of the original MDTA workshop committee. Those receiving this experimental edition will be asked to review and evaluate the material. A questionnaire will accompany the experimental editions for this purpose. After the evaluation forms have been returned, another workshop will be held during the latter part of 1967 where specialists and science will work with the specialists in industrial arts and prepare additional material relating to the scientific principles.

It is anticipated that this industrial arts power mechanic science material will be introduced to inter-relate English and mathematics in a future MDTA project. After all of these steps, the publication will be printed by the State Department of Education and distributed to industrial arts teachers.

As the last phase of this project, a grass-roots workshop will be held to develop a team approach to the four subjects in industrial arts power mechanics, science, mathematics, and English.

* * *

"WHAT'S NEW IN...OCCUPATIONAL PREPARATION?"

John Satterstrom
Santa Clara County Schools

AEROSPACE TECHNOLOGY PROGRAM AT ARAGON HIGH SCHOOL IN SAN MATEO. The pre-technical program is designed to prepare students to participate in our modern technological society. The program is interdisciplinary and includes math, science, technology lab, drafting, and English. In addition there are required classes in social studies. The program is designed for the student who wishes to begin earning a salary upon high school graduation, or entrance into a junior college having technological programs.

EL CAMINO HIGH SCHOOL IN SOUTH SAN FRANCISCO. This program relates to the construction trades and is divided into Construction I and II. The goal of the construction course is to prepare students for entry into the light areas, or continue technical training at a junior college. Prerequisites are Woodshop I, or at the consent of the instructor. The course consists of all the basics of drafting and blueprint reading, care and use of power tools, and building code requirements. The second year of construction is devoted to practical application of material covered during the first two semesters. This part of the course is conducted out of doors on actual construction projects. Prior to the actual out-of-doors construction activities these students have had experience building scale models in the classroom.

John Satterstrom

STUDENTS WITH SPECIAL NEEDS. This program has been developed to assist mentally retarded students to acquire a salable skill. Students are instructed in the art of working in the field which involves the driving of a tractor. Several of the boys were able to drive quite effectively. They had to learn weed control and irrigation. This program is being operated by the Santa Cruz County Office of Education for the trainable mentally retarded students in the area, and is somewhat unrelated to the purposes of our conference. However, I feel that there are some lessons to learn and it may challenge our imagination.

MEAT PROCESSING AT TRACY HIGH SCHOOL IN SAN JOAQUIN COUNTY. Prerequisites for this course are a completion of one year of science. Priority in the selection process goes to seniors, and if there are additional openings, juniors and sophomores are considered. Topics included are: slaughtering, dressing, processing, cutting, and packing.

SERVICE STATION OPERATOR IN THE SAN JOSE UNIFIED SCHOOL DISTRICT. The purpose is to provide educational programs for high school seniors that will develop them into successful employees in the service station industry, and thus an entry into the area of automotive servicing. The training for this program is carried on in automotive mechanics and sales classrooms. Emphasis is placed on personal grooming and cleanliness. Practical experience is gained through actual servicing of the faculty and students' automobiles. Since this program is one of cooperative working experience education, these students gain actual experience in the service station.

* * *

"WHAT'S NEW IN...MDTA?"

Jim Allison
State Department of Education

As a result of the Watts rioting in August, 1965, the McCone Commission asked that something be done about unemployment. We had a commitment from the Secretary of Labor and the Governor to establish skill centers. These centers were to be located in the heart of the disadvantaged areas. We now have five centers--one in the Pacoima area of the San Fernando Valley, one in East Los Angeles, and two in Watts. The centers in Pacoima, East Los Angeles, and Watts are operated by the Los Angeles City Schools. The Community Skill Center in South Los Angeles is operated by the West Coast Trade Schools, which is a private organization. A large center operated by the Peralta Junior College District serves the Oakland area.

Jim Allison

In April, which was 62 days after we first told the schools we wanted training, we had the first plant opened, the machinery in, the buildings altered, and were in operation. The other centers opened around the middle of June. We looked for a large enough structure in the Watts area, but they burned down everything that was of decent size. One of the schools is on the fringe area and the other one in Watts. They vary in size from 4500 square feet to the Oakland center which has one single floor of 125,000 square feet. They also occupy part of a second floor and the basement. We are able to accommodate about 500 students in the Los Angeles area on a single shift basis. In Oakland they can accommodate 1000 to 1200 on a single shift. We provide anything from 9 occupational areas in the Pacoima area to 30 occupations being offered to the students in Oakland.

Some of the occupational training includes licensed vocational nurse, dental technician, mechanical drafting, aircraft engine mechanic, vending machine serviceman, utility worker, office machine serviceman, machine operator, and cooking. There is a 20 to 1 ratio of students to teachers. The classes are small enough to provide individual instruction.

It costs us around $2,000 per trainee, plus allowance and travel subsistence while they are attending. Almost without exception all the trainees are unemployed and disadvantaged. About 75 per cent are males. We have about 85 to 90 per cent Negro population in our centers. I might add, East Los Angeles is a little bit different as it almost is entirely Mexican-American. The majority of the trainees have extensive police records, which creates some problems in placement.

We have monolingual problems in our centers in Pacoima and East Los Angeles. We gave them basic education followed by occupational training. Of the classes that graduated, not one student missed placement. Achievement

levels tested between the second and third grade. In the Watts areas the adults averaged between the fifth and sixth grade. The youth are a bit higher than adults for achievement level. A survey of the groups showed that most of the people in the program have been residents of the area for over five years, so they are products of our own system. We offered a pre-vocational phase which we called industrial exploration. We tried to expose them to as many areas as we could and give them basic education coordinated with this program and allow them to choose an occupation.

Our typical day is eight hours long. It runs four hours in the shop or laboratory, one hour of related information in that laboratory, and two hours of basic or remedial education, and one hour supervised study or counseling--whichever the student needs at a particular time. We do a considerable amount of attitudinal and motivational counseling. This seems to be the most important factor in our program--motivating these students.

Some of our centers now offer high school credit for courses taken at the centers. Over 50 per cent of the first group we had go to night school. We maintain student organizations at each center. They feel like they are part of the community, part of what's going on. We have a record of a little over 92 per cent placement at all centers to date. A survey in the Watts area revealed that about 82 per cent of them stayed on the job. We are servicing about 6300 for this fiscal year, and we think the program has real merit.

* * *

"WHAT'S NEW IN...CORRECTIONAL PROGRAMS?"

Euel L. Tissue
Department of Corrections

Prior to World War II there was no vocational education in the correctional systems of California. We know that people need their sense of self-importance, their sense of dignity, their sense of self-respect in order to contribute to the community in which they live. People leaving correctional institutions are no different in this respect than you or I and have the same basic needs. During World War II the Department of Corrections set out on a course of developing programs that would serve some of their needs. Much of the credit for it must go to people like Lee Bodkin, Lee Ralston, Wes Smith, Dick Nelson, and a host of others. They trained our teachers, helped us gather information, and guided us.

The objectives of the Department of Corrections are to protect the public and the prevention of crimes through effective and efficient correctional programs. One of our methods is the development of vocational programs. Scattered over the State of California are 13 major institutions housing 28,000 inmates. On an average, they are under 30 years of age. When they came to the Department of Corrections they had finished about the eighth grade. They were functioning somewhere around the 6.5 educational level.

They had a few things in common. One is that they were all failures--they failed in the community, they failed in churches, they failed at home, and they even failed in crime. There are some that blamed the public schools for their failure. There are some who blamed vocational education for this failure. I don't happen to be one of them. I think the public vocational education is doing a fine job. One of our problems is to try to prepare them when they leave.

Euel Tissue

A guidance center is a place an inmate goes when he first enters the institution. He spends four to six weeks there, during which a series of tests are conducted. They want to know his background, what he has been doing, and how smart he is. A written and manual dexterity test is given during this period while they are in the guidance centers. About four to six weeks later he goes to one of the institutions. When he gets to the institution, the first thing he does is to appear before an initial classification committee. One member of that classification committee is always an educator. It's here that he first comes in contact with an institution. The committee goes over his program in an attempt to meet his specific needs.

We teach 48 occupations in the correctional system. We have 200 vocational teachers and supervisory personnel. These programs range from an FAA approved aircraft mechanic school to welding. Of the 28,000 inmates in a correctional institution, about 4000 are involved in formal vocational education.

When a man leaves prison he is on parole. It is often difficult to place people who have been paroled from correctional institutions. It has always been easy to get people jobs as dishwashers, but he then becomes a drifter. We are not interested in that. We try to get him into a permanent job. We have a trade advisory council which meets every three months. There are 55 subcommittees; and frankly, this is the kind of committee that I like better than the trade advisory council. It gets everyone involved.

* * *

"WHAT'S NEW IN...TRADE-TECHNICAL EDUCATION?"

Earl McGhee
Coalinga College

The program has two basic objectives: to make technical education available to all students in our college district and to supply technically educated specialists for industry, business, and government. In the last two years of high school, students will take a pre-technical core curriculum--shop, drafting, and a new two-year sequence in technical science.

The two-year technical science sequence is the only new course required at any high school. They already offer shop and drafting. Then, in the 13th and 14th school years, they'll take a specialized technical education program in one of six areas: auto mechanics, automotive machinist, civil-highway, electronics, heavy equipment-diesel, or welding.

Earl McGhee

Most graduates will enter employment when they leave junior college with an associate in arts or associate in science degree. Some may continue through a four-year college to earn a bachelor of science degree in some phase of industrial technology--a reasonable goal for a more capable student. A relatively few may earn B.S. degrees in engineering; this would be much more difficult with the four-year technical program as a springboard.

Because of the wide ability range of entering students, specialized technical programs on three technical levels are offered:

1. Service technician for jobs in service industries or businesses.

2. Industrial technician for jobs in manufacturing.

3. Engineering technician for jobs in research and development.

These three levels differ primarily in terms of whether greater emphasis is placed on manipulative skill courses or on math and science courses.

The two-year technical science sequence, which operates as the focal point of the pre-technical core curriculum, includes a semester each of electrical, mechanical, construction, and community layout and systems. Practical products are used to teach manipulative skills and scientific principles.

In the first, electrical phase, the students take apart and put together ten small electrical appliances--like hair dryers and can openers--and in the process learn about the product, product service sheets, identification of product components, functions of product, electrical symbols, electrical circuits, product operation, electrical theory of product operation, electrical quantities, measurement, measuring instruments, calculation of electrical quantities, terms, units, formulas, scientific notation, slide rule, troubleshooting, and how to get along with people.

In the mechanical phase, they learn the fundamentals of mechanics through the process of caring for, dismantling, analyzing, and assembling a four-horsepower gasoline engine.

In construction, they build scale models of a three-bedroom house, with attention to the principles of construction in general and of each

phase as they go about it, even to preparing cost estimates and financing arrangements.

"Community layout and systems" puts them through the process of planning a well-designed community in terms of the arrangement of streets, power, gas, water, and sewerage service and radio communications.

It's important to the student to learn to be able to function as part of a group. More and more of man's occupations nowadays are geared to teamwork rather than to the isolated individual working by himself.

The ultimate function of the first two years of the sequence is to orient students to achievable goals, create a strong feeling within students that the program is efficiently advancing them toward their goal, and advance them efficiently, in fact, toward successful achievement of their goal.

* * *

Lawrence - Venn - Smith

PANEL PRESENTATION

Thursday Morning, March 16, 1967

Resolved: In California the Area Vocational School can contribute more to a total program of occupational education than can the comprehensive high school.

Moderator: Mack Stoker

Affirmative

Thomas Johnson John Royalty Joseph Bellenger Robert Gonzalez

Negative

Clifford Dobson David Taxis Gordon Funk Norman Stanger

Affirmative: Gonzalez

1. Students are bused to the school.
2. Ten occupational programs are offered.
3. Students are from the 10th grade level.

4. Facility serves about 500 adults.

5. Provides a facility, instructional personnel, is job-oriented, eliminates duplication of effort and costs.

Negative: Dobson

The issue is what is best for our high school youth. The comprehensive high school is considered adequate by:

Parents
Industry
Educators
Taxpayers
Youth

The area vocational school tends to place the student in slots, and it is difficult, therefore, to transfer from one to another.

Affirmative: Bellenger

1. Money is the key to the problem.

2. A quality program and availability to students is a factor.

3. One program in an Area Vocational School serves 20 high schools.

4. One program in a comprehensive high school serves one high school.

Score: 20 to 1

Negative: Taxis

1. Tends to develop another school district.

2. Is not now included in California school law.

3. Would be an expensive undertaking.

Affirmative: Royalty

The area vocational school becomes the hub of the wheel for all students and for all kinds of vocational programs. The program for half-day becomes a real program for the student.

Negative: Funk

1. High school youth can be prepared for careers more effectively in a comprehensive high school.

2. We can meet the needs of the high school student more effectively in a comprehensive high school.

3. The four walls of the comprehensive high school are not the limitation of programs for students.

Negative Summary: Stanger

We must look at all aspects of the case. Comprehensive high schools can contribute more to the total program than any other facility.

Affirmative Summary: Johnson

Area vocational school affirmative proves that it can do the job with better facilities, qualified instructors, and can supply more services. Twenty-five per cent of high school students drop out and are not prepared for employment because they have not benefited from the traditional methods now employed.

Moderator Mack Stoker summed up by saying that there would be no official judgment of the outcome of this debate.

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FINAL LUNCHEON SESSION

Thursday Afternoon, March 16, 1967

Chairman: Richard Lano

Recorder: John Meyer

Smith - Lano - Herman

Chairman Richard Lano welcomed the conferees to the final session and introduced Bureau Chief Richard Nelson to recognize the retirees.

Nr. Nelson: We are honoring four persons who have contributed to our field of Industrial Education over the years and are now retiring. First, Mr. Angus Woodruf Coordinator of Trade and Technical Education in Sacramento City Unified School District. He had experience working at the Utah State University, also working in the dairy industry in Utah. He has been teaching at Sacramento City College. He has a B.S. degree from Utah State University, graduate study at Berkeley and Sacramento State College. On behalf of the Twenty-Ninth Annual Conference on Industrial Education, it is our pleasure to present you with this certificate of appreciation for meritorious service in Industrial Education.

Mike Fullmerhas been employed by the Napa High School and Junior College District. He became Supervisor of Industrial Education in 1951, and served in this capacity until 1964 when the Junior College District was formed. He has been with the Napa High School District recently. He was with us in Bakersfield where there was talk about retirement; and now he has actually made the decision, and as of June, 1966 he has been in retirement. Belatedly, I should like to present to you for your service to the profession this token of our appreciation.

Nelson - Weems

Tom Weems is the third retiree we are honoring today. Tom received his education at the University of Oregon, which included a Master's degree. He taught in Oregon and the State of Washington. He has also taught in the Sacramento senior high schools and Sacramento City College. He is presently Director of Adult Education, Sacramento City Unified School District. Tom, we congratulate you on your retirement--and best wishes.

Our last retiree has been on the Bureau of Industrial Education staff for many years. Most of us have known George Rosecrans as attached to the apprenticeship program in the State of California. George was a charter member of the Apprenticeship Council when it was first established after the passage of the Shelley-Malony Act in California. George has been a supervisor and has worked in teacher education. We certainly hate to see George leave his activities in apprenticeship. George has some property near Orinda. About six months ago he indicated he would like to put some buildings on that property while he could still get around. On behalf of the conference, may I present this token of our appreciation for your services to Industrial Education in California.

Rosecrans

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THE CHANGING SCENE IN VOCATIONAL EDUCATION

By Wesley P. Smith
State Director of Vocational Education

My appearances before this annual audience have been few in number, but I have considered each of them to be among the most complimentary recognitions to come my way. In the first place, my genuine respect for each of you as individuals--and my intense admiration of your collective competencies as educational leaders--makes me value very much any opportunity to serve you.

Wesley P. Smith

Your Planning Committee was most courteous to me--even though a bit reckless--in suggesting that I determine my own subject. Other planning committees have learned to be more discreet, for in the past I have been known to take advantage of such open-ended invitations.

In 1949 when I first spoke to this conference, I was much more certain of the needs (the problems--their solutions) in industrial education than I am today--and much less reluctant to withhold my wisdom from you. Some years later in San Jose, it was not too difficult for me to discuss your program with considerable confidence.

Several years ago I listened to an industrial educator make a prolonged statement on what was good and bad with agricultural education--and part of my reluctance to speak directly on the subject of industrial education today is the memory of the vow taken then, never to voluntarily expose myself to such a task--especially in the presence of the country's most expert practitioners!

My subject is "The Changing Scene in Vocational Education"--and on this subject I have few peers! Man and boy, I have lived in the changing scene of vocational education. My credential of competence is more than 40 years of direct experience in vocational education as a student, as a teacher, and capped by more than 25 years as a vocational education staff member in the State Department of Education. So, you see, I have the portfolio for this subject! I am an expert in the "changing scene."

Fifty years ago, when the Smith-Hughes Act became law, there was an emergency in our nation caused by the mechanization of industry and the training of manpower to operate it. The same emergency continues today in the form of a race between modernization and expansion of our production of goods and services, and the modernization and extension of manpower capacity. The need today is identical with the need of fifty years ago--to provide a competent work force for the world's most productive economy. The only difference is the ominous urgency for meeting the need today--and the perilous consequences if we do not!

As a starter in visualizing the changing scene in vocational education, we must acknowledge the presence and nature of Public Law 88-210, the Vocational Education Act of 1963. In a genuine sense, this Act must be considered as the Magna Charta for vocational education. Just as the Smith-Hughes Act provided the foundation for a nationwide vocational education effort, our new Vocational Education Act has become the symbol of freedom for vocational education--and the liberation of vocational educators from no longer necessary prohibitions and prescriptions. No longer are we limited to building programs of vocational education; now it is possible to also become the architects of new programs. The changing scene in vocational education has witnessed the shift of responsibilities for design of vocational education efforts to operating districts--away from statutory limitations and bureaucratic edicts. As never before, the extent and the nature of vocational education is determined by the capacity of local districts to accept and discharge this responsibility.

In the past, we had to work alone as we designed and as we built and as we operated. Today, we cannot work along, for the task is too complex and too large. There are new alliances among governmental agencies and within the training arena that must influence our efforts. These alliances are intended to fortify manpower development, even though they often entangle our efforts and our energies. Of all the developments in the changing scene of vocational education, one of the most prominent is the emergence of concurrent efforts and programs that are designed also to train manpower in our nation. Some of these efforts and programs are intended to be supportive to our mission. Some are intended to supplement our efforts. Some, without question, are intended to compete with us. Others, by intent or chance, seem to supplant or to replace our programs. That they are present, there can be no question. That they will persevere, there can be little question.

As in no previous time, manpower training is a national and a state commitment. As never before, manpower training involves a multiplicity of efforts and approaches. Today--and tomorrow--our task is to intelligently and efficiently mesh vocational education into this arena of total involvement. How well we fit our educational services in this cooperative jointure is certain to influence the economy. How quickly and how adroitly we fit our activities into this multi-effort approach will influence our future role in training. In the past, we staked out our domain and resisted any encroachment. Today, many others have a legal right of entry into manpower training. For us to resist this entry is both foolish and futile. For us to find an appropriate part of the total action is both urgent and essential.

Another striking change in the scene has involved the surge of Federal financial aid throughout the expanding total program of public education. Not so very long ago we, in vocational education, were the envy of our colleagues in general education; for our program was the only one benefiting from Federal dollars. Today, we find ourselves as junior members in this enterprise, for Federal appropriations for other educational programs dwarf ours by comparison. That this development will influence our programs, there can be no question. With so many other agencies with so much money--and with the need to justify such immense Federal funding--the competition for the Federal dollar may become rather intense.

Within this shifting scene, too, is a changing attitude regarding the importance of research in our program. For most of our history in vocational education, we have committed only a fraction of a percentage to research--and even then often grudgingly. Today, we are almost mandated to consign nearly one-tenth of our Federal funds for this purpose. Tangible and invigorating contributions to our program by the fresh imput of millions of research dollars will be directly related to our awakened respect for research, our confidence in its results, and our ability to direct its use. In any case, the availability of these research dollars will challenge the standards and the traditions we have developed through the years--and to which we hold with almost pious tenacity.

Reoccurring in this changing scene are those moments and occasions when our mission vacillates in the public opinion from the status of honorable and essential to that of dubious and frivolous. In periods of emergency, our program emerges from its cocoon of inattention and tolerance to a position of veneration. This metamorphosis is strange to behold and difficult to reconcile. At this moment in the changing scene, our purpose is so laudable that others clamor for a piece of the action--and elbow their way to proclaim its benevolence. Again, as always before, our task is to take full advantage of this climate of acceptance before the curtain once more is drawn.

Too, we should be aware of extensive alterations in our own concepts of what vocational education is--and isn't. The Vocational Education Act of 1963 didn't produce or cause these concept modifications. Instead, this new Act recognized and accepted both the existence and the propriety of the new concepts and has served to provide statutory ratification of these new concepts. Some of these, specifically, bear upon such matters as the actual availability of vocational education opportunities--for all persons--in all locations--and in all occupations. For most of our history, our program has been quite selective--serving relatively few occupations, meeting the needs of relatively few persons, and being located in relatively few places. Now our goal is to extend offerings until all persons who need occupational preparation are served. In the past, we have often been preoccupied with the extent of our accomplishments. Today, our primary concern must be with unmet needs.

Another modified concept has to do with the relationship of offerings to the realistic demands of total employment patterns. When nearly seventy per cent of the work force is involved in service-type occupations, rather than in goods-producing occupations, the preparation programs should have comparable emphasis.

Not to be overlooked is a rather distinct concept that has emerged just recently, and which declares there is more realism and substance in determining the vocationalness of a program by its intent and purpose than by the number od class periods per day or by whom taught.

Among other changing concepts must be listed the modern willingness of vocational educators to support--even demand--multi-disciplinary approaches to occupational proficiency. Rightly accused in the past of being provincial

in thought and action, vocational educators today are in the vanguard of professionals that insist upon instructional teamwork.

Of great and increasing consequence to all of us is that part of the changing scene that signifies the end of the compartmentalization of our approach to vocational education for all persons. No longer will the pigeonholed effort suffice--even though it has served us well. No longer should our total effort squander its energy through excessive fragmentation.

We experience this evolution in the State Department of Education--and we face it with concern. We know that our organizational structure, based upon a few major subject-matter disciplines, is not capable of accommodating the expanding goal of occupational training for all persons. We know that our existing structure is not compatible with the vocational education needs of the State. You may expect changes in our organizational structure. Our dilemma, as yours, perhaps, is to make such physical adjustment as is essential without nullifying the substantial gains of the past--or erasing provisions for subject-matter leadership in all of the vocational education disciplines.

Any delineation of the changing scene in vocational education would be incomplete without citing the pressures of population in California--and our never-ending cornucopia of clientele for vocational education. Not only in numbers is our task staggering, but the diversified nature of demands is almost overwhelming. We may well be proud that more than 800,000 persons will be served by vocational education in California public schools this year; but we cannot overlook the fact that for every person served, there is another person unserved. And it must be that many, many of the unserved have the greatest need for vocational education. The fact that we have never fully met the vocational education needs in California can give us little comfort in the economic environment of the 70's and 80's. The consequences of inadequacies in job preparation of prior generations were of such a nature that they could be concealed or compensated for by other opportunities. The consequences of inadequate job preparation in the future will be so visible and so devastating that the very nature of our economy may be jeopardized.

Finally, in my listing of dominant changes in the vocational education scene is the one that comes closest to the "here and the now." I refer to the ever-increasing sophistication of local leadership and direction of vocational education. In the truest sense, there has been continuous, uninterrupted shift from the original concentration of leadership talent in Washington, D. C. and from Sacramento to the local districts. This shift has been in both numbers and (with no affront intended to my colleagues in the Department of Education) in quality. Truly, the development and deployment of leadership talents in vocational education must be considered one of our greatest program strengths--and one which is of modern vintage. This shift has not necessarily meant the shrinkage of leadership talent at the Federal and State levels. Instead, it represents the populating of the entire State with capability to invent, to mount, and to conduct the vocational education enterprise as never before possible.

The availability of vocational education leadership sophistication throughout the State has immense significance for future changes in the vocational education scene. It means, for one thing, that increasing amounts of responsibility for program initiation, for program development, and for program quality must reside at the local level. It means adjusted roles for Department of Education staff members. It means a new network of communication in our program. It means the development of new services. It means, too, an increasing willingness for local leaders to assume the responsibilities that accompany their roles. The degree to which they will assume is the degree to which they will have. . . . !

The real fulfillment of the objectives of vocational education lie ahead--not behind. Our task continues to be as great as it is challenging. Our opportunities are as abundant as they are promising. Our purpose is as unswerving as it is resurging!

* * *

SAMUEL FICK LECTURE ON INDUSTRIAL EDUCATION

Friday Afternoon, March 17, 1967

Grant Venn

Presiding: Durant W. Moseley
Richard S. Nelson

Speaker: Grant Venn
Associate Commissioner of Education, Adult and Vocational Education, U. S. Office of Education, Washington, D. C.

Presentation: EDUCATION--THE BRIDGE BETWEEN MAN AND HIS WORK

It is appropriate that a conference of industry and education leaders take place on Saint Patrick's Day. The Patron Saint of the Emerald Isle is not only credited with bringing Christianity to Ireland and driving the snakes out of that country, but Gaelic legend has it that he was the first Christian architect-engineer.

I feel honored to be among the distinguished list of Samuel Leonard Fick lecturers, and I am happy that you have selected "Industrial Education--the Bridge Between Man and His Work" as the theme of your conference. It is not only a timely topic but one that I enjoy sinking my teeth into, because I firmly believe that vocational education must successfully serve as the bridge between man and his work for nearly 80 per cent of our population. The question is, how do we develop a school system to take care of 80 per cent of our young men and women who do not obtain a Baclaureate degree?

We know that only 20 per cent of the youths who enter high school graduate from college. It is the remaining 80 per cent that concerns us most as vocational educators.

Historically, man has based his educational system and preparation for a role in society on a concept of stability. We felt and believed that is we had the right curriculum and taught certain things, everything would work out all right. After all, we are the greatest industrial nation in the world. We have the experience to prove that we are right.

As recently as 1958 we were so sure that we had the right answer for public education in this country, it was proposed by the administration at that time that all Federal funds for vocational education and manpower training be eliminated for over the next four-year period, as it was simply not necessary.

Changes which occurred took generations to evolve. But in the last two decades our civilization has changed rapidly and drastically. The application of science and technology to the agricultural, industrial, labor, business, and commercial institutions of our society has created a revolution in our social, economic, and educational institutions. Some of the symptoms that graphically illustrate these transformations are the manpower shortages in skilled and technical occupations, the high unemployment during peaks of prosperity, the difficulty youth experiences in breaking into the world of work--and the fact that by 1970 more than half our population will be under 25 years of age!

In addition, old values and traditions are being questioned, and many are being discarded. We have racial problems requiring prompt solutions, and poverty pockets throughout the nation which must be eliminated. What a challenge all this poses for educators and employers of the country! And what satisfaction we can gain if we meet this challenge!

Our adult population has long lived with the concept of stability. But the present generation of young people do not know the meaning of stability. It is engulfed in a whirlpool of change. Since I am in the glass house with you, let me say that the most dangerous kind of experience of all is successful experience. Now that isn't literally true, of course. It does cause each of serious problems as we attack problems trying to find the solutions. This has created a new environment. Therefore, we have become the first generation which must educate young people and re-educate adults to new dimensions of time and change. And because methods which solved problems 30 or 40 years ago help so little in solving problems today, experience seems almost a handicap. Change has created a new environment.

For example:

1. The majority of the labor force today is in service and distributive occupations, and the percentage of production workers continues to decline. The number of production workers will not continue to decline to where we will have none, but it does indicate that our entire educational program is going to have to take a look at some new areas that are not now included to a large degree or have not been traditionally seen in vocational education.

2. The average person will need to change his occupation four or five times during his life. I don't care how good a harnessmaker might be turned out in the agricultural program, he probably is not making a lot of money today regardless of how good his skills.

3. Preparation of individuals with simple, specific job skills no longer makes sense as a long-range policy. There are too many people who still see vocational education as simply teaching operative skills for a specific job.

4. Vocational educators must use new methods to train workers in the basic skills they will need to move into new areas.

> In the past, occupational education was isolated from the main stream of education. General studies and vocational studies were conceived as separate tracks leading to separate life goals--the former, a road to liberal or professional higher education; and the latter, a path for students lacking either the means or the ability for higher education.

The rapid changes in our environment make it mandatory for vocational education to change not only some of its functions and aims, but its public image.

We vocational educators have become responsible for a pupil's education because someone else has failed. In proposing new programs, there are certain disadvantages for children of special needs. Some vocational educators have said to me, "One thing we can't do is lose the quality of our vocational education job skill quality development." It is much more likely today if one does not have different kinds of programs for those students who need different kinds of occupational education. If we do not develop the breadth and the variety of vocational programs, we are likely to have students in high-skill programs that cannot benefit; and our whole program will become of low quality. In other words, quality, then, is meeting the needs of all of this.

We argued that we have comprehensive high schools. Every high school in this country is comprehensive if you look at the student body and the program. Although vocational education has undergone tremendous development, especially since the passage of the Vocational Education Act of 1963, its public image harks back in large measure to the time when vocational education--then known as manual training and home economics--was used to school our delinquents.

The amount of Federal dollars that are going into vocational education are not always invested in the vocational schools in places where I think they might be used best. We have programs of a remedial practical nature which imply that vocational education should be for those who can't get something else. Therefore, vocational education is stigmatized as an inferior form of instruction in the mind of the lay public. Although thousands of teachers are dedicated to vocational education and millions of students benefit from vocational education, our public image falls far short of what it could and should be.

In 1965 there were 413,000 vocational high school graduates in this country, aside from those graduating in home economics. This represented one-third of the total high school graduating class that did not go on past high school. In that group of young men and women, their unemployment rate at the present time, graduating in June, 1965, is 4 per cent, which is about the national average. The unemployment rate among young people 16 to 19 in this country runs close to 18 per cent. For graduates of vocational education it is 4 per cent.

In order to improve this image, we need to do more than just talk to each other. All of us who are involved in vocational education must

co-operate in a nationwide public information program to tell the true story of occupational education. It is only in this way that vocational education will be able to obtain its share of the educational dollar needed for those 80 per cent of the students who do not complete college and seldom have adequate opportunities to learn the work skills they will need.

What can vocational education do about our racial problem? The unemployment of our negro students in this country runs 36 per cent; and what can vocational education do about the dropouts in the school? I believe that the knowledge and know-how that we have in vocational education can make a bigger impact on these problems than any other segment of our curriculum in the schools. And perhaps if we talked to the policy makers in our local school districts, and legislators about how vocational education can help solve some of their problems, we might be a little more effective.

But, at the same time we are improving our public image we must also improve our program. The fact that there are so many remedial programs supported by Federal funds is proof that our schools have not been asked to do the total job that is necessary today.

In 1958 I attempted to develop vocational programs in three new high schools being built in a school district of New York, and a community college. I must say that never has any opposition or criticism for these vocational programs been raised; in fact, we couldn't get two people to discuss them. The picture has changed. At the present time, we see remedial programs, poverty programs, manpower programs; and these are an indication that people now think that the vocational approach will solve the problem. But, we have not yet been able to prove to them that the investment in an occupational program in schools would pay off more than remedial correctional programs.

The present outcry for vocational education (which grows louder by the year) arises from the growing fear that our educational system, especially in the large cities, may break down because of the public schools' inability to cope with the heterogeneous student input. There's another reason for the growing demand for vocational education. It is seen as a means of developing the higher skills needed in today's world.

I think it is incumbent on us not to accept the proposition that the proper role of vocational education is simply to be the caretaker of those who fail to make the grade in some more general education system. Our role is a greater one! We must become part of the mainstream of education, and through our inputs, improve the entire process of education. This is the challenge we must meet if we are to become bridge builders to the world work. Because if you had to list three vocational courses that were fundamental to work in today's society, we would name none of those that you and I taught. You would name reading, writing, and arithmetic because these courses that you think of as vocational courses are more vocational than any we are teaching. Because without them you cannot teach the occupational skills that are now needed. So, I think that we, as a total part of the main stream of education, have a new dimension since the world of work has changed so much.

When this Nation was formed it was decided that each person must be educated not only for the sake of his personal development but also for the national welfare. Our Founding Fathers established the principle that the power to govern rests with the governed, and one who governs must be educated so that his decisions will be wise.

Today, a person's role in society is determined almost exclusively by his work role. Therefore, occupational education is a fundamental necessity for an individual's well-being, since a man who cannot work becomes a drag on society, economically, politically, and, most important of all, psychologically. So we arrive at the premise that occupational preparation must now become a fundamental component of each person's educational heritage. Now this is true for some people when they get their M.D., true for some people when they pass the Bar, and true for some people at junior grade level in high school. This concept leads to several conclusions:

(1) Vocational education must become a part of every level of education to assist the individual in making the transition from school to work. To argue about whether you are going to have any vocational education in the high school, or it is all going to be post-secondary, is just as valid as arguing whether you are going to teach it as a post-secondary. I don't think that is very valid, because it depends upon what the individual is going to do and where he is going.

(2) Educators must assume responsibility for helping students make this transition. When you add up the amount of money, time, and effort that we spend in helping the youngsters in making the transition from school to college as compared to what we do to help the student find a place in the local plumbers union (which is harder to get into that then it is into Harvard) and how much we help those students, I think you will find that we will have to conclude that educators must assume more responsibility.

(3) Schools and colleges must make learning how to work a part of their program by providing students with actual work opportunities in cooperation with business and industry. If you have to graduate from high school to get a job, to fill out an application form, unless you have some work experience; and you can't get a job unless you graduate, how are you going to get into this circle? Either you must have some work experience and prove you can do the job, or have enough education to prove you are prepared.

We have long recognized the need for a professional education for doctors, lawyers, engineers, and ministers. We must now recognize the need of an occupational education for every individual. To do less than this will cost this Nation huge outlays in remedial and corrective programs.

Segments of our society are being locked out of work because of technical changes. Even though the overall unemployment rate is now less than 4 per cent, for youths between the ages of 16 and 22 it is 18 per cent, and for Negroes in that age group it is twice as high.

The isolation of adolescents and other groups from the total economic and cultural pattern of society is our number one problem. This can be in the back streets of Chicago and at the beaches of Fort Lauderdale or Malibu. It just does not pretain to just those youngsters that come from poor, low economic income families. How does a young person in this society find a role that is significantly important? It wasn't difficult a few years ago because you could go out and get a job and work. The changed nature of work has virtually barred some young people from a realistic role in the world of work. I am more and more convinced that one of our greatest needs is the need to make a contribution. How are we doing this for some of our young people? How are we giving them this opportunity? I think of all these people who have gotten 12 years of report cards and must wonder how he is going to be significant. But when you send him home every six weeks and make his parents sign it and say it is true. That is rough! And it isn't that the schools are wrong in this, and it isn't that the teachers want to do this, it is that the role of the school in the past was essentially a detrimental role; and because we had the other school system open to work for us, we had a margin for error. There was a time when a youngster raised on a farm was an economic asset to the family. Today the family-sized farm is vanishing.

In the past, the education of the majority of people did not have a vital relationship to their work and did not need to have such a relationship. Today, the education of people must have a vital relationship to their work, as has been true in the professions for many years. Education must become the bridge between each person and the world of work. Are we going to change our school systems to include all these young people? Will we provide the program so that they can become productive and contributory, or are we going to establish in this country another school system to meet today's manpower requirements and help everyone become a contributor to our society or educational system? And I would take the first alternative as the best.

In the early application of technology in our society, the need was for a comparatively few people vocationally prepared as managers, clerks, and engineers--and for a great mass of workers to provide the muscle power and the low level operative skills. The work force took the shape of a very flat triangle.

The educational system provided these necessary skills. This was the picture until 1940-45. Today, manpower requirements of an increasing technological society are in the shape of a tall vase which tapers below the top to indicate the need for administrators, researchers, planners, scientists, engineers, sales personnel, technicians, programmers, teachers, and the many others who use mainly cognitive skills. The vase draws in sharply at the bottom to show the decreasing demand for those who can qualify for muscular and repetitive tasks that daily are being replaced by machines.

To meet today's manpower requirements and to help everyone become a contributor to our society, our educational system must perform several functions--some of them new. They grow out of the following assumptions:

1. Education is a link between man and society. Since we will not all have the same role and it will be changing, we need a variety of educational approaches based on the variety of individuals in our society. This will require both the means of change continually and the skills needed to enter into society as a contributor.

2. Our educational system must change. Its emphasis must be altered from a "selecting out" responsibility to an "including in" responsibility.

3. Public education must be the main integrating institution in our Nation. There is no other agency in our society which serves all the people and which has the opportunity to start serving each person at such an early age and continue to serve him throughout his life. Because of the mobility of our population and the change in our society, somehow we must have some integrated institution. The schools have done this pretty well, but not for the Negroes. I think we will have to admit, and not for certain other minority groups, but on the whole, it has been a good integrative institution; and I think it must continue to be, because alternatives do not appear likely to me. The problem of establishing and continuing to have a middle class, a large number in our society which gives stability, is very important.

4. Education and development of the human resource is less costly than correction and remediation. While those who have "lost out" in the last two decades cannot be expendable, nevertheless an earlier investment would not only be cheaper but would be politically acceptable. Most people prefer to be part of a successful pattern rather than selected for special treatment.

5. Education is seen as a way for many but not for all. The schools must become the "best place" for each child and adult in want of success--today, not in the near future.

6. Public schools and colleges have the resources. Our public schools, colleges, and universities have the greatest resources, facilities, and public acceptance to do the job.

7. Too many corrective programs blatantly fault the public educational system. Since efforts to date have caused a greater growth in frustration than they have in results,

we would do better to build on an established belief in an accepted institution--the educational institution of the Nation.

8. The need for continuing education. The worst term we have in continuing education today is graduation. If anybody expects to make his living on what he learned in school, he had better quit now. It is going to be what he learned after he graduates. I don't care whether he graduated from Harvard with a Ph.D. It is what he learned after he graduated, and that is true for each of our students in high school. Continuing education becomes equal in importance to primary and secondary education as a function of the schools.

9. Adult, vocational, and continuing education are the least structured part of our educational system. With less structure, greater changes can be proposed and more innovative programs developed with less resistance.

There are a number of things that can be done in occupational education to construct a more solid bridge between man and his work. However, as a starting point I would like to suggest just four:

First, the establishment of exploratory occupational programs in junior high schools. These programs could be developed as part of the industrial and home economics subjects which most children take while they are in junior high school. The idea would be to provide youngsters with all kinds of information on possibilities for future education and to broaden their occupational horizons and concepts about work. At this age students could be introduced to the many varieties of jobs that are available to them, what they pay, and what future they hold. There would be no attempt to force a vocational choice: the aim would be to provide for children a bridge from junior high school to high school vocational programs, college preparatory programs, or general programs. The aim would be to give them the information on which they can make a choice. Young people today have very little opportunity to learn about the different kinds of work that are available to them. Take the automobile field which runs from garage wash attendant to the engineer who designs automobiles. There is a wide variety of education required and a wide variety of work opportunities for almost everyone. We must provide this in our junior high schools because it is at this age that the one million and one quarter dropouts will occur in the schools in this country this year.

We need a wide work study program that would give many young people an opportunity for work experience and give the school an opportunity to give them a good grade and to give them employability skills, which they are going to need whether to become an atomic physicist or a bus driver. These These employability skills include the ability to be at the job on time. Now we lecture these kids about attendance pretty regularly, but have we ever given tham a pay-off if they were good on their attendance? Have we ever given them a mark which carried credit? It counts when they are on the job. We could have work study programs and cooperative education programs.

First, a rather lower level short-term kind of skill work experience or orientation work experience to give them experience at different kinds of jobs.

The second level would be general work experience which would be primarily to give them certain kinds of work skills, the kinds of employability skills that they need as well as job skills. This is not just for youngsters enrolled in vocational education, but for any youngsters enrolled in the schools.

The third level would be the direct vocational oriented work skill curriculums. The President, in his budget message, inducated that he felt that the neighborhood Youth Corps should be used in the high school as a work study program. I think it would be much better to make these programs educationally connected and educationally oriented and pay them for the work. This would also give them a purpose that is much higher than simply financial assistance so that he could work in some cases. The boy that would hope to become a M.D. could also work as an aide to the local veterinarian during the summer because he wanted to start learning about medicine, and he could earn some money and would be given a grade. Well, some argue that you are going to run into problems because you are going to take jobs away. Seventy per cent of the young people in this country today do work while they are in school. Yet, we have made no connection between relating the work experience they get to vocational objectives in occupational goals. Why should the boy that is working and hopes to become an M.D. not work during the summer for a vet, as I indicated, instead of with the local home builder because his father happens to know the local home builder?

Second, a nationwide work-study program that would give many young people still in school an opportunity for work experience. Few youngsters have the chance to obtain work experience in today's world. At the same time, it is obvious that much work needs to be done. Students could begin in much the same kind of programs as those offered in neighborhood Youth Corps--with the exception that related studies would be tied to the work experience, which in turn would become a regular part of the school program.

Schools should recognize the value of developing good work attitudes and habits which will stand their students in good stead in the future. They should give credit for work experience. It should become a part of the student's high school record, recognized in the same manner that work experience at the college level is recognized by business and industry.

Third, the establishment of an entry job placement system in the same manner that we now provide this for the college bound student. In spite of how we tend to believe all college bound students are really academically oriented and culturally a cut above the rest, the fact is that those going on to college do not rank academically in achievement much different than those who do not. In fact, the dropouts, as basic ability scores indicate, are not much different than those who stay in. What I am attempting to say is that we have got to try and match jobs with individuals. It is true most people are going to try to continue to learn. Who knows better how the young person, what he has learned, can be used most effectively on the job. Who knows more about the employability skills of that young man and

woman and the specific job skills of that young man or woman? Most college students do not take college preparatory courses because they think they are great and like them. Now, if the school was involved in entry job placement for all youngsters, they might be willing to try a little harder in math and science, and English as well, because there would be a pay-off--not some day, but right away.

A system of demonstration programs might be the best means of getting job placement accepted as part of the educational system. For instance, a school in each of the fifty states and territories might be selected as an "opportunity school" with a placement office and full-time placement officer. The placement office, in co-operation with other agencies, should survey job opportunities in the area, arrange interviews for students with prospective employers, and obtain jobs for its graduates.

Just as college-bound students in high school are told, "If you do well enough in school, we will get you into college," the job placement center would say, "If you do your best in school, we will get you a job."

To carry out its purpose, the placement center would need to maintain close relationships will all employers in the community who, in turn, would pledge themselves to co-operate with the school by employing its students part time in work experience programs and full time after graduation. Equally important would be to seek close working relationships with the State Employment Service, organized labor and business in the community, who also could help students get entry level jobs.

My personal experience in this field indicates that boty employers and labor people are anxious to co-operate. An important consideration in carrying out this program would be the attempt to match the entry job to the potential of the student. The school is the institution that has the most information on the student and is, therefore, in the best position to do the matching.

Fourth, construction of residential vocational schools. This idea is not new. Residential schools have been authorized under the Vocational Education Act of 1963, although funds for their construction have not been appropriated to date. But the concept of the residential school that I am suggesting is one geared primarily to the hard-core disadvantaged who would be given the opportunity to enroll at an early age--earlier than the minimum age level set for programs sponsored by the Office of Economic Opportunity and Skill Centers of the Manpower Development and Training Act.

In the urban and large metropolitan centers, children as young as eleven years of age could be enrolled in residential schools and taught general education skills as well as preparatory vocational skills. They could thus be helped before they become hardened in attitude and habit and inflexible in their approach to their own problems. Is this a job for the schools? Well, maybe it is. Maybe if we were successful, we could bring these young people back into our school system. I am concerned about developing a school system in this country which is segregated on the basis of family income and academic achievement. I think it would make our racially segregated school problem look small. You can take a look at our

Latin American countries where they have made decisions at an early age, that some children belong in this direction and some go in that direction. There is not the mode of stability and economic growth and tranquillity in these countries. I think it is the school system's job to serve all youngsters. It isn't the school's job to be judge, jury, prosecutor, and decide which ones stay and which ones leave.

If we accept the concept that flexibility and continued learning are going to be needed by every citizen in the future, then it is essential that we not only get our young people into our public educational system, but that we keep them there. Only in this way can they become effective throughout their adult lives. And, only in this way can we make education the bridge between man and his work. We in vocational education have more opportunity and more know-how, more opportunity to show the general educators how this can best be done than any single group in education.

May I hope that we become as successful as St. Patrick was in eliminating snakes--may we eliminate the misunderstanding that education is good for some but not for all. We must recognize that man's work is his most important product. Education must truly become the link between man and his work--for everyone.

* * *

COLOPHON

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Statistical Information on the Registration and Education of Professional and Practical Nurses.

Illinois State Dept. of Registration and Education, Springfield
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*ILLINOIS STATE DEPARTMENT OF REGISTRATION AND EDUCATION

In 1967 enrollment figures in nursing programs in Illinois were 117 for the four institutions offering master's programs, 1,521 for the nine baccalaureate programs, 5,760 for the 55 diploma programs, 721 for the 11 associate degree programs, and 2,994 for the 33 practical nursing programs. Associate degree nursing programs took the lead over other types for increase in enrollments, admissions, and graduations. Faculty in baccalaureate programs included 12 with doctoral degrees, 129 with master's degrees, and nine with baccalaureate degrees. Faculty in diploma programs included one with a doctoral degree, 143 with master's degrees, 433 with baccalaureate degrees, and 191 with no degrees. Faculty in associate degree programs included 45 with master's degrees and 7 with baccalaureate degrees. The report also presents information about exchange visitor programs and registered and practical nurse licensure. (JK)

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STATE OF ILLINOIS

DEPARTMENT OF REGISTRATION AND EDUCATION

John C. Watson, Director

STATISTICAL INFORMATION
on the
REGISTRATION AND EDUCATION
of
PROFESSIONAL AND PRACTICAL NURSES .

1967

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Coordinators of Nursing Education

STATE OF ILLINOIS

DEPARTMENT OF REGISTRATION AND EDUCATION

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THE DEPARTMENT OF REGISTRATION AND EDUCATION

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MASTER'S PROGRAMS 1967

Institutions of higher education conducting master's programs in nursing in Illinois during 1967 were DePaul and Loyola Universities, St. Xavier College and the University of Illinois Circle Campus.

Sixty-seven of the 117 students were enrolled in medical-surgical nursing, thirty-nine in psychiatric nursing and eleven in administration.

Each of the four institutions has plans for expansion of enrollments in the future. Plans also include expansion of courses to include other nursing areas as, for example, pediatric and obstetric nursing.

ASSOCIATE DEGREE NURSING PROGRAMS

Junior college nursing education took the lead over all other types of nursing education in the State in terms of increases in enrollments, admissions and graduations.

Admissions in ADN programs increased by 139% and diploma programs, for example, showed a decline of 19%. And, despite the fact that not all of the ADN schools graduated students in 1967, the number of graduations increased by 33% as compared with the 5% gain in the number graduated by the combined three types of programs.

All the while, too, faculties studied their curriculums and made changes to bring about improvements in an effort to meet challenges of an ever-changing society with its demands for more and better nursing.

BACCALAUREATE EDUCATION

Baccalaureate nursing programs in Illinois are similar to those throughout the United States in that they are conducted by both public and private senior colleges and universities. Three of the nine programs are located in private colleges, and two of the six universities operating nursing programs also conduct medical schools.

Baccalaureate programs have access to extensive and diverse clinical facilities for students laboratory experiences. The kind and numbers of each reported were:

General hospitals and clinics	26
Psychiatric hospitals and clinics	13
Nursing homes	1
Rehabilitation centers	4
Public health agencies	12
Children's hospital	1
Maternity center	1
TOTAL	58

In terms of collegiate nurse production, Illinois still has not compensated for its late start in this type of education. In fact, during 1967, it was necessary to curtail admissions because of lack of educational facilities. Consequently, schools reported a 19% decline in initial admissions. However, enrollments increased by 7% and graduations by 14.5 percent.

Nevertheless, there is justification for optimism. Monies have been granted for new facilities and construction already is in progress, and there is an increasing interest on the part of qualified candidates for collegiate nursing. Schools have made bold plans for the future, not only for baccalaureate education, but on through to doctoral programs in nursing.

Exchange-Visitor Nurse Program in Illinois

Currently, 1,150 foreign nurses are enrolled in the twenty-eight Illinois hospitals whose educational programs, which include cultural as well as nursing content, have been approved by the Department of Registration and Education. Countries represented in 1967 were:

Australia	India	Liberia
Ceylon	Iran	Nigeria
Denmark	Jamaica	Philippines
Guyana	Japan	South Africa
Haiti	Korea	Trinidad

The Exchange-Visitor Nurse Program in Illinois has been beset from the start, and continues to be, with problems stemming from: 1) lack of understanding of the purpose of the Mutual Educational and Cultural Act of 1961, 2) employment of trainees for staff nursing and 3) failure of many exchange-visitors to return to their native countries following the expiration of the two year period allotted to them in the United States.

Also, misunderstandings exist relative to the status of the exchange-visitor nurse who holds an Illinois registered nurse license. LICENSURE IN NO WAY CHANGES THE STATUS OF THE EXCHANGE-VISITOR NURSE. Only after the nurse has returned to her native country for at least a two-year stay is she eligible for immigrant status, and the practice of nursing for hire.

Nevertheless, there are encouraging signs. Directors of programs and instructors are gaining insight into exchange-visitor's educational needs and aspirations. Programs are being planned with the student, herself, participating. And, to an increasing degree, the goals of the Exchange Act are being attained.

DIPLOMA PROGRAMS IN NURSING

Of the fifty-eight (58) diploma schools which were in operation the first of the year, many made significant changes in their program, appreciably improving their curriculum. Three closed during the year, while seven did not admit students in September. Four of these will phase out during 1968, others in 1969. Four schools have reorganized to two-year programs; a total of six schools are now converted to this pattern. Many more have adjusted to the academic year, while others have set graduation and finishing date for June. This practice is affecting State Board Examination concentration, the majority of the candidates are now scheduled for June and July examinations, instead of September and October. The greatest number of registered nurses are still prepared in the diploma programs.

There is a trend to teach all clinical courses in the parent school, especially psychiatric nursing. In some instances the parent school provides the instructor while teaching the course in a co-operative agency. There is also evidence of a diminishing number of patients in the obstetric and pediatric departments which would indicate the need for careful utilization of clinical resources.

College and university courses are purchased by more schools, the teaching facilities of thirty (30) such institutions are used mainly for courses in biological and social sciences.

Fifty-four (54) cooperating agencies make their resources available. Of these 24 are hospitals, 10 are Convalescent Homes for the Aged, 20 are Nursery Schools. Two are public health agencies while two schools use industrial clinics for observation and/or experience.

According to the annual reports the schools have 768 faculty members, of which the following degrees are held: PHD 1, MS 143, BS 433. No degree (RN) 191.

This data in comparison with that of previous years indicates improved faculty preparation. Vacancies reported number 50 in all nurse teacher catagory. There is indication of greater stability than in former years.

A few schools reported increased enrollment. On the other hand, 1854 candidates graduated during the year, as compared with 1872 in 1966.

Several schools received NLN accreditation either initially or as a continuation. Some received HEW grant approval for new educational facilities or improvement of existing ones.

Another encouraging sign is that in some areas effort is being made at community planning for in-service education programs and better utilization of instructors. Video teaching has also gained wider acceptance.

PRACTICAL NURSE EDUCATION

The trend which began two years ago placing practical nurse programs under Community or Junior College administrative auspicies gained momentum in 1967. Six (6) schools transferred from high school districts, retaining terminal status for the programs. We now have eight (8) Junior College based schools. Sterling Township High School and Dixon State School of Practical Nursing combined to form Sauk Valley College Practical Nursing Program, Dixon, Illinois. Three new programs were established during the year with MDTA funds, one at Pekin, one in Cairo and one in Streator. One school, McAuley Mercy in Aurora, was closed. This gave a total of 33 schools for the year. The schools made use of the clinical resources of 85 general hospitals, 8 psychiatric hospitals, 6 nurseries, 2 public health agencies, 2 children's hospitals and 30 nursing homes.

These schools graduated 1354 nurses during the year. The enrollment was 2994, while 2083 students were admitted. Those who dropped out of the program numbered 525, which is a considerable decrease from the previous year. The faculties remained stable in these schools. There were 207 instructors, of whom 13 held master's degrees, 100 bachelor's and 94 had various preparation beyond the basic diploma program. Most of them qualified for the teacher certification in the public school systems. This would indicate that teachers in these programs are now better prepared than formerly. Only ten (10) vacancies were reported in faculty positions.

The licensed practical nurses fill a real need in their community; they are employed in various health agencies giving nursing care and in doctor's offices.

Waiver licensure was completed during the year. A total of 5430 applicants were thus licensed. Their employment status depends mostly on the employing agency, many of whom cannot place these "practical nurses" within the framework of their nursing care pattern.

DEPARTMENT OF REGISTRATION AND EDUCATION

TOTAL NUMBER
of
PROFESSIONAL NURSING EDUCATION PROGRAMS

Table 1
Number of Programs in Nursing Education by Type

Basic Nurse Education	1958	1960	1962	1964	1965	1966	1967	Percent Change
ASSOCIATE DEGREE	1	1	1	2	5	7	11	+57%
BACCALAUREATE	4	6	6	7	8	8	9	+12%
DIPLOMA	67	65	63	60	60	58	55	-5%
Total Number ALL PROGRAMS	72	72	70	69	73	73	75	+4%

New Associate Degree Programs admitting students during 1967 were:

Black Hawk College, Moline
Harper College, Elk Grove
Illinois Valley, La Salle
Rock Valley, Rockford

During 1967 the number of Community Colleges offering basic nursing education were increased to eleven (11).

Additional programs are being developed and it is anticipated that six (6) more will be admitting students in September, 1968, bringing the total to seventeen (17) schools.

Baccalaureate Degree Programs increased by one (1), at Nazarene College in Kankakee.

On the other hand diploma programs decreased. The three schools which closed were:

Dixon Public Hospital School of Nursing
St. Elizabeth Hospital School of Nursing, Danville
St. Mary's Hospital School of Nursing, Kankakee

DEPARTMENT OF REGISTRATION AND EDUCATION

Admissions - Enrollments - Graduation

Table 2
Admissions to Programs in Nursing by Types

Types of Programs	1958	1960	1962	1964	1965	1966	1967	Percent Change
Associate Degree	27	22	33	90	193	214	573	+139%
Baccalaureate	135	258	294	439	454	601	550	-19%
Diploma	2790	2869	2577	2537	2586	2527	2086	-17%
Total-all Schools	2952	3149	2904	3066	3213	3342	3209	- 7%

Table 3
Enrollment in Programs in Nursing by Types

Types of Program	1958	1960	1962	1964	1965	1966	1967	Percent Change
Associate Degree	27	53	56	112	264	373	721	+93%
Baccalaureate	322	537	795	1068	1208	1417	1521	+ 7%
Diploma	6733	6906	6879	6246	6604	6140	5760	- 6%
Total-all Schools	7082	7496	7730	7426	8076	7930	8002	+ 1%

Table 4
Graduates from Programs in Nursing by Types

Types of Program	1965	1966	1967	Percent change
Associate Degree	14	74	107	+33%
Baccalaureate	235	256	301	+14.5%
Diploma	2008	1872	1854	- 1%
Total-all Schools	2257	2157	2262	+ 5%

This data is from Registration and Education 1967 Annual Reports on School Statistics submitted to the Department by individual Nursing Programs.

DEPARTMENT OF REGISTRATION AND EDUCATION

TOTAL NUMBER

FACULTY PREPARATION AND LICENSURE

Table 5
Nurse Faculty Preparation

Type of Program	Vacancy	Doctorate	Masters	Bacca-laureate	No. Degree (R.N.)	Total Employed
Associate	12	-	45	7	-	52
Bacca-laureate	20	12	129	9	-	150
Diploma	50	1	143	433	191	768
Total	82	13	317	449	191	970

Table 6
Registered Nurses Licensed

Year	Renewed	Rein-stated	Endorse-ment 1*	Endorse-ment2**	Exami-nation	Total
1963	65,375	2,527	571	130	2,585	71,188
1964	67,175	1,305	1,293	278	2,046	72,097
1965	68,011	2,063	2,222	263	2,260	74,819
1966	61,829	1,430	1,153	339	2,068	66,819***
1967	59,415	1,726	1,185	694	2,499	65,519

1967 Inactive 12,750

* From other states
** From other countries
*** Does not include inactive status

Table 7

Practical Nurses Licensed

Year	Re-newed	Rein-stated	Endorse-ment *	En-dorse-ment***	Exami-nation	Waiver	Total	In-Active
1967	14,171	401	277	7	1,387	5,430	21,673	750

* From other States
** From other countries

REPORT OF THE INVESTIGATIVE UNIT
Violations of Nursing Act
JANUARY 1, to DECEMBER 31, 1967

PROFESSION-NURSE

Number of Inspections	53
Number of Assignments	67
Pending Complaints	6

NATURE OF COMPLAINT

Unlicensed	37
Drug Abuse	7
General Inspections	9
Impersonating L.P.N.	2
Possible Imposters	2
L.P.N. Impersonating R.N.	1
License Revoked in Another State	1
Failure to Record Narcotics	1
Criminal Charges	5
Unethical Conduct	2

DEPARTMENTAL HEARINGS

Formal Hearings	6
Restorations	2
Revoked	1
Dismissed	1
Pending	2
Citation Hearings	12
Informal Hearings	9

Marilyn J. Malone, R.N.

VT 002 393
Jordan, M.
Vision and Revision: Report of a Curriculum Revision Project in a Practical Nursing Program.

National League for Nursing, New York, N.Y. Dept. of Practical Nursing Programs
MF AVAILABLE IN VT-ERIC SET.
National League for Nursing, 10 Columbus Circle, New York, New York 10010 ($.50).
Pub Date - 66 13p.; Paper presented at the Council of Member Agencies of the Department of Practical Nursing Programs (San Francisco, California, May 4, 1965).

*HEALTH OCCUPATIONS EDUCATION; *PRACTICAL NURSING; *CURRICULUM DEVELOPMENT; PRACTICAL NURSES; BEHAVIORAL OBJECTIVES; CLINICAL EXPERIENCE

Faculty at Sacred Heart School of Practical Nursing in Milwaukee, Wisconsin, believe there is a difference between revision forced by outside pressures and the integral change stimulated by faculty involvements in projects such as their curriculum study. Six overlapping stages resulted in curriculum revision: (1) Education behavioral objectives were stated, (2) Learning experiences were identified which would provide opportunities for the student to meet nursing needs of patients in selected situations, to function in common types of health agencies, and to function as a progressing learner, (3) Types of situations in which essential learning experiences could be secured were identified, (4) From the situations selected, concepts and abilities basic to successful performance were abstracted, (5) The concepts and abilities were organized into broad areas, and (6) The group-related concepts and abilities were organized into courses. The resulting curriculum was a 1-year program organized into an introduction term, a first term, and a second term. Nursing as the central course was the guide for the arrangement of courses in physical health and disease, family development, and personal and vocational development. (JK)

VT 002 393

ED042060

VISION AND REVISION

REPORT OF A CURRICULUM REVISION PROJECT IN A PRACTICAL NURSING PROGRAM

by

Sister M. Jordan

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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NATIONAL LEAGUE FOR NURSING
Department of Practical Nursing Programs
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1966

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VT002393

Vision and revision. This title, applied to the subject of curriculum, indicates an order in which activities occur. It tells us that sight (or insight) precedes change or revision. This paper is a description of a curriculum revision project in a practical nursing program. It will indicate some of the pleasant and painful "visions" out of which change grew.

Aids to vision exist. What kind of lenses will give to faculty members the vision that leads to meaningful revision? There is no intent to be facetious in suggesting that regardless of age or preservation, bifocals are in order. We need aids for close vision and distant vision. We need to focus discerningly on every new idea or event that bears a relationship to nursing and education, to accept all valid advances in wisdom, and to detect weakness in the merely modish and novel. We need to focus on what the past has produced, neither condemning it nor enshrining it solely because it is old.

I know that sometimes I've been flustered when awful passé words like "training," "preclinical," and "nursing arts" have revealed the vintage of my vocabulary. My next reaction is to feel chagrined that such superficial and arbitrary standards are my indicators of progress or the lack of it. A little more reflection leads me back to the security of a more accurate, valid measure: Is there growth in understanding what we are attempting to do, and why we are trying to do it? The clearly perceived purpose provides direction and reason for change, and the outcome, whether expressed in Florence Nightingale's quaint English or 21st-century idiom, has a better than average chance of being an improvement. Faith in our efforts grows with this honest approach. The matches can be put away; we do not have to set fire to every bridge behind us. "Bifocal vision"--the ability to see what has been, what is now, and what can be--stimulates creativity and innovations, while giving to change the character of a rational, orderly, progressively constructive phenomenon.

Sacred Heart School of Practical Nursing, our TRAINING program, was established in 1955. We followed a curriculum pattern typical of that time with a four-month PRECLINICAL period consisting mostly of theory and an eight-month clinical period with nearly all time spent in nursing practice. Experiences in medical, surgical, maternity, pediatric, and psychiatric nursing were included. And yes, we did teach NURSING ARTS, together with 12 other units of instruction.

If you have been involved in setting up a program, you will know that the first few years are so full of the blissful busyness of getting established that there is little time for scrutiny of results. Eventually, instructors do get to see the tops of their desks, courses and nursing experiences are quite well planned, routines flow smoothly; this is the logical time for the honeymoon period to end. Comments indicating that this crucial stage had been reached begin to appear in faculty meeting minutes of 1959, apparently caused by and propagated by improving vision. For example:

> Theory and practice are too far removed.
>
> There are too many short, apparently unrelated courses.
>
> There is no clear way of determining content that should be included to prepare nurses at the vocational level.

Sister M. Jordan, O.S.F., R.N., is director of Sacred Heart School of Practical Nursing, Milwaukee, Wisconsin. This paper was presented at the program meeting of the Council of Member Agencies of the Department of Practical Nursing Programs held on May 4, 1965, at San Francisco, California.

More light came from Dorothea Orem's Guides.[1] (Incidentally, much of what follows has take-off points in an application or a misapplication of Orem; my initials, O.S.F. (Order of St. Francis), took on new meaning--Orem's Staunch Follower.) We were ready to accept as a personal battle cry the following paragraph in the introduction to Curriculum Development in Practical Nurse Education.

> . . . there is a great deal of discontent, but the greatest deterrent lies in the fact that the past experiences of many of the instructors presently employed in practical nurse education does not give them the VISION to see what and how the situation could be bettered. Curriculum builders in practical nursing can no longer engage in "curriculum tinkering" or mere rearranging of their present curriculum content. A brand new era in practical nurse education is emerging when bold, pioneering spirits are needed, nurse educators with the VISION to see the place of the practical nurse in the total field of nursing and recognize the potentials and capabilities of the students for the kind of education needed to prepare them to assume their proper role.[2]

As background for placing in context some of the details that follow, here are vital statistics of the program as it operates now. The school is incorporated as an independent educational unit operated by the religious community of the School Sisters of St. Francis. The program is 12 months in length. Cooperating agencies for student experience include a nursing home (170 beds), a sanitarium for medical and convalescent patients (200 beds), a general hospital (300 beds), and a psychiatric hospital (100 beds). Classes of 50 students are admitted twice a year. There are seven full-time faculty members. School personnel serve as instructors in all cooperating agencies. The program begins with a six-week introductory term averaging 20 hours of class per week. This is followed by the first and second terms, 24 and 21 weeks respectively, during which students carry 10-12 hours of class per week and 16-18 hours of nursing laboratory experience. The total cost to the student is approximately $500; students do not receive a stipend of any sort.

The process of curriculum development takes a recognizable direction, but there is no neat completion of one stage before proceeding to the next. To establish order in presentation, the stages in curriculum planning of Guides (modified Orem) will be used (Diagram 1).

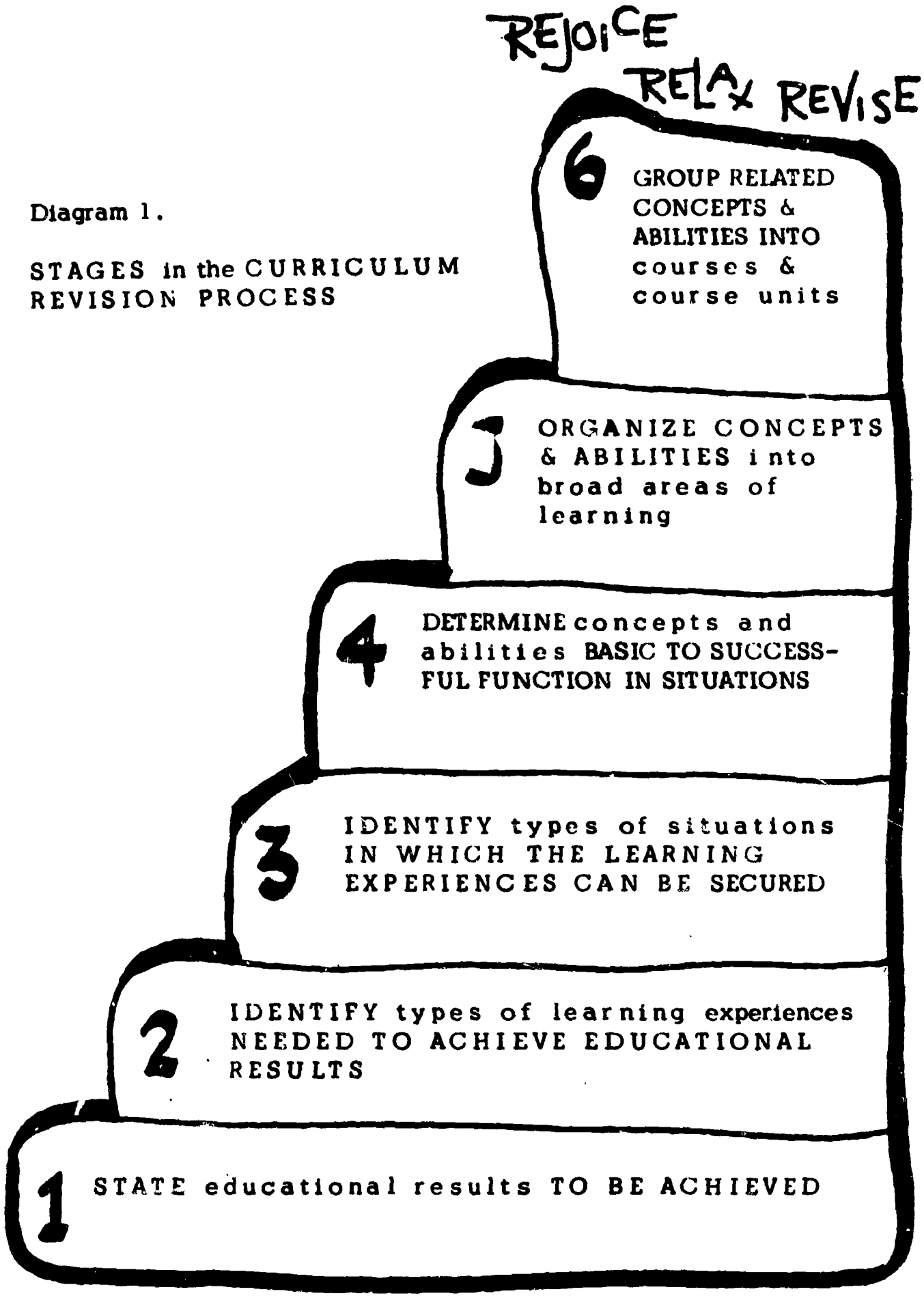
Stage 1. Identify Educational Results to be Achieved

Creativity in curriculum design is much to be desired, but this creativity is concerned with the variety of ways to reach a predetermined goal. It cannot be the creativity of the child working with crayons and paper who responds to the question "What are you making?" with "How can I know? It's not made yet." We must know what we are making.

Our initial move was an attempt to sharpen and make more exact (probably more honest) the description of the graduate of our program in terms of behavioral changes. It is quite an experience to discover that with a file folder stuffed with statements of philosophy, with objectives and subobjectives for the program, for each course, for each unit, for each lesson, one can still have very hazy ideas about the desired outcome in the graduate of the program. We took our nebulous, indefinite, perhaps

Diagram 1.

STAGES in the CURRICULUM REVISION PROCESS



flowery and idealistic description of the abilities of the graduate, flooded it with the strong light of more realistically and vibrantly stated faculty philosophy and aims, placed on it the spotlight of the profession's statement of the two roles of the LPN, and from this illumination "saw" a sharper outline of the desired resulting product.

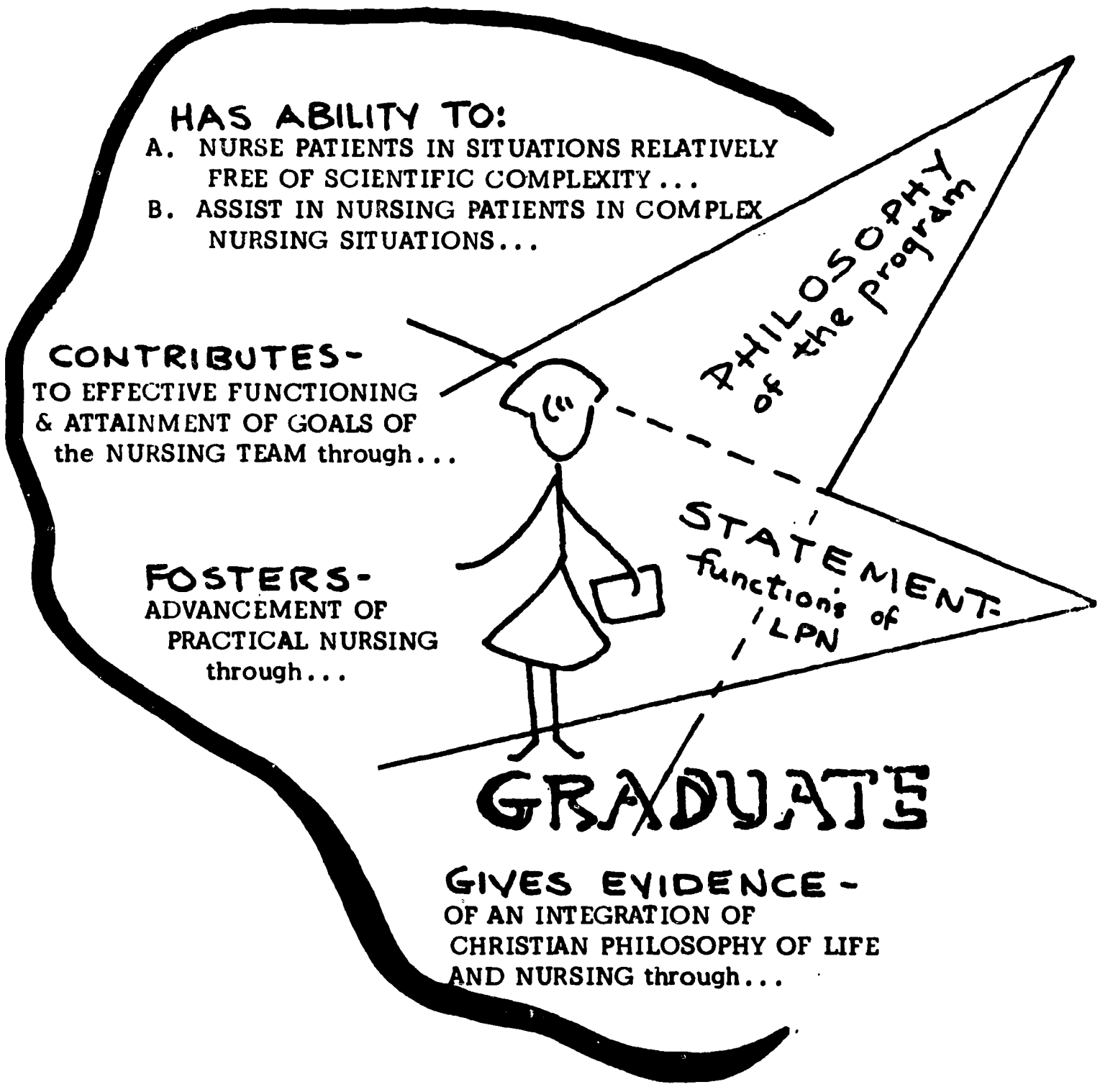


Diagram 2. DESCRIPTION OF GRADUATE OF THE PROGRAM IN TERMS OF BEHAVIORAL CHANGE

Stage 2. Identify Types of Learning Experiences Necessary to Achieve Educational Results

For us, this was like the search for the unknown in an algebra equation. Given a student who meets admission standards and a graduate with identified abilities, find the missing middle--essential learning experiences to bring about the change. (Diagram 3.)

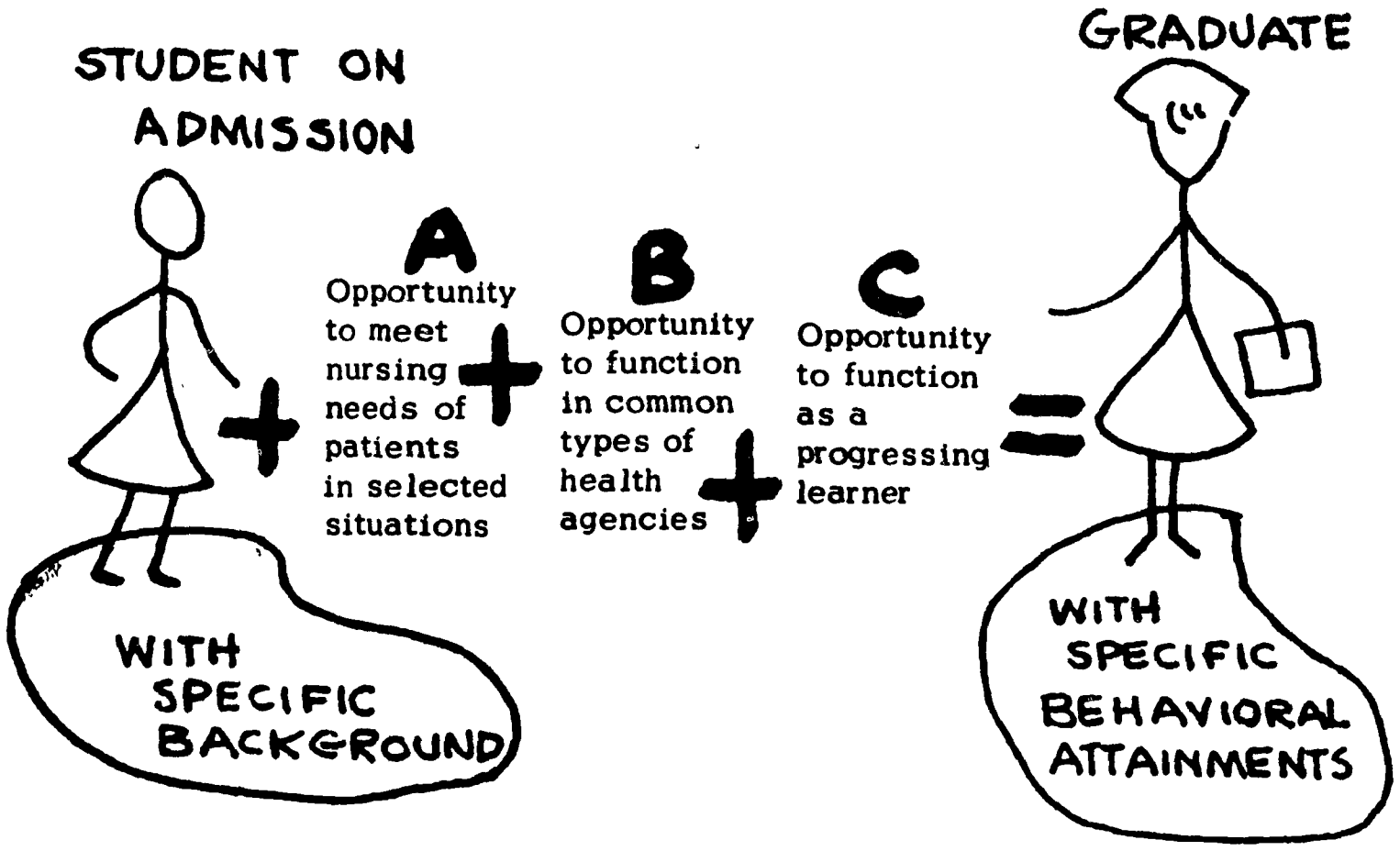


Diagram 3. IDENTIFICATION OF ESSENTIAL LEARNING EXPERIENCES

The solution of the problem: Learning experiences in three areas must be provided. Students require opportunity:

A. TO MEET NURSING NEEDS OF PATIENTS IN SELECTED SITUATIONS.
   Broken down further, this means learning to meet needs of patients with common health problems, of men and women, of patients with varying degrees of dependency, of patients in all age groups.

B. TO FUNCTION IN COMMON TYPES OF HEALTH AGENCIES.
   Settings in which graduates are expected to function must be taken into consideration in the preparation of the student.

C. TO FUNCTION AS A PROGRESSING LEARNER.
   The changing status of the student must be taken into account. It must be possible for her to function at a level that corresponds with her progress in the program.

Stage 3. Identify Types of Situations in Which Essential Learning Experiences Can Be Secured

What combination of patient situations will provide learning experiences classified as essential in stage 2? The search was not for clinical entities, but for situations the nature of which always or very frequently creates types of nursing problems. The following were selected because (1) they were implicit providers of the essential learning situations and (2) they were available to us in the types of agencies indicated on the diagram (Diagram 4.)

THE CORE OF ALL PATIENT SITUATIONS: The patient is a person, a family member, and a member of the community	The patient is a middle-aged or aged adult with chronic medical illness and/or malfunctioning of the aged. (Sanitarium and nursing home.)
	The patient is an adult who is emotionally disturbed. (Psychiatric hospital.)
	The patient is an adult being prepared for or recovering from major surgery on other than vital organs. (General hospital.)
	The patient requires care during labor, delivery, and postpartum period. The patient is a newborn. (General hospital.)
	The patient is a child with common childhood disease, condition requiring surgery, or has had an accidental injury. (General hospital.)

Next, we looked at these situations as they enter into an educational program as learning experiences; we introduced the dimension student in nursing. These patient situations could become learning experiences for the student only when used with sensitivity to the implications of the student situation, since the basic parts of the curriculum must be related to the student who pursues it.

THE CORE OF THE STUDENT SITUATION: The student is a person, a family member, and a member of the community	The student is enrolled at ... School of Practical Nursing.
	The student is a beginning learner, or a progressing learner, or an advanced learner.

Stage 4. Abstract From These Situations, Concepts, and Abilities, Basic to Successful Functioning in the Situation

This is the analysis process described in Orem and in the report of the NLN workshops, but each group working with this will make modifications in accord with their approaches, their goals, and the circumstances in which they function. Diagram 4 shows schematically the way in which we used the analysis procedure.

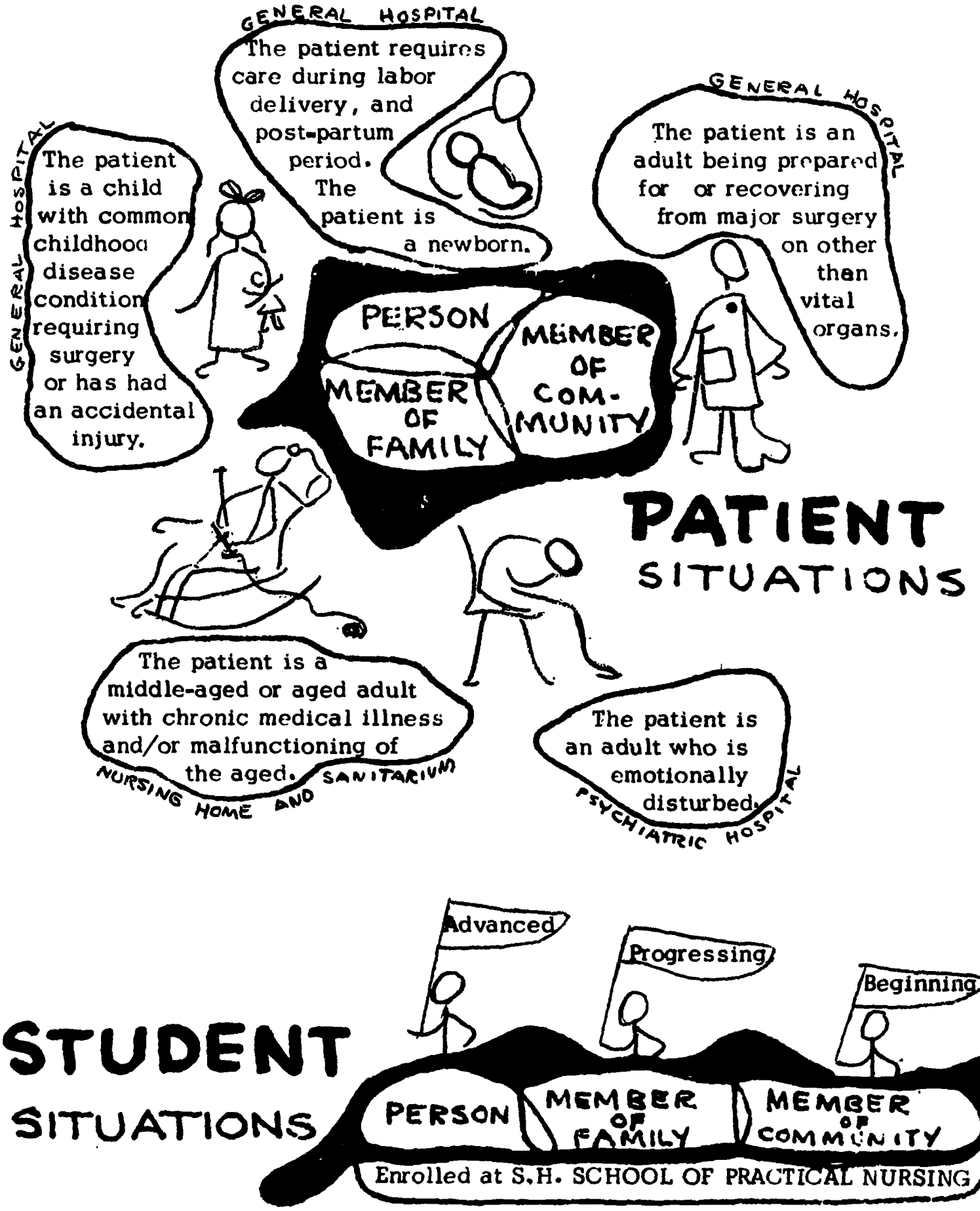


Diagram 4. SITUATIONS IN WHICH ESSENTIAL LEARNING CAN BE SECURED

Analysis of Patient and Student Situations:

1. List the facets of the patient and student situations.
2. For each one, determine the concepts and the abilities needed by the nurse to function in the situation. These concepts and abilities will range from the very simple to the complex; no attempt is made to categorize them at this time.

BASIC TYPES OF SITUATIONS	CONCEPTS AND ABILITIES NEEDED BY THE NURSE
THE PATIENT-	
a person, member of family, member of community	
-is a middle-aged or aged adult with chronic medical illness and/or malfunctioning of the aged.	
-is an adult who is emotionally disturbed.	
-is an adult being prepared for, or recovering from major surgery.	
-is a child with common childhood disease.	
-is a mother who requires care during labor, delivery, and post-partum period.	
-is a newborn.	
THE STUDENT-	
a person, member of family, member of community	
-is enrolled at SH School of Practical Nursing	
-is a beginning, progressing, or advanced learner	

(1 + *) Concepts and abilities with low, intermediate, and high degrees of complexity.

Diagram 5. PROCEDURE FOR ANALYSIS OF PATIENT AND STUDENT SITUATIONS

Stage 5. Organize the Concepts and the Abilities Into Broad Areas

The need to reduce anxiety by organizing and arranging whatever happens to be available for organization and arrangement--a strong tendency credited to nurses and teachers--came to the rescue in one of its more constructive aspects. We set about to organize.

There are rules about the organization process and criteria to be followed. These will not be included in this paper but are mentioned to obviate the possibility that the grouping that is shown will be credited to woman's intuition or the German hausfrau complex. What emerged in our particular setting was a trilevel piece of architecture structured to meet needs of its occupants (students and instructors) and to allow for their growth and development. Diagram 6 shows the focus of broad areas of learning and the assignment of concepts and abilities according to complexity.

AREA	ONE	TWO	THREE
FOCUS learning to meet-	-nursing problems common to most patients in simple nursing situations	-nursing problems of the patient who has a chronic medical disease &/or malfunctioning of the aged, and of the patient who is emotionally disturbed. (Middle-aged & aged)	-nursing problems of the patient resulting from surgery or delivery or injury due to accident. (Young adult, adolescent, child, infant)
CONCEPTS & ABILITIES to be included	| | | | | | | | |	+ + + + + +	* * * * * *

Diagram 6. ORGANIZATION OF CONCEPTS & ABILITIES INTO BROAD AREAS OF LEARNING

Stage 6. Group Related Concepts and Abilities Into Courses and Course Units

This stage brings together related concepts and abilities in ways that can be understood by students. It is the answer to the first loud wail of the newborn instructor, "What will I teach?"

Of the many ways in which the process can be accomplished, our idea was to use the nursing problems course as a central theme and to group scientific facts and concepts basic to nursing action in relation to the problem being studied. As we looked over the concepts and the abilities that had become our curriculum content, four categories seemed plausible. These categories are shown here together with the titles chosen to distinguish them as courses.

1. Concepts and abilities directly necessary to meet nursing problems in selected patient situations--NURSING.
2. Physical science concepts necessary to understand why nursing measures are required and why they are effective in the patient situations included in the nursing course--PHYSICAL HEALTH AND DISEASE.
3. Behavioral science concepts necessary to understand how to modify nursing care in accord with the psychological development of the patient and his role as a family and a community member--FAMILY DEVELOPMENT THROUGH THE LIFE SPAN.
4. Concepts and abilities necessary to function as a learner in this program and later as a practitioner in the occupation of nursing--PERSONAL AND VOCATIONAL DEVELOPMENT.

Coding was used to group similar concepts and abilities in the appropriate category.

COURSE TITLES	CODE	CONTENT OF COURSES
NURSING	○	⊙ ⊙ ⊕ ⊕ ✳ ✳
PHYSICAL HEALTH AND DISEASE	△	◮ ◭ ◭ ◈ ✳ ✳
FAMILY DEVELOPMENT THROUGH THE LIFE SPAN	□	▣ ▣ ⊞ ⊞ ✳ ✳
PERSONAL AND VOCATIONAL DEVELOPMENT	◻	◻ ◻ ◻ ◻ ✳ ✳

Diagram 7. CODING OF CONCEPTS & ABILITIES FOR ASSIGNMENT INTO COURSES

There is nothing extremely original in these classifications; you will recognize them as variations of a melody you have heard before. However, it is one thing to appreciate the theme as rendered by the experts and quite another to play it as a faculty group working with home-town talent. There is a new involvement in discovering these areas as valid divisions, corresponding to the reality of the situation as you see it. It is probably this involvement that makes the difference between the paper-and-pencil revision forced by outside pressures and the integral change stimulated by insights that slowly, sometimes painfully, but surely penetrate all areas of the curriculum. It is fine to hear the experts--I believe we should use all outside resources available--but part of this process remains a "go out to the desert and see for yourself" affair.

Diagram 8. PLAN OF THE PROGRAM

FOCUS OF TERM — Learning to meet nursing problems -		TIME IN WKS.	LEARNING EXPERIENCES — NURSING: Course Units	Patient Situations	Lab. Hrs. per Wk.	PHD*	DLS*	PVD*
Introductory Term	-common to most patients in simple nursing situations	3	1					
		3	2 3	Adult with need for personal health care	4			
First Term	-of the patient who has a chronic medical disease &/or malfunctioning of the aged, and of the patient who is emotionally disturbed (Middle-aged and aged adult)	8		Medical long-term adult patients	14-16			
		8		Chronically ill and aged adult patients				
		8	4	Emotionally ill adult patients				
		1						
Second Term	-of the patient resulting from surgery or delivery or injury due to accident (Young adult, adolescent, child, infant)	7		Mothers and newborn	18			
		6	5 6	Children				
		6		Surgical adult patients				
		2		Orientation to role as graduate practical nurse	28			
T O T A L S		52	370		800	120	56	80

*Abbreviations: Physical Health and Disease, Family Development Through the Life Span, Personal and Vocational Development.

Since the nursing course is our central course, the units in this course were set up first; these became the guide for units in the other courses, since they provide for the nursing course the background necessary to understand the nursing problem being studied.

UNIT

1. The patient requires assistance in meeting personal care needs.
2. The patient is a middle-aged or aged adult with chronic medical illness.
3. The patient is an adult with emotional disturbance.
4. The patient is an adult being prepared for or recovering from major surgery.
   - -is a mother requiring care during labor, delivery, and postpartum period.
   - -is a newborn.
   - -is a child.
5. The patient is in a disaster nursing situation.
6. Summary of nursing problems.

The objectives of nursing assignments in cooperating agencies correspond to nursing units being taught at the time. An example may clarify this point. Beginning with the first term, groups of students are assigned to nursing experience in a nursing home, a sanitarium, and a psychiatric hospital. During this time, the unit on problems resulting from emotional reactions and disturbances is studied. The subject is presented in such a way that students in each area can contribute examples from patients in their care, and subsequent discussions are directed to emphasize problems common to many patients of different ages and the unique problems in special circumstances, and at different levels. A result of basing content on the analysis of patient and student situations is the gradual unfolding of various aspects of a particular subject over almost the entire year.

Changes in the curriculum effected in our program during the past two years have been described in this paper. Much time and effort have gone into planning the changes, and there is some evidence that it represents improvement. However, day-by-day evaluation and the review of the subject in preparing this paper made us aware that as the process begins with vision and revision, it repeats itself in a continuing cycle of better vision and revision of the revision.

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2. United States Office of Education. Curriculum Development in Practical Nurse Education. Washington, D.C.: U.S. Government Printing Office, 1961.

VT 002 428
1967--Year of Decision (5th Annual Report).

National Council for Homemaker Services, Inc., New York, N.Y.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 12p.

*OCCUPATIONAL HOME ECONOMICS; HEALTH OCCUPATIONS; VISITING HOMEMAKERS; COMPANIONS (OCCUPATION); PUBLIC RELATIONS; *PROFESSIONAL ASSOCIATIONS; *PROGRAM DESCRIPTIONS; *ANNUAL REPORTS; COMMUNITY SERVICES; *NATIONAL ORGANIZATIONS
*NATIONAL COUNCIL FOR HOMEMAKER SERVICES, INC.; NEW YORK, N.Y.

This bulletin describes the activities of the National Council for Homemaker Service during 1967. Some 400 volunteers and professional workers in the field of homemaker-home health aide service came from 34 states Canada, and Puerto Rico to attend the first National Council of Homemaking Service Forum held in May. In the plenary sessions and workshops major attention was focused on the impact of Medicare and Medicaid, the health insurance programs created by the Federal legislation in 1965. Two high priority needs in the field were met by the council's publication in the late summer of the "Directory of Homemaker-Home Health Aide Services, 1966 to 1967" and in the fall of "Homemaker-Home Health Aides-Training Manual" designed to aid those responsible for training homemaker home health aides. Work began in the summer on preparation of a teacher's resource book and a comprehensive reference book. The organizational structure was revamped, new criteria for membership and a new scale of dues was developed. Throughout the year, the council received growing numbers of requests for direct help from serving agencies service and community groups planning to establish the service which was provided through correspondence, conferences, and personal visits. A publicity kit, a newsletter, NEWS, and the homemaker home health aide bulletin published cooperatively with the American Medical Association promoted public relations. It is predicted that by 1975 the health industry will be the largest in the United States. Thus, health service agencies must accelerate their effort and productive activity. (FP)

VT 002 428

ED042060

(C1)

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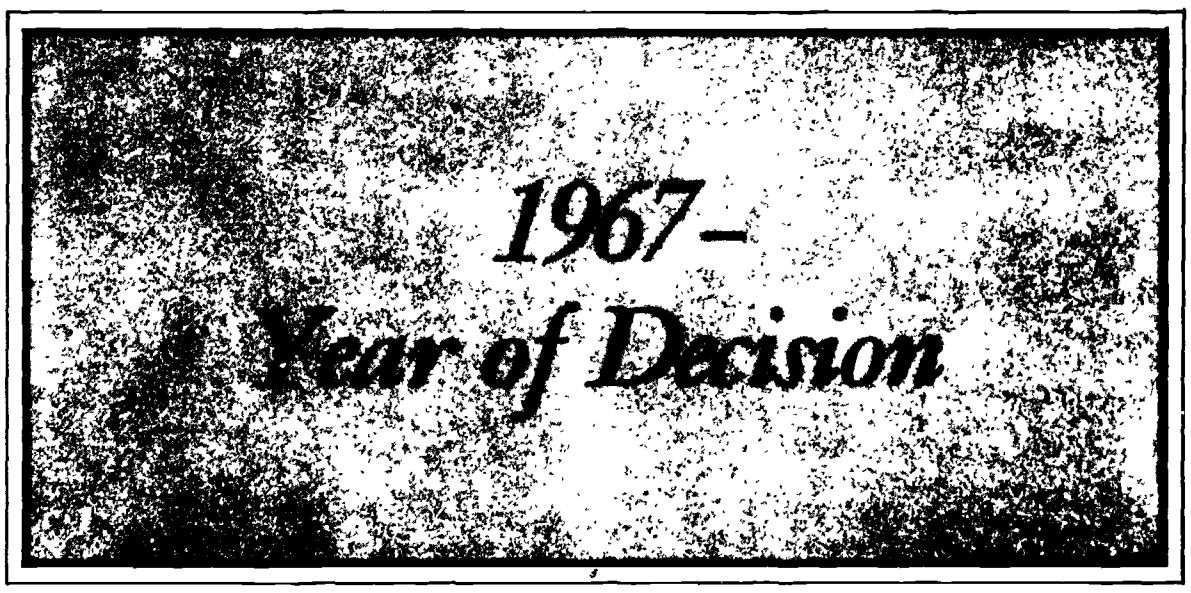

5th Annual Report

VT002428

NCHS

National Council for Homemaker Services, Inc.

From the President . . .

For the Council, 1967 was a year of review, assessment and production . . . it was a year of decision.

Late in 1967 the Council embarked on the last year of a five-year demonstration period. It was appropriate at that time for its accomplishments and program to be reviewed and its future course charted.

Had the organization's services to the field been effective — should they be continued, terminated, or taken over by other national agencies?

To assess its program, the Council called together on December 13th representatives of the 29 voluntary national health and welfare organizations and the governmental bureaus which had initially endorsed the formation of NCHS for the stipulated five-year term. To this group the Council reported its activities and achievements to date. From the group NCHS received an evaluation of its program.

Individual opinions regarding various aspects of the program were freely expressed. There was complete agreement that the Council was urgently needed as a central source of information and that its leadership in all areas should be continued. It was pointed out that homemaker-home health aide service is growing rapidly in both the welfare and the health fields and that NCHS was established to act as liaison between the two. It was also noted that homemaker-home health aide service across the country looks to the Council for development of standards, for assistance in implementing those standards, and for help in expanding the service to meet the rapidly growing demands.

The group voted that the Council should be continued; it endorsed the NCHS program and pledged cooperation, in every way possible, including promotion of financial support for its on-going operations.

Strengthened by the decision of its founders, NCHS ended the year with new resolve to expand its services to the field so as to assist communities in providing homemaker-home health aide service of the highest quality for all who need it.

The Council expresses warm appreciation to all individuals, agencies, organizations, foundations, business and industrial firms which have contributed support to its program. This report is an accounting to them of its stewardship during 1967.

Betty S Trippe

MRS. JUAN T. TRIPPE

1967– Year of Decision

The year 1967 was the most productive 12-month period in the Council's brief history.

Aware of the need for communication throughout the broad field of homemaker-home health aide service, the Council sponsored a two-day Forum in May, held in conjunction with its fourth Annual Meeting. The Forum brought together, for the first time since 1964, board and staff members of agencies providing the service locally and gave them an opportunity to exchange ideas and information, and to discuss and seek solutions for problems common to all.

As the field continued to expand in response to growing demands for service, the Council's activities became increasingly significant. Because the service was provided by both health and social welfare agencies, public and voluntary, and because it was being used to meet so many different human needs, the leadership of a national coordinating body proved its value. If the Council had not already been in existence, a comparable organization would have had to be established.

During the year, NCHS initiated plans for a second Forum, produced several publications of major importance, re-structured its own membership policies, extended consultation to the field, and accelerated its cooperative activities with other national organizations. A number of new projects were launched and became important "firsts"; other projects, started prior to 1967, were completed.

First Forum Hailed with Enthusiasm

Some 400 volunteer and professional workers in the field of homemaker-home health aide service came from 34 states, Canada and Puerto Rico to attend the first NCHS Forum.

In plenary sessions and workshops, major attention was focused on the impact of Medicare and Medicaid, the health insurance programs created by Federal legislation in 1965. Although discussion centered on how agencies might respond effectively to accelerating demands for service in the health field and how these increased services might be financed, serious consideration was given to strengthening the traditional use of the service and initiating new

Some of the 400 volunteer and professional workers who attended the Council's first Forum in May are shown here at one of the two-day sessions.

uses. Improved methods of staffing, recruiting, training, and keeping the service unified were also carefully explored.

It became apparent, during the two-day sessions, that the Council did indeed reflect the vision and thinking of the broad field in which homemaker-home health aide service was growing so rapidly out of adolescence and facing the complex problems that accompany maturity.

In planning and conducting the Forum, the Council was assisted by the American Medical Association and the American Hospital Association; the Metropolitan Life Insurance Company, The Equitable Life Assurance Society of the United States and several individuals made financial contributions in support of the national meeting.

At the close of the sessions, participants agreed there was urgent need to explore further many of the matters that deeply concerned them, and that the Council should convene a follow-up national conference.

Two Major Projects Completed

Two high priority needs in the field were met by the Council's publication in late summer of the *Directory of Homemaker-Home Health Aide Services, 1966-67;* and in the fall of *Homemaker-Home Health Aides — Training Manual* designed for those responsible for training homemaker-home health aides.

The *Directory* lists some 800 homemaker-home health aide services in the United States and Canada, with pertinent facts about each. Information for the *Directory* was gathered and organized, in a joint project, by the Council and the Bureau of Family Services of the Welfare Administration, U.S. Department of Health, Education and Welfare. The Bureau of Family Services provided staff to collect and tabulate the data and the Council was responsible for publishing the *Directory*.

The *Training Manual,* both a working tool and a resource guide for those training homemaker-home health aides, was developed and written by the Council, under a contract with the Office of Education, U.S. Department of Health, Education and Welfare. It is the first such training guide to be developed and published for distribution on a national basis. It includes ten units of instruction which are presented in detail and may be easily adapted to meet local needs. Each unit is basic and essential in the training of homemaker-home health aides, whether they are employed by a health or a social welfare agency.

New Project Launched

Work began in the summer on preparation of a teacher's resource book and a comprehensive reference book. Both publications will be "firsts" in the homemaker-home health aide field.

The resource book includes teaching materials especially written or culled from articles now available and is designed for use in schools of social work (graduate and undergraduate), collegiate schools of nursing, schools of public health, and agencies which provide in-service staff training.

The reference book, intended for public, school and personal libraries, will be a compilation of carefully selected writings which have been published over the years, along with articles especially written for this publication by authorities in the field. These will present a clear and comprehensive picture of homemaker-home health aide service.

It is anticipated that both books, financed by a grant from the Lois and Samuel Silberman Foundation, will be published in 1968.

Pattern of Membership Is Changed

During the year the Council, recognizing the need to work toward uniform standards in the field, turned its attention to establishing requirements for membership. Criteria for membership were formulated, with a new scale of annual dues and a revised schedule of dues payment.

Under the new plan, membership in the Council will extend from January 1 to December 31 and all dues will be payable in January of each

year. This new policy pertains to all categories of membership — active, sponsoring and individual. As of January 1, 1968 the amount of dues paid by an agency providing the service is based on the number of homemaker-home health aides employed on its staff.

Detailed information regarding the new policies of NCHS membership was published in a leaflet titled "Benefits for You," and this leaflet was mailed late in the year to all known agencies in the United States that were providing the service. This invitation to membership was extended in the belief that affiliation with the Council would enhance an agency's ability to participate in development of the field.

In 1967 the Council had 453 members, including 236 agencies, 20 organizations, and 197 individuals. Membership dues for the year amounted to more than one-third of the general administration budget.

Requests for Direct Help Increase

Throughout the year, the Council received increasing numbers of requests for direct help. They came from agencies providing homemaker-home health aide service, as well as community groups planning to establish the service. NCHS gave assistance through correspondence, conferences held in the Council office, and personal visits to local communities.

Because there is a homemaker-home health aide to take care of these children while their mother is hospitalized, they are able to stay together in their own home.

The Council provided information on matters ranging from how to establish or expand an agency and draw up appropriate personnel policies, to procedures to follow in setting up a budget or conducting a study. Consultation is a two-way activity; it enables NCHS to identify trends and major developments — and to pass along this information to communities across the country.

In conjunction with its consultation service, the Council made available to the field materials from its reference library.

NCHS published during the year certain materials needed by local agencies. Among these was a kit, designed to help groups planning to establish a homemaker-home health aide service, produced through the cooperative efforts of the Council, the American Medical Association and the Woman's Auxiliary to the AMA.

The Council continued to make a concerted effort to keep the service unified. Through consultation, it promoted the cooperative efforts of community agencies which must work together if the most effective homemaker-home health aide service is to be provided. NCHS assisted also in establishing councils for the service in a number of states.

The Council sponsored or co-sponsored three sessions on homemaker-home health aide service at the 1967 National Conference on Social Welfare in Dallas, Tex. The role of the service in home care programs was examined in the session co-sponsored by NCHS, the American Medical Association and the American Hospital Association; potentials of a centralized community homemaker service were discussed in the Council's own session. Attention was focused on the use of the service in rehabilitation of the handicapped in the session co-sponsored by the Council and United Cerebral Palsy Associations. Papers presented at the meetings were published during the year and made available to the field.

Workshops and conferences in which the Council participated included a workshop for 32 state homemaker service specialists, sponsored by the Social and Rehabilitation Service, U.S. Department of Health, Education and Welfare, in Washington, D.C. in November. The following month, NCHS played a role in the American Cancer Society's national staff conference, participated in the southern regional conference of the National Council on the Aging, and met with the local Council on Aging in New Orleans.

To Keep Everyone Informed

Interpreting homemaker-home health aide service is a multi-faceted task for the Council. How well the service meets the need in a local community depends, in large measure, on the community's recognition of both the need for and value of the service. The Council is committed, therefore, to assist local agencies in telling the story of the service to all residents of the community. To meet this commitment, NCHS produced in 1967, for the first time, a Publicity Kit designed for use in local communities. The Kit includes sample news stories, editorials, a woman's page feature story for local newspapers; radio spot announcements for recruitment and interpretation, a radio interview; and a sample speech. The Council also produced and made available

These are some of the professional publications in the health and welfare field that carried publicity about NCHS during the year.

to the field a Fact Sheet which presents a brief, clear description of the service, the homemaker-home health aide, and NCHS.

To keep the field informed of developments and trends related to the service, the Council published its newsletter, *NEWS,* five times during the year. The publication serves as a medium for the exchange of information about activities of local agencies.

The Council continued to share responsibility for content of *Homemaker-Home Health Aide Bulletin,* published cooperatively by the American Medical Association and NCHS, and distributed to some 7,000 readers six times annually. The *Bulletin* carries information for up-dating agency listings in the *Directory of Homemaker-Home Health Aide Services, 1966-67.*

The Council enlisted the cooperation of four national health agencies to produce "Help at Home — in Personal Care and Rehabilitation," a new kind of interpretive leaflet designed to promote use of the service in local communities. NCHS provided general information about the service, and each agency in its own leaflet supplied facts about use of the service for patients who are its special concern.

At year's end, the leaflet was on the press. Distribution by NCHS and the other national agencies was planned for early 1968. Participating in this

project were the National Association for Mental Health, National Association for Retarded Children, National Multiple Sclerosis Society and United Cerebral Palsy Associations. The Council will use its version of the leaflet to promote the availability and use of homemaker-home health aide service in local communities.

A Matter of Money

In recognition of expanding needs which call for increased services, the Council Board approved a budget of $89,690 for 1967. The total amount was expended for program activities during the year.

The Council appreciates the generous contributions received during the year from the American Contract Bridge League; the Avalon, Ireland, Ittleson, Louise, Nash, and New York Foundations, and the Lois and Samuel Silberman Fund, as well as from Federated Department Stores and U.S. Steel Foundation, Blue Cross Association, International Business Machines Corporation, Metropolitan Life Insurance Company, The Equitable Life Assurance Society of the United States, and Standard Oil Company of New Jersey. Support from these various sources, from member agencies, sponsoring organizations, and from individuals enabled the Council to broaden its program in 1967.

A Brief Look Ahead

During the five years the Council has been in operation, the homemaker-home health aide field has been developing so rapidly — volunteer and professional workers have been running so fast, in an attempt to catch up with the demand for service — that there has been little or no time for thoughtful planning for the future. There is ample evidence that the field will continue to function on this kind of "emergency" basis for some time to come.

The fact that only about 11,000 homemaker-home health aides are employed today in the United States, against the estimated need for 200,000 such workers, is a measure of the distance the field must travel in the years ahead.

Steps must be taken to insure that homemaker-home health aide service, as an integral part of home care, is built into the comprehensive health plans now on the drawing board. It will follow that, when those plans become programs, provision will have been made for offering the service.

To spearhead the development of new services and the expansion of existing services, NCHS will continue to provide assistance to increase the number of newly emerging state councils for homemaker-home health aide service.

It is anticipated that, as the service grows, the training of homemaker-home health aides will become the responsibility of established educational institutions. Pioneering efforts which have been made in this area have proved to be effective.

It is predicted that by 1975 the health industry will be the largest in the United States. This means that the Council, as well as every other group that has responsibility for providing health services, faces a long period of accelerated effort and productive activity.

National Council for Homemaker Services, Inc.

BALANCE SHEET — DECEMBER 31, 1967

ASSETS

Current Funds:		
Unrestricted:		
Cash	$ 31,204.	
Prepaid expenses	95.	
Equipment at nominal amount	1.	
Total Unrestricted		$ 31,300.
Restricted:		
Cash		3,332.
TOTAL ASSETS		$ 34,632.

LIABILITIES AND FUND BALANCES

Current Funds:		
Unrestricted:		
Withholding tax payable	$ 902.	
Accrued expenses payable	578.	
Deferred income	2,435.	
Fund balance	27,385.	
Total Unrestricted		$ 31,300.
Restricted:		
Fund balance		3,332.
TOTAL LIABILITIES AND FUND BALANCES		$ 34,632.

STATEMENT OF CURRENT INCOME, EXPENDITURES and CHANGES IN UNRESTRICTED CURRENT FUND BALANCE FOR THE YEAR ENDED DECEMBER 31, 1967

Income:		
Contributions:		
Foundations	$16,050.	
Corporations	6,500.	
Individuals	1,606.	$ 24,156.
Membership:		
Active local agencies	$ 5,890.	
Sponsoring organizations	17,650.	
Sponsoring individuals	12,280.	35,820.
Sale of Publications		1,469.
Dividend and Interest		1,302.
Net rental of slide film		114.
Miscellaneous income		186.
Gain on sale of stock		32.
Transferred from restricted funds		15,198.
Income from annual Forum — Registration		10,875.
Total Income		$ 89,152.
Expenditures:		
General program and administrative	$89,922.	
Directory printing	9,885.	
Teachers source book	3,376.	
Training manual	4,266.	
Total Expenditures		107,449.
Excess of Expenditures over Income		$(18,297.)
Unrestricted Current Fund Balance — January 1, 1967		45,682.
DECEMBER 31, 1967		$ 27,385.

AUDITORS' REPORT

The Board of Directors
National Council for Homemaker Services, Inc.

We have examined the balance sheet of the National Council for Homemaker Services, Inc. as of December 31, 1967, the related statement of current income, expenditures, and changes in the unrestricted current fund balance and statement of changes in restricted current funds. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying balance sheet, statement of current income, expenditures and changes in unrestricted current fund balance and statement of changes in restricted current funds present fairly the financial position of the National Council for Homemaker Services, Inc. at December 31, 1967 and the results of its operations for the year then ended in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Very truly yours,
Hauser, O'Connor & Hylind

New York, N. Y.
February 20, 1968

NATIONAL COUNCIL FOR HOMEMAKER SERVICES, Inc.
1740 Broadway, New York, N. Y. 10019 • 212—CI 5-8000

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MRS. MARGUERITE M. DIXON

*As of May 1967

VT 002 440
Montcalm County Vocational-Technical Education Study.

Montcalm County Intermediate School District, Mich.
Michigan Univ., Ann Arbor. Bureau of School Services
Michigan State Dept. of Vocational Education, Lansing
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jan67 119p.

SCHOOL SURVEYS; GRADUATE SURVEYS; *VOCATIONAL EDUCATION; *COMMUNITY SURVEYS; *EDUCATIONAL NEEDS; MANPOWER NEEDS; *EDUCATIONAL PLANNING; SECONDARY EDUCATION; POST SECONDARY EDUCATION; SENIORS; DROPOUT ATTITUDES; STUDENT ATTITUDES
MONTCALM COUNTY; MICHIGAN

To determine the needs for vocational-technical education at the high school and post high school levels in the Montcalm Intermediate School District, data were collected concerning studies of high school drop-outs, educational intentions and occupational aspirations of high school seniors, interests of former high school graduates, and manpower needs as felt by business and industrial executives in the area. Characteristics of the area were examined for implications for educational programs. The report of findings represented the combined efforts of both lay and professional groups. Some of the conclusions were: (1) Vocational-technical facilities should be available to accomodate about 500 youths full-time, (2) Of the 517 seniors whose plans do not include college attendance, 81 percent plan some type of education following high school, (3) Of youth with no plans for college, 52 percent expressed interest in some type of advanced business, technical or trade training if it were available in the area, (4) The high school graduates tend to live in the county or adjacent to it, (5) More than two-thirds of high school graduates indicated they would have or might have taken advantage of a community college in the region, and (6) Responding firms indicated 55 percent strong support of occupational education in the community college, 23 percent for substantial expansion of vocational education in the high schools, and 17 percent for creation of an area vocational school. (MM)

VT 002 440

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CITIZENS OF MONTCALM COUNTY AND BELDING VOCATIONAL-TECHNICAL FEASIBILITY STUDY

Prepared Jointly
by the
Citizens' Survey Committee
and
The Montcalm County Intermediate School District Office
and
The University of Michigan

VT02440

Bureau of School Services
The University of Michigan
January, 1967

MONTCALM COUNTY INTERMEDIATE SCHOOL DISTRICT

SUPERINTENDENT: William J. Seiter

BOARD OF EDUCATION:

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Lewis H. Maynard	Vice-President
Keith D. Bush	Trustee
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Raymond J. Young, Survey Director,
The University of Michigan

M. A. Russell*, Coordinator, Greenville

Leland Brode, Consultant, The University of Michigan

Garold Dyke, Consultant, The University of Michigan

* Deceased

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FOREWORD

The Montcalm Intermediate School District in cooperation with each of the individual public school districts therein initiated a proposal for conducting an area Vocational-Technical Study. Funding for the study as proposed was shared equally by monies administered through the State Department of Vocational Education and by the several school districts. The University of Michigan, Bureau of School Services was invited to provide consultant services to the study conducted by a selected representative Citizens' Survey Committee.

The purpose of the study was to discover through an impartial, objective and scientific approach what the needs were for vocational-technical education both at the high school and post high school levels. Included are data from studies of high school drop-outs, educational intentions and occupational aspirations of high school seniors, interests of former high school graduates, and manpower needs as felt by business and industrial executives in the area. In addition, characteristics of the area were examined for whatever implications there were for educational programs. This report of findings represents the combined efforts of both lay and professional groups, each of which have devoted many hours to its preparation. Members of the Citizens' Survey Committee deserve much credit for their efforts and work in pursuing this study to a successful conclusion.

The study provides a sound basis for future action by the school officials. The Intermediate School District officials deserve commendation for their leadership and vision in following a procedure to assess needs which will undoubtedly result in better and more adequate educational services and programs. No effort should be spared now to develop facilities and programs which data from this study indicate are needed.

Raymond J. Young
Survey Director

ACKNOWLEDGEMENTS

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CHAPTER I

CHARACTERISTICS OF MONTCALM COUNTY

In terms of area, Montcalm County is one of the largest counties in Michigan. It has a land area of 712 square miles. Of the 68 Lower Michigan counties, only eleven have a larger area. Seven of these (Kent, Allegan, Lenawee, Oakland, Saginaw, St. Clair and Tuscola) have a population in excess of 35,795, the 1960 census enumeration for Montcalm County.

Population. Since 1930, population in Montcalm County has slowly increased from 27,471 persons in that year to 35,795 in 1960. Between 1950-1960, the increase was 15.4 percent compared to 8.5 and 4 percents respectively during the next preceding two decades. An analysis of growth within the County reveals a 12 percent decrease in the Northwest fourth between 1910 and 1960 and a slight decrease also in the Southeast. A slight increase had occurred in the Northeast, but the greatest increment has been in the Southwest part surrounding the city of Greenville. Growth has been considerably less than for the state during the past three decades.

In 1940, 1950, and 1960, respectively, the percent of persons living in urban areas was 18.6, 21.5, and 20.8 percents. Between 1950 and 1960 the greatest change resulted in an increase of the rural non-farm population from 35.3 percent to 54.5 percent and a decrease in the rural farm population from 43.2 percent to 24.7 percent. Whereas the median age in 1950 was 33.3 years, it was 28.9 in 1960.

Education and Income. The median number of years in school completed by all persons over age 25 in Michigan was 10.8 in 1960, and in Montcalm County it was 10.5. For male County residents it was 9.8 years and for females it was 11.2 years. The percent of persons age 14-17 in school throughout Michigan was 90.1 percent in 1960 and 90 percent for the County. In Montcalm County, 40 percent of the residents age 25 and over had completed four years of high school or more.

The median family income for Montcalm County in 1960 was $4,815 compared to the state average of $6,256. Whereas, there were 15.7 percent of the state population with a family income of under $3,000, 26.7 percent of Montcalm residents had incomes of that level. Only 7.2 percent of Montcalm County families had incomes over $10,000, while the percent earning that much in Michigan was 17.4 percent in 1960.

Composition of the Labor Force. The U. S. Census Bureau collects data on the employment status of persons age 14 and over during each decennial enumeration. The proportion of persons employed in manufacturing, 38 percent, within Montcalm is the same as for the state as a whole. However, whereas 40.1 percent of persons in Michigan were white-collar workers (professional,

managerial, sales, and clerical), only 29.5 percent of the workers in Montcalm County were engaged in that type of work. Presented in Table 1 are data showing the major industry in which 93 percent of the labor force is engaged. The remaining are distributed among several other industry groups such as entertainment, mining, communications, etc. From Table 1 it can be seen that the industries of manufacturing, retailing, and agriculture are the prominent industries, and about two-thirds of all workers are engaged in one of those three industries. Of the manufacturing, about 47 percent consists of fabricated metals and machinery exclusive of electrical machinery. Electrical machinery and equipment and motor vehicle and vehicle equipment manufacturing constitute another 22 percent of that industry. About 7 and 4 percents of the manufacturing respectively are of good and textile apparel products.

TABLE 1

COMPOSITION OF THE MONTCALM LABOR FORCE
BY MAJOR INDUSTRY GROUP

Major Industry Group	Number	Percent
Manufacturing	4,794	38
Retail, including food and dairy products and eating and drinking places	1,894	15
Agriculture	1,661	13
Construction	579	5
Services: Educational	665	5
Services: Welfare, religious and other professional	343	3
Services: Private household and other personnel	565	4
Services: Medical	324	2
Finance, Insurance, Real Estate and Business Services	266	2
Public Administration	265	2
Transportation (Truck, railway, and other)	257	2
Totals	11,827	93

Data are also available on the major occupation group distribution of the labor force by sex, and they are shown in Table 2. It can be seen, for example, that 632 men, or 7 percent, were classed as professional or technical workers as were 462 or 12 percent of the women. Not shown is the fact that this category includes 8.7 percent of all Montcalm County workers. Slightly over a fifth of the women are operatives and in clerical work. Fifteen

percent are service workers, and 12 percent are professional or technical workers. These four major occupation groups account for about seven out of every ten employed women.

TABLE 2

DISTRIBUTION OF LABOR FORCE BY MAJOR OCCUPATION GROUP

Major Occupation Group	Male		Female	
	Number	Percent	Number	Percent
Prof. Tech. & Kindred	632	7	462	12
Farmers & Farm Mgrs.	1157	13	-	-*
Managers, Officials & Propr's	676	8	119	3
Clerical & Kindred	285	3	786	21
Sales	409	5	345	9
Craftsman, Foremen & Kindred	1548	17	-	-*
Operative	2708	30	794	21
Private Household	-	-	320	9
Service Workers (Excl. Pr. Household)	265	3	548	15
Farm Laborers	370	4	63	2
Laborers except Farm	489	5	-	-*
No Report	350	4	193	5

*Two percent of women were reported as farmers and farm managers, non-farm laborers, and craftsmen and foremen.

The largest percent of men in a single occupation group are operatives. Thirty percent of the men are operatives, reflecting the predominence of manufacturing as the largest industry group. Seventeen percent are craftsmen or foremen and 17 percent more are farmers or farm workers. Seven percent are professional or technical workers. These major occupation groups engage approximately seven out of every ten employed men. Sixteen percent of the men were distributed among managerial, clerical, and sales types of occupations.

These analyses of how adult residents in the County earn a living give some clues as to the vocational education needs of youth who possibly will enter gainful employment there. Important is the projected number of high school youth who may need to be served through high school vocational programs. These data are presented below.

Estimated Vocational-Technical Enrollments. During the decade 1955-65, enrollments in grades 1-12 of the public schools increased gradually. Actual enrollments in grades 1-12 for each year during 1955-56 through 1964-65 were obtained from the records. Annual average rates of change were computed for the movement of

pupils from one grade to the next from one year to the next. Such an index of change, the grade survival ratio, reflect in and out migration of the populace with school age children, death rates, promotion policies, proportion of non-attending handicapped children, and non-public school enrollments. The average annual index of change for the past decade is a sound basis for projecting public secondary school enrollments during the next ten years on the assumption that conditions, especially economic ones, will remain fairly stable. Shown in Table 3 are past and projected public school enrollments for grades 9-12. It can be determined that between the school years 1955-56 and 1964-65, enrollments in these grades increased 50 percent; however, during the next decade the increase is expected to be only about 25 percent.

TABLE 3

PAST AND PROJECTED ENROLLMENTS GRADES 9-12

Years	Number Enrolled	Years	Number Projected
1955-56	2035	1966-67	3030
1956-57	2118	1967-68	3005
1957-58	2276	1968-69	3055
1958-59	2360	1969-70	3155
1959-60	2349	1970-71	3245
1960-61	2489	1971-72	3300
1961-62	2616	1972-73	3410
1962-63	2799	1973-74	3415
1963-64	2972	1974-75	3500
1964-65	3023	1975-76	3621
1965-66	3052	1976-77	3687
		1977-78	3796

It is assumed that initially 20 percent of the high school students' grades 9-12 would take advantage of technical-vocational programs if they were available. It is the further assumption that this proportion would rise as the years passed at the rate of about 1 percent per year for the first seven years. Under these assumptions facilities would need to accommodate the following numbers of youth in high school level vocational-technical programs:

1967-8	-601	1972-3	-853
1968-9	-641	1973-4	-887
1969-70	-694	1974-5	-945
1970-1	-746	1975-6	-978
1971-2	-792	1976-7	-995
		1977-8	-1024

Since no high school youth would be devoting more than half time in vocational-technical courses, building facilities to house programs for 500 students would seem to be adequate.

SUMMARY

Data presented in this chapter seem to warrant the following conclusions:

1. Population in Montcalm County has been increasing at a slow steady rate with increasing percents classified as rural non-farm.

2. The level of education attained by persons over age 25, the percent of persons age 14-17 in school, and the median family income are all lower than for the state as a whole.

3. While the proportion of persons employed in manufacturing is identical to that for the entire state, the percent of white collar workers in Montcalm County was considerably less than for the state. Thirty-eight percent were in manufacturing, 15 percent in retailing, and 12 percent in agriculture.

4. Three of ten men workers are operatives as are 21 percent of the women. Seventeen percent of the men are craftsmen and 13 percent are farmers. A fifth of the women are clerical workers and another 15 percent are service workers.

5. Although high school enrollments increased by 50 percent during the past decade, they are expected to increase by only 25 percent in the next decade.

6. Vocational-technical facilities should be available which would accommodate approximately 500 youth full time (or 1,000 individual students attending on a half-time basis).

CHAPTER II

A STUDY OF MONTCALM COUNTY HIGH SCHOOL SENIORS

Introduction. An important part of assessing the post-high school educational needs of a community is a study of the plans, aspirations, interests, and abilities of youth. Previous studies have indicated that plans of high school seniors are predictors of post graduation actions with a validity sufficient to warrant careful attention. Many of the same influences and forces which affect the formulation of plans tend to be those which operate to influence their implementation and to determine the extent to which a senior is likely to follow them. It is important to ascertain the extent to which an area contemplating a post-high school educational program contains youth who can probably profit from various types of advanced educational and training programs designed particularly for their wants and needs. It is important to determine types of programs which would be compatible with interests and occupational goals.

It is significant to identify obstacles which may be associated with post-high school non-attendance and lack of motivation of talented youth to pursue higher education. Assuming the characteristics of seniors in 1964-65 are similar to those who will be succeeding them during the several consecutive years ahead, certain conclusions based upon a study of them can serve as a basis upon which to offer predictions for the future. To this matter, this portion of the report is directed.

During the spring semester, 1965, questionnaires developed for the purpose were modified in final form by the Citizens' Educational Needs Subcommittee and local high school counselors and principals. Using standardized procedures, they were administered to all seniors of public and parochial high schools in Montcalm County and the seniors in Belding High School. To eliminate bias in responses, seniors were told only that the study was being conducted to obtain information for improving educational opportunities, and no reference was made to it being part of a vocational-technical education survey. Questionnaire responses for 414 boys and 399 girls were coded for IBM processing and the Gibson Company keypunched and processed the data. Following are the results of the study relative to assessing post-high school educational needs.

Twenty-seven percent of the seniors in the study were enrolled in Greenville High School. Sixteen percent attended Belding High School and 13 percent attended Central Montcalm. Each of the other six public high schools contributed between 5 and 10 percent of the total and the two parochial high schools, Cedar Lake Academy and Carson City St. Mary's, represented 5 and 1.4 percents respectively.

Mobility and Nature of Student Population. For future educational planning, it is important to determine whether the pro-

spective student body is composed of persons who have been in the area for some length of time or whether it changes rapidly due to constant migration. Rate of population immigration into the area can be determined by examining the length of time the present seniors have resided in the county. These data are presented in Table 4. Findings reveal that 85 percent of the seniors have lived in the Montcalm County-Belding area at least 3 years, and 79 percent have been there at least 6 years, or since junior high school. Seven of every 10 have lived in the area over 10 years. While the data do not reflect out-migration of youth from the area, they indicate that of those currently in school, a considerable proportion have been there a long time. These findings indicate a high degree of population stability. Ten percent do not live in the area. A large proportion of this group is accounted for by boarding students at Cedar Lake Academy and by out-of-county residents in the Tri-County school district.

TABLE 4

LENGTH OF TIME HOME HAS BEEN IN AREA SERVED BY HIGH SCHOOL

Length of Residence	Percent by Sex		
	Boys	Girls	Both
Less than a year	2	2	2
1-2 years	2	2	2
3-5 years	7	4	2
6-10 years	10	8	9
Over 10 years	67	73	70
Not in area	10	10	10
No response	2	2	2

Twenty percent of all seniors were found to be living with someone other than both parents while attending school. Twelve percent were living with only one of their parents. This represents those from homes broken by death, separation, or divorce. One percent lived with neither father or mother, and 7 percent indicated "other." Most of the latter were boarding students at Cedar Lake Academy.

Of all seniors, 71 and 57 percents of the boys and girls respectively worked part-time during the school year to earn part of the money they spent while attending school.

Educational Intentions of Seniors Enrolled in Spring of 1965. All seniors were asked if their future plans included going to college somewhere. Data summarizing the responses are presented in Table 5. From this table one can observe the number and percent of boys and girls with the several educational intentions. For example, it can be seen that 96, or 24 percent, of the boys and 103, or 26 percent, of the girls do not include college attend-

ance in their future plans. Forty-six and 51 percents of boys and girls respectively expressed definite plans for college attendance. This represents 49 percent of all seniors. However, 16 percent of the boys and 13 percent of the girls indicated that future plans "probably" would include going to college somewhere. Eleven percent of the seniors "didn't know" whether future plans would include college attendance. A higher percentage of girls than of boys had definite plans for attending college and definite plans for not going to college. Of all seniors, percent had definite plans for college or thought future plans "probably" would include college attendance.

TABLE 5

SENIORS' PLANS FOR COLLEGE ATTENDANCE

Plan About College Attendance	Boys		Girls		Both	
	Number	Percent	Number	Percent	Number	Percent
No	48	12	66	17	114	14
Probably not	48	12	37	9	85	10
Sub-Total	96	24	103	26	199	24
Probably so	68	16	53	13	121	15
Yes	192	46	204	51	396	49
Sub-Total	260	62	257	64	517	64
Don't know	55	13	36	9	91	11
No response	3	1	3	1	6	1
Totals	414	100	399	100	813	100

Where Seniors Plan to Attend College. Seniors who had definite plans for college or who thought they "probably" would attend were asked where they planned to attend. These responses are presented in Table 6. In Table 6 it can be seen for example, that 0.4 percent of the boys and none of the girls whose plans definitely or probably include college attendance expect to attend Alma College. Similarly, it can be seen that 29 percent of the boys and 11 percent of the girls, or a total of 20 percent, plan to attend Ferris State College. Fifteen percent plan to attend Michigan State University. Ten percent expect to attend Grand Rapids Junior College. Almost a third, 31 percent, expect to attend a college other than those listed.

TABLE 6

WHERE SENIORS EXPECT TO ATTEND COLLEGE

College or University	Percent of all seniors			Percent of seniors with plans for college		
	Boys	Girls	Both	Boys	Girls	Both
Alma College	0.2	-	0.1	0.4	-	0.2
Northwood Institute	1	-	0.5	2	-	1
University of Mich.	3	2	2	4	3	4
Ferris State College	19	7	13	29	11	20
Michigan State Univ.	9	9	9	14	15	15
Davenport Col. of Bus.	2	6	4	3	9	6
Grand Rapids Jr. Col.	7	6	6	11	9	10
Grand Valley State Col.	1	0.3	1	2	0.4	1
Western Mich. Univ.	1	4	3	2	6	4
Lansing Com. Col.	1	1	1	1	1	1
Central Mich. Univ.	4	7	5	6	10	8
Others	16	23	19	25	37	31
No response	36	36	36			

Youth Plans for Period Immediately After Graduation. To ascertain the plans of youth for the immediate future and as a validity check on responses concerning whether future plans include college attendance, all youth were asked to indicate what they would probably do the next year after high school graduation. Results are presented in Table 7, by plan for college attendance. Such analyses indicate the extent to which seniors who plan to attend college intend to do so the next year or whether they intend to delay college entrance to a time later than the next year after graduation. In Table 7 opposite each type of post-graduation plan and under the response as to whether future plans include college attendance is given the percent who intend to do a given thing the next year after graduation. For example, it may be observed that of boys whose future plans definitely do not include college attendance, 67 percent expect to work on a job and 13 percent intend to enter military service the year following graduation. The remainder of the table is to be interpreted in a similar fashion. Since boys were asked to check only one choice, percents equal one hundred less non-responses, but girls who may plan to become a housewife and also work or attend school were permitted two choices. Therefore, percents for girls may add up to more than one hundred.

It can be observed that 77 and 68 percents respectively of the boys and girls indicating definite future plans for college attendance plan to enroll the year after high school graduation. Nine and 13 percents respectively plan to enter either a business college or a trade or technical school, and 11 percent of the girls plan to enter nurse's training. Only 10 percent of the boys expressing definite plans for college expect to work on a job or to enter military service and thus delay their formal education.

TABLE 7

PLANS FOR COLLEGE DISTRIBUTED ACCORDING TO PLANS FOR NEXT YEAR AFTER GRADUATION

Plans for next year	Boys (Percent)					Girls (Percent)				
	No	Prob. Not	Prob. So	Yes	Don't Know	No	Prob. No	Prob. So	Yes	Don't Know
Work on a job	67	73	51	9	76	71	89	70	18	75
Housewife	-	-	-	-	-	44	40	10	2	28
Military Serv.	13	6	10	1	7	2	3	-	-	-
Work at home	2	-	1	2	4	13	-	2	1	3
Attend Col.	-	-	19	77	-	-	-	38	68	6
Attend Bus. Col.	-	-	1	3	-	-	-	23	8	9
Attend Trade or Tech. School	6	4	6	6	9	5	3	6	5	6
Attend Nursing School	-	-	-	1	-	3	3	4	11	6
Don't Know	2	6	6	2	4	7	3	2	1	12
Other	10	10	4	1	-	2	-	-	3	3

Approximately 189 female and 164 male graduates whose future plans definitely include college attendance somewhere might be expected to enter a post-high school educational institution during the year following high school graduation.

Only 19 percent of the boys and 38 percent of the girls who thought future plans "probably" would include college expect to attend the year following graduation. However, of this group almost a fourth of the girls, or 23 percent, expect to attend business college the next year after graduation, while 7 percent of the boys expect to attend either a business college or a trade or technical school. Of the girls whose plans definitely or probably do not include college attendance, about 71 percent expect to work while about 44 percent intend to become a housewife.

If all seniors would enroll in a college, a business college, a nurse's training school, or a trade school who expect to do so during the next year after graduation, there would be approximately 437, or 54 percent, of all seniors continuing their schooling. Five percent would be in a business college, about 5 percent in a trade or technical school, about 4 percent in a nurses's training school, and 40 percent would be in a regular college, community college, or university.

In general, data regarding immediate post-graduation plans of youth tend to verify the expressed intentions for including college somewhere in future plans. Eighty-six percent of the boys and 92 percent of the girls whose plans definitely include attendance expect to attend some type of educational institution the next year following high school graduation.

Curriculum Distribution by Plan for College. An analysis of educational aspirations was made according to type of curriculum in which the seniors were enrolled. This was to ascertain (1) the extent to which youth who aspire to college are enrolled in curricula appropriate to that goal, and (2) the extent to which youth not planning on college are enrolled in a college preparatory curriculum. Both reveal in part the effectiveness of educational guidance and the extent to which youth have made realistic choices. These data are presented in Table 8.

TABLE 8

PERCENT OF SENIORS BY PLAN FOR COLLEGE
ACCORDING TO HIGH SCHOOL CURRICULUM

High School Curriculum	Plans for College									
	No		Prob. Not		Prob. So		Yes		Don't Know	
	B	G	B	G	B	G	B	G	P	G
Commercial	-	36	8	41	12	26	6	18	4	36
Col. Prep.	-	5	8	14	29	40	71	66	11	19
Shop	17	2	27	-	10	2	2	-	27	-
Agriculture	13	-	19	-	7	-	3	-	5	-
General	63	45	35	41	35	28	15	15	49	39
Homemaking	-	11	-	-	-	-	-	-	-	3
Other	2	-	2	3	1	-	1	-	2	3
No response	6	2	-	3	4	4	3	1	2	-

It can be seen that of the boys whose plans definitely do not include college, 17 percent were enrolled in an industrial arts curriculum, 13 percent in agriculture, and 63 percent in a general curriculum. Of the girls who definitely have no plans for college, 36 percent were enrolled in a commercial curriculum, 5 percent in a college preparatory curriculum, 45 percent in a general curriculum, and 11 percent in a homemaking curriculum. Of youth with definite plans for college attendance, 6 and 18 percents respectively of boys and girls were in a commercial curriculum, 71 and 66 percents respectively were in a college preparatory curriculum, and 15 percent of each were in a general curriculum. Of those whose plans "probably" would include college attendance, only about one-third were enrolled in a college preparatory curriculum, while another third were enrolled in a general curriculum. About 14 percent of all seniors who didn't know if future plans included college attendance were in a college preparatory curriculum. Of the boys who were undecided, 4 percent were in a commercial curriculum, 5 percent in an agriculture curriculum, about one-fourth in industrial arts, and one-half in a general curriculum. Thirty-six percent of the girls who didn't know whether their plans would include college attendance were enrolled in a commercial curriculum and 39 percent in a general curriculum.

Only 3 percent of the seniors whose plans definitely did not

include college and 11 percent of those who probably did not intend to go to college were enrolled in a college preparatory curriculum. This would indicate that high school curriculum planning had been well accommodated to educational intentions.

Relationship of Academic Rank to Plans for College. All the seniors were asked to indicate, to the best of their knowledge, whether they were in the top, middle, or lower third of their graduating class. These results are shown in Table 9. One could assume that those who are actually in the top third know their relative standing and are willing to report it as such, while many who are in the middle and lower third either do not definitely know their academic standing, or knowing it, prefer to consider themselves in the middle rather than the lower third.

TABLE 9

ACADEMIC RANK (SELF-REPORTED) OF ALL SENIORS

Rank in Class	Percent		
	Boys	Girls	Both
Top third	26	41	34
Middle third	53	46	50
Lower third	19	11	15
No response	2	2	2

To determine the extent to which youth aspiring to college attendance have earned grades sufficient to predict success, an analysis was made of their indicated plans for college in relation to their perceptions of their academic rank in their class. The analysis also reveals the extent to which good students may not aspire to college attendance. The data in Table 10 present the percents of seniors, by three levels of academic rank, who indicated each of the various plans for college attendance. It can be seen that of the boys ranking in the top third of their class, 83 percent have definite plans for college attendance and an additional 10 percent thought plans would "probably" include college attendance. Only 3 percent of these boys indicated that their plans would "probably not" include college, and there were none who were definitely not planning to attend. Eighty-three percent of the girls who ranked in the upper third of their class had plans which definitely or probably included college and 12 percent had plans which definitely or probably did not include attendance. Sixty-one and 57 percents of the boys and girls respectively who were in the middle third of their class definitely or probably intended to attend college, while only 26 percent of the seniors who were in the lower third of their class indicated they either definitely or probably planned to attend. Of this group who ranked in the lower third of their class, 51 percent definitely or probably did not plan to attend college, 26 percent indicated they didn't know whether they would or not, and 2 percent did not respond.

TABLE 10

PERCENT OF SENIORS WITH EACH ACADEMIC RANK ACCORDING TO PLAN FOR COLLEGE

Plan for College	Top Third			Middle Third			Low Third		
	B	G	T	B	G	T	B	G	T
No	-	7	4	10	19	14	30	44	35
Prob. not	3	5	4	14	11	13	18	13	16
Prob. so	10	13	12	21	14	18	12	7	10
Yes	83	70	75	40	43	42	14	18	16
Don't know	3	4	4	14	11	13	25	16	21
No response	1	1	1	-	1	-	1	2	2

B = Boys G = Girls T = Total

Another type of analysis is to determine what percents of youth with a given plan for college rank in each of the three levels--top third, middle third, and lower third of their class. These data for all seniors appear in Table 11. It can be seen that of those seniors whose plans definitely do not include college, 10 percent, all girls, are in the top third of the class, 50 percent are in the middle third, and 38 percent rank themselves in the lower third. At the other extreme, 52 percent of those whose plans definitely do include college attendance are in the upper third, 43 percent in the middle third, and only 5 percent are in the lower third of their class. About 3 of 10 of the seniors who don't know whether plans include college rank in the lower third and only 11 percent rank in the upper third.

TABLE 11

PERCENT OF SENIORS WITH EACH PLAN FOR COLLEGE ACCORDING TO ACADEMIC RANK

Academic Rank	Plan for College				
	No	Prob. Not	Prob. So	Yes	Don't Know
Top third	10	13	27	52	11
Middle third	50	60	60	43	57
Lower third	38	24	10	5	29
No response	3	4	2	1	3

Approximately 9 of 10 who should be able to succeed in college are planning to attend, and few who apparently should attend on the basis of ability are not planning to do so. Of the lower third, academically, only 16 percent have plans to attend college. However, of all those who are planning to attend college, only about one-half are in the upper third of their class.

Reasons for Plans Not Including College Attendance. All youth whose future plans definitely or probably did not include attending college somewhere were queried as to their reasons. Table 12 presents an analysis of the reasons given by the seniors. In Table 12 opposite a given reason is shown the percent of boys, girls, and of both who indicated it as the most important reason why future plans do not include college attendance. For example, it may be observed that 30 percent of all seniors whose plans do not include attending college indicated it was because they wanted to work on a job, and 23 percent indicated it was because it would be too expensive. About one-fourth, or 27 percent, of the girls indicated the most important reason was that they intended to get married. Twenty percent of the boys and 11 percent of the girls not planning to attend college gave inability to make good grades as the most important reason. Only 5 percent indicated that they didn't plan to attend because they were tired of school and an additional 3 percent felt that college was not necessary or that it was a waste of time in their opinion.

TABLE 12

PERCENT OF SENIORS WHOSE PLANS "DO NOT" OR "PROBABLY DO NOT" INCLUDE COLLEGE ACCORDING TO REASON GIVEN

Reason	Boys	Girls	Both
Tired of school; not enough education	10	1	5
Want to work and make money	28	32	30
Too expensive; can't afford it	23	22	23
Want to get married	5	27	15
Parents object	2	1	2
College not necessary	3	-	2
Waste of time	1	1	1
Can't make good enough grades	20	11	15
Other reason	7	6	7

Effect More Money Would Have on Plans. Each respondent not planning on attending college was asked if he would change his plans if he had more money. These responses are shown in Table 13 according to the percent of seniors indicating "Yes," "No," or "Maybe" as to whether plans would change. From the table it can be determined that 21 percent of the seniors who don't have plans for college attendance indicated that their plans would change if they had more money, while another 40 percent thought they might change. The rest, 40 percent or 112 youth, indicated that with more money they still wouldn't plan to attend college. Those whose plans would change constitute 7 percent of all the seniors in the Montcalm County-Belding area, and those who thought "maybe" their plans would change constitute an additional 14 percent. Thus, there are 172, or approximately one-fifth of all the seniors in the area whose plans might be altered by more money.

TABLE 13

NUMBER AND PERCENT OF SENIORS NOT PLANNING ON COLLEGE WHO WOULD CHANGE PLANS IF THEY HAD MORE MONEY

Would Change Plans	Boys		Girls		Both	
	Number	Percent	Number	Percent	Number	Percent
Yes	34	22	26	20	60	21
No	56	37	56	42	112	40
Maybe	62	41	50	38	112	40

Seniors who indicated their plans would or might change to include college attendance if more money were available (see Table 13) were asked how much would be needed. Eight percent indicated it would take less than half the expenses, or an amount ranging up to $600. Forty-three percent indicated it would take an amount large enough to pay half the expenses and 49 percent, or 78 boys and girls, said they would need enough to pay all their expenses.

Educational Interests of Youth Whose Future Plans Do Not Include College Attendance. All seniors without plans for college attendance were asked to indicate the types of advanced education in which they would have an interest provided opportunity were available in the Montcalm County-Belding area. A total of 146 youth, or 52 percent, indicated an interest in advanced trade, business or technical training. Only 9 percent would have an interest in the first two years of regular college work which could be transferred to the junior year of a four-year college or university. Thirty-nine percent would be interested in neither.

Further inquiry was made as to types of training in which seniors without plans for attending college might have an interest. These data appear in Table 14. From this table one can observe that 28 percent of the boys and 6 percent of the girls expressed interest in working for several years as a paid apprentice or helper to learn a trade. Thirty-eight percent of the boys and 37 percent of the girls would be interested in on-the-job training with a company or firm. Fifteen percent of the boys and 34 percent of the girls with no plans for college have no interest in any type of further education or training.

TABLE 14

TYPES OF TRAINING OR EDUCATION OF GREATEST INTEREST TO YOUTH NOT PLANNING ON COLLEGE

Type of Education	Percent		
	Boys	Girls	Both
Work for several years as a paid apprentice to learn a trade	28	6	18
Post-graduate high school work in high school at night	2	2	2
Enter military service for training	15	3	9
On-the-job training with a company or industrial firm	38	37	38
Correspondence study	1	9	5
Adult education classes	1	9	5
None of the above	15	34	24

Educational Plans and Perceived Family Income Status. The seniors were asked to indicate one of several responses to describe their family's income. Data in Table 15 show the analysis of their plans for college attendance according to their perceptions of family income level. It can be observed that of the youth who are definitely not planning to attend college, 39 percent indicate they have frequent or occasional difficulty.

TABLE 15

PERCENT OF SENIORS BY PLANS FOR COLLEGE ACCORDING TO FAMILY INCOME STATUS

Perceived Family Income Status	Plans for College					
	No	Prob. Not	Prob. So	Yes	Don't Know	All Seniors
Frequent difficulty making ends meet	11	7	9	5	8	7
Sometimes have difficulty getting necessities	6	8	1	5	12	6
Have necessities, but not many	22	19	18	16	25	19
(Sub-total)	(39)	(34)	(28)	(26)	(45)	(32)
Comfortable, but not well-to-do	49	52	60	58	47	55
Well-to-do	9	13	7	13	8	11
Wealthy	-	-	1	-	-	.4
(Sub-total)	(58)	(65)	(68)	(71)	(55)	(66)

This is in contrast to those whose plans definitely include college. Of these seniors only 26 percent described their family income level as low and 71 percent described it as comfortable or well-to-do. It is apparent that perceived family income level is directly associated with youths' plans for college attendance. Not shown, are data from an analysis by sex which indicates that this relationship between family income and plans for college is even more pronounced for boys than it is for girls.

Perceived Parental Attitudes and Seniors' Educational Interests. Previous studies have shown a relationship to exist between attitudes which youth perceive their parents have about post-high school education and their own plans or intentions. Perceived parental attitudes, insofar as they are valid reflections of parents' true attitudes, also reveal indirectly the strength of moral support which is likely to exist in a community concerning programs of education beyond high school. Data from this analysis are shown in Table 16.

TABLE 16

PERCENT OF SENIORS BY PLAN FOR COLLEGE AND PERCEIVED PARENTAL ATTITUDE TOWARD COLLEGE ATTENDANCE

Perceived Parental Attitude	Plans for College: Prob. No	Prob. Not	So	Yes	Don't Know	All Seniors
Insist or expect that I go	2	-	13	40	3	22
Want me to go if I want to	53	69	73	56	84	63
Don't care	39	28	13	3	12	13
Don't want me to	6	1	-	-	1	1

Attitude and desire of parents toward continued education for their children seems to be associated with educational plans which youth express. Only 2 percent of the seniors who do not plan to attend college indicated that their parents insisted or expected that they go in contrast to 13 and 40 percents respectively of the seniors who probably or definitely planned to attend. On the other hand, 39 and 28 percents respectively of those whose plans definitely and probably did not include college attendance reported that their parents didn't care in contrast to 13 and 3 percents of those whose plans probably or definitely included college attendance.

Eighty-four percent of the seniors who don't know whether they will attend college reported that their parents wanted them to go if they wanted to.

Of all the seniors, 22 percent indicated that their parents expected them to attend college and 63 percent that their parents

wanted them to attend if they so desired. This indicates that a relatively high proportion--85 percent-- of the seniors in the Montcalm County-Belding area perceive their parents as having favorable attitudes toward college attendance.

There were no notable differences between boys and girls in these data.

Relationship of Educational Plans and Educational Level of Parents, School Attendance by Relatives, and Work Status. To determine the extent to which the plans of youth are related to the educational levels attained by parents, an analysis was made of their educational intentions and highest level of education attained by parents. These data appear in Table 17. In columns under seniors' plans for college are shown the percents whose mothers and fathers had various levels of educational attainment. It is apparent that there is a direct relationship between these two factors. Youths whose parents had higher levels of educational attainment constituted larger proportions of the seniors who planned to attend college than they did to those who did not plan to attend. For example, 47 percent of those who definitely did not plan to attend indicated that their mothers had not completed high school, while 10 percent of those who did not plan on college and 40 percent who did indicated that their mothers had some education beyond high school.

TABLE 17

PERCENT OF SENIORS BY PLANS FOR COLLEGE ACCORDING TO LEVEL OF PARENTS' EDUCATION

Highest Level of Education	Plans for College				
	No	Prob. Not	Prob. So	Yes	Don't Know	All Seniors
MOTHER:						
8th grade or less	20	11	12	6	10	10
Some high school	27	25	18	11	33	18
High school graduate	35	44	45	39	43	40
Business or trade school	3	2	6	10	3	7
Some college	4	7	4	14	2	9
College graduate	3	6	7	16	2	10
Don't know	8	5	5	2	4	4
FATHER:						
8th grade or less	32	40	26	14	29	23
Some high school	23	19	20	16	22	18
High school graduate	26	27	26	34	30	31
Business or trade school	2	1	5	8	2	5
Some college	2	5	10	8	2	7
College graduate	3	-	5	13	3	8
Don't know	7	5	4	2	8	4

The findings were almost identical when these data were analyzed separately for boys and girls.

Other Relatives Who Attended College. It is more likely that youth from families where relatives have completed higher levels of education will themselves aspire to education beyond high school than will those from families without this socio-cultural background. The seniors were asked to indicate whether or not they had relatives other than their parents--brothers, sisters, aunts, uncles, cousins--who had attended college. Eighty-six percent of the seniors planning to attend college, in comparison to 78 percent of those who did not plan to attend, reported that they had other relatives who had attended college.

Work Status. Sixty-five percent of all the seniors--71 percent of the boys and 57 percent of the girls--reported that they worked part-time during high school. When analyzed according to their plans for college, the data indicated that more girls who did than who did not plan to attend college had worked during high school, while the reverse was true of the boys--a greater proportion of those who did not than of those who did plan to attend college had worked during high school.

Long-Range Occupational Plans of Youth. Occupational aspirations of youth give clues to types beyond high school which would be required if they are to achieve their occupational goals. All seniors were asked to name their first preference for the kind of job which they looked forward to having ten years from now. These data appear in Table 18.

One can observe, for example, that a fourth of the total (27 percent of the boys and 23 percent of the girls) indicated one of the professions as a long range occupational goal. Thirteen percent of the boys expressed interest in mechanics or shop work. Eleven percent either didn't know or did not respond. Other occupational fields indicated by an appreciable number of boys were: agriculture, 7 percent; run own business or manager, factory foreman or worker, drafting and building trades, 6 percent each. Approximately one-fifth of the girls expressed interest in clerical or secretarial type work, while 17 percent indicated housewife as the occupation of first preference. Eleven percent were interested in nursing and 8 percent were interested in cosmetology. As was the case with the boys, 11 percent of the girls didn't know or did not respond.

TABLE 18

OCCUPATIONAL ASPIRATIONS OF SENIORS

Occupational Aspiration	Boys Percent	Girls Percent	Both Percent	Both Number
Professional (other than nursing)	27	23	25	202
Nursing	.5	11	5	44
Military service	2	-	1	7
Office-Clerical-Secretarial	4	21	12	97
Housewife	-	17	8	68
Electricity or electronics	4	-	2	17
Selling-Salesman-Waitress	2	-	1	6
Drafting or building trades	6	-	3	23
Mechanic or machine shop	13	-	7	53
Agricultural and related	7	-	4	29
Factory foreman or worker	6	-	3	25
Airline pilot or hostess	1	1	1	7
Art (including commercial)	1	2	1	12
Run own business	6	1	3	26
Laboratory technician (medical, dental, chemical)	2	3	2	19
Beautician or barber	1	8	4	36
Religious worker	1	1	1	9
Entertainer	.2	.2	.2	2
Miscellaneous	8	3	6	45
Don't know	4	4	4	31
No response	7	7	7	55

An analysis of occupational aspirations and educational intentions was completed to discover the extent to which youth aspiring to occupations for which post-high school training would be either desirable or essential plan to enter post-high school education or training programs. These data are presented in Table 19. From Table 19, it can be seen that of the seniors aspiring to one of the professions other than nursing, 6 percent definitely or probably do not include college in future plans. Thirteen percent indicate future plans probably will include college. Two percent don't know if future plans include college attendance, but 78 percent have definite plans for college attendance. It appears that of seniors aspiring to one of the professions other than nursing, 91 percent have educational plans compatible with their occupational aspirations.

Seventy-nine percent of those who want to become nurses are including college in their plans. Only 12 percent of the seniors who expect to work in factories are including college attendance in their plans.

TABLE 19

PERCENT OF SENIORS BY OCCUPATIONAL ASPIRATIONS ACCORDING TO PLANS FOR COLLEGE

Occupational Aspirations	Plan for College: No or Prob. Not	Prob. So	Yes	Don't Know	Total Number
Professional (other than nursing)	6	13	78	2	202
Nursing	11	9	70	7	44
Military Service	43	-	27	27	7
Office-Clerical-Secretarial	30	23	39	8	97
Housewife	62	6	14	17	69
Electricity or electronics	12	47	24	12	17
Selling-Salesman-Waitress	-	17	67	17	6
Drafting or building trades	22	17	48	13	23
Mechanics or machine shop	32	26	11	28	53
Agricultural and related	45	3	41	10	29
Factory foreman or worker	72	8	4	16	25
Airline pilot or hostess	29	29	43	-	7
Art (including commercial)	33	8	58	-	12
Run own business	15	19	54	12	26
Laboratory technician (medical, dental, chemical)	-	11	84	5	19
Beautician or barber	6	14	58	19	36
Religious worker	-	-	78	11	9
Entertainer	50	-	-	50	2
Miscellaneous	20	29	38	13	45
Don't know	16	10	55	19	31
No response	46	7	30	17	54

Sixty-seven percent of the seniors aspiring to a career in selling have definite plans for attending college, 17 percent probably will attend, and another 17 percent don't know; while none are definitely or probably not planning to attend. Of those who indicated beautician or barber as their occupational goal, only 6 percent were not including college attendance in their future plans while 72 percent definitely or probably planned to attend. Of those who don't know what occupation they want to enter, 65 percent have definite or probable plans for attending college and 19 percent don't know whether they will or not.

In general, it would seem that youth occupational aspirations and educational plans are quite compatible for those wishing to enter a profession, including nursing. However, this analysis reveals that relatively large proportions of seniors with interest in entering some occupations for which traditional type college would not be appropriate have indicated that future plans probably or definitely will include college. This evidence would indicate that some who have expressed plans for entering college could better reorient their educational planning toward a type of technical

education more appropriate to their occupational interest, or it may be that many of those who indicated plans for attending college interpreted "college" to include post-high school education of a technical-vocational nature. The large percentages for Ferris, Davenport, and "other" in Table 6 would tend to support this interpretation (especially since "Other" may include the recently approved Montcalm Community College).

Field of Interest for Further Study of Youth Planning on College. In addition to being asked to indicate a long-range occupational goal, the seniors were asked to name the field of greatest interest in which they would like to study if they were planning to take advanced technical training or college work after high school graduation. This information can give an indication of the extent to which immediate interests for study coincide with long-range occupational aspirations. Data on the total number of seniors appears in Table 20. From this table one can see that only

TABLE 20

FIELD OF INTEREST FOR ADVANCED STUDY

Field of Interest for Study	Number	Percent*	Plans for College by %: Yes B	Yes G	Prob. So B	Prob. So G
Liberal arts	19	2	4	3	1	2
Engineering	17	2	6	.5	4	-
Business administration	33	4	8	-	13	9
Teaching	74	9	6	24	4	11
Medicine	21	3	5	4	-	-
Nursing	37	5	.5	13	-	6
Agriculture and related	26	3	6	-	4	-
Accounting	24	3	5	3	4	4
General business	16	2	3	2	1	-
Secretarial-Clerical	44	5	2	12	-	13
Laboratory technician	15	2	2	4	1	2
Mechanical technology	31	4	4	-	10	-
Drafting, Design, Technology	17	2	5	-	6	-
Electronics technology	16	2	4	-	6	-
Skilled machine trades	23	3	2	-	9	-
Other skilled trades	60	7	7	8	7	11
Beautician or barber	33	4	1	7	-	8
Miscellaneous	72	9	18	5	10	11
Don't know	17	2	3	.5	-	4
No response	218	27	9	14	16	19
Total Number	813		(192)	(204)	(68)	(53)

* Percents in this column based on all seniors, not just those planning on advanced education.

B = Boys G = Girls

2 percent of the boys and girls expressed an interest in liberal arts type of education. Nine percent expressed an interest in teacher training, 5 percent in nursing, 5 percent in secretarial-clerical training, and 4 percent in business administration. Four percent were interested in mechanical technology, 3 percent in skilled machine trades, and 7 percent in other skilled trades.

Shown also in Table 20 are the percents of seniors with definite or probably plans for college attendance who would be interested in the several types of advanced education or training. Approximately a fourth of the girls whose plans definitely include college and a tenth of those whose plans probably will include college want to study teacher education, while approximately one-eighth of each group are interested in secretarial-clerical training. Thirteen percent of the girls with definite plans for college attendance are interested in nurses training. The interests of the boys whose plans definitely or probably include college attendance are quite evenly distributed over a wide range of fields with business administration being chosen by a slightly larger proportion of the boys than was any of the other fields.

Seniors' Perceptions of How Well High School Was Preparing Them for Their Future. An analysis was made of how well seniors felt the high school was preparing them for what they planned to do after high school graduation, and these data appear in Table 21. About half of the seniors felt that their preparation had been very good in some ways but it could have been better in others. Thirty-five percent of the boys and 28 percent of the girls felt their high schools had either not prepared them very well for what they planned to do after graduation or that their preparation was fair but could have been better. However, a higher percent of girls than of boys felt that high school had given them just what they needed.

TABLE 21

SENIORS' EVALUATION OF HOW WELL HIGH SCHOOL IS PREPARING THEM FOR THEIR FUTURE

Adequacy of Preparation	Percent		
	Boys	Girls	Both
Not very well	11	7	9
Fair, but all training could be better	24	21	23
Very good in some ways, but it could be better in others	48	52	50
It is giving me just what I need	15	20	17

When those responses were analyzed according to the seniors' plans for attending college (see Table 22) it was found that this difference between the boys' and girls' responses is greatly accentuated in the case of those who do not plan to attend college, and in the case of those who definitely are planning on college

attendance, there is no appreciable differences between the two sexes. In general, those who are planning to go to college feel that their high school preparation was better than did those who are not planning on college.

TABLE 22

SENIORS' EVALUATION OF HIGH SCHOOL PREPARATION BY PLANS FOR COLLEGE

Adequacy of Preparation	Plans for College (Percent)									
	No		Prob. Not		Prob. So		Yes		Don't Know	
	B	G	B	G	B	G	B	G	B	G
Not very well	25	6	21	5	10	2	8	9	2	6
Fair, but all training could be better	37	21	27	19	26	26	20	19	35	31
Very good in some ways, but could be better in others	33	38	42	54	49	55	54	54	44	56
It is giving me just what I need	13	35	10	22	12	17	17	17	20	8

Students' Perceptions of Occupational and Educational Guidance Help Received from High School. Attitudes of high school youth toward continuing their training, confidence in the future, and support for a good educational system in the community may possibly be determined in part by the extent to which, as students, they perceive they have received the necessary help desired. A successful post-high school program is largely dependent upon effective occupational and educational counseling at the junior and senior high school levels. In an attempt to reveal how seniors evaluated the amount of help received in deciding what occupations to enter, or in formulating educational plans beyond high school, an analysis was made according to sex and according to plans for college. These data are presented in Tables 23 and 24.

From Table 23 it can be seen that 20 percent of the boys and 14 percent of the girls felt that their school had given them little or no help in occupational or educational planning. At the same time, more girls than boys--24 and 16 percents respectively--felt that their schools had provided all the help they needed. Forty-two percent of both boys and girls indicated that they received considerable help, but that they could have used more.

TABLE 23

SENIORS' EVALUATION OF AMOUNT OF HELP HIGH SCHOOL GAVE IN OCCUPATIONAL AND/OR EDUCATIONAL PLANNING

Amount of Help Received	Percent		
	Boys	Girls	Both
Little or no help	20	14	17
Some, but not very much	21	20	20
Considerable, but could have used more	42	42	42
A lot of help; all I need	16	24	20

When these data were analyzed according to the seniors' plans for college attendance, as is shown in Table 24, it can be seen that the difference between boys and girls--is more pronounced in the case of those who are not planning to attend college.

TABLE 24

SENIORS' EVALUATION OF HELP RECEIVED IN PLANNING BY PLANS FOR COLLEGE

Amount of Help Received	Plans for College (Percent)									
	No		Prob. Not		Prob. So		Yes		Don't Know	
	B	G	B	G	B	G	B	G	B	G
Little or no help	38	12	25	14	12	13	16	13	22	17
Some, but not very much	8	18	33	35	21	13	20	21	20	17
Considerable, but could have used more	42	48	31	35	56	57	38	37	49	42
A lot of help; all I need	10	18	6	16	9	15	24	29	9	22

Seniors' Evaluations of the Way Selected Services and Facilities Have Helped Them. Seniors were asked to indicate how well certain selected school services and/or facilities had helped them. These findings appear in Table 25 by sex and for the total group. One may observe that of the boys, 29, 44, and 25 percents respectively felt that the provision of someone in whom they could confide about school problems was "good," "fair," and "poor." The corresponding percents for the girls were 33, 40, and 25. Under each of the sets of three columns and opposite each type of service or facility is underscored the largest percent appearing in

each set of evaluations. This has been done to facilitate the ease of interpretation for the reader. For example, it may be easily observed that the largest percent of the youth rated all but two of the types of services or facilities as "fair." The two exceptions were information on going to college, which was rated as "good" by 54 percent of the seniors, and the provision of someone in whom they could confide about personal problems, which was rated as "poor" by 45 percent of the seniors. There were no appreciable differences between boys and girls in their ratings of any of these services.

TABLE 25

SENIORS' EVALUATION OF HOW SCHOOL SERVICES OR FACILITIES HELPED THEM

Service or Facility	Percent-Boys			Percent-Girls			Percent-Both		
	G	F	P	G	F	P	G	F	P
Someone I can confide in about school problems	29	44	25	33	40	25	31	42	25
Library materials and information on vocations	39	47	12	44	44	10	41	46	11
Offering many courses from which to choose	20	52	24	18	54	26	19	53	25
Information on going to college	53	34	10	55	38	5	54	36	8
Social activities	36	43	15	40	46	9	38	45	12
Someone I can confide in about personal problems	14	37	46	20	33	44	17	35	45

G = Good F = Fair P = Poor

When these responses were analyzed according to the seniors' plans for college attendance, there were no significant differences between those who were and those who were not planning to attend.

A further analysis was made to reveal the relationship between how much help the seniors thought the high school had given them in deciding what occupation to enter or with respect to educational planning and their evaluations of certain selected school services and facilities. This was an attempt to pinpoint whether perceived inadequacy of certain types of services or facilities in helping them were related to their perceptions of the amount of help the school had given them in occupational and educational guidance. These data are presented in Table 26 which is to be interpreted in similar fashion to the preceding one. For example, it may be noted that of the seniors who indicated the school had given them a lot or all the help they needed in occupational or educational planning, 48 percent indicated the way they had been helped through

the provision of someone in whom they could confide about school problems as "good," 39 percent thought it "fair," and 13 percent believed it to have been "poor." This is in contrast to 22, 35, and 43 percents of those who indicated they had received little or no help in planning for the future.

TABLE 26

PERCENT OF SENIORS BY AMOUNT OF GUIDANCE RECEIVED AND THEIR EVALUATION OF HIGH SCHOOL SERVICES AND FACILITIES

Service or Facility	Lot of Help			Considerable			Some			Little		
	G	F	P	G	F	P	G	F	P	G	F	P
Someone I can confide in about school problems	48	39	13	32	47	19	21	42	34	22	35	43
Information on vocations	48	42	8	44	43	11	42	42	14	27	61	10
Wide choice of courses	25	53	19	22	53	23	14	55	28	13	52	34
Information on college	76	22	1	55	36	6	43	43	11	39	47	15
Social activities	48	42	7	37	46	11	35	47	12	33	41	23
Someone I can confide in about personal problems	22	39	34	19	39	37	10	31	55	11	26	63

G = Good F = Fair P = Poor

It would seem from these data that perceptions about effectiveness of the school in providing adequate occupational and educational guidance is strongly associated with the extent to which students have available, or feel they can confide in, someone who can assist them with school or personal problems. These services seem to be more closely related to student evaluations of guidance help than the other services and facilities studied.

SUMMARY

1. Residential tenure of seniors reflects considerable stability of population. Seven of every ten have lived in the area over 10 years and 79 percent have lived there over 6 years, or since junior high school.

2. The incidence of broken homes is about average. Twelve percent were living with only one of the parents, and the national average is about 13 percent.

3. Seven of every ten boys and 57 percent of the girls worked part-time while attending school.

4. Of all seniors, 49 percent expressed definite plans for attending college and another 15 percent thought future plans "probably" would include college. Eleven percent were undecided. Twenty-four percent of the boys and 26 percent of the girls definitely or probably did not include college in future plans.

5. Of seniors planning on college, 20 percent expected to attend Ferris State College, 15 percent Michigan State University, 10 percent Grand Rapids Junior College, and 8 percent Central Michigan University.

6. Of the 517 seniors whose future plans definitely or probably include college attendance, 81 percent plan to enroll in some type of educational institution the next year following high school graduation.

7. Seventy-one and 66 percents respectively of boys and girls with definite plans for college were enrolled in a college preparatory curriculum. Fifteen percent of each were enrolled in a general curriculum, and 6 percent of the boys and 18 percent of the girls were enrolled in a commercial curriculum.

8. Of the youth who are definitely not planning on college attendance, 63 percent of the boys were enrolled in a general curriculum, and 17 and 13 percents respectively were enrolled in a shop and an agriculture curriculum. Of the girls with such plans, 45 percent were in a general curriculum, 36 percent in a commercial curriculum, and 11 percent in a homemaking curriculum. (Over 9 of 10 boys not planning on college were enrolled in a shop, agriculture, or general curriculum, while 8 of 10 girls without plans for college were in a commercial or general curriculum.)

9. Of youth whose plans definitely do not include college attendance, 10 percent rank in the top third of their class and 50 percent are in the middle third. Fifty-two and 43 percents respectively of those definitely planning on college rank in the top and middle thirds of their class.

10. Eight percent of the youth in the top third of their class have no plans for college, while 26 percent in the bottom third have plans that include college attendance. Forty-two

percent of the youth ranking in the middle third of their class have definite plans for college and an additional 18 percent have plans that will "probably" include college.

11. Three of every ten seniors not planning on college indicated wanting to work as their reason and 23 percent felt that it was too expensive. Fifteen percent cited inability to make good grades as their reason.

12. Of youth without plans for college, 21 and 40 percents respectively indicated that if more money were available they would definitely or probably change their plans. Lack of money is an obstacle for at least 7 percent of all seniors and possibly 20 percent.

13. About half of the youth whose plans would or might change would need an amount to cover all ($1200-1500) the expenses of attending college for a year in order for plans to change. Another 43 percent would need enough to cover half of the expenses.

14. Of youth with no plans for college attendance, only 2 percent would be interested in post-graduate work at the local high school, but 9 percent would be interested in entering military service for training, 18 percent would be interested in apprenticeship-type training, and 38 percent expressed an interest in some type of advanced business, technical or trade training if it were available in the area.

15. Of the boys whose plans definitely do not include college, 80 percent plan to work or enter military service following graduation. Only 6 percent plan to attend a trade or technical school. Of the girls with no plans for college, seven of ten plan to work and 44 percent expect to be homemakers. Five percent expect to attend a trade or technical school and 3 percent a nursing school.

16. In general, fields of interest for immediate advanced study tend to agree with long-range occupational goals of seniors. However, many who are planning on college attendance, especially the boys, might be better off in a trade or technical school in terms of their long-range occupational goals.

17. One-half of the seniors who don't know what occupation they want to enter express definite plans for college attendance.

18. There is little demand for liberal arts, but there is considerable demand for teacher training, nurses training, business administration, and for a wide variety of trade and technical courses including agriculture, secretarial-clerical, mechanical technology, and skilled machine trades.

19. Five factors appear to be highly inter-related. These factors are: plans for college attendance, academic rank, family income, parents' level of education, and number of extra-curricular activities in which students participated.

All of these five factors are positively correlated with the students' perceptions of the adequacy of their high school preparation and of the amount of help they recrived from their high school in occupational and educational planning. This relationship is more pronounced in the case of the boys than of the girls. The high schools seem to be meeting the needs of the youth who have high academic talent and who come from "good" socio-economic backgrounds. The ones who feel least satisfied with their high school preparation are the boys who have lower academic ability, lower socio-economic background, and less ambitious occupational aspirations.

CHAPTER III

A STUDY OF RECENT HIGH SCHOOL GRADUATES

In assessing the educational needs of an area for post-high school programs, studies of school attendance patterns and data which graduates can provide are significant. Assuming the graduates of previous years in an area are similar to those who will follow for a few years, considerable confidence can be placed upon this source of information. Patterns of occupational and educational pursuits, residential distribution, characteristics, and interests are not likely to very markedly with future groups of graduates, barring a major political or economic change, except in a relatively slow fashion.

Recent Pattern of School Attendance Beyond High School Each year, high school principals prepare a report which when signed by the superintendent of schools is forwarded for accreditation purposes. Data taken from these reports constitute the most valid available information on the extent to which graduates pursue further education in a college or university or trade or technical school. They are usually based upon the extent to which graduates have requested a transcript forwarded to a post-high school institution. Data shown in Table 27 reveal the percent of graduates reported entering a college or university or "other" types of school during the recent five year period for all schools in Montcalm County and for Belding; Carson City St. Mary's is excepted for lack of data reported.

Under column (2) one may observe the percent of graduates of all public schools in the study area and the private schools reporting (Cedar Lake Academy), and of both types whose graduates were said to have attended a college or university; those who were said to have attended other types of schools are reported in column (3). In column (4) are presented the percents of all graduates attending all types of post-high school institutions. In column (5) are given the total percents of graduates attending any type of school for the entire five year period. From Table 27, one may note, for example, that 77 and 28 percents respectively of private and public school graduates in 1960 were reported attending college or university the next fall. While none of the private school graduates were reported attending other types of schools, 6 percent of the public school graduates were, making a total of 77 and 34 percents respectively from the private and public schools attending some type of post-high school institution.

For the five year period, 72 percent of the private school graduates were reported continuing their education, while 40.6 percent of public school graduates were reported doing so. Overall, almost 44 percent of all high school graduates from the study area over the five years were reported continuing their education.

TABLE 27

PERCENT OF GRADUATES REPORTED CONTINUING SCHOOL

(1) Schools	(2) Attending College or University 60 61 62 63 64	(3) Attending "Other" Schools 60 61 62 63 64	(4) Attending All Types of Schools 60 61 62 63 64	(5) Total % for all Years
Private	77 80 57 70 60	- 5 2 9 -	77 85 59 79 60	72
Public	28 32 27 32 30	6 10 10 14 14	34 42 37 46 44	40.6
Both	33 36 33 34 34	6 8 8 13 13	39 44 41 47 47	43.6

Method of Studying Graduates Lists of high school graduates were obtained from all high schools in the study area with the exception of Carson City St. Mary's for the years 1960, 1961, 1962, 1963 and 1964. Names were alphabetized by sex and year for each district and a random sample of the 1960 and 1962 classes by sex, and district was selected for contact by questionnaire mailing. Questionnaires were prepared in final form by members of the Citizens Subcommittee on Program Needs after they had contacted their respective high school counselors and principals for suggestions.

During the spring of 1965, 440 questionnaires were mailed to graduates with a cover letter and an enclosed stamped and addressed return envelope. The Montcalm Office of County Superintendent of Schools assisted with the mailing and acted as the return collection agency for the study. In about three weeks following the initial mailing, a second questionnaire and letter were forwarded to those who had not responded to the first invitation for assistance and cooperation. Responses were received from 75 percent of the graduates contacted. The return represented a 13.2 percent random sampling of all seniors graduating during those years. An analysis of non-responses revealed that they were evenly distributed by sex, year, and district. There is no reason to suspect any bias in responses related to these factors. However, data on post-high school attendance of all schools in the study during the five years 1960-1965 indicate that over 43 percent of all graduates continued their education the next fall. Of the graduates responding, 57 percent had attended a college or university, a business college or a trade or technical school. The response to this study is perhaps biased in favor of graduates who continued their education or a sizeable group of graduates delay entering upon further education beyond the next year following high school graduation. The 57 percent, however, is close to the 64 percent of 1965 seniors whose future plans were found to definitely or probably include further education. The number of graduates (as reported later in this chapter)

who were found to be continuing their schooling on a part-or full-time basis would seem to lend support to the assumption that whatever the bias in responses may have been in favor of those who had continued their education was small. On the basis of representative 13.2 percent sample of returns representing three-fourths of the total sample selected there is good reason to believe that if responses had been obtained from all seniors since 1960 the responses would have followed a similar pattern.

Marital and Residential Status of Graduates. Of all the graduates responding to the study, 29 percent live in Montcalm County, 31 percent lived outside but in a county immediately adjacent, 22 percent lived elsewhere in Michigan, and 17 percent lived outside Michigan. With about six of every ten residing in the study area one might expect attitudes developed about the high schools they attended to be heavily reflected in the adult population. Of the 59 percent of respondents who moved out of the Montcalm County and adjacent area, 56 percent of these did so in less than a year, and 88 percent had done so within three years. With 59 percent having left the study area and 60 percent now residing there, it might be assumed that about 20 percent returned since 40 percent reported as not having left.

More men than women left in less than a year, 34 and 31 percents respectively, but more women left within three years than did men, 55 and 49 percents respectively. However, the percentage now living in the study area is almost equal, 61 percent of the men and 60 percent of the women.

About 61 percent of the responding graduates were married--48 percent of the men and 72 percent of the women. Fourteen percent were married within a year of graduation--7 percent of the men and 21 percent of the women; and 29 percent were married within two years--one-fifth of the men and 37 percent of the women.

One may conclude that the holding power of the Montcalm County study area is slightly higher for the women right after graduation; that the incidence of marriage is high, and for women greater and earlier than for men.

Economic and Occupational Status of Graduates and Their Interest in Further Education. Of all respondents, 60 percent were employed full-time, nine percent part-time, and 31 percent (three-fourths of whom were women) were unemployed. One percent did not respond to the question.

When the responses as to employment were compared with interest in further education, such interest was found to be indicated by 69 percent of the full-time employed, 50 percent of the part-time employed and 43 percent of the unemployed. Among the full-time employed those who expressed interest in further education were by sex, 73 percent of the men and 64 percent of the women; among the part-time employed, 53 percent of the men and 45 percent of the women; and among the unemployed, 23 percent of the men and 35 percent of the women.

Generally speaking, about three-fourths of the respondents indicating interest in further education are employed; about one-fourth are not. Slightly more employed men indicated interest in further education than employed women, but considerably less unemployed men indicated interest in further education than unemployed women. By type of employment, the greatest interest in further education was indicated by the full-time employed, the next greatest interest by the part-time employed, and the least interest in further education was among the unemployed.

About 57 percent of the graduates indicated interest in further training of some type; this included graduates currently attending post-high school educational institutions. Their responses may be viewed generally in Table 28 (for specific designations see Appendix A, Table 1). The amount of interest in further training, field by field, was indicated to be 3.10 percent in agriculture;

TABLE 28

GRADUATES' INTEREST IN FURTHER TRAINING
AND THEIR OCCUPATIONAL GOALS
TEN YEARS HENCE

Field	Training of Further Interest		Occupational Goal 10 years Hence	
	N	%	N	%
Agriculture	5	3.10	7	4.79
Apprenticeship, Trades	3	1.86	8	5.48
Business	51	31.67	26	17.81
Health, hospital, medical	17	10.56	14	9.59
Industrial	25	15.53	13	8.90
Marketing and services	10	6.21	18	12.33
Professions	39	24.22	54	36.98
Other	11	6.83	6	4.11
Total	161	100.00	146	100.00

1.86 percent in apprenticeships, trades; 31.67 percent in business; 10.56 percent in health, hospital, medical; 15.53 percent in industrial; 6.21 percent in marketing and services; 24.22 percent in professions, and 6.83 percent in other (unspecified fields). Of the 43 percent who did not indicate interest about one-third was men and two-thirds were women. A large share of these non-respondents might well profit from counseling, testing and guidance services if they were available. Such has been the experience in areas which had a community college to offer such services.

Over 51 percent of the graduates indicated their occupational goals ten years hence. Table 28 is a compilation of their responses, generally (and specific designations may be seen in Appendix A, Table 2). The proportion who indicated their goals, field by general yield, was 4.79 percent in agriculture, 5.48 percent in trades, 17.81 percent in business, 9.59 percent in health, hospital,

medical, 8.90 percent in industrial, 12.33 percent in marketing and services, 36.98 percent in professions, and 4.11 percent in other (unspecified fields). Of the almost 49 percent who did not specify their occupational goal, almost one-third were men, and over two-thirds were women, about one-fourth of whom indicated their goal to be homemaker. With more and more women coming into the labor market at different stages of their lives, this is a group that also could well profit from the counseling, testing and guidance services, and the opportunity for further career preparation which a community college could provide.

Graduates employed in a full-time paying job exclusive of this in the military service indicated their wage or salary weekly earnings. Data presented in Table 29 indicate the percent of earnings for all full-time employed graduates and for those who expressed both a positive and a negative response to present interest in further education. Nine percent of them reported weekly earnings of less than $50.00, 36 percent of between $50.00 and $99.99, 13 percent of between $100.00 and $134.99, 2 percent each of between $135.00 and $159.99, and $160.00 or more respectively. Seventy-four percent of those responding indicated earning under $100.00 a week, about 60 and 90 percents of the men and women respectively, while about 30 percent of these men and 9 percent of these women reported earning between $100.00 and $135.00 a week. About 10 percent of the men responding indicated earning about $135.00 a week as did one woman. Thirty-eight percent did not respond, 25 percent of the men and 49 percent of the women.

These data would indicate that for a considerable number of Montcalm County graduates, earnings would not permit expenditures in excess of necessary living expenses without difficulty. It might be assumed that expenditures which would be incurred by traveling away from home to obtain further schooling would be among the types of expenditures which earnings would not permit for the majority of respondents. Data in Columns (3) and (4) of Table 29 throw more light on the extent to which this is probably true.

In those columns under indication of interest in further education or training are shown the percents of men and women with or without such interest according to amount of weekly earnings reported. For example, it may be seen that 6 percent of both men and women interested in further education or training are earning less than $50.00 per week. In like fashion it can be determined that about 40 percent of the employed graduates interested in further education earn less than $100.00 a week. Three-fourths of the graduates indicating no interest in such opportunity have earnings in this category. Of graduates presently interested in further education or training, 17 percent have weekly earnings of $100.00 or more compared to 5 percent who were not interested. Higher percents of both men and women expressing interest earned less than $50.00 a week than those found to be uninterested at present in further schooling. These data seem to support the assumption that unless appropriate local educational opportunities were to be made available at a reasonable cost to the interested adult graduates, financial conditions and responsibilities would continue to prevent many from obtaining a level and type of further

education or training commensurate with their expressed interests and desires. These data tend also to corroborate responses from graduates not attending school that financial considerations are actually in the way of continued education on the part of a majority of those graduates.

TABLE 29

EARNINGS OF GRADUATES BY PERCENT WITH PRESENT INTEREST IN FURTHER EDUCATION

Weekly Earnings	(2) All Men and Women	(3) Interested M	W	B	(4) Not Interested M	W	B
$49.99 or less	9	9	5	6	2	3	3
$50.00-$99.99	36	25	23	24	11	14	12
$100.00-$134.99	13	18	4	10	5	1	3
$135.00-$159.99	2	2	1	1	2	0	1
$160.00 or more	2			1			1
No response	38	15	17	43	10	32	43

M = Men W = Women B = Both

An analysis was made to determine what relationship if any existed between the amount of weekly earnings and whether graduates had continued their education beyond high school. Respondents in the military were excluded. Three-fourths of the graduates with no further training beyond high school earned less than $100.00 a week while only one-fourth earned more. At the same time only two-thirds of those with additional training were earning less than $100.00 a week while one-third were earning more. No longer than it has been since the respondents graduated from high school, there already appears to be a discernable salary difference between those who continued their education and those who did not.

School Attendance and Interests in Further Education. Of all responding graduates, 18 percent of the men and 26 percent of the women, or over one-fifth of all graduates had received no additional training. Thirty-four and 24 percents respectively of the men and women graduates, or a total of 29 percent had received on-the-job training at the place where they were employed. Three percent of the men and 12 percent of the women had attended a business college, while 12 percent of the men and 7 percent had attended a trade or technical school. Of the respondents 40 percent had attended a college or university. This included 48 percent of the men and 33 percent of the women. Six percent of the women had entered nursing school. About 2 percent each of men and women had taken adult education at the high school while 5 percent

had taken some correspondence school work, 8 percent of the men and 2 percent of the women. Almost a fifth of the men had taken additional training in the military service and 1 percent of the women. Of the men respondents 22 percent were presently going to school full-time as were 12 percent of the women. Eleven percent of the men and 5 percent of the women were attending on a part-time basis, while 65 and 83 percents respectively of men and women were not in attendance at the time of the study.

Of all graduates in school at the time of the study Alma College had 2 percent, Northwood Institute 12 percent, the University of Michigan 1 percent, Ferris State College 2 percent, Michigan State University 5 percent, Davenport Institute none, Grand Rapids Junior College 2 percent, Grand Valley State College none, and Western Michigan University 1 percent. The total enrollment consisted of 25 percent of the respondents.

Various reasons were given by respondents for not attending school at the time of the inquiry. These are shown in Table 30 by percent of response to each reason. Of the graduates not attending school, 11 percent indicated financial reasons, with no significant difference between men and women. Thirteen percent indicated they had already completed the school they had attended following graduation, 6 percent of the men and 19 percent of the women. Twenty-eight percent of the women and 11 percent of the men indicated family responsibilities as a reason for non-attendance. Fourteen percent of the men indicated military service as a reason. Eight percent indicated they were just not interested. Four percent indicated lack of time as the reason while 3 percent scored lack of opportunity available in the community. Two percent said it was too difficult to make grades.

Reasons for not attending school were analyzed for those persons having received no further education or training. Almost half the women indicated family responsibilities as the reason, while only about a fifth of the men did. About a fifth of both sexes indicated they were not interested, while 14 percent indicated financial reasons as the cause (17 percent of the men and 11 percent of the women). Ten percent of the men felt grades were too difficult to make while 7 percent cited military service as the reason and another 7 percent indicated lack of college preparatory curriculum as their reason. Three percent indicated lack of time, while another three percent gave lack of opportunity in the community as their reason for no further education or for not attending. From one-half to one-third of all respondents fall in the family responsibilities and financial reasons categories.

TABLE 30

REASONS WHY GRADUATES WERE NOT IN SCHOOL

Reason	Percent of Graduates Not Attending			Percent Receiving No Further Education		
	M	W	B	M	W	B
Do not have time	4	3	4	3	2	3
Opportunity not available in community	2	3	3	3	2	3
Financial reasons	11	12	11	17	11	14
Family responsibilities	11	28	20	21	48	37
Not interested	7	9	8	21	20	21
Already completed school attended	6	19	13	-	-	-
Too difficult to make grades	3	2	2	10	-	4
Did not take college preparatory course	2	1	1	7	-	3
In military service	14	-	7	7	-	3
No response	38	24	31	10	16	14

M = Men, W = Women, B = Both

Significant is the finding that, of the graduates who did not attend school following graduation or who were not in school at the time of the study about one-fourth of both sexes indicated they would have continued in school provided more financial assistance had been available at the time of high school graduation. This number constitutes 16 percent of all graduates responding to the study who were denied further education because of unavailable resources.

Of the graduates presently living in the study area 70 and 49 percents of the men and women expressed present interest in opportunity for further training or education. Assuming the same proportion of all graduates for the past five years to be interested in further educational opportunity as those in the random sample who responded, there would be approximately 400 graduates each year with interest in further educational opportunity. Research

evidence on the education of adults indicates that validity of high school grades as predictors of success in post-high school programs decreases as length of time out of school increases. Although not all these graduates would be motivated to attend or would be successful if they did, there is no good way of determining the proportions that would be in either category. Studies in performance of adults and veterans indicate that reference to previous high school grades of those expressing interest would be of little help in ascertaining probability of success for this group in appropriate educational programs compatible with their interest and felt needs.

Factors Related to Current Interest in Education Analyses presented in the previous chapter on seniors' educational plans revealed a relationship between them and perceived parental attitude toward their continuing in school after high school graduation. Higher proportions of youth who believed their parents insisted or wanted them to continue their education had plans for further education than those who believed their parents were either indifferent or negative concerning the matter. A similar analysis has been made for graduates, and the data appear in Table .

In Column (2) of Table 31 are shown the percents of all respondents by the attitude which they believed their parents to have about their continuing in college. There appears to be little difference between the sexes, and what little difference there is favors the men. In general the fact that three-fourths of those questioned believed their parents insisted or wanted them to attend college reveals a wholesome community attitude about youth college attendance. The influence of perceived parental attitude may be revealed more clearly in columns (3) and (4) which contain data for graduates with no further education of any type compared to those who have actually attended a college or university. It can be observed that, whereas 5 percent of the men and women who have attended felt their parents insisted on it, none of those without any further education felt that way about their parents. Just as revealing is the fact that while only 8 percent of those having attended college perceived their parents as indifferent, 30 percent of those without further education indicated their parents were indifferent.

From these data one can conclude that (1) there seems to be no particular parental bias favoring the education of one sex more than the other as is the case in various other areas, and (2) that higher percentages of parents of graduates who entered college or university insisted or wanted them to continue than is true of graduates who have had no further education. Further it appears that a relationship may exist between indifferent and negative parental attitudes and graduates having received no further education.

TABLE 31

PERCEIVED PARENTAL ATTITUDE AND EDUCATION BEYOND HIGH SCHOOL BY PERCENT

Parental Attitude About College Attendance	All Graduates		No Additional Training or Schooling			Attended College or University		
	M	W	M	W	B	M	W	B
Insisted I go	6	2	-	-	-	7	2	5
Wanted me to go if I wanted to	71	72	48	34	40	77	84	80
Didn't care	15	11	45	20	30	8	8	8
Didn't want me to go	1	2	-	2	1	1	2	3
Wouldn't let me go	-	1	-	2	1	-	1	-
No response	7	13	7	41	27	7	4	5

M = Men, W = Women, B = Both

Possible Influence of Available Opportunity on Plans An attempt was made to determine how the accessibility of local educational opportunity might have influenced graduates' plans. Each respondent was asked how availability of two years of college work or some type of technical or semi-professional vocational training in the region at the time of graduation might have affected his plans. One-fifth of the women and 27 percent of the men indicated they definitely would have taken advantage of the opportunity in contrast to 32 percent and 25 percent respectively of women and men who were not interested. Forty-four percent, the sexes within a percentage point of each other, indicated they might have stayed to take advantage of training available in the area.

Of the graduates having received no type of further education or training after high school graduation, 24 percent of the men and 16 percent of the women would definitely have taken advantage of the opportunity if two years of college work or some type of technical or semi-professional educational training had been available in the region when they graduated. In addition 55 percent of the men and 39 percent of the women without further education indicate they might have planned to stay at home and take advantage of such opportunities had they been available. About one-fifth of the men and 43 percent of the women would definitely not have been interested.

The same type of analysis was made to determine whether those who did attend a college or university would have been influenced by the availability of two years of college or some type of technical, semi-professional or vocational training. Twenty-four percent of the men and 18 percent of the women said they would definitely have taken advantage of such an opportunity. Thirty-seven and 39 percents respectively of men and women thought they might have planned to stay home and take advantage of such an opportunity. About an equal number of both sexes, 35 percent, continuing their education in a college or university would definitely not have been interested.

If the same proportion of all graduates for the past five years would definitely have taken advantage of local post-high school opportunity as indicated by respondents, an average of 160 from each graduating class would have been in attendance. An additional annual average of 293 persons might have taken advantage of such an opportunity. This would have represented 68 percent of all graduates of that period, including some who have had no further education, as well as some of those who have gone to a college or university. To the extent that the responses of graduates are valid indications of what one might expect to happen, it can be concluded that about seven out of every ten graduates would be interested.

The graduates who did not attend any kind of school after graduation were asked to indicate the type of school in which they would have had an interest if the opportunity were available. Eighteen percent specified a community college, 11 percent a four-year college or university, and 16 percent a trade or technical school. Of the graduates who had received no type of additional training or education, 23 percent would have been interested in attending a two-year college located in the area where they lived and 4 percent would have preferred a four-year college. However, 36 percent (41 percent of the men and 32 percent of the women) would have been interested in a trade or technical school. Fifteen percent said they would not have been interested in any type of school.

Graduates were asked to tell what they thought about the availability of opportunities which youth have in their former high school districts for receiving training or education after high school graduation. Only 22 percent though it was adequate while 43 percent thought it fair and 33 percent thought it poor. There was little difference of opinion between men and women, though men held a consistently lower opinion than did women in each category, and differed with them most extremely in their opinion that opportunities were poor, 35 percent of the men and 30 percent of the women so indicating. This extreme is consistent and even more pronounced as the graduates are viewed otherwise. Among those with no additional training or education since high school 41 percent of the men felt availability of opportunities for further training were poor as compared to 27 percent of the women. Among

those with college or university training 39 percent of the men and 23 percent of the women indicated such opportunities poor.

Relationship of High School Curriculum and Type of Further Education An analysis was made to determine what type of high school curriculum graduates had completed according to type of further education recieved since graduation. These data are presented in Table 32 . Opposite each type of education received are given the percents by high school curriculum completed. It can be observed, for example, that of the girls receiving no further education, 6 percent followed a college preparatory program, 33 percent a general and 38 percent a business education program. The rest of the table is to be interpreted likewise. (Bear in mind that more than one response was possible as to the type of further education, which accounts for imbalance in percentages.)

It can be observed that of the men and women having attended a college or university, 69 percent and 72 percent respectively had followed a college or university preparatory curriculum in high school. Of the women who had had further training the largest percentage, 27 percent, were business education curriculum graduates who gained on-the-job training. Twenty-four percent of the women in business education went on to business college and another 5 percent attended a trade or technical school, such as nursing or beauty school; 9 percent of them went on to a four-year college or university.

It is interesting to note that of the men receiving further training or education, that with the exception of those going on to college or university, the highest percentage in all curricular preparations received on-the-job training, 27 percent of those in college preparatory, 40 percent of those in general, 56 percent of those in business education, 31 percent of those in agriculture and 36 percent of those in shop or technical. Only 18 percent of those in a shop or technical curriculum went on to trade or technical school while another 18 percent went to college or university; over a third of these men graduates reported no additional training.

Of the men going on to business college, none reported taking a business education curriculum, but all had followed a college preparatory program. A high percentage of men in the general curriculum, 40 percent, indicated college or university attendance, while 22 percent of these men reported no additional training. The highest percentage of men reporting no additional training was in agriculture, 38 percent, with shop a close second, 36 percent. The highest percentage of women with no additional training was 38 percent of those taking a business education program.

In general about two-thirds of graduates who later attended college or university completed a high school curriculum designed for that purpose. The same is true of a little over half of the business college attendants, and about one-fifth of those attending trade and technical school. Of all high school graduates responding to the study 36 percent had completed a college or university preparatory curriculum, 30 percent a general course,

19 percent business education, 4 percent agriculture, 3 percent shop or technical, and 1 percent a homemaking curriculum. One percent reported "other" and 6 percent did not respond.

TABLE 32

HIGH SCHOOL CURRICULUM AND TYPE OF FURTHER EDUCATION OR TRAINING*

Type of Further Education	College or University Preparatory		General		Business Education		Agr.	Shop or Tech.
	Men	Women	Men	Women	Men	Women	Men	Men
None	8	6	22	33	22	38	38	36
On the job	27	19	40	22	56	27	31	36
Business college	6	6	-	4	-	24	-	-
Trade or Tech. sch.	16	2	8	12	11	5	-	18
Nursing school	-	13	-	6	-	2	-	-
College or university	69	72	40	18	11	9	5	18
Adult ed. at high school	2	2	4	2	-	-	-	-
Corres. school	6	-	12	6	11	2	8	-
Military service sch.	17	2	24	-	22	-	15	18
Other	-	4	4	6	22	7	8	18

* Omits a few girls in homemaking

Perceptions on How Well High School Prepared For College or Employment Graduates who had attended a college following graduation were asked to indicate how well they felt their high school had prepared them for college work. Others were asked how well they felt their high school had prepared them for employment if they had entered employment on either a full or part-time basis. The results are presented in Table 33. It can be seen that 9 percent of the men and 7 percent of the women, or 8 percent of

both, felt their high school education to be inadequate as preparation for college. Likewise, 17 percent of the men and 2 percent of the women felt it was inadequate as preparation for employment. Twenty-two percent of all respondents in both groups felt their high school preparation was fair with all of it needing improvement. Fifty-nine percent of the college or university group thought preparation good, while 41 percent of those employed thought it good. Ten percent of both groups thought their preparation excellent, while 15 percent of those without additional training or schooling indicated they have not been employed and 4 percent did not respond. Men in both groups rated their preparation lower than women in all but two places with those who had no additional training or schooling being in most extreme difference. Seventeen percent of these men felt training inadequate compared to 2 percent of the women. Twenty-eight percent felt preparation to be fair compared to 18 percent of these women. On the other hand only 31 percent of the men thought preparation for employment to be good compared to 48 percent of the women; 10 percent of the men did think preparation excellent as compared to 9 percent of the women. In preparation for college or university both sexes were within 4 percentage points of each other, except in the designation of excellent; only 5 percent of the men gave that indication as compared to 16 percent of the women.

TABLE 33

GRADUATES' OPINIONS OF HOW WELL SCHOOL PREPARED THEM

Quality of Preparation	For College by Percent			For Employment by Percent		
	M	W	B	M	W	B
Inadequate	9	7	8	17	2	8
Fair; all could have been better	24	20	22	28	18	22
Very good in some ways; could have been better in others	60	57	59	31	48	41
Excellent	5	16	10	10	9	10
Have not been employed				10	18	15
No response	1	-	1	3	5	4

M = Men, W = Women, B = Both

An attempt was made to determine the opinions of graduates as to how effective certain school facilities and services had been in helping them. Each was asked to indicate whether the help of a given service or facility was "good," "fair," or "poor." These data are presented in Table 34 analyzed for men, women and both sexes. For ease of interpretation the largest percent of responses for each item is underscored. For example, it can be seen that of the men respondents, 27, 42 and 27 percents respectively felt that high school counseling services had been good, fair and poor in the way they had been helped. The largest incidence of response was "fair." The remaining portions of Table 34 are to be interpreted likewise.

In general, it can be seen that the largest percent of graduates judged social activities as good. Help in finding part-time employment and someone to confide in about personal problems (this especially among women respondents of whom 47 percent indicated poor) were both rated poor. Four of every ten indicated counseling services were fair, while almost half thought library materials on jobs to be fair. Forty-six percent also felt the number of courses to choose from was fair. It seems significant that about seven of every ten felt counseling in both instances were fair to poor. This would indicate the desirability of Montcalm County High Schools examining the quality, effectiveness, and realistic nature of counseling services. The success of post-high school educational programs in an institution like a community college which typically maintins an open admissions policy depends upon a system of sound and effective counseling and guidance both in the high schools and in the institution itself.

TABLE 34

PERCENT OF GRADUATES BY HOW WELL THEY THOUGHT FACILITIES AND SERVICES HELPED THEM

School Services and Facilities	Men G	Men F	Men P	Women G	Women F	Women P	Both G	Both F	Both P
Counseling services	27	42	27	28	38	30	28	40	29
Library materials on jobs	26	49	20	35	49	10	31	49	15
Offering many courses to choose from	32	47	17	39	45	13	36	46	15
Assistant in finding part-time employment	13	25	50	12	30	42	12	28	46
Social activities	42	45	9	49	41	6	46	43	8
Someone I could confide in about personal problems	19	39	35	17	27	47	18	33	41

G = Good, F = Fair, P = Poor

Graduates Recommendations for Improvement of High School. Graduates' comments in general on how their high school programs could be improved were for broader, deeper, quality curricula and counseling, for more personnel who are capable and interested in students and their education, and for better facilities and equipment.

Favorable comments singled out a business education curriculum, a music program, and particular teachers as representative of the type desired.

Of the various curricula for which improvement was requested the preponderance was for a better college preparatory program, but several indicated also the need for a better vocational program. Opinion was mixed about the amount of emphasis that was and should be placed on each, some that college preparatory was too much and vocational was too little, and vice-versa, that vocational was too much and college preparatory was too little. There were several recommendations for advanced study opportunities.

Broader offerings were requested in the areas of English, foreign language, mathematics, business education, "shop," and social studies. Emphasis on the fine arts and physical education was requested. Vocational education was referred to in several ways, mostly for more in-school and out-of-school opportunities, but also for better vocational counseling, particularly at the ninth and tenth grade levels. Cooperative education and commercial subjects were repeatedly requested. And planned study of vocations was recommended including suggestions to use of resource persons and field trips.

English was the most frequently criticized subject area, with recommendations for more emphasis on the subject, broader more intense course work and better instruction. Specific mention was made of note taking, English literature, more reading and speech as desireable subjects.

Many graduates made recommendations for the improvement of counseling, mostly that it needs to be better. Specifically, they recommended extensive vocational, academic and personal counseling; that it be made available to all students but particularly at the ninth and tenth grade levels; that job opportunities and school preparation for them be explained; that different college curricula be explained; that particular attention be given to the development of the individual student's curriculum without prejudice or because of the student's relative influence; and that counseling be available in regard to marriage.

In regard to teachers and administrators graduates recommended more and better teachers who were "alive" and well-trained, who showed deeper concern for students, and indicated "more interest in (the student's) ability to learn and understand." Teachers should be firm and demanding, graduates said, but too, they should be trusting and fair. There was recommendation for better administrators "so people would back them up in getting a higher quality

staff." Complaint was made in a few cases that school people sometimes violate the nature of the role they have with students by giving an unfair recommendation and by treating them with prejudice against them or according to the student's relative influence.

The general atmosphere of the school should give students an incentive to learn, graduates said: it should try to stir an interest in further education. Student morale should be stimulated and their social behavior should be developed so they can respect and enjoy things as groups (as well as individuals). Rules and regulations should be reasonable (and fairly enforced). A well-balanced social life should be available for all.

Buildings and facilities recommendations by graduates were for new buildings, more room, better library facilities (and encouragement of their good use), and better teaching facilities and equipment.

SUMMARY

1. During the past five years approximately 44 percent of all high school graduates in the Montcalm County study area enrolled for further study in some kind of post-high school institution--about 35 percent in colleges and universities, and about 9 percent in "other types" of post-high school institutions. These data were obtained from high school principals' reports.

2. A 15 percent sampling of the high school graduates of the classes of 1960 and 1962 was made with about three-fourths of them responding. Fifty-seven percent reported that they had attended (or were attending) a post-high school institution of some kind (college or university, business college, trade school or vocational school). Since only about 44 percent of all graduates were reported as having "gone on" to post-high school study by the high school principals' reports, it is possible that the "sample" is biased in the sense that those who had "gone on" tended to return the questionnaire and those who did not "go on" tended not to reply.

3. The evidence shows that Montcalm County's high school graduates tend to live in the county or adjacent to it. At least, of those who replied, while 60 percent reported having left at some time, still 60 percent indicated living there presently.

4. About three-fourths of the respondents reporting indicated earnings of less than $100.00 a week, 68 percent of the men interested in further education and about 90 percent of the interested women indicated earnings which would not permit expenditures beyond necessary living expenses without difficulty.

5. Of the 65% of graduates who indicated interest in further education, about half (48.8%) expressed interest in a professional goal, other than nursing, and over half (51.2%) expressed interest in a goal which could be fulfilled in a one-or two-year post high school program.

6. Two-thirds and more of the male respondents in all income categories expressed interest in further education, as did about half the women.

7. Between one-third and one-half of all respondents indicated that their reasons for no further education or for not presently attending school to be (1) family responsibilities, (2) financial reasons, and (3) lack of opportunity in the community. About one-fourth of the respondents said they had had the financial ability.

8. A significantly positive attitude among parents about further education was indicated by about three-fourths of all graduates, men and women alike, who reported their parents' desire or insistance that they go on for more schooling.

9. Better than two-thirds of the respondents indicated they would have or might have taken advantage of a community college in the region. Twenty-seven and 20 percents of the men and women

respectively indicated they definitely would have taken advantage of a community college in the region, while an additional 44 percent said they might have done so. Eight of ten men and about half the women with no further education said they might or would have done so, while about two-thirds of those who attended a college or university said they might or would have.

10. The availability of further training or education to graduates was thought to be adequate by 22 percent, fair by 43 percent, and poor by 33 percent. Among men who had gone to college or university, 39 percent thought such opportunity poor as did 41 percent of those who had had no further education or training.

11. Of those who completed a high school curriculum designed for their further education or training, about two-thirds of those going on to college or university had done so, a little over half of those who attended business college, and about a fifth of those attending trade or technical school. On the other hand, none of the men going on to business college reported having taken a business education curriculum, but had followed a college preparatory program. Forty percent of the men in a general curriculum indicated college or university attendance. Thirty-eight percent of the men in agriculture reported no further training, as did 36 percent of those in shop, 38 percent of the women in business education, and 22 percent of the men in a general curriculum.

12. About nine of ten graduates felt high school preparation for college was fair and very good in some ways, as compared to three-fourths who felt the same way about preparation for employment. As to the extremes, slightly more felt preparation for college and for employment was excellent--10 and 12 percents respectively--than did those who felt such preparation inadequate--8 and 10 percents respectively.

13. In their indications of the adequacy of their high school services and facilities the graduates predominantly felt they were fair. Social activities was the only exception felt to be good by a greater number, while assistance in finding employment and someone to confide in about personal problems was felt by more to be poor, the former by half or more by both sexes, the latter by over half the women.

14. Graduates recommended improvements in the high school of both the college preparatory and vocational programs. They specified improvements in English, foreign language, mathematics, business education, "shop," and vocational education; emphasis on fine arts and physical education; extensive vocational, academic and personal counseling, particularly at the ninth and tenth grade levels; more, better, fairer personnel; the atmosphere for learning; new buildings, more room, better library facilities and teaching facilities and equipment.

CHAPTER IV

A STUDY OF FORMER STUDENTS WHO LEFT SCHOOL BEFORE GRADUATION

Since vocational-technical training is presumed to have considerable significance to many of those students who leave school before graduation, the Citizens' Educational Needs Subcommittee went to some lengths to obtain as many responses as possible from this group. When the usual mail contact for information provided little return, committee members personally interviewed as many school drop-outs as they could find. The two methods of survey yielded 28 questionnaires, 12 from men and 16 from women. Six were from Belding, 5 from Lakeview, 5 from Sheridan and 12 from Stanton.

Responses are from former students who left school as long aog as 1959, and they range from grades 8 to 12 and include one who completed high school by correspondence. Besides 1 who left school from the 8th grade, responses are from 7 who left from the 9th, 4 from the 10th, 8 from the 11th and 7 who left from the 12th. Two are from married men and 16 from married women.

Reasons for leaving school are shown in Table 35. The most frequent response was marriage; 46 percent, women, gave that as their reason. Eighteen percent of men and 18 percent of women said dislike of school brought them to leave. (This included dislike of teachers and/or administrators, and curriculum.)

TABLE 35

REASONS FOR LEAVING SCHOOL BEFORE GRADUATION BY PERCENT

Reasons for Leaving	Boys	Girls
Dislike of school	18	18
(...teachers, administrators	7)	7)
(...curriculum	4)	
Lack of ability	14	
(in reading	7)	
(to take part in sports	4)	
Skipping	11	
(falsely accused of...	4)	
Money	11	
(had to work	4)	
Family illness	4	
Marriage		46

Fourteen percent, men and no women, gave lack of ability as their reason for leaving, two of these specified reading, and one said because he could not take part in sports. Eleven percent, men and no women, gave skipping (the consequences being removal from school) as their reason, one saying his was a reaction to being falsely accused of skipping. Eleven percent, men and no women, said they wanted money or had to work. One man said he quit school because of his mother's illness.

The kinds of jobs held by these young people (see Table 36) were unskilled or semi-skilled. Forty-two percent, men 21 percent and women 21 percent, reported present jobs of an unskilled type, 22 percent, 18 percent men and four percent women had present jobs of a semi-skilled type (32 percent, women, reported never having held a job and 57 percent were not presently employed). Seven percent, men, were not presently employed, and as many had been employed less than three months as had been employed over six months, 18 percent in each category. All the men had held at least one job, four percent had had one job, 18 percent had had two jobs and 18 percent three jobs. Four percent had held over five jobs since leaving school. Seven percent, women, had held two jobs, 14 percent had held three and four percent had held four jobs.

TABLE 36

NATURE OF EMPLOYMENT
BY PERCENT

	Present Job		Length of Present Employment						No. of Jobs Held					
	S-S*	U**	Not	Up to 3 Mos.	3-6 Mos.	6-12 Mos.	1-2 Yrs.	2 Yrs. & up	0	1	2	3	4	5+
Boys	18	21	7	18	0	4	7	7	-	4	18	18	-	4
Girls	4	21	57						32	-	7	14	4	-

* S-S = Semi-Skilled ** U = Unskilled

More women had taken additional training than had men. Four of the six women who had continued education had taken correspondence training as compared to one man. Another man had had on-the-job training and another special education. One girl reported having gone to night school, and one to cosmetology school (four weeks in Missouri).

Two of the men indicated goals five years from now that would require some degree of skill; one wanted to be in business for himself and the other wanted to be a truck driver. Three saw themselves working, two more doing factory or shop work, one farming, one in the army; two don't know and two gave no response. Other than being a housewife, two of the women expect to attend community college.

When asked their interest in additional training, (shown in Table 37) over two-thirds specified an area. Seven percent, men, want drafting training; 11 percent mechanics; four percent each wants training in equipment operation, tv repair, police work and tool and die. Eleven percent, women, want beauty school training; seven percent, secretarial and bookkeeping, and four percent each wants IBM and nursing. One woman wants to major in English (in college), and two want to finish high school. About a third of the women said they were not interested in additional training or gave no response. One-fourth of the men gave no response or said they didn't know. When asked the time they would prefer this training, seven percent, women, said part-time, four percent said evenings. Men did not respond.

TABLE 37

ADDITIONAL TRAINING OF GREATEST INTEREST
BY PERCENT

Area of Training	Boys	Girls
Drafting	7	
Mechanics	11	
Equipment Operator	4	
TV Repair	4	
Police Work	4	
Tool and Die	4	
Beauty School		11
Secretarial, Bookkeeping		7
IBM		4
Nursing		4
English		4
Finish High School		7
None		7
Don't Know	4	
No Response	11	11

Women were most responsive with suggestions for improvements. The two suggestions from men were for more vocational training; one woman suggested more choice of subjects; another suggested that subjects (like shorthand and typing) be offered every year. Most suggestions for improvement were in the teaching and counseling area. These former students who had left school before graduation asked that teachers pay more attention to slow students, work more with students and counsel, explain work better, and give less home work; one asked for better teachers and counselors generally. In the area of facilities and services, one said school was too crowded, another asked for smaller classes, and another asked that more help be given to drop-outs. Seven respondents had no suggestions, two didn't know, and eight gave no response at all.

If they had it to do over again, three-fourths of respondents

said they would not leave school. One man gave no response, and one woman didn't know. Nine men said they would not leave school if they had it to do over as compared to two who said they would. Twelve women said they would not as compared to five who said they would.

SUMMARY

1. Most former students responding to this study who left school before graduation would not have left if they had it to do over again. They would not leave school even though most indicated the reasons for leaving school were school-related (dislike of school, lack of ability, and skipping), and that there is need for a broader continuous curriculum, more considerate teaching and counseling, and better-suited facilities and services.

2. While some school leavers have had additional training since leaving school, most have had two jobs or more, and few have been presently employed over one year.

3. The school leavers give little indication of definite employment goals five years from now, but 68 percent indicated an interest in additional training, particularly of a vocational-technical kind.

CHAPTER V

EDUCATIONAL NEED OF INDUSTRY AND BUSINESS

Introduction. In planning for the vocational and technical training needs of youth consideration needs to be given to the availability of and entry requirements to jobs in the industries and businesses that offer employment in the area. Jobs at all levels are more complex than they used to be, and some are disappearing while new ones are being introduced. Educational insitutions, to properly fulfill their functions, must then keep abreast of these changing needs in order to plan and carry out the necessary training of their students at the appropriate levels. While this is but one aspect of the schools' total function, preparation for employment should fully qualify the trainee for job entry requirements in jobs that are available.

This chapter is devoted to the presentation of the results of a survey conducted among Montcalm County industrial and business firms and governmental units, to determine the nature of jobs in the area and to explore the extent of any interest which employers might have in high school and community college occupational education programs.

The questionnaire used was prepared by the Program Needs Subcommittee of the Montcalm County Citizens' Committee and by consultants from The University of Michigan. The instrument was field-tested on five typical firms ranging in size from very large to very small, and was then revised and put in final form. Since the actual size of the labor force of Montcalm County and the occupational distribution of workers are factors already known and available from such sources as U. S. Census Data and the Bureau of Industrial Relations of The University of Michigan, a complete occupational survey of the County was not attempted. The purpose of this study was rather to acquire information about the kinds of jobs for which two years of post-high school education (or evening adult education) is the optimum preparation.

The questionnaires were distributed in person or mailed in August, 1965.

It was decided that, in view of the expressed purposes of the study, retail establishments with fewer than ten employees (estimated) would not be surveyed. Professional offices and service establishments were surveyed, however, regardless of the estimated number of employees.

A total of 110 industrial and business firms were selected, and questionnaires were delivered, either in person or by mail. Of the questionnaires delivered, 83 (or 73 percent) were returned.

All those returned were useable, at least to some extent. Ample data were obtained to indicate the general nature of education and training demands for Montcalm County's labor force, and a sufficient number of employer opinions were obtained to give reliable information on how employers feel about high school and post-high school occupational education and the effect it might have on the quality of the work force in this County.

Occupational Distribution of Employees in the Companies Surveyed. Even though a complete occupational survey of the County was not attempted, it is instructive to know the occupational distribution of the work force for the business and industrial firms in the sample. The survey returns were separated into two groups--those from firms employing fewer than 50 employees in one group; those employing 50 or more workers in a second group. The respondents were asked to list the total number of employees, and to group them into eight categories, as reported in Table .

Only brief comment is warranted on the content of Table . First, it is again emphasized that the results do not portray the full picture of Montcalm County's labor force, and consequently the percentages of workers in the several occupational groups may be somewhat at variance with those which would have been obtained had a 100 percent sampling been possible. Some possible interpretations follow:

1. Due to the fact that many jobs in the categories "Administrative/Management," "Semi-Professional," and "Highly Skilled Technician" are beyond the range of this study, the numbers that appear and their proportion of all employed personnel are not representative.

2. The business and sales and service categories, about 16 percent, are under the national and state averages which are about 20 percent.

3. The percentage for the semi-professional and technical group (2) compares with the national figure. Ordinarily about 10 to 12 percent of the work force is in this group.

4. The response from large employers provides perhaps an overweighted proportion in the "Semi-Skilled and Unskilled" category. The proportions of this group in small industries runs about one-to-one compared to the other employment classifications, while in large industry it runs over three-to-one.

TABLE 38

OCCUPATIONAL DISTRIBUTION OF THE WORK FORCE IN A SAMPLING OF MONTCALM BUSINESS, INDUSTRIAL AND PUBLIC SERVICE ESTABLISHMENTS
(Number of Persons Reported in Various Occupational Categories)

Size of Firm	Occupational Category: Indus. 1	Indus. 2	Sales & Serv. 1	Business 1	Business 2	Health Hosp. Med. 2	Agr. 1	Rub Serv. 2	Misc. 1	Total 1	Total 2	Overall
0-50 (74 estabs)	161	16	416	153	48	32	4	6	93	827	102	929
50 or more (9 estabs)	4710	413	109	175	123	39	20			5014	575	5589
Totals	4871	429	525	328	171	71	24	6	93	5841	677	6518
% of Total group	83	63	9	6	25	11	+	1	+	90	10	100
Div. Total	5300		525	499		71	24	6	93	5841	677	6518
Div. % of Total	81		8	8		1	+	+	+	90	10	100

+ less than one percent
1 skilled, semi-skilled, unskilled jobs for which high school-level education and training (plus work experience) are considered sufficient and desirable
2 semi-professional and technical jobs for which one or two years of post-high school education are ordinarily considered desirable or essential

SECTION I. INFORMATION ON NUMBERS OF PERSONS EMPLOYED

The questionnaire was designed to gather information on employed persons by two classifications of educational requirements for job entry. The first classification was for those skilled, semi-skilled and unskilled employed persons for whom high school-level education and training (plus work experience) was considered sufficient and desirable. The second classification was for those persons employed in semi-professional and technical jobs for whom one or two years of post-high school education was considered desirable or essential. Each of the classifications were then sub-divided into categories of types of jobs (industrial, sales and service, business office, agricultural and miscellaneous in the high school level of classification; industrial, business, health, hospital and medical; and public service in the post-high school level of classification). The pages following present the data obtained, together with description and some interpretive comment.

TABLE 39 INDUSTRIAL

KINDS OF SKILLED, SEMI-SKILLED AND UNSKILLED JOBS NOT REQUIRING FORMAL IN-SCHOOL TRAINING BEYOND HIGH SCHOOL, NUMBERS CURRENTLY EMPLOYED, AND NUMBER OF FIRMS EXPECTING AN INCREASE IN THE NEXT FIVE YEARS

(Ranked in accordance with reported numbers currently employed)

Job Title	Numbers Currently Employed			Number of Firms Expecting an Increase in Next Five Years		
	Small Firms	Large Firms	Total	Small Firms	Large Firms	Total
A. Primarily Industrial						
Assembly line worker	5	1556	1561		1	1
Unskilled labor	29	802	831		3	3
Machine operator		791	791		2	2
Semi-skilled labor		400	400		1	1
Welder & flame cutter	16	178	194		1	1
Truck driver	26	146	172	2	1	3
Inspector	4	164	168		1	1
Foundry worker		116	116		1	1
Applicance repair	1	110	111		1	1
Machinist	27	71	98	2	2	4
Mechanic-general	6	78	84	1	2	3
Painter		80	80		1	1
Stationary operator		56	56			0
Auto mechanic	44	3	47	5		5
Electrician-wireman	1	35	36	1	1	2
Heavy equipment operator	29		29	5		5
Plumber		22	22		2	2
Air cond., refrig., and/or heating mechanic		21	21			0
Millwright		21	21		2	2
Maintenance		12	12			0
Chemical worker		10	10			0
Electrician		6	6		2	2
Cabinet maker		2	2	1		1
Total	161	4710	4871	19	23	42

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continued
TABLE 39 SALES AND SERVICE AND BUSINESS AND OFFICE

Job Title	Numbers Currently Employed			Number of Firms Expecting an Increase in Next Five Years		
	Small Firms	Large Firms	Total	Small Firms	Large Firms	Total
B. Primarily Sales & Service						
Sales (retail)	134		134	6		6
Stocker, packer, clerk	110		110	1		1
Nurse's aide	39	60	99	2	1	3
Service worker	29		29	6		6
Janitor	6	18	24	1	2	3
Gardener-yard care	1	15	16		1	1
Telephone serviceman	15		15			0
Stock man	14		14			0
Kitchen aide	12		12	1		1
Assistant cook	11		11	1		1
Bus driver	10		10			0
Household service	10		10			0
Laundry & dry cleaning work	6	3	9	1	1	2
Plant security guard		5	5			0
Postal worker		5	5			0
Waiter, waitress		5	5		1	1
Meter reader	4		4			0
Meat cutter	3		3			0
Total	416	109	525	22	7	29
C. Primarily Business Office Jobs						
Clerk-typist		133	133		1	1
General office worker	93	13	106	9	1	10
Bookkeeper	29	3	32	2		2
Bank clerk & teller	25		25	2		2
Stenographer		17	17			0
Receptionist	6		6			0
Dispatcher		5	5			0
Office machine operator		4	4			0
Total	153	175	328	13	2	15

continued
TABLE 39 AGRICULTURAL, AND MISCELLANEOUS

Job Title	Numbers Currently Employed			Number of Firms Expecting an Increase in Next Five Years		
	Small Firms	Large Firms	Total	Small Firms	Large Firms	Total
D. Primarily Agricultural						
Farm worker		20	20			0
Tree trimmer	4		4			0
Total	4	20	24			0
E. Miscellaneous						
Skilled	51		51			0
Unskilled-seasonal, part-time	35-100		35-100	2		2
Semi-skilled	5		5			0
Shopping	2		2			0
Total	93-158		93-158	2		2

Information About Skilled, Semi-Skilled and Unskilled Persons for Whom High School-Level Education is Considered Sufficient and Desirable. In any industrialized society an important segment of the work force is made up of artisans and mechanics--the skilled tradesmen who build, operate, and repair the structures and machines for modern living. Workers in the skilled trades classifications ordinarily need to possess a considerable amount of theoretical information about processes and materials, but major emphasis in their work is placed on manipulative skills--the unusual combination of a high order coordination between eye and hand which enables the worker to shape, fit, assemble, operate, and repair buildings and machines. In an earlier era almost all the training needed by the skilled worker was acquired by serving an apprenticeship to the master mechanic or journeyman. Indentured apprentices served for periods of three to as many as ten years, before becoming journeymen themselves. Except for reading an occasional set of instructions, or studying up on certain codes or manuals of standard practice, there was very little in the way of related technical instruction, and no requirement in general education beyond the ability to read simple instructions and perform very elementary arithmetical calculations.

The complexity of modern industry has changed all this, however. Necessary as it still is to develop a high degree of manipulative skill--and this can be attained only by actual on-the-job work experience--the extensive amount of related technical content now demanded by almost all the trade and craft occupations requires education and training at least through

high school. Indeed, much of the related technical knowledge needed by workers in the automotive, mechanical, elec rical, service, and metal trades is at a level beyond that taught in most high schools. Furthermore, many high schools, due to their small size or because of financial inadequacies, do not offer education and training which prepares students for entry into apprenticeship or for entry jobs in non-apprenticeable fields. It should be pointed out also, that tradesmen are citizens, and that as our entire society increases in complexity year by year, the assumption that people who work with their hands do not need advanced education in the common learnings is completely untenable.

Some semi-skilled occupations are little more than common (unskilled)labor. Others require only a modest ability in skills of hand and eye, but require certain attributes of intelligence, integrity, personality and related technical knowledge, and thus border on the semi-professional job category. Examples of this latter kind of job are: ambulance attendant, mail carrier, bus driver, and nurse's aide.

As far as the specialized manipulative skills are concerned, there is not much direct relationship between semi-skilled jobs and post-high school education. Some college experience is of definite value, however, in developing the correlative aspects of job performance (mentioned above) for semi-skilled workers.

In the survey, respondents were asked to give the job title, the number of persons currently employed, and the change in the rate of demand, if any, for each of these skilled, semi-skilled and unskilled jobs for which high school-level education is considered sufficient and desirable. Table presents the data on jobs requiring this level of education.

Examination of the table shows jobs by this educational requirement to be heavily concentrated in the industrial area, and particularly with large firms. This is not the case with small firms responding, wherein the largest concentration is in the sales and service type of job. Industry employs 4871 persons in jobs where high school-level education is desirable and sufficient, large industry accounting for 4710 and small industry for 161. In service and sales jobs, 525 persons are employed, 416 in small firms, 109 in larger firms. In business office jobs, 328 persons are employed, 175 in larger firms and 153 in small firms. Agricultural employers responding reported 24 workers, 20 employed by large employers, four by small. In the miscellaneous sub-division, 93-158 were reported to be employed, the variance accounted for by seasonal, part-time employment.

In viewing the number of firms expecting an increase in the employment of persons for whom high school-level education is considered sufficient and desirable, the greatest number of responding firms indicated the largest increases to be in industrial types of jobs. There were 42 designations of expected increases of employment in the industrial category, perhaps most greatly in the large employment areas of assembly line worker, unskilled labor, and machine operator. An increase in machinists was indicated by four firms, two small and two large. Three firms indi-

cated they would increase the number of truck drivers employed, and five small firms each, indicated they expected an increase in auto mechanics and heavy equipment operators, respectively.

There were 29 designations of expected increases in employment in sales and service category, including six each in retail sales and service workers, respectively. Twenty-two of the twenty-nine designations were from small firms, and over two-thirds of the increases designated were in categories of greatest employment, from retail sales through gardener.

Business office jobs had 15 designations by firms indicating an expected increase in employment. Thirteen of the firms were small firms, two were large. The greatest increases were in the areas of greatest current employment numbers, but most decidedly in the general office category, indicated by nine small firms and one large firm.

There was no indication relevant to this study of an expected increase in the agricultural and miscellaneous categories. It should be noted, though, that agriculture is only barely represented in this survey, and does not therefore reflect the trend of growth in agricultural related jobs.

Information About Semi-Professional and Technical Jobs in Which One or Two Years of Post-High School Education is Desirable or Essential. Among communities where junior or community colleges of a comprehensive nature have been established, there is a recognizable trend toward developing strong semi-professional and technical training programs in these colleges. Joint committees from business, industry and education are often set up to advise and counsel in the development and operation of such programs in community colleges. One purpose of this study was to gather information (on a sampling basis) about the semi-professional and technical occupations in Montcalm County as they might apply to post-high school education and training opportunities both for persons already employed, and for youth wanting to prepare for careers in the semi-professional and technical occupations. Information on job titles, on numbers employed and expected increases in the next five years is compiled in Table .

For the purposes of this study, the technician is defined as one who works at a semi-professional job which requires a considerable background of theoretical knowledge in science and mathematics fields; and which also requires a well-developed ability to work with instruments, tools, and certain kinds of machinery. The technician may work in industry, business, health, agriculture or government service fields. His work lies between that of the professional on the one hand and that of the skilled craftsman on the other. Ordinarily his work requires a level of education commensurate with the associate degree or two years of post-high school work. Some technicians have attained their status through work experience and home study, or through military service school training, but the normal path to technician status is through college-level education of two years' duration.

TABLE 40

KINDS OF SEMI-PROFESSIONAL AND TECHNICAL JOBS IN WHICH ONE OR TWO YEARS POST-HIGH SCHOOL EDUCATION IS DESIRABLE OR ESSENTIAL, NUMBERS CURRENTLY EMPLOYED, AND NUMBER OF FIRMS EXPECTING AN INCREASE IN THE NEXT FIVE YEARS

(Ranked in accordance with reported numbers currently employed)
A. Industrial, and B. Health, Hospital and Medical

Job Title	Numbers Currently Employed			Number of Firms Expecting an Increase in Next Five Years		
	Small Firms	Large Firms	Total	Small Firms	Large Firms	Total
A. Primarily Industrial						
Foreman-1st line supervisor	1	200	201		1	1
Industrial tech.		70	70		2	2
Air cond., refrig., &/or heating tech.		45	45		1	1
Quality control tech.	1	22	23		3	3
Drafting & design technician	10	25	35	3	1	4
Metallurgical tech.		14	14			0
Chemical technician		6	6			0
Instrumentation technician		5	5		1	1
Service technician	4		4	1		1
Mechanical tech.	—	3	3	—	1	1
Total	16	413	429	4	10	14
B. Health, Hospital & Medical						
Nurse (RN)	9	17	26	2	1	3
Nurse (Practical)	10	12	22	2	1	3
Med. lab tech.	9	7	16	2	1	3
X-ray technician	3	3	6		1	1
Physiotherapist	1	—	1	—	—	0
Total	32	39	71	6	4	10

..continued next page

TABLE 40 (continued)

Job Title	Numbers Currently Employed			Number of Firms Expecting an Increase in Next Five Years		
	Small Firms	Large Firms	Total	Small Firms	Large Firms	Total
C. Primarily Business						
Secretary	15	36	51	1	2	3
Salesman	23		23	6		6
Merchandising		20	20		1	1
Accountant	8	10	18	2	2	4
Business machine operator		16	16		1	1
Retail management & buying	1	14	15		1	1
Business management		10	10		1	1
Outside salesman		8	8			0
Business data processor		6	6		1	1
Sales manager	1	2	3			0
Real estate, insurance &/or finance	—	1	1	—	—	0
Total	48	123	171	9	9	18
D. Primarily Public Service						
Chief or Supt.	3		3			0
Clerk	1		1			0
Librarian	1		1			0
Treasurer	1		1			0
Total	6		6			0

While the numbers of these people employed, and their proportion in the total employment picture in Montcalm County is small, it is well to note that jobs in all fields and at all levels have increased in complexity and sophistication at an alarming rate during the nearly two decades since World War II. Many industrial, business, and health problems in research, production, and treatment require a "team approach" for most effective solution. Technicians are the support personnel for today's scientists, engineers, physicians, and business leaders. It is reliably estimated that by 1970 nearly one-sixth of the labor force (nationally) will be engaged in technician-type occupations at the semi-professional level.

Experience of the past ten years has definitely shown that all estimates of need for persons well trained in science and technology have erred on the side of "too little" rather than "too much."

If, to the total number employed, we add just one technician for each industry indicating an expected increase, the result is a 15 percent increase. To this an allowance of five percent should be made for death and retirement, which makes a total increase in numbers of these employees of 20 percent.

The bulk of employment among responding firms in semi-professional and technical jobs in which one or two years of post-high school education is desirable or essential is in the industrial jobs category. Almost three times as many workers are employed in this area as in all others with this level of education combined. Almost all of these jobs are in the large firms, 413 of a total of 429; the other 16 are in small firms. About half the jobs are in one category though, that of foreman--1st line supervision, a position in which on-the-job training or development is likely to continue. In nearly all instances, employers expect increases in these occupations in the next five years.

Health, hospital and medical occupations of a semi-professional or technical nature are about evenly distributed between small and large establishments, 39 in large firms, 32 in small firms, for a total of 71 jobs. While little is known of the impact of the federal Medicare program will make now in the future, the indications in this data, made well before the legislation was in effect, are that increases are expected in all areas. With Medicare there is every likelihood that the increases will be greater than anticipated.

Employment in Business Jobs. Jobs in business offices range all the way from professional and managerial occupations (the boss) through accounting, secretarial, and simple clerical jobs to the relatively unskilled jobs of messenger and "office boy." In this section of the study we are concerned primarily with those jobs which require either two years of post-high school education or high school graduation plus a year or more of on-the-job experience and training.

Nationally, about one-fifth of the labor force is engaged in jobs which are classified as "clerical and kindred." However, this classification includes a much wider spectrum of jobs than we are concerned with here. Ten percent of the labor force reported in the kinds of office jobs defined above, is typical of the proportion for which a post-high school educational institution might properly offer education and training.

The business office, like industry, is being automated. Jobs in business offices are far more complex today than they were a decade or two ago. There the secretary in the 1930's was expected to take dictation well and to give speedy and accurate performance on the typewriter, today's secretary must be equally skilled in those departments and in addition operate a wide variety of modern office machines and equipment. Dictaphones, transcribers, tele-

type machines, mimeograph and other duplicators, sorting machines, collators, and data processing equipment--these are just a few of the devices with which the modern secretary must "feel at home" if she is to meet the demands of her job.

SECTION II. EMPLOYERS OPINIONS AND PRACTICES REGARDING EDUCATION AND TRAINING OF NEW EMPLOYEES

While education and training for a specification occupation cannot guarantee the student employment in that occupation, close articulation between the educational institution and potential employers should assure the student that there is a need for this occupation and a readiness on the part of employers to employ qualified trainees. Without such articulation considerable education and training can result in occupational qualification for which there is little or no market.

Employer Interest in Further Discussion or Study of Plans for Improving Occupational Education. There is no way to forecast the exact future needs of employers, either in specific occupations or in specific numbers. The continuing dialogue, though, between education and training institutions and employing firms should result in short-term forecasts of considerable reliability, as well as in cooperative development of education and training programs to meet those needs. Employers have indicated interest in participating in further study of plans for improving occupational education and training, in addition to this study and previous vocational-technical education and training programs already under way. Table indicates the respondent firm's attitudes. Over half of them, 51 percent of the small firms and 78 percent of the large firms, said yes when asked if they were interested in discussion or further plans.

For immediate planning purposes, responding employers were asked to indicate the availability and demand for qualified local employees for entry jobs in the next five years. Their specific responses to expected increases in specific jobs is reported in ables and in the previous section. In combining expected increases with availability, in both categories of educational training, those with post-high school education and training, and those without, a general view of job categories may be seen. These data are presented in Table by percentage.

Reading Table one should keep in mind the numbers of employees actually represented in these instances, both by category, and by size of firm. (Present employment data are reported in ables and of this chapter.) The greatest scarcity of available employees for small firms who have entry jobs that require no post-high school education is primarily for industrial jobs: 59 percent of the indications in this category were of scarcity of this type of employee, while 41 percent were indications of adequate supply. On the other hand, the largest percentage of increase of entry jobs for this kind of employee was in the sales and service area: 45 percent of the indications in this category were for expected employment to increase, while 55 percent were of indications that employment would remain the same.

TABLE 41

EMPLOYER INTEREST IN PARTICIPATING IN DUSCUSSION OR FURTHER STUDY OF PLANS FOR IMPROVING OCCUPATIONAL EDUCATION AND TRAINING

(83 firms reporting)

Response	Number of Firms Indicating			Percent of Firms		
	74 Small Firms	9 Large Firms	83 Total Firms	74 Small Firms	9 Large Firms	83 Total Firms
Yes	37	7	44	51	78	53
No	24		24	33		29
Undecided		1	1		11	1
No Answer	13	1	14	17	11	17
Total	74	9	83	100	100	100

The lowest expected increase for small firms in this category is in business office jobs where 27 percent were for expected increases while 73 percent were for demand to remain the same. For those small firms which have entry jobs that require one or two years of post-high school education or training, the greatest scarcity by percentage is seen in the health, hospital, medical area, indications of 82 percent by these respondents as compared to 18 percent of indications that employment would remain the same. The least scarce seem to be in the primarily industrial jobs, still 55 percent scarcity as compared to 45 percent adequacy. On the demand side for this employee qualification health, hospital and medical was again highest for small firms, 60 percent indications of expected increases in the general area as compared to 40 percent indications of adequate demand. Lowest indications of increase were in the business office category, 36 percent of increase, 64 percent of adequate.

In viewing large firm indication of scarcity of employees for entry jobs that do not require post-high school education or training, sales and service has the highest indication of scarcity, 55 percent of scarcity of this type of employee, as compared to 45 percent of indications as adequate supply. It should be noted also that this is the same area which has the highest indication of expected increase, 66 percent indication of increase, compared to 33 percent indication of demand to remain the same. The lowest indication of scarcity of this type of employee among large firms is in the area of business office where scarcity has 30 percent of the indications as compared to adequate indications of 70 percent. For entry jobs requiring one or two years of post-high school education or training, large firms indicate greatest percentage scarcity to be in the health, hospital and medical area, 86 percent scarcity as compared to 14 percent adequacy, and also indicate greatest increase in this area, 57 percent increase, as compared to 43 percent of indications to remain the same. The lowest indications of increase is primarily in industrial jobs, 43 percent increase, 57 percent demand to remain the same. Availa-

TABLE 42

AVAILABILITY OF QUALIFIED LOCAL EMPLOYEES FOR ENTRY JOBS AND EXPECTED CHANGE IN DEMAND IN NEXT FIVE YEARS BY PERCENT INDICATING

Type of Job and Size of Firm	Employee with No Post-High School Education					Employee with One or Two Yrs. Post-High Sch. Educ.			
	Availability		Change in Demand			Availability		Change in Demand	
	Scarce	Adeq.	Incr.	Same	Decr.	Scarce	Adeq.	Incr.	Same
Primarily Industrial									
Small firm	59	41	37	63		55	45	38	52
Large firm	49	51	41	54	5	76	24	43	57
Primarily Sales & Service									
Small firm	40	60	45	55		(Not included in this			
Large firm	55	45	66	33		category)			
Primarily Business Office									
Small firm	27	73	29	71		73	27	36	64
Large firm	30	70	12	88		75	25	50	50
Primarily Health, Hospital, Med.									
Small firm	(Not included in this					82	18	60	40
Large firm	category)					86	14	57	43

bility of this qualification of employee for large firms is almost uniformly scarce by indications of 75-86 percent to increase in the next five years in all categories as compared to 25-14 percent indications that the supply will be adequate.

In summary, the greatest scarcity of qualified entry job applicants by percentage is for those with one or two years of post-high school education or training. Industrial and sales and service jobs for those applicants without post-high school education or training are indicated to have the fewest qualified applicants. The greatest increase in demand in the next five years, by percentage, is in sales and service for those without one or two years of post-high school education or training, and in the health, hospital and medical for those with one or two years of post-high school education or training. The large firms, also the largest employers by far, indicate the greatest or almost equal percentage of increase in demand in every category but business office jobs for those without one or two years of post-high school training; in this they have almost no expectation of increase at all.

Employment of Young Persons for Entry Jobs. Another consideration in the preparation of youth for entry jobs is the actual practice of employing firms relative to their age and qualifications. While there is complaint that the young person lacks maturity and is not responsible enough, this survey included a question on the frequency of employment for entry jobs of non-high school graduates, and of new high school graduates. These data are presented in Tables and , respectively.

TABLE 43

RELATIVE FREQUENCY WITH WHICH YOUNG NON-HIGH SCHOOL GRADUATES ARE EMPLOYED FOR VARIOUS ENTRY JOBS

(83 firms reporting. Ranked in decreasing order according to "common practice" column.)

Entry Job Category	Number of Firms Indicating Frequency of Employment of Young non-High School Graduates								
	Common Practice			Infrequent			Almost Never		
	74 S	9 L	83 T	S	L	T	S	L	T
Unskilled labor	6	3	9	18	3	21	4		4
Service jobs	5		5	9	4	13	14		14
Business office jobs	3		3	3		3	23	4	27
Sales jobs	3		3	3		3	18	3	21
Apprenticeship for the highly skilled trades and crafts	1		1	3		3	19	4	23
Semi-skilled jobs (assembly line and production workers; machine operators)	1	1	2	7	5	12	16		16

S = Small firms, L = Large firms, T = Total firms

Table indicates that young non-high school graduates are most frequently employed as unskilled labor by most firms, 9, or about one-third of the large firms and a small fraction of the small firms. This same type of employment is also indicated by the greatest number of respondents, 21 firms, who infrequently employ non-high school graduates as unskilled labor. The areas of greatest response of almost never employing non-high school graduates is in business office jobs, 27 firms, and apprenticeship for the highly skilled trades and crafts, 23, which includes almost half of the large firms in both cases.

TABLE 44

RELATIVE FREQUENCY WITH WHICH NEW HIGH SCHOOL GRADUATES ARE EMPLOYED FOR VARIOUS ENTRY JOBS

(83 firms reporting. Ranked in decreasing order according to "common practice" column.)

Entry Job Category	Number of Firms Indicating Frequency of Employment of New High School Graduates								
	Common Practice			Infrequent			Almost Never		
	74	9	83						
	S	L	T	S	L	T	S	L	T
Unskilled labor	19	8	27	5		5	2		2
Business office jobs	18	3	21	8	3	11	7		7
Service jobs	19	2	21	5	4	9	3		3
Semi-skilled jobs (assembly line and production workers; machine operators)	11	5	16	3	2	5	3		3
Apprenticeship for the highly-skilled trades and crafts	10		10	6		6	6	5	11
Sales jobs	7		7	5		5	7	4	11
Highly-skilled jobs	3		3	3		3	13	7	20
Technician jobs	1		1	4	3	7	12	4	16

S = Small firms, L = Large firms, T = Total firms

New high school graduates are commonly employed by more firms as unskilled labor, 27 firms, including 8 of the 9 large firms. (See Table) Business jobs and service jobs are second in commonly employing these candidates, 21 firms in each, about one-fourth of the large and small firms, respectively, in each type of job. Business office jobs and service jobs also had the largest number of firms responding as infrequently employing these candidates, 11 and nine, respectively. Highly skilled jobs and technician jobs were indicated by the largest number of firms, 20 and 16, respectively, as the areas of almost never employing new graduates.

For both categories of new entry jobs, the employment of non-high school and high school graduates is most commonly in unskilled jobs, service jobs and business jobs coming second, but only for graduates, by large firms which are also the largest employers.

Employer Evaluations of Young Persons Applying for Entry Jobs. To get an indication of employers' opinions of their experiences with young persons starting with them a series of questions was included pertaining again to non-high school graduates, and to new high school graduates. These data are presented in Table .

TABLE 45

EMPLOYER EVALUATIONS OF YOUNG PERSONS APPLYING FOR ENTRY JOBS

(83 firms reporting. 74 small; 9 large)

Evaluating statement	Number of Firms Checking			Percentage of Total Firms		
	73 S	9 L	83 T	73 S	9 L	83 T
1. We have employed a number of young non-high school graduates and we have found they can perform satisfactorily certain jobs.[a]	8[b]	1	9	11[b]	11	11
2. We have employed a number of young non-high school graduates, but find they need a considerable amount of additional education and/or training before they can perform satisfactorily.	8		8	11		10
3. We have found young non-high school graduates unsatisfactory.[c]	9		9	12		11
4. Most young high school graduates who apply seem reasonably well prepared for entry employment, and we have employed them as openings have occurred.	28	3	31	38	33	37
5. We have employed a number of young high school graduates, but find they need a considerable amount of additional education and/or training before they can perform satisfactorily.	9	3	12	12	33	14
6. We have found it inadvisable to employ young high school graduates, except for unskilled jobs.	6	1	7	8	11	8
7. The nature of most of the entry jobs in our firm is such that young high school graduates are virtually unemployable because of a lack of occupational education or training.	6		6	8		7

a. Assembly line and production workers, machine operators sanding and paint spraying, service, unskilled labor, typists, cashiers, inventory, stock handlers, ass't department head, janitor and janitor helpers, car washing and waxing.
b. An estimated number; the final tallies did not include the actual number, but did include the results.
c. Not responsible; poor appearance.

S = Small firms, L = Large firms, T = Total firms

Few firms, it may be observed, responded to the first three questions, those having to do with non-high school graduates. And in all but one case these firms were in the small firm category. With almost an equal response to all the first three questions, about ten percent of the firms in each case, young non-high school graduates are indicated to be quite limited in the jobs they can perform satisfactorily, are either in need of considerable additional education or training, or are not found satisfactory at all.

For high school graduates, about a third of both sizes of firms found them reasonably well prepared for entry employment, and employed them as openings occurred. Significantly, the same number of large firms, three, indicated they they needed additional education or training before they could perform satisfactorily, though only about one-third of the hiring small firms, nine, indicated this. Few firms found new high school graduates unsuitable for jobs other than unskilled, or because their entry jobs required greater education or training at the outset, seven firms and six firms, respectively, and all but one of these firms was in the small firm group.

Generally speaking, new high school graduates were found to be satisfactory for employment in new entry jobs by more than three times as many firms as were non-high school graduates. Small firms were least satisfied with either educational qualification, and in need of more highly trained applicants for entry jobs. And additional education or training was indicated as necessary by both groups of firms.

Meeting the Occupational and Training Needs of Employers. While the occupational and training programs of the schools should be designed to serve all youth, the large majority expect to become employed in the area (See Chapters and) having completed educational and training programs locally available. The trainee, the school system and the trainee employer, therefore, all have a vital interest in the suitability of the specific as well as the general educational program. Some training programs are carried on by the schools satisfactorily, and others can be devised as the need warrants to be carried on as well. In other cases, the employer has need to maintain his own training program because of the unique character of his operation or the particular requirements of the training for his business. There is a growing trend in the state as well of a combination training-and-education program whereby the student obtains certain operational and theoretic education in the school classroom, and functional training on the job with an employing institution. Just how the training and education is best handled and developed is in the hands of the institutional representatives who are willing to work together to achieve it. There is no single approach that is best, no particular specifications that will hold for years ahead; rather, there are several ways that need deliberation and the most suitable decided upon to meet foreseeable demands; then as needs change, these decisions need to be reviewed to meet the developing requirements.

Presently, employers are largely of the opinion that Montcalm County and Belding Area schools are meeting their occupational and training needs fairly well or poorly, 43 percent and 28 percent, respectively, of employers so indicated (See Table). Only ten percent felt the schools were meeting their needs very well, and 19 percent did not respond.

TABLE 46

EMPLOYER OPINION OF HOW WELL MONTCALM COUNTY AND BELDING AREAS ARE MEETING THEIR OCCUPATIONAL AND TRAINING NEEDS

(83 firms reporting. 74 small and 9 large)

Size of Firm	Opinion							
	Very Well		Fairly Well		Poorly		No Response	
	N	%	N	%	N	%	N	%
Small (74 Firms)	7	10	31	42	21	28	15	20
Large (9 Firms)	1	11	5	55	2	34	1	11
Total N.	8		36		23		16	
Total %		10		43		28		19

While firms who currently operate formal classroom training departments may desire to continue their operation in all or many phases, some might be doing this because the schools do not; some phases might be desirable for the schools to operate, and perhaps preferred so by the employer operator. Firms which do not operate training programs may desire that the schools institute a program to meet their needs. Table presents data that indicates 40 percent of the responding firms operate their own formal classroom training departments, 35 percent of the small firms and 77 percent of the large firms. Thirty-three percent do not operate such a program, and likely the 27 percent who did not answer do not operate such a program either.

TABLE 47

EXTENT OF FORMAL CLASSROOM TRAINING OFFERED EMPLOYEES BY ORGANIZED, OPERATING TRAINING DEPARTMENTS

(83 firms reporting. 74 small, 9 large)

Response	Number of Firms Indicating			Percent of Total Firms		
	74 Small Firms	9 Large Firms	83 Total Firms	74 Small Firms	9 Large Firms	83 Total Firms
Yes	26	7	33	35	77	40
No	26	1	27	35	11	33
No Answer	22	1	23	30	11	27

The types of programs employers operate are shown in Table . The largest types by percentage are apprenticeship and supervisory training with 14 percent indicating this respectively, though almost half of the large firms are included in the latter. A large percentage of large firms also operate job upgrading programs, 44 percent so indicating.

TABLE 48

TYPES OF EMPLOYER-OPERATED FORMAL TRAINING PROGRAMS AND NUMBER OF FIRMS OPERATING THEM

Type of Employer-Operated Training Program	Firms Operating Their Own Training Programs					
	By Number			By Percent		
	74 S	9 L	83 T	S	L	T
Apprenticeship	11	1	12	15	11	14
Supervisory training	8	4	12	11	44	14
Technician training	4	2	6	5	22	7
Plant management	3	2	5	4	22	6
Executive development	4	1	5	5	11	6
Job upgrading		4	4		44	5
All new employees	4		4	5		5
On-the-job training	2	1	3	3	11	4
Service sales	2		2	3		2
Other	1	2	3	1.4	22	4

S = Small firms, L = Large firms, T = Total firms

As to the type of occupational education and training employers would support, the greatest support was indicated for a strong program of occupational education in the community college, 55 percent of the firms indicating this (See Table).

TABLE 49

TYPE OF OCCUPATIONAL EDUCATION AND TRAINING EMPLOYERS WOULD SUPPORT, BY NUMBER AND SIZE OF FIRMS SUPPORTING

(83 firms reporting. 74 small, 9 large)

Type of Training Would Support	Number of Firms Supporting			Percent of Total Firms		
	74 S	9 L	83 T	S	L	T
1. Substantial expansion of vocational education in existing high schools.	18	1	19	25	11	23
2. Creation of an area vocational school for secondary (high school) occupational training.	9	5	14	12	55	17
3. A strong program of occupational education in the community college.	42	4	46	58	44	55

S = Small firms, L = Large firms, T = Total firms

Substantial expansion of vocational education in existing high schools was supported by 23 percent of the firms, 18 small firms and one of the nine large firms.

SECTION III. GENERAL COMMENTS BY EMPLOYERS ABOUT IMPROVEMENT OF EDUCATION AND TRAINING OPPORTUNITIES

In addition to the structured responses asked for in the body of the questionnaire, the subcommittee solicited free responses. Respondents were asked to make general comments on now they felt educational and training opportunities in the Montcalm County and Belding area might be improved.

Open-end comments by large business and industry:

Ore-Ida - A great need for skilled craftsmen. Far too high percentage of High School dropouts.

Wolverine Shoe & Tanning Corporation - Provide additional education in

1. Principles and practices of supervision and management.
2. Basic industrial and mechanical engineering.
3. Business communications.
4. Related theory training for machine repair apprentices.
5. Basic and advanced clerical, stenographic, and secretarial training.

Carson City Hospital - More vocational training for High School graduates and more formal training. (Carson City High School has just built a new building for vocational training.)

General Electric - Prefer to hire people with agrarian background and mechanical ability.

Open-end comments from small business and industry:

Interest in broadening Vocational Education.

Licensed Practical Nurses program.

Three for Post-High School training in Bookkeeping, Secretarial, Personnel, Office Machines, Foreman's training, Inspectors, Quality control, Material and Production control, Updating courses for Supervisory Personnel.

Two for better training for clerks in meeting public, better letter writing and shorthand experience.

More training in mathematics, making change, use of fractions.

Need strong vocational training, 50% of High School graduates interviewed could not read, write, or spell satisfactorily.

Commercial courses should be upgraded, pupils cannot spell, punctuate and not good in math. Every girl should have two years of typing before graduation, shorthand also recommended.

Meat cutting, Produce and General Merchandise display, Sign painting.

SUMMARY

1. The 74 responding firms employing 50 or less employees accounted for 14 percent of the numbers reported employed, 929 employees. The nine responding firms employing more than 50 employees accounted for 86 percent of the numbers reported employed, 5589 employees.

2. Eighty-one percent of the employees were reported to be in industrial jobs, eight percent each in sales and service, and in business jobs, one percent in health, hospital and medical jobs, and less than one percent each reported in agriculture, public service and miscellaneous, respectively. Ninety percent of the jobs were reported as requiring no post-high school education or training for entry; ten percent as requiring one or two years of post-high school education or training.

3. Eighty-three percent of the jobs requiring no post-high school education or training were primarily industrial jobs, nine percent were primarily sales and service, six percent primarily business and less than one percent each were agricultural and miscellaneous, respectively.

4. Sixty-three percent of the jobs requiring one or two years of post-high school training or education were primarily industrial jobs, 25 percent primarily business jobs, eleven percent primarily health, hospital and medical, and one percent primarily public service.

5. The area of largest employment in numbers, the industrial area, has indications of a scarcity of qualified applicants about as much or half again as much as it has indications of adequacy. The greatest scarcity in this area is among large firms for employees with one or two years of post-high school education or training. Changes in demand for employees with either background are indicated to be about two increases in jobs as compared to three staying the same or decreasing.

6. The greatest increase in the next largest group of employees is expected in primarily sales and service jobs for entry jobs not requiring post-high school education. Indications are that change in demand will be close to one job increase for one staying the same for small firms, those employing most in this category, to two jobs increase for one staying the same for large firms. Scarcity of these employees has a ratio of two indications of scarcity as compared to three of available in small firms, and about five to four in large firms. The lowest increases are expected in the primarily business jobs for entry jobs requiring no post-high school education or training; only 12 percent of the indications are of job increases while 88 percent are for demand to remain the same. The demand is one job increase to one job remaining the same for large firm employment of applicants in this area with one or two years of post-high school education.

Health, hospital and medical jobs have the greatest indication of increase; this is, however, only about one percent of the total numbers in the survey.

7. As a common practice about one-ninth of the responding firms, including 33 percent of the large firms, employ young non-high school graduates as unskilled labor; 21 percent, including another 33 percent of the large firms, infrequently employ applicants of this qualification. Over one-fifth of respondents almost never employ this type of applicant in business office jobs, sales jobs or as apprentices.

8. As a common practice eight of the nine large firms employ new high school graduates as unskilled labor, as do 19 of the 74 small firms. Five of the large firms, 16 firms in all, employ them in semi-skilled jobs. The other general job categories where new graduates are commonly employed are business office and sales and service jobs, 21 firms so indicating.

9. Only about one tenth of respondents indicate satisfaction or dissatisfaction with non-high school graduates as employees.

10. About one-third of responding firms indicate that new high school graduates are well prepared for entry employment, and that they employ them when openings occur. A third of large firms, 14 percent of all firms indicate new graduates need considerable additional training before they can perform satisfactorily.

11. Ten percent of responding firms feel their training needs are very well met, 43 percent fairly well, 28 percent poorly, and 19 percent did not respond.

12. Forty percent of responding firms indicated they offered formal classroom training programs, 33 percent that they did not, and 27 percent did not respond.

13. The greatest percentages of firms 14 percent, respectively, indicated that they operated formal training programs in apprenticeship, and supervisory training; supervisory training programs were offered by four of the nine large firms. Four of the large firms also indicated job-upgrading programs. Other programs representing significant numbers are for technician training, four small and two large firms; and plant management, three small and two large firms.

14. Fifty-five percent of the responding firms indicated strong support of occupational education in the community college; 23 percent for substantial expansion of vocational education in existing high schools, and 17 percent for creation of an area vocational school for secondary (high school) occupational training.

15. Open-end comments dwelt mainly on need for specific courses, specific skill training and education in theory, principles and practices, and improving the quality of trainees.

CHAPTER VI

LEGAL, FINANCE, AND ORGANIZATIONAL ALTERNATIVES

Introduction. This chapter provides information on the legal basis for organizing an area vocational-technical center, estimated costs, and organizational alternatives.

Part I

Legal Definition and Provision for Organization. Legal provision for the establishment of the first alternative in Chapter VI is found in Michigan Act 190 of Public Acts of 1962, as amended by Act 246 of Public Acts of 1964. This legislation provides that an intermediate school district may make a "comprehensive study of the educational conditions and needs," may levy and collect millage by referendum, and "may enter into long term contracts with constituent districts or community colleges" to provide area vocational-technical education programs. Such contracts must be for a period of at least 15 years. Intermediate boards are "specifically prohibited from operating area vocational-technical education programs."

The basic legislation which provides for the establishment of a "community college or area vocational-technical education program" are Acts 189 of Public Acts of 1951 and Act 188 of Public Acts of 1955, as amended by Act 182 of Public Acts of 1957, as amended by Act 200 of Public Acts of 1959, as amended by Act 135 of Public Acts of 1960, as amended by Act 200 of Public Acts of 1961, as amended by Act 98 of Public Acts of 1963, and as amended by Act 237 of Public Acts of 1964.

The law defines a community college as "an educational institution providing primarily for all persons above the twelfth grade level and primarily for those within commuting distance, collegiate and non-collegiate level education including area vocational-technical education programs which may result in the granting of diplomas and certificates including those known as associate degrees but not including baccalaureate or higher degrees."

The same section defines an area vocational-technical education program as a program of organized systematic instruction designed to prepare the following individuals for useful employment in recognized occupations:

(a) Persons who have completed or left high school and who are available for full-time study in preparation for entering the labor market.
(b) Persons who have already entered the labor market and who need training or re-training to achieve stability or advanced employment.
(c) Persons enrolled in high school.

This section goes on to state that the programs or courses for a high school enrollee will be provided at the request of the superintendent of the school district in which the person is enrolled.

A legally established community college exists in Montcalm County already. Legislation pertaining to community colleges provide the legal bases for the plan recommended in this study for providing vocational-technical programs available for high school youth.

Part II

Various alternative plans have been considered for meeting the high school level vocational-technical needs of Montcalm County youth. They are as follows:

Plan A - one of the existing secondary schools may be designated as an area vocational-technical center. Students from all other high schools in Montcalm County would be transported for part of their work leading to satisfaction of graduation requirements to the designated center for vocational-technical work.

Plan B - The Montcalm Community College, at the request of the superintendents of schools may be designated as the area vocational-technical center for high school youth. Youth from the high schools in Montcalm County would attend classes in vocational-technical education in the center operated by the college for high school credit toward graduation from their respective high schools.

Plan C - For certain types of vocational-technical high school work one of the public school district high schools would be designated as the center, while for other types of programs, the college would be designated as the center.

Plan D - Each of several high schools would become the center for certain specific types of vocational-technical work for high school students.

Plan E - There would be a new central facility constructed, which would accommodate 500 high school youth, which would be separate from either an existing high school or the college. It would be operated by the district in which it was located on a contractual basis with the intermediate school district.

After consideration of the merits and disadvantages of each alternative plan of organization for providing vocational-technical programs in Montcalm County, it is the considered decision of study committee members, members of the community college administrative staff, personnel in the intermediate school district superintendent's office and school superintendents in the County that

Plan B should be recommended. The Montcalm County Community College should become the area vocational-technical center designated to offer programs appropriate for high school youth which are not already available in each of the existing high schools in this County.

Part III

Estimated Costs for Operation and Capital Outlay. In accordance with the regulating requirements of the State Department of Education, this study has drawn together pertinent data on financial resources and anticipated financial requirements of the plan proposed. Financial requirements are of two types: operational expenditures (e.g. instructional salaries, administrative costs, maintenance, etc.); and capital outlay (e.g. site, building and equipment).

Sources of Operating Funds. Several sources of funds are available to finance the plan suggested above. Initial consideration will be given to those sources which are outside the community and secondly, consideration will be given to sources of a local nature.

Primarily, external funds come from the State and/or Federal governments. Under the present plan in Michigan, however, Federal monies are administered through the State Department of Education and are indistinguishable from State monies. Presently, it appears that the secondary vocational-technical program will be reimbursed at 25 percent of operational costs under the Vocational-Education Act of 1963. There is presently no provision for any additional state aid reimbursement as there is in Ohio. Table 50presents the costs as projected for the first years of operation. The current cost of secondary education per student in Michigan public schools seems to average near $400. Since the type of training proposed is more expensive, this study has allowed gross operational cost of $500 per student. Column D in Table 50reflects the amount of money that must be raised locally to operate under the alternative recommended. No tuition may be charged the student at the secondary level. A levy of about one (1) mill on the equalized assessed valuation of $144,000,000 would be necessary to provide the local share of operating costs in 1970 for the vocational-technical programs.

The law permits the Intermediate School District to submit such a proposition for this purpose to the qualified voters (all registered voters). If the vote is favorable, the authorized millage can be levied and the money collected by the Intermediate District which then would be transferred to the college to defray expenses in operating the programs.

Capital Outlay. In order to project plans for a facility of sufficient size to accommodate vocational-technical training for the various levels, it was necessary to find some institution that had experience in this type of development. Jackson Community College is developing such a building program. The following estimates are based upon costs which they have experienced.

TABLE 50

SECONDARY
VOCATIONAL-TECHNICAL PROGRAM

Year	A Full Time Equivalent	B Operating* Cost (A x $500)	C Federal-State Contribution 25% (.25 x B)	D Total to be raised locally
1967-68	300	$150,000	$37,500	$112,500
1968-69	313	156,500	39,125	117,375
1969-70	347	173,500	43,375	130,125
1970-71	373	186,500	46,625	139,875
1971-72	396	198,000	49,500	148,500
1972-73	426	213,000	53,250	159,750
1977-78	512	256,000	64,000	192,000

* $500 per full time

Community College enrollments have been estimated in the Montcalm County Community College Study of 1964[1] as reaching 513 in 1970. Although the survey doesn't indicate whether this is expected head count or full-time equivalent, it is assumed it is head count. In an area such as Montcalm County, this would be approximately 410 full-time equated students. If the community college enrollments increase in proportion to the expected increase in high school vocational-technical students, there should be approximately 560 full-time equated community college students in 1977-78. In that year it is estimated there would be 512 high school youth (full-time equated) for whom vocational-technical facilities would be needed.

One advantage to be gained under Plan B recommended is that some dual use could be made of facilities by vocational-technical high school students and community college technical and semi-professional occupational education students. The overlap is estimated to be about one-sixth. Total facilities would be needed to accommodate approximately 1,072 youth. Costs for construction and equipment are estimated as follows:

[1] P. 33

1,072	Voc-Tech-Community College students
150	sq. ft. per student
160,800	
$23	per sq. ft.
$3,698,400	
616,400	1/6 allowed for overlap
$3,082,000	
1,541,000	State and Federal share
$1,541,000	Local share for both community college & Voc-Tech Center

If the cost of such buildings and equipment was no more than $20 per square foot, then the local share would be only $1,340,000. A 20-year bonding program to defray such costs would require approximately .8 mill assuming equal principal payments and an interest rate of 4 percent based upon an equalized assessed valuation of approximately $144,000,000. A levy of one mill would be necessary if it were as high as $23 per square foot.

It is estimated that by 1970, the gross per capita operating cost for a community college enrolling 410 full-time equated students would be $328,000. State aid would be $112,750 at the rate of $275 per full-time student and student tuition would raise $82,000 at $200 per student. The local share derived from taxes would be $133,250. A tax levy of .9 mill would be necessary to operate the community college program. In summary, it would appear that the following financial requirements would be realistic for adequate facilities and under present conditions of operation.

Community college operation	1 mill (already authorized)
Voc-Tech Center operation	1 mill
Building facilities for both	1 mill
Total	3 mills

It is proposed that the Intermediate School District seek to obtain authorization from the voters for levying the difference between the currently authorized levy for community college purposes and the total needed to provide adequately for both the community college and the area vocational-technical center to be operated by the college.

SUMMARY AND CONCLUSIONS

1. Adequate legal provisions exist for establishing an area Vocational-Technical Center.

2. The Montcalm Community College if requested by the superintendents of schools should be designated as the Area Vocational-Technical Center.

3. One mill has already been authorized for the community college. To permit the college to operate as an area Vocational-Technical Center and to provide adequate building facilities for accommodating both high school and college, an additional (2) two mill levy is needed.

CHAPTER VII

SUMMARY AND CONCLUSIONS

The findings of the several study committees are summarized in this chapter. In addition, appropriate conclusions supported by the findings are presented.

Community Background and Characteristics.

1. Population in Montcalm County has been increasing at a slow, steady rate with increasing percents classified as rural non-farm.

2. The level of education attained by persons over age 25, the percent of persons age 14-17 in school, and the median family income are all lower than for the state as a whole.

3. While the proportion of persons employed in manufacturing is identical to that for the entire state, the percent of white collar workers in Montcalm County was considerably less than for the state. Thirty-eight percent were in manufacturing, 15 percent in retailing, and 12 percent in agriculture.

4. Three of ten men workers are operatives as are 21 percent of the women. Seventeen percent of the men are craftsmen and 13 percent are farmers. A fifth of the women are clerical workers and another 15 percent are service workers.

5. Although high school enrollments increased by 50 percent during the past decade, they are expected to increase only 25 percent in the next decade.

6. Vocational-technical facilities should be available which would accomodate approximately 500 youth full-time (or 1,000 individual students attending on a half-time basis).

Educational Needs - (Seniors, Graduates and Drop-outs)

7. Residential tenure of seniors reflects considerable stability of population. Seven of every ten have lived in the area over 10 years and 79 percent have lived there over 6 years, or since junior high school.

8. The incidence of broken homes is about average. Twelve percent were living with only one of the parents, and the national average is about 13 percent.

9. Seven of every ten boys and 57 percent of the girls worked part-time while attending school.

10. Of all seniors, 49 percent expressed definite plans for attending college and another 15 percent thought future plans "probably"

would include college. Eleven percent were undecided. Twenty-four percent of the boys and 26 percent of the girls definitely or probably did not include college in future plans.

11. Of seniors planning on college, 20 percent expected to attend Ferris State College, 15 percent Michigan State University, 10 percent Grand Rapids Junior College, and 8 percent Central Michigan University.

12. Of the 517 seniors whose future plans definitely or probably include college attendance, 81 percent plan to enroll in some type of educational institution the next year following high school graduation.

13. Seventy-one and 66 percents respectively of boys and girls with definite plans for college were enrolled in a college preparatory curriculum. Fifteen percent of each were enrolled in a general curriculum, and 6 percent of the boys and 18 percent of the girls were enrolled in a commercial curriculum.

14. Of the youth who are definitely not planning on college attendance, 63 percent of the boys were enrolled in a general curriculum, and 17 and 13 percents respectively were enrolled in a shop and an agriculture curriculum. Of the girls with such plans, 45 percent were in a general curriculum, 36 percent in a commercial curriculum, and 11 percent in a homemaking curriculum. (Over 9 of 10 boys not planning on college were enrolled in a shop, agriculture, or general curriculum, while 8 of 10 girls without plans for college were in a commercial or general curriculum.)

15. Of youth whose plans definitely do not include college attendance, 10 percent rank in the top third of their class and 50 percent are in the middle third. Fifty-two and 43 percents respectively of those definitely planning on college rank in the top and middle thirds of their class.

16. Eight percent of the youth in the top third of their class have no plans for college, while 26 percent in the bottom third have plans that include college attendance. Forty-two percent of the youth ranking in the middle third of their class have definite plans for college and an additional 18 percent have plans that will "probably" include college.

17. Three of every ten seniors not planning on college indicated wanting to work as their reason and 23 percent felt that it was too expensive. Fifteen percent cited inability to make good grades as their reason.

18. Of youth without plans for college, 21 and 40 percents respectively indicated that if more money were available they would definitely or probably change their plans. Lack of money is an obstacle for at least 7 percent of all seniors and possibly 20 percent.

19. About half of the youth whose plans would or might change

would need an amount to cover all ($1200-1500) the expenses of attending college for a year in order for plans to change. Another 43 percent would need enough to cover half of the expenses.

20. Of youth with no plans for college attendance, only 2 percent would be interested in post-graduate work at the local high school, but 9 percent would be interested in entering military service for training, 18 percent would be interested in apprenticeship-type training, and 38 percent expressed an interest in on-the-job training. However, 52 percent would be interested in some type of advanced business, technical or trade training if it were available in the area.

21. Of the boys whose plans definitely do not include college, 80 percent plan to work or enter military service following graduation. Only 6 percent plan to attend a trade or technical school. Of the girls with no plans for college, seven of ten plan to work and 44 percent expect to be homemakers. Five percent expect to attend a trade or technical school and 3 percent a nursing school.

22. In general, fields of interest for immediate advanced study tend to agree with long-range occupational goals of seniors. However, many who are planning on college attendance, especially the boys, might be better off in a trade or technical school in terms of their long-range occupational goals.

23. One-half of the seniors who don't know what occupation they want to enter express definite plans for college attendance.

24. There is little demand for liberal arts, but there is considerable demand for teacher training, nurses training, business administration, and for a wide variety of trade and technical courses including agriculture, secretarial-clerical, mechanical technology, and skilled machine trades.

25. Five factors appear to be highly inter-related. These factors are: plans for college attendance, academic rank, family income, parents' level of education, and number of extra-curricular activities in which students participated.

All of these five factors are positively correlated with the students' perceptions of the adequacy of their high school preparation and of the amount of help they received from their high school in occupational and educational planning. This relationship is more pronounced in the case of the boys than of the girls. The high schools seem to be meeting the needs of the youth who have high academic talent and who come from "good" socio-economic backgrounds. The ones who feel least satisfied with their high school preparation are the boys who have lower academic ability, lower socio-economic background, and less ambitious occupational aspirations.

26. During the past five years approximately 44 percent of all high school graduates in the Montcalm County study area enrolled for further study in some kind of post-high school institution--about 35 percent in colleges and universities, and about

9 percent in "other types" of post-high school institutions. These data were obtained from high school principals' reports.

27. A 15 percent sampling of the high school graduates of the classes of 1960 and 1962 was made with about three-fourths of them responding. Fifty-seven percent reported that they had attended (or were attending) a post-high school institution of some kind (college or university, business college, trade school or vocational school). Since only about 44 percent of all graduates were reported as having "gone on" to post-high school study by the high school principals' reports, it is possible that the "sample" is biased in the sense that those who had "gone on" tended to return the questionnaire and those who did not "go on" tended not to reply.

28. The evidence shows that Montcalm County's high school graduates tend to live in the county or adjacent to it. At least, of those who replied, while 60 percent reported having left at some time, still 60 percent indicated living there presently.

29. About three-fourths of the respondents reporting indicated earnings of less than $100.00 a week, 68 percent of the men interested in further education and about 90 percent of the interested women indicated earnings which would not permit expenditures beyond necessary living expenses without difficulty.

30. Of the 65% of graduates who indicated interest in further education, about half (48.8%) expressed interest in a professional goal, other than nursing, and over half (51.2%) expressed interest in a goal which could be fulfilled in a one-or two-year post high school program.

31. Two-thirds and more of the male respondents in all income categories expressed interest in further education, as did about half the women.

32. Between one-third and one-half of all respondents indicated that their reasons for no further education or for not presently attending school to be (1) family responsibilities, (2) financial reasons, and (3) lack of opportunity in the community. About one-fourth of the respondents said they had had the financial ability.

33. A significantly positive attitude among parents about further education was indicated by about three-fourths of all graduates, men and women alike, who reported their parents' desire or insistance that they go on for more schooling.

34. Better than two-thirds of the respondents indicated they would have or might have taken advantage of a community college in the region. Twenty-seven and 20 percents of the men and women respectively indicated they definitely would have taken advantage of a community college in the region, while an additional 44 percent said they might have done so. Eight of ten men and about half the women with no further education said they might or would

have done so, while about two-thirds of those who attended a college or university said they might or would have.

35. The availability of further training or education to graduates was thought to be adequate by 22 percent, fair by 43 percent, and poor by 33 percent. Among men who had gone to college or university, 39 percent thought such opportunity poor as did 41 percent of those who had had no further education or training.

36. Of those who completed a high school curriculum designed for their further education or training, about two-thirds of those going on to college or university had done so, a little over half of those who attended business college, and about a fifth of those attending trade or technical school. On the other hand, none of the men going on to business college reported having taken a business education curriculum, but had followed a college preparatory program. Forty percent of the men in a general curriculum indicated college or university attendance. Thirty-eight percent of the men in agriculture reported no further training, as did 36 percent of those in shop, 38 percent of the women in business education, and 22 percent of the men in a general curriculum.

37. About nine of ten graduates felt high school preparation for college was fair and very good in some ways, as compared to three-fourths who felt the same way about preparation for employment. As to the extremes, slightly more felt preparation for college and for employment was excellent--10 and 12 percents respectively--than did those who felt such preparation inadequate--8 and 10 percents respectively.

38. In their indications of the adequacy of their high school services and facilities the graduates predominantly felt they were fair. Social activities was the only exception felt to be good by a greater number, while assistance in finding employment and someone to confide in about personal problems was felt by more to be poor, the former by half or more by both sexes, the latter by over half the women.

39. Graduates recommended improvements in the high school of both the college preparatory and vocational programs. They specified improvements in English, foreign language, mathematics, business education, "shop," and vocational education; emphasis on fine arts and physical education; extensive vocational, academic and personal counseling, particularly at the ninth and tenth grade levels; more, better, fairer personnel; the atmosphere for learning; new buildings, more room, better library facilities and teaching facilities and equipment.

40. Of the respondents who left school before graduation, 68 percent indicated an interest in additional training, particularly of a vocational-technical kind.

Educational Needs - (Business and Industry)

41. The 74 responding firms employing 50 or less employees accounted for 14 percent of the numbers reported employed, 929 employees. The nine responding firms employing more than 50 employees accounted for 86 percent of the numbers reported employed, 5,589 employees.

42. Eighty-one percent of the employees were reported to be in industrial jobs, eight percent each in sales and service, and in business jobs, one percent in health, hospital and medical jobs, and less than one percent each reported in agriculture, public service and miscellaneous, respectively. Ninety percent of the jobs were reported as requiring no post-high school education or training for entry; ten percent as requiring one or two years of post-high school education or training.

43. Eighty-three percent of the jobs requiring no post-high school education or training were primarily industrial jobs, nine percent were primarily sales and service, six percent primarily business and less than one percent each were agricultural and miscellaneous, respectively.

44. Sixty-three percent of the jobs requiring one or two years of post-high school training or education were primarily industrial jobs, 25 percent primarily business jobs, eleven percent primarily health, hospital and medical, and one percent primarily public service.

45. The area of largest employment in numbers, the industrial area, has indications of a scarcity of qualified applicants about as much or half again as much as it has indications of adequacy. The greatest scarcity in this area is among large firms for employees with one or two years of post-high school education or training. Changes in demand for employees with either background are indicated to be about two increases in jobs as compared to three staying the same or decreasing.

46. The greatest increase in the next largest group of employees is expected in primarily sales and service jobs for entry jobs not requiring post-high school education. Indications are that change in demand will be close to one job increase for one staying the same for small firms, those employing most in this category, to two jobs increase for one staying the same for large firms. Scarcity of these employees has a ratio of two indications of scarcity as compared to three of available in small firms, and about five to four in large firms. The lowest increases are expected in the primarily business jobs for entry jobs requiring no post-high school education or training; only 12 percent of the indications are of job increases while 88 percent are for demand to remain the same. The demand is one job increase to one job remaining the same for large firm employment of applicants in this area with one or two years of post-high school education.

Health, hospital and medical jobs have the greatest indication of increase; this is, however, only about one percent of

the total numbers in the survey.

47. As a common practice about one-ninth of the responding firms, including 33 percent of the large firms, employ young non-high school graduates as unskilled labor; 21 percent, including another 33 percent of the large firms, infrequently employ applicants of this qualification. Over one-fifth of respondents almost never employ this type of applicant in business office jobs, sales jobs or as apprentices.

48. As a common practice eight of the nine large firms employ new high school graduates as unskilled labor, as do 19 of the 74 small firms. Five of the large firms, 16 firms in all, employ them in semi-skilled jobs. The other general job categories where new graduates are commonly employed are business office and sales and service jobs, 21 firms so indicating.

49. Only about one tenth of respondents indicate satisfaction or dissatisfaction with non-high school graduates as employees.

50. About one-third of responding firms indicate that new high school graduates are well prepared for entry employment, and that they employ them when openings occur. A third of large firms, 14 percent of all firms indicate new graduates need considerable additional training before they can perform satisfactorily.

51. Ten percent of responding firms feel their training needs are very well met, 43 percent fairly well, 28 percent poorly, and 19 percent did not respond.

52. Forty percent of responding firms indicated they offered formal classroom training programs, 33 percent that they did not, and 27 percent did not respond.

53. The greatest percentages of firms 14 percent, respectively, indicated that they operated formal training programs in apprenticeship and supervisory training; supervisory training programs were offered by four of the nine large firms. Four of the large firms also indicated job-upgrading programs. Other programs representing significant numbers are for technician training, four small and two large firms; and plant management, three small and two large firms.

54. Fifty-five percent of the responding firms indicated strong support of occupational education in the community college; 23 percent for substantial expansion of vocational education in existing high schools, and 17 percent for creation of an area vocational school for secondary (high school) occupational training.

55. Open-end comments dwelt mainly on need for specific courses, specific skill training and education in theory, principles and practices, and improving the quality of trainees.

Legal, Finance, and Organizational Alternatives.

56. Adequate legal provisions exist for establishing an area Vocational-Technical center.

57. The Montcalm County Community College if requested by the superintendents of schools should be designated as the Area Vocational-Technical Center.

58. One mill has already been authorized for the community college. To permit the college to operate as a Vocational-Technical center and to provide adequate building facilities for accomodating both high school and college, an additional two (2) mill levy is needed.

General Conclusions.

59. While Montcalm County is largely rural in character, for primary employment there are nearly three persons employed in manufacturing for every one in agriculture. According to present and future trends in the state and nation, the ratio is likely to increase for manufacturing. The implications for education are apparent from this, and are recognized by most of the respondents to the survey.

60. The responses made by seniors, graduates, high school dropouts and business and industry substantiate the need for improvements in educational program at the high school level for youth attending high school, and for persons living in the area who desire and are interested in further education. This is the case for occupational education, particularly, as well as with other aspects of program.

61. The responses made by seniors, graduates, high school dropouts and business and industry also indicated their interest in educational programs not presently available in the area to youth, particularly occupational education opportunity.

APPENDIX A

Included in appendix A are graduates' indications of interest in further training, and their occupational goals ten years hence.

APPENDIX A

TABLE 1

GRADUATES' INTEREST IN FURTHER TRAINING
BY NUMBER AND PERCENT

Training of Further Interest	N	%	Training of Further Interest	N	%
Industrial			**Health, Hospital, medical**		
Air cond., heating, refrig.	1	.62	Lab. technician	1	.68
Auto service	1	.62	Medical technician	3	1.86
Drafting & design	3	1.86	Nursing (PN)	2	1.24
Electricity	2	1.24	Nursing (RN)	9	5.59
Technology			X-ray	1	.62
Electronics	3	1.86	Other	1	.62
Mechanical design	1	.62			
Other	4	2.48	**Marketing & services**		
Welding	1	.62	Beautician, barber	5	3.11
Mechanical	5	3.11	Conservation	1	.62
Other	4	2.48	Law enforcement	2	1.24
			Sales	1	.62
Apprenticeship, Trades			Other	1	.62
Tool & die	3	1.86			
			Professions		
Business			Artist	1	.62
Accounting	8	4.97	Engineer	8	4.97
Data processing	9	5.59	Teacher	16	9.94
Management	9	5.59	Social worker	4	2.48
Secretarial, clerical	20	12.42	Other	10	6.21
Other	5	3.11			
			Total	161	100.00
Farming	5	3.11			
General					
Adult educ.	3	1.86			
Job training	1	.62			
Not sure	5	3.11			
Other	2	1.24			

APPENDIX A

TABLE 2

GRADUATES' OCCUPATIONAL GOALS TEN YEARS HENCE
BY NUMBER AND PERCENT

Occupational Goal 10 years Hence	N	%	Occupational Goal 10 years Hence	N	%
Industrial			**Health, Hospital, medical**		
Air cond., heating, refrig.	1	.68	Lab. technician	1	.68
Auto service	2	1.37	Nursing (PN)	3	2.05
Drafting & design	1	.68	Nursing (RN)	8	5.48
Electronics tech.	4	2.74	X-ray	1	.68
Mechanical	3	2.05	Other	1	.68
Welding	1	.68			
Other	1	.68	**Marketing & services**		
			Beautician, barber	6	4.11
Trades			Conservation	1	.68
Building	3	2.05	Law enforcement	5	3.42
Tool & die	4	2.74	Retailing	1	.68
Other	1	.68	Sales	2	1.37
			Own business	2	1.37
Business			Other	1	.68
Accounting	8	5.48			
Data Processing	3	2.05	**Professions**		
Management	4	2.74	Artist	1	.68
Secretarial, clerical	8	5.48	Engineer	8	
Other	3	2.05	Teacher	24	16.44
			Social worker	5	3.42
Farming	7	4.79	Other	16	10.96
			Other	6	4.11
			Total	146	100.00

APPENDIX B

Appendix B includes information on the Vocational Education Offerings in the Montcalm Intermediate School District high schools as reported by school administrators in answer to a request for such information. Types of data found are as follows:

Part I - Courses offered by grade level and enrollment according to school.

Part II - Available spaces for classroom instruction as reported by each school.

Part III - Number of different vocational courses offered by total enrollment in each type of vocational education for each school.

Part IV - Areas in which vocational education is offered by school and field of vocational education.

APPENDIX B

CURRENT VOCATIONAL EDUCATION OFFERINGS

IN HIGH SCHOOLS

PART I - Courses Offered by Grade Level and Enrollment

Industrial Arts

A. VESTABURG

	Grade Level	Students Enrolled
Wood Shop		
Arts and Crafts	8	28
General Wood Shop ($\frac{1}{2}$ yr.)	9	14
Cabinet Making	10	9
Carpentry	11-12	16
Auto Shop		
Auto Mechanics I	10-11	12
Auto Mechanics II	11-12	15
Auto Mechanics III	12	2 (Consultant basis)
Drafting		
General Drafting ($\frac{1}{2}$ yr.)	9	14
Advanced Engineer Drafting	11-12	8
Advanced Machine Drafting	11-12	4

B. MONTABELLA

Combination Shop		
General Shop I	9	38
General Shop II	10	39
Farm Shop		
Farm Shop II	10	18
Farm Shop III	11	13
Farm Shop IV	12	9
Drafting		
Drafting	11	15
Other		
Power Mechanics	11	18
Printing	11	15

C. BELDING

Wood Shop

General Shop	9	24
Wood Shop I	10	42
Wood Shop II	11-12	21

Metal Shop

General Shop	9	24
Metal Shop I	10	39
Metal Shop II	11-12	8

Drafting

General Shop	9	23
Drafting I	10-12	40
Drafting II	11-12	12
Drafting III	12	10

D. LAKEVIEW

Wood Shop

General	9	41
Advanced Wood Shop ($\frac{1}{2}$ yr.)	10,11,12	25

Metal Shop

Advanced Metal Shop ($\frac{1}{2}$ yr.)	10,11,12	25

Auto Shop

Auto Shop	10,11,12	42

Farm Shop

Farm Shop	10	23

Drafting

Drafting	11,12	25

E. CENTRAL MONTCALM

Wood Shop

Industrial Arts I	9	55

Combination Shop

Industrial Arts I - II (General Comprehension Shop Welding and Auto)	9,11	75

Auto Shop

Industrial Arts II	11,12	26

Drafting

Mech. Drawing I	11	30
Mech. Drawing II	12	22

F. CARSON CRYSTAL

Wood Shop

General Wood Shop	9	45
Mach. Wood	12	22

Metal Shop

Metal Shop	10	47

Machine Shop

Power Shop	11	27

Combination Shop

Trade and Industrial (T & I)	12	30

Drafting

Basic Drafting	11	40
Advanced Drafting	12	26

G. TRI-COUNTY

(No report of courses offered or enrollments)

H. GREENVILLE

Wood Shop

General Shop	9	65
General Wood I	10	20
General Wood II	11	6

Metal Shop

General Metals	10	30

Machine Shop

Voc. Machine Shop	11,12	19
Ind. Arts Machine Shop	11,12	11

Auto Shop

Auto I	10	71
Auto II	11	29
Auto III	12	28

Drafting

Drafting I	9	89
Drafting II	10	18
Drafting III	11	12
Drafting IV	12	1

Other

Industrial Relations	12	10
Electronics Shop		18
"M" Shop	12	6

Business

A. VESTABURG

	Grade Level	Number Enrolled
Typing I	10	18
Typing I	9-10-12	17
Typing I	10-12	16
Typing II	11-12	12
Basic Business	9-10	30

B. MONTABELLA

Typing I	10,11,12	78
Typing II	12	21
Shorthand	11	23
Bookkeeping I	12	43
Office Practice	12	14
Business Math	11	16

C. BELDING

Personal Typing	10-12	35
Typing I	10-12	105
Typing II	11-12	46

D. LAKEVIEW

Personal Typing	10,11,12	108
Typing I	11,12	23
Typing II	12	27
Shorthand		20
Bookkeeping	11,12	63
General Business	10	73

E. CENTRAL MONTCALM

Typing I	10	115
Typing II	11,12	30
Shorthand I	11	28
Shorthand II	12	11
Bookkeeping I	12	64
Office Practice	12	29

F. CARSON CRYSTAL

First year Typing	10	130
Advanced Typing	11,12	40
Shorthand I	10	26
Shorthand II	11	18
Bookkeeping		40
Bus. Machines	11,12	25
General Business	9	80

G. TRI-COUNTY

(No report of courses offered or enrollments)

H. GREENVILLE

Typing I	10,11,12	122
Intermediate Typing	11,12	23
Personal Typing	10,11,12	30
Adv. Typing	11,12	19
Shorthand I	11,12	29
Shorthand II	12	19
Bookkeeping I	11,12	51
Bookkeeping II	12	16
Record Keeping	11,12	21
Vocational Office Practice	12	16
Clerical Office Practice	12	10
Business Law	11,12	54
Salesmanship, Merchandising	11,12	39
Business English	11,12	24
Basic Business	10,11,12	54

Home Economics

A. VESTABURG

	Grade Level	Number Enrolled
Clothing Construction	9	21
Children's Clothing	10	9
Repair and alterations	11-12	20
Draperies and Room Furnishing		
Meal Preparation	9	21
Entertaining	10	9
Food for the Young Child	11-12	20
Food for Home Invalid		
Well Balanced diets		
Food preservation		

B. MONTABELLA

Home Econ. I (Foods, Nutrition, Grooming, Clothing, Child Development)	9	34
Home Econ. II (Meal planning, Clothing Construction, Int. Decorating)	10	29
Home Econ. III (Meal Planning, Cooking, Tailoring, Homes)	11,12	23
Home and Farm Living (Dating, Grooming Foods, Marriage)	11,12	26

C. BELDING

Home Economics I (Sewing)	9	60
Home Economics II (Cooking)	10	32
Home Economics III	11	23
Living for Young Adults II	12	44

D. LAKEVIEW

Home Economics I	9	37
Home Economics II	10,11	43
Home Economics III	11,12	32

E. CENTRAL MONTCALM

Home Economics I	9	63
Home Economics II	10	39
Home Economics III	11,12	34

F. CARSON CRYSTAL

Combination Curriculum	9,10,11,12	100

G. TRI-COUNTY

(No report of courses offered or enrollments)

H. GREENVILLE

Sewing	10	27
Cooking	9	45
Wage Earning	11,12	9

Agriculture

A. VESTABURG

	Grade Level	Number Enrolled
Animal Husbandry	10	22
Soils and Crops	11-12	13

B. MONTABELLA

Agriculture I	9	18
Agriculture II	10	18
Agriculture III	11	13
Agriculture IV	12	9

C. BELDING

Agriculture I	9	18
Agriculture II	10	13
Agriculture III	11,12	22

D. LAKEVIEW

Agriculture I	9	22
Agriculture II	10	25
Agriculture III	11	12
Agriculture IV	12	15

E. CENTRAL MONTCALM

Agriculture I	9	33
Agriculture II	10	27
Production Agriculture	11,12	16
Agriculture Related	11,12	27
Agriculture Mechanics	10	23

F. CARSON CRYSTAL

1st and 2nd Year	9,10	35
3rd and 4th Year	11,12	31

G. TRI-COUNTY

(No report of courses offered or enrollments)

H. GREENVILLE

Agriculture Biology	9	28
Agriculture Science	10	35
Landscape Hort.	11,12	14
Conservation	11,12	12
Ag. Careers	10	18

PART II

AVAILABLE SPACES FOR CLASSROOM INSTRUCTION

School and Vocational Area	No. of Shops	No. of Spaces (Classroom Instruction)	No. Drafting Classrooms
Vestaburg			
Industrial Arts	2	4	1
Business		22	
Home Economics		25	
Agriculture		33	
Montabella			
Industrial Arts	2	2	1
Business		-	
Home Economics		1	
Agriculture		-	
Belding			
Industrial Arts	2	1	1
Business		3	
Home Economics		3	
Agriculture		1	
Lakeview			
Industrial Arts	3	0	1
Business		2	
Home Econ.		-	
Agriculture		1	
Central Montcalm			
Industrial Arts	2	1 room 34 desks	General Comprehensive Shop, 4 areas
Business		2	
Home Economics		1	
Agriculture		2	
Carson Crystal			
Industrial Arts	2	2	1
Business		2	
Home Economics		2	
Agriculture		1	
Tri-County			
Industrial Arts	2	40	1
Business		76	
Home Economics		20	
Agriculture		0	

PART II
(continued)
AVAILABLE SPACES FOR CLASSROOM INSTRUCTION

School and Vocational Area	No. of Shops	No. of Spaces (Classroom Instruction)	No. Drafting Classrooms
Greenville			
Industrial Arts	3	3	1
Business		(Not Reported)	
Home Economics		2	
Agriculture		1	

PART III

NUMBER OF DIFFERENT VOCATIONAL

COURSES OFFERED BY TOTAL ENROLLMENT

School	Number of Courses	Total Enrollment* in all courses
	A. Industrial Arts	
Vestaburg	10	122
Montabella	8	165
Belding	10	243
Lakeview	5	181
Central Montcalm	5	208
Carson Crystal	7	237
Tri-County	No report	
Greenville	16	433
	B. Business	
Vestaburg	5	93
Montabella	6	195
Belding	3	186
Lakeview	6	314
Central Montcalm	6	277
Carson Crystal	7	359
Tri-County	No report	
Greenville	15	527
	C. Home Economics	
Vestaburg	6	100
Montabella	4	112
Belding	4	159
Lakeview	3	112
Central Montcalm	3	136
Carson Crystal	4	100
Tri-County	No report	
Greenville	3	81
	D. Agriculture	
Vestaburg	2	35
Montabella	4	58
Belding	3	53
Lakeview	4	74
Central Montcalm	5	126
Carson Crystal	2	66
Tri-County	No report	
Greenville	5	107

* These figures would not necessarily indicated the number of different individuals, for some would be enrolled in more than one vocational course.

PART IV

AREA IN WHICH VOCATIONAL EDUCATION IS OFFERED

Vocational Field	Vestaburg	Montabella	Belding	Lakeview	Central Montcalm	Carson Crystal	Tri-County	Greenville
Industrial Arts								
Wood Shop	x		x	x	x	x		x
Metal Shop			x	x		x		x
Machine Shop						x		x
Combination		x			x	x		x
Auto Shop	x			x	x			x
Farm Shop		x		x				
Power Mechanics		x						
Drafting	x	x	x	x	x	x	x	x
Industrial Relations								x
Electronics Shop								x
"M" Shop								x
Printing		x						
Business								
Typing	x	x	x	x	x	x	x	x
Shorthand		x		x	x	x		x
Bookkeeping		x		x	x	x	x	x
Record Keeping								x
Business Law								x
Business English								x
Salesmanship								x
Office Practice		x			x			x
Basic Business	x			x		x		x
Business Math		x						
Bus. Machines						x	x	
Home Economics	x	x	x	x	x	x	x	x
Agriculture	x	x	x	x	x	x		x

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The purpose of this document is to aid the supervisor in recruiting the proper person and to serve as a guide in training employees in the service industries. Information is provided and discussed in areas of: (1) Job Study and Analysis, (2) Finding Employees, (3) Interviewing the Applicant, (4) Training and Training Methods, (5) Job Instruction Methods, (6) How To Instruct, (7) Dialogue Training, (8) Other Training Methods, (9) Evaluation Sheet, and (10) Job Instruction Training Check List. (MM)

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RECRUITING AND TRAINING EMPLOYEES IN THE SERVICE INDUSTRIES

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Extension Bulletins such as this one are part of the educational services provided by the Cooperative Extension Service of Michigan State University. These services to the people of Michigan are financed jointly by your county, state, and federal governments. At the County Extension offices, agents can provide information and help on many farm, home, and community problems. They work in agriculture; home economics-family living; 4-H Youth; marketing; and natural resource and community development. Publications on more than 500 subjects are available at the County Extension Offices or from the MSU Bulletin Office, P. O. Box 231, East Lansing, Michigan 48823.

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RECRUITING AND TRAINING EMPLOYEES IN THE SERVICE INDUSTRIES

By Robert W. McIntosh
Extension Specialist, Tourist and Resort Service and
Professor of Hotel, Restaurant, and Institutional Management

The right person in the right job is essential for success in any business. In hotels, restaurants, motels, resorts, and similar businesses, this factor is particularly important. The guest forms his impression of the accommodation and its services almost wholly by the way the employees treat him. Thus, your guest-contact employees are importantly responsible for the success of the enterprise.

JOB STUDY AND ANALYSIS

Recruiting the proper person for the job is the first step in building and improving guest satisfaction. To do this properly takes thought and advance preparations. For each position, you should perform a job analysis, compile a job description, detail a job specification, and prepare a job evaluation. Then you are ready to begin filling vacancies.

JOB ANALYSIS

This means that you make an organized study of each job which you have to fill. The study should include (1) job description, (2) job specifications, and (3) job evaluation.

Start by writing a description of the job. Keep the description short and to the point, and answer the following questions:

(a) What does the worker do?
(b) Why does he do it?
(c) How does he do it?
(d) When should it be done?
(e) What particular skills are required?

Benefits of writing a job description now become apparent. These include:

(a) Help to establish a fair wage rate for the job.
(b) Determine the amount of training needed.
(c) Clarifies the qualifications required by applicants.
(d) Shows supervisors what is entailed in performing the job.
(e) Defines the job, reduces job conflicts and confusion.

Here is an example of a job description for a housekeeper (maid)

JOB DESCRIPTION FOR HOUSEKEEPER (MAID)

Makes up each guest room which has been occupied to a completely clean, neat, attractive, and fresh smelling room. Cleans rooms by conventional sweeping methods using vacuum cleaner, dusting cloths, cleaning cloths, and similar materials and equipment. Washes fixtures and tile areas of the bathroom with cloth or sponge and sanitizes as required. Changes linen completely after each occupancy. Performs other cleaning jobs at regular intervals such as washing windows, cleaning lamp shades, washing mirrors, polishing furniture, lobby cleaning and similar tasks associated with housekeeping. Stocks the bath and guest rooms with linen, towels, and guest supplies.

Note that this job description answers the questions, "what," "why," and "how," and "skill needed." Such criteria are needed for all job descriptions.

The job description should be prepared carefully. In unionized businesses, many union members will refuse to work outside of their job descriptions. Therefore, it should cover all possible duties.

JOB SPECIFICATION FOR HOUSEKEEPER (MAID)

After describing the job, list all specifications for the position, filling in the requirements for each important aspect in detail. This procedure is called job specification. Here is how the job specification for a housekeeper (maid) might look:

Job title: Housekeeper or maid (former title preferred)

Department: Rooms

Sex: Usually female, but could be male.

Physical aspects: Should be in good health and not exceed 150 pounds. Medium height (short persons have trouble reaching and tall persons have trouble bending.)

Working Conditions: Five to eight hours per day, five or six days per week.

Equipment, materials and tools used: Housekeeper's cart, small sweeper, cloths, pails, and other cleaning-sanitizing materials.

Compensation: (Specify rate and any bonus or profit sharing plan.) See following section on job evaluation.

Training required: Two weeks apprenticeship under experienced housekeeper.

Vacation with pay: One week after one year of employment, two weeks thereafter.

Experience: None required.

Personality requirements: Dependable, careful, methodical, pleasant, and neat appearing.

Judgment: Must have high standards of cleanliness, be able to see dirt and take initiative to clean all parts of room to acceptable sanitary and housekeeping standards.

Manual dexterity: Considerable manual skill needed in use of fingers, hands, arms, legs, knees, and back. Also, must have good feet as most of the work is done in a standing or stooping position.

Accuracy: Must have fine touch with bedspreads, pillows, and sheets so that they present an even and attractive appearance to the newly arrived guest.

Strength: Stamina is required for sustained physical activity involved in changing linen, lifting blankets, sweeping, dusting, and cleaning bathrooms.

Supervision: Works under rooms inspector, supervisory housekeeper, and executive housekeeper.

Responsibility: Must be able to work alone. Is responsible for care of equipment and room furnishings, also of guest's belongings. Must be scrupulously honest and upright.

Opportunity for advancement: To rooms inspector, supervisory housekeeper, and executive housekeeper.

JOB EVALUATION

The third step is to prepare a job evaluation. This determines the correct *relative* value in terms of pay rates for each job. For example, should a front desk clerk receive more pay than a supervisory housekeeper? The only fair way to judge is by using the job evaluation technique. Here is the method:

1. On a sheet of paper, construct a chart listing the primary qualities expected in persons who hold this job. *For example*, you might list education, intelligence, capacity for receiving instructions, experience, and other criteria on the left side of the chart. Across the top list a series of numbers, usually from 1 to 10. (See Fig. 1)

2. Now rate each of the criteria according to its relative importance. Number 1 would be of least importance and number 10 would be of greatest importance. Keep in mind that you are evaluating the various qualities for what they "ought to be" rather than what they *may* be at the present time. Also, remember that *it is the job, not the person*, which is being evaluated. Add up the score for each job. The ratings will be entirely a matter of judgment and therefore are not at all scientific. However, whether you are overly lenient and generous or not doesn't really matter, as long as the job evaluation is a matter of *relative* standing between jobs.

3. Next, plot the jobs and the wage rates on a graph with the score point values along the bottom of the graph and the present wage rates on the left hand side. A series of dots will result, as illustrated as Fig. 2. Note that considerable variation exists in the placement of dots. If the importance of all of the jobs were ideally related in terms of the pay, the dots would form a straight line. They are not, and thus, some of the jobs are overpaid and some are underpaid.

4. While a simple procedure would be to raise those who are underpaid and cut those overpaid, this is not a practical solution. A better approach is to try to raise the pay of those who deserve it whenever possible, not give any raises to those overpaid, and when new employees are hired, hire them at the proper pay rate for the job, in accordance with the job evaluation. This procedure results in the most equitable system of pay for the jobs being accomplished.

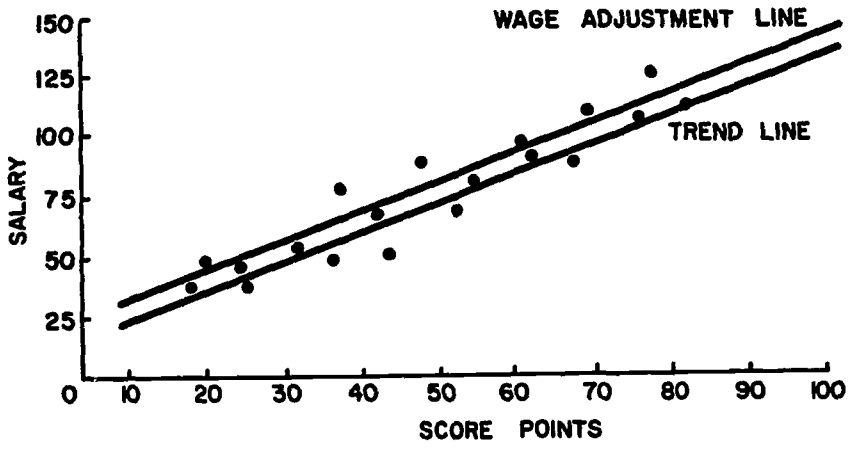
FIG. 1 JOB EVALUATION CHART

Criteria	1	2	3	4	5	6	7	8	9	10
Education										
Intelligence										
Capacity for receiving instructions										
Experience										
Initiative										
Personality										
Dependability										
Working with others										
Appearance										
Responsibility for supervision										

Source: L. C. Pigage and J. L. Tucker, Institute of Labor and Industrial Relations, University of Illinois (adapted from the bulletin, **Job Evaluation**, 1959, 44 pages.)

COMMENTS: Prepare a separate evaluation chart for each job. Check the appropriate column from 1 to 10 for each criteria. Then add up the total score. Jobs with higher scores should receive higher wages.

FIG. 2. DETERMINING EQUITABLE WAGES IN ACCORDANCE WITH THE JOB EVALUATION.



Source: George Strauss and Leonard R. Sayles, Personnel (adapted from the book) (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1960, p. 592.)

COMMENTS: Each dot represents a job. The general trend is shown by the parallel lines. The wage adjustment line provides an area of wage variation within which wages would not be changed. However, if a person was being paid at a rate above the variation range area, he would continue to be paid at that rate. If another person were hired for the same position, then he would be paid at the rate indicated by the trend line and variation area.

FINDING EMPLOYEES*

There are several recommended methods of obtaining good employees:

(1). Prospective employees referred by your present staff. Your experienced employees know the business and know the kind of person for which you are looking. They can help you locate someone who comes close to filling the job specification.

(2). If unable to secure applicants from employee referrals, notify the Michigan Employment Security Commission office nearest you. They have employees available and can send you qualified applicants. Or use other respectable employment offices. You may wish to contact the local high school also. There are growing numbers of job-seekers in the young people's group, as well as in the older age group.

(3). Another method is to seek employees from the local chapter of the Hotel and Restaurant Employees and Bartenders International Union, if your establishment is unionized.

(4). Or place a classified ad in the newspaper, completely describing the job.

YOUNG PEOPLE

Millions of high school graduates will be looking for employment during the next decade. If you decide to hire young people, here are some tips on going about it:

(a) Talk with the high school principal concerning your need and get his suggestions for candidates for jobs.

(b) Review the school records of promising young people. Choose those with favorable records and high I.Q. ratings.

(c) Talk to several applicants and make your offer complete. Don't be surprised if an 18-year-old-boy asks you about the details of your retirement program!

(d) Insist on high standards of performance, appearance, and above all, a pleasing personality.

Some of the positions for which young people are particularly well suited are: Cooks, bakers, busboys, waiters, waitresses, cashiers, swimming pool supervisors, bellmen, sales representatives, entertainers, store room clerks, room clerks, secretaries, yardmen, and vehicle operators.

Young people work out best in an organization which is "on the way up." Each new person hired is a potential future department head or even manager. This gives each person the incentive to stick with the company and to look ahead to increasing responsibility and compensation.

OLDER PEOPLE

At present, there are over 19 million persons in the United States over 65 years of age. Many in this group are in excellent physical and mental condition. They can be of great value to your business in several capacities. Persons over 50 who are seeking jobs or are retired early from other fields of work are likewise potential employees. In some cases, retirement benefits will have to be waived by the employees as a condition to employment, but this is often not a problem.

Older employees have mature judgment and poise which is valuable in motel and resort operations.

Examples of work suited to mature workers are front office desk clerk, accountant, security officer, yardman, laundry worker, sales representative, dining

*Contributed in part by Bill Knapp, Bill Knapp's Restaurants, Battle Creek, Michigan; and the late Keith White, Elms Motor Lodge, Flint, Michigan.

room hostess, cashier, purchasing agent, receiving clerk, and possibly even manager if the responsibilities and hours are not beyond the person's capacity.

INTERVIEWING THE APPLICANT

Managers can improve employment interviews by studying the purposes and techniques of the art of interviewing. Costly labor turnover, poorly assigned and adjusted employees, and worrisome employee problems can be greatly reduced by means of better interviewing for employee selection. Research in interviewing is now extensive. Here are some suggestions:

(a). Recognize the importance of the interview to the success of the business.

(b). Plan it in advance, make the proper preparation, and select a dignified, comfortable place to talk.

(c). At the outset, establish a harmonious relationship between applicant and interviewer. Ask the applicant to be seated and treat him in a friendly and dignified manner.

(d). Make the interview conversational! Ask questions about the applicant's goals and aspirations. Weave in questions about his family and where he lives, also means of transportation between home and the business. Your purpose is to learn about his attitudes and aptitudes in order to evaluate him as an employee.

(e). Confine the interview to the purpose – that of hiring – and avoid non-related subjects such as politics or the weather.

(f). Let the applicant do most of the talking. A common fault with interviewers is that they dominate the conversation and hardly give the applicant a chance to answer the questions. The applicant should do at least three-fourths of the talking so that his prospective employer can learn as much about him as is needed to establish his qualifications for the job.

(g). Be sure to find out about previous experience in this type of work. The applicant may be able to make a substantial contribution to the enterprise based on his previous experience.

(h). Keep the conversation going, showing intense interest in what the applicant says. Give him the impression that you are getting acquainted, as you are, rather than weighing his strong points and faults. Avoid giving the impression that you approve or disapprove of what he may relate. Use such conversational expressions as "is that so?" "My, that must have been interesting!" or a non-committal, "Please tell me a little more about that."

(i). Sell the applicant on your enterprise if he appears to be the kind of person you want in your organization. Enthusiasm is catching and it builds a strong foundation for your relationship with the employee, should he be hired. Be sure to tell him about your company, its background, and the growth of the public hospitality business, generally.

(j). First impressions are not reliable, nor are general impressions. Establish your judgments upon what is brought out in the interview and put more weight on past experience than on general impressions.

(k). Measure the applicant according to the criteria shown in the job description and job evaluation. This will determine his degree of qualification for the position.

(l). Check on letters of recommendation and references. Sometimes a person will write a letter with some reservations, which will be brought out in a telephone conversation.

(m). When making your final decision concerning hiring, be sure you can give at least two or three reasons why you have rated him high or low in each of the major characteristics of the job. If you neglect this last step, you are basing your judgment on first or general impressions.

CAUTIONS

Some applicants have characteristics that are detrimental to their employment. These include:

(a). Those recently divorced, or within a year of a divorce.

(b). Those with low educational background.

(c). Those having many different jobs in the past few years.

(d). Those with distracting mannerisms, or are extremely heavy smokers, very nervous, overly confident, lacking in good diction, or careless about clothes and person.

APPLICATION FORM

A comprehensive application form is recommended. If the applicant is sincere in his wish to obtain a job, he will not mind processing the form. Include all of the information you are seeking. You may wish to include a space for a short statement by the applicant as to why he wishes to be employed by your establishment.

TESTS

In many businesses, tests are used to measure specific characteristics. These include intelligence tests, grammar tests, personality tests, and specific knowledge tests. Whether to use tests or not will largely depend on the nature of the job. If you are hiring a front desk clerk, he should be tested on his use of grammar and his command of the English language. An intelligence test would also be useful. Skill tests are available for jobs requiring special skills such as cashier or secretary.

You can obtain information on testing and other related matters from the Department of Psychology of any of Michigan's colleges or universities. Also, see your Michigan Employment Security Commission for suggestions on tests. In addition you could write to the Executive Secretary, American Psychological Association, Inc. 1333 16th Street, N.W., Washington, D.C. 20006.

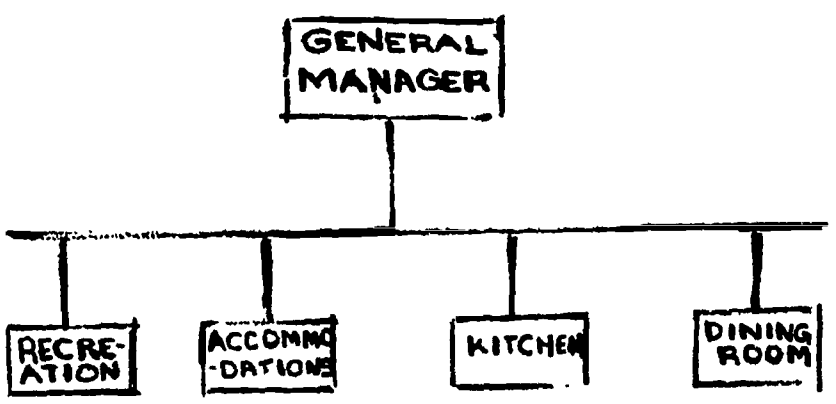
The best procedure is to make your final decision on the basis of the interview and the test combined. If both agree, it is reasonably certain you have the best qualified person for the job.

ORGANIZATION CHARTS

Good organization assures the smooth functioning of your business. Unless the business is well-organized and each employee is fully aware of the identity of his supervisor and higher level managers, he will not function properly and the business will suffer. Effective organization is, in fact, a key to success.

Preparing an organization chart will assist management to draw clear-cut lines of authority which can then be explained to the new employee. This is helpful in improving all work situations.

Rather than drawing up a hierarchy of names alone, a method proven effective is to have pictures taken of each person in the organization and then place both picture and name on the chart. This addition of a human interest touch makes the new employee feel more a real part of the business. Post chart in a conspicuous place so that everyone can study and appreciate it.



TRAINING AND TRAINING METHODS

Training is simply learning. Learning is changing behavior. When an individual behaves differently, that is, when he does something differently than he did before, then he has learned something. We can see it. He may have learned well or poorly, but the behavior which we see is that which has been learned.

The components of any behavior can be singled out with study. Once isolated, they can be taught. Thus, you must first identify or describe the kind of behavior desired. When you have fenced off the end-product desired, the learning products to be taught to achieve the goal should become visible, and their components then easily taught. For instance, if a behavior-goal is to produce a skilled front desk clerk, then the separate learning products to be taught are singled out. These may be skill in greeting the guest, hand-visual coordination, concentration, accuracy and so on. The components of these individual product skills are then taught.

KNOW THE LEARNING CATEGORIES

Learning of course is not confined only to motor skills. Our concepts and attitudes are similarly learned by training in behavior patterns. The whole realm of learning categories might be subdivided as follows:

(1) **PSYCHO-MOTOR HABITS (Skills)** — Those manipulative-mental habits (learning) which are readily repeatable. For example, teaching a housekeeper how to make a bed correctly.

(2) **COGNITIVE HABITS (Knowledge)** — Understandings such as cause and effect, concepts, information, ideas. For example, teaching the effect of certain cleaning agents on wall and floor surfaces.

(3) **AFFECTIVE HABITS (Attitudes)** — Those emotional habits (learning) involving likes, dislikes, fears, anxieties, values, and appreciations. For example, teaching the housekeeper that cleanliness and service to the guest are of utmost importance.

We should note that these products which make up behavior are often interwoven. They may be learned separately, such as teaching the separate product-skills required in housekeeping. Often they are learned together. The housekeeper who learns to have a positive attitude toward cleanliness and service (affective) is also learning how to make a bed (motor) and at the same time understanding which cleaning agent to use on the walls (cogni-

tive). The desired end-product of behavior, i.e., an efficient housekeeper, has been achieved.

PLAN THE TRAINING PROGRAM

As a businessman plans for a desired result, such as complete satisfaction to the guest, increased sales, greater profit, or reduced expenses, so must every teacher plan for the desired result – behavior.

In teaching, *these desired learning products are our managerial objectives.* For example, when a new employee is hired, the first objective in the management process will be training: "Now we will have to *train him* to do the job." The new employee will always feel somewhat insecure during the first few weeks. He probably feels a need for growth and an opportunity to develop his skill and ability. A good training program tends to eliminate this margin of insecurity, and is a tremendous help to the employee. If you as manager or supervisor do an outstanding job of training, you will be respected as a good "boss" and you will build cooperation and teamwork among all of your staff.

Plan the following for a successful course of instruction:

(1.) **WHO** – determine if the learner has the capacity to learn.
(2.) **WHAT** – analyze what is to be learned and in which sequence.
(3.) **WHY** – help him find the reason to learn.
(4.) **HOW** – organize situations or activities in which learning is *possible* and *probable* and so prevent frustration as the result of failure.

TRAINING METHODS

Any manual or textbook that lists varieties of training methods – and there are several – would be extensive. In the next few pages we will discuss six commonly used and effective teaching techniques, beginning with *Job Instruction Training* and *Dialogue Training.*

Job Instruction Training is the traditional method used on most jobs, and is familiar to most of us. It is useful for skill-type training – showing someone how to do something; for instance, training a housekeeper to clean a guest room.

Dialogue Training is a new technique which creates realistic situations in which the accompanying dialogue is intended to teach. It usually has the triple effect of improving the actual ability (motor skill), deepening understanding (cognitive habit), as well as improving attitude (affective habit).

Following these types of training methods are discussions of *On-The-Job Training, Role Playing, Conference Training,* and *Group Instruction.* Each of these has a place in the training program, and the application of each will be explained.

JOB INSTRUCTION TRAINING

Contributed by Dr. Tunis H. Dekker and Dr. Peter G. Haines, Michigan State University.

When a person receives a carefully worked-out sequence of instruction from one who fully knows the job, he can master it himself in a surprisingly short time and do a very acceptable piece of work. Following is a sequence outline, start to finish:

SEQUENCE OF INSTRUCTION

Prepare The Instruction (Get Ready)

1. Decide the behavior desired.
2. Analyze the material
   Use Job Description for:
   Skill training: List important steps.
   Key points
   Information training: List important facts.
   Minor points
   Attitude situations: List observed behavior.
   Probable causes
   Possible solution
3. Plan the training.
   Using training schedule – decide:
   who is to be taught *what*
   how is it to be taught
   where and *when* to instruct
   performance expected
4. Prepare to Instruct.
   Review training checklist (page 12)
   Secure teaching supplies and equipment
   Arrange work place
   Study job break-down
   Review four basic steps you will be using (they are outlined on pages 7 and 8)

HOW TO INSTRUCT
(Use Four Basic Steps)

Step 1. Prepare the learner:
Put learner at ease.
State specific job.
Find out what he knows about job.
Develop interest and desire to learn.
Organize material to be learned in correct learning sequence.

Step 2. Present the material:
Use the following sequence to present the material: Tell – show – demonstrate – question the student.
Present one step at a time clearly, patiently, and in the correct learning sequence as just stated.
Stress key points by emphasis and repetition.
Present no more than learn can master at one time.

Step 3. Try out under supervision:
Have learner do job – correct errors.
Have him repeat and explain steps and key points.
Question him – why – what – how.
Continue until *you* know *he* knows.

Step 4. Check on learning:
Check on understanding and performance.
Correct errors – reteach.
Put him on his own.
Tell him where to go for help.
Taper off coaching to normal supervision.
Your motto throughout preparation and instruction should be: "If the instructor has taught, the worker can perform."

EXAMPLE OF RECOMMENDED METHOD
(Instructing housekeeper to clean guest room)

Step 1. Prepare learner:

a. Accompany housekeeper to a guest room which is ready for cleaning. Have equipment ready in room.
b. Explain what you plan to do.
c. Ask if she has cleaned guests' rooms before and what she knows about the job.
d. Describe why high standards of cleanliness are vital to a profitable lodging business.
e. Arrange tools and equipment for use and know the proper sequence of each item.

Step 2. Present material

1. Push housekeeper's cart loaded with linens and cleaning materials into guest room. Park it between bathroom and bed(s).	Parking the cart here will save many steps.
2. If room is to be aired, open windows.	
3. Strip bed(s). First remove pillowcases. Work from head of the bed to the foot. Put dirty linens in dirty-linen bag in cart.	Save steps by making only one trip from cart to bed and back to cart.
4. Carry clean linens to bed farthest from the bathroom.	
5. Make the bed(s) by one-corner-complete method. a. Spread both sheets, adjust at head. Put on and adjust blankets and bedspread. b. Put on clean pillowcases. Adjust pillow in place on bed. c. Adjust and miter sheets at foot of bed; adjust bedspread. d. Finish other foot in the same way. e. Walk to head of bed and repeat.	This method saves at least three trips around each bed.
6. Take bathroom cleaning materials into bathroom. Put disinfectant in toilet. Remove soiled towels, etc. Clean in this sequence: tub or shower, mirror, lavatory, toilet.	Use 2 sponges of different colors. One for scrub pail to clean toilet and floor and the other for hand bowl and tub (or use old towels of different colors).
7. Wash floor and return cleaning materials to cart.	
8. Replace glasses, towels, bath mat, soap, etc.	
9. Dust the guest room and furniture. Start at nearest corner and work around the room ending up at the cart. Check dresser drawers and wardrobe for forgotten items and litter. Clear tops of tables and other furniture before dusting. Don't overlook light bulbs in lamps, mirror tops, telephone and stand, window sills, and venetian blinds. Dust desk, checking needed desk supplies. Empty waste baskets, pick up desk supplies and put in place. Check: a. Arrangement and supply of stationery and cards. b. Pen to see if clean and usable.	To save time have two dust mitts, one for each hand.
10. Take vacuum cleaner and starting at farthest corner from door, vacuum rug (or floor). If you have hard surfaced floors, a dry mop treated with wax-base material is good for removing fine dirt and grit.	Use a lightweight vacuum cleaner and vacuum every day so that dirt does not stay in the rug foundation. When walked on, such dirt cuts the rug fibers. (Carpet sweepers can be used to pick up noticable litter.)

EXAMPLE OF RECOMMENDED METHOD
(Instructing housekeeper to clean guest room)

Step 2. Present material (Continued)

11. Return vacuum cleaner to cart. Remove cart from room. Make a final room inspection. Balance pictures, arrange furniture in balance, etc.	
12. Note items that should be attended to during next weekly or periodic cleaning.	This periodic cleaning includes washing rugs, drapes, bedspreads, blankets, mattress pads, and venetian blinds, washing and waxing of tile floors, etc.

Step 3. Try out under supervision.

After you have completely done a room (explaining as you go), then move to another room which is to be made up. Now have the learner clean the room while you observe her methods and thoroughness. Ask her to give you the *reasons why* the job should be done in this particular way. Correct any errors which might be committed. Question the learner and ask her about the various key points which you wish stressed. Continue the supervision until learner has done several rooms so that you are convinced that she knows exactly how it is to be done.

Step 4. Check on learning.

For about two weeks after the instruction, make a careful inspection of each guest room which was cleaned by the new housekeeper to ascertain the quality of her work. If any weak spots occur, show her where the problem is and how to correct it. Explain to her where to get advice and help if it is needed. After the two-week period, place her under normal supervision. An occasional expression of interest and concern for her work on your part will show her you are interested in her success and achievements on the job.

DIALOGUE TRAINING

Foremost among the methods for achieving motivational results as well as job-know-how is that of dialogue training. Dr. Joseph W. Thompson, formerly Director, School of Hotel, Restaurant and Institutional Management, Michigan State University, has applied dialogue training to the public hospitality business with excellent results. He states in a series of articles in the *Hotel Monthly:**

"If you want to put reality and creativity based upon sound psychological and educational learning principles into your training program, try dialogue. That is, create realistic situations involving relations between people, and then have participants discuss the dialogue which illustrates these situations. Dialogue eliminates the need for skits or play acting, and it doesn't have the disadvantages of these traditional training devices. It reduces the problem of horseplay, it eliminates the trainee's embarrassment at play acting and it saves time. Above all, it trains people to think; it isolates and pinpoints the idea that the trainer wants to make. But the ideas come from the trainees, not the trainer."†

*Joseph W. Thompson, "Situation Management: A Strategy of Selling and Training for the Hotel Industry." Evanston: *The Hotel Monthly,* series of articles, 1961.

†Some original research work in the application of dialogue training to restaurant management has been made by Dianne Adams Heuston, graduate student in Restaurant Management at Michigan State University.

PLANNING DIALOGUE TRAINING

First step in planning the use of dialogue training is to obtain verbatim transcriptions of conversations held on the job. These may be recorded by the trainer posing as a guest, between waitress and guest, or the waitress instructed to report on some examples of dialogue between waitress and hostess or cashier.

After representative samples of actual situations have been collected (a sample dialogue is presented in the next few pages to give you the idea), the next step is to carefully study and analyze the dialogues. You should look for situations that particularly point up needs; i.e., for giving the guest better service, showing more courtesy, or using an improved sales approach. The trainer should be able to identify those phrases that embody the desired sales principles and hospitality techniques he wishes to convey; that is, the hospitality message he wishes to "sell."

Dialogues finally selected for the first phases of the training program should be prepared on lantern slides so they can be projected on a screen. We recommend that the dialogues also be duplicated on paper. The trainees like to make notes about the dialogues and the written sheets provide a convenient way to do this. This also instills self-confidence in the trainee and encourages him to enter into the discussion. As you have noted, this method should

influence the employee's *attitude*, improve his *interest*, and build *self-reliance*. It usually increases *enthusiasm* as well.

The discussion constitutes the most important and final part of the dialogue training.

TRAINING PROCEDURE

Here is the suggested procedure for the whole training:

(a). Trainer presents a brief explanation of the dialogue situation prior to presenting the dialogue, and explains the viewer's role.

(b). Dialogue presented on screen. Dittoed copies handed out.

(c). Silent period during which trainees study the screen and their copies of the dialogue. They *think about what was wrong* and *what should be improved* – the proper way to have conducted the dialogue.

(d). Trainer now proceeds to ask questions of the group such as "what was wrong?" "do you think the employee said the right thing?" "was the guest satisfied?" "could an additional sale have been made?" "could the conversation be improved?" "how?", etc.

(e). Group members give their ideas as to how the dialogue should have been conducted. Trainer should try to involve *every person* in the *discussion*. If some don't speak up, he should call on them and ask for their opinions.

(f). The trainer then presents a brief review of the dialogue, and summarizes the consensus of the group as to what the *best way would have been* for handling the particular situation presented in the initial dialogue.

(g). The above steps are repeated for each dialogue projected on the screen.

SOME RESULTS

The objective of dialogue training is to teach employees to think about typical situations they meet on the job and about the best possible dialogue to use in that particular situation. Actually it is the fact that dialogue training is based upon actual situations between customers and employees, employees and supervisors that makes it so interesting and enjoyable. No unrealistic material dulls the learner's interest. He enters into the training experience enthusiastically because he senses that the material presented is exactly what really happens. His interpretation of what would have been said and done makes a lasting impression on his mind. This type of thinking strongly motivates him to try to handle the situation "right" at the first opportunity which next presents itself. Thus, dialogue training helps him to understand a situation thoroughly, and so he becomes more confident, assured, and capable.

Remember, though, that the immediate purpose of dialogue training is to give the guest and customer *better service*. Better and more satisfying service results in greater sales and profits.

SAMPLE DIALOGUES

In order to furnish guidelines toward organizing a training program, nine sample dialogues are given. Dialogues 1 through 4 involve waitress and guest; dialogues 5 through 9 relate to reservations or room service.

Dialogue 1 – Knowledge of the menu.

WAITRESS:	"May I take your order now?"
GUEST:	"I see you have lasagne on the menu. What is this dish, anyway?"
WAITRESS:	"Well . . . . ah . . . . now I don't really know just what that is . . . . let me go and ask the chef."
GUEST:	"Never mind, I'll take a cheeseburger and a cup of coffee."

Dialogue 2 – Making suggestions.

GUEST:	"What do you have special out there tonight?"
WAITRESS:	"We have all kinds of good stuff."
GUEST:	"I notice you have chicken cacciatore on the menu. Is it good? How does it look?"
WAITRESS:	"Everything is good."
GUEST:	"Bring me some of that chicken cacciatore."
WAITRESS:	(No reply, writes notation on check and leaves table.)

Dialogue 3 – Increasing sales through suggestions.

	(Guest escorts his best girl into fine restaurant for dinner. There is an attractive display of wines near their table.)
WAITRESS:	"Are you ready to order now?"
GUEST:	"Yes, we would like that sirloin dinner for two, medium, with the chef's salad, lima beans, and coffee."
WAITRESS:	"Thank you. It will take a few minutes to prepare your steaks."
GUEST TO GIRL FRIEND	(After waitress leaves) "I would have ordered wine, but she didn't ask me if we wanted any and I'll be darned if I'm going to beg her to sell us a bottle."

Dialogue 4 — Responding to suggestions from supervisor.

HOSTESS:	"Mary, Mr. Hanson (the manager) would like to increase the sales of soup and we are stressing this for the next two months. When you are taking orders, why don't you suggest a delicious cup or bowl of soup?"
MARY:	"That's fine. Are we going to have a special card on the menu about the soup?"
HOSTESS:	"Yes, there will be a different soup each day." (To the first guest the following day) "We're featuring garbanzo soup today, have you ever tried it? It's delicious. . . . ."
GUEST:	"Never heard of it, what's it like?"
MARY:	"It's a Spanish soup. It has beans in meat broth and flavored with chorizo sausage."
GUEST:	"I'll take a chance, bring me some."

Dialogue 5 — Being polite, use of words. (front desk)

PROSPECTIVE GUEST:	"I'd like to register for a room."
DESK CLERK:	"Do you have a reservation?"
PROSPECTIVE GUEST:	"No."
DESK CLERK:	"Then you will have to step over to the reservation desk."

Dialogue 6 — Being helpful and polite. (front desk)

PROSPECTIVE GUEST:	"Do you have a room?"
DESK CLERK:	"I'm sorry but we are all booked up for today."
PROSPECTIVE GUEST:	"Well, where could I find a room?"
DESK CLERK:	"As far as I know, every place in town is filled."

Dialogue 7 — Room sales technique (front desk)

PROSPECTIVE GUEST:	"What are your rates for rooms?"
DESK CLERK:	"Well, sir, how many are in your party?"
PROSPECTIVE GUEST:	"Just the wife and myself."
DESK CLERK:	"That will be $8.00."

Dialogue 8 — Guest's complaint

GUEST (TO DESK CLERK)	"That shower head in my room just doesn't work right."
CLERK:	"Oh my! Did you get *that* room? I'll put it down again and see if we can't get it fixed this time."

Dialogue 9 — Guest Courtesy

	(Bellman near front desk, greeting guest with considerable luggage): "Good afternoon, sir, may I help you with your luggage?"
GUEST:	"Yes, that will be fine."
BELLMAN:	(Obtaining key from desk clerk): "You are in 631. You take the passenger elevator to the sixth floor. I'll take the freight elevator and you meet me on the sixth floor."

OTHER TRAINING METHODS

ROLE PLAYING

Role playing is a training device in which the trainee learns by observing and taking part in a dramatization of actual problem situations. For example, a waitress pretends she is serving one of her fellow workers as a guest. Under the supervision of an experienced trainer, she learns to do and say things correctly by play-acting the part.

CONFERENCE TRAINING

Conference training utilizes the technique of group discussion of problems and an exchange of ideas. It also affords an effective method of influencing the attitude of group members. Each person receives practice in influencing other members of his immediate conference group. This is a stimulating and rewarding experience for the employee.

GROUP INSTRUCTION

Group instruction makes use of group classes. A competent instructor must be provided. This might be organized under the study program of the Educational Institute of the American Hotel and Motel Association. This organization, located at Kellogg Center, Michigan State University, East Lansing, also offers a good selection of home study (correspondence) courses available at nominal prices. University or college short courses or study of books and trade journals are additional ways of providing training and educational opportunities.

APPRENTICE TRAINING

Another training concept is that of apprentice training. This is an organized program consisting of the formal study of prescribed training manuals or books, lectures and demonstrations, the showing of films, visits to suppliers, etc., in addition to understudy training under an experienced trainer. The apprentice learns by being an assistant for a prescribed period of time on the job in addition to classroom work.

ON-THE-JOB-TRAINING

Learning by doing is the most meaningful way to teach an employee. Listening to a description of the job and viewing training films are helpful to insure top quality training. However, the actual doing is culmination of any training system. This makes the

most lasting and influential effect on the employee. So dialogue training, role playing, and other progressive methods, while strongly recommended, must be supplemented by the learning-doing process itself. Good supervision in the actual working situation is essential for good on-the-job training. How well does your supervisor or department head train? Has he taken instruction or attended a short course on training methods? It is one thing to *know* the job and another thing to *train* the employee. The trainer usually needs training in his role of teacher, administered either by the manager or by a professional educator such as a local school teacher. A manager with a large staff can often arrange a short course of his own for his entire staff or, better, for a select group of staff teachers, using the help of his state university school of education in cooperation with local school personnel. Supervisors or department heads who have received such instruction in teaching methods are then much better equipped to do an effective job of training the employees.

TRAINING CONTINUITY

Regardless of the methods used in any training system, every employee, supervisor, and manager needs new educational experiences which constantly keep him informed and increase his knowledge and ability.

All training must be considered as only a part of a regular program of *continuing education.* New ways of doing things, new equipment, new processes, new materials, and new food items are appearing continually and should be taught. Few people can operate continually at top-notch efficiency. They tend to get sloppy or indifferent from time to time, and to develop bad habits through lack of good supervision. Progressive management must therefore provide every employee with the opportunity to study and improve himself. A *regular training program coupled with re-training is the answer to superior employee performance.*

An additional bonus of a continuous program is more employees within the organization who are prepared to accept jobs of greater responsibility. Because they were encouraged to undergo training and improve themselves, they are now ready to step into higher level jobs when needed.

EVALUATION SHEET

(An additional management aid)

Purpose of an evaluation sheet is to list items which are oftentimes areas of weakness in individual employees and which need to be strengthened. An additional use of the sheets is to point up items which should be covered in training.

The evaluation sheet is used only by supervisors. For instance, for a housekeeper it would be used by the manager in cooperation with the head housekeeper. No information concerning the rating should be given to the individual worker. After some period of trial, particular weaknesses, if uncorrected, should be brought to the worker's attention. This should be done with the proper use of psychology by saying something complimentary about the person's work and then mentioning the weak spot. The thought uppermost in mind should always be, what can you, as manager, do to help the employee? Giving her plenty of encouragement and understanding would be one way to show that you are truly interested in helping her to become a superior housekeeper in every respect.

For each housekeeper, review each item on the evaluation sheet and rate as "poor," "fair," "good," or "excellent," placing entries under the heading *Present Status.* Without doubt a variety of ratings will be given and of course, the objective is to eventually make them all "excellent."

Do not make any entries in the *Progress* column at outset of the training program. As the program progresses, make entries such as "some," "much," "none" or similar appropriate remark. A monthly rating program is suggested but this will depend upon the nature of the training program.

Keep in mind that the end objective of the evaluation program is to create superior guest services through high quality personnel. This means employees who have received effective and imaginative training. Individual favoritism towards any particular employee has no place in the rating process. Supervisors and managers must be as fair and impersonal as possible, trying to help each employee improve and make the most of his potentialities. An abundance of deficits found on Evaluation Sheets may reflect on the training rather than the employees.

JOB INSTRUCTION TRAINING CHECK LIST*

(A Reference and Guide for Instructors)

*Prepared by Dr. Peter G. Haines, College of Education, Michigan State University.

Can I say "Yes" in answering the following questions?

A. Get Ready to Instruct

1. Plan the training:

In planning, do I know

	YES	NO
(a) of the worker:		
That he needs to learn a job?		
The job he must learn?		
What can he do now?		
From his background and interests, what can be used in his training?		
How quickly he learns?		
(b) of the training situation?		
Where instruction will be most effective?		
When instruction can be arranged?		
When instruction will be most effective?		
(c) of the job:		
What specific job operations are to be learned?		
The level of performance the job requires?		
How to do the job myself at that level?		

2. Analyze the material:

Have I asked myself:

Is the learning time available adequate to teach the job?		
What type of break-down shall I use?		

if a manipulative skill—

Is the job title descriptive of job?		
Do I know where training should be done?		
Do I know time required in training?		
Are training equipment and supplies available at training place?		
Are important steps arranged in logical order?		
Are all key points included?		
Has break-down been checked against jobs?		

if information training—

What type of information is needed?		
For which purpose is it needed?		
What time is required?		
What equipment and supplies are needed?		
What are the important steps?		
What is the logical order of steps for the "purpose?"		
What are technical names and minor points?		
Have I checked information needed against break-down?		

if an attitude situation—

Do I know the attitude needing correction?		
Do I know the parties concerned?		
Have I considered the personalities involved?		
Have I considered the best time to discuss the problem?		
Have any needs for equipment and supplies been arranged?		
How much time will be needed?		
Do I have all the facts on "observed behavior?"		
Have I considered all possible causes?		
Have I satisfactory remedies to suggest?		
Is situation still in the annoyance stage?		
Have I considered all possible results of failure?		

B. Use of Four-Step Method

Step 1 — Prepare the learner

Have I considered how:

	YES	NO
to put him at ease		
What actions will put him at ease?		
What interests can be aroused to get the participants on a cordial basis?		
How to make a natural approach?		
How I can make an honest and tactful approach?		
to state the specific job — can I		
Describe the job accurately and simply?		
Relate it to his work?		
to find out what he knows about the job — Do I know		
What experience he has had?		
What to ask to find out what he knows about job?		
to develop his interest and desire to learn — Do I know		
The interesting features of the job?		
The story of the job?		
The importance of the job to his success?		
The need he has for the job in satisfying a natural desire or ambition?		
to place him in the most advantageous learning position — Have I considered		
Where he can more nearly be in position of the manager?		
Where learner can see, hear, and get the "feel" of the job?		

Step 2 — Present the material:

Have I considered how I shall

Tell-show-demonstrate-question		
What I shall "tell" and how?		
What I shall "show" and how?		
What combinations of various methods I shall use?		
The use I can make of visual aids and exhibits?		
How I can provoke thought through questions?		
Present one step at a time, (clearly, patiently, and in correct learning sequence)		
Have I considered:		
How to explain steps clearly?		
The places at which the learner can go wrong and how to overcome them?		
The best approach to each step?		
The reasons for each step (if needed)		
Stress key points		
Do I know all the key points?		
Can I show their bearing on the important step?		
Present no more than learner can master		
Am I sure of the safety precautions?		
Do I know what the learner can master?		
Do I realize difficulty of the job to a beginner?		
Have I made special preparation to present the job in a simple manner?		
Have I considered how much to teach before asking for a response from learner?		

Step 3 — Apply the learnings (Try out under supervision)

Have learner do the job — correct errors.		
Am I prepared to provide adequate practice by the learner?		
Have I decided what errors are commonly made and am I prepared to reteach them?		
Have him repeat and explain steps and key points.		
Am I sure he clearly understands the steps and key points?		
Question him-why-what-how.		
Do I have questions in mind I can ask?		
Will my questions indicate the worker's judgment of the job?		

Continue until you know he knows.

	YES	NO
Am I prepared to insist on sufficient repetition to get correct performance? - - - - - - - - - -	.....	.....

Step 4 — Check on learnings

Have I considered how to

Check on understandings and performance

Is questioning enough? - - - - - - - - - - - - - - - -	.....	.....
Is watching his performance enough? - - - - - - - - - -	.....	.....

Correct error — reteach

Am I prepared to stop the learner courteously and reteach when he makes an error? - - - - - - - - - -	.....	.....

Put him on his own

Have I considered how soon to put him on his own? - - - - - -	.....	.....

Tell him where to go for help

Have I decided to whom he should go? - - - - - - - - - -	.....	.....
Does the other person know he may come for help? - - - - - -	.....	.....

Taper off coaching to normal supervision

Have I considered how often to check on learner? - - - - - -	.....	.....
Have I made note on a calendar of gradually reduced checking until it becomes normal supervision? - - - - - - -	.....	.....
Do I feel that success of the worker in learning the job is largely my responsibility? - - - - - - - - -	.....	.....
Am I ready to teach? - - - - - - - - - - - - - - - - -	.....	.....

REFERENCES

The following publications in the Michigan State University *Tourist and Resort Series* may be of interest:

Chart of Organization and Job Description — Small Operators
Payroll Guides
Sample Work or Time Schedule
How Much Are You Paying for Walking?
Ways to Increase Customer Satisfaction
You Are a Salesperson (for Waitresses)
Simplify Your Work

The following from other sources are also recommended:

A B C of Supervision: University of Illinois Bulletin, Bureau Management No. 601, 1958 — The elements of supervising employees in order to achieve a happy, effective staff are described.

Heckman, I. L. Jr. and Huneryager, S. G. *Human Relations in Management.* Cincinnati: Southwestern Publishing Company. Cincinnati 27, Ohio, 1960. — A textbook which provides a unique blending of text material and selected articles written by authorities in the human relations field. Basic concepts and principles concerning people at work are emphasized.

Job Descriptions for Club Occupations. Washington, D.C.: Club Managers Association of America, 1030 Fifteenth St., N.W., 1964. — An analysis of 201 jobs in the private club industry. These include job descriptions in food preparation, housekeeping, maintenance, recreation, etc. which are essentially the same in motels, hotels, resorts, or restaurants.

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Perreault, John O., *Human Relations in the Hotel Industry.* East Lansing, Michigan: American Hotel and Motel Association, Educational Institute, Kellogg Center, 1962. — Part of the materials of a home study course. Presents case studies drawn from real life to illustrate principles of business psychology and the many ways in which employees and guests react to each other.

Leavitt, Harold J. *Managerial Psychology.* Chicogo: The University of Chicago Press, Chicago 37, Illinois 1958 — A book which clearly outlines methods of solving problems associated with supervising and managing personnel.

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VT 002 495
McIntosh, Robert W.
Employee Motivation and Work Incentives in the Service Industries. Bulletin 483.

Michigan State Univ., East Lansing. Cooperative Extension Service
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Pub Date - Jul66 7p.

REWARDS; *MOTIVATION TECHNIQUES; *INCENTIVE SYSTEMS; MANAGEMENT DEVELOPMENT; *SERVICE WORKERS; *SUPERVISORY METHODS; *EMPLOYER EMPLOYEE RELATIONSHIP

The nature and importance of incentive systems for motivating workers in service industries are discussed in this bulletin. An effective incentive system combines several groups of incentives, the most important of which are (1) recognition--both money and other, (2) achievement, (3) social prestige, and (4) self esteem. A discussion of the improvement of the employee-employer relationship through management development is concluded with a series of checkpoints or methods for testing the effectiveness of supervision. The checkpoints include questions such as What is to be done, and how, why, where, when, and by whom? What are your own feelings and attitude toward the receiver? and Did you follow through to see if orders were carried out? (CH)

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EMPLOYEE MOTIVATION AND WORK INCENTIVES IN THE SERVICE INDUSTRIES

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Employee Motivation and Work Incentives in the Service Industries

BY ROBERT W. MCINTOSH

Extension Specialist, Tourist and Resort Program

ALMOST EVERYONE is making an impression *on* someone else every day of his life. At the same time, almost everyone is forming an impression *of* someone else. It happens in private life, in business, in offices, on farms, in schools, in government—wherever people are involved with people. It happens both unconsciously and consciously, and with a purpose. There is no end to the process.

You, as a manager in the service industries such as the hotel, resort, or restaurant business, are judged not only by the good meal, the restful night's sleep, or the weekend of fun that your guests enjoyed.

You are judged also by the friendliness of your staff, their alertness, their attitude, how they look, and the way they do their job.

You are judged by the impressions your staff makes on your guests. What did your staff do to send a satisfied guest on his way or bring him back? Your success in business may depend on how well you—the manager—build these impressions. How well you do this job depends on how well you can manage people—your employees.

The most important asset of any business is its human family of workers—managers and employees. Increasing the value of your staff is simply smart business management. From the purely humanitarian standpoint, it is also a moral obligation.

Getting people to work not only *for* you but *with* you and to *keep* them working is never simple. However, the skills once acquired, pay handsomely in many fields. They are an especially important key to your success in the service industries.

MOTIVATION

How to Motivate and Inspire*

How do you increase the business value of the people who work for you? Above all, remember that they are people, each one an important part of your business family—not just a cog in a human machine that goes through certain muscular motions for 8 or 10 hours a day with time out for refueling and maintenance. Remember that your staff has heart and brains, feelings and ideas—made of the same raw materials as you are yourself. Their energies are there to be used for their own good and for yours.

Some ways of putting these energies to use in your business are:

1. Seeking and using your employee's own ideas.
2. Keeping employees informed.
3. Expressing personal interest in employees as people.
4. Instilling pride in work well done.
5. Providing effective supervision.

These techniques are discussed in detail below. They concern various methods of directing your employees toward your main objective—building a profitable business as the result of satisfied guests and customers.

As you put these techniques to use, you will find the job only half begun. The employee still needs more answers to his very important private question: "What is there in it for me?" This is not a cynical question. It is another way of asking—"How much am I worth?" As owner or manager, you have to ask yourself this question and answer it. So do your workers. And you must provide answers for them as well as for yourself.

What incentives will you give them? Your success depends on your answer.

Seeking and Using Employee's Ideas

In order to feel very much a part of the hospitality service business and to be given an incentive, each employee must understand that he is free to contribute ideas. Management has the responsibility to encourage these ideas by spoken word and by providing the necessary mechanism for obtaining them. This can be accomplished through such devices as suggestion boxes and by including idea-discussions as a part of every employee's meeting. Encourage employees to think about problems of the business. Some excellent ideas may be forthcoming. As manager, you can then carefully con-

*Material in this section contributed in part by Dr. Gerald C. Carter, University of Illinois; Dr. David Moore, Cornell University; Mr. Paul H. Valentine, Conrad Hilton Hotel, Chicago; and Mr. Ed Leach, Jack Tar Hotels, Galveston.

sider these, and if adopted, commend or reward the giver. If not adopted, a word of explanation and appreciation should always be given.

For example: Suppose new guest room lamps or spreads are needed. Ask the housekeepers to make suggestions. They may not come up with usable ideas, but you have alerted them to this opportunity to contribute and have built in their minds an appreciation of your thoughtfulness in talking to them about the problem.

Keeping Employees Informed

Successful service industry managers build good attitudes in their employees by keeping them well informed regarding affairs of the business.

For example, hold a meeting of all employees at least once every month to announce current news concerning the organization. Meetings should be well planned and purposeful. Include such coming events of importance as convention groups, trends in revenue, occupancy costs and expenses, new ideas for solving problems, new projects or construction, past achievements, and recognition of outstanding workers. Such procedures make each person feel personally important to the success of the business. The employee perceives a recognition of his value in the scheme of things and how his efforts help create success.

This practice of holding *regular* meetings for the employees *is one of the best means* of motivating your staff and building self-esteem. Follow-up printed memos or newsletters help maintain interest and assist in follow-through.

Expressing Personal Interest in Employees

Another important aspect of creating motivation is the *personal conference* held in private with each employee.

For example, managers or supervisors should find time at least once each year to sit down in private with each employee. In a friendly manner, discuss both business and personal matters. Such talks smooth out problems and difficulties which may be blocking the motivation of the employee. The talks are also helpful to you, the supervisor or manager, as you may receive information which would come to you in no other way.

Suppose Mary, a waitress, seems to have lost spirit and goes about her duties with no enthusiasm. If everything outwardly seems satisfactory, such as health and basic job conditions, the manager should carefully consider the action he will take and then invite her to his office for a private talk.

The first step would be to discuss her work, and at the same time, reassure her that there is no danger of losing her job. Find out the facts concerning her attitude towards the job. She may feel a lack of acceptance by other staff workers or feel insecure or discriminated against, or there may be still other sources of dissatisfaction or trouble. Personal or family problems may be vexing her. If her problems are business-related, they often stem from feeling "out of things."

In this case, the second step is to get her better acquainted with her working associates, perhaps by involving her in making plans for some special social activity of the workers, appointing her to some committee or asking her to assist the manager in some particular project. This procedure would give Mary a feeling of being someone special, of receiving special privileges which would have considerable motivational value. If the problems are of a home or personal nature, perhaps some assistance from a friend or relative could be suggested or arranged to help solve the problem.

Instilling Pride in Work Well Done

One definite advantage of employment in the service industries is that much of it is still of a "craft" nature. Craft work with the hands produces a complete finished product that can be admired (with accompanying satisfactions).

Examples: When the salad girl completes a beautiful and tempting salad, she can take justifiable pride in her accomplishment. The same can be said for the waitress serving a delicious meal and the housekeeper who turns out a truly clean and attractive room. These are tangible products of work and thus the old-fashioned pride of skilled accomplishment can still flourish in this industry. Management should show overt satisfaction with accomplishment by occasionally complimenting the employee for work well done, and expressing appreciation for it.

Furthermore, with increased automation in manufacturing, there will be a growing number of persons looking for jobs, as the labor supply will exceed the demand. Many of these job seekers will find their way into the service industries.

A job in a fine hotel, motel, restaurant, or resort will be looked upon as a privilege. Employees should, and probably will, have a higher regard for their positions in the future. Managers today can do much to build up pride, and this should be done in order to keep good workers and attract new ones. Raising status is possible by internal manipulation ("improving the image") regardless of external factors of demand or scarcity. A feeling of respect and pride is the foundation for true appreciation of the value and satisfaction brought about through work.

Pride in work well done also builds morale. Morale can be defined as an emotional attachment to the business itself. It is the end product of skilled management

and is reflected in each individual and in the general tone of all employees toward their employer. When *all* employee satisfactions and needs are being met, excellent morale is the certain result. Morale thus becomes an important indicator of the quality of employee management and should be carefully watched and measured as an integral part of the total management process. Any weaknesses which may appear should promptly receive attention and correction by the manager.

Providing Effective Supervision*

The supervisor is the basic managerial element in the business organization. He forms the essential link between the general manager and the workers. The entire organization is dependent on him. He must follow the fundamentals of good management—planning, organizing, actuating, and controlling. Actually, his functions in the latter two are more important than the former, but nevertheless, he does operate within all of the management procedures.

Usually, the supervisor is responsible for the training needed within his department. He owes each person under him the opportunity for training and self-improvement and he himself also should be entitled to similar opportunities.

An excellent bulletin, *ABC of Supervision*, should be part of every supervisor's "kit." In abbreviated manner, it gives essentials of management needed by all supervisors. The bulletin is available from the Bureau of Business Management, University of Illinois, Urbana, Illinois.

Supervision is likewise the most important *source of motivation* of the employees. When the worker has good and effective supervision, then he will perform to the best of his ability. Poor supervision brings about the opposite results. According to an authoritative source,† one-third of all employee job changes can be attributed to poor supervision. Thus, the quality of supervision will largely determine the level of employee satisfaction and motivation. Since most personal motivation is derived from a competent supervisor, your efforts as manager to improve the quality of supervision will reflect directly in higher employee motivation, achievement, and morale.

Supervisors should be given the opportunity to occasionally "brush up" on improved techniques of leadership. Special courses in supervision and technical aspects of the public hospitality business are offered by the Educational Institute of the American Hotel and Motel Association, Kellogg Center, Michigan State University, East Lansing, Michigan 48823.

Here are some check points for testing the effectiveness of your orders as a supervisor:

1. WHAT is to be done?
   Do you state clearly what is to be done?
   Are materials, tools, and supplies ready or ordered?
   Do you indicate what equipment and tools are to be used?
   Does employee understand what to do?

2. HOW is it to be done?
   Do you explain clearly how job is to be done?
   Does the employee understand the method to be used?
   Do you consider if there is a better way to do it?
   Do you provide for the employee to use his own judgment?

3. WHY is it to be done?
   Do you explain why the job is important?
   Does employee understand why you chose this method?

4. WHO is going to do it?
   Do you state clearly who is to do it?
   Is employee capable of doing it?
   How is he likely to react to your orders?
   Does he have enough authority to do it?
   Has he time to do it along with other work assignments?
   Is there a loophole to permit "buck passing?"

5. WHERE is it to be done?
   Do you indicate where job is to be done?
   If materials or equipment are needed, do you indicate where to get them?

6. WHEN is it to be done?
   Do you state clearly when the job is to start?
   Is it clear when the work is to be completed?
   If urgent, do you indicate urgency or priority over other work?

7. WHAT are your own feelings and attitude toward the receiver?
   Are you friendly but firm?
   Do you confidently expect the order to be carried out?

8. DID you follow up to see if order was carried out?

Faithfully following these guidelines will be of great value to your organization—and to yourself.

*Material contributed in part by Robert W. McConnochie, formerly Director of Training, Sheraton Corporation of America, and Dr. Peter Haines, Professor of Education, Michigan State University.

†Robert L. Peterson, *Work Incentives for Your Personnel*, Bulletin No. 503, Urbana, Illinois: University of Illinois, 1955, p. 18.

WORK INCENTIVES

To motivate workers, a definite system of incentives or rewards is necessary. Such a system requires a combination of several groups of incentives, the most important of which are:

1. Recognition—both money and non-money.
2. Achievement.
3. Social prestige.
4. Self-esteem.

Recognition—Money

A person's pay is his first thought concerning recognition. Good pay is vital but is not the most important aspect of employment. There are others of major importance such as steady work, comfortable working conditions, good working companions, good supervision, and opportunities for advancement. Good pay is essential to employee satisfaction and must be carefully considered in all personnel matters. Pay is the best and most tangible form of recognition of the employee's worth to the company.

Besides actual pay increases, other forms of monetary recognition in common usage are bonus plans, profit-sharing and extra pay for reducing costs (cost-reduction programs).

Bonus Plan

Under this plan employees receive extra pay at regular intervals. The bonus can be a flat amount paid for good service to the employer, or it can be a profit-sharing arrangement determined by a formula.

Psychologically, the more frequently the bonus is paid the better. For example, as an employe incentive, a monthly bonus or quarterly bonus is better than a bonus once a year. Of course, money must be available for a monthly or quarterly bonus.

Another form of bonus is to pay higher wages than the prevailing rate. For example, you may pay 15 cents per hour more than competing businesses. This provides a built-in bonus. The employee should be reminded of this from time to time so that he is fully aware of the bonus he is receiving.

Profit Sharing

There are two types of profit-sharing plans—the *cash plan* and the *deferred plan.* Some companies have both. This is called "combination" profit sharing.

Under the **cash plan,** profits to be distributed are paid in cash currently—usually quarterly, semi-annually, or annually. Profit to be distributed to the employees is usually an amount over a fixed minimum. For example, employees might receive 20 percent of all profits in excess of 6 percent on the company's net worth.

Under the **deferred plan,** a trust fund is set up to provide employees with future benefits. The deferred plan provides retirement, death, supplemental unemployment, health insurance, and disability payments. Also, some plans provide for loan and withdrawal privileges which make possible immediate financial assistance in time of unusual need.

These plans have certain advantages: (1) profit sharing tends to become a unifying force drawing management and employees together, (2) such plans are definitely work incentives as every employee can see that the profitability of the business and his own personal welfare are necessarily related, and (3) each worker has an incentive to be more creative and think of ways to increase sales or reduce or eliminate expenses.

For specific examples and advice, the following organization invites inquiries:

Council of Profit-Sharing Industries
400 West Madison Street
Chicago, Illinois 60606

Cost Reduction Program

An alternative to profit sharing which might be more understandable and appealing to the employees is *cost reduction.* Every employee knows that when he breaks a dish, for example, there is a cost to the company. If he knew that he would share in the amount saved by the company by being more careful and efficient, he would have much more interest in helping reduce costs.

Here's how the program works: A certain base period is established, with which subsequent periods are compared. All expenses in future periods are compared with the base period. Any savings in costs are shared with the employees, usually a certain percentage. The formula used by a steel corporation is a payment of 37½ percent of the savings to the employees. In the service industries, the expenses would have to be adjusted to the volume of business which occurred during the period being compared. But this presents no problem and the relationships could be readily accomplished and the savings ascertained.

Recognition—Other Than Money

Other recognitions aside from money include the tangible and intangible. Tangible recognition is established through such devices as issuing pins for length of service or for special accomplishments. Also effective is awarding a plaque, or announcement of a promotion with a story and employee's picture in the local newspaper. Some businesses run an advertisement in the local newspaper featuring pictures of key personnel, highlighting their training, experience, and outstanding services offered the guests.

There are other less formal intangible means of recognition, however. Just a kind word of praise, for example, can mean a great deal. Saying "Joe, those gardens and the lawn look just great. We've really got a good grounds man" goes a long way towards building good will and is recognized by both parties as a form of respect and recognition. Other examples are taking employees out to lunch at regular intervals and arranging a party for them, such as at Christmas, or sending each one a card on his birthday, or when sick.

Achievement

Ambition falls off when employees do not have enough to do. The only way to solve this problem is to establish reasonable work production standards for each job. Study and evaluation of standards and worker production should result in a reasonable output for each position. Living up to these standards brings a sense of achievement.

Better Placement

Workers will be more productive and interested if they feel that they are in the right job, are best suited for the occupation in which they are employed, and are being utilized to the fullest capacity. Periodic checks on the employee's production and talks with his supervisor will establish his level of performance. Appropriate adjustments in his job assignment help to keep his work up to the level of which he is capable and is of long-term benefit to both worker and employer.

Better Environment

Some places of business look fine from the outside and to the customer, but much less attractive behind doors in the work areas. This is detrimental to morale. Also, there are indirect, bad effects on habits and sanitation standards. Working areas should be made light, airy, comfortable, orderly, quiet, and clean. Actual tests have proven that employees' morale and productivity are much higher when they work in pleasant and clean areas than when the work environment is unattractive and depressing.

Self-Achievement

Self-achievement (also called self-fulfillment or self-actualization) caps all other considerations as an additional incentive especially for the more ambitious and intelligent employee.

Simply stated, this means a person knows he or she can climb the business ladder as far as his ability can take him.

This incentive is especially powerful for younger members of an organization. In order to motivate and hold the services of the most intelligent and capable of your younger employees, you *must* offer some kind of opportunity for advancement. This concept is perhaps one of the reasons why chain or system companies seem to have the services of the more "up and coming" young people in the business. They can offer opportunities for advancement to promising young employees as the company grows and expands. This same principle, however, can be applied to any business establishment. Openings for positions of greater authority and responsibility are sure to occur from time to time, and each business offers its own particular inducements.

Social Prestige

Present-day management theory says it is no longer sufficient to satisfy only lower-level physiological needs. Such a policy is too limited to motivate employees enough for today's competitive business conditions. *Superior employee performance will be obtained only when his social and self-esteem needs are supplied on the job.* "More money" often becomes an insistent demand only when material needs alone are met and when management is concerned only with satisfying minimum physiological needs. When the "whole person" is involved within an enterprise, the employee is often content with less money than he might make elsewhere, simply because he enjoys his work.

Building prestige is accomplished in the relationships between people. Employees, like everyone, are strongly dominated by such motives as the need to belong, need for love and affection, and need for acceptance. These are the foundation-motives for good employee management and the intelligent and efficient manager makes full use of them whenever he formulates policy governing work incentives for his business family.

As an example, let's take the need for social conversation between members of your staff. Suppose you should encourage a 10-minute rest break for the housekeepers. If you provide a reasonably attractive room where they can sit down and enjoy a few minutes of each other's company and a little refreshment, important social needs have been fulfilled and social prestige developed. Such a management policy encourages the employee's cooperation and constitutes an incentive to work towards the best interests of the business.

Or, we might encourage social events and recreational programs. Special dinners may be held for employees for a variety of reasons significant to the group.

Examples are a celebration for achieving some goal, an employee's retirement, a special event in the life of the business such as the anniversary of the founding

date, or similar occasion. Recreational programs could include bowling and softball leagues, swimming, golf, or other group-orientated sport.

Self Esteem

This group of needs differs from those of the social prestige group in that it is concerned only with the employee's view of himself. Examples are the opportunity for recognition, status in the community, respect, distinction, attention, importance, and appreciation. Providing these needs is more difficult than supplying others.

Recognition of achievement as previously described, is a good example of raising an employee's view of himself. The issuance of pins to denote worth to the company is excellent, as is the awarding of plaques or recognition in the newspaper. Another method is to improve understanding and ability by sending your people to special schools or short courses, or paying for home study courses or similar improvement programs.

Satisfying the need for self-esteem enhances feelings of self-confidence, strength, worth, and usefulness to the business organization. Denying this need leads to a feeling of inferiority which brings about discouragement.

SUMMARY

These are practical employee management suggestions which will bring about more productive and better satisfied employees. The team approach and provision of high quality supervision are essential elements in motivation. Use of specific incentives (rewards) in money and non-money forms constitute tangible results for the employee. Employees who are recognized for their worth to the company and rewarded accordingly will multiply this value in guest satisfaction and profits.

Implementing these suggestions in no way implies lack of leadership. In fact, such procedures actually increase leadership ability. Each employee is invited to *assist* management and is *expected* to participate in plans and discussions. Thus, management and employees have equal responsibility in maintaining good leadership. By following these recommendations, the manager can build a better management team and strengthen his position as leader.

For further information and assistance, visit your County Extension Agent of the Cooperative Extension Service, usually located at the county seat, or write to the School of Hotel, Restaurant, and Institutional Management, Eppley Center, Michigan State University, East Lansing, Michigan 48823.

Issued in furtherance of cooperative extension work in agriculture and home economics, acts of May 8 and June 30, 1914, in cooperation with the U. S. Department of Agriculture. N. P. Ralston, Director, Cooperative Extension Service, Michigan State University, E. Lansing, Michigan.

IP-8:66-10M-SQ

VT 002 512
Training Programs for Teachers and Leaders of Gainful Employment Training Programs in Home Economics. Final Report, Part A.

Office of Education (DHEW), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 65 14p.

*HOME ECONOMICS EDUCATION; *HOME ECONOMICS TEACHERS; *OCCUPATIONAL HOME ECONOMICS; *CURRICULUM PLANNING

This report describes a project for the training and preparation of teachers and leaders of gainful employment programs in home economics. A summary of the participants' reactions to questions about the effectiveness of the training program, information about follow-up activities and suggestions for a 1966 training program, are also given. Thirty-two participants were enrolled in the training program. Everyone was required to take a course, entitled Education for Gainful Employment in Home Economics. Each chose another leadership training course for child care, clothing or food service workers. A variety of teaching methods, learning experiences and audio-visual materials were used. The document lists general information, special learning experiences, resource-materials, and specialists for the four courses. The evaluation summary of the 1965 program indicated that participants believed they had developed an overall viewpoint of gainful employment, that they had broader understandings of the program, and that previous training had been supplemented and up-dated. They had developed tentative curriculum materials for areas of special interest, and a plan for initiating or continuing a program. (FP)

VT 002 512

ED042060

14p

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Final Report for Project #286

Training Program for Teachers and Leaders of Gainful Employment Training Programs in Home Economics

Part A

VT 02512

Part A - Overall Statement

1. Brief Description of the Program

A four weeks training program for teachers and leaders of Gainful Employment in Home Economics was held at Oklahoma State University, June 7 - July 2, 1965. A financial grant for the program was approved by the Research and Planning Branch of the Vocational Division of the U.S. Office of Education. Thirty-two participants were enrolled -- 26 vocational home economics teachers from Oklahoma, 2 home economics teachers from Wichita, Kansas, 3 graduate students from Oklahoma State University and 1 representative for the Home Economics Education Staff of the Louisiana Vocational Program.

Staff for the program consisted of six home economists (3 full-time and 3 part-time) with special training and experience in child care, clothing, food and home economics education. Members of the Home Economics Education Staff of the Oklahoma Vocational Program served as special consultants and assisted with the pre-planning and some presentations. Representatives of related agencies, programs, industrial firms and private services gave special presentations and demonstrations. The director of Family Life and Home Economics Program of the Tulsa Public School System was a visitor for part of the program.

Four courses were offered with all participants taking the course, Education for Gainful Employment in Home Economics. Each participant chose one course from the three courses aimed at providing leadership training for Child Care Service Workers, Clothing Service Workers, or Food Service Workers.

A flexible schedule was maintained throughout the four weeks but for the majority of the time a four hour period was alloted daily to the three groups for special group experiences; one to two hours for general sessions with all participants; and the rest of the day for individual or group conferences, additional observations, readings, etc. Two full-day field trips were scheduled and several shorter field trips were provided in all three areas. A variety of teaching methods, learning experiences, and audio-visual materials were used. Individual and small group conferences were held frequently and since all participants were living on campus there were many informal meetings. Weekly schedules were developed by the planning group which was made up of the staff members and a representative from each of the three areas. A special packet of resource materials was provided for each trainee.

General information on the content, special learning experiences and resource materials for each of the four courses is as follows:

a. Home Economics Education - Education for Gainful Employment in Vocational Home Economics Programs. Philosophy and general procedure in identifying needs and development of offerings - Staff - Louise Keller, Kathryn Greenwood, and special consultants.

Workshop Operation -----	Keller
Why Workshop on Gainful Employment -----	Keller
Policies and Progress of State Program in Gainful Employment in Oklahoma -----	Oklahoma Home Economics Supervisory Staff
The Youth We Haven't Served -----	Barbara Kemp, Vocational Division of U.S. Office of Education
Curriculum Design -----	Keller
Vocational Act of 1963 -----	Keller
World of Work -----	Greenwood
Initiating a Program - Developing a Brochure to Help Interpret the Program -----	Keller and Participants
Guidance and Counseling Students -----	Mr. Merle Collins Assistant Director of Guidance, Oklahoma State Department of Education
Services of the Oklahoma State Employment Division -----	Mr. Clyde Hamm, Chief Employment Division
Criteria for Establishing Gainful Employment Courses or Programs -----	Keller
Supervised Work Experience -----	Greenwood
Relation of Gainful Employment Program to other National Programs -----	Keller
The Economics Opportunity Act, Manpower Development and Training Act -----	Keller
Evaluation -----	Cozine
Follow-up - Oklahoma Home Economics Supervisory Staff and Cozine	

Resource materials included in packet.

"A New Look at Home Economics" Bulletin of the National Association of Secondary School Principals. Vol. 48, No. 296, December, 1964.

"Youth and the World of Work" Educational Leadership, Vol. 22, No. 4, January, 1965.

"The New Look in Vocational Education" Theory Into Practice, Vol. 3, No. 5, December, 1964.

b. Family Relations and Child Development - Leadership Training for Child Care Service Workers - Education for Gainful Employment in Vocational Home Economics programs. Practical preparation for teachers of child care service workers. - Mary Cox

Introduction to and need for child care services. Oral/reports of assigned readings by participants. Types and Functions of child care services.	Mrs. Cox

Field trips to observe child care centers:	
Urban - Oklahoma City	Local
Church sponsored child care center (Central Christian Church, infants to school age) Civic group sponsored nursery-kindergarten program (Altrusa) Social work agency child care center (Sunbeam Services, East Division-preschoolers to junior high)	1 private infant care center 4 private child care centers 1 private child care-kindergarten center Oklahoma State University child care services Luncheon and observation Preschool Laboratory Luncheon and Observation Children's Center Headstart Resources Exhibit Headstart Program in operation
Licensing of child care centers in Oklahoma	Mrs. Florence Frank Child Welfare Divison, Okla. Dept. of Public Welfare
Term paper reports by participants	
Child development and guidance: Readings Observation Positive Guidance for Children	Mrs. Halbrook, Demonstration Teacher OSU
Food for Children	Mrs. Burns, Child Nutritionist
Programmed Instruction In Child Care Services Class	Mrs. Hiss, Vocational Home Economics Teacher, Norman, Oklahoma
Curriculum Development	Mrs. Cox
Selected pertinent films were shown	
Packet Materials: A Nursery School Handbook for Teachers and Parents. Green and Woods. Sierra Madre Community School Assn., Sierra Madre, California	Children's Bureau, Supt. of Documents. U. S. Govt. Printing Off., Washington 25, D.C. #382-Children of Working Mothers #412-Day Care for Other People's Children in Your Home

Program Studies for Day Care Center. Dept. of Children & Family Services, Springfield, Ill.

#306-Food for Groups of Young Children Cared for During the Day.
#283-Home Play and Play Equipment
#30-Your Child from One to Six

Child Welfare League of America. Guide to Operation of Group Day Care Program.

Okla. State Dept. of Public Welfare. Standards Relating to Day Care Centers.

Many other pamphlets related to child development were provided.

c. Clothing, Textiles and Merchandising - Leadership Training for Teachers of Clothing Service Workers - Education for Gainful Employment in Vocational Home Economics Program. Practical preparation for teachers of clothing service workers - programs, planning methods, procedures, and equipment. - Greenwood and Gould.

What to look for in fitting a garment	Dr. Thelma Berry Univ. of Maine
Alterations for women	Mrs. Gandy, alteration Lady - Bonney's, Stillwater
Alterations for men	Mr. Sam Bates, Bates Men's Wear, Stillwater
Research report-survey of homemaker needs	Regina Brinkerhoff Graduate Student - OSU
Opportunities for girls in dry cleaning establishments	Dorothy Bennett, Executive Secretary, Okla. County Drycleaning Association
Programmed Instruction in Clothing Service Classes	Gould
Operation of chain stitch machine-how to make simple machine adjustments	Mrs. Clark, Singer Co. Representative
Curriculum development	Gould, Greenwood

Field trip - Oklahoma City
John A. Brown's - alteration department and drapery department
Sears - custom drapery department
Nu-Way Cleaners and several other cleaning establishments

Field trip - Konawa
Michael Casuals, Inc. - dress factory to view mass production

Packet Materials:

Books:

Johnson, Mary. Guide to Altering and Restyling Ready-Made Clothes. New York: E. P. Dutton and Co., Inc., 1964.

Bulletins:

Butt, Gladys L. Mending Clothes & Household Fabrics. Cornell Ext. Bulletin 871, New York State College of Home Economics, Ithaca, New York.

Fitting coats and suits. Home and Garden Bulletin No. 11, U.S. Department of Agriculture.

Removing Stains From Fabrics. Home and Garden Bulletin No. 62, USDA.

Clothing Maintenance Specialist. OE-87005, U.S. Department of Health, Education, and Welfare, Office of Education.

d. Food, Nutrition and Institution Administration - Leadership Training for Teachers of Food Service Workers - Education for Gainful Employment in Vocational Home Economics Programs - Practical preparation for teachers of food service workers - program planning, equipment and facilities, personnel utilization. - Mary Leidigh

Review of laboratory equipment and procedure	Leidigh
Demonstration on use of microwave oven, steamer	
Food preparation using specified equipment	

Field trips: Local

Dormitories - New Hall
Bennett Hall
University Hospital
Holiday Inn
Student Union food areas

Oklahoma City

Cain's Coffee Company
Baptist Memorial Hospital
Glen's Hickory Inn
Howard Johnson's Lodge & Restaurant

Dinner - Freddie's, Drumright

Speakers:	
Nursing Homes	Elizabeth Hensler
Food Production Procedures	Chris Harmon
Study of recipe standardization, portion control, waitress training, organization and management, dishwashing, costing and records	Leidigh
Curriculum Development	Leidigh

Selected related films were shown

Packet Materials:

The Correct Waitress Equipment Maintenance Manual Safety; Training Manual The Waiter and His Public, Ahren's Publishing Company, 116 West 4th, New York 11, New York.

Food Preparation Manual, Oklahoma State University Book Store.

Food Standards Handbook; for Quantity Cookery, Food Service Industry, Establishing and Operating a Restaurant, U. S. Government Printing Office, Department of Health, Education and Welfare, Division of Public Documents, Washington 25, D. C.

School Lunch Workshop Handbook, School Lunch Division, State Capitol, Oklahoma City, Oklahoma.

Handbook for Quantity Cookery, Dahl Publishing Company, Stanford, Conn.

2. Evaluation of 1965 Training Program

An evaluation sheet consisting of three parts was checked by each participant. Tabulation of results is given below as well as the evaluation made by staff members. Following the final session a short staff meeting was held and each member freely presented her evaluation regarding the effectiveness of the program.

Participants Responses to Extent Objectives Were Achieved by checking the question, "To what extent do you feel that each of the six overall objectives for this training program was achieved?"

Objective	Much	Some	Little	No Reply
1. Development of an overall viewpoint of gainful employment related to home economics.	29	3	0	0
2. Development of broader understanding of the characteristics, purpose, factors, opportunities and needs for gainful imployment.	27	2	0	3
3. Aquisition of broader understanding of procedures and techniques of plans for gainful employment programs.	21	8	0	3
4. Supplement and bring up-to-date previous training in area of special interest as related to gainful employment.	15	10	2	5

5. Development of tentative curriculum materials for area of special interest.	22	7	0	3
6. Development of plan for initiating or continuing program in gainful employment.	19	8	2	3

Staff members rated achievement of objectives approximately in the same order. It was felt that satisfactory achievement had been made for the most basic objectives - development of an overall viewpoint and general understanding of the characteristics, purposes, factors, opportunities and needs for gainful employment. Work on curriculum development had to be initiated before much could be accomplished for objectives 3 and 4 and the period of the workshop was too short to develop high quality curriculum materials. It was also felt that the trainees had become better informed on how to develop a plan for initiating or continuing a program in gainful employment but again time was too short for each participant to develop detailed plans.

The general feeling of the staff, the participants and from comments made by others not directly connected with the training program were that the training program had been a successful experience. Staff members stated that they had never worked with a more interested, hard-working, and cooperative group. When the proposal was developed we were probably too ambitious and hoped that more could have been achieved than was possible.

To the second question - "What did you feel were the strengths of the training program?" 113 responses were given, ranging from 1 to 7 by each participant. Half of the group listed the leaders as being one of the strengths and an additional 7 listed the outstanding leadership ability of Miss Keller. Group participation, enthusiasm, sharing of ideas and fellowship as being second in order of mention. Third most frequently mentioned was field trips, next was the availability and quality of resource materials.

The opportunity to assist in the development of curriculum materials was listed by over one-fourth of the participants. Presentation of background material, broad interpretation of program, amount and quality of planning done by each staff member, variety of teaching methods used were mentioned by several.

The staff members agreed in general with the participants.

To the third question - "What would you liked to have had that was not included in the program?" 42 responses were made. The one appearing most frequently was for more time - time for actual work experience, time for more reading, trying out various pieces of equipment and new techniques, improvement and refinement of curriculum materials, developing follow-up procedures, forms for records, etc.

A longer period of time would be desirable but did not seem feasible; therefore, 4 weeks in June was suggested as desirable time.

Additional subject matter was felt to be very desirable by the subject matter specialists, therefore, as plans are developed for the 1966 program attention should be given to include: Major emphasis on curriculum revision.

Other recommendations included: early preparation of a proposal which should be more carefully planned as to amount of financial assistance requested; requests made for classrooms earlier than this year; additional secretarial assistance, especially as materials are being developed; and a longer period of employment for staff members who would be preparing reports and refining materials to be duplicated.

4. Follow-up for 1965-66:

A. Copies of curriculum materials; the brochure; names and addresses of participants; forms for reporting progress (November 1, and March 1) and final report (June 1); and any materials ordered for packets which were received after the closing of the training program will be sent as soon as duplicated.

B. Two "news letters" will be sent to each participant including summary of progress as included in November and March reports.

C. Requests have been made to the State Director of Vocational Education that funds be available for matching part-time salary of staff members who participated in 1965 workshop for serving as consultants as needed and funds for travel to local schools to observe programs in progress.

D. Information provided in June report will be used in evaluating and revising curriculum materials during summer of 1966.

E. Plans for initiating or continuing gainful employment programs in 1965-66 by participants were reported by each as follows:

Child Care - 5 participants plan to initiate a program in September, 1965.
2 uncertain
1 will be continuing graduate study.

Clothing - 6 participants plan to initiate programs in September, 1965.
2 plan to continue programs initiated previously
4 develop plans for initiating in 1966.

Food - 6 participants plan to initiate in September, 1965
4 plan to continue programs initiated previously
2 develop plans for initiating in 1966.

Some suggestions were given for improving mechanics such as availability of resources in one central place and more secretarial assistance especially for typing of curriculum materials.

Again the staff members mentioned these and similar items with the strongest feeling being expressed that more time was needed especially to give the background materials needed in special areas before work had to be started on curriculum. Time did not permit the inclusion of all emphases as listed in the proposal for the training program.

3. Suggestions for 1966 Training Program

Twenty-six of the 32 participants indicated an interest in attending a similar program in 1966, three stated that at this time other commitments would not permit attendance and the remaining three were "uncertain". Approximately two thirds of the group felt it should be 4 weeks in length and 27 suggested June.

Emphases - Revision and refinement of curriculum materials was listed most frequently, techniques and procedures second, additional subject matter third, evaluation fourth and three to five included such items as: Expanded program, time allotment, work experience, job follow-up, adivsing committee, problems encountered during 1965-66 and more laboratory experiences.

Learning experiences or activities to provide - the one listed the most frequently was work experience - length suggested varied from one day to two weeks. Other suggestions made by eight or fewer participants included; field trips to established centers and additional field trips up until 1965; reports by out-of-state leaders as to types of program in their state; a few specific for special technique such as alterations, wardrobe clinic; the development of reports, visiting other areas while in session; have classes scheduled only in the morning leaving more time for reading and group work - limit participation to individuals who were actively engaged in gainful employment programs.

In the final meeting of the staff - unanimously all agreed that it would be desirable to have similar program in 1966. For the most part it should be limited to persons who had attended in 1965 and who had been actively offering a gainful employment program or had made definite progress in organizing for an offering to be initiated in 1966-67. Careful screening should be made of all participants and only those capable of making contributions should be invited.

The major emphasis should be on revision of curriculum materials and the overall leader should be a curriculum specialist. If a person could be located who had also had work experience this would be ideal. Since it would not be likely that such a person could be identified; therefore, two general leaders might be provided. Each of the local subject matter staff members indicated an interest in working with the program in 1966.

Follow-up for Training Program in Gainful Employment in Home Economics - Oklahoma State University, 1965.

Progress Report — November 1, 1965 and March 1, 1966.

Name_____ Area being taught (Circle one)

Address_____ Child Care Clothing Food

Brief review of activities to date. (Satisfactions and successes as well as dissatisfactions and unsuccessful experiences, description or example of any materials developed, or progress made in developing plans for a program in 1966-67.)

Information included in this report will be used in preparing the news letters to be sent to each participant. Send to June Cozine, HEW 110, Oklahoma State University, Stillwater, Oklahoma, 74075.

Follow-up for Training Program in Gainful Employment in Home Economics - Oklahoma State University, 1965.

Evaluation of Tentative Curriculum Materials due June 1, 1966. Home Economics Education, HEW 110, Oklahoma State University.

Part I - General Information

Name_____Address_____

1. Course Taught or Plan to Teach (Check one) Child Care Clothing Food

2. Number of hours allowed for:
   class per week_____work experience per week_____
   Approximate date for initiating work experience_____

3. Units of credit allowed 1 credit___ 2 credits___ 3 credits_____

4. Students: number_____grade level(s)_____
   Previous training in Home Economics in High School (list number of students for each amount) None_____ 1 year_____2 Years_____
   3 years_____
   Methods of recruiting (Describe)

5. Procedures and Techniques for Determining Needs for Offering Course and Emphasis to be given.
   Advisory Council (List personnel as to agency or role each represented and special contribution made by each.)

Survey Attach copy of form used and list individuals or groups contacted.

6. Facilities - (Check one of the following)
   Used space and equipment available for homemaking phase of program, no additions. yes_____ no_____
   Additional space and/or equipment added. yes_____ no_____
   List Additions

Used facilities in the community such as: (List)

7. Amount of Time Spent by Teacher
   Estimate number of hours spent per week in:
   Making initial contacts in community_____number of weeks_____
   Preparation for teaching class_____
   Number of hours teaching class_____
   Supervising work experiences_____number of weeks_____
   Follow-up of students who took course in 1964-65_____

What portion of your school day was allowed for course in gainful employment?
1/4_____1/3_____1/2_____ All_____ Other_____

Part II - Evaluation of Curriculum Materials

Using the second copy of the Curriculum Guide, which was prepared by your special group during the training program, supply the information or rating requested and write in suggested changes as additions, deletions or revisions.

1. Title - Following title place:
   ** if you feel it is a very important unit
   * if you feel it is of some value to include
   - if you feel it is of little or no value
   leave blank if you did not teach this unit
   Date and amount of time spent on unit_____

2. Concepts - Place a check in front of those you emphasized in your course.

3. Objectives - In front of each objective place
   ** if you feel it was achieved to a high degree
   * if you feel it was achieved to some extent
   - if little or no progress was made in achieving
   leave blank if this objective was not included

4. Generalizations - Place a check in front of those you emphasized.

5. Basic Learnings, Experiences, Resources - Draw a line through any not used, write in any additions and revisions. Check those you consider best.

6. Evaluation - Check those used and attach examples of any developed by you and your students or briefly describe.

Brief general statement may be added if you desire to give further comments.

Attach Part I to the evaluated copy of the Curriculum Guide for your special area and send to June Cozine, HEW 110, Oklahoma State University, Stillwater, Oklahoma, 74075.

Your evaluation will be studied and used in making revisions during the summer of 1966.

If you have not been teaching a course during the year but have been developing plans for initiating a course in 1966-67, you may wish to study the material and on the basis of your proposed plans make suggestions. Please attach a brief statement describing activities and progress for the year.

VT 002 664
Hauser, Francis L.; Wellemeyer, J.F.
Seminar on Problems of Manpower Planning, Development, Utilization, Distribution and Administration (June 3-September 6, 1963).

Agency for International Development, Washington, D.C. CRD-Publications and Technical Services Branch
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 63 141p.

FOREIGN COUNTRIES; *CONFERENCE REPORTS; *HUMAN RESOURCES; *ECONOMIC DEVELOPMENT; MANPOWER DEVELOPMENT; MANPOWER UTILIZATION; LABOR FORCE; SOCIAL CHANGE; *VOCATIONAL EDUCATION; MANPOWER NEEDS; PLANNING; SEMINARS; *DEVELOPING NATIONS
*SEMINAR ON PROBLEMS OF MANPOWER PLANNING, DEVELOPMENT, UTILIZATION, DISTRIBUTION, AND ADMINISTRATION, WASHINGTON, D.C., JUNE 3-SEPTEMBER 6, 1963

This third annual manpower seminar was designed to assist 22 policy level officials from 16 developing countries discuss, analyze, and study the relationship between principles of human resources development and economic planning. Participants attended lectures, exchanged views, and presented research papers. Presentations and papers are summarized to convey the essence, deliberations and atmosphere of cooperation of the seminar. Sections of the report are titled: (1) Problems of Manpower Administration, (2) Problems of Skill Acquisition and Education, (3) Problems of Labor Force Distribution, (4) Rate of Development and Institution Building, and (5) The Human Resources Factor in Developing Plans and the Economy. The appendix includes the titles of 15 papers presented by the participants and an extensive bibliography keyed to each report section. (EM)

VT 002 644

ED042060

SEMINAR ON PROBLEMS OF MANPOWER PLANNING, DEVELOPMENT, UTILIZATION, DISTRIBUTION AND ADMINISTRATION

June 3, to September 6, 1953

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VT002664

AGENCY FOR INTERNATIONAL DEVELOPMENT
Labor Technical Information Desk
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INTRODUCTION:

This is the final report of the 1963 Manpower Seminar. As in the two preceding years, the Seminar was conducted in Washington, D. C. by the U. S. Department of Labor under the auspices of the Agency for International Development and was designed to assist policy level officials from developing nations to discuss, analyze and study the relationship between "principles of human resources development" and "economic planning" through an organized exchange of information provided by the representatives from the participating nations and experts from the United States and other countries.

History: The 1963 Seminar was the third such meeting of policy level officials from developing nations. It took into account suggestions made by participants and lecturers associated with the work of the 1961 and 1962 Seminars. In evaluating the previous proceedings, participants and seminar-connected experts agreed that future seminars should concentrate on the relationship between developmental economics and manpower techniques. It was suggested that representatives from developing countries be asked, not only to attend lectures and participate in an exchange of views, but also to prepare research papers. This could be done prior to their arrival, or during the proceedings. They could then present the papers orally as well as in writing. These objectives were adopted as part of the program for the 1963 Seminar. The work sessions, therefore, were divided between lectures and discussions directed by seminar leaders and presentations of papers by officials from developing countries (and by guest lecturers). A list of participants' research papers is included in Appendix C.

Participation and Character: The Seminar was under the direction of Seminar leaders who used world-wide source materials to give some ideas of universal good practices in the solution of human resources questions. Twenty-two participants, representing sixteen nations, selected by the Agency for International Development attended. They came from seventeen participating nations: Brazil, Chile, the Republic of China, Colombia, the Dominican Republic, Ecuador, El Salvador, India, Indonesia, Israel, Nicaragua, Sierra Leone, the Republic of the Sudan, Tanganyika, Thailand, Turkey, and Venezuela. All but one of the participants were civil servants of labor ministries, education ministries, planning boards, and national as well as local employment and manpower services.

The U. S. Department of Labor's Seminar staff consisted of thirteen professional experts, exclusive of librarians, interpreters and clerical personnel. In addition, twenty-nine guest lecturers presented papers on various aspects of human resources policy and planning. Among the guest lecturers were senior members of the Diplomatic Corps, top-ranking civil servants and leading academicians. Professional staff members, foreign participants and guest lecturers are listed subsequently and in addition, reference is made to their contributions, in the body of the report.

The objective of exploring the relationship between economic development plans and human resources policies seemed to lend itself logically to the grouping of the seminar around five independent but related themes or segments. These dealt with:

I. Problems of Manpower Administration (Seminar leaders: Mr. B. Merson and Professor A. Mandelstamm)
II. Problems of Skill Acquisition and Education (Seminar leaders: Mr. J. F. Wellemeyer and Mr. Upchurch)
III. Problems of Labor Force Distribution (Seminar leaders: Professors M. Horowitz and R. Blitz)
IV. The Rate of Development and the Need for Institution Building (Seminar leaders: Professor G. Blanksten and F. L. Hauser)
V. The Human Resources Factor in Development Plans and the Economy (Seminar leaders: Mr. Sokolove and Mr. J. Carruthers).

A week of general orientation lectures preceded the courses. To improve direct communications between the Latin American participants and the Seminar leaders, and to reduce the need for simultaneous interpretation to a minimum, courses I, II, III, and IV were presented in parallel sections in English and Spanish by two teams of Seminar leaders. In order to maintain cohesion and communication between the Spanish and English speaking groups, one course--"The Human Resources Factor in Developmental Planning"--was given jointly in English by two Seminar leaders with the aid of simultaneous interpretation.

Personal and Professional Contacts: During their attendance at the Seminar participants and faculty had professional, as well as social contacts with top officials from the U. S. Department of State, the Agency for International Development, and the U. S. Department of Labor. Arrangements were made for participants to attend the annual meetings of the International Association of Public Employment Service Officials (IAPES) in Chicago, Ill.; they were invited to a special luncheon on September 5th, given in their honor by the Agency for International Development in the private dining room of the U. S. Secretary of State. A number of private parties were given for participants and faculty. Among these were garden parties in their homes in Maryland and Virginia by Mr. Harry Weiss, Deputy Assistant Secretary of Labor, International Affairs, and Mrs. Weiss; by Mr. Ealton L. Nelson, Manpower Adviser, Agency for International Development, and Mrs. Nelson; and by J. Fletcher Wellemeyer, Director of the Seminar, and Mrs. Wellemeyer. In the closing days of the Seminar participants in turn gave a party for the faculty and staff at the Manchester Inn in Washington, D. C.

Historical, Cultural and Technical Visits: Visits to historical and cultural points of interest in Washington, D. C. were arranged for the participants. They visited the Congress of the United States and sat in on hearings of Congressional Committees. They also visited many U. S. Government offices such as the Civil Service Commission, Offices of the U. S. Employment Service, the Department of Commerce and the Department of Health, Education and Welfare. They also visited the State Department

and the Agency for International Development. In each office the aims and operations were discussed. In the Washington area the group also visited the Organization of American States, the International Bank for Reconstruction and Development and the Inter-American Development Bank.

In the section of the Seminar dealing with Skill Acquisition and Education, the Director, J. Fletcher Wellemeyer, arranged for visits to the Montgomery Junior College, the Johns Hopkins School for Advanced International Studies and the Capitol Radio Engineering Institute. In each of the latter the participants were given an opportunity not only to discuss the aims and goals of the schools but also to observe the new and highly automated techniques now in use in educational institutions.

Travel in the United States: For a period of ten days -- August 2nd through August 11th -- the participants were free from lectures and were able to travel through the United States to follow up their special interests. Some went as far as Los Angeles and San Francisco, California; others to Chicago, Illinois, to Boston, Massachusetts, to New York City, Buffalo, New York, to Knoxville, Tennessee, and to New Orleans, Louisiana. During these trips they visited universities, social security and employment offices, factories, farms, dams and hydro-electric plants. The travel period served as a two-fold purpose; it gave the participants an opportunity to break the routine of daily meetings and it also permitted them to observe points of interest which had been discussed in course of the Seminar proceedings.

Final Report: The following report on the proceedings was written by Francis L. Hauser and J. Fletcher Wellemeyer, Jr. on the basis of their own notes and of rapporteur reports prepared by, or under the supervision of, two other faculty members--Mr. Bernie Merson and Mr. Ralph Bettancourt. This is a selective restatement. The authors have used as much of the voluminous record of lectures, discussions and research papers as they felt was sufficient to convey the essence of studies and deliberations and the atmosphere of cooperation within which these took place. They are aware that much interesting material did not find its place in their restatement. Besides conducting seminars Mr. Wellemeyer and Mr. Hauser served as director and deputy director.

It is hoped that this report may be of use not only to those who participated in the 1963, 1962 and 1961 meetings and to participants in future seminars, but also to persons interested in the subject matter of human resources development.

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(Guest Lecturers)

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Everett Reimer, U. S. Department of State

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REPORT OF 1963 SEMINAR

ON

PROBLEMS OF MANPOWER PLANNING, DEVELOPMENT, UTILIZATION, DISTRIBUTION AND ADMINISTRATION

Prepared

by

Francis L. Hauser

and

J. F. Wellemeyer

GENERAL ORIENTATION LECTURES

/ Many Foreign Manpower Officials participating in the annual Seminars have previously been to the United States, or are well acquainted with its institutions. A number of participants, however, come to this country for the first time and many of the characteristics of American Government, mores, traditions and economic life may seem strange to them. Experience in 1961 and 1962 indicated that the first week of the sessions should be set aside for general orientation. In the course of this period this year (1963) three prominent experts presented lectures on American Government, civil rights and the economic system; the first was given by Professor Phillip Taylor of the School for Advanced International Studies of John Hopkins University; the second was on the American Economy, given by Dr. Gerhard Colm of the National Planning Association; and the third was on Civil Rights, given by Arthur B. Caldwell, Assistant to the Assistant Attorney General of the United States. A digest of these three lectures is presented below. /

The United States has a highly structured government. For an understanding of the Nation's politics and administration, one has to keep in mind the fundamental assumptions that American society has formulated and maintained throughout the nation's history. Amongst these are:

That government is best which governs least. People should conduct most of their affairs personally, and use the government only where necessary.

Governmental power should be divided. All power in the hands of the few tends to corrupt. In the United States, the Government is divided functionally and territorially.

No one should hold power for an indefinite period of time. Judges and civil servants have life tenure, but policy making officials and administrators all are limited to terms of years.

Power is derived from the consent of the governed. Representatives must regularly return to the people and be re-elected.

Government should have no secrets, or as few as possible. Some observers feel that there is a current tendency on the part of the government to withhold information that should be public.

All citizens should have equal rights to property and to participation in government and all people within our boundaries have equal legal protection whether they are citizens or not.

No constitution should be too all inclusive and it should be capable of amendment. The U. S. Constitution is very brief.

Procedures must be observed. Laws are not partisan in application. In Anglo-American law this principle is called "due process".

When the Constitution was drafted, it set up a government that was federal and republican. The powers of the federal governments listed in the Constitution are spelled out in broad general terms. Over the years the Supreme Court has interpreted and re-interpreted them in the process of judicial review of the constitutionality of federal and state legislation affecting the individual rights of citizens and residents. The states have retained under the federal Constitution, all legislative, judicial and administrative powers not listed as federal functions. This broad complex is called the police power. It includes law-enforcement, public welfare and the protection of bodily integrity and property of citizens.

Some of the rights enjoyed by citizens are administered by the states; the national government administers only those enumerated in the bill of rights of the Constitution and in amendments adopted thereafter.

The American Constitution provides for a government in which there are three separate, but co-equal branches so that authority would be divided and that no one individual could occupy the position of King George III at the time of the American Revolution.

The founders of the government provided as safeguards of the rights of individuals an enumeration of things that the government would not be allowed to do. These restrictions, as well as a large number of subsequently adopted ones, take the form of amendments to the federal constitution. The first of these, for example, provides that "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abriding the freedom of speech or of the press, or the right of the people peaceably to assemble and to petition the government for redress of grievances".

Other amendments provide that people shall be secur in their persons and houses, papers, and effects against unreasonable searches and seizures, that no person shall be held to answer for a capital or infamous crime unless indicted by a grand jury, nor tried twice for the same offense, or be required to testify against himself.

After the Civil War, three amendments were added involving civil rights. The Thirteenth outlawed slavery, the Fourteenth provided that no state shall make or enforce any law which shall abridge the privileges and immunities of citizens of the United States; nor shall any state deprive any person of life, liberty or property without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws.

In its initial stage of development, the American economy produced agricultural products for sale in Western Europe. During the past one hundred years, however, industry has been growing rapidly, and now agriculture accounts for only 10 per cent of the labor force. However, this 10 per cent combines with highly developed machinery to produce not only enough

food and fiber for the United States, but a considerable amount for export as well. From the beginning the United States developed as one economic entity without customs or other barriers impeding domestic (interstate) commerce. The United States extends over a territory of subcontinental proportions. It is rich in natural resources such as oil, coal, ferous and non-ferous ores.

A characteristic of the economy is its high standard of living. Even unskilled workers are able to own recent model automobiles. This results from high productivity resulting in turn from a high degree of capital investment and highly developed management and the use of scientific technology. Because wages are high, machines are highly developed, and aside from agricultural products, American exports have usually consisted of machines, machinery and office tools. Examples are agricultural machines, particularly harvesters, office machines, airplanes, etc.

The economy has its problems, however. One of these is unemployment. In April 1963 there were 4 million unemployed. At the same time, many employers were unable to find the people with particular skills they need; and some 18 million wage earners were working overtime. The unemployed included large numbers of school drop-outs and unskilled workers, but also well trained competent individuals displaced by the installation of new machinery. Recent increases in production have not been matched by equivalent increases in employment. The Federal Government has begun a program for retraining unemployed workers.

Another problem of the economy is the balance of payment question. Although the net export surplus of the country is about 4 billion dollars annually, our commitments in foreign aid amount to some 3 billion dollars and our military commitments overseas cost some 2 billion dollars. Consequently, the continuation of United States aid programs seems to depend upon the preservation and expansion of the country's exports. The nation's share in the world market has been dwindling since 1962 owing to resurgent competition from Western Europe and Japan.

A satisfactory rate of growth for the American economy is calculated at 4 to 4 1/2 per cent per year, which would require an investment ratio of some 12 per cent of the national income. It is currently only 10 per cent, however, both these figures are far below those for Japan or West Germany, but the situation in the United States is different, and lesser proportions of national income saved can adequately increase national production.

There is a great deal of planning by private firms in the United States. Most of it is based on classical doctrines whereby entrepreneurial decisions

should be made in response to the signals of the market. This method has been useful in the short run. It does not, however, substitute for the five to ten-year planning necessary for large estimates. Long-term plans should be made by the federal government. For various political reasons, the government has not been engaged in the formulation of long-term plans. Private non-profit organizations, like the National Planning Association are making planning studies and suggesting planning policies.

I. PROBLEMS OF MANPOWER ADMINISTRATION

/This course was designed to promote the organization of public and private services in developing nations with a view toward better utilization of existing human resources and skills, as well as the development of potential skills, knowledge and abilities in the labor force. The effectiveness of such services depends upon assembling an expert staff whose work is concentrated upon well defined, realistic objectives. In order to achieve this, the seminar leaders in both sections concentrated upon conveying ideas and principles governing manpower policies and programs. They illustrated these by presenting examples from the United States, Latin American, Tunisian, and (with the help of guest lecturers and participants) German, Indian and Swiss experience. Among specific topics discussed were: measures effectuating the mobilization of the labor force; programs for improving its productive utilization; the significance of experience on the job; human relations; the role of incentives and the need for permitting and accepting vertical mobility; the evaluation of countries; the technical assistance available. Contributions to this section were made by Miss Sonia A. Fereira, Brazil; Mr. Jorge P. Padilla, Colombia; Mr. Ramesh K. Srivastava, India; Mr. Jose O. Banos, El Salvador; Mr. Hasan A. Lavkan and Mr. Nihat F. Yapar, Turkey; Mr. Sakda Saibua and Mr. Sujit Sopon, Thailand, and by many other participants.

Seminar leaders were Mr. Bernie Merson, AID in the English and Allan Mandelstamm Professor of Economics in Vanderbilt University. A number of guest lecturers were invited to speak about special topics. Among these were: Mr. Herman W. Bremer, Labor Secretary, Embassy of the Federal Republic of Germany; Dr.Lukas Burckhardt, Counselor for Cultural and Labor Affairs, Embassy of Switzerland; Mr. Malcolm Kennedy, AID; Mr. John Murray, U. S. Department of Labor, BES; Mr. Seymour Brandwein, U. S. Department of Labor, OMAT, and Professor Raymond Pellesier of Georgetown University./

1. Elements of a Manpower Program: [1]

Manpower programs exist for the performance of specific functions. The following list is intended to be reasonably comprehensive; but some functions may not appear, or may not be necessary, in programs of individual countries.

Formation of an occupationally and psychologically qualified labor force for productive employment: No matter what programs of economic development may be devised, it is essential to develop a trained labor force in connection with it. Apprenticeship programs, trade schools, promotion of labor mobility, on-the-job training, instructor and foreman training institutes, literacy education, correspondence schools and evening classes, training abroad, training within the country by

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[1] This section is based on the presentations of seminar leader B. Merson and a guest lecture by Mr. Malcolm Kennedy.

foreign technicians and by, and in, foreign firms are activities connected with the manpower development portions of an economic plan.

Efficient mobilization, allocation and distribution of the labor force: This function consists of worker recruitment, job finding and placement, which is usually performed by a public employment service, but numerous other services may be used in addition. Employment counselling, food-for-peace programs, Peace Corps, Youth Conversation Corps, wage and job prestige incentives, immigration and emigration policies, and special programs for highly trained manpower may be made integral parts of mobilization efforts.

Optimum utilization of the labor force in production: This is a program to train employers in the achievement of maximum productivity. In underdeveloped countries employers, even in the industrial sector, frequently do not use the best methods of organization and supervision. Some activities in this area are: skill improvement and retraining of employed workers, mutually satisfactory labor-management relations, productivity centers, effective labor market information, equal opportunities in hiring and promotion, technical assistance from other nations, private foundations and the U. N., industrial safety, reduction of absenteeism and feather bedding, appropriate wage policies, realistic education and training standards for positions, a program to improve organization and methods.

Promotion and protection of the welfare of the labor force: This includes such activities as conciliation, arbitration, fact finding boards, provision for trade union representation elections and general welfare activities by the government, such as housing, sanitation, social security, protective legislation, consumer and credit cooperatives, worker education and tripartite advisory councils to government agencies.

Labor market research and information: This function consists of the development of improved manpower tools on the basis of study, research and analysis, as well as a current flow of information on job requirements, labor supply and demand, training needs, employment and unemployment problems and trends.

Specific research projects might include such matters as improved and accelerated training curricula and administration, as well as training tools, techniques and methods including teaching machines, audio-visual aids, public administration techniques, night and correspondence courses. A research program could also include studies of unemployment and underemployment and measures to promote full employment. A better manpower

selection technique, including employment aptitude tests and occupation classification systems can be studied. In addition, research projects could include improved labor market and occupational analysis, studies of social and personal effects of urbanization and industrialization, and of the development of effective work force incentives, such as wages, and job requirements.

Current information might consist of reports on trends and levels of employment and unemployment, in the composition of the labor force, the location of job vacancies, statistics on work injuries, absenteeism and labor turnover, and related topics.

In order to obtain information, periodic censuses of population and labor force are needed; compilation of occupational guides including education, training and experience requirements is useful. So are manpower assessments, utilization and training needs. Current employment and unemployment levels and trends should be the subject of a systematic and continuous data collection program. Statistics should be collected on hours of work, wages, work accidents, labor disputes, consumer prices, and births and deaths.

All these programs may not be practical in every stage of development. Countries will have to pick and choose the programs best for them, but they should be closely related to on-going economic development programs.

Four functions of human resources policies of government are in most cases essential to the administration and organization of a manpower program.

a. An office of manpower resources and planning: This should be a very high-level office, independent of operational departments which will determine the information to be gathered and which performs over-all manpower planning. It consults with departments which furnish information and operate the various programs;

b. Collection and analysis of statistical data: This may involve several government agencies such as a census agency or central statistical agency to provide information on population, agricultural and business activities, and frequently periodic labor force surveys. The National Employment Service can provide material on employment and unemployment levels and trends. Other agencies can produce information on output, education, training, labor turnover, vital statistics, and absenteeism;

c. A public employment service: This is the principal operating agency in a manpower program. It must be closely linked with the Office of Manpower Resources and Planning (described) in (a.) above); finally,

d. A central training authority is desirable to gear education and training closely to plans for economic development and the manpower resources required to carry this out.

The purpose of the planning process, as well as of human resources policies for its support goes beyond the goal of economic growth; it is designed to make sure that development yields benefits to all the people. This formula has often proved useful in analyzing the economic reasons for a manpower program and the supporting interrelations among its various components. It assumes a country's desire to increase per capita income by increasing the gross national product faster than the growth in population.

$$\frac{\text{GNP}}{\text{Population}} = \frac{\text{Labor Force}}{\text{Population}} \times \frac{\text{Man Hours Worked}}{\text{Labor Force}} \times \frac{\text{Production}}{\text{Man Hours Worked}}$$

Another way of saying this is: Per Capita Production = Labor Force Participation Rate X Average Hours Worked X Productivity per Man Hour

On whatever scope manpower services are inaugurated they are indispensable because there is no automatic adjustment which guarantees that the necessary labor force will be adequate when needed. In many developing countries there is a movement of population to the urban areas, and frequently unskilled labor in great abundance exists side by side with unused or partially used machinery, inefficient farms, housing shortages and poor public services. Proper matching of skills and jobs requires considerable lead time and an adequate institutional framework. It also requires careful coordination.

Labor force participation may be increased by using more women or older workers. Also, hours worked may be increased by various devices. However, productivity per man hour is likely the most important component in increasing the national product. Education and training programs, improved utilization of skills, improved management, adult literacy programs and related efforts all will have a beneficial effect on the per capita output.

2. Manpower Administration in the United States: [2]

Manpower administration in the United States is complex and not neatly organized. The high degree of decentralization is the result of the size and complexity of the country, its federal system of government, the individualistic nature of the people, and the belief in checks and balances.

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2) This section is based upon the presentations of both Seminar leaders and guest lectures by Mr. John Murray and Seymour Brandwein of the U. S. Department of Labor.

During the New Deal period an unemployment insurance system was inaugurated and much labor and social legislation pertaining to labor standards, as well as to labor-management relations was enacted on the federal level. Workmen's compensation (for job connected injuries, accidents and illnesses), as well as some basic labor laws had earlier been adopted by state governments.

The United States has had experience with central manpower planning and organization but only during wartime. In the manpower planning field, however, activities during World War II were considered emergency measures; permanent legislation began after the war.

The Employment Act of 1946 for the first time made the Government responsible for promoting "maximum employment, production and purchasing power". In 1962 the Manpower Development and Training Act declared that an effective full employment policy also requires a major effort to improve the functioning of the labor market and the quality and adaptability of the labor force. The Act also provides that the President make an annual report on manpower requirements, resources utilization, and training. There are some additional acts such as the 1961 Area Redevelopment Act, 1962 Public Works Acceleration Act, and the Trade Expansion Act of the same year. Employment service and social insurance legislation date from the 1930's. Special legislation providing for training and education go back to World War I. The President makes an annual economic report under the 1946 legislation.

Many different departments of the Federal Government have responsibility for various aspects of manpower programs. To mention a few; the Civil Service Commission, the various Armed Forces, the Vice President heads a committee on Equal Employment Opportunity, the Bureau of Mines, the Office of Education, and the Old Age and Survivors Insurance organization. The Department of State provides specialized training for foreign service officers, the Department of Agriculture helps farmers with new and improved technology. Labor disputes are handled by the Federal Mediation and Conciliation Service and the National Labor Relations Board.

An important source of manpower statistics is the Bureau of the Census. Within the Department of Labor the Bureau of Labor Statistics, Bureau of Employment Security, Bureau of Labor Standards, the Women's Bureau, the Wage and Hour Division, the Office of Manpower and Training and the newly established Manpower Administration all deal with various aspects of manpower administration.

In addition to the Federal Government, State governments have major responsibilities for apprenticeship and vocational training, for mediation and conciliation, for research, for the administration of employment services and unemployment insurance, for occupational health and safety, child labor, and labor standards administration.

The earliest federal activity in the labor field was the gathering of statistics on employment, unemployment, wages, productivity, and injuries. The Bureau of Labor Statistics, (BLS), established in 1885, as an independent agency first made a series of studies and special reports. The Bureau then concentrated upon the continuing series and reports for which it soon acquired a nationwide reputation for accuracy and integrity. Public debate in America consequently focuses on the problems revealed by the Bureau's statistics and not upon their accuracy. [3] The U. S. Department of Labor, of which BLS became part, was created in 1913. The Department's scope of activities includes a wide area of labor laws. Its Wage and Hour Division and its Bureau of Labor Standards are amongst the principal organizations administering labor standards and wage regulations. The Department is also responsible for promoting skill development through its Bureau of Apprenticeship and Training.

More recently legislation administered by the Department provides for the Office of Manpower Development and Training. [4] This Act provides that some 400,000 will eventually receive training. The Employment Service selects the workers to be trained and the vocational education authorities in the Department of Health, Education and Welfare organize the needed training programs, again working through state organizations. This program is new and supplements a smaller program begun in 1961 in the Department of Commerce based on the Area Redevelopment Act. This Act focuses attention on local areas of substantial unemployment and provides for redevelopment loans and necessary retraining of the workers. Both of these programs represent only a beginning in an approach to a solution to the problems of unemployment.

An important part of the Labor Department is the Bureau of Employment Security. When, in 1955, the Federal government passed a law providing unemployment insurance programs there was a question about its right to do so under the constitution. Some constitutional law experts throught that this function was properly one to be exercised by the States. However, in the midst of the great depression in the 1930's, only one state had passed such a law; the others evidently feared that businesses would leave their states if they did. In order to act, the Federal government made use of its taxing power, which is very broad. It levied a tax of 3 per cent on employers' payrolls. Of this, 2.7 per cent would be returned to the States, providing that they passed a satisfactory law

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3) For a comprehensive treatment of BLS activities see the paper by Mr. E. Clague in the 1961 Seminar proceedings, pp. 117 ff.

4) For a comprehensive treatment of these new programs, see the lectures by Mr. Leo Werts and Mr. Howard Rosen in the 1962 Seminar Proceedings, pp. 154 ff.

providing an unemployment compensation program. If their program was unsatisfactory, the Federal government would retain the funds. The remaining .3 percent was reserved for administration at the Federal and State levels.

The Federal government develops standards and procedures, designs and supervises a statistical reporting system and provides technical experts to assist the state administrators. However, all the employees in state agencies are state employees. All states have unemployment insurance programs.

In addition to the 50 states, Puerto Rico and the District of Columbia have unemployment insurance programs, there also are Employment Services in the Virgin Islands and Guam.

More than 1900 local employment offices are in operation. The Employment Service devises tests and administers them, counsels applicants and provides labor market information to employers and workers. Special efforts are made on behalf of young people, older workers, handicapped and minority groups.

The Employment Services supplies certain technical services to employers, but in peace time use of the service is not mandatory.

Unemployment insurance, placement services and social security pensions were at first offered on a rather limited scope. Coverage has gradually been extended until today most wage and salaried employees, as well as many self-employed persons benefit from these programs.

A major part of manpower activities in the United States is carried on by private activities. Professional associations of all kinds provide education and training through journals and meetings; so do various trade unions and employer organizations. Collective bargaining often includes a wide range of manpower functions through administration of contract provisions pertaining to wages, hours, and conditions of work, fringe benefits and grievance procedures. Collective agreements often contain provisions dealing with promotion, training, industrial safety and increased productivity. Many employers have specialized departments for on-the-job training, personnel administration, relations with trade unions, formulation of wage and employment policies, and collection and analysis of statistics of their own employment operations. At the same time workers do a great deal of work on their own in taking night courses and correspondence courses.

In America, management and supervision are regarded now as professional occupations, much like the legal and medical professions. Fifty or sixty years ago, the use of time studies coupled with the speed-up and

stretch-out gave the field a bad reputation. However, beginning with the Hawthorne studies in the 1920's, American management approaches have emphasized the psychological and sociological motivational aspects. Less strict supervision relying on the individual loyalty to the group works better than traditional methods. If the group can be convinced that it wants to maximize productivity, the supervision need only make an occasional suggestion. The supervisor should also exhibit a personal interest in the workers.

Scientific management applies to the whole field of production. It is based on a discipline called industrial psychology. Supervisors and managers must in day-to-day operations take into account human relations aspects such as these:

Morale and motivation: Man works in a social environment. For good morale, as an individual, he needs a sense of belonging to his group, a sense of recognition, occasional new experiences, and security. In addition, salaries, perquisites, prestige and chances for advancement are important.

Principles of organization: The more important working principles are: span of control, i.e., recognition of a limit on the number who can be supervised by an individual; delegation, the transfer of responsibility (and necessary authority) to subordinates; ultimate authority, the responsibility for acts of subordinates; unity of command, no more than one supervisor should give instructions to a subordinate; contact, supervisors may deal with other supervisors at their own level, provided proposed action is approved by the superiors; and definition and a prescription, in writing of duties, authority, responsibility and relations are observed.

Communication: Many formal and informal methods are used to insure that policies and procedures are clearly understood. These include written and oral instructions, manuals, committees, staff meetings, social events, training classes, grievance procedures.

Induction: A planned program for introducing new or transferred employees to their work. This involves interviews, explanation of the job, rules and regulations, physical layout of the work area, introduction to fellow employees, etc.

Training: Supervisors are responsible for training employees in their jobs. This involves the steps of preparation--putting the employee at ease; presentation--describing, showing and illustrating the operation; application--having the employee try out the job and correcting errors; and follow-up--letting the worker proceed on his own but checking frequently and reteaching when necessary.

Giving orders and directions: These may be oral or written, but should be clear, understandable and acceptable.

Correcting and improving employees: Reprimands should be given calmly, in private, promptly and impartially. Criticize the work, rather than the worker, suit the severity of the reprimand to the seriousness of the case.

Personnel evaluation: Evaluation goes on constantly whether formally or not. Various devices are available for recording evaluations and keeping them as objective as possible. These are: check lists, forms and narratives. Ratings should be accompanied by counselling with the employee.

Selection and placement: In large organizations this is a formalized procedure including recruitment, reception, application forms, interview, testing and health examination.

Other fundamentals of management include, employee problems and counselling, the use of conferences, wages and salaries, safety and housekeeping, work simplification, methods improvement, cost-waste-quality control.

Fundamentally, management is the direction of human efforts toward the objectives of any given organization, and it operates through four main functions:

a. Planning--plan work ahead; establish priorities and order of work; arrange for communications; anticipate services that may be needed and prepare to supply them.

b. Commanding--perform the work or delegate it; interview, teach, listen, explain, schedule, arrange, order.

c. Controlling--men, machines, materials, costs, safety.

d. Improving--let workers do a variety of jobs, appoint understudies, develop new methods and procedures.

3. Manpower Administration and Employment Policies in the Federal Republic of Germany: 5)

After World War II the unemployment situation in West Germany was very serious. It continued to be critical during the early 1950's.

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5) This section is based on a guest lecture, by Mr. Herman Bremer of the German Embassy.

The reconstruction of West German factories was just beginning and the currency reform of 1948 wiped out the black market and the black marketeers with it. Serious problems resulted from the Iron Curtain. Towns were cut off from their hinterlands and vice versa. This meant there were depressed areas along the border to the East. In addition, millions of refugees came into Bavaria, Lower Saxony and Schlesweig-Holstein. The unemployment rate in some of these provinces reached as high as 30 per cent. Finally, exports are essential to the Federal German Republic. The country is not self sufficient, and markets had not been developed or regained.

To deal with this situation the government took direct action to fight unemployment. In 1950 a program calling for 2 billion marks was announced. The money was largely used for housing programs. This not only created much needed shelter, but also jobs. A long-range program of moving refugees away from depressed areas along the Iron Curtain was undertaken. A program of area development was carried out involving a total of 3 billion marks. These were spent as long-term, low-interest loans. They went for public works, for the construction of factories to provide permanent jobs which would produce goods for export. One hundred fifty million marks which went to industry created 50,000 permanent jobs; 40 million marks received by small businesses produced 12,000 additional jobs. In this way, one hundred million marks of unemployment benefits were saved and an increase in income tax of 10 million marks achieved. West German economists believe that these programs amounted to a sort of economic ignition without which it would have taken the economy much longer to reach its present level of production and wealth.

The most important manpower programs in Germany are the nationwide job placement service, the unemployment system, and the counselling service. The placement service has 13 regional and 210 local offices with 539 suboffices. In addition, there is a national clearing house in Frankfurt. Placement services are free except for a few minor private organizations supervised by the federal bureau, it can supply information about the labor market situation on the supply and demand sides. Trends and changes can be spotted quickly. Counselors from the employment office regularly visit schools and advise students about the kinds of jobs available and where there are surpluses or shortages of workers.

The West German labor market is now one of labor scarcity rather than surplus. The public employment offices have today more than 500,000 job openings compared to fewer than 150,000 job seekers. Moreover there are approximately 800,000 workers from other European countries employed in German factories.

Recovery in West Germany was rapid in part because of the high level of skill of the German workers. It was a situation where only capital investment was needed to put the country back at a high productive level. The process of recovery was expedited by the availability of Marshall Plan Aid.

Two particular problems might be mentioned. There is discussion in Germany now about what to do about a relatively huge reserve of unemployment compensation funds. Some feel taxes should be suspended for awhile, others point out that a depression could quickly exhaust the available funds. Automation may be a problem in the future but at the moment workers displaced are quickly absorbed elsewhere. Moreover, the foreign workers provide a kind of cushion. Their working permits could be abolished should unemployment assume critical dimensions.

4. Manpower Administration and Employment Policies in Switzerland: [6]

Switzerland is a country of only 16,000 square miles and 5.4 million inhabitants. Unemployment is almost non-existent and more than 600,000 foreign workers are employed.

Heavy unemployment (7%) during the thirties resulted in a program of job-creation based on a program called the "worker's penny". A one per cent tax on earnings was set aside for employment making enterprises. The tax was imposed by the canton, on the basis of recommendations by management and labor. As part of the works project series then initiated the ancient center of the city of Basel was almost completely restored to display its historical architecture. The owners received up to 50 per cent of the costs of renovating old facades and interiors. They paid the balance themselves.

In 1937 a national "treaty" between labor and management provided for arbitration of labor conflicts. Losses by strikes in the past few years have run to less than 2,000 man-days per year.

After World War II, the Swiss expected heavy unemployment and amended the Federal constitution to provide that the Federal government take responsibility for avoiding economic crises and for creating employment opportunities. A federal law of 1955 provides for preserving jobs and creating new ones when necessary. A law passed in 1951 provides for the creation of private reserve funds. When a firm creates such a fund for the purpose of creating jobs, it gets a tax refund when the money is spent--the refund is to be used to create jobs.

The Swiss Government has a special Delegate for the Creation of Employment Opportunities who is a management expert and who publishes

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6) This chapter is based upon a guest lecture by Dr. L. Burckhardt of the Swiss Embassy.

a quarterly bulletin emphasizing the need for careful private planning during prosperity for unemployment contingencies.

Switzerland has a highly developed apprenticeship program supervised by the Federal government, but administered by the Cantons. In addition to government officials, representatives of management and labor participate in the operation of these programs. In-plant and vocational school training are integrated into the apprenticeship system.

Public employment agencies exist in every canton, but private agencies set up by professional organizations are even more important.

5. Managerial Problems in Latin America: 7)

For countries in the process of development, foreign firms can provide a source of experienced managers and also a source of support for training programs. Training programs in Mexico, Chile and elsewhere have been able to attract cooperation by foreign firms.

In 1955, Mexico began a large training program called Centro Industrial de Personnel, supported by both Mexican and foreign firms. It provided sales training, a program for training women as secretaries and social workers, a program for top management. The program involved courses at the university and travel to the United States.

As industrialization develops, business administration training at the universities becomes more important. In Latin America there is in addition, too much emphasis on law--civil law, constitutional law, business law, and available university instructors are mostly law school graduates. Needed is more concentration on sociology, psychology, marketing, industrial management, human relations. In addition to these changes, teaching methods should put more stress on student participation.

Latin American Governments can promote economic growth by developing productivity centers and by initiating contracts with American universities to improve business administration teaching in the universities. Contacts with American universities should extend to public, as well as private institutions.

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7) This section is based upon a guest lecture by Professor R. Pelissier of Georgetown University.

6. Manpower Administration in Tunisia: [8]

Tunisia became independent in 1956. In its first years as a sovereign state, it had to establish a governmental structure, replace French officials, initiate foreign relations, build institutions, and develop a national as opposed to a tribal or village outlook on the part of the people. However, by 1960 Tunisia was ready for a program of economic growth and social progress on the basis of what was called "Neo-Destourian Socialism". A ten-year perspective was prepared and widely debated. After this discussion an initial three-year program was adopted which is aimed at these overall goals:

The triennial plan calls for a growth rate of six per cent per year; 26 per cent of the gross national product should be saved (i.e. invested); foreign aid should be limited so as never to exceed 50 per cent of total gross (national) investment. This policy of austerity should provide the foundation for greater economic independence at the end of the ten year plan in 1970. The three year plan should create a floor for annual earnings of low income families. Their minimum income should be not below 50 dinars (one dinar= $2.38). To accomplish the objectives of the plan the institutional structure of Tunisian society should be modernized and economic, as well as social barriers to development eliminated. Economic and social dependence upon France should be reduced ("Decolonization") and the transfer of foreign "enclaves" or enterprises to Tunisian hands encouraged ("Tunisification").

The three-year plan--1962-64 calls for an investment budget of 3.3 million dinars, for activities of a manpower service including employment offices, manpower analyses, youth counselling, occupational training, apprenticeship and on-the-job training.

Tunisia will have to undertake a formal assessment of manpower resources and requirements, utilization and training needs. Some parts of such an analysis have already been started. There is understanding on the part of leaders that skilled workers will not automatically become available as the plan proceeds and that programs of training have to be initiated which anticipate future demands of the labor market.

The execution of the three-year plan involves the cooperation of a series of administrative agencies (ministries) and political organizations. The political bureau of the Neo-Destour party formulates basic manpower policies for Tunisia. Members of the bureau include cabinet ministers, trade unionists, employers, and key party members.

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8) This section is based on lectures by Seminar leader B. Merson who had recently returned from a mission of long duration to Tunisia.

In addition to the Neo-Destour bureau the National Council of Occupational Training helps implement the plan. The trade union movement is also committed to support the plan and has been exercising considerable restraint in such matters as labor disputes and wage increases. It operates actively in developing the plan, however, and has been developing formal programs for handling grievances and developing worker cooperatives.

In the executive department of the government there is a special Ministry of Plan and Financing. It coordinates education, training, social welfare and technical assistance relationships with the United States, the United Nations, and other governments and international agencies. The ministry conducts the national statistical services. Cooperating with the Planning Ministry are the line departments or ministries for civil service, social security, employment and training, education and agriculture.

7. United States Technical Assistance in Manpower Administration: [9]

The United States' program of foreign aid is authorized by the Congress and provided for by annual appropriations. The President and the Executive Branch are responsible for carrying out the program. The administration is the function of the Agency for International Development (AID), in the Department of State.

For developing countries, the point of contact with the AID program is the American Ambassador and the Director of the AID Mission in the country. AID programs include development loans and development grants. More and more, emphasis has shifted from grants to loans. However, in the manpower field, most U. S. technical assistance has been in terms of grants.

AID finances the cost of U. S. technicians working overseas, the sending abroad of host-country personnel for training in the U. S. or elsewhere, supplies and equipment needed, and occasionally construction costs, as for demonstration schools.

The guiding policy is to plan assistance as part of an integrated program concentrated on high priority needs, accordingly; the recipient country must demonstrate its desire to help itself by mobilizing local leadership, energy and resources; there must be encouragement of progressive forces; both public and private planning are encouraged but statism *per se* is not. However, the right of sovereign peoples to plan their governments and their economies is recognized. Programs should not focus too

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9) This section is based upon lectures by Seminar leader B. Merson and a guest lecture by Mr. Malcolm Kennedy.

narrowly on economic development. Social reforms aimed at distributing more fairly the produce of the economy should go hand in hand with economic development.

The formulation of AID programs for a given country normally involves these steps:

i. Country Programming: This involves analysis of need and resources, assistance forthcoming from other sources, consideration of U. S. objectives and assessment of the type of activities which can be effectively undertaken with U. S. assistance.

ii. Program Concentration: The U. S. prefers to concentrate in one or two important fields where programs have a significant, visible impact, rather than to spreading limited funds too widely.

iii. Long Range Program Planning: In programs of economic and manpower planning it is usually advisable to block out general goals and programs over a ten-year span. At least a five year program is essential.

iiii. Coordination: AID project planning must be coordinated with host country plans and programs. AID policy also calls for coordination with efforts of other free-world donors.

When specific programs are agreed upon it is necessary to write out specific elements. These are: basic objectives, methods of achieving objectives, material and human resources required, sharing of responsibilities between governments, designation of required staff, technicians and participants, timetable, other sources inolved in the projects, plans for U. S. phase-out and working relations among the technicians involved.

Legal requirements governing the U. S. program are: the project should contribute to the development of educational or other institutions directed toward social progress; the activity should be congruent with other projects in the development field and should contribute to long-range development plans; the activity should be economically and technically sound; the host country should pay a fair share of the cost, take effective self-help measures and show responsiveness to the economic, political and social concerns of its people..

II. PROBLEMS OF SKILL ACQUISITION AND EDUCATION:

/ This course was designed to discuss the role of education and training in the process of economic and social development. Amongst topics to consider were: methods of obtaining executive, professional and technical personnel, problems of training workers to acquire skills needed in the modernizing sectors of the economy; the ways to develop instructors and foremen; the relationship between on-the-job training and vocational school training. The roles of primary, secondary and university education were discussed together with questions of education policy choices and the allocation of funds. Within the scope of the course were programs and policies for adult education including literacy training and occupational retraining, as well as such special aspects as employment policies for the "educated unemployed". The use of educational institutions outside the country and the management of the educational program of youth studying abroad were also discussed.

Seminar leaders were Mr. J. F. Wellemeyer, (who also served as Seminar director) in the English section and Mr. Harley Upchurch, research sociologist associated with Columbia University, New York, N.Y. in the Spanish section. Many participants made important contributions to the identification of specific problems and to exchange of information about conditions and programs in the countries represented, amongst these were: Miss Sonia Apparecida Ferreira (Brazil), Mrs. Aida de Montesinos (Chile), Mr. Jorge Padilla and Mr. Ignacio Ramirez (Colombia), Mr. Ramesh Srivastava (India), Dr. Washington Napitupulu, (Indonesia), Mr. Dov Cohavi (Israel), Mr. Alfredo Ferreti (Nicaragua), Mr. Jose Banos (El Salvador), Mr. Pedro Mota (Dominican Republic), Mr. Macivan Davies (Sierra Leone), Mr. Mahmoud Abdel-Hamid and Mr. Abdel El Zein (Sudan), Mr. Henry Okulo (Tanganyika), Mr. Sujit Sopon (Thailand), Mr. Hasan Lavkan and Mr. Nihat Yapar (Turkey), and Mr. Victor Manzanilla (Venezuela). The scope and character of their contributions are, in addition to identifying footnotes, summarized in section 8 of this report,

Guest lecturers in this section included Professor Fred Harbison from Princeton University, Dr. Oliver Caldwell and Dr. Kenneth Neff from the U. S. Office of Education. The themes discussed by the lecturers dealt with the need for a selective educational policy geared to goals of development (Professor Harbison); frontiers of educational research (Dr. Caldwell and Dr. Kenneth Neff); United States programs initiated under the Area Redevelopment Act of 1961 (Seymour Brandwein, Office of Manpower, Automation and Training); the significance of visual aids and teaching machines (Raymond Larson, Office of Manpower, Automation and Training); the Educational System of the USSR (Eugene Vinogradoff, Office of Manpower, Automation and Training); Training of Middle Level Manpower in Europe (F. L. Hauser, Bureau of International Labor Affairs).

Visits to junior colleges and to the U. S. Office of Education, of the Department of Health, Education and Welfare, gave participants opportunity of contact with college administrators, teachers and observation of teaching machines and other equipment./

1. Economics and Education: [10]

Nineteenth century economists thought of labor as a largely undifferentiated factor of production, having little knowledge or skill and required to do simple manual tasks. This assumption has always been erroneous. In view of technological trends since World War II it is apparent that labor in a modern economy consists of a highly differentiated system of occupations and skills. Consequently a number of economists are now working on a more specific analysis of educational investment in relation to national production. Economic research and experience in this area is still in an initial stage, and basic questions are being debated. Thus, some argue that in developing nations with limited finances a mass literacy program, too early, would waste funds. The development of secondary education should receive priority because it is essential for the expansion of higher education and the development of technicians. On the other hand, others argue that mass education is essential for evolution and establishment of democracy and for creating a solid foundation for higher educational levels and the learning of technical skills.

Regarding choices about the educational policy to be followed, each country must decide for itself on the basis of available resources and national goals. Techniques for forecasting educational needs are available, but not very accurate. Such forecasts should be made, however, and revised from time to time. Educational statistics and forecasting are valuable, if not indispensable tools for selecting the most promising policy.

2. Highly Trained Personnel in the United States:

The development of highly trained skills in the United States began to receive support of the federal government about 100 years ago when the Morrell Act in 1862 established the Land-Grant colleges. The first university to emphasize graduate professional study beyond the baccalaureate degree was Johns Hopkins, founded in 1876. Primary education had been supported by states and local government much earlier. It required a Supreme Court decision to determine that tax revenue could be used for the support of secondary education, however. Such a decision was handed down in 1876. The effect of public financing of education and the increasing concentration on professional university training is reflected in the following tables.

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[10] This section is based upon lectures by Mr. Wellemeyer and Mr. Upchurch.

They give an indication of the rapidity with which chemists and engineers have increased in numbers, and the increase in baccalaureate degrees in natural sciences and doctoral degrees in engineering and natural sciences:

Table 1

Years	Chemists	Engineers
1870	774	7,094
1900	8,847	43,239
1930	47,538	227,590
1950	75,747	534,525

Table 2

Years	BS Degrees (000 omitted) Natural Sciences	Ph.D. Degrees Engineering and Natural Sciences
1901-05	19.7	636
1931-35	56.9	6,430
1951-55	153.1	17,569

During the decade of the 1930's, a long-term trend toward shortages of highly trained personnel was obscured by the depression. There was heavy unemployment in all fields, inclusive of the highly trained professional ones. Until World War II no one in the United States could envisage a manpower shortage occuring in any field. During the War experts found serious scarcities. The war economy almost eliminated training of scientists and engineers, however. After the war several years elapsed before the output of scientists and engineers increased to a near normal level.

In 1945 the Conference Board of Associated Research Councils, a private group of federations of professional societies, began to be concerned

with the question of whether the demand for highly trained personnel might not eventually outrun the supply. Eventually a Commission on Human Resources produced a study, entitled America's Resources of Specialized Talent, by Dael Wolfle. The following table from this study gives an idea of the number of specialists in the various fields then:

Field	Number (000 omitted)
Natural Sciences	237
Psychology	22
Social Sciences	47
Humanities	114
Engineers	633
Applied Biology	246
Health	700
Business Administration	1,372
Secondary Education	1,141
University Education	200
Other Professions	565

These figures total slightly over 5 million, but there is some overlap among them.

Wolfle and the Commission found that one could probably find enough trainable personnel to meet this country's growing requirements in coming decades if one would carefully husband human resources through increased use of women and minority groups and improved testing, guidance, and motivational programs.

Efforts to increase the output of scientists and engineers in the United States were not very successful in the post World War II period. However, the spectacular successes of the Soviet Union in space technology and science finally convinced the American public and the Congress that Russian scientists and engineers were not only growing more numerous at a rapid rate, but also were highly talented as well. Several efforts to catch up were made. The National Defense Education Act was passed offering scholarships and loans in many fields. A Presidential Committee on Scientists and Engineers, composed of the top executives of some of the most powerful groups in the country, was set up to persuade students (and their parents) to enter scientific and engineering training. The group also organized community activities and made efforts to persuade employers to improve utilization of their scientific and engineering staffs. The effort was successful in recruiting scientists but not in recruiting engineers. Freshman classes in engineering declined in number for three years. The President's Committee has been disestablished and the effort to persuade has been dropped, at least temporarily.

Special efforts by economists to measure supply and demand relationships between scientists and engineers and the national economy were made in the late 1940's. In particular, a study by David A. Blank and George J. Stigler, The Demand and Supply of Scientific Personnel should be mentioned in this connection. The authors reasoned that employers would increase salaries offered these professionals if not enough practitioners were available; this would gradually bring a sufficient volume of qualified personnel to meet demands. Their analysis for the period 1929 to 1954 showed, surprisingly, that the salaries of scientists and engineers had risen less than those in many other professions, and considerably less than those of blue collar workers. From the analysis of wage movements they drew the conclusion there was no real shortage.

The study was criticized on several grounds, and other less orthodox economic methods of analysis were sought. The Bureau of Labor Statistics is now working with a sectoral analysis which relates the number of engineers and scientists in various industrial segments to the anticipated increase in employment in each industry as a whole. The analysis shows a continuing major increase of demand. Between 1959 and 1970 the needs for mathematicians and physicists are expected to grow by 100 per cent; for chemists by 72 per cent. The number of engineering positions will increase similarly.

3. Technical Training in the United States: [11]

In the United States the educational structure through the secondary school consists of 12 years; either 8 years primary plus 4 years secondary or 6 years plus 3 years intermediate plus 3 years secondary school. There are a few areas in which slightly different combinations occur, but 12 years is the standard primary plus secondary period. The usual university course, including those for scientists and engineers, is 4 years beyond the secondary level. A technician, in the United States, is usually considered one who has less than 4 years beyond the secondary school, but more than one. The technician may be trained in a separate school designed for a specific field, or in a more general school called a junior college.

Junior colleges began as a method of obtaining the first two years of university training in the student's hometown or its metropolitan area prior to moving to the college of his choice, further away. This is still an important function of the schools, but statistics indicate that 80 per cent of the junior college graduates do not go on through 3rd and 4th years of college, in spite of the fact that 80 per cent of those entering the junior institutions intend to do so. Consequently, junior colleges have begun to concentrate more fully on occupation-related curricula. The shift in the student's interest from college

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11) This section is based upon lectures by both Seminars leaders.

completion to occupational training has been dealt with in a book by Burton R. Clark about the San Jose Junior College (California) called "The Open Door".

Today the Junior College not only performs a social function in helping to reorient the student but also feels it has a function in giving the students some humanities and social science background which will assist him in becoming a responsible citizen. In addition to the junior college type of schools, there are technical schools, usually private, which concentrate more exclusively on technical subjects. The following table gives an indication of the number of students who graduate in different kinds of occupation-related courses from both categories of schools.

Engineering-Related Curricula	Number of Graduates
Aeronautics	1,310
Air conditioning, heating, refrigeration	347
Architecture and Civil Engineering	1,123
Chemical	226
Electrical	5,433
General Engineering Technology	507
Industrial	479
Mechanical	2,972
Metallurgical	65
Miscellaneous	353
Other	170
Non-Engineering-Related Curricula	
Agriculture and Forestry	1,247
Applied and Graphic Arts	1,371
Business and Commerce	15,374
Education	6,152
Health Service	4,217
Home Economics	586
[illegible]	1,1[illegible]
Miscellaneous	1,186
Other	73
TOTAL	301,206

The number of technicians has been far smaller than the number the economy could use. This arises in part from the relative lack of prestige of these positions, and the fact that it is difficult, if not impossible, in the United States today, to attain professional status without a

university degree. At the same time, some of the difficulty arises from a lack of recognition of the importance of these positions until recently. Several times as many technicians as are now being trained could be used advantageously.[12]

4. Middle Level Training - Some European Approaches: [13]

Technological change accompanying economic development requires adjustment and expansion of the school system. The worldwide shortage of high and middle level personnel indicates that the response of the educational plant has nowhere been in proportion to national demands. The shortage is particularly acute in developing nations, and the area of scarcity extends beyond categories requiring graduate university training. It includes occupations such as technicians, draftsmen, nurses, industrial designers, bookkeepers, social workers, and master craftsmen. All these--usually called middle level occupations--are of strategic importance in the struggle for economic growth.

The predicament of scarcity confronting developing nations now is not without historical precedents. The Industrial Revolution found the educational systems of nations on the European Continent ill prepared for the task of supplying industry, banking and commerce, as well as the newly emerging social services, with qualified personnel. Pre-industrial society had, in the course of an evolution extending over several centuries, created a dual system of education designed to give a majority instruction in the three R's and to a small elite an elaborate, long, expensive training for the traditional callings--civil service, law, the church, the army and the navy. This system had become very rigid; to change it rapidly proved an impossible task in countries which--like Germany Russia or Sweden--went through their industrial revolutions late and with great speed. Their response to the challenge is worth noting.

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12 As an example of the junior college, the participants visited the Montgomery Junior College, located in a Washington suburb. This institution was founded in 1946, partly to accommodate soldiers returning from World War II. The institution is financed partly by tuition paid by students, partly by the county, and partly by the State. (The Federal Government under the National Defense Education Act contributes 50 per cent of the cost of new equipment.) The amounts paid by each vary according to place of residence. The rates give preference first to county, then to State residents. Total annual cost per student is approximately $600. There are abou 70 full-time and 50 part-time professors. Any high school graduate is allowed to enter, even from the lowest quarter of the class, on a probationary basis. County high schools may recommend a limited number of scholarship students. The school has had some foreign students, but not many, and is primarily locally oriented. There is a strong market for technician graduates, and the salary levels are very good.

13 This section is based upon a guest lecture by Mr. F. L. Hauser. Mr. Hauser was associated with the 1963 Seminar in the dual capacity of Seminar leader and deputy director.

In Germany the needs of industry and of banking created two new types of middle level training schools, the "Technikum" and the commercial academies. These accepted for enrollment youth aged 14-16 years who had completed a junior high school, and graduated them after three or four years. This gave the modern sectors of the economy technicians aged 16-20 who could move up to engineers through on-the-job training. The traditional (university) training provided entrants to engineering occupations aged 22-24 who were encumbered by much superfluous theoretical knowledge. The model of the "Technikum" soon expanded in two directions. It was adopted in Russia, where it today is one of the essential parts of the educational structure. The success of cutting the training of industrial technicians and bank clerks loose from the elite training curriculum of latin (secondary) schools and universities inspired experimentation. A number of new schools evolved, among them were: schools for applied arts, industrial design; schools for textile engineers and designers; schools for X-ray and medical technician training, and many others.

The diversification of the educational system, initiated in the early stages of industrialization, received additional impetus during the period between the two world wars. Then the all too rigid university system had overproduced academically trained engineers, architects, chemists, lawyers, and doctors. The schools for applied arts and similar institutions attracted the more talented students from all classes. This led to the creation of new experimental schools whose entry requirements were on talent rather than age limits and formal achievement. These often became the pioneers of new thought and techniques and they began to rank in some fields---like the famous "Bauhaus, Dessau" in architecture and design--above the traditional institutions of higher learning.

Much of the success of the "Technikum" approach may have been due to cultural factors. The "spirit of craftsmanship" is strong in most European countries, and the economic and social status of the guild craftsman was high in the pre-industrial societies; it remained high where it could survive--after industrialization. Whether a similar tradition is essential for initiating a movement towards new schools and new (middle level) occupations in developing countries is an open question.

5. Education in Soviet Russia: [14]

The development of education in Russia since 1918 has been something of a miracle. In 1918, 80 per cent of the population was illiterate, and

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[14] This section is based upon a guest lecture by Mr. Eugene Vinogradoff. Mr. Vinogradoff was associated with the 1963 Seminar as an observer.

180 different languages were in use. In effect, a new language had to be invented for the vast majority of the people. This was done, and by 1959 352,000 persons graduated from institutions of higher learning and by now 477,000 are enrolled in higher education. In thatyear, 1.4 million graduated from secondary school.

In Russia, education is under centralized control and enjoys centralized financing. The first 8 years of schooling are compulsory. Beyond this point, entrance into higher levels is based on competence tests. Higher education is free, housing is cheap, and about 80 per cent of the students receive a subsidy sufficient for living expenses. The stipend increases with better grades. The status of professional men is very high; professors get an extraordinarily good salary.

A close relationship with the labor market is maintained. About 45 per cent of the students are actually working in the same field in which they are studying. Students have a number of periods of leave during their university training and they prepare a diploma project of considerable difficulty, for which they are also given leave.

National standards of curricula are enforced, and there is a national series of examination standards. Top leaders serve as professors, and attendance at lectures is required, contrary to European practice. Top technical courses require 6 years, of which about three and one-half are broad education and two and one-half are specialized.

Russia now has a policy of exchanging professors with foreign countries, and they are well prepared, in terms of language and area studies, for the experience.

There are limitations to the Soviet system also, arising from its rigidity, its high degree of indoctrination, and its lack of mental flexibility. The Soviet system is not to be recommended for a democratic society, but such socieities can learn from it. Its methods of attracting students, supporting them and ensuring quality education, are all worthy of study. India has studied the Soviet system and adopted a number of its ideas.

Other countries can devote as high a percentage of national income to education as Russia does if they are willing to make the necessary sacrifices elsewhere. In Russia, the standard of living is **sacrificed**.

6. Cybernetics and Education--Soviet Russian Approaches:[15)]

The Russian interest in the use of cybernetics in education comprehends both the development of various kinds of computers and "thinking machines"

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15) This section is based upon a guest lecture by Mr. Oliver Caldwell.

and the application of cybernetics to the human mind. Russian scientists are working on machines for the automation of factories, on teaching and testing equipment for students, on instruments for diagnosis of illness and on computers for translating languages. In this area generally, the United States may be ahead of the Russians.

Regarding the application of cybernetic principles to human beings, USSR scientists have found that at the present time, only about 10 percent of the capacity of the human brain can be used. They have experimented with the idea of developing surgical techniques for removing the inhibiting mechanisms in the nervous system. This approach has been unsuccessful because the individual who has undergone surgery records such a variety of experiences in a short time that his entire capacity is taken up by immediate impressions so that he becomes unable to absorb anything dealing with the future. Russian scientists hope to be able to affect the human mechanisms less drastically in order to produce a "superior man". This they feel is necessary to accomplish to keep pace with the rapid increase of knowledge. Continued specialization is not an alternative to the expansion of individual intellectual capacities because of the loss of knowledge of the relationships between continually narrowing fields which is inherent in the process of specialization. The United States has some research going forward in this general area also. In this country the use of certain chemicals derived from mushrooms and cactus is being studied. It is known that mescaline and lysergic acid have the effect of temporarily lowering the mental inhibitors without eliminating them. There will be an exchange of information with the Russians in this area, as well as in the area of machines and computers.

The Soviet Union believes that high proportions of the population should be educated. For example, they have 60 to 90 percent of the relevant age groups enrolled in secondary education, and 10 to 20 percent in higher education. In the United States 90 percent are in secondary education and 30 to 38 percent in higher education. The comparative numbers in Western Europe are so low that the future of this region seems to be highly dubious.

7. Education in Relation to Over-all National Development: [16]

In many countries, both industrialized and underdeveloped, technical and vocational training schools have not been notably successful in supplying a sufficient volume of skilled manpower to the labor force. In the United States, for example, it was estimated that about 250,000 skilled workers were needed annually as replacements. Of this total only 0.4 percent, or 1,000 were expected to come from the vocational schools. It is thus questionable whether the vocational schools represent an effective training mechanism for the supply of skilled manpower.

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16) This section is based upon a guest lecture by Mr. K. L. Neff.

The fundamental needs in existing educational programs and planning are for study of objective attitudes and functional approaches. Education is a field in which everyone has his own opinion and is frequently not ready to apply approaches with which he disagrees. We are accustomed, in education, to particular institutions and techniques, such as: use of examinations, professors, academic years, academic degrees, disciplines, etc. There is a strong tendency, whether in our own country or in others, to urge the support of traditional concepts and institutions of this kind. Educators should be as willing to appraise and review the quality of their institutional outputs in relation to national needs as they are ready to evaluate the performance of their students.

Educational institutions can play a useful role in urging the practice of innovation. This is very important to economic development. Education can also assist in providing an understanding of the social organizations and in preparing the population for necessary social changes.

8. The Strategy of Manpower Development: 17)

Almost all the new nations have population growth problems that directly affect their manpower problems. Technology and other knowledge are doubling every hundred years. People generally are coming to expect relief from squalor, misery, and disease. Countries want much more rapid economic progress than has occurred in Western countries, and frequently don't move as quickly as they would like.

A central problem in developing countries is not the formulation of a plan but its implementation. The development process, as opposed to the planning process, is a matter of salesmanship and politics. In order to get things done, power groups in both the public and private sectors must change their thinking. The educational system itself must attempt to influence attitudes which will encourage acceptance of change. Involvement of various groups in the development process is essential. Central governments frequently build school buildings. Better results might be obtained by offering to supply teachers and books provided the local communities build the buildings.

In planning, manpower needs as opposed to social and economic pressures must be considered. The pressure for universal primary schooling may come in conflict with the needs for high-level manpower. One has to give more thought to goals in choosing between alternatives. On the one hand, a large number of schools might be built; on the other, a smaller

17) This section is based upon a guest lecture by Professor Fred Harbison and papers read by Mr. Hamid (Sudan), Mr. Okulo (Tanganyika), Miss Ferreira (Brazil), Mr. Lavkan (Turkey), Mr. Srivastava (India), Mr. Sopon (Thailand), and Mr. Cohavi (Israel).

number might be provided along with better instruction. Costs of educating engineers are six times the costs of educating lawyers. Many countries have a surplus of lawyers already; perhaps some of the resources should be diverted to educating engineers.

Universal education is a worthy aim, but universal primary education may not be timely. If students come to school for less than four years, most of the investment is wasted. Some countries with good secondary school systems can supply teachers for primary schools and are thus in a position to expand this area. Sierra Leone and India are examples of this. In some countries of Latin America secondary schools are under private control which tends to restrict higher education to the well-to-do.

Manpower planners must choose where training should take place. Occupational training can be given in schools or in employing establishments. It is a mistake to place too much responsibility for training on (vocational) schools. Education (as distinct from training) involves the broad general process of developing a person's mind and providing him with languages, science, and mathematics. In modern society technology changes constantly and vocational schooling often becomes obsolete rapidly.

A negative factor regarding vocational education in schools is the fact that such schools accept students who would wish to go into the formal secondary schools but may not because of the shortage of capacity. When these students graduate, they do not accept positions in the trade for which they have been trained, but insist on clerical jobs. Vocational training costs four times as much as general education, and this means funds on students not practicing their skills later on are wasted.

At the central government level, certain types of training might be turned over to ministries other than Education. For example, in Tanganyika there is a problem of training agricultural workers. This might best be left to the Ministry of Agriculture. The Ministry of Education should deal with problems of broad general training. Employing establishments, governmental as well as private, should take responsibility for training. Larger firms can be required to train people. Payroll tax returns earmarked for education are sometimes convenient for financing a program.

Manpower planning must be integrated with over-all economic planning. Most planning organizations now clearly recognize this principle, but this is a recent development. Manpower economists sometimes feel that their data and projections are inadequate. However, they are as good as estimates of and projections of gross national product and capital flow statistics. The manpower planner should take his place as an equal on the council of economic planners.

Manpower planners should be cautious in stating too firmly the educational requirements for specific jobs. It is often found that occupations can be performed with much less formal education than is customarily required in Western countries. Degrees and certificates should probably be downgraded; top positions should be open to those who can produce whether they have degrees or not. Scholarships for study abroad should be awarded for purposes of learning in particular areas rather than for obtaining degrees. Rural life needs to be improved and people encouraged to stay on the land. Better housing, schools, small industries and recreation, in addition to agriculture, need to be developed in these areas.

9. Manpower Strategy and the Stages of Economic Development:

Seminar leaders and participants were able to consider the question of strategies for countries at different stages of development on the basis of a new scheme of classification developed in a then unpublished book by Dr. Fred Harbison and Dr. Charles Meyers called Education, Manpower and Economic Growth (Harper and Row, 1963), made available in mimeographed form by the authors and publisher. The basic principle of this work is that the so-called underdeveloped or developing countries all differ markedly in their stage of development, and that the effort towards improved education and manpower policies should be adjusted to the differing needs. Seventy-five countries were classified into four "levels" on the basis of a composite index based on a number of economic, educational, and demographic factors. These included: per capita gross national product; percent active population in agriculture; number of teachers, scientists, engineers, physicians, and dentists per 10,000 population; enrollment ratios at first, second and third levels; university enrollments in various faculties; public expenditures on education; and the percent of the population in the 5-14 year age group. The Level I countries had, for example, a gross national product per capita of $84 compared to $1100 for the Level IV countries. Scientists and engineers per 10,000 population numbered 0.6 in the Level I countries, 42 in the Level IV countries. Similar differences were noted for other factors.

The authors have labeled the various categories as underdeveloped, partially developed, semi-advanced, and advanced. The full classification is available in the book. The following table gives the classifications for the countries represented in the seminar.

Level I	Level II	Level III	Level IV
Sudan	Bolivia	India	Israel
Tanganyika	Indonesia	Thailand	
	Ecuador	Taiwan	
	Turkey	Chile	
	Colombia	Venezuela	
	Brazil		
	Dominican Republic		

El Salvador and Sierra Leone were both represented in the Seminar, but not classified in the study.

The typical "Level I" country [18] is primarily agrarian, with the vast majority of the population nomadic or rural. Most of the rural activity is devoted to subsistence, with only marginal contributions to the market economy. The modern sector of the economy includes government, large plantations, trading establishments, such industries as food and tobacco processing, occasionally textiles. As noted, these countries all have low gross national products, and the Sudan and Tanganyika have only $60 and $61 respectively. The countries do not have widespread public participation in political activity, but political interest is emerging. Of the high-level personnel, all but a fraction are nonindigenous persons. In African countries this includes Asians as well as Europeans. Even in agriculture the marketable produce available for sale or export is to a great extent produced by outsiders. Education is inadequate at all levels. There is a high dropout rate at the elementary level. The secondary schools are quite good in most places, but take a very small percentage of the relevant age group. Higher education even in countries having institutions (such as Tanganyika) is not adequate and many students have to be sent abroad.

As to a strategy for Level I countries, large-scale industrialization is not possible during a 10 or 20-year planning period. These countries will place major emphasis on political matters, particularly the establishment and preservation of their independence. Replacement of foreigners at medium and high-level positions is a national aspiration. Secondary schools and institutions of higher learning will be expected to produce needed high-level manpower. There will be pressures for rapidly increasing primary education, higher living standards, and better health services.

As to policy, these countries have to face immediately the problem of replacing foreigners and should construct a schedule for doing so over a period of at least 10 years. Localization should begin with the government policy-making posts. Technical and professional posts requiring specialized education and experience may well be last. Major

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18) This treatment of countries in the first stage of economic development is based on oral reports by Mr. El Hamid (Sudan) and Mr. Okulo (Tanganyika).

commercial or industrial establishments may also be required to schedule such changes. It will probably be wise to delay localization of secondary and higher education for some years. Compensation of high-level personnel should be studied; salary levels of local personnel should probably be set lower than those of the expatriates they replace. The relative unpopularity of rural posts among needed professional people might be compensated with higher salaries. Top priority should be given to secondary education. University training can, for the moment, be supplemented by foreign education. Rapid increases in primary education are very expensive and there is a shortage of teachers which will eventually be solved by the increase in secondary education. Science and mathematics should be stressed (in addition to the humanities) and some work with tools provided. Vocational and craft training should be de-emphasized except where there is a direct need which cannot be filled by on-the-job training.

For higher education, when students are sent abroad, the government should specify the curriculum and require a period of employment in the profession in which the student is trained. New institutions will undoubtedly be developed. Here the nations should follow the guidelines set by the Tananarive Conference of 1962. These include increasing proportions of enrollments in scientific and technical subjects (to 60 per cent by 1980); in agriculture; in sub-professional non-degree courses; expanded extramural and extension work; greater class size; lower costs of buildings; and training more secondary school teachers.

Primary education should stress improvement of quality rather than increasing the number of buildings. Enrollment ratios should be increased first by lowering the number of dropouts. Television, radio and teaching machines should be used.

Special attention should be given to adult education extension work.

"Level II" countries include Turkey, Indonesia, and Brazil.[19] There has been in these nations an overemphasis on the humanities, arts, law, and medicine, with under-emphasis on science and technology. Their economies are industrializing, but are still primarily dependent on agriculture. Public opinion and political leadership tends to like large, spectacular projects. Urban unemployment is rising; rural manpower is poorly utilized. Low-quality higher education is coupled with under-development of technological and sub-professional education.

In Brazil, engineers are not fully utilized because of the shortage of technicians. Universities in Brazil are not numerous but rather good. Most professors are now full time and are paid by the Government. Turkey has both private and state universities. The state universities provide

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19) The treatment of countries in this more-advanced stage of development is based upon oral reports by Miss Ferreira (Brazil) and Mr. Napitupulu (Indonesia); and Mr. Lavkan (Turkey).

better teaching. They have full-time, as well as part time, professors. Although there is compulsory education, there is illiteracy, particularly in the rural areas. Indonesia has manpower shortages at all levels, especially in the middle and higher levels; engineers and scientists are very scarce.

Training skills or crafts should in all Level II countries be left to the employers; school training should be broad. Higher education should include agriculture and engineering. Industry and the armed forces should train much of the present labor force.

In Brazil an attempt at reform of the secondary schools has been unsuccessful because the teachers are not qualified for technical courses. Indonesia has some technical training in cooperation with employers for upgrading the present labor force. In Turkey, educational methods courses for teachers are given over the radio. Primary education is a problem in Turkey because of the difficulty of persuading teachers to go to rural areas. Some success has resulted from allowing teachers to go to rural areas instead of doing military service.

In "Level III" countries [20] research and technical training capacity should be developed to reduce dependency on foreign assistance in this area. Higher education should be better oriented to the needs of the economy. Expansion of primary and secondary education should emphasize quality rather than quantity. Productivity in manufacturing should be raised by using the most modern methods in the capital-intensive sector and leaving labor-intensive methods to the cottage and handi-craft sectors. Birth control should be urged; non-technical education should be curtailed. Secondary schools should be emphasized and diversified, apprenticeship should be encouraged. Agricultural work should be improved; industrial management should be studied and made more competent. Educational funds should be distributed roughly as follows: 35 per cent to primary, 40 per cent to secondary, 25 per cent to higher education.

In India, more money is going to higher education, but only 27 per cent to the primary schools. There is a problem of getting all of the 5-9 year age group to attend school. By 1966 the number attending secondary schools will be inadequate. India has considerable variety among its secondary schools. Scholarships, apprenticeships, and offers of jobs are used in encouraging people to become technicians and craftsmen. Firms over a certain size are required to take on apprentices. Apprenticeship periods range from 18 months to 4 years. Birth control has been successful among the educated classes. However, the majority of the people have been slow to adopt it. Because of political pressures, classical education is retained, and there are great numbers of unemployed secondary school and university graduates.

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20) The treatment of countries in this advanced stage of development is based upon oral reports of Mr. Sirvastava (India) and Mr. Sopon (Thailand).

In Thailand there is also unemployment among university graduates, and there is a deficiency in research. People in Thailand all want an education and they gear their activities rather exclusively toward higher education. Secondary education is of poor quality because of rapid expansion, and the classical pattern of instruction.

10. A Resume of Defects and a Summary of Recommendations Concerning the Educational System of Spanish Speaking Latin America: [21]

In the universities, faculty control should replace student control.

Professors should not be permitted to hold several jobs in addition to their teaching positions.

Strict seniority for promotion of professors should be abandoned.

University departments should be organized on a disciplinary basis rather than strictly by faculties. For examples, mathematicians should be in a single department rather than scattered among eight or ten different organizations.

Less emphasis should be given to universities and more to primary and secondary schools. Not only is there greater need for sub-professionals in most cases, but university training can always be obtained abroad if necessary.

Primary and secondary school teacher's salaries should be raised sharply. Improved prestige would probably bring many more intellectuals into teaching.

Face-to-face classroom teaching should continue but be supplemented by thenew techniques involving TV, radio, films, teaching machines, etc.

Regarding training (specific skill acquisition) this may be generally done more efficiently on the job rather than by vocational schools. Vocational school training is often not closely related to skills needed on the job, and the schools tend to become catch-basins for those who fail academic work.

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21) In discussions in the Spanish section, under the leadership of Mr. Upchurch, a critical evaluation of the educational systems of the Spanish speaking nations was made in which all participants from Spanish speaking countries took part. The chapter presents a resume based on raporteur notes prepared by Mr. Ralph Betancourt. Many of the recommendations are applicable to other countries.

The government can also train many of its workers on the job.

The Army can also do a good job of training. This may involve a political decision since the expansion of this function may increase the influence of the army which, in many countires, is already too great.

Private foreign enterprises should be encouraged under proper regulation and restriction. They should be required to train citizens of the host country, and can be required to train more than they need for themselves.

Similarly, experts from more advanced countries can be used in many fields. Here again, the expert must be required to instruct and train citizens of the host country.

A liberal immigration policy can also aid in bringing trained people to the underdeveloped country. Retired technicians from the United States and other countries whose current income is relatively low can be attracted.

11. <u>Résume of Specific Aspects Treated by Individual Participants:</u>

Miss Ferreira discussed the needs for technician training in Brazil and the problem of obtaining adequate numbers of teachers for the rural areas. She made a major presentation on vocational training in Sao Paulo.

Mrs. Montesinos discussed the proportion of secondary graduates going to universities in Chile and discussed some problems connected with secondary education in Russia.

Mr. Padilla spoke of the problems of persuading national legislators to implement economic and manpower plans. He pointed out that the states are frequently unable to carry their share of the expenses of adequate educational programs. He discussed the Russian educational system in terms of the importance of liberal education for co-existance. He queried various aspects of the use of teaching machines and programmed instruction.

Mr. Ramirez mentioned the importance of socio-economic status in connection with the expansion of primary education.

Mr. Srivastava pointed out that India had adopted the International Labor Organization's occupational classification but was concerned about relating training requirements to the occupations. He gave a major presentation on skill acquisition in India. He reported that

India had sent an educational mission to Russia and that some of their ideas, particularly of student support, had been adopted.

Mr. Napitupulu mentioned a problem of under-employment in government because of the current surplus of secondary graduates. He reported on both higher education and adult educational programs in Indonesia.

Mr. Cohavi made a major presentation on the apprenticeship program in Israel.

Mr. Ferreti discussed the question of comparative projections of the education of engineers and technicians in Russia and the United States.

Mr. Banos raised the question of unemployment in Russia.

Mr. Mota discussed problems of keeping workers in rural areas and of training them for improved agricultural production.

Mr. Davies argued that universal primary education was of great importance and should be encouraged.

Mr. Hamid made a major presentation on the educational and training system of the Sudan. On another occasion he discussed the rapid growth of the educational program in the Sudan.

Mr. El Zein raised the question of the problem of training competent labor officers.

Mr. Okulo made a major presentation on vocational training in Tanganyika. He also pointed out that in a country like Tanganyika the central government is forced to take an active role in the training program.

Mr. Saibua discussed some of the difficulties of agricultural training in Thailand and pointed to the need to encourage local initiative in such a program.

Mr. Sopon discussed problems of adult education in Thailand.

Mr. Lavkan made a presentation on higher education in Turkey and discussed some of the problems of finding primary teachers for rural areas. Such teaching may be used as a substitute for military service in Turkey. Educational methods are now being taught via the radio.

Mr. Yapar discussed the programs of the Turkish army in literacy and technical training. Mr. Manzanilla discussed the problems of tax reform in connection with raising funds for educational programs, the problems of employment for increasing numbers of young men and the urgent need for vocational guidance.

III. PROBLEMS OF LABOR FORCE DISTRIBUTION

[This course was designed to convey an understanding of what is meant under labor force, potential manpower, and concepts of mobility and migration and to provide a forum for discussion of problems of employment, unemployment and underemployment.

Four Seminar leaders were in charge: in the English section Morris Horowitz, Professor of Economics in Northeastern University and Lloyd Prochnow, Economist of the U. S. Department of Labor, BLS; in the Spanish section Rudolph Blitz, Professor of Economics in Vanderbilt University and Matilda Sugg, Economist of the U. S. Department of Labor, BLS. Through questions, comments and lectures, as well as research papers, participants contributed substantially to the proceedings which are summarized below. In particular, aspects of importance were covered by: Aida Teresa Belmar de Montesinos, Chile; Ramesh K. Srivastava, India; Washington P. Napitupulu, Indonesia; M. A. Abdel-Hamid, Khojali al-Mubarak, and A. A. El Zein, Sudan; Sakda Saibua and Sujit Sopon, Thailand; and Victor Hugo Manzanilla, Venezuela. In addition two guest lecturers, the Honorable Clarence Long, Member of the U. S. House of Representatives, and Everett Reimer of the U. S. Department of State spoke respectively about employment analysis and Puerto Rican manpower programs.]

1. The Significance of Manpower to Economic Development--A Historical Survey[22)]

In developing countries today discussions concerning economic development are usually couched in terms of how the labor force should be redistributed according to an economic plan. The industrial revolutions in the West, particularly in England and France, were not planned schemes of modernization. Nevertheless, the question of how to redistribute the labor force did constitute one of the key problems then. Considerable institutional adjustment had to be made. The growth of a mechanized textile industry and the use of steam generated power in general, required radical changes in the apprenticeship system. In France the guild organization was disestablished. In England, while the old craft system of apprenticeship training lingered on the new industries needed unskilled labor in large numbers. It became necessary to promote, or rather compel, the recruitment of an unskilled work force, much of it child and women labor. This policy in turn prompted revision of the poor laws in England, and the taking of steps to promote the mobility of labor.

Programs influencing labor force distribution can be looked upon as related to educational policies, or as part of efforts to improve productivity. Whatever viewpoint is adopted one has to keep in mind that a planned, or unplanned, program of industrial expansion is in and of itself not sufficient to bring about an adequate distribution pattern of the labor force or create

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22) This section is based upon lectures by Professor Blitz.

the volume of skills and knowledge required by industrialization.

2. Underlying Factors and Basic Concepts: [28]

While the subject of labor force distribution is usually analyzed with the help of economic methodology, one should not disregard the importance of political factors. The problems involved in policy formation frequently require a good deal of experimentation. Experience in the highly industrialized countries may be of limited usefulness to developing nations. Manpower programs, in France, England, and the United States are often not comparable to those confronting mainly agricultural countries. Whether it is always necessary or desirable for a developing country to concentrate upon urban industries and manufacturing is questionable. The experience in Austrialia and New Zealand indicates that modernization of agriculture leading to greater specialization and increased productivity can greatly increase the national as well as the average (per capita) income.

In the United States manpower is used as a concept separate and distinct from the term labor force. The latter in U. S. parlance refers to individuals who are either engaged in renumerative work or are actively seeking such work. Such a definition of labor force excludes housewives who work exclusively in their household. It does not cover students over 14 years of age who continue in school. While housewives and students are, therefore, not counted into the labor force statistics, they are part of the larger concept of manpower.

It is important to measure manpower as such. Housewives and students over 14 years of age represent a labor force reserve which can be tapped in times of emergency. It was, for instance, necessary to expand the labor force of the United States during World War II. This expansion could be accomplished mainly by recruiting housewives and students beyond the compulsory school attending age into the labor force.

The relationship between manpower and labor force on the one hand and the total population of a country on the other hand is also of significance. The increase or decrease of total population is indicative of the growth and decline of the future labor force. The distribution as to sex and as to age groups is of considerable significance. Forecasts of the future supply of labor depend for reliability upon a careful assessment of demographic trends. These in turn are based upon information about the composition of the population in statistical terms.

It should be kept in mind that a labor force consists of individuals

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[28] This section is based mainly upon lectures by Professor Horowitz, through participation in the discussion, Mr. Wang, China; Mr. Okulo, Tanganyika; Mr. Hamid, Sudan; Mr. Lavkan, Turkey; and Mr. Srivastava, India, contributed much to the clarification of the subject matter.

engaged in economic activities for the purpose of producing goods and services to be shared by the entire population and not just by a limited group like the family. But the concept includes more than just employees who work for wages and salaries. It includes self-employed persons. As a matter of fact, most countries who have manpower statistics treat the self-employed as part of the labor force.

To the statistician in almost every country, the agricultural sector of the labor force presents a problem. In the United States there is the self-employed farmer, who may operate his farm with the help of his wife and teenage school-attending sons and daughters. For reasons of statistical measurement, should these young workers and housewives be counted into the labor force or not? In American practice they are excluded, but this is a discretionary decision. Drawing the line also raises the question of how to classify the household worker who is not part of the family. Should he or she be counted as part of the labor force? The practice in developing countries does not seem to be uniform. In the Republic of China, in Tanganyika and in Thailand household workers are not included in the labor force statistics because no reliable counting technique has been found. In India they are counted in, however.

Identification and enumeration of household workers is part of the greater problem posed by dual economies. In countries in early stages of development, the main question in regard to the problem (of dual economies) seems to be greater. One should make a distinction between the traditional sector and the modern sector. Labor force concepts as developed in the Western world may be applicable only to the modern sector. This may make it seem practical to neglect statistical measurement in the traditional sector. In any case, it should be recognized that a direct relationship between population, labor force and the total output of goods and services exists and that the ratio between population and labor force is crucial in terms of achieving greater wealth for the nation and a better life for its citizens.

3. Some United States Methods of Forecasting Manpower Requirements: [24]

A survey of methods used for forecasting manpower requirements by two bureaus of the U. S. Department of Labor--the Bureau of Employment Security and the Bureau of Labor Statistics--reveales that each bureau uses a somewhat different approach each of which is, with some modifications, applicable to other countries.

These manpower forecasts are not perfect, but they are meaningful in guiding policy decisions, including ascertaining training needs. The forecasts must be reviewed and revised continuously on the basis of new information. It is

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[24] This section is based upon lectures presented and discussions directed by Seminar leaders Lloyd Prochnow and Matilda Sugg.

necessary to make certain basic assumptions and these assumptions must be made to fit the situation in each country. In the United States, for example, it is now assumed that: relatively high levels of economic activity will continue; the social and economic factors that currently affect growth will continue to be operative; there will be a continuation of scientific and technological advances; there will be no major catastrophic disaster or war.

The Bureau of Employment Security, in the United States, is most associated with the technique of the area skill survey which relies on sample surveys of employers. The main purposes of these surveys are: to provide information on job opportunities in a local area for use in employment counseling; to supplement information on area manpower resources for use in community employment development; to promote training programs in local schools, and apprentice training, geared to the occupational labor requirements of the area; to stimulate local employers to evaluate their manpower needs and promote necessary in-plant training; and to provide a tool for local employment use in job developing activities.

In essence, this method is based on collective information primarily from firms within a given geographic area. The basic procedure requires: (1) determination of the occupations to study, usually those in surplus or those which require more than a casual amount of training. Also included are occupations required for a major expansion or of major interest. (2) Selection of sample employer establishments; (3) Collection of information through questionnaires or interviews on employment, current vacancies, future job requirements, and (4) Inflation of the data collected to arrive at totals for the area.

The studies made by the Bureau of Employment Security have led to a series of monographs--Area Skill Surveys--concerning the future demand for labor force skills within particular metropolitan areas. They are useful in providing information on job opportunities existing at the present time, as well as expected to open up in the future. They are good indicators giving direction to training programs, job counseling schools and they also show shortages and deficiencies which can be remedied through action by individual employers or by communities. In some surveys projections are based not only on employer forecasts, but also on projections of past trends in the area's industrial and occupational employment. In some surveys replacement needs for each occupation were derived by the use of labor force life tables and information on age distribution by occupation collected in the survey.

Advantages of this survey technique are:

1. It is easy to administer.
2. It provides estimates of future manpower requirements quickly and at a low cost.
3. It draws up the employer's knowledge of activities and takes into account the company's plans for expansion and introduction of new processes.

4. It provides a good base for determining the occupational composition of individual economic activities.

Disadvantages of the technique are that: many employers make hasty guesses, and some employers are not fully aware of the country's development plans, nor their impact upon his establishment and his industry. Also development plans often provide for new activities and since these activities are not currently in existence, their needs cannot be determined in a survey of existing employers. The result is that summaries of the employer reports often appear unreasonable. In some European countries they conduct a similar type survey but add one item. They ask the employer to supply projections of production levels. Therefore, it is possible to compare the employer's projections with an independent analysis of the industry's production trends.

The analytic technique is used by the Bureau of Labor Statistics in preparing long-range forecasts of U. S. national manpower requirements. The method begins with a projection of the population and the labor force, based upon past trends and anticipated changes in birth rates, mortality rates, net migration, and labor force participation rates by age and sex. The next step is to make a first approximation of future total employment by economic activity, consistent with the anticipated increase in the labor force. A detailed analysis is then made of each important activity, taking into account anticipated changes in demand for its products or services, and anticipated changes in hours of work, arriving at an independent estimate of future total employment in the activity. The first approximations of employment are then modified in accordance with the results of the detailed analysis of each important activity. Finally, an occupational breakdown is derived of the future employment levels by applying appropriate occupational composition patterns with particular attention to occupations requiring specialized training or education.

Preparing the first approximation of future employment by economic activity begins with estimating the total civilian labor force in the forecast year. This estimate of the future civilian labor force is derived by deducting from the total labor force projection a judgment of the number of men and women who will be in the armed forces in the forecast year. In moving from the projection of civilian labor force to a projection of the number of workers who will be employed, it is also necessary to make an assumption as to the future level of unemployment. (For current U. S. 1970 projections, it is assumed that 3% of the labor force would be unemployed; similarly, in 1954 Italy estimated 3% of its labor force as being unemployed in preparing a 1964 projection.) The estimated number of unemployed is then deducted from the total estimated civilian labor force to derive a projection of civilian employment.

Having derived an estimate of total civilian employment for the forecast year, the next step is to estimate the allocation of the employment to agricultural and non-agricultural economic activities. In the U. S. forecast, agricultural

employment is then deducted from the total civilian employment to derive a forecast of non-agricultural employment. (Non-agricultural employment is further divided into employment by industry division, arriving at a first approximation of employment for each industry. Each important industry is then analyzed, providing a basis for possible modification of the first approximation.) An upward adjustment in one activity must be balanced by a downward adjustment of another in order that the sum of future employment for all activities will be consistent with the forecast of future civilian employment.

Forecasts of employment by occupation or occupational group are obtained by applying occupational composition patterns for each industry to the industry employment projections. The Bureau of Labor Statistics has developed occupational patterns for the U. S. based on the most current data available. However, such occupational patterns must be examined when used for deriving forecasts to determine whether they require modification based on anticipated technological change.

Since many developing countries may wish to utilize either the area skill survey or the analytical technique for forecasting manpower requirements, the Agency for International Development has utilized the services of the Department of Labor in preparing detailed manuals on these techniques. These manuals, which were issued by AID in 1963, are entitled "Techniques for Determining Manpower Skills, Needs and Training Requirements" and "The Forecasting of Manpower Requirements". In addition, the manual entitled "Demographic Techniques for Manpower Planning in Developing Countries" also prepared by the U. S. Department of Labor and published by the Agency for International Development in 1963 may be of interest to planners and manpower experts in developing nations.

4. Problems and Programs in Chile, India, Indonesia, Sudan, Thailand and Venezuela: [25]

a. The Employment Service in Chile:

Employment and Manpower Programs are the function of a Bureau of the Chilean Department of Labor which has considerable autonomy. It is divided into a central office and several regional offices. Functional emphasis is on placement, referral and training programs. Contact with employers has been well systematized. It consists of the usual steps; inquiry about job openings, referral, and follow up. The data accumulating in the course of these processes are used for research designed to indicate present, and forecast future demands on manpower in the various sectors of the economy.

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[25] This section is based upon oral presentations and discussions by Mrs. Montesinos, Chile; Mr. Srivastava, India; Mr. Napitupulu, Indonesia; Messrs. El Hamid, El Zein and al-Mubarak, Sudan; Messrs. Saibua and Sopon, Thailand; and Mr. Victor Manzanilla, Venezuela.

The Chilean Employment Service also has to inspect payroll records of employers and to make inquiries about the payment of severance pay and similar fringe benefits. Combined with this investigation function are powers of enforcement. The service also cooperates closely with a semi-public organization engaged in training and skill acquisition, known by its initials as CORVO.[26]

b. India:

The Indian problem of labor force distribution is primarily one of keeping up with the population increase. Within the Indian Republic there are at present about 9 million unemployed persons, some 15 to 18 million are underemployed. The goal of all human resources programs and policies has been to concentrate upon how the potential services of unemployed or underemployed adults can be utilized as quickly as possible. While much has been done in both the agricultural and the industrial sectors, the race between population increase and expansion of production is close. Gains in national income are to some extent frustrated by the increase in population. In the period between 1950 and 1961 national income went up by 42 per cent, but the population increase during that same period was 21 per cent. The result is that the per capita income figure does not reflect in an adequate way the increase in national income.

The significance of reliable population forecasts for a country under an economic plan of the Indian type is perhaps best illustrated by the adverse experience during the first and second five-year plans. India has had a periodic census since 1872, and in recent years the government has made regular current sample surveys. Thus, an apparently adequate body of population information had been built up. However, the planning commission found that its manpower officials had to revise their estimates continuously. This was largely due to inaccurate projections and over-optimistic assumptions concerning the effect of birth control. In 1951, for example, Indian experts projected the 1961 population at 407,000,000. They thought that the birth rate would go down due to family planning. But this assumption was not borne out in fact. Population estimates had also been made by a number of private reserach groups. But they too underestimated the population increase. The estimates of the various non-governmental groups varied as between 431 million to 420 million, and 424 million. The actual count in 1961 showed a population figure of 438 million.

The Indian official way of counting is to include individuals of both sexes between 15 and 59 as potential manpower. Age 15 was selected because compulsory free education is provided until age 14. The upper limit age 59 has been more arbitrarily selected by adding four years to the compulsory retirement age in civil service which is 55 years. On the basis of this assumption of potential manpower and on the basis of other statistics dealing

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26) For the problems dealing with skill acquisition in the Chilean labor force see also Professor Onfrai's exposé in the 1962 Seminar proceedings, page 81ff.

with employment and applicants for employment, the first five-year plan estimated that India would have in 1950 a labor force of approximately 150 million. How many people were actually in the labor force in that year is not certain. In 1959 reliable statistical analysis disclosed that the labor force consisted of 177 million.

Another cause of the margin of error in labor force statistics were the over-optimistic assumptions concerning child labor. Forecast assumed that the number of workers age 14 and under by 1959 would have dropped to zero. Actually, about 17 million of this child labor group were working or seeking employment in 1959. The lesson which India had to learn for its third five-year plan was that labor force estimates cannot be based on unrealistic assumptions concerning the child labor group and its participation rate. Forecasts should be based and projected on samples which give the actual participation rates broken down by age groups in each of the relevant sectors.

c. Indonesia:

Amongst manpower problems and programs in Indonesia of considerable significance to development efforts is the problem of migration. The more than 2,000 islands, which make up the Republic, consist of underpopulated, as well as overpopulated areas. The island of Java is overpopulated and the policy of the government has been to promote migration out of Java to other islands, primarily to Sumatra. Emigration from Java aims at the resettlement of farmers and rural workers; there is an opposite movement which tends to increase the urban population. This migration to Java consists largely of young educated or skilled people who are attracted by city life and the expectation of greater opportunities. The outward migration from Java would, if successful, contribute much to increasing national production and national income. The success of the government promoted resettlement policies has been slow in coming, however. The reasons for the lag seem to be mainly cultural ones. Farmers and rural workers are over generations accustomed to their particular Javanese surroundings. They find it difficult to adjust to conditions in Sumatra and other islands. The outlook for migration on a larger scale than hitherto seems to depend upon the success of educational campaigns the government has initiated. The focus of these programs is to strengthen the feeling for national unity and at the same time instill in the farm population of Java the wish to improve their wealth and living standards. The government agencies involved are proceeding consistently but with great patience.[27]

d. Sudan:

The country is in a relatively early stage of economic development characterized by a dual economy system. In the modern sector the government

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[27] For a detailed report on the resettlement program, see Colonel Brotosewojo's contributions in the 1962 Seminar proceedings pp.99ff.

is the prime mover of economic development and the principal employer. It operates besides the regular civil service, public utilities, railroad and other transportation media. In addition, the Sudanese government controls the cotton producing and exporting "Gezira Project". Recruitment for civil service, the public utilities, and the transportation system is performed by the Establishments Branch of the Ministry of Finance and Economics. Recruitment for public sectors requires the hiring and retention of a small number of foreign experts and a comprehensive recruitment drive amongst Sudanese graduating from middle-level and high-level institutions of learning.

The labor force in 1961 in both the traditional and the modern sectors has been estimated as being roughly 5.5 million. In the modern sector private establishments employ about 40 thousand individuals and the government about 115 thousand. This total of 155 thousand includes white and blue collar workers. An important contingent in the government employment are the roughly 4 thousand employees working on the docks of Port Sudan. The millions in the traditional sector of the labor forces consist of domestic servants, family workers in rural areas and about ½ million seasonal urban workers who still partly depend on work in agriculture during periods of slack urban employment.

The Gezira Project and similar agricultural schemes employ about ¼ million people. They are not really self-employed tenants because the system is a modernization of a traditional pattern of sharecropping. The Gezira Project provides for instruction and direction on the part of a government board administering the project, and it is built on a system of profit sharing which has evolved out of ancient practices native to the Nile Valley. To some extent, however, the worker on the Gezira Project is an independent farmer. He has the right to grow on a fraction of the land he cultivates foodstuffs designed for his and his family's use.

It is against the background of a dual economy that one has to consider the scope and pertinence of social security programs. Upon request of the Sudan Government the ILO recently sent a mission which developed a realistic scheme for wage earners in the modern sector designed to protect them against loss of income due to short term accidents, sickness or maternity, and against such long term contingencies as old age, permanent invalidity, and death of the family head. Expansion and refinement of the social security system beyond the framework recommended by the ILO will have to attend further progress of economic development.

e. Thailand:

Experience with industrialization in Thailand illustrates the limitations of manufacturing in a country in which considerable more than one-half the labor force is working in agriculture. The primary objective of planning must be to concentrate upon improving the productivity of the agricultural sector, and modernizing the methods of farm production. This means the use of more machinery and more chemical soil improvement materials.

The importation of farm equipment is expensive for a country which has to nurse its supply of foreign currency. For this reason, industrialization focused upon the domestic production of farm equipment, fertilizer, and other chemicals has proved itself.

Modernizing the agricultural sector requires the introduction of machinery and the application of scientific knowledge (agronomy) to farming and forestry. It also requires a business-like system of farm management. Such a reorganization is greatly hampered in Thailand by the low educational levels of the farm labor force. Less than five to eight percent of self-employed Thai farmers, or agricultural wage earners, have completed a four-year period of compulsory education. The application of modern technology and the use of hybrid seeds, or shifting from traditional rice production to the cultivation of other crops requires a minimum degree of literacy. Since a majority of the manual agricultural labor force is below such a level of education they are only capable to continue farming along traditional lines. Also they are more inclined to be suspicious of new methods, in part perhaps because they lack the know-how, conveyed by schooling, to master new techniques. It appears therefore that one of the impediments to economic growth in Thailand is the underdevelopment of basic education in the countryside.

f. Venezuela:
The problems confronting the nation in regard to mobility and employment of its growing labor force requires a new over-all educational policy designed to gradually improve skill levels in agriculture, mining, manufacturing and construction. More than 45 per cent of the population of Venezuela is 15 years or younger. In coming years, with increasing urgency, national employment policy will have to create more and more new jobs to place the new entrants. A large portion of the labor force consists of farm labor. A land reform program is in operation and making rapid progress. To succeed the beneficiaries have to be trained to become competent self-employed farmers.

In response to these problems the Government of Venezuela has established an agency called National Foundation for Cooperative Education (INCE). This agency is designed to bring about a reform of the educational system, broadening its base and making it more responsive to the specific needs of economic growth and social betterment. The National Foundation has a close relationship to the National Planning Board, the Ministry of Education and the Manpower Services. It also cooperates with a number of similar agencies in Colombia, Brazil and other Latin America Republics, as well as with French and American and International organizations providing technical assistance. The program of the Foundation (known by its initials as INCE)consists of three parts:

The agency establishes and operates elementary schools for children in rural areas. While these schools are designed to make children literate they also try to provide them with such elementary skills as could be useful to them in agricultural work after they leave school. In addition to these schools

INCE has created schools for illiterate adults in which through evening classes held in villages, as well as in urban places, an attempt is made to bring the educational level of adult students up to that acquired by the children graduating from the Foundation's rural schools. The third part of INCE's program consists of skill acquisition in the more technical sense of the term.

The Foundation enters into contracts with industrial establishments under which these business organizations plan and conduct an on-the-job training program designed to teach industrial skills. These programs are subsidized and supervised by the Foundation. INCE also has a scholarship program which enables gifted alumni from its various schools to receive further education designed to prepare them for middle-level and high-level jobs.

5. Labor Mobility: [28]

All countries are concerned about the composition and size of the labor force. In an over-all way one can analyze available data by employment. This provides information about the number of people employed and unemployed. Likewise one can analyze the labor force composition according to skills and skill levels; one can subdivide the labor force by industries showing the data of employed persons and unemployed persons broken down by industrial sectors and one may also subdivide the labor force according to geographic areas or by educational levels.

All these classifications are relevant. Important, is the relationship between occupational categories. The economic and social planner has to determine the growth potential of the national economy. To this end he needs data concerning the number of administrators, professional workers and scientists, as well as statistics concerning key occupations, skilled, as well as semi-skilled. In practice the collection of pertinent data is frequently a difficult task. It requires a good deal of interviewing and observation of performance on the job. Job titles may be extremely misleading. For example, in the United States the term "engineer" is applied to people who drive railroad engines, to industrial chemists, to electrical engineers in equipment plants, or to graduates from MIT and similar institutions, irrespective of what they do. The same semantic confusion may occur in developing countries and a foreign expert working in such a country is often ill at ease, while a national of the country is usually more aware of pitfalls of terminology. Analysis and subclassification of industrial distribution can be made with more or less detail. The degree of sophistication depends upon conditions in, and policy aims of, a given country.

A problem of labor utilization is often caused by misdirected professional education. This is frequent in developed, as well as in developing countries. Students often are mislead by the success and prestige society accords the

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28) This section is based upon lectures by Professor Blitz and Professor Horowitz.

few individuals who have been successful in such fields as law or literature. They overlook the probability aspects of success, and they fail to analyze, or are often not in the position to do so, the complex combination of conditions which make for success. Another problem seems to occur in some developing countries, particularly in Latin American ones. Employers frequently overstate the educational requirements for job vacancies. They tend to require college degrees where a normally intelligent person with a high school training would have all it takes to do a competent job. The reason usually is that employers believe that an unnecessarily high degree of education will have the effect of making the encumbent more reliable and dedicated than if he had not gone through college. In countries in which there is an over-all scarcity of educated people, such practices are certainly out of place; however, they are difficult to prevent.

6. The Utility of the Purto Rican Experience [29)]

The economic development plan of the Commonwealth known as "Operation Bootstrap" paid considerable attention to the manpower factor. A manpower programming body was created under the name, Human Resources Commission. The task of the Commission was to make forecasts for the demand for manpower generated by the economic plan, The key problem was the lack of past local experience. Prior to 1952, the first year of the plan, the economy of Puerto Rico was specialized on sugar production and production of sugar derivatives such as rum and molasses. The development plan called for the creation of new industries in order to diversify the economy. For these new industries there were no manpower requirement data available in the Puerto Rican census. The Commission decided to ascertain the occupational structure for each of the new industries on a hypothetical basis; using manning tables of comparable industrial establishments in the continental United States as a guide. On the basis of these synthetic manpower forecasts the training and skill acquisition programs in support of the plan were formulated. The forecasts were quite sufficiently accurate in this area. A margin of error developed in the forecasting of future manpower requirements in the agricultural (sugar producing) sector. The Commission assumed that by keeping minimum wages in the sugar industry at a very low level the industry would continue to be labor intensive and absorb portions of the labor force as great or greater than in the past. It turned out, however, that the industry adopted a policy of increasing productivity per man hour through mechanization with the result that employment despite low wages, declined.

In determining manpower requirements for the industries to be created, a series of problems came to the fore. It was relatively easy to find out how many carpenters, or machinists were available and would become available

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29) This section is based on a guest lecture by Mr. Everett Reimer of the U. S. Department of State.

during the duration of the development plan. The semi-skilled occupations were the ones that posed the most crucial problems to forecasting. One did not exactly know what the current supply was. One could not prognosticate with certainty how effective short-term training programs for unskilled labor would be, and finally, it was much more difficult to forecast the supply in more distant years because this kind of forecast was tied up with estimates about school completion.

Adjusting the educational system to the requirements of the plan posed another crucial problem. It was clear that the number of schools and teachers in primary and secondary institutions would have to be increased. An expansion proportionate to the exigencies of the plan was impossible, however. Such an expansion would have wrecked the whole system. It became, therefore, necessary to analyze school attendance and dropout figures in order to pinpoint areas of indispensible expansion. It was found that in Puerto Rico it would be necessary to concentrate teachers and plant facilities in the first years of development planning upon the third and fourth grades of high school. In these two grades the dropout ratio was largest. On the other hand, the completion of these two grades represented a general education minimum for semi-skilled employment in industrial production. The plan was relatively successful in adjusting the educational system to its needs.

In recent years the value of Puerto Rican experience in planning for other developing countries has been questioned. The reason for doubt is mainly that the Commonwealth derives from its economic and political association with the United States a series of advantages such as subsidies, a tariff-free market for its products, the freedom of immigration to the United States and access to the potent American capital market. The advantages of the relationship with the United States are accompanied by disadvantages, however. The freedom to immigrate to the United States exercised a strong pull on the Puerto Rican labor market. Skilled and semi-skilled workers would leave for better paid jobs in New York and elsewhere on the continent. This was a drain on Puerto Rican human resources. Although minimum wages in Puerto Rico were set at levels considerably below the statutory ones on the continent; this level was, nevertheless, relatively high for a developing country. Whatever the limitations of the Puerto Rican experience may be, the work done in adjusting the educational system to the plan is an aspect worthy of study by planners from other developing countries.

IV. Rate of Development and Institution Building

/ The theme of this course was: National or regional development plans and less systematized policies towards directed economic growth are justified by the degree they can contribute to social welfare. Technological change and economic growth may not, in and of themselves, improve living conditions for most people. The disruptions which inevitably accompany such change may in the absence of preventive or remedial action create hardships in the short run which outweigh the benefits in the future resulting from development efforts. Social policies, therefore, must parallel economic ones, and human resources planning must be coordinated with both.

The scope of preventive or remedial action consists of programs designed to create institutions and establish services for which a traditional society has little need. Informal arrangements operating through kinship, clan, family, or religious orders provided for wants--such as housing, child care, relief--in ad hoc ways. Economic development will require as a rule the abandonment of a self-contained economy and a change to a rationalized market economy involving agricultural as much as urban occupations. This change--be it gradual or abrupt--makes working conditions, safety and health, income protection, migration, housing, commitment to job and specific occupations, rural community development, migration and urbaniza-tion into interrelated problems, the solution of which may be decisive for success or failure of developmental policies or plans.

Seminar leaders were: George Blanksten, Professor of Political Science, Northwestern University, Evanston, Ill. in the Spanish section; and Francis L. Hauser, Bureau of International Labor Affairs, U. S. Department of Labor in the English section.

Two guest lecturers, Albert Mayer, Consultant to the Government of India on Rural Community Programs; and Paul Fisher, Economist, U. S. Department of Health, Education and Welfare, spoke respectively about the experience in Indian community planning and the need for social security services and trade union organizations in developing countries. The participants from Brazil, India, Israel, Sierra Leone and Tanganyika presented comprehensive oral reports on the subjects treated by the guest lecturers; other participants made valuable contributions to analysis and discussion.

1. CONCEPTS OF INDUSTRIALIZATION AND INDUSTRIAL SOCIETY: 30)

It may be pertinent to identify and clarify terms such as industrialization, industrial revolution, industrial society, feudalism, and traditional society. Industrialization connotes a change in the process of production which took place very gradually in the countries

30) This section is based on lectures presented by Mr. Hauser.

of Europe, Russia, the United States, Canada, Australia, and New Zealand. The economic characteristics of this process of change were the application of technological innovations, production primarily for exchange in a market, and the organization of such production in factories manned by wage earners working under a new, much more rigid discipline. This process also brought about considerable political changes. While the production of new manufacturing usually took place in cities, the process of change we call industrialization was in the United Kingdom, the countries of the European continent, the United States and Canada, as well as Australia, preceded by modernization of agricultural production. It is therefore appropriate to think of industrialization as a process which extends to villages and farm as much as it does to plant and city.

Economists and social scientists frequently refer to industrial society as distinct from traditional forms of social organization. The distinguishing characteristics are considered to be that in an industrial society income and social status are usually the results of an individual'a contribution to the production process, while in the societies historically preceding the industrial one, income and social status were as a rule the result of descent or inherited membership in a specific class. The concept "feudalism" is frequently used to connote societies other than industrial ones. Feudalism has thus become a generic term. It is used for a variety of social and economic systems. Sometimes it is simply employed as a term indicating backwardness. This runs counter to the historical meaning of the concept but such broad use is legitimate provided one keeps in mind that in the economic and social development of industrialized nations there are a number of stages intermediate between Feudalism in its strict sense and the modern society of today. These stages were part of a process which extended over centuries in most countries of the West.

The term "industrial revolution" is frequently used to connote the process of change referred to above and to underline its novelty. The term is culled from the title of the famous book by Arnold Toynbee, (The Elder), who was amongst the first to point out that the process of industrialization in England had by the middle of the 19th Century, transformed not only the economy but all the social relationships in England, Wales and Scotland. The term "industrial revolution" should not be confused with the meaning of the term not qualified by an adjective. Revolution, as such, connotes the violent overthrow of an established system of government, accompanied by a radical destruction of traditional institutions and the establishment of a new fabric of social relationships. Such a violent and forceful political upheaval actually occurred during various stages of industrialization in such highly developed nations as France, Germany, Italy, and Russia. Industrialization in Great Britain, the United States, the Scandinavian countries, Japan, Canada and Australia was, despite severe crises and social tensions, able to avoid the hardships which accompany violent political changes.

2. POLITICAL AND ECONOMIC ASPECTS--THE NEED FOR OBJECTIVE ANALYSIS: [31]

The analysis of the political aspects of modernization usually proceeds under two different viewpoints. One approach, which may be called the ideological one, tries to fit the process into a framework built by a specific philosophy such as : Marxism, Leninism, Manchester Liberalism, and the various philosphies associated with the term "Fascism". Without criticizing specifically these approaches it should be said that they are based on a preconceived set of values--an ideology. Social and political scientists advocating one of these approaches depart to some extent from standards of professional analysis. It is, of course, difficult to analyze social and political relationships in an unemotional way. Such an approach which we might call the objective approach, however, is helpful, if not indispensable. The difference between the ideological approach and an objective analysis is perhaps not that value judgments are outlawed by the latter. They may find a legitimate place in the conclusions one may draw from an unemotional and factual discussion of the relationships between economic and political change.

3. WHAT IS MEANT BY DEVELOPING COUNTRIES AND THE RATE OF DEVELOPMENT: [32]

The term "developing countries" is a generic one. It is applied to countries in distinctly different stages of economic development and political evolution, of heterogeneous cultural background and traditions; which are confronted by social and economic issues having few characteristics in common. Thus Tanganyika, the Sudan, and Sierra Leone are sovereign states which had won independence recently. Their present frontiers had decades ago been carved out of the African continent by colonial powers without regard to the tribal territories of the people actually inhabiting these countries then and now. Consequently, their governments were confronted with two fundamental tasks--building a nation out of loosely related tribal entities, and, on the economic side, devising programs for orderly change from self-sufficient traditional agriculture to modern farming supported by the establishment of adequate transportation and communication networks, housing programs and the creation of some industries. Their advantage is that they can, so to speak, build from scratch. On the other hand, India and Brazil have developed political institutions over centuries. Their social fabric crystallized long ago and can only gradually be adjusted to the needs of an industrial society. While Sierra Leone, Tanganyika and the Republic of the Sudan are in a very early stage of development Brazil and India have gone far in the process of industrialization. In between these two extremes are Indonesia and Turkey. Here there is disparity

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31) This section is based on lectures presented by Professor Blanksten

32) This section is based upon lectures by Seminar leader Hauser and a clarifying discussion to which Mr. Davies, Sierra Leone; Mr. Okulo, Tanganyika; and Miss Ferreira, Brazil, made significant contributions.

between economic and political development. In Turkey political reorganization began in 1912, industrialization, however, was comparatively late. In Indonesia the reverse of this process can be observed. Economic development made great progress under colonial rule but political and social instituions were neglected. These have to be created by the Republic of Indonesia virtually from the bottom up. A case by itself is Israel, a nation which came into being as the result of a political movement creating a society with much of the "melting pot" characteristics and problems of other immigration countries. Development and institutional change thus poses different problems which may call for entirely dissimilar programs. Generalizations are dangerous but one could perhaps say that in all developing countries there seems to be a tendency of rural populations to migrate to cities. In most countries this migration takes place so rapidly that it creates severe problems. Facilities, such as housing, as well as job opportunities are inadequate. The migrants do not have the skills and work habits urban occupations demand. What town life has to offer the newcomer and what they have to offer to the community falls far short of expectations. The resulting frustration is a seedbed for social strife. The process of urbanization, whether premature or not, gives rise to a number of social problems which require the creation of new institutions or the adaptation of old traditional ones. Almost all developing countries are, besides the urbanization problem, confronted with the problem of how to increase productivity in the agricultural sector. From a strictly economic point of view, more people living and working in cities require a greater national production of foodstuffs and fibers to sustain the growing urban population. This calls for programs of agricultural modernization. In many countries the need to increase the productivity of agriculture is affected by, and related to land reform and the problem of determining the rate of replacing self-sufficient farming and village culture by market-oriented production.

In planning the development of a particular country considerable thought should be given to policies determining and regulating the rate of change. To maximize and speed up change is not necessarily the most promising, or the most responsible policy. In many countries decisions dealing with the rate of change may have to be preceded by considerable exploration of conditions existing in the countryside. Study concerned with such fact finding and analysis should be given high priority, particularly in countries in early stages of economic development.

4. Traditional and New Institutions [33]

Institutions in underdeveloped or developing societies have a less clearly defined scope of functions than in industrialized societies.

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33) This section is based upon lectures by Professor Blanksten and a series of clarifying discussions to which Mr. Chavez (Ecuador); Mr. Mota, (Dominican Republic); Mr. Padilla (Colombia); Mr. Feretti, (Nicaragua); and Mr. Manzanilla (Venezuela) made significant contributions.

Examples are the Army and the Church in Latin American countries. Both are traditional institutions. The Army in Latin American countries has been a training ground for political activity and leadership. It has been, and is, an instrument of politics. In some countries it is also an institution promoting the acquisition of skills. In many of the Latin American countries it has been a force perpetuating the rule of an established elite. Compared to the role of the Army or Navy in highly industrialized countries this is a much broader scope of functions and activities. In the industrial societies functions such as political training, maintaining law and order, education and skill acquisition are taken over by other more highly specialized institutions such as political parties, universities, trade unions, schools, police departments, local governments, and various training schemes.

Similar to the Army, the established Church or religious community in a pre-industrial society, performs a series of functions which it tends to lose in the course of industrialization. Amongst these are education and the conduct of schools, certain social services, which once religious institutions performed as part of their mission of charity. Likewise the Church tends to decline in political leadership and political influence.

In the course of modernization and industrialization in Latin American countries two different ruling groups play a part. The old traditional ruling class consisting of landowners and their allies, Army and Church, begin to share power with a newer urban middle-class consisting of bankers, industrialists, and professional people. In the future, labor leaders may become part of the urban ruling class. The situation in Mexico and Brazil are examples of this leadership by two different elites. This dualism does not necessarily lead to conflict. Both groups may indorse change because in many developing countries public opinion exercises strong political pressure to inaugurate a social and economic transformation and both elite groups are, for reasons of self-preservation, responsive to these pressures.

5. The Role of Institutions in Social Change: [34]

The need of developing nations to promote the formulation of institutions is a corollary to planning. Institutions are needed to implement development plans, but they are also needed to achieve acceptance of plans and of the changes which accompany their execution. In this regard the experience of the industrialization of the West and of Russia and Japan is of limited applicability. In the West and in Japan economic planning did not accompany industrialization; in the Soviet Union it did, but in all these countries

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34) This section is based upon lectures presented by Seminar leader Hauser and discussions designed to clarify ideas and concepts to which Mr. Mubarak, Sudan; Mr. Napitupulu, Indonesia; Mr. Saibua, Thailand; Mr. Cohavi, Israel; and Mr. Srivastava, India made important contributions.

the objectives of industrialization as well as the objectives of planning were substantially different from the goals which developing nations pursue.

In the West economic planning got under way at first in response to mass unemployment brought on by the depression of the early 1930's. In the Soviet Union the system of five-year plans was devised to substitute for the absence of private entrepreneurial activity. Also the Soviet Union was not an underdeveloped country when it initiated its first five-year plan. Russia had been going through a very rapid process of industrialization prior to the establishment of the Communist regime.

The West started planning when it had large unemployment amongst the skilled and professional contingents of the labor force. The developing countries have to start industrialization in most cases without an adequately large skilled labor force, or with a skilled labor force which has acquired the wrong skills. The unplanned development of the West created hardships for large groups, particularly for the industrial urban worker. A series of conflicts gave rise to political movements. Where these movements led to compromises between group interests, new organizations were created which together with the old and traditional ones made up the institutions which generated the framework of industrial society. In developing nations traditional institutions exist and in the course of contact with the more industrialized countries new institutions such as trade unions, cooperatives, etc. are imported. The conflict of interests between groups, however, can in many cases not count upon the working of institutions sufficiently developed to manage the reconciliation task.

Analysis of a modern national community in sociological terms seems to lead to the conclusion that its political stability depends upon the mutual acceptance of what is called major interest groups such as farmers, industrial wage earners, businessmen and institutions such as the civil service, the army, the educational system, the political parties, as well as the key religious institutions and other surviving traditional organizations. If one extends this analysis to include advanced developing nations such as India or Israel, a sequence of events leading to a pattern of political stability seems to become apparent. At first there were social movements; these movements created institutions which influenced the pattern of economic and political development, and operate to achieve recognition of the right and duties of the classes evolving in the process of movement and institution building. This recognition of the rights and duties, for instance of urban wage earners or of small farmers, leads to what one may call institutionalization of the place of the individual within his group and within society. Where such a process

of social organization was not achieved in time as in the case of many of the Western industrialized nations, and in the case of Russia, revolutions and wars have often been the consequence. Revolution and wars in turn impede and set back the process of economic advancement. From a purely rational point of view, as well as from a humanitarian one, they are therefore to be avoided. This in essence, is the case for trying to promote the formation of institutions.

In some developing countries, the State was the result of political movements which had first created a series of non-governmental institutions. These ultimately created an independent sovereign state. Independent India is the work of a political movement starting with the civil disobedience ideas of the late Mohandas Gandi and using a political party to put them into effect. The (Congress) party then created the Indian rural community movement, a trade union movement, organizations of industrialists, etc. until it finally had developed a government structure existing side-by-side with that of the colonial administration, before the latter gave way to an independent Indian Government in 1946. Comparable, but in many ways different, is the evolution of the Government of the State of Israel. A political movement of Jews in the Western world first formulated an almost utopian objective it called a Jewish homeland. It created a series of organizations designed to promote the immigration of Jews into Palestine. Amongst these organizations was an organization designed to teach manual skills, the ORT; a trade union movement, the Histadrut, an organization to purchase land and a series of cooperative movements designed to organize immigrants in Palestine in rural communities. The growth of these institutions took place within the framework of one single political party, the Zionist Party. The Party and its constituent institutions grew and developed under the British mandate. When independence was achieved after World War II, these institutions actually made up what today is the State of Israel and its Government. While it can not be argued that the casesof India and Israelare typical, it can be said that the State industrial society has created is more often a product rather of extra governmental movements and institutions than the result of action by a small ruling class in exclusive control of the political aparatus.

6. India, Israel, and Tanganyika--Three Approaches to Rural Community Development: [35]

Rural India contains a little over 82 per cent of the total population. Under the classification scheme of the Indian census, communities with less than 2,500 inhabitants are considered villages and are presumed to be agricultural settlements. There are 550,000 such villages.

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35) This section is based upon guest lecture by Mr. Albert Mayer and oral presentations of Mr. Srivastava, India; Mr. Cohavi, Israel; and Mr. Okulo, Tanganyika.

The movement for rural reform is closely related to the independence movement.[36] Early attempts around the turn of the century were unsuccessful although political party organizations existed, of which the Congress Party was the principal one. But, the Congress Party, had at that time, followers only amongst the professional and intellectual upper classes in the large cities. On the other hand, the villages in rural India operated under an age-old organization which largely consisted of informally designated community leaders, so-called elders, who represented the village and the interest of the village in dealings with the government (at that time the British colonial regime). British rule had divided those parts of India which were not within the territory of the princes, into districts headed by a commissioner who exercised far-reaching administrative, as well as judicial powers. This setup, which had no parallel in Britain itself, gave a certain amount of informal autonomy to the villages. There was no real local government, however. In their attempt to establish contact with the rural masses the urban Congress Party members were unsuccessful because they did not know how to bridge the cultural differences between town and country, and also because the Indian people are very individualistic and the villagers distrusted the city-bred reformers. Another obstacle to rural reform was the caste system which extended to the social relations within a village, as well as to work on the land and to work on processing farm products.

After Ghandi had established control over the Congress Party, approximately after the first civil disobedience demonstration in 1931, he began to organize rural chapters of the Congress Party in each village. He and his followers visited almost every village in India and stayed in each of them for a considerable period of time. After studying conditions in the villages a policy was adopted to transform the Council of Elders into a local chapter of the Congress Party. Working through the Council of Elders, Ghandi and his disciples tried to break down the caste system by exerting pressure upon each member joining the Congress Party that he would disregard caste lines. Ghandi gradually succeeded in removing the impediment posed by the caste institution. Out of the village party local evolved a full-fledged local government. It took care of public works, mediated disputes between villagers over land, demarkation lines and similar matters, organized the joint sale of products, improvement of community services, such as schools and irrigation works. The Congress Party's village locals were thus able to reduce the intervention of the (Colonial) District Commissioner's Office to a minimum. When India achieved its independence in 1948, the government retained Albert Mayer, a U. S. Army engineer who was stationed in

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36) The structure of village organization has also been explained and discussed in the 1961 Seminar by Mr. Prasad. See 1961 Proceedings, pages 226-88.

India during the war, undertake to improve agricultural production and to re-house the villagers. Villages are organized into community-development blocks, each comprising between 50 and 100 villages. These community-development blocks are run by an elected local government which consists largely of the Council or Elders in the villages and a Council of District Elders in the next largest town. These elected councilmen work with a staff of expert advisers which today consists of a higher ranking general administrative civil servant who has working under him experts in agriculture, housing, education, social work, public health and irrigation. These specialists are selected on the basis of competitive examinations by the ministries in whose jurisdiction their specialty is.

Community reform in India today aims at the expansion of village-based industries, such as the manufacturing of building materials, and on improving agricultural production. It is also designed to gradually improve housing conditions, recreation and health. There is, at present, some doubt whether the community development movement has not fallen below expectations in regard to improving living standards and promoting new industries. Thought is being given to the establishment of "new towns" which would provide a center for the villages.37)

A psychological factor which has done much to impede the effectiveness of the rural community program, during the struggle for independence was the aim to render obsolete the Anglo-Indian administration operating through the District Commissioner's Office. In keeping with the main techniques of civil disobedience villagers had been trained to oppose programs emanating from the (Colonial) central administration. When independence was achieved, the Government of the Republic fell heir to the Anglo-Indian apparatus. It was used, and it had to be used, to initiate and administer programs and policies of the central and provincial governments. Now cooperation by the village communities was needed.

But, the Council of Elders still considered any program emanating from the District Commissioner's Office as an illegitimate interference. To overcome this mentality it was necessary to train a special civil service staff to work in the villages, and to win the confidence of their inhabitants. In the beginning of the program, greater progress was made in this direction. But, as the program grew in size and more and more community projects came into being a manpower problem began to show up. It was relatively easy to recruit people but, it was much more difficult to give the now much larger numbers the proper training and to replace those whose ability to adjust to this type of work turned out to be below par.

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37) Lecturers referred in this connection to a recent book by John L. Lewis, "The Quiet Crisis in India", Brookings Institute, Washington, D. C. 1963.

To manpower experts part of the value of Indian experience is perhaps that it is an illustration of the difficulties one faces when one has to select a competent staff for an entirely new venture. While these difficulties exist whenever a new kind of social or economic service is inaugurated in any country, it is usually of particular complexity in a developing country.

At the start of a program of community development in 1946 the Indian civil service had reached a high degree of stratification, and selecting a staff for work in the villages through regular civil service procedures would hardly have been an effective way of recruiting the proper work force. Mr. Mayer and his associates, therefore, received an exemption from the regular recruiting procedures. This left the task of determining what kind of background and what kind of personality characteristics were desirable to the top executives of the program.

When they had to recruit their staff, candidates seemed to fall into two extremes. There was the highly qualified person who had gone through all the requisite schools and was theoretically admirably well prepared. People from this group, however, usually had lost touch with rural life if they ever had such contacts, and in their attitude to their clientele they were too distant and aloof. On the other end of the gamut, were candidates whose educational background and training was rather sketchy or unrelated to the job they should be doing. Amongst this group, however, one found a good deal of enthusiasm and dedication. In the beginning, about equal numbers were hired from both groups. Training schools were set up for both. On balance employees from the less qualified, but dedicated group contained the larger number of successful workers. It seems that in work of this kind, dedication may be ten times as important as any other qualification. Rural living conditions are often inferior; there may be hardships. Trying to doctor conditions for the community worker sets a bad example. It tends to separate the community worker from the people he should service. On the other hand, it is not necessary for the professional worker to share all the miseries and inconveniences; to strike the proper medium calls for a sensitive individual.

Similar to the rural community movement in India agricultural modernization in Israel grew out of the political movement known as Zionism. Its pioneers consisted of a group who had lived all their lives in cities. Resentment against discrimination which had closed occupations, such as farming to Jews over the centuries made return to the land of their ancestors and work on the land the key goal of the movement. Zionism thus originally was a "back to the land movement". Early adherents were also strongly influenced by utopian socialist ideas and the aspiration to become farmers was combined with the will to experiment with the new socialist forms

of cooperative organization. The result of this combination of ideology and reborn nationalism was the establishment of volunteer programs. One such program had as its goal simply the reclamation of swamp lands and desert lands. It was conducted by brigades of young volunteers who had pledged themselves to reclaim the land for cultivation, but to move on to other bad lands once their work was done. The "back to the land" movement also created two different forms of cooperative farming. The older form was the so-called "Kibutz". In the "Kibutz" land, equipment, and all proceeds are owned by the cooperative. No member of the cooperative owns any real or personal property, be it land or tools or household goods. Women and men work according to their abilities and share according to their needs. Children are at an early age tended in nurseries, kindergardens, and later on schools, managed by members of the "Kibutz". While many of the present political leaders of the nation have come out of such communities, and while many new "Kibutzes" are being established, a somewhat more permissive class of cooperatives seems to be expanding more rapidly. This type of cooperative is called "MOSHAVIM". It permits separate households for families and combines a private area of family farming with the joint cooperative enterprise.

Adjustment of immigrants to new surroundings continues to be a key problem of the State of Israel. The character of the problem has changed somewhat. Immigrants now come from Asian and African countries. Israel itself has become largely urbanized and industrialized. However, settlement on the land, as well as the relationship between rural communities and cities remain important issues. A recent program tries to establish a new pattern of urban-rural relations. It proceeds on the assumption that rural communities need, as a market for their products and cultural center, a small to middle-sized city near by. The government, in cooperation with key private institutions, is trying to build "new towns" of approximately 10,000 inhabitants which should be located in the center of a newly developing agricultural area. A good deal of research work was done before one arrived at the population figure of 10,000. The directive for researchers was that they should try and find out what smallest size of urban community could perform the function of being an intellectual and educational center, the seat of hospitals and of processing industries. The research group working on this project also had to find out through interviews and other techniques what minimum size city could attract competent professional people and skilled workers. The 10,000 figure is, thus, not arbitrary; it is the result of considerable analysis. It was necessary to do serious research because settlement and occupational training in Israel proceeds on the basis of voluntarism. Agencies counselling new immigrants may use a certain amount of persuasion but in principle no newcomer is forced to settle in a particular area or

to select any specific occupation.

Institution building in rural areas of Tanganyika is a response to social problems rather than to economic ones. In the interior of this country, conditions of health are poor; epidemics are frequent and certain tropical diseases endemic. The extension of health services is difficult because of the pattern of settlement. Tanganyika has a large territory. It is a sparcely-settled country. The type of settlement most prevalent is of one of two types. Small groups actually consisting of one extended family attempts to cultivate the land and to raise cattle. The village such a group builds is actually a small fort for defense against attack from nomadic tribes. By contrast the nomadic tribal organizations consist mainly of cattle breeders. Some of the tribes have, in the past, been cattle raiders. Their habitat is, of course, non-permanent. Many modes of living from the land exist which are intermediate between extended family village and the nomadic tribe. Because of this settlement pattern the question arises how social services, primarily health and education can effectively be provided for the rural part of the nation. In Tanganyika great scarcity of skilled and professional manpower exists. Even if the nation were less hard put to find doctors, nurses, teachers and agronomists who could do extension work, the cost of providing such services for villages of perhaps less than 100 people, widely separated from each other, would be much too costly. The government is now studying a plan which would aim at resettling the scattered family villages into more populous and more compact rural centers. These would grow up near main roads and railroads designed to link together the strategic areas of the country. This plan is still in an early stage. It is contemplated that if it is adopted in principle, the government will ask aid-giving countries or international agencies to supply a staff of foreign experts; (city and country planners and housing experts, primarily) to review the plan and to put it into operation.

7. <u>The Role of Institutions in Urbanization -- Trade Unions, Social Security Services, Social Work, Housing and City Planning:</u>[38]

The social problem posed by slums and lack of recreational and health facilities is a complex one. It is still far from solution in the United States, although great progress has been made. An example of successful prevention of slum conditions in the course of industrialization are the programs initiated in Sweden from 1905 on to the present. While the tendency of rural population to migrate to

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[38] This section is based upon presentations by the Seminar leaders, a guest lecture, by Dr. Paul Fisher, and oral presentations by a number of participants, particularly Mr. Davies, Sierre Leone; and Mr. Yapar, Turkey; who made valuable contributions.

cities today is a world-wide one, rural reform and innovation has in the past often been the result of an opposite trend. This was particularly true of the industrialization process in the West. In particular, the successful pioneer work done in Denmark, initiated more than 100 years ago, leading to the creation of farmer cooperatives, as well as a by now highly sophisticated system of adult education for farmers should in this connection be kept in mind.

The problems confronting newcomers to the city are those of adjustment to urban life. Many of these problems can be solved by programs designed to promote organized self help.

The physical and sociological structure of the industrial city is distinct from the older pre-industrial forms of urban life. In the latter, exemplified by the European medieval guild cities, the traditional institutions of the extended family provided economic and social integration for newcomers to the city. Changes in technology, particularly the institution of the factory, replaced the craft-based pattern of production. The anonymity and exacting discipline of factory production provided not only no substitute for the integration resulting from membership in the craft and guild structure, they created economic insecurity and social isolation for newcomers which operated to break their morale, as well as their physical well-being. Developing countries in early stages of industrialization are in a somewhat better position to solve the problems posed by the industrial city. They can build from scratch and place their factories on the outskirts, and relate places of work more conveniently to housing and recreational areas. Countries like India, far advanced in the process of industrialization, are faced with solving the problem of reshaping patterns of urban life which has crowded low income groups into centrally located slums close to noisy and often obnoxious factories and workshops.

To cope with the problem of urbanization in developing countries a combination of public and private action has to be created. A social security system emphasizing information, training, re-training and placement may have to work in close contact with trade union and employee groups. Housing projects are needed, but their success in integrating newcomers to the urban scene depends upon cooperation from church, schools and social work organizations. As is the case of rural community development there is considerable need for exploratory research of the type UNESCO has done in Latin American and Asian cities.

The first step in considering the extent of social security programs in developing nations is to determine whether a given country had a dual economy system or not. In case a fairly intact traditional sector still existed, one should try to draw a demarcation line between the area in

which modern economic life prevailed and the territory in which a traditional subsistence economy was still the controlling pattern of production and of social relationships. As a rule, need for social security programs would exist only in the modern area. It would, therefore, often be possible to exempt the "hinterland" from a social security program. This can make operation of the system more manageable and less costly.

The next question to be analyzed in this connection is the significance of the system for the economic plan. Social security payments and benefits are measures to redistribute income. They thus may have some effect on the amount of savings available for capital investment. The potential conflict between objectives of economic growth and goals of welfare has to be resolved according to the political constellation prevailing in a given country at the particular time.

No hard and fast rule can be established concerning the types of social security program needed. There is undoubtedly a need for public health services in all developing countries. Whether such services can be organized on an insurance basis depends upon the degree of permanent employment, as well as upon the volume of the aggregate payroll. A controversial and difficult problem is unemployment insurance. In this case one should first determine the degree of wage earner dependence upon specific occupational types of industrial employment. One should also analyze how much chronic unemployment there is, or can reaonsably be expected. If the volume of chronic unemployment is very large, unemployment insurance could overtax the economy.

Concerning the part trade unions can play in social security and other programs affecting urbanization, students of developmental economies seem to take a rather negative view. They tend to assign trade unions a political role which reaches its heights during the struggle for independence. Once sovereignty is achieved there is, so to speak, no place for trade unions or labor movements and their activities are consequently curtailed by the government, sometimes the institution is virtually abolished.

Despite these views one should not forget that the role to be played by trade unions after independence has been achieved, could very well be a decisive one. Because of the limited wealth of developing countries industrialization is inevitably accompanied by some hardships. Trade unions can act as mediators and protectors. Their leadership can reduce unrealistic demands of the rank and file to the achievment of practical objectives. They can educate their followers to become realistic and concentrate on essentials. More important are the psychological functions

of labor movements and trade unions. They can operate as catalysts of viewpoints and aspirations, and if necessary, they can be instrumental in articulating protests. They are thus media for political participation of a group of people, which would have no other medium at their disposal. Labor organizations can convey to the urban and rural wage earner, who in many countries carries with him memories of oppression, a sense of participation in the government of his country. This is probably the most important function trade unions and similar institutions can perform in the process of institutionalization.

8. Centralization v. Pluralism--Some Questions Raised: [39]

Political parties, as well as the State, can be identified as being institutions. In this connection, the question can be raised whether the various needs for economic and social change would require adoption of a specific political and governmental system, or whether the fabric of politics and of the society is relatively independent from industrialization. Could an absolute monarchy continue to exist while industrialization was taking place? Was a parliamentary or presidential democracy necessary in order to fairly distribute the fruits and benefits of economic growth? Or, was democracy an unpractical form of society and government during the earlier stages of industrialization? Was it, for instance, necessary to adopt some kind of party dictatorship, as in the Soviet Union, or in the UAR, in order to make progress? Finally, are institutional patterns such as political parties, parliament, an independent judiciary that the West has developed over centuries not parochial institutions which are alien to the culture of many developing nations.

The decision is one of choice between two basic types of societies--closed and open ones. Closed societies have achieved great initial success in economic development. Examples are the absolute monarchies, particularly in France, during the period of mercantilism. Imperial, as well as Communist, Russia are both an important case in point. However, the countries which have made considerable headway under a closed society system seem to be much more prone to revolutions, as the history of France and Imperial Russia indicate. What system of government is selected in a given country depends very much upon the groups of classes in power, and they are usually everywhere a minority of the nation. It seems, however, that in a closed society the ruling class is likely to lose touch with the ruled majority because the channels of genuine criticism and opposition are non-existant. This might explain why despite living through great economic and social crises countries like the United States or

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39) This section is based on lectures and discussions directed by Mr. Hauser. All participants made significant contributions to clarification and identification of the subject matter.

Great Britain have been able to avoid bloody revolutions, while equally civilized countries have gone through violent upheavals.

V. THE HUMAN RESOURCES FACTOR IN DEVELOPING PLANS AND THE ECONOMY

/ This course was designed to concentrate upon the relationship between manpower policies and economic and social planning. A treatment of this relationship requires identification of, content and methodology of development plans and their manpower implications. In highly developed and developing nations alike manpower programs and services have been, until recently, conceived in a narrow technical sense. Consequently their strategic importance was obscured. Therefore, work in this segment was directed towards describing the place of the human resources factor in social and economic policies and the often limiting impact of manpower requirements upon development plans. The significance of cultural factors and their influence upon economic and manpower policies was emphasized throughout lectures and discussions.

Seminar leaders were: Mr. Henri Sokolove, Consultant, U. S. Department of Labor, ILAB and Mr. John Carruthers, Research Economist, University of Texas. Guest lecturers were called upon to treat significant aspects. Professor Benjamin Higgins of the University of Texas lectured on the economics of development; Dr. Herbert Striner of the Upjohn Institute explained the utility of Operations Research to planning; Professor Irving Sobel of Washington University, St. Louis, Missouri, compared the planning techniques of Israel and the USSR; Mr. Howard Carpenter discussed the planning mechanism of France; and Mr. George Tobias from the International Bank for Reconstruction and Development reported on the policies of this institution in regard to coordinating manpower and educational programs with economic planning.

In addition to the guest lecturers named before, Dr. Ganzalo Facio, President of the Organization of American States and Dr. Rufino Gil, Economic Counselor of the Costa Rican Embassy spoke about the problems confronting the Central American Republics and the goals of the Alliance for Progress. To facilitate contact between all participants this course met throughout in joint session.

All participants contributed to the exchange of views and analysis of problems. Significant aspects were presented by Mr. Ramirez, Colombia; Mr. Srivastava, India; Mr. Napitupulu, Indonesia; Mr. Saibua, Thailand; and Mr. Okulo, Tanganyika who read portions of his research paper on manpower planning as well as Mr. Chavez, Ecuador who made a series of oral presentations based upon his comprehensive research paper on the history of economic development of Ecuador. /

1. The Economics of Development and their Relationship to Welfare Targets [40]

Most development plans pursue four broad economic goals. They are: (1) increase in per capita income, (2) increase in employment levels, (3) better distribution of income, (4) a favorable balance of payment. Many plans are also directed towards the achievement of welfare and political goals. Most frequent among these are: (5) social development, (6) prestige projects, (7) national security, (8) cultural values, (9) social organization, (10) population policy.

An increase in per capita income is essential if poverty is to be reduced. Most countries wish to increase employment and eliminate unemployment as well as underemployment. However, a recent ILO report on employment objectives in economic development recommended that disguised underemployment be considered as low productivity and no attempts at statistical measurement (of underemployment) should be made.

More equitable income distribution is a concept which applies to income groups or classes, sectors of the economy, occupations, and last but not least geographic regions. It is not used to indicate a goal of perfect equalization. It is a relative concept rather, particularly relevant in those developing countries which have a dual economy.

To include the balance of payment plan objectives is a little illogical since a favorable balance of payment is not an end in itself. But the problem is so pressing in terms of employment, production, and other goals that most plans include it in their basic objectives. Planned influence upon the balance of payments is designed to affect the structure of imports and exports and intensify the drive for self-sufficiency.

Most plans have stated or implied goals involving improvements in education, health, housing, and social welfare. To the economy oriented planner these and other non-economic objectives present a problem of pricing. The concept of "shadow price" or "accounting price" can be used to determine the true value of such projects and services in order to measure the strain on human capital and national resources they would involve if made part of a development plan. The shadow price approach is particularly applicable to prestige projects.

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[40] This section is based upon four guest lectures delivered by Professor Benjamin Higgins; participants who made significant contributions included Mr. Padilla, Colombia, Mr. Chavez, Ecuador; Mr. Manzanilla, Venezuela; Mr. Cohavi, Israel and Mr. Saibua, Thailand.

The same is true in regard to goals of national security. Here again the basic point is how high a value does the policy maker place on defense in relation to other things. India for example, to its present sorrow, gave this a relatively low priority. The role of the planner is not to proceed as if he had all the wisdom but to present the political leaders with the alternatives and their costs so that they may be in a better position to make a decision.

Because of the effect of population increase upon living standards and per capita income, a reference to population is included in most development programs.

A desire to preserve cultural values may seem to be in conflict with economic development. But there are no pure economic objectives but rather ranges and interactions. One should identify the extent to which objectives conflict with each other and then seek a balance between objectives. Over the past 150 years economics has been studied from the standpoint of the free market; perhaps another 150 years are needed to analyze the economics of political processes involved in planning.

An underdeveloped country can ill afford not to utilize the most efficient technology. However, a plan could indicate which labor intensive projects are desirable. It seems best to devote most of the budget supporting the plan to the income objective and a lesser part to the employment objective. Some desirable labor intensive projects are road building and irrigation systems. The Italian Ten Year Plan uses housing as a balance wheel since it is the most durable of consumer items and demands can be stockpiled to be satisfied when other demands are slight. Housing is useful to counteract employment fluctuations. However, in terms of long run growth, there is no particular merit to this since housing is fairly, but not highly, labor intensive. Also people can get along with bad housing without having their productivity impaired. The essential question is how much more and better housing is needed to meet other plan objectives. Both housing and education have value as a consumer good, but education has a much greater impact on productivity and, hence, on increased production of goods and services. One can almost add indefinitely to the education budget and still continue to get some productivity increase.

International cooperation to reduce the instability of primary products in world markets, as for example, coffee prices, could help many countries. One should keep in mind, however, that low aggregate domestic purchasing power and adequate home markets hurt many countries more than declining exports. Innovations may adversely affect the balance of payment of some countries; for example, the inroads made by synthetic rubber on natural rubber production. The road to economic development is paved with vicious circles.

One of the most difficult decisions of the planner is the choice of a growth pattern. A constant growth rate of say 2 percent may not necessarily be the best pattern. Within the framework of a 20 year perspective, depending upon the sacrifices one decides upon, a country can have more or less savings in earlier years rather than a constant rate. More savings and more capital investment in earlier years may yield a higher level and rate later on.

Few countries have a clear cut decision making apparatus which can be tapped by the planners. Comprehensive planning in a democratic framework is relatively new. The Prime Minister chairs the Planning Commission in India, thus providing a link between the planner and public opinion. In Indonesia the planners did not have much contact with decision makers. A real problem arises when each ministry runs its own empire.

Economists have tried to formulate theories of development using the framework and concepts of their discipline. Some of these theories have achieved considerable importance. They are often used as political arguments in discussions concerned with alternative ways of planning. Three theories should be mentioned in this connection. They are: (1) The Turnpike Theorem; (2) The Balanced Growth Theory, and (3) The Input-Output Approach to Economic Growth.

The Turnpike theorem is a theory of maximum growth rates. Its models are built on the premise that the greater the degree of capital accumulation, the faster the rate of development. The theory does not eliminate the necessity of choosing a growth pattern and this is one of the most crucial decisions in developmental planning.

As seen by the originators of the concept, the late Ragnar Nurkse and Dr. Rosenstein-Rodan, the balanced growth theory has three essential parts: (1) It applies to a closed economy, or one not engaged in international trade. (2) It applies only to direct productive investment (that is, production of goods and services for sale in the market) and not to infra structure and social overhead (such as roads and occupational training institutions necessary to permit production of the final product). (3) The third essential ingredient of balanced growth is that the argument applies only to countries with unlimited supplies of capital. This limits the practical application of balanced growth since few underdeveloped countries can get all the capital they can use.

The core of the balanced growth thesis is that, if investment is concentrated in one or a few lines of production, economic growth cannot occur. A country needs a broad spectrum of investments to generate an internal market and to support it. There is a great deal of confusion and misunderstanding surrounding this concept. "Balanced" is a good word and "unbalanced" has the reverse connotation. These loaded words spill over into other areas, such as balance between industry and agriculture and balance between economic and social development. In the theory of economic development, there is no support for these "balances." How a country allocates its resources between agriculture and industry or between social and economic development must depend on the contribution of each project to the objectives of the policy makers. Since allocations of resources come out of the entire process of development programming, there should be no preconceived theory.

There is a difference between the concepts, terms of trade, balance of trade, and balance of payments. Terms of trade relate to the relationship of the process of exports and imports. The balance of trade, if favorable, is the excess of exports as compared to imports of goods and services expressed in money terms. The formula is X - F. Balance of payments is exports plus capital inflow from foreign investments minus imports plus investments made abroad. Thus, balance of payments adds the investment flow factor to the flow of goods and services. What really counts is the balance of payments.

Underdeveloped countries producing raw materials and food stuffs operate in a highly competitive market whereas developed countries dispose of their manufactured goods in a highly monopolistic manner. This according to the balanced growth theory as interpreted by Raul Prebisch, is why raw material prices are low and prices of manufactured goods are high. The theory is that underdeveloped countries having "low" prices should be able to sell more not less coffee or rubber on the world market. But this is obviously not the case. An essential point overlooked by the theory is that coffee prices, in terms of man-hours, are high in relationship to the price of manufactured goods. The key is productivity per man-hour. Low man-hour productivity in underdeveloped countries is not the cause of underdevelopment. It is underdevelopment. The terms high and low prices in a balance of payment situation are meaningless. When there is an unfavorable balance of payments, it means the poor countries devote more man-hours to pay for imports than higher developed countries for the same volume of trade.

Historical statistics show no long-term trend in prices of raw materials and foodstuffs to decline relative to prices of manufactured products. There have been fluctuations among products and countries and over a period of time. But data covering ten countries over a century show no evidence that Prebisch's Law has validity. Undeniably, underdeveloped countries have balance of payment problems. In a short run there can be balance of payment problems through such factors as unstable markets, concentration of exports in a narrow range and displacement through technological advances. But there is no inevitable long-run tendency for the terms of trade to be unfavorable for underdeveloped countries. The balance of payment problem of underdeveloped countries can be solved only by raising man-hour productivity, which is the same as saying, by economic development.

Manpower planning is frequently related to the input-output approach. The technique is to get the input-output matrix for the target year and translate it into manpower requirements which, in turn, provide education and training requirements. The weakness of this approach is that the relationships are regarded as technologically fixed. To correct for this weakness, one has to put into the predictions not the past relationships but the future relationships based on the technology for the target year. Even more important, future sales depend not only on technology but on demand on the part of the consumer.

Few underdeveloped countries have adequate statistics for a detailed matrix. However, it is worth going through the exercise, if only to get a picture of the inter-relationships in question.

The input-output analysis approach should not be totally relied upon because of three basic weaknesses: (1) future changes in technology, (2) future changes in patterns of consumer spending, (3) the smaller the matrix, the less fixed are the relationships.

Economic development as well as manpower plans require decisions about objectives. This in turn requires evaluating goals to be achieved. In this sense plan making consists largely in determining a priority system for plan targets. How this can be done might be illustrated by contrasting the methods used in the Philippines and in Ceylon.

The objectives in the Philippines were (a) to raise National Income, (b) to improve balance of payment, (c) to use as much as possible domestic products, and (d) to increase employment. A group of technicians worked with a planning commission composed of representatives

of the executive department, the legislature, employers, workers, and other key groups. The priority formula was:

$$IP = R_1 + R_2 + R_3 + R_4$$

IP is the investment program. R_1 is the contribution to National Income. R_2 is the effect on the balance of payments. R_3 is use of domestic raw materials. R_4 is the impact on employment.

The R_1 formula breaks down into $R_1 = \frac{\hat{O}(W + R + I + P)}{K}$. $\hat{O}$ is the essentiality rate which ranges from 0.5 to 2.5, depending on the project. It was the attempt to measure linkage, i.e., the impact on other investments of the particular investment. This was one of the most important factors since one has to know the effect of one economic activity on the others. Not enough is known about this. When planners select the essentiality factor, they really decide in advance the priorities. W represents wages, R rent, I interest, P profits, and K capital costs.

The R_2 component of the priority formula is straightforward.. It is $\frac{FE - F'E}{K}$. FE represents foreign exchange saved or earned and F'E represents foreign exchange costs.

The R_4 equation was $\frac{N \times 2{,}000 \text{ pesos}}{K}$. N represents the number of workers engaged in the project. The 2,000 pesos is an arbitrary shadow price representing the wage of an unskilled worker, that is, less than the average wage. For priotity rating purposes, a 100,000 peso worker was rated the same as an unskilled worker. This had the effect of giving a demerit to scarce high level manpower. It follows that priority was given to labor intensive projects and that employment of middle and high level manpower was downgraded. The wage figure in R_1 is actual.

Among other weaknesses, the Philippine formula was additive in terms of money; hence, priority rating was obtained by summing. The relative effect of each component on the total sum was haphazard. Numerical weights for each component were not carefully considered. Every good development plan should have an employment target as well as an income target for an increase in income may not necessarily increase employment to the same degree.

Basic objectives in Ceylon were (a) to raise per capita incomes, (b) to increase employment level, and (c) to improve the balance of payment situation. A rather simple priority formula was prepared to reflect these objectives. Planners did not try to measure the contribution of each project but rather to classify them--A, B, C, D, etc.--according to plan objectives. A class A project, for

example, could be one with low capital input, or a new industry whose annual foreign exchange sales equal annual costs of its imported equipment. Each project was classified separately according to each of the objectives listed under a) b) c) above and then a combined rank was determined, such as project AAA, ABD, ACB and so forth; the table below is an illustration.

Class	$R_1 = I_c / y$	$R_2 = I_a / N$	$R_3 = (Y - F)/I_c$
A	0.1 - 0.19	/ $500	71.0
B	0.2 - 0.29	500 - 999	0.8 - 0.99
C		1000 - 1499	
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N	0.9 - 10.0	10,000	0

In the first formula, R_1 represents capital-output ratio on an annual basis. The second formula represents the capital-job ratio, the cost of adding one job to the level of employment.

If a textile factory ends up with a higher priority in terms of national objectives than a brewery, the goal is to increase investment in textiles as compared to breweries. The decision maker falls back on a variety of measures to see that this result occurs. These measures include tax policy, such as tax concessions to essential industry, foreign exchange allocations to the high priority plant, preferences in manpower allocation, easier credit terms to top priority industry, and so forth. One of the most important aspects of planning is, after the priorities are established, how to get private industry to conform.

2. The Development Plans of Israel and the Soviet Union Compared [41)]

Planning in Israel is at an earlier stage as compared to planning in the Soviet Union. The purpose of comparing these two plans is to show the basic variables of a political, economic and social nature which make up the environment in which planning takes place. In any political system these are: (a) the extent of private ownership and

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41) This section is based upon a guest lecture by Professor I. Sobel to which in the course of discussion Mr. Hamid, Sudan, Mr. Saibua, Thailand, and Mr. Manzanilla, Venezuela, made contributions.

and disposition of resources; (b) the extent of political and economic freedom; (c) the degree of technological skill and level of technology; (d) administrative skills which the country possesses; (e) statistical information; and (f) the amount of government resources available both internally and externally. Planning and individual freedom are not irreconcilable. There are totalitarian countries which have neither plan nor do any planning. On the other hand, a large number of democracies proceed according to a plan and manage to retain a high degree of individual freedom. According to the main techniques used one can distinguish these broad categories of plans: (a) regimented planning for which the Soviet Union is probably the best example. Under this technique the Government controls and allocates all natural, human, and capital resources; (b) the natural flow type of which the best illustration is the development plan of Pakistan; (c) the national budget type of plan which prevails in France and Israel; (d) the man-power oriented type of plan of Sweden; (e) planning which concentrates on plans for a particular geographic region or a specific sector of the economy and takes place in the absence of an over-all plan. An example for such partial planning can be found in Brazil.

Planning in the Soviet Union is directed by a Planning Board known as the Gosplan. The goals and priorities formulated by the Board are determined by political considerations. While the Planning Board thus has to execute political decisions which should affect the economy of the nation, this agency has more than a routine role to play. Success or failure of execution requires analysis and evaluation which constitutes a kind of feed back from the Planning Board to the supreme political authorities of the Soviet Union. For example, the Gosplan may point out that on the basis of their experience specific over-all goals are not practical because the resources available for reaching the target are inadequate. There is thus in practice a considerable degree of mutual interaction between the planners and the political leadership. The latter, however, makes the ultimate decisions.

The Russian priority system or claims on resources are as follows: (1) State security, including military, and foreign aid claims. (2) Investment goals related to the first priority (these include the necessary durable goods and scientific base for defense). (3) Collective consumption involving certain minimum standards of health, social security, welfare and education. The Soviets believe the individual will not choose as well as the state and, therefore have a predilection for collective consumption. (4) The lowest priority is private consumption. Even in the U. S. there are certain claims which have a higher priority than private consumption; for example, taxes are collected to meet national security and social welfare expenditures. However, in the U. S., investment goals are determined more by private consumption than in Russia.

In Russia private consumption receives the resources left over after higher priority claims are met. This explains the curious anomaly of the co-existence of space age scientific and technological achievement and an inadequately producing and distributing consumer goods production.

This is roughly the organizational structure of Soviet planning: Over-all objectives are set by the political authorities. The individual plant or firm is the basic economic unit. Gosplan is the central planning agency placed between economic units and the (political) decision making body. Between Gosplan and the firm, i.e. the basic economic entity, there are ministries performing current administrative functions and the (economic) administration of the plan. The Administration is composed of 22 industrial and service combines called trusts. All of these are made up of firms organized into one of 22 production or service sectors directed by the trusts.

Gosplan breaks down the broad five and ten year statements of priorities and plan objectives adopted by the political decision making body into yearly operational plans which are reviewed and adjusted frequently. Each firm and plant is given a production quota. There are exceptions to this general approach; for example, in agriculture a different pattern prevails.

Gosplan has data on the resources of the economy, the number and kinds of manpower, number and kinds of firms, levels and allocations of investment, capital output ratios for various sectors, technological changes anticipated, productivity and production data by industry and firm, and so forth. In order to plan, Gosplan therefore must operate a vast statistical and accounting system.

Although Gosplan has a great deal of flexibility, its plans and planning is subject to constraints; for instance, the occupational pattern of the labor force and the variety and volumes of skills cannot be changed rapidly; most of the capital is fixed; the labor force cannot be moved easily from one geographic area to another; where geographic mobility is effectuated the infra-structure (educational facilities, roads and communications system) is often inadequate.

The Gosplan uses some of the techniques of the profit system to measure the efficiency of production of specific firms. The essential differences between planning policies in the U. S. and the planning of the Gosplan in Russia is that in this country consumers through the price mechanism establish a system of priority claims on natural and human resources of the national economy.

There are exceptions to this rule, for instance in the area of taxation, but by and large this is how the U. S. economy operates. In the Soviet Union the use of the price mechanism is in the reverse. The priority system is set by the government. The price system is then used exclusively as a rationing device. For example, if the economic administration of the government should decide that one pair of shoes per person per year is the goal of production for the shoe industry as far as private consumption goes then, irrespective of production costs, the price of a pair of shoes is set high enough to reduce the aggregate demand for this commodity to a volume in conformity with such a plan of distribution.

The Soviet system of planning has its weaknesses. It encourages firms to negotiate with the Gosplan to the end of receiving production quotas which are in effect below their potential productivity. This is done because of the way in which the efficiency of a given firm is evaluated. For example, if firm X has a potential productivity of 125 thousand units per year and knows that it can very easily produce 110 thousand units per year then its management will be inclined to negotiate for a quota of 100 thousand units. The reason for engaging in such tactics is that if the quota were set nearer to the potential (production) limits, say at 120 thousand units, and the firm then would produce only 110 thousand units it would receive a poor rating. If, on the other hand, the quota is set low at say 100 thousand units and the firm produces 110 thousand units then its rating will be high because it has produced beyond its quota. This leads to hording of raw materials, secrecy about improvements, and similar imperfections.

Russian planners are aware of these problems and they are trying to overcome them. The Russian system, just as any other type of economic organization, has weaknesses. One cannot, however, dismiss Russian planning as unsuccessful.

Planning in Israel is, in a technical sense, of the national budget type. This means the main tool of the planner is the public sector. Government spending and production by government-owned services and industry are used to control and direct production and the utilization of manpower, in all sectors of the economy, privately as well as publicly owned and operated. This type of planning is used by other mixed economies. Besides use of the public sector, the Israeli planners can to some extent operate through controlling wage earner incomes. They can use wages and employment policies as a planning tool because of the high degree of unionization. Israeli trade union operations are highly coordinated by the powerful federation "Histadrut". The strongest party in the, by now traditional, coalition government exercises through party affiliation of trade union leaders a very considerable influence upon the wages policy of the "Histadrut."

Israel has a small territory and is poor in natural resources. Because it permits, for ideological reasons, the unrestricted immigration of Jews from all over the world it is confronted with complex demographic problems as well as difficult tasks in the utilization of manpower. Added to this is the problem of defense. The nation has to be prepared for attack on all its borders. Planning, or the idea of proceeding according to a development plan, finds support of public opinion because of the liberal orientation of a majority of Israeli citizens. Yet despite these situations favorable to a planned economic policy initiating a plan during the nation's early years of independence was almost impossible. The political and economic conditions were too unstable to permit planning on a national scale. Rural planning was started first. It concentrated upon making depressed areas economically viable within six or seven year periods. When central planning was initiated certain assumptions were made:

The over-all goal in regard to economic growth should manifest itself through an annual increase in average per capita income of 10 percent per year. This over-all goal should be achieved despite a yearly influx of approximately 70 thousand immigrants. Production should aim at cutting the volume of imports in half by 1966. In the area of agricultural development reclamation of the southern desert should be accorded top priority.

3. Manpower Planning in France [42)]

Since World War II France has been very successful in its economic planning and in organizing its manpower planning. It is now on its fourth 4-Year Plan and each year since 1946 they have exceeded their goals. Their present goal is a 5.5 percent growth per year, which is the highest they have set so far.

There is in Paris a Planning Commissariat which is charged with the whole problem of economic growth. The Commissariat is kept small and operates with nine committees which do the actual planning. Each is concerned with a particular sector of the economy, e.g., agricultural, metals, chemicals, etc.

Individuals from all over France and in different walks of life serve on these committees. The Commissariat makes an estimate of what France can do over the 4-year period and then reviews the committee proposals. The amount of manpower necessary is calculated

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42) This excerpt about French Planning is based upon a guest lecture by Mr. Howard Carpenter, U. S. Department of Labor, ILAB.

and a determination is made of how many young people should go to what schools and what adults ought to be retrained. There is a system of regional committees which implement these plans. There are 21 regions in the administration of these programs. The plan is publicized by television and by printed pamphlets and similar methods. The main way of controlling the plan is apparently through financial manipulation. The government owns many of the banks and largely controls the rest. They review the industry's plans for expansion to make sure that every proposal is in accordance with the plan. Activities of the various ministries are similarly reviewed by the budget bureau before requests for appropriations go to Parliament. There have been some objections by the unions during this past winter but hitherto they had been persuaded to cooperate. France has moved toward reducing apprenticeship and skills training and is trying to push up university enrollment. The committee system has involved about 2,000 of the great names of France who are an important factor in selling the plan to the public.

4. Operations Research as a Coordination Tool in Planning [43]

Operations Research is a way of dealing with every and any kind of problem related to the effective use of natural and human resources. It is an approach to cope with, and find alternative solutions to, a given problem provided such a solution should try to take into consideration all facets and implications. It is in essence an analysis of interrelationships and of the impact particular actions may have upon the system within which they take place. Therefore, systems analysis was the term originally used instead of the more oblique phrase (Operations Research) under which the method is known today.

Operations Research was initially developed in World War II for the purpose of creating more effective means of waging war. It was employed, for instance, to determine the selection of bombing targets. In such a strategic scheme Operations Research offered a more sophisticated way of taking into account and weighing against each other all factors bearing on, in this case, the alternatives in determining which objectives one should try to destroy and which ones should be neglected.

After the war Operations Research was gradually used for the solution of planning problems of a varied character. Just as in warfare the method seemed to promise advantages in solving relatively small planning problems such as the reorganization of a government agency, of business firms and of formulating policies and plans of much wider scope. The crucial element in using Operations Research is to make it an effective communication link

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[43] This section is based upon a guest lecture by Mr. Herbert Striner. In the discussion Mr. Yapar, Turkey and several of the Latin American participants made valuable contributions.

between the policy maker and the research group. If communication is deficient, or if it breaks down, use of Operations Research is a waste of time and money.

Communication between policy makers and researchers first has to concentrate upon a joint exploration of the ramifications of the problem on which the research team should work. In Operations Research a planning problem, whatever its scope and nature is not to be treated as a problem of economics or sociology or engineering or military strategy. The essence of Operations Research is that any problem is looked upon as arising out of the malfunction of a system. Consequently, any remedy must be formulated with a view of its effect on the total system. For example, if a slum is to give way to a better organized neighborhood it is under Operations Research, not sufficient to call in the traditional assortment of experts consisting of architects, city planners, traffic engineers, lawyers and urban land economists. It is necessary first to identify the nature of urban decay of that particular neighborhood through discussion with the policy making officials of the city and state, the head of the research team, civic leaders, and interested parties. In the course of such discussions neglected aspects and submerged facets of the problem will be identified.

The policy maker has the task of guiding the researchers by providing demarcation lines. For instance, if a business organization, a government agency or a national planning board wants an Operations Research team to come up with a plan useful to his organization he has to indicate clearly areas which cannot or should not be changed. The reasons why no change is wanted may be essential in directing the research team. For instance in one case an operations research team was retained to formulate a new plan of organization for the defense establishment of country X. The policy makers in this case did not want to change the hierarchial structure established for the general staff. This, however, was never discussed in the meetings between the head of the Operations Research team and the top policy maker. Since the information, inclusive of data dealing with the hierarchy of the general staff had been given the researchers, the team finally came up with an analysis and recommendations which involved, as an essential element of the plan, far reaching changes in the hierarchial organization of the general staff. To the defense department of country X the plan was utterly useless. This disappointment could have been avoided had the proviso been made clear to the head of the team. Actually this problem was not discussed, in part because the policy maker assumed that this matter was not within the scope of the plan; in part also because he had assumed that it was too sensitive a subject matter to be discussed with experts from the outside.

One could perhaps summarize the character and usefulness of Operations Research in this way: the rate and growth as well as change in technology is so much higher today than in the past that a new approach measuring the probable total impact of an innovation is becoming more and more necessary. The expansion of knowledge which militates for a systems analysis approach occurs at a time in which the desire of the broad masses of the people for change in status and improved living standards generates pressure upon every government, as well as upon private business, to reduce the margin of error in plans and to consider all factors and implications. For government as well as private institutions it becomes more and more urgent to carefully pick and choose among alternatives and in solving a specific problem to seek out the optimum benefit approach. Operations Research tries to be the methodological device to find the best alternatives and also to identify the relative pros and cons of conceivable choices. In a technical sense, Operations Research consists of a grouping together of many disciplines and linking them to mathematics and computer technology. In the course of its application a new relationship is evolving between policy makers and all the people who supply them with information.

To make Operations Research work the decision maker and the research group must have regular communication and contact throughout the problem solving exercise. The policy maker must understand what is involved in the research and what values and limitations have to be recognized. Both he and the research team must be aware in particular of limitations imposed by vested interests. There should be no "Hidden Agenda" as in the defense department example. Operations Research work requires the participation of any vested interests affected in the communication process.

The utility of an Operations Research job will be gravely impaired if its only result is a written report. There should be a final oral briefing and discussion and there should be a system of follow through. Research team leaders should, as a general rule, keep in mind that decision makers do not have the time to read and digest long extremely technical reports. There is, therefore, a need for a number of oral presentations in the course of the work as well as at its end. These presentations should be addressed not only to the top men who may not have much time to spare but to lower and low echelons as well.

5. <u>The Significance of Cultural Factors in Planning</u>.[44])

Economists and social scientists have neglected the human element in planning. Goals of a plan depend very much upon what a decision

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44) This section is based upon the lectures of Seminar leader Sokolove.

maker considers to be desirable. The successful execution of a plan, however, depends to a very considerable degree upon the voluntary support of all the people who are in any way affected by the changes the plan is designed to bring about. They may deflect plan targets according to their ideas, or frustrate them, or again they might greatly help to effectuate them. In other words, the subjective evaluation of what a plan should achieve is in reality a controlling element. Desirability or indifferences or antagonism to the character of proposed change depends to a very considerable degree upon the set of values a particular national culture contributes to the make-up of the individuals who are born into it.

There is a worldwide trend operating to change the social structure of all societies. There seems to be emerging, a uniform pattern of values and of social structure the world over. This pattern we call the industrial society. The characteristics of this structure are that a high evaluation is placed upon the productive achievement of an individual. Compared to other culture patterns inherited status is no longer accompanied by overwhelming advantages or disadvantages in making a career or gaining a living. The worth of a nation and of an individual is valued more and more in terms of tangible achievement, and less and less in terms of introspective philosophical perfection.

While one may assume that this trend is operative everywhere the speed with which it transforms the previous culture pattern varies greatly from country to country. The value system of a traditional culture may as such be favorable to the transformation into an industrial society or it may establish considerable impediments to such a development. There is no proved and tested formula to determine in advance which societies resist change and which do not; nor does one know as yet much about the core areas of resistance.

An understanding of the concept of culture is necessary in an analysis of industrial society. Every society develops a culture pattern of its own which is related to its work. This includes a technological system, a sociological system, and an ideological system. It is fruitless to focus an analysis of economic development on only the technological system. The interpersonal relations, beliefs, creeds, myths, and traditions of a people are extremely important in the development process.

In a pre-industrial society the Peasantry represents the mainspring of the economy. In agriculture status is traditionally inherited. The United States is in this respect unique and atypical. Its development as a nation took place on a sparsely settled territory and its social and economic system was built up after the beginning

of the industrial revolution in England. America as a nation thus did not have to cope with the many elements of social change faced by other countries, industrialized, as well as developing ones.

The caste system of India is essentially an occupational system. India illustrates how one particular society has handled economic production and social relations. Initially, the caste system was a division of labor within the society which eventually divided up this society according to occupational pursuits. In the course of this development, people began to marry within their caste or occupation and their children grew up to be members of one particular caste. This situation is changing in India now, particularly in the large cities. In India the extended family was an institution which performed functions of social security at the village level; for instance, it provided protection against unemployment, incapacitation and old age.

A comparison of Japan and Thailand is of particular significance because the two nations had on the surface much in common. Both were prevalently Buddhist civilizations. Both nations had managed to retain their sovereignty throughout the high tide of Western conquest in Asia. On the other hand, Japan had made very rapid progress in industrialization and modernization since the turn of the century. Despite the reverses through defeat in World War II, Jpana is today one of the great industrial powers of the world. Thailand on the other hand, is still mainly an agricultural country with a traditional society and largely traditional patterns of production. Different endowment with natural resources can offer no explanation. Japan is poor in natural resources and has, compared to its population, an extremely small area of arable land. Thailand is much richer comparatively, in natural resources,and has a much larger territory relative to its population. If one looks for an explanation one cannot focus either upon political structure or geographic location. Both countries are situated on strategic crossroads, both have a strong dynastic tradition, modified somewhat by parliamentary institutions. For an explanation of the difference in rate of growth and direction of development, one must look in another direction. A worthwhile attempt has been made by analyzing the effect upon individual action and motivation as a result of different cultural influences. In Japan, prior to industrialization, the traditional society had established a web of relationships for each individual embodying a set of rather rigid rights and duties. Consequently, the individual Japanese was preconditioned to the ethics of discipline and achievement which are essential ingredients of an industrial society. By contrast in Thailand, the individual has been able to look upon himself as in a high degree detached from nation and society. He would give Caesar his dues but otherwise work either upon perfecting his own individual personality or enjoy life.

Because of the different inclinations of the two nations industrialization, despite the fact that the leadership of both countries wanted and pursued it, progressed at different rates.

Successful industrialization and planning may require a considerable degree of national unity in regard to measures and objectives. The successful exercise of what Professor Higgins earlier had called the decision function of political leaders would have to concentrate on the question whether or not a proposed program could generate substantial national support. In a number of countries in which consistent industrialization policies or development plans have been successfully executed, or are well under way, an emergency of great psychological impact created a climate of national unity which gave direction to, and supported the, decision function of political leaders.

In the case of Russia it was the 1917 revolution and the hardships of the civil war, which provided the unifying basis. In the case of Japan it was the threat of foreign domination, created by Western aggression which destroyed the through centuries maintained isolation of Japanese society and--through compelling the opening of its seaports--exposed the nation's economy to world commerce.

The United States has had two experiences in planning. Both involved periods of crisis which brought forth popular support. The New Deal of the 1930's did not grow out of mathematical economics but out of the will to overcome poverty, business failures and widespread unemployment. The NRA was an entirely new institution with mixed public and private participation. It created in many different industries entirely new standards of business competition; of working conditions; and wages. The other period of planning was in the World War II years. With the establishment of the War Production Board and War Manpower Commission, whole new series of organizations and activities were created. The objectives were to reduce the drain of scarce raw materials to less essential activities and to correct a series of manpower shortages. Many of the techniques mentioned by Professor Higgins were used then in the U. S. but their application would have been impossible unless the American people had felt that what was being done was worth doing.

The problem of national planning in both India and Indonesia is that many of its goals originally rose out of anti-colonialism. The feeling was that everything bad was the fault of foreign rule. With independence a serious responsibility fell on the leaders. They needed to make dramatic appeals to the people to take steps and make the sacrifices necessary for economic development.

There was a need to crystalize their appeal for support so that the decision function could become operative. On the other hand Thailand is a country where there is little dissatisfaction with the existing social and economic order. It is, therefore, more difficult to carry out a centralized plan since there is no widespread support for its execution.

6. The Significance of Manpower Planning in Projects Sponsored by the International Bank for Reconstruction and Development [45]

The World Bank is interested in the manpower factor to assure that the credits extended are planned out from a manpower point of view; to supply or assist in the provision of technical assistance and support of the loan such as engineering services, banking advisory services, and manpower support services. The International Development Authority now extends credit in support of educational undertakings.

More and more attention is given to the investment aspect of education. Education and training is now viewed as an economic good as well as a consumer good. Research is being conducted in two fields: better techniques for making manpower assessments of labor demand and supply; second, study of the relationships between the costs and the benefits of manpower development including educational training.

Some of the common problems requiring external aid faced by underdeveloped countries are: (1) better administration of the education system and production of administrators; (2) the structure of the education system involving teachers, teaching policies, and correlation with occupational requirements; (3) the financing of educational expansion.

The World Bank has certain criteria when reviewing a request for a loan for educational purposes. The manpower experts in a country seeking such a loan might be called upon to prepare information in connection with these criteria. It is for the government itself to decide that education and training has a high priority in economic development and how much of the country's resources shall be committed to this priority. (1) The World Bank looks at the percent of GNP and revenue which is devoted to education and training. (2) The education process must, in turn, have a high rank within the over-all priority and must contribute directly to a well-balanced education plan which supports development.

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45) This section is based upon a lecture by Mr. George Tobias.

(3) The World Bank prefers not to finance year to year growth. It seeks to fill a crucial gap. The external aid supplied should be for the unusual and not the usual educational expenses such as the current costs. Loans seeking significant innovations in basic research, for example, or to increase the effectiveness of apprenticeship training or to develop better teaching methods, would likely meet the criteria. (4) If a country is faced with choices of equal priorities in education, loans for an agricultural technical college to increase the supply of technicians in agriculture would be preferred over a loan for a liberal arts college. This criterion does not represent a value judgment but rather one in terms of return to the economy. (5) The World Bank prefers to participate with other donors in the human resources development field. It seeks collaboration, not competition. It would prefer, however, to collaborate from the beginning of a human resources development undertaking. The ILO and UNESCO are in particular called upon to do manpower assessment and education surveys. Other cooperators might include governments such as the United States, Great Britain, and Switzerland and private foundations such as the Rockefeller and Ford. (7) The World Bank cannot consider projects for loans which are not well planned in every significant element including funding, equipment, instruction, and the human resources element. Where are the teachers coming from, how well are the graduates of the education project utilized, and a host of other questions are raised. (8) The World Bank wants assurance that there will be adequate ongoing planning and controls to make sure that the education and training programs are effective. This requires organization, coordination among all the donors and cooperators and assurance that there will be continuity in education policies. Another aspect is the provision for sufficient research to keep teaching methods modern.

Some of the topics which a World Bank manpower expert would review are: the present education and training systems; the countries' social, economic and cultural environment for education; the planning and administrative controls for the education system; the ability of the education system to adapt to new needs; the manpower situation, such as problems in geographic, industrial, and occupational mobility; how the education system and its products serve economic growth needs; the content and quality of the curriculum; the readiness of each level of the student body to proceed to higher levels; payment of teachers; funds committed, the percentage of the GNP and taxes for education; and the kind and location of school buildings.

7. Politics and Economics--A Joint Session, Discussion and Summary

Because of the close relationship between the topics discussed in this course and the subject matter of the parallel course in institution building, led by Professor Blanksten in the Spanish sector, and Mr. Hauser in the English one, it was decided that joint sessions should be scheduled toward the end of the course. In those meetings, the relationship between politics and economics in industrialization should be explored by participants and Seminar leaders. In particular, the character of economic and political change in the West should be compared with the situation now confronting the developing nations of Africa, Asia, and Latin America. In informal conferences the Seminar leaders formulated this procedure for the joint meetings:

Mr. Henri Sokolove should chair the meetings, and provide general direction. Professor Blanksten and Mr. Hauser should each make a short presentation of points they thought significant enough to be made the subject of discussion. After these presentations, participants from both the Spanish and the English sections should be invited to submit written questions addressed to either Professor Blanksten or Mr. Hauser or to both to the chairman. The Seminar leaders would reply as much to the point as they could. An excerpt of these joint sessions is presented below.

Mr. Sokolove explained the purpose of the sessions. He indicated all three Seminar leaders agreed that Western experience with the industrialization process was of limited utility to developing nations. Why was this so, his two colleagues would point out. Mr. Sokolove added that when in these discussions the term West was used this included the countries on the continent of Europe, Great Britain, Russia, the United States, Canada, Australia and New Zealand. He thereupon called upon Mr. Hauser to make his presentation.

F. L. Hauser said: With the exception perhaps of Russia, industrialization in the West proceeded not according to a plan, and it was not strongly influenced by ideology. While this cannot be said about the economic development in Russia subsequent to the Communist revolution, it is not quite improbable that pragmatism might get the upper hand there also.

Perhaps, the most important experience the leadership of developing countries can deduct from the so-called industrial revolutions in the West is not, strictly speaking, in the area of economics. It is rather in the area of politics and political action that European experience may be of significance. Attempts to mitigate

the hardships of change led to intervention by the government. The government, in turn, was prompted to action by strong protest movements. The end result was a complete change in the functions of the State. What today is often referred to as a welfare state, namely a system of government performing a series of social programs, such as housing and health, is the result of these interventions. Political action is probably also responsible for changes in predominant economic thought. While some 40 years ago Marxism and its conservative antagonists were prominent in influencing economic policy, the ideas of John Maynard Keynes have now been more or less accepted as a basis for economic policy and thought in the West. Turning from the present to the past, the Seminar leader made these observations: (a) Industrialization of Western countries extended over periods of time measured by decades; (b) Industrialization did not take place simultaneously in every country of the West; (c) The later a country industrialized the shorter, as a rule, was the period of industrialization, and this process was, in the case of late comers, accompanied by less hardships than was the case in Western societies who went through the transformation at an early stage. A pertinent example for this observation is the speed and relative freedom from strife with which Sweden industrialized; (d) Where industrial revolutions have been successful, they started in the agricultural sector. On the European continent and in Russia, the government played a more important part in initiating industrialization and in giving it direction, than in Anglo-Saxon countries.

The chairman called upon Mr. Blanksten to make his presentation.

Professor Blanksten said: In comparing industrialization taking place in the West with that now underway, or recently completed, in Asia, Africa, or Latin America, he felt that one important difference should be noted. In the West, technological changes and innovation were generated within the social and economic system. In African, Asian, and Latin American nations, innovation was imported, and in many cases, imposed from the outside, namely from the West. Industrialization in developing countries and in Japan, is therefore, transplanted rather than self-generated. He modified this thought by saying this was a generalization and there are, of course, exceptions. But, the contrast was, nevertheless, an important one and should be kept in mind. The chairman then asked for questions from participants.

Mr. Chavez (Ecuador) addressed this question to both Mr. Blanksten and Mr. Hauser. "During the industrial revolution in the West there did not exist a division of the West and of the world between two super powers and ideologies, which were in conflict with each other. This conflict and the decline of colonialism has brought independence to many formerly dependent nations. The people of these nations are not motivated by a strong aspiration to improve their living conditions. How can achievement of independence be used by them to become a really free and prosperous people without accepting Communist tactics?"

Mr. Blanksten replied, the change from colony to independence is just one more illustration that political change is a prerequisite for economic change. Mr. Hauser added the achievement of political independence by an underdeveloped country often tends to obscure the social and economic problems it actually faces. One of the most crucial problems is this: While the developed countries are prosperous and relatively satisfied because they are in an economic stage characterized by high domestic demand and the ability to satisfy such demand, if necessary by substituting domestic products for imported raw materials, most developing countries have a very poorly developed domestic market and have patterned their economy in such a way that they depend upon the export of a limited number of raw materials. The change to relative self-sufficiency in the West extended over a period of many decades and there is no tried and tested recipe how to develop the domestic market. On this very vital point, therefore, Western experience may be of extremely limited applicability.

Mr. Srivastava (India) posed this question to Mr. Hauser: "How is experience of the industrial revolution in Europe relevant to economic development in underdeveloped countries. Should these countries aim at catching up with the West at current levels of technology or set their aims to achieve levels of industrialization reached by European countries at different stages during their past?" Mr. Hauser replied: "I think one should first analyze conditions in the developing country in question. This is a precondition to determining whether any Western country has valuable experience to offer or not. In general, the decision whether to catch up or to restrict the development of a given country to some historical stage of development of a comparable Western country should be in favor of catching up." There might be exceptions to this, but he cannot visualize any one of these.

Mr. El Zein posed this question to both Mr. Blanksten and Mr. Hauser. "The industrial revolution in the West proceeded uninhibited by social or humanitarian considerations. To do this goes against the grain of the leadership of most of the developing nations. Is it possible to industrialize without imposing the same hardships through which the masses in the West had to go?" Mr. Blanksten answered that he agreed with the observation of Mr. El Zein, but he felt it was not as easy to combine welfare considerations with an economic transformation as to state that such a combination is desirable. Mr. Hauser replied that while it is true that in the West welfare considerations were absent in most countries during the beginning and the middle stages of industrialization, there are exceptions to this which he had stated before and today the outlook of Western policy makers was in regard to the need for a combination of welfare and economic

progress identical with that held by the leadership in developing countries. Since many Western nations have quite some experience in reconciling conflicting social and economic goals they may have something to offer to the planner and decision maker in a developing country. It is, of course, for the political leadership in a developing nation to decide just how much he wants to transplant from the welfare and social institutions of Western countries.

Mr. Padilla (Colombia) posed this question to Mr. Blanksten and Mr. Hauser. "The situation in underdeveloped countries is not the same as that of the United States during corresponding stages of its development. In the development of the United States the influx of capital from abroad played a decisive role; in our Latin American countries we cannot draw upon this source. Combined with our educational backwardness this prevents economic growth." Professor Blanksten replied that there is some disagreement about whether the importation of capital into the United States during the formative period of its development has really been the prime mover. Much of economic development in this country, as well as in other Western nations, has been simply achieved by changes in technology. Mr. Hauser replied he felt both capital and improvements in technology have always been necessary agents to bring about economic growth. The chairman added that he thought the experience of the United States is less relevant to the problems confronting the underdeveloped countries than the experience of most of the other industrialized countries of the West. The reason is that the United States has had very little trouble transforming or liquidating traditional societies; it never went through such stages as feudalism, which were road blocks to the transformation in most of the European countries.

In the course of the discussion, questions from all other participants brought out details and facets of the problems of economic and social development facing their countries and the applicability of Western experience was reviewed in considerable detail.

In closing,the last joint session, Mr. Sokolove made these concluding observations: The character of industrialization requires a change in the system of values. In some Western countries, particularly in Russia, as well as in almost all developing nations, traditionally societies had de-emphasized, one could even say denigrated, the esteem for physical work and for craftsmanship. There were, of course, excellent craftsmen in Japan, prior to industrialization, in India, Iran, and in many other countries. Their social status, however, and their economic rewards did not reflect the caliber of their accomplishment. Consequently, motivation to achieve

something in life does not now direct individuals in such countries toward work of a manual character. In an industrial society, however, such work is of great significance not only for the regular production process but also because innovations and discoveries of a technological nature have, as the history of the West indicates, been made by people with inclinations to work with their hands. It might, therefore, be necessary for developing nations to study policies initiated by Western countries which were designed to increase the social status of the manual worker and of manual work. He had something in mind patterned in a distant way after the Stakanowite movement in the Soviet Union. This should not mean copying that movement; it does not mean also that he endorses it, he just wanted to point out the need for policies rewarding manual work and increasing the status of the manual workers.

This final expose of Mr. Sokolove met with general agreement. The participants from Turkey and many other countries reported on programs designed to change the motivational direction of individuals.

Appendix A: List of Participants Research Papers

/ A limited supply of copies of the research papers listed below is available by request from the U. S. Department of Labor, Bureau of International Labor Affairs, Office of Program Development and Coordination. The papers are available in the language indicated in the list below. /

1. Miss Sonia Fereira (Brazil) Vocational Training in Brazil (English) p. 6

2. Mrs. Aida T. Belmar de Montesinos (Chile) The Public Employment Service in Chile (Spanish) p. 35

3. Mr. Dien-Mo Wang (China) Manpower Resources and Economic Development in Taiwan (English) p. 12

4. Mr. Gaston Chavez (Ecuador) A Brief Economic Monograph of Ecuador--Manpower, Migration, Professional and Technical Training (English) p. 55

5. Mr. Jose Orlando Antonio Banos (El Salvador) Apprenticeship Training and Placement in El Salvador (Spanish) p. 34

6. Mr. R. K. Srivastava (India) Elements of a Manpower Program for Developing Countries (English) p. 12

7. Mr. W. P. Napitupulu (Indonesia) Scientific Manpower Planning in Indonesia (English) p. 20 and Migration Problems in Indonesia (English) p. 6

8. Mr. El Hamid (Sudan) Dimensions in Creating a Labor Force (English) p. 4

9. Mr. A. Zein (Sudan) The Proposed Social Security Scheme for the Sudan (English) p. 11

10. Mr. K. al-Mubarak (Sudan) Role of Trade Unions in Committing an Industrial Labor Force (English) p. 4

11. Mr. Macivan Davies (Sierra Leone) Role of the Labor Movement in the Social and Economic Development of New Nations (English) p. 12

12. Mr. Henry Okulo (Tanganyika) Manpower Planning in Tanganyika (English) p. 9

13. Mr. Sakda Saibua (Thailand) Is Industrialization Necessary for Economic Growth (English) p. 6

14. Mr. N. F. Yapar (Turkey) A Brief Summary of Adult and Worker Education in Turkey (English) p. 6

15. Mr. Victor Manzanilla (Venezuela) The Organization and Programs of the Institute for Cooperative Education of Venezuela (Spanish) p. 24

Appendix B: Bibliography

of the Report of the

Seminar on

Problems of Manpower Planning, Development,

Utilization, Distribution and Administration

BIBLIOGRAPHY

There follows the bibliography of references utilized in connection with the 1963 Manpower Seminar administered under Agency for International Development auspices by the U. S. Department of Labor. This Seminar was conducted in two sections--English language and Spanish language.

The Bibliography for the English section is arranged according to the five courses in the Seminar:

1. Manpower Administration
2. Problems of Skill Acquisition and Education
3. Problems of Labor Force Distribution
4. Rate of Development and Institution Building
5. The Human Resources Factor in Developing Plans and the Economy.

The Bibliography for the Spanish section covers the entire field and is not broken down by specific courses.

All of the titles listed are available to authorized persons in the Library of the U. S. Department of Labor in Washington, D. C.

1. English Bibliography

I. Problems of Manpower Administration

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TECHNOLOGICAL ADVANCEMENT; *TEACHER IMPROVEMENT; *SUMMER INSTITUTES; *WORKSHOPS; *INTEREST; *VOCATIONAL EDUCATION TEACHERS; TRADE AND INDUSTRIAL EDUCATION

The literature of vocational education, as well as that of industry and technology, constantly emphasizes recent developments and innovations in products, processes, and concepts, which have significant implications for technical, trade, and industrial education. This study was made to secure information from the vocational educators in the fields of technical, trade, and industrial education in Colorado, concerning their needs, desires, and willingness to participate in institutes, workshops, and seminars of updating nature. The data from 231 completed survey forms were tabulated and summarized. The information submitted by the teachers and administrators indicated a high interest in updating activities and three out of four respondents were confident that arrangements could be made to attend such educational activities if offered. A 1-week institute in June or July was indicated as the most desirable arrangement. Half of the respondents desired a combination of technological subjects including hardware applications coupled with topics of pedagogy. Implications of the study strengthen the need for immediate implementation on a gradual basis. The findings provide a basis for action to meet needs of teachers in technical, trade, and industrial education in Colorado. (HC)

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Department of Vocational Education

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INSTITUTE INTEREST OF TECHNICAL, TRADE AND INDUSTRIAL TEACHERS OF COLORADO

Research Report

DR. MILTON E. LARSON
PROFESSOR OF VOCATIONAL EDUCATION

OCTOBER 1, 1967

Colorado State University
Fort Collins

RESEARCH REPORT 101

PREFACE

Changes in industry have significant implications for technical, trade and industrial education. A system's approach to updating the instructors in this field seems essential in order to better prepare the students of these teachers to meet the needs of the jobs in industry.

A desire to identify the interest of the educators for such services provided the motivation for this study. The cooperation of many people made this study possible, including:

Dr. Duane Blake, Head, Department of Vocational Education, Colorado State University, Fort Collins, Colorado

Dr. Douglas Sjogren, Director, Research Coordinating Unit Colorado State University, Fort Collins, Colorado

Dr. M. G. Linson, Executive Director, The State Board for Vocational Education, Denver, Colorado, and members of the staff

The 231 respondents who took time to indicate their desires

Robert Russell, Research Assistant, Department of Vocational Education aided in the work of this study.

This study represents the first phase essential to a solution of the problem. The second phase, implementation, needs to follow if teachers are to benefit by the results of this study.

Action is dependent upon policy decisions to recommend implementation and the subsequent steps essential, e.g., financing, staffing, public information, etc. Study of this report by the public and teachers, as well as administrators is encouraged.

-- Dr. Milton E. Larson

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INTRODUCTION

The literature of vocational education, as well as that of industry and technology constantly emphasizes recent developments and new innovations as to products, processes, and concepts.

What is the need in Colorado for replenishing knowledge and improving the skills of vocational educators in technical, trade and industrial education? No recent study has been made in this field, on a state-wide basis. How do those individuals who are on the "firing line" view the desirability of updating activities? Are they interested in participating? Are they able to participate? What is the point of view of the administrators and supervisors concerning such activities? If such activities are desirable what are the highest priorities? When and for how long should these activities be conducted? These are some of the questions for which answers were sought in this study.

Purpose of Study

The broad objective of this study was to secure from vocational educators in the fields of technical, trade, and industrial education in Colorado information as to the needs, desires, and willingness of these individuals to participate in institutes, workshops, and/or seminars of an updating nature.

Specifically, answers to questions such as the following were sought:

1. What kinds of updating activities should be planned, if any?
2. What subjects should be given the highest priorities?
3. If such activities should be planned, when should they be scheduled? What month is most desirable?
4. What length of time should be planned for such activities?
5. Should sessions on teaching methods, techniques and other pedagogical subjects be included?

Methodology

The methodology consisted of development of a survey instrument; field testing and revising the instrument; mailing the form; tabulating and summarizing the results.

The population studied consisted of 776 technical, trade and industrial teachers and administrators in Colorado. No follow-up was planned since response to the initial questionnaire in itself constitutes an indication of the interest of possible respondents in the subject of the study. Completed forms were returned by 29.7 per cent.

SUMMARY OF FINDINGS

A brief summary of the findings is given below. Complete information is contained in the tables which follow.

1. Interest in attending updating institutes was expressed by 216 respondents (93 per cent).

2. Seventy-six per cent (173 respondents) indicated that arrangements could be made with the school administration to attend.

3. June and July were favored by 44 per cent (99 respondents) as the most desirable time of the year for such institutes.

4. The one week institute was identified as the most desirable length; 25 per cent desired three-day institutes.

5. Technological subject-matter topics including "hardware" applications plus sessions on pedagogy was most desirable for 110 respondents (50 per cent); 38 per cent chose technological subject-matter topics plus "hardware" without sessions on pedagogy.

6. Tune-up and carburetion received the most attention in auto mechanics (39 respondents, 20 per cent); other interests were: trouble shooting (15 per cent); electrical systems (14 per cent); automatics transmissions (14 per cent).

7. In the field of building construction and civil technology, 32 (26 per cent) were interested in materials and finishes; 30 (24 per cent in prefabrication; and 22 (18 per cent) in management.

8. Computerized drafting was the principle choice (21 per cent) of the respondents in the field of drafting and design.

9. Computers were selected by 19 per cent in the electronics field; solid state circuits were second (18 per cent); and instrumentation and transistors each received 15 per cent of the respondents' votes.

10. "Hardware" applications, programmed learning, and business data processing developments, in descending order, were suggested by the respondents from the field of electronic data processing.

11. In the field of electricity, the responses showed a 26 per cent interest in instrumentation developments with 24 per cent checking greatest interest in trends in communications.

12. In metal processing and mechanical technology, numerical control received 27 per cent, while 23 per cent selected new materials.

13. In the fields of plumbing, pipefitting, heating, air conditioning, and refrigeration the greatest interest was in new materials and methods.

14. Inert arc (22 per cent) and heliarch (19 per cent) were the subjects of most interest to the instructors in the welding and joining fields.

15. New materials and processes was the choice of 34 per cent in sheet metal; 29 per cent checked coldforming.

16. In the health field the greatest interest was in recent innovations (29 per cent) while 22 per cent were concerned about legal implications.

17. Under the heading technologies of education the greatest interest was shown in externiships and cooperative-type vocational education. The second greatest interest was in couseling techniques with placement and follow-up listed as third by the respondents to this item.

CONCLUSIONS AND IMPLICATIONS

The interest of respondents in updating activities was gratifying. Since the study was conducted during the "peak" workload season with no follow-up planned, the percentage of responses was as high as anticipated. Repeated follow-up efforts would undoubtedly have resulted in a high percentage of responses.

Several administrators and supervisors returned forms with multiple items checked. Some wrote letters, others made telephone calls in which strong interest in such activities was expressed.

Three out of every four respondents were confident that arrangements could be made to attend such educational activities if offered. Over 90 per cent of the respondents were interested in such updating activities.

In several cases the topics selected were of such interest that teachers from other fields might well desire to participate.

In a few cases the number of respondents in a given field was not large enough to justify an institute for that group alone.

Half of the respondents desired a combination of technological subjects including hardware applications coupled with topics of pedagogy. This points to a realization of the need for more opportunities for growth in teaching methods as well as essential updating in new industrial innovations.

Implications of the study strengthen the need for immediate implementation on a gradual basis.

Careful planning of programs, selection of time, and adequate advance information to the teachers and administrators would undoubtedly result in participation greater than indicated by this study.

The findings of this study as an initial effort provides food for thought and basis for action to meet needs of teachers in technical, trade and industrial education in Colorado.

TABLE I

INTEREST IN INSTITUTES

	Yes		No		Uncertain		Total	
	No.	%	No.	%	No.	%	No.	%
Interested in attending	216	93	2	1	13	6	231	100
Can arrange with school administration to attend	173	76	9	4	43	20	225	100

TABLE II

TIME OF YEAR PREFERRED FOR INSTITUTE

During	Number	%
June - July	99	44
August - September	32	14
October - November	25	11
December - January	21	9
February - March	31	13
April - May	18	8
TOTAL	226	100

TABLE III

SUGGESTED DURATION FOR INSTITUTES

Time	No.	%
Two Weeks	31	14
One Week	80	35
Three Days	56	25
Two Days	37	16
One Day	10	4
Four Hours	1	.5
Other	12	5.5
TOTAL	227	100

TABLE IV

INSTITUTE CURRICULUM DESIRED BY RESPONDENTS

Content	No.	%
Technological and subject matter fields with "hardware" applications	86	38
Technological subject-matter fields and theoretical concepts	10	4
Pedagogy	18	8
Technological subject-matter fields with "hardware" applications and pedagogy	110	50
TOTAL	224	100

TABLE V

DEGREE OF INTEREST IN AUTO MECHANICS INSTITUTES

Subject Areas	Greatest Interest		Second Greatest		Third Greatest		Total	
	No.	%	No.	%	No.	%	No.	%
Recent developments in body repair	7	44	7	44	2	12	16	8
Air conditioning	6	50	4	33	2	17	12	6
Automatic transmissions	15	56	6	22	6	22	27	14
Tune-up and carburetion	16	41	12	31	11	28	39	20
Electrical systems	8	30	12	44	7	26	27	14
Trouble shooting	3	10	13	45	13	45	29	15
Turbine power plants	2	17	4	33	6	50	12	6
Welding	3	33	2	22	4	45	9	4
Diagnostic lanes	10	55	5	28	3	17	18	9
Other	4	44	0	0	5	56	9	4
TOTAL	74	37	65	33	59	30	198	100

TABLE VI

DEGREE OF INTEREST
IN BUILDING CONSTRUCTION AND CIVIL TECHNOLOGY INSTITUTES

Subject Areas	Greatest Interest		Second Greatest		Third Greatest		Total	
	No.	%	No.	%	No.	%	No.	%
Prefabrication	18	60	8	27	4	13	30	24
"Pert" system	4	24	6	35	7	41	17	14
Materials and finishes	10	31	17	53	5	16	32	26
Management	9	41	4	18	9	41	22	18
Customer relations	2	14	4	29	8	57	14	11
Other	4	40	3	30	3	30	10	7
TOTAL	47	38	42	34	36	28	125	100

TABLE VII

DEGREE OF INTEREST
IN DRAFTING AND DESIGN INSTITUTES

Subject Areas	Greatest Interest No.	%	Second Greatest No.	%	Third Greatest No.	%	Total No.	%
Computerized drafting	16	59	4	15	7	26	27	21
Trends in Microfilming	1	6	11	61	6	33	18	14
Numerically controlled machines	1	5	15	71	5	24	21	16
Orthographic projection	3	27	2	18	6	55	11	8
Isometric drawing	8	53	5	33	2	14	15	12
Industrial processes	11	50	6	27	5	23	22	17
Drawing for solid state electronics	5	39	1	8	7	53	13	10
Other	0	0	1	33	2	67	3	2
TOTAL	45	35	45	35	40	30	130	100

TABLE VIII

DEGREE OF INTEREST
IN ELECTRONICS INSTITUTES

Subject Areas	Greatest Interest No.	%	Second Greatest No.	%	Third Greatest No.	%	Total No.	%
Solid state	15	60	6	24	4	16	25	18
Transistors	7	33	6	29	8	38	21	15
Pulse and digital circuits	4	31	4	31	5	38	13	9
Thin film applications	0	0	3	60	2	40	5	4
Computers	10	38	7	28	9	34	26	19
Lasers	6	35	6	35	5	30	17	12
Logistics	4	45	2	22	3	33	9	6
Instrumentation (process)	4	19	12	57	5	24	21	15
Other	2	67	0	0	1	33	3	2
TOTAL	52	37	46	33	42	30	140	100

TABLE IX

DEGREE OF INTEREST
IN ELECTRONICS DATA PROCESSING INSTITUTES

Subject Areas	Greatest Interest		Second Greatest		Third Greatest		Total	
	No.	%	No.	%	No.	%	No.	%
"Hardware"	11	65	2	12	4	23	17	19
"Software"	2	18	7	64	2	18	11	12
Programming Cobol	3	37½	3	37½	2	25	8	10
Programmed learning-data processing	6	37½	6	37½	4	25	16	18
Interrupt systems	1	33.3	1	33.3	1	33.3	3	3
Multiprocessing and multiprogramming	2	8	3	27	6	55	11	12
Optical scanning equipment	1	25	1	25	2	50	4	4
New developments in storage systems	1	50	0	0	1	50	2	2
Business data processing developments	6	40	4	27	5	33	15	17
Other	1	33.3	1	33.3	1	33.3	3	3
TOTAL	34	38	28	31	28	31	90	100

TABLE X

DEGREE OF INTEREST
IN ELECTRICITY INSTITUTES

Subject Areas	Greatest Interest		Second Greatest		Third Greatest		Total	
	No.	%	No.	%	No.	%	No.	%
Code and licensing	12	63	5	26	2	11	19	17
Atomic power plants	3	18½	7	44	6	37½	16	14
Developments in instrumentation	13	43	12	40	5	17	30	26
Trends in communication	11	39	7	25	10	36	28	24
Power generation and distribution	3	17	7	39	8	44	18	16
Other	2	50	2	50	0	0	4	3
TOTAL	44	38	40	35	31	27	115	100

TABLE XI

DEGREE OF INTEREST
IN METAL PROCESSING AND MECHANICAL TECHNOLOGY INSTITUTES

Subject Areas	Greatest Interest		Second Greatest		Third Greatest		Total	
	No.	%	No.	%	No.	%	No.	%
Numerical control	21	69	9	31	0	0	30	27
Chemical milling	2	22	5	56	2	22	9	8
Electric discharge machining	3	18	7	41	7	41	17	15
New materials	7	28	10	40	8	32	25	23
Cemented carbides	1	50	0	0	1	50	2	2
Ceramic cutting tools	1	14	3	43	3	43	7	6
Tracer machining	0	0	2	28	5	72	7	6
Deep-hole drilling	1	100	0	0	0	0	1	1
Temporary dies	1	11	1	11	7	78	9	8
Other	2	50	0	0	2	50	4	4
TOTAL	39	35	37	33	35	32	111	100

TABLE XII

DEGREE OF INTEREST
IN PLUMBING, PIPEFITTING, HEATING,
AIR CONDITIONING AND REFRIGERATION INSTITUTES

Subject Areas	Greatest Interest No.	%	Second Greatest No.	%	Third Greatest No.	%	Total No.	%
New materials and methods	16	73	2	9	4	18	22	26
Head pumps	2	50	1	25	1	25	4	5
Climate control systems	2	25	5	62½	1	12½	8	10
Controls and instrumentation	4	28	4	28	6	44	14	17
Noise control	0	0	2	40	3	60	5	6
Heat recovery systems	1	17	1	17	4	66	6	7
New developments in air conditioning	2	14	6	43	6	43	14	17
New developments in refrigeration	1	11	6	67	2	22	9	10
Other	2	100	0	0	0	0	2	2
TOTAL	30	36	27	32	27	32	84	100

TABLE XIII

DEGREE OF INTEREST
IN WELDING AND JOINING INSTITUTES

Subject Areas	Greatest Interest No.	%	Second Greatest No.	%	Third Greatest No.	%	Total No.	%
Heliarc	20	83	2	8	3	13	25	19
Adhesives	2	28	1	14	4	58	7	5
Inert arc	2	7	23	76	5	17	30	22
Ultrasonic welding	5	29	3	18	9	53	17	13
Electron beam welding	9	50	5	28	4	22	18	13
Vacuum brazing: high speed soldering	1	20	2	40	2	40	5	4
Metallurgical testing	4	24	5	38	5	38	14	10
Heat treatment; cold treatment	3	20	4	25	9	55	16	12
Other	1	50	1	50	0	0	2	2
TOTAL	47	35	46	34	41	31	134	100

TABLE XIV

DEGREE OF INTEREST IN SHEET METAL INSTITUTES

Subject Areas	Greatest Interest		Second Greatest		Third Greatest		Total	
	No.	%	No.	%	No.	%	No.	%
"Short-run dies"	2	22	3	33	4	45	9	11
New materials and processes	18	64	6	22	4	14	28	34
Explosive forming	3	16	10	53	6	31	19	23
Coldforming	6	25	10	42	8	33	24	29
Other	2	100	0	0	0	0	2	3
TOTAL	31	38	29	35	22	27	82	100

TABLE XV

DEGREE OF INTEREST IN HEALTH FIELD INSTITUTES

Subject Areas	Greatest Interest		Second Greatest		Third Greatest		Total	
	No.	%	No.	%	No.	%	No.	%
Team nursing	7	47	6	40	2	13	15	17
Germfree isolators	1	20	2	40	2	40	5	5
Automation: records, medicine dispensing	2	33.3	2	33.3	2	33.3	6	7
Toxicology: new developments	6	50	4	33.3	2	17	12	14
Legal implications	4	21	6	31	9	38	19	22
Recent innovations	11	46	6	25	7	29	24	28
Other	2	33.3	2	33.3	2	33.3	6	7
TOTAL	33	38	28	32	26	30	87	100

TABLE XVI

DEGREE OF INTEREST
IN TECHNOLOGIES OF EDUCATION INSTITUTES

Subject Areas	Greatest Interest No.	%	Second Greatest No.	%	Third Greatest No.	%	Total No.	%
Computerized instruction	14	70	1	5	5	25	20	10
Teaching machines	0	0	3	60	2	40	5	2
Programmed learning	5	23	7	32	10	45	22	11
Microfilming	0	0	0	0	2	100	2	1
Problem solving approaches	10	43	10	43	3	14	23	11
Audio-visual equipment and methods	4	21	8	42	7	37	19	9
Counseling and techniques; placement and follow-up	9	24	16	43	12	33	37	18
Providing public information about voc-ed	13	42	7	23	11	35	31	15
Curriculum development and evaluation	1	11	4	44½	4	44½	9	4
Externships and coop-type voc-ed	19	48	13	32	8	20	40	19
TOTAL	75	36	69	33	64	31	208	100

TABLE XVII

EDITED COMMENTS AND SUGGESTIONS MADE BY RESPONDENTS

Classification of Comments		Comments	No.
Curriculum	1.	College credit for workshop	3
	2.	Need T & I coordinator's workshop . . .	
	3.	Need to be updated in T & I workshops .	2
	4.	Needs, usage and motivation for Vocational Mathematics.	
	5.	Keep workshop technical	
	6.	Combine pedagogy and technology in workshops	
	7.	San Jose State College Metal Workshop could be a good guide	
	8.	Need courses towards masters degrees .	
	9.	Have new developments for program directors	
	10.	Stress industrial procedures	2
	11.	Correlate related areas with specialty in workshops	
	12.	Need 10 week workshops on "solid state"	
	13.	Put emphasis on "off campus" courses. .	
	14.	Strees how to do in actual situations .	2
	15.	Have seminar on Philosophy of Vocational Education, analysis, and student selection	
	16.	Civil technology trained people needed.	
Scheduling Considerations	1.	Difficult to involve teachers during the regular school year	9
Workshop Staff	1.	Institute staffed with leading experts from industry to express their needs, skills, & traits of people they employ.	5

Other Fields with Need for Up-dating

Commercial Cooking	Diesel Mechanics	Power Sewing
Cosmetology	Printing	

TABLE XVIII

EXACT COMMENTS BY RESPONDENTS

More Significant Quotes:

"Combining new developments in technological subject-matter fields with some emphasis on pedagogy would certainly keep the meeting more interesting."

"I attended a 7 week institute at San Jose State College last summer. They had a good program in metals that might serve as a guide."

"Workshop or institute should benefit related instructors also. A workshop correlating the different fields and related areas would be valuable."

"There is need for information and techniques of establishing new programs, that is building or space needs, determination of equipment, training needs information, resources of materials and personnel--new program promotion--implementation."

"I feel there should be more cooperation and closer relations between the various fields of vocational education and the related fields."

"Difficult to involve teachers in such institutes during the school year but could be arranged for director or supervisor. Summer institute would be better for teachers of specific subjects. Two weeks would be better for teachers."

"It might be advantageous to have a curriculum center where this information could be kept updated."

"Have men from industry who will state positively the skills and traits they expect in a new employee."

COLORADO STATE UNIVERSITY

FORT COLLINS, COLORADO 80521

DEPARTMENT OF VOCATIONAL EDUCATION

April 3, 1967

Your desires and ideas are significant for vocational education in Colorado and for determining our future course of action!

In order to ascertain the needs and interest of Colorado vocational educators in the fields of Technical Education and Trade and Industrial Education in recent developments, we are asking a few selected individuals to respond to this brief pilot study.

Each item of the instrument will be carefully reviewed after the responses have been returned. Then, a revised instrument will be mailed to the other educators in our field in Colorado.

The purpose of this study is to make a realistic determination of the interest in, and the need for an organized systems approach to providing desired short institutes, workshops, and seminars in our field.

To provide maximum help, please:

1. Complete the enclosed form and return it to me immediately.

2. Write on the form, close to each item, suggested additions, deletions, or modifications. Use the bottom and the reverse side for additional comments.

In order to complete this phase of the study within the next two weeks, we would appreciate your attention to this matter as soon as possible.

Colorado vocational education will benefit by your participation in this study!

Sincerely yours,

Milton E. Larson

Dr. Milton E. Larson
Professor of Vocational Education

MEL/ca
Enclosure

Schedule No. _____

COLORADO STATE UNIVERSITY
Fort Collins, Colorado 80521

PLEASE RETURN TO: DR. MILTON E. LARSON
Dept. of Vocational Education

TECHNICAL, TRADE AND INDUSTRIAL WORKSHOPS AND INSTITUTES FOR COLORADO VOCATIONAL EDUCATORS -- A SURVEY OF INTEREST

In order to implement this study, if this should seem desirable, your assistance in completing the following is essential:

1- NAME _____

2- ADDRESS _____

3- POSITION _____

4- SCHOOL _____ 5- TECHNICAL ( ) 6- T & I ( ) 7- BOTH

DO NOT WRITE IN THIS SPACE
5( )

This is a state-wide study to determine the interest of TECHNICAL, TRADE AND INDUSTRIAL EDUCATORS in workshops and institutes. A determination to develop such a program will be influenced by your response to this form. Your prompt cooperation in completing and returning this form will be appreciated. PLEASE COMPLETE AND MAIL NOW!

DIRECTIONS: Respond to each item by checking or writing in your response as required. Disregard the numbering system which is for tabulation purposes.

A. GENERAL INFORMATION - ONE RESPONSE PER QUESTION, PLEASE!

8- Would you welcome the opportunity to attend workshops or institutes relating to recent developments and new innovations in your field?
( ) 1-Yes ( ) 2-No ( ) 3-Don't know or uncertain 6( )

9- If you were to attend such an institute or workshop, when would you prefer to have it?
( ) 1-June-July ( ) 2-August-September ( ) 3-September-November
( ) 4-December-January ( ) 5-February-March ( ) 6-April-May 7( )

10- The most desirable length of time for such an institute or workshop is:
( ) 1-Two weeks ( )2-One week ( )3-Three days ( )4-Two days
( ) 5-One day ( )6-Four hours ( )7-Other (Specify)_____ 8( )

11- Do you believe you could arrange with your administrator and Board to attend such a workshop or institute?
( ) 1-Yes ( ) 2-No ( ) 3-Don't know or uncertain 9( )

12- Would you prefer such a workshop or institute to: (One choice only)
( ) 1-Concentrate on new developments in technological subject-matter fields with demonstrations and opportunities for participation using actual "hardware" as well as study of principles involved
( ) 2-Concentrate on new developments in technological subject-matter fields but deal mainly with principles and theoretical concepts.
( ) 3-Concentrate on pedagogy--teaching methods and techniques, etc.
( ) 4-Combine new developments in technological subject-matter fields (both "hardware" and principles) with some emphasis on pedagogy. 10( )

13- Other comments helpful in making a determination on this subject:
_____ 11( )
_____ 12( )

B-SPECIFIC INFORMATION

DIRECTIONS: Identify your fields (or closest interest) then, number under each field the subject of greatest interest (or need) with 1, that of second greatest interest with 2, and of third greatest interest with 3. If subjects other than those listed are more significant mark "other" and specify.

14- AUTO MECHANICS

( ) 0-Recent developments in body repair ( ) 1-Air Conditioning
( ) 2-Automatic transmissions ( ) 3-Tune-up and carburetion
( ) 4-Electrical systems ( ) 5-Trouble shooting
( ) 6-Turbine power plants ( ) 7-Welding
( ) 8-Diagnostic lanes ( ) 9-Other (Specify) _____

15- BUILDING CONSTRUCTION AND CIVIL TECHNOLOGY

( ) 1-Prefabrication ( ) 2-"Pert" system
( ) 3-Materials and finishes ( ) 4-Management
( ) 5-Customer relations ( ) 6-Other (Specify) _____

16- DRAFTING AND DESIGN

( ) 1-Computerized drafting ( ) 2-Trends in Microfilming
( ) 3-Numerically controlled machines ( ) 4-Orthographic projection
( ) 5-Isometric drawing ( ) 6-Industrial processes
( ) 7-Drawing for solid state electronics ( ) 8-Other (Specify)_____

17- ELECTRONICS

( ) 1-Solid State ( ) 2-Transistors
( ) 3-Pulse and Digital circuits ( ) 4-Thin film applications
( ) 5-Computers ( ) 6-Lasers
( ) 7-Logistics ( ) 8-Instrumentation (process)
( ) 9-Other (Specify) _____

18- ELECTRONICS DATA PROCESSING

( ) 0-"Hardware" ( ) 1-"Software"
( ) 2-Programming Cobol ( ) 3-Programmed learning - Data Processing
( ) 4-Interrupt systems
( ) 5-Multiprocessing and multi-programming ( ) 6-Optical scanning equip.
( ) 7-New developments in storage systems ( ) 8-Business data processing developments
( ) 9-Other (Specify) _____

19- ELECTRICITY

( ) 1-Code and licensing ( ) 2-Atomic power plants
( ) 3-Developments in instrumentation ( ) 4-Trends in communication
( ) 5-Power generation and distribution ( ) 6-Other (Specify) _____

20- METAL PROCESSING AND MECHANICAL TECHNOLOGY

( ) 0-Numerical control ( ) 1-Chemical milling
( ) 2-Electric discharge machining ( ) 3-New materials
( ) 4-Cemented carbides ( ) 5-Ceramic cutting tools
( ) 6-Tracer machining ( ) 7-Deep-hole drilling
( ) 8-Temporary dies ( ) 9-Other (Specify) _____

1	2	3
13		
( )	( )	( )
14		
( )	( )	( )
15		
( )	( )	( )
16		
( )	( )	( )
17		
( )	( )	( )
18		
( )	( )	( )
19		
( )	( )	( )

21- PLUMBING, PIPEFITTING, HEATING, AIR CONDITIONING AND REFRIGERATION

( ) 1-New materials and methods
( ) 2-Head pumps
( ) 3-Climate control systems
( ) 4-Controls and instrumentation
( ) 5-Noise control
( ) 6-Heat recovery systems
( ) 7-New developments in air conditioning
( ) 8-New developments in refrigeration
( ) 9-Other (Specify) _____

20 ( ) ( ) ( )

22- WELDING AND JOINING

( ) 1-Heliarc
( ) 2-Adhesives
( ) 3-Inert Arc
( ) 4-Ultrasonic welding
( ) 5-Electron beam welding
( ) 6-Vacuum brazing: high speed soldering
( ) 7-Metallurgical testing
( ) 8-Heat treatment; cold treatment
( ) 9-Other (Specify) _____

21 ( ) ( ) ( )

23- SHEET METAL

( ) 1-"Short-run dies"
( ) 2-New materials and processes
( ) 3-Explosive forming
( ) 4-Coldforming
( ) 5-Other (Specify) _____

22 ( ) ( ) ( )

24- HEALTH FIELD

( ) 1-Team nursing
( ) 2-Germfree isolators
( ) 3-Automation: records, medicine dispensing
( ) 4-Toxicology: new developments
( ) 5-Legal implications
( ) 6-Recent innovations
( ) 7-Other (Specify) _____

23 ( ) ( ) ( )

25- TECHNOLOGIES OF EDUCATION

( ) 0-Computerized instruction
( ) 1-Teaching machines
( ) 2-Programmed learning
( ) 3-Microfilming
( ) 4-Problem solving approaches
( ) 5-Audio-visual equipment and methods
( ) 6-Counseling and techniques; placement and follow-up
( ) 7-Providing public information about voc-ed
( ) 8-Externships and coop-type voc-ed
( ) 9-Curriculum development and evaluation

24 ( ) ( ) ( )

26- OTHER FIELDS (SPECIFY) _____ 25( ) ( ) ( )

( ) 1-Other subjects (Specify) _____ 26( ) ( ) ( )
( ) 2-Other subjects (Specify) _____ 27( ) ( ) ( )
( ) 3-Other subjects (Specify) _____ 28( ) ( ) ( )

27- COMMENTS (FEEL FREE TO MAKE COMMENTS WHICH ARE IMPORTANT TO THIS TOTAL EFFORT)

_____ 29( ) ( ) ( )

_____ 30( ) ( ) ( )

_____ 31( ) ( ) ( )

_____ 32( ) ( ) ( )

VT 002 690
Adams, Walter, Ed.; Schnack, Dermot, Ed.
Ohio Vocational Education Notebook.

Ohio State Dept. of Education, Columbus. Div. of Guidance and Testing
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Sep67 130p.

*OCCUPATIONAL GUIDANCE; *RESOURCE GUIDES; *RESOURCE MATERIALS; *VOCATIONAL EDUCATION

This publication was developed as an orientation booklet to be used by school counselors as they interpret vocational programs to students, parents, community, and educators. Program descriptions, vocational performance skills which are goals of the training program, admission guidelines, employment opportunities, and resources for use in orientation and counseling are provided for 57 vocational education programs. Sections of the publication include Vocational Agriculture, Business and Office Education, Distributive Education, Home Economics, and Trade and Industrial Education. (PS)

VT 002 690

ED042060

OHIO VOCATIONAL EDUCATION NOTEBOOK

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

M. W. ESSEX
STATE SUPERINTENDENT OF PUBLIC INSTRUCTION

PUBLISHED BY

DIVISION OF GUIDANCE AND TESTING

STATE DEPARTMENT OF EDUCATION
751 NORTHWEST BOULEVARD
COLUMBUS, OHIO 43212
SEPTEMBER, 1967

VT002690

FOREWORD

This revision of the Ohio Vocational Education Notebook is based on experiences with both the Penta-County Joint Vocational School Student Orientation Notebook and the limited issue of the first Ohio Vocational Education Notebook published in September 1966. Both of these earlier publications were possible because of the cooperation of the Division of Vocational Education, various vocational educators throughout Ohio, numerous guidance counselors (particularly those at Penta-County J.V.S.), and staff members of the Division of Guidance and Testing. Dr. Glenn A. Saltzman, former District Guidance Supervisor for Northwestern Ohio, and now a member of the Counselor Education Staff of Kent State University, pioneered the development of these publications.

This revised edition of O.V.E.N. may be used as an orientation booklet by school counselors as they interpret vocational education programs to pupils, parents, patrons and educators. Portions of O.V.E.N. may also be used as the basis for student orientation publications or for booklets describing vocational education programs offered by local boards of education. Educational leaders are encouraged to incorporate changes in their own publications which more nearly reflect the actual situation in their local schools than does this publication which is intended to reflect vocational education programs from a great many Ohio schools.

The editors of this edition of O.V.E.N. were Walter Adams, Assistant State Supervisor, Measurement and Evaluation Section, and Dermot Schnack, Coordinator of Vocational Guidance, Guidance Services Section. Mrs. Betty Baumann provided the clerical assistance for this revised edition of O.V.E.N.

John G. Odgers, Director
Division of Guidance and Testing

JGO:bb

USE OF THIS PUBLICATION

The information contained in this publication has been designed for use by school personnel in interpreting vocational education opportunities to students. Program write-ups have been designed so that program descriptions (Part I), program objectives, (Part II), and related background experiences (Part III), can be used by students and their parents. The sections identified as Career Opportunities (Part IV), Resources (Part V), and local information (Part VI), have been designed for school counselor use. Part IV, of each write-up, Career Opportunities, refers the counselor to the Dictionary of Occupational Titles, (D.O.T.) Third Edition*, and includes two basic references. The first entry identifies either a two-digit occupational division or a three-digit occupational group as classified by the Bureau of Employment Security, U. S. Department of Labor. (In one or two cases an occupational title has been used together with the complete classification code when it was judged that the vocational education program was designed for one specific occupation.) The second and subsequent entries refer to the Worker Trait Group Arrangement in Volume II of the D.O.T., pages 225-529. Thus, the counselor has a ready reference to both occupational classification codes and worker trait groups appropriate to the vocational education programs.

The counselor who consults Volume II of the D.O.T., pages 33-213, using Occupational Division (first two digits of the code) or the Occupational Group (first three digits of the code) will find occupations listed in a heirarchy from those with the highest relationship to the lowest in terms of the relationship of the occupations to data-people-things. This heirarchy by occupations provides a spectrum for related occupations together with information for understanding the potential entry and advancement sequence in that occupation.

The page references to the worker trait group assists the counselor to locate information about the following: work performed; worker requirements; clues for relating applicants and requirements; training and methods of entry; related classifications; and a qualifications profile.

The information provided by the D.O.T., Third Edition, about the occupational heirarchy and the worker trait group may assist the student to understand career possibilities as well as provide a basis for an appraisal of himself in relation to the demands of the occupation.

Counselors will also find Volumes I (Definitions) and the Supplement, (Selected characteristics of occupation) valuable aids in both understand occupations and for use in career counseling. For a further explanation of the D.O.T. see page 122.

The page references to the Occupational Outlook Handbook in paragraph V of each program write-up are for the 1966-67 Edition of the handbook. We suggest that both the Occupational Outlook Handbook and the D.O.T., Third Edition, be employed in career exploration and orientation.

* See Appendix (page 122)

Portions of O.V.E.N. may be reproduced or rewritten for use by local schools. Although not necessary, we would appreciate a reference or credit for the use of this edition of the Ohio Vocational Education Notebook in local school publications.

For additional assistance or clarification, please feel free to contact:

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Division of Guidance and Testing
751 Northwest Blvd., Columbus, Ohio 43212
Phone: (614) 469-4868

or Dermot Schnack, Coordinator,
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Guidance Services Section
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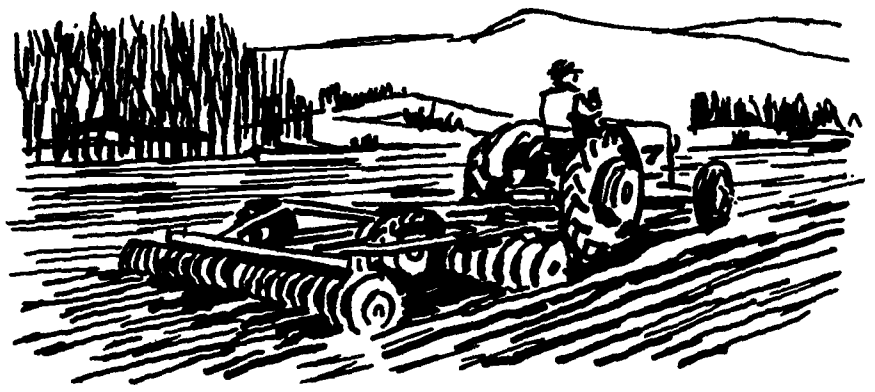


Vocational Agriculture

VOCATIONAL AGRICULTURE

The Major objective of Vocational Agriculture is to train for an employable occupation involving knowledge and skills in agricultural subjects, whether or not such occupation involves work on the farm. Agricultural occupations include any occupation on a farm or in another business, agency or ogranization which performs one or more of the agricultural functions of production, processing, distribution and servicing. The student in the training program will need to develop competencies in one or more of the primary areas of plant, soil or animal science, farm management, agricultural mechanization and agricultural leadership. Agricultural education programs are organized in four areas:

Area 1.	Agricultural Production (Preparation for Farming)	a. Plant and Animal Science b. Farm Equipment c. Farm Management
Area 2.	Horticulture	a. Greenhouse and Nursery Production b. Landscaping and Park Service c. Floriculture
Area 3.	Non-Farm Agricultural Occupations	a. Greenhouse and Nursery Production b. Agricultural Equipment and Mechanics c. Agricultural Services
Area 4.	Natural Resources Conservation	a. Forestry b. Soil and Water Management c. Game Management and Recreation *

Address correspondence to: Mr. James Dougan, Supervisor
Vocational Agriculture Section
Division of Vocational Education
The Ohio Department of Education
State Office Building, Room G-16
South Front Street
Columbus, Ohio 43215

Telephone Number: (614) 469-3076

* The Ohio Manual of Operation for Vocational Agriculture Education (Revised July 1966)

OHIO VOCATIONAL EDUCATION NOTEBOOK

Agriculture Production

I. Program Description

This is a comprehensive agricultural program for ninth through twelfth grade high school students considering careers in farm or farm related occupations either upon high school graduation or completion or post high school technical or college education. The program is designed to provide students with understanding and experience in the areas of crop and livestock production, farm management, farm mechanics and machinery and marketing through planned classroom and shop instruction and farm and non-farm agricultural work experience.

During the first year of the program, emphasis is on exploration and allowance is made for increasing specialization and depth as the student progresses through the program. Instruction covers plant science - the study of soil composition and conservation, plant growth, nutrition, crop diseases and insects, weed control, plant identification and seed production; animal science - which involves a study of animal selection, care, nutrition and breeding; agricultural mechanics - including shop experience in drafting, carpentry, wood and metal finishing, metal working, welding, plumbing and electrical wiring and repair; and agricultural business management - the study of farm credit, insurance, taxes, and market planning and analysis.

During the junior and senior year, students may continue in Agricultural Production, or decide to specialize in Horticulture, Agricultural Business and Serive, Agricultural Equipment and Mechanics, Natural Resources or Farm Business Planning and Analysis. In addition to the planned instruction and related field experiences vocational agriculture students are encouraged to become members of the Future Farmers of America and utilize the opportunity to work cooperatively with each other on agricultural and community projects and to develop their leadership qualities.

II. Program Objectives

1. To help each student develop an appreciation for the various occupations in agricultural production and to acquire the attitudes and values that would enable him to formulate and progress toward a personally chosen agricultural career goal and find satisfaction in continued related learning and experience.
2. To help each student gain experience in the application of the basic knowledge and principles related to crop and livestock production and develop the ability to evaluate various procedures, methods, and materials relating to efficient farm production.
3. To help each student develop the ability to manage a profitable farm business through careful planning, operation and marketing procedures.
4. To help each student become proficient in the evaluation, selection, operation, and maintenance of power farm equipment and machinery and to develop the skills required for the construction and maintenance of farm buildings and other agricultural facilities.

III. Related Background Experiences

Students might be encouraged to consider and discuss their present knowledge and understandings of occupations in agriculture and their preference for the general pattern for farm and rural life.

Industrial Arts in grades seven and eight involving wood and metal working and drafting will help individual students identify and evaluate their possible interest in farm mechanics and working with tools and equipment.

Helpful experiences may be acquired through each student's efforts to plant and cultivate his own garden and harvest and sell the crops and/or assuming responsibility for the care and raising of his own farm animals or poultry. Sharing in work around the farm or home in terms of caring for lawn, shrubs and trees and garden and becoming familiar with different kinds of farm and lawn equipment may also be helpful in assisting a student to evaluate agriculture as a career.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Occupational Category 4 (including Occupational Divisions 40 through 46)

Farming, Fishing, and Forestry (Cropping, Animal Farming, Gardening, and Related Work) (.181) p. 411

V. Resources For Use In Orientation And Counseling

1. County agricultural agent
2. Occupational Outlook Handbook, pp. 792-799
3. State and Federal Experiment Stations
4. Future Farmers of America
5. 4-H Clubs
6. "Careers in Agriculture"
   Vocational Agriculture Service
   College of Agriculture
   The Ohio State University, Columbus, Ohio 43210

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Horticulture Production

I. Program Description

This program provides high school sophomore and junior boys and girls interested in occupations in Horticulture with Basic Horticulture (9th grade) and Advanced Horticulture (10th grade) classroom and school-land-laboratory work experience that will help develop the necessary skills and understandings for eventual employment. The program includes instruction and practical experience through planned classroom, greenhouse, and school-land-laboratory work experience which includes the planting, growing, and caring for plants in a greenhouse and garden; growing and maintaining nursery plants and shrubs; planting and cultivating flowers, landscape design, turf management, and marketing of horticultural products.

During the senior year students interested in greater specialization may consider enrollment in advanced courses such as Floristry, Garden Center Operation, Landscape and Nursery Operation, Produce Processing and Marketing, Turf Management, or continue in Horticultural Production.

II. Program Objectives

1. To help students become familiar with the various occupations in Horticulture and provide them with experience that will assist them in formulating and progressing toward an occupational goal in the field.
2. To help students develop the skills and understanding necessary to plant, grow, and market plants, flowers, shrubs, and trees which include: the propagation of stock through budding, grafting, cutting, and layering; the use of chemicals for plant nutrition and the control of plant disease and pests; and the marketing and sale of horticultural products for garden and yard landscaping and indoor or other special decorating effects.
3. To provide each student with the information and skill necessary to plan a seasonal operating schedule and perform the various tasks associated with operation of a greenhouse, nursery, and landscaping operation.

III. Related Background Experiences

Students should be encouraged to discuss and relate their experiences and understandings about occupations related to Horticultural Production and identify possible interests and occupational goals that may relate to the production and sales of plants, shrubs, and trees.

Biology, if not previously taken, should be scheduled along with Horticultural Production to help students understand and profit to a greater extent from the study of plants and tree propagation growth and care.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Group 406.

Business Relations (Managerial Work) (.168) p. 245
Farming, Fishing, and Forestry (Cropping, Animal Farming, Gardening, and Related Work) (.181) p. 411

V. Resources For Use In Orientation And Counseling

1. Vocational Agriculture Service
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room G-16
   South Front Street, Columbus, Ohio 43215

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Floristry

I. Program Description

This program is provided for high school seniors interested in specialized training related to the functons involved in working in and operating a commercial florist shop. The classroom instruction and cooperative work experience focus on developing the skills and understandings necessary for preparation and packaging flowers and plants for sale, the design and construction of floral displays and corsages and the management and business operation of a commercial florist establishment. Cooperative work experience is designed to supplement the instructional program by providing practical supervised experience in a local florist establishment.

II. Program Objectives

1. To help each student develop greater appreciation for the various aspects of florist shop operation and the skills and understandings necessary for successful employment and shop management.
2. To help each student gain experience in applying the basic principles of design to the construction of floral arrangements and displays for various occasions.
3. To help students gain experience in working with customers and helping them make appropriate selections both in regard to occasion for flowers and plants and the seasonal availability of flowers locally and in other parts of the country.

III. Related Background Experiences

Students considering Floristry should have completed Basic and Advanced Horticulture in order to acquire the basic knowledge and experience needed for further specialization and to develop greater appreciation for the occupational tasks and roles associated with the choice of Floristry and eventual work in this.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 260. and 406.

Farming, Fishing, and Forestry (Cropping, Animal Farming, Gardening, and Related Work) (.181) p. 411
Merchandising (Demonstration and Sales Work) (.258; .358; 458) p. 488

V. Resources For Use In Orientation And Counseling

1. Vocational Agriculture Service
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room G-16
   South Front Street, Columbus, Ohio 43215
2. Ohio State Employment Service (Local Office)

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Greenhouse Operation

I. Program Description

This program is provided for high school seniors interested in specialized training for occupations related to operation of a greenhouse. The classroom instruction and cooperative work experience focus on developing the skills and understandings necessary for propagation and care of plants, the management of the greenhouse environment, control of insects, pests and plant diseases, marketing and management of a greenhouse business.

The cooperative work experience program is designed to supplement classroom instruction by providing students with part time paid work experience in a local commercial greenhouse during the school year or peak operating season.

II. Program Objectives

1. To help each student develop an appreciation for the varied aspects of greenhouse operation and a greater interest and competency in performing the tasks and operations necessary for conducting a successful greenhouse business.
2. To help each student develop the skills and understandings needed to plan greenhouse growing schedules, plant and manage the atmospheric and nutritional environment of plants growing in a greenhouse, and conduct effective marketing procedures for greenhouse products.
3. To become knowledgeable and skilled in advising customers regarding plant selection, soils, plant nutrition, light exposure, and seasonal growing effects.

III. Related Background Experiences

Students considering greenhouse operation should have completed Basic and Advanced Horticulture in order to acquire the basic knowledge and experience needed for further specialization and to develop greater appreciation for the occupational tasks and role associated with the choice of Greenhouse Operation and eventual work in this field.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Group 406.

Business Relations (Managerial Work) (.168) p. 245
Farming, Fishing, and Forestry (Cropping, Animal Farming, Gardening, and Related Work) (.181) p. 411

V. Resources For Use In Orientation And Counseling

1. Vocational Agriculture Service
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room G-16
   South Front Street, Columbus, Ohio 43215

2. American Association of Nurserymen
   835 Southern Building
   Washington, D. C. 20005

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Landscape and Nursery Operation

I. Program Description

This program is provided for high school seniors interested in specialized training related to the functions involved in nursery and landscaping operations. The classroom instruction and cooperative work experience focus on developing the skills and understandings necessary for designing landscape settings, selecting appropriate plants, shrubs and trees for special effects and needs, caring for and maintaining yards and gardens and managing a nursery and landscaping business operation.

Special provisions will be made to allow students to participate in cooperative work experience to gain additional experience in performing the tasks related to landscaping and nursery occupations

II. Program Objectives

1. To help each student develop a greater appreciation for the various aspects of landscape and nursery operations and the skills and understanding necessary for successful employment.
2. To help each student learn how to prepare landscape plans, select turf, plants, shrubs and trees useful for special effects and help customers plan and develop their yards and gardens.
3. To help each student develop the skills necessary to produce and care for nursery stock and transfer appropriate stock to landscaping operations.

III. Related Background Experiences

Students considering Landscape and Nursery Operation should have completed Basic and Advanced Horticulture in order to acquire the basic knowledge and experience needed for further specialization and to develop greater appreciation for the occupational tasks and role associated with the choice of Landscape and Nursery Operation and eventual work in this field.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 406.; 407.

Business Relations (Managerial Work) (.168) p. 245
Farming, Fishing, and Forestry (Cropping, Animal Farming, Gardening, and Related Work) (.181) p. 411
Machine Work (Driving-Operating) (.883) p. 444

V. Resources For Use In Orientation And Counseling

1. Vocational Agriculture Service
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room G-16
   South Front Street, Columbus, Ohio 43215
2. Occupational Outlook Handbook, p. 245

VI. Local Program Information

Turf Management

I. Program Description

This program is provided for high school seniors interested in specialized training related to the functions involved in establishing, managing and maintaining turfs for commercial golf courses, municipal parks, and roadways; for preparing, cutting and laying sod or prepared lawns in building developments and for private and public property groundskeeping. The classroom instruction and cooperative work experience focus on developing the skills and understandings necessary for selecting, growing and caring for various types of turf grasses. The classroom work will relate to technical aspects of turf management while the cooperative program will provide the student with practical work experience.

II. Program Objectives

1. To help each student develop an appreciation for the occupational role related to turf management and the competencies to perform the tasks and operations necessary for employment.
2. To help each student learn the proper methods and procedures for preparing seedbeds for growing turf grasses, designing and installing drainage and irrigation systems, selecting, propagating and maintaining turf grain varieties and diagnosing and treating turf diseases, fungi, weeds, and pests.

III. Related Background Experiences

Students considering Turf Management should have completed Basic and Advanced Horticulture in order to acquire the basic knowledge and experience needed for further specialization and to develop greater appreciation for the occupational tasks and role associated with the choice of Turf Management and eventual work in this field.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Group 407.

Farming, Fishing, and Forestry (Cropping, Animal Farming, Gardening, and Related Work) (.181) p. 411
Machine Work (Driving-Operating) (.883) p. 444

V. Resources For Use In Orientation And Counseling

1. Vocational Agriculture Service
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room G-16
   South Front Street, Columbus, Ohio 43215

VI. Local Program Information

I. Program Description

This program provides high school junior and senior students interested in careers related to the sales and service of agricultural materials and supplies with a special two-year training program and related work experience.

Classroom instruction is provided to help students learn about the variety of products and materials available for farm use and ways of identifying and evaluating their merits. Information and experience will also be provided to help each student learn to function as a consultant and salesperson to agricultural customers and develop an understanding of the various aspects of an agricultural sales business operation.

The work experience program is planned to provide students with actual paid full time employment during the summer following their junior year and part time during their senior year in an agricultural business or industry. The vocational agriculture instructor will assist each student through instruction, supervision and coordination of both the classroom and his work experience program.

II. Program Objectives

1. To help each student develop an appreciation for the expanding occupational opportunities in the sales of agricultural supplies and products and in providing related agricultural services and to assist him in acquiring greater understanding necessary to formulate and progress toward an occupational goal in this area.
2. To provide each student with information and understanding that will enable him to evaluate the effectiveness of various methods and ways of marketing, distributing, and selling agricultural supplies and products; providing related agricultural services and managing a business operation.
3. To help each student become proficient in the skills and understanding needed to become an effective consultant and advisor to persons concerned with the selection and use of various agricultural supplies, products or related experiences.

III. Related Background Experiences

Students might be encouraged to consider their present understanding of occupations in this area and their interest in working as a consultant and salesperson to customers of agricultural supplies, materials, products of related services.

Students will find it necessary to have a basic understanding of agricultural production and farm operation. This background may be acquired by taking Vocational Agriculture I and II at grades nine and ten as preparation for specialization in Agriculture Business and Services.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Group 277.

Merchandising (Demonstration and Sales Work) (.258; .358; .458) p. 488

V. Resources For Use In Orientation And Counseling

1. The Ohio State Employment Service (Local Office)
2. Occupational Outlook Handbook, p. 806
3. "Manual for Planning and Conducting a Program to Train Individuals for Employment in Agricultural Business and Service Occupations," and "Curriculum Guide for Agricultural Business and Service Program," Vocational Agriculture Service, Division of Vocational Education, State of Ohio Department of Education, State Departments Building, Room G-16, South Front Street, Columbus, Ohio 43215
4. "Competencies Needed for Various Non-Farm Agricultural Occupations," Department of Agricultural Education, College of Agriculture, The Ohio State University, Columbus, Ohio 43210

VI. Local Program Information

Agricultural Equipment and Mechanics

I. Program Description

This program is provided for high school junior and senior students interested in occupations relating to the manufacture, sales, and maintenance of agricultural equipment. Students are provided with experience that will help them understand the mechanical operation and capabilities of agricultural equipment and learn the appropriate methods and procedures for the care, service and sales of various types of equipment and machinery.

The instructional program covers the following major areas: 1) agricultural mechanics, 2) field machinery and agricultural equipment, 3) materials handling equipment, 4) farm building, 5) electrical equipment and repair, and 6) the sales of equipment, machinery and parts.

II. Program Objectives

1. To help each student develop an appreciation of the growing occupational opportunities in the area of agricultural equipment sales and service and acquire, in high school, the experience that will assist him in formulating and progressing toward an occupational goal in this field.
2. To help each student develop an understanding of the mechanical design, machine operation and the appropriate use and care of agricultural equipment and machinery.
3. To help develop the skill and understanding necessary to enable him to serve as a consultant and salesperson for the sales, operation, maintenance and repair of agricultural machinery and equipment.

III. Related Background Experiences

Students considering this field might be encouraged to consider their past experience and present interest in working with people in the capacity of consultant, instructor and/or salesperson with regard to the selection, operation, and care of agricultural equipment.

Students will find it helpful to have basic knowledge and understanding of agricultural production. It is recommended that students considering this program have taken Vocational Agricultural I and II in grades nine and ten.

Industrial Arts and related home and farm experience in working with tools and equipment will help students identify their interest and aptitude for understanding and operating various types of machinery and equipment.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 624.; 277.

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Precision Working) (.781) p. 319
Merchandising (Demonstration and Sales Work) (.258; .358; .458) p. 488

V. Resources For Use In Orientation And Counseling

1. "Farm Equipment Industry Workers" (Occupational Brief #264)
   Science Research Associates
   Chicago, Illinois
2. Farm Equipment Dealership, Sales and Service Careers
   Institute for Research
   537 South Dearborn Street
   Chicago 5, Illinois

VI. Local Program Information

Garden Center Operation

I. Program Description

This program is provided for high school seniors interested in specialized training related to the functions involved in Garden Center operation. The classroom instruction and cooperative work experience aspects of the program focus on developing the skills and understandings necessary in advising consumers regarding the selection, planting and care of various plants, shrubs and trees, control of insects, pests and the purchase and use of various lawn and garden tools and equipment.

The cooperative work experience program is designed to supplement classroom instruction by providing students with part time paid work experience in a local garden center store during the school year and/or peak operating season.

II. Program Objectives

1. To help student develop a greater appreciation for the variety of tasks involved in garden center operation and to develop the competency needed to perform these tasks.
2. To help each student learn about the variety of agricultural products, chemicals, equipment, and tools used in the fertilization, protection and care of plants, shrubs, trees, and lawns and to become an effective advisor and salesperson in helping customers make appropriate selections and purchases.

III. Related Background Experiences

Students considering Garden Center Operation should have completed Basic and Advanced Horticulture in order to acquire the basic knowledge and experience needed for further specialization and to develop greater appreciation for the occupational tasks and role associated with the choice of Garden Center Operation and eventual work in this field.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Group 277.

Merchandising (Demonstration and Sales Work) (.258; .358; .458) p. 488

V. Resources For Use In Orientation And Counseling

1. Vocational Agriculture Service
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room G-16
   South Front Street, Columbus, Ohio 43215

VI. Local Program Information

Produce Processing and Marketing

I. Program Description

This program is provided for high school seniors interested in specialized training in the operation of fresh fruit and vegetable departments of wholesale and retail food stores. The classroom instruction and cooperative work experience focus on developing the skills and understandings necessary for selection, grading, pricing, and display of fruit and vegetables; establishing and maintaining good customer relationships and the business management of a produce department. Work experience will be provided through part-time supervised employment in a supermarket, wholesale or retail produce establishment.

II. Program Objectives

1. To help each student develop an appreciation for the responsibilities and varied tasks associated with Produce Processing and Marketing and the competency to perform the necessary functions of a produce department employee.
2. To help each student develop the skills and understandings needed to select, order, grade, display, package, weigh, price, and preserve the freshness of fruit and vegetables.
3. To help each student develop the ability to work efficiently with customers and manage the business aspects of produce marketing.

III. Related Background Experiences

Students considering Produce Processing and Marketing should have completed Basic and Advanced Horticulture in order to acquire the basic knowledge and experience needed for further specialization and to develop greater appreciation for the occupational tasks and role associated with the choice of Produce Processing and Marketing and eventual work in this field.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 262.; 290.

Merchandising (Demonstration and Sales Work) (.258; .358; .458) p. 488
Personal Service (Customer Service Work, N.E.C.) (.468; .478) p. 501

V. Resources For Use In Orientation And Counseling

1. Vocational Agriculture Service
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room G-16
   South Front Stteet, Columbus, Ohio 43215

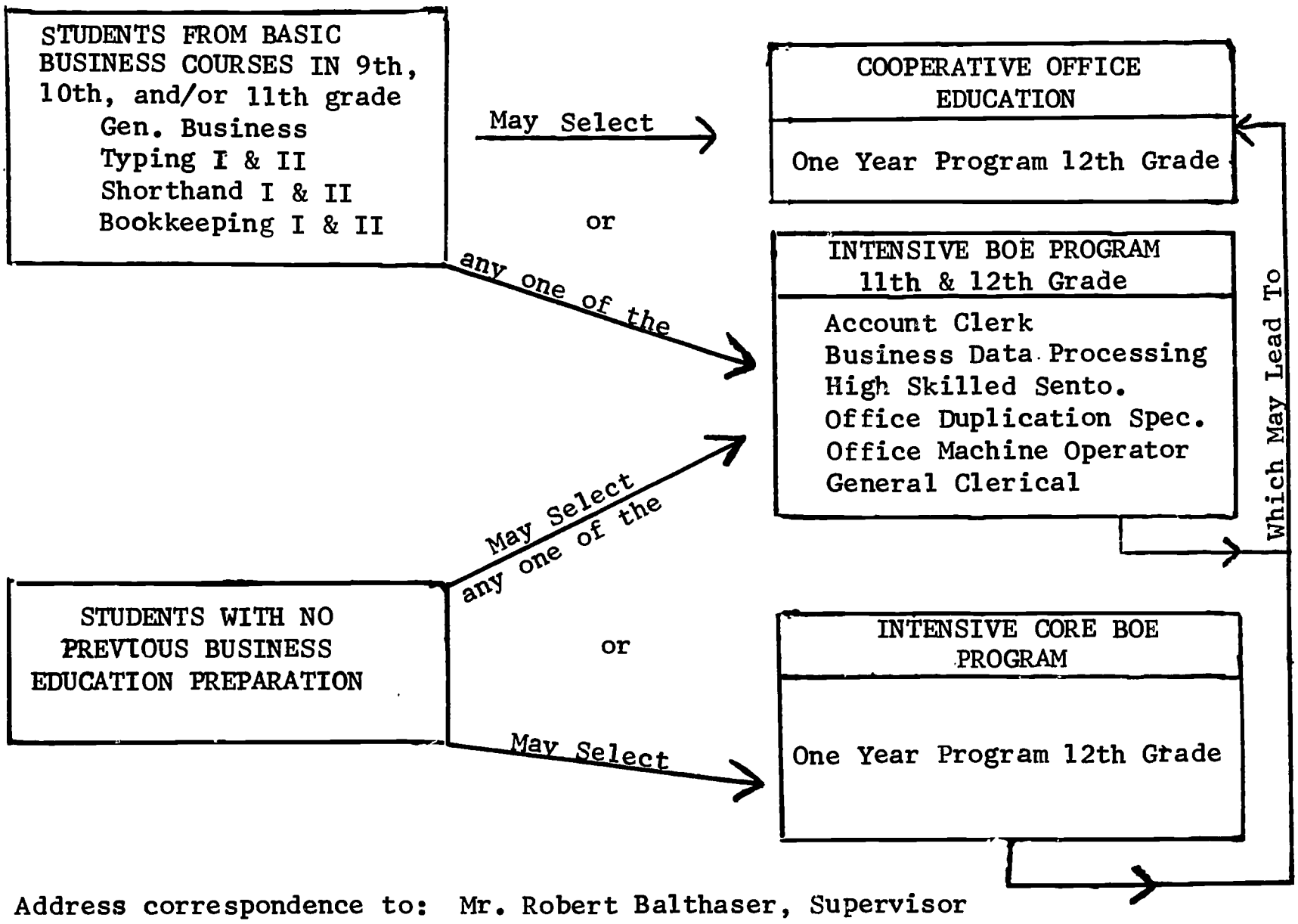
VI. Local Program Information

Business and Office Education

BUSINESS AND OFFICE EDUCATION

Opportunities for orientation and exploration in business education are often available to students as early as the ninth grade. Experiences in General Business, Business Math, Typing, Shorthand, Notehand, Bookkeeping, or Personal Typing may provide insights into both the "World of Business" and into the relationship between the pupil and the demands of the BOE curriculum. However, those students who decide to enter into the BOE program as late as the Senior year may be enrolled in the CORE program which is a one year program.

The Cooperative Office Education program may provide opportunities for actual work experience for qualified high achieving pupils from nearly every BOE program provided they have marketable skills and provided a cooperating employer can be found to employ them. This edition of OVEN does not contain programs for clerical services, DAVY (Disadvantaged Youth Programs), clerk-steno, or general office clerk. Details for these programs are available from the Division of Vocational Education.



Address correspondence to: Mr. Robert Balthaser, Supervisor
Business and Office Education
Division of Vocational Education
State Office Building, Room 611
South Front Street
Columbus, Ohio 43215

Telephone Number: (614) 469-3891

Account Clerk

I. Program Description

The accounting clerk business and office education program is provided for boys and girls interested in occupations related to bookkeeping and accounting. Classroom instruction and practice focus on developing the skills and understandings needed to keep records on fiscal affairs such as accounts payable, accounts receivable, profit and loss statements, reports and balance sheets, preparing payrolls, and handling bank deposits and withdrawals. Students completing the program usually find employment in banks, insurance companies, offices of various stores, businesses and industries or use the technical background in accounting as preparation for a college in certain fields of business or business and office education.

Course work in Business Law, Economics, Mathematics and Office Management, during the two year program, is designed to help the students develop specific competencies in bookkeeping, office machine operation, accounting and typing and a general understanding of the broader aspects of business and office work.

II. Program Objectives

1. To help each student develop an appreciation for the variety of occupational opportunities in business accounting and acquire the skills and understandings necessary for successful employment upon graduation from high school.
2. To help each student develop the technical skills necessary to keep day-to-day accounts of business transactions and fiscal reports in journals and ledgers and/or other various accounting forms and the ability to use adding and calculating machines, bookkeeping machines and other equipment.
3. To help each student develop a general understanding of the business field and the ability to perform the tasks related to general office work such as typing and filing.

III. Related Background Experiences

High school sophomores considering entering the Account Clerk Program for their high school junior business program might be encouraged to consider their present understandings about major tasks and general occupational role of people working in the accounting field and to identify and discuss possible occupational goals for them in their field.

Students might be encouraged to relate previous experience and achievement in arithmetic and mathematics courses and language arts to the goal of entering

the accounting field as a way of identifying interest and aptitude learning for the account's occupational role.

Courses that may be taken in preparation for entering the accounting clerk program which will provide added background and depth are General Business, Typing I and Algebra.

Helpful background experience may be acquired through serving as treasurer and keeping financial accounts of various school or civic organizations.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Two-Digit Occupational Division 21

Business Relations (Information Gathering, Dispensing, Verifying, and Related Work) (.368) p. 258
Clerical Work (Computing and Related Recording) (.388; .488) p. 280

V. Resources For Use In Orientation And Counseling

1. Business and Office Education
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room 611
   South Front Street, Columbus, Ohio 43215
2. Occupational Outlook Handbook, p. 287

VI. Local Program Information

Entry Business Data Processor

I. Program Description

This two-year program is designed to give boys and girls with occupational goals in the area of Data Processing a basic understanding of the business application of computers and the opportunity to develop competency in performing the tasks related to computer operation. Students will be provided experience that will help them understand the operation of a computer system, learn to read and use computer language, understand programming and develop skill in the ability to operate auxiliary data processing machines, work with cards and tapes, check for processing errors and wire a control panel. In addition, students will learn how to operate Key Punch equipment, Tabulating, and Sorting Machines. Classroom instruction includes course work in Data Processing, Bookkeeping, Accounting, Business Organization, Data Processing, and related Mathematics.

II. Program Objectives

1. To help each student develop an appreciation for the rapidly expanding occupational opportunities in the area of business data processing and acquire the skills and understandings necessary for successful employment at graduation or allow for the possibility of continuing post-high school technical or college training in various data processing specializations such as advanced programming, system analysis, or supervisory work.
2. To help each student learn the basic principles of computer systems and develop the skill to prepare computer input, operate computer related equipment, wire a plug board, interpret signals from light panels, recognize common errors in operation and interpret and evaluate output or print out.

III. Related Background Experiences

High school sophomore students considering Data Processing as a business education major for their junior and senior year might be encouraged to consider their present understandings about the major tasks and general occupational role of people working in this field as a way of helping them formulate and progress toward a personally chosen career goal in the data processing field.

Previous experience and achievement in arithmetic, mathematics, and language art may help the student evaluate his ability to learn to perform the major tasks

relating to occupations in data processing and secure eventual employment in the field.

High school courses that may be taken prior to entering the Data Processing Program which would help student evaluate their occupational goals in this area and provide them with related background are: General Business, Typing I and Algebra.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Group 213.

Clerical Work (Tysetting, Reproducing, and Related Machine Work) (.382; .582) p. 274
Clerical Work (Typing and Related Recording) (.588) p. 287
Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. Data Processing Management Association
   524 Busse High
   Parkridge, Illinois 60058
2. Association for Computing Machinery
   211 East 43rd Street
   New York, New York 10017
3. Business and Office Education
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room 611
   South Front Street, Columbus, Ohio 43215
4. Occupational Outlook Handbook, p. 295

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

High Skill Stenographer, Legal Stenographer,
Medical-Dental Stenographer/Entry Secretary

I. Program Description

The two-year Stenographer-Secretary business education major is provided for high school junior and senior students interested in acquiring the training in high school that will enable them to work as stenographers or secretaries in business offices, legal firms, banks, insurance companies, doctor's offices and various government and industrial offices. Students in this program will receive over twenty hours per week of instruction and related work in such courses as Shorthand, Typing, Business Law, Office Machines, Economics and Office Management. Those interested in becoming Legal and Medical-Dental Stenographers will receive specialized training in appropriate vocabulary.

II. Program Objectives

1. To help each student develop an appreciation for the major aspects of a stenographer's and secretary's occupational role, and to acquire the experience necessary to formulate and progress toward a personal career goal in this field and to acquire the skills and understandings necessary to qualify for employment as an entry secretary or stenographer upon graduation.
2. To help each student acquire the following technical background and occupational skills: 1) take dictation in shorthand at a rate of 120 words per minute, 2) attain typing speed of 50 words per minute, 3) transcribe shorthand notes at a rate of 25 words per minute, 4) operate various types of office machines, 5) be able to file material using standard office procedures, and 6) understand the basic operation and management of a business office.

III. Related Background Experiences

High school sophomores considering a business education major in the Stenographic Secretarial Program during their junior and senior year might be encouraged to evaluate their present understanding of and interest in performing the major tasks and adopting the occupational role of a stenographer or secretary. An evaluation of past experience and school achievement in language art (spelling, vocabulary and grammar) would be important as a means of identifying the possible aptitude necessary to learn to perform the major tasks of a secretary.

Helpful experience may be acquired in high school by assisting teachers in the preparation and duplication of instructional materials and examinations and by serving as secretaries in various school organizations.

Courses that may be taken in preparation for entry into a major Stenographer-Secretary course in high school are General Business, Typing I and if possible Bookkeeping I.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer To Three-Digit Occupational Group 201.

Clerical Work (Secretarial and Related Work) (.268; .368) p. 263

V. Resources For Use In Orientation And Counseling

1. United Business Schools Association
   1518 K Street, N. W.
   Washington, D. C. 20005
2. Business and Office Education
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room 611
   South Front Street, Columbus, Ohio 43215
3. Occupational Outlook Handbook, pp. 281-284

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Office Duplication Specialist

I. Program Description

This program is provided for high school junior and senior students interested in learning the necessary skills and understandings related to duplicating materials for office and business use. This program of instruction in Office Duplicating includes learning to set up, operate, adjust and maintain office duplication equipment; to operate composing equipment such as a headliner, varityper and electric typewriter; make masters with photo copying equipment and by burning plates; to operate an offset duplicating machine and perform such related tasks as cutting, punching, stapling, binding, and collating. In addition, related experience is provided in courses such as Office Printing, Office Management, and Typing.

II. Program Objectives

1. To help each student develop an appreciation for the variety of occupational opportunities in office duplicating and to acquire the skills and understanding necessary to operate office duplicating equipment and perform the tasks necessary for employment after graduation.
2. To help each student become proficient in the process of reproducing printed matter with a fluid duplicator, mimeograph machine, offset printing press and various copying machines.
3. To help each student develop the ability to type at a rate of 40 words per minute on a standard typewriter and to be able to use the headliner, varitype and selectric typewriter.
4. To help each student learn to prepare various materials for duplication and to perform various operations such as cutting, punching, collating, stapling, folding, binding, and addressing.

III. Related Background Experiences

High school students considering the field of Office Duplicating might be encouraged to consider their present understanding and ideas about the occupational role and tasks associated with the operation of machines for reproducing printed materials for office use.

High school courses that may be taken prior to starting a business major in Office Duplication would be General Business, Typing, and if possible Art.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Group 207.

Crafts (Manipulating) (.884) p. 322
Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. Clerical Occupations for Women, Today and Tomorrow (Women's Bureau Bulletin 289, 1964) Superintendent of Documents, Washington, D. C. 20402, Price 35 cents.
2. Business and Office Education
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room 611
   South Front Street, Columbus, Ohio 43215
3. Occupational Outlook Handbook, p. 293

VI. Local Program Information

I. Program Description

This is a two-year program designed to give students with occupational goals in business and special interest in working with office machines the opportunity to develop the skills and understandings needed for work with calculating, adding/listing and billing machines and other related office equipment. The instructional program includes additional course work in Business Law, Business Machinery, Economics, and Business Management. Students may also receive basic instruction relating to understanding Data Processing.

II. Program Objectives

1. To help each student develop an appreciation for the variety of occupational opportunities in the field of office equipment operation and to provide him with the skills and understanding required for employment upon graduation.
2. To help each student become proficient in the operation of calculator, billing machines, addition and listing machines, and be able to perform various office reports and business payrolls and to be able to work with and interpret business statement data.

III. Related Background Experiences

High school sophomores considering office machine operating as their business major for their junior and senior year might be encouraged to visit various businesses and learn more about the major tasks and occupational role of persons working in this area. They may be helped to relate the understanding to their own career goals in their fields.

Students should consider their interest and aptitude for working with highly specialized office equipment and paying close attention to columns of numbers and figures.

Courses that may be taken in preparation for the Office Machine Operator Program are General Business, Bookkeeping I, Typing I, and Algebra.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 203.; 207.; 208.; 216.; 217.; 234.

Clerical Work (Typesetting, Reproducing, and Rel. Mach. Wk. (.382; .582) p. 274
Clerical Work (Computing and Related Recording) (.388; .488) p. 280
Clerical Work (Typing and Related Recording) (.588) p. 287
Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. Clerical Occupations for Women, Today and Tomorrow (Women's Bureau Bulletin 289, 1964) Superintendent of Documents, Washington, D. C. 20402, Price 35 cents.
2. Business and Office Education
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room 611
   South Front Street, Columbus, Ohio 43215
3. Occupational Outlook Handbook, p. 292

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Intensive 12th Grade CORE
Programs in Business and Office Education

I. Program Description

This is a special concentrated business education program provided for capable high school students who have changed their educational plans during either the tenth or eleventh grade and are interested in preparing for an occupation in the business field. The program consists of a full day of classroom instruction and practice in office education (exclusive of other required courses) for the first semester and during the second semester students who have acquired the necessary skills will be able to participate in the supervised cooperative work experience part of the program to gain practical experience. The intensive nature of the training requires that the student who enters to be highly motivated, possess high ability and be willing to invest a great deal of time in study and practice to develop the understanding and skills necessary for successful employment. The goals of the program may be adjusted to some degree to meet the special needs and employment objectives of the student.

II. Program Objectives

1. To help each student acquire through concentrated instruction and practice the skills and understanding needed to perform the major functions of a general office worker or secretary.
2. To help each student attain the minimum skills necessary to qualify for cooperative work experience in the last part of his senior year. The skills to be attained are typing of 40 words a minute and 60 words a minute for students who need or desire shorthand.

III. Related Background Experiences

Students considering this business education program should be encouraged to evaluate possible career goals in the business and office area.

The intensive nature of the program requires that a student be highly motivated and above average in academic ability. Students should be encouraged to evaluate this choice in terms of a clear understanding of course demands and his interest and ability to learn the necessary skills in a minimum period of time. Previous course work related to Business Education will be helpful, particularly Typing and General Business.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Two-Digit Occupational Division 20

Business Relations (Corresponding and Related Work) (.288; .388) p. 256
Business Relations (Information Gathering, Dispensing, Verifying, and Related Work) (.368) p. 258
Clerical Work (Secretarial and Related Work) (.268; .368) p. 263
Clerical Work (Typesetting, Reproducing, and Related Machine Work) (.382; .582) p. 274
Clerical Work (Classifying, Filing, and Related Work) (.388) p. 278
Clerical Work (Typing and Related Recording) (.588) p. 287

V. Resources For Use In Orientation And Counseling

1. United Business Schools Association
   1518 K Street, N. W.
   Washington, D. C. 20005
2. Business and Office Education
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room 611
   South Front Street, Columbus, Ohio 43215
3. Occupational Outlook Handbook, pp. 281-285

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Cooperative Office Education

I. Program Description

Cooperative Office Education (COE) is a terminal program in business education provided for individuals who have previously completed part of the course work toward a stenography, bookkeeping or clerical business education major and who are presently interested in participating in supervised part-time office employment as a means of making the transition from the school business program into full-time employment at graduation. At the beginning of the COE program each student will make application for employment, have employment interviews and obtain a job in one of the cooperating local businesses. The student's work experience will be supervised by the teacher-coordinator and the in-school COE classroom instruction will focus on the information and skills needed by class members at their various places of employment.

In addition to the special COE courses students will have an additional course in Secretarial, Office or Clerical Practice and be required to take any other high school course needed for graduation.

II. Program Objectives

1. To help each student develop a greater appreciation for occupations in the field of business and to formulate and progress toward an occupational goal in this area.
2. To help each student improve skills previously learned as well as develop the new competencies required as part of their work experience job demands and occupational success.
3. To help each student develop a basic understanding of business organization and office precedures.
4. To help each student make a successful transition from the school business education program to full-time employment in a business occupation.
5. To help student relate, integrate and apply the knowledge and skills learned in school to the experiences and tasks encountered on the job.

III. Related Background Experiences

The suggested sequence of high school courses that would enable students interested in entering the COE program to profit to the greatest degree would be taking General Business in the ninth grade; Typing I and Business Arithmetic in grade ten; and Typing II and Shorthand or Bookkeeping in the eleventh grade. This preparation would allow the student to continue to pursue his occupational goal by taking Secretarial, Clerical or Office Practice and receiving COE work experience during the senior year. (Students who do not meet these requirements will be required to have special permission from the principal and coordinator to enroll in the COE program. Certain students may qualify to transfer from an eleventh grade Intensive BOE program to COE.)

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Two-Digit Occupational Division 20

Business Relations (Corresponding and Related Work) (.288; .388) p. 256
Business Relations (Information Gathering, Dispensing, Verifying, and Related Work) (.368) p. 258
Clerical Work (Secretarial and Related Work) (.268; .368) p. 263
Clerical Work (Typesetting, Reproducing, and Rel. Mach. Wk.) (.382; .582) p. 274
Clerical Work (Classifying, Filing, and Related Work) (.388) p. 276
Clerical Work (Computing and Related Recording) (.388; .488) p. 280
Clerical Work (Typing and Related Recording) (.588) p. 287

V. Resources For Use In Orientation And Counseling

1. Film "V.O.T."
   Business and Office Education
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room 611
   South Front Street, Columbus, Ohio 43215
2. Occupational Outlook Handbook, pp. 281-295

VI. Local Program Information

Distributive Education

DISTRIBUTIVE EDUCATION

Distributive Education provides cooperative work experience as an integral part of the education program. Within each of the three plans (Plan A, Plan B, or Plan C) under which Distributive Education is carried out in the schools of Ohio the work training experience includes a minimum of 15 hours a week in paid employment. Employment as a stock boy, order clerk, wrapper or packer, delivery or carry-out boy are entry positions leading to the sales person position, positions in display and advertising, mid-management positions, etc. Other distributive occupations include waitress and service station attendent trainee. Distributive Education occupations may be found in such places as a supermarket, grocery, hardware, clothing, variety or discount store, a restaurant, service station, motel or other place of business.

The student, employer and teacher-coordinator meet together at the start of the program and develop a "training plan" for the student and employer to follow. The plan will help insure that over the period of employment the student will have opportunity to become familiar with and gain experience in working in several phases of the business. The teacher-coordinator visits the student and employer periodically during student working hours to evaluate progress and help plan new work experiences.

Distributive Education students are expected to take regular courses of English, history, and social studies during their junior and senior year in high school and must secure a Working Permit for participation in the cooperative work experience program. In addition, there is usually the opportunity to belong to the Distributive Education Club of America (DECA) as part of their extra-curricular school activities.

Address correspondence to: Mr. Bernard C. Nye, Supervisor
Distributive Education Section
Division of Vocational Education
The Ohio Department of Education
Tonti Building
34 North High Street
Columbus, Ohio 43215

Telephone Number: (614) 469-3494

OHIO VOCATIONAL EDUCATION NOTEBOOK

Distributive Education
Retailing, Wholesaling, Service Businesses

I. Program Description

PLAN A provides high school junior and senior students, 16 years of age or older with a two-year program of classroom instruction and cooperative work experience as preparation for occupations in the field of marketing and the distribution of goods and services. Students work closely with their Distributive Education (D.E.) teacher-coordinator both in class and in carefully planned and supervised half-day work experience employment.

Classroom work includes one period daily for study of the principles of business operation - store location, organization, personnel, maintenance, merchandising, advertising and selling; product information - materials, manufacturing, care, selling price, price lines and consumer benefits; and salesmanship - customer identification, sales training, sales personality, merchandising knowledge, sales approach, sales techniques, sales systems, commissions and selling as a career.

PLAN B provides high school senior students, 16 years of age or older with a one-year program of classroom instruction and cooperative work experience as preparation for occupations in the field of marketing and the distribution of goods and services. Students work closely with their Distributive Education (D.E.) teacher-coordinator both in class and in carefully planned and supervised half-day work experience employment.

Classroom work includes two periods daily for study of the principles of business operation - store location, organization, personnel, maintenance, merchandising, advertising and selling; product information - materials, manufacturing, care, selling price, price lines and consumer benefits; and salesmanship - customer identification, sales training, sales personality, merchandising knowledge, sales approach, sales techniques, sales systems, commissions and selling as a career.

PLAN C provides high school junior and senior students, 16 years of age or older with a two-year program of classroom instruction and one year of cooperative work experience as preparation for occupations in the field of marketing and the distribution of goods and services. Students work closely with their Distributive Education (D.E.) teacher-coordinator both in class and in carefully planned and supervised half-day work experience employment.

Classroom work includes one period daily for study of the principles of principles of business operation - store location, organization, personnel, maintenance, merchandising, advertising and selling; product information - materials, manufacturing, care, selling price, price lines and consumer benefits; and salesmanship - customer identification, sales training, sales personality, merchandising knowledge, sales approach, sales techniques, sales systems, commissions and selling as a career.

II. Program Objectives

1. To help each student become familiar with the total field of merchandising and distribution of goods and services.
2. To help each student gain experience in the application of the basic knowledge and principles of business operation, product information and sales, and to develop the ability to judge the value of various products and services and methods of distribution.
3. To provide each student with a planned and supervised intensive sample work experience in an area of marketing or distribution as part of his high school educational program.
4. To help each student develop appreciation for the variety of occupations in the field of marketing and the distribution of goods and services through examination of employment and advancement opportunities and a greater awareness of the life styles of the people working in these occupations.
5. To help each student develop greater respect for the American consumer and acquire skill and understanding in becoming an effective advisor in helping meet customer needs and promote customer satisfaction.

III. Related Background Experiences

Students might be encouraged to consider and discuss their present knowledge and understandings of various stores and business operations and to share their ideas regarding the different occupational life styles existing within the field.

Helpful experience may be acquired in helping organize, advertise, promote, decorate and/or sell tickets for school programs and events, delivery and sales of newspapers, magazines, cards, candy, etc., through regular neighborhood employment in care of lawns, gardens, children, etc., participation in activities or sales related to school or local charities, and involvement in various demonstration or service types of projects or activities.

High school courses that may be taken during the ninth and tenth grade that may provide helpful background and related experience include: General Business, Economics, Business Math, Bookkeeping, Typing, Speech, Consumers' Problems, Retail Selling, Art, Home Economics, and Industrial Arts.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Two-Digit Occupational Divisions 26, 27, and 28

Merchandising (Demonstration and Sales Work) (.258; .358; .458) p. 488

V. Resources For Use In Orientation And Counseling

1. Films "DE STORY" and "DE in Virginia,"
   Distributive Education
   Division of Vocational Education
   Ohio Department of Education
   Tonti Building, Room 611
   34 North High Street
   Columbus, Ohio 43215
2. "Counselor's Guide to Distributive Occupations" - State of Nebraska
   Division of Vocational Education, Lincoln, Nebraska
3. Ohio State Employment Service, (Local Office)
4. Council on Opportunities in Selling, Inc.
   630 Third Avenue
   New York, New York 10017
5. Occupational Outlook Handbook, pp. 306, 317, 319

VI. Local Program Information

DE Coordinator's name, address, and phone number

(Names and addresses of Cooperating Employers)

Vocational Home Economics

VOCATIONAL HOME ECONOMICS

There are two basic program types within vocational home economics at the secondary level. One type focuses on education for the homemaker and the other focuses on education for gainful employment. The needs of the school, its students, and the community should be considered in making decisions about program offerings.

Types of Programs

Type I Home Economics Education programs leading to useful employment in the home; comprehensive 2, 3, and 4 year programs; classes in family living for boys and girls; home economics for 11th or 12th grade girls whose major is either academic or commercial (and who have had no previous home economics); classes for slow learners; as well as other semester or year long courses.

Type II Home Economics Education programs leading to gainful employment; food service workers; child care aids and assistants; home and community service aids; health service aids; clothing service workers; upholstery service workers, and diversified cooperative training.*

Address correspondence to: Miss Margaret McEniry, Supervisor
Vocational Home Economics
Division of Vocational Education
The Ohio Department of Education
State Office Building, Room G-15
South Front Street
Columbus, Ohio 43215

Telephone Number: (614) 469-3046

* Manual of Operation: Vocational Home Economics, January 1967

OHIO VOCATIONAL EDUCATION NOTEBOOK

Homemaking
Home Economics I - Comprehensive

Length of Course: 1 year with a minimum of 7 (45 minute) periods or 5 (55-60 minute) periods weekly

Credit: $1\frac{1}{4}$ credits (with planned student home project program)

Student Prerequisites: None

I. Program Description

The program is devoted to all areas of homemaking and includes: Home Management, Consumer Buying, Family Economics; Personal, Family and Community Relations; Child Development; Foods, Nutrition, and Health; Clothing, Textiles, and Related Arts; Housing, Home Furnishings, and Equipment. The length of time spent studying each of these topics varies from 2 - 12 weeks.

II. Vocational Performance Skills Which Are Goals of the Training Program

A. Explain and define home management terms and concepts.
B. Demonstrate an understanding of children necessary for babysitting.
C. Demonstrate the relationship of diet to health and appearance.
D. Prepare food skillfully.
E. Practice habits of pleasing personal grooming.
F. Select, construct, and care for clothing.
G. Relate family interests, needs, convenience, and comfort to the concept of a home.
H. Demonstrate cooperativeness both at home and in school.
I. Arrange furniture and space appropriately for various activities.

III. Resources For Use In Orientation and Counseling

1. "Chart Suggesting Scope and Sequence for a Vocational Homemaking Program," (1956) and Revised Curriculum (1966), Vocational Home Economics, Division of Vocational Education, The Ohio State Department of Education, State Office Building, South Front Street, Columbus, Ohio 43215.

IV. To Whom Offered

Students with no previous high school home economics.

OHIO VOCATIONAL EDUCATION NOTEBOOK

Homemaking
Home Economics II - Comprehensive

Length of Course: 1 year with a minimum of 7 (45 minute) periods or 5 (60 minute) periods weekly

Credit: $1\frac{1}{4}$ credits (with planned student home project program)

Student Prerequisites: Home Economics I - Comprehensive

I. Program Description

This program is a comprehensive one covering all areas of Home Economics. It has been planned so as to build on concepts from 7th and/or 8th grade Home Economics as well as Home Economics I. The time spent in each area of the comprehensive program ranges from 4 to 12 weeks in length.

II. Vocational Performance Skills Which Are Goals of the Training Program

A. Practice work-simplification principles and demonstrate effective consumer buying techniques.
B. Learn social skills required in wholesome family living.
C. Demonstrate appropriate child guidance in caring for children.
D. Plan, purchase, prepare, and serve nutritious meals for people of all ages.
E. Sew skillfully and efficiently.
F. Select personal clothing with good taste.
G. Demonstrate skill in appropriate techniques of laundering a family size wash.
H. Show evidence of skill in making a home attractive.

III. Resources For Use In Orientation and Counseling

1. "Chart Suggesting Scope and Sequence for a Vocational Homemaking Program," (1956) and Revised Curriculum (1966), Vocational Home Economics, Division of Vocational Education, The Ohio State Department of Education, State Office Building, South Front Street, Columbus, Ohio 43215.

IV. To Whom Offered

Tenth, 11th or 12th grade students who are planning to complete a major or minor in Vocational Home Economics.

OHIO VOCATIONAL EDUCATION NOTEBOOK

Homemaking
Advanced Home Economics - Comprehensive

Length of Course: 1 year with a minimum of 5 (45 minute) periods or 5 (60 minute) periods per week.

Credit: $1\frac{1}{4}$ credits (with a planned home project program).

Student Prerequisites: Home Economics I and II Comprehensive.

I. Program Description

Learning experiences taken from all areas of Home Economics focus on present and future family needs. Time allotment in each area of study ranges from 4 to 10 weeks.

II. Vocational Performance Skills Which Are Goals of the Training Program

A. Write or speak with effectiveness and accuracy about management practices for homemakers serving in multiple roles of wage earner, mother, and community member.
B. Demonstrate management skill in family finance.
C. Identify the responsibilities of parenthood.
D. Guide and direct children's behavior while in a nursery school setting. (If nursery school experience is not a possibility, then kindergarten observation may be used.)
E. Identify cultural, social and aesthetic values of foods.
F. Plan and prepare food to meet special nutritional needs.
G. Identify the scientific, economics and cultural aspects of textiles and clothing.
H. Use textiles and construction techniques which reflect creativity and are characterized by possessing aesthetic qualities.
I. Identify future housing needs.
J. Evaluate floor plans from various dwellings.
K. Plan kitchens for efficiency.
L. Make wise selection of equipment and home furnishings for various dwellings.

III. Resources For Use In Orientation and Counseling

1. "Chart Suggesting Scope and Sequence for a Vocational Homemaking Program," (1965) and Revised Curriculum (1966), Vocational Home Economics, Division of Vocational Education, The Ohio State Department of Education, State Office Building, South Front Street, Columbus, Ohio 43215.
2. State Department of Education, Division of Vocational Education, Revised Curriculum (1966).

IV. To Whom Offered

Eleventh or 12th grade students who are completing a major in Vocational Home Economics and those who choose to continue study in all areas of Home Economics.

OHIO VOCATIONAL EDUCATION NOTEBOOK

Homemaking
Semester Courses to Develop Advanced Skills

Length of Course:	1 semester in each subject matter area with a minimum of 5 (45 minute) periods or 5 (60 minute) periods per week.
Credit:	$\frac{1}{2}$ credit with planned projects related to the area.
Student Prerequisites:	1 year of Comprehensive Home Economics or equivalent is recommended for food and clothing areas. No prerequisites are required for other areas.

I. Program Description

Learning experiences will be centered within one of the specialized areas of Home Economics such as food, clothing, or family management. Activities are similar to the ones planned for Advanced Home Economics - Comprehensive, but with more depth because of the increased time devoted to the specific area. Selection of the area of study according to the semester offerings of the local high school is sometimes possible. In other schools learning experiences are planned in response to the needs of class members.

II. Vocational Performance Skills Which Are Goals of the Training Program

A. Management: Increase understandings in (1) the meaning of management; (2) work simplification; (3) consumer buying; and (4) family finance. Apply management principles when a homemaker serves in multiple roles.
B. Child Development: Develop understandings about children, their basic needs, developmental stages, individual differences and influences of heredity and environment. Increase abilities to guide children in their physical, mental, and social development. Apply learning through observation of children.
C. Food and Nutrition: Increase skill in food preparation and service. Prepare normal and special diets for all ages. Develop ability in food management. Understand new developments in food and nutrition.
D. Clothing, Textiles and Related Art: Develop a working knowledge of textiles and advanced skills in sewing.
E. Housing and Home Furnishings: Develop an understanding of family housing needs.
F. Applicable to all subject matter areas: Investigate employment opportunities and requirements.

III. Resources For Use In Orientation and Counseling

1. "Chart Suggesting Scope and Sequence for a Vocational Homemaking Program," (1965) and Revised Curriculum (1966), Vocational Home Economics, Division of Vocational Education, The Ohio State Department of Education, State Office Building, South Front Street, Columbus, Ohio 43215.
2. State Department of Education, Division of Vocational Education, Revised Curriculum (1966).

IV. To Whom Offered

Junior or Seniors in High School who desire one semester in a specialized area of Home Economics.

OHIO VOCATIONAL EDUCATION NOTEBOOK

Homemaking
Junior-Senior Non-major Home Economics

Length of Course: 1 year with a minimum of 5 periods per week (45 and/or 60 minutes)

Credit: $1\frac{1}{4}$ credits (with a planned student home project program)

Student Prerequisites: None

I. Program Description

This program is planned to include the study of all areas of home economics. The emphasis will be on the development of good homemaking skills for non-home economics majors. Six subject matter areas make up the major part of the program. Home Management; Personal, Family, and Community Relations; Child Development; Foods, Nutrition, and Health; Clothing, Textiles, and Related Arts; Housing, Home Furnishings, and Equipment.

II. Vocational Performance Skills Which Are Goals of the Training Program

A. Practice effective management principles, demonstrate work simplification methods, and engage in marketing and shopping which reflects an adequate group of principles of consumer buying.
B. Identify the multiple roles of the modern adult.
C. Identify the developmental stages and individual needs of children.
D. Recognize community resources for parent use.
E. Develop a plan for family food and nutrition needs for family members of all age groups.
F. Select, prepare, and serve food skillfully, efficiently, and economically.
G. Apply management principles to food purchasing and preparation.
H. Analyze clothing needs of self and family.
I. Select, repair, and care for one's personal clothing.

III. Resources For Use In Orientation and Counseling

1. "Chart Suggesting Scope and Sequence for a Vocational Homemaking Program," (1956) and Revised Curriculum (1966), Vocational Home Economics, Division of Vocational Education, The Ohio State Department of Education, State Office Building, South Front Street, Columbus, Ohio 43215.

IV. To Whom Offered

Juniors or Seniors with no previous high school home economics courses.

Homemaking
Family Living

Length of Course: 1 year with a minimum of 5 periods per week (45 and/or 60 minutes)

Credit: $1\frac{1}{4}$ credits (with planned student home project program)

Student Prerequisites: None

I. Program Description

Family living is a homemaking program designed for both boys and girls. The program is flexible enough to meet the needs and interests of those in the program. The family living curriculum is oriented toward sociology and economics of family living.

II. Vocational Performance Skills Which Are Goals of the Training Program

A. Demonstrate a growth in self-awareness.
B. Identify the functions of the family.
C. Identify the responsibilities of an adult in the modern family.
C. Identify the responsibilities of a parent in the modern family.
E. Contribute to wholesome family relations through participation in family life as a loving, caring, and sharing member.

III. Resources For Use In Orientation and Counseling

1. "Chart Suggesting Scope and Sequence for a Vocational Homemaking Program," (1956) and Revised Curriculum (1966), Vocational Home Economics, Division of Vocational Education, The Ohio State Department of Education, State Office Building, South Front Street, Columbus, Ohio 43215.

IV. To Whom Offered

Open to both boys and girls. (Not recommended for students who have completed or are taking Home Economics I, II, or Advanced Home Economics - Comprehensive)

OHIO VOCATIONAL EDUCATION NOTEBOOK

Job Training

Child-Care Aid

(Cooperative Training Program)

I. Program Description

The Child-Care Aid assists professional Nursery School teacher or Day-Care Center supervisory personnel in caring for children while at school or in the center.

The Child-Care Aid, cooperative training program, involves one and one-half hours daily of in-school study and 15 hours weekly in a laboratory, nursery or a work station. This program is either a senior program or the first year of a combination program of Child-Care Aid and another job training program. When planning a two year program enroll in the Child-Care Aid program one year and then enroll in another job training program another year. Opportunities for employment are increased as a consequence of the two year combination.

Child growth and development, human relations, food for young children and effective operation of a nursery school are typical of the titles used to describe learning content in the Child-Care Aid program. Skills, habits, and concepts derived from this program provide a basis upon which to assume the responsibilities of a mother and homemaker as well as the responsibilities of a Child-Care Aid.

II. Program Objectives (Students will learn to:)

1. Communicate effectively with children and nursery supervisory personnel.
2. Work effectively and efficiently under supervision.
3. Supervise children at play, when eating, while resting, and when toileting.
4. Supervise activities such as painting, clay molding and other arts or crafts.
5. Provide young children with opportunities to develop self-discipline and self-direction.
6. Provide opportunities for children to learn to get into and out of outer garments such as hats, coats, and over-shoes.
7. Provide children with experiences in learning to pick up and put toys and books in appropriate places after they have used them.
8. Assist in keeping the nursery or day-care center clean, safe and attractive.
9. Practice accident prevention while supervising children in the nursery or on the playground.

III. Related Background Experiences

Home Economics in either Junior or Senior High School.

Babysitting at home or in the homes of neighbors.

Courses in Health, Safety Education, or First Aid.

Courses in Art or experiences in handicrafts.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Child Care Attendant 355.878
Child Care Attendant 359.878

Medicine and Health (Child and Adult Care) (.878) p. 479

V. Resources For Use In Orientation And Counseling

1. Christianson, Helen W.; Rogers, Mary M.; and Ludlum, Blanche, "The Nursery School, Adventure in Living and Learning," Houghton Mifflin Co., 1961.
2. Reed, Katherine H., The Nursery School, A Human Relations Laboratory, W. B. Saunders Co., 1960.
3. "Pre-school Guide," Pruett Press, Inc., Colorado Association of Future Homemakers of America, (available from Mrs. Leah W. Little, Box 413, Johnstown, Colorado, 80534).
4. National Association for Nursery Education
   155 East Ohio Street
   Chicago 11, Illinois
5. Children's Bureau Publication Number 420-1964, U. S. Department of Health, Education, and Welfare, Washington, D. C.
6. Preparing for Employment in Child Care Services in Pennsylvania Schools, Harrisburg, Pennsylvania.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Job Training

Child-Care Assistant

(Cooperative Training Program)

I. Program Description

The Child-Care Assistant works with professional Nursery School teachers or with Day-Care Center supervisory personnel in caring for children while at school or at the center. The Child-Care Assistant, cooperative training program, is a two-year program. During the first year one period each day is devoted to study, and one-half day is spent in observation and laboratory experiences. The second year of the program includes one daily period of in-school study and one-half day each day at work in a child-care center.

The one daily period of in-school study during each of the two years provide an opportunity to develop an understanding of child growth and development, human relations, nutrition for children, and effective operation principles of a nursery school. The first year of the program supplements the one period of in-school study with one-half day each day of observation, study, and work with children in a nursery school under the supervision of a professional person. The second year of the program supplements the one daily period of in-school study with a half-day each day of work in a child care center.

The Child-Care Assistant program differs from the Child-Care Aid program in both length and in objectives. Child-Care Assistants are expected to assume more responsibilities than the Child-Care Aids. These two programs are similar in that each program provides cooperative training in a work station.

II. Program Objectives (Students will learn to:)

1. Plan, organize, and conduct a program of learning experiences for pre-school children in a nursery school.
2. Promote cooperative relationships between the home and the nursery school.
3. Provide experiences designed to permit children to grow in maturity in social relationships, emotional control, physical skills, and learning attitudes.
4. Insure the effective operation of the nursery school in keeping with its educational objectives.
5. Achieve the program objectives of the Child-Care Aid program.

III. Related Background Experiences

Home Economics in either Junior or Senior High School.

Babysitting at home or in the homes of neighbors.

Courses in Health, Safety Education, or First Aid.

Leadership experiences in school or church organizations or in clubs.

Courses in Art or experiences in handicrafts.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Teacher, Nursery School 359.878

Medicine and Health (Child and Adult Care) (.878) p. 479

V. Resources For Use In Orientation And Counseling

1. Christianson, Helen W.; Rogers, Mary M.; and Ludlum, Blanche, "The Nursery School, Adventure in Living and Learning," Houghton Mifflin Co., 1961.
2. Reed, Katherine H., The Nursery School, A Human Relations Laboratory, W. B. Saunders Co., 1960.
3. "Pre-school Guide," Pruett Press, Inc., Colorado Association of Future Homemakers of America, (available from Mrs. Leah W. Little, Box 413, Johnstown, Colorado, 80534).
4. National Association for Nursery Education
   155 East Ohio Street
   Chicago 11, Illinois
5. Children's Bureau Publication Number 420-1964, U. S. Department of Health, Education, and Welfare, Washington, D. C.
6. Preparing for Employment in Child Care Services in Pennsylvania Schools, Harrisburg, Pennsylvania.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Job Training

Clothing Service Aid

(Cooperative Training Program)

I. Program Description

Clothing Service Workers work in the constructing, and repairing, cleaning and storing of garments and apparel. The Clothing Service Worker cooperative training program may be either one or two years in length. Well developed sewing skills prior to the training program are required of all who intend to enter this program.

One daily class period is devoted to learning experiences which include the use and care of sewing machines and equipment; how to fit, alter, repair and construct garments; as well as cleaning, pressing and storing clothing. One-half day each day is devoted to work away from school at a work station provided by a cooperating employer.

The Clothing Service Worker program may be the second of a two year sequence in which the Drapery, Slip Cover and/or Upholstery Seamstress is the first. Well developed sewing skills are also required prior to entry into this sequence of programs.

II. Program Objectives (Students will learn to:)

1. Lay out and assemble garments from a pattern.
2. Fit and alter garments.
3. Select textiles appropriate for specific garments.
4. Operate and care for sewing machine.
5. Identify the appropriate cleaning, spotting, and pressing technique required for textiles typically used in garment construction.

III. Related Background Experiences

A Home Economics program in which sewing skills become well developed.

Constructing garments either at home or in school.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Two-Digit Occupational Division 36

Clerical (Computing and Related Recording) (.488) p. 280
Clerical (Sorting, Inspecting Measuring, and Related Work) (.587 and .687) p. 282

Refer to Three-Digit Occupational Group 782.

Crafts (Precision Working) (.781) p. 319
Crafts (Manipulating) (.884) p. 322

Refer to Three-Digit Occupational Groups 782. and 786.

Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. Amalgamated Clothing Workers of America
   15 Union Square
   New York, New York 10003
2. American Apparel Manufactures Association, Inc.
   2000 "K" Street, N. W.
   Washington, D. C. 20006
3. United Garment Workers of America
   31 Union Square
   New York, New York 10003
4. Occupational Outlook Handbook, p. 582
5. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Job Training

Drapery, Slip Cover and/or Upholstery Service Aid

(Cooperative Training Program)

I. Program Description

The Drapery, Slip Cover and/or Upholstery Worker program is one which requires well developed sewing skills prior to entry. It is a one year cooperative training program to prepare Drapery Seamstresses, Slip Cover Seamstresses or Upholstery Seamstresses. One daily class period is devoted to experiences which involve the use and care of textiles typically used on drapery construction as well as furniture slip covering and upholstering. Other activities include fabric measurement, fitting and construction techniques for drapes, slip covering, and furniture upholstering. The construction of slip covers, the making of drapes, or upholstering furniture may be a part of the supervised in-school program. The cooperative training portion of the program includes working one-half day each day for a cooperating employer.

The Drapery, Slip Cover and/or Upholstery Worker program may be taken as the first year of a two year sequence in which the program for Clothing Service Workers becomes the second year.

II. Program Objectives (Students will learn to:)

1. Select fabrics appropriate for draperies, slip covers, and upholstery.
2. Operate and care for sewing machine.
3. Construct draperies and curtains.
4. Measure fabric and construct simple slip covers.
5. Provide assistance in furniture upholstering.

III. Related Background Experiences

Home Economics program in which sewing skills become well developed.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 299.; 780.; and 787.

Clerical (Facilities, Services, etc.) (.368) p. 265
Clerical (Computing and Related Recording) (.488) p. 280
Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Manipulating) (.884) p. 322
Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. Upholstery shop owner.
2. Local Department store.
3. Vocational Home Economics
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room G-15
   South Front Street, Columbus, Ohio 43215

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Job Training

Drapery, Slipcover and/or Upholistry Helper

(Occupational Work Experience)

I. Program Description

This is a two year program in which the first year may be devoted to pre-employment experiences. During the pre-employment period special attention is given to the development of specialized skills. One half day is devoted to this program. The second year is used for on-the-job training.

In-school experiences will include fabrics and their uses. Concentrated attention will be given to single sewing processes in construction of home furnishings. Elementary re-upholstery and re-finishing techniques are sometimes offered in this program.

II. Program Objectives (Students will learn to:)

1. Demonstrate ability to work with upholstery, slipcovers, curtain or drapery fabrics.
2. Assist in the construction of some home furnishings.
3. Develop standards of quality workmanship that are necessary to produce saleable merchandise.

III. Related Background Experiences

Home Economics program in which sewing skills become well developed.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 780.; and 787

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Manipulating) (.884) p. 322
Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. Upholstery shop owner,
2. Local department store.
3. Vocational Home Economics
   Division of Vocational Education
   State of Ohio Department of Education
   State Office Building, Room G-15
   South Front Street, Columbus, Ohio 43215

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Job Training
Food Service Aid or Assistant
(Cooperative Training Program)

I. Program Description

Food Service Workers are generally employed in restaurants, hospital kitchens, nursing home kitchens, school cafeterias, and industrial or plant cafeterias. The Food Service Worker, cooperative training program, may be either a one or a two year program and is open to both boys and girls. In a two year program one period each day will be devoted to in-school preparation and three clock hours each day will be devoted to work experience either on-the-job or in a laboratory kitchen. In one year programs, two daily class periods are devoted to in-school preparation in addition to three hours of work experience daily. Where two year programs are available the training is begun in the Junior year. In a one year program both Juniors and Seniors are eligible to enter the program.

During the first year of the program the in-school preparation phase of the program includes classes devoted to food preparation and food storage and handling in addition to the operation and care of machines and equipment used in restaurant kitchens. The second year in-school preparation will include classes devoted to quantity cooking, purchasing food in quantity, planning menus, estimating food cost, serving food, nutritional quality of food, safety, and sanitation when handling food.

II. Program Objectives (Students will learn to:)

1. Use food preparation terms appropriately and accurately.
2. Employ appropriate techniques of food preparation used in the establishment which has provided the work station for the cooperative training phase of the program.
3. Prepare foods which meet the standards for quality set by the employing restaurant or cafeteria.
4. Handle food so as to prevent spoilage and contamination.
5. Efficiently and profitably manage time, space, equipment, and food costs in a commercial or institutional kitchen.
6. Plan the sequence and identify the inter-relation of work tasks in food service operation.

III. Related Background Experiences

High School Home Economics.

Various kitchen or restaurant jobs.

Cooking at home or for groups as in the case of scouting.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 313.; 314.; and 315.

Crafts (Cooking and Related Work) (.281; .381) p. 310
Crafts (Manipulating) (.884) p. 322

V. Resources For Use In Orientation And Counseling

1. Restaurant Occupations, Occupational Guide No. 45. Michigan Employment Security Commission, 7310 Woodward Avenue, Detroit 2, Michigan, 1960.
2. Manual of Operation for Home Economics Job Training Programs in High School. March 1965. State of Ohio Department of Education.
3. A Suggested Training Program - Supervised Food Service Worker. OE-87004. U. S. Office of Education, Department of Health, Education, and Welfare, Washington, D. C.
4. Food Service Industry. OE-82007. U. S. Office of Education, Department of Health, Education, and Welfare, Washington, D. C.
5. Illinois Teacher of Home Economics (periodical). Volumes VII and VIII (1964 and 1965). Home Economics Education, University of Illinois, 342 Education Building, Urbana, Illinois, 61803.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Job Training
Food Service Helper
(Occupational Work Experience)

I. Program Description

Food Service Workers are generally employed in restaurants, hospital kitchens, nursing home kitchens, school cafeterias, and industrial or plant cafeterias. The Food Service Worker, occupational work experience, program may be either a one or a two year program and is open to both boys and girls who are at least 16 years old. One period each day is spent in study under the direction of the O.W.E. Coordinator. One-half day each day is spent in working in a restaurant or cafeteria under supervision of a food service supervisor, a chef, or a dietician employed by the establishment in which the work experience is being received. Job orientation information and career opportunity exploration are combined with work experience and in-school study to provide a range of vocational education experiences designed to lead to employment both during the years in school and immediately upon leaving school.

During the in-school phase of the program the O.W.E. Coordinator will provide learning experiences in such topics as: hygiene and health practices; safety requirements; safe food handling; sanitation and housekeeping practices; food storage; preparation and serving food; human relations; and personal budgeting.

II. Program Objectives (Students will learn to:)

1. Secure employment in a food service establishment.
2. Handle foods in a kitchen safely and orderly while observing sanitary practices.
3. Practice institutional habits of personal cleanliness both in the kitchen and in the dining room.
4. Report regularly to place of employment and arrive on time each day.
5. Follow orders and instructions from kitchen personnel or supervisory staff.
6. Accept constructive criticism from supervisors and improve work performance by following supervisor's suggestions.
7. Plan a personal budget - follow through with it.

III. Related Background Experiences

Home Economics in high school.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Two-Digit Occupational Division 31

Crafts (Manipulating) (.884) p. 322
Personal Service (Customer Service Work, N.E.C.) (.468; .478) p. 501
Personal Service (Misc. Customer Service Work) (.864; .874) p. 503
Personal Service (Misc. Personal Service Work) (.868; .878) p. 507

V. Resources For Use In Orientation And Counseling

1. Restaurant Occupations, Occupational Guide No. 45. Michigan Employment Security Commission, 7310 Woodward Avenue, Detroit 2, Michigan, 1960.
2. Manual of Operation for Home Economics Job Training Programs in High School. March 1965. State of Ohio Department of Education.
3. A Suggested Training Program - Supervised Food Service Worker. OE-87004. U. S. Office of Education, Department of Health, Education, and Welfare, Washington, D. C.
4. Food Service Industry. OE-82007. U. S. Office of Education, Department of Health, Education, and Welfare, Washington, D. C.
5. Illinois Teacher of Home Economics (periodical). Volumes VII and VIII (1964 and 1965). Home Econimics Education, University of Illionis, 342 Education Building, Urbana, Illinois 61803.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Homemaker's Assistant or Home and Community Service Aids
(Cooperative Training Program or Occupational Work Experience Training Program)

I. Program Description

This program focuses on methods of housekeeping in either a home or an institution where life in a clean, orderly, and pleasant atmosphere is desired. The cooperative training is a one year program and may be the second year of a two year sequence in which the Child-Care Aid or some similar program is the first and Homemaker's Assistant is the second. Other possible combinations include those programs leading to Health Service Aids or Aids in hotels and motels. The O.W.E. program is either a one or a two year program.

One daily class period involves in-school preparation which is devoted to practices of effective home management, use of household electrical applicances, cleaning and care of floor coverings, care of the sick in homes, planning and serving nutritious family meals, as well as planning special diets. One-half day each day is spent in a work station where principles learned from texts and class discussion can be put into practice.

II. Program Objectives (Students will learn to:)

1. Care for all rooms of a home using effective home management practices.
2. Use household applicances and equipment effectively and efficiently in accomplishing work tasks required in the cooperative training phase of the program.
3. Identify and use with correct procedure cleaning materials for surfaces typically found in homes, hospitals, or hotels.
4. Plan, purchase food, prepare, and serve simple meals or special diets.
5. Care for children efficiently and effectively.
6. Keep accurate household records.
7. Provide appropriate home care for a sick person.

III. Related Background Experiences

Home Economics I and II.

Helping at home in various tasks.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Two-Digit Occupational Division 30 and Three-Digit Occupational Group 323.

Crafts (Cooking and Related Work) (.281; .381) p. 310
Medicine and Health (Child and Adult Care) (.878) p. 479
Elemental (Handling) (.887) p. 360

V. Resources For Use In Orientation And Counseling

1. A Suggested Training Program, The Homemaker's Assistant. OE-87008. 1964, U. S. Office of Education, Department of Health, Education, and Welfare, Washington, D. C.
2. National Committee on Household Employment
   1346 Connecticut Avenue, N. W.
   Washington, D. C. 20036

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Homemaking Aids in Nursing and Rest Homes or Health Service Aids
(Cooperative Training Program)

I. Program Description

This is a one year cooperative program designed to prepare for employment in either a nursing or a rest home. One class period daily is spent on in-school preparation and one-half day each day is devoted to cooperative work experiences in a nursing or a rest home.

During the in-school phase of the program classes are devoted to characteristics of aging and the implications these characteristics have for service. Other classes are organized around sanitation, safety, housekeeping skills, and techniques in care of the elderly. Additional topics for study will include menu planning, preparation of meals and special diets, table setting and service, kitchen care, and techniques of assisting the elderly with personal tasks,

II. Program Objectives (Students will learn to:)

1. Plan and prepare meals for individuals on special diets.
2. Interpret attitudes and behavior of aged individuals in keeping with the characteristics of aging as presented in the in-school phase of the program.
3. Provide care for the ill or bed-ridden patient.
4. Bathe individuals, clean apparatus and equipment so as to provide a level of sanitation necessary for healthful living.
5. Perform housekeeping tasks effectively and efficiently.
6. Practice habits of safety.
7. Meet emergency situations with poise and resourcefulness.

III. Related Background Experiences

Home Economics in either Junior or Senior High School.

Living in the same home with an elderly person.

Courses or classes in Health and Safety Education or First Aid.

Reading to other people or writing letters for them.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 323.; and 355.

Medicine and Health (Child and Adult Care) (.878) p. 479
Elemental Work (Handling) (.887) p. 360

V. Resources For Use In Orientation And Counseling

1. Ertel, Paul. "Guide to Community Services for Senior Citizens," (Revised) Mayor's Commission for Senior Citizens, Chicago, Illinois.
2. "Companion to An Elderly Person," OE-87006 1964. Office of Education, U. S. Department of Health, Education and Welfare, Washington, D. C.
3. "Handbook of National Organizations With Plans, Programs, and Service in the Field of Aging," 1960. White House Conference on Aging, U. S. Government Printing Office, Washington, D. C.
4. Occupational Outlook Handbook, p. 352

VI. Local Program Information

Homemaking Aids in Nursing and Rest Homes or Health Service Aids
(Occupational Work Experience)

I. Program Description

Homemaking Aids work along with Housekeepers and other cleaning personnel in either a nursing or a rest home in order to provide clean, orderly, sanitary, and safe places for the patients and residents. The Homemaking Aids occupational work experience program is a two year program open for in-school youth at least 16 years old. One class period each day is devoted to in-school learning experiences under the direction of an O.W.E. Coordinator. One-half day each day during the first year of the program is spent practicing skills or observing personnel at work. During the second year of the program one-half day each day is spent at a supervised work station provided by a cooperating employer.

Housekeeping skills, simple food preparation skills, and skills necessary for care of the elderly provide the basis for the two daily class periods of in-school study. There also will be time devoted to employer-employee relations, personal cleanliness, money management, and safety education.

II. Program Objectives (Students will learn to:)

1. Secure employment in a nursing or a rest home.
2. Clean carpets, floors, furniture, windows, etc. effectively and efficently when directed to do so by supervisory staff.
3. Practice institutional habits of personal cleanliness and safety.
4. Report regularly to place of employment and arrive on time each day.
5. Follow orders and instructions from housekeeper as well as other supervisory staff.
6. Accept constructive criticism from supervisors and improve work performance by following supervisor's suggestions.
7. Plan a personal budget and follow through with it.

III. Related Background Experiences

Home Economics in high school.

Courses or classes in Health and Safety Education or First Aid.

Living in the same home with elderly persons.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 323.; and 355.

Elemental Work (Handling) (.887) p. 360
Medicine and Health (Child and Adult Care) (.878) p. 479

V. Resources For Use In Orientation And Counseling

1. Ertel, Paul. "Guide to Community Services for Senior Citizens," (Revised) Mayor's Commission for Senior Citizens, Chicago, Illinois.
2. "Companion to an Elderly Person," OE-87006 1964. Office of Education, U. S. Department of Health, Education, and Welfare, Washington, D. C.
3. "Handbook of National Organizations with Plans, Programs, and Service in the Field of Aging," 1960. White House Conference on Aging, U. S. Government Printing Office, Washington, D. C.
4. Occupational Outlook Handbook, p. 352

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Diversified Training Program
Cooperative Training Program and Occupational Work Experience

I. Program Description

A diversified training program is structured to include training in two or three areas of Home Economics. These areas are determined by the interest of the students and the type and number of work stations available. The program will include information generally related to employability on any job. Specific experiences pertaining to the individual job areas will be taught in small seminar groups or in directed individual study.

It is recommended that each enrollee in the program specialize in one area of employment throughout the year. However, if success cannot be achieved in the chosen area a change may be made to another area of work.

In a two year program, a pre-employment preparation may be taken in the Junior year to develop those specialized skills that contribute to successful job entry. The Senior year will be devoted to on-the-job work experience. If a one year program is taken, permission will be given to work one half day each day whenever skill and training has been sufficient to insure success on the job.

II. Program Objectives (Students will learn to:)

1. Develop an understanding of the factors involved in a desirable employer-employee relationship.
2. Realize the importance of work done in exchange for wages.
3. Show evidence of good personal habits in training or work situations.
4. Locate and utilize information and knowledge pertinent to the area of work.
5. Understand the need for continuing education, training, retraining, and upgrading of knowledge and skill for job advancement.
6. Develop an employable skill and understanding of necessary related knowledge.

III. Local Program Information

Trade and Industrial Education

TRADE AND INDUSTRIAL EDUCATION

Ohio provides seven types of high school preparatory programs in Trade and Industrial Education.*

Type 1.1 programs include 15 hours each week of skill development in a lab or shop and 7 1/2 hours each week of technical instruction for two school years.

Type 1.2 programs include 15 hours each week of skill development in a lab or shop and 3 3/4 hours each week of technical instruction for two school years.

Type 1.3 programs include 15 hours each week of combined skill development and technical instruction in a lab or shop for two school years.

Type 1.4 programs include a minimum of two hours per day and a minimum of 10 hours per week but may be operated for less than nine months.

Type 2.1 programs are cooperative education programs for seniors who have had one year of trade and industrial education in a Type 1.1, 1.2, or 1.3 program. Skill development of 15 hours each week is provided by the cooperating employer and the school provides 7 1/2 hours each week of technical instruction.

Type 2.2 (Diversified Cooperative Training) programs include 15 hours each week of skill development outside the school and 7 1/2 hours each week of technical instruction in the school for two school years.

Type 2.3 (Occupational Work Experience) includes 15 hours each week of work experience outside school and 7 1/2 hours each week of work adjustment instruction in the school.

The T & I programs included in this revised edition of O.V.E.N. have been written to conform to the Type 1.1 programs.

Address correspondence to: Mr. Harry Davis, Supervisor
Trade and Industrial Education
Division of Vocational Education
The Ohio Department of Education
State Office Building, Room 610
South Front Street
Columbus, Ohio 43215

Telephone Number: (614) 469-2901

* Manual of Operation: Ohio Trade and Industrial Education Service (Revised June 1966)

OHIO VOCATIONAL EDUCATION NOTEBOOK

Air Conditioning and Heating Service

I. Program Description

This is a two year program typically begun in the Junior year. The air-conditioning phase of the program focuses upon the installation and repair of commercial and residential air conditioners. The heating service phase of this program is devoted to the installation, maintenance, and repair of a variety of heating systems especially those employing duct work suitable for use in both heating and air-conditioning. Typical classroom and shop learning experiences involve principles of heat; operation of motors, compressors, condensers, evaporators, and furnaces; reading blueprints and drawings; installation of ducts; combustion chambers, fire pots, radiators, etc. Each school day requires a minimum of three hours a day in the shop and an additional hour and a half in class devoted to theory and other topics necessary for repairmen in the Air-Conditioning and Heating Service industry.

II. Program Objectives (Students will learn to:)

1. Install air-conditioning and heating equipment according to blueprints, diagrams, and written instructions.
2. Connect and join duct work, refrigerant lines, drains and other piping required to install heating plant or air-conditioning unit.
3. Check and adjust relays, thermostats, capacitors, motors, and refrigerant lines.
4. Use such tools as electric drills, acetylene torches, pipe cutters, pipe benders, gauges, and meters.
5. Inspect, test, diagnose, and repair air-conditioners or heating equipment with malfunction.
6. Demonstrate safety in the shop and on-the-job.

III. Related Background Experiences

Industrial Arts (Metal, Electricity).

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 637.; and 827.

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Manipulating) (.884) p. 322

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. Refrigerations Service Engineers Society
   433 North Waller Avenue
   Chicago, Illinois 60644
3. Sheet Metal and Air Conditioning Contractor's National Association
   107 Center Street
   Elgin, Illinois 60120
4. Occupational Outlook Handbook, pp. 465

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Appliance Repair

I. Program Description

This two year program is normally begun in the Junior year. Appliance repairmen may repair household appliances such as electric toasters or gas refrigerators and incinerators. Testing procedures for electrical controls, fixtures, motors and circuits are developed as a part of this program. In addition, testing procedures for both gas and refrigerant flow is also a part of both the daily hour and a half classroom activity and the daily three hour shop experience. Topics for the classroom experiences include mathematics, customer relations, using appliance service manuals, parts ordering, electrical theory and safety.

II. Program Objectives (Students will learn to:)

1. Locate and determine cause of improperly functioning appliance.
2. Repair and adjust appliances.
3. Clean and replace parts as needed in repair of appliance.
4. Use handtools such as screwdrivers, pliers, and wrenches.
5. Estimate job costs accurately.
6. Make effective use of procedures for spare parts accounting.
7. Use wiring schematics and appliance diagrams effectively.
8. Practice safety procedures necessary in working with gas and electrical equipment.
9. Demonstrate good customer relations by taking an interest in repairing the appliances with which they are concerned.

III. Related Background Experiences

Industrial Arts (Metal, Electricity).

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 637.; 723.; 827.

Clerical Work (Inspecting and Stock Checking) (.387) p. 271
Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Manipulating) (.884) p. 322

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. National Appliance and Radio-TV Dealers Association
   364 Merchandise Mart
   Chicago, Illinois 60654
3. Occupational Outlook Handbook, p. 468
4. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Auto Body and Fender Repair

I. Program Description

This two year program beginning in the Junior year is devoted to developing concepts, understandings and skills used in repairing and refinishing damaged automobile bodies. A minimum of three hours per day is devoted to skill development. These programs also have an additional one hour and a half devoted to classroom learnings. Automobiles brought into the shop are used to provide experience in repairing all types of auto body damage, including collision damage and corrosion.

In addition to work with metals in repairing damaged areas of an automobile body, opportunities are provided for experiences in frame straightening, replacement of glass, and repair and installation of upholstery. Opportunities are also provided for the development of understandings of the science of paints and finishes, of abrasives, of business mathematics and of trade information (including Service Manual use).

II. Program Objectives (Students will learn to:)

1. Estimate accurately cost of repairs.
2. Straighten, shape, form and weld to repair damage body and fender.
3. Refinish repaired area through grinding, polishing and painting.
4. Align damaged vehicle frame and body sections.
5. Replace automobile glass.
6. Repair and install upholstery.
7. Use service manuals effectively.
8. Practice procedures of shop safety.

III. Related Background Experiences

Industrial Arts (Metal).
Helper in a Body Shop.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Group 807.

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Precision Working) (.781) p. 319
Crafts (Manipulating) (.884) p. 322
Investigating, Inspecting, and Testing (Appraising and Investigating Work) (.187; .284; .287) p. 420

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. Local Automobile Dealers Association or Local Body Shop Manager
3. Automotive Service Industry Association
   168 North Michigan Avenue
   Chicago, Illinois 60601
4. Occupational Outlook Handbook, p. 474
5. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Auto Mechanics

I. Program Description

This two year program beginning in the Junior year, is devoted to developing auto mechanics skillful in the maintenance and repair of automobiles. A minimum of three hours daily is spent in the shop working on automobiles or their component parts. In addition to the three hours of skill development, auto mechanics programs include an additional one and a half hours each in classes designed to develop concepts, understandings and skills in shop mathematics, science, automotive service manual use, automotive electricity, sketching, and reading diagrams.

Automobiles, brought into the shop for diagnosis and repair, provide learning opportunities, examples of which are: engine overhaul, valve grinding, transmission repair, brake drum turning, carburetor repair, steering repair, and electrical system repair. Nearly every automotive system or component part typically encountered by auto mechanics in work situations is included in the learning experiences in the Auto Mechanics Program.

II. Program Objectives (Students will learn to:)

1. Analyze malfunction, plan method of repair, carry out repair.
2. Conduct preventive maintenance.
3. Use both hand and mechanical tools efficiently and effectively.
4. Use electro-mechanical testing equipment accurately.
5. Repair or replace damaged or inoperative parts of the automobile electrical systems.
6. Repair or replace damaged or inoperative parts of the automobile hydraulic systems.
7. Use and interpret service manuals and technical bulletins.
8. Lubricate automobiles following directions provided by manufacturers service manual.
9. Overhaul an automobile engine.
10. Reline and adjust brakes.
11. Overhaul carburetor.
12. Replace defective fuel pump.
13. Tune engine.
14. Align front end.
15. Replace shock absorbers.
16. Order and stock parts in stock crib.

III. Related Background Experiences

Industrial Arts (Electricity and Metals).

Service Station attendant.

Driver and Pedestrian safety education.

Stock clerk for an auto parts dealer.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Group 620.

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Manipulating) (.884) p. 322
Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. Local Service Department Manager in Auto Agency
3. Automotive Service Industry Association
   168 North Michigan Avenue
   Chicago, Illinois 60601
4. Occupational Outlook Handbook, p. 477
5. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Building Maintenance Mechanics

I. Program Description

This two year program usually begun in the Junior year is designed to develop a building maintenance mechanic who is capable of providing minor repairs and conducting preventive maintenance for industrial plants, businesses, schools, hospitals or residences. This program requires a minimum of three hours each day in the shop and an additional hour and a half of daily classes devoted to developing understandings and concepts necessary for building maintenance. Electrical wiring, carpentry, painting, plumbing, simple masonry, and mechanical equipment repair are examples of the areas in which Building Maintenance Mechanics develop skills and understandings while in the shop and the classroom.

II. Program Objectives (Students will learn to:)

1. Replace defective electrical switches and fixtures.
2. Paint, and lay brick and concrete.
3. Repair woodwork, plumbing fixtures, flooring, floor covering, concrete, roofing, and plaster.
4. Build sheds and other small buildings.
5. Replace window glass.
6. Hang doors, change door locks, and install safety devices.
7. Exercise judgement in planning and carrying out maintenance operations effectively, economically, and safely.

III. Related Background Experiences

Industrial Arts.

Handicraft hobbies.

Home Workshop.

Residence maintenance.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Maintenance Man, Building 899.381

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)

VI. Local Program Information

Carpentry

I. Program Description

This two year program beginning in the Junior year is designed to provide the experiences necessary for the development of concepts, understandings, and skills required of carpenters in building construction. A minimum of three hours each day will be spent in the shop in skill development and an additional one and a half hours each day will be devoted to concepts and understandings necessary for carpenters. Both shop and class experiences will include such topics as: operation and care of carpenter's hand and power tools; framing of buildings; interior and exterior finishing; sketching and drawing; reading and interpreting plans, specifications, and blueprints; form building; building materials, their characteristics and uses; as well as estimating and cost accounting for carpenters.

II. Program Objectives (Students will learn to:)

1. Erect, according to specifications, wood building framework, including studding, floor joists, rafters, and partitions.
2. Cover frame with appropriate sheeting both on sides and roof.
3. Install molding, window sash, door frames, floors, and cabinets.
4. Use carpenter's tools effectively and safely.
5. Measure accurately and solve problems encountered in building construction.
6. Shingle roof and apply siding to building.

III. Related Background Experiences

Industrial Arts (Wood, Mechanical Drawing).

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Group 860.

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Precision Working) (.781) p. 319

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. Building Trade Unions (Local Office)
3. The National Apprenticeship Program
   Bureau of Apprenticeship and Training,
   U. S. Department of Labor, Washington, D. C.
4. United Brotherhood of Carpenters and Joiners of America
   101 Constitution Avenue, N. W.
   Washington, D. C. 20001
5. Occupational Outlook Handbook, p. 377

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Commercial Art

I. Program Description

This is a two year program beginning in the Junior year. A minimum of three hours each day is spent in the art studio laboratory. An additional hour and a half is spent in classes devoted to concepts and understandings of perspective, design, color harmony, composition, media and trade information. The studio laboratory experiences involve pencil, crayon, ink, water color, tempra, oil, and other media. Laboratory experiences also include drawing from live models, advertising design, graphic design, lettering, typography and illustrations. Typical occupations in the Commercial Art field are Illustrator and Letterer.

II. Program Objectives (Students will learn to:)

1. Select and use effectively the media required for commercial art illustrations.
2. Create and design advertising lay-out work.
3. Plan and make signs and posters.

III. Related Background Experiences

Art.

Industrial Arts (Mechanical Drawing).

Handicrafts.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 141. and 970.

Art (Art Work) (.081) p. 232
Art (Artistic Restoration, Decoration, and Related Work) (.281; .381) p. 234
Crafts (Craftsmanship and Related Work) (.281; .381) p. 312

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. Advertising Agency
3. National Society of Art Directors
   Art Education Chairman
   115 East 40th Street
   New York, New York 10016
4. Occupational Outlook Handbook, p. 187
5. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

Commercial Cooking and Baking

I. Program Description

This two year program provides learning experiences necessary to prepare a person for employment as a cook or a baker in a restaurant, an institution, a bakery, or other setting where foods are prepared in quantity. Three hours each day are devoted to learning experiences in a laboratory kitchen and an additional one and a half hours each day is spent in classes designed to develop concepts and understandings required of chefs, cooks, and bakers. Sanitation and safety are topics typically included in the one and a half hours in the classroom along with recipe adjusting, consumption, and cost estimation, menu planning, nutrition and appearance. The three hours spent each day in the laboratory kitchen provide an opportunity for cooking and baking to be done under the supervision of a chef, a head cook, or a baker.

II. Program Objectives (Students will learn to:)

1. Plan menus, compute quantities and cost of food.
2. Select and purchase (or order) food items needed.
3. Apply food preparation theory by using various techniques of preparation.
4. Use and care for utensils and equipment.
5. Demonstrate skill through effective use of mixers, stoves, grills, ovens, deep fryers, broilers and dishwashers.
6. Prepare baked goods for meals which are both nutritious and appealing.
7. Conduct duties in kitchen or bakery safely.
8. Observe standards of cleanliness and health.

III. Related Background Experiences

Home Economics I and II.

Part time work in restaurant or bakery.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 313.; 314.; 315.; and 526.

Crafts (Cooking and Related Work) (.281; .381) p. 310
Crafts (Precision Working) (.781) p. 319

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. Educational Director
   National Restaurant Association
   1530 North Lake Shore Drive
   Chicago, Illinois 60610
3. Occupational Outlook Handbook, p. 347
4. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Cosmetology

I. Program Description

This two year program, open to both boys and girls, is begun in the Junior year. A minimum of three hours each day is spent in the lab in supervised work on fellow students and, later in the program, on customers. An additional hour and a half each day is devoted to concepts and understandings from such wide ranging field as bacteriology, anatomy, physiology, business management as well as trade information and current trends in styling and hair care. After 1500 hours of instruction an opportunity will be provided for all enrollees to be examined by the State Board of Cosmetology. Successful candidates will be issued a license upon graduation from high school.

II. Program Objectives (Student will learn to:)

1. Give permanent waves, shampoos, manicures, scalp and facial treatments.
2. Cut, style, set, straighten, bleach, and tint hair.
3. Provide makeup analysis, shape eyebrows, and clean and style wigs.
4. Sterlize equipment and conduct activities in a clean and healthful manner.
5. Practice habits and skills of good grooming.
6. Establish and maintain friendly relationships with people.
7. Follow instructions of supervisors and customers.
8. Display a sense of form and artistry in work.
9. Develop physical stamina adequate for standing long periods of time.

III. Related Background Experiences

Health classes.

Biology.

Science programs in which physiology is a part.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Cosmetologist 332.271

Personal Service (Beautician and Barbering Services) (.271; .371) p. 499

V. Resources For Use In Orientation And Counseling

1. State Board of Cosmetology
   21 West Broad Street
   Columbus, Ohio 43215
2. Sales representatives/field consultants from Cosmetology Supply Firms
3. National Hairdressers and Cosmetologists Association
   175 Fifth Avenue
   New York, New York 10010
4. Occupational Outlook Handbook, p. 357
5. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

Dental Assistant

I. Program Description

The Dental Assistant program is normally a two year program for students who have attained junior standing. Graduates of this program are prepared to work alongside a Dentist as he treats his patients. Dental Assistants may perform duties in the reception room and in the dental laboratory as well as at the patient's side during treatment.

II. Program Objectives (Students will learn to:)

1. Obtain and record patient information and medical history.
2. Seat and prepare patient for treatment.
3. Assist Dentist during treatment of patient (ready equipment, prepare materials, assist in care of patient, and store and clean equipment).
4. Record dental treatment.
5. Inform patient about post-operative care, oral hygiene, and preventive dentistry.
6. Perform routine maintenance (cleaning, lubricating, sharpening, and changing parts) on equipment in dentist's office.
7. Expose and process dental X-Rays.

III. Related Background Experiences

General Science.

Chemistry. (When it is a part of the 11th grade program of studies.)

Typing.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Dental Assistant 079.378

Medicine and Health (Nursing, X-Ray, and Related Services) (.368; .378) p. 477

V. Resources For Use In Orientation And Counseling

1. American Dental Association
   Council on Dental Education
   222 East Superior Street
   Chicago, Illinois 60611
2. Health Careers Guidebook, 1966, p. 88,
   United States Department of Labor, Washington, D. C.
3. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   United States Department of Labor, Washington, D. C.
4. The Occupational Outlook Handbook, p. 83

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Diesel Engine Mechanics

I. Program Description

This two year program beginning in the Junior year is designed to develop Diesel Engine Mechanics. A minimum of three hours daily is devoted to shop work and an additional one and one-half hours are devoted to technical and industrial concepts necessary for the diesel mechanic. Elements of the program in both shop and classroom are such things as: diesel mechanic's tools; testing equipment, maintenance of diesel engines; diagnosing engine trouble; fuel injectors; engine disassembly; parts ordering; functions of valves and bearings; and both the starting and the cooling system.

II. Program Objectives (Students will learn to:)

1. Demonstrate knowledge of the theory and operation of diesel engines.
2. Determine problem source in engine that is not operating properly.
3. Disassemble original, repair and replace defective engine parts.
4. Repair air and fuel injectors.
5. Inspect, test, and adjust engine components.
6. Conduct preventive maintenance.
7. Repair valves, electrical system and cooling system.

III. Related Background Experiences

Industrial Arts.

Experience in taking apart and assembling electric motors and/or internal combustion engines.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Group 625.

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. International Association of Machinists and Aerospace Workers
   1300 Connecticut Avenue, N. W.
   Washington, D. C. 20036
3. Occupational Outlook Handbook, p. 487
4. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

Drafting

I. Program Description

This two year program begun in the Junior year is designed to prepare either boys or girls for careers in Drafting. Draftsman are classified or identified according to the type of drafting done as: Draftsman, Architectural. The drafting program has within it elements of various types of drafting which provide an introduction to career fields in drafting while developing skills used by Draftsmen. Three hours daily are devoted to skill development in the drafting room and an additional hour and a half each day is spent in developing understandings and concepts necessary for the Draftsman. Examples of topics covered include such things as: solving engineering drafting problems through the use of engineering publications; mathematics and measurement; scale and preparation; and methods of reproducing blueprints and drawings.

II. Program Objectives (Students will learn to:)

1. Use drafting instruments such as compasses, dividers, protractors, triangles, and other drafting instruments competently.
2. Prepare drawings for reproduction.
3. Examine drawings and correct errors.
4. Translate ideas of others into workable plan for use by skilled craftsman.
5. Letter drawings neatly and accurately.

III. Related Background Experiences

Industrial Arts (Mechanical Drawing).

Algebra I.

Geometry.

Art in which lettering is a part of the program.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Occupational Classification 017.281

Engineering (Drafting and Related Work) (.181; .281) p. 377

V. Resources For Use In Orientation And Counseling

1. Firms employing Draftsmen.
2. Ohio State Employment Service (Local Office)
3. American Institute for Design and Drafting
   18465 James Couzens
   Detroit , Michigan 48235
4. Occupational Outlook Handbook, p. 228
5. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Electricity
(Motors, Controls, and Wiring)

I. Program Description

This two year program in Electricity involves three hours daily for laboratory or shop work and one and a half additional hours daily devoted to such things as electrical theory and trade information. Electricity includes, in part, lay out, assembly, installation, and testing electrical apparatus. Additional experiences involve equipment and wiring used in heating, lighting, power, air-conditioning, refrigeration, and other electrical systems used in residences, office buildings, factories, hospitals, schools and other structures. Learning experiences also include DC and AC motors and generators, transformers and rectifiers, safety devices, and power supplies. The classroom phase of the program provides a series of courses in mathematics, drawing, and science as these apply to the field of electricity.

II. Program Objectives (Students will learn to:)

1. Demonstrate a knowledge of electrical theory.
2. Use, care for, and safely handle the tools, equipment, and materials commonly used in the trade.
3. Use blueprints to layout an electrical circuit.
4. Install switches, conduits, controls, circuit breakers, wires, lights and signal devices.
5. Use test lamps, ammeters, volt-ohm meters, and ocilloscopes.
6. Diagnose, repair, or replace electric motors.
7. Practice safety procedures in working with electricity.
8. Demonstrate first aid procedures.

III. Related Background Experiences

Industrial Arts (Electrical and Mechanical Drawing).

General Science in which electricity is a part of the program.

Mathematics.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 721.; 723.; 724.; 729.; 824.; 827.; 828.; 829.

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. International Brotherhood of Electrical Workers
   1200 15th Street, N. W.
   Washington, D. C. 20005
3. Occupational Outlook Handbook, p. 384, 468, 495
4. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Fabric Service

I. Program Description

This two year Fabric Service program for boys and girls who have attained Junior standing is devoted to preparation for a career in a Laundering or Dry Cleaning occupation. The care and cleaning of cloth fabric and the techniques and machines used in the Fabric Service industry are the focus of the program. A minimum of one and one-half hours is devoted to such things as: characteristics of fabrics; cleaning solutions; business management; customer relations; and trade information. An additional three hours each day is devoted to work in the shop or fabric service laboratory in cleaning and pressing garments and operating machines.

II. Program Objectives (Students will learn to:)

1. Receive, mark, and classify customer garments or other fabrics to be cleaned.
2. Operate laundry or dry cleaning machines, such as, washer, dryer, extractor, etc.
3. Spot clean garments.
4. Replace buttons and sew or reweave material to repair minor damage.
5. Press, iron, fold and package cleaned items.
6. Accept and record customer payment for items cleaned.

III. Related Background Experiences

Home Economics (Sewing).

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 361.; 362.; 363.; 369.

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Precision Working) (.781) p. 319
Crafts (Manipulating) (.884) p. 322
Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. Local Laundry or dry cleaning establishment.
3. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Furniture Upholstering and Repair

I. Program Description

This two year program of Furniture Upholstery and Repair is open to both boys and girls who have attained a Junior standing. The fabrics used in furniture covering, their characteristics and techniques for fastening them form the major portion of the learning experiences of this program. A part of this program involves the study of the structure of furniture and application of techniques of furniture repair. An hour and a half daily is spent in the study of fabric coverings, furniture construction, trade information, and business relations. A minimum of three additional hours each day is devoted to shop work which provides experience in upholstering and furniture repair.

II. Program Objectives (Students will learn to:)

1. Repair, rebuild, and reupholster several varieties of upholstered furniture.
2. Remove and replace furniture covering, webbing, padding, and springs.
3. Repair frame when necessary.
4. Measure and cut new covering materials.
5. Use sewing machines where appropriate.
6. Install covering and tack or sew on ornamental trim.
7. Refinish wooden surfaces when necessary.
8. Calculate costs, expenses, and profit margins.
9. Establish and maintain friendly customer relations.

III. Related Background Experiences

Industrial Arts (Wood).

Home Economics I or II (Sewing).

Hobbies involving hand craftsmanship.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 763. and 780.

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Manipulating) (.884) p. 322

Refer to Three-Digit Occupational Group 787.

Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Machinery Maintenance and Service Mechanic

I. Program Description

This is a two year program which has been designed to provide training experiences in all phases of machinery maintenance and repair. Maintenance mechanics are usually employed by the firm which owns the machinery and service mechanics are employed by the firm which markets the machines. This program, involving one and one-half hours daily of classroom instruction and three additional hours each day for shop experiences, will cover machine repair, machinery overhaul, maintenance, adjustment, and set-up of machinery. In addition, blueprint reading, shop mathematics, science and technology in machinery maintenance and repair, are covered as well as trade information during the hour and a half devoted to classroom study.

II. Program Objectives (Students will learn to:)

1. Perform preventive maintenance such as, oiling, greasing, cleaning, and repairing a variety of industrial machines.
2. Keep accurate maintenance records.
3. Read and understand blueprints, lubrication charts, and engineering specifications.
4. Order replacement parts from parts catalog.
5. Use wrenches, screw-drivers, pliars, as well as other hand tools and portable power tools effectively and efficiently.
6. Use welding equipment safely and effectively.
7. Demonstrate a knowledge of the principles of hydraulics.
8. Demonstrate a knowledge of the fundamentals of electricity.
9. Practice shop safety procedures.

III. Related Background Experiences

Industrial Arts (Metal, Electricity, Mechanical Drawing).

Hobbies involving mechanical components.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 626.; 627.; 630.; 638.; 639.

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Precision Working) (.781) p. 319
Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. The Ohio State Employment Service (Local Office)
2. Occupational Outlook Handbook, p. 491

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Machine Trade

I. Program Description

This is a two year program begun in the Junior year. A minimum of one and one-half hours each day is devoted to classroom experiences and an additional three hours each day is devoted to shop work. Learning the set-up and operation of such machines as lathes, grinders, milling machines, screw machines, etc. is a basic part of this program. Other parts of the program are devoted to filing, hand tapping, dowel fitting, and other hand operations. The one and one-half hours in addition to the three hours in the shop usually involve shop mathematics; blueprint reading; instruments used by the machinist; shop safety; metals and their characteristics; as well as information about the family of machine trades.

II. Program Objectives (Students will learn to:)

1. Select tools and materials required for machine set-up and operation.
2. Plan cutting and finishing operations in order to complete work according to blueprints or written specifications.
3. Calculate mathematical computations appropriate for job task.
4. Set-up and operate various machines such as turret lathe, engine lathe, milling machine, screw machine, shaper, horizontal and vertical drill press, etc.
5. Read and use micrometer and other precision instruments commonly used in the machine trade.
6. Work accurately and effectively under pressure of a production schedule.

III. Related Background Experiences

Industrial Arts (Metal, Mechanical Drawing).

Algebra I.

Geometry or Algebra II .

Handicrafts requiring accurate work with a high degree of concentration.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 600.; 601.; 602.; 603.; 604.; 605.; 606.; 609.

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Machine Work (Set-up and/or All-Round Machine Operating) (.280; .380) p. 430
Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. National Machine Tool Builders Association
   2139 Wisconsin Avenue, N. W.
   Washington, D. C. 20007
3. Occupational Outlook Handbook, p. 452
4. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

I. Program Description

This two year program usually begun in the Junior year requires four and one-half hours daily in both shop and classroom activities. One and one-half hours daily is devoted to the theoretical background necessary for occupations in the printing industry. A minimum of an additional three hours daily is spent in the shop working in all phases of the operation of a print shop. Typical experiences in the Printing program include: typesetting, composing, press work, lithography, and photo engraving. Print shop experiences also include use and care of pressroom equipment, make ready, running-the-job, presstending and maintenance, and working with a variety of inks and paper.

II. Program Objectives (Students will learn to:)

1. Demonstrate skill in composition and lay-out by completing a job order.
2. Prepare type forms and press plates for final printing.
3. Tend press during printing operation.
4. Control ink and margins during run.
5. Provide preventive maintenance and minor repairs where appropriate

III. Related Background Experiences

Industrial Arts (Graphic Arts, Photography, Mechanical Drawing, Printing).

Arts.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Groups 650.; 651.; 654.

Clerical (Typesetting, Reproducing, and Related Machine Work) (.382.; .582) p. 274
Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. International Printing Pressmen and Assistants' Union of North America
   Pressmens' Home, Tenn. 37850
3. Printing Industries of America, Inc.
   20 Chevy Chase Circle, N. W.
   Washington, D. C. 20015
4. Occupational Outlook Handbook, p. 526
5. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

OHIO VOCATIONAL EDUCATION NOTEBOOK

Radio and Television Service

I. Program Description

This is a two year program leading to a career as a Radio and T.V. Serviceman. The program is open to Juniors and it requires a minimum of three hours daily of laboratory work plus an additional hour and a half of study in a class devoted to aspects of radio and T.V. servicing. The learning experiences of this program are designed to provide the fundamentals of radio and T.V. electronics as used in the installation and repair of all types of radios and both black-and-white and color T.V. Classroom and laboratory experiences include such topics as: television circuits; vacuum tubes, including diodes, triodes, and multigrid tubes, with an introduction to cathode ray tubes, photosensitive devices, ultra-high frequency tubes, and gas and vapor electron tubes; basic principles of transistors, including conductors, crystal diodes, metallic rectifiers, transistor Zener diodes and tunnel diodes.

II. Program Objectives (Students will learn to:)

1. Demonstrate an understanding of electronic components and circuits.
2. Read and understand appropriate technical publications.
3. Use electrical schematics effectively.
4. Diagnose and repair inoperative radio and T.V. sets.
5. Operate test equipment used in radio and T.V. repair shops.
6. Estimate accurately cost of repair and advise customer concerning alternatives.
7. Practice good customer relations.
8. Practice proper safety procedures.
9. Demonstrate skill in first aid techniques.

III. Related Background Experiences

Industrial Arts (Mechanical Drawing and Electricity).

Mathematics.

General Science.

Hobbies involving electrical circuits, especially radio circuits.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Group 720.

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Manipulating) (.884) p. 322

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. National Appliance and Radio-TV Dealers Association
   364 Merchandise Mart
   Chicago, Illinois 60654
3. Occupational Outlook Handbook, p. 500
5. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

Sheet Metal

I. Program Description

This is a two year program begun in the Junior year. A minimum of three hours daily is devoted to shop experiences and an additional one and one-half hours each day is in classroom study. Sheet metal workers fabricate, assemble, install and repair sheet metal products and equipment. Equipment used in this trade includes mechanical shears, brakes, bending rolls, as well as punch and drill presses. Typical operations include cutting, bending, straightening and bonding or joining sheet metal.

Sheet metal workers are employed in ventilation and air-conditioning businesses, restaurant equipment manufacturing plants, architectural sheet metal projects. Warm-air heating installation companies, roofing companies (where sheet metal is used in roofing), and other businesses needing sheet metal workers in a manufacturing process.

II. Program Objectives (Students will learn to:)

1. Fabricate, assemble, install, and repair various sheet metal products and equipment such as control boxes, drainpipes, ventilators, and furnace casings.
2. Select gauge and type of metal appropriate for job; locate and mark dimensions and reference lines.
3. Set up and operate shears, brakes, bending rolls, and punch and drill presses.
4. Cut, bend, and straighten sheet metal.
5. Shape metal using anvils, blocks, or forms.
6. Join metal with solder or by welding.
7. Smooth seams and joints, using files, grinders, and buffers.
8. Use calipers, scales, and micrometers accurately.

III. Related Background Experiences

Industrial Arts (Metal).

Hobbies requiring detailed finish work.

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Group 804.

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Manipulating) (.884) p. 322

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. Sheet Metal and Air Conditioning Contractor's National Association
   107 Center Street
   Elgin, Illinois 60120
3. Occupational Outlook Handbook, p. 413
4. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

Tailoring and Dressmaking

I. Program Description

This two year program open to both boys and girls is normally begun in the Junior year. The program is designed to provide experiences in garment construction and related needle trade skills. Opportunities to learn both hand and machine operations essential in the apparel industry are provided in the three hours daily devoted to laboratory or shop work. Background and technical knowledge for the needle trades are supplied in one and a half additional hours of daily classroom activities. Customer relations, fabric characteristics, style, design, measurement, pattern making, etc. are also topics which provide for learning experiences in either the shop or the classroom. In some schools Tailoring and Dressmaking are offered as two separate programs.

II. Program Objectives (Students will learn to:)

1. Advise customers about style, fabric, and design.
2. Cut, baste, sew, alter, and press fabric following pattern and customer preference in creating garment.
3. Make buttonholes, attach padding, lapels, collars and buttons.
4. Fit and alter garment to customer satisfaction.
5. Demonstrate the ability and willingness to receive and follow directions.
6. Practice good customer relations.

III. Related Background Experiences

Home Economics I, II (Sewing).

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Three-Digit Occupational Group 785.

Crafts (Costuming, Tailoring, and Dressmaking) (.261; .361) p. 308
Crafts (Craftsmanship and Related Work) (.281; .381) p. 312

Refer to Three-Digit Occupational Group 786.

Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. Ohio State Employment Service (Local Office)
2. Occupational Outlook Handbook, pp. 582-590
3. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

Welding

I. Program Description

This two year program has been designed to prepare industrial welders who are acquainted with the breadth and scope of occupations in welding as well as possessing skill and knowledge in nearly all welding operations. Each school day requires a minimum of three hours of skill development and an additional one and one-half hours of class time. Techniques of joining pieces of metal by applying heat to produce a permanent bond are coupled with classroom theory to produce a knowledgeable as well as skillful welder. Welding by gas and electricity (either arc or resistance) is a major part of this program. Methods used in the fabrication and installation of boilers, tanks, and other products made from heavy metal sheets are also included in this program.

II. Program Objectives (Students will learn to:)

1. Cut and join a variety of metals using arc, gas, and resistance welding equipment.
2. Cut metals with power-driven shears, hacksaws, etc.
3. Plan and lay out work from drawings, blueprints, or specifications.
4. Demonstrate the ability to work with the properties of steel, stainless steel, cast iron, bronze, aluminum, nickel and other metal plate.
5. Work effectively on flat, vertical, horizontal and overhead surfaces.
6. Practice safety while on the job.

III. Related Background Experiences

Industrial Arts (Metal).

IV. Career Opportunities

(Page references are to Worker Trait Groups in D.O.T., Vol. II, Third Edition)

Refer to Two-Digit Occupational Division 81

Crafts (Craftsmanship and Related Work) (.281; .381) p. 312
Crafts (Precision Working) (.781) p. 319
Crafts (Manipulating) (.884) p. 322
Machine Work (Set up and/or All-Round Machine Operating) (.280; .380) p. 430
Machine Work (Set up and Adjustment) (.780) p. 433
Machine Work (Operating-Controlling) (.782) p. 435

V. Resources For Use In Orientation And Counseling

1. The Ohio State Employment Services (Local Office)
2. Owner-operator welding shop
3. The American Welding Society
   345 East 47th Street
   New York, New York 10017
4. Sheet Metal Workers' International Association
   1000 Connecticut Avenue, N. W.
   Washington, D. C. 20036
5. Occupational Outlook Handbook, p. 567
6. The National Apprenticeship Program
   Bureau of Apprenticeship and Training
   U. S. Department of Labor
   Washington, D. C.

VI. Local Program Information

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A P P E N D I X

Review of the

Dictionary of Occupational Titles

The Dictionary of Occupational Titles (DOT) is a current inventory of occupations within the American economy and as such is the most comprehensive single course of occupational information available. The third edition of the DOT, prepared by the U. S. Department of Labor, is published in a two-volume set. Volume I, entitled Definitions of Titles, is a dictionary of occupations which provides us with a basic source of occupational language and job descriptions. Volume II, entitled Occupational Classification, contains the classification structure and the coding system used by the Department of Labor for gathering, compiling, and disseminating employment information. A supplement entitled: Selected Characteristics of Occupations is also available.

Volume I contains definitions of 21,741 separate jobs arranged alphabetically by title. Each definition includes a statement of what is done, how it is done, and why it is done. In addition, information is included on (1) functions of the worker, (2) significant aptitudes, interests and temperaments needed for the job, and (3) a description of the physical demands and working conditions important to understanding the occupation.

The classification system used in the DOT provides a framework for occupational research, statistical analysis of economic trends and manpower needs, measurement of technological change, prediction and evaluation of occupational supply and demand, and the planning of manpower training programs. The classification numbering system combines both an Occupational Group Arrangement code number and a Worker Trait Arrangement number into a single six-digit code system. This represents an improvement over the second edition DOT system which employed two separate code systems. In practice, the code system provides an efficient method for identifying and classifying a job applicant's occupational qualifications and then relating his possible code numbers to similarly coded job openings.

The Occupational Group Arrangement (first 3 digits) is the classification of occupations according to occupational categories, divisions, and groups.

A School Counselor (045.108) is classified as (0) a Professional person; (4) working in the Life Science division; and (5) more specifically in the area of Psychology.

The Worker Trait Arrangement (last 3 digits) describes the relationship of an occupation to a hierarchy of functions related to data, people, and things. The relationship is expressed numerically in a range from (0) high relationship to (8) no significant relationship. Again, to illustrate, consider the worker trait coding for the School Counselor, 045.108. The last three digits indicate that this occupation has functions that have a high relationship to data (1 - coordinating), the highest relationship to people (0 - mentoring), and no significant relationship to things (8 - no significant relationship). This coding arrangement provides guidance personnel with a source of information that can be used for occupational exploration and vocational counseling.

Worker Trait Groups are a new feature of the DOT and are based on the Worker Trait Arrangement. The Groups constitute families of occupations having similar relationships to the data, people, and things. There are 114 such Worker Trait Groups in the DOT which cover 22 areas of work. Each Worker Trait Group is organized providing the following information:

a. Worker Trait Group Titles and number (.xxx)
b. Work Performed
c. Worker Requirements
d. Clues for Relating Applicants and Requirements
e. Training and Methods of Entry
f. Related Classifications
g. Qualifications Profile

(1) Training Time, General Educational Development, and Specific Vocational Preparation
(2) Aptitudes
(3) Interests
(4) Temperaments
(5) Physical Demands
(6) Working Conditions

A third major section in Volume II, entitled Industry Arrangement of Titles, can be used to locate jobs within various industries and to get some idea of the composition of these industries in terms of the occupations typically found there.

The new DOT should find wider use in schools as a source of occupational information, especially with the growing concern for vocational guidance. The Occupational Classification system and the Worker Trait Arrangement offer increased potential for improving vocational guidance. Use of the DOT will require extensive study and planning by counselors, in order to utilize the occupational information as part of school guidance programs.

The occupational classification code system can be used by schools to set up and organize a filing system for occupational information. DOT code numbers can be modified to meet special needs of schools. For instance, an occupational filing system may be set up using only the first two digits of the Occupational Group Arrangement. This approach will provide schools with 83 divisions for organizing and filing occupational materials. Another way of organizing occupational information may be developed using the 114 Worker Trait Groups as a basis for filing information. This system may be cross-referenced within the 22 Areas of Work (see Volume II, pp. 219-223).

The DOT may be purchased (prepaid) from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. Volume I - Definitions of Titles for $5.00; Volume II - Occupational Classification for $4.25 and the Supplement containing selected occupational characteristics for $2.75.

A training manual, using programmed instruction, has been developed which will enable persons interested in learning more about the DOT to do so through self-study. It is entitled Training Manual for the Dictionary of Occupational Titles, third edition, and can be purchased from the same source, as above, for $1.75.

VT 002 691
Health Manpower Requirements and Resources in Metropolitan Indianapolis, 1966-1971.

Indianapolis Hospital Development Association, Inc., Ind.
Public Health Service (DHEW), Washington, D.C.
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INDIANAPOLIS

As an initial step in a 5-year comprehensive manpower project, a questionnaire designed to inventory present health manpower needs and resources in the various personnel categories and to project needs through 1971 was sent to 75 agencies employing and training health workers with a 95 percent return. In addition, administrators were interviewed to determine the net loss in manpower by outmigration or abandonment of the health field. Some findings were: (1) Over 6,600 health workers were employed in 1966 and if current trends continue the community will face a shortage of over 3,500 by 1971, (2) Over one-third of those trained locally will leave the Indianapolis area before being employed, (3) More technician-level employees are needed, and (4) Some institutions are not participating sufficiently in the clinical phase of training. A plan to alleviate problems reported includes defining the health system, examining tasks currently performed, exploring realignment of tasks to educational programs, and improving organization of the health delivery system. (JK)

VT 002 691

ED042060

HEALTH MANPOWER REQUIREMENTS AND RESOURCES IN METROPOLITAN INDIANAPOLIS

1966-1971

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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VT002691

PREFACE

This study, "Health Manpower Requirements and Resources in Metropolitan Indianapolis - 1966-1971," represents an initial effort by Indianapolis Hospital Development Association to provide basic health manpower data on the health care agencies and educational institutions of the metropolitan Indianapolis area. The study was conducted between November 1966 and July 1967 by Martin Reck, Ph.D., Research Associate with the Association's areawide planning project.

Valuable assistance in the development of the questionnaire and study methodology was provided by Mr. Robert Tschetter, Booz, Allen and Hamilton and Associates; Mr. Robert B. Herman, Economist, U.S. Office of Education; Mr. James R. Dove, Director of Research, Community Service Council of Metropolitan Indiana; Miss Evelyn R. Toliver, Labor Market Analyst, Indiana Employment Security Division, and Mr. John R. Mote, Assistant Director, Methodist Hospital. Mr. Fred E. Schick, Executive Vice President, Indiana National Bank and chairman of Indianapolis Hospital Development Association's Staffing of Health Care Facilities Committee, along with members of that committee, guided the study. The support provided by the Indiana State Board of Health, Dr. Andrew C. Offutt, Commissioner, made this study possible through an areawide planning project grant.

Forbes W. Polliard
Executive Director
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DEVELOPMENT ASSOCIATION, INC.

October, 1967

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INTRODUCTION

The delivery of health services is one of the nation's largest enterprises. According to a report by the National Commission on Community Health Services,[17] there has been a rapid increase in the number of people employed in health services. In 1950, the number amounted to about 1.6 million. By 1965, 3 million were employed in occupations involving the delivery of health services, an increase of nearly 100% in a 15-year period. The 3 million people represent about 4% of the labor force.

The population growth has been as dramatic. In 1900 there were 76 million people in the United States, and by 1960, the census indicated 195 million people. It had been estimated earlier that the population would not reach 195 million until 1965, and that by 1975 it would be 225 million. These figures represent approximately 156% increase in population from 1900 to 1965.

A study carried out jointly by the American Hospital Association and the U.S. Public Health Service[2] found that the total professional, technical, and auxiliary personnel employed in hospitals was about 1.4 million. This represents about 50% of the total number of health personnel in the United States. At the same time it was estimated that 275,000 additional professional and technical persons were currently needed in order to provide optimum health care. This amounts to an increase of about 20% above present staffing in hospitals. Those reporting for the above survey indicated that the five most urgent needs were for registered nurses, licensed practical nurses, nurse aides, orderlies and attendants, medical technologists, and dietitians. The needs for Indiana were identified as registered nurses, aides, orderlies and attendants, licensed practical nurses, medical technologists, and surgical technical aides which are identified with nursing personnel.

The facts relating to the national supply and demand for all health workers are not available presently; however, the following statistics may provide some understanding of the indicated shortages. The National Commission on Community Health Services,[19] reports that 31.3% of the dietitians, 30.7% of the licensed practical nurses, 89.7% of the social service workers, and 30.9% of the therapists (including physical, occupational, etc.) are employed in facilities other than those providing direct health services, such as industry, food services, etc.

According to the National League for Nursing, as reported by Kneeland,[16] the shortage of registered nurses in the United States may become twice as serious by 1970. Based on the 1960 census data, there were 332 registered nurses employed per 100,000 population nationally, with the ratio being 238 in Indiana. At the same time, 319 registered nurses per 100,000 population were

employed in Indianapolis. The study conducted by The Indiana Committee on Nursing in 1966,[12] indicated 241 registered nurses employed in Indiana per 100,000 population with 255 as the average for the 11 county area surrounding Indianapolis, while the National average was 315. These figures indicate that employment of registered nurses is not keeping pace with the growth in population. In 1964, the employers of nurses in the Metropolitan Indianapolis area[5] indicated a need for an additional 3,000 registered nurses and 1,000 licensed practical nurses. This was a 15% increase for registered nurses and 11% increase for licensed practical nurses.

There are many reasons why the demand for health services is increasing so rapidly. A report of the National Commission on Community Health Services[18] has stated that the most important of them are:

1. Improved standards of living with higher aspirations for better health care.
2. Increased emphasis on health and modern medicine, which produce a more sophisticated consumer public.
3. Concentrated population within urban and suburban centers, combined with an increased mobility and willingness to travel to obtain health services.
4. Increased population in the age groups of those less than 20 years and those over 65 years of age.
5. The growth of prepayment and health insurance programs.
6. Increased government participation in providing and financing health care services.

As a result of the above factors, annual expenditures for health and medical services are increasing rapidly. The Council on Medical Service and the Division of Socio-Economic Activity of the American Medical Association[10] have reported that the annual expenditure on health and medical services has increased from $13 billion in 1950, to $27 billion in 1960, and to almost $40 billion in 1966. This amounted to about $200/capita or 6% of the gross national product (GNP) in 1966. In 1930, the expenditure was only 3.5% of the gross national product.

The Federal Government is participating to an increasing degree in health care programs. During 1967, the Federal Government is investing more than $440 million in construction of health facilities, $620 million for health manpower education and training, $1.3 billion in biomedical research, and $7.8 billion to provide medical care.[14]

Two factors which contributed to the greater amount spent on health services (but not to the percentage change of GNP) are certainly general inflation and population increases. It was reported at the 1966 Indiana Manpower Research Conference,[6] that the population of Indiana may increase 15% between 1965 and 1975. This will amount to about 725,000 more people.

The growth in the number of people employed in health services over the next few years should be significantly greater than the growth in overall employment. A United States Department of Labor report for 1966[23] projects a 25% increase in employment for service and miscellaneous industries from 1965 to 1970. Concerning the percentage change in employment demand by occupational groupings, it is predicted that there will be a 25% increase in professional, technical, and auxiliary workers in the same time period.

Figures from a study of the Indiana Employment Security Division,[13] Report on Industrial and Occupational Changes in the State, agree quite closely with the national estimates. The study projects increased employment in service and miscellaneous industries of 24% between 1965 and 1970, and of 52% between 1965 and 1975. This is exceeded only by growth in government educational services.

All of the above figures are for broad industrial and occupational groupings into which health agencies and health personnel fit; however, no direct conclusions can be drawn from the data regarding health service personnel specifically.

The emphasis has shifted over the years from the training of physicians to the training of auxiliary health personnel. According to the National Commission on Community Health Services,[17] there were 60 health professionals serving in other fields for every 100 physicians practicing in 1900. In 1960, there were 371 allied health professionals per 100 medical doctors. It is likely that the rate of growth is continuing to increase for health personnel other than physicians. The medical profession seems to think this is as it should be. In a report of the Association of American Medical Colleges,[9] it is stated that the team approach should be stressed in medical education. A physician can no longer be self-sufficient and, therefore, should be trained to function specifically as the leader of the health team.

Several planning agencies have addressed themselves to the manpower problem in health professions. A report of the Cleveland Health Goals Project[8] states that a realistic and satisfactory answer to the problem will be found through discriminating reassessment of manpower requirements and more efficient utilization of existing personnel. They have suggested several approaches:

1. Utilization of more subprofessional and ancillary personnel, providing there is adequate supervision.

2. Differentiation of tasks and training, using personnel at their highest level of capacity.

3. Provision of better and more consistent continuing education.

4. Education of the consumer in proper use of health resources.

5. Development of means to share scarce manpower.

6. Utilization of labor-saving devices and procedures.

7. Critical evaluation of manpower demands when health programs are initiated and expanded, in order to determine priority ratings of new services in comparison with existing programs, since both may be competing for the same personnel.

8. Critical evaluation by professional groups, educational institutions, and the community of any proposals to add years of training as a requirement for adequate preparation.

9. Assumption of more responsibility by educational institutions for recruiting personnel in areas of critical shortages.

10. Recognition of shortages and the need to utilize manpower at maximum performance level by employers of health personnel. The means for professional growth conditions should be established.

The University of the State of New York[15] has established the Community College Health Careers Project to develop and strengthen education for health service workers. Its objectives are:

1. To develop curriculum guidelines for educational programs to be offered by community colleges for the training of health service technicians.

2. To plan and inaugurate new teacher-training programs for instructors and coordinators of community college programs for health service technicians.

3. To establish pilot programs in selected community colleges, utilizing the guidelines developed by the project study groups and the instructors prepared by the teacher-training programs.

4. To assist employers of health service technicians in planning orientation programs for new community college graduates and to develop evaluation instruments for determining on-the-job effectiveness of new graduates.

5. To undertake a follow-up study of community college graduates on the job.

6. To make recommendations concerning curriculum revisions based on results of the follow-up of graduates.

7. To provide an administration and curriculum manual for two-year colleges wishing to develop programs for the training of health service technicians.

The American Public Health Association and the National Health Council created a National Commission on Community Health Services.[19] This commission appointed a task force on health manpower to determine the most effective and efficient methods of providing the manpower required for community health services. They plan to do this through:

1. Assessment of current and projected personnel requirements.

2. Evaluation of current methods of recruiting, educating, training and developing, motivating, and utilizing manpower.

3. Recommendation of ways to assure availability and optimal utilization of manpower, based upon present and projected community health needs.

Since most of the previous investigations of the supply and need for health manpower have been concerned specifically with physicians, dentists, nurses, and environmental health personnel, the task force plans to take an overview of health manpower involving all the health professions and occupations at all skill levels. They firmly believe that the basis for the development of health care facilities and services should be a program based on documented community needs and clearly defined objectives.

Consistent with its goal of facilitating the development and improvement of health services in the Indianapolis area, the Indianapolis Hospital Development Association sponsored a comprehensive nursing resources study[5] to ascertain nursing resources needed in the community and how they could be provided. The firm of Booz, Allen and Hamilton, Inc., was engaged to aid in this study. The findings and conclusions of the study resulted in recommendations to meet nursing requirements through 1975. Participants in the nursing study and the Association became aware of the need to expand the scope of the study to include other health occupations. They felt that the availability of, and need for, other allied health personnel should be studied critically, and that the possibility of developing new approaches for utilizing and educating health personnel should be considered.

The United States Office of Education awarded a grant to the Association to explore approaches to resolving community health manpower needs. Preliminary plans for a comprehensive study of health manpower were developed in the Feasibility of a Systematic Study of Manpower Requirements and Education and Training Programs of Selected Health Occupations.[20] The management consulting firm of Booz, Allen and Hamilton assisted the Association in the feasibility study, and the development of a preliminary project plan.

The present study (Health Manpower Requirements and Resources in Metropolitan Indianapolis - 1966-1971) should provide a baseline of projected health manpower requirements to guide educational institutions, employers of health care personnel and others concerned with the problems of educating appropriate numbers and types of health personnel to satisfy immediate community needs.

Indianapolis area hospitals, a major employer of health personnel, are planning extensive expansion and renovation over the next several years. Over $150,000,000 is being spent by the public and voluntary hospitals between 1965 and 1971 to expand their capacity. This will increase their requirements for health manpower by over 30%.

PROCEDURE

A questionnaire was designed to inventory the present status of health manpower needs and resources in the Indianapolis area. (See Appendix A for a copy of the cover letter and questionnaire.) The objectives of Part I, the "Inventory of Selected Health Occupational Groups," were to determine current manpower strength and present additional requirements, as well as to develop projections of necessary needs to provide required services, based on current expansion plans and anticipated changes in the demand for health services through 1971.

The objectives of Part II, comprised of several general questions, were to determine the manpower needs which are most difficult to fill presently and those which it is anticipated will be difficult to fill in the future. In addition, a question was included regarding reasons for the existing shortages. Finally, an open-end item was included to allow the respondent to make comments regarding the survey.

Part III, "Educational or Clinical Training Program by Health Occupation Category," was designed to identify existing selected health education and training programs and to determine the number of individuals completing the programs currently, as well as to establish projections of anticipated output of these programs through 1971. In addition, questions were included concerning recruitment problems, possible deterrents to future growth, and anticipated changes in the program.

Before the survey was conducted, conferences were held with several hospital and school administrators in order to obtain suggestions for possible changes in the questionnaire. These meetings resulted in clarification of some of the occupational categories, correction of several certification designations, and the addition of a few occupations to the survey. The wording of several of the descriptive-type questions was altered, and the decision was made to include a separate section regarding future educational programs rather than incorporating it as a question in the section on current programs.

The revised form was sent to approximately seventy agencies in the metropolitan Indianapolis area, including hospitals, rehabilitation centers, schools having educational or training programs for health workers, and other selected health or health related agencies. (See Appendix B for a list of agencies contacted.) The present study concentrated on agencies and institutions employing and training health workers. The paramedical manpower requirements of the private practioners (dentists and physicians) were not included in this study . However, a separate study of the manpower needs and characteristics of this employment setting is being considered. The educational system, as a user of health personnel, was not contacted because the majority of schools (public and parochial) are served by the Bureau of Public Health Nursing which was surveyed. Every

agency that received a questionnaire was contacted by phone in order to convey more strongly the need for the information requested and to answer any questions the respondent might have. In addition, many users of health services were contacted in person, not only to facilitate the completion of the questionnaire, but also to discuss generally the manpower problems in the health fields and the possible solutions to these problems. Follow-up calls and visits were made in instances where it was deemed necessary to do so in order to expedite completion of the questionnaire.

This procedure resulted in about a 95% return rate, attesting to the eagerness of most people involved to try to remedy the situation. It should be noted that of the small number of agencies which did not reply, none are major providers of health services in the Indianapolis area.

In addition to the information collected by means of the questionnaire, it was deemed desirable to collect data regarding two other factors which should be considered in the overall picture of community health resources. The first of these is the percentage of health manpower graduates who do not accept positions in the Indianapolis area upon graduation. The second is the rate of loss to the community of health workers; that is, what percentage of people leave one job and do not accept another job in a health occupation in the community.

Agencies vary widely regarding the extent to which they keep records of such information. It is relatively easy to obtain accurate information regarding turnover; that is, the number of employees leaving employment and the number of new persons employed. It was felt, however, that it was important to obtain information about the reasons why selected categories of health personnel left employment, whether or not they accepted other employment in the same field in the community, or whether they accepted employment with a non-health service, left the community, or did not seek reemployment. The data was collected by means of a telephone call or personal contact with administrators of the hospitals and directors of the schools. The information was used to estimate the net loss in health manpower from the community by either out-migration or abandonment of the health field.

RESULTS

The quantitative results of the survey are summarized in Tables 1 and 2, (see listing of Tables and Appendices, page 27). Table 1 includes the present number of employees in full-time equivalents, current additional needs (in terms of budgeted vacancies), estimated additional needs and replacement needs through 1971. Table 2 presents a comparison of net supply and estimated needs from 1967 to 1971. The net supply was obtained by subtracting the estimated loss by out-migration from the estimated number graduated. The estimated deficit or surplus was determined by comparing the net supply with the estimated needs from Table 1.

The bulk of this chapter will be composed of sections devoted to the major occupational categories in which both the quantitative and qualitative information obtained will be described. A list of health education and training programs in the Indianapolis area will be found in Appendix C. The reader may find it helpful to refer to this list while reading this section in order to get a clearer picture of the educational opportunities in Indianapolis. It should be noted that there is no reporting of the number of physicians, residents, or interns in Tables 1 and 2. Indiana University School of Medicine is currently conducting research and planning to improve the medical education program and the availability of physicians in Indiana.

Clinical Laboratory

Seven agencies stated that one of their most critical needs is for medical technologists. Two agencies stated this category as their most critical need, and three placed it as the second most critical. Although there are several training programs in the area, and another scheduled to begin in 1968, the needs are far from being met, as both the quantitative and descriptive data indicate. One of the problems in meeting the demand by health facilities is that private industry is able to offer higher salaries and better working conditions than are hospitals. Two major producers of drugs do employ a number of certified laboratory personnel, however, the exact number is not known because these two agencies were not surveyed. The educational programs are unable to grow because of an inadequate number of qualified instructors and lack of space for expansion. Recruitment is carried out by visits to schools, mailings to counselors, open houses, and career days. It is felt that there is not enough general publicity about the field and that there should be more of a community or state-wide effort at recruitment. Indiana University has a program, but the fact that students must take part of their work in Bloomington and part in Indianapolis discourages some potential candidates.

An accredited program for cytotechnologists was started at Marion County General Hospital, Indianapolis, in July 1967. One hospital pointed out the shortage in this field to be very critical.

The estimated deficit over the next few years will be very large compared to the present number of employed cytotechnologists. It is recommended that the proposed educational program be supported and encouraged.

All persons are trained on the job for histologic technology. No agency mentioned a shortage, and the quantitative figures indicate that for the present the agencies may be able to recruit and train on the job adequate numbers to meet the need. No plans have been made to establish a formalized training program through vocational education.

There is only one existing program for the training of certified laboratory assistants in Indianapolis and it is relatively small. The Indiana Vocational Technical College has started (Fall 1967) a program with a somewhat larger student capacity. Three hospitals cited the shortage in this area as being critical. It is possible that hospitals would use fewer noncertified laboratory assistants if they had a greater supply of certified people. The quantitative report indicates that if the new program graduates as many people as planned, the shortage may be well in hand by 1971. This is, of course, assuming that students can be recruited. Brochures, radio, television, and newspapers are being utilized for this purpose. One administrator felt that even more mass communication is necessary, with documented illustrations, to give young people a full look at the field and make them more aware of the opportunities it offers. It is suggested that support be given by all agencies toward establishing this program.

The need for certified blood bank personnel is limited and the turnover low. In fact, the Director of the Community Blood Bank of Marion County stated they had more applicants than they could use. At present, certified laboratory assistants are given on-the-job training in blood banking. Plans have been completed to add this area of specialization, for those who want it, to the training program now in process at the Indiana Vocational Technical College. It is expected that the first students will be accepted in October, 1967.

Before too many new programs for laboratory personnel are contemplated, a survey should be made of all facilities, including industry, to determine the number of laboratory personnel employed by agencies not providing direct health services. If industry does employ a sizeable number, they should be encouraged to help support appropriate programs. It is also possible that private practitioners are employing specific categories of laboratory personnel. It might be possible for these employees to be shared by more than one private physician or that more part-time personnel could be utilized.

Dentistry

At present, there is no program in Indianapolis for the training of certified dental assistants. The Indiana Vocational Technical College is considering the establishment of a course in 1968.

According to Table 2, there will be a surplus of dental assistants if the expected number of students are graduated. It should be noted, however, that the major users of dental assistants' services, the private dentists, were not included in the survey. Thus the estimated needs may be a gross underestimate of the true needs.

The estimated needs for dentists is an underestimate as well, because this survey does not tell how many private dentists will be needed to provide services for a growing population and to replace retiring dentists. It was stated by the representative of the Indiana University School of Dentistry that the school would like to expand, but a lack of adequate physical facilities and shortage of faculty do not allow expansion or the introduction of new specialties at this time. It is hoped that expansion can occur by 1970, allowing about twenty additional students per class.

The only certified program in the area for dental hygienist training is at Indiana University. Again it was stated that lack of physical facilities is hampering growth. Because of limited class facilities there are no recruitment problems, with a more than adequate number of applicants to fill the openings. The surplus shown in Table 2 for dental hygienists is probably misleading since the major employers of this group were not included in the present survey.

There is no accredited program for dental laboratory technicians in the Indianapolis area. It is probable that the deficit is greater than that shown in Table 2, as private dental laboratories were not included in the survey. Consideration should be given to surveying dental education and dental service in the community before planning for additional programs.

Dietitians

The only educational program for dietitians is located at the Indiana University Medical Center. This includes a dietetic internship as well as a Master's program. The major deterrent to the program's growth is lack of physical facilities. This situation should improve with the completion of the new university hospital, and it is expected that eventually there may be a 50% increase in the number of students as a result of the additional space.

Recruitment for the programs is accomplished through Indiana Health Careers demonstration days, and by word of mouth. Generally, it is desirable that dietitians be able to talk to students about careers in this field and that activities be created, such as in-field observation, educating the community to the dietetic field and its purpose. The quantitative data indicates expansion of this program would be desirable to help offset the projected personnel deficit over the next few years.

Inhalation Therapists

The only program for the training of inhalation therapists in Indianapolis is at the Indiana University Medical Center. It is a new program and the first students will be graduated in 1968. Only one other program for inhalation therapists exists in Indiana. The Indiana University program is hampered by the fact that the program is new, relatively unknown, and as enrollment increases additional instructors will be required. The latter circumstance severely limits the output of the program since there must be one instructor for every four students. Future recruitment efforts will include an increased circulation of information, including brochures, and more extensive contact with counselors and students.

Table 2 shows a fairly adequate supply of registered inhalation therapists, assuming the one existing program in the metropolitan Indianapolis area graduates the expected number of students. Hospitals prefer to use registered therapists if they are available. This preference is substantiated currently by the number of vacancies in budgeted positions for registered inhalation therapists, which is equal to the number presently employed. However, a great need is expressed for nonregistered inhalation therapists.

Medical Assistants

A program for training of medical assistants in Indianapolis is being considered by the Indiana Vocational Technical College. According to Table 2, the need will be met if this institution develops a program and graduates the expected number of students. The private practitioner will be the greatest employer of this group of personnel. Therefore, before a program is defined, it should be determined how many the medical and dental private practitioners will employ, and if persons in this category could be used in other situations to relieve professionally prepared personnel. A new educational or training program should not be anticipated until the projected employers define the need, duties to be performed, and indicate their support of the program by employing graduates.

Medical Education

Previous reports have dealt thoroughly with the question of medical education in Indiana. The purpose of including it in this study is to identify the problems relating to the physician with special education such as anesthesiology, pathology, etc., employed by health agencies and services, and intern and resident education as it affects the Indianapolis area hospitals. No summary of needs is included in either Table 1 or 2. However, the spokesman for the hospitals of the Indiana University Medical Center cited the problem of inadequate physical facilities, and both he and the Methodist Hospital spokesman mentioned a lack of funds for adequate stipends as a major deterrent to growth in the intern and resident program.

The opinion was expressed that funding agencies have not yet recognized the full teaching and research potential of voluntary hospitals. All of the Indianapolis hospitals involved in medical education have expressed a desire to expand their programs. Since there is a tendency for many physicians to remain in the geographical area in which they complete their education, expansion of these programs could result in an increase in the number of physicians settling in this region. One of the efforts of the Regional Medical Program, supported by the Public Health Service, is directed toward increasing the number of available residencies and internships in Indiana.

Medical Librarians

The metropolitan Indianapolis area does not have a training program for certified medical librarians. There is a total of twelve medical librarians in the area, four of which are certified. The estimated additional need for three certified medical librarians in the five-year period and five others does not seem to express enough demand to establish a program in the community.

Medical Records Librarians

The only accredited educational program for medical records librarians in Indianapolis is at the Indiana University Medical Center. The Director of the educational program states that deterrents to the program's growth are a lack of space and a shortage of qualified faculty. The major recruitment methods are contact with high school counselors, word of mouth, and participation in high school day on the medical campus. Recruitment problems exist for several reasons. General knowledge of the field is not sufficiently widespread. The word "librarian" in the job title is a hindrance as well as misleading. The public is not aware of the duties of a medical records librarian and the significance and importance of the responsibilities involved in the job.

The director of the program stated that students should receive more clinical experience in hospitals other than the university hospitals, but it is a problem locating hospitals either in or outside of Indianapolis with the required space and staff to accommodate students for this clinical experience.

Table 2 shows an estimated deficit over the next five years for registered medical records librarians. However, it is likely that the actual deficit is greater, since hospitals would probably prefer to employ more registered librarians, rather than in-service trained, nonregistered technicians, if such people were available. The situation could be improved with the establishment of an associate degree program for registered medical record technicians.

Medical Secretaries

There is no formal educational program in Indianapolis for the training of medical secretaries. A problem exists in finding applicants with the requisite background in medical terminology. Thus, the

users of medical secretaries must hire persons trained in general office work and teach them the necessary terminology. The estimated need for medical secretaries is probably an underestimate, since most institutions have an in-service training program and many employers of medical secretaries were not included in this survey. Before a program is proposed, an evaluation of the secretarial schools should be made to determine their interest in developing training programs in this field.

Music Therapists

There is no program in Indianapolis for the training of music therapists. The number of music therapists in the area is only six, although there are three vacancies in budgeted positions. Since a need for only two additional music therapists is projected through 1971, it would seem that the establishment of a training program in this field is not justified. Therefore, Indianapolis will have to continue to recruit people in this field who have received their training elsewhere.

Nurses

Despite the establishment of new associate degree programs, the results of this survey indicate there will be a deficit of almost 1000 registered nurses in the Indianapolis area over the next five years. It is most likely that this figure is an underestimate since only a limited number of private nursing homes and no privately practicing physicians were included in the survey.

Reasons given as deterrents to the growth of existing educational programs include the growing costs of nursing education and lack of scholarship aid, shortage of qualified nursing faculty, insufficient space and facilities for opportunities of clinical practice. Indiana University mentioned a shortage of student housing as being a problem, and the associate degree programs at Purdue and Indiana Universities are hampered to some degree by the fact that they are new programs and not well known.

Recruitment for the nursing education programs is accomplished through visits to high schools, encouragement in the formation of future nurse clubs, open houses at the hospitals, and participation in career days in high schools. Some recruitment problems stem from the lack of understanding on the part of high school counselors about the various nursing programs and the interests in some of the newer health fields. As one might expect, seventeen agencies cited nursing as being an area of critical shortage, twelve considering it the most critical. The usual reasons given to account for recruitment problems are low salaries and working conditions which are not as satisfactory as in other occupations.

If the Indianapolis School of Practical Nursing graduates as many students as they have estimated, the supply of personnel in this field should almost meet the demand by 1971. This will be accomplished because almost all the graduates of the program will accept jobs in the Indianapolis area upon graduation. A large percentage of people entering this program are of a somewhat older age group and have their roots in the community. Therefore, they are a more settled and stable group than in the case of registered nurses. The school actually accepts applicants up to 55 years of age, thus, encouraging many women to begin a new career in middle age. The school recruits by means of talks at high schools and clubs, publicity by newspapers, radio, and television, and promotional brochures. Recruitment problems exist because of the active labor market and the relatively low salaries of nursing in comparison. Individuals are reluctant to pay for a year of training without salary when they can obtain a position immediately following graduation from high school. The school is selective, however, regarding admission of candidates. Approximately 50% of the applicants are denied admission on the basis of a pre-testing program. Unfortunately, many of the persons admitted must leave before completion of the course because of financial difficulties, marital problems, or other personal factors. Since nine agencies stated the need for licensed practical nurses as being critical, and the number of vacancies in currently budgeted positions attests to this, the growth of the practical nurse school should be encouraged. However, assuming qualified students can be found and the school's growth continues, the situation should improve considerably by 1971.

Six agencies stated a need for nurses' aides and orderlies as being among the most critical. Since there is no organized program to train these people, except by the individual hospital, there is no estimate of the supply. We do know, however, that hospitals have a very difficult time competing monetarily with industry for this level of unskilled labor. The reason traditionally given has been low salaries, but certainly part of the problem must stem from the low status and the nature of the duties these people must perform. It is known that the turnover rate for these people is tremendously high, many employees staying only a week or two. The applicability of the minimum wage law to hospitals may help, but better wages cannot change the nature of the job.

Nurse Anesthetists

No program exists in Indiana for the training of registered nurse anesthetists. Each of the adjoining states has one or more programs. If a registered nurse leaves the state to obtain advanced education, unless sent by an employing agency, the nurse usually does not return to the home state.

There are thirteen nurse anesthetists currently employed in the area hospitals, two of whom are registered. It is estimated, however, that an additional eighteen nurse anesthetists will be

needed during the next five years. This figure, plus the estimated sixteen needed for replacement, does warrant the establishment of a program for the training of nurses as registered anesthetists.

Occupational Therapists

Table 2 indicates a considerable estimated deficit for occupational therapists through 1971. This is reflected, at present, by the fact four agencies stated that a critical shortage exists in the field, one of them placing it as its most critical need and two of them as their second most critical.

Recruitment methods include participation in high school career days and Indiana Health Careers, television, radio, and organized summer work experiences for interested students. Part of the recruitment problem stems from the fact that the field is relatively new and does not have a long history to help attract students. One of the goals of the program is to expand internship experience to include the role of occupational therapy in community mental health programs.

Based on the estimated deficit, and the assumption that agencies would prefer to use a greater proportion of registered people rather than the large number of in-service trained assistants now being utilized, an expansion of the Indiana University program is recommended, as well as possible initiation of an accredited program to train registered occupational therapy assistants. The director of the Indiana University program in occupational therapy indicated that some thought had been given to the development of an associate degree program. The development of an associate degree program should be given further consideration.

Pharmacists

The estimated surplus of pharmacists shown in Table 2 is unrealistic because drug stores and other major employers were not included. Two of the hospitals surveyed cited a critical need for a pharmacist. It was stated that a shortage of pharmacists definitely exists in the Indianapolis area, with even the lowest ranking graduates of the Butler College of Pharmacy receiving many job offers.

Recruitment for undergraduate pharmacy students is carried out by high school contacts and speaking engagements. A need for improved recruiting was expressed. On the Master's level, no recruiting is really necessary as the school gets all the applicants it can handle. The fact that many local employers of pharmacists send their people to school for advanced work contributes to this situation.

One of the deterrents to growth of the Butler College of Pharmacy as a whole is its lack of a Ph. D. program. A general problem at all levels of instruction is a shortage of qualified teachers, one of the reasons is that the abundance of post-doctoral research openings delays the entrance of teachers into the labor market, and sometimes permanently decreases interest in teaching.

Physical Therapists

Nine agencies reported that one of their critical needs is for physical therapists, four of them calling it their most critical need. The large number of vacancies in currently budgeted positions and the large estimated deficit through 1971, seems to indicate that this situation will continue. Deterrents to the growth of the program at Indiana University include space limitations and a shortage of faculty in both the basic sciences and the program itself.

Recruitment for the program is carried out through participation in Indiana Health Careers and Indiana University career days, efforts of individual physical therapists to interest people in the field, and contacts with high schools and counselors. As is the case with occupational therapy, the agencies are using large numbers of non-accredited assistants in physical therapy.

In light of the current and projected shortage, expansion of the Indiana University physical therapy program, at a faster rate than planned, is recommended. The American Physical Therapy Association, at the 1967 annual conference, adopted a policy statement in favor of a physical therapy assistant program. Guidelines are presently being prepared for a formal educational program. Physical therapy aides will continue to be used and given on-the-job training.

Physicians

This survey did not attempt to estimate the future needs for physicians as private practitioners in the Indianapolis area. An examination of the needs of hospitals and agencies contacted did give an indication, however, as to the specialties in shortest supply. The highest number of vacancies in currently budgeted positions is in the field of pathology, and this seems to be the field where the need will grow most rapidly because of the expansion of health services. Hospitals also expressed needs for radiologists, anesthesiologists, and general surgeons. Four agencies cited needs for psychiatrists among the most critical. It was stated that an insufficient number of physicians is considering psychiatry as a specialty. In the future there probably will be much greater emphasis on community psychiatry and mental health programs. If an increased number of residencies were created in the above-mentioned critical areas, there would be a reduction of the manpower deficit in these fields.

Radiological Technicians

Indianapolis has several agencies which offer a course in radiological technology. Table 2 indicates that the estimated output of these programs should be sufficient to meet the demand by 1971. At present, however, there are vacancies in nine budgeted positions in this category and two agencies consider the need for these people to be critical. Factors mentioned as deterrents to the growth of the programs include an inadequate number of qualified teachers, classroom space problems, a lack of applicants, and the relatively low status of radiologic technicians.

The usual recruitment methods are used, including contact with high school advisers, participation in high school career days, and newspaper publicity. Problems of recruitment are partially caused by a lack of the availability of student loans.

The possibility of establishing a degree program in this field was mentioned by one administrator. Assuming that the schools are able to attract applicants, and that the Indiana Vocational Technical College program begins on schedule, the need for registered radiologic technicians does not appear to be one of the most critical.

No program was reported for the education of either registered nuclear medical technologists or registered radio-therapy technologists. Although the need for persons with this training is relatively limited, the schools of radiological technology should give consideration to the possibility of establishing a program for these categories.

Social Workers

Indianapolis seems to be experiencing a serious shortage of social workers. Five agencies stated this as being among their most critical needs. The number of vacancies in currently budgeted positions is high, and the estimated deficit through 1971 is large.

The Indiana University School of Social Service is a major producer of persons with Master's degrees in this field. However, the growth of the school is hampered by poor physical facilities, a lack of funds, and a shortage of qualified teaching staff. The school has no problem recruiting students because of its enrollment limit. Many more apply than can be accepted.

Since Indiana University is a major regional center for the education of social workers, a large percentage of the students come from outside the immediate area and return to their homes upon graduation. Private and county agencies have great difficulty in recruiting people, partially because of the limited number of graduates who remain in Indianapolis, and also because federal agencies, which employ many social workers, are able to offer significantly higher salaries. Support should be provided to increase this program and encourage the development of a social work assistant program on the bachelors or associate degree level.

DISCUSSION

The results described in the previous section indicate the metropolitan Indianapolis area will continue to experience a shortage of workers in most of the health fields over the next five years. The problem may become more critical because of the increasing demands for health care stimulated by new federal programs, liberalized insurance coverage, the rising economy, and new technological advances in medicine.

The agencies surveyed reported they were currently employing a total of over 6,600 professional health workers and assistants. By 1971, over 3,000 additional positions will be created by new and expanded health services, while an additional 4,000 health workers will be required to replace those lost to the field by retirement, relocation, marriage, and death. During this same period, over 6,300 health workers will graduate from Indianapolis area educational institutions and over one-third of these graduates will seek employment outside the metropolitan Indianapolis area. If current trends continue, a shortage of over 3,500 health workers can be expected in the Indianapolis area by 1971. Nurses and clinical laboratory personnel comprise over one-third of these anticipated shortages.

A factor contributing to the shortage of workers, aside from the insufficient number being educated, is the apparent high turnover rate in the health occupations. Part of this can be contributed to the factor that the greater number of health workers are female. This fact creates the second handicap, that hours of employment are not always compatible with homemaking and motherhood.

The American Nurses Association, Facts About Nursing,[3] reports that nationally,61% of the actively employed nurses in 1962 were married. The Survey of Nursing Resources for metropolitan Indianapolis in 1964,[5] reports that 80% of the nurses that were graduates of the Indianapolis area school of nursing from 1935 to 1964 were married, while only 64% of the licensed practical nurses were married. The same survey reports that only 25.9% of the actively employed married nurses in the metropolitan Indianapolis area had no children under 21 years of age. By comparison, 50% of the actively employed licensed practical nurses had no children under 21 years of age. The same data indicated that only 11% of the graduates of the area school from 1935 to 1964, who were actively employed, had accepted positions outside the nursing field, although some had accepted positions in other areas of the health field. Among the graduates of the Indianapolis School of Practical Nursing, 19% were actively employed in a field other than nursing. Other figures from the survey indicate that many nurses work one to five years, marry, have a family and then return to either full or part-time employment after the youngest child has entered school.

The Survey of Nursing Resources[5] also reviewed the location of the student's family home and the location of the first position after graduation. Family, home, and community were the primary reasons given by 40.1% of the professional nurse graduates and by 50.5% of the practical nurse graduates for the location of their first position. Approximately 20% of the graduates gave the residence of the spouse as the primary reason for the location of their first position.

Discussions with the directors of the educational programs in various health careers indicated that at least 50% of all admissions to the baccalaureate programs came from homes outside the metropolitan area and, upon graduation, the majority either returned to the home area or, if married, to the area of employment of the spouse for the first position.

The data from the Survey of Nursing Resources in 1964[5] also seem to indicate that the shorter the educational or training program, the student will more likely accept employment in the area of the school from which graduated.

The present review indicated the turnover rate for registered nurses in the Indianapolis hospitals was about 50%. About one-half of these accepted employment in another health agency or service. There was no indication of the reasons for the other resignations. The high rate of turnover is costly for the hospitals and may have an adverse effect on the quality of patient care.

According to one author, planners are making a great mistake in putting all of the emphasis on supply and training. He feels that initial training is certainly important, but people are concerned about what happens to them after they get their first job. Staff development programs should he geared to systems of promotion including significant increases in wages and fringe benefits. If they are not, efforts will be wasted largely because people will leave the field.

Some of the factors which account for the high turnover in the health field are probably basically the same as those which influence many prospects into not choosing a health occupation as their career. A consistent reason given to account for recruitment problems has been low salaries. Although still true to some extent, the picture is changing rapidly. The average national salary of registered nurses employed in hospitals in 1963 was $375 per month and 25% were earning less than $347 (Friedman, 1966).[11] As of July 1, 1967, most hospitals in Indianapolis were offering $500 per month to beginning nurses with about a 10% evening and night-shift differential. Similar trends can be seen in the case of other employees, such as licensed practical nurses and medical technologists. Since the salaries are approaching those paid workers in other fields requiring similar amounts of education, such as teaching, it is necessary to look further to explain the reluctance of people to enter the health professions.

Women represent the larger per cent of persons in the health occupations, however, no figures appear to be available as to the exact number. The Indiana Employment Security office reported in October 1966, that women comprised 33% of the labor force in Indiana, 80% of the employed women were in medical services, and that 63% of those employed by the public schools were women.[13] Medical services and public schools employed the larger per cent of the total number of women in the labor force at that time. A review of the major health occupations reveals some facts about the predominance of women as health workers. The discussions with the directors of programs preparing students for the various major health occupations revealed that men students were in the minority in all fields but medicine, dentistry, and pharmacy. The Indiana University School of Medical Records Librarians has graduated two men in 17 years, and enrollment of men students in the School of Physical Therapy have averaged about 10%. The field of medical laboratory technology appears to draw more men, however, no facts are available at this time.

If more men could be attracted to the health professions, there is no doubt the manpower situation would be improved significantly. Recruitment of men would help in several ways. First of all, it would immediately increase the total number of students in the various health occupations. Secondly, it might actually increase the number of women entering the field because of increased opportunity for male contact. Finally, it would bring an overall stability to the fields, reducing turnover and attrition.

The American Nurses Association, Facts About Nursing, 1966,[3] reports that nationally, 0.9% of all nurses in 1962 were men while the Indiana survey in 1966, revealed that only 0.5% of all nurses in Indiana were men. About 35% of the practicing physical therapists in the United States are men while in Indiana, men represent about 25% in this field. The Director of the Indiana University program for Dietetic Internships estimated that about 10% of the A.D.A. Dietitians were men and that the majority of these were employed in industries that prepare foods. The Director also commented that more men appeared to be interested in the field since salaries and working conditions have improved. However, additional applicants are not a complete solution according to most program directors. Inadequate classroom and laboratory facilities were stated as major deterrents to expanded programs.

The directors of the several educational programs requiring experience in a clinical setting, such as nursing, physical therapy, occupational therapy, medical laboratory technicians,and medical records librarians, comment on the need for additional clinical facilities. Health agencies need to be encouraged to offer more of their facilities for educational use. The educational programs also need to re-evaluate their requirements for use of such facilities.

In the case of nursing, there should be a thorough study, perhaps on a nationwide level, of where education for nursing should take place. At present, the clamor still goes on between the advocates of nursing education in a hospital setting and advocates of nursing education within the framework of the general system of education. In 1965, the American Medical Association stated that nursing education should take place in institutions of higher learning.[10] The Association of American Medical Colleges has similarly suggested that an increasing proportion of educational needs can be met by institutions such as junior colleges.[9]

This recommendation questions, of course, the continued existence of the hospital-operated diploma program which, as of 1965, graduated about 77% of the nurses entering the profession. There has been a continuous drop in the per cent of student nurses graduating from diploma programs in the past ten years, however, this is the first year in which less than 80% were graduated from the hospital based program. The same trend has taken place in Indiana. The reasons are several: one, students and their parents are more desirous of a college education; two, women students prefer collegiate education; and finally, persons prepared professionally need a broad educational background in order to communicate with other professionals and to assume leadership roles. The Indiana Committee on Nursing, when making its report following the survey of nursing needs and resources in Indiana indicated there is a great and immediate need to increase the nurse supply in Indiana rapidly, therefore, the committee recommended that each school of nursing in the state, regardless of the type, continue to strengthen and expand its educational programs.[11]

Although this study reflects the need for rapid acquisition of additional health workers, many of the persons interviewed during the study indicated that providing more health manpower is not the whole answer. Unrealistic accreditation and licensing requirements, and the constraints which result, were also cited as major problems facing employers and educators of health workers. Identification of undertraining and overtraining of health workers was recommended as one of the first requirements in a long-term plan for meeting manpower needs. It was suggested that opportunities for "career ladder" advancements in the health field be developed to permit more effective use of available health manpower.

A recent message to Congress by the President[14] pointed out that too little has been done to mobilize Universities, Industries, Research Institutions, and Communities in seeking new ways of providing health manpower and delivering health care. Systems Analysis, increased application of computers (for improved communication, computer based instructions and data analyses), and other forms of automation were suggested as approaches to improving the nation's health care system.

The Indianapolis Hospital Development Association recently completed a study to determine the feasibility of a community approach to systematically studying the organization of the health care system and its manpower requirements.[20] The United States Office of Education, Division of Vocational and Technical Education funded the feasibility study. Preliminary plans for the implementation of a 5 year health manpower research project have been developed. This project will be coordinated with the current projects in Area-wide planning and Shared Community Centered Computer System (see organizational chart following page XXXVII of the appendices).

The objectives of the comprehensive health manpower project are to be accomplished over a five-year period, and are outlined as follows:

1. To determine present demand and project future demand and requirements for health services.

2. To determine the present and estimated future supply of health personnel.

3. To relate demand and need for health services to health manpower requirements, utilization and education and training.

4. To analyze the organizational structure for the delivery of health services as it affects manpower requirements.

5. To identify present health personnel utilization by systematically studying the roles and responsibilities of selected existing health professions and occupations.

6. To identify new, restructured, or unchanged selected health occupations according to the most effective grouping and assignment of tasks and the minimum level of knowledge and skill required to perform them.

7. To identify the curriculum content and sequence of study required to prepare persons for selected health occupation classifications.

8. To provide greater opportunities for persons to enter selected health occupations where their levels of skills can contribute to the quality and amount of health care and services.

9. To provide opportunities for "career ladder" advances within health occupational fields, so that qualified persons may progress professionally in an orderly fashion.

10. To coordinate educational and training programs of selected health occupations and professions so that persons can increase their skills and abilities with minimum duplication of content or unnecessary loss of time or expense.

11. To promote the team approach to health care and service through systematic integration and coordination of functional assignments with educational and training programs for selected health occupations and professions.

12. To determine the levels of skills and abilities required of instructors in educational and training programs for selected health occupations.

13. To translate the recommended functional assignments and educational and training programs of selected health occupations into pilot programs which can be analyzed and modified as necessary.

14. To evaluate the effect of the recommended functional assignments and educational and training programs on the quality and amount of health care and service that is required or desired.

15. To develop a plan of action and a final report that will permit other urban areas to benefit from the study of manpower requirements and educational and training programs of selected health occupations in the metropolitan Indianapolis area.

SUMMARY AND CONCLUSIONS

The purpose of this study was to assess the health manpower requirements and resources in the metropolitan Indianapolis area from 1966 through 1971. Of the 75 hospitals, agencies, and educational institutions surveyed, over 95% responded. The results indicate that Indianapolis will experience a substantial manpower shortage of dietitians, medical technologists, medical records librarians, registered nurses, nurse aides, occupational therapists, physical therapists, and social workers. It would seem that the demand for certified laboratory assistants, licensed practical nurses, and radiologic technicians will be essentially satisfied.

An analysis of the data from the agencies surveyed revealed that:

- over 6,600 professional health workers and assistants were employed in 1966
- a 30% expansion of hospital facilities is anticipated by 1971
- over $150,000,000 is being spent by the hospitals to expand and improve their facilities
- an anticipated increase of over 50% in the demand for health workers will develop by 1971
- if current trends continue, the community will face a health manpower shortage of over 3,500 by 1971
- only 2% of those available for employment by 1971 will have been trained on the job
- over one-third of those trained locally will leave the Indianapolis area before being employed
- turnover rates are as high as 50% in nursing and other paramedical fields
- more technician-level employees are needed to assume routine functions
- the shortage of classrooms and facilities for clinical training is preventing the admission of qualified students

- some institutions and agencies in the community are not participating sufficiently in the clinical phase of training

- health leaders are desirous of cooperating in a community effort to improve manpower utilization and availability.

A plan, to alleviate anticipated shortages and utilization problems as reported in this study, has been outlined by the Indianapolis Hospital Development Association to:

- define the community's health system

- examine tasks currently performed

- explore realignment of task assignments

- analyze impact of automation on health system

- relate restructured tasks to educational programs

- improve organization of health delivery system

This report on a survey of health manpower requirements and resources in metropolitan Indianapolis - 1966-1971, is an initial step towards the implementation of the proposed health manpower research project. A coordinated, action-oriented community-wide effort should help to improve the future availability and utilization of health manpower.

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TABLE 1

Number of Current Employees, Budgeted Vacancies, and Estimated Manpower Needs Through 1971

CATEGORY OF PERSONNEL	1 Number of Current Employees in Full Time Equivalents	2 Current Budgeted Vacancies	3 Estimated Additional Needs Thru 1971	4 Estimated Replacement Needs Thru 1971	5 Estimated Needs Thru 1971 (Total Columns 2-3-4)
Clinical Laboratory					
Blood Bank Technologist - MT (ASCP) BB	7	6	13	9	28
Other Blood Bank Technicians	27	1	1	34	36
Certified Lab Assistants - CLA (ASCP)	7	5	51	9	65
Other Lab Assistants and Aides	135	0	52	169	221
Chemist - C (ASCP)	12	2	9	15	26
Chemists - Spec. C (ASCP)	1	3	14	1	18
Other Chemical Technicians	20	1	20	25	46
Cytotechnicians	9	2	28	11	41
Cytotechnologist - CT (ASCP)	10	1	38	12	51
Hematologist - Spec. H (ASCP)	2	2	7	2	11
Histologic Technicians - HT (ASCP)	14	4	16	17	37
Other Histologic Technicians	19	0	9	24	33
Medical Technicians	104	5	45	130	180
Medical Technologist - MT (ASCP)	150	22	98	187	307
Medical Technologist - Other Registration	14	0	1	17	1[illegible]
Microbiologists - M (ASCP)	7	3	13	9	25
Microbiologists - Spec. M (ASCP)	4	3	13	5	21
Other Microbiologists	10	1	5	12	18
Nuclear Medical Technologist - NMT (ASCP)	0	0	0	0	0
Ph.D. and Master Degree Chemist or Microbiologists	17	2	16	21	39
Serologists - Spec. S (ASCP)	2	1	0	2	3
	571	64	449	711	1,224

TABLE 1 (Cont'd.)

CATEGORY OF PERSONNEL	1 Number of Current Employees in Full Time Equivalents	2 Current Budgeted Vacancies	3 Estimated Additional Needs Thru 1971	4 Estimated Replacement Needs Thru 1971	5 Estimated Needs Thru 1971 (Total Columns 2-3-4)
Dentistry					
Dentist	114	0	43	N.A.	43
Dental Assistants - AADA	44	0	12	N.A.	12
Dental Hygienist	6	0	2	N.A.	2
Dental Lab Technician	9	2	9	N.A.	11
	173	2	66		68
Dietary					
Dietitians - ADA	48	19	23	48	90
Other Dietitians	40	1	15	40	56
	88	20	38	88	146
Electronics Technician	2	1	1	N.A.	2
Home Health Aide	19	1	19	N.A.	20
Inhalation Therapy					
Therapist - ARIT	5	5	15	12	32
Other Inhalation Therapists	47	11	63	118	192
	52	16	78	130	224

TABLE 1 (Cont'd.)

CATEGORY OF PERSONNEL	1 Number of Current Employees in Full Time Equivalents	2 Current Budgeted Vacancies	3 Estimated Additional Needs Thru 1971	4 Estimated Replacement Needs Thru 1971	5 Estimated Needs Thru 1971 (Total Columns 2-3-4)
Medical Assistant - AAMA	11	0	0	N.A.	0
Medical Library					
Medical Librarian - MLA	4	1	3	N.A.	4
Other Medical Librarian	8	1	5	N.A.	6
	12	2	8		10
Medical Records					
Medical Record Librarian - RRL	10	5	8	11	24
Other Medical Record Librarian	12	0	5	13	18
Medical Record Technician - ART	5	0	9	5	14
Other Medical Record Technicians	65	3	11	71	85
	92	8	33	100	141
Medical Secretary	86	3	28	N.A.	31
Music Therapist	6	3	2	N.A.	5
Nurse Anesthetist					
Nurse Anesthetist-Registered	11	0	18	14	32
Other Nurse Anesthetist	2	0	0	2	2
	13	0	18	16	34

TABLE 1 (Cont'd.)

CATEGORY OF PERSONNEL	1 Number of Current Employees in Full Time Equivalents	2 Current Budgeted Vacancies	3 Estimated Additional Needs Thru 1971	4 Estimated Replacement Needs Thru 1971	5 Estimated Needs Thru 1971 (Total Columns 2-3-4)
Nursing					
Graduate Nurse - Not Registered	26	0	0	0	0
Licensed Practical Nurse - L.P.N.	698	109	325	418	852
Nurse Aide	1,469	216	519	N.A.	735
Orderly	189	28	56	N.A.	84
Registered Nurse - R.N.	1,328	223	485	1,660	2,368
	3,710	576	1,385	2,078	4,039
Occupational Therapy					
Occupational Therapist - AOTA	32	5	25	64	94
Other Occupational Therapists	15	0	13	30	43
Occupational Therapy Assistants - AOTA	0	0	13	0	13
Other Occupational Therapy Assistants	26	1	30	52	83
	73	6	81	146	233
Pharmacy					
Licensed Pharmacists	56	7	19	N.A.	26
Pharmacy Assistants	22	0	5	N.A.	5
	78	7	24		31
Physical Therapy					
Physical Therapist - RPT	42	10	43	25	78
Physical Therapy Assistants	39	7	37	24	68
Other Physical Therapists	3	0	5	2	7
	84	17	85	51	153

TABLE 1 (Cont'd.)

CATEGORY OF PERSONNEL	1 Number of Current Employees in Full Time Equivalents	2 Current Budgeted Vacancies	3 Estimated Additional Needs Thru 1971	4 Estimated Replacement Needs Thru 1971	5 Estimated Needs Thru 1971 (Total Columns 2-3-4)
Psychiatry and Rehabilitation					
Clinical Psychologist	21	3	18	N.A.	21
Psychiatric Aide	604	65	26	N.A.	91
Psychiatric Nurse, R.N.	76	9	25	N.A.	34
Psychiatric Social Worker	30	11	19	N.A.	30
Rehabilitation Nurse, R.N.	2	0	6	N.A.	6
Recreational Therapist	13	4	7	N.A.	11
Vocational Counselor	47	0	26		26
	793	92	127		219
Public Health					
Health Educator	18	4	9	N.A.	13
Nasologist	2	0	0	N.A.	0
Public Health Administration	9	1	2	N.A.	3
Public Health Nurse, R.N.	135	21	53	N.A.	74
Sanitarian	69	3	13	N.A.	16
Sanitary Engineer	1	0	3	N.A.	3
Veterinarian	3	0	0	N.A.	0
	237	29	80		109
Radiology					
Nuclear Medical Technologist - AART	7	2	7	7	16
Other Radiotherapy Technologists	2	0	0	2	2
Other X-Ray Technologists	19	0	3	19	22
Radiotherapy Technologists - AART	6	0	12	6	18
X-Ray Assistants	51	0	25	51	76
X-Ray Technologists - AART	95	9	76	95	180
	180	11	123	180	314

TABLE 1 (Cont'd.)

CATEGORY OF PERSONNEL	1 Number of Current Employees in Full Time Equivalents	2 Current Budgeted Vacancies	3 Estimated Additional Needs Thru 1971	4 Estimated Replacement Needs Thru 1971	5 Estimated Needs Thru 1971 (Total Columns 2-3-4)
Social Work - Other than Psychiatric					
Master's Degree - MSW	88	18	75	80	173
Other Social Workers - BS	221	13	42	200	255
Social Work Assistants	16	12	15	14	41
	325	43	132	294	469
Special Technicians					
ECG	20	0	4	N.A.	4
EEG	10	0	1	N.A.	1
	30	0	5		5
Speech and Hearing					
Audiologist - ASHA	6	1	7	N.A.	8
Other Audiologist	4	0	0	N.A.	0
Speech Pathologist	6	3	8	N.A.	11
Other Speech Pathologist	4	0	2	N.A.	2
	20	4	17		21

TABLE 2

Comparison of Net Supply and Estimated Needs, 1967-71

CATEGORY OF PERSONNEL	1 Estimated Number Graduated 1967-1971	2 Estimated Loss Through Out-Migration	3 Net Supply 1967-1971 (Column 1- Column 2)	4 Estimated Needs 1967-1971 (From Table 1)	5* Estimated Deficit 1967-1971 (Column 4- Cclumn 3)
Clinical Laboratory					
Blood Bank Technologist - MT (ASCP) BB	0	0	0	28	28
Other Blood Bank Technicians	0	0	0	36	36
Certified Lab Assistants - CLA (ASCP)	230	N.A.	230	65	+165
Other Lab Assistants and Aides	0	0	0	221	221
Chemist - C (ASCP)	0	0	0	26	26
Chemists - Spec. C (ASCP)	0	0	0	18	18
Other Chemical Technicians	0	0	0	46	46
Cytotechnicians	0	0	0	41	41
Cytotechnologist - CT (ASCP)	8-20	N.A.	8-20	51	31
Hematologist - Spec. H (ASCP)	0	0	0	11	11
Histologic Technicians - HT (ASCP)	36-45	N.A.	36-45	37	+8
Other Histologic Technicians	0	0	0	33	33
Medical Technicians	0	0	0	180	180
Medical Technologist - MT (ASCP)	244	122	122	307	185
Medical Technologist - Other Registration	0	0	0	18	18
Microbiologists - M (ASCP)	0	0	0	25	25
Microbiologists - Spec. M (ASCP)	0	0	0	21	21
Other Microbiologists	0	0	0	18	18
Nuclear Medical Technologist - NMT (ASCP)	0	0	0	0	0
Ph.D. and Master Degree Chemist or Microbiologists	0	0	0	39	39
Serologists - Spec. S (ASCP)	0	0	0	3	3
	518-539	122	396-417	1,224	807

* - (The plus symbol (+) in Column 5 indicates a surplus over estimated needs.)

TABLE 2 (Cont'd.)

CATEGORY OF PERSONNEL	1 Estimated Number Graduated 1967-1971	2 Estimated Loss Through Out-Migration	3 Net Supply 1967-1971 (Column 1- Column 2)	4 Estimated Needs 1967-1971 (From Table 1)	5 Estimated Deficit 1967-1971 (Column 4- Column 3)
Dentistry					
Dentist	433	N.A.	433	43	+390
Dental Assistants - AADA	66	N.A.	66	12	+54
Dental Hygienist	160	120	40	2	+38
Dental Lab Technician	0	0	0	11	11
	659	120	539	68	+471
Dietary					
Dietitians - ADA	60	45	15	90	75
Other Dietitians	0	0	0	56	56
	60	45	15	146	131
Electronics Technician	0	0	0	2	2
Home Health Aide	70	N.A.	70	20	+50
Inhalation Therapy					
Therapist - ARIT	22-34	N.A.	22-34	32	+2
Other Inhalation Therapists	0	0	0	192	192
	22-34		22-34	224	190

* - (The plus symbol (+) in Column 5 indicates a surplus over estimated needs.

TABLE 2 (Cont'd.)

CATEGORY OF PERSONNEL	1 Estimated Number Graduated 1967-1971	2 Estimated Loss Through Out-Migration	3 Net Supply 1967-1971 (Column 1- Column 2)	4 Estimated Needs 1967-1971 (From Table 1)	5 Estimated Deficit 1967-1971 (Column 4- Column 3)
Medical Assistant-AAMA	66-84	N.A.	66-84	0	+84
Medical Records					
Medical Record Librarian - RRL	89	80	9	24	15
Other Medical Record Librarians	0	0	0	18	18
Medical Record Technicians - ART	0	0	0	14	14
Other Medical Record Technicians	0	0	0	85	85
	89	80	9	141	132
Medical Secretary	0	0	0	31	31
Music Therapist	0	0	0	5	5
Medical Library					
Medical Librarian - MLA	0	0	0	4	4
Other Medical Librarian	0	0	0	6	6
	0	0	0	10	10
Nurse Anesthetist					
Nurse Anesthetist - Registered	0	0	0	32	32
Other Nurse Anesthetist	0	0	0	2	2
	0	0	0	34	34

* - (The plus symbol (+) in Column 5 indicates a surplus over estimated needs.)

TABLE 2 (Cont'd.)

CATEGORY OF PERSONNEL	1 Estimated Number Graduated 1967-1971	2 Estimated Loss Through Out-Migration	3 Net Supply 1967-1971 (Column 1-Column 2)	4 Estimated Needs 1967-1971 (From Table 1)	5 Estimated Deficit 1967-1971 (Column 4-Column 3)
Nursing					
Graduate Nurse - Not Registered	0	0	0	0	0
Registered Nurse	2,789	1,395	1,394	2,368	974
Licensed Practical Nurse	900	90	810	852	42
Nurse Aide	0	0	0	735	735
Orderly	0	0	0	84	84
	3,689	1,485	2,204	4,039	1,835
Occupational Therapy					
Occupational Therapist - AOTA	102	51	51	94	43
Other Occupational Therapists	0	0	0	43	43
Occupational Therapy Assistants - AOTA	0	0	0	13	13
Other Occupational Therapy Assistants	0	0	0	83	83
	102	51	51	233	182
Pharmacy					
Licensed Pharmacists	175	N.A.	175	26	+149
Pharmacy Assistants	0	0	0	5	5
	175		175	31	+144
Physical Therapy					
Physical Therapists - RPT	156	132	24	78	54
Other Physical Therapists	0	0	0	7	7
Physical Therapy Assistants	~~150~~	0	0	68	68
	156	132	24	153	129

* - (The plus symbol (+) in Column 5 indicates a surplus over estimated needs.)

TABLE 2 (Cont'd.)

CATEGORY OF PERSONNEL	1 Estimated Number Graduated 1967-1971	2 Estimated Loss Through Out-Migration	3 Net Supply 1967-1971 (Column 1-Column 2)	4 Estimated Needs 1967-1971 (From Table 1)	5 Estimated Deficit 1967-1971 (Column 4-Column 3)
Psychiatry and Rehabilitation					
Clinical Psychologist	0	0	0	21	21
Psychiatric Aide	0	0	0	91	91
Psychiatric Nurse - R.N.	0	0	0	34	34
Psychiatric Social Worker	0	0	0	30	30
Recreational Therapist	8-44	N.A.	8-44	11	+33
Rehabilitation Nurse - R.N.	0	0	0	6	6
Vocational Counselors	0	0	0	26	26
	8-44		8-44	219	175
Public Health					
Health Educator	0	0	0	13	13
Public Health Administrator	N.A.	N.A.	N.A.	3	3
Public Health Nurse - R.N.	0	0	0	74	74
Nasologist	0	0	0	0	0
Sanitarian	0	0	0	16	16
Sanitary Engineer	0	0	0	3	3
Veterinarian	0	0	0	0	0
	N.A.	N.A.	N.A.	109	109
Radiology					
Nuclear Medical Technologist - AART	0	0	0	16	16
Radiotherapy Technologist - AART	0	0	0	18	18
Other Radio Therapy Technologists	0	0	0	2	2
X-Ray Technologist - AART	391	195	196	180	+16
Other X-Ray Technologists	0	0	0	22	22
X-Ray Assistants	0	0	0	76	76
	391	195	196	314	124

* - (The plus symbol (+) in Column 5 indicates a surplus over estimated needs.)

TABLE 2 (Cont'd.)

CATEGORY OF PERSONNEL	1 Estimated Number Graduated 1967-1971	2 Estimated Loss Through Out-Migration	3 Net Supply 1967-1971 (Column 1- Column 2)	4 Estimated Needs 1967-1971 (From Table 1)	5 Estimated Deficit 1967-1971 (Column 4- Column 3)
Social Work - Other Than Psychiatric					
Master's Degree - MSW	325	215	110	173	63
Other Social Workers - BS	0	0	0	255	255
Social Work Assistants	0	0	0	41	41
	325	215	110	469	359
Special Technicians					
ECG	0	0	0	4	4
EEG	0	0	0	1	1
	0	0	0	5	5
Speech and Hearing					
Audiologist - ASHA	0	0	0	8	8
Other Audiologist	0	0	0	0	0
Speech Pathologist - ASHA	0	0	0	11	11
Other Speech Pathologists	0	0	0	2	2
	0	0	0	21	21

Indianapolis Hospital Development Association, Inc.
445 NORTH PENNSYLVANIA STREET, ROOM 200 • INDIANAPOLIS, INDIANA 46204 • (317) 632-7561

Most sectors of the health and welfare field are devoting considerable attention to what has been termed "the health manpower crisis." Critical shortages of trained personnel exist in most health occupations in Indianapolis and across the nation. The Indianapolis Hospital Development Association is vitally concerned about this problem and is actively seeking ways to assist in meeting this shortage.

Recently, IHDA received a planning grant from the United States Office of Education, Department of Health, Education and Welfare, to provide assistance to the hospitals and health agencies in developing a coordinated approach to their health manpower needs in the Indianapolis area. IHDA has engaged the management consulting firm of Booz, Allen & Hamilton, Inc., to participate in this effort.

One of the most important elements of information needed at this point in the work is an inventory of the present number of selected health personnel in the Indianapolis metropolitan area and your estimated future requirements. In addition, the number of approved education or training programs, related recruitment efforts, the number of program graduates and projected future plans to supply graduates should be identified. Data on in-service education will not be requested at this time. We will also be asking you to help us determine the sources and amount of funds currently spent in sponsoring the various health education and training programs. The financial aspect of the study is being developed with the assistance of the Geo. S. Olive & Co.

A questionnaire designed to secure the information necessary for this project, and accompanying instructions are enclosed. A summary of data accumulated, as well as a brief analysis of the manpower situation in metropolitan Indianapolis, will

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Forbes W. Polliard, Exec. Dir.

be reported to you as soon as possible after the survey is completed. We will appreciate your willingness to provide the requested data and comments.

As you begin the completion of the questionnaire, please feel free to contact us if you have any questions or if you need additional copies of Parts IIIA or IIIB. One of IHDA's staff members involved in the study, Mr. Martin Reck, will be contacting you in the near future to discuss the questionnaire.

Thank you very much for your cooperation and assistance.

Sincerely yours,

Forbes W. Polliard

Forbes W. Polliard
Executive Director
INDIANAPOLIS HOSPITAL
DEVELOPMENT ASSOCIATION, INC.

FWP/w

15

SURVEY OF SELECTED HEALTH MANPOWER RESOURCES IN
METROPOLITAN INDIANAPOLIS
1966
INDIANAPOLIS HOSPITAL DEVELOPMENT ASSOCIATION, INC.

Name of Institution or Agency _____

Department or Division _____ Name of Person Completing Part I _____

Instructions: From your records, please compile the information necessary to complete this questionnaire. Before beginning, please read the enclosed instructions.

PART I. INVENTORY OF SELECTED HEALTH OCCUPATIONAL GROUPS

	Column 1	Column 2	Column 3	Column 4	Column 5				
					Estimated additional full time equivalent positions needed to provide necessary services based on current expansion plans and/or anticipated changes in demand for services				
	Number of full-time employees	Number of part-time employees	Total number of employees expressed in full-time equivalents	Budgeted Vacancies	1967	1968	1969	1970	1971
1. Dietary									
1.1 Dietitians - ADA Qualified									
1.2 Other Dietitians (include supervisors)									
2. Clinical Laboratory									
2.1 Medical Technologists - MT (ASCP)									
2.2 Medical Technologists - Other registration or certification									
2.3 Other Medical Technologists (Technicians).									
2.4 Histologic Technicians - HT (ASCP)									
2.5 Other Histologic Technicians									
2.6 Cytotechnologists - CT (ASCP)									
2.7 Other Cytotechnologists (Cytotechnicians)									

Name of Institution or Agency _____ Department or Division _____

Name of Person Completing Part I _____

	Column 1	Column 2	Column 3	Column 4	Column 5				
	Number of full-time employees	Number of part-time employees	Total number of employees expressed in full-time equivalents	Budgeted Vacancies	Estimated additional full time equivalent positions needed to provide necessary services based on current expansion plans and/or anticipated changes in demand for services				
					1967	1968	1969	1970	1971
2. Clinical Laboratory - continued									
2.8 Blood Bank Technologist - MT (ASCP) BB									
2.9 Other Blcod Bank Technicians									
2.10 Serologists - Spec. S (ASCP)									
2.11 Hematologists - Spec. H (ASCP)									
2.12 Chemists - Spec. C. (ASCP)									
2.13 Chemist - C (ASCP)									
2.14 Other Chemical Technicians									
2.15 Microbiologists - Spec. M. (ASCP)									
2.16 Microbiologists M (ASCP)									
2.17 Other Microbiologists									
2.18 Ph. D. and Master Degree Chemist or Microbiologists									
2.19 Nuclear Medical Technologists - NMT (ASCP)									
2.20 Other Nuclear Medical Technologists									
2.21 Certified Laboratory Assistants - CLA (ASCP)									
2.22 Other Laboratory Assistants and Aides									
3. Dentistry									
3.1 Dental Assistant									
3.2 Dentist									
3.3 Dental Hygienist									
3.4 Dental Laboratory Technician									
4. Health Electronics									
4.1 Electronics Technician									

Name of Institution or Agency _____ Department or Division _____

Name of Person Completing Part I _____

	Column 1	Column 2	Column 3	Column 4	Column 5				
	Number of full-time employees	Number of part-time employees	Total number of employees expressed in full-time equivalents	Budgeted Vacancies	Estimated additional full time equivalent positions needed to provide necessary services based on current expansion plans and/or anticipated changes in demand for services				
					1967	1968	1969	1970	1971
5. Home Care									
5.1 Home Health Aide									
6. Inhalation Therapy									
6.1 Therapist - ARIT Registered									
6.2 Other inhalation Therapists									
7. Medical Library									
7.1 Medical Librarian - MLA Certified									
7.2 Other Medical Librarian									
8. Medical Records									
8.1 Medical Record Librarian - RRL Registered									
8.2 Other Medical Record Librarians									
8.3 Medical Record Technicians - ART Registered									
8.4 Other Medical Record Technicians									
9. Medical Secretary									
10. Music Therapy									
10.1 Music Therapist									
11. Nurse Anesthetist									
11.1 Nurse Anesthetist - Registered									
11.2 Other Nurse Anesthetist									

Name of Institution or Agency _____ Department or Division _____

Name of Person Completing Part I _____

	Column 1	Column 2	Column 3	Column 4	Column 5				
	Number of full-time employees	Number of part-time employees	Total number of employees expressed in full-time equivalents	Budgeted Vacancies	Estimated additional full time equivalent positions needed to provide necessary services based on current expansion plans and/or anticipated changes in demand for services				
					1967	1968	1969	1970	1971
12. Medical Education									
12.1 Interns									
12.2 Residents									
- Anesthesiology									
- Dermatology									
- General Practice									
- General Surgery									
- Internal Medicine									
- Neurology									
- Neurosurgery									
- Obstetrics - Gynecology									
- Ophthalomology									
- Oral Surgery									
- Orthopedic Surgery									
- Otolarnygology									
- Pathology									
- Pediatrics									
- Physiatry									
- Plastic Surgery									
- Proctology									
- Psychiatry									
- Radiology									
- Thoracic Surgery									
- Urology									
- Other									
13. Medical Assistant									

Name of Institution or Agency _____ Department or Division _____

Name of Person Completing Part I _____

	Column	Column 2	Column 3	Column 4	Column 5				
	Number of full-time employees	Number of part-time employees	Total number of employees expressed in full-time equivalents	Budgeted Vacancies	Estimated additional full time equivalent positions needed to provide necessary services based on current expansion plans and/or anticipated changes in demand for services				
					1967	1968	1969	1970	1971
14. Medicine									
14.1 Director of Medical Education									
14.2 Director of Medical Research									
14.3 Medical Administrator									
14.4 Anesthesiologist									
14.5 Dermatologist									
14.6 General Surgeon									
14.7 Internist									
14.8 Neurologist									
14.9 Neurosurgeon									
14.10 Obstetrician									
14.11 Ophthalmologist									
14.12 Oral Surgeon									
14.13 Orthopedic Surgeon									
14.14 Otolaryngologist									
14.15 Pathologist									
14.16 Pediatrician									
14.17 Physiatrist									
14.18 Plastic Surgeon									
14.19 Proctologist									
14.20 Psychiatrist									
14.21 Radiologist									
14.22 Thoracic Surgeon									
14.23 Urologist									

Name of Institution or Agency _____ Department or Division _____

Name of Person Completing Part I _____

		Column 1	Column 2	Column 3	Column 4	Column 5				
		Number of full-time employees	Number of part-time employees	Total number of employees expressed in full-time equivalents	Budgeted Vacancies	Estimated additional full time equivalent positions needed to provide necessary services based on current expansion plans and/or anticipated changes in demand for services				
						1967	1968	1969	1970	1971
15.	Nursing									
	15.1 Registered Nurse									
	15.2 Graduate Nurse - not registered									
	15.3 Licensed Practical Nurse									
	15.4 Nurse Aide									
	15.5 Orderly									
16.	Orthoptic Technician									
17.	Pastoral Care									
	17.1 Chaplain									
18.	Occupational Therapy									
	18.1 Occupational Therapists - AOTA Registered									
	18.2 Other Occupational Therapists									
	18.3 Occupational Therapy Assistants - AOTA Certified									
	18.4 Other Occupational Therapy Assistants and Aides									
19.	Pharmacy									
	19.1 Licensed Pharmacists									
	19.2 Pharmacy Assistants									
20.	Physical Therapists - Qualified APRT - Registered									
	20.1 Clinical Psychologist									
	20.2 Other Physical Therapists									
	20.3 Physical Therapy Assistants and Aides									

Name of Institution or Agency _____ Department or Division _____

Name of Person Completing Part I _____

	Column 1	Column 2	Column 3	Column 4	Column 5				
	Number of full-time employees	Number of part-time employees	Total number of employees expressed in full-time equivalents	Budgeted Vacancies	Estimated additional full time equivalent positions needed to provide necessary services based on current expansion plans and/or anticipated changes in demand for services				
					1967	1968	1969	1970	1971
21. Psychiatry and Rehabilitation									
21.1 Clinical Psychologist									
21.2 Mental Health Technician									
21.3 Psychiatric Aide									
21.4 Psychiatric Nurse									
21.5 Psychiatric Social Worker									
21.6 Recreational Therapist									
21.7 Rehabilitation Nurse									
21.8 Vocational Counselor									
22. Public Health									
22.1 Sanitarian									
22.2 Public Health Nurse									
22.3 Sanitary Engineer									
22.4 Health Educator									
22.5 Public Health Administrator									
22.6 Nosologist									
22.7 Veterinarian									
23. Radiology									
23.1 Nuclear Medical Technologists (Technicians) AART Registered									
23.2 Other Nuclear Medicine Technologists (Technicians)									
23.3 Nuclear Medicine Assistants									
23.4 Radiologic (X-ray) Technologists (Technicians) AART Registered									

Name of Institution or Agency _____ Department or Division _____

Name of Person Completing Part I _____

	Column 1	Column 2	Column 3	Column 4	Column 5				
	Number of full-time employees	Number of part-time employees	Total number of employees expressed in full-time equivalents	Budgeted Vacancies	Estimated additional full time equivalent positions needed to provide necessary services based on current expansion plans and/or anticipated changes in demand for services				
					1967	1968	1969	1970	1971
23. Radiology - continued									
23.5 Other Radiologic (X-ray) Technologists (Technicians)									
23.6 X-Ray Assistants (Including Darkroom Helpers)									
23.7 Other Radiotherapy Technologists									
23.8 Radiotherapy Technologist - AART Registered									
24. Social Work - Other than Psychiatric									
24.1 Masters Degree - MSW									
24.2 Other Social Workers - BS									
24.3 Social Work Assistants and Aides - non BS									
25. Special Technicians									
25.1 ECG									
25.2 EEG									
25.3 Operating Room Assistant									
26. Speech and Hearing									
26.1 Audiologist - ASHA Certified									
26.2 Other Audiologist									
26.3 Speech Pathologist - ASHA Certified									
26.4 Other Speech Pathologists									

PART II. General Questions

1. Please list five health manpower needs which your institutions or agency find currently the hardest to fill.

1.1 _____ (most critical)

1.2 _____

1.3 _____

1.4 _____

1.5 _____

Comments:

2. Do you anticipate any significant changes in the hardest-to-fill health manpower needs in your institutions between now and 1971 due to such factors as building expansion, installation of new education or training programs, addition of new equipment, consolidation of services, etc.? If so, briefly describe such changes indicating year of change, occupations affected, reason for changes, approximate increase or decrease in manpower needs.

3. If health manpower shortages exist, briefly indicate what you feel to be the principal reasons for your institution's or agency's inability to attract and/or retain health manpower in the selected health occupations being surveyed in this questionnaire.

Health Occupation Category	Reason

4. The purpose of this questionnaire is to survey the current number of employees and future needs for selected health occupations in the Indianapolis metropolitan area. Please make any comments concerning the above which you believe were not adequately covered in the questionnaire.

Name of Institution
or Agency _____

Department or
Division _____

Name and Title of Person
Completing Parts I and II

_____

Date _____

PART III. Educational or Clinical Training Program by Health Occupation Category

A. Instructions: The purpose of Part III-A is to identify and survey the educational or training programs currently supplying health manpower in the Indianapolis metropolitan area.

The programs listed should be limited to those which are presently approved or actively seeking approval by recognized accrediting organizations. A separate Part III-A should be completed for each program.

Name of Institutions
or Agency _____

Name of Health Occupation
Educational or Training Program _____

1. Type of program: (Circle the response which most nearly describes program)

   1.1 Academic or Didactic only
   1.2 Clinical affiliation only
   1.3 Combined or integrated (Both 1.1 and 1.2 above)

2. For the class or classes completing this program in 1965, please indicate:

   2.1 _____ the total number of applicants
   2.2 _____ the total number of applicants enrolled

3. Also, please provide:

   3.1 _____ the total number presently enrolled in the program

   3.2 _____ the optimum capacity of the program (if greater or less than actual enrollment in 3.1 above)

4. Actual and projected total number of persons successfully completing the program in the indicated years.

1965	1966	1967	1968	1969	1970	1971

5. In your judgment, what factors are the present greatest deterrents to the optimum output of this program?

6. What may deter its future growth and development?

7. Briefly describe your recruitment efforts.

8. What are the basic causes of your recruitment problems?

9. What are your plans for the future development of recruitment efforts?

10. Do you anticipate instituting major changes in the above program between now and 1971? If so, please describe briefly.

11. The purpose of this part of the questionnaire is to survey health education and training program resources in the Indianapolis area. Please make any comments concerning the above which you believe are not adequately covered in Part III-A of the Questionnaire.

Name of Institution
or Agency _____

Department or Division _____

Name and Title of Person
Completing Part III-A _____

Date _____

PART III. Educational or Clinical Training Program by Health Occupation Category

B. Instructions: The purpose of Part III-B is to identify these health manpower training or education programs currently in the planning stage. Complete a separate Part III-B for each program your institution or agency plans on establishing between now and 1971.

Name of Institution or Agency _____

Name of Proposed Health Occupation Educational or Training Program _____

1. Type of Program:
(Circle the response which most nearly describes the program)

1.1 Academic or Didactic only

1.2 Clinical Affiliation only

1.3 Combined or integrated (Both 1.1 and 1.2 above)

2. Anticipated starting date _____

3. Projected Enrollment:

1966	1967	1968	1969	1970	1971

4. Projected total number of persons successfully completing the program in:

1966	1967	1968	1969	1970	1971

Name of Institution
or Agency _____

Department or Division _____

Name of Title of Person
Completing Part III-B _____

Date _____

APPENDIX B

LIST OF AGENCIES CONTACTED

The agencies have been grouped into classifications which denote the major function of the agency. Some of the agencies have several functions and nearly all are in some way involved in the process of education. The agencies providing services to individuals will employ one or more classification of health personnel.

A. Agency Provides Direct Health Services to the Individual Other Than As a Hospital:

Alpha Home Association
Altenheim of Indianapolis, The
Borinstein (Joseph A. and Annie) Home for the Jewish Aged, Inc.
Child Guidance Clinic of Marion County, Inc.
Crossroads Rehabilitation Center
Community Blood Bank of Marion County, Inc.
Home Care Agency of Marion County, Inc.
Indiana Agency for the Blind
Indiana Baptist Home, The
Indiana Society for Crippled Children and Adults, Inc.
Indianapolis Home for the Aged
Indianapolis Senior Citizens' Center, Inc.
Indianapolis Speech and Hearing Center, Inc.
Little Red Door of Marion County Cancer Society, Inc.
Little Sisters of the Poor - Home for the Aged
Marion County Association for Retarded Children, Inc.
Marion County Division of Public Health
Marion County Home
Marion County Muscular Dystrophy Foundation
Marion County Tuberculosis Association
Marydale School and Diagnostic Center
Multiple Sclerosis National Society
Muscular Dystrophy Associations of America
National Foundation March of Dimes
Planned Parenthood Association of Indianapolis, Inc.
St. Mary's Child Center
Suemma Coleman Home
Thornton-Haymond-Costin Medical Labs
United Cerebral Palsy of Central Indiana, Inc.
Visiting Nurse Association of Indianapolis
Vocational Rehabilitation Center

B. Licensed Hospital:

Central State Hospital
Community Hospital of Indianapolis
Fort Harrison Hospital
Hancock County Memorial Hospital
Hendricks County Memorial Hospital
Indiana University Medical Center
Johnson County Memorial Hospital
Larue D. Carter Memorial Hospital
William S. Major Hospital
Marion County General Hospital
Methodist Hospital
Morgan County Hospital
Riverview Hospital
St. Elizabeth Maternity Hospital and Home
St. Francis Hospital
St. Vincent's Hospital
University Heights Hospital
Veterans Administration Hospital
Winona Memorial Hospital
Witham Memorial Hospital

C. Research and Education with Some Services to Individuals:

American Cancer Society
Arthritis Foundation, Inc.
Indiana Heart Association
Indiana Tuberculosis Association, Inc.
Indianapolis Diabetes Association, Inc.
Marion County Association for Mental Health

D. Family and Adult Services:

American Red Cross
Family Service Association of Indianapolis
Jewish Social Federation

E. Education:

Butler University
DePauw University
Indiana Central College
Indiana School For The Blind
Indiana School For The Deaf
Indiana University School of Social Work
Indiana Vocational Technical College
Indianapolis School of Practical Nursing
Marian College
Purdue University

F. Placement and Direct Service to Children:

Children's Bureau of Indiana
Day Nursery Association of Indianapolis, Inc.
General Protestant Orphan Association
Lutheran Child Welfare Association of Indiana

APPENDIX C

LIST OF HEALTH EDUCATION AND TRAINING PROGRAMS SURVEYED IN THE INDIANAPOLIS AREA

Code:

AC - Academic or Didactic only

CL - Clinical Affiliation only

CO - Combined or integrated (Academic and clinical)

Dietitians - ADA

Indiana University (CO)
Veterans Administration Hospital (CL)

Medical Technologist - MT (ASCP)

General Hospital (CO) - To start in 1968
Indiana University (CO)
Marian College (AC)
Methodist Hospital (CO)
St. Francis Hospital (CL)
St. Vincents Hospital (CO)

Cytotechnologist - CT (ASCP)

General Hospital (CO)

Certified Laboratory Assistant - CLA (ASCP)

Community Blood Bank (CL)
General Hospital (CL)
Indiana Vocational Technical College (CO)
Thornton-Haymond-Costin Labs (CO)
University Heights Hospital (CL)
Winona Memorial Hospital (CL)

Dental Assistants - AADA

Indiana Vocational Technical College (CO) - To start in 1968

Dentist

Indiana University (CO)
Veterans Administration Hospital (CL)

Dental Hygienist

Indiana University (CO)

Inhalation Therapy

Indiana University (CO)

Medical Record Librarian - RRL

Indiana University (CO)
Larue D. Carter Memorial Hospital (CL)

Medical Education - Interns and Residents

Indiana University Hospitals
Larue Carter Memorial Hospital
Methodist Hospital
St. Vincents Hospital

Medical Assistant - AAMA

Indiana Vocational Technical College

Registered Nurse - R.N.

Baccalaureate Degree Programs:

DePauw University
Indiana University
Indiana Central College - To start in 1970
Marian College - To start in 1968

Diploma Programs:

General Hospital
Methodist Hospital - last class to graduate August 1968
St. Vincent's Hospital - last class admitted Fall 1967

Associate Degree Programs:

Indiana Central College
Indiana University
Purdue University

Institutions which Provide Clinical Experience for Nursing Students:

Central State Hospital
Community Hospital
Indiana University Medical Center Hospitals
Larue D. Carter Memorial Hospital
Marion County Division of Public Health
St. Francis Hospital

Institutions which Provide Clinical Experience for Nursing Students - continued

University Heights Hospital
Veterans Administration Hospital
Visiting Nurse Association
Winona Memorial Hospital

Licensed Practical Nurse - L.P.N.

Community Hospital (CL)
General Hospital (CL)
Indianapolis School of Practical Nursing (CO)
Larue Carter Memorial Hospital (CL)
Marion County Home (CL)
Methodist Hospital (CL)
St. Vincent's Hospital (CL)

Occupational Terhapist

Crossroads Rehabilitation Center (CL)
General Hospital (CL)
Indiana University (CO)
Larue Carter Memorial Hospital (CL)
Veterans Administration Hospital (CL)

Pharmacist

Butler University (CO)
Veterans Administration Hospital (CL)

Physical Terhapist

Crossroads Rehabilitation Center (CL)
General Hospital (CL)
Indiana University (CO)
Veterans Administration Hospital (CL)

Clinical Psychologist

Central State Hospital (CL)
Larue Carter Memorial Hospital (CL)
Veterans Administration Hospital (CL)

Recreation Therapist

Larue Carter Memorial Hospital (CO)

Public Health

Indiana University (CO)

Radiologic Technician - AART

Hancock County Hospital (CO)
Indiana University (CO)
Indiana Vocational Technical College (CO) - To start in 1968
Methodist Hospital
St. Vincent's Hospital (CO)
Winona Memorial Hospital (CO)

Social Worker - MSW

Child Guidance Clinic of Marion County (CL)
Children's Bureau of Indianapolis (CL)
Crossroads Rehabilitation Center (CL)
Family Service Association of Indianapolis (CL)
Indiana University (AC)
Larue Carter Memorial Hospital (CL)
Marion County Association for Retarded Children (CL)
Marion County Department of Public Welfare (CL)
Veterans Administration (CL)

Speech Pathologists

Crossroads Rehabilitation Center (CL)

THE INDIANAPOLIS HOSPITAL DEVELOPMENT ASSOCIATION, INC.

STAFFING OF HEALTH CARE FACILITIES COMMITTEE

FRED E. SHICK - CHAIRMAN
Senior Vice President
Indiana National Bank
3 Virginia Avenue

* ROBERT R. BAXTER
Commercial Contracting
3640 Washington Boulevard

* DR. HAROLD F. BURDETTE
Winona Memorial Hospital
3202 North Meridian Street

MRS. ARDATH BURKHART
4333 Sylvan Drive

* SPURLING CLARK
Clark Prescription Pharmacy
2722 Northwestern Avenue

MISS ANNE GIBBS, R.N., Executive Director
Visiting Nurse Association
615 North Alabama Street

* FREDERIC M. HADLEY, President
Indiana Vocational Technical College
333 North Pennsylvania

JOHN R. MOTE, Assistant Administrator
Methodist Hospital
1605 North Capitol Avenue

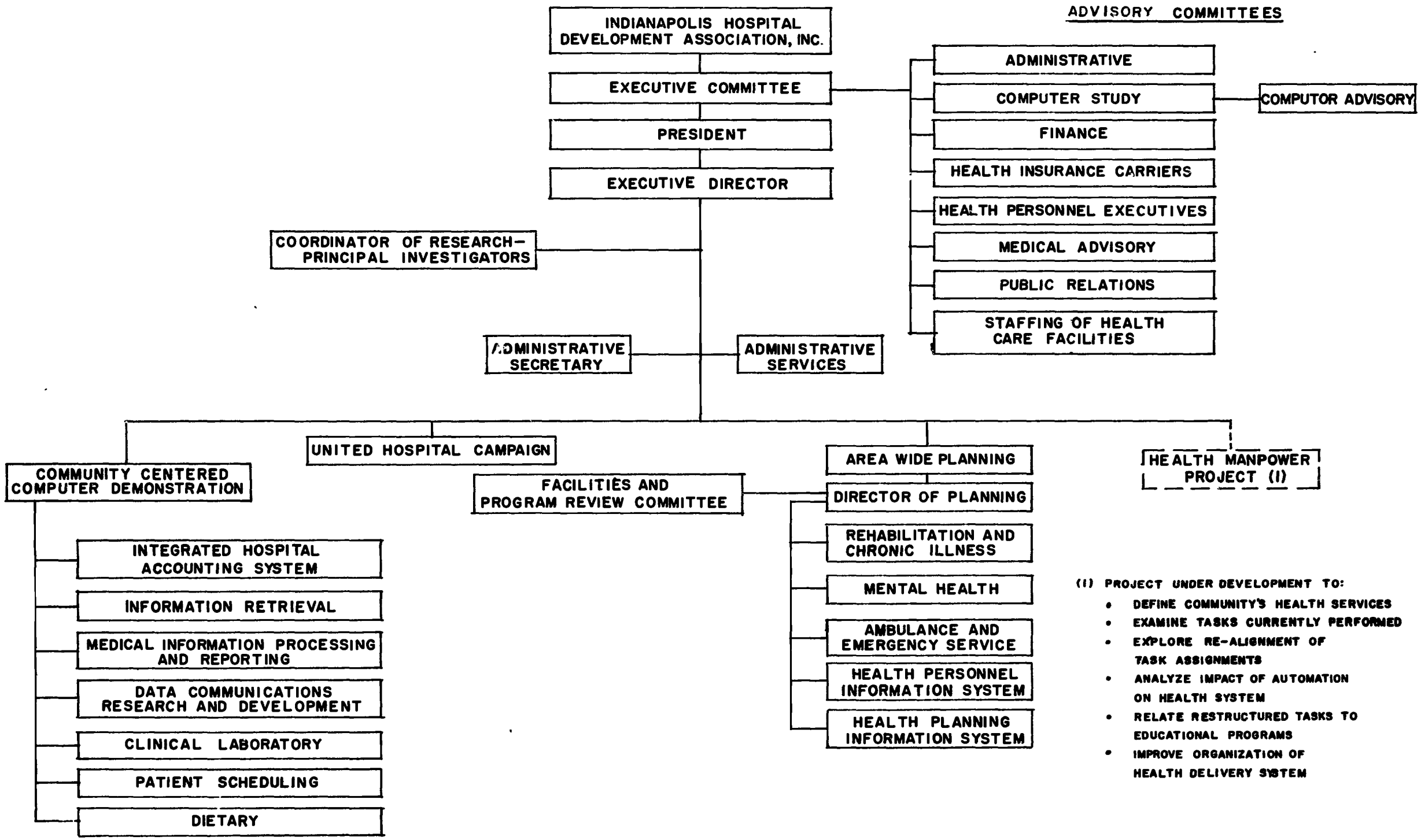
* DALLAS SELLS, President
Indiana State AFL-CIO
910 North Delaware Street

Ex-officio

EDWARD B. NEWILL, Vice President IHDA
FORBES W. POLLIARD, Executive Director IHDA
KENNETH F. VALENTINE, President IHDA

* Also members of IHDA Board of Directors

ORGANIZATIONAL TABLE — INDIANAPOLIS HOSPITAL DEVELOPMENT ASSOCIATION, INC.



(1) PROJECT UNDER DEVELOPMENT TO:

- DEFINE COMMUNITY'S HEALTH SERVICES
- EXAMINE TASKS CURRENTLY PERFORMED
- EXPLORE RE-ALIGNMENT OF TASK ASSIGNMENTS
- ANALYZE IMPACT OF AUTOMATION ON HEALTH SYSTEM
- RELATE RESTRUCTURED TASKS TO EDUCATIONAL PROGRAMS
- IMPROVE ORGANIZATION OF HEALTH DELIVERY SYSTEM

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VT 002 705
Vocational Rehabilitation of Disabled Public Assistance Clients (Johnson, Martin, and Lawrence Counties).

Kentucky State Dept. of Education, Frankfort. Bureau of Rehabilitation Services
Kentucky State Dept. of Economic Security, Frankfort. Div. of Public Assistance
*Vocational Rehabilitation Administration (DHEW), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 180ct67 48p.

REHABILITATION COUNSELING; *REHABILITATION PROGRAMS; *VOCATIONAL REHABILITATION; *PHYSICALLY HANDICAPPED; ON THE JOB TRAINING; *WELFARE RECIPIENTS; INTERAGENCY COOPERATION; *DEMONSTRATION PROJECTS; WELFARE AGENCIES

Findings and implications of a 3-year interagency research, development, and demonstration program to rehabilitate disabled public assistance recipients and applicants are reported. Eighty-six percent more public assistance recipients were rehabilitated in a three-county area during the project than in the 3 years prior to 1964. The evidence indicates that specialized counseling results in more people receiving services, becoming rehabilitated, and obtaining gainful employment. The combined efforts of the rehabilitation counselor and the public assistance case worker resulted in successful rehabilitation of many difficult cases previously reluctant to accept rehabilitation services. Rehabilitation was most successful with the 16-30 year old group. Public assistance case workers need to be aware of the rehabilitation program and the need for early referral. Of the 220 rehabilitated cases, 66 were removed from the public assistance roles; of the remaining 70 percent, 89 or 44 percent were housewives and 26 percent were potential public assistance cases. It is clear that the investment of time, effort, and money in the rehabilitation of disabled public assistance recipients or potential cases is justified by the actual savings of money spent in public assistance payments. References, selected statistical data, employment follow up, and the written agreements between the involved agencies, are included in the document. (FP)

VT 002 705

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vocational rehabilitation of disabled public assistance clients

JOHNSON, MARTIN AND LAWRENCE COUNTIES # RD-1534-D

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BUREAU OF REHABILITATION SERVICES
KENTUCKY DEPARTMENT OF EDUCATION

and

DIVISION OF PUBLIC ASSISTANCE
KENTUCKY DEPARTMENT OF ECONOMIC SECURITY

#T002705

VOCATIONAL REHABILITATION OF

DISABLED PUBLIC ASSISTANCE CLIENTS
(Johnson, Martin, and Lawrence Counties)

A Cooperative Project

Between

Bureau of Rehabilitation Services
Kentucky Department of Education

and

Division of Public Assistance
Kentucky Department of Economic Security

Basil T. Mullins, Project Director

Zella S. Archer, Project Reporter

Carroll Burchett, Project Reporter

Project Period - March 1, 1964 to June 30, 1967

Date of Report - October 18, 1967

This investigation was supported, in part, by a research and demonstration grant, # RD-1534-D, from the Vocational Rehabilitation Administration
Department of Health, Education and Welfare
Washington, D. C. 20201

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Project RD-1534-D Staff Members

Director	Basil T. Mullins, Area Supervisor Bureau of Rehabilitation Services
Counselor-Coordinator	Carroll Burchett, Counselor Bureau of Rehabilitation Services
Secretary	Etta M. McCarty Bureau of Rehabilitation Services

SIGNIFICANT FINDINGS WITH THEIR IMPLICATIONS

The Kentucky Bureau of Rehabilitation Services and the Kentucky Department of Economic Security, Division of Public Assistance, entered into an agreement on March 1, 1964, to work together for a period of three years, to develop and carry out a concentrated program of services for disabled applicants for and recipients of public assistance grants.

The agreement provided for the development of an organized plan for coordinated services necessary to find and restore to employment each disabled public assistance applicant and recipient who was capable of participating in a rehabilitation plan.

The three years of research and demonstration resulted in the following significant findings and their implications for use:

1. During the project period 220 public assistance recipients were rehabilitated and placed in gainful employment. This occurred in Johnson, Martin, and Lawrence Counties, in Eastern Kentucky, an area with a population of approximately 42,000 people. Seven thousand, or 16% of this number, were recipients of public assistance.

This implies that disabled public assistance recipients can be rehabilitated through the concentrated efforts of a rehabilitation agency and the Division of Public Assistance. This indicates also that there is a vast area of potential for rehabilitation among public assistance recipients.

2. There were 86% more public assistance recipients rehabilitated in the three county area during the project period than in the three years prior to 1964. Thirty-one public assistance recipients were

rehabilitated in the general program and the project resulted in 220 rehabilitants.

This evidence points out clearly that specialized counseling results in more poeple receiving services and thereby more people becoming rehabilitated and placed in gainful employment. It seems indicated that the "hard core" public assistance case requires special attention and that only through their assignment to special case loads can they be served adequately.

3. A large portion of the public assistance cases proved to be difficult cases and presented problems in their lack of motivation and reluctance to accept rehabilitation services. The combined efforts of the rehabilitation counselor and the public assistance caseworker resulted in successful rehabilitation of many of these difficult cases.

From this finding it can be concluded that a combination of efforts on the part of the rehabilitation counselor and the public assistance casworker serves to assist the public assistance recipient to overcome reluctance and lack of motivation. The public assistance worker was able to reassure the recipient and to show him the advantages of becoming self-supporting. The professional case work provided by the public assistance worker in counseling with the family, the continuation of public assistance payments throughout the rehabilitation process, and the assurance of public assistance support if rehabilitation is not achieved are factors which serve to augment the work of the rehabilitation counselor.

4. Experience proved there is a need for some type of sheltered training and/or employment for those who cannot be placed in competitive employment. Adequate evaluation of vocational potential could not be secured in many difficult cases because of the reluctance of the "Mountaineer" to leave his home area.

This implies that a really adequate program of rehabilitation should include some type of sheltered facility. A comprehensive workshop with an evaluation unit would greatly enhance the chances of rehabilitating the very difficult cases.

5. During the project period the largest age group which was served was the 16 - 30 group. This group of 155 comprised 41% of the total 376 who were accepted for services. It was the consensus among the staff involved in the project that rehabilitation was more easily achieved in the younger age groups because the levels of education and motivation are higher.

The conclusion that can be drawn here is that the earlier a public assistance client is referred for rehabilitation services the greater are his chances for success. This implies that public assistance caseworkers need to be aware of the rehabilitation program and the need for early referral.

6. Statistics show that of the 220 rehabilitated cases, 66 or 30% of the total, were removed from the public assistance rolls. The average public assistance payment received by the 66 individuals was $1,584 per year for a total of $34, 848 per year. The average income, after placement on the job, for each of these individuals was $2,604 per year for a total of $53,955.

Of the remaining 70%, 89 or 44% were housewives and 65 or 26% were potential public assistance cases who had not begun to receive payments.

The implication is clear that the investment of time, effort, and money in the rehabilitation of the disabled public assistance recipient or potential case is justified by the actual savings in money spent in public assistance payments.

CHAPTER I

Introduction

Background

The Kentucky Bureau of Rehabilitation Services and the Kentucky Department of Economic Security, Division of Public Assistance have for many years worked together very closely to bring about the rehabilitation of many disabled public assistance recipients. For years the rehabilitation counselor and the public assistance caseworker have recognized that there are common areas of concern. There was however no recognized, organized plan for working together. The concept of an integrated approach to providing rehabilitation services to disabled clients has been recognized for many years. Often several agencies can be found working with a client, providing overlapping services and services unique to each agency without ever achieving the desired result. Research and demonstration have shown that an integrated approach is an effective method of operation in many fields of endeavor. Organization and communication are known to be most effective tools in providing maximum benefits to any client.

There has been concern for many years on the part of the Kentucky Bureau of Rehabilitation Services and the Kentucky Department of Economic Security, Division of Public Assistance as to what means might be used to decrease the number of disabled persons on the public assistance rolls and render many more of them employable. For these reasons the two agencies entered into an

agreement to conduct a Research and Demonstration Project to provide coordinated services for a period of three years beginning July 1, 1964, to a specific segment of disabled people on the public assistance rolls.

The Problem

A total of 780 disabled public assistance recipients were referred to the Kentucky Bureau of Rehabilitation Services in 1963. During the three years prior to 1964 a total of 772 public assistance recipients were rehabilitated in the state of Kentucky. A study of the data revealed that the Kentucky Bureau of Rehabilitation Services were rehabilitating only a small portion of the cases potentially available for services from caseloads in the Department of Economic Security. It was felt by both agencies, therefore, that there remained a large number of disabled public assistance recipients and applicants who could be rehabilitated if the rehabilitation service could be accompanied by the services of Division of Public Assistance.

General Objectives

1. To develop and improve administration methods and professional techniques for enabling increasing numbers of disabled applicants for and recipients of public assistance to become self-supporting as a result of coordinated agency efforts.
2. To demonstrate the effectiveness of joint agency planning in assisting the needy eligible individual toward optimum

adjustment in consideration of the individual and family needs as well as the rehabilitation potential.

Specific Objectives

1. To develop effective methods for identifying public assistance applicants and/or recipients with potential for vocational rehabilitation.
2. To develop interagency operational patterns for achieving vocational rehabilitation.
3. To develop and provide fully adequate evaluation and diagnostic services to disabled public assistance clients.
4. To identify and utilize medical and other services especially essential to the rehabilitation of public assistance clients.
5. To demonstrate an effective cooperative approach to the rehabilitation problems presented by the disabled public assistance recipient in a severely depressed economic area of Kentucky.
6. To determine, through a demonstration project, the specific factors that must be considered in practical planning in the rehabilitation of a dependent person living in an area of low economic potential, where there is a lack of comprehensive rehabilitation facilities, and characteristics of rural isolation, such as are typical in Appalachia.
7. To compile and analyze data on the clients served by the project as it relates to kinds and costs of services. To

appraise the project methods and outcomes that may indicate new administrative, supervisory, and professional approaches for better service to the disabled public assistance referrals.

Review of the Literature

It is generally regarded as essential and reasonable to read critically in the related literature, as a stimulus to thinking, before undertaking any research.

Thanks to a progressive, new project in Cleveland, a number of welfare recipients are rapidly disappearing from that city's public assistance rolls, graduating--through vocational rehabilitation services--to productive employment and a personal responsibility for their own lives.[1]

Public welfare recipients are one of the most difficult to rehabilitate groups in our society. The numerous problems surrounding welfare recipients are usually further complicated by the presence of a physical or mental disability. Yet these doubly crippling conditions need not mean the end of the road for those so afflicted: Most of these individuals can be restored to a full, useful, and productive life.[2]

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[1] George E. Ayers, Ed.D. Vocational Rehabilitation Gives Welfare Recipients A New Lease on Life, Journal of Rehabilitation, March-April 1967.

[2] Ibid.

The lessened drain on the city's tax assets might be payment enough for the money and effort involved in this unique project but even more important are the feelings of self-sufficiency, fullfillment, commitment and happiness that this change from the passive recipient to active contributor has brought to the welfare clients involved--and the salutary effect this will have on their descendants.[3]

Public welfare and vocational rehabilitation agencies have long been cooperating in efforts to restore more disabled recipients of public assistance to employment. The progress has been considerable and each year more disabled welfare clients are rehabilitated through cooperative programs. Even so, there is general agreement that the potential is greater than the achievements so far, and that greater, more systematic, and more intensive collaboration is urgently needed.[4]

The conferees agreed that the overriding problem of common concern is the seriousness of the rehabilitation obstacles to be overcome. Generally speaking, the public assistance clients in these projects are severely handicapped. These handicaps are melded of physical and mental disabilities of varying severity and the problems that go with economic, educational, cultural, and vocational deprivation.[5]

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[3]Ibid.

[4]Report of a conference on Projects Aimed at the Welfare Client's Rehabilitation, Rehabilitation Record, February 1967.

[5]Ibid.

Congress gave expression to concern in 1962 with the passage of amendments to public welfare legislation, which reflected, among other things, a growing sentiment for rehabilitation rather than relief for those disabled persons receiving public assistance. One of the most practical activities in this area is the cooperative efforts developed and maintained between State rehabilitation agencies and the local welfare departments to mobilize the total of their resources....[6]

General Setting

The three county area in which the project was conducted is located in the mountains of Eastern Kentucky, a part of Appalachia. The area is mainly rural non-farming with a total population of 42,000. This section of the state was once rich in great forests and wildlife. At one time the hillside land was sufficiently productive to provide for the needs of man and animal. Misuse of the land resulted in erosion and depletion of the soil.

The rich deposits of coal and other minerals attracted outsiders who, during World War I and shortly thereafter, organized mining companies, brought skilled laborers and exploited the resources of the area. The coal industry created a thriving, prosperous economy for a period of time until the "Depression" of the 30's when the industry declined and left a huge portion of the population without jobs, with many disabilities, and the lack of human resources to

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[6]"Vocational Rehabilitation Administration", Annual Report of the U.S. Department of Health, Education and Welfare, 1964.

adapt to a new way of life. The dependency cycle was started and has steadily grown and become more firmly entrenched. Welfare Costs in Kentucky have doubled since 1960.

The stimulus provided by the state and federal government has begun to bring the area out of its decline. New roads and new industry are serving to slow the exodus of the younger, better educated people from the area.

Specific Setting

The project office was located in a remodeled television repair shop in Paintsville, the county seat of Johnson County. Paintsville is a thriving small town with a population of 4,100. At the beginning of the project period 16% of the county population received some type of Public Assistance. Inez, the county seat of Martin County, and Louisa, the county seat of Lawrence County, both have Public Assistance offices which cooperated in the project. Lawrence County had 13% of its population on public assistance and in Martin County 23% of the people were receiving public assistance.

CHAPTER II

Methodology

The project actually went into effect July 1, 1964, with the establishment of the office in Paintsville. The rehabilitation staff consisted of the project director, who was also an area supervisor, a counselor-coordinator and a secretary. The Division of Public Assistance assigned a social worker and a secretary to the project.

The early stages of the program were devoted to the establishment of a working relationship between the two agencies. Agreement was reached as to the referral procedure and the day to day function of each staff member involved in the project. It was originally planned that each referral be screened by the public assistance social worker and the rehabilitation counselor and acceptance into each case load would be simultaneous. The services that traditionally belonged to each agency were provided as the need of each case indicated.

As time went on it became apparent that the procedure for requiring that the cases be accepted by the public assistance caseworker created a delay in the provision of rehabilitation services to the clients. A study of the program revealed that a more logical procedure would be to have the rehabilitation counselor work directly with the caseworkers in the local county Public Assistance offices. There was also a shortage of qualified social workers. These factors contributed to the decision to alter the original plan of work.

The change of plan resulted in the rehabilitation counselor working directly with the caseworker who had been serving the referral. The advantages of this system were several. For example, the caseworker knew the case history, the family background, and the characteristics of each individual. This knowledge provided a basis of understanding which could be used to advantage in motivating the client to accept rehabilitation services and to follow through with an individualized plan for rehabilitation.

Priorities were established for the selection of referrals. It seemed logical that referrals should be considered in the following order:

1. Disabled persons newly applying for public assistance.
2. Former disabled public assistance recipients.
3. Disabled persons who have been on public assistance for no more than six months.
4. Disabled persons who were potential public assistance recipients.
5. All other disabled public assistance recipients that had some potential for rehabilitation services.

These priorities were followed as closely as possible.

The rehabilitation counselor established a schedule of regular visits to each of the three county Public Assistance offices. The rehabilitation counselor and the public assistance caseworker responsible for each case worked closely together on each referral. They traveled together to make home visits. All medical, social,

and other information was shared equally. The spheres of influence of each staff member complemented that of the other. This coordinated approach greatly enhanced the chances of success in each case.

The services that were provided by the rehabilitation agency fell into the usual four categories: (1) counseling and guidance, (2) physical restoration, (3) training, and (4) on-the-job training.

Of the 220 cases who were rehabilitated throughout the project there were 38 who received counseling and guidance, 170 received physical restoration, and 12 received training. These services were provided by the rehabilitation agency.

Concurrent with the rehabilitation services each client received the necessary financial support, family counseling, home visits and other services rendered by the Division of Public Assistance.

There was a high percentage of referrals with orthopedic impairments. This was perhaps unique to the area. The mining occupation contributed to this condition. Many of these cases were considered "hard core" and presented some insurmountable problems. Throughout the three years 114 cases with orthopedic impairments were accepted into the project. Rehabilitation was accomplished in 80% of the cases. It was felt that the percentage would have been higher had there been a comprehensive rehabilitation facility in the area.

The need for a rehabilitation facility was discovered in working with other cases than those with orthopedic impairments. In many of the more difficult cases it was impossible to secure adequate

evaluations of vocational potential because of the lack of a facility. There were such facilities located over the state and in nearby states but all too often the clients were reluctant to go away from home for the period of time required to secure evaluation and/or training.

As the program gained momentum the number of accepted cases continually increased. It was evident that as the knowledge of the program increased the work of the counselor and caseworker became more effective. Success seemed to stimulate success. As awareness of the program grew more cooperation was offered by the medical profession, other agencies, and individuals.

Case Study

This case study is presented to illustrate the range of services rendered, and the interagency action.

Rehabilitation Job: Teacher

Monthly Earnings: $305

Amount of Public Assistance Grant: $140

Disability: Anxiety neurosis

Services Rendered: General medical examination, one year college training, maintenance during training, counseling, guidance, placement, and follow-up.

Summary: This 47 year old white male was referred to the project through the regular referral process from the Division of Public Assistance. He was suffering from an anxiety neurosis which resulted

from his having lost his teacher's certificate after 18 years of teaching. The certificate was lost through a technicality and following the loss he tried working as a salesman, driving a truck, and as a sawmill hand, all without success. These failures aggravated his anxiety neurosis and he came to believe that the only thing he could do was teach school and this was impossible without a certificate. He became despondent to the point that he applied for public assistance. It was learned that with one year of college training his certificate could be renewed and that he could be reinstated in his former position as a teacher. When he realized this and that the Division of Public Assistance would provide a grant of $140 per month for his wife and four children he was more than willing to return to school.

This client successfully completed the one year of college, the anxiety neurosis disappeared, and he returned to his former teaching position. The supportive counseling provided by the rehabilitation counselor and the financial assistance provided by both agencies enabled him to become independent.

The savings in potential public assistance payments, the restoration of human dignity to this individual cannot be accurately measured. It is evident that the results more than repaid the cost.

CHAPTER III

Results

As a result of the integrated efforts of the two agencies involved in the research and demonstration 220 disabled public assistance recipients or applicants were rehabilitated. It was learned that the interagency relationship did indeed facilitate the rehabilitation process.

There was a total of 66 people removed from the public assistance rolls who were earning $53,955 after rehabilitation. These same people had previously been receiving $34,848 in public assistance payments.

The rehabilitations achieved during the three years of the project period exceeded by 86% the number that had been rehabilitated in the prior three years in the same three counties.

The average monthly income of the rehabilitated client was $217. Prior to rehabilitation their average monthly income from public assistance was $132. Some individuals therefore earned almost double the income received while on the public assistance rolls.

The reprieve from dependency, degradation, hopelessness, misery, and non-productive existence which 220 people received through the project cannot be measured in dollars and cents.

The increase in knowledge of ways agencies can work together for a common goal was tremendous. The project operation can serve as a pattern for future cooperative ventures on a more permanent basis.

The evidence that has been produced for the need for a comprehensive rehabilitation facility in Eastern Kentucky should assist in its materialization.

The average cost for rehabilitating each client through the project was $600. There is proof enough that this is money well spent when attention is turned to their potential earnings and tax payments.

It was proven by the program that disability, of itself, was not always the prime factor in dependency on public assistance. The lack of local job opportunities, the lack of motivation, fear of loss of security, reluctance to leave home, and many other mental and emotional factors had to be considered.

There are many unknown, unpredictable, immeasurable elements in a program of this kind. A true assessment of its worth can only be made after a reasonable passage of time. The known benefits do remain and can be expected to be reflected in growth and change in the general program.

CHAPTER IV

SUMMARY

The Kentucky Bureau of Rehabilitation Services and the Kentucky Department of Economic Security, Division of Public Assistance, entered into an agreement on March 1, 1964, to undertake a research and demonstration project. The project was designed to extend through three years to develop and carry out a concentrated program of services for disabled applicants for and recipients of public assistance grants in a three county area. It was planned that the project would provide for the development of an organized plan of coordinated services necessary to find and restore to employment each disabled public assistance applicant and recipient who appeared capable of participating in an individualized plan for rehabilitation services.

The three county area in which the project was conducted is located in the mountains of Eastern Kentucky, a part of Appalachia. Johnson, Martin, and Lawrence Counties are mainly rural non-farming areas. The total population in the project area is 42,000. Paintsville, the largest town, is the county seat of Johnson County and has a population of 4,100. Louisa and Inez are the county seats of Lawrence and Martin Counties respectively. Family incomes and standards of living in the coves, hollows, and old coal camps remain substantially lower than the national average. President Johnson visited Martin County in 1964 and chose it as his launching pad for the "War on Poverty". The decline of the once booming coal industry has left the area depressed economically. New roads are

being cut through the mountains, airports are being built, and dams are being built to control the flooding of creeks and rivers.

The culture of dependency, sometimes called the "welfare cycle", is firmly entrenched. Welfare Costs in Kentucky have doubled since 1960. In Johnson, Martin, and Lawrence Counties there were 7,000 people, or 16% of the total population, who were receiving some form of public assistance at the beginning of the project.

The Kentucky Bureau of Rehabilitation Services provided staff, case service funds, office space, equipment, and the funds for remodeling the office space. The Division of Public Assistance provided staff to work with the Bureau of Rehabilitation Services staff. Office equipment for the public assistance staff was provided by the Division of Public Assistance. Areas of responsibility were established and it was agreed that each agency would provide the services that it traditionally provides. That is, the Bureau of Rehabilitation Services would provide vocational counseling, vocational evaluation, physical restoration services, training, placement, and follow-up. The Division of Public Assistance would be responsible for social casework services, financial assistance to eligible persons, and medical care or treatment for eligible persons.

The project program, in reality, went into effect July 1, 1964, with the establishment of an office in Paintsville. The Bureau of Rehabilitation Services staff consisted of a project

director, a counselor-coordinator and a secretary. The Division of Public Assistance staff consisted of a special caseworker assigned to the project, and a secretary.

The early days of the program were devoted to developing a coordinated plan of work and referral procedures. The Public Assistance Caseworker and the Bureau of Rehabilitation Counselor worked together to screen the referrals received from the county Public Assistance offices. When by mutual agreement, a case was accepted for rehabilitation the case was transferred from the Public Assistance office to the special Public Assistance Caseworker. The case was simultaneously accepted by the Bureau of Rehabilitation Counselor and the necessary services planned. Priorities were established for acceptance for rehabilitation in the following order: (1) disabled persons newly applying for assistance, (2) former disabled public assistance recipients, (3) disabled persons who have been on public assistance for no more than six months, (4) disabled persons who are potential public assistance recipients and, (5) all other disabled public assistance recipients that had some potential for rehabilitation services.

A total of 738 disabled public assistance applicants or recipients were referred to the project. Of this number 378 were accepted for services. The largest single category of disability among the accepted cases was orthopedic impairment. This is a reflection of the type of employment in which they were engaged previously, namely coal mining.

The pattern of dependency and lack of motivation were two major factors of hindrance to the process of rehabilitation. The arrangement with the Division of Public Assistance that enabled the Public Assistance Grant to continue throughout the training and work trial period contributed materially to overcoming these two factors.

Other factors which limited the rehabilitation of some individuals were the lack of job placement opportunities in the area and the reluctance of many individuals to leave their home area because of fear of the new and unknown. This constituted a mental, emotional, and social handicap in addition to physical handicaps.

The rehabilitation of many more individuals could have been accomplished if a sheltered workshop or similar facility had been available in the area.

The cycle of dependency was broken in many cases with the rehabilitation of the younger members in the public assistance families. The largest single age group accepted in the project was the 16 - 30 group with 155 enrolled or 41% of the total number accepted. The rehabilitation of this group was more easily accomplished than the older group because higher levels of education, higher motivation, fewer fears, and higher standards.

The combined efforts of the Kentucky Bureau of Rehabilitation and the Division of Public Assistance in this research and demonstration project resulted in 220 disabled public assistance

persons being placed in gainful employment in an area where 31 people in the same category had been rehabilitated in the three years prior to the project period. A total of 376 received rehabilitation services. Forty of these were closed as unsuccessful and 116 were transferred, for continuation of services, to a general case load at the end of the project period.

It was generally agreed by all those people involved in the project that such an inter-agency relationship greatly increases the possibility of rehabilitation of disabled Public Assistance recipients and applicants.

References

Ayers, George E., Ed.D. Vocational Rehabilitation Gives Welfare Recipients A New Lease on Life, Journal of Rehabilitation, March-April 1967.

Report of a Conference on Projects Aimed at the Welfare Client's Rehabilitation, Rehabilitation Record, February 1967.

"Vocational Rehabilitation Administration", Annual Report of the U.S. Department of Health, Education and Welfare, 1964.

APPENDIX A

Selected Statistical Data

Work Flow Sheet

Period	Referrals	Accepted	Closed	Total Processed
July 1, 1964 through June 30, 1965	259	86	115	201
July 1, 1965 through June 30, 1966	231	136	133	269
July 1, 1966 through June 30, 1967	248	154	77	231
Totals	738	376	325	701

Total Cases Accepted 376

Total Cases Closed Rehabilitated	220
Total Cases Closed Non-rehabilitated	40
Cases Transferred to General Caseload (Remaining at end of porject period)	116
	376

Disability Referral Variables by Sex

	FISCAL YEAR 1964-65		FISCAL YEAR 1965-66		FISCAL YEAR 1966-67		TOTAL 1964-67	
Disabilities	Male	Female	Male	Female	Male	Female	Male	Female
Orthopedic	64	29	51	20	44	26	159	75
Heart	9	3	10	5	5	4	24	12
Stroke	0	0	0	0	0	1	0	1
Mental	0	1	3	0	1	0	4	1
Diabetes	4	1	1	0	4	5	9	6
Vision	12	19	15	7	15	12	42	38
Gallbladder	2	7	0	12	0	16	2	35
Thyroid	1	6	3	6	1	6	5	18
Kidney	2	1	2	3	5	4	9	8
Hearing	4	1	5	1	8	4	17	6
Teeth	0	1	0	5	2	6	2	12
Stomach	13	5	15	6	13	11	41	22
Circulatory	5	10	0	6	0	8	5	24
Hernia	10	5	5	5	5	6	20	16
Other	20	24	26	19	14	23	60	65
Totals	246	113	136	95	117	131	399	339

Rate of Acceptancy Variables by Disability and Sex

	FISCAL YEAR 1964-65		FISCAL YEAR 1965-66		FISCAL YEAR 1966-67		TOTAL 1964-67	
Disabilities	Male	Female	Male	Female	Male	Female	Male	Female
Orthopedic	21	11	21	15	26	20	68	46
Heart	1	1	2	5	2	0	5	6
Stroke	0	0	0	0	0	1	0	1
Mental	0	0	0	0	0	0	0	0
Diabetes	0	0	0	0	3	2	3	2
Vision	4	5	5	9	8	4	17	18
Gallbladder	1	6	0	8	0	15	1	29
Thyroid	0	5	1	5	2	5	3	15
Kidney	0	0	2	2	3	2	5	4
Hearing	2	0	1	0	2	0	5	0
Teeth	0	1	0	4	1	5	1	10
Stomach	1	3	9	6	8	7	18	16
Circulatory	4	4	0	6	0	4	4	14
Hernia	7	4	4	4	4	4	15	12
Other	3	2	8	19	9	17	20	38
Totals	44	42	53	83	68	86	165	211

Acceptancy Category Variables

	FISCAL YEAR 1964-65	FISCAL YEAR 1965-66	FISCAL YEAR 1966-67	TOTAL 1964-67
Counseling and Guidance	6	10	22	38
Physical Restoration	60	88	92	240
Training	20	37	39	96
On-the-job Training	0	1	1	2
Totals	86	136	154	376

Rehabilitation Category Variables

	FISCAL YEAR 1964-65	FISCAL YEAR 1965-66	FISCAL YEAR 1966-67	TOTAL 1964-67
Counseling and Guidance	6	10	22	38
Physical Restoration	33	63	74	170
Training	1	7	3	11
On-the-job Training	0	0	1	1
Totals	40	80	100	220

Acceptancy Variables by Sex and Age Groups

	FISCAL YEAR 1964-65		FISCAL YEAR 1965-66		FISCAL YEAR 1966-67		TOTAL 1964-67	
Age Range	Male	Female	Male	Female	Male	Female	Male	Female
16 - 30	18	8	30	29	49	25	97	62
31 - 45	16	14	10	22	9	21	35	57
46 & over	10	20	13	32	10	40	33	92
Totals	44	42	53	83	68	86	165	211

Sources of Referrals by Fiscal Year

SOURCES OF REFERRAL	FISCAL YEAR 1964-65	FISCAL YEAR 1965-66	FISCAL YEAR 1966-67	TOTAL 1964-67
Public Assistance	136	109	85	330
Physician	83	34	60	177
Department of Health	1	0	2	3
Employment Service	3	0	0	3
O.A.S.I.	10	23	7	40
Self-referral	8	9	15	32
Individual, except client	0	4	3	7
Selective Service	13	37	10	60
Public High School	5	14	65	84
Employer	0	1	1	2
Totals	259	231	248	738

APPENDIX B

Employment Follow-up

Form BRS-21
Employment Follow-up

Commonwealth of Kentucky
Department of Education
Bureau of Rehabilitation Services

District Office -

Dear Mr. Doe :

Please fill out this form and return it to this office at your earliest convenience. The information requested is very important in completing your case file. This information will be treated in strictest confidence. Your cooperation will be deeply appreciated.

NAME OF YOUR EMPLOYER_____

ADDRESS_____

JOB CLASSIFICATION OR TITLE_____

EXPLAIN REQUIREMENTS OF YOUR JOB_____

_____

DATE BEGAN WORK_____AVERAGE WEEKLY WAGE_____

If self-employed, so state, giving your average weekly income_____

_____

DESCRIBE PRESENT HEALTH CONDITION_____

_____

REMARKS_____

_____

Sign your name here_____

Address_____

Date of this report_____

APPENDIX C

Written Agreement

COOPERATIVE AGREEMENT FOR DEMONSTRATION PROJECT FOR
VOCATIONAL REHABILITATION OF DISABLED PUBLIC ASSISTANCE CLIENTS
BETWEEN
BUREAU OF REHABILITATION SERVICES
THE KENTUCKY DEPARTMENT OF EDUCATION
AND
DIVISION OF PUBLIC ASSISTANCE
THE KENTUCKY DEPARTMENT OF ECONOMIC SECURITY

A high proportion of applicants and recipients of public assistance in Kentucky are disabled and are in need of rehabilitation services. The establishment of such persons in remunerative employment and the achievement of full or partial self-support are matters of concern to the parties to the agreement. This agreement is being entered into for the purpose of developing a joint demonstration project for the vocational rehabilitation of disabled and incapacitated public assistance clients administered through the Bureau of Rehabilitation Services of the Department of Education and the Division of Public Assistance of the Department of Economic Security. This agreement sets forth the objectives of the project and the responsibilities of both agencies for direction and coordination, services. staffing, financing, operating procedures, exchange of information, confidentiality, and evaluation of the project.

I. Project Objectives

The general and specific project objectives have been enumerated by the project agencies in separate project statements. In project proposal each agency is in accord with the objectives as stated.

Both agencies will inform their total staff of the project objectives, and purpose and interpret aspects of the project operations as can be carried over into general administration and operations.

II. Services to be Provided

Each applicant and recipient accepted for project services will receive a thorough evaluation of medical, social, and vocational factors to determine rehabilitation potential. This will involve joint assessment by the Social Caseworker and the Vocational Rehabilitation Counselor and will include, as necessary, medical consultation, psychiatric consultation, psychological consultation, and the use of special facilities available.

Services during and subsequent to evaluation will be planned and provided within the scope of social services available through the Division of Public Assistance and Vocational Rehabilitation services available through the Bureau of Rehabilitation Services. Project services will reflect a high level of social casework and vocational rehabilitation counseling. All of these services will be directed toward achievement of vocational goals and maximum functioning of families and individuals within family groups. Throughout project operation, Vocational Rehabilitation Services will be the primary responsibility of the Vocational Rehabilitation Agency while financial assistance and other services compatible with the administration of the Public Assistance Programs will be the responsibility of the Public Assistance Agency.

The Bureau of Rehabilitation Services will provide the following services for the purpose of preparing disabled persons for remunerative employment:

1. Vocational Rehabilitation counseling.
2. Medical, psychiatric, vocational, and psychological evaluation.
3. Physical restoration services, including hospitalization, surgery, medical treatment, psychotherapy, physical therapy, occupational therapy, and artificial appliances.
4. Training -- vocational, pre-vocational, and personal adjustment.
5. Transportation.
6. Maintenance when not covered by the Public Assistance Grant.
7. Occupational tools, equipment, initial stocks, and books and supplies for individual training programs.
8. Placement in suitable employment.
9. Follow-up for the purpose of determining the suitability of the job and the individual's adjustment to employment.

The Division of Public Assistance will provide:

1. Social casework services related to vocational objectives.
2. Financial assistance to eligible persons.
3. Medical treatment and care for eligible persons.

Medical services authorized by the Bureau of Rehabilitation Services will include medical evaluation for rehabilitation purposes and

medical and surgical treatment when it is an essential part of a rehabilitation plan, when the disability is static (or slowly progressive), and when the treatment can be expected to correct or substantially reduce the disability within a reasonable period of time. In accordance with policies of the Division of Public Assistance, medication for certain chronic conditions may be authorized. The Division of Public Assistance will authorize payment for acute intercurrent illnesses for clients receiving vocational rehabilitation if they meet eligibility requirements governing medical services from that agency. If not, the Bureau of Rehabilitation Services will be responsible in accordance with its policies related to intercurrent illness.

The total services of the two agencies will be available to project clients. Representatives of each agency will retain responsibility for decision as to the particular services to be provided in the individual case in the light of the project purposes, agency policy, and joint consideration of the family problems, needs, and rehabilitation potentials.

III. Staffing, Direction, and Coordination

The project will be organized and operated within the framework and programs of the Bureau of Rehabilitation Services, Department of Education, and the Division of Public Assistance, Department of Economic Security. The State Director of the Bureau of Rehabilitation Services will designate a Project Director. He will appoint a Project Coordinator who will be responsible to the Project Director

for the demonstration aspects and the Area Supervisor for service aspects of the Project. He will also appoint Vocational Rehabilitation counselors, and clerical persons, all of whom will be responsible to the Project Coordinator. The Director of the Division of Public Assistance will designate a Public Assistance Project Director, and will appoint social caseworkers and clerical workers, who will be responsible to the Division of Public Assistance. All of these staff members will share office accommodations. The caseworker and clerical worker will receive supervision regarding service aspects of the Project from their respective district offices. Project staff will use the consultative services of their respective state offices. Project staff members will identify themselves as Vocational Rehabilitation and Public Assistance representatives administering these services through a special project.

Policies of the two agencies will be applied throughout the Project except if special policies and procedures are jointly agreed upon and issued in writing to their project staff as a part of the Project Plan.

Costs for the Project Coordinator, vocational rehabilitation counselors, and clerical staff will be budgeted from the Project Grant Funds. Costs for the social caseworkers and clerical workers assigned to the Public Assistance staff will be paid by the Division of Public Assistance, Department of Economic Security, from Project Grant Funds.

IV. Financing

All costs of financial assistance and other social services provided by the Social Caseworkers will be paid from funds of the Division of Public Assistance. Expenditures for Vocational Rehabilitation services will be provided from Project Funds. Vocational Rehabilitation Project Funds will not be used for other than Vocational Rehabilitation Services. Public Assistance Project Funds will be used likewise.

V. Project Operation

A. Area Served:

The project area will include Johnson, Martin, and Lawrence Counties. The project office will be located in the City of Paintsville.

B. Project Clientele:

1. General:

The project will serve applicants for and recipients of any category of public assistance who are disabled and disabled members of the household of a public assistance case and former recipients of public assistance who are disabled and disabled persons likely to become in need of assistance.

2. Limitations:

Clients who will not normally be served in the project will include; (1) those with rapidly progressive terminal illness, (2) those with confinement of expected long duration in a nursing home even if provided rehabilitation

services, (3) those with such severity of disability medically demonstrated that rehabilitative measures will be ineffective, and (4) those whose combination of disabilities are such that rehabilitation potential is lacking.

C. Identification of Clients

All disabled applicants or family members newly interviewed by Public Assistance Staff, fitting classification under heading "B" above and living in the project area will be referred to the project. Cases already on the Public Assistance Agency Rolls and fitting classification under heading "B" will be referred for screening by the project staff for acceptance or rejection. All clients as qualified above will be registered as referrals and assigned to a project counselor and caseworker.

At least one interview with the client by the counselor and caseworker will be held before a decision is made for further evaluation and directions it should take. Additional evaluation will be done before a decision is made to accept or reject the case for service within the project.

A case conference will be called to establish rehabilitative diagnosis and before further counseling for service planning. Concurrently the client will receive any social services to which he is entitled within the context of project goals and objectives for the client and his family.

D. Joint Service Methods

1. Introduction: Project staff members will exercise individual responsibility within the framework of joint decision where case staffing has occurred in implementing client services. Daily contact between staff members is expected. In addition, there will be group conferences.

2. Conferences: (a) Administrative monthly staff conferences, or more often if necessary, will include supervisors responsible to the project from both agencies. Conference content will deal with policy, procedures, relationships, community planning, developing community resources, project expectations, etc. (b) Weekly case conferences, or more often if necessary, will be held to deal with case planning and problems. Personnel for such conferences may vary but would normally include appropriate consultants, project staff and community agency representatives when planning or service problems necessitate their presence.

VI. Housing of Project Staff

A. Project Offices:

Project offices will be established as near as possible to the regular offices of both agencies. The rental and maintenance costs of space will be shared equally by project agencies.

B. Office Equipment:

The equipment needs of the project staff will be provided by the employing agency, as will office supply needs. Joint forms used by project staff will be supplied by Bureau of Rehabilitation.

VII. Exchange of Information and Confidentiality

Staff members of the participating agencies will share policy materials, such as manuals, bulletins, and other issuances of a policy nature. Case recording will be exchanged through the use of carbon copies of case record entries, and through individual and group conferences. Project staff members will treat information responsibly and use it only in relation to administration of Project services.

VIII. Analysis and Evaluation of Project

A. General:

Both agencies will jointly develop a methodology for maintaining, compiling and reporting pertinent client and project data for appraising project methods, accomplishments and reporting. Such data as is required by both agencies through their respective reporting systems will be maintained. Specific fiscal and statistical information will be compiled and reported for comparative purposes, normal agency reporting purposes, and for project appraisal purposes for both agencies.

IX. Project Advisory Committee and Interpretation

A. Advisory Committee

An advisory committee, selected jointly by the project director and the District Supervisor of the Division of Public Assistance Agency, will consist of representatives of agencies normally participating in services for clients such as Public Health, Employment Service, Family Service Association, government, employer groups and others, in addition to the primary project agencies. Such a committee will be kept to seven to ten members.

B. Securing Broad Community Support

Goals and achievements of the project will be interpreted to the public and cooperating agency staffs through conferences, jointly supported releases to news media, agency channels, advisory committee channels and any other appropriate manner agreeable to project staff and primary agency administration. Such interpretation will recognize contributions of participating agencies so that the project activities are always understood to be from a cooperative enterprise.

This agreement becomes effective on March 1, 1964, and will continue until revised or until the Project is terminated.

ACCEPTED AND APPROVED

DATE _____ DATE _____

Earl V. Powell Commissioner Department of Economic Security	Harry M. Sparks Superintendent of Public Instruction Department of Education
Aaron Paul Director Division of Public Assistance	Ben F. Coffman Assistant Superintendent Bureau of Rehabilitation Services

VT 002 715
Vocational Rehabilitation of Disabled Public Assistance Clients. Leslie, Harlan and Bell Counties.

Kentucky State Dept. of Education, Frankfort. Bureau of Rehabilitation Services
Kentucky State Dept. of Economic Security, Frankfort. Div. of Public Assistance
Vocational Rehabilitation Administration (DHEW), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
RD-1533-D
Pub Date - 30Sep67 109p.

*DEMONSTRATION PROJECTS; WELFARE AGENCIES; REHABILITATION COUNSELING; *REHABILITATION PROGRAMS; *VOCATIONAL REHABILITATION; *PHYSICALLY HANDICAPPED; *WELFARE RECIPIENTS; ON THE JOB TRAINING; INTERAGENCY COOPERATION

Agencies providing services essential to the rehabilitation process cooperated in a 3-year demonstration project designed to develop and carry out a concentrated program of services for disabled public assistance applicants and recipients. At the close of the project, 169 of the 322 cases had been rehabilitated and 134 were still in process. A comparison of 200 accepted and 200 closed-not accepted cases showed: (1) Among the unaccepted sample there were more vague complaints, men, minors, and participants in previous vocational rehabilitation programs, (2) Educational and work force participation for the past 12 weeks was higher for the accepted sample, (3) 94 of the 200 accepted cases had been closed and rehabilitated at the close of the project at an average cost of $355.00, and (4) Of the 94 who were rehabilitated, 56 were homemakers. It was concluded that the program objectives had been realized. Future program planners should be aware that: (1) A large majority of the referrals will be homemakers and persons without job prospects who need physical restoration, (2) Fear of financial loss is a fundamental concern of those declining the service, and (3) There should be more attention given to rehabilitation for younger persons and the mildly retarded. Tables, case histories, the project proposal and agency policies are included in the document. (FP)

VT 002 715

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VOCATIONAL REHABILITATION

OF DISABLED PUBLIC ASSISTANCE CLIENTS

RD-1533-D

JOHN M. BURKHART

PROJECT DIRECTOR

PREPARED BY

KENTUCKY BUREAU OF REHABILITATION SERVICES

DEPARTMENT OF EDUCATION

Harlan, Kentucky

September 30, 1967

VT002715

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HIGHLIGHTS

It would be difficult to imagine an environment less conducive to vocational rehabilitation than the environment in which this demonstration took place. Nevertheless, all major objectives or the program were adequately achieved. However, the most important contribution of the project was not the meeting of objectives. The most important contribution was the opportunity offered the rehabilitation counselor to work closely with about 75 public assistance case workers. The coverage achieved by this method would not have been possible without the dynamic links established between these two agencies. The focus of attention upon the people who epitomize poverty in the Appalachian region of the United States yielded insights into some of the most difficult problems facing both welfare and rehabilitation workers. In the midst of an otherwise affluent nation, thousands of people have developed patterns of behavior which are alien to the behavior and attitudes of most modern day Americans. In a nation where many men are holding down two jobs, wives are working, industrial concerns are clocking overtime, and executives are dropping dead from exertion, whole communities sit idle each

day waiting for some type of welfare check. In a nation where millions are motivated to an almost maniacal pursuit of middle class values and material wealth, thousands display no desire to rise above the megre subsistance level at which they exist.

If the rehabilitation worker is to achieve his goals in this atmosphere of apathy, lethergy, and acceptance of defeat, he must concentrate on two primary objectives. First, and most important, he must seek ways to motivate his clients to rise above their circumstances. Second, he must search constantly within the region as well as outside the region for the kind of job opportunities, training opportunities, and on-the-job training opportunities which are best suited to his type of client. Unless rehabilitation can demonstrate, in this environment, its ability to provide jobs for the jobless, it will eventually be perceived by the pessimistic population it seeks to serve, as just another welfare agency - - an agency which can give you back a strong right arm but can offer you no opportunity to use your new strength -- an agency which can give your back your eyesight, but can offer you no vision beyond the narrow horizons of the poverty pocket in which you live.

PREFACE

In April of 1964 when President Johnson transmitted his "Appalachia" bill to congress he called for "an active beginning to end an old problem . . ." This was one of a series of actions over the past few years calculated to "break the cycle of poverty." Such actions resulted from the recent focus of attention on poverty pockets which, like infected wounds, have continued to fester in an otherwise healthy and affluent nation. Mobilization for the "War on Poverty" led to a proliferation of new agencies, organizations, and commissions designed to attack problems of economic deprivation. Such new efforts have enjoyed a measure of success, but unfortunately success has been counteracted, if not outweighted, by setbacks. Few critics have objected to the purpose of these new programs, but there is a growing concern over the methods, especially as the methods relate to over-generous funding of new agencies at the expense of old, established agencies whose mission is, and always has been, to "break the cycle of poverty."

This paper will deal with several things. It will examine the

methods employed to effect a working relationship between two permanent state agencies and report results of the program which evolved from this relationship.

It will highlight the similarities between this present demonstration project and the greater "War on Poverty."

It will show that this present demonstration project was conducted in an area which epitomizes the problems of a chronically depressed region; and it will further show that the project delt with people who epitomize poverty in the United States. In so doing it will reveal that no more suitable battlefield could be found on which to test the mettle of an army whose mission it is to "break the cycle of poverty."

It will discuss the basic philosophies of the two agencies involved in this demonstration project and present the thesis that these philosophies so compliment each other as to assure the optimum utilization of personnel and funds in effecting the most practical and humane solutions to individual cases.

Finally, it is hoped that this paper will demonstrate that existing agencies, even moderately funded, can make a significant contribution to the "War on Poverty," a contribution

which warrants serious consideration of their facilities as the most efficacious channel for funding future efforts aimed at "breaking the cycle of poverty," especially in the eleven state region of Appalachia, America.

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CHAPTER I

INTRODUCTION

Background

Although Public Assistance case workers and rehabilitation counselors have always maintained a loose working relationship, it was not until the 1950's that emphasis was placed on this relationship by the institution of several demonstration projects. As such projects continued from year to year it became apparent that the combined efforts of welfare services and rehabilitation services could increase significantly the number of persons removed from welfare rolls and rehabilitated.

Florida conducted a project in Hillsboro County from 1955 to 1958, titled "Operation Hope," which concentrated on the rehabilitation of disabled fathers of families receiving Aid to Dependent Children. (1) "Operation Hope" yielded the following conclusions:

1. Approximately 25% of the 411 cases handled were rehabilitated.
2. There was a removal of agency barriers with the development of understanding and mutual respect evolving from close cooperation.

3. It was observed that it was preferential to concentrate efforts on new referrals rather than to waste valuable time on old clients much too deteriorated for rehabilitation.

The state of Georgia conducted a project in Fulton County, Georgia from 1956 to 1959. This project focused on disabled parents who were receiving maximum welfare benefits at the time they were referred as possible rehabilitation clients. (2) The following conclusions were drawn from the Fulton County Project:

1. It cost less to rehabilitate a welfare recipient than to continue him or her on public assistance.
2. The average income of the rehabilitants increased ten-fold.
3. The combined interest and concentrated attention of the cooperating agencies strengthened family life and motivated the family for self-help and self-care.
4. Rehabilitation was more effective when the family unit was considered as a whole rather than as a problem of individual disabled family members.
5. The effectiveness of the team approach was demonstrated.
6. It increased the understanding and relationship between the vocational rehabilitation, public assistance, and various

community service agencies.

Arizona reported in 1965 that a project directed at disabled public assistance clients markedly improved interagency communication and made welfare workers more aware of vocational rehabilitation services available to their clients. (3)

California, also reporting in 1965, found that early identification of potentially employable, disabled, public assistance clients and their prompt referral to the Division of Vocational Rehabilitation was four times as successful in rehabilitating the welfare recipient under project operations as under non-project operations.(4)

Such demonstration and research projects, completed or in the planning or operational stage, were largely responsible for the 1962 Public Welfare Amendments to the Social Security Act. It was at this time that the Vocational Rehabilitation Administration and the Welfare Administration intensified their cooperative efforts through planning a special group of demonstration projects.

As a direct result of cooperative planning between these two agencies at the national level planning was initiated by the Bureau of Rehabilitation Services, Kentucky Department of Education and the Division of Public Assistance, Kentucky Department of Economic

Security.

Conferences between these two agencies resulted in mutual agreement on project purposes, goals, organization and operating methods. District personnel responsible for participating in the project were involved in the project planning and some concept of their roles was developed. In addition, planning conferences were held with Employment Service and Public Health.

Personnel in both agencies responsible for staff training and policy development were informed of project purposes, goals, methods and evaluation. They agreed to work closely with project personnel. The following excerpt taken from the formal agreement between the two agencies reveals their willingness to work together:

> "A high proportion of applicants and recipients of public assistance in Kentucky are disabled and are in need of rehabilitation services. The establishment of such persons in remunerative employment and the achievement of full or partial self-support are matters of concern to the parties to the agreement. This agreement is being entered into for the purpose of developing a joint demonstration project for the vocational rehabilitation of disabled and incapacitated public assistance clients administered through the Bureau of Rehabilitation Services of the Department of Education and the Division of Public Assistance of the Department of Economic Security. This agreement sets forth the objectives of the project and the responsibilities of both agencies for direction and coordination, services, staffing, financing,

operating procedures, exchange of information, confidentiality, and evaluation of the project."

On March 1, 1964, the present project was funded and staffing was completed four months later. On July 2, 1964 the Kentucky Department of Public Assistance sent a memo to all field staff outlining the project and specifying that the project would "involve full utilization of the services of both agencies."

Statement of the Problem

Cooperative services through formal agreement between the Bureau of Vocational Rehabilitation Services and Division of Public Assistance, have been provided to public assistance clients for several years. For example, in fiscal year 1963, 1367 public assistance applicants and recipients were referred to the vocational rehabilitation agency. In the same year 316 public assistance recipients were rehabilitated. At the time of acceptance, these clients were receiving $22,745 in public assistance grants in all categories.

During fiscal year 1963, a total of 780 public assistance referrals received services from the vocational rehabilitation agency in Kentucky. In the past three years, a total of 772 recipients

have been rehabilitated who were receiving a total of $62,399 public assistance.

In spite of the above achievements, there remained much to be done in the vocational rehabilitation of this type of referral than could be achieved under existing operational and service procedures.

It was felt that the Kentucky Vocational Rehabilitation agency was rehabilitating only a small portion of cases potentially available for rehabilitation from caseloads in the Division of Public Assistance.

The agencies had always cooperated in efforts to rehabilitate mutual clients, but appropriations for the Bureau of Vocational Rehabilitation were not adequate to allow a major expansion of service to Public Assistance cases.

Description of the Project

This was a selected three year demonstration project designed to carry out a concentrated program of services for disabled public assistance clients through the Department of Economic Security, Division of Public Assistance. The project was sponsored by the Bureau of Rehabilitation Services, with the cooperation of the Division of Public Assistance, and other agencies which provide services essential in the rehabilitation process, including the State

Employment Service, the Department of Health, and other appropriate public and private agencies.

The project provided for the development of an organized plan for coordinated services necessary to identify and restore to employment each disabled public assistance applicant and recipient who could participate in an individualized plan of rehabilitation services. To provide a supportive climate for rehabilitation, the complex of functions beyond the normal scope, but within the interests of the Vocational Rehabilitation program, would be provided by the Division of Public Assistance. Such functions would include social casework, physical restoration services for certain family members, assistance in use of community resources for day care, homemaker services, foster care and other services. The participating agencies had at this time reached common understanding of project goals, relationships and functions. These goals would be supported by use of vocational counseling, casework, medical, psychological and other services essential to achievement of project objectives.

Project Objectives

The general purpose of the project was to develop and improve administrative methods and professional techniques in such a way

as to help a greater number of disabled applicants and recipients of public assistance to earn their livelihood through vocational rehabilitation.

The following were more specific project objectives:

1. To develop and establish effective methods for identifying public assistance applicants and/or recipients with potential for vocational rehabilitation.
2. To develop and establish interagency operational patterns for effective and optimum vocational rehabilitation.
3. To develop and provide adequate evaluation and diagnostic services to disabled public assistance clients.
4. To identify and utilize those medical and other services essential to the vocational rehabilitation of public assistance clients, whether most effectively provided by the single agency or through coordinated provision of services between the vocational rehabilitation agency and the public assistance agency.
5. To identify the type facilities and settings required to provide the most appropriate services needed for the rehabilitation of public assistance clients.
6. To demonstrate the effectiveness of joint agency planning and

coordination of services.

7. To demonstrate an effective cooperative approach to meeting vocational rehabilitation problems of dependent disabled adults in a severely depressed economic area of Kentucky.

8. To determine through a demonstration project the specific factors to be considered in practical planning for the rehabilitation of a dependent person living in an area of low economic potential, lacking comprehensive rehabilitation facilities, and having the characteristics of rural isolation, and other such characteristics as are found typical in Appalachia.

9. To compile and analyze data on clients served by the project as to kinds and costs of services, project methods, and outcomes that may indicate new approaches to the provision of improved service to the disabled public assistance referrals.

It was decided that priority would be given to disabled persons applying for AFDC and disabled recipients receiving AFDC for three years or less. After exhausting this criteria, disabled applicants for AABD, and disabled recipients receiving AABD for two years or less

would be served. Disabled persons likely to become in need of public assistance, disabled persons denied public assistance, and disabled former recipients of public assistance were to be considered after exhausting the before stated priorities. After these priorities any disabled recipient of public assistance would be considered.

CHAPTER II

THE SETTING

Description of the Region

Historians, during the last several centuries, speculated that both Europe and America would be Moslem if the northward conquest of "The Sword of Islam" had not been stopped by the Pyrenees Mountains. Although no major military or religious conquests have been stopped by the mountains of Eastern Kentucky, their jagged ridges and twisting valleys have constituted a formidable deterrent to the assimilation of the cultural and economic benefits of an expanding national affluence. The geographical phenomena of Appalachia and their significance for present problems has long been recognized and much discussed. In 1960 the problem was thumbnailed by John D. Whisman, States' Representative to the Appalachian Regional Commission who wrote, "Impenetrability is a major mountain country problem."(5)

The difference between Eastern Kentucky and the adjacent Bluegrass region is nowhere more striking than from the air in midwinter. Traveling eastward out of Lexington you fly over a rolling green carpet studded with small lakes, ribboned by alabaster, four-lane highways, and interlaced by crosshatched horse fences.

But suddenly this fairyland landscape ceases its soft undulations and explodes into a mass of ragged ridges, tortured streams, and narrow hollows smothered in blue-grey ground fog. A few minutes more and this chaotic terrain, bristling with second growth timber, changes its complexion. It looks as though some sadistic giant has roamed among the hills to vent his wrath on a land already warped by nature. Whole mountain ridges bleed red clay from miles long gashes gouged along their sides and left undressed. Above and below these wounds tree trunks lie in tangled profusion like matted hair on a wrinkled, scalded coon skin. For miles the only signs of civilization are occasional valley-locked hamlets, tenuously tied together by a spindly skeleton of twisted asphalt pikes, double-spined rail spurs, and almost invisible power lines which follow ridges like threads of spider web that drifted down from above to settle in unlikely paths. The few towns of any size, hug the bending rivers and cling to slippery banks as though afraid they'll be shoved into the polluted waters by menacing mountains. It is not a pretty picture, even from 8,000 feet away, but coming closer one sees how kind the distance was. By land there are only two routes. One route, the Kentucky Mountain Parkway, like a scenic

boulevard through a concentration camp, sweeps the tourist up to the Cumberland Plateau with barely a glimpse of increasing economic chaos as he moves farther eastward. For one dollar and sixty cents he glides along a wide, smooth highway surrounded by impressive mountains. However, after two hours of such luxury, he is dumped uncerimoniously in the coal region. Suddenly the mountains change from scenery to obstacles as they crowd in on the patched asphalt roads, and the verdent right of way gives way to scrubby hillsides, rock strewn shoulders, smouldering gob heaps, rotted coal tipples, tar paper shanties, automobile grave yards, abandoned buildings, abandoned mines, abandoned machinery, abandoned trucks, and abandoned people.

Traveling southeast out of Lexington on the second route, the transition from affluence to poverty is less sudden but no less apparent. After some twenty-five miles of interstate concrete and rich pasture land, the road narrows a little and roughens a little as it moves past truck farms, truck stops, and the last real thing of beauty built by man for any other purpose than to rob the land of its wealth, Berea College. After leaving the town of Berea and the quaint dignity of its college campus,

the oppressive monotony sets in, increasing with every mile to the "coal camp grey" of the areas many string-towns.

In the last several years efforts have been initiated to relieve conditions that exist and combat the physical elements of the land that are essentially hostile to man. But such efforts will have little effect on the average public assistant recipient. Most of them have spent their entire lives in an environment which does much to crush their spirit. An article in the Courier-Journal begins with this statement, "Human spirit and hope -- like the mountains -- crumble and waste away each day in East Kentucky." (6)

The implications of these conditions for this project will be discussed further in the paper.

The People

Much has been written to describe the people of Appalachia as a group; (7, 8, 9, 10), much less has been written to describe that segment of Appalachian people treated by this demonstration project. In the three counties covered by this project, alone, there are 7, 961 people receiving either Aid For Dependent Children or Aid to the Totally Disabled. In addition, thousands others receive social security disability benefits, United Mine

Workers benefits or some other form of welfare. It is these people with whom we are concerned here; like caulking between the polished planks of the "Ship of State", these people are tucked back in the deep hollows of Appalachia, almost invisible to the casual observer.

The most glaring characteristic of these people is their overwhelming monotony, sameness, and lack of apparent individuality. Though they have every reason to be, they do not appear worried, frightened, hostile, or even openly unhappy. The first inclusive adjective to come to mind in attempting to describe them is "stoical." But on closer scrutiny this is discarded. The word stoical implies some awareness of suffering and a philosophy to soften the suffering. A more appropriate term is apathy. No place is this more starkly demonstrated than in the waiting rooms of public agencies. It is not unusual to see people come hours early for an afternoon appointment and sit all day without a complaint, without dozing, without going to eat, or without speaking to each other.

The same apathy is apparent in their general physical appearance. Neither their clothes, their behavior, nor their facial expressions show any evidence of a desire to win social

approval.

If this were a condition confined to the present adult welfare recipient, it might be possible to dismiss it as a social accident which would eventually disappear as the older people passed away to be replaced by a younger generation who reflect the changes which have occured in our country in the last decade. But this is not the case. The youth, more than anything else represents the tragedy of the situation. Families of the very poor tend to be much larger than those of the urban and affluent. Each of these families is a cell of despair which perpetuates itself in a geometrical progression.

From our review of the literature and personal observation it is apparent that such poverty as is experienced by these welfare recipients has exerted a deadly effect on their lives and the lives of their children. Geographic isolation and general impoverishment place severe limits on the young mountaineer's opportunity to derive any benefits from the dominant culture in which he lives.

Only a few things, taken for granted by most American young people, but not generally available to the Appalachian young people of the welfare families will be mentioned. Most

American teenagers live in an environment rich with variety. They have seen buildings which range from massive skyscrapers to steepled churches, to colonnaded public buildings, to ranch type houses, and to hovels; they have ridden elevators and escalators, walked on deep carpet, attended parades, circuses and state fairs, visited museums filled with myriad shapes and forms, played in tree shaded parks, plunged into clean, clear swimming pools, and gone on picnics with their family or friends; they have heard the din of heavy traffic, the roar of breakers at the sea-shore, the sound of a lot of laughter, the swell of organ music in churches, the sane, soft chords of worshipful hymns, and the thrill of carols played in huge, bright stores packed with Christmas shoppers; they have had books and magazines in their homes and large public libraries to browse in; they have seen their fathers go to work each morning and come home every evening; they have had shoes and clothes to wear to school, eaten three meals a day, slept on white sheets, seen garbage trucks come to take away their wastes, and used bath rooms with flush toilets and tubs; and, most important, they have spent most of their lives in an environment which at least provided the "sweet smell of success" and gave them goals for which to strive.

The average mountain children, by contrast, rarely see a

building taller than two stories; their image of a public building is a crumbling court house with tobacco stained floors, a stinking public toilet and scaling walls; they have walked almost everywhere they have been, over black mud roads or rock-clogged paths; few have seen an elevator or escalator and few have walked on any floor but wood or concrete; the celebrations they attend are political rallies, often hostile and seldom cheerful; their church experience, if any, is rocked by thundering preachers hurling fire or brimstone or leading small congregations in boisterous, twanging renditions of "Brighten the Corner Where You Are"; parks, like swimming pools, are almost non-existent, so water sport, if any, is limited to floating down polluted streams in tipsy pans made from cut-out car tops; they see their father sitting on the sagging porch when they leave for school and see him sitting there when they return, they have lived on school free-lunch for months on end and slept on unsheeted mattresses; their home more often than not is "four rooms and a path," and a galvanized wash tub provides infrequent baths; since there is no garbage truck their waste surrounds their homes or joins that of their neighbors in a filthy creek behind; the sounds they hear in their now silent woods are little but the growl of tandem trucks or wailing coal train whistles; and, most important, they have spent most of their lives in an environment which provided without end "the fetid stench of failure" and have no good reason to expect

anything for themselves except defeat. Even the regional subculture and the occupational subculture of which they are a part no longer provides a footing in the quagmires of poverty. Decades ago, the jungle-like forests in which they might find a retreat were ripped out to be hauled away, and bottom lands or sloping hillsides on which they might plant gardens or graze cattle for FFA projects are denuded of topsoil, overgrown with weeds and scrub oaks, or covered with cascading spoil banks from hill-top strip mines. Where once they might have at least looked forward to work in the mines, their grim fathers lounging unemployed about the house or picking up trash on the "Happy Pappy Program" attest to the futility of such ambitions. Every hope, every dream, every experience, every skill, and every ounce of drive has been bled from them by the wounds of poverty, passivity, and perpetual defeat. There is little on which to build, for the sinews which provided toughness for their forefathers have been clipped by circumstances leaving them so apathetic that we sometimes wonder if they even know how much they hurt.

These conditions pose a special problem for a project such as is described in this paper. A public health Doctor driving past a small new sub-dividion in an Eastern Kentucky town remarked

to one of the present writers, "That's the biggest hope for this area. If they see better, they'll want better." Unfortunately, most of the people with whom this project is concerned have little opportunity to "see better."

Homes

Little needs to be said concerning the homes of the average public assistance recipient. While obtaining social data for psychological and other reports, it was found with monotonous regularity that the person or the family, regardless of the number of people in the family, more often than not lived in a four room, frame house with no indoor plumbing. Water was usually obtained from a well, but often had to be carried from some distance. The family usually did not subscribe to a newspaper, did not have a telephone in the home, and usually had no books in the home except a bible, a dictionary, or a few of the children's old school books.

Opportunities for employment

Opportunities for employment are markedly limited. The population of Harlan County in 1960 was 51,107 but in manufacturing, the type of industry offering the most potential for the disabled worker, only 996 jobs were filled in 1966. In agriculture, another

area that offers some potential for the unskilled or simi-skilled worker, only 15 hired workers were employed in 1959. In all industries, only 5,415 jobs were filled in 1966. The magnitude of problem is reflected in the fact that Harlan has shown a decrease in population for every decade since the 1940 census. But even with an outmigration of around 18% from 1940 to 1960 there was still an employment potential (people available for employment) of 17,000 to 18,000. Examination of the tables in Appendix A will provide convincing evidence that few job opportunities exist in the three county region with which this demonstration project was concerned.

CHAPTER III

METHODOLOGY

Project Staff

The area Supervisor of the Bureau of Rehabilitation Services in Harlan, Kentucky was designated as project director. He recruited, oriented and trained staff, provided general supervision of staff activities, administered admission and termination policies according to the project plan, approved services within the regulations of the Bureau, maintained liaison with Division of Public Assistance officials, interpreted the program of services to the general public, and saw the Bureau records were completed and progress reports completed.

The Rehabilitation Counselor and the Public Assistance Case Worker, shared office facilities during the first year of the project and had daily contact with each other. However, during the last two years of the project it was decided that more referrals and better coverage of the area could be achieved if the Rehabilitation Counselor established a liaison with all Public Assistance Caseworkers in the two county area served by the project. At this time the case worker position in the Rehabilitation Office was terminated, and the

Rehabilitation Counselor began to make monthly visits to all case workers and accept referrals from each of them.

Psychological services were provided on a fee-for-services basis by consulting psychologists from Lexington, Kentucky, Psychological Associates, Ltd. They helped to establish eligibility of clients for services by the evaluation of intellectual functioning and the determination of any special factors which might affect a client's vocational adjustment. They also assisted in the analysis of data and preparation of the final project report.

Medical services were also obtained on a fee-for-services basis from local physicians and, where needed, from the University of Kentucky Medical Center in Lexington, Kentucky.

Cases Served

1. All Public Assistance referrals.
2. Priority was extended to those disabled clients newly applying for assistance.
3. Former disabled Public Assistance recipients.
4. Disabled persons likely to become in need of assistance.
5. Public Assistance Clients on assistance rolls for not over 6 months.

Clients who normally were not served

1. A person with rapidly progressive terminal illness
2. Persons confined with long duration in a nursing home
3. Persons with such severe disability, medically demonstrated that Rehabilitation would be ineffective.
4. Persons that had a combination of disabilities such that rehabilitation potential was lacking.

Services provided by the Bureau of Rehabilitation Services

1. Vocational rehabilitation counseling
2. Medical, psychiatric, vocational , and psychological evaluation.
3. Physical restoration services, including hospitalization, surgery, medical treatment, psychotherapy, physical therapy, occupational therapy, and artificial appliances.
4. Training -- vocational, pre-vocational, and personal adjustment.
5. Transportation
6. Maintenance when not covered by the Public Assistance Grant.
7. Occupational tools, equipment, initial stocks, and books and supplies for individual training programs.

8. Placement in suitable employment.

9. Follow-up for the purpose of determining the suitability of the job and the individual's adjustment to employment.

Service provided by the Division of Public Assistance

1. Social casework services related to vocational objectives.

2. Financial assistance to eligible persons.

3. Medical treatment and care for eligible persons.

4. For purchase of service from other public agencies when essential to the project.

5. Medication for certain chronic conditions

6. Public Assistance authorized payment for acute intercurrent illness for cases receiving vocational rehabilitation if they meet eligibility requirements of rehabilitation.

Identification of Clients

All disabled applicants or family members newly interviewed by Public Assistance Staff, fitting project classifications and living in the project area were referred to the project. Cases already on the Public Assistance Agency Rolls and fitting project classifications were referred for screening by the project staff for acceptance or rejection. All clients as qualified above were registered as referrals

and assigned to a project counselor and caseworker.

At least one interview with the client by the counselor and caseworker was held before a decision was made for further evaluation and directions it should take. Additional evaluation was done before a decision was made to accept or reject the case for service within the project.

Exchange of Information and Confidentiality

Staff members of the participating agencies shared policy materials, such as manuals, bulletins, and other issuances of a policy nature. Case recording was exchanged through the use of carbon copies of case record entries, and through individual and group conferences. Project staff members treated information responsibly and used it only in relation to administration of Project services.

Medical services authorized by the Bureau of Rehabilitation Services included medical evaluation for rehabilitation purpose and medical and surgical treatment when it was an essential part of a rehabilitation plan, when the disability was static (or slowly progressive), and when the treatment could be expected to correct or substantially reduce the disability within a reasonable period of time.

In accordance with policies of the Division of Public Assistance, medication for certain chronic conditions was authorized. The Division of Public Assistance authorized payment for acute intercurrent illnesses for clients receiving vocational rehabilitation if they met eligibility requirements governing medical services from that agency. If not, the Bureau of Rehabilitation Services was responsible in occordance with its policies related to intercurrent illness. The total services of the two agencies were available to project clients. Representatives of each agency retained responsibility for decision as to the particular services to be provided in the individual case.

Financing

All costs of financial assistance and other social services provided by the Social Caseworkers were paid from funds of the Division of Public Assistance. Expenditures for Vocational Rehabilitation services were provided from Project Funds. Vocational Rehabilitation Project Funds were not used for other than Vocational Rehabilitation Services.

Method of Reporting

The monthly reporting of the project referrals and case

load showed the orderly referral of cases as they came from the three counties involved in the project. It also gave the number of cases accepted and the number of cases rejected. Decision of referrals after they had been made were the responsibility of the Vocational Rehabilitation Counselor with the assistance of the Public Assistance Service worker. The methods of reporting for said Public Assistance Project was the same as for the regular program of Rehabilitation Services. The following forms were used: R-100 Monthly Referral and Case Load Report, KVR-99-A Quarterly Report consisting of the Referral Master List, R-A-99 Master List of Cases and the KVRS-100, a quarterly report consisting of the referral and case load report. A data sheet of Selected Demonstration Project, known as the R-7 was also kept for each case.

Additional County included

On January 1, 1966, Leslie County was included in the Public Assistance Project, along with Harlan and Bell Counties. This was primarily the result of the Multiphasic Diagnostic and Health Survey which was being conducted in Leslie County by the State Department of Health and The Leslie County Development Corporation.

CHAPTER IV

RESULTS

During the three year life of this demonstration project 797 persons were referred for rehabilitation services. Of this total 322, or 44% of the referrals were accepted. (See Tables I and II). Of the total of 322 cases accepted for services 22 or approximately 6% were closed not rehabilitated, (Table II), and 169 or 52% had been rehabilitated. (Table II). A breakdown of accepted cases still on hand at the close of the project shows a total of 134 with the majority of these in two categories, in the process of physical restoration and training, and ready for employment. (Table V) Table VI shows that the number of cases remaining at the end of the project is consistent with other years. The current status on the on-hand cases and actions already initiated indicate that more than half of these cases will be closed within four months after termination of the project.

The primary goal of this project is to remove as many people as possible from the public rolls and return them to productive pursuits. For this reason it is important for the project

TABLE I

REFERRALS

1st year	227
2nd year	289
3rd year	281
Total	*797

* Of this total, 187 cases remained on hand at the end of the project; 134 of these cases have been accepted (see Table 5). It is expected that 75 to 100 will be closed.

TABLE II

ACCEPTED CASES

1st year	66
2nd year	132
3rd year	124
Total	*322

*44% of the total referrals were accepted.

TABLE III

ACCEPTED, CLOSED, NOT REHABILITATED**

1st year	10
2nd year	2
3rd year	10
Total	* 22

* 15-30 more will be closed not rehabilitated

** 6% of total cases accepted were not rehabilitated

TABLE IV

REHABILITATED

1st year	5
2nd year	60
3rd year	104
Total	* 169

* 52% of the total number accepted were rehabilitated

TABLE V

BREAKDOWN OF ACCEPTED CASES ON HAND

1.	Plan development and plan completion	19
2.	Physical restoration and training	54
3.	Ready for employment	52
4.	In employment	1
5.	Interrupted status	8
	Total	134

TABLE VI

TOTAL NUMBER OF ACCEPTED CASES REMAINING

AT END OF EACH YEAR

1st year	51
2nd year	123
3rd year	134

to yield some information as to the types of people who are able or willing to take advantage of the opportunity offered. It was to this end that the following comparisons were made between the accepted cases and the closed-not accepted cases.

Tables VII and VIII show a notable difference between the two groups in some specific areas. The most outstanding difference is that there were more "vague" disorders in the closed and not accepted sample. For example, poor vision, hard of hearing, back pains, headaches, chest pains, stomach, and nerves accounted for 93 or almost half of the major disabilities in this sample. Where the same disabilities occurred in the sample of accepted cases they totaled only 19 or about 5% of the sample. Except for this preponderance of "vague" complaints in the sample of closed and not accepted cases there are no remarkable difference between the two groups.

Table IX compares the two groups as to age, sex, race and education. The age difference is not remarkable, but sex appears to have some relationship to outcome. While 51.5 % of the accepted cases and 76.5 % of the closed-not accepted were male, the situation was reversed for females. Of the accepted cases 48.5 %

were female while only 23 % of the closed-not accepted were female.

In regard to race, only a very small percentage of either sample was Negro. This is consistent with the Negro population of the area served which amounts to only about 2 to 3 percent of the total population.

The education for both groups is low and although the accepted cases tend to have slightly more education than the closed-not accepted cases the difference is not remarkable.

The differences in regard to part-time work history follows the same pattern as that seen in the comparison of education. That is, the accepted cases are a little higher than the closed-not accepted cases in number of weeks of part-time work in the twelve months prior to referral. However, the situation is reversed in regard to full-time weeks worked with the closed-not accepted cases working slightly more than the accepted cases.

The four above comparisons show little in the way of a trend of differences between the two groups. However, Table XI, does reveal a trend. A considerably greater percentage of the closed-not accepted cases were receiving public assistance benefits prior to the PA opening, were involved in community work or

TABLE VII

MAJOR DISABILITIES FOR THE 200 SAMPLE CASES CLOSED AND NOT ACCEPTED

Poor vision	58	Lower Extremity Impairment	3
Psychoneurosis	13	Female Disorders	3
Back pains	11	Headaches	3
Hard of hearing	11	Chest Pains	3
Heart Disease	11	Ulcers	3
Personality Disorder	5	Nerves	3
Arthritis	5	Paraplegia	2
Stomach	4	Emphysemia	3
Hernia	4	Breast Tumor	2
Cyst	3	A/K Amputee	2
Mentally Retarded	3	Hip Fracture	3
Blind in one eye	3	Epilepsy	2

The following major disabilities appeared only once each in the sample of 200 cases:

Thyroid deficiency, thyroid-overactive, weakness left side, bronchitis, hypertension, alcoholism, blind, leg deformity-injury, dermatitis, obesity, weak right ankle, knee pains, carcinoma of cervix, walk with brace, hip pains, dwarfism, stiff ankle, unable to stand or walk (upper lobe lesion) (polio), orthopedic, extensive dental, breast cancer, diabetes-mellitus, deaf-unable to talk readily, goiter, gradiplegia, hemiplegia, rheumatic fever, adhesion of cervix, scar on eye, fluid in lungs, broken back.

TABLE VIII

CASES ACCEPTED FOR THE SAMPLE OF 200

Hernia	15	Vericose Veins	4
Uterine Prolapse	10	Hemoroids	4
Blind one eye	6	Speech Defect	3
Ruptured Disc	5	Vaginal Bleeding	3
Ulcers	5	Cataracts	3
A/K Amputee	6	Cholesystitis	3
Personality Disorders	10	Female Disorders	3
Arthritis	5	Heart Disease	2
Poor Vision	5	B/K Amputee	2
Back Pains	4	Paralyzed Arm	2
Hard of Hearing	6	Old Leg Fracture	2
Tumor of Uterus	4	Dental Caries	2
Stomach Pains	4	Pelvic Relaxation	2
Goiter	4		

The following major disabilities appeared only once in the sample of 200 cases:

Blind, weak leg, orghopedic deformity, paraplegia, infection of the thumb, congenital deformity of chest, gall bladder disease, burgers disease, kypo-sholeosis of the back, multiple fracture of left leg, nasal polypo, crossed eyes, scoliosis, M.S., obstructed breathing, eye infection, fluid in chest, mastoiditis, multiple fracture of arm, chronic bronchitis syndrome, fusion of left hip, impending gangrene foot, traumatic wreck injury.

TABLE VIII (cont)

chronic tonsilitis, asthma, severe pain of feet, undescended testicle, prerygium on eye, pyorrhea of gums, torn cartliage in knee, lump in breast, torn ligament in knee, kidney disease, congenital defect/right leg, pneumonitis unable to lift or bend, nerves, tumor/vocal cords, paralyzed left side, chronic hypertension, cyst on spine, gallstones, short right leg/polio, TB/arrested, kidney stones, salpingiris, generalized malaise, left hydrocele, vivonchiectasis, upper extremity circulatory impairment, amputation of right hand at wrist, severe headaches, diabetes/uncontrolled, paralyzed right arm, rectal fistule, infected pelvic bones, alcoholism, cosmetic disability/no teeth, short right leg, paranal abscess, unable to speak, weakness of left arm and leg, lipoma on arm, fractured vertebra, split meniscus of knee, pleurisy, cervical polyps, cancer of rectum, rectal bleeding, severe facial burn, cyst.

training programs, and had been involved in some vocational rehabilitation program within four years prior to referral.

Another pronounced difference is seen in Tables XII and XIII. As could be expected a large percentage of both groups listed mining as the major occupation in the last five years. The closed-not accepted sample included 60 miners and 26 homemakers. In the accepted sample the situation is again reversed with 76 giving "homemaker" and only 31 "miner" as their major occupation over the past five years.

A very outstanding difference is seen in Table XIV where the two groups are compared as to number of months from referral to public assistance action. The accepted cases waited an average of only 1.3 months while the closed-not accepted cases waited on an average of 8.8 months.

TABLE IX

COMPARISON OF AGE, RACE AND EDUCATION BETWEEN ACCEPTED CASES AND CLOSED-NOT ACCEPTED CASES

	Accepted	Closed-not accepted
Mean Age	37.7	42.0
Sex		
% Male	51.5	76.5
% Female	48.5	23.5
Race		
% White	.97	.96
% Negro	.03	.04
Mean Education	6.6	5.8

TABLE X

COMPARISON OF WORK HISTORIES BETWEEN ACCEPTED CASES AND CLOSED-NOT ACCEPTED CASES

	Accepted	Closed-not accepted
No. of years since last employment	3.4	3.3
Average weeks worked 12 months prior to referral		
Part-time	38.0 -N=22*	26.0 -N=11
Full-time	25.3 -N-33	36.9 -N=16

*These means are based only on those clients in the sample who were actually working. If the full sample of 200 is used to determine means the accepted cases, as a group, worked only 8 1/2 weeks and the closed-not accepted cases, as a group, only 4 1/2 weeks in the 12 months prior to referral

TABLE XI

COMPARISON OF HISTORIES AT TIME OF REFERRAL FOR ACCEPTED AND CLOSED-NOT ACCEPTED CASES REGARDING VARIOUS PUBLIC BENEFIT PROGRAMS

	Accepted		Closed-not accepted	
Receiving PA prior to recent PA opening				
Yes	10	5.7%	18	14%
No	161	94.3%	107	86%
Data not available	29		75	
In Community work and training program at referral				
Yes	9	4 %	64	35%
No	179	96 %	131	65%
Data not available	2		5	
In VR program 4 years prior to referral				
Yes	11	5.5%	20	10%
No	185	94.5%	178	90%
Data not available	0		2	

TABLE XII

MAJOR OCCUPATION LAST FIVE YEARS

CLOSED-NOT ACCEPTED CASES

Miner	60	Gen. sales	1
Homemaker	26	Sawmiller	1
Farmer	9	Machinist	1
Logger	6	Butcher	1
Construction worker	6	Night watchman	1
Kitchen helper	4	Gardner	1
Truck driver	3	Leath Mfg	1
Electrician repair	3	Motor man	1
Saladmaker	2	Auto serv. st. att.	1
Carpenter	2	Cannery worker	1
Clerk	2	Lab Assis.	1
Gen. maid	2	Land laborer	1
Auto mech.	2	Tool clerk	1
Stone worker	2	Plumber	1
Deck hand	2	Nurse Aide	1
Janitor	4	Musician	1
Lumberman	1	Roofer	1
		Waitress	1

Not available	9
None	35
Never worked	2

TABLE XIII

MAJOR OCCUPATION LAST FIVE YEARS

ACCEPTED CASES

Homemaker	76	Telephone line man	1
Miner	31	Junk dealer	1
Waitress	6	Auto salesman	1
Construction worker	4	Bus driver	1
Land laborer	4	Fork lift operator	1
Saw Mill worker	3	Auto assembler	1
Auto Serv. st. att.	3	Spray painter	1
Gen. Maid	3	Maint. man	1
Clerk	3	Hand presser	1
Lumber man	3	Brush painter	1
Logger	3	Hand sander	1
Machinist	2	Apprentice draftsman	1
Farmer	2	Material handler	1
Auto mechanic	2	Taxi driver	1
Press operator	2	Refrigeration mechanic	1
Carpenter	1	Sand blaster	1
Truck driver	1	Upholstery repairman	1
Plumber	1	Family worker (unpaid)	1
Nurses Aide	1	Dumper	1
Riveter	1	Fire works assembler	1

TABLE XIV

COMPARISON OF AVERAGE NUMBER OF MONTHS FROM REFERRAL TO DATE OF ACTION FOR ACCEPTED CASES AND CLOSED -NOT ACCEPTED CASES

	Accepted	Closed-not accepted
Average number of months	1.3	8.8

CHAPTER V

DISCUSSION

Every research or demonstration effort, if it is to be of any real value, must break new ground or yield new insights. In the present instance we were not dealing with tightly planned research. The demonstration project was set up to explore hypotheses of a very general sort. That is, it was involved with an exploratory effort that did not lend itself to tight experimental control. And, no attempt was made to institute such controls. Instead, general objectives were specified and the most logical procedures for realizing those objectives planned. Such plans and such procedures represent an ideal. It is in the comparison of the "ideal" with the "actual" that we derive the real worth of a demonstration project. To make this comparison we will examine the objectives and the outcomes and in doing so attempt to answer this question. Was the whole experience worth while?

Project Objectives

Were more effective methods developed and established

for identifying public assistance applicants and/or recipients with potential for vocational rehabilitation?

The answer to this is an unequivocal "yes". The cooperative arrangement between the Public Assistance agencies was directly responsible for most of the rehabilitated closures obtained. Prior to the project an informal relationship existed between the two agencies, but most referrals between the two agencies occurred when and where the PA agency and the VR agency were located in the same town and were familiar with each other's operations. Under the demonstration project, the VR counselor contacted each of some 75 widely scattered PA case workers in a three county area with the result that the number of "distant" referrals was markedly increased. Although the VR counselor was located in the city of Harlan County, an examination of a sample of 200 accepted cases showed that 33 of the 200 cases came from Bell County and 47 from Leslie County. This experience led the counselor to remark that "if a program of this type were put into each county or each group of counties like we have here, we would double the number of closures per year."

Did the demonstration project develop and establish inter-agency operation patterns for effective and optimum vocational

rehabilitation?

Although the project did not continue as planned, the changes which occurred led to a more effective operation than the one envisioned in the project proposal. The dual relationship between the VR counselor and the PA case worker was terminated after about one year. When the PA position was terminated in the VR office, the VR counselor was no longer limited to the 60 referral maximum dictated by PA agency policy. It was at this time that the VR counselor began to establish a liaison with all PA field workers in the entire area. The result was that many people who might never have been picked up by the Bureau of Rehabilitation Services because of their distance from the facility were referred, accepted, and rehabilitated.

The project propasal outlined procedures for monthly administrative conferences and formal weekly case conferences. It was found, as the project progressed that such conferences would constitute an encumbrance to the on-going program since it would involve more time than was available after the program became operative. Also, there were not sufficient practical problems to warrant the time of several people. As the project developed, the VR counselor and the PA case workers, keeping

within the policies of their respective agencies effected a smooth working relationship which involved far more exchange of ideas and problems than would have occured in formal meetings.

The VR counselor recently remarked to one of the writers that "there are at least three or four PA case workers in my office every day." There is no record of any difficulty concerning policy decisions on the part of either participating agency. It is felt that far more has been gained by this close individual, interpersonal, and informal arrangement than would be gained by numerous "summit" conferences between groups. The problems to be solved were apparent and procedures for attacking the problems within each agency were so specific as to preclude the necessity for anything more than fulfilling the obligations of VR or PA to the individual client.

Did the demonstration project develop and provide adequate evaluation and diagnostic services to disabled public assistance clients?

There is no record of any instance when the necessary diagnostic services were not available, or made available. In some cases clients were sent to distant centers such as the

University of Kentucky Medical Center. Others were served by a well staffed and well equipped facility in Harlan, The Harlan Appalachian Regional Hospital.

The GATB was given to each client going to vocational school and psychological examinations were provided for some of the clients going to college.

Another frequently used facility was the Rehabilitation Project Center located at the Harlan Appalachian Regional Hospital. This facility made its full staff available to the demonstration project. The staff included a director, a vocational rehabilitation counselor, two consulting psychologists from Lexington, Kentucky, a social worker, a physical therapy unit, and a physiatrist from Knoxville, Tennessee. A number of extensive evaluations were provided by this facility. The same facility, in cooperation with the Harlan Appalachian Regional Hospital, also arranged for physical therapy and training in the use of artificial appliances.

Several clients were sent to Goodwill Industries, a sheltered workshop and evaluation center in Cincinnati, Ohio. This sheltered workshop offered extensive evaluation of special, severly handicapped clients. Housing facilities were available through the workshop when it was necessary for the client to remain for

several days or weeks.

The above discussion shows that other specific goals were adequately achieved. These goals and objectives were (1) the identification and utilization of medical and other services essential to the vocational rehabilitation of public assistance clients, (2) the identification of types of facilities and settings needed to provide the most appropriate services, (3) the demonstration of the effectiveness of joint agency planning and coordination, and (4) the demonstration of an effective cooperative approach to meeting vocational rehabilitation problems of dependent disabled adults in a severely depressed economic areas of Kentucky.

As was mentioned above, the only diviation from the ideal plan,for a cooperative effort, as stated in the original proposal and outlined earlier in this paper, was the elimination of some of the more formal administrative conferences and the development of a more informal relationship between field workers. Any services,authorized by regulations of either agency, were provided as needed without question. In short, the objectives of the demonstration project were already built into the on-going programs of the two agencies, and the services specified in the demonstration project were already being provided. The unique contribution of

the demonstation was not the identification of new services so much as it was the creation of a closer bond between workers in the field so that more clients were brought within the scope of a combined, and more comprehensive, service.

Did the demonstration project determine the specific factors to be considered in practical planning for the rehabilitation of a dependent person living in an area of low economic potential, lacking comprehensive rehabilitation facilities, and having the characteristics of rural isolation, and other such characteristics as are found in Appalachia?

This was, perhaps, the most important objective realized by the demonstration project. It takes its importance from the fact that it focused attention on numerous factors which, although well known to all people working in the area, are often ignored or "taken in stride," with little consideration being given to possible solutions. This is not to imply that the service workers in the region are indifferent to its problems. On the contrary, they are much concerned, but many of these problems, especially those so closely tied to cultural and subcultural attitudes, are so formidable and so well ingrained as to defy resolution within the framework of existing funds and facilities, and personnel.

Vocational rehabilitation has carried out an effective program for years in spite of the fact that the program was being conducted in an environment which was essentially hostile and resistant to even the "idea" of rehabilitation. However, the need for their services has been so great as to preclude the possiblity of doing more than meeting the press of every day demands.

The demonstration project helped in two ways to bring core problems to the surface. First it resulted the institution of a referral system which reached far beyond the land-locked community of Harlan proper to pluck from hidden hollows the clients who epitomized the basic obstructions to a normal rehabilitative process in Appalachia. And second, it provided the VR counselor with a wealth of information and experience. His close working association with some 75 front line PA case workers served to enhance his own knowledge of the area, the people, and the unique characteristics of both.

The following factors, highlighted by this demonstration project, should be considered in practical planning for the rehabilitation of public assistance clients in Appalachia:

1. A large majority of the clients referred for services will be homemakers or persons without any job prospects in

the area. Their primary need at the time of referral will be for physical restoration. When physical restoration has been effected the homemakers will remain homemakers and unemployed persons will remain unemployed if they remain in the area. To counteract this condition we would suggest that future plans for rehabilitation include provisions for job placement specialists. These specialists would not be stationed in the immediate area of the project. Instead, they would be stationed in large cities to act as a liaison between VR counselors and industry. Another possiblity would be a cooperative project between the Bureau of Rehabilitation Services, the Division of Public Assistance and the Employment Service. The latter would provide personnel in high employment areas to work directly with the demonstration project.

2. Many clients referred by PA will decline services. A majority of the cases which were closed-not accepted were closed because they declined services and gave no reason for doing so. The real reason, almost never admitted by the client, is that he is afraid of financial loss. Unfortunately

his or her fear is realistic. Many jobs available in the areas do not pay as much for a full-time job as the client can receive through public assistance. Also, public assistance, in addition to such fringe benefits as free medical services, offers more certainty than a regular job. Public assistance recipients do not need to worry about being laid off, transferred, or fired. Even when a job can offer more money, the recipient may cling to his public assistance. In a county where 17,000 employable people are unemployed, it is difficult to argue with the recipients desire to remain on public assistance. It should be recognized that most of these people are not life-time recipients. Many of them have crawled on their knees in coal mines for as long as twenty years only to crawl out one day and be told that they and all their neighbors no longer have jobs; the mine is closed. Since that day there have been no real opportunities in Appalachia. It is only natural that a man living in such an environment would accept the philosophy that "A bird in hand is worth two in the bush", especially when he hasn't so much as seen a bird around the bush for the last ten years.

These conditions must be considered in practical planning for rehabilitation, but there is little the rehabilitation counselor can do to combat them. As evidenced by case histories in Appendix B, not all clients choose to remain recipients. But, until more jobs are made available by the influx of industry, optimism must be tempered with realism in planning for the rehabilitation of public assistance recipients in Appalachia.

3. There is a tendency for older, rather than younger family members to be referred for rehabilitation services. This is often due to the fact that the older family member has the pressing or the more obvious need. Unfortunately, however, he usually has the least promising potential. In many families, younger members have suffered illnesses which would entitle them to rehabilitation services. Also, deprived living conditions and isolation have often been so severe as to retard intellectual development, with the result that many if not all the family members would qualify for services through special programs for the mentally handicapped.

We would suggest that future planning provide for more intensive concentration on whole family units rather than on the most severe or obvious handicap of individual members. We would further suggest that more systematic use be made of psychological testing in order to uncover problems of mental retardation or emotional illness.

4. Emphasis in a program tends to be on physical disabilities to the exclusion of mental or emotional disabilities. It is this category, however, that offers the greatest possibility for rehabilitation as well as the greatest threat to future expansion of welfare rolls. We would suggest emphasis on this category by the increased use of psychological screening, vocational testing, and workshop evaluation. When the limit on payments for on-the-job training payments was $60.00 per month it was difficult to place clients in such situations. However, since the limit has been more than doubled for training in skilled and semi-skilled jobs, this method for placing young handicapped clients has significant potential.

5. While most of American is "success oriented", Appalachia, especially for its welfare subculture, is "failure oriented". The result is that motivation is often lacking, even in the

young person. For this reason it is important that future planning make provision for more intensive counseling, including individual and group psychotherapy sessions to be provided by professional mental health practitioners. Resistance to change becomes an integral characteristic of a people so long deprived and so surrounded by poverty. It will take more than a brief initial interview to convince many of the clients that they have the capacity to take a productive role in society.

6. A team composed of rehabilitation services and public assistance services offers the most promise as a tool to break the cycle of poverty in Appalachia. Not only do they have well-developed facilities, personnel, and procedures, they also have basic philosophies which compliment each other and assure the most equitable and effective distribution of funds for the relief of suffering and the development of individual potential. There are two basic categories of people among the poor, those who are hopeless, helpless, and devoid of potential for self-help, and those who have the capacity to rise above the circumstances

which surround them. Unfortunately the two groups are so intermingled it is difficult to separate them. If no effort is made to separate them, those with potential for development tend to become more hopeless and eventually helpless for all practical purposes. Since the basic mission of the public assistance worker is to help the helpless, he becomes oriented to seeking out the helpless. That is, he becomes reaction-sensitive to helplessness, and at the same time, becomes less sensitive to the characteristics of his referrals which indicate potential for self-help with the result that many such referrals are unknowingly "sentenced" to life on welfare. The rehabilitation counselor, on the other hand, becomes reaction-sensitive to hopefulness. He is looking for some nucleus of strength on which to build. In time he may become insensitive to indications that there is no such nucleus with the result that he will waste time and money on impossible clients. As this present project progressed the significance of these differing attitudes and philosophies became apparent, as PA case worker discovered more "potential" among his case load and the VR counselor

recognized more "hopelessness" in his and made recommendations that some referrals be placed on public assistance. As these two agencies continue to maintain a close working relationship they will develop a combined experience which will assure each client an intelligent and equitable decision as to whether he should take a place among the helpless or or step into the mainstream of life and pursue the road to recovery and rehabilitation.

Although the humanitarian contributions justify the effort and funds expended on this demonstration project, the question of practicality must be answered. If the cost is prohibitive, then continuation of the effort will depend solely on the availability of funds for charity. For this reason, we have asked the following questions and attempted to show that this was not a charitable contribution but a sound investment in Appalachia, America.

What was the average cost to the Bureau of Rehabilitation Services for each client closed-rehabilitated?

To approximate this cost 94 cases from the 200 sample accepted cases were examined. It was found that direct cost to the Bureau of Rehabilitation totaled only 33,396.00 and averaged only $355.00 per client including all services rendered. One client received as much

as #3,572.00 while 26 received less than $100.00 in services.

Was it a financially sound investment?

To explore this question we subtracted the average, monthly PA benefits being received by the 94 closures at the time of closure from the average on acceptance. On acceptance monthly PA payments to the group of 94 clients totaled $2,987.00. On closure monthly PA payments totaled only $1,968.00. Payments had been reduced by $1,019.00 per month. If there were no other considerations, this reduction in monthly payments alone would cancel the cost of rehabilitation in less than three years. However, another source of funds which flow back into state and federal coffers is the tax on earnings. On acceptance, weekly income from earnings for the sample of 94 closures totaled exactly zero. But on closure, 21 of the 94 clients had full-time jobs paying a total of $1,342.00 per week or an average of $63.90 per week from which social security and other taxes will be deducted. This, of course, represents starting salaries, and the eventual total could be significantly higher. But most important, this is more than a starting salary, it is a new start; a new start by people who were, or were likely to become, recipients of the public dole.

CHAPTER VI

SUMMARY

This was a selected three year demonstration project designed to develop and carry out a concentrated program of services for disabled applicants for and recipients of public assistance. The project was sponsored by the Kentucky Bureau of Rehabilitation Services with the cooperation of the Kentucky Division of Public Assistance and other agencies providing services essential to the rehabilitation process.

Project Objectives

The general purpose of the project was to develop and improve administrative methods and professional techniques in such a way as to increase the number of disabled applicants and recipients of public assistance who can earn a livlihood as the result of vocational rehabilitation.

The following were more specific objectives:

1. To develop and establish effective methods for identifying public assistance applicants and/or recipients with potential for vocational rehabilitation.
2. To develop and establish interagency operational patterns for effective and optimum vocational rehabilitation.
3. To develop and provide adequate evaluation and diagnostic services to disabled public assistance clients.
4. To identify and utilize those medical and other services

essential to the vocational rehabilitation of public assistance clients, whether most effectively provided by the single agency or through coordinated provision of services between the vocational rehabilitation agency and the public assistance agency.

5. To identify the type facilities and settings required to provide the most appropriate services needed for rehabilitation of public assistance clients.

6. To demonstrate the effectiveness of joint agency planning and coordination of services.

7. To demonstrate an effective cooperative approach to meeting vocational rehabilitation problems of dependent disabled adults in a severely depressed economic area of Kentucky.

8. To determine through a demonstration project the specific factors to be considered in practical planning for the rehabilitation of a dependent person living in an area of low economic potential, lacking comprehensive rehabilitation facilities, and having the characteristics of rural isolation, and other such characteristics as are found typical in Appalachia.

9. To compile and analyze data on clients served by the project as to kinds and costs of services, project methods, and outcomes that may indicate new approaches to the provision of improved service to the disabled public assistance referrals.

Staff

The staff consisted of a project director, a counselor coordinator and supporting secretarial staff. During the first year the rehabilitation staff also included a public assistance case worker. However, this arrangement was eventually terminated, and the VR counselor established liaison with individual PA case workers throughout the area served by the project.

Methodology

The rehabilitation counselor made contact with PA workers in the area served by the project and accepted referrals. When the project was expanded to cover three counties, the VR counselor was maintaining a liaison with approximately 75 PA case workers.

Psychological services were provided by consulting psychologists from Lexington, Kentucky. Medical Services were obtained on a fee-for-services basis from local physicians, and where needed, from other distant facilities such as the University of Kentucky Medical Center in

Lexington, Kentucky. Extensive evaluations were also obtained from the Rehabilitation Project Center at the Harlan Appalachian Regional Hospital in Harlan, Kentucky, and from Goodwill Industries, a sheltered workshop, in Cincinnati, Ohio.

Cases Served

1. All public Assistance referrals.
2. Priority was extended to new applicants with disabilities.
3. Former disabled Public Assistance recipients.
4. Disabled persons likely to become in need of assistance.
5. Public Assistance clients on assistance roll for not over 6 months.

Clients not normally served

1. A person with rapidly progressive terminal illness
2. Persons confined with long duration in a nursing home
3. Persons with such severe disability, medically demonstrated that Rehabilitation would be ineffective.
4. Persons that had a combination of disabilities such that rehabilitation potential was lacking.

Services provided by the Bureau of Rehabilitation Services

1. Vocational rehabilitation counseling
2. Medical, psychiatric, vocational, and psychological evaluation.

3. Physical restoration services, including hospitalization, surgery, medical treatment, psychotherapy, physical therapy, occupational therapy, and artificial appliances.
4. Training -- vocational, pre-vocational, and personal adjustment.
5. Transportation
6. Maintenance when not covered by the Public Assistance Grant.
7. Occupational tools, equipment, initial stocks, and books and supplies for individual training programs.
8. Placement in suitable employment.
9. Follow-up for the purpose of determining the suitability of the job and the individual's adjustment to employment.

Service provided by the Division of Public Assistance

1. Social casework services related to vocational objectives.
2. Financial assistance to eligible persons.
3. Medical treatment and care for eligible persons.
4. For purchase of service from other public agencies when essential to the project.
5. Medication for certain chronic conditions.
6. Public Assistance authorized payment for acute intercurrent illness for cases receiving vocational rehabilitation if they

meet eligibility requirements of rehabilitation.

Identification of Clients

All disabled applicants or family members newly interviewed by Public Assistance Staff, fitting project classifications and living in the project area were referred to the project. Cases already on the Public Assistance Agency Rolls and fitting project classifications were referred for screening by the project staff for acceptance or rejection. All clients as qualified above were registered as referrals and assigned to a project counselor and caseworker.

At least one interview with the client by the counselor and caseworker was held before a decision was made for further evaluation and directions it should take. Additional evaluation was done before a decision was made to accept or reject the case for service within the project.

Setting

The project was conducted in one of the most severely depressed regions in the United States. It extended over Harlan, Bell, and Leslie counties in Kentucky with office facilities located in Harlan, Kentucky. Both the terrain and the economy are essentially hostile to the rehabilitative process. Mountains, narrow, curved roads, and the wide scatter of clients constituted an obstacle to personal contact

between client and counselor. In Harlan County, alone, there are between 17,000 and 18,000 employable unemployed. Home conditions of the average PA referral are very poor. The homes are commonly four rooms with no indoor plumbing, and they are often located on impassable roads in isolated hollows throughout the region. Much of the population has been on some type of welfare for many years, and a general attitude of despair and defeat pervades the region.

Results

During the three year period of the demonstration project 322 of 797 referrals were accepted. At the close of the project 169 of the accepted cases had been rehabilitated and 134 were still in process.

A representative sample of 200 accepted and 200 closed-not accepted cases was drawn and comparisions made between the two groups. The following results seemed worthy of note:

1. Major disorders in the closed-not accepted sample tended to be "vague" complaints. Such vague complaints were much less frequent in the accepted sample.

2. Far more men than women appeared in the closed-not accepted sample. The situation was reversed for the accepted sample.

3. Level of education for both groups was very low but was slightly higher in the accepted sample.
4. The mean number of weeks worked in the past twelve weeks was only 8 1/2 for the accepted sample and 4 1/2 for the closed-not accepted sample.
5. A considerably greater percentage of the closed-not accepted sample was receiving public assistance prior to PA opening, was involved in community work or training programs and had been involved in some VR program within four years prior to referral.
6. Seventy-six percent of the accepted cases gave "homemaker" as their occupation.
7. Sixty percent of the closed-not accepted cases were, or had been, miners.
8. Only 94 of the representative sample of 200 accepted cases had been closed and rehabilitated at the close of the project.
9. The average cost to the Bureau of Rehabilitation Services for the 94 cases was $355.00.
10. On acceptance the 94 clients were receiving a total of $2,987.00 monthly benefits. On closure this total had dropped to $1,968.00, a difference of $1,019.00.

11. Total weekly income for the group at acceptance was zero, but at closure 22 were employed full-time making an average of $63.90 per weeks.

12. Of the total of 94 rehabilitated, 56 were homemakers.

Discussion

Both the general and the specific objectives of the project were realized. The following observations are considered to be important in planning for rehabilitation in areas similar to the area covered by this project:

1. A large majority of the clients referred for services will be homemakers or persons without any job prospects in the area. Their primary need at the time of referral will be for physical restoration.

2. Many clients referred by PA will decline service without giving a reason for doing so. The reason, though seldom admitted, is that they are afraid of financial loss. Under the present economic circumstances in the area this is a realistic fear.

3. There is a tendency for older family members with serious physical problems to be referred, while younger members with more potential for rehabilitation are by-passed. More

intensive concentration on the entire family unit is recommended. Also, systematic use of psychological testing should be made in order to uncover problems of mental retardation and emotional illness.

4. Emphasis should be shifted to include more mildly retarded referrals who have more potential for rehabilitation than the severely physically disabled.

5. While most of America is "success" oriented, Appalachia is "failure" oriented. This results in poor motivation and general despair which might be alleviated by group or individual psychotherapy.

6. A team composed of rehabilitation services and public assistance services offers great promise as a tool to break the cycle of poverty in Appalachia.

APPENDIX A

TABLE 1

POPULATION DATA FOR HARLAN AND HARLAN COUNTY WITH COMPARISONS TO THE KENTUCKY RATE OF CHANGE, 1910-60

Year	Harlan Population	Harlan %Change	Harlan County Population	Harlan County %Change	Kentucky %Change
1910	657		10,566		6.6
1920	2,647	302.9	31,546	189.6	5.5
1930	4,327	63.5	64,557	104.6	8.2
1940	5,122	18.4	75,275	16.6	8.8
1950	4,786	- 6.6	71,751	- 4.7	3.5
1960	4,177	-12.7	51,107	-28.8	3.2

Source: U.S. Bureau of the Census, U.S. Census of Population: 1960, "General Population Characteristics," Kentucky

TABLE 2

CURRENT POTENTIAL LABOR SUPPLY, HARLAN COUNTY, KENTUCKY AREA, NOVEMBER, 1966

County	Current Labor Potential Total	Male	Female
Area Total	17,850 - 18,850	9,300 - 9,800	8,550 - 9,050
Harlan	5,800- 6,000	3,100 - 3,200	2,700-2,800
Bell	3,750- 3,950	1,700 - 1,800	2,050-2,150
Leslie	1,600- 1,800	1,000 - 1,100	600- 700
Letcher	3,000- 3,200	1,500 - 1,600	1,500-1,600
Perry	3,700- 3,900	2,000 - 2,100	1,700-1,800

Source: Fantus Area Research, Inc.

TABLE 3

HARLAN AREA AGRICULTURAL EMPLOYMENT
FALL, 1959

	Family Workers	Hired Workers*	Total
Area Total:	1,514	31	1,545
Harlan	267	15	828
Bell	215	15	230
Leslie	311	0	311
Letcher	341	0	341
Perry	380	1	381

*Regular Workers (Employed 150 days or more).

Source: U.S. Bureau of the Census, U.S. Census of Agriculture: 1959, Kentucky.

TABLE 4

HARLAN AREA MANUFACTURING EMPLOYMENT
SEPTEMBER, 1966

	Area Total	Harlan	Bell	Leslie	Letcher	Perry
Total manufacturing	2,231	498	1,357	110	138	128
Food and kindred products	615	298	183	0	53	81
Tobacco	1	0	1	0	0	0
Clothing, textile and leather	416	0	416	0	0	0
Lumber and furniture	722	173	335	110	69	35
Print., publ. and paper	69	21	34	0	2	12
Chemicals, coal, petroleum and rubber	63	0	63	0	0	0
Stone, clay and glass	42	0	28	0	14	0
Primary metals	0	0	0	0	0	0
Machinery, metal products and equipment	297	0	297	0	0	0
Other	6	6	0	0	0	0

Source: Kentucky Department of Economic Security (Number of Workers in Manufacturing Industries Covered by Kentucky Unemployment Insurance Law Classified by Industry and County).

TABLE 5

HARLAN AREA COVERED EMPLOYMENT,
ALL INDUSTRIES, SEPTEMBER, 1966

	Area Total	Harlan	Bell	Leslie	Letcher	Perry
Mining and Quarrying	7,926	2,771	632	484	2,433	1,606
Contract Construction	538	181	150	0	85	122
Manufacturing	2,231	498	1,357	110	138	128
Transportation, Communication and Utilities	977	202	418	15	78	264
Wholesale and Retail Trade	3,720	1,168	1,056	68	542	886
Finance, Ins. and Real Estate	496	130	189	8	49	120
Services	1,359	459	350	27	186	337
Other	9	6	3	0	0	0
Total	17,256	5,415	4,155	712	3,511	3,463

Source: Kentucky Department of Economic Security (Number of Workers Covered by Kentucky Unemployment Insurance Law Classified by Industry and County).

The following list of manufacturing firms indicates something of the lack of demand for labor in Harlan, Kentucky

TABLE 6

HARLAN MANUFACTURING FIRMS WITH PRODUCTS AND EMPLOYMENT, 1967

Firm	Product	Employment Male	Female	Total
Chappell's Dairy, Inc.	Milk products	85	5	90
Coco-Cola Bottling Works	Soft drinks			20
Durham Printing & Offset Company	Job printing	3	0	3
Enterprise Publishing Co., Inc.	Newspaper, job printing	19	3	22
Gaines Lumber Co., Inc	Rough lumber	30	0	30
Harvey Green	Lumber	6	1	7
Harlan Farmers Supply Co., Inc.	Feed	10	1	11
Harlan Ice & Refrigerating Co.	Ice Cream	14	0	14
Harlan Ready Mix Concrete	Concrete	3	0	3
Harlan Wood Products Corp.	Dimension lumber, truck flooring	30	2	32
M & A Manufacturing Co., Inc.	Caskets	2	2	4
Modern Bakery, Inc.	Bakery products	264	62	326
Muncy Printing Co.	Job printing	2	1	3
Smith Beverage Co.	Carbonated beverages	7	1	8
Wardrup Provision Co., Inc.	Meat packing	48	5	53

APPENDIX B

Case Histories:

Case No. 1: Mr. E, a 29 year old white married male with 5 small children, had severe varicose veins of the left leg, which resulted in thrombophlebitis of the left leg and multiple lung infractions. He became totally incapacitated six months prior to his referral to the P.A. project. At the time of referral he was receiving $164.00 per month Aid for Dependent Children (maximum benefits). His past work experience consisted of a single job as a salesman-driver for a local soft drink company. Mr. E had an 8th grade education. The P.A. Project provided for his surgery and Division of Public Assistance his hospitalization. This enabled the client to return to his former job as a salesman-driver with an income of $100.00 per week.

Case No. 2: Mr. C, a 32 year old white married male with six small children, suffered from a cataract on his left eye which permitted only light perception in this eye. The examining opthamologist recommended hospitalization and surgery to restore the vision to his left eye. The client, on the "Happy Pappy" Work Experience and Training Program of the Division of Public Assistance, was receiving $246.00 per month. The needed surgery was provided by the Bureau of Rehabilitation

Services, with hospitalization provided by the Division of Public Assistance. The Client recovered from surgery with his eyesight restored. He was then able to obtain employment as a mining machine operator at a local coal mine with an income of $150.00 per week.

Case No. 3: Mr. B, a 36 year old white married male with five dependent children, suffered from both a ruptured disc and a large tumor of the left eye. Because of severe back pains, and the danger of losing eyesight in the left eye, the examining specialists recommended hospitalization and surgery for both conditions. The client was referred to the P.A. Project immediately upon his application for Public Assistance benefits. He was approved for Aid for Dependent Children and received $164.00 per month until he could obtain Social Security benefits.

This agency provided for surgery; hospitalization was provided by the Division of Public Assistance. The client returned to his former occupation as a truck driver with a salary of $60.00 per week. His Social Security disability benefits have since been discontinued.

Case No. 4: Mr. S, a 38 year old white, married male with seven children had chronic osteomyelitis of the left tibia and fibula. He also suffered from a deformed foot of the same

leg caused by an earlier case of polio. An orthopedic specialists recommended a B/K amputation and a new B/K prosthesis. The client's only work experience consisted of taxi driving and he was without a formal education. He was receiving $160.00 per month Aid for Dependent Children from the Division of Public Assistance at the time of his referral. The P.A. Project provided the client with surgery, an new prosthesis, and gait training in the use of his prosthesis. Hospitalization was provided by the Division of Public Assistance. The client was then fully evaluated by a team of Psychologists who recommended that a taxi cab be purchased for the client's use. The client is now employed operating his own taxi earning a salary of $80.00 per week.

Case No. 5: Miss C, a 20 year old white female and unwed mother of one child, had a mild case of epilepsy and neuphritis. She was receiving $50.00 per month Aid for Dependent Children from the Division of Public Assistance at the time of her referral. She lacked one credit completing high school and wanted to train to become a licensed practical nurse which required a high school diploma. The Public Assistance Project provided for the required high school credit through a correspondence course. She then enrolled in a one year practical nursing course

with tuition, room, and board provided by the Public Assistance Project. She is now employed as a general duty nurse in a local hospital with earnings of $63.00 per week.

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APPENDIX C

COMMONWEALTH OF KENTUCKY

Department of Economic Security

DIVISION OF PUBLIC ASSISTANCE

Frankfort, Kentucky

July 2, 1964 BULLETIN - 134

TO: Field Staff: Bell, Harlan, Johnson, Lawrence and Martin Counties Only

SUBJECT: Demonstration Project: Vocational Rehabilitation of Public Assistance Clients

The Division of Public Assistance and the Bureau of Rehabilitation Services have initiated a demonstration project in the above listed counties. Designed to extend through three years, the project is to develop and improve administrative methods and professional techniques for enabling increasing numbers of disabled and incapacitated applicants for and recipients of public assistance to benefit from rehabilitation services. The project will involve full utilization of the services of both agencies and other agency services as needed.

General Information

The regular policies of both agencies will be applied throughout the project in addition to new policies and procedures that will apply only to project clients. The project staff of each agency will share the same office and take a team approach in all project activity to make for mutual understanding, and coordinated services.

I. Staff

A. Bureau of Rehabilitation Services. This staff will include a project director, supervisor, counselor, and clerical workers. The director is responsible for administrative aspects of the project and the supervisor is responsible for service aspects of the project administered by the counselor.

B. Division of Public Assistance. This staff includes the social service supervisor responsible for districts 25 and 32, and service workers and clerical workers assigned as full-time project staff. The social service supervisor is administratively responsible for the service and clerical workers assigned to the project, and supervising their activity.

Project Cases

I. Caseloads and Case Records

A. Maximum. The caseload of the service worker shall not exceed 60 project cases regardless of category. Companion cases are not

included in the case count. The service worker provides casework services to all clients accepted in the project regardless of whether they receive assistance payments, and these clients are included in the case count.

B. Case Records. The service worker maintains a case record for project clients who receive public assistance in accordance with the usual public assistance requirements. Case information, of a service nature, will be exchanged with the counselor through the use of carbon copies of case record entries.

The case record of project clients who are not recipients of public assistance will not receive a case number. The case folder should be marked with the case name and contain case recording and all other information pertinent to the case: e.g., medical information.

C. Confidentiality. Information pertaining to all project clients is treated responsibly and confidentially, and used only in relation to administering project services.

II. Clients. Any disabled or incapacitated resident of the project counties may be included as a project client.

A. Priority. Priority for inclusion of individuals as project clients has been established.

1. First Priority. Incapacitated applicants for AFDC, and recipients of AFDC for three (3) years or less.

2. Second Priority. Disabled applicants for AABD, and disabled recipients of AABD for two (2) years or less.

3. Third Priority. Applicants for any category of assistance who are denied and are disabled or incapacitated.

4. Fourth Priority. Disabled or incapacitated persons likely to become in need of assistance.

5. Fifth Priority. Former recipients of assistance who are disabled or incapacitated.

6. Sixth Priority. All other disabled or incapacitated recipients of assistance.

B. Exceptions. Individuals who will not normally be served in the project will include:

1. Those with rapidly progressive terminal illness.

2. Those with confinement of expected long duration in a nursing home even if provided rehabilitation services.

3. Those with such severity of disability medically demonstrated that rehabilitative measures will be ineffective.

4. Those whose combination of disabilities is such that rehabilitation potential is lacking.

The decision for exclusion is primarily that of the rehabilitation staff.

III. Identification and Referral of Clients. All Public Assistance workers are to be alert to the possibility of any client, or member of the household, in their caseload as being eligible for referral for inclusion as a project case.

A. Identification. Non-project workers will screen their caseload according to all situations given under II, A, above and need not be concerned with the priorities; and, when in doubt as to whether their client will be excluded under II, B, will consider the referral. Pending, active and denied cases are considered for referral.

B. Referral. The supervisor is given the case record of client referred for project services, by the referring worker, and the supervisor gives the record to the project worker for a decision. The project worker notifies the supervisor of the decision; returns the case record if the referral is not accepted, or retains the case record and assumes full responsibility for it when the referral is accepted. He makes the proper entry on the PA-116, secures the Field Worker Card (PA-31) and makes the necessary entries on Forms PA-59 and PA-59.2.

IV. Decision on Referrals and Services

A. Screening Referrals. The project service worker will request the rehabilitation project supervisor to review the record or assign a counselor to review the record so an early decision can be made. The rehabilitation staff is responsible for the decision on all referrals, with assistance of the service worker.

Evaluation, in addition to case record information, will be done before a decision is made to accept or reject a referral for service within the project. At least one interview with the client by the counselor and service worker will be held before a decision is made for further evaluation and directions it should take.

The project worker makes an entry in the case record, which includes date and reason, of all cases not accepted into the project.

B. Services. The service worker is responsible for social service for all clients accepted within the project, whether they receive public assistance or not in accordance with those given in Manual Chapter 7000 and as needed to further the rehabilitation objectives for the client. One important service is preparing the client to accept and follow through the rehabilitation plan. He may deter-

mine or terminate "defined service" designation of the case in the same manner as other workers, and initiate "suitable home" proceedings, etc.

Technical Eligibility

Basically, eligibility requirements for project clients will follow those of the category which the client receives. Exceptions are given herein.

I. Resources and Need

A. Funds paid by Bureau of Rehabilitation Services in behalf of a recipient for maintenance, occupational tools, equipment, initial stocks, will not be considered as available to the recipient. Also, tools, equipment, etc. secured for the client will not be deemed personal property within Public Assistance definitions.

B. Grants will continue to otherwise eligible project clients during a period of supervised training or retraining, treatment or other planned rehabilitation programs begun after restoration of physical or mental incapacity or disability when considered part of the total rehabilitation process.

C. Ineligibility does not always exist as a result of a client's receiving regular employment or becoming self-employed in all project cases. When the worker and supervisor agree that discontinuance of a grant immediately when employment is secured will produce conditions that will interfere with successful job performance, the grant will be continued for 30 days. The amount of payment for the 30 days will be computed by usual standards applicable to the category received; counting the salary to be received as income or anticipated income if self-employed; deducting the $11.00 for expenses connected with earning an income in AFDC and disability in AABD, and disregarding income as provided in eligibility based on blindness or age.

Staff Conferences

Workers and counselors are expected to discuss cases carried cooperatively as frequently as necessary. Conferences to discuss operating procedures as well as case problems are also held. The project supervisor will schedule all conferences, will include appropriate project staff and appropriate consultants, and be responsible for all necessary conferences reporting.

I. Regular Conferences

A. Weekly case conferences will be held to deal with case planning and problems. Any worker or counselor wanting to include a case for discussion will relate his need to the project supervisor and request it be scheduled. The worker or counselor should also indicate whether he thinks there is need for psychiatric, psychological, medical, etc. consultation on the case. Case conferences

may be called more frequently than weekly if the project worker and project director sees the need for them.

B. Administrative monthly staff conferences will include supervisory personnel responsible to the project from both agencies, as well as all workers and counselors assigned to the project. Conference content will deal with agency policy, procedures, and relationships; community planning; developing community resources; project expectations; and other administrative and operational aspects. Case discussion should be at a minimum if at all during these conferences.

Coding of Time

This project service worker will maintain DES-169 in the usual manner, coding time to the 960 series. Time will be identified by category of assistance with 961 for AABD due to age, 962 for all time devoted to AFDC cases, 963 for AABD due to blindness and 964 for AABD due to disability. If cases are carried in priorities 4 and 5, time devoted to these groups will be coded to the category for which the client would qualify if he became in need or for which he was formerly eligible.

S/ Aaron Paul

Aaron Paul
Director

APPENDIX D

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B. Administrative monthly staff conferences will include supervisory personnel responsible to the project from both agencies, as well as all workers and counselors assigned to the project. Conference content will deal with agency policy, procedures, and relationships; community planning; developing community resources; project expectations; and other administrative and operational aspects. Case discussion should be at a minimum if at all during these conferences.

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S/ Aaron Paul

Aaron Paul
Director

APPENDIX D

COOPERATIVE AGREEMENT FOR DEMONSTRATION PROJECT FOR VOCATIONAL REHABILITATION OF DISABLED PUBLIC ASSISTANCE CLIENTS BETWEEN BUREAU OF REHABILITATION SERVICES THE KENTUCKY DEPARTMENT OF EDUCATION AND DIVISION OF PUBLIC ASSISTANCE THE KENTUCKY DEPARTMENT OF ECONOMIC SECURITY

A high proportion of applicants and recipients of public assistance in Kentucky are disabled and are in need of rehabilitation services. The establishment of such persons in remunerative employment and the achievement of full or partial self-support are matters of concern to the parties to the agreement. This agreement is being entered into for the purpose of developing a joint demonstration project for the vocational rehabilitation of disabled and incapacitated public assistance clients administered through the Bureau of Rehabilitation Services of the Department of Education and the Division of Public Assistance of the Department of Economic Security. This agreement sets forth the objectives of the project and the responsibilities of both agencies for direction and coordination, services, staffing, financing, operating procedures, exchange of information, confidentiality, and evaluation of the project.

I. Project Objectives

The general and specific project objectives have been enumerated by the project agencies in separate project statements. In project proposal each agency is in accord with the objectives as stated. Both agencies will inform their total staff of the project objectives, and purpose and interpret aspects of the project operations as can be carried over into general administration and operations.

II. Services to be Provided

Each applicant and recipient accepted for project services will receive a thorough evaluation of medical, social, and vocational factors to determine rehabilitation potential. This will involve joint assessment by the Social Caseworker and the Vocational Rehabilitation Counselor and will include, as necessary, medical consultation, psychiatric consultation, psychological consultation, and the use of special facilities available.

Services during and subsequent to evaluation will be planned and provided within the scope of social services available through the Division of Public Assistance and Vocational Rehabilitation services available through the Brueau of Rehabilitation Services. Project services will reflect a high level of social casework and vocational rehabilitation counseling. All of these services will be directed toward achievement of vocational goals and maximum functioning of families and individuals within family groups.

Throughout project operation, Vocational Rehabilitation Services will be the primary responsibility of the Vocational Rehabilitation Agency while financial assistance and other services compatible with the administration of the Public Assistance Programs will be the responsibility of the Public Assistance Agency.

The Bureau of Rehabilitation Services will provide the following services for the purpose of preparing disabled persons for remunerative employment:

1. Vocational rehabilitation counseling

2. Medical, psychiatric, vocational, and psychological evaluation.
3. Physical restoration services, including hospitalization, surgery, medical treatment, psychotherapy, physical therapy, occupational therapy, and artificial appliances.
4. Training -- vocational, pre-vocational, and personal adjustment.
5. Transportation.
6. Maintenance when not covered by the Public Assistance Grant.
7. Occupational tools, equipment, initial stocks, and books and supplies for individual training programs.
8. Placement in suitable employment.
9. Follow-up for the purpose of determining the suitability of the job and the individual's adjustment to employment.

The Division of Public Assistance will provide:

1. Social casework services related to vocational objectives.
2. Financial assistance to eligible persons.
3. Medical treatment and care for eligible persons.
4. For purchase of service from other public agencies when essential to the project.

Medical services authorized by the Bureau of Rehabilitation Services included medical evaluation for rehabilitation purposes and medical and surgical treatment when it was an essential part of a rehabilitation plan, when the disability is static (or slowly progressive), and when the treatment can be expected to correct or substantially reduce the disability within a reasonable period of time. In

accordance with policies of the Division of Public Assistance, medication for certain chronic conditions may be authorized. The Division of Public Assistance will authorize payment for acute intercurrent illnesses for clients receiving vocational rehabilitation if they meet eligibility requirements governing medical services from that agency. If not, the Bureau of Rehabilitation Services will be responsible in accordance with its policies related to intercurrent illness.

The total services of the two agencies will be available to project clients. Representatives of each agency will retain responsibility for decision as to the particular services to be provided in the individual case in the light of the project purposes, agency policy, and joint consideration of the family problems, needs, and rehabilitation potentials.

III. Staffing, Direction, and Coordination

The project will be organized and operated within the framework and programs of the Bureau of Rehabilitation Services, Department of Education, and the Division of Public Assistance, Department of Economic Security. The State Director of the Bureau of Rehabilitation Services will designate a Project Director. He will appoint a Project Coordinator who will be responsible to the Project Director for the demonstration aspects and the Area Supervisor for service aspects of the Project. He will also appoint Vocational Rehabilitation counselors, and clerical persons, all of whom will be responsible to the Project Coordinator. The Director of the

Division of Public Assistance will designate a Public Assistance Project Director, and will appoint social caseworkers and clerical workers, who will be responsible to the Division of Public Assistance. All of these staff members will share office accommodations. The caseworker and clerical worker will receive supervision regarding service aspects of the Project from their respective district offices. Project staff will use the consultation services of their respective state offices. Project staff members will identify themselves as Vocational Rehabilitation and Public Assistance representatives administering these services through a special project.

Policies of the two agencies will be applied throughout the Project except if special policies and procedures are jointly agreed upon and issued in writing to their project staff as a part of the Project Plan.

Costs for the Project Coordinator, vocational rehabilitation counselors, and clerical staff will be budgeted from the Project Grant Funds. Costs for the social caseworkers and clerical workers assigned to the Public Assistance staff will be paid by the Division of Public Assistance, Department of Economic Security, from Project Grant Funds.

IV. Financing

All costs of financial assistance and other social services provided by the Social Caseworkers will be paid from funds of the Division of Public Assistance. Expenditures for Vocational Rehabilitation

services will be provided from Project Funds. Vocational Rehabilitation Project Funds will not be used for other than Vocational Rehabilitation Services. Public Assistance Project Funds will be used likewise.

V. Project Operation

A. Area Served

The project will include Counties. Project office will be located in the City of

B. Project Clientele

1. General:

The project will serve applicants for and recipients of any category of public assistance who are disabled and disabled members of the household of a public assistance case and former recipients of public assistance who are disabled and disabled persons likely to become in need of assistance.

2. Limitations:

Clients who will not normally be served in the project will include; (1) those with rapidly progressive terminal illness, (2) those with confinement of expected long duration in a nursing home even if provided rehabilitation services, (3) those with such severity of disability medically demonstrated that rehabilitative measures will be ineffective, and (4) those whose combination of disabilities are such that rehabilitation potential is lacking.

C. Identification of Clients

All disabled applicants or family members newly interviewed by Public Assistance Staff, fitting classifications under heading "B" above and living in the project area will be referred to the project. Cases already on the Public Assistance Agency Rolls and fitting classification under heading "B" will be referred for screening by the project staff for acceptance or rejection. All clients as qualified above will be registered as referrals and assigned to a project counselor and caseworker.

At least one interview with the client by the counselor and caseworker will be held before a decision is made for further evaluation and directions it should take. Additional evaluation will be done before a decision is made to accept or reject the case for service within the project.

A case conference will be called to establish rehabilitative diagnosis and before further counseling for service planning. Concurrently the client will receive any social services to which he is entitled within the context of project goals and objectives for the client and his family.

D. Joint Service Methods

1. Introduction: Project staff members will exercise individual responsibility within the framework of joint decision where case staffing has occurred in implementing

client services. Daily contact between staff members is expected. In addition, there will be group conferences.

2. Conferences: (a) Administrative monthly staff conferences, or more often if necessary, will include supervisors responsible to the project from both agencies. Conference content will deal with policy, procedures, relationships, community planning, developing community resources, project expectations, etc. (b) Weekly case conferences, or more often if necessary, will be held to deal with case planning and problems. Personnel for such conferences may vary but would normally include appropriate consultants, project staff and community agency representatives when planning or service problem necessitate their presence.

VI. Housing of Project Staff

A. Project Offices:

Project offices will be established as near as possible to the regular offices of both agencies. The rental and maintenance costs of space will be shared equally by project agencies.

B. Office Equipment:

The equipment needs of the project staff will be provided by the employing agency, as will office supply needs. Joint forms used by project staff will be supplied by Bureau of Vocational Rehabilitation.

VII. Exchange of Information and Confidentiality

Staff members of the participating agencies will share policy materials, such as manuals, bulletins, and other issuances of a policy nature. Case recording will be exchanged through the use of carbon copies of case record entries, and through individual and group conferences. Project staff members will treat information responsibly and use it only in relation to administration of Project services.

VIII. Analysis and Evaluation of Project

A. General

Both agencies will jointly develop a methodology for maintaining, compiling and reporting pertinent client and project data for appraising project methods, accomplishments and reporting. Such data as is required by both agencies through their respective reporting systems will be maintained. Specific fiscal and statistical information will be compiled and reported for comparative purposes, normal agency reporting purposes, and for project appraisal purposes for both agencies.

IX. Project Advisory Committee and Interpretation

A. Advisory Committee

An advisory committee, selected jointly by the project director and the District Supervisor of the Division of Public Assistance Agency, will consist of representatives of agencies normally participating in services for clients such as Public Health, Employment Service, Family Service Association,

government, employer groups and others, in addition to the primary project agencies. Such a committee will be kept to seven to ten members.

B. Securing Broad Community Support

Goals and achievements of the project will be interpreted to the public and cooperating agency staffs through conferences, jointly supported releases to news media, agency channels, advisory committee channels and any other appropriate manner agreeable to project staff and primary agency administration. Such interpretation will recognize contributions of participating agencies so that the project activities are always understood to be from a cooperative enterprise.

This agreement becomes effective on March 1, 1964, and will continue until revised or until the Project is terminated.

ACCEPTED AND APPROVED

DATE _____ DATE _____

Earl V. Powell Commissioner Department of Economic Security	Harry M. Sparks Superintendent of Public Instruction Department of Education
Aaron Paul Director Division of Public Assistance	Ben F. Coffman Assistant Superintendent Bureau of Rehabilitation Services

VT 002 848
Pisani, T.J.
At Last, for That Limited Budget, A Testing Machine within Reach of All.

MF AVAILABLE IN VT-ERIC SET.
Pub Date - nd 14p.

*TRADE AND INDUSTRIAL EDUCATION; *LABORATORY EQUIPMENT; EQUIPMENT MANUFACTURERS; KINETICS; TESTING; PHYSICAL CHARACTERISTICS

A course in materials testing in the high school should provide for physical tests of tension, compression, transverse, and shear on any ferrous, nonferrous, or nonmetallic material in standard or odd shapes. This paper describes a universal testing machine and accessories, suitable for classroom instruction in the practical knowledge and the applications of theoretical analysis in materials testing. The versatility of the equipment is explained by outlining experiments in stress-strain relationship, tension test, compression-wood, transverse of wood beams, and joint tests that are within the machine's capacity. (HC)

VT 002 848

ED042060

AT LAST, FOR THAT LIMITED BUDGET, A TESTING MACHINE WITHIN REACH OF ALL

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

T. J. PISANI - Author - Essentials of Strength of Materials, 3rd ed.
Course Leader - Strength of Materials
Teacher-in-Charge - Materials Testing Laboratory
Brooklyn Technical High School

During the 15th century, research and investigations were being made to give some meaning to the strength of materials. Leonardo da Vinci (1452-1519) fortified his principles of experimental science by actual experiment and observation.

Recorded history shows that Galileo (1564-1642) made many tests on the strength of materials. These tests were made by dead weights. Others were made on beams from which many conclusions were drawn by other fundamentalists that followed Galileo. The most important one was that a loaded beam had fibers both in tension and compression.

The first testing machine was made about 1700 by Peter van Musschenbroeck, a professor at the University of Heyden. It was a steelyard, mounted on a framework, similar to the micrometer screw-beam in some of our present day testing machines.

In France, the knowledge of the Strength of Materials received its greatest impetus during the 18th century. Jean Perronet (1708-1794) built the first universal testing machine. It had a capacity of 18 tons. He observed with his universal testing machine, that scratches and elevation of temperature had an influence on tensile specimens during the test.

VT 02858

Testing of materials was widespread in Europe and England. At first most testing machines were built for testing stone and wood, followed by cast iron, wrought iron and cast steel. As new materials were introduced, testing machines were improved and specifications for important methods of testing increased the knowledge of the properties of materials under stress.

The first testing machines in the United States were built during the 19th century for experiments on gun metal. Steel and bridge companies built testing machines, realizing that the materials to be used in bridge construction had to pass rigid tests.

During the latter decades of this century, testing machines both vertical and horizontal were built on a commercial basis. A typical modern day manufacturer of such machines is the W. C. Dillon & Company, Inc. of Van Nuys, California.

There has been a critical shortage of competently trained technicians in our country. Perhaps the educators of the smaller vocational-technical high schools and communities did not have or were unable to equip testing laboratories primarily because of the cost.

Industries are demanding technicians with basic engineering training. Technicians with such engineering training would assist the engineer, architect or contractor. They would be able to carry on after receiving proper training and instruction. Where a laboratory can be set up, even with a minimum amount of equipment, it will do much to fortify and enrich a course in strength of materials which should be a prerequisite to a course in Materials Testing. Strength of Materials

would be given during the second semester of the tenth year and the first semester of the eleventh year. The course in Materials Testing would follow during the second semester of the eleventh year and the first semester of the twelfth year. The last semester of the twelfth year could be utilized for more advanced experiments in material testing.

AIMS OF MATERIALS TESTING LABORATORY

1. To obtain a knowledge of materials by handling them and watching their behavior under stress.

2. To obtain a knowledge of the techniques of testing materials.

3. To provide training in precise methods of observation.

4. To reinforce the theoretical knowledge of materials.

5. To give some training in proper methods of planning and executing experimental investigations.

6. To give the students a certain marketable skill in the knowledge and techniques of materials testing and operation of testing machines.

Schools introducing or contemplating a course in Materials Testing, but with limited space and a limited budget, will find a suitable solution in the machine manufactured by the aforementioned Dillon Company. This instrument will meet the needs of most any vocational-technical school, regardless of the geographic area of the community or industry. It is especially useful for communities having three or more industries

because of the employment potential and the availability of jobs. The machine referred to above is called the Dillon Universal Tester, Model LW.

This Dillon Universal Tester can perform the four most important types of physical testing, namely, Tension, Compression, Transverse and Shear. It tests virtually any ferrous, nonferrous and nonmetallic materials such as wood, steel, concrete, plastics, springs, rope, cloth, canvas, rivets, screws, rubber adhesive, castings, etc. in standard or odd shapes.

It is obvious from the many kinds of materials that can be tested with this unit that it can, as stated, be used in any location or industrial area. Therefore, the testing laboratory can be adaptable and cater to the needs of the community and its industries. In this way, the classroom instruction is reinforced with practical knowledge and the application of the theoretical analysis actually becomes a reality.

The Dillon Universal Tester, Model LW, can test in eight ranges, namely 0-500 lb., 0-1,000 lb., 0-2,000 lb., 0-4,000 lb., 0-5,000 lb., 0-6,000 lb., 0-8,000 lb., 0-10,000 lb. With the aid of interchangeable dynamometers, any one of these ranges can be met with precision. The tester also comes in different heights with different grips and daylight openings for a variety of testing purposes, namely 10", 20", 30", 40" openings, plus 3" inside grips. To change from one capacity to another, bearing pins and snubbers are removed, and the instrument lifts out. The entire operation requires only 60 seconds. Thus, if a 10,000 lb. tester is procured, anyone of the other dynamometers may be added

later. All higher capacity instruments are equipped with complete shock arresting snubbers.

The Dillon Universal Tester, Model LW, is manufactured for hand operation or motor power. The hand operated version may be placed on any suitable laboratory demonstration table. Load is applied by means of a worm and gear drive, counterbalanced by a handwheel connected to a drive shaft. This loading arrangement permits satisfactory speed control for many materials. The tester may also be motorized with a single speed motor and a chain and sprocket power drive. It can be mounted on a steel stand that provides an ideal motor mount as well as storage space for accessory grips and extra dynamometers.

However, when specifications (A.S.T.M., Federal or Military) require absolutely uniform load application, a motorized tester becomes essential.

By varying the size of the sprocket and chain of the single speed motor, varying speeds of from 2 inches per minute up to 20 inches per minute may be provided with a gear ratio of 10:1. With special gear ratio, cross-head speeds may be secured of from 0.002 inch per minute to as high as 20 inches per minute.

Model LW Testers can provide full power up to 10,000 lbs. in tension. If a material has a tensile strength per square inch in excess of 10,000 lbs., the center area of the specimen is reduced. For example, a steel bar having a tensile strength of 100,000 PSI can be reduced to a 1/4" diameter specimen thus resulting in a breaking load of 4,710 pounds, well within range of the instrument.

The following data describes the cost of the Dillon Model LW Universal Tester, table model, hand operated, 0-10,000 lb. maximum capacity, with 10 inch daylight opening.

NOTE: This machine is available in 20", 30", 40" openings, at slight extra cost of $68, $102 and $132, respectively.

Basic cost without dynamometers	$623.00
Dynamometers, accurate to within ± 2% of full range, for the following ranges:	
1 - 0-500 lb. - 5" diameter dial	$140.00
1 - 0-1,000 lb. - 10" diameter dial	190.00
1 - 0-5,000 lb. - 10" diameter dial	210.00
1 - 0-10,000 lb. - 10" diameter dial	230.00

NOTE: Alternate dynamometers accurate to within ± 1/2% of full range are optional.

ACCESSORIES GROUP "A"

1 Set flat tensile grips type "AA" 1-3/4" wide with set of wedges	$105.00
1 Set tensile grips type "CC" for round specimens 3/8" to 1/2" or 1/2"-3/4" or 3/4"-1"	105.00
1 Compression cage for specimens up to 9-1/8" high	152.00
1 Transverse fixture - specimens up to 1"	98.00
1 Set wire grips for stranded or solid wire up to 1/8" diameter	105.00
1 Set Briquette fixture A.S.T.M. specification 8-190-49	185.00
1 Plastic dust cover for 10" daylight opening	15.00

ACCESSORIES GROUP "B"

1 Bolt test fixture with adapter to fit any specified bolt size	$ 95.00
1 Set of fabric grips, eccentric type, serrated face for specimens up to 5" wide by 1/4" thick	135.00
1 Set molded plastic hard rubber fixture, "dog-bone" type, A.S.T.M. specifications D651-427 and Federal specifications L-P-406B	185.00
1 Set of plywood and glue block grips for specimens up to 1-1/4" thick and 2-3/4" wide, A.S.T.M. specifications D-906-49; D-1002-497 and D-805-47	187.00
1 Set of utility yokes	35.00

NOTE: These added accessories are not necessary for the basic laboratory course. They may be added at the discretion of the instructor, if additional tests of other materials are desired.

An alternate testing machine, suitable for classroom instruction, and also available from the Dillon Company, would be this firm's Multi-Low Range instrument. This is a bench model, handwheel operated, 14-1/2" daylight opening, furnished with elongation scale and spirit level, capacity 0-300 lb., 8" diameter dial, 1 lb. resolution, with 5 scales, 2 dials.

Basic tester cost	$916.00

ACCESSORIES

1 Autograph load-elongation recorder	75.00
100 Recorder graph sheets calibrated in pounds and inches	6.00

1 Set standard tensile grips for flat specimens up to 1/8" thick by 1-1/4" wide	$125.00
1 Compression cage for specimens up to 3" square by 4-1/2" high	73.00
1 Set of wire grips for specimens up to 1/8" diameter	60.00

Specimens for laboratory tests may be made according to A.S.T.M. specifications in the school shop as a shop project. In many instances, commercial bar stock metals may be tested without machining. Such commercial items as wire, cordage, rope, tapes, plastics, aluminum, steel and cast iron bars are easily obtainable. Very often, test specimens made by local industries are available for schools. It will be the job of the instructor to write experiment instructions to suit the conditions, range of machine, type of machine that is available, etc.

It is apparent from the above illustrations of casts that schools with a limited budget would have no great difficulty inaugurating a course in Materials Testing. Any science laboratory might well provide the limited space required.

The Dillon Universal Tester, Model LW, can first be used for demonstration purposes by the instructor, pointing out the essential parts, use of the dynamometers and how to change from one scale to another. In addition, students would be required to perform the same operations as the instructor.

Secondly, groups of two or three students would be assigned to perform tests with materials of different sizes. As each group would

finish its test, it would return to the table to calculate the data obtained. This would permit the instructor to be present at all times to supervise the progress of the test. As the first group performed its test, the other groups would be preparing their reports with proper headings, ready to record the data to be obtained.

The following experiments are listed to illustrate the unusual versatility, wide choice of operating ranges and large assortment of gripping fixtures offered for the inexpensive Dillon Tester:

STRESS-STRAIN RELATIONSHIP

Object: 1. To determine five significant results of a static tension test of a thread-end specimen, i.e. elastic limit, ultimate strength, percentage of elongation, percent reduction of area, modulus of elasticity.

2. To plot stress-strain diagram.

3. To verify Hooke's Law.

Material: Standard A.S.T.M. - .505" diameter thread-end specimen of mild steel.

Equipment: 1. Dillon Universal Tester - capacity 10,000 lbs. with 3/4"-10 threaded grips.

2. 2" gage punch.

3. Suitable extensometer gage with minimum divisions of 0.0002" per division.

4. Percentage elongation gage.

5. 1" Micrometers with cone and flat faces.

Measurement: 1. Tabulation of loads at 2,000 lb. increments, total strain per increment. Calculate values of unit stress, unit strain, modulus of elasticity by means of elastic curve within elastic limit.

2. Plot stress-strain diagram.

NOTE: This test should also be performed on aluminum and aluminum alloy thread-end specimens.

An even simpler tension test is generally performed by industrial and commercial establishments for the purpose of quality control or to determine whether or not material ordered meets specifications. The test is generally simplified to determine the elastic limit stress, ultimate strength and ductility or rigidity.

TENSION TEST

Object: 1. To perform a commercial tension test on a bar of steel.

2. To analyze the resulting data.

3. To determine physical properties.

Material: Bar of steel (1/4" x 1/2" x 12") or round bar 3/8" in diameter.

Equipment: 1. Dillon Universal Tester - capacity 10,000 lbs. with wedge shaped grips.

2. 2" or 8" gage center punch.

3. Steel Scale - 0.001" or 1/64 divisions.

4. Large dividers.

5. Micrometer calipers.

Measurement: 1. Use 2" or 8" gage length.

2. Original gage length at Y.P., load at Y.P., final length, maximum load.

Speed: Lowest speed indicated on machine.

COMPRESSION-WOOD

Object: 1. To determine physical properties of short wood blocks in compression parallel to grain.

2. To plot stress-strain diagram.

3. To verify Hooke's Law.

Material: Two or more specimens of different species of wood (oak, pine, douglas fir, poplar) 1" x 1" x 6"

Equipment: 1. Dillon Universal Tester - capacity 10,000 lb. with compression blocks (1 swivel and 1 plain with inscribed concentric circles).

2. One 6" dial type compressometer with minimum reading of 0.001" per division.

3. Steel Scale - 12" and tri-square.

Measurement: 1. Record readings of loads in 1,000 lb. increments and corresponding values of strain.

2. Calculate values of unit stress and unit strain.

3. Plot stress-strain diagram.

4. From diagram determine proportional limit, moduli of elasticity and crushing strength.

5. Characteristics of failure and comparison of different species of wood.

TRANSVERSE OF WOOD BEAMS

Object: 1. To perform transverse bending tests on wood beams.

2. To determine extreme fiber stress.

3. To determine moduli of elasticity or relative stiffness.

Material: Several wood specimens of different species - 2" x 2" x 30".

Equipment: Dillon Universal Tester - capacity 10,000 lb. with bearing plates, knife edges, steel scale deflectometer.

Measurement: 1. Mid-span load values taken at 100 lb. increments and corresponding deflections.

2. Modulus of elasticity calculated by means of elastic curve within elastic limit.

3. Determination of fiber stress within elastic limit by use of flexure formula.

4. Plot curve for each specimen tested using load versus deflection.

Bending tests may be performed on short spans of other types of materials, such as plastics, ferrous and nonferrous metals of small

cross section, ceramics, glass, bricks, etc. In these tests the modulus of rupture only can be determined.

RIVETED AND BOLTED JOINT TESTS

Object:

1. To perform tension tests of riveted and bolted lap and butt joints.
2. To determine unit stress in shear, tension and bearing.
3. To study characteristics of joint failure.

Material: Riveted and bolted joint specimens of structural steel or aircraft aluminum riveted type.

Equipment: Dillon Universal Tester - capacity 10,000 lb. with flat tension grips - or Dillon Low Range Multi-Scale Tester with flat wedge grips for aluminum rivets.

Measurement:

1. Rivet or bolt diameter.
2. Hole diameter in plates.
3. Net area of plates through holes.
4. Thickness.

This test may also be performed on welded joints, both lap and butt joints.

In summary, it is apparent, from the illustrations shown above the feasibility of instituting a comprehensive course in Materials Testing. Sufficient background in theory of the mechanics of materials should be a prerequisite for students before performing tests.

In addition, a year of physics during the first and second semester of the tenth year and a minimum of two years of mathematics in the ninth and tenth years.

It is the intent and purpose of this article to provide teachers, supervisors, school administrators, advisory committees and local boards of education with the necessary information to formulate plans for establishing and executing a suitable course in Materials Testing.

VT 002 888
The MDTA and Your Health Manpower Needs.

Manpower Administration (DOL), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Manpower Administration, Office of Manpower Policy, Evaluation, and Research, U.S. Department of Labor, 14th Street and Constitution Avenue, N.W., Washington, D.C. 20210.
Pub Date - Aug67 23p.

*HEALTH OCCUPATIONS EDUCATION; REFRESHER COURSES; *PROGRAM DESCRIPTIONS; PROGRAM PLANNING; FEDERAL AID MDTA; *MANPOWER DEVELOPMENT AND TRAINING ACT

The total program under the Manpower Development and Training Act (MDTA) is described in basic terms. Subjects include: (1) the general types of job training, (2) categories of individuals eligible for training, (3) settings utilized for training, (4) the roles of the Departments of Labor, and Health, Education, and Welfare, (5) progress of training under MDTA to December 1966, (6) identification of training program needs and procedure for obtaining assistance, (7) selection of trainees, (8) financing of the program, and (9) designing the course. (JK)

VT 002 888

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The MDTA and Your Health Manpower Needs.

August 1967

U.S. DEPARTMENT OF LABOR
Willard Wirtz, Secretary

MANPOWER ADMINISTRATION
Stanley H. Ruttenberg,
Manpower Administrator

VT00 2886

THE MDTA
AND YOUR HEALTH MANPOWER NEEDS

"The health services available to the people of this country are now being adversely affected in both quantity and quality by shortages of physicians, nurses, and other trained health workers."

If this statement from the 1967 Manpower Report of the President can be reworded by you to read "The health services available to the people of my community are being adversely affected by shortages of trained health workers in my hospital," this booklet is for you.

The Federal Government, under the provisions of the Manpower Development and Training Act, is ready to help hospital administrators, professional health associations, and related groups with the development and cost of on-the-job training programs for health service workers below the professional level. Or it can gear MDTA institutional or "classroom" type training programs to your manpower needs, including refresher training to bring inactive nurses and other professionals back into service.

THE CRITICAL SHORTAGE

As a result of constantly mounting demands for health care, employment in the health service field has been rising for many years. In 1966 it reached about 3.7 million—making this one of the largest sources of employment in the economy. A gain of another 1.7 million health service jobs is expected by 1975. (See chart below.)

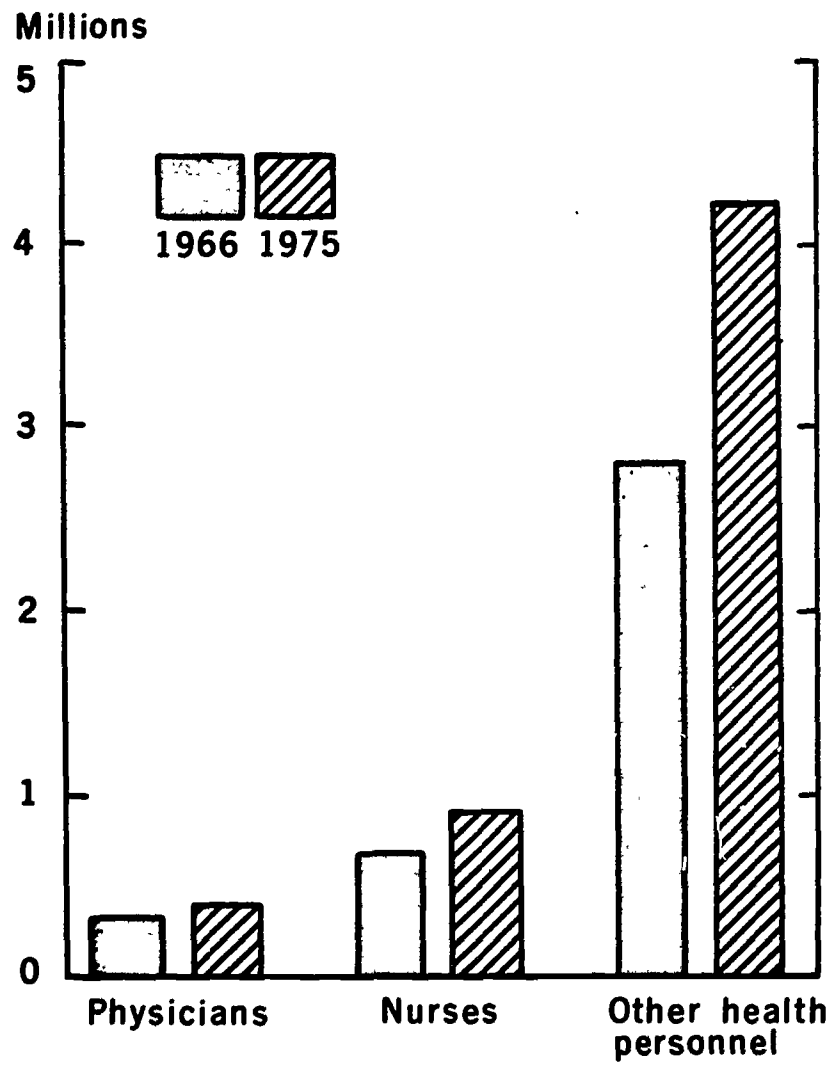
Public concern about the critical manpower shortages in health service seems to center on the inadequate supply of physicians and nurses. But acute shortages exist in many other professional and supporting occupations in hospitals and nursing homes and medical and dental offices and laboratories throughout the country.

FEDERAL MANPOWER DEVELOPMENT EFFORTS

To help meet current and anticipated health manpower needs, several new measures of Federal aid for training health personnel have been authorized in recent years. Specifically designed to help expand the training of professional personnel are the Health Professions Educational Assistance Act of 1963, the Nurse Training Act of 1964, and the Allied Health Professions Personnel Training Act of 1966.

Other legislation reflects the new focus on training manpower below the professional level, as medical

The need for health service personnel will rise sharply in the coming decade.



SOURCE: Manpower Report of the President, April 1967, p. 187.

advances and increased demands for health care cause professional personnel to depend more and more upon supportive health workers.

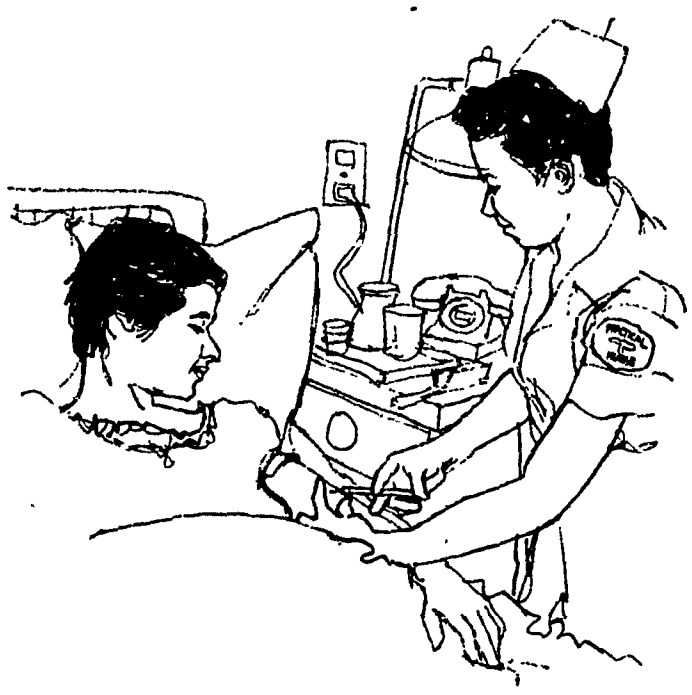
The Manpower Development and Training Act of 1962 and the Vocational Education Act of 1963 are both designed to help relieve immediate shortages in occupations below the professional level. And certain segments of the War on Poverty—for example, the Neighborhood Youth Corps and the New Careers program—also help ease manpower shortages by relieving more highly trained personnel of unskilled and routine but necessary tasks.

The purpose of this booklet is to acquaint you with the MDTA and to show you how it can help your hospital or health establishment—if you will get involved.

THE MDTA AND HEALTH MANPOWER

The Manpower Development and Training Act was founded upon the proposition that some measure is needed to help match people and jobs. The Congress directed in the act that unemployed and underemployed persons who lack the skills needed for available jobs be given the training and related education to qualify them for work.

It provides for two types of job training in health service occupations: (1) Training for entry level jobs



and for upgraded work in health service occupations below the professional level, and (2) refresher training for inactive professional workers, to facilitate their return to practice. Currently, refresher training is being given only in professional nursing, but efforts are underway to expand it to other professions.

Who Are the Trainees?

Persons selected for MDTA training must be in one of the following categories:

- Unemployed workers (including members of farm families with less than $1,200 annual net family income);

- Persons working substantially less than full time;
- Persons who will be working less than full time or will be unemployed because their skills have become or are becoming obsolete; and
- Persons working below their skill capacities.

Those persons who might be especially interested in and suited for health service training include the following:

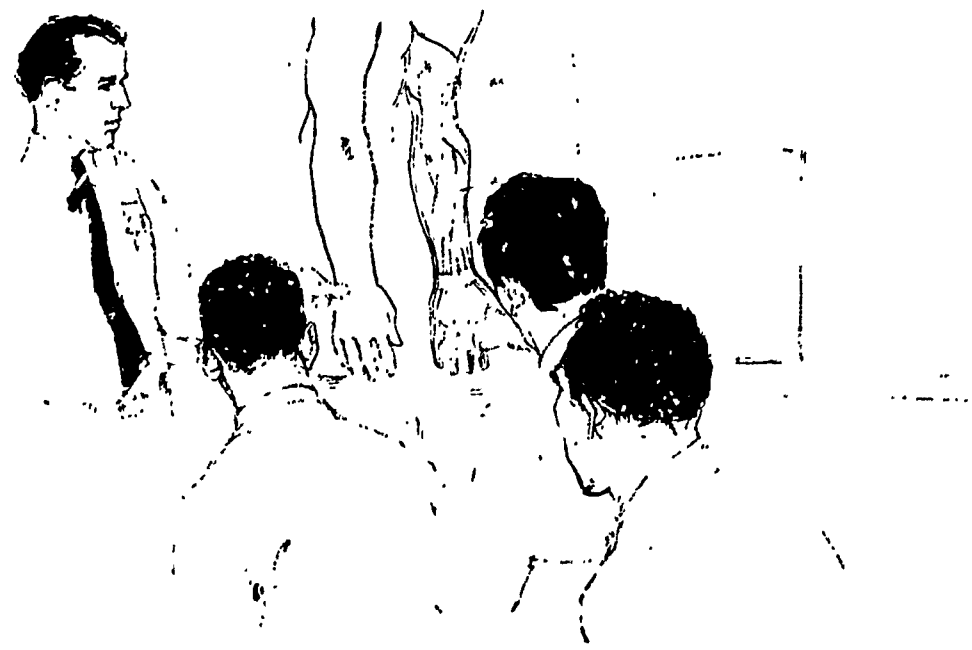
- Persons with technical and professional training presently inactive in the health field and in need of refresher training;
- Unemployed or underemployed persons in need of retraining or refresher training, whose interests and aptitudes suit them for health service work below the professional level;
- Persons in less skilled health occupations with the capability for higher skilled work, whose upgrading will open up opportunities at entry levels for new workers;
- Returned veterans with experience as medical corpsmen or other health workers, whose skills could be upgraded and adapted to civilian jobs; and

- Former Neighborhood Youth Corps and Job Corps enrollees, particularly those with work experience in hospitals and other health facilities.

Where Are They Trained?

MDTA training is given in institutional projects, on-the-job projects, and in "coupled" projects, depending upon the nature of the training occupation.

Institutional training. Training takes place in a classroom setting, usually in vocational education schools, and is geared to prescribed instructional content. Required clinical instruction is given in cooperating hospitals' facilities.



On-the-job training. Trainees are hired to learn on the job by performing work under the supervision of hospital personnel serving as instructors. Hospitals and other health establishments enter into contracts with the Federal Government to provide the facilities and instructors for training. Those who satisfactorily complete the training program continue on as employees.

Coupled projects. These OJT projects combine on-the-job training with institutional instruction. Employers provide skill training on their premises, preceded or accompanied by several weeks of job-related classroom instruction, basic education, or other supportive training. This method is especially helpful for disadvantaged persons whose lack of skills is associated with educational handicaps.

Which Government Agencies Are Involved?

The MDTA is administered jointly by the Secretary of Labor and the Secretary of Health, Education, and Welfare. The Secretary of Labor is responsible for identifying the need for training; for recruiting, selecting, and referring persons to training; for determining eligibility for the payment of allowances and other trainee benefits; for placement upon termination of training; and for the payment of allowances and other program costs.

The Secretary of Labor is also responsible for manpower evaluation, information, and research; job

development programs; experimental and demonstration projects; and on-the-job training.

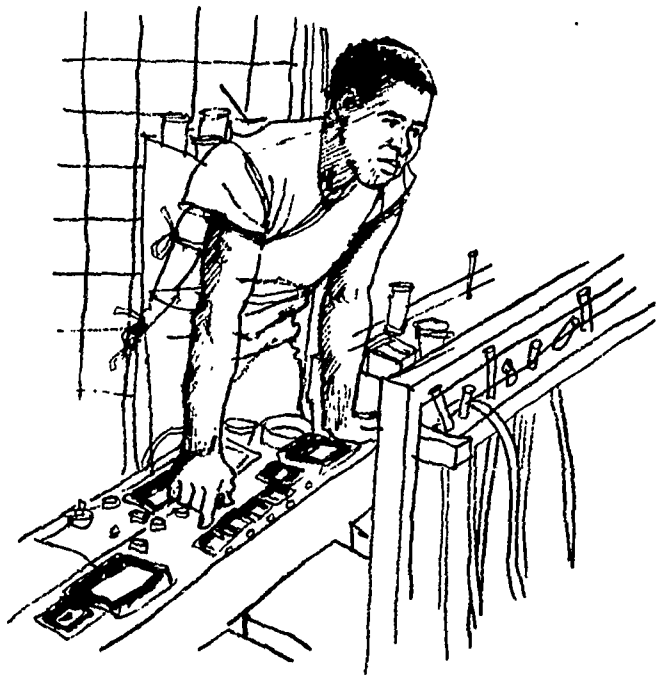
The Secretary of Health, Education, and Welfare arranges for provision of facilities, teachers, curricula, and training materials needed for institutional training programs in classrooms, laboratories, and shops, usually in the public schools. Training can include basic literacy, communications, and other preemployment instruction as well as skill training.

At the national level, responsibility is discharged for the Department of Labor by the Manpower Administration. The corresponding Health, Education, and Welfare arm is the Office of Education.

These two Departments enter into agreements with appropriate State agencies to provide facilities and services to implement the training programs. Most Department of Labor services are provided by its affiliated State and local employment security offices and by Federal and State apprenticeship agencies. State vocational education agencies provide facilities and services for the Department of Health, Education, and Welfare. But each Department has the authority to contract with private organizations under certain circumstances in order to carry out the purposes of the act.

What's Been Done So Far?

MDTA projects provided for the training of approximately 63,000 persons in health-related occupations between late 1962 and the end of 1966.



The occupations in which most workers were scheduled to receive training were licensed practical nurse, nurse aide/orderly, professional nurse (refresher training), and psychiatric aide, but training is conducted in a variety of occupations ranging from X-ray technician to ward maid. (See table below.)

For fiscal year 1968, it is estimated that training in health occupations will be authorized for over 50,000 trainees, 10,000 of whom will be nurses receiving refresher training.

THE MDTA AND YOU

If you need health service workers in your hospital—
First: Review your hospital's occupational structure,

Authorized Trainees in Health Occupations Funded Under the MDTA, August 1962–December 1966

Occupation	Number
Total	63,036
Professional nurses (refresher training)	4,723
Licensed practical nurses	20,695
Nurse aides/orderlies and related occupations	30,028
Nurse aides/orderlies	27,220
Clinical assistants	120
Home attendants	448
Housekeepers (medical service)	1,654
Ward maids	378
Other attendants	208
Specialized technical aides	7,123
Dental technicians	491
Dentists' assistants	765
Medical laboratory assistants	544
Medical records aides	151
Medical technicians	147
Occupational therapy aides	145
Psychiatric aides	2,978
Special diet workers	440
Surgical technicians	925
X-ray technicians	132
Others	405
Health clerical	467
Ward clerks	320
Secretaries and others	147

wage scale, and personnel practices to see what can be done internally to alleviate the shortage.

- Redesigning job content can mean better use of existing staff.

- Realistic hiring requirements can increase the pool of available manpower from which you draw workers.

- Adequate wages, fringe benefits, and promotion policies, plus good guidance and supervision, motivate workers to stay put, thus lowering turnover.

Second: If, in spite of the above measures, you continue to be faced with manpower shortages, contact your nearest local public employment office. (Look in the telephone directory for the address; ask your postmaster; or write to the State employment security agency.) Explain your manpower requirements and ask for names of any available workers who can fill your jobs.

Third: If the Employment Service files show no workers currently registered who meet your requirements, the next step is to utilize the services of the MDTA.

You can participate in MDTA training projects in several ways:

1. For occupations that can best be learned through formal classroom training, the Employment Service will work with local vocational education authorities to develop an institutional project, based upon your needs and those of other health establishments in your area. If you agree to provide the facilities for the clinical training component of the project, you will be reimbursed from MDTA funds.

You will work closely with the public education officials responsible for the institutional training and upon completion of the project will have a pool of trained manpower from which to hire workers for your hospital.

2. If the training occupations can best be learned on the job, the training project will be developed by the local, State, or regional office of the Department of Labor's Bureau of Apprenticeship and Training, which has operating responsibility for MDTA on-the-job training. These offices are listed in your telephone directory. Or the public employment office will direct you to the nearest apprenticeship and training agency.

The apprenticeship and training agency will work with you to develop an OJT project, with your hospital signing a contract to train the workers on the job.

In some cases, professional associations themselves may determine a widespread need for OJT in their field. Qualified organizations may sign a prime contract to oversee and arrange projects among the members of the association. Actual training is then conducted by hospitals or other facilities which sign subcontracts.

Significant examples of large-scale training efforts in the health field using this prime contract approach include:

- The program for on-the-job training of 8,000 paramedical and other subprofessional workers, which is being conducted in hospitals across the Nation under a

prime contractor, the Hospital Research and Educational Trust of the American Hospital Association. The hospitals are training beginners for such jobs as nurse aide/orderly, ward clerk, and housekeeping and dietary aides; and

- The program for on-the-job training of 900 persons, 750 unemployed and 150 needing skill improvement, in health care occupations through the Association of Rehabilitation Centers, Evanston, Ill. This training is conducted in 21 States and provides from 8 to 20 weeks of instruction in the occupations of therapy aide, occupational therapy aide, child care aide, recreation aide, motivation care aide, psychiatric aide, rehabilitation nurse aide, speech therapy aide, and psychological and service aide.

How Are Trainees Chosen?

Potential trainees are usually "screened" for eligibility by the local public employment office. However, for on-the-job training, employers and other organizations can recruit workers and refer them to the public employment office for determination of eligibility and training needs.

What About Cost?

In institutional projects, MDTA funds pay for all costs, including training allowances to eligible trainees, costs of instruction, and instructor salaries.

In OJT projects, employers pay trainees for productive work, in accordance with prevailing industry and area wage level standards as well as applicable minimum wage statutes and collective-bargaining agreements. The Federal Government will:

- Reimburse job instructors' fees;
- Pay for materials used in training;
- Pay for instructional supplies;
- Pay for rental of equipment or space; and
- Provide consultation and advice on training problems.

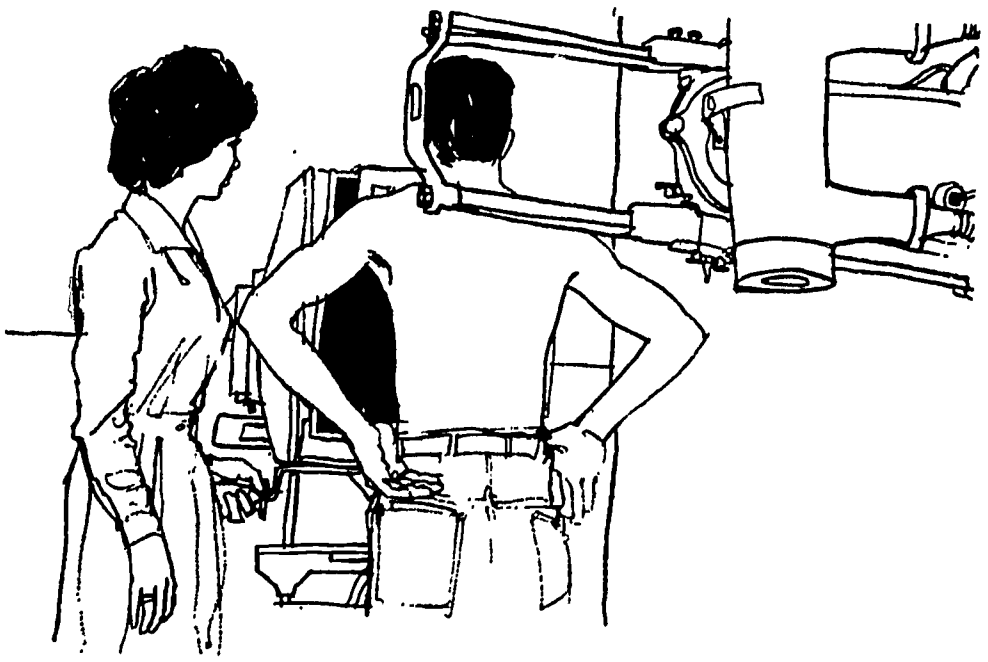
In coupled projects all costs for the institutional portion, including training allowances during this instruction, are paid from MDTA funds. The OJT portion is financed as described above.

Who Designs the Training Course?

Courses under institutional programs are designed by the participating schools and health facilities and approved by the appropriate vocational education authorities.

In OJT projects, you design your own program of training on the job, designating your own instructors for the various occupations in which you will conduct training. Technical advice in training concepts and procedures can be supplied by the representative from the Bureau of Apprenticeship and Training.

Initial guidelines as to trainee wages, hours of work, work processes, duration of training under Federal auspices, and basic instructional requirements will be worked out with the BAT representative. He may monitor your program on a spot-check basis to make certain that training is being conducted as planned, but no control or other direction is exercised by the Federal Government.



A Reminder

If MDTA now interests you, your first step is to visit the nearest local office of the State Employment Service or the Bureau of Apprenticeship and Training.

IN ADDITION . . .

Adequate manpower information is the only foundation for a sound action program, whether it be the Federal Government's total manpower development effort or your own hospital's MDTA training project. The Congress recognized this in its requirement under the MDTA that the Secretary of Labor develop a comprehensive research and information program to provide—

- As complete, detailed, and accurate accounting of present manpower needs, resources, and requirements as possible;
- Information on skill requirements, occupational outlook, job opportunities, labor supply in various skills, and employment trends;
- Information necessary to improve understanding, among all interested groups, of national manpower requirements and manpower development programs, the means to prevent and lessen undesirable effects of automation, the ways to improve worker mobility, and other manpower programs and problems.

Publications resulting from the MDTA research and information program as well as from other Department of Labor operations are listed by subject matter in Publications of the U.S. Department of Labor, issued annually. In addition, the Department issues a monthly supplement entitled New Publications. To receive the catalog and the monthly supplements, write to the Office of Information, Publications and Reports, U.S. Department of Labor, Washington, D.C. 20210.

Some of the publications of particular interest to health administrators are:

Health Careers Guidebook. 2nd ed. revised. Washington: U.S. Department of Labor, Manpower Administration, Bureau of Employment Security, 1965, 251 pages. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, $1.50.

Occupational Outlook Reports. Washington: U.S. Department of Labor, Bureau of Labor Statistics. Reprints from the 1966-67 Occupational Outlook Handbook detailing the employment outlook, training requirements, and earnings in about 700 occupations. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, single reprints 5 cents.

Rosenthal, Neal H. "The Health Manpower Gap," Occupational Outlook Quarterly, February 1967. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, 35 cents.

Technology and Manpower in the Health Service Industry, 1965-75. Washington: U.S. Department of Labor, Manpower Administration, Office of Manpower Policy, Evaluation, and Research, May 1967, 109 pages, Manpower Research Bulletin No. 14.

U. S. GOVERNMENT PRINTING OFFICE : 1967 O - 278-709

WHERE TO GET MORE INFORMATION

Copies of this publication or additional information on manpower programs and activities may be obtained from the U. S. Department of Labor's Manpower Administration in Washington, D. C. Publications on manpower are also available from the Department's Regional Information Offices at the addresses listed below.

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341 Ninth Avenue, New York, New York 10001
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MANPOWER ADMINISTRATION
Curtis C. Aller, Associate Manpower Administrator
for Policy, Evaluation, and Research

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Smith, Ashby G., Jr., And Others
Women Workers in Illinois.

Illinois State Dept. of Labor, Chicago. Bureau of Employment Security
MF AVAILABLE IN VT-ERIC SET.
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*WORKING WOMEN; *LABOR FORCE; OCCUPATIONAL SURVEYS; *CENSUS FIGURES; STATISTICAL DATA; *STATISTICAL ANALYSIS; TABLES (DATA)
ILLINOIS

Statistical evidence demonstrates the increasing importance of women in the Illinois labor force during the past 20 years. Comparison shows that there has been a 73.9 percent increase in the natural work force participation rates of women and a 57.8 percent increase in the work force participation of Illinois women between 1940 and 1960. Women comprised 32.7 percent of the total Illinois work force in 1960 as compared with 32.1 percent nationally. Data about white and non-white women workers compiled from the U.S. 1960 Census of Population, in Illinois, the Occupational Wage Surveys, and the "1960 Handbook on Women Workers" are the basis of this document. Sample topics are marital status, age, occupation, employment and unemployment, work experience, occupational skills, and distribution of occupations in an industry. Graphs, charts, and 73 tables support the narrative. (FP)

VT 003 433

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STATE OF ILLINOIS

DEPARTMENT OF LABOR

BUREAU OF EMPLOYMENT SECURITY

WOMEN WORKERS IN ILLINOIS

U.S. DEPARTMENT OF HEALTH, EDUCATION
& WELFARE
OFFICE OF EDUCATION
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JOHN E. CULLERTON, Director
Illinois Department of Labor

SAMUEL C. BERNSTEIN
Employment Security Administrator

AUGUST, 1964

VT003433

PREFACE

The recent publication of the "General Social and Economic Characteristics" and "Detailed Characteristics" volumes of the United States Census of Population, 1960, Illinois, and similar volumes for the United States has made possible the following analysis of Illinois women in the labor force. Other sources used were Occupational Wage Surveys by the Bureau of Labor Statistics, U. S. Department of Labor for several years in Illinois Areas, and the 1960 Handbook on Women Workers by the Women's Bureau of the U. S. Department of Labor.

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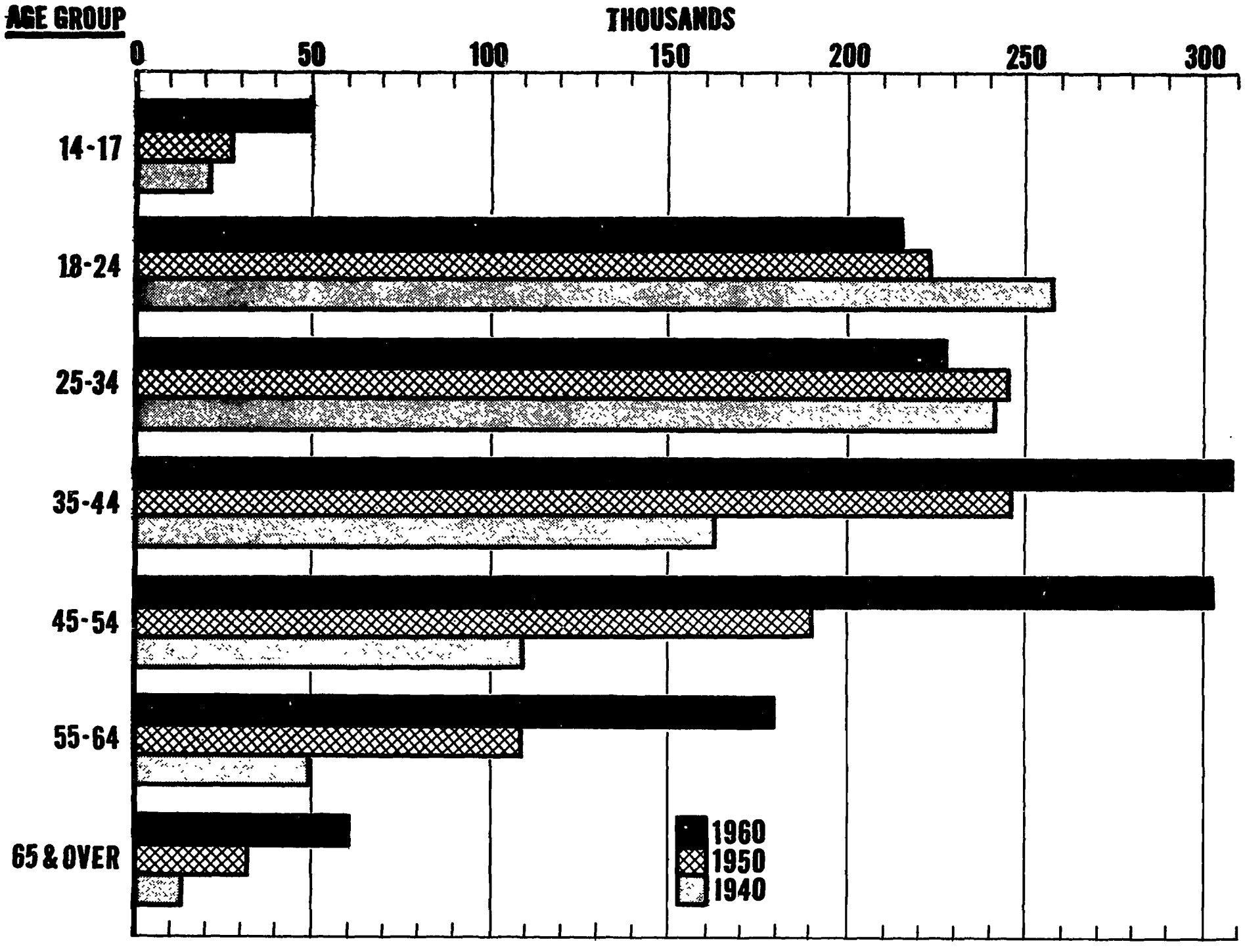
FEMALE LABOR FORCE, BY AGE GROUP
ILLINOIS, 1940, 1950 & 1960



CHAPTER I
ILLINOIS WOMEN IN THE LABOR FORCE

Introduction

Illinois women have become increasingly important as members of the labor force during the past twenty years. Three facts demonstrate this point.

1. In 1940, only 854,276 women were in the Illinois labor force whereas 1,348,328 women were in the 1960 Illinois labor force. This is an increase of 57.8 percent.

2. The female labor force in Illinois was 27.0 percent of all Illinois women 14 years and over in 1940 as compared to 36.2 percent in 1960. Thus, Illinois women have increased their rate of participation as well as their absolute number in the labor force.

3. The female labor force in Illinois constituted 25.4 percent of the State's total labor force in 1940. By 1960, the female labor force had risen to 32.7 percent of the total Illinois labor force.

Similar developments have taken place in the Nation's female labor force. Although the Nation's female labor force has increased by 73.9 percent between 1940 and 1960 in contrast to the 57.8 percent increase in Illinois, women in the Nation's labor force were only 34.5 percent of all females 14 years and over in 1960. This participation rate is 1.7 percentage points less than the Illinois figure of 36.2 percent. Twenty years earlier, only one quarter (25.4%) of all females over 14 years of age were in the Nation's labor force, when 27 percent of the Illinois women 14 years and over were in the labor force. Women constituted 24.3 percent of the Nation's labor force in 1940 and 32.1 percent in 1960. It is clear from these data that Illinois has continued to provide greater opportunities for female employment than the average for the country. It is equally clear that Illinois women have responded to these greater opportunities by participating in the labor force at a rate higher than the national average.

Table 1. Illinois Female Population By Age Group 1960, 1950, and 1940

	Population		
	1960	1950	1940
Total - 14 years and over	3,723,281	3,432,630	3,162,890
14 - 17 years	287,122	210,500	257,776
18 - 24 years	435,702	444,910	491,933
25 - 34 years	652,043	721,050	679,166
35 - 44 years	709,615	664,615	597,318
45 - 54 years	621,681	550,155	510,820
55 - 64 years	492,090	438,725	331,448
65 years and over	525,028	402,675	294,429

Table 2. Illinois Female Labor Force By Age Group 1960, 1950 and 1940

	Labor Force		
	1960	1950	1940
Total - 14 years and over	1,348,328	1,072,915	854,276
14 - 17 years	49,970	27,815	20,154
18 - 24 years	215,488	223,465	256,892
25 - 34 years	227,610	245,430	242,086
35 - 44 years	307,751	245,900	163,069
45 - 54 years	303,392	189,460	108,554
55 - 64 years	183,046	108,195	49,655
65 years and over	61,071	32,650	13,866

Table 3. Percent of Illinois Female Population In The Labor Force By Age Group 1960, 1950 and 1940

	Percent of Population In Labor Force		
	1960	1950	1940
Total - 14 years and over	36.2	31.3	27.0
14 - 17 years	17.4	13.2	7.8
18 - 24 years	49.5	50.2	52.2
25 - 34 years	34.9	34.0	35.6
35 - 44 years	43.4	37.0	27.3
45 - 54 years	48.8	34.4	21.3
55 - 64 years	37.2	24.7	15.0
65 years and over	11.6	8.1	4.7

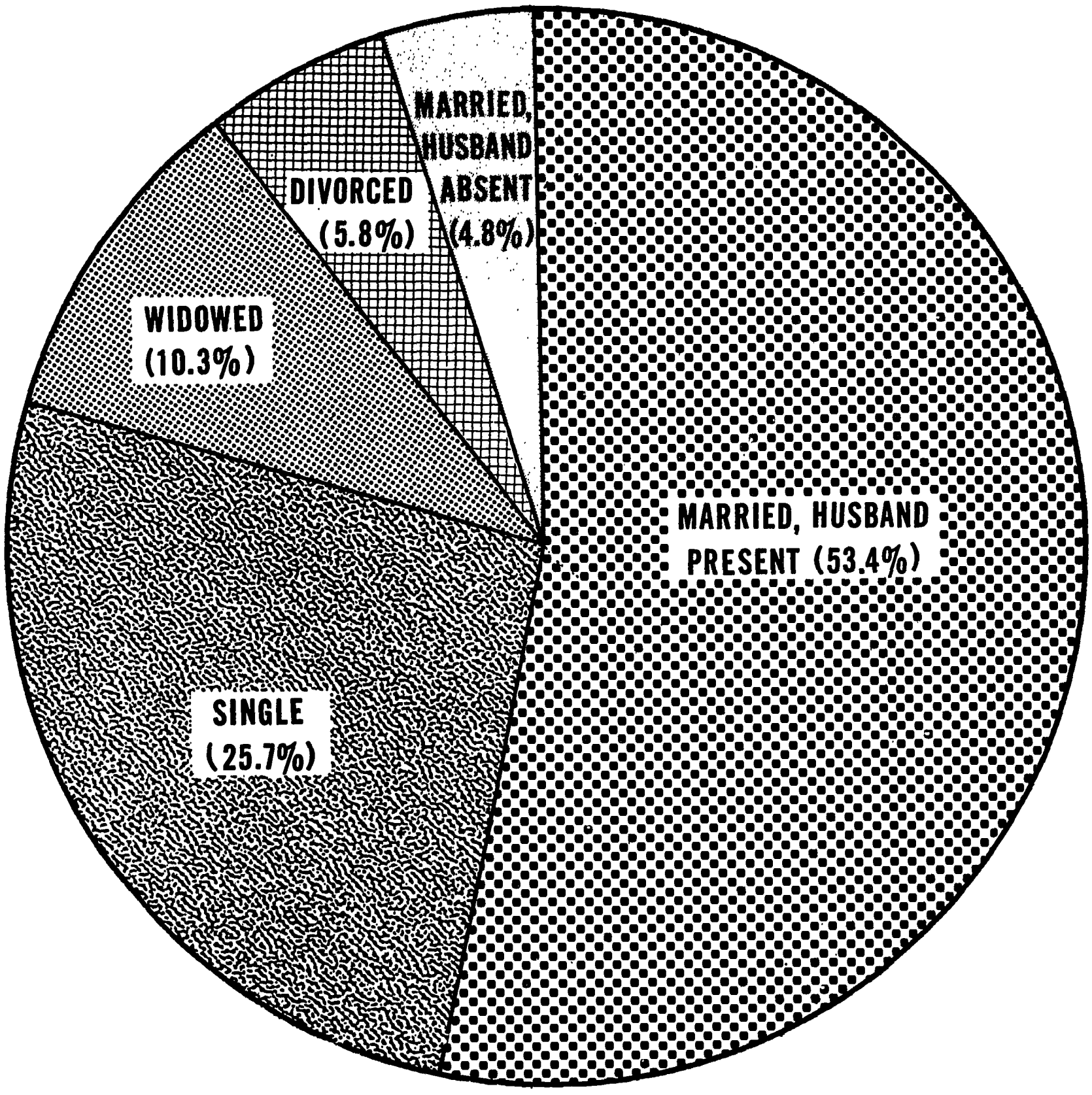
Age of Women in the Labor Force

One of the most striking changes in the Illinois female labor force, over the last twenty years, is the shift in the predominate age groups from younger to older women. In 1940, more than 60 percent of the female labor force in Illinois was under 35 years of age, but by 1960 only 36.6 percent was under 35 years old. The largest ten-year age group in 1960 was the 35-44 year old group which claimed 22.8 percent of all Illinois women workers. This age group was closely followed by the 45-54 year old group which claimed 22.5 percent of all women workers.

Table 4. Percentage Distribution of the Illinois Female Labor Force By Age 1960, 1950 and 1940

Age Groups	1960	1950	1940
Total, 14 years and over	100.0%	100.0%	100.0%
14 to 17 years of age	3.7	2.6	2.4
18 to 24 years of age	16.0	20.8	30.1
25 to 34 years of age	16.9	22.9	28.3
35 to 44 years of age	22.8	22.9	19.1
45 to 54 years of age	22.5	17.7	12.7
55 to 64 years of age	13.6	10.1	5.8
65 years and over	4.5	3.0	1.6
Median Age (in years)	40.9	36.7	31.2

MARITAL STATUS OF THE ILLINOIS FEMALE LABOR FORCE, 1960



In 1940, on the other hand, the 18-24 year old group, a seven year age group, contained 30.1 percent of the female labor force in Illinois. The second largest group was the 25-34 year old group containing 28.3 percent of the Illinois women workers.

Illinois women workers were less concentrated in the predominant age groups in 1960 than in 1940. Five of the seven age groups each contained more than 10 percent of the female labor force in 1960 while only four contained more than 10 percent in 1940. In 1960, only 45.3 percent of the women workers were in the two age groups containing the largest numbers of women workers but in 1940, 58.4 percent of the women workers were in the two largest age groups.

Marital Status

The participation of Illinois women in the labor force is affected by their marital status. Of the 1,348,328 women in the labor force in 1960, the largest number of women in the labor force were married and living with their husbands (719,644). The second and third largest groups were single women (345,968) and widows (138,816). The same table shows that these were the three largest groups of women 14 years and over in the Illinois population.

While married women living with husbands were the largest groups in both the population and the labor force, the number in the labor force was only 31.1 percent of the married women living with husbands. Three other groups of women had higher percentages of their numbers in the population participating in the labor force. They were single women (49.1%), married women not living with husbands (48.6%) and divorced women (72.3%).

Table 5. Illinois Female Population And Labor Force, By Marital Status, 1960

Marital Status	Female Population		Female Labor Force		
	Number	Percent Distribution	Number	Percent Distribution	Percent of Population
Total Females, 14 years and Over	3,723,281	100.0%	1,348,328	100.0%	36.2%
Single	705,186	18.9	345,968	25.7	49.1
Married, With Husbands Present	2,311,913	62.2	719,644	53.4	31.1
With Children Under Six	(748,037)	(20.1)	(132,891)	(9.9)	(17.8)
Married, Husband Absent	134,614	3.6	65,418	4.8	48.6
Widowed	462,987	12.4	138,816	10.3	30.0
Divorced	108,581	2.9	78,482	5.8	72.3

The most poorly represented groups of women in the labor force were married women with husbands and children under six, and widows. Only 17.8 percent of the 748,037 women in the former category participated in the labor force in 1960. Of the 462,987 widows in the population, 138,816 or 30.0 percent were in the 1960 female labor force. The participation of married women with children under six is limited for social and biological reasons which are obvious. It will come as no surprise that widowed women tend to be older. In fact, more than 335,000 of the 462,000 widows in the population (or 72.4%) were 60 years of age and over in 1960. This limited their labor force participation.

CHAPTER II
EMPLOYED ILLINOIS WOMEN

Occupational Trends

The 21 million employed women in the United States were dispersed among a wide variety of occupations, yet 71.5 percent of them were concentrated in four general occupational groups in 1960. The largest of these groups was the Clerical group in which 29.7 percent of the employed women were found. The other groups were Operatives with 15.4 percent, Service Workers with 13.4 percent and Professional Workers with 13.0 percent of the employed women workers.

In Illinois, the same four occupational groups contained fully 75.3 percent (or 3.8 percentage points more than the percentage for the Nation) of the 1,282,200 employed women in 1960. There were no differences in their order of importance, as 34.5 percent of the employed women were concentrated in Clerical occupations, 16.2 percent were Operatives, 12.7 percent were Service Workers and 11.9 percent were Professional Workers.

Employed women in the United States outnumbered employed men in three occupational groups in 1960. The three groups were Clerical Workers (6,291,420 women to 3,015,476 men), Household Workers (1,664,763 women to 61,063 men) and Service Workers (2,846,289 women to 2,598,669 men). In 1940, however, only two of the above groups, Clerical Workers and Household Workers, contained more women than men. Employed female Clerical Workers numbered 2.3 million and employed male Clerical Workers numbered a little over 2 million. In the twenty year period since 1940 women Clerical Workers have increased their numbers by 166 percent while the men have increased by only 49 percent. The totals for both male and female Household Workers have decreased since 1940 when there were 115,175 men and 1,976,078 women in this group. Although there were 311,315 fewer women and 54,112 fewer men in 1960 than in 1940 in this occupational group, men were a lower proportion of the total in 1960 than in 1940.

There were only two occupational groups in Illinois in which women outnumbered men in 1960. They were Clerical Workers (442,613 women and 212,420 men) and Household Workers (56,752 women and 2,267 men). Since 1940, female Clerical Workers have increased their number by 109 percent while the male Clerical Workers have increased by only 22 percent. In the same twenty year period, Household Workers declined in numbers and the women in this group suffered the greatest loss, which was the pattern for the country as a whole. While there were 32,716 fewer women employed, there were only 1,732 fewer men in 1960, but unlike the national pattern, male Household Workers in 1960 were a greater proportion of this occupational group than they had been in 1940.

For a detailed analysis of the occupations of women workers, the 1950-1960 period was chosen. There were 1,026,687 employed women in Illinois in 1950. By 1960, this figure had risen to 1,282,200, an increase in employed women of 24.9 percent. This overall increase affected the ten major occupational groups differently, since six of the groups increased, while the other four decreased. Female Professional, Technical and Kindred Worker employment increased from 115,477 in 1950 to 152,440 in 1960, or 32.0 percent. Employed women in Service occupations rose from 120,867 to 162,698, or 34.6 percent, in the same ten year period. Clerical Workers, the largest employed female group, increased from 342,930 in 1950 to 442,613 in 1960, a rise of 29.1 percent. Employed Women Farmers and Farm Managers increased by 25.7 percent from 2,603 to 3,273 in the ten year period. Women Sales Workers numbered 95,304 in 1960, and 83,138 in 1950, a growth of 14.6 percent. There were 51,450 Private Household Workers in 1950 and 56,752 in 1960, an increase of 10.3 percent.

Table 6. Occupational Groups of Employed Women In Rank Order In the United States and in Illinois, 1960

UNITED STATES

Occupations	Percent Distribution
1. Clerical and Kindred Workers	29.7
2. Operatives and Kindred Workers	15.4
3. Service Workers, Except Private Household	13.4
4. Professional, Technical and Kindred Workers	13.0
5. Private Household Workers	7.9
6. Sales Workers	7.8
7. Managers, Officials and Proprietors	4.2
8. Laborers	1.7
9. Craftsmen, Foremen and Kindred Workers	1.2
Occupations Not Reported	5.7

ILLINOIS

Occupations	Percent Distribution
1. Clerical and Kindred Workers	34.5
2. Operatives and Kindred Workers	16.2
3. Service Workers, Except Private Household	12.7
4. Professional, Technical and Kindred Workers	11.9
5. Sales Workers	7.4
6. Private Household Workers	4.4
7. Managers, Officials and Proprietors	3.4
8. Craftsmen, Foremen and Kindred Workers	1.4
9. Laborers	1.0
Occupations Not Reported	7.1

In four occupational groups, there were 13,636 fewer females in 1960 than in 1950. The two occupational groups which declined the most numerically from 1950 to 1960 were Laborers, where there were 5,240 fewer employed women, and Operatives, where there were 5,103 fewer employed women in 1960. There were 2,012 fewer employed female Craftsmen, Foreman and Kindred Workers and 1,281 fewer female Managers, Officials and Proprietors in 1960 than in 1950.

The greatest percentage loss was among Laborers and the smallest percentage loss was experienced by Operatives (-28.6% and -2.4%, respectively). These were, ironically, the two occupational groups which experienced the largest numerical losses. The other two groups, Craftsmen and Managers, experienced losses amounting to 10.1 percent and 3.1 percent of their respective 1950 totals.

Significant Occupations

There were 36,963 more women employed in Professional, Technical and Kindred occupations in 1960 than in 1950. The occupations which increased the most numerically in this category were Elementary Teachers (+13,629), Professional Nurses (+8,549) and Teachers Outside the Elementary and Secondary School systems (+3,799). These occupations were also among those exhibiting the most significant percentage increases in the Professional group since 1950, with 43 percent, 37 percent and a remarkable 424 percent growth, respectively. Other occupations in this group which recorded more than the 30.8 percent growth for the group as a whole were Sports Instructors and Officials (119.3%), Medical and Dental Technicians (60.6%), Personnel and Labor Relations Workers (52.7%), Accountants and Auditors (34.7%) and Therapists and Healers (32.5%).

In 1950, there were 173,129 persons (male and female) employed as Farmers and Farm Managers in Illinois. By 1960, the number of Farmers and Farm Managers had fallen to 121,973. Yet, employed females in this category rose from 2,603 in 1950 to 3,273 in 1960, an increase of 25.7 percent. The occupation which accounted for the rise in the occupational group was that of female Farmers and Tenants, which rose from 2,492 in 1950 to 3,240 in 1960, an increase of 30 percent. However, the small number of women and the historical downward trend of employment in agriculture clouds the significance of these figures.

The Service Worker, except Private Household, occupational group contained 120,867 employed women in 1950 and 162,698 in 1960, an increase of 41,831 or 34.6 percent. This was the largest percentage increase of employed women in any of the major occupational groups. Five occupations contributed heavily to the increase in that ten year period. They were Attendants in Hospitals and Other Institutions, which increased by 10,549 or 128.5 percent; Waitresses, which increased by 7,290, or 20.9 percent; Cooks, which increased by 6,559, or 49.2 percent; Kitchen Workers, where 4,015 or 51.2 percent more women were employed in 1960, and Hairdressers and Cosmetologists, which had an increase of 24.9 percent or 3,183 more women. Other occupations which exhibited large percentage increases were Counter and Fountain Workers (90.4%), Charwomen and Cleaners (87.9%) and Practical Nurses (35.3%).

There was a 153.4 percent rise in the employment of women as Protective Service Workers. Most of this increase can be attributed to the increase of women employed as Crossing Watchmen (from 34 in 1950 to 1,030 in 1960). Female Crossing Watchmen have replaced policemen at dangerous school crossings in urban areas in the past ten years.

PERCENT CHANGE IN FEMALE EMPLOYMENT BY OCCUPATIONAL GROUP BETWEEN 1950 AND 1960 IN ILLINOIS

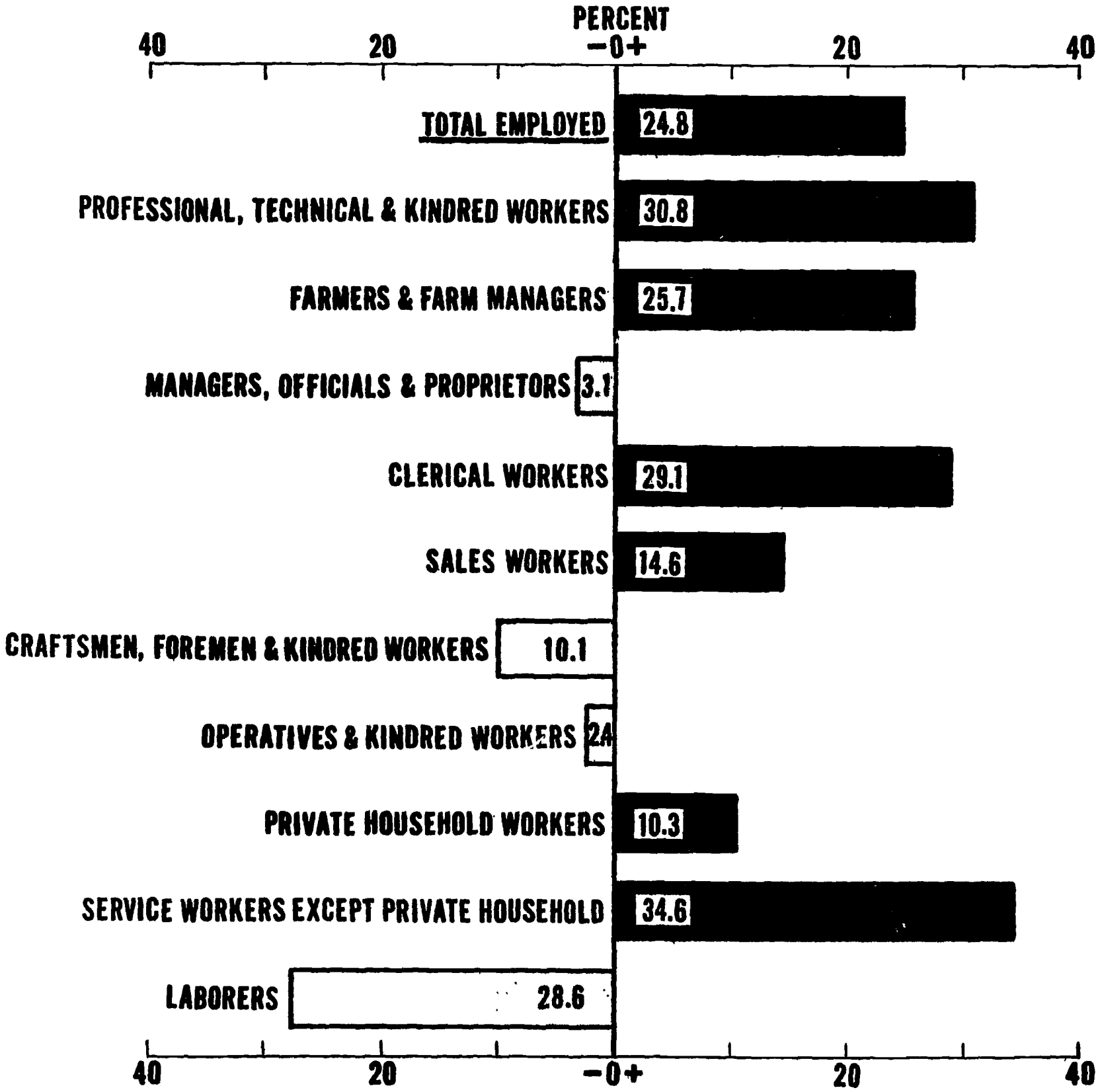


Table 7. Employed Illinois Women By Occupational Groups and By Selected Occupations, 1960 and 1950

Occupation	Numbers 1960	Numbers 1950	Percent Change 1950-1960	Percent Distribution 1960
Total Employed	1,282,200	1,026,687	+24.9%	100.0%
Professional Technical & Kindred	152,440	115,477	+32.0%	11.9%
Accountants and Auditors	6,444	4,785	+34.7	0.5
College Professors & Instructors	1,916	1,672	+14.6	0.1
Dietitians & Nutritionists	1,348	1,236	+ 9.1	0.1
Editors and Reporters	2,879	2,251	+27.9	0.2
Librarians	3,936	3,157	+24.7	0.3
Musicians & Music Teachers	6,053	4,860	+24.5	0.5
Nurses, Professional	31,246	22,697	+37.7	2.4
Personnel & Labor Relations Workers	1,864	1,221	+52.7	0.1
Religious Workers	1,913	1,889	+ 1.3	0.1
Social & Welfare Workers	3,696	3,358	+10.1	0.3
Sports Instructors	1,840	839	+119.3	0.1
Teachers, Elementary	45,331	31,702	+43.0	3.5
Teachers, Secondary	12,427	10,795	+15.1	1.0
Teachers, NEC	4,693	894	+424.9	0.4
Technicians, Medical & Dental	4,421	2,753	+60.6	0.3
Therapists & Healers	1,239	935	+32.5	0.1
Farmers and Farm Managers	3,273	2,603	+25.7%	0.3%
Farmers and Tenants	3,240	2,492	+30.0	0.2
Managers, Officials & Proprietors	40,029	41,310	- 3.1%	3.1%
Buyers & Department Heads, Stores	3,044	2,363	+28.8	0.2
Officials & Administrators-Public Admin.	1,686	1,199	+40.6	0.1
Managers & Officials - Salaried	18,731	14,440	+29.7	1.5
Manufacturing	3,216	2,370	+35.7	0.3
Retail Trade	4,789	5,048	- 5.1	0.4
Banking	1,643	970	+69.4	0.1
Insurance	1,568	831	+88.7	0.1
Managers, Officials & Proprietors, Self-Employed	13,283	19,932	-33.4	1.0
Clerical & Kindred Workers	442,613	342,930	+29.1%	34.5%
Attendants & Assistants, Library	1,487	487	+205.3	0.1
Attendants, Physician & Dentist Offices	3,402	1,981	+71.7	0.2
Bank Tellers	4,280	1,486	188.0	0.3
Bookkeepers	42,331	34,194	+23.8	3.3
Cashiers	27,963	14,482	+93.1	2.2
File Clerks	10,104	8,093	+24.8	0.8
Office Machine Operators	22,895	13,185	+73.6	1.8
Payroll Clerks	4,716	2,497	+88.9	0.4
Postal Clerks	2,870	1,527	+88.0	0.2
Receptionists	8,478	5,080	+66.9	0.7
Secretaries	90,765	58,617	+54.8	7.1
Stenographers	17,045	31,270	-45.5	1.3
Stock Clerks	2,942	2,152	+36.7	0.2
Telephone Operators	24,244	28,208	-14.1	1.9
Ticket Station & Express Agents	1,787	1,000	+78.7	0.1
Typists	37,268	25,500	+46.1	2.9

Continued

Table 7. Employed Illinois Women By Occupational Groups and By Selected Occupations, 1960 and 1950

Occupation	Numbers 1960	Numbers 1950	Percent Change 1950-1960	Percent Distribution 1960
Sales Workers	95,304	83,138	+14.6%	7.4%
Demonstrators	1,281	774	+65.5	0.1
Insurance Agents	1,994	1,683	+18.5	0.2
Real Estate Agents	1,875	929	+101.8	0.2
Salesmen & Sales Clerks				
Manufacturing	4,161	1,770	+135.1	0.3
Wholesale Trade	1,389	1,033	+34.5	0.1
Retail Trade	80,123	73,961	+ 8.3	6.2
Craftsmen, Foremen & Kindred	17,846	19,858	-10.1%	1.4%
Tailors	810	1,945	-58.4	*
Bookbinders	1,311	2,086	-37.2	0.1
Inspectors	505	775	-34.9	*
Compositors & Typesetters	1,015	768	+32.2	*
Decorators & Window Dressers	1,308	844	+54.9	0.1
Foremen	6,681	6,207	+ 7.6	0.5
Mechanics & Repairmen	1,763	1,666	+ 5.8	0.1
Operatives & Kindred Workers	208,136	213,239	- 2.4%	16.2%
Assemblers	34,481	20,465	+68.5	2.7
Checkers, Examiners & Inspectors, Mfg.	16,914	11,603	+45.8	1.3
Dressmakers & Seamstresses	6,075	8,852	-31.4	0.5
Laundry & Dry Cleaning Operatives	14,766	17,170	-14.0	1.1
Packers & Wrappers	20,836	19,692	+ 5.8	1.6
Sewers & Stitchers, Mfg.	19,521	19,805	- 1.4	1.5
Welders & Flame Cutters	1,668	967	+72.5	0.1
Operatives				
Furniture & Fixtures	1,198	2,143	-44.1	*
Stone, Clay & Glass	2,045	2,244	- 8.9	0.2
Metal Industries	8,445	10,716	-21.2	0.7
Machinery, Except Electrical	4,158	5,263	-21.0	0.3
Electrical Machinery	19,971	20,557	- 2.9	1.6
Transportation Equip.	1,117	1,714	-34.8	*
Prof., Photo Equip. & Watches	3,321	3,916	-15.2	0.3
Food & Kindred Products	7,491	8,779	-14.7	0.6
Textile Mill Products	1,700	1,928	-11.8	0.1
Apparel	7,529	12,899	-41.6	0.6
Paper Products	3,389	5,089	-33.4	0.3
Printing & Publishing	4,618	4,698	- 1.7	0.4
Chemicals	2,303	2,515	- 8.4	0.2
Rubber & Plastic Products	3,027	1,844	+64.2	0.2
Leather Products	4,937	6,299	-21.6	0.4
Wholesale & Retail Trade	4,250	4,949	-14.1	0.3

Continued

Table 7. Employed Illinois Women By Occupational Groups and By Selected Occupations, 1960 and 1950

Occupation	Numbers 1960	Numbers 1950	Percent Change 1950-1960	Percent Distribution 1960
Private Household Workers	56,752	51,450	+10.3%	4.4%
Baby Sitters	13,530	2,381	+468.2	1.1
Housekeepers	6,127	5,961	+ 2.8	0.5
Laundresses	1,241	2,014	-38.4	*
Service Workers, Except Private Household	162,698	120,867	+34.6%	12.7%
Attendants, Hospitals & Institutions	18,761	8,212	+128.5	1.5
Bartenders	1,590	1,569	+ 1.3	0.1
Chambermaids	7,336	7,546	- 2.8	0.6
Charwomen & Cleaners	5,974	3,179	+87.9	0.5
Cooks, Except Private Household	19,888	13,329	+49.2	1.6
Counter & Fountain Workers	5,452	2,864	+90.4	0.4
Elevator Operators	1,322	1,421	- 7.0	0.1
Hairdressers & Cosmetologists	15,969	12,786	+24.9	1.2
Housekeepers & Stewards	7,418	6,031	+23.0	0.6
Janitresses	7,040	6,419	+ 9.7	0.5
Kitchen Workers	11,858	7,843	+51.2	0.9
Practical Nurses	8,033	5,936	+35.3	0.6
Protective Service Workers	1,936	764	+153.4	0.2
Waitresses	42,154	34,864	+20.9	3.3
Laborers	13,064	18,304	-28.6%	1.0%
Durable Goods	2,362	3,471	-32.0	0.2
Non-Durable Goods	1,839	3,204	-42.6	0.1
Non-Mfg.	3,803	4,316	-11.9	0.3
Farm	5,060	7,313	-30.8	0.4
Occupations Not Reported	90,045	17,511	+414.2%	7.1%

*Less than one tenth of one percent.

Two occupations suffered declines in this occupational group from 1950 to 1960. There were 56 more Chambermaids in the labor force in 1960 than in 1950, but 210 fewer Chambermaids were employed in 1960. There were fewer Elevator Operators in 1960 than in 1950. The advent of the automatic elevator will continue to decrease the need for persons with this skill.

Numerically, the largest group of employed women, Clerical and Kindred Workers, increased by only 29.1 percent between 1950 and 1960, but this percentage increase resulted in an actual numerical growth of 99,683, by far the largest numerical increase of any of the occupational groups. Five occupations in this group experienced increases of better than five thousand employed women each in the ten year period. They were Secretaries (+32,148), Cashiers (+13,481), Typists (+11,768), Office Machine Operators (+9,710) and Bookkeepers (+8,137).

Seven occupations in the Clerical occupational group experienced remarkable percentage increases, though their growth was smaller numerically. These occupations were Library Attendants and Assistants (+205%), Bank Tellers (+188%), Payroll Clerks (+89%), Postal Clerks (+88%), Ticket Agents (+79%), Physician's and Dentist's Office Attendants (+72%) and Receptionists (+67%).

Two clerical occupations, Stenographers and Telephone Operators, had fewer women in 1960 than in 1950. The number of employed Stenographers and Telephone Operators declined during this period because many Stenographers left this occupation to help satisfy the booming demand for Secretaries and fewer Telephone Operators were needed as automatic switchboards replaced the manual telephone exchanges.

Female Sales Workers increased by 12,166 from the 1950 total of 83,138, a percentage increase of 14.6 percent. Sales persons employed in Retail Trade in this occupational group contributed 6,162 more in 1960 than in 1950, but due to the large number in this occupation (80,123 in 1960 and 73,961 in 1950) it had the smallest percentage increase (8.3%) of the occupations within this group. The occupation showing the second largest numerical increase was Sales Persons employed by manufacturing firms, which rose from 1,770 in 1950 to 4,161 in 1960, an increase of 2,391, or 135.1 percent. Women increased their numbers among employed Real Estate Agents by 101.8 percent and Demonstrators by 65.5 percent since 1950.

Only 56,752 or 4.4 percent of all working women in Illinois were employed in Private Household occupations in 1960. This represented an increase of 10.3 percent over the 1950 total of 51,450. The increase in Baby Sitters from 2,381 in 1950 to 13,530 in 1960, an increase of 468.2 percent, not only off-set decreases in other occupations in this group, but was mainly responsible for the total increase in this group. It is also indicative of the rising demand for child care services by families with children. Only a detailed study in this area would reveal whether or not women released by Baby Sitters become a part of the labor force.

Employed women Operative and Kindred Workers, the second largest occupational group, declined from 213,239 in 1950 to 208,136 in 1960. Decreases were noted for all but five of the occupations within this group. The five which experienced an increase were Assemblers (14,016 more than the 20,465 total in 1950), Checkers, Examiners and Inspectors in Manufacturing (5,311 more than the 1950 total of 11,603), Packers and Wrappers (20,836 in 1960 against 19,692 in 1950), Welders (1,668 in 1960 and 967 in 1950) and Operatives in Rubber and Plastics Products (3,027 in 1960 and 1,844 in 1950).

However, these increases were not enough to offset the losses of employed females in such occupations as Dressmakers, which declined by 2,777 from the 1950 total of 8,852; as Laundry and Dry Cleaning Operators, where the 1950 total of 17,170 was 2,404 above the 1960 total; as Apparel Operatives, where there were 5,370 fewer than the 1950 total of 12,899; and as Operatives in Metal Industries, where there were 2,271 fewer than the 1950 total of 10,716. The remaining occupations declined by smaller amounts between 1950 and 1960.

The greatest percentage declines were experienced by Operatives in Furniture and Fixtures, Apparel, Transportation Equipment, Paper Products and among Dressmakers and Seamstresses. The 1960 figures for these occupations were only 55.9 percent, 58.4 percent, 65.2 percent, 66.6 percent and 68.6 percent of the 1950 totals, respectively.

An analysis of the foregoing reveals some interesting facts. First, the decline in employed female Operatives is not an isolated occurrence. In Illinois, the number of employed males in this occupational group also declined from 534,102 in 1950 to 527,963 in 1960, representing a 6,139, or 1.1 percent, loss.

Second, losses or gains in specific occupations in this category not only resulted from the changing pattern of industry in Illinois, but also from changes in job content. For example, the number of Apparel Operatives declined as the industry curtailed its operations, and the number of Rubber and Plastics industry Operatives grew as the industry expanded its operations. Changes in products led to the substitution of spot welding for heavier welding and soldering techniques, and packing and inspecting occupations became more suitable for female workers because materials and tools became lighter.

The number of employed female Craftsmen, Foremen and Kindred Workers has also decreased since 1950. In 1950, there were 19,858 employed women, but by 1960, only 17,846 were employed in this occupational group. Women employed in this occupational group were well dispersed among the fifty occupations in the group, as witnessed by the fact that only five of the occupations had one thousand or more employed women in 1960. There were only four such occupations in 1950. Thus, numerical increases or decreases were characteristically small.

Employed women in two occupations in the Craftsmen group, Bookbinders and Tailors, suffered the largest losses between 1950 and 1960. Tailors numbered 1,945 in 1950, but only 810 in 1960; while Bookbinders numbered 2,086 in 1950, and 1,311 in 1960. Employed women significantly increased their numbers in three Craftsmen occupations during the same period. There were 247 more Compositors and Typesetters than the 1950 total of 768, an increase of 32.2 percent. Decorators and Window Dressers increased from 844 in 1950 to 1,308 in 1960, a percentage rise of 54.9 percent. There were 474 more Foremen (or Foreladies) in 1960 than in 1950, when the figure was 6,207, an increase of 7.6 percent. The rise in the number of Foremen seems to reflect the increased participation of women in the labor force as well as a slight easing of the unreasoning prejudice against women being employed in supervisory positions.

Employed women in the Manager, Official and Proprietor occupational group declined by 1,281 from 41,310 in 1950 to 40,029 in 1960. During the same period employed males in this occupational group decreased from 274,199 in 1950 to 262,210 in 1960, a loss of 11,989. The loss was a 4.4 percent decrease in employed men, while employed women decreased by only 3.1 percent from the 1950 totals. In both cases, Self-employed Manager was the occupation which suffered the greatest decrease. However, an increase in female Salaried Managers, which

rose from 14,440 to 18,731 between 1950 and 1960, almost offset the 6,649 loss from 19,932 to 13,283 among Self-employed Managers. Women employed as Salaried Managers in three industries increased while those in Retail Trade, the industry having the largest number, decreased from 5,048 in 1950 to 4,789 in 1960. The three which increased were managers in Manufacturing (+35.7%), those in Banking (+69.4%), and those in Insurance (+88.7%).

Workers in laboring occupations became less prevalant as higher skills were required to operate modern plant and equipment, and as services, rather than goods, became more important. As higher skills and modern plant and labor saving equipment were used and higher productivity resulted, fewer people were needed to produce the required amounts of goods and services, and the first to be laid off were the least skilled. Therefore, it was not surprising that the total number of employed persons in the Laborer occupational group had declined in the United States as well as in Illinois between 1950 and 1960. The decline in employed Laborers in Illinois totaled 61,008 as the 1950 figure of 271,900 decreased to 210,892 in 1960. Women employed in such occupations were no exception to the general trend as their number declined from the 1950 total of 18,304 to 13,064 in 1960, a percentage decrease of 28.6 percent. This represents a numerical decline of 5,240. Laborers in Manufacturing, Non-manufacturing and Farming industries all experienced declines. However, the sharpest drops were among those in Non-Durable Goods Production (-1,365) and Farming (-2,253).

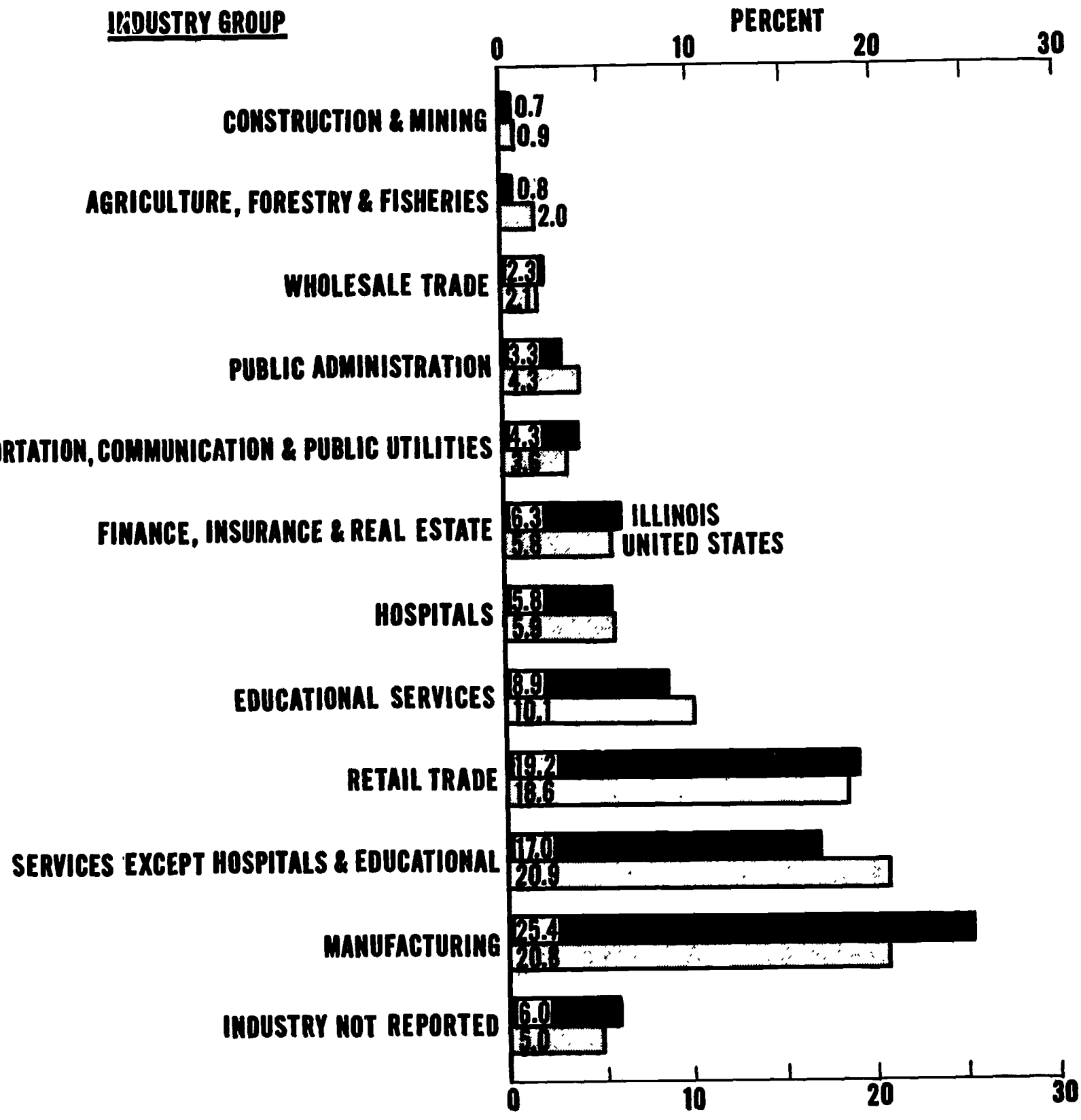
Industry of Employment

In 1940, the vast majority (95.6%) of the women employed in the United States worked in non-agricultural industries. By 1960, this percentage had risen to 98.0%. In contrast, the percentage of women workers in non-agricultural industries in Illinois has been 99% or better during this same twenty year period being 99.3 percent in 1940 and 99.2 percent in 1960. This indicates that Illinois women have been concentrated to a greater degree in non-agricultural industries than was the pattern for women in the country as a whole, although the margin of difference is decreasing.

Women Employed in Agricultural and Non-Agricultural Industries for the United States and Illinois in 1960 and 1940

	Numbers			
	U. S.		Ill.	
	1960	1940	1960	1940
Total Employed	21,172,301	11,178,076	1,282,200	746,933
Agriculture	410,420	491,704	10,168	5,526
Non-agricultural	20,761,881	10,686,372	1,272,032	741,407
	Percent			
	U. S.		Ill.	
	1960	1940	1960	1940
Total Employed	100.0%	100.0%	100.0%	100.0%
Agriculture	1.9	4.4	0.8	0.7
Non-agricultural	98.1	95.6	99.2	99.3

PERCENT DISTRIBUTION OF EMPLOYED WOMEN BY INDUSTRY GROUP IN ILLINOIS AND THE UNITED STATES, 1960



The six industry groups which employed the largest percentages of women in the United States in 1960 were: Service, except Hospitals and Education (20.9%); Manufacturing (20.8%); Retail Trade (18.6%); Educational Services (10.1%); Hospitals (5.9%); and Finance, Insurance and Real Estate (5.8%). These six industry groups were also those in which the largest percentages of Illinois women were employed in 1960, but their order was slightly different. Manufacturing (25.4%) was the industry group to which the largest percentage of Illinois women were attached and this was followed by Retail Trade (19.2%); Services, except Hospitals and Education (17.0%); Educational Services (8.8%); Finance, Insurance and Real Estate (6.3%) and Hospitals (5.8%).

Table 8. Major Industry of Employed Women in Rank Order In the United States and in Illinois, 1960

United States — Industries	Percent Distribution
1. Services (except Hospitals & Education)	20.9%
2. Manufacturing	20.8
3. Retail Trade	18.6
4. Educational Services	10.1
5. Hospitals	5.9
6. Finance, Insurance and Real Estate	5.8
7. Public Administration	4.3
8. Transportation, Communications & Pub. Utils.	3.6
9. Wholesale Trade	2.1
10. Agriculture, Forestry and Fisheries	2.0
11. Construction and Mining	0.9
Industry Not Reported	5.0

Illinois — Industries	Percent Distribution
1. Manufacturing	25.4%
2. Retail Trade	19.2
3. Services (except Hospitals & Education)	17.0
4. Educational Services	8.8
5. Finance, Insurance and Real Estate	6.3
6. Hospitals	5.8
7. Transportation, Communications & Pub. Utils.	4.3
8. Public Administration	3.3
9. Wholesale Trade	2.3
10. Agriculture, Forestry and Fisheries	0.8
11. Construction and Mining	0.7
Industry Not Reported	6.1

Although the total number of women employed in Illinois was higher in 1960 than in 1950, five industry groups employed fewer women in 1960. Those which had fewer were Agriculture (-5.8%), Food Products (-1.2%), Textile Mill Products (-18.4%), Apparel (-19.3%) and Transportation, Communication and Public Utilities (-4.2%). The loss of 11,654 jobs to Illinois women in the above industries during the 1950-1960 period must be placed in perspective to be understood. Some of the decrease was caused by the movement of firms to other states, such as in the Food and Apparel industry groups. Two of the industry groups, Agriculture

and Textile Mill Products, experienced employment declines in the Nation as well as in Illinois. Employment in the fifth group, Transportation, Communications and Public Utilities, reflects the increased use of automatic equipment which requires fewer people to maintain and operate.

In 1960, employed females were more than 50 percent of the total employed in six Illinois industry groups. These industry groups were: Apparel, where women represented 71.4 percent of the total employed; Personal Services, where women comprised 67.3 percent of the total; Hospitals, where 76.4 percent of the total employed were women; Private Educational Services, in which women were 62.5 percent of the employed; Public Educational Services, in which women were 61.9 percent of the employed; and Eating and Drinking Places, where women accounted for 57.1 percent of the total employed. In 1940, only four Illinois industry groups employed more women than men. Women were 67 percent of the total employed in Personal Services, 66 percent in both Apparel and Public Educational Services and 64 percent in Private Educational Services.

It is interesting to note that women were a greater percentage of total employment in 1960 than in 1950 in all but two industry groups--Public and Private Educational Services.

Women have not replaced men in the labor force even though they are a larger proportion of the employed in each industry. Employment has expanded by 1,036,741 in the twenty years between 1940 and 1960, yet the number of employed women has increased by only 535,267. In most industry groups, total employment expansion or contraction has affected both sexes in the same way (the only exception being Agriculture, Forestry and Fisheries where employed women increased dispite a loss in total employment). Women have, however, increased their numbers more rapidly than men due mainly to increased participation in the labor force (36.2% in 1960 and 27.0% in 1940) while participation by men has been at or near its peak (79.4% in 1960 and 79.5% in 1940).

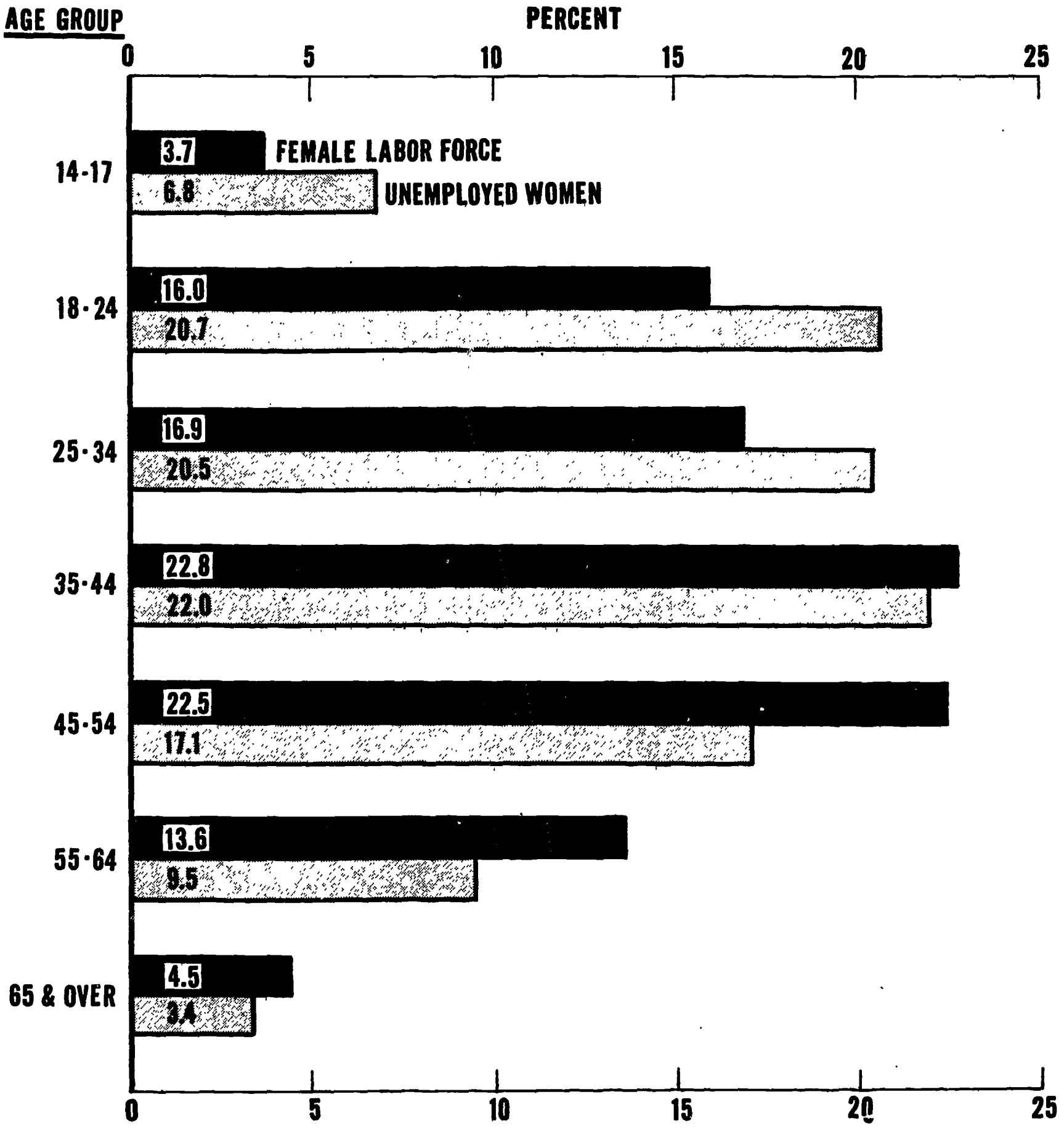
Table 9. Industry Group of Employed Women for the United States and Illinois, 1960

	Number 1960		Percent Distribution 1960		Percent Change 1950 to 1960	
	U.S.	Ill.	U.S.	Ill.	U.S.	Ill.
Female, Employed	21,172,301	1,282,200	100.0%	100.0%	+34.2%	+24.9%
Agriculture, Forestry and Fisheries	417,659	10,275	2.0	0.8	-29.5	- 5.8
Construction & Mining	185,409	9,465	0.9	0.7	+51.7	+38.6
Manufacturing	4,401,121	325,747	20.8	25.4	+20.4	+ 9.4
Machinery	722,874	95,772	3.4	7.5	+57.9	+25.4
Transportation Equipment	221,061	6,875	1.0	0.5	+42.4	+ 6.8
Other Durable Goods	783,508	76,121	3.7	5.9	+27.7	+ 9.6
Food, Kindred Products	429,729	35,204	2.0	2.7	+31.8	- 1.2
Textile Mill Products	418,109	4,529	2.0	0.4	-20.5	-18.4
Apparel and Other Fabrications	865,204	29,961	4.1	2.3	+14.4	-19.3
Other Nondurable Products	960,636	77,285	4.5	6.0	+17.2	+15.2
Transportation, Communication and Public Utilities	770,699	54,937	3.6	4.3	+10.3	- 4.2
Wholesale Trade	450,902	29,299	2.1	2.3	+18.5	+ 5.3
Food and Dairy Products Stores	567,097	34,839	2.7	2.7	+17.6	+ 2.6
Eating and Drinking Places	1,059,833	62,364	5.0	4.9	+22.2	+10.6
Other Retail Trade	2,316,733	148,196	10.9	11.6	+26.8	+16.0
Finance, Insurance and Real Estate	1,230,347	80,531	5.8	6.3	+57.3	+39.8
Business and Repair Services	340,782	27,295	1.6	2.1	+111.5	+81.8
Personal Services	2,775,917	117,295	13.1	9.1	+20.6	+ 5.2
Entertainment and Recreation	157,246	8,410	0.7	0.7	+24.1	+16.7
Educational Services, Public	1,603,147	77,624	7.6	6.1	+59.9	+61.2
Educational Services, Private	537,336	34,141	2.5	2.7	+65.2	+47.2
Hospitals	1,258,088	74,944	5.9	5.8	+77.6	+70.0
Other Professional and Related Services	1,160,483	65,816	5.5	5.1	+54.6	+41.3
Public Administration	914,134	42,897	4.3	3.3	+38.8	+25.2
Industry Not Reported	1,025,368	78,125	4.8	6.1	+210.6	+282.5

Table 10. Industry Groups of Employed Illinois Persons, and Employed Illinois Women, 1960 and 1940, and Percentage Employed Women of Employed Persons by Industry Group

	Total Employed		Female Employed		Percentage Women of Total Employed	
	1960	1940	1960	1940	1960	1940
Total Employed	3,899,472	2,862,731	1,282,200	746,933	32.9%	26.1%
Agriculture, Forestry and Fisheries	173,069	286,232	10,275	5,563	5.9	1.9
Construction and Mining	211,769	167,715	9,465	3,252	4.5	1.9
Manufacturing	1,241,001	827,744	325,747	184,377	26.2	22.3
Machinery	367,664	177,567	95,772	28,383	26.0	16.0
Transportation Equipment	48,574	24,060	6,875	2,636	14.2	11.0
Other Durable Goods	370,469	254,085	76,121	38,477	20.5	15.1
Food and Kindred Products	139,926	121,830	35,204	27,640	25.2	22.7
Textile Mill Prod.	9,466	14,042	4,529	6,481	47.8	46.2
Apparel and Other Fabricated Goods	41,954	49,041	29,961	32,385	71.4	66.0
Other Nondurable Goods	262,948	187,119	77,285	48,375	29.4	25.9
Transportation, Communications & Public Utilities	310,122	257,906	54,937	34,349	17.7	13.3
Wholesale Trade	134,975	91,025	29,299	15,967	21.7	17.5
Food and Dairy Product Stores	94,024	96,757	34,839	24,884	37.1	25.7
Eating and Drinking Places	109,239	88,002	62,364	37,694	57.1	42.8
Other Retail Trade	363,470	279,053	148,196	92,199	40.8	33.0
Finance, Insurance & Real Estate	173,501	117,495	80,531	36,972	46.4	31.5
Business and Repair Services	98,681	67,393	27,295	8,256	27.7	12.3
Personal Services	174,250	218,418	117,295	146,333	67.3	67.0
Entertainment and Recreation Services	26,476	26,576	8,410	5,640	31.8	21.2
Public Educational Services	125,397	66,706	77,624	44,032	61.9	66.0
Private Educational Services	54,653	25,364	34,141	16,286	62.5	64.2
Hospitals	98,088		74,944		76.4	
Other Professional & Related Services	149,070	121,219	65,816	60,366	44.2	49.8
Public Administration	153,138	84,576	42,897	14,223	28.0	16.8
Industry Not Reported	208,549	40,550	78,125	16,540	37.5	40.8

PERCENT DISTRIBUTION BY AGE GROUP OF THE FEMALE LABOR FORCE AND UNEMPLOYED WOMEN, ILLINOIS, 1960



CHAPTER III
UNEMPLOYED ILLINOIS WOMEN

There were 60,924 unemployed women in the experienced civilian labor force of Illinois in 1960. In 1950, there were 40,741 unemployed women in the experienced civilian labor force. While the female labor force expanded by 25.8 percent in this ten year period, female unemployment increased by 49.5 percent, almost twice as fast as the female labor force.

Age of Unemployed Women

Unemployed women workers in Illinois tended to be younger than the female labor force in 1960. Two factors point to this. First, the median age of unemployed women was 35.9 years, while the median age of the female labor force was 41.1 years. Second, in 1960, rates of unemployment were higher than the average rate of unemployment (4.8%) for all age groups under 35 years old. Thus, almost half of the unemployed women (48.0%) were under 35 years of age while only a little over a third (36.6%) of the women in the labor force were younger than 35 years of age.

Table 11. Numbers and Percentage Distribution of Unemployed Illinois Women By Age Group 1960 and 1950

Age Groups	Numbers		Percent Distribution	
	1960	1950	1960	1950
Total, 14 Years and Over	65,071	42,885	100.0%	100.0%
14 to 17 Years	4,400	3,270	6.8	7.6
18 to 24 Years	13,439	10,775	20.7	25.1
25 to 34 Years	13,370	9,565	20.5	22.3
35 to 44 Years	14,347	8,035	22.0	18.7
45 to 54 Years	11,124	6,140	17.1	14.3
55 to 64 Years	6,186	3,925	9.5	9.2
65 Years and Over	2,205	1,175	3.4	2.8

The same pattern was present in 1950. The median age of unemployed women was 32.6 years while that of the female labor force was 36.6 years. The rates of unemployment, by age groups, were higher than the average rate of unemployment (4.0%) for the age groups under 25 years of age. Better than half of the unemployed women (55.0%) were under 35, though less than half (46.3%) of the female labor force were under that age.

Between 1950 and 1960, the median age of the female labor force increased faster than the median age of the unemployed. While the median age of the female labor force increased from 36.6 years in 1950 to 41.1 years in 1960, an increase of 12.3 percent, the median age of unemployed women increased from 32.6 years in 1950 to 35.9 years in 1960, an increase of only 10.1 percent.

Changes in rates of unemployment by age groups are a function of two variables--labor force by age group and unemployment by age group. Therefore, a mere increase or decrease in the numbers unemployed may not reflect increases or decreases in unemployment rates.

Table 12. Percent Change in Illinois Female Labor Force and Female Unemployed by Age Groups between 1950 and 1960, and Unemployment Rates by Age Group, 1960 and 1950

Age Groups	Percent Change 1950-1960		Rate of Unemployment	
	Unemployed	Labor Force	1960	1950
Total	+51.7%	+25.7%	4.8%	4.0%
14-17 Years Old	+34.6	+79.7	8.8	11.8
18-24 Years Old	+24.7	- 3.6	6.2	4.8
25-34 Years Old	+39.8	- 7.3	5.9	3.9
35-44 Years Old	+78.6	+25.2	4.7	3.3
45-54 Years Old	+81.2	+60.1	3.7	3.2
55-64 Years Old	+57.6	+69.2	3.4	3.6
65 Years and Over	+87.7	+87.0	3.6	3.6

An analysis of the above table reveals that only two age groups (14-17 years and 55-64 years) experienced larger increases in female labor force than in female unemployed between 1950 and 1960. Thus, it is not an accident that these two age groups had lower unemployment rates in 1960 than in 1950.

In the other five age groups, the increase in unemployed women was greater than the increase in women in the labor force so the unemployment rate rose between 1950 and 1960. In fact, two age groups (the 18-24 year group and the 25-34 year group) decreased numerically between 1950 and 1960.

The three age groups of unemployed women whose rates of unemployment increased the most between 1950 and 1960 were the 18-24 year group, the 25-34 year group and the 35-44 year group. In each case, the increase in rates of unemployment was due to the combined effect of the large difference between the percentage increase of unemployed women and the percentage change in the female labor force.

Unemployed Women by Occupation

More than 69 percent of the unemployed women in 1960 were distributed among the three occupational groups in which the largest numbers of women in the labor force were found. These groups were Operatives (36.3% of the unemployed), Clerical and Kindred Workers (19.5% of the unemployed) and Service Workers (14.1% of the unemployed). In 1950, these same three occupational categories also contained the largest numbers of unemployed women but accounted for only 53.6 percent of the unemployed women. The percent of experienced workers who were unemployed within each group were Operatives, 24.2 percent; Clerical and Kindred Workers, 16.3 percent; and Service Workers, 13.1 percent. These three occupational groups contained the largest numbers of women in the 1950 labor force.

In 1960, the three groups named above, containing 69 percent of the unemployed, were the occupational groups which accounted for 63 percent of the female experienced civilian labor force. But in 1950, these three occupational groups accounted for 53.6 percent of the unemployed women and for 65.5 percent of the female experienced civilian labor force.

Rates of Unemployment

Unemployed women in Illinois in 1960 were 4.5 percent of the female civilian labor force. This rate was higher than the 1950 unemployment rate for women of 3.8 percent. Unemployment rates varied widely among occupational groups. Women in five groups--Laborers (8.0%), Operatives (9.6%), Service Workers (5.0%) and Craftsmen (4.9%)--had unemployment rates which were above the overall rate for women in 1960. In 1950, there were only four occupational groups which had unemployment rates exceeding the overall rate of 3.8 percent. They were Laborers (4.8%), Private Household Workers (5.0%), Operatives (4.4%) and Service Workers (4.2%).

Unemployment rates for women by occupational groups shifted in the 1950-1960 period. Only one group in 1960 had a lower rate of unemployment among women than in 1950. It was the Private Household Workers group (5.0% in 1950 and 4.3% in 1960). In this case, the number unemployed decreased, while the number of women in this group in the civilian labor force increased between 1950 and 1960.

Unemployment rates increased from 1950 to 1960 in the other occupational groups. Three occupational groups experienced increases in unemployment at the same time that the numbers in the labor force for these groups decreased. These groups were Laborers (8.0% in 1960 and 4.8% in 1950), Craftsmen (4.9% in 1960 and 3.0% in 1950) and Managers (1.3% in 1960 and 1.1% in 1950).

Women in the other five occupational groups also experienced higher unemployment rates in 1960 than in 1950. Even though the number in the civilian labor force increased in each of the categories, the higher unemployment rates were caused by the fact that unemployment increased more rapidly than the labor force in these groups. These groups were Professional Workers (1.0% in 1960 and 0.9% in 1950), Clerical Workers (2.6% in 1960 and 1.9% in 1950), Sales Workers (3.8% in 1960 and 2.7% in 1950), Operatives (9.6% in 1960 and 4.4% in 1950) and Service Workers (5.0% in 1960 and 4.2% in 1950).

Table 13. Unemployed Women by Occupational Group, Percentage Distribution and Rate of Unemployment by Occupational Group, Illinois, 1960 and 1950

Occupational Groups	Unemployed		Percentage Distribution		Rate of Unemployment By Group	
	1960	1950	1960	1950	1960	1950
Total Women	60,924	40,741	100.0%	100.0%	4.5%	3.8%
Professional, Technical & Kindred Workers	1,601	1,094	2.6	2.7	1.0	0.9
Managers, Officials & Proprietors	577	477	1.0	1.2	1.3	1.1
Clerical & Kindred Workers	11,855	6,665	19.5	16.3	2.6	1.9
Sales Workers	3,732	2,275	6.1	5.6	3.8	2.7
Craftsmen, Foremen & Kindred Workers	926	616	1.5	1.5	4.9	3.0
Operatives & Kindred Workers	22,101	9,876	36.3	24.2	9.6	4.4
Private Household Workers	2,556	2,727	4.2	6.7	4.3	5.0
Service Workers, Except Private Household	8,609	5,350	14.1	13.1	5.0	4.2
Laborers	1,133	926	1.8	2.3	8.0	4.8
Occupations Not Reported	7,834	10,755	12.9	26.4	8.0	38.0

In summary, one occupational group had a lower unemployment rate in 1960 than in 1950, while the labor force in this group increased; three occupational groups had higher unemployment rates in 1960 than in 1950, while the labor force in these groups decreased; and five occupational groups experienced higher unemployment rates at the same time that the labor force for these groups expanded. What does this mean?

In the first case, declining unemployment and increasing employment, the pattern is not yet clear. The occupational group concerned--Private Household Workers--is in the Services industry which expanded at a rapid rate during the 1950-1960 period. Thus, the unemployed in these occupations were able to find employment while new entrants were attracted by employment opportunities. Other factors, such as the need for references from past employers and the requirement to live on the premises of the employer, have kept the unemployment rate from falling under the 4.3 percent figure.

The second case, rising rates of unemployment linked with contracting employment, clearly denotes occupations in the Illinois economy in which job opportunities are declining and will continue to decline unless factors (such as higher productivity, changing technology and larger economic units) giving rise to this situation basically change or the demand-supply relationships shift dramatically. The three occupations involved are Laborers, Craftsmen and Managers.

The third group, unemployment increasing faster than the labor force, may reflect any of a number of factors. One is the possibility that the demand for labor has been or is being satisfied (Clerical Workers and Professional Workers). Another possibility is technological innovation, which may destroy, create or change labor demand at one and the same time (Operatives).

Regardless, the three unemployment situations call for different solutions and can not be lumped together either in Illinois or elsewhere, if worthwhile solutions or accomodations to the problems of unemployment are to be found.

Unemployed Women by Industry

The 20,183 rise in unemployed females in 1960 was contributed to by all but two industry groups. Only 172 women with a Miscellaneous Manufacturing industrial attachment were unemployed in 1960 as against 270 unemployed women in 1950. There were 71 unemployed women with an industrial attachment to Public Utilities against 85 unemployed in 1950.

The rate of unemployment among women in Manufacturing rose from 3.3 percent in 1950--a rate exceeded only women in Personal Services (4.6%) and Entertainment (3.6%) industry groups--to 6.9 percent in 1960, and exceeded unemployment rates for all other industry groups that year. The rise was due to the fact that unemployment rates in Durable, Non-Durable and Miscellaneous Manufacturing increased between 1950 and 1960. The former two unemployment rates were 2.8 percent and 3.8 percent in 1950 and were 7.2 percent and 6.5 percent in 1960. In each industry the number of unemployed women almost doubled by 1960.

Industrial rates of unemployment for women rose in all industries except for women with a Personal Services industrial attachment. The unemployment rate in the Personal Service group was 4.6 percent in both years although there were 244 more unemployed women in 1960. The absolute drop of unemployed women with a Miscellaneous Manufacturing industrial attachment was accompanied by a more than proportional decrease in the female experienced civilian labor force with the same

industrial attachment, so the unemployment rate increased from 8.3 percent in 1950 to 8.6 percent in 1960. The unemployment rate in Public Utilities was also constant at 1.4 percent in both 1950 and 1960. Both the numbers in labor force and the number unemployed expanded proportionally in 1960 from the 1950 totals.

The four industrial groups employing the largest numbers of women (Manufacturing, Retail Trade, Professional Services and Personal Services) were the groups having the largest numbers of unemployed women both in 1950 and 1960. Unemployed women with a Manufacturing industrial attachment numbered 10,127 in 1950 and increased to 24,105 by 1960. Unemployed women with a Retail Trade attachment numbered 7,433 in 1950 and 12,438 in 1960. Unemployed women with a Professional Services attachment numbered 1,874 in 1950 and 4,221 in 1960. There were 5,415 unemployed women in 1950 and 5,659 such women in 1960 with a Personal Services industrial attachment. Unemployed women with these four industrial attachments accounted for 61.0 percent of the unemployed women in 1950 and 76.2 percent in 1960.

Table 14. Unemployed Women by Industry Group, Percentage Distribution and Rate of Unemployment by Industry Group, Illinois, 1960 and 1950

	Females Unemployed		Percent Distribution		Rates of Unemployment	
	1960	1950	1960	1950	1960	1950
Females 14 Years & Over	60,924	40,741	100.0%	100.0%	4.5	3.8
Agriculture, Forestry & Fisheries	374	168	0.6	0.4	3.5	1.5
Construction & Mining	360	194	0.6	0.5	3.7	2.8
Manufacturing	24,105	10,127	39.6	24.9	6.9	3.3
Durable Goods	13,891	4,365	22.8	10.7	7.2	2.8
Machinery	6,941	1,920	11.4	4.7	6.8	2.5
Transportation Equipment	654	254	1.1	0.6	8.7	3.8
Non-Durable Goods	10,042	5,492	16.5	13.5	6.5	3.8
Apparel	2,301	1,418	3.8	3.5	7.1	3.7
Food Products	2,755	1,771	4.5	4.4	7.3	4.7
Miscellaneous Manufacturing	172	270	0.3	0.7	8.6	8.3
Transportation, Communications & Other Public Utilities	1,163	830	1.9	2.0	2.1	1.5
Communications	523	386	0.9	0.9	1.9	1.3
Transportation	569	359	0.9	0.9	2.5	1.8
Public Utilities	71	85	0.1	0.2	1.4	1.4
Wholesale Trade	1,303	715	2.1	1.8	4.3	2.5
Retail Trade	12,438	7,433	20.4	18.2	4.8	3.3
Finance, Insurance & Real Estate	1,332	766	2.2	1.9	1.6	1.3
Business and Repair Services	1,197	394	2.0	1.0	4.2	2.3
Personal Services	5,659	5,415	9.3	13.3	4.6	4.6
Entertainment & Recreation Services	519	305	0.9	0.7	5.8	3.6
Professional Services	4,221	1,874	6.9	4.6	1.6	1.2
Medical & Other Health Services	2,617	1,087	4.3	2.6	2.5	1.7
Educational Services	824	393	1.4	1.0	0.7	0.5
Public Administration	1,272	641	2.1	1.6	2.9	1.8
Federal	818	467	1.3	1.1	3.5	2.3
State & Local	454	174	0.7	0.4	2.1	1.2
Industry Not Reported	6,981	11,879	11.5	29.1	8.2	36.8

CHAPTER IV
INCOME OF ILLINOIS WOMEN

Income

More than 35 million women in the United States 14 years of age and over received some sort of income in 1959. More than 2 million of these women were in Illinois. A comparison of the median incomes of women in the United States and Illinois reveals that Illinois women received over $300 per year more than women with income throughout the United States. The median annual income figures for women in the United States and Illinois were $1,357 and $1,678, respectively, in 1959.

Table 15. Illinois Women With Income by Income Group, 1959 and 1949

Income Group	Numbers		Percent Distribution	
	1959	1949	1959	1949
Women With Income	2,073,863	1,437,085	100.0%	100.0%
$1-999 or loss	777,746	590,645	37.5	41.1
$1,000-1,999	357,803	368,690	17.3	25.7
$2,000-2,999	301,161	330,050	14.5	23.0
$3,000-3,999	291,137	93,805	14.0	6.5
$4,000-4,999	186,757	25,275	9.0	1.8
$5,000-5,999	80,940	11,560	3.9	0.8
$6,000-6,999	33,071	5,090	1.6	0.3
$7,000-9,999	31,169	5,655	1.5	0.4
$10,000 and Over	14,079	6,315	0.7	0.4

In comparing 1959 Illinois female income recipients with those in 1949, two facts stand out. First, the number of women with income has increased by more than 636,000 in the ten years since 1949. Second, in addition to this numerical increase, which was reflected in every income category, the percentage increase in size of categories was greatest in the higher income class intervals. For instance, between 1949 and 1959 women receiving $10,000 or more doubled; the $7,000-$9,999 bracket increased almost five fold; the $6,000-$6,999 bracket increased more than five fold; the $5,000-$5,999 bracket and the $4,000-$4,999 bracket both increased six fold. Thus, not only were more women receiving income in 1959 but more women were receiving higher incomes than in 1949.

Income is disproportionately spread among Urban, Rural Non-Farm and Rural Farm areas both nationally and in Illinois. The median income of women in the Nation's Urban areas was 63 percent above that of women in Rural Non-Farm areas and 110 percent more than the median income for women in Rural Farm areas. In Illinois, the median incomes for women in Urban, Rural Non-Farm and Rural Farm areas were $1,840, $1,044 and $894, respectively, in 1959. Thus, Illinois women in Urban areas had a median income which was 76 percent more than the median income for women in Rural Non-Farm areas and 106 percent more than the median income of women in Rural Farm areas in Illinois.

Illinois Women With Income, 1959 and 1949

	1959		1949		Percent Increase of Women With Income
	Number	Median Annual Income	Number	Median Annual Income	1959/1949
Illinois	2,073,863	$1,678	1,437,085	$1,355	+44.3%
Urban	1,765,038	1,840	1,227,020	1,476	+43.8
Rural Non-Farm	238,990	1,044	154,510	803	+54.7
Rural Farm	69,835	894	55,555	713	+25.7

Earnings

Where do these incomes originate? Earnings from participation in the labor force is the chief source of income for women. In the U. S. in 1959 the number of women with earnings was approximately 57 percent of the number of women with incomes. Illinois women with earnings that year were 59 percent of the women with incomes. As Illinois female income recipients fared better than women nationally so did Illinois women workers. In Illinois, women workers had a median earnings figure $450 in excess of that of women workers nationally as opposed to the $360 disparity in median income. In Illinois, women in the experienced civilian labor force raised their median earnings in 1959 to $2,652 a year from the 1949 median of $1,853. Of the 1,343,000 females in the labor force in 1959, earnings of less than $5000 a year were reported by 92 percent as opposed to 96.7 percent of 1,069,000 women workers earning less than an even lower figure of $4,000 a year in 1949. In 1959, approximately 42 percent of the female labor force received less than $2,000 a year as compared to almost 62 percent receiving less than that figure in 1949.

Table 16. The Number of Women with Income and Women with Earnings By Income and Earnings Brackets, Illinois, 1959 and 1949

Brackets	1959		1949	
	Income	Earnings	Income	Earnings
Total 14 Years and Over	3,723,281	1,343,124	3,432,630	1,069,725
Total With	2,073,863	1,232,000	1,437,085	913,005
$1-999 or loss	777,746	255,722	590,645	222,060
$1,000-1,999	357,803	201,713	368,690	280,305
$2,000-2,999	301,161	231,541	330,050	294,525
$3,000-3,999	291,137	258,095	93,805	80,655
$4,000-4,999	186,757	166,392	25,275	19,620
$5,000-5,999	80,940	66,861	11,560	7,465
$6,000-6,999	33,071	25,225	5,090	3,045
$7,000-9,999	31,169	20,535	5,655	2,860
$10,000 and Over	14,079	5,916	6,315	2,470
Median Income and Earnings	$1,678	$2,652	$1,355	$1,853

Women with earnings, surprisingly, were a lower percentage of the women with income in 1959 than in 1949. In the latter year, women with earnings were 63.5 percent of the women with income. In 1959, women with earnings were only 59.4 percent of the women with income. This result reflects the fact that women with income expanded more rapidly (+636,778) than those with earnings (+318,995) between 1949 and 1959.

Women with earnings were more than 70 percent of those with incomes in the income brackets between $2,000 and $6,999 per year in 1959. In 1949, women with earnings were more than 70 percent of the women with income in the income brackets between $1,000 and $4,999 a year. The table below shows a higher proportion of women with incomes than those with earnings were below $3,000 a year in 1959, and in 1949.

Percentages of Illinois Women with Income and Women with Earnings Under $3,000 A Year in 1959 and 1949

	1959		1949	
	Women With Income	Women With Earnings	Women With Income	Women With Earnings
Total Women	100.0%	100.0%	100.0%	100.0%
Under $3,000 a year	69.3	55.9	89.7	87.3

At the same time, we can also see that women with earnings have fared better than those with income in the ten year period. While the percentage of women with income under $3,000 a year fell from 89.7 percent in 1949 to 69.3 percent in 1959, the percentage of women with earnings under $3,000 a year plummeted from 87.3 percent in 1949 to 55.9 percent in 1959.

Earnings alone do not tell the full story simply because earnings over a year's time are a function of three factors. One factor is the wage or salary rate at which a person works. A second factor is the occupation and/or industry in which one works. A third factor is the length of time spent working in the course of a year. For instance, Illinois women working 50 or more weeks had a median income of $3,492 in 1959. In the same year, Illinois women working 40-49 weeks had a median income of $2,689 while those working 27 to 39 weeks had a median income of only $1,823. Total earnings may reflect changes in any or all of the above factors.

Occupation and Earnings

Median annual earnings for Illinois women were highest among Professional Workers ($3,948), Managers, Officials and Proprietors ($3,829), Craftsmen and Foremen ($3,379) and Clerical Workers ($3,233). In 1959, four of the remaining seven occupational groups had median earnings of better than $1,600 a year for women workers. These groups were Operatives ($2,711), Laborers ($2,416), Service Workers ($1,613) and Sales Workers ($1,608). Women working on farms and in private households had the lowest median earnings.

Rank Order of Median Annual Earnings of Illinois Women in 1959
By Occupational Group

	Occupations	Median Earnings
1.	Professional, Technical & Kindred Workers	$3,948
2.	Managers, Officials & Proprietors	3,829
3.	Craftsmen, Foremen and Kindred Workers	3,379
4.	Clerical Workers	3,233
5.	Operatives and Kindred Workers	2,711
6.	Laborers, Except Farm and Mine	2,416
7.	Service Workers, Except Private Household	1,613
8.	Sales Workers	1,608
9.	Farmers and Farm Managers	996
10.	Private Household Workers	788
11.	Farm Laborers and Foremen	760

There were regional differences in earnings for the same occupations among cities of similar size in the United States in 1961. Female Accounting Clerks, Secretaries, Stenographers, Typists, Telephone Operators, Shipping Packers and Cleaners in Los Angeles had higher average earnings than in Chicago. New York Telephone Operators and Packers averaged as much as those in Chicago but the other classifications averaged less. New Orleans had average salaries for these occupations which ranged from a high of 92 percent of what Chicago paid Secretaries to 47 percent of what Chicago paid its female Cleaners.

Among urban communities of different sizes in Illinois there were differences in salaries paid for the same work. To compare Chicago and Rockford, for instance, Class A Accounting Clerks, Secretaries, Stenographers, Typists and Telephone Operators in Rockford earned 91 percent, 92 percent, 88 percent, 87 percent and 88 percent, respectively, of their counterparts in Chicago in 1962.1/

An analysis of 1962 wages of eight occupations in Chicago for which both men and women were employed revealed that Tabulating Machine Operators were paid the same regardless of sex.2/ However, female Accounting Clerks, Classes A and B, Order Clerks, Payroll Clerks, Elevator Operators and Shipping Clerks averaged anywhere from 63 percent to 89 percent of the average male earnings in the same occupational classifications.

Pay differentials between the sexes have remained more or less the same since 1955 except for three of the above occupations. These were Tabulating Machine Operators where salaries for women increased 37 percent compared with 27 percent for men, finally closing the gap between the sex differentials in pay for this occupation. Salaries for Payroll Clerks increased 35 percent for women compared with 26 percent for men and Elevator Operators increased 19 percent for women compared with 16 percent for men.3/

1/ Occupational Wage Surveys, Chicago and Rockford, 1962, Bureau of Labor Statistics, U. S. Department of Labor.

2/ Occupational Wage Survey, Chicago, 1962, Bureau of Labor Statistics, U. S. Department of Labor.

3/ Occupational Wage Surveys, Chicago, 1955-1962, Bureau of Labor Statistics, U. S. Department of Labor.

Table 17. Median Annual Earnings in 1959 of Women in the Illinois Experienced Civilian Labor Force by Occupational Groups and Selected Occupations

	Total Number With Earnings	Median Earnings
Total	1,232,000	$2,685
Professional, Technical & Kindred	142,502	3,948
Nurses, Professional	29,884	3,360
Teachers, Elementary	42,893	4,381
Teachers, Secondary	11,337	4,931
Farmers and Farm Managers	2,128	996
Managers, Officials & Proprietors	36,244	3,829
Salaried	18,375	4,245
Self-Employed	10,090	2,761
Clerical and Kindred Workers	428,020	3,233
Bookkeepers	39,750	3,319
Cashiers	26,728	2,091
Secretaries	88,749	3,729
Typists	36,394	3,023
Sales Workers	86,781	1,608
Salesmen and Clerks--Retail Trade	72,959	1,559
Craftsmen, Foremen & Kindred Workers	17,754	3,379
Operatives and Kindred Workers	217,777	2,711
Machinery	25,756	3,168
Assemblers	37,019	2,934
Non-Durable Goods	37,175	2,641
Private Household Workers	53,355	788
Service Workers	154,567	1,613
Waitresses, Barmaid & Counter Workers	45,860	1,159
Cooks	18,825	1,587
Attendants, Hospitals & Other Institutions	18,125	2,008
Farm Laborers and Foremen	1,790	760
Laborers, Except Farm & Mine	7,935	2,416
Occupations Not Reported	83,147	2,553

Industry and Earnings

Only one industrial group in Illinois reported a median annual earnings for women workers of less than $1,000 a year and that was the Agricultural, Forestry and Fisheries industry group ($993). Seven industry groups reported median earnings for female employees exceeding $3,100 a year. They were Transportation, Communication, and Public Utilities ($3,762); Public Administration ($3,641); Mining ($3,548); Construction ($3,336); Wholesale Trade ($3,253); Finance, Insurance and Real Estate ($3,194); and Manufacturing ($3,162). The first five industry groups employed only 10.6 percent of the women workers in Illinois whereas, 31.7 percent were employed in the latter two industries. These same industry groups were among the eight (Agriculture, Forestry and Fisheries being the sole exception) which had the highest percentages of women working 50 or more weeks in 1959. Therefore, fully 55 percent of female workers were working in industry groups where median incomes were below $2,900 a year and which also employed proportionally fewer women for 50 or more weeks in a year.

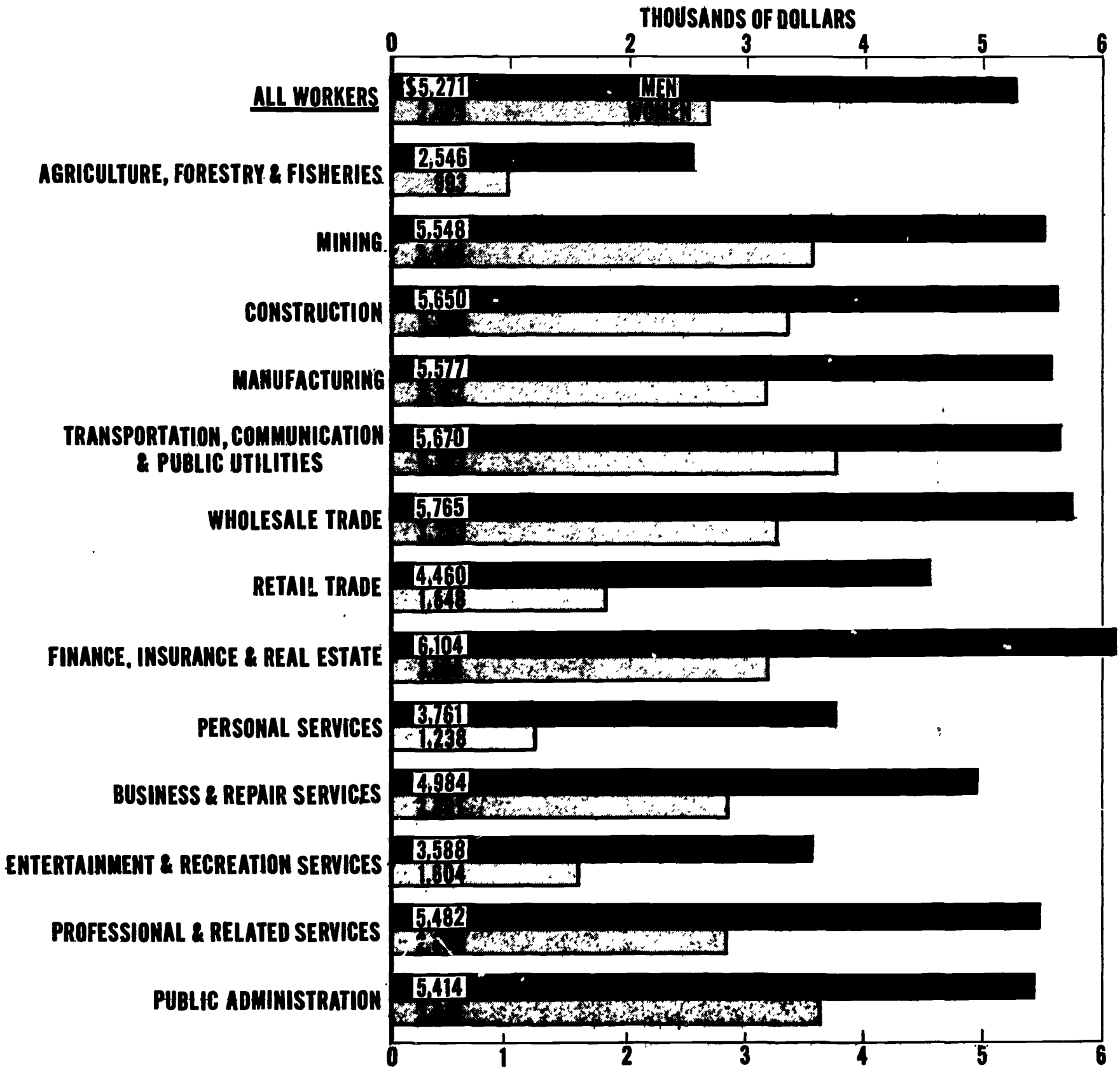
Rank Order of Median Annual Earnings of Illinois Women
In 1959 by Industry Group

	Industry	Median Earnings	Percent Worked 50 or More Weeks
1.	Transportation, Communication & Public Utilities	$3,762	71.5%
2.	Public Administration	3,641	68.3
3.	Mining	3,548	71.2
4.	Construction	3,336	64.4
5.	Wholesale Trade	3,253	64.2
6.	Finance, Insurance & Real Estate	3,194	68.4
7.	Manufacturing	3,162	57.7
8.	Business and Repair Services	2,861	52.4
9.	Professional & Related Services	2,860	41.5
10.	Retail Trade	1,848	47.8
11.	Entertainment & Recreation Services	1,604	36.3
12.	Personal Services	1,238	43.2
13.	Agriculture, Forestry & Fisheries	993	58.2

In contrast, only three industry groups had median earnings figures for men below that of the highest industrial median earnings figure for women ($3,762) and only one industry had an earnings figure for men below the median earnings of all women in 1959 ($2,685). Agriculture, Forestry and Fisheries had the lowest median earnings of all the industry groups for men ($2,546) as well as for women yet it was the only industry group where the median earnings figure for men fell below the median earnings for all women in 1959. The two industry groups in which men received a median earnings below that of the industry group having the highest median earnings for women were Entertainment and Recreation Services ($3,588) and Personal Services ($3,761). Two of the remaining ten industries had median earnings figures for men of $4,460 and $4,984 (Retail Trade and Business and Repair Services) while the median earnings for the rest of the industries were above $5,000 per year.

Most of the men (71.6%) were employed in industry groups where the median earnings for men were above $5,000 a year whereas only 8.6 percent of the employed men were in industrial groups where the median earnings for men were below

MEDIAN EARNINGS OF ILLINOIS MEN AND WOMEN BY INDUSTRY, 1959



$4,000 a year. At the same time all of the employed women were concentrated in industries where the median earnings for women were below $4,000 per year.

Even if rates of pay for the same job are equalized, there is reason to believe that the income of women will never equal that of men in the same industrial categories. The factors which prevent equalization are: the large number of part-time female workers in the labor market; the large number of women who work full-time, but for periods of less than year; the employment of women in low paying and seasonal industries and jobs where skill levels are low and easily acquired. Many occupations for which only women are considered are characterized by low pay. These factors are barriers to the acquisition of skills which lead to promotion and the acquisition of seniority, both of which would tend to increase the earnings of women in the labor force.

Table 18. Percentage Distributions of Illinois Men and Women With Earnings and Median Annual Earnings of Illinois Men and Women, By Industry Group in 1959

Industry	Percent Distribution of those With Earnings		Median Income By Industry	
	Male	Female	Male	Female
Total	100.0%	100.0%	$5,271	$2,685
Agriculture, Forestry and Fisheries	5.8	0.4	2,546	993
Mining	0.9	*	5,548	3,548
Construction	7.5	0.6	5,650	3,336
Manufacturing	35.2	27.2	5,577	3,162
Durable Goods	23.5	15.0	5,543	3,352
Non-Durable Goods	11.6	12.0	5,661	2,887
Miscellaneous Industries	0.1	0.2	5,091	2,698
Transportation, Communications, and Public Utilities	9.8	4.4	5,670	3,762
Wholesale Trade	4.0	2.3	5,765	3,253
Retail Trade	12.1	18.5	4,460	1,848
Finance, Insurance and Real Estate	3.5	6.3	6,104	3,194
Business and Repair Services	2.7	2.1	4,984	2,861
Personal Services	2.1	9.0	3,761	1,238
Entertainment and Recreation Services	0.7	0.7	3,588	1,604
Professional and Related Services	6.5	19.3	5,482	2,860
Public Administration	4.2	3.3	5,414	3,641
Industry Not Reported	5.0	5.8	4,446	2,502

*Less than one tenth of one percent

Annual Earnings of Married Women

How important are women workers to their families? In the State's 2,592,326 families, 928,936 or 35.8 percent of the families had a second earner. In the 2,279,236 husband-wife families in Illinois, 849,098 wives were working. Therefore, over 91 percent of the 928,936 families with a second earner had wives working as secondary earners. The median income of families with one earner was $5,801 a year as opposed to the median income of $7,713 per year for families with two earners, which indicates that the median secondary earner contributed $1,912.

Table 19. Number of Earners in Families in Illinois And Median Annual Incomes by Number of Earners in 1959

	Illinois	Median Income
All Families	2,592,326	$6,566
No Earners	181,850	1,572
1 Earner	1,233,221	5,801
2 Earners	928,936	7,713
3 Earners or More	248,319	10,635

Many more women may be responsible for varying proportions of family income. Some are heads of families and some are second and third earners in families of which they are not the head or the wife of the head. Their contribution is obscured by the way in which the data compiled by the Census are presented.

Table 20. Status of Employment of Husband-Wife Families in Illinois, in 1959 and Median Annual Incomes for Such Families

	Number	Median Incomes
Total Husband-Wife Families	2,279,236	$6,795
Total Working Wives	883,953	---
Head Worked	2,106,114	7,053
Wife Worked	849,098	7,970
Head Did Not Work	173,122	2,413
Wife Worked	34,855	3,920

Education and Income

One factor which affects a woman's employability and earnings is her education. Illinois women 25 years and over have increased the amount of schooling they have received since 1940. That year, women had completed a median of 8.7 years of school. This increased to 9.5 school years completed in 1950 and was 10.6 years in 1960. Whereas 40.8 percent of 2,413,181 women had received more than a grammar school education 1940, in 1960, nearly double that number, or 61 percent of 3 million women had had more than a grammar school education.

As important as this is it is more important to find that persons in Illinois in the 5-25 year old group stayed in school significantly longer in 1960. In 1940, only 58 percent of the Illinois population in the 5-25 year old group was attending school. In 1960, there were 72.7 percent of that age group attending school. Thus, a greater percentage of a larger population was being educated in 1960 than in 1940 and women represented at least half of it.

Why is education important for females? Findings in the 1960 Census revealed that as education increased so did median income. Just to note a few statistics, women in Illinois with income but no education had a median income of $744, those who had 4 years of high school had a median income of $2,470 and those who had 4 or more years of college had a median income of $4,151 a year.

MEDIAN INCOME FOR ILLINOIS WOMEN 25 YEARS AND OVER BY SCHOOL YEARS COMPLETED, 1959

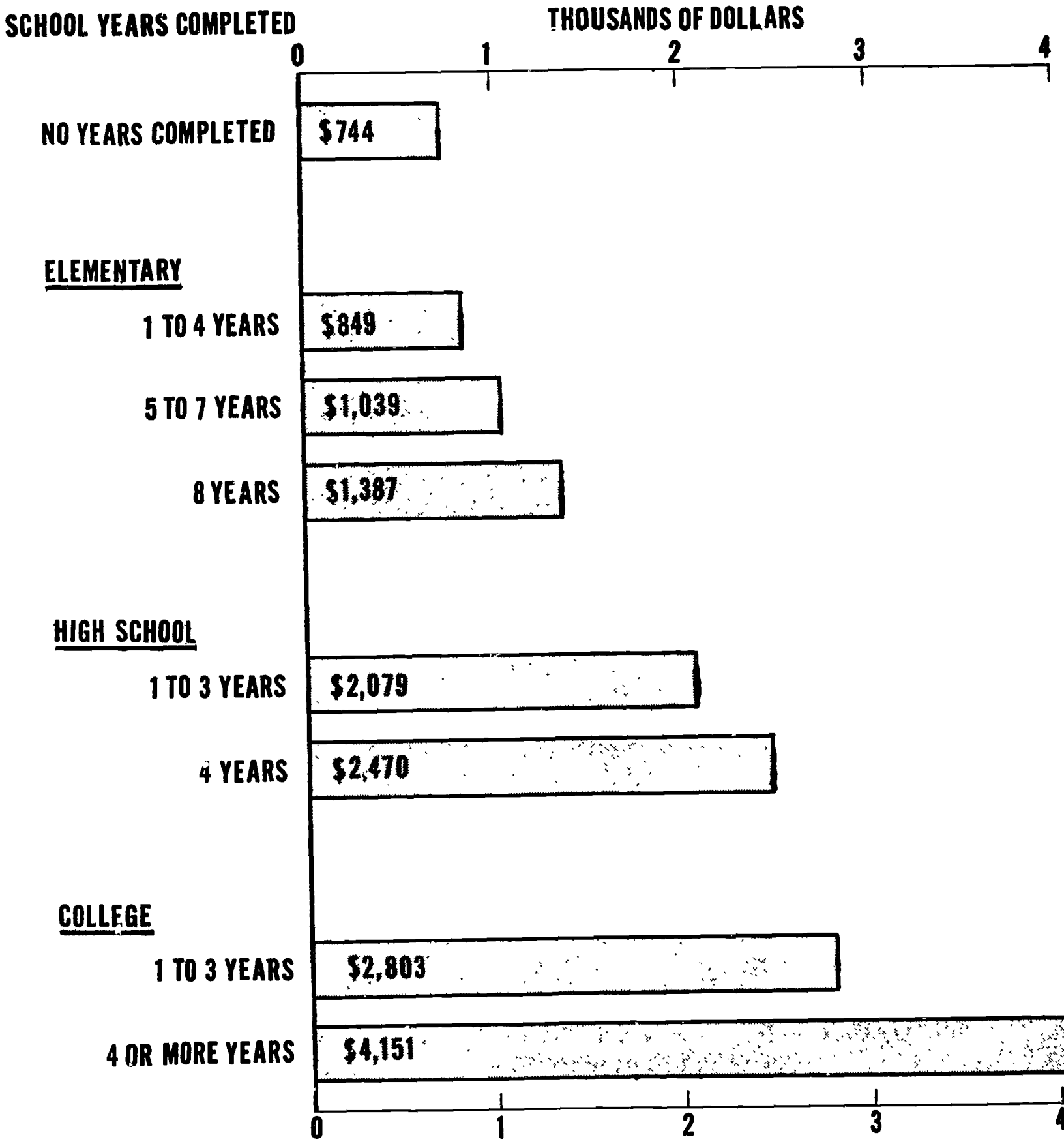


Table 21. Median Annual Incomes for Illinois Women with Income, 25 years and over by years of School Completed, 1959

Years Completed	Median Incomes
No School Years Completed	$ 744
Elementary 1 to 4 years	849
5 to 7 years	1,039
8 years	1,387
High School 1 to 3 years	2,079
4 years	2,470
College 1 to 3 years	2,803
4 or more years	4,151

The above shows a direct relation between education and income, but the main ingredient in this is the fact that education is often the key to entering occupations which command higher pay. Also, the occupations available to those with less than high school education are rapidly diminishing due to technological innovation, changing consumer demand for products and services, and increasingly selective hiring requirements.

Other Income

The importance of income other than wages or salaries is evident from the table below.

Illinois	1959	1949
Women with Income	2,073,863	1,437,085
Women with Earnings	1,232,000	913,005
Percent Women with Earnings of those with Income	59.4%	63.5%

While women workers were 59.4 percent of all women receiving incomes in 1959, women workers were 63.5 percent of all women receiving income in 1949. Therefore, more women, both numerically and proportionally, were receiving income from sources other than those associated with participation in the labor force in 1959 than in 1949.

As women with income but not in the labor force become numerically and proportionally larger, the means by which they gain these incomes become more important. Unfortunately there are no statistics for the State on other forms of income for women so the following figures apply to the Nation as a whole.

The following quote from the Handbook on Women Workers published by the Women's Bureau of the U. S. Department of Labor reveals one source of income:

> Fully 70 percent of the 8.4 million women 65 years of age and over in the population received income in 1959 under federally administered retirement programs -- either as former workers or as wives or widows of former workers.

The maximum sums paid are seldom large in these programs and women rarely get the maximum since they are in the labor force for only short periods of time.

While this is the largest source of retirement income, it is not the only source. There are many other sources of such income, but the number of elderly women drawing funds from private pension plans, personal funds and local relief is unknown. Also, there are an undetermined number of women who are now taking advantage of the earlier retirement age under the 1956 amendment to the Social Security Act, which reduced the retirement age from 65 years to 62 years of age.

Income from investments is becoming a more important source of income to women. Not only are stocks, bonds, insurance and other types of investments more widely held than formerly, but increasingly large amounts of these securities are owned by women. A 1951-52 study by the Brookings Institution revealed that an estimated "3,230,000 women owned stock in 1951-52 and represented slightly less than half of all individual shareholders." In 1952, although women were slightly less than 50 percent of the stockholders, they owned only 823 million shares which were well below the 1,050 million shares held by men. The average value of these holdings was $3,461 for women and $4,197 for men. In 1962, a New York Stock Exchange Study estimated that 8,291,000 women owned stock and this figure was 51 percent of the total number of stockholders in the Nation.

As the table below reveals, women were significant owners of all types of securities in 1952. Over 63 percent of the women in the United States owned life insurance, more than 33 percent owned savings accounts, almost 27 percent owned Series "E" Savings Bonds and 16 percent owned various other investments.

This table also revealed that women were 50 percent of the owners of savings accounts, 50 percent of the owners of publicly held stock and 53 percent of the owners of other government bonds. There is reason to believe, due to increasingly higher incomes among women and the increased numbers of women with incomes, that these percentages and numbers have increased since 1952.

Table 22. Selected Investments Owned by Women, 1952

Type of Investment	Number of women owners (in thousands)	Percent of women who are owners[1]	Percent of owners who are women
Total[2]	61,200	77.8%	50%
Life Insurance	49,980	63.6	48
Savings Accounts	26,430	33.6	50
U. S. Series "E" Bonds	21,130	26.9	49
Annuities and Pensions[3]	5,010	6.4	35
Publicly Owned Stock	3,230	4.1	50
Other Government Bonds[4]	1,960	2.5	53
Privately held Stocks	1,140	1.5	38
Real Estate Mortgages and Bonds	850	1.1	45
Corporate Bonds	350	0.4	44

SOURCE: Table 20, 1960 Handbook on Women Workers, Women's Bureau, U. S. Department of Labor, Page 87.

1/ Based on a total female population of 78,620,000 in 1952

2/ Items exceed the total because some women had more than one type of investment

3/ Does not include Federal Old-Age and Survivors Insurance

4/ Includes bonds of Federal (excluding Series "E" bonds), State, county, municipal, and foreign governments.

Supplementary Benefits

Supplementary benefits, difficult as they are to convert to monetary terms, have become an integral part of the system our society uses to pay its workers for the services they render. Some supplementary benefits increase the actual amount of money received by the worker (shift differentials, paid vacation, sick leave, etc). Other benefits increase the real income of workers by lowering or relieving them of the expense of hospitalization, sickness and insurance policies and pension plans. Other benefits increase the leisure workers receive by decreasing the number of hours worked per week so that workers are free to partake in other activities. Supplementary benefits are usually a combination of the above three types of benefits.

As is true for the entire society, women have an improved economic position today due to increases in supplementary benefits as well as wages and other income. The following paragraphs are examples of what has happened between 1955 and 1962 to such benefits as pay differentials for second shift employees, paid vacations, paid holidays, and health, insurance and pension plans in Cook County.[4]

In 1955, only 16.7 percent of the firms having a second shift had shift pay differentials for all workers as compared with 17.5 percent in 1962.

4/ Occupational Wage Surveys for Chicago 1962, 1956 and 1955, Bureau of Labor Statistics, U. S. Department of Labor.

The scheduled work week dropped between 1955 and 1962. In the former year, 62 percent of the offices had a 40 hour work week, but by 1962 only 58 percent had work weeks of that length and none had longer work weeks. Plants having scheduled work weeks longer than 40 hours dropped from nine percent to seven percent.

Only 37 percent of the offices and 22 percent of the plants had more than six holidays per year in 1955 against 76 percent of the offices and 65 percent of the plants in 1962.

Paid vacation provisions were also more liberal in 1962. Although paid vacation provisions remained about the same for workers having 5 years or less service, both office and plant workers with over 5 years service gained added vacation. After ten years service, 72 percent of the offices granted two week vacations and only 26 percent granted more in 1955. In 1962, the data show that 42 percent of the offices granted two weeks and 59 percent allowed more. Upon completion of 20 years service in 1955, only 83 percent of the offices granted vacations of three weeks or more, while 92 percent of the offices allowed three weeks or more in 1962. After 10 years service, workers in only 25 percent of the plants received more than two weeks vacation in 1955 as opposed to 57 percent receiving vacations of similar length in 1962. Upon completion of 20 years service, 81 percent of the plants granted 3 or more weeks vacation in 1955. In 1962, vacations of 3 or more weeks were granted by 89 percent of the plants to workers with 20 years service.

Health, insurance and pension plans covered more workers in 1962 than in 1956. Approximately 93 percent of the offices and 92 percent of the plants provided life insurance in 1956. By 1962 these figures had increased by four and three percentage points, respectively. Hospitilization covered 88 percent of the offices and 92 percent of the plants in 1962 and represented increases of nine and six percentage points, respectively, since 1956. Smaller percentage point increases in coverage were experienced in sickness and accident benefits and retirement pensions.

CHAPTER V
WEEKS WORKED BY ILLINOIS WOMEN

Introduction

The number of weeks worked during a year by women is important for two reasons. First, it effectively dramatizes one of the reasons why the median earnings of women are beneath those of men. Second, it reflects the differences between men and women as to their conditions of employment with respect to the duration of continuous employment. Such conditions of employment may be a result of either the prevailing pattern of the industries to which women are attached or the personal decisions of women. Although the personal decisions of women may be the more important element, the prevailing pattern of the industry may have an equal effect.

Women worked fewer weeks than men in 1959. Of the 1,593,422 Illinois women who worked that year, 706,958, or 44.4 percent, worked 50 or more weeks, as compared to 67.7 percent of the men who worked 50 or more weeks that year (1,977,035 out of 2,920,791 men who worked in 1959). Some 453,000 women were employed for fewer than 27 weeks, and this number was 28.4 percent of all women with work experience that year. Only 11.1 percent of the men with work experience in 1959 worked less than 27 weeks.

Table 23. Weeks Worked in 1959 by Illinois Women and Percentage Distributions of Women and Men in Illinois by Weeks Worked in 1959

Weeks Worked	No. of Women Workers	Percent Distribution	
		Women	Men
Total	1,593,422	100.0%	100.0%
50 to 52 weeks	706,958	44.4	67.7
48 to 49 weeks	93,272	5.9	6.3
40 to 47 weeks	159,832	10.0	8.3
27 to 39 weeks	180,267	11.3	6.6
14 to 26 weeks	190,280	11.9	5.1
13 weeks or less	262,813	16.5	6.0

Occupations and Weeks Worked

Only 39.3 percent of the women with earnings were in occupational groups where more than half of the women were employed 50 or more weeks in 1959. These groups were Managers (76.7%), Farm Managers (79.1%), Clerical Workers (64.2%), and Craftsmen (64.2%). The occupational groups which had the lowest percentages of women working 50 or more weeks were the Professional, Technical and Kindred group (36.8%), the Private Household Worker group (35.4%), and the Farm Laborer and Foremen group (38.4%).

Industry and Weeks Worked

More than 60 percent of the women with industrial attachments in Mining (71.2%), Transportation, Communication and Public Utilities (71.5%), Construction (64.4%), Wholesale Trade (64.2%), Finance, Insurance and Real Estate (68.4%), and Public Administration (68.3%) worked 50 or more weeks in 1959. However, only 16.9 percent of all women with earnings were employed in these industries.

Less than half of the women in four industries worked 50 or more weeks in 1959 yet these industries provided earnings for a little more than 47.5 percent of the women with earnings. These industry groups were Professional and Related Services (41.5%), Personal Services (43.2%), Retail Trade (47.8%) and Entertainment and Recreation Services (36.3%).

Thus, for one reason or another, women with earnings suffer more severely than men with earnings from discontinuous employment during the course of a year, as only 52.6 percent of the women worked 50 or more weeks while 71.6 percent of the men were able to work as many weeks in 1959. Mining and Construction were the only two industry groups where a higher percentage of women than men worked 50 or more weeks. While 71.2 percent of the women in Mining worked 50 or more weeks, only 65.9 percent of the men worked that long. In Construction, 64.4 percent of the women worked 50 or more weeks compared to only 45.4 percent of the men. This was mainly due to the fact that female employment in these two industries was concentrated in Clerical occupations, an occupational group which seems to offer one of the best possibilities for employment for 50 or more weeks each year. Production in these industries, on the other hand, is seasonal, there is a high concentration of male labor in the productive processes, and this accounts for the relatively lower percentage of men who were employed for 50 or more weeks in 1959.

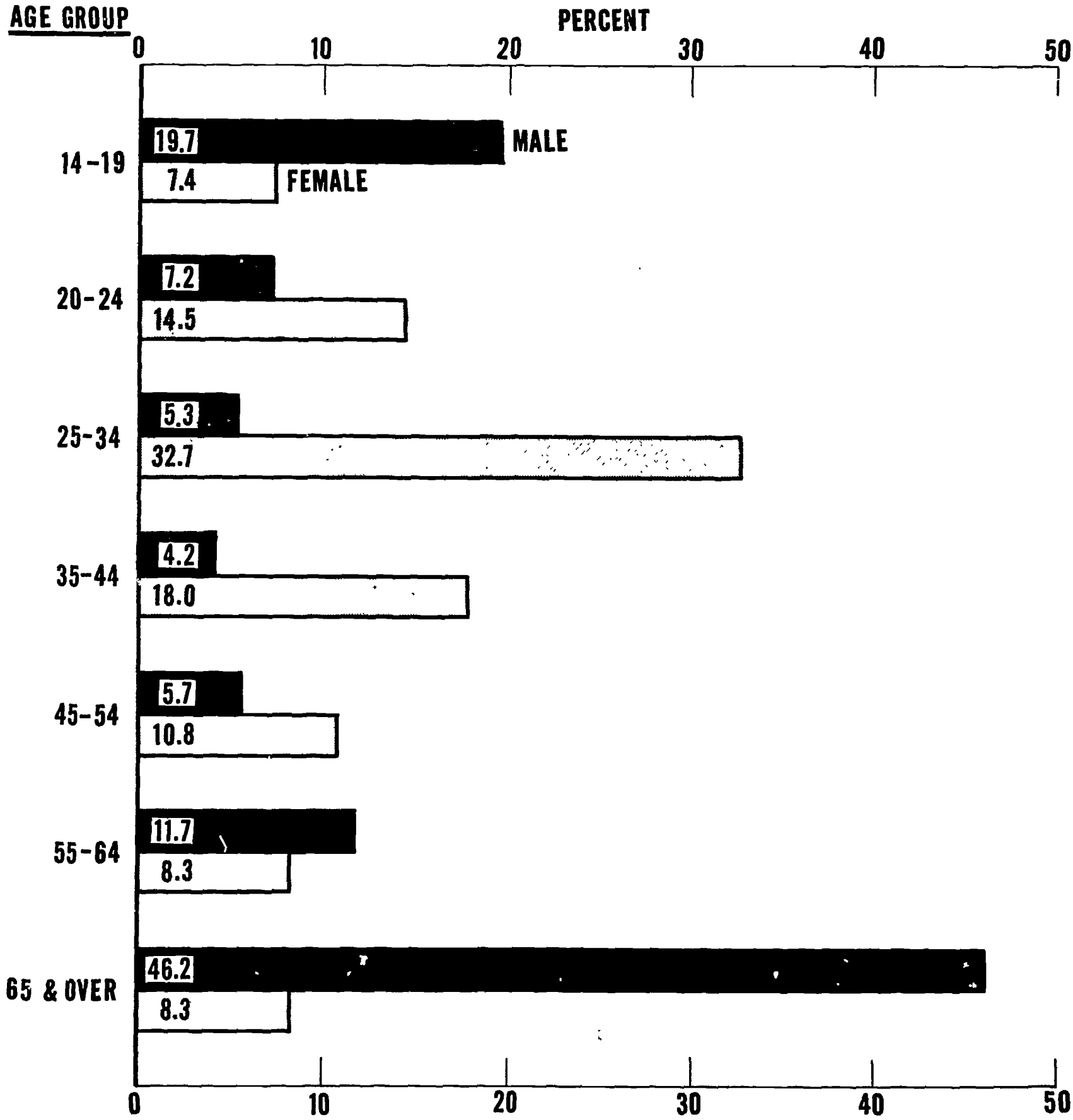
Table 24. Percent of Illinois Working Women employed 50 or more weeks in 1959 by Occupational Groups

Occupational Group	Percent Distribution	Percent Worked 50 - 52 Weeks
Total	100.0%	52.6%
Professional, Technical & Kindred	11.6	36.8
Farmers and Farm Managers	0.2	79.1
Managers, Officials and Proprietors	2.9	76.7
Clerical and Kindred Workers	34.8	64.2
Sales Workers	7.0	43.9
Craftsmen, Foremen and Kindred Workers	1.4	64.2
Operatives and Kindred Workers	17.7	49.7
Private Household Workers	4.3	35.4
Service Workers	12.6	43.7
Farm Laborers and Foremen	0.1	38.4
Laborers, Except Farm and Mine	0.6	45.5
Occupations Not Reported	6.8	50.8

Table 25. Percentage Distribution by Industry Group of Illinois Women with Earnings and Percent Worked 50 or More Weeks by Industry Group, 1959

Industry	Percent Distribution	Percent Worked 50 - 52 Weeks
Total	100.0%	52.6%
Agriculture, Forestry and Fisheries	0.4	58.2
Mining	0.1	71.2
Construction	0.6	64.4
Manufacturing	27.2	57.7
Durable Goods	15.0	59.0
Non-Durable Goods	12.0	56.0
Miscellaneous Industries	0.2	48.3
Transportation, Communications & Public Utilities	4.4	71.5
Wholesale Trade	2.3	64.2
Retail Trade	18.5	47.8
Finance, Insurance and Real Estate	6.3	68.4
Business and Repair Services	2.1	52.4
Personal Services	9.0	43.2
Entertainment and Recreation Services	0.7	36.3
Professional and Related Services	19.3	41.5
Public Administration	3.3	68.3
Industry Not Reported	5.8	50.0

PERCENT DISTRIBRUTION BY SEX OF ILLINOIS RESIDENTS NOT IN THE 1960 LABOR FORCE BUT WITH WORK EXPERIENCE BETWEEN 1950 AND 1960



CHAPTER VI
EXPERIENCED WOMAN POWER IN ILLINOIS

Introduction

A count of the number of persons in the labor force understates the number of persons who possess skills useful to the economy, since this count includes only the employed and the unemployed who are actively seeking work. On the other hand, a count of the total number of persons of labor force age overstates the number of persons with useful skills, because many of these persons do not have such skills and others can not use their skills for either physical, mental or social reasons. Yet, people with marketable skills who are not employed represent a labor reserve of trained workers immediately available for economic growth or national emergency.

For this reason, the large numbers of persons who are not in the labor force but who have labor force experience are of special significance. First, these persons represent a reservoir of trained and experienced workers. Though the numbers overstate the size of this reservoir (due to changing technology, disability and retirement), these persons are an able, but not currently available, supply of skilled workers. Second, these persons represent a pool of persons who are most likely to participate in the labor force at some future date. Being experienced, they would adapt most rapidly to productive employment.

Illinois Women with Work Experience

Illinois women with work experience, but not currently in the labor force, are a sizable potential manpower resource of the State. In fact, women are a more important potential source of trained manpower than men in this category for several reasons. First, there were 853,350 women in Illinois who had been members of the labor force during the ten year period since 1950 but were not members of the labor force in April, 1960. There were only 359,910 men in this category in April, 1960.

Second, women who had had labor force experience in the ten year period since 1950 and were not in the labor force in April, 1960 were younger than their male counterparts. More than 54 percent of the women in this category were younger than 35 years of age, while only 32 percent of their male counterparts were younger than 35. At the other end of the age range, 46.2 percent of the men in this category were 65 years and over while only 8 percent of the women were 65 years and over.

Table 26a. Illinois Persons with Work Experience Between 1950 and 1960 but not in the 1960 Illinois Labor Force, by Sex and Age Group, 1960

Age Group	Male	Female	Percent Distribution Male	Percent Distribution Female
Total	359,910	853,350	100.0%	100.0%
14 to 19 Years Old	71,025	63,374	19.7	7.4
20 to 24 Years Old	26,072	123,388	7.2	14.5
25 to 34 Years Old	19,238	279,345	5.3	32.7
35 to 44 Years Old	15,053	153,297	4.2	18.0
45 to 54 Years Old	20,384	92,206	5.7	10.8
55 to 64 Years Old	42,277	70,806	11.7	8.3
65 Years and Over	165,861	70,934	46.2	8.3

Age

Third, a careful analysis of the labor force participation rate patterns by age group for men and women reveals that women are more likely to re-enter the labor force when they become older than men. In the table below, the participation rates by age group for men in 1960 rose to a high of 96.2 percent for the 35-39 year old group. The rates for the older age groups slowly declined until the 60-64 year old group was reached, where the rate was 82.0 percent. At this point, the participation rates for the groups 65 years and over fell off sharply.

Percent of Population in Labor Force by Age Group, 1960

	Male	Female
Total, 14 Years and Over	79.4%	36.2%
14 to 15 Years	15.4	6.9
16 to 17 Years	39.6	27.1
18 to 19 Years	70.2	54.8
20 to 24 Years	87.4	47.3
25 to 29 Years	94.8	34.9
30 to 34 Years	96.0	34.9
35 to 39 Years	96.2	40.4
40 to 44 Years	95.9	46.5
45 to 49 Years	95.2	49.7
50 to 54 Years	93.4	47.8
55 to 59 Years	89.8	41.8
60 to 64 Years	82.0	31.7
65 to 69 Years	47.9	18.3
70 to 74 Years	31.4	10.9
75 Years and Over	16.9	4.8

In contrast, the participation rates by age groups for women had two peaks with a valley in between in 1960. The rates for the younger groups of women rose sharply to a peak of 54.8 percent for the 18-19 year old group. Then the participation rates fell off to 34.9 percent for the 30-34 year old group and again rose to 49.7 percent for the 45-49 year old group. Beyond this age group, the participation rates again declined.

Detachment from the Illinois Labor Force

Of the 853,350 women with labor force experience since 1950 but not in the labor force in April, 1960, approximately 73 percent detached themselves from the labor force during and after 1955. More than one-half of the latter group of women left the labor force in the 1959-1960 period.

Table 26b. Experienced Women not in the 1960 Labor Force, by Age and by Period of Separation from the Labor Force

Age Groups	Total	Period of Separation		
		1959-1960	1955-1958	1950-1954
Total	853,350	328,708	295,624	229,018
Percent of Total	100.0%	38.6%	34.6%	26.8%
14-19 Years Old	63,374	55,741	7,376	257
20-24 Years Old	123,388	59,030	54,609	9,749
25-34 Years Old	279,345	73,921	100,134	105,290
35-44 Years Old	153,297	53,953	49,334	50,010
45-54 Years Old	92,206	37,459	31,168	23,579
55-64 Years Old	70,806	27,500	25,080	18,226
65 Years and Over	70,934	21,104	27,923	21,907

19

Women usually began to withdraw from the labor force for the first, and sometimes last, time when they reached 20 to 24 years of age. During the 1950-1960 period, there were two indications of this phenomenon. First, a careful analysis of the age groups of women with experience but not in the labor force in 1960 by the period in which they withdrew from the labor force showed that a large number of women were between 20 and 24 years old at the time they withdrew from the labor force. Second, the participation rate for women 20 to 24 years of age was lower than that for the 18 to 19 year old group of women in 1960.

Once a woman has withdrawn from the labor force, she tends to remain out for at least a period of ten to fifteen years. The numbers of women with labor force experience but not in the labor force who were 35 to 44 years of age were much smaller than the numbers of such women 25 to 34 years of age. This phenomenon is significant no matter which of the three separation periods is examined.

Occupational Skills

The occupational skills pattern of the 853,350 women with work experience but not in the labor force was very similar to the pattern for the women in the labor force in 1960. The five largest occupational groups (Clerical, Operatives, Service, Professional and Sales Worker Groups) for women in the labor force were the five largest groups for women not in the labor force. While nearly 83 percent of the women in the labor force were in these five groups, almost 88 percent of the women with experience and not in the labor force were concentrated in these occupational groups. Among the five occupational groups, women with experience were most heavily concentrated in the Clerical group (37.3%), which was followed by the Operative group (18.7%), the Service group (13.8%), the Sales group (10.2%) and the Professional group (7.8%). The other groups (Managers, Craftsmen, Private Household Workers and Laborers) contained from 1.1 percent to 4.4 percent of the women.

Of the total number of experienced women both in and out of the labor force in Illinois, almost 39 percent were not in the 1960 labor force. The occupational groups which had the largest percentages of the total experienced women outside the 1960 labor force were Sales Workers (46.7%), Laborers (46.4%), Clerical Workers (41.2%), Operatives (41.0%) and Service Workers (40.7%). Of the above occupational groups, the Sales group was affected by high turnover, and the Laborer and Operative groups were affected by diminishing demand.

Less than one-third of the total number of experienced women in four occupational groups were outside the labor force in 1960. They were Managers, Officials and Proprietors (26.0%), Professional, Technical and Kindred Workers (30.2%), Craftsmen, Foremen and Kindred Workers (31.4%) and Private Household Workers (32.1%).

PERCENT DISTRIBUTION OF ILLINOIS WOMEN WITH LABOR FORCE EXPERIENCE SINCE 1950 BY OCCUPATIONAL GROUPS

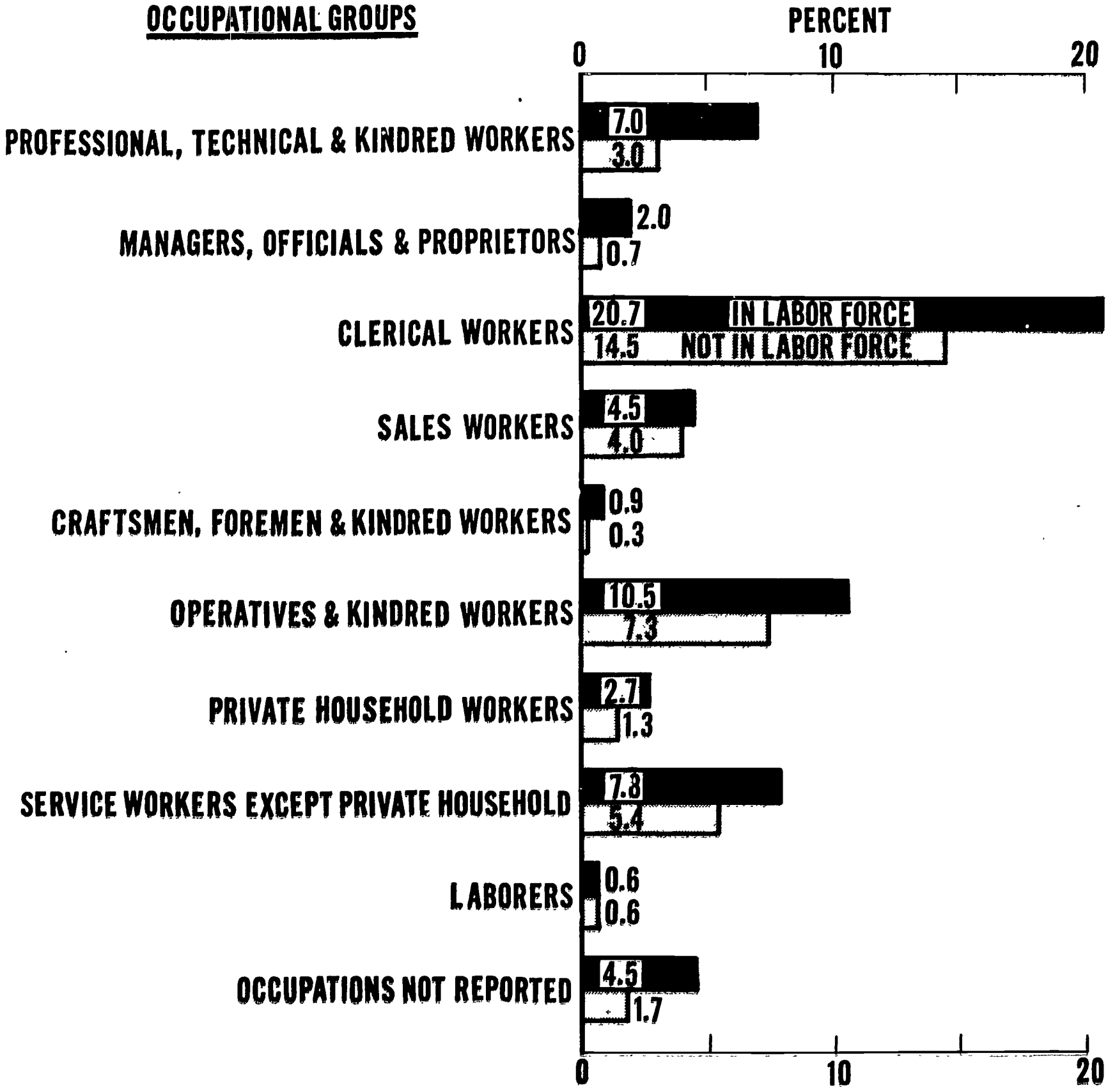
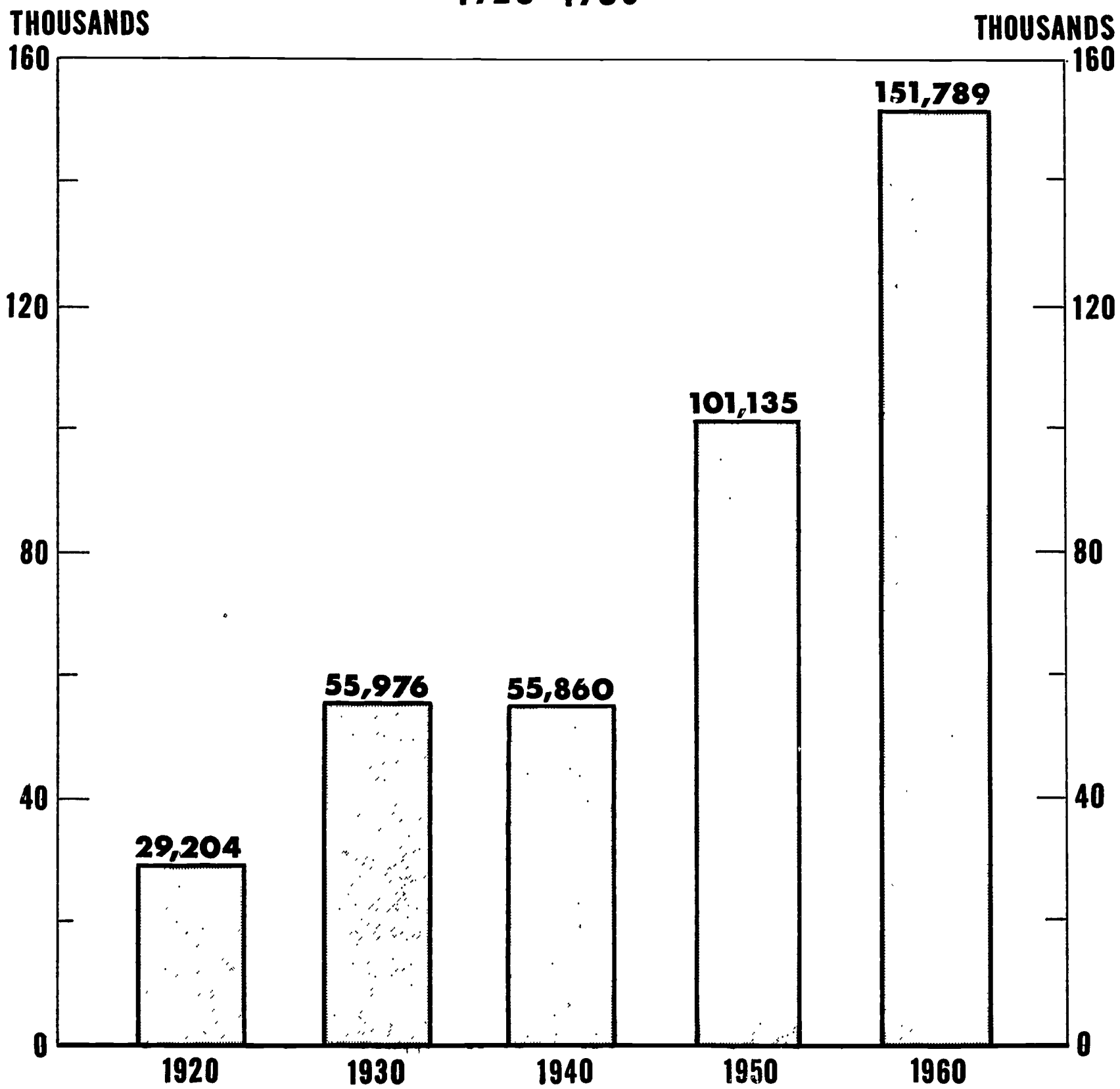


Table 27. Total Number of Illinois Women with Labor Force Experience Since 1950 and Women by Employment Status in 1960 by Occupational Groups

Occupational Groups	Total With Experience	Experienced Women		Percent Not In Labor Force	Percent Distribution	
		In Labor Force	Not In Labor Force		In Labor Force	Not In Labor Force
Total Experienced Women	2,196,474	1,343,124	853,350	38.9%	100.0%	100.0%
Professional, Technical and Kindred Workers	220,744	154,041	66,703	30.2	11.5	7.8
Managers, Officials and Proprietors	59,282	43,879	15,403	26.0	3.2	1.8
Clerical and Kindred Workers	772,751	454,468	318,283	41.2	33.8	37.3
Sales Workers	185,958	99,036	86,922	46.7	7.4	10.2
Craftsmen, Foremen and Kindred Workers	27,354	18,772	8,582	31.4	1.4	1.0
Operatives and Kindred Workers	390,153	230,237	159,916	41.0	17.1	18.7
Private Household Workers	87,285	59,308	27,977	32.1	4.4	3.3
Service Workers, Except Private Household	288,925	171,307	117,618	40.7	12.8	13.8
Laborers	26,470	14,197	12,273	46.4	1.1	1.5
Occupations Not Reported	137,552	97,879	39,673	28.8	7.3	4.6

NONWHITE WOMEN IN THE ILLINOIS LABOR FORCE
1920-1960



CHAPTER VII
NON-WHITE WOMEN IN THE ILLINOIS LABOR FORCE

The following chapters describe the characteristics of non-white women in Illinois as they reflect and affect the participation of this group of women in the labor force. These characteristics are then compared with those for all women workers in the State so that similarities and differences may be exposed, and trends compared.

The characteristics of non-white women are important for two reasons. First, the non-white population is an increasing proportion of the State's population. Second, the challenge of the twentieth century has been and is the integration of non-white minority groups into an increasingly complex industrial and urban society. Therefore, information about these groups is crucial to planning effective action programs.

Most of the data in the Census of Population reports are separated according to color, i.e., "white" and "non-white". The "white" and "non-white" categories were designed to approximate the concepts of these categories held by the general public. However, "non-white" is defined to include only Negroes, American Indians, Japanese, Chinese, Filipinos, Koreans, Asian Indians, Malayans and persons who have strong ancestral and/or ethnic ties with one of the above groups and "white" are all those who are not in the "non-white" group.

Composition of Non-White Women in Illinois

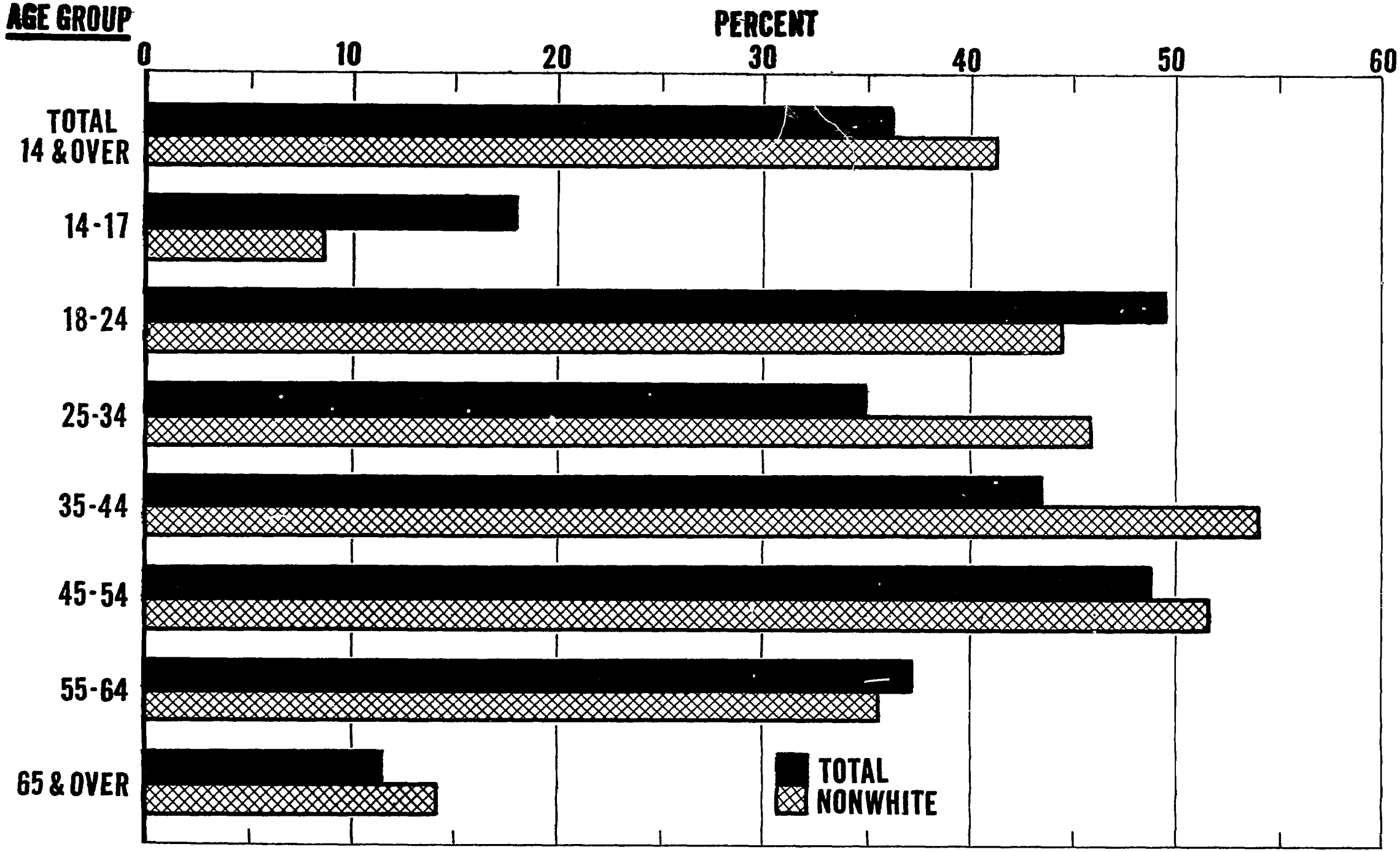
More than 97 percent of the 553,727 non-white women in Illinois in 1960 were Negroes. The next largest groups of non-white women in Illinois--Japanese, Chinese and American Indians--numbered only 7,028, 2,726 and 2,259, respectively, that year. Though the number of Negro women has grown rapidly since 1940 (+167.4%), the number of non-white women during the same period grew even more rapidly (+173.3%). This was chiefly due to the Japanese-American migration from coastal areas during World War II and the migration of American Indians from Indian Reservations during the 1950's.

Non-White Women in Illinois by Race or National Ancestry and Percentage Increases 1960, 1950, 1940 and 1890

	1960	1950	1940	1890	Percent Increases 1960/1950	Percent Increases 1960/1940
Total Non-White	553,727	341,815	202,593	26,947	+62.0%	+173.3%
Negro	538,586	334,220	201,379	26,880	+61.1	+167.4
Am. Indian	2,259	486	289	51	+364.8	+681.7
Japanese	7,028	5,196	127	1	+35.3	+4533.9
Chinese	2,726	1,173	501	15	+132.4	+444.1
Others	3,128	740	297	INA	+322.7	+953.2

In 1890, there were only 26,947 non-white women in Illinois. In 1960, there were 533,727 non-white women in Illinois, an increase of 526,780 non-white women. Two-thirds of this increase has occurred in the twenty-year period between 1940 and 1960 when the non-white female population swelled by 351,134.

PERCENT OF POPULATION IN THE TOTAL AND NONWHITE FEMALE LABOR FORCE, BY AGE GROUP 1960



Numbers

Employment status figures for Illinois women, by color, reveal three things:

1. Proportionately more non-white women were in the labor force than all women. Over 41 percent of the non-white women 14 years and over were in the Illinois labor force while only 36.2 percent of all women were active in the labor market in 1960.

2. Non-white women were an increasing segment of the total female labor force. Non-white women were only 9.5 percent of the female labor force in Illinois in 1950 but, 11.3 percent of all women in the labor market were non-white by 1960.

3. Non-white women experienced higher unemployment rates than white women. While only 4.8 percent of the female labor force were unemployed in April, 1960, the percent of the non-white women in the labor force who were unemployed was 12.1 percent.

National percentages were as striking on these three points. Non-white women exhibited a higher rate of participation (41.8%) in the U. S. labor force than all women (34.5%). Non-white women workers were 12.7 percent in 1950 and 12.8 percent in 1960 of total women workers in the U. S. Non-white women experienced higher unemployment rates than white women in both 1960 and 1950 in the Nation. In 1960, non-white unemployed women were 8.5 percent of the non-white female labor force while all unemployed women were only 5.4 percent of the total female labor force. In 1950, unemployed non-white women were 7.9 percent of the non-white female labor force and all unemployed women were only 4.6 percent of the total female labor force.

Table 28. Non-White Illinois Women in the Population and In the Labor Force by Age Group, 1960 and 1950

	Population		Labor Force		Percent of Population In Labor Force	
	1960	1950	1960	1950	1960	1950
Total, 14 Years and Over	366,024	261,650	151,789	101,760	41.5%	38.9%
14-17 Years	29,577	16,820	2,579	1,015	8.7	6.0
18-24 Years	54,134	42,200	24,086	17,385	44.5	41.2
25-34 Years	86,496	67,375	39,693	32,010	45.9	47.5
35-44 Years	75,387	56,815	40,732	27,950	54.0	49.2
45-54 Years	53,285	39,745	27,536	16,115	51.7	40.5
55-64 Years	38,177	21,170	13,629	5,895	35.7	27.8
65 Years and Over	28,968	17,525	3,534	1,390	12.2	7.9
Median Age	25.5	29.3	37.4	35.2	--	--

Age

The age distribution of non-white women workers in 1960 was somewhat different from that of all women workers in Illinois. Non-white women workers were drawn from a population which had a median age of 25.5 years as opposed to a median age of 31.8 years for all women, so non-white women workers had a median age of 37.4 years compared to 40.9 years for all women workers.

Non-white women workers under 35 years of age were 43.8 percent of all non-white women workers in 1960. This percentage was larger than the 36.6 percent for all Illinois women workers under 35 years of age. The age group which contained the largest percentage (26.8%) of non-white workers was the 35-44 year old group. This was the same group which held the largest percentage of all women workers.

Thus, non-white women workers, although exhibiting the same general pattern as all women workers, had 70.6 percent of their number under 45 years of age, while the percentage of all women workers under that age was only 59.4 percent. The age group which showed the greatest disparity was the 25-34 year old group which contained 26.2 percent of the non-white women workers but only 16.9 percent of all women workers.

Table 29. Percentage Distribution of the Illinois Non-White Female Labor Force by age, 1960 and 1950

Age Groups	1960	1950
Total, 14 years and Over	100.0%	100.0%
14 to 17 years	1.7	1.0
18 to 24 years	15.9	17.1
25 to 34 years	26.2	31.5
35 to 44 years	26.8	27.4
45 to 54 years	18.1	15.8
55 to 64 years	9.0	5.8
65 years and over	2.3	1.4
Median Age (in years)	37.4	35.2

Marital Status of Non-White Women

The 366,024 non-white women in Illinois, 14 years and over, when distributed by marital status indicated a pattern somewhat different from that for all women 14 years and over in Illinois in 1960. The largest group of non-white women were married and lived with their husbands, as was true of all women. But 62.2 percent of all females in the State were in this group whereas only 48.4 percent of the non-white females were married and living with their husbands. Other differences in marital characteristics between the non-white and total female populations were that 14.7 percent of the non-white females were married but did not live with their husbands while only 3.6 percent of the State's women had this status; that 5.3 percent of the non-white women were divorced while only 2.9 percent of the total female population were in this group.

MARITAL STATUS OF THE ILLINOIS NONWHITE FEMALE LABOR FORCE, 1960

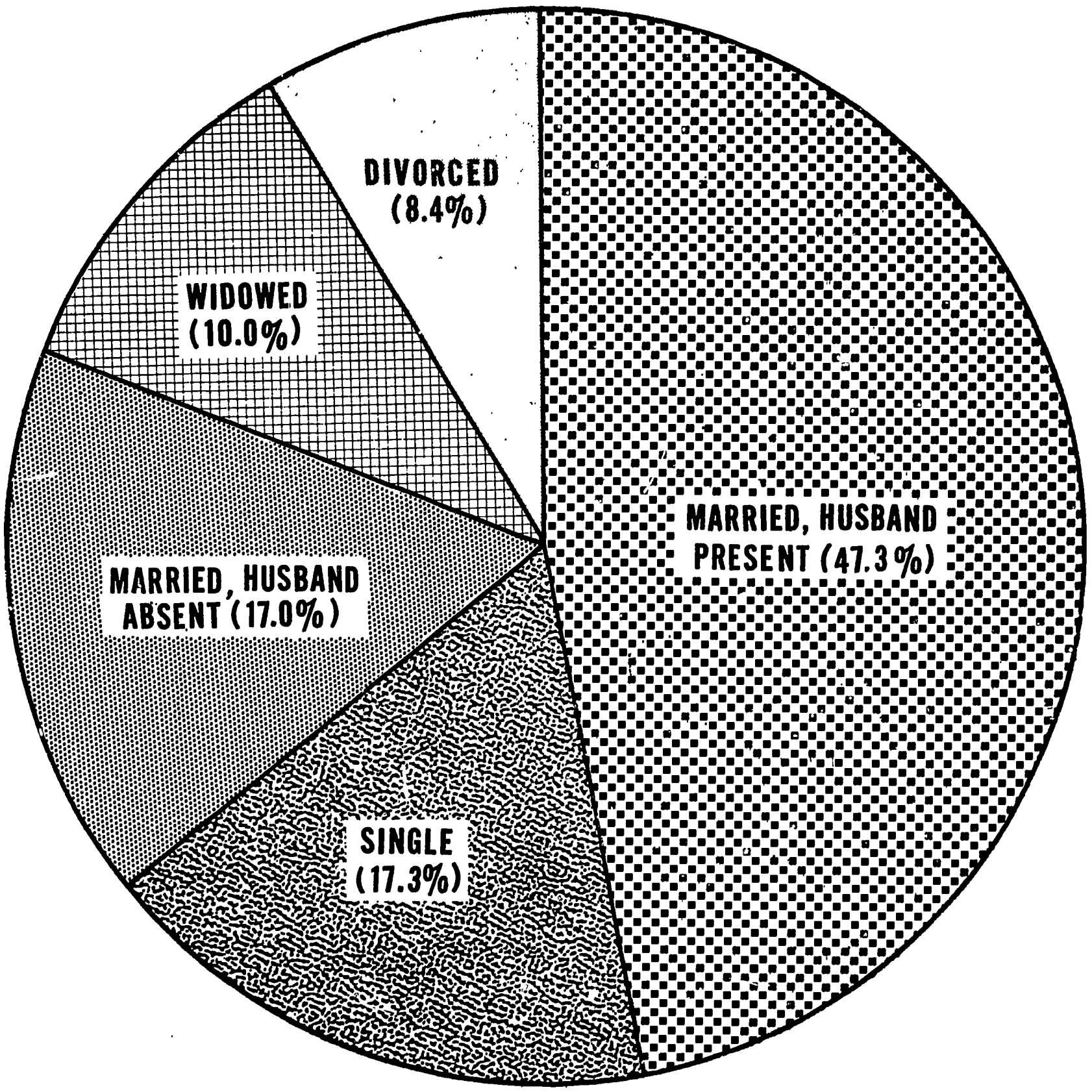


Table 30. Illinois Non-White Female Population and Labor Force by marital status, 1960 and Percentage Distributions of Illinois Female and Non-White Female Populations and Labor Force

Marital Status	Non-White Females		Percent Distribution			
			Population		Labor Force	
	Population	Labor Force	Total	Non-White	Total	Non-White
Females, 14 years and over	366,024	151,789	100.0%	100.0%	100.0%	100.0%
Single	69,028	26,310	18.9	18.9	25.7	17.3
Married, with husbands present	177,201	71,812	62.2	48.4	53.4	47.3
With children under six	66,757	20,118	20.1	18.2	9.9	13.3
Married, husband absent	53,678	25,756	3.6	14.7	4.8	17.0
Widowed	46,640	15,154	12.4	12.7	10.3	10.0
Divorced	19,477	12,757	2.9	5.3	5.8	8.4

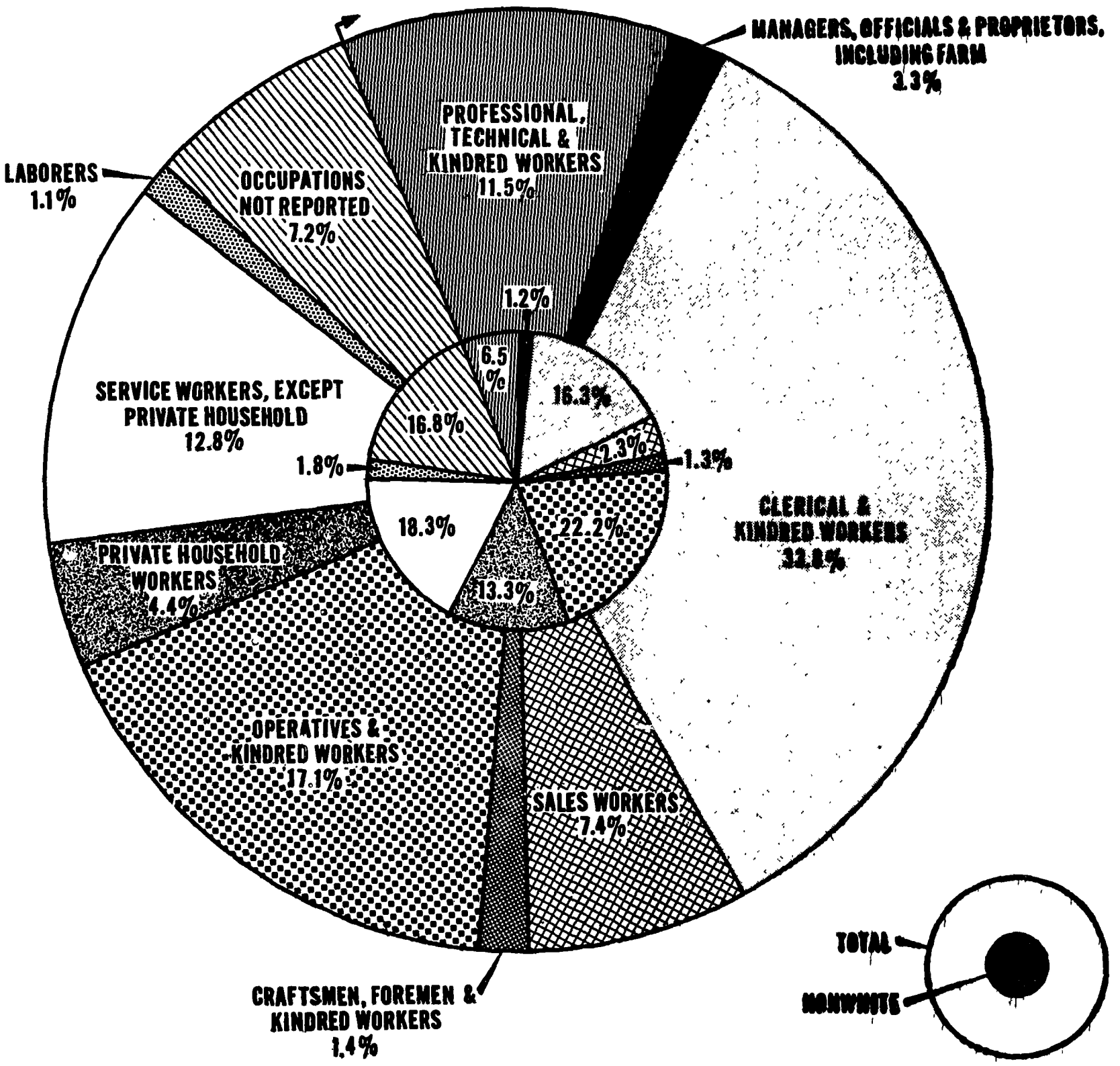
The foregoing explains to some extent why there were differences between the total female labor force and the non-white female labor force. The largest numbers of women in the non-white female labor force were married women living with their husbands (47.3%), single women (17.3%) and married women not living with their husbands (17.0%). Widows, the third largest group in the Illinois female labor force, was the fourth largest group in the non-white female labor force.

Table 31. Participation rates by marital status of the Illinois Female and Non-White Female Labor Force, 1960

Marital Status	Percent of Population in the Labor Force	
	All Women	Non-White Women
Total	36.2%	41.5%
Single	49.1	38.1
Married, with husbands present	31.1	40.5
with children under six	17.8	30.1
Married, husband absent	48.6	48.0
Widowed	30.0	32.5
Divorced	72.3	65.5

Earlier, it was shown that there were proportionally more non-white women (41.5%) in the female labor force than was true for all women in the labor force (36.2%). In this section we find that much of this difference is due to the fact that proportionally more non-white married women living with husbands (40.5%) participated in the labor force than was true for all women (31.1%). It was also true that proportionally more non-white married women living with husbands and having children under six (30.1%) were in the non-white female labor force than was true of all females in the Illinois female labor force. The participation rate for married women living alone (48.0%), the third largest group of women in the non-white population, is almost as high as the participation rate for this group in the Illinois female labor force (48.6%), yet this group was one of the smallest in the State. Widowed non-white women had a participation rate of 32.5 percent while the participation rate for all women was only 30.0 percent. All other groups of non-white women had lower participation rates.

OCCUPATIONAL COMPOSITION OF TOTAL AND NONWHITE FEMALE LABOR FORCE ILLINOIS, 1960



CHAPTER VIII
EMPLOYED NON-WHITE ILLINOIS WOMEN

Occupations of Employed Non-White Women

Of the 1,282,200 women employed in 1960 in Illinois, 133,248, or 10.4 percent, were non-whites. In 1950, there were 88,869 non-whites among the State's 1,026,687 employed women, and they represented only 8.7 percent of the total. While the number of all employed women in the State increased by 255,513 or 24.9 percent from 1950 to 1960, the numerical increase in non-white employed women of 44,379 represented a percentage increase of 49.9 percent, almost twice the increase of all women workers.

The three occupational groups in which the largest numbers of all women were employed in 1960 were also the occupational groups in which the largest numbers of non-white women were employed. They were the Clerical and Kindred Worker, Operative and Kindred Worker and Service Worker occupational groups. These three groups included only 56.3 percent of the 133,248 non-white employed women whereas they contained 63.4 percent of all employed women. Though the Clerical occupational group was the most numerous group, the Operative group the second most numerous, and Service occupations the third most numerous for all employed females, the order was not the same for employed non-white women. The Operative group had 28,277 employed non-white women; Service occupations had 24,626 employed non-white women; and the Clerical group had 22,133 employed non-white women.

There were more employed non-white women in 1960 than in 1950 in six occupational groups. These groups were Clerical and Kindred Workers; Professional, Technical and Kindred Workers; Sales Workers; Service Workers; Managers, Officials and Proprietors and Craftsmen and Kindred Workers. The other three occupational groups, Operatives and Kindred Workers, Private Household Workers and Laborers, declined in numbers during this period.

Table 32. Employed Illinois Non-White Women by Occupational Group, 1960 and 1950

Occupational Groups	Numbers		Change	
	1960	1950	Numerical	Percentage
Female Employed	133,248	88,869	+44,379	+49.9%
Professional, Technical & Kindred	9,550	4,413	+ 5,137	+116.4
Managers, Officials & Proprietors	1,718	1,438	+ 280	+19.5
Clerical & Kindred	22,133	9,334	+12,799	+137.1
Sales	3,053	2,115	+ 938	+44.3
Craftsmen, Foremen & Kindred	1,690	1,479	+ 211	+14.3
Operatives & Kindred	28,277	28,657	- 380	-1.3
Private Household Workers	18,432	18,533	- 101	-0.5
Service Workers	24,626	17,919	+ 6,707	+37.4
Laborers	2,127	3,464	- 1,337	-38.6
Occupations Not Reported*	21,642	1,517	+20,125	---

*Increase due to change in statistical reporting methods between 1950 and 1960.

Table 33. Percentage Distribution of employed Illinois Non-White Women by Occupational Group, 1960 and 1950

Occupational Groups	Percentage Distribution		
	Total Female Employed	Non-White Female Employed	
	1960	1960	1950
Female Employed	100.0%	100.0%	100.0%
Professional, Technical & Kindred	11.9	7.2	5.0
Managers, Officials & Proprietors	3.4	1.3	1.6
Clerical & Kindred	34.5	16.6	10.5
Sales	7.4	2.3	2.4
Craftsmen, Foremen & Kindred	1.4	1.3	1.7
Operatives & Kindred	16.2	21.2	32.2
Private Household Workers	4.4	13.8	20.8
Service Workers	12.7	18.5	20.2
Laborers	1.0	1.6	3.9
Occupations Not Reported*	7.1	16.2	1.7

*Increase due to change in statistical reporting methods between 1950 and 1960.

Employed non-white women with Clerical and Kindred occupations increased by 137.1 percent in the ten year period from 1950 to 1960. In 1950, this occupational group numbered 9,334 and was the fourth largest, but by 1960, it had grown to 22,133 and became the third largest group. Two occupations in this group showed remarkable increases in employed women since 1950. They were Cashiers, of whom there were only 456 employed in 1950, and 1,393 in 1960, a rise of 205.5 percent, and Telephone Operators numbering 266 in 1950 and 980 in 1960, a rise of 268.4 percent. Data for 1950 are not available for Secretaries, Stenographers and Typists separately, so these occupations must be discussed as a unit. There were 2,473 non-white women employed in this occupational family in 1950 and 4,990 in 1960. Although the numerical increase in the ten year period was large (+2,517), the percentage increase of 101.8 percent for this unit was less than that for the total Clerical and Kindred group.

Non-white women workers in the Professional, Technical and Kindred occupational group experienced an increase of 116.4 percent in the 1950-1960 period. In 1950, there were 4,413 employed non-white women in this group. In 1960, there were 9,550 such women, an increase of 5,137. Two occupations which experienced the greatest numerical increases in the period were Professional Nurses and Teachers. The former increased from 749 to 2,435, a rise of 1,686, and the latter increased from 1,473 to 3,568, a rise of 2,095. These increases were 225.1 percent and 142.2 percent of their respective 1950 totals and accounted for 3,781 of the 5,137 increase for the group. The sharp rises in these two occupations probably reflected the large and continuing demand for people in these occupations. It may also reflect the rising income position of non-whites to the point where they were able to pay the cost of the higher education and training required to qualify for such occupations.

Employed non-white women in the Sales Worker occupational group experienced the third largest percentage increase (+44.3%) between 1950 and 1960, but the numerical increase was only 938. Of course, most of the women employed were involved in retail sales which accounted for 2,465 of the 3,053 in the group in 1960 and 1,693 of the 2,115 in the group in 1950.

Table 34. Non-White Female Experienced Civilian Labor Force in 1960 and Employed Non-White Women by Occupational Groups and Selected Occupations, 1960 and 1950, Illinois

	Experienced Civilian Labor Force 1960	Employed 1960	Employed 1950	Percent Change 1960 / 1950
Non-White Women, Total	149,775	133,248	88,869	+49.9%
Professional, Technical & Kindred	9,771	9,550	4,413	+116.4
Nurses, Professional	2,526	2,435	749	+225.1
Teachers	3,610	3,568	1,473	+142.2
Managers, Officials & Proprietors, Incl. Farm	1,806	1,718	1,438	+19.5
Salaried	694	633	406	+55.9
Self-employed	669	657	808	-18.7
Farm	28	21	26	-19.2
Clerical & Kindred Workers	24,463	22,133	9,334	+137.1
Cashier	1,567	1,393	456	+205.5
Office Machine Operators	1,462	1,296	--	--
Secretaries, Stenographers & Typists	--	4,990	2,473	+101.8
Secretaries	1,749	1,679	--	--
Stenographers	469	465	--	--
Typists	3,006	2,846	--	--
Telephone Operators	1,036	980	266	+268.4
Sales Workers	3,417	3,053	2,115	+44.3
Salesmen & Sales Clerks Retail Trade	2,747	2,465	1,693	+45.6
Craftsmen, Foremen & Kindred	1,880	1,690	1,479	+14.3
Foremen	437	420	277	+51.6
Other Craftsmen & Kindred	1,443	1,270	1,202	+5.7
Operatives & Kindred Workers	33,220	28,277	28,657	-1.3
Laundry & Cleaning Operatives	6,645	5,943	6,860	-13.4
Operatives, Durable Goods Mfg.	--	7,670	6,237	+23.0
Operatives, Nondurable Goods Mfg.	--	10,805	11,719	-7.8
Operatives, Non-Mfg.	--	3,859	2,096	+84.1
Private Household Workers	19,885	18,432	18,533	-0.5
Living In	2,032	2,028	2,307	-12.1
Living Out	17,853	16,404	16,226	+1.1
Service Workers, Except Private Household	27,408	24,626	17,919	+37.4
Attendants, Hospital & Other Institutions	4,741	4,398	1,383	+218.0
Charwomen, Janitors & Porters	2,400	2,198	1,703	+29.1
Cooks	2,299	2,073	1,373	+51.0
Hairdressers & Cosmetologists	1,925	1,879	1,597	+17.7
Practical Nurses	1,618	1,503	492	+205.5
Waitresses, Barmaids & Counter Workers	3,365	2,735	2,705	+1.1
Laborers	2,657	2,127	3,464	-38.6
Occupations Not Reported	25,268	21,642	1,517	--

Employed non-white women in the Sales Worker occupational group were only 2.3 percent of the employed non-white women in 1960, while Illinois employed women in this group were 7.4 percent of all employed women. This discrepancy is due to the fact that non-whites have not been allowed free access to employment opportunities in this field in much of the period before 1960. However, the number of employed non-white women should increase dramatically by 1970, because many stores which formerly did not hire non-whites have started to do so recently. This is especially true of non-white neighborhood retail sales operations. The sales field at the retail trade level is also one in which, characteristically, wages are low and turnover is high.

Non-white women in the Service Worker occupational group experienced a 37.4 percent increase in the 1950-1960 period. This percentage increase represented a numerical increase of 6,707 which was exceeded only by the numerical increase of 12,799 for the Clerical group. Two occupations accounted for more than 4,000 of the 6,707 increase in the group. They were Attendants in Hospitals and other Institutions, which increased from 1,383 in 1950 to 4,398 in 1960, and Practical Nurses which increased from 492 in 1950 to the 1960 total of 1,503. These increases are 218 percent and 206 percent of their respective 1950 totals. The remarks made on the Sales occupations also apply here.

The two occupational groups having the smallest percentage increases in the decade were also the smallest groups numerically. Managers, Officials and Proprietors, an occupational group which grew by 19.5 percent, increased to 1,718 employed women in 1960 from the 1950 total of 1,438. During this period, the Self-employed and Farm Manager occupations decreased by 156, but this was offset by the 227 increase in Salaried Managers between 1950 and 1960. Although this occupational group contained 3.4 percent of all the employed women in Illinois in 1960, it only contained 1.3 percent of the employed non-white women in Illinois.

The other occupational group with a small percentage increase was the Craftsmen and Kindred occupational group. There were 1,479 employed non-white women in this group in 1950 and this figure was increased by 211 to 1,690, a percentage change of 14.3 percent by 1960. The increase in Foremen (Foreladies) from 277 in 1950 to 420 in 1960, was mainly responsible for the rise in this occupational group among non-whites. While non-white female employment in this occupational group was rising, total female employment for the group was falling.

Three occupational groups experienced declines in the employment of non-white women. One, the Operatives and Kindred occupational group contained the largest number of non-white women in both 1950 and 1960, having 28,277 of the employed women in 1960 and 28,657 in 1950. This represents a loss of 380 or 1.3 percent in employed women. There were cross-currents at work among the occupations in this group. For instance, employed non-white women Operatives in Dry Cleaning and Laundries were 917 fewer than the 1950 figure of 6,860; Operatives in Durable Goods Manufacturing increased from 6,237 to 7,670; Operatives in Nondurable Goods Manufacturing decreased from 11,719 to 10,805; and Operatives in Non-manufacturing increased from 2,096 to 3,859. Employed Operatives in Nondurable Goods Manufacturing and Dry Cleaning may continue to decrease during the next ten years. Nondurable goods employment is declining in those industries in which large numbers of women are employed and as more self service dry cleaning and laundry establishments compete with the older firms in this industry. More automatic home laundry equipment in use will also further decrease demand for power laundry service.

The fourth largest occupational group, Private Household Workers, also declined during the 1950-1960 period but by only 101. In 1950, employed women in this group totaled 18,533 and were 20.8 percent of the employed non-white women.

The 1960 total for this occupational group was 18,432 and constituted only 13.8 percent of the employed non-white women. This change probably reflects the opening up of other opportunities for the employment of non-white women, many of whom were previously restricted to housework. In 1960, there were 279 fewer employed non-white women in this occupational group living on the premises where they worked than in 1950 when 2,307 non-white women were so employed. However, there were 178 more employed non-white women in this group who were not living on the premises where they worked than the 1950 figure of 16,226. However, this occupational group employed 5,302 more Illinois women in 1960 than in 1950. Most, if not all, of the increase in Illinois women in this occupational group was due to the large increase in Baby Sitters.

Laborer was the smallest of the occupational groups suffering a decline, yet it was the group which had the largest numerical decrease. There were 3,464 employed non-white women laborers in 1950, but in 1960, there were only 2,127 employed non-white women laborers or 1,337 fewer. While the number of female Farm Laborers declined from 88 in 1950 to 71 in 1960, the most significant drop was in the number of Laborers in Manufacturing and Non-manufacturing as the 1950 total of 3,376 declined to 2,056 in 1960.

The 38.6 percent decrease experienced by non-white employed women as Laborers was larger than the 28.6 percent decrease for all employed women in this group in the ten year period since 1950.

Fully 16.2 percent of the non-white employed women did not report an occupation in 1960 as opposed to only 1.7 percent of the women employed in 1950. Since 21,642 were in this category in 1960 and only 1,517 in 1950, any distribution of the not reported group among the occupational groups and occupations could greatly alter the picture presented in this section.

Industries of Employed Non-White Women

More than 80 percent of the 2,623,724 employed non-white women in the United States were concentrated in only four of the twelve industry groups in 1960. The Personal Services industrial group alone contained 43.4 percent of the employed. The other three industry groups were Professional and Related Services (17.8%), Retail Trade (9.8%) and Manufacturing (9.3%).

The four industry groups which employed 80.3 percent of the non-white women workers in the Nation employed only 72.4 percent of the non-white women workers in Illinois in 1960. Though this was not a large difference in the total, there was a radical change in the component parts. The Personal Services industry group was the top employer of non-white women in Illinois as well as in the Nation, but only 24.5 percent of the women were concentrated in this group in Illinois. The second largest concentration of employed non-white women in Illinois was in the Manufacturing industry group (18.1%). This group was the fourth largest employer of non-white women in the Nation. The third and fourth largest concentrations of employed non-white women in Illinois were in the Professional and Related Services (16.6%) and Retail Trade (13.2%) industrial groups. In the Nation, these were the second and third largest employers of non-white women workers, respectively.

PERCENT EMPLOYED NONWHITE WOMEN OF TOTAL EMPLOYED WOMEN WORKERS IN ILLINOIS AND THE UNITED STATES, 1960

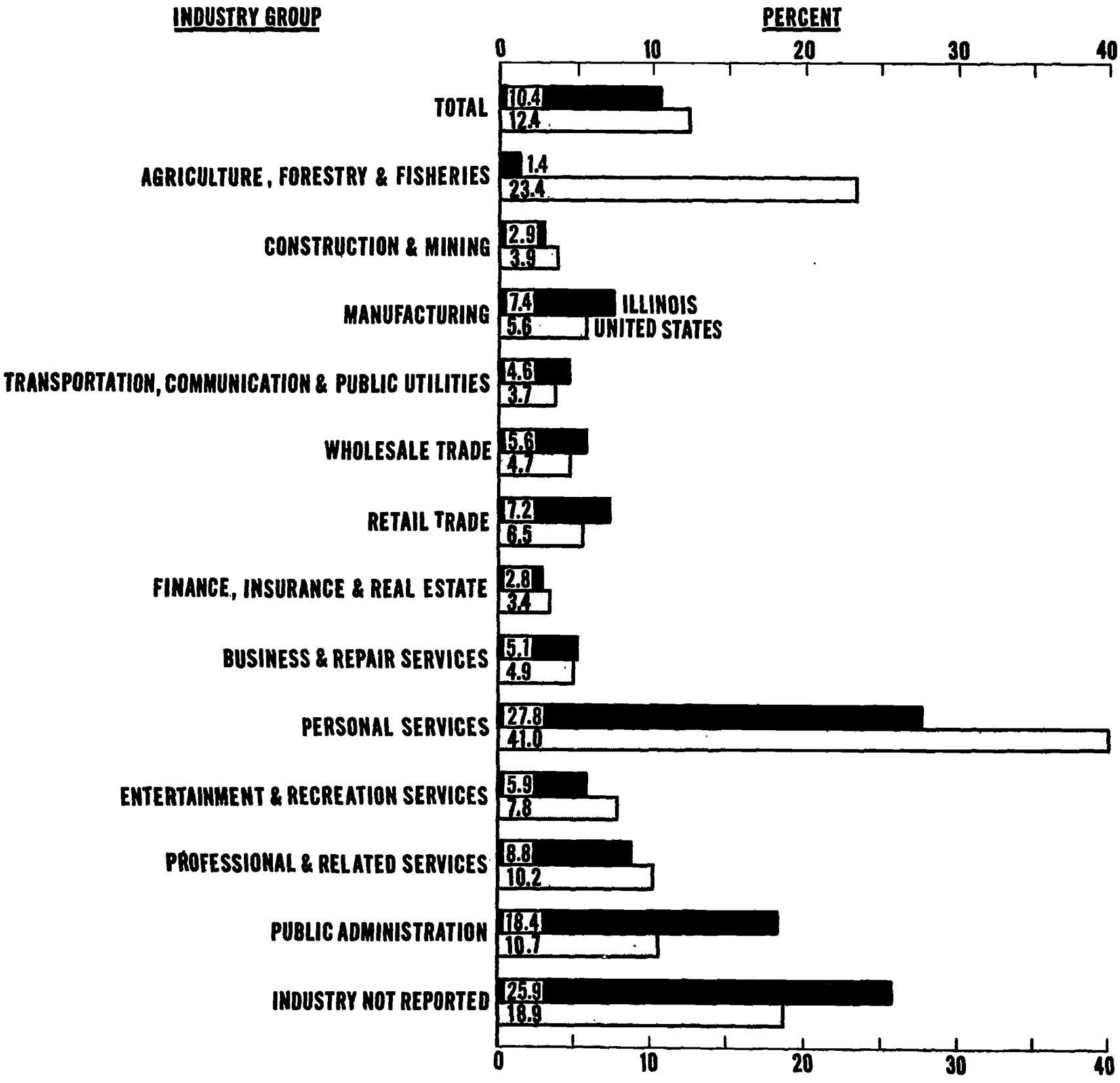


Table 35. Percentage Distribution of Employed Non-White Women in the United States and Illinois by Industry Group, and Percent Non-White Employed Women of Total Employed Women in the United States and Illinois by Industry Group, 1960

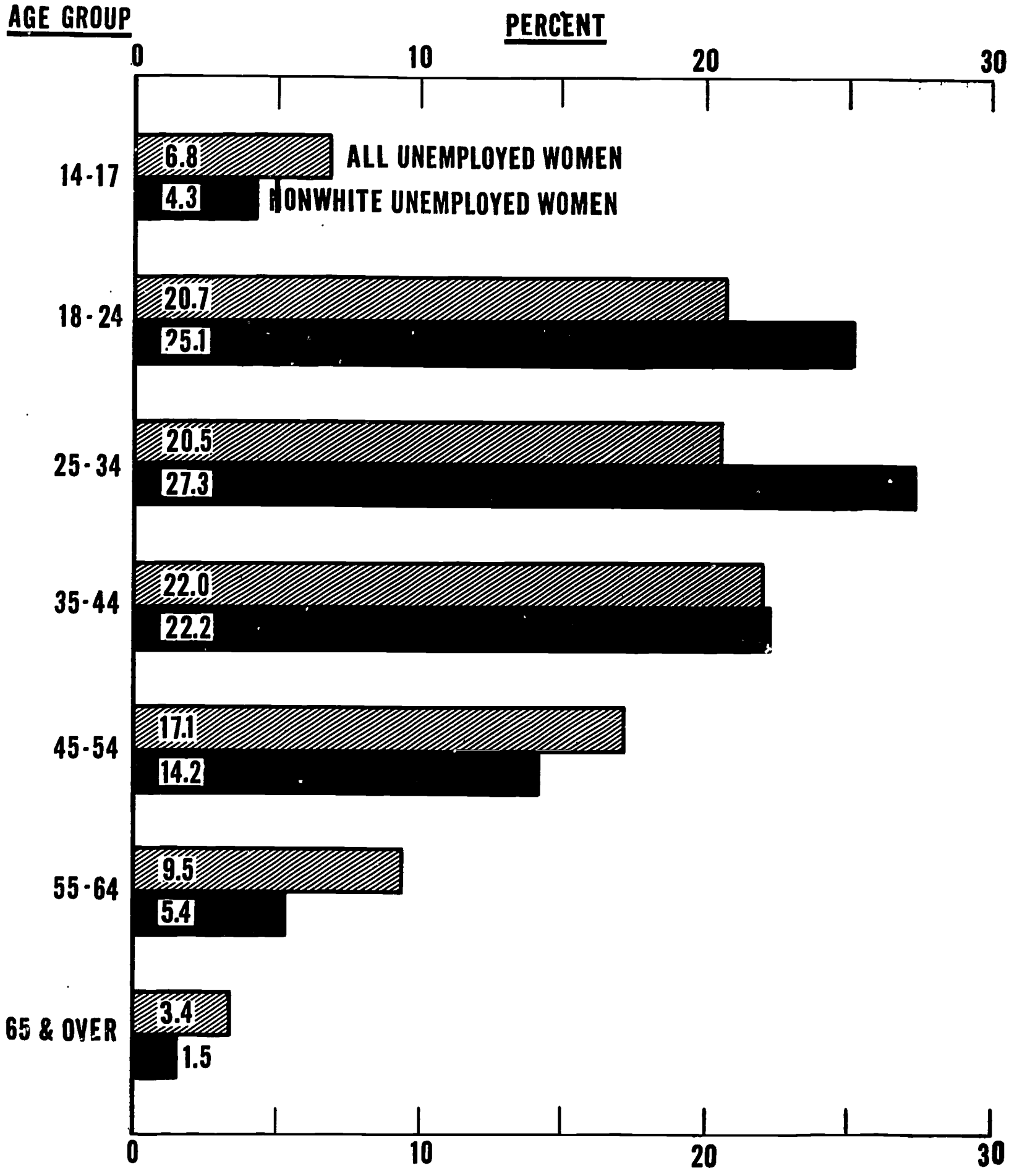
Industry Group	Percent Distribution		Percent Non-White of Total Employed Women	
	U. S.	Ill.	U. S.	Ill.
Total	100.0%	100.0%	12.4%	10.4%
Agriculture, Forestry & Fisheries	3.7	0.1	23.4	1.4
Construction and Mining	0.3	0.2	3.9	2.9
Manufacturing	9.3	18.1	5.6	7.4
Transportation, Communication and Public Utilities	1.1	1.9	3.7	4.6
Wholesale Trade	0.8	1.2	4.7	5.6
Retail Trade	9.8	13.2	6.5	7.2
Finance, Insurance and Real Estate	1.6	1.7	3.4	2.8
Business and Repair Services	0.6	1.0	4.9	5.1
Personal Services	43.4	24.5	41.0	27.8
Entertainment & Recreation Services	0.5	0.4	7.8	5.9
Professional & Related Services	17.8	16.6	10.2	8.8
Public Administration	3.7	5.9	10.7	18.4
Industry Not Reported	7.4	15.2	18.9	25.9

Non-white women were 12.4 percent of the total number of employed women in the United States in 1960. However, non-white women exceeded that percentage of total females only in Agriculture, Forestry and Fisheries (23.4%) and Personal Service industries (41.0%). In Illinois, non-white women were 10.4 percent of the total number of employed women and non-white women as a percent of the employed women was higher only in Personal Services (27.8%) and Public Administration (18.4%).

Table 36. Industry Group of Employed Non-White Women for Illinois, 1960 and 1950

Industry Group	Employed		Percent Distribution	
	1960	1950	1960	1950
Total	133,248	88,869	100.0%	100.0%
Agriculture, Forestry & Fisheries	147	111	0.1	0.1
Construction and Mining	274	187	0.2	0.2
Manufacturing	24,158	23,373	18.1	26.3
Electrical Machinery	3,521	1,758	2.6	2.0
Food Products	4,086	5,386	3.1	6.1
Apparel & Fabricated Textiles	4,396	5,058	3.3	5.7
Printing and Publishing	2,283	1,434	1.7	1.6
Transportation, Communication and Other Public Utilities	2,504	1,828	1.9	2.1
Communications	1,286	406	1.0	0.5
Wholesale Trade	1,631	1,480	1.2	1.7
Retail Trade	17,547	11,539	13.2	13.0
General Merchandise Stores	7,820	2,622	5.9	3.0
Eating and Drinking Places	4,716	4,658	3.5	5.2
Finance, Insurance and Real Estate	2,233	1,454	1.7	1.6
Business and Repair Services	1,390	516	1.0	0.6
Personal Services	32,629	33,709	24.5	37.9
Private Households	18,783	18,907	14.1	21.3
Laundering, Cleaning & Dyeing Places	6,649	7,655	5.0	8.6
Entertainment and Recreation Services	497	614	0.4	0.7
Professional and Related Services	22,115	8,662	16.6	9.7
Medical and Other Health Services	13,266	4,653	10.0	5.2
Educational Services	6,844	2,861	5.1	3.2
Public Administration	7,910	3,803	5.9	4.3
Federal Government	5,011	2,384	3.8	2.7
Industry Not Reported	20,213	1,593	15.2	1.8

PERCENT DISTRIBUTION BY AGE GROUP OF ALL UNEMPLOYED WOMEN AND NONWHITE UNEMPLOYED WOMEN, ILLINOIS, 1960



CHAPTER IX
UNEMPLOYED NON-WHITE WOMEN

Of the 60,924 unemployed Illinois women 16,527, or more than 27 percent, were non-white in 1960. Non-white women constituted only 11 percent of the women in the Illinois labor force, yet they were more than twice that percentage of the unemployed. This was mainly due to the fact that non-white women suffered higher rates of unemployment (11.0%) than that for all Illinois women workers (4.5%).

Age of Unemployed Non-White Women

Unemployed non-white women workers in Illinois tended to be younger than the non-white female labor force in both 1960 and 1950. In 1960, the median age of unemployed non-white women was 31.7 years while that of the non-white female labor force was 36.2 years of age. In 1950, the median age of unemployed non-white women was 30.8 years while that of the non-white female labor force was 35.1 years of age.

In both 1960 and 1950, better than half of the unemployed non-white women were under 35 years of age (56.7% in 1960 and 62.1% in 1950). However, less than half of the non-white women in the non-white female labor force were under 35 years of age in both 1950 and 1960.

Table 37. Numbers and Percentage Distribution of Unemployed Illinois Non-White Women by Age Group, 1960 and 1950

Age Groups	Numbers		Percent Distribution	
	1960	1950	1960	1950
Total, 14 years and over	18,410	12,475	100.0%	100.0%
14 to 17 years	798	465	4.3	3.7
18 to 24 years	4,595	3,475	25.1	27.9
25 to 34 years	5,029	3,810	27.3	30.5
35 to 44 years	4,085	2,730	22.2	21.9
45 to 54 years	2,622	1,485	14.2	11.9
55 to 64 years	999	430	5.4	3.5
65 years and over	282	80	1.5	0.6
Median Age	31.7	30.8		

Unemployed non-white women had a lower median age than that for all unemployed women in Illinois. While all unemployed women in 1960 had a median age of 35.9 years, unemployed non-white women had a median age of 31.7 years. Unemployed non-white women were also younger than all unemployed women in 1950 (30.8 years to 32.6 years) but the disparity was not as great as in 1960.

There is a good reason for the fact that the median age for all unemployed women workers changed significantly, while the median age for non-white women workers did not, and the reason lies in an aging labor force. In 1950, the Illinois female labor force had a median age of 36.7 years, while in 1960 the median age was 40.9 years, a change of 4.2 years. The non-white female labor force had a median age of 35.1 years in 1950 and 36.2 years in 1960, a change of only 1.1 years. Thus, the total female labor force aged faster than the non-white female labor force.

While the overall rate of unemployment for the female labor force grew from 4.0 percent in 1950 to 4.8 percent in 1960, the overall unemployment rate for the non-white female labor force fell from 12.3 percent in 1950 to 12.1 percent in 1960. This was due to the fact that the increase in the non-white female labor force (+49.2%) was greater than the increase in unemployed non-white women (+47.6%).

Table 38. Percent Change in Illinois Non-White Female Labor Force and Non-White Female Unemployed by Age Group, Between 1950 and 1960, and Unemployment Rates by Age Group, 1960 and 1950

Age Groups	Percent Change		Rates of Unemployment	
	Unemployed	Labor Force	1960	1950
Total	+47.6%	+49.2%	12.1%	12.3%
14-17 years old	+71.6	+154.1	30.9	45.8
18-24 years old	+32.2	+38.5	19.1	20.0
25-34 years old	+32.0	+24.0	12.7	11.9
35-44 years old	+49.6	+45.7	10.0	9.8
45-54 years old	+76.6	+70.9	9.5	9.2
55-64 years old	+132.3	+131.2	7.3	7.3
65 years and over	+252.5	+154.2	8.0	5.8

Unemployment rates by age groups fell for the 14-17 year group and the 18-24 year group between 1950 and 1960. For the former group, the unemployment rate was 45.8 percent in 1950 and 30.9 percent in 1960. The latter group had an unemployment rate of 20.0 percent in 1950 and 19.1 percent in 1960. Though these rates fell, there were numerical increases in unemployment for both groups between 1950 and 1960. Thus, both rates fell because the non-white female labor force in both age groups had increased more rapidly than their unemployment.

The unemployment rate for the 55 to 64 year old group remained the same in both 1950 and 1960. However, the labor force and the unemployed expanded at approximately the same rate, so the constant rate conceals an absolute increase in the number of unemployed in this age group.

The other four age groups experienced higher unemployment rates in 1960 than in 1950. For these age groups, unemployment increased more rapidly than did the labor force.

Unemployment by Occupational Group

The absence of data from the 1950 Census does not permit a comparison of non-white unemployment by occupational group between the two periods, so only an analysis of 1960 unemployment by occupational group is presented here.

Unemployed non-white women in 1960 were most heavily concentrated in the following occupational groups: Operative and Kindred Workers (29.9%), Service Workers (16.8%) and Clerical and Kindred Workers (14.1%). These were the same three groups which contained the largest numbers of women in the Illinois labor force and the largest numbers of all unemployed women. However, only one of the above (Operatives and Kindred Workers) was among the occupational groups which had an unemployment rate exceeding that for all non-white women workers.

Two occupational groups had non-white female unemployment rates exceeding the average rate of unemployment for non-white women of 11 percent. They were

Operatives (14.9%) and Laborers (19.9%).

Table 39. Unemployed Non-White Women by Occupational Group, Percentage Distribution and Rate of Unemployment by Occupational Group, Illinois, 1960

Occupational Groups	Unemployed	Percent Distribution	Rate of Unemployment By Group
Total	16,527	100.0%	11.0%
Professional, Technical and Kindred Workers	221	1.3	2.3
Managers, Officials and Proprietors	88	0.5	4.9
Clerical and Kindred Workers	2,330	14.1	9.5
Sales Workers	364	2.2	10.7
Craftsmen, Foremen and Kindred Workers	190	1.1	10.1
Operatives and Kindred Workers	4,943	29.9	14.9
Private Household Workers	1,453	8.8	7.3
Service Workers, Except Private Household	2,782	16.8	10.2
Laborers	530	3.3	19.9
Occupations Not Reported	3,626	21.9	14.4

Non-white women in Clerical occupations had an unemployment rate of 9.5 percent, which was much higher than the rate (2.6%) for all women workers in these occupations. Non-white women Operatives had an unemployment rate of 14.9 percent, and that too exceeded the rate for all women Operatives which was a high 9.6 percent. Non-white Service Workers did not change the general pattern as their rate of unemployment (10.2%) was also more than the rate for all women workers in this group (5.0%). The lowest rates of unemployment by occupational group for non-white women were: Professional, Technical and Kindred Workers (2.3%), Managers, Officials and Proprietors (4.9%) and Private Household Workers (7.3%). None of these had unemployment rates as low as the rates for all Illinois women workers in those groups.

Unemployment by Industry

Most of the 16,527 unemployed non-white women were concentrated in four industrial groupings--Manufacturing, Retail Trade, Personal Services and Professional Services. While these four industrial groups contained 76.2 percent of all unemployed women, they contained only 69.8 percent of the non-white female unemployed. Over 73 percent of Illimois women workers had attachments to these industries while 72 percent of the non-white women workers had such attachments so the reasons why the top four groups do not contain an equivalent proportion of unemployed non-white women lie elsewhere.

Unemployment rates, by industry, for non-white women were higher than those for all women except those in the Public Utilities industry. Only 3 of the 208 non-white women with a Public Utilities attachment were unemployed and the rate for non-whites (1.4%) was equal to that for all women in this industry. In many industries, the rate of unemployment for non-whites was more than twice the unemployment rate for all women in those industries. These industries were Agriculture, Forestry and Fisheries (51.2% to 3.5%), Construction and Mining (10.5% to 3.7%),

Manufacturing (14.9% to 6.9%), Wholesale Trade (17.5% to 4.3%), Retail Trade (14.9% to 4.8%), Finance, Insurance and Real Estate (4.3% to 1.6%), Business and Repair Services (13.6% to 4.2%), Personal Services (8.6% to 4.6%), Entertainment and Recreation Services (16.6% to 5.8%), Professional Services (4.9% to 1.6%) and Public Administration (7.2% to 2.9%).

Table 40. Unemployed Non-White Women by Industry Group, Percentage Distribution and Rate of Unemployment by Industry Group, Illinois, 1960

	Unemployed Females	Percent Distribution	Rates of Unemployment
Females 14 Years and Over	16,527	100.0%	11.0%
Agriculture, Forestry and Fisheries	154	0.9	51.2
Construction and Mining	32	0.2	10.5
Manufacturing	4,231	25.6	14.9
Durable Goods	1,798	10.9	15.3
Fabricated Metals Industry	268	1.6	13.3
Machinery, Except Electrical	76	0.5	11.0
Electrical Machinery and Equipment	498	3.0	12.4
Non-Durable Goods	2,368	14.3	14.6
Apparel	606	3.7	12.1
Printing and Publishing	382	2.3	14.3
Food Products	859	5.2	17.4
Chemical Products	61	0.4	7.8
Miscellaneous Manufacturing	65	0.4	14.9
Transportation, Communications and Public Utilities	147	0.9	5.5
Communications	36	0.2	2.7
Transportation	108	0.7	9.6
Public Utilities	3	*	1.4
Wholesale Trade	347	2.1	17.5
Retail Trade	3,071	18.6	14.9
Finance, Insurance and Real Estate	101	0.6	4.3
Business and Repair Services	219	1.3	13.6
Personal Services	3,083	18.7	8.6
Entertainment and Recreation Services	99	0.6	16.6
Professional Services	1,142	6.9	4.9
Medical and Other Health Services	809	4.9	5.7
Educational Services	154	0.9	2.2
Public Administration	613	3.7	7.2
Federal	472	2.9	8.6
State and Local	141	0.8	4.6
Industry Not Reported	3,288	19.9	14.0

*Less than one tenth of one percent

Although the experienced non-white female labor force was only 11.2 percent of the total experienced female labor force, non-white unemployed women were 27.1 percent of all unemployed women. In three industries, unemployed non-white women were 30 percent or more of all unemployed women. In Personal Services, 3,083 of the 5,659 unemployed women were non-white. There were 613 non-white women among the 1,272 unemployed women in Public Administration, and 154 among the 374 unemployed women in Agriculture were non-white. Thus, non-whites were approximately 55 percent, 48 percent, and 41 percent, respectively, of the female unemployed in

the above industries. Over 47 percent of the unemployed women in the Industry Not Reported group were non-white.

Table 41. Unemployed Illinois Women by Color, 1960

	Unemployed Women		
	All Illinois Women	Non-White Illinois Women	Percent Non-White of All
Total Civilian Labor Force	1,343,124	149,775	11.2%
Total Unemployed	60,924	16,527	27.0
Agriculture, Forestry and Fisheries	374	154	41.2
Construction and Mining	360	32	8.9
Manufacturing	24,105	4,231	17.6
Transportation, Communication and Public Utilities	1,163	147	12.6
Wholesale Trade	1,303	347	26.6
Retail Trade	12,438	3,071	24.7
Finance, Insurance and Real Estate	1,332	101	7.6
Business and Repair Services	1,197	219	18.3
Personal Services	5,659	3,083	54.5
Entertainment and Recreation Services	519	99	19.1
Professional Services	4,221	1,142	27.1
Public Administration	1,272	613	48.2
Industry Not Reported	6,981	3,288	47.1

CHAPTER X
INCOME OF NON-WHITE ILLINOIS WOMEN

The median incomes of non-white women lagged behind the median incomes of all women both in Illinois and in the Nation. Illinois non-white women income recipients had a median income of $1,662 compared with $1,678 for all Illinois women income recipients. The United States figure for all women income recipients was $1,357 or 49 percent more than the U. S. non-white women's median income of $909. The median income for non-white women in Illinois was closer to that for all women in Illinois than was true of the median incomes for non-white and all women in the Nation because non-white women in Illinois were more heavily concentrated in urban areas and were employed in non-agricultural pursuits. Elsewhere in the United States, many non-whites were in rural communities and engaged in agricultural pursuits both of which are marked by low median incomes.

Income

Though the median income of non-white women in Illinois was lower than that for all Illinois females in urban, rural non-farm and farm areas, the fact that only 3,477 of the 221,341 non-white women with incomes (1.6%) as opposed to 308,825 of the State's 2,073,863 females with income (14.9%) were located outside urban areas was the reason why the median income for all women is only $16 higher than that for non-white women. Thus, the figures for non-white women reflect the higher incomes of urban people, while those for all women are heavily weighted by the lower rural incomes.

Illinois Non-White Women With Income, 1959 and 1949

	1959	1949	Percent Change 1959/1949
Illinois	221,341	125,840	+ 75.9%
Urban	217,864	123,210	+ 76.8
Rural	3,477	2,630	+ 32.2

The table above demonstrates the large increase in non-white women with incomes between 1949 and 1959. This was much larger than the 44.3 percent increase for all women with incomes.

More than 77 percent of the non-white women with incomes received less than $3,000 a year in 1959, while more than 96 percent of the non-white women with incomes received less than $3,000 a year in 1949.

While all income brackets shared in the overall 75.9 percent increase in the number of non-white women with income, three groups absorbed 70,743, or 74.1 percent, of the 95,501 increase in non-white women with incomes in the ten year period. The largest increase was in the $3,000-$3,999 bracket (+24,535) and was closely followed by the $2,000-$2,999 bracket (+23,938). The less than $1,000 bracket contained 22,270 more women in 1959 than in 1949. While the former two brackets were proportionately larger in 1959 than in 1949, the less than $1,000 bracket was proportionately smaller in 1959 than in 1949.

Table 42. Illinois Non-White Women with Income by Income Group, 1959 and 1949

Income Bracket	1959	1949	Percent Distribution 1959	Percent Distribution 1949
Total with Income	221,341	125,840	100.0%	100.0%
$999 or less	77,280	55,010	34.9	43.7
$1,000-$1,999	48,367	44,180	21.9	35.1
$2,000-$2,999	45,653	21,715	20.6	17.3
$3,000-$3,999	28,120	3,585	12.7	2.8
$4,000-$4,999	13,267	725	6.0	0.6
$5,000-$5,999	4,932	265	2.2	0.2
$6,000-$6,999	1,892	135	0.9	0.1
$7,000-$9,999	1,464	115	0.7	0.1
$10,000 and over	366	110	0.1	0.1

This increase was due in large part to two factors. One, the number of non-white women 14 years and over increased by 39.9 percent as they increased their numbers from 261,650 in 1950 to 366,024 in 1960. Two, during this period, non-white women workers increased from 101,135 to 151,789, a rise of 50.1 percent. Unlike all Illinois women whose numbers increased fastest in rural non-farm areas, the greatest increase among non-white women with income occurred in urban areas.

Earnings and Occupation

Surprisingly, non-white women in the Illinois labor force had higher median earnings for certain of the occupational groups than those shown for the total female labor force in Illinois. These occupational groups were Professional Workers, where the non-white median of $4,091 was $143 higher than the State's median for women workers in this group; Sales Workers, where the non-white women had a median of $1,828, or $220 more; Service Workers, where the non-white women had a median of $2,089, or $476 more; and Laborers where the non-white women had a median of $2,434 compared with the $2,416 figure for all women in the State in this classification.

Table 43. Median Annual Earnings in 1959 of Non-White Women in the Illinois Experienced Civilian Labor Force by Occupational Groups

Occupational Groups	Median Earnings	Total With Earnings*
Total Women	$2,295	134,590
Professional, Technical and Kindred Workers	4,091	9,222
Managers, Officials and Proprietors	2,573	1,541
Clerical and Kindred Workers	3,021	22,461
Sales Workers	1,828	2,872
Craftsmen, Foremen and Kindred Workers	2,837	1,784
Operatives and Kindred Workers	2,453	30,429
Private Household Workers	1,073	17,805
Service Workers, Except Private Household	2,089	24,480
Laborers	2,434	2,214
Occupations Not Reported	2,211	21,651

*Two occupational groups (Farmers and Farm Managers and Farm Laborers and Foremen) contained insufficient data so a median was not determined. These two groups combined totaled only 131 women in Illinois.

Non-white women had lower median earnings than the State's medians for all women in the other occupational groups.

However, closer analysis reveals that higher median earnings for non-white women workers may have been the result of the fact that proportionally more non-white women worked 50 or more weeks than did all Illinois women workers in these classifications. For instance, 45.8 percent of the non-white women in Professional, Technical and Kindred occupations worked 50 or more weeks as opposed to only 36.8 percent of all Illinois women workers in this group. Also, 54.6 percent of all non-white women Service Workers worked 50 or more weeks against only 43.7 percent of all women workers in this group. In each case where non-white female median incomes were higher than those for all women in the State, the percentage of non-white women working 50 or more weeks was higher.

Earnings and Industry

Non-white women in the Illinois labor force had a higher median earnings than that shown for all Illinois women in the Public Administration and Entertainment and Recreation Services industry groups in 1959. The median earnings for non-white women in Public Administration was $3,644 and $2,207 in Entertainment and Recreation Services in 1959. The median figures for all Illinois women in these two groups were $3,641 and $1,604, respectively, that year.

Non-white women had median earnings exceeding $3,000 in three industry groups in 1959. The three industry groups were Government Educational Services ($4,384), Public Administration ($3,644) and Transportation, Communication and Public Utilities ($3,383).

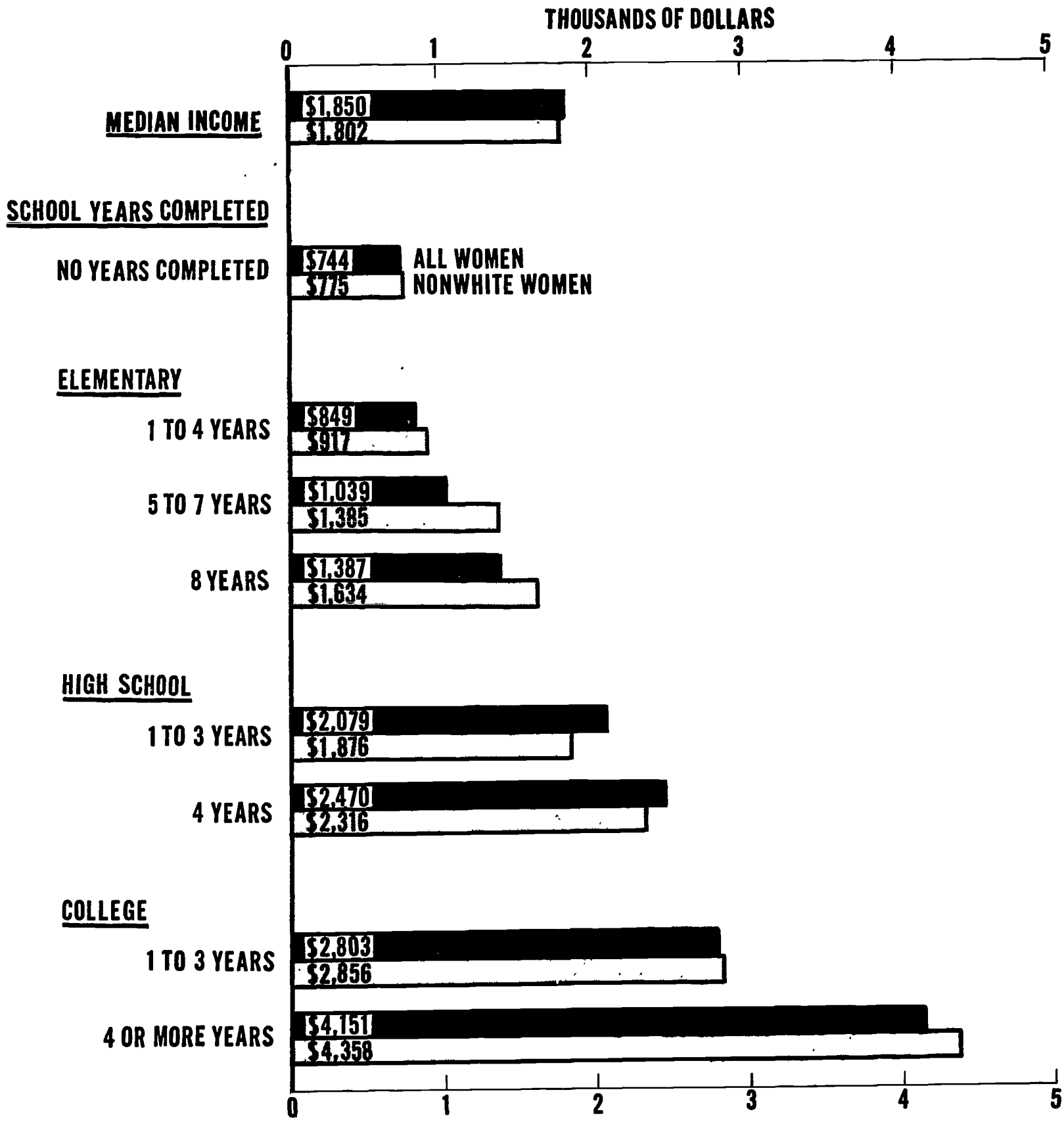
Four industry groups had median earnings for non-white women of less than $2,000 in 1959. They were Hotels and Lodging Places ($1,958), Other Personal Services ($1,872), Eating and Drinking Places ($1,703) and Private Households ($1,074). Two industry groups lacked a sufficient number of non-white women so median earnings were not computed for non-white women in the Agriculture, Forestry and Fisheries and Mining industries.

The remaining thirteen industry groups had median earnings for non-white women which fell between $2,000 and $2,999 in 1959. Non-white women employed in these thirteen industry groups totaled 69,097 and accounted for more than 51 percent of the non-white women with earnings. An additional 20,099 non-white women with earnings, but reporting no industry, had a median earnings of $2,176 in 1959. This group amounted to almost 16 percent of the non-white women with earnings. With approximately two-thirds of the non-white women with earnings having median earnings between $2,000 and $2,999, it is not surprising to find that the median earnings for all non-white women was a mere $2,295 or $390 less than the median earnings for all Illinois women with earnings in 1959.

Table 44. Median Annual Earnings of Illinois Non-White Women in 1959 by Industry Groups

Industry Group	Total With Earnings	Median Earnings
Total Women, Experienced Civilian Labor Force	134,590	$2,295
Agriculture, Forestry and Fisheries	189	---
Mining	18	---
Construction	260	2,946
Manufacturing	26,267	2,686
Durable Goods	10,918	2,842
Nondurable Goods	15,349	2,595
Transportation, Communication & Public Utilities	2,530	3,383
Wholesale Trade	1,801	2,385
Food and Dairy Products Stores	1,299	2,016
General Merchandise Retailing	7,795	2,211
Eating and Drinking Places	4,567	1,703
Other Retail Trade	4,055	2,052
Finance, Insurance and Real Estate	2,127	2,654
Business and Repair Services	1,422	2,358
Private Households	18,154	1,074
Hotels and Lodging Places	4,842	1,958
Laundering, Cleaning and Dyeing Services	6,680	2,074
Other Personal Services	2,312	1,872
Entertainment and Recreation Services	517	2,207
Medical and Other Health Services	13,013	2,636
Educational Services, Government	4,811	4,384
Educational Services, Private	1,869	2,757
Other Professional and Related Services	1,992	2,368
Public Administration	7,971	3,644
Industry Not Reported	20,099	2,176

MEDIAN INCOME FOR ALL ILLINOIS WOMEN AND NONWHITE WOMEN 25 YEARS AND OVER BY SCHOOL YEARS COMPLETED, 1959



Education and Income

Non-white women with income had less schooling than did all women in the State in 1959, as can be seen in the fact that the non-white women 25 years and over had a median of 9.5 school years completed while all women 25 years and over had an median of 10.5 school years completed. This was primarily due to the fact that 46.2 percent of the non-white females with income had not completed more than 8 years of schooling compared with 40.2 percent of all females with income.

Table 45. Median Annual Income of all Women and Non-White Women, 25 Years and Over, by Years of School Completed, Illinois, 1959

			Percent Distribution		Median Income	
	State	Non-White	State	Non-White	State	Non-White
Females, 25 years and over with Income	1,699,661	184,596	100.0%	100.0%	$1,850	$1,802
No School years completed	30,063	3,726	1.8	2.0	744	775
Elementary: 1 to 4 years	76,749	17,237	4.5	9.3	849	917
5 to 7 years	195,720	33,929	11.5	18.4	1,039	1,385
8 years	380,159	30,507	22.4	16.5	1,387	1,634
High School: 1 to 3 years	338,544	43,057	19.9	23.3	2,079	1,876
4 years	421,950	34,917	24.8	18.9	2,470	2,316
College: 1 to 3 years	147,755	13,998	8.7	7.6	2,803	2,856
4 years or more	108,721	7,225	6.4	4.0	4,151	4,358
Median School years completed	10.5	9.5	--	--	--	--

As was true for all females with income, the better educated the non-white woman was, the more income she received. Non-white women with no schooling had a median income of $775 per year. With 8 years of schooling, non-white women had a median income of $1,634 per year. Non-white women with income and a college education had a median income ($4,358) above that for all women with income and a college education ($4,151), but only four percent of the non-white women were in this group as opposed to more than six percent for all women with income.

Other Income

Sources of income other than those generally associated with participation in the labor force became more important to non-white women as well as to all Illinois women.

Non-White Illinois Women With Income

	1960	1950
Total with Income	221,341	125,840
In Labor Force	151,789	101,135
Percent Labor Force of those with Income	68.6%	80.4%

There is, however, very little information as to what the source of this income are for non-white women in Illinois or whether they are substantially different from those for all women in the United States.

In the United States, the median income for non-white females as a percent of the median for all women income recipients was 57.3 percent in 1949 and 67.0 percent in 1959. Illinois non-white women income recipients had a median income which was 86.5 percent and 99.0 percent of the median income figures for all Illinois female income recipients in 1949 and 1959, respectively.

Median Income by Color for U. S. and Illinois Women receiving Income 1959 and 1949, and Percent Non-White Female Median Income of total Female Median Income for the United States and Illinois

	1959		1949		Percent Non-White of All	
	Total	Non-White	Total	Non-White	1959	1949
United States	$1,357	$909	$1,029	$590	67.0%	57.3%
Illinois	1,678	1,662	1,355	1,172	99.0	86.5
Percent Illinois of United States	+23.7	+82.8	+31.7	+98.6		

The median income for non-white women in Illinois was nearly double (98.6% larger) than that of non-white women in the Nation in 1949. But by 1959, the median income for non-whites throughout the country had increased by more than 50 percent so that the median in Illinois dropped to 82.8 percent greater than that for non-whites in the United States. The data presented thus far show that non-white women in Illinois fare substantially better than non-white women in the Nation as a whole.

Income of Married Women

Non-white working women were more important to their families than was true generally. In the 170,141 non-white husband-wife families in 1960 in Illinois, 73,778 had both a husband and a wife working. An additional 4,726 families had just the wife working. Thus, while only 37.3 percent of the State's husband-wife families had both members in the labor force, 43.4 percent of the non-white husband-wife families in Illinois contributed both members to the labor force. While only 1.5 percent of such families had only a working wife, 2.8 percent of the non-white husband-wife families had only a working wife.

In non-white husband-wife families where the husband worked and the wife did not, the median income in 1959 was $4,678 per year and in families where both the husband and the wife worked the median income was $6,655 per year. Therefore, families with working women added around $1,977 to their yearly income. In families where only the wife was working, the median income was $2,959 per year as opposed to the median of $1,531 in families where neither worked, an increase of $1,428 per year.

Table 46. Status of Employment of Non-White Husband-Wife Families in Illinois in 1959, and Median Annual Incomes for such Families

	Total Families	Median Income
Total	170,141	$5,195
Head Worked	153,598	5,460
Wife Worked	73,778	6,655
Wife did not Work	79,820	4,678
Head Did Not Work	16,543	1,813
Wife Worked	4,726	2,959
Wife did not Work	11,817	1,531

There were 198,468 non-white families in Illinois with one or more persons working in 1959. Of this number, 104,333 non-white families, or 52.6 percent, had more than one person working as opposed to only 48.8 percent of the 2,410,476 family units in the State with more than one member working. Thus, a higher percentage of non-white families had more than a single member working. It can not be determined from these data how many were women; however, it is clear that women did provide a significant amount of income that year.

Table 47. Number of Earners in Non-White Families in Illinois and Median Annual Incomes by Number of Earners in 1959

	Number	Median Income
Families with Earners	198,468	-----
With one Earner	94,135	$3,965
With two Earners	80,503	$6,152
With three or more Earners	23,830	$9,161

In non-white families, the median income for families with two earners was 55.2 percent more than the median income for families with one earner. Where there were three or more earners, the median income was 131.0 percent more than for families with one earner and 48.9 percent more than that for families with two earners.

CHAPTER XI
WEEKS WORKED BY NON-WHITE ILLINOIS WOMEN

Non-white working women, when distributed by number of weeks worked in 1959, had a pattern very similar to that for all female workers in the State that year. While 71.6 percent of the State's women workers were employed for 27 or more weeks, 72.9 percent of the 164,357 non-white women workers were employed for 27 or more weeks in 1959. The percentage of non-white women workers employed for 50 or more weeks (43.9%) was very similar to that for all women workers in Illinois (44.4%).

Table 48. Weeks Worked in 1959 by Illinois Non-White Women

Weeks Worked	Number	Percent Distribution
Total Workers	164,357	100.0%
50 to 52 Weeks	72,117	43.9
48 to 49 Weeks	12,000	7.3
40 to 47 Weeks	18,171	11.1
27 to 39 Weeks	17,478	10.6
14 to 26 Weeks	19,917	12.1
13 Weeks or Less	24,674	15.0

Occupations and weeks worked

Half of the non-white women in the experienced labor force worked 50 or more weeks in 1959, but they were not equally distributed among the occupational groups. In only four of the occupational groups were a majority of the women contained therein employed 50 or more weeks. They were: Managers, Officials and Proprietors, except Farm (72.3%); Craftsmen, Foremen and Kindred Workers (59.3%); Clerical and Kindred Workers (57.0%) and Service Workers, except Private Household (54.6%). Less than half, but more than forty percent, of the women in the other occupational groups worked 50 weeks or more in 1959.

Table 49. Percent of Illinois Non-White Working Women Employed 50 or More Weeks in 1959 by Occupational Group

Occupational Group	Percent Working 50 or More Weeks
Total	50.0%
Professional, Technical and Kindred Workers	45.8
Farmers and Farm Managers	--
Managers, Officials and Proprietors, Except Farm	72.3
Clerical and Kindred Workers	57.0
Sales Workers	45.8
Craftsmen, Foremen and Kindred Workers	59.3
Operatives and Kindred Workers	49.1
Private Household Workers	41.5
Service Workers, Except Private Household	54.6
Farm Laborers and Foremen	--
Laborers, Except Farm and Mine	46.5
Occupations Not Reported	46.4

Industry and Weeks Worked

More than 50 percent of the non-white women employed in six of the eleven industry groups in Illinois worked 50 weeks or more in 1959. The industry group with the highest percentage of non-white women employed for that period of time in 1959 was Transportation, Communications and Public Utilities (66.2%). The other five were Public Administration (65.0%), Finance, Insurance and Real Estate (64.6%), Professional and Related Services (51.8%), Wholesale Trade (51.5%) and Manufacturing (50.4%). In the five remaining industry groups, at least 46 percent of the non-white women were employed 50 or more weeks in 1959.

Table 50. Percent of Illinois Non-White Women Workers Employed 50 or More Weeks in 1959, by Industry

Industry Group	Percent Worked 50 or More Weeks
Total	50.0%
Agriculture, Forestry and Fisheries	--
Construction and Mining	48.8
Manufacturing	50.4
Transportation, Communication and Public Utilities	66.2
Wholesale Trade	51.5
Retail Trade*	46.7
Finance, Insurance and Real Estate	64.6
Business and Repair Services	48.0
Personal Services*	47.1
Entertainment and Recreation Services	46.6
Professional and Related Services	51.8
Public Administration	65.0
Industry Not Reported	46.1

*Approximations using Formula

$$\frac{(WN)_1+(WN)_2+(WN)_3+(WN)_4}{N_1+N_2+N_3+N_4}$$

N = Frequency
W = Percent Worked 50 or More Weeks

CHAPTER XII
WOMEN WORKERS IN EIGHT ILLINOIS LABOR MARKET AREAS

Labor Force

The major labor market areas in Illinois[1] are important not only at present but also in the future for a number of reasons. First, these areas are the population as well as the labor force centers of the State, reflecting past and present employment opportunities. Second, trends in urbanization, if continued, promise to increase the impact these areas have on the Illinois economy as they grow. The trends also envision the rise of other labor market areas within the State which are not, at present, numerically significant. Third, employment opportunities are effectively influenced by the presence or absence of other services such as light, water, land and transportation. Though land is scarce in metropolitan areas, the presence of developed light, water and transportation services in such areas draws future employers to the peripheries of such areas where land is available. This in turn tends to increase the impact of the metropolitan market area.

The eight population centers in Illinois (Chicago Standard Metropolitan Statistical Area, Madison and St. Clair Counties, Peoria Standard Metropolitan Statistical Area, Rockford Standard Metropolitan Statistical Area, Springfield Standard Metropolitan Statistical Area, Rock Island County, Champaign-Urbana Standard Metropolitan Statistical Area and Decatur Standard Metropolitan Statistical Area) contained over 76 percent of the women in the State who were 14 years and over in 1960. These same areas, ten year earlier, contained almost 75 percent of the women 14 years and over. Therefore, it is not surprising to find that in 1960, over 80 percent of the women workers in the State resided in these areas. More than 81 percent of the women workers in 1950 were in these eight areas.

Labor force participation rates for women for the eight areas combined exceeded those for the State in both 1960 and 1950. In 1960, only 36.2 percent of the women 14 years and over were in the State's labor force but 38.0 percent of the women 14 years and over in the eight areas combined were in the labor force. Similarly in 1950, only 31.3 percent of the Illinois female population 14 years and over were in the labor force, while 34.2 percent of the female population 14 years and over in the eight areas were in the labor force.

Employed Women

Chicago was the most significant area of employment for women workers in Illinois both in 1960 and 1950. More than 66 percent of the State's women workers were located in this area in 1960. In 1950, more than 68.4 percent of the women workers were located in the Chicago area. This was due to the fact that the State's female labor force increased by 25.9 percent while women workers in the Chicago area increased by only 22.4 percent between 1950 and 1960.

1/ The eight areas containing the largest numbers of women in the Illinois Labor Force are: (Standard Metropolitan Statistical Areas are fully capitalized)

CHAMPAIGN-URBANA	Champaign County, Ill.
CHICAGO	Cook, Du Page, Kane, Lake, McHenry and Will Counties, Ill.
DECATUR	Macon County, Ill.
Madison-St. Clair Counties	The Illinois portion of the St. Louis Standard Metropolitan Statistical Area
PEORIA	Peoria and Tazewell Counties, Ill.
ROCKFORD	Winnebago County, Ill.
Rock Island County	The Illinois portion of the Davenport-Rock Island-Moline Standard Metropolitan Statistical Area
SPRINGFIELD	Sangamon County, Ill.

NUMBER OF WOMEN WORKERS IN EIGHT ILLINOIS LABOR MARKET AREAS, 1960 & 1950

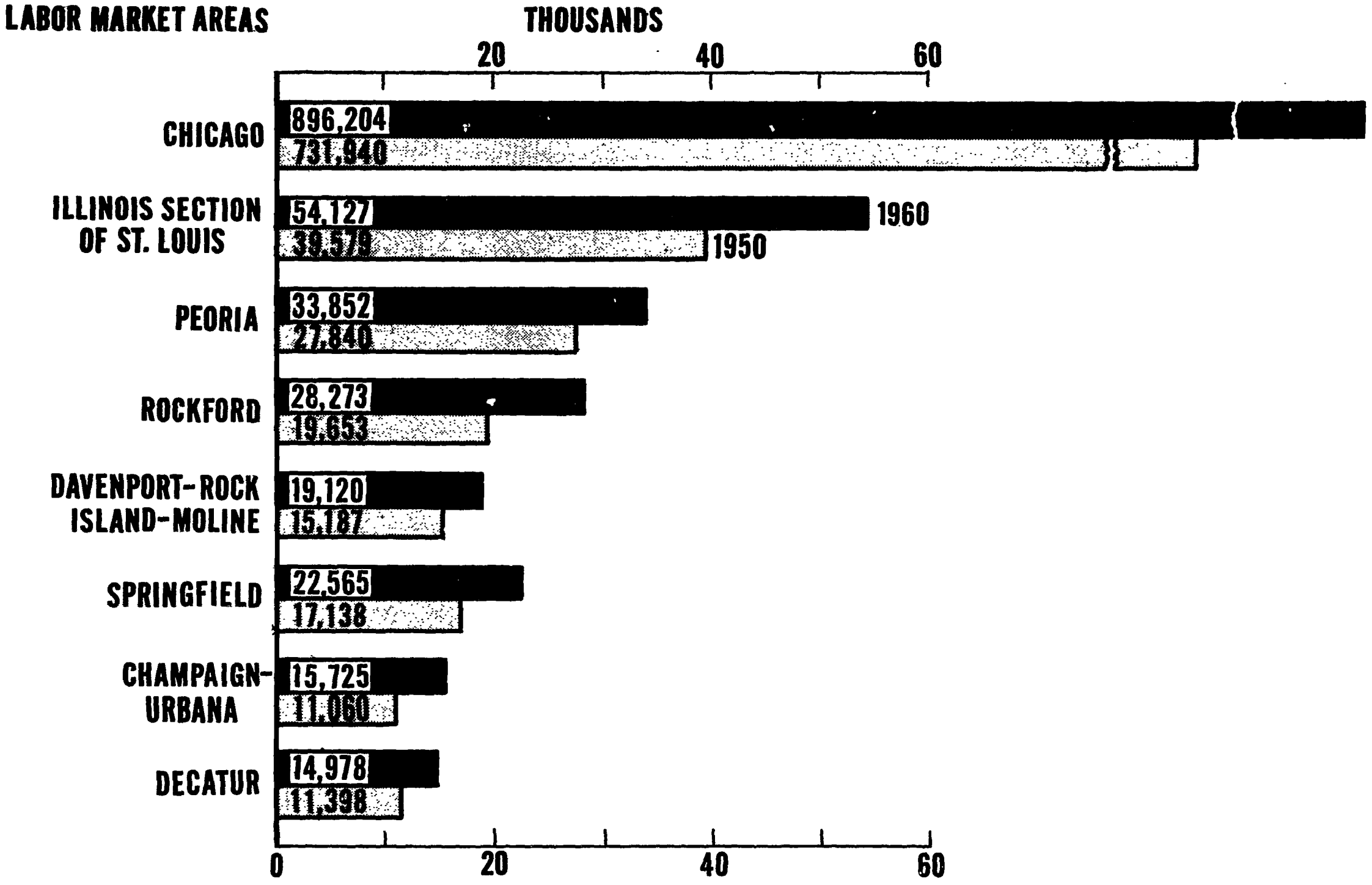


Table 51. Women 14 Years and Over, by Employment Status for Illinois and Major Labor Market Areas in Illinois, 1960 and 1950

Areas	Women 14 Years and Over		Female Labor Force	
	1960	1950	1960	1950
State	3,723,281	3,418,775	1,348,328	1,070,747
SMSA's	2,853,772	2,552,484	1,084,844	873,795
Chicago 1/	2,300,389	2,070,915	896,204	731,940
Madison-St. Clair Counties 2/	173,953	147,072	54,127	39,579
Peoria	104,832	95,194	33,852	27,840
Rockford	74,288	58,677	28,273	19,653
Rock Island County 3/	55,252	51,169	19,120	15,187
Springfield	57,083	53,495	22,565	17,138
Champaign-Urbana	44,318	37,081	15,725	11,060
Decatur	43,657	38,881	14,978	11,398
All Other Counties	872,509	866,291	263,484	196,952

1/ Chicago includes Cook, Du Page, Kane, Lake, McHenry, and Will Counties, Illinois in both 1950 and 1960.
2/ Madison and St. Clair Counties are part of the St. Louis Standard Metropolitan Statistical Area.
3/ Rock Island County is the Illinois portion of the Davenport-Rock Island-Moline Standard Metropolitan Statistical Area.

Table 52. Unemployed Women and Rates of Unemployment for Illinois and Major Labor Market Areas in Illinois, 1960 and 1950

Areas	Unemployed Women		Rates of Unemployment	
	1960	1950	1960	1950
State	65,071	41,888	4.8%	3.9%
SMSA's	53,277	35,225	4.9	4.0
Chicago	44,299	30,314	4.9	4.1
Madison-St. Clair Counties 2/	3,051	1,708	5.6	4.3
Peoria	1,331	1,059	3.9	3.8
Rockford	1,384	447	4.9	2.3
Rock Island County 3/	883	585	4.6	3.9
Springfield	934	559	4.1	3.3
Champaign-Urbana	514	170	3.3	1.5
Decatur	881	383	5.9	3.4
All Other Counties	11,794	6,663	4.5	3.4

1/ Chicago includes Cook, Du Page, Kane, Lake, McHenry, and Will Counties, Illinois in both 1950 and 1960.
2/ Madison and St. Clair Counties are part of the St. Louis Standard Metropolitan Statistical Area.
3/ Rock Island County is the Illinois portion of the Davenport-Rock Island-Moline Standard Metropolitan Statistical Area.

Table 53. Percent Increase of Illinois Women by Employment Status From 1950 to 1960 by Major Labor Market Areas

Areas	Percentage Increase		
	Females 14 Years and Over	Labor Force	Unemployed
State	8.9%	25.9%	55.3%
SMSA's	11.8	24.2	51.2
Chicago 1/	11.1	22.4	46.1
Madison-St. Clair Counties 2/	18.3	36.8	78.6
Peoria	10.1	21.6	25.7
Rockford	26.6	43.9	209.6
Rock Island County 3/	8.0	25.9	50.9
Springfield	6.7	31.7	67.1
Champaign-Urbana	19.5	42.2	202.4
Decatur	12.3	31.4	130.0
All Other Counties	0.7	33.8	77.0

1/ Chicago includes Cook, Du Page, Kane, Lake, McHenry and Will Counties, Illinois in both 1960 and 1950.
2/ Madison and St. Clair Counties are part of the St. Louis Standard Metropolitan Statistical Area.
3/ Rock Island County is the Illinois portion of the Davenport-Rock Island-Moline Standard Metropolitan Statistical Area.

Table 54. Illinois Female Labor Force Participation Rates and Percentage Distribution of Illinois Female Labor Force, by Major Labor Market Areas, 1960 and 1950

Areas	Female Labor Force Participation Rates		Percentage Distribution of Illinois Female Labor Force	
	1960	1950	1960	1950
State	36.2%	31.3%	100.0%	100.0%
SMSA's	38.0	34.2	80.5	81.6
Chicago 1/	39.0	35.3	66.5	68.4
Madison-St. Clair Counties 2/	31.1	26.9	4.0	3.7
Peoria	32.3	29.2	2.5	2.6
Rockford	38.1	33.5	2.1	1.8
Rock Island County 3/	34.6	29.7	1.4	1.4
Springfield	39.5	32.0	1.7	1.6
Champaign-Urbana	35.5	29.8	1.2	1.0
Decatur	34.3	29.3	1.1	1.1
All Other Counties	30.2	22.7	19.5	18.4

1/ Chicago includes Cook, Du Page, Kane, Lake, McHenry and Will Counties, Illinois in both 1960 and 1950.
2/ Madison and St. Clair Counties are part of the St. Louis Standard Metropolitan Statistical Area.
3/ Rock Island County is the Illinois portion of the Davenport-Rock Island-Moline Standard Metropolitan Statistical Area.

The area with the second largest number of women workers both in 1960 and 1950 was the Madison-St. Clair Counties area. Only 4.0 percent of the women workers in the State were in this area in 1960 while 3.7 percent were in this area in 1950. All other areas had lower proportions of the women worker totals in 1960 and 1950 and according to size were: Peoria, Rockford, Springfield and Rock Island County. There was only one change in rank order between 1950 and 1960 as Decatur exchanged places with Champaign-Urbana.

While an increase in the size of the labor force between two periods of time is most often associated with an increase in population, increases in the number of women workers are more often a function of increasing participation rates. As can be seen from Table , the 25.9 percent increase between 1950 and 1960 in the number of women in the Illinois labor force was nearly three times the 8.9 percent increase in the number of women 14 years and over. The largest percentage increases in the female labor force occurred in Rockford (+43.9%) and Champaign-Urbana (+42.2%). In 1950, only three of the eight areas had participation rates for women above 30 percent. By 1960, all eight areas had participation rates exceeding 30 percent. The three areas with the highest participation rates in 1950--Chicago (35.3%), Rockford (33.5%) and Springfield (32.0%)--were the three highest in 1960 with rates of 39.0 percent, 38.1 percent and 39.5 percent, respectively.

After Chicago and Madison-St. Clair Counties (the Illinois Section of the St. Louis Area), Peoria had the largest number of women in the labor force. However, Madison-St. Clair Counties and Peoria had the lowest rates of labor force participation among women 14 years of age and older of the eight areas. In Madison-St. Clair Counties only 31.1 percent of the women were in the labor force and in Peoria only 32.3 percent were labor force members. In 1950, these areas also had the lowest participation rates, 26.9 percent and 29.2 percent, respectively. However, they were closely followed by Champaign-Urbana, Rock Island County and Decatur with rates of 29.8, 29.7 and 29.3 percent, respectively.

Occupational Patterns

The occupational distribution of the employed women workers in the eight labor market areas reflects the influence of these areas on the occupational patterns of employed women in the State. The two tables below demonstrate the importance of the eight areas in their combined contribution to the total employment of women workers in Illinois by occupational and industrial groups.

Table 55. Total Employed Women Workers in the Eight Areas as a Percent of Illinois Employed Women Workers by Occupation, 1960

	Percent of Total
Total Employed	80.4%
Professional, Technical and Kindred Workers	78.1
Managers, Officials and Proprietors	74.0
Clerical and Kindred Workers	86.1
Sales Workers	78.4
Craftsmen, Foremen and Kindred Workers	83.7
Operatives and Kindred Workers	79.6
Private Household Workers	71.3
Service Workers, Except Private Household	71.1
Laborers	57.4

Table 56. Employed Women by Occupational Group For Eight Illinois Labor Market Areas, 1960

	Chicago	Madison–St. Clair	Peoria	Rockford	Rock Island County	Springfield	Decatur	Champaign–Urbana
Employed Women	851,200	50,898	32,517	26,885	18,237	21,627	14,097	15,061
Professional, Technical and Kindred Workers	95,305	5,932	4,390	3,295	2,493	2,857	1,900	2,898
Managers, Officials and Proprietors	25,898	1,635	1,192	702	569	840	608	616
Clerical and Kindred Workers	320,511	16,349	11,044	8,319	6,123	8,825	4,530	5,273
Sales Workers	60,152	3,920	3,009	2,279	1,546	1,509	1,163	1,100
Craftsmen, Foremen and Kindred Workers	13,176	485	308	341	202	173	143	113
Operatives and Kindred Workers	142,620	8,052	3,187	5,483	2,102	1,711	1,655	807
Private Household Workers	31,328	2,324	1,696	1,268	859	1,192	924	878
Service Workers, Except Private Household	87,201	8,325	5,395	3,456	3,254	3,152	2,357	2,541
Laborers	5,803	449	356	363	238	71	112	106
Occupations Not Reported	69,206	3,427	1,940	1,379	581	1,297	705	729

Table 57. Percentage Distribution of Employed Women By Occupational Group For Eight Illinois Labor Market Areas, 1960

	Chicago	Madison-St. Clair	Peoria	Rockford	Rock Island County	Springfield	Decatur	Champaign-Urbana
Employed Women	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Professional, Technical and Kindred Workers	11.2	11.7	13.5	12.3	13.7	13.2	13.5	19.2
Managers, Officials and Proprietors	3.0	3.2	3.7	2.6	3.1	3.9	4.3	4.1
Clerical and Kindred Workers	37.7	32.0	34.0	30.9	33.6	40.8	32.1	35.0
Sales Workers	7.1	7.7	9.3	8.5	8.5	7.0	8.2	7.3
Craftsmen, Foremen and Kindred Workers	1.5	1.0	0.9	1.3	1.1	0.8	1.0	0.8
Operatives and Kindred Workers	16.8	15.8	9.8	20.4	11.5	7.9	11.7	5.4
Private Household Workers	3.7	4.6	5.2	4.7	4.7	5.5	6.6	5.8
Service Workers, Except Private Household	10.2	16.4	16.6	12.9	17.8	14.6	16.7	16.9
Laborers	0.7	0.9	1.1	1.4	1.3	0.3	0.8	0.7
Occupations Not Reported	8.1	6.7	5.9	5.0	4.7	6.0	5.1	4.8

A comparison of the occupational characteristics of employed women among the eight areas demonstrates the differences in employment opportunities for women offered by the various areas. Between 11 and 13 percent of the employed women workers in seven of the eight areas were Professional Workers in 1960. In the eighth area, Champaign-Urbana, Professional Workers comprised nearly 20 percent of the women workers, many of whom were teachers and administrative personnel at the University of Illinois.

Women Managers, Officials and Proprietors varied between 2 and 4 percent of the employed women in each of the areas. The other groups for which there was no substantial variation among the eight areas were Craftsmen, Foremen and Kindred Workers (between 0.8 and 1.5 percent), Laborers (between 0.3 and 1.4 percent), Private Household Workers (between 3.7 and 6.6 percent), and Sales Workers (between 7.0 and 9.3 percent).

Women Clerical Workers constituted between 30 and 35 percent of the employed women in six areas but were 40.8 percent of Springfield women workers, and 37.7 percent of the Chicago women workers. Springfield contains the State Capitol where many women are employed in Government, and in Finance, Insurance and Real Estate. Women employed in the Chicago area are well distributed among all industries using Clerical Workers.

Operatives and Kindred Workers were better than 15 percent of the employed women workers in Rockford (20.4%), Chicago (16.8%), and Madison-St. Clair Counties (15.8%). In three other areas, Operatives accounted for approximately 10 percent of the employed women workers, while in two areas, Springfield, the State Capitol, and Champaign-Urbana, a university community, Operatives accounted for only 7.9 percent and 5.4 percent of the female employed, respectively.

Industrial Patterns

The distribution of employed women by occupational group is basically a response to the industrial character of the employing units in each of the areas. As employers in each industry hire similar proportions of women to total work force in staffing their establishments, the employment and even the occupational skills of the women employed are a function of the industrial activity in each labor market.

Table 58. Total Employed Women Workers in the Eight Areas as a Percent of Illinois Employed Women Workers by Industry Group, 1960

	Percent of Total
Total Employed	80.4%
Agriculture, Forestry and Fisheries	28.7
Construction and Mining	80.7
Manufacturing	83.5
Transportation, Communication and Public Utilities	84.7
Wholesale and Retail Trade	79.1
Personal Services	75.1
Finance, Insurance and Real Estate	87.0
Business and Repair Services	93.3
Professional and Related Services	75.0
Public Administration	81.0
Entertainment and Recreation Services	84.3

Manufacturing, Retail Trade (other than Food and Dairy Products Stores, and Eating and Drinking Places) and Personal Services in that order were the three industries which employed the largest numbers of women in Chicago, Madison-St. Clair Counties, Peoria, Rock Island County, Rockford, and Decatur. The other two areas, Springfield and Champaign-Urbana were affected by special circumstances which were reflected in the distribution of employed women by industry. The Springfield area includes the State Capitol and for this reason Public Administration rather than Manufacturing was the industry in which there was the largest number of employed women. This was followed by Personal Services, the third largest employer in other areas, and Retail Trade (other than Food and Dairy Products Stores and Eating and Drinking Places).

The largest employer of women in the Champaign-Urbana area, the site of the University of Illinois, was Public Educational Services. As in the case of the Springfield area, Personal Services and Retail Trade were the second and third largest industries of employment for women in the Champaign-Urbana area.

The three industries employing the largest numbers of women in 1960 also employed the largest numbers of women in 1950 in seven of the eight areas. The sole exception, Springfield, occurred when Manufacturing, the second largest employer in 1950, fell to fourth in 1960 and was replaced by Personal Services, the fourth largest employer in 1950.

Of the seventeen industrial groups in 1960, only five showed significant variations in the percentage of women employed in the industrial groups among the eight areas. The industrial groups which exhibited such variations among the eight areas were Manufacturing; Finance, Insurance and Real Estate; Personal Services; Public Educational Services and Public Administration. Between 17 and 32 percent of the employed women in six of the eight areas were in Manufacturing. In the Springfield and Champaign-Urbana areas, only 10.3 percent and 5.5 percent of the employed women, respectively, were employed in Manufacturing.

Between five and seven percent of the employed women in five areas were employed by Finance, Insurance and Real Estate firms. The other three areas, Rockford, Springfield and Champaign-Urbana, had 4.4 percent, 8.3 percent and 3.7 percent of the employed women, respectively, in this industry group.

Between four and seven percent of the employed women were concentrated in Public Educational Services in six of the eight areas. Champaign-Urbana, the site of the University of Illinois, and Decatur had 24.6 percent and 8.3 percent of their respective totals of employed women concentrated in this industry group.

There were great differences in the concentration of employed women in Public Administration. In Springfield, 14.4 percent of the employed women had this industrial attachment whereas the areas with the second largest percentage of employed women so concentrated, Champaign-Urbana, had only 6.2 percent of its employed women in this industry group. Madison-St. Clair Counties and Decatur had 4.5 percent and 4.1 percent of their employed women in this group. The other areas, Chicago, Rock Island County, Peoria and Rockford contributed only 3.1 percent, 2.4 percent, 2.0 percent and 1.9 percent of their respective totals of employed women to the Public Administration industry group.

Between 1950 and 1960, employed women tended to increase more rapidly in some industry groups than in others in the eight areas. Generally in seven industry groups, employed women were greater proprotions of all employed women in 1960 than in 1950, while employed women in eight other industry groups were proportionally less. In the two remaining industry groups, Entertainment and Recreation Services

Table 59.
Employed Women by Industry Group
For Eight Illinois Labor Market Areas, 1960

	Chicago	Madison-St. Clair	Peoria	Rockford	Rock Island County	Springfield	Decatur	Champaign-Urbana
Employed Women	851,200	50,898	32,517	26,885	18,237	21,627	14,097	15,061
Agriculture, Forestry and Fisheries	1,812	302	205	128	117	135	80	168
Construction and Mining	6,170	471	228	147	153	279	95	99
Manufacturing	236,032	11,472	6,112	8,747	4,087	2,217	2,425	827
Transportation, Communications and Public Utilities	40,085	1,974	1,053	730	683	966	529	502
Wholesale Trade	22,768	988	768	558	338	278	192	173
Food and Dairy Product Stores	20,423	1,642	1,165	815	708	506	322	342
Eating and Drinking Places	32,309	3,161	1,948	1,480	1,134	1,142	1,089	684
Other Retail Trade	100,976	5,526	4,627	3,082	2,102	2,336	1,845	1,779
Finance, Insurance and Real Estate	59,102	3,214	2,063	1,188	1,262	1,792	868	558
Business and Repair Services	22,964	733	521	443	163	256	172	216
Personal Services	68,741	5,066	3,524	2,726	1,795	2,480	1,826	1,955
Entertainment and Recreation Services	5,787	395	230	182	145	143	69	138
Public Educational Services	37,734	3,623	2,199	1,739	1,168	1,286	1,177	3,697
Private Educational Services	24,248	1,230	680	490	532	441	363	320
Medical Services	57,702	3,365	2,678	1,441	1,605	1,653	996	987
Other Professional and Related Services	27,221	2,473	2,292	1,434	1,142	1,483	870	1,014
Public Administration	26,235	2,270	661	501	437	3,119	574	934
Industry Not Reported	60,891	2,993	1,563	1,054	666	1,115	605	668

Table 60.
Employed Women by Industry Group
For Eight Illinois Labor Market Areas, 1950

	Chicago	Madison-St. Clair	Peoria	Rockford	Rock Island County	Springfield	Decatur	Champaign-Urbana
Employed Women	700,522	37,654	26,772	19,200	14,600	16,572	11,010	10,705
Agriculture, Forestry and Fisheries	1,894	390	243	104	184	130	91	128
Construction and Mining	4,238	253	201	101	111	195	84	63
Manufacturing	220,704	10,602	6,732	7,705	3,638	2,225	2,378	728
Transportation, Communications and Public Utilities	42,313	1,877	1,077	534	614	777	456	381
Wholesale Trade	21,888	854	700	429	269	265	257	130
Food and Dairy Product Stores	20,878	1,333	1,064	686	638	443	341	347
Eating and Drinking Places	32,057	2,796	1,815	1,030	1,138	1,126	935	714
Other Retail Trade	89,402	4,371	3,824	2,264	1,897	2,006	1,632	1,427
Finance, Insurance and Real Estate	44,135	1,856	1,361	895	995	1,170	442	312
Business and Repair Services	13,685	300	332	225	122	177	123	110
Personal Services	72,559	3,997	3,294	1,877	1,710	1,961	1,447	1,568
Entertainment and Recreation Services	5,931	240	244	138	135	104	70	92
Public Educational Services	23,172	1,772	1,452	843	816	795	662	2,558
Private Educational Services	16,866	717	448	337	314	252	221	156
Medical Services	38,292	2,395	2,188	1,078	1,221	1,773	954	830
Other Professional and Related Services	19,026	734	760	348	328	498	249	340
Public Administration	22,206	1,762	588	316	283	2,343	395	595
Industry Not Reported	11,276	1,405	449	290	187	332	273	226

Table 61.
Percentage Distribution of Employed Women by Industry Group
For Eight Illinois Labor Market Areas, 1960

	Chicago	Madison-St. Clair	Peoria	Rockford	Rock Island County	Springfield	Decatur	Champaign-Urbana
Employed Women	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Agriculture, Forestry and Fisheries	0.2	0.6	0.6	0.5	0.6	0.6	0.6	0.1
Construction and Mining	0.7	0.9	0.7	0.5	0.8	1.3	0.7	0.7
Manufacturing	27.7	22.5	18.8	32.5	22.4	10.3	17.2	5.5
Transportation, Communications and Public Utilities	4.7	3.9	3.2	2.7	3.7	4.5	3.8	3.3
Wholesale Trade	2.7	1.9	2.4	2.1	2.0	1.3	1.4	1.1
Food and Dairy Product Stores	2.4	3.2	3.6	3.0	3.9	2.3	2.3	2.3
Eating and Drinking Places	3.8	6.2	6.0	5.5	6.2	5.3	7.7	4.5
Other Retail Trade	11.9	10.9	14.2	11.5	11.5	10.8	13.1	11.8
Finance, Insurance and Real Estate	6.9	6.3	6.3	4.4	6.9	8.3	6.2	3.7
Business & Repair Service	2.7	1.4	1.6	1.6	0.9	1.2	1.2	1.4
Personal Services	8.1	10.0	10.8	10.1	9.8	11.5	13.0	13.0
Entertainment and Recreation Services	0.7	0.8	0.7	0.7	0.8	0.7	0.5	0.9
Public Educational Services	4.4	7.1	6.8	6.5	6.4	5.9	8.3	24.5
Private Educational Services	2.8	2.4	2.1	1.8	2.9	2.0	2.6	2.1
Medical Services	6.8	6.6	8.2	5.4	8.8	7.6	7.1	6.6
Other Professional and Related Services	3.2	4.9	7.0	5.3	6.3	6.9	6.2	6.7
Public Administration	3.1	4.5	2.0	1.9	2.4	14.4	4.0	6.2
Industry Not Reported	7.2	5.9	4.8	4.0	3.7	5.1	4.1	4.6

Table 62.
Percentage Distribution of Employed Women by Industry Group
For Eight Illinois Labor Market Areas, 1950

	Chicago	Madison-St. Clair	Peoria	Rockford	Rock Island County	Springfield	Decatur	Champaign-Urbana
Employed Women	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Agriculture, Forestry and Fisheries	0.3	1.0	0.9	0.5	1.3	0.8	0.8	1.2
Construction and Mining	0.6	0.7	0.8	0.5	0.8	1.2	0.8	0.6
Manufacturing	31.5	28.2	25.1	40.1	24.9	13.4	21.6	6.8
Transportation, Communications and Public Utilities	6.0	5.0	4.0	2.8	4.2	4.7	4.1	3.6
Wholesale Trade	3.1	2.3	2.6	2.2	1.8	1.6	2.3	1.2
Food and Dairy Product Stores	3.0	3.5	4.0	3.6	4.4	2.7	3.1	3.2
Eating and Drinking Places	4.6	7.4	6.8	5.4	7.8	6.8	8.5	6.7
Other Retail Trade	12.8	11.6	14.3	11.8	13.0	12.1	14.8	13.3
Finance, Insurance and Real Estate	6.3	4.9	5.1	4.7	6.8	7.1	4.0	2.9
Business and Repair Services	2.0	0.8	1.2	1.2	0.8	1.1	1.1	1.0
Personal Services	10.4	10.6	12.3	9.8	11.7	11.8	13.1	14.6
Entertainment and Recreation Services	0.8	0.6	0.9	0.7	0.9	0.6	0.6	0.9
Public Educational Services	3.3	4.7	5.4	4.4	5.6	4.8	6.0	23.9
Private Educational Services	2.4	1.9	1.7	1.8	2.2	1.5	2.0	1.5
Medical Services	5.5	6.4	8.2	5.6	8.4	10.7	8.7	7.8
Other Professional and Related Services	2.7	1.9	2.8	1.8	2.2	3.0	2.3	3.2
Public Administration	3.2	4.7	2.2	1.6	1.9	14.1	3.6	5.6
Industry Not Reported	1.5	3.7	1.7	1.5	1.3	2.0	2.6	2.0

and Medical Services, employed women were a larger proportion of all employed women in some areas and a lower proportion in other areas.

The industry groups which increased their proportions of employed women between 1950 and 1960 in the eight areas were Construction and Mining, Finance, Insurance and Real Estate, Business and Repair Services, Public and Private Educational Services, Other Professional and Related Services and Public Administration. There were a few exceptions. For instance, the Construction and Mining group in Decatur, the Finance, Insurance and Real Estate group in Rockford, and the Public Administration group in Peoria, Chicago and Madison-St. Clair Counties all employed proportionally fewer women in 1960 than in 1950.

The industry groups which employed proportionally fewer women in 1960 than in 1950 were those which suffered numerical declines and those which experienced smaller than average increases in employed women. These industry groups were Agriculture, Forestry and Fisheries; Manufacturing; Transportation, Communication and Public Utilities; Wholesale Trade; Food and Dairy Products Stores; Eating and Drinking Places; Other Retail Trade and Personal Services. The only exceptions to the above occurred in Rockford where employed women increased proportionally in both the Eating and Drinking Places and Personal Services industrial groups.

It is interesting to note that the three industries to which the greatest percentages of employed women were attached (Manufacturing, Personal Services and Retail Trade) were those industry groups which employed proportionally fewer of the employed women in 1960 than in 1950. Though these industry groups employed proportionally fewer women in 1960 than in 1950, there were only three instances in which there was no numerical growth in these groups in the 8 areas. They were a numerical decline in Personal Services in Chicago, and numerical declines in Manufacturing in both Peoria and Springfield. This tends to reflect increased employment opportunities for women in other industry groups during the 1950's.

Unemployment

Between 1950 and 1960, unemployed women workers in Illinois grew by 23,183. Almost 78 percent (18,052) of this increase occurred in the eight Illinois areas and caused the rates of unemployment for women in 1960 to increase above those in 1950 in the eight areas.

When the eight areas are ranked by unemployment rates for women both in 1960 and 1950, one is struck by the number of changes in position that occur. One need note that only two of the areas, Springfield and Champaign-Urbana, retained their 1950 positions, sixth and eighth, in 1960 while the other six changed positions. The area which experienced the greatest change in position was Decatur. Fifth in rank order in 1950, its 1960 unemployment rate thrust the area to first in 1960.

In 1950, there was a 2.8 percentage point spread between the highest (4.3%) and lowest (1.5%) unemployment rates among the eight areas while in 1960, the spread between the highest (5.9%) and lowest (3.3%) unemployment rates was reduced to 2.6 percentage points. Thus, although the participation of women in the labor force and the occupational and industrial distributions of women workers vary widely among the eight areas, unemployment rates for women did not vary markedly.

Rates of Unemployment for Women Workers in Rank Order by Labor Market Area

For Women Workers

1960		1950	
Decatur SMSA	5.9%	Madison-St. Clair Counties	4.3%
Madison-St. Clair Counties	5.6	Chicago SMSA	4.1
Chicago SMSA	4.9	Rock Island County	3.9
Rockford SMSA	4.9	Peoria SMSA	3.8
Rock Island County	4.6	Decatur SMSA	3.4
Springfield SMSA	4.1	Springfield SMSA	3.3
Peoria SMSA	3.9	Rockford SMSA	2.3
Champaign-Urbana SMSA	3.3	Champaign-Urbana SMSA	1.5

The most significant reason for the change in rates of unemployment among the areas is the fact that the percentage increase in unemployment was greater than the percentage increase in the female labor force between 1950 and 1960. In the State, between 1950 and 1960, the female labor force increased less than half as fast as unemployed women. Unemployed women in Rockford, Champaign-Urbana and Decatur, the areas with the largest unemployment increases, grew by 209.6 percent, 202.4 percent and 130.0 percent, respectively, while the female labor force for these areas increased by only 43.9 percent, 42.2 percent and 31.4 percent, respectively. Peoria and Chicago experienced the lowest percentage increases in unemployed women (25.7 percent and 46.1 percent, respectively) and were also the same areas which experienced the lowest percentage increases in the female labor force (21.6 percent and 22.4 percent) between 1950 and 1960.

Unemployed Women by Occupational Group

Three of the four occupational groups having the largest numbers of employed women in the eight areas (Clerical Workers, Operatives and Service Workers) were among the four occupational groups having the largest numbers of unemployed women. The Sales Worker occupational group was the other group which had large numbers of unemployed women in each of the areas.

In seven of the eight areas, the largest number of unemployed women were Operatives. In ghe eighth area, Champaign-Urbana, the largest was the Clerical Worker group. This was primarily due to the small amount of Manufacturing found in this area.

The second and third largest groups were Clerical Workers and Service Workers in seven of the eight areas. In three of the seven areas (Chicago, Springfield and Peoria), the Clerical Worker group was the second largest group and the Service Worker group was the third largest group. Again, the Champaign-Urbana area was the exception as the second and third largest groups were the Service Worker and Sales Worker groups.

The fourth largest group of unemployed women in seven of the eight areas was the Sales Worker group. In Champaign-Urbana, again the exception, Operatives were the fourth largest group of unemployed women. Between seven and fourteen percent of the unemployed in each of the eight areas were well spread among the remaining five occupational groups.

Professional Workers, one of the largest groups of employed women workers, were poorly represented among the unemployed because the rates of unemployment for this group in each of the eight areas were quite low.

Table 63. Unemployed Women by Occupational Group
For Eight Illinois Labor Market Areas, 1960

	Chicago	Madison-St. Clair	Peoria	Rockford	Rock Island County	Springfield	Decatur	Champaign-Urbana
Unemployed Women	41,427	2,864	1,233	1,294	844	883	819	472
Professional, Technical and Kindred Workers	1,059	72	32	19	37	11	7	34
Managers, Officials and Proprietors	360	32	12	8	15	4	4	—
Clerical and Kindred Workers	8,729	429	270	169	140	173	155	134
Sales Workers	2,324	198	109	108	55	70	44	68
Craftsmen, Foremen and Kindred Workers	625	19	23	46	11	17	20	—
Operatives and Kindred Workers	15,225	931	328	543	286	348	270	44
Private Household Workers	1,471	179	76	56	31	35	39	28
Service Workers, Except Private Household	4,890	576	254	198	172	154	190	105
Laborers	714	57	22	18	18	—	14	—
Occupations Not Reported	6,030	371	107	129	79	71	76	59

In 1950, unemployed women were most prominent in the Operative, Service Worker and Clerical occupations in all eight areas. There was, however, only one major difference between the 1950 unemployed and the 1960 unemployed and that was that unemployed Private Household Workers were among the four largest groups in six areas in 1950 but not in 1960.

CHAPTER XIII
NON-WHITE WOMEN WORKERS IN EIGHT ILLINOIS LABOR MARKET AREAS

The Illinois non-white female labor force rose from 101,135 in 1950 to 151,789 in 1960, and the eight major labor market areas absorbed almost 98 percent of this increase.[1] The non-white female labor force increased by 50,654 between 1950 and 1960. At the same time, the non-white female labor force in the eight areas increased by 49,569. This 50.9 percent increase in the non-white female labor force in the eight areas was the result of increases in both the number of women 14 years and over and in the participation rate for women. The non-white female population in the eight areas increased by 42.2 percent between 1950 and 1960. At the same time, the participation rate for non-white women in the eight areas rose from 39.6 percent in 1950 to 42.0 percent in 1960. This is a 6.1 percent increase over the 1950 participation rate.

Table 64. Non-White Women, 14 Years and Over, by Employment Status, 1960 and 1950, and Percentage Increases from 1950 to 1960 For Illinois and Eight Labor Market Areas

Employment Status	State		Eight Areas 1/		Percentage Increase	
	1960	1950	1960	1950	State	Eight Areas
Total Females, 14 Years and Over	366,024	261,049	349,635	245,923	+40.2%	+42.2%
Labor Force	151,789	101,135	146,873	97,304	+50.1	+50.9
Armed Forces	131	108	131	108	+21.3	+21.3
Employed	133,248	88,880	128,879	85,488	+49.9	+50.8
Unemployed	18,410	12,147	17,863	11,708	+51.6	+52.6
Participation Rate	41.5%	38.7%	42.0%	39.6%		

Labor Force

Although there were 97,304 non-white women in the combined labor force of the eight major areas in 1950, only two of the eight labor market areas had more than one thousand non-white women workers that year. These areas were Chicago (89,391) and Madison-St. Clair Counties (4,272). The Peoria area had the third largest non-white female labor force (934). The other five areas had fewer than 700 non-white women workers in 1950.

The 49,569 rise in non-white women workers in the eight areas swelled the number of major areas with one thousand or more non-white women workers to six in 1960. The Chicago and Madison-St. Clair Counties areas again headed the list with 134,734 and 5,786 non-white women workers, respectively. The other areas having one thousand or more non-white women workers were Peoria (1,541), Rockford (1,315), Champaign-Urbana (1,095) and Springfield (1,070). The Decatur and Rock Island County areas still had fewer than 700 non-white women workers in 1960, though the number of non-white women workers almost doubled in the latter area.

1/ The eight major labor market areas are: Champaign-Urbana SMSA - Champaign County; Chicago SMSA - Cook, Du Page, Kane, Lake, McHenry and Will Counties; Decatur SMSA - Macon County; Illinois portion of the St. Louis SMSA - Madison-St. Clair Counties; Peoria SMSA - Peoria and Tazewell Counties; Rockford SMSA Winnebago County; Rock Island County - Illinois portion of the Davenport-Rock Island-Moline SMSA.

NONWHITE WOMEN WORKERS IN EIGHT ILLINOIS LABOR MARKET AREAS, 1960 & 1950

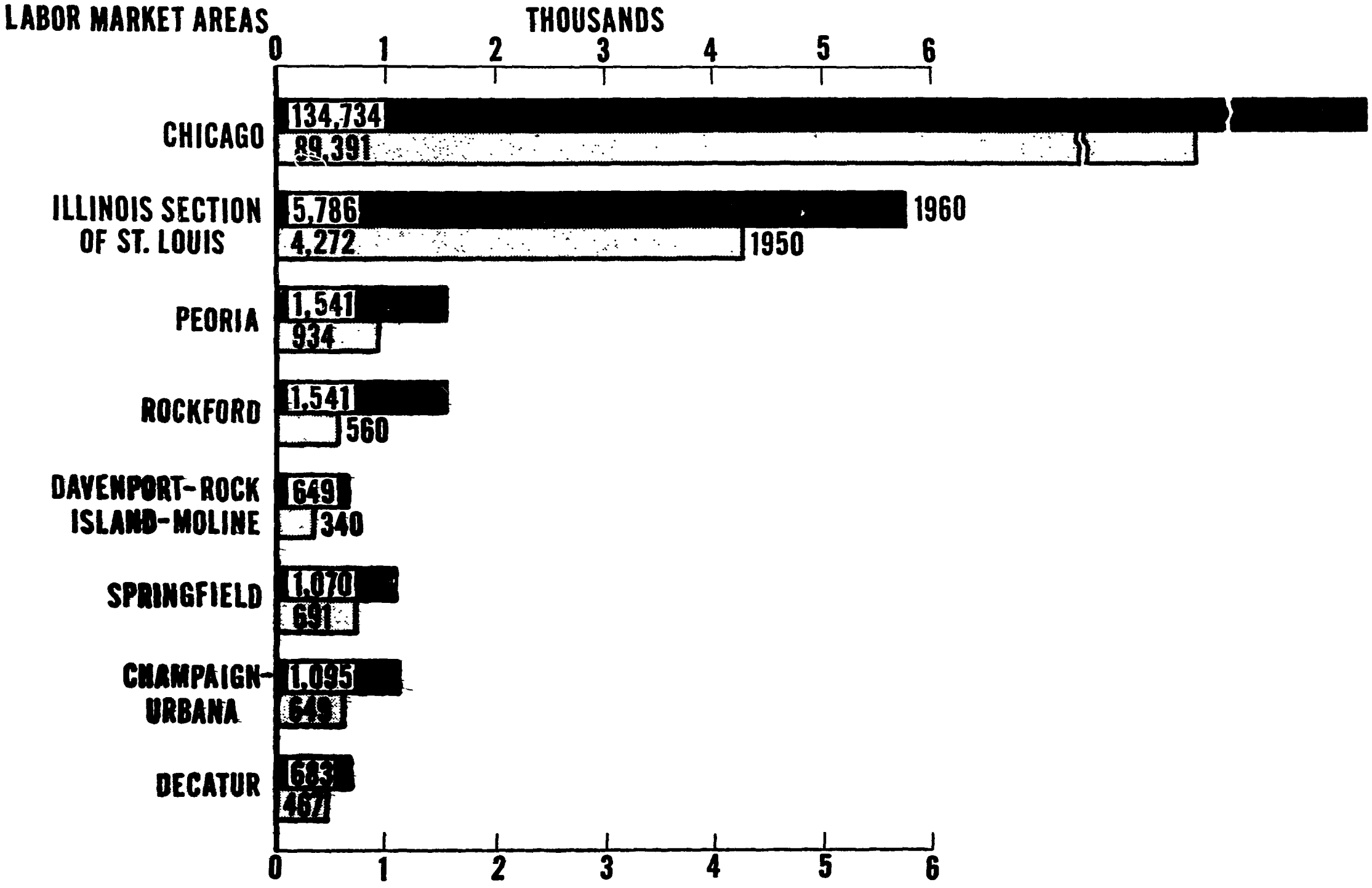


Table 65. Non-White Female Labor Force in the State and In Eight Illinois Labor Market Areas, 1960 and 1950

1960	State	Chicago 1/	Madison-St.-Clair	Peoria	Rockford	Rock Island County	Springfield	Decatur	Champaign Urbana
Total, 14 Years and Over	366,024	314,939	20,339	3,507	2,810	1,444	2,226	1,879	2,491
Labor Force	151,789	134,734	5,786	1,541	1,315	649	1,070	683	1,095
Armed Forces	131	107	12	---	---	---	---	---	12
Employed	133,248	118,174	4,942	1,412	1,178	590	1,012	586	985
Unemployed	18,410	16,453	832	129	137	59	58	97	98
Participation Rate	41.5%	42.8%	28.4%	43.9%	46.8%	44.9%	48.1%	36.3%	44.0%
1950									
Total, 14 Years and Over	261,049	220,637	16,081	2,260	1,413	861	1,827	1,292	1,552
Labor Force	101,135	89,391	4,272	934	560	340	691	467	649
Armed Forces	108	89	10	—	---	1	---	---	8
Employed	88,880	78,524	3,679	818	513	310	628	399	617
Unemployed	12,147	10,778	583	116	47	29	63	68	24
Participation Rate	38.7%	40.5%	26.6%	41.3%	39.6%	39.5%	37.8%	36.1%	41.8%

1/ 1960 area definition of Chicago SMSA used for both 1950 and 1960

In all of the above cases, the sharp increases in the number of non-white women workers in each of the labor market areas between 1950 and 1960 were the result of either increases in the number of non-white women 14 years and over or increases in participation rates or both. In the Decatur area, for instance, the non-white female labor force expanded by 46.3 percent. Almost the entire increase can be attributed to the 45.4 percent increase in population as the 1960 participation rate (36.3%) was only 0.6 percent higher than the 1950 participation rate.

Table 66. Percentage Increases in the Non-White Female Labor Force and Population, 14 Years and Over, and Increases in Participation Rates for Illinois and Eight Major Labor Market Areas From 1950 to 1960

Area	Percentage Increases		
	Labor Force	Population	Participation Rate
State	50.1%	40.2%	7.2%
Rockford	134.8	98.9	18.2
Rock Island County	90.9	67.7	13.7
Champaign-Urbana	68.7	60.5	5.3
Peoria	65.0	55.2	6.3
Springfield	54.8	21.8	27.2
Chicago	50.7	42.7	5.7
Decatur	46.3	45.4	0.6
Madison-St. Clair Counties	35.4	26.5	6.8

In the Springfield area, the increase in the non-white female labor force of 54.8 percent was due mainly to the huge increase in the participation rate. During the 1950-1960 period, the participation rate rose by 27.2 percent, the largest participation rate increase among the eight areas, while the number of non-white women 14 years old and over grew by only 21.8 percent, the lowest population increase among the eight areas.

The increase in the non-white female labor force in the other six areas between 1950 and 1960 resulted from changes in both the number of non-white women 14 years and over and in the participation rates. The Rockford and Rock Island County areas were the ones most affected. These areas had the largest increases in their respective non-white female populations and labor forces. At the same time, they experienced the second and third largest increases in participation rates, respectively, among the eight areas. In Rockford, the non-white female labor force increase was 134.8 percent and in Rock Island County, the increase was 90.9 percent. In both areas non-white women 14 years and over rose dramatically (98.9% and 67.7%, respectively) as did the participation rates (18.2% and 13.7%, respectively). The other four areas in this group, Chicago, Madison-St. Clair Counties, Peoria and Champaign-Urbana, experienced smaller increases in their non-white female labor forces which were mainly attributed to increased population, although a significant portion of the increase was due to higher participation rates in 1960 than in 1950.

In both 1960 and 1950, non-white women had higher participation rates than those for all women in seven of the eight labor market areas. The lone exception, Madison-St. Clair Counties, had lower participation rates for non-white women (28.4% in 1960 and 26.6% in 1950) than for all women (31.1% in 1960 and 26.9% in 1950) both in 1960 and 1950. This area, coincidentally, also had the lowest participation rate for all women workers among the eight areas in 1960 as well as 1950.

More than 40 percent of the non-white women 14 years and over in six of the eight areas participated in the labor force in 1960. The exceptions were the Decatur and Madison - St. Clair areas where the participation rates were 36.3 percent and 28.4 percent, respectively.

In 1950, only three areas had participation rates exceeding 40 percent although two other areas were very close to this rate. These areas were Champaign-Urbana (41.8%), Peoria (41.3%), Chicago (40.5%), Rockford (39.6%) and Rock Island County (39.5%).

Table 67. Labor Force Participation Rates for All Women and Non-White Women by Labor Market Areas, 1960 and 1950

	1960		1950	
	All	Non-White	All	Non-White
State	36.2%	41.5%	31.3%	38.7%
Chicago	39.0	42.8	35.3	40.5
Madison-St. Clair	31.1	28.4	26.9	26.6
Peoria	32.3	43.9	29.2	41.3
Rockford	38.1	46.8	33.5	39.6
Rock Island County	34.6	44.9	29.7	39.5
Springfield	39.5	48.1	32.0	37.8
Champaign-Urbana	35.5	44.0	29.8	41.8
Decatur	34.3	36.3	29.3	36.1

In seven of the eight areas, non-white women workers were a larger proportion of the female labor force than non-white women were of the female population 14 years and over in both in 1960 and 1950. In Madison-St. Clair Counties, the eighth area, non-white women were a smaller proportion of the female labor force than of the female population both in 1960 and 1950. This phenomenon probably was the result of poor job opportunities for women generally and non-white women particularly which discouraged the participation of women in the labor force in this area.

Table 68. Percent Non-White Women of All Women in the Population and in the Labor Force for Eight Major Labor Market Areas in Illinois, 1960

	Percent Non-White of All Women			
	Population		Labor Force	
	1960	1950	1960	1950
State	9.8%	7.6%	11.3%	9.4%
Chicago	13.7	10.7	15.0	12.2
Madison-St. Clair Counties	11.7	10.9	10.7	10.8
Peoria	3.3	2.4	4.6	3.4
Rockford	3.8	2.4	4.7	2.8
Rock Island County	2.6	1.7	3.4	2.2
Springfield	3.9	3.4	4.7	4.0
Decatur	4.2	3.3	4.3	4.1
Champaign-Urbana	5.7	4.2	7.3	5.9

Occupational Concentrations

Numerically, the two largest groups of employed non-white women in the Chicago area were Operatives and Kindred Workers (22.4%) and Clerical Workers (17.8%). Neither of these occupational groups were among the two largest groups of employed non-white women in any of the other areas.

The two numerically largest occupational groups of employed non-white women in the other seven areas were Service Workers and Private Household Workers. These two groups combined contained from 46 percent (Madison-St. Clair Counties) to 74 percent (Decatur) of the employed non-white women in the seven areas. In contrast to this concentration of non-white female employment in these seven areas, only 17 to 23 percent of the total female employment in these areas were among the Service Worker and Private Household Workers occupational groups.

The Service Worker and Private Household Worker occupational groups contained the third and fourth largest groups of employed non-white women in the Chicago area. These two groups contained 16.7 percent and 12.4 percent of the non-white women employed in the Chicago area. It is interesting to note that these same two groups contained the two largest groups of non-white employed women in the other seven areas.

The occupational group which had the third largest number of employed non-white women in each of the other seven areas contained from 5.5 percent to 18.1 percent of the non-white women in those areas. In three areas (Rock Island County, Springfield and Champaign-Urbana), the third largest group was the Clerical Worker group. The Operative and Kindred Worker group was the third largest group in the Madison-St. Clair Counties and Rockford areas, while the Professional, Technical and Kindred Worker group was the third largest group in the Peoria and Decatur areas.

The fourth largest occupational groups of employed non-white women in each of the seven areas outside Chicago contained ten percent or less of the employed non-white women in each area. The fourth largest group in Rock Island County, Springfield and Decatur was the Operative and Kindred Worker group. The Professional, Technical and Kindred Worker group was fourth largest in the Madison-St. Clair Counties and Champaign-Urbana areas, while the fourth largest occupational group in the Peoria and Rockford areas was the Clerical and Kindred Worker group.

Unemployment

The unemployment rate for non-white women workers in the eight areas combined was higher than the unemployment rate for all Illinois non-white women workers in 1960. Of the 151,789 non-white women in the 1960 Illinois labor force, 18,410 were unemployed, an unemployment rate of 12.1 percent. The unemployment rate for the eight areas combined was 12.2 percent that year as there were 17,863 unemployed among the 146,873 non-white women workers in these eight areas.

The unemployment rate for non-white women workers in the State was the same as the rate for the non-white women workers in the eight labor market areas combined in 1950. This rate of 12.0 percent, however, was only slightly lower than the 1960 rate. In 1950, there were 12,147 unemployed among the 101,135 non-white women workers in Illinois. In the eight labor market areas combined that year, there were 11,708 unemployed among the 97,304 non-white women workers.

Table 69. Employed Non-White Women by Occupational Group for Eight Illinois Labor Market Areas, 1960

	Chicago	Madison-St-Clair	Peoria	Rockford	Rock Island County	Springfield	Decatur	Champaign-Urbana
Female, Employed	118,174	4,942	1,412	1,178	590	1,012	586	985
Professional, Technical and Kindred Workers	8,411	450	100	59	9	64	32	68
Managers, Proprietors and Officials	1,528	82	12	8	--	12	--	12
Clerical and Kindred Workers	21,011	388	93	106	68	183	23	101
Sales Workers	2,792	123	9	6	10	12	14	12
Craftsmen, Foremen and Kindred Workers	1,594	16	13	15	--	12	6	4
Operatives and Kindred Workers	26,479	852	72	162	61	65	28	92
Private Household Workers	14,664	866	321	272	142	347	238	256
Service Workers, Except Private Household	19,754	1,444	568	350	249	252	199	367
Laborers	1,790	87	52	51	41	9	13	--
Occupation Not Reported	20,151	634	172	149	10	56	33	73

Table 70. Percentage Distribution of Employed Non-White Women in Eight Illinois Labor Market Areas, by Occupation, 1960

	Chicago	Madison–St-Clair	Peoria	Rockford	Rock Island County	Springfield	Decatur	Champaign-Urbana
Female, Employed	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Professional, Technical and Kindred Workers	7.1	9.1	7.1	5.0	1.5	6.3	5.5	6.9
Managers, Officials and Proprietors	1.3	1.7	0.8	0.7	0.0	1.2	0.0	1.2
Clerical and Kindred Workers	17.8	7.9	6.6	9.0	11.5	18.1	3.9	10.3
Sales Workers	2.4	2.5	0.6	0.5	1.7	1.2	2.4	1.2
Craftsmen, Foremen and Kindred Workers	1.3	0.3	0.9	1.3	0.0	1.2	1.0	0.4
Operatives and Kindred Workers	22.4	17.2	5.1	13.8	10.3	6.4	4.8	9.3
Private Household Workers	12.4	17.5	22.7	23.1	24.1	34.3	40.6	26.0
Service Workers, Except Private Household	16.7	29.2	40.2	29.7	42.2	24.9	34.0	37.3
Laborers	1.5	1.8	3.7	4.3	6.9	0.9	2.2	0.0
Occupation Not Reported	17.1	12.8	12.3	12.6	1.8	5.5	5.6	7.4

Table 71. Non-White Female Labor Force, Non-White Female Unemployed and Rate of Unemployment for the State and the Eight Labor Market Areas, 1960 and 1950

Areas	Non-White Female Labor Force		Non-White Female Unemployed		Unemployment Rates	
	1960	1950	1960	1950	1960	1950
State	151,789	101,135	18,410	12,147	12.1%	12.0%
Eight Areas	146,873	97,304	17,863	11,708	12.2	12.0
Chicago	134,734	89,391	16,453	10,778	12.2	12.1
Madison-St. Clair Counties	5,786	4,272	832	583	14.4	13.6
Peoria	1,541	934	129	116	8.4	12.4
Rockford	1,315	560	137	47	10.4	8.4
Champaign-Urbana	1,095	649	98	24	8.9	3.7
Springfield	1,070	691	58	63	5.4	9.1
Decatur	683	467	97	68	14.2	14.6
Rock Island County	649	340	59	29	9.1	8.5
Rest of State	4,916	3,831	547	439	11.1	11.5

In 1960, non-white women workers in three of the eight areas had rates of unemployment which were higher than the average rate for the eight areas combined. These areas were Madison-St. Clair Counties (14.4%), Decatur (14.2%) and Chicago (12.2%). These same areas also had the highest rates of unemployment for all women workers that year. In 1950, unemployment rates were highest for non-white women workers in the Decatur (14.6%), Madison-St. Clair Counties (13.6%), Peoria (12.4%) and Chicago (12.1%) areas. Three of these four areas, Madison-St. Clair Counties, Chicago and Peoria, were also among the four areas with the highest rates of unemployment for all women workers in 1950.

Non-white women workers experienced rates of unemployment which were 100 percent more than the rates of unemployment for all women workers in six of the eight areas in 1960. Champaign-Urbana, Madison-St. Clair Counties, Chicago and Decatur had unemployment rates for non-white women workers which were between 145 percent and 170 percent greater than the unemployment rates for all women workers. The rates for non-white women workers in Rockford and Peoria were 117 percent and 115 percent, respectively, greater than the rates for all women workers. In the Springfield and Rock Island County areas, the unemployment rates for non-white women workers were only 32 percent and 98 percent, respectively, greater than the rates for all women workers.

In 1950, the unemployment rates for non-white women in Decatur, Rockford, Peoria and Madison-St. Clair Counties were between 216 percent and 329 percent greater than the unemployment rates for all women workers in these areas. The unemployment rates for non-white women workers in the other four areas ranged between 118 percent and 195 percent greater than those for all women workers in these areas.

The decrease in the differential between the unemployment rates for all women workers and non-white women workers in each of the eight areas which occurred during the 1950-1960 period was due entirely to the fact that unemployment among all women workers grew more rapidly than did the female labor force. This is attested to by the fact that unemployment rates for all women workers increased in each of the labor market areas as well as in the State between 1950 and 1960. At the same time, the unemployment rate for non-white women workers decreased in three areas and increased in five areas which resulted in a very slight increase in the unemployment rate for non-white women workers (one-tenth of a percentage point) in the State between 1950 and 1960.

The Rest of the State

Elsewhere in the State, the employment picture was not as bright for non-white women in 1960. There were 16,389 non-white women, 14 years and over, outside the eight major labor market areas. Only 4,916 or 30 percent of these women, were in the labor force, whereas 42.0 percent of the non-white women, 14 years and over in the eight areas were in the labor force. This participation rate for non-white women in other areas was slightly less than the participation rate (30.2 percent) for all women outside the eight labor market areas.

Table 72. Employment Status of Non-White Women, 14 years and Over in Illinois, in the Eight Illinois Labor Market Areas and the Rest of the State, 1960 and 1950

	Non-White Female				Percent Labor Force of Population	
	Population		Labor Force			
	1960	1950	1960	1950	1960	1950
State	366,024	261,049	151,789	101,135	41.5%	38.7%
Eight Labor Market Areas	349,635	245,923	146,873	97,304	42.0	39.6
Rest of State	16,389	15,126	4,916	3,831	30.0	25.3

In 1950, over 25 percent, or 3,831 of the 15,126 non-white women elsewhere in the State were in the labor force. Unlike 1960, this participation rate was above the participation rate for all women elsewhere in the State (22.7%), in 1950, and was even further below the participation rate for non-white women in the eight labor market areas (39.6%).

The 28 percent increase in the non-white female labor force elsewhere in the State was less than the 33 percent increase in the total female labor force elsewhere in the State. This was primarily due to the fact that the participation rate for all women grew faster than that for non-white women since the gain in women 14 years and over in the 10 year period was negligible for all women.

Over 2,700 or 64 percent of the non-white women outside the eight labor market areas were employed as Private Household Workers and Service Workers. There were only three other occupational groups with more than 100 non-white women. They were: Operatives (466), Professional, Technical and Kindred Workers (357) and Clerical and Kindred Workers (160).

Table 73. Employed Non-White Women by Occupational Group for Illinois, The Eight Major Labor Market Areas Combined and The Rest of The State, 1960

Occupational Group	State	Eight Areas	Rest of State
Total	133,248	128,879	4,369
Professional, Technical & Kindred Workers	9,550	9,193	357
Managers, Officials & Proprietors	1,718	1,654	64
Clerical & Kindred Workers	22,133	21,973	160
Sales Workers	3,053	2,978	75
Craftsmen, Foremen & Kindred Workers	1,690	1,660	30
Operatives & Kindred Workers	28,277	27,811	466
Private Household Workers	18,432	17,106	1,326
Service Workers	24,626	23,183	1,443
Laborers	2,127	2,043	84
Occupation Not Reported	21,642	21,278	364

The number of unemployed non-white women elsewhere in the State increased from 439 in 1950 to 547 in 1960, but the unemployment rate fell from 11.5 percent to 11.1 percent between 1950 and 1960. This was the consequence of the fact that the labor force increased faster than the unemployed during the ten year period.

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U.S. DEPARTMENT OF AGRICULTURE

In this second annual report, summaries of manpower data for 1966 for Department of Agriculture personnel were used to develop trend analyses and cumulate activity data for a 2-year period. No significant changes between 1965 and 1966 were noted in average age and length of service of employees. Average age of personnel in 1966 was 41.3 years and average length of service was 13.1 years. The percentage of employees eligible to retire increased each year from 1965 through 1967. During 1966, 20.8 percent of the permanent full-time employees received a promotion. The average time to advance from GS-5 to GS-13 was 11.9 years. During 1965 separations exceeded accessions by 485 persons, but in 1966 accessions topped separations by 2,451. The appendix contains 22 tables relating to distribution, agency breakdown, retirement, promotions, professional occupations, accession rates, separation rates, and recruitment needs for the years 1965 through 1967. (DM)

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TRENDS AND TURNOVER OF MANPOWER IN USDA

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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VT003570

Program & Policy Development Division
Office of Personnel
U.S. Department of Agriculture

October 1967

FOREWORD

The mere accumulation of a mass of data is not worth much unless it is carefully refined into a product used in making better decisions about the resources the data represents.

Each year, we collect, analyze, and print data concerning the manpower of this Department. Improvements in coverage analysis and application of the data are developed as we gain experience and respond to specific requests of Management for more incisive information. This, in itself, is evidence of a growing concern and need by Management at all levels for actual knowledge to replace uncertainties in the decision-making process.

We welcome any suggestions for improvement in the coverage, analysis and presentation of data in this and future manpower reports.

Carl B Barnes

Director of Personnel

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INTRODUCTION

This is the second annual report analyzing the Department's manpower data. The first report issued in 1966, "Using Manpower Data," provided information basic in the process of developing Manpower Resources Plans. That report also illustrated methods and techniques to use in analyzing the data and to assist in making better decisions with respect to the management of human resources.

In this report, "Manpower Data - 1966 Activity and Trends," we use the same type of data derived from MODE outputs covering the activity for Calendar Year 1966 of Permanent Full-Time employees of the Department. In addition to providing the fundamental summaries, averages and rates for Calendar Year 1966, we start in this publication, to develop trend analyses and cumulative activity data for a two-year period. As we gain additional years of experience, trends and patterns will become more significant and meaningful in manpower management and planning.

ERIC

AVERAGE AGE AND LENGTH OF SERVICE SURVEY - 1966

The 1966 Average Age and Length of Service Survey data shows no significant change for USDA employees in comparison with 1964 and 1965 figures.

Again, there has been no major exodus of employees due to retirement, and, those employees who are still with us have added a year in age and length of service. A three-year comparison is shown below.

AVERAGE AGE

1964	1965	1966
41.5	41.1	41.3

LENGTH OF SERVICE

1964	1965	1966
12.7	12.5	13.1

Statistics comparing the 1965 and 1966 distribution of employees by age and length of service for each Agency are shown in TABLES 1-4, Pages 13-16, in the Appendix.

A new Table has been added to this 1966 publication--Average Age and Length of Service of Employees in Professional Series--TABLE 5, page 17, in the Appendix. This shows an upward trend in age and length of service, pointing up the specific professional areas which will require intensified recruitment at all levels in order to compensate for the impact of imminent retirements.

RETIREMENT ELIGIBILITY 1967 - 1972

The number of employees eligible to retire continues to increase. The 1967 retirement eligibility figures show the effects of the new age and length of service group - 60 and 20 - which was added in 1966. Note the yearly eligibility percentages below. The number of employees eligible to retire in 1967 has increased 3% in one year's time.

EMPLOYEES ELIGIBLE TO RETIRE IN:

1965	1966	1967
6.6%	7.2%	10.2%

TABLE 6, page 21, in the Appendix, shows the impact of losses due to retirements in 1967 broken down by Agencies and the GS-13 through 18 group. This Table also projects these figures to 1972, based on employees' age and length of service in 1966.

In examining the figures in this Table, it appears we will continue to have the same factors working in 1972, as in 1967. Our manpower replacement needs will continue to grow in the next five years.

RETIREMENT PROBABILITY - 1967

Because of the unusual liberal provisions of the 1965 Daniel's Act, 1965 retirements when compared to Calendar Year 1966 retirement activity are found to be atypical. Therefore, 1965 data cannot be used by itself, nor combined with 1966 data to predict potential retirements in 1967.

The probability retirement rates shown in TABLE 7, page 22, in the Appendix, are based solely on 1966 experience data. They reflect the impact of the new optional retirement group - 60 and 20 - as it occurred in Calendar Year 1966.

Since these probability rates are based on only one year's experience under comparable conditions, they are far from firm and sound predictors. We shall evaluate these figures after 1967 retirements have been compiled and make any adjustments necessary to close the gap.

CALENDAR YEAR 1966 PROMOTION ACTIVITY

HIGHLIGHTS

GRAND TOTAL of all grade promotions between Class Act positions..... 15,927

or,

20.8% of our permanent full-time employees in Class Act positions received a promotion during Calendar Year 1966,

or,

1 for every 5 employees (based on average employment during the Calendar Year.)

244 promotions involved transfers between Department Agencies.

21.3% involved a series change.

50% were processed as exceptions to or progressive promotions under Merit Promotion Programs-- a drop of 10% from the 1965 activity.

1252 GRADE PROMOTIONS FROM AND TO WAGE BOARD POSITIONS

1725 GRADE PROMOTIONS INVOLVING DIFFERENT PAY PLANS (From WB to Class Act or vice versa, AD to AD, GG to GS, etc.)

Statistical tables showing Agency Percentage of Promotions Effected as Exemptions During Calendar Year 1965, and an Agency Breakdown of Promotions Effected During Calendar Year 1966 are shown in Tables 8 and 9, pages 23-24 in the Appendix.

TIME IN GRADE DATA

TABLE 10, page 25, in the Appendix, shows the lapsed time in the career progression within the same professional series. The top figure for each series is the average time in the lower grade from which promoted.

The bottom figure is the cumulative average time in grade from the GS-5 level.

Thus, looking at GS-110, Economist Series, the average time in GS-5 for a promotion to GS-7 is

1.3 years;

the average time in grade from GS-7 to GS-9 is

1.8 years, etc.

The average time spent in advancing from GS-5 to GS-9 is

1.3 years + 1.8 or 3.1, and

to advance from GS-5 to GS-13, it adds up to

11.9 years.

Excluding GS-701, Veterinarians since they have a higher entrance grade, career progression to GS-14 on the average, is more rapid in Series GS-110 and GS-1530.

In computing the median time in grade (in years) for "all promotions between professional series," we find an employee has a 50-50 opportunity for advancement from GS-5 to GS-12 in a little less than

8 years.

ACCESSIONS AND SEPARATIONS - TRENDS

PREDICTED RECRUITMENT VS. ACTUAL

In the 1966 publication, "Using Manpower Data," the personnel flow was charted for selected occupations. A series loss rate was computed in order to establish a base for predicting the 1966 recruitment needs in the occupation to maintain the population as of December 31, 1965.

In TABLE 11, page 26 in the Appendix, a comparison of the predictions with the actual accessions in Calendar Year 1966 is shown for these occupations. The difference in the prediction and the actual is explained where it could be readily reasoned. For Series GS-458, 802, 810, 890, and 1320, the change in the loss rate when compared with the difference in actual and predicted recruitment is not consistent. These series will need further analysis.

TWO-YEAR TREND DATA

We can begin to stabilize loss and accession rates as we accumulate data over a period of years. The ups and downs will start to level off by using two-year data now in lieu of one year's activity.

TABLE 12, page 27 in the Appendix shows this approach in predicting recruitment needs for Calendar Year 1967 in selected occupations. Here, the two-year series loss rate is applied to the average population for the same period. The predicted needs, again, relate to maintaining the average population. They include no increased program activity or attrition. Agencies should keep these factors in mind when applying these two-year series loss rates in the development of Manpower Resources Plans.

The next two sections - Accessions and Separations - deal not only with 1966 data, but also present two-year trend rates where available.

ACCESSIONS CALENDAR YEAR 1966

This 1966 Output covered all Permanent Full-Time Employees. Transfers to Agencies of the Department from other Agencies of the Department are excluded.

HIGHLIGHTS

	1965	1966	TWO-YEAR AVERAGE
Accessions to Class Act Positions..	7261	10,919	9090
Accession Rate.....	9.6%	14.3%	12.0%
Professional Occupations.....	2378	2688	2523
Accession Rate.....	8.5%	9.4%	8.9%
Office Occupations*.....	2447	3734	3091
Accession Rate.....	20.5%	30.7%	25.7%

*Includes common-use clerical and manual skills such as Typists Stenographers, Card Punch Operators, etc.

Accessions to Agencies are shown in TABLE 13, page 28 in the Appendix, including transfers from other Agencies of the Department.

Accession rates for Agencies ranged from a low of 3.8% in RPDES to over 42.2% in P&O.

Accessions of Permanent Full-Time Employees to Agencies of the Department by Pay Plan and Sex are shown in TABLE 14, page 29 in the Appendix.

A 1965-1966 Comparison of Accession Rates by Agencies is shown in TABLE 15, page 30 in the Appendix. Also see TABLE 22, page 83, in the Appendix for a complete USDA occupational breakdown of turnover and hiring experience for Calendar Year 1966.

SEPARATIONS CALENDAR YEAR 1966

This Output covered all Permanent Full-Time employees who left the Department by any type of separation action, including retirements, resignations, etc. Voluntary Quits included all voluntary resignations from the Department. No inter-agency transfers are reflected. The rate shown is the percent of average employment during the period covered.

HIGHLIGHTS

	1965	1966	TWO-YEAR AVERAGE
GRAND TOTAL, All Separations.....	8241	9127	8684
Separation Rate.....	10.2%	11.1%	10.7%
CLASSIFICATION ACT, All Separations.	7746	8468	8107
Separation Rate.....	10.3%	11.1%	10.7%
Voluntary Quits.....	5193	6838	6016
Quit Rate.....	6.9%	8.9%	7.9%
GS-13 & Above, All Separations....	503	430	467
Separation Rate.....	8.1%	6.6%	7.4%
Voluntary Quits.....	100	175	138
Quit Rate.....	1.6%	2.7%	2.2%
Professional Occupations, All Seps	2138	1994	2066
Separation Rate.....	7.7%	7.0%	7.3%
Voluntary Quits.....	1155	1423	1289
Quit Rate.....	4.2%	5.0%	4.6%
Office Operations, All Separations	2254	2623	2439
Separation Rate.....	18.9%	21.6%	20.3%
Voluntary Quits.....	1966	2405	2186
Quit Rate.....	16.5%	19.8%	18.2%
WAGE BOARD, WL, WS, WP.....	502	571	537
Separation Rate.....	9.9%	12.0%	11.6%

Turnover data for Class Act positions for Calendar Year 1966 showed higher Voluntary Quits than the previous year in 60% of the occupations.

This becomes more significant when it is noted that other types of separations declined markedly. The increase in Voluntary Quits occurred primarily among support and clerical personnel.

	CY 65 Quit Rate	CY 66 Quit Rate	% Increase
Professional Occups.....	4.1	5.0	22.0
Admin.-Tech. & Prof. Support.....	5.3	7.1	34.0
Clerical & Other Occups.....	12.8	16.7	30.5

It is interesting to note that this trend in USDA does not follow that of the Federal Government. In the publication, "Current Federal Workforce Data," as of June 1966, the Civil Service Commission finds, in comparing January to June 1965 and 1966 data, that the greatest increase in the quit rate occurred in the professional group.

Voluntary quit rates by Class Act grades, as would be expected, decreased with each higher grade through GS-14, except for Grades GS-6-8 and 10. See TABLE 16, page 31 in the Appendix.

Since the lower grades are the normal entrance levels, the high quit rates at these levels are showing that new employees quit more frequently than career employees. TABLE 17, page 32 in the Appendix, shows the number and types of separations by series and grades within the series. Also see TABLE 22, page 83 in the Appendix, for a complete USDA occupational breakdown of turnover and hiring experience for Calendar Year 1966.

Wage Board turnover rates for 1966 are higher than 1966 rates for total separations as well as Voluntary Quits. In the FS and ARS, the primary employers of Wage Board employees, the percent of increase in the Wage Board Voluntary Quit Rate from 1965 was:

FS-12.6% ARS-44.6%

Figure 1

TOTAL SEPARATION RATE AND VOLUNTARY QUIT RATE OF PERMANENT FULL-TIME EMPLOYEES

CALENDAR YEAR 1966

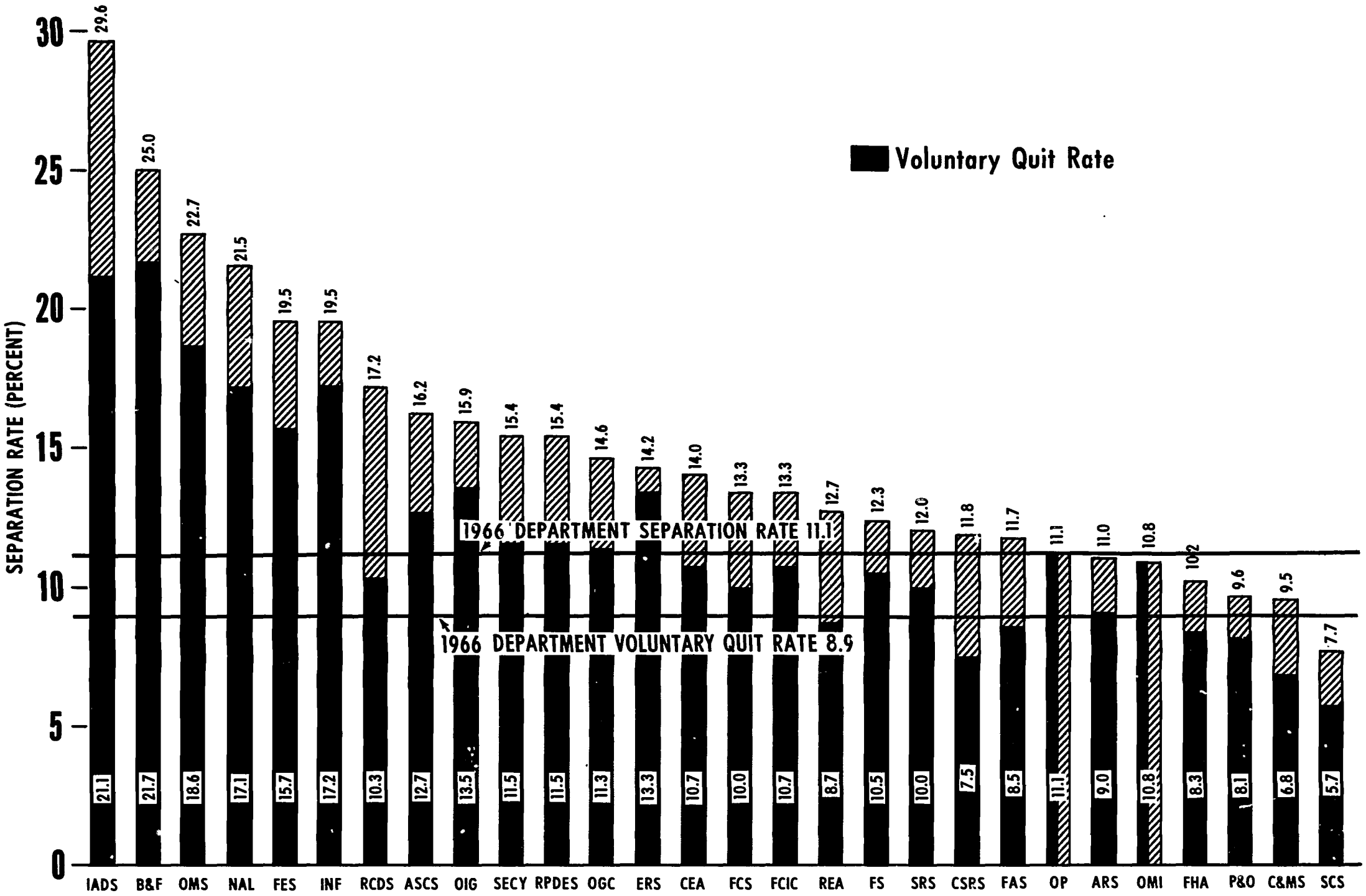

FIGURE 1 on the opposite page, shows Agency distribution of total separations in 1966. A 1965-1966 statistical comparison is shown in TABLE 15, page 30 in the Appendix.

Looking at Table 15, it is disturbing to see that all Agencies, except FCIC, NAL, and OMI had an increase in the voluntary quit rate in 1966.

This points up a need to make further analyses of resignation actions to find where and why they are occurring and to take the steps needed to bring this rate down.

We can see from TABLE 18, page 61 in the Appendix, those occupations having an accelerated quit rate, but we don't know what is causing this.

What are the reasons for these resignations? Insufficient pay? Lack of promotion opportunities? Unchallenging Work? Supervisory problems, etc.?

With the coding of "Reasons for Resignations" under the Civil Service Commission's program, beginning in Calendar Year 1967, we anticipate an analysis of reasons for voluntary quits will be a part of the evaluation of 1967 turnover.

OCCUPATIONAL VOLUNTARY QUIT RATE BY AGENCIES

In order that Agencies can better assess how their occupational groups are doing in comparison to the Department total in that occupation, an analysis was made of the Agency voluntary quit rate for those occupations appearing in significant number in more than one Agency of the Department. This information is shown in TABLE 19, page 77 in the Appendix.

If we examine this Table, we can spot significant variances in need of follow up by the Agencies. For example, the voluntary quit rate for C&MS employees in GS-200 Series (excluding GS-203) was 2.0, the highest of any Agency and higher than the Department rate by 14.8%.

The Accounting Technician (GS-525) quit rate for ARS (27.3) is unusually high compared to other agencies and to the Department rate.

In the FS, the GS-1371 Series and in the ASCS, the GS-501 Series need attention.

COMPARISON - SEPARATIONS VS. ACCESSIONS

CLASS ACT POSITIONS

During Calendar Year 1965, separations exceeded accesssions by

485.

This means that new hires were not sufficient to fulfill replacement needs, and certainly not adequate to staff new positions.

In Calendar Year 1966, however, accessions topped separations by

2,451,

indicating recruitment fruitful enough to staff new positions as well as to meet replacement demands.

WAGE BOARD POSITIONS

Wage Board accessions in Calendar Year 1965 were under separations for the same period by

56,

not enough to fill replacement needs.

In Calendar Year 1966, however, accessions were higher than separations by

121,

again showing the results of effective recruitment.

See TABLES 20 and 21, pages 81-82 in the Appendix for Total Separations by Pay Plans broken down by Agencies.

STEPS FOR TOMORROW

Shakespeare said, "what is past is prologue." Our experience should serve to show us the direction of the future.

This report summarizes statistically the degree of our effectiveness over a two-year period in coping with the management of our human resources. Taking a broad look, we find recruitment to have been moderately successful in quantity. But, we have no measure of the quality of intake to date. Career advancement maintained a normal pace.

While losses remained fairly level, turnover due to resignations went out of control. Since our average age and length of service changed very little in the past three years, it follows that we are losing recent additions to our working force.

We are confronted with the continuing task of building and maintaining a replacement staff for the older workers who will be retiring in large numbers during the next five years. We must, therefore, find out how to assess the quality of recruitment and the motivations necessary to stabilize retention. We must determine what courses of action to take to reduce this rate to assure a continuing, adequate, and well-trained source of manpower.

This is our charter for the immediate years ahead.

TABLE 1
DISTRIBUTION OF USDA PERMANENT FULL-TIME EMPLOYEES BY AGE AND LENGTH OF SERVICE DECEMBER 1965-1966

LOS GROUPS	UNDER 25		25 TO 30		31 TO 40		AGE GROUPS 41 TO 49		50 TO 54		55 TO 59		60 & OVER		TOTALS	
	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966
LESS THAN 5	7628	6308	5906	5681	3802	3523	2412	2116	907	735	562	352	369	168	21586	18882
5 TO 10	385	429	5228	5079	8571	8417	3964	4078	1353	1390	816	882	482	473	20799	20748
11 TO 14			133	187	4834	5402	3260	3422	998	1087	650	679	418	461	10293	11239
TOTAL	**8013**	**6737**	**11267**	**10947**	**17207**	**17342**	**9636**	**9616**	**3258**	**3212**	**2028**	**1913**	**1269**	**1102**	**52678**	**50869**
15 TO 19					2341	2237	4412	4546	1202	1240	784	838	438	506	9177	9367
20 TO 24					387	335	5160	4944	2526	2158	1615	1445	996	880	10684	9762
25 TO 29							1142	1428	2370	2790	1453	1592	736	836	5701	6646
TOTAL					**2728**	**2572**	**10714**	**10918**	**6098**	**6188**	**3852**	**3875**	**2170**	**2222**	**25562**	**25775**
30 & OVER							66	48	1190	1185	2098	2249	1258	1511	4612	4993
TOTALS	**8013**	**6737**	**11267**	**10947**	**19935**	**19914**	**20416**	**20582**	**10546**	**10585**	**7978**	**8037**	**4697**	**4835**	**82852**	**81637**

TABLE 2
PERCENTAGE DISTRIBUTION BY LENGTH OF SERVICE FOR PERMANENT FULL-TIME EMPLOYEES BY AGENCY DECEMBER 1965-1966

	LESS THAN 5		5 - 10		11 - 14		15 - 19		20 - 24		25 - 29		30 & OVER		TOTAL % WITH 15 YRS. OR MORE	
	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966
TOTAL	26.1	23.1	25.0	25.4	12.4	13.8	11.1	11.5	12.9	12.0	6.9	8.1	5.6	6.1	36.5	37.7
SECY	14.3	21.7	23.8	25.0	6.3	13.0	11.1	9.8	17.5	8.8	17.5	16.3	9.5	5.4	55.6	40.2
C&MS	22.7	22.9	29.4	27.8	13.7	14.7	11.1	11.9	15.0	12.5	4.8	6.8	3.3	3.4	34.2	34.6
ARS	28.9	25.2	25.9	27.1	13.0	13.9	10.1	11.0	11.9	11.0	5.1	6.3	5.1	5.5	32.2	33.9
CEA	16.4	27.0	20.8	18.3	8.6	6.4	10.3	9.5	23.3	19.0	10.3	11.9	10.3	7.9	54.2	48.4
ASCS	20.7	15.5	19.7	19.6	12.3	13.8	12.1	12.7	16.8	14.9	12.1	14.2	6.3	9.3	47.3	51.1
FCS	26.3	23.9	16.5	20.5	15.4	15.9	15.4	15.9	13.2	13.6	5.5	4.5	7.7	5.7	41.8	39.8
FHA	28.0	30.2	16.5	16.2	10.8	10.4	12.4	11.6	13.3	11.4	13.2	13.7	5.8	6.5	44.7	43.1
FCIC	36.1	35.0	22.7	24.6	12.6	11.9	8.9	7.5	9.3	9.3	7.5	8.3	2.9	3.4	28.6	28.4
FES	24.7	25.8	13.0	12.9	8.5	7.1	13.8	14.2	17.3	15.1	13.8	14.7	8.9	10.2	53.8	54.2
FAS	22.1	19.0	18.3	18.2	9.9	12.1	9.9	11.1	20.7	15.9	11.2	14.1	7.9	9.6	49.7	50.7
FS	33.2	26.2	29.5	32.0	11.7	14.3	8.6	9.3	7.9	8.1	4.6	5.2	4.5	4.9	25.6	27.5
NAL	34.7	26.6	19.2	20.7	7.8	10.1	12.9	13.0	17.6	17.2	6.2	8.8	1.6	3.6	38.3	42.6
INF	23.1	26.1	25.5	23.0	12.0	11.1	12.0	12.8	14.4	9.7	7.4	12.4	5.6	4.9	39.4	39.8
OGC	22.8	22.5	17.4	18.9	7.1	7.4	10.5	10.4	12.6	11.8	12.9	13.0	16.7	16.0	52.7	51.2
REA	20.6	18.0	11.7	13.8	8.1	6.8	12.1	10.1	23.4	21.0	16.8	20.5	7.3	9.8	59.6	61.5
SCS	15.9	14.8	22.5	20.8	13.8	14.9	15.0	14.9	16.4	16.2	8.1	9.6	8.3	8.8	47.8	49.5
OMS	28.7	30.3	20.5	20.3	6.3	7.9	11.4	9.1	16.4	13.2	10.4	13.2	6.3	6.0	44.5	41.6
ERS	31.0	31.4	24.0	21.9	10.5	12.7	11.5	9.7	11.7	12.2	7.1	6.9	4.2	5.2	34.5	34.1
SEG		33.3		11.1				11.1		11.1		33.3				55.6
SRS	36.8	33.3	21.9	21.6	9.6	11.9	9.9	10.0	10.9	10.7	5.2	5.9	5.9	6.6	31.9	33.2
RCDS	15.4	15.6	23.2	18.7	3.8	9.4	15.4	21.9	19.2	18.8	11.5	12.5	11.5	3.1	57.6	56.3
CSRS	16.8	20.0	16.8	16.7	15.9	13.3	8.4	5.5	17.9	15.6	11.6	13.3	12.6	15.6	50.5	50.0
OIG	23.2	20.0	22.6	23.7	12.6	14.6	11.1	12.5	17.4	14.3	8.1	9.5	5.0	5.4	41.6	41.6
IADS	24.3	26.4	14.3	12.5	5.7	8.4	12.9	11.1	20.0	19.4	10.0	11.1	12.8	11.1	55.7	52.8
IOS			33.3	33.3	16.7	16.7	16.7	16.7			16.7		16.7	33.3	50.1	50.0
RPDES	10.7	17.4	28.6	4.3	7.1	17.4	10.7	4.3	25.1	30.4	10.7	8.8	7.1	17.4	53.6	60.9
B&F	25.0	28.8	26.7	32.2	5.0	1.7	10.0	8.5	13.3	6.8	6.7	5.1	13.3	16.9	43.3	37.3
OHE							14.3	14.3			14.3		71.4	85.7	100.0	100.0
OMI 1/	19.9	19.5	28.0	24.8	16.1	19.9	12.3	11.4	16.9	13.4	3.0	6.1	3.8	4.9	36.0	35.8
OP	30.4	24.0	17.4	21.3	8.7	8.0	10.2	12.0	15.9	18.7	10.2	5.3	7.2	10.7	43.5	46.7
P&O	22.2	25.6	5.4	6.0	9.4	7.9	10.8	10.7	37.4	31.6	4.9	11.2	9.9	7.0	63.0	60.5

1/ Was OMASD at the time of the 1965 Survey.

TABLE 3
PERCENTAGE DISTRIBUTION BY AGE GROUPS FOR PERMANENT FULL-TIME EMPLOYEES BY AGENCY DECEMBER 1965-1966

AGENCY	UNDER 25		25 TO 30		31 TO 40		41 TO 49		50 TO 54		55 TO 59		60 TO 62		63 TO 65		66 & OVER		TOTAL EMP. 55 & OVER	
	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966	1965	1966
TOTAL	9.8	8.3	13.6	13.4	24.1	24.4	24.6	25.2	12.7	13.0	9.6	9.8	3.2	2.5	1.5	2.5	0.9	0.9	15.2	15.8
SECY	4.8	12.0	3.2	7.6	19.0	25.0	25.4	20.6	20.6	17.4	19.0	9.7		3.3	4.8	3.3	3.2	1.1	27.0	17.4
C&MS	6.1	6.6	9.1	9.4	25.5	25.3	27.1	27.3	14.0	14.2	10.9	10.5	3.8	2.7	2.0	2.8	1.5	1.2	18.2	17.1
ARS	9.1	8.0	12.1	11.4	25.7	25.6	26.0	26.6	11.8	12.3	8.5	8.9	3.5	2.5	1.8	3.2	1.5	1.5	15.3	16.0
CEA	12.1	20.6	7.8	7.9	13.8	14.3	22.4	19.0	19.8	12.7	15.5	16.7	5.2	2.4	0.8	4.8	2.6	1.6	24.1	25.4
ASCS	9.0	8.1	7.4	6.3	17.0	15.9	26.6	27.0	17.0	17.6	13.6	14.6	5.1	4.1	2.7	4.7	1.6	1.7	23.0	25.1
FCS	14.3	14.8	5.5	6.8	24.2	20.5	20.9	28.4	12.0	9.1	12.1	12.5	4.4	2.3	5.5	4.5	1.1	1.1	23.1	20.5
FHA	10.6	10.1	9.6	11.7	19.7	19.7	28.6	26.9	15.5	15.4	10.1	10.1	3.4	2.7	1.6	2.5	0.9	0.9	16.0	16.1
FCIC	10.4	10.2	6.7	5.9	18.1	17.0	31.0	31.7	13.7	14.2	13.4	14.1	3.2	2.9	2.3	3.1	1.2	0.9	20.1	20.9
FES	22.3	21.8	6.1	7.1	12.1	8.4	27.1	30.2	11.3	11.2	12.9	13.3	5.7	4.4	2.1	2.7	0.4	0.9	21.1	21.3
FAS	17.6	14.6	7.8	8.8	16.6	16.9	20.4	20.3	17.8	18.5	11.9	12.0	4.8	4.3	1.9	3.3	1.2	1.3	19.8	20.9
FS	11.6	8.2	21.0	20.5	26.7	28.5	19.6	21.0	10.0	10.3	7.8	7.9	2.2	1.7	0.9	1.6	0.2	0.3	11.1	11.5
NAL	18.2	16.0	11.9	10.6	21.3	20.7	21.3	23.7	9.8	10.1	11.9	11.8	4.1	4.7	0.5	1.8	1.0	0.6	17.5	18.9
INF	13.9	14.2	10.6	11.9	25.9	24.3	23.2	23.9	14.8	13.3	9.3	9.8	0.9	0.9	0.9	1.3	0.5	0.4	11.6	12.4
OGC	12.9	14.2	9.3	10.9	17.0	15.4	19.2	19.3	15.3	15.1	16.8	13.9	6.0	5.0	1.4	4.4	2.1	1.8	26.3	25.1
REA	13.9	12.8	7.6	7.1	14.2	13.4	23.4	23.4	16.1	16.5	13.1	14.1	6.1	5.0	3.6	5.3	2.0	2.3	24.8	26.7
SCS	7.3	5.9	12.9	12.4	24.0	23.7	27.1	27.7	13.7	14.0	10.2	10.9	3.0	2.4	1.2	2.3	0.6	0.7	15.0	16.4
OMS	22.4	22.7	12.6	14.2	16.1	15.8	24.3	21.5	11.7	12.3	10.4	10.1	1.9	2.5		0.6	0.6	0.3	12.9	13.6
ERS	17.2	16.9	12.4	12.8	24.5	25.5	22.6	20.6	8.7	9.5	7.9	8.1	3.2	2.4	1.8	2.4	1.7	1.8	14.6	14.7
SEG	30.8	22.3		11.1	23.1	11.1	15.4	11.1	30.8	33.3		11.1								11.1
SRS	17.2	13.6	16.0	15.9	20.8	21.7	20.0	21.8	10.5	10.9	9.2	9.1	4.2	3.6	1.6	2.8	0.5	0.6	15.5	16.0
RCDS		3.1	7.7	9.4	15.4	12.5	38.5	28.1	19.2	25.0	15.4	9.4	3.8	3.1		9.4			19.2	21.9
CSRS	10.5	15.6	2.1	3.3	12.6	10.0	27.4	24.4	20.0	17.8	13.7	14.4	8.4	6.7	4.2	6.7	1.1	1.1	31.9	28.9
OIG	12.2	9.5	12.4	11.7	22.1	23.8	27.3	29.2	12.4	11.9	7.4	8.1	3.4	2.0	2.4	3.2	0.4	0.6	13.6	13.9
IADS	18.6	19.4	12.8	9.7	11.4	12.5	20.0	23.6	11.4	15.3	14.3	11.1	4.3	2.8	4.3	4.2	2.9	1.4	25.8	19.4
IOS							33.3	33.3			50.0	50.0	16.7	16.7					66.7	66.7
RPDES	7.1	8.7	7.1		10.7	4.3	17.9	26.2	32.1	21.8	17.9	30.4	3.6	4.3	3.6	4.3			25.1	39.1
B&F	15.0	22.0	15.0	15.3	30.0	23.6	6.7	8.5	15.0	13.6	13.3	11.9	3.3		1.7	5.1			18.3	16.9
OHE							14.3	14.3	14.3	14.3			14.3		14.3	28.5	42.8	42.9	71.4	71.4
OMI 1/	9.7	10.2	12.3	12.6	28.9	28.5	25.4	24.4	12.3	11.3	7.2	7.7	2.5	1.6	1.7	3.3		0.4	11.4	13.0
OP	24.6	21.3	7.3	9.3	15.9	16.0	23.2	26.8	17.4	14.7	10.2	9.3		1.3	1.4	1.3			11.6	12.0
P&O	15.3	15.3	6.4	9.3	20.7	18.2	28.1	30.2	16.7	13.5	10.3	10.7	1.5	1.4	0.5	0.9	0.5	0.5	12.8	13.5

1/ Was OMASD at the time of the 1965 Survey.

TABLE 4
COMPARISON OF AVERAGE AGE AND LENGTH OF SERVICE OF PERMANENT FULL-TIME EMPLOYEES BY AGENCY DECEMBER 1965-1966

AVERAGE AGE

	1965	1966
OHE	61	61
CCC 1/	57	--
IOS	54	54
SECY	47	40
RPDES	47	49
RCDS	46	47
CSRS	46	45
ASCS	45	45
CEA	44	42
OGC	44	43
REA	44	45
FCIC	43	44
C&MS	43	43
FCS	43	42
IADS	42	41
FHA	42	41
FAS 2/	42	43
ARS	42	42
SCS	42	42
P&O	41	41
FES	41	42
OIG	41	41
DEPT. AVG.	**41**	**42**
OMI 3/	40	40
INF	40	40
NAL	40	41
B&F	39	38
ERS	39	39
OP	39	39
SRS	39	40
FS	38	39
SEG	38	40
OMS	38	38

AVERAGE LENGTH OF SERVICE

	1965	1966
CCC 1/	35	--
OHE	31	32
IOS	18	19
REA	17	18
P&O	17	16
OGC	17	16
CSRS	17	17
SECY	17	14
RPDES	16	19
IADS	16	16
FES	16	16
RCDS	16	15
CEA	16	15
FAS 2/	15	16
SCS	15	16
ASCS	15	16
FHA	14	14
OP	14	14
B&F	14	13
OMS	14	13
SEG	13	15
OIG	13	14
INF	13	13
FCS	13	13
OMI 3/	13	13
DEPT. AVG.	**13**	**13**
ARS	12	12
ERS	12	12
C&MS	12	12
NAL	11	13
SRS	11	12
FCIC	11	11
FS	10	11

1/ Included in ASCS in 1966 Survey.
2/ Overseas employees included in 1966 Survey.
3/ Was OMASD in the 1965 Survey

TABLE 5
AVERAGE AGE AND LENGTH OF SERVICE OF PERMANENT FULL-TIME EMPLOYEES IN PROFESSIONAL POSITIONS CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	AVERAGE POP. 1965-1966	AVERAGE AGE	AVERAGE LENGTH OF SVC.
PROFESSIONAL:	(Work requires completion of a specific course of Academic training or its full equivalent in experience for entry into the occupation.)			
020	URBAN PLANNING	1	35.5	7.5
	SOCIAL SCIENCE	970	41.1	13.7
101	Social Science	20	43.5	12.2
110	Economics	807	40.4	13.0
135	Foreign Affairs	112	46.8	19.2
150	Geography	5	38.5	11.3
170	History	6	49.0	20.0
180	Psychology	4	43.3	7.3
185	Social Work	1	--	--
187	Social Services	16	41.6	3.3
	BIOLOGY & AGRICULTURE	18366	40.8	14.9
401	Biology	91	41.0	13.3
403	Microbiology	152	41.3	12.0
405	Pharmacology	11	45.5	12.5
406	Agr. Extension	103	50.1	21.5
410 & 411	Zoology	5	43.4	14.0
412	Parasitology	31	46.1	19.3
413	Physiology	19	37.3	7.2
414	Entomology	553	41.0	12.5
415	Nematology	31	40.5	11.5
430	Botany	67	42.8	11.1
434	Plant Pathology	264	41.9	13.7

TABLE 5
AVERAGE AGE AND LENGTH OF SERVICE OF PERMANENT FULL-TIME EMPLOYEES IN PROFESSIONAL POSITIONS CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	AVERAGE POP. 1965-1966	AVERAGE AGE	AVERAGE LENGTH OF SVC.
435	Plant Physiology	171	40.8	11.6
436	Plant Quarantine Insp.	969	41.9	15.1
437	Horticulture	68	47.6	18.4
440	Genetics	122	39.3	10.0
450	Gen. Agr. Adm.	214	51.6	24.2
451	Gen. Agriculture	27	45.4	16.8
454	Range Conservation	430	35.8	11.7
457	Soil Conservation	4582	43.9	18.3
460	Forestry	5312	37.6	13.6
470	Soil Science	1671	40.7	15.2
471	Agronomy	248	45.5	18.4
475	Farm Mgmt. Loan	3007	41.9	13.9
487	Husbandry	70	41.2	11.7
493 & 062	Home Economics	152	39.7	9.4
510	ACCOUNTING	973	41.5	14.3
	MEDICAL	32	46.4	8.5
602	Medical Officer	3	51.0	7.5
610	Nurse	29	43.7	8.4
701	VETERINARY	2099	45.5	12.0
480	GEN. FISH & WILD LIFE ADM.	4	49.8	8.1
482	FISHERY BIOLOGIST	13	41.9	6.9
486	WILDLIFE BIOLOGIST	75	35.8	8.1

TABLE 5
AVERAGE AGE AND LENGTH OF SERVICE OF PERMANENT FULL-TIME EMPLOYEES IN PROFESSIONAL POSITIONS CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	AVERAGE POP. 1965-1966	AVERAGE AGE	AVERAGE LENGTH OF SVC.
	ENGINEERING	**3238**	**93.4**	**13.6**
801	Gen. Engineering	68	46.5	19.2
803	Safety Engineering	2	46.0	14.5
806	Materials Engineering	2	48.5	7.5
807 & 808	Architecture	158	35.9	8.3
810	Civil Engineering	1949	38.4	13.2
830	Mech. Engineering	78	40.5	11.3
850	Electrical Engineering	119	45.3	17.5
855	Electronic Engineering	121	44.9	17.2
880	Mining Engineering	22	50.3	14.2
881	Petr. Prod. & Nat. Gas. Engineering	2	53.7	10.3
890	Agricultural Engineering	608	39.6	13.8
893	Chemical Engineering	87	47.1	17.7
896	Industrial Engineering	25	41.4	10.3
905, 960 & 1222	ATTORNEY	185	45.7	18.1
935	HEARING EXAMINER	5	66.2	35.0
1221	PATENT ADV. & EXAMINER	5	50.3	20.8
	PHYSICAL SCIENCE	1484	42.0	13.8
1301	Gen. Phys. Science	50	51.2	23.0
1310	Physics	48	43.1	15.8
1315	Hydrology	6	36.9	10.9
1320	Chemistry	1132	41.4	12.6

TABLE 5
AVERAGE AGE AND LENGTH OF SERVICE OF PERMANENT FULL-TIME EMPLOYEES IN PROFESSIONAL POSITIONS CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	AVERAGE POP. 1965-1966	AVERAGE AGE	AVERAGE LENGTH OF SVC.
1340	Meteorology	18	41.0	17.1
1350	Geology	167	39.9	13.0
1370	Cartography	65	48.7	25.6
1380	FOREST PROD. TECH.	121	41.5	13.1
1382	FOOD TECHNOLOGY	49	41.8	12.3
1384	TEXTILE TECH.	37	50.5	21.6
1410	LIBRARIAN	78	47.2	14.2
1530	STATISTICIAN	464	38.3	13.0
	MATHEMATICS	60	36.2	11.1
1510	Actuary	2	58.5	27.5
1520	Mathematics	21	29.4	5.5
1529	Math-Statistics	37	39.4	13.6
	EDUCATION	267	34.2	4.2
1710	Educ. & Voc. Training	263	34.2	3.7
1720	Educ. Research & Prog.	5	47.3	5.7
TOTAL	PROFESSIONAL	28521	40.4	14.4

TABLE 6
NUMBER AND PERCENTAGE OF PERMANENT FULL-TIME EMPLOYEES ELIGIBLE TO RETIRE 1967-1972

AGENCY	NO. AND % ELIGIBLE TO RETIRE				NO. AND % GS-13-18 ELIGIBLE TO RETIRE			
	1967		1972		1967		1972	
	NO.	%	NO.	%	NO.	%	NO.	%
TOTAL	8336	10.2	8788	10.8	2025	31.0	1375	21.0
SECY	9	9.8	13	14.1	4	11.1	9	25.0
C&MS	1165	9.8	1296	10.9	143	23.3	142	23.1
ARS	1284	9.0	1295	9.1	445	25.1	257	14.5
CEA	20	15.9	14	11.1	8	44.4	2	11.1
ASCS	768	16.6	814	17.6	191	34.3	171	30.7
FCS	13	14.8	8	9.1	8	28.6	5	17.9
FHA	695	10.9	863	13.6	80	41.7	67	34.9
FCIC	70	10.9	88	13.5	29	40.8	22	31.0
FES	41	18.2	27	12.0	26	28.6	15	16.5
FAS	114	16.2	107	15.2	68	26.2	58	22.3
FS	1522	7.0	1775	8.1	440	37.4	239	20.3
NAL	18	10.7	16	9.5	2	14.3	3	21.4
INF	11	4.9	27	11.9	4	10.8	4	10.8
OGC	75	22.2	47	13.9	50	39.7	26	20.6
REA	181	18.6	158	18.1	60	27.0	65	29.3
SCS	1894	12.6	1804	12.0	299	50.7	158	26.8
OMS	32	10.1	36	11.4	6	20.7	5	17.2
ERS	110	10.6	90	8.6	38	14.1	37	13.7
SEG	--	--	3	33.3	--	--	3	75.0
SRS	126	10.5	127	10.5	42	35.0	24	20.0
RCDS	4	12.5	4	12.5	3	20.0	1	6.7
OIG	86	10.6	82	10.1	31	19.6	30	19.0
IADS	14	19.4	10	13.9	8	33.3	5	20.8
IOS	2	33.3	--	--	--	--	1	50.0
RPDES	6	26.1	4	17.4	5	62.5	--	--
B&F	6	10.2	8	13.6	2	12.5	4	25.0
OHE	5	71.4	1	14.3	5	100.0	--	--
OMI	19	7.7	21	8.5	2	9.1	4	18.2
OP	4	5.3	10	13.3	2	8.3	4	16.7
P&O	15	7.0	22	10.2	10	62.5	5	31.3
CSRS	22	24.4	18	20.0	14	35.9	9	23.1

TABLE 7
FORECAST OF RETIREMENTS IN CALENDAR YEAR 1967
(BASED ON CALENDAR YEAR 1966 RESULTS)

AGENCIES	GS-1-8			GS-9-12			GS-13 AND UP			TOTAL		
	POP. 1/1/67	PRED. RET. CY 67	PRED. RATE	POP. 1/1/67	PRED. RET. CY 67	PRED. RATE	POP. 1/1/67	PRED. RET. CY 67	PRED. RATE	POP. 1/1/67	PRED. RET. CY 67	PRED. RATE
USDA	2898	480	16.6	3408	449	13.2	2025	268	13.2	8331	1197	14.4
C&MS	398	83	20.9	624	112	17.9	143	19	13.3	1165	214	18.4
ARS	400	70	17.5	439	70	15.9	445	52	11.7	1284	192	15.0
ASCS	344	78	22.7	233	27	11.6	191	15	7.9	768	120	15.6
FHA	305	41	13.4	310	34	11.0	80	11	13.8	695	86	12.4
FS	524	74	14.1	558	78	14.0	440	76	17.3	1522	228	15.0
SCS	603	78	12.9	992	82	8.3	299	34	11.4	1894	194	10.2
OTHERS	324	56	17.3	252	46	18.3	427	61	14.3	1003	163	16.3

TABLE 8
PERMANENT FULL-TIME PROMOTIONS EFFECTED AS EXEMPTIONS UNDER MERIT PROMOTION PROGRAMS CALENDAR YEAR 1966

AGENCY	TOTAL PROMOTIONS EFFECTED	NUMBER EXEMPT MERIT PROM PLANS	PERCENT OF TOTAL
GRAND TOTAL	15,927	7,967	50.0
SECY	28	3	10.7
C&MS	1,774	1,006	56.7
ARS	2,107	1,480	70.2
CEA	31	11	35.5
ASCS	778	72	9.3
FCS	31	16	51.6
FHA	1,404	402	28.6
FCIC	232	40	17.2
FES	70	38	54.3
FAS	138	95	68.8
FS	4,972	2,853	57.4
NAL	40	23	57.5
INF	55	20	36.4
OGC	93	66	71.0
REA	168	84	50.0
SCS	2,763	1,367	49.5
OMS	118	57	48.3
ERS	358	185	51.7
SEG	5	1	20.0
SRS	287	79	27.5
RCDS	9	3	33.3
CSRS	11	4	36.4
OIG	244	8	3.3
IADS	30	16	53.3
RPDES	2	2	100.0
B&F	28	5	17.9
OMI	89	10	11.2
OP	27	10	37.0
P&O	35	11	31.4

TABLE 9
GRADE PROMOTIONS BETWEEN PERMANENT FULL-TIME CLASSIFICATION ACT POSITIONS
CALENDAR YEAR 1966

AGENCY	TOTAL GRADE PROMOTIONS		GRADE TO WHICH PROMOTED															
	NO.	1/	GS 2	GS 3°	GS 4	GS 5	GS 6	GS 7	GS 8	GS 9	GS 10	GS 11	GS 12	GS 13	GS 14	GS 15	GS 16	GS 17	GS 18
TOTAL	15927	20.8	41	1021	2288	2222	682	2704	124	2362	5	2057	1275	707	277	136	17	7	2
SECY	28	42.4		1	1	3	5	4	1	4				2	2	4	1		
C&MS	1774	16.0	1	34	158	124	28	535	73	372		190	135	99	17	6	2		
ARS	2107	17.8	13	110	382	359	41	346	3	175		170	227	166	72	39	4		
CEA	31	25.6			3	7	2	5		3		4	4		2	1			
ASCS	778	15.9	3	57	187	150	31	71	19	44		81	78	34	16	7			
FCS	31	35.6		1	9	3	1	1		1		4	4	5	2				
FHA	1404	22.8	1	100	228	138	24	260		298		233	90	18	10	3	1		
FCIC	232	35.5	1	120	26	23	8	8	1	15		12	8	7	1	2			
FES	70	29.9	1	3	17	14	10	7	3	2		3	1	4	5				
FAS	138	20.0	2	7	21	21	25	8	2	10		11	13	9	7	2			
FS	4972	24.6	8	343	668	739	114	860	11	878	3	718	375	159	61	26	4	3	2
NAL	40	22.1		13	7	6	2	2		4		4	2						
INF	55	25.7	1	13	6	5	4	6		2			4	9	4	1			
OGC	93	27.8			18	13	5	10		11		5	14	6	6	2	2	1	
REA	168	18.7		4	18	27	18	11	1	21		24	22	15	4	3			
SCS	2763	18.5		110	357	435	287	443	3	410		453	153	73	26	12	1		
OMS	118	38.4	6	23	17	14	10	18		10		7	5	5	2	1			
ERS	358	35.6	2	26	49	34	24	20	2	19		37	60	52	22	10	1		
SEG	5	45.5					1	2							1	1			
SRS	287	25.3	1	20	63	50	12	30		43		36	16	11	2	3			
RCDS	9	31.0				2	1						1		2	3			
CSRS	11	12.0		1	2	4	1		1	1					1				
OIG	244	30.3		4	20	16	14	36		21	1	51	48	26	4	3			
IADS	30	42.9		1	6	6	7	4	1		1	1	2			1			
IOS	0	0.0																	
RPDES	2	7.7				1	1												
B&F	28	46.7		1	1	3	1	1	1	6		2	3	4	3	1	1		
OHE	0	0.0																	
OMI	89	36.9		22	12	17	2	12	1	6		7	5	2	1	1		1	
OP	27	37.5		2	4	3	2	2		3		2	2		4	3			
P&O	35	30.2	1	5	8	5	1	2	1	3		2	3	1		1		2	

1/ Percent of Promotions of Permanent Full-Time Employees in Classification Act Positions.

TABLE 10
AVERAGE YEARS IN GRADE FROM WHICH PROMOTED FOR SELECTED PROFESSIONAL OCCUPATIONS (PROMOTIONS FROM AND TO SAME PROFESSIONAL SERIES) CALENDAR YEAR 1966

SERIES	PROMOTIONS						
	FROM GS-5 TO GS-7	FROM GS-7 TO GS-9	FROM GS-9 TO GS-11	FROM GS-11 TO GS-12	FROM GS-12 TO GS-13	FROM GS-13 TO GS-14	FROM GS-14 TO GS-15
GS-110	1.3	1.8	1.8	2.9	4.1	3.5	2.5
	1.3	3.1	4.9	7.8	11.9	15.4	17.9
GS-414	1.0	1.4	2.7	3.6	3.6	4.0	4.0
	1.0	2.4	5.1	8.7	12.3	16.3	20.3
GS-436	2.0	1.6	4.9	3.4	6.0	--	--
	2.0	3.6	8.5	11.9	17.9	--	--
GS-454	1.2	2.4	3.8	3.6	4.1	5.0	5.0
	1.2	3.6	7.4	11.0	15.1	20.1	25.1
GS-457	1.2	4.1	6.0	5.0	5.1	4.6	4.0
	1.2	5.3	11.3	16.3	21.4	26.0	30.0
GS-460	1.3	3.2	3.8	5.0	4.8	5.6	6.3
	1.3	4.5	8.3	13.3	18.1	23.7	30.0
GS-470	1.4	3.3	5.5	4.8	4.0	5.5	4.5
	1.4	4.7	10.2	15.0	19.0	24.5	29.0
GS-475	1.0	2.6	5.2	4.7	1.9	1.0	--
	1.0	3.6	8.8	13.5	15.4	16.4	--
GS-510	1.1	1.7	2.0	3.5	4.0	5.6	--
	1.1	2.8	4.8	8.3	12.3	17.9	--
GS-701	--	--	0.7	3.6	3.4	4.9	3.7
	--	--	0.7	4.3	7.7	12.6	16.3
GS-810	1.1	2.0	2.6	3.6	4.2	6.0	6.2
	1.1	3.1	5.7	9.3	13.5	19.5	25.7
GS-890	1.6	2.7	4.0	3.5	5.8	4.0	4.0
	1.6	4.3	8.3	11.8	17.6	21.6	25.6
GS-1320	1.0	2.6	3.2	3.2	4.0	5.5	5.0
	1.0	3.6	6.8	10.0	14.0	19.5	24.5
GS-1530	0.7	1.4	2.5	3.5	3.3	4.8	6.0
	0.7	2.1	4.6	8.1	11.4	16.2	22.2
ALL PROF. SERIES[1/]	1.2	2.7	3.8	4.0	4.0	4.9	4.7
	1.2	3.9	7.7	11.7	15.7	20.6	25.3

1/ Promotions from and to any professional series

NOTE: Top Row - one grade
Bottom Row - cumulative time in grade from GS-5

TABLE 11
COMPARISON OF PREDICTED RECRUITMENT NEEDS FOR 1966 AND ACTUAL ACCESSIONS IN 1966

SERIES	SERIES LOSS RATE			PREDICTED RECRUITMENT NEEDS FOR 1966	ACTUAL ACCESSIONS 1966	DIFFERENCE	
	CALENDAR YEAR 1965	CALENDAR YEAR 1966	INCREASE OR DECREASE			CHANGE IN LOSS RATE	DUE TO INCREASED STAFFING
GS-110	11.4	9.8	-1.6	91	95		X
GS-312-313-318	21.5	23.0	+1.5	1114	1122	X	
GS-316-322	30.3	37.3	+7.0	1714	2235	X	X
GS-404	12.4	13.4	+1.0	168	228	X	X
GS-414	7.8	5.4	-2.4	42	48		X
GS-436	8.7	5.7	-3.0	85	52	X	
GS-457	7.7	5.8	-1.9	352	294	X	
GS-458	6.3	6.9	+0.6	173	126		
GS-460	7.4	6.3	-1.1	397	331	X	
GS-470	5.9	5.4	-0.5	101	85	X	
GS-475	7.5	6.4	-1.1	214	525		X
GS-510	13.3	14.3	+1.0	132	137	X	
GS-701	12.1	11.6	-0.5	266	235	X	
GS-802	10.7	14.0	+3.3	257	256		
GS-810	8.6	10.5	+1.9	170	154		
GS-890	12.0	14.8	+2.8	78	46		
GS-1146	11.0	8.0	-3.0	59	26	X	
GS-1320	8.7	7.3	-1.4	98	104		
GS-1530	8.0	6.9	-1.1	38	31	X	
GS-1531	14.8	11.5	-3.3	117	64	X	
GS-1980	4.0	9.7	+5.7	94	192	X	

TABLE 12
PREDICTED RECRUITMENT NEEDS FOR CALENDAR YEAR 1967 IN SELECTED OCCUPATIONS

SERIES	SERIES LOSS RATE			AVERAGE POP. 12/31/64 12/31/65 12/31/66	1967 PREDICTED RECRUITMENT NEEDS BASED ON TWO-YEAR SERIES LOSS RATE
	CALENDAR YEAR 1965	CALENDAR YEAR 1966	CALENDAR YEARS 1965 AND 1966		
GS-110	11.4	9.8	10.7	797	85
GS-312-313-318	21.5	23.0	22.2	5202	1155
GS-316-322	30.3	37.3	34.1	5522	1883
GS-404	12.4	13.4	13.1	1322	173
GS-414	7.8	5.4	6.7	538	36
GS-436	8.7	5.7	7.3	977	71
GS-457	7.7	5.8	6.7	4605	309
GS-458	6.3	6.9	6.6	2783	184
GS-460	7.4	6.3	6.9	5350	369
GS-470	5.9	5.4	5.7	1688	96
GS-475	7.5	6.4	6.9	2864	198
GS-510	13.3	14.3	13.8	983	136
GS-701	12.1	11.6	11.9	2168	258
GS-802	10.7	14.0	12.4	2370	294
GS-810	8.6	10.5	9.6	1922	185
GS-890	12.0	14.8	13.4	636	85
GS-1146	11.0	8.0	9.5	536	51
GS-1320	8.7	7.3	8.0	1120	90
GS-1530	8.0	6.9	7.6	461	35
GS-1531	14.8	11.5	13.2	789	104
GS-1980	4.0	9.7	6.8	2274	155

TABLE 13
ACCESSION RATE FOR PERMANENT FULL-TIME CLASSIFICATION ACT EMPLOYEES - CALENDAR YEAR 1966

AGENCY	AVERAGE EMPLOYMENT	ACCESSIONS	ACCESSION RATE
TOTAL	76,595	10,919 1/	14.3
SECY	66	7	10.6
C&MS	11,070	1,854	16.7
ARS	11,829	1,454	12.3
CEA	121	31	25.6
ASCS	4,883	341	7.0
FCS	87	11	12.6
FHA	6,167	1,332	21.6
FCIC	654	89	13.6
FES	234	30	12.8
FAS	690	116	16.8
FS	20,223	3,172	15.7
NAL	181	30	16.6
INF	214	51	23.8
OGC	335	56	16.7
REA	900	86	9.6
SCS	14,967	1,447	9.7
OMS	307	80	26.1
ERS	1,005	220	21.9
SEG	11	--	--
SRS	1,133	180	15.9
RCDS	29	12	41.4
CSRS	92	10	10.9
OIG	805	185	23.0
IADS	70	16	22.9
IOS	6	--	--
RPDES	26	1	3.8
B&F	60	15	25.0
OHE	7	--	--
OMI	241	37	15.4
OP	72	7	9.7
P&O	116	49	42.2

1/ Accessions to the Department - Excludes accessions to agencies from other agencies of the Department. Therefore, this is not the total of the accessions to each agency of the Department.

TABLE 14
ACCESSIONS OF PERMANENT FULL-TIME EMPLOYEES TO AGENCIES OF THE DEPARTMENT BY PAY PLAN AND SEX CALENDAR YEAR 1966*

AGENCY	TOTAL				CLASSIFICATION ACT				WB & WL & WS				OTHER PAY PLANS			
	TOTAL	M	F	U	TOTAL	M	F	U	TOTAL	M	F	U	TOTAL	M	F	U
TOTAL	11719	7250	4223	246	10919	6526	4163	230	692	635	44	13	108	89	16	3
SECY	7	4	3	-	7	4	3	-	-	-	-	-	-	-	-	-
C&MS	1929	1279	604	46	1854	1212	596	46	7	6	1	-	68	61	7	-
ARS	1836	1112	687	37	1454	763	665	26	357	328	21	8	25	21	1	3
CEA	31	13	18	-	31	13	18	-	-	-	-	-	-	-	-	-
ASCS	342	101	231	10	341	100	231	10	1	1	-	-	-	-	-	-
FCS	11	5	6	-	11	5	6	-	-	-	-	-	-	-	-	-
FHA	1334	745	575	14	1332	743	575	14	-	-	-	-	2	2	-	-
FCIC	89	7	79	3	89	7	79	3	-	-	-	-	-	-	-	-
FES	30	8	22	-	30	8	22	-	-	-	-	-	-	-	-	-
FAS	116	28	86	2	116	28	86	2	-	-	-	-	-	-	-	-
FS	3467	2266	1116	85	3172	1997	1094	81	294	269	21	4	1	-	1	-
NAL	30	17	12	1	30	17	12	1	-	-	-	-	-	-	-	-
INF	54	26	26	2	51	23	26	2	3	3	-	-	-	-	-	-
OGC	56	17	35	4	56	17	35	4	-	-	-	-	-	-	-	-
REA	86	37	48	1	86	37	48	1	-	-	-	-	-	-	-	-
SCS	1467	1188	261	18	1447	1169	260	18	19	18	1	-	1	1	-	-
OMS	83	40	40	3	80	37	40	3	3	3	-	-	-	-	-	-
ERS	222	94	121	7	220	92	121	7	-	-	-	-	2	2	-	-
SRS	190	56	128	6	180	53	121	6	1	1	-	-	9	2	7	-
RCDS	12	5	7	-	12	5	7	-	-	-	-	-	-	-	-	-
CSRS	10	2	8	-	10	2	8	-	-	-	-	-	-	-	-	-
OIG	185	137	45	3	185	137	45	3	-	-	-	-	-	-	-	-
IADS	16	4	12	-	16	4	12	-	-	-	-	-	-	-	-	-
RPDES	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-
B&F	15	5	10	-	15	5	10	-	-	-	-	-	-	-	-	-
OMI	37	18	19	-	37	18	19	-	-	-	-	-	-	-	-	-
OP	7	2	5	-	7	2	5	-	-	-	-	-	-	-	-	-
P&O	56	34	18	4	49	28	18	3	7	6	-	1	-	-	-	-

* Includes transfers to an agency from another agency of the Department as well as appointments from outside the Department.

TABLE 15
COMPARISON OF AGENCY ACCESSION AND SEPARATION RATES OF PERMANENT FULL-TIME EMPLOYEES IN CLASSIFICATION ACT POSITIONS CALENDAR YEARS 1965 and 1966

AGENCY	ACCESSION RATE 1/			TOTAL SEPARATION RATE			VOL. QUIT RATE		
	1965	1966	% CHG.	1965	1966	% CHG.	1965	1966	% CHG.
TOTAL	9.6	14.3	49.0	10.2	11.1	8.8	6.8	8.9	30.9
SECY	20.0	10.6	- 47.0	14.3	16.7	16.8	7.9	13.6	72.2
C&MS	56.8 2/	16.7	- 70.6	9.9	9.6	- 3.0	5.9	6.9	16.9
ARS	9.9	12.3	24.2	9.7	11.1	14.4	6.7	9.3	38.8
CEA	12.1	25.6	111.6	12.1	14.0	15.7	6.0	10.7	78.3
ASCS	5.1	7.0	37.3	12.9	16.2	25.6	8.4	12.7	51.2
FCS	15.9	12.6	- 20.8	11.0	13.8	25.5	5.5	10.3	87.3
FHA	16.1	21.6	34.2	9.0	10.2	13.3	5.8	8.3	43.1
FCIC	10.5	13.6	29.5	12.2	13.3	9.0	10.9	10.7	- 1.8
FES	20.8	12.8	- 38.5	20.6	19.2	- 6.8	12.6	15.8	25.4
FAS	19.6	16.8	- 14.3	12.9	11.7	- 9.3	7.5	8.6	14.7
FS	11.9	15.7	31.9	11.0	12.1	10.0	7.8	10.5	34.6
NAL	23.8	16.6	- 30.3	21.7	21.5	- 0.9	19.0	17.1	- 10.0
INF	36.3	23.8	- 34.4	14.9	19.2	28.9	7.2	17.3	140.3
OGC	29.8	16.7	- 44.0	13.9	14.6	5.0	7.1	11.3	59.2
REA	8.8	9.6	9.1	12.3	12.8	4.1	7.7	8.8	14.3
SCS	6.3	9.7	54.0	7.8	7.6	- 2.6	4.5	5.6	24.4
OMS	15.9	26.1	64.2	17.6	23.1	31.3	11.8	18.9	60.2
ERS	18.5	21.9	18.4	18.6	14.1	- 24.2	12.8	13.2	3.1
SEG	54.5	---	-100.0	---	9.1	---	---	9.1	---
SRS	12.6	15.9	26.2	8.8	11.9	35.2	8.1	10.0	23.5
RCDS	44.8	41.4	- 7.6	17.2	17.2	0.0	6.9	10.3	49.3
CSRS	18.1	10.9	- 40.0	10.5	12.0	16.2	5.3	7.6	43.4
OIG	16.4	23.0	40.2	17.3	15.9	- 8.1	13.1	13.5	3.1
IADS	21.7	22.9	5.5	17.4	30.0	72.4	11.6	21.4	84.5
IOS	---	---	---	---	---	---	---	---	---
RPDES	242.9	3.8	- 98.4	14.3	15.4	7.7	7.1	11.5	62.0
B&F	21.3	25.0	17.4	18.0	25.0	38.9	9.8	21.7	121.4
OHE	---	---	---	---	---	---	---	---	---
OMI	24.4	15.4	- 36.9	14.7	10.8	- 26.5	12.9	10.8	- 16.3
OP	21.9	9.7	- 55.7	17.8	11.1	- 37.6	8.2	11.1	35.4
P&O	20.2	42.2	108.9	18.0	15.5	- 13.9	8.8	13.8	56.8

1/ Accessions to the Department - excludes accessions to agencies from other agencies of the Department except for reorganization transfers.

2/ Includes transfers due to reorganizations.

TABLE 16
TURNOVER RATES BY GRADES OF PERMANENT FULL-TIME EMPLOYEES CALENDAR YEAR 1966

GRADES	TOTAL SEPARATIONS CALENDAR YEAR 1966		VOLUNTARY QUITS CALENDAR YEAR 1966	
	NO	RATE	NO	RATE
GS-1-4	3477	22.0	3200	20.2
GS-5	1487	15.0	1314	13.2
GS-6	257	6.9	178	4.8
GS-7	1051	8.9	821	7.0
GS-8	47	5.5	12	1.4
GS-9	816	6.8	581	4.8
GS-10	3	8.6	2	5.7
GS-11	552	5.6	361	3.7
GS-12	337	5.4	190	3.0
GS-13	222	6.1	99	2.7
GS-14	135	7.6	42	2.4
GS-15	61	8.2	29	3.9
GS-16	14	11.4	3	2.4
GS-17	7	16.7	5	11.9
GS-18	2	9.1	1	4.5
TOTAL	8468	11.1	6838	8.9

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
TOTAL	6838	945	263	223	199
GS-015					1
13					1
GS-018		1			
13		1			
GS-027	3	5	1	1	
5	1				
7	2		1		
11		4			
13		1		1	
GS-085	17	1			
2	1				
3	13	1			
4	3				
GS-090	2				
3	2				
GS-101	3				
5	1				
11	1				
15	1				
GS-110	56	11	3	1	
5	2				
7	5				
9	10				
11	11	3		1	
12	10	1			
13	7	4	2		
14	4	1	1		
15	6	1			
16	1	1			
GS-119	2	1			
5	1				
7	1	1			

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-135	2	2		1	
13		1			
14	1			1	
15	1	1			
GS-180	1				
13	1				
GS-185	1				
11	1				
GS-187	9				
9	7				
11	2				
GS-201	24	4	2	2	
7	8	1			
9	6	1			
11	4		1		
12	3		1		
13	2			2	
14	1	1			
15		1			
GS-203	68	4	4	2	
4	31		1	1	
5	28	2	1	1	
6	5	2			
7	3		2		
9	1				
GS-212	11	1			
7	4				
9	5				
11	1	1			
12	1				
GS-221	8	1	1		
11			1		
12	7				
13	1	1			

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-230	4				
5	1				
9	1				
11	1				
12	1				
GS-235	4				
12	3				
14	1				
GS-301	730	88	21	18	24
1	2				
2	53	1	1		4
3	59	5		1	2
4	192	10	3	2	7
5	248	15	4	2	6
6	12	3	2		
7	46	12	1	4	2
8			1		
9	36	5	3	1	1
11	19	6	2	1	1
12	24	7	2	4	
13	13	6		1	
14	10	9		2	1
15	13	7	2		
16	1	1			
17	2	1			
GS-302	19				1
1	13				1
2	6				
GS-304	4				
3	2				
4	2				
GS-305	101	6	2	3	2
2	41				2
3	49	4		2	
4	10	2	2		
5	1			1	

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-312	636	15	9	1	3
2	2				
3	268	1	2		2
4	311	12	6	1	1
5	55	2	1		
GS-316	34	1			1
3	20				
4	11				1
5	2	1			
6	1				
GS-318	306	43	11	4	1
3	1				
4	40	1	1		
5	148	11	3	1	
6	87	16	4		
7	27	12	2	3	1
8	2	3			
9	1		1		
GS-322	1131	44	21	5	28
2	239	1	3		10
3	687	13	8	3	18
4	204	30	9	2	
5	1		1		
GS-324	3				
4	3				
GS-330	1	1			
11	1				
15		1			
GS-332	24			1	
3	1				
5	9			1	
7	11				
9	2				
11	1				

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-334	28	1			
7	5				
9	7				
11	10	1			
12	5				
GS-335	5				
3	1				
4	3				
5	1				
GS-340		2			
13		1			
14		1			
GS-341	54	19	2	4	
5	8				
7	21	4			
9	16	3	1	1	
11	3	2		1	
12	4	2		1	
13	2	6		1	
14			1		
15		1			
16		1			
GS-342	3	4	1	1	
5		1			
6	1				
7	1			1	
9			1		
13	1	1			
14		1			
15		1			

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-343	17	3			
9	5				
11	2	1			
12	6				
13	3	1			
14		1			
15	1				
GS-344	12	4	1		
5	1				
6	1	1			
7	2	1	1		
9	1	1			
11	1				
12	5				
13	1				
14		1			
GS-345	1				
13	1				
GS-350	13				2
1	1				1
2	9				1
3	3				
GS-355	16		1		
2	5				
3	11		1		
GS-356	99	4	2		3
2	13				
3	78	4			3
4	5				
5	1		1		
6	1				
7	1		1		
GS-357	6				
3	5				
4	1				

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-359	17		2		
2	3				
3	1				
4	12		1		
5	1		1		
GS-362	5				
6	1				
7	2				
9	1				
11	1				
GS-382	5				2
3	5				1
4					1
GS-385	10	1			
4	2				
5	8				
6		1			
GS-401	8	1			
4	1				
5	1				
7	3				
9	1				
12	1				
13	1				
14		1			
GS-403	9	1			1
5					1
7	5				
9	2	1			
11	2				
GS-404	133	3	4	2	4
2	3				
3	16				2
4	22				
5	70	1	3	1	2
7	22	2	1	1	

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-405	1				
14	1				
GS-406	7	5			
9	1				
13	2	4			
14	3	1			
17	1				
GS-412	3				
11	1				
12	1				
13	1				
GS-413	2				
12	1				
13	1				
GS-414	22	7	1		
7	5				
9	2				
11	6	1			
12	3	1			
13	3	2			
14		3	1		
15	3				
GS-415		1			
11		1			
GS-421	10	1	2	1	
4	1				
5	6	1	1	1	
7	3		1		

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-430	1	1			
11	1				
12		1			
GS-434	12	4		1	
9	1				
11	3	1		1	
12	2	1			
13	5				
14	1	2			
GS-435	5			2	
11				1	
12	2			1	
13	3				
GS-436	27	14		3	2
5	9				1
7	1				1
9	17	5		2	
11		5		1	
12		2			
13		2			
GS-437	2	3		2	
7	1				
11	1				
12				1	
13		3			
15				1	
GS-440	6				
9	2				
12	1				
13	2				
14	1				

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-450	5	11		1	
9	1				
12		1			
13		1			
14	2	2			
15	1	3		1	
16		3			
18	1	1			
GS-451	4			1	
9				1	
11	1				
12	3				
GS-454	29	3			
5	6				
7	11				
9	6				
11	1				
12		2			
13	1	1			
14	1				
GS-455	4				
3	2				
4	1				
5	1				
GS-456	43	10	9	3	
3	1		1		
4	4		2	1	
5	23		1	1	
6	6	1			
7	6	4	3	1	
8	1				
9	2	4	2		
11		1			

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-457	132	78	14	14	1
5	46				1
7	32	3	3		
9	41	36	7	4	
11	11	15	2	3	
12	2	10	1	4	
13		6		1	
14		5	1	1	
15		3			
16				1	
GS-458	75	15	15	10	7
3	9				1
4	19		1	1	1
5	20	5	3	3	5
6	26	9	10	6	
7	1	1	1		
GS-460	172	72	4	13	4
5	36				1
7	63	1	1	1	1
9	38	1		4	1
11	18	21		2	1
12	6	16	3	1	
13	5	17			
14	3	13		4	
15	1	1		1	
16	1	1			
17	1	1			
GS-462	104	15	6	7	1
2	1				
3	4			1	
4	33	3	2	3	
5	47	5	3	1	1
6		1			
7	16	6	1	1	
9	2			1	
11	1				

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-470	64	11	4	6	
5	7				
7	29		1		
9	20	1	2	1	
11	6	4		4	
12	2	1		1	
13		3	1		
14		2			
GS-471	11	5	1		
7	3				
9	2				
11	3				
12	1	3	1		
13	2	2			
GS-475	136	31	5	11	6
5	35				2
7	58	2	1	4	2
9	38	14	2	3	1
11	4	6	2	2	
12		4		1	
13	1	3			
14				1	
15					1
16		2			
GS-486	3				
7	1				
9	1				
11	1				
GS-487	3			1	
9	2				
13				1	
14	1				

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-493	16	3			1
5	2				
7	9	1			
9	2				
11	1	1			
12	2				
13					1
14		1			
GS-499	108				2
3	21				
4	42				1
5	45				1
GS-501	99	22	4	2	1
3	11	1			
4	49	6		1	
5	20	4	2		
6	2				
7	8	6	1		
8	1				
9	5	4			1
11	3		1	1	
12		1			
GS-504	4	1		1	
7	2				
9	1	1			
11	1			1	
GS-510	88	21	3	2	6
5	15				
7	12				
9	16	3			2
11	24	4	1	1	4
12	14	5	1	1	
13	7	2			
14		7			
15			1		

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-520	66	10	2	2	
3	7				
4	38	4	1	1	
5	19	6		1	
6			1		
7	2				
GS-525	28	8	5		
4	12	2	1		
5	8	2	2		
6	2	1	1		
7	5	2			
8	1		1		
9		1			
GS-530	8		1		1
2	1				1
3	4				
4	2		1		
5	1				
GS-540	90	9	6	1	6
3	17	3			
4	56	4	3		4
5	15	1	3	1	2
6	1				
9	1	1			
GS-544	10	1			
3	2				
4	6				
5	2	1			

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-560	18	4	1		
7	9				
9	4		1		
11	2	1			
12	1	2			
13		1			
14	2				
GS-590	3				
4	3				
GS-601	2				
7	1				
8	1				
GS-610	4		1		
6	1				
7	3		1		
GS-621	7				
5	7				
GS-645	2				
7	2				
GS-696	1	1			
11	1				
12		1			
GS-699	3				
5	3				

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-701	120	33	12	9	3
7	1				
9	4				
11	91	13	7	5	3
12	11	12	4	1	
13	8	5	1	2	
14	5	2		1	
15		1			
GS-799	63				
7	63				
GS-801	1	3	1		
11	1				
12		1			
13		1			
14		1	1		
GS-802	182	17	7	4	4
2	10				
3	24				
4	52	3			4
5	34	2	1		
6	17	4	3	1	
7	31	8	2	2	
9	13		1		
11	1			1	
GS-807	13				
5	1				
7	3				
9	7				
11	2				
GS-808	3	1			
5	1				
11	2				
12		1			

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-809	10	4		1	
5	1				
6		1		1	
7	9	1			
9		1			
11		1			
GS-810	147	23	1	8	4
5	6				
7	41			1	1
9	50	2		2	2
11	42	6		2	1
12	7	6		2	
13	1	6	1		
14		2		1	
15		1			
GS-817	67	2			2
2	4				
3	7				1
4	18				
5	26				1
6	5				
7	7	2			
GS-818	28	4			
2	1				
3	10				
4	7				
5	7				
6	1	1			
7	2	2			
10		1			
GS-830	7	2			
7	1				
9	3				
11	2				
12		1			
13	1	1			

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-850	13	2			
7	5				
9	3				
11	2				
12	2	1			
13	1				
14		1			
GS-855	6	2		1	
7	1				
9	2				
11	1				
12	2	1		1	
13		1			
GS-856	12	1			
5	1				
7	4				
8	1				
9	5	1			
11	1				
GS-890	31	7	2	2	
5	4				
7	7	2		1	
9	15	2			
11	2	2	1		
12	3				
13			1		
14		1		1	
GS-893	2	1		1	
12	1				
13	1			1	
14		1			
GS-896	5				
9	1				
11	1				
12	3				

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-899	36				
3	12				
4	17				
5	7				
GS-905	7	5	1	1	
7	1				
9	1			1	
11	1				
12	3				
13	1	3			
14		1	1		
16		1			
GS-963	17	5	3		
4	6		1		
5	9	3	2		
6	2				
9		2			
GS-965	1				
4	1				
GS-986		1			
5		1			
GS-990	6	2			
7		2			
9	5				
12	1				
GS-998	5		1		
4	5		1		
GS-1001	10				
2	6				
3	4				

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-1010			1		
9			1		
GS-1020	6	1			
3	1				
5	1				
7	2	1			
9	1				
11	1				
GS-1021	1				1
4	1				
5					1
GS-1060	15				3
3	5				2
4	2				
5	5				
7	1				
9	2				1
GS-1071	3	1			
7	1				
9	1				
11		1			
12	1				
GS-1081	19	4		2	
5	2				
7	5				
9	2	1			
11	3	2			
12	2			1	
13	5			1	
14		1			

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-1082	12	2			
7	7				
9	3				
11		1			
12	2	1			
GS-1083	6	1			
5	1				
9	3				
11	2				
13		1			
GS-1084	4	1			
11	1				
12	3	1			
GS-1087	5	1	1		
4	2				
5	3		1		
6		1			
GS-1102	16	1	1	1	1
5	4				
7	3				
9	3			1	1
11	4	1	1		
12	1				
13	1				
GS-1146	14	11	1	2	
5	1				
7	1				
9	2				
11	3	1			
12	1	2		2	
13	4	4			
14	1	4	1		
17	1				

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-1147	6	2		2	
7	1				
9	2				
11	2	1		1	
12	1				
13				1	
14		1			
GS-1150		1			
13		1			
GS-1165		1			
7		1			
GS-1170	4	2		1	
5	1				
7	2				
11		1		1	
13	1	1			
GS-1301	1				
13	1				
GS-1310	4	1		1	
5	1				
7	1				
9	1				
13				1	
15	1	1			
GS-1311	60	2			1
1	1				
2	7				
3	10	1			
4	7	1			
5	29				1
7	5				
11	1				

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-1315	3				1
5	3				
9					1
GS-1320	71	5		1	1
5	13				
7	23	1			1
9	17				
11	4				
12	10			1	
13	2	2			
14	2	1			
15		1			
GS-1340	3				
9	1				
12	1				
13	1				
GS-1341	3				
5	2				
9	1				
GS-1350	7				1
7	2				
9	3				
11	2				
12					1
GS-1370	1	5		2	
7		1			
9	1	1			
11		1		1	
12		1		1	
14		1			

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-1371	54	7	2	4	2
2	8			1	1
3	20				
4	15	3		1	
5	8		1		1
6	1	1	1		
7	2	3			
8				2	
GS-1373	1				
11	1				
GS-1380	4	1		1	
7	1				
9	2	1			
11	1				
13				1	
GS-1382	2				
9	1				
14	1				
GS-1384	2				
7	1				
13	1				
GS-1399	8				
3	3				
4	5				
GS-1410	6	4			
7	1				
9	3	2			
11	2	1			
12		1			

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-1411	15	2		1	1
2	7				
3	4				
4	2				1
5	2	1		1	
6		1			
GS-1520	4			1	
5	1				
7	2				
9				1	
11	1				
GS-1521	6				
4	5				
5	1				
GS-1529	4	1			
9	1				
11	1	1			
12	1				
15	1				
GS-1530	22	7		1	
5	2				
7	5				
9	6	1			
11	2				
12	2	1			
13	4	2			
14	1	2		1	
15		1			

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-1531	45	16	4	2	
3	14				
4	15	2	1		
5	13	8	2	2	
6	1	4			
7	2	1	1		
9		1			
GS-1640	9	3	1	2	
7	8	1	1	1	
8		1			
9	1	1		1	
GS-1641		1			
9		1			
GS-1654			1		
12			1		
GS-1670	3	1	1		
7	3				
9		1	1		
GS-1701	16			1	
9	6			1	
11	10				
GS-1710	89	1		2	8
5	22				
7	12				2
9	40			2	5
11	3				
12	12	1			1

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-1712	24				1
5	10				
7	7				
9	7				1
GS-1720	1				
11	1				
GS-1810	2			3	
7	1				
9				3	
12	1				
GS-1811	18	4	3		
7	4				
9	8				
11	4	3	1		
12	2		2		
13		1			
GS-1850	9	3	1		
7	1				
9	7	2	1		
11	1	1			
GS-1860	1	1	1		
7			1		
9	1	1			
GS-1863	101	47	21	19	15
5	66		2		10
7	31	13	12	10	4
8	2	16	3	6	1
9		16	4	3	
11	2	1			
12		1			

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-1899	29	4	4	7	1
5	15				
6			1		
7	13	4	2	7	1
9			1		
11	1				
GS-1980	114	39	13	8	30
5	36				2
7	40	3	3		26
9	33	20	4	6	2
11	3	8	4	1	
12	2	7	2		
13				1	
14		1			
GS-1981	8				1
3	7		1		1
4	1		1		
GS-2001	11	1			
3	7				
4	2				
5	1	1			
9	1				
GS-2010	1				
9	1				
GS-2020	34	1	1	1	
3	1				
4	20			1	
5	6	1	1		
6	4				
7	3				
GS-2040	19	1	3		1
2	3				
3	7		2		
4	8	1	1		1
5	1				

TABLE 17
SEPARATIONS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES DURING CALENDAR YEAR 1966

SERIES AND GRADE	VOLUNTARY QUITS	RETIREMENTS		DEATHS	OTHER SEPARATIONS
		MANDATORY AND OPTIONAL	DISABILITY		
GS-2090	9	2			
4	7	1			
5	1				
7	1				
9		1			
GS-2101	2	1			
4	2				
12		1			
GS-2130					3
12					2
13					1
GS-2131	9	1	1	1	2
7	1				
8	3	1			
9	3		1	1	2
10	2				
GS-2132	2				
3	2				
GS-2134	3				
4	2				
5	1				
GS-2135	3				
4	1				
5	2				
GS-2181	7				
9	1				
11	5				
12	1				

TABLE 18
TRENDS IN ACCESSION AND LOSS RATES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	ACCESSIONS			TOTAL SEPARATIONS			VOLUNTARY QUITS		
		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
PROFESSIONAL:	(Work requires completion of a specific course of Academic training or its full equivalent in experience for entry into the occupation.)									
020	URBAN PLANNING	-	-	-	-	-	-	-	-	-
	SOCIAL SCIENCE	15.1	11.5	12.6	11.4	9.3	9.7	7.5	7.4	7.1
101	Social Science	26.3	20.0	25.0	36.8	15.0	25.0	31.6	15.0	25.0
110	Economics	12.3	11.8	12.0	10.3	8.8	9.5	6.2	6.9	6.6
135	Foreign Affairs	1.8	0.9	1.8	0.9	4.5	2.7	0.9	1.8	1.8
150	Geography	-	60.0	50.0	25.0	-	25.0	25.0	-	25.0
170	History	-	33.3	16.7	16.7	-	16.7	16.7	-	16.7
180	Psychology	-	50.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
185	Social Work	100.0	-	100.0	-	100.0	100.0	-	100.0	100.0
187	Social Services	210.0	31.3	130.0	40.0	56.3	70.0	40.0	56.3	70.0
	BIOLOGY & AGRICULTURE	7.0	8.5	7.8	6.9	5.6	6.2	3.3	3.7	3.5
401	Biology	9.5	13.2	11.5	6.0	9.9	8.0	3.6	8.8	6.9
403	Microbiology	11.4	13.2	12.4	9.3	7.2	8.3	7.9	5.9	6.9
405	Pharmacology	30.0	18.2	30.0	20.0	9.1	20.0	20.0	9.1	20.0
406	Agr. Extension	11.3	7.8	9.7	13.2	11.7	12.6	4.7	6.8	5.8
410 & 411	Zoology	-	20.0	20.0	-	-	-	-	-	-
412	Parasitology	8.8	3.2	6.3	20.6	9.7	15.6	5.9	9.7	9.4
413	Physiology	23.5	21.1	22.2	5.9	10.5	11.1	5.9	10.5	11.1
414	Entomology	12.8	8.7	10.8	7.2	5.4	6.3	4.2	4.0	4.1

TABLE 18
TRENDS IN ACCESSION AND LOSS RATES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES
CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	ACCESSIONS			TOTAL SEPARATIONS			VOLUNTARY QUITS		
		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
415	Nematology	37.0	6.5	21.4	-	3.2	3.6	-	-	-
430	Botany	10.7	13.4	12.7	5.4	3.0	4.8	5.4	1.5	3.2
434	Plant Pathology	7.3	9.8	8.8	6.6	6.4	6.5	2.7	4.5	3.8
435	Plant Physiology	8.0	9.4	8.9	10.4	4.1	7.1	8.6	2.9	6.0
436	Plant Quarantine Insp.	5.2	5.4	5.3	7.6	4.7	6.2	2.6	2.8	2.8
437	Horticulture	4.1	4.4	4.3	11.0	10.3	11.4	5.5	2.9	4.3
440	Genetics	11.4	8.2	10.3	9.6	4.9	7.7	5.3	4.9	5.1
450	Gen. Agr. Adm.	-	0.9	0.5	8.4	7.9	8.4	0.9	2.3	1.9
451	Gen. Agriculture	5.0	11.1	8.7	-	18.5	13.0	-	14.8	8.7
454	Range Conservation	10.5	18.1	14.5	8.0	7.4	7.7	6.5	6.7	6.8
457	Soil Conservation	3.6	6.4	5.0	7.3	5.2	6.3	2.6	2.9	2.7
460	Forestry	4.6	6.3	5.4	5.5	5.0	5.3	2.7	3.2	3.1
470	Soil Science	4.8	5.1	5.0	5.9	5.1	5.5	4.3	3.8	4.1
471	Agronomy	4.6	2.0	3.5	7.7	6.9	7.5	3.1	4.4	3.9
475	Farm Mgmt. Loan	15.3	17.5	16.4	7.4	6.3	6.8	3.3	4.5	3.9
487	Husbandry	2.7	5.7	4.1	12.2	5.7	9.6	4.1	4.3	4.1
493 & 062	Home Economics	57.7	13.2	35.3	17.7	13.2	16.2	13.8	10.5	12.5
510	ACCOUNTING	12.3	14.1	13.2	11.8	12.3	12.1	7.7	9.0	8.4
	MEDICAL	64.0	21.9	44.4	12.0	15.6	14.8	8.0	12.5	11.1
602	Medical Officer	-	33.3	50.0	-	-	-	-	-	-
610	Nurse	69.6	20.7	45.8	13.0	17.2	16.7	8.7	13.8	12.5
701	VETERINARY	8.8	9.5	9.2	9.5	8.4	9.0	6.3	5.7	6.0

TABLE 18
TRENDS IN ACCESSION AND LOSS RATES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	ACCESSIONS			TOTAL SEPARATIONS			VOLUNTARY QUITS		
		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
480	GEN. FISH & WILD LIFE ADM.	-	-	-	-	-	-	-	-	-
482	FISHERY BIOLOGIST	22.2	46.2	36.4	11.1	-	9.1	11.1	-	9.1
486	WILDLIFE BIOLOGIST	11.9	10.7	11.3	3.0	4.0	4.2	1.5	4.0	2.8
	ENGINEERING	6.8	8.1	7.5	8.3	8.9	8.6	5.3	7.0	6.2
801	Gen. Engineering	4.6	5.9	5.1	10.3	7.4	8.9	4.6	1.5	3.8
803	Safety Engineering	-	50.0	50.0	-	-	-	-	-	-
806	Materials Engineering	-	-	-	-	-	-	-	-	-
807 & 808	Architecture	11.4	21.5	16.9	11.4	10.8	11.0	8.7	10.1	9.7
810	Civil Engineering	6.5	7.9	7.2	7.9	9.4	8.7	5.0	7.5	6.3
830	Mech. Engineering	14.9	14.1	14.5	14.9	11.5	13.2	8.1	9.0	9.2
850	Electrical Engineering	18.7	4.2	11.9	9.8	12.6	11.9	4.1	10.9	7.6
855	Electronic Engineering	1.5	0.8	1.6	10.8	7.4	9.5	8.5	5.0	7.1
880	Mining Engineering	-	-	-	4.8	-	4.8	4.8	-	4.8
881	Petr. Prod. & Nat. Gas. Engineering	-	-	-	-	-	-	-	-	-
890	Agricultural Engineering	6.1	7.6	6.9	7.2	6.9	7.1	4.8	5.1	5.0
893	Chemical Engineering	-	3.4	2.3	6.7	4.6	5.7	3.3	2.3	3.4
896	Industrial Engineering	12.0	12.0	12.0	16.0	20.0	20.0	8.0	20.0	16.0
905, 960 & 1222	ATTORNEY	6.5	13.0	9.7	12.0	7.6	9.7	2.2	3.8	3.2
935	HEARING EXAMINER	-	-	-	-	-	-	-	-	-

TABLE 18
TRENDS IN ACCESSION AND LOSS RATES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES
CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	ACCESSIONS			TOTAL SEPARATIONS			VOLUNTARY QUITS		
		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
1221	PATENT ADV. & EXAMINER	-	-	-	-	-	-	-	-	-
	PHYSICAL SCIENCE	8.2	8.5	8.3	7.6	7.3	7.5	5.2	6.1	5.6
1301	Gen. Phys. Science	3.4	-	1.8	3.4	2.0	3.6	1.7	2.0	1.8
1310	Physics	6.4	6.3	6.4	4.3	12.5	8.5	-	8.3	4.3
1315	Hydrology	50.0	100.0	100.0	-	66.7	50.0	-	50.0	50.0
1320	Chemistry	8.7	9.2	9.0	8.5	6.9	7.8	6.2	6.3	6.3
1340	Meteorology	15.8	-	11.1	-	16.7	11.1	-	16.7	11.1
1350	Geology	8.6	7.8	8.5	6.2	4.8	5.5	3.1	4.2	3.7
1370	Cartography	-	-	-	4.2	12.3	8.7	1.4	1.5	1.4
1380	FOREST PROD. TECH.	6.9	9.1	8.4	4.3	5.0	5.0	2.6	3.3	3.4
1382	FOOD TECHNOLOGY	2.5	2.0	2.3	-	4.1	2.3	-	4.1	2.3
1384	TEXTILE TECH.	2.8	-	2.8	11.1	5.4	8.3	-	5.4	2.8
1410	LIBRARIAN	13.8	6.4	10.4	16.3	12.8	15.6	10.0	7.7	9.1
1530	STATISTICIAN	8.2	6.7	7.6	6.7	6.5	6.7	3.7	4.7	4.3

TABLE 18
TRENDS IN ACCESSION AND LOSS RATES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	ACCESSIONS			TOTAL SEPARATIONS			VOLUNTARY QUITS		
		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
	MATHEMATICS	9.4	21.7	16.1	7.5	16.7	12.5	7.5	13.3	10.7
1510	Actuary	-	-	-	-	-	-	-	-	-
1520	Mathematics	23.5	38.1	31.6	11.8	23.8	21.1	11.8	19.0	15.8
1529	Math-Statistics	2.9	13.5	8.6	5.9	13.5	11.4	5.9	10.8	8.6
	EDUCATION	174.4	61.0	105.5	-	37.8	28.2	-	33.7	24.9
1710	Educ. & Voc. Training	180.8	62.0	107.3	-	38.0	28.2	-	33.8	25.4
1720	Educ. Research & Prog.	20.0	-	25.0	-	20.0	25.0	-	20.0	25.0
TOTAL	PROFESSIONAL	8.5	9.4	8.9	7.6	7.0	7.3	4.1	5.0	4.6

TABLE 18
TRENDS IN ACCESSION AND LOSS RATES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES
CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	ACCESSIONS			TOTAL SEPARATIONS			VOLUNTARY QUITS		
		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
ADMINISTRATIVE - TECHNICAL & PROFESSIONAL SUPPORT: (Work involves technical, administrative, and similar "college caliber" duties.)										
015	OPERATIONS RESEARCH	100.0	-	-	-	100.0	-	-	-	-
018	SAFETY MANAGEMENT	11.1	-	11.1	11.1	10.0	11.1	11.1	-	11.1
080	SECURITY ADMINISTRATION	-	20.0	20.0	20.0	-	20.0	-	-	-
119	ECONOMICS ASSISTANT	-	46.2	24.0	4.2	11.5	8.0	4.2	7.7	8.0
188	RECREATION	-	-	-	-	-	-	-	-	-
	PERSONNEL	3.7	7.6	5.6	12.1	12.4	12.3	5.3	10.2	7.8
201	Personnel Admin.	4.0	7.5	5.8	9.5	11.4	10.4	3.6	8.5	6.1
212	Placement (Staffing)	4.9	11.5	8.3	13.6	13.8	14.3	7.4	12.6	10.7
221	Position Classification	2.8	2.9	2.9	18.1	14.7	17.1	9.7	11.8	11.4
223	Salary & Wage Adm.	-	-	-	50.0	-	100.0	-	-	-
230	Employee-Management Rel.	-	12.5	8.7	5.0	16.7	13.0	5.0	16.7	13.0
235	Employee Development	2.6	4.9	4.9	17.9	9.8	14.6	5.1	9.8	7.3
	COMPUTER & MGMT. SERV.	5.6	9.3	7.5	8.5	10.0	9.2	4.2	7.6	5.9
330	Digital Comp. Sys. Adm.	5.0	-	4.5	5.0	8.0	9.1	5.0	4.0	4.5
332	Comp. Sys. Operator	8.9	22.1	16.3	13.3	26.3	20.7	13.3	25.3	19.6
334	Dig. Comp. Sys. Analysis	14.9	15.2	15.1	11.3	11.0	11.0	10.0	10.6	10.2

TABLE 18
TRENDS IN ACCESSION AND LOSS RATES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES
CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	ACCESSIONS			TOTAL SEPARATIONS			VOLUNTARY QUITS		
		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
340	Program Mgmt.	-	-	-	-	25.0	12.5	-	-	-
341	Adm. Assistant & Officer	5.0	8.7	6.9	7.8	7.7	7.8	2.8	5.2	4.0
342	Office Services	2.5	-	1.3	8.8	11.8	10.3	3.8	3.9	3.8
343 & 345	Management Analysis	2.6	8.2	5.6	9.5	10.8	10.3	3.7	9.2	6.7
344	Management Technician	1.8	3.4	2.9	6.1	9.7	8.2	1.2	6.9	4.1
362	EAM Mach. Prog. Planning	-	9.7	6.3	5.6	16.1	12.5	5.6	16.1	12.5
	AGRICULTURAL TECHNICAL AND SUPPORT	7.5	12.7	10.1	7.6	7.4	7.5	4.4	5.2	4.8
027	Crop. Insurance Adm.	1.2	1.2	1.2	3.1	6.0	4.9	1.2	1.8	1.8
404	Biol. Lab. Technician	16.2	16.3	16.3	9.9	10.4	10.3	8.2	9.5	8.9
421	Plant Pest Control Tech.	1.1	3.9	2.7	6.2	5.4	6.1	5.1	3.9	4.5
455	Range Technician	6.1	10.7	9.8	8.2	7.1	7.8	6.1	7.1	7.8
456	Forest & Range Fire Control	8.5	2.9	5.9	12.4	5.8	9.4	7.6	3.8	5.9
458	Soil Conservation Tech.	1.8	4.5	3.2	4.6	4.4	4.5	1.8	2.7	2.3
462	Forest Technician	5.3	7.3	6.4	9.1	6.1	7.7	5.8	4.8	5.4
499	Biol. Science Student Trainee	61.5	293.2	174.5	29.7	75.3	55.2	2.4	74.0	53.3
799	Vet. Student Trainee	111.0	90.0	120.4	82.2	157.5	126.5	82.2	157.5	126.5
1146	Agr. Marketing Specialist	5.9	4.9	5.4	7.9	5.3	6.7	3.1	2.7	3.0
1147	Agr. Marketing Reporting	5.0	3.5	4.5	6.5	5.0	6.0	1.0	3.0	2.0
1850	Agr. Comm. Whse. Exam.	1.3	5.2	3.2	8.8	6.1	7.7	4.0	4.2	4.1
1863	Food Inspection	8.4	16.7	12.6	6.3	5.0	5.6	2.5	2.5	2.5
1980	Agr. Comm. Grading	2.6	8.6	5.5	3.9	9.1	6.5	1.4	5.1	3.3
1981	Agr. Comm. Aid	66.7	51.9	62.5	4.2	40.7	25.0	-	29.6	16.7

TABLE 18
TRENDS IN ACCESSION AND LOSS RATES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES
CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	ACCESSIONS			TOTAL SEPARATIONS			VOLUNTARY QUITS		
		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
	INSPECTION	-	-	-	-	-	-	-	-	-
1901, 1903 & 1905	Insp. & Quality Control	-	-	-	-	-	-	-	-	-
	ACCTG. & FIN. SUPPORT	1.5	3.0	2.3	11.9	15.2	13.6	6.3	11.4	8.9
501	Gen. Acctg., Cler. & Adm.	1.9	3.5	2.8	12.0	15.8	14.0	5.9	12.2	9.1
525	Acctg. Technician	0.3	2.0	1.3	11.8	13.4	12.8	7.5	9.1	8.3
	BUDGET & FIN. MGMT.	6.9	9.9	8.4	13.3	12.4	12.8	6.9	9.4	8.4
560	Budget Adm.	7.6	11.8	9.6	13.6	11.8	12.7	7.1	9.2	8.1
504	Budget & Acctg.	-	-	-	13.3	19.4	17.4	6.7	12.9	17.4
505	Financial Management	-	-	-	-	-	-	-	-	-
	MEDICAL SUPPORT	132.0	31.4	69.4	28.0	31.4	33.3	18.7	29.4	30.6
601	General Health Science	100.0	50.0	100.0	-	100.0	50.0	-	100.0	50.0
621	Nursing Assistant	163.6	42.9	100.0	36.4	33.3	42.9	36.4	33.3	42.9
644 & 645	Med. Technician	-	25.0	25.0	20.0	50.0	50.0	20.0	50.0	50.0
696	Food & Drug Inspection	90.9	15.8	50.0	9.1	10.5	14.3	-	5.3	7.1
699	Medical Aid	100.0	40.0	100.0	33.3	60.0	66.7	33.3	60.0	66.7
	ENGINEERING SUPPORT	8.2	14.3	11.4	9.0	10.2	9.7	7.4	8.9	8.3
802	Engineering Technician	6.6	10.4	8.6	8.1	8.7	8.4	6.0	7.4	6.8
809	Construction Insp.	1.1	9.9	6.2	1.7	7.1	4.6	1.7	4.7	3.6
817	Surveying Technician	7.4	15.2	11.5	8.9	10.6	10.0	8.2	10.0	9.4

TABLE 18
TRENDS IN ACCESSION AND LOSS RATES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	ACCESSIONS			TOTAL SEPARATIONS			VOLUNTARY QUITS		
		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
818	Engineering Drafting	17.0	22.3	19.9	19.2	18.3	19.3	18.1	16.0	17.6
856	Electronic Technician	4.4	8.7	6.6	5.0	7.1	6.0	2.8	6.6	4.4
899	Engineering Stud. Trainee	61.9	204.1	122.6	38.1	73.5	54.8	38.1	73.5	54.8
954	LEGAL ASST.	-	-	-	-	-	-	-	-	-
	CLAIMS EXAMINING	0.9	6.0	3.5	8.1	14.2	11.5	2.7	9.9	6.6
963	Legal Instr. Exam.	-	6.1	3.2	8.6	15.2	12.0	3.9	10.3	7.6
990	General Claims Exam.	2.9	6.1	10.5	7.1	12.1	10.4	-	9.1	4.5
992	Loss & Damage Claims Exam.	-	-	-	-	-	-	-	-	-
	ART & INFORMATION	8.3	12.5	4.5	11.2	12.5	11.9	5.5	10.1	7.8
389	Radio Operating	-	-	-	-	-	-	-	-	-
393	Communication Spec.	-	33.3	33.3	33.3	-	33.3	-	-	-
1001	General Ars & Info.	23.5	42.1	35.3	8.8	26.3	20.6	8.8	26.3	20.6
1010	Exhibits Spec.	-	37.5	25.0	25.0	12.5	25.0	12.5	-	12.5
1020	Illustrating	9.3	5.0	7.3	18.6	17.5	19.5	9.3	15.0	12.2
1021	Office Drafting	-	12.5	12.5	-	25.0	12.5	-	12.5	12.5
1045	Translator	-	-	-	40.0	-	20.0	40.0	-	20.0
1046	Clerk Translator	-	-	-	-	-	-	-	-	-
1060	Photography	11.7	9.0	10.4	11.7	10.8	11.6	5.5	9.0	7.3
1071	Motion Picture Prod.	4.2	20.8	12.5	8.3	16.7	12.5	4.2	12.5	8.3
1081	Public Info.	6.3	12.4	9.4	9.7	11.5	10.8	3.4	8.8	6.1
1082	Writing & Editing	8.2	14.0	11.4	7.5	10.9	9.1	2.2	9.3	6.1

TABLE 18
TRENDS IN ACCESSION AND LOSS RATES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES
CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	ACCESSIONS			TOTAL SEPARATIONS			VOLUNTARY QUITS		
		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
1083 & 1412	Techn. Writing & Editing	2.9	14.7	8.8	8.8	20.6	14.7	2.9	17.6	11.8
1084	Visual Info.	4.2	8.9	6.4	6.3	11.1	8.5	4.2	8.9	6.4
1087	Editorial Assistant	7.9	3.7	6.4	19.7	8.5	14.1	13.2	6.1	10.3
	BUSINESS & INDUSTRY	2.1	4.4	3.3	7.2	8.5	8.0	2.1	5.8	4.2
1101	General Business & Ind.	-	-	-	-	-	-	-	-	-
1102	Contract & Proc.	2.6	2.8	2.9	5.2	7.9	6.6	1.7	6.3	4.1
1104	Property Disposal	-	-	-	-	-	-	-	-	-
1150	Industrial Specialist	-	-	-	35.7	8.3	23.1	7.1	-	7.7
1152	Production Control	-	-	-	-	-	-	-	-	-
1163	Insurance Examining	-	-	-	40.0	-	20.0	-	-	-
1165	Loan Specialist	-	3.2	2.9	4.3	3.2	3.7	2.1	-	2.9
1170	Realty	3.2	17.1	12.1	9.7	20.0	15.2	3.2	11.4	9.1
1171	Appraising & Assessing	-	-	-	-	-	-	-	-	-
2070	Property Utilization	-	33.3	50.0	-	-	-	-	-	-
	PHYSICAL SCIENCE SUPPORT	10.0	19.7	15.0	13.3	17.5	15.6	11.6	15.3	13.6
1311	Phys. Science Technician	10.6	13.2	12.3	9.6	15.4	12.8	8.4	14.6	11.8
1341	Meteorology Technician	25.0	33.3	33.3	-	100.0	66.7	-	100.0	66.7
1371	Cartographic Aid	5.9	24.2	3.6	14.5	19.4	16.9	12.3	15.2	13.6
1373	Cadastral Surveying	-	12.5	9.5	-	4.2	4.8	-	4.2	4.8
1399	Phys. Science Stud. Trainee	47.2	64.3	56.3	50.0	28.6	40.6	47.2	28.6	40.6
1411 & 1421	LIBRARY & ARCHIVES ASST.	14.0	20.0	17.4	30.2	22.4	26.7	27.9	17.6	23.3

TABLE 18
TRENDS IN ACCESSION AND LOSS RATES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES
CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	ACCESSIONS			TOTAL SEPARATIONS			VOLUNTARY QUITS		
		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
1521	MATH. TECHNICIAN	14.3	50.0	50.0	-	75.0	50.0	-	75.0	50.0
	EQUIPMENT & CONSTRUCTION	2.2	8.4	5.3	13.3	11.5	12.2	2.2	6.3	4.3
1601	Facility Management	-	-	-	16.7	-	14.3	-	-	-
1640	Construction & Maint.	2.7	8.8	6.2	15.3	13.2	14.2	3.6	7.9	6.2
1641	Bldg. & Grounds Maint.	-	20.0	20.0	-	20.0	20.0	-	-	-
1654	Printing Mgmt.	4.0	7.4	7.7	16.0	3.7	11.5	-	-	-
1670	Equipment Specialist	-	8.1	5.6	5.7	13.5	11.1	-	8.1	5.6
	EDUCATION	160.0	68.2	102.6	78.0	38.2	53.9	72.0	36.4	50.0
1701	General Educ. & Training	195.7	56.8	120.7	147.8	38.6	89.7	134.8	36.4	82.8
1712	Instruction	125.0	75.8	91.5	17.9	37.9	31.9	17.9	36.4	31.9
	INVESTIGATION	4.3	8.9	6.5	6.9	7.7	7.3	3.1	4.9	4.0
1810	General Investigation	12.2	7.7	10.4	18.7	9.6	15.1	9.4	3.8	7.5
1811	Criminal Investigation	-	30.8	22.4	8.4	14.8	13.8	1.2	10.7	8.6
1825	Aviation Safety	-	50.0	100.0	-	-	-	-	-	-
1860	Public Health Inspection	-	-	-	7.7	5.4	7.4	1.9	1.8	1.9
1899 & 1895	Misc. Inspection	3.7	4.5	4.1	4.6	6.1	5.4	2.3	4.0	3.2
	SUPPLY	2.0	5.7	3.7	10.5	13.6	12.2	6.0	11.9	9.0
2001	General Supply	2.4	8.4	5.2	9.7	11.2	10.4	5.6	10.3	7.8

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CALENDAR YEAR 1966

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		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
2003	Supply Prog. Management	-	-	-	25.0	-	33.3	25.0	-	33.3
2010	Inventory Management	-	-	-	50.0	100.0	100.0	50.0	100.0	100.0
2030 & 2032	Storage Management	-	-	-	20.0	-	20.0	20.0	-	20.0
2090	Publication Supply	1.5	1.6	1.6	9.2	17.7	14.3	3.1	14.5	9.5
	TRANSPORTATION	3.2	9.9	6.9	11.0	15.1	13.0	6.0	10.8	8.3
2101	General Transportation	-	-	-	-	60.0	25.0	-	40.0	12.5
2130	Traffic Management	5.7	9.8	7.9	5.7	7.3	7.9	2.9	-	2.6
2131	Freight Rate	-	4.3	2.6	16.9	20.0	18.4	6.0	12.9	9.2
2132	Travel	-	-	-	8.3	15.4	16.7	8.3	15.4	16.7
2134	Shipment	-	4.3	4.8	10.0	13.0	14.3	10.0	13.0	14.3
2144	Cargo Scheduling	-	-	-	-	-	-	-	-	-
2151	Dispatching	-	-	-	-	-	-	-	-	-
2181	Aircraft Operation	9.1	22.4	15.8	9.1	12.1	10.5	7.3	12.1	10.5
TOTAL	ADM.-TECH. & PROF. SUPPORT	7.3	12.3	9.8	8.7	9.3	9.1	5.3	7.1	6.2

TABLE 18
TRENDS IN ACCESSION AND LOSS RATES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES
CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	ACCESSIONS			TOTAL SEPARATIONS			VOLUNTARY QUITS		
		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
CLERICAL AND OTHER OCCUPATIONS N.E.C.										
081, 085 & 090	FIRE PROT. & PREV. GUARD & GUIDE	13.9	29.7	21.9	11.1	27.0	19.2	9.7	25.7	17.8
203	PERSONNEL CLERICAL	2.5	2.2	2.5	17.6	15.9	16.9	14.7	13.9	14.4
309	CORRESPONDENCE CLERICAL	-	-	-	12.5	-	14.3	12.5	-	14.3
	OFFICE OCCUPATIONS	20.5	30.7	25.7	18.9	21.6	20.3	16.5	19.8	18.2
302	Messenger	43.1	83.7	60.4	43.1	46.5	43.8	31.4	44.2	31.3
304	Info. Receptionist	28.6	33.3	37.5	42.9	44.4	50.0	42.9	44.4	50.0
305	Mail & File	10.7	26.6	18.5	17.3	22.3	19.7	13.1	19.7	16.4
312	Clerk-Stenographer	26.6	34.3	30.6	22.3	23.5	22.9	20.1	22.5	21.4
313	Steno. or Typ. Unit Supv.	-	-	-	12.5	-	14.3	12.5	-	14.3
316	Clk. Dict. Mach. Trscr.	13.3	25.7	19.6	20.7	24.3	23.0	19.3	23.0	21.6
318	Secretary	7.1	6.4	6.7	15.1	15.3	15.1	11.7	12.8	12.2
322	Clerk-Typist	25.4	39.7	32.9	18.5	22.2	20.5	16.9	20.4	18.8
324	Cold Type Comp. Mach.	20.0	7.7	18.2	10.0	23.1	18.2	10.0	23.1	18.2
335	Comp. Aid & Technician	-	29.0	21.7	100.0	16.1	17.4	100.0	16.1	17.4
350	Office Mach. Oper.	9.9	35.6	23.6	22.5	20.5	22.2	15.5	17.8	16.7
351	Printing Clerical	20.0	-	20.0	40.0	-	20.0	20.0	-	20.0
354	Bookkeeping Mach. Oper.	10.0	25.0	22.2	-	-	-	-	-	-
355	Calc. Mach. Oper.	11.9	18.8	15.1	10.7	26.6	17.8	9.5	25.0	16.4

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		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
356	Card Punch Oper.	16.2	38.1	26.7	21.7	35.2	28.3	18.3	32.2	25.2
357	Coding	-	8.7	3.6	47.1	26.1	39.3	41.2	26.1	35.7
359	EAM Operator	8.2	18.0	13.6	13.6	19.0	16.5	13.6	17.0	15.5
382	Telephone Operator	6.7	21.4	13.8	23.3	25.0	24.1	6.7	17.9	13.8
385	Teletypist	2.0	18.2	10.9	12.2	25.0	19.6	4.1	22.7	13.0
392	General Communication	-	50.0	50.0	-	-	-	-	-	-
	ACCOUNTING CLERICAL	3.7	10.0	6.9	14.9	22.5	18.7	10.4	18.4	14.4
520	Accts. Maint. Clerical	1.8	8.2	5.1	11.9	20.6	16.5	9.4	17.0	13.4
530	Cash Processing	12.8	25.0	18.9	12.8	31.3	21.6	7.7	25.0	16.2
540	Voucher Exam.	4.2	11.2	7.8	17.3	25.2	21.3	10.5	20.2	15.3
544	Time, Leave & Payroll	5.6	7.5	7.1	16.7	13.8	15.3	15.6	12.5	14.1
590	Time & Leave	12.5	-	8.3	12.5	17.6	16.7	12.5	17.6	16.7
	LEGAL CLERICAL & ADM.	11.8	6.7	12.5	11.8	13.3	12.5	5.9	6.7	6.3
965	Land Law Clerical & Adm.	14.3	16.7	16.7	-	16.7	16.7	-	16.7	16.7
986	Legal Clerical & Adm.	9.1	-	10.0	18.2	11.1	20.0	9.1	-	10.0
998	CLAIMS CLERICAL	-	-	-	12.2	13.3	14.0	7.3	11.1	9.3
1531	STATISTICAL CLERICAL	4.8	8.1	6.5	12.7	8.4	10.6	6.8	5.7	6.2
301	GENERAL CLERICAL & ADM.	6.3	16.0	11.3	10.6	14.6	12.7	6.5	12.1	9.5

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		CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE	CY 1965 RATE	CY 1966 RATE	2 YR. RATE
	SUPPLY CLERICAL	7.0	9.2	8.2	14.9	12.7	13.9	9.8	11.1	10.6
2020	Purchasing	6.9	8.1	7.8	16.0	14.3	15.1	12.1	13.2	12.7
2040 & 2050	Stock Control	7.0	10.4	9.2	13.6	10.9	12.6	7.0	8.6	8.2
2135	TRANSP. LOSS & DAM. CLER. EXAM.	-	-	-	-	50.0	28.6	-	50.0	28.6
TOTAL	CLERICAL & OTHER OCCUP. N.E.C.	14.3	23.4	19.0	16.0	18.8	17.5	12.8	16.7	14.8
	GRAND TOTAL	9.6	14.3	12.0	10.3	11.1	10.7	6.9	8.9	7.9

TABLE 19
VOLUNTARY QUITS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES IN CALENDAR YEAR 1966

OCCUPATIONAL SERIES AND AGENCIES	POP. 1965	POP. 1966	AVG. POP.	1966 QUITS	1966 QUIT RATE	DEPT. QUIT RATE
GS-110 Economist						6.9
ERS	478	492	485	41	8.5	
SCS	111	114	112	6	5.4	
Others	208	211	210	9	4.3	
GS-312 Clerk Stenographer						22.5
C&MS	386	416	401	109	27.2	
ARS	463	482	473	103	21.8	
ASCS	320	279	300	62	20.7	
FHA	286	316	301	51	16.9	
FS	471	425	448	93	20.8	
SCS	615	612	614	104	16.9	
Others	300	282	291	114	39.2	
GS-318 Secretary						12.8
C&MS	238	268	253	45	17.8	
ARS	561	570	566	45	8.0	
ASCS	384	374	379	63	16.6	
FHA	84	89	87	5	5.7	
FS	200	211	206	28	13.6	
SCS	160	251	206	14	6.8	
Others	708	671	690	106	15.4	
GS-322 Clerk Typist						20.4
C&MS	420	499	460	103	22.4	
ARS	672	623	648	167	25.8	
ASCS	270	233	252	83	32.9	
FHA	1933	2024	1978	182	9.2	
FS	1468	1402	1435	387	27.0	
SCS	283	300	292	54	18.5	
Others	460	476	468	155	33.1	

TABLE 19
VOLUNTARY QUITS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES IN CALENDAR YEAR 1966

OCCUPATIONAL SERIES AND AGENCIES	POP 1965	POP 1966	AVG POP	1966 QUITS	1966 QUIT RATE	DEPT QUIT RATE
GS-200 (Excl. 203) Personnel						10.2
C&MS	42	45	44	11	25.0	
ARS	60	62	61	11	18.0	
ASCS	50	52	51	5	9.8	
FHA	18	19	19	--	0.0	
FS	199	218	209	16	7.7	
SCS	60	60	60	4	6.7	
Others	54	64	59	4	6.8	
GS-341 Administrative Officer						5.2
ARS	179	197	188	8	4.3	
FS	445	479	462	34	7.4	
SCS	146	144	145	4	2.8	
Others	251	242	247	8	3.2	
GS-454 Range Conservationist						6.7
FS	195	218	207	12	5.8	
SCS	200	203	202	16	7.9	
Others	21	22	22	1	4.5	
GS-470 Soil Scientist						3.8
ARS	189	199	194	3	1.5	
FS	86	85	86	3	3.5	
SCS	1433	1344	1389	58	4.2	
GS-501 General Accounting Clerical & Administrative						12.2
ASCS	243	181	212	37	17.5	
FS	306	287	297	40	13.5	
SCS	121	120	121	7	5.8	
Others	192	167	180	15	8.3	

TABLE 19
VOLUNTARY QUITS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES IN CALENDAR YEAR 1966

OCCUPATIONAL SERIES AND AGENCIES	POP. 1965	POP. 1966	AVG. POP.	1966 QUITS	1966 QUIT RATE	DEPT. QUIT RATE
GS-510 Accounting						9.0
C&MS	73	69	71	5	7.0	
ASCS	157	121	139	17	12.2	
FS	151	157	154	5	3.2	
REA	90	81	86	2	2.3	
OIG	373	364	369	45	12.2	
Others	151	156	154	14	9.1	
GS-525 Accounting Technician						9.1
C&MS	11	10	11	2	18.2	
ARS	26	17	22	6	27.3	
ASCS	70	60	65	7	10.8	
FHA	67	68	68	3	4.4	
FS	38	44	41	3	7.3	
SCS	60	60	60	1	1.7	
Others	42	40	41	6	14.6	
GS-540 Voucher Examining						20.2
C&MS	35	24	30	8	26.7	
ASCS	159	127	143	23	16.1	
FS	117	148	133	23	17.3	
SCS	39	42	41	4	9.8	
Others	101	97	99	32	32.3	
GS-701 Veterinary						5.7
C&MS	1212	1203	1208	72	6.0	
ARS	912	871	892	48	5.4	
GS-802 Engineering Technician						7.4
ARS	175	188	182	13	7.1	
FS	769	872	821	57	6.9	
SCS	1440	1442	1441	111	7.7	

TABLE 19
VOLUNTARY QUITS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES IN CALENDAR YEAR 1966

OCCUPATIONAL SERIES AND AGENCIES	POP. 1965	POP. 1966	AVG. POP.	1966 QUITS	1966 QUIT RATE	DEPT. QUIT RATE
GS-810 Civil Engineering						7.5
FS	920	841	881	99	11.2	
SCS	981	994	988	45	4.6	
GS-817 Surveying Technician						10.0
FS	589	364	477	48	10.1	
SCS	185	184	185	19	10.3	
GS-890 Agricultural Engineering						5.1
ARS	243	247	245	9	3.7	
SCS	381	303	342	20	5.8	
GS-1081, 1082, 1083, 1084, 1087 Information Series						9.1
C&MS	45	51	48	4	8.3	
ARS	93	93	93	7	7.5	
ASCS	19	23	21	2	9.5	
FHA	10	9	10	2	20.0	
FS	126	133	130	9	6.9	
SCS	62	74	68	2	2.9	
INF	49	47	48	6	12.5	
Others	93	86	90	14	15.6	
GS-1146 Agricultural Marketing						2.7
C&MS	289	270	280	10	3.6	
ASCS	161	149	155	2	1.3	
Others	85	100	93	2	2.2	

TABLE 19
VOLUNTARY QUITS OF PERMANENT FULL-TIME CLASS ACT EMPLOYEES IN CALENDAR YEAR 1966

OCCUPATIONAL SERIES AND AGENCIES	POP. 1965	POP. 1966	AVG. POP.	1966 QUITS	1966 QUIT RATE	DEPT. QUIT RATE
GS-1320 Chemistry						6.3
C&MS	89	87	88	8	9.1	
ARS	996	996	996	59	5.9	
FS	44	47	46	3	6.5	
GS-1371 Cartographic Technician						15.2
ASCS	63	59	61	1	1.6	
FS	176	161	169	43	25.4	
SCS	98	128	113	9	8.0	
GS-1531 Statistical Clerical and Administrative						5.7
ERS	159	174	167	7	4.2	
SRS	332	340	336	18	5.4	
Others	299	283	291	20	6.9	

TABLE 20
TOTAL SEPARATIONS FROM AGENCIES OF PERMANENT FULL-TIME EMPLOYEES BY PAY PLANS
CALENDAR YEAR 1966

AGENCY	CLASS ACT							WAGE BOARD							OTHER PAY PLANS						
	AVG. EMP.	TOT. SEP. NO.	TOT. SEP. RATE	VOL. QUITS NO.	VOL. QUITS RATE	OTHER SEP. NO.	OTHER SEP. RATE	AVG. EMP.	TOT. SEP. NO.	TOT. SEP. RATE	VOL. QUITS NO.	VOL. QUITS RATE	OTHER SEP. NO.	OTHER SEP. RATE	AVG. EMP.	TOT. SEP. NO.	TOT. SEP. RATE	VOL. QUITS NO.	VOL. QUITS RATE	OTHER SEP. NO.	OTHER SEP. RATE
DEPT. TOT. 1/	76595	8468	11.1	6838	8.9	1630	2.1	4739	571	12.0	441	9.3	130	2.7	976	88	9.0	63	6.5	25	2.6
SECY	66	11	16.7	9	13.6	2	3.0	5	-	-	-	-	-	-	7	1	14.3	-	-	1	14.3
C&MS*	11070	1066	9.6	762	6.9	304	2.7	95	8	8.4	5	5.3	3	3.2	594	46	7.7	32	5.4	14	2.4
ARS	11829	1312	11.1	1095	9.3	217	1.8	2331	248	10.6	188	8.1	60	2.6	217	23	10.6	17	7.8	6	2.8
CEA	121	17	14.0	13	10.7	4	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ASCS	4883	792	16.2	620	12.7	172	3.5	62	9	14.5	8	12.9	1	1.6	18	1	5.6	1	5.6	-	-
FCS	87	12	13.8	9	10.3	3	3.4	-	-	-	--	-	-	-	3	-	-	-	-	-	-
FHA	6167	627	10.2	513	8.3	114	1.8	6	1	16.7	-	-	1	16.7	5	-	-	-	-	-	-
FCIC	654	87	13.3	70	10.7	17	2.6	1	-	-	-	-	-	-	-	-	-	-	-	-	-
FES	234	45	19.2	37	15.8	8	3.4	2	1	50.0	-	-	1	50.0	1	-	-	-	-	-	-
FAS*	690	81	11.7	59	8.6	22	3.2	1	-	-	-	-	-	-	4	-	-	-	-	-	-
FS	20223	2454	12.1	2120	10.5	334	1.7	1942	274	14.1	219	11.3	55	2.8	8	2	25.0	-	-	2	25.0
NAL	181	39	21.5	31	17.1	8	4.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
INF	214	41	19.2	37	17.3	4	1.9	7	2	28.6	1	14.3	1	14.3	-	-	-	-	-	-	-
OGC	335	49	14.6	38	11.3	11	3.3	-	-	-	-	-	-	-	1	-	-	-	-	-	-
REA	900	115	12.8	79	8.8	36	4.0	2	-	-	-	-	-	-	1	-	-	-	-	-	-
SCS	14967	1135	7.6	841	5.6	294	2.0	182	25	13.7	18	9.9	7	3.8	6	-	-	-	-	-	-
OMS	307	71	23.1	58	18.9	13	4.2	10	1	10.0	1	10.0	-	-	-	-	-	-	-	-	-
ERS	1005	142	14.1	133	13.2	9	0.9	-	-	-	-	-	-	-	17	3	17.6	3	17.6	-	-
SEG	11	1	9.1	1	9.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SRS	1133	135	11.9	113	10.0	22	1.9	2	-	-	-	-	-	-	96	12	12.5	10	10.4	2	2.1
RCDS	29	5	17.2	3	10.3	2	6.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSRS	92	11	12.0	7	7.6	4	4.3	-	-	-	-	-	-	-	1	-	-	-	-	-	-
OIG	805	128	15.9	109	13.5	19	2.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
IADS	70	21	30.0	15	21.4	6	8.6	-	-	-	-	-	-	-	1	-	-	-	-	-	-
IOS	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RPDES	26	4	15.4	3	11.5	1	3.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B&F	60	15	25.0	13	21.7	2	3.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OHE	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OMI	241	26	10.8	26	10.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OP	72	8	11.1	8	11.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
P&O	116	18	15.5	16	13.8	2	1.7	94	2	2.1	1	1.1	1	1.1	-	-	-	-	-	-	-

*Excludes MMA employees in C&MS

1/ Does not include transfers between agencies and therefore does not necessarily equal total of columns.

TABLE 21
TOTAL SEPARATIONS FROM AGENCIES OF PERMANENT FULL-TIME EMPLOYEES
ALL PAY PLANS
CALENDAR YEAR 1966

AGENCY	TOTAL						
	AVG.	TOTAL SEP.		VOL. QUITS		OTHER SEP.	
	EMP.	NO.	RATE	NO.	RATE	NO.	RATE
DEPT. TOTAL 1/	82313	9127	11.1	7342	8.9	1785	2.2
SECY	78	12	15.4	9	11.5	3	3.8
C&MS*	11759	1120	9.5	799	6.8	321	2.7
ARS	14376	1583	11.0	1300	9.0	283	2.0
CEA	121	17	14.0	13	10.7	4	3.3
ASCS	4962	802	16.2	629	12.7	173	3.5
FCS	90	12	13.3	9	10.0	3	3.3
FHA	6177	628	10.2	513	8.3	115	1.9
FCIC	655	87	13.3	70	10.7	17	2.6
FES	236	46	19.5	37	15.7	9	3.8
FAS	695	81	11.7	59	8.5	22	3.2
FS	22173	2730	12.3	2339	10.5	391	1.8
NAL	181	39	21.5	31	17.1	8	4.4
INF	221	43	19.5	38	17.2	5	2.3
OGC	336	49	14.6	38	11.3	11	3.3
REA	903	115	12.7	79	8.7	36	4.0
SCS	15155	1160	7.7	859	5.7	301	2.0
OMS	317	72	22.7	59	18.6	13	4.1
ERS	1022	145	14.2	136	13.3	9	0.9
SEG	11	1	9.1	1	9.1	--	--
SRS	1230	147	12.0	123	10.0	24	2.0
RCDS	29	5	17.2	3	10.3	2	6.9
CSRS	93	11	11.8	7	7.5	4	4.0
OIG	805	128	15.9	109	13.5	19	2.4
IADS	71	21	29.6	15	21.1	6	8.5
IOS	6	--	--	--	--	--	--
RPDES	26	4	15.4	3	11.5	1	3.8
B&F	60	15	25.0	13	21.7	2	3.3
OHE	7	--	--	--	--	--	--
OMI	241	26	10.8	26	10.8	--	--
OP	72	8	11.1	8	11.1	--	--
P&O	209	20	9.6	17	8.1	3	1.4

* Excludes MMA employees in C&MS.

1/ Does not include transfers between agencies and therefore does not necessarily equal total of columns.

TABLE 22
ACCESSIONS AND LOSSES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	AVERAGE POP. 1965-1966	ACCESSIONS 1/		LOSSES FROM SERVICE 1/			
			TOTAL	RATE	TOTAL SEP.	RATE	VOL. QUITS	RATE
PROFESSIONAL:	(Work requires completion of a specific course of Academic training or its full equivalent in experience for entry into the occupation.)							
020	URBAN PLANNING	1	-	-	-	-	-	-
	SOCIAL SCIENCE	970	112	11.5	90	9.3	72	7.4
101	Social Science	20	4	20.0	3	15.0	3	15.0
110	Economics	807	95	11.8	71	8.8	56	6.9
135	Foreign Affairs	112	1	0.9	5	4.5	2	1.8
150	Geography	5	3	60.0	-	-	-	-
170	History	6	2	33.3	-	-	-	-
180	Psychology	4	2	50.0	1	25.0	1	25.0
185	Social Work	1			1	100.0	1	100.0
187	Social Services	16	5	31.3	9	56.3	9	56.3
	BIOLOGY & AGRICULTURE	18366	1563	8.5	1027	5.6	677	3.7
401	Biology	91	12	13.2	9	9.9	8	8.8
403	Microbiology	152	20	13.2	11	7.2	9	5.9
405	Pharmacology	11	2	18.2	1	9.1	1	9.1
406	Agr. Extension	103	8	7.8	12	11.7	7	6.8
410 & 411	Zoology	5	1	20.0	-	-	-	-
412	Parasitology	31	1	3.2	3	9.7	3	9.7
413	Physiology	19	4	21.1	2	10.5	2	10.5
414	Entomology	553	48	8.7	30	5.4	22	4.0
415	Nematology	31	2	6.5	1	3.2	-	-
430	Botany	67	9	13.4	2	3.0	1	1.5
434	Plant Pathology	264	26	9.8	17	6.4	12	4.5
435	Plant Physiology	171	16	9.4	7	4.1	5	2.9
436	Plant Quarantine Insp.	969	52	5.4	46	4.7	27	2.8
437	Horticulture	68	3	4.4	7	10.3	2	2.9
440	Genetics	122	10	8.2	6	4.9	6	4.9

1/ Represents Accessions and Separations to the Department. Does not include transfers between agencies of the Department.

TABLE 22
ACCESSIONS AND LOSSES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	AVERAGE POP. 1965-1966	ACCESSIONS 1/		LOSSES FROM SERVICE 1/			
			TOTAL	RATE	TOTAL SEP.	RATE	VOL. QUITS	RATE
450	Gen. Agr. Adm.	214	2	0.9	17	7.9	5	2.3
451	Gen. Agriculture	27	3	11.1	5	18.5	4	14.8
454	Range Conservation	430	78	18.1	32	7.4	29	6.7
457	Soil Conservation	4582	294	6.4	239	5.2	132	2.9
460	Forestry	5312	333	6.3	265	5.0	172	3.2
470	Soil Science	1671	85	5.1	85	5.1	64	3.8
471	Agronomy	248	5	2.0	17	6.9	11	4.4
475	Farm Mgmt. Loan	3007	525	17.5	189	6.3	136	4.5
487	Husbandry	70	4	5.7	4	5.7	3	4.3
493 & 062	Home Economics	152	20	13.2	20	13.2	16	10.5
510	ACCOUNTING	973	137	14.1	120	12.3	88	9.0
	MEDICAL	32	7	21.9	5	15.6	4	12.5
602	Medical Officer	3	1	33.3	-	-	-	-
610	Nurse	29	6	20.7	5	17.2	4	13.8
701	VETERINARY	2099	199	9.5	177	8.4	120	5.7
480	GEN. FISH & WILD LIFE ADM.	4	-	-	-	-	-	-
482	FISHERY BIOLOGIST	13	6	46.2	-	-	-	-
486	WILDLIFE BIOLOGIST	75	8	10.7	3	4.0	3	4.0
	ENGINEERING	3238	262	8.1	289	8.9	228	7.0
801	Gen. Engineering	68	4	5.9	5	7.4	1	1.5
803	Safety Engineering	2	1	50.0	-	-	-	-
806	Materials Engineering	2	-	-	-	-	-	-
807 & 808	Architecture	158	34	21.5	17	10.8	16	10.1
810	Civil Engineering	1949	154	7.9	183	9.4	147	7.5

1/ Represents Accessions and Separations to the Department. Does not include transfers between agencies of the Department.

TABLE 22
ACCESSIONS AND LOSSES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	AVERAGE POP. 1965-1966	ACCESSIONS 1/		LOSSES FROM SERVICE 1/			
			TOTAL	RATE	TOTAL SEP.	RATE	VOL. QUITS	RATE
830	Mech. Engineering	78	11	14.1	9	11.5	7	9.0
850	Electrical Engineering	119	5	4.2	15	12.6	13	10.9
855	Electronic Engineering	121	1	0.8	9	7.4	6	5.0
880	Mining Engineering	22	-	-	-	-	-	-
881	Petr. Prod. & Nat. Gas. Engineering	2	-	-	-	-	-	-
890	Agricultural Engineering	608	46	7.6	42	6.9	31	5.1
893	Chemical Engineering	87	3	3.4	4	4.6	2	2.3
896	Industrial Engineering	25	3	12.0	5	20.0	5	20.0
905, 960 & 1222	ATTORNEY	185	24	13.0	14	7.6	7	3.8
935	HEARING EXAMINER	5	-	-	-	-	-	-
1221	PATENT ADV. & EXAMINER	5	-	-	-	-	-	-
	PHYSICAL SCIENCE	1484	126	8.5	108	7.3	90	6.1
1301	Gen. Phys. Science	50	-	-	1	2.0	1	2.0
1310	Physics	48	3	6.3	6	12.5	4	8.3
1315	Hydrology	6	6	100.0	4	66.7	3	50.0
1320	Chemistry	1132	104	9.2	78	6.9	71	6.3
1340	Meteorology	18	-	-	3	16.7	3	16.7
1350	Geology	167	13	7.8	8	4.8	7	4.2
1370	Cartography	65	-	-	8	12.3	1	1.5
1380	FOREST PROD. TECH.	121	11	9.1	6	5.0	4	3.3
1382	FOOD TECHNOLOGY	49	1	2.0	2	4.1	2	4.1
1384	TEXTILE TECH.	37	-	-	2	5.4	2	5.4

1/ Represents Accessions and Separations to the Department. Does not include transfers between agencies of the Department.

TABLE 22
ACCESSIONS AND LOSSES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	AVERAGE POP. 1965-1966	ACCESSIONS 1/		LOSSES FROM SERVICE 1/			
			TOTAL	RATE	TOTAL SEP.	RATE	VOL. QUITS	RATE
1410	LIBRARIAN	78	5	6.4	10	12.8	6	7.7
1530	STATISTICIAN	464	31	6.7	30	6.5	22	4.7
	MATHEMATICS	60	13	21.7	10	16.7	8	13.3
1510	Actuary	2	-	-	-	-	-	-
1520	Mathematics	21	8	38.1	5	23.8	4	19.0
1529	Math-Statistics	37	5	13.5	5	13.5	4	10.8
	EDUCATION	267	163	61.0	101	37.8	90	33.7
1710	Educ. & Voc. Training	263	163	62.0	100	38.0	89	33.8
1720	Educ. Research & Prog.	5	-	-	1	20.0	1	20.0
TOTAL	PROFESSIONAL	28521	2668	9.4	1994	7.0	1423	5.0

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TABLE 22
ACCESSIONS AND LOSSES OF PERMANENT FULL-TIME EMPLOYEES IN CLASS ACT POSITIONS BY SERIES CALENDAR YEAR 1966

SERIES CODE	SERIES TITLE	AVERAGE POP. 1965-1966	ACCESSIONS 1/		LOSSES FROM SERVICE 1/			
			TOTAL	RATE	TOTAL SEP.	RATE	VOL. QUITS	RATE
ADMINISTRATIVE-TECHNICAL & PROFESSIONAL SUPPORT: (Work involves technical, administrative, and similar "college caliber" duties.)								
015	OPERATIONS RESEARCH	1	-	-	1	100.0	-	-
018	SAFETY MANAGEMENT	10	-	-	1	10.0	-	-
080	SECURITY ADMINISTRATION	5	1	20.0	-	-	-	-
119	ECONOMICS ASSISTANT	26	12	46.2	3	11.5	2	7.7
188	RECREATION	1	-	-	-	-	-	-
	PERSONNEL	502	38	7.6	62	12.4	51	10.2
201	Personnel Admin.	281	21	7.5	32	11.4	24	8.5
212	Placement (Staffing)	87	10	11.5	12	13.8	11	12.6
221	Position Classification	68	2	2.9	10	14.7	8	11.8
223	Salary & Wage Adm.	1	-	-	-	-	-	-
230	Employee-Management Rel.	24	3	12.5	4	16.7	4	16.7
235	Employee Development	41	2	4.9	4	9.8	4	9.8
	COMPUTER & MGMT. SERV.	1909	177	9.3	190	10.0	145	7.6
330	Digital Comp. Sys. Adm.	25	-	-	2	8.0	1	4.0
332	Comp. Sys. Operator	95	21	22.1	25	26.3	24	25.3
334	Dig. Comp. Sys. Analysis	264	40	15.2	29	11.0	28	10.6
340	Program Mgmt.	8	-	-	2	25.0	-	-
341	Adm. Assistant & Officer	1042	91	8.7	80	7.7	54	5.2
342	Office Services	76	-	-	9	11.8	3	3.9
343 & 345	Management Analysis	195	16	8.2	21	10.8	18	9.2
344	Management Technician	175	6	3.4	17	9.7	12	6.9
362	EAM Mach. Prog. Planning	31	3	9.7	5	16.1	5	16.1

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			TOTAL	RATE	TOTAL SEP.	RATE	VOL. QUITS	RATE
	AGRICULTURAL TECHNICAL AND SUPPORT	15413	1959	12.7	1136	7.4	795	5.2
027	Crop. Insurance Adm.	166	2	1.2	10	6.0	3	1.8
404	Biol. Lab. Technician	1399	228	16.3	146	10.4	133	9.5
421	Plant Pest Control Tech.	257	10	3.9	14	5.4	10	3.9
455	Range Technician	56	6	10.7	4	7.1	4	7.1
456	Forest & Range Fire Control	1118	32	2.9	65	5.8	43	3.8
458	Soil Conservation Tech.	2771	126	4.5	122	4.4	75	2.7
462	Forest Technician	2178	160	7.3	133	6.1	104	4.8
499	Biol. Science Student Trainee	146	428	293.2	110	75.3	108	74.0
799	Vet. Student Trainee	40	36	90.0	63	157.5	63	157.5
1146	Agr. Marketing Specialist	527	26	4.9	28	5.3	14	2.7
1147	Agr. Mkt. Reporting	200	7	3.5	10	5.0	6	3.0
1850	Agr. Comm. Whse. Exam.	213	11	5.2	13	6.1	9	4.2
1863	Food Inspection	4087	681	16.7	203	5.0	101	2.5
1980	Agr. Comm. Grading	2230	192	8.6	204	9.1	114	5.1
1981	Agr. Comm. Aid	27	14	51.9	11	40.7	8	29.6
	INSPECTION	32	-	-	-	-	-	-
1901, 1903 & 1905	Insp. & Quality Control	32	-	-	-	-	-	-
	ACCTG. & FIN. SUPPORT	1115	34	3.0	169	15.2	127	11.4
501	Gen. Acctg., Cler. & Adm.	809	28	3.5	128	15.8	99	12.2
525	Acctg. Technician	307	6	2.0	41	13.4	28	9.1
	BUDGET & FIN. MGMT.	233	23	9.9	29	12.4	22	9.4
560	Budget Adm.	195	23	11.8	23	11.8	18	9.2
504	Budget & Acctg.	31	-	-	6	19.4	4	12.9
505	Financial Management	7	-	-	-	-	-	-

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SERIES CODE	SERIES TITLE	AVERAGE POP. 1965-1966	ACCESSIONS 1/		LOSSES FROM SERVICE 1/			
			TOTAL	RATE	TOTAL SEP.	RATE	VOL. QUITS	RATE
	MEDICAL SUPPORT	51	16	31.4	16	31.4	15	29.4
601	General Health Science	2	1	50.0	2	100.0	2	100.0
621	Nursing Assistant	21	9	42.9	7	33.3	7	33.3
644 & 645	Med. Technician	4	1	25.0	2	50.0	2	50.0
696	Food & Drug Inspection	19	3	15.8	2	10.5	1	5.3
699	Medical Aid	5	2	40.0	3	60.0	3	60.0
	ENGINEERING SUPPORT	3746	534	14.3	381	10.2	335	8.9
802	Engineering Technician	2459	256	10.4	214	8.7	182	7.4
809	Construction Insp.	212	21	9.9	15	7.1	10	4.7
817	Surveying Technician	669	102	15.2	71	10.6	67	10.0
818	Engineering Drafting	175	39	22.3	32	18.3	28	16.0
856	Electronic Technician	183	16	8.7	13	7.1	12	6.6
899	Engineering Stud. Trainee	49	100	204.1	36	73.5	36	73.5
954	LEGAL ASST.	3	-	-	-	-	-	-
	CLAIMS EXAMINING	233	14	6.0	33	14.2	23	9.9
963	Legal Instr. Exam.	165	10	6.1	25	15.2	17	10.3
990	General Claims Exam.	66	4	6.1	8	12.1	6	9.1
992	Loss & Damage Claims Exam.	2	-	-	-	-	-	-
	ART & INFORMATION	801	100	12.5	100	12.5	81	10.1
389	Radio Operating	1	-	-	-	-	-	-
393	Communication Spec.	3	1	33.3	-	-	-	-
1001	General Arts & Info.	38	16	42.1	10	26.3	10	26.3
1010	Exhibits Spec.	8	3	37.5	1	12.5	-	-
1020	Illustrating	40	2	5.0	7	17.5	6	15.0
1021	Office Drafting	8	1	12.5	2	25.0	1	12.5
1045	Translator	4	-	-	-	-	-	-

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			TOTAL	RATE	TOTAL SEP.	RATE	VOL. QUITS	RATE
1046	Clerk Translator	3	-	-	-	-	-	-
1060	Photography	166	15	9.0	18	10.8	15	9.0
1071	Motion Picture Prod.	24	5	20.8	4	16.7	3	12.5
1081	Public Info.	217	27	12.4	25	11.5	19	8.8
1082	Writing & Editing	129	18	14.0	14	10.9	12	9.3
1083 & 1412	Techn. Writing & Editing	34	5	14.7	7	20.6	6	17.6
1084	Visual Info.	45	4	8.9	5	11.1	4	8.9
1087	Editorial Assistant	82	3	3.7	7	8.5	5	6.1
	BUSINESS & INDUSTRY	343	15	4.4	29	8.5	20	5.8
1101	General Business & Ind.	4	-	-	-	-	-	-
1102	Contract & Proc.	254	7	2.8	20	7.9	16	6.3
1104	Property Disposal	1	-	-	-	-	-	-
1150	Industrial Specialist	12	-	-	1	8.3	-	-
1152	Production Control	1	-	-	-	-	-	-
1163	Insurance Examining	4	-	-	-	-	-	-
1165	Loan Specialist	31	1	3.2	1	3.2	-	-
1170	Realty	35	6	17.1	7	20.0	4	11.4
1171	Appraising & Assessing	1	-	-	-	-	-	-
2070	Property Utilization	3	1	33.3	-	-	-	-
	PHYSICAL SCIENCE SUPPORT	823	162	19.7	144	17.5	126	15.3
1311	Phys. Science Technician	410	54	13.2	63	15.4	60	14.6
1341	Meteorology Technician	3	1	33.3	3	100.0	3	100.0
1371	Cartographic Aid	356	86	24.2	69	19.4	54	15.2
1373	Cadastral Surveying	24	3	12.5	1	4.2	1	4.2
1399	Phys. Science Stud. Train.	28	18	64.3	8	28.6	8	28.6
1411 & 1421	LIBRARY & ARCHIVES ASST.	85	17	20.0	19	22.4	15	17.6
1521	MATH. TECHNICIAN	8	4	50.0	6	75.0	6	75.0

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SERIES CODE	SERIES TITLE	AVERAGE POP. 1965-1966	ACCESSIONS 1/		LOSSES FROM SERVICE 1/			
			TOTAL	RATE	TOTAL SEP.	RATE	VOL. QUITS	RATE
	EQUIPMENT & CONSTRUCTION	191	16	8.4	22	11.5	12	6.3
1601	Facility Management	8	-	-	-	-	-	-
1640	Construction & Maint.	114	10	8.8	15	13.2	9	7.9
1641	Bldg. & Grounds Maint.	5	1	20.0	1	20.0	-	-
1654	Printing Mgmt.	27	2	7.4	1	3.7	-	-
1670	Equipment Specialist	37	3	8.1	5	13.5	3	8.1
	EDUCATION	110	75	68.2	42	38.2	40	36.4
1701	General Educ. & Training	44	25	56.8	17	38.6	16	36.4
1712	Instruction	66	50	75.8	25	37.9	24	36.4
	INVESTIGATION	1012	90	8.9	78	7.7	50	4.9
1810	General Investigation	52	4	7.7	5	9.6	2	3.8
1811	Criminal Investigation	169	52	30.8	25	14.8	18	10.7
1825	Aviation Safety	2	1	50.0	-	-	-	-
1860	Public Health Inspection	56	-	-	3	5.4	1	1.8
1899 & 1895	Misc. Inspection	734	33	4.5	45	6.1	29	4.0
	SUPPLY	176	10	5.7	24	13.6	21	11.9
2001	General Supply	107	9	8.4	12	11.2	11	10.3
2003	Supply Prog. Management	1	-	-	-	-	-	-
2010	Inventory Management	1	-	-	1	100.0	1	100.0
2030 & 2032	Storage Management	6	-	-	-	-	-	-
2090	Publication Supply	62	1	1.6	11	17.7	9	14.5
	TRANSPORTATION	212	21	9.9	32	15.1	23	10.8
2101	General Transportation	5	-	-	3	60.0	2	40.0
2130	Traffic Management	41	4	9.8	3	7.3	-	-
2131	Freight Rate	70	3	4.3	14	20.0	9	12.9
2132	Travel	13	-	-	2	15.4	2	15.4
2134	Shipment	23	1	4.3	3	13.0	3	13.0

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			TOTAL	RATE	TOTAL SEP.	RATE	VOL. QUITS	RATE
2144	Cargo Scheduling	2	-	-	-	-	-	-
2151	Dispatching	2	-	-	-	-	-	-
2181	Aircraft Operation	58	13	22.4	7	12.1	7	12.1
TOTAL	ADM.-TECH. & PROF. SUPPORT	27035	3318	12.3	2517	9.3	1909	7.1

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			TOTAL	RATE	TOTAL SEP.	RATE	VOL. QUITS	RATE
CLERICAL AND OTHER OCCUPATIONS N.E.C.								
081, 085 & 090	FIRE PROT. & PREV. GUARD & GUIDE	74	22	29.7	20	27.0	19	25.7
203	PERSONNEL CLERICAL	490	11	2.2	78	15.9	68	13.9
309	CORRESPONDENCE CLERICAL	6	-	-	-	-	-	-
	OFFICE OCCUPATIONS	12156	3734	30.7	2623	21.6	2405	19.8
302	Messenger	43	36	83.7	20	46.5	19	44.2
304	Info. Receptionist	9	3	33.3	4	44.4	4	44.4
305	Mail & File	512	136	26.6	114	22.3	101	19.7
312	Clerk-Stenographer	2827	969	34.3	664	23.5	636	22.5
313	Steno. or Typ. Unit Supv.	6	-	-	-	-	-	-
316	Clk. Dict. Mach. Trscr.	148	38	25.7	36	24.3	34	23.0
318	Secretary	2385	153	6.4	365	15.3	306	12.8
322	Clerk-Typist	5532	2197	39.7	1229	22.2	1131	20.4
324	Cold Type Comp. Mach.	13	1	7.7	3	23.1	3	23.1
335	Comp. Aid & Technician	31	9	29.0	5	16.1	5	16.1
350	Office Mach. Oper.	73	26	35.6	15	20.5	13	17.8
351	Printing Clerical	6	-	-	-	-	-	-
354	Bookkeeping Mach. Oper.	8	2	25.0	-	-	-	-
355	Calc. Mach. Oper.	64	12	18.8	17	26.6	16	25.0
356	Card Punch Oper.	307	117	38.1	108	35.2	99	32.2
357	Coding	23	2	8.7	6	26.1	6	26.1
359	EAM Operator	100	18	18.0	19	19.0	17	17.0
382	Telephone Operator	28	6	21.4	7	25.0	5	17.9
385	Teletypist	44	8	18.2	11	25.0	10	22.7
392	General Communication	2	1	50.0	-	-	-	-

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			TOTAL	RATE	TOTAL SEP.	RATE	VOL. QUITS	RATE
	ACCOUNTING CLERICAL	962	96	10.0	216	22.5	177	18.4
520	Accts. Maint. Clerical	389	32	8.2	80	20.6	66	17.0
530	Cash Processing	32	8	25.0	10	31.3	8	25.0
540	Voucher Exam.	445	50	11.2	112	25.2	90	20.2
544	Time, Leave & Payroll	80	6	7.5	11	13.8	10	12.5
590	Time & Leave	17	-	-	3	17.6	3	17.6
	LEGAL CLERICAL & ADM.	15	1	6.7	2	13.3	1	6.7
965	Land Law Cler. & Adm.	6	1	16.7	1	16.7	1	16.7
986	Legal Clerical & Adm.	9	-	-	1	11.1	-	-
998	CLAIMS CLERICAL	45	-	-	6	13.3	5	11.1
1531	STATISTICAL CLERICAL	794	64	8.1	67	8.4	45	5.7
301	GENERAL CLERICAL & ADM.	6014	961	16.0	881	14.6	730	12.1
	SUPPLY CLERICAL	479	44	9.2	61	12.7	53	11.1
2020	Purchasing	258	21	8.1	37	14.3	34	13.2
2040 & 2050	Stock Control	221	23	10.4	24	10.9	19	8.6
2135	TRANSP. LOSS & DAM. CLER. EXAM.	6	-	-	3	50.0	3	50.0
TOTAL	CLERICAL & OTHER OCCUP. N.E.C.	21040	4933	23.4	3957	18.8	3506	16.7
	GRAND TOTAL	76595	10919	14.3	8468	11.1	6838	8.9

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VT 003 595
Opportunities in Apprenticeship and Skilled Trades in Iowa.

Iowa State Manpower Development Council, Des Moines
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Apr67 55p.

*APPRENTICESHIPS; ON THE JOB TRAINING; *QUALIFICATIONS; WAGES; *SKILLED OCCUPATIONS; INSTRUCTION; *INFORMATION SOURCES; *OCCUPATIONAL INFORMATION
IOWA

Individuals can become familiar through this report with apprenticeship programs registered with the Bureau of Apprenticeship and Training in Iowa. Thirty-seven apprenticable occupations are described in terms of: (1) usual duties and responsibilities of the apprentice during training and while under supervision of a journeyman, (2) qualifications of age, physical prerequisites, and general academic requirements, (3) occupational Aptitude Pattern minimum scores, (4) length of apprenticeship, (5) wage rate, and (6) contact sources for additional information. Some of the apprentice programs and skilled trades described are: (1) auto-body repair, (2) blacksmiths, (3) cement finishers, (4) decorators and interior designers, (5) dental technicians, (6) lathers, (7) opticians, (8) plasterers, (9) truck and bus mechanics, and (10) typographical compositor. (HC)

VT 003 595

ED042060

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OPPORTUNITIES

IN APPRENTICESHIP AND SKILLED TRADES

IN IOWA

APRIL 1967

IOWA MANPOWER DEVELOPMENT COUNCIL

Harold E. Hughes, Governor
John M. Ropes, Director

VT003595

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PREFACE

It is the purpose of Opportunities in Apprenticeship and Other Skilled Trades to acquaint individuals with programs in the apprenticeship and building trade field that are registered with the Bureau of Apprenticeship and Training within the State of Iowa. Individuals, who can provide additional information with respect to an apprenticeship program or skilled trade, have been included as contact sources. These individuals will provide additional information relevant to: (1) date, time, and place for making out an application, and (2) number of openings for the particular apprenticeship or skilled trade. As a further source, the employment office or the Bureau of Apprenticeship and Training should prove valuable as sources for additional information. The data for this resource book was obtained from: (1) Occupational Outlook Handbook; (2) Guide to the Use of the General Aptitude Test Battery; (3) Bureau of Apprenticeship and Training, U. S. Department of Labor, 413 Court Street, Des Moines, Iowa

Frank B. Robinson, Jr.
Manpower Specialist
Iowa Manpower Development
Council

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III. Apprentice programs and Skilled Trades

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Roofer 30
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Tile Setter, Terrazzo Worker and Marble Setter 34
Tool and Die Makers 35
Truck and Bus Mechanics 36
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FAIR EMPLOYMENT PRACTICES

Entry opportunities for minority persons into many of the apprentice programs listed herein have been virtually non-existent. It is hoped that those who utilize this information will encourage all individuals who have the interest and aptitude to take advantage of Opportunities in Apprentice and Skilled Trades in Iowa.

The author prevailed upon Commissioner Samuel C. Jackson of the Federal Equal Employment Opportunity Commission, administrators of Title Seven of the 1964 U. S. Civil Rights Act to make some comments relative to the utilization of this source book. Following Commissioner Jackson's comments are portions of Title Twenty-nine, which pertains to non-discrimination in apprenticeship and training and section seven of the Iowa Civil Rights Act which has reference to employment.

> "A major component of America's economy, the construction industry accounted for 11 per cent of our gross national product in 1965 (72 billion dollars). Construction activity has a widespread impact on other sectors of the economy, generating employment opportunities both directly and indirectly in many industries. For each million dollars of new construction, 60 workers are employed for one year in industries that produce, sell, and deliver the materials it requires.
>
> By 1975, more than one-half million jobs will be available to skilled workers--an increase of nearly 40 per cent over the number of such jobs in 1965--accounting for nearly half of all employees in the construction industry. At the same time, the number of unskilled jobs will decrease sharply. These optimistic forecasts for growth make it immeasurably important that young men--especially Negro, Indian, and Spanish-speaking youth who are conspicuously absent from most skilled crafts--seek and complete training for the skilled trades following high school graduation.
>
> Old, discriminatory barriers to entry into the crafts are falling. Today's apprentices will be tomorrow's skilled workmen. We must act now to assure that

opportunities are available on an equal basis to those who will help America continue to grow."

Samuel C. Jackson, Commissioner
Equal Employment Opportunity Commission
Washington, D. C.

Title Twenty-Nine (Section 30.3)

Each apprenticeship program registered with the Bureau of Apprenticeship and Training shall operate on the basis of the following standards:

(a) The selection of apprentices on the basis of qualifications alone, in accordance with objective standards which permit review after full and fair opportunity for application, unless the selection otherwise made would themselves demonstrate that there is equality of opportunity.

(b) The taking of whatever steps are necessary, in action upon application lists developed prior to this time, to remove the effects of previous practices under which discriminatory patterns of employment may have resulted.

(c) Non-discrimination in all places of apprenticeship and employment during apprenticeship after selections are made.

Iowa Civil Rights Act (Section 7)

It shall be an unfair or discriminatory practice for any:

(a) Person to refuse to hire, accept, register, classify or refer for employment, to discharge any employee or to otherwise discriminate in employment against any applicant for employment or any employee because of the race, creed, color, national origin, or religion of such applicant or employee.

(b) Labor organization or the employee, agents, or members therefor to refuse to admit to membership any applicant, to expel any member, or to otherwise discriminate against any applicant for membership or any member in the privileges, rights or benefits of such membership because of the race, creed, color, national origin, or religion of such applicant or member.

EXPLANATION OF CATEGORIES

Each apprenticeable occupation and skilled trade that appears in this informational source is described in terms of six categories: (1) usual duties; (2) qualifications; (3) occupational aptitude test pattern; (4) length of apprenticeship; (5) wage; (6) contact person for additional information. An explanation of these categories appears on this and the following page.

Usual Duties. Describes the general responsibilities and duties of the apprentice during training and while under supervision of a journeyman.

Qualifications. Where information was available for this category, age limits and physical prerequisites are included along with the general academic requirements for the apprentice program or skilled trade being discussed.

Occupational Aptitude Pattern (OAP). Occupational norms are shown in terms of a structure consisting of a series of occupational aptitude patterns. Each occupational aptitude pattern consists of the most significant aptitude and the critical scores on these aptitudes established as minimum scores for a group of occupations having a similar aptitude requirement. For example, the OAP for a sheet metal worker is, Spatial Aptitude 16 percentile; Finger Dexterity 31 percentile; Manual Dexterity 23 percentile. A percentile of 16 means that the individual whose test performance rates that score exceeds the performance of 16 percent of the group taking the test. It is suggested, however, that the reader be particularly cautious about generalizing upon the isolated OAP scores which serve as only one indication of an individuals potential abilities.

Length of apprenticeship. Apprenticeship programs range from six months to five years. Many apprentice programs include classroom instructions as well as on-the-job training with performance in the former serving as a good indication of an individual's abilities, aptitude and interest for the apprenticeship or skilled trade.

Wage. The wage represents the going national rate for a qualified journeyman or skilled tradesman. This amount fluctuates from state to state and occasionally within the state, dependent upon the rate established by the Joint Apprenticeship Committee. An apprentice generally receives between 50 and 65 percent of the wage rate for a journeyman to start and this percentage increases during the period of apprenticeship. During the final months of apprenticeship an individual can make up to 95 percent of the going journeyman's wage rate.

Contact Sources. Many of the individuals listed under this category have, or are now serving on individual or Joint Apprenticeship Committees. These individuals are experienced and knowledgeable about their particular trade and should be utilized as a resource for additional information.

APPRENTICE PROGRAMS AND SKILLED TRADES

A U T O - B O D Y R E P A I R M E N

USUAL DUTIES

The apprentice auto-body repairman will receive instruction and on-the-job training for: (1) removing dents in body and fenders; (2) filling bad dents and cracks with solder; (3) installing new fenders, hoods, panels, window glass and window-shields and welding breaks in the body of the car.

QUALIFICATIONS

The auto-body repairman and painter does not necessarily have to possess a high school diploma. A beginner should be in good physical condition and have a good eye-hand coordination. Courses in automobile body repair are offered by a relatively small number of high schools, but vocational schools and private trade schools provide valuable training, as do courses in automobile mechanics.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Percentile Cutting Score	
	ADULT	YOUTH
G (Intelligence)	50	
S (Spatial Aptitude)	50	
M (Manual Dexterity)	31	

HOURLY WAGE RATE

$ 3.60 - $ 3.80

LENGTH OF APPRENTICESHIP

Three to four years

CONTACT SOURCES - For additional information

Name	Address	City
Fox, Chase A.	109-15th St., N.E.	Cedar Rapids, Iowa
Freund, Maynard	411 Grand Avenue	Des Moines, Iowa

CONTACT SOURCES (Continued)

Name	Address	City
Harlan, E. W.	1914 E. Euclid	Des Moines, Iowa
Havens, Kenneth	320 Sixth Avenue S.	Clinton, Iowa
Helms, Tom	810 W.River Drive	Davenport, Iowa
Johnson, L. E.	611 N.2nd Street	Clinton, Iowa
Kees, E.R.	1440 Locust	Des Moines, Iowa
Knopp, Jack P.	K & P Chevrolet-Olds Company	Monticello, Iowa
McPherson, C. C.	Box 1071-Highway 20 East	Fort Dodge, Iowa
Mirrielers, D. F.	3633 Falls Ave.- Box 142	Waterloo, Iowa
Storsch, L. G.	3423 Brady Street	Davenport, Iowa
Stringer, Kenneth	324 W. 4th Street	Davenport, Iowa
Watkins, Morris	100 4th Avenue S.	Clinton, Iowa
Zabriski, George	Zabriski's Garage	Fayette, Iowa

A U T O M O B I L E M E C H A N I C S

USUAL DUTIES

The apprentice auto-mechanic will, under supervision, perform the following tasks: (1) keep automobiles, small trucks, and buses in good running order; (2) do preventative maintenance, diagnose breakdowns and replace worn out or broken parts; (3) overhauls engines, transmissions, clutches, rear ends and other assemblies.

QUALIFICATIONS

Age: 18 - 35

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. The automobile mechanic should have an understanding of automobile construction and operation, like mechanical work and have mechanical aptitude-a driver's license is generally required. This applicant should also have a background in automobile repair, gained from working as a gasoline service station attendant, training in the Armed Forces, or experience repairing automobiles as a hobby is valuable. Courses in automobile repair offered by many high schools, vocational schools and private trade schools are also valuable.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score	
	ADULT	YOUTH
G (Intelligence)	40	40
S (Spatial Aptitude)	23	22
F (Finger Dexterity)	11	11

HOURLY WAGE RATE

$3.40 - $3.60

LENGTH OF APPRENTICESHIP

Three to four years

CONTACT SOURCES - For additional information

Name	Address	City
Fox, Chase A.	109-15th St., N.E.	Cedar Rapids, Iowa
Freund, Maynard	411 Grand Avenue	Des Moines, Iowa

CONTACT SOURCES (Continued)

Name	Address	City
Harlan, E. W.	1914 E. Euclid	Des Moines, Iowa
Havens, Kenneth	320 Sixth Avenue S.	Clinton, Iowa
Helms, Tom	810 W. River Drive	Davenport, Iowa
Johnson, L. E.	611 N.2nd Street	Clinton, Iowa
Kees, E. R.	1440 Locust	Des Moines, Iowa
Knopp, Jack P.	K & P Chevrolet-Olds Company	Monticello, Iowa
McPherson, C. C.	Box 1071-Highway 20, East	Fort Dodge, Iowa
Mirrielers, D. F.	3633 Falls Ave.-Box 142	Waterloo, Iowa
Storsch, L. G.	3423 Brady Street	Davenport, Iowa
Stringer, Kenneth	324 W. 4th Street	Davenport, Iowa
Watkins, Morris	100 4th Avenue S.	Clinton, Iowa
Zabriski, George	Zabriski's Garage	Fayette, Iowa

B L A C K S M I T H S

USUAL DUTIES

The apprenticeship blacksmith will work under close supervision of a journeyman blacksmith for the purpose of: (1) making and repairing many different kinds of metal articles and parts, such as forging tongs and other tools, machine frames, automobile parts, and other industrial and agricultural equipment; (2) sharpening hand and machine tools, such as chisels, drills and picks; (3) shaping and joining together glowing hot metal which has been heated in a special type of furnace called a forge.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Vocational school or high school courses in metal working, blueprint reading and mathematics are helpful.

HOURLY WAGE RATE

$2.50 - $3.00

LENGTH OF APPRENTICESHIP

Three to four years

CONTACT SOURCES - For additional information

Name	Address	City
Kuhl, M. B.	Clinton Corn Processing Company	Clinton, Iowa

B O I L E R M A K E R

USUAL DUTIES

The apprentice boilermaker will work under close supervision of a journeyman boilermaker for the purpose of specializing in the repairing, lubricating and assembling of boilers, tanks, vats, pressure vessels, heat exchanges and similar vessels made of metal plate, and repairing and erecting boilers and vessels. The layout men are usually employed in manufacturing new boilers and heavy tanks.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Other qualifications are training in mathematics, blueprint reading and shopwork, mechanical aptitude and manual dexterity. A physical examination must be passed.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G(Intelligence)	93	
N(Numerical Aptitude)	84	
S(Spatial Aptitude)	84	

HOURLY WAGE RATE

$4.70 - $4.90

CONTACT SOURCES - For additional information

Name	Address	City
Bloom, G. R.	1628 W. 4th St.	Davenport, Iowa
Kuhl, M. B.	Clinton Corn Processing Co.	Clinton, Iowa
Myers, Arlo A.	1106 Washington St.	Burlington, Iowa
Reimer, Edward G.	P. O. Box 4255	Minneapolis, Minn.

B R I C K L A Y E R S

USUAL DUTIES

The apprentice bricklayer will work under close supervision of a journeyman bricklayer for the purpose of: (1) constructing walls, partitions, fireplaces, chimneys and other structures of brick; (2) precasting panels made of brick, cament, tile, stone or marble; (3) installing brick lining for industrial kilns and furnaces.

QUALIFICATIONS

Age: 18 - 24

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score	
	ADULT	YOUTH
G (Intelligence)	31	27
N (Numerical Ability)	40	40
M (Manual Dexterity)	11	11

HOURLY WAGE RATE

$4.70 - $4.90

LENGTH OF APPRENTICESHIP

Four Years

CONTACT SOURCES - For additional information

Name	Address	City
Alter, Ralph	1808 Grube Street	Burlington, Iowa
Bane, Orran N., Jr.	472 Loma	Waterloo, Iowa
Baker, Gerald E.	2906 "C" Ave.NE	Cedar Rapids, Iowa
Bouher, Lester	2430-7th	Sioux City, Iowa
Farrell, Robert	1118 Mulberry	Des Moines, Iowa
Huff, Kenneth	1112 S.19th	Fort Dodge, Iowa
Netcott, Ralph	108 High Street	Ames, Iowa
Wells, Thomas H.	RFD 6	Ottumwa, Iowa
Wendland, Leo	520 - 24th	Rock Island, Illinois

C A R P E N T E R S

USUAL DUTIES

The apprentice carpenter will work under close supervision of a journeyman carpenter for the purpose of: (1) erecting the wood framework in building, including subflooring, sheathing, partitions, floor joists, studding and rafters; (2) installing molding, wood paneling, cabinets, window sash, door frames, doors and hardware, as well as build stairs and lay floors; (3) installing heavy timbers used in constructing docks, railroad trestles, and similar installations; (4) building forms to enclose concrete until it sets; (5) erecting scaffolding and temporary buildings on the construction site; (6) installing linoleum, asphalt, tile and similar soft-floor coverings; (7) sawing, fitting and assembling plywood, wallboard and other materials.

QUALIFICATIONS

Age: 17 - 25

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. The applicant must also be in good physical condition, have a good sense of balance and not have fear of working on structures high off the ground. Manual dexterity and the ability to solve arithmetic problems quickly and accurately are also important aptitudes.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score	
	ADULT	YOUTH
N (Numerical ability)	16	15
S (Spatial aptitude)	31	30
M (Manual Dexterity)	16	16

HOURLY WAGE RATE

$4.35 - $4.55

LENGTH OF APPRENTICESHIP

Four years

CARPENTERS (continued)

CONTACT SOURCES - For additional information

Name	Address	City
Boe, Anthony	321 5th Street	Sioux City, Iowa
Cochran, Burdette	908 8th Street	Des Moines, Iowa
Edwards, Earl E.	1266 Wilson Ave. SW	Cedar Rapids, Iowa
Flynn, Ambrose	218 10th NW	Mason City, Iowa
Jones, G. L.	110½ South Court St.	Ottumwa, Iowa
Kaiser, Vincent J.	576 Central Ave.	Dubuque, Iowa
McCracken, K. J.	1827 Boone Street	Boone, Iowa
Machande, Art	613 S. Second St.	Clinton, Iowa
Olson, Erling	1815 Des Moines	Burlington, Iowa
Schuler, Ted	243 Duryea Street	Waterloo, Iowa
Thompson, Kenneth	P. O. Box 373	Ames, Iowa
Tracey, Ray	1230 S. 28th Street	Fort Dodge, Iowa
Wendland, Leo	520 24th Street	Rock Island, Illinois
Winans, M. A.	303 S. 21st Street	Centerville, Iowa

C E M E N T F I N I S H E R S

USUAL DUTIES

The apprentice cement finisher will work under close supervision of a journeyman cement finisher for the purpose of: (1) finishing the exposed concrete surfaces on many types of construction projects-patios, floors, sidewalks, dams, highways and airport runways; (2) pouring of concrete mixture and leveling the surface with a "straight-edge"; (3) working with a "float" and other hand tools to fill depressions and remove high spots and drawing cement to the surface of the mixture in preparation for final finishing operations.

QUALIFICATIONS

Age: 18 - 25

Education: A high school education is not required, but education above grade school level, including mathematics, is needed to understand the classroom instruction. The applicant must be in good physical condition and have manual dexterity, and receive a satisfactory rating by the Joint Apprenticeship Committee.

HOURLY WAGE RATE

$4.25 - $4.45

LENGTH OF APPRENTICESHIP

Three years

CONTACT SOURCES - For additional information

Name	Address	City
Erickson, Richard	1125 Upton	Waterloo, Iowa
Farrell, Robert E.	1118 Mulberry	Des Moines, Iowa

DECORATORS AND INTERIOR DESIGNERS

USUAL DUTIES

The apprentice decorators and interior designers will work under close supervision of a journeyman decorator and interior designer for the purpose of: (1) enhancing the attractiveness of homes and other buildings; (2) planning the functional arrangement of interior space and coordinating the selection of furniture, draperies, floor coverings and interior accessories; (3) working on the interiors of residential or commercial structures, including ships and aircrafts; (4) designing stage sets used for motion pictures and television. Interior designers are more concerned than decorators with space planning and other interior design and they often work for clients on large design projects, such as the interior of an entire office building.

QUALIFICATIONS

Education: The minimum educational requirement is completion of either a two or three year course at a recognized art school, or institute specializing in interior decorating and design, or one may pursue a four year college course leading to a Bachelor of Fine Arts Degree with a major in interior design and decoration. Only professionally trained people are accepted for beginning jobs and in most instances, from one to three years of on-the-job training is required before a trainee is considered eligible for advancement to the job of decorator.

HOURLY WAGE RATE

$2.40 - $3.37

LENGTH OF APPRENTICESHIP

One to three years

CONTACT SOURCES - For additional information

Name	Address	
Blankenship, Chick	917 - 9th Street	Sioux City, Iowa
Clifford, Lyle	5110 "J" Street, S.W.	Cedar Rapids, Iowa
Hayden, Floyd	6404 School Street	Des Moines, Iowa
Newton, Clifford J.	2837 E. 4th St.	Waterloo, Iowa

D E N T A L T E C H N I C I A N S

USUAL DUTIES

The apprentice dental technician will work under close supervision of a journeyman dental technician for the purpose of: (1) making artificial dentures, crowns, bridges and other dental and orthodontal appliances; (2) forming models in dental stone from impressions of patient's mouths taken by dentists; (3) making metal castings for dentures, polishing and finishing dentures; (4) constructing metal or porcelain crowns or inlays for partially destroyed teeth, and making appliances to correct such abnormalities as cleft palates.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a staisfactory rating by the Joint Apprenticeship Committee.

HOURLY WAGE RATE

$2.00 - $3.75

LENGTH OF APPRENTICESHIP

Three to four years

CONTACT SOURCES - For additional information

Name	Address	City
Jackson, Albert P.	514 Shops Building	Des Moines, Iowa

E L E C T R I C I A N S
(CONSTRUCTION)

USUAL DUTIES

The apprentice electrician will work under close supervision of a journeyman electrician for the purpose of: (1) laying out, assembling, installing and testing electrical fixtures, apparatus, and wiring used in electrical systems on construction projects. These systems are used to provide heat, light, power, air-conditioning, and refrigeration in residences, office buildings, factories, hospitals, schools, etc; (2) installing and connecting electrical machinery, equipment, controls and signal and communications systems.

QUALIFICATIONS

Age: 18 - 24

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Courses in mathematics and physics are desirable and applicants are usually required to take tests to determine their aptitude for the trade.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score	
	ADULT	YOUTH
N (Numerical Ability)	31	
S (Spatial Ability)	100	
F (Finger Dexterity)	85	

HOURLY WAGE RATE

$4.65 - $4.85

LENGTH OF APPRENTICESHIP

Four years with 144 hours of related classroom instruction each year.

CONTACT SOURCES - For additional information

Name	Address	City
Bachtell, Tom	P. O. Box 283	Burlington, Iowa

ELECTRICIANS (Continued)

Name	Address	City
Dewald, Glen	317 Sixth St. SW	Cedar Rapids, Iowa
Hazer, Greg	1638 Central Ave.	Dubuque, Iowa
McGinnis, Thomas P.	715 Pacific St.	Sioux City, Iowa
Moen, Al	% Dewey Electric	Ventura, Iowa
Reeves, Rodney	2615 Ingersoll	Des Moines, Iowa
Trave, John	935 S. E. 14th St.	Des Moines, Iowa
Workman, Ralph	107 North Moore St.	Ottumwa, Iowa
Yeager, Richard	223 - 18th Street	Rock Island, Illinois

E L E C T R O N I C T E C H N I C I A N (E T C.)

USUAL DUTIES

The apprentice electronic technician will work under close supervision of a journeyman electronic technician for the purpose of: (1) making radios, radar, sonar, telemetering, television and telephones; (2) making industrial and medical measuring, recording, indicating and controlling devices. One might also design navigational equipment, missile and spacecraft guidance and control instruments, electronic computers, and many other types of equipment using vacuum tubes and semi-conductor circuits.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Applicants should have a sound background in mathematics and science. The majority of programs offered by schools specializing in post-high school technology are two year programs leading to an associate of arts or science degree.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G(Intelligence)	69	
S(Spatial Aptitude)	50	
P(Form Perception)	50	

HOURLY WAGE RATE

$3.80 - $4.40

CONTACT SOURCES - For additional information

Name	Address	City
Pohl, Clark E.	Don's Radios & T. V.	Perry, Iowa

F L O O R C O V E R E R S

USUAL DUTIES

The apprentice floor coverer will work under close supervision of a journeyman floor coverer for the purpose of: (1) installing, replacing, and repairing resilient tile, linoleum and other sheet goods, and carpeting on floors in residential, commercial, and industrial buildings; (2) working on wood, concrete, metal and stone floors, both large and small; (3) inspecting to determine whether the floor is ready for the treatment it is going to receive.

QUALIFICATIONS

Age: 17 - 30

Education: High school education is preferred but not required, and the individual must receive a satisfactory rating by the Joint Apprenticeship Committee. Manual abilities are necessary, along with a neat appearance and pleasant business like manner, because the work is performed on the customer's premises.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G(Intelligence)	40	
N(Numerical Ability)	50	
M(Manual Dexterity)	11	

HOURLY WAGE RATE

$3.50 - $4.50

LENGTH OF APPRENTICESHIP - Three to four years

CONTACT SOURCES - For additional information

Name	Address	City
Olson, Erling	1815 Des Moines	Burlington, Iowa

G L A Z I E R S

USUAL DUTIES

The apprentice glazier will work under close supervision of a journeyman glazier for the purpose of: (1) engaging in construction work, cutting, fitting and installing plate glass, ordinary window glass, mirrors, and special items such as leaded glass panels; (2) cutting glass to size or using pre-cut glass.

QUALIFICATIONS

Age: 18

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G(Intelligence)	40	
S(Spatial Aptitude)	60	
P(Form Perception)	31	

HOURLY WAGE RATE

$4.10 - $4.30

LENGTH OF APPRENTICESHIP - Three years

CONTACT SOURCES - For additonal information

Name	Address	City
Holbach, Lewis	243 Duryea Street	Waterloo, Iowa
Miller, W. A.	c/oPittsburgh Plate Glass Company	

INDUSTRIAL FACTORY MACHINE REPAIRMEN - MAINTENANCE MECHANICS

USUAL DUTIES

The apprentice industrial factory machine repairmen and maintenance mechanics will work under close supervision of a journeyman industrial factory machine repairman and maintenance mechanic for the purpose of: (1) keeping machinery and equipment in good operating condition; (2) determining the cause of trouble when breakdowns occur and making necessary repairs; (3) completely or partly disassembling a machine in order to repair and replace defective parts; (4) making necessary mechanical adjustments after the machine is reassembled in order to insure its proper operation; (5) regularly inspecting equipment, oiling and greasing machines and cleaning and repairing parts to prevent trouble which could cause breakdown later.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G(Intelligence)	16	16
N(Numerical Aptitude)	11	11
M(Manual Dexterity)	23	22

HOURLY WAGE RATE

$3.00 - $3.20

LENGTH OF APPRENTICESHIP - Four years

CONTACT SOURCES - For additional information

Name	Address	City
Ayer, F. M.	Keokuk Public Service Co.	Keokuk, Iowa
Bloom, J. R.	1628 W. 4th Street	Davenport, Iowa
Kohl, M. B.	Clinton Corn Processing	Clinton, Iowa

L A T H E R S

USUAL DUTIES

The apprentice lather will work under close supervision of a journeyman lather for the purpose of: Installing the supporting backings on ceilings or walls on which plaster or other materials are applied. These supports are usually metal or large pieces of perforated or unperforated gypsum lath.

QUALIFICATIONS

Age: 16 - 25.

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Applicants must have manual and finger dexterity as well as other qualifications required. Apprentices generally must pass examinations that are given at the end of each six month period.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score	
	ADULT	YOUTH
G (Intelligence)	11	11
F (Finger Dexterity)	11	11
M (Manual Dexterity)	16	16

HOURLY WAGE RATE

$4.50 - $4.70

LENGTH OF APPRENTICESHIP

Two years

CONTACT SOURCES - For additional information

Name	Address	City
Farrell, Robert E.	1118 Mulberry	Des Moines, Iowa

M A C H I N I S T S (F O U N D R Y)

USUAL DUTIES

The apprentice foundry machinist learns to: (1)make castings of iron and steel; (2) produce gray and ductile iron castings in ferrous foundries. Those apprentices who work in a non-ferrous foundry learn to make brass, bronze, aluminum, magnesium and zinc castings.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. The applicant should be mechanically inclined and temperamentally suited to do highly accurate work that requires both concentration and physical effort. Courses in mathematics and physics and some knowledge of electronics and hydraulics may be helpful both during and after apprenticeship training.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G (Intelligence)	50	
S (Spatial Aptitude)	50	
M (Manual Dexterity)	31	

HOURLY WAGE RATE

$ 3.25 - $ 3.45

LENGTH OF APPRENTICESHIP

Four years

CONTACT SOURCES - For additional information

Name	Address	City
Bunn, George W.	John Deere Waterloo Tractor Works	Waterloo, Iowa

M E C H A N I C A L A N D S T R U C T U R A L

D R A F T S M E N

USUAL DUTIES

The apprentice mechanical and structural draftsman will work under close supervision of a journeyman mechanical and structural draftsman for the purpose of: (1) making detailed plans, giving exact dimensions and specifications for objects such as space capsule, electric iron, television sets, radios, etc; (2) translating the ideas, rough sketches, specifications and calculations of engineers, architects and designers into working plans which are used by skilled craftsmen in making a product; (3) calculating the strength, reliability and cost of materials; (4) describing in their drawings and specifications exactly what materials and processes workers are to use on a particular job.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. The applicant should have had courses in mathematics and physical science, as well as mechanical drawing and drafting. Those with only high school drafting start out as tracers; those with post-high school technical training can often qualify as junior draftsmen. A draftsman must have the ability to visualize objects in three dimensions and do freeehand drawing.

HOURLY WAGE RATE

$3.25 - $3.50

LENGTH OF APPRENTICESHIP - Three to four years

CONTACT SOURCES - For additional information

Name	Address	City
Hartl, L. J.	Stanley Building	Muscatine, Iowa
Mekemson, G. E.	301 Avenue "H"	Fort Madison, Iowa
Miller, Roy	525 East 18th Street	Cedar Falls, Iowa

M E T A L L U R G I S T
IN IRON AND STEEL INDUSTRY

USUAL DUTIES

The apprentice metallurgist will work under close supervision of a journeyman metallurgist for the purpose of: (1) designing constructing and operating of mill machinery and material handling equipment; (2) working in operating units where their jobs include determining of roll size and cutout, rolling pressures and operating speeds; (3) testing and controlling the quality of the steel during its manufacture; (4) developing and improving the industry's products and processess through research.

QUALIFICATIONS

Age: 18

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee.

HOURLY WAGE RATE

$3.40 - $3.60

CONTACT SOURCES - For additional information

Name	Address	City
Farrell, Robert	1118 Mulberry	Des Moines, Iowa
Miller, Duane L.	1002 Commercial St.	Waterloo, Iowa
Peterson, Clarence	4131 Adams St.	Sioux City, Iowa
Personnel Director	Eagle Iron Works 129 E. Holcomb	Des Moines, Iowa
Reed, William	1501 E. Aurora	Des Moines, Iowa

M I L L W R I G H T S

USUAL DUTIES

The apprentice millwright will work under close supervision of a journeyman millwright for the purpose of: (1) moving and installing heavy industrial machinery and other equipment; (2) taking apart and re-assembling equipment in order to move and/or install it; (3) repairing and maintaining industrial machinery and other equipment, such as conveyors, cranes, hoists, scaffolds, pumps and blowers, in addition to moving and installing equipment.

QUALIFICATIONS

Age: 18 - 26

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. High school courses in science, mathematics, mechanical drawing, and machine shop practive are useful and mechanical aptitude is important, along with strength and agility.

OCCUPATIONAL APTITUDE PATTER (OAP)

OAP	Cutting Percentile Score	
	ADULT	YOUTH
G(Intelligence)	16	16
N(Numerical Ability)	11	12
M(Manual Dexterity)	23	22

HOURLY WAGE RATE

$3.00 -$3.20

LENGTH OF APPRENTICESHIP - Four years

CONTACT SOURCES - For additional information

Name	Address	City
Boland, C. M.	112 Wilson Ave. SW	Cedar Rapids, Iowa
Kuhl, M. B.	Clinton Corn Processing Company	Clinton, Iowa
Rickabaugh, Paul E.	P. O. Box 750	Davenport, Iowa
Runneals, Larry G.	200 South 12th Ave.	Marshalltown, Iowa
Wendland, Leo	520 - 24th St.	Rock Island, Illinois

M O D E L O R I N S T R U M E N T M A K E R

USUAL DUTIES

The apprentice model or instrument maker will work under close supervision of a journeyman model or instrument maker for the purpose of: (1) working closely with engineers and scientists in translating designs and ideas into experimental models, special laboratory equipment and custom instruments; (2) modifying existing instruments for special purposes; (3) constructing experimental devices for regulating heat, measuring distances, recording earthquakes, and controlling industrial processes; (4) specializing in installing electric and electronic instrument components; (5) lubricating metal parts by operating machine tools such as lathes and milling machines by using chisels.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. The applicant should have further technical schooling in electricity and electronics, courses in algebra, geometry, trigonometry, science and machine shop work; have a strong interest in mechanical subjects, initiative and resourcefulness, ability to develop original solutions, and considerable pride in creative work.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G(Intelligence)	69	
S(Spatial Aptitude)	50	
P(Form Perception)	50	

HOURLY WAGE RATE

$3.40 - $3.60

LENGTH OF APPRENTICESHIP - Four or Five years

CONTACT SOURCES - For additional information

Name	Address	City
Doris, S. R.	2734 Hickory Grove Rd.	Davenport, Iowa
Kuhl, M. B.	Clinton Corn Processing Company	Clinton, Iowa

M O L D E R

USUAL DUTIES

The apprentice molder will work under close supervision of a journeyman molder for the purpose of: (1) preparing molds made of specially prepared sand, which contains a hollow space in the shape of the item to be made; (2) making the mold by packing and ramming prepared sand around a pattern-a model of the object to be duplicated-in a molding box called a flash; (3) pouring molten metal into the cavity, which when solidified, forms the casting.

QUALIFICATIONS

Education: An eighth grade education usually is the minimum requirement for apprenticeship. Physical standards are fairly high; good vision is necessary and a high degree of manual dexterity is needed.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G (Intelligence)	50	
S (Spatial Aptitude)	50	
F (Finger Dexterity)	31	

HOURLY WAGE RATE

$2.70 - $2.90

LENGTH OF APPRENTICESHIP

Four Years

CONTACT SOURCES - For additional information

Name	Address	City
Bloom, J. R.	1628 West Fourth St.	Davenport, Iowa

O P T I C I A N S

USUAL DUTIES

The apprentice optician will work under close supervision of a journeyman optician for the purpose of: (1) making and fitting eyeglasses; (2) grinding and polishing the lenses to meet the specifications of the prescription and assembling in frames; (3) fitting and adjusting glasses to the customer's requirements; (4) fitting contact lenses.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Applicant should have a knowledge of physics, algebra, geometry and mechanical drawing.

HOURLY WAGE RATE

$2.25 - $4.00

LENGTH OF APPRENTICESHIP - Four to Five years

CONTACT SOURCES - For additional information

Name	Address	City
Hunter, John	322 Third Ave., S.E.	Cedar Rapids, Iowa

P A I N T E R S A N D P A P E R H A N G E R S

USUAL DUTIES

The apprentice painter will work under close supervision of a journeyman painter for preparing the surfaces of buildings and other structures and then applying the necessary finish of either paint, varnish, enamel or lacquer.

The apprentice paperhanger will work under supervision in covering room interiors with paper, fabric, vinyls or other materials.

QUALIFICATIONS

Age: 16 - 25

Education: A high school education is not essential but an applicant must have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Applicant should have manual dexterity and a discerning color sense and should not be allergic to paint fumes or to the other materials used in these trades- such as varnish, turpentine and lacquer.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score	
	ADULT	YOUTH
G (Intelligence)	50	47
V (Verbal Ability)	50	49
S (Spatial Aptitude)	31	30

HOURLY WAGE RATE

$ 4.10 - $ 4.30

LENGTH OF APPRENTICESHIP

Three years

CONTACT SOURCES - For Additional information

Name	Address	City
Blankenship, Chick	917-19th Street	Sioux City, Iowa
Clifford, Lyle	5110 "J" Street SW	Cedar Rapids, Iowa
Hayden, Floyd	6404 School Street	Des Moines, Iowa
Newton, Clifford J.	2837 E. 4th Street	Waterloo, Iowa

P A T T E R N M A K E R I N F O U N D R Y

USUAL DUTIES

The apprentice pattern maker will work under close supervision of a journeyman foundry pattern maker for the purpose of: building patterns used in making molds in which foundry castings are formed. He will also work from blueprints prepared by the engineering department.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. The applicant must have a high degree of manual dexterity, the ability to visualize objects in three dimensions, and good trade school courses in patternmaking provide useful preparation for the prospective apprentice.

HOURLY WAGE RATE

$3.25 - $4.00

LENGTH OF APPRENTICESHIP

Five years

CONTACT SOURCES - For additional information

Name	Address	City
Bunn, George W.	John Deere Tractor Works	Waterloo, Iowa
Kuhl, M. B.	Clinton Corn Processing Co.	Clinton, Iowa
Shrewsberry, George S.	32nd & Jackson	Keokuk, Iowa

P L A S T E R E R S

USUAL DUTIES

The apprentice plasterer will work under close supervision of a journeyman plasterer for the purpose of: (1) applying plaster to interior walls and ceilings to form fire-resistant and relatively soundproof surfaces, which then may be decorated; (2) applying stucco to exterior walls and form and cast ornamental designs in plaster.

QUALIFICATIONS

Age: 18-25
Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee.

HOURLY WAGE RATE

$4.60 - $4.80

LENGTH OF APPRENTICESHIP

Three to four years

CONTACT SOURCES - For additional information

Name	Address	City
Netcott, Ralph	108 High Street	Ames, Iowa
Wells, Thomas H.	RFD #6	Ottumwa, Iowa

P L U M B E R S A N D P I P E F I T T E R S

USUAL DUTIES

The apprentice plumber and pipefitter will work under close supervision of a journeyman plumber and pipefitter for the purpose of: (1) installing pipe systems that carry water, steam, air and other liquids or gases needed for sanitation, industrial production, or other uses; (2) altering and repairing existing pipe systems and installing plumbing fixtures, appliances and heating and refrigerated units.

QUALIFICATIONS

Age: 16 - 25

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Applicants should have had courses in mathematics, physics and chemistry; they are often required to take aptitude tests to determine whether they have the high degree of mechanical aptitude required in this field.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G (Intelligence)	23	
N (Numerical Ability)	16	
M (Manual Dexterity)	31	

HOURLY WAGE RATE

$4.70 - $4.90; $4.60 - $4.80

LENGTH OF APPRENTICESHIP

Five years

CONTACT SOURCES - For additional information

Name	Address	City
Budeslich, Joseph	116 North Green St.	Ottumwa, Iowa
Dahl, Robert H.	302 Washington St.	Burlington, Iowa
Davis, James	215 E. 22nd Street	Dubuque, Iowa
Dochterman, Roger	1839-16th Ave. SW	Cedar Rapids, Iowa
Fisher, Patrick J.	1120 South Avenue	Fort Dodge, Iowa

Contact Sources (Continued)

Name	Address	City
Furnace, William		Letts, Iowa
Lowndes, Robert	1211-23rd Street	Sioux City, Iowa
Murphy, William	Local #384, 243 Duryea Street	Waterloo, Iowa
Reufer, Eugene	609½ W. 4th St.	Davenport, Iowa
Seymour, Wilton	124 Washington	Des Moines, Iowa

P R I N T I N G (P R E S S M E N A N D A S S I S T A N T S)

USUAL DUTIES

The apprentice printer (pressman and assistant) will work under close supervision of a journeyman printer for the purpose of: (1) printing or setting type by hand and machine, and assembling it with illustrations in page form in preparation for printing newspapers, advertising materials and books; (2) specializing in setting type by hand (hand compositor) or by machine (type-setting machine operator). The apprentice may also receive instruction in preparing and operating lithographic printing presses.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Companies generally choose apprentices from among press assistants and others already employed in a plant. The applicant must have mechanical aptitude and preparation in chemistry and physics with at least one year of each.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G (Intelligence)	40	
V (Verbal Aptitude)	31	
Q(Clerical Perception)	50	

HOURLY WAGE RATE

$4.20 - $4.40

LENGTH OF APPRENTICESHIP

Commercial Shops-two years for press assistants, four years for pressmen; five years for newspaper establishments.

CONTACT SOURCES - For additional information

Name	Address	City
Billmyer, William S.	2705 Second Avenue	Rock Island, Illinois
Holub, Robert	#2 Waverly Drive	Rock Island, Illinois

PUMP MAINTENANCE MECHANIC IN PETROLEUM REFINING INDUSTRY

USUAL DUTIES

The apprentice pump maintenance mechanic in petroleum refining industry will work under close supervision of a journeyman pump maintenance mechanic for the purpose of maintaining and operating power-driven pumps which circulate petroleum products, chemicals and water through units during processing.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee.

HOURLY WAGE RATE

$ 3.55 - $ 3.75

CONTACT SOURCES - For additional information

Name	Address	City
Kuhl, M. B.	Clinton Corn Processing Company	Clinton, Iowa

R E F R I G E R A T O R A N D A I R - C O N D I T I O N I N G F I T T E R

USUAL DUTIES

The apprentice refrigerator and air-conditioning fitter will work under close supervision of a journeyman refrigerator and air-conditioning fitter for the purpose of: installing, maintaining, disassembling, cleaning, overhauling, assembling and connecting parts of refrigeration or air conditioning systems.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a staisfactory rating by the Joint Apprenticeship Committee. The applicant should be in good physical condition, have mechanical aptitude and interest in electricity and the ability to handle mathematics, physics, electricity and mechanical drawing.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G (Intelligence)	93	
N (Numerical Ability)	84	
S (Spatial Aptitude)	84	

HOURLY WAGE RATE

$3.00 - $4.50

CONTACT SOURCES - For additional information

Name	Address	City
Dochterman, Roger	1839 - 16th Avenue SW	Cedar Rapids, Iowa

R O O F E R

USUAL DUTIES

The apprentice roofer will work under close supervision of a journeyman roofer for the purpose of: (1) applying composition roofing and other materials, such as tile and slate, to the roofs of buildings; (2) waterproofing and damp-proofing walls and other building surfaces.

QUALIFICATIONS

Age: 18
Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. The applicant should be in good physical condition and have a good sense of balance.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G (Intelligence)	40	
N (Numerical Aptitude)	50	
M (Manual Dexterity)	11	

HOURLY WAGE RATE

$ 4.15 - $ 4.35

LENGTH OF APPRENTICESHIP

Three years

CONTACT SOURCES - For additional information

Name	Address	City
Koder, Robert L.	1922 Delaware	Des Moines, Iowa
Riley, James	P. O. Box 521	Burlington, Iowa

S H E E T - M E T A L W O R K E R S O R T I N S M I T H S

USUAL DUTIES

The apprentice sheet-metal workers or tinsmith will work under close supervision of a journeyman sheet-metal worker or journeyman tinsmith for the purpose of: (1) loading, unloading and cleaning metal; (2) cutting metal to size and shaping it for installation; (3) operating brake, shearing rollers, and other machines; (4) soldering and spot welding.

QUALIFICATIONS

Age: 16 - 23
Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Applicant should be in good physical condition and have mechanical aptitude.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G(Intelligence)	40	
S(Spatial Aptitude)	31	
P(Form Perception)	23	

HOURLY WAGE RATE

$4.50 - $4.70

LENGTH OF APPRENTICESHIP - Four years

CONTACT SOURCES - For additional information

Name	Address	City
Brockway, Martin	1104 Gnahn Street	Burlington, Iowa
Hermann, William	124 Washington	Des Moines, Iowa
Hess, Richard	2311 N. Second St.	Clinton, Iowa
Jorgensen, Phil P.	3261 Court Street	Sioux City, Iowa
Pauley, John E.	Box 519	Mason City, Iowa
Ryan, James	2850 Indiana	Dubuque, Iowa
Weddell, Robert S.	P. O. Box 46	DeWar, Iowa

S T E R E O T Y P E R S A N D E L E C T R O T Y P E R S

USUAL DUTIES

The apprentice stereotyper and electrotyper will work under close supervision of a journeyman stereotyper and electrotyper for the purpose of: (1) making duplicate press plates of metal, rubber, and plastic for letter press printing; (2) making of plates from the metal type forms prepared in the composing room. Electrotyping and stereotyping are necessary because most volume printing requires the use of duplicate printing plates.

QUALIFICATIONS

Age: 18

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Physical examinations and aptitude tests are given and high school courses should include mechanical training and chemistry.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G(Intelligence)	50	
S(Spatial Aptitude)	31	
F(Finger Dexterity)	16	

HOURLY WAGE RATE

$4.10 - $4.30

LENGTH OF APPRENTICESHIP - Three to four years

CONTACT SOURCES - For additional information

Name	Address	City
Bickel, Hilary G.	814 Carroll St.	Keokuk, Iowa
Bishop, John	800 S. Main St.	Burlington, Iowa

T. V. A N D R A D I O R E P A I R M E N

USUAL DUTIES

The apprentice T. V. and radio repairman will work under close supervision of a journeyman T. V. and radio repairman for the purpose of: (1) testing tubes; (2) installing antennas and equipment, adjusting and repairing parts of radios, television receivers, public address systems and other electronic devices.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive satisfactory rating by the Joint Apprenticeship Committee. A good background in mathematics and physics is needed. The applicant must have the ability to manipulate small parts and tools, have good hand-eye coordination, good hearing and eyesight and color vision.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
N(Numerical Ability)	31	
S(Spatial Aptitude)	50	
F(Finger Dexterity)	23	

HOURLY WAGE RATE

$1.50 - $2.13

LENGTH OF APPRENTICESHIP - One year

CONTACT SOURCES - For additional information

Name	Address	City
Vilimek, Ed	2409 University	Des Moines, Iowa

T I L E S E T T E R, T E R R A Z Z O W O R K E R A N D M A R B L E S E T T E R

USUAL DUTIES

The apprentice tile setter learns to attach tile on walls, floors or ceilings, according to blueprints or other instructions. He will also, under supervision, learn to lay tile floors by first pouring the concrete subfloor.

The apprentice terrazzo worker learns to lay a mixture of base epox or latex and use an electric-powered grinding machine for polishing the surface

QUALIFICATIONS

Age: 17 - 22

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Good physical condition and manual dexterity are important assets and the applicant should have an eye for quickly determining proper alinements of tile, terrazzo and marble, and have a good sense of color harmony.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G (Intelligence)	40	
N (Numerical Ability)	50	
M (Manual Dexterity)	11	

HOURLY WATE RATE

$ 4.45 - $ 4.65

LENGTH OF APPRENTICESHIP

Three years

CONTACT SOURCES - For additional information

Name	Address	City
TILE SETTERS		
Baker, Gerald E.	2906 "C" Ave. NE	Cedar Rapids, Iowa

CONTACT SOURCES (Tile setters) Continued

Name	Address	City
Bane, Orran H. Jr.	472 Loma Street	Waterloo, Iowa
Montgomery, Harlan H.	434 Commerce Building	Sioux City, Iowa
MARBLE SETTERS		
Boucher, Lester	2430 7th Street	Sioux City, Iowa
TERRAZZO WORKERS		
Montgomery, Harlan H.	434 Commerce Bldg.	Sioux City, Iowa

T O O L A N D D I E M A K E R S

USUAL DUTIES

The apprentice tool and die maker will work under close supervision of a journeyman tool and die maker for the purpose of: (1) specializing in jigs and gauges, and other measuring devices that are used in manufacturing precision metal parts; (2) constructing metal die forms which are used in stamping and forging operations to shape metal; (3) making metal molds used in die-casting and molding plastics; (4) repairing dies, gauges and jigs.

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. A test may be administered to determine the applicants mechanical aptitude and ability in mathematics. Other qualities for the job are: (1) a good working knowledge of mathematics and physics; (2) considerable mechanical ability and finger dexterity; (3) a liking for painstaking work.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G (Intelligence)	40	
S (Spatial Aptitude)	61	
P (Form Perception)	31	

HOURLY WAGE RATE

$ 4.60 - $ 4.90

LENGTH OF APPRENTICESHIP

Four or Five years

CONTACT SOURCES - For additional information

Name	Address	City
Bunn, George W.	John Deere Waterloo Tractor Works	Waterloo, Iowa
Crowe, Robert C.	P. O. Box 561	Burlington, Iowa

CONTACT SOURCES (continued)

Name	Address	City
Docken, F. L.	Maytag Company	Newton, Iowa
Doris, S. R.	2734 Hickory Grove Rd.	Davenport, Iowa
Ehlers, Verne	2611 State Street	Bettendorf, Iowa
Etten, Robert D.	338 Rock Island	Waterloo, Iowa
Fahy, Robert F.	M. A. Ford Manufacturing 1545 Rockingham Road	Davenport, Iowa
Garlick, Max H.	Square "D"Company	Cedar Rapids, Iowa
Gilbertson, Knute A.	300 Airport Road	Ames, Iowa
Herrick, Keith W.	P. O. Box 311	Muscatine, Iowa
Lading, David	Deluxe Products,Division of Walker Manufacturing	Lake Mills, Iowa
Mekemson, G. E.	301 Avenue "H"	Fort Madison, Iowa
Miller, Roy	525 E. 18th Street	Cedar Falls, Iowa
Parks, Carl B.	P. O. Box 612	Dubuque, Iowa
Richards, Robert F.	P. O. Box 690	Davenport, Iowa
Schlitz, W. J.	736 Federal	Davenport, Iowa
Shrewsberry, George S.	32nd and Jackson	Keokuk, Iowa
Stellman, Steward	1105 Maple	West Des Moines,Iowa
Storlie, Lee	Deco Products Company	Decorah, Iowa
Swisher, C. F.	35th & Elm Streets	Bettendorf, Iowa
Uchtorff, Alfred E.	1833 West Street	Davenport, Iowa
VanDellen, Lubbert H.	111 Main Street	Pella, Iowa
Warywods, Fred	101 7th Street	West Des Moines, Iowa
Williams, Robert	3811 McDonald	Des Moines, Iowa

T R U C K A N D B U S M E C H A N I C S

USUAL DUTIES

The apprentice bus and truck mechanic will work under close supervision of a journeyman truck and bus mechanic for the purpose of: (1) keeping trucks and buses in good running condition; (2) keeping large inter-city, medium and small trucks used in local hauling in good running condition; (3) repairing heavy trucks used on construction and mining sites. The bus mechanics maintaining a variety of buses, ranging from small ones used in local transit to large trans-continental buses. In trucks and buses the engines are large transmissions and differentials complex, having air-brakes which are different than in automobiles.

QUALIFICATIONS

Age: 18

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Where duties include the driving of trucks, applicants shall be 21 years of age and be able to obtain a state chaffeur's license. Practical experience in automobile repair, science, and mathematics are helpful.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score	
	ADULT	YOUTH
G(Intelligence)	40	38
S(Spatial Aptitude)	23	22
F(Finger Dexterity)	11	10

HOURLY WAGE RATE

$2.70 - $2.90

LENGTH OF APPRENTICESHIP - Six months to one year

CONTACT SOURCES - For additional information

Name	Address	City
Harlan, E. W.	c/o Bruce Motor Freight 1914 E. Euclid	Des Moines, Iowa

T Y P O G R A P H I C A L C O M P O S I T O R

USUAL DUTIES

The apprentice typographical compositor will work under close supervision of a journeyman typographical compositor for the purpose of: (1) setting of type requiring very fine composition, for advertising copy and small jobs where it would be impractical to set the type by machine; (2) The hand compositor reads from the manuscript copy and first sets each line of type in a "composing stock", letter by letter and line by line. He also slides the completed lines of the full stock onto a shallow metal tray called a "gallery".

QUALIFICATIONS

Education: Possess a high school diploma or have met the requirements for a high school equivalency certificate and receive a satisfactory rating by the Joint Apprenticeship Committee. Qualifications which are important are: English - especially spelling and Mathematics, printing and typing courses in vocational or high school; interest in electronics and photography; artistic ability in layouts.

OCCUPATIONAL APTITUDE PATTERN (OAP)

OAP	Cutting Percentile Score ADULT	YOUTH
G(Intelligence)	40	
V(Verbal Aptitude)	31	
Q(Clerical Perception)	50	

HOURLY WAGE RATE

$3.75 - $3.95

LENGTH OF APPRENTICESHIP - Six years of progressively advanced training, supplemented by classroom instruction or correspondence courses.

CONTACT SOURCES - For additional information

Name	Address	City
Billmyer, William S.	1705 Second Avenue	Rock Island, Illinois

VT 003 723
Amendments to the Vocational Rehabilitation Act. Hearings Before the Select Subcommittee on Education (Washington, D.C., July 18-20, 27, 1967).

Congress of the U.S., Washington, D.C. House Committee on Education and Labor
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 157p.

*VOCATIONAL REHABILITATION; *FEDERAL LAWS; *FEDERAL AID; *CONFERENCE REPORTS
VOCATIONAL REHABILITATION ACT AMENDMENTS; *HEARINGS BEFORE THE SELECT SUBCOMMITTEE ON EDUCATION OF THE COMMITTEE ON EDUCATION AND LABOR, WASHINGTON, D.C., JULY 18-20, 27, 1967

The document presents the text of H.R. 8981, a bill to amend the Vocational Rehabilitation Act, extending and expanding the authorization of grants to states for rehabilitation services, providing assistance for migrants and authorizing assistance in the establishment and operation of a National Center for Deaf-Blind Youth and Adults. Statements to the subcommittee under the chairmanship of Dominick V. Daniels include those of John W. Gardner, Mary E. Switzer, Peter J. Salmon, E.B. Whitten, Howard A. Rusk, Howard Hanson, Ancher Nelsen, Beatrice Holderman, Merle Frampton, Clare D. Rejahl, Terence E. Carroll, John F. Nagle, James Garrett, and Douglas C. MacFarland. Additional statements, letters, and other supplemental materials are included. (JK)

VT 003 723

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AMENDMENTS TO THE VOCATIONAL REHABILITATION ACT

HEARINGS

BEFORE THE

SELECT SUBCOMMITTEE ON EDUCATION

OF THE

COMMITTEE ON EDUCATION AND LABOR

HOUSE OF REPRESENTATIVES

NINETIETH CONGRESS

FIRST SESSION

ON

H.R. 8981 and similar bills

TO AMEND THE VOCATIONAL REHABILITATION ACT TO EXTEND AND EXPAND THE AUTHORIZATION OF GRANTS TO STATES FOR REHABILITATION SERVICES, TO AUTHORIZE ASSISTANCE IN ESTABLISHMENT AND OPERATION OF A NATIONAL CENTER FOR DEAF-BLIND YOUTHS AND ADULTS, AND TO PROVIDE ASSISTANCE FOR MIGRANTS

HEARINGS HELD IN WASHINGTON, D.C., JULY 18, 19, 20, 27, 1967

Printed for the use of the Committee on Education and Labor

CARL D. PERKINS, *Chairman*

VT003723

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ED 080 [illegible]

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PATSY T. MINK, Hawaii
LLOYD MEEDS, Washington
EDITH GREEN, Oregon
CARL ALBERT, Oklahoma

OGDEN R. REID, New York
ALPHONZO BELL, California
JOHN N. ERLENBORN, Illinois
WILLIAM J. SCHERLE, Iowa
WILLIAM A. STEIGER, Wisconsin

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AMENDMENTS TO THE VOCATIONAL REHABILITATION ACT

TUESDAY, JULY 18, 1967

HOUSE OF REPRESENTATIVES,
SELECT SUBCOMMITTEE ON EDUCATION
OF THE COMMITTEE ON EDUCATION AND LABOR,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to call, in room 2257, Rayburn Office Building, Hon. Dominick V. Daniels (chairman of the subcommittee) presiding.

Present: Representatives Daniels, Green, Mink, Scherle, Steiger, and Dellenback.

Also present: Daniel H. Krivit, counsel.

(The text of H.R. 8981 follows:)

[H.R. 8981, 90th Cong., first sess.]

A BILL To amend the Vocational Rehabilitation Act to extend and expand the authorization of grants to States for rehabilitation services, to authorize assistance in establishment and operation of a National Center for Deaf-Blind Youths and Adults, and to provide assistance for migrants

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Vocational Rehabilitation Amendments of 1967".

GRANTS TO STATES FOR VOCATIONAL REHABILITATION SERVICES

SEC. 2 (a) Effective with respect to appropriations for fiscal years ending after June 30, 1968, section 1(b)(1) of the Vocational Rehabilitation Act (29 U.S.C. 31(b) (1)) is amended by striking out "and", and by inserting before the period at the end thereof ", for the fiscal year ending June 30, 1969, the sum of $500,000,000, and for the fiscal year ending June 30, 1970, the sum of $600,000,000".

(b) Section 2 of such Act (29 U.S.C. 32) is amended by adding at the end thereof the following new subsection:

"(c) Notwithstanding the foregoing provisions of this section, the total Federal commitment for payments under this section for the fiscal year ending June 30, 1969, or June 30, 1970, shall not exceed the amounts appropriated for the purposes of this section for the fiscal year involved, and in the event that the sum of the Federal shares of the cost of vocational rehabilitation services under approved State plans for the fiscal year involved exceeds the amount so appropriated for such year this limitation shall be applied to individual States in accordance with criteria prescribed by the Secretary."

GRANTS TO STATES FOR DEVELOPMENT OF COMPREHENSIVE PROGRAMS

SEC. 3. Section 4(a)(2)(B) of the Vocational Rehabilitation Act (29 U.S.C. 34(a)(2)(B)) is amended by striking out "June 30, 1967" each time it appears therein and inserting in lieu thereof "June 30, 1968" and by striking out "June 30, 1968" and inserting in lieu thereof "June 30, 1969".

CENTERS FOR DEAF-BLIND YOUTHS AND ADULTS

SEC. 4. The Vocational Rehabilitation Act is further amended by redesignating section 17 as section 19 and by inserting after section 16 the following new section:

"NATIONAL CENTER FOR DEAF-BLIND YOUTHS AND ADULTS

"SEC. 17. (a) In order—

"(1) to demonstrate methods of (A) providing the specialized, intensive services, as well as other services, needed to rehabilitate handicapped individuals who are both deaf and blind, and (B) training the professional and allied personnel needed adequately to staff facilities specially designed to provide such services and training such personnel who have been or will be working with the deaf-blind;

"(2) to conduct research in the problems of, and ways of meeting the problems of rehabilitating, the deaf-blind; and

"(3) to aid in the conduct of related activities which will expand or improve the services for or help improve public understanding of the problems of the deaf-blind;

the Secretary is authorized to enter into an agreement with any public or nonprofit private agency or organization for payment by the United States of all or part of the costs of the establishment and operation, including construction and equipment, of a center for vocational rehabilitation of handicapped individuals who are both deaf and blind which shall be known as the National Center for Deaf-Blind Youths and Adults.

"(b) Any agency or organization desiring to enter into such an agreement shall submit a proposal therefor at such time, in such manner, and containing such information as may be prescribed by the Secretary. In considering such proposals, the Secretary shall give preference to those proposals which (1) give promise of maximum effectiveness in the organization and operation of the National Center for Deaf-Blind Youths and Adults and (2) give promise of offering the most substantial skill, experience, and capability in providing a broad program of service, research, training, and related activities in the field of rehabilitation of the deaf-blind.

"(c) The agreement shall—

"(1) provide that Federal funds paid to the agency or organization for the Center will be used only for the purposes for which paid and in accordance with the applicable provisions of this section and the agreement made pursuant thereto;

"(2) provide that the agency or organization making the agreement will make an annual report to the Secretary, which the Secretary in turn shall transmit to the Congress with such comments and recommendations as he may deem appropriate;

"(3) provide that any laborer or mechanic employed by any contractor or subcontractor in the performance of work on any construction aided by Federal funds under this section will be paid wages at rates not less than those prevailing on similar construction in the locality as determined by the Secretary of Labor in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a—276a-5); with the Secretary of Labor having, with respect to the labor standards specified in this paragraph, the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (15 F.R. 3176) and section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c); and

"(4) include such other conditions as the Secretary deems necessary to carry out the purposes of this section.

"(d) If within twenty years after the completion of any construction (except minor remodeling or alteration) for which funds have been paid pursuant to an agreement under this section the facility constructed ceases to be used for the purposes for which it was constructed or the agreement is terminated, the United States, unless the Secretary determines that there is good cause for releasing the recipient of the funds from its obligation, shall be entitled to recover from the applicant or other owner of the facility an amount which bears the same ratio to the then value of the facility as the amount of such Federal funds bore to the cost of the portion of the facility financed with such funds. Such value shall be determined by agreement of the parties or by action brought in the United States district court for the district in which the facility is situated.

"(e) The Secretary is also authorized, directly or by grant or contract, to plan for one or more additional centers of this kind. In doing such planning, the Secretary shall be guided by experience with the Center established pursuant to the preceding subsections and such other information and experience as he may find relevant.

"(f) For purposes of this section—

"(1) the term 'construction' means construction of new buildings, acquisition of existing buildings, and expansion, remodeling, alteration, and reno-

vation of existing buildings, and initial equipment of such new, newly acquired, expanded, remodeled, altered, or renovated buildings; and includes the cost of architects' fees and acquisition of land in connection with any of the foregoing, but does not include the cost of off-site improvements;

"(2) the determination of who are both deaf and blind shall be made in accordance with regulations of the Secretary."

SERVICES FOR MIGRATORY AGRICULTURAL WORKERS

SEC. 5. The Vocational Rehabilitation Act is further amended by inserting after section 17 (added by section 4 of this Act) the following new section:

"PROJECT GRANTS FOR SERVICES FOR MIGRATORY AGRICULTURAL WORKERS

"SEC. 18. (a) The Secretary is authorized to make grants to any State agency designated pursuant to a State plan approved under section 5, or to any local agency participating in the administration of such a plan, for not to exceed 90 per centum of the cost of pilot or demonstration projects for the provision of vocational rehabilitation services to handicapped individuals who, as determined in accordance with rules prescribed by the Secretary of Labor, are migratory agricultural workers, and to the members of their families who are with them, including maintenance and transportation of such individuals and members of their families where necessary to their rehabilitation."

RESIDENCE REQUIREMENT

SEC. 6. Section 5(a) of the Vocational Rehabilitation Act (29 U.S.C. sec. 35(a)) is amended by striking out "and" after the semicolon at the end of paragraph (10), by striking out the period at the end of paragraph (11) and inserting in lieu thereof "; and", and by inserting after paragraph (11) the following new paragraph:

"(12) effective July 1, 1969, provide that no residence requirement will be imposed which excludes from services under the plan any individual who is present in the State."

Mr. DANIELS. The Select Subcommittee on Education will come to order.

We meet this morning for the purpose of considering H.R. 8981, and similar bills, to amend the Vocational Rehabilitation Act, to extend and expand its provisions. At the same time, we intend to consider H.R. 5801 and H.R. 5803, which will amend the Vocational Rehabilitation Act so as to increase Federal allotments of funds under section 2 of the act for the District of Columbia.

Since 1920, when Congress passed the first Vocational Rehabilitation Act, approximately 2 million handicapped people have been rehabilitated for jobs under this public program.

In January 1965, the President recommended a stepped-up program of vocational rehabilitation. At the same time the President set a goal of at least 200,000 handicapped persons a year and urged Congress to enact legislation designed to achieve this goal. In an effort to obtain this worthy objective in the 89th Congress, I introduced H.R. 8310, a bill which became law on November 8, 1965.

That law known as the Vocational Rehabilitation Amendments of 1965 marked the first major revision of the law since 1954. The 1965 act represented a national commitment to provide additional improved services to prepare greater numbers of physically or mentally disabled young people and adults for suitable employment.

In serving the disabled of our Nation, the Vocational Rehabilitation Administration offers a combination of special services. These services include:

1. Full evaluation including medical diagnosis to learn the nature and degree of disability and to help evaluate the individual work capacity.

2. Counseling and guidance to achieve good vocational adjustment.
3. Medical, psychiatric, and hospital care and related care to reduce or remove disability.
4. Artificial and other prosthetic and orthopedic devices needed to increase workability.
5. Needed remedial education and personal adjustment training.
6. Comprehensive or specialized rehabilitation facilities, including workshops and adjustment centers.
7. Maintenance and transportation during rehabilitation.
8. Tools, equipment, and licenses for work on the job or in establishing a small business.
9. Placement in a job suited to the individual's highest physical and mental capacity and postplacement followup to make certain placement is satisfactory to the employee and the employer.

In our consideration of the proposed rehabilitation amendments of 1967, we are about to take another humane step forward. Amongst its provisions, H.R. 8981 authorizes a separate program for grants to States to provide vocational rehabilitation services to migratory agricultural workers. It also amends the law with respect to residence requirements in providing rehabilitation services.

In a five-point program for these forgotten Americans the President has recommended legislation to provide 90-percent Federal reimbursement for vocational services for disabled migratory farmworkers. This committee also intends to consider section 2 of H.R. 8981, which amends section 1(b)1 of the Vocational Rehabilitation Act to authorize a 2-year extension of appropriation for grants to the States for rehabilitation services in the amount of $500 million for fiscal year 1969 and $600 million for fiscal year 1970.

The bill further amends section 1 to make clear that despite the amount of Federal funds allotted amongst the States, the Federal Government would not be committed beyond that amount that is actually appropriated each year in the regular appropriation process.

Section 6 amends section 4(a)2(b) of the act to extend the authority for appropriations for States under planning grants through 1968. Under the present law the authority for appropriations extends only through June 30, 1967, with appropriations remaining available through fiscal year 1968. The amendment would authorize appropriations through the period ending June 30, 1968, and permits such appropriation to remain available through fiscal year 1969.

Section 3 of H.R. 8981 amends the Vocational Rehabilitation Act by adding a new section to establish a new National Center for Deaf-Blind Youths and Adults. During the hearings, this week, we will also consider two other bills which are identical, H.R. 5801 and H.R. 5803, introduced by Representatives McMillan and Nelsen, respectively, and both of these bills would amend the Vocational Rehabilitation Act with respect to an allotment percentage to be applied to the District of Columbia.

These proposals are intended to correct a present inequity in the law by providing "the District of Columbia" with a fixed allotment percentage of 75 percent in the same manner, and the same percentage, as is provided for other non-State jurisdictions under the present law.

Rehabilitation of the disabled is carried out through a large variety of public and voluntary cooperative programs. The national focal

point for the public program is the Vocational Rehabilitation Administration. It is my sincere hope that, after careful and conscientious study of these proposed bills, our efforts will make it possible for all of the handicapped to be employed in some work with complete dignity.

STATEMENT OF HON. JOHN W. GARDNER, SECRETARY, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE; ACCOMPANIED BY MARY E. SWITZER, COMMISSIONER, VOCATIONAL REHABILITATION ADMINISTRATION; AND RALPH K. HUITT, ASSISTANT SECRETARY FOR LEGISLATION, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Mr. DANIELS. It is a pleasure to present as our first witness, Hon. John W. Gardner, Secretary of Health, Education, and Welfare, and I understand you are accompanied by Miss Switzer, Commissioner of the Vocational Rehabilitation Administration. Before you proceed, I would like to present the gentlewoman on my right, the great Congresswoman from the State of Oregon, who is a leader in the field of education and has always had a great interest in this work—Mrs. Green. I would also like to present Congressman Scherle, who is sitting in front of me—Congressman Scherle.

You may make your statement, Mr. Secretary.

Secretary GARDNER. I also have with me Assistant Secretary for Legislation, Ralph Huitt.

Mr. DANIELS. Before you proceed, I see another colleague stepping up, Congresswoman Mink, of Hawaii.

Secretary GARDNER. Mr. Chairman and members of the subcommittee, I welcome this opportunity to appear before your subcommittee to testify on legislation that concerns one of the most vigorous and effective agencies within our Department—the Vocational Rehabilitation Administration. The administration bill, H.R. 8981, would make several important amendments to the Vocational Rehabilitation Act.

Throughout the 47-year history of the Federal-State program of vocational rehabilitation, the Committee on Education and Labor has exhibited a remarkable record of devotion to the disabled people of this Nation. The program has grown and improved, in large part, because of the consistent interest, support, and guidance of the Committee on Education and Labor.

The most recent example was provided in 1965, when the committee enacted major changes in the Vocational Rehabilitation Act. As a result, the Nation's rehabilitation programs, both public and voluntary, are operating today at a far higher level of effectiveness. Thousands of additional disabled people are receiving services. The supply of rehabilitation facilities and professional workers is increasing steadily.

All of the new programs authorized by the 1965 amendments are now in full operation. At the end of my statement I would like to insert into the record a summary of these programs.

When we discuss disability, we speak of a problem that is far more widespread than most Americans realize. A study by the National Health Survey has indicated that some 16 million persons of working age or near it are limited partially or totally in their major activities—

at work, or keeping house, or going to school. Even this is not the whole story, for it excludes people in hospitals and institutions and it takes no account of the more than 5 million mentally retarded.

Present estimates indicate that nearly 4 million disabled people need vocational rehabilitation services if they are to become employable. Around 400,000 new cases are added each year. Last year the Federal-State program rehabilitated 154,000 disabled people into useful work.

Obviously, we still have a major task ahead of us, if we are to reach and restore those who need help. This we must do. We are concerned now with some of the most disadvantaged of our people. We are working toward a program which gives them the dignity that comes from work, and the self-respect that comes from personal independence.

We need these people. Thousands of those who have been successfully rehabilitated are today employed as teachers in our schools, where the shortages of good teachers persist. Others are employed as accountants, farmers, technicians, lawyers, sales clerks, office workers.

The Vocational Rehabilitation Administration has placed particular emphasis on working with other agencies of Government and with the voluntary and professional groups. For example, they have had a formal and close working arrangement with the Social Security Administration for the past 13 years.

As you know, disabled people covered under social security are eligible for disability retirement benefits. When a person applies for this benefit, he is automatically referred to the State vocational rehabilitation agency to see if he might be helped by rehabilitation services.

Nearly 17,000 persons with disabilities were located in this way and rehabilitated in 1966. As a result of an amendment to the Social Security Act in 1965, the cost of services to those receiving disability benefits is now paid from social security trust funds.

There are numerous other examples of direct cooperative work with other agencies including the Welfare Administration, the Office of Education, the Public Health Service, the manpower development and training program in the Department of Labor, and others.

The VRA has a written cooperative agreement with the National Aeronautics and Space Administration, through which some of the results of space research are being adapted to solving the problems of the physically handicapped.

In another arrangement, VRA works with the Federal Bureau of Prisons in development of special programs for offenders. An increasing number of State rehabilitation agencies have cooperative programs with Federal and State prison systems, and several are working with probationers.

H.R. 8981 proposes five changes in the law which should be enacted this year.

Mr. Chairman, I will speak first of the proposal for a National Center for Deaf-Blind Youth and Adults.

If ever the conscience of a Nation needed to be stirred, it is here, as we confront the problems of deaf-blind people.

Most of us, I am afraid, have given this matter no thought at all, or have put the subject far back in our minds with the vague feeling that

somehow arrangements have been made for our deaf-blind men and women. They have not been made.

It is shocking, Mr. Chairman, that we should have neglected this subject and these people for so long. We do not even have an adequate count of the numbers of deaf-blind persons. Experts in the field have estimated that they number about 7,000. Others believe the figure is closer to 5,000. In either event, they represent a large group of Americans who, for the most part, are receiving little or no constructive help from anyone.

Only a few institutions are doing anything of consequence for deaf-blind adults and only one has a sizable progra .

The proposed National Center for Deaf-Blind Youth and Adults would:

(1) Provide services, particularly specialized intensive services for the deaf-blind.

(2) Provide training for professional and allied personnel working with them.

(3) Conduct research with respect to their problems and rehabilitation.

(4) Help expand and improve services for, and public understanding about, the problems of the deaf-blind.

President Johnson urged the establishment of such a center in his health and education message to Congress on February 28 of this year. I hope and believe that the Congress will join us in creating this modern facility for deaf-blind adults, and in developing plans a little later for the additional centers that are essential to reaching and helping all the deaf-blind.

We are at work on a similar proposal for deaf-blind children. The problems among children, and the numbers involved, are quite different from those among adults. We have consulted with experts in this field and have secured the best advice we can get.

The American Foundation for the Blind operates a national registry of the blind which, among other things, indicates that there are about 400 deaf-blind children at present, at or nearing school age. Thus the number concerned contrasts sharply with the adult group.

Despite the small number, only about half of these children are now receiving the kind of institutional care and training they should have. Programs to help the parents are quite inadequate in most places.

We should be aware of the possibility that the numbers of deaf-blind children may increase sharply in the near future. From 1963 to 1965 there was an epidemic of rubella, or German measles, in this country. When rubella is contracted during pregnancy, the unborn child frequently is affected—and one of the effects can be deaf-blindness.

The full results of the rubella experience of those years cannot be predicted now but all our advisers agree that we must prepare for an increase in the numbers of deaf-blind children nearing school age.

Mr. Chairman, the bill before the committee makes another proposal which I hope will be considered favorably and promptly—the launching of a special effort to deal with the disabling conditions so serious among migratory agricultural workers.

The plight of our migrant workers generally deserves our attention and action. If we have a true concern for helping each individual in our society to achieve his full potential, a true concern for replacing despair with hope and opportunity, for giving dignity to existence,

then we must take steps to improve the lives of these men and women and their children.

President Johnson, in his message to the Congress this year on poverty, proposed a program to bring under control the problems of disability among migratory agricultural workers.

Disability is especially prevalent among these people, as it is among all low-income groups. Some of the disability has its origin in chronic illnesses long neglected. Some of it arises from accidents on the job or on the highway, as the migrants follow the trail of ripening crops.

Under the proposal in H.R. 8981, special funds would be made available to the States for projects to provide the complete range of vocational rehabilitation services to migratory agricultural workers and their families who become disabled.

Where needed, transportation and maintenance also could be provided to the disabled person's immediate family, since most of these disabled individuals are far from home when they become disabled.

This work for the disabled would be part of a coordinated plan with welfare and other agencies. The Secretary of Labor would establish and conduct a program of identifying those who are migratory agricultural workers, as a means of streamlining the system of reaching and serving them under this program.

This committee, by supporting the proposal, can render a great service to a group of Americans who need our attention and help.

The bill includes another provision that vitally affects the grants to States for vocational rehabilitation services. This would amend the act to extend for an additional 2 years—through fiscal 1970—the authority for appropriations for grants to the States, to carry out the basic service program for disabled people.

The present authority in the law extends only to next June 30. In a well-established program like this, with services to several hundred thousand disabled people involved, we should give the States enough advance notice of our intentions to permit them to plan and budget.

Most States, like the Federal Government, are now developing their budgets for the fiscal year 1969. They need to know what Federal funds will be available to them as they decide on their own plans and budgets. Next spring will be too late to help them plan most effectively.

The bill would further amend section 1 to make clear that, despite the amount of Federal funds allotted among the States, the Federal Government would not be committed beyond the amount that is actually appropriated each year in the regular appropriation process.

I hope the committee will act on this now, to help us and the States develop our financial plans in an orderly way.

H.R. 8981 also would provide congressional support for an additional year for the statewide planning now underway in the States. When the 1965 amendments were enacted, Congress called upon each State to conduct a 2-year program of statewide planning in rehabilitation.

The objective was to insure that each State would have a basis for developing service programs, facilities, personnel, and other resources, so that, by 1975, each State would be able to furnish rehabilitation services to all disabled persons.

Because the 1965 amendments did not become law until November 1965 (with regulations issued in January 1966), a full 2-year-planning program has been impossible. As nearly all States are presently

engaged in the planning program, it is important that they be able to complete their work. To do this, the bill asks an extension of the authority for statewide planning grants through 1968.

Finally, Mr. Chairman, the bill proposes to eliminate the use of residence requirements as a condition of providing vocational rehabilitation services to disabled people. After many years of experience, authorities in the vocational rehabilitation field are convinced that imposing a residence restriction on service is interfering with service to many of the people who need help the most, and frequently causes long delays which seriously reduce the chances of successful rehabilitation.

This change would become effective July 1, 1969, unless a State chooses to apply it earlier.

In summary, this bill expresses the convictions of our leaders in rehabilitation work on the steps that need to be taken now to strengthen programs for restoring the disabled. In some respects it is a modest bill, yet it will set in motion a series of actions that will affect many thousands of disabled youth, men and women.

Mr. Chairman, our programs for the disabled go to the heart of the American commitment. Every individual is of value. Every individual should have the opportunity to grow to his full stature, to achieve his full potential, to live his life with some measure of dignity.

We just do not any longer accept the idea that a serious physical handicap means a life of dependence and uselessness. A few years ago the great majority of individuals with severe physical handicaps were condemned to live lives of dependence.

Today, through an inspired combination of education, health care, job training, and sheer human devotion, hundreds of thousands of such lives are being rebuilt.

We are now engaged in a great national effort to combat all the conditions that stunt human growth or prevent individual fulfillment—ignorance, poverty, disease, racial discrimination, mental illness, and every kind of physical disability.

Thanks to that effort we are coming to a new realization of what we can do to help people become self-sufficient human beings.

Nothing stands as a brighter symbol of that great national effort than the remarkable upsurge of attention to the disabled in recent years.

This committee, I am sure, shares these convictions, and I thank you for what you are doing to advance the cause of the Nation's disabled people.

Thank you very much, Mr. Chairman.

Mr. DANIELS. Mr. Secretary, thank you for a very, very fine statement.

I note, Mr. Secretary, that you have proposed to extend the working of this act to provide for a National Center for the Deaf-Blind. This apparently has not been tackled before through the Federal-State programs.

Do you have any specific ideas as to what center or centers would be established and where?

Secretary GARDNER. Well, as I said, we have one in mind now for youth and adults and we are working on a plan for a center for children. We have not settled on the locations. This would require study, of

course. There is one major institution now engaged in work for the deaf-blind in Brooklyn, the Industrial Home for the Blind, which certainly would be a major candidate for any such program, but this is the sort of thing that would be approached in an orderly way.

Mr. DANIELS. Has any study been made as to the number of deaf-blind adults and children?

Secretary GARDNER. We have gathered what data we can and as I indicated the modest estimate is in the neighborhood of 5,000. Many believe it is closer to 7,000. But I think it is accurate to say we are at this point very dissatisfied with our statistics and the poor statistics are really a reflection of the neglect of this field.

I would like Miss Switzer to comment.

Mr. DANIELS. All right.

Miss SWITZER. I think one reason we do not have a more accurate statement is the fact that we tend not to know about people if we have nothing to offer them and we have not been serving more than, at the very most, a couple of hundred adults a year. It is very easy to lose people when you have nothing to give them.

That is what I think has happened. The places where they have an accurate and responsive rehabilitation program or some voluntary agency working in the field of blind and deaf-blind, there is a natural magnet that brings people to the surface. This is only true in a very small number of places. I believe that in the Industrial Home for the Blind, they usually have slightly under 200 men and women. There might be two or three more in workshops throughout the country but I think it would be a generous estimate to say that on any given day of the year there would be 200 or 215 deaf-blind adults getting any kind of service.

This would be a large number.

It has been our experience throughout the history of rehabilitation that the minute we surface this idea and the minute we hold out some hope people will come to have hope and hope is a great drawing card for people who want to be what they can be.

Mr. DANIELS. Do you have any specific definition of a deaf-blind person?

Miss SWITZER. We would certainly caution avoiding the present legal definition of blindness or measuring deafness at decibels, because a person who has the combination of these two disabilities is more disabled totally than any one person with one or the other.

Of course, a deaf-blind person is one who cannot see anything, who cannot hear anything, and, therefore, the entire range of communication is something that has to be taught from infancy.

Mr. DANIELS. Miss Switzer, you don't mean to imply that for a person to be considered deaf-blind he must be totally blind or totally deaf?

Miss SWITZER. That is the usual definition. Now, there might be an ability to see shadows of things, but most of the deaf-blind people that are served in these programs are truly deaf and truly blind in the most extreme sense of the word.

Now, I won't say that we know enough to say whether or not there are degrees of this that we should consider in an enlarged program. I think this will have to be developed as we go forward.

Mr. DANIELS. How much money do you anticipate we will need to establish this National Center for Adults and Children?

Miss SWITZER. We are estimating $400,000 in 1968. It is $600,000 in 1969 and $2 million in 1970 when the major building and any additional construction will presumably take place with a leveling off to about $500,000 a year thereafter.

Again, this is an estimate, and it would be, of course, subject to our experience in what was done. I think that the actual cost of really carrying a deaf-blind person through to rehabilitation in terms of time and staff and skill is very great. It is almost the most complicated disability to deal with that we have, really.

Mr. DANIELS. Does the program envision the establishing of institutions for the improvement of skills as teachers and instructors?

Miss SWITZER. Yes, we would hope in the large center, as is now actually done on a small scale, that there would be a substantial increase in the training of workers, teachers, and vocational counselors, and so on.

Again, it is a question of finding committed people, because it takes more than just the ordinary education and talent to deal in this field. It takes a real sense of commitment and a desire to really do something patiently with these people.

Mr. DANIELS. I direct this question to the panel.

Under the 1965 amendments, $300 million was appropriated for fiscal year 1966; $350 million for fiscal 1967; and $400 million for fiscal 1968.

Under the proposed legislation you are now asking $500 million for fiscal 1969 and $600 million for fiscal 1970. On what do you predicate your present request for funds? Has any study or survey been made to require or necessitate the larger extension of this program?

Miss SWITZER. Yes, the customary way we have always promoted our program in rehabilitation has been to try to provide in Federal dollars whatever amount is estimated to match the State investment and since the 1954 amendment there has been a substantial increase every year in the amount of money that States have invested in the program. In the years since the passage of the 1965 amendments this has been a spectacular increase.

It has always been characteristic of this program, too, that there are wide variations in the support of the States. We have a group of what we call lead States, who will pick up every Federal dollar that is made available to them. We have other States that do not support the program quite so liberally.

So, in estimating, based upon past experience, upon the cumulative effect of increases in program, availability of new personnel and new knowledge, we decided that $500 million for 1969 and $600 million for 1970 would give the same type of incentive to the States to continue to increase and improve their programs.

This is a fairly conservative percent increase in what the States have put up.

Mr. DANIELS. Do you feel the cooperation you have received from the several States warrants the increased authorization?

Miss SWITZER. Definitely so. We have some tables, Mr. Chairman, which I think you might be interested in for the record, showing how this money would be divided among the States for these years and this would be compared with 1968 and you could see the increase.

Mr. DANIELS. That will bring me to the next question: There is another amendment proposed with reference to subsection (c) of sec-

tion 2 and there have been questions raised about that section. This is being interpreted to mean that allotments will be made on the basis of amounts authorized but appropriations will not have to be made to pay the Federal share of all State expenditures within these allotments.

What is your interpretation of this subsection and why is it necessary?

Miss SWITZER. Well, "Why is it necessary?" is a good question. I think it was put in to try to control the budget at this particular, crucial time in budget history, but it does not trouble me particularly, as the administrator of the program, because the experience that we have had with the Congress and with our own estimating procedures with the States, has been very successful.

We have been able to come close to estimating the dollars that should be appropriated to meet the States' entitlement under the allotment. We have never come up for a supplemental. We never, except last year when the Senate cut something which we had included in our estimate.

Now to me our history does not indicate this is going to be any problem, as far as the administration of the program is concerned, because we seem to have a good system of estimating, we seem to have the confidence of the Bureau of the Budget and the Congress, in our estimates, and we have lived within them.

Mr. DANIELS. The Congress only authorizes an appropriation of a specific sum of money.

Miss SWITZER. Well, if they authorize the appropriation of the money we asked for and we are as good in the future as we have been in the past, this ought not to give us any trouble. If it does, we will have to meet that contingency when it arises.

Mr. DANIELS. You know, there is a tendency in the 90th Congress to cut all appropriations by 5 percent or more and suppose it happens?

Miss SWITZER. Well, this would be a problem. But this year, if I may say, the Congress and the House, although they did cut some of the appropriations in vocational rehabilitation they did not cut this one. They took the estimates we had as being the best possible estimates we could get of the States' ability and need and they recommended the appropriation of the whole amount we asked for.

Mr. DANIELS. Getting back to my question again, do you feel there is a need for this amendment? You can't spend any more than the Congress appropriates?

Miss SWITZER. That is correct, I don't think there is a need for it. On the other hand, I don't worry about it.

Mr. DANIELS. The gentlewoman from Oregon, Mrs. Green.

Mrs. GREEN. Thank you, Mr. Chairman and Mr. Secretary and Dr. Huitt. It is my first chance to see Mary Switzer this year, and a very special welcome to you. Many times I have said the program you administer is the most effective war on poverty I know of in the Federal Government, both from an economic standpoint and also in terms of what it does to the individual in bringing dignity and independence. It is very nice to see you.

I would like to follow through on the chairman's question, if I may, and I must say I have not given this bill the study I should have at this time. Did section 2(c) originate in your Department or did it originate in the Budget Bureau?

Miss SWITZER. Budget Bureau.

Mrs. GREEN. You say you are not particularly worried about it? It seemed to me those were guarded words. Do you see any real value, being more specific than the response to the chairman? What effect would it have on the amendment, in your judgment?

Miss SWITZER. Well, I think I would have to say it is the kind of restriction that would worry the worriers, shall I put it that way? I think it was not intended to be restrictive. I think it was not intended to change the policy of the Budget Bureau, which has been consistent for the past several years in going along with the estimates of the Department on what we feel is necessary for this program.

I also feel, however, that as our history says to me, "Don't worry about it," so I think it should say to the Bureau of the Budget, "Don't worry about it either," because we have a sound program.

Mrs. GREEN. You think if it is not in there, the Budget Bureau should not worry either, is that right?

Miss SWITZER. That is right. Because I think our history shows we are responsible estimators. That Congress recognizes those, even in a year like this, so I think that one way or the other I have larger problems than this in getting the people of the country rehabilitated.

Secretary GARDNER. I might add I asked Miss Switzer the same question yesterday and in our conversation in my office she expressed a lack of worry about this and felt that it was a perfectly acceptable amendment.

Mrs. GREEN. This view is not shared by people outside of Government, though, I think?

Miss SWITZER. This is understandable, I think.

Mrs. GREEN. For the record, could I have answers for the following few questions? If the chairman doesn't mind, I am quoting from his letter, of which I received a duplicate: "When a State is given an allotment of appropriations and matches the allotment, would it be possible for a goodwill industry to receive a Laird grant even though the legal amount for such State is more than enough according to the formula set by section 2(a) if the language in 8981(c) becomes law?"

Miss SWITZER. No State can receive more than its legal allotment no matter what. The Laird amendment is only there for the purpose of limiting the amount of money that can be given to nonprofit organizations that put up their own money but the Laird amendment money is still administered under the total allotment of the vocational rehabilitation bill, so if the State has its full allotment and is spending it on something else, the Laird amendment won't make any difference.

Mrs. GREEN. Another question, and we may, Mr. Chairman, want to go into it later: What other problem would be created by enactment of section 2(c) in reference to the continued use of the Laird amendment under section 2 of Public Law 565? Would you like to have these questions in writing and a chance to respond in detail?

Miss SWITZER. I don't have them in my own mind, I don't have the sections of the bill that clearly in mind. Repeat the question again, if you will.

Mrs. GREEN. Let me do this, if I may. I ask unanimous consent to insert at this point in the record the questions in writing with the responses from Miss Switzer.

Mr. DANIELS. Without objection, it is so ordered.

83-687—67——2

(The information referred to follows:)

QUESTIONS RAISED ON SECTION 2(c), H.R. 8981

1. Is there adequate justification for Section 2(c) of H.R. 8981? The formulae and matching ratio received careful consideration through full discussion and debate in 1965 when the 1965 amendments were passed. What new consideration prompts the need for further change at this time?

The Administration bill includes Section 2(c) as a means of deciding upon the budgetary needs for vocational rehabilitation annually as part of an orderly budget process in government which takes into account each year the anticipated revenues as well as expenditures.

2. When a state has been given its allotment of the appropriations and matches all of that allotment, would it be possible for a Goodwill Industries to receive a "Laird grant' 'even though the "legal" amount for such state is more than enough according to the formulae set by Section 2(a) if the language in H.R. 8981, Section 2(c) becomes law?

No state may receive more federal funds for any purpose under Section 2 of the Act than the amount of its allotment. This is true with respect to "Laird" projects and all other purposes under Section 2. The enactment of Sec. 2(c) of H.R. 8981 would not change this.

3. What other problems would be created by the enactment of Section 2(c) of H.R. 8981 in reference to the continued use of the Laird Amendment under Section 2 of Public Law 565, the Vocational Rehabilitation Act?

The Vocational Rehabilitation Administration does not foresee problems that would be created by the enactment of Section 2(c).

Mrs. GREEN. Let me turn to another question.

Mr. DANIELS. You mentioned two questions. Would you ask unanimous consent on those?

Mrs. GREEN. Yes; unanimous consent for those to be submitted later.

Mr. DANIELS. All right.

Mrs. GREEN. Since there are so many departments of Government now involved in vocational rehabilitation—Social Security, Office of Education, Office of Economic Opportunity, and the Labor Department—is there any kind of coordinating committee, an interagency committee here, Mr. Secretary?

Secretary GARDNER. There is not a committee specifically on this subject, but I would say that, of all of the agencies in my Department, the one that has most effectively related itself to the other programs in Government and played its role in relation to other needs in other programs, has been the "VRA." They have found a very effective way of relating to the social security agency, relating to the manpower development programs, and others.

I feel that there is less confusion and duplication here than one is likely to find in most programs and I think this is a tribute to Mary Switzer and her determination to get the job done.

Mrs. GREEN. I must say I am delighted to hear you say that, Mr. Secretary, because I indicated earlier I have more confidence in this Department than in almost any department of Government I know of, and I have followed it very closely for the last few years.

Let me turn to one other question, Miss Switzer: If we have the forgiveness feature in terms of "NDEA" loans and a person who receives a "NDEA" loan can have a forgiveness of 15 percent a year if he works with the handicapped.

Has your Department made any study of this? Do you see that the particular feature has had any impact on attracting more teachers to work with the handicapped?

Miss SWITZER. No; I can't say I have, but it is a good question, and I would like to go into it and see what I can find out. I think we need all sorts of inducements. I am not sure how much the "NDEA" loan program has been used by teachers in training for the handicapped because there is a scholarship program, as you know, to the Office of Education in teachers of the deaf, teachers of the mentally retarded, so perhaps not as many of the young people under the general program are going into this, but we are now taking a good hard look at the whole training program to see if there are not some new ways that we can encourage young graduates, without professional topping of 2 years of master's work, to see how we can entice them into the field.

I am very, very strongly of the opinion we won't get the manpower unless we do something really new and different in this area. I think we can, if we can figure out just the right way to do it.

Mrs. GREEN. As I understand it, there is a controversy between two groups who are working with the deaf on teaching of the deaf children. Has your Department been involved? Has any research been done or has there been any control group that has been working under one method versus the other?

Miss SWITZER. We have been right in the middle of it, of course, especially in rehabilitation, because the products of both methods are the ones that we see most often. Again, from my own experience in the problem of teaching deaf children, and the problems created by deafness are difficult enough, that I have said to the leaders in both areas that it is rather shocking that there is such a strong emotional involvement on the method in contrast to trying to make both methods serve a larger number of people.

It seems to me that we have come a long way in the last 5 or 6 years since I have been intimately concerned with trying to improve the vocational rehabilitation of the deaf. I don't think we have any studies. I have a personal completely subjective opinion, and that is that the oral method, so-called, is a splendid method for youngsters who are highly talented, who can read lips, who have proper parental and environmental exposure, when they are very young. When a good lipreader and a well-educated, orally educated, young deaf person is good, they are about as good as anybody you can imagine, but this is a very small minority of the total group of deaf children.

Those interested primarily in the manual method of communication, which has grown up over the years, are equally as prejudiced and do not give the opportunity for the children to learn as much as they could both in speech and in lipreading.

Now, not everyone can learn to read. They say, "If we could only lipread," and we have made studies in our program which show there are very, very definite limitations to learning to lipread. We don't know why, but they do exist.

So I think this is another one of those areas in which you have to keep constantly mixing people. I think we have made some good progress in this.

Mrs. GREEN. I should know the answer to this, and I am sorry I don't, but do you have a relationship to Gallaudet College?

Miss SWITZER. Yes; the majority of students of the college are supported by the vocational rehabilitation program.

Mrs. GREEN. What would be the relationship between Gallaudet and the Blind Center?

Miss SWITZER. I don't know really.

I would think that this would have to be worked out. They don't have any combination students like this at Gallaudet. You know traditionally the deaf-blind have always been educated in schools for the blind or people whose primary interest has been with the blind, not with the deaf, for historical reasons, and I don't know exactly why.

Mrs. GREEN. Going back to the amendment adopted last year in regard to Gallaudet, it is my understanding that it has been determined they will teach only one method for the deaf. Is this right?

Miss SWITZER. I don't think so. I think they have traditionally been sign language people.

Mrs. GREEN. Exclusively?

Miss SWITZER. Exclusively.

Mrs. GREEN. Has a study been made of this as related to your Department as to whether this is wise and best?

Secretary GARDNER. I can't answer that question either. We will have to answer it for the record.

Mrs. GREEN. That is all, Mr. Chairman.

Mr. DANIELS. The gentleman from Oregon, Mr. Dellenback, do you have any questions?

Mr. DELLENBACK. I don't at the moment. I want to look at the bill. I have been reading the Secretary's testimony and I will wait a minute.

Mr. DANIELS. The gentlewoman from Hawaii.

Mrs. MINK. Thank you very much, Mr. Chairman.

In your proposal, Mr. Secretary, on the establishment of the National Center for Deaf-Blind, what are the estimates of the cost of this center as you determined it thus far?

Secretary GARDNER. Miss Switzer, would you give those? We have them worked out.

Miss SWITZER. In 1968, it is $400,000 and for 1969 it is $600,000 and for 1970 it is $2 million. That is the year when whatever construction is necessary will have been planned for and done. That is why the estimate is high. Then there is leveling off at about $500,000 a year.

Mrs. MINK. Is it intended that the Department will operate and administer and generally oversee this national center or is it contemplated that this will be contracted out to another public or private agency?

Miss SWITZER. It will not be operated as a Federal institution. It will be worked out on a cooperative, probably a contract agreement, or a ground agreement, whichever seems most feasible, and it will be entirely under the administrative direction of the institution that agrees to cooperate with us.

Of course, the statute will contain certain standards and objectives and in addition to that it is the Secretary's intention and mine to have an advisory group of people knowledgeable in this field to help with the selection and to keep in constant touch with the development and working out of the program and also to advise us on the continuous planning. Because this is a big country, we would hope that we could have more than one center, so that we would have better ease of people getting to it.

Mrs. MINK. I notice in your bill also that you are asking for authority to plan for additional centers and that the planning would be guided by the experience of the first center which is established. How long would you say it would be necessary for the center to be in operation in order for meaningful experience to be derived from which to plan additional centers?

Miss SWITZER. Well, I wouldn't think that it would take as long as you might normally think, because there is some experience already with the Industrial Home for the Blind, but I think the purpose of putting this in was to make it clear that planning will need to be done, the collecting of information, the geographical spread of the problem, the degree to which we are able to achieve good staff development, so that if we could have a second center, we would be able to run it.

Secretary GARDNER. We do believe, too, that as we take this first move and it becomes publicized across the country in medical circles and elsewhere, we will come to have a far better understanding of the scope of the problem and the number of people involved.

Mrs. MINK. After the $2 million construction has been completed in fiscal 1970 and based upon your operational cost of one-half million dollars, how many individuals does this figure contemplate you will be able to serve in 1 year at the center?

Miss SWITZER. Here, again, we really have only the barest estimates. We think probably 300 at any given time would be a relative census of a center of this kind. How fast they would turn over would depend on many things. So that, actually, what we are trying to provide for is the best estimate that we get, from the people who are doing the work, of the number of people that would be necessary to support a good program and increase the service, even if slowly, to greater numbers of deaf-blind people.

So, $500,000 for the operational cost for a year is an estimate.

Mrs. MINK. I notice in your statement, Mr. Secretary, you indicate that later plans will include the deaf-blind children. Does this mean that the first center which this bill authorizes and those additional centers which might be planned are not being planned or contemplated for young children?

Secretary GARDNER. We propose to come up fairly soon with a plan for children, including quite young children, and this is of a special nature and immensely important. In some cases one can diminish the likelihood that the defects will become a grave and handicapping defect if they are found early enough. This is particularly true with the youngsters coming along whose cases stem from the rubella epidemic.

We feel that this is an early necessity and will hope to have the plans before you before very long.

Mrs. MINK. One final question, Mr. Chairman: Are there any centers currently in operation that serve the deaf-blind?

Miss SWITZER. Not as such.

Mrs. MINK. Nongovernmental or private?

Secretary GARDNER. We mentioned the Industrial Home for the Blind. There are other institutions for the blind that have worked with the deaf-blind to a very modest degree; for example, the Perkins Institution in Massachusetts.

Mary, would you add to that?

Miss SWITZER. Well, I think that the Perkins School for the Blind in Watertown, Mass., has the largest group of deaf-blind children

that is anywhere. The Talladega School for Deaf and Blind in Alabama has a very small group of the deaf-blind. There are one or two other places; a school for the blind in Berkeley, Calif., has a few deaf-blind children.

But there is no place except one or two workshops that have taken some of the graduates, you might say, except the Industrial Home for the Blind in Brooklyn, that have any programs for the adults and the children. There are so few children in school whom we can identify that it is really almost a crisis, particularly with the increase that is contemplated from rubella.

Mrs. MINK. Thank you very much, Mr. Chairman.

Mr. DANIELS. The gentleman from Iowa, Mr. Scherle.

Mr. SCHERLE. No questions at this time, Mr. Chairman.

Mr. DANIELS. The gentleman from Wisconsin, Mr. Steiger.

Mr. STEIGER. Thank you, Mr. Chairman. It is a pleasure to have the Secretary here and Dr. Huitt and Miss Switzer, and to have an opportunity to listen to you.

Now to get back to a question that Mrs. Mink asked, did I understand you correctly, Mr. Secretary, that you will come forward with some ideas as to ways and means of identifying and helping deaf and blind people at an early age?

Secretary GARDNER. Yes.

Miss SWITZER. Real early.

Mr. STEIGER. If my memory serves me correctly, Holland is a country that has made some remarkable strides in this problem.

Miss SWITZER. Well, I am not sure about what they have done with the deaf-blind, but they have been very, very skillful in identifying handicapping conditions very early in children, and in the retarded they have done, for instance, a remarkable job.

If you think they have done something with the deaf-blind, I will find out about it right away.

Mr. STEIGER. I don't know if it is specifically with the deaf-blind except I know they have done something in this area

Miss SWITZER. I know they have generally with children and this is one of their really striking accomplishments.

Mr. STEIGER. Are we taking a look at their programs to see if there is anything we could use?

Miss SWITZER. Some of our people have.

Mr. STEIGER. Mr. Secretary, in the Vocational Rehabilitation Act in section 15, subsection (e) provides:

> The Commission shall also prepare such interim reports as the Secretary may request even though the report is not due until January 1, 1968.

Have you requested or received from the Commission any interim reports?

Secretary GARDNER. I believe we have such a report.

Miss SWITZER. There has been an interim report worked out by the Commission, largely prepared for a hearing which was held yesterday in the Senate. This report came to the Secretary only a couple of days ago. I doubt if he or anyone on his staff has had time to study it. But it is an excellent report with some practical suggestions.

Mr. STEIGER. Would it be possible to procure a copy of that for this committee?

Miss SWITZER. I am sure there is no problem.

Secretary GARDNER. There certainly would be no problem.

Mr. STEIGER. That I appreciate.

What kind of work do you do, Miss Switzer, with private industry in any programs that they carry on for those who may need some assistance in rehabilitation? I am somewhat familiar, for example, with what Minnesota Mining has done. Are there other companies that do this?

Miss SWITZER. I don't know if there is any company that does just what they do. That is rather a unique kind of arrangement. This is an arrangement whereby they have a lot of duplicating and office equipment and a whole variety of new gadgetry. This is primarily directed toward small businesses and one-man offices. They have worked cooperatively with our rehabilitation agencies in the States to set up a local kind of center using a handicapped person who has been trained to operate the equipment. These persons are very often paraplegics or quadraplegics who would not otherwise have as good an opportunity for work.

I think this is the only company with whom we have this type of arrangement, but a very interesting new development in the last 6 months has occurred in cooperation with the Small Business Administration. We have a joint program with them. For many years, they were not able, because of their own legal and administrative restrictions, to work with nonprofit small businesses, and now we have just embarked, and we don't know yet how many, how widespread the effort will be, but all of the small business regional offices throughout the country have had a joint communication from the Small Business Administrator and myself. We have two or three very enthusiastic staff people in both agencies promoting this.

So I think this will develop some things we had not thought about before. Our chief relationship with business and industry is in the employment area, first of all, in trying to convince and persuade that the hiring of handicapped people is a very fine thing to do.

You will be interested in a story that Senator Percy told me the other day. The first time he had knowledge of this was when he was head of Bell & Howell and he was asked to make a speech and he thought he better find out what Bell & Howell was doing. As a matter of fact they have a good record so it sold him on the good things about the program.

Another interesting relationship we have in some places, particularly with small industry, is on-the-job training. Our program traditionally, especially in the South and Southwest, has relied very heavily on the small industry itself and privately owned training facilities to select and train handicapped people for work in the competitive labor market. I think this has been one of our most productive areas.

Mr. STEIGER. Mr. Secretary, would you comment on the National Policy and Performance Council and the National Advisory Council on Correctional Manpower in Training?

How well do these groups operate, how effective have they been?

Secretary GARDNER. Again, because my own relationship to these has been somewhat distant, I will ask Miss Switzer to comment.

Miss SWITZER. The National Council on Performance has done one of the most outstanding advisory jobs of any advisory body I have had anything to do with, and I have had a lot of them in my day.

This was a difficult job. It was composed of representatives of organized labor, management, business, workshops, and so on, and its job was to set the standards that would be applied by the Vocational Rehabilitation Administration in placing training grants in the workshops.

It was under the chairmanship of Mr. Christiansen, the vice president of Montgomery Ward. It was the most skillfully handled and the most dedicated group of people I have ever worked with. They came out with a recommended series of standards which the Secretary promulgated and which we are now operating under, with a minimum of dissatisfaction. It was a very technical job on the one hand and it was quite a new venture for us.

I would say that this Council ranked very high. The Correctional Manpower Council again is a very specialized Council. This was a Council established to administer a new program which was in the 1965 act, to make a study of correctional manpower and all of the penal institutions of the country. It is composed primarily of experts, administrators of penal institutions and State reformatories and the like, together with a certain number of citizen representatives.

This Council has guided us in the standards and the general oversight of this very broad-scale study that is now underway and it, too, has been, as far as I can judge, very successful.

It has not had the detailed responsibility that the Performance Council has, to come out with a document that was, you know, immediately to be used in administrative action. Its primary purpose was to guide us in the manner in which the big study should be conducted and be sure it went to the right places, and so on.

Mr. STEIGER. To go back to Minnesota Mining for 1 minute, which is my last question to you, the program in Wisconsin was severely curtailed in the last 6 months. A few men were withdrawn.

Miss SWITZER. You mean in Minnesota Mining?

Mr. STEIGER. Yes. In one case one of the men who was participating in the program was left without any guidance and really in a very serious position which the Wisconsin vocational rehabilitation people picked up after the three men pulled out. I don't know whether this has come to your attention and, if it has not, I wonder if it is possible for you to try to determine whether or not they are continuing with the program or whether they have withdrawn?

Miss SWITZER. I would be glad to. I am sure if it is a productive program in rehabilitation, it will be continued by your director because he is a forward and very good administrator.

Mr. STEIGER. Mr. Towne has done an excellent job.

Miss SWITZER. He is one of our really topflight State administrators.

Mr. STEIGER. I am delighted to hear you say that.

Thank you, Mr. Chairman.

Mr. DANIELS. Mr. Secretary, you did say before the hearing started that you had an appointment this morning at 11 o'clock? I hope you don't mind my acknowledging Mr. Dellenback at this time.

Secretary GARDNER. That is all right.

Mr. DELLENBACK. May I say I welcome the chance to ask a few questions. In part because, while this is not a subcommittee on which I serve, I am here because of an interest in the field but also because

quite frankly I wanted again to hear the Secretary testify. He has testified before certain other committees on which I serve. I have not met Miss Switzer before. I appreciate this opportunity.

May I ask three questions?

One, Miss Switzer, so far as the record of States in this particular field of rehabilitation is concerned, do you find great variation? Do you find that some of the States are doing an exceptional job and some a poor job?

Miss SWITZER. Very much so. This is one of the characteristics of this program from its very beginning.

Mr. DELLENBACK. At risk to us both, would you have any comments to make on the State of Oregon?

Miss SWITZER. Well, I think Oregon has been on a plateau for quite a little while. They have had organizational problems. It certainly is not as well supported as many States. It ranks 36th in one of the indexes that we have which considers the number of rehabilitations for 100,000 population, which is one general ranking we give to try to, get a little competition into the area.

Oregon is 36th, say, in contrast to Iowa, which is 39th, or Oklahoma which is 14th, just to mention offhand some of them. Whereas, with the State funds available on a percentage basis, Oregon does pick up a large percentage of its allotment, 85 percent of its allotment in 1967, which is a fairly good record.

Mr. DELLENBACK. Do you find that the records of the States have any geographical area ties? For example, we have in education, in certain fields of education, had concern expressed as to what the States of the Deep South would, or would not do, if they were given a good deal of authority if funds were poured in.

As a general thing, how have the States in the Deep South done in this field?

Miss SWITZER. They are the lead States in this field.

Mr. DELLENBACK. They are doing an exceptionally good job?

Miss SWITZER. Yes.

Mr. DELLENBACK. In large part because of the work of their own people in this field?

Miss SWITZER. Yes; and I think in large part because historically there was very little, especially in the voluntary field that was going on when the public program got its first big spurt in 1943 and consistently from that time until today they still are the lead States in terms of picking up their money, serving of these people, and doing of unusual things in projects, and so on.

Mr. DELLENBACK. In this field they have shown they can do a good job?

Miss SWITZER. Yes.

Mr. DELLENBACK. Mr. Secretary, may I ask you two or three questions. Are there other amendments in this area which are not involved in this bill which you think are important and we ought to be considering?

Secretary GARDNER. No, sir.

Mr. DELLENBACK. These are the principal amendments?

Secretary GARDNER. Yes, sir.

Mr. DELLENBACK. Recognizing the difficulty also of this question, because each of these needs is pressing, do you feel this is one of the more important needs for additional funds as contrasted with some of

the problems of the war on poverty and contrasted with other needs of your own Department, would you rank this top, middle, bottom, insofar as the pressure for funds is concerned?

Secretary GARDNER. It is very difficult to trade off human benefits involving different kinds of handicaps, and as I suggested in my testimony, all of these handicaps that stunt human growth and prevent individuals from becoming selfsufficient human beings, deserve our attention.

I will simply state, for this one, that it has proven remarkably successful. The vocational rehabilitation program has taken people who were in a state of dependence and made them independent time and again. They have paid off heavily as a social investment. We are talking about individuals who often but for the kinds of treatment they would get here, would be institutionalized or a burden on their family or a burden on society in one way or another and this program is almost a model of how you move to get people back on their feet and move them on as self-sufficient human beings so they can look after themselves.

Mr. DELLENBACK. Recognizing the difficulty of this, and I will close with this: Have you ever run a cost-benefit-ratio study on this? This is the thing we use, for example, on construction projects and actually it is being done in social areas, too.

Secretary GARDNER. I would say that the man in charge of our cost-benefit studies, Assistant Secretary William Gorham, regards the Vocational Rehabilitation Administration as one of the most cooperative agencies we have. They have run a series of studies and I would like to have Miss Switzer comment.

Miss SWITZER. Yes, we have interesting ones. We have ones that relate to the return on taxes and we have a study, our most recent one, on the return to the gross national product, economic development, and I would like to send you the technical detail, if I might, on that.

Mr. DELLENBACK. I would be interested in what you have on that.

Miss SWITZER. Yes, we have very interesting data on this, which is taken out of statistics and throwing them in a new way.

Mr. DELLENBACK. Thank you, Mr. Chairman.

Mr. DANIELS. If there is no objection, when this material is made available, it will be inserted in the record at this point.

(The summary follows:)

SUMMARY OF THE VRA EXPLORATORY COST-BENEFITS ANALYSIS

One of the most impressive ways in which VR services benefit disabled persons is in the increase in earnings of these persons. A recent VRA study estimated this increase over the working lifetimes of 200,000 persons whose cases were closed during FY 1966 by State VR agencies. It was found that every dollar expended on these 200,000 disabled persons will produce a lifetime increase in earnings and value of work activity of $35. This is exclusive of other economic benefits of VR services such as reduction in public assistance payments and in cost of support in tax-supported public institutions. Indirect and intangible benefits were mentioned in the study but no effort was made to assign dollar value to them. Thus, only a single economic benefit was the focal point of the study—increased earnings.

Broadly speaking, the estimation procedure was as follows:

Earnings at the time of rehabilitation closure among wage-earning clients and estimated value of work activity of homemakers, unpaid family workers and self-employed farmers at closure were projected over an estimated working lifetime. From this projected figure was subtracted an estimated amount of lifetime earnings and value of work activity that could not be attributed to the receipt of services.

Once this subtraction was effected, the result was the *increase* in lifetime earnings and value of work activity attributable to VR services.

The main factors considered in deriving this lifetime increase were as follows:

1. The rates at which death and new or recurrent disability will cause termination of employment through the years. These rates varied according to the age of the clients.

2. The number of years of work-life for remaining clients until retirement. In most instances the retirement age was assumed to be 62 years. It was a little higher for older clients of the State VR agencies.

3. The earnings and value of work activity associated with clients remaining in employment through the years. These earnings data were based on reports sent to the VRA by State agencies. Estimates of the value of work activity among homemakers, unpaid family workers and self-employed farmers were interpolations from unpublished Census Bureau data.

4. The present value of future earnings. This is called the discount rate and it reflects how much more a stated amount of money is expected to be worth at a given point in time compared to the same point a year later. This study used a 4 percent per year discount rate. Had we omitted discounting, the final result would have been considerably in excess of a $35 increase in earnings and value of work activity per dollar of expenditure.

5. The increase in the rate of yearly productivity of clients in the years after rehabilitation. This increase in productivity was assumed to be tied to an increase in earnings through the years and was estimated to 3 percent per year.

The lifetime increase in earnings and value of work activity was then divided by the estimated cost of rendering services to the 200,000 disabled persons under study. The cost included Federal and State expenditures and a small amount expended by other sources. It included the cost of direct services rendered to the clients as well as the cost of administration and guidance and counseling. The cost excluded capital expenditures and grants for research, training, and international activities.

II. OVERALL SUMMARY

It was estimated that because of vocational rehabilitation services, clients whose cases were closed during fiscal year 1966 will experience an increase of $35 in their earnings and value of work activity over their working lives for every dollar expended on them.

The four groups of clients for whom estimates were derived are shown as follows:

Group	Number of closed cases	Lifetime earnings or value of work activity based on—			Increase in lifetime earnings or value of work due to VR services[2]	Increase per dollar of cost ($147,000,000)[3]
		Earnings or value of work at closure	Earnings or value of work at acceptance[1]	Assumed future earnings[1]		
	(1)	(2)	(3)	(4)	(5)	(6)
		Millions	Millions	Millions	Millions	
Rehabilitated wage earners	127,824	$5,312	$485	$345	$4,482	$30.50
Rehabilitated homemakers and unpaid family workers	24,127	737	69	----------	669	4.55
Rehabilitated self-employed farmers	2,328	98	9	----------	89	.60
Not rehabilitated wage earners	48,969	9	1	----------	7	.05
Total	203,248	6,156	565	345	5,246	35.70

[1] The figures in this column represent earnings that cannot be attributed to VR services.
[2] Col. 2 less col. 3 less col. 4.
[3] Co .5 divided by $147,000,000.

Notes: All lifetime estimates are discounted at 4 percent. Some figures do not add because of rounding.

Mr. DANIELS. I don't like to detain you any longer but I have two short, important questions. In your statement you state on page 10 the bill proposes to eliminate the use of residence requirements as a condition for providing vocational rehabilitation services to disabled persons.

In a few cases migrant workers are citizens of the States where they are working, they are disabled, and they and their families may need assistance under this act.

Do you feel that the States would be willing to pay the 10 percent of the cost of services to these nonresident migrant workers?

Secretary GARDNER. Yes; we believe they would be prepared to do that.

Mr. DANIELS. Do you think you would get more cooperation from the States if the Federal Government paid the whole 100 percent share?

Secretary GARDNER. I think that is always an appealing approach as far as the States are concerned. But our experience has suggested that they are very likely to be willing to step up and contribute their 10 percent.

Mr. DANIELS. You feel then you will get their cooperation, sir.

Secretary GARDNER. That is correct, sir.

Mr. DANIELS. Even though they are not citizens of that State? Now, a good many States have residence requirements and what would you do in that situation? Will you call upon the legislatures of those States to repeal their laws?

Secretary GARDNER. We are asking for a repeal of the residence requirement.

Mr. DANIELS. My second question deals with H.R. 5801 and H.R. 5803. You did not comment upon it in your earlier remarks. I would like to know the position of your Department with respect to these two bills. They refer to the allotment for the District of Columbia. These bills will provide that the act be amended to give them the same consideration with regard to the allotment as we do give to Guam, Puerto Rico, and the Virgin Islands. What is the position of the Department with respect to that proposal?

Secretary GARDNER. We favor that, Mr. Chairman.

Mr. DANIELS. Thank you.

Mrs. MINK. Will the chairman yield?

Mr. DANIELS. Yes.

Mrs. MINK. May I request, following the chairman's question with respect to the requirements for residence, if we might have a tabulation from the Department as to the number of States that have this residence requirement and whether this is based upon legislation or simply included in their State plans?

Miss SWITZER. We have a comprehensive statement on residence, which is quite illuminating.

Mrs. MINK. May I request it be inserted.

Mr. DANIELS. The chairman does have a copy in his file here, and I think all of the members of the committee ought to have copies of it, if you will look in your folders.

Miss SWITZER. We will make them available if you don't have them.

Mr. DANIELS. Thank you, and I will, pursuant to request from the gentlewoman from Hawaii, have such a statement incorporated in the record if there is no objection.

Thank you. It was a pleasure to have you, Mr. Secretary, Miss Switzer, and Mr. Huitt.

Secretary GARDNER. Thank you very much, Mr. Chairman.

(Report on residence requirements follows:)

Residence requirements for eligibility for vocational rehabilitation services for clients other than social security disability beneficiaries

	Total number of State plans
I. No residence requirements	12
A. Both general plan and plan for the blind: Nevada	2
B. General plans only: California, Hawaii, Louisiana, Texas	4
C. Plans for the blind only: Connecticut, Massachusetts, Montana, Indiana, Minnesota, Nebraska	6
II. Unqualified durational residence requirement for all services	1
General plan: District of Columbia (1 year)	1
III. Unqualified durational residence requirement for certain services	1
Plan for the blind: New Jersey (1 year) [1]	1
IV. Durational residence requirements with alternatives of nondurational residence or domicile or intent of residence	14
A. Both general plans and plans for the blind: Arkansas,[2] Iowa [3]	4
B. General plans only: Delaware,[4] Michigan,[4] New Jersey,[4] Pennsylvania,[4] Idaho,[5] New Hampshire,[7] Oklahoma,[8] Wisconsin,[9] Indiana [6]	9
C. Plan for the blind only: Arizona [4]	1
V. Nondurational requirements of residence, domicile, or intent of residence	63
A. Both general plans and plans for the blind: Florida, Kansas, Maine, Mississippi,[10] Missouri, New Mexico, New York, North Carolina, Ohio, Oregon, Rhode Island, South Carolina, South Dakota,[11] Tennessee, Vermont, Virginia, Washington	34
B. General plans only: Alabama, Alaska, Arizona, Colorado, Connecticut, Georgia, Guam, Illinois,[12] Kentucky,[10] Maryland, Massachusetts, Minnesota, Montana, Nebraska, North Dakota,[13] Puerto Rico, Utah, Virgin Islands, West Virginia, Wyoming	20
C. Plans for the blind only: Delaware, Hawaii, Idaho, Louisiana, Michigan, New Hampshire, Pennsylvania, Texas, Wisconsin	9
Total	91

Source: Approved State plans in central VRA office Apr. 30, 1967.

[1] New Jersey blind plan: 1 year's residence within State immediately preceding extension of such services as physical restoration, maintenance, training, travel while in training, occupational licenses, tools, and equipment. Residence within State without time restrictions required for all other services including diagnosis, extended evaluation, counseling, guidance, and job placement.

[2] Arkansas general and blind plans: 1 year's residence or resident at time of disability or voluntary establishment for nontemporary purpose.

[3] Iowa general and blind plans: 6 months' residence or intent (1) to remain for a reasonable period (under general plan) or (2) to become a permanent resident (under blind plan).

[4] General plans of Delaware, Michigan, New Jersey, and Pennsylvania and blind plan of Arizona: 1 year's residence or intent to establish residence.

[5] Idaho general plan: 6 months' residence or resident at time of handicap.

[6] Indiana general plan: 6 months' residence or intent to establish residence.

[7] New Hampshire general plan: Residence or 24 hours' residence.

[8] Oklahoma general plan: 1 year's residence or resident.

[9] Wisconsin general plan: 1 year's residence or legal residence in the State or temporary residence in the State due to military service or occupational requirements of family members.

[10] Mississippi general plan: Only intent of residence required. Mississippi blind plan (under a different agency) and Kentucky general plan: Resident or eligible under agreement with another State or with the Federal Government.

[11] South Dakota general plan: A resident does not lose his domiciliary status by voluntarily moving to another jurisdiction unless such moving is with intent to make the new jurisdiction his domicile. The residence requirement is waived, provided that the handicapped individual is temporarily residing in the State due to military or other governmental service or occupational requirements of family members. South Dakota blind plan (under a different agency): Residence in State, with no qualification of this requirement.

[12] Illinois general plan: Clients of the Illinois vocational rehabilitation agency who move from Illinois continue eligible for vocational rehabilitation services from Illinois until completion of authorized services or until acceptable by the other State for vocational rehabilitation services. The choice of greater benefits does not influence determination of residence and State sponsorship.

[13] North Dakota general plan: Legal residence in State or temporary residence due to military service or occupational requirements of family members or intent of residence.

Miss SWITZER. Mr. Chairman, do you have any further questions from me on the District of Columbia? May I put this statement in the record on the District of Columbia?

Mr. DANIELS. The statement will be incorporated in the record.

(The statement referred to follows:)

STATEMENT OF MARY E. SWITZER, COMMISSIONER OF VOCATIONAL REHABILITATION, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Mr. Chairman, thank you for this opportunity to appear before this committee in support of H.R. 5801 and H.R. 5803 to amend the Vocational Rehabilitation Act by revising the allotment percentage for the District of Columbia.

If the bill is enacted, the District will be able to greatly expand its rehabilitation program for the handicapped.

The Vocational Rehabilitation Act requires that a formula be used in computing the allotment percentages for the States and Territories. Part "(A)" of Section 11(h)(1) applies to States, and Part "(B)" to the Commonwealth of Puerto Rico, to Guam and the Virgin Islands. The allotment percentage, derived from the per capita income of a State, is a basic factor in computing the allotments made under Section 2 of the Act. Thus it directly affects the amount of federal funds for the basic support of the vocational rehabilitation program in each State and the United States.

In the law at present, the District of Columbia is treated as a "State," in computing the allotment percentages. For several years now, the District has been among the top three "States" in terms of its per capita income; at present, it ranks at the top. Under the formula for distributing Federal funds, the higher the per capita income, the lower the Federal allotment percentage. Since the District is entirely an urban area, it has a level of per capita income which, while comparable to the level of other central cities of standard statistical metropolitan areas, is considerably above the level of per capita income of States where, generally, the per capita income of rural areas and small cities tends to pull the level down. Thus the District, being highest in per capita income, receives the smallest allotment percentage (33⅓%) and a comparatively small allotment of Federal funds.

In the District of Columbia, the rehabilitation program—although operating in only one large city—has to cover all the functions and responsibilities for general program direction ordinarily assumed by State government plus the daily work with the handicapped which in other places is done by district offices in cities and counties.

With this kind of financial situation, there is no opportunity for expansion of the vocational rehabilitation program in the District.

The bill proposes that the Congress rectify this situation in a fair and sound way by providing for unique situations in other jurisdictions which are not one of the 50 States.

Under the Federal law in effect in 1965, the total expenditures by the District under this program were $1,077,376, which was shared 50% Federal, 50% State, each contributing $538,688. In 1966, financial support was the same. The allotment was $538,688, being brought to this level by the floor provisions in Section 2(a) of the Vocational Rehabilitation Act, as amended through 1965. State funds required were the same in order to comply with the maintenance of effort provisions in Section 2(b) of the Act, as amended.

Under the District's low allotment percentage (33⅓%) the Federal allotment for 1967 was $604,545. With the required matching of $538,688, the total program for the District for 1967 was $1,143,233, making a participation ratio of 53% Federal and 47% District.

As you know, Mr. Chairman, the 1965 amendments to the Act established a Federal share of 75 percent in this basic program of services to the handicapped. Yet now, in 1968, the District is receiving a Federal share of only about 56 percent. This, I believe, is obviously unfair and was not intended when the 1965 amendments were enacted.

H.R. 5801 and H.R. 5803 propose that the District of Columbia's allotment percentage be increased to 75%, the same as other jurisdictions requiring special consideration such as Puerto Rico, Guam and the Virgin Islands. We concur with this provision.

In addition, a technical but important change is recommended in the bills. They are drafted as bills "To amend the Vocational Rehabilitation Act to reduce the amount of matching funds required from the District of Columbia." As I have

stated previously, the real purpose of these bills is to provide for a larger program for the District of Columbia by increasing its Federal allotment. The proposed change would not result in less matching funds. The District government would be expected, and does expect, to expend at least as much District funds as before. Therefore, I hope the Committee will title the bill along these lines:

"To amend the Vocational Rehabilitation Act to provide a fixed allotment percentage for the District of Columbia."

Mr. Chairman, the Committee, the President and our Department have, for several years, encouraged all the State rehabilitation programs to develop as rapidly as possible, in a concerted effort to serve all the disabled who need vocational rehabilitation to become employable. We have urged these programs to increase State and local funds to match Federal funds, as an essential part of this important national effort for the disabled.

In this cooperative effort, the District program should not be hindered in its efforts to serve the disabled residents of the city whose futures depend on these services. I recommend that the committee give this legislation prompt and favorable consideration.

Miss SWITZER. It states the basis for our request for the approval of the District of Columbia allotment, H.R. 5801 and H.R. 5803.

Mr. DANIELS. All right.

Thank you.

STATEMENTS OF PETER J. SALMON, ADMINISTRATIVE VICE PRESIDENT, INDUSTRIAL HOME FOR THE BLIND, BROOKLYN, N.Y.; AND ROBERT J. SMITHDAS, ASSOCIATE DIRECTOR, SERVICES FOR DEAF-BLIND, INDUSTRIAL HOME FOR THE BLIND, BROOKLYN, N.Y.

Mr. DANIELS. Our next witness is Dr. Peter J. Salmon, administrative vice president of the Industrial Home for the Blind, Brooklyn, N.Y. Dr. Salmon, will you step forward.

Dr. SALMON. With your permission, Mr. Chairman, I would appreciate it if Mr. Smithdas could make his presentation first.

Mr. DANIELS. If you have no objection, you are listed next.

Dr. SALMON. Yes; it is all right.

Mr. DANIELS. Do you desire the witness to sit alongside of you?

Dr. SALMON. Yes.

Mr. DANIELS. Mr. Smithdas, associate director, Services for Deaf-Blind.

Dr. SALMON. Could I briefly say that Mr. Smithdas has attained a very considerable success in his own personal life and professional life. He has received both his bachelor's and master's degree, which, the master's degree, was very unusual for a deaf-blind person. He is the first one in the United States to receive it.

He has decided to devote his entire life to work for the deaf-blind in appreciation for what has happened to him, and I think you will be very much interested in his story, and I hope he will tell you a little of it in his own words.

Mr. DANIELS. Fine. You may ask him to be seated.

Dr. SALMON. Yes.

Mr. DANIELS. You may tell Mr. Smithdas he may proceed.

Mr. SMITHDAS. Honorable chairman and members of the subcommittee, I am Robert J. Smithdas, associate director, Services for the Deaf-Blind, of the Industrial Home for the Blind, Brooklyn, N.Y.

I have submitted previously a formal statement to this subcommittee but today I would like to take the opportunity of speaking extemporaneously because I would like to express what I think and

what I feel in my heart. I am especially grateful to have this opportunity to speak to this subcommittee and to tell of the problems and the needs of our deaf-blind people. I am also grateful for the fact that I have the gift of speech, to tell of those needs and problems. It is difficult to describe what deafness and blindness means to a person who has lost his sight and hearing. Blindness or deafness in themselves are serious handicaps but when they are combined together and the person is afflicted by both disabilities at the same time, the aspects of the problem are peculiarly understandable only to the deaf-blind person.

I have submitted a statement describing what it means to be deaf-blind, that from my own experience and from what I understand from dealing and working with deaf-blind men and women I know that the relative of the deaf-blind person shrinks when he has lost his hearing and sight. The relatives and in-laws he is able to reach only with his fingertips and he has special problems of communication and mobility that are unknown to any other group of disabled persons.

At the present time, there is a great need for integrated services for our deaf-blind people throughout the country. At The Industrial Home for the Blind where I have been for the past 22 years, I have come to know deaf-blind people, not only as persons but as friends. Having been a deaf-blind child myself, I also know the problems of education of deaf-blind children and realize how much skill and patience it requires to train them.

Today, we have over 500 deaf-blind children who are in need of education. At the present time, we have seven departments for special education of these children and we have schools for the blind and schools for the deaf throughout the country, but approximately only 100 of these children are being trained at this time and the others who should be educated by the same program are being neglected simply because there are not enough facilities to render these services to them.

Years ago when I went to college at St. John's University and New York University, my own efforts were considered an experiment because, you see, years had passed since the time Helen Keller graduated from Radcliffe. The fact that I was successful in my studies is not only due to my own efforts but to the faith and confidence of my family, friends, and teachers who have given me encouragement during all of these years.

Since I graduated with a master's degree in 1953, six other deaf-blind persons have gone into higher education and won degrees and are now employed in professional work. This is a small beginning. There are many deaf-blind persons who have not had these opportunities who are less fortunate than the other deaf-blind students wherever I have been. They are in need of help.

At the Industrial Home for the Blind, we have established various methods and techniques to be used in communication and mobility for the deaf-blind so that they could be placed in outside industry in employment where they could earn a livelihood and gain some measure of happiness and social well-being, while being a credit to their communities.

We know that we have the keys to help them and we have made an effort to open the doors of opportunity for them. It is difficult for a

layman to visualize what it means to be born deaf and blind. Perhaps any one of us could understand what blindness or deafness would mean to us as single disabilities, but it is infinitely more difficult to imagine what these two would mean to us if they were combined together and were to remain with us for the rest of our lives.

I have known personally the frustrations and despair that come from these disabilities, but I have also known that once a person who is deaf-blind has been given the necessary opportunities, he can regain confidence in himself and other human beings, be a credit to his community, to his family, his friends, and be a good neighbor.

Perhaps we should think of deafness and blindness as a multiple handicap because you have not only the physical disabilities of deafness and blindness but also the acute problems of mobility, communication, social adjustment, and a particular place in society.

It has become obvious to me for many years that our deaf-blind people have a life to lead and a burning desire to achieve their goal to overcome their obstacles wherever possible. When they are given opportunities for self-expression and to utilize the talents and the abilities that God has given them, they have shown that they have the courage and willingness to attain those purposes.

Last February, President Johnson made a proposal to Congress regarding the Center for Rehabilitation for Deaf-Blind Persons. All of us knew the deaf-blind would be gratified because at last we felt we were receiving the recognition which as a group has grown up and been considered a minority group. It has been overshadowed by other groups of disabled persons. We thought that the deaf-blind as a minnority should not be allowed to be neglected and forgotten. It is heartwarming and thrilling to realize that you, Mr. Daniels, and the other members of this subcommittee are pursuing this proposal and are so willing to listen to the cause of our deaf-blind people.

Today I brought with me some copies of my book of poems, which was published last November, "City of the Heart," and I would like to present a copy to each one of the members of the subcommittee. I like poetry because it gives me an opportunity to express in a few words the thoughts that come to me, gives me an opportunity to crystallize my own feelings, and I feel that in reading some of these poems you will understand and feel what I have felt regarding our deaf-blind people.

Thanks to all of you, and God bless you.

Mr. DANIELS. Mr. Smithdas, as chairman for the subcommittee, and on behalf of all of the members of the subcommittee, I want to compliment you upon an excellent presentation. I also wish to commend you for your educational, your scholastic, and occupational achievements. I am familiar with your biography and it is indeed a remarkable one. Your achievements are great, considering the disabilities that you have suffered from. Your record is absolutely outstanding. You are not only a credit to yourself and your family, but to the entire community. You are very worthy of considerable praise for what you have done.

Your coming here today to testify indicates the great need there is for this vocational rehabilitation service not only through the Federal Government, but also through the States and private organizations as well.

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In addition thereto, I want to thank you for presenting to each member of the subcommittee, a copy of your book of poems, the "City of the Heart." I assure you I shall be delighted to read it. I am certain the other members of the subcommittee will be equally interested in your book.

Does the gentlewoman from Hawaii have any questions?

Mrs. MINK. No questions, but I want to join with you in welcoming Mr. Smithdas to this committee and in extending my own personal, warmest commendations for your achievements. Persons like yourself are indeed rare in our society, and I know that the entire Nation joins with this committee in expressing our deep appreciation for your significant achievement and for your dedication to the cause of improving the welfare of those that are similarly afflicted as yourself.

As the chairman has, I have also read this very inspiring short résumé of your achievements thus far and if the committee has no objection I would like to ask unanimous consent to have this inserted immediately following the witness' testimony.

Mr. DANIELS. Without objection, it shall be so ordered.

(The biography follows:)

BIOGRAPHY OF ROBERT J. SMITHDAS

Mr. Robert J. Smithdas—author, lecturer, and poet—was born on June 7, 1925. He contracted cerebrospinal meningitis at the age of 4½ and, because of the effects of this disease, lost both his sight and hearing. He attended Western Pennsylvania School for the Blind and was a gold medalist in history in June 1940. He continued at Perkins School for the Blind in Watertown, Mass., where he was graduated with a scholastic average of 97 in June 1945. From 1946 until 1950, under the auspices of the Industrial Home for the Blind, Mr. Smithdas attended St. John's University, working toward and securing his bachelor of arts degree, which he attained cum laude, majoring in English literature and minoring in scholastic philosophy. From 1950 to 1960, he was employed in the Public Relations Department of the Industrial Home for the Blind, giving lectures on rehabilitation and the services offered by this agency.

Mr. Smithdas received his master's degree from New York University in vocational guidance and rehabilitation of the handicapped in June 1953—the first deaf-blind person in the United States to ever have earned this degree.

From 1957 until 1960, Mr. Smithdas was engaged in a research and demonstration project concerned with the rehabilitation of deaf-blind persons, in addition to his community relations work. At present, Mr. Smithdas is director of the department for the deaf-blind of the Industrial Home for the Blind, assisting supervisors in the handling of problems of deaf-blind persons employed in the Industrial Home for the Blind Industries. He also serves as community relations counselor for the Anne Sullivan Macy Service for Deaf-Blind Persons of the Industrial Home for the Blind.

Mr. Smithdas' personal achievements are as interesting as his scholastic and occupational attainments. He lives in his own apartment and cooks his own meals. He received the New York State Junior Chamber of Commerce Distinguished Service Award for 1957–58, and he is a member of the American Association of Workers for the Blind. He has written many lovely poems which have been published in booklet form and in newspapers and magazines throughout the United States. Mr. Smithdas' autobiography "Life at My Fingertips," was published by Doubleday in 1958, and continues to be a popular book in biography. He was elected to membership in the Poetry Society of America in 1960, and that same year was awarded Poet of the Year for 1960–61. He is also a member of the fellow of the International Institute of Arts and Letters since 1963, and is a member of the Knights of Columbus, third degree, Brooklyn Council No. 1119. In 1965 Mr. Smithdas was elected to Perkins Corp., Watertown, Mass., and was selected as Handicapped American of the Year 1965 by the President's Committee on Employment of the Handicapped.

Mr. Smithdas is an amateur wrestler and is a qualified American Red Cross swimmer. He enjoys dancing and fishing, and takes great delight in the New York Yankee Baseball Team. One may talk to him by printing block letters into the

palm of his hand, or by using the one-hand manual alphabet designed for Deaf-blind persons, or the Tadoma method in which he places his right thumb on the lips of the speaker and his fingers on the throat over the vocal cord, interpreting speech by the vibrations through his fingers.

Mrs. MINK. Thank you very much.

Mr. DANIELS. The gentleman from Wisconsin, Mr. Steiger.

Mr. STEIGER. No questions, Mr. Chairman. I would join with my other colleagues in welcoming Mr. Smithdas here. I can think of no more eloquent testimony for the National Center for Deaf-Blind Youth and Adults than his. This has been, for me, an "inspiration" to have him here, and I join with the other members of the committee in welcoming him here and passing along my own congratulations and commendation for what he has done.

Mr. DANIELS. Thank you, Mr. Steiger.

Dr. Salmon, you may proceed and give your statement to the committee.

Dr. SALMON. Mr. Chairman and members of the committee, I am Peter J. Salmon, administrative vice president of the Industrial Home for the Blind in Brooklyn, N.Y. I am testifying for that agency. I also have the privilege to testify on behalf of the American Association of Workers for the Blind and to present, which I have done with my testimony, a resolution endorsing H.R. 8981, particularly in relation to the National Center for the Deaf-Blind. I know the time is running short and I will try to skim through my testimony and not to repeat too much of what has been so well said before.

I would like, without casting any aspersions on Mr. Smithdas, to say about 2 months ago he caught a 60-pound tuna, and one of the things he likes, and many of the deaf-blind people do, is to fish and go deep sea fishing, and also I think you can still take his testimony, but the thing I want to point out is that that 60-pound tuna, within 3 weeks, had become 90 pounds. So, you see, he is a real fisherman.

Mr. Chairman and members of the committee, at the beginning of my testimony I have given full endorsement to H.R. 8981, and so I would like to turn immediately to the matter of the National Center for the Deaf-Blind and to say here that the President's recommendation, which has been referred to several times, gave us the first real hope that we have had in a long period of years in working with deaf-blind persons.

My own interest goes back to my early days at Perkins School for the Blind, where I seemed to have a natural affinity to these young fellows who had the double handicap. So I became sort of a helper to them and then when I graduated I came back and spent 2 years of postgraduate work on the deaf-blind and this interest has become a part of the endeavors of my whole working life from then on, which counts, they tell me, some 50 years.

It was my good fortune to have become very early associated with Helen Keller, who, like yourselves, I am sure, was and still is my idol, and we have worked very closely over the years. It was not so many years ago that severely handicapped people, including the blind, were people apart and except for some outstanding individuals who succeeded on their own, the situation was a desperate one. The change came with the advent of the Federal-State program of rehabilitation in 1943, which I mark as the great breakthrough.

I think it is to the great credit of the Government of the United States that one of the earliest concepts set up by the VRA was, they would seek out the severely handicapped and as the program and services became more sophisticated, more and more effort has been placed in this area rather than simply dealing with what has been known as the feasible handicapped person. "Most feasible" are words which today are hardly ever heard. Nearly every type of severely handicapped person has received services that have been greatly expanded over the years except the deaf-blind.

On Helen Keller's 45th birthday she came to Brooklyn to give her blessing and her encouragement to the establishment of the first formalized program for deaf-blind adults. With the usual problems of limited funds and a very meager staff, the program went forward to help some 11 deaf-blind persons whom we had identified.

Then, during the next 10 or 12 years, the program expanded considerably, so in 1956–58 we were fortunate to receive a grant from the Vocational Rehabilitation Administration to the Industrial Home for the Blind, which had for its purpose bringing together the experience of this agency and to review what had been learned and to make a projection for the future.

With the help of a number of interested colleagues in and out of the field of work for the blind, a report was made, contained in some seven volumes, which still remains the only substantial valid treatise on the adult deaf-blind.

Coincidentally, with the report, the director of the IHB was made chairman of a committee on services for the deaf-blind of the World Council for Welfare of the Blind which has some 44 nations in its membership, and the eighth volume was produced at their request in the form of a primer which could be used by any country in setting up at least a minimum program for the deaf-blind. This primer has been widely used; in fact has been out of print for some time. We know it has had a marked effect on the programs, because I have had the privilege of visiting a number of the countries.

One of the most important recommendations of this study contained in these seven volumes was the establishment of regional centers for providing services to deaf-blind persons because of the small number of such persons in each of the States.

Then, in 1962, again the VRA made a grant to carry forward the ideas contained in the report. This grant will have been in operation for 5 years as of December 1, 1967. Briefly, it set up what we have called the Anne Sullivan Macy Service for Deaf-Blind Persons, through which IHB has offered rehabilitation services to some 15 States contained in HEW regions 1, 2, and 3.

A considerable amount of interest has been developed through this program and many rehabilitations have been accomplished.

Last year the Perkins School for the Blind and the Industrial Home for the Blind cosponsored an educational project beginning April 1, 1966, and continuing to date, celebrating the centennial of the birth of Anne Sullivan, Helen Keller's beloved teacher. This endeavor brought results far beyond the expectations of the sponsors in terms of awakening interest for deaf-blind persons. In fact, it has had an effect throughout the world. We have entered, with our testimony, a copy of the centennial report, which, among other things, lists some

eight deaf-blind persons and the awards they received for their accomplishments, and even though a small number, it gives a pretty good cross-section.

We have also placed with the testimony our report, VRA Progress Report, which gives some narrative and statistical information that the committee staff, I am sure, will find of benefit and it will answer some of the questions that have been asked.

I might interpolate here. too, not as a direct result, but coming right at the conclusion of the Anne Sullivan Centennial Year, in fact on April 15, 1967, the Committee on the Deaf-Blind of the World Council for the Welfare of the Blind had the privilege of a private audience with His Holiness Pope Paul VI, and some 15 countries were represented. He was very kind, considerate, and deeply moved regarding the problems of deaf-blind persons and made a formal statement to the world regarding their needs.

Mr. Chairman and members of the Committee, the preceding sketch of the history of work for the deaf-blind does not really touch on the main problem which still confronts us. The great majority of deaf-blind persons are still languishing without service. Many of them are isolated in their communities and, indeed, in their own immediate families. Through the Anne Sullivan Macy Service, we have located several deaf-blind persons who have been in mental institutions anywhere from a few years to 30 years, persons who never should have been there in the first place and who were there only because of a lack of communication and understanding of the deaf-blind person by those in charge.

In each instance, we have been able, through long and painstaking effort, to bring each of these deaf-blind persons to a much better situation where they were able to take care of themselves and some were able to enter gainful employment.

We shudder to think of the number of such persons who undoubtedly are to be found in institutions for the retarded, as well as mental institutions; we doubt if there are one-half dozen psychiatrists in the United States who can deal with deaf-blind persons, and if any group needs that kind of help, they do.

We do not know how many deaf-blind people there are in the United States and we never will know until services are available to them. We have had this experience with other groups and other group programs, where we thought there were only a few people, only to have people practically coming out of the cracks of the walls when we had a service for them. Estimates of the numbers seem to center around 4,000 to 5,000, but we daresay that there may well be twice this number.

One of the problems of recent origin—and here, again, I think I will skip it, since it refers to the group of rubella children which has been amply covered. The proposal in H.R. 8981 for the Center seems to us to be the only possible valid solution to the development of services for deaf-blind persons throughout the United States.

The fact that they can adjust to this double handicap has been amply demonstrated over the years by even the limited number who have had the opportunity of a full group of rehabilitative services and who are carrying forward in many walks of life.

A number are married and supporting their families. Perhaps the largest number are employed in sheltered workshops. During recent years we have been able to place a number of deaf-blind persons in

various jobs in industry. I might say that we received one of the finest recommendations, totally unsought by us, by an employer just recently who employed a deaf-blind person, and we don't say every deaf-blind person will be this good, but this man was doing three times as much as the man that preceded him; so the firm is ready to employ more deaf-blind persons; and part of the reason was that the deaf-blind person keeps on the job and the other fellow wandered around and took a look; and the deaf-blind person also has demonstrated that he can do other jobs and has been seeking them; so the employer was very high in his praise of this man. I will say he is a bit unusual, too. Not all deaf-blind persons are going to be that good. They have not had the opportunity.

It will be necessary to train additional personnel, and this is very important, and to further develop and to refine the techniques now available in services offered to deaf-blind persons. A much longer evaluation and training program is vitally needed as compared with the limited amount of time that has been given to the rehabilitation of individuals in the past.

Because of the longtime neglect and lack of service for deaf-blind persons, a good deal of special training is necessary even for many deaf-blind persons who are already earning and doing fairly well. Because of the problem of communication, most deaf-blind persons will require segregated situations. This is especially true in the area of residence.

As in the case, however, of the blind and other groups of handicapped, the goal should always be to strive to bring the deaf-blind person into the community and into family life. To this end, several tasks lie ahead, not only with regard to the deaf-blind person, but very particularly with respect to acceptance of the deaf-blind individual by the public as a person and not something apart. Dealing adequately with deaf-blind persons is at least a 1-to-1 relationship. The cost of adequate service will be high, but the rewards will be commensurate.

I might mention here, a man I had to agree to put in a mental institution some 30 years ago, and my own experience was, to say the least, inept, and, as stated above, no psychiatric help was available at that time. The mental institutions themselves didn't cooperate with outside agencies as much in those days as they do now. This man we have seen several times recently and we thought that we had established communication with him only to find we were wrong.

I figure that from the money standpoint, that man in that institution for 30 years probably represents something around $300,000 in cost, to say nothing of the tragedy of the waste of a human life.

Now, I may be wrong, but my own judgment, knowing those days and knowing today, is that I believe this man under today's situation, which is not the best, would not be there.

We are working very closely with the mental institutions and our hope is that we will be able to establish such good rapport that at the point of intake, we, or some other agency, dealing with the deaf-blind, will be brought in and the deaf-blind person may never have to go into that institution.

It is hard to believe: it is hard to really convey this fact to persons who have not been connected with it. I can't say I feel a sense of guilt, but I know my nights are not good, because I know that there are

deaf-blind persons languishing in mental institutions that should not be there.

The Industrial Home for the Blind has always tried to deal with the severely handicapped and among the most severely handicapped are the deaf-blind.

I would like to conclude, Mr. Chairman, because I realize the element of time, by saying that last Saturday Mrs. Salmon and I visited Helen Keller, as we do quite frequently, and actually she had been reading so much during the night that she was sleeping when we got there; however, she woke up and I had the chance of speaking with her for just a little while. She is 87 years old and is not able now to be the advocate for the deaf-blind and to travel the world over on their behalf, but I am sure she is looking to us for this National Center, because, when I mentioned the National Center, she just squeezed my hand. She does not try to talk so much on the manual. But when I told her a few years back of the development of the Anne Sullivan program in the 15 States, she said, "Now I know my life has not been lived in vain."

Thank you.

Mr. DANIELS. Dr. Salmon, the Chair wishes to thank you for your very interesting and informative testimony. I was glad to hear you mention the name of Miss Keller. It was the hope of this committee that we would be able to have the benefit of her testimony, but my staff director informed me she was ill and confined to the hospital. We are sorry to hear that.

Dr. SALMON. She is at home. I might say she has the most, talking about dedicated, dedicated and loving care that anybody could possibly have night and day and she is living out these remaining years of her life in quiet and certainly under the best possible circumstances.

Mr. DANIELS. She is a great woman. Will you please convey to her my personal regards for continued good health for a great many years.

Mr. LEHMAN. Chairman Daniels, could Mr. Smithdas add a word?

Mr. DANIELS. Surely.

Mr. SMITHDAS. Mr. Chairman, I would like to make a comment. Dr. Salmon has been the father of the rehabilitation for the deaf-blind for nearly 50 years. No one has ever devoted more time and given more devotion to our deaf-blind people. He is known by our deaf-blind, men and women all over the country, and they regard him with respect and affection and love.

Mr. DANIELS. It is very, very kind of you to say that.

In fact, the Chair was going to comment that Dr. Salmon, indeed, has a distinguished record of achievements, also. He holds many, many honors, I know. He serves as the Chairman of the U.S. Labor Department Advisory Committee on Sheltered Workshops; he has served on the National Advisory Council on Vocational Rehabilitation, and, too, the greatest honor is that he was the recipient, in his field, of the Shotwell Award as well as the Migel Medal.

Dr. SALMON. I would be glad to answer any questions, if I can.

Mr. DANIELS. Well, that bell is an indication the House is now going into session, and if there is no objection, we will continue for a few moments.

I notice, Dr. Salmon, that you have read your notes with your paper very, very close to your face. You are suffering from some disability, is that true?

Dr. SALMON. I wouldn't say I am suffering from it, because I had it all of my life and I never looked at my blindness as anything but a blessing because the other members of my family didn't have the opportunity that I had and I wouldn't trade what I have had for sight. So it has been no problem. I have the large type here and we have developed for people like myself, who have some remaining sight, a program of what we call "optical aids," low-vision program, where we give a very extended examination and sort of tailormake the actual lenses that are to be used.

This program has been in effect now for about 15 years, and I am not the press agent for the VRA, but the VRA has spent a very considerable amount of money on this, so there are now some 50 different clinics over the United States and this has an application to the deaf-blind as well as the blind because everyone who comes to our agency has a very careful eye examination also as well as very careful hearing examination.

Any deaf-blind person that comes to us, we will deny he is deaf-blind until we can have a most thorough examination of our own regardless of what has been said by anyone else.

Mr. DANIELS. Do you feel the proposed program for the deaf-blind—setting up these national centers—should be limited to persons totally blind, or totally deaf, or a combination?

Dr. SALMON. No; I think those are the ones that need it the most, but I think we should go at least as far as they do in the field of work for the blind; that is, accept those persons who have some remaining vision, which we included in the legal definition of blindness.

Mr. DANIELS. What is that definition?

Dr. SALMON. It is—the technical definition is—20 over 200, which, in the very simplest terms, means that the person who has 20 over 200 can see at 20 feet what a person of normal sight of 20 over 20 can see at 200 feet. There are many other factors but that is it. I have what is known as 12 over 200. For instance, I can read my testimony by holding it close to my eyes because it has been prepared in large type.

Then with respect to the deaf people, we consider a person deaf if he cannot identify connected speech with or without a hearing aid.

There are degrees of loss of hearing as there are of loss of sight and in the case of children, the educators in the field have felt that there must be some latitude with these children so that if there are remedies, they will get them as early as possible. If you just take a person who is profoundly deaf, has no hearing at all, and is totally blind, it will limit the group. While the emphasis needs to be placed here, it should not be to the exclusion of a person having some residual hearing, because of the limitation of the double handicap.

Mr. DANIELS. In other words, you are saying to the committee there should be no restriction or limitation placed on either deafness or blindness?

Dr. SALMON. No; I think there is a need, and I am sure Miss Switzer would agree, there is a great need and part of the work of the centers would be to develop reliable statistics which we do not have now, to develop reliable criteria so that we can eventually come up

with a much better definition of both blindness and deafness with respect to deaf-blind persons at least.

In the field of work for the blind, we are not too happy with the definition that exists, the legal definition, but it is the best we have been able to come up with, and we have been able to live with it for about 35 years; so the time may come when we can refine the defin - tion. Some people have difficulty in believing a person is blind who has some remaining vision as I do; they think of blindness as being total lack of sight.

Mr. DANIELS. Dr. Salmon, you served since last year as the administrative vice president of the Industrial Home for the Blind?

Dr. SALMON. Yes.

Mr. DANIELS. How many blind or deaf-blind persons does that institution care for?

Dr. SALMON. We have a register of blind persons of 7,000. This covers Long Island primarily, although we have always made some of our specialized services available to other States out of our service area. With respect to the deaf-blind, I think our register now is just under 200. This includes people that we have taken from upstate New York or from other States where they were not receiving service and where the Industrial Home for the Blind was able to offer the service. This goes back practically all the way to 1945, when we formalized the program.

Mr. DANIELS. Is this a private or public agency?

Dr. SALMON. A private agency.

Mr. DANIELS. When you refer to service of so many thousands of deaf persons, or so many thousands of blind persons, do you mean that these are persons to whom this institution has rendered service in the past, or at the present time?

Dr. SALMON. During the past year.

Mr. DANIELS. On a term basis, how many persons do you serve?

Dr. SALMON. We would have rendered to the 7,000 at least one important service during the year.

Actually, it breaks down so that at any one time we are probably dealing intensively with about one-third of the register. The others we may deal with intermittently, as they have a problem with which we can be of help.

Mr. DANIELS. Do you have any inservice residence, blind or deaf?

Dr. SALMON. Yes, we have a residence for deaf-blind men and we have a residence that we make available for deaf-blind women trainees. We do not have a separate residence for deaf-blind women.

These trainees are those who are coming through the rehabilitation program for rehabilitation. I think it is interesting that actually there is now no industrial home for the blind at all. We were able to develop over the years, and through the great help of the Federal-State program, opportunities for the younger blind persons who were the ones considered suitable for the Industrial Home for the Blind, so they now can live outside on their own and we would not today establish an industrial home for the blind.

There is a need still for older blind persons and we have a residence for them. So that we converted the actual residence, the Industrial Home for the Blind, to a residence for deaf-blind persons who are in the working age group.

We have some 21 living there at the present time.

Mr. DANIELS. This is taken care of by private funds?

Dr. SALMON. Yes, except for the small number of individuals who receive public assistance.

Mr. DANIELS. There has been reference in the testimony earlier today to the Perkins School up in Watertown, Mass.

Dr. SALMON. Yes.

Mr. DANIELS. Would you describe that institution to the committee and give us some background material on it?

Dr. SALMON. Yes. The Perkins School is one of three oldest schools in the United States. The other two are the New York Institute for the Blind at Pelham and the Overbrook School just outside of Philadelphia. Actually, they started so close together that after over almost a century and a half they still have some debates as to who started first.

But Perkins is a private—privately operated school and it has over the years taken children not only from its immediate area in Massachusetts but a number of other States, and then, of course, Perkins is the school where Laura Bridgeman received her education, which was mostly training. She never achieved too much, but she was able to take care of herself and lived a very good life. This was around, I think, 1838, and she was, of course, the first deaf-blind person to be so trained; so that when the problem of Helen Keller came half a century later, Perkins had in the meantime trained some other deaf-blind persons and were in a position to go forward with this very stupendous problem, and Anne Sullivan, who also was educated at Perkins, was one of those who had this dedication that Mary Switzer spoke of, which is the greatest ingredient, and she also had a number of other qualities, including her determination that she was not going to let this little rascal Helen Keller overcome her.

Of course, they became such wonderful friends, and I think it is to Anne Sullivan's credit that she would never allow herself to overshadow Helen Keller. She always wanted her to come first. This is one of the reasons we set up the centennial, to honor this woman, who had a profound effect on the education, not only of deaf-blind children, but of other handicapped children as well.

Perkins School provides education all the way from kindergarten through the high school and prepares the students for the workaday world, and an increasing number go on to higher education. Miss Switzer made the address to the graduates in June, and a number of the graduates were going on to college.

This is a big change. As recently as 35 or 40 years ago, at the outside, you could hardly matriculate a blind person in a college in the United States. In the old days, many of these people who went to college, who managed to get in, couldn't make the grade in the workaday world because they were not accepted. The lawyers and others went into professional work and they were completely rejected even though they had the brains and background and training and everything else.

Mr. DANIELS. The Chair desires to ask one question more. The hour is getting late and I want to give my colleagues the opportunity of addressing you.

Dr. SALMON. Chairman Daniels, I am afraid you made a mistake in asking me about Perkins because I have been tempted to go on and on.

Mr. DANIELS. Are services rendered by Perkins to these children from the elementary grades up to high school and preparing them for college, are they rendered free of charge, or is there a fee attached?

Dr. SALMON. There is a fee attached. With respect to the deaf-blind, the fee is $4,500. Actually Perkins feels that it costs between $9,000 and $10,000 to educate the child.

Mr. DANIELS. Is that an annual fee?

Dr. SALMON. Yes. That fee is paid very often by the State, or a combination of the State and the voluntary agencies, as in our own case.

Mr. DANIELS. Who makes up the difference between the $4,500 fee charged and, you say, the cost of $9,000?

Dr. SALMON. Perkins has a large endowment. They are, you know, about 135 years old or so and they have built up a wonderful reputation and built up a very substantial endowment fund. Dr. Waterhouse will surely be testifying, when the bill being contemplated for education of deaf-blind children is ready. I know he will give you much more information.

Mr. DANIELS. Our colleague from Wisconsin, Mr. Steiger.

Mr. STEIGER. I don't have any questions, but I will ask, how long has the Industrial Home for the Blind been in existence?

Dr. SALMON. Since 1893.

Mr. STEIGER. By what funds are you supported as a private organization?

Dr. SALMON. Voluntary funds. We receive tuition for people who go into the rehabilitation center, and we have also, as I indicated, received some grants from Government agencies. We have one now in addition to the VRA grant; we have one on the aging where we hope to be able to place blind persons in homes for the aging and to give them the necessary help, so that they can live there, and also to help the institution to be able to deal with the blind person, which they have not been able to do in the past.

I would like, Mr. Chairman—and I know it is late—but I would like to go back to a question asked earlier by Mr. Steiger—that is, regarding Holland; and I didn't have the opportunity to check on Holland and its work for deaf-blind persons. I checked some 12 countries, but I did go to Holland purposely to see a friend who is a deaf-blind man who received his doctorate in mathematics when he was 38. He has been working for the Netherlands Telephone & Telegraph Co. and he carries on his work from his home.

He is totally deaf and blind, but has retained his speech. He sets up formulas for the computing machines and it is done through an ingenious device. He lives about 40 miles away. The speech at the sending end is transmitted into electrical impulses and then comes out in braille on his machine and then he, being able to speak, talks and gives them his formulas. He has been working for them, to my knowledge, for about 15 years. He is an intellectual and is a tremendous person.

Mr. STEIGER. Thank you very much.

Dr. SALMON. It shows what can be done with the handicapped

Mr. STEIGER. This has been a very moving and a very good day. Thank you for coming, and thanks to Mr. Smithdas for his book, which I look forward to reading. Thank you both very much.

Mr. DANIELS. Dr. Salmon and Mr. Smithdas, I want to compliment you again for your wonderful testimony here today. It has been most illuminating and enjoyable and it was a pleasure to have you here, and likewise, Miss Switzer. I was glad to have you here.

Miss SWITZER. I was glad to be here.

Mr. DANIELS. We will stand adjourned until 10 o'clock tomorrow morning.

(Whereupon, at 12:15 p.m. the subcommittee adjourned, to reconvene at 10 a.m. Wednesday, July 19, 1967.)

AMENDMENTS TO THE VOCATIONAL REHABILITATION ACT

WEDNESDAY, JULY 19, 1967

HOUSE OF REPRESENTATIVES,
SELECT SUBCOMMITTEE ON EDUCATION
OF THE COMMITTEE ON EDUCATION AND LABOR,
Washington, D.C.

The subcommittee met at 10:15 a.m., pursuant to call, in room 2157, Rayburn House Office Building, Hon. Edith Green, presiding.

Present: Representatives Green, Mink, Reid, and Steiger.

Also present: Daniel Krivit, counsel.

Mrs. GREEN. I think we will not wait any longer for some of our colleagues. The meeting of this subcommittee, the Select Education Subcommittee, will come to order. The chairman of the subcommittee has another meeting this morning at which he has to present testimony, and so he has asked me to preside.

Our first witness this morning is no stranger to the subcommittee, a friend of many, many years standing, one for whom this subcommittee has a great deal of respect and admiration.

Mr. Whitten, would you present your statement, in any manner that you wish?

STATEMENT OF E. B. WHITTEN, EXECUTIVE DIRECTOR, NATIONAL REHABILITATION ASSOCIATION, WASHINGTON, D.C.

Mr. WHITTEN. Thank you, Madam Chairman.

It is a real pleasure and opportunity to be able to testify before a subcommittee which you chair. It brings up some of the memories of our work together in 1965, and I think all of us take pride in some of the accomplishments of those days.

With your permission, I would like to ask that my entire statement be inserted at the opening of my testimony.

Mrs. GREEN. Without objection, it will be so ordered.

(The statement referred to follows:)

STATEMENT OF E. B. WHITTEN, EXECUTIVE DIRECTOR, NATIONAL REHABILITATION ASSOCIATION

Mr. Chairman, the National Rehabilitation Association, which I represent, is a national voluntary organization of 28,000 individuals and 600 agencies, all of whom have a major concern for the care and rehabilitation of handicapped people. The membership of the Association is largely professional, but not exclusively so. It includes large numbers of administrators, counselors and physicians, and smaller numbers of social workers, physical therapists, occupational therapists, speech and hearing pathologists, and other professionals active in rehabilitation. Its 6,000 lay members are public spirited citizens who have a lay interest in the rehabilitation of handicapped people in their respective communities and who

support the National Rehabilitation Association as one method of achieving their aims of more comprehensive and better services for handicapped people. Members of the National Rehabilitation Association work in the state-federal rehabilitation programs and other federal agencies, rehabilitation centers, sheltered workshops, voluntary health agencies, etc.

Today, I want to speak in support of H.R. 8981, which is cited as the "Vocational Rehabilitation Amendments of 1967." In so doing, I, first, want to say a few words about the point-of-view from which this testimony is being presented.

PROGRESS UNDER PUBLIC LAW 333 OF 89TH CONGRESS

Members of this committee are aware of the fact that important amendments to the Vocational Rehabilitation Act were enacted by the 89th Congress. These amendments became law in November, 1965. The regulations governing most of the provisions of the Act were issued in January, 1966; regulations governing certain new provisions of the Act were not promulgated until early 1967. It is important, therefore, to bear in mind that no parts of the new legislation have been in effect more than 18 months and that some parts have been effective only a few weeks. It is too early, of course, to make a full appraisal of the effects of this legislation upon services to the handicapped, although some facts are evident.

In the main, we are confident that the expectations of Congress for the expansion and improvement of vocational rehabilitation programs are being realized. The Statewide Planning Program, which is expected to result in the development of statewide plans for meeting all of the vocational rehabilitation needs of all of the handicapped by 1975, is in full swing. The state vocational rehabilitation agencies have made phenomenal progress in recruiting and training staff to enable them to meet their expanded responsibilities. Administrative reorganization to increase the efficiency of state vocational rehabilitation agencies is being undertaken in many states. New positions of leadership in the areas of research, rehabilitation facilities, planning, etc., are being established and filled. Comprehensive staff training programs are under way not only for new workers but to reorient seasoned workers for new and greater responsibilities.

Increases in state appropriations have been substantial. The fear that some states might take advantage of the higher federal share to hold the line on their own appropriations or even to decrease them has been found to be without sound grounds. The new definition of the handicapped individual in the regulations is gradually catching on, resulting in an expansion of the concept of eligibility for the program. Standards by which economic need for services are determined are being liberalized in many of the states.

Already the number of individuals being rehabilitated in the state-federal rehabilitation program is increasing substantially. The rate of increase will certainly step up when newly hired staff is able to meet full production schedules. There is a lag of at least one year between the time an individual is hired and the time that reasonable production can be expected. In addition, frequently, seasoned personnel must be moved into supervisory positions, as programs expand, which has a tendency to cut down on the production. All in all, we believe that the increase in the number of people served and the number of people being rehabilitated is satisfactory.

As already stated, these results are being attained as a result of the 1965 legislation. Particularly helpful has been the increase of the federal share of the state-federal rehabilitation expenditures, the availability of funds for expansion and innovation, and the new programs to assist workshops.

Particularly encouraging has been the very effective cooperation of the Vocational Rehabilitation Administration and the state vocational rehabilitation agencies in putting these new programs into effect. This has undoubtedly resulted from the policy of the Vocational Rehabilitation Administration to involve state vocational rehabilitation agencies and the voluntary rehabilitation effort in all stages of the decision-making process and the operation of these programs as a true state-federal partnership. Also helpful has been the policy of VRA to delegate responsibilities to their regional offices. Members of Congress and others have frequently stated that the vocational rehabilitation program is probably the best single example that can be found of a sound and effective state-federal partnership in a program of services for people. This kind of relationship can overcome difficulties which might, otherwise, impede the progress of a program.

AREAS OF LAG

As I have stated, the programs are developing about as well as might have been expected, but there have been some disappointments.

In spite of the substantial increases in state funds, there is still a big gap between the amount of money which is allotted under Section 2 of the Vocational Rehabilitation Act and the amount that is utilized by the states, this resulting from the fact that state legislatures are not yet taking full advantage of the higher federal allotments. Another disappointment has been that the Administration has not recommended the full amounts authorized for rehabilitation facilities under Section 12 of the Vocational Rehabilitation Act. In my opinion, Congress expected this program to become the principal means of financing vocational rehabilitation facilities. The amount being appropriated, however, is so small, and the apportionments to states so meager, that it has been most difficult to make substantial progress under this section.

Another disappointment has been in the delay in getting the training services program for handicapped people in workshops and rehabilitation facilities under way. This is a new approach to the provision of services under the Vocational Rehabilitation Act. The promulgation of regulations governing this section had to await recommendations of a newly formed National Policy and Performance Council, and delays in the appointment of this Council contributed substantially to the delay in getting this program under way. The first few grants have just been made.

Another unexpected problem, at least to us, has been the fact that legal counsel ruled that appropriations to implement the program of technical assistance to workshops (Section 13) was a salary and expense item. This has meant that the use of funds for technical assistance has had to compete with personnel and other administrative needs in VRA, and this has made the administration of the program difficult. Another disappointment has been that appropriation for research training has been far less than the amounts authorized in the law.

In spite of these problems, I want to repeat that, in balance, things are strongly positive. Handicapped people and everyone involved professionally in serving them have every reason to be extremely grateful to the 89th Congress for the passage of Public Law 89-333.

STUDY UNDERWAY

The National Rehabilitation Association is now making a detailed study of the effects of P.L. 89-333 on the rehabilitation of handicapped people. Constructive as its results are, we believe that experience will point the way to improvements. Early next session of this Congress, the National Rehabilitation Association expects to be ready to recommend to this committee amendments to strengthen the Act in a number of ways. We understand that the Administration is making its own study and will probably be in a position to make recommendations at the same time. In the meantime, all of us agree that certain steps need to be taken this year. Since there is general agreement with respect to certain needs and what should be done to meet them, any delay would seem unjustified. H.R. 8981 is the Administration's proposal to meet these needs, and we concur heartily in the recommendations, although we shall suggest a change in one of the sections and shall make two or three additional recommendations.

GRANTS TO STATES

Section 2 of H.R. 8981 extends appropriation authority for two additional years, recommending an allotment base of $500 million for fiscal 1969 and $600 million for fiscal 1970. It is very important that an extension be made this year. Since appropriation authority expires June 30, 1968, it will be impossible for the Vocational Rehabilitation Administration to give estimates to the states of the availability of federal funds for 1969 until such extension is made. Over one-half of the state legislatures are in session next year. There will be a great deal of confusion and uncertainty, unless the authority for appropriations is extended during this calendar year. We think the amounts recommended in H.R. 8981 are reasonable. It is the declared policy of Congress that this program be expanded as rapidly as the states can use the money wisely and economically. Since the tooling up process will be substantially completed by June 30, 1968, the states should be ready to use substantially larger sums in the provision of rehabilitation services to increasingly large numbers of handicapped people.

Much of the expansion to be expected in future years will be in developing programs in cooperation with other agencies who have responsibility for some aspects of the needs of handicapped individuals. Particularly significant will be cooperative agreements between the vocational rehabilitation agencies and the public schools for the rehabilitation of handicapped individuals coming through special education classes; cooperation of vocational rehabilitation agencies with

mental hospitals and mental health centers in the rehabilitation of the mentally ill who receive medical services under the mental health programs; the cooperation of vocational rehabilitation agencies with correctional institutions in the rehabilitation of public offenders; cooperation with schools and homes for the mentally retarded in the rehabilitation of individuals undergoing services in such programs, etc. Initiated, in the main, by the vocational rehabilitation agencies, these cooperative programs are paving the way for much more comprehensive and effective services to many handicapped individuals. The advantages of these cooperative agreements are many. They bring rehabilitation services to an individual in a familiar setting (school, hospital, etc.); the services are available before the individual becomes a "drop-out," which condition usually intensifies the problem; gaps in services are more quickly identified and can be bridged by rehabilitation services; the entry of rehabilitation to the institutional setting is an invigorating influence upon the practices of the institutions; and often the contribution of the "third party" in cash or services may be used as state funds to match federal funds under the Vocational Rehabilitation Act. In the years immediately ahead, we anticipate a much expanded program of cooperation between the vocational rehabilitation agencies and the manpower agencies of the country. There seems little doubt that this interagency cooperative program in rehabilitation is the most advanced of any series of interagency relationships now under way in the area of services to people, and it will be watched with great interest by all who are concerned with coordination of effort in federally supported programs.

In extending the appropriation authority, we recommend to the committee that it delete subsection (c) of Section 2. At the present time, the Act specifies that allotments are to be made on the basis of the amounts authorized in the law. Naturally, Congress has felt the obligation to appropriate all of the money that is required to match state money expended for vocational rehabilitation services within the limitations of the allotment. This plan of financing has worked very well.

As we interpret paragraph (c) it means that although allotments would continue to be made on the basis of the amounts authorized, Congress would no longer be obligated to appropriate all the funds required to match state expenditures within these allotments. We think this could be damaging to the program psychologically as well as in fact.

DEVELOPMENT OF COMPREHENSIVE PROGRAM

As already indicated in this statement, the statewide planning effort from which is to come the blueprint for a program of services which will meet the needs of all handicapped adults by 1975 is in full swing. The authority to appropriate funds for these studies expires June 30, 1968. Section 3 would extend this through June 30, 1969. The two-year period for the studies would probably have been inadequate in any case, judging from the experience of other agencies undertaking similar studies, but the fact that funds were not available for planning purposes until early 1966, and that project applications had to be developed and staff hired after this date resulted in very few studies actually getting under way before the end of fiscal 1966. The additional year requested in Section 4 is absolutely necessary, if a complete and business-like job of statewide planning is done.

CENTERS FOR DEAF-BLIND YOUTHS AND ADULTS

Knowing that a number of witnesses at this hearing will concentrate upon this section of the bill, this testimony will deal with it briefly. Undoubtedly, there is no more difficult job in rehabilitation than the rehabilitation of the deaf-blind. Encouragingly, however, it has been demonstrated that when a combination of circumstances can be brought about, such rehabilitation can be complete and adequate. At a National Rehabilitation meeting in Jackson, Mississippi, recently, the luncheon address was delivered by a deaf-blind girl who is doing graduate work at the University of Mississippi and who expects to be a teacher. Those best acquainted with her are sure she will succeed.

The relatively small number of such individuals has made it difficult, if not impossible, to develop any real network of facilities to serve them. As a result, individuals receiving such services are having to be sent to a relatively small number of institutions. The time is long overdue when a step should be taken such as contemplated in Section 3 of the bill. The knowledge and techniques flowing from such a center should enable other rehabilitation centers to work more effectively with the deaf-blind. We hope the authority requested in this section is granted.

SERVICES FOR MIGRATORY AGRICULTURAL WORKERS

Special Section 5 establishes a program of project grants for services to migratory agricultural workers. The problem of rehabilitation is, of course, only one of the problems encountered by one who tries to plan for the general welfare of migrant workers. It is, however, an important one. It is appropriate that this be a special project program, since the problem is not uniform throughout the country, and state rehabilitation agencies have not found it practical to develop such programs under their basic state authority. The migratory nature of these workers and their miltifaceted problems make necessary programs of a kind not normally available under the Vocational Rehabilitation Act. Regulations governing the expenditure of funds on special projects can be more liberal. We believe the approach taken in Section 5 of the bill is the proper one to get maximum results. It is understood that the state vocational rehabilitation agencies will be cooperating with other state and local agencies who have related responsibilities in connection with migrant workers.

RESIDENT REQUIREMENTS

Section 6 of the bill amends the Vocational Rehabilitation Act by requiring that state plans provide that residence requirements will not be imposed, which exclude from services under the plan any individual who is present in the state. We are not sure of the extent to which residential requirements for services by state vocational rehabilitation agencies have interfered with the provision of rehabilitation services to non-residents. The state vocational rehabilitation agencies have found it possible to work together to serve individuals who may be changing their state of residence. For instance, services may have been started for an individual in one state, continued after the individual has moved to another state, until such time as residence has been established in the second state. This process, although it will work, is cumbersome, and everyone would agree, I think, that it would be better if every individual needing services could get the service wherever he happened to be residing. At one time, a proposal of this kind would have met with determined opposition from some of the states. We have had no indications that this provision meets objections at this time.

ADDITIONAL PROPOSALS

As indicated in the opening paragraphs of this statement, we wish to suggest some amendments to H.R. 8981, mainly in the way of additions. The amendments we propose are as follows:

1. Language Governing Appropriations

In the part of this statement having to do with renewing appropriation authority under Section 2 of the Vocational Rehabilitation Act, we stated our objection to Subsection (c) of Section 2 on Page 2 of the bill. We repeat, our request is that this section be deleted.

2. Family Services

A problem of increasing magnitude arises from the fact that vocational rehabilitation services may be made available to a handicapped individual, but cannot be available under any circumstances to a member of the family other than the disabled person. Many of the clients being served by the vocational rehabilitation agencies at the present time have problems of such nature that solution is impossible outside the context of the whole family. This is particularly true in serving public offenders, the mentally ill, the mentally retarded, etc.

Accordingly, we ask the Subcommittee to consider amending Section 11 of the Vocational Rehabilitation Act by inserting a new Subsection (b) which would read:

"(b) Any of the services listed in Subsection (a) of this section shall be available to members of the family of the handicapped individual, under regulations of the Secretary, when such services are necessary to assure the rehabilitation of the handicapped individual."

Illustrations of the need of such services are as follows: It may be necessary to train a wife to work with her blind or otherwise disabled husband in a business enterprise. It may be necessary to provide transportation for spouse and children of a handicapped individual to a locality where work is available for the handicapped individual. Supplementary maintenance for family may be required during the period the handicapped individual is undergoing rehabilitation and may not be available from other sources. Counseling services to family members may be needed in connection with the return of a mentally ill person or a public offender to his home following institutionalization.

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3. Rehabilitation Facilities, Section 2

The definition of the establishment of a rehabilitation facility in Section 11(f) should be amended to permit the use of funds appropriated under Section 2 of the Vocational Rehabilitation Act to be used for new construction as well as for expansion, remodeling, or alteration of existing buildings. The additional words should be inserted in (f)(1) and (f)(2).

The definition of vocational rehabilitation services in the Vocational Rehabilitation Act includes the establishment of workshops and rehabilitation facilities. In both instances, establishment is defined to mean the expansion, remodeling, or alteration of existing buildings but to exclude new construction. This definition dates from the 1954 Amendments, which included rehabilitation facilities in the definition of rehabilitation services for the first time. We believe the definition is needlessly restrictive and should be amended to include new construction. This is particularly important in light of the fact that inadequate sums are being appropriated for rehabilitation facilities under Section 12. This amendment would enable states to use funds allotted under Section 2, which otherwise could not be used, to construct badly needed new rehabilitation facilities. In doing this, we suggest that the committee limit the proportion of the total funds allotted to a state under Section 2 that can be spent for rehabilitation facilities to 10 per cent of its total allotment. This limitation would make clear that Congress intends that allotments under Section 2 be used principally for supporting the state-federal rehabilitation services program to individuals.

4. District of Columbia Allotment

Circumstances have shown that the unusual situation of a high per capita income and a high proportion of handicapped people needing rehabilitation services in the District of Columbia results in allotments under Section 2 of the Vocational Rehabilitation Act to the District of Columbia being utterly unrealistic in terms of the need of handicapped people in that jurisdiction. Accordingly, we are requesting that the District of Columbia cease to be regarded as a state in the allotment of funds. This would mean the deletion of the term "District of Columbia" from Section 11(g) and the insertion of the term "District of Columbia" in Section (h)(1)(D). This would result in an increased allotment of funds for the District of Columbia. It would not affect the federal share, which is the same in all jurisdictions.

Mr. WHITTEN. I shall then read certain sections and probably interpolate at some points. In order that you may follow me in the text, if you care to do so, I will begin at the bottom of the first page.

I think it is important that the committee understand the viewpoint from which we are presenting this testimony.

Members of the committee are aware of the fact that important amendments to the Vocational Rehabilitation Act were enacted by the 89th Congress. These amendments became law in November 1965.

The regulations governing most of the provisions of the act were issued in January 1966; regulations governing certain new provisions of the act were not promulgated until early 1967.

It is important, therefore, to bear in mind that no parts of the new legislation have been in effect more than 18 months and that some parts have been effective only a few weeks. It is too early, of course, to make a full appraisal of the effects of this legislation upon services to the handicapped, although some facts are evident.

In the main, we are confident that the expectations of Congress for the expansion and improvement of vocational rehabilitation programs is being realized.

The statewide planning program, which is expected to result in the development of statewide plans for meeting all of the vocational rehabilitation needs of all of the handicapped by 1975, is in full swing.

The State vocational rehabilitation agencies have made phenomenal progress in recruiting and training staff to enable them to meet their expanded responsibilities. Administrative reorganization to increase

the efficiency of State vocational rehabilitation agencies is being undertaken in many States.

New positions of leadership in the areas of research, rehabilitation facilities, planning, and so forth, are being established and filled.

Comprehensive staff training programs are underway not only for new workers but, this is very important, to reorient seasoned workers for new and greater responsibilities.

Increases in State appropriations have been substantial. The fear that some States might take advantage of the higher Federal share to hold the line on their own appropriations or even to decrease them has been found to be without sound grounds.

The new definition of the handicapped individual in the regulations is gradually catching on. I might say not as rapidly as we would like, but still it is catching on, resulting in an expansion of the concept of eligibility for the program. Standards by which economic need for services are determined are being liberalized in many of the States.

Already the number of individuals being rehabilitated in the State-Federal rehabilitation program is increasing substantially. The rate of increase will certainly step up when newly hired staff is able to meet full production schedules.

There is a lag of at least 1 year between the time an individual is hired and the time that reasonable production can be expected. In addition, frequently seasoned personnel must be moved into supervisory positions, as programs expand, which has a tendency to cut down on the production. All in all, we believe that the increase in the number of people served, and the number of people being rehabilitated, is satisfactory.

In accomplishing these goals, it should be pointed out that they are being attained as a result of this 1965 legislation. Particularly helpful has been the increase in the Federal share of the State-Federal rehabilitation expenditures, the availability of funds for expansion and innovation, and the new programs to assist workshops.

I want to say, too, as I summarize this next paragraph, that very important in this has been the very fine, effective cooperation between the State agencies and the Vocational Rehabilitation Administration, which, Madam Chairman, we attribute to the policy of the Vocational Rehabilitation Administration to involve the State rehabilitation agencies and voluntary agencies at every stage of the decisionmaking process, which has prevented the disruption and confusion that sometimes arises when such policies are not followed.

Also, the policy of VRA to delegate a great deal of responsibility to the regional office for the approval of programs has proved very helpful, and it is most encouraging to report that there is what might be called almost an ideal relationship between the States and the Federal Government in the administration of this program.

It would not be accurate for me to imply that everything has gone on just exactly like we would have had it in this 18-month period.

As I have stated, programs are developing, I suppose, as well as could be expected, but there have been some disappointments. In spite of the substantial increase in State funds, there is still a big gap between the amount of money which is allotted under section 2 of the act, and the amount that is being utilized by the States, this resulting from the fact that State legislatures are not yet taking full advantage of the higher Federal allotments.

Another disappointment has been that the Administration has not recommended here the full amounts authorized for rehabilitation facilities under section 12 of the Vocational Rehabilitation Act.

Even in the third year of the act, only a little over one-third of the appropriation authority has been used.

In my opinion, Congress expected this program to become the principal means of financing vocational rehabilitation facilities.

The amount being appropriated, however, is so small, and the apportionments to States so meager, that it has been most difficult to make substantial progress under this section.

Another disappointment has been in the delay in getting the training services program for handicapped people in workshops and rehabilitation facilities underway.

This is a new approach to the provision of services under the Vocational Rehabilitation Act. The promulgation of regulations governing this section had to await recommendations of a newly formed National Policy and Performance Council, and delays in the appointment of this Council contributed substantially to the delay in getting this program underway.

The first few grants have just been made.

Mrs. GREEN. Could I interrupt there? What was the delay on that?

Mr. WHITTEN. Well, the bill required the appointment of this National Policy Performance Council, and stated that it would have to recommend the standards under which the Secretary would make grants to workshops under this program.

There was great delay in the Department or the White House—I never know quite where to assess the delay—in getting this Council appointed. It has performed quite efficiently and expeditiously since its appointment.

Mrs. GREEN. When was it finally appointed?

Mr. WHITTEN. I believe it must have been 6 or 8 months after the passage of the act. And then it had to meet several times, and I believe the first grants under this program have been made within the last month or two.

Another unexpected problem, at least to us—that is, it surprised us; the administration may not have been surprised; I am not sure about that—has been the fact that the legal counsel ruled that appropriations to implement the program of technical assistance to workshops (sec. 13) was a salary and expense item.

This has meant that the use of funds for technical assistance to workshops has had to compete with personnel and other administrative needs in VRA, and this has made the administration of the program difficult.

By the way, we had assumed that this would be an earmarked sum which would be used for this purpose, and it did not turn out that way.

Another disappointment has been that the present appropriations for research and for training have been far less than the amounts authorized by law. Although I want to say then in fairness that there have been small, steady increases in the amounts appropriated for these purposes.

Now in spite of these problems I want to repeat that, in balance, things are strongly positive. Handicapped people, and everyone involved professionally in serving them, have every reason to be

extremely grateful to the 89th Congress for the passage of Public Law 89–333.

The next paragraph I want to summarize briefly by saying that it is too early for us to come to definitive conclusions with respect to everything that we think might be done in order to improve vocational rehabilitation legislation. We're now undertaking a study of the legislation and hope by next spring to be able to make a fuller appraisal of the effect of this law, and to come to the committee with recommendations, if they are found needed, for ways that the program can be served.

I want to say that we realize that we have a very wonderful law, but, as you know, as times change and clientele changes, new problems that arise, and sometimes, amendments to the act can help to achieve the desirable purposes.

Now, I am going to go immediately to the bill. Section 2 of this bill you are considering extends appropriations for 2 additional years, and I think everyone understands the importance of making this determination this year, for State legislatures will be meeting next year, and they need to know, of course, what the allotments will be. Most States appropriate for 2 years at a time, and I think this is just commonsense to renew the appropriations authority in this calendar year.

The amounts, we think, are reasonable. They permit an orderly expansion of the program for 1969 and 1970, and we have no complaint to offer about the amounts that are being recommended for these 2 years.

At this point, I want to say just a word about how the agencies are using and are going to use a great deal more money in doing what Congress has asked them to do.

Much of the expansion to be expected in future years will be in developing programs in cooperation with other agencies who have responsibility for some aspects of the needs of handicapped individuals.

Particularly significant will be cooperative agreements between the vocational rehabilitation agencies and the public schools for the rehabilitation of handicapped individuals coming through special education classes. I really hope that members of the committee will have the opportunity to study in detail this very promising, tremendous program which has resulted for the first time in all these years in vocational rehabilitation agencies and departments of education that have responsibility for the education of handicapped people, really working out practical programs to assure a continuum of services for these kids, as they finish the formal education that they are capable of receiving, and move on out into the community.

This is most promising, and I know it does your heart good to know that this is working out. I don't think anybody has been more concerned than the chairman for developments of that kind.

Just as significant, I will say, have been the cooperative agreements worked out between vocational rehabilitation agencies and the mental hospitals and the mental health centers, for the rehabilitation of mentally ill, who receive medical services under these programs, and the cooperation of vocational rehabilitation agencies with correctional institutions.

In relation to the rehabilitation of public offenders, Madam Chairman, the passage of the Correctional Manpower Act last year has

thrown these two groups into closer relationships, and this is a dividend that may not have been contemplated.

I feel fortunate to have been asked to serve on the board of directors of the correctional manpower study, and this has given me a good opportunity to observe the real dedication that these people have, directed toward providing the kind of institutionalization that will rehabilitate the offenders, and they are finding the rehabilitation agencies very effective aids in this process.

The advantages of these cooperative movements are many. They bring rehabilitation services to an individual in a familiar setting (school, hospital, and so forth); the services are available before the individual becomes a dropout, which condition usually intensifies the problem; gaps in service are more quickly identified and can be bridged by rehabilitation services; the entry of rehabilitation to the institutional setting is an invigorating influence upon the practices of the institutions; and often the contribution of the third party in cash or services may be used as State funds to match Federal funds under the Vocational Rehabilitation Act.

I talked recently to the superintendent of a mental hospital, one of the largest in the country, in which a rehabilitation center had been built under the Rehabilitation Act and staffed by the vocational rehabilitation agency, and he said that nothing during the period of time that he had been superintendent of that institution had done more to lift the morale of both the staff and the patients than the presence of this rehabilitation entity on the grounds of that institution.

And I found him the principal advocate of this approach toward helping the institution do a better job, not just helping the rehabilitation agency do a better job in rehabilitating these people.

There is going to be a greatly expanded program in these areas I am talking about, and I don't think any of us can estimate yet what it will take to do this job the way it ought to be done.

As related to the school program, a State agency will begin with a few school districts, where the circumstances seem to be right to go into this, and then the demand goes to building up, for when one community finds it successful, the next community wants to take advantage of it. So far, we have not had to hold back, but the time is coming when pressures are going to be very great.

One reason why I am very much interested in its development, is that I have always been a believer that it is possible for various programs supported by Federal funds to cooperate with each other.

I am not among these optimists who think everything is going along all right or as well as could be in this respect. I think there are many lacks in this field which we would be glad to discuss, but we don't feel we have the time here. I do want to say that I think Miss Switzer and the Secretary were correct, yesterday, when they indicated that VRA and the State rehabilitation agencies have usually taken the lead to try to see that cooperative agreements are worked out.

This is probably because the State rehabilitation agencies and VRA have always had to work with others. They have never had the resources to enable them to do everything for everybody, and so they have been the ones who have knocked upon the doors of other agencies, but we still have a lot of progress to make in this regard, particularly in relationship with the manpower agencies. I am hopeful that this next year or two we can make very substantial progress in relationship

with these organizations, which have been somewhat more difficult to work with, not because of any personal problems, but, I think because of the newness of the manpower programs and the fact that their personnel is not oriented to everything that was going on in the various communities. I think that we are going to start making more rapid progress in this field.

Before leaving section 2, Madam Chairman, I want to say a word about that little subsection (c), about which you and Mr. Daniels asked some questions yesterday.

We listened carefully to the Administration's testimony on this. The way I interpreted what was said in response to your question the Bureau of the Budget inserted this provision. It was not the idea of the Department.

The witnesses did not seem to be particularly worried about it, and we have no reason to believe that anyone, you know, is out to get the program, or anything like that. The contrary is true. But we are far more concerned about this provision than they appeared to be, and since the program is running smoothly the way Congress intended it to operate, and there have been no problems of bad estimates, things of that kind, to cast any question upon the method of financing, we don't see any reason for this language and would like to have you delete it.

We think that the insertion of the provision, in fact, would have psychological effect which might be more important the first year or two than anything that might happen as a result of the proposed language.

You know, Madam Chairman, that in 1943 to 1954, we had a law in which the Federal Government obligated itself in the statute to do certain things, but did not always appropriate the money required to do it, and during those years, we had all kinds of confusion. No one has given me information that would appear to justify this section.

Moving on down, I am just going to say a word or two about the development of the comprehensive programs, which is the official way, I suppose, to talk about the statewide planning effort.

I think all the committee members understand that the delay in putting these studies into effect made this, in essence, not a 2-year program, but a little over a 1-year program. This planning just has to go on, or we are going to lose our investment. I don't know of anybody that would question the renewal of this authority for the third year, to enable these statewide studies to be completed, and so, unless there are questions about this section, I will pass over it with this brief statement.

As regards a center for the deaf-blind youth and adults, since you did have comprehensive testimony devoted specifically to that proposal—and, I will say, to me, very convincing and eloquent testimony—I do not want to repeat the things that have been said.

We, too, think this would be a good idea. We know that there is no more difficult group to rehabilitate than this group. We think this is the best approach that can be devised for it. I was glad that the question was asked about the definition of deaf-blindness, and I would like to emphasize that I feel that the viewpoint expressed by the Secretary and Miss Switzer was the best viewpoint on that, that there should be some liberality in the definition of deaf-blindness.

Certainly a deaf person who is nearly blind, or a blind person who is nearly deaf, needs the services of an institution of this kind.

I won't get into technical definitions, but this, in spirit, is the way I see it.

I know the question has been raised about how many deaf-blind people there are, and whether it would be better to have a multi-purpose center that would serve other disabled as well, and I can understand why such question is asked. Sometimes specialized centers do become multihandicapped centers in a few years, but I think the committee would be thoroughly justified in starting this program for the deaf-blind with a liberal definition of deaf-blindness, and then after 2 or 3 years determine whether the needs of the deaf-blind are enough in common with needs of others that other disabled people might be brought into the same framework.

I think one of the justifications of the special center is that so many of our rehabilitation centers that do an excellent job with many types of disabilities just have not been able to work effectively in this particular area, and of course, we are hoping, as one witness, I think, said yesterday, that what is found out in this center can be then translated into many rehabilitation centers over the country, so that every deaf-blind adult will not have to be expected to go to one center, wherever it might be located.

Now with respect to the services for migratory workers, this is a baffling problem. Congress has dealt with it on many different occasions and contexts, as members of this committee know.

If the rehabilitation agencies are to make an important contribution here, and I think they can, although I must admit that this will be a very difficult thing to do, it is going to have to be a special project program, such as visualized in H.R. 8981.

It cannot be done under the regular authority in the act. The fact that these people are virtually all nonresidents, often noncitizens, that they often reside in communities only a few weeks and move on, means that an entirely different approach will have to be taken, if substantial programs are worked out.

This is different, for instance, from providing health services. The health department can go in, clean up the living quarters and see that for a 6 weeks' period living conditions are decent, but it is quite different when you go to try to develop a rehabilitation plan for a handicapped person in the family, a plan that is going to take maybe 6 months or a year or 2 years before it is carried into full fruition. It is going to mean probably that two or three State agencies are going to have to cooperate to assure the success of individual plans, so I think the special project approach is best. Under special project programs, the money will go where the problem is, and there can be leeway in the regulations that will permit the type of service that might contribute to the solution of the problem for some of these people.

About residence requirements, I will say just a few words. We have no objection whatsoever to the removal of the residence requirements, and I do not think you will find any substantial opposition to this action. A few years ago, you would have, but for instance, California, who used to be one of the principal opponents of removing these residence requirements, repealed their residence requirements 4 years ago, and, I am told that the public assistance load did not increase

noticeably as a result of it as had been feared. I don't think anybody is going to object to this section.

Mrs. GREEN. Then in that connection, what do you think the impact will be of the court ruling on residency in Connecticut?

Mr. WHITTEN. There are many who think that this ruling, if it survives the Supreme Court, will wash out the residence requirements, anyway, in programs of this kind.

However, I have not asked any legal advice on that. It has been interpreted to me in a lay fashion that it probably would, if it survives the Supreme Court.

Mrs. GREEN. You don't think it will have any impact on certain States?

Mr. WHITTEN. Madam Chairman, I do not think so now. A few years ago, people used to be very, very much concerned about this, but I thought that probably the California test was the best test, because this is a State to which more people are moving than any other, and we had heard over the years that the authorities then in California were afraid that if they removed the residence requirements, everyone would come out there that needed public assistance, because their payments were more liberal than most any other State in the Union, but it did not happen, when they removed the requirements, and I think that the Vocational Rehabilitation Administration has made a study, and maybe has a paper showing just exactly what the status is in the various States.

I do not have that in front of me but I will be very much surprised if this proves to be a problem.

Now I am going to make two or three additional proposals to the committee. As I told you, we are not trying to present comprehensive amendments to VRA now, but we want a little more time to be sure that any recommendations we would make would be sound, but there are two or three things I think you could do now without any difficulty.

The first is what I have already mentioned, the deletion of this little subsection (c) and I won't say any more about that.

A problem of increasing magnitude arises from the fact that vocational rehabilitation services may be made available to a handicapped individual, but cannot be available under any circumstances to a member of the family other than the disabled person.

Many of the clients being served by the vocational rehabilitation agencies at the present time have problems of such nature that solution is impossible outside the context of the whole family.

This is particularly true in serving public offenders, the mentally ill, the mentally retarded, and so forth.

Accordingly we ask the subcommittee to consider amending section 11 of the Vocational Rehabilitation Act by inserting a new subsection (b) which would read—and let me say parenthetically, I may not have put this at the right place, nor have exactly the right language, but I am sure if the principle is accepted, there are no difficulties there. The amendment might read like this:

> Any of the services listed in subsection (a) of this section shall be available to members of the family of the handicapped individual, under regulations of the Secretary, when such services are necessary to assure the rehabilitation of the handicapped individual.

I emphasize those latter words, for we do not have in mind here the rehabilitation agencies becoming family service agencies, far from

that, but when it is necessary to provide some services to another member of the family in order that the handicapped person can be rehabilitated, we would like to see them able to do it.

I have given two or three illustrations, simple ones, of how this might be used. For instance, to train a wife to work with her blind or otherwise disabled husband in a business enterprise.

It may be necessary to provide transportation for spouse and children of a handicapped individual to a locality where work is available for the handicapped individual.

In other words, the agency now could buy a plane ticket for the handicapped person, but could not buy one for the wife. Supplementary maintenance for family may be required during the period the handicapped individual is undergoing rehabilitation and may not be available from other sources.

Counseling services to family members may be needed in connection with the return of a mentally ill person or a public offender to his home following institutionalization.

There will probably not be a very high percentage of the cases in which this would be necessary, but when family problems are the barrier and cannot be overcome, what would otherwise be a good rehabilitation case can blow up.

I am going to introduce on page 12 an idea about rehabilitation facilities. The definition of the establishment of rehabilitation facility in section 11(f) should be amended to permit the use of funds appropriated under section 2 of the Vocational Rehabilitation Act to be used for new construction as well as for expansion, remodeling, or alteration of existing buildings.

The additional words should be inserted in (f)(1) and (f)(2). Now this would really mean just adding the words "new construction" in subsection (f)(1) and subsection (f)(2).

Now I want to say, Madam Chairman, that this matter of the financing of rehabilitation facilities is really one of the bigger problems that we have to confront, as we think about changes that need to be made.

Particularly, in view of the fact that, for some reason, we can't get the financing needed for facilities under section 12. The State rehabilitation agencies are now spending more money under section 2 for rehabilitation facilities than they are spending under section 12, four or five times as much, but they are limited, of course, to the remodeling, expanding, and equipping.

I understand that the Department rule runs sort of like this: That you can't make an addition to a building any bigger than the building was to start with. And I guess we can't complain that that is an unreasonable definition, but it does mean if you happen to have a building you can build onto you can use this section 2 money for it, but not otherwise; for instance, one cannot just build a breezeway between one building and another, and build a new building with the section 2 funds.

It would be very helpful if this restriction was removed. I would say here that if it is removed, the committee might consider whether some limitation might be put upon the total percentage of the section 2 money that could be used for this purpose, and you will note I inserted the figure 10 percent.

Further deliberations and some research that I ought to have done before I wrote this statement, rather than afterward, have indicated that this needs a good deal more study with respect to what this percentage ought to be. Some States, for instance, that are not using their State funds for case services, that is, all the allotted funds, have found it possible to use substantial parts of section 2 for construction, and I am sure that what they are doing is wise, because one cannot have a good rehabilitation program in any State unless there is a network of appropriate rehabilitation facilities.

Still, I think that in the law or in the report or under regulations of the Secretary there needs to be some restriction to make it sure that this program does not become a facility program in lieu of a direct service program.

The current provision, with its restrictions, has been extremely helpful in that it has permitted the use of section 2 funds for the remodeling and extension, and for staffing and equipping of centers.

The final word I have to say is about the District of Columbia bill, which I think, Madam Chairman, you and your committee put through last year, but which bogged down in the Senate in the last days.

We think that the unusual circumstances in the District of Columbia justify this, and since it is simply a matter of taking the District of Columbia out of the definition of the State, and putting it another classification, it does not present any legal difficulties, if the committee wants to do it.

Madam Chairman, let me say in conclusion that it would just be hard for people in the rehabilitation movement to convey to members of this committee how much this 1965 act has meant to the rehabilitation of handicapped people.

It has revolutionized the program in many ways, and it is providing opportunities for handicapped people that I think many of us never dreamed could be made available so quickly.

The spirit in which it has been accepted, both by the Vocational Rehabilitation Administration and the States, and the voluntary movement, also, is really phenomenal, and I just wish you were able to get around to more places and see what is being done under this very, very fine legislation.

And we do hope that the committee will see fit now to approve these modest amendments, and that, in due season we can give you a better report with respect to any more substantial amendments that might be needed.

Thank you very much.

Mrs. GREEN. Thank you very much, Mr. Whitten. You are an extremely articulate spokesman for those individuals that need vocational rehabilitation, and also a very persuasive speaker.

Congresswoman Mink must attend another committee meeting so I am going to call on her first for questions.

Mrs. MINK. Thank you very much, Madam Chairman.

I have only two questions that I would like to direct to you, Mr. Whitten. With respect to your observations on page 5, on the ruling made by the legal counsel about the program which provided funds for technical assistance which have been interpreted to be a salary item, I wonder if you could expand on that difficulty, and what the impact was?

Mr. WHITTEN. Well, this program was designed to develop panels of experts on various aspects of workshop activity.

Mrs. MINK. Was this on a State level, or in the national administration?

Mr. WHITTEN. It is on the Federal level.

Mrs. MINK. I see.

Mr. WHITTEN. And to have these panels available, so that if a workshop in your community wanted special help in some aspect of its work, it could call for a consultant, and this consultant would be paid on a per diem basis out of this fund. Now, what we had expected was that there would be an earmarked sum for this purpose. But since these panels apparently are VRA panels, that is, they are on the VRA payroll, in a sense, as consultants, it has been declared that this is a salary and expense item, and has to be justified as a part of salaries and expenses.

Now just to illustrate—and I hope you will ask the Administration to give a more complete answer to this question, Madam Chairman, for I am not involved in the details of the work. I found just a short time ago that telephone calls were being made to cancel consultations that had been arranged under this section because the Bureau of the Budget had ordered a squeeze on salaries and expenses the next 2 or 3 months.

Mrs. MINK. Mr. Whitten, is this problem of sufficient magnitude that you are saying that this act should be amended to correct this problem?

Mr. WHITTEN. Yes; I think it should be, either now or next year. I did not draft an amendment on this. I was not quite sure how to do it—although your counsel, I know, could find a way to do it. If it was made a part of section 12, for instance, which is the facilities section, there would be no problem. But the wording probably could be changed slightly, where it is, to clear up the matter.

In other words, what I think that we are going to suggest next year, unless we have reason to change our mind, is that workshop improvement and technical services, which are two separate subsections now, be combined into one section, with a broader definition, so both purposes can be achieved. There has been no problem arising in connection with workshop improvement, and this might be the simpler solution to the problem.

I will be glad to work with your counsel, if you want to go any further with this, and I am sure that VRA will do likewise.

Mrs. MINK. Yes. My next question has to do with your recommendation that we delete subparagraph (c) of section 2. In the past experience, has there ever been an occasion where the sum of the Federal shares which have been approved in the State plans exceeded the amount appropriated?

Mr. WHITTEN. When the State money exceeded the amount required?

Mrs. MINK. When the sum of the Federal shares which is required to match the State programs that have been approved ever exceeded the Federal appropriation for this program.

Mr. WHITTEN. My memory is that only once, to the amount of $15 million, and it really was a coincident that this was the amount the Senate had reduced the recommended amount, because they thought VRA had over estimated. The supplemental, when it was

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sent over, was for exactly that amount. I think really one could say that a 5-percent miscalculation would not be bad, but the record is better than that.

Mrs. MINK. Thank you very much, Madam Chairman.

Mrs. GREEN. Thank you.

Congressman Steiger, do you have questions?

Mr. STEIGER. Mr. Whitten, I wonder what your reaction is, while in your testimony you do support the establishment of the Youth-Adult Center For Deaf-Blind Individuals, is that really what ought to be established, or is it something that we ought to think of not just in terms of deaf-blind people as multiple-handicapped individuals, but rather, as a center that ought to serve more than just the deaf-blind?

Mr. WHITTEN. Well, I think we ought to start the center with the deaf-blind, with a liberal definition of deaf-blindness.

I do not preclude the fact that it might, in a few years, be found that other handicapped people could be served in the same facility, or rather, that the research and training connected with other disabilities could be done; but I think one thing that needs to be borne in mind about this is that VRA now has grants supporting research and training centers in some 15 or 20 places in the United States, dealing with other types of disabilities. For instance, at least two regional research and training centers having to do with the retarded, and so on, and a number of centers that are dealing with problems in general. There do seem to be needs of the deaf-blind that would be most difficult to try to meet outside a center dealing exclusively with the deaf-blind.

I think that this proposal is a way to start; I will put it like that.

Mr. STEIGER. What would your reaction be if this were changed to provide the establishment of such a center directly by VRA, rather than through grants to public or nonprofit agencies for this purpose?

Mr. WHITTEN. I would rather see VRA contract with some other organization.

Mr. STEIGER. You think this is a more effective way of operating?

Mr. WHITTEN. Yes, I do. I really don't care much as a matter of policy for the Federal Government to be running these establishments. I do not say that there would never be any justification for it. There might be, sometime, but certainly I can see no reason why the Federal Government would want to operate a facility of this kind, when there has been as much experience as there has been by at least one or two or three institutions in the country, in doing this sort of thing. So my inclination would be toward the contract method provided in the bill.

Mr. STEIGER. I appreciated your comments regarding that small subsection (c).

Mrs. Green, I think, asked a series of very good questions yesterday to try to highlight this, and I would frankly share your concern about what the impact will be if that were to stay. I would hope that the committee might find it possible to delete that, per your recommendation.

That's all the questions I have.

Mrs. GREEN. Thank you, Congressman Steiger.

Mr. Whitten, we have other witnesses, but, first, a couple of quick questions.

On page 7, you talk about the rehabilitation of public offenders, and I have been watching the progress of that part of the Act that was passed. The proposal was made a month ago that in order to aid this rehabilitation effort we amend the Teacher Corps bill to provide a hundred members of the Teacher Corps program, plus some VISTA volunteers, to various detention homes, or to work with people who had served time.

It would seem to me that if we follow this recommendation and procedure, that this is where attention ought to be given. What is your judgment there?

Mr. WHITTEN. I had not really thought of it in this context. The rehabilitation agencies are using their counseling personnel and certain additional personnel at what you would call the aide level in working with this. It is a very difficult thing. I mean, you know, you can't recruit personnel just anywhere to get into this sort of field. There are fears that certainly members of the committee would understand. I am a little baffled as to how to answer that. I think there is a place for the volunteer, the VISTA-type individual, in the total complex of correctional institutions dealing with its people. Whether this would be appropriate to make a part of the State vocational rehabilitation agencies' responsibility, I am not able to say at this time.

Mrs. GREEN. Would you take another look at that, and give us your views on it?

Mr. WHITTEN. I surely will.

Now you say this proposal was to have a certain number of individuals, volunteers, who would work specifically with offenders. I expect that, already, the State rehabilitation agencies probably have 200 or 300 people that are working in this field, and it is expanding rapidly.

Mrs. GREEN. Yes. Would you refresh my memory on the definition of the blind and the deaf? The technical definition?

Mr. WHITTEN. The technical definition of blindness is that an individual has not to exceed 20 over 200 visual acuity after the best correction. In other words, after he is fitted with glasses. For deafness, I forget precisely. It is a decibel loss. I can't remember now exactly what decibel loss it is, but it means about three-fourths or more of the hearing lost on the decibel scale.

Now there are other indications. As Dr. Salmon said, Madam Chairman, for instance, this is only one. For instance, if the angle of vision—you know, some people who can see very well have vision that only allows them to see a very narrow arc. If this arc gets closed too tight, this becomes legal blindness.

Mrs. GREEN. If I understand your recommendation to the committee, though, it is that we ignore these technical definitions in our consideration of the deaf-blind.

Mr. WHITTEN. I don't think to say "ignore" would be exactly what I have in mind. But to develop another definition, the combination of which would not be quite so severe as the definition of saying that a person must be legally blind and legally deaf. For instance, if a person is legally blind, and then only hears a little, this is such a problem to deal with it probably ought to be included.

Some of your witnesses later today probably can testify better in this particular field than I, and may be able to answer your question better.

Mrs. GREEN. Mr. Steiger, do you have anything else?

Mr. STEIGER. No; no further questions.

Mrs. GREEN. May I make one suggestion, as one member of the committee? I haven't had a chance to talk to Congressman Daniels about this, but I noticed in your statement, I believe in response to Mrs. Mink, that you said next week or next year, you were going to come in to urge some changes. I think, if I understand the feeling of my colleagues, that we are trying to move in a path so that we don't amend every bill every year. This makes it necessary for the departments to make new rules and regulations which have to be sent out. If we can stagger the legislation in the committee, and have some legislation expire one year, and some the following year, it helps us in the consideration of it. So I would hope that you would reconsider the amendments that you are at least thinking about for next year, so that you would be able to bring them to us this year.

Mr. WHITTEN. Well, we will work with you on that. Really, the way the administration is planning, you see the appropriation authorities under two or three other of these titles run out next year, too, but they did not propose in this year to renew them, the matter of the renewal of the authority for the State program being the more urgent; so the administration is going to need to come up again next year for at least the renewal of appropriation authority in some sections.

But we will be glad to work with you and Mr. Daniels and the counsel, and try to get this thing as far along as we can now. We would probably make a few other suggestions anyway at this time, if we knew the committee was not likely to go into the proposal again next year.

Mrs. GREEN. Thank you very, very much, Mr. Whitten.

Mr. WHITTEN. Thank you.

Mrs. GREEN. You are very helpful to us, as always.

The next witness to appear before the committee is Dr. Rusk, director of the Institute of Rehabilitation Medicine, in New York.

Your reputation is well known to the members of this committee, Dr. Rusk, and we are delighted to have you here this morning. We are anxious to have your suggestions and recommendations in regard to the pending legislation.

STATEMENT OF DR. HOWARD A. RUSK, DIRECTOR, INSTITUTE OF REHABILITATION MEDICINE, NEW YORK, N.Y.

Dr. RUSK. Madam Chairman Green and Congressman Steiger, I am very happy to have this opportunity to come down and discuss this bill, and certain other problems in the rehabilitation program as we in the field see it.

I have a very short prepared statement, which I will not read, but will file for the record, in order to conserve time.

(The statement referred to follows:)

STATEMENT OF HOWARD A. RUSK, M.D.

Mr. Chairman, I am Dr. Howard A. Rusk of New York City. I am Chairman of the Department of Rehabilitation Medicine, New York University Medical Center, and Director of the Institute of Rehabilitation Medicine. I have also been, for the past several years, Chief Medical Consultant to the Vocational Rehabilitation Administration and Chairman of its Medical Advisory Committee.

At present I also am serving as Chairman of the National Citizens Advisory Committee on Vocational Rehabilitation, which is engaged in a national study of rehabilitation programs.

As a physician, I have been concerned with and working with the problems of disabled people for twenty-five years. At our Institute of Rehabilitation Medicine, we daily see large numbers of severely disabled individuals representing some of the most catastrophic disabilities that occur to human beings.

Out of this experience, one learns to appreciate the infinite capacity of people to absorb the shattering experience of sudden disability—and then become active, interested, useful human beings all over again. It is a daily exercise in inspiration to be associated with these magnificent people.

Mr. Chairman, I am appearing before your committee in support of H.R. 8981. Each proposal in this bill will help solve a special problem that now faces rehabilitation workers across the country. While the proposals appear at first glance to be a primary concern to the public program of vocational rehabilitation, I wish to make clear to the committee that the bill has importance also for the many voluntary and private groups in our national rehabilitation system.

It has been my privilege to work cooperatively with many state vocational rehabilitation agencies. We not only serve disabled people referred to us by the New York State Division of Vocational Rehabilitation; we also have many patients that come to us through the vocational rehabilitation programs in other states.

Thus, when you strengthen the capacity of the state rehabilitation agencies to serve more disabled people, you thereby are calling upon the voluntary and private organizations and facilities for more and better services.

I hope, therefore, that the committee will act to extend the funding authority for the federal-state program. I know that, in our state of New York, the state officials very much need to have this kind of advance indication of the intent of Congress for future financing of the public program.

I join President Johnson, Secretary Gardner and Commissioner Switzer in urging enactment of the proposal for a National Center for Deaf-Blind Youth and Adults. Of all the gaps in our present resources for severely disabled people, this probably represents the greatest one. There simply are no places to send the vast majority of the deaf-blind adults today. One of the pioneers and true experts in this field is Mr. Peter Salmon, Director of the Industrial Home for the Blind in Brooklyn, and the guiding spirit in the Anne Sullivan Macy Service for the Deaf-Blind. If it were not for Mr. Salmon and the service he has developed, we would be virtually without any resource in this country to offer constructive help to deaf-blind adults. As things stand today, this country is capable of serving no more than 250 deaf-blind adults out of an estimated deaf-blind population of 5,000.

Similarly, Mr. Chairman, I endorse the proposal for providing a special service program for disabled migrant workers. Here again, we are giving our attention to one of the most neglected groups of people in the country. The nature of their work and their existence makes them virtual nomads in our land, with the result that they usually are left outside the entire picture of community and state services. This is a disgraceful situation for migrant workers generally; it is doubly so in the case of those workers who become disabled, usually far from home when the disability strikes. I hope the committee will give its prompt and firm support to this measure.

Finally, Mr. Chairman, I express my support for the other two provisions—namely, the removal of residence requirement in providing rehabilitation services through the state agencies, and an extension of one year for the current effort in statewide planning throughout the country. On the latter point let me say that we are in the initial stages of this kind of state planning in New York and I feel that it is crucially important that the job be done. How well and how efficiently we use our funds, facilities, and other resources in New York State and throughout the country during the next decade will be profoundly affected by the quality and completeness of this state planning.

Mr. Chairman, I thank you and the members of the committee for the privilege of appearing here today. You are dealing with a subject which vitally affects several million Americans. I thank you for the many ways in which this committee has helped strengthen rehabilitation work over the years and I offer you my help in any way that will assist the committee.

Dr. RUSK. I would like to make a few comments about the various points in this bill. In the first place, the deaf-blind group is one of the

most difficult of all to rehabilitate, and I believe that the approach in the bill is correct.

I believe that the only way it can be done is in a research pilot type of institution, because there are so many of the techniques that need to be further studied in light of present research, and I will say this: That I do not believe that this can be done in the setting of a general center.

I will base this statement on a confession. The worst mistake that I ever made in our own institution was to try to rehabilitate a group of emotionally disturbed blind children along with physically handicapped sighted.

It was very disturbing to the sighted, and it was completely confusing to the blind, because we forgot a very simple fact that we should have recognized, and that is, in the training period, these children have to live in a fixed environment; every piece of furniture has to be in the same place every day, in order for them to get around with any type of facility, and to feel the confidence that is built up in this type of environment.

We found that we had to lead these children by the hand every place they went, because they would fall over toys and hurt themselves, and all kinds of things, and we soon realized that, from our standpoint this was an impossibility so we had to discontinue the program.

I am happy to say that because of this experience, there now are a number of such programs for the emotionally disturbed blind child that have been developed by voluntary agencies throughout the country, because of all parents that I have ever seen, in desperation, this group of parents was the most desperate, because there was just no place that would accept these children.

I think this program is on the way, and I will say as an aside that this is going to be a facet of the study of the deaf-blind that will be a very important one, and that is, the emotional problems that are bound to arise in a certain percentage of these patients.

So I think the approach is correct and the need is great, and I think from this, hopefully, people can be trained and facts learned that can be applied into other programs that could not be, I don't believe ever directly a part of the usual type of general rehabilitation center, but as adjuncts, associated with such a center, so that you could pool the personnel and use them in both programs.

I certainly feel that the provision for the migratory workers is most needed, and I would like to add one thought about this; that if their program can be started in the United States, and if they and their families can be made to realize what can be done for them with such a program, that I think many of these workers, with proper study and referral, can go back to their countries and continue their program.

As you well know, there are excellent programs in Puerto Rico, and there are some splendid programs in Mexico today, individuals that we have trained here in this country, and who now head excellent operating programs, and could pick up the load after the casefinding was done, and the initial program started, so I would think that those who required long-term, continuing training, that possibly provisions could be made for this type of referral when they go back to their countries, after the seasonal work.

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On the provision of establishing residency, I am highly in favor of this. I would predict, however, that certainly as far as New York is concerned, that we will have not a deluge, but we will have a certain number of severely disabled people, who will be brought to New York, primarily from Puerto Rico, and these are going to be the very difficult, complicated paraplegics and quadriplegics, and brain-injured patients, who have run the gamut in their own training programs, and whose family will bring them here in desperation.

I don't think it is going to be any inundation, but I think it is going to be the type of case that even in modest numbers will cause us considerable effort, which I think we should accept, and as far as I am concerned, I am delighted to do it.

Our own institution, the Institute of Rehabilitation Medicine, is responsible for the professional care of some 3,000 rehabilitation beds in New York City, from consultants to a direct professional responsibility, and I will say from our own standpoint that we are happy to accept this responsibility, if it becomes a reality.

I think that the deaf-blind program brings up certain points in light of the total program that might be worth taking a few minutes to discuss.

I have been consultant to vocational rehabilitation programs for more than 15 years, and have been through all of the evolutionary phases of the program. In the beginning, as you well remember, Madam Chairman, in the early days, that this was primarily a "numbers game," and everybody tried to get the most "numbers" rehabilitated, and if you did a hernia operation on a field hand, and gave him a new pair of overalls, that this was rehabilitation.

Well, the time has long passed when this is considered real rehabilitation. The primary problem now is to meet the needs of the severely disabled from the nursing homes and the back bedrooms. We now have enough evidence to know that meeting the needs of this group of patients is not only good medical care, it is good social action, and it is good economically.

I saw the parents of a boy last week from a Southern State who was paralyzed in a diving accident from the upper chest down. He was admitted to a general hospital, where he got good care, but only acute care.

The family used all of their savings, the father had a nervous breakdown, and could not continue to work, and the boy was sent to a nursing home, along with problems of senility, primarily a geriatrics home, where he was really sentenced to hopelessness for the rest of his life.

I got a pitiful letter from his mother, and we started inquiry through Miss Switzer and through the regional offices, because the mother stated that here the VRA in this State had said that they did not invest their money in quadriplegics, that they could not be rehabilitated, and they had to save it for other patients.

It is interesting that this boy was in his third year in college, and a psychology major, interested in coming into vocational counseling when he finished his college.

Well, to make a long story short, through a lot of effort, we were able to get this boy out and into an active program, and my prediction will be that within 6 months, that he will be ready to go back to college, and that he will finish his course, and because he is

an A student, he will make a real contribution to the program as a whole.

I don't say this idly, because not from choice, but because of the problem, the institute has become a specialized center for traumatic quadriplegics, individuals paralyzed in arms and legs, and if I testified before you 10 years ago, I would have told you that these were very tough, and not too much could be done.

We have just done a followup study on 350 quadriplegics, that we have seen at the institute in the last 5 years, as to what they are now doing, 52 percent are either back in college or at work in competitive industry, and this does not include those who are working in a homebound program.

The average training time has been from 150 to 200 days. It is interesting to see the evolution of education for these groups, primarily with the leadership of the University of Illinois and then your support in the Congress of the regional program and the development of facilities in various sections of the country as regional areas.

I would estimate that there are now probably a hundred colleges which are willing and can handle well even severely disabled people. This has been one of the most heartening things in the whole program, as far as I am concerned.

Mr. Whitten brought up the problem of the rehabilitation of the emotionally ill, and I think this illustrates a new dimension in the responsibility in rehabilitation.

We have changed the name of our institute. Most of the departments in medical schools throughout the country have done the same, and the Congress of Physical Medicine and Rehabilitation also changed their name to Rehabilitation Medicine. We have found that while this program started as a program primarily for neuromuscular disorders, primarily orthopedic, has grown now to encompass the totality, so now we talk about the third phase of medical responsibility.

The first is obviously prevention, the second is definitive care, and the third phase is the training phase for disabled or chronically ill people, who have to change their way of life and their way of work, to take them back to the best life they can lead with what they have left.

I am sure that we have four times as many respiratory cripples in the United States, primarily from pulmonary emphysema, as we have orthopedic. We are just touching the fringe of the cardiac's problems. We have never even dared to look at the problem of those with emotional illness, until very recently, when we saw what was being done on a demonstration basis, in some of the "half way houses" around the country.

These discharged psychiatric patients came in, lived in a nonhospital atmosphere, in apartments, or areas near the center, and came for the simplest kind of fortification and emotional therapy help, and for job placement. The results have been astounding.

The readmission rate in this group has been less than half of that of the group who have not had this privilege, and again, when you analyze it, it is rather simple to understand. We would not take an individual with a broken leg out of his cast, and say, that is it, now you are ready to go back to work.

Well, it is much easier for him to do it than it is for someone who has spent a long period of time now in a mental institution, who comes out bewildered, into a world that is frightening to him, without

the help that he needs to bridge the gap. I think that we are going to see more and more emphasis on this phase of the program.

It might interest you to know that 52 percent of all the patients we see in our institution have some kind of emotional problems, that most of them are relatively simple, but if you don't meet them, you miss the boat therapeutically.

I say it this way, using "medicalese" rather than "governmentese." It is a little silly to spend 120 days to teach a paraplegic to walk if he has such an anxiety he won't go outside the door, and if you meet that need and send him home to a third floor walkup, where he is going to be a prisoner in his own room there the rest of his life, you do him no great service.

If you meet the first three, and don't take him by the hand and get him into the kind of job that he can do, within the limits of his disability, but up to the hilt of his ability, you still are not fullfilling your responsibility.

In our experience, for example, more than 85 percent of our paraplegics, go back to work in competitive industry.

I might also say that we are finding industry and labor sensitive to the fact that these people do make good workers and that if they are properly placed, they have a better production rate, a lower accident rate, a lower absentee rate, and nine times less labor turnover than the normals working side by side with them.

At a symposium in New York about 2 months ago it was very heartening to me to speak to leaders of the AFL–CIO from all over the United States, some 400 of them who came and talked about health and rehabilitation, for 3 days. Some of the research programs with labor organizations that have been supported by the VRA have been outstanding. I think of the Labor Council in New York. What they have done in evaluating the needs of the workmen's families and on bringing to them the knowledge of where they can go to get the help they need, has been a very heartening experience.

In rehabilitation, our problem is trained people. I brought this folder to illustrate, because I was looking at it last night, just before I took off. These are letters that have come to me within the last few weeks, not months or years.

Pleading letters. Can't you find us somebody to head our program in the medical school? We need a second rehabilitation man in our medical school. We have nobody in our community hospital to head our rehabilitation program.

We have no one in our general hospital. We have a building. We have the beds. But won't you find us a qualified doctor?

These letters came from Connecticut, Elmira, N.Y., Marquette, Mich., Albany, where they are looking for a head of the medical school training program, Miami Beach, Fla., the Harlem Hospital in New York City, Phoenix, Ariz., Chicago, Albuquerque, Brooklyn, Princeton, N.J., Providence, R.I., Richmond, Va., University of West Virginia, and New Haven.

We have in training in our own institute between 55 and 60 young doctors all the time. They are about half foreign, and half American. We try to operate it this way. We have now trained more than a thousand foreign physicians from 76 countries.

We think they not only help disabled people, but they are the best ambassadors for the United States that can be produced. Unfortu-

nately, the numbers that we are producing are about 20 percent of the total of the country.

The shortage goes across the board, not only physicians, but in all of the therapy groups, psychologists, social workers, and so forth. And I feel that we have to continue to stress training, training, training.

With increasing knowledge about our program, the problem is compounded every day. With the opportunity provided by medicare and medicaid, people are demanding the services that they never could afford before. And this is proper; however, there are just not enough facilities; our own waiting list now is almost—well, it is between 2 and 3 months, which is tragic.

I would like to say one word, if I may, about the internation program, where I think the VRA has done such a magnificent job; $3 million last year of counterpart money, in 12 countries; $100,000 in matching dollars. I understand, that this will be increased to $5 million with $100,000 matching dollars next year. This can truly be bread on the waters, and I will give you one little instance.

Today everybody is excited now about the immediate fitting of prosthetic devices on the operating table, when an individual has his limb amputated.

It is extremely successful. The individuals walk on their prosthesis the day after the surgery, with practically no pain. There are now six pilot programs going throughout the United States. This technique saves pain and time, often weeks of hospitalization.

The original work was done in a small rehabilitation center in Constanchin, outside of Warsaw, with our Public Law 480 funds, this was the beginning of the whole program.

Now there are more than 50 such research programs. There are 11 projects going in Israel, some of which have been invaluable in meeting the need of the casualties of this recent war.

And this has not cost us a dime. This is money that we could not spend. Here is a way that we can make friends, help people, without any cost.

And this is really bread on the water, that sometimes comes back buttered, as it did from the Poland experience. I can give you one other illustration of this. We have worked out in our own institution, with the help of a young Spanish prosthetist who is a genius, a new, simplified method of training prosthetic technicians. If they are given the component parts and the plastic and simple tools, in about 4 months, you can train such a prosthetist to be a reasonably good limb assembler and fitter.

I don't say this idly because we have done it in 14 countries in South and Central and Latin America; in Ethiopia; in Egypt; and now have a national training program in India. These techniques were used to meet the problem that we had in Vietnam.

When I was there on a mission for President Johnson about 20 months ago, to me, the amputee problems seemed to be one of the most primary and difficult ones. There are estimated to be more than 35,000 amputees. They have been cumulative over the 20 years.

To put the figure in perspective, we had 21,000 in all three services in World War II. The Vietnamese had a small rehabilitation center in Saigon that was producing about six limbs a month, which obviously does not make much indentation on the backlog of 35,000, when you get several hundred cases each month.

So we set up a training program there in January of 1966 with 44 young Vietnamese technicians.

At the end of 5 months, we were producing 500 limbs a month. Last month we opened our first branch center at Can Tho on the Mekong Delta, and we next month will open the second branch, up at Danang right in the heart of the hottest combat area. I think that in another 60 days we will be producing between 750 and 800 limbs a month.

It might interest you to know that these limbs are the most modern limbs, just as good as you can get any place in the United States, and the average cost for a below-knee prosthesis is $32.

That same limb in this country would cost between $250 and $300, an above-knee prosthesis $65, and an artificial arm, of the most modern type, and hand, about $130, compared to $500-plus in this country.

This program has had a great impact on the Vietnamese people and on their morale. There have been scores of defections from the Vietcong who come across the border in order to get a limb. Most stay once they come across.

I like to feel that this, too, is bread on the waters. That in providing this kind of program for the civilian population in Vietnam that we are using a tool that is one of the tools that I believe we have to use if we are ever going to win a peace there, because it is not going to be one that is won with bullets, but with health, with education, and with agriculture, and with social justice.

So I did not mean to make a philosophical speech, but I felt I would like to tell you some of our problems, and some proposed solutions.

I think the progress that has been made in this field in a decade has been phenomenal. I think the understanding, the support of the Congress has been magnificent, and we are, all of us who are working "in the vineyard" are so grateful to you, Mrs. Green and to John Fogarty, and to Senator Hill, and to your colleagues for giving us the tools with which to work.

Our institute in New York was the first research and training center that was designated. This has been a Godsend to us and has allowed us to expand our training and research and service program, in a depth that never would have been possible without your understanding and support, and I would like to publicly express my deep gratitude.

Mrs. GREEN. Thank you very much, Dr. Rusk.

I would be interested in hearing about your mission to Vietnam, and perhaps we could talk later.

Dr. RUSK. I would be glad to comment, if you would like. First let me comment on Operation Compassion, which came out of my first visit, when I found these 75 paraplegics dying in a convalescent center about 75 miles out of Saigon, over Vietcong territory.

No doctor, no nurse, no equipment. Well, yes, there was one piece of equipment. One of these boys was a little more ingenious than the others, and he had tied a piece of gauze bandage around each big toe, so he could yank on it and move his paralyzed legs.

They all had terrifically infected bed sores. They were just waiting to die. You could smell death when you walked into the place. I reported it to President Johnson on my return, and he asked me what we could do, and I said, "There are only two things that we can do,

we can leave them there to die, and it won't take too long, or we could airlift the whole group back in one of the big new air evacuation planes. You could never take all the needed services to them there; it is too complicated, the plastic surgeons, the urologists, the neurologists, the orthopedists, and so forth."

He made a decision in a flash. To make a long story short they were flown back here in November of 1965 and a program was set up for them in the veterans hospital at Castle Point.

The medical history of this group was reported at the American Medical Association last month. They had between 250 and 300 assorted surgical procedures. There were no deaths. The first group went back to Vietnam about 6 months ago, 27 of them; 23 are at work or in vocational training, in the program in Saigon, living with their families. We trained two Vietnamese doctors while they were here, and 12 corpsmen and nurses. Now they have started their own program for paraplegics in Saigon. There are estimated to be between 300 and 400 paraplegics in the country. I don't think anybody really knows the exact number. I don't think there are too many, because those in the villages die, because there is no care.

But now they have a program in the country. The young doctors have established one in the military hospital and also a civilian center. The people have been extremely grateful and the reaction again has been very good.

Before my last mission, which was in early March, I had been disturbed by reading certain reports in some of the magazines and in the press. I was particularly disturbed about a cover picture on a magazine called Ramparts that was published in January, in which there was a burned child on a cross, and two GI's with bayonets at the child's side.

I was also very much upset by some of the student signs that asked "LBJ, LBJ, how many kids did you fry today?"

And the statement was that there had been a million people who had been killed or wounded or maimed, and hundreds of thousands of napalm burns. A movement to fly these children from Vietnam to the United States, and to other parts of the world was being established.

It seemed to me that this was not very practical, because of the language barrier, the numbers, the different mores and the distance. Well to give you an illustration about how provincial the countrypeople are, we had a woman in one of our centers we had fitted with a limb.

We flew her back into her village by helicopter. We let her off a mile away, because there was no place to land directly in the village. She was lost for over a week because she had never been that far away from home before.

It seemed to me that we should try to ascertain just how many of these cases there were, and what the problems were.

So I asked to visit the cross section of provincial hospitals, and I visited 21 of the 43, from the 17th parallel to the Gulf of Siam. I saw every burn case in each hospital.

There were about 300 burn cases. I saw two phosphorous burns, but no napalm. The burns I saw were from gasoline explosions. The people not knowing how had tried to use gasoline for cooking oil. It exploded, and the people were burned.

I found hundreds of people badly injured from the war, as you would expect. Some from our air strikes, but even more from land mines that had been planted by the Vietcong on the public roads, and in civilian areas, by Vietcong booby traps, and the result of torture.

Well, when I was in Vietnam, Professor Harada, a distinguished plastic surgeon from Japan, also visited the country to take a group of these children back to his hospital in Hiroshima. After 10 days, he left, saying that he could not find enough severely burned children to warrant taking back, and he felt that they should be taken care of in their country.

Following conferences a decision was made. Something had to be done to meet the needs of the civilians who were the victims of war, for the Vietnamese health economy simply could not carry it.

They only have a thousand doctors of which 800 are in the military and there are areas of a quarter of a million people with no doctor.

So the decision was made that the United States would set up a new hospital system, operated by our military, of acute surgical hospitals, paralleling certain of the civilian regional hospitals in the heavy combat areas, to meet the needs of these civilians who had been hurt.

Six hundred of these beds are now open in two military field hospitals and the others are under construction. The whole chain of 2,000 beds should be operating within the next 3 or 4 months.

It is interesting that this is the first time in history that an armed force, and/or a country, has ever established a program for disabled and sick and hurt civilians, when a war was on.

Mrs. GREEN. One of the few times when we have had the enemy in front and in back of us at one and the same time.

Dr. RUSK. Pardon?

Mrs. GREEN. One of the few times when we have had the enemy in front and in back of us at the same time, which makes it a necessity.

Dr. RUSK. In addition to that, we are establishing now with the AID program, paralleling the program for the artificial limbs, a specialized hospital for restorative plastic surgery for those who need it. Some few may be brought to this country and properly so, but I think the numbers are going to be quite small.

Mrs. GREEN. Dr. Rusk, I am going to have to interrupt this. I hate to; I would like to go on; I hope I can talk to you more later about your trip to Vietnam, but we must get back to vocational rehabilitation.

I would like to read more on the number of napalm burns, because, of course, I have tremendous respect for your integrity. What you say does influence me, but I must consider some of the other reports.

The paradox which I cannot accept is that of measuring our success in Vietnam each day by the number of people we have killed.

Dr. RUSK. I agree.

Mrs. GREEN. And even official estimates place it in terms of how many we have bagged today, and then our compassion and our concern for one individual who has been hurt. This paradox is one of the things that I find impossible to understand.

I am not going to take any time for further questions, except one. You pointed up the terrible need for additional personnel. This is true in every phase of our activities. I don't know of any professional group which does not have a shortage of personnel.

You cite the problem there, without giving us much help in solving it. We are the wealthiest country in the world, and supposedly the most powerful, and can do what we think we need to do, if we set our minds to it; and yet we take advantage of and actually encourage the brain drain from other countries at the same time we talk of foreign aid.

I think of the number of doctors who are serving in hospitals here, rather than returning home, and who are taking care of our population instead of their own. So I wish from your profession we could have some suggestions on what we could do to improve this manpower situation.

Dr. RUSK. Well I think that they are forthcoming now, as you noted in the press, that the AMA at its meeting recognized that there was a doctor shortage, and, personally I think the medical schools are in a deplorable situation financially. There are not more than one or two in this country that are not in a really desperate fiscal situation, as far as funds are concerned. We must step up the numbers, build the schools, and substantially increase enrollment. I will give you an interesting figure on the foreign physicians.

Year before last the cost of training the number of physicians from South and Latin America who came to this country for postgraduate training and stayed to practice, the cost of their education to their countries was more than the total appropriations for health in South and Latin America in that same year, that we made through foreign aid.

Mrs. GREEN. That is a shocking statement.

Dr. RUSK. I think, as far as doctors in the rehabilitation field, we are in worse shape than anybody else, because we are the youngest specialty. We have to start back in medical school to teach the young doctor to get the same inner satisfaction out of taking care of the chronic patient that in the past he has gotten out of acute medical problems and intricate diagnosis is increasing this kind of training of the VRA.

This summer, there are more than 400 medical students on VRA summer fellowships. There are 30 in our own institution.

After their second year they come in medical school. We are now just beginning to get the interest of these young people, who when they finish their intership, want to come into rehabilitation as a career.

I think the program is sound. Maybe I am too restless and want to get things done too fast, but I think we are on the right track.

Mrs. GREEN. In the interest of time, I will not ask any more questions. Congressman Steiger.

Mr. STEIGER. Madam Chairman, I have no questions for Dr. Rusk. I simply want to say to you, Dr. Rusk, how very honored I am that I have had a chance to hear you today, having read of you, and having read your articles.

This has been extremely valuable and very illuminating, and I know it can help to give the committee a more effective opportunity to do what needs to be done, and I very much appreciate your coming.

Thank you.

Dr. RUSK. Thank you.

Mrs. GREEN. Congressman Reid.

Do you have any questions?

Mr. REID. Thank you, Madam Chairman. I would first just like to welcome you to these hearings, and say, Dr. Rusk, how fortunate I think the medical profession all over our Nation has been because of your leadership in so many areas.

I am sorry to have missed your testimony, but I noticed your comments on the National Center for Deaf-Blind Youth and Adults and special service programs connected with migrant workers, and the removal of the residence requirement in providing rehabilitation services, and your last comment on the clear and pressing and urgent need for more doctors in the rehabilitation field.

I would like to ask, if I may, just one or two quick questions. In terms of the future, the next 10 or 20 years, the need for doctors generally in the United States, what are we going to have to do to get on top of the situation and train enough doctors in all of the vital areas, and are we measuring our programs in relation to the needs?

Dr. RUSK. You have asked a big question. One, I think we have to do what we are now doing; that is, to build more medical schools, probably both 2- and 4-year schools, also financial help to get the rolls in existing medical schools stepped up as far as their capacity will allow, but I think we have to go beyond that.

I think that we have to study this whole problem of utilization. I saw a utilization study recently that was done in pediatricians' offices. The survey pointed out that 80 percent of the tasks done in the pediatrician's office could be done perfectly well by a pediatric nurse.

There is a new program down at Duke University. There they are training people at the corpsman level who can serve as physicians' assistants.

I think that the same thing is true in nursing, and that we have to save the professional nurse for professional tasks, and we have to use practical nurses and maids and aides and assistants, and the same is true in the various therapies.

I don't think that the need will ever be met just by training in the old routine. Increased numbers and better mobilization is the only answer.

Mr. REID. Is there any thoughtful study or research that would serve as a guide for the Congress on this, at this point, or is this research that basically has to be undertaken?

Dr. RUSK. I think the best facts—there are a number, but I think that the best packet that you could get would be from Dr. Phillip Lee, Assistant Secretary in HEW.

Mr. REID. What is our short fall in doctors each year that we are now graduating each year, and nurses, compared with what we should be graduating?

Dr. RUSK. I don't believe I can answer it that way. We are graduating about 8,500. I know that when I was chairman of the Health Resources Committee in 1955, that we reported then we would be 30,000 doctors short, in 1960.

Mr. REID. The apparent shortage would be what, approximately?

Dr. RUSK. Again it is so hard to define. There are so many factors here. Are you going to have one to every 850, which is about the number we have now? Are you going to fill all the vacancies in mental hospitals and TB hospitals and Public Health Service and so forth, in isolated areas?

So it is not an easy figure to give, but it is plenty big. Between 50 to 60,000 in 1975.

Mr. REID. Thank you very much for your testimony, and again our compliments to you on it.

Dr. RUSK. Thank you.

Mrs. GREEN. Thank you, Mr. Reid.

We have two other witnesses, who are from out of the city, Mr. Howard Hanson, the president of the Council of State Administrators of Vocational Rehabilitation.

Mr. Hanson, we welcome you to this committee, and I am sorry for this delay, and we are anxious to hear any recommendations that you might have on the legislation that is before us.

STATEMENT OF MR. HOWARD HANSON, PRESIDENT, COUNCIL OF STATE ADMINISTRATORS OF VOCATIONAL REHABILITATION, PIERRE, S. DAK.

Mr. HANSON. Thank you, Madam Chairman, and members of the committee, and guests. It is my pleasure to appear before you this morning representing the Council of State Administrators of Vocational Rehabilitation, and to present my views concerning the proposed amendments.

My home is Pierre, S. Dak., and I think we should have that entered in the record, because we are proud of our State.

I will make brief comments. You have a printed copy of my testimony, which I would appreciate having recorded in your transcript.

Mrs. GREEN. Without objection, it will be recorded at this place.

(The statement referred to follows:)

STATEMENT OF HOWARD H. HANSON, PRESIDENT, COUNCIL OF STATE ADMINISTRATORS OF VOCATIONAL REHABILITATION, PIERRE, S. DAK.

Madam Chairman, the Council of State Administrators of Vocational Rehabilitation is the organization of state vocational rehabilitation agencies which are charged under state law with responsibility for the administration of the state-federal vocational rehabilitation program. Organized in 1938, the Council serves as an advisory body to the Vocational Rehabilitation Administration, the National Rehabilitation Association, and other public and private organizations with respect to the problems and needs of handicapped people, as such needs are seen by state vocational rehabilitation agencies. Since a great number of states have two vocational rehabilitation agencies, one serving the blind and the other serving handicapped people other than the blind, the total agency membership of the Council is about ninety. Since the state vocational rehabilitation agencies are the instruments through which the Congress of the United States and the State governments expect services to be delivered directly to handicapped individuals resulting in their employment, these agencies are vitally concerned with any proposals to amend The Vocational Rehabilitation Act.

The legal responsibilities of the state vocational rehabilitation agencies are comprehensive and varied, although they all relate to the rehabilitation of handicapped people. These responsibilities may be summarized as follows: (1) Administration and supervision of a program of vocational rehabilitation services directly to the nation's physically and mentally handicapped youth and adults as defined in the Vocational Rehabilitation Act and related state legislation. (2) Development of a state-wide plan for the provision of comprehensive, high quality vocational rehabilitation services to all who need them. (3) Cooperation with other public and voluntary agencies and local communities to establish, staff, and operate workshops and rehabilitation facilities. (4) Provision of consultative services to workshops in the development of workshop improvement and technical service projects. (5) Development of contracts with and provision of consultative services for workshops and rehabilitation facilities engaged in training programs

supported by federal training grants and allowances to individuals. (6) Conducting research and demonstration activities and providing consultative services to community organizations developing research and demonstration projects and expansion programs. (7) Making certifications to the Wage and Hour Division of the United States Department of Labor of individuals who are not capable of competitive employment but are capable of some production. (8) Working with the United States Department of Labor and United States Employment Service in the provision of diagnostic services and assistive devices to assure success of training of individuals under the Manpower Development Training Program. (9) Developing and carrying out programs directed toward public understanding of the numbers and classes of handicapped people and their problems. (10) Helping create an accepting environment for handicapped people in the community and removing or lowering barriers to the full participation of handicapped people in community living. (11) Working with other public agencies with a related responsibility to assure a continuum of services directed toward meeting the total needs of the handicapped people. (12) Developing and conducting innovation programs. (13) Administering the Randolph-Sheppard Act under which business opportunities are made available to blind people in federally administered buildings, and (14) working with the Social Security Administration in making determinations of eligibility of applicants for OASDI benefits and providing vocational rehabilitation services to beneficiaries of the trust funds.

There are a number of unique features of state vocational rehabilitation agencies which have contributed to make vocational rehabilitation programs effective. (1) Vocational rehabilitation agencies are responsible for providing vocational rehabilitation services to *all disabled youth and adults with employment problems.* (2) Vocational rehabilitation agencies have authority to provide substantially *all services that are needed to evaluate the rehabilitation potential of the individual and prepare him for employment.* (3) Services of state vocational rehabilitation agencies are *available on equal terms to all handicapped people and all sub-divisions or states.* (4) Laws and regulations governing administration of rehabilitation programs for the state are flexible, enabling the state agency to work with related agencies in almost any way that would expedite the rehabilitation of handicapped people. (5) The flexibility of funding of the state vocational rehabilitation agency programs makes it possible for state vocational rehabilitation agencies to be experimental and innovative in their approach to the provision of rehabilitation services. (6) Availability of funds for education and training of staff, both institutional and in-service, has enabled the state vocational rehabilitation agencies to make rapid strides in expanding their staffs and increasing their effectiveness.

These advantages stem from liberal federal and state legislation. Much progress is being made under Public Law 333 of the 89th Congress, which became law in November of 1965. In fact, we are very proud of the progress that is being made in all of the states, although it has not been as rapid as we would like to have seen it. In some states, state legislatures have been slow in appropriating the amount of money needed to match the federal money available for this program, and it is a disappointment that in the 1968 fiscal year, only about three-fourths of the federal allotments will be used by the states. The figures will show, however, that progress has actually been quite substantial, and we expect even more rapid progress in the future.

Another difficulty has been in recruiting and training personnel for a rapidly expanding program. As members of this committee well know, well-trained people in all of the professions are scarce and hard to come by. State vocational rehabilitation agencies, although they have hired as many individuals as they can find with graduate degrees, have had to depend, in the main, on hiring individuals with baccalaureate degrees and training them on the job. Reasonable progress has been made with the cooperation of the colleges and universities.

Another disappointment has been in the fact that the amount of money appropriated for rehabilitation facilities under Section 12 of the Vocational Rehabilitation Act has not been sufficient to permit any substantial expansion of rehabilitation facilities. The maximum appropriation for this program, contemplated in 1968 fiscal year, is less than four million dollars, which means that the average state share could not be more than about seventy-five thousand dollars. It is absurd, of course, to expect any substantial rehabilitation facility development under such conditions. Fortunately, it has been possible to use a limited amount of Section 2 Vocational Rehabilitation Act appropriations for remodeling, expanding, and equipping existing buildings, and small appropriations under the Hospital Survey and Construction Act have permitted limited new construction of rehabilitation facilities. In our judgment, this is a problem which Congress will need to look into in the months immediately ahead.

I shall now speak directly to the provision of H.R. 8981, which the committee is currently considering. I shall take it up section by section, speaking briefly of each.

GRANTS TO STATES FOR VOCATIONAL REHABILITATION SERVICES

Appropriations for vocational rehabilitation services under Section 2 of the Vocational Rehabilitation Act are the heart of the vocational rehabilitation program. This is the fund which is allotted to states on the basis of a formula found in the law to enable them to provide vocational rehabilitation services directly to handicapped individuals, as such services were defined in Section 11 of the law. When Public Law 333 was passed in 1965, it provided appropriation authority of 300 million dollars for the first year, 350 million for the second, and 400 million for the third. This appropriation authority expires June 30th 1968. It is a matter of extreme importance to the state vocational rehabilitation agencies that the appropriation authority be extended in the current year. More than half of the state legislatures will meet in 1968. Appropriations are made for two-year periods in most of the states. If the Vocational Rehabilitation Administration is not able to make estimates to the states of the availability of funds for 1969 and 1970, confusion and uncertainty will undoubtedly be harmful to the program. We give high priority to the passage of this section.

The amounts being recommended are, we think, reasonable. The amount specified will permit an orderly expansion of the program. With the tuning-up job largely done, that is staff expansion, etc., it may be anticipated that the agencies can move rapidly ahead in serving a larger clientele.

At the same time, we do not see the necessity for including in the bill Subsection (c) of Section 2. In fact, we are not sure exactly what this means. At the present time, Congress exercises fiscal control by annual authorization ceilings. The Secretary is required to allot money on the basis of the authorizations. If the Secretary underestimates the amount to be required by the states, a supplemental makes up the difference. Estimates have been reasonably good, and it has not been necessary to ask for large supplementals. In fact, the largest supplemental required was the result of the decision of the Congress to reduce the amount which had been recommended by the Administration as necessary. Almost the identical amount that was cut from the appropriation had to be restored in the form of a supplemental. The language of subsection (c) apparently would mean that Congress is not obligated to pass such a supplemental. This would be confusing and could be harmful. We know of no problems which would justify the insertion of this section.

GRANTS TO THE STATES FOR THE DEVELOPMENT OF COMPREHENSIVE PROGRAMS

Mr. Chairman, we can deal with this section very briefly. The 1965 legislation authorized a two-year study of vocational rehabilitation needs in the states. One year was almost completed before the planning program could get under way, and in a few instances, statewide planning is just now getting under way. Since practically one year was lost, we simply want the authority to conduct the study to be extended for another year. The amount of money required will be included in the estimates made by the Bureau of the Budget to the Appropriations Committees.

Incidentally, we would like to say that the state-wide planning effort is a most constructive use of a relatively small sum of money. The interest and concern that State governments have shown in developing their plans for the studies has been heartening. In practically all instances, the governors of the states have been personally involved, high level administrative or advisory committees have been established, and competent research staff secured to assure sound study and planning.

CENTERS FOR DEAF-BLIND YOUTH AND ADULTS

We heartily recommend the passage of this section of the bill through which the Secretary of Health, Education, and Welfare would be permitted to contract with a public or other nonprofit organization to construct and equip a center for vocational rehabilitation of handicapped individuals who are both deaf and blind. I suppose that every deaf-blind person in the United States is sooner or later referred to a state vocational rehabilitation agency for service. Those of us administering such programs understand the great difficulty in providing rehabilitation services to this very severely handicapped group of people. The competencies required in the rehabilitation of the deaf-blind are not found in the aver-

age rehabilitation center in the country. In fact, there remains much to be known as to how services may be most effectively utilized to help such individuals and how professional personnel can be taught to deliver these services. It is our hope that the National Center for Deaf-Blind Youth and Adults will be able to develop the methods and techniques that are most effective and that the findings of the National Center can be utilized in other centers throughout the country.

SERVICES FOR MIGRATORY AGRICULTURAL WORKERS

This section would provide a special project program to assist in the rehabilitation of migrant workers. We think it is proper to approach the provision of this service through special projects, since this problem is not common to all of the states. The transitory nature of this population, the multifaceted nature of the problems of families of migrant workers, and the combination of skills and resources that are required to provide any substantial rehabilitative services require special effort. It is our understanding that this vocational rehabilitation program for migrant workers will relate itself to health and welfare programs for the same people. We think this is a forward-looking step.

RESIDENCE REQUIREMENTS

So far as we know, residence requirements by state vocational rehabilitation agencies do not constitute a substantial problem in the rehabilitation of handicapped individuals, but this is the kind of "cleaning-up" operation which facilitates the delivery of rehabilitation services. Heretofore, in the presence of residence requirements, the state agency to which the handicapped non-citizen makes application finds it necessary to work out an agreement with the state agency in the state of the individual's citizenship, so that services may begin under the auspices of one agency and then be transferred to the second agency when citizenship is established in the second state. Although this can be done, and is often done, it is cumbersome. At one time, objections might have been raised by some of the states to the requirement that residence be no longer a factor in the provision of services. We do not believe that objections will arise at this time. We think this would be a progressive step.

Mr. Chairman, in this hearing, we have confined our statement to the specific provisions of H.R. 8981. In cooperation with the National Rehabilitation Association and the Vocational Rehabilitation Administration, we are now undertaking a study of progress that is being made under P.L. 333 of the 89th Congress, of the needs that are not being adequately met under this legislation and related state legislation, and are developing proposals which might make the program more effective. We need a little more time, however, before we make any definite proposals along this line. We believe that the passage of H.R. 8981 this year is a necessary and constructive step forward.

Mr. HANSON. The Council of State Administrators of Vocational Rehabilitation was formed in the year of 1938, as an advisory body to assist Vocational Rehabilitation Administration, or the then Office of Vocational Rehabilitation, with policy, planning, and execution of the rehabilitation program for disabled people.

Throughout the years we have thoroughly enjoyed an excellent cooperative relationship with our Vocational Rehabilitation Administration, and the State directors have cooperated and carried on the best program that they could conceivably do under the regulations and policies thereof.

The council actually consists of 91 State agencies' directors. Thirty-seven of these agency directors are providing services in a separate agency serving blind persons, such as I represent here today as an individual.

I also happen to wear the second hat of being president of the National Council of Agencies for the Blind, and would like to report to you that the agencies for the blind endorsed a resolution endorsing the entire amendments (H.R. 8981). It was passed about a week ago last Sunday in Miami Beach, and I believe that Peter Salmon introduced the resolution yesterday, and it probably is a matter of record

in his testimony; hence I will not ask you to include it in my remarks, or to have it read at this time.

Due to the shortage of time I am going to skip some sections of my presentation and attempt to scan and pick up information which you will need.

I think possibly the best I can do is to turn to the amendments themselves. I would like to endorse what Mr. Whitten said about the progress we have made under Public Law 333. We certainly have been delighted and excited by the new legislation passed in 1965. We have made what we think is great progress at this point, but we are still a little dissatisfied with our own progress and would like to see more and more handicapped persons served than are currently being served each year.

Some of the States have been quite slow in obtaining their State matching moneys to take advantage of the allotments that were available, and we hope that some of the directors will be giving more attention to this as their legislatures convene.

Mention has been made of the extremely difficult problem of the recruitment of trained staff, or the recruitment of staff and the training of new recruits.

Some of our State agencies, I am sure, have diluted their staffs with less trained people, who are currently being trained within their own programs.

We are also disappointed in the amount of money available under the section 12, which is the Construction Act for the establishment of workshops and rehabilitation facilities.

Unfortunately, there is only about $75,000 per State available, and naturally this is not going to give us much money to build new construction. In my own region (region 6), I know that there are tentative applications for something like four and a half million dollars worth of new construction, and unfortunately $75,000 will not make a very big dent in providing these services.

To the bill itself, a number of witnesses have testified as to the need for the extension of the limitation on section 2 money, and that the authorization be extended to 1970.

Section 2 money, of course, is the backbone of all the rehabilitation programs that are conducted through the State agencies.

Its authorization should be extended so that all the State legislatures will be able to plan adequately for their own appropriations sessions which they will be facing in the very near future.

Half of these States will not have the legislatures meet until next year, and so we earnestly request that this amendment be included.

Comment has been made concerning subsection (c) and I will not comment other than to say that I endorse the statements made by Mr. Whitten. We would appreciate it if this were deleted from the text of the amendments.

Concerning the statewide planning I think you have the facts, that due to the lateness of the legislation being passed in 1965; that many States did not get underway in their statewide planning efforts until recent date.

Literally we have lost almost a year of the 2 years authorized under this program. No State director is in opposition to statewide planning by any means.

They all have joined, and are all involved in it currently in supporting the effort actually. Most of them have taken advantage of the

opportunity to involve their Governors, and the high-level-advisory committees that can be developed.

Needless to say, through experience as a State director, I can attest to the fact that we need the cooperation of all agencies within State government to carry out a responsible rehabilitation program, and requesting an additional year for statewide planning, and I am sure here that with the thoroughness and capability of staff we have doing it, that we will be able to present to you a real good composite picture of the needs tor rehabilitation in the United States.

Let me pass the deaf-blind center for the moment, and just comment that the services to migrants is an important part of our legislation.

I come from a State where we do have some migrant labor, with the Indian population working in potato fields.

Certainly I think that this is excellent legislation, and should be conducted on a project basis for States where problems do exist.

Residence has not been an insurmountable problem with any of us. I think that most of us have been able to serve disabled people who transfer into our area with contracts and cumbersome arrangements with other States.

However, I do think that it would make it easier for us to have cases transferred if residence requirements were removed.

Now I would like to speak just a moment on deaf-blind centers. Man is born with actually five senses. A sense of taste, touch, smell, hearing, and sight. Through these five senses he learns about everything that he knows in his normal daily endeavor.

These are literally pathways to the brain. Dr. Rusk was commenting about the difficulty in working with a person who is deaf-blind. I think if we think about what is lost, when a person loses one of these senses, we may realize why a center of this nature should be specialized.

When a man loses his sight, he loses mobility, his ability to travel about independently, and to get from place to place, from home to work, to social affairs.

He loses communications, and finally, he loses the power of observation. The power to look at someone else doing a task and learn from his observations. When you combine this with the loss of hearing, and you have a deaf-blind person, you have created a total isolation.

These individuals can, with proper care, proper training, be returned to useful working citizenship in our country.

As a blind person myself, I know that there are skills and methods by which we compensate for the loss of our mobility, our communications, and of our observations. Some of them can never be replaced.

The deaf-blind person has a doubly difficult proposition, because he does not have as much ability to communicate as do the blind. Both of these losses are sensory. They are not physical.

When you talk about physical rehabilitation, and the adaptations, such as Dr. Rusk does about artificial limbs, you train a person to use an artificial limb. He uses it in a similar fashion to that which he did before.

When you talk about training a deaf-blind person who has lost two senses, two vital senses, then you are talking about giving new paths to the brain, so that he can learn.

A State director of the United States today is faced with the proposition of where can we receive training services for a deaf-blind client. We have had them in South Dakota. Every State, I think, in

the Union, has. I think every deaf-blind person, sooner or later, is referred to a vocational rehabilitation agency. At this point there are very limited training facilities available to deaf-blind youths and adults.

Certainly we would urge your support of this particular phase of this legislation as well as the rest of the bill.

I am sure that the research and the training of other professional individuals which will take place in a National Institute of this nature would be helpful to all of us, because then our own centers, which are in our geographic areas, will be able to give services to deaf-blind individuals, but someone must give the leadership in this program.

I am wearing four hats when I appear before you today. My remarks are brief, but they are certainly sincere. The president of the Council of State Administrators of Vocational Rehabilitation; president of the National Council of State Agencies Serving the Blind; I am a State director from a rural State. I am a blind person, who is interested in the welfare of others.

I sincerely urge your support of H.R. 8981, and its passage.

Thank you.

Mrs. GREEN. Thank you very much, Mr. Hanson, for that testimony. Let me say very honestly that the one part of this bill about which I have some concern is the extension of the help to migratory children, and it is based on parts of other legislation which has come to the Congress.

In your official position, do you have anything to do with the programs for migrants that would be under the Office of Economic Opportunity, or under the Office of Education?

Mr. HANSON. Not at this point; no.

Mrs. GREEN. There has been no coordination. Are you aware of the services that are available through these other programs?

Mr. HANSON. I am aware of some of them, yes. We have worked with our State offices in both areas, and cooperated with them jointly on serving some cases, but we have not been called at this point to really provide services of any nature.

Mrs. GREEN. Your testimony has been very helpful. As a native South Dakotan, I also welcome you to the committee.

Mr. HANSON. We are the proud State now. We have a new slogan.

Mrs. GREEN. Congressman Steiger.

Mr. STEIGER. Thank you, Madam Chairman.

Mr. Hanson, I share Mrs. Green's concern regarding the migratory labor provisions of this legislation. Would it be possible for you, either now or later, to submit any ideas or recommendations that you might have on how this could best be coordinated? I noted in Mr. Whitten's testimony he said:

> It is understood that the state vocational rehabilitation agencies will be cooperating with other state and local agencies who have related responsibilities with migrant workers.

Yet in the legislation I am not sure that point is terribly clear, and I do wonder whether this may serve almost as a duplicating amendment, rather than a supplementing amendment.

Mr. HANSON. Now if I understand the chairman's question originally, she said migratory workers' children. Is that correct?

Mrs. GREEN. No; either migrants or children of migrants. This is what I am concerned about.

Mr. HANSON. Well, each State agency is to develop cooperative relationships with all programs serving handicapped individuals. We either do it formally or we do it informally, in areas where it is required, and I would doubt very much if there will be a duplication.

I think that most of us who are in State administration find that we have all too many calls for the funds that we have available to us, not to take advantage of anyone else's program, if we are able to serve a person.

I don't know if that answers your question.

Mr. STEIGER. I am writing to Adrian Towne, who is the VRA man in Wisconsin.

Mr. HANSON. Right.

Mr. STEIGER. And I am going to ask for his specific comments on that particular amendment proposed in the legislation. Is the problem now that you don't think there are sufficient funds available through State administration, or is it that you don't have the authority?

Mr. HANSON. To serve migrant workers?

Mr. STEIGER. To serve migrant workers.

Mr. HANSON. Many States don't have the authority. I would like to have Mr. Whitten comment on that, if he would. He probably knows of some of the States where this problem is more severe than it is with us.

Mr. WHITTEN. Do you want me to comment?

Mr. STEIGER. I would be happy to have your comments.

Mr. WHITTEN. I will say first the insertion of this sentence in my testimony had reference to something that really has not materialized.

We were told that the administration was attacking the problem of migrants in four or five different programs, and that there would be related legislation having to do with the Public Health Department's responsibility, the Welfare Department's, and so forth, and that this was a part of a total administration package, really.

Now, just like in the case of the center for the deaf-blind children—this part of an administration proposal has not arisen. Therefore, we are not in position to speak with any competence about what this relationship would be at the present time.

The only questionable authority as I see it now, with respect to the State agencies, is the residence and citizenship problem, if the State has a residence requirement, since very few of these people stay in a State long enough to become a resident. If the residence requirement was removed, there probably would be no problem so far as eligibility is concerned.

On the other hand, this is a very difficult problem to attack, within the framework of VRA policies and the State agency policies, and, as I indicated, Madam Chairman, I don't know how.

I would not know quite how to develop a program of this kind in a State rehabilitation agency, unless I was able to see what the authority of all these other agencies is, and just how all could work together.

There is a problem here. We know that.

Mrs. GREEN. Thank you, Mr. Whitten.

Mr. HANSON. I might just comment that, for one State, our residence requirement is a matter of intent, and obviously a migrant worker who is coming to the State to work, for a matter of 3 or 4 weeks, it is just perfectly obvious he does not intend to reside there, and we can't serve him.

That is it. If he intends to make his residence in South Dakota, fine; then we can serve him.

Mr. STEIGER. I have no further questions.

Mrs. GREEN. Thank you again, very much, Mr. Hanson.

Mr. HANSON. Thank you.

Mrs. GREEN. We appreciate your being here.

Off the record.

(Discussion off the record.)

Mrs. GREEN. The committee meeting is adjourned until 10 o'clock tomorrow.

(Whereupon, at 12:10 p.m. the subcommittee adjourned, to reconvene at 10 a.m., Thursday, July 20, 1967.)

AMENDMENTS TO THE VOCATIONAL REHABILITATION ACT

THURSDAY, JULY 20, 1967

HOUSE OF REPRESENTATIVES,
SELECT SUBCOMMITTEE ON EDUCATION OF THE
COMMITTEE ON EDUCATION AND LABOR,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to call, in room 2257, Rayburn House Office Building, Hon. Dominick V. Daniels (chairman of the subcommittee) presiding.

Present: Representatives Daniels, Reid, and Steiger.

Also present: Daniel Krivit, counsel.

Mr. DANIELS. The Select Subcommittee on Education will come to order.

Our first witness this morning is our distinguished colleague, the gentleman from Minnesota, Congressman Nelsen. Congressman, will you step forward?

It is a pleasure to have you here.

STATEMENT OF HON. ANCHER NELSEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MINNESOTA

Mr. NELSEN. Thank you, Mr. Chairman. I am appearing today in support and ask for favorable consideration of H.R. 5801 and H.R. 5803, introduced by Congressman McMillan and myself. In the interest of time, I will file my statement and just briefly mention my concern over this matter. This deals with the rehabilitation program for the handicapped. I might point out that in the District of Columbia, we discovered that in many Federal programs that have been enacted for the benefit of people all over the United States, somehow we have overlooked the fact that in some cases, the residents of the District of Columbia, because of quirks in the law, have been denied some of the benefits that are available to the States, In this area, we find one of them is glaringly apparent, and under the provisions of the bills that I mentioned, the residents of the District of Columbia would qualify for rehabilitation assistance on the same basis as our States, I think it is very meritorious, and it is my understanding that the committee has previously acted favorably on this, and I hope will again do so. I hope our proposal will go all the way through the Senate, and correct this glaring need here in the District of Columbia.

Mr. DANIELS. Congressman, the Chair wholeheartedly agrees with you. There is no reason why there should be a distinction between the District of Columbia, and, say, the Commonwealth of Puerto Rico, or Guam, or other possessions of the United States.

Mr. NELSEN. Thank you very much.

Mr. DANIELS. The District should be placed more or less in the same category, and should be given the same equal and equitable consideration.

Thank you.

Mr. NELSEN. Thank you very much, and I will file my statement if it meets with the approval of the chairman.

Mr. DANIELS. Thank you.

(The statement referred to follows:)

STATEMENT BY HON. ANCHER NELSEN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MINNESOTA

Mr. Chairman, I appear today to ask the Committee to favorably consider H.R. 5801 and H.R. 5803 introduced by myself and Mr. McMillan the Chairman of our House District Committee. I know, at first hand, the great need to expand programs that will strengthen the citizenship and build a better economy in the District of Columbia.

As a ranking minority member of the House District Committee, I have listened to testimony and received hundreds of letters and messages directed toward the large numbers of District residents who are unemployed or underemployed and the amounts the District is spending on various forms of public assistance to the underprivileged, the blind, the disabled, etc. Most of the views and comments support proposals that the House District Committee do more to help the disadvantaged and the handicapped of this city and thereby substantially reduce the extent of their need for public support. The District's Vocational Rehabilitation Program attacks these problems and, its record of achievement in the past, soundly justifies an enlargement in its activities.

Vocational rehabilitation is a program that I have closely followed—both in my home State of Minnesota when I was in the State Senate and serving as Lieutenant Governor, and since I came to Congress in 1959. As you may know, Minnesota was one of the pioneers in the vocational rehabilitation field—as evidence, our state voted acceptance of the Federal Act on April 23, 1919, in anticipation of its passage. Our vocational rehabilitation program was inaugurated on July 1, 1921, and in the first year of operation, 30 cases were closed as successfully rehabilitated.

Minnesota's vocational rehabilitation program has grown significantly since those early days. During the immediate past 5 years, over 8,000 disabled Minnesotans have been rehabilitated and are now enjoying more meaningful and more abundant lives. I am told the Vocational Rehabilitation Act Amendments of 1965 provide considerable additional Federal funds to Minnesota and have stimulated further growth in our total program whereby it will be possible to rehabilitate many more thousands of disabled residents in the years to come.

Unfortunately, expansions such as we enjoy in Minnesota, and in the other states, are not possible in the District of Columbia because the amendments did not provide for an increase in Federal funds for the District. In fact, the District would have received less Federal funds, but a special provision was incorporated in the new law which guaranteed at least the 1965 level of Federal fund allocation. I view this as a most confusing situation.

It was my understanding the objectives which underlie the new legislation that was passed by the Congress in 1965 would encourage vocational rehabilitation programs to move ahead as rapidly as possible in their efforts to rehabilitate the disabled of our great nation. This was to be done through a liberalization in Federal financing, development of new service programs, and extending services to greater numbers of disabled people. As matters currently stand none of those benefits accrue to the District of Columbia, and I believe steps should be taken to rectify this situation.

Furthermore, I understood the new Act would change the "Federal share" of the cost of carrying out a plan of vocational rehabilitation in each State. The Federal percentage is to be 75 percent of such costs in fiscal year 1967 and years thereafter. Again, the District of Columbia cannot benefit from the amendments, even though for years the District has been a National leader in terms of the level of State support for vocational rehabilitation and has consistently appropriated larger sums of local funds than is needed to "match" Federal allotments. In fiscal year 1967 for example, the District's appropriation for vocational rehabilitation is $789,499 whereas the Federal fund allotment is established at

$603,014. I believe some adjustment needs to be made to offset this inequity because it is the *only* situation in the entire Nation where local funds for vocational rehabilitation exceed Federal matching.

Mr. Chairman, the District of Columbia has the same proportion of disabled people, in relation to its population, as does any other State or Territory. The District's Vocational Rehabilitation Program is making every effort to serve their needs as is evidenced by the fact the District of Columbia is ranked 2nd nationally in terms of the numbers of disabled rehabilitated per each 100,000 of its population. This is a most commendable record, but, if the District is to be able to do what we so deeply wished it to do when the Congress passed the 1965 Amendments, it must have the dollars. I do not think there should be special penalties attached to being a disabled person in the District of Columbia such as cited above. I believe that the District's disabled should have the same opportunities as those disabled persons residing elsewhere. I do not believe that we can sit by and allow individuals, who might be helped, to lead unproductive lives.

H.R 5803, which I am pleased to sponsor, will overcome this tragedy and give the disabled of the District of Columbia an opportunity to achieve self respect through their ability to support themselves.

One final point, in recent years the Congress has enacted various Federal grant-in-aid programs all calculated to help restrain and redirect unemployed and underemployed people to more productive employment. Among these newer programs, to name a few, are:

Anti-poverty
Vocational Education
Manpower Development and Training
Juvenile Delinquency
Public Welfare Training Services
Area Redevelopment

Most of these programs provide more liberal Federal financing as well as incentive funds for new efforts that are undertaken than is possible under the vocational rehabilitation program. If funds can be provided for such programs that are, as yet, not fully tried and tested as is vocational rehabilitation, we certainly ought to be at least as generous in the District's Vocational Rehabilitation program that has proved itself to be so worthy of support.

Thank you.

Mr. DANIELS. Our next witness is Mrs. Beatrice Holderman, director, New Jersey Rehabilitation Department of Labor & Industry, Trenton, N.J.

STATEMENT OF MRS. BEATRICE HOLDERMAN, DIRECTOR, NEW JERSEY REHABILITATION DEPARTMENT OF LABOR & INDUSTRY

Mrs. HOLDERMAN. Thank you, Mr. Chairman.

Mr. DANIELS. Mrs. Holderman, it is a great pleasure to welcome you to these hearings. I know personally of your great interest in rehabilitation.

I have had occasion, as you well know, to call on your department, and you, personally, on many cases in which my constituents were involved, and I want to express to you publicly my sincere thanks and appreciation for the help you have rendered over the past years.

Mrs. HOLDERMAN. It has always been a pleasure, Congressman Daniels, to do this. We try wherever we can, as you know.

It is a distinct honor, Mr. Chairman, to have been asked to appear before you as chairman of the subcommittee and your members, and I say this for the record.

I would also like to say at this time that our Governor was tremendously interested in knowing that you had asked a representative of New Jersey to come down and testify on bill, H.R. 8981.

All of its provisions are important, he feels, because of this vast interest in social legislation. I think you know that he was chairman of the Health, Education & Welfare Committee of the Governor's Conference for a number of years.

Mr. DANIELS. Mrs. Holderman, I have heard him on the political stump many, many times and I have heard him express his views, and I know of his great and intense interest in the problems of the handicapped and the people less fortunate than ourselves.

Mrs. HOLDERMAN. He is particularly interested in one provision of the bill, and that is migrant labor. Mr. Chairman I wonder, for the record, if I could present the formal statement to the secretary, and just touch on some highlights of the statement. Would that be all right?

Mr. DANIELS. Mrs. Holderman, you may proceed in any fashion that you desire. So without objection, your formal statement will be introduced in the record immediately following your oral testimony.

Mrs. HOLDERMAN. Thank you.

I am sure that you indicated, and I think it is important to say here, because of the possibilities of handicapped people being trained and employed, that you related to the members of your subcommittee the climate in New Jersey.

So many people think we are an agricultural State, but we are not totally agricultural. There are more than 7 million people in New Jersey at this time, and its industry is just as varied as we could possibly want it to be.

It has industry, business, large and small, with a demand for all the skills that are needed for the economy of the State, and it is most important that we had the skills to keep this economy as high as it has been over the years.

In connection with section 2, of H.R. 8981, undoubtedly our wonderful commissioner, Mary Switzer, has presented to you a lot more detailed information than I shall attempt to go into. The present financing, I am sure she touched on, is most important to us in the States.

The amendments provide for improved financing, so that we can do some better programing and planning. We are fortunate, I think, in a way, in our State, in being on an annual basis. However, even on an annual basis, we must prepare our budgets, and submit them at least a year and a half before the appropriations committee acts on the Governor's recommendations.

This poses a problem, even more serious, in the States that are on bienniums, You can well understand the difficulty of projecting 2 years ahead, not being sure whether the appropriations, because of certain conditions, would be available.

With appropriations specifically stated for 1969 and for 1970, it would help tremendously for the States to know just what money would be available.

Not only in working in their own fields of vocational rehabilitation, but in planning with other departments of government in the State as to how they could best merge their interests under their specific pieces of legislation.

Mr. DANIELS. Well, one of the amendments proposed under this legislation intends to do exactly that. We are projecting ourselves into the years 1969 and 1970, authorizing appropriations of $500 million for 1969, and $600 million for 1970.

Mrs. HOLDERMAN. Mr. Chairman, this would be helpful.

Mr. DANIELS. So the States may look forward to a continuation of the programs, so that they may properly plan.

Mrs. HOLDERMAN. We would be pleased if it were enacted, because we can see with vocational education, special education, and vocational rehabilitation, planning a year or two ahead for cooperative services such as rehabilitation units in mental institutions or mentally retarded training schools, or services for the brain damaged.

This would be a significant contribution to the States, if such planning could go forward with some assurance.

Mr. DANIELS. Mrs. Holderman, have you formulated any views with respect to the establishment of a National Center for Deaf-Blind Youths and Adults?

Mrs. HOLDERMAN. Yes.

Mr. DANIELS. As is contemplated by this legislation?

Mrs. HOLDERMAN. Mr. Chairman, I have some thoughts about it, if I may project them to you. In our State, the work of educating and rehabilitating the blind, is handled by a separate department of government; the Commission for the Blind. In talking with Mr. Kohn, who is the director of that program, he has given me considerable information.

We know only too well the multidisabling conditions of the blind have mitigated against their taking a place as productive citizens, because there have not been facilities available to do the kind of research that is necessary, or for the kind of training that is necessary.

Also, because there are not people trained; professional people trained, to know how to work with the deaf-blind, and they have been sadly forgotten.

There is very little work that has been done. As an illustration in talking with Director Kohn he told me that they know factually that in New Jersey, 125 children under 2, as a result of German measles—I won't use the professional term—have had their vision seriously affected, and also, their hearing.

They don't know how deep the damage is. There has not been enough research to know whether they are profoundly deaf, or whether they are totally blind as yet. However, there has been a marring of both of these senses. They have 10 profoundly deaf and totally blind people that they are working with at the present time, but there are not enough trained people for this kind of work.

A national institute would be most helpful, not only in research, but in training of people, and also providing special social and vocational rehabilitation programs to help them to take an independent place in life.

One of the things that he brought out I think is most important, and I had not realized it, that because of these handicapping conditions, with the deaf-blind, sometimes compounded by other disabilities as well, the parents are not able to understand the child's needs. Therefore, there is a biological deficit. This can seriously affect health and future when there is a lack of communication. Possibly the parent does not even understand what the child is trying to communicate, and as this condition develops, it can have a very detrimental effect.

Mr. DANIELS. How many such persons do you say there are?

Mrs. HOLDERMAN. Well actually in New Jersey, they know, and they have definitive figures on this—they have better figures, sometimes, than we do—there are 125 children under 2 who have had German measles whose vision and hearing have been affected.

Mr. DANIELS. As of what date?

Mrs. HOLDERMAN. That was as of yesterday, when I talked to Mr. Kohn. He knows that things can be done to help. He gave me an illustration of a brother and sister, both profoundly deaf and totally blind, who have been trained in some homework, and are earning a good living in sewing machine operations. When we think of this kind of a situation nationwide, while the numbers may not be significant—I think I read somewhere about 3,000 people—you realize, what good could result from such a national institute

This has been proven, for instance, by the National Institutes of Health, and some of the national institutions for mentally retarded. A National Institute for the Deaf-Blind could make a significant contribution to developments in this whole field.

Mr. DANIELS. What is New Jersey doing specifically for the deaf-blind children whom you have just spoken about?

Mrs. HOLDERMAN. Well, actually very little; practically nothing at this time, because they don't know enough about it. Their needs are great and there needs to be a great deal more research done in this area. There are only two, Mr. Kohn told me, that they are working with now.

They were fortunate in reaching the two adults, the brother and sister, and being able to work with them.

Mr. DANIELS. Do we have anything in the State of New Jersey with respect to the total population of deaf-blind?

Mrs. HOLDERMAN. Mr. Chairman, I don't have that figure in front of me.

Mr. DANIELS. Do you think you would be able to obtain this figure?

Mrs. HOLDERMAN. Yes.

Mr. DANIELS. And furnish it to the committee?

Mrs. HOLDERMAN. I would be glad to.

(The information referred to follows:)

DEPARTMENT OF INSTITUTIONS AND AGENCIES,
COMMISSION FOR THE BLIND,
Newark, N.J., July 25, 1967.

Mrs. BEATRICE HOLDERMAN,
Director, State of New Jersey Rehabilitation Commission,
Trenton, N.J.

DEAR BEA: I am happy to make certain information available in connection with the need for a Center for Deaf-Blind Children and Adults. I trust that you will convey this letter to Chairman Dominick V. Daniels and members of his subcommittee, without modifying the material, so that its impact is not changed. For the sake of brevity, it would appear desirable to number my comments.

1. Services to Deaf-Blind people have, through the years, become the responsibility of agencies or schools for the blind, since schools for the deaf have not been equipped or prepared to deal with this problem.

2. The N.J. Commission for the Blind has always served Deaf-Blind people. While we do not have exact statistics at hand, a quick review with some of our major departmental units brings to mind seventeen (17) Deaf-Blind adults that we are currently working with. Several of these individuals have been rehabilitated and are employed.

3. Currently we are in process of developing a cooperative study with the Industrial Home for the Blind in Brooklyn, N.Y. to determine the extent and

need of services for Deaf-Blind people in New Jersey, as well as the probable number. Undoubtedly it is quite a bit more than seventeen.

4. Our largest concern, at this time, is with the number of children whose vision and hearing have been affected by the Rubella Epidemic of 1964. We currently know of 125 such rubella youngsters. About 40 such children are in school programs. Approximately 30 are either in State institutions or awaiting placement therein. About 55 are pre-schoolers and we are still trying to learn about their needs.

5. Our most significant lack is for comprehensive evaluation to determine the *extent* of visual loss, hearing loss, and concomitant additional handicaps. A number of children have mental retardation, cardiac involvement, or neurological impairments. On the other hand, a substantial number have varying degrees of residual vision, some of which can be considered useful.

6. The number of blind and profoundly deaf children is not really known. But we anticipate sending to Perkins Institute in Watertown, Mass., in Fiscal Year 1969, some 6–10 children.

7. During the year ending June 30, 1967, the Commission had an increase of 106 children more registered than the year before. Many of these were in the pre-school years and are directly related to the maternal rubella syndrome. We anticipate that more will be referred as they reach school age.

As can be appreciated from the foregoing, our greatest need is for adequate evaluation to determine the nature and degree of disablement among these children. Adequate evaluation will lead to more appropriate community and school programming, using whatever strength the child has. Undoubtedly a number of these children will be able to be absorbed in those programs now educating blind children. Others will need specialized facilities. Those who are profoundly deaf and blind will need very specialized facilities. Without this, numbers of children will be lost and institutionalized.

My sincere thanks to you and to the Rehabilitation Commission in joining in support of this need. To Mr. Daniels and other members of the subcommittee, a special word of thanks for encouraging Vocational Rehabilitation endeavors. Its impact in New Jersey has meant that blind people who have the ability to take and hold employment do so with the full knowledge and expectation of employers that they will succeed. Last year the number of blind people, placed by the N.J. Commission for the Blind, had aggregate earnings, on a one (1) year basis of $448,000.00. (Fiscal year 1967—172 people rehabilitated.)

With sincere personal good wishes.

Very truly yours,

JOSEPH KOHN,
Executive Director.

Mr. DANIELS. And, also, what services are available for them?

Mrs. HOLDERMAN. At the present time, there are no services in the total sense available for the deaf-blind, and, further, I might emphasize again that people have not been trained in the field to know how to work with a person that is both deaf and blind.

They may know how to work with a person who is deaf, or blind, but working with both presents a problem. Now the Mount Carmel Guild in the new comprehensive rehabilitation center they are developing in Newark, will work with the multihandicapped blind person, but there is very little so far that they know about in relation to working with the deaf-blind.

This is a very serious need, and a national center could result in fruitful work for the deaf-blind.

Mr. DANIELS. Well, I would like to ask you a question, with regard to their treatment. Have you formulated any opinion as to the advisability of staffing a separate center for the treatment of deaf-blind, or do you think they could be better helped by treating them at a center where the multiple handicapped are treated?

Mrs. HOLDERMAN. I think a national center, such as described in this important piece of legislation, is necessary, if we are going to,

through research in this particular area, be able to get some of the answers that we need to feed out to different parts of the country, so that they in turn will know best how to work with deaf-blind people.

If we leave it up to special projects, information does not feed out as it should, nor would there be the possibility of staffing it with the kind of professional help needed.

Mr. DANIELS. You endorse the establishment of a separate, independent facility for the treatment of the deaf-blind then?

Mrs. HOLDERMAN. Indeed I would.

Mr. DANIELS. Both adults and children?

Mrs. HOLDERMAN. Yes. It could be a significant advancement; we have made many advancements in working with the handicapped person; indeed, miracles are performed today, and this is a group that has not had the kind of help that could be given to them to make them productive citizens.

Mr. DANIELS. To your knowledge, are any figures available as to the total deaf-blind population in the United States?

Mrs. HOLDERMAN. Congressman Daniels, Mr. Chairman, I read only recently that there are about 3,000; but I don't have exact figures on that.

There are many people more knowledgeable than I in this field. Mr. Salmon spoke about this the other day, and I am sure Mr. Nagle will have more information than I. Often in these national institutes, where you are delving for the kind of information you need, whether research, medicine, vocational training, social—the kind of social work that is needed—you come up with some factors that relate to other disabilities as well that would be helpful where multihandicapping conditions exist.

Mr. DANIELS. You may continue.

Mrs. HOLDERMAN. Section 18, agricultural workers: In New Jersey, because we are a garden State, with the diversity of crops that are produced in the State, we have about 21,000 migrant workers that come to us each year to help us produce these crops.

Some of them come under contract from the Puerto Rican government, some of them who come in are Puerto Ricans from other sections of the country. A great many Negroes come from the South with the crops as they are harvested.

At the present time, there has been very little concentrated work done relative to disabling conditions of health, or accident, or disease, or birth.

Very little. We know this. We have worked at it for quite a long time in New Jersey. I think you know that, through our Bureau of Migrant Labor, the conditions for migrant workers have improved tremendously as to sanitary and health conditions.

This is not so throughout the country. We have still a lot of work to do, but a lot has been done. There are 13 schools today for the migrant workers, and I will tell you why I mention schools later on.

There has not been the kind of understanding on the part of the community that people coming to us are part of us when they come into the State.

Many of these people really do not know where to get the kind of social services that are necessary if illness or accident strikes. They come to us, very often, with some of the aggravated conditions that lack of good health services causes, with the multiple problems that have developed over the years.

They have distinct needs which embrace the full range of medical, dental, social, and psychological services, and which their low wages cannot afford. There are cooperative efforts in our State between vocational rehabilitation, the department of health, the welfare agencies, and our new department of community affairs, which has taken over the economic opportunity programs, as well as some others.

Our department of health has, over the last 6 or 7 years, had some pilot health projects; has done some educational work in the local communities to alert the communities to the effect that health conditions concern them individually, in the community if there are poor health conditions as far as the migrant workers are concerned.

In talking with our people in education, I understand that today 13 schools are working with probably about 1,600 people; about 10 percent of them are between the ages of 12 and 16, which is rather interesting.

This did not happen years ago, and is a result of motivation on the part of the parents for the child to go on with education. A number of them have gone on to college, as a result of this concentrated effort.

I think most of the States along the eastern seaboard, if my memory serves me, do transmit progress reports as far as education is concerned. For this 12 to 16 group as far as vocational rehabilitation is concerned and also as far as health conditions are concerned, through contact with the schools, we can reach early, detect, and undoubtedly help with vocational rehabilitation, where there are disabling conditions. It is most important that the health facilities be improved in these areas, that hospitals have a better understanding, that communities have a better understanding.

I think that as a result of the pilot projects that this legislation recommends there will be a concentrated effort to reach deeply into this whole situation. These are people who really go from place to place, and have never had the kind of attention that will correct some physical or mental disabilities.

We had a conference in New Jersey about 2 months ago; our Department of Health, our Rehabilitation Commission, the Migrant Labor Bureau, and the two farm organizations that arrange for workers for the farms.

This was a 1-day session. "What services are available and what are the needs, what could be done if we understood what services were available, how could we refer?" Two of the representatives of the farm groups said that they had not known that this kind of a service would be available to the farmers they represent, if there were an accident on the job, or if someone was injured in an automobile accident, or if there was a mentally retarded child.

There is a good coordination of services between agencies in New Jersey as a result of some of the cooperative work that has been done. In the migrant workers area, it is minimal.

Mr. DANIELS. Where are facilities for migrant workers located?

Mrs. HOLDERMAN. There are seven different counties in our State into which migrant labor comes. In the northern part of the State, just a minimal amount; the apple picking country. Really, it is from the southern part up to a little above the middle part, where the main harvest is produced. It would be possible for us, I think, to effectively consolidate efforts for a pilot project, under a qualified director, with vocational rehabilitation counselors, whose responsibility it is to know

the services that are available. There is a unique quality, we feel, as I am sure Miss Switzer has pointed out, to the work of the vocational rehabilitation counselor who is specially trained and can provide the comprehensive services that are necessary, whether they be medical, psychological, or psychiatric, or training; it is his responsibility also, to coordinate the services of other agencies, so that the individual can get the kind of comprehensive rehabilitation that will be helpful to him.

Mr. DANIELS. New Jersey has been one of the leaders in the area of migrant workers. I would like to pose this question to you.

The legislation under consideration proposes to eliminate the use of residence requirements as a condition of providing vocational rehabilitation services to disabled persons.

Do you think this would interfere with or in any way be a drawback to the States who render services to the migratory worker and his family?

Mrs. HOLDERMAN. You mean if the residency is maintained? If it is eliminated?

Mr. DANIELS. If it is eliminated.

Mrs. HOLDERMAN. If it is eliminated, I think it would materially help. Now, each State has its own regulations, and we are talking about a national situation in this, so that there could be extreme rigidity in some States, or there could be absolute denial of services, if the migrant came into the area. I don't know that much about other States. We do have "intend to stay" in New Jersey, but you would have to prove this also.

Not only as far as the migrant is concerned, but we are talking about our vocational rehabilitation work throughout the country, so I think the elimination of residency requirements applies to our whole population.

We have a moving population today. Our industry today requires movement of people. In the section in which I live, probably about 5 percent of the people work for RCA or other large concerns and they move on an average of probably once every 5 years, and sometimes once every other year. It is most important that we have in the Federal vocational rehabilitation program, as we do in education, the possibility of moving an individual right on from services in one State to the other. Because we have a similar vocational rehabilitation program in each State, it would indeed be possible for us to start services and when ready transfer the individual's case to another State. There may be some deterrent here, Mr. Chairman, to some of the States doing the kind of work that they would like to do in vocational rehabilitation unless residency is eliminated. I think it is more far reaching than the migrant worker, for we have a mobile population in our country, and it would be advisable, we feel, to remove the residency requirement.

It also, I think, has a psychological effect as far as welfare departments are concerned, or as far as hospitals are concerned.

If they know that there is the kind of climate in other sections of the State where a person can progress to a certain level of either rehabilitation or health, and then be moved on into their own home community, needed and better services would be available.

Pilot projects, as indicated in this bill, are necessary. Anything that we have ever started in new areas of our work in New Jersey and this is true, I think, in many States of the Nation, we do on a pilot basis

to find out how best to do the job, before trying to do something statewide. For instance in working with the deaf, we have a very fine school in New Jersey, the Katzenbach School for the Deaf, in Trenton, which is comparable to a high school.

Three years ago, we cooperatively worked with the school, with a special counselor based at the school. There is some very fine training there. As a result of the work that has been done, we have six counselors in the State now working with the deaf today.

Doors have been opened, and I give this as an illustration, because the same thing could happen with the migrant worker. Doors have been opened in some of our large industries: Prudential, RCA, for trained deaf people, in either clerical or machine operations or technical jobs; people move on to college who are deaf who never would have had the opportunity before. This kind of attack, if you will, on a pilot basis, shows you how much better to do the job, and when you fold it into your State program, you have a great deal more assurance of some positive results for people than you do otherwise. So I think this phase of the bill is important. I can see where with this kind of pilot project approach an intensification of services: health, vocational rehabilitation, social agencies in the community, the farm groups, farmers in a community, will result in independence for handicapped migrant workers and better health conditions.

As an illustration, six migrant workers who had some mental disturbances, and had been placed in the State hospital, were referred to a rehabilitation counselor stationed at the hospital.

Their stay in the hospital—modern medicine, thank heavens, helps in this field—their stay in the hospital was from 6 months to a year and a half.

They are back in the fields working today. In three other cases, where migrant workers had been referred through the health department; and that is because we have been working more closely together; one with a back injury, another with severe burns—we are still working with them, and they will either be able to move on into the field again or into another field of activity after training, which we can provide.

Mr. DANIELS. I think you mentioned before that in New Jersey we employ some migrant workers from Puerto Rico.

Mrs. HOLDERMAN. Yes.

Mr. DANIELS. Would these same services be available to these Puerto Rican migrant workers as would be available to other migrant workers from New Jersey, or other parts of the country?

Mrs. HOLDERMAN. Oh, yes.

Mr. DANIELS. There would be no barrier to rendering those services because they came from Puerto Rico?

Mrs. HOLDERMAN. No. Actually Puerto Rico itself has a very fine vocational rehabilitation program. We have had cases where we have worked with someone, where there has been an automobile accident, and then were able to transfer the case to the rehabilitation agency in Puerto Rico.

This is the very great value of having similar programs.

Mr. DANIELS. When a family moves from New Jersey, after participating in a rehabilitation program, do you communicate with the State to which they are moving?

Mrs. HOLDERMAN. Oh, yes.

Mr. DANIELS. To see that there is a continuation of services being rendered?

Mrs. HOLDERMAN. We do this before the person is ready to go on, to find out if services are available. In some cases, because of the Residency Act, they have been denied services. Not with us, but I know this is so. There is the climate, as far as migrant workers are concerned, that because they are on the move they are not a part of an individual population; but they are, and it is so important that this kind of climate be changed, because they certainly make a contribution to our economy.

Mr. DANIELS. Thank you very much. Do you have anything further to add?

Mrs. HOLDERMAN. Mr. Chairman, I would just like to, if I may, in the concluding statement, say that two of the provisions in this bill cover needs as stressed in the President's message, parts of it, on health and education and also his poverty message. Significant progress has been made in this country as a result of the legislation that has been enacted for extension of vocational rehabilitation services.

We in this country are very grateful to this committee, not only the subcommittee, but your House Committee on Education and Labor, for the wonderful and deep interest that you have had, and the effective work that you have done in Congress in influencing enactment of the Vocational Rehabilitation Act of 1965, and I could not let this opportunity go by without expressing appreciation to you.

I did attach for informational purposes, in a statement from our council of State directors, a summary which I think will give the committee a little broader background as to the work of vocational rehabilitation. The passage of this bill, we feel, should be fully implemented with staff to undertake the work. Its enactment will make a significant contribution to the kind of progress that has been made in our country in helping handicapped people to become independent and productive.

May I thank you, Mr. Chairman, and members of your committee for the opportunity of coming.

This is my first appearance, and I am frank to confess I was scared to death.

Thank you. [Laughter.]

Mr. DANIELS. Mrs. Holderman, I thought perhaps you might have felt at home here, inasmuch as you have a New Jerseyite presiding as the chairman.

Mrs. HOLDERMAN. But, you know, it is difficult to feel at home when you have not done anything before.

Mr. DANIELS. Well, I remember when I tried my first case in a law court. I can honestly tell you; I can say it now, my knees were shaking. But today, I walk into court without any trepidation.

Mrs. HOLDERMAN. Thank you very much.

Mr. DANIELS. I enjoyed your testimony, and I think you have made a marvelous statement, and we appreciate the views that you have expressed. When you return to New Jersey, you will probably see the Governor before I will, you express to him my kind regards.

Mrs. HOLDERMAN. Thank you, sir.

Mr. DANIELS. My colleague from the State of Wisconsin, Congressman Steiger, may have a question or two to ask of you.

Mr. STEIGER. Mr. Chairman, thank you. No; I have no questions for Mrs. Holderman. I have enjoyed listening to her testimony, and I am glad that she was here, and I hope that you will not feel afraid at all when you come back. We are very happy to have you.

Mrs. HOLDERMAN. Yes; I will. I do want to tell you, Mr. Steiger, that you have a very excellent vocational rehabilitation program in Wisconsin.

Mr. STEIGER. Thank you. I agree with you and I am delighted to hear you say that, Mrs. Holderman. We think very highly of it.

Thank you.

(Mrs. Holderman's prepared statement follows:)

STATEMENT OF MRS. BEATRICE HOLDERMAN, DIRECTOR OF THE NEW JERSEY REHABILITATION COMMISSION

Mr. Chairman and members of the subcommittee, it is a distinct honor to present to this distinguished subcommittee the views of the New Jersey Rehabilitation Commission. I welcome this opportunity to testify on H.R. 8981, the Vocational Rehabilitation Amendments of 1967.

Our Governor, Richard Hughes, who is vitally interested in improvements in social legislation, was pleased to learn that you had invited a representative of New Jersey to appear before you. He is particularly interested in this legislation and its enactment because along with its other important provisions it provides for pilot projects for the rehabilitation of migrant workers. Our State has a significant number of migrant workers who come to us each year and contribute to our economy through their work in the production of the fine crops produced.

At this time, we in the Rehabilitation Commission, and our New Jersey Commission for the Blind wish to express to you our deep appreciation for the fine contribution you made in the passage of the important Amendments to the Vocational Rehabilitation Act in 1965. You realized in your wisdom that these changes would have a significant effect upon the extension of services to handicapped people in our country. In our State there has been greater recognition on the part of our State Legislature and public and private agencies, stimulating their concern for handicapped people and the possibilities of their gainful occupation. They have influenced and encouraged to a greater extent, closer communication, cooperation, and coordination of services between those concerned with people disabled through accident, health, or at birth. Most important, we are working with a great many more handicapped people, many of them with severe handicaps such as the heart, stroke, and cancer, the quadriplegic, more of the mentally retarded and mentally ill, with good results. We are grateful to you for providing the possibilities of extension and expansion of services to handicapped people.

You undoubtedly know a lot about New Jersey from your distinguished Chairman. For the record I should like to present some details which you undoubtedly considered in asking me to appear before you. While New Jersey is a small state in area, its population is close to 7,000,000 people. Its economy is fortunately varied—industrial, one of the large research centers of our country, large and small business operations, agricultural, and fine educational centers.

A diversity of skills; professional, semi-professional, clerical and sales, service occupations, agricultural, skilled, semi-skilled, unskilled occupations, are required for the maintenance of the relatively high economy it enjoys. These are mentioned because of the fine possibilities and opportunities of training handicapped people to not only supply the needs of the economy but the resulting human effects for the individual as a productive and independent person, his family, and the community.

COMMENTS ON AMENDMENTS AS PRESENTED IN H.R. 8981

Grants to States for vocational rehabilitation services

Section 2.

Commissioner Switzer of the Vocational Rehabilitation Administration, has undoubtedly presented to you much more detailed information for consideration than I shall attempt to do. The present financing of our Vocational Rehabilitation Agencies under the amendments of 1965 has aided the states materially in reaching and helping more handicapped people.

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The amendments incorporated here would provide a better basis for the States in projecting program needs in the preparation of budgets. The present law authorizes appropriations for grants-to-states for basic support of state programs under Section 2 only to the fiscal year 1968. In New Jersey, even though we operate on an annual basis, budgets must be prepared and presented to the Budget Bureau a year and one half prior to the projected fiscal year's operation. In the case of states whose legislative bodies meet biennially, you can understand the budgetary problems involved since no provision presently is made in the law for Federal funds after fiscal year 1968.

These amendments would be most helpful in eliminating the problem, allowing for better planning on the part of the Vocational Rehabilitation Administration and the States for fiscal years 1969 and 1970.

They would likewise be helpful in planning for coordinated services with other agencies where joint plans for funding under our specific pieces of legislation such as Vocational Rehabilitation, Vocational Education, Special Education, Mental Retardation, Mental Illness, would be a decided advantage in providing cooperative and comprehensive services.

Vocational and special education and rehabilitation of the brain damaged person, is an illustration of joint planning in New Jersey.

Grants to States for development of comprehensive programs

Section 3.

The charge under the Vocational Rehabilitation Act Amendments of 1965 to the states to institute statewide planning for the provision by 1975 of vocational rehabilitation services and facilities for all handicapped persons who could benefit therefrom has demonstrated its far-reaching effects already. In New Jersey we were fortunate in securing competent project staff people to do this job. The acceptance for service of knowledgeable and influential people in their particular fields of responsibility has been most heartening. Their contribution is at present made through various organized bodies such as the Governor's Advisory Committee, the Steering Committee (an organ of the Advisory Committee), the various Regional Committees, and the Task Forces whose work relates to special problems of handicapped people. As a result of their contribution and interest there is better understanding not only of the availability, and possibilities for extension of vocational rehabilitation services, but a growing understanding of the value of working together in their own regions and on the state level. Improvements resulting from meetings have already been incorporated in ongoing programs.

Because of its importance and the fact that under the present law, authority for appropriations extends only through June 30, 1967 (with appropriations remaining available through the fiscal year 1968), this amendment authorizing appropriations through the period ending June 30, 1968 would be most helpful, permitting such appropriations to remain available through the fiscal year 1969.

Centers for deaf-blind youths and adults

Section 4.

Through Vocational Rehabilitation Administration grants, the New Jersey Rehabilitation Commission has been working to extend and improve services for the deaf and hard of hearing. This is being accomplished primarily by intensive services for students at the New Jersey School for the Deaf, working closely with parents and maintaining regular liaison with employers. Intensive training has been given to counselors working with the deaf, enabling them to assist the more seriously handicapped—the emotionally disturbed deaf.

Services to the deaf have been closely coordinated with the New Jersey School for the Deaf. This link has netted important breakthroughs in the development of employment opportunities. As an illustration, a coordinated program was developed with Radio Corporation of America to train a deaf boy to become an Electronics Computer Systems Checkout Technician, with Bell Telephone Laboratories to accept deaf girls in clerical positions and with the State Civil Service to consider adjustments for deaf students applying for Civil Service examinations.

Some important strides have been made in serving the seriously handicapped deaf, but we are confronted with even a larger problem—the handicapped who cannot see or hear. There is a real need to establish a National Center for the Deaf and Blind. Such a facility is needed to:

1. Provide highly specialized services which currently are not available.
2. Prepare people to work with this extremely complex problem.
3. Provide residential facilities for those unable to travel.
4. Provide social and vocational programming consistent with the deaf-blind's needs.

5. Cope with the many problems presented by this very complex communication disorder.

Grants are being provided by the Vocational Rehabilitation Administration to Jersey City State College and Seton Hall University to train instructors to work with the blind.

Agricultural workers

Section 18.

To us in New Jersey, as well as many other States in our country, the provision for pilot or demonstration projects for the provision of vocational rehabilitation services to handicapped migrant agricultural workers and members of their families, would further encourage cooperative efforts to reach early and help disabled migrant peoples, with concentrated professional work in this field. The rehabilitation needs of migrants are many, the means to meet them are scant. Migrants come to New Jersey from approximately nineteen states and the Commonwealth of Puerto Rico. About 21,000 workers make an annual contribution to the economy of our state. This includes agricultural "day haul" workers provided through the efforts of our Department of Labor and Industry's Farm Placement Bureau. The majority are Puerto Ricans and Negroes. The Puerto Rican worker who comes from the Commonwealth is better protected under contract with insurance and health benefits than the Puerto Rican "walk-ins" from other sections or the Negroes who follow the harvesting of crops from the southern part of our country. The Puerto Rican worker from the Commonwealth comes alone but the other migrant workers in the majority of cases come with his or her family with a multiplicity of problems which are carried with them as they move from job site to job site in their efforts to maintain a livelihood. Their needs embrace the full range of medical, dental, social, and psychological services, which their low wages cannot afford. There are cooperative efforts in our State between the Department of Health, the Welfare Agencies, the Community Affairs Department, and the Rehabilitation Commission to help with rehabilitation services. However, we all know that a great deal more needs to be done to effectively consolidate these efforts. A great deal must be done for a better understanding on the part of the hospitals, health facilities, the farmers, and the community, and the migrant agricultural workers themselves to accomplish definitive results. To illustrate how forces can work together workers were referred by one of our State Mental Hospitals to the vocational rehabilitation counselor stationed there. Their stay in the hospital ranged from six months to a year and a half. They are working in the fields again and have been for some time. Three others were referred by the Health Department; one with a bad back injury, another severe burns, another a diabetic condition. Our counselors are presently providing the diagnostic and remedial services required along with the all important counseling and guidance of the trained professional person. All of them are between 30 and 40 years of age. There are not as many who have been referred as could be.

There is a good Migrant Labor Bureau in our Department of Labor and Industry and through their efforts the farmers have cooperated in providing improved housing and sanitary conditions. The Department of Health has worked with the local health agencies, and has done some pilot health work with migrant workers, improving services constantly. There are 13 schools for migrant workers in the central and southern portions of our State where there is a concentration of migrant workers. Children from 1 to 16 are receiving educational training. There are about 160 out of a total of about 1600 between the ages of 12 and 16. This is an interesting change from the past, generated primarily through the motivation of some of the parents for a better education for their children.

The Rehabilitation Agency is in a unique position of providing the kind of comprehensive vocational rehabilitation services that can change despair to hope for the individual and his family, from dependence to independence,through the provision of or coordination of necessary restorative and training services. There is some resistance on the part of the community and the hospitals to provide services to migrant and agricultural workers.

The provisions under this bill would provide the means of undertaking pilot projects dealing with such areas as closer cooperation of all those concerned or involved with migrant workers, referral of disabled people, remedial and training services as needed, and followup periodically for definitive results. Such projects would involve the Migrant Labor Bureau or similar Bureaus in other states where responsibility rests for migrant workers, Departments of Health, Departments of Education, in our state the Community Affairs Department concerned with migrant opportunity programs.

In New Jersey we have a healthy climate of cooperation between State Public and Private agencies. This has been growing over the past several years, encouraged to a greater extent, I believe, by the fine social legislation enacted in 1965. More is needed. We are all working to accomplish it. Undoubtedly we are not too different from other states but knowing that this kind of climate generates positive action concerning the social welfare of people with which you are concerned, I thought you would like to have this statement for the record.

Residence requirement

Section 6.

Vocational rehabilitation services as provided by the State rehabilitation agencies are relatively uniform through the fine guidance of our Vocational Rehabilitation Administration. The needs of our country's economy for personnel movement in many areas is much greater today than ever before. It would seem highly desirable therefore that approved State plans for rehabilitation services would not contain residence requirements which would exclude an individual from services under the plan.

Concluding statements

Two of the recommendations in this bill have been formulated to carry out the specific recommendations and the spirit of the President's Health and Education Message of February 28, 1967 and his Poverty Message of March 14, 1967. They are a valuable and basic part of building a structure in our country which will provide needed services for the improvement of conditions for our fellow man.

Significant progress has been made in our country in reaching and rehabilitating people. Aside from the basic humane value of these services it is a fine investment program because of the skills trained handicapped people provide in our economy and their contribution to our society. Through their productive efforts, they represent a savings in institutional and public assistance costs as well. We are grateful to you for the privilege of providing these services.

The Council of State Administrators of Vocational Rehabilitation recently published a document "The State-Federal Vocational Rehabilitation Program Looks to the Future"—A Statement of Mission and Goals. Because I felt it could be of value in your deliberations, a copy of its summary is attached.

The passage of this bill, we believe, when fully implemented with sufficient funds and staff to undertake the work, will make a significant contribution to continued progress in reaching and helping more disabled people. We urge its passage and ultimate enactment.

I want to thank the committee and its distinguished chairman for your deep interest in rehabilitation with its full potential of bringing a fuller life to our physically and mentally handicapped citizens.

THE STATE-FEDERAL VOCATIONAL REHABILITATION PROGRAM LOOKS TO THE FUTURE (ABSTRACT)

A STATEMENT OF MISSION AND GOALS

(Council of State Administrators of Vocational Rehabilitation, Washington, D.C.)

SUMMARY

Social Theory

Federal and state support of vocational rehabilitation service is based upon the following concepts: work is one of the basic ingredients of American culture, and disabled people have a right to work; America needs the productive efforts of all of its citizens; it is important to the nation that the handicapped person become a more efficient consumer; disability results in dependence and the cost of dependence is a serious drain upon the economy of the nation; and specialized agencies and specialized programs are required to prevent disabled people from being neglected in programs designed to serve the general public.

Scope of program

The justification for vocational rehabilitation services has changed little over the years. The purpose remains to make employable disabled people who are handicapped in securing and holding employment. The scope of individuals to be served and service to be rendered has undergone radical change since the initiation of the program in 1920. Beginning as a vocational training program for physically handicapped adults, the program now includes physically and mentally handicapped people, including individuals with behavioral disorders. The scope of

services now includes diagnostic services, counseling, physical restoration services, and a variety of vocational services. In fact, a vocational rehabilitation agency may provide almost any service which will result in making the handicapped person employable.

Responsibility of State agencies

The responsibilities of state vocational rehabilitation agencies under existing legislation include the administration and supervision of a program of direct services to handicapped adults; developing a statewide plan to be a guide in providing complete rehabilitation services to all of the state's handicapped citizens; working with local communities in developing plans for establishing and staffing workshops and rehabilitation facilities; providing consultative services to workshops in the development of workshop improvement and technical service projects; providing consultative services to workshop and rehabilitation facilities that may be used for special training programs to be supported by federal funds, and certifying handicapped individuals as eligible for such training services; consultation with community organizations in developing research and demonstration projects and the approval of such projects, when they involve direct services to handicapped people; developing and conducting research, demonstration, and innovation projects; administering the Randolph-Sheppard Act; making determinations of disability for the Social Security Administration; developing cooperative arrangements with other agencies whose responsibilities are related to vocational rehabilitation; certifying to the United States Department of Labor individuals not capable of earning the federal minimum wage.

Unique qualities

State vocational rehabilitation agency laws and practices have certain unique features that make these agencies effective in serving handicapped people: (1) the vocational rehabilitation agency can provide services to *all disabled youth and adults* with employment problems; (2) it can provide *all of the services* that are needed to evaluate rehabilitation potential of the individual and prepare him for employment; (3) the vocational rehabilitation services are available *on equal terms to handicapped people in all sub-divisions of the state;* (4) laws and regulations governing the administration of rehabilitation programs of the state are flexible, enabling the state agencies to work out *cooperative agreements with related agencies* in almost any way that will expedite rehabilitation of handicapped people; (5) the flexibility of funding enables state vocational rehabilitation agencies to be *experimental and innovative* in their approaches to the provision of services; and (6) the availability of funds for education and training of staff, both institutional and in-service, has enabled state vocational rehabilitation agencies to make unusual strides in increasing the numbers and effectiveness of their personnel.

Mission

The mission of vocational rehabilitation as related to the scope of individuals to be served and services to be provided is summarized as follows: In addition to those with medical diagnosis of physical or mental impairment, the current definition of disability makes "eligible" for vocational rehabilitation services individuals with behavioral disorders stemming from other causes. This broader definition of disability frees state vocational rehabilitation agencies from restrictions imposed by previous definitions of disability and its relation to impairment and will result in a broader use of the skills of the vocational rehabilitation agencies. The vocational rehabilitation agency will not find it necessary to provide the complete scope of its services to every client, although it will *retain responsibility for such services.* A very important responsibility of state vocational rehabilitation agencies will be to develop cooperative relationships with agencies with related programs to be sure of a continuity of services resulting in complete rehabilitation.

Levels of responsibility

The levels of vocational rehabilitation agency responsibility are defined as being threefold: (1) providing rehabilitation services to mentally and physically impaired people for whom vocational rehabilitation agencies have sole responsibility under the Vocational Rehabilitation Act and related state legislation, in so doing utilizing whatever services may be available in their respective communities; (2) providing vocational rehabilitation services in cooperation with other agencies which share responsibilities with the vocational rehabilitation agencies for serving the total needs of various groups of handicapped people; and (3) providing services related to vocational rehabilitation to disadvantaged

people under other state and federal laws not in conflict with the Vocational Rehabilitation Act. Such programs will be financed from funds earmarked for such purposes.

Resources needed

To perform their obligations effectively state rehabilitation agencies will require the following resources: Funding must be realistic to enable the state rehabilitation agency to develop and carry out a vastly expanded program of direct services to the nation's handicapped citizens; a network of rehabilitation facilities and workshops must be developed and maintained; the status of the state vocational rehabilitation agency in state government must be enhanced; resources for continuing state-wide planning for the provision of vocational rehabilitation services must be assured; and resources must be available to enable state vocational rehabilitation agencies to accept and carry out a leadership and consultative role commensurate with their responsibilities. This includes a staff of experts on rehabilitation facilities, research and demonstration, and community organization and planning.

Mr. DANIELS. Our next witness is Dr. Merle Frampton, principal of the New York Institute for the Education of the Blind.

It is really a pleasure, Dr. Frampton, to welcome you here. I have not seen you in a number of years and my mind goes back to about 8 years ago when I first had occasion to meet you, and to work with you on rehabilitation programs.

So I know you are a great authority in this area, and perhap yours views today will help this committee in dealing with this legislation.

STATEMENT OF DR. MERLE FRAMPTON, PRINCIPAL, NEW YORK INSTITUTE FOR THE EDUCATION OF THE BLIND

Dr. FRAMPTON. Thank you, Judge. It is a source of real satisfaction to some of us professionals in this field to find a highly competent advocate for the handicapped. I know this to be true for nearly a decade, with a sympathetic and constructively critical approach to the problem you have contributed much to the handicapped. I predict some real aid to the handicapped, under your leadership.

My remarks are confined to section 4 of H.R. 8981. I have no comments on the other sections of the bill, the migratory or the district bills, and I would certainly have no objection to them. I would prefer to follow the requests of the executive department.

For more than a decade, three decades in fact, I have watched the Members of this House struggle with the problems of the physically handicapped and after careful deliberation make available funds for increased services to the handicapped of this country.

Without this concrete support many needed services would not yet be in existence. Those of us in the professional field are grateful for this concern which I know you all share for your fellow man.

As in all public economic, education, and welfare programs, the secret of real success is getting the maximum value from the tax dollars appropriated in good faith.

Interest in services for deaf-blind children and adults is not a new venture in work for the handicapped in the world in general and the United States in particular.

Probably the earliest definitive professional treatment of the subject now available was made by Abee Carton, director of the Institute of Deaf and Blind in Brussels in 1836–39. He reports several earlier attempts dating to the latter part of the 16th century.

Sometime, if you are interested, I would be glad to let you see the first known etching of the first known educated deaf-blind person in the world that we have any record of, and perhaps you would like to see it.

It looks a little bit like Laura Bridgman, for those of you who are professionally informed in the field.

Here are the historical facts.

Mr. DANIELS Yes. Thank you.

(The information referred to follows:)

Mention is made of Deaf-Blind individuals and possibilities of their training. It was the teachers of the deaf who first faced the problem in the 16th and 17th Centuries. Ponce (1585) Bonnet (1620–29) J. Bulwer (1648) Dalgarno (1661) Wallis (1655) Holder, Sibscota, Van Helmont, Amman (1692) L'Eppe (1755) Sicaud (1815) Kerger, Raphel, Lazius, Arnoldi, Heinecke, Pereira, Diderot (1749) Lenden-Register of History, Politics and Literature (1758) discusses the problem. Deschamps-(1772) Gengential Deaf, Dumb and Blind. L. Hervas Y. Panduro-(1795) Spanish School for Deaf-treats Charles Mitchell-(1795) Prof. Steward Edinburgh, Julia Brace (1817) Hartford, Connecticut-Anne Temmermans (1818) Brussels (Carton) Miss Morissian-Paris (1832) Laura Bridgman, Perkins U.S.A. (1837) Helen Keller, Perkins U.S.A. (1880).

In the United States the earliest attempts were made in Hartford, Conn. (Julia Brace (1817), and Laura Bridgman, Perkins (1837)). Neither effort was crowned with much success until the arrival of Helen Keller at Perkins and the discovery of an unusual teacher, Anne Sullivan Macy.

In our generation we are familiar with the wonderful achievements of that distinguished first lady of our field, Helen Keller and her superb teacher, Anne Sullivan Macy.

At the risk of incurring the ire of my professional colleagues I must in all candor state that there is much sentiment and emotion connected with the subject of the deaf-blind much more than the problem itself warrants. More often than not too much for sound educational and scientific planning for useful continuous services for this group. Deaf and blind individuals are like all other seriously multiply handicapped individuals and after careful study and servicing over a period of years, discovered to be relatively easily classified.

They can be classified as those who are feasible for education, rehabilitation, and trainable for simple living functions; or individuals who are not feasible.

Deaf-blind individuals make up a very minute part of the far larger group of multiply handicapped individuals. The vast majority of deaf-blind children and adults are nonfeasible as are other seriously multiply handicapped individuals.

Few deaf-blind individuals can ever become self-sufficient in our present society under our present standards. I know of fewer than 10 living deaf-blind adults who are earning their own way in life.

We hardly would expect them to do so. Helen Keller with all her accomplishments and they are great, and we marvel at her achievements, has been a subsidized person by individuals and agencies since her birth.

No one knows what it has cost in dollars, probably over 1 million, plus years of devoted teaching, interpreting, and specialized care for her, and no one complains.

She has overcome her multiple handicaps and stands as an example of courage to others. What the public and many professionals forget, sir, is that there are few, very few Helen Kellers in any generation.

The stark fact is that the vast majority of deaf-blind individuals do not have her native capacity or anything like it. If they did, the present organizations would have before the public a large number of such success stories. If such embryo Helen Kellers are here, and we have not found them and educated them with the same success as Helen Keller, then something is wrong with the present educational and rehabilitation system.

My own experience would not condemn the educational and social agencies. After 30 years of working with deaf-blind and multiple-handicapped children and youth I have been convinced that Mother Nature has either not given them the native capacities, or disease or injury has deprived them of the facilities necessary for such achievements.

Now this by no means suggests that one should not be interested in aiding the deaf-blind to reach their greatest potential.

Mr. DANIELS. I am very glad you added that sentence.

Dr. FRAMPTON. It does not mean that one should stop education, research, medical, and educational efforts, and take laissez faire attitudes, resting on the past. One would forfeit his leadership as a professional if he did and abandon his sense of responsibility as a citizen for the welfare of others less fortunate, if he were to be so unconcerned.

I do not think the great private and public agencies which have been serving in this field for over 135 years, have or are guilty of any such neglect.

A scientist must put facts and conditions in their proper perspective. There is a terminal point in our present era beyond which additional moneys and efforts placed in certain areas will yield astonishing, diminishing returns.

Our needs are so great that we must carefully consider where we allocate new millions in an effort to bring our people to the threshold of high-quality productive service. The field of the deaf-blind is for the present a terminal service.

Unless we secure a breakthrough in medicine or technical aids, we should go slowly in the matter of allocation of large sums of money to areas where the needs in numbers and service requirements do not warrant such expenditures.

Our representatives in Congress must increasingly be aware of the relative value of each new request in terms of our total national needs and our national strength. There are important differences which if poorly evaluated, will spell economic chaos for our Nation.

If this bill concerned itself with a National Center for Multiple Handicapped Youth and Adults it would fulfill a much greater need in our society today, including the deaf and blind, and could demonstrate more effective restoration of more such individuals to productive living because of the greater number.

In 1959, we estimated that $271,765,902 was appropriated providing services to the handicapped from 29 departments, agencies, and bureaus of the Federal Government. We have no firm figure for 1967–68 but reliable estimates place the figure well over $1 billion.

Like all other Government services as the interest and appropriations grow so does the complexity of administration carrying with it the inevitable duplication and overlapping of services, lack of coordination, and the inevitable rush of a multitude of agencies to get on the wagon for a part of the available funds.

Some of the above evils have to be endured at least for a time in urgently needed crash programs. They may in a few limited cases be justified. Such is not the case with regard to the proposed legislation H.R. 8981, which I will take item by item.

I do not believe this problem of deaf-blind youth and adults is anywhere near the magnitude it is claimed to be by the proponents of this bill, either in total numbers of deaf-blind children and adults in this country or the prospects of increase in incidence because of the rubella.

The proponents of the bill claim:

> While many authorities in the field tend to be dissatisfied with the statistics available on the incidence and prevalence of deaf-blindness in the population, the most generally accepted estimate of the number of deaf-blind adults in the United States is 5,000.
>
> The Registries of blind persons maintained by most states contain 4,000 persons registered as deaf-blind. Other estimates have run as high as 7,000. Thus the generally prevailing estimate of 5,000 adults is used for our purposes here.
>
> The registry also indicates some 400 deaf-blind children and authorities believe there are others not registered. The epidemic of rubella in this country is expected to sharply increase the number of deaf-blind children, with many authorities estimating a 300 to 700 percent increase.

The proponents claim that there are 5,000 adults, which may run as high as 7,000—I have quoted these in the testimony—and perhaps 400 deaf and blind children which may run as high as 700. In fact, the opposite is probably true. This is perhaps the smallest and least needy area of servicing in the entire field of rehabilitation and special education.

I admit it can be made the most appealing by clever and timely public relations and emotional appeals.

Let us look at some other figures I have listed, the figures of 30 years of registrations at the New York Institute for the Education of the Blind, the oldest school for the blind in the United States.

(The information referred to follows:)

ENROLLMENT FIGURES FOR 30 YEARS

[Many of these children have remained for from 10 to 15 years in the Department]

	Pupils	Teachers	Staff		Pupils	Teachers	Staff
1937	7	5	5	1954	9	5	5
1938	8	8	6	1955	10	6	6
1939	8	8	6	1956	10	6	6
1940	5	6	5	1957	11	6	8
1941	6	6	6	1958	10	6	6
1942	10	8	6	1959	10	6	6
1943	9	5	7	1960	12	6	8
1944	8	6	5	1961	13	7	7
1945	9	6	5	1962	15	7	8
1946	7	4	4	1963	8	5	[1] 5
1947	8	4	4	1964	7	4	5
1948	6	4	4	1965	11	5	5
1949	7	4	4	1966	11	5	5
1950	7	4	4	1967	12	6	6
1951	6	4	4				
1952	8	5	5	Total	[2] 277	-------	--------
1953	9	5	6				

[1] In 1963 we dropped all noneducable children who had had at least a year trial period in this institute.
[2] Average attendance 9 pupils per year.

You will see that we average about nine pupils a year, and many of these children cover from 10 to 15 years in the department.

I list also some figures from the American Foundation for the Blind, and the total is 101. Many of these cases overlap several years.

(The information referred to follows:)

ENROLLMENTS IN DEAF-BLIND DEPARTMENTS, 1955-67

	Alabama	California	Illinois	Iowa	Michigan	New York institutions	Perkins	Washington	Domestic total
1955-56	7	8	----	16	4	13	6	----	54
1956-57	10	6	----	15	6	8	14	7	66
1957-58	11	5	5	5	5	11	24	8	74
1958-59	11	6	7	6	5	12	26	8	81
1959-60	15	8	8	2	7	12	29	6	87
1960-61	16	8	8	2	8	12	38	5	97
1961-62	----	----	----	----	----	----	----	----	----
1962-63	18	7	7	0	5	[1] 6	[2] 31	4	78
1963-64	24	6	5	0	5	[1] 7	[3] 34	7	88
1964-65	25	8	4	0	6	[1] 6	[4] 32	6	87
1965-66	28	10	4	0	6	[1] 9	[5] 30	5	92
1966-67	29	15	2	0	4	[1] 11	[5] 32	[6] 8	101

[1] Plus 1 child from Nova Scotia, Canada.
[2] Plus 1 child from Iceland and 1 child from Canada.
[3] Plus 1 child from Singapore, 1 from Iceland, and 2 children from Canada.
[4] Plus 1 child from Singapore and 3 from Canada.
[5] Plus 1 child from Malaysia and 2 from Canada.
[6] Plus 3 children from Canada.

Dr. FRAMPTON. During the past 30 years, first three, now eight State and private schools have provided service for deaf-blind children and at least two agencies, services for the adult deaf-blind.

None of these schools or agencies have admitted or would admit they had failed to service deaf-blind individuals nor have they turned down any deaf-blind clients for whom they offered a service program.

Their work on the whole has been of high quality. Most State officials responsible for the educational, social, and rehabilitation services in their respective States are fully aware of these service units, and do refer deaf-blind clients to them.

In my opinion, all of or the vast majority of the deaf-blind who are feasible for such services have received excellent service within the present private and public support. If these agencies had done otherwise, they would have been open to serious public criticism. The plain fact is that the incidence of these feasible and nonfeasible deaf and blind cases is grossly overstated. The New York Institute for the Education of the Blind has operated a department for 30 years, taken all deaf-blind children feasible and nonfeasible referred to them from New York State and many from New Jersey, Connecticut, and Pennsylvania. I believe we have received just about all they had found.

With regard to the future predictions I believe these projections also to be greatly exaggerated. It is a well-known medical fact that a successful vaccine for rubella has been prepared and is in the process of further testing for side effects on the mother before its general release.

During my visit to Australia last summer medical reports and laboratory visits seen by me indicated the results of their use of the new serum.

Britain has also developed such a vaccine and is now using it. Our own National Institutes of Health know of such a vaccine, and are testing it.

I seriously doubt we need to worry about any great increase among deaf-blind children from this source. The incidence of deaf-blind children and adult cases will remain relatively stable for the foreseeable future and increasing as the population increases.

Even such a population increase projection is not made with any surety by demographic experts. The only immediate catastrophe or threat would be nuclear warfare.

Mr. DANIELS. Dr. Frampton, at this point, I would like to ask you a question. You heard the previous witness, Mrs. Holderman, from the State of New Jersey.

Dr. FRAMPTON. Yes.

Mr. DANIELS. She stated that as of yesterday, she received a report that in the State of New Jersey there were 125 children under 2 years of age who are deaf-blind.

Dr. FRAMPTON. No; I don't think she stated that. She said these cases were in various stages of loss of hearing and sight. I do not wish to put words in her mouth, but that is the way I understood it. I don't think that—well, recall her to the stand. I doubt very much whether there are 125 deaf-blind children now. There are 125 rubella cases. I am sure that is what she meant.

Mr. DANIELS. She is here, she can clear the point up. Mrs. Holderman.

Mrs. HOLDERMAN. I said that there are 125 who have been subject to rubella, the disease. I said also, from our commissioner of the blind, that they do not know to what extent there has been the penetration of harm to either one of these senses, either the deafness or the blindness. They don't know this but they do know that there is a serious impairment.

Mr. DANIELS. Serious impairment of which faculties?

Mrs. HOLDERMAN. Both.

Mr. DANIELS. Of both?

Mrs. HOLDERMAN. That is right. But they don't know to what extent. This was one of the reasons that they felt the need for research. Also, if we are going to attack this kind of a problem in the country—whether it is 3,000 or 5,000 or 1,000—we are talking of people we really need to know about. This type of national institute does not have to involve a great number of people; the important thing is, it seems to me, to find out how best we can help and serve those who are presently denied services.

They are forgotten. We don't have professionals who know how to work with both handicapping conditions. Dr. Frampton, I hope you don't mind my speaking so strongly.

Dr. FRAMPTON. Oh, no; I think that your statement was absolutely true. You do not know what the degree of loss of visual acuity or auditory loss is at 2 years of age. It is impossible to determine. It could be that a very large percentage of this 125 rubella may turn out to be in the category of deaf-blind.

On the other hand, it is very likely that a larger portion of them will not be in the deaf-blind category. I think that is a correct statement. It is too early, for 2-year-olds, to say what the result of the multiple handicap of rubella would be in these 125.

All I do know is that I am in close connection with New Jersey, having served them for over a hundred years—I mean, my school having served them—and we get a good many of their deaf-blind children, when they come to the ages of 4 and 5.

We have, I think, two or three of your children in school today.

My point is not the point that we don't have some here now. My point is that in the near future, we will have a vaccine to correct this, as we had in the case of retrolental fibroplasia when another Australian, for example, found the cure for this in correcting the amount of oxygen used during the incubation period.

I think these new cases are a very temporary affair we are facing here, with medicine in its present state of development.

Further, a study of the statistical matter will show such cases rather widely and thinly distributed throughout the Nation.

I may pause here also on this, Mr. Chairman, to comment on this incidence of deaf-blind adults. I read Dr. Salmon's very excellent statement the other day, and he came up with a grand, big, sum total of 139 deaf-blind adults for the entire two health areas on the eastern seaboard. It is also a mystery to me why the Federal executive departments, who allocate funds for research, do not try to find out what the incidence is of deaf-blindness in this country. It is not a very big research problem.

Most medical and most business people do. If a man wants to put a new drugstore on the corner, he goes out with a checker and at least counts how many people are passing by that corner, before he invests his money. With all the moneys that have been put into this field for research, there is not a single sound study of incidence of the deaf-blind.

I maintain that that is the first thing we should do.

What are we dealing with? How many do we have? How serious is the multiple handicap? Before we start spending any money, we should know these facts. We have already appropriated plenty of money, as I am going to point out in other areas. The real need here is not the special treatment of the deaf-blind, who are members of the far larger group of multiple handicapped individuals, but the larger group itself.

I earnestly believe this in its present form is special legislation for a select group where the need is less and the amount of money requested out of all proportion to the needs.

Now I must pause here again and say that at one time I did not understand what the executive department was thinking about in terms of money. There is a vast difference in appropriating a hundred thousand dollars and $4 million. And the gossip in this field that arrived at my ears was that this was to be a multimillion-dollar bill for a national center for the deaf-blind.

If you started to build buildings you would certainly get into that and many more millions.

Let the authors of this bill present a bill calling for an expanded program for all the multiple handicapped and I will be the first one to support it provided they do not request $5 billion the first year.

Mr. DANIELS. If I might say at this point, Doctor, I have some figures before me, and they provide for $400,000 for the first year.

Dr. FRAMPTON. How many dollars?

Mr. DANIELS. $400,000.

Dr. FRAMPTON. $400,000.

Mr. DANIELS. That is for fiscal 1968.

Dr. FRAMPTON. Of course, that is not——

Mr. DANIELS. $600,000 in fiscal 1969; in 1970, $2 million; in 1971, a half a million; in 1972, a half a million.

Dr. FRAMPTON. I was not here the first day of the testimony.

Mr. DANIELS. That would total $4 million over a 5-year period of time.

Dr. FRAMPTON. Yes.

Mr. DANIELS. Now do you think that is an exorbitant sum——

Dr. FRAMPTON. Yes; I do.

Mr. DANIELS (continuing). For us to spend on this particular group?

Dr. FRAMPTON. Yes; I do. Under the present lack of knowledge of the total number that we have to serve, $4 million could go a long way in helping a whole multiple-handicapped program, rather than just the deaf-blind group.

Mr. DANIELS. Well, do we neglect this group?

Dr. FRAMPTON. I have not suggested we neglect it. I am not through yet.

Mr. DANIELS. How are you going to take care of this?

Dr. FRAMPTON. They are being pretty well taken care of. This bill calls for the provision:

1. To demonstrate methods (a) providing the specialized intensive services as well as other services, needed to rehabilitate handicapped individuals who are both deaf and blind. The present deaf and blind units operating in this country have already demonstrated, studied, and researched the methods of teaching and rehabilitation of deaf-blind individuals.[1]

The methods used today in this field with the exception of the use of electronic aids are old and for the most part still highly successful in teaching and rehabilitation work with the deaf-blind. I do not know what "other services" mean as mentioned in this bill. Some research funds could be used to explore more effective and efficient electronic aids.

We are on the threshold of a breakthrough now with a new electronic aid. I think you know Judge Roseman in New York, he sits on the superior court bench. He was practically totally deaf. And a private organization, without a penny of Federal money in a very short time is going to make a very substantial breakthrough for totally deaf people. I think the time is not too far distant when electronic and chemical treatment of the cortical centers, where the visual and auditory perceptions associate, will make possible the new era for the deaf and blind. These are the research areas, Mr. Chairman, where we should spend the money in technical, electronic aids, and in medical research. Such funds can be secured from present research appropriations in the Vocational Rehabilitation Administration, Special Education Division, of HEW or the National Health Institutes.

There are sufficient useless research projects which could be abandoned to provide the small funds necessary for this purpose.

This is a very unusual charge, but I have spent 10 years studying over 5,000 Federal grants in HEW. If time permitted, which it does not, I could lay before you some very, very interesting results of these grants. I think one of the jobs in the future of a committee of this kind

[1] See Industrial Home for Blind, New York City, office of vocational rehabilitation grants and see Perkins School for the Blind, Watertown, Mass., Monographs on Deaf and Blind.

is to take a good look, and a very careful look, at how your money was spent in all research grants in this general area.

I will just pause for a moment to read one type from reports I have taken at random from my library.

Here is a large study called the "Performance of Blind and Sighted Children on the Weschler Intelligence Scale for Children, Study 21", sponsored by the Vocational Rehabilitation Department.

Here are the conclusions:

In terms of educational objectives, there are several conclusions to be made, about this study. First, there appears to be a lack of integration among educational experience, with the result that each bit of knowledge is isolated and cast in separate frame of reference. Second, verbal abilities focus on basic vocabulary without much elaboration.

Third, the blind tend to approach abstract conceptualization problems on a concrete and functional level, and consequently, lag behind the sighted children, and finally the blind are quite capable of being comparable to the sighted in numerical ability.

Now I submit to you that this means absolutely nothing. Nothing in the sense that we already knew and the field has known for over a hundred years.

I have one other study I think I ought to point out to you, because it is a very large one and a very costly rehabilitation study.

Here is the summary:

The supervisor is an enabler who fulfills his administrative and educational functions through both supervision of the rehabilitation teacher and planning and conducting staff development programs.

Now, mind you, this is a summary of a 2 years' study.

These important responsibilities necessitate that the supervisor consistently and persistently engaged in critical self scrutiny, and invest time, thought and energy in advancing his own knowledge and competency in his chosen field.

Conclusion 3. Supervision is conceived of as an administrative process which emphasizes teaching and learning toward the goal of helping the rehabilitation teacher develop his professional capacities in order to make his maximum contribution to the agency's program of service.

Fundamentally this responsibility implies professional dedication, and whole hearted investment of self, because of belief in the agency's contributions coupled with conviction that people both staff members and clients, continue to grow and change.

Thousands of dollars, gentlemen, to tell us that. I could give you thousands of these "research studies," Judge, thousands of them. As a taxpayer, and as a professional, I think it is an utter waste of Government money.

I want new moneys for deaf-blind children, yes, and adults. But I do not wish to see it go down the drain like this. You all can look at them. I have 5,000 similar ones, and I will stake my professional reputation on them that they are not worth the time and money spent.

Mr. DANIELS. If you see fit and have the time, we would love to have a list of these, so-called worthless grants that have been made, which, to use your words at this point——

Dr. FRAMPTON. Well, you will have to use my words, and I would temper them some, and say the money could have been better spent elsewhere than it has been spent on this type of research. For a scientist who was taught research methodology and quantitative research for over 30 years, the various research methodology used in most of these studies has little research validity.

There is little reliability to more than half of these studies. The intelligence test they started with is unreliable. It does not apply to the blind or multiple handicapped. The basic norms used in this study apply to nonhandicapped people, and they used them as a basis of investigation and comparison.

Well, I will be glad to give them to the committee, Judge, in due course. I did not mean to get on this subject. It is a peripheral area, but you talked about wanting to use money wisely. That is what I am interested in.

I am not interested in taking money away from people that need it.

Training the professional and allied personnel needed adequately to staff facilities specially designed to provide such services and training such personnel who have been or will be working with the deaf-blind.

Until the past 2 years, there has been a real dearth of teachers and workers for the deaf-blind. This year we seem to have little difficulty in finding teachers. We had six applicants for two openings this year. Funds to enlarge the corps of trained personnel could surely be allocated by the Vocational Rehabilitation Administration and Special Education, HEW from their very large existing training grants and the colleges and universities stimulated to cooperate.

Here we have much overlapping of special education and other special area services.

These departments have the responsibility under present legislation and could work out a joint training program with OVR for this training.

Indeed they have already done so. Look at the 1967–68 college course offerings at Michigan, Peabody, and California. No new money is needed to shore up this area in my judgment.

Unless again the concept of this legislation is widened to include all multiple-handicapped.

to conduct research in the problems of, and ways of meeting the problems of rehabilitating the deaf-blind

To conduct research. Well, I have made my speech on that. I have always believed in good research and still do. But my faith in reliable, definitive research has been greatly shaken in recent years.

I have served on three research studies for this House and many others. I have diligently read the results of thousands of research grants in the Defense Department, Agriculture, Commerce and of course Education and Rehabilitation. My own professional field for the past 10 years has been carrying on a great push to save society through research.

I must reluctantly conclude that my own profession has for the most part, no remote conception of what constitutes valid research, how to conduct it with reasonable validity and at reasonable cost. If time permitted I could present an analysis of thousands of Federal grant studies which are pure waste of human effort and money.

Unfortunately, educators deal largely with words and their ability to apply even elementary semantics to their projects, let alone sound mathematics formulas places them at the bottom of the totem pole of the research hierarchy.

Some research moneys should be channeled for deaf-blind studies in the neurological and general medical areas to ascertain whether a real medical breakthrough can be achieved for the deaf-blind.

If this is done, top medical research facilities, now in operation should be available at the National Health Institutes. Plenty of research funds should be available for funding such projects.

Now the related part of this, the next section 3 deals with the establishment of specifics of the National Center.

To aid in the conduct of related activities which will expand or improve the services for or help improve public understanding of the problems of the deaf-blind; the Secretary is authorized to enter into an agreement with any public or non-profit private agency or organization for payment by the United States of all or part of the costs of the establishment and operation, including construction and equipment of a center for vocational rehabilitation of handicapped individuals who are both deaf and blind which shall be known as the National Center for Deaf-blind Youths and Adults.

This section, in my opinion the most dangerous section of the bill. The Secretary is given the power to spend many millions of dollars to contract with only one or several if he chooses, public or private agencies to operate a national center for the deaf and blind. Too many administrative questions are left unanswered.

(1) What does the bill mean by youth aged 5, 10, 15, 20?

(2) What regions or region, east, south, north, west?

(3) How many national centers?

(4) What is estimated cost for one? How much money for 1968–69 for this purpose?

(5) What does the center do, research, employment, sheltered workshop, institutional care? All of these or merely advise?

(6) How do deaf-blind California people get national services now?

(7) Does the Vocational Rehabilitation Administration envision a unit similar to Gallaudet College or the Rochester School for the Deaf, operated by the Federal Government or a unit operated by a private school or agency?

(8) What happens to nonfeasible deaf-blind cases?

Nobody mentions those. Those, they are not going to be able to be rehabilitated. The administrative plans as laid out here seem to me to make available grossly exaggerated subsidies to private and public units for grants for construction, operation, and all other services for an exceedingly small select number of our handicapped.

The oldest and largest agencies serving this area are private, not public. These cannot be by their nature national centers for deaf-blind youth and adults, as this bill provides.

None of the professional public or private regional units are going to be satisfied with this kind of an administrative arrangement. Too much power for initial planning, financing, and decisionmaking is placed in the hands of the Secretary.

If there must be a national center, let us start it as a Federal project, with initial emphasis on medical research and the few other pressing services. Let us expand the bill to include all multiple handicapped children and adults. So we do not now need any such sizable moneys for construction, expansion, remodeling, alterations, and so forth for this small area. Let us place substantial new moneys where the real need exists.

Now I have on the last page made some recommendations all of which I have covered in the rest of this report.

(The information referred to follows:)

RECOMMENDATIONS

1. Delete Section 4 in its entirety. It is not needed in our generation. Too much for so little return. Consider a new bill for the multiple handicapped in general.
2. Recommend the Division of Vocational Rehabilitation, Education and National Health Institute set up a joint coordinating committee designed to implement present programs for the Deaf-Blind by:

Providing more —

1. Research on medical aspects of the Deaf-Blind problems for a more effective breakthrough.
2. Traineeship for Rehabilitation and Education personnel for the Deaf-Blind area through existing Rehabilitation and Special Education appropriations now available. Increase funds in modest amounts if Executive Departments insist they cannot find new money. They probably will so insist.
3. Technical aids, chiefly electronics for supplementary use.

3. Go slowly on supplying large sums for brick and mortar, i.e., new buildings, remodeling, reconstruction, etc., for a service field already reasonably well supplied with such facilities.
4. Insist on regional allocation of all new funds appropriated, preferably through existing State programs which work reasonably well when good coordination exists between Federal, State and local public and private groups. Any program in this area which is not begun as a regional service, is doomed to failure and a great waste of money.

Dr. FRAMPTON. Thank you for allowing me to appear before the committee, and I apologize for interrupting you when you were telling me about the appropriations requested.

Mr. DANIELS. How about the other sections of the bill, Dr. Frampton?

Dr. FRAMPTON. I am in favor of the other sections of the bill, so far as I can see. I am not competent to talk about the migratory situation, but I know it is a difficult one, and I certainly feel very strongly for Texans or anyone else, Puerto Ricans, who get stranded in New Jersey, and cannot get rehabilitation services, so I assume that if there are no legal problems the legislation is needed.

I am not opposed to it, nor am I opposed to the District clause in the bill.

Mr. DANIELS. You do feel very sincerely, then, that the deaf-blind ought to be included and treated in a center for the multiple handicapped, that we should not establish a private, independent center for them?

Dr. FRAMPTON. I have 14 cerebral palsy blind children, working right along with my deaf-blind children. I have adults in the same condition—not too many, because I am a school—but I employ deaf-blind, and CP-blind people. They get along very well together. You know, this concept of segregation is very much overrated. "Birds of a feather do flock together," whether we like it or not. People are stratified in our society and they, during certain periods of their life, are happier.

In the second instance, you cannot get enough deaf-blind people for a national center, around this country, unless you place it in one area, and keep it in that one area. Then you might pick up enough. There are not more than 60 educable and trainable deaf-blind children in this country, in my opinion.

Mr. DANIELS. How about adults?

Dr. FRAMPTON. Well, here again now, I am in the same position as the people who are proposing this bill. I am simply guessing very,

very much fewer than they are. I doubt there are over a thousand trainable adults in the deaf-blind area in this country. It would be a very simple project for someone to find out.

If our great national health organizations and our great Federal vocational rehabilitation departments cannot find out, through blind assistance, and deaf assistance, how many people are deaf and blind in this country, then I do not see why you want to give them a time to try to develop programs for them. I would tell them first go out and put down the facts. How many of this type of people are there in the United States? It is a strange paradox that the Governments of Argentina, Australia, and the little Government of Peru, through their police officers and health officers, could tell me specifically how many handicapped people they had in their country and what were their handicaps. Our great country does not know how many we have, and just guesses. We could allow a probable error, a small probable error and get some real figures on incidence.

To me, this is the first requisite of asking a committee to give you money for research or services. I would no more think of coming in and asking my board of managers to give me $100,000 for my deaf-blind department, which is what it costs me to operate annually, unless I could tell them I have this many children, this many teachers, it is going to cost me so much for food, et cetera.

Here we have the great national organizations coming in here and telling us well, we think there are 5,000, maybe more. To answer your question specifically. I would give them some money. I would earmark it for the multiple handicapped. You can spell that term out, the the CP-blind, the deaf-blind, the emotionally blind, mentally retarded blind, et cetera. If you had heard Dr. Rusk talk about the emotionally disturbed yesterday, the emotionally disturbed blind, the emotionally disturbed deaf, et cetera. There are lots of these combinations. He made the statement that his greatest problem was the emotionally disturbed. They had to get a paraplegic, or an amputee over the sense of fear before they could even have them try to walk to the door. Well, this is no great scientific truth, but it is true, that you cannot educate or rehabilitate anyone unless there is a climate for education and rehabilitation.

You must get people ready for it. It is not too difficult a job to do.

Now, we ought to look at this with relationship to the whole problem. These proponents will only be back to you in another year or so, wanting to amend it for CP-blind, mentally retarded blind, and all the rest of them. When they come to argue the point that you can't define the areas we reply, we have fairly good parameters for the definition of blindness and deafness, cerebral palsy, and brain damage. The one field in which the definitions are fairly liquid is that of emotional disturbance. That takes in about everybody who is involved in these things. I feel very strongly about this, and having been so much a part of it for 30 years, I hate, I just hate to see money wasted.

We unfortunately have to waste a little of it, in a great society such as ours, but the amount is getting so much now that someone has to take a stand on these matters and make some choices.

We at the Institute have not asked for a dime of Federal or State money to educate our deaf-blind children. We have been running a deaf-blind department on private funds, and getting along pretty well. The public has supported it. I know they have supported Perkins

as well. The Industrial Home has strong public support. I am quite sure that the general public will respond to this special group with all the money needed.

So, my final suggestion to you is that you seriously consider expanding the title of this bill, and button it down for the first year to a program of medical and electronic research. Stay away from brick and mortar. You are talking about $4 million. You know how much it cost to build our plant? Nearly $15 million. You should know what it cost the Federal Government very recently for the support of Gallaudet. Well, look at the budget, because you had to approve the budget for Gallaudet. You are just building a deaf school at Rochester. You are already in for $9 million on it. You would not build a deaf-blind national center under $10 million, and then you would be stuck with it, for the rest of the century. If it were a multiple-handicapped unit, then I think you have another matter to consider.

Mr. DANIELS. Thank you, Dr. Frampton. Just a moment.

Dr. FRAMPTON. I beg your pardon.

Mr. DANIELS. My colleague from Wisconsin, Congressman Steiger, has been sitting here very, very patiently, and listening to you. Perhaps he has some questions he would like to present.

Mr. STEIGER. Thank you, Mr. Chairman.

Dr. Frampton, you do an exceedingly effective job. It has been a great honor for me to have an opportunity to hear you. I have heard of you and about you for a number of years.

In your testimony, you make comment directly on the point I raised yesterday—you may have been here—on whether this ought to be operated by the Federal Government, rather than by attempting to contract out. Did you hear the answer that was given? I think Mr. Whitten may have given it, indicating that he thought it was far better to provide some other agency to do this. I still have a concern about how it is done.

Do you have any further thoughts you could give to the committee on that question?

Dr. FRAMPTON. Of course, I am biased, Mr. Congressman. I am a little bit anti-Federal approach, and I am very strongly State minded, and very strongly locally minded, so you have to take my remarks and sort of shave them off.

I think, to begin with, that anything you do in this area should be made the responsibility of OVR or special education, in the Office of Education.

To begin with, so that you can hold them directly accountable for results, to report back to you as to what they have done on incidence, what studies they have done in medical research, and so forth.

I would stay away from considering buildings at all right now. As I say, brick and mortar. Nobody knows what kind of buildings, where to put them, how many people are going in them. These are all serious question marks.

Now, if, after you have some facts on the matter, and it is apparent that there are 10,000 people here, in this country, then, of course, you will have to use both approaches. You will have to apply some of your funds to existing public and private agencies, to assist them to expand their programs, and you will probably have to develop a national program of its own.

For such a special problem, a national center—now we are talking about geography, a national center—where to put it will be very difficult to determine. If you put it on the eastern seaboard, the folks on the western coast are going to yell, "We want one, too." If you put it in Wisconsin, the folks in Alabama are going to want one also.

Mr. STEIGER. Do you consider the institution that you are now connected with as a multiple center?

Dr. FRAMPTON. Well, our school does a little of everything. We believe in integration within segregation. That is a very complicated semantic statement, but the professionals will understand it. We have deaf-blind children who are segregated. We have CP-blind children who are segregated. When they are at a level where they can take the classes with the regular blind children, they move right on into the grades. You will see wheelchair cases, deaf-blind children working right along in grades, with ordinary blind children. So that we have both.

Mr. STEIGER. This is a sound concept. You may have also heard the response to the question that I asked yesterday on this question, in which one of the witnesses said: "No, we don't think you should have a multiple center, because it might have furniture moved in one instance, or problems of this kind." You would agree that it is possible to achieve segregation within integration?

Dr. FRAMPTON. Oh, yes, and I think that this whole problem of segregation is very greatly overrated. You don't send a medical doctor to an engineering school to train. He goes to his specialty. It is the same thing with children. I have written an article called "The Tragedy of Integration in this Country for the Severely Handicapped." Of course, it is again a biased position!

I think one of the most difficult things, the most serious thing that has happened to special education and rehabilitation, is that we have compartmentalized everything. You must have a deaf-blind department, you must have an emotionally disturbed department, and so forth. I oppose this very strongly. I think you are very sound, and I think as the years go along, and you get your teeth into this business here you will see what I am presenting. In general lay people have more of an objective approach to this than we professionals. They are rubbing shoulders with many different kinds of people, stupid people, brilliant people, poor people, rich people, Democrats, Republicans, Protestants, Catholics, and Jews. We are all stratified in some way. All this business about no stratification in society is a lot of nonsense. We waste more time not getting down to the issues, the real issues, in arguing about the semantics of it. Who cares whether you are rich or poor, as long as you can come from being poor to being rich, as long as the channels are open for you? Nobody cares.

Well, I didn't mean to go into a philosophic lecture. Thank you.

Mr. STEIGER. The last point that I would raise with you, I suspect you may be one of the few men who has ever had the perseverance to wade through some of the products of the research of our Federal Government.

Dr. FRAMPTON. The judge is another one, Chairman Daniels.

Mr. STEIGER. Having had the chance only since I got here to review briefly some of the titles of the research documents—not the documents themselves. I haven't had the time yet to do that——

Mr. DANIELS. Mr. Steiger, the witness made a study for the Education and Labor Committee about 8 or 9 years ago.

Mr. STEIGER. Yes; I am aware of his study. I would think it might be valuable and we ought to get him back to make another study, because I think, as you know, there is an increasing concern in the Congress about the fantastic sum of money that is being spent on research, and for what purpose, and to what end, and who does see it, and who does make it available and who can use it. I would love to sometime sit down with you and go through some of the 5,000 documents that you have compiled and you have reviewed for the purposes of trying to see what we are doing, and why, and what we are not doing that we should be doing, and where we are spending money we should not be spending, and that is not really a question, except as a comment by way of what you said.

Dr. FRAMPTON. Well, I will be glad to make them available to the committee and to you, anything I have, Judge. You know that.

Mr. STEIGER. Thank you, sir.

Mr. DANIELS. Thank you, Dr. Frampton.

Our next witness is Mr. C. D. Rejahl, of the National Advisory Council for Crippled Children and Adults, at Madison, Wis.

STATEMENT OF CLARE D. REJAHL, REPRESENTING THE NATIONAL SOCIETY FOR CRIPPLED CHILDREN AND ADULTS

Mr. REJAHL. Thank you, Mr. Chairman, and members of the committee.

Mr. STEIGER. Mr. Chairman, I should like to state for the record that I have had an opportunity to work with Clare from the time I served in the Wisconsin Legislature. I have a tremendous amount of respect for the work that he does, and for the society that he represents. He has made in our State a number of substantial contributions in this field of vocational rehabilitation, and it is a particularly great delight and pleasure and honor for me to have him here before the committee this morning.

Mr. REJAHL. Thank you, Mr. Steiger.

Mr. Chairman and members of the committee, I am Clare Rejahl, a member of the National Advisory Committee of the National Society for Crippled Children and Adults, and a former member of the board of trustees.

I have had a backstop this morning that I hadn't anticipated, Mr. Leon Chatelain, who is a distinguished architect here in Washington, and also is a member of our board of directors is here. He is the chief architect for the legislation affecting architectural barriers for the handicapped, and is our Government relations representative, here in Washington. Mr. Chatelain is here to my right.

As an active participant in a voluntary agency engaged in rehabilitating handicapped persons, we are both aware of the importance of the Federal-State vocational rehabilitation program and of its impact on the lives of disabled persons. I appreciate the opportunity to present testimony on H.R. 8981. Before stating our position, I should like to offer information on our society.

EASTER SEAL SOCIETY'S ROLE

The national society was founded 46 years ago, and today is the Nation's largest voluntary organization providing a program of direct services for the benefit of physically handicapped persons. Education and research complement the service program.

Our 52 State societies focus their efforts and a greater proportion of their funds on the operation of rehabilitation facilities and services at the local community level. Among the programs we own and operate are 49 rehabilitation centers, 163 treatment centers, 27 mobile therapy units, 28 workshops, five employment programs for homebound persons, and other vocational services.

Vocational services are provided in 60 communities in 26 States. In fiscal 1966, we served a total of 214,923 crippled children and adults, a significant proportion of whom received vocational services.

For almost a half century the national society has worked with crippled children and adults to span the chasm caused by disability and to help the physically disabled develop skills and abilities required for productive living. While we have helped many, we have also witnessed the effects of limited resources and prejudicial attitudes toward the handicapped. It has resulted in a heavy toll of dependency, an increased public welfare expenditure, and human suffering and frustration.

NEED EXPANDS

Evidence previously presented before this committee documents the current and future needs of an estimated 22 million Americans who are disabled or chronically ill, many of whom require rehabilitation. Service needs expand as our country grows. An increased population means a greater number of disabled persons.

Acquisition of medical knowledge means more persons live longer, many with disabilities associated with aging, and more congenitally handicapped babies survive. Funds are required to meet increasing needs, to plan for improved and coordinated services, and to extend programs to disadvantaged groups not receiving adequate care under the present law.

PARTNERSHIP GROWS

The past decade has seen dramatic changes in government, in science, in industrial technology, and in the health and rehabilitation fields. In the latter areas we have witnessed a growing partnership between Government and voluntary agencies. We believe that this partnership is mutually strengthening. For more than two decades the national society has had a gratifying and productive partnership with the Vocational Rehabilitation Administration; hence, we are deeply concerned with the continuation and expansion of the Vocational Rehabilitation Administration's program.

SUPPORT AMENDMENTS

The amendments propose to continue and expand the grant authority of the Vocational Rehabilitation Administration for rehabilitation services and planning. to establish and operate a National Center for the Deaf-Blind, to provide assistance to migrants, and to eliminate

residence as an eligibility requirement. We enthusiastically support all of these provisions.

ON THE GRANT AUTHORITY

On the basis of its past history and successes, the grant program to States should be continued and expanded. In the previous year, about 500,000 disabled persons received rehabilitation services from State agencies, an increase of 58,000 over fiscal 1965. Of this number, 154,279 disabled persons, an increase of 19,000 over fiscal 1965, were rehabilitated to the extent they were placed in productive, remunerative employment.

This dramatic increase, the result of the grant program, means greater numbers of disabled persons became self-sufficient. Were our society not plagued by discriminatory practices, the number rehabilitated could be substantially greater. The grant authority is an investment in rebuilding human lives. It is more than dollars. It is a means of enabling disabled persons to enter the mainstream of society and to become taxpayers rather than tax users.

With the extensive developments in rehabilitation during the past decade by both public and voluntary agencies, programs have grown like Topsy. Funds for continuing the planning functions of State divisions of vocational rehabilitation are essential for the orderly development of facilities and services. To make better use of what services now exist, to assure programs in appropriate locations, to assure coordinated and integrated service within and among agencies, to prevent duplication, to increase the knowledge, skills, and wise use of personnel, comprehensive planning is mandatory.

NATIONAL CENTER FOR THE DEAF-BLIND

It is fitting that Congress take steps to establish a National Center for the Deaf-Blind in 1967, the year of Anne Sullivan's Centennial Commemoration. It is paradoxical that with the example of a Helen Keller and of an Anne Sullivan as her teacher, that there are 5,000 deaf-blind in the United States who are largely neglected.

The problems of this catastrophically handicapped group are overwhelming to all concerned—the individual, the family, the community, society as a whole, and the professional worker. Yet, there continue to be models like Helen Keller who triumph over disability.

Such is Robert L. Smithdas, the first deaf-blind person to secure a master's degree. Mr. Smithdas presented testimony before this committee and in doing so demonstrated the capability of a deaf-blind person to overcome the combination of these two most serious handicaps.

President Johnson, in a message to Congress this year, and the Department of Health, Education, and Welfare's report of the task force on the handicapped, recognized the plight of the deaf-blind and recommended legislation to remedy some of the deficits in programing. There has also been a resurgence of action by parents who, encouraged by research and treatment advances in other problem areas, now seek for their deaf-blind children the fruits of available knowledge and techniques.

The proposed center will provide research, treatment, and leadership in changing the attitudes of the public and professionals:

> There is among the general public and professional workers for the handicapped an almost complete ignorance of the capabilities of the deaf-blind, or, indeed, even of their existence.

The proposed center offers an opportunity, in the words of Mary Switzer, "to unlock the many remaining doors behind which they—the deaf-blind—await our friendship as shown by our faith in their future fulfillment."

MIGRATORY WORKERS

The project grant program would provide a complete range of rehabilitation services to still another disadvantaged group of citizens—the migratory worker and his family who may be or become disabled.

We are a mobile people. The migrants exemplify this trait. Many of their problems stem from their way of life which is characterized by the lack of a permanent home, the absence of roots in a community, and the lack of sustained contact with health and rehabilitation agencies. Unfortunately, the migrants are not regarded as a vital part of local communities, despite the fact that they are a vital part of our economy. They present difficult service problems, the result of cumulative neglect. They require imaginative and specialized programs which this bill now authorizes.

RESIDENCE REQUIREMENTS

Residence requirements result in hardships and the denial of service to many individuals who are compelled to move in order to follow industry which is relocated or to leave depressed areas such as Appalachia. Once again the problem of mobility confronts us in administering the vocational rehabilitation program. The bill proposes a solution, namely the elimination of residence as a requirement for securing rehabilitation service.

The last decade has witnessed an extensive movement of people from farms to cities and from State to State; 26 percent of our population no longer live in the State where they were born. In 1960, 33 percent of the population lived in rural areas, 36 percent in central cities and 30 percent in suburbs. By 1980, it is estimated that 29 percent will live in rural areas, 30 percent in central cities, and 41 percent in suburbs.

Shifts in population are stimulating demands for additional facilities, for new methods of providing service, and for reexamining eligibility requirements such as residence. This is true for the vocational rehabilitation program and for other Federal, health, and welfare programs.

In our Easter Seal Society centers and programs, we have tried to bridge the gap and to provide help to persons who do not meet the requirements of public programs. But we are not able, as can be readily understood, to take on the full responsibility. The removal of residence as a requirement would correct an inequity in our present legislation and make service available to all disabled citizens requiring rehabilitation.

I wish to reiterate the support of the National Society for Crippled Children and Adults for the amendments which would continue the

essential State rehabilitation program, the planning functions, and add new services to disadvantaged groups.

In closing, I want to commend the committee on behalf of the national society for the evident interest and real concern they have shown in their hearings on this proposed legislation. We consider it a privilege to have been invited to be participants in these hearings.

Thank you.

Mr. DANIELS. Mr. Rejahl, I want to thank you for a very, very fine statement. In the State of Wisconsin, do you have a residency requirement?

Mr. REJAHL. Yes; 1 year.

Mr. DANIELS. Do you believe your legislature will repeal that provision, in the event this legislation is enacted by Congress?

Mr. REJAHL. Well, I feel we certainly would make the effort, and that it would be favorably considered by our legislature. We have had wonderful support in Wisconsin from our legislature, in the area of vocational rehabilitation.

Mr. DANIELS. Do you think that the proposal of this legislation to eliminate the residency requirement will receive the cooperation of the various States of the Union?

Mr. REJAHL. I feel so. I think this is a problem quite generally across the country.

Mr. DANIELS. I have no questions. Mr. Steiger?

Mr. STEIGER. Mr. Rejahl, no, sir; I don't have any questions, either, Mr. Chairman. I am just very happy you came.

Thank you very much for your testimony. It was good testimony.

Mr. DANIELS. I have no questions, except for this: You heard the previous witness, you were sitting there all the while, and I assume you were quite interested in what he had to say. He objected most forcefully to the establishment of a general National Center for the Deaf-Blind. Of course, I have listened to the views that you expressed, and you fully endorse the legislation under consideration.

Mr. REJAHL. That is right.

Mr. DANIELS. Do you have anything further to add after listening to the previous witness?

Mr. REJAHL. Well, nothing more except that I don't happen to agree with the gentleman. I haven't met him before, but we feel that this is an area that certainly needs prompt attention, and I did refer to the fact that the task force on vocational rehabilitation did make this as a recommendation. I feel certain they would not have recommended it without having some facts to support it.

Mr. DANIELS. You feel an investment of $4 million, as contemplated by this legislation, in establishing this National Center for the Deaf-Blind, is a worthwhile investment, or should it be postponed to obtain the information suggested by Dr. Frampton?

Mr. REJAHL. I am not willing to say that it ought to be postponed. I think this is a problem we ought to face now.

Mr. DANIELS. Thank you.

Mr. STEIGER. If I may, Mr. Chairman, would you share Dr. Frampton's view that the most pressing problem is in research? Medical and technical research.

Mr. DANIELS. Electronic research.

Mr. STEIGER. For the field.

Mr. REJAHL. Well, of course, the only thing I can base my remarks on is to draw on my 30 years' experience in the field of vocational rehabilitation, and I certainly would not be willing to admit that we had ever spent funds in Wisconsin which we could not legitimately defend. I do not have the feeling that the rehabilitation agencies generally have wasted Federal or State money in any sense of the word.

As you well know, programs which are instituted in our own State are based on good research and facts.

Mr. STEIGER. Is there any estimate, Clare, that you know of, as to the number of deaf-blind youth and adults in Wisconsin?

Mr. REJAHL. Well, I don't know about the statistics today. Of course, as you well know, I had a birthday, and left the rehabilitation agency 3 years ago, so I am not acquainted with the statistics for our State at the moment. But these were people we could not serve. They were denied service. We walked away from them.

Mr. STEIGER. During the time that you served with the vocational rehabilitation agency in Wisconsin, did you have any idea as to the number that were involved?

Mr. REJAHL. I think in my time, we may have seen a hundred of these people in our State. That is just a figure I take off the top of my head.

Mr. STEIGER. Thank you.

Mr. DANIELS. Thank you.

We have a very distinguished foreign visitor in the audience, whom I would like to introduce at this time. We have with us, Mrs. Adeyola David, director of the Nigerian Society for the Blind.

Mrs. David, would you care to rise, so the people in the audience here may get acquainted with you?

It is a pleasure to have you here, and we feel highly honored that you have taken your time out as a visitor to the U.S. Capital to stop in at these hearings. There are many hearings going on in this building, and we welcome the fact that you have seen fit to come in here and pay us this honor.

Mrs. DAVID. Thank you very much for having me. It is quite an education for me.

Mr. DANIELS. Our next witness is Mr. Terence E. Carroll, Director of the National Institute on Rehabilitation and Health Services, in Washington, D.C.

STATEMENT OF TERENCE E. CARROLL, DIRECTOR, NATIONAL INSTITUTE ON REHABILITATION AND HEALTH SERVICES, ACCOMPANIED BY KENNETH E. POHLMANN, MEMBER OF THE BOARD OF TRUSTEES, NIRHS; AND CHARLES DELLA, PRESIDENT, MARYLAND-DISTRICT OF COLUMBIA-VIRGINIA AFL–CIO, AND MEMBER OF THE BOARD OF TRUSTEES, NIRHS

Mr. CARROLL. Good morning, Mr. Chairman.

Mr. Congressman, with your permission, I would like to introduce to you and ask to sit with me here two of our trustees who would also be available for discussion with this committee.

Mr. Charles Della, who is president of the Maryland-District of Columbia-Virginia AFL–CIO; and Mr. Kenneth Pohlmann, who is

rehabilitation consultant to the United Mine Workers health and retirement fund, and we have a third trustee with us this morning, Mrs. Holderman, who I am sure would also be available for responses to the testimony which we have prepared for the committee.

Dr. Brand, the Chairman of the Board of Trustees of the National Institute on Rehabilitation and Health Services, could not be with you, and asked me to provide you with this testimony; and, with your permission, I will merely have the prepared testimony which you were forwarded inserted in the record.

Mr. DANIELS. Without objection, Dr. Brand's testimony will be inserted at this point in the record.

(The statement referred to follows:)

STATEMENT OF MORRIS BRAND, M.D., CHAIRMAN, BOARD OF TRUSTEES, NATIONAL INSTITUTES ON REHABILITATION AND HEALTH SERVICES

Mr. Chairman, members of the Subcommittee, my name is Terence Carroll and I am the Director of the National Institutes on Rehabilitation and Health Services. Dr. Morris Brand, Chairman of our Board of Trustees, has asked me to give you his regrets at his inability to be with you today and has asked me to read the following statement on his behalf.

We are indeed pleased to respond to the Subcommittee's request to offer our comments regarding H.R. 8981 and similar bills to amend the Vocational Rehabilitation Act because we have been deeply concerned with this subject for a number of years.

The National Institutes on Rehabilitation and Health Services is a non-profit, scientific and educational organization. It was incorporated in the District of Columbia in 1961 for the purpose of conducting research and education programs on the subject of rehabilitation and health services. Since its incorporation it has designed and conducted a number of research programs and has conducted well over 100 national, state and community programs for persons professionally employed, or who intend to become employed, in the fields of rehabilitation and related health services. In addition, it carries forward an extensive program of publications, disseminating information widely about these subjects. The Board of Trustees of NIRHS is comprised of 21 distinguished persons in the fields of rehabilitation, medical care, labor, management and education.

The proposed amendments provide essentially for the five following new programs or changes in existing programs:

(1) Authorize a two-year extension of appropriations for grants to the States for rehabilitation services as follows: FY 1969, $500 million; FY 1970, $600 million.

(2) Authorize a special program of grants to the States to provide rehabilitation services to migrant workers.

(3) Authorize the establishment and operation of a national rehabilitation center for youths and adults who are handicapped by being both deaf and blind.

(4) Extend the authorization for grants for statewide rehabilitation planning for one year, or through FY 1968, and will make funds available through FY 1969.

(5) Provide for the elimination of all residency requirements for the provision of vocational rehabilitation services by the States.

The NIRHS is in favor of amending Section 5 of the Vocational Rehabilitation Act to eliminate the residency requirement as a barrier to receipt of vocational rehabilitation. For many reasons, most of them for reasons connected with employment, our citizens are highly mobile and limiting their right to proper and adequate restoration of their functions wherever they may find it necessary to be domiciled after illness or injury is depriving them, their families and the community from the fullest economic and social opportunities which should be available to them. These transient Americans must be accorded the same privilege to a whole life as are those who by chance are able to reside in a more permanent fashion on a particular street, in a particular village, town or city, of a particular state. Who knows but that today's "permanently" residential citizens may be forced by circumstances or by personal desire to move to another state. Does this mean they should be deprived of the benefits of rehabilitation services? It is our opinion

they should be entitled to the same services as any so-called permanent resident and the benefits of rehabilitation should be made available to all in accord with need.

The need for the extension of the authorization for statewide planning is a matter which is largely self-evident, since it will merely enable the States to execute the original intent of the Congress in its 1965 amendments to the Vocational Rehabilitation Act in this regard.

The proposal to construct and operate a National Center for Deaf and Blind Youth and Adults for the purpose of providing such individuals with vocational rehabilitation services should be approved.

Individuals who have incurred both of these two devastating handicaps require highly specialized and intensive services in order to become productive citizens. Programs which are designed for and experienced with the provision of services to individuals who suffer from only one of these handicapped conditions are unable, in our opinion, to provide the requisite services to those who are both deaf and blind. Although there are several facilities which are able to provide appropriate services to deaf-blind children, there is presently only one program in the nation which is equipped to meet the vocational rehabilitation needs of deaf-blind youths and adults. Indeed, as a result of this deficiency in our programs to serve these handicapped, we generally lack knowledge of how best to provide these services. We were, therefore, pleased to note in the proposed amendments a reference to proposed research in the problems of providing services to those with this multiple handicap and it is our hope that in its operation the Center will give considerable emphasis to this phase of its activities. Secondly, it is our hope that Congress will appropriate additional funds, as soon as it appears feasible, to construct additional such centers in order to provide for an appropriate regionalization of these facilities in order that they might operate both economically and with the greatest convenience to those whom they will serve.

We are of the opinion that the amendment to Section 1 of the Vocational Rehabilitation Act which will authorize a two-year extension of appropriations for grants to the States for rehabilitation services is a proposal which will enable the State agencies of vocational rehabilitation and the legislative and executive branches of the State governments to do a sounder job of planning, inasmuch as it will provide them with an assured foundation of federal appropriations for a two year period. However, we would nevertheless like to offer the following comment regarding the projected levels of appropriations. The 1965 Amendments to the Vocational Rehabilitation Act committed our nation to a program of expanding our vocational rehabilitation programs at a rate to enable us to provide vocational rehabilitation services to every individual who requires them by 1975. Although we are not in a position at the present time to state what should be the level of federal appropriations to the States for vocational rehabilitation services for the FY 1970, we are skeptical that the $600 million figure proposed here is sufficient and are quite certain that this sum will have to be increased if the programs are to grow at a rate sufficient to ensure that we achieve our goal by 1975. In this regard we refer the Subcommittee to the thoughtful resolution of the Constitutional Convention of the AFL–CIO in 1965:

"Society must make adequate provision for the care of the disabled. Every effort must be made not only to care for this increasing number of disabled persons but to return them to productive activities. Organized labor has participated actively in the work of the National Advisory Council on Vocational Rehabilitation, the President's Committee on the Employment of the Handicapped and similar state committees, and on the community level to promote job opportunities for the disabled. Organized labor applauds the progress that has been made in recent years by both public and voluntary rehabilitation agencies in rehabilitating the disabled, and particularly commends the Vocational Rehabilitation Administration and its Commissioner for the leadership provided in the rehabilitation field. Yet much more must be done. Therefore be it

"Resolved: That the AFL–CIO reaffirms its position on rehabilitation adopted by the Fifth Constitutional Convention of the AFL–CIO and urges all state and local central bodies to support legislative action matching maximum amounts of state funds to available federal appropriations. Further, we urge aggressive implementation of the 1965 amendments to the Federal Vocational Rehabilitation Act and the rehabilitation amendments to the Social Security Act to the end that maximum state and local resources will be mobilized for comprehensive rehabilitation programs. Affiliated bodies are urged to actively participate in programs to identify members of union families requiring rehabilitation and to refer them to sources of services, to work for the establishment of citizens' advisory

councils where they do not exist, to assist in the placement of disabled workers, and to actively support community rehabilitation programs. The experience garnered by such labor rehabilitation projects as that of the Sidney Hillman Health Center in New York City, by the New York City Central Labor Council and by the Iowa Federation of Labor should be widely disseminated and affiliated bodies should work closely with the National Institutes on Rehabilitation and Health Services and the Vocational Rehabilitation Administration in order to initiate and organize similar projects wherever feasible."

We have been gratified to note similar statements of support for this national objective from the insurance industry, management associations and professional organizations.

The NIRHS cannot speak strongly enough in favor of the amendment to authorize special program grants to the States to provide rehabilitation services to migrant workers.

The plight of the hundreds of thousands of migrant agricultural workers in our country is one which concerns us all deeply. These are individuals of all ages whose needs for health, education and welfare services have been seriously neglected by us for far too long. As a result of deficiencies in housing, education (including health education), sanitation services, and medical care there is an alarmingly high prevalence of chronic illness among migrant workers which has resulted in a variety of handicapping conditions among them.

In addition, the agricultural industry, in part as a result of advances in technology, has become one of our more hazardous industries. Not only does the industry produce a high rate of industrial accidents resulting in permanent impairment, but the increased use of toxic chemicals has contributed to a high rate of occupational disease. Coupled with this high rate of occupational injury and disease is the fact that 42 of the 50 states and the District of Columbia lack full coverage of agricultural workers under workmen's compensation.

The National Institutes on Rehabilitation and Health Services considers this proposed program to be one of major importance and we sincerely hope that the Subcommittee will recommend its adoption by the Congress. While we recognize the need to initiate such a program of services on a pilot or demonstration basis, in order that we might determine the best methods of providing them both efficiently and effectively, we urge the Subcommittee to recommend that these grants be generous in their allocation of funds in order that the rate of progress in providing these services be equal to the magnitude of the need and that a sound base be established to assure continued planning and servicing.

We were pleased to note that this proposal also provides for a cooperative program with the Department of Labor since it provides for the determination of eligibility by that agency. The National Institutes on Rehabilitation and Health Services supports efforts aimed at encouraging inter-agency cooperation in the development and execution of programs and urges the Subcommittee to continue to review the health and rehabilitation needs of migratory agricultural workers.

As a result of the lessons which will be learned from these demonstration projects, the Subcommittee may well want to recommend a greater involvement of such federal agencies as the Office of Economic Opportunity, the United States Public Health Service, and their analogous agencies at the state level, in the provision of those services which are related to vocational rehabilitation services.

In closing, we again wish to extend our deep appreciation to this Subcommittee for requesting our opinion on the legislative proposals before them. We join with you in the deep concern manifested for the continued development of services under the State-federal program of vocational rehabilitation. We are certain that as a result of your deliberations our nation's handicapped will be the beneficiarie of better and more widely available rehabilitation services under that program.

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Mr. DANIELS. Do you have a prepared statement, sir?

Mr. CARROLL. What we would like to do, I think, is rather informally go over this with you here, and highlight a couple of points we would like to make, and then answer any questions you might have to make.

Mr. DANIELS. That is fine. Of course, our time is limited, and we have 20 minutes before the House will convene, and we do have another witness, so bearing that in mind, I would appreciate if you would summarize your views, and then if the committee has any questions to present the panel, we would be happy to question you.

Mr. CARROLL. I will be very brief.

First of all, I may state that the National Institute on Rehabilitation and Health Services feels that each of the proposals within the proposed amendment, H.R. 8981, is worthy of support by the committee, and we feel that each of these is a wise step forward in increasing the availability and the quality of rehabilitation services to the handicapped population of the United States.

We would like particularly, however, to emphasize the need for the adoption of those proposals with reference to the elimination of residency requirements, and the development of special programs for services to migratory agricultural workers. This is a group which has been long neglected in our society, and because of their frequency of movement, their lack of persistency of residency in any one community or any one State, makes it difficult for us to organize programs with sufficient continuity to adequately serve their needs, and we recognize that this is a group that is difficult to serve, and that some experimentation is needed.

However, we hope that this experimentation will go forward very rapidly, Mr. Chairman, in order that we can begin to provide services to this group in a measure equal to the magnitude of the problem which is represented here.

We also would like to point out that this group encounters a very special problem, in that they are engaged in an industry which is becoming increasingly a dangerous one, both from what might be called industrial accidents, and from the toxic chemicals which are used in the industry, which leads to a high prevalence rate of occupational diseases, and yet despite this fact, 42 of the 50 States in the United States, plus the District of Columbia, lack full coverage under workmen's compensation for this group, and although the benefits of

rehabilitation under workmen's compensation are frequently illusory, they are, nevertheless there, and there are some other workmen's compensation benefits available to other workers; in the area of medical care, for example, under workmen's compensation, which too frequently is omitted from programs for agricultural workers.

One of the reasons why we stress the importance of the elimination of the residency requirements, of course, is that these kinds of requirements also inhibit the provision of rehabilitation services to migratory agricultural workers.

Other than those two comments, I would like to say that Mr. Della, who represents the Maryland State and District of Columbia AFL–CIO, probably would like to comment to you on their view regarding the two identical bills that have been sponsored by Representatives McMillan and Nelsen, H.R. 5801 and H.R. 5803.

Mr. DANIELS. I was going to ask you a question with regard to that. Most of the witnesses have neglected to give us their views on that. I was going to say what is your position with respect to those two bills, which would affect the District of Columbia.

Mr. CARROLL. Well, we enthusiastically, as the National Institute, support the proposal, because as you well know, under the 1965 amendments to the Vocational Rehabilitation Act, a considerable problem was created for the District of Columbia in this regard, of adequate funding of this program, and we feel that the proposed amendment to the Vocational Rehabilitation Act, through H.R. 5801, would certainly make additional funds available to the District of Columbia Vocational Rehabilitation Agency.

Mr. DANIELS. Is there any reason why the District should be singled out and have a different allotment or formula than the other non-State jurisdictions that are under the jurisdiction of the Vocational Rehabilitation Act?

Mr. CARROLL. Yes. As the chairman is aware, the District of Columbia is a rather peculiar political jurisdiction, and it is in a sense also a peculiar demographic community, in that there is a wide disparity of incomes within this particular community, and that we have a large population of very, very poor people.

We also have a substantial minority of individuals with very high incomes. As a consequence, the per capita distribution of income here is, I think, illusory, when applied on an average basis, and does not adequately represent the needs of the community in terms of the large number of low economic groups within the community.

Mr. DANIELS. Well, do you believe that the formula should be changed, then, as recommended by the legislation?

Mr. CARROLL. Precisely.

Mr. DANIELS. Now, you gentlemen heard one of the early witnesses, Dr. Frampton, this morning, express his disapproval of the establishment of a National Center for aid to our deaf-blind citizenry. What do you have to say with regard to the views that he expressed?

Mr. CARROLL. Mr. Chairman, each individual in our society, handicapped or nonhandicapped, we feel, requires special services to the extent that that person is a very special kind of an individual. For that reason, we believe that even though many programs can be developed in this country which provide services to a broad range of handicapped individuals, even within that program, each professional person working with each individual client or patient recog-

nizes that these individuals must have a rather special program and special treatment according to their own needs, their own experiences, their own level of education, their own potential.

I don't think there is any question but what this kind of a National Center is desperately needed for the 5,000 or 6,000 or 7,000 individuals who have incurred this kind of a devastating handicapping condition.

I don't think that we would necessarily be in a position at this time to recommend that this be an entirely free standing and separate institution, or that it might be included within another facility or organization which provided services to a broader range, to a population with a broader range of handicapping conditions, other than deaf-blindness alone. Frankly, I would suspect that it would be much better to do so; however, particularly if that agency had some considerable volume of experience in providing services to either (*a*) the deaf, or, (*b*) the blind.

I would agree, certainly, with Dr. Frampton's point of view that we desperately need considerably more research in this field, more information than what we have at the present time, and I do feel that perhaps one of the best ways of conducting this kind of research would be in such a center, where an adequate population of individuals with this kind of a devastating handicap would be available for research.

Mr. DANIELS. We also raised the point, that there was a problem with regard to the center's location, as to whether or not it should be located in one region of the country or another.

Mr. CARROLL. Here again, I would tend to agree with Dr. Frampton that as rapidly as possible, in terms of economy and efficiency, we should move to regionalize these kinds of services, so that they would be most convenient for these individuals. I think it would be extremely unfortunate to insist for a long period of time that we transport individuals from San Francisco, for example, to Washington, D.C., or to New York, or vice versa, and I think we all recognize that services, wherever possible, should be provided to the individual in his own community, and, if possible, while he remains with his own family.

Mr. DANIELS. But regardless of that argument, you would not, however, neglect the establishment of a National Center.

Mr. CARROLL. No. I should think, however, the objective finally, would be to regionalize these kinds of facilities, so that they would be available generally, to the population that they should serve. But initially, I think it would be very helpful to begin with one National Center, probably best located in a facility that is accustomed to serving both deaf and blind, and in all probability, even other disability groups. As Dr. Rusk apparently observed in his testimony previously here, individuals who have incurred these kinds of handicapping conditions frequently have an emotional involvement in their handicapping situation, and, of course, professional help should be available within one facility to take care of this additional handicap that these people have experienced.

Mr. DANIELS. Mr. Steiger, do you have any questions?

Mr. STEIGER. No questions, Mr. Chairman. I appreciate Mr. Carroll's testimony and his support for the legislation, and the members of the Board that came with him.

Mr. DELLA. We think it is good legislation.

Mr. CARROLL. Mr. Della, would you care to formally make a statement on behalf of the Maryland-District of Columbia-Virginia AFL–CIO?

Mr. DELLA. I would just like to point out, we are in support of the legislation that you have here, and I think a couple of things need to be recognized.

One is that as the population grows, you are going to have more people that need this type of service, and I don't believe that anybody should go through life as a handicapped individual. I think that rehabilitation now is such that each handicapped person could be rehabilitated in some type of vocation that could give them some kind of gainful employment, and I think this is the purpose behind the whole concept of rehabilitation.

I have been very active in rehabilitation mostly in the State of Maryland and the District of Columbia, and now to a great degree across the country, and I am a great advocate of supporting these bills that you have here. Also I support very strongly Mary Switzer's statement yesterday on the District of Columbia, and I think this is a great need here for that change in your concept of benefits to the District of Columbia, but I think that rehabilitation, itself, is still in its infancy, and where the research may be falling short in many instances, the best way to do it is through centers, where more of the people are coming into the center for services, where you find out what the problems are, and then you branch out into regional facilities when it becomes more advantageous to do so.

We are having a rehabilitation center built in Maryland now. That has been through the insistence and strength of the labor movement, putting the pressure on the legislation, and I think that as more of these are developed across the country, more people will come out of their holes, so to speak, because many of them are hidden. They don't like it to be known that they are handicapped, and I think as these services are developed more, these people will be rehabilitated and will be able to perform a gainful living.

Mr. DANIELS. Do you have any knowledge, sir, of the number of deaf-blind people in the State of Maryland?

Mr. DELLA. No, I don't but I know that we have a substantial number of either one or the other. Now, whether they are both deaf and blind at the same time, I don't know what that number is, but as a suggestion, I would say this: Maybe Congress could suggest to the census takers for 1970 that this might be one of the questions they ask the families when they take the census, so you could have a definite number from each of the States that would be recorded.

Mr. DANIELS. If we embark on this new program as provided in this bill, we will not have to wait until 1970.

Mr. DELLA. I don't know how many would be deaf and blind at the same time.

Mr. DANIELS. Is there anything further the gentlemen would care to add? If not, I want to thank you gentlemen for your testimony.

Mr. CARROLL. Thank you very much, sir.

Mr. DELLA. Thank you for the time, sir.

Mr. DANIELS. Our next witness is Mr. John Nagle, Washington representative of the National Federation of the Blind. Mr. Nagle, we are happy to have you again before a subcommittee of the Education and Labor Committee, and I am quite sure that you have a worthwhile contribution to make this morning.

STATEMENT OF JOHN F. NAGLE, CHIEF, WASHINGTON OFFICE, NATIONAL FEDERATION OF THE BLIND

Mr. NAGLE. Thank you very much, Mr. Chairman, and members of the subcommittee. To identify myself fully, my name is John F. Nagle, and I am chief of the Washington office of the National Federation of the Blind. My address is 1908 Q Street NW., Washington, D.C.

I am appearing here today, Mr. Chairman, to present the views of the National Federation of the Blind with reference to the proposals contained in H.R. 8981, the Vocational Rehabilitation Amendments of 1967.

The National Federation of the Blind endorses and supports section 5 of the pending bill, which would make it possible for migrant agricultural workers and their families to obtain vocational rehabilitation services when they become physically or mentally disabled by disease or accident.

These workers perform a much needed and important service in our national economy, but in the pursuit of their employment they do not fit into the customary social pattern, and constant movement and impermanence—the dominating requirement of their occupation—prevents them from obtaining vocational rehabilitation services and specialized help from State vocational rehabilitation programs.

The specially oriented projects proposal contained in section 5 of H.R. 8981 to meet the vocational rehabilitation needs of migratory workers and their families seem sound and sensible to us—but if this provision of the pending measure is to provide the help intended to those intended to be helped, section 5 must be amended to eliminate durational residence and citizenship requirements for eligibility to receive services under the special projects.

Failure to make these changes in the bill would completely nullify the very purpose to be served by these special migratory worker projects.

Then too, Mr. Chairman, we hope that projects established to provide vocational rehabilitation services to migrant workers and to the members of their families who are with them means that physically or mentally impaired children, however young, may be eligible for physical restoration, therapy, adjustment training, and similar rehabilitative services under such projects.

Since this would not be so under present practice in regular State vocational rehabilitation programs where a child must be 15 or 16 years of age and about ready to enter the labor market to qualify for vocational rehabilitation services, we recommend that the committee report issued with reference to H.R. 8981 make very clear the intention of Congress that the special projects authorized to be created to provide vocational rehabilitatiou help to migrant workers and their families are intended to serve the needs of all family members.

And this action is necessary, Mr. Chairman, for though a migrant worker's children may not be of an employable age, they are just as mobile as their parents and older brothers and sisters, and because of this they are just as ineligible for the usual community services and programs as are the older family members.

The National Federation of the Blind endorses and supports the provisions of H.R. 8981 which deal with the authorization of Federal participating funds for State programs of vocational rehabilitation,

and we commend the administration for substantially raising the level of such authorizations.

But, Mr. Chairman, Federal dollar authorizations and Federal dollar appropriations for vocational rehabilitation services only have meaning in the lives of physically and mentally impaired men and women when the Federal dollars are actually paid to the States for case service expenditures.

In fact, Mr. Chairman, very few States take full advantage of federally provided money for vocational rehabilitation services.

In fiscal year 1965—the last year under the old amendments of the Vocational Rehabilitation Act, Public Law 83–565—when $1 of State money brought about $2 Federal, only seven of the 54 States, territories, and jurisdictions claimed, in full, their share of available Federal money for vocational rehabilitation services.

In fiscal year 1966, the first year under the new Vocational Rehabilitation Act Amendments, Public Law 89–333, when $1 of State money brought $3 Federal for use in providing vocational rehabilitation services to handicapped people, only five jurisdictions claimed, in full, their share of available Federal money.

Figures are not available for this fiscal year yet since it is not yet completed. Mr. Chairman, it is estimated that during fiscal year 1967, only 16 jurisdictions will claim, in full, their share of available Federal money for vocational rehabilitation services.

Why do the overwhelming majority of States fail to take advantage of available Federal money for their vocational rehabilitation services programs?

We believe there are several reasons for this—because of the increasing demands for more and better State provided services; State government costs rising far more rapidly than are State revenues to meet them; in the competition for State dollars to match Federal funds in federally aided State programs, vocational rehabilitation agencies, too often, come off second best; and then the practice of State officials to use limited State funds to match Federal money in programs where the greatest return in Federal money can be obtained.

But whatever the reason, Mr. Chairman, the full amount of congressionally provided funds for rehabilitation services for handicapped people is not being used and available and reflected in expanded and improved living and livelihood opportunities for handicapped men and women.

We think the most practical solution to this situation would be to change the financial matching formula in section 2 of the Vocational Rehabilitation Act from the present 75-percent formula Federal, 25-percent State ratio, or three Federal dollars for each State dollar, to 90-percent Federal and 10-percent State, with nine Federal dollars obtainable for each State dollar.

Thus a State which now receives $75,000 Federal money for $25,000 State money would receive under the revised formula, $225,000 Federal money for the same $25,000 amount of State money.

Mr. Chairman, the National Federation of the Blind believes this suggested change in the vocational rehabilitative law is much needed and we urge its adoption by this committee and the Congress.

At a time in our Nation's history when there is a growing awareness of the gain, not only to the individual but to the entire Nation, when a physically or mentally disabled person is restored to productivity and

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usefulness, it is most essential that State vocational rehabilitation agencies be sufficiently well funded to provide services of the highest possible caliber to their disabled clients, to the Nation's physically and mentally impaired citizens.

The population growth, improved casefinding methods, and greatly advanced adjustment, training, and other rehabilitative techniques which now give hope, help, and opportunity of restoration to normal life and regular employment to disabled persons and disability categories only a short time ago considered beyond the scope of rehabilitation and remotely beyond the possibility of self-reliant, independent living—all of these factors make the responsibility and the opportunity of State vocational rehabilitation agencies greater and more costly, today.

We of the National Federation of the Blind believe these agencies must be fully equipped to fulfill this greater responsibility and fully able to take advantage of this greater opportunity.

Mr. Chairman, attached to my printed testimony is a suggested amendment to the Vocational Rehabilitation Act which would accomplish the change in the Federal-State financial matching formula which we recommend.

We urge your approval of this amendment.

The National Federation of the Blind endorses and supports section 6 of H.R. 8981 which would prohibit residence requirements in State vocational rehabilitation programs.

Mr. Chairman, it has always been the belief of the National Federation of the Blind that only two conditions should be met by a person applying for vocational rehabilitation services—that he is physically or mentally disabled, and that the provision of vocational rehabilitation services could reasonably be expected to help him—at best, to achieve complete self-support, or at least, to gain an increased ability to cope with the difficulties of his disabling condition.

The National Federation of the Blind has always believed that a handicapped person should be able to obtain vocational rehabilitation services wherever he happens to reside, even though such residence just has been acquired or is of very short duration.

To refuse vocational rehabilitation services under such circumstances amounts to a denial of this most necessary assistance.

It imposes a restriction upon his freedom of movement, upon his freedom of choice in residence—it freezes him where he lives, and discourages and prevents and keeps him from seeking better employment opportunities; it does not allow him to go to a State where he believes he might secure the kind and quality of vocational rehabilitation help he needs.

We believe he should be able to do just that.

Mr. Chairman, it may be said, in opposition to the residence abolition proposal, that States which have acquired a reputation for the high standards of the vocational rehabilitation services provided to their disabled people may be inundated by nonresident handicapped people seeking to benefit from such programs and to be helped by them, since they had received little benefit and no help from the vocational rehabilitation programs in the States where they formerly lived.

If experience shows that this is happening, Mr. Chairman, we would hope this committee and the Congress would consider providing a

bonus payment formula for such States, and that they may continue to provide quality vocational rehabilitation services to all disabled persons who apply, that local taxpayers may not become disproportionately burdened and penalized financially because their vocational rehabilitation agencies are doing such fine work and achieving such constructive and commendable results for physically and mentally impaired men and women.

Mr. Chairman, just as the National Federation of the Blind opposes residence requirements as a limitation upon the availability of vocational rehabilitation services to disabled people, so, too, we are opposed to the continued imposition of a means test as an eligibility condition for the receipt of any vocational rehabilitation service.

In 1965 this committee caused to be removed from the Vocational Rehabilitation Act the requirement that some vocational rehabilitation services should be provided to disabled people upon a financial needs basis.

With the removal of this Federal requirement, States were then free to abandon needs tests practices in their vocational rehabilitation programs.

But Mr. Chairman even though a year and a half has passed since the 1965 amendments to the Vocational Rehabilitation Act were enacted into law, as of March 15 of this year, only 15 States and one territory have acted, either administratively or through their legislatures to abolish the economic needs test in vocational rehabilitation.

Only 10 States have eliminated economic need as an eligibility requirement in vocational rehabilitation programs for the blind.

Only 11 States and one territory have eliminated economic need as an eligibility requirement in general vocational rehabilitation programs.

In short, Mr. Chairman, so far as can be learned, only the States of Arkansas, Iowa, Maine, Nevada, New Hampshire, and Oregon have abolished economic need in vocational rehabilitation programs for all disabled clients, whether blind or otherwise impaired.

To accelerate this snail pace progress, the National Federation of the Blind offers as an amendment to H.R. 8981, the bill H.R. 7396 introduced in the House by Congressman Phillip Burton, California, able and distinguished member of the Committee on Education and Labor.

H.R. 7396 would prohibit the needs test as a condition for receiving any vocational rehabilitation service from any State vocational rehabilitation program.

Enactment of this measure into law would make it possible to provide vocational rehabilitation services solely upon the ground that a person has need for such help because he is physically or mentally disabled.

When such a person determines to rebuild his shattered life, Mr. Chairman, the entire Nation benefits from the example of his courageous efforts, and when he succeeds and achieves self-support the entire Nation gains materially and substantially for such a restored and rehabilitated person need no longer depend upon the resources and taxes of others, and he contributes by his taxes, by his productivity, to the general welfare and the strengthening of the Nation.

Mr. Chairman, the National Federation of the Blind urges the approval of H.R. 7396 by this committee and the Congress.

Finally, Mr. Chairman, the National Federation of the Blind endorses and supports section 4 of the bill, H.R. 8981, which would authorize the establishment of national centers for deaf-blind youths and adults.

As blind men and women, the members of the National Federation of the Blind are fully aware of the problems incidental to blindness and the difficulties of functioning sightless in the world geared to sight.

As blind persons, we are also fully aware of the extent to which we depend upon our hearing ability as we endeavor to compete and cooperate with physically fit people.

Therefore, Mr. Chairman, those who must confront the uncertainties of life without sight and without hearing have our profound respect and admiration, and, of course, our full and unqualified support—for theirs must truly be a herculean struggle against adversity, against seemingly insurmountable obstacles.

But, Mr. Chairman, in spite of this, there are men and women, deaf-blind, who are a living, functioning demonstration that, when given specialized help, when given special training directed toward meeting their particular needs and solving problems peculiar to their doubly handicapping condition, it is not only possible for all of such persons to live fuller, more worthwhile lives, it is also possible for some of them to achieve independent, economically self-sufficient lives.

Mr. Chairman, the National Federation of the Blind urges this committee and the Congress to act favorably and promptly upon H.R. 8981, in order that the provision dealing with the establishment of a national center for the deaf-blind youths and adults of the Nation may be started upon its very essential and most worthwhile work as soon as possible—for the deaf-blind have waited and waited for centuries for this help and they should not have to wait longer for it.

But, Mr. Chairman, just as there is a great need for the creation of a facility exclusively oriented toward meeting the very special needs of deaf-blind youths and adults, we believe there is even a greater need for a similar facility oriented solely toward meeting the even more special needs of deaf-blind children.

Born without sight and hearing or with extremely impaired sight and hearing or sustaining the loss of these basically essential faculties in infancy—this is the sorry plight of a considerable number of children today, damaged by the ravaging effects of German measles.

These unfortunate children and their desperate parents are in urgent need for the kind of assistance that would be available to them at a national center for deaf-blind children.

Mr. Chairman, it is the belief of the National Federation of the Blind that this committee should either expand the proposed national center for deaf-blind youths and adults to include deaf-blind children, or you should authorize to be established a separate national center for such doubly defective, doubly handicapped children, and we believe the separate facility would be preferable.

PROPOSED AMENDMENT TO SECTION 2 OF PUBLIC LAW 89–333—FEDERAL GRANTS TO STATES FOR VOCATIONAL REHABILITATION SERVICES

Section 11(i) of the Vocational Rehabilitation Act Amendments of 1965 is amended by deleting all of the present text and in lieu thereof substituting the following:

SEC. 11(i). The Federal share for any State for any fiscal year beginning after June 30, 1968, shall be ninety percent.

TOPICAL OUTLINE

The National Federation of the Blind supports:

1. Project grants for vocational rehabilitation services for migratory agricultural workers and their families.
2. Amendment of section 5 of H.R. 8981 to eliminate duration residence and U.S. citizenship as eligibility requirements to receive vocational rehabilitation services under this section.
3. Committee report declaration that all children of a migrant worker, however young, may be eligible for vocational rehabilitation services under the migratory worker projects provided for in section 5 of H.R. 8981.
4. Authorization of appropriations.
5. Amendment to section 2 of the Vocational Rehabilitation Act Amendments of 1965, making the Federal share 90 percent of the cost of vocational rehabilitation services.
6. Prohibition of durational residence requirements for vocational rehabilitation services.
7. H.R. 7396 to prohibit the means test for any vocational rehabilitation service.
8. Centers for deaf blind youths and adults.
9. Inclusion of deaf-blind children within the scope of the centers for deaf-blind youths and adults or preferably, authorization for the establishment of centers for deaf-blind children.

Since preparing the foregoing statement, Mr. Chairman, I was informed that H.R. 5801 and H.R. 5803, identical bills introduced in the House by Congressman McMillan and Congressman Nelsen, were to be included in the present hearings. The National Federation of the Blind endorses and supports the McMillan-Nelsen proposal and urges its approval by this committee. H.R. 5801 and H.R. 5803, which would amend the Vocational Rehabilitation Act to reduce the amount of matching funds from the District of Columbia, are intended to correct a financing disadvantage created for the District of Columbia by the 1965 amendments to the Vocational Rehabilitation Act.

As vice chairman of the Advisory Council on Vocational Rehabilitation to the District of Columbia government, I am familiar with the extent to which vocational rehabilitation services to disabled persons in the District of Columbia have suffered, have been curtailed or canceled, because of lack of adequate funding.

The McMillan-Nelsen measures, as Federal law, would make it possible for the District of Columbia to qualify for Federal participating vocational rehabilitation money on a basis that would recognize and compensate for the unique per capita wealth situation which prevails in the District of Columbia.

The McMillan-Nelsen bills as enacted law would assure that vocational rehabilitation programs in the District of Columbia would be adequately financed, with the result that more and better rehabilitation and restoration help could be provided to the District's disabled citizens.

We of the National Federation of the Blind urge this subcommittee and the Congress to act favorably and speedily upon H.R. 5801 and H.R. 5803.

I thank you, Mr. Chairman, for this opportunity to appear here.

Mr. DANIELS. Mr. Nagle, the Chair desires to compliment you on a very, very fine and informative statement, and appreciates your coming here, giving us the benefit of your views.

The recommendations that you have made with respect to amending the legislation under consideration will be given careful study and consideration by this committee.

Mr. NAGLE. Thank you, Mr. Chairman.

Mr. DANIELS. I would like to call upon my colleague from the State of New York, Congressman Ogden Reid. Do you have any questions?

Mr. REID. Thank you, Mr. Chairman.

Mr. Nagle, I thought your testimony was particularly thoughtful and clear and pertinent with regard to the opportunity before the Congress, and the needs of many Americans, and I want to commend you for the substance of your remarks.

Could I ask you, sir, with regard to the needs of deaf-blind children, approximately how many children are there in America in this category today?

Mr. NAGLE. I won't even try to guess, Congressman. I haven't the remotest idea, whether it is a thousand, whether it is 200. I heard just recently that there were some five hundred children in the State of New York at the present time, who have had their vision and hearing damaged by German measles. To what extent this damage will cause difficulties in functioning, my guess would be that just isn't known. But I have heard, as I say, all sorts of figures.

The 500 in New York State is the specific one I think of in terms of one particular State.

Mr. REID. Thank you. You suggest a change in the formula to 90–10, rather than 75–25, and one of the points you advance is the fact that a number of States now do not take full advantage of Federal funds in vocational rehabilitation services, is partly due to the competition of States for State dollars. Have you made any estimate as to the degree of greater participation by the States if the formula was changed?

Mr. NAGLE. I think that with greater available money in a State, that such a thing as this could happen. At the present time, when a client of a vocational rehabilitation agency wishes to go to college, because State colleges and universities are less expensive, usually, than colleges and universities outside of the State, the disabled person will be sent to such a local college or university, even though if he were to go to a remotely located college or university, he would get a much better, far superior education, a far superior training in his particular field, and, therefore, be much better equipped to function once he has gotten his education.

I think that with more money in a State, that there would be — there would not be this parsimony that exists in providing quality services to handicapped people.

Mr. REID. Thank you, and one final question, Mr. Chairman.

I think quite obviously, a National Center for the Deaf-Blind youth and adults as proposed in H.R. 8981 is long overdue. Do you have any comments, Mr. Nagle, about the general character of vocational rehabilitation programs, particularly as they may affect the blind or the deaf-blind, whether there are any changes that could be made throughout the country in some of the programs that possibly would reflect in part something of the training that this center would make possible?

Mr. NAGLE. I think that with the existence of this center, gaining experience through the best type of research; that is, in actually dealing with the people themselves, not just as a research project, but as a continuing operating institute, dealing with the people and their problems, day after day, trying to solve problems, trying to provide alternative methods for them to do certain types of things, I think as this information is gained, it will, of course, be made available to the various State vocational rehabilitation programs, and will be beneficial not only to the ones who are totally deaf and totally blind, but many of the gains will be available, and helpful for services to persons who are only blind or only deaf. It is my belief that this National Center for Deaf-Blind will present, will offer sort of a spur to the entire field, not just in its limited area of deaf-blind, but in the entire field of rehabilitation.

Mr. REID. Thank you very much, Mr. Nagle.

Thank you, Mr. Chairman.

Mr. DANIELS. The gentleman from Wisconsin, Congressman Steiger.

Mr. STEIGER. Thank you, Mr. Chairman. I have no questions for Mr. Nagle. I have enjoyed having the opportunity to hear his testimony on behalf of the National Federation of the Blind. I appreciate your coming today.

Mr. DANIELS. Well, this concludes today's hearings, and the subcommittee will stand adjourned subject to the call of the Chair.

(Whereupon, at 12:20 p.m., the subcommittee adjourned subject to the call of the Chair.)

AMENDMENTS TO THE VOCATIONAL REHABILITATION ACT

THURSDAY, JULY 27, 1967

HOUSE OF REPRESENTATIVES,
SELECT SUBCOMMITTEE ON EDUCATION
OF THE COMMITTEE ON EDUCATION AND LABOR,
Washington, D.C.

The subcommittee met at 9:45 a.m., pursuant to call, in room 2261, Rayburn House Office Building, Hon. Dominick V. Daniels (chairman of the subcommittee) presiding.

Present: Representatives Daniels and Steiger.

Also present: Daniel Krivit, counsel.

Mr. DANIELS. The Select Subcommittee on Education will now come to order.

Miss Switzer, it is a pleasure to have you back here again. We thought we would have you return for the express purpose of clearing up some questions that have arisen in my mind and also I believe in the minds of some of the members of the subcommittee.

Last week a witness, Dr. Merle Frampton, appeared here before the subcommittee and testified that he felt there was no urgent need for the National Center for Deaf and Blind. It was his view that a sufficient survey had not been made to ascertain the number of deaf-blind, that they had multiple handicaps, and since most were terminal cases it would be better to have a national center for multiple handicaps, youths and adults.

Do you have any comment on that?

STATEMENT OF MISS MARY E. SWITZER, COMMISSIONER OF VOCATIONAL REHABILITATION, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Miss SWITZER. Yes; I disagree with almost every point Dr. Frampton made. Based on our experience I think his assumption would not give us the service for the deaf-blind people we are trying to reach.

It is true there is no absolute census of the number of deaf-blind people and where they live any more than there is any other census. The best figures we have on which any agency would have to plan are compiled by means of a register by the American Foundation for the Blind, which is one of the foremost private organizations working in the field of the blind in our country.

They have been doing more than any other agency except for the Brooklyn Industrial Home for the Blind. They have been maintaining a register in an effort to keep track of them; and, according to their statistics, there are about 4,000 deaf-blind adults over the age of 20 and about 1,600 are between the ages of 20 and 65.

Those are the ones that we would be addressing ourselves to in our proposal.

In the case of the children, which the Secretary mentioned in his testimony, a proposal will be sent to the Congress as soon as it is finished. We think, based on the experts, that there are probably at the moment something under 500 children registered with the foundation as of last July.

Taking into consideration the number that would be the victims of the Rubella epidemic, probably another 200 are added to that.

As far as we know, and we have had very intensive discussions on this, only about 91 children are enrolled in educational deaf-blind programs. In comparision to orthopedic and other disabilities, the number is not large. However, the spread of what we are trying to do about it is very large.

We do know we can do a great deal for both deaf-blind adults and children, and we are trying in this proposal to make a start and get going. That has to do with the numbers.

As to whether or not we need a center, and as to whether or not a center should handle multiple handicaps other than deafness and blindness combined, almost all the experts are emphatic in their conviction that deaf-blindness, the combination of these two in an individual, is a very severe handicap and if there was an additional orthopedic handicap also, this would probably have to be handled but, in the great centers of our country like the one at New York University under Dr. Rusk or Dr. Kottke in Minnesota, none have the competency to deal with deaf-blind people and they would be the first to tell you so.

Therefore, we feel to mix up this group or this problem by suggesting it be broadened to include other groups of multihandicapped people would have the effect of not meeting the need as we see it.

I think the only way we can solve this problem is to address ourselves to what we know and to consult with the people who are doing something in the field, which is very few, and deal with it this way.

Do you have anything to add, Dr. Garrett?

STATEMENT OF DR. JAMES GARRETT, ASSOCIATE COMMISSIONER, VOCATIONAL REHABILITATION ADMINISTRATION, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Dr. GARRETT. I think the problem chiefly, going into a multidisability center, would be the size of the institution. If you deal with the problems of cerebral palsied blind, the blind retarded, deaf retarded, blind mentally ill, deaf mentally ill, when you think of the complexity of each of these problems by themselves, you would tend to lose the deaf-blind.

I think primarily the problem of the deaf-blind is that it is a "hidden" disability that is so severe you tend to neglect the problem.

Mr. DANIELS. Dr. Frampton testified, "the field of deaf-blind is then, for the present, a terminal service." Then he made an additional comment, "If this bill concerned itself with a National Center for Multiple Handicapped Youth and Adults it would fullfill a much greater need in our society today, including the deaf and blind, and could demonstrate more effective restoration of more such individuals to productive living because of the greater number."

Miss SWITZER. I would like to reply to his first statement. I think this is a statement of a man of little faith. When we look at what has happened to the adult deaf-blind who have gone through the Industrial Home for the Blind, it is inconceivable to me that this statement could be made by a responsible person in the field. This is for adults. Dr. Garrett, you had some experience recently with seeing even in a remote place like Vermont where a few deaf-blind people had had the service and they were busily at work and happily engaged and leading productive, useful lives.

We have invested through our research program in trying to broaden the opportunities for the deaf-blind a great deal of energy, money and talent and have, I think, come up with a very remarkable record so that it is absolutely not a fact that the institutions now dealing with the deaf-blind, either children or adults, are dealing with terminal conditions, this is not a fact.

Dr. GARRETT. You may be interested in a few figures from the Industrial Home study which they made, 9 percent of those in the group achieved employment in industry, 3 percent in self-employment, 27 percent in sheltered workshops, 15 percent homemakers, 11 percent were in training, 1 percent were students.

On the adverse side, 14 percent were not given further services because of age and 21 percent were either judged to be unemployable or were seeking employment at the time this study was finished. This hardly suggests this is a terminal program.

Miss SWITZER. In the case of the children, I think we should put this in the record also, I think I am correct that in saying Dr. Frampton's main experience has been with children it is the firm conviction of our services, and our advisers, from Dr. Waterhouse who is the head of the Perkins School for the Blind in Massachusetts, where the biggest program for the deaf-blind children is going on, you don't speak of handling children in a terminal sense, you do what you can do for children as long as you can do anything for them.

The earlier you work with them, the better chance you have of carrying them along. I think in even the most frustrated programs where one lacks the talented teachers and the resources, there is not in our program this negative approach. I think it is a tragic thing to feel that one has so little faith in the victims of such a serious handicap that one could close the door just because it is difficult or just because it takes a long time or just because one's experience in an individual case might be less than perfect.

This is a group that is neglected, as the Secretary said in his testimony. It is a group we want to identify and turn whatever talent we can to meet it, turn that talent in a constructive way and I am absolutely convinced given this legislation, 5 years from now we can have the most dramatic story this committee has ever heard.

Mr. DANIELS. On page 189 Dr. Frampton further states:

> I do not believe this problem of deaf-blind youth and adults is anywhere near the magnitude it is claimed to be by the proponents of this bill.

Later he stated:

> The proponents claim there are 5,000 adults, which may run as high as 7,000, and perhaps 400 deaf and blind children may run as high as 700. In fact, the opposite is probably true.

Do you have a comment to make on that?

Miss SWITZER. I think anyone can have an opinion about facts. We are basing our testimony on the most solid facts we can get, I think there obviously is 4,000 or 5,000, that is a conservative figure, and we think 1,600 out of this group are between the ages of 20 and 65.

We know there are 500 deaf-blind children, they are on the register. Dr. Waterhouse, who has the most national exposure to the rubella problem, thinks there is another 200 not yet caught up with.

Mr. STEIGER. Will the Chairman yield?

Mr. DANIELS. Certainly.

Mr. STEIGER. You said there are about 4,000 adults?

Miss SWITZER. Over the age of 20.

Mr. STEIGER. Suffering from the multiple handicap of deaf-blindness?

Miss SWITZER. Yes.

Mr. STEIGER. You go on to say there are 1,600 between the ages of 20 and 65, does that mean the 2,600 that are left are over 65?

Miss SWITZER. That is what this would seem to imply. Nothing has been done about this for a long time.

Dr. GARRETT. That is also because blindness is associated with age.

Mr. STEIGER. It should be 2,400 over 65 and 1,600 between 20 and 65.

Miss SWITZER. I think Dr. Frampton is entitled to his opinion of numbers, I don't know on what he bases his statement. As I say, we are basing ours on the best data we have.

Mr. DANIELS. He also made the comment he thought it would be more advisable at this time,before we proceed with the establishment of a multiple center to take care of them, that it would be better to go out and make a survey to ascertain exactly the number of adults and infants involved.

Miss SWITZER. My attitude toward surveys is that if you are very much in doubt and you are close to meeting the problem, maybe you do need a survey.

We know so many people are in needs of service and this center is only going a little way toward meeting the problem. I am in favor of a survey when we are so close to doing what we want to do for the people that we need to know where they are, and through our people in rehabilitative agencies to direct people to the center and direct them through other programs. To wait for the survey is to do nothing.

I would be absolutely opposed to that.

Mr. DANIELS. Dr. Frampton proposed a further thought that it would be preferable to give first priority to research rather than construction.

What is your comment?

Miss SWITZER. I think we have to do both. We know enough now to do a lot of things for a number of people that we are not now reaching, and I would like Dr. Garrett to talk about the research he would like to see undertaken or that is being done or going on.

Dr. GARRETT. I think the question is perhaps not an either/or situation. The proposal we have here in this legislation envisions a program of demonstration, it envisions programs of research, it involves a program of service to people and it envisions a program of training of the necessary personnel in order to do the job.

The construction feature of the program is, while not in dollars incidentally, not the most important aspect of the proposal.

The important aspect of this proposal is to take what we have already demonstrated at the Industrial Home for the Blind and apply it broadly so that more people can benefit from what has been learned.

There is still a tremendous amount that needs to be learned. The more you deliver service, the more questions arise in terms of how you can improve that service.

This is why the proposal envisions research going along with the service part of the program. I think that the great lack that we have had in most programs has been the idea of applying the results of research to people so that people can benefit and benefit immediately from what you find out.

I think this is the great virtue of this particular proposal, that is, by having the research and the training and the service all going on simultaneously in an integrated fashion, you immediately get the results and benefits of the research over into the service people.

Mr. DANIELS. Not knowing exactly the number of multiple-deaf adults and infants in this country where would you establish the first center?

Miss SWITZER. Well, the center would be established after a review of the possible places by a committee that the Secretary would appoint.

This is the way we do business in our Department. I think, however, that one thinks immediately, naturally, of the Industrial Home for the Blind for the adults, since this is the only place a fully developed, organized service is going on.

Yet we have been around too long not to know that there will be other places anxious to have a part in the program but I think it is fair to say we would have principles and criteria set up by an advisory group and this advisory group would recommend to the Secretary the institution of choice.

This is the way the National Technical Institute for the Deaf was set up and I think in fact the Secretary stated in answer to a similar question that this is the way this would be done. The same would be done with the children's institute.

This is a field that is small, it is a field that the people, who are familiar with what is going on, know where the work is being done and it is not difficult to identify the centers where the most likely chance of expansion or development could be but I think it would be extremely short sighted to have any preconceived ideas about it.

Mr. DANIELS. If it was established at the Brooklyn Institution for the Blind, you would not embark upon a construction program immediately?

Miss SWITZER. I think wherever it would be, I think to enlarge the program to the extent we have in mind, there would have to be construction.

I would like to ask Dr. MacFarland, head of our Services for the Blind, and who has been closer to these things than any of us, does he have anything to add?

STATEMENT OF DR. DOUGLAS C. MacFARLAND, CHIEF, SERVICES TO THE BLIND, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Dr. MacFarland. The only thing I would like to add is when we talk about the conservative estimate of numbers, we are forgetting the two epidemics of rubella that we had in 1963 and 1965.

The health people tell us that there were over a million cases of German measles and about 30,000 infants were affected. This will have a serious impact on any program we develop. The people who are urging us to move ahead are looking forward to developing an orderly program before we have perhaps a thousand or 2,000 children needing service and no place to go.

I was somewhat appalled, too; at the testimony stating that we had all the teachers of the deaf-blind apparently we need. Anyone who has been in this field for even a few years will tell you that we will never have enough people to serve the needs of the deaf-blind unless we conduct continuous intensive training programs.

This would all be part of the Institute—training, research, and service. It is not a matter of how much you can pay a person; this is a matter of dedication. The person teaching the deaf-blind student has to be intensely interested to do the job.

We should not overlook the large number of young children who will need service. Some epidemiologists seem to feel that in the next few years we will have a vaccine to prevent German measles while others say we are not even close to this. In any event it may not come in time to take care of the next sweep.

Epidemics occur about every 7 years and if we are not ready with the vaccine in 1970, we will have another large increase of deaf-blind children. The current population under 65 years is estimated at 1,600. If we add the rubella victims, this figure may be multiplied several times—enough to keep a center working at capacity for the next two decades.

Mr. Daniels. We notice the bill gives the Secretary the authority to plan other centers. This seems to imply a decision that others will be needed.

Miss Switzer. I think the reason for putting that language in there was to make sure this program is not an exclusive one and rather to put a mandate to the Department to be working with the center that would be established to see what more needs to be done.

This is a very big country and in order to meet the needs of its people, it seems to us we would want to look forward to having a better geographical spread.

At the present time the Industrial Home for the Blind takes only the people from the Northeastern States. It is a regional center.

With the exception of the Berkeley School for the Blind and the school in Alabama, you have almost no place where adult deaf-blind can get the services they need and can get in Brooklyn.

I think it would be very desirable to charge the Department with the responsibility of attempting more adequately to meet the geographical needs of these people.

The least one ought to expect is a center on the west coast.

Mr. Daniels. How will the center help other rehabilitation centers that will be working with the deaf-blind?

Dr. GARRETT. This is not just a theoretical question, it is an actual question in terms of the way they are now working in the northeastern region. What you have is a small staff of individuals who go out into the State, when they want to refer someone to the Industrial Home for the Blind, to make the initial contact with this individual.

They prepare the individual for going to the Industrial Home for the Blind. Unlike so many other programs which tend to become very provincial and keep all of their clientele in the area in which they happen to get the service, the program that we envision puts these people back out into the community.

This is what the project we are now supporting is doing. In other words, the IHB has individuals who go back and work with community agencies to orient them to the problem of deaf-blindness, to orient them on what they can do.

One of the illustrations I might give is in the State of Vermont where there is a little work shop for 10 blind persons run by the Blind Association of Vermont.

Of the 10 blind persons there, two happen to be deaf-blind and this was done through this cooperative work between the Industrial Home and the Vermont Work Shop and the Vermont Agency for the Blind.

This is typical of the way we would see that this would be done. This would also be the way ultimately in which, if this committee were to approve the concept of looking at whether other centers are needed around the country, this would be the way in which the groundwork would be laid for the development of the skills and expertise in order to handle the problem if it were decided.

I think this is the major question and I think it goes to the heart of Dr. Frampton's comment to this committee, which is that these are individuals with very severe difficulties and disabilities.

The usual way in which evaluation is done, which is on a kind of rapid basis, referral to a physician here and referral to a psychologist here, referral to a social worker somewhere else, this just will not work with individuals with severe disabilities and the real potential of these individuals can never be realized unless there is an opportunity for what we call extended evaluation.

You just have to get in, you have to give these people services, you have to try the best and the most you know how in order to serve them.

When you have done this and only after you have given it a valid "try" can you say that the person is not feasible, or that he is terminal, what ever the words are that have been used here.

The problem that we have with children—with the best of intentions, in the programs, for example, that the American Foundation for the Blind has conducted at the University of Syracuse—there has not been this effort made at extended evaluation which is the cornerstone of our new legislation.

And when you have given all you know how to give—maybe you fail—but at least you have given all that you have. I think the importance of what the Industrial Home has done is to show that by extensive, tireless services on the part of a lot of people, it is possible to take a group of people who are not thought to have any constructive potential and actually get them back into the community and I think this is the goal we are trying to achieve with this legislation.

Mr. DANIELS. Any questions, Mr. Steiger?

Mr. STEIGER. Yes, a number of questions.

83-687—67——10

Miss Switzer, in response to a question by the chairman, you touched on a center for children, do you envision this to be a separate center?

Miss SWITZER. Yes. I mentioned the children in order to give you the total picture. There will be another proposal before the committee as the Secretary said when he appeared before you. This proposal will lay out the plans for the children.

I am perfectly willing to tell you all I know and glad to, as a matter of fact. It would be a separate center, to answer your question directly. This legislation concerns an adult institution and the other for children would have to be where they are doing a major part of the work for children.

Mr. STEIGER. How do you define youth?

Miss SWITZER. I am thinking now of really little children, almost preschool. The basic problem now with deaf-blind children is to get them young enough and the one place with the largest number of deaf-blind children is Perkins School for the Blind in Watertown, Mass.

I am really repeating the statements made by Dr. Waterhouse, who is head of this school, and who probably knows the most about the practical problems of training deaf-blind children—I don't think that is an overstatement.

He has been working with the Department and he and I shared a session—and this is why I am so familiar with his point of view—just last week at the annual meeting of the American Association of Workers for the Blind.

The children's proposal would be primarily education in the usual sense of the word and the effort would be to get the children as early as possible. They have a preschool program at Perkins, and other places—not many.

This is an entirely different kind of problem than the adult problem. You could not have them at the same place.

Mr. STEIGER. That does not answer who—how you define youth.

Miss SWITZER. We define youth as at or near working age. I think the deaf-blind who would be at the center might be as young as late high school and as old as you would find it possible to work with a person. But in this program we are discussing in this bill, there would not be a children's program in our usual concept of it.

Mr. STEIGER. In section 17, sub (a), sub (3) on page 4 of the bill, it says among other things, it is to aid in the conduct of related activities which will expand or improve services or help improve public understanding of the problems of the deaf-blind.

Can you give us an idea of what is intended by that?

Miss SWITZER. Well I think you could enumerate a number of areas. This principle would apply to almost any severely disabled group.

First of all, you have the families, the people. You have the education institutions to which you want to send your young people to be educated. You move to the employers where you have industry where you hope to place them.

You have the community agencies, the recreational institutions, the neighbors that make up the mosaic of any community life of any individual.

In order to break through in any of these areas, it takes a public information program, perhaps in the form of special institutes—short-term training—and we could give you examples of what we have

done in the field of the deaf, which is another area that has been neglected insofar as some of these elements are concerned.

We have had a series of workshops with different groups of religious leaders, all of whom have a desire to do something for their disabled parishioners but don't know how.

The same is true in the field of mental health. Then there are other community agencies that need education and employers most of all. But an employer is convinced best when you have a salable product that lives up to its promise

I believe it is safe to say most of the deaf-blind people who have been placed in competitive employment have been extraordinary people.

When you see someone like Mr. Smithdas, who testified before this committee last week, you realize the impression such a person can make on a community group, where he would be talking over the problems and making an appeal to do this.

There is another aspect which is perhaps a little remote from the usual thought of public information, that is to somehow or other interest a creative talent in solving some of the problems.

We are a long way from the scientific points that would be desirable in dealing with these two disabilities. We have a very far-reaching program in work for the blind in all sorts of research; the same for the deaf and a little in the deaf-blind.

I know Dr. Masland in the field of neurology is working on this. This is a small field in terms of numbers and it is not easy to attract talent to address the problems.

Usually you get your information and new knowledge as a by-product from some other scientific field. This is where we made a great deal of progress in the use of hearing aids and vibration and all sorts of things in alleviating the problems in deafness.

Much of this was discovered during the war in research financed by the Navy and it still is in preventiveness.

Mr. STEIGER. Should we be concerned with establishing a national center for those who suffer from the kind of multiple handicaps Dr. Garrett mentioned?

Miss SWITZER. We have some needs; we are by no means out of the woods on everything. There is almost no combination of disabilities now that is not being handled somehow. I am not saying now that the country is completely covered, that we are perfect, or that everything is being done that needs to be done.

After all, we are supporting at the present time, and there is being worked out at the present time—how many medically oriented research training centers?

Dr. GARRETT. Eleven.

Miss SWITZER. Eleven centers dealing with all sorts of handicaps growing out of orthopedic, neurological, and heart disabilities.

We have programs in centers helping the emotionally disturbed blind; we have a beginning in centers dealing with emotional problems of the deaf, in particular.

There are not enough places where everybody can get treatment as fast as they want. I would say I would not see a justification at the moment for a national center in any other combination as we are recommending here because I think there are other institutional arrangements that are equal to meeting it if they would expand.

Mr. STEIGER. That is not true of the deaf-blind.

Miss SWITZER. No, it is not.

Mr. STEIGER. Why is the administration proposing that we have separate legislation? Why is it not possible to combine both a national center for deaf-blind youth and adults and deaf-blind children in one piece of legislation?

Miss SWITZER. Just as there is an Office of Education handling aid to education, and there is a Vocational Rehabilitation Office handling the retraining and rehabilitation of disabled people, so there is a different focus. The Secretary mentioned, and I elaborated on his mention of the proposal for the education of deaf-blind children, not because I expect to necessarily be administering the program, the Department will decide how and where it will be placed.

It is strictly an educational proposal as it is conceived but we felt certain that, based on our past experience, coming up with a proposal for the adult deaf-blind, the committee would want to know, particularly in view of the rubella situation, whether the Department had any plans to increase the scope of the program for deaf-blind children.

Mr. STEIGER. I would make a personal comment on the section to which the chairman addressed himself. I would have some hesitancy in granting the authority, at this point, for the purpose directly or by contract planning for one or more additional centers of this kind. I concur I think it is important, as you indicated in your response, that we go look down the road but it would seem to me you are getting the cart before the horse if you are granted the authority in this direction without having had the establishment of a center on which to base a judgment.

Frankly, I would much prefer if a center is to be established that then you and the Secretary come back to the committee to give us some idea of the successes and/or failures that you have had before giving further authority to go ahead.

Miss SWITZER. This would be a decision for the Congress to make.

Mr. STEIGER. That would be my own personal view on that, Miss Switzer. Let me turn to one other section of the legislation briefly.

I had an opportunity to talk with Adrian Towne, director of vocational rehabilitation in Wisconsin, and in a letter to me he said, "The amendments contained in H.R. 8981 are sound, and I can endorse them without reservation. I feel that the section on migratory workers could be strengthened by the addition of a few lines that would emphasize the importance of coordinating the efforts of all agencies who might impinge upon this problem."

It does seem to me, and I did raise this, I think, with you and I know with other witnesses, that it would make sense to insure that there is a degree of cooperation in the migratory field which, frankly, I find lacking in the legislation.

Miss SWITZER. We would have no objection to anything such as a mandate for cooperative effort being in the bill. I think if it was left out it was left out because we take this so much for granted in the way that we work in our program that it would never occur to us that we could mount a program like this without the necessary cooperative arrangements with the departments that would be most deeply concerned with it.

These would be especially departments of health, that already have substantial investments in this; the employment services in

the various States where they would be; of course the Federal Department of Labor, who we would have to look to for what a migrant worker is and where; and voluntary groups who have made great contributions in giving service in some of these communities.

If it was left out it was because we took it for granted, not because we did not expect to do it. We would certainly welcome such a reference by the committee.

Mr. STEIGER. I think the concern I have is in its operation at the State level.

Miss SWITZER. This is where I think you get the greatest cooperative effort.

Mr. STEIGER. I think it has to be made clear that this is to be expected at all levels in order to do this. I would also, just for the record make note of the fact that Adrian Towne informed me that the current legislature in Wisconsin removed the residency requirement for the Wisconsin vocational rehabilitation statute.

I am sure, from the Wisconsin standpoint, we have no objection to the residency question.

Miss SWITZER. This would facilitate a great deal the easy delivery of services in many places. Certainly it is essential for this group.

Mr. STEIGER. That is all the questions I have, Mr. Chairman.

Mr. DANIELS. Miss Switzer, $400,000, I believe, is the amount contemplated to be expended the first year.

Miss SWITZER. I believe that is my recollection. That would be the first-year cost.

Mr. DANIELS. Is it contemplated that with that sum of money that some part of that sum of money would be charged for deaf-blind studies in neurological and general medical studies?

Miss SWITZER. No; I would not think so. We have not planned that. Medical studies in the neurological aspects of deaf-blindness more appropriately should be done by the National Institute of Neurological Diseases and Blindness. We would not finance a research grant study out of this bill at all because we have in the Vocational Rehabilitation Administration a grant program for research in institutions. If such a study were supported it would not be supported out of this money.

This money is exclusively for the development, staffing, equipping, and operating, and giving service to deaf-blind people.

The research they would do would be action research in connection with the services.

Dr. GARRETT. That is right, it would be research in the way you rehabilitate deaf-blind individuals.

Miss SWITZER. This institution would not be competent to do the other.

Dr. GARRETT. I think Dr. Masland would agree that, if it is primarily medical-oriented research, it would be more appropriate for them to do that research.

Mr. STEIGER. You indicated in your earlier testimony today that your Department does do a limited amount of research in the deaf-blind area.

Miss SWITZER. The Vocational Rehabilitation Administration has a program of research and demonstration which has been operating since the 1954 amendments.

It is not big money compared to the National Institutes of Health, but it is big money. We have combinations of our research and training program of something over $60 million.

And from time to time we have had research in deaf-blindness but only insofar as we have been able to get people to show how to improve services.

I think, of all our research in deaf-blindness, none has been in the medical end; it has been in the communicative areas where we try to improve communications.

In the delivery of service we have almost continuous work in this field with the Industrial Home for the Blind. We have attempted in other places to support similar work but it has not worked out.

Mr. STEIGER. Who is responsible for the medical or the electronic research that would be applicable to deaf-blindness?

Miss SWITZER. We have a number of projects in electronic research particularly directed toward blindness. We have a large investment in that with many institutions and we have research going on in deafness.

But in very technical neurological basic research we have taken the position in the department that, with the great resources and high level of technical and scientific know-how that exists in the National Institutes of Health, their responsibility goes to the medical research and it is very rare for us to support a project in this field.

The National Institute of Health—the National Institute of Neurological Diseases and Blindness would be the most logical place to look for medical, physiological research and possibly a combination of medical, physiological, and electronics but we have a lot going on in the field of electronics research.

Dr. GARRETT. If it comes to a question of overcoming the handicap of blindness or handicap of deafness in terms of the utilization of electronic aids and the development of electronic aids, we feel this would be a proper area of work for us. For example, in the development of sight substitutes so a blind person might orient himself better in space, we have an array of research.

We also support research in the evaluation of these technical aids that are developed. Our area of work is, we would say, primarily in the technical aid part of it in order to allow the individual to overcome his handicap or disability.

Studies of this nature are more appropriate for us.

Mr. DANIELS. Thank you; we have no further questions and I want to thank you for coming here today.

I would like to read the following letter from Dr. Howard A. Rusk.

NEW YORK UNIVERSITY MEDICAL CENTER,
New York, N.Y., July 26, 1967.

Hon. DOMINICK V. DANIELS,
U.S. Congress,
Washington, D.C.

MY DEAR MR. DANIELS: I want to express my appreciation to you and your colleagues on the committee for the privilege of testifying before your Select Subcommittee on Education last week on H.R. 8981. I regretted that other business made it impossible for you to be present that day but I want you to know that I was courteously received and that I appreciated the opportunity to assist the committee.

In following the course of the hearings, I noted a suggestion that the proposed National Center for Deaf-blind Youth and Adults be changed into a center for the multiply handicapped, in which deaf-blind persons would be one of the

groups served. I think this would be a serious error if we are to create new and adequate services for deaf-blind people.

Here at the Institute of Rehabilitation Medicine we see large numbers of severely, multiply handicapped people daily—perhaps more than any other single institution. We consider this to be our field of primary responsibility and greatest competence. Yet we are completely unequipped to meet the needs of the deaf-blind, simply because their needs are completely different. They require different staffing, different technical procedures, different equipment; they are, in fact, quite different in nearly all respects. The individual rehabilitation program for the severely physically handicapped person with multiple handicaps is usually measured in months. For the deaf-blind, it could well be measured in years.

I sincerely hope the committee will keep this proposal squarely in terms of the deaf-blind. It has taken us too long already to face up to their needs. We should not be diverted at this crucial point.

Again, my thanks and my personal good wishes.

Sincerely,

HOWARD A. RUSK, M.D., *Director.*

Mr. DANIELS. That concludes the hearings of the Select Subcommittee on Education. The subcommittee stands adjourned.

(Whereupon, at 10:40 a.m., the subcommittee adjourned subject to the call of the Chair.)

(The following letters and statements were submitted for the record:)

STATEMENT OF HON. CLAUDE PEPPER, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

THE 1967 VOCATIONAL REHABILITATION AMENDMENTS: A SIGN OF CONTINUING PROGRESS

Mr. Chairman, members of the Committee, we have indeed made tremendous advances in the field of vocational rehabilitation. During the past thirty years—during my service in the Senate and House—Congress has not only accepted its role as a partner of the States in the provision of rehabilitation services for all Americans, but has gone beyond the furnishing of money to the suggestion of new and imaginative programs. Working with the executive branch and with the States, Congress has consistently enlarged and improved the Vocational Rehabilitation Act until today the goal of rehabilitation for all who want and need it is almost within reach.

The proposed Vocational Rehabilitation Amendments of 1967, which I am proud to sponsor as H.R. 9683, will first of all increase authorizations for the Federal share of the program from $400 million at present to $500 million in 1969 and $600 million in 1970. These increases will enable the States, and private agencies working cooperatively with them, to enlarge their programs of service to the disabled. There are few things more inspiring than the rehabilitation of a seriously disabled individual for the world of work and self-sufficiency. Certainly there are few other programs in which we can see positive results so quickly and clearly. Not only does rehabilitation give a man more self-respect, but he becomes a contributing member of the community, no longer in need of public assistance and even able to pay back the cost of rehabilitation through his tax dollars.

The amendments include provision for a National Center for Deaf-Blind Youths and Adults. Today only a token effort is made to rehabilitate these individuals who have suffered such a catastrophic disability. The center would offer them the intensive, specialized services they need, and would also be a training facility for those interested in working with and for the deaf-blind.

Our President proposed such a center in his March 6, 1967 message on health. He stated "Among the most tragically neglected of our citizens are those who are both deaf and blind. More than 3,000 Americans today face life unable to see and hear." The President suggested such a center. I have recently seen statistics showing that at the most 250 deaf-blind Americans are receiving help.

Certainly the lack of provisions for the deaf-blind has been a serious lack in our generally compassionate rehabilitation program. With this first center, and the authority given the Secretary to plan for additional centers, the problem of helping the deaf-blind is on its way to a national solution.

The amendments also authorize project grants for services for migratory agricultural workers. The Federal government may pay up to 90% of the cost of pilot or demonstration projects for the provision of vocational rehabilitation services to handicapped individuals who are migratory agricultural workers. As a Member from Florida, a State which must use migrants to help harvest our fruit and produce, I am well aware of the special burdens which these people face. Their need for State services is great, and they are the group least likely to receive them. The fate of the migrant struck with disability far from home is especially tragic.

Residency requirements for vocational rehabilitation services are clearly out-moded, and this legislation would abolish them by 1969. Disability occurs without warning: it does not wait until the individual has established residency. In many cases, rehabilitation is easier the sooner it is begun, so in the long run residency requirements may prove more expensive than rehabilitation of the disabled solely on the basis of their need for such services. Today the United States has a highly mobile population, and we must face that fact in planning government programs.

Finally, these 1967 amendments grant an extension of one year for the current effort in statewide planning for rehabilitation services. In many States, this detailed planning has barely begun, and we must assure the States that they will have the time needed to design plans for the next decade of service. The quality of planning is vital to the achievement of our national rehabilitation goals.

I urge prompt approval of this legislation. Many States, such as my own, hold legislative sessions only every other year. The Florida legislature will not be in session next year, yet it is vitally important that they know for planning purposes the level of Federal financing they may expect in fiscal 1969.

Vocational rehabilitation is non-controversial, for it is in the finest American tradition of encouraging self-help and individual courage. All Americans who are able should have the opportunity to work, and for the disabled rehabilitation gives them their second, or in some cases their first, chance at life. I have always supported vocational rehabilitation legislation, because it is my profound belief that Americans should have the opportunity to achieve success through work. My recent proposals which would give more of our senior citizens the opportunity to help in the poverty programs, and receive necessary training, are examples of my support for this philosophy.

Statement of Hon. John L. McMillan, a Representative in Congress From the State of South Carolina

Mr. Chairman and Members of the Committee, I appreciate the opportunity to present this statement to the Committee in connection with the pending bills, H.R. 5801 and H.R. 5803. These bills were introduced by me as Chairman of the House Committee on the District of Columbia and by Mr. Nelsen of Minnesota, the ranking Minority Member of that Committee. The pending legislation relates to the very important Vocational Rehabilitation Program of the District of Columbia. As the Chairman and the ranking Minority Member of the House Committee of the District of Columbia, Mr. Nelsen and I feel a definite responsibility and a deep interest in supporting this legislation to preserve and improve the Vocational Rehabilitation Program for the handicapped citizens in the Nation's Capital.

As the Members of this Subcommittee well know, similar legislation was considered in the 89th Congress and favorably reported to and approved by the House of Representatives. Unfortunately the legislation did not reach the point of consideration in the Senate before adjournment of the 89th Congress. The problem which this legislation is designed to meet has the same urgency as existed in the 89th Congress.

Vocational Rehabilitation has long been recognized as a beneficial and needed program for handicapped persons. Local communities and states initiated such programs many years ago. Ultimately the Congress recognized the value of vocational rehabilitation and enacted laws to encourage the states to initiate programs or improve them where such programs were already in existence.

In 1965, the Congress enacted amendments to the Vocational Rehabilitation Act for the purpose of expanding the scope and level of Vocational Rehabilitation services throughout the nation. While these amendments served for that purpose to the various states, this was not the case in the District of Columbia. The 1965 amendments were designed to equalize the Federal matching rate so that by fiscal year 1967, the matching rate would be 75% for all the states. Because of the

formula for the distribution of Federal funds and the requirement of maintenance of state effort as required under the amendments, the Vocational Rehabilitation Program of the District of Columbia was faced with curtailment rather than improvement. In fiscal 1965, the District of Columbia Federal Fund allotment totaled $785,350. However, under the amendments and for fiscal year 1966, the District of Columbia allotment was $538,688, a reduction of $146,662. This results from the fact that the District of Columbia has for many years appropriated more local funds for the program than was necessary to meet the maximum available as a Federal allotment.

The Federal share available to all states beginning with fiscal year 1967 is 75%. However, although the District of Columbia is technically entitled to such a percentage for fiscal 1967, because of the factors mentioned above, the actual Federal share to the District of Columbia will be only about 46.5%.

This fact has placed the Vocational Rehabilitation Program in the District of Columbia in a very critical situation. The agency is faced with the necessity of either reducing its personnel costs or reducing its case intake to keep its expenditures within fund availabilities.

This contradictory result was certainly not intended by the Congress, and in effect penalizes the one jurisdiction where local funds provided for Vocational Rehabilitation have always exceeded the Federal matching requirements. The sole purpose of H.R. 5801 and H.R. 5803 is to amend existing law to remove the present inequities which exist in relation to the District of Columbia.

The House Committee on the District of Columbia, of which I am Chairman, has basic legislative obligations to the Nation's Capital. The program of the Department of Vocational Rehabilitation for the District of Columbia meets an important purpose in rehabilitating the handicapped persons who have the initiative and desire to achieve capabilities of gainful employment, restoration of their self respect and position in the community with an ultimate reduction in the public costs to the District of Columbia. During fiscal year 1966, the last year for which statistics are available, the District Vocational Rehabilitation Department successfully rehabilitated 1,742 disabled persons to gainful employment. Of this number, 1,446 had no personal earnings of any sort when they were first accepted in the program. The District of Columbia government was providing public assistance or was housing in public institutions or hospitals, or both, 504 of the total number. There were also 905 of the total number which were receiving Workmen's Compensation, Unemployment Insurance, Disability Benefits, and many of those were living with families or friends. The Rehabilitation services have removed these persons from a condition of dependence to a condition of independence.

The public economies of this program become apparent from the fact that the expenditures for public assistance and other health and institutional services for this group of persons would exceed $1.9 million annually. This saving is realized not only the first year of the restoration of such persons to productive activities, but each year thereafter as long as these rehabilitated persons are physically able to continue to support themselves. They have become taxpayers instead of tax consumers. It is estimated that they will pay in various forms of District and Federal taxes approximately $900,000. This contribution back to the community will continue year after year as long as they have productive capacity.

I might observe that any public program which produces results of this character fully justifies itself. Any program which can contribute so distinctively in contributing to the social and economic welfare of any segment of the community merits full support. The District of Columbia Vocational Rehabilitation Agency in its activities of vocational evaluation, counseling, guidance, training, job placement and follow-up, has made real contribution for lessening community burdens and assisting the handicapped individuals among the unemployed or underemployed.

I believe that the views which have been expressed here today by my colleague, Mr. Nelsen, and by me are shared by all of the Members of the House Committee on the District of Columbia. It is the desire of that Committee to make every reasonable effort and lend our support to those legislative measures which serve any good purpose in the national capital. This legislation will enable the District Vocational Rehabilitation Agency to maintain and improve its service to the community, to provide opportunities for the handicapped citizens who have the courage to prepare for, enter and keep jobs, walk the streets with dignity, as they can be proud of being Americans and help themselves and take care of their families.

I do not doubt that this Committee will give the pending bills sympathetic and careful consideration and I trust that the legislation may be favorably reported to the Congress in the near future.

COUNCIL OF ORGANIZATIONS SERVING THE DEAF,
Washington, D.C., July 27, 1967.

Hon. DOMINICK V. DANIELS,
Chairman, Committee on Education and Labor, Select Subcommittee on Education,
U.S. House of Representatives,
Washington, D.C.

MY DEAR MR. DANIELS: We are writing to express our interest and concern in H.R. 8981, which proposes to amend the Vocational Rehabilitation Act to extend and expand the authorization of grants to States for rehabilitation services, to authorize assistance in establishment and operation of a National Center for Deaf-Blind Youths and Adults, and to provide assistance for migrants.

The newly-formed Council of Organizations Serving the Deaf was incorporated in January of this year, and at the present time represents twelve national organizations which have for their central focus the betterment and upgrading of the lives of those with hearing handicaps. I believe it would be a true reflection of the combined membership of these national groups to indicate a most certain and favorable endorsement of this bill in its entirety, and especially with special reference to the section on a national center for the deaf-blind.

Your committee is certainly aware that just last year the President's trophy for the Handicapped American of the Year award went to the deaf-blind Robert J. Smithdas of New York, who despite his double affliction, received both his bachelor's and master's degrees with honors, has published several books, and now serves as a counselor to those with the same type of handicap. Obviously a most unusual individual, Bob Smithdas nevertheless points to the fact that rehabilitation possibilities for the deaf-blind are real and that goals along these lines are definitely attainable.

At the present time it would appear that most rehabilitative work with the deaf-blind is done within the context of sheltered workshops and other centers where the services are spread out among those with a medley of handicaps.

Such a National Center as proposed by this bill would provide for the highly specialized and concentrated services that these people need for maximal rehabilitative success. Here, creative research and ongoing studies could be undertaken along with the provision of counseling and other services to meet the immediate needs of the deaf-blind. Our concern should be with the "now-living" as well as those who will live in a tomorrow fashioned by the experimental research of today.

The productive and successful work accomplished by the small number of special facilities now working with the deaf-blind is illustrative of a tremendous job of rehabilitation with limited resources and support. However, there continue to be individuals in scattered parts of the country who are not receiving adequate guidance and preparation, and who could be advantageously served by a national center.

In the area of the handicapped, the 1964-65 rubella epidemic has received frequent reference in terms of planning for future needs. It should be noted that this epidemic has left a decided increase in the number of deaf-blind babies, an incidence great enough to be of concern to professionals in the area. For this reason as well as those previously mentioned, the proposal for a National Center for the Deaf-Blind is both timely and necessary.

It is our contention that the needs of the deaf-blind are the most crucial and most unique in the field of rehabilitation; certainly their handicap is of utmost severity and a challenge to all of us who would provide for these people the opportunity to become useful, tax-paying members of our society.

We urge, therefore, that immediate action and full support be given to H.R. 8981 in all of its component parts.

Sincerely yours,

MERVIN D. GARRETSON, *Executive Director.*

NATIONAL ASSOCIATION OF SHELTERED WORKSHOPS
& HOMEBOUND PROGRAMS,
Washington, D.C., July 21, 1967.

Hon. DOMINICK V. DANIELS,
Chairman, Select Subcommittee on Education, Committee on Education and Labor, U.S. House of Representatives, Washington, D.C.

DEAR MR. DANIELS: We are writing to you to express our support for H.R. 8981—the amendments to the Vocational Rehabilitation Act. We believe the proposed changes in the act will result in increased services to disabled people. We would, however, like to make some suggestions with regard to the proposed legislation.

Section 2(c), as presently written, would seem to restrict funds which could be made available to workshop facilities. At the present time, the Act specifies that allotments would have to be made on the basis of the amounts authorized in the law. As we interpreted it, under the provisions of this new proposal, allotments would continue to be made on the basis of the amount authorized, however, Congress would no longer be obligated to appropriate all the funds required to match state expenditures within these allotments. We think that this provision could retard services to disabled people, and recommend that the Committee delete subsection (c) of section 2.

With regard to the center for Deaf, Blind and Youth, we heartily endorse the principle of providing rehabilitation services to the more severely disabled. We would, however, suggest that the matter of establishing regional centers for the deaf-blind also be explored further. This would be in keeping with current trends to bring services to people closer to their own community where they would have the support of their own families and reduce transportation costs.

We support the liberalization of residence requirements as a condition for eligibility for services and the provision of services to migratory workers. We would like to commend the Committee for their interest in the problems of disabled people and for the opportunity to comment on this important piece of legislation.

Sincerely yours,

ANTONIO C. SUAZO, *Executive Director.*

TESTIMONY PRESENTED ON BEHALF OF UNITED CEREBRAL PALSY ASSOCIATIONS, INC.

My name is Harry Lyons and I am Director of the Legal and Legislative Department of United Cerebral Palsy Associations, Inc., the national organization.

United Cerebral Palsy Associations, Inc. is a nonprofit membership corporation, organized in 1948, the only Nationwide organization devoted exclusively to a united attack on cerebral palsy, a general term for a group of disorders caused by injury to the motor centers of the brain which result in impairment of voluntary muscle control. Our humanitarian work is wholly supported by voluntary public contributions.

United Cerebral Palsy Associations' objective is to serve the many needs of some 600,000 children and adults who are combating crippling effects of cerebral palsy. Affiliates provide community treatment and educational and related services for those thus handicapped. Particular emphasis is being devoted to treatment, recreation, developmental and family supportive programs to supply a total habilitation program leading, wherever possible, to the employment and economic independence of the cerebral palsy victim.

We join with the National Rehabilitation Association and other organizations that have testified before us, in support of H.R. 8981, which is designed to amend the Vocational Rehabilitation Act to extend and expand the authorization of grants to States for rehabilitation services and for other purposes.

As Dr. Howard A. Rusk emphasized in his column in the New York Times of Sunday, July 30, "physical disability is far more widespread than most people realize."

Secretary of Health, Education, and Welfare John W. Gardner estimates that nearly four million disabled persons need vocational rehabilitation services if they are to become employable. This, of course, includes the cerebral palsied.

Among other things, the proposed amendments to the Vocational Rehabilitation Act, as contained in H.R. 8981, would extend present authority for appropriating Federal funds for the basic Federal-State rehabilitation program for another two years, to include fiscal years 1969 and 1970 and limit Federal commitment to actual appropriations; authorize one additional year (through June 30, 1968) of the present Federally-supported programs of Statewide planning for rehabilitation services, facilities and other resources; and eliminate residence as a requirement for receiving vocational rehabilitation services.

On behalf of the many thousands of adults with cerebral palsy, we hope that H.R. 8981 will be enacted into law, so that they may be in a position to obtain the help so vitally needed for their rehabilitation and an opportunity to obtain economic security.

NATIONAL ASSOCIATION OF THE DEAF,
Washington, D.C., July 26, 1967.

Hon. DOMINICK V. DANIELS,
Chairman, Select Subcommittee on Education, Committee on Education and Labor, U.S. House of Representatives, Washington, D.C.

Re H.R. 8981 To amend the Vocational Rehabilitation Act to extend and expand the authorization of grants to States for rehabilitation services, to authorize assistance in establishment and operation of a National Center for Deaf-Blind Youths and Adults, and to provide assistance for migrants

MY DEAR MR. DANIELS: On behalf of the membership of the National Association of the Deaf, I wish to express our very definite and favorable endorsement of the above H.R. 8981, in all of its tripartite aspects, but particularly with respect to a national center for the deaf-blind.

Traditionally people have felt the task of rehabilitating the deaf-blind was almost insurmountable, but conclusive and productive results have emerged from such special facilities as the Perkins Institute for the Blind in Massachusetts and other sheltered workshop type of activity. These people have been doing a tremendous job of rehabilitation within the limitations of their small resources and certainly need support.

Unfortunately, such facilities as these mentioned above are few in number and not always advantageously located; so that they fail to serve adequately the needs of the present deaf-blind population in this country. The 1964–1965 rubella epidemic has lately served as a point of reference in long-range planning for the area of the handicapped, as an attendant growth of multiply-handicapped babies has resulted which with time will increase the numbers of deaf-blind to such an extent that unless facilities are provided these citizens may be deprived of an opportunity to become useful, tax-paying members of our society, rather than human vegetables.

It must be reemphasized that the needs of the deaf-blind are unique; conceivably they are the most severely handicapped of all groups in need of rehabilitation. We would be doing a disservice to these people not to take immediate action and lend full support to H.R. 8981.

Sincerely yours,

FREDERICK C. SCHREIBER, *Executive Secretary.*

BROOKLYN, N.Y., *June 27, 1967.*

Hon. DOMINICK V. DANIELS,
Chairman, Select Subcommittee on Education,
U.S. House of Representatives, Washington, D.C.:

On this Helen Keller's 87th birthday we were delighted to learn that H.R. 8981 is to have hearings on an early date in July. This measure containing, as it does, the establishment of a national center for the deaf-blind fulfills a dream of Dr. Keller and of all of us who have been concerned with the problems of deaf-blindness over the years. We hope that your committee will approve this measure for passage in the House.

PETER J. SALMON,
Administrative Vice President, The Industrial Home for the Blind.

GOODWILL INDUSTRIES OF AMERICA,
Washington, D.C., July 13, 1967.

Hon. DOMINICK V. DANIELS,
Chairman, Select Subcommittee on Education, Committee on Education and Labor, U.S. House of Representatives, Washington, D.C.

DEAR MR. DANIELS: We understand H.R. 8981 is before your committee for public hearings July 18, 19, and 20. Goodwill Industries of America, Inc., representing all local Goodwill Industries in the United States is anxious to have this proposed legislation receive favorable consideration. However, we would raise a question as to one section of this bill.

Section 2(c), lines 8 through 18 on page 2, makes certain changes in the present Vocational Rehabilitation Act which relate to appropriations under Section 2 of such Act. It appears to limit the "total Federal commitment for payments under this section . . ." for the fiscal years 1969 and 1970 to the exact appropriations.

Our question relates to the effect of Section 2(c) on the Laird Amendment which was enacted by Congress in 1964 as a part of the Appropriations Act for the Department of Health, Education, and Welfare. It was as follows:

"$41,065,000: *Provided,* That for the purpose of determining the amount of payments to States from any appropriation for carrying out sections 2 and 3 with respect to expenditures under a State plan approved under said Act (and, if made after August 3, 1954 and prior to July 1, 1965, certified by the Secretary of Health, Education, and Welfare prior to July 1, 1965 for payment), State funds shall, subject to such limitations and conditions as may be prescribed in regulations of the Secretary, include contributions of funds made by any private agency, organization, or individual to a State to assist in meeting the costs of establishment of a public or other nonprofit workshop or rehabilitation facility, which would be regarded as State funds except for the condition, imposed by the contributor, limiting use of such funds to establishment of such workshop or facility."

The regulations covering this amendment appear under Title 45 Public Welfare Chapter IV, Vocational Rehabilitation Administration, Department of Health, Education, and Welfare, Part 401 The Vocational Rehabilitation Program, Subpart B State Plans and Grants for Vocational Rehabilitation and is entitled, "Federal Matching of Contributions to State Vocational Rehabilitation Programs from Private Sources."

The Appropriations Act for the fiscal years ending June 30, 1966 and June 30, 1967 earmarked the specific sum of $5 million for Laird Amendment grants in the appropriations under Section 2 of the Vocational Rehabilitation Act. The Appropriations bill already passed by the House for the fiscal year ending June 30, 1968, earmarks the sum of $10 million for Laird Amendment grants. The Laird Amendment has made it possible to further expand the state-federal vocational program by the use of local community funds in addition to the regular state tax appropriations for matching purposes under Section 2 of the federal Act.

A large proportion of local Goodwill Industries has been able to expand their services to the handicapped and disabled with grants under Section 2. These grants have been used to expand, remodel and alter existing buildings, thus providing for more adequate buildings to meet the demands for increased services to more persons. Of special importance is the fact that more safe quarters have been made possible for training, evaluation, and other rehabilitation services. Great care has gone into the regulations and administration of this type of grant that only fully sound existing buildings have been involved. We expect to do a pictorial study of these expanded facilities made possible under Section 2. Already there has been a major expansion in services rendered to increased numbers of persons referred under the State Vocational Rehabilitation programs.

One of the major advances made possible by the use of Section 2 funds by Goodwill Industries has been the acquisition of up-to-date equipment. It is highly important that a person be trained with the use of modern equipment. Too long we have over-burdened the handicap of an individual with antiquated and dilapidated tools and equipment. Increased productivity, higher wages, and greater opportunity for major advances in placement in regular employment has been made possible through the use of the Section 2 funds.

You can therefore appreciate our concern for the continued use of this source of "seed" money.

We recognize that the 1965 Amendments which originated in your committee have provided many other sources and assistance in expanding the badly needed services of rehabilitation facilities and workshops. We appreciate the difficulties facing Congress in appropriating funds to make use of these new authorizations.

This increases the importance of being able to use the regular sources created under the 1954 Vocational Rehabilitation Amendments and the 1964 Laird Amendment.

It is in light of all of this we raise the following questions about the proposed legislation in Section 2(c) of H.R. 8981:

1. Is there adequate justification for Section 2(c) of H.R. 8981? The formulae and matching ratio received careful consideration through full discussion and debate in 1965 when the '65 amendments were passed. What new consideration prompts the need for further change at this time?

2. When a state has been given its allotment of the appropriations and matches all of that allotment, would it be possible for a Goodwill Industries to receive a "Laird grant" even though the "legal" amount for such state is more than enough according to the formulae set by Section 2(a) if the language in H.R. 8981, Section 2(c) becomes law?

3. What other problems would be created by the enactment of Section 2(c) of H.R. 8981 in reference to the continued use of the Laird Amendment under Section 2 of Public Law 565, the Vocational Rehabilitation Act?

4. *It is our considered judgment at this time that Section 2(c) of H.R. 8981 would create grave consequences for the needed expansion of services under the state-federal program of Vocational Rehabilitation.*

Sincerely yours,

JOHN C. HARMON, JR.,
Director of Special Services and General Counsel.

STATEMENT OF IRVIN P. SCHLOSS, LEGISLATIVE ANALYST, AMERICAN FOUNDATION FOR THE BLIND

Mr. Chairman and members of the Subcommittee, I appreciate this opportunity to appear before you in support of H.R. 8981, a bill which would amend the Vocational Rehabilitation Act to extend the authorization of appropriations for grants to the states for vocational rehabilitation of the disabled, to provide for the establishment and operation of a National Center for Deaf-Blind Youths and Adults, and to improve the vocational rehabilitation program in other essential ways.

In addition to representing the American Foundation for the Blind, the national voluntary research and consultant agency in the field of services to blind persons, I am also representing the American Association of Instructors of the Blind and the American Association of Workers for the Blind—the two national professional membership associations in the field—as well as the Blinded Veterans Association. All four of these national organizations join in urging favorable action by the Congress on H.R. 8981 as legislation which would materially assist in meeting several pressing unmet needs in services to handicapped persons.

As you know, the authorization of appropriations for the basic program of grants to the states for the rehabilitation of the disabled expires June 30, 1968. In order to allow the state agencies administering this program at the grass roots level to plan for orderly and effective expansion and to seek adequate matching funds from their legislatures, many of which still meet biennially, it is highly desirable that the Congress act this year to extend the program. The increase in the authorization of appropriations to $500,000,000 for fiscal 1969 and to $600,000,000 for fiscal 1970 will allow for much needed expansion in this essential program if the steadily increasing number of disabled persons are to be effectively restored to the work force of the nation as productive, contributing citizens.

Another important provision is the extension of the special grant authority provided by Public Law 89–333 for comprehensive statewide planning to improve the effectiveness of rehabilitation services. This authorization makes possible an inventory of existing services and facilities—both public and private—throughout each state as well as orderly planned expansion based on projected needs. It is essential to the provision of adequate services.

All of the organizations I am representing heartily endorse the provision of H.R. 8981 amending state plans to prohibit the imposition of durational residence requirements for rehabilitation services. In an increasingly mobile society where families frequently move to other states for better employment opportunities, it is cruel to deny an individual who becomes disabled from accident or disease the benefits of rehabilitation services because he has not resided in the state in which his present home is located for a specific period of years. We firmly believe that all Federal-State grant programs which are largely financed by Federal funds should prohibit residence requirements as a criterion of eligibility for service or benefits.

We also endorse the provisions of the bill establishing pilot and demonstration projects for the rehabilitation of migrant workers and their families. Unfortunately, this segment of our population is deprived of many of the basic services we take for granted because of the pattern of living their employment dictates. They should certainly have the benefit of the Federal-State rehabilitation program in the event they become disabled.

Blindness uncomplicated by additional impairments is a severely handicapping condition necessitating highly specialized education, rehabilitation, vocational, and numerous ancillary services. The problems of blindness associated with deafness obviously require even more skilled attention. Unfortunately, techniques for adequate medical, educational, and rehabilitation diagnosis, evaluation, and training of deaf-blind children and adults are lacking. By providing for the establishment of the National Center for Deaf-Blind Youths and Adults and subsequently for additional regional centers, H.R. 8981 would make possible the development of these techniques for deaf-blind people of employable age.

The American Foundation for the Blind maintains a register of deaf-blind persons in the United States and therefore has the most authoritative statistics. There are approximately 4,000 deaf-blind youths and adults in this country 20 years of age and over known to the Foundation. About 1,600 are between the ages of 20 and 65. The employment status of all those of employable age is not known, but we can safely assume that only a handful are employed in sheltered workshops and even fewer in regular competitive employment including professional occupations.

The only facility in the United States for the training and rehabilitation of deaf-blind adults is operated by the Industrial Home for the Blind of Brooklyn. With the aid of a demonstration grant from the Vocational Rehabilitation Administration, this pioneering local agency for the blind established the Anne Sullivan Macy Service for the Deaf-Blind in 1962 as a regional facility. Representatives of this agency are also appearing as witnesses and will provide the Committee with specific details of their program as well as the nationwide need for effective services for the deaf-blind projected from their experience.

Federal facilities are urgently needed to develop adequate medical, educational, and rehabilitation diagnostic, evaluation, treatment, and training procedures for deaf-blind children and adults. H.R. 8981 provides for such a Federal facility for deaf-blind youths and adults. We understand that legislation to establish and operate such a center for deaf-blind children is presently being prepared and will be sent to the Congress by the Administration during this session.

In addition to serving as a facility for essential research in all of the needed areas, the National Center for Deaf-Blind Youths and Adults would be used to train highly specialized medical, paramedical, and rehabilitation personnel through internships, residency, and practicum programs.

All of the national organizations I am representing here today respectfully urge favorable action on H.R. 8981 and its sister bill providing for the establishment of a national center for deaf-blind children. Enactment of this legislation during this session of the Congress is essential as a means of providing for the needs of a too-long neglected group with a potential for self-care and self-support.

In addition, we would also recommend favorable action on H.R. 7396. This bill would prohibit the use of an economic need factor as a criterion of eligibility for rehabilitation services. It is a logical extension of the provisions of Public Law 89–333 which permitted the states to eliminate the economic need criterion on an optional basis. Certainly when we are considering rehabilitation services for severely disabled persons like the deaf-blind and blind, the question of economic need to determine eligibility for these essential services should not be a factor.

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LOW INCOME COUNTIES OF SOUTHERN STATES

This report studied the patterns of labor force participation of women in low-income rural areas and the way these patterns related to marital status, stages of the family life cycle, age, education, and level of living. The sample was drawn from Alabama, Kentucky, Louisiana, Mississppi, North Carolina, Tennessee and Texas, and included approximately 100 households per county and a total of about 2,500 households for the entire region. Data were collected by interviews with 1,908 households. Conclusions were that certain employment opportunities would represent a way out for rural people with low incomes and levels of living. Although these rural women are less educated, are slightly older, and are willing to work for relatively low wages, attitudes are not a block to gainful employment. These findings suggest that low-income rural communities will contribute to employed women power. (CH)

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SOUTHERN COOPERATIVE SERIES

BULLETIN NO. 116

This bulletin is the 116th in the series of Southern Cooperative Bulletins. It presents an analysis of selected data from the Southern Regional S-44 Project entitled "Factors in the Adjustment of Families and Individuals in Low-Income Rural Areas." The committee conducting the study is composed of representatives of the Agricultural Experiment Stations of Alabama, Florida, Kentucky, Louisiana, Mississippi, North Carolina, Tennessee, and Texas.

Bulletin No. 116, like others in the Southern Cooperative Series, is in effect a separate publication by each of the cooperating stations and is mailed under the frank and indicia of each.

Since the bulletin is identical for the several cooperating stations, it is suggested that a copy, or copies, be requested from only one source. Requests from outside the cooperating states should be addressed to the Louisiana Agricultural Experiment Station, Baton Rouge, Louisiana.

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Conclusions and Implications

Low-income rural areas represent a potential source of womanpower for the nation's labor force. Women from these areas who enter employment, however, are not typical of the women in the nation who do so. These rural women are less educated, are slightly older, and are willing to work for relatively low wages. These findings suggest that low-income rural communities will contribute to employed womanpower, but in a specialized way.

Attitudes are not a block to gainful employment for women in low-income rural areas. The working women studied indicated favorable attitudes toward their work situation. Married women continued their employment until the arrival of children.

This study reveals that certain employment opportunities would represent a way out for rural people with low incomes and levels of living. When the wife worked, the total gross family income was raised by approximately the amount of her earnings. When female heads of households entered the labor force, their earnings contributed the large part (if not all) to the total income of the household.

One important implication for program planners was evident in the responses of the women interviewed. Findings revealed that one of the basic causes of the persistence of low income in rural areas is the subcultural orientation which the people hold. Although their conditions when compared with national standards are considered problems, they are quite acceptable to local residents. Before programs to raise levels of living can succeed, the women and their families will have to aspire to higher incomes and levels of living. Employment opportunities then will be welcomed as a means whereby they can improve their present conditions.

The Labor Force Characteristics of Women in Low-Income Rural Areas of the South

GERALDINE B. TERRY AND
ALVIN L. BERTRAND*

Introduction

The Problem

The need for reliable and systematic information about women in the labor force is great. Many public and private agencies have use for such information in connection with their employment needs and problems. An understanding of these phenomena is also necessary for labor policy makers in industry and government. Educators need greater insight into the work patterns of women so that educational progress may be designed to prepare female students adequately for work careers. Beyond practical questions, such as the above, there are considerations of import to national goals and progress. For example, thought must be given to the question of whether or not female labor force participation is necessary for the high level of living which is a characteristic of today's society. These and like considerations highlight the importance of studies of this nature, for the nation and for individuals.

Opportunities for female employment vary from area to area because the technological and socio-psychological changes have not been equally diffused throughout the United States. Rural women, for example, do not participate in the work force to the same extent as urban women. Because of these differences there is a special need for information concerning the work patterns of women in low-income rural areas.

Source of Data: The Southern Regional S-44 Project

This study is an analysis of selected data from the Southern Regional S-44 Project entitled "Factors in the Adjustment of Families and Individuals in Low-Income Rural Areas." The S-44 Study was proposed in the early 1950s. There was a need for a regional project to study the problems of adjustment of rural people in the South. The

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research design for the project was adopted in 1958 by representatives of the sponsoring Agricultural Experiment Stations of seven southern states.

The sample for the S-44 Study was designed by members of the Department of Experimental Statistics, North Carolina State College, Raleigh, North Carolina (one of the contributing states). It involved an area probability approach. The universe was composed of the counties in each state which had level of living indices below a prescribed level. The 1956 farm operator family level of living index was used as a guide in determining the low-income status of the counties. Subsamples were drawn so as to permit generalizations for important subregions in the South. Each subsample was to be self-weighing in order to avoid problems of combining data from different counties, states, and subregions. The final design of the sample provided for representativeness in each county.

The sample was drawn from the following states and counties:

Alabama: Clark, Monroe, Montgomery, and Tallapoosa.
Kentucky: Harlan, Perry, Whitney, and Wolfe.
Louisiana: East Feliciana, Franklin, Livingston, Natchitoches, and Union.
Mississippi: Clay, Coahoma, Holmes, Lawrence, Neshoba, and Tunica.
North Carolina: Anson, Ashe, and Robeson.
Tennessee: Hancock, Houston, Humphreys, and Union.
Texas: Burleson, Cass, Newton, and Upshar.

The sampling unit for the study was established as a household in which both the head and the homemaker were available for interview. The sample was designed to include approximately 100 households per county, with a total of about 2,500 households for the entire region. Interviews were completed with 1,908 households.

The same interview schedule was used in all states so that the data would be comparable. Regional representatives for states could add additional questions for particular purposes, but no question could be omitted. In its final form, the interview schedule included four sections, each one representing major dependent variables: socio-economic situation, social participation in formal groups, occupation, and level of living. Other questions were concerned with attitudes, communications, and characteristics of migrants from the household.

Data were collected by interviews with all household units. An interview manual was prepared for the interviewers in order to facilitate uniformity.

A regional code was constructed. Data were coded and punched in IBM cards in accordance with the code. Decks were distributed to all states.

A regional division of labor for data analysis was established. Re-

searchers at Louisiana State University assumed responsibility for analysis of the occupational data. This bulletin is a part of the occupational analysis.

Objectives

This study is designed to fill part of the void of information regarding the socio-economic characteristics of persons in low-income areas. The over-all objective is to determine the characteristics of women in a particular segment of the population, namely, those in low-income rural areas of the South.

The specific objectives of the research were:

1. To describe the labor force experience of women in low-income rural areas.
2. To study the patterns of labor force participation by women in low-income rural areas as these are related to marital status and to stages of the family life cycle.
3. To study the patterns of labor force participation by women in low-income rural areas as these are related to age, to education, and to level of living.
4. To report the attitudes of employed women in low-income rural areas toward gainful employment.

Social Setting of Study

It is apropos to approach a study of working women from the perspective of a review of recent trends in the family. In the United States the family traditionally has been an economic unit in which all the members put forth their efforts and skills for the production of necessary goods and services. A high degree of integration was promoted by the functioning of the family unit as an economic group. The rural family of today, in particular, retains characteristically strong family ties.[1] However, changes in family structure have occurred in both rural and urban families as a result of decreased isolation brought about by improvements in transportation and communication. Perhaps no change has affected the traditional roles and statuses of women more than the trend of employment outside the home. As pointed out elsewhere, technology and other factors are related to this trend.

The typical family in the United States has turned from being a production unit to being a consumption unit. This means that the family as a unit buys rather than produces food, furniture, clothing, and other commodities. The rural family has retained a sufficient resemblance to the former pattern to be described today as both a producing and a consuming unit.[2] However, the differences between rural and urban families are gradually being narrowed in the United States.

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[1]Alvin L. Bertrand, *Rural Sociology* (New York: McGraw-Hill Book Co., 1958), 214-19.

[2]*Ibid.*

It has been stated that increased female labor force participation is both an inevitable and a permanent result of the above-mentioned changes in family structure.[3] If this is true, increased female work activity may be expected in the future, irrespective of a rise in levels of living which might reduce the economic necessity for women working.[4] This is, then, the social setting in the United States insofar as the future importance of the female labor force is concerned.

Theoretical Frame of Reference

To be meaningful, the analysis of findings from a study such as this must be done in terms of a theoretical frame of reference. The approach employed in this study has been termed the "subcultural approach to differences."[5] This approach assumes that cultural factors play a major role in accounting for personal and group deviation from societal norms. In other words, certain subgroups within a greater society deviate in certain cultural practices because of a peculiar history or because of peculiar geographic or social conditioning. This approach helps to explain why some persons act in ways differing from national cultural patterns, but at the same time are well adjusted to the demands of their subculture.

The concept of cultural relativity implies that a trait has meaning only in its cultural setting. The trait is "good" if it harmonizes with the rest of the culture in which it functions; "bad" if it does not. This basic premise of sociology and anthropology helps explain certain stresses within our own and other societies.

Since behavior, and especially "adjustive behavior," is the central concern of this study, it is apropos to review briefly "situational" factors which might be related to subcultural participation. The noted sociologist W. I. Thomas is responsible for this sociological method. He wrote, "The central problem in the general life process is one of adjustment, and the forms of adjustive effort are 'behavior'."[6] Because men, in their adjustive efforts, are never absolutely sure of the conditions to which they are adjusting, it is impossible to determine all the conditions and factors which may exist. As a result of this limitation, human behavior must always occur in terms of what is thought to exist. Men act "as if" the conditions really are as they imagine them to be.

As an analytical tool the concept of "situation" permits an accounting for behavior which occurs in different ways under different sub-

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[3]Alva Myrdal and Viola Klein, *Women's Two Roles: Home and Work* (London: Routledge and Kegan Paul, 1956), 72; and C. E. V. Leser, "Trends in Women's Work Participation," *Population Studies*, 12 (November, 1958), 100-10.

[4]Myrdal and Klein, *Ibid.*

[5]Paul B. Horton and Gerald R. Leslie, *The Sociology of Social Problems* (New York. Appleton-Century-Croft, Inc., 1956), 28-40, 142-43.

[6]W. I. Thomas, *Primitive Behavior: An Introduction to the Social Sciences* (New York: McGraw-Hill Book Co., 1937), 1.

cultural conditions. Thomas wrote in 1931, "The study of the situation, the behavior in the situation, the changes brought about in the situation, and the resulting change in behavior represent the nearest approach the social scientist is able to make to the use of experiment in social research."[7] So important did he consider the "definition of the situation" in human behavior, that he boldly stated, "If men define situations as real, they are real in their consequences."[8] This statement has come to be widely quoted and used as an explanation of adjustive behavior.

The utility of the situational concept in the present study is that it clearly indicates that deviant behavior patterns may be explained by the fact that particular persons with subcultural experience define a "situation" somewhat differently than others. Such deviancy is a product of the physical and social life of the area.

The differences between the labor-force participation patterns of rural low-income women of the South and that characteristic of the national female labor force may be understood as subcultural differences or deviations. In other words, in theory, deviation from national female employment patterns would be correlated to the subcultural values and demands which make up the "situation" for low-income rural women.

Each time a finding of this study deviates from national norms, this fact is noted. These deviations may be explained, for the most part, in the above manner, *i.e.,* because of subcultural differences. To avoid redundancy, mention of the theoretical frame of reference is not made explicitly each time.

Selected Characteristics of All Women in the Sample Population

The purpose of this section is to describe selected characteristics of the 1,781 women studied. In the following discussion the data are analyzed for the women as a group. A knowledge of these characteristics for the sample is basic to an understanding of the socio-cultural variables affecting female labor-force participation within the group.

Employment Status

All women in the sample were classified by employment status. The majority of the women (58.2 per cent) were not employed, but more than one-quarter (26.2 per cent) of the women were working. The re-

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[7]Swann and others, "Essays on Research in the Social Sciences," in Edmund H. Volkart (ed.), *Social Behavior and Personality: Contributions of W. I. Thomas to Theory and Research* (New York: Social Science Research Council, 1951), 88.

[8]W. I. Thomas and Dorothy Swaine Thomas, *The Child in America* (New York: Alfred A. Knopf, 1938), 572.

mainder of the women (13.8 per cent) were ineligible for the labor force, that is, they were retired or totally disabled (Table 1). Thirty-three of the respondents (1.9 per cent of the sample) were not classifiable in any of these categories because of lack of sufficient information.

TABLE 1.—Classification of Women in the Sample Population by Availability for Work and Employment Status

Availability For Work	Total		Unemployed		Employed		Retired or Disabled		No Information	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Fully able to work	1,207	72.7	859	83.0	411	88.0	...	...	27	81.8
Limited permanent disability	199	11.2	162	15.6	34	7.2	...	...	3	9.1
Total disability	115	6.5	...	. .	11*	2.4	104	42.4	. .	...
Retired (no disability)	147	8.3	...	...	6	1.3	141	57.6	. .	...
No information	23	1.3	15	1.4	5	1.1	...	...	3	9.1
Total	1,781	100.0	1,036	100.0	467	100.0	245	100.0	33	100.0

*Women classified as employed and as totally disabled result from the definition of totally disabled. For example, total blindness is considered total disability, and yet many blind persons are actively employed.

A substantial number of women in low-income rural areas of the South are employed. The percentage of women employed in such areas of the South is small, however, compared with the 36.8 per cent of all United States women age 14 and over who are in the labor force.[9] The female employment rate in low-income rural areas of the South more closely approximates the female employment rate of the total rural women in the nation (27.3 per cent). This is not surprising since low-income areas are the most rural of rural America.[10] Despite an obvious need for additional income on the part of low-income rural families, women do not work as much. No doubt, cultural patterns and lack of opportunity are factors of imporance in this connection.

Marital Status and Family Characteristics

Over four-fifths of the women studied (84.0 per cent) were in a

[9]Unless otherwise stated, the comparisons are of data presented in the following section on characteristics of employed women in the sample. The source of such statistics is noted in that section.

[10]Harold F. Kaufman, *Rural Families with Low Incomes: Problems of Adjustment,* Sociology and Rural Life Series No. 9, (Mississippi Agricultural Experiment Station), February, 1957.

secondary household role as homemakers. The remaining women (16.0 per cent) were heads of households. National statistics show that only 10 per cent of the nation's households have female heads.[11] The rural low-income households of the South thus have 62 per cent more female heads than does the national population. This is an important variation from national trends.

The large majority of the women (84.0 per cent) were married. Of the remainder, most were widowed. This finding was expected and is a reflection of the differential longevity of women. The sample population included only 15 women never married.

It seems unusual that 11 of the women in the sample who were family heads were also married. This finding is contrary to the traditional role of males and females, and may indicate that the husband and wife were geographically separated.

In the majority of the households and families, there was a husband available for work. However, in 14.5 per cent of the families, the husband was totally disabled or retired. In an additional 16.0 per cent, no husband was present in the household; that is, the woman was head of the household.

When married women in the sample were classified by stage in the family cycle, an over-representation in the later stages was evident. A very small number of married women were young and childless, and only slightly more had a child who was age 3 or younger. Relatively large numbers of married women were older and had none of their children now residing in their households.

Age Status

Women in the sample population were generally older than women in the nation. For the sample, the median age of women reporting was 47.3 years. It is generally known that the rural population is characteristically an older one. This finding is thus not unusual.

Educational Status

The educational attainment of women in the sample population was low. The median years of school completed by those reporting was 8.4 years. The educational attainment for women in the nation (age 25 and over) is higher; the median was 10.9 years in 1960. The rural population is characteristically less well-educated than the national population as a whole. For example, in the same year, the median years of school completed by rural women in the nation (25 and over) was 9.8 years.[12] The lower educational attainment of women in the sample population, as well as the lower educational attainment of rural people generally,

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[11]U.S. Department of Labor, Women's Bureau, *1960 Handbook on Women Workers*, Bulletin 275 (Washington: Government Printing Office, 1960), 39.

[12]Bureau of the Census, *1960 Census of Population*, Social and Economic Characteristics, U.S. Summary (Washington: Government Printing Office, 1962), 207, Table 76.

is largely explained by the fact that the younger and more highly educated people migrate from rural to urban areas.

Total Family Income

The reported family income of all respondents was relatively low, as could be expected from the nature of the study. In this regard, a word of caution is advisable. Whether or not a given family considers itself "low-income" depends upon the levels and standards of the community or subculture of which it is a part.[13] Also, in rural areas, nonmonetary items, such as garden produce, frequently supplement monetary income. For these reasons, any comparison of rural low-income families with urban families having higher monetary income must be made with reservation.

The median income was $1,602. This sum represents the combined farm and nonfarm earnings of the family members. It also included income from other sources such as welfare payments, retirement income, worker's benefits, veteran's benefits, and fixed income from real estate or securities.

Level of Living

Level of living was measured by taking an inventory of the aids to house care which were available to each woman. Of the 13 items studied, the average number possessed by the families and/or households studied was 6.4. More than 9 out of 10 interviewees' homes were equipped with electricity. Over two-thirds of the homes contained mechanical refrigerators, and the same was true of gas or electric ranges and of washing machines. A small majority of the homes were equipped with piped water and kitchen sinks. The families or households of 6 out of every 10 women studied possessed an automobile. Few homes had central heating or were equipped with vacuum cleaners or electric sewing machines.

In an attempt to measure level of living aspiration, each woman was asked how she would spend an unexpected $2,000. The majority mentioned housing improvements as their first choice. A large percentage of the remainder mentioned living expenses.

To gain some understanding of interviewees' assessment of their living conditions, each woman was asked to comment on her satisfaction with the family income. The majority expressed satisfaction, although few said that it was *very* satisfactory.

Residence

The sample was made up entirely of rural residents. Interviewees' residence was classified as either rural farm or rural nonfarm, in accordance with census definitions. It was determined that the majority of the women in the sample (54.3 per cent) lived in rural nonfarm places. Slightly more than one-third (36.7 per cent) resided on farms.

[13]Kaufman, *loc. cit.*

For the remainder of the women (8.9 per cent), type of residence could not be determined, but presumably was proportionate to the above dispersion.

Selected Characteristics of Employed Women in the Sample Population

In the sample population, women who were employed exhibited significantly different characteristics from women who were not employed but were eligible for employment. The purpose of this section is to present the findings of the study which relate certain major sociocultural variables to female labor-force participation. The variables analyzed are those which have been most closely related to female employment on the national level. The reason for this approach is two-fold. In the first place, these variables appear to be the most important determiners of women's work patterns. Secondly, use of these variables makes possible a comparison of findings with national data on female labor-force participation patterns.

It may be noted that two of the variables discussed in the previous section for the national female population are restricted for the sample population. These are residence and total family income. The sample was made up entirely of low-income persons living in rural areas, and all findings of the study are cast in this subcultural setting.

Type of Employment

Eight occupational groups were used to classify the employed women in the sample population. A larger number of women (23.8 per cent) were classified as domestic or service than were classified in any other group. The representation of women in operative (19.1 per cent) and farm laborer or foremen (18.8 per cent) classes was also relatively large. Nearly one in ten were classed as sales or clerical workers. Fewer employed women were working as laborers (6.6 per cent) or as farm operators or managers (5.8 per cent). Only six women (1.3 per cent) were employed as craftsmen or foremen (Table 2).

The occupational distribution of women in the national labor force is somewhat different. The principal difference appears in employment as a manager, proprietor, professional, or technical worker, and in sales or clerical work. Both classes represent occupations less frequently found in the sample population. The percentage of craftsmen, foremen, and domestic or service workers in the sample was similar to that for the nation, however. In contrast, women workers in the sample were employed relatively more frequently as operatives; nonfarm laborers;

TABLE 2.—Classification of the Female Labor Force by Occupation and Median Income, United States and Sample Population

Occupational Classification	Per Cent of Female Labor Force		Median Income	
	Sample	U.S., 1960**	Sample	U.S., 1958***
Farm operator or manager	5.8	0.6	$ 708	*
Farm laborer or foreman	18.8	1.1	206	*
Manager, proprietor professional or technical	8.8	3.7 13.0	2,555	$2,764 3,528
Sales or clerical	8.4	7.8 29.7	1,916	1,734 3,029
Craftsman or foreman	1.3	1.2	750	*
Domestic or service	23.8	7.9 13.4	619	609 1,394
Operative	19.1	15.4	2,100	2,196
Laborer (except farm)	6.6	0.5	2,000	*
No report	7.5	5.7		

*Median not shown where base is less than 200,000.

**Source: (Per Cent Distribution) Bureau of the Census, *1960 Census of Population,* General Social and Economic Characteristics, U. S. Summary (Washington: Government Printing Office, 1962), 216, Table 87. (This source lists the median income for the female labor force, 1960, as $2,230. See page 232, Table 98.)

***Source: (Median Income): Bureau of the Census. *Current Population Reports,* Series P-60, No. 33 (Washington: Government Printing Office, 1960), 41, Table 28. (This source, in another table which includes all women with income, lists the median income for farm laborer or foreman as $279. This number is possibly somewhat lower than the median income of women in the labor force who have this occupational classification.)

or as farm operators, managers, laborers, or foremen. The under-representation of office jobs and the over-representation of agricultural workers was expected, and is explained by the difference in employment opportunities in rural areas, as brought out previously.

Annual Earnings – Employed women in the sample reported median annual earnings of $870 for the preceding year (Table 3).

The fact that this figure is below half the median earnings of employed women in the nation is not surprising, in view of the nature of the study group. Almost one-third of the women in the sample (31.9 per cent) had earned less than $500 during the year. This is a somewhat larger percentage than is characteristic of the national female labor force. The difference in the median income for the two groups, however, is apparently greater at the other end of the income scale. In the sample, less than one-tenth of the employed women reported an income of $3,000 or more, while almost one-quarter of the employed women in the nation reported earnings of this size.

TABLE 3.—Classification of the Female Labor Force by Income Distribution, United States, 1960, and Sample Population

Income Distribution	Per Cent of the Female Labor Force	
	Sample	U.S., 1960
$ 1– 499	31.9	22.9
500– 999	16.5	19.3
1,000–1,499	7.1	11.0
1,500–1,999	8.4	7.9
2,000–2,499	18.2	8.3
2,500–2,999		6.1
3,000 or more	9.2	24.8
No report	8.8	...
Median income	$870	$2,230

Source: Bureau of the Census, *1960 Census of Population*, General Social and Economic Characteristics, U. S. Summary (Washington: Government Printing Office, 1962), 231, Table 97. Median income, from Table 98, p. 232.

The association of low income with agricultural work and of high income with white collar work is evident in Table 2. Women in the sample who were employed as farm laborers or foremen reported the lowest median income of all groups, $206. Low reported median incomes were also characteristic of domestic and service workers and of the other group of agricultural workers. The highest median income, $2,555, was reported by women employed as managers, proprietors, professionals, or technical workers. For each occupational classification, the median income reported by employed women in the sample was much lower than the median income reported by employed women in the nation. The only exception to this general pattern was found in the class of female operatives, who reported a median income very similar to the national norm. This finding may be a result of the recent trend toward rural industrialization.

Motivation for Work — The stimulus for women to participate in the labor force has been described as being primarily two-fold: economic necessity and personal satisfaction. The former was tested for the sample population through an analysis of the relationship between total family income and female labor force participation, and will be discussed in that connection. The latter was tested through analysis of the interviewees' response to the question, "What things about your present or most recent job do you like or dislike most?"

Findings indicated that attitudes toward employment were closely related to the level of earnings received. This pattern of responses also characterizes the national female labor force. The median income reported by those in the sample population who expressed an unfavorable attitude toward employment was $494, while those expressing a favorable attitude toward employment reported a median income of more than twice that amount — $1,181 (Table 4). The former figure is much below the median earnings for employed women in the sample ($870), and the latter figure is well above that amount.

TABLE 4.—Classification of Employed Women in the Sample Population by Attitude Toward Employment and by Occupation and Median Income

Occupational Classification	Attitude toward Employment									
	Favorable		Mixed		Unfavorable		No Information		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Farm operator or manager	2	7.4	..	...	3	11.1	22	81.5	27	100.0
Farm laborer or foreman	20	22.7	8	9.1	46	52.3	14	15.9	88	100.0
Manager, proprietor, professional or technical	18	43.9	15	36.5	4	9.8	4	9.8	41	100.0
Sales or clerical	17	43.6	13	33.3	4	10.3	5	12.8	39	100.0
Craftsman or foreman	1	16.7	..	...	3	50.0	2	33.8	6	100.0
Domestic or service	48	43.3	35	31.5	15	13.5	13	11.7	111	100.0
Operative	31	34.9	30	33.7	17	19.1	11	12.3	89	100.0
Laborer	14	45.1	9	29.0	6	19.4	2	6.5	31	100.0
Total	166	35.5	120	25.7	103	22.1	78	16.7	467	100.0
Median income of those reporting	$1,181		$1,225		$ 494		$ 688		$ 870	

Attitude toward employment also varied according to the occupational classification of the women responding. The majority of the farm laborers and foremen responded with unfavorable attitudes. By contrast, women employed as managers, proprietors, professionals, or technical workers largely responded with favorable comments. Domestic or service workers followed more closely the pattern of the latter rather than of the agricultural workers. It was anticipated that women employed in this capacity would have been less favorably disposed toward gainful employment, for such work is held in low esteem by the larger society.

Women in the sample more often responded with favorable attitudes than in any other way; that is, with mixed feelings about working or with unfavorable remarks. It appears that women in the sample who were employed generally had a favorable attitude toward their work situation. It should be noted that economic necessity, rather than personal satisfaction, is generally accepted as the stimulus for low-income women to participate in the labor force. The findings would indicate that both stimuli motivate rural low-income women in the South.

Marital Status and Family Characteristics

Previous studies have determined that the most significant variables affecting female labor force participation patterns are marital status and family characteristics. It was not surprising to find this pattern prevalent in the sample of women studied. When measured by the chi square test, the differences in marital status between the employed and unemployed women were statistically significant. Table 5 shows that unemployed women were more likely to be married than were other women in the sample. Employed women, by contrast, more typically were never married, or were divorced or separated. Widowed women contributed a proportionately greater number to the ranks of the employed women than to the ranks of the unemployed. Many of the widows were not, however, eligible for the labor force because of age or infirmity. Again the patterns follow closely those known to exist in the greater society. They can be explained in precisely the same manner. In the national population in 1959, for example, 50 per cent of the women who were heads of households were in the labor force, while only 31 per cent of the homemakers (wives living with their husbands) were employed.[14] Thus, as may be seen in Table 6, the absence of a primary breadwinner was more significantly related to women working than the disability or retirement of the husband. Only one-fifth of the unemployed women (19.6 per cent) had husbands who were not able to work or had no husband. By contrast, of the employed women in the sample, almost one out of three either did not have husbands or had husbands who were not providing for the family because of retirement or disability.

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[14]USDL, Women's Bureau, *1960 Handbook on Women Workers*, Bulletin 275 (Washington: Government Printing Office, 1960), 39.

TABLE 5.—Classification of Employed and Unemployed Women in the Sample Population by Marital Status

Marital Status	Employed		Unemployed	
	No.	Per Cent	No.	Per Cent
Married	376	80.5	944	91.1
Never married	6	1.3	5	0.5
Divorced or separated	30	6.4	15	1.5
Widowed	55	11.8	72	6.9
Total	467	100.0	1,036	100.0
$x^2 = 45.204$	d.f. = 3		P<.001	

TABLE 6.—Classification of Employed and Unemployed Women in the Sample Population by Availability of Husband for Work

Availability of Husband for Work	Employed		Unemployed	
	No.	Per Cent	No.	Per Cent
Eligible for the labor force	330	71.3	829	80.4
Fully able to work	295	63.7	710	68.9
Limited permanent disability	35	7.6	119	11.5
Ineligible for the labor force or absent from the household	133	28.7	202	19.6
Total disability	21	4.5	73	7.1
Retired (no disability)	18	3.9	33	3.2
Absent (woman head)	94	20.3	96	9.3
Total	463	100.0	1,031	100.0

When the data were reworked so as to include homemakers only, there was less distinction between employed and unemployed women. Approximately 10 per cent of the husbands of both employed and unemployed homemakers were ineligible for the labor force (Table 7). Why no more difference was found between employed and unemployed women in the availability of husbands for work is not easily explained. It was anticipated that disability, as well as the lack of a

TABLE 7.—Classification of Employed and Unemployed Homemakers* in the Sample Population by Availability of Husband for Work

Availability of Husband for Work	Employed		Unemployed	
	No.	Per Cent	No.	Per Cent
Fully able to work	295	80.0	710	75.9
Limited permanent disability	35	9.5	119	12.8
Total disability	21	5.6	73	7.8
Retired (no disability)	18	4.9	33	3.5
Total	369	100.0	935	100.0

*Married women, husband present.

husband, would have acted as a stimulus to increase female labor-force participation.

Single Women — The sample population included only six employed single women, slightly more than one-half of those who were eligible for employment. The national employment rate for women never married is very similar to that of the sample. Three-fourths of the employed single women were in agricultural occupations. The only other occupational classification represented was that of clerical and sales workers. Women never married reported a median income of $563 (Table 8). The size of the sample of single women is too small to allow statistical comparison. However, it may be noted that their occupational distribution is very dissimilar to that of single women in the nation. One explanation for this variation, and of the low median income, may be found in the fact that 50 per cent of these women were managing or operating family farms, which perhaps they inherited.

Divorced and Separated Women — Thirty of the 47 women in the sample who were divorced or separated were employed. The extremely high employment rate among such women is a national pattern which results from the necessity of self-support. These women were heavily concentrated at the bottom of the occupational ladder. Over one-third of them were employed as domestic or service workers. Almost the same relative number were classifiable as agricultural workers. Of the remainder, most were laborers. The median income reported by this group was the lowest of all groups of working women, $500. These characteristics are typical of national patterns.

Widowed Women — The employment pattern characteristic of the 216 widows in the sample differed from that of the divorced and separated women in only one way; a smaller percentage were employed. Slightly over one-fourth of these women (55) said they were employed. Although a larger number of these women (72) were unemployed, more of them were retired or totally disabled (85). These findings are consistent with national patterns.

The employed widows were concentrated in the lower income and occupational levels. Three-fifths of them were employed in agriculture. Although the widowed women formed only a small proportion of the female labor force for the sample, they filled over three-fourths of all the positions as farm operators or managers. This finding apparently is related to the fact that farms were inherited from deceased spouses.

The next highest employment concentration of widows was as domestic or service workers. The median income reported by widowed women was $650. The occupational and income characteristics of widowed women were also consistent with national patterns.

The presence of children did not appreciably alter the higher employment rate which characterized women who were divorced, separated; or widowed. Three-fourths of these women whose youngest child was no older than 9 years of age were in the labor force, and a majority of the mothers of older children were also gainfully employed.

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TABLE 8.—Classification of Employed Women in the Sample Population by Marital Status, Occupation, and Median Income

Occupational Classification	Single		Married		Divorced, Separated		Widowed		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Farm operator or manager	3	50.0	..	...	3	10.0	21	38.2	27	5.8
Farm laborer or foreman	1	16.7	69	18.4	6	20.0	12	21.8	88	18.8
Manager, proprietor, professional or technical	..	..	37	9.8	2	6.7	2	3.6	41	8.8
Sales or clerical	1	16.7	36	9.6	..	...	2	3.6	39	8.4
Craftsman or foreman	.	...	6	1.6	..	..	..	...	6	1.3
Domestic or service	.	...	92	24.5	11	36.7	8	14.5	111	23.8
Operative	.	...	81	21.5	2	6.7	6	10.9	89	19.1
Laborer	.	...	25	6.6	4	13.3	2	3.6	31	6.6
No information	1	16.7	30	8.0	2	6.7	2	3.6	35	7.5
Total	6	100.0	376	100.0	30	100.0	55	100.0	467	100.0
Median income of those reporting		$563		$1,069		$500		$650		$870

Economic necessity appears to be the important explanation for the high employment of such women in both the sample and the nation.

Married Women – Married women, with husbands present, differed appreciably from other women in their labor force participation patterns, in both employment rate and occupational classifications. When measured by the chi square test, employment and marital status were statistically significant (Table 5 and Table 9). Married women were over-represented in operative positions and as clerical or sales personnel. They were also prominent as managers, proprietors, professionals, or technicians and as domestic or service workers. They were under-represented as farm laborers or foremen, and none were employed as farm operators or managers. The median income reported by married women also varied from that of women in other marital status classes. They earned almost twice as much as was reported by women in any other marital status class.

TABLE 9.—Employed Women in the Sample Population by Marital Status and Occupation

Occupational Classification	Married		Other Marital Status		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
Farm operator or manager	....		27	6.25	27	6.25
Farm laborer or foreman	69	15.97	19	4.40	88	20.37
Manager, proprietor, professional or technical	37	8.56	4	.93	41	9.49
Sales or clerical	36	8.33	3	.69	39	9.02
Domestic or service	92	21.30	19	4.40	111	25.70
Operative; craftsman or foreman*	87	20.14	8	1.85	95	21.99
Laborer	25	5.79	6	1.39	31	7.18
Total	346	80.09	86	19.91	432	100.00
$x^2 = 132.172$		d.f. = 6		$P < .001$		

*Category includes six married women in class of craftsman or foreman.

The variations in labor force participation which are characteristic of married women relate significantly to their family stage, as measured by the chi square test (Table 10). For this reason, the work patterns of married women are discussed in terms of the stages of the family cycle.

The majority of the married women in the sample who were childless and who were relatively young (at least one of the couple under age 35) were gainfully employed. At no other stage in the family cycle were the majority of the married women in the labor force. The recent trend toward continuing employment until the birth of the first child has already been discussed. The fact that the highest employment rate for the married women studied was found among young childless wives is evidence that rural low-income areas differ little from the rest of the nation in this respect.

One-half of the young childless wives working were employed as domestic or service workers (25.0 per cent) or as operatives (25.0 per

TABLE 10.—Classification of Employed and Unemployed Homemakers* in the Sample Population by Stage in Family Cycle

Stage in Family Cycle	Employed		Unemployed	
	No.	Per Cent	No.	Per Cent
Couple only, age less than 35	24	6.5	22	2.3
Couple with children				
Age 3 or less	23	6.2	44	4.7
Age 4 – 9	53	14.3	114	12.2
Age 10 – 17	100	27.1	236	25.1
Age 18 or more	88	23.8	288	30.7
Couple only, age 35-59	56	15.1	120	12.8
Couple only, age 60 or more	26	7.0	114	12.2
Total	370	100.0	938	100.0
$x^2 = 28.164$	d.f. = 6		P< .001	

*Married women, husband present.

cent) (Table 11). This occupational distribution is quite different from the national picture in that this class of working women are most often found in clerical and sales work. Opportunities to work in offices and retail establishments are, of course, scarce in rural areas.

In the national female labor force, women are least apt to be employed if young children are present in the household; and the age of the youngest child remains inversely proportional to the mother's labor-force participation. In the sample, this pattern was reversed. The explanation must be sought in the make-up (rural and low-income) of the sample population. Apparently when the dependency ratio of the family is increased (by the presence of children) the economic needs of the family unit are increased enough to force employment. Other studies have shown this to be true, *i.e.*, when the husband's earnings were not sufficient to meet living costs, the wives were more prone to work.

It is important to note that, as a factor related to women's working, marital status was more important than presence of children. The rate of employment for mothers who had children present was consistently much lower for the married mothers than for the mothers of other marital status (separated, divorced, or widowed).

The occupational distribution characteristic of young married mothers in the sample also differed from the national picture. They reported a median income which was considerably above the median earnings of all married women, and almost twice the amount reported by all employed women. Nearly one-half of the young married mothers who were employed worked as operatives. Young mothers in the national labor force, on the other hand, are concentrated in low-paying jobs. This pattern continued through the next stage of the family cycle (couples with school-age children). For the sample, earnings remained relatively high and the occupational concentration continued to be in the class of operatives.

TABLE 11.—Classification of Employed Homemakers* in the Sample Population by Stage in Family Cycle, Occupation, and Median Income

Occupational Classification	Stage 1		Stage 2		Stage 3		Stage 4		Stage 5		Stage 6		Stage 7	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Farm laborer or foreman	3	12.5	1	4.3	7	13.2	17	17.0	24	27.3	9	16.1	8	30.8
Manager, proprietor, professional or technical**	4	16.6	3	13.0	5	9.4	10	10.0	6	6.8	4	7.1	4	15.4
Sales or clerical	3	12.5	2	8.8	3	5.7	12	12.0	2	2.3	12	21.4	2	7.7
Craftsman or foreman	..	...	..	...	..	...	3	3.0	1	1.1	1	1.9	1	3.9
Domestic or service**	6	25.0	4	17.4	10	18.9	26	26.0	27	30.7	12	21.4	3	11.5
Operative	6	25.0	10	43.5	16	30.2	19	19.0	16	18.2	11	19.6	3	11.5
Laborer	1	4.2	1	4.3	4	7.5	6	6.0	6	6.8	5	8.9	2	7.7
No information**	1	4.2	2	8.7	8	15.1	7	7.0	6	6.8	2	3.6	3	11.5
Total	24	100.0	23	100.0	53	100.0	100	100.0	88	100.0	56	100.0	26	100.0

*Married women, husband present.

**One woman of this classification not reporting stage in family cycle.

STAGE IN FAMILY CYCLE:
1. Couple only, age less than 35
2. Children, age 3 or less
3. Children, age 4 – 9
4. Children, age 10 – 17
5. Children, age 18 or more
6. Couple only, age 35 – 59
7. Couple only, age 60 or more

Mothers of children age 18 or more who live with them participated even less in the labor force than did mothers of younger children. Only one in five of these women was employed. This finding probably is due in part to the earning power of grown children and in part to the age of the mother. These mothers were most often employed as domestic or service workers, or as farm laborers or foremen. The median income of this group was the lowest of all groups of married women studied.

The percentage of women employed decreased with each ensuing stage of the family cycle where children were present. However, the fact that an increasing number of women were involved at each successive stage meant that larger contributions (in numbers) were made to the employed womanpower as the age of the youngest child increased.

The data did not permit study of women after active motherhood separate from women who had remained childless. However, the two groups have characteristics in common, such as the fact that both include relatively high percentages of employed women. Such a pattern held true for the sample population. This stage of the family cycle was defined for the sample population so as to include all couples where neither spouse was younger than age 35, nor both older than 59 years of age. Approximately one-fifth of the employed women in this stage were employed in each of three classes of work: domestic or service, sales or clerical, and operative. It may be noted that this group of working women were more often employed in sales and clerical positions than was characteristic of women at any other stage of the family cycle.

Women who were in the final stage of the family cycle were least active in the labor force of all groups of married women studied. This finding is in keeping with the national pattern. Of those women who were employed, most worked as farm laborers or foremen.

Age Status

In the sample population, employed women were characteristically younger than other women (Table 12). When measured by the chi square test, the age difference between employed and unemployed women was statistically important. The employed women were over-represented at the lower age levels and under-represented at the higher age levels. The median age of employed women in the United States in 1961 was 40.4 years, which is only 2 years younger than was reported by the employed women in the sample.

Employed women in the sample population apparently reached their peak earnings at a much lower age than is characteristic of the female labor force of the nation. For these women, the peak in earnings was reached during their 30s, while for the employed women in the nation peak earnings are reached from age 45 to age 54 (Table 13). The arrival of the peak in earning capacity at late middle age is not only characteristic of women in the United States, but is also a phenomenon for American men. The arrival of peak earnings at late middle age is associated with increase in training, experience, and seniority, before the

TABLE 12.—Classification of Employed and Unemployed Women in the Sample Population by Age

Age	Employed		Unemployed	
	No.	Per Cent	No.	Per Cent
Under 20	8	1.7	24	2.4
20–29	73	15.9	124	12.2
30–39	127	27.6	223	21.9
40–44*	55	11.5	130	12.7
45–49*	62	13.5	132	12.9
50–54*	68	14.8	132	12.9
55–64	44	9.6	174	17.1
65–74	19	4.1	65	6.4
75 or more	4	0.9	16	1.5
Total	460	100.0	1,020	100.0
Median age of those reporting	42.0		45.3	
$x^2 = 25.352$	d.f. = 8		P< .01	

*Category is one-half the size of other categories.

TABLE 13.—Classification of the Female Labor Force by Age and Median Income, United States and Sample Population

Age	Per Cent Distribution of Labor Force	Median Income Reported
Sample		
Under 20	1.7	$ 833
20–29	15.9	639
30–39	27.6	1,214
40–44*	11.9	705
45–54	28.3	804
55–64	9.6	525
65–74	4.1	500
75 or more	0.9	500
United States		
14–19	. . .	370
20–24*	. .	1,572
25–34	18	1,671
35–44	23	1,817
45–54	22	1,884
55–64	13	1,326
65 or more	4	776

*Category is half the size of other categories.

Source: (Per Cent) : USDL, Women's Bureau, *1960 Handbook on Women Workers*, Bulletin 275 (Washington: Government Printing Office, 1960), 28, Table 12. Distribution of U. S. female labor force for younger ages is as follows: Ages 14-17, 4 per cent; ages 18-24, 16 per cent.

Source: (Median Income) : Bureau of the Census, *Current Population Reports*, Series P-60, No. 33 (Washington: Government Printing Office, 1960), 35, Table 24.

onset of physical decline or retirement. Explanation must be sought elsewhere for women in the rural low-income areas of the South. The peak in reported earnings for such women was associated with the age and income variables related to specific occupations. In those occupations for which the lowest median age was reported, the highest median earnings occurred (Table 14). These occupational classifications were: operative (median 35 years); sales or clerical (38 years); and manager proprietor, professional, or technical (42 years). Since the lowest ages and the highest incomes occurred in precisely the same occupational classes, this association serves to explain in large part the arrival of the peak earnings at an unusually early age for the employed women in the sample.

TABLE 14.—Classification of Employed Women in the Sample Population by Occupation, Median Age, and Median Income

Occupational Classification	Median Age of Those Reporting	Median Income of Those Reporting
Farm operator or manager	55.8	$ 708
Farm laborer or foreman	45.9	206
Manager, proprietor, professional, or technical	41.7	2,555
Sales or clerical	38.2	1,916
Craftsman or foreman	45.0	750
Domestic or service	42.5	619
Operative	35.1	2,100
Laborer	62.5	2,000
Median of employed women	42.0	$ 870

Educational Status

In the sample population, employed women characteristically had completed more years of schooling than was reported by unemployed women (Table 15). The educational differences between these two groups of women are statistically significant as measured by the chi square test. More than two-fifths of the unemployed women had not completed grade school, while only about one-third of the employed women had so little formal schooling. Relatively twice as many of the women in the employed group (28.3 per cent) as in the unemployed group (15.1 per cent) had completed at least high school. Twice the number of women in the employed group were college graduates than were in the unemployed group.

In Table 16 one may note that the median level of educational attainment for women in the national female labor force is three years higher than is characteristic of employed women in the sample. This pattern is typical for the population studied, as explained previously.

Increased educational attainment is generally accompanied by increased income. This pattern held true for the same population. The median income reported by employed women in the sample population,

TABLE 15.—Classification of Employed and Unemployed Women in the Sample Population by Education

Years of School Completed	Employed		Unemployed	
	No.	Per Cent	No.	Per Cent
None	10	2.2	14	1.4
1–3	32	7.0	62	6.1
4	18	4.0	65	2.4
5–7	100	21.9	274	27.0
8	62	13.6	223	22.0
9–11	105	23.0	223	22.0
12	86	18.9	126	12.4
13–15	21	4.6	16	1.6
16 or more	22	4.8	11	1.1
Total	456	100.0	1,014	100.0
Median years of school completed by those reporting	9.2		8.4	
$x^2 = 63.475$	d.f. = 8		$P < .001$	

as for employed women in the nation as a whole, increased with education (Table 16). This pattern has already been discussed in connection with the national female labor force and is explained in terms of educational characteristics of high-paying positions. These occupations which offer the highest financial remuneration are precisely the ones which require the most educational preparation by the participants. Women working as managers, proprietors, professionals or technicians had the highest median level of educational attainment (15.5 years) and also reported the highest median income (Table 17). Following the same

TABLE 16.—Classification of the Female Labor Force by Education and Median Income, United States and Sample Population

Years of Schooling Completed	Per Cent of Female Labor Force		Median Income	
	Sample	U.S., 1959	Sample	U.S., 1958
Less than 8 years	34.3	11	$ 391	$ 711
0–4 years	12.9	3	300	*
5–7 years	21.4	8	471	*
8 years	13.3	13	1,050	909
9–11 years	22.4	19	1,396	867
12 years	18.4	38	2,016	2,036
13–15 years	4.5	10	2,812	1,865
16 years or more	4.7	8	> 3,000	3,309
No report	2.4	1		
Median	9.2 yrs.	12.2 yrs.	$ 870	$2,210

*Data not available.

Source: (Per Cent distribution): USDL, Women's Bureau, *1960 Handbook on Women Workers,* Bulletin 275 (Washington: Government Printing Office, 1960), 94, Table 3.

Source: (Median Income): Bureau of the Census, *Current Population Reports,* Series P-60, No. 33 (Washington: Government Printing Office, 1960), 38, Table 26.

TABLE 17.—Classification of Employed Women in the Sample Population by Occupation, Median Years of School Completed, and Median Income

Occupational Classification	Median Years of Schooling Completed by Those Reporting	Median Income of Those Reporting
Farm laborer or manager	7.7	$ 708
Farm laborer or foreman	6.0	206
Manager, proprietor, professional, or technical	15.5	2,555
Sales or clerical	12.2	1,916
Craftsman or foreman	11.0	750
Domestic or service	8.5	619
Operative	10.3	2,100
Laborer	9.8	2,000
Median of employed women	9.2	$ 870

pattern, women who were employed as farm laborers or foremen had the lowest level of educational attainment (a median of 6.0 years) and also reported the lowest median income. The patterns of education and occupation which characterize the sample population are explained in the same way as they are for the national female labor force.

Total Family Income

The income reported by families where the woman was unemployed was close to the median family income for the entire sample population ($1,602). In contrast, families in which women were actively employed reported a considerably higher income, $2,108 (Table 18).

TABLE 18.—Classification of Employed and Unemployed Women in the Sample Population by Total Family Income

Total Family Income	Employed		Unemployed	
	No.	Per Cent	No.	Per Cent
$ 1 – 499	27	6.3	126	13.8
500 – 999	74	17.4	177	19.5
1,000 – 1,499	48	11.3	133	14.6
1,500 – 1,999	39	9.1	94	10.5
2,000 – 3,999*	115	27.0	223	24.6
4,000 or more	123	28.9	155	17.0
Total	426	100.0	908	100.0
Median income reported	$2,108		$1,696	

*Category is four times larger than other categories.

A study of household or family income is more meaningful, perhaps, when sex of family head is taken into consideration. The median income of the households and families studied varied significantly with the sex of the head. Families with male heads had a median family income of $1,676, but households headed by a woman reported a median of only $927. Income also varied with the employment of the woman within the family and/or household. Of the families with male heads,

those in which the wife worked had a median family income of $2,978, and those in which the wife did not work had a median of $1,663. Of those households which had a female head, those in which the woman head worked had a median total income of $896, and those in which the woman head was not in the labor force had a median income of $673. As may be seen in Table 19, for the households in the sample

TABLE 19.—Classification of Family Head by Median Income, United States, 1958, and Sample Population

Family Status	Per Cent of Families		Median Income of Families	
	Sample	U.S.	Sample	U.S.
All families	100.0	100.0	$1,602	$5,087
Families with male heads	84.0	90	1,676	5,292
Wife in labor force	21.0	25	2,978	6,214
Wife not in labor force	63.0	62	1,663	4,983
Families with female heads	16.0	10	927	2,741
Woman in labor force	5.0	*	896	*
Woman not in labor force	11.0	*	673	*

*Data not available.

Source: USDL, Women's Bureau, *1960 Handbook on Women Workers*, Bulletin 275 (Washington: Government Printing Office, 1960), 63, Table 5.

population the variation in total family income related to the sex of the head and to the employment of the wife follows the general pattern characteristic of the nation. However, as was mentioned previously, in all comparisons the incomes were much lower in the sample population. In each case, families with male heads had a median total income above that of all families and/or households, while the median total income of households headed by a woman was about half the size of the norm. The employment of the wife also caused an upward variation in the total family income in both the sample population and in the nation's population as a whole. These pattern variations for the sample may be explained in precisely the same way in which they are explained for the nation.

A comparison of the contribution of the income of the working woman to the total family income reveals a significant point for the sample population. The employee wife's income (a median of $1,077) very nearly accounted for the difference in total family income between those families in which the wife did and in which the wife did not work. But in households with women heads, the work income of the employed women (a median of $610) accounted for much more than the difference in total family income between households in which the women did and in which the women did not work. In this case, the women's work income accounted for three times the difference in income. The median work income of $610 (of employed women who were heads of households) accounted for almost three-fourths of the total income of those households. This finding reveals how the fact of eco-

nomic necessity is related to female employment in households where a male head is absent.

Level of Living

Level of living was measured by possession of 13 selected items. Table 20 shows the number of items possessed and the percentage of the women in each study group whose family possessed the particular technological aid to house care. Differences in possession of these items between employed and unemployed women were statistically significant when measured by the chi square test. However, the difference between employed and unemployed women was in the possession of particular items rather than in a variation of the average number of total items possessed per family or household studied.

The following items were possessed more frequently by the employed women than by the unemployed: central heating (6.0 per cent more), home freezers (5.7 per cent), automobiles (4.6 per cent), telephones (3.8 per cent), and a smaller percentage margin of electric sewing machines, electricity, hot water heaters, and gas or electric ranges. Technological aids used in measuring level of living more often possessed by unemployed women were washing machines (14.1 per cent more), kitchen sinks (4.8 per cent), and piped water and refrigerators. The same relative number of employed and unemployed women possessed vacuum cleaners.

Study of the measure of level-of-living aspiration revealed that no significant difference existed between employed and unemployed wo-

TABLE 20.—Classification of Employed and Unemployed Women in the Sample Population According to Family* Ownership or Use of Selected Level of Living Items

Selected Level of Living Items	Employed		Unemployed	
	No.	Per Cent	No.	Per Cent
Automobile	301	66.8	641	62.2
Gas or electric range	326	70.3	719	69.7
Central heating	68	14.7	90	8.7
Piped water	227	48.9	528	51.0
Hot water heater	169	36.4	362	35.1
Electricity	451	97.2	976	94.7
Telephone	144	31.0	280	27.2
Electric sewing machine	148	31.9	295	28.6
Mechanical refrigerator	406	87.5	913	88.6
Home freezer	178	38.4	337	32.7
Kitchen sink	240	51.7	582	56.5
Vacuum cleaner	119	25.6	266	25.8
Washing machine	285	61.4	768	74.5
Average number of items possessed	6.6		6.6	
$x^2 = 27.556$	d.f. = 12		$P < .01$	

*Family (or household).

men, as tested by the chi square test. This finding is related to the low-income nature of the sample. The majority of the women as a whole, and of the women of each study group, desired improvement in housing. A larger percentage of the remainder mentioned that they needed more money for living expenses (Table 21). Only a few of even the employed women felt that their level of living was sufficient to allow use of additional money for items which were not necessities, such as charity or religious donations, recreation, health, or educational uses.

This finding seems contradictory to the fact that most women, whether employed or not, expressed satisfaction with their lot (Table 22). In a rural democratic society there is a tendency among people to aspire to an improved status, but not to admit dissatisfaction with prevailing circumstances. Nor will rural residents generally admit that real social differences exist which result from the improved status. The total family income of the employed women was larger, and it could be expected that they would have been more satisfied; yet this was not what was reported.

TABLE 21.—Classification of Employed and Unemployed Women in the Sample Population by Level-of-Living Aspiration

Expected use of $2,000	Employed		Unemployed	
	No.	Per Cent	No.	Per Cent
Living expenses	114	25.0	216	21.6
Housing	248	54.4	572	57.1
Communications	12	2.6	22	2.2
Farm and/or business	21	4.6	60	6.0
Health	8	1.7	27	2.7
Savings	20	4.4	57	5.7
Charity and religious donations, or recreation	4	0.9	12	1.2
Education	29	6.4	35	3.5
Total	456	100.0	1,001	100.0
$x^2 = 11.391$	d.f. = 7		P> .01	

TABLE 22.—Classification of Employed and Unemployed Women in the Sample Population by Assessment of Level of Living

Woman's Satisfaction With Family Income	Employed		Unemployed	
	No.	Per Cent	No.	Per Cent
Very satisfactory	12	2.6	27	2.6
Satisfactory	262	56.5	604	59.2
Unsatisfactory	190	40.9	390	38.2
Total	464	100.0	1,021	100.0
$x^2 = 1.069$	d.f. = 2		P> .01	

Residence

The unemployed women were more likely to have a rural farm residence, while the employed women were more likely to live in rural nonfarm dwellings (Table 23). This pattern is in keeping with the findings of other studies and is explained in terms of the work demands associated with farm life.

The percentage of rural farm women who were employed in the low-income rural areas of the South (24.0 per cent) compares closely to the percentage of rural farm women in the nation who are employed (22.9 per cent). Likewise, the percentage of rural nonfarm women in the sample who were employed (29.3 per cent) is very similar to the percentage of rural nonfarm women in the nation who are employed (28.8 per cent). In both cases, it may be noted that employment rates in the sample are slightly higher for the specified residence than are those in the nation. This approximation of the work rate for national population, rural farm and nonfarm, can be explained in precisely the same way as it was for the national rural population somewhat earlier in the discussion.

TABLE 23.—Classification of Employed and Unemployed Women in the Sample Population by Residence

Residence	Employed		Unemployed	
	No.	Per Cent	No.	Per Cent
Rural farm	157	35.7	418	44.8
Rural nonfarm	283	64.3	516	55.2
Total	440	100.0	934	100.0

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This report reviews employment experience of graduates of the Norfolk Project, a program to train disadvantaged persons. The cumulative employment rate over the intervening year was 99 percent for graduates, and at the time of the evaluation, 41 percent had training-related jobs. One of the most important effects of the program was the graduates' willingness and ability to remain on a job for an extended period. While racial discrimination did not appear to limit employment, age over 45 and police records did. The effects of training seemed to drop over time. Masonry graduates were the most successfully employed, earning about $4.00 per hour. Due to cutbacks at a local plant and low entry wages, custodial graduates were disillusioned and had a tendency to fall back on previous patterns of unemployment. Auto mechanics graduates, with poor educational backgrounds, short training periods, and lack of experience had difficulty in obtaining employment. Electronics graduates, although having the highest educational background, also experienced diverse employment problems. (EM)

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GRADUATES OF THE NORFOLK PROJECT 1 YEAR LATER

VT003901

U.S. DEPARTMENT OF LABOR: W. Willard Wirtz, Secretary
MANPOWER ADMINISTRATION
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Graduates of the Norfolk Project 1 Year Later

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PREFACE

The Norfolk Project, conducted by the Norfolk Division of Virginia State College, is one of the earliest programs in which disadvantaged persons have been trained under the Manpower Development and Training Act of 1962 (MDTA).

This report of employment experience of graduates of the Norfolk Project in the year following completion of training is one of a series of Manpower Evaluation Reports. These reports are designed to inform Government agencies, officials, and the public of the progress and problems of training programs carried out under provisions of the MDTA.

Graduates of the Norfolk Project, 1 Year Later was prepared in the Office of Manpower, Automation and Training by Pierce A. Quinlan of the Division of Program Evaluation under the immediate supervision of Abraham Stahler, Division Chief, and under the general direction of Earl T. Klein, Deputy Assistant Director for Evaluation and Field Services.

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INTRODUCTION

The Norfolk research and demonstration project originated from a desire of the Norfolk Division of Virginia State College to help unemployed, unskilled workers prepare for and find suitable employment. It was also to serve as a pilot project for research and demonstration projects of similar educational institutions.

The project trained approximately 100 individuals in brick masonry, automobile mechanics, sheet metal work, electronics technology, and building maintenance. These occupations are generally the same as those offered through the post-high school technical program of Virginia State College. The training included remedial education as well as instruction that would help the graduates get and hold jobs.

The occupational training phase was completed November 15, 1963, after 52 weeks of training. In November 1964, 1 year after completion of the project, a study of the employment experience of the trainees who were graduated from the program's occupational training program was made. This is a report of its findings.

THE ECONOMIC CLIMATE

The Norfolk program was designed to draw disadvantaged trainees from the Norfolk-Portsmouth, Virginia labor area—composed of Norfolk, Portsmouth, Chesapeake, Suffolk, and Virginia Beach. But while trainees were drawn solely from the Norfolk-Portsmouth labor area, potential jobs were available from both the Norfolk-Portsmouth labor area and the Newport News-Hampton labor area, in which there were a total of over 800,000 persons in 1960.

While the unemployment rate for the United States as a whole was 4.5 percent in November 1964, the unemployment rate for the Newport News labor area, with a labor force of 93,000, was a low 1.9 percent and for the Norfolk labor area, with a labor force of 193,700, 2.5 percent that same month.

The principal employer in the area is the military, with the Navy the largest single employer. The world's largest Naval base is located in Norfolk, and large shipbuilding and repair facilities are located in both Norfolk and Newport News. Other large military facilities are also present in the area. Recently, some signs of reduction of Government expenditures have been evident in the area, but this has brought about few employment problems thus far.

The economy is becoming increasingly diversified. New plants are moving in, drawn by the climate, the proximity to markets, and other factors. More growth is looked for in the future, spurred by the completion of the Chesapeake Bay Bridge-Tunnel providing easy access to the population centers in the Northeast.

OTHER FACTORS

A number of factors other than economic climate might be considered significant in the placement of the graduates of the Norfolk program. One is discrimination in hiring. All of the graduates of the course were Negroes. One might expect, therefore, to run into serious placement problems in this Southern community. However, Norfolk

differs from the traditional Southern city because of the great concentration of military personnel. Discrimination in hiring did not turn out to be the limiting factor originally anticipated.

However, because of the concentration of jobs in the military that involve security clearances, police records of a number of those who were graduated from the program did, in some cases, affect their holder's employability.

CHARACTERISTICS OF GRADUATES

The Norfolk research and demonstration project called for 100 persons to receive training in 1 of 5 occupations. While 107 men, all Negroes, were enrolled (in anticipation of dropouts), 90 men were graduated.

MAJORITY 21 TO 29 YEARS OLD

The mean age of graduates of the program was 30.7 years. More than half of the trainees fell into the 21- to 29-year category. Table 1 shows the age distribution of the graduates of the program when they entered training on November 15, 1962. This table indicates that problems in placement, from the standpoint of age, would normally not be too great since most of the graduates were in the "prime" working ages.

TABLE 1. AGE OF GRADUATES AT BEGINNING OF TRAINING, NOVEMBER 15, 1962

Age [1]	Number	Percent distribution [2]
Total	90	100.0
Under 21	4	4.4
21 to 29	47	52.2
30 to 39	20	22.2
40 to 49	17	18.9
50 to 65	2	2.2

[1] Mean age: 30.7 years.
[2] Because of rounding, sums of individual items may not equal totals.

HIGHER EDUCATIONAL ATTAINMENT THAN ANTICIPATED

The graduates of the program generally had a tenth grade education or better. Almost one-third of the graduates had 12 or more years of school, a higher educational attainment than was anticipated in the project design. The average grade completed by the graduates was 10.4, greater than the average grade attainment of other Negro males among MDTA trainees in this area.

As might be expected, the highest educational attainment was found in the electronics course. The average school level completed by the 18 graduates of that course was 11.5. The lowest educational attainment was found in the auto mechanic course, where the average school level completed was 9.6. Information on the educational attainment of the graduates can be seen in table 2.

SPOTTY EMPLOYMENT HISTORIES

Despite the fact that the educational attainment of the graduates was higher than anticipated, their job histories

generally showed intermittent periods of unemployment. For the most part their employment had been in low-skill, poorly paid jobs. Many of the men had been construction laborers and freight handlers on the docks and railroad yards—jobs which pay around $1.25 an hour in the Norfolk area. Some of these jobs had been abolished through automation and other job cutbacks, such low-skill jobs usually being among the first to be affected by automation, defense cuts, and economic downturns.

TABLE 2. EDUCATIONAL ATTAINMENT OF GRADUATES

Grade level [1]	Number	Percent distribution
Total	[2] 89	100.0
Under 8	9	10.1
8	5	5.6
9 to 11	46	51.7
12	20	22.5
Over 12	9	10.1

[1] Mean educational attainment: 10.4.
[2] Information not available for one graduate.

PREVIOUS UNEMPLOYMENT GENERALLY SHORT TERM

The duration of unemployment immediately prior to training for graduates of the program was not lengthy. As indicated in table 3, 61 percent of the graduates had been unemployed less than 15 weeks when they entered training. Seventeen of the trainees (19 percent) fell into the very long-term unemployed category (27 weeks or more). In general, the fact that unemployment was short term was due largely to the relatively ready availability of jobs in the Norfolk area. However, what is not brought out in the table is that most of the previous jobs held by the trainees required only minimal skill and training and

paid a relatively low wage. Moreover, these trainees had been experiencing frequent periods of unemployment.

TABLE 3. LENGTH OF UNEMPLOYMENT OF GRADUATES IMMEDIATELY PRIOR TO TRAINING

Period of unemployment	Number	Percent distribution
Total	[1] 89	100.0
Under 5 weeks	20	22.5
5 to 14 weeks	34	38.2
15 to 26 weeks	18	20.2
27 to 52 weeks	9	10.1
Over 52 weeks	8	9.0

[1] One person employed, awaiting layoff for technological change.

FINDINGS

The cumulative employment rate over the year following completion of training for graduates of the Norfolk Project was 99 percent. Seventy-two percent of those who were employed obtained training-related jobs. Several of the graduates were able to break out of the cycle of low-skill, low-pay jobs that had characterized many of these persons, and to obtain and hold permanent, well-paid jobs.

Although in terms of employment the results of this training program are better than those reported for regular MDTA institutional training programs as a whole, the effects of this project's retraining have not, in some cases, been permanent. Post-training counseling and other followup services appear necessary.

METHOD OF EVALUATION

In November 1964, 1 year after completion of the project, a large number of contacts were made and a variety of sources were used to determine the employment experience of the graduates of the Norfolk Project. The records of the local employment service office were reviewed; in-

formation was received from the college; employment service and other local agency personnel were interviewed; employers were visited and called; and some graduates and dropouts from the program were interviewed as a part of the sample in a nationwide study of dropouts from MDTA programs. In addition, approximately 20 of the graduates were personally interviewed by an OMAT (Office of Manpower, Automation and Training) national office staff member.

HELP IN FINDING EMPLOYMENT

The ability of the graduates of the Norfolk program to obtain jobs in occupations and firms where Negroes had not previously worked is one of the high points of the program. This was largely because of job development efforts by Virginia State College. For example, one graduate received employment as an automobile salesman, another as a lineman for the telephone company. Failure to obtain such jobs in the past was due, in part, to the fact that Negroes had not attempted to get jobs in these areas, or had not been qualified to perform on these jobs, or lacked sufficient outside help in obtaining such employment.

The Norfolk and Portsmouth local offices of the Virginia State Employment Commission were also called upon to place many of the graduates. The placement effort of these local offices was not a one-shot effort, but rather a continuous one. Many of the graduates of the Norfolk research and demonstration project have returned to the local offices for jobs. The local offices usually make a special effort to serve the graduates of this program when they come into the office.

The Norfolk and Portsmouth local offices of the Virginia State Employment Commission were involved in the Norfolk research and demonstration project from the beginning. Most of the persons who ultimately were enrolled in the program found out about it from the local employment office through letters or conferences with an employment service counselor. Those interested were referred to the college for selection for the program. While the

training was being conducted, the employment service role was basically limited to payment of training allowances.

CHANGE IN TRAINEES' ATTITUDES

The training and other special services which the graduates received in the program helped many in getting employment. One of the most important effects that the program has had on the graduates appears to be the willingness and ability to remain on a job over an extended length of time. Part of this newly found ability to stick with a job was due to a change from a defeatist attitude on the part of a number of trainees to one of self-confidence. This was fostered by the school through counseling.

These men had experienced for the most part unstable employment. However, after being in training for a year they realized that they could actually stay with a job over a lengthy period and this new realization stayed with them when they found employment. This change was difficult for many of the trainees, but they were encouraged by the college staff and particularly by the project director. Staying with one job was not universal among the graduates, but it was widespread enough to become significant.

DISCRIMINATION IN HIRING

Some of the employment problems faced by the graduates were mentioned in a general fashion earlier in this report. One of the anticipated problems which did not turn out to be a limiting factor in the placement of the graduates was discrimination in hiring. Two of the graduates claimed that they were not working at their trade because of racial discrimination. Further study of these cases, however, seemed to indicate that the men were rationalizing their inability to hold a job because they lacked adequate speed and skill on it.

A problem of greater significance in the placement of the graduates was that of discrimination in hiring because of age. Seven trainees were over the age of 45. These per-

sons did report difficulty in finding jobs in occupations related to training. Most of them felt that this was due particularly to their age. Upon investigation, this feeling seemed to have a certain amount of validity. The problem was found mainly in the electronics and masonry occupations. In practice, employers were reluctant to hire older workers in electronics jobs, particularly when the men had had no job experience in the field. The complaint voiced in the masonry field was that under production conditions some of the physical demands of the trade were too much for the older men. Age discrimination was not a noticeable factor for the men in the maintenance custodial field. The problem did not arise in the automotive and sheet metal courses since all of the graduates were under age 45.

Placement problems of men who had police records fell into two major areas: Those companies who would not hire any person with a criminal record, and those who would hire such persons but insisted on knowing about the records. In some instances, companies stated that they did not care if a person had a police record, but it must be reported on the application form. In one case, a graduate did not put his minor police record on the application and he was subsequently fired from a good job when the employing company checked his background. Others told the truth and were hired and remained on well-paying jobs. Some graduates were hesitant about divulging their police records because they had been refused jobs previously because of them.

In some jobs in the area involving national security, persons with records were ruled out. This has limited the placement possibilities available to some graduates.

POST-TRAINING EMPLOYMENT EXPERIENCE

Since this evaluation was conducted 1 year after the completion of the training phase of the program, sufficient time was allowed for an employment pattern of the trainees to develop. Information on employment following training is available on 83 of the 90 graduates. The

information on their employment experience is summarized in table 4 and table 5. Table 4 gives a picture of the cumulative job experience that the graduates had during the entire year following completion of training. Table 5 gives the employment picture of the graduates at the time of the evaluation—1 year after training.

In this year, the employment experience of the graduates has generally been good. As table 4 shows, only one person, of those who could be located, did not work during the year. This person was pensioned from the railroad and did not look for work. Information on seven of the graduates and their employment over the year was not available. Thus, 82 of the 83 graduates that could be located, or 99 percent, had worked during the year. Moreover, 72 percent of the graduates who were employed held one or more jobs related to training.

The information on the employment status of the graduates at the time of the evaluation itself (table 5) indicates that the job picture at that time was somewhat different from the one cumulative over the year. At the precise time of evaluation (1) fewer persons who were working were working in training-related jobs, and (2) slightly more persons were unemployed. Some difference between a study made at one point of time and a cumulative one can be expected, of course, because trainees move between jobs.

However, analysis of the timing of the training-related jobs shows that the highest number of such jobs were held immediately following completion of the course. As time passed, the impact of training, in terms of kinds of jobs obtained, appeared to be lessening. Some trainees became discouraged about their ability to perform in the kind of work for which they were trained and ceased looking for it. Others, however, moved on to other jobs which were relatively well-paying though not training-related.

Several of the graduates holding non-training-related jobs were as well or better off than those in training-related jobs. The average wage of those in non-training related work was $1.70 an hour compared with the average wage of about $1.25 an hour prior to training.

An examination of the employment experience of trainees from each of the five training courses revealed:

TABLE 4. EMPLOYMENT DURING YEAR FOLLOWING TRAINING

Course	Number graduates	Number information available	Employed		Training-related employment	
			Number	Percent	Number	Percent
Total	90	83	82	98.8	59	72.0
Masonry	16	15	15	100.0	15	100.0
Maintenance	18	17	17	100.0	13	76.6
Sheet metal	20	18	18	100.0	14	77.7
Auto mechanic	18	17	16	94.1	8	50.0
Electronics	18	16	16	100.0	9	56.3

TABLE 5. EMPLOYMENT AT TIME OF EVALUATION

Course	Number graduates	Number information available	Employed		Training-related employment	
			Number	Percent	Number	Percent
Total	90	79	70	88.6	29	41.4
Masonry	16	15	15	100.0	10	66.7
Maintenance	18	15	11	73.3	6	54.5
Sheet metal	20	17	17	100.0	5	29.4
Auto mechanic	18	16	14	87.5	3	21.4
Electronics	18	16	13	81.3	5	38.5

Masonry Graduates

Perhaps the most successful, in terms of employment, of the five occupational courses was the masonry course. The graduates of this course had very little unemployment over the past year, and earned the highest rates of pay of all Norfolk Project graduates. They had an average educational level of 10.0 grades, and two-thirds of them had been unemployed less than 15 weeks prior to taking training. As table 4 indicates, all 15 of the masonry graduates for whom information was available, had worked at bricklaying jobs at some time during the past year. At the time of the evaluation, 10 of the graduates were working at bricklaying jobs and 5 were working at jobs not related to the trade, mostly laboring jobs.

Those graduates no longer working as bricklayers had generally lost confidence in their ability to perform this

Bennie R. works at construction job as skilled bricklayer.

type of work under production conditions. There was no shortage of bricklaying jobs as construction continued to prosper in the area. A typical comment from a graduate not working as a bricklayer was: "They wanted a 'speedball' on the bricklaying job and I'm no 'speedball'." Most were, however, able to adjust to the conditions necessary for working as a bricklayer. Consequently, they are assured of relatively steady work at higher rates of pay than they received prior to taking training.

The pay for the 10 graduates who were working as bricklayers was quite good, ranging from $4.05 to $4.50 an hour. At least two men were accepted into the union, which enhanced their chances for frequent work at the high rates of pay.

The previous wages of the trainees who were working as bricklayers at the time of the evaluation were much lower than their present wages. One man, for example, had previously worked as a porter at $1.00 to $1.25 an hour, but was now a skilled bricklayer, able to command over $4 an

Donald M. inserts electrical fixture on a construction job.

hour. This man has been making $177.75 a week consistently since June 1964. The highest previous wage listed was $2.00 an hour for an aircraft cleaner, and this man was now making $4.05 an hour as a bricklayer. The average wage of all the masonry graduates, prior to taking training, was about $1.25 an hour and the jobs were generally in the unskilled category, including truck helper, porter, and construction laborer.

Maintenance Graduates

The maintenance man course had 18 graduates, most of whom previously had mediocre work histories showing a predominance of poorly paid jobs. The average educational level of the group was just above the tenth grade, and 14 of the 18 graduates had been unemployed less than 15 weeks.

During the past year, all of the maintenance man (custodial) graduates found at least one job and better than 75 percent found jobs related to training. Many of the graduates of the maintenance man course, however, had a tendency to fall back into previous patterns of low-skill jobs and periods of unemployment. As indicated in table 5, four of the trainees were unemployed at the time of the evaluation, and only six were working in training-related jobs. Some of the men have gone back to working as porters and laborers at relatively low wages.

One of the main reasons why the graduates of the maintenance course have tended to work in other fields is the low rate of pay offered in most custodial work at the entry level in Norfolk. The graduates were conditioned by the school so that their attitudes and job outlook were at a very high point when they graduated. They became quite disillusioned when they found that entry maintenance jobs in the area paid $1.00 to $1.25 an hour even though they had received 52 weeks of training. Thus, they tended to take any jobs that came along and when they did so, the benefits of training were lost.

Sheet Metal Graduates

The 20 graduates of the sheet metal course had difficulty in getting jobs related to training because the plant in

Wilbert R. prepares air-conditioning ducts for sheet metal company.

which sheet metal jobs were expected to be most readily available had unexpected employment cutbacks. Nine of the course graduates had been unemployed 15 weeks or more prior to training. Their average educational attainment, 10.6, although only slightly higher than the next highest group, was second highest among graduates of each course.

It was originally expected that most of the graduates would be employed by an aircraft company in Elizabeth City, N.C. Nine graduates did go to work at the company, but all but one were let go after 10 days because of a wide-spread employment cutback caused by the cancellation of a defense contract. The one person who remained there is working as a sheet metal mechanic at $80 per week.

Most of these graduates were able to find other employment in the Norfolk area, but most jobs were not related to the training. At the time of the evaluation, less than one-third of the graduates who were working were in training-related jobs. A number of the graduates were able to find jobs outside of sheet metal work that paid as well or better. The ability to stick with a job that some of the trainees learned during training was helpful in their obtaining and holding these non-training related jobs. The outstanding example is the trainee who obtained a magazine franchise and is working on his own. He states that he is averaging $175 per week under a commission payment.

Here in the sheet metal course, as in the maintenance course, the problem is entry wages. Outside of the defense plants, the pay for a sheet metal worker in Norfolk is in the $1.25 to $1.50 an hour range for new employees. Four graduates were working in sheet metal jobs in Norfolk at the time of the evaluation in addition to the man working at the aircraft plant. The wages they were receiving were $1.25, $1.50, $1.80, and $2.00 an hour, respectively. Those persons earning the higher rates of pay had been on the job for a period of several months and had received wage increases.

Auto Mechanic Graduates

The graduates of the auto mechanic course also had problems in getting jobs related to training. Table 4 shows that only 50 percent of the trainees who found employment during the year following training were able to get training-related jobs. Furthermore, only 21 percent of those who were working were in training-related jobs at the time of the evaluation. They had particular difficulty getting jobs in large garages and with franchised dealers. This was principally because of their lack of prior experience and the somewhat limited period of training. Most of the training-related jobs the graduates were able to get were in service stations which pay a top salary of $1.50 an hour and in general, less.

One trainee who benefited indirectly from this course was a retired Navy chief steward who was able to get a

job as an automobile salesman for one of the largest dealers in the area. This job is especially important because the auto dealers had hired very few, if any, Negroes as salesmen previously. This man was quite successful on the job and he has been averaging $125 per week, including commission.

The auto mechanic course had the only graduate who did not work during the previous year. This man had been a long-time messenger of the railroad who was laid off because of work curtailment. He later became eligible for railroad retirement. This man did not look for work during the year and he is drawing railroad retirement pension.

Those in the auto mechanic course had an average educational attainment of 9.6, the lowest educational level in all five courses. Also, 50 percent of the graduates had been unemployed for 15 weeks or longer. The poorer backgrounds of the auto mechanic graduates may have contributed to their problems in getting jobs related to the training.

Johnny J., graduate of the auto mechanic course, loads automobile parts for the assembly line at a major auto assembly plant.

Electronics Graduates

The fifth occupational course was in electronics. The course had the highest level of education among the 16 graduates, with an average grade attainment of 11.5. Despite the higher level of education, most of the trainees had held jobs such as truck helper at $1.00 an hour, light truck driver at $1.50 an hour, and maintenance man at $1.15 an hour. The average pre-training wage was about $1.25 an hour. However, only one-third of the graduates had been unemployed longer than 15 weeks.

All 16 of the graduates of the course on whom information was available found jobs during the year. However, the difficulty in finding jobs related to training again cropped up. During the past year, 56 percent of the graduates found training-related employment and 38 percent of those employed were working in training-related jobs at the time of the evaluation.

Two of the graduates were successful in getting jobs with a national electric company as equipment installers. These

Harvey G. tests communication equipment for a nationwide communication equipment manufacturer.

men progressed very well on the job and were sent to school by the company to prepare them for work on automated telephone equipment. Both graduates had received periodic raises and were in the $2.15 to $2.95 an hour salary range with bright futures ahead. Opportunities in this work for graduates were limited, however, because persons must have a security clearance. This eliminated from consideration some other graduates with police records.

Four graduates worked for a small radio and TV repair company for some time, but found the pay poor because the company was not well established.

Employment at Assembly Plant

An important source of employment for the graduates from the various courses was a large automobile assembly plant. A total of five of the graduates of the program were hired by the plant and four remain on the payroll at substantial hourly earnings. One of the graduates of the electronics course is working at the plant as a pre-conditioner of new automobiles at $2.73 an hour. One of the graduates of the building maintenance course started at the plant as a maintenance man at $2.53 an hour but was later promoted to the assembly line at $2.83 an hour. Another maintenance graduate was hired for the assembly line but was later discharged because he did not admit his police record on his application. He was working as a laborer unloading freight cars at $1.25 an hour at the time of the evaluation. One of the sheet metal graduates is working as a spot welder on new car bodies at $2.94 an hour. Finally, one of the auto mechanic graduates is working as a fork-lift operator loading stock for the production line at $2.91 an hour. These rates of pay represent substantial increases over the average wage of $1.45 an hour the graduates received prior to training.

EMPLOYMENT EXPERIENCE OF SPECIAL GROUPS

The employment experience of special groups, such as older workers, the poorly educated, and the long-term un-

employed, is of particular interest because of the need to reach the people in these groups through training. The largest percent of the graduates of the Norfolk program did not fall into these three groups. Only 17 graduates were unemployed for 6 months or longer, 19 graduates were over the age of 40, and 14 had 8 years of school or less. These groups comprise what is broadly called the "hard-core," and it is interesting to examine their employment experience. Among these three groups there is, of course, some overlapping of individuals.

Surprisingly, the post-training employment experience of these hard-core groups was not markedly different from the rest of the graduates. Most of these persons were able to find training-related employment. Almost 87 percent of the graduates who fell into the very long-term unemployed category (27 weeks or more) found jobs related to training during the year following completion of training, as did 74 percent of the over-40 graduates, and 64 percent of the graduates with 8 years or less education. As was true with the rest of the graduates, some of the persons from these hard-core groups were able to get good jobs, such as those in the automobile assembly plant and as bricklayers. Others managed to get fairly good jobs but tended to fall back into their previous employment patterns.

At the time of the evaluation, the percent of these hard-core group graduates who were working in training-related jobs was roughly at the same level as the combined figures for all of the graduates. The group with the lowest educational level fared the poorest of the three groups. Four of the 14 graduates in this group were unemployed at the time of the evaluation and only 29 percent of the group who were employed were working at training-related jobs. This record, however, was better than the record for the graduates of the auto mechanic course, generally.

It appeared that, overall, persons in the so-called "hard-core" groups had about the same success in finding employment after the training as did the trainees as a whole.

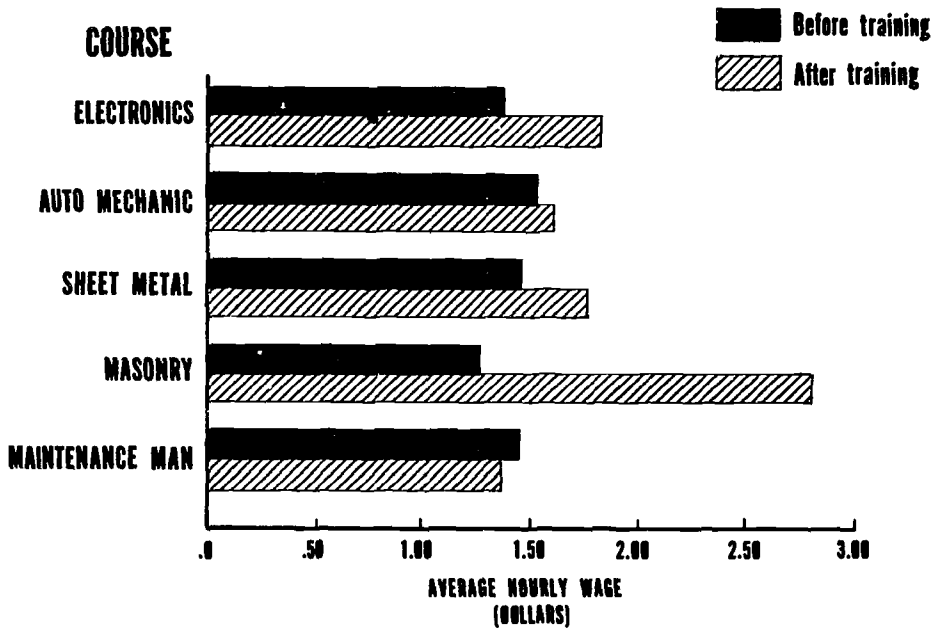
CONCLUSION

The results of the Norfolk Project in terms of employment are better than those reported for regular institutional MDTA training programs as a whole. The employment rate cumulative over the year following completion of training for training-related jobs was a high 99 percent compared with 72 percent for trainees who completed regular MDTA institutional courses. At the time of the evaluation, 89 percent of the graduates were employed with 41 percent of them having training-related jobs. Actually, several of the graduates holding non-training related jobs were as well or better off than those in training-related jobs. In general, wages were up after training. (See chart.)

One of the principal areas of success of this program has been the ability of several of the graduates to break out of the cycle of low-skill, low-pay jobs that previously characterized many of these persons and to obtain and hold permanent, well-paid jobs (such as those at the automobile assembly plant).

At the end of the year following graduation, some of the trainees became unemployed and fewer were working in training-related jobs. Post-training counseling and other services and continuing followup of the trainees to assist further with job adjustment appear to be necessary.

WAGES GENERALLY UP AFTER TRAINING



In the light of later developments, there might be some question, also, as to whether some courses, such as the one for maintenance man, were the most appropriate for the trainees enrolled. There is also question as to whether training in maintenance work should be undertaken when entry wages discourage employment. It was felt, however, that there was some merit in training men with very uneven employment histories for work which though low paid would be steady. However, this was an experimental program and new approaches were used. Chances were taken on trainees and types of courses were given that might not normally be taken. It is evident that trainees should be made quite aware of wages and working conditions before entrance into training.

This project was a beginning attempt to provide services to disadvantaged workers as a tie-in with the regular MDTA program. The problems which arose during the conduct of this project may well serve as a guide to other organizations operating similar programs.

The overriding feature of this project is that a number of disadvantaged persons have been helped and their skills have been upgraded. Much has been learned which should add to the body of knowledge that is required if the needs of the disadvantaged worker are to be adequately met.

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MANPOWER DEVELOPMENT AND TRAINING ACT PROGRAMS; MDTA PROGRAMS

By the end of February, 1965, after 2 1/2 years of Manpower Development and Training Act (MDTA) program operations, reports were received on almost 14,000 recipients of public assistance enrolled in institutional training, representing 9 percent of the 158,000 trainees on whom individual reports had been received. Projected to the estimated total of 195,000 enrollees in institutional training programs, the number of public assistance trainees can be placed at between 17,000 and 18,000. The profile of these trainees indicates: (1) most are heads of families, (2) as often a woman as a man, (3) larger than average number of dependents, (4) the majority are long-term unemployed, (5) educational attainment below other trainees, (6) typically in prime working age from 22 to 44 years old, (7) almost half non-white, and (8) most found in large, densely populated, industrial states. Some results of training are: (1) Overall employment rate was 64 percent (62 percent for women), (2) Placement rate varied among different occupations for which enrollees were trained, and (3) Earnings were on a level with other MDTA trainees. (EM)

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manpower evaluation report

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TRAINING OF PUBLIC ASSISTANCE RECIPIENTS UNDER THE MDTA

VT003902

U.S. DEPARTMENT OF LABOR: W. Willard Wirtz, Secretary
MANPOWER ADMINISTRATION

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TRAINING OF PUBLIC ASSISTANCE RECIPIENTS UNDER THE MDTA

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PREFACE

This report discusses the extent to which occupational training under the Manpower Development and Training Act has benefited the most impoverished and disadvantaged segment of our population. It is a study of the characteristics, training choices, and placement experience of those MDTA institutional project enrollees who were receiving public financial assistance at the time training was offered.

This report was prepared by Rose G. Rosofsky and Benjamin Goldstein of the Division of Analysis and Reports, Office of Evaluation and Reports.

INTRODUCTION

From its original broad focus on providing retraining for the unemployed, adult labor force, the Manpower Development and Training Act training program has evolved, through administrative and legislative action, into a dual pathway—also meeting the needs of particularly disadvantaged groups in the labor force. Some of these groups, such as unemployed youth and the undereducated, have been singled out by special provisions for training and related services. But others, meshed within the overall training program, nevertheless constitute segments of our disadvantaged population. One of the most disadvantaged groups reached by the MDTA training program has been the public assistance recipients.

This report is based upon data compiled on those trainees in institutional, vocational courses through February 1965 who, prior to enrollment, were receiving some form of public assistance.[1] The data show that the public

[1] Under the MDTA reporting system, a public assistance recipient is an applicant who, at the time training was offered, was receiving financial aid from a Federal, State, or local public assistance program. It does not include applicants receiving supplemental assistance such as food, or assistance from a voluntary welfare agency (such as the Salvation Army), or income from pensions or OASI benefits.

assistance recipient has been a beneficiary of the MDTA training program. The training has restored many of these people to gainful participation in the mainstream of economic life.

By the end of February 1965, after 2½ years of MDTA training program operations, reports had been received on almost 14,000 recipients of public assistance enrolled in institutional training conducted under the MDTA.[2] They represent a sizable proportion (9 percent) of the 158,000 trainees on whom individual reports had been received. Projecting this proportion to the estimated total of 195,000 enrollees in the institutional training program as of that date, the actual number of public assistance trainees can be placed at between 17,000 and 18,000. An additional 180 public assistance recipients were reported to have enrolled in the on-the-job MDTA training program as of the same date. This report, however, is confined to the institutional training program.

The profile of this category of trainees outlines the characteristics of the disadvantaged and underscores the opportunity for rehabilitation. As a group:

> . . . They are preponderantly heads of families—as often a woman as a man—with a larger than average number of dependents.
>
> . . . The majority come from the ranks of the long-term unemployed.
>
> . . . Their overall educational attainment is below that of other trainees—a greater proportion has had only an elementary school education or less.
>
> . . . They are typically of prime working age—22 through 44 years old.
>
> . . . Almost half of them are nonwhite workers for whom disadvantages are multiplied in competing for jobs.
>
> . . . The typical enrollee is found in large, densely populated, industrialized States.

---

[2] Although public assistance ceases upon enrollment, at least for those receiving allowances—the term "public assistance trainee" is used throughout this report for purposes of identification. Technically, therefore, it describes trainee status immediately prior to enrollment.

CHARACTERISTICS OF PUBLIC ASSISTANCE TRAINEES

MOST ARE FAMILY HEADS

The public assistance trainee is typically the primary wage earner of a family unit. Almost 9 out of every 10 (86.8 percent) fall into this category—half again as many as the proportion of family heads in the overall training program.

The family units of these trainees tend to include large numbers of dependents. One-quarter of the trainees have families of five or more dependents—triple the proportion of all trainees who have families of like size. Another 30 percent have three or four dependents—almost twice the proportion found among all institutional trainees. As a consequence of this high incidence of family responsibility coupled with previous work history, over 77 percent of these trainees were reported eligible for regular training allowances.[3] The difference between this percentage and the 87 percent of the group falling into the primary wage earner category suggests the presence of many young trainees striving to gain a foothold in the labor force and at the same time struggling with family responsibilities. Some of these may even represent the second or third generations of welfare recipient families which have come to public attention in the war on poverty.

HALF OF THESE TRAINEES ARE WOMEN

One of the most striking statistics contained in these data is the high proportion of women. Women account for approximately half (49.6 percent) of the total number of

[3] Under the provisions of the act in effect as of the date of this study, trainees eligible for regular training allowances were basically those who were unemployed heads of families or households who had had at least 2 years of previous work experience. The new amendments to the act, effective in April 1965 and therefore not pertinent to this study, extend allowance payments to single persons not part of a family or household group.

public assistance trainees. Almost 84 percent of these women are heads of families, heavily burdened with dependents. Almost half have at least three dependents, a smaller number than the two out of three male public assistance recipients so characterized but more than triple the proportion of all women in the institutional training program. Only one in eight does not have any dependents, in marked contrast to the more than one in two proportion in the overall training program. (See table 1.)

These are the women—7 out of 10 below age 35, the majority of them from the rosters of the long-term unemployed, more than half of them further disadvantaged by belonging to nonwhite minority groups—whose training and employment needs must be met if they are to lift themselves and their families out of their desperate poverty. Training opportunities for these enrollees thus reach one of the major groups in the Nation's poverty pyramid—families headed by women, and more particularly by nonwhite women.

PRIME-AGE WORKERS AND LONG-TERM UNEMPLOYED PREDOMINATE

The public assistance recipient enrolled in training is typically of prime working age. More than 73 percent of the enrollees were reported to be between 22 and 45 years of age, as compared with 55 percent for the institutional training program as a whole. Moreover, two-thirds of this number fall in the category of 22 through 34 years. This younger age bracket accounts for almost half (48.6 percent) of all the trainees studied and is significantly above the 37.2 percentage for all institutional enrollees, who are also heavily concentrated in this age range.

Female public assistance enrollees are even more heavily represented in this younger age bracket. More than half of them (51.2 percent) are between the ages of 22 and 35. The female public assistance enrollee over age 44 is represented only half as well as her counterpart in the total program. For her the circumstances generally associated with poverty appear to compound the other disad-

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TABLE 1. SELECTED CHARACTERISTICS OF PUBLIC ASSISTANCE TRAINEES AND OF ALL TRAINEES ENROLLED IN MDTA INSTITUTIONAL PROGRAMS, BY SEX, CUMULATIVE THROUGH FEB. 28, 1965

Characteristic	Public assistance trainees			All MDTA trainees		
	Total	Male	Female	Total	Male	Female
Total:						
Number	13,978	7,049	6,929	158,460	95,606	62,854
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Primary wage earner:						
Yes	86.8	88.0	85.5	60.4	72.2	42.5
No	13.2	12.0	14.5	39.6	27.8	57.5
Family head:						
Yes	84.9	86.0	83.8	55.3	67.3	37.1
No	15.1	14.0	16.2	44.7	32.7	62.9
Number of dependents:						
0	12.9	13.4	12.4	42.4	31.8	58.2
1	12.9	7.0	18.4	16.5	17.0	15.8
2	18.4	12.7	23.6	14.9	17.0	11.8
3	17.4	15.4	19.3	10.9	13.5	7.1
4	13.2	14.5	12.1	6.6	8.6	3.7
5 or more	25.1	37.0	14.2	8.6	12.1	3.5
Eligibility for regular allowances:						
Yes	77.1	84.1	70.4	53.3	66.0	34.5
No	22.9	15.9	29.6	46.7	34.0	65.5

NOTE: Detail may not add to totals due to rounding.

vantages experienced by the older worker in qualifying for training and employment opportunities.

Teenagers under 19 and young people 19 through 21 years of age comprise less than one-fifth of the public assistance enrollees, but over one-third of all institutional enrollees. This is largely attributable to the definition of the enrollees being studied and the focus of the total program. Youth without family responsibility are only infrequently on the public assistance rosters; those in the 19- through 21-year-old age group are not eligible for assistance under the aid to dependent children program. In addition, the heavier concentration of youth in the overall program reflects the emphasis being given to youth training as a result of the 1963 amendments to the MDTA. Although outside of the scope of this study, unemployed youth in families receiving public assistance are sharing these training opportunities. (See table 2).

The success of the MDTA training program in reaching the long-term unemployed is quite pronounced with respect to public assistance enrollees. Some 60 percent of these enrollees had experienced unemployment of more than half a year—practically double the comparable proportion reported for all institutional trainees. Another 12 percent had been unemployed for 15 to 26 weeks. Thus more than 70 percent were enrolled from among the long-term unemployed, bettering the comparable record of slightly under half (46.1 percent) in the overall program. (See chart 1.)

Notwithstanding their protracted unemployment, three-quarters of the public assistance enrollees had had at least 2 or 3 years of previous gainful employment. Approximately 3 out of every 10 had a previous work history of 10 or more years—not too dissimilar from the comparable 27 percent reported in the total program.

EDUCATIONAL ATTAINMENT LAGS

Educational deprivation, more than any other characteristic, is associated with the disadvantaged population and frequently links succeeding generations in the now familiar poverty cycle.

Public assistance recipients enrolled in MDTA institutional training reflect a lower educational level than all institutional trainees. Approximately 20 percent, as compared with 14 percent in the total program, did not advance beyond elementary school. Two-fifths of these

TABLE 2. AGE AND SEX OF PUBLIC ASSISTANCE TRAINEES AND OF ALL TRAINEES ENROLLED IN MDTA INSTITUTIONAL PROGRAMS, CUMULATIVE THROUGH FEB. 28, 1965

(Percent distribution)

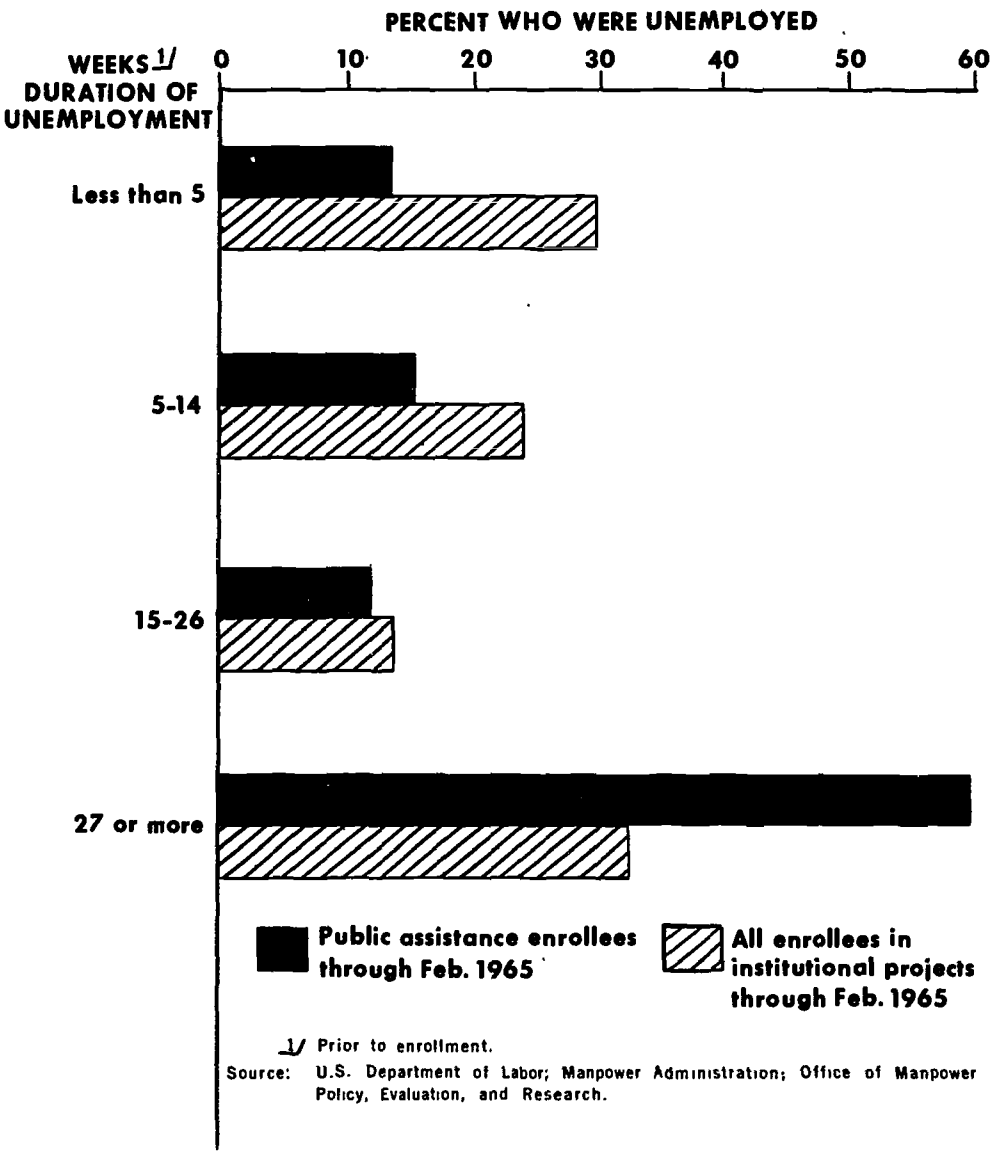
Age and sex	Public assistance trainees	All MDTA trainees
Total	100.0	100.0
Under 19 years	5.6	11.9
19–21	12.8	22.4
22–34	48.6	37.2
35–44	24.7	17.8
45 and over	8.3	10.7
Men	100.0	100.0
Under 19 years	5.9	11.0
19–21	11.5	23.4
22–34	46.0	40.3
35–44	26.4	15.7
45 and over	10.2	9.5
Women	100.0	100.0
Under 19 years	5.3	13.2
19–21	14.0	21.0
22–34	51.2	32.3
35–44	23.0	20.9
45 and over	6.5	12.6

NOTE: Detail may not add to totals due to rounding.

did not complete elementary school. The heaviest concentration, another 43 percent, are high school dropouts with 9 to 11 years of schooling. In total, almost two-thirds of the enrollees studied were handicapped through undereducation. This differs significantly from the profile of all institutional trainees, almost 55 percent of whom have achieved a high school education or better. (See chart 2.)

CHART 1

MANY PUBLIC ASSISTANCE TRAINEES HAVE BEEN JOBLESS FOR MORE THAN HALF A YEAR

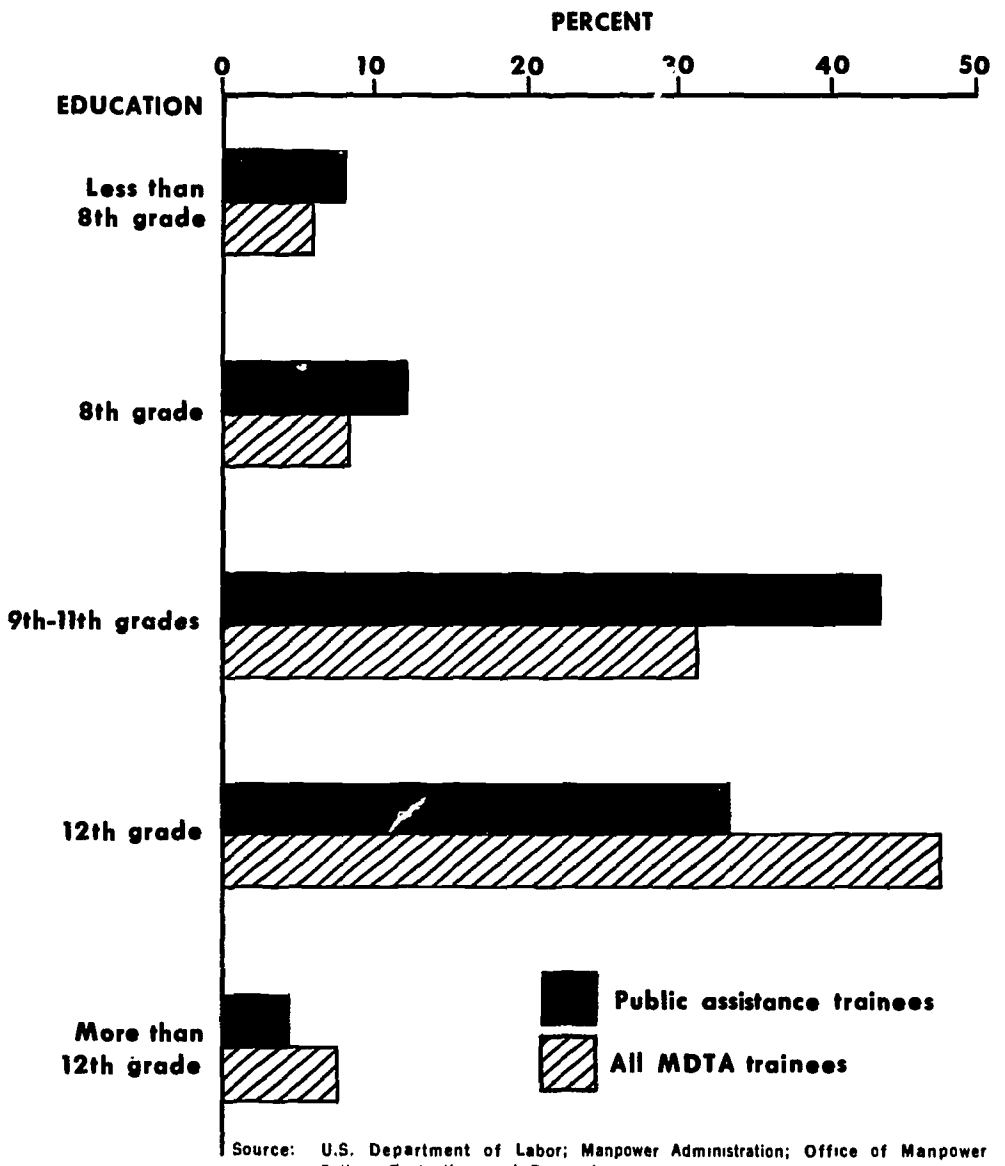


1/ Prior to enrollment.

Source: U.S. Department of Labor; Manpower Administration; Office of Manpower Policy, Evaluation, and Research.

CHART 2

MANY PUBLIC ASSISTANCE TRAINEES ARE SCHOOL DROPOUTS



Source: U.S. Department of Labor; Manpower Administration; Office of Manpower Policy, Evaluation, and Research.

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However, the female public assistance enrollee is better educated than her male counterpart. She is twice as likely to be a high school graduate, and far less frequently is among those who have not completed elementary schooling. But she, too, is most often a high school dropout—40 percent of the time as compared with 46 percent in the case of males. She thus follows the general pattern of relatively higher educational attainment which characterizes women trainees in the total institutional training program, but with a consistently less advantageous showing at each level of the educational ladder.

Public assistance enrollees are sharing in the provision for basic education combined with occupational training which was enacted under the 1963 amendments to the MDTA. Although comprehensive data are not yet available on the implementation of this amendment, a sample survey of trainees enrolled in basic education training through February 1965 indicated that 11 percent of them were public assistance trainees.

NONWHITES ARE MORE THAN PROPORTIONATELY REPRESENTED

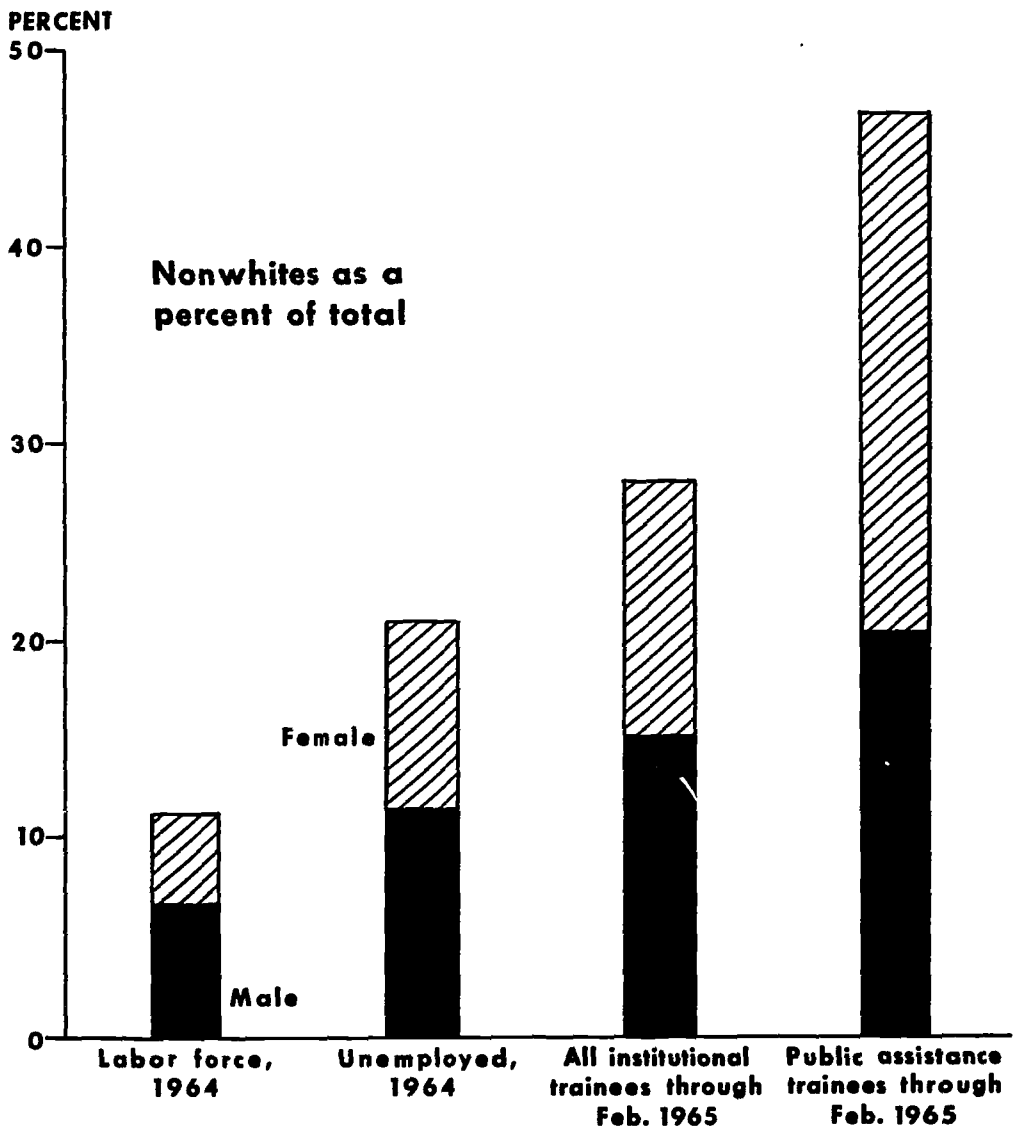
Nonwhite workers are disproportionately represented among the disadvantaged in our society. Unemployment, underemployment, and marginal employment have been both a basic cause and an effect of the socioeconomic trap in which these citizens have been confined. Bringing them into full participation in the labor force is one of the important challenges of the Nation's war on poverty.

Among the successes of the MDTA training program is the extent to which it has brought new opportunity for gainful employment to nonwhite workers. Although constituting only 11 percent of the civilian labor force, nonwhite workers account for some 21 percent of the unemployed. They constituted 28 percent of all institutional trainees as of the date of this study.[4] And they made up 46.6 percent of the total number of public assistance trainees studied. (See chart 3.)

[4] Their proportionate share in the MDTA–OJT program is also significant. As of Feb. 28, 1965, nonwhites constituted 21 percent of the total number of enrollees in that program.

CHART 3

NONWHITE PUBLIC ASSISTANCE RECIPIENTS ARE MORE THAN PROPORTIONATELY REPRESENTED IN TRAINING



Source: U.S. Department of Labor; Manpower Administration; Office of Manpower Policy, Evaluation, and Research.

Nonwhite public assistance trainees do not differ significantly from their white counterparts. The overwhelming majority of both groups are family heads, although for the nonwhites the proportion is somewhat lower—81.4 percent as compared with 88.5 percent. In both groups close to three-quarters are of prime working age, and the great majority of both groups have a previous strong attachment to the labor force. Both have borne extensive, long-term unemployment, but the nonwhites more so. More than half (56 percent) of the white enrollees had been unemployed for more than half a year, while for the nonwhites the proportion was 64 percent.

Nonwhite youth, for whom the unemployment rate is the highest of any sector of the labor force and double that of white youth, are represented in greater number among the public assistance enrollees than white youth. In the relatively small group of those age 19 and under, nonwhite enrollees outnumber their white counterparts 1½ times. The difference is even more pronounced for the 19- through 21-year-old age group, in which 16.2 percent of the nonwhite and 9.6 percent of the white enrollees are found.

However, in the 45-years-and-over age bracket, public assistance enrollees make up only 5 percent of all nonwhite enrollees.

Approximately one-third of both the white and nonwhite public assistance trainees are high school graduates. But the incidence of high school dropouts is significantly greater among the nonwhites, almost half of whom (47 percent) reported some high school training as compared with less than two-fifths of the whites. And relatively fewer nonwhite than white enrollees are concentrated at the lower end of the educational structure. (See table 3.)

UNEVEN GEOGRAPHIC DISTRIBUTION

Although found in each of the 50 States, public assistance enrollees are unevenly distributed across the Nation.

Heavy concentrations of more than 1,000 public assistance enrollees are found in each of 5 States—Pennsylvania, California, Illinois, Michigan, and New York. An

additional concentration of over 500 is found in Ohio. Together these 6 States account for 8,575 (over 61 percent) of the 13,978 enrollees for whom data were reported. These are also (but not in the same order) the six leading States in the distribution of all trainees enrolled in institutional training.

TABLE 3. CHARACTERISTICS OF WHITE AND NONWHITE PUBLIC ASSISTANCE TRAINEES ENROLLED IN MDTA INSTITUTIONAL PROGRAMS, CUMULATIVE THROUGH FEB. 28, 1965

(Percent distribution)

Characteristic	Public assistance enrollees in MDTA programs	
	White	Nonwhite
Family status:	100.0	100.0
Head of family	88.5	81.4
Other	11.5	18.6
Age:	100.0	100.0
Under 19 years	4.4	6.5
19–21 years	9.6	16.2
22–34 years	46.2	51.2
35–44 years	28.4	21.1
45 years and over	11.4	5.1
Education:	100.0	100.0
Less than 8th grade	8.4	7.4
8th grade	15.4	7.7
9th–11th grades	38.6	47.2
12th grade	34.0	32.8
Over 12th grade	3.5	4.8
Weeks of unemployment:	100.0	100.0
Less than 5	14.3	12.2
5–14	17.0	12.9
15–26	12.9	11.1
27 or more	55.8	63.7

NOTE: Detail may not add to totals due to rounding.

Six additional States—Missouri, West Virginia, Massachusetts, Connecticut, Indiana, and Wisconsin—which follow in ranking order with between 300 and 500 public

assistance enrollees, account for another 16 percent. Thus, more than three-quarters of all public assistance enrollees are concentrated in 12 States, with the balance more or less thinly scattered in the remaining 38 States.[5]

Enrollment of public assistance recipients has followed closely the geographic pattern for the overall institutional training program. These enrollees have been reached most substantially in the larger, more densely populated, and more industrially developed States—those having the most expansive training programs, whose large cities have concentrated and identifiable poverty-stricken populations and broadly developed public assistance programs. The one exception is West Virginia, where the high proportion of public assistance enrollees would seem to reflect both the impoverished status of a large sector of its population and the relatively extensive and vigorous training effort which has been made to deal with its widespread unemployment and poverty. (See table 4.)

OCCUPATIONAL TRAINING

In the overall MDTA institutional program, training has been provided in over 600 occupations. For the public assistance enrollees the occupational range is narrower, covering some 400 occupations, but nevertheless encompassing all major occupational categories.

The occupational training pattern of public assistance enrollees is not too dissimilar from that for all institutional trainees, although some differences are to be noted. These differences are the heavier concentrations of public assistance enrollees in less skilled occupations and their underrepresentation in the more skilled occupational categories—a reflection of the difficulties experienced by all disadvantaged groups in qualifying for training and jobs. Thus, proportionately 1½ times as many public assistance trainees as all institutional trainees were enrolled in service occupations.

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[5] Public assistance enrollees are also reported for Puerto Rico and the Virgin Islands, but their numbers are negligible and therefore not referred to in this report.

TABLE 4. NUMBER OF PUBLIC ASSISTANCE RECIPIENTS AND OF ALL TRAINEES IN MDTA INSTITUTIONAL PROGRAMS, BY SELECTED STATES, CUMULATIVE THROUGH FEB. 28, 1965

State	Public assistance enrollees		All enrollees in MDTA institutional programs	
	Number	Rank	Number	Rank
Total	13, 978	(1)	158, 400	(1)
Total, selected States	10, 854	(1)	84, 544	(1)
Pennsylvania	2, 410	1	10, 851	3
California	1, 841	2	13, 355	1
Illinois	1, 638	3	10, 295	4
Michigan	1, 070	4	7, 428	6
New York	1, 035	5	11, 956	2
Ohio	581	6	7, 440	5
Missouri	435	7	5, 140	9
West Virginia	430	8	2, 282	22
Massachusetts	411	9	4, 998	10
Wisconsin	342	10	2, 634	20
Connecticut	340	11	4, 457	11
Indiana	321	12	3, 708	16

[1] Negligible amount.

Over two-fifths of all institutional MDTA trainees are to be found in seven ranking training occupations: Licensed practical nurse, stenographer, typist, nurse aide/orderly, welder, automobile mechanic, and general machine operator. (See table 5.)

Despite the fact that public assistance trainees tend to be underrepresented in the skilled occupational categories when compared with all MDTA institutional trainees, the heaviest concentration nevertheless is in the skilled category, where almost one-quarter of all are to be found. All but a handful of these trainees are men, accounting for some 45 percent of all the male public assistance trainees studied. The principal skilled occupations—4accounting for almost one-quarter of all public assistance trainees in this category and over one-quarter of the men—are: Welder, automobile mechanic, and automobile body repairman. On an individual occupational basis, the largest

TABLE 5. TRAINING OCCUPATIONS OF PUBLIC ASSISTANCE RECIPIENTS AND ALL MDTA INSTITUTIONAL TRAINEES CUMULATIVE THROUGH FEB. 28, 1965

(Percent distribution)

Occupation trained for	Public assistance trainees			All MDTA trainees		
	Total	Male	Female	Total	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0
Professional and managerial [1]	7.8	2.5	13.3	9.8	7.2	13.8
Licensed practical nurse	6.3	.3	12.3	4.8	.5	11.4
Other	1.5	2.2	1.0	5.0	6.7	2.4
Clerical and sales	21.7	2.5	41.3	22.5	3.7	51.0
Stenographer	6.8	.1	14.5	7.9	.3	19.5
Typist, clerk-typist	6.7	.6	12.8	6.0	.6	14.2
Clerk, general office	3.1	.1	6.0	2.2	.2	5.1
Other	5.1	1.7	8.0	6.4	2.6	12.2

Service	18.0	10.6	25.4	11.9	6.5	20.0
Nurse aide, orderly	6.7	1.5	11.9	5.3	1.2	11.6
Waiter/waitress	1.6	.7	2.6	1.1	.4	2.2
Building service worker	1.5	2.8	(2)	.6	1.0	(2)
Other	8.2	5.6	10.9	4.9	3.9	6.2
Agricultural	3.3	6.5	(2)	3.6	6.0	.1
Skilled	23.9	45.5	2.0	30.6	49.4	2.0
Welder	5.4	10.7	(2)	5.3	8.8	.1
Automobile mechanic	4.4	8.7	(2)	5.9	9.7	(2)
Automobile body repairman	3.2	6.3	(2)	3.0	4.9	(2)
Other	10.9	19.8	2.0	16.4	26.0	1.9
Semiskilled	18.8	24.3	13.1	18.7	23.6	11.2
Machine operator, general	5.8	11.5	(2)	6.6	11.0	(2)
Other	13.0	12.8	13.1	12.1	12.6	11.2
Other	6.4	8.1	4.8	2.9	3.6	1.9

[1] Training in this group is chiefly at the semiprofessional and technical level.

[2] Negligible amount.

NOTE: Detail may not add to totals due to rounding.

proportion of men was enrolled in training for the semiskilled occupation of general machine operator.

Training opportunities for women have been predominantly in the clerical and health fields. One out of every three women was being trained for the clerical occupations of stenographer, typist, clerk-typist, and general office clerk—a reflection of the nationwide shortages in these occupations. Over one woman trainee in four was being prepared for work in the rapidly expanding health field as nurse aide or licensed practical nurse.

But public assistance trainees tend to be more highly concentrated in occupations involving lower skill levels within the respective categories. For example, in the clerical and sales category, the proportions of public assistance and all trainees are not too dissimilar, but relatively more public assistance trainees have been enrolled in typist and general office clerk courses and less in stenography courses. Similarly, in the semiprofessional and technical group, relatively more public assistance than all trainees were enrolled in courses for licensed practical nurse but fewer for draftsman. And in the service category, the proportions of public assistance enrollees assigned to courses for such occupations as housekeeper, waitress, and building service workers, although small, were greater than those in the overall program.

HIGHER SKILLS FOR TRAINEES

Training for most public assistance enrollees is a step up the occupational ladder. This is clearly evidenced by a comparison between the earlier employment of these trainees and the occupation for which they have been trained.

Before entering training, only 1 percent of these trainees had been employed at the professional, semiprofessional, or managerial level. Yet the number receiving training in this category—most often as licensed practical nurse—was approximately 1 out of 12. Again, the proportion trained for skilled work—almost all of them male trainees—more than quadrupled the proportion previously employed in such occupations, while the proportion in the

semiskilled classification rose from 17 percent prior to training to 19 percent in training. For clerical and sales occupations the increase was from 15 to 22 percent.

At the same time, MDTA training has promoted a shift out of service occupations. Whereas the largest concentration of these trainees, 22 percent, had previously been service workers, only 18 percent have received training in this field. (See table 6.)

Both men and women, whites and nonwhites, are improving and expanding their work skills and, in so doing, attaining higher occupational status. Though almost 30 percent of the male public assistance trainees previously worked at unskilled jobs, MDTA training has prepared almost one-half of them for skilled work, and about one-fourth of them for semiskilled work. Increased occupational mobility is also indicated for the 12 percent of the men who formerly worked only at entry jobs or had no prior work experience. One out of every 10 of these trainees was enrolled for training in semiprofessional or technical work, an additional two-fifths for skilled work, and one-fifth for semiskilled work. (See table 7.)

Public assistance trainees have also attained higher work skills. Over two-fifths were trained for clerical and sales positions, well above the 24 percent previously engaged in these occupations. Also, the proportion trained for service jobs (25 percent) was well below the one-third with prior experience in this field. Of the women who had worked in the service field, one-fifth were moving into semiprofessional and managerial work and one-fourth into clerical work. Work skills were also upgraded for the one-fifth of the women enrollees who had only entry or no previous work experience. Over two-fifths of this group (43 percent) were moving into clerical and sales jobs, one-fourth were shifting into service work, and another one-fourth into semiprofessional and technical and semiskilled work in almost equal proportions.

Thus, the overwhelming thrust of training was toward upgrading trainee skills. But where the enrollees' capabilities were insufficient to enable them to adjust to market changes in labor demand, some enrollees received training in the same or even lower level skills. Such adjustments

TABLE 6. PRETRAINING AND TRAINING OCCUPATIONS OF PUBLIC ASSISTANCE RECIPIENTS ENROLLED IN MDTA INSTITUTIONAL PROGRAMS, BY SEX, CUMULATIVE THROUGH FEB. 28, 1965

Occupational group	Total		Men		Women	
	Pretraining	Training	Pretraining	Training	Pretraining	Training
Total:						
Number	(13,978)		(7,049)		(6,929)	
Percent	100.0	100.0	100.0	100.0	100.0	100.0
Professional, semiprofessional, and managerial [1]	0.8	7.8	0.9	2.5	0.8	13.3
Clerical and sales	14.5	21.7	5.6	2.5	23.5	41.3
Service	22.0	18.0	9.9	10.6	34.3	25.4
Agricultural	3.0	3.3	5.5	6.5	.5	[2]
Skilled	5.1	23.9	9.3	45.5	.9	2.0
Semiskilled	17.2	18.8	27.4	24.3	6.8	13.1
Unskilled	20.0	[2]	29.0	[2]	10.8	[2]
Entry or no prior work experience	16.7	[2]	11.8	[2]	21.7	[2]
Other	.7	6.5	.7	8.1	.7	4.7

[1] MDTA training in this group is largely at the semiprofessional or technical level.

[2] Negligible amount.

NOTE: Detail may not add to totals due to rounding.

were necessary to enable them to achieve gainful employment.

Men who formerly worked in skilled occupations and women who had worked in clerical and sales positions made the fewest occupational changes. Three out of five men formerly in skilled occupations were improving or updating their work skills to meet employment requirements for jobs at the same general skill level. However, one out of five of these workers was accepting training that would lead to a semiskilled level but would restore him to gainful employment. Seventy percent of the women with previous experience in clerical and saleswork were also improving their skills in the same occupational category.

TABLE 7. COMPARISON OF TRAINING OCCUPATIONS AND PRIMARY OCCUPATIONS OF PUBLIC ASSISTANCE RECIPIENTS ENROLLED IN MDTA INSTITUTIONAL TRAINING, CUMULATIVE THROUGH FEB. 28, 1965

Training occupation	Previous primary occupations								
	Total	Professional and managerial	Clerical and sales	Service	Skilled	Semiskilled	Unskilled	Entry	Other
ALL TRAINEES									
Total:									
Number	13,978	115	2,024	3,075	715	2,405	2,793	2,336	515
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional and managerial [2]	7.8	20.0	12.5	16.1	5.0	4.7	4.7	11.3	1.4
Clerical and sales	21.7	25.2	59.3	20.5	6.0	7.0	7.8	30.7	7.0
Service	18.0	10.4	8.7	35.8	9.1	10.3	14.3	19.6	10.1
Skilled	23.9	24.3	9.1	10.0	54.1	42.7	34.3	14.7	21.2
Semiskilled	18.8	15.7	9.2	12.7	20.3	27.5	27.6	15.6	17.1
Other [1]	9.8	4.3	1.2	4.9	5.4	7.9	11.3	8.1	43.3

MEN									
Total:									
Number	7,049	63	396	696	654	1,931	2,042	830	437
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional and managerial [2]	2.5	14.3	7.8	4.9	3.8	3.0	3.1	10.6	1.4
Clerical and sales	2.5	6.4	11.2	1.2	2.7	.9	.9	7.5	1.0
Service	10.6	7.9	13.9	27.3	8.1	7.4	10.7	7.6	5.5
Skilled	45.5	42.9	43.2	35.3	59.0	52.1	45.7	39.5	24.9
Semiskilled	24.3	22.2	20.2	21.1	20.8	28.2	26.3	22.2	16.7
Other [1]	14.6	6.4	3.8	10.0	5.5	8.6	13.2	12.6	50.6
WOMEN									
Total:									
Number	6,929	52	1,628	2,379	61	474	751	1,506	78
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional and managerial [2]	13.3	26.9	13.6	19.3	18.0	11.6	9.1	11.7	1.3
Clerical and sales	41.3	48.1	71.0	26.1	41.0	31.8	26.5	43.4	41.0
Service	25.4	13.5	7.4	38.3	19.7	22.4	24.2	26.2	35.9
Skilled	2.0	1.9	.9	2.6	1.6	4.2	3.1	1.1	(3)
Semiskilled	13.1	7.7	6.6	10.3	14.8	24.9	31.0	12.0	19.2
Other [1]	4.7	1.9	.6	3.3	4.9	5.1	6.1	5.6	2.6

[1] Chiefly agricultural.
[2] Chiefly at the semiprofessional and technical level.
[3] Negligible amount.
Note: Detail may not add to totals due to rounding.

RESULTS OF TRAINING

The unemployed who are eligible for public welfare assistance have been described as "the most destitute among the unemployed. Frequently, they labor under physical, intellectual, or emotional limitations that leave them with only marginal employability." [6]

Studies of various disadvantaged groups receiving MDTA training show that the disadvantages which limit job opportunities for the unemployed persist even after completion of training. This is true also of public assistance trainees. Thus, their employment rate (64 percent) is significantly lower than that for all enrollees who have completed institutional training (75 percent).

PLACEMENT BY SEX AND COLOR

Male public assistance enrollees who have completed training have had better job placement success than their female counterparts, as in the overall institutional train-

[6] *Programs To Aid the Unemployed in the 1960's,* by Joseph M. Becker, William Haber, and Sar A. Levitan (Upjohn Institute, 1965).

ing program. However, this differential is much less marked for the public assistance trainee than for all trainees. Among the public assistance "graduates," the employment rate for men was 66 percent, for women 62 percent. In contrast, among all MDTA institutional "graduates," the rate was 81 percent for men and 70 percent for women.

Public assistance "graduates" also have experienced more continued unemployment following training than their counterparts in the overall program. For the women public assistance "graduates," continued unemployment following training was close to 1½ times that of all women "graduates"—26 percent as compared with 18 percent. For men, the spread was even greater. Not only was the employment differential broader—65.5 percent as compared with the overall 80.5 percent—but their unemployment rate was twice that of all male institutional "graduates"—30 percent as compared with 15 percent.

Nonwhite public assistance "graduates" have a lower placement rate and a higher continuing unemployment rate than both their white counterparts and their counterparts in the overall institutional program. (See table 8.)

PLACEMENT RESULTS BY OCCUPATION

The best placement results for male public assistance enrollees were attained by those trained in skilled occupations—and the least successful placement involved the small number trained in agricultural occupations. But of all the individual occupations in which men were trained, the highest placement rate was achieved by those trained as general machine operator in the semiskilled category. The placement rate for this occupation was only moderately lower than the comparable rate for the total institutional program, in marked contrast to the generally disparate placement rates in other occupations between public assistance and all institutional trainees.

Female public assistance "graduates" trained in the semiprofessional and technical category (virtually all as licensed practical nurses) have had a placement record of almost 100 percent—better than the record for all women MDTA "graduates" in this field. The poorest showing

TABLE 8. LABOR FORCE STATUS OF PUBLIC ASSISTANCE AND ALL TRAINEES WHO COMPLETED MDTA INSTITUTIONAL PROGRAMS, THROUGH OCTOBER 1964

(Percent distribution)

Item	Total	Employed	Unemployed	Not in labor force
Total trainees:				
Public assistance	100.0	63.6	27.6	8.8
All MDTA	100.0	75.3	16.6	8.1
Male:				
Public assistance	100.0	65.5	30.4	4.1
All MDTA	100.0	80.5	15.4	4.1
Female:				
Public assistance	100.0	62.3	25.6	12.2
All MDTA	100.0	69.8	17.9	12.3
White:				
Public assistance	100.0	65.8	24.7	9.5
All MDTA	100.0	77.5	14.0	8.5
Nonwhite:				
Public assistance	100.0	61.9	30.6	7.4
All MDTA	100.0	69.3	24.0	6.6

NOTE: Detail may not add to totals due to rounding.

was made by the limited number of women who received training in the semiskilled occupations, less than half of whom succeeded in obtaining jobs. In the service category the record was slightly above the average for all female public assistance "graduates," but somewhat lower than that for their counterparts in the overall program. Nurse aide "graduates," comprising the largest single component of the service occupations trainees, show a placement rate well above that for all female public assistance "graduates" and only slightly less than that for women in the overall MDTA programs trained in this occupation.

In the clerical and sales field, female public assistance "graduates" had a placement rate of 60 percent as compared with the overall rate of 70 percent for their counterparts in the total MDTA program. The best success was

achieved by those trained as stenographers; the least, by general office clerks. (See table 9).

TABLE 9. EMPLOYMENT EXPERIENCE OF PUBLIC ASSISTANCE AND OF ALL TRAINEES WHO COMPLETED MDTA INSTITUTIONAL PROGRAMS, THROUGH OCTOBER 1964

Occupation trained for	Placement rate of graduates as a percent of all persons completing training in category			
	Men		Women	
	Public assistance	All MDTA	Public assistance	All MDTA
Total	65.5	80.5	62.3	69.8
Semiprofessional and technical	(1)	86.4	97.7	87.8
Licensed practical nurse	(1)	(2)	97.6	89.6
Clerical and sales	(1)	75.1	59.5	69.8
General office clerk	(1)	(2)	53.7	67.8
Stenographer	(1)	(2)	68.4	74.3
Clerk-typist and typist	(1)	(2)	58.2	69.6
Service	66.2	75.4	63.5	68.8
Nurse aide, ward attendant	(1)	(2)	67.8	71.2
Agricultural	48.5	75.4	(1)	(2)
Skilled	70.5	82.2	(1)	(2)
Welder	69.1	83.9	(1)	(2)
Automobile mechanic	69.7	83.1	(1)	(2)
Auto body repairman	69.2	85.2	(1)	(2)
Semiskilled	65.6	79.0	(1)	(2)
General machine operator	79.6	85.8	(1)	(2)

[1] Percent not computed where base is less than 50 graduates.
[2] Negligible amount.

POSTTRAINING EARNINGS

Once employed, public assistance "graduates" earned almost as much as all MDTA institutional "graduates." Reflecting greater proportions in occupations at the lower

end of the skill and pay levels, their median hourly earnings were $1.60 as compared with $1.66 for all MDTA "graduates." Nevertheless, for one-quarter of those placed, average hourly earnings reported were over $2, not significantly below the comparable proportion of some 30 percent of all MDTA graduates.

Internal comparisons of the earnings levels of public assistance "graduates" show tendencies similar to those reported for all MDTA "graduates." Thus, as in the total program, the median earnings reported for white public assistance trainees were higher than those for nonwhites—$1.67 per hour as compared with $1.49. The spread between the median earnings of men and women was even more marked—$1.91 for men and $1.45 for women, with only 9 percent of the women but almost 50 percent of the men reporting average hourly earnings of $2 or more per hour. (See table 10.)

TABLE 10. POSTTRAINING EARNINGS OF PUBLIC ASSISTANCE AND ALL TRAINEES WHO COMPLETED MDTA PROGRAMS, THROUGH OCTOBER 1964

Straight time average hourly earnings	Total	Male	Female	White	Nonwhite
Median earnings:					
Public assistance graduates	$1.60	$1.91	$1.45	$1.67	$1.49
All MDTA graduates	1.66	1.95	1.46	1.71	1.50
Percent distribution, public assistance graduates	100.0	100.0	100.0	100.0	100.0
$0.50–$0.749	1.1	.7	1.4	1.1	1.1
$0.75–$1.149	11.5	5.0	16.4	8.7	15.2
$1.15–$1.249	4.8	.4	8.1	2.3	8.3
$1.25–$1.499	25.0	18.3	30.2	23.2	26.8
$1.50–$1.749	18.8	17.6	19.7	21.3	15.2
$1.75–$1.999	13.9	12.4	15.0	16.0	11.3
$2.00–$2.499	14.3	22.4	8.1	16.4	11.5
$2.50–$2.999	7.5	16.2	.8	7.2	8.4
$3 and over	3.1	7.0	.2	3.8	2.1

NOTE: Detail may not add to total due to rounding.

THE ROLE OF THE MDTA IN PERSPECTIVE

The foregoing data are meaningful not only for the immediate objectives achieved but also for their far-reaching implications. Public relief rolls since World War II have followed an upward trend. The total in this Nation now numbers close to 8 million—1 in every 25 citizens—at an annual public cost running into the billions. Every public assistance recipient trained and thereafter placed in employment checks this trend for himself and reduces the burden to be borne by society.

The record compiled on public assistance recipients drawn into MDTA training is an example of the MDTA's potential. Admittedly the number involved is small, as is the total program when viewed in relation to the national problem with which it is dealing. The record is significant in that it demonstrates that the unemployed—even the most destitute and deprived—can through training attain self-sufficiency.

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Technological change in the automotive industry has been a gradual, steady evolutionary process which has been both a cause and a result of the growth of the industry. The continued introduction of new methods and new machinery has been characteristic of the industry and the continuing process has been met with gradual improvement in work skills through on-the-job training and other programs to enrich employee capability. This procedure of adjustment by employers has not been permitted to lag behind the pace of technolgoical change. Both management and labor have recognized the need for successfully handling the problems associated with technological change and have cooperated in developing programs, policies, and procedures to ease employee adjustment. The benefits of sustained technological advancement have been shared by the industry and its employees through (1) an acceptance of changes as normal, (2) an orderly collective bargaining relationship to protect employee interests and security, (3) an investment in better tools, machinery, and equipment, (4) better organization and better management methods, and (5) an expanding output creating new jobs faster than old jobs have been eliminated. (HC)

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TECHNOLOGICAL CHANGE & EMPLOYMENT IN THE AUTOMOTIVE INDUSTRY

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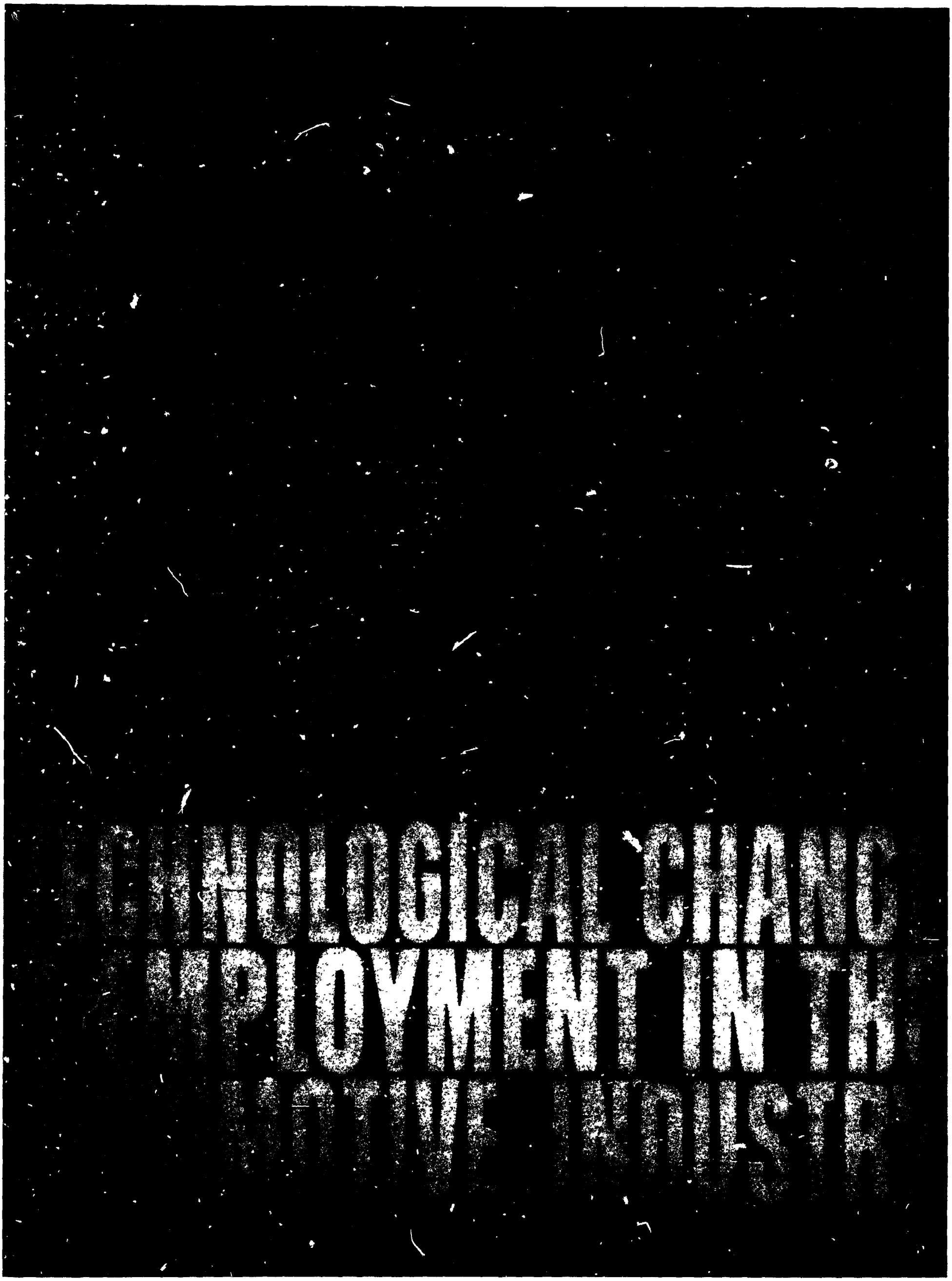
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WASHINGTON
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366 MADISON AVENUE

AUTOMOBILE MANUFACTURERS ASSOCIATION, INC.

320 NEW CENTER BUILDING • DETROIT, MICHIGAN 48202 • TRINITY 2-4311

ROY ABERNETHY, PRESIDENT
HARRY A. WILLIAMS, MANAGING DIRECTOR

September 30, 1965

Mr. Garth L. Mangum
Executive Secretary
National Commission on Technology,
Automation and Economic Progress
P. O. Box 6198, Apex Station
Washington, D. C. 20004

Dear Mr. Mangum:

The attached statement is in response to your request for our opinion on the items covered by the mandate of the National Commission on Technology, Automation and Economic Progress.

Our statement does not attempt to cover all the points in the Commission's very broad mandate. Many of these questions are beyond the scope of our experience and competence. We have confined our reply to an area where we may have something to contribute -- the experience of the automotive industry.

We thank you for seeking our opinion and hope the attached statement will be useful to you.

Very truly yours,

Harry A. Williams

Harry A. Williams
Managing Director

PERHAPS nowhere in America are people more accustomed to change than in the automotive industry. This is a natural consequence of being a part of a dynamic industry which produces new models of a wide variety of cars and trucks each year. In order to serve the public and satisfy its appetite for quality products at attractive prices, the industry spends millions of dollars annually in "tooling up" for the new models. During each calendar year those in the industry experience the close of one model year, the annual changeover to new model production, and the commencement of a new model year. Tooling programs, equipment changes, conveyor line rearrangements, the introduction of new machinery, changes in methods and processes—these and many other activities take place during the annual model changeover or are scheduled to be completed at the time new model production begins.

Model changeover, of course, is not the only time innovations and technological change take place in the automotive industry. Changes of all types, including engineering changes in the product, changes in production methods and changes in the equipment being used, are an everyday occurrence throughout the entire model year. As a consequence, everyone in the industry is accustomed to change as a natural, expected and inescapable way of automotive life.

It should be apparent to anyone familiar with the industry that, over the years, the technological change in the automotive industry has been an evolutionary, not a revolutionary, process. It has been gradual and steady since the industry began. It has been an essential part of the business. It has been both a cause and a result of the impressive growth of the automotive industry.

In the automotive industry technological changes have been accompanied by expanding, not declining, employment. Since the start of the current economic expansion in 1961, for example, employment in the automotive industry has increased by almost 300,000. The demand for motor vehicles has increased tremendously since the industry began. Cars and trucks have been improved both by the addition of new features such as power steering, power brakes, air conditioning, and by changes in basic features, such as improved engines, suspension systems, and automatic transmissions, requiring additional manhours of labor. During the recent eight-year period of price stability in the economy, the industry has been able to offer the customer an improved car each year at virtually the same price.

Technological change has been a manageable process that has not displaced nor rendered obsolete overnight the skills of large groups of employes. At the present time, there is no evidence that a substantial change in the pace or the nature of technological change will occur in the automotive industry.

Past experience probably provides the best guide to the effect of technological change on future automotive industry employment levels and skill requirements. From that viewpoint, technological change has historically caused no drastic or rapid shift in the nature of employe skills required by the industry. The education and skills of the automotive industry's work force has improved gradually and this may be expected to continue because such improvement is taking place generally across the entire country.

For the foreseeable future, as in the past, a large proportion of the blue collar job assignments in the automotive industry will be ones that can be learned quickly. In any event, as in the past, any changes in skill requirements which do occur will no doubt be met primarily by training industry employes for the new jobs as they appear.

Employe Wages, Benefits and Working Conditions

The improvement in the nation's productivity, to which the automotive industry has contributed has resulted in higher standards of living for automotive industry employes. During the period 1947 to 1964, real hourly wages in the industry increased 57%. In addition, employes have been provided a part of the increase in their standard of living in the form of supplementary benefits such as sickness and accident benefits, hospital and surgical expense coverage, life insurance, pensions, unemployment benefits, and longer paid vacations and more paid holidays. Moreover, technological progress has resulted in improved working conditions as automotive jobs have become substantially safer and more attractive over the years.

Technological Change and Employment Security

Both management and Union leaders in the automotive industry have recognized the desirability of technological change. Collective bargaining in the automotive industry has not been characterized by conflict over featherbedding, issues that have retarded technological advance and assumed major importance in collective bargaining in other industries.

For the past fifteen years, automotive industry union contracts have contained the following paragraph which is indicative of the attitude of management and the unions toward technological progress:

> *The annual improvement factor provided herein recognizes that a continuing improvement in the standard of living of employes depends upon technological progress, better tools, methods, processes and equipment, and a cooperative attitude on the part of all parties in such progress. It further recognizes the principle that to produce more with the same amount of human effort is a sound economic and social objective . . . .*

In its labor agreements, automotive management has retained the right to introduce changes in products, tools, methods, and processes at any time. The industry has thus been free to introduce technological changes as rapidly as they become technically and economically feasible.

Changes in methods and in products are an everyday occurrence in automotive plants. This has been the nature of the business since the beginning of the industry. As a consequence of changes, jobs and groups of jobs have been eliminated and at the same time other jobs have been created. For over twenty-five years the companies and the unions have had an established, orderly and fair way of handling such situations associated with both the elimination and the creation of jobs. This favorable environment has made possible gradual, evolutionary changes without sudden, major employment dislocations or shifts.

Any employment shifts attributable to technological changes which have occurred have not affected the security of large numbers of employes. The policies and procedures of the automotive industry have minimized the impact on employes of such dislocations as are from time to time caused by technological change.

Many of these policies worked out through collective bargaining have been incorporated in industry labor agreements for many years. They have helped the industry and its employes adjust to technological change efficiently and with a minimum of human hardship. They help answer such questions as what wage rates are paid for new jobs, what happens when an employe's job is eliminated by a new process or machine or when a major operation is transferred to a new location or, as in rare cases, when a plant is permanently shut down.

These policies have successfully met the problems associated with technological change in the automotive industry for more than a quarter of a century. For that reason, a discussion of some of the main features of the industry's job and income security programs as they relate to technological change might prove helpful to the Commission.

A DISCUSSION OF AUTOMOTIVE INDUSTRY PROGRAMS, POLICIES AND PROCEDURES AS THEY RELATE TO TECHNOLOGICAL CHANGE

THE companies in the automotive industry have many programs, policies and procedures which relate to technological change. As to those technological changes which affect employes and their rights, labor contract provisions have been worked out through collective bargaining with unions representing these employes. Some of these provisions have been negotiated to apply specifically to situations in which technological changes affect employe rights and job security. Others, though intended to apply in broader areas, are applicable as well when technological change occurs.

Dealing with Job Displacements

Displacements of employes which occur in the automotive industry as a direct result of technological change ordinarily affect relatively few employes at any one time. Although individual company seniority provisions differ somewhat in detail, they have all been characterized by a broadening of the base or the area in which employes may exercise seniority and thereby increase their job security.

Employes displaced are transferred in accordance with their seniority to jobs in the plant which they are capable of performing. These jobs are comparable in pay to their former jobs. In the automotive plants there are a wide variety of job assignments on which a great many employes are interchangeable. Accordingly, it is not difficult to locate a job to which

an employe exercising his seniority can be assigned. This is particularly true in the case of longer service employes who have worked on numerous job assignments in past years. Therefore, it is a rare occasion indeed when a long service employe is unable to exercise his seniority and remain at work on a job he can do.

In cases where layoffs do occur in the automotive industry, whether as a result of technological change or any other reason, a number of procedures are available for the employe's protection. One of these is area hiring preference.

Under the area hiring procedure, employes laid off from one plant are given preference over new job applicants for employment at whatever other plants the employer may have in the area. The effect is to pool each company's work force in a given labor market area to enable employes to flow smoothly from plants where employment may be declining to plants where jobs are available as a result of increases in output or for other reasons. In Flint, Michigan, one General Motors multi-plant community, employes may shift between twelve AC Spark Plug, Chevrolet, Buick, Ternstedt and Fisher Body Plants and Warehouses. In the Detroit area, Ford employes may shift between 26 plants and Chrysler employes between 27 plants. Since 1951, over 30,000 Ford employes have been placed under the preferential hiring agreement covering the Detroit area. Laid off automotive industry employes are also given preferential hiring treatment in new plants established by their employer.

Negotiating Wage Rates for New Jobs

Wage rates for job classifications have been negotiated between employers and unions in the automotive industry for over twenty-five years. This orderly method of establishing wage rates has been applied whenever job classifications were needed in a plant for which a wage rate had not already been agreed to by the parties. Thus, this method has been used whenever technological changes resulted in a new job classification being created. The process has become routine with the management and union representatives having responsibility for establishing negotiated wage rates.

To set rates for new jobs placed into production which cannot properly be placed into an existing classification, management establishes a temporary job classification and rate. As soon as possible thereafter, management and the union negotiate a permanent rate for the classification. If management and the union disagree whether a new classification and rate should be negotiated, the dispute may be submitted to an impartial umpire for determination. The umpire may rule that the job properly fits into an existing classification or that it is a new job which fits no existing classification. In the latter event, the parties have the responsibility to negotiate a new classification and rate. The new rate and classification then become a part of the existing wage agreement.

Plant Closings and Transfers of Major Operations

The closing of a plant or the transfer of a major operation to another location is the best example of the full range of programs available to protect employes.

Whenever management decides to close a plant or to transfer major operations, the union is informed in advance and a memorandum is negotiated regarding the rights of employes affected. The protective programs can be and are as varied as the needs of the employes involved.

Employes who wish to continue their careers with the company and accept transfer to the new location retain full seniority and full rights under all benefit plans. To further encourage employe mobility, the transferred employes may be eligible for a moving allowance of up to $580.

Many employes may understandably wish to remain in their present home communities. If the employer has other plants in the area, employes will be given preference over new applicants for jobs available in these plants under the area hiring procedure already discussed. While awaiting placement under this program or seeking work with another employer, employes can receive up to 52 weeks of supplementary unemployment benefits which, in conjunction with state unemployment benefits and earnings, if any, will provide approximately 62 per cent of weekly earnings for a 40-hour week plus $1.50 a week for each dependent up to four. In addition, such an employe would be protected by fully paid hospital, medical and surgical insurance coverage for up to one year.

If the opportunity for employment at another company facility in the area is unlikely, the employer assists the employes in finding jobs with other firms in the community.

Older employes can take advantage of the early retirement program. Under the flexible retirement age provisions of industry pension agreements, the normal retirement age is 65, the automatic retirement age is 68, and the early retirement age may be as low as 55. In the case of plant closings or transfers of major operations, special early retirement provisions are applied. These permit employes who are at least age 55 with 10 years of credited service to retire with unreduced life income benefits of $4.25 per month for each year of credited service. Such employes receive an additional $5.20 per month per year of service, up to a maximum of $130, until they reach age 65 or become eligible for unreduced Social Security benefits. After September 1, 1965, employes who retire prior to age 65 may also be eligible for a new supplemental allowance which can raise total monthly retirement income from the company up to $400 until they reach age 65.

Employes who do not transfer to the new location or who are not placed under the area preferential hiring procedure, and who are not eligible for retirement benefit, may be paid a separation allowance equal to as much as a full year's pay.

They will become eligible as early as age 60 for a deferred vested benefit under the retirement plan, if they had at least 10 years of credited service.

Thus, with transfer rights and moving allowances, area preferential hiring and supplemental unemployment benefits, early retirement, and separation payments and vested pension benefits, employes and their families are well protected when a plant closing or a transfer of a major operation is necessary for any reason, including technological change.

Training and Retraining

Just as technological change is an everyday occurrence in the automotive industry, so are the training and retraining activities which are carried on as a routine, normal part of doing business. The frequent changing of automotive industry job assignments means that the industry's retraining task never ends.

As jobs are changed and new jobs created, new employes must be trained and employes must be retrained in order to fill them. In most cases, the training required by individual employes is accomplished by brief periods of on-the-job training. The actual experience of an assembly plant going from a one-shift to a two-shift operation provides an excellent example. Over a period of four to six months, a total of 1,057 new hourly rate employes were hired. This group received 67,280 hours of on-the-job training or approximately 64 hours per employe. In addition, 73 hourly employes who were promoted to foremen as a result of the addition of the second shift received 19,050 hours of presupervisory classroom training. For the majority of these employes this represented between six to eight weeks of intensive classroom training, plus one to three-day assignments in the various departments.

On some occasions equipment changes are of such magnitude that more formal training is required, particularly for skilled employes. Such training may involve longer periods of time, classroom work and instruction by equipment manufacturers.

During 1964, Ford had about 23,000 enrollments in various retraining programs. Of these, 13,100 or 57 per cent were by hourly employes. The hourly retraining activities included over 2,000 enrollments in various subjects pertaining to the production of steel by the basic oxygen furnace method, over 7,000 in the maintenance and operation of arc welding equipment and ultra-sonic weld testing, and over 200 in the maintenance of a new pivoting pillar body buck. Also, in 1964, a 19-week electronics program in the maintenance of new automated forging equipment was established.

In GM, also, formal training courses in addition to on-the-job training are provided for hourly employes. In one GM plant with 2,400 employes, 22,981 hours of specialized training were given 838 employes in one year. The training ranged from one-hour classes and safety lectures to teaching operators how to handle tape-controlled machines in courses that extended over several months.

The need for such highly skilled journeymen as electricians, tool and die makers, machine repairmen and pipefitters is a never-ending one, and close attention is paid to apprenticeship programs and keeping them up to date with manpower requirements. The four major automotive employers have approximately 15,000 employes enrolled in apprenticeship and on-the-job training programs leading to journeyman status. Through cooperation with technical high schools and community colleges, apprentices receive advanced course work related to their apprenticeship programs in such fields as electronics, mathematics, physics, chemistry, drafting, tool and die design, metallurgy, hydraulics, combustion, operating engineering and similar technical subjects.

Apprentices are paid for the hours of training in the plant and for the time spent in required classroom training. Their rates are increased in eight increments from a minimum of $2.70 per hour plus cost of living allowance to the regular journeyman rate for their trade as they satisfactorily complete the four-year apprenticeship period. Tuition and registration fees for classroom training are paid by the companies, and a special payment is made toward the purchase of tools for the apprentice.

In addition to apprentice programs, several companies in the industry also use the upgrading method to develop skilled tradesmen. Qualified employes are given on-the-job training in skilled job classifications through the "Employe-in-Training" or "E.I.T." Program. It provides the opportunity to attain journeyman status for employes who were unable to serve a formal apprenticeship but who have acquired the skill and ability of trained mechanics. Such employes are eligible to be reclassified as journeymen by agreement with the union after they have served in a particular skilled classification for ten years.

As an incentive for voluntary education improvement the automotive companies offer their employes tuition refund plans. Under these plans employes who satisfactorily complete college or other specially approved course work in their spare time receive a full refund of their tuition expenses up to a maximum of $250 a year. By participating in this program, employes may further their formal education.

Since the tuition refund plan was extended to hourly employes for the first time in the fall of 1964, no data are available on utilization. However, these plans have been available to most salaried employes for a number of years. In the major automobile companies in 1964, over 20,000 salaried employes completed college, post graduate or other specially approved courses under the plans. In some cases, employes who wish to leave work to continue their education full time may be granted leaves of absence for up to twelve months, with seniority accumulating during the leaves. Such leaves may be renewed for additional periods.

Summary and Conclusions

The automotive industry and its employes have shared in the benefits of sustained technological advance. This has been possible for four reasons:

1. Acceptance of changes as normal, continuing and essential in the automotive industry with programs, policies and procedures effectively protecting the interests of all concerned;
2. An orderly collective bargaining relationship with definite policies to protect employe interests and security;
3. Investment in better tools, machinery and equipment, and by better organization and better management methods;
4. An expanding output which has created new jobs faster than old jobs have been eliminated.

New methods and new machinery have always been characteristic of the automotive industry. Because technological advance has been a continuing process rather than an intermittent, disruptive one, it has been accomplished with resulting benefit to the existing labor force and not at its expense. Since changes in the methods of production have been adjusted to as each was introduced, the individual adjustments required have been small.

Years of gradual improvement in work skills through on-the-job training and other programs have done more to enrich employe capability than any one program of massive retraining could have accomplished. Thus, the procedure of adjustment by employes has not been permitted to lag behind the pace of technological change.

Both management and the unions have recognized the need for technological change and have cooperated to develop policies and procedures to ease employe adjustment. An orderly procedure to establish new jobs and job rates has allowed employes to fill the new jobs without costly friction. Where greater adjustments have been needed, they have been accomplished within the framework of a family of policies designed to protect employes when jobs were threatened for any reason—seasonal fluctuations, business recessions, changes in consumer taste or technological innovation. Plant-wide seniority protects the displaced employe in his plant.

Preferential area hiring widens employment opportunities. Transfers and moving allowances encourage employe mobility. Supplemental unemployment benefits, separation pay, vested pension benefits and placement assistance help employes find work with other firms with minimal financial sacrifice. Flexible retirement age provisions allow older workers to leave the work force and still maintain an adequate standard of living.

Expanding demand for the industry's products has been the greatest source of employment security in the automotive industry. Growth in output has enabled the industry to provide new job opportunities and to avoid layoffs which might otherwise have occurred because of technological change. In a vital sense growing output and improving technology have fed upon each other: technological advance has allowed the industry to produce improved vehicles which have attracted customers and resulted in higher sales, while higher sales and output have enabled producers to introduce new equipment and processes and thus to improve their products. In turn, both growing output and advancing technology have made possible greater protection of employes from hardship that might otherwise have been the outgrowth of change.

Improvement in the standard of living, the expansion of employment opportunities, and continued economic progress in the country can be assured only so long as there is continued technological progress.

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Civil Engineering Technology, Educational Needs of the Technical Worker.

California State Dept. of Education, Sacramento
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*CIVIL ENGINEERING TECHNOLOGY; CALIFORNIA

Civil engineering technical workers perform duties directly related to planning and supervising construction activities including estimating, purchasing, surveying, preparing specifications, drafting and designing. Job operational analysis reveals that civil engineering technical workers spend 57 percent of their work time in the performance of activities unique to the civil engineering field. Other operations include: (1) supervising, appraising, and training subordinates, 1½ percent, (2) inspecting production work of others, 8 percent, (3) planning research and construction operations, 13 percent, and (4) coordinating construction operations functions with other departments, 10 percent. Subject matter recommendations of industrial spokesmen, given in semester units, are: (1) civil engineering, 15, (2) physical science, 16, (3) mathematics, 9, (4) drafting and blueprint reading, 7, and (5) communications and supervision, 9. Surveys indicate industry expects to recruit a substantial portion of civil engineering technical workers from junior colleges. This booklet is part of a series containing information and recommendations designed to assist California junior colleges in developing occupation-centered curriculums. (HC)

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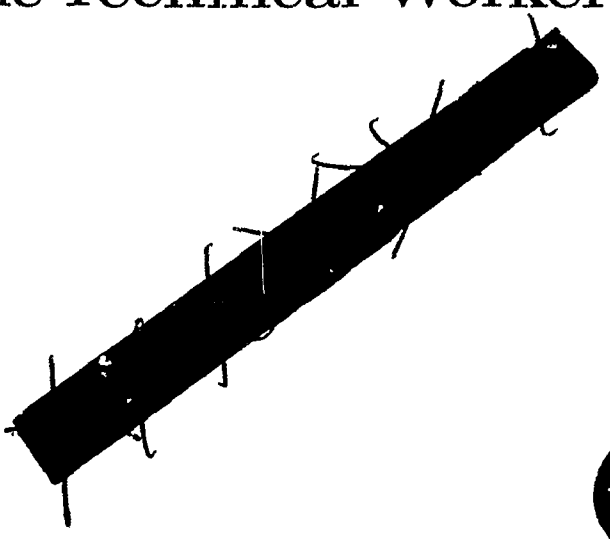
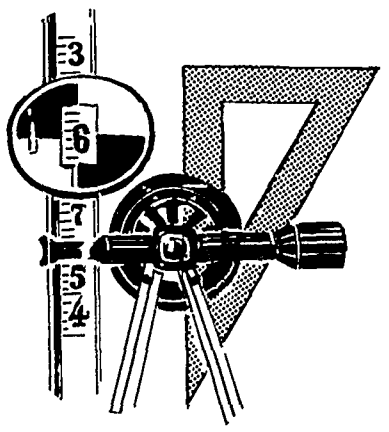
Educational Needs Of
The Technical Worker





Civil Engineering Technology

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California
State
Department
Of Education

Max Rafferty
Superintendent of
Public Instruction

Sacramento
1963

FOREWORD

This booklet is part of a series containing information and recommendations designed to assist California junior colleges in developing occupation-centered curriculums. These curriculums will prepare students for employment as technical workers in a variety of fields. In this series are set forth recent occupational survey findings in connection with the needs of technical workers. Also presented are analyses of job operations and activities, profiles of competencies necessary for entry-level job placement, and recommendations for areas of and procedures for curriculum development.

We are hopeful that this series will help meet the growing demand for information designed to assist in the development of occupation-centered curriculums in technical education.

Max Rafferty

Superintendent of Public Instruction

PREFACE

In recent years junior colleges have demonstrated strong interest in the development in young people and adults of skills that are critically needed by the industries of California. The Bureau of Industrial Education, California State Department of Education, has assisted local junior colleges in studying manpower needs and developing occupation-centered curriculums. Appropriations provided under the National Defense Education Act of 1958 have aided these programs. Reliable profiles of the competencies demanded by industry for entry-level job placement in many technical classifications have been obtained from recently conducted occupational surveys.

This booklet is based primarily on the findings of a survey conducted for the Los Angeles Junior College District entitled Education and Training for Technical Occupations and supplemented by findings and recommendations made in other surveys, particularly the Survey of Vocational-Technical Needs for the Pasadena-San Gabriel Valley Area, conducted by the Pasadena City Schools, and the Science and Engineering Technician Study, a joint effort by San Jose City College, Foothill College, and the College of San Mateo.

This is the ninth in the Educational Needs of the Technical Worker series being prepared under the direction of Russ Journigan, Supervisor of Technical Education. Appropriations provided under Title VIII of the National Defense Education Act of 1958 aided in financing this project, also. Acknowledgment for assistance in coordinating the survey is accorded Donald D. Dauwalder, Special Supervisor, under the direction of Mack Stoker, Regional Supervisor, Bureau of Industrial Education, Los Angeles. Manuscripts were edited and prepared for publication in the Instructional Materials Laboratory.

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Chief, Division of
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Industrial Education

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INTRODUCTION

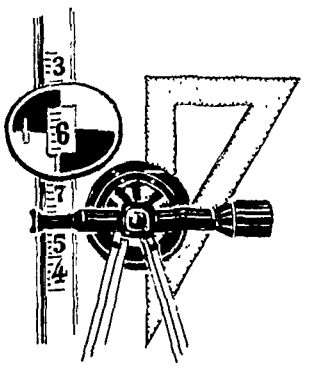
Civil engineering is the oldest and largest branch of the engineering profession. The work of the civil engineer may be seen in almost every structure erected in our modern world--the laying of our transportation systems, the handling of our water supply, and the erection of our buildings. These engineers design, plan, and supervise the construction, operation, and maintenance of highways, bridges, dams, water distribution and sewage disposal systems, railroads, airports, and many other structures and facilities.(1)[1] The civil engineering technical worker has the competence to translate the ideas of the engineer into plans meaningful to the skilled craftsman.

These technical workers assist engineers with many of the tasks necessary before ideas can become a realization. On construction projects, they help in cost estimation and preparation of specifications for materials, or they may participate in surveying, drafting, or designing work. When construction has started, they may assist the contractor or superintendent in scheduling construction activities and inspecting for conformance with blueprints and specifications. Others may work as surveyors, draftsmen, and estimators. Those working as surveyors determine the location and measurement of land areas and buildings for construction and other purposes. Estimators prepare estimates of the costs, materials, and time necessary in the construction or repair of various structures.(2)

[1]Sources referred to by number are listed at the end of this book.

Civil

Civil engineering technicians make use of the transit to solve field problems



Field data collected by the civil engineering technician is used to prepare such drawings as topographical maps

Engineering Technology

A civil engineering technology curriculum offers opportunities for a variety of student activities. Such practical experiences provide students with the knowledge and skills required to qualify for entry-level placement in the field of civil engineering technology.

Estimating construction costs by using the data taken from building plans is a function performed by the civil engineering technician

Job Analysis--Civil Engineering Technical Workers

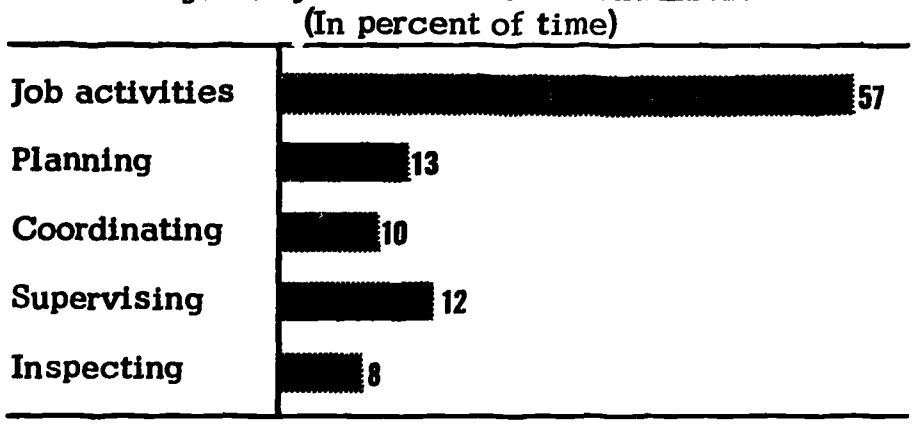
Job descriptions and operational analyses have been received from industry throughout the state. A composite of these descriptions and analyses indicates that civil engineering technical workers perform duties directly related to many of the planning, supervising, and direct job operations of constructing, estimating, purchasing, surveying, preparing specifications, drafting and designing as related to construction activities.

Civil engineering technical workers require high mathematical ability and spatial aptitude, including the ability to visualize three-dimensional objects from drawings and blueprints. They also need good motor coordination, including digital and manual dexterity. In addition, they should have strong technical and scientific interests, and, ideally at least, a talent for the abstract and creative.

Job Operational Analysis

These technical workers engage in the various job operations analyzed in Fig. 1. The time spent in these operations is taken up first with the performance of the unique activities of the civil engineering field (classified as job activities and discussed in a subsequent paragraph), representing 57 percent of over-all job time. The other operations comprising the total job time include those that are common to all or most technical worker fields. These are: supervising, appraising, and training subordinates, 12 percent; inspecting production work of others, 8 percent; planning research and construction operations,

Fig. 1. JOB OPERATIONAL ANALYSIS
(In percent of time)



13 percent; and coordinating construction operations functions with other units or departments, 10 percent.

Job Activity Analysis

Surveys of industry have indicated that, in performing actual job activities, civil engineering technical workers participate in many specific activities in the design, construction, maintenance, and operation of the structures and systems earlier described. These activities are considered here in six of the eight categories established as the result of a survey of technical workers in 1958 conducted by Dr. George L. Brandon.(3)

1. Activities in Working with Instruments. The activities to which technical workers in the civil engineering field devote the greatest percent of time are using instruments such as transits, levels, and plane tables in surveying; planimeters in determining areas; calculators, slide rules, and other computers in making estimates; and drafting instruments as required.

2. Activities in Working with Drawings, Reports, Records and Handbooks. The activities to which technical workers in this field devote the second greatest percent of time are working with blueprints and sketches; making freehand sketches, working drawings, and scale drawings; using engineering and technical manuals and handbooks; recording and compiling data; reading and writing technical reports; plotting curves and preparing diagrams and graphs.

3. Activities in Working with Equipment. Ranking third in job activity time is working with equipment, i.e., "the machinery, apparatus, furnishings, operating accouterments, etc., which surround them in industry."(4)

4. Activities in Working with Tools and Machines. Civil engineering technical workers perform machine and hand tool operations. These activities rank fourth in percent of job activity time utilized.

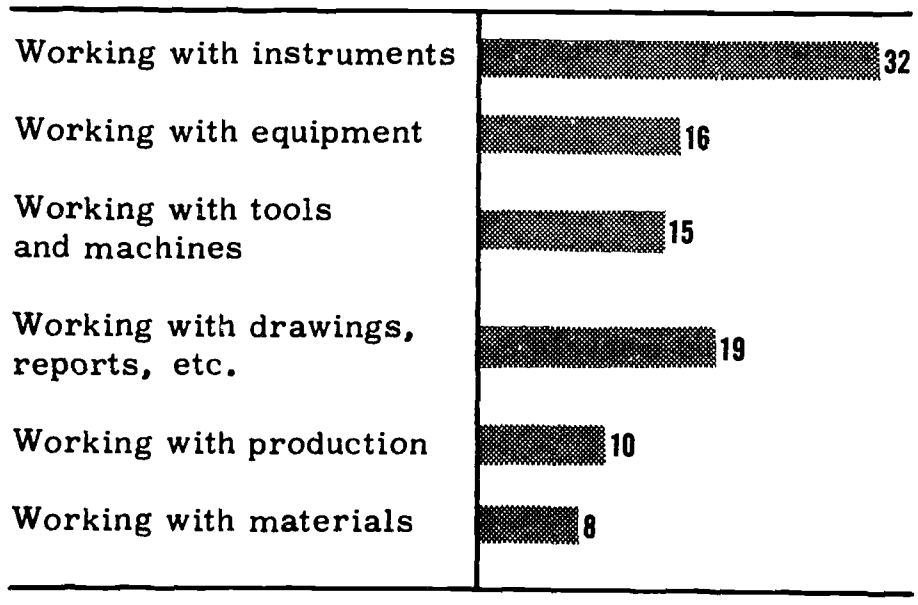
5. Activities in Production. Working in production, determining that construction work is executed in proper order, and inspecting the work as it progresses for conformance to blueprints and specifications are activities that occupy 10 percent of these technical workers' time.

6. Activities in Working with Materials. Working out specifications, calculating weights and strengths, conducting

research, and testing for stresses, strains, motion, and impact of materials are activities of civil engineering technical workers. They are involved in testing and working out specifications for materials. These activities comprise 8 percent of job activity time.

These activities include such functions as estimating costs, preparing designs, scheduling construction activities, and inspecting work in progress. In addition these technical workers may specialize in surveying, or they may be employed as foremen where they supervise skilled craftsmen and workers. Figure 2 presents an analysis of these job activities.

Fig. 2. JOB ACTIVITY ANALYSIS
(In percent of time)

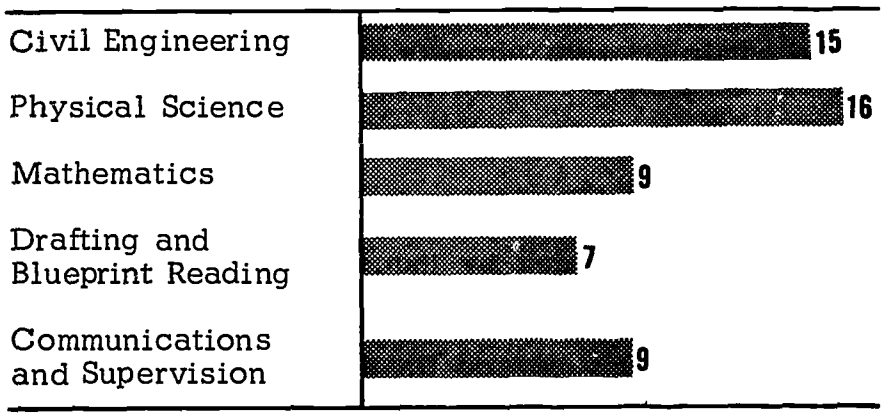


A Curriculum for Civil Engineering Technical Workers

A curriculum for technical workers consists of instruction in technical, scientific, and manipulative areas. An analysis of the occupation for which the training is offered is necessary to determine the content of a specific curriculum containing a major field of study. Such an analysis would also indicate the shop and laboratory equipment needed for duplicating basic industrial processes to the degree necessary to provide adequate training. The extent to which instruction processes involve actual job procedures would also be indicated.

The subject matter recommendations shown in Fig. 3 represent a consensus of the industrial spokesmen contacted during numerous surveys. The units suggested in the various subject matter areas are considered basic in developing competent civil engineering technical workers. It may be necessary, however, in view of the number of units recommended, to consider inclusion of some of the units in an educational program for technical workers that would continue following their entry into the civil engineering field.

Fig. 3. SEMESTER UNITS RECOMMENDED



Civil Engineering

A minimum of 15 units are required in specific subjects related to civil engineering. Ten of these units should be in basic civil engineering subjects and five units related directly to the field of specialization.

Physical Science

A broad knowledge of physical science in a specialty area is required. A minimum of 16 units should be offered; 12 of these should be in a specialty area, and four units related directly to the field of specialization.

Mathematics

These technical workers use all arithmetical functions. They work with fractions, percentages, ratios, decimals, measuring systems, etc. They require basic knowledge of addition, subtraction, multiplication, and division of exponents; the application of sine, cosine, and tangent functions; the use of logarithms; and the solution of problems involving angles and plane and solid geometric shapes. These mathematical functions can be combined into three semesters of technical mathematics or can be offered in traditional mathematics courses. Nine units are a minimum requirement.

Drafting and Blueprint Reading

A minimum of seven units in blueprint reading, drafting, and related subjects should be included in the curriculum.

Communications and Supervision

Five units in technical oral and written communications are recommended. To this should be added four units in supervision and administrative subjects. These programs should be specifically structured for this and related technical curriculums.

General and Related Courses

The units recommended by industry can be supplemented to meet the standards set for an Associate in Arts degree in civil engineering technology. All basic courses can serve as a foundation for further study beyond the degree or certificate that is issued so that students may continue their education throughout their job careers.

Equipment and Facilities

It is recommended that students in junior college curriculums for technical workers have access to physical science laboratory facilities and engineering testing laboratory facilities. Often

specialized equipment may be obtained through industry, and a district may be able to utilize shop and laboratory facilities in adjacent schools or industrial plants. Associations such as industry education councils and technical societies have expressed a willingness to cooperate with the schools in obtaining needed equipment from industrial and governmental sources and in coordinating distribution.

Extended Day Courses

Many civil engineering technical workers of the future will be obtained by upgrading current industrial employees who have completed courses in these recommended subject matter areas. Some of these employed technical workers may take sufficient courses to receive the Associate in Arts degree or the same certificate offered for day students. It is suggested that most new programs established by junior colleges could begin with extended day courses for employed workers that could be expanded later to include day courses.

Employment Opportunities in the Field of Civil Engineering

Results of recent studies indicate a large and growing need for civil engineering technical workers throughout California. A large number of additional technical workers in the civil engineering field will be required statewide during the next ten years. This need will not be uniformly distributed over the state; it will vary with the type of industrial development within specific communities and areas. Therefore, it is recommended that each junior college survey the manpower requirements in its district. This survey would necessarily include a review of industrial employment practices, emphasizing an analysis of the percent of technical workers to be employed following the completion of occupation-centered curriculums; and the percent to be recruited from other sources, including the upgrading of currently employed workers.

Civil engineering technical workers are employed by companies, contractors, and groups engaged in the construction of highways, railroads, bridges, dams, and other structures. There is a lack of uniformity in job titles assigned to positions with essentially the same duties. Twenty-four titles were found during the surveys to apply to jobs involving the duties and educational requirements outlined herein.

Surveys indicate that industry expects to recruit a portion of the needed civil engineering technical workers from students completing two years of post high school study. The reception given to these technical workers will depend primarily on the extent to which they have completed courses that successfully develop the competencies needed by industry for entry-level job placement.

Developing Technical Education Curriculums

Local junior college districts may wish to consider the following five items in developing technical education curriculums:

1. Conduct a study of manpower requirements in the district with the assistance of an industrial steering committee to determine industrial practices and needs.

2. Establish an advisory committee for each technical field in which a curriculum is being considered. This committee would help plan for the initial curriculum and evaluate programs. Various-sized industries as well as appropriate organizations and associations should be represented.

3. Adapt occupation-centered curriculums to the needs of local industry by setting definite achievement levels geared to the competencies required in a particular industrial area.

4. Evaluate continually each technical program.

5. Plan technical education curriculums cooperatively with adjacent junior college districts. It may not be practical for each junior college to offer every technical education curriculum requested by industry. Major areas of need can be covered on a district basis, while related areas of need can be referred to interdistrict coordinating committees.

Assistance Available from the Bureau of Industrial Education

The Bureau of Industrial Education of the California State Department of Education is able to assist in developing new programs and curriculums by supplying survey findings from other areas and by aiding in the conduct of new coordinated studies. Local districts may secure some financial help from state and federal vocational education funds. In addition, consultation service is available from the staff of the Bureau. The office of the Bureau of Industrial Education is in the Education Building, 721 Capitol Mall, Sacramento 14, California.

Regional Supervision

For the purpose of providing more effective local assistance to junior college districts throughout the state, three areas have

been established, each served by a regional office of the Bureau of Industrial Education. Local districts desiring assistance in any phase of trade and technical education should consult the appropriate regional office of the Bureau of Industrial Education.

The Regional Office for the Central Valley Area, 721 Capitol Mall, Sacramento 14, serves the following counties:

Alpine	Lassen	Shasta
Amador	Madera	Sierra
Butte	Mariposa	Siskiyou
Calaveras	Merced	Stanislaus
Colusa	Modoc	Sutter
El Dorado	Mono	Tehama
Fresno	Nevada	Trinity
Glenn	Placer	Tulare
Inyo	Plumas	Tuolumne
Kings	Sacramento	Yolo
	San Joaquin	Yuba

The Regional Office for the Northern Coast Area, 1111 Jackson Street, Room 4064, Oakland 7, serves the following counties:

Alameda	Marin	San Mateo
Contra Costa	Mendocino	Santa Clara
Del Norte	Monterey	Santa Cruz
Humboldt	Napa	Solano
Lake	San Benito	Sonoma
	San Francisco	

The Regional Office for the Southern Area, State Building, Room 809-I, 217 West First Street, Los Angeles 12, serves the following counties:

Imperial	Orange	San Luis Obispo
Kern	Riverside	Santa Barbara
Los Angeles	San Bernardino	Ventura
	San Diego	

Coordination

Since trade and technical education involves cooperation with many industry-oriented organizations, school administrators find it desirable to assign the responsibility of this cooperation to specially trained educators. These educators are normally qualified instructors who have occupational experience in industry and who are trained in translating manpower needs into educational programs. Depending upon its particular

organization or its size, the junior college district may use a supervisor, a coordinator, or both. In any case, these men are assigned responsibility to maintain adequate industry contacts in order to keep the junior college program abreast of the con-. tinual changes that are typical of industry. Some of their responsibilities may include working with industry consultants, advisory committees, employer and employee organizations; organizing course materials; obtaining instructional materials from industry; assisting in instructor recruitment, selection, and in-service training; cooperating with school counseling and guidance staff; and placing graduating students. They provide liaison between community, business and industry, and the school. In so doing, these men become effective public relations emissaries for the junior college.

Supervision of trade and technical education classes in a local junior college district or a combination of junior college districts requires the holding of a California supervision credential authorizing general supervision of trade and technical programs. Departmental supervision within one instituion or in one occupational field may be authorized as a part of the California teaching credential. The coordination of trade and of technical education requires the holding of a California teaching credential that authorizes such coordination. Detailed information about credential requirements may be obtained from the Trade and Technical Teacher Training Office at the University of California, Berkeley or Los Angeles.

References

(1) Occupational Outlook Handbook, U.S. Department of Labor, Bureau of Labor Statistics (Washington: 1961), p. 110.

(2) Ibid., p. 161.

(3) George L. Brandon, Twin Cities Technicians (East Lansing: Michigan State University, 1958), pp. 19-27.

(4) Ibid., p. 19.

VT 004 352
Marengo Experimental Vocational Program.

Community High School, Marengo, Ill.
MF AVAILABLE IN VT-ERIC SET.
Project No. 6052-A6
Pub Date - nd 81p.

PROGRAM EVALUATION; SECONDARY GRADES; *PROGRAM DESCRIPTIONS; *EXPERIMENTAL PROGRAMS; *WORK EXPERIENCE PROGRAMS; DROPOUT PREVENTION; STUDENT ATTITUDES; SELF CONCEPT; *OCCUPATIONAL GUIDANCE; *EDUCATIONALLY DISADVANTAGED

The Marengo Experimental Program provides educational program for the underachieving student with dropout characteristics. The value of the program lies in the degree to which these students are made to want to succeed. The program consists of: (1) Learning Laboratory Core emphasizing reading, speaking, mathematics, and occupational guidance, and (2) Vocational Work Experience Core in which the student gains vocational skills. Observation was used to evaluate the progress made by the 19 students (ninth grade level) included in the program. General conclusions were: (1) The individual's self-concept was improved, (2) The program succeeded in proving to the students that they can learn, (3) In unstructured interviews, the students expressed feelings of accomplishments, (4) As a result of their work experience, they now feel they can learn needed job skills. Plans are to continue the program at the ninth grade level and extend it into the tenth grade. Course outlines are included. (MM)

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MARENGO EXPERIMENTAL

VOCATIONAL PROGRAM.

Community High School

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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District No. 154

Marengo, Illinois

VT004352

Project No. 6052-A6

INTRODUCTION

The general purpose of the Marengo Experimental Vocational Program is to provide a unique educational program for the student who is an underachiever, who possesses drop out characteristics and has a history of academic problems. Such academic problems caused emotional frustrations and discipline problems and called for a re-designed curriculum to include a program structurally flexible and mobile enough to challenge this type of student.

The students identified for this program had developed symptoms of apathy, futility, and a rejection of high school and further education. They questioned the value and motivation of learning. There was little incentive for excellence; they were content just to "get by." There was no good reason for them to put the best of themselves into their daily work. They had been pushed forward through their early education, knowing they would be passed on even if they did not do passible work for their grade level. These students knew they were being promoted because the "system" said such was best for them. What did occur was the opposite - a tragic loss of human worth and resourcefulness. They reached high school without the desire to <u>want</u>!

These students came to us willing to flow with the tide of mediocrity. They would flow with this tide until we could demonstrate the importance of wanting to do. "Nothing happens until somebody wants to create."[1] Creating progress will become reality. We have caused the student to <u>want</u>. "The more we make students want what they need, the more they become motivated. The burden is on the teacher to make people want what they have to sell."[2] The worth or <u>value</u> of this program can only be measured in the degree to which we make these students want to succeed. We want to make these students happy individuals, strong enough to hold their place in society.

[1]Motley, A. H., "Want Creating," I.P.G.A. Newsletter No. 22, Winter 1967. P.18
[2]Ibid P. 19

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Chapter I

DESIGN AND PURPOSES

I. The major purposes of the Program

A. Encouraging low-achieving students to complete a program which will lead to employment

B. Building self-confidence, self-respect, social status, acceptance by their peers, and the personal responsibility needed for employment

C. Encouraging low-achieving students to develop functional work habits, job skills, and attitudes necessary for employment

D. Developing an understanding of occupations so that low-achieving students can realistically and intelligently choose a career

E. Developing a work experience core to help the student recognize and employ his abilities

II. The Design of the Program

A. Mobility and flexibility is a very important factor in this program. The flexibility of the program allows for the incorporation of constructive program changes by the State Board of Vocational Education and other school authorities. The experimental program coordinates with the school's music program, driver's education program, sports program, class activities, and specific units in home economics, agriculture, business education, and shop activities. Students are transferred in and out of the program at any time and may move into the regular curriculum and vocational subjects. No student is required to stay in this program for any predetermined length of time. The goal is to place the student in a vocational training program.

B. The students selected for this program have been carefully screened by testing (D.A.T., Diagnostic Reading Test, G.A.T.B., and S.R.A. Achievement test), teacher conferences, and home visitations. The students who enter the program lack basic fundamental skills of communications and mathematics or have severe sociological and psychological problems which hinder them in a traditional learning program.

C. Each student participates in the regular physical education and health classes. Such social contacts with the rest of the students are important in developing the individual.

D. Low-achieving students have difficulty in developing study skill without direction and do not participate in a study hall.

E. Carnegie units are not the basis for determining the students graduation. Each student makes progress at his own rate in the areas of this program. The purpose of this program is to help students secure and hold satisfactory employment, not to complete specific units.

F. Tours and field trips are important aspects of this program. The flexibility of the program allows individuals and groups to participate in these learning experiences.

G. Parent understanding is a very important factor in the development of the individual student. Home visitations are an integral part of this program. The director, teachers, counselors, and the work experience coordinator participate in this part of the program.

H. Group and individual counseling is the heart of the program. A qualified vocational counselor is a member of the team and the teaching staff is guidance oriented. Professional resource personnel help provide individualized instruction, but more importantly, they provide friendly adult understanding and appreciation. Psychological services, clinical counseling, social services, and health services on a referral and consultant basis are included in this program.

I. The members of the group have formed a school organization. The purpose of this organization is to develop leadership, self-confidence, self-respect, status, acceptance, and personal responsibility.

J. United States history will be included in the program during the third year because of the Illinois state law requiring United States history and the study of United States and Illinois Constitutions. This will be a United States history course developed for the slow learner.

K. The faculty for the program hold eleven month teaching contracts. Their duties for the two summer months include home visitation, individual student conferences, and counseling, program planning, and program research and evaluation.

L. The director in charge of the Marengo Experimental Vocational Program determines when the student can transfer out of the experimental program.

III. Basic Cores of the Program

A. Learning Laboratory Core

1. Communication skills for Vocational Competence - This part of the core is designed as a program of continous instruction based on the individual needs of the students. Emphasis is placed on vocational reading development, verbal communication, and the basic grammar needed for securing employment.

2. Related Vocational Mathematics - This part of the core is designed as a fundamental and practical mathematics program. This program is coordinated with the mathematics in the work experience core. The program includes business transactions for the world of work.

3. Group Learning Experiences - This part of the core is designed as a group guidance experience to promote feelings of recognition, security, acceptance, and worth on the part of the individual. This learning experience involves a study of occupations, and job related problems.

B. Work Experience Core

1. Develop Mental Vocational Skills - This part of the program includes shop skills, agricultural skills, clerical skills, domestic service skills, and home and building maintenance skills which students can profitably use in securing future employment.

2. Industrial Production Skills - This part of the program utilizes jobber units provided by industries, contractors, community organizations, and individuals and is done in a controlled work shop. From these jobber units production line techniques used in industry will be duplicated in small scale assembly line procedures.

3. Applied Science Techniques - This part of the program emphasizes a learning by doing science laboratory.

4. On-The-Job Training - This part of the program is similar to diversified occupations.

IV. The Designed student Program of 1966-67

A. 1st Year Program - Ninth Grade

1. Group Learning Experience
2. Group Learning Experience
3. Physical Education

Lunch

4. Work Experience Core
5. Work Experience Core
6. Work Experience Core
7. Group Learning Experience Core

B. 2nd Year Program - Tenth Grade

1. Work Experience Core
2. Work Experience Core
3. Work Experience Core

Lunch

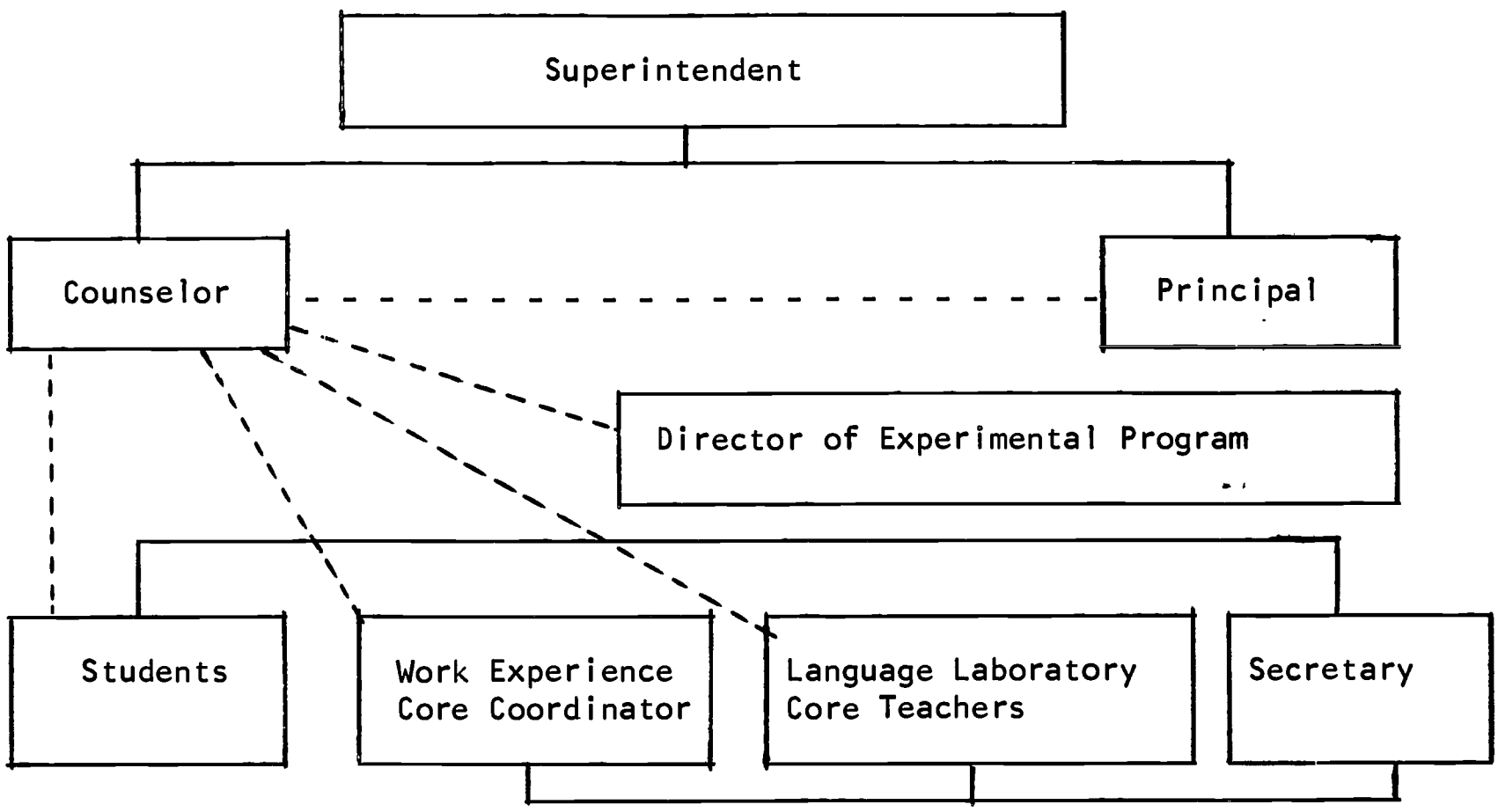
4. Group Learning Experience
5. Group Learning Experience
6. Group Learning Experience
7. Physical Education

V. The staff of the Program 1966-67

A. 1 - Program Director
B. 1 - Work Experience Core Coordinator
C. 2 - Vocation Reading Instructors
D. ½ - Vocation Secretary
E. 1/7 - Counselor

Chapter II

PROGRAM FLOW SHEET AND JOB DESCRIPTIONS



Responsibilities

I Principal

A. Responsible to the Superintendent for the overall functioning and reporting of the program

B. A member of the course development committee

C. Develop a schedule for the program and a schedule for the students within the program

D. Contact industries for sub-contracts for the Work Experience Core Program

II Counselor

A. Identify, select, and interview students, and work with the director informing staff members of the student profile

B. Consult with students and teachers on a regular basis

C. A member of the course development committee

D. A member of the home visitation and parent conference team

E. Available for consultation concerning the overall evaluation of the program

F. Contact industries for sub-contracts for the Work Experience Core Program

III. Director of Experimental Program

A. Develop, coordinate, and implement the program

B. Chairman of the course development committee

C. Schedule and conduct staff meetings

1. Conduct at least one weekly meeting of the whole staff (purpose - develop and plan a program)

2. Meet with individual staff members (help plan and develop their phase of the program)

D. Develop and implement an organized program which will relate the pupils to the world of work

E. Contact industries for sub-contracts for the Work Experience Core Program

F. Develop and implement a placement program for the students (part-time, full-time, and school-time)

G. Help identify, select, and interview students, and inform the staff members of the student profile

H. Develop and implement a program helping parents gain more insight by home visitations and parent conferences (individual and group)

I. Conduct a summer program which will involve the staff members hired for more than nine months

1. Home visitation
2. Parent and student conferences
3. Program planning
4. Research
5. Evaluation
6. Placement

J. Schedule field trips for the program and approve the Work Experience Core and Language Laboratory Core field trips

K. Make a budget for the total program and present the budget to the superintendent

L. Make the following reports

1. Evaluation of total program
2. Research for the total program
3. Student evaluation forms
   a. Completions
   b. Analysis

M. Follow class discipline procedure as outlined in Teachers Information Book

IV. Work Experience Core Coordinator

A. A member of the course development committee

B. Develop, coordinate, and implement a Work Experience Core Program as outlined in proposal

1. Help students establish themselves as capable people in society and into the world of work

2. Develop work habits similar to those of industry

C. Contact industries and make tentative contracts, and final contracts for the Work Experience Core after gaining approval of the director

D. Keep director informed of progress of the Work Experience Core Program

1. Evaluation
2. Research
3. Student Reports
4. Contract work

E. A member of the home visitation and parent conference team

F. A participant in the summer program as outlined by the director

G. Arrange field trips that relate to the Work Experience Core, inform director of program for final approval from the administrator

H. Make a budget for the Work Experience Core Program and present this budget to the director

I. Follow class discipline procedures as outlined in Teachers Information Book

V. Language Laboratory Core Teachers

A. A member of the course development committee

B. Develop, coordinate, and implement a Language Laboratory Core Program as outlined in the proposal

C. Keep director informed of progress of the Language Laboratory Core Program

1. Student reports
2. Research
3. Evaluation

D. A member of the home visitation and parent conference team

E. Arrange for field trips relating to the Language Laboratory Core Program, inform the director of the program for final approval from the administration

F. A participant, if hired, in the summer program as outlined by the director

G. Make a budget for the Language Laboratory Core Program and present this budget to the director

H. Follow discipline procedures as outlined in the Teachers Information Book

Chapter III

PURPOSES AND SPECIFIC OBJECTIVES

I. The Learning Laboratory Core

A. Developing communications skills necessary for successful employment.

1. Aiding in the development of comprehension

a. By following directions and locating materials
b. By finding answers to personal and social problems
c. By reading for various purposes
d. By understanding words for purposes of increasing vocabulary

2. Aiding in the development of reading skills
a. By reading for important ideas
b. By reading for significant details

3. Associating ideas and materials
a. By finding proofs
b. By finding information relevant to particular problems
c. By examining basic assumptions
d. By studying adequacy of presentations

4. Organizing ideas and materials

a. By arranging events
b. By developing a sequence of ideas
c. By making outlines
d. By summarizing

5. Increasing speed of silent reading

6. Improving oral reading

7. Providing readings in the content field with attention to a wide variety of readings in occupations

8. Aiding in the development of writing skills

a. By building from words to sentences, paragraphs, and short compositions

b. By writing unit reports, letters, and newspaper reports

c. By writing elementary grammar reviews

9. Aiding in the development of vocabulary and spelling
a. By introducing new words found in their assignments and readings

b. By introducing dictionary exercises
c. By using phonics drills

B. Aiding in the development of fundamental mathematic skills necessary for successful employment.

1. By developing arithmetic skills used by employees in the field of work
2. By teaching arithmetic skills needed in the work experience core
3. By helping students figure their own business transactions in relation to their work experiences

C. Developing group learning experiences related to successful employment

1. By providing opportunities for the development of positive attitudes toward school, society, and the field of work
2. By creating an interest in vocations by exploring the world of work
3. By assisting the student in understanding his vocational abilities and educational needs in relationship to the world of work
4. By assisting the student in the selection of a vocation
5. By assisting the student in reevaluating himself and his job selection so he will best fit into the field of work and society

II. The Vocational Work Experience Core

A. The purposes of the Work Experience Core

1. Encouraging students to complete a vocational program which will lead to employment upon graduation from high school

2. Building self-confidence, self-respect, social status, acceptance by their peers and adult society, and personal responsibility needed for employment

3. Encouraging students to develop functional work habits, job skills and attitudes necessary for employment

4. Helping students recognize and employ their abilities

5. Developing an understanding of occupations so that the students can realistically and intelligently choose a career

6. Emphasizing learning by doing through a variety of work experiences

7. Providing on-the-job learning experiences

B. The Specific Objectives of the Work Experience Core

1. Teaching basic skills in a variety of work experiences to be used profitably in securing employment

2. Utilizing jobber units provided by industires, contractors, community organizations and individuals in a controlled work shop

3. Assimilating production line techniques

4. Providing on-the-job work-study learning experiences

5. Conducting classroom discussions as needed for success on the job

   a. By providing information needed on the job

   b. By discussing related problems to work experiences

Chapter IV

COURSE OUTLINE FOR THE NINTH GRADE LEARNING LABORATORY CORE

Communication Skills for Vocational Competence

I. Orientation to Class (Conducted by Counselor)

- A. Purpose of the class
- B. Explanation of procedures
- C. Counseling service

II. Diagnostic work and testing to determine levels of reading and writing

- A. S.R.A. Diagnostic Reading Test
- B. S.R.A. Reading Laboratory
- C. Sample writings

III. Library Orientation (Conducted and taught by school librarian)

- A. Location of library facilities
- B. How to use facilities
- C. Culmination
  1. Diagram facilities
  2. Look up book "Titles" and "Authors"

IV. Newspaper work

- A. Read and evaluate worthwhile news
  1. Various areas of current news
     - (a) Local
     - (b) County
     - (c) State
     - (d) National
     - (e) Inter-national
  2. Evaluation of Current News
- B. Prepare a report on some news item to be tape recorded

V. Development of Self interests

- A. Presentation of books to develop reading interest
  1. Discuss books previously read

2. Discuss the selection of books new to students
3. Analyze reasons for student choices of particular titles

B. Possible vacation trips

C. Hobby exploration

D. Vocational preferences

E. Biographical sketches

1. Writing an autobiography for more than just an exercise in composition
2. Composition areas

a. Description of one's happiest life experience
b. Description of most admired
c. Ambitions

VI. Development of Reading Skills

A. Introduction

1. Gaining ideas from a printed page
2. Answering questions to gain information
3. Finding out what others think

B. Reading skills

1. Phrasing

a. Marking phrases in newspaper stories
b. Sampling selections

2. Teaching how to attack reading materials

a. Looking for main idea
b. Looking for details
c. Questioning the details

3. Critical reading

4. Oral reading

VII. Development of listening skills

A. Learning how to listen

B. Experiencing listening exercises

VIII. Development of approaches to unit work

A. Motivation

1. Using visual and dramatic procedures

a. Listening to a story
b. Reading newspaper accounts

c. Reading bulletin boards
d. Watching T.V. programs pertaining to the unit
e. Reading library books pertaining to the unit

2. Helping the individual student find something which will have appeal

3. Developing unit procedure

a. Displaying books with a wide range of reading levels
b. Collecting pictures pertaining to unit
c. Reading stories and poems pertaining to the unit
d. Taking field trips
e. Visiting guest lecturers
f. Studying maps
g. Discussing individual experiences
h. Acting different life roles from the unit of study
i. Reading magazine articles about study unit
j. Discussing startling statement about study unit
k. Viewing motion pictures about the study unit
l. Viewing film strip and slides about the study unit

B. Cooperative planning

1. Developing incentive for unit work bolstering the student's ego

2. Individualizing the activity each student will follow

3. Planning by the group

4. Setting up the unit

a. Cover (Tied in with the graphic arts program)
b. Table of contents
c. Chapters
d. Bibliography

5. Culmination of unit

a. Pooling individual work
b. Taping or reporting the individual's phase of the unit
c. Slides and movies by the students as the final step in the unit

6. Evaluation

a. Observing themselves in their movie
b. Viewing and looking at their classmates work
c. Discussing how unit and work can be improved and made more enjoyable

IX. Additional work

A. Reading a good book at individual interest and ability level

1. Giving oral reports
2. Giving written reports

B. Expressing themselves in written form

1. Short writing experiences

a. Aiding those with major writing difficulties
b. Aiding those with creative difficulties

2. Simple to more difficult elements of writing

a. Mastering sentence structure
b. Grouping related sentences into paragraphs
c. Writing short compositions

3. Realistic letter writing

a. Reading letters written by others for magazines & newspapers
b. Writing to a Congressman on an important issue
c. Writing to someone over-seas
d. Writing invitations to club affairs

4. Writing guide lines

a. Writing on a common experience
b. Listing good points
c. Organizing the writing

5. Revisions

a. Correcting (All work corrected by teachers)
b. Re-writing

Related Vocational Mathematics

I. Diagnostic Work and Testing to Determine level of each individual student

A. Differential Aptitude Test

B. Quick check arithmetic tests

II. Teaching of arithmetic skills as needed by each individual

A. Procedures

1. Relating arithmetic to everyday living problems (addition, subtraction, percentage, multiplication, division, decimals, fractions)

a. Budgeting
b. Buying
c. Costs
d. Selling
e. Making change

2. Word problems relating to buying, selling, budgeting costs

3. Learning by rate as needs arise in the arithmetic program

III. Helping students with related arithmetic problems in work experience core

A. Cutting paper into proper sizes

B. Centering images on paper with offset press

C. Enlarging and reducing object problems to be photographed

Group Learning Experience

I. Orientation

A. Identification and enrollment

1. Testing and teacher evaluation

2. Eighth grade teacher conferences with high school counselor

3. Parent conference

a. High school curriculum explanation
b. Program placement

4. Discussing school programs in relation to occupations

5. Summer parent, student, counselor, and program director conferences

B. Exploring occupations

1. Surveying present vocational interests

2. Parent occupations and their influence on student's occupational choice

3. Using Kuder Preference Inventory developing areas of exploration

4. Selecting student occupational interests shown by the Kuder Preference Inventory results

a. Developing oral or written reports on one of these occupational interests and including:

1. Salary
2. Educational requirements
3. Advantages of job
4. Disadvantages of job
5. Personal qualities
6. Working conditions
7. Number of working hours per week, month, and year
8. Where employed

II. Teaching procedures

A. Teaching topics

1. Determining the role high school education plays in future employment

2. Determining future employment opportunities

3. Determining the factors students should consider in selecting a vocation

B. Motivations and teaching techniques

1. Taking field trips

a. Total group
b. Interest group
c. Individual

2. Viewing vocational films

a. Occupation Careers
b. Job world
c. General occupational preparation

3. Using outside specialists

4. Reporting by students on special areas

COURSE OUTLINE FOR THE TENTH GRADE LEARNING LABORATORY CORE

Communication Skills for Vocational Competence

I. Reviewing work to determine academic growth

A. S.R.A. Diagnostic Reading Test

B. S.R.A. Reading Laboratory

C. Sample writings

II. Library Work

A. Suggesting topics to discuss prior to library work

1. Looking for topic materials
2. Using library resources

B. Making a report on the topic selected

III. Reading

A. Practicing silent reading

1. Using class discussions to determine level of comprehension
2. Using Written tests to determine comprehension

B. Practicing oral and written book reports

IV. Grammar and work usage

A. Fundamentals

1. Capitalizing
2. Punctuating
3. Constructing paragraphs and sentences

B. Letter writing

1. Applying for a job
2. Writing a friendly letter
3. Writing an invitation
4. Writing replies to an invitation

C. Vocabulary

1. Selecting words from daily work
2. Discussing words, meaning, and usage

D. Spelling

1. Studying misspelled words found in written work
2. Studying basic words needed for employment

E. Unit - National Parks

1. Motivation

a. Reading short summary about each park
b. Showing films of parks
c. Writing to parks for information
d. Finding pictures of parks

2. Outline for Unit

a. History

1. Date founded (by whom, if possible)
2. How discovered
3. Reason for names
4. Why and when established
5. How formed

b. Description

1. Size
2. Location
3. General description
   a. Area of land and water
   b. Rocks or trees
   c. Exceptional scenes
4. Main feature or features
5. Special features
   a. Short description
   b. Animal life
   c. Plant life
   d. Seasonal values
   e. Maintenance and administration of park

3. Reference Material

a. National Parks - Jensen, Paul - New York - Golden Press, 1964
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d. National Geographic Magazine - National Geographic Society Washington, D.C.: National Geographic Society, 1937-1966
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g. World Book Encyclopedia - New York: World Book Inc, 1965

Related Vocational Mathematics

I. Reviewing work to determine academic growth

A. Using differential aptitude test

B. Using quick check arithmetic test

II. Applying mathematics to the work experience core

A. Using division knowledge in paper cutting

B. Using percentage knowledge in reducing and enlarging of layouts for negatives

C. Using division, addition, and fractions to center images on offset press

D. Using percentage in relation to calculator as used in photography in the dark room

III. Motivation and orientation

A. Discussing the need for fundamental mathematic skills in the world of work

1. Referring to information students found in their job exploration studies
2. Relating mathematic skills necessary to the work in the work experience core

B. Relating mathematics to everyday living

1. Buying and financing an automobile
2. Computing wages earned
3. Buying and selling experiences
   a. Selling school booster pins made in graphic arts program
   b. Selling school calendars made in graphic arts program
4. Computing
   a. Using social security forms
   b. Using interest rates tables
5. Figuring individual income tax returns

V. Teaching mathematic skills needed by students in the work experience core and everyday living

A. Adding

1. Fractions
2. Decimals
3. Whole numbers
4. Combination of whole numbers and decimals
5. Combination of whole numbers and fractions

B. Subtracting

1. Fractions
2. Decimals
3. Whole numbers
4. Combination of whole numbers and decimals
5. Combination of whole numbers and fractions

C. Multiplying

1. Fractions
2. Decimals
3. Whole numbers
4. Combination of whole numbers and decimals
5. Combination of whole numbers and fractions

D. Dividing

1. Fractions
2. Decimals
3. Whole numbers
4. Combination of whole numbers and decimals
5. Combination of whole numbers and fractions

Group Learning Experience

I. Self-appraising and analyzing

A. Evaluating self in relation to ninth grade data

B. Profiling and evaluating tests scores

C. Investigating self

1. Using mental abilities and dexterity skills
   a. Evaluating the G.A.T.B. test scores given by Illinois State Employment Agency
   b. Evaluating other aptitude tests

2. Relating information to individual salf
   a. Analyzing all test profiles
   b. Developing personal data sheets

3. Determining personality traits
   a. Developing a list of desirable traits most employers want in their employees
   b. Using a job personality check list

II. Factors involved in choosing an occupation

III. Salable qualities - Developing a qualification sheet

A. Determining attitudes needed to succeed

B. Determining personal and physical characteristics

C. Determining interests

D. Using a part-time job to determine interests

IV. Determining employer job requirements

A. Determining personal characteristics
   1. Appearance
   2. Integrity
   3. Interest in job
   4. Willingness to work
   5. Able to get along with others
   6. Even-temper, self control
   7. Willingness to learn

B. Determining talent and ability
   1. Communicating on the job
   2. Listening to orders
   3. Other qualifying characteristics

V. Securing a job

A. Looking for a job
   1. Using newspapers
   2. Using employment offices
   3. Using personnel offices
   4. Using school placement

B. Completing the application

C. Preparing for a job interview
   1. Determing questions employees should ask
   2. Determining questions employer might ask
   3. Role plaving

VI. Motivation and teaching technique

A. Going on field trips to places of possible employment
   1. Interest groups
   2. Individual

B. Viewing vocational films

C. Visiting speakers

VII. Preparing for on-the-job training for the eleventh grade

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Bauer, M. D W. W., and Dukelow, M. D., Donald A. What You Should Know About Smoking and Drinking.

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Riper, C. Van. You Can Talk Better.

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Krug, Atheida, M. D. and Beck, Helen L. A Guide to Better Discipline.

Kuder, G. Frederick and Paulson, Blanche B. Exploring Children's Interest.

Leonard, Charles W. Why Children Misbehave.

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Remmers, H. H. and Jackett, C. G. Let's Listen to Youth.
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Riper, C. Van. Helping Children Talk Better.
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Strang, Ruth. Helping Children Solve Problems.
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Chapter V

COURSE OUTLINE FOR THE WORK EXPERIENCE CORE

Course Outline For Ninth Grade Work Experience Core

I. Orientation to the Work Experience Core

A. Shop procedure

1. Equipment

2. Safety

B. Job areas

C. Field trips

II. Job areas

A. Graphic Arts

1. Screen printing area (hand cutting and photo screen making)

a. Skills involved

b. Jobs completed

c. Related information

d. Field trips

e. Suggested reference materials

AREA -- SCREEN PRINTING

STUDENT SHOULD LEARN TO DO ---------
Make register marks on original
Cutting 1 color
Cutting 2 colors
Cutting more than 2 colors
Making Frame
Stretching screen
Adhering Film
Registering 2 or more colors
Set up register guides
Printing 1 color
Printing 2 or more colors
Operate screen washer
Cleaning image from screen
PHOTO -- DIRECT
Make pasteup and layout
Make negative
Make positive
Preparing emulsion
Coating screen
Exposing screen to arc lamp
Printing 1 color
Printing 2 or more colors
Cleaning image from screen
Others
Printing on cylindrical object
Printing on textiles
Others

SCREEN PRINTING (hand cutting and photo screen making)

Jobs Completed

1. GAA Felt Badges
2. Dance Posters
3. Christmas Cards
4. Plastic Conference Champ Badges
5. Personalized Graduation Napkins
6. Party Napkins
7. Personalized Napkins
8. Personalized Towels
9. School Emblem on Track Uniforms
10. Place Cards & Napkins for Sports Banquet
11. Badges for all Basketball Games

Related Information

1. Types of Screens
2. Paints
3. Jigs and Fixtures
4. Cleaning Solutions
5. Emulsion Coatings

Field Trips

1. Advance Process Supply Co. - Chicago, Illinois
2. Chicago Decal - Chicago, Illinois

Suggested Reference Material

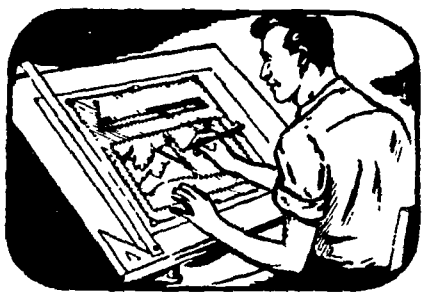
1. Six Quick Steps for Making Hand-Cut Screen
   Advance Process Supply Co. Chicago, Illinois
2. 8 Basic Steps for Hand Screen Printing
   Advance Process Supply Co. Chicago, Illinois
3. Instructions on Direct Contact Photo Screen Making
   Advance Process Supply Co. Chicago, Illinois
4. Instructors Information Sheets
   a. Cutting Film
   b. Making the Frame
   c. Stretching the Screen
   d. Adhering the Film
   e. Printing
5. Kosloff, Albert - Elementary Silk Screen Painting
   Modern Franklin Publishing Company, Chicago, Illinois 1964
6. Bairey, Earl - Fundamentals of Silk Screen Process
   Frederick J. Drake Company, Chicago, Illinois. 1962
7. Eisenberg and Kafka, Silk Screen Printing
   McKnight and McKnight Publishing Company, Bloomington, Illinois 1957
8. Kosloff, Albert - The Art and Craft of Screen Process Printing
   Bruce Publishing Company, Milwaukee, Wisconsin. 1960
9. Brigelaesen and Cohn, Silk Screen Techniques
   Dover Publications, 180 Varick St., New York 14, New York 1958
10. Kosloff, Albert - Screen Printing Process 1964
    Hiett, Harry - How-To-Do-It-Charts 1959
    The signs Of The Time Publishing Company, Cincinnati, Ohio

Six Quick Steps for Making HAND-CUT SCREENS

1. Preparation

Thumb tack original drawing to a drawing board or work table. In pencil or ink, draw a cross in each of the four corners of the original drawing to facilitate replacing the film in exact registration.

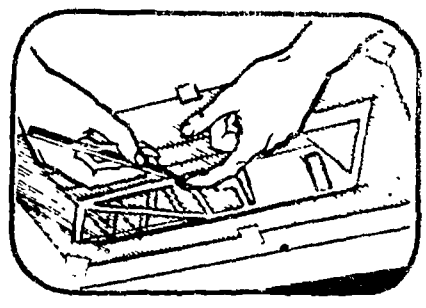
2. Cut a piece of film large enough to cover first color. Fasten film (film side up) to original drawing with enough scotch tape so that film will not shift. Backing paper will act as a temporary carrier of film until such time as the transfer to the silk is made, after which backing paper is removed. The idea is to cut through the film only to the backing paper but not through the backing paper.



3. Cutting Film

Decide which color is to be run first and cut stencil corresponding to it. Allow sufficient overlap of colors for proper registration. In tracing manner, using fine stencil knife, cut through film to backing paper, then strip out all film from that portion of design which will appear open on screen. In all large, open spaces, cut a small slit through backing paper to allow escape of air during adhering operation.

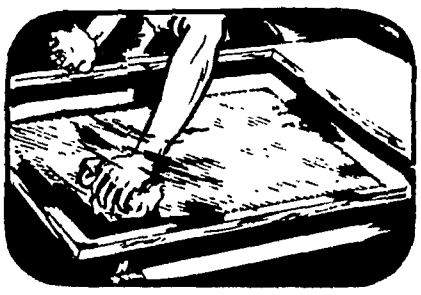
At this point, you can either adhere film to silk for first color or remove it from original sketch and roll up with film surface outside until ready for adhering. Repeat same operation for each remaining color. Prepare a screen and be sure it is clean. Frames can be stretched either by the Tite-Stretch Method (See page 102) or by Staple Method (see below).



4. Stripping

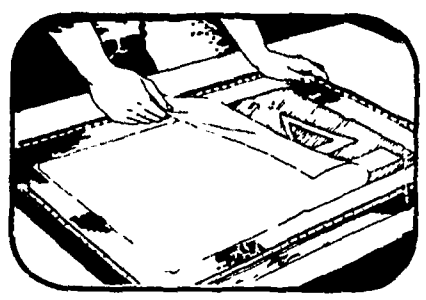
If new silk is used wash well with water (after silk is stretched on frame) to remove sizing, then with Adhering Liquid No. T-700 (See page 47) or its equivalent, to remove any other foreign matter.

Place screen in hinges of printing table, position original drawing under it and set register guides. Fit back cut film for Color No. 1 to original position in which it was cut (using 4 crosses) and fasten with a few small pieces of scotch tape. Examine cut film to be sure that no small pieces of film or dust have been left on. Bring down screen to be sure silk is in close contact with film.



5. Adhering

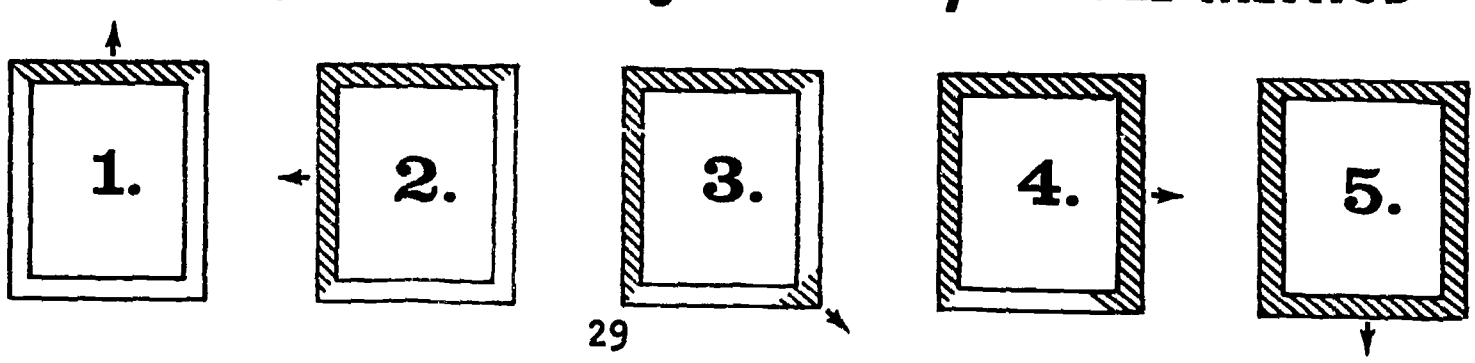
Wet a rag (preferably cotton such as an undershirt) well with our adhering liquid. Wet small portion of screen with single stroke, about 6" long, and dry immediately with another rag of the same type, using a light rubbing motion. Continue rubbing lightly for about 10 seconds, until you see that all adhering liquid has evaporated. Adhesion is then instant. Continue until entire film has been adhered, wetting rag as often as is necessary. Always start from 1 side and continue in same direction to avoid wrinkles.



6. Removing Backing

When you have finished the adhering step you are ready to start the final step of this process. Start in any of the four corners and slowly peel backing paper off. It must be remembered to peel the backing paper so that you can see film at all times. This will help to prevent tearing of any portion of film that was not well adhered. It is advisable to wait 30 minutes before stripping regular films and at least 1 hour for lacquerproof films. Blockout and tape screen.

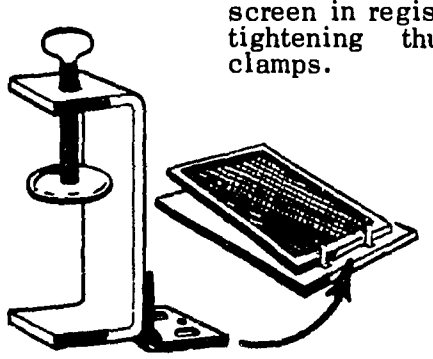
Five Steps in Stretching Frames by STAPLE METHOD



8 BASIC STEPS FOR HAND SCREEN PRINTING

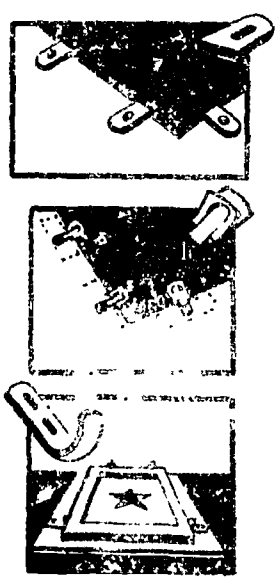
1. HINGE SCREEN TO BASE

Place hinge clamps on level, smooth base approximately 2" from each end of screen. Fasten hinges in center of slotted holes using screws and washers. Lock screen in registration by simply tightening thumb screws on clamps.



Register screen in final position and lock screws tightly. If loose pin hinges are used, setting of screen follows same procedure.

2. SET GUIDES



FOR RIGID PIECES

Set feeding guides for cardboard, masonite, glass, metal, etc. Guides must be thinner than piece to be printed. No screws, nails or sharp edges should protrude.

FOR PAPERS

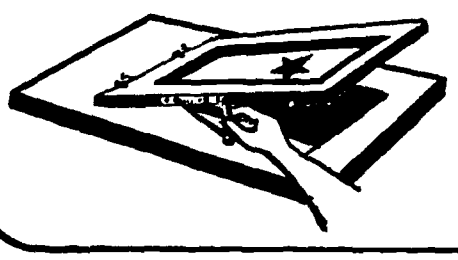
For light weight papers set paper guides or thin piece of tape. A suction base is very important for holding down stock when printing large areas

FOR COLOR REGISTER

Exercise extra care when printing multiple colors.

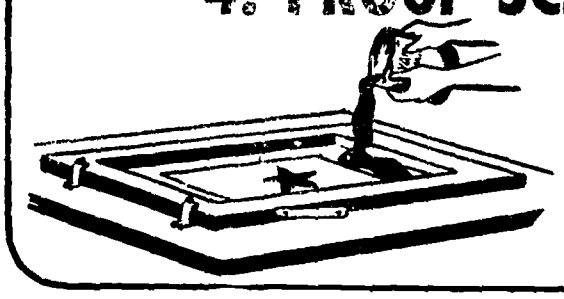
Hinges must be fastened securely and frame register guides keep screen securely in printing position.

3. FASTEN SIDE KICK



A sidekick is a simple device for holding screen in up position when feeding, setting guides or cleaning screen. Mechanical sidekicks save extra operations. A sturdy drilled lath however will perform satisfactorily.

4. PROOF SCREEN

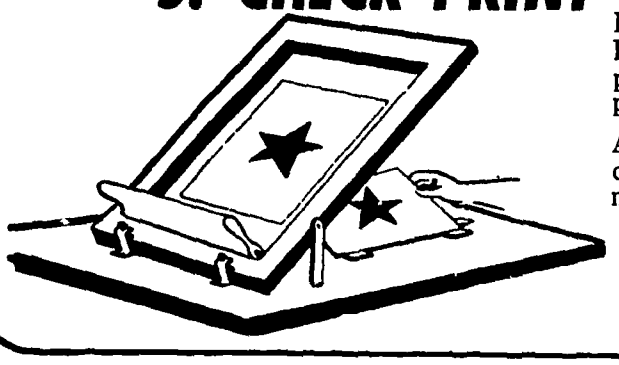


Place a piece to be printed in the guides.

Proper color is poured in reservoir area of the screen.

Squeegee color to hinge side of screen leaving squeegee in this position.

5. CHECK PRINT

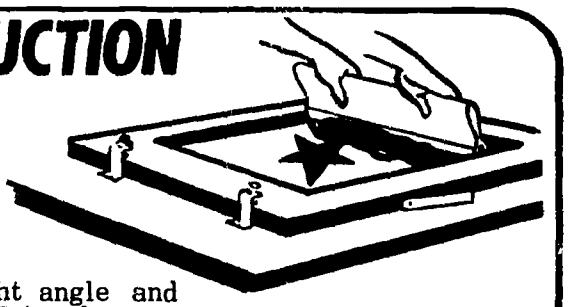


Raise screen - - Remove printed piece and examine print carefully.

Any corrections or changes should be made at this time.

Leaks and pinholes can also be blocked out on the screen.

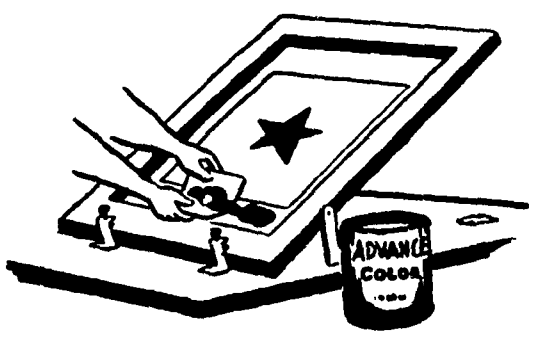
6. PRODUCTION



The printing operation is now continuous. Color is scooped up with squeegee and brought to opposite end of screen.

Hold squeegee at slight angle and print with sharp edge. Printed piece is removed and new sheet inserted in guides. Rack printed pieces until color is completely dried.

7. WASHUP



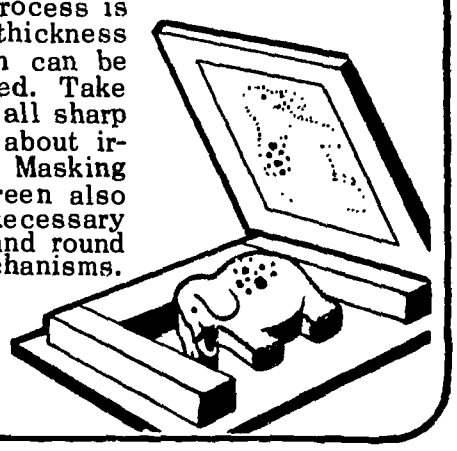
When printing run is finished, scoop up all unused color with ink knife or hard cardboard and replace in ink can. Place newspaper under screen and lower to base as in printing position.

Pour washup solvent in screen and proceed to loosen all color. With clean cloth mop dry. Repeat this procedure once again.

Screen is now ready to be stored for reuse.

8. SPECIAL SET-UPS

The true versatility of screen process is based upon the various sizes, thickness and shapes of materials which can be simply and economically printed. Take care to protect the screen from all sharp edges by building a "chase" about irregular shapes as illustrated. Masking tape placed underneath the screen also prevents wear. Ingenuity will be necessary in many applications. Curved and round objects require special mechanisms.



ADDITIONAL HELPFUL HINTS

- Screen should be set 1/8" to 3/16" off contact from piece to be printed.
- Textile printing is best accomplished by printing on contact.
- Flooding screen keeps color from drying in open areas of screen.
- Keep squeegee sharp for best printing.
- A nail placed upright on hinge end of frame keeps squeegee handle upright.
- For large runs tape placed inside screen prevents paint seepage.

INSTRUCTIONS ON DIRECT CONTACT PHOTO SCREEN MAKING

1. Pre-Cleaning Fabric

Both sides of screen frame should be thoroughly washed with stiff nylon brush with proper "prep solution", then rinse out with cold water. Apply 5% acetic acid with nylon brush (be sure this brush is not contaminated with prep solution), then rinse out with cold water. Set aside to dry.

2. Sensitizing your Emulsion

Prepare your sensitizing solution according to directions, usually 4 ounces (5 tbsps.) ammonium bichromate to 1 quart lukewarm water. Sensitize your emulsion with this solution (usually 1 part solution to 5 parts emulsion). Mix slowly but thoroughly so there is no streaks. Mix enough coating mix for the day's work. Use only glass, plastic or stainless steel tools or receptacles.

3. Coating your Screen

Coating must be performed in dimly lit room (yellow bulb), cool 80° or less) and dry. Coats must be thin and uniform. The first coat seals the mesh, the second coat builds up the required deposit. For fine lines and halftones, coat twice. For open and coarser details, coat three times.

5. Re-coating your screen

Apply second coat as in first coat. The second coat will build up your desired deposit, and will eliminate most pinholes. Again, coat the outer side (printing contact side).

6. Final Drying

After your last coat is applied, set aside to dry as in Instruction No. 4. Keep dirt and dust away from coating while it is drying. Wait until final coating is "dry-to-the-touch before exposing. Proceed now to expose screen.
Caution: Keep screen dry and be sure to expose within 30 minutes.

7. Exposure

Care must be exercised to assure absolute, complete and uniform contact between positive and coated dry screen. Scotch tape your positive (emulsion side down) in position on the outer side (coated side). Place in Polycop Exposing Unit. Only this Polycop unit can give you the contact you need. Time of exposure with arc lamp depends on fineness of detail, fineness of mesh, size of area to be exposed. Generally 2½ minutes at 3 feet will do the trick.

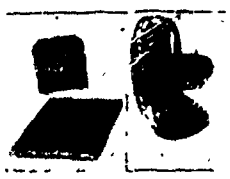
3A. Coating with Scraper Coater

Pour coating mix on outer side (printing contact side) and with aid of scraper coater, pull scraper coater smoothly up length of screen. Use pressure but not extreme pressure. This is one coat.

3B. Coating with Scoop Coater

Select a Scoop Coater whose width is wider than the design but does not ride on the wood. Pour the coating mixture into the scoop. Place working edge of Scoop Coater against bottom edge of screen. Tilt Scoop Coater until solution comes in contact with screen. Maintaining pressure (but not extreme pressure), draw Coater up towards the top of the screen. Just before you reach the top (about 1/2 inch or so), tilt the Coater back so that the remaining solution falls back into the Scoop. This is considered one coat.

4. Drying coated screen



Dry screens flat, not upright, in dimly lit room (preferably in darkest spot). Area must be dust-free. Place fan in front of screen about 3 feet away. Do not use heat. Make sure first coat is hard before applying second coat.

8. Washing out exposed screens

Protect exposed screens from daylight or fluorescent until washing out. Wash out with water of about 115°, using hose and spray. First wet both sides of screen. Do most of your washing out from inside (basin side or squeegee printing side) of screen until 75-80% of each detail and line is open. Then using hose only, wash outside of screen until more detail opens up. Constantly rotate screen while washing out. Then go back to inside of frame and finish out your washing out. Work rapidly, keeping in mind that too much water harms your softened emulsion.

9. Remove residue and eliminate scum

All excess residue and scum should be washed out by now. Use Scum-X to insure this. Wipe off inside of screen with Scum-X. On the outside, you may use Scum-X to wipe off non-printing areas but take care to pat only the printing areas lightly with Scum-X. Set aside to dry. Warm dry air now can be used to speed drying.

10. Inspect and block out

Make final inspection for pinholes and other defects. Now blockout the screen with water-soluble blockout. Finally, tape screen with Flex-Form Tape. Your screen is now complete and ready to print.

For Reuse remove all emulsions with Emulsion Remover IDC-3

CUTTING FILM

1. Determine colors to be used.

2. Determine which color will be cut first.
   (BEGIN WITH LIGHTER COLORS FIRST -- LIGHT TO DARK --)

   MAKE 2 OR 3 REGISTER MARKS ON ORIGINAL (KEEP OFF PATTERN)
   WITH SHARP PENCIL AND TRIANGLE

3. Place film over original and tape down.

4. To make cutting easier tape original to piece of poster board and then tape film (SLICK SIDE UP)to poster board. This will enable film to be turned to make cutting easier.

5. Make sure knife is (SHARP) (USE STONE)

6. IMPORTANT -- LIGHT TOUCH IS VERY IMPORTANT

7. (CUT REGISTER MARKS FIRST.)

8. When cutting -- OVERCUT THE FIRST COLOR A LITTLE AND CUT THE FINAL COLOR AS MUCH AS POSSIBLE ON THE LINE.

TIPS

1. If film is torn when removing, use thinned rubber cement to repair damaged area.

2. Openings can be touched up with thinned blockout and art brush.

3. Plastic film will hold closer register than paper backed film.

4. (DO NOT) use nylon screen for adhering hand arts.

MAKING FRAME

1. Select size of framing lumber so there is enough work space (WITHOUT CROWDING DESIGN.)

2. Lay out framing lumber to be sure all pieces are the (CORRECT SIZE.)

3. Start corrugated fastners at an (ANGLE) on one piece and then line up the corners. JOINTS MUST BE TIGHT.

4. Put 2 staples on each corner, and one on the inside where the groove is. BE CAREFUL NOT TO SPLIT WOOD.

STRETCHING SCREEN

1. When cutting silk from roll, try to avoid wasting large pieces. (CHECK MEASUREMENTS BEFORE CUTTING)
2. Cut silk about 2" OVER on EACH SIDE.
3. Lay silk (SCREEN) over grooved side of frame, REMOVING AS MANY WRINKLES AS POSSIBLE
4. Unroll enough tite stretch cord for one side -- (BUT DO NOT CUT)
5. Begin tacking cord into groove LIGHTLY with hammer
6. DO NOT DRIVE ALL THE WAY DOWN AT THIS TIME
7. Follow the same procedure for the remaining three sides, being careful to STRAIGHTEN OUT WRINKLES.
8. Cut cord just short of last corner.
9. Use stretching tool and hammer to push cord down into groove. (COVER THE ENTIRE SURFACE EVENLY UNTIL SCREEN IS TIGHT.)
10. After fastening screen, cut paper tape to correct sizes.
11. Apply tape outside and inside of screen.
12. Before applying inside FOLD TAPE BEFORE WETTING for easier installation.
13. Apply thinned blockout to tape (INSIDE IS MOST IMPORTANT)
14. ALLOW TO DRY (10 - 15 minutes)

ADHERING FILM

1. Place screen on board and clamp.
2. Place card under screen and position in the center of screen and tape corners to keep in place.
3. Cut 3 guides from approximately the same thickness as matter to be printed.
4. Apply guides (½" to 1½") to base (2 ON LONG SIDE AND 1 ON SHORT SIDE) with ½" masking tape.
5. Now clean (PRIME) entire screen with adhering fluid (OR WATER)
6. Place #1 stencil over card (FILM SIDE UP) and lightly tape corners (BE SURE REGISTER MARK LINE IS UP)
7. LEAVE SCREEN ON TOP OF FILM AND APPLY ADHERING FLUID TO 2 OR 3 SPOTS ON THE SIDE OF OBJECT WITH SMALL CLOTH. BE SURE TO WIPE IMMEDIATELY.
8. Remove card and PLACE BUILD UP UNDERNEATH so that screen will not sag.
9. Lower screen and apply adhering fluid to a small area and wipe with dry cloth. (DO NOT RUB TOO HARD)
10. Continue until entire surface is covered. (BE CAREFUL NOT TO APPLY TOO MUCH ADHERING FLUID OR FILM WILL DISSOLVE.)
11. Let dry for about 10 minutes.
12. Remove screen from clamps and APPLY THINNED BLOCKOUT TO BACK OF SCREEN BEFORE REMOVING BACKING SHEET AND ALLOW TO DRY. USE THICK CARDBOARD
13. If screen is to use for 2 runs, use the same procedure as before.

CLEANLINESS IS VERY IMPORTANT BECAUSE IT WILL SHOW ON THE FINISHED PRODUCT.

PRINTING

1. Place screen in clamps with original taped down in one of the positions to get final registrations.
2. Apply sufficient paint to screen.
3. Run 1 copy on first color to obtain register marks and then tape register marks underneath.
4. Pull squeegee at about 60° angle.
5. Run required amount of 1st color. (CHECK EACH PRINT)
6. Clean screen by placing newspapers underneath screen and use washup and rags to clean.

   IMPORTANT -- EVERY BIT OF PAINT MUST BE REMOVED FROM SCREEN.

   DRY SCREEN WITH CLOTH BEING CAREFUL NOT TO DAMAGE FILM ON UNDERNEATH SIDE

7. Prepare to run 2nd color as above.
8. USE FIRST COPY TO CHECK REGISTER AND CHANGE IF NECESSARY AND TAPE REGISTER MARKS
9. Run 2nd color (CHECK EACH PRINT)
10. Clean entire screen with washup. (After carefully removing excess paint and putting it into can.)
11. Wipe screen with soft cloth. (Check to see that all paint is removed from image.)
12. Clean tools, seal cans and place things in the proper place.

2. Offset Printing Area (layout and press work)

   a. Skills involved

   b. Jobs Completed

   c. Related information

   d. Field trips

   e. Suggested Reference materials

AREA -- OFFSET

THINGS STUDENT SHOULD LEARN TO DO ----
Freehand work on paper masters
Typing on paper masters
Preparation and layout of artwork
Layout for booklets
Negative layout and opaqueing
Preparing negative for 2 color printing
Exposing plates and negatives to arc
Using tints
Washing plates and preparing for press
PRESS WORK
Selecting appropriate paper on stock
Paper feeder set-up
Adjusting conveyor feeder & register guides
Adjust delivery table and jogger
Mixing moisture solution
Inking the press
Prepare and apply paper master
Prepare and apply metal master
Printing copy (1 side)
Printing copy (2 sides)
Cleaning blanket
Preparing master for preservation
Complete cleaning of press
Assist press operator
Others
_____

OFFSET PRINTING (layout and press work)

Jobs Completed

1. Guidance Booklet
2. Potpourri Literary Magazine
3. School Newspaper
4. Basketball Programs
5. Football Programs
6. Band & Choir Concert Programs
7. Variety Show Programs
8. Variety Show Tickets
9. 1, 2, & 3 Color Christmas Cards
10. Holiday Tournament Programs
11. Holiday Tournament Posters
12. History Maps
13. Report Cards
14. Teacher's Grade Report
15. Halftone of Football & Basketball Team on Programs
16. Honors Day Programs
17. Bus Permit Cards
18. Students Personalized Stationery
19. Junior Class Prom Program & Favors
20. Library Book Plates
21. FHA Dinner Invitations
22. Vocational Program Statements NCR
23. Yearbook Advertising Contract NCR
24. Graphic Arts Order Form NCR
25. Field Trip Request Blanks NCR
26. Graphic Arts Job Request Blanks
27. Veteran's Day Dinner Tickets
28. Rosarian Dance Tickets
29. Helping Hands for Marengo & Union
30. Church Stationery
31. Wizard of Oz Flyers & Tickets
32. McHenry County Jr. College Tickets & Stationery
33. Printing and Selling School Calendars every month listing School Activities
34. Christmas Festival Program
35. Arthur F. Miller - A Tribute
36. Evaluation Sheets
37. Class Play Programs
38. Smoke Signals Identification Cards
39. Leave School Permits
40. Long Distance Telephone Blanks
41. Film Request Sheets
42. Teacher-Counselor Conference Blanks
43. Teacher's Information Book
44. Master Class Schedule
45. Yearly School Calendar

Related Information

1. Types of Ink
2. Theory of Offset Printing
3. Paper Masters - Direct Image

4. Pre-Sensitized Aluminum Masters
5. Layout and Pasteup
6. Paper Cutting
7. Types of Paper

Field Trips

1. Belvidere Daily Republican Newspaper - Belvidere, Illinois
2. Addressograph-Multigraph Corp. Chicago, Illinois
3. Nu Arc Corp. Chicago, Illinois
4. Photo Shop Rockford, Illinois

Suggested Reference Material

Addressograph-Multigraph Corp. Cleveland, Ohio
Multilith Offset Operators Manual Model 1250 1965
Certified Multilith Supplies 1964
Operators Guide on Multilith Inks 1962

3M Printing Products Division, Minnesota Mining and Manufacturing Co. St. Paul, Minnesota
How to be a Smooth Operator 1962
Tips and Hints on Running Your Offset 1962
3M Platemaking and Proofing Guide 1964

Kagy, Frederick, Graphic Arts, Goodheart and Willcox Publishing Co. Chicago, Illinois 1961

Delmar Publishers, Albany, New York, Printing Layout Design 1955

PROCESSING PROCEDURE

SERIES 6001 NEGATIVE WORKING ALUMINUM MASTERS

(SENSITIZED TWO SIDES)

1. General Information

Both surfaces of the Series 6001 master are sensitized. If the second surface is to be used, both sides must be exposed before developing. Both surfaces must be protected by careful handling during exposure and developing steps. Avoid finger marks in the duplicating area. Handle the master by the corners or the lead or trailing edges only.

2. Exposure

Any standard exposure unit, which provides adequate ultra-violet light, may be used. Exposure time ranges from 20 seconds to 1-1/4 minutes, depending on the exposure unit used. Expose to obtain a solid step 4 using the A–M Exposure Guide #200-918A (a Kodak Photographic Step Tablet #2 or LTF 21 Step Sensitivity Guide may be substituted). The image will be faintly visible after exposure. If it is intended to duplicate from both sides of the master, expose the two sides before developing.

3. Developing the Master

A. FOR SHORT RUNS (Less than 5,000 copies)

After exposure, attach the master to the master cylinder. Remove unexposed sensitized coating with a Multilith Pad moistened with Multilith Developer Solution #200-914. Start duplicator and contact the Repelex Form Roller to the master and immediately contact the Ink Form Rollers. Start duplicating. Ink-up is immediate.

If second side of the master is to be used, perform complete processing on each side in turn. Exercise care to protect the second side from extraneous light and mechanical damage. If the second side of the master is not to be used, remove unexposed sensitized coating with a Multilith Pad moistened with water, then dry.

NOTE: If a delay between exposure of the master and duplicator run is required, the exposed master should be stored in a light-tight container. Masters processed on one side only must be stored face to face, or interleaved with a protective sheet.

B. FOR LONG RUNS

After exposure, place the master on a smooth clean surface. Clean newsprint may be used. Use a clean sheet beneath the master between each development step. Pour Multilith Developer Solution #200-914 to form a pool approximately 3-1/2" in diameter on the center of the master. Spread developer evenly over the entire master surface with a clean Multilith Pad or a Cellulose Sponge (See Note "A").

Now pour a pool of Multilith Quick Process Lacquer (#200-899) onto the master which is moist with Developer (#200-914). Using the same Multilith Pad or Cellulose Sponge, work the lacquer over the entire master area using medium pressure. Continue until the image becomes a deep, vivid blue. Wipe down the excess lacquer with a clean Multilith Pad and polish dry. In addition to providing a strong, ink-receptive image, the lacquer also protects the non-image area of the master during storage. When the master has been lacquered and rubbed down according to instructions, a blue haze should be visible over the entire master surface.

The master is now ready for the duplicator or for storage up to 30 days. If the second side is to be used, tutn the master over on a clean surface and repeat the above. If the second side of the master is not to be used, remove unexposed sensitized coating with a Multilith Pad moistened with water, then dry. If master is not to be run within 30 days, follow step 5 for storing.

Place the master on the duplicator. Start by wiping entire surface with fountain solution only, whether it is the initial starting or restarting of the master. Begin duplicating.

Upon completion of run, raise the ink and dampening form rollers and remove excess ink from image by running down six to eight copies. Remove the master from duplicator and proceed with storage instructions (See step 5 below).

4. Developing Hints

The amount of lacquer deposited on the image is controlled by the operator during processing. Medium pressure will allow the lacquer to build up to maximum density on the image making it capable of long runs. Heavy pressure applied during development will retard proper image build up. If the lacquer adheres to the non-image area, re-work the master by applying more Developer #200-914 to the master and additional Quick Process Lacquer if necessary.

Under proper conditions, 25,000 copies may be readily obtained when using Multilith Quick Process Lacquer (#200-899). If a much greater number of copies is desired, the image can be re-lacquered on the duplicator by stopping the run at approximately 15,000 copies. At this point run down the master, moisten it with fountain solution, apply Quick Process Lacquer to build up the image and continue the run. Repeat this procedure as required.

5. Storing The Master

A. Place master on smooth clean surface.
B. Apply fountain solution to entire master surface.
C. Apply Sealinx Solution 200-838A to image area. Wipe down smooth.
D. Apply dilute Keepeze Solution (diluted 1 to 1 with distilled water) to entire master surface and wipe smooth and dry with cheese cloth.

6. Addition and Deletions

Additions may be made with stylus or hard, sharp pencil. Wipe area with distilled water and dry. Make the addition and rub duplicator ink thoroughly into the area. Wipe with fountain solution and continue run.

Deletions can be made with Multilith eraser (#40-2546) or an Etcho Stick (#200-733) dipped in fountain solution. Use only sufficient pressure to remove the unwanted image. After the image has been removed, wipe the erased area with fountain solution and continue the run.

NOTE "A"

A cellulose sponge approximated size 3" x 3" x 1" is recommended for even application of the #200-899 Quick Process Lacquer. A–M Sponge part #120-4330-1 may be cut to size. The sponge must be moistened with water before using.

Cleanliness of lacquer sponges is essential for proper plate preparation. To prevent lacquer from caking and drying in sponges, they should be thoroughly rinsed with water at frequent intervals. Sponges should always be thoroughly rinsed before storing.

Graphic Arts

Marengo Community High School — Richard Magnani

Please complete this form in triplicate

Graphic Arts Department — Retain last copy — Instructor

DESCRIPTION: A typed draft should be submitted at least 2 weeks in advance of the date finished work is desired. In the case of a poster or the like, a freehand sketch which supplies all of the needed information should be submitted. Please include the number of copies and the style of layout desired.

NO. OF COPIES _____

DATE REQUESTED _____

PERSON REQUESTING WORK _____

DEPARTMENT _____

DATE NEEDED _____

SIGNATURE OF SUPERINTENDENT _____

Do Not Write Below This Line

PROCESS USED OFFSET___SCREEN PRINTING ___

OPERATOR _____

NO. OF COPIES RUN _____

COLOR _____

STOCK _____

AMOUNT OF FILM USED _____

SIZE _____

NO. OF PLATES USED _____

SIZE _____

MISC. MATERIALS USED _____

_____

STATEMENT ISSUED _____

COST	
OFFSET	SCREEN PRINTING
PHOTO FILM _____	PHOTO SCREEN _____
PLATES _____	HAND CUT FILM & SCREEN _____
PAPER & MATERIALS _____	PHOTO FILM _____
_____	PAPER & MATERIALS _____
LABOR _____	LABOR _____
TOTAL _____	TOTAL _____

Make Check Payable To:

COMMUNITY HIGH SCHOOL
GRAPHIC ARTS DEPARTMENT

Transfer from _____ account to

Graphic Arts account. Amount _____

3. Photography

   a. Skills involved

   b. Jobs completed

   c. Field trips

   d. Suggested reference materials

AREA -- DARK ROOM & PHOTOGRAPHY

THINGS STUDENT SHOULD LEARN TO DO ----------
Set up copy camera for line work
Adjust water temperature regulator
Prepare developing solutions
Use enlargement and reduction calculator
Adjust vacuum board for correct film size
Center copy on registered copy board
Set timer on camera for correct exposure
Handle film properly
Set developing timer
Use proper sequence for developing
Agitate film properly while in developer
Squeegee properly and hang to dry
Set up camera for halftone work
Proper handling & positioning of halftone screen
Proper developing for halftones
Correct copy positions for duo-tones
Testing film for correct time exposure
Set up and use flash lamp
Make contact positive
Make silver print to check negative
Use color guide to check colors or for overhead projector
_____

Photography

Jobs Completed

1. Mix Chemical Solutions
2. Expose and develop line copy
3. Expose and develop half tones
4. Expose and develop duo tones
5. Contact Positives

Related Information

1. Developing Solutions
2. F-Settings
3. Film Testing
4. Films
5. Safe Light Procedures
6. Percentage Calculator

Field Trips

1. Belvidere Daily Republican Newspaper - Belvidere, Illinois
2. Addressograph-Multigraph Corp. Chicago, Illinois
3. NuArc Corp. Chicago, Illinois
4. Photo Shop Rockford, Illinois

Suggested Reference Material

1. NuArc Company, Inc., Chicago, Illinois

   Graphic Tips -- Basic Tools and Their Applications
   Vol. I 1962
   Graphic Tips -- Fundamentals of Layout in the Graphic Arts
   Vol. II 1962
   Anatomy of the NuArc Camera, 2nd Edition June 1965

2. Basic Halftone Techniques and the Magenta Screen, Photo Products Dept., E. L. Dupont DeNemowis & Co. Wilmington, Delaware

3. Basic Photography For the Graphic Arts Kodak Publication, No. Q-1, Eastman Kodak Co. Rochester, N. Y. 14650 1963

4. Preparing Copy for Camera, Addressograph-Multigraph Corp. Cleveland, Ohio 1961

5. Denstonan and Schultz, Photographic Reproduction, McGraw Hill Book Company 1963

6. Instructors Information Sheets

   a. F-Setting
   b. Contact Positives
   c. Developing Solution
   d. Steps in Setting Up
   e. Developing Procedure
   f. Halftones & Tips

Exposure time for DuPont -- 30 seconds at F22
DuPont Film -- 40¢ each

F SETTING PHOTOGRAPHING

I. Use 16 or 22 for 100% copy.

II. (A) ENLARGING - Exposure is LONGER (CHECK CALCULATOR)

(B) REDUCTION - Exposure is REDUCED (CHECK CALCULATOR)

III. Determining Size of Copy

Find the necessary size you need by checking the size of copy you have on the calculator.

IV. LIGHT BLUE will photograph as WHITE

V. PALE OR SHADES OTHER THAN WHITE will need a longer exposure time (25% approx.) because THEY DO NOT REFLECT LIGHT AS WELL.

VI. EXPOSURE TIME FOR DUPONT:

At F22 - 30 Sec.
At F16 - 15 Sec. ---Time either doubles or halves for each movement on the F scale.
At F32 - 60 Sec.

CONTACT POSITIVE (REVERSE)

1. Place film EMULSION SIDE UP ON VACUUM TABLE
2. Place NEGATIVE WITH REVERSE READING UP
3. Apply vacuum and close vacuum table.
4. EXPOSE ABOUT 12 SECONDS
5. Develop as regular film.

DEVELOPING SOLUTIONS

I. DEVELOPER -- (Water should be 68°- 72°)

1. Mix 1 part of A and 3 parts of water
2. Mix 1 part of B and 3 parts of water

3. NEVER MIX PARTS A AND B BEFORE ADDING WATER

4. 1 quart of mix for 10 to 12 8½ x 11 sheets
   ½ gallon of mix for 20-25 8½ x 11 sheets

   (Mix 4 oz. of A 12 oz. of water) = 16
   (Mix 4 oz. of B 12 oz. of water) = 16 = 32 oz. or 1 qt.

5. DEVELOPER MUST BE CHANGED EVERY DAY.
6. Developing time is from 2-3 minutes. (2½ IDEAL)

TIP ---- If developer is spilled on clothing use a 5-1 mixture of fixer and soak for 15 minutes.

II. RINSE

1. USE PLAIN WATER (Water from the hose 68°- 72°)
2. Keep film in here about 5 seconds
3. May be 10-15 SECONDS IF WATER IS RUNNING.

III. FIXER (HYPO)

1. May be kept for a WEEK OR LONGER if small amount of film is developed.
2. Fixer will not deteriorate from standing.

   FIXER MIX (1 gal. to 1½ gallons total)
   Add 3 quarts of water to 1 quart of fix
   Add 2 oz. of hardener for each quart of concentrate fixer

3. When fixer gets old it will feel slimy and will take longer to clear.
4. FIXER TIME IS ABOUT 1 MINUTE. (White lights may be turned on after this.)

TIP ---- On weekends after developer has been emptied, pour fixer into developing tray and leave over weekend --- on Monday pour fixer back into original tray and wash developer tray with water. This will help to bleach developer tray.

TIP ---- If FIXER is spilled on clothing, wash out with WATER.

STEPS IN SETTING UP

WHITE LIGHTS ON

1. Mix Solution
2. Determine size of copy according to calculator.
3. Set copy and lens tape to size desired.
4. Set F setting if different - MAKE SURE COPY GLASS IS CLEAN
5. Set timer for correct exposure.
6. Place copy to be photographed on copy board (CENTERED)
7. Set vacuum table for size of film.
8. MAKE SURE LAMPS ARE AIMED AT COPY BOARD AND LENS COVER REMOVED.
9. Turn on safe lights - if not already on.

WHITE LIGHTS OFF

1. Make sure ALL WHITE LIGHTS ARE OFF (EVEN LIGHT TABLE)
2. Remove 1 sheet of film from carton and SEAL the rest before proceeding.
3. Place film on vacuum table with emulsion (LIGHT) side up (CENTERED)
4. Apply vacuum switch.
5. Close vacuum cover until latch catches.
6. Press start button.
7. After film has been exposed - - (LIFT VACUUM TABLE)
8. Shut off vacuum and remove film BEING CAREFUL NOT TO TOUCH IMAGE AREA.

GO TO DEVELOPING PROCEDURE

DEVELOPING PROCEDURE

STEPS

I. DEVELOPER SOLUTION

1. Set timer for 2½ minutes and flip switch when inserting film in developer.

2. After removing film from camera place in developing solution. (EMULSION SIDE FIRST AND THEN FLIP TO BACK SIDE)

3. Agitate film during 2½ minutes by moving tray.

TIP ---- If at end of day solution is weak - increase exposure 20 to 25% or increase developing time ½ to 1 minute

II. RINSE SOLUTION

4. Place in here for about 5 SECONDS

5. A longer time 10-15 seconds WILL NOT HURT if WATER IS RUNNING

III. FIXER SOLUTION

6. Place in here for about 1 minute

7. Agitation is okay but not required

8. When film TURNS from WHITE to CLEAR - PROCESS IS OVER

9. White lights may be turned on

TIP ----- Fixer may be prolonged at end of week by adding about 1% of hardener per gallon.

IV. RINSE SOLUTION

10. Place in here and wash with hands to clean film.

11. This process should last about ½ minute, but film could be left here INDEFINITELY WITHOUT DAMAGE.

12. Remove from rinse water and place on HARD SURFACE to squeeze.

13. Be sure to place film with READABLE SIDE UP when squeezing to AVOID DAMAGING EMULSION SIDE (unreadable side)

14. Place on LIGHT TIME for EXAMINATION.

HALF TONES

1. Place photo and gray scale on copy board and center.

2. Set lens at (F 11) and set timer for 2 minutes for 100%.

3. Turn off white lights.

4. Place film on with emulsion (light) side up.

5. Place halftone screen with tape (shiny) side up on top of film, and apply vacuum. (Handle screen on the corners.)

6. Stand back and check for bubbles.

7. Close top and expose. (ALWAYS PUT SCREEN AWAY FIRST WHEN FINISHED.)

8. Lift vacuum top.

9. If copy has large dark areas, expose film and halftone to yellow light for 10 seconds. (THIS SHOULD PUT BLACK DOT IN 1.40 & ABOVE SCALE.)

   The further up the gray scale we go on the light area of the negative with small black dots, the more detail will show in black areas of the finished print.

10. Place film in developer, flat and evenly, and agitate slowly for 3 to 3½ minutes.

11. Place in other solutions as you would line copy.

TIPS

1. If copy is too light and more contrast is desired:
   A. Expose film ½ normal time.
   B. Lift vacuum top and expose to yellow light 10 sec.
   C. Remove halftone screen and close vacuum table and expose film 5% of the remaining time.

(Example) If exposure time is 2 minutes for 100% copy at F 11:

1. First expose film and screen for 1 minute.
2. Then expose to yellow light 10 seconds.
3. Remove screen and expose in camera 5% of the remaining 1 minute, which is 3 seconds.
4. Develop 3 to 3½ minutes.

TO MAKE TINTS ON REGULAR FILM

1. First make negative and then a positive
2. On 50% tint only make a negative
3. A=10% B=20% E=50%

1. Our screens density range on the gray scale is from .05 - 1.40.
2. Exposure for halftones is from 5-7 times that of line copy.
3. Vigorous agitation increase contrast - Still development decreases contrast.
4. Increasing exposure will make the halftone darker.
5. The white part of your photo will be the darkest area on the negative.
6. WE WANT SMALLEST WHITE DOT IN .05 AREA

   10% OF DARKEST AREA SHOULD BE WHITE

   DOTS SHOULD BE AS SMALL AS POSSIBLE WITHOUT BEING CLOSED

TO DROP OUT BACKGROUND ON A HALFTONE

A. ½ normal exposure time
B. 10% of ½ normal exposure without screen
(just like line shot)

USING FILTERS

A. Orange 3 times normal line exposure
B. Green 5–6 times normal line exposure

DUO–TONES

1. Tape register guide on original
2. Lay out copy board with tape at 30° from horizontal cross guide.
3. Shoot 1 halftone regular (yellow flash 7–10 seconds).
4. Develop.
5. Move copy 30 degrees.
6. Shoot 2nd halftone and develop

IF ORIGINAL IS A HALFTONE ALREADY, THEN YOU MUST START OUT WITH COPY AT 30 AND SECOND SHOT OF THE COPY MOVED 30 MORE IN THE SAME DIRECTION.

IF ORIGINAL IS NOT VERY SHARP, AND WILL NOT REFLECT MUCH LIGHT, AND ALL YOUR COPY IS IN THE LIGHT RANGE, THEN USE ABOUT 3/4 OF TIME AS REGULAR HALFTONE AND 5% OF REMAINING TIME AS LINE SHOT.

4 COLOR

1st normal block
2nd 30 for red
3rd 30 for blue
4th 45 for yellow (up or down)

SILVER PRINT PAPER

1½ to 2 minutes in plate maker.

Develop in plain water.

To make image darker dip the paper in fixer after developing.

Squeeze and hang up to dry

COLOR GUIDE

1. A and B may be mixed together without any trouble. use about 1 qt. of total water (72)

2. Expose colors to arc lamp with shiny side up for 3/4 to 1 minute.

3. Then develop for 1 minute, and wash out in warm water.

4. Keep hands off the image.

5. If you get the wrong color on the wrong negative and you expose it don't throw away. Just put away in box for 3 days and it is okay.

4. Jobs relating to graphic arts areas

   a. Paper Cutting

   b. Paper Folding

   c. Paper Binding

AREA -- MISCELLANEOUS

THINGS STUDENT SHOULD LEARN TO DO -----
CUTTER
Layout of paper for cutting
Operating paper cutter
FOLDER
Set up for folding
Operating folder
Assist folding operator
BINDERY
Assemble booklets
Assist stapling operator
Operate stapler
Stack and count assembled copy
Operate combo punch & binding machine
OTHERS
_____

Jobs relating to graphic arts areas

Folder (jobs completed)

1. Tournament Programs
2. Basketball & Football Programs
3. Band & Choir Programs
4. Variety Show Programs
5. Potpourri Magazine
6. School Newspaper
7. Sports Banquet Program
8. Honors Day Program
9. Christmas Festival
10. Class Play Programs

Paper Cutter (jobs completed)

1. Paper for Christmas Cards
2. Various Passes -- Note pads
3. Report Cards
4. Rosarian Dance Tickets
5. Bus Permit Cards
6. McHenry County Jr. College Foundation Tickets
7. Variety Show Tickets
8. Smoke Signals Identification Cards

Binding (jobs completed)

1. Holiday Basketball Tournament Programs
2. Prom Program
3. Guidance Booklet
4. Potpourri Magazine
5. Teachers Information Book

B. Toy Repair Area

1. Skills involved

    1. Painting
    2. Welding
    3. Threading
    4. Wood Cutting
    5. Metal Fabricating

2. Jobs Completed

    1. Small cars and trucks
    2. Tricycles
    3. Wagons
    4. Sleds
    5. Bicycles
    6. Small garden tools

Course Outline For Tenth Grade Work Experience Core

I. Orientation

A. Assimulating assembly line work

B. Discussing jobber units

C. Learning safety procedures

D. Using demonstrations by industries

II. Jobber Units

A. Farm Machinery - new equipment to be assembled for Paulters Implement Co., Belvidere, Illinois and Marengo Implement Co., Marengo, Illinois

1. Jobs Involved
   a. Assembling hay rakes
   b. Assembling parts and accessories of garden tractor
   c. Assembling plows
   d. Assembling cab and attached cab to tractor body

2. Skills students need to learn
   a. Following instructions in manual when assembling various units
   b. Rechecking parts to see if fastened firmly and correctly

3. Equipment needed
   a. Assortment of wrenches, pliers, screwdrivers
   b. Hoist

4. Field trips
   a. Marengo Farm Implement Co., Marengo, Illinois
   b. Paulters Implement Co., Belvidere, Illinois

B. Aluminum Hubs - part of a fan blade. Hub contains a set screw used to fasten the fan blade to the shaft of the motor. Unit furnished by Walton Products, Union, Illinois

1. Jobs involved
   a. Drilling
      1. Set up jog for drilling
      2. Drill to desired depth

   b. Tapping
      1. Set up jig for tapping
      2. Tap to correct depth

   c. Inserting screws

2. Skills students need to learn
   a. Removing chuck from drill press and attaching tapping unit
   b. Adjusting tapping unit for correct torque

c. Setting depth stops
d. Changing belt on drill press to vary speeds
e. Installing and adjusting jigs
f. Unscrewing set screw so hub fits on motor shaft
g. Using necessary safety devices

C. Tackle Box Handles - Part of tackle box manufactured by Walton Products, Union, Illinois

1. Jobs involved
   a. Placing two part handles together
   b. Placing in foot press and clamp together
   c. Removing from press and checking

2. Skills the students need to learn
   a. Placing parts correctly in the press
   b. Locking handle before pressing foot pedal
   c. Using required safety precautions

3. Field trips
   a. Walton Products, Union, Illinois

D. Exhaust Fan #859 - A wall mounted fan. Used in kitchens and bathrooms. Unit furnished by Aubrey Manufacturing Company, Union, Illinois

1. Jobs involved
   a. Pressing outlet into outlet box
   b. Attaching outlet box to fan housing
   c. Fastening wall mounting brackets to housing
   d. Attaching motor to motor mounting bracket
   e. Attaching fan blade to motor shaft
   f. Attaching motor mounting to housing
   g. Plugging motor cord into receptacle
   h. Pasting U. L. Labels to motor and housing
   i. Testing motor by plugging into wall outlet
   j. Packaging unit instructions included

2. Equipment and tools needed
   a. Phillips screw driver
   b. Hex headed socket wrench
   c. Power driven screw driver
   d. Wall outlet for testing
   e. Packaging and labeling equipment

3. Field trip - Aubrey Manufacturing Company, Union, Illinois

E. B.W.I. - HT Humidistat - Thermostat - An accessary unit. Used on grain dryer to control humidity and temperature. Unit furnished by Chicago Eastern Corp. Marengo, Illinois

1. Jobs involved
   a. Screen printing panels
   b. Testing thermostat before assembly
   c. Testing humidistat before assembly
   d. Attaching thermostat to unit
   e. Attaching extension shaft to humidistat

f. Connecting wires to humidistat
g. Testing unit with current tester
h. Attaching unit to wire cage
i. Assembling panel to cage with pop rivets
j. Attaching and setting knobs and attaching cord relief
k. Testing for accuracy, using current tester and psychrometer

2. Skills students need to learn
a. Pretesting humidistat and thermostat
b. Attaching wires and cord properly
c. Using circuit tester
d. Using pop rivet gun
e. Setting dial with allen wrench
f. Checking room humidity with psychrometer
g. Checking room temperature
h. Screening for printing

3. Equipment and tools needed
a. Screw driver
b. Socket wrench
c. Allen wrench
d. Pop rivet gun
e. Strain relief pliers for cord
f. Circuit testor
g. Psychrometer
h. Screen for printing

4. Field Trip - Chicago Eastern Corporation, Chicago, Illinois

F. Acorn Scraper - Tool used for scraping, cutting, and ripping. Unit furnished by McGill Metal Products; Marengo, Illinois

1. Jobs involved
a. Attaching support plates to handle using bending jig
b. Attaching blade receptable to handle
c. Attaching handle to cord with razor and support plate
d. Inspecting

2. Skills student need to learn
a. Using bending jig
b. Attaching blade receptacle
c. Attaching unit to cord properly

3. Equipment and tools needed
a. Screwdriver
b. Bending jig

4. Field trip - McGills Metal Products Company, Marengo, Illinois

III. Class discussions relating to the work of the work experience core and the world of work
A. Explaining assembly procedures

B. Explaining importance of teamwork in assembly work

C. Discussing quality vs Quantity

D. Explaining humidity and the sling psychrometer

E. Arriving at positions on the assembly line

F. Getting a job and keeping it

G. Responsibility on the job

H. Getting along with fellow workers

I. Following instructions

J. Accepting criticism

K. Using time properly

Chapter VI

RELATED ACTIVITIES AND TECHNIQUES OF THE EXPERIMENTAL VOCATIONAL PROGRAM

I. The Experimental Vocational Club

A. Purposes

1. Promoting leadership within the group
   a. Organizing the club
      1. Electing officers
      2. Appointing committees
      3. Planning a program
      4. Planning special events
   b. Operating the club
2. Handling the activities
3. Promoting recognition
4. Unifying activities of the program
5. Creating an interest in occupations
6. Encouraging and practicing thrift
7. Participating in worthy community projects

B. Activities of the club

1. Holding recreational activities
2. Conducting field trips
3. Holding parent, student, school social affairs
4. Developing community service projects
   a. Helping hand
   b. Repairing toys
   c. Assisting Jaycees

C. Club newspaper

1. Reporting activities of the club
   a. Parents
   b. Staff
   c. School officials
   d. State officials
   e. Visitors

2. Informing other interested agencies

II. Supplementary Workers

A. Volunteer student helpers (explanation on page 64)

1. Using Art students in graphic arts layout
2. Using Industrial art students in shop area
3. Using business education students for verityping
4. Using individual tutoring

B. Supervisors from industry

1. Explaining project assembly
2. Checking faulty parts

C. Specialists in the fields

1. Demonstrating machines and material used
2. Resource people

III. Inter-related classes

A. Course coordinating with program

1. Choir and band
2. Driver education
3. Physical education
4. Home economics
5. Agriculture
6. Typing
7. Art
8. Mechanical drawing

B. Student registration in other courses

1. Relating to their interest
2. Enrolling when they become capable
3. Enrolling when they have desire

IV. Staff Meetings

A. One period a day - staff member conferences

B. One period a week - entire staff conference

C. Day workshop - whole staff

V. Parent participation in the program

A. Summer conference - student, parent, program director, and counselor

B. Group parent - student - teacher conference

C. Individual parent - student and teacher conference

D. Social gatherings
1. Recreational activities
2. Recognition night
3. Student-parent-staff pot luck

VI. Student progress reports (sample copy page65-6)

A. Language laboratory core evaluation

B. Work experience evaluation

VII. On-the-job training agreement (sample copy page 67-8)

A. Participating students

1. Having ability to perform job
2. Needing this experience

B. Evaluation

1. Coordinator
2. On-the-job trainer

Student Volunteer Helpers

The field of graphic arts was chosen as the first year work experience program. There were a number of reasons for this choice. The field was appropriate for both boys and girls, resource people were available and it was a field that lent itself well to volunteer student helpers.

The program's student helpers were not chosen at random, but because they had developed skills in their areas which could contribute to the program. These student helpers were understanding and appreciative of the problems faced by the experimental students. They became a part of the group, listened to problems, and adjusted to each student's level of performance.

The helpers from our art curriculum contributed as follows:

1. Preparing work to be photographed
2. Helping with copy layout
3. Making finished copy from rough design
4. Providing individual instruction
5. Supplying sketches

The helpers from the shop curriculum contributed as follows:

1. Inspecting assembly work
2. Spot-checking assembly line progress
3. Using drafting skills in layout work
4. Supervising wood cutting

The helpers from the business education curriculum contributed as follows:

1. Typing copy for offset printing
2. Lay out and designing material to be typed
3. Correcting and pasting up copy
4. Justifying for newspaper

The helpers who indicated an interest in Special education contributed as follows:

1. Helping students in the learning laboratory core who have individual reading, arithmetic, and spelling problems

2. Supervising students studying in Reading In High Gear

WORK EXPERIENCE PROGRESS REPORT

Student _____ Rated by _____

Dear Parent: *This evaluation sheet is a means by which the instructor may help indicate to the parent the level at which the student is now operating. It also helps the instructor to evaluate for the training period and in counseling with the student. Checks are placed in the column that best describes the student's performance.*

Qualities To Be Rated	Above Average	Average	Below Average	Improvement Noted
DEPENDABILITY: Prompt, consistent, works with little supervision, truthful, follows instructions				
CULTURAL REFINEMENT: Courteous, considerate, respectful, appreciative				
LEADERSHIP: Aggressive, imaginative, resourceful, able to inspire others, uses good judgment				
INDUSTRIOUSNESS: Persistence, makes wise use of his time				
MENTAL ALERTNESS: Attentive, interested, eager to learn				
THOROUGHNESS: Accurate, practices safety, sustained interest, completeness of work				
PERSONAL APPEARANCE: Clean, neat appearance, orderly, poised				
GETTING ALONG WITH OTHERS: Adaptable, friendly, tactful, cooperative, willing to be counseled, a respect for others				
SOCIAL HABITS: Attitude, self control, honesty, not inclined to argue, complain, give excuses, excessive or loud talking, accepts criticism				
PERFORMANCE: In skills taught				

Comments: _____

_____

_____

Parents please sign on the reverse side.

LEARNING LABORATORY PROGRESS REPORT

Name _____ *Date* _____

1. *Word recognition* _____
   a. *Omissions* _____
   b. *Substitutions* _____
   c. *Vocabulary* _____
2. *Reading Speed* _____
3. *Reading Comprehension* _____
   _____
4. *Listening Comprehension* _____
   _____
5. *Punctuation* _____
   _____
6. *Phrasing* _____
   _____
7. *Repetitions* _____
   _____
8. *Other Observations*
   a. *Interest* _____
   b. *Security* _____
   c. *Motivation* _____
   d. *Use of time* _____
   e. *Responsibility assumed* _____
   f. *Promptness* _____
   g. *Attitude toward peers* _____
   h. *Confidence* _____
   i. *Social characteristics* _____
9. *Remarks* _____
   _____
   _____
   _____

Parent's Signature _____

COMMUNITY HIGH SCHOOL-MARENGO
VOCATIONAL EDUCATION DEPARTMENT

ON-THE-JOB-TRAINING AGREEMENT

DATE_____

1. The _____ will permit _____ to enter
   training agency and address — name of student

   it's establishment for the purpose of gaining knowledge, experience, and skills as a _____ under the supervision of _____ in the
   Job Title — Name of Supervisor

   _____ department.
   Name of department

2. The training program shall start _____ and continue through _____.
   starting date — ending date

3. The student trainee shall be released from school for On-The-Job-Training during the following period of time of the school day: _____
   Released School Time

4. Credit towards high school graduation shall be given for satisfactory work completed in the training program.

5. The school Coordinator and the training agency, _____ shall plan
   name of agency

   the student's On-The-Job-Training Program and also outline related information to be taught at the high school.

6. The length of the training program shall depend upon the individual trainee's conduct and educational growth at the high school and/or On-The-Job. Unsatisfactory work at the high school and/or the training center shall terminate this On-The-Job-Training agreement.

7. The student-trainee shall retain his status as a student of Community High School-Marengo and therefore shall comply with its rules and regulations during this training period.

8. The student-trainee shall comply with the established rules and regulations of the training center.

9. The Coordinator and the On-The-Job-Trainer shall make periodic evaluations of the student's growth within the training program and this evaluation shall become a part of the student's permanent high school record.

10. The salary to be received by the student-trainee shall be agreed upon by the training center, the student-trainee and the school Coordinator.

11. Since other students in the Vocational Education Program earn money for the total program, five dollars ($5.00) of the student-trainee's weekly salary shall be paid to the Vocational Education Department at the Community High School, Marengo.

12. Adjustments in the salary and in the work program will be made after a conference with the Coordinator, student-trainee, and employer-trainer.

13. The starting salary of this trainee shall be _____ per week less the deductions for social security, income tax, and the school deduction.

14. Student-trainee complaints, and Trainer-employee shall be made to the Coordinator.

15. The student-trainee shall be covered by insurance provided by:

_____
Name & Address of Training Center

_____

_____ _____
Student signature date Parent or Guardian date

_____ _____
Employer Signature date Coordinator signature date

Chapter VII

EVALUATION 1965 - 1966

Introduction

The goal of the Marengo Experimental Vocational Program is to encourage and give low-achieving students an opportunity to fulfill their basic material needs, as well as a chance to acquire a feeling of dignity and worth. The program provides opportunities for these students to develop functional work habits, job skills, and attitudes necessary for employment.

The high school counselors involved in this program carefully selected the students by evaluating the student test scores, previous school performance records, and through individual conferences with the student's former teachers. Finally, parent-student summer conferences were held at which time the program was explained. The decision to participate was left entirely up to the student and his parents. These conferences were an integral part of the students' and parents' acceptance of this program.

Referrals were made to a psychologist and to Vocational Rehabilitation for additional appraisal or help for those students who needed these additional services. Each student in the program then had the benefit of individual counseling to reinforce himself, and to help him deal with frustrations, feelings, and obstacles.

Evaluation was a continuous process because of the nature of the program and the type of student involved. All of the staff made casual, every day observations and reflections to help satisfy the needs of the students. Day to day material needs and approaches had to be tailored to their capacities.

Objectives were stated in behavioral terms and these became the criteria against which this program was assessed. All of the objectives could not be regarded equally because of the great differences in individuals. The data gained through observation and reflection gave the staff insights and helped them make decisions to further enhance the program. Parents and students were informed regularly as to improvements or reversals that were being observed. The staff met regularly to evaluate, share ideas, and plan.

The final evaluation of the program was made by first stating the goals and objectives for the experimental program. These objectives were such that all of the staff could observe and verify. The specific method chosen was Froehlich's methodology called client opinion or "the what do-you-think-method." An unstructured taped interview was held with the students to get their expressed opinion of the program.

The names of the student appearing in the student analysis, summary, and evaluation have been changed. The comments written about each of the students give emphasis to certain aspects of the program.

Student Analysis, Summary, and Evaluation

Jane Anderson

Jane has a physical defect (post choana fusion nasal disorder) and environmental difficulties to overcome. These difficulties have caused Jane to withdraw from her fellow students and have retarded her school progress. Her attitude toward school soon resulted in an attendance problem. She only attended school under pressure.

Jane's attitude toward school has now completely changed. Pressures within the home are no longer needed to encourage school attendance, in fact, she now waits for the bus. She has made great improvement in her school work, and in her relationship with her schoolmates. One of the most important outcomes of Jane's vocational work experience was the development of self-direction. Family communication has improved. She has been referred to Vocational Rehabilitation for correction of her physical defect. If Jane progresses at the present rate, she will be employable at the end of her high school education.

Joseph Smith

Joe is an epileptic and has had several severe attacks which have left him with some brain damage. His parents are very understanding, realizing they have a problem, and that the boy is limited in his capacity to learn. We found Joe to be a very cooperative, considerate, and realistic young man, but he lacked confidence in himself to go ahead on his own. At the beginning of the work experience program he was hesitant about going ahead with his project. He made many mistakes and when he did make a mistake would retaliate with the words, "That's me; that's what I always do." He read at about the third grade level, but knew he needed help in English, reading, and spelling. He communicated easily with his teachers and fellow students.

Joe is now the hardest worker in the class; doesn't waste time, and is always looking for another job. Although he doesn't always do the best job, he stays with his work until it is completed. Once he learns how, he works efficiently. Near the end of the year a facsimile of an assembly line was set-up in our work experience program, and Joe performed his position on the line very capably. He has improved in his ability to follow directions (takes his directions with him to his work bench), has developed more confidence in himself, and seeks help from teachers when he cannot go ahead by himself. There was a significant improvement made in Joe's vocabulary as a result of the English program.

Mary Doe

Mary was placed in the program because of her reading level and her lack of reading comprehension. She read at about the fourth grade level and could not concentrate enough on her reading to relate what she had read. She lacked self-confidence in academic situations. Mary was very quiet, did not volunteer, but was a pleasant and cooperative young lady.

Mary realizes that she needs help and has worked hard to improve. She has gained some security, has more self-confidence, and has assumed some responsibility. She works well with others but needs to improve in following directions. She works well with others but needs to improve in following directions. She now talks freely and has assumed some leadership roles within the group.

Peter Johnson

When Peter entered high school he was a very immature boy for his age. His actions in all classes were those typical of a grade school student. Peter was somewhat reluctant to enter this program. He was placed in the program because of his reading problems and his attitude toward school.

An error was made when this boy was considered for the program and allowed to participate. His academic potential was greater than his evaluation revealed. The boy became bored, and his enthusiasm vacillated. Peter is not going to participate in the program next year.

Robert Fitch

Robert's obtained Full Scale Wisc. I.Q. of 87 (Verbal I.Q.=90; Performance I.Q.=86) places him at approximately the 20th percentile of the standardization sample and at the upper end of Wechsler's "dull normal" group. If it were not for poor performance on a verbal subtest taping arithmetic ability and performance subtests taping visual-motor coordination, he would have clearly been in Wechsler's "average" group. In short, he apparently has the intellectual capacity to complete high school, contrary to what is indicated by his previous scholastic record. Failure had become so much a part of Robert's school life that he simply had ceased to make any attempt to do what was required of him. Robert was not included in the initial program because it was felt that both Robert and his parents had to see the need for a program of this nature. Previously, Robert's parents had blamed the school for his failure.

Robert's greatest gain has been in establishing good work and study habits. His assignments are completed and handed in on time, for the first time in his school history, and he has proven that he has potential to succeed. The school-home communication line has been reestablished, and Robert's home and school life has been much happier.

Dale Macy

Dale was not included in the whole program because in the original selection of the group this boy appeared to be stronger than the group selected. Later, because of his failures in regular school subjects, including industrial arts, he was placed in the vocational program. He did not want to leave his regular science, math, and English, so he was allowed to remain in these classes.

The conclusions of the staff indicate that he did not gain the benefit of the attitudes developed in the English-reading program. It appears that in order to be successful in this program, the students must have the benefit of the whole program.

Lowell Olson

Lowell disliked school, his attendance was poor, and he had very little understanding of what to do, and how to do it. He was probably the most retarded student in the group. He was very quiet, afraid to try, stayed to himself, was self-conscious, and very insecure.

Lowell's biggest gain is in his attitude toward school. His attendance is now good. His parents are very pleased with his progress. Lowell has developed a good understanding of himself and his academic problems. He likes the program because he can accomplish the work that he is asked to perform. Much improvement has been made, but for him to be employable he must continue to develop self=confidence and skills.

David Rae

David, upon entering high school last fall, was a very quiet and reserved young man. He lacked self-confidence and was hesitant about assuming responsibilities. David knew he had a severe reading and communication problem and was willing to try to correct this problem. The evaluation indicates he has academic potential, and a good memory.

This boy has reacted favorably to the program and his teachers feel he has gained a great deal. He has developed some self-confidence, improved his reading and writing skills, and has worked well in every area of the work experience program. If he continues to improve at the same rate, this boy may in another year move into a modified regular school program.

Lester Schultz

Lester's aspirations about his future seem to be much greater than his potential. The parents encouraged Lester to enroll in this program. He had reservations about becoming a part of the English-reading program, and was definitely against entering the work experience part of the program. Past history tells us that he is a hard-working, cooperative, and conscientious young man. He was reading at about the fifth grade level.

He admits he has developed his communication skills, enjoys reading, and appreciates the help he received from this part of the program. However, because he has still failed to appraise himself realistically, he has decided not to become part of the program next year.

Lynn Foster

Lynn's mother rejected the idea of Lynn's becoming a part of this program even though the school's evaluation indicated she should be in the program. However, after Lynn's grades for the first grading period were received at home, her mother immediately sought a conference with the school. Lynn was placed in the program as an outscome of this conference. Lynn has low average ability, but because of some severe problem her achievement is not commensurate with her ability. The pressures that have built up over a number of years because of these difficulties seem to have created a number of unfavorable situations for this young lady. She was afraid to accept any responsibility, rarely volunteered, and would cry whenever one of the school staff tried to talk to her alone.

Lynn entered the group after the first six week's grading period. She acted like she didn't want to be in the class, and paid very little attention. This attitude changed after a short period of time and she has improved almost unbelievably both academically and socially. Her attitude has changed, but she still needs the benefits of a program of this nature. Lynn's family relationships and her status within the family have improved.

Fay Peters

Fay, upon entering high school last fall, lacked self-confidence, had a low opinion of himself, and craved recognition and when thwarted, gave up completely. He was an extrovert, had an out-going perspnality, but depended on others for his happiness and security. It had been difficult for Fay to achieve with any group in which he had been placed, so he had developed a "so what" attitude. Fay's home environment has not encouraged academic achievement. He was a poor listener and read at about the fourth grade level.

One of the greatest accomplishments Fay has made this year has been to develop a better understanding of himself. Since he has a better understanding of himself, he has developed a better attitude toward learning. Fay's parents have a better understanding of his problem. He has shown improvement in communication skills and work habits but still needs to improve. He feels the kind of training he is getting now will help him to adjust to future work in industry.

Sally Smith

Sally entered high school last fall with a very realistic understanding of her academic needs. The parents understand Sally's problems. She reads at about a fifth grade level. She was rather shy, quiet, and retiring. Sally may have been "pigeon-holed" unfairly because of a school clique.

Sally has shown improvement in all areas of the program. She makes wise use of her time and is not afraid to take responsibility. She now likes to read, and at times may read at the expense of other school work. No longer is she relegated to a limited social group; she now has a wide range of friendships.

Howard Mays

Upon entering school last fall, it was felt that Howard had academic potential and his poor achievement was due to his habit of "not doing". He lacked security, craved attention from his peers, and lacked confidence only in the academic area. Howard compensated for a lack of academic achievement by substituting childish behavior in the classroom. He was reading at the fourth grade level.

After working with this boy for a year, the staff has mixed emotions about his academic potential. He has made progress in communication skills, work habits, and his attitudes toward school, but not at a rate commensurate with his evaluated potential. It is felt that if Howard continues to grow at the present rate he will be an employable young man at the end of a four year vocational program.

James Kelley

James came to high school last fall with a "persecution complex" and negative attitude toward school. His family until recently, had been migratory workers, and Spanish is spoken in the home. James accepted the invitation to become a part of the group, because he understood that he needed help academically, but had the hardest time adjusting to the class because of pressures exerted by

other classmates not in the program. He was reading at a fourth grade level.

James has more potential than evaluation indicated last fall. He has made more progress in social acceptance, attitudes toward school, and work habits than any other member of the class. If this progress continues, James should develop some very good vocational skills by the time he leaves high school.

Paul Coon

Paul has more academic potential than any other member of this class. In fact, his over-all I.Q. on the Wisc. was 110, but his reading achievement was at about the fifth grade level. It seemed that Paul yearned for recognition as an individual and tended to minimize his abilities in the presence of his peers. He wanted to be treated as an independent adult, but avoided adult responsibilities andcontrols. Paul's mother is concerned about Paul's learning progress, but does not know how to cope with this problem. His father seems to be apathetic toward Paul's problems.

Progress has been made with Paul, but not with his ability. The greatest learning took place when he worked individually. His efforts to receive recognition from the group are of the type that hamper his group learning experience. This young man needs the advantages of this program to realize his full potential and to be able to work with a group.

Kathryn Ellis

When Kathy entered high school, she was a withdrawn introvert, depended on others, lacked self-direction, and was an emotionally unstable young lady. She could not communicate with any of the high school staff and students unless her mother was present. Kathy became emotionally upset when she had to adjust to a new situation. She read at the fifth grade level, had poor listening habits, and was unable to communicate adequately.

Kathy now feels much more secure, more interested in school, likes school, has gained in self-confidence, assumes some responsibility, and has developed some close friendships with her peers. She has shown much improvement in communication skills. In the work experience program she has shown a desire to do the work rather than to assist. If improvement continues at the same rate, she should be employable at the end of her high school program.

Rolf Jones

Rolf was the oldest member of the class and the only son of older parents who were overly concerned about his progress. While the parents recognized that Rolf had a reading problem (he read at about the fifth grade level) Rolf did not recognize the need for developing these skills. He was very withdrawn, and quiet, but a very kind, considerate, courteous young man. His communication skills were very weak.

Rolf is now interested in all the work he is doing, is feeling more secure, correlates his work well with his needs and interests, uses his time more efficently, assumes more responsibility, and has gained some self-confidence.

The progress he is making in his personality demonstrates the need for continuing a program of this nature for his future employability.

Paula Stout

Paula was selected to be a participant in the English-reading program because of her low reading comprehension. Paula and her parents both recognized this problem and secured some tutoring. After three months in our program her reading skills had developed enough for her to perform capably in our regular English program.

Paula was moved into our regular English program and is performing at an average level.

Jon Jackson

Jon was a drop-out, and had been retained two years in the grade school. He was seventeen years old and did not belong in this group.

Jon was severely handicapped when it came to reading, writing, and spelling. He was so far below the level of the group selected that he had to be helped individually. He was not willing to start where he was able to work, consequently he did not improve. He was referred to the Vocational Rehabilitation, and he is presently enrolled in the Decatur Job Training Center.

Teachers' Analysis, Summary, And Evaluation

Communication Skills for Vocational Competence Teacher

Last September, we knew that these ninth grade students had reading, writing, and spelling problems, and we knew they wanted help in solving them. We also knew that we would have to deal with poor attitudes, social and environmental problems, and poor work and study skill habits.

We were at a loss to know how to begin to give help to so many needs. We were unhappy and knew that the students must have been unhappy. Sometimes class situations were close to chaos. The presentation and materials used had to have a ninth grade interest level, but at the student's level of achievement. It was difficult to find this type of reading material. We turned to the school, city, county, and state libraries for aid, and we were successful in obtaining the kinds of material we wanted.

We worked on substituting good habits and attitudes for poor ones, and on the development of listening skills. These skills were essential to the formulating of new habits. We insisted on respect. Firmness and consistency were important in the classroom. If we were inconsistent in our approach, the students soon sensed this feeling. We praised students for small gains, assured them of success, and tried to develop a feeling of security. We found that if the work was too difficult it only increased the problem and contributed to their sense of failure. Keeping the work at the students' level gave them a feeling of personal worth, which helped to change attitudes toward school, and this in turn encouraged them to develop listening, reading,

and writing skills. We assured the students of personal ability by removing the pressure of competition and rigid traditional teaching procedures.

Last fall we were frustrated with many problems, but now are pleased with the tremendous progress these students have made. Now it is a pleasure to see these students walk into the room, sit down and go to work. They have developed a sense of worth, citizenship, and are accepted members of the high school society.

Work Experience Teacher

In the beginning, most of the students in the class seemed very insecure. They were hesitant about accepting any type of job for fear of making a mistake or not being able to complete what they had started. The students were constantly asking for help and assistance, wanting to know if they were doing things correctly. They could not solve many of their simple problems.

There has been a complete turn-about in the students attitude toward their work. Most of the students go about their work, have improved in their ability to follow directions, and have become less dependent on me for each and every step they take in their job performance. They are proud of their work and are eager to bring their work to me for my approval and praise. The majority of the students have shown a desire to gain experience in all the work areas.

Conclusions

Due to the program, each individuals self-concept was improved. Previous school experiences left them with a feeling of inferiority and that very little was expected of them. Some of them had been rejected, hostile, afraid, and angry but did not know why. Many of these students had failed in school because they were by-products of a lack of early recognition, because their classroom work was beyond their understanding, or because they had environmental problems they were unable to understand or change.

The program attempted and succeeded in proving to these students that they can learn. One of the reasons for success is that they were placed with teachers trained and prepared to teach them. These teachers knew the student needs, drives, motivations, mores, frustrations, values, attitudes, habits, and problems, and the individualitites of the students, parents, and the community. The students discovered they were liked, wanted, accepted, and they experienced success instead of failure. The teachers tried to communicate to each student the feeling that they would be accepted for what they were, and their progress would be compared to their own achievement.

The students in the experimental program, in their taped unstructured interviews, expressed feelings of growth in self-confidence, self-value, and accomplishments which they attributed to their classroom and work experience.

One of the good features of the experiemental program is student flexibility and mobility. The experimental program students are allowed and encouraged to participate in all of the extra-class activities of the school. This also allowed students from other school disciplines, such as the industrial arts and the art program to be used as assistants to the instructors. These students, coming from other parts of the school program, generated social acceptance by the rest of the student body. The calibre of printing and silk screening that the experimental students did for the school gave them recognition by their peers and the community. Social acceptance has been achieved through the integration of the experimental student into other school disciplines.

Students in the program who at selection time appeared to be potential drop-outs or talked about quitting school, now proved themselves to be willing workers. In the taped interviews, not once was dropping out of school mentioned. However, the real test of the program will come when these students reach the age of sixteen.

Some of the students indicate, that as a result of their work experience, they now feel they could more easily learn job skills in a factory. If they find they can do the work, they know local industries will hire them.

They were satisfied with some improvement of their communication skills because they had received more individual attention. Their written work improved in content, punctuation, spelling, and neatness. Some of them indicate they are doing more reading and enjoying it.

Disruptive problems declined as the pupils began to understand what the teachers were trying to do for them. Communications between student and teachers improved as the students realized the teachers saw value in them as individuals. Personalities grew favorably as their attitudes and self-concepts changed.

The program is less than one year old, and it has just begun to provide opportunities for these students to become respected members of society. The taped interviews indicate they have made considerable gains, favorable adjustments, and are learning some skills valuable for their future employment. In order for these students to develop to their full potential, this program must be continued, varied, and expanded to prepare these students for employment. Though some favorable gains have been made, these students will continue to need the advantages that this program provides.

During the 1966-67 school year this program will include ninth and tenth graders. There will be thirty-two students enrolled in the program. This doubles the previous year's enrollment. The 1965-66 program was approved by the state office in August, and sufficient staffing was impossible to secure. It is imperative that the staff be increased because of the lacked sufficient staff during the 1965-66 year, and the doubling of the 1966-67 enrollment.

A program or group learning experience is needed to help the individual learn how to handle himself in more constructive ways. This would provide an outlet or opportunity for the student to respond to many factors, including an opportunity to think about himself in terms of occupations and the meaning of his work experience.

One of the ways in which this program could have been improved would have been by better communication with other teachers to whom these students were assigned. The work experience program could be coordinated more closely with their other classroom work. The program needs a full-time director on the experimental staff to develop these communication lines.

A good workable program has been developed for the ninth grade students. We now need to develop a continium of this program for the tenth grade level. Few students today have opportunities to work in activities oriented to the work of local industires, or other work in their communities. It is hoped that a simulated work experience program can be started at the tenth grade level. This will give those students who have completed the ninth year work experience core an opportunity to function in a work situation. This will require someone to secure projects of the light assembly line type of work that can be brought into our school shop. The high schools' guidance staff has already laid the foundation work for some of these projects. Local industry will be furnishing some assembly line work and materials.

The design of the program will remain the same. Students have been re-evaluated, and as the evaluation indicates, some will be moved out of the program. The remainder of the students will move into the tenth grade program. Selection of incoming students has begun, and parent-student, counselor conferences will be held.

The equipment and materials needed will be expanded to meet the increase in the enrollment.

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SALISBURY-ROWAN COMMUNITY SERVICE COUNCIL; HOME MANAGER'S PROGRAM; NORTH CAROLINA

This evaluation was conducted to determine the effectiveness of the Home Manager's Program in uplifting deprived families through better home management. A questionnaire designed to show changes in knowledge, skills and attitudes was administrered to a randomly selected group of 37 women having received Home Manager's service and a group of 35 non-recipients, all of whom had "poverty linked" characteristics parallel to national poverty criteria. The individually interviewed sample showed that recipient women had: (1) more skill in homemaking, (2) more diet variety through wider use of economy foods, (3) more family sharing of responsibilities, and (4) fewer housekeeping problems. Women having contact with Home Managers were more cooperative than non-recipients during the survey. The survey indicated that older family members should share responsibility by finding jobs to raise the family's income. Parents must become aware of vocational education and encourage the occupational and educational aspirations of their children. More instruction is needed in budgeting, personal grooming, and health facilities. The underprivileged must learn to recognize and accept the need for personal and civic responsibility. Data in tabular form, the questionnaire, a bibliography and a description of the objectives, development and procedures of the Home Manager's Program is included. (FP)

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HOME MANAGERS' PROGRAM

SALISBURY-ROWAN COUNTY (N. C.) COMMUNITY SERVICE COUNCIL

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VT004353

EVALUATION AUGUST, 1967

NANCY MOORE MYERS
VIRA RODGERS KIVETT

E V A L U A T I O N

Home Managers' Program

Salisbury-Rowan Community Service Council

August, 1967

Nancy Moore Myers

Vira Rodgers Kivett

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I. Introduction

The Home Managers' Program represented the fourth component part of the Salisbury-Rowan Community Service Council's efforts toward alleviating poverty in Rowan County. Other components included: The Neighborhood Youth Corps, Adult Education, the Head Start Program, and a Summer Recreation Program. The Home Managers' Program was based upon the premise that the teaching of better home management practices by sub-professional Home Managers among the economically deprived is a realistic approach to their stimulation of ambition, desire, and sense of personal and community pride. A need for such a service was first cited by the Director of Public Welfare and the Salisbury Housing Authority in Rowan County and the Rowan County Extension Service.

Four geographical areas within Rowan County were selected as target areas for the development of its Community Action Program. These areas were selected upon information obtained in surveys conducted by the North Carolina Fund regarding conditions of poverty throughout the county.

According to the 1960 Census the population of Rowan County was 82,817. The number of housing units in the county was 25,777 of which 837 were deteriorating to a serious degree, and 989 were listed as delapidated. The population of the City of Salisbury, including two recently annexed areas, was 24,212 by the end of 1965.

In Rowan County, 52.9 percent of the people were reported by the 1960 Census as living in rural areas; and 47.1 percent lived in urban or semi-urban areas. Among these percentages, there were 5,557 families earning less than $3,000 per year -- meaning that over 25 percent of the families in the county fell below the poverty index. Another large number whose income was above the $3,000 fell into the poverty classification because of family size.

An advisory committee was established in each of the target areas involved in the Community Action Program and was made up of respective residents representing all ethnical, cultural, racial, and religious groups. Regularly scheduled meetings of the advisory committees and the citizenry at large were held in each area. Through these meetings, programs were developed and implemented. Both groups were responsible for providing space for group demonstrations or actions (such as the provision of "multi-purpose units") and for the dissemination of information in the respective target area. In addition, an advisory board was set up to guide and direct the Home Managers' Program. Members included: representatives from the Welfare Department; the Health Director; the Director of Public Housing; the Director of Salisbury Redevelopment Commission; and the Rowan County Agricultural Extension Agent.

A. Objectives of the Program

The Home Managers' Program was designed to be carried out within individual homes in the target areas where all family members could participate and in demonstration areas. Over-all objectives were:

1. To teach families of low socio-economic backgrounds to be better managers of their family resources

2. To discuss and evaluate household and personal needs with the individual and assist in setting up a budget based upon a family income in order to plan purchases and eliminate debts

3. To evaluate each individual's needs within the family group, and ferret out family problems and strengths. The Home Manager was to evaluate the family resources and help resolve the problems through these resources, making appropriate referral to a local agency for assistance in the problem area

4. To help make plans and assist in the acquisition of better housing, modern appliances and furniture, and instruct in the operations of equipment as required

5. To assist families in planning and preparing nutritious meals, purchasing of food stuffs, and utilizing commodities from the surplus food program

6. To give instructions and practical assistance to each family in budgeting, nutrition, personal grooming, human relations, etiquette, arrangement of furniture, the use of home appliances, sanitation, home nursing and sewing

7. To instruct families and give practical assistance in food preservation and in food and clothing selection

8. To teach fundamental hygiene and assist in giving bedside care to individuals who were ill, and where practicable, endeavor to teach other family members to provide the required care

9. To give First Aid Training (This entailed showing principles and practices of good first aid techniques). The Home Manager was to assist in rendering first aid or other preventive measures throughout the home, ensuring that devices and know-how were readily available in the home should the need arise

10. To assist the head of households in training and disciplining children; assign and schedule housekeeping duties to children according to their capabilities, encourage parents to take an interest in children's school work, and to assist them in establishing good study habits

11. To estimate the probable duration of needed services and report the same to the supervisor for planning purposes

12. To provide for Home Managers' attendance in service training courses of the various public agencies to acquire new skills and improve old ones

13. To maintain a two-way referral system between the County Health Department and Home Managers in regard to services such as the Child Health Conference, the Orthopedic Clinic, the Chest X-ray and Chest examination clinic, also the Dental Clinic and Medical Clinic for the indigent over 65

Leonard J. Dubl (4), chief planning specialist of the planning staff at the National Institute of Mental Health, in a paper prepared for the American Home Economics Association, reinforced the objectives upon which the Home Managers' Program was developed when he said:

> Ways must be found to end this cross-purpose activity and this fragmentation of services (to the poor). At all levels a new kind of service is needed. . . . the service of listening to all that is said, the kind of service which gathers up all strands and ties them together. The worker who performs this service must have absorbed many social and scientific disciplines, must be aware of the variety of services and sources of assistance available in his

> community, and must be able to pass successfully through the maze of procedure. . .such a person should be a home economist, a community social worker, a public health person, or a person on a lower level of activity with no particular profession who is relatively untrained, who comes from the target community, and who "knows the ropes" and can do the legwork. . .The listening and responding process should take place on a neighborhood level or else the poor will get lost in the shuffle.

The problem of "fragmented services" has long been pointed out as a major grievance of the poor. This system is comprehended by the poor as the inability of social service agencies, professionals, school systems and other institutions "to listen" to their problems. The refusal "to listen" is the poor's interpretation of the middle class's habitual modes of response, of their methods of refusal, of appointments, and duplication of agencies. The Home Managers' Program was conceived and developed as a system to end cross-purpose activity and a fragmentation of services among several county agencies. Principle among these agencies were the Health Department, the Welfare Department, the Housing Authority, and the Salisbury Redevelopment Commission.

B. Development of Program

1. Contributing Agencies

Funding for the project was through two sources. Funds for the training of the Home Managers were made possible through a grant given to the School of Home Economics of the University of North Carolina at Greensboro by the Manpower Act, Employment Security Commission. Working capital for part of the training period was provided by the North Carolina Fund. Funds for the development and initiation of this program, which qualified as a Community Action Program under the Economic Opportunity Act of 1964, were received from the Office of Economic Opportunity.

Five community agencies endorsed and supported the program. These agencies were: the Rowan County Public Health Department, Rowan County Agricultural Extension Services, Rowan County Public Welfare Department, Redevelopment Commission of City of Salisbury, and the Housing Authority of Salisbury. Contributions from the agencies, in the main, were twofold: They provided a representative to serve as an advisory committee to the sponsoring agency; They were responsible for referrals to the sponsoring agency.

2. Home Managers

The Home Managers' Program was designed to be carried out by unemployed women from the target areas in Rowan County. Other criteria included: economic need, past experience, interests, aptitude, and living in the proximity of the established target areas. Bases for the criteria were twofold: (1) that communication would be facilitated through the service of a group of persons already emphathetic with and knowledgeable of some of the problems of the economically deprived, and (2) that through the preparation for a profession, this group of persons could assist in raising their own family's level of living.

Ten Home Managers were selected from approximately two hundred applicants. The applicants were screened by the Employment Security Commission and the Director of the Community Services Council. The Director of Welfare assisted in the initial screening of some of the applicants. All Home Managers were married and ninety percent of them lived in the target areas. The average age was 40.9 years and the average number of children was 2.5. Median family income for the women was 3,200 dollars and average educational attainment was 11.3 years. Sixty percent of the Home Managers were Negro.

The Salisbury-Rowan Community Service Council arranged with the University of North Carolina at Greensboro to provide a training course for the Home Managers. A professional homemakers' course had previously been developed under the auspices of the Manpower Development Training Act of 1962, and the cooperation of the School of Home Economics of the University of North Carolina at Greensboro. The curriculum consisted of 385 hours (four months) of instruction as follows:

9 Hrs.	Orientation (History and philosophy of home management services)
42 Hrs.	Human development
125 Hrs.	Foods (Nutrition, planning, selection, preparation)
24 Hrs.	Community resources
25 Hrs.	Red Cross Home Nursing
88 Hrs.	Clothing (Repairs, selection, care, grooming)
60 Hrs.	Management (Budgeting, work simplification, space)
12 Hrs.	Home equipment
385 Hrs.	TOTAL

One additional month of training in Rowan County consisted of an orientation to local community services which included: the Welfare Department, Mental Health Clinic, Child Health Clinic, Vocational Rehabilitation, Health Department, Sanitation, Child Care and Home Nursing, Home Demonstration and Agricultural Extension Services, services for aging and for families with children, workshop on human relations, and demonstrations on health, nutrition and preparation of foods. A Nutrition Consultant with the State Board of Health worked with the Home Managers at least one day per month during most of the time period of the present study. She visited families with the Home Managers and aided in special nutrition problems. In-service workshops for Home Managers were conducted bi-monthly.

A professional Home Economist served as Supervisor of the Home Managers and was responsible for weekly in-service training of the women and for keeping them abreast of current information. Later in the program an assistant to the Supervisor was secured. Home Managers reported each morning to the "Home Manager Center," or demonstration house. This building housed the offices of the Supervisor, Assistant Supervisor, secretaries, demonstration kitchen, supplies, conference room, records, and storage.

II. Implementation of the Home Managers' Program

A. Referrals for Home Visits

Following the orientation period, Home Managers began working with referrals from the county agencies, doctors, principals, and school attendance counselors.[1] Typical reasons for referral were help needed with: use of commodity foods, general home management, cooking, dieting, food buying, budgeting, low-cost recipes, child care, "good health habits," better nutrition, improving home conditions, school attendance, immunization, dental care, invalid home management, sanitation, medical problems, and minor house repair.

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[1] See Appendix for sample "Interagency Referral for Home Managers' Program."

Table 1. Family Referrals by Agencies Between May 1966 and October 1966

Agency	Referrals N	Referrals %
Welfare Department	170	48.4
Health Department	71	20.2
Housing Authority	44	12.5
Redevelopment Commission	16	4.6
Schools	12	3.4
Individual or Family Members	7	2.0
Neighborhood Youth Corps	2	0.6
Employment Development	1	0.3
Medicare Alert	10	2.8
Agricultural Extension	1	0.3
Others	17	4.8
TOTALS	351	100.0

See page 7 for description of "Others"

B. Home Visits

The Home Manager's first visit to the home was usually made with the person making the referral. After this introduction to the family, the Home Manager began her work. She could assist in any area of home management in her effort to improve a family's living conditions. Home Managers worked with the families as long or as short a time as they were needed. Their visits could last for only a few minutes or all day, according to the need and their acceptability by the family. The Home Manager was not to replace any family member. Her position of instruction in home management was to remain apparent. This practice was altered somewhat when elderly clients were involved.

Appointments for home visits were made generally one week in advance by the Home Manager, therefore enabling families to anticipate her coming. Upon some occasions when ample rapport had been established, Home Managers would drop in unannounced on the family. Times such as these might include when family members had been sick, certain problems had developed, or if the Home Manager had special information or materials for the family.[2]

Many of the Home Managers, as they went into the referral homes, reported that some of the things that they saw were almost impossible to believe (12). Mothers were said to be keeping their children out of school rather than wash and mend their clothes; Five people were sleeping in a single bed; Surplus food was being thrown away because no one in the family knew how to prepare it. It was not uncommon for the Home Managers to report that children were playing over and around an exposed sewer pipe because the pipe was never placed underground. Naked wiring hung from ceilings and in some homes there were no electrical wall outlets. Many homes were reported as not having water tanks, others had them but they had never been connected. Bath time meant heating water and pouring it into the tub. Water and filth frequently spilled over on the floor with each using of the toilet. To be able to stand and look up and see the sky through the ceiling or to see the ground through the floor was not unusual. Mothers on occasion prepared double recipes of bread in order to feed rats in hopes of attracting them away from more food and the children.

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[2]See bottom of p. 11 for materials available to referral families.

Other circumstances found in Rowan County by Home Managers were (11):

-- surplus food rotting because mothers didn't know how to prepare it;

-- mothers spending precious dollars on store-bought clothes because no one ever taught them to sew;

-- half empty flour sacks stored carelessly on shack floors, the flour etched with rat tracks.

These were the types of challenges faced by the Home Managers and the method of meeting the challenge was an individual matter. One Home Manager interpreted the situation as "What they need most is some home improvement to lift the morale" (12). It was her feeling that although there may not be enough money in a family to allow for home improvements, change can be brought about through willingness. To prove her point, she rented an old deteriorated house in one of the target areas with the approval and assistance of her supervisor and colleagues. Some of the money needed to acquire the house was made through "car wash" funds by members of the Neighborhood Youth Corps. With the help of several unemployed young men, other Home Managers, and several Neighborhood Youth Corps workers, a small miracle was wrought through the creation of a "demonstration house." Old wallpaper was stripped, floors cleaned, floors and screens repaired. Cardboard replaced the old wallpaper. Part of the old walls were left to show the contrast. Curtains were made from scraps, furniture was repadded, and chairs salvaged from junk heaps were painted. The job was not professional, but there were hopes that others might be motivated to be better citizens through the upgrading of their housing conditions. Many people did come and ask questions.

Activities and areas of discussion initiated by the Home Managers during their visits ranged widely among the homes. Random examples of activities or areas of discussion that were listed on the Home Managers' daily reports were:

"just visited" (to establish rapport)
changed burn dressing on child's chest
helped housewife launder clothes
assisted housewife with mending
discussed mother's employment
discussed mother's dental problems
took mother to dental clinic
helped family plan preparation of surplus food commodities
discussed "cooking"
took mother and child to doctor to discuss child's special diet
talked with family about moving
took mother to Social Security Office and to the surplus food warehouse
listened to housewife's problems and talked to her
explained and assisted mother with Social Security forms
informed family of eye clinic
showed houseife how to mend sofa
discussed general home management
took mother and children to clinic for immunization shots
worked with house cleaning, budgeting and personal cleanliness
showed housewife how to iron
took linens, dishes, and cooking utensils to family from the Salvation Army

Rapport between the Home Manager and a family was generally established over a period of time. Frequently, home visits were made to console a family that had experienced a death. "Showing" by "doing" menial household tasks with or for the client facilitated desirable relationships. This assistance was especially effective in homes with illness. Some rapport was obtained through the fulfillment of certain physical needs. As publicity grew out of the Home Managers' services, and some material needs of this citizenry made known, many donations were made. A "clothing closet" was set up in the demonstration house for distribution of clothing to the most needy families. Articles

ranged from baby diapers and maternity dresses to shoes. Furniture, pots and pans, and many other household items were presented for distribution.

During a weekly conference, the attendance of which was required by each of the Home Managers, Home Managers related certain material needs of their "clients." Based upon need and availability, equipment and clothing were allotted to the most urgent cases. This practice was initiated for two reasons: (1) to gain rapport with the family, and (2) in order to provide materials for teaching purposes. The Home Managers, following these conferences, were alert to certain types of donations that would help their co-workers' clients. Generally, the Home Managers were responsible for getting supplies and equipment into the homes of their clients, as many of the families possessed limited or no mode of transportation.

Table 2. Total Home Visits Made by Home Managers for a Six Month Period*

Month	Families Visited	Visits Made
May	283	360
June	110	277
July	124	207
August	130	227
September	102	207
October	145	311
TOTALS	894**	1,589

*May, 1966 to October, 1966
**This total represents a duplication of families visited.

C. Community Oriented Programs

The second phase of the Home Managers' Program was designed for the dissemination of information through group demonstrations in the target areas. By the latter part of 1966, approximately eleven "centers" had been made available throughout the target areas for the purpose of workshops and demonstrations. Examples of these facilities included: use of recreation centers, one home, and space in storage rooms of apartment buildings. One of the more satisfactory facilities was provided by the local Housing Authority, a "demonstration" apartment in the low rent housing development. Most of the spaces available were "multi-purpose" facilities, housing other facets of the Community Action Program.

An example of this "multi-purposeness" was seen in the "Sherrill House," a renovated older frame home located in one of the target areas. Local residents made small monthly contributions for rental. The Sherrill House was set up mainly as a Day Care Center. It was anticipated that through the use of this facility, local mothers would be able to work outside of the home and subsequently help to raise their family's level of living. A well-baby clinic was held at this center as were other local meetings. (Home Managers helped the Health Nurses set up and administer the well-baby clinics by weighing and measuring and establishing records on the babies.) Two small rooms in the Sherrill House were used by the Home Managers. One of the facilities available for the Home Managers' Program did not have water.

As the program continued, it was evident that some Home Managers were more adept than others at organizing groups and maintaining their interest. Generally speaking, community classes were held weekly, or

bi-weekly in most of the target areas. A morning or afternoon was considered a session and often there were two classes conducted in a session.

Table 3. Monthly Total and Average Attendance at Group Demonstration Centers from March, 1966 to October, 1966*

Month	Attendance			Totals		Average Attendance
	Adults	Children	Totals	Sessions	Centers	
March	58	16	74	9	3	8.2
April	129	55	184	21	3	8.8
May	260	196	456	42	7	10.9
June	183	351	534	34	3	15.7
July	133	187	320	32	6	10.0
August	152	220	372	40	7	9.3
September	183	80	263	31	5	8.5
October	180	136	316	44	10	7.2
TOTALS	1,278	1,241	2,519	253	11**	10.0

*See Appendix, p. 114 , for a breakdown of attendance according to center.
**Total here indicates the different centers used.

Individual clients were encouraged by the Home Manager to participate in local group workshops, particularly if a need of the client was to be explored at a current meeting. Otherwise, the meetings were open to area families not presently under the services of the Home Managers' Program. Examples, as taken from the Home Managers' reports, of topics and activities provided through these community meetings included:

Child Development: Film shown on baby care, followed by a discussion.

Clothing and Sewing:	Use of sewing machine, alteration of clothing, sewing techniques, remodeling and mending clothes, sewing with scraps, covering pillows, knitting and crocheting.
Crafts:	Making stuffed toys, making Christmas gifts.
Foods and Nutrition:	Preparation of certain foods, low cost foods, understanding of the "basic four foods," meal planning, attractive meals, care and storage of food, preserving food, use of surplus food. 4-H Club members occasionally prepared demonstrations in foods and nutrition during these workshops.
Housing:	Beautification of grounds, removing old wallpaper, painting, repairing and refinishing old furniture, making curtains, braiding rugs, making pictures.
Home Management:	Cleaning - walls, windows and appliances, "bed-care," laundry, conservation of resources, storage, money management and budgeting, family duties.
Personal Development:	Family relations, personal hygiene, grooming.
Safety:	Home hazards.

D. Records and Reports

Data on the families receiving the Home Managers' service, on the activities of the Home Managers, and on all other facets of the program were kept to provide a continuous evaluation of the program. These records were being continuously developed throughout the project and were not necessarily used during all of the project.

Sources of these data were:

Referral Sheet:	This sheet was completed by the referral agency.

Narrative of Daily Activities:	This report proceeded on a day-by-day basis and was turned in monthly.
Class Attendance Sheet:	This report reflected classes taught beginning in March, 1965, and provided information relating to the center, Home Manager, number of adults and children in attendance, and a brief description of class activities.
Monthly Reports: (Supervisor)	This report contained all of the services and the activities of the Home Manager during the month. This report was begun in May, in a later stage of the evaluation period.
Active and Inactive Referral Listing:	This report listed the number of active and inactive referrals made by agencies and was begun in February.

III. Evaluation of the Program

Early in the proposal of the Home Managers' Program it was recognized that some form of evaluation would be necessary for determining the fulfillment of the project's objectives and for its continuance and improvement. A review of the literature showed virtually no "before and after" studies relating to home managerial change among low income families. Scarcer still were the appropriate instruments to measure attitudinal change, the acquisition of skills and the assimilation of new knowledge. Most of the literature pointed toward the lack of communication between the middle and low income groups as a main barrier in the evaluation of values, practices, and attitudes found in the low income group (4). Based upon a lack of appropriate, standardized instruments for measuring significant change occurring among homes receiving the Home Managers' service, specific assessment methods were developed.

A. Objectives

The over-all objective of the evaluation was to evaluate the effectiveness of the Home Managers' Program by determining significant change in the knowledge, skills, and attitudes of recipient families and their subsequent contributions to community life. More specifically, it was the purpose of the evaluation to provide information relating to:

1. The competency of the Home Managers to give assistance needed by the low income recipients
2. The adequacy of the Home Managers' pre-training and in-service training
3. Significant changes in the knowledge, skills, and attitudes of the recipient families as a result of working with the Home Managers
4. Differences among recipient families regarding receptiveness to new ideas and information and subsequent assimilation of these ideas and information
5. The association of certain demographic data with observed change among recipient families
6. The influence of the Home Managers' Program upon the community
7. The extent to which the Home Managers' services were utilized by the community

The approach to the problem was to compare differences in certain knowledge, skills, and attitudes of a randomly selected group of recipient families with those of a similar group of referral familes not yet having received the Home Managers' service. A survey type of interview was planned to denote differences between the two groups and variables associated with observed differences.

B. Questionnaire

A questionnaire to be used in the collection of data for the evaluation was developed.[3] This instrument was of the check-list type and, in general, was designed to be read aloud to the women by an inter-

[3] A copy of "The Home Survey" is found in the Appendix, p. 133.

viewer. Two problems immediately presented themselves: (1) the extent to which rapport could be maintained, or even reached between a "middle class" person unknown to the family; and (2) the construction of a questionnaire that would reliably reflect the values, habits, and skills of a low level income group, and at the same time not destroy the interviewer-interviewee relationship.

Areas of home management to receive emphasis in the program as set up in the project proposal formed the general framework of the questionnaire. These areas were further supplemented or expounded upon through talks with the Home Managers and their Supervisor. Questions and problems pertinent to the Home Managers' Program were constructed. Questions were revised or eliminated if they were too involved, too personal, lended themselves to sophistication or dishonesty. To simplify the task of the interviewer, where feasible, a list of probable answers was given to facilitate recording of the data.

The first draft of the "Home Survey" was submitted to a panel of three judges for review: a sociologist; a professor and research director in Home Economics; and a former research instructor in Home Economics. After this revision, a pretest of the instrument was done with a small number of families and final revisions were made.

The types of information requested on the questionnaire included:

General Data:	Such as housing type and location, education, occupation, family size, household equipment and facilities.
First Aid and Home Nursing:	Knowledge regarding
Foods:	Skills, meal patterns, buying, storage

Housekeeping:	Time management, delegation of household responsibilities
Housing:	Renovations to furniture and house structure
Sources of Information and Help:	House or housekeeping, children, budgeting and credit
Discipline and Problems:	Children at home and school
Aspirations:	Educational and occupational
Participation:	Civic (including voting) and church
Budget:	Plans, credit

An additional sheet to be filled out by the interviewer after leaving the home was attached to the back of the questionnaire. This check list contained questions relating to the:

Attitude of the respondent

Appearance (general grooming) of the respondent

Condition of the house (exterior and interior)

A space for other comments was included.

C. Interviewers

Interviewers for the study fell into one of three groups: (Group I) Sixteen volunteers from Woman's Clubs in the community, (Group II) Ten volunteers obtained through the Coordinator of Volunteer Services of The Salisbury-Rowan Community Service Council, and (Group III) Two paid interviewers (Tables 4, 5, 6). Group III was recruited because of a lack of enough volunteer interviewers. This group carried out about one half of the interviews.

Different clubs in the community agreed to do the interviews as one of their community projects for the year. Two general meetings for purpose of explaining the project to the interviewers were set up by

the director of the evaluation. Later, an orientation meeting dealing with interviewing techniques was held. An information sheet explaining the purposes of the Home Managers' Program and lists of suggestions and instructions for carrying out the interviews were prepared and given to all of the interviewers. The interviewers were asked to fill out forms relative to their age, education, and previous interviewing experience. Approximately one third of the interviewers had interviewed prior to this experience.

Table 4. Interviewers According to Group and Age Level

	Age Level						
Group	Below 30	30-39	40-49	50-59	60+	No Response	Totals
I	3	5	2	2	0	4	16
II	0	2	0	0	8	1	11
III	1	1	0	0	0	0	2
TOTALS	4	8	2	2	8	5	29

Table 5. Interviewers According to Group and Years of Schooling

	Years of Schooling				
Group	11 yrs*	12-15 yrs	16+	No Response	Totals
I	1	1	2	12	16
II	0	4	1	6	11
III	1	1	0	0	2
TOTALS	2	6	3	18	29

*This usually denoted high school graduation.

Table 6. Number and Average Interviews by Interviewers According to Group

Group	Interviewers		Women Interviewed		Interviews (Average)
	N	%	N	%	%
I	16	55.2	26	36.1	1.6
II	11	37.9	12	16.7	1.1
III	2	6.9	34	47.2	17.0
TOTALS	29	100.0	72	100.0	2.5

D. Home Managers

After the Home Managers had been working for several months, upon the request of the evaluator, The Home Makers' Test (I & II) was administered to the ten original Home Managers. This instrument was developed for use in the Home Maker's Service of the State Welfare Department. Test scores reflected general knowledge of home management and skills. As seen in Table 7, only one Home Manager's score on the Home Maker I Test was below 1 s.d., and the scores of two Home Managers on the Home Maker II Test fell below 1 s.d. of the mean score.

Table 7. Distribution of Scores on Home Makers' Test (I & II) of Rowan County Home Managers*

Test	Above 1 s.d.	Below 1 s.d.	Within 1 s.d.
Home Maker I (M=60.6) (s.d.=10.8)	3	1	6
Home Maker II (M=73.4) (s.d.=12.9)	3	2	5

*Mean Scores were based upon a sample of 53 Welfare Department Home Makers during an earlier pretest of the instrument.

E. Sample

Two groups of fifty families each were selected to serve as the sample for the evaluation.

1. Group I (Recipients or Clients)

This group consisted of those families having received the Home Managers' service. Average income per year for recipient families was $1,527.72. Every third name was selected at random from all active referrals as of February 15, 1966. Out of 60 names, 37 (61.7) were located and interviewed. One family refused to participate in the study.

2. Group II (Non-recipients or Non-clients)

This group represented the control group, or those families having been referred to the Home Managers' Program, but not yet recipients. Their average yearly income was $1,908.36. All referrals made between April 1 and October, 1966, were included in Group II. It was necessary to discard 15 cases in order to keep a balance between Groups I and II and agency referral. Out of 74 names 35 (47.3%) were interviewed. Three families refused to participate, one of them due to illness.

Table 8. Total Areas of Contact between Recipient Women and Home Managers

Subject Area	Families Visited (Number)	Visits (Total)	Time (Estimated) (Total Hours)	Average Time Spent	
				Hours	Minutes
Foods	30	109	164	1	50
Sewing	19	70	103	1	47
Health Safety	15	58	39	1	07
Clothing	13	44	63	1	43
Housing	15	40	60	1	50
Home Management	14	40	61	1	53
Children	11	29	21	1	12
Community	13	23	17	1	14
Money Management	9	14	13	1	33
Family or Personal	6	12	9	1	15
Crafts	4	4	9	2	25
TOTALS	36	443	559	1	26

Visits here referred only to the number associated with the corresponding subject area. For example, a visit might have been made just "to check on" someone who was sick. All visits are reflected in the Visits (Total) column.

F. Collection of Data

The names of the sample were sorted according to geographical area and given to the interviewers. The interviewer then visited the home.

A uniform method of introduction, previously prepared for the interviewers, was followed. This introduction identified the interviewer as assisting with a study of the Salisbury-Rowan Community

Service Council. Furthermore, the statement identified the Council with other local programs such as the Neighborhood Youth Corps and the Head Start Program and stressed the importance of "that" family's help in the Council's continued planning. The women were told that they could assist by answering some questions about homemaking. Their anonymity was assured and the randomness of their selection was pointed out.

Most of the information was obtained on a check list by the interviewer in the presence of the respondent. Some personal observations of the home and the respondent were checked by the interviewer upon leaving the home. Other sources of data for the study are listed under Records and Reports, page 15.

G. Statistical Design

The nature of the questionnaire designed for this study did not lend itself to a comparison of differences in scores, as the data were not continuous. Therefore, contingency table chi-square values were used to signal significant associations between certain demographic data, questionnaire items and the subsamples. It was frequently necessary to combine categories within the table because of low frequencies. In this study, significant associations were interpreted as indication of differences between Group I and Group II. Upon signaling a significant association, a contingency table was inspected to determine the direction of the association -- observed more or less than the statistical expectation. Only those observed frequencies that were substantially greater or less than the statistically expected frequencies were mentioned to any extent.

Descriptive results in the form of frequencies and percentages were occasionally presented. Inferential and descriptive results of the evaluation were presented in the order of:

1. Variables associated with certain background characteristics of those families having been recipients of the Home Managers' Program (Group I), and those having received no help (Group II).

2. The association between knowledge and applied knowledge and certain background characteristics of recipient and non-recipient families.

3. The association between homemaking problems and background characteristics of Groups I and II.

4. The association between "help requested" by families and background characteristics of Group I and Group II.

5. The association between initiative toward receiving knowledge and certain background characteristics of recipient and non-recipient families.

6. The association between sources of information received and certain background characteristics of the two subsamples.

7. The association between civic and community participation and certain background characteristics of Group I and Group II.

IV. Findings

A. Background Characteristics

Considerable effort was made to maintain similarity between specific background information of families having received the Home Managers' service and those families not yet recipients. Chi-square contingency tables were constructed to reflect differences through associations between the two subsamples, and occasionally, within a subsample. It was hoped that the value of the information obtained here would be twofold: (1) to reinforce the premise of similarity between the two subgroups in regard to certain variables; and (2) to indicate direction of change among Group I through observed differences between Groups I and II.

1. Type of Housing. The housing type referred to whether the place of residence was one family, duplex, apartment building, or other. Type of housing was not statistically associated with subgroup. That is to say, no significant differences were found between recipient and non-recipient families regarding the type of dwelling in which they lived.

As can be observed in Table 9, over one half of each subgroup resided in one-family residences. Apartments were mentioned by the next largest number of both groups.

Table 9. Housing Type According to Subgroup

Group	No Response Other		One Family		Duplex		Apartment Building		Totals	
	N	%	N	%	N	%	N	%	N	%
I	2	5.4	24	64.9	4	10.8	7	18.9	37	100.0
II	1	2.9	21	60.0	4	11.4	9	25.7	35	100.0
TOTALS	3	4.2	45	62.5	8	11.1	16	22.2	72	100.0

2. Location of House. House location referred to whether a dwelling was located in a housing development, in the city, in the suburbs, or in a rural area. There was no statistical relationship between subgroup and location of house. City or rural residence was mentioned to a greater extent by both groups than other locations (Table 10).

Table 10. Location of House According to Subgroup

Group	No Response		Housing Development		City		Suburb		Rural		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%
I	1	2.7	5	13.5	11	29.7	2	5.4	18	48.6	37	100.0
II	2	5.7	6	17.1	15	42.9	2	5.7	10	28.6	35	100.0
TOTALS	3	4.1	11	15.3	26	36.1	4	5.6	28	38.8	72	100.0

3. Number of Rooms. Possible responses to number of rooms in a dwelling were; one through eight (actual number recorded); and nine or more. For tabulation purposes, dwellings were classified as small (one to three rooms), medium size (four to five rooms), or large (six or more rooms). No association was observed between number of rooms and subsample. Table 11 shows that both Group I and Group II most frequently reported living in four to five room dwellings.

Table 11. Number of Rooms According to Subgroup

Group	Number of Rooms						Totals	
	1-3		4-5		6 or More			
	N	%	N	%	N	%	N	%
I	12	32.4	22	59.5	3	8.1	37	100.0
II	6	17.1	21	60.0	8	22.9	35	100.0
TOTALS	18	25.0	43	59.7	11	15.3	72	100.0

4. Length of Residence. The total amount of years a family had lived in their present dwelling indicated their length of residence. For purposes of tabulation, groupings included: 0 (less than one year), 2-4 years, 5-9 years, and 8 or more years. No differences were seen between recipient and non-recipient families and the length of time they had resided in their residence. Women in Group I and

in Group II generally reported having lived in their present dwelling from one to four years (Table 12).

Table 12. Length of Residence According to Subgroup

Group	Number of Years 0 N	0 %	1 N	1 %	2-4 N	2-4 %	5-8 N	5-8 %	9+ N	9+ %	Totals N	Totals %
I	0	0.0	11	29.7	11	29.7	8	21.6	7	18.9	37	100.0
II	2	5.7	13	37.1	10	28.6	6	17.1	4	11.4	35	100.0
TOTALS	2	2.8	24	33.3	21	29.2	14	19.4	11	15.3	72	100.0

5. Home Ownership. This variable referred to whether the family was renting or buying their home, whether they owned their home, whether they lived with a relative, or other (situation not listed). Home ownership did not reflect differences between the two groups in the study. Three fourths or more of the families in both Group I and Group II were renting their dwellings (Table 13).

Table 13. Home Ownership According to Subgroup

Group	Rent N	Rent %	Buying, Own N	Buying, Own %	Relative (Other) N	Relative (Other) %	Totals N	Totals %
I	28	75.7	4	10.8	5	13.5	37	100.0
II	30	85.7	4	11.4	1	2.9	35	100.0
TOTALS	58	80.6	8	11.1	6	8.3	72	100.0

6. Respondents' Age. The actual age of the respondent taken to the nearest birth date at the time of the interview was recorded. When ages were grouped according to subsample: under 25 years, 25-34 years, 35-44 years, 45-59 years, and 60 years or more, significant differences were observed between Groups I and II. There were sub-

stantially more recipient than non-recipient women between the ages of 35-44 years of age (Table 14). This difference may be accountable in that, as the program progressed, agencies may have changed their criteria for referrals.

Table 14. Respondents' Age According to Subgroup*

Group	Years of Age: Under 25 N	Under 25 %	25-34 N	25-34 %	35-44 N	35-44 %	45-59 N	45-59 %	60 and over N	60 and over %	Totals N	Totals %
I	4	10.8	6	16.2	17	45.9	5	13.5	5	13.5	37	100.0
II	5	14.3	12	34.3	2	5.7	8	22.9	8	22.9	35	100.0
TOTALS	9	12.5	18	25.0	19	26.4	13	18.1	13	18.1	72	100.0

*$p. > .05$ (d.f.=4; $x^2=15.294$)

7. Respondents' Education. This education item referred to the number of years of schooling completed by the respondents. Possible responses included: none; 1-3 years; 4-6 years; 7-9 years; 10-11 years; 12 years; and some college or vocational training. Respondents' education was not statistically associated with subgroup. The majority of women in both the recipient and non-recipient groups reported that they had received nine or less years of schooling. Three years or less of schooling was reported by approximately one fourth of Group I and by approximately one fifth of those from Group II (Table 15).

Table 15. Respondents' Education According to Subgroup

Group	Years of Schooling Completed												Totals	
	0		1-3		4-6		7-9		10-11		12*			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	3	8.1	8	21.6	6	16.2	10	27.0	9	24.3	1	2.7	37	100.0
II	1	2.9	5	14.3	9	25.7	10	28.6	4	11.4	6	17.1	35	100.0
TOTALS	4	5.6	13	18.1	15	20.8	20	27.8	13	18.1	7	9.7	72	100.0

*The one response in this category for Group I represented "some college" or vocational training.

8. Occupational Status (Respondents). Respondents were asked if they were: employed part time; employed full time; or if they were not employed. There was no significant relationship between the occupational status of the women and the subgroup into which they fell. The majority of both the recipient and the non-recipient groups, approximately three fourths, was not employed (Table 16). Both groups of respondents reported part-time employment about as frequently as full-time employment.

Table 16. Occupational Status of Respondents According to Subgroup

Group	No Response		Part Time		Full Time		Not Employed		Totals	
	N	%	N	%	N	%	N	%	N	%
I	1	2.7	4	10.8	5	13.5	27	73.0	37	100.0
II	0	0.0	4	11.4	4	11.4	27	77.1	35	100.0
TOTALS	1	1.4	8	11.1	9	12.5	54	75.0	72	100.0

9. Occupation of Respondents. Those women reporting employment were asked the nature of their work. The interviewer's check list was set up according to the Census Occupational Classification. Only

those categories reflecting frequencies were included in Table 17. As seen in Table 17, those women reporting work outside of the home usually indicated that they were industrial or custodial type workers.

Table 17. Occupation of Respondents According to Subgroup

Group	Not Employed*		Industrial Worker		Clerical Sales		Custodial		Services		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%
I	28	75.7	4	10.8	0	0.0	3	8.1	2	5.4	37	100.0
II	28	80.0	2	5.7	0	0.0	4	11.4	1	2.9	35	100.0
TOTALS	56	77.8	6	8.3	0	0.0	7	9.7	3	4.2	72	100.0

*This category also contained "no responses."

10. Husband in Home. Respondents were asked if their husband resided in the home. Husband's presence in the home was not statistically associated with subgroup. About one half of Group I and Group II reported their husbands were not living in the home (Table 18).

Table 18. Husband in the Home According to Subgroup

Group	No Response		Husband in Home		Husband Not in Home		Totals	
	N	%	N	%	N	%	N	%
I	1	2.7	20	54.1	16	43.2	37	100.0
II	0	0.0	16	45.7	19	54.3	35	100.0
TOTALS	1	1.4	36	50.0	35	48.6	72	100.0

11. Husbands' Age. Respondents were asked the age of their husband, taken to the nearest birth date. For purposes of tabulation, ages were grouped: under 35; 35-50 years; and 50 years and over.

Husbands' ages for each subgroup generally fell into the less than 35 year and the 50 years or more categories (Table 19).

Table 19. Husband's Age According to Subgroup

Group	Years of Age: Husband not in Home* N	%	Under 35 N	%	35-50 N	%	50 and Over N	%	Totals N	%
I	17**	45.9	6	16.2	6	16.2	8	21.6	37	100.0
II	19	54.3	7	20.0	2	5.7	7	20.0	35	100.0
TOTALS	36	50.0	13	18.1	8	11.1	15	20.8	72	100.0

*This category mainly reflects no husband in the home.
**This total reflects 1 no response

12. Husbands' Education. If husbands were living in the home, the women were asked the number of years of schooling that their husbands had completed. The observed range was from none to twelve years (Table 20). Two women in Group I, and one in Group II reported their husbands as never having been to school.

Table 20. Husband's Education According to Subgroup

Group	Husband not in Home N	%	No Response N	%	0-9 N	%	10-12 N	%	Totals N	%
I	16	43.2	6	16.2	13	35.1	2	5.4	37	100.0
II	19	54.3	6	17.1	5	14.3	5	14.3	35	100.0
TOTALS	35	48.6	12	16.7	18	25.0	7	9.7	72	100.0

13. Husbands' Occupation. Husbands' occupations were classified according to the Census Occupational Classification. Only those classifications involved here are shown in Table 21. No statistical differences were observed between recipient and non-recipient families in regard to husband's occupation. Respondents in each group

usually reported their husband as being retired or unemployed. Industrial work was mentioned more frequently than other occupations.

Table 21. Husbands' Occupation According to Subgroup

Group	Unemployed Retired Other		Industrial Worker		Custodial		Services Clerical Sales		Craftsman*		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%
I	7	36.8	5	26.3	2	10.5	0	0.0	5	26.3	19	100.0
II	8	53.3	4	26.7	0	0.0	2	13.3	1	6.7	15	100.0
TOTALS	15	44.1	9	26.5	2	5.9	2	5.9	6	17.6	34	100.0

*This category also included: construction, rock quarry, saw mill

14. Number of Children. The number of children within the sample group ranged from one to twelve. Group I reported an average of 5.3 children per family and families in Group II averaged 3.6 children. The number of children in a family was significantly related to subgroup. Recipient families had more children (eight or more) and non-recipient families had less children (eight or more) than statistically expected (Table 22).

Table 22. Number of Children According to Subgroup*

Group	Number of Children						Totals	
	0-3		4-7		8 or more			
	N	%	N	%	N	%	N	%
I	14	37.8	12	32.4	11	29.7	37	100.0
II	19	54.3	14	40.0	2	5.7	35	100.0
TOTALS	33	45.8	26	36.1	13	18.1	72	100.0

*$p. > .05$ (d.f.=2; $x^2=7.091$)

15. Children at Home. Respondents were asked the actual number of children presently living in the home. Group I reported for each family an average of 3.7 children and Group II reported an average

of 2.4 children still at home. No significant differences were observed between Groups I and II in regard to number of children still living at home (Table 23).

Table 23. Number of Children at Home According to Subgroup

Group	Number of Children at Home										Totals	
	0		1-2		3-4		5-7		8 or more			
	N	%	N	%	N	%	N	%	N	%	N	%
I	6	16.2	10	27.0	7	18.9	10	27.0	4	10.8	37	100.0
II	8	22.9	11	31.4	11	31.4	5	14.3	0	0.0	35	100.0
TOTALS	14	19.4	21	29.2	18	25.0	15	20.8	4	5.6	72	100.0

16. Family Life Cycle. This item was used to describe the general stage into which children in the family fell. When responses were grouped according to: preschool only; some school; and "grown," no significant association with subgroup was observed. School children (elementary through high school) predominated in both Groups I and II (Table 24).

Table 24. Family Life Cycle According to Subgroup

Group	Preschool		School		Grown*		Totals	
	N	%	N	%	N	%	N	%
I	4	10.8	27	73.0	6	16.2	37	100.0
II	5	14.3	19	54.3	11	31.4	35	100.0
TOTALS	9	12.5	46	63.9	17	23.6	72	100.0

*This category referred to children out of school.

Further breakdown of the data regarding the family life cycle was done. No statistical differences were found between

the recipient and non-recipient families in regard to:

Number of preschool children
Number of high school children
Children stopping school
Number of high school graduates
Number of married children

Several observations can be made from Table 25. Approximately one half of both Groups I and II had preschoolers in the family. Over one half of each group reported having grade-school children. High school students were mentioned fewer times by both groups and introspection of the data showed a moderate to high "drop-out" rate. About forty-one percent of Group I and seventy-nine percent of Group II reported having children who quit school. Other data available indicated that school "drop-outs" were about the same among Negro and white families within these subgroups.

Table 25. Children's Educational Status According to Subgroup

	Group I					Group II				
	Children		Families			Children		Families		
Status	N	%	N	%	Avg.	N	%	N	%	Avg.
Preschool	46	24.6	19	51.4	2.4	36	28.8	16	45.7	2.3
Grade School	67	35.8	25	67.6	2.7	42	33.6	19	54.3	2.2
High School	15	8.0	11	29.7	1.4	6	4.8	5	14.3	1.2
School "Drop-Out"	48	25.7	15	40.5	3.2	20	16.0	10	28.6	2.0
High School Graduates	11	5.9	6	16.2	1.8	21	16.8	11	31.4	1.9
TOTALS*	187	100.0	*37	100.0	5.1	125	100.0	*35	100.0	3.6

(Note: One family in both groups had no children)
*The totals shown here are based upon an N of 37 for the recipient group and an N of 35 for the non-recipient group.

17. Children Living at Home. Recipient families reported having thirty-six married children, fourteen of which lived at home. Those

families not having received the services of the Home Managers' Program indicated having twenty married children, one of which lived at home.

There was no significant relationship between employed children living at home and subgroup. From Table 26 it can be seen that in both Groups I and II, very few children in the home were employed.

Table 26. Occupational Status of Children Living at Home According to Subgroup

Status	Group I Families* N	Group I Families* %	Group II Families* N	Group II Families* %
No Response	31	83.8	32	91.4
Full-Time Employment	2	5.4	1	2.9
Part-Time Employment	4	10.8	2	5.7
TOTALS	37	100.0	35	100.0

*The percentages given here are based on the number of families (respondents) responding to the item.

18. Others Living in the Home. Respondents were asked the number of individuals other than immediate family living in the home. About two thirds of both recipient and non-recipient women reported no "other" individuals as living in the home. When women reported others in the home, they usually indicated "one" other (Table 27). One family in Group I reported seven other individuals as residing in the home. No significant association was observed between others in the home and subgroup.

Table 27. Others Living in the Home According to Subgroup

Group	Number of Individuals: None N	None %	1-3 N	1-3 %	4 or More N	4 or More %	Totals N	Totals %
I	26	70.3	8	21.6	3	8.1	37	100.0
II	28	80.0	5	14.3	2	5.7	35	100.0
TOTALS	54	75.0	13	18.1	5	6.9	72	100.0

19. Race. Classifications under this item included: White; Negro; and Indian. No significant difference was found in the ratio of Negro to white families between Groups I and II. There were approximately twice as many Negro families as white families within both recipient and non-recipient groups (Table 28).

Table 28. Race According to Subgroup

Group	White N	White %	Negro N	Negro %	Indian* N	Indian* %	Totals N	Totals %
I	14	37.8	23	62.2	0	0.0	37	100.0
II	11	31.4	23	65.7	1	2.9	35	100.0
TOTALS	25	34.7	46	63.9	1	1.4	72	100.0

*This category was regrouped with column 1 in the statistical analyses because of the low frequencies.

20. Referral Agency. Comparisons were made between recipient families and non-recipient families in regard to the type of agency making their referral. No statistically significant differences were found between Groups I and II in terms of the agencies referring them. Referrals for both groups of families were most frequently made by the Welfare Department (Table 29).

Table 29. Subgroups According to Referral Agency

Group	Health Dept.		Welfare Dept.		Housing Authority		Redevelop-ment Comm.		Others*		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%
I	11	29.7	18	48.6	4	10.8	3	8.1	1	2.7	37	100.0
II	9	25.7	13	37.1	3	8.6	3	8.6	7	20.0	35	100.0
TOTALS	20	27.8	31	43.1	7	9.7	6	8.3	8	11.1	72	100.0

*Others included such as: schools; churches; and Medicare Alert. (See Table 2, page 12.

21. Newspapers and Magazines. No differences were found between recipient and non-recipient families regarding the presence of newspapers and magazines in the home. As observed in Table 30, less than one half of each group reported regularly receiving a newspaper and about one tenth of the families subscribed to magazines.

22. Conveniences in the Home. Certain types of conveniences found among the families in Groups I and II were recorded by the interviewer and they included: electricity; water and location in the house; indoor bathroom; refrigerator; screens; washer, electric iron; telephone; sewing machine; and automobile. When all conveniences were grouped together, no significant differences were observed in the total frequency of conveniences owned by recipient and non-recipient families (Table 31). When individual conveniences were compared between Groups I and II, several significant associations were found. The differences observed were in favor of Group II. Non-recipient families had more sewing machines, indoor bathrooms, and telephones than was statistically expected.

Table 30. Newspapers and Magazines in the Home According to Subgroup

Group	Newspapers								Magazines							
	No Response		Yes		No		Totals		No Response		Yes		No		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	1	2.7	14	37.8	22	59.5	37	100.0	1	2.7	3	8.1	33	89.2	37	100.0
II	1	2.9	12	34.3	22	62.9	35	100.0	2	5.7	1	2.9	32	91.4	35	100.0
TOTALS	2	2.8	26	36.1	44	61.1	72	100.0	3	4.2	4	5.6	65	90.3	72	100.0

Table 31. Conveniences Owned According to Subgroup

Group	None and no Response		No electricity No water, or no Indoor bathroom		No water, no Indoor bathroom, have elec.		No indoor bath No hot water, Has electricity and cold water		No hot water Has cold water, Indoor bathroom		Has elec., hot and cold water & Indoor bathroom		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	0	0.0	2	5.4	11	29.7	3	8.1	4	10.8	17	45.9	37	100.0
II	0	0.0	0	0.0	7	20.0	1	2.9	4	11.4	23	65.9	35	100.0
TOTALS	0	0.0	2	2.8	18	25.0	4	5.6	8	11.1	40	55.6	72	100.0

23. Home Economics Background. Respondents were asked if they had taken Home Economics while in school. There were no significant differences in the responses of Group I and Group II. Approximately one half of both recipient and non-recipient women reported not having taken Home Economics courses (Table 32).

Table 32. Home Economics Background According to Subgroup

	Home Economics Background							
	No Response*		Yes		No		Totals	
Group	N	%	N	%	N	%	N	%
I	3	8.1	12	32.4	22	59.5	37	100.0
II	2	5.7	15	42.9	18	51.4	35	100.0
TOTALS	5	6.9	27	37.5	40	55.6	72	100.0

*This category also contained "don't remember" frequencies.

24. Condition of Home. Interviewers, upon leaving each house, were asked to indicate on a check list certain general exterior and interior conditions of the home that were in definite need of repair. No significant differences were found in the house conditions of Groups I and II. About one third of the homes in Group I and two fifths of the homes in Group II were not considered (by the interviewer) to be in "definite" need of repair (Table 33).

Table 33. Exterior and Interior Condition of Home According to Subgroup

Group	Conditions in Need of Repair								Totals	
	Exterior House Windows		Porch or steps, Yard, Walkway, Walls, Ceilings		Floors, Rugs, Furniture		No Response			
	N	%	N	%	N	%	N	%	N	%
I	7	18.9	9	24.3	8	21.6	13	35.1	37	100.0
II	12	34.3	4	11.4	4	11.4	15	42.9	35	100.0
TOTALS	19	26.4	13	18.1	12	16.7	28	38.9	72	100.0

25. Respondents' Attitude. A check list provided space for the interviewer to check the adjectives, both positive and negative, best describing the respondent's general attitude toward the visit. This information was recorded after the interviewer left the home. Actual adjectives checked (later regrouped as either positive or negative) were: suspicious, resentful, eager to learn, pleasant, cooperative, un-cooperative, discouraged, hostile, hopeful, easily discouraged, doesn't care, and other. Interviewers most frequently described recipient and non-recipient women as having a mildly positive response toward them. A few more cases of negativism were observed among the non-recipient women than among those having received the Home Managers' Services (Table 34).

Table 34. Respondents' Attitude According to Subgroup

Group	Very Positive		Mildly Positive*		Positive, Doesn't Care Easily Discouraged		Some Negativism		Totals	
	N	%	N	%	N	%	N	%	N	%
I	10	27.0	20	54.1	6	16.2	1	2.7	37	100.0
II	12	34.3	16	45.7	3	8.6	4	11.4	35	100.0
TOTALS	22	30.6	36	50.0	9	12.5	5	6.9	72	100.0

*This category included 2 no responses in Group 1.

26. Respondents' Appearance. The interviewer was requested to indicate the area in which, in her opinion, the respondent needed instruction. Areas were: care of hair; body cleanliness; care of hands and finger nails; care of clothing; and cleaning the house. No statistical differences were observed in the kinds of help in appearance needed by recipient and non-recipient women (Table 35).

Table 35. Respondents' Appearance According to Subgroup

Group	Help Needed With Care of						Totals	
	No Response		Hair, Body Cleanliness		Hands, Nails, Clothing, House			
	N	%	N	%	N	%	N	%
I	18	48.6	10	27.0	9	24.3	37	100.0
II	21	60.0	8	22.9	6	17.1	35	100.0
TOTALS	39	52.4	18	25.0	15	20.8	72	100.0

27. Nature of Referral. This item applied to the specific problem within the family upon which the referral was based. Three categories of problems were investigated: home or home management, foods or commodity foods; and other (this category included clothing and sewing, money, children, and health). Some families were referred

for more than one reason. The three following areas were compared separately for reasons of simplification:

a. Home or home management problems were no more frequent among non-recipient families than among recipient families. Approximately one third of the Group II families' referrals were wholly or partly based upon home or home management problems. This referral reason was given for about two fifths of the recipient Group I.

b. Foods and commodity foods as a reason for referral did not significantly distinguish between recipient and non-recipient families. Approximately one half of Group I and three fifths of Group II were wholly or partly referred because of problems related to foods or the use of food commodities.

c. Other reasons (sewing and clothing excluded) for referrals did distinguish between recipient and non-recipient families. Referrals for families having received the Home Manager service were more general in nature than the referral reasons for families in Group II.

Table 36. Nature of Referral According to Subgroup

Group	Housing and Home Management						Foods and Food Commodities						Other					
	No*		Yes		Totals		No*		Yes		Totals		No*		Yes		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	21	56.8	16	43.2	37	100.0	19	51.4	18	38.6	37	100.0	22	59.5	15	40.5	37	100.0
II	22	62.9	13	37.1	35	100.0	15	42.9	20	57.1	35	100.0	31	88.6	4	11.4	35	100.0
TOTALS	43	59.7	29	40.3	72	100.0	34	47.2	38	52.8	72	100.0	53	73.6	19	26.4	72	100.0

*The No's shown here did not indicate an absence of a problem, but that this particular area did not enter into the referral agent's reason for referral.

B. Change as Indicated Through Responses to Questionnaire Items

This part of the evaluation attempted to determine the acquisition of certain knowledge and development of specific skills through significant differences in the response of recipient and non-recipient families. Only those results significant at the $p > .05$ level of significance and beyond were presented in tables.[4]

1. Home Management: Family participation in household responsibilities.

Recipient and non-recipient women were asked, "Who usually -- cooks meals, washes and dries dishes, cleans house, makes beds, takes care of yard, takes care of babies, does marketing, pays bills, launders clothes, irons clothes, takes out garbage, sets table for meals?" Possible responses were: wife, husband, children (sons or daughters), and other.

No differences were observed between the "chore responsibilities" of recipient and non-recipient families except in the areas of yard care and food preparation. Women in Group I received more help with yard work from husbands and/or children than did non-recipient women (Table 37).

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[4] An exception was in cases in which certain general information was of value to the reader.

Table 37. Yard Responsibilities According to Subgroup*

Group	Wife		Husband and/or Children		Others		Totals	
	N	%	N	%	N	%	N	%
I	8	21.6	23	62.2	6	16.2	37	100.0
II	8	22.9	12	34.3	15	42.9	35	100.0
TOTALS	16	22.2	35	48.6	21	29.2	72	100.0

*p. $>$ .05 (d.f.=2; x^2=5.991)

Cooking responsibilities were shared more frequently among non-recipient women and their children than among recipient women and their children (high school age children and older) (Table 38).

Table 38. Children's Assistance with Cooking According to Subgroup*

Group	No Help		Children Assisting, High School Age and Beyond		Totals**	
	N	%	N	%	N	%
I	22	91.7	2	8.3	24	100.0
II	6	60.0	4	40.0	10	100.0
TOTALS	28	82.4	6	17.6	34	100.0

*p. $>$ .05 (d.f.=1; x^2=4.254)

**Some families were not eligible to respond to this item because of children's age, consequently N did not equal 72.

2. Home Management: Problems with housekeeping. Respondents in the study were asked, "Do you have any of the following problems with your housekeeping?" A check list was read aloud by the interviewer. Problem areas included:

Keeping clothes clean and ironed for family
Keeping the house cleaned

Getting the dishes washed after a meal
Getting the beds made in the mornings
Getting everything done that you plan to do each day

The total number of problems and the frequency of specific problems of Groups I and II were similar with one exception. Problems involving cleaning were mentioned significantly more by non-recipient families than by those families having worked with Home Managers (Table 39). About three fifths of Group II as compared to approximately one third of Group I reported cleaning problems.

Table 39. Housekeeping Problems According to Subgroup*

	Problems**												
	Leisure		Ironing		Cleaning*		Dishes		Beds		Planning		Totals
Group	N	%	N	%	N	%	N	%	N	%	N	%	N
I	10	27.0	11	29.7	14	37.8	8	21.6	5	13.5	9	24.3	57
II	11	31.4	9	25.7	22	62.9	3	8.6	3	8.6	11	31.4	59
TOTALS	21	18.1	20	17.2	36	31.0	11	9.5	8	6.9	20	17.2	116

*$p. > .05$ (d.f.=1; $x^2=4.504$)
**Percentages based on N=37 (Group I); N=35 (Group II)

3. Money Management. An effort was made to determine differences between recipient and non-recipient families in regard to budgets and debts (types and number).

Respondents were asked, "Do you have a budget?" Differences between Groups I and II in the use of budgets were not significant. Slightly more than one third of the women in Group I and about one half of those in Group II reported having budgets (Table 40). Introspection of other data for both family groups indicated that the number of time payments varied little with the use of a budget.

Table 40. The Use of Budgets According to Subgroup

Group	No Response		Yes		No		Totals	
	N	%	N	%	N	%	N	%
I	5	13.5	14	37.8	18	48.6	37	100.0
II	2	5.7	17	48.6	16	45.7	35	100.0
TOTALS	7	9.7	31	43.1	34	47.2	72	100.0

Respondents were asked, "How many different things is your family buying 'on time' at present?" A list indicating types of indebtedness was read to the women. As observed in Table 41, among both groups, doctor bills were the most frequent and similar source of indebtedness. House repair and furnishings were seldom mentioned as the basis of debt. No significant differences were seen in the number of time payments being made by recipient and non-recipient families.

No significant differences were observed between Groups I and II in the number of time payments and education and age of respondent, or conveniences in the home.

Approximately three fourths of the women having had the Home Managers' service indicated having received no information regarding making a budget "or spending money" from either: a newspaper or magazine; a club; a community agency; an individual; a Home Manager; or "other" source. More non-recipient women (nine tenths) than recipient women reported having received no information regarding "money." No statistical differences were found between Groups I and II in regard to the source of information received and their age, or the conveniences in their home.

Differences between recipient and non-recipient families became apparent when they were asked, "Can you think of any problems or information about money or shopping that you would like help or information about?" Respondents in Group II desired significantly more information than the recipient women regarding budgeting, installment buying, making wise purchases, and "other" related information. Approximately three fourths of Group I and three fifths of Group II indicated that they either had no problems or needed no information regarding the use of money (Table 42).

4. Knowledge: First aid and home nursing. Fifteen families receiving the Home Managers' services were referred on the basis of health or safety problems. In an attempt to determine the effectiveness of this information, families in the study were asked what they would do (besides or in addition to calling a doctor or a nurse) in the event of several crises. These crises were: if someone drank poison; if someone fainted; and what to do to prevent bed sores when someone must remain in bed for a long time.

No significant differences were found between the responses of recipient and non-recipient women in regard to certain first aid knowledge. When respondents' knowledge regarding poisoning and bed sores was compared according to their age group, no differences were observed.

Table 41. Type and Frequency of Indebtedness According to Subgroup

Group	Number of Debts by Type*																				Totals	
	Food		Rent		Utilities		Clothing		Fuel		House Repair		Auto Upkeep		Furnishings		Doctor		Hospital		Med.			
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	5	10.6	1	2.1	4	8.5	3	6.4	5	10.6	0	0.0	2	4.3	1	2.1	16	34.0	6	12.8	4	8.5	47	100.0
II	3	5.6	2	3.7	7	13.0	4	7.4	7	13.0	0	0.0	2	3.7	0	0.0	21	38.9	7	13.0	1	1.9	54	100.0
TOTALS	8	7.9	3	3.0	11	10.9	7	6.9	12	11.9	0	0.0	4	4.0	1	0.0	37	36.6	13	12.9	5	5.0	101	100.0

*Percentages here are based on total time payments of each subgroup

Table 42. Money Management Information Desired According to Subgroup*

Group	No Response		None		Budgeting		Installment Buying		Purchases		Other		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	3	8.1	29	78.4	3	8.1	1	2.7	0	0.0	1	2.7	37	100.0
II	4	11.4	22	62.9	3	8.6	0.	0.0	2	5.7	4	11.4	35	100.0
TOTALS	7	9.7	51	70.8	6	8.3	1	1.4	2	2.8	5	6.9	72	100.0

*$p. > .05$ ($d.f.=1$; $x^2=5.142$); A dichotomous grouping was used (the last four columns were grouped together) for statistical interpretation.

Women were asked, "Are there any special problems concerning First Aid or Home Nursing that you would like to learn more about? If so, what?" Similar proportions of recipient and non-recipient women, slightly under one half, reported they did not need this type of information (Table 43). Whether families had received the Home Managers' service was not associated with their desire for more or less First Aid or Home Nursing information.

Table 43. First Aid and Home Nursing Information Desired According to Subgroup

Group	No Response		None		Yes Nonspecific		Yes Specific		Totals	
	N	%	N	%	N	%	N	%	N	%
I	5	13.5	16	43.2	9	24.3	7	18.9	37	100.0
II	5	14.3	15	42.9	5	14.3	10	28.6	35	100.0
TOTALS	10	13.9	31	43.1	14	19.4	17	23.6	72	100.0

5. Skills Learned: Number.[5] A list of household skills was read aloud to Groups I and II. A respondent was asked, (1) if she had performed the technique in the past year -- if her response was yes, she was asked, (2) if she had learned the technique in the past year -- if her response was affirmative once again, she was then asked, (3) who taught or helped her learn the technique. The skills included:

Make bread, pies or cakes
The use of new recipes
Preserve fruits or vegetables by canning or freezing
Make jams, jellies or pickles
Alter clothing by taking up or letting out or hemming
Sew - making dresses, curtains, etc.
Do handwork - knitting, crocheting, quilting, embroidery, etc.
Re-do a piece of furniture by refinishing, painting, slip covers

[5]The finding in this section relating to assistance or help with skills refers to new skills.

A significant difference between recipient and non-recipient women was found in the number of skills learned when those who gave no response or no skills, or only one or two skills were compared with the group that had learned three or more skills. More non-recipient than recipient women did not respond to the questions or had learned two or less skills during the year. About four fifths of Group I as compared to three fifths of Group II indicated having learned 3 - 8 skills during the past year (Table 44).

Table 44. Number of Skills Learned According to Subgroup*

	Number of Skills				Totals	
	0-2		3-8			
Group	N	%	N	%	N	%
I	7	18.9	30	81.1	37	100.0
II	14	40.0	21	60.0	35	100.0
TOTALS	21	29.2	51	70.8	72	100.0

*$p. > .05$ (d.f.=1; $x^2=3.870$)

Age was associated with the number of skills learned and affiliation with the Home Managers' Program. A significant difference in the number of skills acquired by respondents in Group I and Group II was found among the 35-49 age group. Recipient women, 35-49 years of age, had acquired significantly more skills than their peers in Group II (Table 45). Education was not associated with differences between recipient and non-recipient women and the number of skills acquired.

Table 45. Number of Skills Learned by 35-49 Year Olds According to Subgroup*

Group	Number of Skills						Totals	
	0-2		3-4		5-8			
	N	%	N	%	N	%	N	%
I	0	0.0	6	33.3	12	66.7	18	100.0
II	0	0.0	6	85.7	1	14.3	7	100.0
TOTALS	0	0.0	12	48.0	13	52.0	25	100.0

*p. > .02 (d.f.=1; x^2=5.541)

Conveniences in the home was related to differences between recipient and non-recipient women in the number of skills learned. More in Group I who had electricity, hot and cold water and an indoor bath had acquired six to eight new skills than corresponding women in Group II (Table 46).

Table 46. Number of Skills Learned According to Specific Conveniences in the Home and Subgroup*

Group	Number of Skills Learned by Respondents with Either -- Electricity, Water or Bath; Cold Water, Indoor Bath; or all Conveniences						Totals	
	0-2		3-5		6-8			
	N	%	N	%	N	%	N	%
I	2	11.8	9	52.9	6	35.3	17	100.0
II	11	47.8	10	43.5	2	8.7	23	100.0
TOTALS	13	32.5	19	47.5	8	20.0	40	100.0

*p. > .05 (d.f.=2; x^2=7.553)

The number of visits made by the Home Manager to the homes of recipient families was significantly associated with the number of skills learned (Table 47). There were more women than statistically expected who had learned two or less skills while having had twenty

or more home visits. The acquisition of from three to five skills was most characteristic of those clients who had between three and nineteen visits. About two fifths of the women receiving twenty or more home visits had learned two or less skills. The number of skills learned did not increase with the number of visits.

Table 47. Number of Skills Learned by Recipient Families According to Number of Visits*

Number of Visits	Number of Skills						Totals	
	0 - 2		3 - 5		6 - 8			
	N	%	N	%	N	%	N	%
3 - 19	1	4.8	12	57.1	8	38.1	21	100.0
20 or more	6	37.5	6	37.5	4	25.0	16	100.0
TOTALS	7	18.9	18	48.6	12	32.4	37	100.0

*$p. > .05$ (d.f.=2; $x^2=6.346$)

6. Skills Learned: Kind. Respondents were asked (in effect) what specific skills they had carried out or had learned during the past year. Group I most frequently mentioned skills carried out during the past year in the order of baking, new recipes and food preservation. The non-recipient group responded in the order of alterations, baking, and new recipes (Table 48).

Group I, when asked what new skills that they had learned during the past year most frequently mentioned new recipes, followed by baking, and food preservation. Group II most frequently mentioned learning to preserve food (Table 49).

Table 48. Specific Skills Carried Out During the Past Year According to Subgroup*

Group	Baking		New Recipes		Food Pres.		Jams, Jellies		Altera-tions		Sewing		Hand Sewing		Re-do Furniture	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	32	86.5	27	73.0	25	67.6	17	45.9	24	64.9	11	29.7	9	24.3	7	18.9
II	26	74.3	12	34.3	10	28.6	7	20.0	27	77.1	11	31.4	9	25.7	4	11.4
TOTALS	58		39		35		24		51		22		18		11	

*Percentages shown here do not total 100.0 because of multiple responses to each item.

Table 49. Specific Skills Learned During the Past Year According to Subgroup*

Group	Baking		New Recipes		Food Pres.		Jams Jellies		Altera-tions		Sewing		Hand Sewing		Re-do Furniture		Totals
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
I	6	17.1	15	42.9	4	11.5	3	8.6	2	5.7	3	8.6	0	0.0	2	5.7	35
II	2	18.2	2	18.2	3	27.3	1	9.1	2	18.2	0	0.0	0	0.0	1	9.1	11
TOTALS	8	17.4	17	37.0	7	15.2	4	8.7	4	8.7	3	6.5	0	0.0	3	6.5	46

*Percentages shown here do not total 100.0 because of multiple responses to each item.

Differences between Groups I and II were investigated in regard to specific skills already known or specific skills learned within the past year. Variables associated with these differences were also examined.

a. Baking. No association was observed between when a baking skill was acquired and subgroup. Acquisition of a baking skill among recipient and non-recipient women was neither related to educational level nor to conveniences in the home.

b. New recipes. Significant differences were observed between Groups I and II regarding the learning about and acceptance of new recipes during the past year ($p. > .01$; $d.f.=2$; $x^2=15.200$). Recipient women had learned about and used new recipes more than non-recipient women. Several background variables were found to be statistically related to the differences between Groups I and II in regard to the acceptance of new recipes. They included age (34 years and under); Education (4 to 9 years of schooling); Conveniences in the Home (Table 51).

Clients in the 34-year and under age range showed a greater tendency to respond to the question regarding recipes than did non-clients in the same age range in Group II. Group I, in the above age group, indicated having learned about and used new recipes to a greater extent than their peers in Group II. Home Managers were named by two thirds of Group I as their source of help regarding the use of new recipes.

Recipient women with an education between four and nine years, showed a greater acceptance and use of new recipes than did non-recipient women of the same educational level. Group

I's acceptance of new recipes increased more than statistically expected as certain home conveniences increased (such as water in home, hot and cold; indoor bathroom; refrigerator; screens, washer; telephone, etc.).

Table 50 shows the source of help with specific new skills learned according to subgroup. Of the skills listed, Home Managers were more frequently reported as sources of help with new recipes than other sources.

Table 50. Sources of Help with Specific Skills Learned During Past Year According to Subgroup

Skill	Sources															
	Group I - Recipient								Group II - Non-Recipient							
	No Source	Self Taught	Friend of Neighbor	Home Mgr.	Comm. Club	Comm. Agency	Other	Total	No Source	Self Taught	Friend or Neighbor	Home Mgr.	Comm. Club	Comm. Agency	Other	Total
Baking	0	1	0	3	0	2	0	6	0	1	1	0	0	0	0	2
New Recipes	1	1	1	10	0	1	1	15	0	0	0	0	1	1	0	2
Food Pres.	0	0	1	1	0	0	2	4	0	0	2	0	0	0	1	3
Jams, Jellies	1	0	0	0	0	0	2	3	0	0	0	0	0	0	1	1
Altera-tions	0	0	0	2	0	0	0	2	0	0	1	0	0	0	1	2
Sewing	0	0	0	2	0	1	0	3	0	0	0	0	0	0	0	0
Hand Sewing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Re-do Furniture	0	0	0	1	0	1	0	2	0	0	0	1	0	0	0	1
Total Number	2	2	2	19	0	5	5	35	0	1	4	1	1	1	3	11
Percent*	2.7	5.7	5.7	54.3	0.0	14.3	14.3	100.0	0.0	9.1	36.4	9.1	9.1	9.1	27.3	100.0

*Group I percentages based upon N=35; Group II percentages based upon N=11

Table 51. The Acceptance and Use of New Recipes According to Subgroup and Background Information

Background Information	Group I								Group II							
	No, No Response		Did Past Yr.		Learned and Did Past Yr.		Totals		No, No Response		Did Past Yr.		Learned and Did Past Yr.		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Age* 34 and under	1	10.0	6	60.0	3	30.0	10	100.0	9	56.3	6	37.5	1	6.3	16	100.0
Education** 4-9 yrs.	2	12.5	8	50.0	6	37.5	16	100.0	12	63.2	6	31.6	1	5.3	19	100.0
Conveniences Hot or cold + water, indoor bath	7	35.0	5	25.0	8	40.0	20	100.0	10	83.3	2	16.7	0	0.0	12	100.0
Refrigerator ++ §creens, washer, iron, Tel., auto, sewing machine	3	17.6	7	41.2	7	41.2	17	100.0	13	56.5	8	34.8	2	8.7	23	100.0

*p. $>$ .02 (d.f.=2; x^2=6.351)
**p. $>$ .01 (d.f.=2; x^2= 10.820)
+p. $>$ .01 (d.f.=2; x^2=8.336)
++p. $>$ .01 (d.f.=2; x^2=8.383)

c. Food Preservation: Canning and Freezing Fruits and Vegetables.

Significant differences were found between recipient and non-recipient women in regard to information recently learned about food preservation ($p. > .01$; $d.f.=1$ $x^2=10.949$). Group I, more than Group II, indicated having preserved food during the past year. Age accounted for some of the differences between respondents and their having recently canned or frozen foods. Among women thirty-five to forty-nine years of age, food preservation was practiced more by recipient women than among non-recipient women in the same age group (Table 52).

Education was associated with the recent practice of food preservation. In the fourth to ninth grade educational level group, food preservation was more frequently practiced among clients than among non-clients. The number of conveniences in the home was associated with women's acceptance and practice of food preservation. In the recipient women's homes, preservation of food was more frequent than statistically expected among those with hot or cold water, indoor bath (or all conveniences). The reverse was observed among non-recipient families (Table 52).

Table 52. The Practice of Canning and Freezing Fruits and Vegetables According to Subgroup and Certain Background Information

Background Information	Group I						Group II					
	No, No Response		Did Past Year		Totals		No, No Response		Did Past Year		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%
Age* 35-49 yrs	1	5.6	17	94.4	18	100.0	5	71.4	2	28.6	7	100.0
Education** 4-9 years	5	31.3	11	68.8	16	100.0	13	68.4	6	31.6	19	100.0
Conveniences + Hot and cold water, bath, refrigerator, screens, washer, iron, telephone, sewing machine, auto	6	35.3	11	64.7	17	100.0	20	87.0	3	13.0	23	100.0

*p. > .02 (d.f.=1; x^2=5.601)
**p. > .05 (d.f.=1; x^2=4.803)
+p. > .01 (d.f.=1; x^2=11.468)

d. Food Preservation: Jams, Jellies, Pickles. Recipient and non-recipient women differed according to whether or not they had made jams, jellies, and pickles during the past year. The preservation of food by making jellies and jams and by pickling was more frequent among clients than among non-clients. Differences were pronounced and in favor of Group I among thirty-five to forty-nine year olds, and among those women who had between a fourth and a ninth grade education (Table 53).

Table 53. The Practice of Preparing Jellies, Jams, and Pickles According to Subgroup and Certain Background Information

Background Information	Group I						Group II					
	No, No Response		Did Past Year		Totals		No, No Response		Did Past Year		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%
Age*												
35-49 yrs.	7	38.9	11	61.1	18	100.0	6	85.7	1	14.3	7	100.0
Education**												
4-9 years	8	50.0	8	50.0	16	100.0	17	89.5	2	10.4	19	100.0

*$p. > .05$ (d.f.=1; $x^2=4.428$)
**$p. > .02$ (d.f.=1; $x^2=6.630$)

e. Sewing: Alterations. Groups I and II were similar when compared in respect to the number of times that they had altered clothing during the past year.

f. Sewing: Construction. When compared to the frequency with which they had made dresses, curtains, etc., during the past year, recipient and non-recipients did not differ.

g. Handwork. The practice of knitting, crocheting, quilting, embroidery, etc., did not distinguish between Groups I and II.

f. Furniture Renovation. Recipient and non-recipient women did not differ in the frequency with which they had "re-done" furniture during the past year.

7. Desire for New Skills. Respondents were asked which skills that they would like to learn (Table 54). Baking was the only item on the check list that distinguished between recipient and non-recipient women. Group I indicated a preference for assistance more frequently than Group II. The desire to learn new household skills was associated with certain conveniences in the home ($p. > .05$; d.f.=1; $x^2=4.183$). Group I with all conveniences (conveniences defined in Table 52) more frequently than their counterparts in Group II indicated that they would like to learn new skills.

Table 54. Desire for New Skills According to Subgroup

Group	Baking*		New Recipes		Food Preser.		Jams Jellies Pickles		Altera-tions		Construc-tion (sewing)		Hand Work		Re-do Furniture		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	4	6.8	8	13.6	5	8.5	3	5.1	3	5.1	13	22.0	9	15.3	14	23.7	59	100.0
II	1	2.8	1	2.8	4	11.1	3	8.3	1	2.8	11	30.6	5	13.9	10	27.8	36	100.0
TOTALS	5	5.3	9	9.5	9	9.5	6	6.3	4	4.2	24	25.3	14	14.7	24	25.3	95	100.0

*p. > .02 (d.f.=1; x^2=5.791)

8. Foods Served. A food check list was read to the respondents by the interviewer. They were asked to respond to those foods generally served to their family (served more than once or twice). Groups I and II were similar in the total number of foods served, although more variety was observed in the diets of Group I. Foods generally served by nine tenths or more of Groups I and II were:

Group I	Group II
Eggs	Eggs
Dried beans	Fried chicken
Stew meat	Rice
Dried peas	Fresh tomatoes
Bologna	Green Beans
Fried chicken	
Fish	
Grits	
Rice	
Cabbage	
Green Beans	
Green peas	

Foods generally served less than once or twice by Groups I and II included: pork liver, sweetbreads, dried fruits, spinach, and rutabagas.

Differences were observed between recipient and non-recipient women in regard to certain types of foods served. These foods were: dried beans, dried peas, meat stew, soup from "left-overs," bologna, sweet potatoes, and cabbage. In each instance, recipient, rather than non-recipient women, reported generally serving these foods to their family (Table 55).

Table 55. Significant Food Items Generally Served According to Subgroup

Food	Group I						Group II					
	No Response		Served		Totals		No Response		Served		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%
Dried Peas* (d.f.=1; x^2=8.235)	2	5.4	35	94.6	37	100.0	11	31.4	24	68.6	35	100.0
Dried Beans** (d.f.=1; x^2=5.448)	1	2.7	36	97.3	37	100.0	7	20.0	28	80.0	35	100.0
Meat Stew+ (d.f.=1; x^2=4.015)	3	8.1	34	91.9	37	100.0	9	25.7	26	74.3	35	100.0
Soup "Left-overs"** (d.f.=1; x^2=6.495)	5	13.5	32	86.5	37	100.0	14	40.0	21	60.0	35	100.0
Sweet Potatoes+ (d.f.=1; x^2=4.635)	4	10.8	33	89.2	37	100.0	11	31.4	24	68.6	35	100.0
Cabbage+ (d.f.=1; x^2=4.272)	1	2.7	36	97.3	37	100.0	6	17.1	29	82.9	35	100.0
Bologna+ (d.f.=1; x^2=4.015)	3	8.1	34	91.9	37	100.0	9	25.7	26	74.3	35	100.0

*p. > .01
**p. > .02
+p. > .05

9. Children's Breakfast. Interviewers asked respondents, "What do the children eat for breakfast?" A free response technique was used. Responses were grouped into the following breakfast patterns: No breakfast or cereal and bread; cereal, bread, fruit, and milk; fruit or milk only; only milk and fruit; cereal, bread, egg, and meat; or cereal, bread, egg, meat, fruit, and milk. Children's breakfast patterns were similar between the two sub-samples. The majority of Groups I and II reported serving their children a breakfast of cereal and protein. Three recipient women indicated "no breakfast."

10. Use of Dried Milk. Respondents were asked, "Do you ever use dried milk?" The following groupings were used: Don't use; cook only; or use, but don't drink and cook; and cook with and drink. The frequency with which dried milk was used for cooking and drinking was significantly higher among recipient than among non-recipient families. About three fourths of Group I reported drinking and cooking with dried milk; less than one half of Group II reported these practices (Table 56).

Table 56. The use of Dried Milk According to Subgroup*

Group	Don't Use; Use, but Don't Drink and Cook**		Cook only or Use, but Don't Drink and Cook		Totals	
	N	%	N	%	N	%
I	12	32.4	25	67.6	37	100.0
II	20	57.1	15	42.9	35	100.0
TOTALS	32	44.4	40	55.6	72	100.0

*$p. > .05$ (d.f.=1; $x^2=4.383$)
**This category included 1 no response for Group I.

11. Storage of Staple Items. Groups I and II used similar storage methods for flour and sugar. When asked, "Where do you store flour and sugar?", their most frequent response was in canisters or jars with lids.

12. Kitchen Problems. A check list of kitchen problems was read to the respondents. Examples of problems were:

Powdered milk lumping
Milk becoming sour before all is used
Bread or cake molding or getting hard
Burning finger or arm while cooking
A lot of liquid in vegetables. . . . . .
Roaches, ants, or rats getting to cabinets

Recipient and non-recipient women were similar in the number and kind of problems indicated. The most frequently mentioned problems among both groups were: start to bake something and find that you don't have enough flour, sugar, eggs, milk, etc.; hamburger shrinking; and burning self.

13. Use of Grocery List. Women in the study were asked, "Do you write down the list of things you want to buy before going to the grocery store?" This did not include going to the store for only one or two items. An inspection of response frequencies indicated no differences among respondents regarding the use of a grocery list. About one half of Groups I and II reported using a grocery list. Approximately one fifth of each group indicated that they "knew" but did not write down grocery items to buy. The next largest number in each subgroup said that they "sometimes" used a grocery list.

14. Type of Grocery Store Frequented. Respondents were asked, "Where do you buy most of your groceries?" Introspection of the data indicated few differences between recipient and non-recipient women in regard

to type of grocery visited. Between seventy and seventy-four percent of each group mentioned shopping at a large supermarket. The use of a small neighborhood grocery was indicated by twenty-three to twenty-four percent of Groups I and II. In regard to this question, about one half of clients and non-clients reported grocery shopping one time a week. The next most frequent response of each group was "once a month."

15. Information Received: Food. Significant differences between Groups I and II were found when asked if they had received any help or information concerning foods or cooking in the past year and the source of such help. Recipient women, more frequently than the non-recipient women, reported having received information. Home Managers were mentioned by Group I as a source of information more frequently than other sources (Table 57).

Table 57. Frequency and Source of Food Information Received During the Past Year According to Subgroup

	Frequency of Information*						Source of Information**							
	None or No Response		Received Information		Totals		No Response Newspaper, Mag., Club, Individual		None		Community Agency, Home Mgr.		Totals	
Group	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	17	45.9	20	54.1	37	100.0	3	8.1	15	40.5	19	51.4	37	100.0
II	27	77.1	8	22.9	35	100.0	5	14.3	25	71.4	5	14.3	35	100.0
TOTALS	44	61.1	28	38.9	72	100.0	8	11.1	40	55.6	24	33.3	72	100.0

*$p. > .01$ (d.f.=1; $x^2=7.365$)

**$p. > .01$ (d.f.=2; $x^2=11.121$)

Differences in food information were found among Groups I and II who did not have hot running water. Among families with this

limited convenience, recipient families were more likely than non-recipient families to have obtained food information (Table 58).

Table 58. Frequency of Food Information Received During the Past Year without Hot Running Water According to Subgroup*

Group	No Information		Information Received		Totals	
	N	%	N	%	N	%
I	7	35.0	13	65.0	20	100.0
II	11	91.7	1	8.3	12	100.0
TOTALS	18	56.3	14	43.8	32	100.0

*$p. > .01$ (d.f.=1; $x^2=9.786$)

16. Children. A section of the questionnaire was designed to elicit answers from the respondents regarding disciplinary techniques used with their children. Aspirations for and expectations of children, and problems with children.

a. Disciplinary Methods. General observations of the responses given by mothers when asked "What do you usually do when the children misbehave?" indicated similarity of techniques among Groups I and II. Slightly more than one half of Group I and Group II reported that they usually used physical punishment. The next more frequent techniques used, by one fourth or less, were: talking, isolation, or taking away some privilege.

b. Problems: Children. A check list was read aloud to the mothers who were asked to indicate which problems that they had experienced with their children. The problems incurred with children by clients and non-clients were similar except in those relating to school. A larger proportion of Group I mothers than Group II mothers reported that their children did not like school (Table 59).

Table 59. Problems with Children As Reported by Mothers According to Subgroup

Group	Doing Chores		"Minding"		Children "running off"		Dislike School*		Doing Homework		Unable to Help with Homework		Inadequate Study Space		Other		Totals
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
I	7	18.9	7	18.9	6	16.2	7	18.9	4	10.8	10	27.0	7	18.9	1	2.7	49
II	7	20.0	12	34.3	7	20.0	1	2.9	5	14.3	5	14.3	7	20.0	0	0.0	44
TOTALS	14	15.1	19	20.4	13	14.0	8	8.6	9	9.7	15	16.1	14	15.1	1	1.1	93

*p. $>$ .05 (d.f.=1; x^2=4.698)

Note. Row percentages are based upon the subsample N (Group I, N=37; Group II, N=35)

c. School Visits. Respondents were asked, "Have you visited the children's school this year?" Recipient and non-recipient women were similar in their responses to this item. Less than one half of each group reported having visited the school during the year.

d. Educational Aspirations. Almost one half of the mothers in Group II did not respond when asked how far that they would like for their children to go in school. Mothers in both groups showed similarity in the educational aspirations that they held for their children. Approximately one half of the recipient mothers desired a high school education for their children. When they did respond to the item, non-recipient mothers generally desired their children to have a college education (Table 60).

Table 60. Mothers' Educational Aspirations for Their Children According to Subgroup

Group	No Response		High School		College		Commercial		Other		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%
I	7	18.9	17	45.9	10	27.0	1	2.7	2	5.4	37	100.0
II	16	45.7	8	22.9	10	28.6	1	2.9	0	0.0	35	100.0
TOTALS	23	31.9	25	34.7	20	27.8	2	2.8	2	2.8	72	100.0

e. Educational Expectations. Respondents were asked, "How far do you expect your children to go in school?" No significant differences were observed in the educational expectations that recipient and non-recipient women held for their children. Group I (about one half) and Group II (one third) most fre-

quently expected their children to graduate from high school (Table 61).

Table 61. Mothers' Educational Expectations for Their Children According to Subgroup

Group	No Response		High School		College, Trade or Commercial		Totals	
	N	%	N	%	N	%	N	%
I	13	43.3	14	46.7	3	10.0	30	100.0
II	10	41.7	8	33.3	6	25.0	24	100.0
TOTALS	23	42.6	22	40.7	9	16.7	54	100.0

When women were separated on the basis of family life cycle significant differences were observed in the educational expectations of Groups I and II in the "high school age-child" range. Almost all mothers in Group I expected their children to end their formal education upon high school graduation, whereas most non-recipient mothers were about equally divided between expecting high school graduation, and college or a trade (Table 62).

Table 62. The Educational Expectations Held by Mothers for Their High School Age Children According to Subgroup*

Group	No Response or High School		College or Trade, Commercial		Totals	
	N	%	N	%	N	%
I	19	86.4	3	13.6	22	100.0
II	5	50.0	5	50.0	10	100.0
TOTALS	24	75.0	8	24.2	32	100.0

*$p. > .05$ (d.f.=1; $x^2=4.848$)

f. Attitude Toward Children's Future. Women in the study were asked, "What are some of your ideas about the children's future? What would you like for them to do or be?" No significant differences were found between Groups I and II and the ideas that they held regarding their children's future. Ideas for each subgroup ranked in the following order:

Group I (Rank)	Ideas Regarding Children's Future	Group II (Rank)
3	No Response	1
1	Haven't thought about it	2
6	For them to be happy	7
4	They can choose own occupation	5
2	Finish High School	6
2	Go to College, trade or special school	4
2	Have profession or a good job	3
4	Be decent people	0
5	Other	6

g. Information Received: Children. Interviewers asked respondents if they had received any help or information concerning children in the past year, and if so, from whom or what. Recipient and non-recipient mothers did not differ in the frequency or source of information received relating to children. The majority of both Groups I and II either did not respond to the question or said that they had received no information regarding children during the past year. A community agency was mentioned most frequently by Group I as their source of information (Table 63).

h. Information Desired: Children. Respondents in the study were asked, "Can you think of any problems or information concerning the children that you would like help or information about? If so, what?" Groups I and II were similar in the types and amount

of information desired regarding children. The majority of each group either did not respond to the question or said that they did not desire such information (Table 64).

C. Total Homemaking Problems.

The total number of problems reported by each respondent was tallied according to subgroup. Comparisons were made between the two groups and specific background data. The areas of problems from which the frequencies were obtained included: First Aid or Home Nursing; Kitchen, Foods or Cooking; Housekeeping; Children; and Money. It was possible for a respondent to report up to thirty problems.

Total number of homemaking problems. There were no significant differences in the total number of problems reported by recipient and non-recipient families. A significant difference was observed between the groups in the number of "no responses" or none, one or two problems given. More in Group II gave "no responses" and indicated none, one, or two problems than in Group I (Table 65). Clients reported a higher number of homemaking problems than non-clients. The largest number of total problems reported within the groups was: 18 reported by one client and 21 reported by a non-client.

Table 63. Frequency and Source of Information Received Regarding Children According to Subgroup

Group	No Response		None		Newspaper or Mag.		Club		Community Agency		Home Manager		Individual		Other		School Personnel		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	7	18.9	20	54.1	0	0.0	0	0.0	7	18.9	1	2.7	0	0.0	0	0.0	2	5.4	37	100.0
II	13	37.1	16	45.7	0	0.0	0	0.0	2	5.7	1	2.9	1	2.9	0	0.0	2	5.7	35	100.0
TOTALS	20	27.8	36	50.0	0	0.0	0	0.0	9	12.5	2	2.8	1	1.4	0	0.0	4	5.6	72	100.0

Table 64. Information About Children Desired by Mothers According to Subgroup

Group	No Response		None		Discipline		School		Play		Health		Other		Totals	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
I	6	16.2	19	51.4	3	8.1	1	2.7	0	0.0	6	16.2	2	5.4	37	100.0
II	12	34.3	11	31.4	2	5.7	3	8.6	0	0.0	2	5.7	5	14.3	35	100.0
TOTALS	18	25.0	30	41.7	5	6.9	4	5.6	0	0.0	8	11.1	7	9.7	72	100.0

Table 65. Total Number of Homemaking Problems According to Subgroup*

Group	Number of Problems: No Response, 0-2 N	%	3 or more N	%	Totals N	%
I	3	8.1	34	91.9	37	100.0
II	9	25.7	26	74.3	35	100.0
TOTALS	12	16.7	60	83.3	72	100.0

*$p. > .05$ (d.f.=1; $x^2=4.015$)

D. Areas of Information Obtained

Total Areas of Information Obtained. There were four areas in which respondents were asked if they had obtained help during the past year: general homemaking skills; foods and cooking (page 55); house or housekeeping; and children (page 74). Comparisons were made between recipient and non-recipient women in regard to the number of areas in which information had been received. Group I had received information in more areas of interest than Group II. The majority of Group II had obtained no information. The recipient group usually indicated that they had received information in one or two areas (Table 66).

Table 66. Total Areas of Information Obtained According to Subgroup*

Group	Number of Areas: None N	%	1 or 2 N	%	3 or 4 N	%	Totals N	%
I m	11	29.7	18	48.6	8	21.6	37	100.0
II	23	65.7	9	25.7	3	8.6	35	100.0
TOTALS	34	47.2	27	37.5	11	15.3	72	100.0

*$p. > .01$ (d.f.=2; $x^2=9.457$)

Differences in the number of areas in which information had been obtained by Groups I and II were associated with age level. Pronounced differences in the number of areas of information obtained were seen among women in the 35-49 year group. More recipient women had received help in two or three areas than expected (Table 67).

Table 67. Total Areas of Information Obtained by 35-49 Year Olds According to Subgroup*

Group	Number of Areas: None N	None %	1 or 2 N	1 or 2 %	3 or 4 N	3 or 4 %	Totals N	Totals %
I	3	16.7	11	61.1	4	22.2	18	100.0
II	4	57.1	1	14.3	2	28.6	7	100.0
TOTALS	7	28.0	12	48.0	6	24.0	25	100.0

*p. $>$ .05 (d.f.=2; x^2=5.337)

Table 68. Total Areas of Information Obtained by Respondents Having 4-9 Years of Schooling*

Group	Number of Areas: None N	None %	2 - 5 N	2 - 5 %	Totals N	Totals %
I	5	31.3	11	68.8	16	100.0
II	13	68.4	6	31.6	19	100.0
TOTALS	18	51.4	17	48.6	35	100.0

*p. $>$ .05 (d.f.=1; x^2=4.803)

The types of conveniences in the home distinguished between Groups I and II in terms of total areas of information received. Among families without hot running water and electricity, recipient, rather than non-recipient families had received information in at least two to five areas (Table 69).

Table 69. Total Areas of Information Obtained According to Limited Conveniences and Subgroup*

Group	No Running Water or Electricity: Number of Areas 0 - 1 N	%	2 - 3 N	%	4 - 5 N	%	Totals N	%
I	3	15.0	12	60.0	5	25.0	20	100.0
II	8	66.7	4	33.3	0	0.0	12	100.0
TOTALS	11	34.4	16	50.0	5	15.6	32	100.0

*$p. > .01$ (d.f.=2; $x^2=9.891$)

The family life cycle was associated with differences between recipient and non-recipient families and the number of areas in which they had obtained information. Differences between subgroups were significant among women having children pre-school or adult age (those out of school living at or away from home). Recipient mothers reported having received information in two to five areas more frequently than non-recipient mothers (Table 70).

Table 70. Total Areas of Information Obtained by Mothers of Pre-school Through Adult Age Children and Subgroup*

Group	Number of Areas: None N	%	1 - 4 N	%	Totals N	%
I	5	22.7	17	77.3	22	100.0
II	6	60.0	4	40.0	10	100.0
TOTALS	11	34.4	21	65.6	32	100.0

*$p. > .05$ (d.f.=1; $x^2=4.236$)

E. Total Information Desired

The frequency of total information desired by each woman was tallied according to subgroup. Comparisons were made between the two groups and specific background data. The areas of information desired from which the frequencies were obtained included: Special homemaking skills such as trying new recipes, altering clothing, redoing furniture, etc.; foods or cooking; children; and money. Recipient and non-recipient women were similar in regard to the number of areas in which they desired information (Table 71).

Table 71. Total Areas of Information Desired According to Subgroup

Group	Number of Areas of Info. Desired						Totals	
	0 - 1		2 - 3		4 - 5			
	N	%	N	%	N	%	N	%
I	15	40.5	17	45.9	5	13.5	37	100.0
II	14	40.0	13	37.1	8	22.9	35	100.0
TOTALS	29	40.3	30	41.7	13	18.1	72	100.0

Age was associated with differences in the frequency of information desired and subgroup. Among the 35-49 year group, Group I had significantly more than Group II desiring two to five areas of information (Table 72).

Table 72. Total Information Desired Among 35-49 Year Olds According to Subgroup*

Group	Number of Areas of Info. Desired				Totals	
	None		2 - 5 Areas			
	N	%	N	%	N	%
I	3	16.7	15	83.3	18	100.0
II	4	57.1	3	42.9	7	100.0
TOTALS	7	28.0	18	72.0	25	100.0

*$p. > .01$ (d.f.=1; $x^2=4.096$)

F. Most Important Source of Information.

Respondents were asked who or what had been their most important source of new ideas and information in the past year. The following listing was read aloud: Newspaper or Magazines; Radio or Television; Club or Community Organization; Community Agency; School Personnel; An Individual; Other. Introspection of the data indicated no difference between recipient and non-recipient women and the frequency with which they named the same important sources of information. Both Groups I and II mentioned radio and TV as most frequent sources of information. Home Managers as important sources of information were listed by a little more than one fourth of the clients (Table 73).

Housing as an area in which information was received distinguished between Groups I and II. Recipient, more frequently than non-recipient women mentioned either newspaper or magazine, club, community agency, Home Manager, or an individual as a source of information (Table 74). A breakdown of these data indicate that six recipient women reported receiving housing information from a Home Manager. A breakdown of Table 74 indicated that approximately one seventh of recipient women mentioned either a Community Agency or a Home Manager as a source of housing information. It should be mentioned here that Home Managers referred families and helped them get assistance from other agencies.

Table 73. Total Sources of Information Received According to Subgroup

Group	Total Sources					Totals*
	Radio or T.V. or T.V. and Radio	Newspaper or Radio & Mag.	T.V. and/or Newspaper and/or Mag.	Newspaper	Magazine	
I	18	1	14	14	3	50
II	23	1	11	12	1	48
TOTALS	41	2	25	26	4	

*The totals have reflected multiple responses by respondents

Table 74. Housing Information Received According to Subgroup*

Group	No Response None		Received Information		Totals	
	N	%	N	%	N	%
I	25	67.6	12	32.4	37	100.0
II	30	85.7	5	14.3	35	100.0
TOTALS	55	76.4	17	23.6	72	100.0

*$p. > .05$ (d.f.=1; $x^2=3.284$)

Differences were observed among women in the 19-34 year old group regarding the sources of housing information that they had received. Newspaper or magazine, club, community agency, Home Manager, or an individual were more frequent sources of information for recipient than non-recipient women (Table 75). Low frequencies in the categories could have accounted for observed differences.

Table 75. Housing Information Received by 19-34 Year Olds According to Subgroup*

Group	No Response None		Received Information		Totals	
	N	%	N	%	N	%
I	6	60.0	4	40.0	10	100.0
II	15	93.8	1	6.3	16	100.0
TOTALS	21	80.8	5	19.2	26	100.0

*$p. > .05$ (d.f.=1; $x^2=4.513$)

G. Mass Media

Data were analyzed to determine significant differences in the types of news media to which the subsamples had been subjected. Media included: TV; radio, newspaper, magazines, and combinations of these

types. No differences were seen between recipient and non-recipient families in respect to the mass communication types available to them. The media types most frequently mentioned by Groups I and II were radio and TV.

As might be expected, the types of mass media most utilized by families in the subsamples were associated with the possession of certain home conveniences. Among families having no hot running water or electricity, Group I was more likely than Group II to report several media sources (Table 76).

Table 76. Sources of Mass Media According to Limited Conveniences in the Home and Subgroup*

	No Hot Running Water or Electricity							
	No Response		TV, Radio Newspaper		TV, Radio, Newspaper, Magazine		Totals	
Group	N	%	N	%	N	%	N	%
I	3	15.0	12	60.0	5	25.0	20	100.0
II	0	0.0	12	100.0	0	0.0	12	100.0
TOTALS	3	9.4	24	75.0	5	15.6	32	100.0

*$p. > .05$ ($d.f.=2$; $x^2=6.400$)

H. Changes Made in House

Respondents were asked, "What changes have you made in the house or any of the furnishings in the past year? How have you improved or changed the house or any of the furniture?" A list was read by the interviewer. Possibilities included: re-done furniture; added furniture; added equipment; added furnishings; structural changes made in the house; repaired house; and other. Groups I and II were similar regarding the types of changes made in their houses during the year.

In respect to changes in the house, women were asked what changes they desired. Similar preferences were voiced by recipient and non-recipient women. Few in either group did not desire changes. Most preferences of Groups I and II were: to re-do furniture or to add furniture.

I. Community Participation

A check list of clubs or organizations was read to the respondents. They were asked to indicate if they "belonged." The listing included: church; church organizations; neighborhood club or organization; P.T.A.; other; or none. Recipient and non-recipient women did not differ in the frequency of participation or in the types of groups in which they engaged. In Group I, approximately nineteen percent indicated that they did not belong to any of the organizations mentioned, and the majority, about fifty-seven percent mentioned participation in church and/or church organizations. Church and/or church organizations were mentioned by about sixty-six percent of Group II while approximately eleven percent said that they did not belong to any clubs or organizations. P.T.A. membership was mentioned by only one client. About eleven percent of Group I and fourteen percent of Group II indicated that they were officers in these groups. Approximately one fourth of the recipient women and one third of the non-recipient group reported that they were registered to vote and generally voted.

Respondents were asked, "Have you attended any classes on homemaking in the past year? What were the classes about? If you did not attend, would you like to attend such classes?" As observed in Table 77, about ninety percent of both groups of women said that they had not attended homemaking classes in the past year. Among recipient women

reporting attending a class, about one fourth, Home Managers were mentioned more frequently than other teacher sources. Other data indicated that among both groups of women who had not attended homemaking classes during the past year, about one half of each group would like to attend such classes.

Table 77. Participation of Subgroups I and II in Home Managerial Classes According to Teacher and Topic Source

Source	Group I		Group II	
	N	%	N	%
Teacher Source				
No Response Did Not Attend	28	75.7	33	94.3
Home Manager	9	24.3	1	2.9
Community Club	0	0.0	0	0.0
Community Agency	0	0.0	0	0.0
Other	0	0.0	1	2.9
TOTALS	37	100.0	35	100.0
Topic Source				
No Response Did Not Attend	28	75.7	32	91.4
Home Econ. (General)	5	13.5	1	2.9
Cooking or Foods	3	8.1	0	0.0
Sewing and Clothing	1	2.7	2	5.7
TOTALS	37	100.0	35	100.0

V. Change As Observed Through Referral Agents

In an attempt to arrival at an over-all evaluation of the Home Managers Program, one additional observation was obtained: That of the agency representative making the referral. (See Table 29, Page 38, for a breakdown of the recipient families according to referral agency). The referral agent

was asked to fill out a questionnaire on each recipient family having been referred through his or her agency. In some cases, information on families was not complete because the evaluator felt unqualified, through observation, to give an opinion. Most data, however, were completed. (All data reported in this section refer to Group I families.)

A. The referral agent was asked to check the adjective(s) that best describe the client's initial response to the Home Manager during the first visit (Both Home Manager and referral agent usually made the first visit to the home). Apparently the time lapse between initial visit and questionnaire caused some difficulty in the agents' recall: no response was given for thirty-eight percent of the recipient families. Attitudes observed were reported in the following order: pleasant and cooperative, 22.0%; pleasant, cooperative and/or eager, 16.0%; eager, 8.0%; and suspicious and/or resentful, 16.0%.

B. The referral agent was asked next to rate, according to a check list, the Home Manager who worked with each of their referral families. This evaluation was in relation to:

1. Homemaking knowledge and skills
2. Attitude toward family
3. Ability to work with family
4. Co-operation with agency

Again, a noteworthy number of agents did not respond to this item (Referral agents apparently felt that in about thirty-two percent of the cases they could not evaluate the Home Manager) (Table 78). The following ratings were accorded the remaining twenty-five recipient families' Home Managers: (In no case was a Home Manager reported to be in need of much improvement).

Table 78. Referral Agents' Evaluation of Home Managers According to Certain Skills and Traits

Skill or Trait	Evaluation: No Response N	%	Needs Much Improvement N	%	Adequate N	%	Good* N	%	Excellent N	%	Totals N	%
Knowledge or Skill	14	37.8	0	0.0	18	48.6	4	10.8	1	2.7	37	100.0
Attitude Toward family	12	32.4	0	0.0	15	40.5	4	10.8	6	16.2	37	100.0
Ability to work with family	14	37.8	0	0.0	19	51.4	3	8.1	1	2.7	37	100.0
Cooperation with Agency	13	45.1	0	0.0	14	37.8	4	10.8	6	16.2	37	100.0

*This adjective, not originally on the agent's check list, was inserted by them.

The areas of change among recipient families as reported by the agents referring them ranged from none to six. Change in two areas or more was reported to have occurred within the majority of families (Table 79).

Table 79. Total Areas of Change Observed Among Recipient Families by Referral Agents

Area of Change Noted	Number of Families*
No Response	11
Little or None	8
1 Area	4
2 Areas	3
3 Areas	5
4 Areas	3
5 Areas	2
6 Areas	1

*N=37

Change in knowledge or skills regarding food was most frequently observed by referral agents. Change in home management practices was also frequently recognized by agents (Table 80).

Table 80. Specific Areas of Change Observed Among Recipient Families by Referral Agents

Area of Change	Number of Families
Foods	10
Home	9
Housekeeping	8
Nutrition	5
Clothing	5
Personal Development or Grooming	4
Community Participation	4
Money Management	3
Also Child Care, Family Relationships, Health or Nursing	0

VI. Summary and Discussion

A. Summary

This study was conducted to determine the effectiveness of a Home Managers' Program, a Community Action Program component, implemented by ten sub-professional Home Managers. For purposes of evaluation, similarities and differences were observed between a randomly selected group of thirty-seven women having contact with Home Managers, and a group of thirty-five non-recipient women. Both groups were mainly referrals of the Health Department, Welfare Department, and Housing Authority. Recipient women (Group I) and non-recipient Women (Group II)

were compared to determine similarity of certain demographic data. Information obtained here reinforced the premise of homogeneity, upon which the evaluation was based, between the group "worked with" and the control group. Significant differences in responses relating to knowledge, skills, and attitudes as reflected in a questionnaire administered to the two groups, were interpreted in terms of change. Data were obtained from several records as well as from a questionnaire which was administered by an interviewer.

The method for meeting the objectives of the Home Managers' Program was training and using women from target areas to "lift up" deprived families through their development of better home management. Just how competent were these persons in their work? Scores made on a standardized test showed their general knowledge of homemaking to compare favorably with that of Welfare Department "Homemakers." Results of their work varied. The time limitation in the study probably was not adequate in many respects to provide for certain types of change. Evidence of contact with the Program was seen among recipient women, who more than non-recipient women, had: learned more homemaking skills during the past year, more variety in diet through the use of a wider range of economy foods; a wider use of dried milk; more family sharing of certain home responsibilities; less housekeeping problems; and had obtained information in more general areas of homemaking. Other change of note was seen in recipient women's acceptance of new recipes, practice of food preservation, recognition of certain of their own problems relating to children's attitude toward school and of homemaking.

There was indication that women having had contact with a Home Manager exhibitied less negativism than non-recipient women during the

survey. The mildly positive attitude generally observed among clients by the interviewers could have been based upon a previously successful experience with an outsider (Home Manager). This implication of change in attitude is justifiable through the observation of referral agents making the initial visit to the homes with the Home Manager. They reported that sixteen percent of the respondents were suspicious or resentful upon first contact with them. Fewer "No responses" or "don't know" reactions among recipient than among non-recipient women could have been due to a greater feeling of adequacy brought about through their increased knowledge.

Most Home Managers did not incur problems with establishing rapport, but each confrontation was individual and rapport proceeded accordingly. Interestingly enough, Home Managers many times found that the children in a family had more favorable attitudes or were more receptive to learning than their mother. In some cases the parents couldn't care less what happened to their children. Older children, in several cases, worked with Home Managers in learning how to prepare foods, clean their homes, and good grooming techniques.

The "fragmentation of services" common to the low income family was, in most cases, eliminated through the Home Managers' Program. Agency referrals were made to the Supervisor of Home Managers, priority lists were constructed, and Home Managers assigned. Home Managers were well aware of the families' reason for consignment, and being familiar with city and county resource services, channeled families in the right direction -- in most cases "taking them."

The total Home Managers' Program required interaction and cooperation between many individuals and agencies. On the planning level it

brought together representative groups from the target areas and the larger community. Much of the Program was carried out in cooperation with the City and County Health Departments and the Welfare Department through referral systems, workshops, and clinics such as: the Child Health Conference; the Orthopedic Clinic; the Chest X-ray and Chest Examination Clinic; the Dental Clinic; the Medical Clinic for the indigent over 65; the Salvation Army; and the Junior Woman's Club. The Salisbury Housing Authority provided an apartment in Pine Hills Apartment as a demonstration center. A close working relationship was observed among the Program and the Social Security Agency. Professional persons in many of the areas of home management or related areas were brought in to assist with the in-service training of the Home Managers. Youth in the community assisted with the Program through Neighborhood Youth Corps projects, such as car washes to raise money and through actual physical help. 4-H Club members assisted with demonstrations during the workshops. Many older men, unemployed, were observed as "lending a hand" in several projects and workshops. The Program received very good support from the community agencies, with over eighty percent of the referrals coming from the Welfare and Health Departments, and the Housing Authority during the first year. The Home Managers' Program also received continued support from the local news media, with many articles being published regarding the work of the Program.

B. Discussion

1. Demographic Data

The seventy-two families used in the evaluation of the project were usually referrals of Welfare or Health Departments with problems relating to housing or home management, or foods and food com-

modities. Recipient and non-recipient families were similar in certain background characteristics and these "poverty-linked" characteristics paralleled acknowledged poverty criteria in the United States.✓ One major exception to this observation was income. Average family income of the sample families was about $1,700. This figure is considerably lower than the poverty-line definition of less than $3,000 for families as set down by the President's Council of Economic Advisors in 1964.

The majority of the women in the study were Negroes between 25 and 44 years of age, who generally reported having completed from four to nine years of schooling. Substantially more recipient than non-recipient women fell into the 35-44 age group. Three fourths of the women in the study said that they were not employed and part-time employment was as frequent among them as full-time work. Industrial or custodial type work was usually mentioned.

Husbands were in the home in one half of the families and their age was usually under thirty-five or over fifty years. Respondents with husbands in the home generally reported them as having completed between 0 - 9 years of schooling and as being unemployed or retired. When an occupation was mentioned, it was usually an industrial type job.

The average number of children in the home was approximately three and these children were most likely to be in school. School drop outs within a family were not uncommon, with about one in every four women reporting this occurrence among some of their children. Few children, after stopping or finishing school, or marrying, remained at home. Children in the home usually did not contribute

to the family's income through either full or part-time employment.

Sample families were most likely to have rented a one-family dwelling consisting of four to five rooms and located in the city or in a rural area rather than in a housing development or in the suburbs. The majority of families had lived in their present residence between one and four years. Only one out of every five homes contained all conveniences such as: electricity; water, hot and cold; indoor bathroom; refrigerator; screens; washer or electric iron; telephone, sewing machine, or automobile.

The incidence and degree of poverty has been associated with the presence of single or multiple characteristics sometimes referred to as "risks of poverty" or "poverty-linked characteristics." Burchinal (3) found that the risk of poverty varies with each of several factors but increases markedly when two or more of these factors are present. They include rural residents who are: non white; poorly educated; elderly; unemployed; living in a large family or one headed by a female, or a person under twenty years of age. Ornati (7) found similar "poverty-linked characteristics" coupled with members of families in which there are more than six children under eighteen years of age. Orshansky (8) reported that among the poor more children were found in homes in which the husband was not present. Characteristics of the sample reported in the present study reinforced most characteristics of poverty previously reported by other investigators.

2. Change in Knowledge, Skills, and Attitudes.

Women having worked with the Home Managers' Program had acquired more general household skills during the past year than non-recipient women. New skills learned were not dependent upon level of education. Referral agents, when asked to indicate those areas in which a family had changed usually mentioned foods followed by home and housekeeping. Less improvement was observed in the order of child care, family relationships, health or home nursing; money management, community participation; and personal development or grooming.

Women associated with the Home Managers' Program who had learned a substantial number of skills (six to eight) were more likely to have a certain level of conveniences in their homes than were corresponding non-recipient women. It is probable that through Group I's introduction to the proper use of their equipment and materials that they were better able to absorb new knowledge than were non-clients.

The more home visits, the more skills learned, did not necessarily follow. Apparently there was a point of contact beyond which women's acquisition of skills did not increase appreciably. This number of visits appeared to be twenty or more (The program is now - 1967 - including many of these skills in classes.

Respondents' over-all acquisition or performance of a number of homemaking skills did not increase with their association with the Home Managers' Program. These skills included: baking, new recipes, food preservation, jams and jellies, alterations, sewing, hand sewing, and redoing furniture. When individual skills were studied,

certain differences were observed between recipient and non-recipient women.

No outstanding differences were found between homes in contact with the Home Managers' Program and those not associated with the Program and family members' "chore responsibilities." Differences between respondents were seen in regard to housekeeping problems. Women not having received assistance from the Home Managers' Program indicated having more cleaning problems than clients. Home Managers' records indicated an average of fifty-three minutes spent on home management assistance in clients' homes. This amount of time represented the largest block of time spent in any area of emphasis and probably accounted for the change indicated here among recipient families. The areas covered on the visits usually reflected the interest of the recipient families, being based upon the areas in which they were willing to receive help.

The use of a budget was not found any more frequently among recipient families than among non-recipient families. About one half of each group reported using a budget. Both groups were also similar in the total number of time payments being made and the number of payments varied little with the use of a budget. Time-wise, money management received less emphasis by Home Managers, as was reflected here, than did home management and certain skills. Lack of money management emphasis was likewise reflected in the observations of agency referrals. Among sixteen families having been referred for management problems (housing and money), change, which was observed in three fourths of them was seldom seen in their management of money.

The practice of making out a grocery list closely paralleled women's infrequent use of a budget. About one half of recipient and non-recipient women reported "usually" making out a grocery list. Others did "sometimes." The majority of all housewives studied shopped at a large supermarket with about one half of both recipient and non-recipient women reporting shopping for groceries once a week. Shank (13), in working with a group of food stamp recipients, also found that most grocery shopping was done at chain stores, once a week or less.

Recipient and non-recipient women were similar in the total number of foods that they served their families, but the diets of families having worked with Home Managers were varied more frequently than those of others. Certain economy type foods such as dried beans and peas, meat stew, soup from "left overs," bologna, sweet potatoes, and cabbage were more often utilized by recipient than by non-recipient families. Foods ranked second in regard to average time spent per family by Home Managers and its place of emphasis was seen in this finding.

Apparently contact with the Home Managers did not increase First Aid and related knowledge. It would appear, from their responses, that low level of living women did not sense a need for this type of information. The frequent bed-side care and other types of health assistance given by Home Managers was generally custodial in nature, the techniques and value of which apparently were not absorbed by some attending family members.

There has been recent speculation that poor diets may not be an inevitable accompliment of low levels of family income, or else,

the nature of the subject lends itself to some sophistication in response. In an Iowa study relating to the diet practices and physical development of children from low income families, no gross inadequacies in children's diets were found (10). Ascorbic acid, calcium and iron were the three nutrient intakes which tended most often to be in short supply. If breakfast patterns can be predictive of the total day's intake, data from the present study indicate no substantial association between poor diets and low family income. The majority of all mothers interviewed reported serving their children a breakfast of cereal and protein. However, during the initial stage of the Home Managers' Program, Home Managers often reported that many of the families had no idea what nutrition was. They did not realize why a child should eat breakfast before coming to school. As the Program progressed, one principal of a grammar school expressed joy upon observing the steady improvement of the grades of a group of brothers and sisters whose family had begun serving breakfast to them. He reported that the whole family's attitude seemed to change.

At least one half of recipient and non-recipient families had been referred to the Home Managers' Program for food or food commodity reasons. Significant change in the use of dried milk through cooking and drinking was found among families having worked with Home Managers. The more frequent use of milk as a beverage and in cooking among recipient women was probably reflected in their increased use of new recipes. The use of dried milk received considerable emphasis in the Program.

Interviewers from general observations, reported one out of every two women in the study as needing help with the care of her hair, body, cleanliness, hands, nails, and clothing. Contact with Home Managers was not associated with improved personal appearance, as both recipient and non-recipient women were reported to need similar kinds of help regarding their appearance.

Another item which lent itself to considerable subjectivity by the interviewer was condition of families' homes. Interviewers, from observation of certain exterior and interior house conditions, found the majority of all homes in the study in need of some kind of repair. Recipients' homes were in need of repair as frequently as those of non-recipient families. Other data in the study support this observation in that, according to debt types, house repair debts were less likely to be incurred by either group of families than were other types observed. The fact that four fifths of the families in the study rented homes accounted, in part, for the condition of homes and little expenditure on repair. Even if a dwelling was in bad need of repair, it was difficult for a family to move out because of the shortage of houses within their economic range. There was probably also some hesitancy in reporting a sub-standard house for fear of being asked to move by the landlords. It is understandable for them to conclude that a sub-standard home was better than no home.

Recipient and non-recipient mothers reported similar problems with children with one exception; Recipient mothers more frequently than others said that their children did not like school. This admittal could be significant in that it is thought that the most

inadequate and neglectful parents are the most reluctant to talk about the specifics of child rearing (5). About one half of all mothers in the study reported that they usually employed physical punishment when their children misbehaved.

No discernible differences in parental aspirations were observed between mothers in contact with Home Managers and those not having been associated with the Program. Non-recipient women when asked about the educational aspirations they held for their children usually did not respond; when a response was elicited, it was generally, "I haven't thought much about it." This attitude was also the most frequent expression of mothers having been associated with the Home Managers' Program. The highest educational attainment usually desired by clients for their children was a high school education. There was indication that these recipient mothers not infrequently wanted their children to follow a profession or a career, but they were unaware of the educational preparation required.

In a study of the educational and vocational goals of rural youth in North Carolina, in which level of living was a variable, Sperry and Kivett (14) found: Boys from the low LOL group planned to end their education upon high school graduation more often than their parents expected, particularly in the instance of maternal expectation; At least one half of the mothers in the low LOL group reported giving strong to moderate encouragement to their daughters to continue their schooling; The parents of low level of living boys usually said that they could not completely pay for their son's education beyond high school, but that some help would be

available. Ferman (5) reported that among low-income families there is a lack of knowledge or clarity as to how children are to obtain the goals projected; and that there is very little indication that the parents know what to do themselves in order to motivate children.

Recipient and non-recipient women showed similar preferences for the types of changes that they desired in their houses. Changes desired usually centered around the repair or acquisition of furniture. Data relating to debts indicated house furnishings, although desired, were an infrequent source of indebtedness, and apparently were considered a real luxury as compared to other daily, more basic needs. Bortel (1) when comparing home management in two socio-economic groups found that low level of living families placed considerable value on improved housing and material possessions, but, unlike the present study, these values were associated with their managerial activities.

3. Receptiveness to New Ideas and Information Media.

Women who had been in contact with the Home Managers' Program had received information in more areas of homemaking during the past year than non-recipient women. These areas included: general homemaking skills; foods and cooking; house or housekeeping; and children. These data reinforce other findings in the present study in which change among recipient women was observed in regard to certain food preparation skills and cleaning.

The higher the level of conveniences found in clients' homes, the more areas of information they had obtained. Again, the pos-

session of certain types of conveniences in the homes of clients apparently acted as a stimulus for their acquisition of information.

As would be expected, the family life cycle stage was pertinent to the type of information parents preferred. Recipient mothers reported problems relating to their children's dislike of school. This observation was probably associated with the receptiveness of new information shown by recipient mothers of high school age children.

About one fifth of the women having received Home Managers' services mentioned the Home Manager as an important source of information. At no time was Home Manager mentioned to the respondent as a possible response. Radio and television ranked first, community agency ranked second, and Home Managers ranked third in terms of important sources of information. Recipient women were more apt to mention several sources of information if they had a certain level of conveniences in their home -- again pointing up the relationship between conveniences and receptiveness.

Women in contact with Home Managers more frequently than non-clients reported having received information relating to food. Their principle source of information was Home Managers. This finding was in keeping with the Program's emphasis placed on food information. Among low income families with limited conveniences in the home, receptiveness to food information was more likely among women having been associated with the Home Managers. This observation would indicate that recipient families had received some stimulus to work with the conditions at hand.

The greatest differences in acceptance and use of new recipes was most likely found among women with an education between four and nine years, and among those with a higher level of conveniences in the home. Differences were in favor of the women having had association with the Home Managers' Program.

Shank (13) reported several findings relative to the present study. In a study relating to the nutritive intake of and information media used by a group of food stamp recipients, she found that: Food and nutrition information and ideas used by the women had been obtained from "menu of the month," newspapers and magazines, radio and television; The order of preference for future information was newsletters and magazine, television, meetings and radio; Families' caloric allowances were more apt to be met when the women had various media available and had used information from them; Households of women that requested future food and nutrient information met allowances more often than those who did not request additional information.

The average amount of time spent on Money Management by Home Managers ranked sixth among eleven areas of emphasis. Women associated with the Home Managers' Program reported not having received information regarding "money" about as frequently as those women not in contact with the program. This finding was not in keeping with the amount of time reportedly spent on Money Management by the Home Managers. Considerable emphasis on Money Management in a few homes could have distorted figures from the average time spent. The majority of recipient women said that they had received no information regarding making a budget "or spending money." This apparent

lack of information regarding the use of a budget probably accounted for the high percentage of recipient families who reported not using a budget.

Newspaper, magazine, club, community agency, Home Manager, or an individual were significant sources of housing information reported by recipient families.

Children, as an area of interest, ranked tenth in the eleven areas of emphasis in terms of average time spent with each recipient family. The lack of emphasis on information relating to children was reflected in the high percentage of clients who stated that they had received no information on this subject. When recipient mothers did receive information about children, the source was generally a community agency rather than other sources. There was some evidence that respondents classified Home Managers as community agencies. Both recipient and non-recipient women showed considerable hesitancy in answering this question.

It was hoped that through the implementation of the Home Managers' Program that a significant change would occur in the participation level of low income families. Participation in civic, religious, and community activities is usually indicative of a certain amount of personal esteem and concern for existing conditions. Brager (2) in a paper dealing with the organization of the unaffiliated in a low-income area stated that lower income adults are less likely to become closely involved in community affairs because: (1) New groups in a community -- especially new minority groups -- are often confronted with hostility from established groups whose

positions of power are threatened by the possibility of forceful action by the newcomer; (2) The necessary preoccupation of the lower class adult with the day-to-day problems of survival, hardly encourage his attention to broad community matters; (3) Lower class persons lack the verbal or literary requisites for organizational skills and do not feel comfortable with formal methods of doing business in organizations, (4) Most community organizations are staffed by middle class personnel, causing the lower class individual to withdraw from a fear of being dominated.

Families' frequency of participation in church, school, and community organizations did not change as a result of their being associated with the Home Managers' Program. It can be speculated that, over a longer period of observation, level of participation might have been seen to increase. Church and church-related activities were the usual types of participation mentioned by recipient and non-recipient families. Few women held leadership positions in the organizations with which they were affiliated. Mothers having worked with the Home Managers' Program showed no increase in the frequency with which they visited their children's school; only one out of every two mothers had visited the school during the past year. Approximately ninety percent of recipient and non-recipient women had not attended a homemaking class during the past year. One half of each group, however, indicated that they would like to attend such classes. Lebeaux (6), in reporting on the disparity of low-income budgets, pointed out that well-off people easily forget that almost all social relationships depend on the ability to spend some money. A visit to the school costs a mother money; transportation,

adequate clothing, make-up, a baby sitter, or time off from work. The lack of mothers' contact with the school likely lessens the importance of school in the eyes of their children, and thus the climate for future drop-out problems is created.

VII. Limitations of the Study

Several limitations of this study are acknowledged.

A. The most accurate indication of change among client families could have been obtained by testing recipient families before their contact with the Home Managers' Program and again after the contact, and responses compared. The time limitation placed on the study prevented this treatment.

B. A significant difference in the control group and the recipient families in regard to age groups could have accounted for other differences observed between the two subsamples. In most cases a variable found to be associated with age did not receive emphasis in the findings.

C. Interviewers for the study consisted, in the main, of volunteers from local women's clubs and volunteers through the Community Council Volunteer Program and paid interviewers. The disadvantages of a middle-class outsider who was relatively untrained in interviewing techniques was recognized but the objectivity that the method lent to the study and the availability of an interviewer seemed to be more expedient. Differences of age and experience among interviewers could have accounted for some differences in the samples.

D. The time limit of this study was not adequate enough to observe certain types of change.

E. Referral agents in a noteworthy number of situations could not thoroughly evaluate a Home Manager's attitude or the technique she used with a recipient family.

F. The small sample did not afford an adequate breakdown for comparative purposes of some demographic data.

G. Several items on the questionnaire could have been interpreted by the sample as a reflection on their abilities as mothers or housewives. These items probably caused some reluctancy in responses. Examples of interpretations that might have been read into the items by the women are that they:

Did not provide an adequate diet for the family
Did not keep their house relatively clean and orderly
Did not know how to raise their children
Needed help in budgeting their money
Did not value an education
Did not know how to make wise choices when buying

VIII. Recommendations

The following suggestions are offered to the Home Managers' Program in light of the objectives of the program and how these objectives were met.

A. Low-level of living families need assistance in the sharing of family responsibilities and in recognizing the potential economic contribution of the members.✓ Are there high school age children or older family members who can find a rewarding type of work that at the same time will raise the family's income.

B. Direction regarding vocational guidance and/or training is needed by men and women in order to cut down on the low full and part-time employment rates among the economically deprived. Parents need a better understanding of the requirements for certain occupations for which their sons and daughters should now be training.✓

C. More instruction is needed in the importance and use of a family budget and in the choices of indebtedness among low level of living families. There should be more assistance in the recognition of values in the meeting of goals, particularly those of a long-range nature.

D. Women with very limited home conveniences need some type of inspiration to encourage them to work more effectively with what they have.

E. Assistance with personal grooming is needed in order for low level of living women to increase their self respect and feel more comfortable interacting in the "middle class" situations into which they are inevitably thrown (school, community, and church-related organizations).

F. Methods of increasing the level of conveniences in the homes of low income families needs exploration. Some of these changes would involve landlords, and would have to be backed by local city and county authorities.

G. Persons involved with referrals need to become more keenly aware of the point of contact with families beyond which the association is not justified.

H. Work needs to continue in the area of educating low level of living families to the types of health facilities available to them.

I. Some inspection needs to be made of the characteristic medical indebtedness of low level of living families and some plan made for its reduction.

J. Parents from low level of living backgrounds need to be ercouraged to show more interest in their children's school attendance, the school itself, and in their children's educational and occupational aspirations.

K. Since food requires a large percent of the family's income, women need more guidance in the setting up of menus incorporating a variety of economy foods, and in the practice of using a grocery list.

L. Parents from low level of living background need assistance in recognizing problems involving their children, and in being able to "talk about" these problems.

M. Methods need to be created to help individuals from underprivileged homes to be able to recognize the need for personal and civic responsibility and then to be accepting of it.

N. Human relations in the homes of the economically deprived need to be improved as well as their interpersonal relationships outside of the home.

O. Consideration should be given to the wording of specific items on the questionnaire due to occasional high frequencies of no response. Rodman (9) has pointed out that a high proportion of "don't know" responses in the lower class depends on the characteristics of the question. On informational questions a "no response" is most likely related to a feeling of incompetency to judge or to less knowledge. A "don't know" response in regard to a question of opinion can usually be accounted for by the middle-class interviewer's questions.

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DEMONSTRATION CENTERS

Equipment Available:

1. Kitchen kits: sifter, mixing bowls, measuring spoons, cups, mixing spoons, cookie sheet, dish pan
2. Sewing machine, sewing tools
3. Requested materials and foods for demonstrations

Centers Used:

BROOKVIEW APARTMENTS

Classes are held in the office storage area. Tables can be set up for use in sewing or some types of cooking demonstrations. Heat, light, and outlets are good.

CHINA GROVE

Classes are held in the Community Building. Tables and chairs are available. A kitchen stove and cabinet top for work area are available. This is to be developed completely in the near future to accommodate the Day Care Program.

CIVIC APARTMENTS

Classes are held in the storage areas of the office. The space is adequate, lights are good, water, outlets, and heat are good.

FAIRVIEW HEIGHTS

A two-room frame house with good lighting and heat is available. No water is in the house at present. Portable table, with chairs enough to accommodate a class are available. There are outlets for a hot plate for some types of demonstrations in foods.

GRANITE QUARRY

Classes are held in the Recreation Center, an imitation brick building with plenty of space and equipment. Tables for cutting and sewing and a complete kitchen unit are available.

MILLER RECREATION CENTER

Classes are held at the center. A kitchen area is adequate for demonstrations. A kitchen unit with good space for cutting and sewing, plenty of light and water are available.

PINE HILL APARTMENTS

Facilities include a four-room apartment, one complete kitchen unit, living room, bath; one room for sewing and one for children's play. Equipment is adequate.

SHERRILL HOUSE

Classes are held in two small rooms in the Sherrill House Day Care Center. Equipment consists of two small tables for cutting and setting up machines, few outlets, and poor lighting. Heat is good.

Table 81. Attendance at Centers According to Month

Month	Adults Attending	Children Attending	Total Attendance	Number of Sessions	Number of Centers	Average Attendance
March	58	16	74	9	3	8.22
April	129	55	184	21	3	8.76
May	260	196	456	42	7	10.86
June	183	351	534	34	3	15.71
July	133	187	320	32	6	10.00
August	152	220	372	40	7	9.30
Sept.	183	80	263	31	5	8.48
Oct.	180	136	316	44	10	7.18
TOTALS	1287	1241	2519	253	11*	9.96

*Total number of Centers

Table 82. Class Attendance According to Center

Center and Starting Dates	Adults	Children	Total Attendance	Number of Sessions**	No. of Months Classes Held	Average Attendance
Brookview Before Mar.'66	23	0	23	7	3	3.29
China Grove May '66	161	520	681	22	5	30.95
Civic Park April '66	128	102	230	19	6	12.11
East Spencer May'66	176	69	245	30	4	8.17
Granite Quarry July '66	116	32	148	15	4	9.87
Miller Rec. Center May'66	59	89	148	15	4	9.87
Pine Hill Before Mar.'66	422	316	738	109	8	6.77
Sherrill House Before Mar.'66	130	82	212	24	7	8.83
Dunbar Oct.'66	25	0	25	1	1	25.00
Western Rowan Oct. '66	15	21	36	3	1	12.00
Fairview Heights Oct. '66	23	10	33	8	1	4.13
TOTALS	1278	1241	2519	253	8*	9.96

*Total number of months covered by data

**A session as reported here was usually a morning or afternoon lasting from 3 to 4 hours but in some centers lasted morning and afternoon.

HOME SURVEY

SALISBURY - ROWAN COMMUNITY SERVICE COUNCIL, INC.

SALISBURY, N. C.

Code Number of Family _____ Date of Interview _____

Evaluator _____

(Observe 1 and 2)

1. What type of Housing does the family live in?

___One family ___Duplex ___Apartment building

___Other _____

2. Where is the house located?

____Housing development ____City ____Suburb ____Rural

(Directions: READ EACH QUESTION TWICE. Do not need to read lists but once unless repeat is requested or indicated by response. If in doubt about which answer to check, write answer out.)

(Read to Homemaker) The questions need only short answers. I will read each question twice to be sure you understand it. If you do not understand the question or for any reason you want me to repeat the question again I will be glad to do so.

3. How many rooms does your family have? Do not count bathroom or porches.

___1 ___2 ___3 ____4 ____5 ____6 ____7 ____8 ____(Number)

4. Has your family lived here more than 10 years? (If "No") About how long has your family lived here?

____1 ____2 ____3 ____4 ____5 ____6 ____7 ____8 ____9 ____10 or more.

5. (Read down list until you reach the correct answer and then go on to next question.)

_____ Do you pay rent for your home?

_____ Are you in the process of buying your home?

_____ Do you own your home?

_____ Is it owned by relative who charges no rent?

_____ Other _____

6. A. What is your age? _____yrs.

B. How many grades of school did you complete? _____grades.

C. Do you work outside the home? ____Yes ____No

(If "Yes") Is this full time work? At least 40 hrs. a week? ___Yes ___No

What type of work do you do? (Probe as needed)

DO NOT READ

____Industrial Worker	____Custodial (housekeeping, cleaning, etc.)
____Clerical or sales	____Services (baby sitting, waitress, etc.)
____Other _____ (Be specific)	

7. A. Does your husband live here? ____Yes ____No

(If "Yes")

B. What is his age? ____yrs.

C. How many grades of school did he complete? _____grades

D. What is his present occupation? (Probe as needed)

DO NOT READ

____Unemployed	____Custodial (watchman, cleaning, etc.)
____Farmer	____Services (cook, waiter, barber, etc.)
____Industrial Worker	____Clerical or sales
____Managerial	____Craftsman _____ (Be specific)
____Professional _____ (Be specific)	____Other _____ (Be specific)

8. How Many children do you have? Include step-children. _____(Number)

(If "None" skip to question "13" on next page.)

9. How many of your children or step-children live here with you now? _____

10. How many of your children or step-children:

A. Have not started to school - are under 6 years old?_____

B. Are in Grade School - grades 1 - 8? _____

C. Are in High School - grades 9 - 12? _____

D. Left school before graduating? _____. How many of these were girls__

E. Graduated from High School? ___. How many of these were girls? _____

F. Are married? _____. How many married children living at home? _____

11. Are any of the children living at home employed? _____Yes _____No

(If "Yes")

12. How many children living at home are employed full time? _____

How many are employed part time? _____

13. Do any of the following live with you? (If more than one put number)

_____ Mother or Mother-in-Law

_____ Father or Father-in-Law

_____ Daughter-in-Law

_____ Son-in-Law

_____ Grand-Children (If "Yes") What are their ages? _____

_____ Nieces or Nephews (If "Yes") What are their ages? _____

_____ Other Children (besides those in "10" or "13") Ages? _____

14. Are there any other people living here that we have not mentioned?

_____ Yes _____ No

(If "Yes") How many? _____(number)

HOME SURVEY

15. Do you have:

a. city water _____

b. garbage pick-up service _____

c. screens on windows _____

d. electricity _____

e. running water in kitchen _____

f. hot running water in kitchen _____

g. indoor bathroom _____

h. hot running water in bathroon _____

i. bathtub or shower in bathroom _____

j. washing machine _____
__wringer; __automatic

k. electric mixer

l. refrigerator _____

m. electric iron _____

n. stove for cooking _____
___wood;___gas;___electric

o. heater _____
___wood;___oil;___gas

p. telephone _____

q. sewing machine _____

r. television set _____

s. radio _____

t. lawn mower _____

u. automobile _____
less than 5 yrs. old

16. Do you subscribe to a ___daily or ___weekly newspaper? _____Yes _____No

17. How many magazines does your family subscribe to? _____ _____None

18. Did you study home economics when you were in school?

_____Yes _____No _____No answer or don't remember

19. Have you attended any classes on homemaking in the past year? The classes might have been on cooking, sewing, furniture, housing, child care, etc.

_____Yes _____No

(If "Yes")

What were the classes about? _____

About how many classes did you go to? _____

Were the classes helpful to you? _____Yes _____No _____Some

Who gave you the classes? _____

(If "No")

Would you like to attend such classes? _____Yes _____No

20. The following questions are about First Aid and Home Nursing:

What would you do besides or in addition to calling a doctor or nurse

A. If someone drank poison such as insect spray?

_____Don't know ___Other ___Give antidote such as milk or cause to vomit

B. If someone fainted?

_____Don't know ___Other ___Feet higher than head or lower head

C. To prevent bedsores when someone must remain in bed for a long time?

_____Don't know ___Other ___Turn often, massage, and put cushions under pressure points

21. Are there any special problems concerning First Aid or Home Nursing that you would like to learn more about? If so, what?

_____None _____Yes _____

22. A. In the past year have you: (Read list in chart below and put check (✓) under "Past Year")

B. (Ask "B" only if "A" is "Yes".) Did you learn to do this in the past year? (Put answer below under column headed "Learned Past Year".)

C. (Ask "C" only if "A" and "B" above are "Yes".) Who taught you or helped you with this? (Put answer below under "Source of Help." May indicate answer using number where:

1. Self taught
2. Friend or neighbor
3. Home Manager
4. Community Club
5. Community Agency)

	Past Year	Learned Past Year	Source of Help	Like to Learn
A. Make bread, pies, or cakes				
B. "Tried out" new recipes				
C. Preserved fruits or vegetables by canning or freezing				
D. Made jams, jellies, or pickles				
E. Altered clothing by taking up or letting out or hemming				
F. Sewed - making dresses, curtains, etc.				
G. Done handwork - knitting, crocheting, quilting, embroidery, etc.				
H. Re-done a piece of furniture by refinishing, painting, slip covers				

23. Are there any of the things we just went over that you would like to learn to do? If you already know how, are there any of these things that you would like to have help with?

(Put answers in last column above under "Like to Learn")
(DO NOT READ LIST)

24. I have a list of foods. As I read the list, tell me if you serve the foods listed to your family. Do not include those that have only been served one or two times.

Do you serve your family: (Read List Slowly)

FOOD	SERVE
(1) Eggs	
(2) Dried beans	
(3) Meat Stew	
(4) Dried Peas	
(5) Meat Loaf	
(6) Macaroni & Cheese	
(7) Soup from "left-overs"	
(8) Hamburger Patties	
(9) Pork Liver	
(10) Beef/Veal Liver	
(11) Liver Pudding	
(12) Chicken Gizzards/Liver	
(13) Sweetbreads (meat)	
(14) Hot Dogs	
(15) Bologna	
(16) Luncheon Meat	
(17) Sausage	
(18) Bacon	
(19) Fried Chicken	
(20) Fish	
(21) Oatmeal or Mush, etc.	
(22) Grits	
(23) Rice	

FOOD	SERVE
(24) Dry Cereals	
(25) Apples	
(26) Dried Apples	
(27) Dried Peaches	
(28) Prunes	
(29) Oranges	
(30) Orange/Grapefruit Juice	
(31) Tomato Juice	
(32) Canned Tomatoes	
(33) Fresh Tomatoes	
(34) Sweet Potatoes	
(35) Squash	
(36) Carrots	
(37) Turnip Greens	
(38) Mustard Greens	
(39) Collards	
(40) Spinach	
(41) Cabbage	
(42) Rutabaga	
(43) Turnips	
(44) Lima Beans	
(45) Green Beans	
(46) Green Peas	

25. What do the children usually eat for breakfast? (May check more than one item)

DO NOT READ

_____ a. No breakfast
_____ b. A Meat
_____ c. An Egg
_____ d. Cereal (including grits)
_____ e. Jelly or syrup
_____ f. Bread
_____ g. Fruit or Fruit Juice
_____ h. Milk
_____ i. Other _____

26. How much milk do the children usually drink each day? About how many glasses of milk do each of the children drink each day?

DO NOT READ

_____ a. None
_____ b. 1 - glass each
_____ c. 2 - glasses each
_____ d. 3 or 4 glasses each
_____ e. Other _____

27. Do you ever use dried milk? _____Yes _____No
(if "Yes")
Does your family drink it? _____Yes _____No
Do you use it in cooking? _____Yes _____No

28. Where do you store flour and sugar? Do you store them in the bags they come in or do you put them into canisters or large jars with lids?

DO NOT READ

_____ a. Bags they come in
_____ b. Canisters or jars with lids
_____ c. Canisters or jars without lids
_____ d. Other _____

29. Do you have any of the following <u>problems</u> in the kitchen?

(Please place a check mark (✓) beside the ones that are a problem.)

(1) Burning foods . . . . . ____

(2) Start to bake something and find that you don't have enough flour, sugar, eggs, or milk, etc. . . . . ____

(3) Powdered milk lumping . . . . . ____

(4) Milk becoming sour before all is used . . . . . ____

(5) Bread or cake molding or getting hard . . . . . ____

(6) Grease smoking or catching fire . . . . . ____

(7) Meat tough or stringy . . . . . ____

(8) Eggs tough or too crisp around edges after frying . . . . . ____

(9) Hamburger shrinking up too much . . . . . ____

(10) Burning finger or arm while cooking . . . . . ____

(11) Vegetables too soft after cooking . . . . . ____

(12) Vegetables boiling dry . . . . . ____

(13) A lot of liquid in vegetables making it hard to get last of vegetables out of pan or bowl . . . . . ____

(14) Roaches, ants, or rats getting to cabinets . . . . . ____

(15) Bugs getting to meal, flour, etc. . . . . ____

(16) Are there other problems? _____

30. Do you write down the list of things you want to buy before going to the grocery store? Do not include going after 1 or 2 items, such as a loaf of bread.

DO NOT READ

____Yes ____No ____Sometimes ____Don't write but know what I'm going to buy.

31. Where do you buy most of your groceries?

_____ a. Small neighborhood store
_____ b. Large supermarket
_____ c. Other _____

32. How often do you or someone in the family go to the grocery store to buy food for a meal? Do include going to the store to buy small items like a loaf of bread or pint of milk.

DO NOT READ

_____ a. 2 or 3 times daily
_____ b. 1 time a day
_____ c. 2 or 3 times a week
_____ d. 1 time a week
_____ e. Other _____

33. Have you received any help or information concerning foods or cooking in the past year? If so, from whom or what?

DO NOT READ

_____ a. None
_____ b. Newspaper or magazine
_____ c. A club
_____ d. A community agency
_____ e. An individual _____
(Title or "Friend" or "Neighbor" - No name)

34. Can you think of any problems or information concerning foods or cooking that you would like help or information about? If so, what type?

DO NOT READ

_____ a. None
_____ b. Meals (Planning)
_____ c. Cooking
_____ d. Preparation of _____(Specific item)
_____ e. Buying groceries
_____ f. Other _____

35. Do the children have regular chores to do at home or do you ask them to do different things at different times?

DO NOT READ

_____regular chores _____just helps _____no help _____no answer

36. Who usually : (Read List)

(Under "Children" use "D" for daughter, "S" for son, followed by age.)

	Wife	Husband	Children	Other
(1) cooks meals				
(2) washes and dries dishes				
(3) cleans house				
(4) makes beds				
(5) takes care of yard				
(6) takes care of babies				
(7) does marketing				
(8) pays bills				
(9) launders clothes				
(10) irons clothes				
(11) takes out garbage				
(12) sets table for meals				

37. Do you have any of the following problems with your housekeeping?

(Put a check mark (✓) beside the ones that are problems.)

(1) Finding time to sit down and read, watch T.V., or visit neighbors ____

(2) Keeping clothes clean and ironed for family . . . . . ____

(3) Keeping the house cleaned . . . . . ____

(4) Getting the dishes washed after a meal . . . . . ____

(5) Getting the beds made in the mornings . . . . . ____

(6) Getting everything done that you plan to do each day . . . . . ____

38. A. What changes have you made in the house or any of the furnishings in the past year? How have you improved or changed the house or any of the furniture? (READ LIST)

(Place answer in chart below.)

	Made Past Year	Would Like to Make
(1) None		
(2) Re-done furniture by painting, finishing, or covering		
(3) Added piece of furniture such as bed, table, chair, or sofa		
(4) Added or replaced a piece of major equipment such as range, refrigerator, washer, heater		
(5) Added or replaced drapes, curtains, rugs, pictures, etc.		
(6) Structural changes to house such as new roof, new siding, new porch, new room		
(7) Painted or other minor repairs such as replacing window panes, replacing old boards, patching roof		
(8) Other (Write In)		

B. What changes would you like to make in the house or furniture?

(Do not read list)

39. Have you received any help or information concerning the house or housekeeping in the past year? If so, from whom or what?

DO NOT READ

_____ a. None

_____ b. Newspaper or magazines

_____ c. A club

_____ d. A community agency

_____ e. An individual _____
(No name - title or "Friend" or "Neighbor")

40. What do you usually do when the children misbehave? (If more than one answer is given, number "1" for 1st mentioned, "2" for 2nd, etc.)

DO NOT READ

_____ a. Nothing

_____ b. Talk to them

_____ c. Fuss or threaten punishment

_____ d. Physical punishment

_____ e. Take away some privilege

_____ f. Other _____

41. Do you have any of the following problems with the children?

(Put a check mark (✓) beside the ones that are problems.)

(1) Getting the children to do their household chores . . . . . _____

(2) Getting the children to "Mind" . . . . . _____

(3) Children going somewhere and neglecting to tell you where they are going . . . . . _____

(4) Children don't like school . . . . . _____

(5) Getting the children to do their homework . . . . . _____

(6) Being able to help with homework . . . . . _____

(7) Having a quiet place with table and good lighting where children can do homework or study . . . . . _____

(8) Other _____
(Write In)

42. Have you visited the children's school this year? _____Yes _____No

43. Do you attend P.T.A. meetings at your children's school? _____Yes _____No

44. How far would you like for your children to go in school?

DO NOT READ

_____ Grades (1-12) _____College _____Trade or Commercial _____Other

45. How far do you expect your children to go in school?

DO NOT READ

Grades (1-12) _____College _____Trade or Commercial _____Other

46. What are some of your ideas about the children's future? What would you <u>like</u> for them to do or be?

DO NOT READ

_____ a. Haven't thought about it
_____ b. For them to be happy
_____ c. They can choose their own occupation
_____ d. Finish High School
_____ e. Go to college, trade school, or special course
_____ f. Have a profession or have a good job
_____ g. Other _____

47. Have you received any help or information concerning the children in the past year? If so, from whom or what?

DO NOT READ

_____ a. None
_____ b. Newspaper or magazine
_____ c. A club
_____ d. A community agency
_____ e. School personnel
_____ f. An individual _____
(No name - title or "Friend" or "Neighbor")

48. Can you think of any problems or information concerning the children that you would like help or information about? If so, what?

DO NOT READ

_____ a. None
_____ b. Discipline or training
_____ c. School
_____ d. Play
_____ e. Health
_____ f. Other _____

49. Do you belong to any clubs or organizations? Do you belong to: (Begin with "b")

_____ a. None

_____ b. Church

_____ c. Church organizations

_____ d. Neighborhood club or organization

_____ e. P. T. A.

_____ f. Other _____

50. (If a club or organization is checked above:)
Are you an officer in any of these groups? _____Yes _____No

51. Do you have a budget or plan for spending money?

_____Yes _____No _____No answer

52. How many different things is your family buying "on time" at present. Such things as automobile, appliances, T.V., sewing machine, furniture, etc.
Do <u>not</u> include food or clothing bought on a charg account. _____(Number)

53. Does the family have bills more than a month old for: (Read List)

_____ a. Food

_____ b. Rent or House payment

_____ c. Electric, telephone, or water bill

_____ d. Clothing

_____ e. Fuel bill for gas, oil, coal, or wood

_____ f. Repairs to house

_____ g. Repairs, gas, etc. for automobile

_____ h. Furnishings such as drapes, rugs, curtains, bedspreads, etc.

_____ i. Doctor bills - medical doctor, eye doctor, dentist

_____ j. Hospital bills

_____ k. Medicines

54. In the past year, have you received any help or information about making a budget, shopping, installment buying, or about spending money? If so, from whom or what?

DO NOT READ

_____ a. None

_____ b. Newspaper or magazine

_____ c. A club _____

_____ d. A community agency _____

_____ e. An individual _____
(No name - title or "Friend" or "Neighbor")

_____ f. Other _____

55. Can you think of any problems or information about money or shopping that you would like help or information about? If so, what?

DO NOT READ

_____ a. None

_____ b. Budgeting

_____ c. Installment Buying

_____ d. Making wise purchases

_____ e. Other _____

56. Are you registered to vote? _____Yes _____No _____No answer

57. Do you usually vote in elections? _____Yes _____No _____No answer

58. Who or what has been your most important source of new ideas and information in the past year? Before you answer let me read a list to you. (Read list and then repeat question.)

_____ a. Newspaper or magazines

_____ b. Radio or Television

_____ c. A club or community organization including church organizations

_____ d. A community agency such as Health Department, Welfare Department, Extension Agent, or Housing Administration.

_____ e. A school personnel

_____ f. An individual _____
(Give title or just "Friend")

_____ g. Other _____

THANK HOMEMAKER FOR HER HELP AND COOPERATION _____hrs. length of interview.

HOME SURVEY

(To be filled out after leaving homemaker.)

1. Attitude of homemaker. Check the adjectives that you feel apply to this homemaker.

_____suspicious	_____discourages
_____resentful	_____hostile
_____eager to learn	_____hopeful
_____pleasant	_____easily discouraged
_____cooperative	_____doesn't care
_____un-cooperative	_____other _____

2. Condition of house. The following were in definite need of repair:

_____exterior house	_____walls and ceilings
_____windows	_____floors
_____porch or steps	_____rugs
_____yard or walkway	_____furniture

3. Judging from appearance, homemaker needs instruction concerning:

_____care of hair

_____body cleanliness

_____care of hands and fingernails

_____care of clothing

_____cleaning the house

4. Other comments.

HOMEMAKER SURVEY
(Referral Agency)

(This questionnaire was only used with families in the study).

The information in the box below is to filled out by the Home Manager Supervisor.

Participating Family _____ Race _____

Address _____

Home Manager _____ No. of visits ____ over period of ____ wks./mos.

Referred by (Agency and individual) _____

Reason for Referral _____
(Type of assistance requested)

The questions below are to be answered by the referral agent.

1. The Home Manager's services were: (Check the correct answer)

___ a. requested by family member.
___ b. suggestion of referral agent.
___ c. Other _____
(Explain)

2. Check the adjective(s) below that best describes the homemaker's initial reaction to the Home Manager on the first visit. (May check more than one.)

___ a. suspicious
___ b. resentful
___ c. hostile
___ d. apathetic
___ e. eager to learn
___ f. pleasant
___ g. co-operative
___ h. Other _____
another adjective

3. Answer the following questions concerning the Home Manager that worked with this family. Rate the Home Manager on the traits listed below by placing a check (✓) in one of the 3 columns to the right of each trait.

	Needs much improvement	Adequate but needs some improvement	Excellent
Homemaking Knowledge and Skills			
Attitude toward family			
Ability to work with family			
Co-operation with Agency			

4. In your professional opinion, has the homemaker improved in knowledge or skills as a result of working with the Home Manager?

Beside the areas of homemaking listed below, place a check (✓) if the recipient family has improved in the area.

Areas	Improved	Comments
Grooming		
Personal Development		
Nutrition		
Foods - Cooking		
Home & Furnishings		
Housekeeping		
Money Management		
Child Care		
Family Relationships		
Community Participation		
Health and Home Nursing		
Clothing		

5. Are there any indications of changes in attitude concerning self, home, or community?

6. What was homemaker's reaction to Home Manager's services? Did Homemaker make any comments indicating her satisfaction or appreciation of Home Manager's services?

7. Suggestions or comments.

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Ten committees suggested ways to improve California's industrial education program in the following areas: (1) Counseling and Guidance, (2) Programs in the High Schools, (3) Articulation with other Subject Areas, (4) Articulation--K through 14, (5) Programs for Persons with Special Needs, (6) Adult and Continuing Education, (7) Teacher Education, (8) Evaluation and Followup, (9) Advisory Committees, and (10) Programs in Junior College. (EM)

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PRELIMINARY Reports OF THE COMMITTEES

29TH ANNUAL CONFERENCE ON INDUSTRIAL EDUCATION

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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COUNSELING AND GUIDANCE

The problem of sound career planning in an increasingly complex society assumes difficult proportions for both a student and his parents. The number of possible occupational endeavors open to youth, as well as the identification of appropriate potential for skills, represent two vital aspects of vocational guidance. Unfortunately, the process of assisting boys and girls with the problem of the proper choice of a career is far from simple, and often requires not only the competency of a well-qualified professional counselor, but the intelligent use of accurate sources of occupational information.

The effectiveness of vocational counseling depends not only on the competency and experience of the professional counselor but upon the availability of suitable materials or devices for assessing both the individual and his occupational opportunities.

To improve Counseling and Guidance the following actions are suggested:

.... Use in-service education as an immediate method of upgrading the present counseling staffs in the area of occupational information.

.... Utilize the California Counseling and Guidance Association to lead the in-service training of guidance personnel.

.... Promote the inclusion of an area of specialized study of the vocational aspects of guidance within the pupil personnel credential.

.... Encourage industrial education personnel to enter the guidance field to promote and upgrade the vocational guidance programs.

.... Urge each industrial educator to endeavor to establish a healthy avenue of communications between himself and the counseling office.

.... Promote the idea that more valid tests and procedures be created to test the vocationally oriented student, stressing the non-verbal approach.

.... Work toward the aim that vocational guidance be introduced in the elementary grades.

.... Encourage the idea that new, fresh, innovative "tools" be developed to assist the vocational counselor in his already difficult task. Project VIEW may well be such a type of "tool."

.... Promote the policy that counselors be assigned to attend advisory committee meetings.

.... Suggest that each school have an identified counselor who is responsible for vocational guidance.

.... Establish an ad hoc committee to determine the present conditions and future needs of vocational guidance.

PROGRAMS IN THE HIGH SCHOOL

Industrial education programs in the high school have been the primary source of information to students about design, manufacture, and maintenance of things people use. These programs provide educational experiences with tools, machines, and materials. Typical programs include drafting, electricity-electronics, graphic arts, auto mechanics, metals, and woods.

There are two types of programs on the high school level. Industrial arts is the first contact the student has with the industrial education program. Industrial arts provides general and exploratory educational experiences for the student, and should be followed by a vocational industrial education program. The vocational education program provides the student with opportunities to develop his abilities for employment in an occupation.

Throughout history man has utilized his ability to work with tools and materials to create products for the improvement of his life. This development of technology is growing at an ever accelerating rate, requiring greater abilities of each generation. Today the ability requirements for entering and maintaining one's employment are becoming increasingly more demanding and diverse.

Increased efforts are necessary to meet the needs of employment opportunities and to stimulate more efficient and diverse industrial education experiences for high school students.

To improve Programs in the High School, the following actions are suggested:

.... Teach after-school short term courses using people from industry and supervised by a teacher.

.... Establish regional occupational center offices, hire staff, and place them into existing schools.

.... Provide occupational programs on Saturdays for no credit on a voluntary basis.

.... Hire students to take movies of various occupations, conduct interviews of workers, and make audio tapes of various occupations.

.... Bus students from one school to another to get special specialized occupational programs.

.... Admit all students to regional occupation centers.

.... Make comprehensive high schools truly comprehensive.

.... Relate general education subjects to occupational education.

.... Use mobile classrooms, laboratories, and shops for concentrated instructional programs.

.... Develop instructional packages including objectives, course outlines, projects, instructional materials, organizational plans, equipment and material lists, etc.

.... "Plant" people in campaign meetings held by prospective board members to ask questions about industrial education.

.... Start vocational education programs in small schools by having one teacher handle three groups of students in different occupational tracks.

.... Provide offset press operation for low ability students.

.... Recommend an in-depth study, by Bureau of Industrial Education, to identify vocational education programs for students of the lower 1/3 ability.

.... Develop Saturday programs; micro film, zerox, blueprinting, offset printing, power sewing, mechanics, hearing and ventilation, drafting, tool design, electronic drafting, nursing.

.... Start new programs such as: vending machines, foods program (no equipment cost), small appliance repair, large appliance repair, fiber glass fabrication, closed circuit television (electronic communications).

.... Show business people how they can help you with guidance functions, materials, equipment, and services.

.... Rebuild or remodel houses that have been moved from original locations due to freeway or other construction.

.... Provide three minimum days per year for in-service education.

.... Expand work experience programs.

ARTICULATION WITH OTHER SUBJECT AREAS

Articulation of any area of education involves the relationship and interdependence that exists among the various elements of the curriculum that facilitates a continuous and efficient educational program for students. It not only includes interdependence between like subject matter areas but relationships between secondary schools and institutions of higher education, the world of work, and the philosophy of learning.

Relationships must be established between vocationally oriented curriculum areas to determine ways in which learning methods can aid the total educational program. Articulation is necessary so that vocational education in the future will have the flexibility of being able to continue to readjust to meet the forces of change.

Since the learning process is a continuum, efforts must be made to improve the articulation among all levels and areas of vocational instruction. There must be an evolving inter-relationship between all curriculum categories in order to get the useful, occupational, and personal goals of vocational education to the learner.

To improve Articulation With Other Subject Areas, the following actions are suggested:

.... Provide funds for supervision.

.... Involve general education teachers and counselors in the planning and development of vocational programs.

.... Obtain administrative personnel for vocational education responsibilities who have appropriate training, experiences, and knowledge of this program.

.... Provide more involvement in planning and better communication with general education.

.... Improve articulation of subject matter areas to avoid repetition and unnecessary review from junior high, high school, and junior college.

.... Devise and develop procedures so that entering students may begin a program at an appropriate level. This may be done in the form of tests or demonstrated performance.

.... Encourage general education for vocational students. The advantage is a more totally educated individual. It is the basis for retraining or additional training.

.... Interrelate industrial education with other subject matter no later than grade 7.

.... Fit the school and its curriculum to the student; avoid jamming the student into the curriculum squares.

.... Assist in relating academic courses to the practical problems of life and industry.

.... Convince the student that the mastery of certain academic areas is mandatory to successfully completing certain technical programs.

.... Help the student establish areas of interest that may evolve into an occupation direction as early as possible.

ARTICULATION -- K THROUGH 14

The concept of education for all American youth can only be implemented through recognition of all segments of school experience. It is easy to say that not all youth can profit from college prep course work and just as easy to say that the college bound do not have time for vocational education. It ought to be easy to promote the idea that all youth will be involved with the world of work and therefore should be oriented to this reality all through their educational experience.

Articulation on the theme of integrated world of work references throughout all education from K through 14 must be flexible rather than fixed. No one pattern will suffice for all schools or school systems. Many audiences need information on this topic at all different levels of usability. Different patterns can evolve based on core concepts to provide horizontal or subject matter atriculation, advanced standing, or credit for previously completed work or experience and formal agreements concerning who will do what at what level.

Because of the complexity of articulation, this study is limited to the manner of interrelating course content from one grade level to the next even though it is recognized that there is a relationship between occupational courses and other courses offered at the same grade level.

To improve Articulation K through 14, the following actions are suggested:

.... Approach articulation on a "school to job" basis.

.... Provide for continuous built-in evaluation of articulation.

.... Build subject-program and horizontal-vertical relationships.

.... Involve inter-action between grade levels.

.... Involve "cross pollination" of teachers from all levels and agencies.

.... Invite participation by "outside" people from industry public and private agencies of all sorts.

.... Provide for acceptance of skills and knowledges learned at other levels.

.... Encourage local supervisors to involve the top administrators in the need for articulation.

PROGRAMS WITHIN INDUSTRIAL EDUCATION FOR PERSONS WITH SPECIAL NEEDS

Regular programs within industrial education meet the specific needs and requirements of selected occupations. In these programs there may be individuals or groups of persons with special needs. These special needs may be categorized as aging, disabled, culturally deprived, economically deprived, emotionally disturbed, low ability, mentally retarded, physically handicapped, and minority groups.

Recently, industrial educators have been requested to provide more and more training for persons having these special needs. A single class may include persons with the same special needs or persons with a variety of special needs. Meeting special needs alone under some conditions may be more difficult than providing occupational skills and knowledges to persons who have no special needs. Special needs should be defined as precisely as occupational needs if programs are to be developed to meet the special needs.

To improve Programs Within Industrial Education for Persons with Special Needs, the following actions are suggested:

.... Use more community resources in the instructional program.

.... Stimulate within the curriculum more effective method of starting special programs without the red tape of established curriculum policies.

.... Organize short courses to meet identified special needs for students.

.... Develop programs that are practical, exciting, and interesting.

.... Involve the student whenever possible when developing new programs or reorganizing old programs.

.... Meet identified needs by developing specialized certificate programs at the junior college level, for example, certificate program in machine technology that can be completed in one year of day attendance.

.... Involve more persons in the total counseling program (teachers, citizens) as it applies to programs of "special needs."

.... Identify school personnel responsible for identifying the student with special needs.

.... Encourage students with special needs to become aware of their responsibilities for their education.

.... Initiate functioning advisory committees.

.... Establish financial structure and support needed.

.... Establish class size on the basis of factual support.

ADULT AND CONTINUING EDUCATION

Adult and Continuing Education, more than any other part of the education system, recognizes education as a continual lifelong process. It is concerned with the training, upgrading, and retraining of the adults of all ages in order that they may survive and grow in a society of ever-increasing complexity in which change is the rule rather than the exception. Adult and continuing education is not the answer to all our ills, but is a vehicle through which the maturing individual can progress, can change, and can become a useful, better informed and more productive citizen.

Adult and continuing education, long established in many areas, will continue to expand in response to the expressed needs of business, industry, agriculture, and all segments of society.

Increased interest and support from local to federal levels has provided both fiscal and philosophical backing. Teacher training and promotional programs expand the availability of needed courses by providing more qualified teachers. The challenge is great.

To improve Adult and Continuing Education, the following actions are suggested:

.... Develop more short unit courses and accelerate the time schedule for many now offered.

.... Provide for flexible programming -- offer courses more times per day -- make use of the 8 a.m. to 10 p.m. span, Monday through Saturday.

.... Develop the time calendar for a particular course to fit course demands.

.... Concentrate and compress courses designed for "job entry."

.... Encourage exchange programs with industry -- teacher works, man from industry teaches.

.... Involve skilled people from industry as teachers of short term courses.

.... Encourage districts to provide the climate which will permit short term assignments for the teacher to work in industry and skilled industrial persons to teach.

.... Encourage greater state and local support for programs of adult education.

.... Provide for the loan or donation of up-to-date equipment.

.... Take advantage of the provisions in adult education legislation which allows lecture series to be given.

TEACHER EDUCATION

Teacher education and preparation for industrial education subjects continues to be one of the crucial problems facing the profession. Quality and efficiency of preparation programs is often questioned and the too small quantity of candidates entering the profession is a concern. There is a continuing need for more and more imaginative in-service education programs.

The preparation program for teachers of industrial-technical subjects must integrate two main background areas. These are (1) academic preparation, and (2) technical (skills) preparation. How can these two areas of learning be best integrated into a program which will prepare successful industrial education teachers? What is an adequate academic preparation and what should constitute adequate technical preparation? Can these be measured in terms of years of experience, of degrees earned, or by trade tests?

Assuming reasonably successful teacher education programs, how can more candidates to the programs be obtained? What is wrong with the industrial education image, or might the question better be what is wrong with the image of teachers and teaching as held by the general public?

The changing times give rise to the ongoing need for teachers in service to improve and update knowledge, methods, and skills. How can they be led to identify weaknesses and to desire to gain greater teaching strengths? What might we in the profession do in implementing in-service programs which can be helpful to teachers? What types of programs?

The problems identified point up three main areas for action: Industrial-technical teacher preparation programs, recruitment of candidates to the teaching profession, and in-service teacher education. These are areas which we in the profession recognize as needing continuing improvement. They deserve much thoughtful attention from each member of the industrial education community.

To improve Teacher Education, the following actions are suggested:

.... Develop a program of in-service education for Industrial Education through such means as: summer industrial work; sabbatical leaves of absence; subsidizing in-service programs with VEA, NDEA, school district, etc.; a program of 1 summer in industry for 3 years' teaching.

.... Initiate workshops on the following basis: regional basis, with industry, with A-V companies, for the part-time teacher trainer (one who teaches the part-time teacher).

.... Provide a team of specialists to visit schools and present in-service programs

.... Establish a plan for teacher exchange between: schools, industry, and colleges.

.... Arrange for credit that would count on salary schedule for acceptable institutes or supervised work experience.

.... Recommend that the Bureau of Industrial Education should study credentialing with the assistance of representative ad hoc committees.

.... Stress the plan (Swan Bill) for technical work experience at the undergraduate level that provides credit toward the Baccalaureate degree.

.... Arrange for an early acquaintance with public school situations.

.... Require student teaching prior to the 5th year of the teacher preparation program.

.... Provide student teaching for trade-technical teachers prior to their employment as instructors.

.... Re-evaluate the training given by the police science and fire science programs for possible credit toward credentials and/or credit.

EVALUATION AND FOLLOW-UP

Much time is spent evaluating industrial education programs and in making follow-up studies of graduates from the programs.

Follow-up studies are considered as a part of the evaluation process. Statistical information indicate whether or not graduates are being placed in related jobs or are moving into other occupations. Questionnaires can provide information as to the value of instruction and point the way for program improvements. Follow-up studies can be used to show whether or not vocational students find jobs easier than academic students. The questions that can be answered by follow-up data are too numerous to list.

Evaluation implies determination of the value of an industrial education program. Methods are needed to determine the value of educational plans before a program starts. Programs should be evaluated while they are in operation, and the products and values of programs should be judged after completion of the program.

It is through continuous evaluation that programs are updated and improved. Without evaluation the benefits of programs cannot be measured or proven.

To improve Evaluation and Follow-up, the following actions are suggested:

.... Initiate an "on-going" system of evaluation that is both immediate and current.

.... Stress statistical accuracy in all reports.

.... Use social security numbers for purposes of identification of individuals involved in studies.

.... Consider factors such as military service, labor lay-offs and strikes, and job change-overs when reporting placements.

.... Agree on the definition of the term "completed" in terms of courses and programs of occupational preparation.

.... Involve the individual student in terms of personal responsibility for evaluation and follow-up.

.... Investigate the validity of area or regional evaluative sampling.

.... Stress the importance of annual or periodic evaluation and reporting.

.... Encourage all vocational instructors to take an active role of evaluation and follow-up.

.... Work to simplify all evaluation and follow-up reports.

ADVISORY COMMITTEES

The use of local representative advisory committees is traditional and almost universal in all areas of vocational education -- in agricultural, business, distributive, homemaking, and trade and technical education. Some advisory committees are continuing in nature, others are used for a short duration of time. Some are general in nature, and others are special and specific. Tested experience over many years of operation has demonstrated the value of representative local advisory committees. When properly conceived, organized, and used, they become indispensable to the successful conduct of local programs of vocational education.

These committees act in an advisory and recommending capacity to their respective school systems. They do not have administrative or supervisory responsibilities.

Advisory committees are charged with the responsibility of seeing that the programs get off to a good start and maintain their growth by keeping up to date and functional, by being geared to the needs of the industrial community. These groups are concerned with all levels of vocational education in their occupational field including elementary, high school, junior college, and adult programs. Members of advisory committees are usually appointed by a local board of education, county or district, and notified of their selection in writing by the Secretary of the Board or by a person so authorized by his authority. In many cases it is advisable that the local superintendent, director, or consultant of vocational education serve as the Committee Secretary, thereby helping to carry out committee recommendations, write minutes, take care of correspondence, and other paper work.

To improve Advisory Committees, the following actions are suggested:

.... Involve teachers, program directors, committee members, and representatives of organized groups and the Department of Employment in the selection and appointment of advisory committee members.

.... Outline the specific duties and responsibilities of the advisory committee in relation to curriculum development, evaluation and assessment of the program, and student placement and follow-up.

.... Assign responsibility for the follow-up on advisory committee recommendations.

.... Encourage the establishment of local or regional advisory committees to service larger geographical areas than those currently served.

.... Develop and make available a brochure outlining the duties and responsibilities of advisory committees.

PROGRAMS IN THE JUNIOR COLLEGE

The development of occupational programs on the junior college level will have significant impact on the prestige level of occupational education, the movement of the occupationally trained in the labor force, the training for middle level youth, the slow learner, academically superior youth, and how the occupational education is identified with broader fields of education, government, business, industry, labor, and other professions.

The junior college can, and many cases does, offer programs that take the student where he is and progresses at rates comparable to the skill levels of the students. A vast potential for this type of program exists in occupational areas.

To improve Programs in the Junior Colleges, the following actions are suggested:

.... Study standardization of occupational programs considering the variations due to local needs, the fact that students leave when they feel they are ready to take a job, the difference between young and mature students.

.... Use standard courses only as guidelines and suggestions.

.... Provide articulation of high school and junior college programs.

.... Provide articulation between all California two-year junior college programs.

.... Meet local needs, even at the expense of articulation.

.... Work to prevent costly duplication of programs.

.... Plan programs with other junior colleges within community area.

.... Inform representative local community leaders that area planning is a fact of life.

.... Initiate an annual junior college vocational conference.

.... Encourage affiliation of school personnel with the California Junior College Association.

.... Examine existing courses in terms of possible shortening of course time.

.... Clarify all course requirements.

.... Eliminate "low level skills" from the junior college course offerings.

.... Publicize results of follow-up studies.

.... Make provisions for more adequate financial funding of vocational interns.

.... Increase industry involvement.

.... Provide more than manipulative skills in all course offerings.

.... Stress importance of the A.A. degree or unit approach to occupational preparation.

VT 004 401
Research Approaches to the Initiation of New Vocational-Technical Programs; A Conference (Madison, Wisconsin, October 3-7, 1966).

Wisconsin Univ., Madison. Center for Studies in Vocational and Technical Education
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*SCHOOL INDUSTRY RELATIONSHIP; *VOCATIONAL EDUCATION; *CONFERENCE REPORTS; INFORMATION SOURCES; *STUDENT CHARACTERISTICS; *INFORMATION SYSTEMS; TECHNICAL EDUCATION
*RESEARCH APPROACHES TO THE INITIATION OF NEW VOCATIONAL-TECHNICAL PROGRAMS CONFERENCE, MADISON, WISCONSIN, OCTOBER 3-7, 1966

Resource leaders made presentations, forming a basis for discussion by 39 participants with responsibility for program development in their local communities. Major presentations included: (1) "Areas of Assistance from Private Employers" by George A. Howden, (2) "National Research Services" by William G. Shannon, (3) "Retrieval Systems and Services" by J. Kenneth Little, (4) "Industrial Involvement in Initiating New Programs" by Samuel Burt, and (5) "Student Characteristics" by Philip Perrone. (EM)

VT 004 401

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RESEARCH APPROACHES TO THE INITIATION OF NEW VOCATIONAL-TECHNICAL PROGRAMS

A Conference held in
Madison, Wisconsin
October 3-7, 1966

Sponsored by
Center for Studies in Vocational and Technical Education
The University of Wisconsin
Madison, Wisconsin

VT004401

U.S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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INTRODUCTION

This invitiational conference was held in Madison, Wisconsin from October 3-7, 1966. Its purpose was to present information and discuss procedures to be used in establishing new programs of vocational-technical education.

The participants were persons named by state directors of vocational education from Indiana, Iowa, Illinois, Michigan, Minnesota, and Wisconsin as having important responsiblities for program development in local communities. It was hoped that the participants would not only make use of the information and concepts for improving their own schools, but also would assist others in their states with similar interests and responsibilities.

The conference included educators, economists, and businessmen as discussants and resource leaders.

When the participants assembled it was found that their major concern was with such questions as: What is the best organizational base for vocational-technical programs? How do we anticipate future training needs? What kinds of information do we need for realistic planning? How can we get support from management and labor? and other administratively related questions.

The conference activity is best described as a colloquy in which the participants exchanged information about practices, viewpoints, and trends in their several states, using the presentations of the resource leaders as the forces of discussion.

The discussions that followed revealed that each state was experiencing uncertainty about the kind of organizational patterns to adopt in both high schools and post-secondary institutions. It was also recognized that future program development will require regional as well as state and local planning. The need for continuing effective communication betweeen educational administrators, business representatives, and labor leaders was emphasized. Fact-finding and research activity as a basis for decision-making appears to have low priority in current programs, but is appearing more frequently in new and prospective plans.

The attached materials are summaries of selected presentations by resource leaders at the conference. Some of the presentations were made from outlines, and verbatum records were not kept. Abstracts of these

presentations, as prepared from their outlines, describe the type of information discussed, but of course, do not do justice to the total contribution of these resource leaders.

J. Kenneth Little
Gerald G. Somers
Co-Directors

July, 1967
Center for Studies in Vocational
and Technical Education
Madison, Wisconsin

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THE NEED FOR NEW VOCATIONAL-TECHNICAL PROGRAMS

John R. Plenke
Trade and Technical Education
Wisconsin State Board of Vocational, Technical and Adult Education

Mr. Plenke discussed the basic philosophy of vocational-technical programs; described the age groups served by such programs; the major personal and societal needs to be satisfied; and the procedures used by the State Board of Vocational and Technical Education in evaluating and approving new programs in Wisconsin.

STATE EMPLOYMENT SERVICE RESEARCH SERVICE

Aubrey E. Hunter
Minnesotat State Department of Employment Security

Mr. Hunter discussed the current status of information about the demand, supply and content aspects of occupational data; sources commonly used; and pointed to need for research on (a) effects of technological change, (b) clusters of skills in families of occupations, (c) and transferability of occupational skills. He emphasized the need for continuous and comprehensive data and warned of the cost of developing such informations. He urged that the development of comprehensive occupational data be accompanied by attention to packaging it for optimum use by educators and employers, and that labor market analysts, job analysts, and educators work closely together in arriving at decisions about what occupational information is necessary for educational planning.

AREAS OF ASSISTANCE FROM PRIVATE EMPLOYERS

George A. Howden
Wisconsin Telephone Company

My main objective will be to try to identify critical needs, and to point up certain areas of cooperation from the employer's point of view and areas where I believe greater rapport can be established between the educator and the businessman.

Before getting into a more specific discussion, I would ask your indulgence while I make a brief appeal as an advocate of business and the free enterprise system. I do so for two reasons: (1) we need to remind ourselves from time to time that this country's productive capacity and

resultant standards of living have reached the present high levels through the basic framework of a free market economy characterized by individual choice and the profit motive; (2) enlightened businessmen have for some time recognized a social responsiblity that enters into their decisions.

An article in the May-June issue of The Harvard Business Review deals with this matter and lists some 30 recent books that bear on the topic of "business in society." Theodore C. Sorensen, former aide and confidant of President Kennedy, commented in a New York speech recently that "The modern corporation has evolved into a social as well as an economic institution with concerns, ideals and responsibilities which go far beyond the profit motive."

But to return for a moment to my thesis on the free enterprise system, I would like to offer a viewpoint which I think bears on the motivation a student may have to enter the "world of work." There are real, personal satisfactions to be found by the individual. Business life is not always dull and routine where one has to be a conformist. On the contrary, creativity is one of the principal ingredients in finding new and better ways to effectively serve human needs and wants. This is what most businesses are basically trying to do. Of course, any large organization requires a certain amount of discipline but the innovator will be well rewarded both financially and by a sense of social accomplishment.

Why spend all this time in extolling a philosophy about the business system, or the world of work? There are attractions to entering the business world, and for many, right out of high school. I sometimes wonder whether these satisifactions are adequately understood by the students, or even by guidance counselors. There is so much publicity these days about the fields of service with a direct application toward helping our fellow man--such as teaching, nursing, social work, service in the Peace Corps, etc.--that it is easy to overlook the fact that other pursuits also have their rewards.

I can best illustrate my point by talking about a long distance telephone operator. In the course of one day's tour of duty she may be providing successive connections that will help relieve suffering for someone needing medical attention, let a happy new father report the birth of a child, enable a caller to reach a distant party to get a needed job. All business occupations do not have quite the same direct service overtones, but it takes only a little imagination to find a bit of human interest and a sense of accomplishment in most jobs in business.

In short, I am simply asking that business get equal billing with some of the other careers. If the image of business is unduly tarnished, it should be put in better perspective. Whatever is done to better prepare students for the working world will begin with the attitude the students have toward such a career. I am not at all sure we have done enough to convey what business has to offer in satisfying the individual's inner wants and in making him aware that he is a part of an institution with a social purpose.

Now let's examine some of the specific areas of concern about the quality of job applicants as viewed from the vantage point of the employer. At a time when our economy continually makes increasingly sophisticated demands on our national work force, we in business are confronted with a number of disquieting elements which have evidenced themselves in the labor market. To know what must be done to effect a cure, we must first inventory the ailments. The businessman must ask questions about his employment and training experiences. Here are a few that pertain to the main problem we are discussing:

(1) Why can't job applicants understand basic instructions in a testing situation?

(2) Why is spelling yet a formidable hurdle for a graduate of one of our high schools?

(3) Why does a student recoil in surprise upon learning that business regards 20 or 30 days of school absence per year as an indicator of inadequate employee responsiblity?

(4) Why does it surprise the applicant that business has difficulty placing the youth who is indecisive about a career preference and will do "anything for a living."

Many more questions could be asked at this point. But to further our search as to what can be done to eliminate the current vocational dilemma--many jobs open with just as many unqualified applicants--let us look at some of the elements in the school program.

I think one major concern relates to a balance in the secondary school curriculum between what is sometimes called general education on the one hand and vocational education on the other. But here semantics may trip us because the term vocational education may have a different connotation to different people.

Broadly, of course, all education that is in preparation for a job might be termed vocational, but more often the term "vocational" education, connotes specialized skill training, practice at machine or bench, and the development of manual dexterity suited to particular trades. I sense a trend to greater emphasis on training of the type embraced by this latter

concept--and frankly this is disturbing to me.

In my business, for example we find a need for a better "general" type education or, to put it simply, a firmer grounding in the "3 R's" and basic sciences. We need individuals with a capability to assimilate on-the-job training and not someone who has practiced a particular work operation until he can perform it by rote. To some extent our business may be unique since there is only one telephone company in each community and we have traditionally trained our own craftsmen and operators.

However, this matter of balance in the curriculum and proficiency in the verbal and mathematical fields is a common topic among personnel men of my acquaintance. One of them who is a large employer of men who work in the shops as welders, machine operators, and similar jobs said to me recently: "The applicants should know the 'why' as well as the 'how.' The value of and importance of good performance in mathematics and English and the beginning sciences does not seem to be getting across. Many high school graduates who come to industry are very weak in these areas."

A telephone associate recently pointed out to me that one of the important attributes of a good telephone lineman is his ability to read and interpret written instructions. Every line truck carries a set of practices and procedures consisting of three volumes totaling 1500 pages. To use these effectively requires, among other things, a basic understanding of geometry and the ability to understand circuit layout sketches. In fact, the lineman very likely will be operating a piece of equipment valued at $20,000, such as a digger or an aerial lift, which will have its own set of instructions that he must understand. Thus, it is not just enough to know how to climb a pole or how to join wires.

Continuing with experience in our company, I can be more specific as to some of the weak points in the educational base as we have seen it. Spelling, grammar, and low reading comprehension levels are evident weaknesses in many youngsters today. High school graduates, deficient in these elementary items, cannot become conversant with modern day technology if they cannot effectively utilize training made available to them. Adequate remedial aid for such students is obviously a need. Even if some of these skills haven't been acquired at the primary school level, it is not too late to do it in the high school. The goal should be to make these students employable.

I believe more attention must be devoted to educational programs which stress and develop the though process. Again, rather than to enlarge the

capabilities, ways should be proposed to better prepare the person to think. Graduates should have the ability to apply to their jobs the knowledge gained from the educational process.

As a corollary, it is essential that the schools condition their students to be responsive to change. It is important for them to realize that change is not merely a thing to cope with or adapt to but is essentially an opportunity. The present computer revolution is a case in point. Dramatic changes in the operations of many businesses will result. The employee who is able to embrace the new concepts and apply his talents accordingly will avoid frustrations and will more readily achieve his goals.

This is not only the viewpoint of a businessman. Irving Adler, noted scholar and teacher, writing nine years ago on this subject said, "A narrow, specialized vocational education was never an adequate substitute for a liberal education. Under automation it will not even be good vocational training."

There also is a need for a more soundly based motivation and a keener sense of responsibility on the part of the high school graduate. All too often one encounters an expressed philosophy that it should be possible to share our nation's great wealth without really working, or earning it. (Galbraith--author: "The Organization Man" recently advocated a federal annual subsistence to each unemployed family of $2,000.) Education can help offset this deteriorating concept. There is dignity to work; there are many satisfactions that arise from a job well done. Greater rapport between educators and businessmen may help to strengthen this concept.

In this area, for example, educators can play a key role in explaining that poor high school attendence is a major bar to employment for many otherwise promising graduates. Absence records of 25, 30 or 35 days per year are not uncommon. The value an employer attaches to regular school attendence cannot be emphasized too strongly. When operating a tightly scheduled service-oriented business, such as the telephone industry, it is imperative that we have employees who will be on the job regularly, ready to serve our customers.

There are a number of other areas that can be considered if we want to minimize the number of unemployable graduates from our schools. Many of them relate to the role the vocational guidance counselor has in the school. Most counselors appear to be teachers and administrators first, and guidance personnel second. I realize steps have been taken in many communities to raise the status of the counselor's job, but I feel there is need to re-examine the

over all objective of the counseling function. Is it adequately recognized that many students will be happier by going directly to a vocation out of high school? Are there enough counselors so that they can take the time to search for vocational or educational paths that the developing student can best pursue? A recent article in The National Observer suggests the answer is No. One high school girl is quoted as saying, "They are just too busy; you don't know them and they don't know you."

Counselors with little exposure to or training in miscellaneous vocational pursuits are handicapped in guiding questioning youth through an unfamiliar vocational field. This is not to say that limitless job knowledge must reside within each counselor, but it is a plea to professionalize the assignment. The function needs capable and enthusiastic personnel who are adequately trained and who have the support and encouragement of school administrators. It was interesting to note that the last report of the Board of Visitors of the University of Wisconsin emphasized the greater need for counseling service for students than now exist at the university. In fact, there might be merit in titling the job "Counseling and Placement." Shouldn't the counselor feel a direct responsiblity to place each student--either in a job or college? Wouldn't such emphasis lead the counselor into many more firsthand contacts with employers? Counseling should have a scheduled place on each students' program so that he is forced to examine this matter regularly. In this way we can avoid the situation where pupils in need of counsel do not get it because they are not in trouble scholastically or they are not a discipline problem.

It is timely to note that we must identify and work with the underachiever early enough in his high school career so that he is equipped to earn a living. The business community is continually responding to proposals from government and social agencies requesting us to utilize these people as productive members of our work force. Many of these plans have merit. In line with our community responsibility, we are working with various agencies to absorb these people. But, as we try to improve the working capabilities of the currently underqualified or marginally prepared citizens, it is abundantly clear that we must seek through the educational system to minimize the number in the future.

It has often seemed to us that efforts to job orient the student appear somewhat late in his educational program. The scheduling of career days, the provision of specialized or intensive counseling activity, and the exposure to business people or places, more often than not, come in the senior

year and frequently in the last semester. Might there be more genuine vocational experiences for the freshman or sophomore classes geared specifically to create an awareness in the student of the many good careers available without college training?

One element in creating such an awareness is the provision of sufficient information and opportunities for observation so that pupils in their deciding years may come to a more informed vocational decision. Could there be more scheduled visits for students to industry to see and learn what jobs there are? Both the student and counselor should know what the business machine programmer does. Given an early enough chance to learn firsthand what various jobs are like, the student can better evaluate his future and better shape his vocational and educational goals.

Of course, implicit in such an undertaking would be the vigorous and interested cooperation of employers. You would be surprised at their responsiveness. At the telephone company, we have done some of this recently in connection with efforts to demonstrate our interest and desire to offer employment to members of minority groups. In cooperation with the school guidance counselors, during the Easter vacation we invited about 50 students from the inner core high schools to tour our facilities and learn about the kinds of job openings there are in the telephone business. Over three fourths of the students were enthusiastic about the experience. Similar responses at Christmas time and a year ago at the Easter vacation period are good evidence that students welcome such opportunities.

I am suggesting that visits of this kind be programmed for all students as an integral part of the curriculum in the high school--not just in the senoir year. Perhaps there also could be an expansion of the so called cooperative ventures whereby, on a planned basis, students could work part-time in industry in tasks that supplement classroom activities.

In some respects these "on-site" visits and work experiences might be viewed as being just as necessary as laboratory sessions for a specific academic subject.

Undoubtedly, the wider use of industry as a classroom adjunct will present administrative problems. But these are not insurmountable. For example, if there is concern that the decision to visit a particular firm will be viewed as giving that firm preferential treatment, then make the arrangements through a neutral organization of businessmen such as a service club, a Chamber of Commerce, an employers association, or an Equal Employment Opportunity Council.

If too much student time is spent away from the school premises, perhaps industry representatives might be invited to the classroom. I recall two recent instances where such visits were well received in Milwaukee. In fact, we frequently invite business and professional men to address meetings of employees to obtain their views on subjects of mutual interest.

In one case, the objective was to impress upon junior high school students the importance of continuing in school through the 12th grade. Here, individual workers--not personnel men--gave testimony and answered questions about their own job. In the other case, representatives from Milwaukee firms visited high school assemblies and classrooms to put on a "how to get a job" clinic. Such a clinic informs students of the rudiments of making application for a job and the type of behavior expected by the employer. In both cases students not only could learn something specific about jobs in industry but also were exposed to a cross section of the kind of people they will meet and associate with in the "world of work."

To emphasize this point, I believe you will find that industry welcomes an opportunity to be of greater service and, in effect, to be used as a community resource. To fully develop this potential will call for imaginative thinking by both educators and businessmen. It also means that both must cast aside any preconceived notions and be willing to open doors and esperiment with new approaches.

By asking for closer cooperation between educators and employers, business is on record as wanting to do more to improve and supplement existing vocational programs. Briefly, may I suggest that the progressive employers of today are ready to aid in some of the following ways:

(1) Make accessible to students information regarding available career opportunities.

(2) Provide guidance counselors the opportunity to observe firsthand the current industrial environment and the requirements of various occupations. In Milwaukee, for example, a number of industries have given summer employment on the production floor to counselors which permits them to evaluate the jobs, to determine employee attitudes and to reach personal judgements about careers in industry and to upgrade their previous concepts of various types of occupations. Our company has had a smilar program here in Madison. Obviously, some measure of this could also be accomplished by encouraging counselor visits of shorter duration. Another effort in this direction are the summer institutes sponsored by Plans for Progress in some cities.

(3) Place in the schools adequate printed material informing the potential employee and counselor what the comapny is, does, offers, and what type of employees are needed. Our company prepares a printed and bound 32-page guide to telephone careers which has been well received by counselors throughout the state.

(4) Supply business representatives to speak to teachers, administrators, pupils and parents. We cannot expect schools or others to be our publicity agents. Again, a visual demonstration is always effective. In our business we have found that "open houses" at telephone offices are well received.

(5) Perform within industry more of the highly specialized or unique training functions that are required to sustain the business. Obviously, post-high school technical training is desirable in some cases. However, if the schools provide a firm educational foundation, business will be better able to develop the specific vocational skills on the job.

(6) Maintain a vigorous corporate environment that will encourage employee development. Employers must not only hire for entry level job placement, but also must create and maintain many avenues of advancement for their employees. Similarly, we must seek to maximize the capacities of each individual. In our industry today, we are experimenting with some programs of "job enrichment." This is an attempt to make the jobs more interesting and more satisfying. Still another method of encouraging employee development is the tuition reimbursement program now fairly prevalent in industry.

Before concluding, I am aware that in the process of emphasizing certain points I have perhaps not done full justice to the tremendous contribution that has been made by vocational schools and by the teaching of so called vocational subjects in other high schools. I know that these have provided much technical competence to industry. It is also true that some smaller employers are not as well equipped to carry out all of the responsibilities I have said industry can accept.

In summary, these points should be underscored:

(1) Careers in industry have their rewards and more could be done to make students aware of it. As a related matter, we all have a responsibility to examine our opportunities to motivate the student toward the maximum application of his talents and to help him recognize the importance of responsiveness to change.

(2) The exposure of students to industry is a long developmental process that should begin early in the secondary school and should include programmed, firsthand observations and sampling of work tasks.

(3) The role of the guidance counselor should be expanded and professionalized to become a more formal part of the student's schedule and with greater stress on the placement function.

(4) There needs to be more emphasis in school on general education as typified by the 3 R's and basic science.

(5) Industry should accept more responsibility for the skill training on the job.

But overriding these specific matters is the urgent need for closer and more effective relationships between the educator and the businessman. There must be a willingness on the part of both to experiment with new concepts. In particular, doors and minds need to be open to ways in which the business community may be put to greater use in the educational process.

NATIONAL RESEARCH SERVICES

William G. Shannon
American Association of Junior Colleges

To a person responsible for establishing a new program, information about a wide variety of topics is essential: nature and number of jobs available, student potential, employer attitudes and demands, job salaries, faculty and staff, facilities, money, etc. Perhaps we can ask: what information would you or I want to have if we were responsible for initiating a new program?

What National Sources of Information are Open to Us?

Each persons has to decide which types of information are most pertinent to his situation. It would be helpful if we could step up to a computer and ask for an information source list useful in setting up, say, a radiation technology program or one for a medical emergency technician program. Maybe some day we will get that sophisticated but right now, unfortunately, each administrator has to "invent the wheel" all over again and probably experience the same mistakes and frustrations of others before him in similar situations.

Perhaps this Center will be able to construct an efficient instrument that will ingest information about individuals and agencies with expertise in specific areas and print out names, addresses, phone numbers, etc., at the touch of a button. Such a basic elementary clearinghouse service should not be too difficult to organize. Later, we might look for print outs with the bulk of the information an administrator might need already culled from the sources listed in the first print out.

My objective this afternoon is more modest than setting up an electronic clearinghouse or referral service, but possibly our discussion will in-

spire someone else to tackle the challenge in the basic idea. My first reaction to this assignment was to say there are only a few national research services, and, from a technical point of view, that may be true. However, a little study showed that there are many sources of data and information which may or may not be derivatives of "research," but which could be useful in establishing programs. The problem shifted from one of scarcity to one of abundance calling for a systematic approach to avoid disorganization and inefficiency. I've divided these sources or services into six categories just to illustrate one possible approach and have listed samples in each grouping.

I. FEDERAL GOVERNMENT

- A. Department of Labor
  1. Bureau of Employment Security - USES
  2. Bureau of Labor Statistics
  3. Office of Manpower Policy, Evaluation and Research
- B. Department of Commerce
  1. Bureau of the Census, Small Areas Data Activity--Newsletter
  2. Office of State Technical Services
- C. Department of Health, Education and Welfare
  1. Public Health Service
     a. Bureau of Health Manpower
     b. Bureau of State Services
     c. N. I. H.
  2. Office of Education
     a. Bureau of Adult and Vocational Education
     b. Bureau of Higher Education - HEFA
- D. National Science Foundation
  1. NASA
  2. Civil Service Commission

II. INDUSTRY ASSOCIATIONS

- A. Automobile Manufacturers Association (plus AVA)
- B. Society of the Plastics Industry
- C. The American Society for Metals
- D. Manufacturing Chemists Association
- E. Fluid Power Society and the National Fluid Power Association
- F. National Tool, Die and Precision Machinery Association
- G. Education Council of the Graphic Arts Industry
- H. N. A. M
- I. U. S. Chamber of Commerce

III. TRADE UNIONS

A. International Brotherhood of Electrical Workers, Washington, D. C.

B. Bricklayers, Masons and Plasterers International Union of America, Washington, D. C.

C. International Association of Bridge, Structural and Ornamental Iron Workers, St. Louis, Missouri

D. International Association of Machinists and Aerospace Workers, Washington, D. C.

E. United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry, Washington, D. C.

F. International Union of Operating Engineers, Washington, D. C.

G. AFL-CIO, Washington, D. C.

IV. UNIVERSITY CENTERS

A. Wisconsin--Center for Studies in Vocational and Technical Education

B. Ohio State--ERIC--vocational education studies (curriculum, technician training, etc.)

C. UCLA--ERIC--junior colleges

D. SUNY--Albany, N. Y.--"Metropolitan Digest"
1. Graduate School of Public Administration
2. Center for the Study of Urban Affairs--Yearbook

E. Washington University, St. Louis--Resources for the Future, John Martinson's newsletter "News in Urban Economics"

F. Columbia University--Institute of Urban Development

V. PROFESSIONAL SOCIETIES

A. NSPE--Washington, D. C.

B. Engineering Manpower Commission (of Engineering Joint Council)--N. Y. C.

C. American Society for Engineering Education

D. American Chemical Society

VI. OTHER

A. Under NSF--CUEBS, et. al.

B. The W. E. Upjohn Institute for Employment Research--Washington, D. C.

C. AAJC--Washington, D. C.

D. AVA--Washington, D. C.

E. ALA--Chicago

F. National Planning Association--Washington, D. C.

G. National Health Council--N.Y.C.

H. American Medical Association--Chicago

I. American Dental Association--Chicago

J. ASPO--Chicago

THE PROBLEMS AND TECHNIQUES OF CONDUCTING LOCAL SURVEYS

John Helling
University of Wisconsin

(SUMMARY OF THE STUDY DISCUSSED BY JOHN HELLING AT THE CONFERENCE)

The Lakeshore Curriculum Study Council, an organization of some 22 Milwaukee County school districts, initially approached the Wisconsin State Board of Vocational and Adult Education with a proposal for a cooperative study of post-high school educational needs among eight South Milwaukee County school districts. The State Board invited the Center for Studies in Vocational and Technical Education to share in the study, and Center funds were committed to its budgeting.

The study problem originally arose as a result of concern about the paucity of vocational education facilities in the young but growing school districts of Whitnall, Greenfield, Greendale, Franklin, Oak Creek, Scuth Milwaukee, Cudahy, and St. Francis. An advisory council of citizens engaged in commercial, civic, and industrial pursuits was nominated to plan with the superintendents of the eight districts for an evaluation of the situation. This advisory committee met with staff members of the Center and the State Board to formulate the guidelines for the study.

It was decided to break the study into three phases: data collection (March-September 1966); analysis (September 1966-January 1967); and formulation and publication of findings (January-June 1967). The first phase is nearly completed, and the second under way.

Phase one operations consisted of collecting data relevant to the adequacy of educational opportunities in South Milwaukee County. Three questionnaires and one interview schedule were developed to appraise the perceived educational needs of past and present high school students, community members, and employers. In addition to the sampling of demographic information and attitudes, the existing facilities for vocational training were visited and assessed.

The first questionnaire developed was sent to individuals who had attended one of the eight high schools as juniors during the years 1955, 1957, 1959, 1961, and 1963. The second questionnaire was administered to all seniors (spring 1966) attending high school in the eight school districts. Both of these instruments were designed to appraise the socio-economic status of the respondents and help determine their occupational aspirations. In addition, their perceptions regarding desirable vocational training facili-

ties for the area were sampled. A third questionnaire was constructed to assess employers' needs and opinions relative to the problem of adequate vocational preparation among employees from the South Milwaukee County area.

All of these questionnaires have been administered. The employer questionnaires netted a 60 percent return from the original mailing. A follow-up has been sent, and questionnaires are still being received. The senior questionnaires provided data from 95 percent of registered seniors. The student follow-up questionnaire to date shows a 64 percent completion rate.

An interview schedule was devised for use in sampling the demographic dimensions of the attitudes and perceptions revealed by residents of the eight school districts. A random sample of 1,032 residences was drawn from township assessment lists. (This was possible because school district and township lines are coterminous in South Milwaukee County.) The sample was drawn proportionately from each school district, so that data could be specifically attached to locale. A standard form was utilized by trained volunteers and employed interviewers in gaining information from and about the selected residents. Approximately 1,000 interviews were successfully conducted.

Members of the study team visited the South Milwaukee County area for three days to examine the existing vocational training facilities. Each of the eight high schools plus the Milwaukee, Cudahy, and South Milwaukee vocational school plants were visited.

Within the past several weeks, the retrieval and compilation of data from the qeustionnaires and interview schedules began a process expected to continue through the fall. Preparation of a written report of the findings is scheduled for the spring semester of 1967.

VOCATIONAL COORDINATION: RESEARCH REPORT

Harland Samson
University of Wisconsin

Mr. Samson discussed the practical problems of securing coordination of planning between teachers, administrators, employers and labor in the development of new programs of vocational-technical education, and presented the following basic premises:

There are certain beliefs which stand as guidelines for coordination.

These are presented both to inform and to serve as a yardstick against which the coordination practices of a vocational program might be measured.

(1) Coordination is the activity which unites all facets of the vocational program and without which the educational experiences cannot be considered vocational.

(2) The amount of time which cooperative students spend on the job should be realistically appraised to assure they will have time and energy to master the other subjects in which they are concurrently enrolled.

(3) The training sponsors of vocational students should be prepared to fulfill their responsibility for training students on the job which includes periodic evaluation of the student's occupational experience.

(4) The coordinator should be employed by the school system for at least ten months during the year so that they might fulfill all of the responsiblities of the job.

(5) The coordinator should take advantage of the opportunities provided through coordination activities to help keep his occupational knowledge up to date.

(6) Vocational students in the project plan should have, whenever possible, employment experiences which are coordinated and evaluated in terms of the students' occupational interests.

(7) The management of coordination activities is most efficient when aided by an appropriate planning and reporting form which is prepared regularly and is a part of the permanent file of the vocational department.

(8) The ability to perform coordination activities is not a natural talent of vocational teachers and to assure effective performance of coordination each coordinator should have formal training in coordination through course work, workshops, seminars or in-service education.

(9) The effectiveness of coordination practices is best measured by the learning outcomes attained by the students and the reputation of the vocational program among students, parents, business and industry.

He described the distribution education project now operating in Wisconsin high schools and presented a statement of "Critical Requirements for Distributive Education Teacher-Coordinators."

RETRIEVAL SYSTEMS AND SERVICES

J. Kenneth Little
University of Wisconsin

INFORMATION CENTER

The Center for Studies in Vocational and Technical Education has assumed,

as one of its major undertakings, the development of a national information center with a comprehensive library of publications, unpublished reports, research findings and other material related to vocational and technical education. The Center regularly publishes acquisition lists, annotated bibliographies, selected references, bulletins and reports describing its data collection and the findings of associated research personnel.

The Information Center can be used by any researcher, administrator or other person who is interested in learning of up-to-date publications on topics in vocational and technical education. If the information is available, it will be sent at once. If not, a special machine search will be conducted, and all pertinent data collected into a bibliography.

The Information Center acquires and houses many of the documents which it lists. Citations are made to other material that may have to be obtained from its sources. Certain abstracts are made of some research reports and other significant materials which can be made available at a nominal cost.

Organization

There are three basic units in the retrieval system: (1) the reference unit, which selects the materials to be acquired and indexes and annotates these documents; (2) the library unit, which orders materials, prepares them for library use, and assists users who visit the library; and (3) the machine unit, which develops, maintains, and edits the list of terms used to index the documents; posts on machine records the information needed to retrieve documents dealing with the specified topics, prepares periodic bibliographies on general topics and reference lists on topics as requested.

The Reference Unit

In order to keep the system up-to-date on developments in all phases of vocational and technical education, the most logical information source is the experts in various fields. A system has been worked out whereby a specialist in each area of concern provides the Center, on a periodic basis, with information relative to his area, through a recommended acquisition list. After the document has been acquired, the specialist will index and annotate or abstract the material, then forward the document with the index and abstract to the machine unit. Persons with this assignment will be known as "Reference Resource Specialist."

The heart of the retrieval system lies in the ability to identify and order, store, or cite significant research or research-related information in all fields of vocational and technical education and related disciplines. Reference Resource Specialists will have as a first major responsiblity, the identification of material in their field, and notifying the library unit of the Center of this material. The Center will order the document or, if already available, refer it to the Reference Resource Specialists. The specialist should index this material and forward the index sheet to the Machine Center. Material to be indexed may be found in textbooks, journals, bibliographies, conference proceedings, doctoral and master's theses, state department releases, research in progress or completed by the Center's staff or other university staff members, or studies reported by federal, state or local units of the educational system.

The next step is "indexing." Indexing means the identification of key words or word groups which most aptly describe the contents of the document. As an example, suppose we are to index a document entitled, "Employment, Unemployment and Occupational Mobility in Texas." The key words, or "uniterms," in the title are EMPLOYMENT, UNEMPLOYMENT, OCCUPATIONAL-MOBILITY and TEXAS. It could be assumed from the title that this article could be of interest to a person who was searching for articles dealing with either "occupational-mobility" or "unemployment: or about studies within Texas. By reading the contents of the article, more terms could be identified that would describe the nature of the information contained in the article, such as "research," "minority groups," "rural," etc. If this article is keyed to each significant word or concept with which it deals, it may be retrieved for use by persons interested in any of these concepts or any combination of them. The machine retrieval system accomplishes this by assigning a number to each document, preparing a card for each key work or concept, then punching the number of the document on each card that represents a key word in its concept of the document. For example, EMPLOYMENT and TEXAS could be superimposed to obtain the search question of Employment in Texas. Of course, there are other combinations which can be used to represent other search questions.

Therefore, it is important that Reference Resource Specialists identify the key words in each document which will assure that this document will be retrieved for persons who may be interested in the information it contains. Hence the Reference Resource Specialists should (1) use key words or word-groups which describe the content of the document; (2) the key words should

be those used by experts in the field; (3) the key words should cover the central concepts of substance and method commonly of interest to research personnel, producers, and users of research.

Documents which deal with research (a report or study in whcih data is collected and analyzed) or an innovation in vocational or technical education (a promising new technique) should be abstracted by the Reference Specialist. The abstract, not more than 250 words, should be a summary of the purpose, the procedure, and the findings.

The Library Unit

This unit is housed in the Social Science Building on Observatory Drive of the University of Wisconsin. It consists of a collection of documents specifically related to vocational and technical education drawn from research literature in economics, sociology, psychology, industrial relations, business operations, engineering technology, and other fields. Other material may be housed in other libraries on or off the campus.

The three activities of this unit are: (1) New material requested by the Reference Specialists will be ordered. When acquired, the material will be sent to the Machine Retrieval Unit. The Machine Unit will then forward it to the appropriate Reference Specialist for indexing and abstracting. (2) The Machine Unit will then assign a number and make a library card. This card will be sent to the library unit along with the document. The library unit will maintain a card file, by title and by corporate source. (3) The library unit will be responsible for housing the material in the order of numbers assigned by the Machine Unit. To make the material available, the Machine Unit will keep the library supplied with up-to-date bibliographies, which will be available for persons wishing to find the documents.

The Machine Unit

The Machine Unit is responsible for maintaining up-to-date indexes of uniterms, storing retrieval information in the machine system, conducting searches for information as required for the preparation of general bibliographies and special reference units. It is also responsible for coordinating the activities of the Reference Unit. It will house the abstracts and make these available upon request. Its process consist of the following: (1) Assigning a number to all documents which are to be indexed whether housed in the Center library or not; (2) Preparing file cards and an index sheet; (3) Forwarding index sheets and documents to appropriate reference resource personnel; (4) Receiving completed index sheets; (5) Editing index

sheets to have words, phrases and concepts in correct terminology and related to uniterm vocabulary; (6) Posting the uniterms on proper cards; (7) Keeping track of the frequency of usage of new terms and introducing them into the system when they have been used a significant number of times; (8) Filing the index sheet by assigned number; (9) Forwarding documents and file cards to the library; (10) Receiving requests for bibliographies; (11) Processing requests for machine search; (12) Editing requests to see that no superfluous documents are cited; (13) Disseminating bibliographies; (14) Conducting general bibliographic searches and disseminating these to lists of persons kept on file who request periodic updating of general bibliographies; (15) Retaining on file all abstracts and making them available upon request.

Significance

The informational center will only be as good as the adequacy of the information fed into the system and the adequacy with which pertinent information can be retrieved on any important topic. A special vocabulary list is maintained by the Machine Unit and is available for reference specialists. This list is constantly being up-dated, and the vocabulary list will be edited from time to time. It is important that each person assigned a responsibility in the system do his utmost in keeping up-to-date with the Center's information, and keeping the Center up-to-date in its information.

The Center has a service in this activity which will supply the field of vocational and technical education with up-to-date information. It hopes to impart an exemplary service to users of this information throughout the country.

INDUSTRIAL INVOLVEMENT IN INITIATING NEW PROGRAMS

Samuel Burt
U. S. Employment Service

(This paper is based on a study conducted by the author for the Upjohn Institute for Employment Research with a grant from the Fund for the Advancement of Education of the Ford Foundation. A more detailed discussion of the theme of this paper is presented as a chapter in a volume to be published in September, 1966, by the Johns Hopkins Press, Baltimore, Maryland, titled Dimensions of Manpower Policy. This study will be published by McGraw-Hill under the title, Industry and Vocational-Technical Education, all rights reserved.)

Industry-education cooperation in vocational and technical education at the national, state, and local levels has been considered a sine qua

non by educators from the earliest days of vocational education. Industry[1] leaders, and more recently, economists and other social behavior scientists, have also recognized that education for the world of work must be rooted in the manpower needs of industry in order for such education to effectively meet its objectives. Over the last 50 years a great deal has been written about industry-education cooperation. Unfortunately much of the writing has consisted of good intentions and platitudinous or exhortative statements. In pursuance of efforts to assure industry-education cooperation, some states have passed laws and many states have issued regulations requiring industry participation in vocational and technical education. As if cooperation can be legislated!

This is not to say that industry people are not committed or involved in local vocational and technical education programs. As a matter of fact, industry-education cooperation is quite extensive. For example, the Los Angeles Trade-Technical College has some 50 industry advisory committees with a total of over 500 industry people who have contributed almost $1 million of equipment to the school. The Denver Opportunity School has over 80 committees with some 700 industry representatives. The American Vocational Association estimates that over 20,000 industry advisory committees are utilized by local and state vocational educators throughout the United States.

Industry cooperation with vocational and technical educators is evidenced in so many ways that it can be said it is limited only by the extent to which educators exercise the initiative and effort to involve industry in their programs. Indeed, industry offers in vain its services, its time, its personnel and its funds unless local educators provide the necessary climate and leadership, and arrange for channeling and utilizing industry's interests in vocational and technical education. While a number of schools and school systems can cite situations in which industry-education cooperation has been effective--through the use of committees of industry people, individual employers, and trade, labor and professional associations--there is little meaningful, sustained, coordinated, and systematic participation and involvement of industry as a "way-of-life" for occupational education in a vast number of schools and school systems. Much of the fault rests with vocational and technical educators, for they have demonstrated a lack of knowledge as to the nature of and motivation for industry participation.

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[1]"Industry" or "industry people" is used as a generic term to include representatives of business, the professions, labor, agriculture, trades, manufacturing, etc.

Factors Motivating Industry to Participate in Vocational and Technical Education Programs

A variety of factors motivate industry groups and individuals to volunteer their advice, services and participation in school programs designed to prepared students for employment in particular occupations. An understanding of these factors will help educators better perform their critical role of leadership. Industry wants to become involved in occupational education programs in the schools, as individuals or as an industry group effort, because industry itself:

1. would like to have the school system assume the burden of costs of initial job entry training of new employees, as well as skill upgrading of present employees
2. would like to have a reliable source for a continuing supply of well educated new employees in order to reduce their costs of recruitment and selection
3. would enjoy the prestige which accrues to the industry as a result of having a program in the schools
4. consider their work with schools as fulfilling a community public service responsiblity
5. seek the opportunity to engage in an educational activity that provides them, as individuals, some measure of prestige among their associates, neighbors, friends, and inner-family circle
6. may satisfy its desire to be considered altruistic and philanthropic by providing prizes, awards, and financial aid to young people
7. desires to take advantage of such public and customer relationships that may result from participating in educational programs
8. is satisfying a personally felt moral and social responsibility to help young people become productive citizens by offering interesting and worthwhile career opportunities
9. wants to help young people to take advantage of these opportunities as present employees were helped when seeking a career

Recognition of these motivating factors can provide educators innumerable clues for developing greater participation and involvement of industry in school programs.

Nature of Industry - Education Cooperation

For too long educators have viewed industry-education cooperation as an "advisory committee" function when, in fact, cooperation and participation in school programs takes place in numerous ways and through a variety of instrumentalities. For example, in addition to advisory committees, there can be cooperating committees (which "do something" rather than just advise) and joint apprenticeship committees (which have some administrative responsibilities as well as operational activities). Also, local trade, professional, and labor groups are frequently called upon for assistance by educators. In addition to these organizational instrumentalities, a great deal of industry cooperation is carried on informally through the efforts of instructors, department heads, and coordinators with individual employers, as well as with trade associations.

Industry participation and involvement in occupational education is usually concerned with initiation of new programs; expansion or elimination of established programs; interpretation of manpower and skill requirements studied in terms of curriculum needs; development of curricula; acquisition of shop and laboratory equipment; counseling and recruitment of students; recruitment and training of instructors; job placement of work-study students and program graduates; public relations; and evaluation of school programs. The following list of some of the activities and services provided by industry to occupational education programs should be studied by local vocational and technical educators in terms of how industry may be approached, both formally and informally, and what motivations should be utilized in obtaining maximum advisory and operational involvement.

A. Student Counseling, Recruitment, Selection, and Placement

1. Participating in development of aptitude tests and other criteria for selection of students
2. Encouraging young people (and parents) to consider vocational or technical education and training through visits to "feeder schools," speeches to civic clubs, career day meetings, etc.
3. Assisting in screening students applying for admission to the courses
4. Placing school graduates in jobs
5. Placing students in part-time work during school year or summer vacations.
6. Arranging plant or field trip visits for students and counselors

7. Providing vocational guidance information literature to students and counselors

8. Assisting in surveys of local industry manpower needs

9. Assisting in development of aptitude tests, achievement tests, certification and licensing tests, and other techniques and procedures for initial employment of school graduates

B. Instructional Program

1. Assisting in preparation and review of budget requests for laboratory and shop equipment and supplies

2. Evaluating physical conditions, adequacy of equipment and layout of laboratory and shop

3. Assisting in the development of course content so as to meet the changing demands of the local industry

4. Obtaining needed school equipment and supplies on loan, as gifts, or at special prices

5. Assisting in the establishment of standards of proficiency to be met by students

6. Assisting in the development of school policy concerning the kinds and volume of production work or "live jobs" to be produced by students so that this work will be of instructional value in the educational program

7. Establishing and maintaining a library of visual aids, magazines, and books concerning industry

8. Assisting in surveys of extent to which school programs are meeting needs of industry

9. Assisting in the development of special programs under MDTA and the Economic Opportunity Act, etc.

10. Assisting in development of evening school skill improvement and technical courses for employed personnel

11. Assisting in development of apprenticeship and on-the-job training related courses

12. Arranging field trip visits for teachers in plants

13. Providing sample kits of raw materials, finished products, charts, posters, etc. for exhibit purposes in classrooms and shops

C. Teacher Assistance

1. Providing funds to assist local teachers to attend regional and national meetings of industry and teacher organizations

2. Arranging meetings of teachers to establish cooperative relationships between the schools and industry

3. Arranging summer employment for teachers

4. Assisting in the establishment of teacher qualification requirements

5. Conducting clinics, and in-service training programs for teachers
6. Providing substitute or resource instructors from industry to assist regular teachers
7. Subsidizing teacher salaries in such unusual cases as may be necessary to obtain qualified instructors

D. Awards

1. Providing scholarships and other financial assistance for outstanding graduates who wish to continue their education and training
2. Providing prizes to outstanding students

E. Public Relations

1. Providing speakers to address trade and civic groups concerning the industry's education and training program in the schools
2. Providing news stories concerning school programs to magazines published for specific industry groups
3. Providing news stories concerning school programs to local news media
4. Attending meetings in support of vocational and technical education which may be convened by local and state school officials, boards, and legislative groups
5. Participating in radio and television programs designed to "sell" vocational and technical education to the public
6. Contributing funds to advertize specific school occupational education and training programs
7. Advising employees and their families concerning school programs by posting the information on bulletin boards, carrying news stories in company publications, and providing enclosures concerning school programs in pay envelopes

Summary

Examples of the leadership and ingenuity that must be exercised by educators to involve industry in several of the activities listed above are appropriate as a summary. When an employer donates a piece of equipment to the school, a metal plaque showing the name of the donor should be attached to the equipment. The fact that such recognition is provided will not only please the donor, but will serve as an incentive to other employers to donate equipment. When an employer provides a prize or scholarship to a student, the award should be made at the school awards assembly or graduation exercises, publicized in the school newspaper as well as in local newspapers and industry trade journals, and a certificate of appreciation should be presented to the employer. The donor is pleased to assist a stu-

dent and is honored by the publicity afforded him. Here again, the publicity will undoubtedly have a chain reaction and result in other employers providing scholarships and prizes. Furthermore, those employers who do participate actively in the school program should be given priority in referrals of graduating students seeking employment.

School officials should include in their catalogues the names of industry representatives who are serving in an advisory or cooperating capacity to the school in developing its course offerings. Not only would this simple technique afford a great deal of personal satisfaction and pride to the industry people involved, but it would also inform the prospective student, his parents and guidance counselors that industry is indeed involved in the occupational education program of the school.

In closing, it must be noted that more than sentiment, exhortation, legislation, or cooperative relations are needed if industry is to become really involved in vocational and technical education. Educators must provide the ways, means, and strategies for industry people to identify themselves with and feel themselves full-fledge partners in solving the problems of the schools and school systems of our nation. Since it is the educators who are responsible for the administration and operation of their schools, then it is they who must take the initiative and exercise the leadership to arrange for effective utilization of industry people so that their occupational programs will, in fact, offer purposeful, meaningful, and effective education and training for the world of work.

In every community there are numerous resources which depend on industry and civic support and which might well be utilized by educators in enhancing and improving vocational and technical education. For example, the local employment service offices, many of which have established industry advisory committees, and which offer testing, counseling, and job placement services, should be utilized to the fullest possible extent by local schools. Arrangement can be made for local employment service staff to either administer their aptitude tests to students in school, or to train school counselors in the administration of the tests. Also, employment service counselors can be called upon to provide school counselors orientation seminars to the "world of work" based on the knowledge they have acquired in their working relationships with employers. The economists of the employment service, as well as the Chamber of Commerce, banks, and local universitites can be called upon by school people to assist in the interpretation of economic and manpower needs studies for the area so that educators can better plan their

immediate as well as long-range program offerings. Furthermore, sociologists and psychologists in local colleges and universities might be called upon to assist in planning not only how to motivate students to enroll in vocational courses, but also how to motivate industry to participate more fully in the school system's programs. Vocational and technical education and training cannot simply be considered as a prerogative of educators; it is, in fact, a facet of the manpower planning and utilization program of our nation and must be considered and conducted by educators in these terms. Recognition of this fact must lead educators to the exercise of their responsibility to involve not only industry, but the total community in all phases of occupational education. How well, and to what extent, educators do demonstrate such leadership will determine the continuing role of vocational and technical education in relation to other systems for meeting industry's manpower needs.

STUDENT CHARACTERISTICS

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This study was the first phase of a research program designed to identify certain psycho-social characterisitics of potentially poor performing workers and some who are potentially unemployable. It is intended that these research results will establish normative data as well as provide useful instruments to aid counselors and vocational coordinators in counseling pupils interested in the various secondary school vocational programs.

How do you evaluate job performance? It seems valid to assume that vocational instructors are aware of, and can recognize the work traits evidenced by students which suggest either good or poor worker potential. Thus the criterion variable for this phase of the research is based upon instructor judgments.

Method

The subjects of this study were 269 boys and 388 girls enrolled in "capstone" coursesin thirty cooperating schools of Wisconsin's pilot program in vocational education. These schools were chosen by the Wisconsin State Department of Education as a representative sample of Wisconsin high schools. Included were major metropolitan schools from Milwaukee, minor metropolitan schools from cities such as Oshkosh, major urban rural schools from cities such as Wisconsin Rapids, and minor urban rural schools from towns such as Hurley. The students represented three different trade and

vocational areas: 225 boys were enrolled in the trade and industry programs; 5 boys and 326 girls were enrolled in the business programs; and 39 boys and 62 girls were enrolled in the distribution programs.

Initially, the vocational classroom teachers were asked to identify students who comprised the upper and lower quarters of their classes, based on a criterion of projected on-the-job performance. At the same time, they were asked to rate the students on several characteristics.

School counselors were then asked to provide data on mental ability and achievement tests, school grades, educational level of both parents, and father's occupation.

Additional data were collected from the student on the following variables: educational and vocational plans, career objectives, expected entry jobs, wage aspirations, work model identification, work value orientation, work orientation, job involvement, student self-concept of ability, achievement value orientation, major life satisfactions, and student self ratings.

Findings

(a) Boys: When compared with boys rated as having a better level of potential on-the-job performance, potentially poor performers were similar in:

Socioeconomic background. An occupation having a socioeconomic level comparable to the mean father's occupation of both groups would be that of a delivery-man, millwright, or craftsman.

Parents' educational attainment. There was a trend, however, indicating that fewer of the parents of the poor performers attended college. Typically the mother's education exceeded the father's education for both groups.

Entry wage expectations. There was a wide range of choices for both groups with the mode occurring at $100-$125. Wage aspirations of both groups were also similar with 50 percent of the boys aspiring to wages over $150 per week.

Work orientations. Eighty percent of poor performers chose nonperson-oriented jobs (science, technology) for both their entry job expectations and career objectives. About 10 percent chose person-oriented (service, arts, and entertainment) occupations and 10 percent chose business-data occupations.

Work model identification (relationship). About 20 percent of the boys in the study identified with a parental work model and about 60 percent identified with a friend or person in a work setting.

Job involvement. They had similar regard for the importance of work to

the worth of the person. As measured by the job involvement instrument, both groups had mean schores in the mid-fifties suggesting a high-average amount of involvement.

Major life satisfactions. About 24 percent of the boys in the study chose work as major source of satisfaction. Forty-three percent chose family, 26 percent chose hobbies and sports, and the remaining 8 percent chose religion and community activites.

Work value orientation. A majority seek a job in which they can use their skills or abilities.

Self ratings. The two groups describe themselves similarly on these social qualities: cultural refinement, leadership, personal appearance, ability to get along with others, and social habits.

Potentially poor performing boys differend from boys with good work potential in:

Teacher ratings of personal characteristics. Poor performers were rated lower on all characterisitcs.

Intelligence. Poor performers had a mean IQ of 96 compared to 105 for good performers.

School performance. Poor performers achieved statistically significant lower grades in all subject matter areas and on all achievement sub-tests.

Occupational aspirations. The mean score of 39 for boys rated as poor performers indicated a socioeconomic level approximately that of a book-binder, retail sales worker, or decorator which may be compared to the mean of 48 for better performers who aspired to a socioeconomic level similar to that of manager of a small business, or construction foreman.

Occupational expectations. They planned to enter the labor market at a mean socioeconomic level comparable to that of a radio-T.V. repair man while good performers expected to enter the labor market at a socioeconomic level comparable to that of an electrician.

Post-high school plans. Fewer poor performers planned on further education or training, and more planned on military service upon graduation. About 20 percent planned on an immediate job after completing high schools. Poor performers were just as likely to plan for vocational school or apprenticeship programs but less likely to plan for college.

Work model identification (level). Poor performers indentified with a worker having a lower socioeconomic standing. The mean socioeconomic level of the worker identified with for both groups paralleled the socioeconomic level of their occupational aspiration.

Achievement Value Orientation. They placed less emphasis on the value of achievement than good performers. Poor performers also had a lower self-concept of academic ability than the good performers.

Self-ratings. They rated themselves lower on such performance characteristics as: dependability, industriousness, mental alertness, thoroughness, and employability.

(b) Girls: When compared with potentially good performers, girls rated as potentially poor performers were similar in:

Socioeconomic background. The family socioeconomic level based on father's occupation for both groups of girls was similar to that of boys in the study, approximating that of deliveryman, routeman, or craftsman.

Parent educational attainment. For both groups of girls, fathers' education typically was less than mothers'.

Post-high school plans. About one-third of both groups planned on further education. Poor performers were more likely to plan for vocational school, than were good performers. More good performers had aspirations for a college education.

Wage aspirations. The choices of both groups were distributed over a wide range of possibilities with a mode occurring at $100-$125.

Work orientation of entry job expectations. Most entry expectations were in the business-data category.

Work model identification (relationship). Less than 10 percent of either group identified with a parental work model. About 55 percent identified with a friend or person in work setting.

Job involvement. The two groups had similar regard for the relative importance of work to the worth of the person. As measured by the job involvement instrument both scored in the mid-fifties suggesting a high-average amount of involvement.

Major life satisfactions. About 13 percent of both groups chose work as the primary source of major life satisfaction and about 70 percent indicated they looked to the family as the major source of life satisfaction.

Self-ratings. The poor performers rated themselves similar to the good performers on personal appearance, social habits and employability.

When compared with girls rated as potentially good performers, girls rated as potentially poor performers differed in:

Teacher ratings of personal characteristics. Poor perfomrers were rated lower, by their teachers, on all personal characteristics.

Intelligence. They were significantly lower in intelligence with a

mean IQ of 98 compared to the 108 for girls rated as good performers.

School performance. Poor performers obtained statistically significant lower grades in all subject matter areas and lower scores on all achievement sub-tests.

Occupational aspirations. Career objectives of poor performers had a considerably lower mean socioeconomic level than career objectives of good performers. The mean level of poor performers was approximately the socioeconomic level of a dental technician while the mean level for good performers was at a level approximating that of a music teacher or therapist.

Entry job expectations. Entry job expectations of the two groups were very similar to their career objectives, indicating a difference comparable to that mentioned above. Entry job expectations of girls rated as poor performers, then, were lower than expectations of the good performers.

Post-high school plans. While a majority of both groups of girls planned on entering an occupation with a business-data orientation, girls rated as poor performers were more likely to seek a job with a person-orientation, than were girls rated as good performers.

Work model identification (level). Poor performers identified with a worker whose occupation was at a socioeconomic level lower than that of good performers. For both groups of girls, the socioeconomic level of their work model paralleled the socioeconomic level of their entry job expectations with the greatest frequency of choices in the less than $55 category compared with the highest frequency in the $56-$75 range for good performers.

Self-concept of academic ability. Poor performers had a lower student self-concept than did better performers.

Work value orientation. About 55 percent of girls rated as poor performers sought a job in which they could use their special skills and abilities, compared to 70 percent of better performers. Many more of the poor performers, however, chose security as a need to be satisfied through work than did good performers.

Achievement value orientation. Poor performers placed less value on achievement than did good performers.

Self-ratings. Poor performers rated themselves lower than better performing girls on the following characterisitcs: dependability, cultural refinement, leadership, industriousness, mental alertness, thoroughness, and ability to get along with others.

Conclusions

The results suggest that in general, students rated as having a poor projected level of on-the-job performance are lower in both scholastic ability and performance. Potentially poor performing students seemed to lack the values and aspirations of better performing students. They identified with workers of a lower socioeconomic level, had lower job expectations, lower occupational aspirations, and generally placed less value on achievement.

The investigators can only speculate as to why youth with similar socioeconomic origins who identify with similar adult workers and who describe themselves similarly on social characteristics can at the same time select worker models occupying different job levels, and have dissimilar job aspirations and expectations. It might be concluded that the higher scholastic achievement and self ratings of those described as potentially better performers can be attributed to their superior potential. However, it is not knownwhether this difference in test scores existed prior to entering school. Another possibility is that school has had a positive influence on those who have excelled and that this in turn is reflected in higher achievement motivation and higher occupational aspirations and expectations. This interpretation would imply the school can influence both motivation and performance of some but not all students from the lower socioeconomic levels. This study does not allow one to determine the reasons for these differences but the reasons must be determined if education is to augment individual productivity.

For vocational educators this may mean that, for part of their classes at least, the most challenging job they are called upon to do may not be in teaching the skills of the job, but in increasing or inciting the motives and aspirations of their students.

The relationship between the vocational educator and the students he teaches seems to be very critical. The vocational teacher is in a unique position by virtue of his potential as both a work model and catalyst in increasing the vocational competence of his students.

Counselors can certainly assist vocational educators and students by keeping abreast of opportunities in vocational-technical areas. They can be better informed and secure better informational materials for non-professional and sub-professional occupations. Schools, by their academic nature, often fail to provide motivation for the vocationally-oriented students within the level of their capabilities. The characterisitcs of groups having poor worker potential suggest that more individual and small group work should be done to challenge and encourage realistic choices and adequate self-concepts.

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Field experience in the vocational rehabilitation of more than 200 disabled veterans so seriously handicapped as to require vocational rehabilitation in their homes provides the basis for this report. Problems encountered and solutions developed at each stage of the program are presented for illustrative purposes. The development of vocational plans involved assessing the veterans' readiness for vocational rehabilitation, degree of family assistance to be expected, and the adequacy of the veterans home as a training facility. The veterans whose rehabilitation is reported in this study had the assistance of a skilled professional team, including medical consultants, occasional counselor, vocational rehabilitation specialist, and the vocational instructor. Experiences of the program are described at length, from finding a qualified instructor to the development of possibilities following the completion of training. Selective case narratives, cases in study by training objective and disability, and a selected bibliography are appended. (CH)

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To work again ...to live again

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The Vocational Rehabilitation of HOMEBOUND Veterans

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The case studies on which this report is based were provided by the Veterans Administration regional offices under the guidance of the Department of Veterans Benefits. Responsibility for analysis and integration of the materials and preparation of the report was carried by Donald T. Griffin. At Mr. Griffin's death just prior to completion of the project, the task was assumed by Glen S. Faxon. Gerald E. Wise assisted in various phases of report preparation. The report is part of the staff work of the Vocational Rehabilitation Board (formerly the Vocational Counseling Training and Adjustment activity, VR&E Service), of the Compensation, Pension, and Education Service.

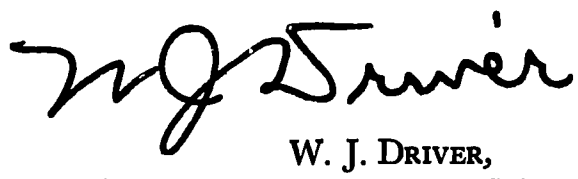
Foreword

Two thousand years ago Cicero said, "I know not why, but home is the dearest." For some, however, home is a prison, a place where, because of disability, a man is shut away from his world. This has been the experience for some very seriously disabled veterans. Perhaps the title here should not be the "Vocational Rehabilitation of Homebound Veterans" but somehow should express the idea of release from the bondage of serious disability. Within these covers are reports on the education and training of veterans too disabled to travel to school or to reach a training facility. So like Mahomet and his mountain, the training facility has been taken to the veteran. For the most part the reports speak for themselves. However, for many of the veterans the real story is told only in terms of long hours of patient and sometimes painful effort, of the devotion of a wife or parent, the determination of an understanding instructor to find a way to do the "impossible," and at last the mastery of skills that, until yesterday, were considered beyond the attainment of the seriously disabled.

The more than 200 cases which form a basis for this report represent a small fraction of seriously disabled veterans who have been rehabilitated. Yet they loom large when one is able to visit the veteran in his home and see, at first hand, the transformation that has taken place in the veteran and his family. Frequently a whole community has become involved by participating in various ways in the veteran's rehabilitation. They are the people who give encouragement, provide instruction, and then become the consumers of the goods and services purchased because of their quality of excellence. It is a program that emphasizes and reemphasizes that disability is not on sale. Rather, the veteran is so competently trained that what he produces is purchased because the goods and services are of sound quality and are offered on a competitive basis.

In studying the report for purposes of application in programs of rehabilitation, in reading it carefully, or in just glancing through it, perhaps one should think in terms of "home-released" rather than "homebound." Some of these veterans at the time of early contacts considered themselves bedridden invalids. Some were so seriously disabled that training was deemed not medically feasible. Today many of them work regular hours in their home shops or home offices and are part of a community that brings the everyday world to them along with a request for cleaning a watch, re-

pairing a piece of jewelry, auditing a set of books, repairing a transistor radio, or doing one hundred and one other things that the trained disabled veteran does so well for the community of which he is now a living part.



W. J. DRIVER,
Administrator of Veterans Affairs.

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Overview

The homebound veteran is one whose service-connected disabilities are so serious (for example, quadriplegia, multiple sclerosis), as to make it impossible for him to obtain instruction in a suitable vocational objective outside of his home.

In this report on the vocational rehabilitation of the homebound, the problems encountered and solutions developed at each stage are presented through the use of illustrative material.

In most instances, the veteran's plan is to operate a small business in his home, and training in the production of specific goods or services is accompanied by training in marketing and business methods. The aim of the VA program is to enable the veteran to function as an independent worker as far as is possible.

It is highly important that workers with the homebound understand the range of reactions which persons with very severe disabilities experience at various stages. In whatever form the problem of initial motivation is encountered, it is quite likely that the veteran's pretraumatic habit patterns and characteristic mode of expression will be radically modified as a result of severe disability. Viewing himself by his former standards of comparison, the veteran typically is no longer acceptable to himself, cannot believe he is acceptable to others, doubts that anyone would come to see him except out of pity, and tends to withdraw from others. This reaction accounts in part for the fact that simply making vocational rehabilitation available and leaving it to the seriously disabled veteran to initiate an application does not have the intended result. To accomplish its purpose the program must be accompanied by an active case-finding approach.

Early in the program, vocational rehabilitation personnel found that they could obtain referrals from VA medical, contact, and loan guaranty personnel, and that homebound veterans could be identified from applications for prosthetic aids, specially adapted housing, and allowances for attendants. Cases were referred by veterans' service organizations, public and private health and welfare agencies, and members of coordinating councils participated in by VR&E [1] personnel. Other referrals came as a result of speaking engagements before veterans' organizations and civic

[1] VR&E: Vocational Rehabilitation and Education.

groups, articles prepared for the press, and radio and TV programs sponsored by VA regional offices. More recently, with the establishing of a VA data-processing center, lists of seriously disabled veterans are prepared from runs of machine records cards. This is now a mandatory method in all offices.

The veterans whose rehabilitation is reported in this study have had the assistance of a skilled professional team, including medical consultant, vocational counselor, vocational rehabilitation specialist, and the instructor. Further, their vocational rehabilitation frequently involves the efforts of medical specialists, social workers, and representatives of organizations and agencies in the veteran's community. Homebound veterans and their families are especially vulnerable to the confusion which would result from a lack of coordination of activities. It is essential for good teamwork that each member provide the type of service for which he is responsible and make his findings and recommendations available to other team members.

Constructive planning with handicapped persons at an early stage following their disablement is desirable, but this must be balanced against appreciation of the individual's readiness for vocational rehabilitation.

The counselor or vocational rehabilitation specialist may encounter the veteran in any one of several possible reactions to his situation when he is first seen. It may be that the veteran simply does not know that anyone with his disability can perform useful work. He may be more or less ready to turn from the period of "mourning" and bitterness, from dependency or boredom, to more constructive activity. At times he may appear to be actively opposing attempts to draw out his interest, as if by doing so he could get back at the world for his loss. This venting of feelings is to some degree necessary, but at an appropriate point the veteran should be helped to divert the force of his complaints into constructive channels.

The counselor or vocational rehabilitation specialist who visits the veteran at this stage must establish an atmosphere of confidence and understanding with him through continuous contacts, providing information as to what other equally disabled veterans have done, and possibly arranging for a visit by such an individual. It is important that the worker accept the veteran as a person, and that he avoid creating any suggestion of threat, including the impression that he is trying to push the veteran into a decision. However, as he is accepted personally by the homebound individual, the experienced counselor or training specialist knows when he can challenge him to make an effort in his own behalf. One of the purposes of vocational training is to help the veteran reestablish a degree of independence, and it is essential that the decision of the veteran should be his own. An interest in matters outside of himself, his willingness to accept the fact that veterans who are equally disabled have made a comeback, and a request for private discussion, in contrast with visits which have included family members, are indications of increased readiness on the veteran's part to plan for himself.

The homebound veteran's family and home constitute his social and physical environment. The first visit with the veteran provides an opportunity

to meet the veteran's wife, parents, or other relatives. It also provides an opportunity to consider whether the physical arrangements of the home are likely to favor or limit the veteran's engaging in a home business upon completion of vocational training. In some instances, the veteran's dependence upon family members for physical care means that his vocational rehabilitation plan must be a family project. Because of their involvement with the veteran's problems and to establish an understanding of the kind of planning which needs to be done with the veteran, it is likely that the worker will need to confer with family members, with the veteran's consent. Where there are special family problems, it is appropriate to obtain social service assistance in working with the family.

When the homebound veteran is able to accept at least the possibility of vocational rehabilitation, he is given appropriate help in order to see himself and his future in relation to a specific, practical, vocational goal. He may need special assistance in counseling to accommodate his pretraumatic view of his future to any of the more limited number of occupations which are now available to him.

It is as desirable not to overemphasize the narrowness of such restrictions as it is necessary to accept the existence of actual limitations. With community assistance specific information is developed concerning particular occupations under consideration, potential demand for the goods or services produced in those occupations, possible merchandising methods, and the availability of qualified instructors.

Homebound veterans have followed successfully a considerable range of occupations. Among them are: accountants; artists; bookkeepers; beekeepers; clerks; canvassers (telephone and mail); draftsmen; designers; teachers; photographers; writers; repairmen for office machines, home appliances, radios and television sets; and others. The wide range of different kinds of work resulted from creative planning on the basis of a thorough knowledge and understanding of the individual veteran in his particular community setting. The principle followed emphasizes abilities rather than disabilities. In work with the homebound, it is desirable to emphasize realistically the opportunities which are suggested by the veteran's circumstances rather than their limiting aspects. The vocational counselor working with the homebound encounters essentially the problems met in working with less disabled persons. The differences are in terms of difficulty and complexity. Stimulating motivation, arranging for adequate instruction, and planning and training for self-employment are all problems encountered occasionally in counseling other individuals. With the homebound they are encountered regularly and in combination.

The information contained in the standard literature which tells where and how a properly qualified and trained person may enter various occupations is of little use with the homebound. The job itself frequently has to be redesigned with a view to the veteran's limitations and the conditions of the potential market in his community. It is necessary to do the kind of

research in the area which a businessman planning to establish a business would undertake. Rather than consulting catalogs of training institutions or reviewing lists of establishments which have provided training on the job, it is necessary to carry planning to the point of determining that it is possible, in effect, to create a special training facility for the veteran, surveying his home for its suitability as the physical plant, locating a qualified instructor, and developing a suitable program.

Whether the homebound veteran becomes a producing worker and is in fact vocationally rehabilitated depends primarily upon the adequacy of the training he receives in the skills and knowledge of his vocation. The essential job of the instructor is to provide this training. How effectively he does this will depend not only upon his own skill and knowledge of the occupation, but also upon his skill as a teacher. If in addition he sets a good standard and is able to impart the related knowledge which the veteran will need in his business and employment, it may be hoped that the veteran will develop pride of workmanship and show initiative in thinking ahead to the problems he will face as an independent worker.

In addition to teaching the veteran occupational skills, the instructor, as a resident of the veteran's home area, knows more about the community and its resources than other team members. He can contribute considerably to the veteran's becoming established as a working member of the community. Also, the community knows the instructor, and some of the regard in which he is held is likely to "rub off" on the trainee. For these reasons the selection of a qualified instructor is of critiical importance.

On the basis of mutual confidence, sharing of information, and respect for each other's knowledge, the rehabilitation specialist charged with the supervision of the veteran's training should endeavor to develop with the instructor the same effective working relationship as customarily prevails with other members of the rehabilitation team. Both have a responsible part in planning the training program, determining necessary equipment and modifications of equipment, working out the instruction schedule, evaluating the veteran's progress, and considering adjustments of details of the training plan as the need arises. Close collaboration throughout the period of training is necessary, inasmuch as the instructor's work with the veteran is not ordinarily under the supervision of an established institution and is especially important when the instructor has had only limited or specialized teaching experience.

One of the principal conclusions of this study is that any break in continuity between the training period and the period of independent work should be minimized as much as possible. Two methods are important for making a smooth transition which will not try the veteran's motivation unnecessarily. The first consists in analyzing the problems of customer contact, marketing, supply, and methods of business operation which the veteran will face, and planning for him to receive appropriate training in business methods as part of his total program. The second is to plan in advance

for the trainee to begin the production of goods or services for sale as a regular part of his training program. Production should be increased as the program progresses so that the veteran is in full production or nearly so by the time the program is completed.

The VA vocational rehabilitation program, in the language of the law, has "the purpose of restoring employability, to the extent consistent with the degree of disablement, lost by virtue of a handicap due to service connected disability." Training for employability is understood to mean training which leads to gainful employment, as contrasted with training in independent living, important as that is in its own right. In our culture, work serves many purposes. It is not only productive of income, but it also serves to provide a way of life. For homebound veterans the significant point is that they are restored to a more normal life.

Introduction

This report is based upon VA field experience in working with disabled veterans so seriously handicapped as to require vocational rehabilitation training in their homes.[1] Its publication is designed to make available to vocational rehabilitation personnel in the Veterans Administration knowledge which workers in a number of VA offices have acquired in working with this group of seriously disabled veterans. The Veterans Administration also recognizes an obligation to share with other agencies in the rehabilitation field the experience which it has accumulated in this challenging area.

The impression is still widespread that persons who are too seriously disabled to be trained or employed outside their homes are precluded from making a contribution to the productive life of their communities or that their contributions are limited to industrial contract or handicraft work. Consequently, there is a need for wider dissemination of information regarding homebound individuals who have been rehabilitated into useful employment. It is hoped that the examples given in the following pages will illustrate what has and can be done in this respect, stimulate further development along the lines of the examples cited, encourage original thinking in the rehabilitation of other cases, and assist in the expansion of job opportunities for the homebound, both veterans and others.

Development of VA Practices

Early in the VA vocational rehabilitation program, the problem arose of training seriously disabled veterans whose limitations precluded regular travel or required resources which were not afforded by any available training facility. In some instances, although the veteran was able to travel to a limited extent, the available training facilities were excessively distant from his home, or they lacked especially adapted dormitories, toilet facilities, elevators, ramps, etc. For some disabled veterans, such as severe heart cases and epileptics whose seizures occurred without warning, the use of common carriers presented great hazards. In other instances, it was impossible to require veterans to travel to a training facility because of their inability to make social contacts for a variety of reasons, such as reaction-provoking facial conditions, speech incapacity, or an emotional disability.

[1] The VA provides vocational rehabilitation training under the provisions of chapter 31, title 38, United States Code (originally P.L. 16, 78th Cong., for veterans of World War II, and P.L. 894, 81st Cong., for veterans of the Korean conflict). Chapter 31 was amended by Public Law 87–815 to include disabled veterans of peacetime service.

There were two alternatives. Training could be held to be medically infeasible. This had been done by some agencies for the handicapped, and some VA regional offices originally followed this policy. The other alternative, which was to train the veteran in his home for employment he could pursue from his residence, was adopted early by most regional offices.

Neither the statutory basis of the vocational rehabilitation program nor the diversity in the environment of homebound veterans throughout the country suggested that the Veterans Administration could undertake to carry on contracting or marketing functions on a continuing basis for such veterans after they had completed training. The general philosophy of the vocational rehabilitation program was that the training provided to handicapped veterans should enable them, so far as possible, to exercise the same initiative in engaging in self-employment as is possible for the nondisabled. For these reasons, in its work with the homebound the VA emphasized training in trades and professions, together with instruction in small business operations as needed, rather than developing a program of industrial contract homework or extensive handicraft production.

As the range of disabilities and circumstances necessitating home training became apparent, various regional offices also learned that numerous veterans, who needed vocational rehabilitation which could be provided only in their homes, failed to apply for it or to pursue their applications. The sudden occurrence of permanent and serious physical disability frequently results in apathy, resignation to a role of dependency, and loss of the individual's belief and confidence in himself as a person capable of self-directed endeavor toward a goal. The receipt of monetary compensation for total disability, especially with veterans residing in low-income areas, may also complicate their readjustment to a productive role.

An essential service for such seriously disabled veterans consists in helping them to overcome lethargy and attitudes which result from disability and which may prevent vocational rehabilitation. The Veterans Administration has found it a useful technique to bring to their attention the fact that other equally handicapped veterans have achieved vocational rehabilitation. Accordingly, case-finding and motivational visits are currently emphasized.

A team approach has been developed in planning vocational rehabilitation training in the home, with major emphasis on the coordination of all the skills and services required in the individual case. Involved regularly in the team effort, in addition to the veteran himself, are the counselor, the training specialist,[2] the medical consultant and, as soon as the objective is

[2] For the information of readers other than VA personnel, it is noted that the counseling function is carried out by vocational counselors. The function of providing assistance and supervision while the veteran is in training is performed by counselors and vocational rehabilitation specialists who are also referred to as "training specialists" (formerly training officers). As compared with present practice, a much greater degree of functional specialization prevailed among vocational rehabilitation personnel during the earlier period of the program when the total caseload was very large.

selected, the instructor. The counselor helps the veteran to explore his physical, social, emotional, and vocational needs and to develop a vocational plan appropriate to those needs. In developing this plan, an understanding of the training arrangements potentially practicable in the veteran's home, the help which can be provided by members of the veteran's family, and the potential market for his goods or services in his community represent areas of information quite as significant as an understanding of his remaining capacities, background, and personal characteristics. It is, therefore, necessary to explore the former areas concurrently with the latter. When the vocational rehabilitation specialist carries out the survey of the veteran's home and community, it is essential that he share his findings in every relevant respect with other members of the team, so that the veteran may make his decisions with an integrated understanding of the bearing which all factors, including those which relate to his own traits and those which derive from his environmental situation, have upon his choice of occupation. Since the medical implications of the proposed training objective are carefully considered with the medical consultant, the basic plan arrived at is a team product. The rehabilitation team is enlarged as necessary through the inclusion of medical specialists, a social service worker, representatives of service or community organizations, or other persons who may assist in meeting the needs in the individual case.

For the vocational rehabilitation of the veteran in his home, it is frequently found that the most important addition to the basic team is made at the point when a qualified instructor is found. The vocational rehabilitation specialist has at least a general knowledge of the special equipment which will need to be provided. He knows the provisions to which the training program should conform, and from his survey of the community he will have developed information with regard to the steps required to develop a market for the veteran's goods or services. However, a qualified instructor is able to make many detailed and valuable suggestions with regard to all of these matters. His teaching ability, specific vocational knowledge and community contacts, his leadership, example, and inspiration are crucial to the veteran's success in his training plan. Patience and a sense of humor are also valuable assets for one who is to work with the seriously disabled.

This does not minimize the role of the vocational rehabilitation specialist, who is responsible for determining that the instructor's qualifications are adequate and that his performance is competent, who must see that the various stages of the training program are appropriately synchronized, and who must call upon other members of the team for special services or initiate modification of the program when circumstances require either action. Finally, the vocational rehabilitation specialist is responsible for following the veteran's progress during the initial period after he is declared rehabilitated, and for extending such assistance as may be needed to insure that completion of the training program actually results in productive work.

The diversity of needs and of adaptations required in various cases is very considerable. Those who have worked successfully in this field agree that it demands dedication and persistence, a capacity for original solutions to novel problems, and a broad conceptualization of vocational training in the home as a basis for creative rehabilitation.

Source of Case Materials

The case materials used in this study were drawn from over 200 brief case histories which were received from all regional offices. Each regional office was asked to select several cases "illustrative of productive vocational rehabilitation, suggestive of effective practices for rehabilitation workers, and generally useful for teaching and staff development purposes." Offices were asked to describe the veteran's employment and adjustment in cases of successful employment, and for those veterans who were not employed to say why the plan miscarried and what could be learned from the case as to safeguards or danger signs which would be applicable in other instances. In addition, some offices commented topically on their experience. The cases obtained do not constitute a random or representative sampling of all veterans trained in their homes, but it is believed that they are indicative of the range of experience of VA offices with this type of training.

Excerpts from case reports which are cited in the following pages are identified in the VA Central Office by the code number of the regional office which furnished the report. Inquiries for additional information on any case may be addressed to Central Office of the Veterans Administration. This method protects the anonymity of the veteran.

The present publication is the fifth in a series, each of which reports experience in working with a different category of rehabilitation problems. Previous publications in this series include VA Pamphlet 7–10, *Occupations of Totally Blinded Veterans of World War II and Korea;* VA Pamphlet 7–12, *Occupations of Paraplegic Veterans of World War II and Korea;* VA Pamphlet 22–6, *Occupations of Epileptic Veterans of World War II and Korean Conflict;* and VA Pamphlet 22–9, *They Return to Work,* which is a study of the employment adjustment of veterans with psychiatric disabilities.

Preliminary Considerations

1. IDENTIFICATION OF VETERANS REQUIRING TRAINING IN THEIR HOMES

There is general agreement on the importance of involving a severely disabled person in planning for vocational rehabilitation as early as practicable following the onset of his disability. To assist veterans in such planning on a realistic and well-informed basis as soon as the progress of their treatment would permit, vocational counseling was made available in VA hospitals by detailing counselors from VA regional offices, beginning as early as 1944. After World War II and during and following the Korean conflict, vocational counseling also was made available by regional office counselors, on an itinerant basis, for servicemen in Army and Navy hospitals who were about to be discharged from the service.

The VA Department of Medicine and Surgery recognized the therapeutic value of providing counseling to assist patients in their vocational planning. In order to make counseling available to hospitalized veterans regardless of whether they were eligible for benefits under laws administered as part of the VR&E program, it began to provide such services in VA hospitals in 1950. During the next several years, counseling services continued to be provided in many instances from nearby regional offices in those hospitals which had not yet established counseling positions. Since the beginning of 1952, veterans receiving vocational counseling in VA hospitals have been counseled by psychologists employed by the hospitals. Designated regional office counselors visit VA hospitals periodically to determine need for vocational rehabilitation under the provisions of chapter 31, title 38, United States Code, to consult as to the appropriateness for VR&E purposes of employment objectives which are proposed, and to bring cases requiring an extension of training time to the attention of the regional office vocational rehabilitation board. With vocational rehabilitation specialists, they provide information as to the availability of training facilities and make arrangements necessary to expedite the early induction into training of veterans upon release from the hospital.

Need for Case-Finding Program

The report of the Bradley Commission [1] in 1956 pointed out that only 41 percent of veterans with disabilities rated at 100 percent had taken advantage of educational and training benefits, whereas slightly over half of those with lower ratings had taken such training. The recommendations of the Commission for closer coordination of rehabilitation activities, and for veterans who are placed on the compensation rolls to receive counseling regarding rehabilitation services which are available to them, pointed the way for more intensive work with new applicants.

The earlier provisions for notifying veterans of the availability of VR&E benefits had conformed to a policy of avoiding anything which might be construed as "soliciting business." However, these procedures were changed when it became apparent that many of the most seriously disabled veterans were not receiving vocational rehabilitation training. According to present VA procedures, when an award of compensation has been made for a service-connected disability and the veteran has been notified, a copy of the rating sheet is referred to the VR&E activity. Following determination that the veteran has basic eligibility for vocational rehabilitation under chapter 31, title 38, United States Code, the veteran is offered an appointment for counseling.

The period of availability of vocational rehabilitation benefits for disabled veterans is limited by law. Although there is provision for extension of the time limits for veterans whose eligibility was established late or whose physical or mental condition made training medically infeasible during the original period of availability of this benefit, such extension is itself time limited.[2] Many seriously disabled World War II veterans lost the opportunity for training through failure to apply. This fact pointed up the need for identifying disabled veterans of that war with continuing entitlement, and for further contact with seriously disabled veterans of the Korean conflict who had not applied for training or who had discontinued training without completing it.

Carrying out the intent of the Commission recommendations for seriously disabled veterans who had established service connection earlier but who

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[1] President's Commission on Veterans' Pensions. *Veterans' Benefits in the United States—A Report to the President: Findings and Recommendations.* April 1956, U.S. Government Printing Office, Washington, D.C., p. 190.

[2] The original termination date for World War II veterans was July 25, 1956. This was extended by Public Law 610, 83d Cong., to July 25, 1960, for the veterans specified above. A similar 4-year extension was provided for veterans of the Korean conflict in the act which codified laws administered by the VA under title 38, United States Code. More recent legislation has provided a further extension to July 25, 1965, for World War II veterans who were prevented from training under earlier authorization (P.L. 86–721), and an extension to June 30, 1975, for blinded veterans (P.L. 87–591).

had not applied for vocational rehabilitation required the development of a case-finding program. Since it is not possible to determine whether a disabled veteran will require training in his home without intensive study of the case, identification of those requiring such training must be approached as part of the broader problem of identifying and motivating the seriously disabled.

Why Homebound Veterans Delay in Applying for Training

An interest in the how and what of vocational rehabilitation together with a renewed capacity to invest an interest outside of himself may mark the end of a severely disabled veteran's preoccupation with his loss and lead directly into specific planning while he is still hospitalized. Lacking this, the veteran may be discharged from the hospital initially, following physical convalescence, but develop plans with the assistance of a hospital counselor if it is found that further hospitalization is required. In a number of the case excerpts cited, the reader will note reference to occupational interests developed during hospitalization.

However many veterans who will require training in their homes do not avail themselves of counseling services while still hospitalized because they are not ready for vocational planning by the time improvement in their physical condition has progressed far enough for them to be discharged. Amputees, paraplegics, and other very seriously disabled persons experience a profound emotional reaction following the loss of members or functions.[3] It is very difficult to elicit an interest in planning for the future while the individual is despondent, feels that he is "finished," and is exclusively preoccupied with his loss. The planning of hospitalized veterans who will require training in their homes is further complicated by a lack of detailed information regarding home and community circumstances which it is essential to consider in developing any realistic plan.

There are a number of reasons why homebound veterans who have not initiated counseling while still hospitalized delay or fail to apply for such training after they have returned home. In many instances this is basically due to the limited range of their contacts and derives from the fact of their being homebound. They do not have information about VR&E benefits or about what other similarly disabled veterans have been able to do in overcoming their handicaps. They may be fearful that their disability compensation will be cut or discontinued if they train for employment. In some instances when the amount of compensation which they receive for their disability takes care of their financial needs they have become satisfied with their way of life and do not wish it to be disturbed.

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[3] See, for example: "Amputee Needs, Frustrations, and Behavior," by Sidney Fishman in *Rehabilitation Literature,* November 1959, XX, 11, 322–329.

The stereotype of the severely disabled person as a helpless individual, perpetually consigned to dependency, is still widespread in popular thinking. It is not surprising that such point of view, if it is taken for granted by the family, should be reflected in the attitude of the veteran. After a time, the very fear of having false hopes aroused serves to crystallize further the attitudes which they and he have assumed. As with nonveterans, the members of a veteran's family may go beyond the point of providing needed help and care and become overly protective, with resultant discouragement of efforts on his part to establish a reasonable independence.

If a veteran has been discharged from the hospital initially, following his physical convalescence, without beginning to plan for his future, he may develop habits of thought which are very difficult to overcome. Idle too long, he becomes adjusted to doing nothing and to being dependent. Training requires the capacity to change psychologically, and this is threatening for some individuals who are rigid and habitually resist change. The defensiveness felt by some very seriously disabled veterans is well set forth in the following excerpt from an account which was written by one such veteran after he had completed training as a writer. (This veteran's statement is quoted in full as No. 6 in appendix A.)

> I am going to start with that day in 1956 when a man came to see me, a man from the Veterans Administration. . . . Well, I knew how to shut him up right off the bat; so I let him have it with both barrels. "What in the hell can I do? I lie in this bed 21 hours a day, and if someone puts my clothes on me, I sit in a wheel-chair for 3 hours. I watch television and I count the cars that go up and down the road out there. I thought about asking the State for a job doing that, but it seems that the position has already been filled by a counting meter. That leaves watching television. You know anybody who wants to pay me to do that?"
>
> "No," he said, "I don't know anyone who will pay you to do that, but there are other things you can do. Let's talk about what you would like to do."
>
> Well, I didn't have anything else to do, so we talked a while. . . .

There are numerous instances in which veterans have been rehabilitated into useful employment, with an accompanying change in their outlook upon the world, despite initial attitudes similar to those expressed in the above quotation. This is a basic justification for concluding that a case-finding program is necessary. As is suggested by the following excerpt, an active case-finding program will also have the result of providing information, counseling, and the opportunity for vocational rehabilitation to veterans at the time when they are most receptive and most need such help.

> This veteran speaks of his despondency at the time of his paralysis as though it had been only a short period. It must have been serious, since he said it was his fear of losing his mind that drove him to take a correspondence course. This man actually has a lot of native ability, but it is doubtful if he could ever have found expression had vocational training not been made

available to him. "An earlier contact by VA personnel would have saved me some anxious hours." This was his answer to the question, "How could VR&E have helped you more?"

There is an accumulating body of evidence that indicates that the vocational rehabilitation of disabled persons is justified on a purely economic basis, in terms of their contribution to the gross national product and through the increment of income and other taxes to various governmental jurisdictions. In terms of the American philosophy of equal opportunity for all kinds and conditions of men, there can be no question of the value of a program which for many hundreds of veterans has brought release from years of dependence, frustration, and apathy, and has made it possible for them again to become normally productive individuals with a self-determining and contributing role in their communities.

Methods of Case Identification Developed in Regional Offices

In addition to veterans who are identified by the medical consultant as requiring training in their homes, in the course of reviewing medical records of applicants for vocational rehabilitation, veterans requiring such training are referred by other medical personnel. The latter include staff members of the Prosthetic and Sensory Aids Unit, the mental hygiene clinic, psychiatric and other special examiners, and social workers. Such veterans are also referred by VA contact representatives and by members of the loan guaranty staff.

Veterans' service organizations are a source of referrals. Their service officers and members are able to encourage a fellow veteran to interest himself in vocational rehabilitation by pointing out that he is apt to live longer, that he will be happier and healthier, and that time will go by much faster if he is employed. They can explain what having a job or home employment can mean in terms of more contacts, companionship, and friends, increased income, independence, and self-respect, and an enhanced regard by family and members of the community.

Referrals are received from State vocational rehabilitation agencies, and other health and welfare agencies, both public and privately supported. Contact with other agencies is usually maintained through the VR&E member of a State or local interagency coordinating committee.[4]

The most successful method developed by VA field offices in locating seriously disabled veterans who had not been rehabilitated vocationally was

[4] On June 1, 1960, the VA Deputy Administrator wrote to the Managers of all VA regional offices and hospitals, enclosing a statement recommending the establishment of local interagency committees on vocational rehabilitation. This statement was released simultaneously to their respective regional offices and field elements by the Veterans Administration, by the Office of Vocational Rehabilitation, and by the Bureau of Employment Security for the U.S. Employment Service and the Veterans Employment Service.

based on the use of existing punchcard records. Lists were prepared of veterans awarded assistance in obtaining specially adapted housing, veterans in need of personal attendants, veterans awarded 100 percent disability compensation, veterans with specific types of disabilities, and veterans who had applied for vocational rehabilitation but had not reported for scheduled appointments.

After compilation of lists, the names of veterans who already had been rehabilitated or who were in training at the time of review were eliminated. Contacts with veterans who had not applied for training or who had not completed training and had not recently been contacted, were planned by counselors and rehabilitation specialists during their regular travel to the various locations in their areas.

The methods described above were employed by many offices to identify veterans with paraplegia, convulsive disorders, psychiatric handicaps, locomotor difficulties, and other serious disabilities who, as a result of rehabilitation, were helped to achieve a respected place for themselves as gainful workers. Beginning in 1960, as a result of their experience, all regional offices were required to use punched-card records in developing lists of seriously disabled veterans who had not completed vocational rehabilitation training.

After appropriate review of individual cases, veterans were contacted personally or by letter. The following groups were surveyed as a result of specific directives: Korean-conflict veterans with 100 percent disability ratings for all disabilities and with other high percentage ratings for psychiatric conditions (Technical Bulletin 22–7); Korean veterans who had begun training but discontinued before completion (Emergency Interim Issue 22–33); and World War II veterans with high disability ratings who had not made use of education and training benefits and might be eligible under the new law governing extension of training time (Instruction 1, P.L. 86–721).

Findings of a study of seriously disabled Korean-conflict veterans, who were entered into training as a result of the special emphasis given this program by TB 22–7 in March 1960, showed that by February 28, 1962, more than a thousand veterans with disability compensation ratings of 100 percent had been entered into training. Of these veterans, 184 had already completed their training; 448 were still in training; for 160, training was suspended temporarily with the possibility of being resumed; and only 214 had dropped out before completion.

Only a small proportion of these veterans were homebound, but other evidence indicates that the methods employed in contacting seriously disabled veterans have been effective in identifying an increasing number of veterans requiring training in their homes. For several years the number of the latter declined with the total of veterans in vocational rehabilitation training, the proportion varying closely around 0.3 percent of the total.

Since 1956 both the number and proportion of veterans training in their homes have risen, as indicated in the following table:

Veterans Reported in Training in Their Homes (Apr. 30, 1957–60 and 1963; Mar. 31, 1961–62)

Year	Number	Percent of all vocational rehabilitation trainees
1957	83	0.45
1958	101	.67
1959	121	.96
1960	139	1.52
1961	102	1.60
1962	177	3.34
1963	153	3.18

2. CONDITIONS WHICH REQUIRE TRAINING IN THE HOME

Whether training in the home is required for a seriously disabled veteran must be decided in each case individually upon a consideration of all relevant information and with the aid of medical advice. The need for such training arrangements cannot be inferred from the rated disability or diagnostic label alone. The relation of the latter to the former is complex and can best be understood through consideration of a sampling of cases in which training in the home has been found necessary.

The occurrence of principal disabilities among the 206 cases reported in this study is summarized below from the tabulation in appendix B.

(a) Fifty-five percent of the veterans trained in their homes, in the sample tabulated, are paraplegics.

(b) A fifth of the distribution is accounted for by the following conditions: Arthritis, blindness, and multiple or disseminated sclerosis.

(c) The next most frequent conditions—quadriplegia, amputations, cardiac conditions, epilepsy, tuberculosis, encephalitis, and poliomyelitis—constitute an additional 15 percent.

(d) The remaining 10 percent of cases in the sampling include a variety of conditions with only one instance of each.

The various categories mentioned above include medical conditions in which there is loss—or loss of use of—extremities, loss of bladder and bowel control, loss of sensory functions, or markedly reduced work tolerance. However, it would not be correct to infer that all veterans with these types of functional losses necessarily required training in the home. In the majority of cases with these limitations, such training is not required. Training in the home is required when the effects of such limitations are unusually severe, when there is no appropriate training facility available and it is impossible for the veteran to train away from home because of

his disability, or when available training facilities lack the special adjustments or accommodations which are required because of the limiting effects of the veteran's disability including limited work tolerance.

Examples of Very Severe Disability Limitations

A number of factors taken together sometimes indicate a need for training in the home; or any one of several coexisting conditions may be sufficient to make this necessary. As will be noted, some of the examples cited below do not lend themselves to a clear-cut classification.

In some instances, even if it were possible to arrange travel, the disabling effects of the veteran's condition are such as to require special arrangements which no training establishment can be expected to provide and which cannot be found outside the veteran's home or a hospital. This situation is illustrated in the case record excerpted below:

> The veteran is 38 years old and is totally disabled from rheumatoid arthritis, multiple, very severe, and spondylolisthesis, L–5 and S–1. He is confined to a motorized wheelchair, and is moved from the chair to bed, bath, etc., by the use of a hydraulic lift. . . . Following discontinuance of teacher training, the veteran's revaluation counseling was done in his home because he was not physically able to travel to the regional office. It was readily apparent that any training provided for him would have to be given in his home because of his inability to move about other than in his motorized wheelchair and of his inability to travel to and from any training facility.

The principal reason for providing training in the home for many veterans is their inability to travel at all or to travel more than very short distances. This may be because of the effects of fatigue, because of the necessity to avoid exposure to inclement weather, or because of inability to perform the actions which are required in travel. A few instances are known of veterans whose epileptic seizures occur without aura and who would be capable of training under some environmental conditions, but who cannot travel in a metropolitan area where they would have to rely upon subways and encounter heavy traffic and where the danger of injury is great.

The excerpt quoted below illustrates the need for training in the home as a result of limited ability to travel. The veteran's disability is a spinal cord condition, with paralysis of the legs and lower part of the body, aggravated by inability to use his right crutch safely for climbing and descending stairs because of weakness of the right brachial plexus.

> He was contacted at his home but desired to take counseling at the regional office. This was scheduled at his request. He insisted that he could get about enough to visit the regional office for counseling service. The conclusion that homebound training was necessary came only after several attempts were made by the veteran to reach willing employers for interviews.

A frequent reason for determining that training must be provided in the home is the sharply limited work tolerance of the veteran. A related condition is a need for the veteran to be able to modify his schedule at will so as to change from one activity to another or obtain rest as needed.

> The disability is designated as absence acquired, both buttocks (injury Muscle Group XVII, and P.O. Ventral Hernia). . . . The disability precluded unrelieved sitting or standing, and for this reason it was felt that he would have a difficult adjustment to a classroom situation. The medical consultant considered it medically advisable for the veteran to train in the home. . . .

Progressive nature of the disabling condition, which may be a reason for arranging for training in the home, is mentioned in some reports of veterans with arthritic disability. The history in such cases sometimes reports earlier attempts to work or train outside the home which proved to be infeasible.

> The veteran's disability is arthritis, sacroliac joints and both shoulders, Marie-Strumpell type. . . . His employment experience prior to service was working as a clerk in a meat market, waiting on customers and also some minor meat cutting experience. By 1951 the veteran's condition had became so bad that he could not take advantage of formal school opportunities, and it was concluded that he would have to be trained in the home by an independent instructor.

There are a few instances of veterans who were unable to bring themselves to meet the public because of the disfiguring nature of the disability, because of blindness, or because of a psychiatric factor.

> The veteran's disability is described as squamous cell carcinoma, floor of mouth and tongue, postoperative. In the treatment of this cancerous condition, surgery was performed 17 times. Residuals of the surgery include removal of approximately half of the veteran's tongue, a portion of both jawbones and chin, tissue of the floor of the mouth and several teeth. The results have caused difficulty in opening his mouth, speaking, masticating food, and swallowing. . . . From a disability standpoint, the veteran's speech could only be understood with difficulty, and when he attempted to talk, saliva exuded from his mouth. He carried several gauze mops on his person to help control this situation. He subsisted on a special soft diet prepared by his wife. The disfigurement of his lower face was somewhat repulsive.

The rehabilitation history of this veteran, who had been trained in law prior to the time he incurred his disability, is much more complex than can be indicated in a brief excerpt, since severe adjustment problems were involved. His subsequent success in working through the latter, as well as in dealing with the disfiguring aspects of his disability, are indicated later in the record, as follows:

> His speech has improved considerably. . . . He has grown a Van Dyke type of beard which partially covers his facial disfigurement and gives him a sort of distinguished appearance. He is now fully accepted by the members of the legal profession and citizens of his community.

Disability Limitations in Relation to Characteristics of Training Facilities

The examples given above are instances in which disability limitations preclude training outside the home quite directly and unequivocally. The veteran's condition requires care or facilities which no regular training establishment could be expected to provide; the veteran has little or no

travel ability; any plan for him to train away from home is contraindicated because of very limited work tolerance, need for rest periods to be taken at will, or inability to meet persons outside the family; or, although not currently limited in any of these ways, medical opinion indicates that he will become so because of the progressive nature of his condition.

Other serious disability limitations must be considered in relation to the characteristics of available training facilities. For these conditions, it is necessary to evaluate the need for a program of training in the home in relation to the question whether training establishments available for the occupation under consideration can provide the facilities or adjustments required by the disability limitations existing in the individual case.

Many persons who are so limited in ambulation as to require regular use of a wheelchair are able nevertheless to train outside their homes. Implementation of standards for street-level entrances to schools and other public buildings will increase the number who will be able to do so in the future.[5] However, at the present time many training institutions are housed in buildings without ramps or elevators whose physical arrangements present an effective barrier to their use by veterans who are unable to climb stairs.

> **The veteran sustained gunshot wounds which resulted in transverse myelitis with loss of use of lower extremities, loss of bladder control, kidney injury, loss of bowel control and incomplete paralysis of the ulnar nerve and the median nerve of the left upper arm. Counseling was started in the regional office but was concluded in the veteran's home. A survey was made of possible training facilities in the area of his home which might offer access to a wheelchair trainee and none could be found. . . . The objective selected was Radio Repairman (Bench), 5–83.411.**

Buildings occupied by training establishments may have street-level entrances and elevators, but be unsuitable in other respects. The physical layout of classrooms or the lack of appropriate toilet facilities may make it impossible for the veteran with serious disability limitations to attend. In some instances where it would otherwise be practical for a veteran to train in a resident school, the lack of appropriate dormitory arrangements may be the deterring factor.

> **The veteran's service-connected disability is paraplegia, with paralysis of bladder, paralysis of bowel, and decubitus ulcers ischial and sacral. . . . He was approved for training as a Radio Repairman, 5–83.411. At this time there was only one institution in his community that offered training in radio repair. This institution was found to be inadequate, due to the fact that the school was crowded and the classrooms and laboratories were not suitable to accommodate a wheelchair. The toilet facilities as well as the parking facilities were found to be unsuitable for such an individual. Numerous radio shops were contacted by the training officer, but objections to training the veteran were voiced by many, some due to his disability and**

[5] See "American Standard Specifications for Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped," *Congressional Record*, Feb. 6, 1962, vol. 108, No. 18, pp. A–919–922.

> **others because of his lack of institutional training. It was then determined that the only practicable way to rehabilitate him was by training in the home.**

Schools whose physical facilities are adequate to meet the needs of the physically disabled may have fixed schedules or admission requirements, which cannot be met by the veteran in question. In rare instances school officials are unwilling to accept a trainee for other reasons:

> **This 40-year-old man, who was blinded in combat, was a high school graduate. . . . Counseling was in the regional office and was conducted over a period of several months. Since available schools refused to accept this veteran for training because of his blindness, it was determined training should be in the home. From the start he was interested only in cabinet work, which came to be selected as his objective.**

A further problem is presented in the case of a veteran with serious disability limitations living in a community where there is no training facility for the occupation of his choice. Whether to use a training establishment at some distance from the veteran's place of residence or to provide a program of training in his home requires evaluation of his ability to travel and of the effects of the possible alternative arrangements upon his physical condition. This is a decision that can be made only with the help of medical advice.

> **The veteran's service-connected disability is diagnosed as traumatic injury to conus medullaris, residuals of skull fracture, and paralysis of both lower extremities and lower trunk. . . . He trained at the school until January, at which time the institution discontinued its radio course. There being no other training facility in the area, the possibility of his leaving and going to another area to continue training was considered by this office. The Medical Division considered it entirely inappropriate and infeasible to require him to leave his home area where he had purchased a specially adapted paraplegic home. It was pointed out that he had many urologic difficulties in addition to the paralysis of the lower extremities which required special care and special arrangements in the home.**

The fact that there may be no training facility for a particular occupation within reasonable commuting distance does not necessarily preclude consideration of schools elsewhere. Some residential schools have special arrangements to assist students who are dependent upon use of a wheelchair or are handicapped in other respects. In considering residential schools it is, of course, necessary to consider acceptability and suitability of living arrangements as well as of instructional facilities.

Disability Limitations the Basic Consideration

In the following instance, the decision to provide training for the veteran in his home was based upon his limited work tolerance and inability to travel regularly. The fact that he already had a workshop and woodworking equipment indicated an interest which was significant for the veteran's choice of objective, rather than being the determining factor in deciding that he needed training in his home.

> The veteran is 35 years old with myelitis, transverse, level D6, with incontinence of bladder and bowel, and dislocation of left hip. He is confined to a wheelchair and lives in a specially adapted home for persons confined to a wheelchair. . . . In the counseling at the regional office, certain facts pointed to the need for training in the home. Primarily, his disability precluded travel to and from a place of training, and since he was subject to decubitus ulcers, he was placed on a permanent reduced tolerance of 4 hours per day, 5 days per week. The veteran owned a great deal of shop equipment for woodworking and had a large workshop in the basement of his home. He had used this equipment as a hobby. The combined objective of Wood Turner, 4–33.363, and Toymaker, 5–13.011, was selected. During collaboration the training officer examined the veteran's workshop and equipment, and surveyed the area to determine the potential for marketing the services and products to be offered by the veteran. It was found that these factors were suitable for training purposes. The veteran's workshop is in his basement in a light airy room about 20′ x 20′. The machine tools are along the wall with a large workbench in the center of the room. Electric power outlets are located at suitable points in the room. He owned a radial saw, band saw, lathe, sanding equipment, drill press, paint sprayer and jointer at the time of the counseling. No special adaptation was needed for suitable operation of the equipment.

On-farm training cases included in this study are those of veterans whose disability limitations would require training in the home regardless of whether farm training or another kind of vocational objective were chosen. In most cases of this type and especially with general farming, the training of veterans with severe disabilities emphasizes the management aspects of farmwork, since the veteran is normally dependent upon hired help or family members for getting the physical work done.

3. COORDINATION OF SKILLS AND SERVICES

Helping a homebound veteran to develop and carry out a vocational rehabilitation plan requires the cooperative effort of various specialists. All of the latter have individual responsibilities based upon their particular skills and understanding, but the timeliness and effectiveness with which they coordinate their activities are of paramount importance. The team approach is effective only when members fulfill their individual responsibilities, then freely share their ideas with the group, including the veteran himself.

The concept of team activity implies four related responsibilities for each team worker: (1) to initiate the type of service corresponding to his individual responsibility in accordance with the needs of the particular veteran; (2) to involve other members of the team by keeping them informed of the information he has received, his findings and recommendations, and the further information he needs in order to carry out his individual responsibility; (3) to view these findings and recommendations in relation to those of other members of the team and in terms of the significance of all data from the point of view of the general goal of employability of the veteran;

and (4) to coordinate vocational rehabilitation efforts through one member who serves as liaison with the veteran at any one time.

The working relationships of team members and the sequence of their efforts depend upon the needs of the individual veteran, but are also influenced by administrative arrangements with respect to relative staffing, travel schedules, and the like.

Examples cited below to give concrete meaning to the subject of coordination anticipate to some extent the later detailed topical treatment of special aspects of work with the homebound. This is necessary for the substance and significance of flexible coordination in the employment of appropriate skills and services to be described in a manner to make it clear that the words "coordination" and "teamwork" are something more than shibboleths.

Coordination at Time of Initial Contact With the Veteran

Many regional offices have commented on the importance of the team approach in the vocational rehabilitation of veterans in their homes. The following statement by one such office is representative:

> **It is important, if at all feasible, to have the counseling psychologist and vocational rehabilitation specialist work closely as a team from the earliest phase of training. In our experience this has been proven to be invaluable in coordinating and creating any effective rehabilitation outcome. The continuity attained eliminates any loss of time in the transition from the counseling stages to the actual entrance into training. During the former period the vocational rehabilitation specialist makes a thorough survey of the area to determine the acceptance and support of business groups for the objectives under consideration. The final objective selected then has reasonable assurance of success as a potential business in the community. This is a key step in the whole program.**

What happens at the time of initial contacts with the veteran and differences with respect to the sequence of such contracts illustrate the point that the coordination of team activities must be flexible enough to accommodate not only to the varying needs of individual veterans but to achieve the necessary result regardless of whether the veteran is contacted first by the counselor, by the training specialist, or by both together on the same visit.

In the first example cited below, training in the home was required because of the special hygienic problems and dietary needs of the veteran. However, he was not incapable of traveling and came to the regional office where counseling preceded survey of his home and community by the training specialist. The veteran's disability was rated as 100 percent for ulcerative colitis with repeated surgery, which included permanent ileostomy and prostate resection, with urethritis.

> **Counseling was completed in the regional office and work tolerance of 5 hours per day was recommended. This work tolerance was maintained throughout the veteran's period of training. The surgery resulted in constant fecal drainage, necessitating wearing a protective device, and resulted in troublesome hygienic problems. In addition, it was necessary for the veteran to maintain a special diet, and he was forced to take nourishment**

several times each day. After consultations with the medical consultant and the training officer, it was decided that training in the home would be the only feasible approach in this instance, and this decision was fully acceptable to the veteran.

In the consideration of training objectives, two factors seemed to require primary emphasis. It was deemed advisable to select an objective that would permit the veteran to work apart from other people insofar as possible because of his disability and problems of personal hygiene. . . . The objective Junior Accountant was chosen as it was of considerable interest to the veteran, and it was felt that training in this objective would enable him to carry on an accounting business within his home and perhaps, to a limited extent, permit him to undertake some employment outside his home on a part-time basis for small business concerns not requiring a full-time accountant.

The physical arrangements of this veteran's home presented no problem in this objective. However, the question of the possibility of obtaining accounts was crucial here and the training officer, through primary investigation, found a number of small firms that would be willing to cooperate after the veteran completed his training. After these initial contacts were made in this office, the counselor and the training officer visited the veteran in his home to develop more specific goals with reference to the proposed home training and the final arrangements were discussed jointly by the counselor, training officer and medical consultant.

In the following example, a survey of the veteran's community, following initiation of counseling in his home, developed information which indicated the practicability of training in a type of work in which the veteran became interested while hospitalized:

The veteran received counseling in his home. The Chief of the VA Hospital Paraplegic Service stated that it would be physically impossible for him to attend an ordinary institution for training. Training in the home with a permanent tolerance of 26 hours per week was recommended. The objective of Portrait Photographer was chosen. The veteran had developed a fixed and sustained interest in this work in the hospital during occupational therapy. He had also made a darkroom in his home. The special rehabilitation procedures training officer assigned to the veteran's area made a survey which showed that there was no photography studio in that area. The veteran was close to two schools and the neighborhood contacts indicated that a fertile field for this type of service could be developed. The veteran's home had separate quarters for his studio and a separate side entrance available from the front sidewalk.

The paragraph excerpted below from the report on the rehabilitation of another paraplegic veteran summarizes action which occurred following initial exploration of possible training objectives in counseling and determination that training in the home would be necessary.

Original contact with the veteran was made by a counselor who determined that training could be accomplished in the veteran's home. This was followed by a survey by the training officer which led to the conclusion that drafting skills could be satisfactorily utilized in the community. Both counselor and training officer collaborated closely during the counseling

sequence, the information obtained by one supplementing the data developed by the other.

When veterans with high disability ratings fail to respond to letters informing them of basic eligibility for vocational rehabilitation and offering a counseling appointment, arrangements are made to visit them and ascertain whether they should be provided counseling. Information is obtained, before scheduling a counseling session in the veteran's home, to indicate whether he is able to undertake counseling. On the basis of this provision, initial contacts with many veterans reported to be homebound have been made by training specialists while on training supervision trips in the neighborhoods where the homes of such veterans are located.

The following example illustrates typical procedures when the initial contact with the veteran is made by a vocational rehabilitation specialist:

> The veteran was first referred to VR&E through a contact officer. The training officer had a precounseling interview at the veteran's home September 9, 1947, at which time tentative arrangements were made for him to report to the regional office for counseling. The veteran's home had sufficient space for studying. Instruction could be given and work could be done in private. The training officer's contacts were coordinated with and reported to the Counseling Section. The home was surveyed for possible homebound training prior to the veteran's coming to the regional office. The training officer furnished the necessary data regarding the veteran's home environment and the physical arrangements in the home to the counselor. A counseling appointment was made at th same time the veteran was in this regional office vicinity for his prosthesis repair.

The following comments are from a report of experience by a regional office whose vocational rehabilitation specialists have been unusually active in seeking out and making exploratory contacts with homebound veterans

> When you begin to discuss the possibility of training, the veteran may immediately go on the defensive, stating his physical condition will not permit any type of training. At this point, the training specialist will explain that others having similar or worse disabilities have been successful in training when they, too, felt originally that the possibility of training was out of the question. This is the first step in motivation, and its effect is increased by showing pictures of other veterans and their accomplishments. This usually arouses interest which results in a long discussion of all aspects of counseling, training and rehabilitation. Such discussion always includes the wife, parents, or others who have the responsibility of caring for the veteran. If the training specialist is unable to get a signed application form for vocational rehabilitation training on this first visit, he will make subsequent contacts after the veteran and family have discussed the matter. Further discussion may be required to point out the advantages of training. When sufficient interest has been aroused for the veteran to sign the application form, arrangements will be made immediately for a vocational counselor to visit the home, usually accompanied by the training specialist.

In some instances misconceptions will have to be cleared up as to what is implied by vocational rehabilitation. If the veteran thinks that only limited types of training are offered, it will be necessary to point out the kinds of training that are available. It may be necessary also to explain how in-

struction is provided, kinds of adjustments that can be made in equipment, and provisions regarding duration of the course, fees, medical care and consultation, leave and supplies. The veteran and his family should understand that assistance will be provided in developing a market for his products, or in obtaining employment after he completes his training program.

Teamwork a Continuing Need: Further Instances of Coordination

Whether the first contact with a homebound veteran has been made by a counselor or a vocational rehabilitation specialist, the collaboration between the two of them thereafter should be more intensive and comprehensive than is required in the majority of less seriously disabled cases. Close collaboration is needed in order to determine the practicability of the principal job objectives which are being considered, since such objectives must be evaluated in relation to potential markets for products or services, availability of instructors, modifications of equipment to suit the limitations of the disability, and existence of adequate facilities in the home for training and eventual operation of an enterprise. It should be apparent from the examples given below and those which have already been quoted that what is required is the free and necessary exchange of information characteristic of people working together toward a common goal.

The following excerpt describes the collaboration which took place in the next stage of the last case cited above.

> Counseling was performed in his home with the training officer present for active collaboration. Complete exploration resulted in the selection of Accountant, General, Code No. 0–01.20, as the objective. The medical consultant of the VR&E Division stipulated that the veteran could not withstand the physical requirements of institutional or on-the-job training. In addition it was necessary to conduct training in an atmosphere involving minimum nervous tension and strain. The home provided a suitable, quiet atmosphere for study and instruction. The veteran's wife was in full accord with the vocational training.

In the next case the veteran's disability was avitaminosis, multiple, severe, manifested by peripheral polyneuritis, metabolic and endocrine dysfunction and cardiac dilation, analogous to myasthenia gravis.

> Counseling and training could only be accomplished in the veteran's home due to his inability to travel. Actually, at the time of counseling, the veteran had no use of his legs and had to be lifted from his bed to the wheelchair. The objective of Watch Repairman, 4–71.510, was selected. Before selecting the objective it was determined that the veteran had a well lighted, spacious work area plus a large glassed-in heated porch that was usable the year around as a work area. The training officer was present throughout the counseling process, determining, first, that an independent instructor could be located in the veteran's home area; second, that the veteran was well known and liked in his community of 5,000; and third, that only one other watch repair establishment existed in the area. The availability of markets for watch repairing was determined by the training officer through canvassing the town, talking with the veteran's neighbors and with business people.

Findings of the vocational rehabilitation specialist and counselor are discussed with the medical consultant to explore their medical implications, and questions as to whether the demands of the proposed objectives would exceed the capabilities of the veteran are checked with him. In accordance with the policy of the VA Department of Medicine and Surgery and the VA Department of Veterans Benefits, medical consultation in connection with counseling and prescribing training for vocational rehabilitation purposes is an essential element in planning for future occupational adjustment of handicapped veterans. Particularly in cases of seriously handicapped veterans, the medical opinion of physicians who are regularly engaged in clinical practice is of the greatest importance.

The head of the chest clinic usually serves as medical consultant for tuberculosis cases as does the psychiatrist of the mental hygiene clinic when there is a history of mental illness, the regular designated medical consultant serving for other cases. However, through him other medical specialists may be brought into any case as may be necessary for special reasons, for example, a psychiatrist in multiple sclerosis cases or an ophthalmologist or orthopedic surgeon in cases involving their specialties. The medical consultant reviews the existing medical records, obtains necessary information from other medical sources (for example, he may correspond with the veteran's private physician), and may make a supplemental medical examination himself if he deems it necessary. Participation of the medical consultant has been noted in a number of the examples previously cited, as well as being illustrated in those which are given below.

In the next example, the veteran's disability was arthritis, chronic, spinal (Marie-Strumpell type):

> Counseling was provided at the regional office and it was quickly resolved that homebound training would be necessary to comply with the medical consultant's recommendations. These included absolute minimum of travel, no exposure to inclement weather and an opportunity to recline and rest as need arose.

In this instance the medical consultant indicated the activities precluded by the veteran's physical condition, and vocational planning proceeded from that point. The vocational counselor, in collaboration with the training specialist, is responsible for pointing out the physical and other requirements of the occupation for which training is proposed. In the following passage from case No. 1 in appendix A, the differential responsibility for defining the positive capacities and limitations which depend upon the veteran's disability on the one hand, and for determining the requirements of occupations on the other, is brought out explicitly. The employment objective architectural draftsman was chosen by the veteran.

> From his knowledge of the veteran's condition, the medical consultant had first felt training was generally infeasible but agreed to consider a specific plan if it was highly suitable and could be arranged within a 4-hour daily work tolerance (two 2-hour periods). This highly restricting limitation, plus the veteran's poor tolerance for travel and his inability to leave

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the house in inclement weather, dictated home training by private instruction.

The discussion so far has referred to informal conferences and consultations among counselors, training specialists and medical personnel. Regularly scheduled meetings of the vocational rehabilitation board provide opportunity for more formally organized consultation and joint decision when the nature of the problem and the need for all team members to participate in key decisions require such procedure. To avoid duplication, the work of the vocational rehabilitation board will be considered further in connection with the topic of medical feasibility, rather than here, since most of the board's actions are concerned with cases in which general medical feasibility or infeasibility is an issue.

The Rehabilitation Team Includes Other Specialists and Organizational Representatives as Needed

The counselor, training specialist, and medical consultant have been referred to as constituting the basic vocational rehabilitation team. This is true in the sense that in every case these three functions must be represented. However, composition of the team changes at different stages and should be understood as including such additional specialists or representatives as are required to meet the needs of the individual veteran. The participation of psychiatrists, tuberculosis specialists, and orthopedists has already been mentioned. Psychiatric cases not only require the participation of a psychiatrist, but are frequently referred for an evaluation by a clinical psychologist of the VA mental hygiene clinic. A member of the social service staff serves regularly as a member of the vocational rehabilitation board. When there is a need for family members to explore their problems with regard to the veteran in order to provide him the most appropriate help in carrying out his rehabilitation plans, referral is made for social service casework assistance.

Various divisions of the regional office may be involved. Examples of referrals by contact and loan guaranty personnel have been cited. If a veteran has been determined legally not competent to handle his own funds, as with serious mental illness, any proposal for use of the veteran's funds in connection with a plan for vocational rehabilitation must be coordinated with the Chief Attorney's office. The Supply Officer who serves the regional office, and who is located usually at the nearest hospital, may be concerned in connection with the ordering of special equipment.

Staff members or representatives of agencies or organizations outside the VA contribute to the rehabilitation of veterans who are seriously enough disabled to require training in their homes. Included are State rehabilitation agencies, health organizations, and agencies concerned with special disabilities.

The Multiple Sclerosis Society is contributing materially in providing weekly physiotherapy in the home for a rocking-bed case.

This veteran received his counseling at a regional office, being transported from his home to the regional office by the Red Cross for that purpose.

Examples of assistance rendered by veterans' organizations, civic or business groups, public school officials, etc., will be noted later in the discussion of the survey of the community. The need for meshing the activities of such persons or organizations with other elements of a coordinated plan, as appropriate in the individual case, is self-evident.

Good public relations are an essential part of any successful vocational rehabilitation program. VR&E staff members address veterans' organizations, chambers of commerce, businessmen's associations, foreman-manager clubs, church and civic groups. The members of such organizations are interested in accomplishments of the VA program in their own State and in such items of information as the amount of money expended in the State, the number of veterans trained, their average income and average educational level before and after training, and the number of doctors, dentists, engineers, and members of other occupational groups who have received their training under laws administered by the VA. Speaking engagements provide opportunities for education of the community in the acceptance and employment of the mentally and emotionally handicapped, the severely physically disabled, and those having disfiguring disabilities.

The following comments are from a regional office which has been highly successful in working with homebound veterans:

> **Any effort toward success in a program of this nature must receive wholehearted support at all supervisory levels beginning with the Manager. . . . In the selection of our instructors we have been able to present our story to a number of individuals in the community. In addition to being a good public relations gesture, it has led to the selection of well-qualified individuals. . . . We believe it is profitable to make and maintain contracts, when the opportunity presents itself, with representatives of civic clubs, veterans' programs and other community leaders in developing markets for goods and services for veterans training in the home.**

Offices which have developed good public relations programs have observed that "nothing succeeds like success." Communities which have become aware of one or two outstanding cases of rehabilitation, especially of veterans who were previously thought to be helpless invalids, have been eager to help other disabled veterans by providing needed assistance.

Developing the Vocational Plan

4. READINESS FOR VOCATIONAL REHABILITATION

It is desirable that a severely disabled person should begin planning for vocational rehabilitation as soon as his interest can be engaged and as his convalescence will permit because he may come to accept dependency as a permanent role if such planning is too long delayed. Nevertheless, in the individual case, when readiness for this step is not correctly gaged, failure in a premature attempt may make it difficult for a veteran to interest himself in rehabilitation at a more favorable time.

Conclusions regarding the readiness of a particular veteran for vocational rehabilitation require a consideration of the following areas: (1) the possibility or practicability of vocational rehabilitation from the point of view of the medical factors; this is referred to as "medical feasibility"; (2) the general attitudinal readiness or motivation of the disabled person; and (3) his readiness for vocational rehabilitation in terms of a specific goal.

Medical Feasibility

Medical feasibility may be either general or specific. To say that training is not possible or feasible from a medical point of view may mean that the veteran's condition is such that no plan is possible or practicable and that the veteran cannot undertake vocational rehabilitation of any type at the time the determination is made (general infeasibility); or it may mean that, in general, the veteran's condition is such that he can undertake training but the specific type of work or training under consideration is not feasible because some of the activities involved would be impossible for him to carry out or his engaging in them would have an adverse effect upon his disability (specific infeasibility).

In the great majority of cases the medical consultant finds that vocational rehabilitation should be considered generally feasible from a medical point of view (i.e., item 4 on p. 1 of VA Form 21E–1902i is checked "Yes"—see fig. 1). When there is no reason for questioning the general medical feasibility of vocational rehabilitation for a particular veteran, the medical consultant indicates the activities, conditions, and situations in which the veteran has full, limited, or no capacity (see chart on p. 2, VA Form 21E–1902i, fig. 2). He either provides or arranges to obtain information regarding the veteran's work tolerance, the progressive character of the disability or any expected symptom changes, as appropriate, and such specific condi-

tions as it may be desirable to have in mind in planning with the veteran for his vocational rehabilitation (see items 11–17, p. 3, VA Form 21E–1902i, fig. 3). It is one of the purposes of counseling, of course, to help the disabled veteran evaluate possible objectives in relation to his remaining capacities, his limitations and relevant medical information. Questions regarding feasibility of training for specific objectives ordinarily will be anticipated on the basis of such information or will be explored through consultation with the medical consultant or other specialist.

COUNSELING RECORD
MEDICAL INFORMATION—RELATED FINDINGS

REGIONAL OFFICE

LAST NAME—FIRST NAME—MIDDLE INITIAL OF COUNSELEE	CLAIM NO	TYPE OF CASE (Check)	WW II	K.C.	P.T. Ch 35
	C—	NEW			
		REACTIVATION			
NAME AND ADDRESS OF PERSON HAVING POWER-OF-ATTORNEY		RECONSIDERATION			
		REVALUATION			
		OTHER (Specify)			

PART I

A. MEDICAL AND RELATED DATA OF RECORD, PRIOR TO COUNSELING

1. IS A COPY OF THE RATING SHEET ATTACHED?
☐ YES ☐ NO *NOTE: A copy should be attached in all veteran cases.*

2. DATE OF NEXT MEDICAL EXAMINATION, IF SCHEDULED

3. SUMMARY OF MEDICAL DATA, SOCIAL HISTORY, AND OTHER PERTINENT INFORMATION *(Continue on additional sheet, if necessary)*

B. MEDICAL CONSULTANT'S OPINION AND RECOMMENDATIONS *(Based on medical records summarized above)*

4. IS IT PROBABLE THAT VOCATIONAL REHABILITATION IS MEDICALLY FEASIBLE? *(This item need not be completed when veteran is hospitalized)*

☐ YES ☐ NO *(If your answer is "Yes," and you believe (a) that the medical information of record is adequate, (b) that little or no change in the veteran's capacities may be expected, and that, therefore, no medical examination is needed, make appropriate entries in the first column in the chart on page 2, to indicate those capacities which may be lost or limited by the disability, and which should be analyzed with particular care at time of counseling. Record any comments or recommendations at left of chart.)*

If Item 4 is Checked "Yes," Complete Either Item 5A or Item 5B

5A. DO YOU BELIEVE THAT MEDICAL EXAMINATION AT TIME OF COUNSELING IS NECESSARY?
☐ YES ☐ NO

5B. DO YOU BELIEVE THAT MEDICAL EXAMINATION IS DESIRABLE?
☐ YES ☐ NO

6 PHYSICIAN'S STATEMENT AS TO PURPOSE OF EXAMINATION, AND/OR OTHER COMMENTS

7A. DATE	7B SIGNATURE OF MEDICAL CONSULTANT	8A. DATE	8B SIGNATURE OF VA COUNSELOR

VA FORM MAY 1964 **21E–1902i** EXISTING STOCK OF VA FORM 22–1902i, SEP 1960, WILL BE USED. PAGE 1

FIGURE 1.—VA Form 21E–1902i (May 1964).

PART II

A. ANALYSIS OF MEDICAL AND RELATED DATA OBTAINED AT TIME OF COUNSELING

INSTRUCTIONS: Indicate, on chart at right, veteran's physical capacities. Enter an "O" *before* each Job Factor for which capacity is severely restricted or absent; an "X" if partial or limited. A blank space will indicate no limitation. In Job Demands column(s) consider each factor for which either "X" or "O" appears in capacities column(s); if factor is not a demand of objective (or job) enter "N" *after* factor in Demands column; if factor is a demand of objective (or job) enter "A" if, though partially limited in capacity, counselee is able to meet demand, or "U" if counselee is unable to meet the job demand.

9A. IF CAPACITIES APPRAISALS BY MEDICAL CONSULTANT AND BY COUNSELOR DIFFER ON ANY FACTORS, EXPLAIN WHY AND HOW RESOLVED. ALSO FOR ANY FACTOR CHECKED "A" IN DEMANDS COLUMN FOR OBJECTIVE CHOSEN, EXPLAIN HOW COUNSELEE CAN BE EXPECTED TO MEET THE DEMAND, DESPITE PARTIAL LIMITATION OF CAPACITY. THIRD COLUMN MARKED "CRITICAL DATE" IS FOR USE IN CASES INVOLVING EXTENSION UNDER VAR 10204(B) AND (C).

9B. IF MENTAL CAPACITIES WILL AFFECT EMPLOYABILITY OR CHOICE OF WORK, DESCRIBE LIMITATIONS HERE.

APPRAISAL OF

	By MED. CONSULT.	By COUNSELOR	CRITICAL DATE	JOB FACTOR	PROPOSED OBJECTIVES (From VA Form 21-1902b) 1	2	3	PRESENT OR PREVIOUS JOBS (1903a)		
ACTIVITIES				LIFTING						
				CARRYING						
				PUSHING						
				PULLING						
				CLIMBING						
				BALANCING						
				STOOPING						
				KNEELING						
				CROUCHING						
				CRAWLING						
				REACHING						
				HANDLING						
				FINGERING						
				FEELING						
				STANDING						
				WALKING						
				TREADING						
				SITTING						
				TURNING						
				TALKING						
				HEARING						
				SMELLING						
				NEAR VISION						
				FAR VISION						
				DEPTH PERCEPTION						
				COLOR VISION						
CONDITIONS				INSIDE						
				OUTSIDE						
				EXTREME COLD						
				EXTREME HEAT						
				SUDDEN TEMP. CHANGE						
				HUMID						
				WET						
				DRY						
				NOISE						
				VIBRATION						
				CLUTTERED FLOORS						
				SLIPPERY FLOORS						
				HIGH PLACES						
				MOVING OBJECTS						
				HAZARDOUS MACHINERY						
				DANGER OF BURNS						
				ELECTRICAL HAZARDS						
				EXPLOSIVES						
				FUMES						
				ODORS						
				TOXIC CONDITIONS						
				DUST						
				POOR VENTILATION						
				POOR LIGHTING						
SITUATIONS				VARIETY OF DUTIES						
				REPETITIVE WORK						
				FAST PACE OF WORK						
				FOLLOWING SPECIFIC INSTRS.						
				EXACTING PERFORMANCE						
				MEETING EMERGENCIES						
				COMPETITIVE WORK						
				WORKING ALONE						
				WORKING AROUND OTHERS						
				WORKING WITH OTHERS						

PAGE 2

FIGURE 2.—VA Form 21E–1902i (May 1964).

Questions regarding feasibility which become a matter of concern to the full membership of the rehabilitation team are likely to be questions pertaining to general feasibility rather than to specific feasibility. Under VA regulations final determination of general infeasibility is a function of the vocational rehabilitation board. While such determinations may be based primarily upon medical information provided by the medical consultant, or by a consulting specialist who may serve as a member of the board in its consideration of a particular case, the board's determination is presumed

PART II *(Continued)*

B. CONCLUSIONS AS TO MEDICAL FEASIBILITY OF VOCATIONAL REHABILITATION; MEDICAL RECOMMENDATIONS
(To be completed, as appropriate, by counselor or physician)

10 CONSIDERING ALL INFORMATION AVAILABLE AT TIME OF COUNSELING, INCLUDING THAT RECORDED IN PART II, A, IS A PROGRAM OF VOCATIONAL REHABILITATION MEDICALLY FEASIBLE AT THIS TIME? *(Check one)*

☐ YES ☐ NO ☐ DOUBTFUL

[1] *(If answer is "Yes," but veteran's work tolerance is limited, or if medical measures of any type are required before or during training, the medical specialist or other physician acting as medical consultant should complete applicable items under "Medical Recommendations," items 11 through 17, below. If possible recommendations that recorded should be made with reference to a specific type of employment objective and type of training.*

If answer is "No" or "Doubtful," counselor will complete Section C, with assistance, as appropriate, of medical consultant.)

MEDICAL RECOMMENDATIONS

DISTRIBUTION OF TIME ▶

11 MAXIMUM NUMBER OF DAYS PER WEEK *(Including necessary travel, instruction, preparation, and weekend assignments)* DAYS

MAXIMUM HOURS PER DAY FOR: *(Sum of items 12A, 12B, 12C and 12D should equal 24 hours)*

12A. TRAINING	12B. REST	12C. RECREATION	12D OTHER PURPOSES
HRS	HRS	HRS.	HRS

13 AMOUNT OF LATITUDE PER. MISSIBLE FOR OCCASIONAL OVERTIME, NIGHT WORK, ETC. HRS

14 EXPECTED DURATION OF LIMITED WORK TOLERANCE *(If "Temporary," complete items 15A, 15B and 16)*
☐ PERMANENT ☐ TEMPORARY

ULTIMATE WORK CAPACITY EXPECTED	
15A. PER DAY	15B PER WEEK
HRS	DAYS

16 TIME WITHIN WHICH ULTIMATE CAPACITY IS PROBABLY ATTAINABLE

	6 MONTHS		18 TO 24 MONTHS
	6 TO 12 MONTHS		OTHER *(Specify)*
	12 TO 18 MONTHS		

17. EXPLAIN OR QUALIFY ANY OF THE ABOVE ENTRIES; IDENTIFY TYPE OF OBJECTIVE AND MODE OF TRAINING UPON WHICH ANY RECOMMENDED WORK LIMITATIONS ARE BASED; AND INDICATE ANY EXAMINATIONS, TREATMENTS, PROSTHESES, OR OTHER MEDICAL MEASURES WHICH SHOULD BE TAKEN BEFORE OR DURING TRAINING.

18 DATE	19. SIGNATURE OF PHYSICIAN

C. CONSIDERATION OF CASE BY VOCATIONAL REHABILITATION BOARD

20 REASON FOR REFERRAL OF CASE TO BOARD *(Check appropriate boxes, and attach copy of referral memorandum)*

	A DETERMINATION AS TO GENERAL MEDICAL FEASIBILITY FOR VOCATIONAL REHABILITATION		C EXTENSION OF TRAINING UNDER VAR 10204 (B) OR (C)
	B ADVICE OR ASSISTANCE BY BOARD IN DEVELOPING A PROGRAM OF VOCATIONAL REHABILITATION		D. CONSIDERATION OF TRAINING PLANS FOR HANDICAPPED WAR ORPHANS

21 DETERMINATIONS AND RECOMMENDATIONS OF BOARD *(Check appropriate boxes and attach copy of memorandum covering basic reasons for the Board's determinations and recommendations. Subsequent Board actions, if any, may be shown on additional sheets).*

	A. A PROGRAM OF VOCATIONAL REHABILITATION IS CURRENTLY MEDICALLY FEASIBLE		C. EXTENSION APPD UNDER VAR 10204: ☐ (B)(1)(c); ☐ (B)(1)(d); ☐ (C)(1)(c); ☐ (C)(1)(d); ☐ (B)(2); ☐ (C)(2)
	B VOCATIONAL REHABILITATION IS CURRENTLY MEDICALLY INFEASIBLE AND IS EXPECTED TO REMAIN SO FOR A PERIOD AS FOLLOWS:		D SPECIAL RESTORATIVE TRAINING IS APPROVED
	TEMPORARY *(Less than 12 Mos. duration)* / INDEFINITE		OTHER *(Specify)*

REMARKS

22 DATE OF REFERRAL	23 SIGNATURE OF VA COUNSELOR
24 DATE OF BOARD ACTION	25. SIGNATURE OF CHAIRMAN

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FIGURE 3.—VA Form 21E–1902i (May 1964).

to be a responsibility participated in by all of the members of the board. As is true with respect to its other actions, the determination is not based upon the opinion of a single member of the board, but is arrived at only after the facts upon which the opinion is based and the implications of the proposed conclusion are considered by all.

The board consists of a member of the VR&E counseling staff as chairman, a training specialist, the medical consultant, and a member of the social service staff. Other medical specialists participate as consultants whenever the board has need of their services. Counseling is carried for-

ward as far as practicable, to insure that the board's proceedings will be fully informed and all other available information is obtained prior to presenting a case to the board. In addition to considering questions pertaining to general medical infeasibility, the board provides counseling and training personnel with advice and assistance in planning vocational rehabilitation for seriously handicapped veterans for whom training and employment are feasible but whose problems of adjustment are particularly complex or difficult and, in the opinion of the staff member making the referral, require coordinated judgments and planning by medical, vocational, and other specialists.

In cases in which vocational rehabilitation has been determined by the board to be generally medically infeasible, the board considers further whether the condition of infeasibility should be regarded as temporary, indefinite, or permanent. For cases in which temporary or indefinite infeasibility has been found, VA policy places maximum emphasis upon the board's responsibility for arranging treatment or other measures which will assist the veteran in overcoming the condition which stands in the way of his undertaking rehabilitation training. To determine progress and whether the condition upon which the determination of infeasibility is based has been overcome, such cases are followed up periodically at intervals specified by the board. A determination that vocational rehabilitation is permanently infeasible is made only after all possibilities of improving the veteran's condition have been considered and rejected for reasons which are generally acceptable to a qualified specialist in the type of disability involved, and it is concluded that there is no possibility of overcoming the condition that blocks vocational rehabilitation or of the veteran's engaging in gainful employment.

Spontaneous remissions or unexpected improvement occurs occasionally even with some very serious conditions for which the outlook was not originally favorable. It is also to be noted that since the beginning of the VR&E program, rehabilitation personnel have developed methods of assisting veterans to overcome obstacles which earlier were thought to preclude vocational rehabilitation. It is not extraordinary, therefore, for a regional office to have rehabilitated veterans for whom rehabilitation was originally deemed to be permanently not feasible but for whom this determination was later reconsidered and reversed.

The following quotation which illustrates the fact that it is sometimes necessary to reconsider a prior determination of the permanent infeasibility of vocational rehabilitation for a veteran, although such determination may have appeared well founded at the time it was made, is taken from a report on a 35-year-old quadriplegic. The veteran's disability resulted from traumatic myelitis, with loss of bladder and anal sphincter control. Although he is confined to a wheelchair and has lost the use of all extremities with the exception of gross movements of his right arm, he has been successfully rehabilitated and is operating his own business.

Previously the Vocational Rehabilitation Board had held training for this veteran permanently not medically feasible. Six years after separation from the Marine Corps, he and his wife renewed his application by inquiring about college training. Vocational counseling was conducted in the veteran's home, some 125 miles from the regional office. Firsthand observations of the veteran's physical limitations and mode of living, together with rather extensive data gathering and testing, led to the conclusion that he would need to be trained in his home for a homebound occupation. Negative factors leading to this conclusion included extremely limited physical abilities, limited endurance, difficulty of traveling, and necessity for his wife to attend to his personal needs and to assist with phases of training. Positive factors included their specially built home with ample room and various arrangements and devices for the veteran's activities, location in a fairly large city which should provide opportunities for homebound training and work, and willingness and capability of the wife, a registered nurse. The veteran's ability to talk (even though his speech was sorely in need of training), his desire for variety and personal contacts, and his lack of interest in intellectual or esthetic pursuits, as well as the practical considerations already mentioned, suggested the combination objective of Telephone Solicitor and Survey Worker, with work to be done by telephone from the home. . . .

Motivation

The immediate effect of a disability so severe as to preclude training in ordinary training establishments is highly traumatic. The resulting emotional reaction very frequently outlasts the period of physical convalescence. The veteran perceives his disability primarily in terms of its personal meaning to him. Lacking acquaintance with other similarly disabled persons who have succeeded in achieving a positive adjustment, he does not have a basis in knowledge for taking an objective view of his situation.

Among the factors affecting his behavior at this time are his perception of his needs, his frustration at not being able to fulfill those needs as he formerly did or had hoped he eventually would be able to do, and manifold associations which derive from his previous experience. The fact that his preoccupation with these matters may appear to others to be unproductive or irrelevant, or even to mark his behavior as peculiar, is simply another way of stating what already has been observed; i.e., that the shock of serious disablement provokes a prolonged emotional state which inhibits adaptive behavior or an objective and rational assessment of his situation.

Of necessity the severely disabled person perceives himself as a different person in terms of what he is, what he can do, what he knows, and what he has. Yet his needs as a human being in the most general sense, including needs for self-regard, status, and achievement, continue as before, and his emotional involvement in the hopes and ambitions he had developed as an adult prior to his disablement tends to persist. How he will react to the frustration of being unable to fulfill his needs and ambitions in a normal way will depend upon the defense mechanisms he develops and the adjustive habits he carries over from his previous life. The readjustment is seldom easy. It is not surprising that motivation has been characterized as con-

stituting a problem in at least 50 percent of the cases of homebound veterans and as the single most difficult problem faced by workers with homebound veterans.[1]

The disabled person's new perception of himself includes a changed picture of his corporeal self—a new body image. Depending somewhat upon his own reaction and the customary reaction of his family and friends to other disabled persons prior to the onset of his own disability, this is likely to involve changes in his sense of worth in the eyes of others, as he perceives it, and a lowering of self-esteem. Such devaluation is inhibiting of constructive effort so long as he persists in seeing the change from his pre-disabled self in absolute rather than relative terms.

Not only is he seriously limited in what he can do, with many types of activity altogether precluded, but many of the functions which he can still perform require a greater degree of effort than formerly. He must relearn activities which formerly were done simply, directly, and without thought. He must acquire new complex and circumscribed behavior patterns. His outlook changes as his methods of experiencing reality change. The knowledge and skills he has acquired in any occupation he has followed or trained for may be largely useless now. Furthermore, the fact that he receives compensation as a disabled veteran and possibly other secondary gains from his condition may operate to lessen his motivation.

Although the problems faced and the adjustment required are in many ways different, it is instructive to compare the time which is required by the nondisabled adolescent to achieve emotional, social, and occupational maturity after the development of physical maturity. As during his adolescence, the very seriously disabled adult must again work through problems which are complicated by uncertainties of knowledge, expectations, and social relations, which require a new balancing of the individual's needs for dependence and independence, and which make heavy demands upon his ability to change.

Another comparison which is frequently made is with the bereaved person who has lost a close member of the family. Both the bereaved individual and the severely disabled person tend to dwell upon the loss itself for a period of time. In fact, with amputees this is known by workers in the field as a "mourning period." This period tends to be lengthened by the occurrence of a kind of circular process of thinking. The sense of loss is all pervasive. It results in a considerable cessation of coping behavior and tends to persist until the person is able to interest himself in some specific constructive activity. Since there is a real danger that this state of mind may perpetuate itself indefinitely, workers with the disabled recognize the importance of helping the disabled individual reach a stage in which he can accept the real limitations of his disability and devote some of his attention to other things.

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[1] See Fishman, Sidney, *op. cit.*

During the period of mourning which typically begins when the individual realizes that he must accept the permanency of his disability as a fact, he is sometimes exposed to well meant but contradictory and often basically inappropriate advice from relatives and acquaintances. At this stage, if he is urged not to give up hope on the ground that some cure may be found for his condition, when he knows that this is unrealistic, and at the same time he is admonished not to feel sorry for himself, the development of feelings of frustration, apathy, and hostility is not difficult to understand.

One of the most important elements in the dynamics of the "hopeless" person is that, much as he mourns his immediate loss, eventually he comes to mourn even more his loss of spirit, pride, and faith, and the ability to cope with problems. What he deplores most deeply is that he has become a different kind of person. This means that if a disabled person can find himself in a situation where he sees that one may be disabled and yet have faith and pride and "fight," he can be brought to a realization that his disability is not relevant for attaining some basic goals which are dependent upon abilities he still retains or can develop.

It is at this point that he can begin to cope with his disability. He develops motivation to function as a disabled person and an interest in learning to deal with his new reality. As his values change he learns to set goals which enable him to regard his disability as *one* of his characteristics. In effect, he comes to accept the disability as part of his personality. Feelings of inadequacy and inferiority plague him less as he is placed in situations, from time to time, where he is forced to make discriminations between adequate and inferior people on the basis of characteristics other than physique.[2]

Readiness To Select a Vocational Goal

How early it is possible to undertake productive vocational planning with veterans so severely disabled as to require training in the home is a matter for observation and judgment in the individual case. The time required to develop such readiness is subject to much variation and may be considerably prolonged in some instances. One office reported that "in some cases we have taken as much as 4 years to motivate a veteran and his family and to overcome all other obstacles encountered." Cases have been reported by several offices in which VR&E staff members worked with a veteran even longer before he was ready to select a goal and undertake training.

To help the veteran reach the stage where he is ready to begin the process of selecting a vocational goal, both the counselor and the vocational rehabilitation specialist must attempt to establish a psychological climate in which

[2] For a more detailed account of changes in motivation and thinking which characterize common stages in the adjustment to permanent disabilities, see "Understanding the process of adjustment to disability," *Journal of Rehabilitation* 27: 16–18 (XXVII, 6, November–December 1961), by Nancy Cohn, herself paralyzed from polio, who holds a graduate degree in somatopsychology from the University of Houston.

the personal motivation of the veteran can grow and mature into a readiness to act. This requires continuous contacts, clear communication, and the avoidance of any approach which might be perceived by the veteran as a threat. The vocational rehabilitation specialist or counselor can provide information, including information as to what similarly disabled veterans have achieved. This may be reinforced if arrangements can be made for a successfully rehabilitated veteran, who has developed constructive attitudes with regard to his own situation and circumstances, to visit the veteran who is torn between his desire to begin training and his doubts that he has the capacity to succeed.

An attitude of understanding and acceptance on the part of the counselor or training specialist is essential. He must be a good listener and accept the right of the veteran to express negative emotions. At the same time he should let it be seen that he is matter of fact in his approach to what the veteran is capable of doing. The rehabilitation training specialist must be perceived by the veteran as being in complete factual contact with the world of work as well as with what has been done by other equally disabled veterans. When he has this confidence in the worker, the severely disabled veteran will be able to disarm his own fear that his desire to do something constructive—to be productively employed—is not mere fantasy, and to let go of the feeling that maintaining contact with reality requires him to continue to repress that desire. To accept the worker in this role and commit himself to the task of planning a vocational future, the veteran must have confidence that the rehabilitation worker will require him to face objective reality at the same time that he is trying to help him give practical form to his aspirations. Thus it is important that the worker appear in the eyes of the veteran as having an acceptable balance between these two things.

Much as he may desire to see the veteran reach a decision to capitalize his potentialities, the vocational rehabilitation specialist should not push the veteran into such a decision. One of the purposes of vocational rehabilitation is to increase the veteran's independence, and the decision to undertake such rehabilitation must be his own. Unless *he* accepts the responsibility for this decision, he cannot be expected to stick to it. Although it sometimes may be necessary to wait out the development of readiness on the part of the veteran—simply keeping the contact alive and being sure that he knows help is available—this should not be construed as recommending a passive attitude on the part of the counselor or training specialist. Part of the skill of the worker lies in being able to sense when he has established a basis of common understanding with the veteran so that he can challenge him to do what, in fact, he is capable of doing.

Former medical consultant of the VR&E Division of the Huntington, W. Va., regional office, describes the approach in one such case [3] as follows:

[3] Quoted from "Don't despair of a 'totally disabled' man," *VR&E Quarterly Information Bulletin,* No. 2, B, IB 22–29, April 1960, p. 4.

> I know of one instance where the counselor went into the veteran's home. The man was very morbid—as practically all of them are—confined to a wheelchair, looking down at the floor. The counselor talked to him, but he didn't respond very well. He said, "What can you do for me? I am hopeless. I am helpless. There is nothing you can do."
>
> The counselor said, "Let's start. Can you speak?" "Yes." "Can you see?" "Yes." "Can you reason?" "Yes." "That's enough. We have a whole lot to work with right there."

In discussions with severely disabled veterans, emphasis on vocational training as a means for increasing self-sufficiency and decreasing dependency is appropriate. The veteran who is trying to rebuild his self-respect as a functioning adult will want to make a contribution as a productive member of his community. It is a purpose of the help which is furnished the disabled veteran to decrease his need for assistance.

A vocational counselor, writing on counseling in the home,[4] after describing what happens in such home visits, including discussions held with the veteran's family, makes the following observation:

> The visits become productive for counseling and eventual vocational rehabilitation planning when the veteran begins to arrange for "private" visits.
>
> The interest which he can invest outside of himself is perhaps the best clue as to his readiness for vocational planning. Personal adjustment and vocational counseling progress together according to needs expressed during subsequent visits.

Initially many of the veteran's reactions to the idea of vocational training may take place at the threshold of awareness, below the level of connected thought. In his first tentative grasping at the idea of vocational training as a possible goal for himself, he is likely to be involved in a sort of kaleidoscopic review of his feelings from the time of disablement to the present, his relations with family and friends, and incidents associated with past hopes and present fears. The individual needs help in bringing his attitudes and feelings into the open, examining their meaning, noting how certain feelings fit into his present view of his world and others do not, and deciding what are his significant permanent desires. This is necessary if unresolved negative feelings are not later to complicate his selection of a vocational objective or interfere with his pursuit of training. By a consistently understanding attitude and the use of personal adjustment counseling techniques, the counselor can help the individual to develop self-respect and provide a setting in which the growth forces of his personality can operate. The counselee's attitudes and feelings must be accepted tactfully and interpretations offered only as he is able to assimilate them.

In the situation described by the writer last quoted above, the veteran's arranging for "private" visits (i.e., not including family members) is equivalent to his requesting a counseling interview, either in the regional office

[4] See "Counseling the Homebound" by Dean E. McIntire, *VR&E Quarterly Information Bulletin*, No. 2, IB 22–29, April 1960, p. 2.

or through the visit of a counselor to his home. It means that he wants to work with a resource person who can help him review all relevant information and relate it to his own thinking, in a situation free from interruptions and distraction. When the veteran and his family have accepted the idea that vocational rehabilitation is a possibility *for him,* he is ready to examine in detail the facts which will answer the question as to how what he would *like* to do squares with what he *can* do, and to evaluate his capabilities, his limitations, and the opportunities which exist or can be developed.

The taking of this initiative, with a stand for a measure of independence, indicates that he has reached the stage of accepting the effects of his disability and is on the way to recovery from the emotional state in which he was left by his disablement. However, his first attempts to think in objective terms may be somewhat tentative, and it is for this reason that personal adjustment counseling and vocational counseling frequently "progress together," or that one will alternate with the other in the early stages of counseling.

Once the veteran is ready to begin exploring possible vocational objectives, he and the counselor will continue to face problems growing out of the severity of the disability, but the methods of counseling will be essentially similar to those which are employed in counseling less seriously disabled persons. However, before considering the veteran's choice of a specific training objective, it is desirable to look at sources of the information which he and the counselor must have in order to make an intelligent plan. This leads next to a consideration of the veteran's family situation, the facilities and arrangements in his home, and the survey of his community.

5. FAMILY ASSISTANCE AND COOPERATION

Completion of vocational rehabilitation will lead the veteran to the kind of independence that results from being able to invest his effort and get a return on it, consisting of a monetary income and the less tangible but critically important satisfactions of achievement, self-respect as a producing person, and social contacts. At the same time, it is obvious that a veteran who is so handicapped as to require training in his home cannot expect to be independent in matters of physical location, mobility, and freedom from need for certain types of personal assistance. Furthermore, since the most common outcome of training in the home is that the veteran operates a small business of his own, he is dependent as are other small businessmen, but to a greater degree, upon customers, suppliers, and persons who can assist in his promotion efforts. This means that, while the roles of persons in the counselee's environment and the circumstances in which he lives should be considered significant in any vocational counseling, with a homebound veteran their importance is greatly increased.

Effect of Family Attitudes

The character of family attitudes and relationships is likely to be decisive in determining a veteran's success or failure in his plan for training in his home. However, there is no reason to believe that the preexisting needs of family members of disabled veterans are different from the needs of the members of other persons' families. Occasionally there may be encountered situations in which attitudes of overprotectiveness, possessiveness, rejection, and the like are factors which have to be considered. Many counselors, training specialists, and medical consultants feel that a social work evaluation should be requested at the time it is first proposed to develop a plan for training in the home, since there are numerous instances in which social service assistance has been valuable in working with family problems which otherwise would have prevented or impeded the realization of a training plan.

In the great majority of cases the seriously disabled veteran's wife or, if he is unmarried, his parents, want to do whatever they can to help him face life constructively, but they do not always know just how to proceed, nor do they always understand the feelings which he expresses. It is natural for them to feel that the deprivations resulting from his disability should be made up to him. However, if his disability has left him with needs for dependency which he expresses initially through a tendency to magnify his symptoms, what they do for him may not favor his doing the most he can for himself. If he is trying to minimize his loss, he may resent some of the things they do for him because they call attention to his disability and emphasize his dependence. In either event, family members may not understand their part in the development of what they come to regard as a do-nothing attitude or chronic expression of dissatisfaction on his part.

Hoping for a closer and more constructive family adjustment, they are prepared to welcome the planning of vocation rehabilitation for the veteran when they can see in it an opportunity for him to occupy his time productively and for them to clarify their roles in relation to his. When members of the veteran's family understand that there are specific things which they can do to help him carry out his plan of training and work and that there are other things best left for him to do, and when they can begin to act upon this knowledge, the usual result is a general improvement in family relationships.

The following statement by a vocational counselor [5] summarizes some of the problems which are met when vocational rehabilitation is discussed with homebound veterans and their families as well as changes which occur as rehabilitation progresses:

> As cases are identified as "potentially" homebound, a scheduled visit is arranged with the counselee. This visit and possibly later visits are used to become acquainted with the veteran, his family, and his community. . . .

[5] McIntire, *op. cit.*

Conferences with parents or wives are often arranged (with consent of the counselee) when it becomes obvious that further progress with the counselee is not possible without helping the wife, mother or father, as appropriate, to gain a better understanding of the counselee's physical handicap, emotional needs, and vocational potential. When it is necessary to help the principal family member clarify his role with the counselee and to work out areas of feeling about this relationship, referral is made for social service casework assistance.

Joint sessions are held by the counselor with the counselee and key family members when this will most effectively promote a mutual understanding of the central problem. It is often surprising how rapidly the vocational planning with a counselee moves as personal relationships or roles are clarified. There is a decreasing need for personal adjustment counseling as the counselee and family members begin working and thinking together toward selection of a suitable home-operated vocation.

Several interesting developments may be observed during and following the rehabilitation of a homebound veteran, as follows:

a. The relationship between the veteran and his family steadily improves.

b. Rehabilitation provides a needed opportunity for the veteran and family members to work together in a productive activity.

c. The veteran and his family seemingly "forget" that he is a severely disabled person.

d. The veteran eventually becomes more active in community activities.

e. The veteran regains status within the family, in his social group, and in the community.

Not only the veteran but family members as well must understand that when a plan for training is undertaken, it entails definite obligations on the part of the veteran. If the plan involves family arrangements or depends upon the help of family members, the agreement to provide such assistance cannot be taken lightly. If the family regards the veteran's training activity simply as something that will divert him and keep his time employed, it will fail. Not only must the assistance which is promised be provided, but the veteran must be free from distractions which will eat into that part of his time which is programed for training activities. One of the best omens is for both the veteran and his family to see the completion of his vocational rehabilitation as an opportunity for performing a service to himself and his community similar to that provided by other contributing members.

The necessary dependence upon family members for physical care of the veteran who is confined to his home means that in some respects his rehabilitation plan must be a family project. The situation is similar to that of less seriously disabled veterans who train for farm objectives; the farm is a family project and represents a center of interest for all family members. It has been observed in many instances that when a veteran has been rehabilitated vocationally in his home, the result is that the whole family has been rehabilitated, and not he alone.

In some of the most successful instances of rehabilitation, a close community of interest is found within the family as in the following examples.

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Both are paraplegic veterans. The first quotation is from the report of a followup visit which was made several years after the veteran completed training for the objective of accountant, general. The second veteran trained as an electric appliance and radio repairman.

> It was learned that the veteran suffered a compound fracture of his right leg 1 year ago, which had confined him to his bed since then except for short periods. A hypersensitive nerve in the left leg further complicates his condition. However, he continues to operate his business, performing his work from his bed. He conducts business by the use of the telephone with his clients. They deliver and pick up finished work. His typewriter and adding machine are attached to a small table with casters which can be rolled about at his convenience. He performs computational work over a makeshift serving table—which extends over his bed. At the present time he keeps four complete sets of books and completes approximately 100 income tax returns per year, plus performing limited auditing work. As an interesting sideline he has trained his wife to do simple bookkeeping and she has several accounts of her own. She does not actively assist him with his business operations but provides invaluable care with regard to his health problems. The veteran expresses high interest in his work and states that it is most satisfying. He plans to continue it indefinitely and only regrets that he cannot accept more accounts and develop his business to the fullest potential. He stated that if he had the opportunity to train again he would select the same objective.
>
> In spite of the serious nature of his disability the veteran needs very little if any assistance in his work. His outlook for the future is excellent and he faces it with determination. Although the veteran and his wife have no children of their own, they adopted a baby boy last June and are having success in rearing that child. They were turned down on their first attempts at adoption on the grounds that the wife would not have sufficient time to devote to the child after caring for her husband. However, the veteran devotes as much time in caring for the child as does his wife. This has developed into a very happy home life for all. Through the confidence that the veteran has built in himself as a result of his successful training, he has become less dependent on others and enjoys life to the fullest. He takes good care of himself, and as a result he is seldom sick. During the entire time that he was in training he used no sick leave at all.

A homebound veteran needs a harmoniously and effectively operated household. As observed by one worker, "There are home enterprises where family assistance, although important, is not directly related to the product or the service; it may consist, for example, of maintaining a home to which customers or clients like to come."

Specific Assistance by Family Members

Although a few instances are cited elsewhere in which the veteran employs hired assistance, it should be noted that such arrangements have developed out of the needs of the business. As in any other business additional workers may be employed if required by normal growth, but any plan for business of a homebound veteran which depends initially upon the employment of outside help should be scrutinized very carefully, unless

an unusual amount of capital is available and the arrangements proposed will meet all the requirements of sound business planning.

The specific assistance required by a disabled veteran to conduct a business in his home will ordinarily have to be furnished by family members in addition to such personal care as may be necessary. In fact, in many instances the assistance which is required will be little more than an extension of such personal care.

From the first contacts with the veteran and his family, it is important to note the potential of various family members for involvement in the plans of the veteran and evidence of specific assistance they may be able to give him in the conduct of his business. However, since his capabilities and preferences should have priority over theirs as determinants of his occupational choice, it is wise to proceed with caution in the more detailed exploration of what they may be able to do for him until after the exploration of his own capabilities and occupational preferences has gone some distance.

The person who is most closely identified with the veteran and who is most likely to be free of other responsibilities will usually be the one who undertakes to provide not only such personal care as the veteran may need, but also such assistance as may be required in his business. This will ordinarily be the veteran's wife, or one of his parents if he is single. Occasionally a brother, sister, or other relative may serve in this role, but this is less usual because such relatives are likely to have other family or work responsibilities.

In some instances, the veteran's need for assistance may derive primarily from the specific character of his disability, as with sensory limitations or inability to position materials or equipment before beginning work. The first example below is that of a blinded veteran who was rehabilitated as a cabinetmaker:

> For the most part all work is carried on by the veteran, but he is assisted by his wife in the matching of colors and other matters which require sight.

In other cases, the assistance which is required pertains not to the work process itself but to activities which in a larger business would be carried on by workers employed elsewhere than in the production department. For example, in the case of a paraplegic veteran trained as an architectural draftsman,

> His wife does his typing and filing.

In the case of another veteran with defective hearing and encephalopathy, it is reported:

> On a recent contact with the veteran it was found that he was continuing to expand his business and was very enthusiastic. He uses roadside advertising and good customer relations to build up his business, and feels that he has all of the technical knowledge necessary to make a living. His father continues to help him with the heavy work around the poultry farm and his sister assists him in the necessary bookkeeping.

In the following case the veteran, a quadriplegic, was rehabilitated as a bookkeeper:

> This veteran is very industrious and would no doubt be successful to a certain degree without the assistance of anyone in his immediate family. However, his wife has played a very important role in helping the veteran locate accounts. She is presently picking up and delivering account records and driving the veteran for personal interviews with prospective customers.

The assistance received by a homebound veteran may include contacting customers and outlets. This sort of help may supplement his own efforts in such activities, or it may extend to the point that his wife or another family member undertakes a principal share of the responsibility for developing a market and extending business contacts. In the first excerpt below, the progress of an epileptic veteran rehabilitated as a leather stamper is described:

> A recent visit to the veteran's home established evidence of a significant improvement in his medical as well as vocational status. The frequency and nature of his seizures have been alleviated, he has been able to go out more often and more freely without fear of an attack, and his general outlook on life is considerably more optimistic. He has continued to work at his craft and has built up a reputation in the community as a leather craftsman and specialist in the manufacture and repair of such items as belts, billfolds, ladies' purses and pocketbooks, gun holsters, eyeglass cases, cigarette cases, etc. A local store has been marketing some of his products and he has received special orders from several civic and commercial groups, but his chief "sales representatives" are his wife and sister, who continue to get him orders and market his products in the home area. His earnings thus far have been sufficiently high to provide an incentive for continuation and enlargement of his production efforts. His enthusiasm for his work is high, and he has expressed optimism for the future success of his venture.

The next example is taken from a report on a paraplegic veteran who was rehabilitated as an accountant, general:

> The veteran is happily married, and his wife helps not only in meeting the responsibilities of an aid and attendant but assists the veteran in contacting small business firms in connection with the bookkeeping accounts.

In other instances the veteran's home business may be begun as a joint enterprise with his wife or another family member, it may assume this character later, or it may develop as a family business involving several members of his family. Such a development may be favored by the nature of the occupation, common interests, or the necessity of handling an unexpected volume of orders. Family members may participate because, once the business is set up with supply sources and outlets, the more work hours contributed the greater the family income. An example of more general participation of family members in the veteran's business is cited below.

Paraplegia—Portrait Photographer:

> The veteran's wife is a great asset to him, inasmuch as she helps to set up the lights, which can be difficult for him at times. She also assists in posing the clientele as she has a special talent for getting best expressions on their faces, especially so with the children.

Blindness—Poultry Farmer:

> Active management and operational control are performed by the veteran even though his wife and daughter maintain the records and assist in preparing eggs for market.

Blindness—Textile Craftsman:

> The veteran's wife attended most of the classes in weaving and small business management. She assisted the veteran in selecting and matching materials for rugs and helped him with his business accounts. . . . He is happy and optimistic about the future of his gift store. His wife continues to assist him in operating his business, including the making of needlework items.

Paraplegia—Machinist II

> He always seems to have more work than he can do, since he can repair almost anything that can be brought into his shop. In addition to his shop work, he operates a sales and service agency for power lawn mowers. . . . It is believed that the veteran would be successful in his trade without the assistance of his wife because he is industrious and a good manager. However, his wife and four children all work together in the business, which has resulted in very close relationship with his family.

6. FACILITIES IN THE VETERAN'S HOME

In this chapter we are concerned with the physical arrangements of the veteran's home. Its human characteristics have been considered in the discussion of family assistance. The provision of necessary equipment will be considered later in connection with setting up the vocational plan. Adaptive devices used by the veteran in the activities of daily living sometimes offer clues on arrangements which will be helpful in the training and work situation.

Before a vocational plan can be developed with the veteran who will train in his home, it is necessary to know what space is available there for him to use in carrying on his training and work activities. It is also necessary to know whether there are alternative locations which may be considered for this purpose, how readily they can be reached by the veteran from his living quarters, and their suitability with respect to ventilation, heat, light, and the availability of utilities. Observations bearing upon the practicability of modifying existing arrangements as necessary should be noted for future reference.

It is not possible to reduce the experience of VA offices with respect to physical facilities and training in the home to simple rules. Combinations of circumstances occur in great variety, based upon the diversity of conditions found in the physical structure of homes occupied by veterans, the range of disability limitations encountered, and the various requirements of different occupations. However, the cases upon which this study is based provide examples which serve to illustrate the questions, with respect to physical arrangements of the home, which regularly must be considered in vocational rehabilitation planning with this group of veterans.

Space Requirements for Training and Work

The physical arrangements of the veteran's home, as observed by the VR&E staff member who first visits him, may suggest certain possibilities and limitations for consideration when the veteran explores the advantages and disadvantages of various alternative occupations with his counselor. Later, it may be necessary to review in detail whether the arrangements of the home, in view of the veteran's limitations, will permit him to carry out the requirements of the occupation he wishes to select. In other cases such further consideration of the physical arrangements of the home may occur when the relative advantages of two or three otherwise suitable occupations are being weighed. Careful evaluation of the facilities of the home is especially important when there is any reason for doubting the suitability of the proposed workspace.

A separate room is desirable for training. Where the selected occupation requires that customers come to the veteran, it is highly desirable that access to his shop or office be directly from the outside rather than through the living quarters of the home.

A "spare room," den, enclosed porch, or other extra space, if such is available in the veteran's home, often provides an entirely adequate work area when the requirements of the particular occupation chosen by the veteran are not unusual. The example given below is of a paraplegic veteran trained as a duplicating machine operator.

> The veteran had a den which was converted to a small office for desk, duplicating machine space, supply cabinets, files, etc.

A need for storage space for bulky raw materials or completed products, the need for using machinery or equipment which will require floors with more than average weight-bearing capacity, or plans which depend upon convenient public access to the veteran's shop, display room, or office all require careful planning in advance. In some of the examples given below to illustrate how such special requirements were met, it was possible to use existing facilities; in other instances the problem presented was solved by further building. The example below illustrates how need for storage and shop space was met for a paraplegic veteran rehabilitated as a novelty crafts benchworker:

> During counseling and the initial period of his training, extensive alterations were made to his home for a suitable workshop, including partitions, bathroom facilities and workspace with proper electrical outlets. Later in the program a small bungalow adjoining the veteran's home was remodeled and ramps built for a complete workshop with ample space and facilities for storage of lumber and additional woodworking machinery. Some of the machinery required special safety devices and tables to enable the veteran to use the equipment properly.

In the next example, the occupation chosen by the veteran, modelmaker (plastics), required the use of machinery or equipment heavier than ordinary household furniture.

> The veteran's workship is located in his basement and is easily accessible. It is a light, airy room, 60′ x 30′. His equipment is in the center of the floor, with benches and work tables along the walls.

In the following instance of a veteran trained as a cabinetmaker, arrangements were needed so that customers could readily enter the shop.

> Before training was undertaken, the veteran bore the expense of constructing a workshop (12′ x 18′), separated from the main structure of his home by a carport, and had it finished to match his home. This arrangement permitted a street entrance, and he could enter the shop from his kitchen by crossing the concrete floor of his carport.

In the case of a veteran trained as a watchmaker,

> The shop is located in the garage, and it is well ventilated and adequately lighted. The front windows of the house lend themselves very well to a small display of clocks and watches.

Conditions Which Require Special Attention

Space in a veteran's home which may be available for his work must be considered in relation to his disability limitations. A second-floor bedroom which otherwise would provide appropriate workspace is not likely to be usable for this purpose if the veteran is unable to go up and down stairs. Also, it would be inappropriate in terms of customer access. In the following examples new construction provided workspace suited to the veteran's special disability limitations. They describe arrangements in the home of a veteran with multiple sclerosis who was trained as a saw filer (machine) and of a paraplegic veteran rehabilitated as a portrait photographer.

> The veteran's heated garage was converted into a workshop. The garage was connected to the house by a breezeway, and the veteran could easily move from the house to the garage in all types of weather.

> The veteran has his studio and darkroom in the basement of his home. The facilities are excellent. He has an escalator-type elevator to facilitate descending and ascending the stairs to the first floor. The main section of the basement is used for a studio, which includes six adjustable photography lamps, camera, and backdrop, in front of which he poses his subjects. A section of the basement is partitioned off for the darkroom. It is well planned and could be used as a model for other paraplegic veterans who are interested in this employment objective.

Suitability of the workspace should be evaluated with respect to light, heat, and ventilation. If it is deficient in any of them, does the possibility exist of making alterations? Does the work which the veteran plans to do require special electrical outlets or running water? Requirements of this type and the plans which were put into effect are described in the following excerpt from the records of a multiple sclerotic who was trained as a jewelry stonecutter.

> A survey of the veteran's home found that modification of front porch space by enclosure, installing a heat duct and register, installing a water line to the porch area, and running an electric conduit with a terminal box would permit excellent work space. A rock supply shed was added to one end of

the enclosed porch and an assembly-line type of work operation was established.

Although his home may be suitable in every other respect, zoning restrictions may prevent the veteran's carrying on a business in a residential area. The existence and effect of zoning regulations should be investigated at an early date, as in the following instance of a veteran who planned to train as a clock repairman:

> The veteran had a large screened-in porch in his home which he planned to have enclosed and finished to use as a shop. The city manager of his home community was contacted, and it was determined the city had no objections to a shop of this type in a residential area. The veteran, prior to entering training, did have this porch enclosed, heated, lighted with fluorescent lights; and the interior was finished in knotty pine. Access to the street was through a separate door.

Since the veteran will not be rehabilitated in fact if his home is so crowded that he cannot study and work free from distractions, it may be necessary in his interest to defer beginning his training until appropriate work or shop space can be provided, as occurred in the instance cited below of a paraplegic veteran subsequently rehabilitated as a radio repairman:

> Crowded conditions in the veteran's home prohibited training in the home until adequate work space could be provided. The veteran promised that as soon as his finances permitted, he would have a workshop constructed adjacent to his home. Therefore, the veteran was inducted into an independent instructor course with one of the shop operators in the city engaged as instructor. However, after 3 months' duration, the training staff felt the arrangement unsuitable, so training was terminated until adequate accommodations could be set up to train him in the home. With the help of free labor provided by his neighbors, the veteran had a shop constructed adjacent to his house. A runway permitted him to get to the shop from his home with his wheel chair.

Change or Expansion of Work Quarters

Space initially available may suffice for training purposes, but other more suitable arrangements may be made by the veteran for carrying on his business when he has completed training, as in the following instance of a paraplegic veteran trained as an accountant, general.

> The home provided a suitable, quiet atmosphere for study and instruction. . . . Upon completion of the course the veteran rented a small office space in a suburban area, together with another paraplegic veteran. He opened an accounting and insurance sales business. This enterprise has continued, and the veteran now has an agency for an established line of insurance.

Many veterans who are entitled to specially adapted houses under the provisions of chapter 21, title 38, United States Code, have already completed their homes, but eligible veterans who have not may profit from coordinating their building and training plans. Cooperation between loan guaranty and VR&E personnel in providing special housing and rehabilitation services to veterans is described in the following paragraphs from a regional office letter:

The added expense of remodeling a home to provide for homebound vocational rehabilitation was recognized early in both the VR&E and Paraplegic programs, and although there have been unquestionable savings to the veteran in many instances, our desire was to provide for the veteran to the fullest extent possible and at the earliest time available, all of the benefits to which he was entitled.

Our practice, with variations, is relatively a very simple one. The Construction and Valuation Section works closely with VR&E staff members. When the former receives notice of a veteran's eligibility for Specially Adapted Housing, contact is immediately made with the Vocational Counseling, Training and Adjustment Section. In most instances this is done prior to the preparation of the housing plans. VR&E then has the opportunity to review the veteran's situation and help him formulate plans for his rehabilitation and determine the special facilities which might be most beneficial for his employment in the home. When this has been accomplished, any special items are brought to the attention of the architect by the Loan Guaranty Division and either included in the original drawings or suggested as revisions.

The example below is that of a veteran who was trained as an accountant while his home was being built:

The veteran was in the process of building a new VA-financed specially adapted home, and provisions were made in the plans for suitable office space. In the meantime, training could be conducted in the front room of the veteran's present rented home.

The fact that a veteran is occupying rented quarters rather than a house owned by him is not necessarily a bar to training in his home. However, since a home business requires long-range planning, it is considerd desirable in some circumstances that a veteran who is planning such an enterprise own his home or have a plan for doing so. Although not an example of changing physical arangements, but rather the opposite, an exception may be noted in the following instance of a paraplegic veteran trained as a portrait photographer whose location in rented quarters is undoubtedly an asset to his business:

The training specialist surveyed the veteran's home, and it was found to be a suitable place for training and self-employment. He lived in the center of a very large apartment house project of high order, housing approximately 1,200 families and embracing a thickly populated area of well-to-do families. The veteran's apartment was located on the ground floor. He used the living room for portrait posing. It was large and well lighted and desirable in all respects. The veteran received permission from the superintendent of the apartment house project to construct a darkroom in the basement. This was accomplished, and he used this facility for developing.

As illustrated in some of the excerpts cited above, a veteran may change his arrangements after he has completed training because some expansion is justified by the success of his business, for the purpose of providing a more suitable place for the reception of customers and display of goods, or simply to suit his convenience. The veteran's remodeling of part of his shop building for a showroom and store, in case No. 3, appendix A, is an additional example.

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7. SURVEY OF THE COMMUNITY

The community survey has two principal purposes. The first is to obtain information concerning the opportunities and resources available in the veteran's area, for use with other information in making a tentative selection of an occupation or in narrowing the range of possibilities to two or three which merit further consideration. The second is to obtain such further information regarding the practicability of the preferred objective or objectives as may be required to make a final choice and to develop a rehabilitation plan which will implement that choice.

The foregoing suggests that the survey is likely to be carried out in two phases, and it frequently happens that the counselor or vocational specialist will make contacts in the community on more than one occasion; e.g., at the time of a visit to the veteran's home or when he is in the area in connection with the supervision of other veterans. However, the most appropriate sequence will not be the same in every case. The counselor, especially if he is to make the community survey as well, should give some thought to the best strategy of timing on the basis of the needs of the individual veteran. How early it is desirable to undertake the preliminary phase of the community survey may depend upon how well the characteristics and economy of the community are already known to the counselor or rehabilitation specialist, whether he has established contacts in the community or must develop them, how far the veteran has already developed his thinking about a possible occupation, and the scope and objectivity of information available through the veteran and his family.

The lack of resources and of employment opportunities in some rural areas poses a special problem in the planning of a business in the home. However, such deficiencies may be capitalized to the veteran's advantage when the absence of a needed service or the presence of customers desiring certain types of goods, as in a resort area, serves to suggest an employment objective for him. Although such localities have fewer organized community agencies than are found in urban areas, this may be compensated for by the fact that the veteran and his family are likely to be well known among their neighbors. In urban areas it will be necessary to estimate the probable amount of competition, ascertain local trade practices, and anticipate the need for more highly developed business promotional methods. In either situation it is important that the relevant local conditions be explored fully, including the pertinence of zoning regulations. Without such information a vocational rehabilitation plan is as likely to run into a block at a later time as would one which has been developed without knowledge of the veteran's own characteristics.

Sources of Information and Assistance

Persons and firms engaged in the business in which the veteran proposes to train are an obvious source of information. By visiting their shops or offices it is possible to develop useful information with respect to employ-

ment prospects, the competitive market for products, training needs, the physical requirements of the proposed occupation, and the possibility of adapting equipment and procedures to meet the veteran's physical limitations. The following example is from a report on a quadriplegic veteran who trained as a telephone solicitor and survey worker.

> The vocational rehabilitation specialist visited different firms in the community engaged in activities similar to that which was planned for the veteran. These visits indicated a need for a service such as Telephone Solicitor and Survey Worker, what might be required in the way of training, employment possibilities, and anticipated income.

There are various civic, business, and government organizations which may make available the expert opinion of qualified advisers as to the suitability of a proposed plan, assist in developing information regarding market and outlets, support the veteran's training plan, or help him secure business after his training is completed. The illustration below is from the records of a quadriplegic veteran with the objective duplicating machine operator:

> A survey of the town where he resided was made as to availability of a market for his services. Assistance was given by the local Chamber of Commerce, which made a survey of local industries and organizations. The main feature with respect to available work for the veteran was that there was no other "Letter Service" in the local area.

As the worker becomes better acquainted with the resources and personnel of a particular community through working with successive cases, he learns what persons and organizations can provide most information and are most likely to help, or are most knowledgeable in indicating other sources of information and assistance. For a newly assigned VR&E staff member who has not already established such contacts, it is inevitable that there will be a certain amount of waste motion. If it is necessary for him to start blind in a community, he should make it his business to become acquainted with a number of school people, including county and district school superintendents, principals, shop supervisors, heads of commercial departments, and personnel with comparable duties in technical institutes, in trade and business schools, and in private schools as well as those supported by public funds. Veterans' organizations, the State employment service office and the local chamber of commerce or board of trade are also obvious initial contacts. From any one lead the worker gets other leads.

The veteran who is well and favorably known in his community has an obvious advantage. Cited below, is an instance of a veteran who built his business with the help of previously established contacts.

> Paraplegia—Radio and TV Repairman:
>
> The veteran lived in a rather thickly settled community and the nearest repair shop was 13 miles from his residence. It was also found that he was a leader in his community and an officer of a veterans' organization and a civic club. Through these organizations and other contacts, the training officer and the veteran were encouraged regarding prospects for setting up a successful business in his home.

Determining Marketability of Goods and Services

Successful vocational rehabilitation of the veteran who is trained in his home will depend with very few exceptions upon the availability of a local market for his goods or services.[6] This does not mean that there must necessarily be a local unsatisfied demand for the products in question before the veteran undertakes training, but that a reasonable estimate, based upon all the relevant facts, indicates the existence of a potential market. As would be done by a nondisabled person contemplating the establishment of a small business, it is necessary to consider specific opportunities which are presented, availability of established commercial outlets, the amount of competition, and the rate of growth of the community.

In the example below, the veteran was trained as an architectural draftsman. The possibility of performing work on a subcontract basis, as illustrated in this instance, should be considered when appropriate. Note, however, that he avoided making his future entirely dependent on subcontracts which are always subject to cancellation or nonrenewal.

> The availability of a market for the services to be rendered was given careful consideration as the veteran intended to operate his business from the home. He planned to do subcontracting work for other architects, as well as direct assignments from contractors or builders. He had already discussed this potential with the architect and builder of his new home. A survey was made by the training specialist relative to the veteran's obtaining sufficient employment upon completion of training. The result of the survey was encouraging, as all indications pointed toward a ready market for the veteran's services.

In the following instance, information was obtained indicating that established commercial outlets could be used upon completion of training as a watch and jewelry repairman.

> At the time we were exploring the possibility of training him on the job, opinion was voiced by many watchmakers that he could develop a good business in his own home after training. It was found that numerous jewelry stores in the city do not maintain a watchmaker and farm their work out to other shops. In fact, there was one individual, an elderly German immigrant, since deceased, who had a flourishing business in his home by accepting work from jewelry stores. This individual was known to the Education and Training activity, since at that time he was training a disabled veteran. He gave us encouragement in setting up the veteran for training and employment in his home and stated that he had more business than he could possibly handle.

It is sometimes possible to take advantage of special characteristics of the veteran's locality. In the following example the nature of the vocational objective is apparent from the context:

> The objective Gunsmith (5–83.542) was selected through counseling. Prior to becoming an invalid the veteran was an enthusiastic hunter. Due con-

[6] The importance of a prior survey of the actual market is equally obvious in those rare instances which do not depend upon a local market; e.g., a veteran residing in a rural area who wishes to train as a book repairman or literary writer.

sideration was given to his home community where hunting and target shooting were major pastimes to the local inhabitants. A considerable amount of money was expended by participants in these sports. Collaboration between the counseling and training sections was close. Before the objective was established, the training officer made a thorough investigation of the area. Serious consideration was given to the suitability of a market for the services to be produced. It was determined that an excellent market was available. There are many hunting, target, and skeet shooting clubs in the area. During the seasons hunters from all over the State congregate in the area.

It is especially important to determine whether there are other established suppliers of the same service in the veteran's community. If there are, it is necessary to estimate how intensive the competition will be and whether there is sufficient demand to support another worker in the occupation. The possibility should be explored of doing work on a subassembly or subcontract basis for larger suppliers. For a small business to become dependent upon a single outlet presents an obvious risk, but such an arrangement may supplement other marketing arrangements profitably.

The Special Rehabilitation Procedures Training Officer assigned to the veteran's area made a survey which showed that there was no photography studio in that area. The veteran was close to two schools, and the neighborhood contacts indicated that a fertile field for this type of service could be developed.

Other Information Available From Community Survey

The fact that a topical treatment of procedures and methods employed in working with homebound veterans has been adopted for clarity of exposition should not lead the reader to assume that the various aspects of such work, as suggested by the principal headings of this report, are distinct and separate. In the course of the survey of the veteran's community, much information will be obtained which will be invaluable in developing and implementing the veteran's plan for vocational rehabilitation after he has selected his training objective. Such information may suggest, for example, a profitable specialization within the occupation selected, sources of raw materials, alternative merchandising plans, and leads to the identification of qualified instructors. The groundwork may be laid at this time for securing articles for repair by veterans who will train as various types of repairmen. Some established shops prefer to specialize in certain items and to farm others out. Arrangements for repair work can be made with the distributor of a product. It is sometimes feasible to arrange for a central pickup station, or for several veterans to operate together in a shopping center location.

The following excerpts, illustrating plans developed on the basis of information obtained in community surveys, are from the records of veterans trained, respectively, as radio and television repairman and jewelry stonecutter:

Prospective instructors were contacted, and zoning ordinances were checked to assure continuation of the shop in the home. The special rehabilitation

procedures supervisor accompanied the counselor to explore possibilities for training.

Investigation of available supply sources of raw materials revealed that they could be procured at reasonable prices. A survey of marketing opportunities for anticipated finished products disclosed prospects of an expanding tourist business in the area. Three methods of merchandising were considered: (1) The veteran could establish a contractual relationship with a manufacturer for disposing of his work products. This would involve a minimum of business responsibility and probably the least potential profit. (2) He could set up his own tourist stand operation. This would increase the veteran's responsibility for business management, increase his potential margin of profit, entail greater financial risk and probably greater physical demands. (3) He could negotiate consignment sales on a commission basis with well established, reputable retail outlets. This procedure would seem to require moderate business management, promise modest profit, and involve a minimum of financial risk. The third alternative was chosen and successfully utilized.

8. SELECTING THE VOCATIONAL GOAL

The counselor working with homebound veterans employs methods and techniques which are essentially similar to those employed with nondisabled persons. He relies upon the same knowledge of disabilities as in counseling veterans who are less seriously disabled. Many of the problems encountered are the same. Differences are basically a matter of degree and complexity.

There are several reasons why vocational planning with homebound veterans is typically more complex and difficult than with the less severely disabled. It should be clear from what has been said already that emotional blocking and other problems in motivation are frequently encountered. Many occupations are precluded from consideration by the veteran's physical limitations, his limited ability to travel, or the fact that it is usually not practicable for him to change his place of residence.

Very particular attention must be paid to the arrangements required for the veteran to carry on his occupation when he has completed training. This realistic central concern obviously has the greatest possible import in the vocational counselor's consideration with the homebound veteran. Information about his environment and the persons in it assumes much greater importance in planning with the homebound than is true in working with other counselees. Furthermore, it is usually necessary for exploratory planning to be developed further and more specifically in terms of the veteran's circumstances and environmental situation in order to establish whether vocational possibilities which appear promising must be eliminated or may be considered further.

Assisting homebound veterans to choose a suitable vocational goal is essentially a threefold task as in other vocational counseling. The vocational and related problems and needs of the individual must be understood by him and by the counselor; information has to be developed, not only pertaining to his physical capacities and limitations and his personal charac-

teristics, but also with respect to what will be his working environment; and the veteran must be helped to evaluate this information in the light of his own needs and in relation to the requirements of possible occupations.[7]

Individual Needs and the Meaning of Work

The activities, requirements, and conditions of various occupations have different implications for different persons depending upon their needs, interests, and aptitudes. The variety of human needs and their importance for motivation are well illustrated in findings with respect to the function and meaning of work for various kinds of workers. In one of the best known of these researches, Friedman and Havighurst studied the responses of various groups ranging from coal miners to physicians.[8] They were able to distinguish five types of satisfaction or meaning which work provides, as follows:

(1) Economic return (providing income and a means for maintaining a level and standard of living).
(2) A routine for life activity and a way of organizing time.
(3) Identification (defining the individual's role and serving as source of self-respect and the respect of others).
(4) Fixing pattern of association (with fellow workers and others).
(5) A set of meaningful life experiences (giving purpose to life and providing opportunity for new experience, self-expression, and service).

Springer, in a report based on observation of 44 homebound chronically ill persons engaged in work projects arranged by the Home Care Department of Montefiore Hospital in New York City, reported that this fivefold classification sufficed to describe the work values of nearly three-quarters of his group.[9] However, three additional categories were necessary for the remainder, and he suggests that these categories of work values will be found in any large group of disabled persons. These three additional categories are—

(1) Displacement mechanism (work provides a means for the worker temporarily to escape from the anxiety created by some other situation; e.g., an unpleasant family situation).
(2) Proof of worthiness and control of depression (with regular work the individual becomes less passive and withdrawn).

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[7] This sentence paraphrases principal rubrics under the heading "Quality requirements for cases disposed of with counseling," p. II–60 (Mar. 30, 1959), M7–1, *Vocational Rehabilitation and Education Procedures.*

A list of references on counseling and vocational rehabilitation of the disabled may be found in Lofquist, Lloyd H., *Counseling with the Physically Disabled,* p. 357. Chap. 17, "Counseling Interview Considerations," is of special interest.

[8] Friedman, E. A., and Havighurst, R. S. *The meaning of work and retirement.* Chicago, University of Chicago Press, 1937.

[9] Springer, Donald. "Remunerative homework for the homebound chronically ill: Observations on the meaning of work." *Personnel and Guidance Journal,* 1961, 40: 51–57.

(3) Socioenvironmental control mechanism (worker uses work as a means of controlling persons or factors in his environment).

The person whose initial interest in vocational rehabilitation represents an attempt to escape from boredom or from unsatisfactory aspects of his home situation, or a desire to control the latter, may seem somewhat negatively motivated. Once he feels that he wants to do something about his situation, however, an exploration of his assets, as contrasted with his liabilities, may be expected to release more positive motivation on his part. Indeed, it may be pointed out to the veteran that many persons who learn a trade or occupation and, as a result, operate a small home business, obtain some work satisfactions which are denied to workers on a production line. They are able to develop pride of craftsmanship, they have the sense of purpose which comes from being able to follow their product from beginning to end rather than doing a single repetitive operation, they gain a sense of self-direction from managing their own business, and they get considerable satisfaction from meeting customers and other persons with whom they have business contacts.

Counselors generally prefer to begin the initial counseling interview with an open-ended question which will lead the counselee to tell what thinking about a choice of work he has already done. This leads naturally into a discussion of the basis of his work preferences, the steps he has taken toward implementation, and what obstacles he sees in the way of securing appropriate training or finding suitable work. The counselor is then able to note what further information is needed, including data about the inventories, and information about the requirements of various types of work and various jobs. Presentation of this information in such a way that the counselee can see its bearing on his own problems is the best method of correcting any lack of realism on his part.

This approach has the advantage of disarming the tendency of some counselees to hold back from discussion of problems which involve their more personal needs and feelings and aids them to become satisfied that the counselor is a safe person to talk to. They are easily convinced that he is if he shows signs that he understands what they are saying and refrains from reacting with disapproval to the ideas they express.

When the counselor is the VA representative who first contacts the veteran in his home, counselor and veteran will have established a basis for discussion by the time the veteran is ready to consider development of his vocational plan. However, the general point stated above is still valid. To undertake the development of a vocational plan with such a seriously disabled veteran elsewhere than at the stage of thinking he has already reached frequently does not promote his interest in vocational rehabilitation, but may have the opposite effect.[10]

[10] For a discussion of the interrelated roles of counselor and counselee, see "The Client as Comanager in His Rehabilitation," chap. 14 in Wright, Beatrice A., *Physical Disability—A Psychological Approach.*

Information Required in Vocational Rehabilitation Planning With the Homebound

Discussion of the questions and possibilities which are of most immediate interest to the veteran at the beginning of counseling usually involves consideration of pertinent elements in his background. It is a natural progression to proceed to related areas of information in his history and his reactions concerning them. Finally, it is possible to fill in the gaps in other areas, so that the counselor has the requisite information, obtainable through interviewing, to assist the counselee in developing a vocational rehabilitation plan. As with other counselees, the range of such information includes the medical history, previous education and training, service assignments and employment history, avocational interests and family background.

In considering the veteran's history, the information obtained from survey of home and community, and the data obtained from psychometric tests, the counselor is alert to note areas which have positive, rather than negative or limiting, implications. He discusses with the veteran the special opportunities and demands which exist in the community, kinds of work in which the veteran's remaining physical capabilities are required, occupational possibilities suggested by the veteran's prior work experience and military assignments, previous training and avocational pursuits, and kinds of work which correspond to his measured aptitudes and interests.

The development of information through survey of the community, the home itself, and the potential assistance available from family members, has already been discussed. To a great extent this information serves the purpose which, for persons trained outside their homes, is served by standard sources of occupational and educational information. It is frequently necessary in defining the occupation considered by a homebound veteran, to emphasize its specific characteristics as determined by the needs of the community and other environmental circumstances, as well as by his particular capacities and limitations.

The problems of the veteran who expects to operate a small business in his home resemble the problems of other persons planning to go into business. Information regarding potential customers, probable competition, local resources, and business conditions is essential for either.

It is usually desirable to defer testing until the veteran understands the purpose it will serve in his individual planning. In the course of the interview the counselor notes points on which further information is required and implications which need to be supported or refuted. Tests and inventories are selected with a special view to answering such questions. The employment history, and academic and counseling records obtained from schools attended by the veteran prior to service are also analyzed to pinpoint the information which needs to be obtained through testing.

Tests and inventories which the counselor brings with him to the veteran's home are the same as are used with less seriously disabled veterans. Special tests for the blind constitute an exception to this statement, but the problem

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here is no different from that of the ambulatory blind who are counseled in the regional office.

As in other testing situations, it is necessary to adhere to the use of standardized test directions, accurate timing, and accurate scoring for the results to be considered valid. If for any reason this is not possible, the test cannot be regarded as a psychometric instrument but simply as a standard situation in which it is possible to observe the testee's performance for the purpose of qualitative evaluation. Such observations by the counselor may have limited value when he is able to compare the counselee's performance with that of other counselees in the same test, or when the test task constitutes a sample of the work which the veteran would perform in a given occupation under consideration.

Occasionally, as in the following instance, testing and other sources of information may need to be supplemented by diagnostic work adjustment training.[11]

> The use of toy Erector sets and other such toy mechanical construction devices has been found useful in diagnostic work adjustment training when physical dexterity is a major consideration. They have been recommended and approved by the physical medicine staff.
>
> In one such case a quadriplegic veteran applied for training in the home, and counseling was provided. The medical records showed minimal use of both arms and no use of hands or fingers. He was, of course, unable to ambulate and was confined to a wheelchair. The counselor was unable to evaluate his physical capacities and requested that the veteran be entered into diagnostic work adjustment training. Counseling, Education, and Medical had worked with him for over a year, and he was highly motivated. He had an 11th-grade education and was mechanically inclined. At the beginning of diagnostic work adjustment training a trial was made with an Erector set. It was found that the veteran was unable to use this set at all. Erector sets contain a great many small screws and nuts and the veteran was unable to handle them in any way. However, a set of Tinker Toys was secured, and the veteran gradually became proficient in assembling this toy.
>
> In 3 months' time the veteran demonstrated that he had regained some dexterity and had learned methods of using his hands and arms sufficiently to justify further counseling and vocational training. He expressed an interest in the employment objective of jewelry engraver, machine. While the veteran was in restorative training, the counselor and training officer conferred frequently on this case, and the Counseling Section was kept advised of the veteran's progress. The determination was reached that by using modified equipment this veteran could do machine engraving.

Evaluation of Information and Selection of a Training Objective

Possible occupations and plans mentioned by the veteran or suggested as a result of reviewing his background, his interests and abilities, and the

[11] For diagnostic work adjustment training, provided as specialized restorative training under VA Regulation 10201(D), see VA Information Bulletin 7–88, May 31, 1955, par. 2c(1). The case cited is not part of the sample obtained for this study, but was reported in a separate communication discussing adaptations of equipment.

opportunities and resources of his community are compared to determine which one holds the greatest promise for rehabilitation to the point of employability. His residual physical capacities, the conditions in his home and community, test data, and his stated preferences are evaluated in considering numerous questions which arise concerning each proposed objective. Does the objective suggested by the demand in the community for a particular kind of goods or services fit well enough with the veteran's aptitudes and interests so that he can train successfully and work in it with sustained interest? Is the objective suggested by his test responses a practical one in view of the competition from other suppliers and the market conditions in the area where he lives? Is the plan which is based upon his preservice employment experience a wise one to select in view of all other information? Is the outlook for success in training and employment in one of these proposals sufficiently better than in the others to mark it as an obvious choice? Or, if the best conclusion is that the veteran could succeed in any one of them, which does he prefer?

In the course of discussion with his counselor, the veteran clarifies and defines more realistically the meaning of the objective facts which must be taken into account. Reviewing the tasks involved in the different occupations under consideration helps him to make up his mind which of the latter he would find most congenial. Reviewing possible marketing arrangements helps him to visualize the potential usefulness of the products or services he would be supplying. Through comparison of roles expressed or required by the various occupations under consideration, he is helped to clarify his own needs and aspirations. Selection of a vocational objective on the basis of such exploration and comparison increases his confidence in his choice, his sense of purpose in training, and the likelihood of persevering in the occupation following training.

In reviewing histories of veterans whose disabilities have required them to train in their homes, the differences between cases are often more striking than the similarities. The key problem which poses itself as a sticking point in the effort to develop an acceptable vocational rehabilitation plan may occur at various stages. Data from the different areas which are for consideration may be quite disparate in their indications. The crucial problems presented often have no exact precedent in the form in which they are presented, and their solution requires the counselor or vocational rehabilitation specialist to exercise some degree of creative originality in combining elements from their knowledge and experience and in employing the resources which are available. For these reasons it is difficult to select any one case as typical, but the narrative presented below is an example of the kind of problem solving which may occur in the selection of an employment objective.

As the information about the counselee was developed, in this instance, three potential employment objectives were considered. The first, which was suggested by the veteran's preservice employment and certain test data,

did not satisfy his desire to function at a technical level. The veteran's stated desire for a college level technical objective such as architect was based on the fact that he enjoyed mathematics and mechanical drawing in his high school vocational course, but neither his secondary school preparation nor his tested ability was sufficient to promise success in college. The occupation of draftsman was in line with the veteran's abilities and interests, but his limitations in the use of his right hand raised a serious question as to whether he could perform the necessary work. This problem was resolved with the help of tests of manipulatory ability, by working out changes in his manner of holding a pen, and by use of an instructor of mechanical drafting as an expert consultant in determining whether the veteran could perform the operations required in the occupation. The counselor worked closely with the medical consultant and the vocational rehabilitation specialist. There was no problem with respect to work tolerance or availability of later placement possibilities in this case, and the veteran made excellent progress in his training.

When first seen the veteran was 22 years old. He was severely disabled as the result of wounds to all four extremities and had double above-knee amputations and a partial paralysis of the right ulnar and median nerves. The right hand had suffered a slight loss of usefulness and sensitivity. Hospital reports stated that the right hand probably would always be weaker than the left.

Obviously locomotion was sharply handicapped. He had learned to use prostheses with elbow crutches and canes, although ambulation was still quite difficult for him. Stair climbing was possible for short distances only, and then only where he could use two rails. Stair descent was even worse. Because of amputation stump angles, he frequently lost his prostheses when sitting on a hard surface.

He had been graduated from a high school vocational course with a very good record, though subjects were not at the precollege level. He had good grades and had enjoyed math and especially his 3 years of mechanical drawing. He was a shipping checker for a wholesale drug firm for 2 years before entering service.

In spite of the severe and traumatic disabilities, the veteran had a good attitude toward rehabilitation. Considering his situation as a whole, his outlook was generally good, and he obviously sought quick vocational goal setting as a part of his general determination to keep a positive attitude. Hospital work with him in these areas had evidently been very good. Counseling was conducted entirely at his home because of the stair climbing situation in the regional office. On the second visit the SRP training specialist accompanied the counselor.

Quite a bit of testing had been accomplished at the hospital. This showed his general mental level to be high average, his potential for college training to be quite low. Clerical aptitude tested at somewhat higher than the mechanical and, on interest inventory, there was no sharp differentiation among the fields of activity. The closing report from the hospital suggested that clerical work—perhaps a return to some phase of his preservice work—probably offered the most promising possibility.

When interviewed, however, the veteran was found to be thinking in terms of college-level technical objectives. This was worked through with him. Realistically he didn't think these were practical goals, but he was very resistent to the thought of clerical work. Exploring the background experiences with him revealed that most of all he would like to be a draftsman—if he couldn't go on to architecture.

The counselor was extremely skeptical of this because of the residual which affected the right (his working) hand. Training in this field would be available at his level if he could work well and fast enough to be competitive in such an occupation. Tests were used to study this manipulative problem and it was found that the veteran, by making certain adjustments in the way he held a writing instrument, could do reasonably well. An instructor of mechanical drafting was, therefore, asked to visit the veteran and evaluate, if possible, the manipulative capacity for drafting and the overall potential. He agreed that the veteran could learn this skill. It was evident to all concerned that opportunities for placement in this work would be good if he could attain an acceptable production and quality level.

Because of the stair-climbing problem and the lack of any school with elevator facilities, it was necessary to set up a home-training private instructor program for his objective of mechanical draftsman.

A room was available in the veteran's home where he could work undisturbed and his materials could be set permanently in place. The instructor had declared, and investigation by the training specialist indicated, that there would be no difficulty with later placement except selection of suitable physical facilities.

. . . . . .

Almost immediately following the completion of training, as the result of referral by the instructor, two full-time work opportunities were located in firms where the veteran would have to do no climbing. He was accepted by the first interviewer and was declared rehabilitated. In the meantime, however, he had made application for a State civil service job as a draftsman. The details of his qualifying for that job are not known. He did qualify, however, was offered an appointment, and went to work as a mechanical draftsman for the State before actually beginning his work with the precision tool firm that had offered to hire him.

He is still very happily employed, working for the State. Physical facilities are ideal for him, since complete elevator service is available. He has no concern about job security or finances. He has expressed his complete satisfaction with the results of his training and the employment status achieved.

The tendency to jump at a plausible choice of objective may be especially insidious with some very severely disabled veterans because of a feeling that they are lucky to be able to do anything at all. A counselor should not attempt, of course, to divert the selection of an objective just because it seems to the veteran to be an obvious choice. However, it is important that the selection should be made by the veteran only after he has been helped to evaluate all the relevant information. It is true that there are occasions when revaluation to a new training objective is necessary, but it is imperative to be as sure as it is possible to be that a goal has been selected and a program developed initially which, in terms of the employment and

marketing resources within the community, are most likely to be accomplished. The investment by the veteran and his family financially and otherwise is such that failure in training for the objective originally chosen can have a highly traumatic effect.

Setting Up The Vocational Plan

9. FINDING A QUALIFIED INSTRUCTOR

Possibly the most important single decision made in implementing the vocational rehabilitation plan for a veteran who will train in his home is the choice of a qualified instructor. The skill and knowledge which the veteran acquires will depend upon the instructor's skill and knowledge in his occupation and upon his teaching ability as well as upon the trainee's own involvement, interest, and drive. As a member of the rehabilitation team and a specialist in his trade or profession, the instructor also has a contribution to make as a consultant in the detailed development of the rehabilitation plan.

Necessary Qualifications

Vocational rehabilitation implies that the veteran is being trained to work seriously in his selected occupation and to achieve a level of production which will give him a sense of usefulness to society and result in a significant income. To accomplish this, it is essential that the instructor himself be qualified at the journeyman level. Ability to organize material and to present it in a clear and understandable fashion is a prime requirement. The ability to evaluate the progress of the trainee, to perceive when he needs help, and to provide it as needed is equally important. The individual who does not have a liking for working with people and a sound attitude toward the disabled is not likely to to be successful in this situation. To these qualites must be added a willingness to cooperate with other persons whose interest or activities are important for the success of the veteran's rehabilitation.

Some instances in which other qualifications, in addition to occupational skill and knowledge, were regarded by the regional office concerned as contributing to an instructor's success appear below.

> **After a long search, a semiretired master watchmaker with many years of experience at the trade was located and employed. This quest for a teacher was carried on through inquiries of other watch repairmen in the community. The instructor proved to have an unusually good understanding of people as well as watches.**
>
> **The instructor, who was located as the result of a survey, was selected on the basis of the fact that he owned and operated a successful photographic**

> business in the veteran's home town. Also, it was determined that he was by temperament and other traits an excellent instructor.

Teaching experience is highly desirable but is not an absolute requirement. In some areas and for some occupations it may not be possible to find instructors who are formally qualified as teachers. In the cases reported in this study, about half of the instructors employed were practitioners in their fields of work. However, this group included craftsmen who had trained apprentices and other persons who had had at least part-time teaching experience.

The point of view expressed in the following excerpt from a letter of general comment is typical of the thinking of most offices:

> . . . One qualification which has been most useful in an instructor is interest in people and ability to get along with people. . . . The instructor chosen should also be one who is well known and who has a good reputation in the community not only for being a good instructor but for being a good citizen in other respects. If it is impossible to find an instructor with teaching experience, then even more care must be taken in searching his background.

The reason for being concerned with the role of the instructor in the community is pointed up in the following quotation from another office, which emphasizes the fact that a veteran engaged in home training usually plans to operate a small business from his home and that when this is true his program should include assistance in developing arrangements necessary to operate such a business successfully:

> In the final selection of our instructors, we have developed a full understanding with respect to their responsibilities, not only as to training activities, but also with respect to public relations, promotional activities, and the full development of a market for the veteran's products or services.

In some areas there may be only one person available as an instructor within reasonable driving distance of the veteran's home. The first example below, in which the veteran was trained as a radio repairman, presents such a situation. However, as may be inferred from the next instance, from the record of a veteran trained in a similar objective, it is not always correct to assume that a second candidate for instructor cannot be found even though the first one has been located only with some difficulty.

> There was only one skilled mechanic in the vicinity of the veteran's home, and he had all the television work he could handle; therefore, there was a need for a trained radio repair mechanic. Selection of an instructor was limited to the skilled repairman mentioned. He had no professional teaching experience but was well qualified in practical work. Moreover, he, as well as the veteran, spoke French, a language commonly used in that particular section of the State.

> Since all of the qualified training people in the community stated their workload would not allow them time to train the veteran, it became necessary to engage an instructor whose residence was 37 miles from the veteran's home. This man taught in a trade school, and had had practical work experience

also. About halfway through the program, the instructor accepted employment which interfered with training; so it became necessary to go to another city, 35 miles from the veteran's home, to engage an instructor. He was a young man who recently had completed a course of radio and TV repair in a trade school in a large city. He came highly recommended by the school. In fact, the school was considering him for a position on their staff. This instructor trained the veteran to completion of the course.

In some cases it is necessary to evaluate the qualifications of instructors in more than one field, as when preparatory or auxiliary training is needed in basic education subjects or in principles of operating a small business, or when the training objective requires a combination of two skills with separate training in each. The excerpt below illustrates such a situation.

Training was provided by individual instructors. One instructor was employed to teach the veteran composition and hand press operations and the other instructor to teach him small business management and simple bookkeeping. Both instructors were known by the veteran and were residents of a nearby city where he was well known. The printing instructor was a retired printer with 30 years of experience in the trade. The business instructor was a general accountant who had operated his own accounting business for several years. Both instructors were cooperative and interested in the veteran and soon established good rapport with him during the training period.

In another instance the veteran had lost the use of all extremities except for gross movements of his right arm. His "ability to talk (even though his speech was sorely in need of training)" was considered with other factors in the course of counseling and led to the selection of the objective, telephone solicitor and survey worker.

Individual instructors, secured through schools and the State Employment Service, were certified professional teachers with experience in providing individual instruction and an interest in working with this particular veteran. Training began with instruction in spelling, business mathematics, business English, bookkeeping and business research. Another instructor provided instruction in business psychology and techniques of telephone selling. A third instructor provided speech therapy.

How Candidates Are Found

About half of the case reports in which information was given as to how the instructor was located credited the assistance received to educational institutions or personnel. In the majority of instances, instructors of veterans trained as bookkeepers, accountants, draftsmen, electrical appliance repairmen, and cabinetmakers were reported as having a background of experience in teaching, and the leads which resulted in locating them came most often from schools or school personnel. For the occupations in which instructors more frequently were practitioners, leads were obtained both from tradesmen and business establishments and from schools. Watchmaker instructors were suggested both by watchmakers and jewelers, and by watchmaking schools. Photographers were suggested by other photographers and by various schools. Suggestions for instructors in radio and

TV repair, by contrast, were obtained principally from other journeymen and from shopowners in this field.

In contacting schools and educational institutions, leads may be obtained by canvassing special groups of teachers, as well as from superintendents, principals, and offices of boards of education. Selection of instructors with the help of these and other related sources is illustrated below.

> **We were very fortunate in locating a husband-and-wife team to serve as instructors. They were located through a teacher placement service. Both of these instructors were exceptionally well qualified, each having a master's degree. The wife had 6 years of experience teaching commercial subjects in local high schools. The husband had been employed as an auditor at the university for 3 years and had previous experience teaching and tutoring. The instructors took over the subjects related to their specialization.**

> **The instructor was located by the training officer who personally interviewed manual arts teachers in trade schools and high schools. The instructor is a registered manual arts teacher, who received his training in Europe and in the United States. He had specialized training in woodworking in this country, and had taught woodworking for about 25 years.**

The range of possibilities for suggestions as to possible instructors obtainable from tradesmen and business establishments, including distributors and supply houses, is indicated by the following examples:

> **Numerous radio technicians in the city were contacted. The best qualified instructor was employed by the Chicago & Southern Airlines as a radio technician. Previously he had been been in the Merchant Marine as a radio operator and prior to that time had been employed by the FBI for 5 years as a radio operator and technician. He held a commercial first-class telephone license, a second-class radio telegraph license, and a class A amateur license.**

> **The instructor had had 10 years of experience as a fly tier, 4 of them as a professional. He was located through the efforts of the training officer, who visited a tackle company which distributes his product and many other similar establishments.**

When it is necessary to start from the beginning in the locality where an instructor is needed, the classified section of the telephone directory is useful in obtaining a listing of small business and service establishments which may be visited. Tradesmen who are not themselves available to teach can suggest other workers in their occupation. Information as to where they or their friends received their training may lead to training institutions and to instructors employed by the latter. Craft museums and specialty shops know the craftsmen whose work they display or sell. Persons interested in writing and various types of artistic endeavor know the local leaders in such activities. It is usually desirable to obtain the assistance of experts in evaluating a veteran's products when one of the "talent objectives" is being considered in the course of counseling. Through such contacts, once established, it is possible to obtain information as to qualified instructors.

Suggestions can be obtained from a variety of organizations or agencies, such as crafts unions, professional associations, State employment service, State and private rehabilitation agencies, county veterans' service officers, county agricultural offices, local chambers of commerce and businessmen's service organizations, or—as in the case cited below—special business groups. Although no single one of the organizations mentioned has been involved in a large proportion of cases, it is appropriate to consider their use when finding a qualified instructor proves to be difficult.

> An insurance agent who was operating his own insurance agency in the veteran's home community was selected as an independent instructor upon the recommendation of the city Association of Insurance Underwriters. This individual had a B.A. degree in business administration and also had taken many special courses in general insurance. He had on previous occasions taught insurance courses at night classes in the community.

Typical Backgrounds of Instructors

An office may be fortunate enough to find an instructor with previous experience in teaching homebound persons. Instructors who previously have provided instruction to VA trainees on the job or in the institution-on-farm training program are more frequently available.

> An instructor with 16 years of commercial teaching experience on the high school level was engaged; also he had 7 years' experience in teaching commercial subjects to homebound cases for the State Rehabilitation Service.

> The training officer interested an experienced nurseryman in becoming the instructor, at no cost except for textbooks and for an initial supply of various plans to be used for practice. The instructor, with 21 years of experience in the nursery business, specializing in ornamentals, had trained several veterans on the job.

> Training was provided by an individual instructor who had operated his own radio repair shop for 27 years except for his 44 months' duty in service. He had trained other individuals, including two other veterans who were then employed in the radio repair business. During service he was foreman of radio repair at Wright Field with a Civil Service rating of SF–9.

However, it is only in a minority of cases that an instructor can be found with experience in training disabled persons in the occupation chosen by a veteran who is to be trained in his home. When no such person is available, the most obvious place to seek teaching ability in combination with specialized occupational knowledge and skills is among professional teachers. Teachers employed as private instructors for veterans training in their homes have a variety of institutional connections, occasionally including technical institutes, business colleges and universities, in addition to the one suggested by the example cited below.

> Due to the veteran's ability to type and previous educational training, instruction was needed only in bookkeeping, review English, stencil cutting, duplicating and business practice. A six-month training program was agreed upon. Through the assistance of the local board of education, a substitute teacher was selected as the instructor. This instructor was a gradu-

ate of a teacher's college. She had taught commercial subjects for 10 years before her marriage and since then had been doing substitute teaching.

In the examples given below we see instances of skilled craftsmen, operators of shops, and other practitioners in their occupations who, in addition to specialized knowledge and skills, have various other qualifications, such as experience in training apprentices, in technical writing, or as foremen.

Arrangements for an instructor were worked out well in advance. A journeyman cabinetmaker, operator of a cabinet shop in the veteran's home community, was employed. He was found best qualified of several men considered for the job. A lifetime of cabinetwork, furniture building and finishing gave him invaluable experience. He had had experience training apprentices. He promised that overflow work from his own shop would frequently be channeled to the veteran.

An individual instructor was secured who lived in another town some 20 miles distant from where the veteran resided. He agreed to work with the veteran in the evening, commuting to the veteran's home. This instructor had operated his own shop for a number of years, had been an electronic technician in service, and wrote technical articles for several radio publications.

The instructor hired was the foreman of the veteran's former on-job training facility. A World War II veteran himself, he was the youngest of three men in the State potentially qualified to teach jewelry stonecutting. He was highly qualified from a craftsman standpoint although unskilled so far as formal teaching ability was concerned. To compensate for this, the SRP supervisor and instructor worked out the training program jointly.

With qualified craftsmen who have not had teaching experience, it may be necessary in some instances for the vocational rehabilitation specialist to assist in preparing lesson plans and to suggest methods which are adapted to the limitations of the veteran's disability for presenting material in teaching. Correspondence courses are sometimes used as supplemental teaching aids under these circumstances.

Owners of shops and service establishments have current knowledge of what the public demands and of what needs to be done to be successful in a private enterprise, but they may not have time for teaching, and occasionally object because of a feeling that they are training a competitor. However, as in the following instance, they may provide appropriate instruction when willing to serve.

An established portrait photographer was available for instructional purposes. He had had considerable experience in portrait and commercial photography and military experience in microfilming and general darkroom work. He had a good library, and was much interested in the veteran. He also said that his business was such that he could turn over a reasonable amount of work to the veteran as soon as he was qualified to do it.

In recent years, instructors have included veterans who themselves received their training under the VR&E program, as in the following instances.

The instructor had been a journeyman carpenter prior to service. He very successfully completed a machine shop course under P.L. 16, and is now operating a successful business in machine repair, saw filing, lawnmower sharpening, and has a sales agency for power lawnmowers.

The instructor, who was obtained from an outstanding facility within the area, was a rehabilitated veteran who had made outstanding progress in his work and who was selected because of his ability. He was recommended very highly by his employer who had trained a number of P.L. 16 veterans and was very much interested in the training program. The instructor was about the same age as the veteran and rapport between the two was very easily obtained.

10. THE ROLE OF THE INSTRUCTOR

How the instructor should meet the needs of the veteran training in his home will be evident in reviewing the special circumstances which are characteristic of this type of training situation.

With a teacher-student ratio of 1 to 1, it is obvious that the instructor and veteran will be thrown very much into each other's company and that the effectiveness of instruction will depend to some extent upon the character of the personal relationship which develops. It is highly important that the instructor and veteran be able to find a basis for mutual respect and congeniality, and this is one reason why it is necessary to find an instructor who likes to work with people, and has a sound attitude toward the disabled.

The situation of the veteran training in his home contrasts with other training situations in that the student does not have the support of normal peer relationships with other students. Opportunities for discussion and friendly competition with fellow trainees is lacking. Despite this, in some instances the veteran's morale may remain at a high level with the stimulation of new associates, new activities, and new learning, and because simply to be in training for a vocational goal is for him an achievement he previously has despaired of reaching. In other instances the veteran may be especially subject to doubts as to his ability to advance because of the unusual frustrations he has already encountered as a severely disabled person. When the latter occurs, the knowledge and experience of the instructor will need to be used in maintaining the veteran's confidence in the outcome of training.

The length of the student-teacher relationship, usually 1 or 2 years or longer, together with the circumstances already mentioned, suggests a danger that some trainees may tend to become unduly dependent upon the instructor. An appropriate countermeasure to this possibility consists in emphasizing the veteran's exercise of initiative in the processes and operations of the occupation as early as his acquisition of knowledge and skill qualifies him to do so. Good teachers develop the student's concept of confidence in and respect for the body of knowledge associated with the trade or profession. Such a concept develops into an attitude which dis-

tinguishes the journeyman worker from the beginner and normally releases him from the need for dependence upon his teacher. Many of the functions of the instructor are supportive in nature, but the veteran and every one else concerned should understand that the purpose of such support is to help him reach the point where it is no longer required .

A large majority of veterans training in their homes become proprietors of their own small-scale private businesses. Therefore, in addition to inculcating appropriate standards of workmanship by teaching and example, the instructor must assist him in planning for the sale of his goods or services, obtaining supplies, developing promotional methods, and learning about trade practices.

In evaluating the way in which the instructor fulfills his role in specific instances, it is desirable to have in mind accepted standards of educational practice and to compare the adequacy of teaching with that found in established training facilities which provide comparable training to less seriously disabled veterans and to nondisabled persons.

Supervision of the training-in-the-home situation is the responsibility of a designated vocational rehabilitation specialist. The knowledge and skills which he has acquired in working with other disabled veterans enable him to aid the instructor in many phases of the program. He makes appropriate referral for medical attention required by the veteran, aids in arrangements for obtaining or adjusting needed prostheses, and suggests special equipment or adaptations of equipment which are suited to the requirements of the veteran's disability. If a team working relationship is established early between instructor and training specialist, not excluding the veteran, it will be possible to deal appropriately with problems which may arise later. Needs for closer observance of limitations of work tolerance specified by medical authority, further motivation and encouragement of the veteran, elimination of distracting elements in the home situation, provision of supplementary aids to training, or modifying the program are additional examples of such problems.

The joint control of the veteran's program which is exercised by the instructor and the training specialist must substitute for the element of institutional control and discipline which prospective students and trainees, veterans and nonveterans alike, accept when they enter a recognized school or training establishment. It is very important that, from the beginning, the training specialist share with the instructor the information which he has regarding the proposed plan, the veteran's relevant characteristics, and anything that will have a bearing upon the veteran's progress in training. This is the vocational rehabilitation specialist's opportunity to establish a spirit of mutual confidence with the instructor.

Assistance of the Instructor at the Beginning of Training

In the first example below, the staff of the watchmaking school, which contracted to assign an instructor to teach a homebound veteran the course

of study normally conducted at the school, also participated in planning and helped to implement it by a temporary loan of equipment. As suggested by these examples, the instructor is frequently consulted in evaluating the suitability of space layout and the adequacy of physical facilities, and he may advise or assist the veteran in improving his working arrangements.

> The watchmaking school assisted the training specialist in laying out the working area within the veteran's home, and worked out problems of securing loans of equipment and planning outlets for the veteran's services in collaboration with the training specialist and counselor before final agreement on the suitability of training for the employment objective of Watchmaker. . . . The school provided work benches, lights, and all necessary tools on a loan basis, without cost, until they could be purchased by the Veterans Administration.
>
> By the time counseling was completed, the veteran had already set up a shop in the large double garage attached to his house on a common level. The instructor selected, who was a local vocational school teacher with 13 years' industrial arts experience, together with the training officer, assisted the veteran in replanning the shop and work benches to accommodate the equipment it was planned to install. Work benches were designed to enable the veteran to work at the benches and machines from his wheelchair.

The instructor may assist in developing the training program or by making recommendations regarding certain parts of it.

> The veteran was entered into a 15-month training program on a permanent reduced-time basis of 24 clock-hours per week under VA Regulation 10202 (B). Concurrently he was enrolled in a correspondence course offered by National Radio Institute. This course was requested by his instructor as an aid in developing a knowledge of radio theory.
>
> The private instructor, a teacher with years of experience in mechanical drafting work and teaching, estimated that approximately 8 months of intensive instruction and full-time assignment work would be needed.

Examples of Problems Encountered in the Course of Instruction

As in other teaching situations, the instructor is concerned with providing instructional materials, scheduling of assignments, review of materials previously studied, and evaluation of progress.

> The instructor used texts purchased by the Veterans Administration, and other books, the property of the instructor, temporarily loaned to the veteran for purposes of training. The instructor coordinated his text assignments at all times to fit the various aspects of manual practice and operation as training progressed. At other times, such as when mathematical formulae were being taught, the interval assignment consisted of the study of text material and the working of problems assigned, either as found in the text or those that developed in connection with manual assignments. At various intervals when a distinct portion of the training had neared completion, a review of material previously covered was had, this largely in the nature of question and answer sessions. Manual operations such as splicing, soldering, etc., were assigned and completed by the trainee, for inspection by the instructor on the following visit. The length of the training program was 12 months, taken continuously without interruption. At the end of the ninth month the veteran began to receive various appli-

ances for repair. These consisted of radios, toasters, fans, small motors, and electric drills. By the end of the training period the veteran was kept busy working on these appliances in most of his spare time.

The specific physical limitations or other characteristics of a veteran may challenge the instructor to adapt usual methods of instruction to fit particular needs, as in the following instances. The first example is that of a veteran with a limited academic background; the second is a blinded veteran who trained as a poultry farmer.

During the early part of the course the veteran became impatient with theory instruction and study. The instructor solved that problem by typing up written assignments for study, with a problem in the practical work for laboratory proof of understanding of the theory.

The training schedule provided 6 hours per week of direct instruction and 8 hours per week of reader service. The assignments between instructional periods consisted of text material to be read by the reader, and the work assignment regarding the actual operation was carried on by the veteran himself.

Another matter which is of concern to both instructor and training specialist is adjustment of the training program, as necessary, to changes in work tolerance and to the abilities of the veteran as demonstrated in earlier stages of training. In the following example, which is taken from a case cited above in another connection, the veteran's training program was originally set up for 12 months.

For a brief period at the outset of training, it was thought that full-time training might be too exhausting, and so time devoted to training was restricted. By the end of the first month, however, a full-time schedule was adopted on the advice of the consultant physician. The veteran actually completed the training schedule in an 11-month period, was determined to be capable by the instructor, and was declared rehabilitated by the VA.

Teaching Production Standards and Business Methods

Coordination of practice with instruction in fundamentals and theory is a basic prerequisite to the teaching of production standards. The following example illustrates appropriate emphasis upon such coordination:

The training schedule included 6 hours per week of direct individual instruction. Between instructional periods, the veteran was given study assignments from machinists textbooks and, in addition, was given practice assignments to accomplish on the lathe, sawfiler, grinding machine, etc. Forty-eight months of training were required to complete the program, and the veteran was selling his service during the last 2 years of training.

A further example, which is cited below, concerns a veteran with rheumatoid arthritis. A school which could provide training in general accounting to a wheelchair student was secured. However, on the consideration that additional physical limitations might be imposed in the future, in view of the progressive nature of the disability, training for self-employment in the veteran's home was indicated. A second phase was planned to provide training in his home to acquire the additional skill and knowl-

edge necessary for maintaining small business accounts and performing income tax services in his home.

> Courses in business law, tax accounting and auditing were of particular concern, and it was felt necessary to incorporate them in the training program for the second phase. As an additional training technique, the instructor undertook two private small business accounts which were maintained by him but utilized in instruction for a portion of the practical problem assignments throughout the course. Length of training for the second phase was established at 6 months. . . . The trainee's rate of production was slow at the outset, due to the transition from theoretical to practical accounting, and some discouragement was noted and treated. Continued application to training was maintained, and both quality and speed of production improved with the acquisition of skills and confidence.

As already suggested by a number of the citations which have been presented, the teaching of production standards and methods is greatly strengthened by arranging for the veteran to begin actual production work on a limited scale as early as practicable during the period of instruction. This arrangement permits the instructor to inspect completed work before it is returned to the customer and have it corrected if necessary. It also provides the veteran with experience in a range of technical and business problems which he will encounter when he is operating his business independently. The first illustration which follows is from the last cited case:

> During the course of the occupational and potential business survey referred to previously, contact with three small business accounts was established. During the final phase of training, the trainee assumed these accounts under the instructor's supervision. The minor service charge was utilized by the trainee to purchase and replace supplies used in his course. As a result, when training was completed, the trainee had three active accounts. Three additional accounts were secured by the trainee to begin in about a month.
>
> During the last 4 months of the 12-month program the veteran accepted taxwork from clients, and this was incorporated in the training program to furnish practical and timely problems while the instructor was available to assist him.

As previously stated, when the veteran plans to operate a home enterprise, training should be provided in principles of business management, purchase of supplies, maintenance of shop and equipment, display of merchandise, marketing of goods and services, and development of sales outlets. This may be done by setting up special units in the training program, as in the example given below, or through supplementation of the formally scheduled units of the program by coaching of the instructor:

> Instruction and demonstration were followed by specific units of practice and manufacture, and step-by-step assistance was provided in the completion of work items. The training program included small business management and the purchase and care of items necessary for the trade, as well as the effective display and marketing of manufactured items. The veteran was provided and acquainted with sales outlets, including several jewelry stores. After completing two-thirds of his training program, he commenced selling what he made. Upon rehabilitation, after reaching

basic employability, the trainer had succeeded in helping the veteran to acquire a remunerative market for individual, handmade custom jewelry creations.

Many of the case narratives contributed by regional offices indicate implicitly the interest of the instructor in helping the veteran to overcome the obstacles which appear to stand in the way of successful rehabilitation. Such interest is apparent in the ingenuity shown in improving the trainee's working arrangements and in planning the details of instruction, in the loan of supplementary instructional materials and the donation of supplies, and through assistance both during training and afterwards in obtaining customers or clients. Spontaneous efforts of this type on the part of an instructor suggest that he is impressed with the veteran's seriousness of purpose in his endeavors. In the following examples this attitude is indicated explicitly:

A highly qualified and sympathetic manual arts instructor was secured through a contract with the public schools. All training in cabinetmaking and related drawing was handled by this professional teacher. He was particularly adept at planning instruction so it might be followed by applicable shop assignments or related steps in the construction of a project. He met the veteran as an adult, quickly determined his physical limitations and potential, assisted in laying out the shop and designing suitable stands for mounting power tools. At no time did he question the trainee's ability to do the work. A close and almost brotherly relationship persisted throughout the entire training program.

His instructor in cabinetmaking still visits the veteran at intervals to assist him with any new problems and has sold some of the finished products.

The veteran's future looks very good. Recently, his instructor transferred to a larger town, and he referred all his clients to him. The veteran feels that his photographic business will increase considerably.

11. DEVELOPING THE TRAINING PROGRAM

Before instruction can begin and before needed tools and equipment can be ordered, it is necessary to outline the contents of the training program. Careful preparation of the program will make it possible to anticipate problems, tie the different elements of the training plan together, and set the stage for instruction to proceed. The fact that an attempt should be made to foresee all contingencies and to develop a complete plan does not mean that adjustments cannot be made later.

General Guidelines

The training program should reflect the veteran's training needs accurately. Since it is proper to assume that the occupation he has chosen, once it is concurred in by the medical consultant, is one which is consistent with the limitations caused by his disability, the nature of that occupation will be the primary determinant of the contents of the training program. However, the purpose of training in his home is to enable the veteran to become profitably employed in his community, and the usual content of such

program for the particular occupation may have to be modified to some extent to meet the characteristics of his anticipated employment or the peculiarities of local demand. Furthermore, although the selected occupation would not have been chosen if it were not generally consistent with the veteran's limitations, it also may be necessary to eliminate one or more of its minor components which require actions he cannot perform. The veteran's work and the preparation he is to receive should not be conceived in narrow terms. No more than with less seriously disabled veterans should the training program be thought of as preparation for employment by a single employer or for carrying on a small business solely under the conditions currently prevailing in the veteran's community. To do so would place him at a disadvantage if that employer were to go out of business and would leave him in an inflexible position for adjusting to altered competitive conditions.

Under VA policy, when a veteran's disability is such that it seriously restricts the number of employment opportunities within the occupation for which he is training or is such that he will be at a disadvantage in competing for business with nondisabled persons, he may be provided a course of training longer than is ordinarily required to qualify for employment in the occupation. Under these circumstances he may be trained to a higher level than is usually required, and a more advanced course of instruction may be provided, or an additional body of closely related training may be made available if it affords substantial promise of offsetting the uncommon severity of the veteran's handicap. It is necessary to "tailor" the program for training in the home to fit the particular needs of the individual veteran.

The period of time required for a veteran to complete training in his home will depend upon the factors indicated above and upon the number of hours per day the veteran is able to devote to training. Aside from the possibility of interruption because of illness, it frequently will be found necessary to plan for relatively slow progress because of limitations in work tolerance as prescribed by medical authority. Thus a veteran who is limited to 4 hours' work a day, 5 days a week, will require a longer period in training than a veteran who is capable of full-time work. However, experience shows that it is not usually necessary to lengthen the total time in proportion to the reduction in work tolerance. It appears that the individual whose work tolerance is limited nevertheless continues to be mentally active in his hours of relaxation in a way that contributes a certain amount of development toward his goal.

Special requirements, which will need to be reflected in the training program, may be established in the course of counseling. For instance, a veteran whose academic achievement is meager as compared with his ability may need supplementary instruction in academic subjects to enable him to carry out computations and to understand instructional materials which will be used in training in a technical objective. Special guidelines may be recommended by the vocational rehabilitation board.

Any previous training a veteran has had which is related to his present objective should be considered in drawing up his training program. A veteran who undertook training for the same or a related objective before entering service should not repeat the material in which he had previous instruction, although some review may be necessary, depending upon the time elapsed since the earlier period of training and the amount of overlap.

Determining Program Content

The vocational rehabilitation specialist is responsible for developing the training program. He cannot be expected to possess prior detailed knowledge of all the varieties of work training which he may be called upon to supervise. However, from his general background knowledge and his experience in other cases, he is acquainted with a large number and he understands how to make an occupational analysis and to develop appropriate sources of information.

Before undertaking the detailed consideration of the training program with the instructor, the vocational rehabilitation specialist will have discussed the tasks, knowledge, and requirements of the work with employers, journeyman workers, and teachers while making the community survey and canvassing possible instructors. Additional sources of background information may be found in the files of the regional office. These include programs developed for the training of other veterans for the same objective, and sample training programs for a long list of occupations.

Course outlines are available from schools which offer training in the occupation under consideration. The latter materials need to be used discriminatingly. For example, the course outlines on watchmaking of certain schools provide for instruction on Swiss movements only. Professional and trade organizations are another source. For unusual objectives, regional offices sometimes request the assistance of Central Office, which can make available information obtained from other Government departments and the headquarters of national professional organizations.

The instructor is usually regarded as a principal resource person in the development of the training program. However, this does not mean that the preparation of the training program should be turned over to him to develop as he sees fit. The latter practice may seem natural when the instructor has previously taught the selected occupation, but experience does not suggest that it is a wise approach. Since his teaching may have been slanted to the needs of other types of trainees, the vocational rehabilitation specialist who will supervise the training of the veteran in his home must be considered finally responsible for the preparation of the training program. Even when the instructor is experienced in teaching disabled persons, the vocational rehabilitation specialist must be sure that the contents of the program are oriented to the needs of the individual veteran and to the goal of producing salable work.

A journeyman worker may have a good reputation for reliability and for skill in the performance of the tasks of his trade without having a clear understanding for teaching purposes of how the various kinds of trade knowledge which he has acquired at different times relate to his job performance. However, a number of instances which are reported in the cases reviewed in this study indicate that such workers can serve successfully as instructors, in the absence of candidates with teaching experience, if given assistance in organizing the material which is to be taught and in methods of teaching.

Before attempting to set out the principal units and subdivisions on the Training Program and Progress Record (VA Form 21E–1905a), it is desirable to make an analysis of the work performance requirements of the occupation in which the veteran will train. This is especially important with an instructor who has not had previous teaching experience. Such an analysis should result in a clear, concise, and factual outline setting forth the work tasks and requirements of the occupation as it will be carried on by the veteran upon completion of his training. The following description of such a job analysis was prepared originally for training in another setting, but the principles set forth apply as well to this situation.[1]

> . . . The statement should tell exactly what the worker does and why and how he performs the various tasks. Generally, when describing the tasks it will be desirable to record the information in the chronological order in which the tasks are performed. The organization of the listing and description of tasks naturally will vary with each job, but it should be set up in such a way as to give all information on one phase of the job in one place. Occasionally it will be necessary to rearrange and group like information, so as to present the job in the most logical and understandable manner. The approximate percent of time and the degree of skill involved in the performance of the tasks should be determined and considered as the basis for selecting the elements of a training program and fixing the amount of time to be devoted to each.
>
> Based on the actual work tasks and information gathered from all available sources, there should be prepared a detailed analysis and interpretation of the basic skills, knowledges, abilities, and responsibilities required of the worker for successful performance of the job. This step is necessary to determine whether the performance of the duties and responsibilities of the job at the right time and in the right order depend on any specific skills, knowledges, exercise or judgment, or other factors. . . .

Depending upon the ability of the veteran to contribute to or profit from participation in the discussion, the training specialist may find it advantageous in some instances to meet with the instructor at the veteran's home for the purpose of developing the training program on a collaborative basis. In other instances he may find that it is more helpful for him and the instructor to meet with another member of the VR&E staff who has had experience in supervising trainees in the particular occupation or in working with homebound trainees. Whether or not other staff members actually

[1] Program Guide G–1, M7–1, pt. III, p. 1.

participate in the original drafting of the training program, the desirability of obtaining their assistance in reviewing the program before it is put in final form is apparent.

Training in Production and Business Methods

In addition to identifying the principal units and subdivisions of instruction in the work of the particular occupation, planning of the training program should take into account the veteran's need to develop production methods and experience in that occupation. Unless the outlook is to work for an employer, rather than to be self-employed, the plan should also provide for instruction in business methods, purchase of supplies, maintenance of shop and equipment, and other things the trainee will need to know as the proprietor of a small business.

There are a number of ways in which early involvement in production, in most cases, can make a positive contribution to the veteran's training and later success in the practice of his occupation. However, if production activities are emphasized for their own sake at this stage, without reference to their training value, they are likely to interfere with proper training and to handicap the veteran's development in his occupation subsequently. It is of the greatest importance that all concerned have a correct understanding of both aspects of this question, so that the amount and timing of production in relation to the successive phases of specific training may be planned to result in the greaest advantage to the veteran in the long run.

With rare exceptions, the outlook is for the trainee to undertake some production work at an early stage in his period of training, as is suggested by many excerpts from actual cases cited throughout this study. In two-thirds of the case narratives upon which it is based, the time when trainees began some production for sale was specifically stated. Ninety percent of the trainees for whom this information was reported began such work before completing their training programs, and more than 70 percent reached this point by the time they were three quarters through their programs.

Some exceptions should be admitted to the general view that a limited production of goods or services should be undertaken before completion of training. When a veteran plans to work for another employer rather than to be self-employed, or when he has prior business experience or well-established contacts, together with strong motivation, there is little likelihood of a hiatus between the training period and regular work following its completion.

Arrangements made for the veteran to begin production work during the period of training are valuable because they provide the occasion for teaching production methods, types of products, and quality of work required for salability, and rates of work necessary and practicable to meet conditions of the veteran's special market. Teaching production methods also has a bearing upon the veteran's motivation, since it leads him to develop an attitude and expectation of producing for a market. Furthermore, if the veteran is able to complete work for pay before the end of his training, this

means that he is already in production, has begun to establish a market for his work and is in fact employed at the time he finishes training and is declared rehabilitated. It is, therefore, usually desirable that definite expectations be built upon the part of the veteran and instructor, at the time the training program is prepared, that the former will begin to complete work for pay as soon as his training has progressed sufficiently to make this possible. The necessary specific arrangements are ordinarily made by the instructor, who supervises the veteran's completion of such work as an integral part of his training.

Training for some objectives, whether in the home or not, is to a large extent on-the-job training in nature. For example, in such an objective as appliance repairman, training should begin with a maximum of systematic instruction in problems of the trade, and the allocation of time should change gradually until at the close of training, whether it be an individual serving his final year of apprenticeship or a homebound veteran, production exceeds planned instruction by a considerable amount. This does not mean that production is not part of the training program. It simply means that practice under supervision tends to perfect skills that have been learned and that the trainee can profit from the help and guidance of the instructor in solving problems encountered in the course of production work.

At the same time—and despite the commonly favorable effect on the veteran's motivation which is derived from direct experience of the utility of his work through receiving pay from satisfied customers—great care should be exercised to avoid introducing production work of a type or amount, or at a time, that in any way will limit specific training or lessen its value. For example, it is not desirable to supply a watch-cleaning machine to a veteran during his training period. Use of such a machine has little or no training value. Furthermore, for the watchmaker or repairman trainee to spend training time in using this equipment diverts his attention and takes his time from things which he should be learning. This is a type of equipment which the veteran properly may purchase from the proceeds of his work for the purpose of increasing his productivity when training is completed. The training program should not contemplate that the veteran will engage during this period in any type or amount of production work at the expense of solid and thorough training. Training is not simply indoctrination in a few production operations.

Instruction in business methods and related practices also should be planned as an integral part of the veteran's training program, to be taught parallel with all or the latter part of the period of instruction in the subject matter of the particular occupation. In a few of the cases reviewed for this study, a separate instructor was employed to teach these subjects, because of their importance in the veteran's total plan and the fact that the instructor for trade operations did not have the background to teach them. In some instances, instruction in these subjects may be incidental to instruction in production methods, especially if the veteran has had at least some business

experience. In other instances, specific instruction may be planned for certain topics, e.g., bookkeeping and correspondence, whereas instruction in purchase of supplies, maintenance of shop and equipment, display of merchandise, and marketing may be presented in the form of suggestions or as a part of the general background information which is passed on from instructor to trainee. For example, an instructor can find numerous occasions for pointing out that customers are favorably impressed by a neat and workmanlike shop and that taking pains to satisfy the needs of exacting customers is worth while, since success in doing so will enhance the veteran's reputation in the community for quality work.

Materials on the management and technical problems of small business enterprises are available free of charge from the Small Business Administration. They include *Management Aids, Small Marketers' Aids*, and bulletins on home businesses and on handicrafts and home products for profit. The field offices of this agency have available for reference the U.S. Department of Commerce *Small Business Establishment and Operating Series* and can assist VR&E staff with problems of small business establishment operation and management. Training courses in administration and management of small businesses, provided in cooperation with the Distributive Division of the U.S. Office of Education, are available in some areas for clients of rehabilitation counselors.[2]

Related Considerations

In addition to the total hours of study and practice for the major units and subdivisions of the course of instruction, which are entered on the *Training Program and Progress Record*, planning with respect to time should include an agreed upon weekly schedule which will set forth the hours of instruction and practice or study for each day of the week.

Textbooks and other text materials which the veteran will be required to own and use as a part of his course should be selected and ordered at this time. Information obtained from schools with regard to text materials required for students receiving regular classroom and shop instruction can serve as a guide in the selection of such materials. A correspondence course is sometimes purchased for use as part of a course of training in the home when it provides the veteran with theory or technical information directly related to and functional in the practice of the occupation for which he is being trained.

It has already been noted that adjustments may have to be made in the program after training has begun. Worsening of the veteran's condition may result in interruption, or improvement may result in increased work tolerance and make acceleration of the program desirable. Further informa-

[2] Persons interested in obtaining aid from the Small Business Administration should contact the SBA field offices or write to the Small Business Administration, Washington, D.C., for the most recent list of "Free Management and Technical publications," SBA115A.

tion may become available bearing upon local market conditions and the prospective demand for the goods or services the veteran proposes to sell. The latter situation may develop occasionally because of the original hesitancy of tradesmen to supply full information for the benefit of a possible competitor. The course may prove to be more difficult for the veteran than was originally supposed or he may progress more rapidly than was anticipated. Shortening the duration of the program for the latter reason is appropriate. However, this situation should not be confused with shortening the program because the veteran has learned to carry on a few production operations, which is to be avoided.

Finally, it is necessary to give attention to the coordination of tool and equipment ordering with the requirements of the training program, so that there will be no danger of delay in beginning the successive phases of the program as a result of the lack of essential items.

12. SPECIAL EQUIPMENT AND MODIFICATION OF EQUIPMENT

In the present discussion we are concerned primarily, not with the training equipment which is standard for various occupations but with special equipment and modifications of standard equipment which are required by the veteran's disability limitations.

The kind of equipment which the Veterans Administration supplies a trainee in his home for training purposes varies, of course, with the character of the occupational objective. It does not include additional equipment, beyond that needed for training, which is desirable so that he may increase his production. Equipment for the latter purpose should be purchased by the veteran as income is received as a result of his work. The veteran may find it difficult to start buying production equipment and supplies if he waits until he completes training and is ready to begin business on his own. For this reason, purchasing supplies and equipment from his own funds for production purposes should be stressed with the veteran from the beginning of his program. It is important not only because it will lead to his having made much of his essential capital investment by the time he has completed training, but also for its training value in business planning and business methods.

Initiating action to modify or supplement lists of supplies and equipment which have been approved in connection with training in the home is the responsibility of the vocational rehabilitation specialist designated to supervise the veteran's training. The instructor's advice and suggestions should be considered, but the selection of equipment should not simply be delegated to him.

In some instances no special equipment or modification of equipment is needed, but the question of such needs must be considered carefully in the individual case and a clear answer arrived at, since errors of judgment in this respect may have serious effects on the success of training. For example, a veteran with chronic rheumatic arthritis, who was trained as an ac-

countant, had both hips fused so that his upper body was tilted forward at approximately a 45° angle. He performed the computational and writing requirements of his program from a standing position, and reading was done in a semiprone position. The office where he was trained later stated, "When a suitable work table or desk could not be located at an established office equipment company, one should have been constructed to specifications by a local cabinetmaker. By having to stand while performing certain training operations, the veteran tired more quickly and this affected his training progress." Furthermore, it is important that equipment needs be determined as early as possible and that necessary equipment be obtained and modifications effected promptly to avoid the possibility of delay in initiating the program or of causing an interruption of training. Modifications of equipment may be suggested by adaptive devices used by the veterans to improve functioning in his home.

> **Well before training was started the veteran had installed a planer, jigsaw, turning lathe, band saw, drill press, sander and portable electric drill. All handtools were furnished by the VA. Benches for power tools, workbenches, and assembly tables were built by the veteran with the guidance of his trainer. They were set at heights which would permit working from a wheelchair.**

One office reports that it has provided materials to cabinetmaker trainees to construct desks and workbenches needed by other veterans training in their homes as well as arranging for printer trainees to print business cards and announcements used by other homebound trainees. Modification and adaptation of equipment is sometimes done by the instructor. In some areas it is possible to arrange with local vocational schools for the construction of workbenches and similar items at a cost equivalent to the value of the materials. In other instances it is necessary to engage the service of local tradesmen or to purchase special equipment from commercial sources.

Adapting Equipment to Limitations in Mobility of Lower Extremities

Paraplegic and arthritic veterans training for occupational objectives such as watchmaker, radio or television repairman, electric appliance repairman, toymaker, and the like often require especially constructed or adapted workbenches in order to have a workspace at appropriate level or to be able to approach the bench in a wheelchair.

> **The veteran was supplied with a specially designed and constructed workbench which had to be built chest high, with carved out front to enable him to work without bending his back.**
>
> **The veteran's home contained a workshop with an especially constructed workbench. . . . A 3′ x 4′ blackboard was purchased through the VA and provided for use by the instructor in diagraming and illustrating circuits and component parts of radios and television sets.**

Furnishing a blackboard as in the last example above is not, of course, based upon the veteran's limitations, but is appropriate in view of teaching requirements of the subject matter and the fact that the place of instruction was not supplied with such aids as a schoolroom would be.

The trainee's workbench may need to be supplemented by low stands or tables, which may be either fixed or movable.

> A special bench, and appropriately designed and conveniently arranged machine layout, permitted (and now continue to make possible) ease of machine handling during all months of the year. Power tools were mounted on low stands so the veteran could operate them from his wheelchair. Machines included a wood lathe, drill press, table saw, jigsaw, jointer, planer and grinder.

The arms of a wheelchair are sometimes removed to permit it to fit under a workbench. When this is done for a paraplegic trainee, it is necessary to be sure that his legs or feet cannot be chafed by contact with the legs on sides of the bench, and that there is no possibility of burns from hot water or steam pipes located out of sight under the bench. Other modifications and attachments may be required.

> An assembly-line type of work operation was established. The workbench was constructed of uniform height. A built-up swivel-type office chair was put on casters so that all work tasks, including lifting, which did not exceed 10 pounds, could be done in a sitting position.

For paraplegics, substitute controls must be installed to take the place of pedals or foot controls which are normally found on sewing machines, watchmaker's lathes, etc.

> Special equipment included general leathercraft tools, fluorescent desk lamp, and a heavy-duty sewing machine which was furnished the veteran. An adaptation was necessary for operation of the sewing machine, since it is normally foot controlled. A foot pedal was removed and a lever was constructed from an airplane spare part and attached in a position where the veteran could operate and control the machine by pressure from his right forearm.

The following detailed description tells how the operation of a sewing machine can be converted from foot to arm control:

> A paraplegic veteran to be trained as a Tailor I will need a tailor's sewing machine. This machine is manufactured especially for the tailoring business and is operated by means of a foot treadle which actuates a clutch setting the needle in motion. Conversion from foot control to arm control can be done locally by any good mechanic or machinist.
>
> A wooden board 5 inches wide by 36 inches long is hinged to the front top of the machine stand. This will place the board directly under the veteran's forearm while he is working at the machine. The board is fastened to the top of the machine stand with hinges, preferably screen door hinges, which have a spring. A metal angle iron 1" x 1" is fastened to the left rear leg of the machine stand and is pivoted at the top of this leg so that it will move up and down. The angle iron runs to the front of the machine up against the underneath side of the machine stand and the hinged board. The iron should be approximately 1 inch shorter than the total width of the machine. This metal angle iron is held up against the underneath side of the machine stand and hinged board by a coil spring pressing upward against the flat surface of the angle iron. The coil spring is held in place by a metal bracket.

The upper side of the bracket which holds the coilspring is fastened to the underneath side of the machine stand, and the lower vertical part is fastened to the left front leg of the machine stand. The coil spring rests on the metal horizontal part of the bracket. The center of the bracket under the coil spring is threaded to receive a machine bolt. The bolt is screwed to the bracket, a nut is added, and a washer is placed on top of the nut. The washer is slightly larger in diameter than the coil spring. By adjusting this bolt upward or downward, tension on the spring can be increased or decreased.

About midway of the angle iron running from the left rear leg to the front edge of the hinged board, a hole is bored large enough to admit a ¼-inch steel rod. This rod can be made from a welding rod. The rod has a turnbuckle in the middle, and the other end of the rod is bent into an L-shape and fits into the hole at the end of the brake lever. By adjusting the turnbuckle, the amount of downward movement of the hinged board required to start the machine can be precisely controlled.

The household sewing machine may also be appropriately altered. Such machines are activated by a foot rheostat. A machine stand must be constructed to mount the machine at the proper height. Household machines already available and mounted are not found to be suitable for use from a wheelchair. In modifying the household machine, a hinged board is fastened to the stand in the same manner as it would be attached to a tailor's sewing machine. The rheostat is mounted on a bracket with a control button or lever placed directly in contact with the underside of the hinged board. Forearm pressure on the hinged board will start the machine.

Actual experience has demonstrated that both of the machines described above can be altered and precisely controlled in actual tailoring and dressmaking operations. The household sewing machine is not suitable for tailoring but serves well for the objective of Dressmaker.

Adaptation to Limitations in Manipulatory Ability

Although he may have no specific limitation in hand movement, a paraplegic may find it awkward to carry out certain manual operations in a wheelchair. Following is an instance in which special equipment was furnished for this reason:

> The veteran constructed a workbench under the windows in the shop. This bench was high enough so that he could move close to it with his wheelchair without obstruction. Attached to the bench was a cradle device for holding firmly the appliances being worked on. This also was maneuverable through various arcs to permit easy access to any part by a seated person. A special vise permitting easy rotation was similarly located. Also, racks and shelves were so constructed as to hold necessary hand tools and instruments without more than occasional movement away from the bench by the veteran.

Many items of special equipment are manufactured for quadriplegics and other manually disabled persons, some of which are described below.

> Typewriters are manufactured for the use of individuals with one arm, and typing manuals for one-armed typists are also available. The prosthetic appliance and brace shops at the various VA hospitals are in a position to manufacture and furnish to individual veterans prosthetic aids which will enable the individual to perform certain functions which his disability would otherwise prohibit. Examples are: gloves and accessories used by quadri-

plegics to drive automobiles; devices to enable the individual to hold such items as combs, razors, forks, etc.; special gloves and accessories which enable the veteran to do typing. There is available a prosthetic aid which fitted to a quadriplegic's hand, will permit him to pick up an object with his thumb and finger. This aid is operated by means of a cable which runs up the arm and is affixed to a strap which fits over the veteran's shoulders.

The next example describes adaptations of telephone equipment made for a veteran training as a telephone salesman.

Special equipment secured from the telephone company eliminated the use of the receiver and enabled the veteran to use the telephone independently. This included a microphone and speaker, whereby the veteran could carry on a telephone conversation from any place in the room without being near the instrument, and an attachment through which the dialing process was handled by a special operator contacted by the veteran's moving a switch on his set.

Other adaptations of equipment to meet special needs are illustrated in the next several quotations:

The veteran was furnished an automatic loom as an item of special equipment for training purposes. The loom was equipped with an automatic fly shuttle and was selected over a hand loom, since the veteran had limited use of his left hand.

Benches and cabinets were located at convenient heights to facilitate the veteran's printing operation while at work in his wheelchair. The handle of the press was equipped with a special counterweight to reduce the amount of effort necessary to operate the press by hand.

The following paragraph describes methods for adapting saw filing equipment so that gross movements can be substituted for the fine hand movements ordinarily required:

Quadriplegics may be trained on saw filing machinery if certain alterations are made. For example, all fine movements such as turning knobs or dials must be converted to gross movements. A knob ½ inch in diameter may be converted to a T-handle by drilling a hole horizontally through the knob and inserting a pin 2 or 3 inches long. On a hand-operated wheel which an individual must rotate to center or set a machine and which has one handle, additional handles may be added at 90 degree intervals around the circle.

On automatic saw sets and automatic retoothers, mechanical parts and devices can be constructed and added to the machines which will hold the saw in place while being retoothed or set.

In the following instance an engravograph jewelry engraving machine was altered for the use of a quadriplegic who had limited use of both arms and hands but no movement of his fingers.

A stand was constructed to hold the machine which would enable the veteran to have access to it in his wheelchair. The machine was tilted slightly to the front to make working conditions more suitable. The pressure control lever was lengthened, and a device was attached to the left front leg to hold the pressure control lever at the desired pressure. Knobs and other controls on the machine which were too small were enlarged and converted. The veteran demonstrated that he could do machine engraving satisfactorily.

Some of the operations of a gunsmith, as performed by trainees whose manipulatory ability is severely limited, are discussed in the next paragraph.

> Quadriplegic veterans with some gross movement of their arms may be trained as gunsmiths and stockmakers if adequate special equipment is properly mounted and appropriately altered to compensate for the veteran's disabilities. After a gunstock is drafted on a rough block of wood, it can be sawed to approximate shape on a band saw. Using a drill press with wooden bits, mortising chisels and sanding drums, the rough stock can be sanded to correct proportion and the inletting work can be completed. A great deal of the inletting work can be done by using wood bits and mortising chisels. All machinery, especially power machinery, must be mounted at a suitable height for the individual and properly placed in the shop so that the veteran has easy access to each piece of equipment. In placing the machinery in the shop, it is also essential that adequate work space be available. Stands or tables for mounting machinery should be constructed from wood by the veteran and his instructor, if they are qualified to do the work. This will provide the veteran with valuable experience in the basic fundamentals of any trade where woodworking is an integral part of the training program.

Some offices have reported successful experience in providing special equipment in kit form.[3]

> In every instance where satisfactory special equipment is available in kit form, such kits should be furnished, and the construction of the equipment should be made a part of the training program. An example would be Heath Kits, manufactured by the Heath Co., Benton Harbor, Mich. These kits are primarily for the construction of electronic testing equipment and are suitable for use by trainees in radio and television repair and servicing.

Adaptation to Sensory Limitations (Blindness)

The following two examples illustrate special equipment and adaptations of equipment used by blinded veterans:

> The special equipment provided was a Gallinger loom complete with accessories, a bobbin winder, scale, bench, extra heddles, and one extra reed. A warp winder designed by the instructor and the veteran was constructed at this station by the station engineer and station carpenter. This was a labor-saving device which enabled the veteran to wind his own warp with a minimum of assistance and reduce the time necessary for this operation to a considerable degree.

> Special equipment provided was a recording machine which was used quite intensively in recording radio discussions and speeches made at farm meetings. A method of checking egg production from each cage was devised by putting a short blackboard at the top of each one. Twelve nails were driven in each of these boards and at the beginning of each week, a clothes pin would be moved over to indicate the number of eggs taken from the cage. There were two layers to each cage.

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[3] Other manufacturers of kits in addition to the one mentioned in the excerpt are: Allied Electric, Inc., 100 North Western Ave., Chicago, Ill. (Knight Kits); EICO, 3300 Northern Building, Long Island City, N.Y.; and Paco Electronics, Inc., 7031 84th St., Glendale, Long Island, N.Y.

Carrying Out The Vocational Plan

13. PROVIDING ASSISTANCE DURING TRAINING

Once he has begun an approved vocational rehabilitation training program with an individual instructor, it is not safe to assume that the veteran who is training in his home will move easily and directly to completion of his program, or that nothing remains to be done but to contact the veteran monthly, review his progress, and arrange for a formal declaration of rehabilitation at the end of training. A student with a serious disability who is attending a regularly established school or college is likely to need more attention and help from medical and faculty advisers and from the office of the dean of students than the average student.[1] The vocational rehabilitation specialist who has been assigned to supervise the training of a veteran in his home usually must provide comparable assistance, either through his own efforts or by calling upon the resources of the VA regional office or hospital or of the community.

Frequency and Character of Supervisory Visits

Compared with most other trainees, it may be anticipated that a veteran training in his home will need to be visited relatively often, especially at the beginning of the training period. The criterion for frequency of visits is whether the veteran is receiving the help and attention which he needs. When it is possible to maintain contact with the veteran or the instructor by telephone or correspondence, it should be possible to schedule travel for personal visits more effectively and economically. However, if there is uncertainty as to whether the training is progressing as planned or the veteran is in need of help, it is wise to be in a position to anticipate the solution of problems before they become serious. For this reason, with a veteran who is so severely limited by his disability as to require training in his home, visits are usually scheduled at least once a month when there is no known reason for more frequent visits.

Written records, observation of the veteran's work, discussion with the instructor, and periodic interviews with the veteran during the course of his

[1] See "The facilitation of the education of the physically disabled college student," by Margaret E. Condon, *Rehabilitation Literature*, September 1962, 22: 266–274, 281; and *Guiding the Physically Handicapped College Student*, by Herbert Rusalem, Bureau of Publications, Teachers College, Columbia University, 1962.

training are important in the supervision of the training situation. In the face-to-face situation, it is possible to receive and give information, review the trainee's progress with him, and learn what further specific assistance may be necessary. To be of the utmost assistance and to assure success insofar as possible, the training specialist must establish a working relationship of mutual understanding and trust with the disabled person. To do this he should know as much about the veteran, his disability, his likes and dislikes, his successes, his frustrations, and his family relationships as it is possible to know.

The vocational rehabilitation specialist must feel a keen sense of responsibility for the success of the veteran's program. Anything short of this is not enough, for the seriously disabled person is sensitive to the feelings of those who work with him. Once a sincere and friendly, businesslike relationship has been established, each visit of the worker to the veteran's home will provide an occasion in which the latter can express his understanding of the most recent aspects of his training and the changes he himself is going through—his progress in acquiring new skills, and changes in his thinking and feeling about his disability and his potentiality. Acceptance of the trainee's attitudes and feelings makes it possible for him to achieve a necessary catharsis. The use of this approach is not inconsistent with maintaining appropriate control of the interview, using open-ended questions to insure that necessary topics are covered, and setting appropriate time limits to the interview. If there are problems which require more extensive discussion and there is no pressing need for an immediate solution, it may be desirable to arrange for continuation in another visit rather than to prolong the interview unduly.

For one who has been working intensively with a veteran to limit the number of contacts or abruptly alter the character of the relationship with the veteran once instruction has begun would be to ignore the self-doubts and complexity of motivation which frequently plague the severely disabled person. Prior hospitalization has enforced a period of dependency. For help in planning and initiating his training program, the veteran who must train in his home frequently is dependent, in fact, upon the vocational rehabilitation specialist's encouragement and belief in him at a time when his own unreinforced self-confidence is low. Abruptness in terminating or changing the character of this relationship may cause the veteran considerable uneasiness. However, this does not mean that the worker should be complacent about the character of the relationship.

The veteran's growing self-reliance usually shows itself in an initiative in applying what he has learned from instruction in the basic processes of the occupation to various practical work tasks, in the ideas he expresses for improving his work and for finding outlets for his products and services, and in his effort to keep his shop shipshape and his equipment in good condition. The veteran's increasing confidence in his instructor and experience of initial success in training should result naturally in decreased dependence

upon the vocational rehabilitation specialist. If this does not occur spontaneously and if the veteran does not show appropriate initiative, the goal of independent status as a producer and steps necessary to achieve it should be considered with him on successive visits.

Further action occasionally may be needed to "wean" the trainee from inappropriate dependence upon the vocational rehabilitation specialist. For the latter gradually to work himself out of the picture in such a situation may be both beneficial to the veteran and appropriate in terms of releasing time for new cases. It is possible to arrange for the vocational rehabilitation specialist or counselor who is to assume responsibility for supervision to substitute in making one or more visits during a transition period.

It is to the advantage of the veteran, as compared with the clients of agencies with more restricted resources, that the VR&E worker's activities and reports are themselves subject to review by his supervisors in the regional office VR&E program. In addition to assistance which the vocational rehabilitation specialist obtains on his own initiative from other staff members of the regional office, the veteran's reported progress is regularly reviewed and evaluated in the light of the experience and knowledge of senior staff members.

Services Related to Successful Completion of Training

Some types of assistance which are essential to accomplishment of the veteran's goal are considered elsewhere in discussion of the selection and role of the instructor, preparation of the training program, provision of special equipment, and developing a market for the veteran's goods or services. In general, in those and other areas, the vocational rehabilitation specialist assigned to supervise the training of the individual veteran is responsible for seeing that all necessary and appropriate arrangements are made. However, whether specific actions, for example, with respect to obtaining supplies, servicing equipment, or aiding in establishment of sales outlets, should be initiated or carried out by the veteran, the instructor, or the vocational rehabilitation specialist will depend upon circumstances in the individual case. The nature of contracts made at the time of the community survey or of other information available to him may enable the last named to make arrangements that neither the veteran nor the instructor could initiate readily, if at all. Furthermore, it is desirable for suppliers, potential customers, and the community in general to know from contacts with the training specialist that the veteran is receiving substantial training and assistance through the Veterans Administration, and that his enterprise can be expected to be a sound and continuing one.

The vocational rehabilitation specialist's background and experience and his knowledge of the effects of the veteran's disability and of the problems encountered in training other veterans in the same or related objectives enable him to gage the trainee's progress and the adequacy of the instruction which he is receiving. If the instructor is not an experienced

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teacher, problems encountered or anticipated in the course of instruction and preferred methods of presentation may require discussion, as in the following example:

> **The instructor hired was the foreman of the veteran's former on-the-job training facility. He was highly qualified from a craftsman's standpoint, although unskilled as far as formal teaching ability was concerned. To compensate for this, the training supervisor and instructor worked out the training program jointly. The supervisor then sat through the first two instruction periods and in a separate interview discussed with the instructor ways and means in which his instruction might prove more beneficial.**

Knowledge of disabilities and their effects is of special importance in view of the usual severity of the condition when training in the home is required, the fact that most such trainees have a limited work tolerance and the relative frequency of interruptions for rehospitalization or because of illness. For instance, in the planning of physical arrangements, the training specialist must be sure there is no possibility that the paraplegic will be burned by contact with undercounter steam or hot water pipes. He must be able to convey a clear understanding of the characteristics and limitations of the veteran's disability to the instructor. He must be sure that the planned schedule and the work routines developed by the trainee do not violate established work tolerances. He must be constantly aware of the veteran's medical status and needs so that changes in respect to them can receive appropriate attention through referral to the medical consultant.

There is also an important area of cooperative action with medical and hospital personnel with respect to medical supplies and equipment. The worker may be able to assist a homebound veteran by calling the hospital prosthesis section regarding needed adjustment of a prosthesis, or even to take needed medical supplies with him to the veteran's home on the occasion of a visit. Similarly, he may facilitate other types of assistance which the veteran needs, through the working relationships which he has with other specialized VA personnel. For example, the assistance of the Supply Officer is necessary in the purchase of special types of equipment, and correction of some inadequacy of arrangement in the specially adapted home of a paraplegic veteran requires the attention of the Loan Guaranty Division.

Adjustment of the Training Program

Not only must the program for training in the home be planned to fit the characteristics and circumstances of the individual homebound veteran, but also it may be necessary, in some instances, to change the program to accommodate to changes in the veteran's situation and circumstances. Such modifications are most frequently caused by interruptions of training due to illness or rehospitalization, or by changes in the veteran's work tolerance. As illustrated in the following examples, work tolerance may be either increased or decreased, depending upon the character of the change in the veteran's physical condition. Other circumstances occasionally require an extension of the schedule beyond that originally planned.

A training period of 8 months was originally agreed upon, but was later extended to 18 months due to repeated hospitalization of the veteran and severe limitation of his ability to devote time and effort to his training while at home. He began doing repair work for customers approximately 3 months after he began training. A permanent work tolerance of 25 hours per week was in effect during the entire training period. Despite all handicaps, the veteran completed the prescribed training program and was declared rehabilitated.

The original training program called for 12 months of training. The medical consultant assigned the veteran's work tolerance as 30 clock-hours per week, 5 hours per day, 6 days per week. The veteran was to receive 10 hours per week of instruction and was to practice 20 hours per week on projects assigned by the instructor. The veteran trained on this schedule for a period of 3 months, when it became necessary for him to be hospitalized for an operation. When he reentered training, the medical consultant assigned his work tolerance as 4 hours per day, 5 days per week, for a total of 20 hours, and considered this work tolerance permanent. The veteran trained for a period of 9 months on this schedule when the medical consultant, on the basis of new medical information, increased his tolerance to 36 hours per week. The training program was shortened accordingly and the veteran completed the prescribed course, after being in training for a total of 15 months and 3 days.

The suggestion of one blinded veteran was reported by a regional office which had rehabilitated him as a cabinetmaker, to the effect that the ratio of instructional hours to hours of practice should be highest in the initial phase of training and should be diminished gradually, with some provision for flexibility from one unit of instruction to another. That an adjustment of the allocation of available time between instruction and individual study or practice is sometimes found necessary is illustrated below.

At the beginning, 10 hours of individual instruction and 10 hours of practice each week were established. Supervised instruction later was reduced to 5 hours a week, and practice was increased to 15 hours per week. The veteran had a permanent reduced work tolerance of 4 hours per day. For a short period it was increased to 6 hours, but it was immediately returned to 4 hours a day when his condition became aggravated.

There are times when revaluation or reconsideration of the employment objective or a thorough revision of the training program may be necessary. It is obvious that extreme care should be exercised in selecting the training goal, orienting the veteran and his family toward the occupation which he proposes to pursue, and planning the training program to diminish the possibility of such an occurrence. The necessity for a radical change in the plan may have a traumatic effect on the veteran and even produce such frustration that it is impossible to lead him to another objective. Revision of the original plan may be required, however, by failure on the part of the veteran to make reasonable progress in training, or by changes in the demand for goods or services in the veteran's community.

Instructors were obtained from the regular faculty group of the university, well qualified in their respective fields, fully cooperative, and with every desire to assist in this veteran's vocational rehabilitation. The

veteran was placed in training in his home in the employment objective of Junior Accountant. The original plan of training provided only for specialized courses to ensure employability. However, conditions changed in the area so that a degree was virtually a "must" for individuals desiring entrance into the accounting field. The program was then revised to include sufficient training for a degree. The full curriculum consisted of 130 credit-hours. The veteran was given full credit for subjects completed prior to military service at the university as well as certain credit for military service. . . . The veteran successfully completed the prescribed training and received a B.S. degree in the School of Business Administration with a major in accounting.

14. DEVELOPING A MARKET FOR GOODS OR SERVICES

The groundwork for developing a market for the veteran's goods or services is usually laid at the time of the community survey. Negative information regarding the possibility of marketing the products of a particular occupation is a contraindication for the choice of that occupation. Conversely, when the available information indicates the existence of a potential market, that information also carries implications as to what needs to be done to develop outlets and how to let the community know about them. Throughout the training period, it is the responsibility of the vocational rehabilitation specialist who is supervising training to see that a program of continuous contacts with potential customers is maintained by the instructor, the veteran and himself, so that the veteran will be well established in business by the time training is completed.

The following are typical examples of arrangements growing out of information and contacts developed during the community survey.

During counseling the training officer collaborated closely with the counselor or personally contacted retail sports stores, gun repair shops, military colleges, state and local police barracks, gun clubs and pistol teams in an effort to secure leads for future gun repair work for the veteran and to determine the extent of the market. During the survey and before the veteran was actually inducted into training, the training officer had secured six letters from the above sources stating that they would consider the trainee for repair work done when he completed his training program. This type of survey laid the foundation for a successful rehabilitation after training was over.

The training officer contacted the local PTA and the Lions' Club and got those organizations to back the veteran in his training, and they are continuing to help him secure business in repairing electrical appliances and radios.

With reference to the kind of aid described in the last excerpt, it should be noted that it is desirable to ascertain that something more than a sympathy market is contemplated by civic or veterans' organizations which offer help. Their assistance is most valuable during the training period and at the launching of the veteran's enterprise. Such organizations can be helpful in negotiating contracts for a permanent market through trade sources. However, many organizations will take a genuine interest in a veteran and

provide assistance for a limited time, but will not undertake responsibility for continuous service.

A veteran's initiative in making contacts and the development of his planning for the promotion of his business may be prompted in the earlier phase of his program by the example of his instructor and the training specialist. Their experience as to appropriate timing of various steps in similar programs will lead them to suggest and develop arrangements necessary to supplement his training and further his ultimate business success. For example, an instructor in accounting may first arrange for the trainee to work on accounts which remain the instructor's responsibility and later turn accounts over to him to be done under general supervision. In another situation, an instructor who also teaches in a vocational school may arrange for work to be sent to a veteran trainee from the same sources that provide work projects for classes in the school. Whatever is done with respect to obtaining work or setting up projects to provide the necessary production experience as a part of training is likely to be significant in the subsequent development of the veteran's market. Some of the examples cited in the next several pages, as well as case excerpts quoted elsewhere, indicate that the veteran's business following completion of training has frequently grown from such beginnings.

The Diversity of Possible Marketing Arrangements

Most of the veterans whose occupations are reported in this study are in the position of marketing services or goods to individual consumers. The small scale of their enterprises, as well as the lack of a margin for multiple middleman profits, generally precludes the use of wholesale distribution channels. The amount of space required for the display of goods or the fact that the veteran has a particular kind of service to offer will influence the selection of sales outlets and methods in the individual instance. The circumstances of the veteran and the characteristics of potential customers must also be considered. One such factor is the availability of needed display space in the veteran's workroom or elsewhere in his home. The advantage of locating displays where customers regularly go for shopping, recreation, or other purposes must be balanced against the need for additional capital and the requirement of at least limited mobility, if the veteran plans to set up his own shop away from his residence.

The following excerpt describes an instance in which the veteran has established a separate shop outside his home:

> The veteran has been self-employed since his rehabilitation August 15, 1948. He has set up a gift shop in the center of the town near a large resort hotel in which he sells his own products and other hand-crafted articles produced in the State. He keeps the shop open during the summer and fall months and during the winter spends his time weaving products for sale during the summer months. He also has a loom set up in the shop during the summer which he operates a good part of each day. His wife assists him in the operation of the shop and this continued operation is undoubtedly dependent to a

large degree on her assistance. According to his statement, he is enjoying excellent business in the shop and is selling all of his products that he is able to weave.

In establishing outlets at places where customers are likely to be found, such other arrangements have been made by veterans as obtaining a counter for gun repair work in a sporting goods store and setting up a workbench for repair of jewelry in a tavern. Agreements with department stores and jewelry stores to do the repair work they take in are made quite frequently by veterans trained as watch repairmen. These and other establishments also serve as pickup stations for veterans who do other kinds of repair work, take orders for various types of products, and sell goods on consignment. TV shops often have enough television repair work so that they are glad to farm out some of the radio repair work which they receive.

The training officer had calling cards and showcards printed for the veteran by a trainee printer. Approval was granted by certain hardware and furniture stores to place these showcards in their stores indicating they would accept lawnmowers and bicycles for repair, which the veteran does on a percentage basis. The instructor, who maintains a business of the same nature, recommends clientele to the veteran. The outlook for continued success is good. . . . The only assistance the veteran receives is the help of his sons in delivery and pickup of lawnmowers.

Arrangements are also possible by which the sale of a veteran's product or services can be tied in as a sideline to the work of solicitors or salesmen in noncompeting lines. For example, the wife of a paraplegic veteran was able to arrange for the drivers of bakery trucks, at the place where she was employed as a secretary, to obtain watches from their customers for her husband to repair. Similar arrangements have been made with milk route salesmen. When the services of an intermediary are necessary, it should be noted that the experience of most offices indicates that for a wife to serve in this capacity is likely to be a more permanent arrangement than when another member of the family is involved. Other relatives are likely to develop more pressing family responsibilities and often have to change their plans and working arrangements.

In some circumstances it is advantageous for the veteran to purchase stocks of items for repair and resale, as in the following instance:

The sale of his services was well underway by the time one-fourth of the program was completed. Almost from the beginning, the volume of work in the repair of watches and clocks has met his physical capacity for production. Since finishing the course, several sizable stocks of used watches have been purchased and then repaired and marketed through retail outlets in the community. Pawnshops and welfare stores are sources for the procurement of secondhand watches and clocks which are oftentimes purchased in large job lots. Sometimes they are paid for by the repair of a certain number of total watches and clocks. Some of his products are sold to stores that cater to military personnel and Mexican dealers. This former trainee receives a great deal of satisfaction from his work, and he can set his own hours of employment as he sees fit. He is not dependent upon any one to assist him in any way. The outlook for continued successful operation is bright.

Arrangements were made with a furniture company to provide the veteran with broken lamps and minor appliances for repair. He also received a variety of small appliances for repair from friends and neighbors. He charged for new parts and added a fee for labor costs. This work increased during the following months as jobs came in from commercial sources. He also bought used electric motors, ¼ and ⅓ hp, rewound them and sold them.

An example is given below in which referral of customers for a veteran's services is made through the instructor, who had more customers than he could take care of.

Thirteen months after the start of training, the veteran had acquired a set of accounts from a local furrier and then 2 months later, he took over another set of accounts. In addition, the instructor continued to furnish additional work to the veteran. At completion of the training program, the veteran had four permanent accounts with several additional smaller ones available when he had time. Even after rehabilitation, the veteran continued to work with and for the instructor. He has worked steadily as an accountant since his rehabilitation in January 1954. The recent contact with him revealed that he is working to the capacity of his physical limitations.

Letting the Community Know

The time to start letting the veteran's community know about the services he will have to sell is at the beginning of his training. Especially in rural communities and suburban neighborhoods, information spreads through informal channels. The wider the circle of friends and acquaintances the veteran and his family have, the more free advertising he will receive. While it is not wise for the veteran to restrict himself to such methods alone, there are instances in which a veteran's principal method of promoting the sale of his product has been word-of-mouth advertising, supplemented by the favorable recommendations of persons in a position to know his work.

The veteran has been self-employed as an Electric Appliance Repairman for more than 2 years and is very successful. He has advertised in the local papers of his home community and in surrounding towns. He has erected a large and attractive sign in front of his home. He relies, however, more on the advertising furnished by satisfied customers.

About halfway through his program, the veteran began to sell his services, starting by doing developing and printing, and then taking pictures of the local high school students. He has been doing such work as single and group high school pictures, commencements, pictures of children and other individual portraits. He also has done refinishing and oil coloring. The veteran did not have to do any advertising as new work was procured from recommendations by satisfied customers.

If the veteran has any mobility for travel, he should make a point of contacting personally potential customers, suppliers, and other businessmen, whose good will he needs. Telephone solicitation of accounts is used especially by bookkeepers and accountants. Mail-order solicitation and the use of mailing lists to distribute announcements or brochures is sometimes useful.

Setting up a sign in the yard is an obvious device to use when the veteran has proceeded to the point that he has goods to sell or is ready to charge for his services. Printed cards are frequently used for distribution. It is sometimes possible to arrange for them to be made by a veteran who is in training as a printer and who is willing to be paid in kind. Such cards may be left in stores and other public places, posted on drugstore bulletin boards, or exhibited on the bulletin board of a nearby VA hospital.

The use of local stores as outlets has been discussed. Some types of business which use little display space themselves will permit a veteran's products to be displayed in their windows without undertaking responsibility for sales. Such display space may also be found in the lobby of the local library or YMCA. The meetings of the Kiwanis, Lions', and Rotary Clubs and other organizations provide opportunities for special displays. The possibility of displaying art and handicraft items in community art exhibits should not be overlooked. Some community health organizations maintain shops which sell the work of handicapped persons or organize sales of such work by their volunteers at Christmas and on other special occasions.

Frequent use is made of advertising in newspapers, in magazines with regional circulation, in telephone directories, and in other special-purpose publications. Most regional offices make the completion of training of a veteran who is going to operate his own business the occasion for a VA news release. A description of the services which can be provided by such a veteran may be included with other news and announcements in radio-broadcasts sponsored by the Veterans Administration.

> The veteran has been self-employed in the occupation in which he trained since rehabilitation. He had a sign made advertising the repair of electrical appliances and radios. In addition, the large general store in this rural community, which sells appliances, agreed to allow the veteran to do their repair work. The veteran, on his own, made extensive telephone calls to homes indicating the services he is able to render in this community. He has found that the field of repair of car radios is more lucrative, and he secures about all of this kind of business that he can do. The veteran does not depend upon anyone to assist him in the work which he is doing, except on car radios, which are dismounted before they are brought to him for repair.

In the next example the oustanding fact to be noted is the number and variety of methods employed by the veteran in making his business known to potential customers.

> The veteran (who was trained as a letter engraver) has developed a steady demand for his product through advertising media, direct and mail order solicitations, competitive bids, arrangements with salesmen of products suitable for special engraving, and display of his wares in community art exhibits.

Cultivating the Customer

As in other businesses, the reactions of customers are determined by such factors as promptness of service, adequacy of stock, and whether the shop

or office they visit is clean, has an orderly arrangement of goods and equipment, and presents attractive displays. Customers recommend a business to their friends which caters to their special needs, interests, and preferences. In rural communities, when a veteran is known personally to his clients or customers, allowances are made for his disability and even for his personal idiosyncrasies. This is less true in more populated areas and where there is more competition.

Elaborate methods of market analysis may not be justified in businesses of this size; but through conversation with his customers and by noting their preferences, the types of goods which sell fastest, and daily, weekly, or seasonal variations in calls for service, the veteran has a basis for planning how to fit his goods and services to his customers' needs. He can decide what specialty or lead items to play up. If his business justifies hiring part-time employees, such observations will provide a basis for deciding whether it is better to have help during regular business hours or at other times.

> The veteran has been self-employed since training was completed. In addition to radio repair he has, through self-study, qualified for television repair. He operates a shop on a main thoroughfare. The shop is well equipped, and he carries a good stock of accessories for both radios and television. Although he can perform practically all the work independently, his wife assists him in the shop on a part-time basis. He has an arrangement with an employee of the telephone company (a qualified television repairman) who makes his outside calls in tne evening.

Pricing of goods and estimating repair costs normally should be taught by the instructor along with other business methods. In general, the veteran must approximate a standard price for standard products or units of service. If the price is too high, customers will not return. If the price is too low, competitiors will feel that the veteran is trying to undercut them and take unfair advantage, and it will be impossible to maintain the mutually amicable and helpful relations with them which are to the veteran's advantage.

The preceding comments with respect to pricing should be interpreted with an understanding of the fact that customwork, individualized styling, and originality of design command a special price. How much higher this may be will vary with the locality and will depend upon the potential demand for unusual quality and the ability of customers to pay for it. The following excerpt is from the record of a veteran who is producing for such a specialized market.

> Arrangements were made for the veteran while he was in training to market some of his manufactured items through jewelry stores in the city. In addition, his service-organization affiliations have disseminated the knowledge of his skills and originality of manufacture. He has been self-employed successfully for 6 years and states that the outlook for marketing of his products continues to be good. He mentioned that customers who have the wherewithal to buy his individually designed and carefully handmade creations, have been especially obliging in sharing with their friends, acquaintances and relatives the unique source of supply.

In all large cities there is a market for artistically designed handcraft items, as is evident from observing the goods displayed in specialty shops and department stores which cater to the luxury trade. If the veteran aims to manufacture for this market, which is sensitive to factors of quality and style, it is desirable to obtain the advice of professional buyers or other qualified persons, unless his training includes instruction in design. A person who has no special aptitude or training in design, and who has not studied this market carefully, is in serious danger of failure if he assumes that his personal preferences necessarily coincide with the preferences of his customers, or if he limits himself to stereotyped models or styles.

The success of souvenirs and novelties, which have a somewhat different market, also frequently depends upon their originality or uniqueness. However, they ordinarily must compete with low-cost items which are sold with a small margin of profit. The question needs to be considered whether such items can be manufactured in large enough quantity in a one-man shop to be profitable. However, this is a question which must be answered in any particular instance by weighing all relevant factors in the same way as in considering other plans suggested by the homebound veteran's situation.

15. DEVELOPMENT POSSIBILITIES FOLLOWING COMPLETION OF TRAINING

Ordinarily completion of training in a trade or other occupation will be followed by work in that occupation. However, with disabled and nondisabled workers, some sort of work progression frequently occurs, either in the same or a related field. Small business enterprises often develop a sideline, especially in rural areas, and the pursuit of an occupation may lead to unforeseen opportunities in more or less closely related work areas.

In providing vocational rehabilitation for seriously disabled veterans in their homes, one of the goals is to enable them so far as possible to develop a degree of independence in work and living comparable to that of nondisabled persons. It is desirable that they have a background for judgment and planning to deal with contingencies which may arise in their later work and business experience. This is a further reason, in addition to those already discussed, why specific training in business methods necessary for the operation of a small business should be included in the total program of vocational rehabilitation. It is also appropriate that veterans training in their homes should have pointed out to them, in the course of their training, some of the more practicable possibilities for expansion of their work into related fields.

Numerous instances have been cited of successful self-employment in an occupation as planned at the time the veteran's training program was formulated. Our purpose here is to consider development possibilities which are less typical and which cannot be fully anticipated in the early planning of the program, and sometimes not until training is completed. They include favorable developments, as illustrated by examples of work progression, and

the kind of branching out into more or less related fields that has occurred in the careers of some veterans trained in their homes, as a result of their becoming established as working and functioning members of their communities. Some of the problems and obstacles encountered in the early stages of the veteran's career as an independent worker following completion of training are also considered, together with the kind of followup contacts and services which are needed.

Adapting to New Circumstances and Opportunities

Broadening of a veteran's work experience in the early stages of his successful pursuit of his occupation may consist simply of developing outlets, products, or related activities which were not specifically anticipated during his training period, as in the following instance:

> **Within a few months after completing training, a change in production schedule virtually eliminated the original furniture company from sending upholstery work to the veteran. However, somewhat the same type of work was shipped to him by another company, and he continued to supplement his income by doing upholstery jobs for individuals in his community. The veteran continues to be self-employed in the objective for which he was trained, namely the repair of furniture and upholstery. He has developed a clientele among people in his community who learn of his work from others. This clientele has been built since he dropped his subcontracts with furniture companies a few months after completion of training.**

When the occupation in which the veteran trained does not provide enough work to keep him busy, adding one or more related sidelines is a method of increasing his business. Sometimes the latter becomes the principal part of his business.

> **The outlook for continued successful operation of the veteran's business as Radio Repairman and TV Serviceman is good, since he has added to his operation the repair of small electric appliances.**

> **The veteran has been self-employed as a Clock Repairman for 2 years. He advertises his shop in the classified pages of the local telephone directory and in the local newspaper. Two of the largest jewelry stores in the community refer all their clocks to him for repair. While this veteran is not licensed in this State as a Watch Repairman, many customers leave watches with him. In turn he refers these watches to a local watchmaker and receives a commission on the work. The veteran also repairs electric razors, carries a line of clocks, costume jewelry, watch bands, leather goods, and small electrical appliances which he sells on a retail basis. No outside assistance is now needed, and it appears that the outlook for continued success is good.**

Employment in Less Closely Related Work

Sometimes a sideline is chosen for some reason other than its relation to the individual's principal occupation, as in the first excerpt below, which is taken from the record of a paraplegic veteran who is an accountant. In some instances the main occupation and the sideline complement each other in that the contacts made in one type of work help to promote the other phase of the veteran's business.

Through investigating a hand-operated driving mechanism, he has obtained an agency for this device. Some of his time is devoted to promotion of this product with some degree of success.

Following completion of training as a Toy Maker, the veteran is successfully employed as a manufacturer of unique, custom-made products. Subsequent to his vocational rehabilitation, he also has taken over an insurance agency, dividing his time between pursuit of novelty manufacturing and the sale of insurance. It is worthy of mention that contacts involved in one occupation frequently result in the veteran's accruing further profitable business in the other. Wood products made are usually ordered in advance and are styled for individual sales. Sales are made through church, club and civic organization marketing channels. The veteran sells life, automobile, and property damage insurance. His prospects and customers are in the environs of his home, largely within a 50-mile radius. Because of disability compensation and modest personal demands, his working hours and occupational activities are at his option. He enjoys his work and especially his personal contacts with individuals. His business ventures are satisfying, secure, and permanent, with the extent of his business income from each activity dependent upon the amount of time he is disposed to spend.

Some veterans who were trained in their homes have shown marked initiative in applying their skills to related fields and a capacity for management beyond the scale of the one-man enterprise.

During the last few weeks of training, contacts and referrals were made by the training officer to secure business or employment for the veteran as a Survey Worker and/or Telephone Solicitor. Employment acceptable to the veteran was located with a magazine subscription agency. The veteran worked approximately 6 months for this agency, and for the past 14 months he has had control of it. Earnings have been very satisfying to the veteran, and he expresses confidence for a continued increase in his income. Prospects for sales are furnished from subscription expirations from a well-known national publisher. The veteran also solicits business through neighborhood newspapers and by direct mail. He has found a good source of income through contacts made with doctors and professional people who subscribe to magazines for their waiting rooms. He now employs other people on a commission basis, as his work capacity does not permit him to keep up with referrals. The veteran works unassisted in calling potential customers and then depends on his wife for keeping records and preparing necessary correspondence.

In the example below, the veteran appears to have valued his original type of work primarily for the range and variety of personal contacts which it made possible and also because it opened opportunities to engage in other activities which, in turn, provided a still greater range of personal contacts. This is no different from what happens with nondisabled persons who have a similar orientation of interests. The danger should be noted, however, that disabled persons who pursue such a course may exceed their physical limitations.

In 1953 the veteran was asked to build display counters for one of the large local sports centers. His work in designing and building these cabinets attracted the attention of many people visiting this center. The veteran also became interested in owning and operating the establishment. He pur-

chased and operated it for approximately 3 years, doing a very successful business. The veteran liked the business operation and made many friends through contacts with customers. He was continually making or designing some new item that could be sold in the sports establishment. In 1956 the veteran's general health became so poor that his physician advised him to discontinue the operation of the shop. He sold it with the understanding that he was to remain in the shop and work as long as his health would permit. Although his physical activities are limited, he seems to derive much pleasure from his work and from associating with the customers. He feels that the training he received has resulted in his successful rehabilitation. He is well adjusted in all areas and seems to get much pleasure out of life.

The Need for Followup After Completion of Training

Consideration of successful outcomes of training should not obscure the fact that a handicapped veteran's business or employment may not necessarily *start out* as a full-fledged success. As with nondisabled individuals, a favorable picture emerges only after experience has been gained, a reputation established, and some adjustment made. General experience indicates that a veteran is more likely to encounter reverses and obstacles at the beginning of his business career than at any subsequent period. For this reason, a followup survey of the veteran's situation should be made within a few weeks of the date when he completes his training. The number of additional followup contacts to be made during the next half year will be determined by the findings at this time and by the evident needs of the veteran if he has encountered problems which he is not capable of meeting by himself. The investment of time and money which has been made in his training and the return on his further efforts should not be jeopardized for want of experience, which is likely to be his principal lack at this time.

Some of the problems which are found at this stage may be indicated in the form of questions. Is the veteran overoptimistic in his expectations? Is he promising more work than he can accomplish in a given period of time? Does he tend to ignore his physical limitations in a way that may endanger his health? Is he overextending himself in his purchases of supplies, equipment, or advertising?

Or the problems which occur may be of a contrasting character: Is the veteran showing lessened interest and motivation now that he is no longer meeting regularly with his instructor? Is there a need to enlist or reenlist the services of local organizations (e.g., veterans', church, or civic groups, or local chapters of organizations concerned with special types of disability) to convince him that others are interested, and to help him "get over the hump"? Has there been a VA publicity release about the opening of his business? Is he receiving the assistance from his family and other persons which was promised at the time his vocational rehabilitation plan was developed?

Followup contacts may discover a need for specific assistance, or simply a need for the veteran to take an objective look at his situation and think through what he can do about his problems, with the aid of an experienced

person. Many of the steps taken by veterans in adapting their training to changed conditions or forms of work, as described in the excerpts quoted above, were discussed in the planning stage with the vocational rehabilitation specialist who had supervised the veteran's training, either in regular follow-up visits or in informal contacts at the time the specialist was in the veteran's neighborhood for other purposes.

The conditions existing at the time the veteran begins training and upon which his plan is based do not inevitably remain static. The unexpected may occur just when he is most in need of a stable situation in order to carry out his plan. There may be a shift in the competitive situation, a rezoning ordinance which precludes carrying on a business from his home, or the failure of promised assistance to materialize, as in this example:

> **Upon completion of the training program which was intended to enable the veteran to operate his own retail business, it was found that the promises made were not valid. The veterans' organization stated that no space was available in a public building, and the necessary funds to set up a small retail business for the veteran could not be raised. A search for suitable employment for the veteran was begun, and an appointment was secured with an organization hiring handicapped people only. The veteran was hired as a bench worker on aircraft harnesses and cable work. He hired a taxi driver to transport him to and from his home. The situation had a remarkable effect on the veteran's morale, and his domestic relationship improved. After one year of employment the veteran's home training paid off, and the firm transferred him to the office, where he was put in charge of the estimating and cost control section. He is currently working at this job and is so well satisfied that he sold his previous home and bought another one close to his place of work. Daily transportation is provided by taxi. This veteran's future appears to be very promising, and his salary will increase as the company grows.**

The veteran may succeed in carrying out his plan, but finds that it keeps him only seasonally occupied, as in the following instance:

> **Recent contact with the veteran indicated that he is carrying on successfully in his work as a Fly Tier. However, this is a seasonal type of work which keeps him occupied only about 6 months during the year, and this 6-month period is usually interrupted by periods of hospitalization. His physical condition limits his output, which is distributed through sporting goods houses, friends, and tourists. He stated that he has more than enough orders to keep him fully occupied, and business is constantly increasing. He fully intends to keep at this work, since he likes it very much and it gives him a reasonable return for his time. His production requires no assistance from his wife or others, and he finds it possible to make many outside contacts by use of his automobile. Since this is a seasonal occupation, it was recently decided, upon a request from the veteran, to give him additional training in order to qualify him as a Taxidermist. This trade, which is most active in the fall and winter months, together with his present trade, would provide the veteran with full year-round employment, and training is expected to commence within a month or two.**

In another type of situation, a special and limited kind of assistance was needed by a paraplegic veteran who had completed training as an archi-

tect. He was able to obtain related employment, but found that his limited mobility interfered with taking examinations at the place where they were regularly scheduled, in order to qualify for professional recognition.

> **Arrangements were made with the State Civil Service Division for the veteran to take the examinations for Registered Architect in a private assigned room in a VA hospital. Training officers volunteered for duty as approved proctors. There were seven different examinations which had to be taken and passed. The veteran did not pass all phases of the examination until the third year, with the same arrangements being made each year.**

The adage that "nothing succeeds like success" should be considered in trying to determine the extent of followup support which should be provided in a particular case. From examples already cited, as well as from general experience, it is apparent that some severely disabled veterans who are spurred on by success may realize work potentials, the presence of which would scarcely have been suspected at a time immediately following their disablement. Conversely, until such an individual has had some experience of success as a qualified independent worker, small obstacles, especially when they appear in combination, may seem insurmountable to him. The purpose of continuing contacts with the veteran after he completes training is to help him past this stage. They cannot be regarded as providing a permanent crutch. For a seriously disabled veteran who requires a specific type of assistance on a continuing basis, which has not already been provided for, it is necessary to define this need as exactly as possible and to arrange for family members or other local persons or agencies to meet the need.

16. TRAINING OUTCOMES

Although the data regarding the group of veterans under study cannot be projected to all veterans trained in their homes, it is useful in answering the following questions: How many of these veterans were working successfully after completion of training? Were the earnings of those who were gainfully employed significant? What other outcomes of training were reported? For those who did not continue to work, what were the reasons? Does experience with these veterans suggest guidelines for work with other cases?

In addition to the summary of outcomes presented here, attention is also invited to the case tabulation which appears in appendix B.

Time elapsed since completion of training ranged from less than a year to more than 10 years. Although the present ages of the members of this group range from under 25 to over 60, nine-tenths of the group fall within the age range of 25 to 50, as would be expected from the fact that both World War II and Korean-conflict veterans are included, the former predominating.

Work Following Completion of Training

Four-fifths of the veterans in the study group were gainfully employed

(either self-employed or otherwise); 19.5 percent were not working at the time of reporting.[2]

For the employed veterans in the sample, information regarding earnings was reported in descriptive terms in the majority of instances. However, nearly a third of the reports for these cases included a statement of the net income which the veteran realized from his employment. The annual net income from this source for the middle 50 percent of the 51 cases reporting this information ranged from $900 to $3,000, with a median of $2,000 and an average of $2,345.

In some instances in which net income was not stated, gross income from the veteran's employment was reported, and in still other instances the extent of his employment was described in terms such as the following:

> The veteran has earned as high as $50 a week, depending on his physical condition and the amount of time he can spend at his work.

> This veteran has been successfully self-employed since the termination of his training. His earnings, when converted to an hourly rate basis, compare favorably with those of a journeyman working full time.

> Since rehabilitation over 4 years ago, the veteran has successfully pursued his homebound leather business and has never been without a backlog of orders. In addition to his leather business, he and his wife own and operate a small grocery store. The combined income provides an adequate living for the family and has given the veteran a promising outlook on life and a sense of security for the future.

The veterans in the two examples above are employed as watchmakers. The disability in the first instance is arthritis of sacroiliac joint and both shoulders, Marie-Strumpell type. In the second it is a heart condition.

The amount of income of the paraplegic veterans referred to below was not reported, but the terms in which their employment is described justify their selection as representing a high degree of success.

> The veteran made above-average progress in his training program, and by the time he had completed the first half of his training, he started commercial production. Upon completion of his program, he had developed a successful portrait photography business. During the past year, this business developed to the point that a larger studio was needed. The veteran secured a downtown location and moved his studio where it would be available to a larger clientele. He now employs a full-time receptionist and an assistant. The veteran's wife has been of invaluable assistance to him in transporting him to and from work, as well as assisting in the studio.

> Since the completion of his training in bookkeeping, this veteran has been employed by a transportation company, and his earnings are very satisfactory. His knowledge of Interstate Commerce Commission requirements make him most valuable for the job. He does not have to depend on his wife or any person for assistance. The outlook for continued success in his field of business is considered to be very good.

[2] The 40 cases upon which this percentage is based do not include 3 cases reported as temporarily unemployed but expected to resume employment at an early date. Of a total of 206 cases reported, 1 was deceased.

In some instances, the veteran's work is limited by the state of his health, but he continues with his employment as he is able and gets satisfaction from doing so. The example below is of a veteran whose disability is reported as residuals of amyotrophic lateral sclerosis.

> Since the veteran was rehabilitated, he has operated his business on a moderate scale and has every intention of continuing its operation. Veteran's principal products are lead pencils, which he supplies to the local schools. These he imprints with the name of each school, in the school colors. He made these arrangements with school officials, aided by his instructor, who has been in schoolwork for many years and is well known in the area. However, the veteran's monetary needs are not great, and his training has been of great therapeutic value in improving his adjustment to his disability and interest outside himself. His physical condition is such that medical authorities are of the opinion that he has not long to live, but in the meantime he has built a business which occupies his time and brings in a small income.

The veteran, in the example below, is continuing to work in an occupation for which he completed training several years ago.

> Part-time work in the repair of watches and clocks has been continued for approximately 7 years. About 3 years ago the veteran moved to a desert community, where he continues the same employment. Clientele is secured through newspaper advertisements and personal contacts. There is apparent satisfaction with this vocational venture as only a sedentary objective could be pursued. The wife and children assist by picking up and delivering merchandise. It is probably this objective will be followed indefinitely.

In the remaining excerpts of this group, the first veteran is paraplegic and the second has chronic rheumatoid arthritis.

> The veteran's course as Cabinet maker was completed, and he has continued to operate his shop. The shop has been enlarged and additional equipment has been purchased by the veteran. His earnings have increased, and it is expected that he will continue in his work. He is well satisfied and seems to get a genuine pleasure from it. He has all the work which he can take care of in his shop.

> From personal contact with the veteran it was learned that he is actively practicing his vocation as an Accountant. He has been County Treasurer for 6 years. This position requires 12 to 16 hours' work per week, most of it being performed at the veteran's home office. He also keeps a complete set of books for the local drugstore, requiring approximately 2 hours per day. The bulk of this work is also performed at his home office. He also performs limited auditing and income tax work. His condition is such that he cannot devote more than 25 hours per week to his work. He cannot drive an automobile and is extremely limited with regard to walking. He has a taxi arrangement when necessary to leave his home. His condition has remained static for the past 2 or 3 years. He has occasional spasms in his back which incapacitate him for short periods. His attitude is objective and the outlook for continued success in the operation of his business is favorable. He expresses a high interest in his accounting work and only regrets that he is not able to devote more time to his business. He continues to live with his widowed mother. She is of invaluable assistance

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with regard to his health needs but does not assist in his business operation.

Numerous other examples of successful outcomes have already been presented in the discussion of marketing and other special topics earlier in this report. In addition, a few case reports are printed in full in appendix A. Topical consideration of the special problems and aspects of vocational rehabilitation training, as provided in veterans' homes, has required the chopping up of the narrative sources for use as illustrations in the form of brief excerpts. The latter tend to produce an impression of fragmentation with respect to the histories of these veterans. This impression is essentially inaccurate, as the basic unit of information is what happens to the individual who is engaged in training over the period of time until rehabilitation is completed through his being successfully employed.

Trainees Who Discontinued Work

Of the 40 veterans who were not working, the physical condition of the veteran was the reason given in 14 cases. These 14 instances included 11 in which there was worsening of the service-connected condition, 2 in which a non-service-connected physical condition was stated to be the cause, and an additional instance in which the veteran's failure to remain in the occupation for which he had been prepared was ascribed to a complex of circumstances, including increasing poor health and other conditions.

The existence of severe psychoneurotic problems is implied in two other cases, including one in which there was a problem of alcoholism and another in which the chronic expression of resentful attitudes interfered with the veteran's employment.

In 5 of the 24 cases remaining, it was reported that the veteran was unable to meet competition or to provide goods or services at competitive prices. Lack of business experience or ability was specifically noted in two additional instances. Statements made in the other 17 cases indicated lack of motivation or loss of interest on the part of the veteran.

Comments contained in several of the individual reports for the latter group reflect an awareness of factors underlying the veteran's loss of interest in the work for which he was trained and a recognition of the fact that lack of motivation is not a unitary characteristic.[3] As with nondisabled persons, when a disabled veteran relinquishes an occupation in which he has trained, it frequently happens that a number of circumstances in combination contribute to this outcome, and the reasons vary from one individual to another. Some of the reports pointed out, however, that a different outcome might have been anticipated if other methods or additional procedures had been employed. Several measures which were mentioned repeatedly in the reports have already been discussed under their appropriate topic headings, but are listed below with examples for further emphasis:

[3] See: Sinick, Daniel. "The 'Unmotivated' Client," *Rehabilitation Counseling Bulletin*, September 1961, 4: 119–122.

Planning continuously with the trainee toward his rehabilitation in the course of supervisory contacts:

> In this case there were no notes made of loss of interest while in training. Neither was any record made of efforts to continually sound out the veteran regarding employment plans, build up pride, develop motivation and create desire for success. Looking back there is evidence that a homebound training program should include provisions for introducing the trainee to a widening circle of trade acquaintances and having him make regular outside contacts to develop professional consciousness and interest. If he does not get out of his own little family world and associate with others than his close social friends, he will stagnate, and interest in his trade will wither.

Assisting the trainee to establish a market before completion of training:

> More effort should have been exerted during the last third of the veteran's training to assist him in establishing market outlets for his products.

Followup contacts after the formal declaration of rehabilitation:

> Failure in this case . . . points out the importance of continuing frequent contacts with severely disabled veterans subsequent to completion of training.

An additional observation which deserves emphasis is prompted by the fact that analysis of the reports for the group of trainees who were not motivated to continue working indicates that they contrast in one respect with the reports on veterans who continued in the occupations for which they trained. The reports for the 17 veterans in the former group are almost uniformly silent with respect to what training in business methods was provided. The following excerpt pertaining to this subject concerns a veteran who is reported as working successfully in the occupation for which he was trained. However, like those cited above, it is an illustration of the kind of stocktaking or evaluation which enables staff members to profit by their experience and improve their work in later cases.

> The program is considered to have been reasonably successful, but there were defects which caused delay. . . . Since the program was planned for self-employment, instruction in the organization and operation of a small business should have been included as a part of the training program.

Appendixes

APPENDIX A. SELECTED CASE NARRATIVES

The illustrative material for this report came from case narratives prepared by the VA regional offices and centers. The topical organization of the study, however, has led to the citation of this material in the form of brief excerpts removed from their original context. In contrast with these brief citations the following case narratives (Nos. 1 to 5, inclusive) describe in sequence typical steps in the trainee's progress, from the identification of specific problems to self-employment. No. 6, which differs from the others in presenting an account of a veteran's rehabilitation as seen by the veteran himself, is included here because of its bearing upon the problem of motivation.

No. 1.—Architectural Draftsman

This veteran was unable to work for several years because of his disability. However, as a result of vocational rehabilitation training, he established himself in this occupation in which he could use business contacts built up in the course of his previous work.

Forty-three years old at the time of counseling, this veteran was considered totally and permanently disabled, due to a respiratory condition: Bronchial Asthma, Chronic, Severe. His physician, however, considers pulmonary emphysema to be the primary condition, with marked fibrosis and secondary changes. He is referred to as a respiratory cripple, and observation of his condition after even slight effort (3- or 4-tread stair climbing) shows this to be essentially true.

The veteran completed 10 grades of formal schooling, primarily vocational, and then entered directly into apprenticeship training as a carpenter. He worked at a local hospital doing all sorts of maintenance carpentry plus a good deal of cabinetwork, until entry into service. He served as a Carpenter's Mate 1/c supervising a variety of projects in service and 2 years later returned to his maintenance carpentry job at the hospital. On return home he was in respiratory distress on frequent occasions, but he continued working until his physical difficulties worsened to the point that this was no longer possible.

The veteran was seen at home originally by the counselor and a training specialist. Initial counseling procedures were completed and he came to the office to complete counseling a few days later. From his knowledge of

the veteran's condition, the medical consultant had first felt training was generally infeasible but agreed to consider a specific plan if it was highly suitable and could be arranged within a 4-hour daily work tolerance (two 2-hour periods). This highly restricting limitation, plus the veteran's poor tolerance for travel and his inability to leave the house in inclement weather, dictated home training by private instruction.

During the initial interview, the veteran indicated his interest in architectural planning and drawing. This seemed to fit so well with his background that he was encouraged in further exploratory planning in this direction. He was surprised and delighted that such a training program might be possible. Some of his pretraining drawings, which were seen by the counselor, appeared neat and precise. When he completed an interview form, it was heavily weighted with reference to this interest, and the results of psychological testing showed well-above-average general mental ability, very high spatial comprehension, and outstanding manual-perceptual skills. The objective Architectural Draftsman, therefore, seemed very sound.

The training specialist had been in constant touch with the developing plan, and at this point a possible instructor was located. It was arranged for him to interview the veteran and evaluate his possibilities. The instructor was a drafting teacher in a local vocational school and was well qualified by background and personal traits. He heartily supported the plan. Since the veteran had many contacts in the construction field, some of them were interviewed, and they indicated that there would be a market for his work.

The veteran had a room in the basement of his home which had been partially finished and which offered reasonably good light and sufficient heat. The space was large enough to accommodate a drawing board, bookcase, files, etc., without crowding. Its use would require stair climbing, but the veteran stated he made the trip downstairs two or three times daily, anyway, so that this would not be a drawback. The training officer and counselor visited the home a second time to assure themselves that the working area was completely suitable. The instructor gave final endorsement to all the physical arrangements.

The individual training program provided for three 2-hour periods of individual instruction each week with 2 additional hours of assigned drawing on those days, and 4 hours of lesson assignment work, plus some associated study on 3 other days each week. The veteran, therefore, expended his maximum tolerance of 4 hours each day in 2-hour periods, 6 days a week. This, of course, was permanent.

The course was originally established for a 30-week period. The veteran made outstanding progress, which resulted in vastly improved outlook and contentment in living on his part. He was intensely interested in the course and had to be cautioned by the instructor and the training specialist against doing too much. At the end of the initial 30 weeks, it was evident that the veteran had achieved basic drafting skill, but that another period specifically devoted to instruction in architecture, as recommended by the instructor,

would be desirable. This period was approved, and an instructor who was a registered architect was secured on recommendation of the original instructor.

Training again progressed outstandingly well. About midway through this second 30-week period, the veteran secured a house design and drafting job from a friend and a lead for a house-remodeling plan from the instructor. He completed both of them to the satisfaction of the people involved, even to the extent of doing his own blueprinting. At the end of a total of 60 weeks of private instruction, he was declared rehabilitated. His instructor pronounced him proficient and immediately referred a house-plan client to him.

The veteran continues to be self-employed in this work. He has managed to get several worthwhile jobs through his contacts. His earnings are sufficient at this time to serve as a supplement to his compensation, so that he is able to support his family with only minimal assistance from periodic earnings by his wife. He hopes to be able to secure enough work so that his wife can stop her employment and devote all her time to care of the home and three children. He continues to use his basement workshop as headquarters.

The veteran has had business cards printed and has distributed them to associates in veterans' organizations, lumber dealers with whom he is very well acquainted, contractors, and others who might be in a position to make referrals. He has identified himself as a "do-it-yourself" consultant—an idea that is particularly apt. He draws up the plans and makes supervisory visits to people doing their own home remodeling, etc. Though he does not have enough work to occupy all his 4-hour tolerance, the situation is improving constantly.

He continues to be enthusiastic about his new work and his accomplishments. He operates independently and confidently, having solved some problems in ways which have delighted his clients. He is realistic about his present situation and optimistic about the future, since he has a vocational skill which he is able to put to productive use.

No. 2.—Television Service and Repairman (Bench)

Problems described in this case are fairly typical of those which are encountered in the vocational rehabilitation of paraplegic veterans.

This 27-year-old paraplegic veteran completed the eighth grade and was employed as an oiler on a tugboat for 6 months prior to military service. All counseling was done in the veteran's home, and because of his inability to ambulate, it was determined that training should be given in the home. The veteran had participated in Educational Therapy while in the hospital and showed above-average intelligence. He also had partially completed a correspondence course in radio and television with satisfactory grades and manifested a strong interest in this occupation. The objective was selected on the basis of this interest and background.

At the time of counseling, the veteran was residing in a rural area where he had lived all of his life. He was well known in the community. His home had adequate space for training, and the plans for his specially adapted house to be constructed on the adjoining lot provided for appropriate space for a workshop. He lived in a moderately heavily populated area, and survey indicated that there were no radio or television repair establishments in that part of the county and no large cities to attract the trade from his locality.

Training was given by an individual instructor, and supplementary correspondence course material was used. The training officer located the instructor by contacting all of the radio and television shops in the nearby communities. After discussing the proposed program with various journeymen in the trade, a contract was negotiated with the best educated and qualified instructor candidate. The instructor selected was a graduate of a well-known college in radio and television electronics and was employed as a full-time radio and electronics repairman. He had previous experience teaching veterans pursuing on-the-job training at his firm.

A side porch was enclosed and converted into a workshop. This made a workshop approximately 9′ x 20′ with adequate light and heating facilities (electric). Vacuum tube voltmeter, signal generator, oscilloscope, TV alinement generator, tube checker, TV picture tube test adapter kits, technical application bulletins, and business records were provided the veteran as necessary training equipment. A workbench was especially built to give him access to all equipment from his wheelchair.

The training program (3,510 clock-hours, including 702 hours of individual instruction and 2,808 hours of work assignments) was for 28½ months with 6 hours of individual instruction per week. The training schedule was set up in sequence with a correspondence course consisting of 65 lessons. Additional hours of instruction and assignment for practical experiments were added to the lessons. A practical experiment was completed in a series of each 10 lessons. All training equipment received was unassembled. The veteran was required to construct the equipment as a training project.

A minimum of two correspondence course lessons was set up per month. In addition, the instructor gave the veteran work assignments in basic radio and television repair. The veteran's work was observed by the instructor, who made the necessary corrections and helped the veteran in the actual repair of radios and televisions. The veteran had a work tolerance of 6 hours per day. This was a permanent work tolerance, and no increase was made during the period of training.

As soon as the instructor felt that the veteran had acquired sufficient knowledge in the repair of radios, which was the initial phase of the training program, radios were secured for repair. This occurred approximately 6 months after the veteran entered training. As the veteran acquired knowledge and skill in television repair, television sets were obtained for him to work on. Initially this work was done only under instruction. Sub-

sequently the veteran progressed to the point where he could repair television sets alone.

The veteran has been self-employed for 24 months. When his instructor accepted a civil service appointment, the work that he had previously been doing was given to the veteran insofar as possible. In addition, firms in the area were contacted by the training specialist and veteran, and arrangements were made to secure work on the servicing of new radio and television sets from retail appliance establishments which did not have their own technicians. He obtains additional work through previous customers.

The veteran has some assistance from his wife and daughter. The retail electric appliance shop referring work to the veteran delivers the sets to his home and picks them up when they are repaired. The veteran is satisfied with his employment, and there is every indication that he should be able to continue successful operation of his business.

No. 3.—Ceramic Craftsman

The unusually severe limitations resulting from this veteran's disability required him first to relinquish the vocational objective he originally selected and then to change from school to home training for the new objective. However, his work tolerance increased following further hospital treatment so that he was able to complete training in a talent field and develop his own business successfully.

This veteran is 45 years old and has tuberculosis, pulmonary, chronic, far advanced, arrested. Treatment included thoracoplasty with removal of the left upper lobe, second, third, and fifth ribs, left side; and right upper lobe and greater portion of the fifth rib, right side.

The veteran is a high school graduate. Before entering service, he was employed in forestry work as a member of the Civilian Conservation Corps. He did general farming work after high school for about 1 year.

Original counseling was done at the VA regional office, and he selected the employment objective of Poultryman. Due to an exacerbation of his pulmonary tuberculosis, he did not enter training in that objective and was not declared medically feasible again until 2 years later.

At this time, following additional counseling, he selected the new objective of Ceramics Craftsman. He had developed an interest in clay modeling while he was a patient in a VA hospital. Experts at a craft center examined some of the veteran's early productions and believed that he showed superior artistic talent. It was determined that his pottery and other ceramic products could be marketed through a Commission of Arts and Crafts.

The veteran's training program was established initially as a school-type course with a 4-hour-a-day work tolerance. His case was reclassified to training in the home 1 year after he began his school program. This action was found to be necessary and recommended by VA medical officers when it was discovered that the stress of commuting to school and attending formal classes overtaxed his strength and aggravated his disability.

Arrangements were made to continue his training at his home under a qualified instructor of ceramics. The final phase of his training program included training in small business management with an instructor from a local business college.

No additional equipment was provided when he began training in his home, since he had procured all the necessary equipment for his shop prior to that time. He had previously remodeled and equipped a double-deck poultry house (40' x 20') on his farm as a ceramics shop and equipped it with a kiln, potter's wheel, benches, and other accessories needed for the business. The upper floor of the building was used for packaging and storage of finished products.

The veteran's work tolerance was increased to 5 hours per day during the first year in training and to 6 hours per day during the second year. Although another period of hospitalization intervened at this time, it was possible for him to reestablish his program with a 6-hour-per-day work tolerance when he returned to training. Since completing training, he has devoted 6 to 8 hours per day to his business.

He produced about 1,800 items in ceramics the first year after completion of training. He has exhibited his ceramic products at local craft shows and markets his products through a Commission of Arts and Crafts. He has also sold some of his products through an agent in another State. He is now remodeling one end of his shop building for a showroom and store.

The veteran is satisfied and happy with his business and continues to improve his shop facilities and marketing program. The limitations imposed by his disability are the principal obstacle to increasing his volume of business. He reports that he could double it if he were able to work more hours a day. His wife is quite helpful to him in decorating some of his art pieces and taking care of packaging his products for shipment. The veteran plans to continue operating his ceramics shop just as long as his health will allow; he hopes for several years in the future. At the present time he is making combination sugar bowl and cream pitchers, salt-and-pepper containers, ashtrays, fruit bowls, and ornamental pieces.

No. 4.—Book Repairman

An important element in the successful vocational rehabilitation of this veteran with serious disabilities, including blindness, was the work of the vocational rehabilitation specialist in exploring the need of libraries and offices of record for a service which is not otherwise in great demand.

This 46-year-old veteran's service-connected disabilities include blindness in the left eye, rated analogous to enucleation; encephalopathy, severe, posttraumatic. rated as posttraumatic personality disorder; and tinnitus, left, postconcussion. In addition to the service-connected disabilities, this veteran lost the vision of his right eye in an industrial accident subsequent to service. He completed 1 year of postgraduate high school work and was employed as a carpenter and contractor before entering military service.

Counseling was provided in his home, and the determination was made also to provide training in the home as a result of a recommendation by the VA psychiatrist and the lack of adequate training facilities within the area. The objective of Book Repairman was selected as one which would satisfy his literary interest and his desire to work with his hands.

Considerable work was done by the training specialist prior to final selection of the objective, including visits to bookbinding establishments and with State vocational rehabilitation personnel. As a result of these discussions, it was determined that there was plenty of work available for anyone with the ability to repair and bind books, regardless of the location of his shop. Several sources reported that they had requests for hand binding and repair which they were unable to perform due to their own workload. Officials of the American Foundation for the Blind and the New York Institute of the Blind were consulted prior to setting up the training program.

The veteran converted a garage to a shop, doing a great part of the work himself with the assistance of his wife, who was an active participant throughout his training period. Special equipment furnished the veteran included a bookcraft kit, large standing press, medium letterpress, small letterpress, and type, slugs, and equipment for printing book titles. In addition to this equipment, during the course of the training program the veteran purchased a considerable amount of used equipment.

The veteran's first instructor was the head of the weaving program at the New York Institute for the Blind, who also had knowledge of the basic techniques of bookbinding and repair. The training program extended for a period of approximately 34 months. During the period of training two instructors were lost, due to illness or inability to allocate the time necessary to provide instruction. The last instructor, who is the head bookbinder at a college library, completed the training program and did an excellent job with the veteran.

During the first month of the veteran's training, he was provided approximately 30 hours per week of instruction, and during the balance of the program instruction was provided at a rate of 6 to 8 hours per week. The overall period of training was probably 1 year longer than would have been required had it not been necessary to change instructors so frequently. The assignments during the instructional period included the removal and repair of contents from the case, pasting and sewing, re-covering, and all of the general work necessary in the complete repair of a book. A number of volumes were obtained from the State library which the veteran used in carrying out his various assignments.

The veteran has been self-employed since his rehabilitation. He did not undertake bookbinding for pay until shortly before his rehabilitation date but has found that he has been offered more than he could accept since that time. In fact, he is pretty much limiting his work, at present, to that provided by the various town clerks in the State. The work of binding old and new town records was obtained for him through a former VA employee

who is now the Director of State Records. This work has developed to a sizable amount and is of a type which he prefers to do. Before he obtained work from this source in its present quantity, he did work for several colleges in this and another State as well as for individuals. He receives necessary assistance from his wife in the examination of books brought to him for repair and in the business aspects of his enterprise. It is apparent that he intends to continue the operation of this business and that it is sufficiently remunerative to warrant continuance.

No. 5.—Watchmaker and Jeweler

Despite the fact that he can sit in a wheelchair only for limited periods of time, this veteran has established a successful business and takes part in community activities.

This 35-year-old paraplegic veteran was referred to the regional office for vocational rehabilitation by a social worker. He had initially contacted the regional office about training 3 years earlier, but for personal reasons did not enter training at that time. His disability causes a weakness in the back and limits the number of hours he is able to sit in a wheelchair. He completed 2⅓ years of high school and was employed as a mail-order clerk for about 3 years before entering the service.

Vocational counseling was completed in the regional office, since the veteran was able to travel from his home. Because of his disability the medical consultant recommended training in the home for this veteran. Further, when the objective was agreed upon, it was found that the school facilities which were available were not suitable for him because of his disability. The veteran's home was considered ideal for training, and the community situation was favorable for success in the combination objective of Watchmaker and Jeweler.

During the period of counseling there was very close collaboration among counselor, training specialist, medical consultant, and the veteran. The nearest watchmaker was approximately 15 miles from the veteran's home, and it was determined that a market existed for his services. This information and other data from the home and community survey were supplied to the counselor for use in assisting the veteran to make a suitable choice of objective. The veteran displayed a keen interest in training as a skilled worker, and his interests and aptitudes in mechanical areas were exceedingly good. His high school training in shopwork also suggested a skilled craft objective for him.

A room in the veteran's house, approximately 12′ x 12′, was used for training. There was excellent light and window area in this room, as well as sufficient space for his workbench, cabinets, and other equipment necessary for training.

Training was given by two individual instructors, one for the watchmaking phase and one for the jeweler portion of the program. To locate the watchmaking instructor, a number of repair and watchmaking schools and shops were visited. The instructor selected had a State teacher's certificate, and

was a qualified watchmaker and a teacher in a watchmaking school. He had been teaching watch repair work for a number of years and was considered by school authorities to be one of their outstanding instructors. The jewelry training was done by an individual instructor who also was approved by the State qualifying agency and who had taught jewelry repairing in a trade school. At the time he was engaged, he was operating a wholesale jewelry repair house and was considered outstandingly qualified both from a teaching standpoint and in experience. He was located by visiting jewelry repair shops in the area.

In setting up equipment for the veteran, it was found necessary to arrange for the side handles of his wheelchair to be removed when he was working at his bench. The equipment provided included a watchmaker's bench, movement trays, boiling pan, lathe and motor, polishing kit and buffers, flexible shaft machine, and heating torch. The spring in the motor rheostat was removed to permit adjustment of the speed of the lathe motor, which allowed the speed to be maintained at a constant rate depending on the work to be done.

The veteran received 5 hours of instruction per week and did 25 hours of practice work each week. His permanent reduced work tolerance was 6 hours per day, 5 days per week. Between instructional periods the veteran received definite assignments from the instructor, which were to be completed prior to the time the instructor returned for his next visit. The length of the combined program was 70 weeks.

During his training program the veteran, with the guidance of the instructor and training officer, purchased stock parts and handtools in addition to those supplied by the VA. The objective was to insure that at the time he completed his program he would have a sufficient supply of parts and tools to carry out the duties of a watch repairman and jeweler. A watch repair record book was maintained during the entire training program, showing stock parts on hand and the cost of repair work, as well as the amount of money he received for his services. Various sources of supply were developed for the veteran, such as watch repair supply houses, wholesale houses and other establishments providing service or parts for watchmakers. It was found that certain wholesale houses in the adjoining urban area could be utilized by the veteran for the sale of his watches and other jewelry, and he sold a number of items on this catalog plan. He interested local high school personnel in giving his name to students, particularly those who were graduating, and because of his ability to supply watches and jewelry at wholesale prices, he was able to develop a small clientele. His income from this source was more than adequate considering the minimum amount of time that he spent on it.

The veteran began to repair watches about 4 months before he completed the watchmaking phase of his program. This permitted the instructor to examine the watches before they were returned to customers to insure that a quality job was performed. It also provided an opportunity for the veteran

to learn the day-to-day problems that normally would be encountered in a watch repair shop. He completed a number of jewelry projects during training, such as repairing rings, earrings, and wristbands, and making settings, and was able to sell some of the items. The instructor, because of his job contacts, was able to provide certain kinds of work to the veteran to assist him in developing a jewelry repair business.

The veteran has been employed for approximately 3 years in his home performing the work of a watchmaker and jeweler. He used a number of techniques to develop a clientele for his services. Small cards were printed and distributed in the local communities near his home. The high school art department made posters advertising his location and the services he offered, which were displayed in the shop windows in local stores. Local newspapers were used for advertising purposes, and this resulted in a fair return. The training specialist contacted a gift shop and interested the owner in accepting watches from the public for the veteran to repair. This was a satisfactory source of repair work for the veteran. A man who was retired contacted homeowners and acquainted them with the services that the veteran had to offer and brought a number of jobs to him. The veteran was instructed in the importance of providing a quality job for all of his customers and of charging the going rate for his work. The veteran's wife occasionaly takes in jobs; however, he is generally at home and is able to handle any calls which may come in on the phone or in person.

The outlook at the present time for this veteran is excellent. He is very well satisfied with the occupation and plans to continue in it. He has become quite interested in his field, has purchased a number of references and texts, and has accumulated a rather large library on his occupation. He claims that the work does not aggravate his disability and that he becomes so absorbed in his work that he forgets time. His wife states she must remind him of his limited work tolerance and the limited number of hours he can sit up consecutively in his chair. He is very active in community affairs and takes part in bowling and other sports in which paraplegics participate.

No. 6.—"My Rehabilitation"—A Veteran's own report [1]

The sense of futility, which is expressed initially in this acccunt, is often the hardest hurdle for the very seriously disabled person to surmount. How this was overcome to the point where the veteran began to see the possibility of doing something worthwhile and his description of the kind of assistance which helped him make this transition are of special interest.

Too often we hear the expression, "Start at the beginning," but then, just where is the beginning? Is it the day I left the hospital in 1954? Is it the day my neck was broken and I became paralyzed in 1952? Is it the day I joined the Navy in 1942? Is it the day I was born in 1926? Or is it even before then? I am not going to start at the beginning. I am going

[1] This report was prepared by Raymond E. Hinkle, a disabled veteran of the Korean conflict. Only minor editing has been supplied.

to start with that day in 1956 when a man came to see me, a man from the Training Section of the VA Regional Office in Huntington, W. Va.

I don't remember the man's name now, he was the first of several men who came to see me, but I do remember what he had to say. The first thing he asked me was, "Hinkle, have you thought about what you are going to do?"

Well, I knew how to shut him up right off the bat; so I let him have it with both barrels. "What in the hell can I do? I lie in this bed 21 hours a day and if someone puts my clothes on me, I sit in a wheelchair for 3 hours. I watch television and I count the cars that go up and down the road out there. I thought about asking the State for a job doing that, but it seems that the position has already been filled by a counting meter. That leaves watching television. You know anybody who wants to pay me to do that?"

"No," he said, "I don't know anyone who will pay you to do that, but there are other things you can do. Let's talk about what you would like to do."

Well, I didn't have anything else to do, so we talked a while. We talked about what I liked to do and we talked about what I could do, the little things that I did for myself. I could get myself a drink of water from a special pitcher on my night stand; I could answer the telephone; I could feed myself with a fork strapped to my hand; I could shave with an electric razor strapped to my hand; I could push my wheelchair a little on a level floor. That was just about all. I couldn't use my hands, but I could use my arms pretty good. I could see; I could think; I could talk. He said that was plenty to start with, and there were several things I could do. All we had to do was find out where my main interest was, and what I could do best. He said we could find this out by taking some tests. They would ask me questions about what I liked and what I knew and things like that. My answers would be checked with people with similar interests and we would know what I should do.

I figured, "What have I got to lose; it's somebody to talk with," so I took the tests. Actually, it was a lot of fun. The questions were fairly simple, but not without meaning. I have tried to think back and to evaluate my feelings at that time. I am sorry that I cannot truly do this. I do not believe I was resentful. I was, perhaps, doubtful. I am sure after the first visit I was curious. It became something of a challenge, and I found myself trying to prove that my secret desire to be a writer was in any event where my main interest did lie. I am sure I will make a statement later that seems in opposition to this, but try to understand in the battle in my mind, I tried not only to prove my point, but to disprove it as well. I believe the reason for this was I did not know how to do what I was sure I wanted to do. The answer was fairly simple, once I became aware of it; if I wanted to write, I must learn to do so.

There were tests of memory. He would give me numbers, each one larger

than the one before. I would repeat them. Then he gave me numbers that I would repeat backward. There were questions like: What would you rather do, go to an opera, go to a movie, go to a ball game? In what way is an ant like an oak tree? (They are both living things.)

The result of the tests did show a strong interest in writing. I was enrolled in homebound training, and the Veterans Administration assigned Mr. H. C. Tustin of St. Albans, W. Va., as my training officer. His duty was to supervise my training, obtain an instructor, arrange for my supplies and equipment. He was, in short, father, counselor, and friend, and one of the most dedicated men I have ever met.

My first instructor was Lee R. Boggs, a high school English teacher. I hope it is enough to say I have never known a more considerate or courteous person. Under his instruction I studied grammar, vocabulary, punctuation. I became acquainted with Poe, Tchekov, and DeMaupassant. We even read a little Shakespeare. After a year with Mr. Boggs I was graduated to a study of writing.

My instructor for 2 years was Mary Lee Settle, a writer. Mary Lee has published three novels and has just finished her fourth. I think it will please Mary Lee if I just say she is a gal with a mind of her own, and thanks a million. Mary Lee has always told me, "When you are ready to write something, it will come to you."

"But," I said, "I don't know anything to write about."

She told me then, "Everything that is, everything you see, everything you hear, everything you feel, is something to write about."

So, I began to write. It wasn't easy. She would say, "You are on top of a hill, Why did you go up there? Write about it. Now, look around you, over the hill. What do you see? What do you hear? Write about it."

So I would write. I began to hear; the sound of a breaking twig, the sound of fluttering wings when a covey of quail takes to the air, the sound of running water in a creek bed. Each thing I learned made me aware of other things. Now I have learned much. Now I am aware I know but a little.

I have learned to read and to enjoy it. I have written four short stories on my own. Perhaps I will never be great, perhaps I will never be known, but I have found something greater than greatness. I have found something to do.

I sit before my typewriter and peck out the words one letter at a time. The words come slowly and they are few, but they are my own. If I write a page a day, I am happy. If I write two pages a day, I am very happy. Whatever I write, it gives me pleasure, and perhaps some day someone will find pleasure in reading it.

Everyone should have something to do. I should not have found my something without someone to help me. Having a handicap does not make a person useless, does not make that person cease to live, but it is easy to get lost when we are alone. It is up to all of us to see that the handicapped are not alone. One thing more, let us remember you cannot measure the value of having something to do by how much you will earn by doing it.

APPENDIX B. CASES IN STUDY BY TRAINING OBJECTIVE AND DISABILITY

Training objectives are listed alphabetically under appropriate three-digit groups of the Dictionary of Occupational Titles, Volume II. In most instances the occupational titles shown are as reported in the case narratives submitted by the VA regional offices. They include local and special titles which serve to indicate unusual patterns of job activity that overlap two or more occupations or that omit important segments of an occupation as defined in the Dictionary of Occupational Titles. In a few instances the special title reported has been changed to one more commonly employed. This has been done to avoid confusion with a standard title pertaining to a different job activity from the one intended, or when for some other reason the local title could not be expected to convey an accurate idea to the reader. Minor and insignificant variations of common titles also have been disregarded; e.g., the objective variously reported as watchmaker, watch repairman, and watch and clock repairman is shown below as watchmaker (watch repairman).

Classification under each training objective is in accord with the principal disability category. In some instances brief descriptive phrases serve to suggest the severity or complexity of the physical limitations. However, it is not possible in this tabulation to indicate the exceptional limitations which have necessitated training in the home for a few veterans with disabilities (e.g., above knee amputations or epilepsy) which ordinarily do not require such training. The medical information in the case narratives was obtained from VA adjudication and rehabilitation records.

0–01. Accountants and Auditors

Accountant	Paraplegia: (3034)
Accountant, General	Paraplegia: (3016); (3019)–2; (3019)[1]; (3029); (3046)–2; (3062); (4047) Rheumatoid arthritis: (3016); (3032)
Accountant, Junior	Paraplegia: (3006); (3009); (4002) Poliomyelitis affecting all four extremities: (3006) Ulcerative colitis with repeated surgery and permanent ileostomy; prostate resection with urethritis: (3062)
Accountant, Public	Paraplegia: (3022)
Accountant, Tax	Paraplegia: (3014)

[1] Not employed.

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0–03. Architects

Architect	Paraplegia: (3001)

0–08. Clergymen

Clergyman	Arthritis, Marie-Strumpell type: (3051)

0–44. Commercial Artists

Commercial Artist	Multiple sclerosis: (3011) Paraplegia: (3006)

0–48. Draftsmen

Detailer	Paraplegia: (3071)
Draftman, Architectural	Bronchial asthma, chronic severe: (3004) Paraplegia: (3009)
Draftsman, Mechanical	Double above-knee amputation and partial paralysis of right ulnar and median nerves; slight loss of use and sensitivity, right hand: (3004) Paraplegia: (3010)

0–50. Laboratory Technicians and Assistants

Dental Technician	Paraplegia: (4052)

0–56. Photographers

Photographer, Portrait	Multiple sclerosis: (3061) Paraplegia: (3001); (3009)–2; (3020); (3051)

0–68. Semiprofessional Occupations, N.E.C.

Law clerk	Above knee amputation, left: (3018)[1]

0–72. Retail Managers

Manager, Retail Store	Residuals of shrapnel wounds resulting in spetic arthritis with loss of use of both lower extremities; fibroid ankylosis of both hips, knees and ankles: (3006)

1–01. Bookkeepers and Cashiers, Except Bank Cashiers

Accounting Clerk	Rheumatoid arthritis: (4038)
Bookkeeper II	Absence, both buttocks, injury Muscle Group XVII; P.O. ventral hernia: (3021)[1] Gunshot wound of brain with epilepsy manifested by triplegia: (3031)

[1] Not employed.

1–01. Bookkeepers and Cashiers, Except Bank Cashiers—Continued

Bookkeeper II	Paraplegia: (3031); (3013); (3018)–2; (3018)[1]; (3019); (3028); (3061)[1]; (4047); (4047)[1] Quadriplegia: (3025) Syringomyelia of cord with loss of use of both lower extremities and of left hand: (3007) Thrombophlebitis, left lower extremity: (3015)

1–04. Clerks, General

Clerk, General	Paraplegia: (9039)

1–05. Clerks, General Office

Clerk, General Office	Paraplegia: (3027)[1]

1–25. Office Machine Operators

Duplicating Machine Operator.	Quadriplegia: (3001)

1–37. Stenographers and Typists

Court Reporter	Squamous cell carcinoma, floor of mouth and tongue, P.O.: (3016)

1–55. Canvassers and Solicitors

Telephone Solicitor and Survey Worker.	Quadriplegia: (3045)

1–57. Salesmen, Insurance

Salesman, Insurance	Quadriplegia: (3029)

3–08. Poultry Farmers

Chicken Farmer, Egg	Osteomyelitis, chronic, right femur; injuries both feet; limitation of motion, right arm: (3011)
Farmer, Poultry	Blinded: (3025); (3044); (3071) Encephalopathy; occasional epileptic convulsions, frequent spells of dizziness, very easily fatigued; defective hearing: (9039)
Poultryman, Turkey	Paraplegia: (3071)

3–37. Farm Managers and Foremen

Manager, Agricultural	Paraplegia: (9039)

[1] Not employed.

3–38. Nursery Operators and Flower Growers

Plant Propagator	Paraplegia: (3017)[1]

4–15. Weavers, Textile

Craftsman, Textile	Blinded; facial scars; traumatic sinusitis; loss of smell and taste: (3073)
Weaver	Arthritis, Marie-Strumpell type: (3029) Blinded: (4005) Encephalopathy, traumatic, with residuals of penetrating bullet wound of skull and brain with destruction of visual fields: (3026)[1] Rheumatoid arthritis: (3050)
Weaver, Automatic Loom	Multiple sclerosis: (3027)[1]
Weaver, Plain Loom	Multiple sclerosis: (4033)[1] Paraplegia: (3030)[1]

4–32. Cabinetmakers

Cabinetmaker	Bilateral blindness; multiple powder burns and scar of face and left mandible; scars, multiple, from neck to ankles with retained foreign bodies; residuals, fractures, both hands, left mandible and left tibia; residuals of concussion: (3011) Blinded: (3044); (4066) Enucleation right eye; chorioretinitis left eye with metallic foreign body, normal vision, small opacity of left lens; absence acquired distal phalanx left thumb and distal 2 phalanges left index finger: (3008) Injury to urethra, prostate gland, and bladder resulting from bullet wound; loss of sexual function and recurrent obstruction to bladder and inflammation of kidneys and pelvis: (3029) Paraplegia: (3022); (4022)[1]; (9035)–2 Subtotal gastric resection, result of perforation caused by duodenal ulcer; liver damage from abscess with recurring gastric symptoms; arteriosclerotic heart disease: (3051)
Woodworking Craftsman	Blinded: (3059) Paraplegia: (3073)

[1] Not employed.

4–33. General Woodworking Occupations, N.E.C.

Carver, Hand	Blinded: (3041)[1]
Novelty Crafts Bench Worker.	Paraplegia: (3010)
Wood Turner and Cabinetmaker.	Blinded: (3026)[1]
Wood Turner and Toy Maker, Wood.	Paraplegia: (3028)
Woodworker	Severe heart condition, coronary arteriosclerosis: (3031)[1]

4–35. Upholsterers

Upholsterer II	Paraplegia: (3057)

4–44. Compositors and Typesetters

Job Printer	Paraplegia plus some loss of motion in both arms: (3073)

4–62. Occupations in Manufacture of Leather Products, Other Than Boots and Shoes

Hand Raised Stamper (Art leather goods).	Epilepsy, grand mal, severe; associated with status epilepticus: (3061) Paraplegia: (3061)
Leather Craftsman	Arthritis, Marie-Strumpell type: (3017)
Luggage Repairman	Paraplegia: (3016)

4–66. Occupations in Production of Clay Products

Ceramic Craftsman	Tuberculosis, pulmonary, chronic, far advanced, arrested; thoracoplasty with removal of left upper lobe and second, third, fourth and fifth ribs, left side; removal of right upper lobe and greater portion of fifth rib, right side: (3073)

4–71. Jewelers, Watchmakers, Goldsmiths, and Silversmiths

Clockmaker (Clock Repairman).	Arthritis of spine: (4033)
Jeweler (Creative)	Glomerulonephritis (and other NSC conditions): (3011)[1] Paraplegia: (3030)–2

[1] Not employed.

4–71. Jewelers, Watchmakers, Goldsmiths, and Silversmiths—Continued

Stonecutter, Jewelry	Multiple sclerosis: (4038)[1]
Watchmaker (Watch Repairman).	Arteriosclerotic heart disease; arthritis of right knee: (3044) Arthritis, Marie-Strumpell type: (3007) Avitaminosis, multiple, severe, manifested by peripheral polyneuritis, metabolic and endocrine dysfunction and cardiac dilatation; analogous to myasthenia gravis: (3029) Conversion reaction manifested by paralysis of both lower extremities: (3044) Eisenmenger's syndrome: (3001) Hypoadrenia, Addison's disease, severe: (3061)[1] Multiple shell fragment wounds, both legs (loss of use of both feet): (3018)[1] Osteomyelitis of right tibial tuberosity; (3021) Paraplegia: (3008); (3009); (3013); (3013)[1]; (3016); (3024); (3031); (3032); (3071); (4052) Pulmonary tuberculosis: (3044)
Watchmaker and Engraver	Paraplegia: (4023)
Watchmaker and Jeweler	Arthritis, Marie-Strumpell type: (3072) Multiple sclerosis: (3072) Paraplegia: (3020)–2; (3028)

4–73. Engravers

Engraver, Jewelry	Paraplegia: (3031)[1]
Engraver, Letter	Ankylosis, left ankle, with traumatic arthritis; herniated intervertebral disc L–5 S–1; osteomyelitis, left ankle; instability, both knees; peripheral vascular disease, left femoral artery: (3046)

4–75. Machinists

Machinist, Bench	Paraplegia: (3025)

5–10. Occupations in Manufacture of Fabricated Plastic Products

Modelmaker, Plastics	Paraplegia: (3028)

[1] Not employed.

5–13. Occupations in Manufacture of Miscellaneous Products

Fly Tier	Arthritis, Marie-Strumpell type: (3065)[1]; (4002)[1] Paraplegia: (4002)
Fly Tier, Fishing Rod Repairman, and Fletcher.	Multiple sclerosis: (3010)
Toymaker, Wood	Paraplegia: (3030)–2
Toymaker, Woolen Animals	Psychoneurosis, conversion hysteria with amblyopia hysterical, bilateral; pseudoneuritis, bilateral; uncontrollable movements of all extremities; and headaches: (3070)

5–83. Mechanics and Repairmen, N.E.C.

Bicycle and Lawnmower Repairman.	Rheumatoid arthritis: (3014)
Fishing Reel Repairman	Multiple sclerosis: (3010)
Gunsmith (Gun Repairman)	Bilateral leg amputations; both amputations too high to permit suitable prosthesis: (3010) Paraplegia: (3027); (3056)[1]; (4033)
Radio and Electrical Appliance Repairman.	Arthritis with loss of use of both feet, both knees, left hip, lumbar and dorsal spine and sacroiliac: (4036) Paraplegia: (3014); (3015); (3056)
Radio and Television Repairman.	Bilateral blindness; perceptive type deafness, residual of concussion; shell fragment wounds with incomplete paralysis of 7th cranial nerve: (3062) Encephalomyelitis, acute; confined to wheelchair because of weak upper extremities: (3031) Osteochondritis deformans, both hips: (3021)[1] Paraplegia: (3014); (3020); (3021); (3027); (3028); (3031); (4023)[1] Paraplegia with chronic arthritis: (4023)
Radio Repairman	Paraplegia: (3015) (3017); (3020); (3021); (3025); (3062); (4033) Residuals of poliomyelitis: (3017); (4052) Rheumatoid arthritis, multiple joints, with loss of use of both feet: (3049)
Sports Equipment Repairman.	Multiple gunshot wounds and amputation of right leg above knee: (9039) Paraplegia: (9039)

[1] Not employed.

5–86. Photographic Process Occupations

Darkroom Man	Paraplegia: (4002); (4002)[1]
Photograph Retoucher	Paraplegia: (3034); (3057); (4033); (9035)[1] Shortening and limitation of motion of left forearm and left leg resulting from fractures; severe multiple injuries, including fecal and urinary incontinence secondary to sphincter paralysis: (9035)[1]

6–19. Occupations in Manufacture of Textiles, N.E.C.

Rug Hooker, Hand	Aneurysm, left internal carotid artery, ligated, with right hemiparesis, incomplete; aphasia; craniotomy defect; loss of vision of left eye, and right hemianopsia: (3019)[1]

6–49. Occupations in Printing and Publishing, N.E.C.

Book Repairman	Bilateral blindness; encephalopathy, severe, post-traumatic; tinnitus, left, postconcussion: (4005)

6–62. Occupations in Manufacture of Leather Products, Other Than Boots and Shoes

Leatherworker	Bilateral upper leg amputation; amputation of two digits and ankylosis of two digits of left hand; scars burns, multiple, healed; tinnitus: (3049)[1] Encephalopathy, traumatic, residuals of gunshot wounds: (3049)[1] Paraplegia: (3027)[1]; (4023) Psychogenic musculoskeletal reaction, pronounced (formerly rated as rheumatoid arthritis): (3049)[1] Pneumonectomy, right, removal of 10 ribs; arteriosclerosis; asthenic reaction: (4023)
Casemaker	Epilepsy, grand mal; unable to travel alone; mental as well as physical deterioration: (3045)[1] Paraplegia: (3057)
Leather Stamper	Epilepsy, grand and petit mal; (3004) Paraplegia: (4047); (4047)[1]

[1] Not employed.

7–59. Occupations in Trades and Services, N.E.C.

Gold Leaf Stamper	Residuals of amyotrophic lateral sclerosis: (3024) Encephalopathy due to trauma, manifested by motor aphasia and left hemiparesis; epilepsy: (3015) Quadriplegia: (3015); (3072)

7–83. Mechanics and Repairmen, N.E.C.

Electric Appliance Repairman.	Hypertensive heart disease: (3026) Multiple sclerosis: (3056)[1] Paraplegia: (3006)[1]; (3026); (3041) Paraplegia plus partial paralysis of median and ulnar nerves of left arm with atrophy: (9035)[1]
Repairman, Small Electrical Appliances and Mechanical Equipment.	Multiple sclerosis: (3017)

7–84. Tool Sharpeners and Dressers

Saw Filer, Machine	Paraplegia: (3025) Quadriplegia: (3014)

[1] Not employed.

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VT 004 803
National Painting and Decorating Apprenticeship and Training Standards.

National Joint Painting and Decorating Apprenticeship and Training Committee
Manpower Administration (DOL), Washington, D.C. Bureau of Apprenticeship and Training
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 33p.

*APPRENTICESHIPS; *PAINTERS; *LABOR STANDARDS; *PROGRAM GUIDES; PROGRAM ADMINISTRATION; NATIONAL PROGRAMS; SKILLED OCCUPATIONS; TRADE AND INDUSTRIAL EDUCATION

Changing techniques and new competitive materials requiring increased skills and technical knowledge demand more versatile and thoroughly trained craftsmen in the painting and decorating trades. The national standards, revised to meet this need, itemize apprenticeship provisions to provide the local joint apprenticeship committees and contractors with guidelines for establishing, improving, and conducting apprenticeship programs. The minimum apprenticeship term is set as 3 consecutive years of on-the-job training supplemented with 144 hours of related classroom instruction each year. Other standards include qualifications for apprenticeship, selection of apprentices, term of apprenticeship, period of probation, agreement between employer and apprentice, ratio of apprentices to journeymen, wages of apprentices, supervision of apprentices, and certificates of program completion. The local joint apprenticeship committees, equally representative of management and labor, are responsible for adapting the national standards to local use. Examples of the type of work experience and training considered necessary to develop skilled and productive workers are given for painters, decorators, paperhangers, and drywall finishers. The standards are supplemented with apprenticeship record keeping forms and directories of regional and state apprenticeship agencies. (HC)

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National Painting and Decorating Apprenticeship and Training Standards

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Adopted by the National Joint Painting and Decorating Apprenticeship and Training Committee, representing the Brotherhood of Painters, Decorators, and Paperhangers of America and the Painting and Decorating Contractors of America, in conformance with the basic standards recommended by the Bureau of Apprenticeship and Training.

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Willard Wirtz, Secretary

MANPOWER ADMINISTRATION, Washington
Stanley H. Ruttenberg, Administrator

BUREAU OF APPRENTICESHIP AND TRAINING
Hugh C. Murphy, Administrator

1967 Edition

VT 48

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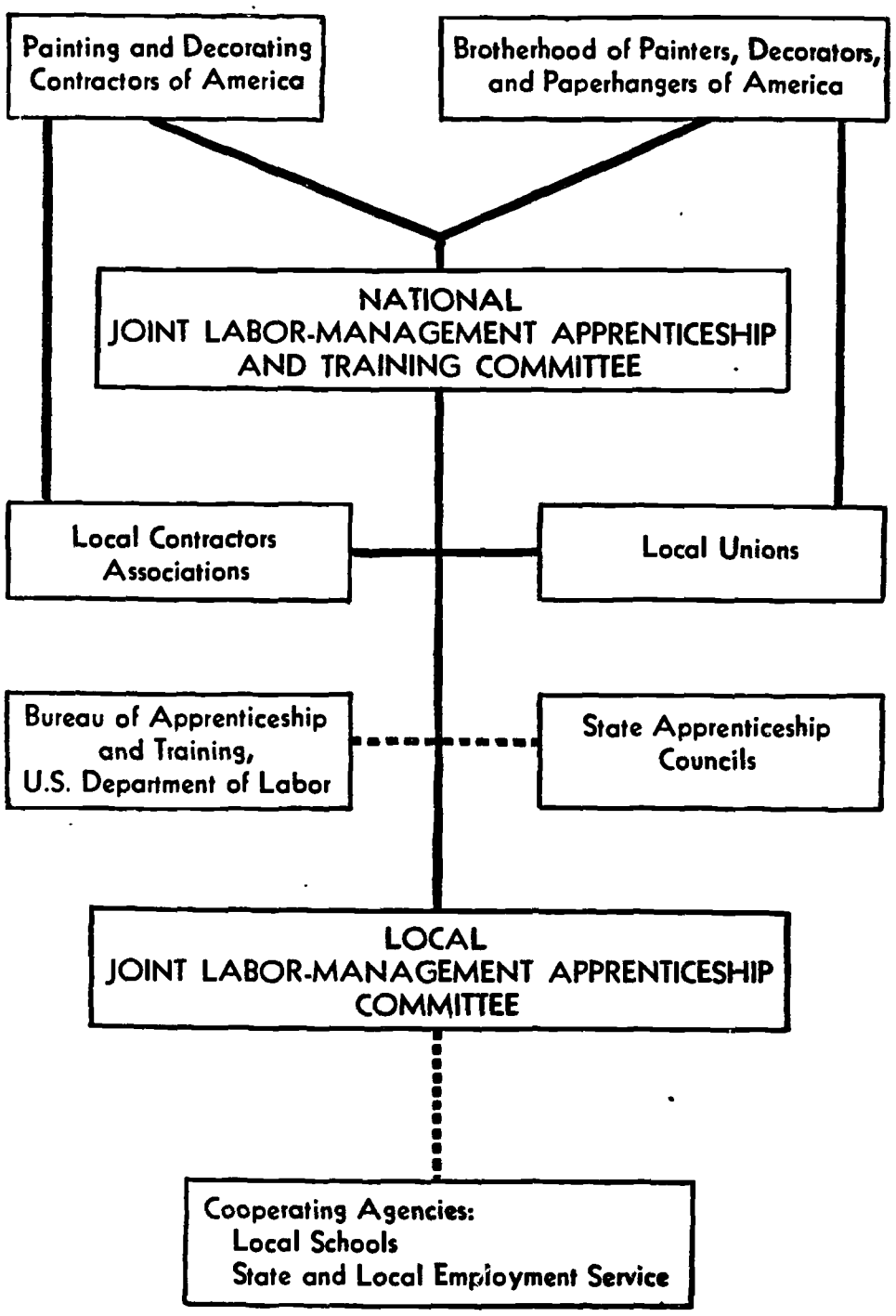
APPRENTICESHIP SYSTEM OF THE PAINTING AND DECORATING INDUSTRY



U.S. DEPARTMENT OF LABOR
BUREAU OF APPRENTICESHIP AND TRAINING
WASHINGTON, D.C. 20210

May 18, 1967

National Joint Painters and Decorators
Apprenticeship and Training Committee

Gentlemen:

It is with great pleasure that I congratulate you and the industry which you represent for your foresightedness in maintaining the highest standards for the training of craftsmen in your industry.

Your continued efforts to make these standards an effective guide and instrument for building sound local systems of apprenticeship should bring you lasting credit and satisfaction. I know that you will maintain the same enthusiastic support of apprenticeship in the years to follow.

You may be assured of the continued assistance from the staff of the Bureau of Apprenticeship and Training in all matters of apprenticeship and training at the national and local levels.

Sincerely yours,

Hugh C. Murphy
Administrator

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AREA CODE 312

National Headquarters

Painting and Decorating Contractors of America
2625 WEST PETERSON AVENUE • CHICAGO ILLINOIS 60645

May eighth
19 67

The Bureau of Apprenticeship & Training
U.S. Department of Labor
Washington, D.C.

Gentlemen:

We wish to express our appreciation to your staff for the help given to our National Painting and Decorating Joint Apprenticeship Committee in the revision of the National Apprenticeship standards for the Painting and Decorating Industry.

Representatives of the Painting and Decorating Contractors of America, Brotherhood of Painters, Decorators and Paperhangers of America and the Gypsum Drywall Contractors International, have worked together as a committee to prepare these standards and our Apprenticeship and Training program for the industry. We feel that these standards provide the basis for a sound National Apprenticeship program for well rounded training.

The newly revised standards will be distributed to all of our affiliated Councils and Chapters, and recommended to them as the basis upon which to build their progressive training program.

Very truly yours,

D. Avery Boyd

D. Avery Boyd
National President, P.D.C.A.

DAB:fw

SIGN PAINTERS
SCENIC ARTISTS
GLAZIERS AND GLASS WORKERS
CARPET AND LINOLEUM
PAINT MAKERS
and Allied Workers

Brotherhood of
PAINTERS, DECORATORS and PAPERHANGERS of America • AFL-CIO

1925 K. STREET. N.W. WASHINGTON. D.C. 20006 • TELEPHONE 338-8300

OFFICE OF S. FRANK RAFTERY GENERAL PRESIDENT

May 5, 1967

Bureau of Apprenticeship and Training
U. S. Department of Labor
Washington, D. C.

Gentlemen:

The Brotherhood of Painters, Decorators and Paperhangers of America is pleased to see the fruition of these revised National Painting and Decorating Apprenticeship and Training Standards. We feel that these standards are an effective guide for building local and national apprenticeship and training programs for the painting and decorating industry and are pleased to give them our full endorsement.

Apprenticeship has always been recognized as the sound foundation upon which industry builds its corps of skilled craftsmen and the apprenticeship system of the painting and decorating industry is based on the continuing interest of labor and management in maintaining the highest standards for the training of craftsmen in our industry.

Our Brotherhood is particularly proud of the active role of our affiliated Local Unions and District Councils and the National Joint Painting and Decorating Apprenticeship and Training Committee in developing and updating their training programs to adapt to the technological changes in our industry.

We join the employers in our industry in expressing our appreciation to the Bureau of Apprenticeship and Training for the assistance of your staff members in preparing this manual for publication.

Very truly yours,

S. FRANK RAFTERY
General President

Certificate of Registration

NATIONAL PAINTING AND DECORATING APPRENTICESHIP AND TRAINING STANDARDS
(Jointly Sponsored by the Brotherhood of Painters, Decorators, and Paperhangers of America and the Painting and Decorating Contractors of America)

Nation-Wide

Issued in recognition of the above apprenticeship system, registered as part of the National Apprenticeship Program, in accordance with the standards recommended by the

FEDERAL COMMITTEE ON APPRENTICESHIP

for the trade classifications of PAINTER-and-DECORATOR and DRYWALL TAPER

Date May 18, 1967

Registry No. 81380

W. Willard Wirtz
Secretary of Labor

Hugh C. Murphy
Administrator, Bureau of Apprenticeship and Training

JOINTLY DEVELOPED AND ADOPTED BY CONTRACTORS AND LABOR

In order that there may be continuous activity and progress in the national apprenticeship program in the painting and decorating trade, a National Joint Contractor-Labor Apprenticeship Committee was originally established and appointed by the Secretary of Labor to serve in an advisory and promotional capacity. This national committee, now known as the National Joint Apprenticeship and Training Committee, is made up of an equal number of representatives of the Brotherhood of Painters, Decorators and Paperhangers of America and the Painting and Decorating Contractors of America. A representative of the Bureau of Apprenticeship and Training, U.S. Department of Labor, and of the Trade and Industrial Education Service, U.S. Office of Education, serve as consultants to the committee.

To enable young men to obtain the training necessary to equip them for the responsibilities they must assume as successors to the present generation of craftsmen, the national committee has developed, for the guidance of local contractor and labor groups, the national standards of apprenticeship contained in the following pages. It is through the cooperative effort and initiative of the local groups that the national committee looks for ever-increasing apprenticeship activities.

These national standards represent the conservative judgment of leading painters and decorators concerning the essential factors in the development of highly skilled painting and decorating craftsman. The national committee will arrange for every assistance possible to be given to the local groups in establishing practical and sound apprenticeship programs. It will review the operation of apprenticeship programs and the development of apprentice training in the industry through periodic surveys, and make such recommendations as may be necessary for improving the effectiveness and completeness of the training of apprentices.

FOREWORD

Set forth in this booklet is the seventh revision of the National Joint Painting and Decorating Apprenticeship and Training Standards, which were originally formulated and adopted in 1937. This latest edition was developed by the Joint Painting and Decorating Apprenticeship and Training Committee in cooperation with the U.S. Department of Labor's Bureau of Apprenticeship and Training. The committee, which represents the Brotherhood of Painters, Decorators and Paperhangers of America and the Painting and Decorating Contractors of America, is established on a permanent basis.

The painting and decorating trade was one of the first trades in the United States to adopt national standards to provide a uniform pattern for use by employers and labor in every locality in setting up and operating apprentice training programs. The original standards formulated in 1937, formed a basis for national standards subsequently developed in many other trades.

Continuously on the alert for ways and means to improve training methods and procedures, representatives of contractors and labor in the trade revised the original standards in 1938, 1948, 1954, 1960, 1964 and now in 1967. The changing techniques and new competitive materials introduced have constantly increased the skills and technical knowledge required in the trade and the necessity for more versatile, thoroughly trained craftsmen, capable of a more economical, longer-lasting, perfectly executed job.

In addition to itemizing the various provisions of this latest version of the national standards, this booklet includes an explanation of the application of the standards for the guidance of contractors and labor representatives. Not only have many of the provisions been amplified, but a new provision has been added relating to the training of drywall tapers. Supplementing the provisions is a new schedule of work processes in which to train apprentices. A statement of policy of nondiscrimination in the selection of apprentices has also been included.

It is hoped that all employers and labor representatives in every community will take full advantage of this edition of the Painting industry's National Standards in establishing, improving, and conducting local apprenticeship programs.

NATIONAL JOINT PAINTING AND DECORATING APPRENTICESHIP AND TRAINING COMMITTEE

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CONSULTANTS

U.S. Department of Labor
Bureau of Apprenticeship and Training
Washington, D.C.

NATIONAL PAINTING AND DECORATING APPRENTICESHIP AND TRAINING STANDARDS

Part I

Provisions of Standards Governing the Employment and Training of Painting and Decorating Apprentices

NOTE.—Local application of these National Standards in States having State Apprenticeship Councils may require adaptation to meet the standards of apprenticeship in such States. The staff of the Bureau of Apprenticeship and Training and State apprenticeship agencies is available to advise on such standards.

1. *Definition of Painting and Decorating Apprentice.*—A "painting and decorating apprentice" is a person—

(*a*) who is at least 16 and not over the age of 25,

(*b*) who is engaged in learning the trade covered by these standards, and

(*c*) who is covered by a written agreement, hereinafter called an "apprenticeship agreement," with a local painting and decorating joint apprenticeship and training committee, acting as agent of the contractor, or with a contractor with approval of the agreement by the local joint committee.

2. *Definition of Registration Agency.*—The term "Registration Agency," as used herein, shall mean a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, or, if no such recognized agency exists in the State, it shall mean the Bureau of Apprenticeship and Training, U.S. Department of Labor.

3. *Qualifications for Apprenticeship.*—Applicants for apprenticeship must be at least 16 and not over 25 years of age. (The local joint apprenticeship and training committee will have the authority to waive the maximum age limit in the case of honorably discharged veterans, and in other special cases.) All applicants shall satisfy the local joint committee that they have the ability and aptitude to master the rudiments of the trade and have sufficient education to satisfactorily complete the required hours of related theoretical instruction.

Applicants must be American citizens, or in the process of naturalization; be physically able to perform the work required of the trade; and meet such other qualifications as shall be established by the local joint apprenticeship and training committee.

4. *Selection of Apprentices.*—Selection of apprentices under this program shall be made from qualified applicants on the basis of qualifications alone and without regard to race, creed, color, or national origin, in accordance with objective standards which permit review, after full and fair opportunity for application; and this program shall be operated on a completely nondiscriminatory basis.

Local joint apprenticeship and training committees shall establish proper selection standards and procedures for applicants interested in a painting and decorating apprenticeship. The use of application forms, appropriate interviewing techniques, and aptitude tests are essential tools of the selection process, and properly used, provide some degree of assurance that the applicant possesses the qualities necessary to success in the trade. Among other benefits to be derived from adequate selection procedures are:

(*a*) better qualified apprentices,
(*b*) reduction in turnover,
(*c*) savings in time, money, and effort in training, and
(*d*) more competent and highly skilled craftsmen.

5. *Term of Apprenticeship.*—Apprentices shall serve a minimum term of 3 consecutive years (approximately 6,000 hours) in the painting and decorating trade, which shall consist of six 6-month periods of reasonably continuous employment during such term, and include the probationary period and the required hours of supplemental school instruction. (Exception: Where taper apprentices are training in a shop which does only drywall work, the training period may be two years (approximately 4,000 hours) and work processes schedule "B" may be used.)

6. *Related Classroom Instruction.*—Apprentices shall be required to attend classes in subjects related to the trade each year of their apprenticeship (144 hours per year of such instruction is normally considered necessary). The local joint apprenticeship and training committee shall request the local schools to establish classes of supplemental related instruction for apprentices, and shall cooperate with the local vocational school officials in determining the subjects to be taught, and the qualification of instructors. The local joint committee may recommend journeymen in the trade who have the knowledge and ability to teach related classroom instruction.

Where it is found impracticable to establish related instruction classes, the local joint committee may substitute other organized forms of instruction in the theoretical and technical subjects related to the painting and decorating trade, such as correspondence courses or other industrial courses of equivalent value.

Local standards of apprenticeship should clearly indicate the policy of the local committee with respect to hours spent in related instruction:

(*a*) The local standards should include the statement that hours spent in related instruction after regular working hours shall not be considered hours worked.

Local standards should clearly indicate the policy of local committee with respect to payment for hours spent in related instruction.

No apprentice should be allowed to work overtime when such work will interfere with his attendance at related instruction classes. In case of

NOTE.—In Wisconsin, State laws provide that the employer shall pay for the time the apprentice is receiving instruction at his regular hourly rate. It also provides that if the apprenticeship is for a longer period than 2 years, the total amount of instruction shall not be less than 400 hours.

failure of any apprentice to fulfill his obligations as to school attendance and conduct, without due cause, the local joint apprenticeship and training committee shall take necessary disciplinary action.

7. *Ratio of Apprentices to Journeymen.*—The provision in local standards covering the ratio of apprentices to journeymen shall be worked out according to local practices or agreements.

8. *Apprenticeship Agreement.**—Each apprentice shall be covered by a written apprenticeship agreement with the local joint committee, acting as agent of the contractor; or the agreement may be between the apprentice and the contractor with approval by the joint committee. All apprentices shall be registered with the appropriate registration agency.

Each apprenticeship agreement shall contain a statement making the terms and conditions of the local trade standards a part of the agreement. For this reason, every apprentice and employer will be required to read the local standards of apprenticeship before signing the agreement.

9. *Probationary Period.*—Apprentices employed under these standards shall be subject to a try-out or probationary period, to be determined by the local joint apprenticeship and training committee, which shall not exceed 3 months of reasonably continuous employment. During the probationary period, the termination or cancellation of the apprenticeship agreement shall be made by the local joint committee at the request of either party to the agreement. After the probationary period, the agreement may be canceled by the local committee after adequate cause has been shown, and all parties to the agreement have had an opportunity to be heard.

The registration agency shall be notified of all cancellations and terminations of apprenticeship agreements.

10. *Apprentice Wages.*—It is recommended that the schedule of wages for apprentices be established on a percentage of the prevailing local journeyman painter and decorator's wage rate, and increased each 6 months to completion of the apprenticeship.

The local joint apprenticeship and training committee shall examine apprentices before each period of advancement, ascertaining as to their satisfactory attendance and progress both at school and on the job, and the degree of proficiency and quality of workmanship achieved.

11. *Credit for Previous Experience.*—If the local joint committee finds, upon examining the applicant's records, that he has had previous practical experience in the trade it may grant him advanced standing on the term of apprenticeship, subject to review before the end of the probationary period. Apprentices who receive credit for previous experience shall be paid the wage rate for the period to which such credit advances them.

12. *Hours of Work for Apprentices.*—The hours of work for apprentices shall be the same as those for journeymen employed in the trade. No apprentice

*Some State Apprenticeship Agencies require the use of their own apprenticeship agreement forms. In such instances, the agreement forms may be obtained from the staff of the State Apprenticeship Agency or of the Bureau of Apprenticeship and Training.

shall be allowed to work overtime, if it interferes with his attendance at related instruction classes.

Apprentices absent from the services of their employers through their own fault shall make up all such time lost before being advanced to the next period of apprenticeship.

13. *Supervision of Apprentices.*—The contractor shall designate a particular person, who may be the superintendent, foreman, or journeyman, to be responsible for the training of apprentices. He shall, with the advice and assistance of the local joint apprenticeship and training committee, be responsible for the apprentices' work experience on the job, for their attendance at related classes, and the recording of same on record forms provided for this purpose. (See example of apprentice recordkeeping form on page 14.)

It shall be his duty to see that these record forms are complete in every detail and forwarded to the local joint committee at periodic (quarterly) intervals. The local committee shall keep a master record of the apprentices' work experience and related instruction.

14. *Coordinator of Apprenticeship.*—Where the local program of apprenticeship or the area of coverage of the local program is unusually large, the local joint committee should give consideration to the appointment of a person to assist it in the supervision and administration of the apprenticeship system. The Coordinator of Apprenticeship shall be responsible to the local joint committee and assume such duties as may be assigned to him by the local committee. In effect, the Coordinator of Apprenticeship acts for and on behalf of the local joint apprenticeship and training committee during the interim between regular meetings of the local committee to assure the effectiveness and success of the local program.

15. *Accident Prevention.*—Apprentices shall receive instruction on accident prevention and safe working habits during their entire term of apprenticeship. Such instruction shall be coordinated with the actual work being performed on the job and the tools and equipment being used.

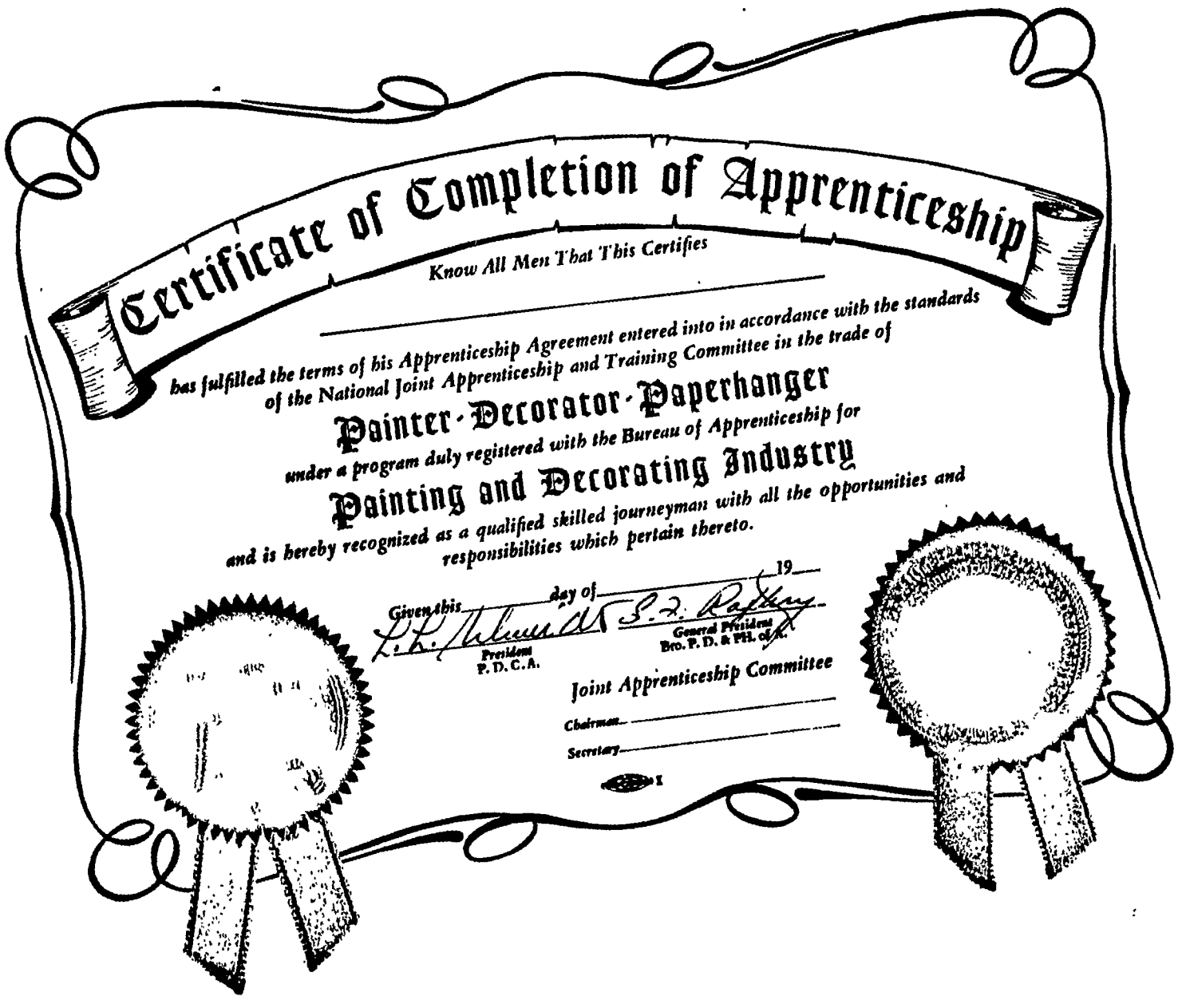
16. *Adjusting Differences.*—The contractor and the apprentice shall have the right and privilege of appeal to the local joint apprenticeship and training committee in the event of disputes or controversies arising over any provision of the local apprenticeship standards which cannot be satisfactorily settled between them. The local committee shall hear all parties and make such adjustments as it may consider neccessary.

17. *Work Experience.*—During his apprenticeship, the apprentice shall be taught the use, care, and effective and safe handling of all tools and equipment commonly used in the trade. He shall be given work experience and training in all branches of painting and decorating, including paperhanging, to assure him the skill and proficiency that characterizes a fully qualified and competent craftsman in the art of painting and decorating, and paperhanging. (See the recommended schedules of work experience and training outlined on pages 12–13.)

18. *Certificate of Completion of Apprenticeship.*—Apprentices who complete their apprenticeship and have passed the required journeyman examination, shall be awarded a certificate by the local joint committee, attesting to their satisfactory completion of training and recognition as qualified journeymen painters and decorators. Certificates of completion are available from the registration agency for all apprentices completing their apprenticeship under registered standards.

19. *Consultants.*—The local joint committee may request interested agencies or organizations to designate a representative to serve as a consultant. Consultants may be asked to participate without vote in conferences on special problems which affect the agencies or organizations they represent.

20. A Representative from the Bureau of Apprenticeship and Training, United States Department of Labor, and/or the appropriate State Apprenticeship Council, is available on request to provide assistance to local joint apprenticeship committees in developing selection standards and procedures consistent with the requirements of Title 29, CFR, Part 30.



Certificate of Completion of Apprenticeship

Know All Men That This Certifies

_____

has fulfilled the terms of his Apprenticeship Agreement entered into in accordance with the standards of the National Joint Apprenticeship and Training Committee in the trade of

Painter-Decorator-Paperhanger

under a program duly registered with the Bureau of Apprenticeship for

Painting and Decorating Industry

and is hereby recognized as a qualified skilled journeyman with all the opportunities and responsibilities which pertain thereto.

Given this _____ *day of* _____ *19*__

L. P. Nelson
President
P. D. C. A.

S. J. Ray
General President
Bro. P. D. & Pa. of A.

Joint Apprenticeship Committee

Chairman _____

Secretary _____

ERIC

Part II

Adapting National Standards to Local Use

1. *Local Painting and Decorating Joint Apprenticeship and Training Committee.*—It is recommended that a local joint apprenticeship and training committee, equally representative of management and labor, be established which shall be responsible for the administration of the local apprenticeship standards, and for coordinating them, where desirable, with the apprenticeship standards of other groups in the community.

Where organizations of employers and employees exist, such organizations should each appoint an equal number of its members to serve on the local joint committee.

Where no employer or employee organizations exist, a committee may be formed in like manner by volunteers who shall agree to carry out the national standards as herein set forth.

A representative from the Bureau of Apprenticeship and Training, U.S. Department of Labor, and/or the State apprenticeship council, if one exists in the State, is available upon request to attend meetings of the joint committee as advisor and consultant on labor standards applicable to apprentices, on the development of administrative procedures for the conduct of apprenticeship, and on any problems relating to apprentices and apprenticeship.

2. *Coverage.*—It shall be the duty of each local joint apprenticeship and training committee to identify its area of operation and to assume responsibility for the training of all painting and decorating apprentices by contractors within that area with whom the local union has bargaining agreements. The local committee shall also encourage all other contractors in the area to employ and train apprentices under its system of apprenticeship and any contractor who desires to do so may participate in the local program by signifying agreement to the terms and conditions of training prescribed in the local standards.

3. *Duties of Local Joint Apprenticeship and Training Committees.*—The local joint committee shall develop local apprenticeship standards consistent with these national standards, and covering such items as:

(*a*) Method of selecting apprenticeship applicants on a nondiscriminatory basis.

(*b*) Schedule of work experience on the job.

(*c*) Progressively increasing schedule of wages for apprentices.

(*d*) Provision for supplemental related instruction.

(*e*) Provision for instructions on safe working habits and accident prevention.

(*f*) Provision for reviewing or testing the apprentice's progress both on the job and in related instruction.

(*g*) Provision for adjusting complaints regarding apprenticeship.

(*b*) Procedure for providing apprentices with certificates of completion.

It shall be the responsibility of the local committee to:

(*a*) Conduct surveys to determine the need for, and the availability of, apprentices in the local area.

(*b*) Ascertain whether contractor undertaking to train apprentices has the necessary facilities to assure effective training.

(*c*) Place each apprentice under agreement. (Where the apprentice is indentured to the local joint committee, the committee shall make every effort to keep the apprentice continuously employed and assure him of well-rounded training and experience in all phases of the trade by rotating him, whenever possible, among the various participating contractors. Where the apprentice is indentured to the contractor, and the contractor is unable to provide employment for him, the local joint committee shall exert every effort to place him temporarily with another contractor with the understanding that the contractor to whom he is regularly indentured shall have first call on his services when and if he is able to furnish employment for him.)

(*d*) Assure that apprentices are receiving the necessary on the job experience and related technical instruction.

(*e*) Conduct the final examination for apprentices to establish their status as journeymen in the trade.

(*f*) Notify the appropriate registration agency of all terminations and cancellations of apprenticeship agreements.

(*g*) Prepare and submit all reports concerning its apprenticeship program that may be legally required by local, State, or Federal agencies, and the respective national organizations.

(*h*) Supervise the enforcement of all the provisions of the standards.

4. *Responsibilities of Apprentices.*—The local joint apprenticeship and training committee should impress upon each indentured apprentice that in signing the apprenticeship agreement he has voluntarily agreed to abide by the provisions of the local standards, and inform the apprentice of his responsibilities and obligations under the apprenticeship program.

(*a*) To perform diligently and faithfully the work of the trade and other pertinent duties as assigned by the contractor in accordance with the provisions of the standards.

(*b*) To respect the property of the contractor and abide by the working rules and regulations of the contractor and the local joint committee.

(*c*) To attend regularly and complete satisfactorily the required hours of instruction in subjects related to the trade, as provided under the local standards.

(*d*) To maintain such records of work experience and training received on the job and in related instruction, as may be required by the local joint committee.

(*e*) To develop safe working habits, and conduct himself in his work

in such manner as to assure his own safety as well as that of his fellow-workers.

(*f*) To work for the contractor to whom assigned to the completion of his apprenticeship, unless he is reassigned to another contractor or his agreement is terminated by the local joint committee.

(*g*) To conduct himself at all times in a creditable, ethical, and moral manner, realizing that much time, money, and effort will be spent in affording him an opportunity to become a skilled craftsman.

Filing with the Registration Agency

As soon as the local apprenticeship standards have been developed and approved by the sponsoring local groups, the local joint committee shall file a copy with the registration agency. The joint committee shall furnish the registration agency with any additional information required by Federal or State laws or regulations affecting apprentices. The joint committee shall also register a copy of each apprenticeship agreement with the registration agency.

Cooperating Agencies

Local joint apprenticeship and training committees may obtain assistance in the formulation and administration of apprenticeship programs from:

(*a*) Painting and Decorating Contractors of America, 2625 West Peterson Avenue, Chicago, Ill.

(*b*) Brotherhood of Painters, Decorators and Paperhangers of America, Painters and Decorators Building, Lafayette, Ind.

(*c*) Gypsum Drywall Contractors International, 127 Wacker Drive, Chicago, Ill.

(*d*) The Bureau of Apprenticeship and Training, U.S. Department of Labor, Washington, D.C. 20210.

(*e*) State Apprenticeship Councils, State Labor Departments, or State Industrial Commissions.

(*f*) The Division of Vocational Education, U.S. Office of Education, which administers and supervises Federal funds appropriated for apportionment among the States for vocational education. The assistance of State and Local Boards of Vocational Education is also available upon request.

Federal Laws and Regulations Affecting Apprenticeship

Wage Determination Regulations (federally financed and assisted construction).—The Secretary of Labor, through the Solicitor's Office of the U.S. Department of Labor, predetermines the prevailing wages for construction mechanics and laborers employed on Federal or federally assisted construction projects. (Details of these regulations will be found in Part 5, Title 29, Subtitle A, Code of Federal Regulations, covering labor standards provisions applicable to public contracts.) The local joint apprenticeship committees should advise all contractors participating in the local apprenticeship program that in case they bid on and are awarded a contract for a federally financed or assisted construction project, they should not employ

apprentices on such project until such time as they have requested and obtained the applicable apprentice wage schedule for the area from the contracting or sponsoring government agency; and provided that the apprentices are indentured and employed under a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, U.S. Department of Labor, or if no such recognized agency exists in the State, with the Bureau of Apprenticeship and Training, U.S. Department of Labor; and provided further, that the apprentices so employed are individually registered with the appropriate registration agency.

The contractor must present written evidence of such registration, including evidence of the established ratios and wage rates applicable in the project area to the Contracting Officer for acceptance.

Selective Service Regulations (Deferment of Apprentices).—State directors of Selective Service are authorized to accept for deferment purposes apprentice training programs which meet its regulations, upon request of the program sponsors. The request must be accompanied by a certification from the registration agency that the program meets all the standards and requirements of the Selective Service Regulations, including the statement that the program has been in operation at least one year and one or more apprentices have been in training during that time in each occupation covered.

After the program has been accepted, the program sponsor and the apprentice may request the local board to defer the apprentice. The request must be accompanied by a certificate of the sponsor that his program has been accepted by the State Director of Selective Service for the State in which the program is being operated, and that the registrant currently is meeting all the standards and requirements of the apprenticeship program and is satisfactorily performing and progressing in his on-the-job training and related trade instruction.

The decision as to actual deferment rests with the local board, subject to appeal if the request is denied.

Detailed information and necessary forms may be obtained from the nearest field representative of the Bureau of Apprenticeship and Training or State apprenticeship agency.

Joint Training Funds

1. *Legality of Training Funds.*—Training funds for use in defraying the cost of apprenticeship or other training programs, to which employers contribute, are authorized under The Labor-Management Reporting And Disclosure Act of 1959 which amends Section 302 of the Labor-Management Relations Act of 1947. Such funds must be established in the form of a trust; the trustees must be equally representative of the employers and employees (this may be the joint apprenticeship and training committee); and the basis on which payments to the trust fund are to be made must be detailed in a written agreement with the employer, including provision for an annual audit of the trust. Those persons (trustees) responsible for the custody or control of the trust funds must be bonded.

Where a trust is established, a clause should be included in the trust agreement

to the effect that the trusteeship is (1) a nonprofit organization; (2) that no part of the net earnings will inure to any private individual or member; and (3) in the event of dissolution of the trust, how the accrued moneys and other assets will be disposed. (They can be apportioned to those who paid into the fund, or donated to a charitable or educational organization, or to the labor organization.)

2. *Tax Exempt Status of the Trust.*—Training trust funds are considered to be tax exempt by the Internal Revenue Service under Section 501(c)5 of the Internal Revenue Code of 1954. To obtain this exemption, the trustees must file Form 1024 with the appropriate District Director of Internal Revenue. In submitting Form 1024, include with it a copy of the trust agreement and apprenticeship program. After the tax exempt status of the trust has been determined, each year thereafter the trustees shall make a return on Form 990 in order to maintain this exemption.

Employer contributions to the training trust fund are deductible as ordinary and necessary expenses in the conduct of their business under Section 162(a) of the Internal Revenue Code.

Title 29 Code of Federal Regulation, Part 30—*Nondiscrimination in Apprenticeship and Training*—All programs of apprenticeship registered with the Bureau of Apprenticeship and Training on and after January 17, 1964, must include acceptable apprentice selection standards and procedures, and nondiscrimination clause, consistent with the regulation. Provision must be made for disseminating information on apprenticeship openings to the local schools and public employment service offices, for evaluating the qualifications of applicants, for selecting qualified applicants in descending order of qualifications, and for keeping of records of the selection process for a period of at least two years.

The Civil Rights Act of 1964, Title VI, establishes policy with respect to nondiscrimination in federally assisted programs:

> No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, or denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

Detailed information regarding the application of nondiscrimination requirements under the Civil Rights Act of 1964 and Title 29 CFR Part 30 regulation may be obtained from the Bureau of Apprenticeship and Training, U.S. Department of Labor or State apprenticeship agency.

Schedule "A"

TRADE EXPERIENCE SCHEDULE FOR PAINTERS, DECORATORS AND PAPERHANGERS

This schedule is an example of the type of work experience and training considered necessary to develop a skilled and productive worker in the painting and decorating trade. Within the limits of basic trade requirements, local joint apprenticeship and training committees will find the schedule sufficiently flexible for adaptation to local conditions, and in allocating the approximate experience.

	Approx. hours
I. Preparation of Surfaces	
1. Wood and composition	
2. Masonry and concrete	
3. Metal	
4. Plaster	
5. Painted	
6. Drywall taping and surface treatment (See Schedule "B")	.....
II. Operation and Care of Tools and Equipment	
1. Brushes, rollers, etc.	
2. Spray-painting equipment	
3. Miscellaneous hand and power-driven tools; including sand blasting equipment	
4. Ladders, scaffolding, and rigging	
5. Compressors	.....
III. Materials Used in Painting and Decorating	
1. White pigments	
2. Extender, metal priming and metal pigments	
3. Color pigments	
4. Binders, thinners and dryers	
5. Primers and sealers	
6. Oil paints and enamels	
7. Water paints and emulsions	
8. Clear coatings	
9. Stains	
10. Mastics, cement enamels and other special coatings	
11. Plastics	
12. Adhesives	
13. Wall coverings	
14. Coatings and linings (tanks, vats and vessels)	.....
IV. Application of Materials—Exterior and Interior	
1. Painting, staining, coatings and covering of all surfaces	
2. Floor finishing, such as staining, filling, shellacing, varnishing, waxing, sealing, buffing, etc.	.....
V. Applying Various Types of Wall Coverings	.....
VI. Matching and Mixing Colors	.....
VII. Stippling and Texturing	.....
VIII. Blending and Glazing	.....
IX. Graining, Marbling, and Metal and Gold Leafing	.....
X. Stenciling and Stripping	.....
Total Term, 3 years (approximately 6,000 hours)	.....

Schedule "B"

TRADE EXPERIENCE FOR DRYWALL TAPING WORK PROCESSES FOR ON-THE-JOB TRAINING

This schedule is an example of the type of work experience and training considered necessary to develop a skilled and productive worker in the drywall finishing portion of the trade. It may be used as a guide to a complete 4,000 hour on-the-job training program for those apprentices employed by contractors whose business is the Specialty of drywall taping only, within the Painting and Decorating Industry. Within the limits of basic trade requirements, local Joint Apprenticeship and Training Committees will find the schedule sufficiently flexible for adaptation to local conditions, and in allocating the approximate experience. In order for the drywall finisher trainee to be classified as an apprentice, he must be registered with, and under the jurisdiction and supervision of, the existing local Joint Apprenticeship and Training Committee for the Painting and Decorating trade.

	Approx Hours
I. Application and Embedment of Tape	
1. Joints, hand operation	
2. Angles, hand operation	
3. Joints, machine operation	
4. Angles, machine operation	.....
II. Application of First Skim Coat Over Tape	
1. Hand application	
2. Machine application	.....
III. Application of Second Skim Coat Over Tape	
1. Hand application	
2. Machine application	.....
IV. Detail Work (Hand Operation)	
1. Touching up bad joints	
2. Taping and finishing around pipes and tubs	
3. Nail spotting—1st, 2d, and 3d coats	
4. Filling metal corner guard and metal edge trim	
5. Application of tape type metal corners and trim	.....
V. Finishing of Angles	
1. Hand operation	
2. Machine operation	.....
VI. Finishing, Sanding and Final Check Out	.....
VII. Application of Texture (Includes Spray Application)	
1. Application of rough decorative simulated acoustic ceiling texture	
2. Spray application of fog and spatter wall texture	
3. Hand rolled texture	
4. Skip trowel texture	
5. Application of thin wall surfacing texture	
6. Proper masking procedures	.....
VIII. Final Cleanup	
1. Floors, jams, window frames, etc.	.....
Total Term, 2 years (approximately 4,000 hours)	.....

APPRENTICE RECORDKEEPING

To maintain a current record of the progress and ability of apprentices, an accurate recordkeeping system, covering the pertinent points, is essential. A number of different types of recordkeeping systems are in use in the different areas. Some systems include a variety of recordkeeping forms—daily, weekly, monthly, as well as a final master chart summarizing the pertinent data recorded during the entire term of apprenticeship.

Reproduced on the following page is a simply designed recordkeeping form used by joint apprenticeship and training committees in a number of localities. It is presented as an example to those in charge of apprentices in other localities in establishing their own recordkeeping systems. This form covers a 2-week period and is accumulative. The number of hours the apprentice has been trained on the job in each phase of the trade are recorded in columns I through X, and the hours of related classroom instruction are recorded in the next column. Provision is also made for the verification of hours spent in related instruction.

It will be noted that the data recorded during each 2-week period is carried forward to the next 2-week period. In this way, a current and complete record of the progress of each apprentice may be kept on this single form.

Samples of other recordkeeping systems may be obtained, upon request, through the field representatives of the Bureau of Apprenticeship and Training or State apprenticeship agencies.

Painting and Decorating Apprentice Recordkeeping Report

Apprentice ____ Address ____ City ____

Employer ____ Address ____ City ____

Month ____ Year 19__

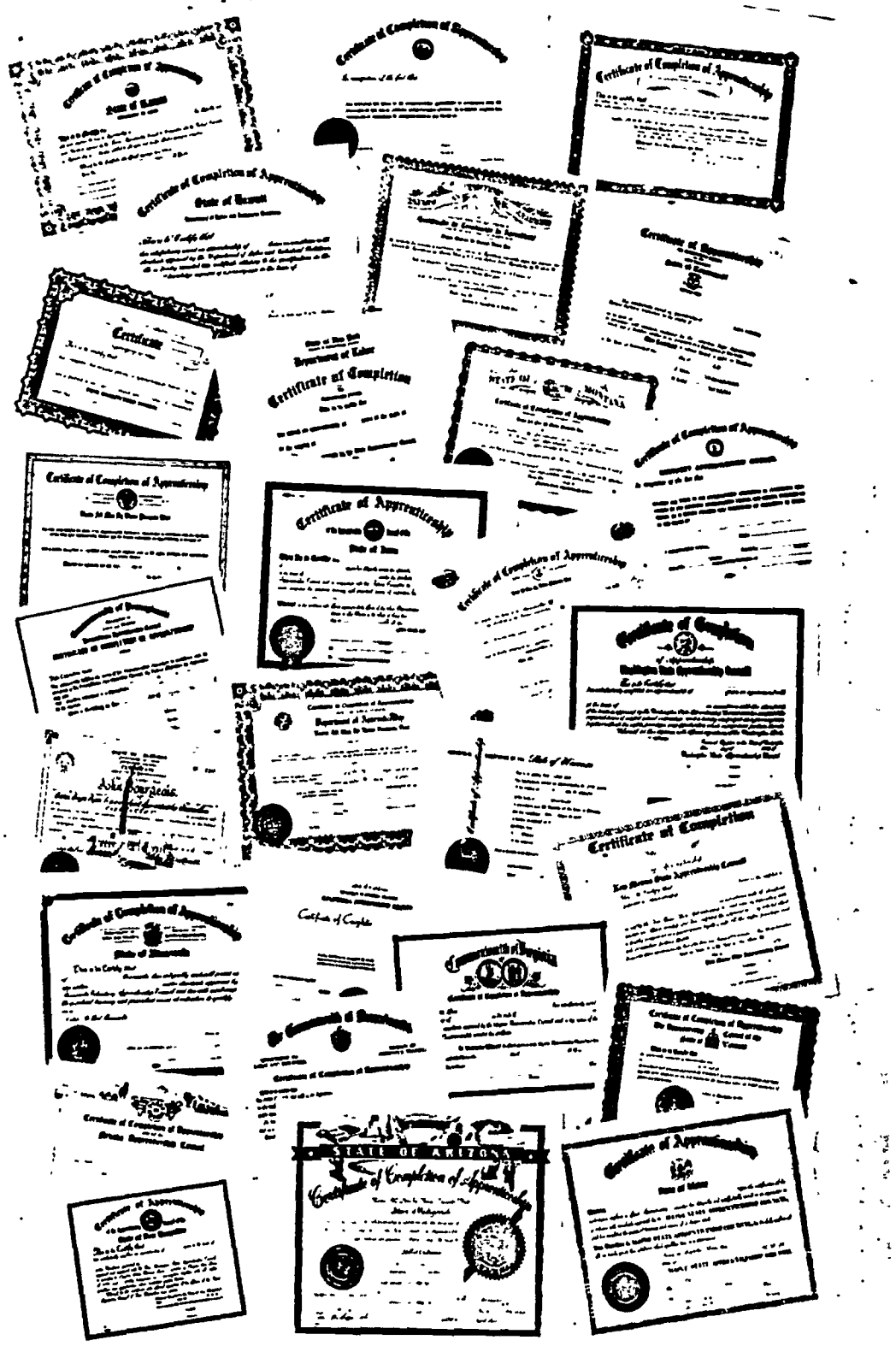
Schedule	I Surface preparation	II Tool care	III Use of materials	IV Exterior and interior applications	V Wall covering	VI Color matchings	VII Stippling	VIII Blending and glazing	IX Graining and marbling	X Stenciling and stripping	Related instruction: Hours of related instruction	Related instruction: Supervisor's verification
Total hours required →												
Hours carried forward												
Date												
Monday												
Tuesday												
Wednesday												
Thursday												
Friday												
Saturday												
Sunday												
Monday												
Tuesday												
Wednesday												
Thursday												
Friday												
Saturday												
Sunday												
											Total school hours	
Total hours to date												

Employer or foreman verify and sign here

Give location of job above

Make comments or remarks on progress of apprentice on reverse side

Enter grand total here.....



Certificates of Completion of Apprenticeship, awarded apprentices when they have completed their training, are issued by the State apprenticeship agency or the Bureau of Apprenticeship and Training in States in which no such agency is established.

APPRENTICESHIP AGREEMENT

Between Apprentice and Employer

(Front View)

The employer and apprentice whose signatures appear below agree to these terms of apprenticeship:

The employer agrees to employ and train the apprentice in accordance with the terms and conditions of the....., which are made a part of this
(Name of Apprenticeship Standards)
agreement; or, in accordance with the terms and conditions stated on the reverse side of this agreement.

The apprentice agrees to apply himself diligently and faithfully to learning the trade in accordance with this agreement.

Trade..... Term of apprenticeship .....
(Hours or Years)

Credit for previous experience..... Term remaining.....

Date the apprenticeship begins.....

This agreement may be terminated by either party notifying the other or in accordance with the named apprenticeship standards.

.....	.....
(Signature of Apprentice)	(Name of Employer—Company)
.....	.....
(Address)	(Address)
.....	.....
(Apprentice's Birth Date)	(Signature of Authorized Official)

Approved by....., Joint Apprenticeship Committee.

Date..... by.....
(Signature of Chairman or Secretary)

Registered by.....
(Name of Registration Agency)

Date..... by.....
(Signature of Authorized Official)

Where a State requires the use of its own agreement form, such form may be obtained from the staff of the State Apprenticeship Agency or of the Bureau of Apprenticeship and Training.

TERMS AND CONDITIONS

(Back View)

1. Term of apprenticeship and period of probation:
   (*a*) Total term: ..... calendar years, or ..... hours
   (*b*) Probationary period: ..... months, or ..... hours

2. Schedule of work processes in which the apprentice is to receive adequately supervised instruction and experience, of which a record will be kept and periodically evaluated:

(*a*) List here: Major divisions of the trade and work tasks required under each:	(*b*) List here: Approximate time, in hours, months, or percent of apprenticeship:

3. Wage rate to be paid the apprentice each period of apprenticeship: (Period may be expressed in hours, months, or years; rate may be expressed in money or percent of journeyman's wage)

Periods:	Rates:	Periods:	Rates:	Periods:	Rates:
1st.....	.....	5th.....	.....	9th.....	.....
2d.....	.....	6th.....	.....	10th.....	.....
3d.....	.....	7th.....	.....	11th.....	.....
4th.....	.....	8th.....	.....	12th.....	.....

Journeyman's rate as of..... is ..... {per hour / per week

4. Number of hours per week or per day to be worked by the apprentice:
   (*a*) Hours per week..... (*b*) Hours per day.....

5. Number of hours of related instruction:
   (144 hours per year—4 hours per week during regular school year, is normally considered necessary. Where classes are not available through the local school, other organized trade, industrial, or correspondence course of equivalent value may be substituted)
   (*a*) ..... week ..... year (*b*) School or course.....
   (*c*) Apprentice ☐ will ☐ will not be compensated for hours spent in related instruction after regular working hours.

6. Other provisions:
   (*a*) There is reasonable certainty that the job for which the apprentice is being trained will be available to him upon completion of his apprenticeship.
   (*b*) Upon request by the Joint Apprenticeship Committee or employer, a Certificate of Completion will be granted the apprentice by the Registration Agency upon satisfactory completion of the apprenticeship, in accordance with standards covered herein.

APPRENTICESHIP AGREEMENT

Between Apprentice and Joint Apprenticeship Committee

(Front View)

THIS AGREEMENT, entered into this..... day of..... 196.. between the parties to .....
(Name of local apprenticeship standards)

represented by the Joint Apprenticeship Committee, hereinafter referred to as the COMMITTEE, and....., born.....
(Name of apprentice) (Month)

....., hereinafter referred to as the APPRENTICE, and (if a minor)
(Day) (Year)

....., hereinafter referred to as his GUARDIAN.
(Name of parent or guardian)

WITNESSETH THAT:

The Committee agrees to be responsible for the placement and training of said apprentice in the trade of ..... as work is available, and in consideration said apprentice agrees diligently and faithfully to perform the work incidental to the said trade during the period of apprenticeship, in accordance with the regulations of the Committee. The Apprenticeship Standards referred to herein are hereby incorporated in and made a part of this agreement.

Credit for previous experience at trade if any..... {Hours. / Years.
Apprenticeship remaining..... {Hours. / Years.
Other conditions.....

In witness whereof the parties hereunto set their hands and seals:

.....[SEAL] (Apprentice)	.....[SEAL] (Representative of Joint Apprenticeship Committee)
..... (Address)	..... (Title)
.....[SEAL] (Parent or guardian)	.....[SEAL] (Representative of Joint Apprenticeship Committee)
	..... (Title)

Registered by the.....
(Name of registration agency)

By ..... Title ..... Date....., 196..

Available through Bureau of Apprenticeship and Training, U.S. Department of Labor, Washington, D.C.

Where a State requires the use of its own agreement form, such form may be obtained from the staff of the State apprenticeship agency or of the Bureau of Apprenticeship and Training.

APPRENTICESHIP AGREEMENT

Between Apprentice and Joint Apprenticeship Committee

(Back View)

The undersigned agrees to provide employment and training in accordance with standards named herein.

.....
(Employer)

.....
(Address)

.....
(Employer)

.....
(Address)

.....
(Employer)

.....
(Address)

.....
(Employer)

.....
(Address)

REGIONAL OFFICES

BUREAU OF APPRENTICESHIP AND TRAINING

REGION I
(Maine, N.H., Vt., Mass., R.I., Conn.)
John F. Kennedy Federal Bldg.
Government Center
Boston, Mass. 02203

REGION II
(N.Y., N.J., Puerto Rico, Virgin Islands)
Room 906, 341 Ninth Ave.
New York, N.Y. 10001

REGION III
(Pa., Del., Va., Md., W. Va., N.C.)
Room 321
Professional Arts Bldg.
Chambersburg, Pa. 17201

REGION IV
(S.C., Tenn., Ga., Miss., Fla., Ala.)
Room 729, 1371 Peachtree Bldg.
17th and Peachtree St., NE.
Atlanta, Ga. 30309

REGION V
(Ohio, Mich., Ky.)
Room 831, Federal Office Bldg.
1240 East 9th St.
Cleveland, Ohio 44114

REGION VI
(Ill., Ind., Minn., Wis.)
Room 858
219 So. Dearborn St.,
Chicago, Ill. 60604

REGION VII
(N. Dak., S. Dak., Iowa, Kans., Mo., Nebr.)
Room 2811, Federal Office Bldg.
911 Walnut St.
Kansas City, Mo. 64106

REGION VIII
(La., Tex., N. Mex., Okla., Ark.)
Room 312, 411 N. Akard St.
Dallas, Tex. 75201

REGION IX
(Utah, Wyo., Colo., Mont.)
Room 314, New Custom House
721 19th St.
Denver, Colo. 80202

REGION X
(Ariz., Nev., Hawaii, Calif.)
Room 10451, 450 Golden Gate Ave.
P.O. Box 36017
San Francisco, Calif. 94102

REGION XI
(Alaska, Idaho, Wash., Oreg.)
Room 1809, Smith Tower
506 Second Ave.
Seattle, Wash. 98104

STATE APPRENTICESHIP AGENCIES

(Including the District of Columbia, Puerto Rico and the Virgin Islands)

Arizona Apprenticeship Council,
1623-B West Adams,
Phoenix, Ariz. 85007

Division of Apprenticeship Standards,
Department of Industrial Relations,
San Francisco, Calif. 94102

Colorado Apprenticeship Council,
c/o Industrial Commission
Denver, Colo. 80203

Apprentice Training Division,
Labor Department,
Wethersfield, Conn. 06109

Delaware State Apprenticeship and Training Council,
Department of Labor and Industry,
Wilmington, Del. 19801

District of Columbia Apprenticeship Council,
1145 19th St. NW.,
Washington, D.C. 20036

Department of Apprenticeship,
Florida Industrial Commission,
Tallahassee, Fla. 32304

Apprenticeship Division,
Department of Labor and Industrial Relations,
Honolulu, Hawaii 96813

Kansas Apprenticeship Council,
Department of Labor,
Topeka, Kans. 66603*

Kentucky State Apprenticeship Council,
Department of Labor,
Frankfort, Ky. 40601

Division of Apprenticeship,
Department of Labor,
Baton Rouge, La. 70804

Maine Apprenticeship Council,
Department of Labor and Industry,
State Office Bldg.,
Augusta, Maine 04330

Maryland Apprenticeship and Training Council,
Department of Labor and Industry,
Baltimore, Md. 21201

Division of Apprentice Training,
Department of Labor and Industries,
Boston, Mass. 02202

Division of Voluntary Apprenticeship,
Department of Labor and Industry,
St. Paul, Minn. 55101

Montana Apprenticeship Council,
Department of Labor and Industry,
Helena, Mont. 59601

See footnote at end of table.

Nevada Apprenticeship Council,
Department of Labor,
Carson City, Nev. 89701

New Hampshire Apprenticeship Council,
Department of Labor,
Concord, N.H. 03301

New Mexico Apprenticeship Council,
Labor and Industrial Commission,
Albuquerque, N. Mex. 87106

Bureau of Apprentice Training,
Department of Labor,
Albany, N.Y. 12226

Division of Apprenticeship Training,
Department of Labor,
Raleigh, N.C. 27602

Ohio State Apprenticeship Council,
Department of Industrial Relations,
Columbus, Ohio 43215

Oregon Apprenticeship Council,
Bureau of Labor,
Portland, Oreg. 97201

Pennsylvania Apprenticeship and Training Council,
Department of Labor and Industry,
Harrisburg, Pa. 17120

Apprenticeship Division,
Department of Labor,
San Juan, P.R. 00908

Rhode Island Apprenticeship Council,
Department of Labor,
Providence, R.I. 02903*

Utah Apprenticeship Council,
Industrial Commission,
Salt Lake City, Utah 84111

Vermont Apprenticeship Council,
Department of Industrial Relations,
Montpelier, Vt. 05601

Division of Apprentice Training,
Department of Labor and Industry,
Richmond, Va. 23214

Washington Apprenticeship Council,
Department of Labor and Industries,
Olympia, Wash. 98501

Apprenticeship Division,
Wisconsin Industrial Commission,
Madison, Wis. 53203

Virgin Islands Apprenticeship Council,
Department of Agriculture and Labor,
Christiansted, St. Croix, V.I. 00820

*All agencies, with the exception of Kansas and Rhode Island, operate under apprenticeship and/or training laws enacted by the legislature. Agencies in Kansas and Rhode Island function under executive order of the governor.

U.S. GOVERNMENT PRINTING OFFICE: 1967 O—274-745

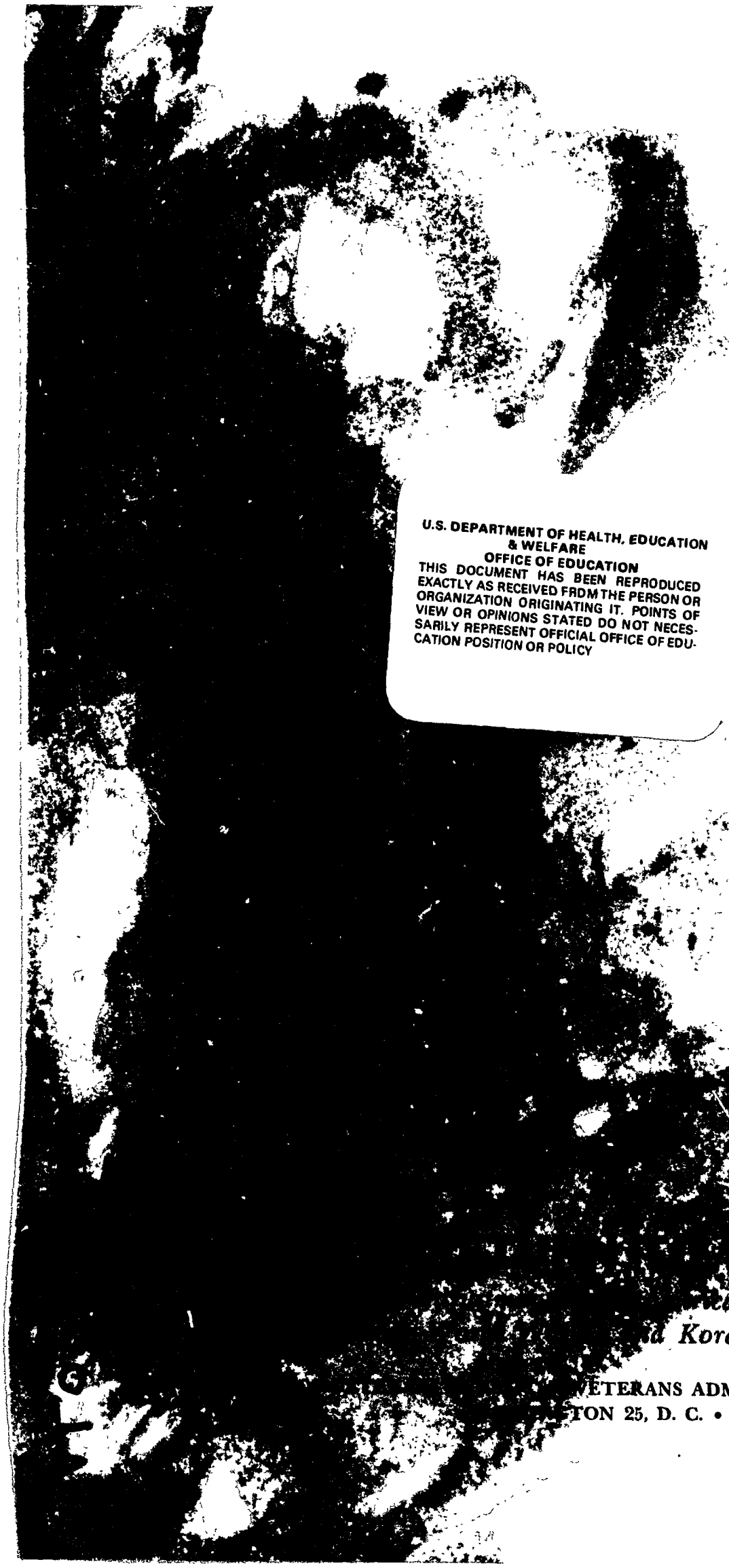
VT 004 837
Cooperman, Irene G.; Sonne, Thomas R.
They Return to Work. The Job Adjustment of Psychiatrically Disabled Veterans of World War II and Korean Conflict.

Veterans Administration, Washington, D.C. Dept. of Veterans Benefits
MF AVAILABLE IN VT-ERIC SET.
VA Pamphlet 22-9
Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402 ($.70).
Pub Date - Jan63 214p.

*CASE STUDIES (EDUCATION); *SURVEYS; *EMOTIONALLY DISTURBED; *VOCATIONAL ADJUSTMENT; *EMPLOYMENT; CLASSIFICATION; OCCUPATIONS
*VETERANS; WORLD WAR II; KOREAN CONFLICT; DICTIONARY OF OCCUPATIONAL TITLES, VOLUME II

Occupations employing psychiatrically disabled World War II and Korean Conflict veterans are illustrated with 337 selected case briefs showing a wide range of vocational adjustment. The briefs all follow a similar format: a description of the veteran's current job and adjustment to it, followed by an account of how he got the job and his previous work experience and psychiatric history, including available information about present general adjustment. The briefs are classified by occupation in accordance with the occupational classification structure in Volume II of the Dictionary of Occupational Titles. A related technical report is available as VT 001 967 (also in this issue). (CH)

VT 004 837



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ETERANS ADMINISTRATION
TON 25, D. C. • JANUARY 1963

THIS PAMPHLET is the fourth in a VA series dealing with the employment of disabled veterans of World War II and the Korean conflict. The first publication, VA Pamphlet 7–10, described the occupations of totally blinded veterans; the second, VA Pamphlet 7–12, described the occupational adjustment of paraplegic veterans; the third, VA Pamphlet 22–6, dealt with the employment of veterans with epilepsy. All four present a picture of greatly broadened rehabilitation horizons.

For sale by the Superintendent of Documents, U.S. Government Printing Office
Washington 25, D.C. – Price 70 cents

The research on which this pamphlet is based was carried out by the Vocational Rehabilitation and Education Service of the Department of Veterans Benefits. A more comprehensive report of the study, detailing the methods used and the findings, is presented in VA Technical Report, TR22–1, available from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

The principal investigator for the study was Irene G. Cooperman, who also had chief responsibility for preparing this pamphlet. The associate investigator was Thomas R. Sonne, of the Buffalo VA regional office. Data of the study were gathered by VR&E staff of the field offices of the Veterans Administration. Fred Panzer, VA Central Office Information Service, collaborated in writing the text of the pamphlet. VR&E staff members contributed as follows: Herman G. Carroll, Frank C. Fellows and Gerald E. Wise wrote case briefs; David H. Pritchard wrote case briefs and resolved problems of occupational coding.

FROM THE PRESIDENT'S COMMITTEE ON EMPLOYMENT OF THE HANDICAPPED

My heartiest salute to the 1,400 veterans described in this VA study, as well as to all the other mentally restored veterans in our land, for demonstrating so forcefully that the mentally restored have the ability to work, if only they are given the opportunity to work.

And another salute to the Veterans Administration for conducting this valuable study—a milestone in the cause of employment equality for the mentally restored.

We Americans are a practical "show-me" type of people. We don't accept everything told to us; we prefer to see for ourselves. This trait is one of our national strengths.

Through this VA study—with its emphasis on the employment records of veterans with histories of mental illness—we *can* see for ourselves that by depriving them of their rightful opportunity to work, we actually deprive ourselves of the services and talents of a valuable and much-needed group of fellow citizens.

This is a study not of theory but of facts. And the facts are good, encouraging, heartening. The facts, if spread far and wide, can go a long way in putting more of these people on the job, where they belong. We all shall be the richer for it.

The truth is the highest summit of life, said a philosopher. Let us take to our hearts the truths in this study; let these truths enrich our lives and strengthen our country.

The President joins me in the hope that this study will help many public-spirited citizens to increase their efforts to help others to help themselves.

Mel Maas

MELVIN J. MAAS,
Chairman.

NEW HOPE FOR THE MENTALLY ILL

There is new hope, in our time, for the mentally ill. And new hope is desperately needed, for mental illness ranks as one of the Nation's major public health problems. Psychiatric patients occupy more than half of all the hospital beds in the country. Much larger numbers of persons, not hospitalized, also suffer some degree of emotional disability. Each year more than $1.7 billion is spent for the care and treatment of the mentally ill and for mental health programs. The cost in human terms—in the damaged lives of individual patients and their families—is incalculable.

But now there are growing possibilities of rehabilitating persons with mental and emotional disorders. As far as the seriously ill are concerned, no longer does hospitalization portend long-term custodial care. Advances in treatment—the use of "tranquilizing" drugs making patients more accessible to psychotherapy, "open" hospitals, halfway houses and other bridges between the hospital and independent living, improved aftercare facilities—these and other new techniques are making it possible for more and more mental patients to return to life in the community.

Successful rehabilitation of the mentally and emotionally disturbed depends in no small measure on their opportunity to get jobs and resume productive work. But the question arises in the minds of many employers, can such persons function effectively as employees? There is evidence in the following pages that they can. A history of psychiatric disorder, even of serious degree, need not be a bar to employment.

The Veterans Administration is proud to present this record of accomplishment by veterans with psychiatric disability. It is my hope that these examples will help open the doors of job opportunity to many others who are similarly disabled.

J. S. GLEASON, JR.,
Administrator of Veterans Affairs.

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INTRODUCTION

Time: Noon.
Place: An office.
Scene: Familiar.

It is lunch time at the Jones-Low-Perry Company. The 30 employees of the accounting department put aside their work to hurry to the cafeteria and beat the rush. In two's and three's they hustle off. Their bantering small talk trails after them, leaving the office silent.

A typical lunch time scene, duplicated in thousands of offices throughout the country. But at Jones-Low-Perry there is a slight variation. One man (let's call him Joe) remains behind. His eyes scan a paper; but he isn't reading it. He is waiting for the others to leave. Only when they are gone will he leave for lunch. He avoids them; he has done so since he started working there 2 years ago. By now no one pays much attention. By the others Joe is considered "OK, but different."

And to an extent he is. Joe is a veteran of the Korean conflict. Before joining the staff at Jones-Low-Perry Company, Joe had spent almost 2 years in a VA neuropsychiatric hospital.

When Joe was ready to be discharged from the hospital for a 1-year trial period, a VA rehabilitation officer went to see the head of the company's personnel department. They had some long and serious discussions. The personnel man had understandable misgivings. How would the other employees react? How would Joe handle the job? Would the company's investment in expensive training be rewarded by erratic behavior or trouble on the job? Or would Joe just up and leave one fine day?

On the other hand, the personnel man could see the positive points put forward by the VA rehabilitation officer. Joe had assets any firm could use: good training in accounting, careful attention to detail and accuracy. If he were placed in a job without too many deadlines and pressures, as his psychiatrist suggested, the company could capitalize on his ability.

The personnel man thought it over, tapping a pencil on his desk while the VA man waited. Finally, he tossed the pencil aside, "OK," he said, "we'll give it a whirl."

His gamble paid off. Two years experience has proved the validity of the judgment and decision he made. Joe is not yet "normal"—his social isolation and markedly schizoid behavior set him somewhat apart and indicate a less-than-desirable level of mental health—but his personality has not stood in the way of effective performance on the job.

There is a triple payoff in this case. First, of course, there are Joe's personal gains, which include not only economic self-sufficiency, but new feelings of satisfaction and increased self-esteem. In the opinion of the VA psychiatrist to whom he still reports periodically, the job has been a big help in Joe's adjustment since leaving the hospital. The Jones-Low-Perry Company has added a productive worker to its payroll. And the community has won back a self-supporting, tax-paying member, in place of a nonproductive mental patient.

And Joe's experience has even wider implications. It demonstrates a fact of life: emotional maladjustment, even to a marked degree, is not necessarily a barrier to hold a job. Mental health and mental illness are not absolutes; no one is free of all maladjustment. Often mental difficulties are not even readily recognized. Outwardly calm persons may be tied up in knots, chronically tense, unhappy and anxious. But most important, the psychological "illness" may have little bearing on the needs of a job. Indeed there are few jobs that can only be handled by a "normal" or "whole" person.

Moreover, as Joe has shown, successful work experience has an important part to play in rehabilitating the emotionally disturbed. There is growing evidence that employment contributes to the general adjustment of the individual who is recovering from mental illness. Unemployment, on the other hand, has been shown to be a factor in the rehospitalization of mental patients.

Too often, however, the rehabilitation efforts of the psychiatrically disabled are met by rejection, fear and dislike. Joe's happy experience is, unfortunately, not universal. The acceptance and understanding shown by his employer, the employer's willingness to work with VA rehabilitation personnel in bringing about suitable job placement and providing followup supervision, the tolerance displayed by fellow workers—these are not always present. The time is long past when the so-called "insane" were regarded as possessed by the devil or criminal and, therefore, to be punished. But mental illness still carries a heavy social stigma and is surrounded by misunderstanding.

To help dispel these barriers, factual information is needed about the work adjustment capacity of persons with a history of psychiatric disorder. After all, Joe is just one of an estimated 17 million persons in the United States who suffer from some form of mental illness, ranging from mild maladjustment to serious disorders. At any one time, half of all the hospital beds in the country are occupied by mental patients. Intensifying the need for information is the emphasis in modern treatment of the mentally ill on early restoration to the community, as opposed to custodial care.

What, then, of the many others in the same boat as Joe? Have they too been able to find and maintain employment? And if so, in what kinds of jobs? And how well are they doing?

To answer these questions for veterans, the Veterans Administration in 1960 made a study of the employment experiences of veterans with psychiatric disabilities. The study was based on a nationwide sampling [1] of all World War II and Korean conflict veterans with service-connected psychiatric conditions of a functional nature (i.e., conditions with no known organic brain involvement). The sample included the three major psychotic disorders (schizophrenic, paranoid and manic-depressive) and the psychoneuroses;[2] it covered the entire range of severity of disability. Of the group of 2,049 veterans studied, 1,421 were found to be employed. These men at work provided the data reported in the following pages.

On the whole the findings present an encouraging picture—more optimistic than might have been expected. They should serve to demolish many of the commonly held stereotypes about people with a history of functional mental illness, for they demonstrate that a number of these beliefs have no foundation in fact.

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[1] A detailed description of the sampling method and the characteristics of veterans in the sample is presented in VA Technical Report, TR 22–1.

[2] See Appendix A for a list of the diagnostic categories included in the study.

MAJOR
FINDINGS

Q. How Many Are Working?

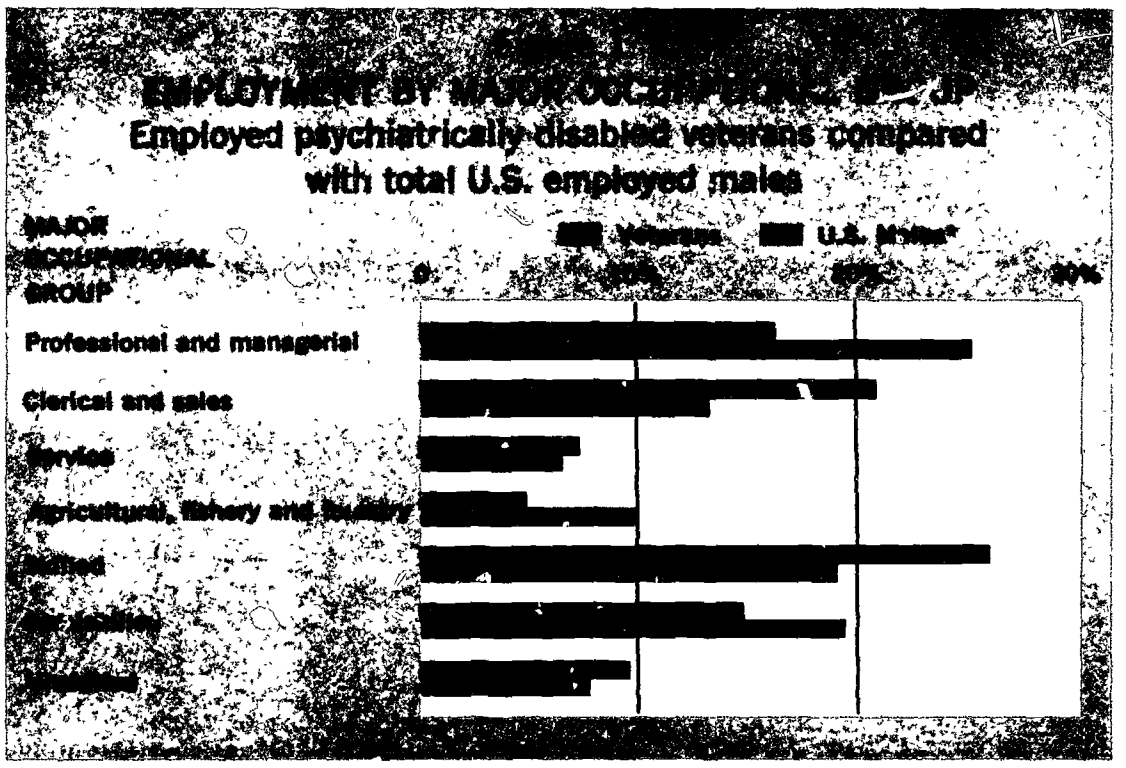
A. At the time of the survey, 7 of every 10 nonhospitalized psychiatrically disabled veterans were working; 84 percent for an employer, 16 percent for themselves.

Although the figures are encouraging, they do not warrant the conclusion that the rehabilitation needs of this group have been met, or that their potential as productive workers has been fully exploited. Looked at another way the survey shows that 31 percent of these veterans were unemployed. When this jobless rate is compared with the unemployment rate of about 6 percent in the civilian labor force at the time the study was done, room for improvement is indicated. The possible need for further rehabilitation and readjustment services on the part of the unemployed group requires study and followup action.

Q. What Kinds of Jobs Do They Hold?

A. They were employed in the full gamut of jobs in the United States. Actually, their job distribution compared favorably with that of all employed males in the civilian labor force (figure 1).

In this veteran group, as in the total employed male population, the largest proportion of workers (about 40 percent) was found in skilled and semi-



*Data for April 1960 from Employment and Earnings, U.S. Department of Labor, Bureau of Labor Statistics, May 1960

skilled crafts and manual occupations. Relatively more of the psychiatrically disabled veterans than of men in general were working at the skilled level, however, and fewer at the semiskilled. Clerical and sales jobs were relatively more numerous among the psychiatrically disabled than among all employed males. On the other hand, somewhat fewer psychiatrically disabled veterans than men in general were found in professional, managerial, and technical jobs. Service occupations (personal, protective, building and domestic service) and unskilled manual occupations occurred in the veteran and total male population with approximately equal relative frequency. Fewer of these veterans (about 1 in 20) were employed in agricultural, fishery, and forestry occupations than in any of the other major groups.

The jobs held by psychiatrically disabled veterans were widely dispersed throughout the occupational structure, with no heavy concentration in any one area (figure 2). The largest single group of occupations was the cleri-

Figure 2

EMPLOYED PSYCHIATRICALLY DISABLED VETERANS
By major occupational group division

Major Occupational Group Division	% of Veterans
Professional and managerial:	
Professional	5.5
Semiprofessional	2.0
Managerial and official	9.2
Clerical and sales:	
Clerical and kindred	12.3
Sales and kindred	8.5
Service:	
Domestic service	.1
Personal service	2.8
Protective service	1.9
Building service workers and laborers	2.7
Agricultural, fishery, forestry and kindred:	
Agricultural, horticultural, and kindred	4.3
Fishery	.3
Forestry, hunting, and trapping	—
Skilled:	
Manufacturing and related	9.4
Nonmanufacturing	7.3
Miscellaneous	7.9
Foremen	1.5
Semiskilled:	
Manufacturing and related	5.4
Nonmanufacturing	7.3
Miscellaneous	2.1
Apprentices	.1
Unskilled:	
Manufacturing and related	3.8
Nonmanufacturing	2.1
Miscellaneous	3.5
Total	100.0

cal; 12 percent of psychiatrically disabled veterans were employed in clerical jobs. Among men in general, this proportion was 7 percent.

Contrary to popular expectations, the study showed that one of every five veterans with a history of psychiatric disability was working in a job where person-to-person relationships played an important part in the job duties. For example, 11 percent were in managerial and official occupations and foreman jobs; 8 percent were in sales jobs; and 3 percent did personal service work. In many additional jobs, of course, interpersonal relationships are important in the work setting, as in the need to get along with coworkers and supervisors, and to work cooperatively.

The wide variety of jobs held by this group tends to discount the notion that they are best suited for a narrow range of employment. "Outdoor work," "working alone," "low level work," or "work free of responsibility" are frequently recommended for persons with a history of mental disorder. Perhaps some persons who have suffered mental illness should do these kinds of work, or are channeled into these occupations. But not all of them.

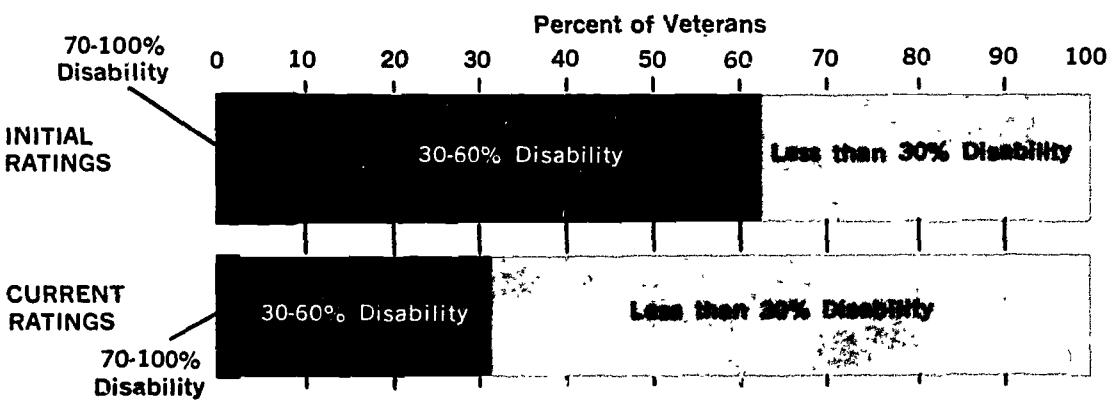
The evidence seems to lend support to the long-standing belief of rehabilitation workers that people and jobs can only be matched on an individual basis.

Q. How Disabled Are They?

A. Fifteen percent of the employed veterans had a history of psychosis (i.e., severe mental disorder characterized by a considerable degree of personality disintegration and an outright break with reality). 85 percent were rated for psychoneuroses (a variety of behavior disorders without gross disorganization of personality or gross distortion of reality perception; the individual is troubled by inner conflicts which show themselves in such forms as anxiety, unjustified fears, hysterical symptoms, obsessions and compulsions). One of every eight was receiving psychiatric care at the time of the study. And almost a quarter of the group also had one or more physical disabilities incurred in military service.

When the study was made, 3 of every 10 employed veterans had compensation ratings of 30 percent or higher for psychiatric disability, as shown in figure 3. They were classified as seriously disabled in contrast with

Figure 3
CHANGE IN DEGREE OF IMPAIRMENT
Current disability ratings of em ployed psychiatrically disabled veterans compared with their initial ratings



the 70 percent who had a lower compensation rating. However, this ratio did not always exist. As figure 3 shows, the majority of the employed group were at one time evaluated as seriously disabled. Thus, their psychiatric condition has improved markedly.

Did employment follow improved mental health? Or did successful employment help bring about improved general adjustment? Further study is needed to supply the answer. But the present findings do show that considerable vocational potential has been realized among a group, the majority of whom were at one time evaluated as seriously disabled. The promise inherent in this finding justifies intensified rehabilitation efforts on behalf of individuals with serious psychiatric disorders.

Q. What Are Their Other Characteristics?

A. The men were no longer young, about 42 years old on the average. More than 9 out of 10 were World War II veterans; the rest served in the Korean conflict. All had been out of military service at least 5 years when the study was made; almost 80 percent had been discharged 15 or more years ago. Most were married, seven out of eight, with the rest equally divided between those who had never married and those who were separated or divorced.

Q. Do They Stay on the Job?

A. The psychiatrically disabled are thought to be chronic job hoppers: malcontents, who cause friction, stir up dissatisfaction, and then quit. This stereotype was not borne out by the survey, however. On the contrary, the veterans in the study maintained a high degree of job stability. At the time of survey, as shown in figure 4, three-fifths (62 percent) of the total employed group had been working for their current employers for 5 years or more; 12 percent for 3 to 4 years, 15 percent for 1 to 2 years and only 11 percent for less than 1 year. Self-employed veterans showed just as high

Figure 4
LENGTH OF EMPLOYMENT WITH PRESENT EMPLOYER

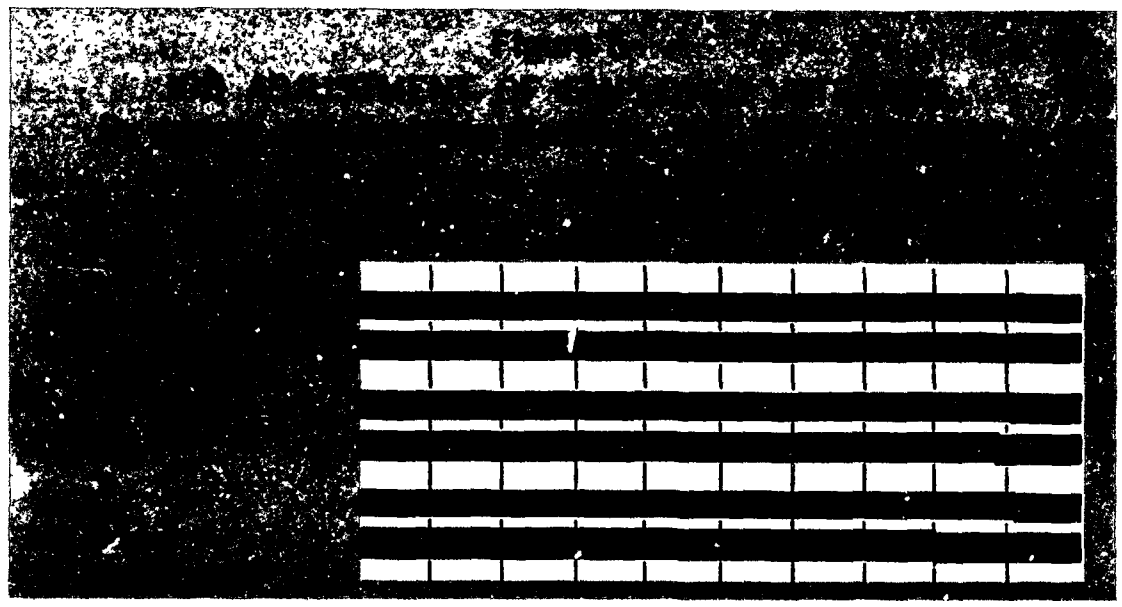
Employed Veterans

a degree of stability, measured by years of self-employment in the same kind of business, as did employees.

An analysis of the case briefs suggested that many veterans tended to place a high value on the security features of a job, rather than the salary or chance for advancement it offered. Are persons with emotional difficulties more interested in job security than workers in general, or even physically handicapped workers? We do not know. But it is interesting to speculate that a person beset by emotional problems may especially desire the tangible security provided by a stable and steady job.

Q. Are They Making Good on the Job?

A. Yes, they are, in surprisingly large measure. Nine of every ten were judged to be making a satisfactory job adjustment, as figure 5 shows. Of course the evaluations of job adjustment are subjective, based on judgments by VA vocational counseling and rehabilitation specialists.[3] But they did take into account the veteran's expressed degree of job satisfaction, stability of employment, outlook for continued employment, rate of pay and promotions.



Employers' evaluations of performance would have been valuable, but were not available. Nevertheless, it is impressive that in only 10 percent of the cases was job adjustment rated "less than satisfactory" or "unsatisfactory" by the rehabilitation worker.

Marital status seemed to be a factor in job adjustment. Married veterans were more frequently rated satisfactory than single or divorced veterans. Age, however, did not seem to be significant. Veterans 45 and older were adjusting satisfactorily to their jobs as frequently as younger veterans. But the degree of disability had some effect. The adjustment of veterans with disability ratings of 30 percent or higher was more often judged "less than satisfactory" or "unsatisfactory" compared with veterans with lower dis-

[3] The limitations inherent in the evaluations of job adjustment are discussed in VA Technical Report TR 22–1.

ability ratings. Nevertheless, the great majority of the more seriously disabled—as well as the less seriously disabled—was considered to be making a satisfactory job adjustment.

Indications were found that some veterans were not going all out to succeed—as if they had applied the brakes themselves. Two of every five who were well adjusted to their jobs were also advancing, that is, winning higher pay, added responsibility, promotions. But many others reported that they were not interested in such achievement. Some said they had turned down promotions which involved added responsibility and pressure. As is true of workers in general, older veterans (45 and over) were moving up the ladder significantly less often than younger veterans.

Q. Do They Tell Their Employers?

A. "To tell or not to tell" seems to be the dilemma of a psychiatrically disabled person looking for a job. About half told and half concealed the facts about the nature of their disability from employers at the time of hiring. Later, an additional 8 percent revealed the information they had withheld.

Some veterans said their disability was not relevant to the job and so they saw no reason to bring it up. Others feared the effects of disclosure. Were their fears justified? We do not know. But the study suggests that more often than is commonly supposed telling the truth *does not* work against the job seeker. Three findings support this belief: First, 59 percent of the veterans were hired and retained even though the employer knew their background. Second, "satisfactory" job adjustment was reported as often for those who told as for those who didn't, and their jobs were evaluated equally often as "stable." Third, the employer's knowledge of the fact did not block the worker's advancement. Indeed a significantly larger proportion of veterans who told were moving ahead on the job.

Q. How Do They Find Jobs?

A. Two-thirds said they used the do-it-yourself approach. A quarter were aided by friends and relatives. Only 4 percent said they found work through public agencies.

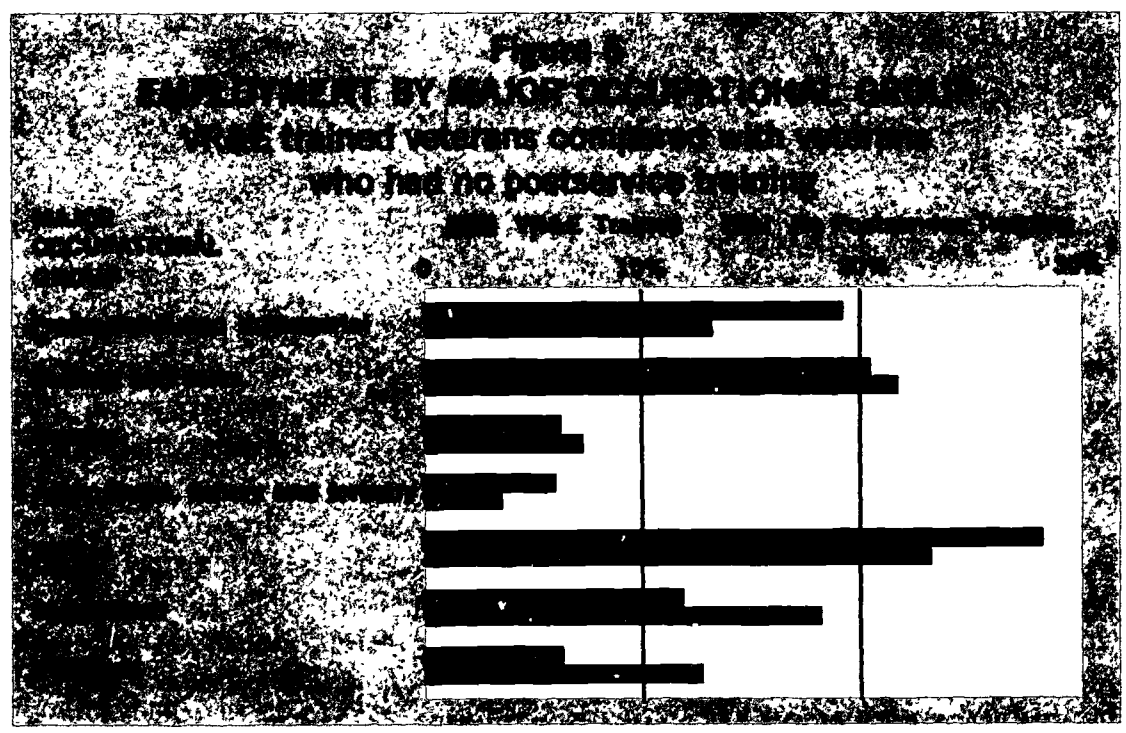
Even allowing for a measure of inaccuracy in these self-reports (e.g., forgetting just how a job was landed; the human tendency to overvalue one's own job-finding role, etc.) it seems clear that very little use was made of public placement agencies.

However, it cannot be concluded from the success of these veterans in finding jobs on their own that the psychiatrically disabled as a group do not need professional placement assistance. After all, 3 of every 10 nonhospitalized veterans were unemployed, and perhaps these may be the very persons most in need of selective placement and rehabilitation aid. Moreover, large numbers of other psychiatrically disabled veterans are in hospitals—they comprise one-half of all patients in VA hospitals on the average day. Inference about their needs cannot be made from the present study.

Q. Does Training Help?

A. Yes. Half of the employed veterans had some education or training after military service under one of the VA vocational rehabilitation and education programs. In general this group had a better current job picture.

(They include both those who completed VA training and those who discontinued it before completion.) As shown in figure 6, relatively more of the VA-trained veterans were employed in professional, technical and managerial, and skilled occupations; fewer were in semiskilled and unskilled jobs. Significantly more with VA training were advancing occupationally.



The two groups were not matched, however, with respect to intelligence, prior education, age or other relevant factors. So it is impossible specifically to credit their higher occupational status and advancement rates to their VA administered education and training. Nevertheless, the contribution of VA vocational rehabilitation and education is strongly suggested by the facts.

IMPLICATIONS

The outline of five major implications emerges, holding out new hope for millions—for the mentally, emotionally, or psychiatrically disabled themselves; their families, friends and fellow citizens; labor, management, and government officials; and professional workers in rehabilitation, medicine, placement, and education.

It has been said, ". . . and the truth shall make you free . . ." If so, this study is a good, first step. It advances some facts which may indeed liberate us from stereotypes, fears, and prejudices.

1. The achievement of these veterans casts serious doubt on any easy generalization that persons with a history of mental illness cannot succeed in productive employment.

2. That they are performing well in a wide variety of jobs throughout the occupational structure runs counter to the popular belief that they are suited only for marginal employment or for a restricted range of occupations.

3. The fear of employers that these workers are high-turnover risks does not square with the findings of the study, which suggest that their performance in this respect resembles that of physically handicapped workers who are among the most stable of employees.

4. These findings point to the possibility of successful vocational rehabilitation even for persons with serious psychiatric disorder, including those now in mental hospitals. The veteran group under study shows how much potential was actualized. The majority of them were once rated as seriously disabled. Yet, they have succeeded in finding varied, often demanding jobs—and in holding them.

5. There is challenge, as well as promise, in the findings. They point up the need to intensify rehabilitation efforts on behalf of the psychiatrically disabled who have not yet been restored to productive living.

CASE BRIEFS[4]

A Word About the Briefs

The 337 selected cases which follow illustrate the variety of occupations in which psychiatrically disabled veterans are employed, although examples are not given for every occupation. They include veterans with disability of different degrees of severity and diagnostic categories. And, of course the cases show a wide range of job adjustment: some veterans are doing very well, others are having difficulty, and a few are doing poorly. Nevertheless, all are working, many having held their jobs for considerable periods of time.

The briefs all follow a similar format: a description of the veteran's current job and adjustment to it, followed by an account of how he got the job, and his previous work experience and psychiatric history, including such information as is available about present general adjustment. If a veteran has a service-connected physical disability, information about it is included only if it has some relevance to his job adjustment.

The case briefs are classified by occupation in accordance with the occupational classification structure in volume II of the Dictionary of Occupational Titles. For occupations in which more than one psychiatrically disabled veteran was reported to be employed, individual statements are not always presented for each case. The cases for which briefs are not given are listed as "additional cases" under the appropriate occupational titles. For those occupations for which no illustrative briefs are given, merely the occupational titles and the frequency of their occurrence are noted.

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[4] The medical and psychiatric information in the case briefs was secured chiefly from VA adjudication and rehabilitation records and personal interviews with the veteran. No attempt was made to report information contained in clinic or hospital records.

PROFESSIONAL OCCUPATIONS

Accountants and Auditors (0–01) [5]

ACCOUNTANT, AUDIT. Is one of 6 employees in a public accounting firm. Has been with present employer 2 years. Employer does not know of veteran's disability. Job requires traveling 75 percent of the time and involves regular contacts with his accounts. Veteran is not satisfied with his present situation because of the comparatively low salary and lack of opportunity for advancement. Feels he is at a disadvantage in competing with certified public accountants and that he has been passed over for promotions because he does not have a degree, but has done nothing about completing college. Works full 40-hour week, with no limitations because of his disability.

Veteran obtained present job through a private employment agency. Has been employed in bookkeeping and accounting jobs during the past 10 years. Prior to World War II service had completed 2 years of college work in accounting and business administration and had some work experience in accounting.

Was hospitalized for psychosis while in military service and subsequently discharged because of disability. Rated by VA for psychosis, schizophrenic reaction, paranoid type, complete social and industrial inadaptability.[6] Adjustment following service was very poor. Believed everyone was against him, worried about his future and became so confused that hospitalization was again required. Made a good recovery; condition has remained stabilized over the last 12 years. Still has some feeling of resentment and irritability. Diagnosis at time of most recent VA rating: schizophrenic reaction, paranoid type, slight impairment of social and industrial adaptability.

Veteran is married and has children.

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[5] Dictionary of Occupational Titles, Vol. II, Code.

[6] For information about disability levels, see Appendix B.

ACCOUNTANT, COST. Is the only cost accountant in a manufacturing plant employing about 250 people. Has been with present employer 12 years. Supervises the work of one clerk. Is administratively responsible to plant superintendent; receives occasional professional direction from a cost accountant in the home office of the company. Job duties are those usually performed by a professional cost accountant. Work involves frequent contact with many departments and individuals; veteran says these relationships are good. Has had salary increases which he believes to be above average; prospects for advancement are good. Works regular 40-hour week, with no limitations or concessions because of his disability.

Veteran was promoted to present position 4 years ago, after 8 years as bookkeeper for the same company. Company provided him 18 months of specialized training on the job under a consultant accountant. Was referred to his present employer by the business school which he attended part time over a 3-year period.

Experience prior to present job was limited to laborer jobs. Worked in a creamery before entering World War II military service and returned to that job after discharge, leaving it for a better paying job as laborer in a railroad repair shop. Then enrolled in the business school.

While in service overseas, manifested psychotic symptoms, including hallucinations and muscular rigidity. Upon discharge, rated by VA for psychosis, schizophrenic reaction, mixed type; complete social and industrial inadaptability; declared incompetent. Showed early improvement, but some conversion symptoms and general nervousness persisted. Later, with training and appropriate placement, these tended to disappear. About 6 years ago, had several brief periods of amnesia and, after a diagnostic evaluation in a hospital, received psychotherapy on an outpatient basis for 2 years. Considerable improvement resulted, he says, but he still has frequent headaches and gastric upsets. Diagnosis at time of most recent VA rating: psychoneurosis, mixed type (dissociative and phobic), moderate.

Veteran is married, has no children.

ACCOUNTANT, COST. Supervises 33 employees, including 7 other accountants, in the cost analysis section of a large corporation. Has been with present employer 11 years. Employer now knows character of veteran's disability, although he was not informed at the time of employment. On-job relationships are said to be excellent. Veteran is satisfied with both his present salary and advancement possibilities. Works full 40-hour week, with no concessions because of his disability.

Veteran obtained employment with the company for which he is now working through a friend, almost immediately after graduating from college with a B.B.A. degree under the VA vocational rehabilitation program. Prior to this rehabilitation training, had worked for a short time as a machine tender in a textile plant. Had no other work experience, having entered military service directly from high school, at the end of the 11th grade.

While in World War II service, veteran was hospitalized after combat with complaints of nausea, lack of appetite, nightmares, battle dreams,

restlessness, inability to make friends. Discharged after psychiatric examination revealed impaired insight and judgment, irritability, a depressive outlook and loss of interest. Initial VA rating was for psychoneurosis, anxiety reaction, severe, manifested by nervousness, tension, vomiting, anorexia. Symptoms diminished in severity while in college; insight and judgment good; some gastrointestinal symptoms and restlessness, impatience, impulsiveness, emotional instability persist. Diagnosis at time of most recent VA rating: psychoneurosis, psychogenic reaction, moderate.

Veteran is married and has children.

ACCOUNTANT, GENERAL. Supervises one employee and is in charge of office of a small trucking business. Has been employed by this firm for 3 years, a longer period than he has spent in any other job. Employer does not know of the veteran's disability. Job relationships said to be good. Veteran keeps all accounts, and is responsible for payroll, taxes, bills, orders, correspondence. Works 45 hours per week, with 3 to 6 weeks layoff every winter during firm's slack season. Veteran is dissatisfied with his job because he has had no increase in salary despite increased responsibilities, and he sees no opportunity for advancement.

Veteran applied for present job after learning of the opening through a friend. Has worked in bookkeeping and accounting jobs since completing 2 years of business school training under the VA vocational rehabilitation program. Other postservice jobs, prior to instituting this training, were as an insurance agent and owner-manager of a variety store. Prior to service worked as a gas station attendant.

After discharge from World War II military service, rated by VA for psychoneurosis, mixed type, severe. Symptoms included feelings of anxiety, irritability and argumentativeness. Veteran was out of work for about a year because of this illness. Has since lost several jobs because he couldn't get along with the boss. At present, complains that he is unable to relax and that he sleeps poorly unless exhausted. Worries about rapid heartbeat at times and about an intermittent twitch in his neck. Despite these symptoms, has been dependable worker on current job. Takes prescribed medication regularly, but does not know what it is. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety hysteria, moderately severe.

Veteran is married and has children.

ADDITIONAL CASES: Accountant, Cost—1; Accountant, General—4; Accountant, Public—1.

Architects (0–03)

ARCHITECT. Is a municipal civil service employee. Has been employed by the city government for 6 years, 3 of which have been in his present position as architect. Employer was informed of disability at time of hiring. Plans and designs municipal buildings, does architectural drawing. Works 40 hours per week, with no limitations in his work schedule. Reports that his relationships with supervisors, coworkers, and private contractors are

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good. Is highly satisfied with his job and hopes to advance further through competitive examinations.

All of veteran's postservice employment has been in Government service. After graduation from college as an architectural engineer under the VA vocational rehabilitation and education programs, he found it difficult to get work. After 6 months' unemployment, entered the Federal civil service as a cartographic aide. Stayed in this job for 30 months, then received a municipal civil service appointment as an engineering aide. Has moved rapidly upward to his present position of architect. Had no work experience prior to World War II military service.

Initially rated by VA for psychoneurosis, psychogenic cardiovascular reaction, moderately severe. Most recent diagnosis the same.

Veteran is married and has children.

ADDITIONAL CASE: Architect—1.

Authors, Editors and Reporters (0–06)

EDITOR-PUBLISHER. Self-employed in the specialty book publishing field. Formed own company 8 years ago. Works an average 65-hour week; has 6 employees. Responsible for own selling, administration, planning, estimating, and billing. Deals with institutions, churches, etc., where unusual requirements are specified. Reports excellent relationships with employees and customers. Company has good earnings record.

Based on 6 years' executive experience and other work experience in same field was able to obtain adequate financing to start own business. Had no work experience prior to military service in World War II.

Disability history indicates headaches, nervousness, lack of energy and insomnia. Resents authority but controls himself. Social relationships are restricted to small group of close friends. Diagnosis at time of initial and most recent VA rating: psychoneurosis, anxiety reaction. Rating reduced from moderately severe to moderate. Is receiving outpatient psychotherapy.

Veteran is married and has children.

PUBLIC RELATIONS MAN. Has been employed for 13 years in large Federal Government installation; for the past 8 years has served as information specialist. Prepares management information releases for employees. Supervises several others. Responsible only to second ranking line official. Has daily contact with top management staff. Relationships said to be good. Employer knew of veteran's disability at time of hiring. Veteran is well satisfied with job, its security and remuneration, even though it offers limited opportunity for further advancement.

Obtained present job by steady promotions from minor clerical job in same installation. Had significant experience before World War II military service in newspaper work but was unable to find satisfactory pay in his field after leaving service. Kept watch on job examination announcements, applied and was hired as clerk-typist. Was VA vocational rehabilitation trainee for 2 years in business administration.

Initial VA rating for psychoneurosis, anxiety reaction, chronic, moderate, has remained unchanged. Veteran reports that he received assistance with

respect to his emotional problems from his clergyman. Is not receiving psychotherapy, but is under care of general medical practitioner. Takes tranquilizers to aid sleep.

Veteran is divorced.

REPORTER-PHOTOGRAPHER. Is the only photographer-reporter on a small daily newspaper. Employed 5 years; hired without employer's knowledge of his disability. Employer now has this information. Reports and photographs have to do principally with sports events and local political coverage. Likes his work and finds satisfaction in it, but promotional opportunities are poor because of small size of the city and its newspaper. Works a 45-hour week and enjoys congenial relationship with the city editor and editor who serve as his supervisors.

Veteran obtained his present job by applying where his father had worked previously. Veteran had significant prewar experience in this field. Postservice employment for 10 years was divided equally as routeman, shoe store manager and motel manager. Veteran disliked the working conditions on these jobs and reentered prewar field of employment.

Veteran was hospitalized in service in 1945, after reporting headaches, sleeplessness and depression associated with dreams of combat based on his 35 air bombing missions in 8 months. On discharge, rated by VA for psychoneurosis, anxiety reaction, severe; this has been reduced to moderate. Veteran uses tranquilizers under physician's prescription; was hospitalized recently for 2 weeks. Worries over possibility of breakdown. Not receiving recommended psychiatric treatment.

Veteran is married, has no children.

ADDITIONAL CASES: Managing Editor, Photographic Directory—1; Public Relations Man—1.

Chemists (0–07)

CHIEF CHEMIST. Employed in laboratory of a manufacturer for past 4 years. Employer knew of the disability at the time of hiring. Performs research and quality controls on paint products. Works 40 hours per week. Limitations or concessions in work schedule are at his own discretion. Relationship with coworkers and supervisors said to be good. Job is secure and steady; offers some opportunities for advancement, but at a slow rate.

After discharge from World War II military service, veteran obtained degree in chemical engineering under VA vocational rehabilitation program. Then found job as chemist with a paint company; after 9 years moved to present job because it offered better opportunities. Secured present job on own application. Preservice employment was as cutter in heavy fabric manufacturing.

Initial and most recent VA rating: psychoneurosis, anxiety reaction, moderately severe.

Veteran is married and has children.

ADDITIONAL CASES: Patent Chemist—1; Research Biochemist—1.

Clergymen (0–08)

CLERGYMAN. Has served present church 2 years. Bishop knows of "nervous" disability but congregation does not. Works 60-hour week with 500 members in all types of church activities. United the congregation in a building program now nearing completion. Has been offered a larger church but prefers to see through the expansion program he inspired. Expects to have a large church in 2 to 3 years.

Has been an ordained minister 6 years. Prior to present assignment, served 4 years in smaller church. Completed B.S. degree in religious education under VA vocational rehabilitation program. Then attended school part time 7 years to obtain B.D. degree; concurrently worked full time as a clerk. Wife also worked during this period. Veteran had no employment prior to World War II military service.

Veteran was discharged from Navy for disability following South Pacific combat duty in which his ship sank and he was rescued from the sea. Described as restless, indecisive, tremulous, with thoughts of suicide. Rated by the VA for psychoneurosis, hysterical war neurosis, moderately severe; this later changed to severe. After completing training for ministry, veteran applied to VA for outpatient psychiatric treatment, but would not accept psychogenic explanation of his complaints and refused treatment. At time of most recent VA examination, still complained of headaches and tiredness; diagnosis: psychoneurosis, anxiety state, chronic, moderate. Is of the opinion that his "nervous" disability bothers him less than it formerly did because he is doing work that gives him considerable satisfaction.

Veteran is married and has children. Gives much of the credit for his adjustment to the support he has had from his wife.

ADDITIONAL CASES: Clergyman—4; Missionary—1; Rural Minister—1.

College Presidents, Professors and Instructors (0–11)

TEACHER, COLLEGE. Has been employed as instructor in a small junior college for 1 year. Informed the Dean of his disability after he was hired. Enjoys his relationships with the faculty and students and believes he has their respect. Outlook for the future in this growing college seems good.

Obtained present position through teacher placement agency. Veteran did not return to preservice occupation of clerk. Enrolled in college under the VA education program; after obtaining bachelor's degree, won a fellowship and obtained graduate degree. Again accepted employment as clerk; held a variety of jobs and was eventually promoted to a supervisory level. Unable to tolerate demands of the job, he resigned to enter the teaching field.

Veteran was rated by VA several years following discharge from World War II military service for psychoneurosis, anxiety reaction, with gastrointestinal symptoms, moderate. Later the disability worsened, and veteran was hospitalized. Recovered sufficiently to be able to return to work. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety reac-

tion, severe. Currently receiving psychiatric treatment on an outpatient basis. Uses tranquilizers regularly. Recent psychiatric report states social adaptability is marginal. Veteran at times feels insecure in front of a class but on the whole enjoys his work; feels that his satisfactory family life is a stabilizing influence.

Veteran is married and has children.

ADDITIONAL CASES: Teacher, College—3.

Dentists (0–13)

DENTIST. Engaged in practice of dentistry before World War II and returned immediately to his practice which had been maintained by an associate during his absence. Works 50 to 55 hours per week, performing dental repair and corrective work and minor dental surgery.

Veteran completed 36 months of postgraduate work in dentistry under the VA education program.

Initially rated by VA for psychoneurosis, anxiety, mild; this was subsequently changed to moderately severe. After discharge from service, veteran was subject to emotional upsets and suffered a skin eruption on his hands and fingers which was considered psychogenic in origin. Overconscientious and perfectionistic. Received several years of intensive psychotherapy on an outpatient basis from the VA. His symptoms have disappeared and he considers himself much improved. His social relationships have improved and he is active in several organizations. Diagnosis at time of last VA rating: psychoneurosis, anxiety, moderate.

Veteran is married, has no children.

ADDITIONAL CASE: Dentist—1.

Engineers, Electrical (0–17)

JUNIOR RESEARCH ENGINEER. Except for the time spent in World War II military service, veteran has been employed since 1929 by a major communications company. Work involves research and experimentation in the development, testing and modification of equipment. Veteran requires no concessions in work schedule or tasks. Job is secure, but offers little advancement opportunity.

Prior to military service, veteran completed 5 years of evening classes in college courses in electrical engineering. While in service, received training in radio and radar and worked as radar technician. After service requested VA vocational rehabilitation training to complete college but psychiatric consultant felt it would impose too much strain. Since return to his job has made no advance in his status.

Hospitalized while in service; discharged because of psychiatric disability. Rated by VA for psychosis, schizophrenic reaction, severe impairment of social and industrial adaptability. Has shown considerable improvement, but continues to have difficulty with interpersonal relations, is tense, rigid, meticulous. Social life is restricted; occupies spare time with a hobby. Has had occasional medical treatment for his fluctuating anxiety and for abdom-

inal pains. Diagnosis at time of last VA rating: schizophrenic reaction, in almost complete remission, definite impairment of social and industrial adaptability.

Veteran is married.

RADAR ENGINEER. Supervises 37 technical and production employees in the engineering department of an electronics products manufacturer. Has been with same employer 9 years in progressively responsible positions. Employer does not know about disability. Works full 40-hour week and is regarded as a highly effective worker. Likes his work and maintains good relationships. Believes he has a wonderful future with this company.

After discharge from World War II military service, veteran attended college under VA vocational rehabilitation and education programs, obtaining B.S. and M.S. degrees in mathematics. Upon graduation, secured job with present employer through one of his former college professors. This is the only job he has ever had.

Rated by VA for psychoneurosis, anxiety reaction. Improvement has resulted in recent rerating from moderate to mild. Current complaints include easy fatigability, frontal headaches and fingernail biting.

Veteran is married and has children.

ADDITIONAL CASE: Electronic Engineer—1.

Engineers, Industrial (0–18)

INDUSTRIAL ENGINEER. Works with 24 other engineers in the engineering research section of a large manufacturer of metal alloys. Is not a fully qualified engineer although college trained. Has been with present employer 10 years. Employer knew of the disability before hiring him. Normal workweek is 40 hours but frequently works 10 to 20 hours more. Does not supervise others. Says that he has good relationships with supervisors and fellow workers. Has had several salary increases. Feels that he is earning $100 per month less than holders of engineering degrees receive for comparable work, but is generally satisfied with job, and not inclined to leave the department for greater opportunities.

Veteran obtained present employment on own application. Was a student prior to World War II service. After service entered teachers college under VA vocational rehabilitation program with the objective of mechanical engineer. Says that the type of college and the absence of engineering atmosphere influenced him to change course. Graduated as a teacher of industrial arts. Taught 1 year but found himself temperamentally unsuited to high school teaching, primarily because of problems in student discipline. Tried house to house sales and clerical work without satisfaction, did assembly work until present job was offered on the basis of his college training. Partially completed a mechanical engineering course by correspondence.

Veteran suffered physical disability associated with confinement in a Pacific POW camp. Later also rated by VA for psychoneurosis, anxiety

state, moderate, a diagnosis which was confirmed at time of most recent examination.

Veteran is married and has children.

ADDITIONAL CASES: Management Analyst—1; Methods Engineer—1.

Engineers, Mechanical (0–19)

DESIGN ENGINEER. Two years on present job with firm making electronic components used in missiles for U.S. Government. Employer not informed of the character of disability. Veteran writes specifications for engineering products; design analysis; and does missile alignment systems engineering. No concessions in work assignments because of the disability. Reports he is able to get along satisfactorily with supervisors and coworkers. Work is stable, occupational outlook, salary and advancement opportunities are good, but veteran is beginning to be dissatisfied with job. Wants increased salary, but without accompanying increase in responsibility and work pressure. Also feels that by changing jobs frequently he can keep in check the pressures that build up in him with resulting impairment of job performance.

Principal preservice occupation was watchmaker. Worked 1 year after World War II service as an aircraft instrument mechanic, then further trained by VA in watchmaking for 14 months; self-employed for 8 months in watchmaking. Reentered VA training program for 4 years at a university, graduated with a major in physics. During 7 years of postcollege employment had four jobs as instrument technician, engineering physicist, and air force base engineer. Obtained present job on recommendation of a friend with whom he worked some years before.

After suffering psychotic episodes while in service in the Pacific during World War II, veteran was hospitalized for 9 months. Rated by the VA for psychoneurosis, mixed type, pronounced. Had outpatient treatment from VA mental hygiene clinic during 1953-54 and since 1957 has again been receiving psychiatric treatment and medication to control stomach pains, high blood pressure, headaches, insomnia, excessive worry. Diagnosis at time of most recent VA rating: psychoneurosis, mixed type, moderate.

Veteran is married and has children.

ADDITIONAL CASES: Design Engineer—1; Designer (Piping and Equipment)—1; Machine Designer—1.

Lawyers and Judges (0–22)

LAWYER. As an employee in a legal office, assists clients with all types of legal problems from initial interview to pleadings before the bar as a practicing attorney. Cases are generally negligence, real estate and criminal type. Employer does not know the nature of veteran's disability. Generally works a 50-hour, 5-day week with no concessions to disability. Relations with other staff attorney and clerical workers are reported to be good. He is also attempting to establish his own private practice from his home on evenings and weekends. Has been lawyer for 84 months, 8 in present posi-

tion. All legal jobs obtained through advertisements in county law association newspaper. Veteran feels present job is secure but plans to leave it when his own private practice is sufficiently established.

Was a prelaw student prior to World War II service. Completed law school under the VA education program. Has served as an associate attorney with four different law firms and for approximately a year as a claims representative for a Federal agency. Work career interrupted by Korean service and by an adrenalectomy in 1955.

Veteran suffered a psychotic break while in service during the Korean conflict. Rated by VA for psychosis, schizophrenic reaction, severe impairment of social and industrial adaptability. Currently in good remission, though he is tense and irritable. Belongs to local Bar Association and enjoys social relationships with colleagues. Diagnosis at time of last VA rating: psychosis, schizophrenic reaction, and Cushing's syndrome.

This is veteran's second marriage.

LAWYER. Has been a trial attorney in a Federal Government agency for 3 years. Handles legal work involving motor carriers in a four-state area. The employer does not know of the veteran's disability. Veteran likes this job, in which he reviews investigations, reports and makes decisions on the courses to follow, prepares cases for trial, and handles the case in Federal Court, working mostly on his own. Feels that this will continue to be his major work. There is one other attorney in the office. Veteran appears secure in this job and anticipates some future pay raises.

Veteran was a farmer prior to World War II service. After discharge, studied law under the VA vocational rehabilitation program. Previous to his present job, he practiced law 1 year and served as county attorney for 4 years.

Initial VA rating for psychoneurosis, anxiety reaction, moderately severe, has been reduced to moderate.

Veteran is married and has children. Feels that the satisfaction he derives from family life helps him to meet the pressures occurring on his job.

LAWYER. Is self-employed, sharing office facilities, law library, and secretarial services with another lawyer. Specializes in probate and estate planning, involving detailed searching of legal documents and records. Present law associates have no knowledge of his disability. Veteran feels that his practice of law has increased his social status, broadened his concepts, and provided many opportunities for personal recognition and achievement. Derives considerable satisfaction from his current work; believes that prospects for increased practice and remuneration are quite good.

Veteran was a student prior to World War II service. Pursued his law training under the VA vocational rehabilitation and education programs. His first position with a well-known law firm and a later one as clerk for the county judge's court were obtained as a result of his wife's contacts. He was also self-employed as a lawyer for 4 years, prior to the latter job.

Diagnosis at time of initial and last VA rating was psychoneurosis, hysteria, moderate. Headaches and nausea persist to the present, although

the veteran feels that there has been a progressive lessening of the severity of his headaches. He experiences tremulousness when occasionally obliged to speak in public.

Veteran has been married twice and has children. His first marriage was an extremely hectic one, which, on the one hand helped him to advance in his work, and on the other hand involved great domestic turmoil. Feels that he is well adjusted in his second marriage. Anticipates a productive, satisfying future.

ADDITIONAL CASES: Lawyers—4.

Musicians and Teachers of Music (0–24)

MUSIC TEACHER, HIGH SCHOOL. Teaches music in all four grades of a small high school, averaging 6 hours work per day. Appears to have a good working relationship with the principal and other teachers. Nine years in present position which was secured through his college placement service. School principal did not know of his disability at the time of employment but does now. Adjustment in this employment appears excellent. No concessions in work schedule because of disability. Security with periodic wage increases seems assured, although there probably is little opportunity for advancement in this small school.

Veteran has B.S. degree; the last 2 years of his education were accomplished following discharge from World War II military service, under the VA vocational rehabilitation program. No work experience prior to present job.

Diagnosis at time of last VA rating: psychoneurosis, mixed, moderate, in a rather immature individual. Veteran states that when under excessive pressure he gets severe headaches which occasionally are so serious that it is necessary for him to remain at home; misses approximately 6 or 7 days per year because of this condition.

Veteran is married; has no children.

ADDITIONAL CASES: Music Teacher, High School—1; Music Teacher, Music Store—1; Songwriter—1; Teacher, Piano—1.

Pharmacists (0–25)

PHARMACIST. Fills prescriptions and performs other general drugstore duties, supervising five or six clerks and fountain employees. In present position for 9 months, following 4 prior years experience in this occupation. Wife and father also registered pharmacists. Employer is aware that veteran is disabled but does not know the nature of his disability. Except for feeling that pharmacy work is perhaps too confining at times, veteran feels that the profession affords excellent opportunities, not only in pharmacy but also in related work, such as drugstore salesman.

Veteran was a student prior to Korean conflict service, trained afterward under the VA vocational rehabilitation and education programs and received his professional degree in 1956. Worked in a drugstore for a year following graduation and then bought the store and operated it for 2 years before selling it. Since then has worked as a pharmacist for others.

TEACHER, HIGH SCHOOL. Employed in present position for 9 years in a small city school system of about 60 other teachers. Employers do not know of veteran's disability. Gets along well with fellow teachers and supervisors. Likes his work and has basis for hoping to rise to administrative position.

Principal preservice occupation was assistant manager of a chain department store. His college training was accomplished prior to World War II service. Began teaching after service, as he had always wanted to do. Concurrently pursued a course under the VA education program in the completely unrelated field of lumberyard management. Continued teaching for 3 years; had to leave job when he was hospitalized for psychosis. Following recovery from breakdown, spent 1 year as a surveyor for an engineering firm, and then reentered teaching occupation in his present job.

Veteran has had two overt psychotic breaks necessitating hospitalization, most recently in 1949. Since 1951 his manic-depressive reaction has been diagnosed as in remission. Most recent VA rating found only slight impairment of social and industrial adaptability. Participates actively in the community and coaches Little League baseball and junior basketball.

Veteran is married and has children.

TEACHER, HIGH SCHOOL. Teaches French and Spanish. In present position 8 years following 3 years' previous teaching experience. Believes disability was known to school officials although he has never made it known himself. Likes teaching very much. Would not change positions except for advancement to department chairman, perhaps, or to teach French at college level. Position offers excellent security.

Completed 2½ years of college before entering World War II service. Returned to college after service and completed his A.B. degree, with a major in French, under the VA vocational rehabilitation program. For 1 full year following graduation, he could not find a French teaching post and became very discouraged and upset. Obtained a fellowship to study French abroad, however, and received his master's degree. Graduate work was taken under the VA education program.

Veteran was discharged to civilian life following service hospitalization for psychosis. No hospitalization since that time. Periodic medical examinations during the postwar years found him very withdrawn, slow and suspicious. At one time he was found so regressed that a rating of complete social and industrial inadaptability was assigned. Examination in 1950 found him slightly improved, but the doctors felt there was little hope of success for him in teaching. Veteran persisted, however, and has done well. Currently acknowledges some tension and fatigue caused by teaching, which he reduces by resting after school every afternoon. Receives no regular treatment or medication but contacts the VA for help when he feels the need. Latest VA diagnosis: psychosis, schizophrenic reaction, paranoid type, in remission, competent, definite impairment of social and industrial adaptability.

Veteran is married and has children.

ADDITIONAL CASES: Principal, Elementary School—1; Teacher, High School—2.

Teachers and Instructors, n.e.c. (0–32)

TEACHER, EXCEPTIONAL CHILDREN. Teaches in a grade school in a large urban school system. Is assigned to the seventh, eighth and ninth grade level in two different schools. Meets with small classes of mentally retarded children. Has been in present position for 6 years and in the field of education for 8 years. Obtained present position by competing in a qualifying examination for State certification. The veteran let his difficulty be known at the time of job application. Is not entirely satisfied with his work. Feels that he is teaching in a neighborhood and to a class of students who have not learned respect for themselves and others, and says he feels embarrassed at times when he finds himself verbalizing on the level of his students when speaking to others. Also dislikes the requirement that he alternate between two schools. Frequently does not report for work because he feels so irritable. Although the veteran is on tenure and feels that his job is secure, his promotional possibilities seem quite limited. Has had the same responsibilities since he began this work.

Principal preservice occupation was that of installation and maintenance mechanic of burglar and fire alarms for a detective bureau. Returned to this occupation for only 3 months following discharge from World War II military service, leaving because of dissatisfaction with the work and a desire to better himself. Used VA vocational rehabilitation and education benefits to obtain his bachelor's and master's degrees, majoring in industrial arts. Through the school placement bureau, obtained position as an industrial arts teacher, but left it after 2 school years because of dissatisfaction with the work. Then became a police photographer on the city police force while concurrently pursuing graduate study. He left the police force for teaching after completing his school program.

Veteran was discharged from military service through a medical survey; rated by VA at that time for psychoneurosis, neurocirculatory asthenia, moderately severe. Complained of pain in the chest, shortness of breath, and expressed fear of dying from a heart condition. Later began to display hysterical features, neurodermatitis, phobias, chronic worry, tremors, agitation. Veteran is currently convinced that he has a vascular lesion in his brain which is causing severe headaches. Has been under the care of his family physician for the past 8 months and is receiving tranquilizers. Veteran appeared at the time of interview for the study to be quite disturbed emotionally. He expressed many fears, particularly of dying. Diagnosis at time of last VA rating was psychoneurosis, anxiety reaction, moderately severe.

Veteran is married and has children.

ADDITIONAL CASES: Teacher, Exceptional Children—1; Teacher, Vocational Training—2.

Natural Scientists, n.e.c. (0–35)

METEOROLOGIST. Has worked for Government bureau for 14 years, qualifying for a civil service appointment on the basis of training and experience as a weather observer during military service. It is not known whether the employer is aware of his disability.

Immediately after discharge from World War II military service, veteran returned to his previous occupation of retail salesman for a few months, then qualified through civil service examination for his present job. Has since supplemented his meteorological training by means of correspondence courses through a State college. Prior to service he attended a university for 2 years, studying liberal arts.

Initial VA rating was for psychoneurosis, anxiety state, severe. This has since been reduced to moderate. Veteran's symptoms include tremors and excessive perspiration of hands, headaches, excessive worrying, depression, stomach distress.

Veteran is married and has children.

Professional Occupations, n.e.c (0–39)

ADDITIONAL CASES: Manager, Employment—1; Osteopath—1; Supervisory Training Officer—1.

SEMIPROFESSIONAL OCCUPATIONS

Decorators and Window Dressers (0–43)

DISPLAY MAN II. Is one of 21 employed by a large distillery to install display in retail liquor stores. Has been in present position for 2 years. Travels an assigned territory and is free to adjust his work hours. Works an average of 40 hours per week. Is not under regular supervision and reports to his regional manager indirectly bimonthly. Likes his work, though he realizes there is limited chance for promotion. No special concessions have been made because of veteran's disability. Employer has not been informed of the nature of the disability.

Veterans has worked in advertising for 30 years. Has had no special training for his work. Prior to World War II service, was a freelance window trimmer; reentered this field after discharge. Left freelance work to become window trimmer for a chain department store; after 1 year, transferred to employ of a large distillery; left latter after 2 years to enter his present job, which was offered to him by the employer.

On veteran's discharge from military service in 1945, VA disability rating was based on the diagnosis of psychoneurosis, mixed type, severe, manifested by tremulousness, anxiety, intolerance, and somatic complaints without organic basis. Severity of disability has lessened, but veteran still appears tense, irritable and apprehensive. At time of most recent VA rating, diagnosis was psychoneurosis, anxiety reaction, chronic, moderate.

Veteran is married and has children.

INTERIOR DECORATOR. Is one of seven decorators employed by a large department store to advise customers in home decorations and furnishings. Has been employed in this job for 4 years. Works 40 hours per week. No concessions have been made because of veteran's disability. Employer has not been informed of the nature of the disability. Veteran like his job, feels confident and secure in it. However, he does feel that wages are too low and there is little opportunity for advancement.

Veteran's preservice occupation was that of house painter. He continued with this work for 6 years after discharge from World War II military service until he enrolled in a vocational school under the VA education program. Completed a course of interior design. Secured present job

without assistance. Present job is his first employment in this field of work.

Most recent VA rating is based on the diagnosis of psychoneurosis, psychogenic gastrointestinal reaction, moderate, manifested by recurring episodes of weakness and nausea.

Veteran is married and has children.

ADDITIONAL CASES: Display Man II—1; Window Trimmer—1.

Commercial Artists (0–44)

COMMERCIAL ARTIST. Works for an electronics firm that employs 3,000 people. Has been in present position for 2 years. Works full time and is well adjusted except for a variety of somatic complaints. No special concessions are made because of veteran's disability, as the employer has not been informed regarding the nature of the disability.

Prior to World War II service veteran graduated from a school of fine arts of an Ivy League college. He worked as a commercial artist. Has been in the field for 24 years. Has had continuous employment, either self-employed or in industry.

Atfer a year of military service veteran was discharged because of disability. Had a series of bizarre episodes, including temporary blindness and paralysis. Most recent VA rating is based on the diagnosis of psychoneurosis, hysteria, moderate. Veteran has a variety of somatic complaints and is subject to mood swings.

Veteran is married and has children.

Draftsmen (0–48)

DRAFTSMAN, AERONAUTICAL. Does engineering drafting in the design section of an aircraft manufacturing plant. Has been employed in present position for 9 years. Adjustment to the job is excellent. Employer does not know the nature of veteran's disability.

Prior to World War II military service veteran was a student. After discharge he pursued an engineering course under the VA vocational rehabilitation program. This training fitted him for his present position. He has had no other vocational experience.

Shortly after discharge from service, veteran suffered a psychotic break and was hospitalized by VA with the diagnosis psychosis, schizophrenic reaction, catatonic type, incompetent, complete social and industrial inadaptability. He made a good hospital adjustment, was put on trial visit, and subsequently discharged. Most recent diagnosis is schizophrenic reaction, in remission, slight impairment of social and industrial adaptability.

Veteran is married, has no children.

DRAFTSMAN, TOOL DESIGN. Is one of 2,000 employees of a tool manufacturing company. Makes mechanical drawings of drill jigs, fixtures, and machines. Employed in present job for 4 years. Works 40 hours per week. Employer was informed of the nature of veteran's disability at the time of employment. No special concessions in work schedule or tasks have been made because of disability. Veteran feels relatively secure, work is

steady, has had periodic salary increases. Has little chance to advance beyond present job.

Upon discharge from World War II military service, veteran returned to his prewar job of draftsman. Left this after 1 year to enter a dental technician training course under the VA vocational rehabilitation program. Upon completing this training, operated his own dental laboratory for 7 years. Gave it up because of long hours and low income to return to drafting work. Obtained present job by direct application.

During combat duty, veteran became panicky, tense, tremulous, and had nightmares. On discharge, rated by VA for severe anxiety neurosis. Rating has since been reduced to moderate. Complains of tenseness, restless nights and battle nightmares. Does not socialize much because of fear of crowds. Relationships with his family are satisfactory.

Veteran is married and has children.

TECHNICAL ILLUSTRATOR. Has been employed for 28 months in a large aircraft manufacturing plant. Makes drawings of aircraft parts showing details of relationships. Both freehand drawings and drafting instruments are employed. He was hired for this job as a result of his personal application. At that time the employer was informed of the nature of the veteran's disability. Is well satisfied with the job; feels secure, as he has survived several layoffs.

Prior to World War II service, the veteran was employed as a design stamper. Returned to that job after discharge; after 3 years, was laid off. This was followed by 8 years as an assembler, following which he obtained present job. Commercial art course in high school and 1 year of vocational school, as well as drafting experience in the Army, qualified veteran for his present work.

While in the Army, veteran became tremulous, had recurrent headaches, was unable to concentrate, hands shook so that he could not perform his work as a draftsman. Initial VA rating after discharge from service was for psychoneurosis, anxiety reaction, moderately severe. Condition has improved, and rating has been reduced to moderate.

Veteran is married and has children.

ADDITIONAL CASES: Draftsman, Architectural—1; Draftsman, Commercial—1; Draftsman, Construction—1; Draftsman, Chief, Design (Eng.)—1; Draftsman, Electrical—1; Draftsman, Mechanical—4; Draftsman, Structural—1.

Laboratory Technicians and Assistants (0–50)

LABORATORY ASSISTANT. Works in the research laboratory of a large glass manufacturing company. Is part of a team composed of technicians, engineers, and physicists. Assists in setting up test equipment by making initial sketches, which he turns over to engineers for approval. Conducts tests on properties of glass. Is supervised by a chemical engineer and a physicist. Has no supervisory responsibilities. Has been employed here for 10 years. Works 40 hours per week. No concessions made because of his disability. Employer has not been informed of the nature of

his disability. Has adjusted well to this job, appreciates the apparent security. Thinks wages are too low and prospects of advancement without college training are limited.

Prior to World War II military service, veteran worked for 1 year as a rodman after graduating from high school. On discharge, obtained job as a laboratory assistant with present employer through referral by State employment service. After 2 years, quit to move to another area; worked for 2 years as a railroad brakeman. Then reapplied to his former employer and was rehired as a lab assistant. Has been given on-the-job training by the company.

After flying 52 combat missions, veteran became tense, preoccupied, and depressed over loss of friends in combat, lost weight, and suffered gastrointestinal difficulty. Following separation from service, VA outpatient psychotherapy was initiated, but veteran failed to keep appointments. Diagnosis at that time was psychoneurosis, mixed type, severe. Continues to see a doctor regularly for drug prescriptions, but is not receiving psychiatric treatment. Most recent VA diagnosis: psychoneurosis, anxiety, moderate. Veteran is still tense, somewhat withdrawn, easily fatigued, occasionally depressed.

Veteran is married and has children.

LABORATORY MAN (CHEMIST ASSISTANT). Works for a large chemical company. Assigned to a research unit in which 250 people are employed. Employed here for 8 years. Employer has no knowledge of the nature of the veteran's disability. No concessions have been made because of the disability. Works 40 hours per week. Veteran feels that this job is good insofar as his adjustment is concerned. Realizes that lack of formal training limits future promotion. Job is reasonably secure and has provided periodic salary increases.

Veteran was an apprentice seaman in the Merchant Marine before World War II military service. After discharge, took three semesters of college training under the VA vocational rehabilitation program. Discontinued training and returned to Merchant Marine for 6 years, advancing to junior engineer. Marriage and the desire to settle down prompted him to leave. Obtained present job through a private employment agency.

Diagnosis at time of initial VA rating: psychoneurosis, anxiety, severe. Veteran's psychiatric history shows steady improvement since his discharge from service. Anxiety and apprehension have greatly decreased. Main difficulty now, he says, is making decisions. Most recent VA rating is based on the diagnosis of psychoneurosis, anxiety reaction, moderate.

Veteran is married, has no children.

ADDITIONAL CASES: Dental Laboratory Technician—2; Laboratory Technician (Tester)—1.

Photographers (0–56)

PHOTOGRAPHER, COMMERCIAL. Is working for a firm that employs four people. In addition to taking and developing pictures, is considered the assistant manager of the establishment. Continuously

employed here for 15 years. No concessions made because of veteran's disability. Employer has never been informed of the nature of the veteran's disability. Says he gets along well with employer and fellow employees. Salary increases have been generous.

Job was obtained by personal application. Veteran had 6 years experience in this field prior to World War II military service. His military assignment in the Signal Corps provided further relevant experience.

Veteran complains of abdominal distress, rapid heartbeat and profuse sweating, throbbing headaches, nervousness and exhaustion. Initial VA rating for psychoneurosis, anxiety reaction, severe, has been reduced to moderate.

Veteran is married and has children.

Technicians, Except Laboratory (0–66)

TAXIDERMIST. For the past 3 years veteran has been self-employed as a taxidermist. Interest for this grew out of a hobby. Works 40 hours per week. Is satisfied with the modest wage from this work. Expects to continue this vocation. Says he is unable to work under supervision or to meet deadlines. Relationships with customers are good. Business is growing.

No preservice work experience. After discharge from World War II military service, attended an art academy for 7 years, 3 of which were under the VA vocational rehabilitation program. Completed course and operated a small art school for 3 years. This was discontinued to devote full time to his hobby which has developed into his vocation.

Following 4 months of combat service experience, veteran showed marked tension and anxiety, manifested by sleeplessness, poor memory, depression and seclusiveness. On discharge, rated by VA for psychoneurosis, anxiety state, severe. The most recent rating continues the original diagnosis, but disability is now evaluated as lesser in degree (moderately severe). Veteran reports recurrence of anxiety attacks, including numbness of lips, stuttering, severe headaches, and smothering sensations. Feels that self-employment lessens his tension.

Veteran is married and has children.

Semiprofessional Occupations, n.e.c. (0–68)

ENGINEERING TECHNICIAN (SHIPBUILDING). Is employed in one of the U.S. naval shipyards. The department to which he is assigned employs 400 people. Has worked continuously on this job for 14 years. Employer knew nature of veteran's disability at time of hiring. There have been no limitations or concessions in his work schedule due to his disability. He works 40 hours per week. Describes his work relationships with supervisor and coworkers as excellent. Has received a superior accomplishment award and one 2-grade promotion. Feels his job is secure. Lack of formal training limits future promotion.

Job with present employer was obtained by filing application for on-the-job training under the VA vocational rehabilitation program. After completing 2 years training he was retained with increased responsibilities. Has

also pursued evening courses at a local university at his own expense. Work experience prior to World War II military service was that of surveyor's helper.

Most recent VA rating is based on the diagnosis of psychoneurosis, anxiety, moderate. During the early part of training when disability was severe, lost some time from work due to illness. Since 1950 has used only 10 days of sick leave. Received outpatient treatment from VA mental hygiene clinic in 1954. He sees his family physician, who prescribes drugs for headaches.

Veteran is married, has no children.

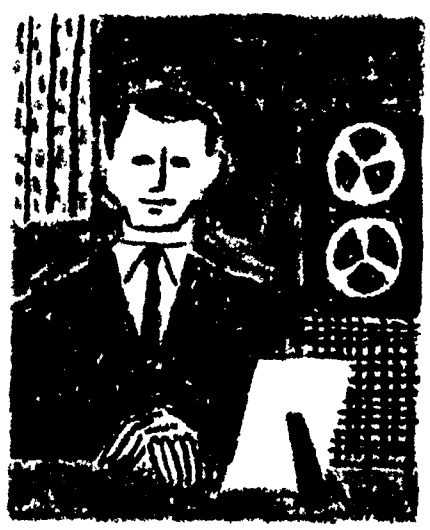
PRODUCTION SCHEDULER. Works in a factory employing 1,000 people. Assists in the scheduling of production of electronic equipment. Has worked here for 4 months. Works 40 hours per week. No concessions are made because of his disability. Character of his disability was not made known at the time of hiring, nor is it known now. Job outlook and opportunities for advancement are excellent.

This job was located and applied for by the veteran with no help from anyone. Present job is veteran's only experience in this field of work. Was a student before service in Korean conflict. After discharge worked briefly as a control clerk, then as an order packer. Completed an 11 months' course in mechanical drafting under the VA vocational rehabilitation program. Was employed for 6 months in this objective, the vocational school assisting in the placement; left for present job.

VA rating following veteran's discharge from service was based on the diagnosis of psychosis, schizophrenic reaction, complete social and industrial inadaptability. Most recent rating indicates considerable impairment of social and industrial adaptability. Veteran appears moody, worried, withdrawn, but loses little time from work, gets along well with others.

Veteran is married, has no children.

ADDITIONAL CASE: Production Planner—1.



MANAGERIAL AND OFFICIAL OCCUPATIONS

Hotel and Restaurant Manager (0–71)

MANAGER, LIQUOR ESTABLISHMENT. With a partner, owns and operates a neighborhood bar and grill. Employs one full-time bartender. Has been in this partnership 6 years. Partner knows the character of the veteran's disability and knew of it at the time they went into business together. In addition to performing various management functions, veteran tends bar. Enjoys customer contacts; relations with partner and employee are good. Averages 50 to 60 hours per week, but takes time off frequently because of nervousness and easy fatigability. This creates no problem, because his partner understands the situation and, accordingly, is tolerant of his absences.

Veteran was helped by friends in getting financial backing to acquire his present business. Had had no prior experience in this kind of work. Post-service employment was as a mechanic's helper and a delivery man. Before entering World War II service, worked as a delivery man.

VA diagnosis: psychoneurosis, anxiety reaction with conversion features in psychopathic personality. Initially rated moderately severe; rating subsequently reduced to moderate. Veteran complains of nervousness and fatigability. Was hospitalized several months ago for 1 week.

Veteran is married and has children.

MANAGER, RESTAURANT. Manages restaurant (lunch counter) in a department store. Supervises 11 employees. Has been with present employer 1 year. Employer and company physician are aware of veteran's disability and are considerate of his occasional need for treatment and time off. Working relationships with coworkers and supervisors are reported to be good. Veteran works 52 hours per week, but has considerable latitude in arranging his work schedule so that he can take time off to report to the company doctor for medication as necessary. Satisfied with wages, working conditions and employer, but is somewhat concerned because future advancement seems precluded because of his unwillingness to accept additional responsibility and stay with a single employer.

Veteran obtained present job on his own initiative. A short order cook before service, he returned to that occupation for a short time and then entered training under the VA vocational rehabilitation program, becoming

qualified as a manager, food service. Has held a number of managerial jobs; ascribes his leaving each of these to his nervous condition. Apparently adjusts well for a time and then feels he must move on. Stayed on job prior to present one for 4 years.

While on sea duty during World War II, veteran observed the loading of many serious casualties on his ship; this experience proved highly traumatic. He reacted with great depression and anxiety, feelings of guilt over his own lack of injuries, and a sense of the worthlessness of living. Frequently broke into uncontrolled agitated weeping. After hospitalization, was returned to duty, but continued to feel agitated and anxious. Upon discharge, rated by VA for psychoneurosis, anxiety reaction, moderately severe; this rating has been continued.

Recent examination found him apprehensive, tense, irritable, restless, subject to short, acute depression and crying spells. Symptoms exacerbated when veteran is alone or not occupied in work. Sleeps poorly; has occasional severe headaches.

Veteran is married and has children.

MANAGER, RESTAURANT. For the past 2 years, has owned and operated a coffee shop. Is assisted by his wife and two part-time employees. Veteran performs a variety of duties: waits on tables, serves as counterman, helps prepare food, acts as cashier, does some ordering of supplies, supervises employees, does janitorial chores at close of business. Says this is the only job he has held in which he was happy with the work. Gets along well with wife in the business relationship. After a considerable trial and error period learning the business (record keeping was especially difficult for him, and he now has this service performed for him on a contract basis), is earning a good living. Regulates his own working hours; spends about 3 hours per day in direct service, additional time (unspecified) in housekeeping duties. His business is located near a high school and is closed during the period of the school's summer vacation.

Veteran displayed considerable initiative in establishing his business and obtaining the necessary loans from local financial institutions. Had only a few months' related experience and no previous training prior to setting out on his own. Was an oiler before entering military service; unemployed for 2 years afterward. Then worked as a subassembler and visual inspector in a refrigeration manufacturing plant for 6 years. Although his employer was sympathetic, he was discharged because of excessive absences and inability to get along with supervisors. With the help of a relative, found work as a distribution manager for a newspaper. Was dismissed after 3 years because he could not get along with his supervisor. Was unemployed for the next 2 years, except for a few months' employment in a snack bar. Then started his present business.

Was hospitalized while in World War II service; after discharge, rated by VA for psychoneurosis, neurasthenia, moderately severe. Received intensive psychiatric treatment on an outpatient basis for 2 years. Reports this as having been extremely helpful. Not now receiving psychiatric treatment, but would not hesitate to return to the clinic if depression recurred.

Diagnosis at time of most recent VA rating; psychoneurosis, anxiety reaction, moderately severe.

Veteran is married; has no children.

MANAGER, RESTAURANT. With his wife as partner, owns and operates a drive-in-restaurant and tavern, purchased several months ago. Works 70 hours a week. Is worried about the prospects of keeping the business, in which he has invested most of his savings, on a profit-making basis. Wife is highly cooperative and understanding and tries to relieve veteran of as much pressure as possible. With no prior experience in the restaurant business, veteran realizes that he has much to learn. His only work experience, dating from World War II military service, was 15 years as a loader and machine operator in a coal mine.

Following 180 days in combat, veteran was hospitalized with complaints of headaches, nervousness, and pains in the back of the neck. Expressed feelings of general inadequacy and unworthiness. Later, became depressed, seclusive and unable to concentrate. Upon discharge from service rated by VA for psychoneurosis, anxiety state, severe. Has been hospitalized several times in private sanatoria; experienced feelings of impending events of great omen and of being followed. Is now in treatment with a private psychiatrist. Has difficulty sleeping and takes medication daily to overcome this. Worry and tension apparently being aggravated by uncertainty of his business venture. Diagnosis at time of most recent VA rating; psychoneurosis, anxiety state, moderate.

Veteran is married and has children.

MANAGER, TAVERN. Is self-employed as a partner in a tavern. Purchased interest in the business 10 years ago. Supervises employees, orders supplies, keeps records. Says he gets along well with employees and his partner. Hours of work not specified, but apparently works full schedule since he or his partner is always on duty. Only limitation in his job tasks is that he seldom tends bar. Says he is not particularly well satisfied with this kind of work, but plans to remain with it.

Veteran was an auto parts clerk before World War II service and for 4 years after service. Then bought present business.

Was hospitalized in service for severe anxiety following a brief period in combat. Psychiatric examination described him as insecure, tense, anxious and apprehensive, tremulous. Improved with treatment, but at last examination still complained of nervousness, chest pains and feeling uneasy with strangers. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety state, moderate.

Veteran is married.

ADDITIONAL CASES: Manager, Liquor Establishment—3; Manager, Restaurant—3.

Retail Managers (0–72)

MANAGER, RETAIL AUTOMOTIVE. Manages automobile accessories department of a chain store that also sells appliances such as refrigerators, stoves, air conditioners, etc. Has worked for present employer,

who knew of veteran's disability at time of hiring, for 2 years. Is in charge of installation of parts and accessories, e.g., tubes, tires, batteries, lights, horns. Does not supervise installations requiring knowledge of a skilled automobile mechanic. Is well satisfied with his employer; has no difficulties with his coworkers. Likes his job better than any he ever had before. Has received wage increase, but no increase in responsibility since beginning of job. Job security appears good. Works 48 hours per week with no limitations.

Obtained employment with this chain by filing application on his own initiative. A truckdriver, heavy (construction) and automobile service station attendant before World War II service, veteran returned to service station work for several months after discharge. He then took 24 months training on the job under the VA education program for the objective gunsmith. Abandoned this because it required too much sitting and small detail work; it made him nervous. Returned to service station work with his old employer, stayed there 2 years, and then located present job, which offered better hours and more pay.

Veteran was hospitalized for psychosis while in service; for 3 months he was in a closed ward. Upon discharge, rated by VA for psychosis, schizophrenic reaction, paranoid type, complete social and industrial inadaptability. Rated as incompetent for more than a year. Has shown considerable improvement. Brags about his ability to fight his way out of problems. Prefers to work alone as much as possible. Diagnosis at time of most recent VA rating: schizophrenic reaction, undifferentiated type, chronic, competent, definite impairment of social and industrial adaptability.

Veteran is married and has children.

MANAGER, RETAIL FOOD. Owns and operates small retail grocery store. Has been engaged in this enterprise, in which he is assisted by his wife, for 10 years. Works 54 hours per week. Feels he has a good business going in a neighborhood which will continue to support an operation of this nature, though opportunities for expansion are limited. Income is adequate for support of veteran and his large family. Feels self-employment relieves him of pressures occasioned by being supervised.

Veteran opened his store in a vacant building owned by a relative; used savings accumulated on previous jobs. Had previously been self-employed for 4 years: 2 years as operator of a vegetable stand and 2 years as operator of a poolroom. Only other postservice work experience consisted of a short period as an inventory clerk and stockroom clerk. Prior to World War II military service, worked as a baker in a hotel for 2 years.

While in military service, veteran complained of nervousness, occasional headaches and dizzy spells, excitability, insomnia, and feeling tired. Upon discharge, rated by VA for psychoneurosis, anxiety reaction, chronic, moderate; this rating has remained unchanged. Main symptoms currently are dizzy spells, backache and inability to do much stooping or bending

and lifting. Hospitalized 8 years ago; on doctor's advice has decreased number of hours he works per day.

Veteran is married and has children.

MANAGER, RETAIL HOME FURNISHINGS. For past 11 years has owned and operated a retail store in which he buys and sells furniture and hardware items, new and used. Business has grown steadily, and veteran believes it will continue to do so. Has won the regard of the community through his hard work and commendable adaptation to the handicap imposed by the loss of use of his left hand and wrist resulting from a gunshot wound during combat.

Veteran bought his present business after working as a routeman for 18 months. Prior to latter job, worked as schoolbus driver for 6 months; before that, as truck driver for 6 months after discharge from service. Pre-service occupation was truck driver, heavy.

During combat in World War II, veteran suffered a gunshot wound of the hand. Psychiatric symptoms began shortly thereafter, in the form of indigestion, headaches, dizzy spells, sensitivity to noise, frightening dreams, and insomnia. Initial VA rating was for psychoneurosis, mixed type, moderate. Symptoms have subsided over the years; he is still bothered by sudden noises, feels uncomfortable in crowds. Tries to avoid emotionally stressful situations. Since he knows what bothers him, feels he can adjust to most situations. Home life described as happy; active in community affairs. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety state, moderate.

Veteran is married and has children.

MANAGER, RETAIL STORE. For the past 8 years, has owned and operated a small sporting goods store. Has one part-time employee and receives full-time assistance from his wife. Sells most small items of sporting goods and equipment; sells and repairs guns and jewelry (a jewelry repairman finishes articles he cannot repair). During slack period, contracts for manual labor jobs, such as basement repair and cleaning buildings.

Veteran built his store and attached home; started with a few items of jewelry from a store that went out of business, then gradually added to his inventory. Has developed business to profit-making level, despite his lack of prior experience in it and the fact that he is almost illiterate, although he attended school for 7 years.

Before entering World War II military service, veteran worked as a grocery clerk in his father's store and as a light truck driver. After discharge, refused to work under the supervision of his father (finds any close supervision intolerable); spent 2 years doing nothing. Then began to take manual labor jobs, such as digging foundations and cleaning buildings, on a contract basis; has continued this kind of work concurrently with his jewelry business.

Shortly after his induction into the Army, during a training session involving small arms fire, veteran began to cry and claimed total deafness. His hearing returned and he was discharged for disability. Rated by VA

for psychoneurosis, conversion hysteria, moderate; associated inadequate personality. Is tense and restless, but says he controls his nervousness by hard manual labor. Rating remains unchanged.

Veteran is married and has children.

ADDITIONAL CASES: Manager, Retail Automotive Accessories—2; Manager, Retail Automotive Service—3; Manager, Retail Dairy Products—1; Manager, Retail Farm Implements—1; Manager, Retail Food—6; Manager, Retail General Merchandise (Dept. Store)—1; Manager, Retail General Merchandise and Service Station—1; Manager, Retail Gift Shop—1; Manager, Retail Housefurnishings and Appliances—1; Manager, Retail Jewelry and Watch Repair—1; Manager, Retail Liquor—4; Manager, Retail Office Furniture—1; Manager, Retail Shoe—1; Manager, Retail Variety Store—1.

Wholesale Managers (0–73)

ADDITIONAL CASES: Manager, Wholesale Trade Establishment—2.

Buyers and Department Heads, Stores (0–74)

BUYER, CHAIN STORE. Buys furniture for a chain of 78 retail stores. Has been with present employer 10 years; during that period has quit several times, and each time, after staying out a few weeks, was rehired immediately. Employer though not informed of the character of the veteran's disability, apparently has become aware of the nature of his limitations; is willing to retain him in present capacity because of his competence but not to promote him to supervisory job. Did promote him at one time to position of department head, with supervision over 2 buyers and several clerical personnel. After 2 years was demoted to present position, because of unsatisfactory relationships with members of his department. Works 45 hours per week with no limitations in work schedule. Is not happy with current job, because it is too confining and because of lack of promotion possibilities.

Veteran's initial employment with present company was secured with the help of one of his friends, a college counselor, immediately after graduation from college under the VA vocational rehabilitation program with a degree in business administration. Company gave him 2 years of on-job training in general management. No preservice work experience.

Upon discharge from World War II military service, veteran was rated by VA for psychoneurosis, anxiety, severe. While in college, received treatment from VA mental hygiene clinic. Also has received considerable support from wife. Is still nervous, tense, restless, fidgety, apprehensive, worried; smokes excessively and drinks large quantities of coffee. Is pleasant in manner, but blows up easily. Unable to speak before a group. Diagnosis at time of most recent VA rating; psychoneurosis, anxiety reaction, moderately severe.

Veteran is married and has children.

BUYER, RETAIL STORE. Buys merchandise for the sporting goods department of a large department store. His employment with this company totals 18 years, 3 of which were prior to service. Employer knows of disability and has been sympathetic and understanding. Veteran gets along well now with his associates; had some difficulty in on-the-job relationships the first year after his return from service.

Upon reemployment after World War II military service, veteran was given a planned program of training by the company in preparation for becoming head of a department. Has had several promotions and wage increases.

Veteran suffered a psychotic break after flying a prolonged series of combat missions as a pilot. Hospitalized by the VA for several months after discharge with rating of psychosis, schizophrenic reaction, hebephrenic type, incompetent, complete social and industrial inadaptability. Improved following shock treatment and psychotherapy. In good remission. Diagnosis at time of most recent VA rating: schizophrenic reaction, chronic, slight impairment of social and industrial adaptability.

Veteran is married and has children.

BUYER, RETAIL STORE. Is employed as photographic buyer for large department store. Has been with present employer, who knows of veteran's disability, for 2 years. In addition to usual duties of buyer, consults with customers regarding photographic problems. Likes his job and the company, but frequently becomes upset and disturbed and suffers headaches when under work pressure.

Veteran obtained his present job on his own initiative. A graduate of a school of photography, he worked as a photographer prior to service. Enlisted during World War II and was assigned to duty as a training officer for reconnaissance photographers. Following discharge, attempted to direct a school of photography, but excessive worry and conscientiousness and frequent headaches made it impossible for him to continue.

Entered college under the VA vocational rehabilitation program in preparation for the objective teacher, vocational training, but dropped out of school because of severe headaches. Found employment as a retail salesclerk, then as a salesman and buyer of photographic supplies. Remained in latter job for 11 years, at which time the firm failed; then found present position.

Veteran's military duties in training reconnaissance photographers involved heavy workload and considerable responsibility. He was overly conscientious and driven to get things done. Developed frequent severe headaches, nervousness and poor vision; hospitalized and given medical discharge. Rated by VA for psychoneurosis, anxiety state, moderate; rating increased to moderately severe a year later; remained at that level for 13 years, when it was again decreased to moderate. Veteran is under care of family physician for recurrent headaches and nervousness; takes tranquilizers. Social and marital adjustment reported very satisfactory.

Veteran is married and has children.

ADDITIONAL CASES: Buyer, II—2; Manager, Building Materials Department—1; Manager, Merchandise—1.

Inspectors, Managerial and Official (0–79)

ADDITIONAL CASES: Construction Inspector—2.

Advertising Agents (0–81)

ADDITIONAL CASE: Manager, Advertising—1.

Officials of Lodges, Societies, Unions (0–83)

ADDITIONAL CASE: Union Representative—1.

Credit Men (0–85)

ADDITIONAL CASES: Manager, Credit and Collection—3.

Managers and Superintendents, Building (0–87)

ADDITIONAL CASES: Assistant Housing Manager—1; Superintendent, Building—2.

Purchasing Agents and Buyers, n.e.c. (0–91)

BROKER, USED CARS. Self-employed; has his own shop and office from which he buys and sells used cars and auto supplies. Dismantles wrecked cars and resells usable parts. Has been so engaged for 13 years. Enjoys the work; says his income is adequate and business outlook good. Reports good relationships with his employees. Works up to 60 hours per week, with no limitations in work schedule because of disability.

Veteran says he had no special assistance in setting up his business. Prior to World War II service and for 1 year afterward, worked as auto parts salesperson; this experience, plus business college training, constituted helpful preparation for his present work.

Captured by the Japanese on Bataan, veteran suffered severe emotional, as well as physical, residuals from this experience. Major emotional symptoms were nervousness, frequent "blow-ups," feelings of dizziness, irritability, insomnia and headaches. Rated by VA for psychoneurosis, anxiety. Has shown slow but consistent improvement over the years, though at time of most recent psychiatric examination by VA, complained of nervousness, headaches and difficulty in sleeping. Active in community and church activities. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety reaction, chronic, moderately severe. Also rated for residual physical disabilities.

Veteran is married and has children.

ADDITIONAL CASES: Broker—2; Buyer—1; Purchasing Agent—2.

Conductors, Railroad (0–92)

ADDITIONAL CASE: Conductor, Yard—1.

Public Officials, n.e.c. (0–94)

DEPUTY TAX COLLECTOR. Works in the State tax department. His job involves traveling as an auditor-collector. Has been employed by the State for 9 years. Employer was informed of disability at time of application. Veteran likes his job; it is secure and offers usual civil service promotion opportunities. Works 40-hour week, with no limitations because of disability.

Obtained present job through competitive civil service examination. Prior to that, had 1 year of experience as a junior accountant in private industry. No other work experience, for veteran was a college student before service and, after discharge, returned to college under the VA vocational rehabilitation program, graduating with a degree in business administration.

Veteran suffered psychotic break while in World War II service and following discharge was hospitalized by VA for several months; rated for schizophrenic reaction, catatonic type, complete social and industrial inadaptability. Remained seriously disturbed for a period of a year. Treatment was continued on an outpatient basis until 6 years ago. Currently reports much less tension and anxiety, greatly improved social relationships. Diagnosis at time of most recent VA rating: schizophrenic reaction, catatonic type in almost complete remission, competent, slight impairment of social and industrial adaptability.

Veteran is married and has children.

ADDITIONAL CASES: Assessor—1; Contract Specialist—1; Customs Collector—1; Fish and Game Warden—1; Postmaster—3; Tax Collector, Deputy—3; Town Clerk—1; Truant Officer—1.

Inspectors, Public Service, n.e.c. (0–95)

HEALTH INSPECTOR. Has been employed for 6 years by large city health department. Disability known when hired. Investigates sanitary conditions in retail food establishments and makes report of violations of sanitary regulations. Enjoys security of present job, minimal supervision, and the authority that goes with his work.

After discharge from World War II military service, veteran returned to preservice job as auto parts clerk for 4 years. Interpersonal difficulties with supervisors caused his discharge. Held various jobs during next year, then obtained clerical post in city fire department, a job he held for 3 years. Obtained present better-paying job through civil service examination.

Rated by VA for psychoneurosis, anxiety, moderate; rating has remained unchanged since discharge. Short period of postwar hospitalization for acute alcoholism; at that time, veteran was restless, irritable, profane and obscene in speaking, restive and belligerent. Main current complaint concerns gastrointestinal disturbances.

Veteran is divorced; has no children.

INSPECTOR, WEIGHTS AND MEASURES. Employed 3 years by county government; disability was known to employer at time of hiring. Inspects, tests scales and measuring devices used by merchants, making re-

ports of infractions. Works 37-hour week. Job requires tact in dealing with the public and the ability to resist pressure from violators. Job is secure but there are no promotional opportunities. Veteran accepts this and indicates he will remain in this job until he retires.

After discharge from World War II military service, veteran returned to his preservice job of auto mechanic, municipal transportation system, for 12 years. During this time was promoted to foreman but soon after asked to be reassigned to old job because he could not adjust to the pressure of the new duties. Left this department because of unpleasant conditions arising from a strike. Obtained present job by civil service examination. Those two jobs constitute his entire working experience.

Rated by VA at time of discharge for psychoneurosis, anxiety state, severe. Condition has improved, but veteran continues to be irritable, is annoyed by minor problems, occasionally quarrels with fellow workers. Tries to avoid this by withdrawing and selecting jobs where he can work by himself. Despite occasional difficulties he has not missed time from work. Takes tranquilizers regularly on physician's prescription. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety reaction, moderate.

Veteran is married and has children.

ADDITIONAL CASE: Inspector, Production Equipment—1.

Managers and Officials, n.e.c. (0–97 through 0–99)

ADMINISTRATIVE ASSISTANT. Has been employed by Federal Government for 3 years. Allocates commodities to schools for school lunch program, contacting school authorities and performing some public relations functions. Also does some accounting and statistical work. Feels he has had some difficulty with supervisor as a result of discovery of his disability through a civil service investigation. Reports liking for the work he is doing; but feels that his chances for advancement have been limited by his supervisor's attitude.

Veteran remained at home for 1 year following discharge from World War II service, and then entered and completed college training under the VA vocational rehabilitation and education programs. Worked several years as a bookkeeper for three different companies, leaving all jobs because of discontent with working conditions and the pay scale. Next worked 10 months as credit manager, resigning because of hospitalization for hernia operation. Worked next as a general clerk for 9 months, resigning to accept present position, which he obtained through civil service examination.

Veteran was admitted to naval hospital after a few months of service because of tension, crying spells, fear of losing his mind, and auditory hallucinations. Discharged and rated by VA for psychosis, schizophrenic reaction. Had been under a physician's care for nervousness at various times prior to service. Has long suffered from insomnia and takes sleeping pills when absolutely necessary. Diagnosis at time of latest VA rating: psychosis, schizophrenic reaction, slight impairment of social and industrial adaptability.

Veteran is single.

CONTRACT COORDINATOR. Is employed in an aircraft manufacturing plant. Has been in this position for 4 years. Assists in negotiating contracts and preparing proposals to the U.S. Air Force. Works as a member of a group of about seven persons including clerical help. Contacts foremen and administrative personnel in various divisions throughout the plant and collects, evaluates and coordinates information received from these various sources. Veteran believes employer knew of his disability at the time of hiring, but is not sure. Enjoys his work and work relations. Works full 40-hour week. Job appears to be secure and the veteran has had some increase in responsibility and salary.

Obtained present position by direct application to the company's employment office, which found his prior experience as a bank trust officer relevant. Has had no formal training since discharge from World War II service. Following service he returned to his preservice bank job for 3 years. Resigned to move to another part of the country. Owned and managed a restaurant for 5 years but found the work too hard and the profits too small; then worked 1½ years as a security salesman but reports he quit because he didn't "have the knack." Went from this to present job.

Veteran was hospitalized in service because of various psychosomatic complaints and received a medical discharge. Diagnosis at time of initial VA rating was psychoneurosis, hysteria, moderately severe. When last examined, he still complained of headaches, weakness and gastric disturbances. Diagnosis at time of most recent VA rating: psychoneurosis, asthenic reaction, moderate.

Veteran is divorced; has no children.

CONTROLLER, FURNITURE MANUFACTURING. Responsible for all financial aspects of business, coordinating operations of three plant divisions, supervising the accounting, and preparing the financial reports. In present position for 7 months. Job was offered him by the owner and general manager, who is a close friend. Employer knew of the disability beforehand. Veteran has no desire to change employers, believing himself to be receiving top salary possible, and reporting much satisfaction from his work and his relationships with plant personnel. On other hand, has some fear of possible criticism from employer and other employees. There is little or no opportunity for advancement since owner himself is in the next position, general manager.

Following discharge from World War II military service, veteran had 33 months of college training as a general accountant under the VA vocational rehabilitation program, obtaining B.S. degree; later took one semester of work under the VA education program to prepare for CPA license. Made excellent progress in training despite some financial difficulties at the time. Has been employed as a controller or assistant manager with five different companies since 1949, changing once for schooling, once for health reasons, once to accept a better job and once because of failure of the company.

Diagnosis at time of last VA rating was psychoneurosis, anxiety state, moderate. Disability manifested in some inability to sleep, loss of appetite, anxiety, and worry about job future.

Veteran is married and has children.

MANAGEMENT ANALYST. Works in a large Federal Government installation; disability was known to agency employer at time of hiring. Makes survey of work procedure and work flow; suggests simplification and improvements and writes new procedures. The veteran's work requires much tact and the maintenance of cooperative relationships with both management and employees. He fulfills those job requirements. There is opportunity for advancement, and he is satisfied with his employment field.

Prewar employment experience was that of clerk and regular Army administrative N.C.O. After World War II, he became a Federal Government clerk, then a supervisor. Has had four terms in evening school of commerce and one 6-month period of study in several correspondence courses.

Rated by VA 3 years after war service for psychoneurosis, anxiety reaction. Takes some accumulated annual leave for relaxation and rest at home when symptoms of disability recur. Is receiving treatment from VA mental hygiene clinic.

Veteran is married and has dependent children.

MANAGER, GARAGE. On discharge from World War II military service, took over deceased father's garage and marine service station and has been operating it with success for 14 years. Repairs marine, truck and auto engines. Business primarily seasonal. Works 40 to 80 hours weekly depending on workload. Job adjustment considered excellent. Has relatively limited social life, is concerned only with job and family.

Prior to service, veteran was a self-employed auto and marine mechanic for 11 years.

Diagnosis at time of initial and most recent VA rating was psychoneurosis, anxiety reaction, chronic, moderate. Is moderately tense; body and tongue are constantly in motion; has occasional tension spasm in right leg which is evaluated as psychosomatic. These symptoms do not interfere with work.

Veteran is married and has children.

MANAGER, INDUSTRIAL ORGANIZATION. Self-employed as partner in a chickenfeed mill, president of a chicken hatchery, and treasurer of a broiler processing plant. The feed mill employs 4 people; the hatchery, 10; the processing plant 140 to 150. Veteran devotes between 75 to 80 hours per week to these three enterprises. Has been in two of these businesses for 7 years; added the third a few months ago. Feels that his business associates think highly of him and that his relationships with employees are satisfactory. His business associates are unaware of his disability. With satisfactory economic conditions, his jobs with these businesses are quite secure; the businesses are currently successful and expanding.

Prior to World War II service the veteran completed high school, took a special course in welding and was employed as a welder in a shipyard. After service he was employed by a friend as plant superintendent of a dairy prod-

ucts processing plant. After 3 years, resigned to move to another State, where for 2 years he attended university extension courses under the VA education program, taking courses in business administration, economics and related subjects which aided him in subsequently establishing his own poultry business.

On discharge from service, veteran rated by VA for psychoneurosis, anxiety reaction, severe. Continued nervous, anxious and depressed for about 4 years, when marked improvement commenced. Diagnosis at time of last VA rating was psychoneurosis, anxiety state, moderate.

Veteran is married and has children.

MANAGER, POOL HALL AND SNACK BAR. Manages a pool hall having two other employees; buys and serves the food and beverages and supervises the other two employees in the operation of the pool and domino tables. Was hired as helper 8 years ago and subsequently promoted to manager. Reports that he discussed his nervous condition with his employer at the time of hiring. Receives moderate pay and has no opportunity for advancement but the job seems secure. Has a close relationship with the owner and expresses warmth for the other employees. Works 44 hours per week, with no concessions or limitations because of his disability. Veteran obtained present job on his own, by personal application to owner. Had worked in similar capacity prior to military service.

After discharge from World War II service and prior to his present employment, veteran was a construction laborer for about 4 years.

Developed "combat fatigue" while in service. Upon discharge was highly nervous and at times assaultive. Feels that he has learned to control his temper by keeping in constant cordial contact with others. Diagnosis at time of initial and last VA rating was psychonerosis, anxiety state; rating reduced from severe to moderate.

Veteran is single.

MANAGER, CONCRETE PLANT. For the past 5 years, veteran has owned and managed a plant employing 12 men and operating 7 trucks. Handles all of his company's sales work; plant operations are supervised by a foreman. Has continually expanded his business, which he considers to represent hard work but well worth the effort. Works 14 or 15 hours per day when necessary. Enjoys being able to take vacations from the job when he feels that his "nervous" condition requires it.

Veteran's principal preservice occupation was draftsman. After military service, returned to this work as a civilian employee with the Army Corps of engineers. On this job, gained knowledge about the requirements for concrete in buildings helpful in his present business. Left draftsman job after 4 years because of "nervousness." While thus employed, he developed a sideline business buying and repairing railroad-damaged furniture. This grew into a full-time business which earned him the capital with which to start present concrete business.

Veteran was treated during World War II service for combat fatigue and hives. Become irritable and argumentative when not able to leave for home at a time of emergency in his family. After discharge, on his

first job, had trouble applying himself, suffered from tremulousness, gastric distress and occasional nightmares. Recent examination shows that he continues to have some difficulty in sleeping and some restlessness, but is no longer troubled by nightmares. Still has some stomach pains, occasional hives. Diagnosis at time of last VA rating: psychoneurosis, anxiety reaction, mild.

Veteran is married and has children.

MANAGER, PRINTING SHOP. Manages a mail advertising service employing nine people. Has complete supervision of the premises, payroll, bookkeeping, personnel management, buying, customer service, estimating and production. Has been with present employer 5 years, 2 years of which have been in present position. Employer notified of disability at time veteran applied. Feels amply rewarded for his services and secure in his job. Responsibilities have been increased as he has risen from production worker to manager in 5 years. Is allowed large measure of independence in his work. Feels that he gets along well with employer and other workers, all of whom are very understanding when he occasionally "blows his top." Works full 40-hour week and misses very little time from work because of disability.

Veteran was a student prior to Korean conflict service, taking a printing program in trade school. During military service, had several years of experience as a photolithographer. After discharge completed a course in linotype operation under the VA education program. Worked for a year as a sales-service representative of a printing supply firm. While on this job, met owner of company for which he is now working; hired by latter and trained on job successively as offset pressman and photoengraver; promoted to foreman, then to manager.

Diagnosis at time of initial and last VA rating was psychoneurosis, anxiety reaction, moderate. Veteran has intermittent headaches, perspires excessively, and complains of nausea and vomiting mornings.

Veteran is married and has children.

OFFICE MANAGER. Is one of 110 employees of a wholesale baking firm. Has been with present employer 12 years, 7 of them in his present capacity of office manager. Supervises the work of four other persons in the company office and does cost accounting. Job is secure, and the veteran finds his income adequate and the chances for advancement reasonable. Wage increases have accompanied his promotions through various levels to present position. Employer learned of veteran's disability after hiring him.

Veteran's principal preservice occupation was electrician. Following service completed a 10 month business school course under the VA education program. Obtained job with present employer through the placement office of the school, beginning as a general office clerk and advancing to assistant manager, and finally office manager.

Combat experience in World War II resulted in impairment of hearing in left ear following concussion from shell blast. Immediately afterward symptoms of anxiety appeared. Complaints of nervousness and poor sleep-

ing persist. Diagnosis at time of initial and latest VA rating was psychoneurosis, anxiety reaction, moderate. Also rated for defective hearing with chronic otitis media.

Veteran is married and has children.

OFFICE MANAGER. Office manager and accountant for the past 3 years for a wholesale auto parts company. Keeps books, oversees the billing and inventory clerks, prepares financial statements, invoices, payrolls, etc., and conducts certain correspondence. Works under the general supervision of his employer, and their relationship is good. Obtained this position through the services of a commercial employment agency. Employer knew of disability before hiring him. Veteran likes his job very much, feels that it is secure, reasonably remunerative, and offers opportunities for future promotion. Has had several promotions with the firm previously. Feels some need for more advanced training in accounting.

Veteran was student prior to service. Took some training under the VA vocational rehabilitation and education programs for mechanic and electrical objectives, but found this work unsuited to his nervous disability and undertook the study of bookkeeping on his own. From 1951 to 1957, when he started work with his present employer, he had numerous clerical positions, some involving bookkeeping. Gave up some of them because of dislike and others because of ill health and family troubles.

Veteran was in combat during World War II and subjected to two or three bombings during period of 8 months. Developed numerous complaints of gastric distress and nausea; at various times has been anxious, tense, fidgety and irritable; has trouble sleeping more than a few hours at a time at night; history of alcoholism from time to time between 1944 and 1954, when he joined Alcoholics Anonymous. Currently receiving outpatient psychiatric treatment and medication regularly. Initial VA rating was for psychoneurosis, anxiety state, severe; most recent rating is moderately severe.

Veteran is married; has no children.

SALES MANAGER, RETAIL STORE. Is in charge of a retail furniture and home appliance store employing five people. Does the buying, ordering, some of the selling, and supervises the other employees. Has been in this position for 9 years. The store is owned by a brother-in-law, who is aware of the veteran's disability. Veteran likes the work and is satisfied with his job. It is secure but offers no chances for advancement.

Before World War II service, veteran was a salesperson of men's and ladies' clothing. Following service he attended a university for 2 years, studying business administration under the VA vocational rehabilitation program. Then entered present job.

Veteran was hospitalized overseas and later in a VA hospital. Diagnosis at that time was psychosis, schizophrenic reaction, complete social and industrial inadaptability. Recent psychiatric examination found him a fearful, immature and inadequate person, doubting his ability and retreating into illness when unusual demands are made upon him. Complains of being nervous, is easily excited, irritable, often feels tense and upset. Has

headaches about once a week, which he relieves by lying down and relaxing. Has been able to adjust to this particular work situation which permits him more or less to govern his schedule of activity. Is receiving VA mental hygiene clinic outpatient treatment on a monthly basis. Sees a private physician regularly for non-service-connected diabetes. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety reaction, moderate.

Veteran is married and has children.

SALES MANAGER, TOBACCO PRODUCTS. Supervises five people selling tobacco products to retail establishments and promoting merchandising activities. Travels with the salesmen, instructing and supervising them; is out of town about half the time. Has been with present employer since 1938, except for period when he was in World War II military service. Works normal work week, and no concessions are made to him because of his disability. Feels the attitudes of superiors and subordinates toward him are satisfactory. He assumes employer is aware of his disability. Is reasonably satisfied with present job except for lack of advancement to a larger sales area. Job is secure and steady, but the veteran believes he will never receive further promotion because of his disability.

Following service, veteran was reemployed by present employer as a salesman of tobacco products and smoking supplies; received promotion to his present job a year later. Has had no specific vocational training and no other work experience.

Initial VA diagnosis was psychoneurosis, anxiety reaction, severe, following skull concussion, associated with complaints of back pains, battle dreams, amnesia, headaches and dizzy spells. Rating has since been reduced to moderate. Veteran reports that his symptoms—stuttering, sleeplessness and various aches and pains of the hip and back—have persisted, but in lesser degree. Feels that satisfactory conditions at home have helped his job adjustment. Attributes his occupational adjustment also to the fact that his employer holds a sympathetic attitude toward him.

Veteran is married and has children.

TRAFFIC MANAGER. Is employed by a company which manufactures toilet articles. Administers the traffic department which ships cosmetics and pharmaceuticals by truck, railroad, plane and ship. A substantial part of his duties consists of handling customer complaints. Has been in present job for 5½ years. Disability not known to employer.

Relationships with fellow employees are good. Work is secure but veteran is dissatisfied with the opportunities for advancement in this company.

Veteran worked as a traffic clerk for 1 year prior to World War II service. Following discharge obtained a bachelor's degree in traffic management as a result of a 4-year course under the VA education program. Then returned to job as traffic clerk for his preservice employer; subsequently held several short-term jobs as freight operations trainee, traffic clerk and general clerk. Had some difficulty during this period (before he obtained his present job) in finding and keeping employment because of stammering and hesitation in communicating with others.

Since veteran's discharge, VA rating has been based on a diagnosis of psychoneurosis, anxiety reaction, moderate. His symptoms are tension and stammering, fearfulness, shyness and some self-consciousness. Gets along well with authority figures, keeps appointments, has a steady work history and excellent attendance on the job. Activities include photography and reading.

Veteran is married and has children.

ADDITIONAL CASES: Contractor, Construction—3; Engineering Clerk—1; General Manager—1; Junior Executive—1; Manager, Branch Bank—1; Manager, Industrial Organization—3; Manager, Insurance Office—2; Manager, Office—2; Manager, Parts—1; Manager, Production—2; Manager, Recreation Establishment—1; Manager, Sales—5; Manager, Service Establishment—4; Manager, Utility Company—1; Superintendent, Construction—1; Superintendent, Waterworks—1; Supervisor, Ordering and Scheduling—1; Vice President—4.

CLERICAL AND KINDRED OCCUPATIONS

Bookkeepers and Cashiers (1–01)

ACCOUNTS RECEIVABLE CLERK. Is one of 14 employees in the office of an electrical manufacturing plant. Has been with present employer almost 2 years. Types, posts, and checks items in accounting records. Because veteran stutters, employer has modified job duties by excluding all responsibility for answering telephone or meeting public. Veteran feels uncomfortable and "different" because of this, though otherwise reports on-job relationships with coworkers to be good. Also feels promotional opportunities in this or any other job limited by factors of his tenseness and stuttering. Job security poor, because firm is about to move to another city; veteran uneasy about prospect of job hunting.

Veteran obtained present job by personal application. Because of extensive clerical experience and background, dependability and good clerical skills, has had no trouble finding or holding jobs. Returned to preservice employer after discharge from World War II military service; stayed there as an order clerk and file clerk for 5 years. Left for higher wages as general office clerk. Resigned after 5 years because he was not promoted. Found job as bank teller trainee; left this after 7 months because bank wanted to assign him to an "undesirable" branch. Worked as mailroom clerk; quit after 1 year, because of lack of promotion opportunities, to accept present job.

Since discharge from service, veteran has been tense, nervous, jittery; stutters when under stress. Took singing training under the VA education program in hope that speech would improve, but this did not happen. Has limited social contacts. Diagnosis at time of initial and most recent VA rating: psychoneurosis, anxiety, moderate.

Veteran is single.

BOOKKEEPER II. Employed in the office of a small retail company. Has been with present employer, who was informed of veteran's disability at time of hiring, 5 years. Does general bookkeeping, including recording sales and expenditures and keeping inventories. Works under one super-

visor, and reports that he gets along well with him. Loses about 3 or 4 days' work per year because of nervousness. Has not had any promotions, but has been given periodic wage increases with some increase in job responsibility. Is well satisfied with his job, which he regards as secure and offering adequate salary and some advancement opportunity.

Veteran obtained present job by personal application, without assistance, after release from VA neuropsychiatric hospital. Only directly related training consisted of high school business courses. Has held several short-term jobs, interspersed with periods of unemployment, since discharge from World War II military service; longest period of employment (4 years) was as a bartender, a job he had to leave because it was physically unsuitable (a service-incurred knee injury precluded the required prolonged standing). Principal preservice occupation was as a farmhand.

Veteran has had several brief periods of hospitalization for extreme anxiety since discharge from service; the last one was 5 years ago, prior to his beginning his present job. Currently much improved, main symptoms being frequent brief periods of tenseness and nervousness, fear of crowds. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety state, moderate.

Veteran remarried after divorce; has children.

MATERIAL CLERK. Employed in large electronics firm. Has been with present employer, who does not know character of veteran's disability, since before World War II. Present work represents demotion from two earlier jobs with same employer. Last demotion was at veteran's own request to reduce job pressure and tension. Considers current assignment satisfactory; is under minimum pressure; works alone most of the time; such sporadic contacts as he has with other workers are pleasant; supervisor described as "very helpful." Job secure, wages adequate.

Prior to military service, veteran was employed as a tester, electronics for 4 years. Completed a night course in general radio during this time. Following service in the Army where he served as a radio operator, returned to preservice job. Was demoted to inspector, electronics, because nervousness and tension interfered with his job performance. Remained in that capacity 6 years, after which he requested transfer to his present assignment.

Initial VA rating was for psychoneurosis, anxiety state, chronic, severe. Veteran has maintained regular contact with VA mental hygiene clinic; currently reports once every 6 months for treatment. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety reaction, moderate.

Veteran is married and has children.

ADDITIONAL CASES: Accounting Clerk—2; Bookkeeper—3; Material Clerk—1; Station Agent—1; Ticket Agent—1; Toll Collector—1.

Clerks, General (1–04)

CLERK, GENERAL. Is one of 35 clerks in the office of a baking company. Has been with present employer 4 years. Is responsible for maintaining status cards of all purchase orders used in maintenance of new construction and repair work in all factories of the parent corporation. Employer in-

formed of veteran's nervous condition before accepting him. No limitations due to disability; get along well with fellow employees. Job is secure but limited with regard to promotions.

Veteran obtained present job through a private employment agency. Prior to that, and since service, had 10 years' employment in a variety of clerical jobs. Took a course in blueprint reading and estimating under the VA education program.

Veteran was hospitalized for respiratory infection in service during World War II; became irritable, explosive and complained of loss of weight. Less than a month after return to duty he was rehospitalized because of headaches, nervousness and generalized weakness. Discharged from service. Diagnosis at time of initial VA rating: prepsychotic personality, manifested by ideas of reference, multiple somatic complaints, phobias, occasional auditory hallucinations, obsessive thinking, withdrawal. On later examination, complained of nervousness, tendency to get excited easily, depressed moods, hallucinations, ideas of reference. Diagnosis at time of most recent VA rating: schizophrenic reaction, definite impairment of social and industrial adaptability.

Veteran is married and has children.

CLERK, GENERAL. Works 35 hour week in the office of a large petroleum corporation. Employed 5 months. Files, types and maintains card index forms. No concessions due to disability; the records and veteran's statement agree that he gets along well with supervisor and coworkers. Job is secure, but pay is low, and veteran feels there is little opportunity for advancement.

Veteran attended business college prior to World War II service. After service he completed 3 years of college, under VA vocational rehabilitation program, majoring in Education. Upon leaving college without graduating, obtained work as a clerk and has continued in this same field for 16 years, holding a variety of jobs during that time. Present job was obtained through a private employment agency.

Veteran initially rated by VA for psychosis, schizophrenic reaction, complete social and industrial inadaptability. Rerated after short time, with diagnosis of schizophrenic reaction, hebephrenic type, slight impairment of social and industrial adaptability. Appears tense, preoccupied, anxious and confused. A tremor of the tongue and eyelids is noticeable. Gets along well with others. Engages in some social activities.

Veteran is single.

CLERK, GENERAL. Works in the office of a large manufacturing plant. Was with same employer before World War II military service. For 15 years the veteran has been a clerk in the export division. Employer knew the nature of his disability at time of reemployment. Veteran experiences some depression occasionally because of work pressures occasioned by company changes in procedures. However, he feels he has economic security and a well-paid job.

Prior to service in World War II, veteran worked for his present employer as a photostat machine operator. Has had no other work experience and no postservice training.

Veteran hospitalized while in service because of multiple psychosomatic complaints. Record shows him to have been depressed, agitated, perplexed and restless, with weeping spells. Attempted suicide by slashing himself. On discharge, rated by VA for psychosis, schizophrenic reaction, paranoid type, complete social and industrial inadaptability, competent. Marked improvement resulted in reduction of rating 2 years later; rating since that time indicates slight impairment of social and industrial adaptability.

Veteran is married; no children.

ADDITIONAL CASES: Clerk, General—3.

Clerk, General Office (1–05)

CLERK, GENERAL OFFICE. Has been working for past 6 years at an Army base in a section with 14 other office employees. Disability was known before hiring. Keeps records of time and leave, supplies and equipment. No concessions required because of his disability. Reports good relationships with supervisors and coworkers. Occupational outlook is good. Some chance for promotion.

Veteran entered service during Korean conflict directly from high school. Took no training after discharge. Obtained present employment through civil service examination.

Veteran served in combat for 11 months and received 3 decorations. Is a tense individual, easily upset by time pressure or displeasure of others; stutters; is very exacting and tends toward perfectionism. Diagnosis at time of initial and most recent VA rating: psychoneurosis, anxiety reaction, moderate.

Veteran is married and has children.

CLERK, GENERAL OFFICE. Is employed in the office of a wholesale petroleum marketing organization. Has been with this firm almost 3 years. Employer knows that veteran has a service-connected disability, but does not know its nature. Works 40-hour week with considerable overtime; job is quite demanding because of shortage of personnel. This pressure is tolerated because the veteran has hopes for promotion to a job as stockroom inventory control clerk; this will provide not only an increase in salary but a desired opportunity for more physical work. Veteran feels the need to be more active, with less desk work. Gets along well with supervisors.

No work experience prior to service during Korean conflict. After discharge he held six jobs in 5 years in the clerical and sales fields, leaving each job for acceptable reasons. These jobs followed an attempt to attend college, which ended after 1 month due to "blackouts." This condition has disappeared, but he still has tension and headaches which he controls by use of aspirin. He applied for training under the VA vocational rehabilitation program, but refused to cooperate in the required counseling procedures.

While in combat, veteran was knocked unconscious on two occasions; returned to duty, he began to have blackouts and complained of dizziness, weakness and nervousness. Blackouts ceased after 1953, the year when he was discharged. At time of application to VA for disability compensation (2 years after discharge) veteran complained of splitting headaches, numbness of hands and neck, tension; rated for psychoneurosis, conversion reaction, moderate; rating has remained unchanged.

Veteran is married and has children.

ADDITIONAL CASES: Clerk, General Office—10.

Financial Institution Clerks, n.e.c. (1–06)

TELLER. Works as a teller-clerk in a building and loan association. Receives and disburses cash, handles savings accounts, takes loan applications, etc. Has been with firm 2 years; his disability was known when hired. Relationships on the job said to be good. Veteran finds the job satisfying, has had wage increases and assists department heads in duties that should result in his advancement.

Veteran was a student before Korean conflict service, completing one semester of college. After discharge, worked as a bookkeeper in a finance company briefly and was promoted to teller. Left the job to return to his home State, where he found a job as teller in a bank; left after 1 year to manage a loan agency. Company closed down and veteran got present job through the State employment service.

Veteran initially rated for psychoneurosis, anxiety, moderate, residuals of concussion, manifested by headaches and nausea. This rating recently confirmed. Veteran's complaints included occasional severe headaches, restlessness and nervousness.

Veteran is married and has children.

ADDITIONAL CASES: Note Teller—1; Teller—1.

Hotel Clerks, n.e.c. (1–07)

ADDITIONAL CASE: Night Clerk—1.

Correspondence Clerks (1–16)

ADDITIONAL CASES: Claim Clerk—1; Correspondence Clerk—1.

File Clerks (1–17)

FILE CLERK. Has been employed 8 months in the stockroom of a branch plant of a large pump manufacturer. Files inventory and other stockroom records. Works 40-hour week. Employer is unaware of the disability. According to veteran, he has good relationship with his supervisors; likes his work and feels the demands of the job are not severe.

Veteran was a stock clerk for about 11 years prior to World War II service. For 2 years after service he worked as a semiskilled machine operator. Then he moved to another State and entered farm training for 4 years under the VA vocational rehabilitation program. Farmed 2 years

after training but gave it up because of low income. Accepted a job as file clerk in a contractor's office, where he worked about 2 years until the company ceased operations. Was unemployed for a year until he found present job in newly opened plant; got job on his own application.

Veteran was hospitalized for 2 months in the service, after serving 3 years, including 18 months in combat. Rated by VA for severe anxiety neurosis; major symptoms were tension, impatience, irritability, insomnia, and exhaustion. Most recent VA diagnosis: psychoneurosis, asthenic reaction, chronic, moderately severe.

Veteran is married; has no children.

FILE CLERK. Works for a large insurance brokerage firm. Has been with present employer 1 year. Files old records in a basement file room with one other employee. Normal workweek. Feels salary is inadequate, but otherwise is satisfied with his job. Has not informed employer of his disability. Does not socialize with coworkers. Feels accepted by supervisor, who generally leaves him to his own devices so long as all the work is properly filed.

Veteran was referred to present employer by a relative employed in another part of the office. Had no related prior experience or training. Before World War II service, was a taxi driver. After discharge, worked as a private chauffeur; most recently was with one employer for almost 5 years. Quit because driving increased his tensions.

Veteran rated 14 years ago for psychoneurosis, anxiety, moderately severe; at time of last examination, disability was evaluated as severe. Veteran has a marked speech impediment; he is tense and avoids interpersonal relations because he fears ridicule. Maintains limited social life to avoid hurt.

Veteran is single.

ADDITIONAL CASES: File Clerk—2.

General Industry Clerks (1–18 and 1–19)

APPOINTMENT CLERK. Works in the personnel section of a large Federal agency; performs clerical tasks involved in processing appointees into civil service positions. Employer was informed of disability prior to hiring. After 8 years in same job, veteran likes the work but feels the lack of promotional opportunities in his situation. Reports that his relationships with fellow workers and supervisors are good.

A student prior to World War II service, he attended college under the VA vocational rehabilitation program for 2 years with termination of this training due to poor grades. Transferred to business college and completed 1 year of a projected 2-year course before quitting to accept a U.S. Civil Service job as messenger. After 4 months was promoted to mail and file clerk and 3 years later to his present job.

Veteran given medical discharge from service. Rated by VA for psychoneurosis, anxiety, moderate. Described as being immature, dependent, restless, apprehensive, with nonorganic gastric disturbances and hand tremors. At time of most recent VA examination, complaints included infre-

quent stomach upsets and dizzy spells; easy excitability and fatigability, aching all over when he gets excited. Initial rating was continued.

Veteran is married and has children.

MAIL CLERK. Has been employed for 16 years in a Federal Government agency. Opens and sorts mail. Is not required to stamp forms or cut envelopes, because these activities make him nervous. Employer knew of disability at time of hiring; makes necessary concessions and adjustments in duties. Veteran works 40-hour week. Job is secure, but veteran aware he will not be given opportunity for more responsibile work. He realizes his limitations and shows acceptance of his routine work; is satisfied with regular salary increments.

Principal preservice occupation was shipping packer. After World War II service he obtained present job after passing a civil service examination.

Rated by VA for psychoneurosis, anxiety, moderate. Is tense and anxious but shows insight into his disability. Is receiving VA outpatient mental hygiene services and uses tranquilizers.

Veteran is married; no children.

TRACE CLERK. Is one of 14 employees in the office of a motor freight company. Has been with present employer 5 years. Disability known to employer at time of hiring. Veteran traces lost freight shipments by telephone, correspondence, telegraph; tact and patience are required. Works 40-hour week with no concessions because of his disability; likes his work and has had promotions and salary increases.

Prior to Korean service, veteran was employed as an apprentice in the printing trade. After discharge, he entered and completed a business school course in accounting under the VA vocational rehabilitation program; then took additional training in accounting under the VA education program. Employed 1 year in a food processing plant as an office clerk; left the job for present employment because he felt his opportunities were too limited and he had too many supervisors.

Veteran was hospitalized while in service overseas when he suffered episodes of extreme disruptive behavior—beat his head against wall, was combative with tent mates, and completely inaccessible and uncommunicative. After 1 month's treatment, he returned briefly to duty but was rehospitalized after further disruptive behavior. Was returned to the United States where he remained hospitalized for 5 months. Condition has improved; for past 7 years has had rating for psychosis, schizophrenic reaction, catatonic type, in remission, slight impairment of social and industrial adaptability. States he is still nervous and easily excited but that he is getting along well at present time. Recognition of his work and confidence of his coworkers are considered to have contributed much to his adjustment.

Veteran is married; has no children.

ADDITIONAL CASES: Dispatcher, Motor Vehicle—2; Order Clerk—1; Personnel Clerk—1; Production Clerk—3.

Office Machine Operators (1–25)

BUSINESS MACHINE OPERATOR. Operates different types of IBM machines including sorter, reproducer, tabulator and calculator. Has been in present position 37 months. Employed as a result of a friend's recommendation and 8 years of previous related work experience. The veteran's disability is not known to present employer. Feels that his relationship with supervisors and coworkers is good. Job presently insecure because firm is moving to another State.

Veteran worked as a saleman prior to World War II military service. After discharge, and prior to present job, had two jobs (totalling 8 years) as an IBM machine operator.

Diagnosis at time of initial rating was psychosis, schizophrenic reaction, considerable impairment of social and industrial adaptability. One year later the next lower rating (definite impairment) was assigned. Medical history indicates tenseness, seclusiveness and suspiciousness. Stays mostly to himself; watches TV and attends movies; has very few friends.

Veteran is married and has children.

MACHINE RECORDS INSPECTOR. Works for a company that manufactures and services business machines. Supervises other employees and checks their machine cards for accuracy. Has been with same employer 18 years; in present position for 7 years. Employer not aware of the disability at time of rehiring veteran after military service, but is now. Veteran likes his job. Has had no promotions but has had two small raises and some increase in responsibilities. Job is very secure but the veteran believes that his opportunity for advancement is limited because of competition with new college trained employees. Feels he must continue on present job, because it is too late to start all over. Works on the night shift by preference because of difficulty in sleeping at night. Feels the work does get on his nerves at times because of constant changes and the necessity to study them in order to keep up to date.

Veteran was an offset pressman for present employer before World War II service. Upon reemployment after discharge, was given 4 months company training for his present job. Used VA education program benefits for 1 year for instruction in accordion playing.

Following considerable combat duty, veteran was discharged from military service for disability; rated by VA for psychoneurosis, anxiety reaction, chronic, severe. This was reduced to moderately severe at time of last VA rating. Veteran has headaches, is upset easily, has much insomia and some stomach and chest pains. Is on sick leave approximately 35 days per year because of nervous trouble.

Veteran is married and has children.

TABULATING MACHINE CONTROL OPERATOR. Is employed in the program planning operation of a large automobile manufacturing company. Has been with present employer 10 years. Is well satisfied with his job; says it provides some opportunity for advancement and his disabilities are in no way limiting.

Veteran was a student prior to World War II service, completing 2½ years of college. After discharge, trained for high school teaching under the VA vocational rehabilitation program and continued graduate work to the master's degree under the VA education program. Taught for 3 years, leaving to enter present employment because he felt teaching entailed "too much pressure."

Diagnosis at time of initial VA rating was psychoneurosis, anxiety, hysterical, moderately severe. Most recent rating: anxiety reaction, moderate.

Veteran is married; has no children.

ADDITIONAL CASES: Calculating Machine Operator—1; Tabulating Machine Operator—1.

Paymasters, Payroll Clerks, Timekeepers (1–26)

ADDITIONAL CASES: Chart Clerk—1; Payroll Clerk—3; Time Clerk—1.

Post Office Clerks (1–27)

MAIL SORTER. Sorts mail in a general post office according to established and memorized schemes. Present position obtained through civil service examination 6½ years ago. Employer knew of disability before hiring him. Reports no complaints with his job, which is secure but offers very limited opportunity for advancement.

Veteran was a machine operator prior to World War II service. Has had no VA training. Returned to preservice job after discharge but left it for postal service because of inadequate income.

Diagnosis at time of initial and last VA rating, psychoneurosis, anxiety, moderate. Veteran speaks in a tired manner, complains that his memory is poor and his mind wanders; says he eats excessively, has difficulty sleeping, suffers occasional dizziness, has headaches. Has been receiving VA outpatient psychiatric treatment for 12 years.

Veteran is married and has children.

MAIL SORTER. In present position for a few months. Does not have career status yet. Obtained job through civil service examination. Employer knew of disability before hiring him. Veteran does not want a job with more responsibility; feels that the security, which will come with career status and the salary and fringe benefits which he receives will be satisfactory for him.

After service in World War II, returned to preservice job of material clerk for a general grocery warehouse; left this job, after 18 years with the same employer, because he found the work made him cross and irritable. He felt persecuted. Studied salesmanship under the VA education program for 3 months. Employment during the last 3 years, prior to getting present job, was irregular and consisted chiefly of working as a doorman for various hotels. Lives alone in a small apartment where he does some handyman work for the owner of the apartment house, in part payment of his rent.

Diagnosis at time of initial and last VA rating was psychoneurosis anxiety reaction, moderate. Veteran receives outpatient psychiatric treatment from VA mental hygiene clinic about twice a month and takes prescribed drugs when he cannot "shake things." Also sees a private physician at his own expense on occasions. Symptoms have included tension, apprehension, restlessness, fatigue, severe headaches, depression, palpitation of heart, and shortness of breath.

Veteran is divorced and has had no contact with his children or other relatives for years.

POST OFFICE CLERK. Sells stamps and envelopes, makes out money orders, registers and issues letters and parcels. In present position for 2 years following 11½ years of service as letter carrier. Veteran believes that his employer has never had any knowledge of his disability. Job is secure; the veteran is satisfied.

Before military service in World War II, the veteran was an auto cushion assembler.

Diagnosis at time of latest VA rating: psychoneurosis, anxiety, moderately severe. Initially rated severe. Symptoms began during combat; since then his main complaints have been fatigue, insomnia and feelings of depression.

Veteran is married and has children.

POST OFFICE CLERK. Sells postage stamps, post cards, stamped envelopes and money orders. Registers, insures and computes cost of mail. Cancels outgoing mail and may sort mail. Prepares a record of daily transactions. In present position for approximately 14 years. Entered by way of competitive civil service examination. Employer knew of disability at time of hiring. Veteran particularly likes the security and steadiness of his work; also likes his contacts with the public and nearness of his place of work to his home. Reports that he gets along well with supervisors and coworkers on the whole but that he is "quick tempered" and feels bitter about individuals who, he thinks, are shirking their duties; has had an occasional verbal altercation with some of his coworkers, as a result of this feeling. Chances for advancement are limited.

Principal occupation prior to World War II was peddler (vegetables). Following discharge, worked as a shingle packer, a spool winder of aluminum foil, warehouseman in the wholesale food industry, and as a sales clerk in a retail food store. Time in each of these jobs ranged from 6 to 24 months. He left each of these jobs for what he considered a better one.

Diagnosis at time of initial VA rating was psychosis, schizophrenic reaction, simple type, considerable impairment of social and industrial adaptability. Changed shortly afterward to psychoneurosis, anxiety type, severe. Currently rated as moderate. Veteran gives history of terrific headaches and nightmares.

Veteran is married; has no children.

ADDITIONAL CASES: Mail Sorter—10; Post Office Clerk—19.

Mail Carriers (1–28)

MAIL CARRIER. Works in a large city post office. Obtained present position about 12 years ago after serving 4 months as a substitute. Employer knew of disability before hiring him. Satisfied with his job but says stomach trouble occasionally makes it difficult for him to complete his route. Is rated as a satisfactory worker.

Prior to World War II service, veteran worked for about a year for a railroad, loading and unloading freight. After discharge, entered training as a tailor under the VA vocational rehabilitation program, but discontinued upon obtaining full-time employment. Changed to part-time training in business administration under the VA education program and completed this course. Feels that this latter training helped him to pass his civil service examination.

Veteran was hospitalized in 1945 for 6 months; rated for psychosis, schizophrenic reaction, complete social and industrial inadaptability. Showed great improvement following electroshock therapy and was placed on trial visit from the hospital, then discharged. Diagnosis at time of last VA rating: schizophrenic reaction, in remission, slight impairment of social and industrial adaptability. Veteran's main complaints at that time were occasional headaches and stomach trouble.

Veteran is married and has children.

MAIL CARRIER. Works in a small branch post office. In present position for 14 years. Studied available literature in preparation for the competitive civil service examination which he passed. Employer knew of his disability at time of hiring. Likes his work, his contacts with people on his route, and the security, steadiness and pay of his job.

Veteran was an automobile mechanic prior to World War II service. After discharge, made no attempt to seek work for 6 months; then worked as automobile mechanic in retail service station for 12 months; resigned in order to take present position. Has had no formal training since military service.

Diagnosis at time of initial VA rating: psychoneurosis, hysteria, moderate, has been continued. Veteran's chief complaint is of pain in left arm, for which no organic basis has been found.

Veteran is married and has children.

MAIL CARRIER. For about 2 hours each day, veteran sorts mail he is to distribute on his route and then delivers it in a primarily residential neighborhood. Has been in this position for about 13 years. Employer knew of disability at time of hiring. Likes the job, gets along well with people on his route, despite the fact that he is apprehensive and anxious much of the time and does not like close association with people. Reports that he gets along fairly well with his supervisor, but becomes tremulous and fearful when criticized . Early in his present job he was told that his work and attendance would have to improve in order for him to keep his job. He has overcome those difficulties.

After discharge from World War II service, veteran returned to pre-service employment as a general clerk with a Government agency. A year later, however, his work was found to be unsatisfactory, and he elected to resign rather than be fired. He then undertook training in accountancy at a business college under the VA vocational rehabilitation program, but completed only the first semester. He next worked briefly as a moving picture theater attendance checker before entering his present employment.

Diagnosis at time of initial and last VA rating was psychoneurosis, anxiety state, moderate. The veteran has not been receiving psychiatric treatment, but expressed interest in this kind of help when questioned about it and was referred to the VA mental hygiene clinic by the interviewer. His present adjustment appears quite unsatisfactory. During the interview his voice broke and he began to cry. Because of his fear of meeting people, he leads a rather seclusive life.

Veteran is married and has children.

RURAL MAIL CARRIER. Delivers mail on a rural route, using his own automobile. Employed 4 hours a day, 6 days a week. Has been in this position for 16 months, following about 6½ years as postal clerk. Was initially employed by the post office as a substitute clerk as the result of the assistance of a VA training officer. The postmaster knew of the veteran's disability when he hired him. The veteran transferred from clerk to carrier in order to return to his childhood home, although this change reduced his salary by several hundred dollars. Expresses complete satisfaction with his current employment. No advancement is available, but the job is secure.

Veteran terminated high school in the 12th grade, in order to enter military service during World War II. After discharge, entered college under the VA vocational rehabilitation program, with the objective of high school teacher. This training was discontinued after 18 months because of veteran's unsatisfactory academic progress. Postservice jobs included brief periods as salesperson, meats; general farmer; airplane electrician; apprentice lithographic pressman; construction clerk; advertising salesman; construction laborer. He quit or lost these jobs because of his many somatic complaints and emotional instability. Since entering Federal employment, has had stable work history.

Diagnosis at time of initial VA rating was psychoneurosis, unclassified, moderately severe. This has since been changed to hypochondriac reaction, chronic, moderate, manifested by many somatic complaints. Has had no psychiatric treatment; refuses to recognize the nature of his disability.

Veteran is married and has children.

RURAL MAIL CARRIER. Delivers mail to persons along a daily rural route. In present position for about 7½ years. Obtained job through competitive examination after being helped by veterans organization to file his application. Employer knew of his disability at time of hiring him. Reports that he likes this work very much. Although the job is secure and steady, there is little or no likelihood of advancement.

Upon discharge after World War II service, veteran returned to his pre-service employment of bank teller. Soon received a promotion to assistant cashier; resigned because of his nervous symptoms when he was offered his present job. Veteran has a high school education, but no postservice training.

Veteran was shot down over Germany and was a POW for 10 months. When examined for compensation purposes about 2 years after discharge, was found to be depressed, extremely nervous and easily fatigued. Diagnosed as having a mixed type of psychoneurosis, moderate. At time of last VA examination, he was found to be tense and dissatisfied, had gastrointestinal complaints; rated for psychoneurosis, anxiety reaction, moderate.

Veteran is married and has children.

ADDITIONAL CASES: Mail Carrier—29; Rural Mail Carrier—6; Special Delivery Messenger—1.

Shipping and Receiving Clerks (1–34)

FOREIGN CLERK. Works in the office of an electrical equipment manufacturing plant. Has been with present employer, who is not aware of veteran's disability, 8 years. Examines shipping and traffic records and statements of charges for merchandise being exported; bills orders; makes out customs papers; calculates amounts in foreign currencies and records on documents and ledgers. Enjoys good relationships with supervisors; job is secure; considers wages adequate; has had several periodic wage increases and expects others in future, but there is limited opportunity for advancement in this small company. Plans to remain in this job indefinitely. Only aspect of the work that he dislikes is dealing with railroad loaders, truckmen and stevedores. Works full 40-hour week, with no limitations because of disability.

Veteran had no work experience prior to entering service during World War II. After discharge, completed 2 year on-the-job training program under the VA vocational rehabilitation program for objective of foreign clerk. Remained in employment with trainer for 1 year, then was laid off because business was slow. Worked as traffic clerk for 3 years, again laid off because of business slump. Next job was as credit clerk, foreign trade; veteran left after 2 years, because commuting to job was difficult, and transferred to present company.

Initial VA rating for psychoneurosis, neurocirculatory asthenia, moderately severe, has remained unchanged. Veteran worries about jobs to be done, is afraid that "things will get out of hand"; at such times gets palpitation of the heart, perspires profusely. Symptoms do not cause him to lose any time from work. Leads moderately active social life. Sees private doctor occasionally, who gives him reassurance.

Veteran is married and has children.

RECEIVING CLERK. Employed in a large Federal installation. Has been in civil service employment 7 years, advancing during that time from laborer to present job. Disability was specified in application at time of hiring. Checks incoming shipments of radio and electric parts for correct-

ness of quality and weight, and for damages. Likes his job; feels it offers security, good pay, and opportunity for advancement. Says his relationships with supervisor and coworkers are good; received no special consideration because of his disability.

Veteran obtained job through usual civil service channels following training for radio-TV repairman under the VA education program. Only other postservice employment was seasonal work as houseman at a resort hotel (during part of the period veteran was so employed, he was on trial visit from VA hospital). Preservice occupation was laborer in a textile mill.

After prolonged World War II combat in Africa, Sicily, and Italy, veteran was given a furlough to the United States. While at home, became very upset, refused to return to duty, talked about suicide. Following disability discharge from service, hospitalized for almost 2 years in VA hospital for schizophrenic reaction. After a period on trial visit, during which he secured work and began making a good adjustment, was discharged from hospital. Has been steadily employed for last 7 years, apparently making good adjustment. Diagnosis at time of most recent VA rating: psychosis, schizophrenic reaction in partial remission, slight impairment of social and industrial adaptability.

Veteran is single.

SHIPPING CLERK. Employed in a small photoengraving firm. Has been with this employer, who was informed of nature of disability at time of hiring, more than 10 years. Prepares magazine plates and proofs for shipment; arranges for air, rail, and truck shipments; prepares, consolidates, and files bills of lading. On occasion, assists in some of the technical operations. Works 40-hour week regularly; frequently considerable overtime. Job is secure, wages adequate, but veteran says opportunities for advancement are limited. Has no overt difficulty with coworkers, but thinks they all know about his nervous condition and consequently feels uneasy with them.

Veteran was referred to present employer by a veterans service organization representative. A newspaper salesman before World War II service, he held several jobs of very brief duration following discharge. Following training in graphic arts under both the VA vocational rehabilitation and education programs, found present job and has remained stably employed for last 10 years.

On discharge, veteran rated by VA for psychosis, schizophrenic reaction, paranoid type, complete social and industrial inadaptability. Has shown marked improvement during the intervening years. Still complains that people take advantage of him; blames lack of job advancement on lack of "political connection," has disturbing dreams, some somatic complaints; is compulsively neat and orderly, a characteristic that is an advantage in his job which requires exacting attention to detail. Attends group therapy sessions at VA mental hygiene clinic. Diagnosis at time of most recent VA rating; schizophrenic reaction, paranoid type, definite impairment of social and industrial adaptability.

Veteran is married and has children.

SHIPPING CLERK. Works in an auto parts and accessories manufacturing company. Has been with present employer, who is not aware of nature of veteran's disability, 10 years. During this time has had one promotion, from laborer to present job. Packages and ships auto parts; routes shipments as directed by order. Likes his work.

Veteran obtained work as press operator (laborer) with present employer following 1 year of training in auto body repair under the VA education program; promoted after 4 years to shipping clerk. Only other work experience following World War II service was as attendant in a hospital for mentally ill, a job he held for 1 year. Preservice occupation was laborer, railroad.

While on Okinawa as an ammunition handler, veteran became hysterical during air raids and had to be hospitalized. Out of contact, delusional, menacing and suicidal, he was returned to United States and given a disability discharge. Hospitalized by the VA; rated for psychosis, schizophrenic reaction, unqualified, incompetent, complete social and industrial inadaptability. Released on trial visit 4 months later and subsequently discharged. Diagnosis at time of most recent VA rating: schizophrenic reaction, mixed type, in remission, slight impairment of social and industrial adaptability.

Veteran is married and has children.

ADDITIONAL CASES: Receiving Clerk—2; Shipping Clerk—5.

Technical Clerks, n.e.c. (1–35)

ADDITIONAL CASE: Engineering Clerk—1.

Statistical Clerks and Compilers (1–36)

STATISTICAL CLERK. Has been employed by the Federal Government for the last 5 years. Disability was specified in his application. Works 40 hours per week, with occasional overtime, compiling statistical reports. No concessions because of disability. Says on-job relationships are excellent; also maintains off-duty social relationships with coworkers. Has permanent civil service status; has had several promotions, the most recent following a period of school training in electronic data processing which was subsidized by the agency. Plans to take evening college courses in accounting and mathematics in order to be eligible for additional advancement.

Obtained job through competitive civil service examination; only other work experience following Korean conflict military service consisted of a brief period as a roofer and sheet metal worker.

It was while working as a roofer (and several months following discharge from service) that veteran suffered acute schizophrenic break. Became delusional and hyperactive. Hospitalized briefly in non-VA hospital and given series of electroshock treatments; transferred to VA hospital and put under medication. Improvement was rapid. Discharged in 3 weeks; remained convalescent and did not attempt employment for 6 months; then started with present employer. Takes tranquilizers regularly on

prescription of his family physician. Diagnosis at time of most recent VA rating: psychosis, schizophrenic reaction, paranoid type, slight impairment of social and industrial adaptability.

Veteran is single.

Stock Clerks (1–38)

STOCK CONTROL CLERK. Works in a branch plant of a boilermaking company employing about 175 persons. Controls the amount of stock on hand; keeps a perpetual inventory and takes a periodic physical inventory; orders needed items, estimating from production, sales and other records the amount required for further use. In present position for 2 years. Employer does not know of his disability. Veteran reports that he gets along well with supervisors and coworkers. Is not satisfied, however, with the pay or working conditions or the work itself. Also unhappy about the fact that his place of employment is some 100 miles from his home, which forces him to maintain two residences and permits him to visit his family only on weekends. The work appears to offer steady employment, but overall the veteran appears to be making less than satisfactory adjustment.

Prior to World War II service, veteran was a milling machine operator for an aircraft engine manufacturing company. Upon discharge from service, he returned to the same company and was assigned to work as an industrial X-ray technician. After 10 years, he left there to accept his present job. Took 2 months training in business administration under the VA education program; discontinued because he felt the program was "too rough" and unsuited to his interests and aptitudes.

Veteran made a fairly good adjustment in service until his ship was torpedoed. Hospitalized because of severe depression. Subsequent history indicates depression, inability to sleep, and general emotional disturbance. Has has psychiatric treatment. Takes tranquilizers occasionally. Initial diagnosis of psychoneurosis, hysteria, moderately severe, associated with reactive depression, has been continued.

Veteran is married and has children.

TOOL CRIB ATTENDANT. Receives, classifies and stores tools and equipment in a Federal Government arsenal employing 28 other employees in the same section. Has been in present position for 6 years; (during this period was hospitalized for 1 year). Obtained job as a result of civil service examination and appointment. Employer knew of disability before hiring him. The job is secure, and the veteran feels that although advancement is slow, the wages are fair and the job is satisfactory in other respects.

Prior to service in World War II, veteran worked as a mechanical draftsman. After service, worked for a business machine manufacturing company for 2 years; as a machinist at another company for 3 years; and then as a draftsman for 1½ years. He says that he left the draftsman job because it made him nervous. Veteran is a high school graduate; has had no training under any of the veterans benefits laws.

Diagnosis at time of last VA rating was psychosis, schizophrenic reaction, chronic, unclassified, competent, considerable impairment of social and

industrial adaptability. Veteran has many somatic complaints; says he feels that his body is disintegrating and that he might lose his mind. Has been in psychotherapy for many years and recently was hospitalized in VA hospital for a year. Has failed to report back to hospital as requested. Says he is receiving psychiatric treatment at present time.

Veteran is married and has children.

ADDITIONAL CASES: Parts Clerk—2; Stock Clerk—7; Stock Control Clerk—1; Stock Foreman—1; Storekeeper—2; Supply Clerk—2; Tool Clerk—1; Warehouseman—1.

Baggagemen, Transportation (1–43)

ADDITIONAL CASE: Cargo Handler—1.

Ticket, Station, and Express Agents, Transportation (1–44)

ADDITIONAL CASES: Freight Traffic Agent—1; Ticket Agent—1.

Agents and Appraisers, n.e.c. (1–48)

VETERANS' SERVICE OFFICER. Works for a State veterans' affairs commission. Renders service to other veterans in connection with claims for benefits. Prepared for present job by on-job training under the VA vocational rehabilitation program, and has been in his present position for about 15 years. Employer knew of the veteran's disability before hiring him as a trainee. Veteran's adjustment has been especially good. Position is steady and secure. Veteran is highly satisfied. Has received occasional increases in salary and responsibilities over the years.

Principal preservice occupation was hotel clerk. Worked as an industrial laborer for 2 weeks after discharge from World War II military service, then trained for about 3 months under the VA vocational rehabilitation program as an electric motor repairman before changing his training objective.

Veteran was discharged from service for psychoneurosis. Medical examination following discharge showed him to be listless and confused; he complained of nervousness, upset stomach, insomnia, headaches, other somatic difficulties. Rated by VA for psychoneurosis, anxiety type, moderately severe; most recent rating the same. There has been some lessening of veteran's feelings of tension, insecurity and inferiority.

Veteran is married and has children.

ADDITIONAL CASE: Veterans' Service Officer—1.

Clerks and Kindred, n.e.c. (1–49)

METER READER. Has been employed 15 years by a public utility. Reads meters and records information about the use and condition of company equipment. Employer does not know of veteran's disability. Nature of the job requires few contacts with supervisors or coworkers. Veteran likes the relative independence and freedom from close supervision that he has. Expects to remain in job.

Veteran was a student before World War II service. Upon discharge, applied for and obtained present job through his own efforts. Very little training required to handle the work.

Initial VA rating: somatization reaction, psychogenic gastrointestinal reaction, moderate. Veteran has history of gastrointestinal complaints, restlessness, tremors, anxiety and apprehension. Most recent VA rating: psychoneurosis, anxiety reaction, moderately severe.

Veteran is married and has children.

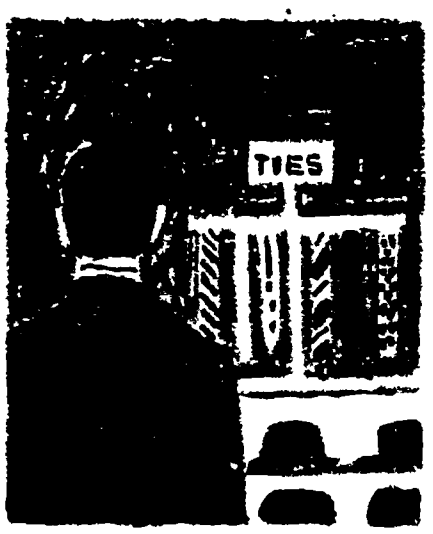
METER READER. Employed 14 years reading gas meters and making other observations concerning the condition and use of company equipment. Employer knows of veteran's disability. Veteran works full 40-hour week, with no limitations because of his disability. Likes the security of the job, and is satisfied with his pay but is not entirely content with his duties. Still interested in airplane and engine mechanics, in which he was enrolled as a trainee years ago, but is hesitant to give up his present security and risk finding another job in that field.

Veteran was student prior to World War II service. Following discharge, he completed a program of training in mechanics under the VA vocational rehabilitation program and was licensed as an airplane and engine mechanic, but never worked in that field. Worked 6 months on a project to convert manufactured gas appliances to natural gas. Then applied for and obtained present job through his own efforts.

While in service, was hospitalized for 3 months for psychiatric disorder. On discharge, rated by VA for psychoneurosis, anxiety, chronic, severe, manifested by tenseness, nervousness, irritability. Chief complaints now are dizziness and sudden headaches with shaky spells when he gets excited; becomes fearful at these times; crowds bother him; has few friends. Says he is under treatment of family physician for "nerves." Diagnosis at time of last VA rating: psychoneurosis, anxiety reaction, moderately severe.

Veteran is married and has children.

ADDITIONAL CASE: Process Server (Deputy Sheriff)—1.



SALES AND KINDRED OCCUPATIONS

Salesmen, Brokerage and Commission Firms, n.e.c. (1–52)

MANUFACTURERS' AGENT. Employed 7 months with a large manufacturer of special mailing devices for offices with heavy outgoing correspondence and promotional material. The veteran does direct sales work with prospective users of the equipment; earnings are by straight commission on sales and currently are at the rate of over $10,000 per year. Works a 45-hour week; under constant pressure to meet sales quota; this is causing him some anxiety. No out of the city travel is required. The employer is not aware of the veteran's disability. Veteran says he is being considered for promotion to management job.

The veteran was a route salesman for 2 years before World War II service and [illegible] years afterward. Eight years ago he completed a 2-year course in photography under the VA vocational rehabilitation program. However, the prospects in this field did not look good to the veteran. He became an insurance salesman for 5 years and an advertising salesman for 2 years. Then moved to present job, which he secured by direct application after hearing of the opening through a friend. While working has attended evening course in business administration.

Veteran initially rated by VA for psychoneurosis, anxiety reaction, mild. Disability rerated as moderately severe 2 years later; most recent rating is moderate. Complaints of abdominal distress continue. Feels his difficulty is aggravated by pressures of his job. Reports regularly to VA mental hygiene clinic.

Veteran is married and has children.

ADDITIONAL CASES: Manufacturers' Agent—2.

Canvassers and Solicitors (1–55)

SALESMAN, HOUSE TO HOUSE. Employed for 13 years by a household furnishing store. He sells house to house to regular customers; enjoys the work and has no desire to be tied down to a desk job. Employer knew of disability at time of hiring veteran. Pay is based on salary and commissions; veteran feels the job is secure, and he has opportunities for promotion.

Gets along well with his employer. Works 40-hour week, with occasional overtime. Earnings adequate to support his family.

Veteran was a milkman prior to World War II service. After discharge was unemployed 8 months, then entered on-the-job training in general sales under the VA vocational rehabilitation program. Withdrew because of low earnings; accepted present job, which he obtained by applying in response to a newspaper advertisement.

Veteran hospitalized in service for neurosis. Most of his symptoms have disappeared, but he still becomes nervous over sudden metallic sounds and has occasional nightmares. He has found that personal contacts quiet his nervous condition; feels least nervous when busy. Interviewer reports that the veteran has an outgoing personality and apparently has made activity his most significant adjustment technique. Initial rating by VA for psychoneurosis, anxiety, moderate, has been continued.

Veteran is married and has children.

ADDITIONAL CASES: Salesman, House to House—6.

Salesmen, Insurance (1–57)

SALESMAN, INSURANCE. Employed 2 years with the district office of a multiple line insurance company, selling life, hospitalization, health and accident insurance. Employer knows of veteran's disability but was not so informed before hiring him. Veteran has mixed feelings about his job. Feels it offers security; gets along well with his supervisor and likes his coworkers. His earnings have increased, and he has received one award for outstanding achievement. However, he feels the job is "too rough on him" (must work 50 to 60 hours per week); also believes that, because of his lack of education and formal training in insurance, he has no chance for advancement.

Veteran was a semiskilled laborer before World War II. After the war he operated a tavern and cafe for several years and later worked as a bartender. Both jobs aggravated his disability and he left for 5 years of employment as an order clerk in a wholesale's office. Left his clerical job to become an insurance salesman after answering a newspaper advertisement. Two years later he obtained his present job through an associate with whom he had worked in another company.

On discharge, veteran rated by VA for psychoneurosis, anxiety state, severe, manifested by headaches and depression. Rating subsequently reduced to moderately severe.

Veteran is married; has no children.

SPECIAL AGENT, INSURANCE. Employed 12 years by a major insurance company, with past 6 years in present job. Has never informed the company of his disability. Works in an office where he assists a large force of agents by drafting contracts, advising on new business prospects, cancellations and overdue accounts. Is responsible for training agents for increased production. Likes the work and has had several promotions. Looks forward to further advancement.

A high school student prior to World War II service, he entered college after discharge and earned a B.A. and an M.A. degree in business administration under the VA vocational rehabilitation and education programs. Then entered the employ of his present company as a junior executive trainee; was given thorough training and experience in insurance and promoted to his present job. Has also taken evening courses in insurance.

Veteran rated by VA for psychoneurosis, chronic conversion reaction, mixed type, moderate. His chief complaints have been headaches, stomach aches, pains and numbness in the arms. Has had some supportive therapy; gained sufficient insight to realize that his physical complaints are emotionally based. Still has gastrointestinal disturbances which he relates to the pressures of his job.

Veteran is single.

ADDITIONAL CASES: Claim Adjuster—2; Claim Examiner—1; Investigator I—1; Salesman, Insurance—6; Underwriter—1.

Hucksters and Peddlers (1–61)

HUCKSTER. Veteran, in partnership with his brother since World War II, operates a truck from which they peddle vegetables and fruit. In a workweek ranging from 2 to 5 days, depending on the season of the year, veteran's share averages $55 per week. He likes the work and has no desire to expand into store operation. Considers himself fully employed and expects to remain a peddler indefinitely.

Preservice occupation was grocery clerk in an older brother's store.

Veteran rated by VA for psychoneurosis, anxiety, severe. Is frequently irritable, restless and unable to meet people; complains of chest pains. Is able to handle his job by relying on his brother to drive and sell when the effects of the disability are felt; he stays at the truck, arranges the produce, etc.

Veteran is married and has children.

ADDITIONAL CASES: Buyer, Junk—1; Peddler—1.

Salesmen, Real Estate (1–63)

REAL-ESTATE BROKER. Self-employed for 4 years in a general real-estate agency; rents and sells real property on a commission basis. Maintains an office in his home. Employs two salesmen. Works long hours because of evening and Sunday appointments. Says he meets clients well, and his disability does not limit him in conduct of his business. Likes the work.

Veteran left high school in the senior year to enlist during World War II; after discharge was unable to work for extended period because of disability; later entered college under the VA vocational rehabilitation program. Grades were unsatisfactory; after 2 years, transferred to business college for 1 year, completing a bookkeeping course. Worked for 1 year as an auto salesman, leaving the job to start his present business.

Upon discharge, veteran was rated by VA for psychosis, schizophrenic reaction, complete social and industrial inadaptability. Rating was reduced after 2 years but in a short time again raised to indicate severe impairment as the veteran's disturbance increased. For the past 6 years his condition has been improved; rating indicates definite impairment of social and industrial adaptability.

Veteran is married; no children.

REAL-ESTATE BROKER. Self-employed for 12 years and has been moderately succesful. His business is gradually expanding and he is optimistic about the future. Has two employees. Works hard and long hours; his feeling is that he must "keep fighting" for business and to overcome his nervous condition. Takes only a day to two off from work every few months for rest. States that his employees do not know of his disability. Is active in social and community affairs.

Preservice employment consisted of brief periods as an automobile upholsterer and shipper's helper. After World War II service he worked seasonally and for short periods as a salesman for various real-estate brokers, and as a bookkeeper. Then completed 4 academic years of college training under the VA vocational rehabilitation and education programs toward the employment objective of salesman, real estate; obtained a broker's license and began to operate his own real-estate business.

Veteran initially rated for psychoneurosis, anxiety reaction, severe; most recent rating is moderate. Complains of occasional persistent, severe headaches, shortness of breath and spots before his eyes. Although his doctor tells him the spots before his eyes are not serious, he is worried and anxious about them. Occasionally he will drop all his office duties and rush to the nearest neighborhood doctor to get treatment. After getting a supply of pills his anxiety diminishes and he resumes his normal duties. He indicates that the pattern to have something to worry about all the time is almost constantly present. When one crisis passes another, equally formidable, takes its place. He enjoys sports and social activities and is very much at ease in the presence of others.

Veteran is married and has children.

REAL-ESTATE BROKER. Self-employed for 6 years. Enjoys being his own boss and works long hours. Expresses a feeling of security, with earnings and advancement related to his own endeavor. Financial outlook is good. When he becomes disturbed he can regulate his own activities.

Before going into World War II service, veteran graduated from high school with a major in business education. Postwar employment for 8 years was in numerous jobs in the semiskilled and clerical fields; most recent job, before present employment, was as a collector and salesman for a furniture store. Left these jobs because they made him "nervous."

During his Army service, veteran was on a troop transport which almost sank after being hit by another ship. Shortly afterward he was hospitalized for minor surgery. Following this, became tense, shaky, and suffered crying spells; was hospitalized in service hospital for 6 months because of psychiatric disorder. Has had no hospitalization since discharge. Recent exami-

nation by VA found indications of underlying tension, but veteran stated he felt better and has learned to live with his disability. Rated for psychoneurosis, anxiety reaction, moderate.

Veteran is married and has children.

ADDITIONAL CASES: Real-Estate Broker—3; Salesman, Real Estate—3.

Salesmen, Stock and Bond (1–65)

ADDITIONAL CASE: Salesman, Securities—1.

Sales Clerks (1–70)

SALES CLERK, GROCERIES. Employed over 4 years in the produce section of a supermarket with 12 employees. Works 50 hours per week, with no limitations because of disability. Relationships with coworkers said to be good. Present job is steady and secure, but opportunity for advancement is limited; wage is average for this kind of work, but veteran is having financial problems.

Prior to service in World War II, veteran worked as a dairy clerk. Following discharge, opened a fruit store, but was unsuccessful in its operation and after several closings and re-openings, gave it up and secured his present job.

Veteran rated for psychoneurosis, anxiety, moderate; complains of nail biting, headaches, insomnia and gastrointestinal disturbance. Does not socialize, remains at home after work. Current financial distress is affecting his adjustment.

Veteran is married and has children.

SALES CLERK, GROCERIES. Employed 9 years in a supermarket with 22 employees. Waits on customers, serves as checker at cash register, orders merchandise for his unit and marks prices. The veteran likes his work, feels job is secure, and the occupational outlook is good. Does not supervise others; gets along well in his work and seems to have made a good adjustment. Employer aware that veteran has service-connected disabilities, but unaware that one of these is psychiatric.

After discharge from World War II service, veteran worked for 1 year as a dispatcher for an aircraft company. Then trained on the job, with related academic training, for 1 year as a grocery clerk under the VA education program. Worked for 5 years as a grocery clerk with the company where he took his on-the-job training. Then obtained present job by applying to the chain organization.

Veteran rated for psychoneurosis, anxiety state, moderate. Two years after discharge he had to leave his work for 3 months to be treated for a nervous condition. Since 1950, however, he has missed little or no time from work.

Veteran is married and has children.

ADDITIONAL CASES: Sales Clerk, Groceries—4; Sales Clerk, Produce—1; Sales Clerk, Retail Liquor—1.

Salespersons (1–75)

SALESPERSON, GENERAL. Sells radios and radio parts in a large retail store. Has worked at this job for 7 months. Is optimistic about its prospects and expects to stay with it. Says he gets along well with supervisor and coworkers. Works regular 40-hour week. Employer has not been informed of the nature of veteran's disability.

Preservice job was that of polisher, metal. After discharge from World War II service, veteran had series of short-term jobs, interspersed with periods of hospitalization. Then completed a course of training in radio and TV repair under the VA vocational rehabilitation program. Became self-employed in that objective for 5 years; discontinued because of insufficient earnings. Accepted a job as a nurse's aide in a hospital. Quit after a year and found job as a radio repairman in a retail store. Quit for higher paying job with his present employer, which he obtained through newspaper ad.

Veteran's disability is diagnosed as psychoneurosis, anxiety reaction. Initially rated as severe, it has since been rerated to moderately servere. Veteran sees his family physician periodically and takes tranquilizers on his prescription. Is subject to moodiness and anxiety, but has missed no time on present job because of disability.

Veteran is separated from wife, has children.

SALESPERSON, GENERAL STORE. Employed over 30 years in a country store operated formerly by his father and now by a brother. Sells groceries, notions, hardware, etc.; pays bills, receives and stocks merchandise. Since the war has worked 20 to 40 hours per week depending on how he feels; currently working 40 hours per week. Family aware of the character of the veteran's disability. Gets along well with customers he has known over the years. Does not contemplate any change in occupation. Earnings minimal and supplemented by wife's income from teaching.

While overseas during World War II military service, veteran became fearful, homesick, sleepless, forgetful and apprehensive. Was hospitalized a few weeks and then returned to duty as truck driver. Two days later was readmitted with delusions and hallucinations. Returned to the United States; was discharged and sent to a VA hospital. On admission there he was found to be depressed, agitated, fearful, unstable, self-accusatory, delusional and without insight or judgment. Responded well to electroshock therapy and discharged after 1 year on convalescent leave. Since then has had several periods of hospitalization and extensive treatment, including drug therapy, for acute exacerbation of his disorder. Most recent hospitalization was in 1958. Is currently on tranquilizers. Diagnosis at time of most recent VA rating: pyschosis, manic-depressive reaction, with anxiety reaction complications, severe impairment of social and industrial adaptability.

Veteran is married; no children.

SALESPERSON, SPORTING GOODS. Is one of 4 employees in a new retail store. Has been employed here for only 1 month. Obtained present job by recommendation of former employer, for whom he worked 14 years. Works the usual number of hours as others similarly employed. Enjoys his

work and feels that prospects are good for this firm to expand. Veteran feels certain that employer knows the character of his disability although the matter was not discussed when he was hired.

Preservice occupation was that of a student. After discharge from World War II service, worked for brief periods as a guard and in production of an aircraft plant and as parts manager for a truck company. Then applied to the VA for voctional rehabilitation. Was provided a 2-year course of on-the-job training as a salesperson. Following this training was employed 14 years by his trainer.

VA rating is based on the diagnosis of psychoneurosis, anxiety reaction. Initially rated severe; subsequently rerated to moderately severe. Veteran appears to have his disability under good control. When tension builds up, relaxes by going fishing; says he avoids all arguments; finds commotion and unusual noises very disturbing.

Veteran is married and has children.

ADDITIONAL CASES: Salesperson, Auto Parts—2; Salesperson, Furniture—4; Salesperson, General—4; Salesperson, Household Hardware—1; Salesperson, Outboard Motors—1; Salesperson, Paint—2.

Salesmen, to Consumers (1–80)

SALESMAN, GENERAL. Sells new and used sewing machines in the store and at customers' homes, making demonstrations, estimating the value of trade-in products and discussing the merits of his machines. Has been in this position for 9 years. Employer knew of veteran's disability before hiring him. Job provides veteran an adequate living when he works, but he quits periodically. He has not been promoted since he joined the company, although his responsibilities have changed from machine repairman to salesman. Has difficulty in his relationships with his supervisor and coworkers because of his bad temper.

Prior to World War II service, veteran was a meter reader. Following discharge, he was essentially unemployed until he entered on-the-job training as a sewing machine repairman under the VA voctional rehabilitation program. He has remained until now with the same employer.

Diagnosis at the time of last VA rating was psychoneurosis, mixed, moderately severe. Veteran has temper tantrums; expresses unhappiness with his work and with his living. Resents fact that his wife earns more than he does. Acne causes him a great deal of embarrassment. Long history of emotional instability.

Veteran is married and has children.

SALESMAN, USED CARS. Sells automobiles for his brother, who is not aware of the character of the veteran's disability. Has been in present job 8 months. Considers his income good and is satisfied with his working situation. Says he gets along with his employer and coworkers. Finds the work not too hard or pressing and believes he can stay with his brother as long as he wants to. Intends to remain here as long as he can earn a livelihood.

Veteran was a truckdriver prior to service in World War II. Returned to this job after discharge for approximately 24 months, leaving it because he was nervous, "just couldn't drive any more." Has since worked as a truckdriver again, carpenter's helper, chicken packer, and fur trapper. He left the second truck driving job also because of nervousness.

Initially rated by VA for severe psychoneurosis, unclassified, manifested in part by complaints referable to stomach and headaches. Last VA rating was for psychoneurosis, anxiety reaction, moderate. Symptoms included aversion to noise, irritability, restlessness, insomnia, excessive worry, depression, paranoid attitude. On current interview, complained of headaches, excessive worry, some faulty memory.

Veteran is remarried after divorce; has children.

SALESMAN, USED CARS. Sells and demonstrates used cars approximately 50 hours per week. Is the only employee of a longtime friend and neighbor. Has been in this job 16 months. The employer is not aware of his disability. Though he earns considerably less than on his previous job as automotive parts salesman, veteran feels work is far more suitable for him in his circumstances. Feels that his job is his for as long as he wants it and has no intention of changing.

Was an automobile parts clerk prior to World War II service and returned to the same employer after discharge but left this after 1 year for a better position, salesman of automobile parts, which he held for 15 years, until taking his current position. He reports making this last change because the work was "nerve-racking" and kept him way from home too often.

Following combat, veteran was hospitalized for 6 months because of severe depression and anxiety and then discharged from military service for disability. Rated by VA for psychoneurosis, anxiety. Diagnosis has remained unchanged, but severity of disability has decreased from severe to moderate. Veteran appears tense and introspective, inclined to self-pity.

Veteran is married and has children.

SALESMAN, VACUUM CLEANERS. For past 3 months has been self-employed, selling and servicing all types of vacuum cleaners. Servicing part minimal. Reports that the work is steady, and seems to be satisfied with it, but has some doubt as to the future prospects of his business. Works about 60 hours per week.

Principal preservice occupation was that of coal mining laborer. Since discharge from World War II military service has held the following succession of jobs: General salesman, for 3 months; machine operator, 2 years; laborer for a mattress manufacturing company, 2 years; kitchen helper, 6 months; salesman for a large vacuum cleaner corporation, 5 years. Left this last job to enter business for himself. Received on-the-job training from his last employer.

Initial VA rating was for psychoneurosis, mixed type, mild. This has since been increased to moderate; over the years veteran has been moderately tense, apprehensive, moody, emotional and very labile.

Veteran is married and has children.

ADDITIONAL CASES: Salesman, Automobile—13; Salesman, General—9.

Salesmen and Sales Agents, Except to Consumers (1–85, 86, 87)

SALESMAN, COMMERCIAL EQUIPMENT AND SUPPLIES. Is employed by a small distributing firm as a salesman of welding equipment. In present position for about 10 years. Employer knew of veteran's disability at time of hiring. Veteran likes his job very much and feels there is a good future for him in it. Works 48 hours per week with no concessions because of his disability. Reports getting along very well with his boss and fellow employees.

Prior to service in World War II, veteran was student. After discharge, completed a 4-year college course in industrial arts under the VA vocational rehabilitation program. After graduating, obtained present job through a friend.

Diagnosis at time of last VA rating was psychoneurosis, anxiety reaction. Degree of disability greatly reduced since time of initial rating (from severe to moderate). Veteran reports that he feels shaky under pressure, perspires freely at night, has a moderate amount of tension, occasional headaches. Is socially active.

Veteran is married and has children.

SALESMAN, DRY GOODS. Obtained this position about 6 years ago through his own efforts and has never told the employer of his disability. Works 40 hours a week. Occasionally loses a day or two from work because of "nerves." The job is steady and offers promotion opportunities. Enjoys the travel and challenge involved in selling.

Veteran's principal preservice occupation was salesman. His first job after World War II service was as a clerk in a Federal agency; he resigned after 9 years because he "was not getting ahead." Present job constitutes his only other work experience. Pursued college training under the VA education program; earned a B.A. degree in economics and sociology. Feels that his college degree has helped him in selling.

Diagnosis at time of last VA rating was psychoneurosis, anxiety state; initial rating of moderately severe has been reduced to moderate. Veteran feels always on edge, tense and unable to relax. If he doesn't feel well on the job, he visits a doctor to get medication for fatigue and nervousness.

Veteran is married and has children.

SALESMAN, FOODSTUFFS. Travels as a wholesale salesman, getting orders from retail food stores. In addition, he and his wife own a grocery store which she operates, assisted by him nights and weekends. Veteran has been with present employer 2 years. Employer now knows about disability, but was not informed of it at time of hiring. Work relationships with associates reported to be good. Veteran works 50-hour week and is on a salary basis. Wage increases dependent on volume of sales. No promotion opportunity, but job is secure and offers adequate pay.

Veteran's principal preservice occupation was surface grinder operator. During the 2 years following discharge from World War II military service

he held a number of jobs: taxi driver, painter, and store clerk. Then entered on-the-job training in a chain grocery store under the VA vocational rehabilitation program for the objective assistant manager, retail; was employed as manager by two chain groceries (6 years with one, 4 years with another) before entering his present employment. Present job was offered to him by the manager of the company, a personal friend.

Veteran was given medical discharge from service because of psychoneurosis. Continued to show instability for several years. For last 4 years or so has experienced fewer emotional upsets. Still exhibits irritability and tension at times. Takes tranquilizers on prescription. Diagnosis: psychoneurosis, anxiety reaction. Initially rated moderately severe; for past 5 years, rating reduced to moderate.

Veteran is married and has children.

SALESMAN, HARDWARE SUPPLIES. Sells hardware items, plumbing materials, janitor supplies, etc., to industrial establishments on wholesale basis. Has worked for present employer for 29 years, the last 10 years in his present position. Under the supervision of a sales manager, services six large establishments in one city. Deals primarily with purchasing agents for the several establishments. The manager knew of the veteran's disability at time of rehiring him. Veteran has an excellent relationship with his supervisor and enjoys unusual freedom to use time off for sick leave as he feels the need. Absent about 1 month each year because of his disability, but does not lose his salary for this period. Has been offered a job as sales manager but has declined it because he doesn't want the kind of problems involved. Has no desire to seek or receive a promotion, as he is satisfied in his present position. Position is secure and reasonably remunerative.

Prior to World War II service, veteran worked for his present employer as stockroom clerk, then foreman. Left latter job to enter military service. Immediately after discharge, veteran took a position as clerk in a large paper company in preference to returning directly to his preservice employer, because he did not believe that he could work well with the person who was to be his supervisor. After 4½ years, however, returned to his preservice employer, who assured him of understanding and support as a salaried salesman.

Last VA rating was for psychoneurosis, anxiety, moderately severe. Veteran receives VA authorized treatment from a local psychiatrist twice a month and takes prescribed medication as necessary. Since wife's death some months ago, he has withdrawn from most social activities, living with friends in a quiet environment. Currently appears quite depressed.

Veteran remarried after divorce; now widowed; has children.

SALESMAN, HARDWARE SUPPLIES. Has been self-employed in the hardware business on a partnership basis for 1 month. Contacts prospective buyers and sells hardware supplies. Usually works about 48 hours per week. Says he gets along well with partner and customers. Partner knew of veteran's disability before partnership was formed.

Before service in World War II, veteran worked as a dress cutter. Following discharge, returned to work as a dress cutter in the garment industry for 3 years; then worked for 12½ years as a hardware salesman, wholesale. Left this job to go into own business.

Diagnosis at time of initial and most recent VA rating: psychoneurosis, anxiety, severe. Veteran complains of anxiety, insomnia, irritability. Has limited social activities, preferring to be alone.

Veteran is married and has children.

SALESMAN, TOILET ARTICLES. Is employed by a company which manufactures hairdressing preparations; sells to retailers. Immediate supervisor is company vice-president. Veteran has been in this position for 4 months. Job appears reasonably secure and steady, and the pay is above average. Veteran likes work except for the traveling aspect. Present employer offered the job to veteran; does not know of the disability.

Veteran's preservice job was lineman, high voltage. Since World War II service he has been in some form of selling, including one 8-year period of employment with a drug manufacturing company. Took some training as an electrician under the VA vocational rehabilitation program, but discontinued prior to completion.

Veteran was hospitalized in service, with diagnosis of schizophrenic reaction. Showed marked religious interests, had morbid dreams, was mixed up in his thoughts, and very indecisive. Following medical discharge, rated by VA for psychoneurosis, anxiety state, severe. At time of last examination, the following were noted: feelings of anxiety and apprehension, insecurity, inadequacy, restlessness, vasomotor disturbances, catastrophic dreams. Disability was rated as moderately severe.

Veteran is married and has children.

ADDITIONAL CASES: Salesman, Advertising—4; Salesman, Beverages—6; Salesman, Building and Construction Equipment and Supplies—3; Salesman, Commercial Equipment and Supplies—1; Salesman, Dental Equipment and Supplies—1; Salesman, Foodstuffs—4; Salesman, Jewelry—1; Salesman, Musical Instruments and Accessories—1; Salesman, Paper and Paper Products—1; Salesman, Printing—1; Salesman, Publications—1; Salesman, Shoe Leather and Findings—1; Salesman, School Equipment and Supplies—1; Salesman, Tobacco Products—2.

DOMESTIC SERVICE OCCUPATIONS

Housemen and Yardmen (2–04)

ADDITIONAL CASES: House and Yardman—2.

PERSONAL SERVICE OCCUPATIONS

Bartenders (2–21)

BARTENDER. Owns and operates a small bar and grill. Supervises one bartender. Works 40 to 48 hours per week. Present employment has continued for 2 years. Gets along well with customers and employee. Considers outlook for future good.

Veteran had no work experience or training related to his present employment. Worked 12 years following discharge from World War II military service at his pre-service occupation: routeman, milk. Left this job because of his service-connected physical disability, a knee injury.

Veteran is restless and jumpy, complains of headaches; but work history is steady, and he loses little time on the job. Most recent VA rating is based on diagnosis of psychoneurosis, anxiety reaction.

Veteran is married and has children.

ADDITIONAL CASES: Bartender—3.

Bellmen and Related (2–22)

BELLMAN. Is one of 75 employees at a hotel. Has been with present employer 25 years. Supervisor knows of veteran's disability and gives special consideration by allowing an hour off when he does not feel well. Coworkers also know of disability and make allowances for it. Works 37½ hours per week. Feels there is no opportunity for advancement, but has security so long as he can do his job. Has taken examination for post office clerk several times but never passed it.

Returned to preservice job following discharge from World War II service. Had worked at the same hotel 10 years before service. Completed 8 months training for auto mechanic under the VA education program, but never worked at that job.

Veteran complains of dizzy spells and blackout spells. Is described as seclusive with mild paranoid ideas. VA rating based on diagnosis of psychoneurosis, anxiety reaction, with schizoid features; also bronchial asthma.

Veteran is married; has no children.

Boarding-House and Lodging-House Keepers (2–23)

CO-OWNER, TOURIST CAMP. With his brother, he owns, manages, and does the maintenance work of the camp during the summer season. His wife does the bookkeeping. Started this business 13 years ago with a VA loan. Business has grown, now has 15 cottages. Is happy in his work, feels that he can continue to increase volume of his business. Believes working outdoors is good for his health. During tourist season works 50 to 60 hours per week. Offseason, works as independent carpenter 40 hours per week.

Veteran employed as carpenter and roofer prior to World War II service. Continued this employment for 18 months after release from service. Then worked for 6 months as a brewery worker. Veteran believes life of confinement in a city caused increased nervousness and dizzy spells. On his own initiative he quit and built his business in the quiet of open country.

Onset of nervousness occurred in service aboard Coast Guard ship in 1945. Manifested by continuous headaches and dizzy spells, apprehension and increased tension. VA rating following discharge was based on diagnosis of psychoneurosis, anxiety state, moderately severe. The latest VA rating continues this diagnosis, but degree is reduced to moderate. Veteran attributes the improvement of his mental health to the environment of his present job.

Veteran is married and has children.

Cooks, Except Private Family (2-26)

COOK. Veteran is one of 23 cooks employed at an Air Force base. Obtained job by civil service application. Employer has no knowledge of veteran's disability. Works 40 hours per week. No time lost because of disability during 5 years on same job. Feels secure, for he knows his job. Is adjusted to wage scale, does not expect advancement. Likes his security and steady employment.

Veteran had no formal training. Worked as a cook before and during World War II service; returned to that occupation after discharge.

Initial VA rating based on the diagnosis of psychoneurosis, mixed, moderately severe. Most recent VA rating the same.

Veteran is married and has children.

COOK. Veteran is an employee of a large Federal hospital. Employed as a kitchen helper through usual civil service procedures 6 years ago. Promoted to cook. Employer was aware of veteran's disability at time of hiring. Veteran has worked 40 hours per week until recent hospitalization. Now is continued as a reduced time employee. Has made good adjustment. Speaks well of his supervisors.

Veteran has had no special training for his present job. Has an elementary school education; took no training under laws administered by the VA. Has attained permanent civil service status. Has had only two jobs since discharge from World War II service. Worked as a laborer in a meatpacking plant for 7 years, then obtained his present job. Prior to service was a plumber's helper.

Initial VA rating based on diagnosis of psychoneurosis, conversion hysteria, moderately severe. At time of most recent VA rating, disability evaluated as moderate. Veteran has many somatic complaints. Has requested psychiatric treatment on outpatient basis.

Veteran is married and has children.

ADDITIONAL CASES: Cook—2; Cook, Short Order—2.

Waiters and Waitresses, Except Private Family (2–27)

WAITER, DINING CAR. Serves as headwaiter in railroad dining car. Has been with present employer more than 10 years. Employer does not know nature of veteran's disability. In addition to waiting on tables, assigns other waiters to their duties, interviews prospective employees, recommends discharge of undesirable employees. Reports no problems in his on-job relationships. Likes his work; has had a promotion, as well as periodic wage increases; job is secure. Works 40-hour week; no limitations in his assigned duties because of disability. However, when under pressure, has marked hand tremors which make it difficult for him to serve customers.

Obtained present job through reemployment by preservice employer. Before seeking this reinstatement, had worked for 5 years following discharge from World War II service as manager of a cafeteria of which he was part owner; when business declined, returned to his preservice occupation.

After Battle of the Bulge, veteran complained of severe pain and weakness in both legs, from hips down, and of night sweats and insomnia. These symptoms, which are considered functional, have persisted through the years. Initial VA rating for psychoneurosis, conversion reaction, moderate, manifested by pain in back and legs, has been continued.

Veteran is married; has no children.

ADDITIONAL CASE: Waiter, Informal—1.

Kitchen Workers in Hotels, Restaurants, Railroads, Steamships, etc., n.e.c. (2–29)

KITCHEN HELPER. Works in a large Government hospital, where he has been employed for the past 9 years. Disability was specified in his application. Carries food trays to patients, makes salads, washes dishes, helps clean kitchen. Likes his job; gets satisfaction from helping the sick. Reports getting along well with supervisors and coworkers. Job is secure, fringe benefits are good, but pay is rather low. Has had no increase in job responsibilities or promotion since entry.

Veteran obtained present job through civil service examination. Only other post-service experience was as busdriver, a job he held for 2 years following discharge from World War II military service. This was terminated because of curtailment of service. Trained under the VA education program for 11 months as a carpenter, 12 months as an upholsterer and 6 months as a beauty operator. Has not made vocational use of any of this training. Prior to service worked as a motor dispatcher.

While in service, veteran became extremely nervous and shaky and complained of pain in left chest. No organic basis for these symptoms found. Current complaints much the same. Diagnosis at time of most recent VA rating: psychoneurosis, conversion reaction, chronic, moderate.

Veteran is married and has children.

ADDITIONAL CASES: Dishwasher—1; Kitchen Helper—1.

Barbers, Beauticians, and Manicurists (2–32)

BARBER. For the past 5 years, has owned and operated a one-chair barber shop. Provides usual barber services; keeps his own books. Averages 45 hours work per week, but sets his own pace; closes the shop when his irritation with customers becomes unbearable, reopening after he has gained control of himself. Important to him to be his own boss. Has established a regular clientele, willing to tolerate his idiosyncrasies; income good; work is as steady as he will allow it to be within his interpretation of job freedom. Is satisfied with his present work and with the occupational progress he has made.

Veteran trained for present work after holding a series of different jobs following his discharge from World War II military service. First post-service job was as a welder, his preservice occupation. Quit after 1 month because of dissatisfaction with working conditions. For next 18 months worked as a railroad switchman. Again became dissatisfied, quit to take job as machine shop helper; had 5 accidents during 18 months. Resigned and returned to welding for 3 months; quit because of dislike for management. Entered barber school at own expense and completed 9 months' course. Then worked as apprentice in 6 different barbershops; each of these placements terminated after a short period, because of veteran's or owner's dissatisfaction. As apprentice, was under close supervision; unable to adjust to this. Finally completed apprenticeship period and was hired as a master barber. Disputes with employer and customers ended this employment after 19 months. Aware of his difficulty in adjusting to authority and supervision, he took business school course as preparation for self-employment; opened own shop.

Veteran suffered severe anxiety reaction following 24 months of combat duty in the Pacific. Currently much improved, but expresses intense hostility toward people, is easily irritated and angered. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety reaction, moderate.

Veteran is separated from wife; has children.

BARBER. For past year, has owned his own shop. Employs one other barber. Business is good, and veteran expects to be able within 5 years to retire the substantial bank loan made to purchase the shop. Works 40 to 48 hours per week, making no concessions in his work schedule because of his disability.

Used his own initiative in finding business location in newly developed shopping center and in arranging loan. Prior to self-employment, had worked as a barber in various shops for 4 years. Before that, spent 8 years

as a hairdresser and beauty operator, after completing a beautician course under the VA education program. Found it progressively more difficult to deal with female clientele; their demands and expectations irritated and frustrated him. Lost several jobs because of this inability to get along with customers. As a result, decided to change to barbering and obtained State license as barber. Prior to World War II military service, had only casual work experience as bellman and part-time gas station attendant.

Veteran's initial rating for psychoneurosis, conversion hysteria, moderately severe, has remained unchanged. Has had no psychiatric treatment since 1949–50, when he received intensive therapy on an outpatient basis, but continues to take tranquilizers regularly, on prescription from mental hygiene clinic. Has achieved greater insight regarding the psychogenic nature of many of his physical symptoms. Is moderately active in community and social affairs.

Veteran is married and has children.

HAIR STYLIST. Works in a beauty shop that employs three people. Has been with present employer less than a month, too short a period to assess job adjustment. Employer not informed of veteran's disability. Works 50 hours per week. Says he gets along with employer and customers, but does become tense dealing with women all day.

Veteran qualified for work as hair stylist thru training under the VA vocational rehabilitation program, followed by advanced training under the State vocational rehabilitation program. Has worked as hairdresser for the past 5 years, during which time he has had 3 shops of his own and been an employee in about 20 different shops. Previous work history similarly unstable. Was a heavy truck driver before World War II service; for 2 years after discharge held odd jobs while taking training in commercial art. Reentered service for 2 years. In 4-year period following had many jobs as truck driver, busdriver and mechanic; then entered training for present work.

Veteran was hospitalized for a short time during service when he became severely anxious about returning to the front lines. Since discharge has had several short periods of therapy on outpatient basis. Symptoms include tenseness, nausea, shakiness, smothering sensation, depression, gastric upsets. Diagnosis at time of initial and most recent VA rating: psychoneurosis, anxiety state with conversion, moderate.

Veteran is married and has children.

ADDITIONAL CASES: Barber—9; Hair Stylist—2.

Midwives and Practical Nurses (2–38)

ADDITIONAL CASE: Attendant, Ambulance—1.

Attendants, Hospital and Other Institutions (2–42)

ORDERLY. Works in a large Federal hospital. Has been with present employer 5 years. Information regarding disability was specified on his job application. Performs routine duties in the care of surgical patients as

assigned by nursing staff. On-job relationships reported to be good. Though veteran prefers rural life and farming to his present situation, appreciates security offered by permanent civil service status; also derives personal satisfaction from helping patients. Apparently making good job adjustment, as he has had two promotions.

Veteran obtained present employment through competitive civil service examination. Had had some related experience while serving in Army Medical Corps during World War II. Did not enter this occupation immediately upon discharge, however. Instead, returned to his preservice occupation, general farming, for 8 years; during this time took 3 years of institutional on-farm training under the VA education program. Left farming when he obtained present civil service employment.

Psychiatric condition has apparently remained stabilized. Veteran is preoccupied with many somatic complaints. Diagnosis at time of initial and most recent VA rating: psychoneurosis, hypochondriacal reaction, moderate.

Veteran is married and has children.

WARD ATTENDANT. Works in a large State hospital. Has been with present employer 5 years. Employer not aware of nature of veteran's disability. Cares for mental patients: escorts them to and from mess hall, watches over them in the ward, etc. Works 40-hour week. Relations with supervisor and coworkers said to be excellent. Job is steady, but wages low. No increase in wage since veteran began job.

Veteran obtained present job by routine application on his own. Had no pertinent training or related work experience. Following discharge from World War II military service, took a 2 year adult general education course and 2 years of training in auto mechanics under the VA education program. Worked for 6 years as auto mechanic in a service station. Quit because it made him nervous; was afraid of having a nervous breakdown. Preservice occupation: small truck driver.

Veteran's compensable rating was not established until some time after discharge. Complained of nervousness, loss of appetite, insomnia, fainting spells. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety reaction, chronic, moderately severe.

Veteran is married and has children.

ADDITIONAL CASES: Orderly—4; Ward Attendant—1.

Attendants, Professional and Personal Services, n.e.c. (2–43)

ADDITIONAL CASE: Funeral Attendant—1.

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PROTECTIVE SERVICE OCCUPATIONS

Guards and Watchmen, Except Crossing Watchmen (2–61)

GUARD, REFORMATORY. Employed by a State institution which is responsible for care, training and rehabilitation of delinquent boys. This employment began with the current month, although veteran has had 14 years' similar employment since discharge from World War II service. Is responsible for a work detail of six delinquent boys who work in a plant that processes food for freezing. Receives direct supervision from plant supervisor as well as from caseworker who is concerned with rehabilitation of the delinquent boys. Says he gets along very well with both. Secured job through application and interview. Did not report the character of his disability at time of application, but employer has since learned of it. Regrets that he did not continue education sufficiently to qualify as a professional caseworker, but expresses complete satisfaction with his job.

Veteran's preservice job was salesman. Following discharge from World War II military service, he worked briefly as a timekeeper and then for 2 years as a crane operator. After being laid off from the latter, held two jobs as a reformatory guard, the first for 5 years, the second for 9 years. Felt that the pressures and responsibility of his job aggravated his stomach condition, so quit and entered a course in barbering. Discontinued after a few weeks and returned to work at the reformatory where he had previously been employed. Has lost time from work, due to his service-connected disability, but each employer has been willing to continue his employment.

Diagnosis at the time of initial VA rating was psychoneurosis, anxiety, moderate; also duodenal ulcer. The most recent VA rating is based on the diagnosis of psychophysiologic gastrointestinal reaction, moderate, with inactive duodenal ulcer. Veteran is not receiving psychiatric treatment, but is seen regularly at the outpatient clinic for medical treatment.

Veteran is married and has children.

WATCHMAN I. Has been employed for the past 13 years by a firm that furnishes guard services for marine industrial and commercial enterprises. Works nights, guarding ships or industrial plants along the ship channel. Veteran works 40-hour week with no concessions because of his disability. Employer did not know of veteran's disability at the time of hiring, but

knows now. Likes his job and has made adequate adjustment to it. Sees security with little opportunity for advancement, a condition which he accepts.

Veteran had no training or work experience in preparation for this job other than the usual guard duties performed in World War II military service. A friend told him of the job opening; he applied and was hired. Prior to service he was a laborer, construction.

The most recent VA rating continues the original diagnosis of psychoneurosis, neurocirculatory asthenia, moderate.

Veteran is married; no children.

ADDITIONAL CASES: Guard, Institution—2; Guard Sergeant—1; Watchman I—2; Watchman II—1.

Firemen, Fire Department (2–63)

FIREMAN. Works with 15 other firemen at a firehouse of a large urban firefighting force. Has been in this job, which he obtained by successfully completing a civil service examination, 15 years. Employer knew character of veteran's disability when job was obtained. Works 40 hours per week. No concessions or limitations are made in assigned work activity because of his disability. At first, had trouble settling down to a steady job. States that he now gets along well with supervisors and coworkers. Is not satisfied with rate of pay, but is pleased with the security this job offers and the fringe benefits. Feels he cannot look forward to a promotion, because he cannot concentrate on studies for a promotional examination. Works part time on another job to support his family better.

Veteran's preservice job was lathe operator. Did not care to return to this after World War II. Took a job as helper with an outdoor advertising firm but quit after 1 week because his back hurt. Took examination and obtained present employment. No special training or experience for present job. Feels that nervousness has prevented full use of his capabilities.

Veteran given a medical discharge from service. Chief complaints were insomnia, heart pain, anorexia and indigestion. Original VA rating based on the diagnosis of psychoneurosis, anxiety state, severe. The latest VA rating continues this diagnosis, but with degree of disability reduced to moderate. Veteran is easily irritated, tends to be solitary and nonsocial, worries over trifles, does not sleep well.

Veteran is married and has children.

FIRE CAPTAIN. Employed by a development center which tests equipment for the Federal Government. Supervises a crew of 14 firefighters. Has been in this job 8 years. Secured job without placement assistance. Employer knew character of veteran's disability when he was hired. Likes his work; seems well adjusted.

Veteran's principal preservice occupation was sales clerk, grocery. Returned to this after service in World War II but resigned because he was unable to tolerate the confinement. Took 4 years farm training under the VA vocational rehabilitation program; continued to farm until he got his present job. Continues a beef cattle program on his farm in addition to his present job.

The VA rating after discharge was based on the diagnosis of psychoneurosis, hysteria, severe. The most recent VA rating continues the diagnosis, but with degree reduced to moderate. Veteran has been unable to adjust sleeping habits with weekly shift changes. Avoids crowds, for they tire him and make him nervous.

Veteran is married; has no children.

ADDITIONAL CASES: Fireman—8.

Policemen and Detectives, Public Service (2–66)

PATROLMAN. For the last 13 years, veteran has worked as a patrolman for a large municipality. Has advanced from walking a beat to use of a patrol car. Employer has no knowledge of character of veteran's disability. Veteran fears that knowledge of this would prevent future promotion. Has not been limited in performance because of his disability, although he feels self-conscious when he is required to direct traffic. Appreciates security offered by his job, but is not satisfied with the pay.

Previous to this job, veteran had no training or experience for this activity. During the first 18 months on the job he was provided special training. Only other job following discharge from World War II service was as a truck driver for 2 years. Preservice experience was as a stock clerk.

The initial VA rating was based on the diagnosis of psychoneurosis, anxiety reaction, moderately severe, manifested by somatic complaints and depression. Diagnosis has remained unchanged but rated degree of disability has been reduced to moderate. Veteran has received psychiatric treatment regularly from VA mental hygiene clinic. While not free of stress, he maintains good control by having psychiatric supportive assistance.

Veteran is married and has children.

PATROLMAN. For 8 years has been employed by a small municipality. Employer had knowledge of character of his disability at time of employment. Veteran covers his assigned area in a police car. Receives little supervision as he is "on-his-own" after his daily report to the station house. Likes this aspect of the job, also the fact that he is on the move and outdoors. Says he gets along well with everyone. Knows that promotion is slow, but feels that he has a chance when a vacancy occurs.

Veteran had no special education or work experience for this job. The employer provided 6 weeks' specialized training after he was employed. Experience prior to World War II military service consisted of one job as inspector in the food industry. Following service, veteran spent 3 years in professional baseball until he had to quit because of a shoulder injury. Then worked for 3 years as a stock clerk; left because he wanted an outdoor job.

Initial VA rating was based on the diagnosis of psychoneurosis, anxiety, severe. Most recent rating continues the diagnosis, but with degree reduced to moderate. Veteran complains of being nervous and having headaches, especially when under tension.

Veteran is married and has children.

ADDITIONAL CASES: Detective II—1; Policeman—6.

BUILDING SERVICE WORKERS AND PORTERS

Charwomen and Cleaners (2–82)

ADDITIONAL CASES: Window Cleaner—3.

Janitors and Sextons (2–84)

JANITOR. Works with four other custodians in a grade school of a large city. In present position for 4 years. Obtained this job through civil service examination. Employer knew of disability at time of hiring. Veteran feels that his job is secure but that he, himself, is not, because his disability causes him to lose too much time on sick leave. Currently feels that his supervisors have reached the limit of their patience with his absence. Has been granted one consideration in his work activities, namely, that he does not have to perform any boilerroom duties becouse of aversion to the heat.

Veteran worked as a truckdriver, heavy, prior to entering World War II military service. Upon discharge, obtained the position of garageman, servicing mail trucks, as a result of civil service examination. Resigned after 8 years, because he felt that he could not stand the gasoline fumes in the garage. Was unemployed for about a year before receiving appointment to present position.

Initial VA rating was for psychoneurosis, war neurosis, severe, Most recent rating: psychoneurosis, mixed type, moderately severe. Veteran was discharged from service because of complaints of dizziness, nervous stomach, headaches, etc. Hospitalized briefly in 1959 because of anxiety reaction. Appears to be a dependent, anxious person with a multiplicity of bodily complaints.

Veteran is married and has children.

JANITOR. Has worked in an apartment house with two other employees for 8 months. Obtained job thru referral by State employment service. Employer knew of disability before hiring him. Veteran says he gets along well with the tenants. Works 48 hours per week. Is satisfied with this position, aspiring to nothing better because of his age and social security income remittances. Has been told the job is his for as long as he may want it.

Veteran was a truck driver, heavy, prior to World War II service. Completed a training school program as a stationary fireman under the VA

education program, but did not take the licensing examination. Through State employment agency referrals he has worked successively as a janitor in several apartment houses, a hotel elevator operator, a filer in the carbide tool industry, and an assembler of magnets for loudspeakers. Trouble with circulation in his right foot caused him to leave several of these jobs, but he stoutly maintains that this does not interfere with his present work.

Veteran was discharged from service because of nervousness. Rated by VA for psychoneurosis, moderate. Veteran has been hospitalized and operated on for circulatory condition. Is subject to extreme depression. States that many days he does not feel like working but drives himself to it by sheer willpower. At time of last VA rating, degree of disability was found to be greatly increased; diagnosis: psychoneurosis, anxiety reaction, severe.

Veteran is married and has children.

JANITOR. Works as janitor in a school; has been in present position 21 months. Obtained job thru information supplied by a friend. Employer is not aware of veteran's disability. Job is steady and seems to be secure.

Veteran's preservice occupation was that of farmhand, general. Had 2 years of college training. After World War II service, returned to farm laboring, but left it because of poor health. Took some training in carpentry under the VA education program, but did not complete it. Worked as a tile setter helper and various other casual jobs off and on until obtaining present position.

Diagnosis at time of latest VA rating: psychoneurosis, anxiety type, moderately severe. Initially rated severe. Veteran has many bodily complaints and appears to make full use of his sick leave privileges on the job. A slow, apathetic individual, easily fatigued.

Veteran is married and has children.

JANITOR. Employed in a large paper and paper goods manufacturing organization. Has been with this employer since discharge from World War II service 15 years ago, but in present position only 2 months. Employer knows of disability now, although he did not at the time of hiring. Veteran has strong, positive feelings about the company and his job; feels employer is most cooperative and helpful, particularly in view of their retaining his position for him while he was hospitalized for 6 months in 1955 and again in 1958. Job is secure and steady, provides reasonable earnings; but the possibility for advancement is minimal.

Veteran's principal preservice occupation was hand presser (shirts). Upon discharge, entered training as an automobile painter under the VA vocational rehabilitation program, but discontinued after 2 months. A new training program was planned, but instead, veteran accepted job of box sealer with his present employer, a position which he held until transferring to his present job, except for about 1 year as a hand trucker. Has found it difficult to sleep at night; the job of janitor on a night shift which permits him to sleep periodically during the day has solved this problem to some extent. Also enjoys the mobility offered in his job.

Diagnosis at time of last VA rating was psychosis, schizophrenic reaction, undifferentiated type, competent, severe impairment of social and industrial

adaptability. Psychiatric history reveals an increase in severity of his disability over the years. Symptoms include fluctuation of self-esteem, frequent emotional outbursts and some alcoholism. He had outpatient psychiatric treatment for a year following his most recent hospitalization (1958). Now reports for such treatment on the basis of felt need for supportive therapy. Adjustment at present time is better than it has been for a number of years.

Veteran is married and has children.

ADDITIONAL CASES: Janitor—11.

Porters, n.e.c. (2–86)

PORTER I. For 1 year has worked on a large custodial staff maintaining buildings and dormitories at a college. Referred to this position by the State employment service. One of the veteran's supervisors knows that he has "nervous trouble" for which he has to go to the VA doctors. Immediate supervisor rates veteran as a "good worker—likes to be by himself, but everyone seems to like him and get along with him—never any trouble." Veteran's "satisfaction" is resignation, expressed with a shrug. Job is secure, steady, low paid.

Veteran was a general clerk prior to World War II service. Following service, spent 15 years in a hospital. After discharge from hospital, was referred to a custodial job, where he remained 1 year before leaving to accept present position.

Veteran was aboard a ship which struck a mine and went down in the Pacific. He reached an island shore after lengthy immersion in oily water, physically unharmed but mentally unbalanced. There had been no prior history of mental or emotional problems; he had been a reasonably good student, a popular sociable person, active in athletics, competent in but somewhat dissatisfied with office work. From the time of this catastrophe, however, he was a hospital patient in Army and VA facilities for 16 years. Diagnosis at time of initial VA rating: psychosis, schizophrenic reaction, hebephrenic type, complete social and industrial inadaptability. Veteran's hyperactivity and assaultiveness finally progressed to the point where a bilateral prefrontal lobotomy was performed in March of 1954. Following this he was very childish and dependent for a while but gradually achieved some adjustment and became much less active and assaultive. A dramatic reversal of this pattern came with the administration of chlorpromazine in December 1956. He gradually improved sufficiently to be placed on member-employee status and did well. Because of a suspected idiosyncrasy the medication was discontinued and the veteran immediately regressed. He was returned to patient status and to drug therapy. Again the change was dramatic. The veteran was returned to member-employee status; was allowed home weekends (the first time outside a hospital in 14 years) and finally was placed on trial visit and eventually discharged.

"I couldn't believe it," he says. "After fifteen years in the hospital they were going to let me go home. I didn't know what to say or do." He has continued his adjustment, though the levels of achievement, motivation and

social interaction are low. Spends most of his time at home with his parents and a sister with whom he "goes for rides." Has recently been declared competent to handle his own funds. Says, quite significantly, "I'm perfectly o.k. as long as I take my medicine." (Now thorazine, twice a day.) Receives outpatient psychiatric treatment regularly from VA mental hygiene clinic. Diagnosis at time of most recent VA rating: schizophrenic reaction, chronic, in partial remission, considerable impairment of social and industrial adaptability.

Veteran is single.

PORTER I. Employed in a Federal hospital. Obtained civil service retirement for medical reasons about 3 years ago, but requested reemployment because of insufficient income and as a result was assigned to his present position 2 months ago. Employer knew his disability before hiring him. Thus far, veteran reports liking his work. Job is secure and steady, but provides only very limited opportunity for advancement.

A student prior to World War II, veteran returned to school for 2 years after discharge, working part time as a waiter at a boardinghouse. Then attended barbering school under the VA education program for 6 months, subsequently working at this trade for 2 years. Then was employed as a kitchen helper by the Federal hospital where he is now working. After 3 years, was recalled to active duty in the Korean conflict; following this he returned to his job as hospital kitchen helper for approximately 5 years, until hospitalized for a nervous breakdown. It was following this hospitalization that he was retired from the civil service.

Veteran was in service during World War II for 6 months and developed a nervous condition 4 months after induction. He was discharged as cured and did not receive treatment for the condition between that time and being recalled to active duty during the Korean conflict. Four days after the second induction, veteran became psychotic, with visual and auditory hallucinations and panic reaction. Was hospitalized for 15 months during this period of service. Upon discharge from service, rated by VA for psychosis, schizophrenic reaction, catatonic type, complete social and industrial inadaptability. At time of most recent VA rating, diagnosis was continued, but degree of disability greatly reduced (rating indicates slight impairment of social and industrial adaptability). Veteran is receiving outpatient psychiatric treatment from the VA. Says that his work does not bother him, especially since he is able to stay by himself and not be bothered by other people. Is fairly cheerful and seems intent on making a living for himself and his family, to whom he is greatly devoted.

Veteran is married and has children.

PORTER I. Primary duties involve general cleaning and janitor work although he performs some stock handling tasks as well. Employed in same position, same firm (a chain grocery supermarket) since 1948. Employer was aware of veteran's disability at time of hiring. Veteran seems to have accepted this job as being as suitable as anything he could find in view of his feelings about his physical limitations. Reports having had two short periods of hospitalization; says that on occasion he becomes weak, nauseated

and has back pains necessitating absence from work, but that his employer understands and accepts these conditions.

Veteran was a laborer prior to World War II service, was offered reemployment by the same firm on release from service, but declined because of his "physical condition." For the first 4 or 5 years following discharge he took short time jobs as a porter and general handyman, but was usually unemployed until locating his present position. Completed high school under the VA education program.

Initial VA rating was for psychoneurosis, neurasthenia, moderately severe. Diagnosis at time of last VA rating was anxiety reaction, moderate. The veteran is preoccupied with numerous physical complaints. Says that when he begins to feel very upset he visits the VA hospital.

Veteran is married and has children.

ADDITIONAL CASES: Porter I—7; Porter II—8.

Elevator Operators (2–95)

ELEVATOR STARTER. Is one of two elevator starters who oversee the loading of freight and passenger elevators of both manual and automatic types in a large manufacturing plant. In this position for 11 years. Obtained the job as a result of own efforts. Employer knew of disability before hiring him. The veteran is cooperative, well liked and efficient; is grateful to the company for accepting him and for treating him well, and speaks very highly of his supervisors and work associates. The job is relatively well paid and secure.

Veteran was a student prior to World War II service. After discharge, worked successively as a production assembler in an electrical motor manufacturing company, shipping clerk in a camera manufacturing plant and printing setup man, before getting present job.

Disability was initially rated by VA as severe psychoneurosis, unclassified. Last VA rating was for psychoneurosis, anxiety state, moderate. Examination at that time indicated veteran had always been nervous and "blows up" easily and frequently; does not sleep well. Also has the residuals of shrapnel wound in the right arm, leg and flank. Has lost no time from employment because of disability.

Veteran is married and has children.

ADDITIONAL CASE: Elevator Operator, Passenger—1.

Agricultural, Fishery, Forestry, and Kindred Occupations

AGRICULTURAL, HORTICULTURAL, AND KINDRED OCCUPATIONS

Crop Specialty Farmers (3–03)

ADDITIONAL CASE: Tobacco Grower—1.

Dairy Farmers (3–04)

ADDITIONAL CASES: Dairyman II—2.

Fruit Farmers (3–05)

GRAPE GROWER. Self-employed 4 years. Operates a small vineyard, hires and supervises seasonal labor such as pruners and pickers. Veteran apparently well adjusted and satisfied with his work.

Veteran's principal occupation prior to World War II military service was grocery clerk. Postwar employment was as retail salesman in a seed and fertilizer warehouse. Also farmed part time until taking over present vineyard operation.

Veteran was hospitalized while in service because of psychotic break. Discharged to VA hospital; rated for psychosis, schizophrenic reaction, complete social and industrial inadaptability. Condition improved and veteran was placed on trial visit and subsequently released. Most recent VA rating indicates definite impairment of social and industrial adaptability.

Veteran is married; has no children.

ADDITIONAL CASE: Grape Grower—1.

General Farmers (3–06)

FARMER, GENERAL. Self-employed on own farm for 7 years. Has been adding to his operation by purchasing additional land with the financial help of his wife and father-in-law. Workweek varies by season. Wife helps with farmwork, and veteran works at odd jobs off the farm to obtain more cash income to apply on mortgage.

A farmhand prior to World War II military service, veteran worked at odd jobs for a time after discharge: then entered and completed a 2-year institutional on-farm training program under the VA vocational rehabilitation program. Has continued to farm since completing this rehabilitation training.

During 11 months in military service, veteran was on frequent sick call because of nervous complaints. Felt that fellow soldiers were talking about him and that he was being persecuted by others. Rated by VA on discharge for psychosis, schizophrenic reaction, paranoid type, slight impairment of social and industrial adaptability. Symptoms increased in severity, and veteran was declared incompetent in 1949; rated as restored to competency in 1952. Since that time, psychosis has been found in partial remission; rating indicates considerable impairment of social and industrial adaptability. Veteran has few social contacts because he believes people are afraid of him; easily disturbed over events on the farm, and experiences considerable anxiety over his financial situation.

Veteran is married; has no children.

FARMER, GENERAL. Self-employed 13 years in general farming. Pays cash rent for farmland and buildings owned by his mother. For added income he repairs farm machinery and diesel engines. Has agreed to purchase a mechanical harvester, which will be rented and operated on a fee basis for neighboring farmers. Says he is struggling to continue farming operations because of financial problems. Supervises 2 to 20 farmhands as needed. Does little physical labor outside, because he suffers from headaches when in the sun more than a short time.

Veteran worked in a garage before World War II military service. Returned to operate family farm for 3 years. Reenlisted for 2 years' service. Again returned to present farm.

Veteran was treated for psychoneurosis during his first period of military service. Reenlisted in 1948 but discharged in 1950 with diagnosis of passive dependency reaction. Following this second period of service, rated by VA for psychoneurosis, anxiety reaction, moderate. Spent 3 days in VA hospital 6 years ago, complaining of soreness, stiffness, and pains in head, neck and back. At time of most recent VA examination, again had numerous vague physical complaints. Rating has remained unchanged.

Veteran is single.

FARMER, GENERAL. Has been self-employed as a farmer for 13 years. Owns 60 acres and rents 60 acres. In addition to his general farming, hauls freight part time. Income from these two activities enables him to maintain family at modest level. Veteran says he loses an average of 1 day per week from work because of his disability. Likes farming, because it enables him to be his own boss and to adjust his work to limitations imposed by his disability.

Prior to service in World War II, veteran worked on his father's farm. After discharge, pursued institutional on-farm training under the VA vocational rehabilitation program for 2 years; since then has operated on his own.

Veteran suffered head wound while in combat. Following this, complained of ringing in ears, numbness of left side of head, headache, fatigue, anxiety tremors, and irritability. Since discharge, symptoms have remained essentially the same. Veteran complains of periods of extreme nervousness, depression, noises in left ear, severe headaches. Leads retricted social life. Diagnosis at time of last VA rating: psychoneurosis, anxiety state, chronic, moderately severe tinnitus. Prior to this time, disability had been rated as severe.

Veteran is married and has children.

TRUCK FARMER. Veteran has been self-employed on a small farm for 12 years. Plants, cultivates and harvests vegetables, and markets them at local farmers market. To supplement income, veteran last year held temporary job during winter months as fire lookout. Income, which fluctuates and is sufficient at times, insufficient at others, is supplemented by wife's salary from a job in town.

Prior to service during World War II, veteran worked as an armament mechanic. Upon discharge, raised broilers for 1 year; then bought present farm and began farm training under the VA vocational rehabilitation program; continued as a trainee for 3 years. Since then has been in farming on his own. Initially engaged in egg production and vegetable farming. Discontinued egg production after 5 years because market was poor, and has since limited himself to growing vegetables.

Veteran became ill while in service. Rated on discharge for psychosis, schizophrenic reaction, paranoid type, competent, considerable impairment of social and industrial adaptability. Since returning to civilian life, veteran has continued to complain of feelings of strain and pressure, weakness, headaches, and ringing in the ears, inability to sleep. Last VA rating indicated definite impairment of social and industrial adaptability.

Veteran is married and has children.

ADDITIONAL CASES: Farmer, General—28.

Animal and Livestock Farmers (3–07)

FARMER, LIVESTOCK. Veteran has been self-employed for 7 years on a 280 acre livestock farm. Raises beef cattle primarily, also a few dairy heifers. Started with 20 owned acres, now has 120 and leases more land than he owns. Does occasional off-farm work for cash income to help build his operation. Seems to be satisfied farming and is living comfortably.

A farmhand before World War II service, veteran worked briefly at semiskilled jobs after the war. Then pursued 4 years of farm training under the VA vocational rehabilitation program. His progress was satisfactory, and he has remained on the farm since completion of training except for a couple of brief periods spent in semiskilled jobs.

Veteran rated by VA for past 14 years for psychosis, schizophrenic reaction, paranoid type, severe impairment of social and industrial adaptability, competent.

Veteran is married and has children.

FARMER, LIVESTOCK. Veteran has been self-employed 10 years on a large tract of land where he raises show horses and beef cattle. Employs several permanent hired hands plus seasonal hands. Stock is pure bred and raised for premium prices; sold through auctions, stock shows and extensive advertising. Veteran works long hours and must use modern scientific livestock raising techniques. Is well regarded in his community. The operation is highly satisfactory to the veteran and is described by him as profitable.

Prior to World War II service, veteran was a college student. After service, completed college and later enrolled in law school under the VA vocational rehabilitation program for 1 year. Quit law school to devote his time to family holdings, consisting mainly of large enterprises controlled by himself and his wealthy family. Considers himself better suited to his present enterprise.

Veteran rated by VA for psychoneurosis, anxiety reaction, moderate. Rating has been continued unchanged. Restlessness and tension cause veteran to lose sleep; suffers muscle spasms in various parts of body; speaks in jerky sentences. Gets along well with his family. Able to pace his activities according to his physical and mental condition.

Veteran is married and has children.

Farmer, Poultry (3–08)

FARMER, POULTRY. Veteran has been self-employed 9 years on his small farm where he raises about 20,000 broilers per year. Also raises cotton but not as a major enterprise. Hires occasional labor. Careful not to overwork because of his physical disability (hypertension). Is adjusted to farm life and satisfied with it, but does not like the small cash returns left after expenses.

Veteran was raised on a farm. After World War II service he worked 1 year as a postal clerk and 1 year as a grocery clerk in a chain store. Resigned for health reasons and returned to the farm. Entered and completed a 4 year combination school and on-the-farm course in farming under the VA vocational rehabilitation program.

While in service, veteran was hospitalized 2 months for a nervous condition. Has history of being tense, restless, anxious and apprehensive. Complains of headaches, palpitation of the heart, indigestion; occasionally feels he is smothering, has difficulty sleeping, and is easily upset. Rated by VA for psychoneurosis, mixed, moderate, and for hypertension. Veteran refuses offer of psychiatric treatment.

Veteran is married and has children.

Farmhands, General Farm (3–16)

FARMHAND, GENERAL. Veteran works on a general farm. Assists in preparing seedbeds, planting and reaping crops, feeding livestock, etc. Employer does not know of disability. Works 55 to 60 hours per week, with no limitation because of his disability. Says he gets along well with employer and with people in the community. Likes to farm, but does not want responsibility of operating his own farm. Employment outlook good

because of his reputation as a good, steady worker. Income adequate for his family's needs.

Veteran was a farmhand prior to World War II military service. Returned to that occupation after discharge. Between 1949 and 1960 worked for three farmers; each time he changed employers, he bettered himself financially.

Diagnosis at time of last VA rating: psychoneurosis, psychophysiologic gastrointestinal reaction. Five years ago, rating decreased from moderately severe to moderate. Complaints included nervousness, nausea, headaches, nightmares; frequent depression, morbid fear of crowds, great difficulty in socializing.

Veteran is married and has children.

ADDITIONAL CASES: Farmhand, General—4.

Farmhands, Animal and Livestock (3–17)

ADDITIONAL CASE: Sheepherder—1.

Farmhands, Poultry (3–18)

ADDITIONAL CASE: Farmhand, Poultry—1.

Farm Mechanics (3–35)

FARM MECHANIC. Operates a farm machinery repair business with his brother as a partner; self-employed 18 months. He and brother get along well as partners. Works 50 hours per week repairing tractors and other farm machinery. Earnings are substantial for his community. Outlook for business is good. Veteran is satisfied, can vary his work schedule and pace to suit himself.

Veteran's preservice occupation was farmer; had 6th grade education. Following World War II military service, completed 4 year VA vocational rehabilitation training program on his farm; farmed for 4 more years. Quit farming to take a job as assistant manager of a roadside grill. Left after 5 years to enter present partnership. Farm mechanics portion of his VA training very useful in his present business.

Veteran discharged from service because of disability when, following several months' combat, he became restless, irritable, unable to sleep, lost weight, suffered battle dreams. Diagnosis at time of initial VA rating: psychogenic somatic disturbance, associated with anxiety neurosis, severe. At time of last examination, condition was found to be improved, but veteran was still tense and apprehensive, subject to spells of acute turmoil. Diagnosis: psychoneurosis, mixed, moderate.

Veteran is married and has children.

Farm Managers and Foremen (3–37)

ADDITIONAL CASE: Caretaker, Farm—1.

Nursery and Landscaping Laborers (3–39)

LABORER, AGRICULTURE AND HORTICULTURE. Veteran has been self-employed on a seasonal basis for 2 years cutting cedar boughs and selling them to florists. Has also been employed approximately half of each of the past 4 years in the logging operation of a lumber mill; finds logs previously cut, fastens them to tractor chains and helps load to truck. Has had no difficulty getting along with landowners where he cuts boughs or with his employer. Deals on a satisfactory basis with florists. Wife assists in self-employment venture. Work is seasonal, insecure, and only mildly remunerative.

Veteran's preservice occupation was cutting firewood and pulpwood. After Korean conflict service, worked 2 months as a laborer in a shipyard and 6 months as a laborer in a grain handling and storage facility.

Veteran rated by VA for psychoneurosis, anxiety reaction, moderate.

Veteran is married and has children.

ADDITIONAL CASES: Laborer, Nursery—1; Nurseryman II—1.

Gardeners and Grounds Keepers, Parks, Cemeteries, etc. (3–40)

GARDENER. Self-employed 5 years contracting for seasonal jobs in maintenance of lawns and grounds of residences. Owns own equipment. Works alone. Veteran not very well satisfied with his work; expressed fear of loss of customers, due to inability to perform work on schedule.

Veteran worked as a coppersmith 10 years before World War II service. Trained 2 years on the job as a maintenance mechanic under VA vocational rehabilitation program, but did not complete projected 3-year course. Worked 5 years as a packer in a government installation before beginning present work. Veteran stated termination was because of his disability and frequent absence from work.

Disability symptoms—weakness, dizziness, vomiting—began while veteran was in service. Initial VA rating based on a diagnosis of psychoneurosis, anxiety reaction, moderate. Since 1954, disability rated at higher degree (moderately severe). Veteran states he is nervous and jittery, fears closed places and does not like to be in groups of people. Does not attend church for this reason. Usually vomits in the morning. Reports that he is receiving psychiatric treatment from the VA, also from a private physician.

Veteran is married and has children.

LANDSCAPE GARDNER. Self-employed for 8½ years; works 55 hours per week. In summer season, employs two or three men. Obtains leads for work by advertising. Works on contract basis. Designs lawn layouts, orders materials, selects plants, supervises planting; trims trees and bushes. Treats diseased trees. In winter, cuts and sells cordwood. Earnings are over $600 per month and feels confident that business will grow into a larger operation.

Preservice occupation was salesman, foodstuffs. After World War II service, veteran worked as an inspector in a manufacturing plant; left to enroll in a 2-year school program in horticulture under the VA vocational

rehabilitation program. On completion of training, worked as a gardener for 1 year prior to self-employment.

Diagnosis at time of last VA rating: psychoneurosis, hysteria, severe.

Veteran is married and has children.

LANDSCAPE GARDENER. Does small scale landscaping on an estate. Has been in present job 5 years except for 14 months when he was hospitalized. Works with one other employee. Veteran likes his job and is satisfied with the working conditions and scale of pay.

Prior to World War II service, veteran worked as a farmhand. Had 22 months of training in agriculture under the VA vocational rehabilitation program. Present job constitutes his only employment since discharge from service.

Diagnosis at time of initial VA rating was psychosis, schizophrenic reaction, complete social and industrial incapacity, competent. Temporary improvement occurred, followed by relapse. Periods of hospitalization became necessary in 1951, 1953, 1956 and 1957. Most recent rating same as initial one.

Veteran is separated from wife; has children.

ADDITIONAL CASES: Gardener—1; Greenskeeper II—1; Groundskeeper—2; Groundskeeper, Supervisor—1; Tree Pruner—1.

FISHERY OCCUPATIONS

Fishermen and Oystermen (3–87)

FISHERMAN, LOBSTER POT. Self-employed 14 years operating his fishing boat and tending the lobster pots he has constructed. Veteran works alone and markets his own catch. He does not have the patience to work with a helper and likes to be by himself. Likes the kind of work he does and the outdoor life. But the work is seasonal (6 months per year) and veteran gets small financial return for the hard work and long hours involved. Boat was purchased with the aid of a Federal Government small business loan. Payments have been made with great sacrifice. Lobster season is 6 months. Off-season work has been unobtainable for 3 years. Before that time in spring and early summer, he had cleared land for building projects. Veteran extremely independent and self-reliant. Has what he describes as "tough financial sledding," but will not ask aid from any source.

Self-employed before World War II service as a seafood wholesaler, the veteran did not feel capable of rebuilding his business after the war. Worked as a deckhand on a fishing boat for 2 years prior to present self-employment. Found living and working in close quarters at sea for 10 to 12 days intolerable.

After discharge from military service, veteran was rated by VA for psychoneurosis, unclassified, severe, manifested by somatic complaints. Records indicate him to be moody, introverted, restless, and easily fatigued; arms and legs twitch, must be "on the go" all the time. To the interviewer, he appeared withdrawn, bitter, and depressed. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety reaction, moderately severe.

Veteran is married and has children.

ADDITIONAL CASES: Captain (Fishing)—1; Fisherman, Purse Seine—1.

Fishing Occupations, n.e.c. (3–89)

FISH CUTTER. Employed 10 years as a fish cutter preparing fillets for a wholesaler. Works full 40-hour week. There is very little opportunity for

any kind of advancement in this occupation. Wages are average for the industry.

Veteran worked for present employer for 3 years before Korean conflict service; was reemployed upon discharge.

Diagnosis has been continued unchanged since discharge: psychoneurosis, anxiety reaction with psychophysiological gastrointestinal reaction, moderately severe. Veteran was hospitalized by VA for 1 month in 1955. Received psychotherapy weekly at VA mental hygiene clinic for 3 years. Is described as insecure, frightened, ill at ease, morbidly self-concerned; complains constantly of dysentery and stomach cramps.

Veteran is married and has children.

OCCUPATIONS IN MANUFACTURING AND RELATED ACTIVITIES

Occupations in Production of Food Products

Bakers (4–01)

BAKER. Works in a large wholesale bakery. Has been with present employer 8 years, 4 years as apprentice and 4 years in journeyman status. Employer not aware of veteran's disability. Performs first steps in baking process; measures and weighs ingredients, mixes dough by operating dough-mixing machine. Works alone; gets along well with foreman. Likes his job. Works 35-hour week. Loses practically no time for health reasons; feels he can't afford to, though at times his multiple physical disabilities make it hard for him to remain on the job. Has had periodic wage increases, but no promotions. Does not want to become foreman, because of additional responsibility it entails.

Veteran obtained apprenticeship without any assistance, though his application was filed at suggestion of friend employed in the bakery. Previous experience was as an electric motorman in a mine. Pursued 1 year of on-the-job training as a gunsmith apprentice under the VA vocational rehabilitation program; discontinued because of illness. Prior to World War II service worked in a mine as a maintenance mechanic helper.

Veteran was a Japanese POW for 3½ years, suffered considerable maltreatment. In addition to multiple physical residuals (including arthritis, defective visual fields, rheumatic spondylitis), experienced severe anxiety reaction. This has diminished over the years. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety reaction, moderate.

Veteran is married and has children.

ADDITIONAL CASE: Bench Hand, Bakery—1.

Production of Beverages (4–03)

ADDITIONAL CASE: Stillman, Beer—1.

Slaughtering and Preparation of Meat Products (4–09)

BUTCHER, ALL-ROUND. Works in a meat processing plant employing 125 people. Has been with present employer, who is his uncle, for more than 20 years. Relieves overloaded workers in cutting meat. Does not enjoy his work, but remains in it because it offers economic security; dislikes standing in one spot all day doing the same thing; resents the pressures of production quotas; feels someone is always watching him. Gets along well with most of his coworkers, but tries to avoid some because he thinks they do not like him. Has had periodic pay increases, and is satisfied with the pay; little or no chance for promotion. Works full week, with no limitations because of disability.

Veteran has worked for his uncle since the age of 17. It was his first job; learned the work by doing it. After World War II, began a few evening courses in sales work and accounting under the VA education program, but discontinued after a short time.

During service veteran complained of being easily exhausted, easily excited, jumpy and irritable, with dizzy headaches and occasional stuttering. Initially rated by VA for psychoneurosis, anxiety state, moderately severe, manifested by headaches and backache. Still has many of the same complaints. Diagnosis at time of most recent VA rating; psychoneurosis, anxiety reaction, moderate.

Veteran is married and has children.

ADDITIONAL CASE: Butcher, All-round—1.

Occupations in Production of Textiles

Weavers, Textile (4–15)

WEAVER. Works in a small textile mill that employs only 10 weavers. Regularly works 40 hours per week. Employed in same job and by the same mill for the past 8 years. Job obtained by applying in person at the mill. Employer has never been informed of the character of veteran's disability. Veteran feels that this is a good job and that he is well adjusted to it.

All 22 years of this veteran's work experience have been spent in the job of weaver. He became skilled in this before entering World War II military service. Following discharge, returned to his preservice job; when laid off because of lack of work, obtained present job.

Initial and most recent VA rating the same: psychoneurosis, hysteria, moderate. Veteran complains of chronic fatigue, occasional enuresis.

Veteran is married; has no children.

Loom Fixers (4–16)

ADDITIONAL CASE: Loom Fixer—1.

Manufacture of Textiles, n.e.c. (4–19)

ADDITIONAL CASE: Cloth Grader—1.

Occupations in Production of Fabricated Textile Products

Tailors and Tailoresses (4–26)

TAILOR. Veteran is one of several employees in the alterations department of a large urban department store. Held this job before entering Korean conflict military service and returned to it after discharge; employment thus far totals 12 years. At time of reemployment, the employer was informed of the character of the veteran's disability. Veteran likes his job, feels secure and is satisfied with the pay scale. Little or no chance for promotion, but this does not bother him.

To qualify for this job, veteran served an informal apprenticeship at this store. Opportunity was obtained through the influence of a friend. No other work experience.

Veteran was discharged from military service because of combat fatigue and an impending breakdown. Chief complaints center around insomnia, occasional nightmares, tenseness, irritability, and a tendency to provoke arguments. VA diagnosis and rating: psychoneurosis, anxiety reaction, chronic, moderate.

Veteran is married and has children.

Fabrication of Textile Products, n.e.c. (4–27)

ADDITIONAL CASE: Canvas Worker—1.

Occupations in Production of Lumber and Lumber Products

Lumbermen, Raftsmen, Woodchoppers (4–30)

ADDITIONAL CASE: Logger, Hand—1.

Cabinetmakers (4–32)

CABINETMAKER. Is one of three cabinetmakers employed by a small shop. Does high-quality commercial work. Has frequently been assigned to supervision of other workers. Has been in present job 40 months. Got the job on his own initiative. Is satisfied with his job and rate of pay; understands and accepts fact that promotion is not likely. Says he enjoys excellent relationships with his fellow workers.

Prior to World War II service, veteran was a shrimp fisherman. After discharge, was self-employed manufacturing shrimp nets until he entered a 4 year apprenticeship training program in cabinetmaking. Completed this training under a combination of benefits under the VA vocational rehabilitation and education programs. Worked for 3 years as a journeyman in the shop where he trained. Held several short-term jobs before starting on present job.

Diagnosis at time of most recent VA rating: psychoneurosis, mixed, moderately severe.

Veteran is married and has children.

ADDITIONAL CASE: Cabinetmaker, Maintenance—1.

Upholsterers (4–35)

UPHOLSTERY CUTTER. Cuts and fits fabrics in a large furniture factory. Has been on present job 8½ years. A relative helped him secure the job. The employer knows the character of his disability. Veteran works 40 hours per week, with no limitations because of his disability. Feels his relationships with superiors and coworkers are cordial. Is satisfied with the job because it is steady, place of work is near his home, pay is satisfactory. Is bitter, however, because he feels he has been passed over for promotions.

Veteran's preservice job was in an arsenal as a munitions handler. After World War II service he worked successively, for periods ranging from 6 months to 36 months, as a gas station attendant, tree pruner, routeman delivering oil, construction laborer, and machine operator in a knit goods factory. Then, through the help of a relative, secured opportunity for on-the-job training as a cutter in the place where he now works. Pursued the training to completion under the VA education program and has remained in same employment.

VA rating based on the diagnosis of psychoneurosis, anxiety. Initially rated as severe; at time of last rating, reduced to moderate. Veteran says that several times recently he has had dizzy spells and passed out.

Veteran is married and has children.

ADDITIONAL CASES: Furniture Repairman—1; Upholsterer II—1; Upholsterer Cutter—1.

Cooperage Occupations, n.e.c. (4–38)

ADDITIONAL CASE: Cooper—1.

Printing Occupations

Compositors and Typesetters (4–44)

COMPOSITOR. Works in a printing shop employing 200 workers. Has been employed here 9 years. Sets up and composes type by hand. Works 36½ hours per week. No limitations or concessions in the work schedule or tasks due to his disability. Says his relationships with supervisors and coworkers are good and their attitude toward him favorable. Employer has not been informed of the character of veteran's disability. Veteran sees no opportunity for advancement. Believes job is secure, unless it becomes obsolete as a result of advances in printing processes.

Veteran completed 3 years as an apprentice compositor with present employer prior to military service during the Korean conflict. Reemployed following discharge. During off-duty hours, attended a business school under the VA education program and completed a course of eight subjects toward the objective advertising man.

VA rating based on the diagnosis of psychoneurosis, psychogenic gastrointestinal reaction, moderate. Veteran complains of nausea and vomiting. For the past 2 years has been getting psychiatric treatment biweekly.

Veteran is married; has no children.

LINOTYPE OPERATOR. Sets type on a linotype machine for a large advertising specialty firm. Has been with present employer 8 years. Works 35 hours per week, with seasonal overtime as well as layoffs; no limitation because of disability. Employer is aware of the character of veteran's disability. There is little opportunity for advancement, but pay is adequate. Except for fact of seasonal layoffs, the job offers security. Veteran reports satisfactory work relationships.

Preservice occupation was salesman. Returned to this after World War II military service, but gave it up because he was too nervous. Without training or experience, obtained employment as printer on a rural weekly newspaper. After 1 year he enrolled in a trade school to take printing training. Got another job as printer on a small town newspaper; this ended in layoff after a year. Held another job briefly; this ended when veteran was hospitalized for 5 weeks for emotional disorder. Began employment with present employer as apprentice under VA vocational rehabilitation program; completed training, and has been stably employed since then.

Veteran had breakdown while overseas, was hospitalized and given insulin shock treatment. On discharge rated by VA for mild tension state. Several years later worsening of disability led to VA hospitalization. Since then veteran has had VA mental hygiene clinic treatment from time to time, until 6 months ago. VA rating for psychoneurosis, anxiety reaction, moderately severe, established in 1950, subsequently reduced to moderate; continued at that degree. At time of last examination, veteran complained of being nervous, tense, fatigued, and slightly depressed.

Veteran is married and has children.

ADDITIONAL CASES: Compositor—2; Linotype Operator—1.

Photoengravers (4–47)

ADDITIONAL CASE: Photoengraving Finisher—1.

Pressmen and Plate Printers, Printing (4–48)

LITHOGRAPHIC-PRESS MAN. Operates a lithographic press in a commercial printing shop of 100 employees. Has been with this employer only 1½ months. Employer does not know the character of veteran's disability. Veteran enjoys his work; salary is good. But will probably continue his previous pattern of moving on to another job when the pressure is too great.

Veteran was a student prior to Korean conflict military service. Completed apprenticeship for off-set press man under the VA vocational rehabilitation program; stayed on this job for awhile after completing training. Has since changed employers several times, securing each new job through personal application.

Veteran was hospitalized while in the Army. Received a medical discharge. VA diagnosis: Psychosis, schizophrenic reaction, acute. Has trouble getting his breath, has a dry mouth and throat, must have water available at all times. Has hives frequently when under tension.

Is restless and anxious. When interpersonal relationships become involved, he runs away. Cannot control his temper. Tranquilizing medication helps him. Is receiving psychiatric treatment on outpatient basis from VA mental hygiene clinic. Most recent VA rating reduced from "considerable" to "definite" impairment of social and industrial adaptability.

Veteran is married and has children.

OFFSET-PRESSMAN—CYLINDER-PRESSMAN. Operates a Heidelburg press and an offset press in a plant of 15 employees. Has been with present employer for 3 years. Employer was told the character of veteran's disability before hiring him. He and veteran's immediate supervisor maintain a sympathetic attitude without coddling the employee. Employer feels that veteran has slowly adjusted to his job. He still gets upset if his routine is broken, but, on the whole, accepts responsibility and turns out a quality product. Works 40-hour week.

Following discharge from World War II military service, veteran received 4 years' on-the-job training as a cylinder-pressman under the VA vocational rehabilitation program. Training was interrupted once for a period of psychotherapy, but veteran resumed and completed it. Remained in company where trained for 7 years; then obtained present job on own application. Preservice job was carpenter's helper.

Diagnosis at time of most recent VA rating; psychoneurosis, anxiety reaction, chronic, moderately severe. Condition showed considerable fluctuation in the years following discharge, worsened until veteran required hospitalization in 1951. Improvement has occurred since then, especially since veteran started on present job. He has had psychiatric treatment from time to time. Takes tranquilizers as needed.

Veteran is married and has children.

PLATEN-PRESSMAN. Makes ready and tends the operation of a platen press, used for printing labels and tags for industrial use. Is one of 150 employees of this plant. Employed here for 12½ years. Referred to this job by State employment office. Employer is not aware of the character of veteran's disability. Veteran works 40 hours per week. No limitations because of his disability. Says he gets along well with coworkers, but feels supervisor is strict; he speaks up in protest. Not satisfied with pay. Refused an offer of promotion, since it did not carry additional pay, he saw no reason for assuming additional responsibility and pressure. Veteran's job appears to cause tension. He does not feel secure. Feels that seniority is not respected by this plant.

Veteran's preservice job was that of lathe operator. He returned to this after World War II service, but left after 14 months because of a decline in the company's business. During the next 2 years, held a series of short-term odd jobs; then secured present employment, where he received 24 months on-the-job training.

Veteran hospitalized for 3 months while in service due to nervous condition and operational fatigue precipitated by prolonged flight duty. Has history of being tense, unable to sleep nights. He is a chronic nail biter and a constant worrier. Feels that his disability has been aggravated by

the pressure of his job; can take things just so long, then must "blow top." VA rating for psychoneurosis, anxiety state, moderately severe, has been continued.

Veteran is single.

ADDITIONAL CASES: Cylinder-Pressman—1; Offset-Pressman—1.

Occupations in Production of Chemicals and Chemical Products

Production of Industrial Chemicals (4–52)

CHEMICAL OPERATOR III. Veteran works in a chemical manufacturing plant employing over 200 people. He has been with present employer since discharge from military service in 1945. Job consists of operating and checking a guage board which is controlled automatically. Exact adjustments are required. Works 40 to 48 hours per week. Is responsible to a shift supervisor, to whom he relates well. Likes and is respected by his fellow workers. Has been given increased responsibility as a result of automation over the past 2 years. Job is secure and remunerative but offers little further advancement opportunity, except for pay increases obtained through union efforts. Veteran secured job through influence of his father, who was employed at this plant. Employer knows veteran has a disability, but does not know its character.

Veteran's preservice occupation was that of a flame cutter operator in a ship building plant. After discharge, he began work as a laborer in the company where he is now employed; worked up to his present job through company training.

Veteran given psychiatric treatment in service, following 5 months in combat. Complaints at that time included dizziness, tremor, headaches, weakness, pains in back and abdomen. History of psychosomatic complaints dating back to childhood. Currently complains of tiredness, pain in back, nausea and irritability. Most recent VA rating is based on the diagnosis of psychoneurosis, anxiety state, moderately severe; initially rated as severe.

Veteran is married and has children.

ADDITIONAL CASES: Chemical Operator III—2.

Occupations in Production of Rubber Goods

Production of Rubber Goods (4–57)

HOSEMAKER (ROPER). Veteran is engaged in "tieing" and connecting rubber hoses being manufactured. Works 40 hours per week in a plant that employs 160 workers. Has been on the present job 5 years. Is paid an hourly wage. States that he gets along well with supervisors and fellow workers. Employer did not know the character of the veteran's disability at the time of hiring but knows it now. No concessions are made because of the veteran's disability.

After discharge from World War II military service, veteran returned to the occupation in which he has been engaged ever since he reached working

age. Has had a number of different employers. Got his present job through referral by his brother who is similarly employed.

Latest VA rating is based on the diagnosis of psychoneurosis, anxiety reaction, moderately severe; disability initially rated as severe. Veteran has numerous somatic complaints. Social relationships are strained. Appears to be tense, fidgety, restless, tremulous and slightly depressed. Gets into frequent arguments.

Veteran is separated from his wife.

TIRE BUILDER. Veteran employed in a tire manufacturing plant, which has several thousand workers. Works on a machine which makes the final pressing of the tire prior to the finish and touchup stage. Works a 6-hour day 5 days per week, which is normal for production workers in this industry. Describes his relationships with supervisors and fellow employees as generally satisfactory, but says "They know I'm nervous." Has not informed employer of the character of his disability—believes it would be disadvantageous to do so. Has 15 years seniority at this plant; 2 years on present job; 13 years as a fireman, stationary boiler. Hopes the seniority system will allow him to return to the job of boilerman, from which he was displaced as a result of employment cutbacks.

Preservice occupation was that of farmer, general. After discharge from World War II service, worked briefly on auto assembly line. Experience in the Navy had qualified him for a boiler operator's license—high pressure. So he took a job as fireman, boiler. Worked 3 months; quit because of mental illness. Returned to work 5 months as a fireman in an auto parts manufacturing plant and then obtained work as fireman in present company. Two brothers, who are stationary engineers, assisted him in securing this employment. His goal is to obtain a license as stationary engineer. Has failed examination twice. Attended part-time trade school under the VA education program. Now studying on his own to take the license examination again.

While in the Navy veteran became mentally ill, was hospitalized, and discharged for disability. His symptoms at that time were those of the manic phase of manic-depressive psychosis. Later psychiatric examinations found him in depressed phase. Residuals of his illness take the form of irritability, inability to sleep well, self-depreciation and depressed mood. When he feels too jumpy and irritable, he stays home from work. Diagnosis at time of last VA rating: psychosis, manic-depressive reaction, in fair remission, slight impairment of social and industrial adaptability.

Veteran is married and has children.

ADDITIONAL CASE: Tire Builder—1.

Occupations in Manufacture of Leather and Leather Products

Shoemakers and Shoe Repairmen, Not in Factory (4–60)

SHOE REPAIRMAN. Operates own shoe repair shop. Has a good location and well-equipped shop. Also sells shoe accessories. His wife waits on customers in the afternoon. Employs a boy part time. Has operated present

shop for 5 years. Works long hours, 10 to 12 hours per day. Steady, but low, income. Gets satisfaction from his work.

Veteran began training for shoe repair work as a child, under his father. All of his adult life, except for World War II military service, has been devoted to this occupation. Trained for 2 months as a butcher under the VA vocational rehabilitation program; discontinued because he did not like the kind of work.

VA rating is based on the diagnosis of psychosis, schizophrenic reaction, paranoid type, competent, complete social and industrial inadaptability. Alcoholism and domestic difficulties have been recurring problems.

Veteran is married and has children.

ADDITIONAL CASE: Shoe Repairman—1.

Occupations in Production of Stone, Clay and Glass Products

Production of Clay Products (4–66)

CASTER. Employed by a manufacturer of porcelain plumbing fixtures. There are 14 employees in department where veteran works. Has been with present employer 9½ years. The employer did not know the character of veteran's disability when he hired him, but knows it now. Veteran works 38 hours per week, standard for this plant. No concessions are made because of his disability. Job provides steady work, but is not very remunerative. Veteran indicates dissatisfaction; nevertheless, stays with the job because he likes to work alone, and present job permits this. Describes relations with his supervisor as "not so good," with fellow employees as "o.k."

Veteran's preservice job was that of boxmaker. Upon discharge from World War II service, refused to work for 3 years. Then held several jobs (as truckdriver, routeman, and caster) for brief periods each before starting present employment. Was fired from previous job as caster because of an infraction of rules; veteran says, "I blew my top."

Diagnosis at time of initial and most recent VA rating: psychosis, schizophrenic reaction, simple type, in partial remisson, definite impairment of social and industrial adaptability. Veteran gives a history of periods of extreme irritability. Does not belong to any social organizations, nor participate in any recreational or social activities.

Veteran is married and has children.

Stonecutters (4–68)

STONECUTTER, HAND. Is employed by a granite company which has a total of 15 employees. Cuts, letters and does small carvings in granite. Works 40 hours per week in a union shop. Has been employed by this company for 15 years. Was retained after completing apprenticeship. Employer does not know character of veteran's disability. Veteran feels that he has adjusted well, enjoys his work, which is steady and secure.

Preservice job was that of truckdriver. After discharge from World War II military service, prepared for present job by completing a program of apprenticeship training under the VA education program.

Most recent VA rating: psychoneurosis, mixed, moderate.
Veteran is married and has children.

Metal Working Occupations

Jewelers, Watchmakers, Goldsmiths, Silversmiths (4–71)

WATCH REPAIRMAN. Veteran owns and operates a retail watch business. It is a one-man operation in a large urban area. Primarily cleans, adjusts and repairs watches; also sells watches and costume jewelry. Has operated this business for nearly 16 years. Works a full week and is not limited in his work activities because of his disability. Has cordial relationships with his customers. Is well satisfied with his growing business.

Prior to World War II military service, veteran worked as a messenger. On discharge from service he enrolled in an 18 months' trade school course of watch repair. This course was pursued to completion under the VA education program. Veteran started present business immediately prior to graduation from vocational school. Experienced financial difficulties at first, but a good business was soon established.

Initial VA rating for psychoneurosis, anxiety state, moderate, manifested in part by headaches and tinnitus aurium, has been continued. Other symptoms include tenseness, excessive perspiration, and fatigue.

Veteran is married and has children.

ADDITIONAL CASES: Jeweler—1; Watch and Jewelry Repairman—1.

Engravers (4–73)

ADDITIONAL CASE: Engraver, Jewelry—1.

Machinists (4–75)

JOB SETTER. Veteran is employed in a large refrigerator manufacturing plant. Has been with present employer since separation from service after World War II. Employer knew of disability at time of hiring. Veteran sets up various types of specialized machines, adjusts them, and turns them over to operator. Is not able to operate hazardous machines because his fingers shake. Works 40 hours per week. Reports good working relationship with shop foreman and fellow workers. Has advanced over the years from machine operator to present job; further advancement not likely.

Prior to military service, veteran was a punch press operator, automatic. Took almost 2 years of flight training under the VA education program. Planned to go into crop dusting, but was unable to qualify for commerical pilot's license. Employment with present employer was obtained through direct application.

Veteran was discharged from service for disability after he required hospitalization for extreme restlessness and emotional upset. Initial VA rating, assigned 6 years following discharge, was for psychoneurosis, mixed type, moderate; it has been continued without change.

Veteran is married and has children.

MACHINIST. Works in a large plant that manufactures pipeline supplies and aircraft parts. Has been with present employer 10 years. Is rated as a tool room machinist. Works 40 hours per week. No concessions are made because of his disability. Likes his supervisor very much. Has good working and social relationships with coworkers (there are 15 employees in his particular shop). Employer does not know the character of veteran's disability. Veteran feels secure in his job, is satisfied with pay, stability of job, advancement, and everything about his work.

Obtained present employment through State employment service. Was hired as a machine hand and worked up to his present job by training on the job. Prior to this, veteran received college training under the VA vocational rehabilitation program for teaching agriculture in high school. Taught for 1 year, but did not like it. Tried job as salesman for a year and did not like that. Wanted work using his hands; since doing this kind of work, has been happier than ever before in his life.

VA diagnosis: psychosis, schizophrenic reaction in remission. Initial rating of considerable impairment of social and industrial adaptability has been reduced to slight impairment.

Veteran is married and has children.

MACHINIST. Operates all equipment of a machine shop of the maintenance department of a flying school. Work requires close tolerance. Has an immediate supervisor and 30 coworkers. Gets along well with all. Works 40 hours per week. No limitations or concessions in his work schedule or tasks because of his disability. Has been employed 9 years in present job. Employer does not know the character of the veteran's disability. Has been given increased responsibility and had several wage increases, but there is no opportunity for further advancement. Job not secure, since installation is scheduled to be closed within a year.

Veteran's preservice job was catcher in a rolling mill. Returned to this after discharge from World War II service. Quit because of his health. Operated a grocery store for 3 years; closed because of insufficient business. Began vocational school training for his present occupation under the VA vocational rehabilitation program. After completing vocational course had difficulty obtaining the kind of job for which he had trained. Worked at several temporary jobs before securing present one. Employment secured through personal application; information on the vacancy was obtained from a friend.

Veteran has a history of being tense, restless, irritable, apprehensive and emotionally unsettled. Initial VA rating for psychoneurosis, conversion reaction, chronic, moderately severe has been reduced to moderate.

Veteran is married and has children.

MACHINIST, EXPERIMENTAL. Veteran is the only machinist in a model section of a shop which produces component parts for missiles. Working from sketches, makes models of parts to specifications. Has been employed in this job for 3½ years. Says his relationships with his supervisor are excellent. Works 40 hours per week. Loses about 3 days a month because of illness, but supervisor is very understanding and tolerant. In-

formed employer of the character of his disability when he applied for a job. Feels secure, thinks his occupation will continue to be in demand. His work is a challenge to him.

Prior to World War II service, veteran was employed in a shipyard as a machinist, all around. Upon discharge, returned to his preservice job. Requested and was granted a transfer to the transportation department as cost clerk. Was unhappy doing deskwork, so transferred back to machine shop as a bench machinist. Stayed on that job 5 years; felt it was aggravating his disability, so resigned. Completed a 32-month trade school course in watch and jewelry repair under the VA vocational rehabilitation program. For a short time followed this trade on a self-employed basis; gave it up because of insufficient income. Returned to work as a machinist on his present job. Considers his training in watch repair to be quite helpful in his current work.

Initial VA rating for psychoneurosis, conversion hysteria, chronic, severe, has been continued. Since discharge, veteran has had numerous psychosomatic complaints; insists he is diabetic, also complains of angina-like pains, kidney and blood pressure trouble.

Veteran is single.

ADDITIONAL CASES: Job Setter—4; Machinist—12; Machinist, Bench—2.

Tool Makers and Die Sinkers and Setters (4–76)

DIE MAKER. Works in a small experimental motor parts and die shop. Grinds a variety of experimental motor parts from prints. Assists superintendent in laying out work. Has been with present employer 18 years, including 3 years prior to World War II military service. Works 40 hours per week. Employer knew of veteran's disability when he requested his return. Supervisor and fellow workers very understanding and tolerant: anytime veteran feels pressure too great, he punches out without discussing the matter with anyone. Adjustment to job appears to be good. Veteran feels he has reached the top in his present job in a nonunion shop.

Prior to service, veteran served apprenticeship for this trade with present employer.

Veteran has not availed himself of psychiatric treatment since discharge from service, although he has been offered outpatient treatment when called in for examination by VA. Says that he does not care for those "I don't give a damn pills." Diagnosis at time of most recent VA rating: psychoneurosis, anxiety, moderately severe. Initially rated severe.

Veteran is married and has children.

DIE SETTER. Works in a large plant that manufactures metal household products. Has been with present employer 15 years. Duties involve setting up and aligning dies in a punch press. Works 40 hours per week. Says on-job relationships are good. Employer is not aware of veteran's disability. Veteran secured job through personal application. Has been offered promotional opportunities, but feels it better to retain his present

assignment, because it offers security. Is dissatisfied with wage scale, however.

Veteran's preservice job was that of a photostat operator. While in World War II military service he was trained for and served as an armament mechanic. Upon discharge, obtained job with present employer. Building on knowledge and skills veteran had acquired in mechanics training, employer gave him on-the-job training as a die setter.

Diagnosis at time of initial VA rating: psychoneurosis, anxiety state, moderately severe. Rating subsequently reduced to moderate. Veteran has frontal headaches nightly, some dizzy spells, and worries a lot. Has made a poor social adjustment.

Veteran is married; has no children.

TOOLMAKER. Veteran is employed in a research unit of a large manufacture of sewing machines. He makes dies for sewing machine parts. Works a standard 40-hour week. No concessions are made because of his disability. Has been employed in his present job for 10 years; with this firm 14 years. The employer did not know of veteran's disability when he was rehired after military service. He knows of it now. Veteran holds highly skilled job, likes it, is adjusted to it. Is receiving top wage, no more promotions in sight, but that is not of great concern to veteran.

Preservice occupation was that of a machine operator with the present employer. On release from World War II service, veteran accepted offer of a toolmaker's apprenticeship; this training was accomplished under the VA education program.

On discharge, veteran was restless, shaky, frightened; suffered from lack of appetite, insomnia, headaches. Has made marked improvement. Initial rating for severe psychoneurosis has been reduced to moderate. Diagnosis: anxiety reaction.

Veteran is married and has children.

ADDITIONAL CASES: Die Maker—1; Die Setter—1; Tool and Die Maker—1; Tool Maker—2; Tool Inspector—1.

Machine Shop and Related Occupations, n.e.c. (4–78)

ENGINE-LATHE OPERATOR. Veteran works in a 250 employee plant which manufactures machine forgings for automatic crankshafts. Veteran's job duties include setting up and operating engine, turret, and finishing lathes. Has been in employ of present employer since before World War II. The character of his disability was known to employer at time of reemployment. Works 40 hours per week, with the understanding that he may have time off when needed because of his disability. Not required to work on incentive jobs or piecework, because time pressures upset him. His fellow workers know of his disability in a general way and let him blow off steam. The supervisor is tolerant of his many complaints. Job is reasonably secure because of seniority. Veteran does not desire to advance beyond present status because of pressure to work at closer tolerance.

Veteran's work with present employer constitutes his only work experience. All of his training has been provided on the job.

Veteran anxious, nervous, and irritable during and since service. Is preoccupied with his health. Claims to have a serious heart condition and arthritis, but physical examination shows no organic basis for these complaints. Initial VA diagnosis and rating of psychoneurosis, mixed neurosis, moderately severe, have remained unchanged.

Veteran is married and has children.

VERTICAL-TURRET-LATHE OPERATOR. Has been employed for over 4 years by an aircraft manufacturer. Works 40 hours per week. Obtained the job by personal application. Employer knew of his disability before hiring him. Veteran has accepted and adjusted to the job, because the pay is good, and, as a union worker, he has reasonable assurance of remaining. However, he is not especially happy doing this kind of work.

Before World War II service, veteran was a machine operator for 3 years. After discharge, he began training under the VA vocational rehabilitation program toward the objective of commercial artist, but discontinued after 1½ years because of financial difficulties. A series of short-term jobs followed. Employability during this time was impaired by alcoholism and fighting. Then in 1956, veteran obtained present job. Has stayed with it, although he would still like to enter the art field. Will compromise by keeping interest in art as a hobby.

Diagnosis at time of most recent VA rating: psychoneurosis, anxiety neurosis. Initially rated as severe, disability now evaluated as moderately severe.

Veteran is married and has children.

ADDITIONAL CASES: Inspector, Machine Shop—3; Milling-Machine Operator I—2.

Tinsmiths, Coppersmiths, and Sheet-Metal Workers (4–80)

SHEET-METAL WORKER, AIRCRAFT. Performs the usual sheet-metal tasks such as laying out the job, operating sheet-metal machinery, cutting, and soldering. Works for a large aircraft manufacturing company. Has been with present employer 5½ years, working up to his current job from the position of helper. The employer knew of his disability before hiring him. Veteran is well satisfied with his job.

Veteran returned to his preservice job of textile machine operator for a brief period after discharge from World War II service. Completed a course of training for the objective of auto mechanic under the VA vocational rehabilitation program. Was employed in this occupation 5 years; quit because of low wages. Then employed by present employer as a sheet metal mechanic's helper. With on-the-job training has worked up to his present skill.

Diagnosis at time of last VA rating: psychoneurosis, anxiety state. Degree reduced from moderately severe to moderate. Veteran described as

irritable, resentful, introspective, tense and somber. Many gastrointestinal complaints.

Veteran is married; has no children.

ADDITIONAL CASES: Sheet-Metal Worker—3.

Structural and Ornamental Metal Workers (4–84)

STRUCTURAL STEEL WORKER. Works for a contractor, heavy construction, who employs an average of 10 persons per job. Duties consist of placing steel beams and other steel work on construction jobs. Employer knows the character of veteran's disability. He did not know of it when veteran was employed. Veteran obtained his job through the union. Present employer is the only contractor in the community who will employ this veteran; as a result, veteran cannot maintain steady employment. Veteran has established a good relationship with the employer, who seems to understand him. Relationship with coworkers is not good. While employed he works 40 hours per week. Concessions are made because of his disability in that he is not required to work at heights. Veteran is a hard worker and is very dependable so far as his job is concerned.

Veteran's occupation prior to World War II military service was the same as the present one. Is making marginal adjustment to his work situation. Wage increases have followed the general increases in this trade.

Veteran described as a restless, tense individual, who is easily provoked and becomes combative at times. Complains of being tired and does not sleep well. Initially rated for severe psychoneurosis, mixed, superimposed on constitutional psychopathic state. Most recent VA rating: psychoneurosis, schizoid personality, moderate.

Veteran is married; has no children.

ADDITIONAL CASES: Boilermaker (ship and boat building and repair)—1; Ship Fitter—1; Structural Steel Worker—1.

Welders and Flame Cutters (4–85)

COMBINATION WELDER. Works for a large automobile parts manufacturer. Operates both electric and acetylene welding apparatus. Works on the final assembly line and does repair work on metal dies. Employed on present job for 18 months. Works the afternoon shift, and averages 40 hours per week. Says he gets along well with supervisor. Often becomes irritated with coworkers, but consistently avoids arguments. Obtained job on his own initiative. Employer has no knowledge of the character of veteran's disability. Veteran likes his work and feels secure in his trade, although present job is likely to terminate if employer loses present contracts.

Veteran's preservice occupation was that of a subassembler. Returned to this work after discharge from Korean conflict service. After his first layoff, he entered a vocational school under the VA vocational rehabilitation program and completed a course in combination welding. Has since had 5 different employers. Each change of employment was due to plant layoffs.

Veteran is somewhat anxious, states that he is bothered by transient episodes of dizziness and occasional vomiting. Easily irritated and angered. Attempts to maintain tight control over impulses. VA diagnosis and rating: psychoneurosis, mixed, moderate, have remained unchanged.

Veteran is married and has children.

ADDITIONAL CASES: Brazer—1; Welder, Arc—3; Welder, Combination—4; Welder, Foreman, Combination—1; Welder, Pipe Line—1.

Blacksmiths, Forgemen, and Hammermen (4–86)

FORGING-PRESS OPERATOR. Veteran has been employed 3 years operating a hydraulic press which shapes hot aluminum blanks between dies. Changes and sets dies. Supervises three helpers. Employer is aware of the veteran's disability. Job tenure is good, based on seniority. Veteran is in line for further promotion.

Veteran had no significant work experience prior to military service in World War II. After 1 year of postwar VA hospitalization and rest, worked 1½ years as a construction laborer, 3 years as a papercutter operator and 6 years as a chipper in an automobile plant. States that after a few years the latter job irritated him because of the airhammer noise and vibration. Made application for present job through the company employment office.

Veteran was hospitalized in service, following combat. Discharged for disability, and transferred to VA hospital. Described at that time as being confused, perplexed, uncooperative; showed signs of blocking; and hallucinated. Improved following electroshock treatments but soon regressed; displayed assaultive and impulsive tendencies. Left hospital after a few more months of treatment. Within a year accepted employment. Diagnosis at time of most recent VA rating: psychosis, schizophrenic reaction, catatonic type, in remission, competent, slight impairment of social and industrial adaptability.

Veteran is married and has children.

ADDITIONAL CASES: Blacksmith—1; Inspector, Forging—2.

Heat Treaters, Annealers, and Temperers (4–87)

ADDITIONAL CASES: Hardener (Heat Treat)—2.

Mechanical Treatment of Metals, n.e.c. (4–88)

ADDITIONAL CASE: Furnaceman—1.

Electricians and Occupations in Manufacture of Electrical Equipment

Electricians (4–97)

ELECTRICAL REPAIRMAN. Veteran is self-employed. Works out of his home. Installs electrical wiring in commercial buildings and residences; does wiring repair work. During the past few months, he has not been well and has done little work. Occupational outlook will depend on his health, as there is plenty of work in his hometown.

Prior to World War II service, veteran worked as a farmhand, cotton. After service, he completed an 18 month vocational school program in electrical repair under the VA education program. Following this training, he worked for various contractors and, in this manner, developed his own business.

Diagnosis at time of initial and last VA rating; psychoneurosis, anxiety reaction, moderate. Current complaints include stomach distress, vomiting; is disturbed by noises, gets upset easily.

Veteran is married and has children.

ELECTRICIAN. Veteran is a journeyman electrician; installs electrical wiring and equipment in new construction. Is will satisfied with his job; has steady work. He has been with present employer 2 years.

Prior to World War II service, veteran was a student. After service obtained work with the U.S. Border Patrol for 6 months and then entered electrician apprenticeship training under the VA vocational rehabilitation program. Has been doing this kind of work for various employers for the past 11 years.

Veteran was discharged from Naval service for disability. Diagnosis at time of initial and most recent VA rating; psychoneurosis, anxiety, moderately severe. Veteran has required hospitalization twice since discharge and is currently receiving psychiatric treatment.

Veteran is married and has children.

ADDITIONAL CASES: Electrical Repairman—6; Electrician—7; Electrician, Powerhouse—1.

Manufacture of Radios, Phonographs and Accessories (4–98)

INSPECTOR, ELECTRONIC ASSEMBLY. Veteran has been employed for 2 years at an electronics research and manufacturing company. Inspects parts for conformance to specifications. Employer learned of the disability sometime after hiring him. Works a standard week with no concessions made because of his disability. Says he gets along well with employer and employees. Happy and well adjusted in his work. Wages good. Promotion depends upon his broadening his background in electronics.

Veteran obtained present job through a friend. Did not have the experience normally required for the job. Drove a bus before World War II service and for 4 years after his discharge. Operated a luncheonette for 8 years until business failed. Worked as a shipping clerk 1 year and then obtained current job.

Diagnosis at time of initial VA rating: psychoneurosis, neurasthenia, severe. Most recent rating reduced to moderate; diagnosis given as psychophysiological nervous system reaction. Veteran complains of heartburn, headaches, tension and irritability. Is compulsive person who likes exactness.

Veteran is married and has children.

INSPECTOR, ELECTRONIC ASSEMBLY. Veteran works for a large company that manufactures electrical equipment. Employed 23 years with

same company. Employer knew of the psychiatric disability when veteran was reemployed after World War II. On return from service, veteran was given his old job of meter board operator; became so nervous that he was demoted to line service. Subsequently was promoted several grades; reduced again and now has recovered half of lost ground. Is unable to tolerate close supervision. Resents supervisor standing over him after issuing orders and instructions. This inability to get along with supervisors apparently a factor in his demotion. Gets along well with coworkers. Works steadily but future looks insecure to the veteran, because plant employs only one-tenth of wartime work force.

Veteran has had no work experience other than work with his present employer. Trained on the job by employer.

Diagnosis at time of initial and most recent VA rating: psychoneurosis, anxiety reaction, moderate. Veteran complains of being nervous, jumpy, tense; objects to working under pressure or close supervision.

Veteran is married; no children.

Manufacture of Miscellaneous Electrical Equipment, n.e.c. (5–00)

ADDITIONAL CASE: Assemblyman (Electrical Equipment)—1.

Occupations in Manufacture of Transportation Equipment

Building Aircraft, n.e.c. (5–03)

TESTER, HYDRAULIC. Works in a large plant devoted to aviation and missile construction. Under supervision he builds and tests valves of many types and varieties. Has worked in present job for 7 months. Has been employed at this plant for 3½ years. Employer knew the nature of veteran's disability at the time of hiring. No concessions in work schedule or tasks have been made because of the disability. Veteran appears to have made a good adjustment to the job.

Prior to World War II service veteran was employed as a laborer. After service he worked for 8 years as a boilermaker's helper for a railroad, then was laid off. Was employed by present employer as a janitor; promoted to assembler, mechanical, to assembler, hydraulic, and then to his present job. All of his jobs have been obtained by direct application.

Diagnosis at time of most recent VA rating: psychoneurosis, anxiety state; rating greatly reduced (from severe to moderate).

Veteran is divorced; has no children.

Occupations in Manufacture of Miscellaneous Products

Piano and Organ Tuners (5–12)

PIANO TUNER. Is self-employed. Has a small shop at home, where repair work is done. The tuning is done in the customer's home. Wife assists by taking phone calls and arranging work schedule. Veteran usually works 5 to 6 hours per day. Longer hours cause nervousness. Has con-

tinued this arrangement of work for 11 years. Is adjusted to the work, and feels that he has security.

Veteran was a professional musician before service during World War II. After discharge, attended college for a year under the VA education program, majoring in music. Then completed a 2-year course of training in radio and TV repair under the VA vocational rehabilitation program. Was unable to follow through because the work made him nervous. This is when his self-employment began.

Diagnosis at time of initial and most recent VA rating: psychoneurosis, anxiety state, moderate.

Veteran is married and has children.

Miscellaneous Manufacturing Occupations

Painters, Except Construction and Maintenance (5–16)

FURNITURE FINISHER. Veteran has been employed for last 12 years in a shop that repairs, restores and reproduces antique furniture. There are six employees including a supervisor. Employer was informed of veteran's disability at time of hiring. Works 48 hours per week, with no concessions or limitations in work schedule or tasks because of his disability. Relationships with supervisor and coworkers are good. Job security and salary good; little opportunity for advancement.

Following discharge from World War II military service, veteran completed an 18-month course of training on the job under the VA vocational rehabilitation program in the shop where he is now employed. On-job training opportunity was located by the VA. Veteran's preservice job was that of grocery checker.

Veteran suffered a psychotic break while in service. Began to express feelings of insecurity, guilt and worthlessness, and finally became mute and negativistic. Was discharged from service and transferred to VA hospital. Left the hospital against medical advice, but once home, did improve. Diagnosis at time of most recent VA rating: psychosis, schizophrenic reaction, catatonic type, in remission, slight impairment of social and industrial adaptability. Recent examination describes him as pleasant, shy, meek, subdued and cooperative. Main complaint is headache.

Veteran is married and has children.

ADDITIONAL CASES: Furniture Finisher—1; Painter, Automobile—1

Pattern and Model Makers, Except Paper (5–17)

MODEL MAKER (JEWELRY). Works in a small shop, which serves a large local jewelry industry, by hand making models of new jewelry designs. Staff consists of owner and the veteran. Has worked on this job for 7 years. Veteran "thinks" the employer knows the nature of his disability. They get along fine, working side by side for hours in silence, a condition which apparently satisfies them both. Veteran works 40 hours per week regularly. No limitations of work schedule or tasks because of his

disability. Is entirely satisfied with his job. Has received periodic wage increases.

Veteran was a student prior to World War II service. After discharge he worked as a milk routeman for 4 years. Gave this up because the work aggravated his service-connected physical disability (trenchfoot). Through assistance of the VA, a 1-year on-the-job training program under the VA vocational rehabilitation program was developed with the present employer. Completion of this training eventuated in steady employment up to the present time.

Most recent VA rating is based on the diagnosis of psychoneurosis, anxiety type, moderately severe; also trench foot, symptomatic. For a time veteran was provided psychiatric treatment from the VA mental hygiene clinic. For the past 4 years he has been treated by his private physician. Continues to be apprehensive, self-centered, worrying; suffers from gastrointestinal complaints.

Veteran is married and has children.

ADDITIONAL CASES: Patternmaker, Metal—1; Patternmaker, Wood—1.

OCCUPATIONS IN NONMANUFACTURING ACTIVITIES

Occupations in Extraction of Minerals

Miners and Mining-Machine Operators (5–21)

COAL MINER. Veteran has been employed in coal mines for 28 years; has been operating a conveyor belt for past few months. Has worked steadily when the mines are operating; says he would not want to change employment because he enjoys the work and likes his fellow workers.

Veteran has had no civilian work experience in any field other than coal mining. Has performed a variety of jobs in the mines. Left school at age 17 after completing the 8th grade.

Veteran became ill and required hospitalization while in service overseas during World War II. Developed auditory hallucinations, expressed strong guilt feelings, talked constantly of his misdeeds. Was given a discharge for disability and transferred to VA hospital where he remained for 11 months. Discharged from the hospital, he returned to work in the mines. Made a fairly satisfactory adjustment for about 13 years (until 1957) when he again required hospitalization. Except for two brief unsuccessful trial visits, remained hospitalized until August 1959, when he again left on trial visit. Has remained in that status up to present time and appears to be making an adequate adjustment on his job. Social adjustment is poor, however, and the veteran is being provided psychiatric social service assistance by the VA. Diagnosis at time of last VA rating: psychosis, schizophrenic reaction, paranoid type, competent, complete social and industrial inadaptability.

Veteran is separated from his second wife; his first marriage ended in divorce; has children.

ADDITIONAL CASE: Coal Miner—1.

Construction Occupations

Construction Machinery Operators, n.e.c. (5–23)

OPERATING ENGINEER II. Veteran is self-employed. Grades lots to be used as building sites. Owns a bulldozer, and occasionally rents other

equipment. Has worked as an operating engineer 4 years, the last 1 of which has been on self-employed basis. People with whom he works do not know the nature of his disability. Works full time. Appears to be doing well. Likes the independence of self-employment.

Prior to World War II service, veteran was a farmer, general. Following service was employed for 7 years as a laborer, construction. Then for 4 years he worked as a busdriver; left this because of poor pay. Again worked as a construction laborer for 2 years, prior to becoming employed as an operating engineer.

After combat in ETO veteran became nervous, tremulous, had battle dreams and insomnia; developed a marked startled reaction. On discharge, rated by VA for psychoneurosis, anxiety state, severe. At time of most recent VA examination, his complaint was of recurrent headaches. Most recent VA diagnosis and rating: psychoneurosis, mixed type, moderate.

Veteran is married and has children.

ADDITIONAL CASE: Operating Engineer II—1.

Brick and Stone Masons and Tile Setters (5–24)

BRICKLAYER. Veteran has been employed 6 years with a construction engineering firm. Works a regular workweek, with no limitations because of his disability. Employer was informed of disability at time of hiring. Veteran likes his job because he feels it provides security, adequate pay with regular wage increases and increased responsibility. Reports no difficulty in his relationships with coworkers or supervisors.

Veteran had no preservice work history. After World War II service he entered apprenticeship training in bricklaying under the VA vocational rehabilitation program and attained journeyman status. Employed in his trade 8 years prior to his present job, which he obtained by personal application.

Veteran spent 13 months as a prisoner of war after his plane was shot down. Nervous symptoms, which had started earlier in service, increased. After his release and return to the United States, he continued to have nightmares and to walk in his sleep; was tense, restless, irritable. Rated by VA for severe anxiety state. At time of last VA rating, some of his symptoms remained, but in lesser degree. Diagnosis: psychoneurosis, anxiety state, moderate.

Veteran is married and has children.

BRICKLAYER. For the past 6 years, veteran has been self-employed as a contractor for general masonry work. In addition to managing the business, he does some of the masonry work. Presently has 2 employees; has had as many as 15. Enjoys his work and feels more secure while engaged in it. Outlook is not good, however, because of a slowdown of construction activity in this area.

Present job was developed by the veteran himself. He has worked in this field for 14 years. Learned the trade from his father prior to entering World War II military service. After discharge, started a truck rental service, but the business failed after a few months. Before starting present

business, tried several other jobs, such as drill cutting machine operator, but felt they aggravated his service-incurred physical disability (trenchfoot.)

While in service, veteran developed difficulty in sleeping, had combat dreams, anorexia. On discharge, rated by VA for psychoneurosis, anxiety state, severe; rating later reduced to moderately severe.

Veteran is married and has children.

ADDITIONAL CASES: Bricklayer (Brick and Tile)—1; Bricklayer (Construction)—1; Stonemason—3.

Carpenters (5–25)

CARPENTER, CONSTRUCTION. Veteran is employed by a small construction contracting company. Has worked for this employer continuously for 10 years. Employer does not know the nature of veteran's disability. Works 45 hours per week with no limitations in work schedule or tasks because of his disability. When weather does not permit outside work, veteran does some inside painting. In this way, has steady work and satisfactory income. Enjoys a very satisfactory relationship with his immediate foreman, the superintendent of construction, and his fellow workers.

Veteran's preservice job was that of farmer. After World War II service, he was employed as a laborer with a house moving firm. Continued here for 3½ years until the firm ceased operation. At this time veteran entered a vocational school under the provisions of the VA education program; completed a 36 months' course in carpentry and cabinetmaking which gave him journeyman status. Then made personal application to company where he is now employed.

Diagnosis at time of most recent VA rating: psychoneurosis, conversion hysteria, moderate. Disability had initially been rated severe. Veteran complains of extreme nervousness, frequent stomach disorders and headaches.

Veteran is married and has children.

CARPENTER FOREMAN. Veteran has been employed 6 months with small house building firm. Supervises two carpenters; works from blueprints and orders materials as needed. Employer has not been told of veteran's disability. Workweek is 40 hours with some overtime to meet deadlines or make up for time lost in bad weather. Veteran feels he is getting along well with the employer and has had no difficulty with his helpers. He likes his work but realizes there is little chance for advancement in this small company.

After World War II service, veteran completed a 4-year apprenticeship in carpentry under the VA vocational rehabilitation training program. Since that time has worked as a carpenter, carpenter working foreman, and a self-employed carpenter.

Following combat, veteran suffered from a severe psychoneurosis, diagnosed as chronic anxiety state; manifested by tremulousness, nervousness, headaches, chest pains, worries and battle dreams. At time of most recent

VA examination, rating reduced to moderate. Veteran's complaints include depression, headaches, sleeplessness, chest pains, inability to concentrate.

Veteran is married and has children.

CARPENTER FOREMAN. Veteran has been employed 10 years with a building contractor. Supervises a small crew of carpenters and other woodworkers in building construction. Employer was informed of the veteran's disability prior to employment. Veteran works 40 hours per week along with others and seem to get along well with everyone. Has received promotions, including both increased job responsibility and wage increases. Is well satisfied with his job. Also operates a small subsistence farm with the aid of his large family.

Upon returning from World War II service, veteran entered and completed a 3-year apprenticeship program in carpentry under the VA vocational rehabilitation program. Then worked as a journeyman carpenter and, for the last 10 years, as foreman. Prior to service, worked as a farmhand.

Veteran saw extended combat in South Pacific. Became restless, tense, apprehensive. On discharge, rated by VA for psychoneurosis, anxiety state, severe. Condition much improved at time of most recent VA examination; rated moderate. Veteran also has a severe hearing impairment (bilateral nerve deafness), not service connected, and wears a hearing aid. Says he gets along fine unless he is rushed or something goes wrong, in which case he gets nervous, tense, and excited.

Veteran is married and has children.

ADDITIONAL CASES: Boatbuilder, Wood—1; Carpenter, Construction—20; Carpenter, Finish—6; Carpenter Foreman—1; Carpenter, Maintenance—6; Carpenter, Rough—2; Hardwood Floor Layer—1; Roofer, Wood Shingle—1.

Cement and Concrete Finishers (5–26)

ADDITIONAL CASE: Cement Finisher—1.

Painters, Construction and Maintenance (5–27)

PAINTER, ASSISTANT FOREMAN. Veteran is employed in a large oil refinery as assistant foreman of a crew of 12 construction painters. Has been with employer 17 years, the last 7 of these in his present capacity. Employer knew of veteran's disability at time of reemployment after service. Veteran works 40 hours per week regularly; no concessions are made to him. Is very happy in his work. Says he gets along well with his supervisor and the people he deals with. Promotion is slow and dependent on other painters leaving, but is satisfied because he has made some advancement, pay is good, and job secure.

Prior to service in World War II, veteran was an apprentice painter with his present company. After discharge, completed apprenticeship under the VA education program. Served as journeyman for 7 years before promotion to assistant foreman.

Veteran was rated by VA for psychoneurosis, anxiety state, moderately severe, for 1 year; rating was then lowered to moderate; continues at latter rate. Veteran described as moody and apprehensive, gets upset over trivial accidents and has numerous physical complaints. Says he has found that keeping busy is the best antidote for his emotional disturbances.

Veteran is married and has children.

PAINTER, BOAT, FINISH. For the past 9 months, veteran has worked for a small boat building company. Is in charge of finishing (painting) the boats; two men work under his supervision. Employer does not know of veteran's disability. The shop is nonunion and veteran earns less per hour than he used to as a union house painter. This disadvantage is compensated, he feels, by the steady work provided. He is inclined to complain about the quality and quantity of work some of his fellow workmen do; "blows off" once in a while, but has had no trouble recently. Very much interested in his work, and keeps up with developments by reading trade journals. Says the manual work of his job is good for him.

Following discharge from World War II service, veteran, without formal training in the trade, succeeded in getting a union painter's card. Worked as a house painter for several years, except for the usual seasonal layoffs. Then went into business with a partner, contracting for house and commercial painting jobs. Found the pressure of self-employment too much, and quit after several years to take his present job. Says he feels much better now.

Veteran was discharged from service for psychoneurosis. Rated by the VA for psychneurosis, anxiety state, moderately severe. Continues to have attacks of stomach upset and nausea due to tension, but less frequently than in the past. Diagnosis and rating at time of most recent examination: psychogenic gastrointestinal reaction, moderate.

Veteran is married; no children.

PAINTER (CONSTRUCTION). Veteran has been self-employed for 4 years as a house painter. With a partner he estimates and bids on jobs; he and the partner both do the painting; sometimes hire a helper. The partner knows of the disability and has done much to help the veteran adjust to the work. Earnings are sufficient to support a large family.

Veteran was a sign painter before World War II service and returned to this work for 7 years after the war. Because of lack of work, he went into house painting, taking a job with a friend. The two subsequently developed their present partnership.

Upon discharge from military service, veteran was given a maximum disability rating by VA for psychosis, schizophrenic reaction. At that time he was confused, agitated, seclusive, hallucinated, and showed marked religiosity. Condition improved, then regressed, improved again and has remained improved for the past 5 years. Diagnosis at time of last VA rating; schizophrenic reaction, unclassified, slight impairment of social and industrial adaptability.

Veteran is married and has children.

PAINTER, MAINTENANCE. Veteran is employed in a large hospital, where he is engaged in painting and redecorating rooms. Has held present job 3 months; was promoted to it after serving 2 years as porter in the same hospital. Employer was not informed of disability at time of hiring but knows about it now. Wages are only fair and there is not much opportunity for advancement, but veteran feels secure and is satisfied. Gets along well with building superintendent, who is his main staff contact; regarding others, he says, 'I don't bother them—they don't bother me." Is somewhat handicapped in job by a slight hand tremor; overcomes this by taking more time.

Veteran's preservice occupation was truckdriver. Following discharge from World War II service, he worked as a retail clerk 8 years, then left because of a dispute with the boss; after 9 months as a parts man, electrical supplies, was laid off in a reduction in force. Entered VA vocational rehabilitation training in a 22 months' course at an electrical trade school and completed it. Following this, was self-employed 2 years in electrical appliance repair but quit because of lack of business. A friend referred him to his present employer, where he began work as a porter.

Veteran rated by VA in 1945 for anxiety neurosis, pronounced, precipitated by cerebral concussion in combat and for gunshot wound, left shoulder. Had numerous somatic complaints, constant tremor of hands and feet, with movement of entire body noticeable. In 1953, essential symptoms of the disability were found to persist, but in lesser degree. Condition rerated to severe; this rating has been continued. He is being treated by a general practitioner but questions the effectiveness of the treatment.

Veteran has remarried after divorce; has children.

ADDITIONAL CASES: Painter (Construction)—10.

Plumbers, Gas Fitters, and Steam Fitters (5–30)

PIPE FITTER, MAINTENANCE. Veteran is employed in piping maintenance and repair in a paper manufacturing plant. Has worked for present employer, who knew of veteran's disability at time of hiring, over 10 years. Works 48-hour week; has lost only 2 weeks time in 5 years. Work is around boilers, dirty and dusty places; veteran says fumes bother him, but on the whole, he likes his job and feels better when he is working than when not working. Is well liked by supervisors and coworkers. Job is secure and pay fair. Veteran is senior man in the crew; has turned down chances for advancement in other departments, because he finds that added responsibility increases his tenseness and irritability.

Veteran was a semiskilled machine operator before World War II. Upon discharge he entered and completed a VA vocational rehabilitation training program in retail automotive service. With no service station available, he got a job installing gasoline pumps and tanks. Left this after 2½ years, because he required hospitalization for psychiatric treatment. After release from hospital, obtained employment with his present employer by direct application. Has tried various jobs with the company, but his present one is the only one to which he has been able to adjust.

Veteran was hospitalized in the service following prolonged combat. Discharged for disability, he was rated by the VA for psychoneurosis, unclassified, severe. Improved following discharge, but several years later, following series of domestic problems and difficulties, again required hospitalization. Since treatment, recovery and discharge, he has had occasional hospitalization for examination and treatment. Is allowed time off from job for these. Has compulsion for constant activity. Diagnosis at time of last VA rating: psychoneurosis, anxiety reaction, moderate.

Veteran is married and has children.

PLUMBER. Is employed by a plumbing contractor as a master plumber; has been with present employer 2 years. Employer knew of veteran's disability at time of hiring. Works a 40-hour week, more when necessary. Reports that his relationships with supervisor, coworkers and customers have been very good. Likes his work and is satisfied with its pay and security. Does not want to assume the responsibilities of operating a business of his own.

Prior to World War II service, veteran had completed 2 years of high school vocational education and an apprenticeship program in plumbing and had worked as a plumber. Following discharge, did not seek work for a year. Then returned to his trade. Has worked for numerous contractors, with only very brief periods of unemployment between jobs.

Initial VA rating for psychoneurosis, anxiety state, moderately severe, has been continued. Veteran has history of fearing closed places, having "smothering spells" during which he gasps for breath, develops palpitation, and perspires profusely. He attributes these feelings to having been hemmed in an engineroom aboard ship during 2 years of combat duty.

Veteran is married and has children.

ADDITIONAL CASES: Pipefitter, Maintenance—1; Plumber (Construction)—4; Steamfitter—4.

Construction Occupations, n.e.c. (5–32)

ADDITIONAL CASES: Lather, Metal—1; Lather, Wood—1.

Transportation Occupations

Chauffeurs and Drivers, Bus, Taxi, Truck and Tractor (5–36)

ADDITIONAL CASES: Bus Driver—2; Schoolbus Driver—3.

Brakeman, Railroad (5–38)

BRAKEMAN, ROAD FREIGHT. Works from "extra board" for large railway system. Has been with present employer 10 years. Informed employer of his disability at time of hiring. Well satisfied with working conditions, especally because he can lay off from work when he feels upset without any explanation necessary. Averages 7 or 8 days of work missed per month.

Following discharge from World War II service, veteran trained as an apprentice cabinetmaker under the VA education program for 6 weeks;

worked very briefly as a jackhammer operator. After a period of unemployment, moved to a small mountain ranch, hoping to ease the feelings of tension and pressure he was experiencing. There raised chickens and had a garden; also did seasonal work as a lookout for the Forest Service. Unable to support his family in this way, he returned to the city, where, by applying in response to a newspaper ad, he found the job in which he is currently employed. Prior to entering service, had worked as a laborer in a shipyard. Left school while in the 7th grade.

Veteran entered military service at age 18. Three years later was taken prisoner at Corregidor; suffered privation and physical abuse until freed 3 years afterward. Upon release from service, was troubled with insomnia, lack of appetite, gastric distress, cold sweats. Rated by VA for psychoneurosis, anxiety state, severe, and for duodenal ulcer, residuals of tropical ulcers (both legs), beri beri, malnutrition. Had has psychiatric treatment on an irregular schedule for many years. Experiences periods of depression, tires easily, has bad dreams, little or no social life. Currently receiving psychiatric treatment through the VA. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety reaction, moderately severe; physical conditions rated as nondisabling at this time.

Veteran is married and has children.

ADDITIONAL CASES: Brakemen—2.

Locomotive Engineers (5–41)

ADDITIONAL CASE: Yard Engineer—1.

Locomotive Fireman (5–42)

FIREMAN, LOCOMOTIVE. For the past 4½ years has worked as a Diesel engine fireman in a large railroad yard. Informed employer of nature of his disability at time of hiring. Duties consist of servicing, checking and refueling Diesel locomotives in preparation for next run. Is still on the "extra board," but works 40 hours per week most of the time; expects permanent assignment soon. Works independently and at his own pace, with no pressure-type tasks. Likes his job and considers it the best he has ever had. Outlook doubtful, however, because job may soon be obsolescent. Veteran faces this prospect realistically; is selling real estate during his spare time and is planning to take business training courses at night school to prepare himself for operating a real-estate agency.

Veteran obtained present job with the help of friends already employed by the railroad. This was 2 years after discharge from Korean conflict military service; intervening 2-year period was one of vocational instability and maladjustment, during which he worked at 16 different and varied jobs, many of them for periods as short as 1 month; also trained briefly under the VA vocational rehabilitation program toward the objective, radio announcer. Quit both jobs and training because of his nervousness. Prior to service, had worked for 2 years as a railroad fireman; on entering latter job, had been given a short period of vestibule training.

While in service, veteran developed strong feelings of guilt and depression and severe headaches. Discharged from service because of disability. Went from job to job, quitting each after a short time, because of nervousness. Said he hated everyone at times; had trouble getting along with his children. From time to time felt people were watching him; that was one of the main reasons for his moving from job to job. Though some of his nervous symptoms remain, he does not have this feeling of being watched on his present job. Is receiving psychiatric treatment. At time of most recent VA examination, rating for psychoneurosis, anxiety reaction, was increased from moderate to moderately severe.

Veteran is married and has children.

ADDITIONAL CASE: Fireman, Locomotive—1.

Motormen, Street, Subway, and Elevated Railway (5–43)

ADDITIONAL CASE: Streetcar Operator—1.

Transportation Occupations, n.e.c. (5–49)

ADDITIONAL CASES: Lock Tender—2.

Communication and Utility Occupations

Power Station Operators (5–51)

ADDITIONAL CASE: Hydroelectric Station Operator—1.

Linemen and Servicemen, Telegraph, Telephone, and Power (5–53)

TROUBLE MAN II. Repairs electric powerlines that have been broken or are otherwise not functioning properly. Employed by a municipally owned electrical utility company. Drives a company truck to the site assigned by a supervisor and makes necessary repairs, working alone. In present job for 8 years. Obtained the position by direct application. Feels that some favorable weight was given to approximately 4 semesters of engineering school under the VA education program. Employer does not know of his disability, and veteran fears being fired if this fact became known. Tending toward pessimism and worry, veteran feels some dissatisfaction about his job, yet says it is just the kind of job he needs. Has difficulty relating to other workers and supervisor, says, "I stay to myself—they think I am a screwball." Feels that his supervisor and perhaps other employees do not have much confidence in him as a worker. Believes his opportunities for promotion are very poor; says he would refuse promotion if it required his working inside or working closely with other people.

Veteran had not established himself in any regular occupation prior to World War II service. Interrupted his college GI training after service because of nervousness. Subsequently worked at various unskilled jobs, being unemployed as much as employed. Then worked for about 1½ years for a company engaged in constructing electrical power transmission lines. This job helped him qualify for his present position.

Veteran was medically discharged from the Navy as very nervous, unstable, insecure and unable to perform his duties. Rated by VA for psychoneurosis, anxiety, moderately severe. At the latest VA examination, veteran was described as a passive-dependent individual with a low threshold of emotional tolerance. Interpersonal relationships on the job and at home were judged poor. Diagnosis: anxiety reaction, moderate. Although psychiatric treatment was recommended some years ago, it was not accepted by the veteran. He says that there are times when he is too nervous to work. Feigns a physical illness to his supervisor and goes to a family physician with whom he, nevertheless, expresses dissatisfaction because the doctor does not have time "to give me the confidence I need."

Veteran is married and has children.

ADDITIONAL CASES: Lineman—1; Powerhouse Repairman—1; Testman (Telephone and Telegraph)—1.

Trade and Service Occuptaions

Laundering, Cleaning, Dyeing, Pressing, etc. (5–57)

DRY CLEANER. Works in a dry cleaning plant that employs 11 other persons. Supervises employees in cleaning and pressing clothes. In this position for 2 years. Present employer is aware of his condition and allows him to take time off as necessary. Has adjusted well to present job. Satisfied with his work and his working conditions. Feels that salary is good. Has the confidence of his employer, and is given charge of the establishment whenever the owner is away from town.

Veteran was a student prior to World War II service, completing 2 years of high school. Following discharge, trained under the VA vocational rehabilitation program for the objective of dry cleaner and spotter; after completing his training, worked for several months in the plant where he had trained. Has changed his residence a number of times and thus employers, but has remained in dry cleaning work for past 10 years.

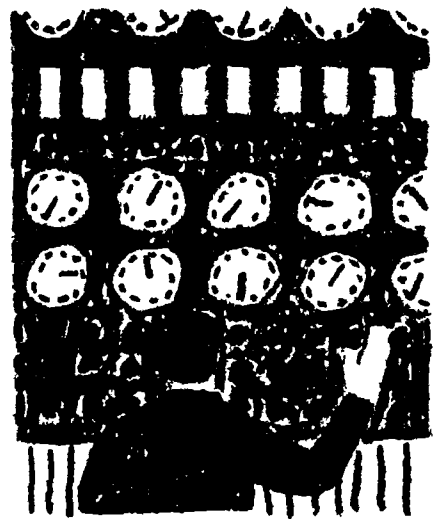
Initial VA rating for severe anxiety neurosis was reduced to moderate in 1948; latter rating has been continued. At time of last examination, veteran was described as anxious, apprehensive, rather restless, shaky when excited, suffering from insomnia. Currently complains of headache most of the time and frequent restlessness; says he keeps away from people as much as possible.

Veteran is married; has no children.

ADDITIONAL CASES: Dry Cleaner—1; Spotter, General—1.

Meatcutters, Except in Slaughtering and Packing Houses (5–58)

ADDITIONAL CASES: Meat Cutter—2.



MISCELLANEOUS OCCUPATIONS

Engineers, Stationary (5–72)

GAS COMPRESSOR OPERATOR. Is employed by a public utility company. Lubricates and cleans compressors, checks the oil in the crankshaft, detects need for repair work. Observes gages and other indicators and adjusts control mechanism to maintain desired performance. Began as a temporary laborer 5 years ago, becoming one of eight compressor operators and assistants 2 years ago. Obtained job through personal application. Employer knew of disability before hiring veteran. Veteran feels his treatment by the company, and his work, have contributed greatly to his readjustment. Feels accepted by other workers, and enjoys freedom to perform his duties without much supervision. Job is steady and secure and offers opportunity for advancement.

Veteran lived and worked on a farm before entering service during World War II. After discharge, worked as a farmhand for 2 years, then as a nursery laborer for a few months; entered dairy farm training under the VA vocational rehabilitation program; training terminated when owner sold the farm. Spent next 5 years as a highway construction laborer before getting present employment.

At time of his discharge from military service, veteran's disability was diagnosed as psychosis, schizophrenic reaction, catatonic type; rating indicated complete social and industrial inadaptability. Symptoms included confusion, excitement, persecutory ideas and hallucinations. Condition improved after several months and remained stabilized for more than 3 years, when total disability award was again made. This was again followed by improvement. At time of most recent examination, rating indicated definite impairment of social and industrial adaptability. Veteran told interviewer that headaches are his current chief complaint but these cause him to take little time from work, because he feels better when busy.

Veteran is married, no children.

STATIONARY ENGINEER. Is employed in a steel mill. Operates steam turbine blower; makes minor repairs; furnishes airblast for converters, cupolas, and blast furnaces by operating electrically powered blowing engine. Checks pressure and increases or decreases it as necessary by

changing engine speed. Has been in present employment for 23 years, including both preservice and postservice periods. Immediate foreman and fellow employees know of his disability. Veteran says they help him when he has a nervous spell, until medication quiets him. Reports he usually loses 2 or 3 weeks per year from work because of his illness.

Veteran was hospitalized while overseas during World War II because he became restless, jittery, and developed various complaints. After discharge, rated by VA for anxiety neurosis, moderate. Periodic examinations since that time have continued to find him nervous, irritable, apprehensive, with numerous physical complaints. At last examination, veteran complained of frequent feelings of weakness, dizziness, choking spells, vague gastric symptoms, frequent severe headaches. Social adjustment apparently adequate; has friends, is active in church and scouting, hunts and fishes. Diagnosis at time of last VA examination: psychoneurosis, conversion reaction, moderate.

Veteran is divorced and remarried; has children.

ADDITIONAL CASES: Boiler Operator II—1; Gas-Pumping-Station Operator—1; Refrigeration Engineer, Chief—1.

Cranemen, Derrickmen, Hoistmen, and Shovelmen (5–73)

POWER SHOVEL OPERATOR. Is employed on a military reservation. Operates a steam shovel doing general excavation. Occasionally operates bulldozer and performs some shopwork. In present position for 15 years. Obtained this job through civil service application. Employer knew of his disability at time of hiring. Veteran says he is permitted to work in the shop when he has sick spells and that his supervisors are sympathetic and understanding. Feels his job is secure and adequately remunerative. Feels there is no opportunity for advancement on this job, primarily because of his health.

Immediately prior to service in World War II, was enrolled in the CCC where he operated heavy equipment. Before that, he was a cook. Veteran's present job is his only postservice work experience.

Veteran's symptoms began while he was in military service. These included tenseness, restlessness, moderate depression and irritability; he complained of back pain and walked in a bizarre manner. On discharge rated by VA for psychoneurosis, mixed type, moderately severe. Currently he complains of almost constant headaches and gastrointestinal disturbances, including vomiting. Feels completely exhausted at night. Has a history of accidents, two of them recently on the job. He blames these on his "nervousness." Reports that he uses sick leave frequently. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety reaction, chronic, moderate.

Veteran is married; has no children.

ADDITIONAL CASES: Electric-Bridge-Crane Operator—1; Overhead-Crane Operator—1; Power-Shovel Operator—1.

Drillers, Extraction of Minerals and Construction (5–75)

DRILLER, WATER WELL. Operates well driller in a country area. Gets some assistance from a 15 year old son. Has been employed in this work by his brother since leaving the hospital 12 years ago. Brother knows of the veteran's disability. Veteran likes the work, although it offers no opportunity for advancement. During occasional slack periods he has worked at various laborer jobs, such as railroad section hand and newspaper carrier.

Veteran was discharged from World War II military service for disability. Rated by VA for psychosis, unclassified, incompetent, complete social and industrial inadaptability. Last hospitalization was in 1947–48, when veteran was hospitalized for 6 months. Diagnosis at time of most recent VA rating: psychosis, schizophrenic reaction, simple, considerable impairment of social and industrial adaptability.

Veteran is married and has children.

Inspectors, n.e.c. (5–76)

ADDITIONAL CASE: Inspector, Telephone Equipment Installation—1.

Glaziers (5–77)

ADDITIONAL CASES: Glazier—2.

Millwrights (5–78)

MILLWRIGHT. Works in a large light bulb manufacturing plant. Keeps a group of eight multiple machines going. If any part of the machine breaks down, he repairs it. Assignment to the swing shift permits him to care for his children during the day while his wife works. Also owns and operates two small coin machine routes on the side. Has been with his employer for 10½ years; during this time has had three promotions, the last of which was to his present job 4 years ago. Obtained this employment with the help of a neighbor who is supervisor for the employer. The employer is unaware of veteran's disability. Veteran is highly pleased, happy and satisfied with present employment. Opportunity for advancement exists. Has continued to assume greater responsibilities from the day he was hired as a laborer to present time as a millwright.

Veteran was enrolled in CCC for 6 years prior to World War II service. Learned to operate and repair heavy equipment. Prior to the CCC, he was a farmhand, where he gained experience in operating modern farm machinery. After discharge he took 2½ years of adult education under the VA education program, raising his grade level from the fifth to the ninth. First job after service was house to house salesman. Based on an outstanding record in this capacity, his employer promoted him to supervisor for four States. After 6 years of supervisory work which required extensive traveling, he transferred again to a local route which permitted him to remain near home. Gave up selling because his feet and legs swell if he walks excessively. Next obtained his present position.

On discharge, rated by VA for psychoneurosis, mixed type, moderately severe. Last VA rating was psychoneurosis, anxiety hysteria, moderate.

Veteran is married and has children.

Mechanics and Repairmen, Airplanes (5–80)

AIRCRAFT MECHANIC. Is employed by a commercial airline. Works on the line doing between-flight and maintenance check and preflight work. Has served in this capacity for past 7 years. Regularly works a full shift No concessions have been required because of his disability. The nature of veteran's disability was made known to the employer at the time of hiring. Has been assigned tasks of increasing importance. Although work puts him under some pressure, veteran says he is able to keep his nervousness under control.

Veteran had no work experience prior to World War II military service. On completing high school at age of 18 he immediately went into the Navy. After discharge worked briefly as a signal engineer, railroad; then for 3 years as a freight handler. Left to enter vocational school of aeronautics under the VA education program. Attended 1 year, quitting because of nervousness. Was employed by a private aviation firm. Stayed there for 3 years and quit because of nervous strain. On the suggestion of a fellow worker, he applied for and was hired for his present job.

Veteran's emotional difficulties developed after 4 years of sea duty, much of it in combat zones. Became extremely anxious and irritable, had battle dreams, visceral symptoms. On discharge, rated by VA for severe war neurosis. Current status much improved. Veteran says he has been able to overcome his nervous condition pretty well. Diagnosis at time of last VA rating: psychoneurosis, anxiety reaction, moderate.

Veteran is married and has children.

ADDITIONAL CASE: Aircraft Mechanic—1.

Mechanics and Repairmen, Motor Vehicle (5–81)

AUTO BODY REPAIRMAN. Works in an auto repair shop owned by a close friend of his family. Has worked here 21 years, starting as an apprentice at the age of 14. In addition to specific auto body repair functions, he performs to a degree as auto mechanic, painter and glazier. Employer did not know of disability at time of rehiring veteran after discharge from service, but does now. Veteran has difficulty in getting along with the boss and the 14 other employees because of his "nervous" condition. His difficulty is tolerated because of the family friendship. Is given time off when needed. Job pays well but offers little chance for advancement. Veteran reports he likes the trade and plans to remain in it with present employer indefinitely.

Veteran returned to preservice job early after discharge from World War II military service, but left after a few months because of "nervousness." Worked as a railroad freight handler and as a handy man in a dry cleaning shop, both briefly. Then returned to present position. Has sixth grade education.

On discharge, veteran rated for severe psychoneurosis, mixed type, with concussion symptoms. Most recent VA rating was for psychoneurosis, anxiety reaction, moderate. Veteran is described as tense, restless, insecure person who feels a resentment toward others which is not always well disguised. Chronic headaches cause him to lose considerable time from work. His adjustment in present situation has been facilitated by favorable personal circumstances.

Veteran is married and has children.

AUTO BODY REPAIRMAN. Repairs damaged auto bodies for an automobile sales and service agency. Has been employed in his present position for about 4 years. Employer is unaware of the disability. Has good relationship with shop foreman; is regarded as a good workman. Veteran expresses high interest in his work and feels secure in it, although he is aware that there is little or no opportunity for advancement.

Veteran has been in this same occupation for approximately 13 years, including 2 years prior to World War II military service. For 1½ years (between 1954 and 1955) he switched to house painting, then returned to auto body repair work. Since 1946, has worked for four employers. He applied for vocational rehabilitation training after discharge but did not enter training at that time; instead he returned to his preservice work. He did, however, take about 6 months of typing and bookkeeping under the VA education program, but discontinued for lack of interest.

Diagnosis at time of initial and last VA rating was anxiety reaction, chronic, moderately severe. Veteran has history of being subject to depression, nervousness and gastrointestinal disturbances.

Veteran is married and has children.

AUTOMOBILE MECHANIC. Rents space in a garage and repairs automobiles on a self-employed basis. Occasionally employs part-time workers. Borrowed tools until he could afford to buy. Now has a shop well stocked with tools. Is more than pleased with his income. Says he clears $125 per week. Works long hours by choice. Says he is still bothered by nervousness, but takes a day off when this builds up and then is able to return to work. Has been in present job 1 year.

Veteran had no preservice work experience, as he went from school into military service at the time of the Korean conflict. After discharge he tried a number of unskilled jobs for brief periods. Was not satisfied, became more restless. Applied to VA for vocational rehabilitation and completed a course of training for automobile mechanic. Had no assistance in starting own business, as he wanted none.

VA rating is based on the diagnosis of psychoneurosis, anxiety reaction, moderate. Veteran says he is restless, nervous, has difficulty in sleeping, is subject to headaches and dizzy spells. Had psychiatric treatment during 1957–58.

Veteran is married and has children.

AUTOMOBILE MECHANIC. Is employed in the auto and equipment shop of a large Government hospital. Veteran is one of 12 employees under a supervisor in this shop. Has been continuously employed here for 9 years,

the first 2 years as chauffeur. Works 40 hours per week with no concessions made because of his disability. The nature of veteran's disability was known to this employer at the time of hiring. The work is steady; wages have increased along with prevailing wages of the community. Veteran thinks that he is unofficially considered second in command of the shop and may eventually be promoted to supervisor. Has been given additional responsibilities, such as administering and scoring driver's road tests.

Prior to service, veteran was a counterman in a restaurant. After World War II service, he tried several jobs for brief periods of time, without success. Applied to VA for vocational rehabilitation. An on-the-job training situation as automobile mechanic was arranged with a sales and service agency. This was discontinued after 18 months because of veteran's temperamental reactions. Took job as a laborer for 1 year. Returned to VA counseling, where he was encouraged to continue in auto mechanics. Filed civil service application and was hired as chauffeur in installation where he is still employed.

Veteran was wounded in combat. Following discharge, was rated by VA for gunshot wound and for severe anxiety state. Condition has improved over the years and been rerated accordingly. Diagnosis at time of most recent VA rating: anxiety reaction, moderate, and shell fragment wound, right heel.

Veteran is married and has children.

AUTOMOBILE MECHANIC. Repairs motors and chassis of trucks and passenger cars in the garage of a wholesale bakery. Does some repair and routine maintenance of machinery and baking equipment in the bakery itself. Has been with present employer 11 years. Employer is not aware of disability. Veteran is very satisfied with his working conditions and expects to remain or this job, which is steady and secure but offers no prospect of advancement. Particularly appreciates the opportunity to work at his own pace for a tolerant supervisor.

Veteran had 5 year's experience as an automobile helper prior to World War II service. After discharge found job as auto mechanic for a bus company but left there after 2 years for higher pay. Next obtained present position by answering a newspaper ad. While working, took 14 months' evening training in Diesel engine mechanics under the VA education program.

Diagnosis at time of initial and last VA rating was psychogenic cardiovascular reaction, moderate. Irritability, forgetfulness and heart palpitations have diminished in recent years.

Veteran is married and has children.

AUTOMOBILE MECHANIC. Works as all-round automobile mechanic in service garage of an automobile dealer. Has been in present job 2 years. Employer is unaware of disability. Veteran says he gets along well in the shop. Feels secure in his job, likes the work.

Prior to World War II service, veteran was a garage foreman supervising eight men. In service was a machinist mate, working on steam, gas and Diesel engines. Since discharge he has held five different jobs as an auto-

mobile mechanic, and on two occasions has attempted to operate his own garage. Reports marital trouble as the reason for leaving each job. Proud of ability as a mechanic, happy in present position where he feels secure and foresees some opportunity for advancement and wage increases. Formal education ended at sixth grade.

While in service, veteran was treated on numerous occasions for stomach distress and nervous state, attributed to anxiety. Says he is much better now, but still has nervous symptoms from time to time. Initial VA rating for psychoneurosis, anxiety reaction, moderately severe, was subsequently reduced to moderate; this confirmed at time of last examination.

Veteran has been married and divorced three times; has children.

ADDITIONAL CASES: Automobile-Body Repairman—4; Automobile Mechanic—19; Automobile Repair Serviceman—2; Electrician, Automotive—1; Truck Mechanic—3.

Mechanics and Repairmen, n.e.c. (5–83)

ELECTRIC MOTOR REPAIRMAN. Works in a small shop, which repairs all types of electric motors. Has been with present employer 10 months. Employer knew of veteran's disability at time of hiring. Veteran works 40-hour week, with no limitations. Is second in command of shop, often assuming some supervisory or administrative responsibility. Gets along well with employer, who does not press for production, and with coworkers. Believes he has security and opportunity for advancement in this job.

Prior to World War II service, veteran was a bolter in a sawmill. After discharge, worked 4 years as a syrup mixer in a soft drink bottling plant. Left for higher paying job as a lathe operator, wood. Losing this job after 1 year because firm went out of business, he found work as a soaker-feeder in a bottling plant. Stayed until he moved to another State. Worked as a driver of a dairy truck for 1 year and then in sign building for an advertising agency. Left because work was too heavy. Completed 2 years on-the-job training as an electric motor repairman under the VA vocational rehabilitation program and remained with the firm that trained him for 4 more years. Was induced to transfer to present job by the shop owner who had known the veteran when he was in training status.

Veteran was discharged from service for psychoneurosis. VA rating is for psychoneurosis, anxiety state, moderate. Veteran complains of headaches, chest pains, rapid heartbeat, fatigue. But misses practically no time from work.

Veteran is married; has no children.

KNITTING MACHINE FIXER. Works in a large hosiery and knit goods mill servicing and repairing knitting machines. Has been with the same employer since before World War II. The employer was informed of the nature of the veteran's disability at the time of rehiring. Veteran usually works 40 hours per week, but the head fixer relieves him of some work when the load is unusually heavy, also allows him to be absent when he is not well.

Absence sometimes amounts to 3 or 4 days in a month. Has had opportunity to become foreman but declined because he would be required to work on the third shift. Believes his job is hard on his nerves and that he would be better off doing outside work.

Prior to World War II military service, veteran had completed high school and worked with present employer as a knitting machine operator. After discharge, looked for work outside hosiery industry, but was unsuccessful. Entered on-job training with prewar employer under VA vocational rehabilitation program and qualified as knitting machine fixer, his present occupation.

Diagnosis at time of last VA rating: psychoneurosis, anxiety state, moderately severe. Complaints were nervousness and stomach trouble. Described as becoming discouraged and depressed at times, subject to startle reaction and insomnia, having stomach trembling and diarrhea when upset. Sees a local physician regularly because of his nervousness.

Veteran is married and has children.

OFFICE MACHINE REPAIRMAN. Works for the service department of a large office machine manufacturer. There are 15 employees in this department. Has worked on this job for 7 years. Works full time with no concessions due to his disability. Employer was informed of the nature of veteran's disability at the time of employment. Veteran is satisfied with his work. Works pretty much on his own and enjoys the freedom. Feels that the pay is adequate. Has been offered advancement to supervisor, but declined in order to continue where the pressure is less.

Veteran's preservice occupation was that of auto body repairman. After discharge from World War II service, operated his own auto repair garage for 6 years. This work became increasingly aggravating to his disability. Applied to VA for vocational rehabilitation. An on-the-job program of training in office machine repair was arranged with the present employer; upon completing the training, veteran was retained as an employee.

Initial VA diagnosis and rating: neurocirculatory asthenia, severe. Most recent VA rating: psychoneurosis, anxiety reaction, moderate. Complaints: headaches, fatigability, back pain, restlessness. Had psychiatric treatment on outpatient basis in 1953.

Veteran is married and has children.

RADIO REPAIRMAN. Veteran operates a radio repair shop in his home. Has been self-employed for past 8 years. Works irregular hours, when he feels well enough. Earnings therefore variable; could increase them if he were able to work regularly. Says he gets along well with customers, but prefers to be alone most of the time.

Prior to World War II service, veteran worked as a porter. Returned to that job after discharge, leaving it to enter training under the VA education program. Trained briefly via correspondence in radio repair; this was followed, in turn, by 24 months in painting and decorating and 9 months in woodworking. After training, worked for 2 months, then was hospitalized for mental illness. Was in and out of the hospital during next 4 years, following which he entered present self-employment.

Veteran suffered a psychotic break while in service. Symptoms: confusion, feeling of unreality, inability to carry on routine duties. Has required hospitalization several times since discharge. Diagnosis at time of last VA rating: psychosis, schizophrenic reaction, incompetent, severe impairment of social and industrial adaptability.

Veteran is separated from his wife; has children.

SEWING-MACHINE REPAIRMAN. Veteran works in a dress manufacturing plant. Has been with present employer 7 years. Employer knew of veteran's disability at time of hiring. Duties include servicing and repair of all makes and models of sewing machines, ordering parts, repairing and servicing electric irons. Veteran works regular 50-hour week, but employer, who is understanding and tolerant, allows time off for illness and treatment as necessary; absence not excessive. Coworkers also tolerant and encouraging. Veteran regards this as best job he has ever had.

Prior to World War II service, veteran worked as a shipping clerk. Following discharge was greatly disturbed; sat and cried most of the time. Recovering sufficiently to seek work, held various odd jobs during 4-year period. Brother-in-law reported to have been major force in rehabilitation of the veteran; taught him trade, gave him initial job, helped him find present one and kept in close touch until veteran achieved satisfactory job adjustment.

On discharge from military service, veteran was rated by VA for psychosis, schizophrenic reaction, undifferentiated type, considerable impairment of social and industrial adaptability. At time of most recent examination, psychotic disorder rated as in partial remission, definite impairment of social and industrial adaptability. Symptoms: excessive sweating, inability to sit still, negativism, anxiety and apprehension. Veteran is receiving psychiatric treatment through VA.

Veteran is married and has children.

TELEVISION SERVICE AND REPAIRMAN. Veteran is part owner of an electric appliance business; his duties involve mainly servicing TV receivers; sells occasionally. Has been in this partnership 13 years, 10 years on a full-time basis and before that, 3 years part time. Partner is aware of veteran's disability. Veteran works about 78 hours per week; only concession made to him is in deference to his fear of heights: is not required to install antennas. Likes the servicing work, but does not like dealing with the public. Business on profit-making basis, outlook good.

Prior to World War II service, veteran worked as a chipper, metal. After discharge, completed a course of training in radio and television repair under the VA vocational rehabilitation program. Did television and radio repair part time while working as a supply clerk in a textile mill; then went into present business on a full-time basis.

Veteran was hospitalized in service when following combat, he began to show a marked startle reaction, irritability, insomnia, loss of appetite, severe headaches, and swelling of his lips. Discharged for disability. Rated by VA for psychoneurosis, anxiety state, severe. Still complains of headaches, irritability, stomach trouble, fatigue. Is receiving psychiatric treat-

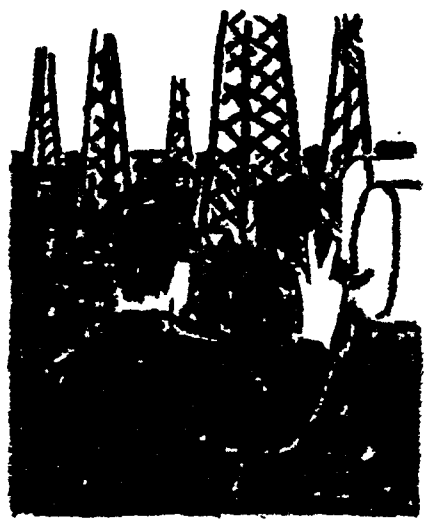
ment from local physician under VA fee-basis arrangement. Diagnosis at time of last VA rating was psychoneurosis, anxiety reaction, moderately severe.

Veteran is married and has children.

ADDITIONAL CASES: Coke-Oven Repairman—1; Diesel Mechanic—1; Electric-Motor Repairman—2; Electrical Appliance Serviceman—2; Electronics Technician—4; Gas-Appliance Serviceman—2; Instrument Repairman—1; Knitting Machine Fixer—1; Locksmith—1; Maintenance Man, Building—10; Maintenance Man, Factory—1; Maintenance Mechanic II—9; Maintenance Mechanic Foreman—1; Meter Repairman—4; Office-Machine Serviceman—1; Oil-Burner-Installation and Serviceman—1; Postage Meter Repairman—1; Radio and Television Repairman—2; Refrigeration Mechanic—4; TV Cable Repairman and Installer—1; Typewriter Repairman—1.

Tool Sharpeners and Dressers (5–84)

ADDITIONAL CASES: Tool-Grinder Operator—4.



FOREMEN

Foremen, Manufacturing (5–91 and 5–92)

FOREMAN, MACHINE SHOP. Works in a large machine manufacturing plant. Has been with same employer for 16 years and has advanced steadily. Employer knew of veteran's disability when he reemployed him after World War II military service and has shown great tolerance, via supervisors, in allowing him rest periods when he gets nervous or dizzy. Veteran works 40-hour week, only concession being in the form of rest periods as needed. Absenteeism which was excessive in early years after his reemployment, has declined. On-the-job relationships are good, even though he becomes irritable at times.

Veteran exercised his employment rights as a shipping clerk with present employer. Applied for apprenticeship training as a machinist under the VA vocational rehabilitation program and completed it. Progressed from journeyman to leadman, then to foreman. Work experience limited to this one employer.

On discharge from service, veteran was rated by VA for severe anxiety reaction, with conversion features. Has shown improvement but continues to suffer from irritability, dizziness and nausea. Rating reduced to moderate at time of most recent VA examination.

Veteran is married and has children.

FOREMAN, TEXTILES. Works in a textile mill that employs several hundred people. Has been with present employer since before World War II. Supervises 30 weaving machine operators. Works 40-hour week, with no limitations because of his disability. Reports that he gets along well with both his supervisors and the workers whom he supervises. Has had several promotions; is well satisfied.

Immediately after service, veteran returned to work at the mill where he was formerly employed as a mattress filling-machine operator; promoted to weaver, then to loom fixer, head fixer, to present job.

Veteran was hospitalized after 2 years' military service because of complaints of headache, dizziness, emotional disturbance. Discharged for disability; rated by VA for psychoneurosis, unclassified, moderately severe. Condition improved subsequent to discharge, upon return to home environ-

ment. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety type, moderate.

Veteran is married and has children.

PLASTICS MOLDING FOREMAN. Works in a large electronics manufacturing plant. Has been with present employer 12 years. Promoted to foreman 3 years ago; now supervises 16 plastics molders engaged in fabricating insulation terminals; confers with draftsmen who design new parts. Reports good on-the-job relationships; likes his job because it is challenging. Pay and job security good.

Has been employed in electronics manufacturing since shortly after World War II. Prior to service, worked as a laborer (laundry). Completed training for private pilot's license under the VA education program.

While on overseas duty, veteran developed insomnia, fatigue, battle dreams. On discharge, rated by VA for severe psychoneurosis. Complains of back and stomach pains and tension, but is currently much improved. Diagnosis at time of last VA rating: psychoneurosis, mixed, moderate.

Veteran is married and has children.

ADDITIONAL CASES: Chief Inspector, Machine Shop—2; Foreman, Auto Manufacturing—1; Foreman, Brick and Tile—2; Foreman, Logging—1; Foreman, Machine Shop—1; Foreman, Printing and Publishing—1; Foreman Typewriter Parts—1; Production Manager, Reproduction—1.

Foremen, Extraction of Minerals (5–93)

FOREMAN, PETROLEUM PRODUCTION. Works for large company which pumps oil from wells to storage tanks. Has been with present employer since discharge from World War II military service. One year ago was promoted from pumper, a job he held for 14 years, to foreman. Supervises work of six pumpers. Employer knew of disability at time of hiring; is described as being tolerant and helpful; delayed promoting veteran until he felt sure additional responsibility would not be too much for him. Veteran feels his job is very suitable for him because he is out and away from people, moves about, and works with only one or two persons at a time. Is very happy in his work.

Diagnosis at time of most recent VA rating: psychoneurosis, conversion reaction, chronic, moderately severe.

Veteran is married and has children.

Foreman, Construction (5–94)

ADDITIONAL CASE: Foreman, Construction—1.

Foremen, Transportation, Communication and Utilities (5–95)

FOREMAN, AIR TRANSPORTATION. Works in the passenger and cargo division of a large airline. Has been with present employer 5 years. Has not told employer of disability. Supervises six employees. Is in charge of all supplies kept for use in repair of aircraft; keeps perpetual inventory, notifies purchasing agent of supplies to purchase, checks in and issues sup-

plies, keeps supplies in order. Receives little supervision in his work. Describes working conditions as excellent; is well satisfied. Disability does not bother him on job, except that when he gets nervous, walks around until he is steady and settled down. Values his freedom to do this; also fact that his desk is in quiet location.

Following discharge from World War II military service, veteran took some business school and electrician training under the VA vocational rehabilitation program and a short period of flying training under the VA education program. Tried to work as an electrician, but considered that the work was dangerous because he was so nervous. Also tried saleswork, but was unsuccessful. Then got a job as storekeeper for an aircraft company. Tenure appeared uncertain, so veteran sought other work. Obtained his present job.

Though veteran is still subject to considerable nervousness, he can relieve it sufficiently, by moving around the plant, to carry on his job without loss of time. Disability was originally rated as severe; most recent rating: psychoneurosis, anxiety, moderate.

Veteran is married and has children.

Foremen, Services and Amusements (5–97)

TRUCK MECHANIC FOREMAN. Works in the garage of a freight trucking company. Has eight men under his supervision. Has been with present employer 14 years. Told the superintendent of his disability before he was employed. Makes repair estimates, and completes repair orders. Assigns personnel to repair and maintenance work. Inspects the finished work. Relationships with coworkers and supervisor appear to be very good. Work is steady and secure. Though there is little opportunity for advancement, veteran is content. Is not sure he would want or be able to accept the additional responsibility that would come with advancement. Works 48 hours a week, with no concessions because of his disability, except that he tries to avoid noise as much as possible.

Veteran and his employer were formerly neighbors. Hired as a mechanic, he has advanced to shop foreman. Formerly worked as a mechanic for local government agency, following a period of on-job training under the VA education program. Transferred to private industry because of higher pay. Prior to World War II military service, was a mechanic's helper. Schooling stopped at end of 7th grade, at age 15.

Veteran contracted malaria while in service in Africa. Following this, became weak, listless, was without energy and quite shaky. Had to be relieved from frontline duty several times because of extreme trembling, but was not hospitalized. On discharge, rated by VA for psychoneurosis, anxiety state, moderate. This rating was continued unchanged. At time of most recent psychiatric examination, veteran complained of anxiety and apprehension, restlessness, inability to relax, trembling, queasy stomach, in-

ability to stand excessive noise without becoming excited and tense. Visits family physician for sedatives.

Veteran is married and has children.

ADDITIONAL CASE: Foreman, Auto Seat Covers—1.

Foremen, n.e.c. (5–99)

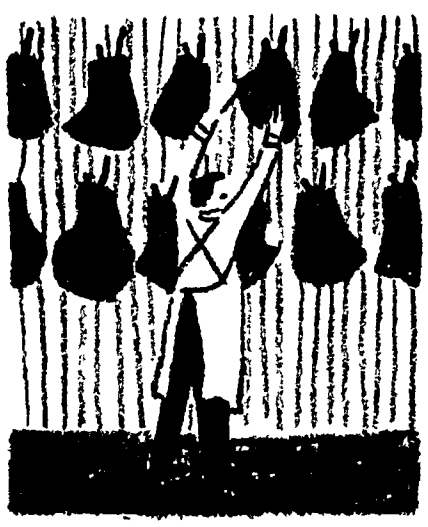
RECEIVING AND SHIPPING FOREMAN. Works in a railroad warehouse. Has been employed by this railroad 18 years. Employer is aware of character of veteran's disability. Veteran receives and makes up steel shipments. Likes job because he works outside and is away from loud noises and telephones.

Veteran obtained present job on basis of seniority, in accordance with union-management contract. Prior to his current assignment, worked as shop clerk, a job he had also held before World War II military service. Because noise and constant phone ringing made him very nervous, he bid for his present job.

Veteran's ship was torpedoed. He was picked up after 12 hours in the water. Became nervous, irritable, easily given to anger, experienced occasional blind spells. Was returned to United States for hospitalization. After 6 months, returned to limited shore duty, but had to be hospitalized again. Was given medical discharge. Rated by VA for psychoneurosis, war neurosis, severe. Complained of severe headaches, nervousness, battle dreams, blackouts, inability to stand noise. At time of most recent examination still complained of bodily pains. Last rating was dissociative reaction, conversion hysteria, moderate.

Veteran is married and has children.

ADDITIONAL CASES: Foreman, Garbage Collection—1; Foreman, Warehouse—2.



OCCUPATIONS IN MANUFACTURING AND RELATED ACTIVITIES

Occupations in Production of Food Products

Production of Beverages (6–03)

ADDITIONAL CASE: Cooler Operator (Beer)—1.

Slaughtering and Production of Meat Products (6–09)

LEG SKINNER. Works on the killing floor of a meatpacking plant. Has been with present employer, who does not know of his disability, 5 years. Is one of a five-man gang; says he gets along well with all of them and with foreman. Is satisfied with the work, its security and pay. Promotion and retention are by union seniority.

A laborer in a packing plant before World War II, veteran returned to this employment after service and has been promoted on a seniority basis through several labor grades. Overall, has worked 17 years in packing plant work (in two packing plants). In periods of layoffs he has worked at several semiskilled trades. Trained part time after working hours under the VA education program in radio and TV repair for a short time; then in auto body and fender work; but has not used this training on any job.

Diagnosis at time of last VA rating: psychoneurosis, anxiety neurosis, moderate. Symptoms: restlessness, quick temper, excitability, inability to relax, backaches, tension.

Veteran is married and has children.

Production of Miscellaneous Food Products (6–10)

ADDITIONAL CASE: Sugar Drier—1.

Occupations in Manufacture of Tobacco Products

Manufacture of Tobacco Products (6–12)

CIGAR PACKER. Sorts, grades and selects cigars for packing. Has had this job over 6 years. Works 40 hours per week and gets along well with

coworkers. Some possibility for advancement, but veteran is satisfied with present job and not interested in advancing. Job is well paid, exacting and ranks high in respect to the skills required in the cigar making trade. Employer was aware of the nature of veteran's disability at time of hiring.

Following discharge from World War II service, veteran was restless and unable to settle down. Spent 3 years traveling over the Eastern United States, holding a succession of short-term, unskilled jobs. Then entered and finished a 3-year apprenticeship program in cigar making under the VA vocational rehabilitation program. Has been employed in the field of cigar manufacturing ever since.

Veteran rated for psychoneurosis, mixed type. Degree of disability initially evaluated as severe, is now rated moderately severe.

Veteran is married; has no children.

ADDITIONAL CASE: Cigarette-Making-Machine Operator—1.

Occupations in Production of Textiles

Manufacture of Textiles, n.e.c. (6–19)

PIN-DRAFTING-MACHINE OPERATOR. Employed 4 years in a textile plant operating machines which process synthetic thread. Employer does not know of the nature of the disability. Veteran works under a "section hand," with whom he is on very good terms. Works 5 to 6 day week and has not lost time due to his disability. Hourly pay is top for this field of work. Veteran also farms part time on tract of land which used to be part of his father's farm.

Veteran was a farmhand before World War II service. Immediately after the war he completed a 2-year farm training program under the VA education program and farmed full time for 8 years until he took his present job. The latter was obtained through a friend who was helping recruit for the present employer.

After 10 months of service, veteran was discharged for disability. Rated by VA for psychoneurosis, hysteria, moderate. Examined at intervals since then, was found to have continuing abdominal complaints, fatigue, tremulousness. Veteran still has some symptoms and believes there is something wrong with his bowels. Diagnosis at time of most recent VA rating: psychoneurosis, anxiety state, moderate.

Veteran is married and has children.

ADDITIONAL CASES: Cloth Stretcher—1; Smash Piecer—1.

Occupations in Production of Fabricated Textile Products

Manufacture of Hats and Caps, n.e.c. (6–24)

ADDITIONAL CASE: Stiffener (Hats and Caps)—1.

Occupations in Fabrication of Textile Products, n.e.c. (6–27)

CUTTER, MACHINE. Employed 5 years in a textile plant operating a power-driven machine which cuts textiles for clothing. Employer does not

know of his disability. Although veteran states his job is "hard on the nerves," he is satisfied with it. Job offers only limited chance for advancement, but it is secure because of his union seniority.

Veteran was a laborer in a textile plant before World War II service. After service he returned to his job for 8 years; then entered on-the-job training as a machine cutter under the VA education program; after training, he worked 2 years in the plant where he was trained before transferring to his present job.

Veteran broke down in service after 2 months in combat. Rated by VA for psychoneurosis, anxiety reaction, severe. Chief complaints centered around gastrointestinal pains, and restlessness; also showed constant tension and obsessional thinking. Described as moody and emotionally unstable since childhood. At present complains of being nervous and tense; feels he must be busy at something or his tension will increase. Feels work is therapy to him; it gives him a feeling of self-reliance and adequacy. Diagnosis at time of last VA rating: psychoneurosis, anxiety state, moderate.

Veteran is married and has children.

ADDITIONAL CASES: Sewing-Machine Operator—2; Slitting-Machine Operator—1.

Occupations in Production of Lumber and Lumber Products

Sawmill Occupations, n.e.c. (6–31)

SAWMILL WORKER. Veteran has been with present employer 14 years. Works a 60-hour week, and states he would not change jobs even if he "were wealthy or had a better education." His responsibilities have been increased from time to time, but he does not aspire to supervisory duties. Employer was informed of the disability at the time he hired veteran as a trainee under VA vocational rehabilitation program.

Veteran was a sawmill worker prior to World War II service. Upon discharge, an on-the-job training opportunity with his present employer was found for him by VA rehabilitation officer. Veteran completed training and has remained with same employer ever since.

Veteran's nervous symptoms began during combat duty. Complaints included headaches, tension, tremors, swelling and choking in the throat, insomnia and gastrointestinal disturbance. Initially rated by VA for psychoneurosis, neurasthenic state, moderately severe. This has since been reduced to moderate. Veteran states he has no psychiatric disability; still believes his only disability to be a back condition.

Veteran is married and has children.

General Woodworking Occupations, n.e.c. (6–33)

ADDITIONAL CASES: Band-Scroll-Saw Operator—1; Machine Operator, General—1; Sticker Operator—1.

Planing Mill Operations, n.e.c. (6–34)

FRAME MAKER. Employed for 1½ years making window and door frames in a large sash and door factory. Employer is not aware of the veteran's disability. Veteran operates various woodworking machines. Works 40-hour week, with no limitations. States that he gets along well with his supervisor and coworkers but is not satisfied because of the layoffs in times of decreased activity in the construction industry. However, he does not know of a better opportunity because carpentry, his previous employment, is subject to the same cycles. Has received wage increases, but not promotions or added job responsibility.

Veteran was a carpenter prior to World War II military service. Returned to this work for 8 years, interrupted by two admissions to a VA hospital. Left carpentry to work as a frame maker; was employed 1 year when firm closed down; veteran transferred to the present employer. He was recommended for the job by a former supervisor.

Veteran was discharged near the end of the war because of disability. Hospitalized several times, most recently in 1957, when he was admitted suffering from depression. History of quarrels with relatives and of marital discord, which twice resulted in divorce. At time of most recent VA examination, veteran complained of being nervous and upset, subject to headaches and chronic insomnia. Diagnosis: psychoneurosis, anxiety state, moderate.

Veteran is married and has children.

Upholsterers (6–35)

CUSHION MAN. Employed 1 year in a furniture and drapery shop making curtains; does some custom upholstery at his home. Employer knows nothing of the veteran's disability. Veteran gets along well at work; has had two pay raises and expects promotion to a higher paying job as upholsterer soon. Has been given gradually increased responsibilities; is well satisfied and gets along well with other employees.

Veteran was a career service man until he was discharged for disability 6 years ago. Following discharge, completed an 18 months' trade school course in upholstery under the VA education program. With his severance pay established his own upholstery shop, but the town was too small to support a full-time shop. He applied for a job with his present employer and worked on a part-time trial basis; soon was hired full time.

Veteran suffered a psychotic breakdown while in service. Was hospitalized and given electroshock treatment. At present, very greatly improved; says he does not feel disabled. Diagnosis at time of last VA rating: psychosis, unclassified, competent, slight impairment of social and industrial adaptability.

Veteran is married and has children.

Manufacture of Furniture, n.e.c. (6–36)

ADDITIONAL CASE: Inspector (Furniture)—1.

Manufacture of Miscellaneous Finished Lumber Products, n.e.c. (6–39)

PICTURE-FRAME MAKER. Veteran has been employed 5 years in a small art gallery; he and employer are the only personnel. Designs, constructs and finishes custom picture frames to suit the individual picture. Job is steady, relationship to employer is excellent, wages are satisfactory. Veteran has refused higher paying jobs elsewhere, because he values following advantages of his present job: minimum supervision, attractive environment, lack of stress and pressure, dealing with professional clientele. Employer knows of veteran's disability.

Veteran was a student before World War II service. Upon discharge, entered art training under the VA education program. Completed an 8-month course in art school, followed by 18 months' training on the job in framing. After 7 years' employment in the shop where trained, he transferred to the gallery where he is now employed.

Initial VA rating was for moderately severe psychoneurosis. Diagnosis at time of last VA rating: psychoneurosis, anxiety reaction, moderate. Veteran states he has moody spells, at which time he does not want to talk to anyone but likes to get off by himself to read or paint. When upset or tense, suffers from gastrointestinal disturbance. Tries consciously to avoid situations that would upset him.

Veteran is married and has children.

ADDITIONAL CASES: Box-Blank-Machine Operator—1; Box-Maker, Wood III—1; Clipping-Machine Operator—1.

Occupations in Production of Paper and Papergoods

Manufacture of Paper and Pulp (6–41)

COATING-MACHINE OPERATOR. Veteran works in a small wallpaper manufacturing plant. Has been with present employer 3 years, last 6 months of which have been in present job. Generally works a 40-hour week; feels fully accepted on the job. Employer aware of the disability and makes concessions to the veteran, such as allowing rest period, leaving early on days when ill. Veteran says he gets along well with the other workers. Feels secure in job and intends to remain with his understanding employer. Prospects for advancement are very limited.

Prior to World War II service, veteran worked as auto service station attendant in family enterprise. Discharged from service for a severe psychoneurosis, he held various unskilled jobs for short periods, with much unemployment because he felt too ill to work. Answered an advertisement 3 years ago and went to work for present employer as a paper winder; promoted after 2½ years.

Diagnosis at time of initial and last VA rating: psychoneurosis, anxiety reaction, severe. Veteran described as a very passive individual; almost always sweating in palms of hands; lacking motivation and socially quite vegetative; wife makes most family decisions. Under tranquillizing medication from family physician, a general practitioner.

Veteran is married and has children.

Printing Occupations

Printing and Publishing, n.e.c. (6–49)

BOOK COVER MACHINE OPERATOR. Veteran works in a very large printing firm. Operates a machine that makes book covers from cardboard stock. Has been with present employer 2 years; promoted to present job 2 months ago. Employer thought to be aware of the disability, although the veteran has not made it known. Veteran works steadily, gets along well with other employees, has no difficulty with supervisor. The pay is high, with periodic advances.

Following 5 months' hospitalization after discharge from service during the Korean conflict, was reemployed in his preservice job of shipping clerk for 2 years, until the firm moved out of the State. Worked successively at a variety of unskilled jobs. Lost most of them through layoff; but in two instances he simply walked off the job after a short time. Two years ago present employer hired him as a laborer, on the basis of veteran's direct application.

Veteran suffered a psychotic break while in service and was discharged to a VA hospital, where he remained 5 months. Has not required hospitalization since that time (1952). At time of most recent VA examination, complained of nervousness; prefers to be alone; daydreams; judgment and reasoning power fair, but no insight into his condition; heavy drinking once a week. Diagnosis: schizophrenic reaction, in partial remission, competent, definite impairment of social and industrial adaptability. Veteran reports that he receives support and help from his spiritual adviser; believes he is much improved.

Veteran is married and has children.

Occupations in Production of Chemicals and Chemical Products

Production of Plastics and Related Synthetic Materials and Processing of Chemicals (6–15)

PURIFICATION-OPERATOR HELPER. Veteran works in a large manufacturing plant. Has been with this employer 3 years. Tends equipment which purifies chemical waste material before disposal. Works a 40-hour week with one other worker who is his supervisor. There are no limitations or concessions in the work due to the veteran's disability. The employer was not informed by the veteran concerning his disability because of reputed company policy of not hiring workers drawing disability compensation. Veteran's relations on the job are good and he is satisfied; believes that he will soon be rated a supervisor on another work shift.

Veteran's preservice occupation was construction mechanic. Following World War II he worked as an auto mechanic for 1 year, then completed 4 years of training in automobile mechanics under the VA vocational rehabilitation program. After 2 years as a journeyman he left for a better paying job in a manufacturing plant. Five years later he moved out of the

State and secured his present job by direct application to the personnel office.

Veteran was given a medical discharge from military service following prolonged combat action. Rated by VA for severe psychoneurosis, mixed type. Condition has improved since discharge, but veteran still suffers from irritability, tremulousness under stress, headache and backache; continues to be insecure and withdrawn. Had mental hygiene clinic service in the postwar years and states he has learned to live with his disability. Most recent VA rating: psychoneurosis, anxiety state, moderately severe.

Veteran is married and has children.

Production of Industrial Chemicals (6–52)

ADDITIONAL CASES: Chemical Operator II–3.

Occupations in Production of Petroleum and Coal Products

Refining of Petroleum (6–55)

BLENDER I. Veteran works in an oil refinery. Operates blending pumps; also cleans tanks and filters and loads tank trucks for delivery. Has been with present employer 6 years, 1 year in present job. Job adjustment is good; employer knows of the disability. Advancement possibilities are limited, but pay is on union scale and good.

Veteran was a sheet metal apprentice before Korean conflict service. Since discharge, has worked only for present employer. Was hired through influence of a relative. Began as a laborer, and after 2 years was promoted to maintenance man. Because paint fumes bothered him, he transferred to job as blender a year ago.

Veteran was wounded in combat and was a prisoner of war of the Communist Chinese for 3 years. Suffered from malnutrition, hepatitis, pain and swelling of legs. Following release, continued to complain of recurrent abdominal distress for which no organic basis was found. Has made a good social adjustment, except for inability to tolerate large groups of people. Diagnosis at time of last VA rating: psychophysiological gastrointestinal reaction, moderate. Also receiving compensation for residuals of foot injury and hepatitis.

Veteran is married and has children.

CASEMAN. Veteran has been employed 8 years in a gasoline refinery. Performs visual inspection and otherwise assists at the controls of an operating board regulating and indicating pressure, temperature and flow. Employer knows that veteran receives VA disability compensation but is unaware of the nature of his disability. Veteran works 40-hour week. Admits having occasional arguments with foreman, but says these are always resolved satisfactorily and relationships are good. Is satisfied with his job: shop is unionized and pay is good; work is steady; with increased seniority, veteran will have opportunity for promotion to reactor operator.

Veteran had no work experience prior to World War II. While in service, worked as a cook. In the first 6 years following discharge, prior

to his present employment, veteran had 10 different jobs as a cook and in various unskilled capacities. The longest duration of any of these jobs was 1½ years. Also took some training in auto mechanics under the VA vocational rehabilitation program, but discontinued prior to completion. Health and marital problems contributed to the veteran's instability during this period.

Veteran developed a severe headache after the shock of a blast when a large gun was fired near his duty station aboard ship; became nauseated and vomited frequently; was found to be tense and tremulous; started to stutter. Was given a medical discharge. Rated by VA for psychoneurosis, anxiety type, severe; this has since been reduced to moderate.

Veteran is remarried after divorce; has no children.

Occupations in Production of Rubber Goods

Production of Rubber Goods (6–57)

BANBURY-MIXER OPERATOR. Veteran has been employed 8 years in a large tire manufacturing plant; operates rubber compound mixing machine. Works 40 hours per week, with no limitations because of his disability. Says his relationships with coworkers are satisfactory. Job is secure and steady, but there is little opportunity for advancement. Employer does not know of his disability.

Prior to World War II service, veteran worked as a baling machine operator in a wool yarn factory. Following discharge, worked as a crane operator in a steel mill for 3½ years, except for a short time when he left because of inability to adjust to his coworkers. On returning to the job, again had difficulty adjusting and quit. Obtained his present job by direct application. Pursued part-time training in radio repair under the VA education program, but was dropped by the school for failure to study.

Initial VA rating for psychoneurosis, anxiety state, severe, has been reduced to moderate. Veteran states he has trouble sleeping and is nervous; retains some tendency to resist authority. However, he has insight into his difficulty; says he has forced himself to find a job and stay with it.

Veteran is married and has children.

Occupations in Manufacture of Leather and Leather Products

Manufacture of Leather (6–59)

ADDITIONAL CASES: Measuring-Machine Operator—2.

Manufacture of Boots and Shoes (6–61)

CLICKING-MACHINE OPERATOR. Employed 13 years in a shoe factory; cuts material over a die by operating a cutting press. Employer informed of the disability prior to hiring. Works a 40-hour week on piecework basis; his rate of production slows late in the day. Appears adjusted to his work and to his coworkers. Is satisfied with pay (union rates), but does not

feel secure in his job because of its seasonal nature and fear of a possible cutback in production.

Veteran was a student prior to World War II service. After discharge had two jobs as laborer for a couple of months each, then applied directly to his present employer for a job. After a short period of on-the-job training in simple machine operation, he was assigned to his present job. Enrolled in a trade school on a part-time basis (evenings), hoping to qualify as a refrigeration mechanic, but withdrew from this VA-sponsored training after a few months.

Veteran was wounded in service and held for a time as a prisoner of war. Rated by the VA for gunshot wound and psychoneurosis, anxiety reaction, chronic, moderately severe. Complains of frequent gastrointestinal disturbances; tires easily; becomes nervous and irritable when tired.

Veteran is married and has children.

EDGE SETTER. Four years ago returned to his former employment as an edge setter in a shoe manufacturing plant; shapes and polishes the edge of ladies' shoe soles. Job satisfaction is not high; job is steady, but there is some uncertainty about future outlook because shoe industry in this area is declining. Says he gets along very well with supervisors and coworkers. Employer does not know of his disability.

Prior to World War II service, veteran was employed as a sole sorter in a shoe factory. Upon his return he atended a trade school for a month, and the school placed him as an edge setter. Three years later the plant moved out of State. Under the VA vocational rehabilitation program, veteran then completed a 6-month on-the-job training program as a tile salesman, but did not pursue this occupation. Then entered a non-VA apprenticeship as a sheet-metal worker; left after 2½ years because the noise bothered him. Unemployed for 2 years, he was placed by the State employment service as a laborer in an electrical goods manufacturing plant; resigned to take higher paying job as a press operator in a plant manufacturing rubber goods. This lasted only 6 months due to seasonal slump; through the efforts of a friend, veteran then obtained present job in the same occupation he had followed immediately after release from the service.

Veteran was discharged from the service because of disability. Rated by VA for moderately severe psychoneurosis. Lifelong history of nervousness, trembling, depression, emotional instability, periods of confusion, easy fatigue, palpitations and insomnia. Most recent VA rating: psychoneurosis, anxiety reaction, moderate. Chief complaints were heart pain, insomnia, inability to tolerate noise.

Veteran is married; has no children.

ADDITIONAL CASES: Edge Setter—1; Stitcher, Machine—1.

Occupations in Production of Stone, Clay and Glass Products

Production of Clay Products (6–66)

KILN BURNER. Employed 7 years in a small tileyard as a kiln burner operator in the cooking of rocks and gravel. Employer now knows the

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nature of veteran's disability but was not informed of it at the time of hiring. Veteran works 48-hour week; gets along well on the job. Periodic wage increases have almost doubled his earnings since he began this job, but he has had no increase in responsibility and there is little chance for promotion. Veteran likes his job and is satisfied with it.

Before entering military service during World War II, veteran was an auto mechanic helper; returned to this occupation for 1 year following discharge. Was unemployed for a year, then worked as a laborer on construction jobs for 2 years and as a miner for a year. Took 24 months' trade school training in carpentry under the VA education program; then worked as a carpenter for 2 years. Left this work for his present job, which he obtained with the assistance of a relative employed in the plant.

While in combat, veteran began to display bizarre behavior, hyperactivity and marked flight of ideas. Was hospitalized and given shock therapy; showed little improvement. Discharged from service and transferred to VA hospital; rated for psychosis, schizophrenic reaction, hebephrenic type. Discharged after 9 months' hospitalization. At time of most recent VA rating, condition rated as schizophrenic reaction, in partial remission, slight impairment of socal and industrial adaptability.

Veteran is married and has children.

ADDITIONAL CASES: Fireman, Kiln—1; Pressman II (brick and tile)—1.

Metalworking Occupations

Machine Shop and Related, n.e.c. (6–78)

ASSEMBLER. Is employed in the machine shop of an iron foundry. Works on an assembly line, using handtools in assembling machine castings. Has been with present employer since before World War II. Employer was aware of disability at time of rehiring veteran. Veteran's present job represents a demotion from the job of machinist which he held in the same shop before entering military service. Found himself unable to tolerate close precision work; also, present job more compatible because it allows him to move around more, carries less responsibility. However, veteran frequently loses time from work because of illness. Gets along well with supervisor and his coworkers.

Veteran went to work for present employer 21 years ago, at age 18, and has had no other civilian work experience.

Veteran was unable to work for several months after discharge from service for disability. Still takes frequent sick leave. Complains of gastrointestinal disturbances, smothering spells, nervousness; unable to tolerate crowds, and is fearful of driving in heavy traffic. He doubts the psychological origin of his physical symptoms. Is receiving mental hygiene clinic services from VA. Takes tranquilizers on prescription. Diagnosis at time of last VA rating: psychoneurosis, anxiety reaction, with pylorus spasms, moderate.

Veteran is married and has children.

LATHE OPERATOR. Is employed in a factory that makes small machine parts for elevators. Is 1 of 120 employees. Has been employed here for 3 years. Employer was informed of the nature of veteran's disability at the time of hiring. Works 40 hours per week with no limitations in work schedule or tasks because of disability. Argumentative with coworkers and supervisors. Resents authority and complains to union delegate. Present job is secure, wages are adequate, but opportunity for advancement is not good.

Veteran's work experience prior to World War II military service was as an apprentice engineer. Present job constitutes his only postservice experience. Had difficulty obtaining job because of lack of prior qualifying experience.

Veteran is described as restless, withdrawn, seclusive, self-reproachful, resentful of authority; believes people mean to hurt him and avoids them; sees people's lips moving and is sure derogatory remarks are being made about him. The latest VA rating is based on the diagnosis of psychosis, schizophrenic reaction, considerable impairment of social and industrial adaptablity.

Veteran is married and has children.

TURRET LATHE OPERATOR, AUTOMATIC. Works in a small plant that manufactures hospital equipment. Has been with present employer 5 years. Employer not informed of disability. Veteran works 40-hour week. Feeds metal blanks into automatic turret lathe, removes them after machining, and puts them in a box. Is unable to machine to close tolerance or set up the machine; ascribes this to both his health and very limited education. Is worried about job security, which rests mainly on union membership. Work is subject to frequent layoff, depending on business volume.

Veteran drove heavy trucks prior to World War II service. Immediate postwar employment was in a variety of unskilled operative jobs. He completed a 2-year course in watch and jewelry repair under the VA education program, but never worked in this occupation. Worked as a winding machine operator for 1 year before being laid off; then for 4 years as an automatic screw machine operator; next as automatic turret lathe operator for 1 year; after being laid off, obtained present job on basis of direct application.

Initial VA rating for psychoneurosis, hysteria, pronounced; this has been reduced to moderately severe. Veteran secures treatment from VA mental hygiene clinic from time to time when he feels "too nervous and weak," but hours of work make this difficult.

Veteran is married; has no children.

ADDITIONAL CASES: Floor Assembler—2; Lathe Operator—1; Machine Operator—1; Multiple-Spindle-Drill-Press Operator—1.

Foundry Occupations, n.e.c. (6–82)

ADDITIONAL CASES: Sandblaster—2.

Welders and Flame Cutters (6–85)

WELDER, SPOT. Employed 10 years as a machine welder joining pieces of metal for use in pneumatic devices and machinery. Works a full week with some absences because of headaches. Says he gets along well on the job because the work is light and employer makes allowances for him. He feels that his present job is as good as he can get, and he has adjusted to it.

Veteran worked as a senior lineman with a utility prior to World War II service. Upon his return he was restless and uneasy and moved from job to job. Marital difficulties among his problems at that time. Until 1950 when he entered present employment, veteran did not stay longer than 9 months on any one job.

While in service, veteran was subject to almost constant headache, complained at times of nausea. On discharge, rated by VA for psychoneurosis, anxiety state, moderately severe. Same diagnosis at time of most recent rating, but disability now rated as moderate. Present complaints include constant headache, poor appetite, difficulty in sleeping and easy fatigue.

Veteran is divorced.

ADDITIONAL CASE: Welder, Spot—1.

Mechanical Treatment of Metals (6–88)

FORMING-PRESS OPERATOR. Veteran has been employed 10 years in an automobile parts manufacturing plant. Operates a press which forms auto body parts; also spends some time running the conveyor belt to and from the machine. Likes his job. Works on a late shift because pay is better. No limitation on present job. Employer is aware of the nature of veteran's disability.

Veteran had no employment prior to World War II military service. Following discharge, worked as a stock clerk; dissatisfied because he felt there was no future in it. Entered training course in Diesel mechanics under the VA vocational rehabilitation program, but interrupted after 3 months and changed to on-the-job training in auto mechanics. Worked as an auto mechanic for 2 years, but left because grease and oil aggravated his service-incurred skin condition. Employed as a timekeeper for a year, but when the work became unsteady and part time, transferred to present job.

During combat duty, veteran became severely disturbed: developed severe headaches, became shaky and tremulous. He was treated, returned to combat and became much more disturbed than at the time of original breakdown. Was afraid of the dark, cried easily, had severe headaches daily. Discharged for disability, he was rated by VA for psychoneurosis, anxiety reaction, severe. Received treatment from VA mental hygiene clinic. Since 1950 has made adequate vocational adjustment, but social and marital adjustment remain poor. At time of most recent VA psychiatric examination, continued to complain of restlessness, difficulty in sleeping, skin eruptions; but reported that he was engaging in more social and recreational activities. Rated for anxiety reaction, moderately severe.

Veteran is married and has children.

POWER-SHEAR OPERATOR. Operates a machine in the manufacture of fluorescent lighting fixtures. Has been on present job for 5 years. Is one of 50 employees. Employer knew the nature of veteran's disability at the time of hiring. No concessions in work schedule, except that sometimes he has to rest briefly because he gets nervous on the job. Also instructions must be written out for him, because he cannot remember them. Works 40 hours per week. Has progressed from helper to present job, and has had periodic pay raises. Is well satisfied with the job. Further advancement not likely because of veteran's limited intellectual capacity.

Following discharge from World War II service, veteran remained unemployed for several years because he felt he was unable to work. Took 5 months on-the-job training in textile weaving under the VA education program, but withdrew prior to completion. Worked sporadically in a cotton mill as a spinner over a period of 4 years, then as a carpenter's helper for 3 years. Obtained present job as a result of having known the employer in the Army. Preservice work limited to farm labor and part-time work as a butcher. Veteran left school at age 16 after completing 5th grade.

Veteran was hospitalized while in service and discharged for disability. Most recent VA rating: psychoneurosis, hypochondriasis, moderately severe, in a mentally deficient person. Symptoms: restlessness, irritability, and preoccupation with somatic ailments.

Veteran is married and has children.

PUNCH-PRESS OPERATOR II. Employed 9 years as a punch press operator in a large metal fabricating and precut structural steel plant. Employer does not know about the veteran's disability; veteran believes he would not have been hired had he told. Works a regular 40-hour week, and reports he gets along well with his foreman and fellow workers. Feels that his job is not secure and that the pay is inadequate; stays with it because he has been unable to get work elsewhere. Believes these rejections have been based on his disability.

Prior to World War II service, veteran worked as a laborer in a bookbindery. Had no employment from time of discharge until he obtained the present job through a relative who was a union official.

Veteran received a medical discharge from service because of manic-depressive psychosis. Prolonged VA hospitalization followed. Since his release his condition has steadily improved; at time of last examination, diagnosis was depressive reaction, slight social and industrial incapacity. Some of his symptoms remain; he feels tense, anxious, fears death, is restless, irritable and depressed; his heart pounds, he feels body vibrations and has butterfly sensations in stomach.

Veteran is married and has children.

ADDITIONAL CASES: Power-Shear Operator—1; Punch-Press Operator—1.

Furnacemen, Smelters, and Pourers (6–91)

PLATFORM MAN. Is employed by a large steel plant. Has been with present employer since 1938, except for 4 years of military service during

World War II. Employer was not informed of veteran's disability at time of rehiring and does not know of it now. Veteran caps ingot molds after they are filled with hot metal. Works 40 hours per week. Takes about 2 weeks of sick leave per year because of nervousness. Feels that 22 years' seniority gives security and expects to remain until retirement. Income is steady and in line with cost of living in his community.

Veteran finished 7th grade and went to work on present job as soon as he was old enough to be hired. He obtained the job without assistance. Following military service, he applied for but never accepted VA vocational rehabilitation benefits.

On discharge, veteran rated by VA for severe psychoneurosis (anxiety state). Since that time has had history of nervousness, diarrhea, tiredness and worry. Was given psychiatric treatment at a VA mental hygiene clinic soon after discharge, followed by treatment by a private physician. Recently returned to VA mental hygiene clinic, where treatment is now being provided. Veteran complains of numerous somatic and emotional difficulties. Most recent VA rating is based on the diagnosis of psychoneurosis, anxiety state, moderate.

Veteran is married and has children.

Fabrication of Metal Products, n.e.c. (6–93 and 6–94)

CAN INSPECTOR. Works in a large can manufacturing plant. Has been with company 14 years. Has not made disability known to employer. Examines cans, cartons, and containers manufactured on an assembly line production process for defects and conformity to specifications. Has had both wage increases and increases in responsibility since beginning work with present employer. Is satisfied with job, except that he doesn't like the swing shift. Reports good working relationships with supervisory personnel and coworkers. Job is secure and provides steady work and adequate pay, but offers little opportunity for advancement. Veteran intends to remain with this company.

Veteran's principal preservice occupation was wood filler. After World War II service, he worked 6 months as a packer and shipper in a bookbinding firm, then 6 months as an assembler in a plant manufacturing juke boxes. Applied for present employment because he felt it offered greater security.

Veteran became tremendously upset while in service under combat conditions for 10 months. On discharge rated by VA for psychoneurosis, anxiety state, severe. Symptoms included feeling of palpitation of heart, nervousness, restlessness, and frequent blowups. Condition has greatly improved; disability rated moderate at time of last VA examination.

Veteran is married and has children. Claims he and wife are making excellent social, marital and economic adjustment.

SHEET-METAL WORKER, HELPER. Works under the supervision of a sheet-metal worker in attaching aluminum siding to the outside walls of existing structures, cutting, fitting and forming the metal at corners and around openings. He and supervisor are the only employees of the contractor. Veteran has worked for this employer for 12 months. Employer

was not informed of the nature of veteran's disability, but does know that veteran is extremely nervous and that his capacity is limited in such things as climbing ladders and working on scaffolds. Accordingly, high level or two story jobs are not assigned him. Also when he becomes nervous and upset, supervisor sends him home. Excellent work relationship exists between veteran and his supervisor. Work hours per week vary from 24 to 48. Pay is based on piecework. Veteran is pleased with the job and expects to continue in it.

Prior to World War II service, veteran was a shipping clerk, wholesale. After service he worked for 9 years as a machine operator in a papermill. Gave it up because it aggravated his disability. Had no employment other than a few odd jobs for brief periods each until he was recommended to his present employer by a relative.

While in service, veteran was twice hospitalized for fatigue and overexertion. Has been hospitalized once since discharge, for a period of 2 months. Receives medication from the VA for his nervousness. Veteran feels that his condition has improved during the past year while working out of doors and not being under pressure on the job. Most recent VA rating is based on the diagnosis of psychoneurosis, anxiety reaction, moderate.

Veteran is married; has no children.

SLITTING MACHINE OPERATOR, HELPER. Is 1 of 150 employees in his shift in a factory which manufactures paper containers. Has been on present job 2½ years. Employer does not know the nature of veteran's service-connected disability. Works 40 hours per week, but misses 3 to 4 days per month because of disability. Was transferred to present job, where he works by himself, from job as sealing machine operator because he "blew his top" at foreman. Says that he is not satisfied in his job: the work is too heavy, there is too much pressure for production and promotion is not likely.

Before World War II service, veteran worked as a card cleaner in a textile plant. After discharge, initiated an on-the-job course of training as a comber tender under the VA vocational rehabilitation program. Interrupted this after 12 months due to interpersonal difficulties with supervisor. Worked as a card machine operator in a rug factory for 1 year and as a sheet metal worker for 2 years before getting present employment. Since release from service, has been unemployed a total of 8 years, but only 2 months of this unemployment have been during the last 5 years.

VA rating is based on the diagnosis of psychoneurosis, anxiety state, moderate. Veteran's complaints center around gastrointestinal disturbances. Also states that he never feels just right and is always on "edge," gets depressed easily and has a tendency to brood.

Veteran is married and has children.

ADDITIONAL CASES: Sheet-Metal Worker, Helper—1; Slitting Machine Operator—1.

Inter-Industry Metalworking Occupations, n.e.c. (6–95)

ADDITIONAL CASE: Welder Helper, Combination—1.

Electricians and Occupations in the Manufacture of Electrical Equipment

Manufacture of Radios and Accessories (6–98)

MACHINE OPERATOR (QUARTZ CRYSTAL GROWING). Works for one of the large electric manufacturing companies. Uses own observation and judgment in producing a satisfactory crystal. Has worked for present employer just short of 5 years. The exact classification of veteran's disability is not known by the employer, but its general nature was disclosed at the time of hiring. Regularly works 40 hours per week. Interpersonal relationships with supervisor and coworkers are good. He hopes for recognition and chance of promotion. Present job outlook is favorable.

Prior to Korean conflict service, veteran was a student. Upon discharge, enrolled in an industrial management course under the VA vocational rehabilitation program. Discontinued after 1 year and obtained employment with present employer as a sweeper. After 2 months was promoted to a furnace tender. One month later promoted to his present classification.

The latest VA rating is based on the diagnosis of psychosis, schizophrenic reaction, competent, slight impairment of social and industrial adaptability. Veteran says he feels personally able to control his nervousness; feels better when he keeps busy.

Veteran is divorced; has no children.

Manufacture of Miscellaneous Electrical Equipment (7–00)

ELECTRIC-SWITCH INSPECTOR. Works for a large appliance manufacturer. Is assigned to the refrigeration department which produces electrical controls for refrigeration equipment. Is 1 of 25 employed in a unit that makes final tests and adjustment of the controls. Has been with present employer 7 years (1 year prior to Korean service and 6 years since discharge). Almost 2 years of this have been on present job. Employer was informed of disability at time of rehiring. Veteran works 40 hours per week. Says he gets along well with fellow workers, but resents "tough" supervisors. Feels that some concessions should be made to him because of his disability. Feels insecure—afraid that automation will eliminate his job and that his lack of education or training will preclude his being shifted to other suitable work.

Worked for same company as a tester of aircraft controls before service. Returned to that job, but found it to be too heavy for him, because of his left leg amputation. Has had no work experience except with this firm. All training has been provided by the employer in the form of on-the-job training.

VA rating for amputation, left leg, below knee, neurosis, unclassified, moderate. Veteran says that because of his nervousness he resents tough

supervision. He states that he becomes tense and irritable in this type of situation. He also attributes stomach symptoms to his nervousness and on-the-job situation.

Veteran is married and has children.

Occupations in Manufacture of Transportation Equipment

Manufacture of Automobiles, n.e.c. (7–02)

DOOR ADJUSTER. Veteran has been employed 8 years on the assembly line of an auto manufacturing plant. Fits doors into the body frame. Gets along well on the job; says "my foreman looks after me." Job is fairly secure, with about 3 months layoff each year. There are periodic wage increases, based on union contract. No opportunity for promotion, because veteran is illiterate. Employer does not know the character of veteran's disability.

Veteran was employed for 6 years after World War II as a laborer in an auto spring factory. Obtained better paying present job by direct application to hiring office. Was given 2 weeks' vestibule training by employer. Employed for 15 years prior to military service as a professional baseball player.

While in service overseas veteran contracted severe dermatitis; was returned to military hospital in United States where he was observed also to have a limp, for which no organic basis was found. Discharged with service diagnoses of conversion hysteria and mental deficiency. Initial VA disability rating was for psychoneurosis, conversion hysteria, moderately severe; this has since been reduced to moderate.

Veteran is married; has no children.

ADDITIONAL CASES: Core Dipper—1; Motor Adjuster—1.

Building Aircraft, n.e.c. (7–03)

SHEET-METAL ASSEMBLER I. Veteran works in a large aircraft manufacturing plant. Assembles sheet-metal pieces, fabricated by others; job is in the experimental design shop. Has been with present employer, who does not know the nature of the veteran's disability, 5 years. Relationships with supervisors and coworkers are satisfactory. Veteran has had periodic wage increases. Attended training school for prospective foremen, but has not been promoted to foreman job.

Except for period of World War II service, veteran has been employed past 20 years in sheet-metal work, working for various employers.

Veteran complains of restlessness, irritability, tension, tremulousness, nausea and loss of appetite. Says he feels like "telling people off," but doesn't. Feels better when working. At home he keeps himself occupied to allay stress. Initial VA rating for psychoneurosis, anxiety state with gastrointestinal manifestations, moderately severe, has been reduced to moderate.

Veteran is married and has children.

ADDITIONAL CASE: Aircraft-Engine-Parts Assembler—1.

Occupations in Manufacture of Miscellaneous Products

Manufacture of Fabricated Plastic Products (7–10)

MACHINE OPERATOR, PLASTIC. Veteran works in a small plant that manufactures battery cases. Has been with present employer 5 years, the past 3 years in his present job. Employer knew of veteran's disability at time of hiring. Veteran serves as a relief operator of forming presses in which plastic molds are compressed. Relieves various operators for short periods each; this introduces change and variety into his duties and keeps the job from being monotonous. Likes his work; gets along well with foreman and coworkers. Was elected labor steward, but resigned because he found that the responsibility of dealing with management produced anxiety and strain.

Veteran's preservice occupation was meat cutter. After World War II service, he took 16 months on-the-job training in a municipal utility plant and then spent 2 years as a farm trainee under the VA education program. Left to attend a seminary; while going to school, worked part time for present employer. Laid off from the job, he had to drop out of school. Spent 2 years in a rural ministry, but found he could not get along on the salary. Reapplied to the battery plant and has been employed there since. Still serves as part-time minister, thereby supplementing his income.

Veteran's disability became manifest during military service while he was assigned as ward attendant in the psychiatric section of a base hospital. He became nervous, tense and tremulous, suffered from loss of appetite and sleep. Rated by VA at discharge for psychoneurosis, anxiety state, moderately severe; this has since been reduced to moderate. Current symptoms include feelings of anxiety, panic in crowds, sleeplessness.

Veteran is married and has children.

ADDITIONAL CASE: Machine Operator, Plastics—1.

Miscellaneous Manufacturing Occupations

Painters, Except Construction and Maintenance (7–16)

SPRAY PAINTER I. Has been employed 7 years by a major electrical appliance manufacturer. Spray paints parts of washing machines on an assembly line. Obtained job on own application. Informed employer of disability at time of application. Works standard workweek, with occasional overtime. Says he gets along well with foreman, who understands his condition; has no trouble with coworkers, but has as little to do with them as possible. Likes his job, except for fact of layoffs from time to time. Has no desire for additional job responsibilities.

Prior to World War II military service, veteran worked as housebuilder with his father. Following discharge felt too nervous to seek employment; spent several years on a relative's farm, working sporadically as a stope driller in a nearby mine. When mines closed, operated a picking machine in a textile plant for 3 years. Left this job to move to another city; worked as polisher and buffer in an automobile manufacturing plant for 6 months.

Quit after 6 months because he couldn't stand the noise. Applied for and obtained present job.

Veteran was discharged from service for disability. Rated by VA for severe psychoneurosis. Feels inferior to others, avoids groups, is resistant to directions and suggestions. Former aggressive acts and drinking have been replaced by passive withdrawal. Wants to be left alone. Currently receiving psychiatric treatment through VA hospital; also consults family physician frequently. Diagnosis at time of last VA rating: schizophrenic reaction, simple type, slight impairment of social and industrial adaptability.

Veteran is married and has children.

ADDITIONAL CASE: Paint-Touchup Man—1.

OCCUPATIONS IN NONMANUFACTURING ACTIVITIES

Construction Occupations

Construction Machinery Operators, n.e.c. (7–23)

BULLDOZER OPERATOR. Veteran has been self-employed on a contract basis for over a year. Operates a bulldozer digging farm ponds, basements and scraping clay in open pit mines. Averages 30 to 40 hours work per week, depending upon how he feels and the availability of contract work. Job has advantage of letting him set his own work pace. Between contracts drives a truck and operates the farm on which he lives.

Prior to World War II, veteran worked as an auto mechanic. Following discharge from service, was self-employed as a mechanic for 2 years. Had to give this up when owner reclaimed shop that veteran had leased. Worked as a power shovel operator for 2 years; quit because his back bothered him. After a year's employment as auto mechanic, he entered and completed a 3-year course of institutional on-farm training under the VA vocational rehabilitation program. Because of inadequate earnings, left the farm to work again as power shovel operator (1 year) and bulldozer operator (1 year). Entered present self-employment, where he can pace his work according to the way he feels.

Veteran is rated by VA for psychoneurosis, conversion hysteria, moderate and for compression fracture, first lumbar vertebra. Has backaches and gastrointestinal complaints.

Veteran is married and has children.

HOLE-DIGGER OPERATOR. Veteran works for an electric utility company. Has been with present employer 19 years, 4 years prior to service and 15 years since. When veteran was reemployed following World War II, he did not tell employer of his disability. On his present job, which he has held for 2 years, he operates a hole digging machine and places and anchors poles. Works 40 hours per week, with some overtime, and loses no time because of disability. Gets along well with fellow employees, he says, but has occasional arguments with foreman.

Except for some experience as a farmhand, veteran's entire work life has been with present employer. Following discharge from military service,

worked as lineman for 1 year; fell and broke his ankle. Required medical treatment over long period of time. Sued employer and was rehired and given jobs compatible with his leg disability. Was promoted to foreman of the hole-digger gang, but was bumped out of this job by employee with greater seniority 2 years ago. Veteran retreated to job he now holds.

Following 32 months in combat zone overseas, veteran was hospitalized for 8 months because of severe anxiety. On discharge, was rated by VA for psychoneurosis, anxiety state, severe. Rating subsequently reduced to moderately severe and at time of last examination, to moderate. Complaints include pains in chest and abdomen, heart pounding, insomnia, palms sweating, easy fatigue.

Veteran is married; has no children.

ADDITIONAL CASE: Bulldozer Operator—1.

Painters, Construction and Maintenance (7–27)

ADDITIONAL CASE: Painter, Rough—1.

Roofers and Slaters (7–31)

ROOFER. Is employed by a roofing contractor. Has been with present employer only 4 months. Supervises a crew of 5 to 10 laborers in applying gravel and asphalt roofs over a base of metal or wood sheeting. Employer does not know of the veteran's psychiatric disability. Relationships with employer and workers good. Works full week plus overtime when required. No concessions required because of disability. Employment subject to fluctuations in building activity.

Before World War II, veteran worked with his father as a carpenter's helper. Did not like carpentry, so gradually shifted over to roofing work. Following discharge from military service, he completed 2 years of VA vocational rehabilitation training in plumbing, but could not get into the union. Secured job as a roofer by own efforts. Has advanced to foreman status.

Veteran had prior history of gastrointestinal symptoms; these increased markedly during 5 months' combat duty. He was hospitalized for 2 months, then discharged. Rated by VA for severe psychoneurosis, anxiety, manifested by gastrointestinal reaction. Improved following discharge; rating subsequently reduced to moderate.

Veteran is married and has children.

ROOFER. Has been in this occupation 14 years, the last 2 with present employer. Works with a gang of roofers who install and repair heavy tar and gravel roofs atop commercial and industrial buildings. Employed steadily except for slack times in winter. Likes outdoor work and having freedom in hunting season. Has some arguments on the job due to his readiness to comment on anything he does not like. Employer has transferred him away from two supervisors. Gets along with current supervisor. Employer well satisfied with him as a productive worker. Employer hired him because he could do a job, and no information was asked

for or given about a disability. Promotion unlikely; veteran does not want any additional responsibility.

Veteran did some construction work before World War II. Upon his return he had serious social and vocational adjustment problems, including drinking and several arrests. Changed jobs frequently until a relative took him into his home in another State. Under this care he made substantial improvement in adjustment. Veteran's education ended in grade 7 at the age of 15.

Veteran developed acute panic state while in service in North Africa, after witnessing a buddy's death in an automobile accident. Had bad dreams and hallucinations, became hyperactive and confused. Was hospitalized and discharged for disability: Adjustment, which was very poor for a number of years, has improved, but violence of temper and frankness of speech get him into difficulty. Complains of insomnia and nervousness. Initial and most recent VA rating; psychoneurosis, conversion hysteria, moderate.

Veteran is single.

ADDITIONAL CASES: Roofer, Asphalt, Tar and Gravel—1; Roofer, Composition—2.

Construction Occupations, n.e.c. (7–32)

ASPHALT RAKER. Employed past 15 years by a city department of public works. Is a member of a gang of 10 to 12 men engaged in paving and resurfacing streets. Rakes and brushes asphalt roadbuilding material to distribute it evenly over street. Works 40 hours per week. Enjoys his work. Has received regular pay increases but no promotion. Work record is excellent. Employer knew of disability at time of hiring.

Veteran worked as a laborer in a brickyard prior to World War II service. Upon his return applied for present job on own initiative. Has had no other work experience.

Rating by VA for psychoneurosis, anxiety state, moderate, has remained unchanged. Symptoms, still present, are described as hyperirritability, profuse sweating and rapid heartbeat. During anxious periods, he is quick tempered. Vomits almost every morning after arising and frequently following a meal. Feels as if there were something crawling on his skin.

Veteran is married; has no children.

SEAT INSTALLER. Works for a company that sells and installs seating in schools, churches, theaters and other public places. Has worked for present employer, who is aware of the character of veteran's disability, for 11 years, except for periods of hospitalization. As member of a crew of 5 to 10 men, drills holes in floors, installs and connects seating units. Job requires travel. Works full time except for seasonal layoffs. Good relationships with foreman and others. Steady and productive worker. No opportunity foreseen for advancement. Would prefer outdoor work, but is reluctant to consider changing, because of his accumulated seniority.

Veteran worked as a sales clerk before World War II service; after discharge, worked very briefly as a railroad engine hostler, and then as a textile

machine operator. This was followed by 2 years' employment as an express freight handler. Was bumped from this job by a returning veteran. Obtained present job through a relative employed by same firm.

Veteran suffered a psychotic break while in service and was hospitalized. About 6 months following discharge, improved to the point where he was able to hold employment. Two years later again required hospitalization because he became increasingly suspicious, withdrawn, and depressed. Since that time this pattern has been repeated several times; periods of temporary remission have been followed by recurrence of illness. Since 1943, veteran has been hospitalized five times. Is currently on trial visit from VA hospital. Diagnosis: psychosis, schizophrenic reaction, paranoid type.

Veteran is single.

ADDITIONAL CASES: Pipe-Fitter Helper—3; Plumber Helper—1; Tile-Setter Helper—1.

Asbestos and Insulation Workers (7–33)

ADDITIONAL CASE: House Insulator—1.

Transportation Occupations

Routemen (7–35)

MILKMAN. Has been employed 9 years as a driver-salesman for a milk products company. Obtained the job through the help of friends. Employer knew the character of veteran's disability at time of hiring. Veteran had difficult time adjusting to work; keeping a record of all sales, meeting people, and making collections were hard for him; driving the truck made him nervous. Is extremely methodical and perfectionist; this slows him down, and as a result he gets tense and jittery. Has overcome these difficulties at least sufficiently to be able to hold on to the job. He says, "A person can overcome these things if he sets his mind to it."

Prior to World War II service, veteran was a student. Following discharge, spent 2 years as a machinist trainee under the VA vocational rehabilitation program, but discontinued training prior to completion. Worked as a clothes presser for 3 years. Quit because he found his job arduous (fainted on job). Obtained present employment.

After prolonged sea duty in combat area, veteran complained of headaches, nightmares, dizziness, poor appetite and insomnia. On discharge rated by VA for psychoneurosis, anxiety reaction, severe; this reduced to moderately severe 1 year later; continued at this level until a few months ago, when rerated as moderate.

Veteran is married and has children.

ROUTEMAN, FUEL OIL. Veteran has been employed 10 years, except for periods of hospitalization, as a driver-salesman delivering fuel oil in a rural and small town area. Employer did not know of the disability at time of hiring, but knows now. Is very understanding of the veteran and has been helpful to him in many ways, including financial. Veteran gets along

well with customers and coworkers. Hours of work vary with season. There is no prospect for substantial increase in income or for advancement on this job, but veteran is satisfied.

After World War II service, veteran remained out of work for a year; then worked 4 months as a bread route salesman, but was discharged because he was considered too slow. Operated a retail liquor store for a relative for 1½ years. Drove a light pickup truck for a dry cleaning establishment for 2 years before obtaining present job by own efforts. After 7 years on this job, had a blackout and wrecked a truck. Was hospitalized several times for psychiatric disability during the next 3 years; was recently rehired by employer.

Veteran was discharged from service for disability; symptoms at that time included nervousness, headaches, dizziness, and occasional fainting. Rated by VA for psychoneurosis, anxiety state, severe. At time of most recent VA examination, manifestation of disability included tremors, marked tension and excitability, flight of ideas, circumstantiality, and occasional indulgence in alcohol as a result of tension. Social and marital adjustment were described as poor. Disability rated as moderately severe.

Veteran is separated from wife, divorce pending; has children.

ROUTEMAN, WATER SERVICE. For the past 18 months, veteran has been employed by a small firm which provides water softening service. He sells water softening equipment and then services the equipment in customers' homes, delivering chemicals, cleaning and repairing the system. Works 40 to 60 hours per week, with no concessions to his disability. Employer was informed of the nature of the disability at time of hiring. Veteran likes his job; has received pay increases and greater responsibility.

Prior to and immediately following World War II military service, veteran's vocational adjustment was extremely poor. Went from odd job to odd job and drank excessively. First stable employment consisted of 6 months as a forest ranger and 1½ years as a U.S. Government clerk. Both jobs were terminated for VA hospitalization. Next worked as a laboratory technician in a paper mill for 3 years; left this to sell real estate for 4½ years. Took evening college courses in sales under the VA education program. Quit selling for present job, because latter offered greater opportunity. It was through friends that present job was offered to him.

Veteran developed an active psychosis, diagnosed as manic-depressive, soon after discharge from service. Hospitalized at that time and again in 1950. Since 1950 has made a relatively good adjustment, although he gets mildly depressed at times. Drinking, which was formerly a problem, is now moderate. Diagnosis at time of last VA rating: psychosis, manic-depressive type, in remission, slight impairment of social and industrial adaptability.

Veteran is married and has children.

ADDITIONAL CASES: Milkman—4; Routeman, Bakery—3; Routeman, Coffee—1; Routeman, Eggs and Poultry—1; Routeman, Laundry—1.

Chauffeurs and Drivers, Bus, Taxi, Truck and Tractor (7–36)

TAXI DRIVER. Is employed by a small taxicab company. Has worked for this employer 3 years. Informed employer of disability at time of hiring. In addition to driving a cab, does some supervision and routing of other drivers. Is satisfied with his job. Works only when he feels like it; consequently, his income is limited and irregular, and advancement is not likely. Says he has no difficulty with other employees or his employer.

Before World War II, veteran taught blueprint reading. After discharge he took 22 months vocational school training in auto mechanics under the VA education and vocational rehabilitation programs, but has not worked in this field. Took job as a taxi driver. When the company went out of business 4 years later, transferred to another cab company, where he stayed 9 years. Left to work part time for present employer.

Veteran was discharged from the Navy after 5 months' hospitalization. Chief complaints since discharge have been insomnia, dizzy spells, fatigability and "nervousness." Initial VA rating for psychoneurosis, conversion hysteria, moderate, has remained unchanged.

Veteran is married; has no children.

TRACTOR OPERATOR. Veteran has been employed 4 years by State highway department in the construction and repair of roads. Employer knew the character of his disability at time of hiring. Veteran works a full 40-hour week, gets along well with coworkers. States there are no concessions made because of his disability. Expresses mixed feelings about his job. Does not like security prospects nor present pay. Considers job dependent on politics. Adequate increases are promised.

Veteran worked on a farm prior to World War II service and for unspecified period after separation. Operated a forklift for 7 years. This was a civil service job, which terminated because of veteran's illness. Present job secured through a friend with political influence.

On discharge from service, veteran was rated by VA for psychosis, manic-depressive type, incompetent, complete social and industrial inadaptability. Adjudged competent 3 years later. Most recent rating indicates definite impairment of social and industrial adaptability. Veteran manifests extreme religiosity; feels he is a minor prophet and must preach.

Veteran is married and has children.

TRAILER TRUCKDRIVER. Drives a heavy trailer truck for a wholesale drug and chemical supply firm. Has been with present employer 22 years, including 7 years prior to military service. Informed employer of disability shortly after he was reemployed. Works 40-hour week, with no concessions because of disability. Says he gets along well with all associates except one who is regarded as a "needler" by all. As union member, has had periodic wage increases. Expects to be transferred soon to warehouseman job, which he feels may be better because of his service-incurred arthritis.

Veteran was discharged from World War II service for disability. Rated by VA for severe psychoneurosis, anxiety, hysteria. On latest VA examina-

tion, had numerous subjective complaints, vague and emotional in nature, was emotionally perturbed and frustrated. Diagnosis: psychoneurosis, conversion reaction, moderate.

Veteran is married and has children.

TRUCKDRIVER, LIGHT. Drives a light delivery truck for a hosiery manufacturer. Makes local deliveries, helps load and unload trucks. Has worked for present employer 12 years. Employer was told of disability at time of hiring. Veteran satisfied with present job, which he obtained 8 months ago through transfer within the company. Works steadily at wages considered good for this area.

Prior to World War II service and for 4 years after discharge, veteran worked on father's farm. During latter period, took 2 years' farm training under the VA vocational rehabilitation program. Left to take job as stockroom clerk in present employer's hosiery mill; after more than 11 years on this job, was transferred to present job as truckdriver.

Veteran suffered a psychotic break while recovering from minor operation in a service hospital. Symptoms were described as apathy, withdrawal, auditory hallucinations, defective memory and negativism. After 5 months of service hospitalization was given a medical discharge and transferred to a VA hospital, where after 2 months, he was placed on trial visit to home. Discharged from hospital after 9 months' trial visit. For past 12 years, psychosis has been in almost complete remission. Most recent VA rating: psychosis, schizophrenic reaction, catatonic type, in partial (almost complete) remission, slight impairment of social and industrial adaptability.

Veteran is married and has children.

TRUCKDRIVER, LIGHT. For the past 2 years has worked as a driver of a pickup and delivery laundry truck. Employer not informed of the disability. Veteran works 50-hour week, with no limitations. Says he gets along well with customers and fellow employees, but feels that he has been unfairly treated by employer. Is also quite dissatisfied because wages are very low. This small business firm has no wage increase or fringe benefit plan.

Before entering World War II service, veteran worked for 4 months in a clothing factory. After discharge, worked 8 months as a short order cook; 4 months as auto service station attendant. Drove milk delivery truck off and on over a period of 5 years. Obtained present job by direct application.

Veteran had history of emotional instability dating from childhood. Hospitalized while in service after he manifested symptoms of a psychosis. Hallucinations and delusions cleared up prior to his discharge. Following discharge, rated by VA for schizophrenic reaction, simple type, considerable impairment of social and industrial adaptability. At that time, veteran complained of being nervous, jittery with frequent headaches, unable to concentrate; displayed ideas of persecution; memory, insight, and judgment were poor. Condition improved over the next 2 years to point where disability was rated as producing only slight impairment of social and industrial adaptability. This rating has been confirmed.

Veteran is single.

ADDITIONAL CASES: Chauffeur—1; Taxi Driver—5; Tractor Operator—1; Trailer-Truck Driver—7; Truck Driver, Heavy—20; Truck Driver, Light—15.

Trade and Service Occupations

Laundering, Cleaning, Dyeing, and Pressing of Apparel and Other Articles (7–57)

ADDITIONAL CASE: Presser, Machine—1.

Trades and Services, n.e.c. (7–59)

ADDITIONAL CASE: Carpet Layer—1.

Attendants, Filling Stations and Parking Lots (7–60)

GARAGEMAN. Veteran has been working for U.S. Post Office garage for 7½ years. Secured job thru civil service examination. Gave information about his disability on his application. Job duties consist of servicing post office and automotive equipment; he inspects for gasoline, oil, water, supplies these items when needed, and makes minor mechanical adjustments. Likes his job because it offers adequate, steady income and a definite feeling of security.

Prior to and immediately following World War II service, veteran had job at an Army airfield, doing servicing and maintenance work. When, after 2 years, his job was reclassified downward to laborer, he suffered a relapse and was hospitalized for 2 months. Upon return from hospital, he pursued 1 year of schooling at high school level under the VA vocational rehabilitation program in preparation for clerical work; this was to have been followed by business college training, but veteran again had recurrence of illness and required hospitalization for 1 month. After discharge from hospital, obtained job with Post Office as mechanic helper; after 18 months, transferred to present job.

While in service, veteran became seclusive, hallucinated, suicidal, and depressed. Was hospitalized and given both electric and insulin shock treatments. Following discharge, improved to point where he was able to find and hold a job for a time, but between 1947 and 1950 was rehospitalized twice. Has had no recurrence of acute illness since then; adjustment much improved following his marriage and achievement of job stability. Diagnosis at time of last VA rating: psychosis, schizophrenic reaction, paranoid type, in remission, competent, slight impairment of social and industrial adaptability.

Veteran is married and has children.

PARKING LOT ATTENDANT. Veteran has been working as a parking lot attendant for the same employer for 23 months. There are three other employees working with him. He attends a small office-like booth, issues clock-punched tickets for parked cars, collects in accordance with a set rate when a car vacates the lot, keeps records, and makes bank deposits. He works on a shift with one other employee, and they seem to work with

mutual respect and harmony. Present employer does not know of the character of his disability; it was never discussed. Job is steady and secure. Little prospect of promotions, although wage increases are possible. He seems to like the work and has lost no time from the job.

Veteran was a truckdriver prior to World War II service and returned to that job after discharge. Worked for 12 months and then quit because he could not get along with the foreman. Another short-term job as truck-driver for a bottling concern was followed by 4 years as a weaver, automatic loom, in a textile plant, and 1 year as an insurance agent. Hospitalized for 1 month, then worked briefly as a grocery stock clerk, again hospitalized for 9 months. Resumed job as an insurance agent, but lost about 1 week per month from work because of illness. Quit this job to take present employment, which he obtained through a friend. Before his hospitalization, took 7 months' training in a correspondence course in rayon weaving under the VA education program.

Veteran was demobilized after approximately 17 months' service. Treated during this time for nervousness associated with headaches, burning sensation in face, night sweats and restlessness; illness diagnosed as psychoneurosis. Nine years later (in 1956) became delusional, hallucinatory, violent and threatening; diagnosis at this time: psychosis, schizophrenic reaction, paranoid type. Veteran improved during hospitalization and was discharged after 9 months. Has not required hospitalization since that time. At most recent VA examination, veteran had numerous complaints of somatic pains, but no hallucinations or gross defects in thinking were found. Psychosis rated as in partial remission, severe impairment of social and industrial adaptability. Veteran takes tranquilizers on prescription from private physician.

Veteran is married and has children.

SERVICE STATION ATTENDANT. Has been employed in this capacity for a period of 7 years. The establishment is owned by members of his family, and there are two other employees. He services cars, including changing tires, dispensing gas and lubrication, selling and installing various accessories. Likes his job because his work is steady and offers some security. Receives low pay, mainly because his production is low; he is not able to work very fast and also takes time off for rest because of headaches, which occur about twice a week.

Veteran's principal occupation prior to World War II service was service station attendant. Following service he trained under the VA vocational rehabilitation program for general farmer for 48 months and followed this work for a period of 1 year after completion of training. Gave up farming because he experienced terrific headaches and felt he had to do something that would not entail much pressure. Returned to preservice occupation because, the business being owned by the family, he can set his own work pace.

Veteran developed a nervous condition and headache while in military service in Guam; also incurred gunshot wound. Hospitalized 6 months.

Initial VA rating for severe war neurosis; most recent rating; psychoneurosis, anxiety reaction, moderately severe.

Veteran is married and has children.

ADDITIONAL CASES: Automobile-Service-Station Attendant—12; Parking Lot Attendant—1.

Public Service Occupations, n.e.c.

Public Service, n.e.c. (7–61)

HIGHWAY MAINTENANCE MAN. Veteran has worked for the State highway department for 5 years. Obtained job thru civil service examination. Told employer of disability at time of application. Repairs roads, cleans ditches, repairs guardrails, sets up highway markers, and in the winter removes snow from the surface of roads. Says he gets along fine with his supervisor and coworkers and has been placed in charge of the crew in the absence of his supervisor. Works 40 hours per week, but misses several days each month due to illness. These absences are covered by overtime and allowed sick leave. Is occasionally assigned easier jobs during these sick spells; this helps him to stay at work.

Veteran worked as a heavy truckdriver prior to World War II service. After discharge, entered apprenticeship training as an auto mechanic under the VA vocational rehabilitation program. Quit training after 3 years because the auto fumes affected his health. Farmed on a rented farm for 1 year, then worked as a laborer in an iron mine for 4 years. Left to accept present job.

VA rating is for psychoneurosis, anxiety reaction, moderate. Veteran gets spells of nervousness, during which he breaks out in sweat. Complains of severe pressure inside head.

Veteran is married and has children.

ADDITIONAL CASE: Highway Maintenance Man—1.

MISCELLANEOUS OCCUPATIONS

Firemen, Other Than Process Firemen (7–70)

ADDITIONAL CASES: Fireman, Stationary Boiler—2.

Oilers of Machinery (7–71)

OILER II. Is employed by an iron mining company. Has been with present employer, who was informed of disability at time of hiring, almost 7 years; last 6 years have been in his present job. Oils mining equipment and does minor mechanical repairs. Occasionally operates the equipment and on rare occasions does some laboratory work at the mine. Works 40 to 60 hours each week, with no limitations because of his disability. Says he gets along well with his coworkers and supervisors. Feels the job provides adequate pay and security; is satisfied with it. In addition to his job at the mine, operates a small farm.

Before World War II service, veteran was camp cook at a CCC camp. After service he worked for a year each as routeman for a bottle gas firm, self-employed truck driver and hardware delivery man; left these jobs because they were too hard on his nerves. Went into farming, and took 40 months' farm training under the VA vocational rehabilitation program. Quit to work for present employer, first as a member of a construction crew, next as a machine operator in the ore washing plant, and then on this present job.

Veteran was a Japanese prisoner of war for 3 years; has a variety of physical residuals of this experience for which he is receiving VA disability compensation. Psychiatric disability initially rated as severe was evaluated as moderately severe at time of last VA examination. Diagnosis: psychoneurosis, anxiety state. Veteran described as having feelings of resentment and hostility, suffering from insomnia, poor appetite, restlessness.

Veteran is married and has children.

ADDITIONAL CASES: Oiler II—2.

Drillers, Extraction of Minerals and Construction (7–75)

ADDITIONAL CASE: Rotary-Driller Helper—1.

Mechanics and Repairmen, Railroad and Car Shop (7–79)

AIR COMPRESSOR MECHANIC. Veteran is employed in a railroad machine shop. Has worked for present employer for almost 13 years, the last 6 of which have been in his present job. Employer knew of disability at time of hiring. Veteran says he likes the work and gets along well with coworkers and supervisors. He has had increased responsibility on the job. Feels the job is secure, offers adequate pay and some opportunity for further advancement.

Prior to World War II service, veteran was a drill press operator. After discharge, returned to that job for a brief period, then worked as a laborer for a year before going with present employer. Obtained present employment with help of a friend.

At discharge, veteran rated by VA for psychosis, manic-depressive reaction, in partial remission, considerable impairment of social and industrial adaptability. Last suffered manic-depressive reaction, manic type, in 1947. At time of last examination, rating of slight impairment of social and industrial adaptability was continued.

Veteran is married and has children.

Mechanics and Repairmen, Motor Vehicle (7–81)

ASSEMBLER, TRUCK. Veteran has worked for the past 3 years as a member of an assembly team which assembles and disassembles experimental trucks. Both employer and immediate foreman know of disability; were informed at time of hiring. Veteran works 40-hour week, with no concessions because of his disability. Supervisor said to be considerate and understanding but firm with respect to veteran's work responsibilities. Veteran does miss about 3 weeks per year because of his disability. Gets along well with coworkers. Likes his job, because it offers varied, interesting work and security. Has had periodic wage increases, but no promotion.

Veteran had no preservice occupation. After World War II service, he worked successively as a telephone installer (3 months), auto assembler (6 months), and light truckdriver (2 years). Then entered and completed 18 months on-the-job training in truck mechanics under the VA vocational rehabilitation program; worked as a mechanic until he found job as a water-meter repairman; left after 1 year for higher paying job as assembler in an automobile plant. Quit because of boredom. Moved out of the State. Worked as a process helper in an aircraft plant. Returned home, almost broke, and obtained present job with help of a friend.

Veteran's first symptoms of psychiatric disability appeared shortly after he entered military service. He was hospitalized and given electric shock treatments. On discharge, rated by VA for psychosis, schizophrenic reaction, catatonic type, competent, definite impairment of social and industrial adaptability. This rating recently confirmed and continued. Veteran has not required hospitalization since discharge, but has been under almost constant treatment by a private psychiatrist under VA fee-basis arrangement.

Veteran is married and has children.

AUTO MECHANIC HELPER. Has worked as an auto mechanic helper under State civil service for past 8 years. Specified nature of his disability at time of application. Assists the journeyman mechanic, and performs such duties as greasing and oiling and washing cars and trucks; makes minor adjustments and repairs. Works 40 hours per week, with no limitations. Enjoys a very pleasant working relationship with foreman and all other workers in the shop. Is satisfied because job is steady, offers security, and is easy on his nerves. Has had periodic wage increases but no promotions.

Prior to World War II service, veteran's principal occupation was that of commercial fisherman. He returned to this work after service for a little over 5 years. Left because of inadequate earnings. Entered training under VA education program, and completed 18 months' trade school course in air conditioning and refrigeration. Worked as an air-conditioning serviceman for 11 months; lost job because employer went out of business. Drove a garbage truck for 2 years until he obtained present civil service employment.

At time of veteran's discharge, his disability was rated by VA as psychosis, schizophrenic reaction, in partial remission, considerable impairment of social and industrial capacity. Rating changed 6 months later to indicate psychoneurosis, mixed type, moderate. This has been continued. Currently veteran complains of constant headache, nervous stomach, and loss of appetite.

Veteran is married and has children.

ADDITIONAL CASES: Automobile Mechanic Helper—3; Truck Mechanic—1; Windshield Man—1.

COIN-MACHINE SERVICEMAN. Has been employed for 6 years in a coin machine servicing establishment owned and operated by a relative. Most of his time is spent in repairing and servicing pinball and vending machines and juke boxes; also stocks machines and does some collecting. Works 65 hours per week, with no limitations because of his disability. Is not under direct supervision. Gets along well with employer-relative. Job is secure; pay adequate. Veteran has had some wage increases, but no promotions.

Prior to World War II service, veteran managed a dry cleaning establishment. After discharge, worked as a dry cleaner (2 years), stationary engineer (1 year), and machine operator in an industrial chemical plant (7 years). Left this last job because it was nightwork and bad on his nerves. He trained for approximately 2 months under the VA vocational rehabilitation program as manager, auto parts establishment, but did not like this sort of work.

Veteran's complaints—insomnia, headaches and loss of appetite—date from discharge from service. Several years ago complained of having a heart condition and bronchial asthma; no medical evidence of either. Diagnosis at time of last VA rating: psychoneurosis, anxiety, moderate.

Veteran is married and has children.

ADDITIONAL CASES: Coin-Machine Serviceman—1; Farm-Machinery Set-Up Man—1; Lawnmower Repairman—1; Set-Up Man, Punch Press—1; Water-Meter Installer—1.

Tool Sharpeners and Dressers (7–84)

ADDITIONAL CASE: Wheel Finisher—1.

Transportation Equipment Laborers, Washers and Greasers (7–85)

ADDITIONAL CASE: Greaser (Auto Service)—1.

Chainmen, Rodmen, and Axmen, Surveying (7–87)

SURVEYOR'S HELPER. Works for a commercial surveyor as a helper, carrying the chain and doing some mapmaking in the office. Has been with present employer 8 months. Sees his job as being insecure, with very low pay. Feels that he is capable of carrying increased responsibilities, but that he is not given the opportunity because the employer, knowing of his disability, is prejudiced against him. Likes the outside work, however, and is grateful for the job. Has had one pay increase since starting on this job. Believes his coworkers, who are aware of his disability, do things to belittle him and joke about his mistakes.

Veteran was a student prior to World War II service. After service, worked for 4 years as a farmhand on family farm. Felt he was not getting anywhere, and quit to attend school under the VA education program, majoring in music. Hospitalization interrupted training; while in hospital, learned upholstering. Followed this trade for 12 years, leaving it because of low pay, lack of opportunity, and dislike for the work. After several months' unemployment, obtained present job through a relative. Making marginal adjustment.

Veteran has had extensive hospitalization and treatment, including electroshock. Long history of emotional difficulties. Since discharge has varied between periods of complete social and industrial incapacity and incompetence and periods in which his psychosis was in partial remission. At time of last VA rating, diagnosis was schizophrenic reaction, catatonic type, in partial remission, competent, severe impairment of social and industrial adaptability. Veteran on medication from VA mental hygiene clinic.

Veteran is single.

ADDITIONAL CASE: Rodman—1.

Warehousing, Storekeeping, Handling, Loading, Unloading, and Related Occupations, n.e.c. (7–88)

ADDITIONAL CASES: Cooler Man II (Ice Cream)—1; Fork-Lift Truck Operator—1.

Miscellaneous Occupations, n.e.c. (7–89)

TIRE REPAIRMAN. For past 6½ years, has worked in the repair shop of a military base. Is under Federal civil service. Nature of his disability was specified on application. Repairs tires of all types and sizes. Says he gets along well with other employees. "Blows up" occasionally, but not more often than anyone else. Is so well satisfied with job (main reason he cites is "being let alone") that he has refused a reassignment to mechanical repair work that would have meant a promotion.

Prior to World War II service, veteran helped his brother in delivering advertising samples from door to door. From discharge in 1946 to 1950 had a succession of short-lived jobs. Many lasted only 2 or 3 days; some were as long as a few months. Then obtained a civil service appointment as nurses' aide in a Federal hospital. Stayed on this job 3½ years. Did not like the kind of work involved, and took first opportunity for another civil service appointment (his present job). Wanted to remain in civil service because of job security it offers.

Veteran's medical history parallels work record detailed above. Between 1946 and 1950, the period when he changed jobs so frequently, he was highly disturbed. He was explosive, destructive, and bizarre in general behavior. During the period of hospital employment, these symptoms disappeared; chief complaints at that time were chronic nausea and frequent vomiting. Veteran hospitalized for brief periods on three separate occasions because of this. Now complains of headache, dizziness, numbness and coldness in hands and feet, as well as nausea. Aside from hospitalization, has worked steadily for past 10 years. Not receiving psychiatric treatment on regular basis, but frequently consults psychiatrist in VA mental hygiene clinic. Diagnosis at time of last VA rating: psychoneurosis, anxiety reaction, severe. Veteran is married; has no children.

ADDITIONAL CASES: Inspector, Tire Recapping—1; Vermin Exterminator—1.

Apprentices

Electricians' Apprentices (7–95)

ELECTRONIC TECHNICIAN APPRENTICE. Has been working as an apprentice in Federal service in a shipyard for 2 years. Employer knew of disability at time of hiring. Receives 3 weeks of on-job training per month in computing, radar, television and related electronics equipment, including timers, transmitters, receivers, indicators, antennae systems and servomechanisms. One week per month is spent in related academic work. Works 40-hour week. Supervisor takes cognizance of his inability to work in a noisy environment and places him in a work setting which is comparatively quiet. Veteran says he gets along well on the job. Outlook for continued employment at this facility on completion of training not good, because shipyard is reducing personnel. However, veteran feels his training will enable him to find work in private industry.

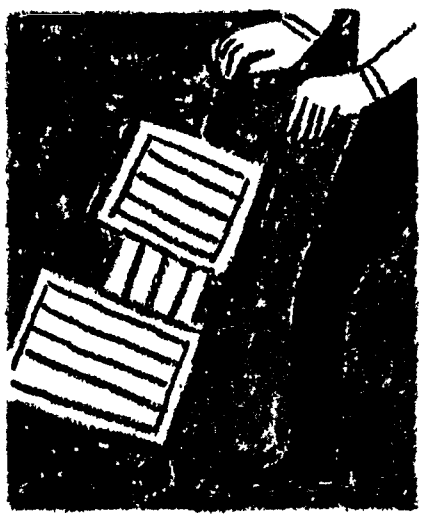
Prior to World War II service, veteran worked as a presser, clothes. After service he worked as a velvet inspector in a rubber factory for 18 months. Left because of low pay. Obtained job in Federal hospital as an authorization clerk, but quit because he moved to another section of the country for health reasons. Entered on-the-job training for electronics technician under the VA vocational rehabilitation program; stayed with it for 12 months and then left for financial reasons. Entered Government employment in a local shipyard as electrician's helper; after 4 years, was promoted to radio mechanic; worked in that capacity for 2 years; had to leave for health (physical) reasons and accepted enrollment in an apprentice program (his present job) with considerable loss of pay.

Veteran is rated by VA for bronchiectasis and gunshot wound of left arm, as well as psychoneurosis, anxiety reaction, moderately severe. Has required hospitalization on three occasions for bronchiectasis. Because of chest condition, veteran is extremely fearful of contracting lung cancer. Has history of being tense, nervous, easily tired; perspires excessively, has frequent headaches; noises bother him. Consults local general practitioner weekly.

Veteran is married and has children.

Apprentices to Other Trades (7–99)

ADDITIONAL CASE: Aircraft-Engine-Mechanic Apprentice—1.



OCCUPATIONS IN MANUFACTURING AND RELATED ACTIVITIES

Occupations in Production of Food Products

Production of Bakery Products (8–02)

INGREDIENT MIXER HELPER. Veteran works in a large food-processing plant. Mixes the dry ingredients used in making cookie mixes, pancake mixes, and flour. Has been on this job for 3 years and with the company for 12 years. Employer is not aware of his disability. Veteran feels that he gets along well with the fellow workers and has a good relationship with his foreman. Has had no increase in responsibilities but has received some wage increases by union negotiations. Expressed reasonable job satisfaction but would like employment closer to home.

Before World War II service, veteran had no regular employment. After service did various odd jobs for about 3 years, until he found present employment on his own. First job with this company was as a trucker (6 years), then was made an ingredients man (3 years); then transferred to present job.

While in service in Air Force, veteran was shot down on 22d mission and held as German prisoner of war for 1 year. On discharge, rated by VA for psychoneurosis, anxiety reaction, mild. This was later increased to moderately severe; at time of last examination, reduced to moderate. Veteran complains of difficulty in breathing at night, and of feeling as if bugs were crawling over him, of pains in knee and hip, and nausea.

Veteran is married; has no children.

LABORER, (BAKERY PRODUCTS). Veteran works in a commercial bakery. Has been on this job with same employer 10 years. Nature of disability has not been made known to employer. Work consists of pushing a handtruck that has been loaded with packaged baked goods from the packing counter to a delivery truck at a nearby loading platform. Veteran works 40 to 44 hours per week, with no loss of time or other limitation resulting from his disability. Says his relationship with supervisors and coworkers is satisfactory; feels that he is fully accepted by them. Plant

workers are unionized and enjoy the benefits of job retention on the basis of seniority; veteran feels, therefore, that his job is relatively secure. Is not interested in a promotion.

Veteran's occupation prior to World War II was that of laborer (slaughtering and meat packing). After service, he worked in five different jobs (bartender, janitor in an industrial plant, carton packer, pipefitter's helper, construction laborer). These ranged in duration from 2 to 28 months and were terminated for reasons beyond veteran's control, e.g., business sold, plant moved, reduction in force. Obtained present job through a relative's recommendation.

Veteran's disability diagnosed as psychoneurosis, anxiety reaction, moderate. Complains of nervous tension and of backache and muscular aches.

Veteran is married and has children.

ADDITIONAL CASE: Ovenman Helper IV—1.

Production of Beverages (8–03)

FILTERMAN (MALT LIQUORS). Has been employed in a brewery for past 12 years; operates a filtering machine, which forces beer through a filter to eliminate impurities, also cleans tanks and pumps beer. Reports a satisfactory relationship with his supervisor and coworkers. Feels secure in the job; work is steady. His chances for advancement are slight, but he is satisfied with the job.

Prior to World War II service, veteran had begun a brewery apprenticeship. After discharge, tried a series of outdoor jobs, longest of which was 3 months as a truckdriver, light. Quit because he felt job imposed too much emotional strain. Returned to brewery (present employer) and completed 4-year apprenticeship, after which he was given his present job.

On discharge from service, veteran was rated for psychosis, schizophrenic reaction, complete social and industrial inadaptibility. Presently in complete remission, slight impairment of social and industrial adaptability. Reported as belligerent and hostile during neuropsychiatric examination, memory spotty, displayed emotional instability, felt threatened and started to cry.

Veteran is married and has children.

ADDITIONAL CASE: Laborer (Brewery)—1.

Slaughtering and Preparation of Meat Products (8–09)

ADDITIONAL CASES: Chitterling Splitter—1; Laborer, Packing House—2; Laborer, Poultry—2; Stock Driver—1.

Occupations in Manufacture of Tobacco Products

Manufacture of Tobacco Products (8–12)

PAPER MACHINE OPERATOR. Works in the filter manufacturing department of a large tobacco company. Has been with this employer 15 years, last 2 of which have been in present job. Employer not informed of

disability. Veteran has never had any difficulty with his coworkers or supervisors; feels he is well liked and respected in his work. Works regular 40-hour week. Has had one promotion to date; further advance to machine repairman possible with added seniority, but veteran not eager for added responsibility.

Veteran's employment prior to World War II service consisted of farmwork. After service, applied for work with his present employer and was hired as a hopperman. Education stopped at third grade.

Onset of symptoms occurred after veteran was wounded during combat. Became restless, apprehensive, confused. Transferred to United States and hospitalized; condition described as "almost panic." On discharge, rated by VA for psychoneurosis, anxiety state, severe. Condition has improved to point where it is now rated as moderate. Continues to have some anxiety, apprehension, and restlessness; this becomes worse when he is under stress.

Veteran is married and has children.

ADDITIONAL CASE: Laborer (Tobacco)—1

Occupations in Production of Textiles

Manufacture of Textiles, n.e.c. (8–19)

ADDITIONAL CASES: Battery Filler—1; Dye-Machine-Tender Helper—1; Laborer (Textiles)—1.

Occupations in Production of Fabricated Textile Products

Fabrication of Textile Products, n.e.c. (8–27)

LABORER (SHIRT MANUFACTURING). For past 3½ years, has worked in a shirt factory. Sorts cut material according to sizes and shirt parts, places pieces on a handcart and takes them to the various sewing machine operators for sewing. After the various shirt parts are sewn together, picks up the finished shirts and packs them into cases, according to size, color, style and order number. Works 40 hours, without limitations or concessions because of his difficulty. Says he gets along with coworkers and supervisors. Feels his job is not secure, because he is low on seniority list. Work is seasonal, dependent on volume of orders. Has had periodic wage increases, but no promotion. Veteran not satisfied, feels he "wouldn't want to spend rest of life" in this job.

Veteran had no work experience prior to Korean conflict service. Completed an 11 months' school course under the VA vocational rehabilitation program in preparation for work as an accounting clerk, but did not follow this occupation. Applied to two seminaries for acceptance as a teacher-trainee, but was not accepted. Obtained present job as result of answering newspaper ad.

On discharge from military service, veteran hospitalized and rated by VA for psychosis, schizophrenic reaction, catatonic type, incompetent, complete social and industrial inadaptability. Two years later, psychosis

found in complete remission, veteran judged competent. Rating indicates slight impairment of social and industrial adaptability.

Veteran is single.

ADDITIONAL CASE: Laborer, Garment—1.

Occupations in Production of Lumber and Lumber Products

Sawmill Occupations, n.e.c. (8–31)

ADDITIONAL CASES: Laborer (Sawmill)—1; Trimmer Loader—1.

Manufacture of Furniture, n.e.c. (8–36)

ADDITIONAL CASE: Hand Filler—1.

Manufacture of Miscellaneous Finished Lumber Products (8–39)

ADDITIONAL CASE: Laborer (Wood Preserving)—1.

Occupations in Production of Paper and Paper Goods

Manufacture of Paper and Pulp (8–41)

ADDITIONAL CASE: Laborer (Paper and Pulp)—1.

Manufacture of Paper Goods (8–42)

ADDITIONAL CASE: Sealing Table Man—1.

Occupations in Production of Chemicals and Chemical Products

Production of Industrial Chemicals (8–52)

DRIER HELPER (CHEM.). Works in a chemical plant; operates machines for the unloading and storing of raw materials for use by the dryer operator. Has worked on this job for 6 years and has excellent relationships with the superintendent, foreman, and coworkers. Employer did not know of veteran's disability at time of hiring, but does know of it now. Works 40-hour week; misses no work because of disability. Opportunity for advancement is poor, but occupational outlook and job satisfaction are excellent.

Prior to World War II service, veteran worked as a laborer on a milk truck for 7 months after completing high school. After discharge, trained for 1 year under the VA education program as a farmer, general, and farmer, livestock. Worked for 3 years as a ranch manager and was released when the ranch was sold. Then worked for short periods as a painter and as a livestock buyer before being employed on present job, which he obtained on his own initiative.

Veteran's initial VA rating was psychosis, manic-depressive, complete social and industrial incapacity, competent. For past 12 years, psychosis

has been in complete remission. Rating indicates slight impairment of social and industrial adaptability.

Veteran is married and has children.

Production of Chemical Products, n.e.c. (8–53)

ADDITIONAL CASE: Laborer (Alcohol Distilling)—1.

Production of Ammunition, n.e.c. (8–54)

ADDITIONAL CASE: Ammunition Assembler II—1.

Occupations in Production of Petroleum and Coal Products

Production of Miscellaneous Petroleum and Coal Products (8–56)

ADDITIONAL CASE: Laborer, Coke Oven—1.

Occupations in Production of Stone, Clay, and Glass Products

Production of Clay Products (8–66)

ADDITIONAL CASE: Mixer Man—1.

Production of Asbestos Products, Abrasives, and Polishing Products (8–70)

ADDITIONAL CASE: Laborer (Asbestos Products)—1.

Metalworking Occupations

Electroplating, Galvanizing and Related Processes (8–74)

PICKLING OPERATOR. Works for a large electroplating firm. Prepares metals for chromium plating. Has not told employer about disability. Has been on this job only 5 weeks, but had worked for company previously (10 years ago) for 4 years. Works regular 40-hour week. Says he gets along well with coworkers and supervisors. Enjoys his job but would like to earn more money; has difficulty in getting along on his wages. Stays with job because it offers steady work.

After World War II military service, veteran took on-the-job training under the VA education program for the objective, pickling operator. Worked on this job 4 years, until he enlisted in the Korean conflict. After separation, worked as a machine operator (1 year), carloader (6 years), handtrucker (2 years). Was laid off because of lack of work in each instance. Then rehired on present job by former employer.

VA rating for psychosis, catatonic reaction, in fair remission, slight impairment of social and industrial adaptability, has remained unchanged since time of veteran's discharge.

Veteran is married; has no children.

ADDITIONAL CASES: Pickling Operator—1.

Machine Shop and Related Occupations, n.e.c. (8–78)

DRILL-PRESS OPERATOR I. Works for large company that manufactures earth-moving equipment, tractors and marine motors. Has been with employer 10 years; told of his disability after he was hired. Operates a drill that is used to drill flywheels, gears, and flywheel assembly gears. Works 40-hour week. Says he gets along well with coworkers and supervisors. Is very much interested in the work. The work is steady, with only infrequent layoffs. Veteran has had four advancements in pay.

Prior to World War II military service, veteran worked as a general farmer. After service, retuned to farming for about 5 years. Received about 20 months' farm training under the VA education program. Left farming because he felt that he could not earn a good living. Obtained present employment through brother's help. Was hired initially as a burr-bench operator, then moved to present job.

At time of most recent VA examination, rating for psychoneurosis, anxiety reaction with conversion symptoms was increased from mild to moderate. Veteran preoccupied with somatic complaints, irritable, easily angered, subject to depression and worry. Also has nonservice-connected duodenal ulcer and gastritis.

Veteran is married and has children.

ADDITIONAL CASES: Laborer (Machine Shop)—1; Machinist's Helper—1.

Foundry Occupations, n.e.c. (8–82)

ADDITIONAL CASE: Laborer (Foundry)—1.

Mechanical Treatment of Metals (8–88)

ADDITIONAL CASE: Wire Cutter—1.

Production of Ferrous and Nonferrous Metals (8–92)

ADDITIONAL CASES: Laborer (Iron and Steel)—4.

Fabrication of Metal Products, n.e.c. (8–93 and 8–94)

ASSORTER, CUT STOCK. Works in a tinware factory. Has been with present employer 7 years. Specified nature of his disability at time of applying for employment. Job consists of removing large sheets of tin from a conveyor and stacking them. Work is routine and repetitive with no variation from day to day. Veteran likes the routine, uncomplicated job activities and the relative isolation of his work. Feels that he is respected and accepted by shop employees. Appreciates the security of the job. Has no desire for more responsible work assignments, and thus the lack of promotional opportunities does not disturb him.

Prior to World War II service, veteran was a student. After service, worked on a cutter machine for 4 months but left because of low pay. Then worked as coal picker for short time before he entered college under the VA vocational rehabilitation program. Was dropped for low scholarship

after 2 years, and applied for employment in the factory where he has been employed since. Says he does not regret having terminated college training.

While on overseas duty, veteran became withdrawn and irritable, suffered auditory hallucinations. Hospitalized and given a medical discharge. Rated by VA at that time for psychosis, schizophrenic reaction, complete social and industrial inadaptability, competent. Three years later, found in complete remission; condition has remained stabilized since then. Rating indicates only slight impairment of social and industrial adaptability.

Veteran is single.

FINAL INSPECTOR, CASTINGS. Veteran works in a wheel manufacturing plant. Inspects drum assemblies for truck wheels. Informed employer of his disability at time of hiring 15 years ago. Employer careful not to place veteran on a fast assembly line where workers are "pushed too much." If pressure does get too great, he is allowed to go home, but this does not happen often. Veteran feels he gets along well with his supervisor and fellow workers. Work is secure and steady, except for layoff of about 3 weeks per year for model changeover. Advancement opportunities are limited; veteran's responsibilities have not increased over the years, but he is very well satisfied with his job.

Prior to World War II service, veteran worked as a cleaner, spotter and presser in a dry cleaning establishment and returned to this work after service. Left after 2 years, because he found it tedious and nervewracking. Obtained present job through his brothers who were employed at the plant.

Veteran required hospitalization in service when he became extremely nervous and jittery after a near-hit by a mortar shell. Was hospitalized and subsequently discharged for disability; rated by VA for psychoneurosis, anxiety state, severe; this has been reduced to moderately severe. Veteran stammers when excited and has a facial tic. Receives psychotherapy on regular semimonthly basis from private psychiatrist under VA fee-basis arrangement.

Veteran is married and has children.

ADDITIONAL CASES: Laborer (Machine Mfg.)—2; Laborer (Wire)—1; Machine Brake-Operator Helper—1.

Electricians and Occupations in Manufacture of Electrical Equipment

Manufacture of Miscellaneous Electrical Equipment (9–00)

ADDITIONAL CASES: Electrician's Helper—3.

Occupations in Manufacture of Transportation Equipment

Manufacture of Automobiles, n.e.c. (9–02)

ADDITIONAL CASES: Laborer (Auto Mfg.)—3.

Building of Transportation Equipment (9–05)

ADDITIONAL CASE: Laborer (Locomotive and Car Building)—1.

OCCUPATIONS IN NONMANUFACTURING ACTIVITIES

Occupations in Extraction of Minerals

Production of Petroleum (9–20)

OILFIELD ROUSTABOUT. Is a laborer in the oilfields. Works as member of a crew cleaning up around the fields, handling pipe and doing rough construction work. Receives standard wages and is happy with his work. Works regular 40 hours per week. No chance of advancement. Employer does not know of his disability. Has held present job 5 years.

Job obtained by personal application. Has worked in this occupation for 13 years. Was a farm laborer prior to World War II military service. Entered a vocational course of training in welding under the VA education program, but withdrew before completion.

Most recent VA rating is based on the diagnosis of anxiety reaction, chronic, moderate; this represents a reduction from initial rating of moderately severe. Veteran has exhibited periods of depression with schizoid trends.

Veteran is married and has children.

ADDITIONAL CASE: Laborer (Petroleum Production)—1.

Construction Occupations

Construction Occupations, n.e.c. (9–32)

BRUSHMAN II (CONSTRUCTION). Works for a company of tree surgeons. There are 40 employees. Veteran works in a small crew of three or four men who cut and dispose of brush and tree limbs along highways, powerlines and similar right-of-ways. Has worked in present job 6 years. Employer knew of veteran's disability before hiring him. Veteran usually works 40 hours per week and sometimes 48 hours. No concessions have been made in work tasks. Coworkers have a good attitude toward him and a sympathetic understanding of his disability. Veteran has adjusted well to his job. Content with it, even though pay is low, because it offers security. Plans to continue in it indefinitely. Knows that promotion is unlikely.

Prior to World War II service, veteran worked as a laborer in a wire manufacturing plant. Since discharge, his employment has been interrupted three times by hospitalization, twice for extended periods. Immediately following military service, worked for 8 months as a truckdriver; was hospitalized a few months, and then for 2 years held numerous short-term laborer jobs. Hospitalized for 3 years; while still a patient, was provided VA counseling assistance and, on discharge, placed as a kitchen helper. Remained on this job 4 years, when he became severely disturbed again and reentered a VA hospital, where he stayed 2 years. On discharge, obtained present job through a lead supplied by a friend; has remained successfully employed for past 6 years.

After 9 months in the Army, veteran was discharged with the diagnosis hysteria after he manifested many physical complaints and fears. Some months later, developed more severe symptoms, including delusions of grandeur. Was committed to a VA hospital, classified as incompetent, with the diagnosis manic-depressive psychosis, manic type. Almost 3 years of hospitalization was followed by 4 years during which his psychosis was in remission. Then he became worried, agitated, and fanciful; rehospitalized with diagnosis schizophrenic reaction, unclassified. Discharged 2 years later (in 1954). Has functioned well since. Most recent rating indicates slight impairment of social and industrial adaptability.

Veteran is married and has children.

LABORER, CONSTRUCTION. Works for a general building contractor. Does all kinds of labor connected with carpentry, concrete construction, plumbing and allied trade. There are 50 employees in this crew. Has worked with this employer for 11 years, including 2 years prior to Korean conflict military service. Works 40 hours per week with no limitations because of his disability. Employer does not know of the nature of the disability. Veteran gets along well with fellow workers and neighbors by not becoming involved with them, tending to his own job and doing what is required. Complains mildly that he works too hard, but works steadily, nevertheless.

Veteran's job with present employer constitutes his only work experience.

After 1 year in military service, veteran was hospitalized for psychosis. Suffered auditory and visual hallucinations and delusions of persecution and grandeur; became assaultive and combative in behavior. Was discharged for disability and transferred to VA hospital where, after 9 months, he was placed on trial visit for a year and then discharged. Has not required further hospitalization. At time of last examination, veteran's complaints were insomnia, nervousness, trembling, and dizziness. Has no recall of his past psychotic behavior. Manifests stilted affect. Most recent VA rating: schizophrenic reaction, catatonic type, in remission, slight impairment of social and industrial adaptability, competent.

Veteran is married and has children.

LABORER, GROUND WORK. Works with three other men in a crew carrying pipes and other materials for use in testing soil to determine the

number of pilings and depth for foundations of buildings. Has been employed on this job for 7 years. The employer does not know the nature of the veteran's disability. Veteran works 40 hours per week. Feels that he gets along well with supervisor and coworkers. Does not particularly like his job, but it is steady and he feels it is as good as any other. Finds the work harder as he get older. Promotion is not likely.

Prior to World War II service, veteran worked as a delivery boy. After service worked 4 years as a laborer at a sawmill, 6 years in a wholesale grocery. Then obtained present job by answering newspaper ad. Trained as cook for 18 months under the VA education program, but was never employed as such.

Veteran was discharged from service for disability. Rated by VA for psychoneurosis, anxiety reaction, chronic, moderate. This rating has since been reduced to mild.

Veteran is married and has children.

LABORER, HIGHWAY MAINTENANCE. Works for a State highway department. Has worked here steadily for 4 years. Is helper member of a two-man team which patrols roads in a truck, patching holes, removing rubbish, repairing guardrails, sanding and removing snow. Employer knew the nature of veteran's disability at the time of hiring. Veteran works 45 hours per week with no special concessions because of disability. Gets along fine with coworkers and supervisors. Likes the security and satisfaction of steady employment. Pay is low, but enables him to get by. Promotion is not likely.

Prior to World War II service, veteran worked as a farm laborer. For a brief time after service he was self-employed as a trucker, but this was not profitable. Returned to his preservice work for 7 years, when he was seriously injured in a traffic accident. After extended hospitalization, obtained present job by following up a lead given him by a friend.

While in service veteran spent time in POW camp. On release and discharge from service, rated by VA for psychoneurosis, anxiety state, severe. This has since been reduced to moderately severe.

Veteran is married and has children.

LABORER, PLUMBING. Is employed by a city government as member of a water and street department crew which lays water mains to new subdivisions and replaces and repairs old lines. Has been employed by this city for 13 years, either on a seasonal or full-time basis. For the past 6 years has been on a full-time basis. Works 40 hours per week. Employer knew of veteran's disability when he was hired. As a concession to his nervousness, veteran is not required to drive truck. Has been fired several times over the years because of drinking, but was rehired each time. Has received substantial wage increases. When extra workers are employed is sometimes given the responsibility of overseeing them.

Prior to World War II service, veteran worked as a farmhand. After discharge, did not seek work for 6 months. Then bought a farm and sold it after only 6 months. With the aid of a relative, obtained employment with

city water department; for first 7 years of this employment, had only seasonal work amounting to 6 months per year.

Veteran's original VA rating was based on diagnosis of psychosis, paranoia, complete social and industrial incapacity. Improvement in his social and vocational adjustment was noted following his marriage 6 years ago. Diagnosis at time of most recent VA rating schizophrenic reaction, simple type, considerable impairment of social and industrial adaptability.

Veteran is married and has children.

TRACKMAN, RAILROAD. Has been employed by this railroad 17½ years, including 3 years before World War II military service. Is member of a 16-man crew which lays and repairs track. Regularly works 40 hours per week, with no limitations. Says he gets along well with foreman and coworkers. Employer has not been informed of the nature of the disability. Outlook for future employment is good. Veteran feels that he has a chance of being promoted to foreman.

Veteran has had no work experience other than that with present employer.

Most recent VA rating is based on the diagnosis of psychoneurosis, anxiety, moderate. Veteran has occasional severe headaches, nausea and stomach pains; sleeps poorly.

Veteran is married and has children.

ADDITIONAL CASES: Laborer, Carpentry—1; Laborer (Construction)—7; Laborer, Road—1; Plasterer's Helper—2.

Transportation Occupations

Longshoremen and Stevedores (9–47)

LONGSHOREMAN. Works on the piers loading and unloading general cargo. Employer not informed of the nature of veteran's disability. Veteran is unable to unload in hatches because he gets dizzy; so limits himself to working on dock. Gets only 10 to 20 hours work per week. While on the job work attendance is good.

Veteran had 3 years' experience in this work prior to World War II service. On discharge, worked as longshoreman at an Army base; when this closed, began working the piers. Has had total of 20 years' experience in this occupation.

Veteran complains of headaches and nervousness; is easily excited. Has discontinued psychiatric treatment, feeling that it did not help him. VA rating is based on the diagnosis of psychoneurosis, moderately severe.

Veteran is married and has children.

Sailors and Deckhands, Except U.S. Navy (9–48)

DECKHAND. Performs manual labor on a barge engaged in river transportation. Has been employed on this job for 5 years. Employer has no knowledge of veteran's disability. No limitations in work schedule or tasks because of the disability. Usually spends 1 month on duty followed by a

month off duty. While on duty works 6 hours and off 6 hours. Feels that his job is secure as long as he is physically able to perform duties. Has received small wage increases periodically.

Veteran worked as a miner prior to World War II service. Returned to that job for 5 years after discharge; left because he felt the work aggravated his disability. Held short-term jobs as auto assembly line worker, guard, and laborer, then entered VA vocational rehabilitation training in cabinetmaking. Discontinued after 20 months because of insufficient income. Obtained present job through the influence of a relative.

While in service, veteran complained of nervousness and stomach pains. These complaints have persisted, along with shortness of breath, dizziness, easy excitability and irritability. Received psychotherapy on outpatient basis from VA for a time, but discontinued treatment. Initial and most recent VA rating: psychophysiological gastrointestinal reaction, chronic, moderate; veteran also has moderate instability of right knee.

Veteran is married and has children.

Transportation Occupations, n.e.c. (9–49)

ADDITIONAL CASE: Laborer (RR Transportation)—1.

Communication and Utility Occupations

Furnishing Utilities, n.e.c. (9–54)

LINEMAN HELPER. Is employed by a large power company. Helps install poles for powerlines. Has been employed on present job for 6 years. Employer was informed of disability at time of hiring. Veteran works 40 hours per week with no special concessions or limitations because of his disability. Is satisfied with the job, is building social security and has fair chance for promotion.

Prior to World War II military service, veteran was a farmer. Following discharge, had 6 years' experience with a local power company doing work similar to his present job. Left because of a strike, and found job as laborer in a brass plant. After 3 years on that job, transferred to present employment. Pursued a general combination course in high school subjects under the VA education program.

Initial VA rating for psychoneurosis, anxiety reaction, moderately severe has been reduced to moderate.

Veteran is married; has no children.

SEWAGE-DISPOSAL WORKER. Is employed by the engineering department of a State hospital. Works alone in a disposal plant somewhat remote from the hospital proper. Has been employed in this job for 11 years. Works 40 hours per week. No concessions have been made because of veteran's disability. Employer has not been informed of the nature of veteran's disability. Makes reports to the disposal engineer by phone, otherwise his work is not supervised except on infrequent occasions. Is well satisfied with the job. Enjoys the security of civil service. Feels that

he has a perfect setup in that he works by himself. Likes being his own boss so much that he has refused opportunity for promotion.

Job was obtained through a civil service examination and with the recommendation of a friend working at this instituiton. Veteran's preservice job was that of bake oven operator (asbestos shingles). Upon discharge from World War II service, returned to his previous job. After 5 years, left it for his present job, believing job security would be greater. Attended a local trade school evenings under the VA education program, taking courses in airplane engine mechanics. Discontinued before completion, because combined load of work and school was too much for him.

Veteran saw combat service on Iwo Jima. Was discharged because of combat fatigue. After separation, rated by VA for severe anxiety neurosis, manifested by anxiety, confusion, nervous indigestion. Attended a VA mental hygiene clinic weekly for a 2-year period. Most recent VA rating: psychoneurosis, anxiety state, moderately severe.

Veteran is married and has children.

ADDITIONAL CASES: Laborer (Light, Heat, and Power)—1; Lineman Helper—2.

Trade and Service Occupations

Laundering, Cleaning, Dyeing, and Pressing of Apparel and Other Articles (9–57)

ADDITIONAL CASE: Dry Cleaner Helper—1.

Trades and Services, n.e.c. (9–59)

ADDITIONAL CASE: Sandwich Man—1.

Public Service Occupations, n.e.c.

Public Service, n.e.c. (9–61)

ADDITIONAL CASE: Garbage Collector—1.

MISCELLANEOUS OCCUPATIONS

Packing, Filling, Labeling, Marking, Bottling, Washing and Related Occupations (9–68)

PACKER II. Has been employed 8 years packing large automobile parts into cardboard shipping boxes; take packages on a hand dolly to the shipping department. Employer does not know the nature of veteran's disability. Works 40 hours per week, with no limitations. Gets along well with other employees. Has an occasional disagreement with his several bosses, but states that most times he avoids arguments by saying nothing; walks away, and thus protects his job. Job is secure and steady. Veteran has been laid off only 3 weeks in 8 years. Periodic wage increases, but little likelihood of promotion.

Veteran worked as welder before World War II. Unemployed for 1 year after receiving a medical discharge from service, "too nervous to work." Returned to welding until 1952; lost this job when company moved its plant. After short period in VA hospital, had a laboring job for 1 week; was fired, but doesn't know why. After several months' unemployment, secured present job through a friend already employed at the small plant.

Veteran was hospitalized in service when he became seclusive and depressed, suffered delusions. Rated by VA for schizophrenic reaction, paranoid type, severe impairment of social and industrial adaptability. In 1952 (7 years later) again required brief hospitalization. Condition has improved. Most recent VA rating indicates considerable impairment of social and industrial adaptability.

Veteran is married and has children.

ADDITIONAL CASES: Capping-Machine Operator I—1; Inspector and Caser—1; Laborer, Packing—5; Weighman—1.

Oilers of Machinery (9–71)

ADDITIONAL CASES: Oiler I—2.

Cranemen, Derrickmen, Hoistmen, and Shovelmen (9–73)

ADDITIONAL CASES: Crane Follower—3.

Mechanics and Repairmen, n.e.c. (9–83)

ADDITIONAL CASES: Maintenance Mechanic Helper—4; Millwright Helper—1.

Transportation Equipment Laborers, Washers and Greasers (9–85)

ADDITIONAL CASES: Automobile Washer—2; Cleaner III—4.

Warehousing, Storekeeping, Handling, Loading, Unloading and Related Occupations (9–88)

FLOOR BOY. Works in a small toy manufacturing plant. Has been with present employer 4 years. Employer knows about veteran's disability now, but was not aware of it at time of hiring. Job duties include carrying toy parts to assemblers; also packs and weighs packages. Supervisor understands how disability affects the veteran, so is careful not to irritate him. Veteran gets along well with fellow workers, but still has minor difficulties with one supervisor. Works 40-hour week plus Saturday overtime; glad of latter, because it increases his earnings, which are low. Promotion unlikely, but veteran satisfied because job offers security.

A carpenter's helper before World War II, veteran trained 9 months in refrigeration mechanics and 10 months as a bricklayer in Puerto Rico under the VA vocational rehabilitation program. After relocating, worked 2 years operating a power press in a kitchenware manufacturing plant. When the plant was on strike, located present job through a friend. Veteran has language handicap, 8th grade education.

Most recent VA rating is for psychoneurosis, conversion hysteria, moderate. Initially rated moderately severe. Symptoms are startle reaction, fearfulness and attacks of hyperkinesis, manifested by falling down and attempts to bite himself. These attacks are precipitated by arguments or excessive criticism. Reaction has persisted through the years. Frequency depends upon the stress in a given situation. Has had only one attack on present job; supervisors understand cause of attacks and try not to irritate him.

Veteran is married and has children.

LABORER, WAREHOUSE. Employed under civil service 9 years unloading trailer trucks and storing freight in a U.S. Government warehouse. Application for employment contained information about the disability. Is fairly well satisfied with his job; outlook for continued employment is good. Gets along well with associates. Was a supervisor for a year; that job was abolished and he was reassigned as a laborer.

Veteran was a janitor before World War II service. After discharge, worked as a truckdriver for a lumber company for 4 years. Quit because supervisor was highly excitable and made him nervous. Obtained present job by answering a newspaper advertisement.

Veteran was hospitalized in service because of attempted suicide. VA rating: psychosis, manic-depressive, partial remission, competent, considerable impairment of social and industrial adaptability. Veteran has been

hospitalized once since discharge (in 1947, when he again attempted suicide). Symptoms have included periods of dissociation from reality, insomnia, shortness of breath, excitability and dizziness. Diagnosis at time of last VA rating; schizophrenic reaction, chronic, affective type, definite impairment of social and industrial adaptability. Veteran says he takes a "nerve medicine" prescribed by private physician.

Veteran is married and has children.

ORDER FILLER. Works in the stockroom of an industrial supply firm. Has been employed here for 7 years. Employer was not informed of the nature of veteran's disability at the time of hiring. Veteran says that no occasion has arisen in the meantime which would necessitate informing his employer of his condition. Fills customer's orders, selecting individual items of merchandise from the stockroom, and handcarries them or transports them on hand truck to the shipping room or the retail outlet. Works without immediate supervision; likes this aspect of his job. Works 40 hours per week. Says he gets along well with everyone on the job. Work is steady with periodic pay increases. Veteran understands that chance of promotion is not likely. Would like to earn higher salary, but puts high value on the security offered by the job.

Job was obtained by personally answering newspaper ad. No training was necessary. Veteran was a student prior to Korean conflict service. After discharge from service was unemployed for a year until he got his present job. Appears to have made an excellent adjustment to his work. Feels that he has a lifetime career.

VA rating, which has remained unchanged since veteran's discharge, is based on diagnosis of psychoneurosis, mixed, with gastrointestinal complaints, moderately severe.

Veteran is married and has children.

ADDITIONAL CASES: Laborer, Loading and Unloading—6; Order Filler—2; Trucker, Hand—4; Warehouseman—9.

Miscellaneous Occupations, n.e.c. (9–89)

ADDITIONAL CASE: Grave Digger—1.

A NOTE ON METHOD AND LIMITATIONS

How Data Were Obtained

Data of the study are derived from a nationwide sampling of World War II and Korean conflict veterans with disability compensation ratings for service-connected functional psychiatric conditions (i.e., the functional psychoses and psychoneuroses). The information was gathered in the spring of 1960 by Vocational Rehabilitation and Education staff in VA regional offices throughout the continental United States.

A brief form letter inquiring about employment status was sent to non-hospitalized veterans in the sample, unless it was already known from information available in the records that the veteran was unemployed. One followup letter was sent if the veteran failed to respond. In all, answers were received in slightly more than three-fourths of the cases.

Among those who responded, 1,421 veterans reported themselves to be employed. These 1,421 employed veterans were the main focus of the study. Information about each veteran's present job and his work and psychiatric history was gathered by VR&E staff, in accordance with a uniform outline.[7] In seven of eight cases, data were obtained by means of personal contact with the veteran, as well as from the study of agency records. In the remainder, the information was derived from agency records or other reliable sources.

The information for each case was assembled in the form of a brief narrative report. In addition, a code sheet was completed for each case to permit the machine tabulation of selected items of information; codes were subsequently entered into punchcards and tabulated to provide data for the employed group as a whole.

Limitations

Since the study was based on a random sample of veterans in the specified disability categories, the data are subject to the usual limits of sampling error. For a detailed statement of fiducial limits, the reader is referred to VA Technical Report TR 22–1. Some bias may have resulted because of failure of a proportion of veterans to respond. However, the fact that those who responded and those who did not were similar with respect to known characteristics (age, severity of disability, and disability classification of psychosis vs. psychoneurosis) indicates that this bias is not serious.

The individual briefs are for selected cases. Unlike the group data,

[7] A copy of this outline is reproduced in VA Technical Report TR 22–1.

therefore, they are to be regarded as illustrative, rather than representative. The major criteria which determined the selection of cases for briefing have been stated previously (p. 13). In addition, case selection was influenced by the completeness of the narrative material submitted and by the dictates of time and economy, which set a limit on the number of cases to be briefed. However, as shown below, the occupational distribution of the cases for which briefs are presented is roughly approximate to the distribution of the total study population.

Major occupational group	Illustrative briefs	Total cases
	Percent	*Percent*
Professional and Managerial	20.6	16.7
Clerical and Sales	17.7	20.8
Service	7.7	7.5
Agricultural, Fishery and Forestry	4.7	4.6
Skilled	24.2	26.1
Semiskilled	17.7	14.9
Unskilled	7.4	9.4
Total	100.0	100.0

Neither the data for the group as a whole nor any one or more of the individual case briefs provide the basis for generalization as to the suitability of particular occupations for persons in a specific disability category or for any individual person. On the contrary, the findings highlight the need for a particularized appraisal of vocational potential and psychiatric status in each case.

APPENDIX

A. Disability Categories Included in the Study

Psychotic Disorders

- Schizophrenic reaction, simple type
- Schizophrenic reaction, hebephrenic type
- Schizophrenic reaction, catatonic type
- Schizophrenic reaction, paranoid type
- Schizophrenic reaction, mixed type
- Manic-depressive reaction
- Paranoid reaction

Psychoneurotic Disorders

- Hysteria, conversion
- Neurasthenia
- Hypochondriasis
- Psychasthenia
- Anxiety hysteria
- Anxiety state
- Psychoneurosis, mixed types
- Neurocirculatory asthenia
- Neurosis, cardiac
- Anorexia nervosa

B. *Disability Levels*

Under the Veterans Administration Schedule for Rating Disabilities for purposes of compensation, the degree of disability from the psychoses and psychoneuroses was determined, "in general, by the extent of social and industrial inadaptability, i.e., the extent to which the symptomatology would permit the patient to adjust himself to his social and industrial environment." [8] "Social and industrial inadaptability" contemplated those abnormalities of conduct, judgment and emotional reactions which would affect economic adjustment, i.e., produce impairment of earning capacity. The severity of disability was based upon actual symptomatology, in relation to the social and industrial inadaptability which would be expected to result in the case of the average person affected.

At the time the present study was done, the following levels for rating the psychoses and psychoneuroses were in effect:

Disability Levels—Psychotic Disorders:

Complete social and industrial incapacity.
Severe impairment of social and industrial adaptability.
Considerable impairment of social and industrial adaptability.
Definite impairment of social and industrial adaptability.
Slight impairment of social and industrial adaptability.

Disability Levels—Psychoneurotic Disorders:

Pronounced: Symptom combinations such as to produce nearly complete social and industrial inadaptability.
Severe: Symptom combinations productive of severe social and industrial inadaptability.
Moderately severe: Symptom combinations productive of considerable social and industrial inadaptability.
Moderate.
Mild.

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[8] 1945 Schedule for Rating Disabilities, Veterans Administration, Loose Leaf edition, p. 121.

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*PROGRAM EVALUATION; FOLLOWUP STUDIES; *EXPERIMENTAL PROGRAMS; *DEMONSTRATION PROGRAMS; JOB PLACEMENT; ON THE JOB TRAINING; *DISADVANTAGED GROUPS; *ADULT VOCATIONAL EDUCATION; UNEMPLOYED; EMPLOYMENT PROGRAMS
DENVER; PUEBLO; COLORADO

The Job Opportunity Centers (JOC) in Denver and Pueblo, Colorado, were funded by The Office of Manpower Policy, Evaluation, and Research for the 20-month period from October, 1964, to June, 1966. Some objectives were: (1) to provide an intensive program of recruitment, selection, counseling, testing, referral to training, and placement of a minimum of 500 unemployed heads of families, (2) to place a minimum of 100 of the 500 in on-the-job training situations, and (3) to help the disadvantaged acquire basic educational, social, and other skills needed to help them adjust to community life as it now exists. In September, 1965, the Secretary of Labor awarded a 24-month contract to the Human Interaction Research Institute to conduct a follow-up study of the work of the JOC. The descriptive studies and critique of JOC operations and empirical studies of JOC outcomes indicates that little in the way of productive outcomes emerged from the JOC project. JOC not achieving its expectations is not an indication that the idea of an experimental-demonstration project of this type is not worth trying. More accurately construed, it may be an indication of the extent to which relatively unqualified people were able to cope with the complexities of what is now recognized as one of the more difficult undertakings in our highly complex society. (HC)

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AN EVALUATION FOLLOW-UP STUDY OF THE JOC EXPERIMENTAL DEMONSTRATION PROJECT FOR THE COMMUNITIES OF DENVER AND PUEBLO, COLORADO

Final Report to the Office of Manpower Policy,
Evaluation and Research
U. S. Department of Labor
Washington, D. C.

Contract No. 82-05-66-01

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PREFACE

When the Office of Manpower, Automation, and Training (OMAT -- which subsequently was changed to Office of Manpower Policy, Evaluation, and Research -- OMPER) approved and authorized the operation of the Denver and Pueblo, Colorado, Job Opportunity Centers (JOC) in October 1964, it further demonstrated a much-needed sensitivity to a serious national problem. It also set in motion another exciting social experiment from which much might be learned about working with adult "unemployables" and seriously disadvantaged people in general.

Unfortunately, the JOC project lacked a built-in research design for evaluating outcomes. For example, there was no provision for setting up experimental and control comparison groups. Provision for record keeping was most inadequate; the records were incomplete and often inaccurate. On the basis of available records, what might be said at best was that there was little in the way of objective evidence on which to base conclusions about JOC accomplishments.

As a result, the Human Interaction Research Institute (HIRI) had to go to great lengths to fill in gaps in the records, verify information, correct inaccuracies, "extract" post-hoc control groups, and generate much of its own data in order to be able to ascertain the extent of pre-post changes on relevant dimensions for the experimental and control samples. Of course, statistical analyses had to be performed in order to determine the reliability of findings.

Much of the work done by HIRI rightfully belonged within the domain of JOC, but it was work that had to be done if scientifically based findings were to be brought forth as the foundation for drawing valid conclusions.

It must be reported that, by and large, very little in the way of productive outcomes emerged from the JOC project. It was a grand and ambitious effort, but extremely few of its hoped-for objectives achieved fruition.

In terms of "hindsight," however, much has been learned that may be of value for future similar projects. These "learnings" are incorporated in the chapter on Recommendations in this report.

In order to avoid "finger-pointing," names of individuals have been entirely omitted; regrettably, this precludes giving appropriate recognition to those who made notable contributions to the JOC program.

Because of the complexity of the JOC project and the vast amount of work done by HIRI in its follow-up study, a complete and detailed final report would be unduly long, technical and cumbersome. The bases for the distilled report presented here are to be found in the half-dozen progress reports previously submitted, some of which are replete with tables and detailed statistical analyses. These progress reports, appendix material and work data are in HIRI's files and may be examined by properly interested persons.

Chapter I. INTRODUCTION

On October 6, 1964, the United States Department of Labor, Office of Manpower Automation, and Training (OMAT, hereafter referred to under the subsequent name, OMPER) entered into a 20-month contract with the Job Opportunity Center (JOC) in Denver and Pueblo for the purpose of accomplishing the following objectives, as stated by JOC:

JOC Objectives*

1. To provide an intensive program of recruitment, selection, counseling, testing, referral to training, and placement of a minimum of 500 unemployed heads of families (350 in Denver, 150 in Pueblo) who have a variety of problems which create difficulties in their ability to profit from conventional programs.

2. To interview additional individuals in the course of selecting the 500, and to give those individuals limited service, including referral to appropriate outside agencies.

3. To place a minimum of 100 of the 500 in on-the-job training situations.

4. To achieve permanent vocational placement of the head of the household with attendant rehabilitation to family members of all ages. Or, "the hoped-for end result will be a head of a household engaged in full-time, permanent employment at a skill level truly commensurate with his abilities and aptitudes, and a stable family unit who feel themselves a respectable part of the society and community in which they live."

5. To marshal better than do existing public agencies the multitude of services needed by hard-core underprivileged families in order to reverse the patterns and conditions that have created a growing army of unemployables -- a growing army of families unable to adjust to the changing urban and rural world of today.

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* These project objectives are not stated in this ordered sequence in the JOC project contract but are interspersed in the contract and have been extracted by HIRI for this recapitulation.

6. To restore to independence, by many different kinds of reconstructive techniques, some or all of the disadvantaged -- or at least to determine whether or not sizable numbers of the disadvantaged can be cured of that condition by methods available now.

7. To help the disadvantaged acquire basic education skills and social and other skills needed to help them adjust to community life as it now exists.

8. To provide assistance in family problem areas.

On September 20, 1965, the Secretary of Labor awarded a 24-month contract to the Human Interaction Research Institute (HIRI) to conduct a follow-up study of the work of the Job Opportunity Center for the purpose of accomplishing the following objectives, as stated by HIRI:

HIRI Objectives

1. To ascertain the extent to which the experimental-demonstration project meets its stated objectives. And especially, to determine the extent to which the hoped-for end result of the project is achieved, namely, that the heads of households worked with during the project will become engaged in full-time, permanent employment at a skill level truly commensurate with their abilities and aptitudes, and that their families will become stable family units which feel themselves a respectable part of the society and community in which they live. (P. 10 of the JOC Contract) If they have not become "engaged in full-time employment," to determine why they have not, and the extent to which they may have become employable.

2. To determine what appreciable changes took place in the persons and families who were served by the project.

3. To identify the project factors which caused the changes in the project clients, or to seek explanation where such factors failed in their purpose.

JOC Life Span

Intake of trainees in the Denver Center began in November 1964 and the first class in Basic Education started December 7, 1964. In the Pueblo Center the first class in Basic Education began on January 4, 1965. The first vocational training class started in Denver on January 2, 1965 and in Pueblo one month later.

Although the JOC contract with the Department of Labor provided for 20 months of operation, JOC officials stated that they were informed by OMPER not to take any more trainees after June 20, 1965, which was about nine months after the JOC contract was awarded. Vocational education was terminated in August 1965. The JOC administrators attempted unsuccessfully to obtain more funds but eventually sent a bulletin to all JOC personnel in Denver and Pueblo on October 25, 1965, indicating a state of financial emergency. Termination of the services of several major staff members on October 1, 1965, and discouragement over the unfavorable outlook for JOC were reflected in deterioration of trainee and staff morale. These events were taking place just a year after the project began and adversely affected operations during the remaining eight months of the duration of the contract.

In response to an OMPER directive, all basic education was terminated in the Denver and Pueblo centers after November 26, 1965, and the major emphasis thereafter was stipulated to be on job development and placement. This effort

was short-lived, however. A great deal of effort was expended in drafting a new proposal to OMPER for additional funds to keep JOC in existence and in providing basic education for Title V (Welfare) trainees.

The November 12, 1965, issue of the (Denver) JOC Blast, a trainee newspaper, carried this story on page one:

JOC Prints Last Issue of Blast

> The JOC Blast regrets to announce that this will be the last issue due to the fact that as of November 26, 1965 there will be no more Basic Education due to lack of funds . . .

Actually, a limited Basic Education program was provided. That program was terminated and was followed by basic education financed by Title V. Administrative funding was still provided by OMPER.

All JOC services, as an OMPER enterprise, ceased on June 6, 1966. The Office of Economic Opportunity, however, provided limited financial assistance thereafter (for a different program) until final closing of JOC doors in Denver and Pueblo on March 31, 1967.

The following summarizes the major dates in the JOC operations:

October 1, 1963	JOC began as a small AFL-CIO enterprise.
October 6, 1964	JOC began to operate under the OMPER contract.
November 16, 1964	JOC admitted the first group of trainees for testing, etc.
December 7, 1964	Basic education and acculturation began in Denver.
January 2, 1965	Vocational education began in Denver; a month later in Pueblo.
January 4, 1965	Basic education, and acculturation began in Pueblo.
June 20, 1965	Intake procedures terminated in both cities.

August 1965	Vocational education terminated in both cities.
October 1, 1965	Several major administrators terminated.
November 26, 1965	Objectives changed from an education and demonstration project to job development and placement.
June 6, 1966	JOC ceased operating as an OMPER enterprise.

Chapter II. ABSTRACT AND SUMMARY

The Job Opportunity Center (JOC) began as a modest Colorado AFL-CIO project in October, 1963. It was funded by an OMPER contract beginning October 6, 1964 (with date of termination set for June 6, 1966, at which time it ceased operating). The Human Interaction Research Institute (HIRI) began its follow-up study in September 1965. JOC stated eight primary objectives in its project proposal. The main observations and findings relating to JOC objectives, operations and outcomes are summarized as follows:

JOC Objective 1. To provide an intensive program of recruitment, selection, counseling, testing, referral to training, and placement of a minimum of 500 unemployed heads of families (350 in Denver, 150 in Pueblo) who have a variety of problems which create difficulties in their ability to profit from conventional programs.

A. The administration of JOC which was charged with responsibility for trainee selection, training, placement, referral, and general program operation was fraught with difficulties from the inception. Otherwise recognized capable individuals who were placed in positions of major responsibility appear to have been ineffective in these roles. The administration failed to provide adequate staff leadership, to clarify objectives, to execute sufficient advance planning to ensure program support, or to secure essential cooperative working relationships with other agencies. There was a serious circumvention of the administrative line of authority which resulted in confusion and staff demoralization. In general, the professional operation of the program was not sufficiently insulated against external pressures and vested interests.

B. In contrast to the stated goal of reaching 500 families, JOC was able to serve only 352 before the program was phased out (223 in Denver and 129 in Pueblo). Contact, recruitment, and publicizing of the

project were fairly well carried out, particularly in Pueblo, but the process of selecting trainees is subject to criticism. The initial selection criteria were subsequently modified (to meet MDTA training regulations) and there is evidence that criteria were not strictly adhered to in all cases, so that it was difficult to generalize upon the nature of the trainee population. A control group of trainees was to have been selected for evaluation of JOC's intervention efforts compared with a matched group not receiving such intervention, but this was never accomplished.

C. Counseling, individually and in groups, was carried out at JOC and there is evidence that counselors in many cases made sincere effort to provide personal assistance to trainees. Frequently this was on a fundamental survival level. Counseling, however, could have benefited from better program leadership, in-service training, and better backup resources such as professional consultation. The test results were rarely made available to counselors for use in working with the trainees. Counselors were divided into "trained" and untrained indigenous groups which paved the way for staff rivalries. The "trained" counselors were later transferred to the staff of the project psychologist to assist in the "research" program and thus lost their potential effectiveness to perform in a service role.

D. A vast testing program involving 39 separate tests and test batteries was carried out at JOC, but without any apparent useful purpose relating to the stated project objectives. The test data were being accumulated to satisfy the seemingly spurious, undefined "research" interests of the project psychologist and the director.

E. A considerable amount of effort went into job development, but the results were less than encouraging. Employers were not provided with accurate descriptions of trainee characteristics and there was continual uncertainty regarding time phasing of training so that at any given time it was not known when a particular trainee might be ready for placement.

F. The JOC Final Report states that JOC had placed 31% of its trainees in Denver and 35% in Pueblo. The HIRI follow-up indicated these figures to be markedly exaggerated. Some trainees at the time of the report were still in training and others had found their own jobs. A number of the claimed placements involved individuals who had in fact been trained under a supplementary project. In October of 1966, JOC reported that 97 of the 223 persons trained in Denver had been placed. A telephone follow-up by HIRI of these 97 persons,

conducted in March 1967, revealed that only 28 were working on some job. Forty persons had worked at the reported placement location but were no longer there. Twenty-nine could not be located at all.

JOC Objective 2. To interview additional individuals in the course of selecting the 500, and to give those individuals limited service, including referral to appropriate outside agencies.

Although some additional applicants were referred to other agencies, the referral process was apparently highly informal and unaccompanied by follow-up. The selection procedure did not provide for taking detailed job histories, and testing for screening purposes was deliberately avoided so that little was known regarding the applicant which would be useful in referral for placement. Referral was often in the form of casual suggestions by the clerk-receptionist.

JOC Objective 3. To place a minimum of 100 of the 500 in on-the-job training situations.

A HIRI survey of the total JOC population found that of the 97 individuals mentioned in "F" above, 68 had been placed in OJT. Of the 29 who could not be located, we could not, of course, confirm how many had been placed.

JOC Objective 4. To achieve permanent vocational placement of the head of the household with attendant rehabilitation to family members of all ages. Or, "the hoped-for end result will be a head of a household engaged in full-time permanent employment at a skill level truly commensurate with his abilities and aptitudes, and a stable family unit who feel themselves a respectable part of the society and community in which they live."

This objective was involved with rehabilitation, socialization and acculturation benefits. Intensive structured interviewing accompanied by interviewer observations on a sample of experimental and control subjects indicated a slight movement of the trainees in the direction of middle-class attitudes regarding employment and a greater willingness to utilize community facilities, e.g., the public library. Statistical comparisons regarding changes in self-concept, level of aspiration, property ownership, and family harmony revealed no differences between experimental and control groups. Follow-up studies comparing groups on anti-social behavior as measured by police records indicated no differences favoring trainees over non-trainees of similar circumstances. Studies of behavior and performance of an experimental sample of the dependent children of trainees in the school setting found no differences in the improvement of these children when compared to a matched group of control subjects. Investigation of the anti-social behavior patterns of the dependent children indicated no difference favoring the experimental group.

JOC Objective 5. To marshal better than do existing public agencies the multitude of services needed by hard-core underprivileged families in order to reverse the patterns and conditions that have created a growing army of unemployables -- a growing army of families unable to adjust to the changing urban and rural world of today.

There was little evidence to suggest that the JOC program, as it operated in this instance, was superior to the services provided by existing public agencies; or that the program format showed any particular promise for making a substantial impact upon the "growing army of unemployables" as we were able to assess the results at this point in time.

JOC Objective 6. To restore to independence, by many different kinds of reconstructive techniques, some or all of the disadvantaged -- or at least to determine whether or not sizable numbers of the disadvantaged can be cured of that condition by methods available now.

A. Although some individuals were clearly helped toward rehabilitation by the combination of services provided, comparative evaluation in terms of the proportion helped, at least in the area of economic independence, finds no clear advantage for this group over similar persons unassisted by JOC.

B. With regard to the objective of ascertaining whether the disadvantaged can be "cured of that condition" by methods now available, the HIRI follow-up evaluation suggests that the question remains unanswered. There is considerable doubt as to whether the mode of operation was sufficiently sound to permit potential program effects to become manifest.

JOC Objective 7. To help the disadvantaged acquire basic education skills and social and other skills needed to help them adjust to community life as it now exists.

It was the consensus of the HIRI team that the programs for basic education and acculturation were among the more promising aspects of the total JOC project. A substantial increase in reading level was noted for the trainee population, and an increased level of reading usage was observed. There was also some evidence of shifts in attitudinal characteristics in the direction of a middle-class orientation with respect to attitudes toward job holding and utilization of community resources. It is conceivable that these changes may produce long-range benefits which are not measurable at this time.

JOC Objective 8. To provide assistance in family problem areas.

HIRI findings indicate that JOC trainees did receive personal assistance in the area of family problems which was undoubtedly beneficial in some cases. Counselors made genuine attempts to provide individual assistance in this area, and for a while, family group sessions were conducted toward this end. The group sessions were popular and well-received, but were discontinued for unexplained reasons. Better utilization of the counseling personnel, accompanied by better professional leadership and support, and improved followup of family contact, might have enhanced the results considerably.

Chapter III. HIRI RESEARCH PROCEDURES

Introduction

To accomplish the threefold purpose of the HIRI follow-up project, as stated in its contract, an explicit research design had to be formulated. To do this meaningfully, it was necessary to go beyond a reading of the OMPER-JOC contract and get to know the JOC situation and the people involved in administering its program. Prior to setting up the specifics of the research design, therefore, members of the HIRI team (1) conferred and became well acquainted with the administrative officials in the JOCs in Denver and Pueblo; (2) discussed with these officials their interpretation of the JOC objectives and policies as stated originally and the extent to which it was felt they were being attained, modified, or discarded for any reasons; (3) worked out an agreement with the appropriate JOC personnel about the information which would need to be gathered as a basis for determining the efficacy of the methods, techniques and organizational setup of the JOC project during its operation under the contract with OMPER; (4) ascertained the specific counseling, training, and placement policies and procedures being employed and the extent to which records were available; (5) wrote out descriptions of stated policies and procedures whenever records of them were not available, and identified and recorded changes in statements of objectives (after which they were verified by having cognizant JOC officials read and initial them); (6) discussed with various officials concerned -- in the schools, welfare agencies, and employment service -- their relationship with JOC officials and the JOC project.

Following this, the HIRI staff held meetings to design research methods appropriate to the goals and objectives of the JOC, its philosophy, its clientele, and its procedures.

Rationale and Formulation of Design

The immediate task confronting the HIRI research team was to translate the statement of JOC objectives into clear-cut operational objectives and evaluative criteria which could be utilized as a basis for developing specific research strategies. Adequate evaluation also necessitated an understanding of the context within which JOC operated; and this in turn required a detailed and objective description of the JOC operation both within the framework of its stated purpose and in relation to community influences and interactions. HIRI hoped, thereby, to design and carry out systematic investigations of the extent to which JOC met its stated objectives in terms of actual outcomes; and to arrive at meaningful and useful conclusions and recommendations.

The itemization of JOC project objectives, statements of intent, and implied promises of goals to be accomplished was translated into 73 operational HIRI objectives representing specific evaluative tasks to be undertaken. These research objectives were then classified into 24 appropriate groupings or clusters, e.g., those having to do with education and acquisition of skills, with job placement, with changes in trainee self-concept and aspiration, impact on families, etc. The item clusters then became the basis for a series of

specific studies which were carried out by the HIRI team to examine various aspects of the JOC total program. Methodologically, the research studies fell into two classes, descriptive and empirical.

Descriptive Studies

The descriptive research studies were based upon direct observation, inspection of records, and interview. Observational data were gathered by on-the-scene inspection and inquiry. One member of the HIRI professional staff spent one full year on the JOC premises. During that time he made careful examination of all pertinent record information, conducted continuing interview sessions with members of the JOC staff, and conferred extensively with community leaders and agency officials where appropriate. All other members of the HIRI team made periodic visits to the JOC centers in connection with various phases of our on-going research studies. The professional staff met in conference sessions at regular intervals during the contract period. These meetings provided an opportunity to share, validate and objectify our observations.

Sources of data were many and varied. JOC records were corrected and completed where possible. The data from JOC files were supplemented through cooperation from other agencies and through the addition of HIRI-generated data. From the various sources, data were compiled into a central data bank for use by the HIRI staff.

The studies pertaining to the description of the operations of JOC covered the following areas:

1. Organization and Administration of JOC
2. Community (Local, State and Federal) Relationships
3. Contact, Recruitment and Selection of Trainees
4. The Testing Program
5. Counseling
6. Basic and Acculturation Education
7. Vocational Education
8. Job Development and Placement

Empirical Studies

Sample Selection

For purpose of intensive study of the trainee population in relation to certain of our empirical studies, HIRI found it desirable to identify a sample of subjects from the total 222 population in Denver. While certain of our objectives could be approached by surveying the entire available population, others, e.g., intensive interviewing of trainees, required that we deal with smaller numbers. Consequently, in the spring of 1966 an experimental sample of 32 trainees was identified by means of stratified random sampling. The final sample was shown to be statistically comparable to the total trainee population on the basic variables of age, number of dependents, and functional grade level. (It was observed that the JOC procedure for computing functional grade level from the Metropolitan Achievement test was atypical and this variation had to be taken into account in our selection of matched control subjects.) The sample was also equated on ethnic distribution.

A control group sample was identified from JOC applicants who had completed the intake procedure in September of 1965 and had undergone partial testing, but had not received service from JOC. On the basis of existing JOC records these subjects had met the same minimal intake criteria as the experimental subjects and they were subsequently shown to be comparable in terms of the same variables of age, dependents, and Metropolitan grade placement level. Supplementation of these samples became necessary in some cases because of inability to locate subjects.

The empirical outcome studies can be subdivided into those dealing directly with JOC trainees, and those dealing with trainees' dependents. In some cases data were obtained from JOC records and the records of cooperating agencies. In other cases the HIRI staff generated original data and developed its own instruments.

Studies of Trainees

1. The following studies were based upon intensive interview with a sample of JOC subjects, utilizing instruments developed by the HIRI staff:

   a. General Outcomes
   b. Level of Aspiration
   c. Self-Concept
   d. Motivation
   e. Family Stability
   f. Family Harmony
   g. Property Ownership
   h. Reading Usage
   i. Attitudes of Program Participants

2. Extent to which trainees represented hard-core unemployed. Assessed by means of checking welfare history, level of education, income versus essential subsistence base, and the number of persons per household.

3. Change in anti-social behavior. Assessed by checking police records regarding frequency of arrests, and comparing the experimental and control samples.

4. Adequacy of post-training employment. Scales were developed for rating Level of Employment and Adequacy of Employment. Pre- and post-ratings were made by two employment service counselors for a group of subjects who were "still working" and for a group which was "not working."

5. Occupational performance of a selected group. Obtained from Employment Service rating forms administered to employers of JOC trainees.

6. Study of drop-out population. Based upon an evaluation of psychometric and demographic data which characterized the drop-out group.

Studies of Dependent Children

1. These studies were based upon a comparative evaluation of the school records of children from the experimental and control group samples over a two-year period. The groups were compared in terms of pre- and post-measures on the following variables:

a. Grade point average
b. School attendance
c. Performance on standardized achievement tests
d. Behavior ratings involving conduct and attitude
e. Anecdotal record ratings
f. Transiency as indicated by moves among schools

2. Change in anti-social behavior. A check was made of the juvenile court records for members of the experimental and control groups of children.

Limitations

In our initial visits with JOC representatives it was clear that there was considerable confusion as to the extent of research emphasis which should be built into an E & D project. In spite of the espoused interest in research by those occupying prominent positions in the JOC administrative hierarchy, we found that, from the outset, systematic planning along the lines that would provide for built-in follow-up and evaluation was totally missing. This was partly due to the absence of clear-cut goals or objectives for specific elements of the program which might provide a basis for evaluation. In addition, there was inadequate provision for record keeping and for follow-up contact of trainees. Where records were kept, they lacked completeness and accuracy, and were often unrelated to project objectives. Even the addresses given for the trainees were frequently unreliable or non-existent. On the other hand, certain kinds of data were being collected and quantified in a highly systematic fashion but for no relevant purpose so far as we could determine. A flagrant

example was in the testing of trainees. No provision was made for securing a control group to provide a basis for comparative evaluation of outcomes.

In the face of these and other limitations, HIRI was obliged to fill in gaps in the records, when possible; to evaluate the adequacy of existing base data and generate some of its own; and to "extract" an appropriate control group and establish its equivalence to the JOC experimental population in order to enable comparative evaluation in relation to specific empirical outcome studies.

Chapter IV. DESCRIPTIVE STUDIES AND CRITIQUE OF JOC OPERATIONS

Organization and Administration of the Job Opportunity Centers

Board of Directors

JOC was established and modestly financed by Colorado AFL-CIO before the contract with OMPER was signed. After it was funded by that agency of the U. S. Department of Labor, the President of Colorado AFL-CIO continued as Chairman of the JOC Board. There were six other representatives of the labor movement on the Board. Ten members who were representative of employers, five local and/or state agency representatives, and several people from church and similar local groups rounded out the Board roster.

There is no evidence that the Board possessed well-defined policy guidelines. It appeared to be difficult for some members to refrain from assuming administrative and operational roles, rather than policy-making ones.

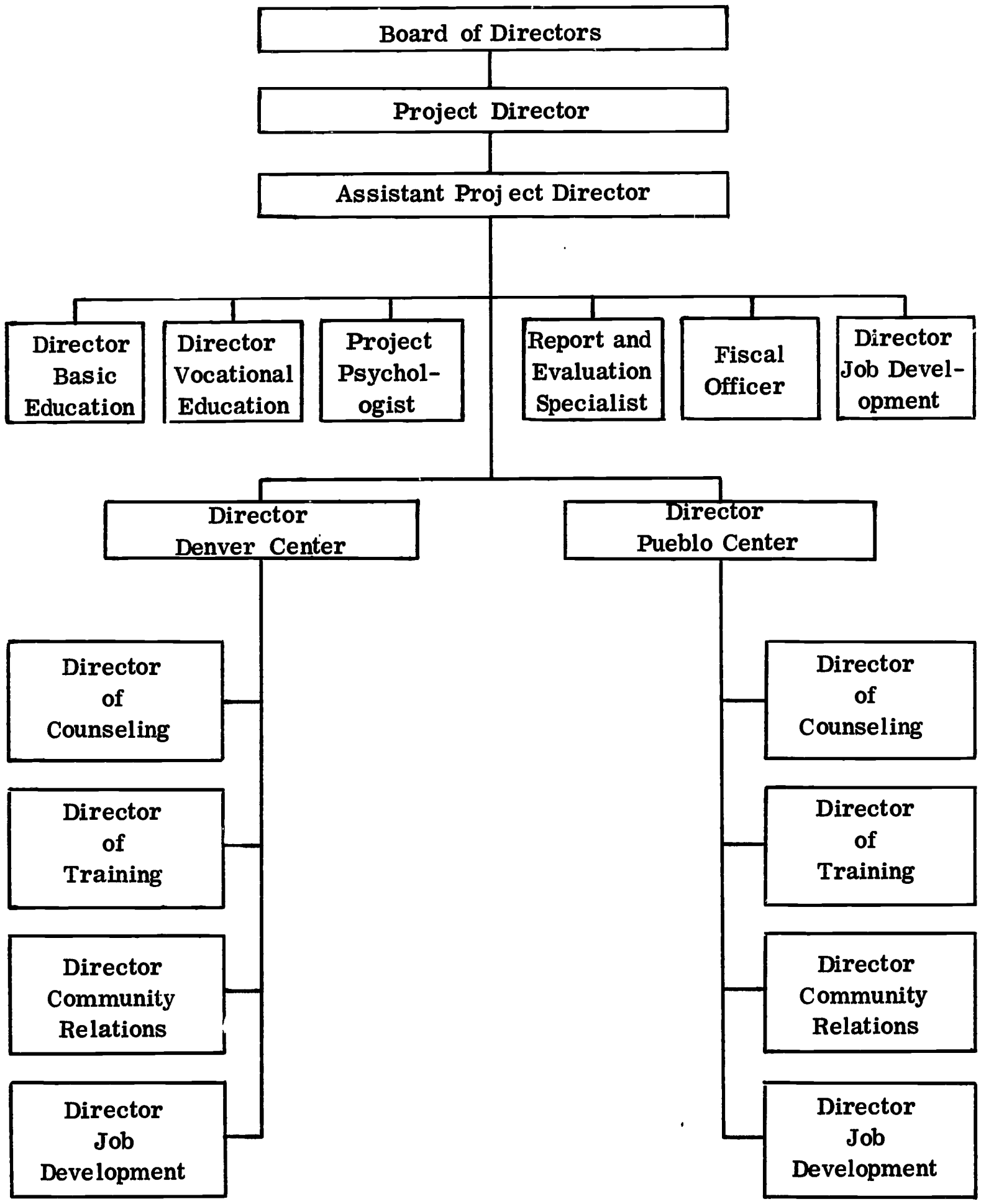
Administration

A table of JOC organization is presented on the next page.

Throughout the following pages a distinction is made between Project and Center administration.

The Project administration theoretically had responsibility for developing and implementing, subject to policy direction by the Board, procedures to be followed by the Denver and Pueblo Center administrators.

ORGANIZATION OF COLORADO JOC



Project administrators were the Director, Assistant Director, Director of Education, Director of Vocational Education, Director of Job Development, Project Psychologist (who served as Project Director of Testing and Research), Reports and Evaluation Specialist, and Fiscal Officer. The administrators were in disagreement, almost from the outset, over their responsibilities in an experimental and demonstration project. They differed over the role of "research" and never did agree on the extent to which test data would be collected, to whom it would be made available and for what purpose.

Lack of close OMPER supervision, conflict between Board and Project administrators and (to some extent) between the latter and Center administrators concerning the real nature of an experimental and demonstration project, uncertainty over financial support and poor record keeping resulted in a state of confusion which at times could almost be described as chaotic. This condition had a demoralizing effect on staff members, especially in the Denver Center which was located in the same building with the Project administration. Awareness of JOC conditions also had an adverse effect on Denver public school officials as well as other agency administrators and community leaders who might have rendered greater service to JOC had it enjoyed a better reputation in the community.

Perhaps the greatest difficulty faced by Project administrators was their felt lack of information about finances. As JOC personnel perceived it, the financial arrangements made for the Project contained built-in hazards.

Although the JOC staff hoped that they would receive and be able to administer a total budget, vocational training funds were administered by the State Board for Vocational Education, and funds for maintenance allowances were disbursed by the Colorado Employment Service. The JOC Fiscal Officer was responsible only for the administrative budget and he asserted that it was difficult for him to keep informed concerning all financial matters pertaining to JOC operation. Several Board members and Project administrators were operating under an assumption that more funds would be forthcoming merely on request. One administrator told an HIRI staff member that "We were out of money before we knew it."

A major problem encountered by JOC Board and Project administrators was that of finding competent people for the positions which were available. Very few individuals who were trained and/or experienced for the kind of project envisaged were available, especially for a two-year contract period. With qualified personnel in such short supply, close cooperation between professionals on the staff and less-qualified personnel was highly desirable. Policies providing for in-service training were essential. The JOC Project administration made a brave beginning in these areas of activity, but that work was discontinued when key persons departed and morale deteriorated. There was a notable lack of cooperation between testing and counseling and training and placement personnel.

In the Denver and Pueblo Centers, administrators had the following titles:

Center Director
Director of Counseling
Director of Training
Director of Community Relations
Director of Job Placement

The Center administration in Denver was not always clear-cut. Since Project administrators were located in Denver and also served as Center administrators, a detailed description of Denver Center administration would be redundant.

Several Project and Denver Center administrators and staff members achieved a high degree of "visibility" as members of various activist groups. It was alleged that they planned and participated in demonstrations and similar activities "on JOC time."

Pueblo Center directorship was provided by the same individual throughout its history. Direction of the training program there also was provided by the same person throughout the life of Pueblo JOC. Although three administrative staff members left Pueblo JOC, they were not terminated but moved on to other responsible community positions. One staff member, a Spanish-American counselor, was transferred to the Denver Center, at the request of the latter agency.

A major factor in the difference between the organization and operation of the Denver and Pueblo Centers was that the latter Center was located 115 miles

from Denver and thus was too inaccessible for extensive Board and Project supervision and/or "interference."

Another difference between the Pueblo and Denver Centers was that the former was established with extensive community support at the outset.

The first JOC Project Director had earned the respect of Pueblo community leaders in his (earlier) role as State Director of Institutions. In that capacity he had visited Pueblo often, in order to study the needs of and to obtain legislative support for the State Mental Hospital (located in Pueblo). With the assistance of the Pueblo Chamber of Commerce and the publisher of the two daily newspapers, he was able to establish the JOC there with solid community support. The man who was selected as Center Director in Pueblo had been a well-known personnel manager in a large industrial concern there. The Director of Community Relations in Pueblo was a former businessman; he also was very effective in JOC budget administration.

Pueblo is known as a "labor town," so labor connections were less of an obstacle to employers than they were in Denver, although they did constitute a problem on some occasions and with some people. These connections were assets in some cases.

The city of Pueblo is smaller than Denver and easier to "reach" via the power structure and its decision-makers; the power structure was utilized in Pueblo and was not used in Denver, for reasons already stated.

Pueblo JOC administrators employed a number of Spanish-American staff members at the outset. Denver Project and Center administrators increasingly employed minority personnel as turnover occurred.

A major factor in the success of the Pueblo Center was the effective work done by the Director of Training at the Vocational-Technical Pueblo Junior College before it became a part of the Southern Colorado State College. Although he was never actually on the staff or budget of Pueblo JOC, in effect he served as de facto Director of Training for JOC, since all JOC training in Pueblo was done by contract with the college. Because of this "dual" assignment and also because he performed in a very competent manner in both roles, there was a minimum amount of confusion concerning the Basic and Acculturation and Vocational Training programs at Pueblo JOC.

Partly by virtue of the fact that the Pueblo JOC staff was smaller than the Denver one, and partly because there was continuous administration in the former Center, it was easier to gain staff cooperation and to provide in-service training. In spite of this fact, there was some friction between professionally trained and so-called "family" (untrained) counselors. It was alleged that this situation was a factor in the resignation of the Director of Counseling at Pueblo.

Critique re Board of Directors and Administration

Board of Directors

Although a variety of agencies was represented, many of the Board members apparently did not have direct contact with or sufficient knowledge about the project population, or about industrial problems and opportunities.

The proposal (to OMPER) indicated an understanding of many facets of the problem, but the statement of objectives and procedures to be employed suggested a certain degree of naivete concerning the difficulties involved, including obtaining the assistance of existing agencies.

The policies of the Board were not always clear or in writing. The Board seemed to be inadequately informed about significant developments and in turn failed to provide for timely policy leadership for the administrators in getting the task achieved.

While not a Board responsibility in a specific sense, the project's failure to establish an adequate research design -- including setting up a control group and evaluative procedures -- indicated lack of appreciation of the methods usually involved in determining whether or not objectives are achieved, or even attainable in an E & D project of this type.

Although most of the problems were inherent in the nature of the project, they were seldom solved satisfactorily by the administrative staff and thus became Board problems. On many of these occasions individual Board members, especially the Chairman, attempted to cope with them rather than to require administrative solutions or total Board considerations. In the absence of high morale and operating efficiency, the Chairman assumed what some administrators, staff members, and Board members considered to be too much of the authority which should have been delegated to administrators, who in turn, should have been held responsible for getting results. Some administrators, however, were

clearly ineffectual in this situation. In some cases the Personnel Committee of the Board apparently assumed a great deal of administrative responsibility.

One of the most important responsibilities of the Board of Directors -- especially when expending public funds -- was that of careful budget planning and control. This was not done, perhaps due partially to the difficulties encountered by the Fiscal Officer. Another possible reason was that several Board and staff members were operating under the assumption that more funds would be forthcoming merely on request.

With no research design established for the E & D Project, no control group selected, and no follow-up made of actual placements or job commitments, there were no adequate bases for valid evaluation. In the absence of these data the Board of Directors did not know whether objectives were being attained.

Administration

Certain difficulties were faced by Project and Center administrators which complicated their operations. One normal operating problem which should have been resolved at the outset was the need to develop and implement uniform client selection procedures. This was not resolved and adhered to in a satisfactory manner. Varying economic conditions and resultant effects on employment in the cities concerned served to influence the client population selected for the several classes and census areas to be served by the project.

As JOC personnel perceived it, the financial arrangements made for the project contained built-in hazards. The JOC project staff hoped that they would receive and be able to administer a total budget which would encompass funds for administration, training, and maintenance allowances. In fact, all training funds were allocated to the State Board of Vocational Education, and money for maintenance allowances was appropriated to the State Employment Service. It would seem that the JOC staff should have had more knowledge, facts and understanding about the realities of how things actually worked rather than so many important misconceptions.

Under MDTA regulations the Employment Service requires a two-year employment history before qualifying trainees for training allowances. This regulation complicated the fulfillment of other JOC contractual obligations to train hard-core unemployed. The rate of maintenance allowance was increased by that agency during the course of training and thus accelerated the expenditure of funds allocated for the project. JOC administration needed to make the implications of this situation clearer to OMPER before financial trouble developed.

The financial manager of the JOC Project (Denver and Pueblo) was responsible for only the administrative budget and it was difficult for him to visualize accurately the financial picture of all fiscal matters pertaining to the entire operation. Furthermore, it was hoped that changes in legislation governing the allocation of funds for the fiscal year 1965-66 would provide for direct appropriation to JOC of all funds needed for training and maintenance allowances as

well as administration. Not only was this not done, but no funds were appropriated for JOC (for 1965-66) through other agencies, as was done in 1964.

An additional complicating factor was that some of the top JOC administrators had little or no previous administrative experience, especially in the initiation of difficult new enterprises, and were ineffectual in coping with the number and magnitude of the problems encountered. Because of the previous training and experience of some of the administrators, disproportionate emphasis was placed on what they perceived to be "research" while other activities were given less attention. As a result of the turnover and job change in administrative personnel, it was difficult to maintain continuity in operations and desirable staff morale.

Since the close of the 1964-65 fiscal year, uncertainty over project funding had an adverse effect on the staff and trainees. Trainees who had completed the regular basic education-acculturation sequence were kept in that program for many additional weeks when they had expected that they would be given vocational training.

When the final decision was made concerning a supplemental appropriation to JOC, it was insufficient to provide vocational training for 70 trainees in the Denver Center. Similar problems in Pueblo were avoided to some extent because of imaginative innovation.

Job development in Denver and Pueblo was very difficult, and it is pertinent to remark that Colorado's economic growth was on a plateau for two years. Unemployment in December 1965 was not so high, however, as in December 1964. Another complicating factor in the placement of Spanish-Americans was the absorption of 650 Cuban refugees in the winter of 1965-66.

Discrepancies between the realities of the job market and the expectations engendered by the JOC counselors constituted another problem. A further complication was the fact that wages paid in many of the available jobs were less than the increased maintenance allowances referred to above.

One promising avenue of placement-training, OJT, was almost closed because of the difficulties encountered in negotiating contracts with small businessmen who were not equipped to provide the kind of training desired at a reasonable financial rate. Trainees in JOC were not eligible for tool allowances.

So much difficulty was encountered in arranging for apprenticeship training that almost none was provided. The threshold requirements for the trades involved were beyond the qualifications of this population of hard-core unemployed. The standards for entry were not lowered.

Neither Denver nor Pueblo ever reached the point where minority people, who constituted the bulk of the JOC population, had equal economic opportunity -- an obvious obstacle to placement.

Another problem faced by the JOC administrators in Denver and Pueblo was that physical facilities for administration of the programs were limited. They were located at a distance from the training facilities. The Pueblo office and training facilities finally were brought into close proximity.

The roles played by Board members and Project administrators in the Denver Center, coupled with the nature and magnitude of difficulties and problems existing there, had the net effect of rendering ineffectual some Project and Denver Center administrators, resulting in a condition which at times appeared to be almost chaotic. There was a great deal of competition and some outright conflict which was detrimental to the Project, the Denver Center, and the JOC image among knowledgeable people.

The Pueblo Center operated much more smoothly and with less friction, but was not so successful as it hoped to be in placement of the hard-core unemployed minority-group trainees.

It is unfortunate that, for whatever reasons, optimal utilization of the abilities, interests and creative potential of the administrative personnel was not realized in this project. Evaluation and report writing were rendered very difficult because of lack of clear, superable project objectives and the absence of a research design which would have provided bases for progress evaluation.

In summary, although Board members and administrative and staff personnel were attempting to accomplish an admittedly difficult task, their situation was

complicated further by their lack of preparation and ineffectual administration. They were often confused and discouraged. A great deal of effort was expended, however, in behalf of a group of trainees who had never before had the benefit of so much interested attention. It is unfortunate that better mobilization of these forces could not have been made in such an important enterprise.

Community (Local, State and Federal) Relationships

Description of JOC's Program of Public Relations

Various forms of public relations approaches were used by JOC. The major ones are described below:

1. A series of newspaper stories and speaking engagements prior to the opening of the JOC reached many private individuals from the disadvantaged culture as well as agency people. As evidence of this, Denver JOC had some 400 applications from potential trainees prior to its opening in October, 1964.

2. Speaking engagements were set up all during the project and literally hundreds of contacts were made. This was a two-way operation. Many outside speakers were brought to JOC to speak to staff and trainees, and most of the JOC staff participated in speaking engagements with agencies, churches, clubs and conferences. Complete records are not available, but some speakers' records were maintained.

3. One of the community public relations efforts was a consultant service established by the Community Services Specialist. Some 55 persons from 31 agencies volunteered several hours per month at the JOC in Denver. They provided service to trainees, but were there mainly to work with drop-ins who did not meet JOC criteria.

4. Several brochures outlining JOC's purposes were published and were widely distributed, particularly by the job development people, and letters were sent to several hundred prospective employers. In addition, the job development specialists made hundreds of employer contacts.

5. Another public relations effort was the joint development of a documentary film by a local television station and JOC. The film was about a former JOC trainee and received a good deal of attention.

6. Student newspapers were published in both centers, and although these were for internal circulation only, some copies found their way to other people. In Pueblo, a Spanish radio station gave the project a great deal of publicity with the target group prior to opening.

Report of the Survey Conducted by HIRI in Spring 1966 on Selected Community Leaders' Knowledge of and Attitudes Toward JOC

1. Denver Leaders

Interviews of at least an hour's duration were conducted individually with the following Denver people who were recognized as being outstanding in their knowledge of and service to the community: an adult educationist, two businessmen, a prominent community worker and housewife, a librarian, a minority leader, a newspaper publisher, two personnel managers, two public school officials, a State government official, and three University presidents and deans (retired). This sample of individuals was not representative of the entire community but were chosen because the investigator knew them personally, had excellent rapport with them and was able to obtain frank and comprehensive replies to questions.

In addition to their being among the generally best-informed citizens of the community, most of them also had national reputations in their respective fields of career specialization. They were representative of "liberal" and "conservative" elements in the community.

All of these individuals were asked, after being informed by the investigator about the follow-up study, to tell what they knew about the Job Opportunity Center in Denver.

One-third had never heard of the JOC. When informed about its objectives and activities, however, all but one expressed belief in the need for such an agency. One of the men felt that expenditure of money on adult "losers" was not justified and preferred the spending of money on younger persons.

Of those who knew something about JOC, only one expressed enthusiasm for its operation, although most endorsed the idea exemplified by the agency. One believed that only selected, "good, adult risks" were worthy of such expensive training. The others believed that the money could better be spent on youths.

All of the people who had the most detailed knowledge of the operations of the JOC were keenly concerned about its administration and operation. Several indicated respect for the Chairman of the Board and the first Director of JOC but were unanimous in their opinion that good leadership had not been provided. Several expressed the opinion that although the

Chairman of the Board deserved great credit for conceiving the idea of the JOC he had "too many irons in the fire." A similar opinion was expressed several times concerning the first Director. It was indicated that it was unfortunate that he served for a time as Chairman of the Denver War on Poverty Board while he was also Director of JOC.

One-third of the individuals who knew a great deal about JOC stated that its difficulties were attributable, in part at least, to lack of qualified staff personnel. One said, "It is difficult, if not impossible, to establish and maintain an effective poverty program without trained help." Another stated that "JOC, like the whole poverty program, was too hastily conceived and implemented." Another said "JOC could work only if the staff were very knowledgeable." The same individual, a professional in the field of minority relations, indicated that "JOC is a good laboratory."

Another well-qualified individual in the sample queried said that it was unfortunate that JOC leadership wasn't better because "the category of people being served needed this kind of training so badly and weren't getting it elsewhere."

The community leader who was "high on JOC" stated that it was essential that some aspect of the poverty program be successful. "The hopes of minority people were raised by the school desegregation decision and by civil rights legislation and court decisions but only minor gains have been

made thus far in those areas. This program must succeed!" The same individual regretted "lack of cooperation, with JOC, by several Government agencies."

One employer who had hired JOC graduates deplored the fact that very few had made good. He now believed that money should be spent hereafter on youth, rather than on adults who have never been successful. An individual who was enthusiastic about the JOC idea had come to the conclusion, reluctantly, that "maybe these people just can't go to work at 8:00 a.m. five days a week." Another famous Denver citizen indicated that "JOC had impossible objectives; it is difficult enough to help deprived youth."

Several of the respondents expressed admiration for the idealism and altruism of the Chairman of the JOC Board and the Colorado Labor Council, of which he also is President, in starting JOC with union funds (prior to gaining Federal aid). But there was wide recognition of inadequacies in administration of the enterprise.

In all fairness it should be stated, however, that the strenuous efforts which were expended to recruit qualified administrators and staff members were frustrated, somewhat, by difficulties encountered as a consequence of the long delay in Government approval of the JOC Project.

2. Pueblo Leaders

Interviews of at least an hour's duration were conducted with five influential Pueblo leaders who were generally recognized as being outstanding in their knowledge of and service to the community: the president of Southern Colorado State College, the manager of the Chamber of Commerce, the editor and publisher of the Pueblo Star Journal and Chieftain, an important official in the office of the Community Action Program and a prominent local attorney. These people were chosen because the interviewer had known them personally for many years and believed that he could obtain knowledgeable and honest answers to the question "What do you know about Pueblo JOC?"

All but one of them knew a great deal about the Job Opportunity Centers. According to their comments, members of the business community had serious doubts, based largely upon their political convictions, regarding the Great Society and anti-poverty programs. However, they respected the Director of the JOC Project (a former State Director of Institutions) and, on the strength of their confidence in him, the manager of the Chamber of Commerce recommended approval of JOC. The Chamber of Commerce Board approved of JOC on the basis that it was an experimental and demonstration project, the purpose of which was to determine whether some unemployed people could be helped to become employable. They regarded this primarily as an experiment in ascertaining whether

welfare recipients were capable of becoming self-supporting, productive people.

Some other information generated by the interview survey was that the Industrial Development Committee of the Chamber of Commerce was seeking to obtain the establishment of a textile plant in Pueblo. The existence of the JOC as a possible training facility for industry-serving employees was stressed as an argument in favor of locating such a plant there.

The Director of Pueblo JOC was influential in obtaining community support for the Center. He had been manager of industrial relations in a plant of an important Pueblo industry, was well and favorably known by many in the business community, and had served on several Chamber of Commerce committees, including the one dealing with welfare.

Relationships with Local, State, and Federal Agencies

On all levels, JOC administrators needed the close cooperation of officials in the Employment Service, State Vocational Education Office, Welfare Department, Public Schools, etc. Efforts were made to obtain the assistance of such agencies by a succession of JOC officials.

Although JOC Project and Center administrators found many cooperative agency officials and established effective working relationships with some of them, many of the agency officials, when interviewed by HIRI researchers engaged in the follow-up study, stated that lack of skill and tenure on the JOC administrative

staff in Denver (but not in Pueblo) constituted a great problem. Constant turnover in Project and (Denver) Center administrators resulted in a critical loss of knowledge about agency operations.

Critique

Administrative ineptness and rapid turnover in the JOC Project and Denver Center staffs were prime factors influencing the attitude of local, State, and Federal officials. HIRI interviewers repeatedly were told by agency representatives that although they were favorable to the JOC idea, the administration of the Project and the Denver Center was not effective. They referred frequently to lack of administrative effectiveness, lack of knowledge about the agencies, and lack of follow-through in support of JOC objectives. By December, 1966, community relationships in Pueblo were deteriorating.

Several Employment Service and welfare officials expressed regret that JOC administrators did not really know what kind of vocational training was needed. Numerous officials described JOC administration as "disorganized" and "unrealistic" in terms of trainee and community needs.

Contact, Recruitment, and Selection of Trainees

JOC had more than 400 applications by the time it opened its doors. Walk-ins, people who had heard about JOC on the radio or TV or from friends or who had read about it, were one major source of trainees. When they arrived at JOC, they were interviewed by a counselor-receptionist, and if they seemed to meet the selection criteria, were given an application to fill out.

A second group of trainees was composed of people who were known to the counselors or to other members of the staff. Family counselors went into the neighborhoods, knocked on doors, explained JOC, and secured applications, In this aspect of the work they seem to have done an effective job.

A third group of trainees was the "random sample group." JOC was supposed to select qualified applicants at random and also establish a control group. The latter was never done. Some 40 agencies were contacted and asked to supply names of hard-core unemployed individuals to JOC. Six responded, and from the names they supplied (the majority from welfare general assistance rolls), a "random selection" of individuals was made insofar as this was possible. (Some agencies supplied only two or three names.) Family counselors contacted these individuals and obtained applications from them.

The counselors, particularly the family (indigenous) ones, knew many of the applicants and according to counselors' statements fought hard for their acceptance. "Bending the rules" was fairly common, and it helped to be a friend of a friend.

Selection Criteria

In the JOC proposal the following criteria appear:

Select individuals who:

1. Demonstrate a prolonged and repeated inability to obtain and keep steady employment.

2. Evidence social, cultural, or economic ignorance.

3. Are between 22 and 60 years of age.

4. Are heads of households.

5. Will have motivation to pursue an occupation or training after receiving services by the Center.

6. Will, on completion of training, elevate their ability to a practical level of employment.

7. Could not reasonably find full-time employment without training.

8. Have a record of persistent unemployment.

9. Are unemployed at the time of selection or underemployed with substandard income.

A number of these factors are matters of judgment and some -- like the age group -- were modified from the beginning. In general when the first two groups in Denver and the first group in Pueblo were given preliminary interviews, an attempt was made to screen vigorously on all these criteria except age. From that point (January, 1965), however, the criteria were modified and for the most part JOC trainees met the following criteria.

They were:

1. Heads of households.
2. Between 17 and 60.
3. Had substandard income ($3000 or less).
4. Were unemployed or underemployed at intake.
5. Were certifiable for maintenance allowances under MDTA regulations.

The fact that the revised criteria required that trainees be "certifiable for maintenance allowances under MDTA regulations" (two-year employment record) resulted in very generous interpretations of records when applicants lacked

adequate work experience. A higher grade of trainees (than just "hard-core unemployed") was selected after the "new" criteria were applied.

Although there were Selection Committees in both Centers, decisions were made on recommendations presented by one counselor (in each case) who may not have been trained for this kind of interviewing.

The steps involved were as follows:

a. A counselor went to the home of a person who had been nominated by an agency and asked the individual to fill out an application. The counselor concerned decided to recommend or not to recommend the applicant on the basis of the information provided in his application form and from his conversation with the applicant.

   Denver walk-in applicants were screened by a receptionist who was a college graduate and former teacher. If she considered the applicant to be acceptable, she referred him to a counselor.

b. The counselor's final recommendation, in the cases of those who were not screened out after the initial interview, was based on the home (or office walk-in) contact, informal analysis of the application form, the data gathered during the initial interview and the information gained from the intake interview. The latter was a lengthy, detailed structured procedure which was not always followed in standard fashion by all counselors.

At the outset, much of this final screening was done by trained professional counselors, but after the Project psychologist transferred almost all of them to his "psychology staff," the interviewing was done by "family counselors," most of whom had no professional training or prior experience. Trained supervision was presumably available but seldom utilized, especially in Denver. In Pueblo, continuous direct supervision was provided.

During the early JOC days, Denver counselors were benefited by in-service training, but it was discontinued after a short time. In-service training in the Pueblo Center was superior and more sustained than that provided in Denver; however, it was not helpful in improving intake interviews. Failure to follow the intake interview form was a serious fault in at least 75 cases in Denver. Much of the Denver in-service training of Family Counselors was provided by the professional counselors who lost much of their potential for effectiveness after they were removed from direct trainee contact.

Critique

1. Neither the JOC nor the Employment Service took a detailed employment history on the JOC trainee group. HIRI had to seek out previous employment office and welfare records to try to determine the employment history of the trainees. The only effort made by JOC (later in the project history) was to see if trainees had two years of previous employment so they could meet MDTA training regulations; but special work experience, training,

skill, or aptitude information was secured only through counselor interviews or subsequent testing. The intake interview was so elaborate and time-consuming that counselors frequently sped through it without getting complete or accurate data. The testing results were rarely made available for counseling purposes.

2. Contact work was done fairly well, but methods of selection are open to criticism. The change in selection criteria makes it difficult to generalize about the characteristic of the trainee population. The fact that some of the counselors "selected" their friends and that there was insufficient counselor training to ensure standard procedure in the application of selection criteria casts further doubt on the validity of generalization about the sample.

3. The applicant's word was taken as "fact" when statements were made during the initial contact and intake interview and when made on the application form. No effort was made to verify statements about previous employment for use later in MDTA application. Standard welfare agency procedures for the verification of self-report data has been demonstrated to be a valid and useful process in programs of this type.

4. Objective testing was deliberately avoided for screening of applicants; and since counselors were not adequately trained in the interpretation of the psychological data which could be obtained by use of the intake interview form, the selection process took place very largely on a subjective and personal basis.

5. The JOC decision not to select a control group complicated comparison of trainees' and untrained personnel's job performance. Alternate procedures were subsequently instituted by the HIRI staff to provide a control group.

6. The above-mentioned failure to follow a rational and systematic intake screening and contact selection procedure has significant implications for any attempt at program evaluation. In effect the HIRI evaluators were faced with the task of developing post hoc samples and control groups, and measures and assessment techniques which are by their very nature less effective in determining program outcomes.

The Testing Program

Testing was part of the overall psychological program at JOC. The project psychologist designed the testing program and selected the tests to be used. Two members of the psychology staff, one in each Center, administered and scored the bulk of the tests. Both had some psychological training.

Most trainees were given an extensive battery of tests during their first several weeks in the program. The testing program involved 39 different tests or test batteries and many trainees spent the equivalent of a 40-hour week taking them.

In Pueblo a psychometrist with a baccalaureate degree in psychology did some test interpretation for counselors until June 1965 when he was transferred to

Denver. Shortly thereafter the test files were also moved to Denver so were not available in Pueblo.

The psychological files, including test results, were kept separate until October 1965. Terse summaries of test data (four to five lines) were written on about one-third of the trainees. Some, though very little, test information and interpretation were made available to counselors and/or trainees.

Minimal use of test information was made by the vocational training staff. The General Aptitude Test Battery (GATB) was used most frequently. Few other tests were considered. The job development staff was given few test results and made little or no use of test data. Occasionally an interested teacher obtained and used some test information for selected trainees.

Critique

Contact with administrators of the JOC program had led people to believe that there was to be a heavy emphasis on research. Preliminary investigation revealed that the research concept held by the JOC staff was synonymous with testing and test data analysis. This, of course, at best must be considered a very naive approach to research. The testing program involved has been the subject of negative comment by virtually every observer of this program, both because of the extensive nature of the battery and the paucity of results based on analysis of this information, an outcome predictable at the outset.

The approach to testing can best be characterized as a caricature of a shotgun approach more accurately described as an artillery approach. As the investigation proceeded, it became obvious that the rationale was simply that if a large battery of tests was administered, analysis of resulting data would somehow or other reveal significant information. It must be said that this program violated virtually every caution presented in elementary textbooks on testing and was conducted in virtual ignorance of questions which might be considered by a sophisticated research specialist.

Because tests were administered only after admission to the project, scores could not, of course, be used for purposes of admission to the program. This procedure also prevented accruing of data for individuals not admitted to the program. Tests could have been used for individual diagnosis of trainee capabilities and in this sense be potentially valuable in determining treatment needs of the various trainees. Minimal use of this type was made. That is, the Elementary Metropolitan Achievement test was used to group students for classes in basic education. There is no evidence, however, that this grouping was related to the teaching of students in the various classes. Even for grouping of classes the composite score was computed erroneously.

The intermediate form of the Metropolitan was administered at the end of the program in basic education for purposes of evaluating the impact of this program on the individual. However, no analysis of these data was made by the JOC staff; therefore the information which could have been provided was not made

available to counselors or personnel people to facilitate decisions concerning individual trainees. The tests could have been used by counselors to help them better understand their clients. However, because most counselors were not trained to analyze or interpret individual test batteries themselves, a competent resource person should have been easily available to them for this purpose. There is no evidence that such a back-up service existed. In fact, the HIRI team became aware that there was an administrative policy severely limiting or virtually prohibiting such use of the data. The few instances which we came across where tests were used in this way seemed to have occurred in spite of, not because of, the organization of the Centers.

During our study of the testing program we were concerned about the following: absence of a control group who might have taken the same battery of tests; absence of systematic behavioral observations during testing; absence of any evidence of knowledge concerning the different tests; lack of information regarding the impact of cultural differences on test responses; lack of knowledge about the reading difficulty level of each of the tests; absence of information concerning reading capabilities of the trainee population; absence of any knowledge concerning parameters of the population from which the trainees were drawn; absence of adequate sampling from the basic population; and absence of relevant norms. These deficiencies in research design virtually prohibited any profitable use being made of the test data.

During the last weeks of the project, funds were obtained to run a massive inter-correlation analysis of these data by the Denver Reserach Institute. These computations were completed; however, the data have not been analyzed or summarized. Should someone attempt to do so, the likelihood of producing anything of significance would be unlikely for the above-stated and other reasons. The expenditure of money and effort for this final project is limited to producing physical evidence of a memorial to a massive but futile effort.

The only use to which these data have been put is that which has been made by the HIRI team. This was done by attempting, after the fact, to develop an appropriate control group and gather systematic pre-program base data. Analysis in these instances has been limited to such sub-populations on whom such data could be obtained. The HIRI team has also been able to make some use of the data by analyzing certain tests as they relate to differential outcomes of the program.

The lack of utilization of these data by JOC, in view of the great expenditure of time and money and intentions of (the JOC) project staffs and the potential of what could have been achieved under appropriate conditions, is one of the most regrettable features of the JOC project. The project's failure in this area can only be attributed to staff naivete and lack of technical sophistication. After the fact, it becomes obvious that research competency is not a function of enthusiasm or good intentions but rather a function of careful design and technical know-how carried out by individuals of demonstrated competence. There is no

basis for assuming that any of the involved project administrators had the competence to carry out this aspect of the program successfully.

Counseling

In the counseling area, as in other activities of the JOC program, frequent staff changes impaired the emergence of a stable counseling program. In addition, there was a lack of direction from the very beginning of the program in this area. JOC did not have any definition of counseling nor did it appear to have any clear idea as to what the counselor roles would be in the program. Still, counseling did take place at the Center and must be considered a major part of the program.

Only four of the people working in the counseling division had any formal counselor training. One was the counselor supervisor at Pueblo and another was the Denver counselor supervisor, who was on the project for only a short time. Two other trained persons were hired as counselors for carrying case loads.

The role of the supervisors was never well elaborated. They did not carry case loads, did little individual counseling, and yet appeared to perform little in the way of supervisory activity either.

There was a tendency for those persons who had formal counseling training to shift from the area of counseling to the area of testing and as a result, throughout a large part of the program, the actual counseling work was done by persons

with minimal or no training. This latter group consisted of individuals who had some training in psychology, social work or education, on the one hand. and, on the other, a significant number of persons who were hired as representatives of the indigenous poor, although they had no training in counseling.

When JOC opened its doors the counseling staff was divided into two groups, the "trained" counselors and "untrained" counselor interns. Those persons with specific training in counseling were quickly transferred to the testing section. The untrained counselor interns consisted of people who had been active in minority and political groups at the neighborhood level. They were selected for their first-hand involvement and experience with the disadvantaged. Thus, the operating group of counselors consisted of persons with minimal or no training in counseling. Only a very limited amount of "professional counseling" (personal, vocational or educational) was provided by the trained staff.

Considering the makeup of the counselor group it would appear that an active program of in-service training would have been necessary, but only feeble attempts were made in this direction. For a brief period of time, in-service training was conducted at each Center, with joint sessions being held at irregular intervals. Interpersonal difficulties within the Centers and rivalries between Centers led to the early cessation of this activity.

Another factor in the cessation of the in-service training was that the indigenous staff and indeed some of the administrative staff were inclined to associate

professionalism with the duties of the Employment Service and welfare and other agencies. They considered the services of the latter agencies to be inadequate and thus were inclined to reject ideas that were "professional." This "anti-professional" attitude had the effect of developing among the counselors an in-group feeling which was primarily action-oriented and had the further effect of alienating the counselors from the teaching staff, vocational counselors and job development personnel. Communication between these three groups and the counselors was particularly poor and would appear to play a considerable part in the failure of JOC to achieve its program objectives.

Because of the nature of the trainee population and the organizational structure of the Job Opportunity Center, a somewhat novel approach to counseling developed. The family counselors were action-oriented and became involved in some or many of the following activities:

> Reached out into the poverty areas of the city to seek out potential trainees.
>
> Made agency contact with the general hospitals, Salvation Army, Veterans' Administration, Red Cross, Employment Service, Welfare Department, employers and the like. They acquainted trainees with agencies' services, accompanied trainees and families to the agencies, and more often than not intervened on their behalf.
>
> Taught trainees; counselors were concerned with developing budgeting techniques, food buying, cooking, and providing information about planned parenthood.

Talked with trainees -- informal discussions about personal problems, school problems, family problems, legal problems and physical problems were held. If the counselor could personally assist the trainee, he frequently did; if not, he made referrals, usually set up contacts, cleared road-blocks and accompanied the trainee to the referral source.

Talked with teachers about individual trainees and their problems.

Talked with the entire family -- about how things were going in general, and about specific trainee or family problems.

Talked with creditors about bills owed by the trainees and tried to work out reasonable solutions. Worked with lawyers on bankruptcy procedures.

Appeared in court -- juvenile, civil, traffic, and criminal -- to help trainees and family members. Often served as spokesman or advocate.

Helped obtain food and clothing for trainees and their families.

Helped obtain furniture and intervened with public housing authorities so trainees could move into low-cost housing.

Helped trainees and families get physical and dental care.

Visited trainees in vocational education or on the job training.

Talked with instructors and school officials.

Attended Spanish classes for the period of time they were given in order to better communicate with the trainee.

Wrote reports describing numbers of contacts, etc., and toward the end of the project wrote narrative reports on trainees.

Helped trainees prepare for job interviews and for a short time accompanied trainees on interviews.

Visited trainees in jail; worked with the police, usually intervening on behalf of the trainee.

Helped the trainee find employment.

Visited trainees' homes.

From the above list it is apparent that the family counselors were involved in a wide variety of activities that were central to trainee survival. In addition, two other "counseling activities" were developed. For a short period of time group discussions were held three mornings a week with trainees, teachers and counselors participating. Very brief familiarization with group techniques was provided by a number of volunteer psychologists and psychiatrists who visited the Center for the first one or two group discussions. After this the discussions were in the hands of the counselors and teachers. The group discussions continued for a very short period of time and were cancelled rather abruptly, apparently for two reasons: (1) it became apparent to the trainees that the group discussions were regarded by the staff as group therapy and a natural reaction against this set in; (2) in some of the group sessions the trainees were frankly willing to express their negativism toward teachers and counselors, who appeared unable to cope with this overt hostility.

A second counseling activity of note was the "marathon" family-group program conducted by the project psychologist and two other members of the staff from the Pueblo Center. Anecdotal information indicates that the trainees and their wives responded very positively to these marathon sessions. No reasonable explanation was found as to why these popular sessions were discontinued.

In summary, much of the productive work of the Job Opportunity Centers was done by the family counseling staff. A broad range of services was provided by the counselors and it seems likely that the extent to which the trainees may

have reaped long-term benefits from their contact with the Center depended as much upon their counselors' assistance as on any other set of factors, except perhaps the educational and vocational training programs.

Critique

Trainees at the Job Opportunity Center received considerable personalized attention from the counseling staff. The assistance that was provided was not of the kind that is normally considered to be counseling, but there is no evidence that what is traditionally regarded as counseling would be effective with this population. The main criticism relative to the Job Opportunity Center is that their procedures were such as to preclude the accumulation of information which might help one to gain understanding of kinds of counseling approaches that would be efficacious with this trainee population.

The tendency to channel the "trained" counselors into the testing activity appears to have had disastrous effects. If one views the traditional counselor role as being verbal and the counselor role as developed at JOC as being action-oriented, then it appears likely that considerable gain could result from merging the two. The traditional counselor is frequently criticized for his failure to become involved in the realistic problems which his clients face. The JOC counselor, conversely, may be criticized for his failure to go beyond his clients' day-to-day problems. It would appear that well-developed in-service training programs could have provided an opportunity for the "traditional counselor" to develop his

skills and techniques in providing basic material and psychological comforts for his client; and the "non-traditional" counselor could have expanded his skills in the area of insight development as emphasized in self-evaluating counseling. Closer liaison between the two types of counselors appears at least to have had the potential for expanding the skills of both groups, to the overall advantage of the client. This, however, did not happen at JOC. Instead, increasing alienation between the two groups of counselors developed, based largely upon the lack of adequate supervision and the basic animosity which existed between the trained and untrained counselors.

Counseling records, like almost all other records, at the Job Opportunity Center were virtually non-existent. Those records which exist were prepared after the HIRI team began its evaluation -- perhaps because of the evaluation. Compiling these records at such a late date naturally contributed to inaccuracy or vagueness.

A few seemingly imaginative programs were started in the counseling area, notably the group discussions and family marathons, but they did not last for long. No clear objectives were set for these programs, pre-training was inadequate, and no thorough attempt at evaluating the effects of these innovations exists. The evaluative data which were proffered by the JOC staff consisted mainly of a few tape recordings of participants' opinions elicited by a JOC administrator or by the person who "ran" the group. No thorough evaluation can be conducted with these data.

In-service training programs were discontinued just when the case load was being handled more and more by untrained counselors and exactly when the need for in-service training was greatest. In effect, a group of untrained persons was given increasing responsibility for the personal problems of the trainee population without receiving effective consultative assistance. In theory some consultative assistance was available from the project director (a psychiatrist) and the project psychologist, but the failure to overcome feelings of counselors' animosity toward professionals had the effect of making the professional staff inaccessible.

Basic and Acculturation Education

All trainees at JOC were enrolled in basic education and acculturation. A trainee's time spent in basic education depended somewhat on his skill level, but also very importantly on vocational education or job opportunities available at any given time.

The Project had as educational director a retired public school principal who was located in Denver, where he did most of his work. The two staffs (Denver and Pueblo) met occasionally and had similar but separate programs.

The State Board for Vocational Education and the State Education Department made available lists of materials that had been used in other similar projects. A curriculum was developed, and a report was published on that curriculum.

The basic education and acculturation curriculum report can serve as a description of how instruction was carried out in both centers. Teachers were given a great deal of flexibility for devising their own curricula, however, so the outline served essentially as a guide.

In Denver, basic education was subcontracted to the Emily Griffith Opportunity School of the Denver Public Schools. The teacher supervisor was a regular member of that school staff, but the teachers were not, although they had taught or were teaching in other similar programs. For example, Title V Provision for Vocational Education was made (by contract) with the public schools and a variety of private schools. All contracts were approved by the State Board for Vocational Education.

In Pueblo all education was subcontracted to the Southern Colorado State College, and regular college staff members were used in the program. The supervisor, an SCSC employee, became the JOC education officer and was also on JOC's payroll.

Little in the way of controlled experimentation was done and few, if any, new techniques of instruction were given a systematic trial. Evaluation data were scarce. Records were kept of attendance, but grades were not considered; it was felt that they were inappropriate. An evaluation rating sheet was made out for most trainees, but there is little evidence that these rating scales were used broadly or systematically by the vocational education or job development staffs. An overall anecdotal teacher evaluation of the program was attempted at the end

of the first year in Denver, but the results of that study have never been compiled or made available to the staff -- even the teaching staff. It was at about this time that the Education Director left the Project, and he was not replaced. Also, shortly after this, basic education was discontinued.

In both Centers the trainees were placed in groups according to their functional grade level. The procedures used in determining functional grade level, however, were atypical. A modified form of the Metropolitan Test was given prior to basic education, and an intermediate form of the Metropolitan was used to determine pre-post change in functional level.

In the lowest-level groups the major concentration was on acquiring basic skills in English and mathematics. The majority of students spent half their day (i.e., 3 hours) in basic education classes, and the other half in acculturation. Here all manner of issues were discussed, from personal grooming and health to budgeting, government, and the world of work. Training aids were not used extensively, and some materials, like workbooks, were in short supply, but speakers were brought in and field trips were utilized to broaden the scope of student experience.

For a short time, student discussion groups similar to therapy groups were in vogue, but although everyone agreed they were worthwhile, they were discontinued inexplicably. No attempt at evaluation was made. This seems to be common for most of the programs in which the psychological staff was involved.

Late in the project a supervised study hall was added in Pueblo, after discovering that one of the more promising trainees had failed in vocational education largely because he had no place to study. Extra evening and Saturday morning classes in basic education and acculturation were added for trainees who had gone into vocational education and were finding it difficult to compete.

A group of ten students in Pueblo, while on basic education allowances, was allowed to enroll in a welding course. They took welding during the day and basic education at night. The basic education instructor "sat in on" the welding theory lectures and then adapted her curriculum to trainee needs. According to the vocational instructor, this worked well and the trainees were doing well. Unfortunately, the total experience cannot be evaluated since the trainees were dropped when basic education was terminated in November, 1965, and the welding course was discontinued because of lack of funds.

An attempt was made by one teacher to use the "words in color" approach and she reported it successful, particularly in introducing new sounds to Spanish-American trainees. No evaluation of the technique was made.

At one point teacher-counselor teams were assigned to subgroups of the trainee population, with intent to facilitate staff communication, but this interesting innovation was discontinued within a few weeks after it was inaugurated.

When asked how they would build a new program, all teachers felt there needed to be a closer relationship, or overlapping between basic education and vocational education or employment. They were taking steps in this direction at the end of the project.

Critique

One of the major problems with the Basic Education and Acculturation Program was that phasing was determined largely by factors extrinsic to the educational process itself. The classes frequently served as a "pool" or holding area in which trainees were kept "occupied" until vocational training or job opportunities became available. Insofar as this served to extend a person's time in basic education it was beneficial. However, when scheduling considerations led to the individual's receiving less than optimum training, the trainees were unprepared for the attempted job placement.

This situation reflects an administrative policy error in setting up training classes rather than in making provision for placing trainees in individual training slots in existing vocational training programs. Holding trainees in the basic-education sequence contributed to over-expenditure of funds for that kind of training and for maintenance allowance support while trainees were in it.

In general, one is struck by the lack of clear-cut explicitly formulated educational goals, planning and evaluation, or even accumulation of experience. And here, as elsewhere in the project, lack of communication and team effort between the various staffs hurt the effectiveness of the program. The counselors and teachers met together occasionally but seemed to have few joint goals; indeed, a good deal of ill feeling was built up at times because they seemed to each other to be working at cross purposes.

Everyone agrees that basic education is important, and there is evidence from the Metro test and GED tests that some measure of improvement was achieved, but several modifications seem called for.

Closer staff coordination is a must and would not be too difficult to achieve. When the teachers were asked how they knew when someone was ready to move out of basic education, they mentioned grooming, manners, attitude -- indeed, a whole array of middle-class-values -- but educational achievement was scarcely even alluded to. One cannot help wondering what might have happened if the teaching and counseling staffs had been more closely related to each other and to the vocational education and job staffs, and if their joint goals had been more clearly spelled out and cooperatively implemented. They were not so far apart as they seemed to be and could have helped each other a great deal.

No serious attempts at evaluation of specific technique, of innovations, or of the overall program are available in the records, nor were attempted in fact. This, plus personnel turnover, made it difficult, if not impossible, to make systematic evaluations of the program.

Staff coordination and cooperation were lacking here as they were in the rest of the Project. Teachers simply did not work closely with other parts of the Project staff. But there is evidence that they wanted to, and on occasion tried to, and that is to their credit.

The teaching program was flexible and in this type of project that is certainly desirable; but clear-cut aims and evaluation in such a program are a necessity and there is no evidence of their presence.

The direction from an overall standpoint was, as in most parts of the program, vague or non-existent. We do not question the integrity or sincerity of the Educational Director, only his effectiveness. We could find no evidence that the program was moving in a specific direction.

About the time we began our study, nearly a year after the project was operational and only weeks before basic education was discontinued, a general commentary by teachers was called for. The inquiry was not specific, few people besides ourselves seem to have read the responses, and even the teaching staff was not acquainted with the results. However, it is interesting reading and provides some insight into teacher experiences in the project. Some of the specifics are incorporated in our section on recommendations.

Despite the many limitations noted, basic education seems to have been one of the more rewarding and fruitful programs provided by the JOC. The majority of trainees interviewed after the project mentioned "what they learned in class" as the best thing JOC had done for them. Few trainees were critical of teachers; most thought they got something worthwhile out of the program. The HIRI staff concludes that the need for basic and acculturation education is great but that the JOC program was not implemented as well as it could have been.

Vocational Education

In all, JOC referred 202 people for formal vocational training; 16 separate classes involving 25 occupational areas were selected for training. Vocational training was provided by such contracting agencies as the Denver Opportunity School, Englewood Public Schools, private trade schools in Denver, and the Southern Colorado State College in Pueblo. Some of the Denver private schools were the Park School of Business, Machine Automative and Technical Training School, Colorado School of Welding, and Rocky Mountain School of Art. The funds for the training were provided by the State Board of Vocational Education which executed the contracts with the various schools. The MDTA training allowances were allocated through the Employment Service.

A problem arose over the selection of training agencies. The JOC Project and Center Directors of Vocational Training were disposed "to scout around and find the 'best' school available and recommend it to the State Director of Vocational Education". The latter believed that he and his staff possessed the information to make this decision. There was some controversy over this matter.

Another major problem developed in the area of utilization of occupational outlook data. Unlike the Denver Opportunity School, which never initiated a training class or program without utilizing the knowledge of a special occupational advisory group, the JOC Project did not employ such groups, and, according to very responsible State Employment Service and State Vocational

Education administrators, did not make effective use of information available to those agencies.

The following interview with members of the staff of the State Board of Vocational Education is pertinent at this point. By way of introduction of the topic a member of the HIRI staff made the following statement:

> The JOC administrative staff have repeatedly pointed out that many of their troubles were caused by lack of proper information. Specifically they charge that the State Vocational Educational Board did not involve them in meetings when vocational training for JOC trainees was being discussed, although all other interested parties were involved. They further state that the Federal allotment made to the state board for their use was exhausted before they knew about it because the board did not give them adequate information about expenditures. They realize that the level of training they requested was at a higher skill level than their original estimates and was consequently larger and more costly, but they felt that they were in financial trouble before they knew it and that OMPER's . . . assurance that more funds would be available if necessary was not followed through with action. Originally, of course, they hoped the entire budget would be allocated directly to JOC and feel many of their troubles came about because they had to work through the State Board for Vocational Education.

His subsequent questions and the summarized responses follow:

Q. Is it true that the JOC staff were not allowed to sit in on meetings where training was being planned and approved for JOC trainees?

A. They never asked to sit in although they could have had they requested. As far as project approval meetings were concerned, we would have been glad to have them . . . . We would not have had them sit in on the 'priorities' meetings because by law those decisions are made by the State Board, the local HEW representative, and the BES representative meeting together. This is where funding is involved . . . . JOC was never funded for training. They operate under Title I. We operate under Title II. They were funded for counseling and that type of work, but not for training.

Q. Were they informed about the cost of training and use of their allocation in your budget?

A. We've never been able to explain that to them. No funds were earmarked for JOC in our budget. We supplied them just like other programs -- and as far as that goes, far better. We had four million dollars and about $700,000 of it -- nearly a quarter -- was used for JOC alone . . . . They made a bad mistake in their original cost estimates anyway and in the slots they requested. They first assumed the level of training would be lower than they subsequently requested, but their use of the slots was still badly handled . . . . You see, originally they requested twelve slots, twelve specific kinds of training, and when those were used up -- no matter how few people were in them -- Washington -- HEW -- cut them off . . . . They tried to send us large groups of trainees every time and it took longer to set up courses than it might have -- about six weeks from request to training . . . . If they had used one of the twelve slots for individual trainees we could have sent a lot more trainees into different kinds of programs -- ones already going on -- and wouldn't have had to try to establish complete courses . . . . As far as that goes, a change order was sent in after the slots were used, but HEW in Washington wouldn't O.K. it even though there were some funds -- not much, just about $10,000 -- left . . . . But we did give them the cost of training. There was a contract and they knew at the beginning what each program cost . . . . They tried to get us to give them a monthly statement, but we wouldn't do that. We don't operate that way, but they did know the total cost of the programs.

Q. Could this job (requesting of training slots) be done properly?

A. Yes, though we'd like some changes.

Q. Were the problems primarily personnel?

A. Yes.

Q. Who is responsible?

A. We had trouble with one of their top people who just couldn't understand any of the problems or laws. He always thought things could be done differently and you could never explain anything to him.

Q. How could the project be handled correctly?

A. First of all, we should have had an earmarked allotment . . . . JOC would have to understand the financial limits . . . . They needed a better sense of time. It takes six weeks from request to training. You have to plan ahead -- let us know what you will want . . . . They needed to ask -- and did not -- for vocational education at the time basic education is planned. You need a total plan . . . . You need to fund a two-part package here . . . . BES should verify both the appropriateness of training and opportunity for employment before sending the package to us. We'd like to see more provisions for individual training.

Critique

Lack of planning and experience caused some problems in the area of vocational training. In the beginning a certain number of training areas were preselected, but trainee interest (few wanted to train as janitors) and trainee skill level were misjudged. The programs finally established were consequently more expensive than JOC had anticipated and thus fewer people could be trained than had been expected.

According to the State Board for Vocational Education, JOC also failed to provide for individual referrals to ongoing courses through their own program; thus additional opportunities for individual training suited to needs and abilities were lost. (In fairness, it must be reported that JOC staff was unaware and was not informed that a system of individual referrals to training was possible.) In essence the Board had to consider training requests only for full classes. This limited the type of opportunities available and took more time to negotiate. The Board felt that industrial needs were not always determined before training was undertaken and that JOC liaison personnel did not understand the problems,

the need for an overall training plan (basic and vocational training); nor did they realistically evaluate the budget available, though they were provided with copies of contracts. Seldom did they utilize other available training opportunities.

Job Development and Placement

A variety of techniques in job development and placement was employed by both the Denver and Pueblo Centers. The general public and community relations programs, of course, directly affected the job program. In addition, literally hundreds of personal and mail contacts were made with employers. Denver Center officials indicated that they made some 300 personal and mail contacts there, and Pueblo personnel sent out 250 letters and brochures, and followed up with a number of individual calls. Not only did JOC personnel contact employers outside, but they brought several of them to JOC Centers to discuss business needs and expectations with groups of trainees. The Chambers of Commerce in both cities were kept informed about the program but efforts in securing cooperation were more successful in Pueblo. A number of other agencies were kept informed -- agencies such as the State Employment Service, the Urban League, etc. These agencies provided direct assistance in placement, in varying degrees.

A number of Board members were potential employers as well as employer contacts. Labor union people also participated on the Board of Directors and others were contacted by the JOC staff concerning jobs.

After some special emphasis and direction by OMPER, toward the end of the Basic Education contracts, special attention was focused on placement -- especially on OJT -- for the last several months of the life of the Project. Job development personnel and counselors were organized into teams; special efforts were made to prepare trainee resumes and job applications at the Centers. Plans were made to accompany trainees on interviews and several new people were added to the Job Development staff.

Test and intake interview data were available to these teams but were not always used. Jobs for minority people with poor (prior) employment records were very difficult to secure; real "placement" in terms of matching of the man's qualifications to a job was difficult.

Though this was a union-initiated project, and the Colorado Labor Council committed funds to the project, we found very few trainees who were admitted into unions or got jobs in trades under union jurisdiction. Indeed JOC's final report indicates that some employers did not cooperate because of their union collective bargaining and seniority commitments; they were afraid to employ people who might later have seniority but not be promotable.

With the increased emphasis and direction from OMPER toward the end of the project, job teams were developed and some trainees were helped with applications and accompanied on interviews. Some additional staff members were employed, but several of the JOC administrators who knew most about job development were released. The opportunities provided by OJT received

more interest, but the OJT and the placement efforts were not sustained throughout the project, nor were the efforts very productive. Pueblo JOC did more sustained placement work but in the last analysis their production of jobs was similar to Denver's.

In the JOC Final Report, job section Table VIII, it was indicated that by May 1, 1966 (the OMPER contract expired May 31) Denver JOC had placed only 31% of their trainees. Pueblo JOC indicated 35% placement. It is believed, however, that both of these figures included trainees who found their own jobs. Eighty-eight of the 359 people listed in that table were still in training.

Critique

In the beginning, though many calls were made, the Job Development people were selling an unknown product. They were not initially sure about trainee characteristics and were never really provided with summaries of characteristics throughout most of the project. The trainee was in training, after all, so the job staff was also trying to sell a man not immediately available for employment; this was a real problem. Uncertainty over schedules of beginning and completion of vocational training was a problem too. At the same time, however, with three men working full time in Denver and Pueblo for a full year before most trainees were ready to be placed, one would expect to see a number of employment commitments, and such was not the experience. We asked for such information and looked at the files, but found only scant evidence of interest --

no firm commitments from employers generally or from those employers and union members on the Board who were contacted.

Our HIRI research staff found it difficult to validate placement figures because much of JOC's specific placement information, i.e., name and address of trainee and place of employment, was not secured until in March, 1966, when, at the request of OMPER, counselors went out, contacted trainees, and got the information. Using that information, we assisted the Employment Service in attempting to locate all trainees then employed. In several cases the man had never worked where presumably employed; in at least one case we could not even find the company listed as employer. A wide variety of circumstances led to the inability to locate others. Although Pueblo JOC promised to cooperate with the Employment Service in a follow-up survey, it was not completed.

Using the same information described above, and often rechecking it with the JOC staff, we tried to locate a sample of 32 people for intensive interviews in June and July of 1966. We could locate only 14 of the first 32 names and managed, by using an additional 25 alternate names in our sampling, to locate an additional 11 people -- a total of 25 out of 57 former JOC trainees. We were using JOC's most up-to-date information, yet some addresses were non-existent, some people had not lived at the address given for a year -- in one case for almost 20 years. The members of the HIRI staff were aware that some of the trainees were avoiding interviews because of fear of bill collectors and the police.

A third follow-up study, conducted in March 1967, focused on trainees reported as placed by Denver JOC. This telephone follow-up led to the verification of 68 placements out of 97 claimed. Of this group of 97, 28 were still employed as of March 1967, and 40 had worked at the place of claimed employment from one day to six months. A residual group of 29 was not contacted for various reasons.

It is obvious that the JOC Project should have placed more emphasis on follow-up of its graduates or at least on the provision of adequate records for them. It is probable that continued counseling and job placement would have resulted in more placement and increased the strength of the placement. To expect hard-core unemployed to make the transition to full employment without considerable assistance is naive.

Better coordination between the Job Development and other staffs, more involvement on the part of the staff and Board, and more related experience on the part of later additions to the Job Development staff would have been desirable.

We feel also that more emphasis should have been placed on OJT training from the establishment of the project; the JOC final report listed only 28 such commitments although their proposal called for 100.

In the last analysis, the failure of JOC staff to keep accurate records of their trainees and their locations may be an indication of the feelings of helplessness that pervaded the Project and Centers during the spring of 1966. To say that the staff was demoralized is not an exaggeration. The termination of many key

administrators, replacement with new, and in some cases inexperienced, personnel, uncertainty over whether vocational training could be continued and doubts about whether or not the entire project would be terminated on May 31 contributed to a condition of poor morale throughout the organization.

Chapter V. EMPIRICAL STUDIES OF JOC OUTCOMES

Studies of Trainees

Intensive Interview

In order to determine the degree to which the Job Opportunity Center had achieved a number of its proposed objectives, an intensive interview was conducted with a sample of persons who had received training. A control group of persons who would qualify for training by virtue of their disadvantaged position but had not been trained was used for comparison purposes.

1. General Findings -- Intensive Interview

In the process of conducting the intensive interview survey, it was found that although the Job Opportunity Center population had received extensive agency contact for a period of almost one year prior to the HIRI team's efforts to make contact, they were in fact as difficult to locate as were members of the non-trained indigenous population.

Statistical analysis of individual item responses was made to provide a descriptive view of the interview responses. Probably the most important finding arising from this analysis was that there were in fact only minimal differences between the trained and untrained populations. For example, the data indicated that the average take-home pay for the Denver experimental population was $65.04 per week, the Pueblo experimental population $68.50 per week, and the control population $61.88 per week. Analysis suggested that differences even greater than these could be a function of

chance alone so that the differences obtained could not legitimately be attributed to the JOC program.

The most salient outcomes with regard to the intensive interviews would be those where both the Denver and Pueblo experimental populations differed from the control population but not from one another. From our intensive interview, few such findings were noted.

It was evident from the data that the experimental populations had developed some resistance to going on public welfare programs and had become more concerned about holding jobs, suggesting that the experimental populations had shifted in the direction of middle-class values in this area. Analysis also suggested that the experimental populations had begun to shift in social orientation away from the disadvantaged cultural group and toward a broader base of social contacts. There was also a tendency on the part of the experimental population to use a broader range of community facilities, such as the public library and middle-class business establishments.

One other area in which some evidence for change was indicated was the area of attitudes toward personal health and personal well-being. The experimental populations had become more aware of physical health liabilities and problems and were in fact not so optimistic in this area as the control population. They were also more likely to be carrying health and life insurance than the control group.

A number of differences can be noted as being characteristic of one of the experimental populations, but not of the other experimental population or of the control group. These different effects between the two JOC Centers seem to have interesting social connotations.

Shifts in the Denver experimental population can be characterized by the following items: They were found to be more willing to ask for advice. They were more optimistic about success in the future as opposed to the present. They belonged to more social organizations and were involved in more social and political activities. They seemed to feel more independent of the husband's parents. They had shifted their pattern of purchasing groceries from the corner store to the chain supermarkets. They had actually purchased more items such as vacuum cleaners than the other groups. The family was more likely to see a physician than had been characteristic of them in the past.

Shifts in the Pueblo population can be characterized by the following items: The trainees owed more money. They were less optimistic about future raises. They were more independent of the wife's family. They were more likely to go out as a family for entertainment. They were more satisfied with current success.

Differences between the Denver and Pueblo populations can be characterized by the following items: It appeared that there was a difference in time perspective between the two populations, the Pueblo group feeling

"better off" right now and acting consistent with that family image. The Denver group appeared more hopeful of success in the future but was not particularly satisfied with its current circumstances.

2. Level of Aspiration

A level of aspiration scale comparing the three populations indicated that there were no statistically significant differences in the level of aspiration for the three groups. There was evidence that the control (non-trained) population was more desirous of further education than were the experimental populations; however, this was likely to have been contaminated by the fact that the experimental population had recently received some training. The findings with regard to level of aspiration were based both upon codification of trainee responses and codification of interviewer observations.

3. Self-Concept

Two measures of self-concept were obtained, one based upon trainee responses, the other based upon interviewer observations. Analysis indicated that there were no significant differences with regard to positiveness of self-concept for the three populations.

4. Motivation

Two scales of motivation were incorporated into the intensive interview. A scale of motivation based around utilization of community facilities that might lead to self-improvement

indicated that both the Pueblo and Denver experimental populations were more inclined to make use of such community facilities. A motivation scale based on tendency of the subjects to give somatic complaints as explanations for failure to achieve indicated that there were no differences in this regard among the three populations.

5. Family Stability

Findings on the family stability scale indicated that there were no statistically significant differences among the three populations, although there was a slight directional indication that the Pueblo experimental group exhibited greater stability. Interviewer ratings in the same content area indicated that the Pueblo experimental group scored significantly higher with regard to family stability than either the Denver experimental group or the Denver control group. The HIRI team is inclined to attach minimal import to this finding because of the observation of systematic differences in rating style between Pueblo and Denver interviewers.

6. Family Harmony

Both the interviewer ratings and codified interviewee responses indicated that there were no significant differences in degree of family harmony among the three populations studied.

7. Property Ownership

The ownership sub-scale, consisting of a listing of the material objects which the family possessed, indicated that there were no significant differences.

8. Reading Usage

In order to investigate the degree to which JOC had caused an increase in utilization of literary materials a reading usage scale was developed. The scale consists of items sampling frequency of purchase of newspapers, magazines, pocketbooks, and possession of books such as encyclopedias or hard-cover novels. Analysis indicated that there were no significant differences in the possession of reading materials among the three groups.

9. Attitudes of Program Participants

Although the attitudes of program participants were not assessed as part of a formalized statistical design, some information was available. In both the Denver and Pueblo Centers the majority of the trainees indicated that the arithmetic aspect of their education had been the most popular. In addition the majority of the trainees were inclined to indicate that the classroom training itself had been the most important aspect, although in Pueblo a number of trainees indicated that the relationship with the counselor had been beneficial.

Trainees in both Centers also reported that they saw the teachers as the most likeable people although the counselors were perceived as the most

helpful with regard to problems. Trainees in both Centers indicated that their family counselor had visited them at home on the average of twice a month and there was slight evidence of greater stability of counselors in the Denver Center insofar as fewer trainees who were interviewed reported having more than one counselor. Evidence from our observational experience suggests a strong likelihood that this would not be borne out if the entire trainee population was surveyed.

Finally, perusal of the anecdotal comments received from the trainees suggested that in general they were most pleased with the intrinsic aspects of the program, i.e., class experiences, field trips, and vocational education and least pleased with the outcomes of the program, i.e., failure to achieve improved status, failure to achieve adequate employment, etc.

Conclusion Re the Preceding Nine Studies of JOC Outcomes

In summarizing the above nine studies the HIRI team would conclude that there were very few definite changes in the trainee population. Analysis of the subscales derived to evaluate specific proposed outcomes suggested that the JOC training program had virtually no identifiable effects with regard to level of aspiration, self-concept, family stability, family harmony, and property

ownership. Reading usage and motivation (as assessed by community facility usage) seemed to be somewhat improved in the trainee populations.

Assessment of the Degree to Which the Trainees Represented the Hard-Core Unemployed

Because of the vagaries of the selection standards applied by the Job Opportunity Center the HIRI team surveyed pre-training demographic characteristics of the trainee population in order to determine the degree to which the trainees were in fact hard-core unemployed. Findings were strongly suggestive of the fact that the trainees did represent a seriously disadvantaged population. Almost half of the trainees had at some time received welfare, 24% had not held any job for more than one year and almost 50% had not held any job for more than two years. One and a half percent of the population had not attended school and 63% of the population had not gone beyond the 8th grade. Although 5% of the trainees had completed high school, none had any job-related training or trades training outside the public school system.

The functional grade level as measured by the Metropolitan Achievement Test indicated that the typical trainee achievement level was somewhere between fourth and fifth grade. At time of intake, trainees reported their present income, revealing that 25% of the population was earning less than $100 per month, whereas only 11% of the population was earning more than $300 per month. Since the mean number of persons per household was 5.9, there was some indication of considerable financial disadvantage. Similarly, with regard to housing,

it was found that the mean number of rooms per house was 4. 4 with the typical family having 1. 3 persons per room and 2. 5 persons per sleeping room. All of the above findings were strongly suggestive of the fact that JOC did select the hard-core unemployed.

Change in Anti-Social Behavior

Analysis of police records of a selected group of 32 JOC trainees and a representative control group of 32 untrained disadvantaged persons found that 25 persons in the control group and 28 persons in the trainee group had police records prior to the period when JOC was in operation. Analysis of arrests and bookings for the period January 1966 to December 1966 found that 10 of the 32 individuals in the control group had been arrested and that they shared between them 17 offenses. For the JOC group it was found that 18 of the 32 individuals studied had been arrested during the year and that they shared 21 offenses. These data indicated that there was certainly no difference favoring the Job Opportunity Center population with regard to reduction of contact with the law after training.

Adequacy of Post-Training Employment

In order to assess the level and adequacy of post-training employment, pre-training and post-training job histories for persons that persisted on the job and did not persist on the job were obtained. Findings indicated that for the group of trainees that had persisted on the job, their post-training job level was significantly higher than their pre-training level. Those trainees who

had not persisted (i. e., were no longer working) did not receive post-training jobs which were at a significantly higher level than their pre-training jobs. Assessment of the degree to which the individual's job was commensurate with his aptitudes and abilities indicated that the trainees still working had significantly more appropriate placements than those trainees who were no longer working.

For persons still employed and those no longer employed, evidence indicates that Job Opportunity Center training increased their aptitudes as indicated by the General Aptitude Test Battery and functional grade level as measured by the Metropolitan Achievement Test. The most significant improvements, however, were for the population of persons no longer employed. Comparisons of psychometric information (GATB and Metropolitan Achievement Test scores) between the still working and not working group indicated that the non-working group scored higher prior to and after training.

Comparisons of the two populations on their post-JOC jobs revealed that the hourly wage for the group of persons still working was significantly higher than the hourly wage which had been earned by those persons no longer working. In addition, the increase in hourly wage for the group of persons still working (average hourly wage before training, $1. 76; average hourly wage after training, $2. 04) was a markedly higher relative increase than for those individuals who did not persist on the job (pre-training wage, $1. 64; post-training wage, $1. 77).

In summary, it appears that the group of individuals who persisted on the job received a significantly greater degree of job upgrading as a result of their training, were earning a significantly higher hourly wage after JOC, but did not exhibit as high a level of competence on the psychometric variables as did the group of persons who did not persist on the job.

Job Performance Study

In cooperation with the Colorado State Employment Service an attempt was made to have employers rate the quality of the performance of ex-JOC trainees on the job. Because of follow-up problems, less than half of the 72 trainees who were reported as working were contacted, and the sample was probably biased in the direction of over-representing successful trainees. For this population, however, evidence suggested that the employees were in fact performing quite satisfactorily. Statistics available at the Colorado State Employment Service suggested that scores for unsatisfactory employees on a standardized job performance rating scale, developed by Joseph Seiler, would seldom exceed 20. The scores for the 30 trainees that were rated ranged from 12 to 37 (45 being the maximum possible score) with only 2 trainees receiving ratings of less than 20.

Study of Dropout Population

A number of demographic and psychometric indices were compared in an attempt to identify characteristics of persons who persisted in training and persons who withdrew from training. Three groups were studied: a sample of persons who

persisted in training, a sample of persons who dropped out of basic education and a sample of persons who completed basic education and withdrew during vocational education. In addition, the dropout population from the Pueblo Center and the dropout population from the Denver Center were compared. Data on 162 separate variables were analyzed. There were significant differences on only a few of the variables and thus considerable caution should be applied when evaluating the findings.

Comparisons of the basic education dropout and the control (persisting) population indicate that the control population scored significantly higher on the GATB Scale K motor coordination and the GATB Scale M manual dexterity sub-tests. In addition, it was found that the basic education dropout population had lived for a significantly longer time in the target areas. Other evidence, not statistically significant, but highly consistent with regard to the direction of results, indicated that on 43 of the 44 psychological test or sub-test measures analyzed, the control group persisting in training scored higher. The findings suggest that the basic education persisting population was superior to the dropout population on intellectual and achievement measures. Similarly the patterning of findings on the demographic variables indicated the persisting population to be superior.

Comparisons of the vocational education dropouts and the persisting population indicated the latter group to be significantly superior to the dropout population with regard to Metropolitan Achievement Test language usage and verbal ability

scores, and the Edwards' Personal Preference Schedule need achievement scale. There was also a significant difference between the two populations with regard to the sex ratio, the vocational education dropout population having significantly fewer women than did the persisting population. As with the comparison of the persisting group and basic education dropouts, the direction of the differences on psychometric measures suggested that the persisting population was superior to the population which dropped out of vocational training. This was not as consistent, however, as the patterning reported for the basic education dropouts versus the persisting population. The vocational dropout population scored higher than the persisting population on 4 test variables: the GATB verbal factor on both forms A and B and the form perception and clerical skills sub-tests on form B. Consideration of the demographic characteristics of the persisting group and the vocational education dropouts again suggested that the former group population represented a superior trainee group. These differences, however, were not conclusive.

Comparisons of the basic education dropouts and the vocational education dropouts indicated that the differences between the two groups were less consistent than those revealed when comparing either group to the persisting population. There were a significant number of psychological test means favoring the vocational education dropouts over the basic education dropouts although individual mean differences were not statistically significant. Of the 44 psychological test variables which were relevant to this analysis, 36 means favored the

vocational dropouts and 8 means favored the basic education dropouts. This suggested that there was a small but real difference in ability favoring those individuals who persisted through the basic education program and into but not through vocational education. Inspection of the pattern of demographic characteristics of the two populations suggested that the basic education and vocational education dropouts were similar; some differences emerged but on the whole the two populations were alike in most respects. Statistically significant differences were found on four measures. The basic education dropouts were somewhat older and had lived in the area for a significantly longer period of time. The vocational education dropouts scored significantly higher than the basic education dropouts on GATB Scale M (manual dexterity) and GATB Scale K (motor coordination).

Comparisons of the Denver JOC dropouts and the Pueblo JOC dropouts were conducted by treating all basic and vocational dropouts in each center as the samples. Only a limited number of the variables studied indicated statistically significant differences between the two populations although there was a certain consistent patterning of findings. Thirty-one psychological test means favored the Denver population, 11 means favored the Pueblo population. Although the differences did not attain statistical significance, the consistency in direction of the results suggested that there were small but real differences favoring the Denver group. The demographic variables did not reveal any consistent pattern of characteristics although some factors (previous formal education,

functional grade level at intake) favored the Pueblo group; others (number of divorced and separated persons, number of traffic tickets) suggested they were a less advantaged group. Those variables which did attain statistical significance indicated that the dropout population in Pueblo was somewhat older than that in Denver and that they had, on the average, more dependents than did the Denver dropouts. The only test difference in and of itself found to reflect real difference between the two populations was on the M (manual dexterity) Scale of the GATB (form B). It would be difficult to interpret this difference as a spurious finding in that the mean raw score for the Denver population was 109 as contrasted with 76 for the Pueblo group. This finding also represented an inversion of mean scores for the M Scale obtained early in the program when form A of the GATB was administered. This would suggest that program effects in Denver did, in fact, increase individuals' abilities on this variable. Conjecturally, it is difficult to see how such effects might have been achieved. One would suspect motivational factors or conditions of administration would be more likely the factors of such change than specific training methods.

Overall Comparison Between Dropout and Persisting Population Re Psychological and Demographic Characteristics

In summary, there were slight but identifiable indications that, compared to the persisting population, the dropout population was an inferior one prior to training with regard to both psychological and demographic characteristics. There was also some indication from psychological tests that they were less responsive to training.

Studies of Dependents

Study of School-Age Dependent Children

A complete study was made of all available school records for 32 children produced from the experimental family sample of JOC trainees and 27 children from the control family sample. Subjects were compared in terms of pre- and post-measures of grade point average, school attendance, achievement test scores, personal and social behavior ratings, anecdotal records, and extent of movement among schools. A covariance design was utilized which equated the groups on relevant pre-treatment variables such as age, I.Q., grade level, and educational background of the father. Including pre- and post-measures, a total of 23 variables were analyzed. On the basis of this analysis, and taking the appropriate covariates into account, the following findings were observed:

1. There was no difference between experimentals and controls with respect to improved scholastic performance as indicated by school marks over the project period;

2. The groups did not differ with respect to school attendance patterns;

3. The groups were equivalent in terms of performance on standardized achievement tests;

4. There was no overall difference between groups in behavior ratings. However, boys in the experimental group showed significant improvement over boys in the control group;

5. There was no difference between groups with respect to ratings of anecdotal records; and

6. There was no difference between groups with respect to transiency as indicated by movement among schools.

In summary, the analysis of school records took 23 variables into account in comparing children from the experimental and control groups. From the entire analysis, one isolated finding proved to be statistically significant. This one indicated a difference in favor of the boys in the experimental group over the boys in the control group in regard to behavior ratings. In view of the number of variables which were analyzed, and in the absence of other supporting evidence, it is probable that the observed difference favoring the experimental male subjects on personal-social behavior ratings was a function of random sampling variation. It would appear, then, that the JOC program had no meaningful effect upon the indices of behavior and performance of the dependent children of the trainees as manifested in the school setting.

Study of Juvenile Court Records

An attempt was also made to determine the degree to which the dependents of JOC trainees and dependents of the control group were involved with the juvenile authorities. The number of dependents old enough to be encountering difficulties with the law which become a matter of record was very low. It was found that the dependents of the control group totalled six arrests during 1966 whereas only one dependent of a JOC trainee had been arrested during the same period. Here we are referring specifically to arrests rather than tentative bookings.

With regard to bookings, two of the 32 control group families had children involved with the law whereas four of the 32 experimental families had children involved with the law. The incidence of matters of record was not great enough over this period of one year to allow the HIRI team to form any conclusions.

Chapter VI RECOMMENDATIONS

General Considerations

In November 1966, HIRI conducted, under OMPER sponsorship, a multi-agency seminar on "Putting Research, Experimental and Demonstration Findings to Use." A report[1] of that seminar was made available in April 1967. It contains many specific suggestions for reducing the kinds of difficulties experienced in connection with the Colorado JOC project. We will not attempt to repeat those suggestions here, but we endorse them, and would have made some of the same ones as a consequence of this evaluation follow-up study.

Funding for Project Development

The Colorado JOC project proposal was weak in its statement of plans for achieving its objectives and evaluating that achievement.

Once the general idea of an E & D project such as this is deemed of appreciable interest to a funding agency like OMPER, it would seem advisable to give the proponents a small planning grant and to work closely with them in developing the design, program, reporting procedure and fiscal details, with an experienced OMPER program officer helping in all ways that may be needed.

This assumes that a funding agency like OMPER can have money allocated to support planning and perhaps small pilot tryout of a promising project, with

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[1] U. S. Department of Labor, MDTA Experimental and Demonstration Findings No. 1, Putting Research, Experimental and Demonstration Findings to Use. June 1967.

sufficient program staff to engage in such dialogue and relatively close interaction with a grantee. OMPER did not have that kind of program officer staff in 1964, when JOC was funded, and does not have it now. We recommend that every effort be made to set aside a reasonable percentage of OMPER's total program budget to provide help with project development and adequate monitoring to insure better quality of performance and subsequent utilization payoff from the projects which are funded.

We realize that there were many pressures on OMPER in 1964-65 to push through a crash program to carry forward its portion of the War on Poverty. To do so with deliberate speed is understandable. To undertake crash programs under conditions of something like maximum speed is to invite poor quality, waste, frustrated hopes and missed opportunities, although some badly needed concepts, projects and services may thereby get launched into actual being more quickly. In such instances, the "debugging" process needs to come later, as a consequence of experience rather than as a consequence of careful detailed pre-planning.

Grantor-Grantee Relationship

From our viewpoint, the insufficient allocation for adequate program officer staff by the funding agency to monitor and perform liaison functions with the E & D project staff is a basic weakness in many Federal funding structures. This is

particularly true in relation to the large sums of money invested for E & D projects, and especially when the projects are administered and staffed by people relatively inexperienced in this difficult work.

Turnover of key personnel on the JOC project staff and the OMPER program staff appreciably handicapped this project (and we assume other projects as well). In a fluid society, such turnover may be inevitable. If the OMPER program staff were larger, however, it would be easier to provide replacements as openings occur, and thus reduce the problems caused by discontinuity of knowledgeable counterpart relationships between grantor and grantee.

An ongoing grantor-grantee relationship would provide adequately frequent site visits and close scrutiny of progress reports, followed by conference-discussion of any problems or items that appear to need clarification or better "buttoning down." The time to improve the E & D project operation is before it begins and while it is going on, not after it is practically over. Our evaluation follow-up study, for example, was undertaken too late to help improve the actual JOC operation . Had we been able to start sooner, we could have undertaken a participant-observer type of evaluation, with feedback to JOC, which would have focused on the living dynamics of the project, its decision-making processes, and upon analysis of individual, group and organizational behavior, as well as upon results achieved. While we hope the lessons drawn from this evaluation study will help future projects, it obviously would have been better to have given constructive feedback to JOC while it was functioning. In addition, a late

arrival on the scene does not permit creating needed records which should have been kept from the beginning if subsequent evaluation and utilization are an OMPER objective.

Colorado JOC did not have adequately experienced and competent leadership for the complex and difficult task they had contracted to undertake. Upgrading of E & D project staffs might well be stimulated and promoted by a funding agency like OMPER. One method of providing such stimulation might be through holding regional conferences. A more ambitious method might be requiring that the key staff of a new E & D project attend a "Poverty War College", jointly run by agencies like OMPER and OEO, to share relevant learnings from other related projects. For example, Colorado JOC (and all other participants) might have learned much that would have been valuable through interaction with key project officers from OMPER-funded E & D projects such as those in Los Angeles, San Francisco and North Richmond, California -- and from the OMPER program staff officers who would be present at the conference.

OMPER program officers, as a part of their site-visit consulting and monitoring duties, might readily become aware of important frictions developing on a given project between, say, the board of directors and the project administrative officers; or the project and other community agencies; or the project and Federal or State agencies. The OMPER program officer might -- if he is skillful in conflict resolution -- function as a helpful person combining outside objectivity with a legitimate concern with the problems in the project he is monitoring.

In addition to the normal qualifications of a funding agency program officer, it may become clear either to the local project staff or to the Washington program officer that technical assistance could be useful to the project. If fully competent help of the needed kind can be secured locally from project funds, good! If there is evidence that the technical problem is not getting adequately resolved, we recommend that the funding agency be prepared to offer specialized consultation in areas such as research design, evaluation procedures, utilization planning, fiscal management, inter-agency relationships, etc.

Even today OMPER does not have sufficient program staff in Washington to undertake prompt and thorough review of progress reports as they come in, and engage in comprehensive and timely feedback discussion with the authors of the progress report to ensure that things are being worked out to the satisfaction of all parties concerned. If the two or three persons on the OMPER program staff who have most knowledge about and interest in a given project could meet first by themselves to discuss each progress report, then have the collated questions, criticisms and suggestions sent to the project director, followed by a telephone conference or even a site-visit conference, if deemed necessary by the project staff, this kind of interaction between grantor and grantee would improve quality and give OMPER more for its money. The progress reports should be a source of feedback to the project staff, as well as to the funding agency. If sharp questions are asked and demonstrable evidence required with reference to reported results, the staff as well as the funding

agency would become aware of how well the project is moving toward its objectives, and be able to judge whether the objectives or the means for achieving them may need modification in the light of experience. For example, if it becomes evident that jobs cannot be found for people completing a basic education, acculturation, vocational training and personal counseling program such as was offered by JOC, a study might need to be undertaken quickly to get at the probable reasons, following which the best remedial action that the project staff can devise could be tried and evaluated.

If a helper-monitor relationship such as has been described cannot be provided by the funding agency itself, the funding agency could arrange to have this function fulfilled for a given project under contract with a qualified research or consulting organization.

Stock-Taking before Termination of the Project

In view of the large investments of hope, time, money and energy in these E & D projects, and the societal needs for such projects, it is very important to try to extract certain learnings and lessons before the staff disbands and undertakes the often onerous chore of final report writing. We recommend that before project termination date, a two or three day conference be held among project staff, funding agency, outside consultant, if any, and the evaluation follow-up study group (if there is one), to talk through and record where the project has been, where it is, and where it is going.

If it is an especially valuable and important project, it may be continued under an extended contract. It may seem desirable to invite the key staff to become "traveling troubadors" or consultants to other communities or new projects which plan to replicate some essential features of this one. Or it may seem desirable to turn the project into an operational training situation to which persons from other cities or projects can come to learn by observing and actually participating as temporary staff persons in this prototype.

In any case, there are some things that can best be learned from a project while the "bodies who did it" are there. Post-hoc evaluation undertaken with the uninterested remnants of a once-vital staff, and the often partly empty files and records is not the optimal way to conduct a meaningful evaluation follow-up study.

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In August, 1964, OMPER held a training conference. Dr. Curtis Aller's Summary Report of that conference contains a number of very important observations and recommendations which we can strongly confirm from this follow-up study of the Colorado JOC project. For that reason it seems appropriate to repeat them, for many still need attention and implementation.

> . . . Our most critical need is to learn all we can from those engaged in these E & D programs and to utilize this knowledge in two directions. First, we need to infuse as much as we can into existing agencies so that the volume of rejects from our system is reduced. Second, we need to discover how techniques that work can be routinized, thereby economizing on effort and personnel.

Far too many (project people) have insufficient experience in the world of work . . . . There may be a tendency toward too much division of labor in the projects and . . . an effort should be made to utilize a team concept headed by a multioccupational leader to offset the centrifugal tendencies of specialization.

. . . Personnel can rarely be found who are ready-made for a project's needs. Hence . . . provision (should) be made for the training of staff . . . . Additionally, OMPER might consider whether it could assist in the development of training material in areas common to many projects, as for example understanding the culture of disadvantaged groups and the world of work.

. . . Many of the examples of difficulties at local levels . . . could have been avoided -- if local people knew how to work with local community groups and to involve them in the planning . . . . (HIRI note: We already have recommended in this report that OMPER consider setting up a "Poverty War College" to provide a short training course for the key personnel of important and expensive E & D projects before the project "opens for business" in its community. This training would include orientation in strategies regarding innovation and change.)

These (E & D) projects are aimed at various categories of disadvantaged people and there is a strong likelihood that the target population will have a distinctly different culture from our dominant middle-class culture. To be successful, therefore, the project needs to become an accepted part of the social subsystem with which it deals . . . . The objective is to change a style of life, and to have an opportunity to do this, the confidence of the group to be manipulated must first be secured . . . . It would appear essential that indigenous leadership be discovered and used as linkage points. And where this leadership doesn't exist, it needs to be developed . . . . The 'alumni' of the project should become the leaders within their community.

. . . There appears to be a great need for building into the project some kind of contingency fund concept.

. . . Contractual specifications should be drawn as broadly as possible, so as to permit the largest possible amount of flexibility and experimentation.

. . . Each project should have a time period in which it can revise or modify its purposes and budget . . . .

. . . It would seem to be the highest irony that an instrument (E & D projects) chosen because of its flexibility should have its greatest virtue destroyed by rigidity at the top.

. . . OMPER should assume a stronger leadership role than it appears to have done in determining where our gaps in knowledge are and where demonstrations might be productive. A rough approximation of priorities ought to be attempted and efforts made to find or develop projects to satisfy the high priority objectives.

. . . There is . . . merit in the frequent pleas . . . for more technical help from OMPER in developing projects.

. . . Provision should be made for lead-time between approval and the actual initiation of the project.

. . . On the average it takes 10 months for a project to secure approval from point of initiation to contract signing . . . . Ten months is a long time in a program that began with a 3-year life span.

. . . OMPER should move to respond to the expressed desires . . . for more communication from the projects to OMPER and from the projects to each other.

. . . Projects need more evaluation, planning, and research elements . . . research and action evaluation should be built into the program from the start.

. . . Supportive services after job-placement is an essential element in a project's success.

. . . Greater use could be made of universities, extension courses, employer organizations, and labor unions (instead of sole reliance on ES) for job development and placement activities. Also, . . . more effective use of OJT could be made by dealing directly with the employer.

Specific Considerations

Recommendations Concerning the Role and Relationship of Boards of Directors Vis-A-Vis Project Administration

The description and critique of the JOC Project Board of Directors, presented in Chapter IV, pages 19 to 32, indicates the need for clearly defined guidelines for Board operation. While it would not ordinarily be expected that a Federal agency, such as OMPER, would tell a local agency's board how to operate, OEO for instance has found it necessary to intervene in the affairs of the Denver War on Poverty Board.

In the case of Colorado JOC, where administrative personnel were inexperienced in that type of operation, it is understandable that an experienced administrator who was a member of the Board of Directors might step in and more or less "take over."

In view of the frequency with which problems occurred between boards and operating staff of community agencies, it is recommended that OMPER develop and publish guidelines on this subject, and that their application to a given project be reviewed with the grantee before the given project is funded.

Recommendations Concerning Administrative Policies and Procedures

By this time, Federal agencies like OMPER have had vast experience with E & D and community action projects. In view of certain commonly recurring problems in project administration, OMPER might find it very helpful to distill its knowledge and experience into something like a Reference Guidebook

for Project Administrators. This could be combined with the previous suggestion regarding guidelines dealing with board-administration functions and relationships.

A reference guidebook such as proposed might also spell out the need for continuing contacts between sub-administrators and staff members. Lower-level personnel -- teachers, counselors, and job development workers -- have daily contacts with trainees and are a major source of feedback (concerning the effect of idea input and implementation) to the administrators.

Recommendations Concerning Certain Procedural Matters

1. Research Design

The essential importance of adequate research design already has been discussed. This must be geared to the objectives of the project and embody a credible method for determining whether or not the experiment was successful and is worth further experimentation and demonstration.

In this connection it is the opinion of the authors that if a (local) petitioning body does not indicate, in its proposal, that appropriate evaluation design has been built in, the proposal be returned and improved before resubmission. If the petitioning body does not have a qualified researcher among its membership, it should be required to obtain the services of a qualified consultant.

Since projects of this sort call for experimentation, they require advance assurance that program innovations can in fact be tried out under existing circumstances, e.g., characteristics of the trainees versus MDTA training regulations, job development versus trade union restrictions on apprenticeships, etc.

2. Selecting Trainees

Trainee selection should be done according to the established criteria and the research design. Variation in selection standards should be possible, if necessary, but all hands involved should be informed and proper adjustments made in the research design; comparisons between experimental and control groups must be made on the basis of known criteria. It is recommended that personnel involved in selection of trainees have (or be given) enough training so that they can understand and utilize standardized procedures. If this is not done it would be difficult for anyone accurately to describe the experimental population.

3. Testing Trainees

As a general observation, disadvantaged people respond negatively to testing during initial intake. They often do not put forth adequate effort on the tests to justify use of the scores as a basis for assignment to training programs, particularly if the given training program requires only a low level of academic aptitude -- which is mainly what the test scores measure. Work sample testing, however, does show promise, as

indicated in the Mobilization for Youth and other E & D projects, and in various sheltered workshops.

People enroll in E & D projects to get jobs, not to undergo long periods of assessment, counseling, training, preachments, etc. . . . then frequently find themselves sent to the kind of low-level jobs they could have qualified for without enrolling in the project. These motivational and attitudinal factors need to be kept in mind when considering what tests are relevant, and how to use the test scores.

The testing of applicants and the pre- and post-evaluation of trainees should be done according to the research design, program purposes and situational realities. "Shotgun" testing is of dubious research value unless the population to be tested is motivated to do their best on the tests, and the psychological staff of the project is qualified to interpret all of the data and to use it in a detailed description of the population being studied. Aside from research considerations, as already stated, trainees often resent being put through long test batteries, especially if they do not receive personalized feedback and interpretation of test results.

Before testing is begun there should be consensus on the variables to be studied before and after training, and what tests can measure those variables for the kind of population involved. Standardized test administration, interpretation, and analysis of the results, such as work sample

tests and some reading tests, then can be useful to help determine progress made by trainees.

It is recommended, moreover, that data gained from the pre-testing of trainees be made available and interpreted, if necessary, to the counselors who will be assisting trainees in the selection of available training programs that really require some of the aptitudes or skills or knowledge measured by the tests. Some of these data also may be useful to the family counselors and job-development personnel.

Test and interview descriptions of the trainee population, if sensitively interpreted, can serve to deter counselors from giving trainees an unrealistic perception of possible post-training employment. Too often they have been used to disqualify and block people who, if motivated by a job placement or in some other way, could blossom and learn. Joint and knowledgeable consideration of these data by counselors and job-development personnel can be of valuable help to successful placement of hitherto unemployed, or even unemployable personnel. Follow-up can be more effective, too, if those who are responsible for it and those who actually do it have relevant knowledge and insight concerning the counselees. The risk is that superficially interpreted or invalid test data about an individual may serve to block him from training opportunities when the relevant considerations occur in the areas of motivation and perceived meaningfulness of the training by the trainee.

4. Counseling Trainees

As a general observation regarding counseling with disadvantaged people, the counseling is most pertinent when it is situational, at the point of need in the here and now, and not an abstraction. Counseling that is imbedded in job training and actual work, and which deals relevantly with the hard realities of how one acts and how others react, seems to yield a higher-than-average percentage of responsiveness. Thus, for effective career counseling, job placement should be thought of as only the second stage if not the beginning of counseling, rather than as the end point. There needs to be a continuing support bridge between training, placement, and help -- often to employer as well as to employee -- toward the objective of job retention, and the behaviors needed to keep a job after it has been found.

It already has been recommended that trained counselors (e.g., those who have benefited from the CAUSE projects or similar experience) be employed. But all professional and/or so-called "indigenous counselors" should be kept in close contact with personnel on the training and job-development staffs. An E & D project is not the proper place for the kind of parochialism (separate "empires") that characterizes some business and educational institutions where personnel workers operate in an insular fashion.

Although it has been stated previously, the authors of this report here repeat their conviction, that providing training (basic and vocational) and a job will not necessarily "convert" all disadvantaged people (especially the minority ones) from an outlook of hopelessness and purposelessness to identification with and productivity in the world of work. In order to become fully effective in our society such individuals often require significant help in the development of understandings, meanings, and certain behavioral patterns normally required by most employers, and these can best be developed when the trainee sees it as relevant and feels motivated. More attention might well be devoted to in-training programs which focus on the development of interests, values, motivation and behavior patterns related to keeping a job after getting one. To achieve these objectives, counselors can play a central role, but always in cooperation with training and job-development personnel.

If counselors cannot be employed who already know something about the disadvantaged and their values, needs, and beliefs, they should be given intensive and prolonged in-service training and supervision by individuals who are qualified.

Group or family and/or individual counseling of a meaningful and appropriate kind may be indicated for some hard-core unemployed. Provision should be made in the staffing of E & D projects concerned with the culturally disadvantaged for the services of part-time clinical psychologists and/or psychiatrists who have worked successfully with the disadvantaged, and the in-service training of counselors. It is essential that these specialists have sufficient experience in non-traditional settings to make them fully aware of the complexities of this unusual treatment task. The counselors who do that work should have the full benefit of data available in the records and from observational or interaction experience with trainees on the part of selection, training, and job-development personnel connected with the E & D project.

5. Maintaining Records

An adequate system of records must be maintained if all selection, testing, counseling, training, placement, and research personnel are to be expected to profit by their own and the experiences of others in this difficult kind of work. But this won't just "happen." The original proposal should specify the kinds of information-gathering and record-keeping procedures which are necessary for the effective functioning of the specific organization. This specification having been made, administrative attention and in-service training in maintenance and use of records is indicated.

It goes without saying that this kind of trainee population cannot be described nor its progress known unless records (and a research design) are provided.

It also is obvious that accurate financial records must be maintained so that boards of directors, administrators, and staffs understand their monetary resources and limitations.

6. Training -- Basic and Vocational

The techniques of basic education and acculturation should be based on as accurate knowledge as possible of the trainees and their needs. Consultants or other especially knowledgeable people should assist in the early formulation of these objectives. But as training, counseling, and placement personnel become better acquainted with the trainee population there should be feedback to those responsible for training objectives. Records of changes in direction and methods should be kept and fed into the research design for analysis of extent of trainee development and factors possibly influencing it.

It already has been stated that vocational training should be individualized as much as possible -- under MDTA slot provisions or OJT -- but that the assistance of special occupational advisory councils and the information available in the State Employment Service should be utilized to full advantage, in order that trainees will not be prepared for non-existent jobs.

The Pueblo JOC staff experimented somewhat with combined basic-acculturation and vocational education, and were pleased with the results. Previous researchers in the field of training of underprivileged people have experimented with a coordinated program and have been impressed with trainee reaction to it. The authors of this report recommend that more experimentation be conducted along this line. A holistic approach appears to have advantage over a fragmentary attack on the problem.

The basic education of disadvantaged adults requires special innovative procedures with regard to techniques and curricular materials. There is need to identify a level of teaching materials which have appropriate adult interest level and content with accompanying controlled vocabulary. A number of such special materials now are available.

It would enhance the didactic instructional program if continual effort were exerted to relate basic education to the functions, realities, aspirations and opportunities of work. The entire re-education program suffers because of its meaningful lack of focus. Some of the newly developed materials, such as NAM's "MIND" program, and materials developed in conjunction with certain E & D projects are designed to remedy this frequent deficiency.

Effective work with disadvantaged adults requires heavy emphasis upon individualized educational diagnosis followed by the application of

experimentally proven clinical and remedial techniques directly connected with behavior and performance on the job.

Training proposals and budget requests should reflect awareness of the fact that more than the usual amount of training will be required to rehabilitate the hard-core unemployed. It would be unreasonable to expect disadvantaged persons to acquire marketable skills with the same amount of training as is given to typical vocational trainees.

7. Job Development and Placement

If the chief administrator of a project and Director of Community Relations work effectively, they pave the path for job-development personnel. If significant commercial and industrial leaders and groups to which they belong believe in the value of the project, they can "speak a good word" to their employment managers. Working in behalf of this are Fair Employment legislation, and Equal Opportunity Commissions and the work of the (National) Plans for Progress organization. The latter group actively promotes and financially supports workshops where public school counselors can learn about the existing job opportunities for minority youth and help the latter to prepare for them.

In an effectively operating program the job development personnel will be required to assume responsibility for not only developing placement but also modifying the kinds of vocational training offered by the project

in relation to the realities of available job possibilities. Job development personnel must communicate the community's vocational opportunities to the training staff. A careful matching of community needs and training program should serve to curb the high recidivism rate occurring as a result of the failure to assess realistically present and near-future demands for various categories of personnel.

It should further be recognized that obligations extend beyond the artificial boundaries of initial entry into training and terminal placement. Effective transitional and post-placement counseling should be provided to maximize persistence on the job. Continual emphasis should be placed on the fact that placement per se is not the ultimate goal of the program. Rather these programs must accept as their objective the placement of an individual in a job commensurate with his capabilities and learning abilities, providing remuneration, and advancement opportunities which will support persistence in the world of work. Our follow-up study showed that unemployment recidivism often was due to factors such as fear of failure and lack of motivation rather than worker competence.

8. Relationships with the Community and Other Agencies

It previously has been indicated how difficult it is for a new government-supported E & D project to obtain the cooperation of other Federal, State and local agencies. It also has been indicated that obtaining the support of potential employers (of disadvantaged people -- especially minorities)

is difficult. Obtaining such cooperation and support is a major undertaking and must be so recognized by board members, project administrators and staff members.

Since E & D projects are frequently established to overcome the inequities and inertia inherent in traditional agencies, the problem of interagency relationship becomes central. Effort must be expended to provide an operating structure which encourages rapid and effective provision of needed services without alienating the existing agencies.

Strenuous and continuing efforts must be expended in order to catch and keep the interest, imagination, and support of agency and employer groups. In this work there is no substitute for an effective chief administrator and a director of community relations. Board and staff members can be helpful in some situations, but well-informed (based on feedback from the JOC staff) administrators are indispensable. In this connection it cannot be overemphasized that such administrative personnel should be selected carefully and kept in their jobs if possible. Frequent turnover of administrators has undermining consequences in the area of community relations!

Community agencies and employers must not only be "sold," but must be provided continuous feedback on project progress. Readers of this report are well aware of the widespread cynicism ("it's political") of

many influential people from the outset of such projects as JOC. Newspaper, television, radio and magazine accounts of "failures" in various areas and aspects of the program have been numerous.

The facts of life about "decision makers" and community power structure should be well-known and understood by board members and administrators of E & D projects. A "shotgun" (newspaper or radio) approach to the problem is not sufficient. A "rifle" approach, aimed at specific "key" people, is indicated.

It should be recognized that projects such as JOC are vulnerable to personal and political exploitation. There is urgent need to provide insulation and autonomy for the professional project staff to ensure independent operation so that decisions may be made on the basis of merit rather than expediency.

Some Overall Observations

To the authors of this report "the wave of the future" seems obviously to be moving in the direction of meeting the need for the training and employment of disadvantaged people. Knowledgeable persons are well aware of the shortage of jobs for unskilled workers and the great need for skilled and semi-skilled personnel in the technical and service occupations.

Rapidly rising birth rates among disadvantaged people, coupled with feelings of hopelessness about the job outlook, and many urban problems which accompany these conditions contribute to an awakening recognition of what is meant by "social dynamite". Failure to ameliorate these conditions is tantamount to lighting the fuse. The disturbances which occurred during the summers of 1965, 1966, and 1967 have dramatically emphasized this condition.

As the War on Poverty continues, disadvantaged people's hopes are raised and as middle- and upper-class people become more aware of urban problems they, too, become concerned and conceivably could become more active in the support of E & D projects like JOC.

But as people become more knowledgeable about our socioeconomic problems they become aware that we haven't yet learned how to solve them. Private charity, public assistance programs, and spasmodic, seasonal jobs have been found wanting. There is a growing awareness that "something is wrong" and that it might affect me, my home and my family.

All of these assumptions could easily lead one to make the observation that public opinion is far more favorable for E & D projects in the fall of 1967 than it was in the fall of 1964 when JOC opened its doors in Denver and Pueblo.

The fact that Colorado JOC did not achieve its rosy expectations is not an indication that the idea of an E & D project of this type is not worth trying. Rather it may more accurately be construed as an indication of the extent to which relatively unqualified people (in terms of training and experience) were able to cope with the complexities of what is now recognized as one of the most difficult undertakings in our highly complex society.

The authors of this report hope that more E & D projects like JOC will be attempted, but in such a way that they can profit from what has been learned from previous experiences.

VT 005 149
A New Look at the Why and the How of Clinical Laboratory Experiences: Report of the Regional Workshops of the Council of Member Agencies of the Department of Diploma and Associate Degree Programs (1963).

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*CLINICAL EXPERIENCE; *WORKSHOPS; *HEALTH OCCUPATIONS EDUCATION; *NURSING; FACULTY; HEALTH PERSONNEL

Thirty-three guests and 1,088 representatives of 574 member agencies attended the regional workshops in Des Moines, Chicago, Pittsburgh, Boston, Dallas, and Portland, in November, 1963. The workshops aimed at assisting instructors to: (1) plan meaningful clinical experiences, (2) clarify relationships of these experiences to course objectives, and (3) plan experiences to prepare the new graduate to function as a beginning general duty nurse. "The Role of the New General Duty Nurse in Meeting Today's Needs in Hospital Nursing Services," a paper prepared cooperatively by League staff members, Evelyn Zetter, Angela Coletti, and Mary Ellen Warstler, was presented by one of the three at each meeting. Elaine Dominowski and Grace Dowline both prepared papers on "Effective Utilization of the Clinical Laboratory," one of which was presented at each meeting to give direction to general sessions and group work. Nursing functions related to patient care plan, nonprofessional nursing personnel, patient education and rehabilitation, cooperation with other personnel, and the liaison role with patient, family, physician, hospital personnel, and community agencies were selected for discussion. Implications for future action at home were identified as faculty responsibilities, nursing service responsibilities, and cooperative responsibilities for faculty and nursing service. (JK)

VT 005 149

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A NEW LOOK AT THE WHY AND THE HOW OF CLINICAL LABORATORY EXPERIENCES

Report of the 1963 Regional Workshops of the Council of Member Agencies of the Department of Diploma and Associate Degree Programs

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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ANALYSIS OF THE 1963 REGIONAL WORKSHOPS

Katherine Brim

The fourth annual series of regional workshops of the member agencies of the Department of Diploma and Associate Degree Programs was held in November, 1963. The program was planned and developed by the program planning committee of the Council of Member Agencies, which is composed of the national chairman, Gertrude Nathe; the national vice-chairman, Edna Fagan; and the regional vice-chairmen: Carol E. Randall, Midwestern Region, Sister Bernadette O'Brien, Southern Region, Sister Mary Raphael, Western Region, and Gertrude S. Walsh, North Atlantic Region.

The Theme

Inasmuch as the 1961 regional workshops focused on over-all curriculum development and the 1962 workshops focused on the planning and the teaching of medical-surgical nursing, the program planning committee decided that the emphasis of this series of meetings should be on the planning of experiences in the clinical setting and on the functions of the general duty nurse. The topic chosen was "Are We Preparing Today's New Graduate to Function as a General Duty Nurse?"

The Meetings

MIDWESTERN REGION (A)--Des Moines, Iowa. November 7-8, 1963. Chairman: Edna Fagan. Chairman of local committee: Sister Mary Timothea. President of local league: James Fields. DDADP staff: Katherine Brim, Olga Krazinski. States represented: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin.

MIDWESTERN REGION (B)--Chicago, Illinois. November 4-5, 1963. Chairman: Carol Randall. Chairman of local committee: Bertha Kauser. President of local league: Brother Maurice. DDADP staff: Katherine Brim, Olga Krazinski, Catherine Molinari, Alice White. States represented: Indiana, Illinois, Michigan, Ohio.

NORTH ATLANTIC REGION (A)--Pittsburgh, Pennsylvania. November 14-15, 1963. Chairman: Gertrude S. Walsh. Chairman of local committee: Sister M. Paulinus. President of local league: Mary Brennan. DDADP staff: Virginia Allen, Katherine Brim, Audrey Conley, Mary Fulton, Frances K. Peterson. NLN staff: Inez Haynes, Phyllis Hurteau. States represented: Connecticut, Delaware, District of Columbia, Maryland, New Jersey, Pennsylvania.

NORTH ATLANTIC REGION (B)--Boston, Massachusetts. November 18-19, 1963. Chairman: Gertrude Nathe. Chairman of local committee: Ellen T. Duncan. President of state league: Dorothy S. Hayward. DDADP staff: Katherine Brim, Marilyn Burkart, Vivian Zane. States represented: Maine, Massachusetts, New Hampshire, New York, Rhode Island, Vermont.

SOUTHERN REGION--Dallas, Texas. November 11-12, 1963. Chairman: Sister Bernadette. Chairman of local committee: Sister Regina Triche. President of local league: Gesini Franke. DDADP staff: Katherine Brim, Patricia Byrne, Olga Krazinski. States represented: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, Puerto Rico, South Carolina, Tennessee, Texas, Virginia, West Virginia.

WESTERN REGION--Portland, Oregon. November 1-2, 1963. Chairman: Sister M. Raphael. Chairman of local committee: Esther A. Jacobson. DDADP staff: Katherine Brim. States represented: Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Oregon, Utah, Washington.

Attendance

There were 691 member agencies of the department in 1963; this is an increase of 20 member agencies over 1962. The number of agencies represented at the 1963 meetings was 574, or 83 percent of the membership, while 86 percent of the membership was represented at the 1962 meetings. In 1962 and again in 1963, 33 guests attended the meetings. At the Pittsburgh meeting, five associate degree programs were represented by seven faculty members. In addition, representatives from two associate degree member agencies attended the meetings in Portland and in Boston.

The following table gives the statistical record of the meetings:

Region	Total Membership	Members Sending Representatives		Number of Representatives	Number of Guests
		Number	Percent		
North Atlantic					
A	128	105	82	205	3
B	153	134	88	270	3
Midwestern					
A	110	93	85	174	6
B	133	119	89	222	6
Southern	115	82	71	142	9
Western	41	34	83	64	5
Associate Degree	11	7	64	11	1
Total	691	574		1,088	33

The Program

The program planning committee selected the topic "Are We Preparing Today's New Graduate to Function as a General Duty Nurse?" because:

1. Associate degree and diploma nursing programs purport to prepare their graduates to function in general duty nurse positions upon licensure as registered nurses.

2. Many faculties are involved in making changes in the educational programs.

3. It is the responsibility of faculties in all programs to plan educational programs that assure the graduate's having the knowledges, abilities, and skills she needs in order to meet the expectations of patients and the employer's expectations of the beginning practitioner.

The aims of the 1963 workshops were to help the instructors to:

1. Identify better ways of planning meaningful clinical experiences throughout the program.

2. Clarify the relationships of these experiences to course objectives.

3. Plan more realistically the experiences that will prepare the new graduate to function as a beginning general duty nurse.

The planning committee felt that basic to any consideration of the preparation of graduates would be the matter of nursing service's expectations of the new graduates. At the 1963 annual meeting of the Council of Member Agencies of the Department of Diploma and Associate Degree Programs, the program session focused on (a) the trends and the changes related to the care of patients in hospitals, (b) the effect such trends and changes will have on the future role of the graduates from associate degree and diploma programs, and (c) the implications such trends and changes have for future planning of educational programs. At that annual meeting, a generalist, a representative from an associate degree program in nursing, and a representative from a diploma program discussed the topic "Getting Ready for the Future," and a nursing service director presented a paper on "The Job to Be Done," which placed major emphasis on what the patient in the hospital needs and wants from the registered nurse. The 1963 regional workshops were planned to stimulate the carrying out of the concepts introduced at the 1963 annual meeting as well as those presented at the regional meetings held in 1961 and 1962.

The program format was the same at each of the regional meetings. Three staff members of NLN's Department of Hospital Nursing prepared a paper on "The Role of the New General Duty Nurse in Meeting Today's Needs in Hospital Nursing Services," which was presented by one of the three at each meeting. The paper is included in this report. Two nurse educators prepared papers on "Effective Utilization of the Clinical Laboratory by the Nursing Instructor." Each paper was presented at three of the six meetings. The two papers are also included in this report. The papers served to set the tone and to give direction to general sessions and the face-to-face group work.

In the interest of saving small-group discussion time, the following premises regarding the utilization of the clinical laboratory resources were formulated by the planning committee and read at the beginning of each group discussion.

1. All faculties face a major problem in the planning of meaningful laboratory experiences that have a direct relationship to the objectives of the school, the curriculum, and the course.

2. All clinical nursing courses must be planned so that each learning experience in the clinical areas is viewed as a step that will lead to the effective functioning of the new graduate as a general duty nurse.

3. In order to achieve effective utilization of the clinical laboratory, the faculty must be responsible for planning, supervising, and evaluating all learning experiences.

4. Effective means of communication between the nursing service personnel and the faculty member in each clinical area need to be established, and communication must be an ongoing activity.

It was planned that the group discussions would focus on "Planning Clinical Laboratory Experiences in Relation to the Functions of the General Duty Nurse." Five functions from the section of ANA Statements of Functions, Standards, and Qualifications entitled "Functions, Standards, and Qualifications for Practice of General Duty Nurses" were selected for discussion. Prior to the meeting, representatives were asked to indicate which function they wished to discuss, and the small groups were set up accordingly.

In order to stimulate discussion, questions related to each function were formulated. Before the members of the small groups proceeded with the discussion of the questions, they agreed to accept the following four beliefs as basic to all of the aspects of their discussions:

1. The clinical laboratory experience is an integral part of a nursing course, but it is only one of the activities that contribute to the students' achievement of the objectives, and the content related to an objective must be taught concurrently with clinical laboratory experiences.

2. The amount of time planned for the clinical laboratory experience must be sufficient to make the experience meaningful and satisfying to the student, and the experience must support the principles of learning and give the student an opportunity to demonstrate the behavior identified in the objectives of the course and the curriculum.

3. The instructor, who is responsible for implementing all aspects of a course, must be familiar with patients in the units and know what kind of nursing care is required by each patient selected for the student's assignment.

4. The principles of learning related to sequential learning experiences and to moving from the simple to the complex are basic to course planning. The sequential experiences must be such that as the student moves through the program, she will develop abilities related to the function being discussed.

The planning committee felt that if the aims of the workshop were to be achieved, the participants would have to give serious attention to the role of the general duty nurse and upon returning to their schools, study their educational programs objectively, critically, and in depth to ensure the inclusion of the essential learning experiences that prepare the student to function as a beginning general duty nurse upon graduation.

The functions and related questions discussed by the groups follow.

1. Prepares, administers, and supervises a patient care plan for each patient in the group for which she is responsible.

   a. What differences should there be in the instructor's expectations of the student who is developing a care plan for a patient or patients in the beginning of the program and of the student who is about to graduate?

   b. Identify the ways in which these expectations are considered in the planning of clinical laboratory experiences throughout the program.

   c. What factors must form the basis of the instructor's decision to assign a student to one or two patients or to a group of five or more patients?

   d. What expectations of the student should the instructor have when making such assignments?

2. Teaches and directs nonprofessional nursing personnel for whom she or he is assigned responsibility.

   a. What relationship should the student have with nonprofessional nursing service personnel (1) when a beginning student and (2) just prior to graduation?

   b. What specific ongoing clinical experiences should be planned in order to develop the student's ability to carry out the elementary principles of teaching and of directing the work of these nursing service personnel?

   c. In what ways will the nursing service department's approach to the nursing care of individuals and groups of patients affect the student's understanding of the RN's responsibilities of teaching and directing nonprofessional nursing personnel?

   d. What approaches to planning nursing care can the instructor find--without setting up an artificial approach, such as setting up a nursing team composed of students only--that would prepare the student to carry out these teaching and directing activities?

3. Assists in patient education and rehabilitation, including the promotion of mental and physical health.

   a. What opportunities should be provided to enable the student to recognize the need for health teaching?

   b. What skills does the student need in order to carry out her role as a health teacher?

   c. What activities should the student participate in that will help her to utilize the above skills when teaching the patient with few nursing and health needs and, later, the patient who has a number of complex needs?

   d. How does the selection of patients provide the students with the opportunity to apply nursing concepts of rehabilitation throughout the program? Identify the means by which the instructor determines whether or not the student is able to do effective health teaching at the various levels of the program.

4. Cooperates and shares responsibility with general duty nurses, the head nurse, supervisor, attending physician, and other personnel.

   a. Who are the "other personnel" on the health team with whom the nursing personnel must cooperate and share responsibility in order to ensure that optimal care is provided for the patient?

   b. What opportunities to learn to communicate with and relate to these members of the health team are provided for the student? When and how should these relationships begin?

   c. What specific means are used by the instructors to provide these opportunities?

   d. What consideration is given to increasing the depth of these relationships as the student progresses in the program?

5. Communicates and acts as liaison between patient, family, physician, hospital personnel, and community agencies.

   a. What indirect and direct activities related to communication skills should the student engage in for the purpose of promoting her ability to communicate effectively and to act as a liaison between each patient to whom she is giving care and all other persons concerned with his care and the promotion of his welfare?

   b. How should the student's learning experiences be planned so that she utilizes the nursing care plan as a means of applying principles of communication and in planning for the continuity of care within the total hospital environment?

   c. What learning experiences in the community can be provided for the student in order that she may learn to utilize community resources in planning for continuity of care for patients and families when there is no active referral system?

   d. What learning experiences can be incorporated into the clinical laboratory periods in order to help the student to plan for continuity of patient care, taking into consideration the patient's environment and physical condition prior to his hospitalization as well as what his environment and needs will be after discharge from the hospital.

It was recognized that the functions selected and the questions raised for discussion were not exhaustive or all-inclusive. The other functions included in the ANA statements on "Functions, Standards,

and Qualifications for Practice of General Duty Nurses" are as important as those chosen for discussion. Other questions about each function could have been raised and certainly should be raised by each faculty when it gives careful attention to planning, implementing, and evaluating the program of studies. Also, it is essential that the faculty consider the implications that these functions have for the planning of the clinical laboratory experiences throughout the program. Finally, nursing education must recognize its responsibility to prepare the student in such a manner that upon graduation, she has the ability to carry out each function independently after a period of orientation to the institution in which she is first employed.

This implies that nursing education and nursing service have distinct and different responsibilities. The former is responsible for the preparation of the student, and the latter for the orientation of the new graduate. When planning and implementing clinical laboratory experiences, nurse educators should identify those experiences that are pertinent and essential to the role of the general duty nurse and eliminate any experiences in the educational program that require knowledge and skill beyond that expected of the general duty nurse and beyond that which is appropriate to the objectives of the associate degree and diploma programs.

Action at Home

At the final session of each of the workshops, the participants were asked to identify some of the implications that the ideas and the information gained at the meeting had for action at home. In addition, the two speakers summarized briefly additional considerations and possible activities at home that were based on the discussion questions and on the observations made by the representatives during the small-group discussions.

The implications for action at home as identified by the majority of the participants related to activities that are the responsibility of the faculty, of nursing service, or of both groups through a joint effort.

I. Responsibilities of faculty.

A. Philosophy and objectives.

1. Review and study all statements of philosophy and objectives used in the educational program in relation to the ANA statements on "Functions, Standards, and Qualifications for Practice of General Duty Nurses."

2. Review and discuss with appropriate nursing service personnel the philosophy of nursing service and the objectives of patient care in order to determine the implications that exist for the basic educational program.

B. Curriculum.

1. Identify and implement more specific learning experiences to provide the student with the opportunity to recognize and plan for continuity of nursing care from the community to the hospital and back to the community.

2. Study the program carefully to determine whether or not it provides the content and the learning opportunities that enable the student to develop skills unique to problem-solving, critical thinking, leadership, and the management of the nursing care of a group of patients.

3. Initiate or improve the use of the pre- and post-conference technique as part of each clinical-laboratory experience throughout the program.

4. Identify experiences that should be incorporated into the program in order to enable the graduate to meet her obligation as a teacher of health to the patient and his family.

5. Assume full responsibility for all learning experiences in the clinical laboratory setting.

6. Identify clearly the levels of expected behaviors within the program, and implement a program that will assure that these behaviors are achieved by the student as she progresses through the program.

7. Improve the use of various teaching methods throughout the program, giving careful consideration to the ability of the faculty members to use different methods effectively and to the readiness of the students for further learning as a result of the teaching.

8. Seek experiences that will help the student to understand the role of nonprofessional personnel in the planning and the giving of care to patients and the methods used by the general duty nurse in guiding and directing their work.

9. Develop each course so that it bears a relationship to the total curriculum plan, its concepts and principles serving as a foundation for more advanced knowledge and skills.

10. Use the organized approach to patient care, such as team nursing as implemented by nursing service, as a guide for planning learning experiences throughout the program. Eliminate those experiences that are not in keeping with the everyday approach to nursing care used by nursing service personnel.

C. Evaluation.

1. Initiate a follow-up study of the graduates' performance in relation to the objectives of the program.

2. Provide an opportunity for the graduate to evaluate the basic program in the light of beginning experiences as a general duty nurse.

3. Evaluate the total program objectively to determine whether certain learning experiences have outlived their usefulness in assisting students to achieve program objectives.

4. Determine how community resources, including hospital areas, can be used effectively and realistically by faculty in relation to the objectives of the program and the curriculum.

5. Evaluate learning experiences found on a 24-hour basis that can be used to prepare the student for those responsibilities that she will be expected to assume upon graduation.

II. Responsibilities of nursing service.

A. Inservice programs.

1. Establish a program for the orientation of the new graduate--including the graduates from the school of nursing or the nursing program even though they might be familiar with the physical facilities of the hospital--or strengthen the current program.

2. Strengthen and improve the ongoing inservice education programs so that they help the general duty nurse to acquire new knowledges and skills in the situation.

B. Planning for patient care.

1. Determine how allied professional members can be used by the nurse to plan and implement more effectively a program of comprehensive care of the patient.

2. Formulate a realistic philosophy of team nursing, and implement this philosophy in planning nursing care.

3. Develop a more realistic and more adequate form for recording the plan of nursing care for each patient, one that can be used effectively by nursing service personnel and by students while in the basic program.

III. Responsibilities of faculty and nursing service together.

A. Improvement of communications.

1. Establish and implement a plan whereby personnel from nursing service and nursing education, such as directors and assistant directors, head nurses and instructors, and coordinators and supervisors, can meet regularly in small groups to discuss problems of mutual concern and interest.

2. Create an atmosphere whereby personnel from both areas develop respect for and understanding of each other's role and responsibilities.

3. Review each other's objectives to determine whether those of the school and the curriculum and those of nursing service, although different in focus, are compatible.

4. Plan a joint workshop or a work conference in which the groups can study the ANA statement on "Functions, Standards, and Qualifications for the Practice of General Duty Nurses" and discuss the implications for service and education.

Further Considerations

Were the 1963 regional workshops successful? Were they failures? No on-the-spot evaluation can adequately answer these questions.

The immediate worth of any workshop depends directly upon the participants--to what extent they helped each other to gain new knowledge, skills, or insights into problems, how much they extended themselves to inform their colleagues at home about the sessions and the group discussions, and how conscientiously they identified pertinent implications for action.

The ultimate outcome depends upon the faculty--how they use the information shared with them, how comprehensively they identify additional and specific implications as guides for program improvement, and how conscientiously they eventually evaluate the effectiveness of their efforts.

Following are some questions that might need thoughtful exploration by faculties in associate degree and diploma programs in nursing.

Have we approached nursing service personnel and provided them with the opportunity to interpret their philosophy and objectives of nursing care? How well have we supported nursing service's philosophy and objectives in planning the clinical laboratory experiences for students? If we do not agree with their philosophy of nursing care, what steps have we taken to initiate discussion of the differences with appropriate nursing service personnel? Do we have a sincere respect for nursing service personnel and their problems?

Have we as a faculty ever formulated definitions of words and phrases appearing in statements of beliefs and objectives that are used throughout the educational program? Some examples of such words and phrases are: principles, concepts, critical thinking, health team, nursing team, nursing care plan, communication, needs of patients, democratic atmosphere, promotion of health, teacher of health, rehabilitation, citizenship.

Are the definitions accepted by us compatible with those accepted by nursing service personnel? Have common definitions of terminology been accepted by the two groups?

What are the teaching skills needed by the new graduate, and how and when should they be introduced throughout the total program? How are these skills learned? Where can they best be learned? How does each course, including the major clinical nursing courses, contribute to the student's knowledge and ability to teach patients and their families? Do we plan experiences for students that are inappropriate in regard to learning teaching skills? Some inappropriate experiences are the "teaching" of younger students, the "teaching" of classes for aides, et cetera. What teaching skills are needed in order to direct the work of nonprofessional personnel?

Do we use ways of communicating with nursing service personnel that serve to promote mutual understanding of efforts and responsibilities? Are these ways the most economical in terms of conserving the time and the effort of all concerned? Do only those who have direct involvement with the area of concern meet together? How are others informed about the results of such a meeting? Is each meeting planned carefully and cooperatively? Do we have an organization that permits us to carry out the functions of nursing education and achieve our stated objectives? Do we support nursing service in its efforts to carry out its functions and achieve its stated objectives?

Are we planning a curriculum that is realistic in the face of the employer's expectations of the general duty nurse? Have we given critical attention to the kind of experiences needed by the student in order to meet these expectations? Have we allowed sufficient time for the student to develop the skills basic to the behaviors identified in our objectives? Is each instructor thoroughly familiar with the content and the experiences provided in each course so that content and experiences are not repeated but are used as a basis for further learning?

Are the objectives of the curriculum actually and actively used as a basis for planning and implementing each course? How do we evaluate these objectives? What concrete evidence do we have that shows that the objectives have been achieved? Are the changes we make in the curriculum the result of careful and thoughtful planning that is based on sound educational principles and realistic goals? In planning changes, do we give consideration to the abilities of the faculty and the students and to the available resources? Do we plan for a critical evaluation of the current offerings? What criteria must we formulate to evaluate any curriculum change?

THE ROLE OF THE NEW GENERAL DUTY NURSE IN MEETING TODAY'S NEEDS IN HOSPITAL NURSING SERVICES

Evelyn Zetter, Angela Coletti, and
Mary Ellen Warstler

The role of the general duty nurse in meeting today's needs in hospital nursing services cannot be considered out of the context of what is being expected of hospitals, and therefore of nursing services, by the public they serve. Perhaps it will be helpful to identify briefly some adaptations and new concepts which have appeared since the early 1940's--a period of revolution rather than evolution. As Barbara Ward says of our era in her recent book, The Rich Nations and the Poor Nations, ". . . we are living with ten or twenty revolutions--all changing our ways of life, our ways of looking at things, changing everything out of recognition and changing it fast."[1] Some of these adaptations and new concepts in the health field have been:

1. Changing concepts of health care and who shall be eligible to receive it. Already, some community hospitals are moving toward the idea of a community health center. We see this evidenced by the increasing acquisition and development of broader community services such as nursing homes, rehabilitation centers, psychiatric units, day and night clinics, and in a very few institutions, home care and follow-up programs. It seems evident that in our health programs, we are moving toward concentration and coordination of curative, rehabilitative, and preventive health resources within one administrative framework. As yet, which health agency will assume this over-all responsibility has not been clearly defined. It may be that this responsibility will be met in several different ways from one community to another.

2. The formal education of hospital administrators and the employment of increasingly better qualified administrators. This has brought a corresponding increase in the use of sound business practices within the hospital organization.

3. The increasing number of categories of personnel in nursing service as well as in the institution as a whole. This has created great differences due to numbers alone.

4. Changing functions in specific categories of personnel. Here we are beginning to see administration becoming increasingly concerned with separating administrative and service functions from nursing functions. This is probably best reflected in the ward clerk's or the ward secretary's role. Here, too, in a very few places, administration is assuming the responsibility right down the line to the patient unit. This is what we are seeing in the research projects which are working with so-called ward managers and unit managers.

5. Along with the last two developments, the expanding role of the registered nurse in absorbing new functions and in delegating to others those functions and tasks which can be adequately performed with less formal education. This increased respect for the registered nurse and her unique contribution is reflected in a true story related to me recently. A nursing director told me that her community hospital was building an addition to house a nursing home facility. When the question of criteria for admission came up, the physicians said that this was not a medical decision, that it was a nursing situation, and therefore, nurses should establish the criteria.

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6. The tremendous increase in number of hospital beds and the expansion of other health facilities to meet public demand reflects the change in the community hospital's function and, consequently, the new expectations from nursing service. This change in public attitude is discernible when one looks at the changes occurring in many areas of the patient care units and especially in two services--the outpatient department and the emergency unit. In the past seven years, there has been an increase of 34 percent in outpatient department visits, while the over-all emergency unit visits have increased by 90.5 percent. It is known from experience that these increases are for the most part in the visits of paying patients.

7. The new scientific, diagnostic, and treatment facilities are being centered within hospitals, if for no other reason than that modern medical practice is increasingly dependent upon these complicated and very expensive pieces of equipment as well as upon a supply of highly skilled personnel to operate them.

As new knowledge in the fields of science, human relations, and technology is becoming available at such a rapid pace, we cannot help wondering if today is not yesterday and if tomorrow is not today. We in nursing service and nursing education have our assignment. Society has delegated to us the responsibility for its nursing care. More specifically, our assignment has been clearly pointed out in the 1952 report of the President's Commission on the Health Needs of the Nation[2] and in the 1963 report of the Surgeon General's Consultant Group on Nursing.[3] It is on the basis of the definition of health in the report of the President's Commission[4] that nursing leaders have been able to define the role of the nurse as a participating member of the health team in all phases of the health cycle--promotion and maintenance of health; prevention of disease; and performance of diagnostic, therapeutic, curative, and rehabilitative measures.

During the winter of 1962-63, the first Department of Hospital Nursing conferences for directors of nursing services were held to consider the implications for nursing service of these vast changes which were already taking place in our communities. A follow-up series entitled Blueprint for Action will be held early in 1964. Blueprint for Progress in Hospital Nursing,[5] the report of the 1962 meetings, pointed up the more important needs to be faced now and in the foreseeable future.

A few of the specific needs can be summarized as follows:

1. Perspectives and viewpoints of nurses and all other persons involved in nursing services will need to be restructured so that a state of rapid change will be as comfortable to each of us as rigid maintenance of the status quo has been.

2. An increasing blending of patient services both inside and outside the hospital is an immediate need. This will mean not only that hospitals will play a new role in the community but that the public will exert even more influence in enforcing controls over our service as it demands that cost and quality be brought into a reasonable relationship.

3. All members of the health professions are faced with complex problems concerning not only how to bring the benefits of modern medicine to mankind but also how to do this while at the same time recognizing the increasing social trend toward protecting human dignity and the individuality of patients' needs.

4. Automation has already affected hospital operation, and its effect will increase as it is used to bring about more effective and efficient services to patients. As these changes are realized, nurses must be ready to meet the added nursing and psychological needs created in the patients by this new environment.

As the consumer of services rendered by general duty nurses, who represent 62 percent of all registered nurses, the nursing department of the hospital has the responsibility of helping newly graduated nurses function in the situation as it exists in our hospitals. Nursing service must help them

make this adjustment without loss of the high standards set for them during their clinical practice in the school. At the same time, we must provide for the progressive development of clinical proficiency at the bedside and recognize and encourage those with potential to prepare to take leadership in clinical nursing at the bedside, to take leadership in teaching such proficiency to others, and to take leadership in the administration of the nursing services of our institutions.

As we see how these and other events have affected nursing service in recent years, we need to consider whether we are functioning in this general framework or in the framework in which we were prepared as head nurses, nursing directors, clinical instructors, and nursing educators 5, 10, 15, or even 20 years ago.

National nursing and hospital groups and many, many individual hospitals have put much effort and money into the reeducation of nurses through institutes and workshops. Our federal services and professional organizations have spent much effort and very large sums of money to have research done and the implications disseminated to the broad nursing population. Yet, we see little progress within hospitals in redefining the role of the general duty nurse or in developing clear and concise job descriptions for the many categories of personnel added to the nursing service area. We see very few adequate inservice programs in hospitals--if by "adequate program" we mean one which provides (1) orientation of each worker to her specific job responsibility, (2) a skill inventory for each preservice-prepared person, and (3) a program of job development, planned in relation to the job category, where the head nurse or inservice coordinator sees to it that the desired skills are taught and the performance is evaluated and where provisions are made for retraining employees, including nurses, in new systems and forgotten skills. All this, in addition to the more common practice of conducting training classes for aides, orderlies, clerks, et cetera.

During this past period, owing to the many developments in technology, human relations, and science which we have discussed, more opportunities for the nurse and her many varied abilities have opened up than nursing personnel could take advantage of under the systems of nursing preparation then current. Thus, it is easy to see how many of our fragmentary patterns of nursing service have been developed to meet the revolutionary changes taking place both inside and outside hospitals.

There were, fortunately, leading hospitals and nursing service directors who had a greater insight into the rapid pace of change occurring in the present and into what might be expected in the future. They began experimenting with new patterns of staffing nursing service based on a redefinition of the occupation of nursing and on a consideration of the new levels and relationships which must be dealt with in the hospital situation. At the same time, nursing educators in many areas were looking at the changing events and considering the effect on their product, the new general staff nurse. These educators began to experiment with new curriculums and methods of helping the student to prepare for her expected working environment. As a result, school programs began to see their functions as best achieved apart from the nursing service situation in a number of different ways based on as many different reasons. The great majority of hospital nursing services and practicing nurses, however, continued to lag behind and to try to meet the mounting problems by day-to-day ad hoc decisions.

A major difficulty facing nursing service personnel today is that of defining and clarifying the functions which uniquely belong to nursing in this complex and poorly defined situation of actual rather than desirable health services. Another distinctive problem of the nursing role in the hospital organization is that this role currently expands and contracts, depending upon the availability of staff personnel and the usability of allied health services and their personnel. These difficulties continue to block, to a great degree, the ultimate achievement of quality nursing service and care.

But even as we recognize some of the outer limits of our problems and frustrations, there are things to be done which can ease our situation. At the same time, we may find that after we have achieved what lies within our immediate reach, many of the so-called major difficulties will have been removed. Perhaps this is trying to change the old familiar aphorism "One can't see the forest for the trees" to say that one cannot remove the forest except tree by tree.

It seems that the most direct approach toward our concern today--nursing service's expectations of the newly graduated general duty nurse--is to look at the expressed objectives of schools of nursing and to compare them with nursing service's expressed expectations. In reviewing the objectives of a representative group of diploma schools, I have put together some of their similar objectives in five major areas. As you read them, ask yourself if the objectives which I have grouped together can be equated or if there are differences.

Area 1.--To develop skills necessary to render quality nursing care essential for health restoration and preservation, or, said in another way, to give devoted and efficient care which meets the total needs of patients, or, said in a third way, to competently organize and implement a plan of nursing care to meet immediate and restorative needs of patients.

Area 2.--To utilize communicative skills effectively, or to guide nonprofessional workers who assist the nurse in caring for the individual needs of a group of patients.

Area 3.--To acquire the ability to adapt the knowledge and the scientific principles of nursing care to meet individual needs, or to accept responsibility for their own decisions and actions, or to appreciate the significance and ramifications of changing times and needs in terms of patient care.

Area 4.--To understand the role of community resources in a total health program, or to be aware of the need for continuity of patient care, or to appreciate the work of other groups in the total care of the patient and the nurse's role as coordinator.

Area 5.--To develop the habit of critical thinking, or to develop problem-solving techniques.

Are these objectives really saying what you mean? Can you guarantee that these basic abilities as outlined in these general statements, along with their implications, can be expected by employers of the new practitioner? Or are we thinking and acting like an instructor I was told about?

A director of nursing service, who had been in her job for about 18 months but had been educated for and was experienced in nursing education, was discussing with a personal friend, an instructor, the problem of the inadequate ability of the new graduate to meet the needs of nursing service. The instructor responded, "This is not my concern. I do my part in teaching them." The director of nursing service, who told me the story, commented on her shock that this friend whom she respected could be so unconcerned about the kind of nurse that her teaching produced. I tell you this because I believe that it has something for all of us to think about. You may be also interested in her final comment: "I know that I am an educator and that this experience in nursing service is temporary. I am going back to teaching one of these days, but when I do, I can assure you that I will do my job differently than I ever did it before."

Are we like the instructor in this story, and do we, too, abdicate responsibility when students fail to measure up? Are we sure that our objectives actually can and will be put into action by the student when she begins her first job? Do nursing service personnel understand the expected or possible outcomes of the school objectives? Do you check on your graduates' performance to determine whether your objectives are achieved? Do you contact their employers after one year, two years, or more of employment to evaluate how well the graduates measure up to their expectations? In numerous discussions, articles, and surveys as well as during workshops and conferences with nursing service directors, supervisors, and head nurses, it has been made clear that their expectations of the newly graduated general duty nurse may be listed as follows:

1. She can prepare, administer, supervise, and coordinate a nursing care plan for each patient for whom she is responsible. In doing this, she will:

   a. Make a detailed evaluation of the patient's physical needs, habits, and personality resources.

b. Cooperate and share responsibility with co-workers, supervisors, and other personnel.

c. Interpret through assignment and teaching conferences the needs of patients for whom she is responsible to all other persons working with her in the care of these patients.

d. Observe, record, and report to appropriate persons symptoms, reactions, and progress of patients.

e. Apply judgment in the delegation of duties. This means that she will understand that nursing tasks can be considered and assigned only in relation to the patient and the nature of his illness.

2. She applies scientific principles in performing nursing procedures and techniques. At the same time, she will adapt these principles and procedures to the particular institution in which she is functioning.

3. She is able to adapt to an emergency situation. She will show awareness of the legal aspects of nursing and follow the established rules of the particular hospital.

4. She recognizes the need for and provides interpretation of therapeutic treatments prescribed. She will teach the patient the methods by which he can effectively assist in his therapy and his maximum rehabilitation.

5. She recognizes the limitations of self and is able to ask for help and accept constructive criticism.

6. She is able to take charge of nursing unit personnel on the evening and night tours of duty in the absence of the head nurse.

7. She participates in inservice and on-the-job training programs as well as in scheduled group discussions.

8. She understands the importance of self-development and recognizes that her conduct serves as an example for others.

Is it not already past the time to look realistically at the situation found in many patient care units used for clinical practice? As I review the literature and talk with registered nurses in hospitals, I am concerned to find little or no emphasis on highlighting the practicing nurse and clinical instructor as the nurse image for the student. Educators, do you understand the tremendous implication of this? Much of your valuable teaching and the high grades achieved by your students go for naught if the student's image of a practicing registered nurse is that of a friendly, well-liked, pretty nurse who receives compliments from her patients (more for her prettiness than her skill) and attention from doctors (more social than professional) and who gets the obvious things done but rarely goes beyond this to look at or for the specific needs of her patients. If this is the image your students receive, should you not examine your methods of teaching and, especially, your clinical practice areas? No clinical practice--no matter how perfect the demonstration for one, two, or more patients given by your students under your guidance--will offset what they observe as the daily ongoing practice on the patient unit of the registered nurse. Because of this, you may need to work with nursing service in setting up demonstration units where consistently good practice is carried out for all patients, not just those assigned to students, even though this may mean giving some time to retraining and reorienting the practicing registered nurse to the kind of performance needed for quality nursing care.

It must be kept in mind that the hospital as an institution is an organizational entity separate from the school. Whether there is a school or not, there always is a nursing service functioning for patient care; therefore, your contribution, as educators, should remain that of consultative assistant and stimulator, and your attitude should always be one of cooperation. Nursing service must assume the final

responsibility for continuing programs and demonstrations in all patient units as well as for an ongoing level of quality patient care performance throughout the nursing service.

I cannot emphasize too much the need for nursing service to assume this responsibility to the registered nurse or the need for nursing education to realistically look at its product, especially when I consider the list of problems that newly graduated staff nurses reported in a small study made by NLN's Department of Hospital Nursing. This study queried registered nurses in representative hospitals in different geographical areas about the problems they encountered in their first job experience.

1. Sixty percent said that they had difficulty because of their lack of experience in management of patient care for all three periods of the 24 hours. Considerable frustration was encountered in making the adjustment from the limited student assignment under close instructor guidance to the normal expected patient assignment requiring the direction of others if the assignment was to be achieved.

2. Forty-five percent indicated difficulty in becoming acquainted with the general hospital routine so that they could be knowledgeable in procedures and the like.

3. Twenty-five percent had difficulty in operating equipment which was new and unfamiliar to them. Just as important was the inability to practice patient care owing to the tremendous load of paper work for which they had not been prepared.

These indictments by young graduates of their preparation and orientation certainly do not stack up very well against the school's stated objectives or nursing service's stated expectations of the new nurse employee. This gap must be spanned by some kind of bridge built out of the situation as we presently find it in our hospitals.

I have said that we can meet our problems if we begin by taking one part at a time and completing just that much well. Both nursing education and nursing service must build these parts together; each in its own way has procrastinated far too long. Nursing education may need to take the initiative, as I have indicated, in developing conferences with nursing service. Nursing educators in general have much know-how, even though some instructors may not be fully qualified. Nursing service has many less-qualified leaders. At the same time, this know-how must be converted into a realistic, cooperative working relationship with nursing service. Both must work together. Those of you who are directors of nursing have the primary responsibility of bringing these two groups together.

The challenges today are, therefore, those of incorporating the current concepts of health care into active nursing service practice. Some aspects can be put into practice with little change in present administrative detail or so-called paper work and non-nursing tasks. Other changes must be ready to go into operation at the same time that the non-nursing departments finally assume all of the non-nursing tasks now burdening and blocking quality patient care. Among these other changes which must come are such vital ones as the development of team-nursing philosophy, the retraining of present practicing nurses to carry out actual patient care functions, and the helping of the registered nurse to regain the personal satisfaction to be found in really communicating with her patients and their families as well as with the patient's physician.

We too often rationalize that the practicing registered nurse does not want to care for patients but prefers to remain at the desk. Have we honestly looked at the situation? Is the problem now that we are doing that which we are most comfortable in doing? These registered nurses did not come into our schools to do this kind of work. Perhaps we who helped direct them into the various satisfactions, for whatever reason, need to look at our responsibilities beyond that of only giving orders.

Where patient care standards have been put into practice after identification by an intergroup committee representing education, nursing service, medicine, and administration, the staff nurse is able to function in a complementary relationship, collaborating with all persons interested in the patient's progress and welfare.

Where patient care is planned and executed according to the medical and nursing needs of patients and where the resources of a hospital are mobilized for care directed toward the optimum health of the patients, the staff nurse can carry out the necessary steps in the physician's plan of medical care. The role of the nurse here embraces the role of teacher in that she needs to teach the use of the hospital facilities to her patient and his family and the means by which everyone can cooperate in the established plan for the patient's recovery.

Where the concept of the nurse's supportive role in medical care has been recognized, the staff nurse will assume her function in diagnosing the nursing needs of the patient, in helping to identify the psychological problem that may be hampering therapeutic care, in offering suggestions to assist the patient in living with his condition, in providing the uplifting, looking-outside-of-self supportive role learned in mental health. She will become skilled in interviewing the patient, in recognizing how and when to offer counsel or when to bring in the specialized therapist, and in coordinating all these roles into a total plan of care.

Where all this and nursing care plans are available for each patient whether he has a short-term illness, a long-term illness, an intensive condition, or a convalescing condition, the multifaceted approach to care is being recognized and the nurse's specific contribution toward meeting the health needs of the individual patient has been identified. Where the therapeutic plan of care has been set forth in the patient's record, the staff nurse can incorporate this plan into the specific situation. It is in this therapeutic relationship that the nurse must determine where her services are most needed. In this connection, we must note that there is a role of increasing participation for licensed practical nurses. They are now giving medications, at least those that do not require highly discriminating nursing judgment. The role of the registered nurse here as the person responsible for the nursing plan of care requires that the licensed practical nurse and other members of the nursing team be instructed, directed, and supervised in giving the care and evaluated as to their effectiveness.

In providing the framework in which the beginning student functions as a responsible member of the nursing team but under the guidance of the instructor, nursing service demonstrates the art of nursing as coordinated, not disjointed or fragmented, since each member is contributing to the whole. The time in each succeeding level of clinical experience is spent in close relationship with registered nurses who are filling the role of the nurse. In this way, the student gains a favorable image of the practicing nurse.

The nursing services which have adopted the philosophy of team nursing are the ones which provide the ready environment in which instructors can help the student to function from the beginning as a participating member of the group rather than as an overprotected, indecisive individual who cannot assume responsibility. Thus, the desired image is nurtured in order that the graduating student will assume the duties expected of a beginning staff nurse. Thus, the student is oriented to the staff graduate nurse's role from the beginning of her preparation and can undertake with greater ease the expected position of hospital employee upon graduation.

In Summary

I would like to have you reread and consider the recommendations of the Goldmark Report of 40 years ago, the Ginzberg Report of 20 years ago, Esther Lucille Brown's report of 15 years ago and her more recent ones, along with the recommendations contained in Nursing at the Mid-Century and many other reports, and compare them with our current nursing services. Seemingly, many of us failed to learn well from these reports. Yes, we listened and talked much about them, but learning is not listening or talking. Learning is the process of changing attitudes and reflecting the changes in overt behavior.

Florence Flores, in her address "The Job to be Done," read at the annual meeting of the Council of Member Agencies of the DDADP in May of this year, pinpointed the expectations with regard to the

newly graduated staff nurse in her comment, "As an employer of nurses, my chief concern is with the product of the educational program. My concern is with what she knows and not with how long it took to prepare her. I want to employ nurses who can nurse our patients skillfully, effectively, and intelligently."[6]

Certainly, diploma and associate degree programs are here and will most likely be here in some form for many years, producing registered nurses who have the highly developed skills and the knowledge required to support quality patient care. How effective they will continue to be in the occupation of nursing depends directly on how much persons responsible for educational programs allow themselves to be intimidated by that all-powerful word status, so prevalent in our culture. Many curriculums have been changed. Have the changes been made in view of the future need or in terms of what is fashionable? Have courses and clinical experiences merely been shortened--cut off? Have we added, on the other hand, so-called liberal education courses because everyone was doing it or because this knowledge was being used in an integrated teaching approach in keeping with patient needs? Could it be that shortening one course may be the reverse of our need? Certainly, we cannot know for sure unless we have carefully defined the behaviors needed and how these behaviors are translated into action by our students. No one can question your responsibility as educators to prepare your students for the future, but this cannot be achieved if you leave out a foundation of adequate preparation for meeting the needs of today, and it may be that you can achieve better preparation for the future in preparing your students better to meet today's problems.

A person with firm principles, tolerance, and empathy who develops skills in judgment, problem-solving, and communications along with the necessary skill in the practice of patient care and in the direction of others is certainly much better prepared to meet constant changes, develop new habits, and adopt new knowledge meaningfully in her future environment. Thus, such a person already has the foundation of an attitude which will permit her to meet with confidence whatever demands the future may bring.

If you have so equipped your students, you, as instructors, have carried out your responsibility to prepare them to meet their future--a future where, though one can no longer chart the specification with any certainty, one can proceed with a confidence and an assurance in keeping with an era of constant revolution and change.

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EFFECTIVE UTILIZATION OF THE CLINICAL LABORATORY EXPERIENCE BY THE NURSING INSTRUCTOR

Elaine Dominowski

My assignment was to prepare a paper dealing with the effective utilization of the clinical laboratory experience by the nursing instructor. It was suggested that I avoid placing emphasis on any one particular educational program or any one clinical area. Considering the scope of this project, my remarks will of necessity be limited to a few rather broad generalizations, which, I believe, are applicable to any program and any clinical area.

In my opinion, any consideration of the utilization of the clinical laboratory must begin with a critical evaluation of the philosophy of the school and the objectives of the curriculum. The school's philosophy, I believe, should be the result of group action on the part of the faculty. It should include a definition of nursing which the group has agreed upon. It should include a statement of how the faculty believes learning takes place. And, it should include a description of the graduate of that particular program.

The curriculum objectives should describe in behavioral terms how these things, which have been stated in the philosophy, will be accomplished. I should like to emphasize that the philosophy and objectives are the result of group activity. This implies commitment on the part of each individual group member to the achievement of these aims.

Before I begin to discuss the clinical laboratory experience, I think it would be appropriate to give you my beliefs about nursing education, since the discussion which follows is a reflection of these beliefs.

I believe a school of nursing should aim to produce a beginning practitioner of nursing. I stress the fact that she is a beginner. The new graduate should not be expected to be an experienced nurse. The apprenticeship type of preparation which passed for education in the 1930's and 40's and produced experienced practitioners of nursing is not at all appropriate today. The depth and breadth of understanding which the nursing student must acquire and the scope of the present practice of nursing are so vast that to expect the student to become experienced in the practical application of these understandings is unrealistic.

I believe that we, as educators of nurses, must be primarily concerned with the quality of the nursing care which a student gives, not with the quantity of care which she can provide. A criticism of nursing education today voiced by many employers of nurses is that a new graduate is unaware of the reality situation in the employing agency and consequently is still a learner. This is true; she is still a learner. And, I would hope, she will remain a learner for as long as she continues to practice nursing.

I believe the new graduate of a school of nursing should take with her certain abilities which provide her with the potential to become a skilled practitioner of nursing. I believe this new graduate should be able to communicate effectively; she should be technically competent, mentally alert, intellectually inquisitive, and capable of disciplined critical thinking. I believe she should have acquired

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these abilities in the school of nursing; I do not believe she needs to be skilled in their use. The skill will come through the practice of nursing.

How do we begin to use the laboratory experience effectively? At the risk of sounding facetious, I'll say that the obvious place to begin is at the beginning. That is, the faculty defines the behavior they expect the learner to exhibit and identifies the learning experiences which will provide her with the opportunity to demonstrate this behavior. Or, in other words, the teacher of nursing identifies the components of quality nursing care and provides the learner with the opportunity to practice these herself and to see them practiced by others.

To utilize the clinical laboratory experience effectively, I believe the faculty must arrive at a definite set of objectives for clinical practice which are in accord with the objectives of the total curriculum and which can be used throughout the program, in any clinical area. I also believe the faculty should identify those learning experiences which will help the student meet these objectives.

For example, one of the objectives for clinical practice might be "to develop the ability to adjust the environment to the capacity and the understanding of the patient." A few learning experiences which would help the student meet this objective would be the opportunity to practice nursing with various types of patients and in various situations, the opportunity to set realistic goals for nursing care with the patient, and the opportunity to assist the patient in the definition and acceptance of his abilities, limitations, feelings, et cetera. These are just a few examples of learning experiences which would help the student meet this objective; the list is by no means complete.

Let me offer a few more objectives which might be used for clinical laboratory experience: (1) to develop the ability to provide safety and comfort for the patient; (2) to develop the ability to make sound nursing judgments which reflect her knowledge of general health; (3) to develop an awareness of self. I feel this last objective is particularly appropriate, since most nursing students are themselves adolescents and are intimately involved in this process as part of their growth and development. As far as learning experiences are concerned, for this last objective, the instructor might give the student the opportunity to discuss her feelings and reactions to the clinical situation with the instructor and provide her with the opportunity to recognize and meet her own needs.

As in any other good learning situation, the clinical laboratory experience should provide the student with the opportunity to progress from the simple to the complex. I am not speaking in terms of nursing procedures at this point. I am referring to the type of care the student is expected to give as she progresses through the program. This implies that the instructor knows the kind of nursing care required by each patient selected for student assignment. It also implies that patients are selected for student assignment by the instructor in the light of each individual student's needs.

Perhaps an illustration of how one would utilize a simple nursing problem might be useful at this time. There are many situations which one might consider to be simple nursing care problems. In selecting a patient for student assignment, the instructor must analyze the nursing care this patient requires and identify the principles involved in meeting the patient's needs. For this discussion, I have chosen a patient who is unconscious and whose physical condition is fairly stable. I have selected this type of patient as presenting simple nursing care problems because this individual is unaware of his environment and his nursing care consists in meeting the basic physical needs which we all share.

In giving the nursing care needed by this particular patient, the student will apply basic principles of nursing which are applicable to almost all nursing situations. How does this prepare her to cope with a more complex nursing problem? This question can best be answered by going on to discuss a more complex nursing situation.

There is a wide range of complex nursing problems which could be presented. Let us consider the nursing care needs of the patient who is a paraplegic. What similarities are there between the needs of this patient and the needs of the unconscious patient? What principles of nursing care which the stu-

dent applied in the care of the unconscious patient will also be applied in the care of the paraplegic? What makes this nursing situation complex?

I will consider just one aspect of these patients' care. There are many which I might have used, but this one seemed to be most easily demonstrated. Both of these patients, like all of us, require muscular stimulation. For the patient who is unconscious, muscular activity is accomplished through passive range-of-motion exercises, the goal being to maintain muscle tone. The nurse does this for the patient. The care required by the paraplegic, however, involves the cooperation of other members of the health team, and its success is dependent upon the cooperation and motivation of the patient, the goal being not only maintenance of muscle tone but also muscle reeducation. In this instance, the student will need to apply not only principles which will help her meet the basic physical needs of the patient but also principles of communication, mental health, teaching, rehabilitation, et cetera. Here, the nurse must work with the patient if her care is to be effective.

The above illustration demonstrates a progression from a nursing situation which requires application of fundamental principles to one which requires not only application of these fundamentals but also application of more complex, involved principles. Obviously, the student cannot be expected to progress from the very simple to the very complex in one giant step. She must be given the opportunity to care for a variety of patients with a variety of nursing needs before she will be able to cope with the complexity of the care required by the paraplegic.

The selection of patients for student assignment by the instructor does not, in and of itself, guarantee a good learning experience. In order for this to be a learning experience, the student must be made to feel that she is a learner. She must be given the opportunity to discuss her nursing care plan with her instructor before she attempts to put it into action. She must be given whatever guidance, assistance, or direction is necessary to help her accomplish her goals. And, she must be given the opportunity to evaluate this nursing care plan, with the assistance of the instructor again, after she has completed her assignment.

Generally, the discussion of the proposed nursing care plan and the evaluation of the nursing care given are best accomplished through small group conferences. In this manner, the student is able to identify the relationship of concepts and principles which she has learned in the classroom, and she can make application not only as they relate to her own experiences but as they relate to the experiences of her classmates as well. These conferences also provide the instructor with an excellent opportunity to identify student needs and to determine areas for future assignment.

One of the principles of education states that learning takes place when an experience is meaningful and satisfying to the learner; and if learning takes place, a change in the behavioral pattern of the student can be demonstrated. It is the job of the instructor to recognize and evaluate these behavioral changes. I must reemphasize at this point that before you can evaluate a product, you must first know what you want that product to be. That is, the faculty as a group must be in accord with the objectives of the curriculum and the philosophy of the school.

To evaluate a student's progress and provide for continuity in the learning process, the instructor who is responsible for this individual in the clinical laboratory must also be responsible for the classroom instruction. This makes for more effective communication between student and instructor and provides a sound, objective basis for evaluating the student's performance.

The learning experiences which are provided in the clinical laboratory, then, become an integral part of the nursing course and reflect the objectives of both the course and the total curriculum. Through these learning experiences, the student is able to reinforce theoretical concepts which were part of the nursing course content in the classroom. As the student progresses through the program, she is able to assimilate and synthesize knowledge gained from all courses. As she continues to add new experience, she learns that the practice of nursing requires the application of scientific principles,

critical thought, and sound judgment. She finds that it is not a meaningless, mechanical routine which must be adhered to regardless of the situation.

The effectiveness of the clinical laboratory experience is dependent in large measure upon mutual cooperation between the nursing instructor and the head nurse and the staff nurses in the clinical area selected for these experiences.

In the selection of patients for student assignment, the assistance of the head nurse is most valuable to the instructor. This individual has far more complete knowledge of all of the patients in the area than the instructor could ever have. She is aware of the nursing needs of all of the patients for whom she is responsible, not just a select few.

If the clinical laboratory experience is to be effective, it is necessary for the head nurse in the area to have an understanding of the goals which are to be met, the level of performance which the students have achieved, and how these relate and contribute to the total program. It is also necessary for the instructor to have an understanding of the goals and the objectives of the nursing service department. This understanding between the two groups can be accomplished only if there is free communication and an exchange of ideas between the people involved.

This mutual understanding between the head nurse and the nursing instructor helps to create an environment in which the student can learn. It also creates an atmosphere in which each of the individuals concerned feels free to call on the other as a resource person.

This atmosphere of mutual cooperation very often results not only in a good learning situation for the students but in an improvement in the services provided to the patients in that area. I say this, not because the students give better nursing care, but because in this type of atmosphere, the nursing service staff understands that the student is in the area not only to learn to give a quality type of patient care but also to see it practiced by others. It is this understanding on the part of the nursing staff which brings about the improvement in patient care.

The clinical laboratory experience can be as much or as little as you wish it to be. It can be a meaningful learning experience for both the student and the instructor, or it can be time spent in repetition of meaningless tasks. It is true that some students will learn in spite of the teacher. This is not true for the majority of students, however.

In conclusion, if the experiences provided in the clinical laboratory are to be effective, you must define the objectives which are to be achieved, you must identify the learning experiences which will help the student meet these objectives, you must provide an environment which is conducive to learning, and you must provide these learning experiences in a systematic, logical sequence which has meaning for the student. The quality of the product you produce is directly related to the effective utilization of the clinical laboratory experience. The effective use of the clinical laboratory experience in a program can be evaluated and is reflected in the performance of the graduates of that program.

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EFFECTIVE UTILIZATION OF THE CLINICAL LABORATORY

Grace Dowling

We, as faculty, expect that graduates of nursing programs will be able to identify components of nursing care that persist in all nursing situations. It is imperative that the faculty group identify these components and that they become a part of every nursing course. The graduates of a program planned in this way will have developed basic understandings and skills and will be able to function in future situations by application of principles of nursing.

This paper will consider the contribution of the clinical laboratory in nursing education to development for nursing practice and to growth of the student in the nursing program.

The role of the faculty member in the clinical situation is neither one of isolation nor one of independence. She is carrying out one of the many activities that have been identified as essential to the accomplishment of the objectives of the curriculum, all of which lead to the development of knowledge and attitudes and skills of the graduate nurse.

The faculty reaches agreement on its philosophy of nursing and nursing education and from this definition develops the objectives of the school, which identify the competencies of the product of the school. The faculty then defines its understanding of the term curriculum. In order to meet the curriculum objectives, decisions are made concerning experiences in general education, nursing education, counseling and guidance, and social and recreational programs.

Faculty agreement on the utilization of the clinical laboratory in all nursing courses is inherent in a consistent philosophy of education for nursing. It should be recognized that clinical nursing courses involve concurrent learning experiences in the classroom and clinical situations.

While the often-used nostrum states that "experience is the best teacher," an assignment in the patient area cannot be termed education if it has not been selected to move the learner closer to achieving well-defined goals and does not show the learner her individual progress toward becoming more competent. A principle of educational psychology is planning for guided learning, recognizing the disadvantages of trial and error. In the clinical nursing situation, trial-and-error learning is inappropriate, because it requires the unlearning of erroneous behavior, to say nothing of the disastrous results which might ensue. It seems important to state, then, that for effective utilization of the clinical laboratory, it must be considered as just that--a laboratory experience, an integral part of a course designed to teach knowledge, skills, and understandings that are expected of the practitioner.

Laboratory experience has been described as the most expensive form of education in terms of time, equipment, and the need for qualified supervision,[1] but it is the most permanent form of learning, because the student actively engages in the learning experience. In education for nursing, time, equipment, and qualified faculty are indeed costly and often difficult to obtain. In addition, we must add two points: the first deals with the learner; the second considers the clinical setting.

First, we must remember that the insecure student is more concerned with her own feelings in the clinical situation than with those of her patients. This provides a block to effective nurse-patient relationships on any level. The student who is obviously tense and ill at ease and who has not developed manual skills cannot provide therapy for a patient who is worried, in pain, or frightened by his hospitalization. Our responsibility here is to insure that the attitudes and basic manual skills of the

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student have been developed in a controlled setting where she will neither feel threatened nor threaten others by her ineptitude.

Because we are teaching students to nurse people, not diagnoses, and to work with people, not job categories, there are variables in every nursing situation. While these variables are somewhat more easily controlled in the classroom setting, the student needs preparation for contacts in the clinical areas that she may find personally threatening. Fortifying her with knowledge of the dynamics of human behavior and understanding of how the patient's illness may affect his reactions to people before she enters the clinical situation will help her to develop objective attitudes and avoid unnecessary emotional stress.

Most important in helping the student to grow in this area is providing her with an opportunity to verbalize her feelings under guidance of the instructor. The use of a conference session immediately after the clinical laboratory experience helps students to share experiences of all kinds, to talk about their feelings of inadequacy, and to develop better understanding of their roles in similar situations.

Now let us consider the second point, that of the clinical setting. Unlike the process of providing laboratory experience in the classroom situation, the nursing instructor must select and plan experiences consistent with activities in a nursing service situation that has its own objectives, philosophy, and responsibilities. The nursing instructor and the administrator of the nursing service unit, whether it be an inpatient area, a clinic, or an operating room, must articulate the activities of nursing service and nursing education so that both are accomplished in the same space and at the same time. Each, however, must be committed to her individual responsibility and yet understand the goals of the other. The nurse carrying administrative responsibility must make provisions for the rendering of the best possible nursing care to patients. The nurse-educator must provide an opportunity for learning to take place in the clinical setting in accordance with the preconceived plan of the curriculum.

The professional nursing staff on a given patient unit can contribute to the clinical laboratory experience through demonstration of professional nursing activities and by attitudes of continuing interest in trends in nursing care and nursing education. The nurse-educator makes a wise investment of time when she explains the purposes and activities projected for student experience to the professional nursing staff. Other workers who share in patient care will also benefit from a discussion geared to strengthening their understanding of the role of the student nurse as a learner.

It would seem only logical, then, considering such factors as the time of the teacher and the student, the effect on the patient and the student, and the need for coordination with the ongoing activities of nursing service, that the experiences selected for the clinical laboratory should be carefully evaluated in terms of the desired outcome for the learner. We often overuse the patient area for development of skills not requiring this kind of experience. Mildred Montag has made this point in recommending that the clinical situation be reserved for those things that can be taught in no other way.[2]

In the selection of a clinical setting for laboratory experiences, the nursing instructor must consider whether the patient population and climate of the nursing unit will afford the desired experiences for the student. Objectives of laboratory experience that are disease-centered or procedure-centered can rarely be accomplished for all students. Chance admissions, seasonal changes in patient populations, and advances in medical and nursing techniques will continue to exist. Laboratory sessions planned around diagnoses or procedures will prove to be unrealistic if the instructor feels that the student must accomplish all procedures and give care to patients with specific diagnoses before her competency can be assured.

A broad view of nursing on the part of the faculty will enable the breaking of the restrictions of assignments by diagnosis or by geographical area. It will help the student to develop a comprehensive view of the patient by enabling her to focus on patient needs rather than on a procedure book.

How, then, does the nurse-educator determine what is appropriate to the clinical laboratory setting? The public and the profession have identified some of the activities that are expected of the graduate

nurse. The adept performance of physical care, the quick, correct response to emergency situations, and the understanding of emotional tensions of patients and their families are qualities inherent in the public image of the graduate nurse. In developing a curriculum, the faculty goes far beyond this and plans in depth activities designed to produce a practitioner of nursing. Decisions are made that will determine how courses in communications, the social sciences, the biological sciences, mental health, and the various aspects of nursing care will produce a practitioner prepared to take her place in meeting the nursing needs of society.

When this practice is structured on educational principles, a number of patterns of clinical laboratory experience will be found in various schools. The philosophy and objectives of the individual school will be based upon the faculty's knowledge of the learner, of education, of the nursing needs of society, and of trends in health care.

Using this information, nurse-educators decide on the sequence of courses and the amount of time devoted to learning activities within the framework of the legal requirements for licensure of the graduate nurse. The instructors responsible for teaching nursing courses must consider the factors of sequence and time in terms of the specific knowledge, skills, and understandings needed for beginning competency in a given area. They identify behaviors indicating the competencies that students must attain and determine the sequence of learning experiences that will best accomplish this in the classroom, the clinical laboratory, or the community setting. Within each learning situation, the educator decides on the approach and the method to be used to effect learning. A clinical teaching program cannot be considered a separate entity. It should be recognized as one method of achieving the objectives of the course. In the clinical laboratory, the instructors use the goals as guidelines in selecting learning experiences that require problem-solving, observing, recording, communicating, and planning and that will give the student a sense of satisfaction in achieving the goals.

The competencies expected of the learner at each level of the program need to be identified by the faculty. They can then develop a sequential relationship of courses that move from the simple to the more complex types of learning experiences that will focus on the needs of patients. Focusing on patient needs does not necessarily limit the teaching methods that can be used to achieve the competencies expected at any given level.

One may find experience with patients in obstetrics, the outpatient department, orthopedics, the geriatric unit, or the general medical-surgical unit offered as a first nursing experience in some programs, while others may select these same areas for more complex learning experiences. Hypothetically, a beginning student caring for a patient will be expected to respond to the obvious tasks and to the overt needs of the patient, while in the same situation, the responses of a more advanced student should be the product of multiple previous experiences.

Whether the faculty's concept of a progression of learning experiences resembles a ladder, an inclined plane, or an ascending spiral, curriculum plans should reflect this philosophy in a form that can be translated into learning activities for the student. For example, an early nursing contact in many schools is one in which the student converses with patients to determine some of their nursing needs. Since it is usually an early experience, the student has little background in understanding psychology, sociology, and nonverbal communication and in identifying covert and overt needs. The behaviors expected of the student in this situation will reflect this fact in the objectives of the experience. However, a similar activity later in the nursing program would appropriately draw upon concurrent and completed courses and the student would be expected to develop more-advanced skills in communication, observation, and identifying patient needs. It would be logical for a beginning student to perceive that a patient is talkative or withdrawn or angry. Expectations of an advanced student would be to understand that these same patients may be compensating for feelings about their hospitalization that they are unable to verbalize. Thus, the assignment of the more-advanced student, while involving the same overt activity --conversing with patients--becomes a more sophisticated problem.

A clinical laboratory experience in the nursing of children placed early in the program would appropriately focus on the similarities between the needs of pediatric patients in the hospital and those of

normal children and would progress toward the development of basic skills in the care of sick children, while an experience late in the program could incorporate the student's knowledge of psychology of behavior, of growth and development, of anatomy and physiology, and of disease entities to enable her to effectively care for a child such as one with rheumatic fever who is resisting the restrictions of bed rest.

This implies that the experience selected for the student is one in which she can achieve success because she has developed the knowledge and skills prerequisite to the particular activity. It is recognized that the quality of the clinical laboratory experience rather than the quantity is the determining factor in achieving the goals.

It has been shown that distributed rather than massed practice is more effective in any learning situation.[3] Here, the responsibility of the faculty members lies in determining the amount and the placement of laboratory hours within the curriculum plan.

The student who enters a program that will prepare her to become a nurse brings anticipation, enthusiasm, and sometimes impatience or apprehension to the clinical laboratory situation. Her self-image as a future member of the health professions and a practitioner of the healing arts needs to be supported and developed within the framework of the philosophy and the objectives of the educational program. Clinical laboratory experience, when planned to achieve the goals of the program, will make use of an understanding of the learner and, using principles of educational psychology, will increase the strengths that the student brings to the clinical situation. The realization that the student's presence in the program indicates a degree of self-motivation can be utilized and developed so that the interest will be diffused throughout all of her learning experiences. The student who recognizes that nursing practice involves the application of broad fields of knowledge rather than manual activities alone will be stimulated to develop these knowledges. The faculty cannot develop them for her.

Pre- and post-experience conferences are examples of a group activity in a setting that is comfortable to the student and in which she can develop further motivation and formulate meanings and generalizations.

Thorndike has shown that success in a learning situation tends to reinforce the correct response and that failure or punishment develops repetition of the incorrect responses.[4] It would seem logical, then, in planning and selecting activities for the students, to strive to assure that guidance is given to reinforce correct behavior. Evaluation of behavior immediately after the student's performance will reinforce the proper response for future similar situations.

In order for transfer of learning to take place, experiences should be planned to assure that each new task incorporates previous learning.[5] This will provide for retention of that skill and will add one or two new elements for the learner with each experience. In planning nursing laboratory, it is important that we insure that the student identifies consistencies of care in all nursing situations before she attempts to develop those specialties of activities governed by patient needs. When teaching more advanced nursing courses, we should also consider that previously learned skills need to be utilized or they will be lost to the student. In planning for clinical laboratory, the faculty must explore questions such as "What is the role of the faculty member in assisting the student to achieve success in the clinical laboratory situation?" "At what point in the program should the selected learning experiences approximate the functions expected of the graduate nurse?"

This concept should be evident in planning a progression of experiences throughout the program. The learning experiences offered at the most advanced stage in the educational program should require the application of skills developed by the learner as the result of planning for progression of learning experiences by the faculty. They should require the application of learning in all courses in the curriculum plan and should assure that upon completion of the program, the student will be able to fulfill the role of the graduate nurse.

We in nursing are striving for this realistic viewpoint. We live in a society in which obsolescence is affecting us all. In planning for clinical laboratory experiences as a part of the nursing course, we should remember that obsolete learning activities have no place in a dynamic program of education for nursing.

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The rapidity with which social, economic, cultural, political, and educational changes were affecting health care led the National League for Nursing (NLN) Board of Directors to appoint a Committee on Perspectives to study the nursing profession in order to pinpoint important issues to be considered in planning for the future. The Committee's report includes sections on changes in the patient, in the professional and service staff, in medical care, and in education. Among recommendations for NLN activity are: (1) initiating and participating in multi-professional/lay study and action programs for patient care; (2) stimulating progressive staffing patterns in the light of the changing patient role, societal expectations for health care, and anticipated manpower; (3) supporting improved salaries and working conditions for persons involved in health care; (4) joining with the American Association of Medical Colleges in exploring medical and nursing education; (5) becoming active in community planning and policy formulation in health, education, and welfare; (6) developing criteria for evaluating and improving nursing services; (7) convening NLN representatives in preparation for League participation in a proposed comprehensive study of nursing education; and (8) supporting rapid expansion of associate degree, baccalaureate, and graduate programs in nursing and more moderate expansion of diploma and practical nursing programs. (JK)

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Report
of the
Committee on Perspectives
National League for Nursing

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INTRODUCTION

The rapidity and the intensity with which changes from all sides — social, economic, cultural, political, educational — were affecting health care and especially nursing led the Board of Directors of the National League for Nursing, in January, 1960, to appoint a Committee on Perspectives "to take continuing cognizance of the future of the nursing profession in the perspective of the past and anticipation of future events, and to call to the attention of the board issues or questions of import in planning for the future."

The existence of the League for Nursing itself — a voluntary agency in which concerned lay persons and allied professionals work cooperatively with nurses to improve nursing service and nursing education — symbolizes nursing's awareness that its destiny is tied up irrevocably with the milieu in which it exists.

Nursing attracts its recruits from the secondary schools of the nation and in turn educates them in colleges and universities, hospitals, vocational schools, and some even in high schools. Whatever happens in American education makes its mark upon nursing.

Nursing services are provided for people with the financial support of the people through taxes, voluntary contributions, and direct payments. Thus, the health care needs, expectations, and desires of the people influence the kind of nursing services they will have and the nature of the nursing care they will receive.

As a medical service, nursing influences and is influenced by newly developing patterns of providing health care, the roles of other professionals and non-professionals on the health team. and the scientific and technical explosion that is altering all manner of health services.

It was issues such as these that rocketed the NLN Committee on Perspectives off into its discussions and explorations. The scope of the group's ranging was prescribed in part by the people who composed the committee — a professor of public health administration, a college president, a sociologist, a practicing physician and medical educator, a college nursing dean, a director of a hospital nursing service, a nursing research administrator, and a prominent lay person — and by the consultants who worked with the committee from

the fields of higher education, hospital administration, and medical education. Time was another factor. The committee met seven times, usually in day and a half sessions, over a period of three years. Its unstructured conference sessions were designed to give free rein to imagination and inquiry, and to create a climate conducive to studious hammering through to the essence of a problem.

Throughout its work the committee has shared its thinking with the nursing community, and most especially with the membership of the National League for Nursing, through brief reports of its discussions and concerns. Many of these were crystallized and elaborated upon for the 1963 NLN Convention, where members of the committee were among symposia speakers on two major programs. The NLN publication, *Health Issues of the Day,** a report of these symposia, contains material that will supplement many of the ideas and perspectives recorded in this summary of the committee's deliberations.

The committee knew well that an inquiry into nursing's future is not a matter to be finished in three years, or six, or ten. Nor can a committee, functioning at a national level, ever be sufficiently attuned to all of the thinking, hoping, planning, and doing going on the world over by the people who provide health services and those who receive them, to contribute more than a synthesized glimmer of, and some solutions to, issues with which the people responsible for providing health services are grappling every day. The NLN Board of Directors, in its wisdom, included the phrase "take continuing cognizance" in its charge to the committee. "Continuing cognizance" needs to be the watchword for all concerned about health care and nursing service, for it is inconceivable that nursing will ever function distinct from its colleagues, the institutions in which it is practiced and in which its personnel are educated, and the people it serves.

This, then, is a report on some aspects of the future for nursing. In it the committee attempts to bring into perspective the changes that are taking place, and which can be expected to increase, in these four areas:

1. The nature of the patient himself and the composition of the patient population.
2. The corps of personnel involved in patient care, its composition, roles and interrelationships, and its expertness.

* *Health Issues of the Day*, National League for Nursing, New York, 1963.

3. The agencies through which nursing and health care are made available to the people.
4. The education of personnel who man the health services.

The committee's sphere of interest has been nursing, and its charge most specifically was to the nursing profession. The group's inability to stick to its subject — i.e., not to be concerned, say, about medical education or medical practice — only emphasizes nursing's interrelatedness and the compelling need for forward planning for nursing in concert with the community forces that affect or are affected by nursing.

In its report to the NLN membership in *NLN Biennial Reports, 1961-1962,* the committee conveyed its early-arrived-at conviction that nursing is no longer the handmaiden of medicine when the needs of patients are considered. During its discussions this conviction came to be more strongly expressed in such sentences as, "There are two aspects of medicine: nursing and doctoring" and "The time is overdue for nursing to act forcefully regarding health care decisions of the nation." This report of the informal discussions of a single, relatively small group of people — the NLN Committee on Perspectives — hopefully will illuminate some of the aspects of health services, patient care, and the education of patient care personnel that support the committee's conviction.

Many of the observations and conclusions of the committee are those which might be expected. When projected in depth, however, the issues they reflect become considerably more fundamental in terms of relationships and attitudes than when examined only on the surface. Thus the degree to which decisions about such issues fall to interdisciplinary study and action prompts the committee to hope that this report will lead to a good deal of study and discussion about nursing by the many groups touched by nursing as a service to society and as an educational discipline.

RUTH B. FREEMAN, *Chairman*
Committee on Perspectives

CHANGES IN THE PATIENT

In the multiplicity of changes affecting health care, *the patient* was seen by the Committee on Perspectives as a focal point of change, altering just as rapidly and just as markedly as the services being provided for him. Actually, there is a new patient status, a new patient condition, and, in many ways, a new *kind* of patient who is stimulating new patterns of patient care. In turn, the new ways of treating patients are serving further to alter concepts of who and what the patient is and how he himself affects his own therapy.

Early in its deliberation, the committee foresaw that it is no longer sufficient to know that there are going to be more people to be cared for by our health services. The steady stream of predictions emanating from government sources, demographers, and the press daily documents the population explosion. We know, too, that the population is growing fastest in the groups which are high users of health services, the aging and the very young. People are surviving diseases and therapeutic interventions to a degree inconceivable only a few short years ago. And both medical people and the public at large are ever broadening their expectations of the miracles and cures that can be wrought by health care practitioners.

The fact has long been accepted that patienthood extends far beyond the person lying in a hospital bed or visiting a doctor's office. The infant brought to the pediatrician for innoculations, the school child having a dental examination, the emotionally troubled teenager, the parent seeking medical guidance for himself and his family, the grandparent needing living accommodations more suited to his physical and oftentimes financial limitations—all of these are patients.

The familiar illustration of a wan-faced patient lying supine in a high, white hospital bed being ministered to by a kindly, starched nurse — television images to the contrary — no longer suffices as an adequate pictorialization. If the patient is in a hospital, chances are he is or soon will be up and about simply because mobility will speed his recovery. He has demands that will be heard, and often a state, or potential state, of wellness that can be capitalized upon and furthered, even though he is very ill.

At the same time he may be exhibiting new illnesses not yet clearly defined by the inquisitive health workers who are looking for names and therapies for them. And although he always has been a member of a family, of a community, and of a society, the effects on his illness of his being part of a family and a society are taking on new meaning in his care.

In one of its earliest sessions the committee noted that advances being made in therapy often actually make the therapy itself less debilitating, thus contributing to the patient's growing independence and self-reliance. The obverse of this coin is the fact that many patients do not want to be independent and must be encouraged to assume responsibility for their own benefit. Helping other patients as well as themselves is another role that patients might well assume to a greater degree than they are now doing. How patients may participate most effectively in their own therapy and be helpful to each other is a question that has no set answers, but the health services must recognize the potential power of group interaction throughout medical care programs, as have groups such as Alcoholics Anonymous. "Earth shaking for the health sciences" was the way one member of the committee characterized this potential.

THE POWER OF THE PATIENT

Dr. Philip D. Bonnet, who served as a consultant to the committee, said in an address to the NLN 1963 Convention, "The major issue confronting all of us [in patient care] is how to put the patient properly into the picture." He contended that hospitals and patient care systems are designed to preclude the possibility of the patient having an active role in his own therapy, and that the education of nurses too long has ignored or minimized the extent to which the patient's own personality and knowledge come into play in the treatment of his own illness.

The Committee on Perspectives was aware that this new view of the patient is being discussed at length in medical care conferences, in learned and popular journals, and from public platforms. It was aware also that he has always been so recognized by the skillful, understanding therapist in the still, quiet moments of interpersonal relationships that so often govern the success of health care.

IMPLICATIONS FOR NURSING

The committee predicted, however — and again it was not original in so doing — that the patient's role in his own therapy and in planning for his health services will increase markedly in the future.

It is this growing patient power, which the committee sees no possibility and indeed no desirability of reversing, that will initiate and advance some of the changes ahead in nursing.

- ▶The nurse of the future will need to be trained to be more sensitive to the real needs of patients as expressed in their growing freedom to demand.
- ▶The nurse of the future will need to be increasingly knowledgeable about the social and economic factors that affect her patient's well-being.
- ▶The nurse of the future will need to be comfortable in two-way communication between patient and practitioner and skillful in instilling such comfort in the patient.
- ▶The patient of the future will have to assume a joint responsibility in his care by acquiring correct and pertinent information and using his knowledge effectively.
- ▶Health services will have to be staffed with the realization that working *with* patients requires more time, more skill, and more judgment than working *for* patients.
- ▶Doctors and other therapists must recognize the areas of decision that are within the nurse's province when good care of the patient is the prime consideration.

Awareness of the new patient, or more literally, of the newly understood patient power, so permeated the committee's discussions that, in drawing up recommendations of how nursing might deal with this growing challenge, the committee was unequivocal in its decision that the patient must be brought in on programs relating to his care and that changes in his role must be fostered.

The committee saw that this new role of the patient might be furthered in two ways:

1. Through multi-professional and lay study and action programs relating to patient care. Such studies should pay special attention to the methods by which patient care is provided, seek insight into desirable patterns of care, and pursue knowledge about the dynamics of organization of such care.

2. Through an examination of health services' staffing and utilization patterns as they relate to the changing role of the patient, society's expectations for health care, and to anticipated health manpower.

The committee made specific recommendations that Leagues for Nursing, nationally and in the states and localities, take leadership in initiating and stimulating such studies. It proposed that many people other than nurses and patients necessarily should be involved in such investigations — allied health care personnel, health service administrators, lay boards of managers, nursing's educators. The question the committee wished these investigations to answer was not whether patient care will continue to change as a result of changes in the patient, but what are the desirable directions of change and how these can be best and most rapidly effectuated.

CHANGES IN THE PROFESSIONAL AND SERVICE STAFF

Perhaps no area of concern so challenged the Committee on Perspectives as did that of the roles and relationships of the professional and service staff who are responsible for caring for the patient. Like the patient himself, who often is concerned and confused by the rapidly multiplying numbers and kinds of health personnel who do something for, or hopefully with, him, the committee had constantly in mind the matter of health personnel relationships, what these are doing for, and what they can contribute to, patient care. Often discussed were nurse-doctor-patient relationships, but more often nurse-doctor relationships in terms of patient care.

Nurse-doctor relationships became the core of discussion, not because these are the only or always the most important ones, but rather because they often are the most crucial in terms of patient care. Nurse-doctor relationships also provided a subject which the committee's composition made it impelling to discuss.

NURSE-DOCTOR ROLES—FACT OR FICTION?

The committee could only see that the traditionally accepted role of the nurse and role of the physician are being questioned sharply. They always have been fluid. They promise to be more so in the future. In fact, changes are taking place so rapidly that the committee realized that a report on what these roles are would be behind the times before it could be issued. Only a few years ago, for instance, nursing shied away from the term "diagnosis" as describing an activity solely within the doctor's realm. Now nursing is quite comfortable with the term "nursing diagnosis" and with the concept that a diagnosis is made when even so simple an occurrence takes place as a nurse recommending that a patient see his physician.

Not too long ago, a national nursing magazine carried a list of 24 common nursing procedures and functions which 25 years ago were "the strict prerogative" of physicians. What has been traditional about nurse-doctor relationships has been the delegation to nurses of the physician's functions and responsibilities as these became stabil-

ized. Legal liability for their actions and decisions has been another factor spreading nurses' responsibilities.

The committee anticipated that history will continue to repeat itself and that transfers of functions and responsibilities from doctors to nurses will long be a fact of life. It also saw a safety valve in the increasing competence of nurses and in the rapid upgrading of nursing education which will strengthen nursing's decisions about what it will assume.

As far into the future as the committee could see, the demand for medical care will outstrip the available supply of physicians. Certainly this is true of nursing too. Nursing has been *the* profession over the years about which the word "shortage" has appeared in banner headlines. The exigencies of patient care, therefore, demand mutual determination by nurses and doctors of what their functions and roles will be. It is a simple truism to say that at present they overlap to an astonishing degree.

CARE NEEDS GOVERN ROLES

Developments in patient care are responsible in large measure for this overlap and for a growing interest in determining who does what with the patient. Doctors and nurses do not have an exclusive patent on this concern. It exists throughout the health care team, involving medical social workers, dietitians, x-ray and laboratory technicians, medical research personnel, and the host of auxiliary workers who are not only found abundantly in hospitals, but also in growing numbers in home care. It is compounded each time a new type of health worker comes on the scene.

In direct patient care, however, doctors and nurses will continue to be the key personnel and thus their role determination will be crucial to the advancement of patient care.

Often the committee saw the confusion in roles, the overlap, woven intrinsically into the fabric of patient care because there are so many more things to do for so many more patients. It envisioned that hard and fast rules could never be arrived at which would specifically and for all time reserve one function for the doctor and another for the nurse. It held rather to the premise that the needs of the person being cared for now dictates, and always will dictate, who makes a decision about patient care, at what time, and in what circumstances. What needs to be changed most, in the committee's opinion, is the climate in which decisions are made so that touchiness and even fear may be eliminated from both professional groups when questions of roles and responsibilities are under consideration.

IMPLICATIONS FOR NURSING

For nursing, the committee saw many implications.

- Through preparation and experience, nurses must acquire the skills and competencies that equip them for independent action and decision.
- Nursing education and medical education must relate to each other more closely so that leadership shifts in patient care situations may be made more easily and effectively.
- The concept of patient care as contrasted with medical care must be deepened and elucidated so that nursing's areas of responsibility will be more clearly defined.

The growing emphasis on clinical specialization in nursing was seen as having a major influence on the roles of and relationships between doctors and nurses. Although clinical specialization in nursing is not yet as clearly conceived as in medicine, the group saw development in this direction as inevitable for nursing. They ventured that this probably would lead to an increase in status conflicts between nurses and doctors, especially among the traditionalists. The prevailing view, however, was that nursing's role in the future will depend more upon the knowledge and skill a nurse employs in clinical patient care than upon her skill in administration and supervision. Thus nursing will become more closely identified with the medical services than with administrative aspects of operating a patient care institution. A prediction was made that nursing will move toward having clinical chiefs of nursing service in the hospital as medicine now operates the medical services.

The committee could see several rather specific steps being taken to bring nursing and medicine closer together.

Educating medical and nursing students together in areas where core content is identical or so similar that it can be incorporated into one course was noted often as an appropriate step and one not too far off. The college and university setting for nursing education as well as for medical education was seen as a likely force for bringing together some aspects of the preparation of doctors and nurses. Nursing schools under the umbrella of medical schools were not among the committee's anticipations. Cooperative independence was.

Frank and open discussions between doctors and nurses to arrive at mutual determination of their roles and responsibilities was another step advocated by the committee. National conferences were viewed

as helpful but less influential in the long run than planned give-and-take discussions between nurses and doctors in their immediate patient care settings.

In the view of one member of the committee, nursing must take major responsibility for promoting the process of mutual role determination between nurses and doctors because "at the present time there are relatively few medical leaders who will initiate such activities although there are many who will participate."

The involvement of hospital administration in the determination of roles and responsibilities was also favored by the committee. In many instances, three-way discussion among doctors, nurses, and hospital administrators will be the most rapid and effective way of bringing about change.

Two of the committee's recommendations were directed toward the changing responsibilities of nurses, and the changing relationships between doctors and nurses these new responsibilities are bringing about. The recommendations were:

1. That agencies using nursing services utilize more effectively the improving preparation and increasing capabilities of nurses in the care of patients. (This, in the committee's opinion, would also involve equating responsibilities, remuneration, and status of nurses with their preparation.)
2. That medical education and nursing education join in an exploration of goals and areas of instruction that are common to medicine and nursing and of the way in which these two systems can be brought into closer relationship. There should also be an interchange of information and exploration of the changing roles of medicine and nursing among nursing, medical, hospital, and public health groups in order to make progress with current practitioners in these fields.

CHANGES IN MEDICAL CARE

It would be difficult to find a community today in which the systems of delivering care to patients do not differ, in some ways radically, from what they were only a few years ago. Although the hospital, doctor's office, and home care agency still form the nucleus of the patient care complex in most communities, chances are that innovations and experiments to meet newly emerging patient needs have altered the fringe of the pattern significantly and may even have made inroads into the nucleus itself.

From the knowledge and experience of its members, and without going into an exhaustive study of community health care systems, the Committee on Perspectives could see that new health needs of whole groups of people are being expressed in the development of new types of health care facilities.

HEALTH FACILITIES ARE CHANGING

Group medical practice is in many instances replacing the single doctor-patient relationship. Prepayment for group medical services and the improved diagnostic and treatment facilities which result from combining medical skills and equipment are part of the reason for this development.

Hospital, nursing home, and home-care programs are being combined into single organizational structures to extend health services across diagnosis and acute treatment, convalescent care, and rehabilitation.

Labor unions and consumer groups (i.e., Golden Age Clubs), multiple housing developers, and forward looking industrial managers are setting up new health facilities for the people within their spheres of influence, both outside and inside existing health services.

Hospital doors are opening to receive an inflow of patients who can be treated effectively in emergency and outpatient services and in day or night care programs, and to promote an outflow of patients to home situations more conducive to recovery than hospitalization.

The expansion of medical centers to house research, diagnostic, treatment, and teaching facilities is being matched by the multiplica-

tion of small, often isolated, hospitals which serve basic community needs for diagnosis and treatment and operate as feeder institutions for the larger medical centers.

NEW FACILITIES MEAN NEW STAFFING PATTERNS

It is obvious, thought the committee, that old patterns of staffing are inadequate for these health facilities and the many other variations of them that are in the offing. Group medical practice, for instance, poses an expanding role for nursing — taking medical histories, serving as a steady bridge between the patient and several physicians, interpreting patient viewpoints and reactions to several doctors, keeping an eye on how patients follow through on physicians' advice and treatment, to name a few aspects of change.

The inclusion in care programs of non-medical services and the opportunities that newer facilities provide for preventive work with patients are also expanding the role of nursing. As nursing continues to aim to see that people receive the care they need when they need it, this trend can only continue, in the committee's view.

The group saw the need for study of community health services —what they are now and what they are becoming—but as even more vital they saw the need for giving concerted attention to the problems of staffing. Usefulness to patients was emphasized as being the key consideration in nurse staffing of health facilities, not the nurse's usefulness in managerial and fiscal functions of the agency.

The factors contributing to the problem of appropriate staffing are not unlike those that are producing and stimulating many of the other changes coming about in the provision of patient care services. Among these are:

1. The increasing demands for physician care in the face of a static, or at the most only slowly expanding, doctor force for the nation.
2. The lag in the preparation of all types of health workers at the upper ranges of academic abilities.
3. The higher degree of interpersonal skills which are being required of all health workers as patients become more independent and participate more effectively in their own therapy.

The committee was especially aware of the fact that nursing often has little part in planning and establishing new kinds of health services. Reversal of this situation is desirable in view of the pre-

dominant role nursing plays in the provision of health services once the facilities are in operation. Again and again the group emphasized that nursing must be represented with a clarion voice in the councils of community planning for health services. One of its recommendations, aimed toward this end, was that Leagues for Nursing:

1. Exercise active responsibility in community planning and public policy formulation (as expressed in legislation, commissions, councils or planning board recommendations) in health, education, and welfare. To this end educational experiences need to be developed that will equip individual nurses and the personnel of League units to assume this kind of responsibility.

Two other recommendations, though they were not specifically designed to heighten nursing's role in community planning, undoubtedly would help to create a climate more conducive to nursing's assumption of responsibility. They advocated:

2. An intensified public information effort to create understanding of nursing as a professional service, with special attention directed toward interpretation to such key publics as boards of trustees of nursing services and boards of education.
3. The development of criteria for use in improvement and evaluation of nursing services.

CHANGES IN EDUCATION

Few sessions of the Committee on Perspectives proceeded far without consideration of the relationship of nursing education to whatever concept was under discussion. Discussions of nurse-doctor relationships, for instance, were apt to elicit such comments as, "The typical college nursing student is extraordinarily more sophisticated than a medical student about why people act the way they do." On status, another recorded comment was, "'College required' is not an adequate impetus to status in nursing. Medicine had an historic tradition of status and thus had only to change its method of education."

It was obvious from the outset that many of the solutions to problems and issues identified by the group would be seen as lying within the province of nursing education. The committee made no effort, however, to project solutions to the problem of redesigning the educational system of nursing. It saw its role not as one of judging the merits of changes being advocated or predicted for the education of nurses, but as one of sounding the alert to the factors that are impeding some of these changes. In assuming this role, the committee became more interested in looking into what nurses need to know or will need to know, say 20 years from now, than in weighing the pros and cons of one educational program in nursing over another.*

EDUCATION FOR THE FUTURE

In this context the group could view nursing education in the future as increasing its stress on socio-cultural skills.

It could anticipate that medical education would continue to lean more strongly than nursing toward the physical sciences.

* The types of nursing educational program now being offered are: one-year practical nursing program, two-year associate degree program in junior and community colleges, three-year diploma program in hospitals and independent schools, four-year baccalaureate program in senior colleges and universities.

It could view both nursing education and medical education as concentrating much more than in the past on non-institutional care and preventive measures.

Thus, out of the educational foundations of the two professions might be carved the essential roles of medicine and nursing — obviously, however, with as many variations from the main form as there are people involved with the two systems of education and with the practice of the personnel they prepare.

Essentially it was this way of looking at education, rather than the defense or criticism of existing or proposed systems, that the committee hoped would occupy the nursing education planners in the future — nurse educators and those from other fields and disciplines who necessarily must participate in this planning.

TIES BETWEEN NURSING AND MEDICAL EDUCATION

There was no doubt in the committee's mind that the tendency of nursing education and medical education to come together on more fronts, now being seen sporadically, will produce even closer ties in the future. Primarily supporting this, in the committee's view, is the fact that nurses and physicians more and more are expected to practice in an integrated fashion — by patients and by nurses and doctors themselves — and that this expectation dictates a high degree of correlation in the preparation of practitioners in the field.

Another factor is the recent emergence of the clinical nursing specialist. Preparation of specialists in nursing, unlike medicine, long has been related to the field of practice of the nurse, such as public health nursing or education. Specialization in the care of one kind of patient, such as the cardiac or pediatric patient, has been reserved to the physician. Now with the knowledge explosion and the resulting advances in patient care, quick, highly technical nursing decisions are having to be made in the absence of the physician; thus doctors are becoming more dependent than ever upon nursing observation, analysis, and reporting for their own medical diagnosis and therapy.

THE DIRECTION OF NURSING SPECIALIZATION

The question of whether nursing specialization should go the way of medical specialization concerned the committee at length. There were those in the group who viewed the trend toward specialization with some qualms. They questioned the tendency of specialization to narrow viewpoints at a time when patient needs are requiring

broad concern for the personal, social, economic, and physical factors affecting the patient. The effectiveness of the clinical nursing specialist in improving patient care in the special settings where experiments and demonstrations are going on, however, indicated to the committee the likelihood of continuation in this direction.

It was this conviction which led the committee to its earlier reported recommendation that steps be taken to utilize more effectively the improving capabilities of nurses in the care of patients.

EDUCATION MUST MEET CARE NEEDS

Changes in the system of nursing education itself will be difficult to bring about, in the committee's view, unless they are specifically related to the needs of patients, of communities, and of the nation as a whole for nursing services. The committee could see no argument against better education for nurses. With the social, scientific, and technical developments upon us, better education is desirable for everyone from the kindergartner to the graduate student.

In the committee's view the important question again was how, not where, to offer this better education to nurses. The group strongly supported the upward trend in college education for nursing. It anticipated, however, that for some time to come the major responsibility for educating nurses will continue to be carried by service institutions rather than by educational institutions. Thus, improvements must go along concurrently in the several types of nursing education programs if patient care needs are to be met.

This does not rule out an eventual shift that will place nursing education wholly within the higher education institutions of the country. It does mean, however, that the process will not be a rapid one until the college and university output of nurses increases substantially enough to influence nursing practice and nursing education. The two overriding factors holding back expansion of college and university prepared nurses are shortage of qualified faculty and lack of physical facilities. Colleges and universities hesitate to establish and expand high cost clinical education facilities such as those required for nursing in the face of increasing costs in expanding enrollments of all kinds of college students.

The committee saw this not as an insoluble problem but as one requiring substantial financial assistance, over and above that already available to higher education and to nursing, and public acceptance of the need for educating its nursing professionals as other professional people are prepared.

The committee felt that there will be continuing pressure — from the public, from employers of nurses, and from physicians — for expansion of all types of nursing education programs and that this calls for carefully relating quantity of nursing education to quality. It knew that nursing can never resist the demands upon it for the care of patients, nor, as a service to society, should it do so. These demands, the group anticipated, will be expressed forcefully through the hospital schools of nursing. Hospitals' dependence upon their nursing students for patient care will continue to create pressures to sustain these schools as long as they are needed. The committee anticipated, too, that nursing programs will be increasingly attractive to junior and community colleges as these institutions develop and expand to meet all kinds of community needs for prepared workers.

This means that for some time nursing will have to continue to accommodate to the several types of educational programs for beginning practitioners which constitute its present system, while at the same time adjusting to rapid changes within the curriculum of each type of program as quality demands become as forceful as those for quantity.

Convictions such as these led the committee to support the proposed study of nursing education by an independent commission. The committee saw that a great deal of time would be needed to complete such a study, and that nursing and community health groups across the country would need still more time to study the results of the commission's investigation and accept its recommendations before any action could be taken. It saw, too, that many changes would be going on in nursing education during the time of the study and that guidance would be needed to channel these winds of change into adjustments that would safeguard patient care and the programs of community health services. It therefore recommended:

1. That nursing education and nursing service together delineate agreed upon principles that might serve as a guide to a comprehensive study of nursing education. The committee was aware that agreement might not be possible at this time in the evolution of nursing education. If it is not, delineation of areas of agreement and disagreement might be a significant contribution to the work of the independent commission to study nursing education.

Convinced also that the public will not be nursed unless there are enough nurses prepared at appropriate levels, the committee urged further that immediate efforts be made to bring into nursing all of the numbers called for in the report of the Surgeon General's Consultant Group on Nursing* and recommended:

2. Rapid expansion of associate degree, baccalaureate degree, and graduate programs in nursing and the more moderate expansion of diploma and practical nursing programs as recommended in the report.
3. A broad recruitment program geared to rapid expansion of the leadership pool in nursing, selectively designed to make maximum use of all available sources of manpower, and with special emphasis on attracting the college bound student to nursing.

* *Toward Quality in Nursing: Needs and Goals*, U.S. Department of Health, Education, and Welfare, Public Health Service, Washington, D. C., February, 1963.

SUMMARY OF ISSUES AND CHANGES IN NURSING

IN THE PATIENT

1. The *number of patients* will increase, as a result of
   a. overall population increases,
   b. increase in "high use" groups — the old, the young, the "therapeutically well" who heretofore would not have been expected to survive,
   c. increase in the number of people availing themselves of health care.

2. *Patient expectations* of quality as well as quantity of health care will increase, as a result of
   a. more health education, both formal and informal,
   b. rising standards of living,
   c. spreading of prepayment movement,
   d. American concept of "vigor."

3. *Patient's problems* will be more complex, as
   a. chronic illness increases, demanding social and medical care, and family as well as patient care,
   b. multiple problems of patients and families come into focus,
   c. new ills and poorly defined etiology demand more expert nursing observation,
   d. population control measures increase demands for appropriate and discriminating counseling.

4. The *patient's role* vis-a-vis the professional will enlarge, as he is expected to
   a. make more decisions about seeking and using care,
   b. become involved with decisions about the therapeutic measures to be taken,
   c. cooperate in his own therapy to an unprecedented degree.

IN THE PROFESSIONAL AND SERVICE STAFF

1. *Roles of nurse and physician* will change substantially, as
   a. increasing demand for physician care outstrips supply,
   b. physicians continue traditional delegation to nurses of functions that become stabilized,
   c. rapid upgrading of nursing education and increasing competence equip nurses for independent action and decision,
   d. legal liability of nurses broadens nursing responsibility,
   e. increasing specialization in medicine and decreasing number of general practitioners alter the nurse's relationship to patients.

2. *Interdependence of scientific research and care personnel* will continue to increase, with
   a. the inevitable specialization in the professions,
   b. increasing dependence on multiple causation theory in relation to illness,
   c. increasing concern for multi-problem families,
   d. deepening concept of patient care as contrasted with medical care.

3. *Interprofessional relationships* will be "touchy" as long as
   a. functions of nurses, doctors, and other health personnel continue to overlap,
   b. function transfers create anxiety in older practitioners and difficulties and disagreements regarding relocation of functions,
   c. level of education for nursing and other professions comes closer to medicine, resulting in status conflicts,
   d. nonmedical measures increase in patient care,
   e. the marked difference in the physician's and nurse's concept of the nursing role is not resolved.

IN MEDICAL CARE

1. The *role of nursing care agencies* will change as
   a. evolving patient needs require radically different hospital construction to provide both medical and nonmedical services,
   b. ambulatory patient care produces less easily controlled patient care situations,

c. closer ties among community agencies increase joint patient care planning,
d. day and night hospital care increases.

2. *Staffing patterns* will be different, as a result of

a. expanding care programs for the private as well as for the welfare patient often associated with large medical centers,
b. needs to adjust to the persistent lag in the production of fully-trained personnel, availability of labor pool of non-academic personnel, new nursing duties requiring sharp change in nurse-staffing mix,
c. physicians' need for relief to accommodate to increased demands, more use of personnel in existing technical and professional categories, development of such new categories as medical assistant, operating room technician,
d. acknowledged disadvantages of premature promotion of all young nurses.

3. *Increasing prepayment for health care* will change nature of service provided, increasing feasibility of stronger preventive programs.

4. *Utilization of nurses* will grow increasingly complex because of

a. specialization needs,
b. continued use of nurses trained in many different ways for the same general function of patient care,
c. insatiable demand and natural limits on supply,
d. time demands inherent in nursing support for comprehensive patient care,
e. growing importance of the ambulatory patient with increased need for interpersonal skills.

IN EDUCATION

1. *Emphases in education* will continue to shift as

a. the need for nurses to move as rapidly as possible into leadership positions increases,
b. nursing education heightens stress on socio-cultural and educational skills,
c. collegiate schools of nursing surpass most medical schools in emphasis on non-institutional patient care,

d. physical science continues to play a stronger part in medical schools than in nursing schools,
e. nursing and medical education alike continue efforts to make up deficiencies in content and experience in preventive and non-institutional care.

2. Unlike any other professional education, *nursing education will continue to be predominantly under the aegis of service* rather than educational institutions, as long as
   a. the upward trend in collegiate education is not great enough to substantially influence practice and service,
   b. increasing collegiate output is hampered by lack of prepared faculty and of facilities,
   c. pressure of service groups to continue hospital training is high,
   d. colleges evidence reluctance to take on nursing programs because clinical education is costly and financing of universities is inadequate for expected increased enrollment.

3. Increasing *education for nursing leadership* personnel will not be reflected immediately in available supply in view of working patterns of women.

4. Need for thoughtful *relating of quality and quantity* factors in nursing education will increase. Continued pressure for expansion of nursing education facilities may be expected from the public, from employers of nurses, and from physicians, regardless of the quality level that is possible, because
   a. demands for care are insistent and hard to resist,
   b. nursing is an attractive program for the community colleges which are developing at a phenomenal rate,
   c. hospital schools often depend on students for patient care.

5. Closer *ties between nursing and medical education*, now developing sporadically, are expected to increase as
   a. nurses are employed on medical school faculties,
   b. identical course content in nursing and medicine is identified,
   c. nurses and physicians are expected to practice in an integrated fashion, thus dictating a high degree of correlation in the preparation of the practitioner in these fields.

6. There will be increasing need for *education at the specialist level* in nursing to accommodate

   a. advances in care calling for quick, highly technical nursing decision and action,
   b. physicians' increasing dependence on nursing observation, analysis, and reporting for medical diagnosis and therapy.

7. Need to accommodate to a *wide variation in nursing education programs* and at the same time to rapid changes within the curriculum of each type of program may be expected to continue for some time, in view of the fact that

   a. the independent study of nursing education proposed by the Consultant Group to the Surgeon General will take time to complete, and more time will be needed to study, secure acceptance of, and implement its recommendations,
   b. reconciling utilization, compensation, and nomenclature for nurses from different types of educational programs is complex and compelling,
   c. patient care needs, increasing educational sophistication of nurses, and public acceptance of the need for advancing all education are accelerating experimentation in schools.

8. *Correlation of nursing education and nursing service* will continue to be a major problem, as the need continues to

   a. reconcile the number of able young nurses going to educational positions and to positions in nursing service,
   b. create nursing services as good models of clinical experience and in which promising young nurses can function as they have been educated to function.

SUMMARY OF RECOMMENDATIONS

As a committee of the board, the Committee on Perspectives made its recommendations to the National League for Nursing Board of Directors. The recommendations and the narrative commentary accompanying them were approved by the board for publication in September, 1964.

The recommendations suggest ways by which the proposed actions may be carried out through national activities. State and local league groups, member agencies, and individual members of the League are urged also to consider the recommendations for the implications they hold for programs and projects to meet nursing service and education needs in their own communities.

The recommendations of the committee have appeared in general terms in the text of the report. A summary of them, as presented to the board, follows:

The nature of the issues and changing conditions affecting health and health care are highly significant for the obligations and the program of the National League for Nursing in the decade ahead. The problems they create, the decisions they require, the actions they demand are, for the most part, the concern of several groups, organizations, and agencies rather than solely in the province of any one group. In making the following recommendations the NLN Committee on Perspectives assumes that all action will be taken in coordination with representative individuals, groups, agencies, or organizations which share concern and/or responsibility for a particular problem or action.

In this context, the Committee on Perspectives recommends to the National League for Nursing Board of Directors that the League:

1. Initiate, stimulate, and participate in multi-professional/lay study and action programs relating to patient care — with special concern for the methods by which such care

is provided, for desirable patterns of care, and for the dynamics of organization for care.

2. Examine staffing and utilization patterns as they relate to the changing role of the patient, to societal expectations for health care, and to anticipated health manpower. Continuing attention should be directed toward the upgrading of nursing education and the emerging role of the clinical specialist in nursing. The League should stimulate experimentation with, and demonstrations of, new and progressive staffing and utilization patterns, develop guidelines and prototypes, and disseminate findings for use by all types of agencies using nursing services.
3. Take steps to urge institutions using nursing services to utilize more effectively the improving preparation and increasing capabilities of nurses in the care of patients, and to equate responsibilities, remuneration, and status of nurses with their preparation.
4. Lend vigorous support to improved salaries and working conditions for all persons involved in health care, reiterating in its communications to its members the importance of good working conditions in the recruitment and retention of staff.
5. Invite the American Association of Medical Colleges to join in an exploration of goals and areas of instruction that are common to medicine and nursing and of the ways in which medical education and nursing education can be brought into closer relationship.
6. Exercise active responsibility in community planning and public policy formulation (as expressed in legislation, commissions, council or planning board recommendations, etc.) in health, education, and welfare, and develop educational experiences designed to equip individual nurses and League units to assume this kind of responsibility.
7. Intensify public information activities to create a broad understanding of nursing as a professional service, with special attention focused on such key publics as boards of trustees of health agencies and boards of education.
8. Develop criteria for use in improvement and evaluation of nursing services as an initial step in defining standards

for the operation of nursing services and for high quality patient care.

9. Convene a committee of representatives of all departments and councils of the League that are concerned with nursing education to delineate agreed-upon principles that might serve as a guide to the proposed comprehensive study of nursing education. If agreement is not possible, areas of agreement and disagreement should be delineated. This delineation might be expected to enhance the League's contribution to the autonomous commission to study nursing education.
10. Support the rapid expansion of associate degree, baccalaureate, and graduate programs in nursing and the more moderate expansion of diploma and practical nursing programs indicated in the report of the Surgeon General's Consultant Group on Nursing through all means at its disposal.
11. Undertake a broad recruitment program geared to rapid expansion of the leadership pool in nursing and selectively designed to make maximum use of all available sources of manpower. Special emphasis should be placed upon attracting college bound students to nursing.

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Callaghan, Daniel J.
Academic Planning Survey of Mental Health Manpower.

California State Dept. of Mental Hygiene, Sacramento. Office of Planning
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CALIFORNIA

To secure information regarding California's mental health training from November 1964 through June 1965, the state's colleges and universities training students in psychiatry, psychology, social work, and nursing were surveyed to indicate the number of students graduated in each discipline in 1964 and the number of students expected to graduate in 1970. In nursing 1,555 graduated from diploma, baccalaureate and associate degree programs in 1964 and 3,345 were expected to graduate in 1970, or an increase from 8.67 to 15.4 per 100,000 population. In social work 195 graduated in 1964 and 613 were expected to graduate in 1970, or an increase from 1.09 to 2.81 per 100,000 population. Assuming no increase in size or number of programs beyond 1970, it was estimated that there would be only 2.32 graduates per 100,000 population in 1980. In psychology 69 graduates with Ph.D.'s in 1964 and 132 were expected to graduate in 1970, or an increase from .318 graduates to .608 per 100,000 population. With no program expansion beyond 1970 there would be only .5 graduates per 100,000 population in 1980. In psychiatry, 109 graduated in 1964 and 179 were expected to graduate in 1970, or an increase from .60 to .82 per 100,000 population. With no increase in the number of psychiatrists trained beyond 1970, there would be only .68 graduates per 100,000 population in 1980. (JK)

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STATE OF CALIFORNIA
DEPARTMENT OF MENTAL HYGIENE
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ACADEMIC PLANNING SURVEY OF MENTAL HEALTH MANPOWER

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June, 1967

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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VT005244

OFFICE OF PLANNING
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ACADEMIC PLANNING SURVEY OF MENTAL HEALTH MANPOWER

In order to obtain information regarding California's mental health training plans, the Office of Planning in cooperation with the deans of academic planning conducted a survey from November, 1964, through June, 1965, of the number of professionals being trained in the mental health field. Questionnaires were sent to the colleges and universities throughout the State of California which were training students in psychiatry, clinical psychology, social work, and nursing. The deans of academic planning or those with this responsibility furnished information on the number of students their institutions graduated in each discipline in 1964 and the number they expect to graduate in 1970.

Since training programs in the field of mental health are changing rapidly, particularly in the field of nursing, a revision of the 1970 projections was made by a survey conducted during the period of October, 1966, to January, 1967. The following discussion presents the number of students expected to graduate in the year 1970. Current projections for 1970 differ significantly from those made two years ago. In addition, the increases in students being trained are compared to projected increases in population growth for the State of California.

Our objective has been to obtain and present the mental health profession training plans of California schools. This information and the brief analysis which is included should be considered only a starting point for academic planning in the area of mental health manpower. It is clear, however, from inspection of the data presented herein that planning for new or expanded training programs for the mental health professions should be taking place now. For each of the four disciplines discussed, improvement is anticipated between 1964 and 1970 but, while this improvement is significant in percentage terms, it is modest in relation to current shortages. Unless there is continuing growth in the training programs, there will be regression in the next decade due simply to population increase.

NURSING

Although our concern is with psychiatric nursing, since there is no specialty in psychiatric nursing at the undergraduate level, it is necessary to consider the total pool of registered nurses. In California all nurses are required during their training to receive clinical training in working with patients who are mentally ill. This experience does not equip nurses to be termed "psychiatric nurses," but all could be employed in a psychiatric setting.

It appears that the field of nursing, of the disciplines with which we are concerned, will show the greatest change in both numbers being trained and the type of setting in which training is offered. There are three distinct types of programs which qualify students to take state board examinations in order to become registered nurses. There is the diploma program which is usually provided by hospitals and is of three years duration, there is the baccalaureate program which is offered by universities and colleges and consists of four years of college level work, and there is a recent development, the associate degree program. This program is generally provided by two-year junior colleges, although it can be offered by other colleges. It consists of two years of college level work. The following table summarizes the trends in the training of nurses.

PROJECTED TRENDS IN THE TRAINING OF NURSES

Type of Program	No. of Grads. 1964	Est. No. of Grads. 1970	Est. % Increase 1964-1970	% of Total 1964 Grads.	% Est. Total 1970 Grads.
Diploma	561	668	19%	36%	20%
Baccalaureate Degree	408	853	109%	26%	25%
Associate Degree	586	1,824	211%	38%	55%
TOTAL	1,555	3,345	115%	100%	100%

The table illustrates that the diploma program which has traditionally provided the majority of nurses will provide an increasing number of nursing graduates (19% increase). However, its share of the total nursing graduating class in the year 1970 will be only 20% as opposed to 36%

in 1964. Three diploma schools have discontinued operations since our earlier survey. The baccalaureate programs will show an increase of 109% (a doubling of the number of students) but their share of the total will remain almost static, 25% in 1970 as opposed to 26% in 1964. The associate degree programs will show a sizable increase of 211% (a tripling), and their share of the total 1970 graduating class will be 55% as opposed to 38% in 1964.

Possible reasons for the sizable increase in the number of graduates of associate degree programs are (1) that this type of program has been and is increasing rapidly, (2) the cost of attending associate degree programs is generally less than the baccalaureate programs, (3) the period of training for the associate degree program is two and one-half years as opposed to three years for the diploma program, four years at most state colleges for the degree program, and five years at the University of California, and (4) since associate degree programs are spread throughout the state, students in these programs can usually live at home, thus decreasing the cost of the training to the student and also making this training more accessible to prospective students in the local communities.

NURSING GRADUATES PER 100,000 POPULATION

Type of Program	No. Graduates Per 100,000 Population 1964	No. Graduates Per 100,000 Population 1970
Diploma	3.12	3.08
Baccalaureate Degree	2.28	3.93
Associate Degree	3.26	8.4
TOTAL	8.67	15.4

Assuming a current shortage of mental health professionals, training must increase at a greater rate than the rate of population growth in order to reduce the shortage. California's population for 1964 was estimated to be 17,946,000. The population estimate for the year 1970 is 21,734,000, an increase of 21% over 1964. The table shows

that the baccalaureate and associate degree programs in nursing will grow at a faster rate than the population of the state. The increase in the diploma program will fall slightly behind population growth. The totals for nursing as a whole show that in 1965 nursing programs trained 8.3 students per 100,000 population while the projected figures for 1970 indicate they will be training 15.4 per 100,000 population.

The U.S. Surgeon General's recommended minimum standard for nursing is 350 registered nurses per 100,000 population. This figure is only a minimum. The following table shows how California with its increased training of nurses will compare to the minimum assuming no increase in training after 1970. The table is based on the assumption that nurses will retire at age 65. An age distribution of currently working licensed nurses in California indicates that such nurses will reach the age of 65 at about the rate of 1,000 per year between 1965 and 1970 and 1,500 nurses per year will reach the age of 65 between 1970 and 1980. The number of nurses expected between 1970 and 1980 is derived by subtracting the number of active nurses expected to retire from those expected to be graduated from nursing programs. The probable excess of nurses under 65 leaving working status over those under 65 returning to active nursing is not considered in this estimate. No information on these movements is available. Thus the resulting estimates of active nurses in 1970 and 1980 are on the high side. The net increases for the period are 1,400 per year between 1965 and 1970 and 1,800 per year between 1970 and 1980. These figures show that there must be a substantial increase in the training of nurses in order to reach the Surgeon General's recommended minimum of 350 registered nurses per 100,000 population.

	No. of RNs Necessary for Ratio of 350 RNs per 100,000 Pop.	No. of RNs Expected Based on Retirement & Training Plans	Expected Deviations from U.S. Surgeon General's Recommended Minimum
1965	65,645	59,300*	- 6,348
1970	76,000	66,300	- 9,700
1980	92,420	84,300	- 8,120

*Equivalent full-time employees (50,475 full time and 17,653 part-time). "Profile of Registered Nurses in California," Board of Nursing Education on Nurse Registration, March 1967.

The following tables present the nursing graduates for the year 1964 and projections for the year 1970 for each program in California.

NURSING DIPLOMA (RN)

School	Graduated 1964	Estimate of the No. Graduating in the Yr. 1970
California Hospital School of Nursing	37	45
Glendale Sanitarium and Hospital School of Nursing	29	*
Highland School of Nursing (Alameda Co. Hosp.)	38	50
Hollywood Presbyterian Hospital	17	28
Kaiser Foundation	39	50-60
Knapp College of Nursing	26	*
Los Angeles County General Hospital	95	125-130
Mercy College	35	45
O'Connor Hospital	35	20
Paradise Valley School of Nursing	23	*
Providence College of Nursing	23	35
Queen of Angeles, School of Nursing	24	60
St. Francis Memorial Hospital	21	30-35
St. Joseph College of Nursing	31	30-35
St. Luke's Hospital	27	30-35
St. Vincent's College of Nursing	37	40
Samuel Merritt Hospital	34	40-60
San Jose Hospital	21	40
TOTAL	592	668-718

* Program no longer in operation.

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NURSING BACCALAUREATE DEGREE (RN and BS)

School	Graduated 1964	Estimate of the No. Graduating in the Yr. 1970
California State College at Long Beach	NP	50
California State College at Los Angeles	37	50-75
Chico State College	10	50
Fresno State College	23	50
Humboldt State College	5	18-20
Mount St. Mary's College	33	30-35
Sacramento State College	16	40
San Diego State College	30	55-60
San Francisco State College	40	80-100
San Jose State College	35	55
The University of California Center for the Health Sciences (Los Angeles)	41	125
University of California Medical Center (San Francisco)	32	85
University of San Francisco	39	70-74
Loma Linda University	47	65
Stanford University	20	30-32
TOTAL	408	853-916

NP - Program not in operation.

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NURSING ASSOCIATE DEGREE (RN and AA)

The following schools are all two year junior colleges except Pacific Union and La Sierra Colleges.

School	Estimate of the No. Graduating in the Yr. 1970
American River College	**
Antelope Valley College	*
Bakersfield College	20-25
Barstow College	*
Cabrillo College	20-25
Cerritos College	35
Chabot College	35
Chaffey College	30
Citrus College	**
Coalinga College	*
Compton College	20
Contra Costa College	50
Cuesta College	30
Desert, College of the	*
Diablo Valley College	**
East Los Angeles College	35
El Camino College	40-45
Foothill College	30
Fresno City College	50
Fullerton Junior College	50
Gavilan College	*
Glendale College	*
Grossmont College	**
Hancock (Allan) College	*
Hartnell College	24
Imperial Valley College	25
Laney College	*
La Sierra College	**
Lassen Junior College	*
Long Beach City College	50-60
Los Angeles City College	75
Los Angeles Harbor College	60
Los Angeles Metropolitan Col.	*
Los Angeles Pierce College	*
Los Angeles Trade-Technical Col.	*
Los Angeles Valley College	100-110
Marin, College of	40
Merced College	*
Meritt College	40
Mira Costa College	*
Modesto Junior College	40
Monterey Peninsula College	*
Mount San Antonio College	50
Mount San Jacinto College	*
Napa Junior College	*
Orange Coast College	45
Pacific Union College	70-75
Palomar College	25-30
Palo Verde College	*
Pasadena City College	75
Porterville College	*
Redwoods, College of the	25
Reedley College	*
Rio Hondo Junior College	45
Riverside City College	80
Sacramento City College	80
San Bernardino Valley College	40
San Diego Junior College	*
San Francisco, City College of	40-45
San Joaquin Delta College	40
San Jose City College	40
San Mateo, College of	100
Santa Ana College	*
Santa Barbara City College	60
Santa Monica City College	**
Santa Rosa Junior College	30
Sequoias, College of the	**
Shasta College	**
Sierra College	*
Siskiyous, College of the	*
Southwestern College	*
Taft College	*
Vallejo Junior College	*
Ventura College	80-100
Victor Valley College	*
West Valley College	*
Yuba College	*
Total Estimate of the Number Graduating in 1970	1824-1894
Number Graduating in 1964	586

* Will not have a program in operation by 1970.

** Program in the planning stage.

California Department of Mental Hygiene
Office of Planning
February 1967

SOCIAL WORK

This survey is concerned with those students receiving the master of social work degree. The survey has not looked into the area of undergraduate training for social work. Although our primary concern is with the field of psychiatric social work, we must look at the entire pool of MSW graduates due to the fact that there is no longer a distinct specialty in psychiatric social work (students may begin specialization in psychiatric social work as a result of their field placement during the second year of their training).

TRENDS IN SOCIAL WORK TRAINING

Type of Program	No. of Grads. 1964	Est. No. of Grads. 1970	Est. % Increase 1964-70	% of Total 1964 Grads.	% Est. Total 1970 Grads.
University	195	320	64%	100%	52%
State College	-	293	-	-	48%
Total	195	613	214%	100%	100%

In the field of social work, the increase from 1964 to 1970 is expected to be 214% (a tripling). In 1964 the universities provided all of the social work graduates, i.e., those with an MSW degree. However, the state colleges have acted to meet the demand in the field of social work by establishing four new schools of social welfare at Sacramento, San Diego, San Francisco, and Fresno State Colleges. These four schools are expected to provide 48% of the social work graduates by 1970.

The following table presents the number of social workers trained per 100,000 of California population for the year 1964, the number expected to be trained per 100,000 for the year 1970 and the number trained per 100,000 in 1980 assuming no increase in size or number of programs beyond 1970.

TRAINING OF SOCIAL WORKERS PER 100,000

No. of Grads. Per 100,000 - 1964	Est. No. of Grads. Per 100,00 - 1970	Est. No. of Grads. Per 100,000 - 1980
1.09	2.81	2.32

The following table presents the number of social work graduates for the year 1964 and projections for the year 1970 for each program in California.

SOCIAL WORK (MSW)

School	Graduated 1964	Projection 1970
Fresno State College	*	113
Sacramento State College	*	40-50
San Diego State College	*	100
San Francisco State College	*	40
University of California at Berkeley	117	150
University of California at Los Angeles	24	90
University of Southern California	54	80
TOTAL	195	613-623

* Program not in operation.

Although the increases in the training of social workers appear to be substantial, the schools granting the MSW, with the exception of San Francisco State College, have no plans for expansion beyond their 1970 projections. San Francisco State College, which has the most recent MSW program, plans to increase its number of graduates to approximately 80 per year, while the other programs will be mature by 1970. Almost half of the 1970 MSW graduates result from new programs established since 1964.

If the number of social workers being trained beyond 1970 is to increase, this increase must come from increased class size of existing programs or the institution of new programs in social work. Only four of the 17 California State Colleges have programs which grant the MSW degree. The remaining 13 California State Colleges are a potential area for the expansion of graduate programs in social work. California also has many private universities such as Stanford, University of the Pacific and the University of San Francisco which have no programs in social work and so far as we know have none planned. This is another potential area for the expansion of social work programs.

PSYCHOLOGY

The survey of psychologists included the total group awarded Ph.D.'s as well as the specialty in clinical psychology. The California Department of Mental Hygiene, which is the largest employer of clinical psychologists in California, has broadened its requirements so that it recruits all major specialties in psychology. These specialties include clinical, counseling, education, social, medical, and experimental psychology. The Department's Bureau of Psychology estimates that this will expand its manpower pool by approximately 90%.

The following table summarizes the trend in the training of psychologists.

PSYCHOLOGY (Ph.D.)

	No. of Ph.D.'s Award 1964	Est. No. of Ph.D.'s Awarded 1970	Est. % Increase 1964-70	% of Total 1964 Ph.D.'s Awarded	% Est. Total 1970 Ph.D.'s Awarded
Clinical Psychology	28	39	39.4%	40.5%	30%
Other Psychology	41	93	127.0%	59.5%	70%
Total Psychology	69	132	91%	100%	100%

The table illustrates that while psychology Ph.D.'s awarded in 1970 will increase, the number is still relatively small. In addition, the table shows that while in 1964, 40% of psychology Ph.D.'s had a clinical specialty, in 1970 only 30% of psychology Ph.D.'s are expected to have a clinical specialty.

The following table relates the training of psychologists to California's population, assuming no increase in size or number of training programs beyond 1970.

Ph.D. DEGREES IN PSYCHOLOGY AWARDED PER 100,00 POPULATION

	No. Per 100,000 - 1964	No. Per 100,000 - 1970	No. Per 100,000 - 1980
Clinical Psychology	0.129	0.180	0.148
Other Psychology	0.189	0.428	0.352
Total Psychology	0.318	0.608	0.500

This table illustrates that the training of clinical psychologists will barely stay ahead of California's population growth by 1970 although training in all psychology specialties will double. However the numbers remain small.

The following table shows the output of psychologists in 1964 and the expected output in 1970.

PSYCHOLOGY (Ph.D.)

UNIVERSITY	Number of Ph.D.s Awarded - 1964		Number of Ph.D.s Awarded - 1970	
	Clinical Psychology	Other Psychology	Clinical Psychology	Other Psychology
University of California at Berkeley	7	12	12	8
University of California at Los Angeles	8	12	15	20
University of Southern California	10	2	7	15
Stanford University ****	3	11	5	22
Claremont Graduate School	-	4	-	12
University of California Medical School at San Francisco *	-	-	-	2
University of California at Riverside **	-	-	-	5
University of California at Santa Barbara ***	-	-	-	9
	28	41	39	93

* Ph.D. program began 1967.
** Ph.D. program began 1963.
*** Ph.D. program began 1962
**** Stanford's clinical program to be phased out, last clinical students (3) accepted 1967.

The table shows that only four universities have clinical programs. Stanford's clinical program is being phased out and no further output can be expected beyond 1971 or 1972. The University of California campuses at Berkeley and Los Angeles show slight increases in their clinical

program but no further increase is expected. Claremont graduate school's program is expected to stabilize at 12 per year. The program at the University of California Medical Center at San Francisco is expected to show only a slight increase beyond 1970. The program at the University of California at Riverside expects to reach a maximum of seven or eight per year. The University of California at Santa Barbara should graduate approximately 15 to 20 per year at maturity.

Growth in the production of California Ph.D.'s in clinical psychology was never sufficient to meet the California Department of Mental Hygiene's manpower needs, apart from the needs of other programs. The Department has an authorized complement of 232 psychologists and currently has 35 vacancies. Due to attrition the Department needs to recruit 40 psychologists per year simply to maintain staffing, let along reduce vacancies. This does not include research psychology positions which include about 50 for the Department. A review of the university of final degree for the Department's psychologists shows that 36% of the Department's staff were California trained and 52% came from outside the Western states.

PSYCHIATRY

It generally takes 12 years of post-high school training to become a psychiatrist, four years of undergraduate college work, four years of medical school, one year as an intern to become an M.D., and then a three year residency in psychiatry.

In the field of psychiatry, the number completing three year psychiatric residencies in 1970 is expected to be 64% higher than in 1964, but the number will still be relatively small. The State Department of Mental Hygiene is expected to continue training the largest number of psychiatrists.

PSYCHIATRY (3 year residency)

No. of Graduates 1964	Est. No. of Graduates 1970	Est. % Increase 1964-1970
109	179	64

The following table relates the training of psychiatrists to California's population. It presents the number of psychiatrists trained per 100,000 of California population for the year 1964, the number expected to be trained per 100,000 for the year 1970 and the number trained in 1980 assuming no increase in size or number of programs beyond 1970.

NUMBER OF PSYCHIATRISTS TRAINED PER 100,000

No. Completing Training Per 100,000 - 1964	No. Completing Training Per 100,000 - 1970	No. Completing Training Per 100,000 - 1980*
0.60	0.82	0.68

* Based on no increase in the number of psychiatrists trained i.e., 179 in 1980.

PSYCHIATRY
(3 Year Residency)

College	Graduated 1964	Estimate of the No. Graduating in the Yr. 1970
California College of Medicine	4	8
Cedars-Sinai Medical Center	6	6
Department of Mental Hygiene - State Hospitals	27	44*
Harbor General Hospital	-	3
Herrick Memorial Hospital	3	12-15
Letterman Hospital	5	7-8
Loma Linda University	-	2
McAuley Neuropsychiatric Institute	2	6
Oakland Naval Hospital	4	3
Orange County Medical Center	-	3
San Francisco General Hospital	-	4
San Mateo General Hospital	-	4
St. Francis Memorial Hospital	1	1
Stanford University	12	12
The University of California Center for the Health Sciences (Los Angeles)	16	21**
University of California Medical Center (San Francisco)	7	12***
University of Southern California	12	16
VA, Brentwood Neuropsychiatric Institute	8	8
VA, Long Beach	2	7
TOTAL	109	179-183

* Forty-four residents will complete training in the State Hospitals in 1970. Of these, 31 are financed by the State Department of Mental Hygiene, 11 are supported by NIMH grants, and 2 are financed by the California Department of Corrections.

** Twenty-one residents will complete training at UCLA in 1970. Of these, 3 are on the University budget, 3 are supported by Los Angeles County, 3 receive grants from U.S. Public Health Service, and 12 are financed by the State Department of Mental Hygiene.

*** Twelve residents will complete training in 1970. Of these, 2 are on the University budget, 2 are supported by NIMH grants, and 8 are financed by the State Department of Mental Hygiene.

California Department of Mental Hygiene
Office of Planning
February 1967

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Nebraska State Dept. of Health, Lincoln. Section of Hospitals and Medical Facilities
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Pub Date - Mar67 65p.

*OCCUPATIONAL SURVEYS; *SCHOOL SURVEYS; HEALTH OCCUPATIONS EDUCATION; *NURSING; HOSPITALS; PROFESSIONAL EDUCATION; SUBPROFESSIONALS; EMPLOYMENT STATISTICS; *MANPOWER NEEDS
NEBRASKA

In response to the Nebraska Nurses Association proposal of a timely study of the nursing situation and to the concern of the Governor's Committee on Medicare for overall health resources, an assessment was accomplished through data supplied by state and federal agencies and directions of schools of nursing. The deficit between supply and needs may be viewed from various angles: (1) The ratio of registered nurses to population for Nebraska was 337 per 100,000 as compared with the ratio of 350 per 100,000 recommended by the National League for Nursing and the United States Public Health Service, (2) There were ratios of one registered nurse per two hospital beds and one practical nurse for 8.7 hospital beds as compared with a Michigan League for Nursing recommendation of one registered nurse for 2.9 hospital beds and one practical nurse for 5.6 hospital beds, (3) In using the Surgeon General's Consultant Groups recommendations for educational preparation for various kinds of positions 22 percent of Nebraska's nurses are underprepared, (4) 103 out of 133 hospital administrators reported 168 budgeted and unfilled positions for RN's and 61 for licensed practical nurses, (5) Nebraska had one full-time public health nurse per 17,376 population as compared with the American Public Health Association recommendation of 1 to 5,000, (6) Schools of Nursing reported a deficit of 13 nurses with master's degrees and five with baccalaureate degrees. Although no programs for advanced degrees exist, educational facilities include three baccalaureate programs graduating 52 students in 1966, eleven diploma schools graduating 423, and four practical nurse schools graduating 161. Recommendations involve the issues of the attractiveness of educational programs, financial aid to students, the economy of larger schools, and nurses' salaries. (JK)

VT 005 425

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NEBRASKA'S NURSE SUPPLY, NEEDS AND RESOURCES: 1966

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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An Inventory of Nebraska Nurses with an estimate of nursing needs and a survey of educational facilities now available to supply these needs

Cora Ann Martin, Ph.D.

VT005425

Section of Hospitals and Medical Facilities
Nebraska Department of Health

March 1967

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Data were made available from the State Board of Nurse Examiners, the Section of Hospitals and Medical Facilities of the State Health Department, the chief nurses of the federal hospitals in Nebraska, and the directors of Nebraska's schools of nursing. This help is gratefully acknowledged.

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Part I

INTRODUCTION

The motto for the 1950-51 committee appointed to survey the nursing needs and resources in Nebraska was "Action without study is fatal; study without action is futile." The report[1] issued by this committee, prepared with the cooperation and help of over one hundred Nebraska nurses, identified a number of areas in which needs were considered most acute. Specifically, four areas were singled out for priority action: (1) higher academic preparation for instructors in schools of nursing, (2) expanded facilities for training practical nurses and state licensure of practical nurses, (3) recruitment and training for acute nurse shortages in the fields of psychiatry, public health and tuberculosis, and (4) recruitment of more men into nursing.[2]

Fifteen years have passed since the report was issued in 1951. Nurses recognized the need for a new study to ascertain the degree to which the report had fulfilled its purpose of not merely pointing out deficiencies but also serving as an impetus toward and a basis for action. Further, in our society change is rapid. The impending implementation of Medicare for citizens over age 65 pointed up in an acute form the rate of change in the health field. The facts which served as a basis for action fifteen years ago are totally inadequate today. Therefore, the Nebraska Nurses Association proposed a study to bring up-to-date the picture of the nurse supply, nursing needs and the resources for meeting them in Nebraska.

The Governor's Committee on Medicare was also concerned with the health resources of Nebraska. The Medicare program was expected to greatly increase the need for trained medical personnel in all fields. It was in answer to these concerns and with the cooperation of the Nebraska Nurses Association, the Governor's Committee on Medicare, and the Nebraska State Department of Health that an assessment of Nebraska's nursing supply, needs, and resources was done.

---

[1] A Report of the Survey to Measure Nursing Needs and Resources in Nebraska, 1950-1951.

[2] Summary Report of a Survey to Measure Nursing Needs and Resources in Nebraska 1950-1951.

Method

Data were obtained from a number of sources. Demographic data on Nebraska nurses were available from the licensing renewal forms which are issued by the State Board of Nurse Examiners. Since licensing is required of both professional and practical nurses in the state, data could be obtained for both levels of nurses for all nurses registered in Nebraska, both active and inactive, as of 31 January 1966. To supplement this source data were obtained from all Federal hospitals on professional and practical nurses who were working in Nebraska on 31 January 1966 and who were registered in other states.[3]

Another source of data was the licensing form of all hospitals in the state. These were made available by the State Department of Health, Hospital Division. Included in the licensure application was information on total number of nurses (at all levels) employed in the hospital as well as budgeted but unfilled positions as of 31 December 1965.

The state office of the United States Public Health Service gave an estimate of budgeted and unfilled positions in the various public health agencies of Nebraska. Finally, the directors of schools of nursing provided information about their educational facilities and personnel, as well as information about educational careers and work patterns of their graduates.

Limitations of the Data

It is necessary to recognize the limitations of the data. The greatest source of error is in reporting. The data obtained from the nurse registration cards had errors of omission[4] as well as errors in the data reported. One hundred eighteen professional nurses report that they hold an Associate Arts degree. This is thought to be a considerable overestimation. If nurses did not report their education, they were assigned to the category of "diploma" so that there doubtless exists some underreporting of baccalaureate and master degree nurses. The error in the reporting of higher academic preparation is, however, thought to be minimal.

Originally it was hoped to do a separate analysis of nurses employed full time or part time. However, many nurses failed to report this aspect of their employment status. Therefore, all nurses--whether full time or part time employed--were treated simply as "employed."

---

[3]Seventy-eight RN's were employed in Nebraska on 31 January 1966 who were registered out of state.

[4]For example, 286 professional nurses did not give their age, 23 did not give their marital status, etc.

A second source of possible error in reporting concerns the hospital reports of nursing personnel. These reports are submitted by the hospital administrator in his application for renewal of license. There is no way to estimate the accuracy of these reports. Cross tabulation to assess the reliability of these data comparing self reports and hospital reports is not possible because they represent different time periods.

All data were coded by two coders working independently and differences in coding were resolved by recourse to the original data source. Errors in punching data into cards were reduced by verifying all cards. Analysis was done by computer with checks for internal consistency to reduce error.

In summary, it is thought that with the exception of those erroneously reporting associate degrees and some lack of clarity in the definition of areas of clinical practice (discussed below) the errors in the data are within tolerable limits. Where errors are known to be large, categories have been expanded to encompass the looseness of the data.

Problems in Definition of Need

There are difficulties inherent in establishing any basis for an estimate of "need" for various levels of nursing personnel. Numerous factors must be taken into consideration. For example, not only size of population, but geographic distribution is important. Very small health facilities do not efficiently use highly trained personnel. One nurse supervisor can supervise a unit with three employees, with twenty, or with more depending on the organization of the facility. On the other hand, there is the human value of having medical facilities close at hand so that contact with the patient's family is maintained. The relative importance of these two factors must be assessed on other than demographic evidence.

Needs are often projected by estimating change in population size and composition. But shifts of population from rural to urban areas call for a redistribution of health facilities. Rural immigrants to urban areas soon become acculturated to urban fertility norms, etc. Thus more than a simple projection on the basis of quantitative measures of population size is necessary. Further the changing age composition of the population necessitates alterations in planning for future health needs.[5]

---

[5]Twelve per cent of the population of Nebraska was 65 years of age or over in 1965 and this proportion will increase in the next decade. (Based on population estimates from United States Department of Commerce, December 1966, Series T.25.)

Even the architectural features of health facilities are a factor. Old facilities which do not have such personnel-saving devices as two-way communications to the bedside, electronic patient monitoring equipment, pneumatic delivery systems, etc., require more nursing personnel. The organization of patient care--e.g., size of the wards, availability of intensive care units, and organization of nursing services--all affect the desirable nurse/patient ratio.[6]

The subjective "need" identified by the patient must be taken into account. The literature, both popular and professional, is replete with examples of patients who were dissatisfied with the nursing care they received while in a hospital. Sometimes these were cases of actual neglect, but often they resulted from a discrepancy between the expectations held by the patient for personal service and the nurses' definition of the amount of patient care which the situation demanded.

Then there is the "need" which is identified by the professional in the field who uses a formula based upon a nurse/patient ratio for the total population, or a "standard" number of hours of nursing care for various categories of patient. While this type of estimate is beneficial for estimating staffing needs, it does not take into account some of the variables mentioned above.

This listing of factors which affect nursing needs is not exhaustive. Any professional in the field can identify important omissions. It does, however, serve to point up the difficulty of making estimates of "needs" for the present--to say nothing of projecting these needs into the future.

For purposes of this study, several estimates of "needs" will be used. One is budgeted but unfilled positions. These unfilled positions have been reported by hospital administrators, directors of nursing schools, and the Public Health Service. Almost certainly they underestimate the need, for it is likely that administrators keep their estimates within the reasonable limits of their expectation of having the positions filled.

Another is based on ratio of nurses to population or health facilities as established by various health "experts." Finally an estimate of qualitative rather than quantitative need is made using the guidelines established by the Surgeon General's Consultant Group on Nursing.

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[6]L. T. Mercante found that a reorganization of the administration of nursing units allowed them to use 50% fewer supervising personnel than a comparable hospital ("Organizational Plan for Nursing Service," Nursing Outlook, May, 1962, pp. 305-306).

Part II

INVENTORY OF CURRENT NURSE SUPPLY IN NEBRASKA

Professional Nurse Supply

How many professional nurses has Nebraska? Where are they? What is their age, their preparation, their marital status? Where do they work? What trained but unused potential exists? These are some of the questions to which this section is addressed.

As noted earlier, the answers come from the nurses themselves as they reported these data on their annual re-registration form. This source was supplemented by gathering comparable data from nurses working in Nebraska but registered elsewhere.

There were 7,400 registered professional nurses in the state of Nebraska on 31 December 1966.[1] These included 4,957 (67.0%)

Table 1

DISTRIBUTION OF PROFESSIONAL NURSES IN NEBRASKA BY SEX AND EMPLOYMENT STATUS, 1957 AND 1966

Registered Nurses	1957 Total*	1966 Total	1966 Per Cent	1966 Male	1966 Female
Total	5,726	7,400	99.9	49	7,351
Employed	3,662	4,957	67.0	46	4,911
Unemployed	2,064	2,436	32.9	3	2,433
Employed in another field**	-	7	***	-	7

*Does not include nurses registered in another state but working in Nebraska. Computed from Table 1, Directory of Registered Nurses with Active License for 1957, Nebraska State Board of Nurse Examiners.

**These are dropped from all further analyses.

***Less than 1.0%.

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[1]Thirty-nine nurses live out of Nebraska, mostly in Council Bluffs, but are registered and work in Nebraska. Seventy-eight work in Nebraska, are registered out of state. Both groups will be treated as part of the total professional nurse population

employed,[2] 2,436 (32.9%) not employed, and 7 nurses who maintained their registration but worked in another field. (Table 1) These figures approximate the national figures. In 1962 the American Nurses' Association reported that 2/3 of registered nurses were working, 1/3 were unemployed.[3]

Table 2 shows the geographic distribution of both professional nurses and licensed practical nurses. Compared to a count made in 1957,[4] 70 counties show an increase in total number of professional nurses[5] although in most cases the increase is quite nominal. The exceptions, as would be expected, are the counties with urban centers.[6] Nine counties show no change in number of professional nurses, and 14 counties show a decrease. The distribution of nurses is, quite plainly, like that of the population of the state itself.

---

[2]At least 1,296 of these nurses (26.1% of the total of employed nurses) work part time in hospitals--See Table 12. In addition, 5 work part time in schools of nursing, 46 of those in private duty report that they work only part time, 14 school nurses are part time, 31 work in offices or industry part time and 3 list themselves as part time anesthetists. Since the category for part time is included under "field of employment" it is not known how many nurses failed to check this category.

[3]American Nurses' Association, The Nation's Nurses, The 1962 Inventory of Professional Registered Nurses, 1965, p. 6.

[4]State of Nebraska, State Board of Nursing, Inventory of Registered Nurses with Active License for 1957.

[5]Practical nurses were not licensed at the time of the 1957 survey.

[6]It should be remembered that the figures for the two periods are not exactly comparable, as the 1966 table includes 78 nurses not registered in Nebraska.

Table 2

GEOGRAPHIC DISTRIBUTION OF NURSES IN NEBRASKA BY COUNTY OF RESIDENCE AND FIELD OF EMPLOYMENT, 1957, 1966

Place of Residence	Totals			Field of Employment, Registered Nurses, 1966								
	LPN 1966	RN 1957*	RN 1966	Unemployed	Hospital	School of Nursing	Private Duty	Public Health	School Nurse	Industrial	Office	Other
Total	1,300	6,117	7,393	2,436	3,699	241	268	85	135	65	452	12
Adams	24	209	230	55	118	15	11	1	4	-	25	1
Antelope	5	31	35	8	25	-	1	-	-	-	1	-
Arthur	-	-	3	1	2	-	-	-	-	-	-	-
Banner	-	2	2	1	1	-	-	-	-	-	-	-
Blaine	-	-	2	1	-	-	-	-	1	-	-	-
Boone	1	19	29	11	15	-	-	-	2	-	1	-
Box Butte	36	63	63	25	21	3	10	-	1	-	3	-
Boyd	-	7	9	3	1	-	1	1	-	-	2	1
Brown	6	9	9	4	5	-	-	-	-	-	-	-
Buffalo	53	70	92	37	32	6	9	-	2	-	6	-
Burt	2	33	30	14	13	-	-	-	1	-	2	-
Butler	4	23	25	15	8	-	-	-	-	-	2	-
Cass	11	39	53	19	23	3	2	-	-	-	6	-
Cedar	-	9	14	7	5	-	-	-	1	-	1	-
Chase	2	15	20	9	10	-	1	-	-	-	-	-
Cherry	7	24	24	15	5	-	3	1	-	-	-	-
Cheyenne	14	47	53	17	21	1	5	1	-	1	7	-
Clay	-	32	31	15	7	1	4	-	2	-	2	-
Colfax	5	33	41	16	20	-	1	-	1	1	1	1
Cuming	10	52	57	23	24	-	3	-	-	-	7	-
Custer	8	34	38	12	19	-	4	-	1	-	2	-
Dakota	9	6	16	12	3	1	-	-	-	-	-	-
Dawes	13	24	32	7	17	-	5	-	1	-	2	-
Dawson	18	63	68	27	32	-	2	-	2	-	5	-
Deuel	-	8	7	4	2	-	-	-	-	-	1	-
Dixon	-	17	17	6	8	-	-	-	-	-	3	-
Dodge	16	99	134	50	56	-	9	-	5	3	11	-
Douglas	463	2,304	2,747	862	1,409	123	89	49	45	34	134	2
Dundy	8	6	9	5	4	-	-	-	-	-	-	-
Fillmore	2	26	21	10	9	-	-	-	2	-	-	-
Franklin	3	19	12	6	6	-	-	-	-	-	-	-

Place of Residence	Totals LPN 1966	Totals RN 1957*	Totals RN 1966	Field of Employment, Registered Nurses, 1966: Unemployed	Hospital	School of Nursing	Private Duty	Public Health	School Nurse	Industrial	Office	Other
Frontier	1	5	5	4	1	-	-	-	-	-	-	-
Furnas	2	11	10	4	5	-	-	1	-	-	-	-
Gage	16	95	98	40	46	-	-	1	2	-	9	-
Garden	2	23	16	1	10	-	1	-	-	-	4	-
Garfield	-	3	6	2	4	-	-	-	-	-	-	-
Gosper	-	5	4	1	2	-	-	-	-	-	-	1
Grant	2	3	4	3	1	-	-	-	-	-	-	-
Greeley	3	12	20	8	10	-	-	-	-	-	2	-
Hall	45	214	259	73	44	10	10	2	3	4	13	-
Hamilton	10	29	33	16	12	-	3	-	-	-	2	-
Harlan	2	14	18	6	9	-	1	-	-	-	2	-
Hayes	-	3	6	3	3	-	-	-	-	-	-	-
Hitchcock	2	6	8	2	5	-	1	-	-	-	-	-
Holt	3	38	39	15	19	-	3	-	-	-	2	-
Hooker	-	2	4	2	1	-	-	-	-	-	1	-
Howard	2	24	26	11	13	-	2	-	-	-	-	-
Jefferson	1	25	36	11	24	1	-	-	-	-	-	-
Johnson	-	16	20	10	9	-	-	-	1	-	-	-
Kearney	11	21	20	9	9	-	1	-	-	-	1	-
Keith	12	29	35	9	22	-	2	-	-	-	2	-
Keya Paha	1	2	3	1	1	-	1	-	-	-	-	-
Kimball	4	16	14	4	8	-	-	-	2	-	-	-
Knox	8	17	31	10	17	-	1	1	-	-	2	-
Lancaster	136	1,008	1,134	329	574	53	41	9	25	15	86	2
Lincoln	36	105	108	43	49	-	6	1	2	-	7	-
Logan	1	2	3	3	-	-	-	-	-	-	-	-
Loup	-	-	1	-	1	-	-	-	-	-	-	-
Madison	12	93	110	39	62	-	2	-	2	-	5	-
McPherson	1	1	1	1	-	-	-	-	-	-	-	-
Merrick	3	19	23	10	11	1	-	-	-	-	1	-
Morrill	5	15	19	8	6	1	2	-	-	-	2	-
Nance	3	14	15	6	9	-	-	-	-	-	-	-
Nemaha	5	11	19	11	5	1	-	-	1	-	1	-
Nuckolls	8	20	25	12	9	-	-	-	-	-	3	1

Place of Residence	Totals LPN 1966	Totals RN 1957*	Totals RN 1966	Field of Employment, Registered Nurses, 1966: Unemployed	Hospital	School of Nursing	Private Duty	Public Health	School Nurse	Industrial	Office	Other
Otoe	15	59	63	24	29	-	2	-	3	-	5	-
Pawnee	-	7	11	4	6	-	-	-	-	-	1	-
Perkins	7	7	14	3	9	-	-	-	-	-	2	-
Phelps	13	52	57	15	30	-	3	-	1	-	7	1
Pierce	-	14	21	10	11	-	-	-	-	-	-	-
Platte	15	88	122	48	61	1	3	-	1	-	8	-
Polk	3	26	35	12	20	-	-	-	-	-	3	-
Red Willow	10	49	51	14	28	-	3	2	1	-	3	-
Richardson	9	24	38	14	20	-	-	-	2	-	2	-
Rock	-	4	7	3	4	-	-	-	-	-	-	-
Saline	10	46	47	14	23	1	1	1	2	-	5	-
Sarpy	45	50	212	68	114	7	4	7	6	5	1	-
Saunders	4	39	56	18	29	-	2	1	1	-	5	-
Scotts Bluff	37	166	170	55	80	6	4	3	4	1	15	2
Seward	9	50	54	18	30	-	1	-	2	-	3	-
Sheridan	4	25	28	12	14	-	-	1	-	-	1	-
Sherman	1	12	17	6	8	1	1	-	-	-	1	-
Sioux	1	6	6	2	4	-	-	-	-	-	-	-
Stanton	1	10	9	6	2	-	-	-	-	-	1	-
Thayer	1	20	24	7	15	-	-	-	-	-	2	-
Thomas	1	3	4	3	1	-	-	-	-	-	-	-
Thurston	5	14	12	2	9	-	-	1	-	-	-	-
Valley	5	13	18	9	7	-	1	-	-	-	1	-
Washington	6	42	57	20	29	2	1	-	2	-	3	-
Wayne	-	25	24	8	12	1	-	-	-	-	3	-
Webster	3	18	17	5	9	-	-	-	-	-	3	-
Wheeler	-	1	1	-	1	-	-	-	-	-	-	-
York	9	55	62	28	29	-	1	-	1	-	3	-
Out of State	16	-	39	-	29	1	2	1	-	1	5	-
Unknown	13	-	21	4	14	1	2	-	-	-	-	-

*Source: State of Nebraska, State Board of Nursing, Inventory of Registered Nurses with Active License for 1957, Table 9.

If nurses in Nebraska in 1957 are compared with those in 1966 by field of employment a notable change is a decrease by almost 50% of private duty nurses, from 10.5% of employed nurses in 1957 to 5.4% in 1966. Nationally there was a decrease of private duty nurses of from 22% of employed nurses in 1949 to 12% in 1962.[7] Those in schools of nursing have increased considerably even when the difference in classification is taken into account.[8] School nurses have also increased, but there has been a decrease in public health nurses. None of the other changes appear significant in view of the overall increase in nurses.

Table 3

COMPARISON OF NURSES IN NEBRASKA BY FIELD OF EMPLOYMENT 1957 AND 1966

	1957*	1966
Total	6,182	7,393
Hospital, Other Institution	2,940	3,699
School of Nursing	98	241
Hospital and School of Nursing	39	**
Public Health	94	85
School Nurse	75	135
Private Duty	434	268
Industrial	57	65
Office Nurse	357	452
Other	24	12
Unemployed	2,064	2,436

*Source: State Board of Nursing, Inventory for 1957, Table 2.
**This category not included for 1966 data.

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[7] The Nation's Nurses, p. 9.

[8] In 1957 the two categories "School of Nursing" and "Hospital School of Nursing" probably are combined in the 1966 "School of Nursing."

Table 4 compares the distribution of employed nurses by field of practice for Nebraska and the total United States.

Table 4

DISTRIBUTION OF EMPLOYED REGISTERED NURSES BY FIELDS OF NURSING IN NEBRASKA AND IN THE UNITED STATES

	Nebraska 1966		United States, 1962* including Hawaii and Alaska	
Fields of Nursing	Number	Per Cent	Number	Per Cent
Total	4,957	99.9	532,118	100.0
Hospital, Other Institution	3,699	74.6	335,404	63.0
School of Nursing	241	4.9	16,294	3.1
Public Health	85	1.7	23,983	4.5
School Nurse	135	2.7	16,704	3.1
Private Duty	268	5.4	64,155	12.1
Industrial	65	1.3	17,569	3.3
Office	452	9.1	43,558	8.2
Other	12	0.2	14,451	2.7

*Source: The Nation's Nurses, Table 7A, p. 29.

Part III

DEMOGRAPHIC AND EDUCATIONAL CHARACTERISTICS OF THE NURSE SUPPLY

Registered Professional Nurses

One of the major concerns identified in the 1951 report had to do with levels of preparation of professional nurses. Table 5 summarizes the educational preparation of the nurses of Nebraska by field of employment. Only 63, or 0.8% of Nebraska's nurses have a master's degree in nursing and 10 (15.9%) of these are not working! Another 46 (0.6%) have a master's degree in another field, but 5 (11.0%) of these do not work. In all, 1.9% of Nebraska's employed nurses have a master's degree. These are about evenly divided between hospitals and schools of nursing.

Twelve and two-tenths per cent of Nebraska's working nurses are prepared at the baccalaureate level. Thirty-three and two-tenths per cent of nurses with baccalaureate degrees do not work. The number prepared above the master's level is too small to require comment.

In all, 1,017 (13.8%) of Nebraska's nurses are prepared beyond the diploma.[1] Of these 38.6% work in a hospital or other institution, 16.8% work in a school of nursing, 2.0% do private duty, 3.5% are in public health, 4.5% are school nurses, 0.7% work in industrial jobs, 2.8% work in an office, and 31.0% are unemployed.

Viewed from another perspective those having a baccalaureate or higher degree comprise 12.9% of the unemployed, 10.6% of hospital nurses, 71.0% of those in schools of nursing, 7.5% of private duty nurses, 42.4% of public health nurses, 34.1% of school nurses, 10.8% of industrial nurses, and 6.2% of office nurses.

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[1]Those reporting associate arts degrees are classified with diploma holders.

Table 5
REGISTERED NURSES, EDUCATIONAL PREPARATION BY FIELD OF EMPLOYMENT, 1966

	Total	Diploma	Associate*	Baccalaureate	Master's		Doctorate	
					Nursing	Other	Nursing	Other
Total	7,393	6,257	119	905	63	46	2	1
% of Total	99.8	84.6	1.6	12.2	.8	.6	**	**
Unemployed	2,436	2,083	38	300	10	5	-	-
Hospital, Other Institution	3,699	3,237	69	348	25	19	1	-
School of Nursing	241	70	-	129	26	15	-	1
Private Duty	268	242	6	19	-	-	1	-
Public Health	85	46	3	31	1	4	-	-
School Nurse	135	89	-	44	-	2	-	-
Industrial	65	58	-	6	-	1	-	-
Office	452	421	3	27	1	-	-	-
Other	12	11	-	1	-	-	-	-

*This is thought to be a considerable overestimation. After this table, the associate degree has been combined with the diploma category.
**Less than 0.1%.

For Table 6 all nurses who reported associate degrees were combined with diploma graduates, and all master's degrees and the three reported doctorates were combined. Classified thus, it is apparent that most of the nurses (61.8%) with baccalaureate degrees are ages 20-39. The majority of those with master's preparation (49.1%) are from ages 30-49, reflecting the longer educational investment.[2] It is also interesting to note that while 7 of those with master's training in ages 30-39 are unemployed (presumably engaged at this period of their life cycle in family building) only 1 each for the age categories 40-49 and 50-59 are unemployed.[3]

Table 6 also confirms that the largest proportion of unemployed nurses are in the age range of 30-39 closely followed by those 40-49 and 20-29. During the peak productive years that a man devotes to his job, large numbers of female nurses are removed from the labor market --32.1% of professional nurses between ages 20 and 49 are not employed in nursing. While this is probably functional from the point of view of the individual nurse, it is not difficult to see its dysfunction for the profession as a whole. If 32.9% of Nebraska nurses do not practice their profession, 100 nurses must be educated to keep 67 active in the profession. Such a large proportion of "loss" is difficult to sustain without considerable strain on educational facilities.

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[2]If the 10 years from 50-59 are added, 69.6% of the nurses are in this range.

[3]An interesting question arises. Is there greater likelihood that those with more educational investment, i.e., a master's degree, are more likely to return to the profession when family commitments allow? These data would seem to indicate that they do.

Table 6

REGISTERED NURSES BY FIELD OF EMPLOYMENT, AGE AND EDUCATIONAL PREPARATION, 1966

	Total	20-29			30-39			40-49			50-59			60-65			66+			Unknown		
		Dip.[1]	BS[2]	MS[3]	Dip.	BS	MS	Dip.	BS	MS	Dip	BS	MS	Dip	BS	MS	Dip	BS	MS	Dip	BS	MS
Total	7,393	1,691	268	5	1,553	291	27	1,278	188	28	907	82	23	360	30	10	339	18	9	248	28	10
Unemployed	2,436	382	60	-	644	136	7	426	57	1	278	22	1	120	6	-	183	12	6	88	7	-
Hospital, Other Institution	3,699	1,135	126	3	717	93	11	632	75	13	445	32	9	162	7	7	91	3	1	124	12	1
School of Nursing	241	27	54	2	16	35	7	13	25	10	9	5	12	2	2	2	2	2	1	1	6	8
Private Duty	268	16	6	-	38	5	-	48	5	-	56	1	-	32	1	-	49	1	1	9	-	-
Public Health	85	5	9	-	6	4	1	18	5	3	9	8	1	3	4	-	3	-	-	5	1	-
School Nurse	135	8	3	-	16	8	-	30	13	-	22	14	-	9	5	1	3	-	-	1	1	1
Industrial	65	6	2	-	9	1	-	15	1	1	18	-	-	6	2	-	1	-	-	3	-	-
Office	452	111	8	-	101	8	1	94	7	-	70	-	-	24	3	-	7	-	-	17	1	-
Other	12	1	-	-	6	1	-	2	-	-	-	-	-	2	-	-	-	-	-	-	-	-

[1]Combined diploma and associate arts degree.
[2]Baccalaureate degree.
[3]Master's degree and three doctorates.

Table 7 adds evidence to the total picture which emerges of the handicap under which a profession composed largely of women must operate. Of those female nurses employed 3,379 (68.8%) are married.[4] Given the role structure supported by the American ideology, this overwhelming majority of those in the profession owe their primary time commitment to their family. For all practical purposes they cannot prepare for professional advancement or accept positions which would require the family to move. In the event of a family crisis, such as illness, it is their role to supply the necessary care, staying away from their job if necessary. Imagine the professional chaos if male doctors, for example, or lawyers had the same extra-professional role obligations as nurses.

An alternative to changing the extra-professional role obligations of women (a solution which hardly seems likely, and perhaps is not even desirable) is the recruitment of men into nursing. This has not proceeded with great rapidity in Nebraska or, indeed, nationwide. In the United States as a whole 1.0% of nurses are men.[5] In 1951 there were 9 male registered nurses employed in Nebraska; in 1957 there were 13; in 1966, 46. However, 14 of these latter were employed as anesthetists, a specialty somewhat outside the major body of nursing practice. Of the remaining 32, 3 were administrators (See Table 10), one was teaching in a school of nursing, and 24 were employed in hospitals at levels ranging from supervisor to general staff. The position of 3 is not known.

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[4]The national average for 1962 was 61%, (Nation's Nurses, p. 25).
[5]Nation's Nurses, p. 10.

Table 7

EMPLOYED REGISTERED NURSES BY FIELD OF EMPLOYMENT, MARITAL STATUS AND SEX, 1966

	Female					Male			
	Total	Married	Single	Other	Unknown	Total	Married	Single	Other
Total	4,911	3,379	1,048	456	28	46	34	10	2
Hospital, Other Institution	3,654	2,536	791	307	20	45	34	10	1
School of Nursing	240	146	79	15	-	1	-	-	1
Private Duty	268	174	51	42	1	-	-	-	-
Public Health	85	46	28	11	-	-	-	-	-
School Nurse	135	94	18	22	1	-	-	-	-
Industrial	65	37	14	13	1	-	-	-	-
Office	452	337	66	44	5	-	-	-	-
Other	12	9	1	2	-	-	-	-	-

Licensed Practical Nurses

Nebraska had 1,300 licensed practical nurses on 31 January 1966. Of these 1,045 (80.4%) were employed, 233 (17.9%) were unemployed, and 22 did not report their activity status.

Table 8

DISTRIBUTION OF LICENSED PRACTICAL NURSES IN NEBRASKA BY SEX AND EMPLOYMENT STATUS, 1966

Licensed Practical Nurses	Total		Male	Female
	Number	Per Cent		
Total	1,300	100.0	15	1,285
Employed	1,045	80.4	13	1,032
Unemployed	233	17.9	1	232
Activity status not reported	22	1.7	1	21

Part IV

DEMOGRAPHIC CHARACTERISTICS OF NURSES EMPLOYED IN HOSPITALS OR OTHER INSTITUTIONS

Registered Professional Nurses

In Nebraska in 1966, 74.6% of the nurses actively engaged in nursing were employed by hospitals or other institutions.[1] This analysis will deal only with these nurses. Hospital nurses can be differentiated on a number of dimensions. One of the most salient is by type of position. Table 9 shows type of position by age and educational preparation.

One-third (34.2%) of the nurses working in hospitals are between the ages of 20-29. This young work force is concentrated in the general duty position--44.7% of general duty nurses are in this age group. This is a not unexpected finding. Of head nurses or assistant head nurses, 23.7% are also in the 20-29 age group. For supervisors, however, experience weighs more heavily. Almost half of the supervisors (48.5%) are between the ages of 30-49.

Only 2 supervisors in hospitals in Nebraska report that they have a master's degree; however, 18 of the administrators hold a master's. Of those who hold baccalaureate degrees 50.3% are working at the staff nurse level; 14.4% as head nurse or assistant.

Table 10 shows the distribution of professional nurses employed in hospitals and other institutions by sex and marital status. Little can be added to the previous discussion of the general distribution of nurses on these variables.

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[1] 63.0% of the nation's nurses worked in hospitals or other institutions in 1962. (The Nation's Nurses, p. 29.)

Table 9

HOSPITAL EMPLOYED REGISTERED NURSES BY TYPE OF POSITION, AGE AND EDUCATIONAL PREPARATION, 1966

		20-29			30-39			40-49			50-59			60-65			66+			Unknown		
	Total	Dip.[1]	BS[2]	MS[3]	Dip	BS	MS	Dip	BS	MS	Dip	BS	MS	Dip	BS	MS	Dip	BS	MS	Dip	BS	MS
Total	3,699	1,135	126	3	717	93	11	632	75	13	445	32	9	162	7	7	91	3	1	124	12	1
Administrator or Assistant	150	4	2	-	13	4	1	31	9	7	34	6	5	15	1	4	6	2	1	4	1	-
Consultant	9	-	-	1	-	-	1	2	-	1	3	-	-	-	-	1	-	-	-	-	-	-
Supervisor or Assistant	464	52	7	-	89	23	1	97	15	-	95	10	-	31	3	1	18	-	-	22	-	-
Instructor	52	4	7	1	6	6	5	6	3	3	4	3	-	1	1	-	-	-	-	-	1	1
Head Nurse or Assistant	553	116	15	-	83	15	1	113	14	1	111	2	1	43	2	1	13	-	-	20	2	-
General Staff or General Duty	2,316	942	92	1	488	37	2	349	30	1	176	9	2	62	-	-	44	-	-	74	7	-
Unknown	52	8	1	-	10	1	-	12	-	-	8	1	1	2	-	-	4	1	-	2	1	-
Anesthesia	103	9	2	-	28	7	-	22	4	-	14	1	-	8	-	-	6	-	-	2	-	-

[1]Combined diploma and associate arts degree.
[2]Baccalaureate degree.
[3]Master's degree and three doctorates.

Table 10

HOSPITAL EMPLOYED REGISTERED NURSES, BY TYPE OF POSITION, SEX AND MARITAL STATUS, 1966

	Female					Male			
	Total	Married	Single	Other	Unknown	Total	Married	Single	Other
Total	3,654	2,536	791	307	20	45	34	10	1
Administrator or Assistant	147	81	46	18	2	3	2	1	-
Consultant	9	6	3	-	-	-	-	-	-
Supervisor or Assistant	457	279	107	68	3	7	6	1	-
Instructor	51	29	15	6	1	1	1	-	-
Head Nurse or Assistant	549	375	105	68	1	4	4	-	-
General Staff	2,303	1,697	466	128	12	13	8	4	1
Anesthetist	89	38	37	14	-	14	11	3	-
Other	49	31	12	5	1	3	2	1	-

Table 11 reports the distribution of hospital nurses by self-reported areas of clinical practice. Less confidence is placed in these reports than any other classification variable. In the first place, the categories are ambiguous and not mutually exclusive. No instructions are given to establish a common frame of reference for the respondents.[2] In the second place, in the small hospital[3] there is no "area of clinical practice" and in most cases the nurse probably simply listed general or put the category in which most patients would fall. This is not an "area of clinical practice" in the generally accepted use of that term. The amount of variance thus introduced is unknown. However, the findings are presented with this cautionary statement.

Tables 12, 13, and 14 show the report on nursing personnel from the 130 hospitals licensed to operate in Nebraska in 1966 and 3 federal hospitals.[4] These data indicate that a large proportion (40.2%) of the registered nurses employed by hospitals in Nebraska work part time.[5] This is true also of practical nurses (17.7% work part time) and aides (24.1% work part time). These proportions vary by size of hospital, type of institution and type of ownership of hospital. Small hospitals are particularly dependent on part time nurses.

The Surgeon General's Consultant Group on Nursing[6] cites a study which demonstrated that for patient satisfaction 50% of direct patient care should be provided by professional nurses, 30% by licensed practical nurses, and 20% by nursing aides. Although the number of persons in each category does not indicate that they are giving proportionate amounts of care, it is interesting to compare the proportion of levels of nursing in Nebraska with this standard. In December 1965, 32.8% of the nursing personnel were registered nurses, 8.2% practical nurses, and 59.0% nurses aides.[7]

Student nurses are a part of the nurse labor force. They are, however, a significant part only in large hospitals.

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[2]For example, when does one check "Mental Health" and when "Psychiatry?" Does this reflect a treatment philosophy on the part of the individual nurse?

[3]Eighteen Nebraska hospitals have fewer than 20 beds, 41 between 20 and 29.

[4]One federal hospital did not return the questionnaire.

[5]Part time nurses were estimated to comprise 23% of the employed registered nurses in the United States in 1964. (Michigan League for Nursing, Nursing Needs and Resources in Michigan Today and Tomorrow, 1966, p. 53).

[6]U. S. Surgeon General's Consultant Group on Nursing, For Quality in Nursing, 1963.

[7]Two part time employees computed as one full time.

Table 11

AREA OF CLINICAL PRACTICE OF HOSPITAL EMPLOYED REGISTERED NURSES BY AGE, 1966

	Total	Age						
		20-29	30-39	40-49	50-59	60-65	66+	Unknown
Total	3,699	1,264	821	720	486	176	95	137
Medical	181	64	38	37	20	8	3	11
Surgical	428	189	97	65	49	11	3	14
Medical-Surgical	864	411	167	119	92	33	16	26
Pediatric	211	114	37	23	18	4	5	10
Obstetric	419	163	100	82	31	13	14	16
Maternal-Child	21	7	3	6	3	2	-	-
Gynecological	415	50	93	104	83	39	26	20
Psychiatric	195	66	42	45	29	7	1	5
Mental Health	10	-	3	1	4	2	-	-
General Practice	928	198	234	234	152	54	24	32
Other	2	-	-	1	-	-	-	1
Unknown	25	2	7	3	5	3	3	2

Table 12

SIZE OF HOSPITAL BY NURSING PERSONNEL EMPLOYED, DECEMBER 1965*

Beds	Total	R.N.'s			L.P.N.'s			Nurses Aides**		
		Full Time	Part Time	Per Cent Part Time	Full Time	Part Time	Per Cent Part Time	Full Time	Part Time	Per Cent Part Time
Total (N=133)	9,188	1,923	1,296	40.3	582	125	17.7	3,991	1,271	24.2
% of Total	99.9	20.9	14.1		6.3	1.4		43.4	13.8	
0-20 (N=23)		44	64	59.2	13	10	43.5	108	113	51.1
21-30 (N=31)		79	131	62.4	21	14	40.0	208	217	51.0
31-50 (N=28)		136	174	56.1	46	11	19.3	280	192	40.7
51-75 (N=10)		89	98	52.4	52	6	10.3	170	123	42.0
76-100 (N=8)		122	98	44.5	38	8	17.4	221	114	34.0
101-150 (N=11)		235	118	33.4	69	17	19.8	441	118	21.1
151+ (N=22)***		1,218	613	33.5	343	59	14.7	2,563	394	13.3

*Cf. Appendix C which contains tables summarizing these data for 1966.
**Federal hospitals did not report nurses aides.
***One hospital did not report.

Table 13

TYPE OF INSTITUTION BY NURSING PERSONNEL EMPLOYED, DECEMBER 1965 *

	R.N.'s			L.P.N.'s			Nurses Aides**		
	Full Time	Part Time	Per Cent Part Time	Full Time	Part Time	Per Cent Part Time	Full Time	Part Time	Per Cent Part Time
Total	1,923	1,296		582	125		3,991	1,271	
General (N=94)	1,255	966	43.5	351	79	18.3	1,466	836	36.3
Chronic (N=8)	42	30	41.7	13	3	18.8	194	44	18.5
Mental (N=4)	115	11	8.7	10	-	-	1,150	14	1.2
Tuberculosis (N=1)	4	-	-	2	-	-	31	3	8.8
Mentally Retarded (N=1)	9	1	11.1	1	-	-	380	-	-
General & Mental (N=4)***	295	119	28.7	126	23	15.4	287	101	26.0
General & Chronic (N=21)	203	169	45.4	79	20	20.2	483	273	36.1

*Cf. Appendix C which contains tables summarizing these data for 1966.
**Federal Hospitals did not report nurses aides.
***One hospital did not report.

Table 14

TYPE OF OWNERSHIP OF HOSPITAL BY NURSING PERSONNEL EMPLOYED, DECEMBER 1965 *

	R.N.'s			L.P.N.'s			Nurses Aides**		
	Full Time	Part Time	Per Cent Part Time	Full Time	Part Time	Per Cent Part Time	Full Time	Part Time	Per Cent Part Time
Total	1,923	1,296		582	125		3,991	1,271	
Proprietary (N=9)	14	37	72.5	8	8	50.0	49	51	51.0
Non-Profit Organization (N=76)	1,350	987	42.2	445	85	16.0	1,774	914	34.0
County (N=23)	132	159	54.6	40	18	31.0	329	233	41.4
State (N=11)	210	45	21.4	47	7	13.0	1,691	23	1.3
City (N=11)	85	62	42.2	23	7	23.3	148	50	25.2
Federal (N=3)***	132	6	4.3	19	-	-	-	-	-

*Cf. Appendix C which contains tables summarizing these data for 1966.
**Federal hospitals did not report nurses aides.
***One hospital did not report.

Professional Nurses Employed in Federal Agencies

A large number of patients are cared for each year in federal government hospitals. Three Veterans Administration hospitals in Nebraska have a combined bed capacity of 936 and one Air Force Hospital has a bed capacity of 125. A separate analysis of these nurses presents some interesting contrasts. Just over one-fourth (27.5%) of the military nurses have at least a baccalaureate degree, and 25.8% of the civilian nurses who work in federal hospitals are prepared at this level, contrasted to 9.4% of the non-federal hospital-employed nurses. (Table 15) It is also interesting to note the difference in the age structure. No military nurse is over 50 years of age, no civilian employee of a federal hospital over 65. It would appear not to strain credulity too far to attribute this to the excellent retirement plan available to federally employed nurses and to postulate that many of the 95 nurses over age 66 working in non-federal hospitals would have retired had they been assured of financial security.

Professional Nurses in Religious Orders

Ninety-six of the nurses employed in Nebraska's hospitals are members of a Catholic order.[8] Although the numbers are small and 11.4% of these nureses did not report their age, a pattern which is almost the obverse of that observed among federally employed nurses is evident with regard to age. Only 39.6% of the nurses in orders are under the age of 50.[9] One-third (34.4%) of the nurses in Catholic orders have at least a baccalaureate degree. Nurses in religious orders are also in positions of responsibility: 21.9% are administrators or assistant administrators and 52.1% are supervisors.

Licensed Practical Nurses

Most practical nurses work in hospitals (56.0%), but 9.6% work in nursing homes.[10] The only other fields employing notable numbers of practical nurses are private duty (6.9%) and offices (5.8%). Nebraska has only 15 male practical nurses.

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[8]These were classified on the basis of an address which indicated membership in a religious order. It is possible that this subanalysis contains some religious of other than the Roman Catholic church.

[9]The large number with ages not listed might affect this conclusion.

[10]Licensed practical nurses were given the choice of this category on their licensing form. For professional nurses this category was included in "Hospital or other institution."

Table 15

FEDERAL/NON-FEDERAL HOSPITAL EMPLOYMENT OF PROFESSIONAL NURSES BY AGE AND EDUCATION, 1966

Age and Education	Military	Civilian	Non-Federal
Total	40	240	3,419
20 - 29			
Diploma	16	39	1,080
Degree	1	11	117
30 - 39			
Diploma	7	44	666
Degree	7	13	84
40 - 49			
Diploma	6	71	555
Degree	3	18	67
50 - 59			
Diploma	-	16	429
Degree	-	13	28
60 - 65			
Diploma	-	7	155
Degree	-	1	13
66+			
Diploma	-	-	91
Degree	-	-	4
Unknown			
Diploma	-	1	123
Degree	-	6	7

Table 16

NURSES IN ROMAN CATHOLIC ORDERS BY TYPE OF POSITION, AGE AND EDUCATION, 1966

	Total		20-29		30-39		40-49		50-59		60-65		66+		Unknown	
	Diploma	Degree	Dip.	Deg.	Dip.	Deg.	Dip.	Deg.	Dip.	Deg.	Dip.	Deg.	Dip.	Deg.	Dip.	Deg.
Total	63	33	3	3	7	8	9	8	14	7	9	4	11	2	10	1
Administrator or Assistant	7	14	-	-	-	2	-	6	2	3	3	1	1	2	1	-
Consultant	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Supervisor or Assistant	34	16	1	2	4	6	4	2	8	4	6	2	6	-	5	-
Instructor	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Head Nurse or Assistant	5	-	-	-	1	-	-	-	2	-	-	-	1	-	1	-
General Staff	12	1	2	1	1	-	4	-	1	-	-	-	3	-	1	-
Anesthetist	3	-	-	-	1	-	-	-	1	-	-	-	-	-	1	-
Unknown	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1

Table 17

LICENSED PRACTICAL NURSES BY FIELD OF EMPLOYMENT AND SEX, 1966

	Total	Per Cent	Female	Male
Total	1,300	99.7	1,285	15
Unemployed	233	17.9	232	1
Hospital	728	56.0	723	5
Nursing Home	125	9.6	121	4
Private Duty	90	6.9	88	2
Public Health	8	0.6	7	1
Industrial	3	*	3	-
Office	76	5.8	75	1
Other	15	1.2	15	-
Activity Status Not Reported	22	1.7	21	1

*Less than 0.5%.

Part V

DEMOGRAPHIC CHARACTERISTICS OF UNEMPLOYED NURSES

The unemployed nurse, as Table 18 shows, is most apt to be a married woman between the ages of 30 and 39--32.3% of the unemployed are in this age group. From another perspective, 42.1% of nurses in this age group (i.e., 30-39) are not employed. However, in the age categories 40-49 and 20-29 there are also large numbers of married women who are not working--19.3% of the unemployed are married women 40-49 years of age and 17.2% are married women between 20 and 29. It is only after the commonly accepted retirement age of 65 that those who are single make up a significant proportion of the unemployed.

Table 18

REGISTERED NURSES NOT EMPLOYED, BY AGE AND MARITAL STATUS, 1966

Age	Total	Married	Single	Other
Total Unemployed	2,436	2,111	137	188
20 - 29	442	419	22	1
30 - 39	787	771	7	9
40 - 49	484	469	4	11
50 - 59	301	253	21	27
60 - 65	126	86	16	24
66+	201	61	63	77
Unknown	95	52	4	39

To what extent can the unemployed nurses realistically be viewed as a potential labor pool for the nurse labor force? Labor force participation by women has been steadily increasing in the United States; nursing has followed this general trend. "In 1940, married women made up less than a third of the female work force; by 1950, their number had reached half, and by 1962, exceeded half of all women workers. The rise has been chiefly due to increased entry by mature women: between 1947 and 1962, the number of women 45 and older who were working doubled."[1] According to the Women's Bureau, "During the 1950-61 period, the number of women in part-time jobs has increased much more rapidly than the number in full-time work. . ."[2]

Nursing might suffer some handicap in attracting its married practitioners back into the labor force, however. The U. S. Department of Labor found the most important reason given by married women for returning to work was financial necessity. Thirty-one and three-tenths per cent of those with one year of college or more gave this reason.[3] An additional 20.4% gave reasons also related to economic necessity, e.g., earning extra money or husband unemployed. Only 21.8% said that they worked because of the personal satisfaction they derived from their jobs. Given the present wage scale for nurses, the financial gain realized by a married nurse offers little incentive to return to work. This is especially true if the nurse has children young enough to require the services of a baby-sitter.

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[1]Report of the President's Commission on the Status of Women, American Women, 1963, p. 66.

[2]U. S. Department of Labor, Women's Bureau, 1962 Handbook on Women Workers, Bulletin 285, p. 58.

[3]U. S. Department of Labor, Why Women Start and Stop Working: A Study in Mobility, Special Labor Force Report No. 59, Table 1.

Part VI

NURSING NEEDS

The difficulties of estimating nursing needs have already been pointed out. This report will, however, make some tentative estimates of present nurse deficit to serve as a basis for projecting nursing needs by those interested nurses and citizens whose responsibility it is to provide health services for the people of Nebraska.

Ratio of Nurses to the Population

For the United States as a whole there were 298 employed nurses per 100,000 people in 1962.[1] The same report listed the ratio in Nebraska as 320/100,000 population. Twenty-two states exceeded this ratio, i.e., had a ratio of more than 320/100,000 population. By 1964 the nurse/population ratio had increased to 306/100,000 for the United States.[2] For Nebraska, using 1966 figures, it was 337/100,000. The National League for Nursing and United States Public Health Service indicate a desirable ratio of 350 registered nurses per 100,000 population.[3]

Ratio of Nurses to Hospital Beds

The measure of nurse deficit can be refined somewhat by estimating the deficit of hospital nurses as a ratio of the number of nurses to hospital beds. The Michigan report considered the equivalent of 1 full time registered nurse per 2.9 hospital beds and 1 full time licensed practical nurse per 5.6 hospital beds as a norm. Nebraska in 1966 had a ratio of 1 registered nurse per 2.0 hospital beds and 1 practical nurse per 8.7 hospital beds.[4]

Educational Deficit of Nebraska Nurses

Another method of estimating nursing deficit is by an assessment of the levels of preparation of nurses now practicing compared with the level recommended by national organizations. This type of analysis identifies, not the shortage of nurses, but the shortage of preparation of the nurses now practicing.

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[1] The Nation's Nurses, p. 7.

[2] Michigan League for Nursing, op. cit., p. 7.

[3] Ibid.

[4] Computed from the reports of hospital administrators. Part time nurses were considered as working half time--the national average according to The Nation's Nurses, p. 9. Only general hospitals (and those combining general and some other service) were included.

Nursing Needs and Resources in Michigan quotes the standards used by the Surgeon General's Consultant Group on Nursing in 1962 as follows:[5]

Positions	Preparation
Group A Registered nurses who give direct patient care as general staff nurses in hospitals, clinics and nursing homes where supervision is available; private duty nurses; nurses in doctors' offices.	Hospital Diploma Program or Junior College Associate Degree Program
Group B Registered nurses who give direct patient care requiring specialized clinical competence; staff level public health nurses; directors of nursing in nursing homes that provide skilled nursing care; nurses in hospital positions ranging from team leader through head nurse.	Baccalaureate Degree Program
Group C Faculty in all nursing education programs; clinical specialists, supervisors and consultants in all types of institutions and health agencies; administrators, assistant administrators and inservice education directors in hospitals and health agencies.	Master's Degree Program
Group D Deans of college nursing programs; faculty of graduate education programs; research investigators; nursing service directors of large hospital systems or large public health agency systems.	Doctoral Program

[5]Michigan League for Nursing, op. cit., pp. 26-27.

Using these standards, Nebraska has an educational deficit of 819 nurses prepared at the master's degree or higher and 272 nurses with baccalaureate degrees. In other words, 22.0% of Nebraska's nurses are under-prepared for their position using these standards. The Surgeon General's Consultant Group recommended that the proportion of R.N.'s with baccalaureate or higher preparation be increased from 10% (the 1962 national figure) to 17.7% in 1970. For Nebraska in 1966, 14.1% were prepared at this level.

Table 19

EDUCATIONAL DEFICIT OF EMPLOYED NEBRASKA NURSES, 1966

Educational Preparation	Number of Employed R.N.'s	
	Held the Degree	Needed the Degree*
Total	4,957	4,957
Master's Degree or Higher	97	916
Baccalaureate Degree	604	876
Diploma or Associate Degree	4,256	3,101
Unknown	-	64

*Estimated from field of employment and type of position (self-report) using guidelines of Surgeon General's Consultant Group on Nursing, 1962.

Deficit by Fields

Hospitals[6]

Hospital administrators in Nebraska reported that as of 31 December 1965 they had budgeted and unfilled positions for 168 registered nurses. It is not known how much of this figure is an underestimation for 30 hospital administrators (of 133) failed to fill out this question on their licensing form.[7] They also reported budgeted and unfilled positions for 61 L.P.N.'s.[8] Sixty positions were open for nurses aides.

Table 20

BUDGETED AND UNFILLED POSITIONS REPORTED* FOR VARIOUS LEVELS OF NURSING PERSONNEL BY SIZE OF HOSPITAL, DECEMBER 1965

	Number of Beds							
	Total (N=133)	0-20 (N=23)	21-30 (N=31)	31-50 (N=28)	51-75 (N=10)	76-100 (N=8)	101-150 (N=11)	151+ (N=22)
R.N.'s	168	-	9	1	4	-	2	152
L.P.N.'s	61	-	-	3	-	-	-	58
Nurses Aides	60	-	-	3	-	-	-	57

*Two hospitals indicated needs but made no estimate of how many were needed; 30 hospitals did not report.

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[6]Cf. Appendix C which contains tables summarizing these data for 1966.

[7]Four of the hospitals failing to report had 20 or fewer beds, eleven had from 21 to 30 beds, two from 31 to 50 beds, one from 51 to 75 beds, one from 76 to 100, two from 101 to 150, and seven had 151 or more beds. Two reported needs but gave no estimate. One federal hospital did not report.

[8]The same hospitals failed to report their need of L.P.N.'s and of nurses aides.

Most of the hospital administrators reporting that they needed nurses were from hospitals under the administration of non-profit organizations. City and state hospitals also had numerous unfilled positions. It appears that federal hospitals--in spite of their size and therefore relatively large staffs--had little trouble competing for nurses.

Table 21

BUDGETED AND UNFILLED POSITIONS REPORTED* FOR VARIOUS LEVELS OF NURSING BY TYPE OF OWNERSHIP OF HOSPITAL, DECEMBER, 1965

	Total (N=133)	Proprietary (N=9)	Non-Profit Organization (N=76)	County (N=23)	State (N=11)	City (N=11)	Federal (N=3)
R.N.'s	168	-	128	4	14	20	2
L.P.N's	61	-	50	3	8	-	-
Nurses Aides	60	-	44	3	13	-	-

*Two hospitals indicated needs but made no estimate of how many were needed; 30 hospitals did not report.

Table 22 shows the nursing personnel needs by type of institution. Not unexpectedly, the general hospitals and combined general-mental hospitals comprise the largest categories with unfilled positions.

Table 22

BUDGETED AND UNFILLED POSITIONS REPORTED* FOR VARIOUS LEVELS OF NURSING BY TYPE OF INSTITUTION, DECEMBER, 1965

	Total (N=133)	General (N=94)	Chronic (N=8)	Mental (N=4)	Tuberculosis (N=1)	Mentally Retarded (N=1)	Gen. & Mental (N=4)	Gen. & Chronic (N=21)
R.N.'s	168	65	1	-	3	-	96	3
L.P.N.'s	61	17	-	-	-	-	44	-
Aides	60	30	-	-	5	-	25	-

*Two hospitals indicated needs but made no estimate of how many were needed; 30 hospitals did not report.

Public Health and School Nurses

The American Public Health Association recommends the equivalent of one full-time public health nurse per 5,000 population. In 1966 Nebraska had one full-time (or equivalent) public health nurse per 17,376 population. As of 1 January 1966 there were only 3 1/2 budgeted but unfilled positions in public health.

Neither Lincoln nor Omaha had unfilled positions for school nurses. It is difficult to estimate how many school districts would use school nurses if they were available. However, it is likely that most school districts which want school nurses have them, since there is no separate certification for school nurses in Nebraska and the hours and vacations make this an attractive position for married nurses.

Private Duty, Office and Industrial Nurses

No attempt to estimate deficit in these areas was made. There is very little consensus on any norm.

Nursing Education

Schools of nursing report a nurse deficit for October 1966 of seven nurses prepared at the master's level for collegiate schools of nursing and six nurses at the master's level for diploma schools. Diploma schools also have budgeted but unfilled positions for five nurse educators with baccalaureate degrees.[9] Only two diploma schools indicated that they had adequate faculty.

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[9]Two diploma schools did not answer the question regarding budgeted and unfilled positions on their questionnaire.

Part VII

SUPPLY--NEBRASKA'S SCHOOLS OF NURSING[1]

In 1966 Nebraska had eleven diploma schools preparing registered nurses, three collegiate schools offering a baccalaureate degree in nursing, and four practical nurse schools. All were accredited by the Nebraska State Board of Nursing. As contrasted with 1951 when none were nationally accredited, thirteen of the fourteen schools for professional nurses were accredited by the National League for Nursing. In October 1966 the diploma schools in Nebraska had a student body which ranged in size from 50 to 207 students, with an average of 132.5 students. The three collegiate schools reported 321 students[2] or an average of 107 students.

Nursing personnel are prepared in Nebraska on a number of levels: untrained, or hospital trained, nursing aides, licensed practical nurses who graduated from accredited one year schools, registered nurses graduated from three year diploma schools, registered nurses graduated from a four year baccalaureate program, and three year diploma school graduates who earn a baccalaureate degree after completing a three year nursing course. There is post-graduate training in anesthesia and psychiatry. There are no programs for an advanced degree in nursing.

The combined educational facilities for nurses in Nebraska graduated 423 diploma students, 52 students with a baccalaureate degree in nursing, and 161 practical nurses in 1966. These nurses, of course, offer the greatest single potential for increasing the nursing labor force. Where do they work? How many of them do not enter the labor force? How important are they as a labor force supply for their parent institution? Table 23 gives some of the answers.

The nursing school is an important labor pool for the parent hospital. It is also interesting that most nurses who finish the program are engaged in nursing practice at least for the immediate period after graduation. A very small proportion go immediately into further educational programs.

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[1]The data for this section were obtained from a questionnaire returned by directors of all professional schools of nursing in Nebraska. The questionnaire was adapted from E. Cunningham, Today's Diploma Schools of Nursing, National League for Nursing, 16-1081, New York, 1963, pp. 57-64. See original source for questions used.

[2]Includes those of sophomore level or higher.

Table 23

EMPLOYMENT OF 1965 AND 1966* GRADUATES OF NEBRASKA'S DIPLOMA SCHOOLS OF NURSING

Employed	Graduates of 1965 Number	Graduates of 1965 Per Cent	Graduates of 1966 Number	Graduates of 1966 Per Cent
Total	405	100.0	423	99.9
Parent Hospital	101	24.9	187	44.2
Other General Hospital	141	34.8	142	33.6
Psychiatric Hospital	12	3.0	8	1.9
Nursing Home	2	0.5	2	0.5
Military Service	15	3.7	15	3.5
Physician's Office	23	5.7	5	1.2
Public Health	5	1.2	6	1.4
Teaching	3	0.7	1	0.2
Industrial	1	0.3	1	0.2
Non-nursing Position	-	-	2	0.5
Full Time Study				
Baccalaureate Degree Program	8	2.0	9	2.1
Master's Program	3	0.7	2	0.5
Other Study	-	-	1	0.2
Anesthesia	2	0.5	-	-
Part Time Study	6	1.5	6	1.4
Other Employment in Nursing	9	2.2	8	1.9
Neither Employed nor Engaged in Full Time Study	15	3.7	14	3.3
Do Not Know	59	14.6	14	3.3

*Graduates of Diploma Schools only. This information could not be furnished by the collegiate schools.

Characteristics of the Student Nurse Population

Students in the diploma schools are, in the usual case, high school graduates. However, three of the Nebraska schools report 12, 18 and 20 students respectively (or 9.8% of their enrollment) with two years or more of college before admission. The other schools report only a total of 8 students with this much college prior to entering the diploma program. This would indicate adequate counseling to encourage girls with substantial preparation to enter a degree program.

Table 24 shows the geographic origin of students in Nebraska's schools of nursing.

Table 24

GEOGRAPHIC ORIGIN OF NEBRASKA STUDENT NURSES, OCTOBER 1966

	Nebraska Students				All U.S.* Diploma Students 1962
	Diploma Students		Baccalaureate Students		
	Number	Per Cent	Number	Per Cent	Per Cent
Total	1,458	99.9	321	100.0	100
Same County	290	19.9	50	15.6	36
Another County	825	56.6	102	31.8	47
Bordering State	312	21.4	88	27.4	12
Non-bordering State	30	2.0	77	24.0	5
Foreign	1	**	4	1.2	**

*Today's Diploma Schools, Figure 3, p. 9.
**Less than 1%.

In comparing the origin of Nebraska and all United States students, Nebraska "pirates" students from bordering states in considerably higher proportions than the norm. This is no doubt due in large part to the inclusion of Council Bluffs, Iowa, in the metropolitan area of Omaha. This is another instance of the artificiality of political boundaries when analyzing goods and services.

Nursing students in Nebraska in this time period were drawn in equal proportion from small towns, metropolitan areas and rural areas. In the future, however, as Nebraska becomes increasingly more urban, recruitment efforts will have to make special appeal to the graduates of urban high schools. It is already evident that collegiate schools are reflecting this change.

Table 25

RURAL/URBAN ORIGIN OF NEBRASKA STUDENT NURSES, 1966

Origin	Total		Diploma Students		Collegiate Students	
	Number	Per Cent	Number	Per Cent	Number*	Per Cent
Total	1,703	99.9	1,458	99.9	245	100.0
Towns of 10,000+	598	35.0	476	32.6	122	49.8
Towns up to 10,000	585	34.4	490	33.6	95	38.8
Farms	520	30.5	492	33.7	28	11.4

*One school did not separate farms from towns up to 10,000, thus they were omitted from this table.

One of the attributes which has long separated nursing schools from general education has been their insistance on what one person has termed the "monastic" pattern, i.e., student nurses living in residences and remaining unmarried. This has been changing since World War II. Although the number of students who take advantage of a policy which allows them to continue living at home or to marry and live outside the hospital residence is relatively small, such a policy salvages a number of students who otherwise would not continue their nursing education. All but one of Nebraska's schools of nursing allow students to live out. It is interesting to note the difference between the residence patterns of diploma and collegiate school students.

Table 26

RESIDENCE PATTERNS OF STUDENTS IN NEBRASKA'S NURSING SCHOOLS, 1966

	Day Students		Resident Students	
	Number	Per Cent	Number	Per Cent
Diploma Schools*	113	7.8	1,335	92.2
Collegiate Schools	64	19.9	257	80.1

*81.3% of students in diploma schools were resident students in 1962 for all U.S. schools (Today's Diploma Schools).

Only one school in Nebraska does not admit married students. Nevertheless, as Table 27 shows the proportion of married students is low.

Table 27

MARITAL STATUS OF NEBRASKA NURSING STUDENTS, 1966

Marital Status	Diploma Schools		Collegiate Schools	
	Number	Per Cent	Number	Per Cent
Total	1,458	99.6	321	100.0
Single	1,391	95.4	298	92.8
Married	62	4.2	23	7.2
Widowed or Divorced	5	*	-	-

*Less than 1%.

The attrition rate of student nurses has shown little change over the years since it was first computed. In 1950, the rate of withdrawals was 33.0% for the United States; in 1962, it was 33.2%.[3] For Nebraska, in the 1966 class it was 30.4%. Compared to an estimated withdrawal rate for liberal arts colleges of 50%, this lower attrition rate reflects the careful screening process through which student nurses are admitted. Nonetheless, the rate of academic failure and failure to adjust has traditionally been of considerable concern to nursing educators. Table 28 reports reasons given for withdrawal for students from Nebraska's schools for the class of 1966.

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[3]Today's Diploma Schools, p. 41.

Table 28

ATTRITION RATES* OF THE CLASS OF 1966 FOR NEBRASKA NURSING SCHOOLS BY REASON FOR WITHDRAWAL

Reason for Withdrawal	Diploma		Collegiate**	
	Withdrawals	Per Cent	Withdrawals	Per Cent
Total	160	100.0	68	100.0
Academic Failure				
In general education courses	34	21.2	18	26.5
In nursing courses	4	2.5	1	1.5
In both general education and nursing courses	37	23.1	10	14.7
Non-academic Reasons				
Marriage and/or pregnancy	27	16.9	7	10.3
Dislike of nursing	22	13.8	10	14.7
Other	36	22.5	22	32.3

*Does not include transfers.
**For last 3 years only.

Characteristics of the Faculty

Educational preparation of the faculty is a major criterion for evaluating schools of nursing. Detailed data on the academic preparation of the faculty members of Nebraska schools of nursing is presented in Table 29.

Table 29

CHARACTERISTICS OF FACULTY IN NEBRASKA NURSING SCHOOLS, 1966

	Diploma Schools	Collegiate Schools
Number of Schools	11	3
Number of Students Enrolled	1,458	321
Nurse Faculty		
Number of students per instructor*	10.0	12.1
Academic Preparation of Full-time Nurse Faculty		
Master's degree	6	29
Baccalaureate degree	75	9
No degree	26	-
Academic Preparation of Part-time Nurse Faculty		
Master's degree	2	2
Baccalaureate degree	12	-
No degree	7	-
Academic Preparation of Administrative Level Nurses (Directors and Assistants)		
Doctoral degree	-	1
Master's degree	14	4
Baccalaureate degree	6	-
Non-nurse Faculty		
Academic Preparation of Full-time Faculty		
Master's degree	1	-
Baccalaureate degree	9	-
No degree	2	-
Academic Preparation of Part-time Faculty		
Doctoral degree	1	-
Master's degree	4	-
Baccalaureate degree	23	1
No degree	3	-
Academic Preparation of Cooperating Agency Personnel		
Master's degree	8	-
Baccalaureate degree	57	-
No degree	22	-
Academic Preparation of College Faculty		
Doctoral degree	28	11**
Master's degree	38	14**
Baccalaureate degree	11	-
No degree	1	-

*Full-time equivalent.

**Two schools did not report.

Measures of faculty development other than academic preparation can be investigated. For example, all of the schools report that there is a formal faculty organization. Further, eight of the diploma schools report that they conduct annual self-evaluation, one reports a biennial evaluation and only two schools report that self-evaluation is irregular. However, only one school reports that the evaluation includes an outside consultant. The danger here would seem self-evident.

The schools report that they freely solicit the opinions of faculty, hospital administrators, governing boards and students as a form of evaluation. They also rely on standardized achievement tests, reports from cooperating agencies, performance on State Board examinations, and follow-up of previous graduating classes.

Library Facilities

Library facilities are a critical factor in evaluating and accrediting any educational facility. Although nursing school libraries have often been deficient in the past, the picture is changing for most schools. All of Nebraska's diploma schools in 1966 reported either a separate library (9) or a combined medical-nursing library (2).[4] The number of titles (excluding fiction) reported ranged from 610 to 10,205 with an average of 2,095. This compares with the national median in 1962 of 1,182. New titles added during the previous school year averaged 142 per school compared with the national median of 101. (The range was from 56 to 333.) There was an average of 32 periodicals per school compared to the national median of 20.[5] Again the range was wide with two schools reporting only ten periodicals and one reporting 174. Most schools did not have a librarian with a degree in library science. Indeed, two schools did not have a full time librarian.

Characteristics of the Schools

The diploma schools all had a 36 month program. The number of weeks of actual class and clinical laboratory assignments ranged from 39 to 48 per year with most schools reporting 48 weeks each of the three years. All of the diploma schools reported that their students had some instructions on a college campus. Four also reported some college courses taught at the nursing school. All reported that their

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[4]For collegiate schools the library is considerably larger and frequently combined with the university library. Only diploma schools will be considered in this discussion.

[5]Figures for national median from Today's Diploma Schools, p.24.

students earned some college credits for courses taken during the three years. The average (mode) was the equivalent of one academic year.

With two exceptions, the eleven diploma schools were governed by the hospital board. In four of the eleven schools the director of the school was also the director of nursing service. All reported that the director had no teaching responsibilities for any of the major courses. Since all but one of the directors had a master's degree (they constituted 54.5% of the faculty prepared at this level), the best prepared nurse teachers are not in the classroom. This is, of course, an echo of the often lamented phenomenon of the nurse with advanced preparation not at the bedside. Perhaps nursing education should follow the pattern of many colleges which require administrative personnel through the rank of dean to teach at least one course.

Many of these characteristics do not, of course, apply to baccalaureate schools. Their graduates earn a baccalaureate degree on completion of the program. Their instruction is all on the college level and carries college credit. They are governed by the same rules and regulations and are under the same administration as the other colleges or departments in the university. Table 29 compares the preparation of diploma and collegiate faculty.

Financial Considerations

The cost to the student for the diploma programs does not vary much by school. With the exception of one school which reports the cash cost to the student of the total program as $1,503.50, the other ten schools report their cost between about $2,200 and $3,000. The average is $2,190. None of the schools pay students during any part of the program.

During the period of reporting, 220 students in diploma programs received loans for tuition and fees, 268 had scholarships, and 59 others received financial help, e.g., grants-in-aid. In all, 405 student nurses or 27.8% of the total received some some kind of financial aid. The student nurses' ability to earn money while attending school is probably limited by their relatively small amount of free time. Although specific studies cannot be cited to substantiate the claim, it is likely that student nurses have less time to hold part-time jobs than college students in general. Nevertheless, eight of the schools reported that they allowed their students to work in the hospital giving patient care for pay. An additional school allowed them to work at non-nursing duties. All but one reported that their students were allowed to work outside of the hospital. This latter probably represents a very minor source of income for the student, however.

The cost of a baccalaureate education is considerably more than for a diploma program. Estimates of expense ranged from $6,900 for the four years to $2,030 plus meals, books, and uniforms as the cost of the last three years. However, 50.1% of the students in the baccalaureate programs were receiving some form of financial aid. These students were allowed to work outside the hospital, in the hospital in non-nursing duties, and two of the three schools allowed them to receive pay for patient care.

Curriculum

In general in diploma schools the behavioral sciences are being taught to student nurses in classes with other students on college campuses. Biological and physical sciences, though often taught by college faculty, are most frequently for nurses only. Three schools are using educational television for all or part of the biological and physical sciences. The diploma programs used a cooperating agency for psychiatry, and a number had a pediatric affiliation.

The collegiate schools indicated a more extensive offering of courses, e.g., public health and administration and leadership. They did not use cooperating agencies, but taught all areas themselves.

The schools reported considerable planning and changes in the recent past in curriculum organization, utilization of college or university instruction, timing and sequence of the educational program. Two school reported that they were considering changes in the length of the educational program.

Plans and Problems--the Future

More schools reported changes made in the in-service education program for the faculty than in any other area. However changes were reported either in progress or planned in many other areas: school fees, faculty selection and recruitment, student personnel policies, curriculum change, utilization of clinical resources, and library resources were the most frequently cited.

Almost without exception securing faculty "adequate in number and preparation" was identified as the major problem. Faculty development was also cited. Other problems were expansion of physical facilities, need for new physical facilities, cost to the hospital of maintaining a school of nursing, financial difficulties in general, adequate clinical facilities and the problem which arises when the students face what has been called the "reality shock" of finding out that the quality of nursing care taught is not matched by that practiced. One school identified recruiting an adequate number of capable

students as a major problem.

In all, the impression was conveyed that the directors of Nebraska schools of nursing perceive a major problem in the area of adequately prepared faculty. There is considerably less consensus concerning the next most pressing problem, but if matters which have to do with finance, (e.g., expansion and new facilities, cost of operation, etc.) are combined, these would clearly rank second.

Conclusions

This report is viewed as an analogue of the laboratory reports presented the physician. Laboratory reports offer some insight into internal physical processes and present data points on which, using his professional judgment and knowledge of the "whole" patient, the physician can make a diagnosis and prescribe a treatment regime. This report has as its goal the compilation of data which would inform on the state of nursing in Nebraska for 1966. It is expected to serve as data points on the basis of which interested professional and community members can make decisions and advocate policy about the direction of nursing and nursing education for Nebraska. The data are contained in the tables.

However, a technician often describes the gross morphology of a field. Therefore a few observations seem warranted: Nebraska needs more professional and practical nurses to come up to present standards, however those standards are determined. This need is particularly acute in several areas: nurses trained at the baccalaureate and advanced levels; public health nurses; male nurses; nurse educators. Rigorous inquiry into the feasibility of re-designing the educational program so that it will hold more appeal for prospective nurses who are at present presented attractive career possibilities in many other fields would appear to be of first importance. Increasing financial aid to students should be investigated. It has been demonstrated that larger schools educate nurses more effectively and at less cost.[6] This should be kept in mind as plans are made. Finally, as nurses do not need to be reminded but perhaps the general public does, salaries for nurses must be raised to the level so that nursing can successfully compete with other service professions of a similar educational level--social work, teaching, etc.

If this report has presented the picture of nursing in Nebraska in 1966 unambiguously so that it can serve as a basis for policy-making regarding the future direction of nursing in Nebraska, it will have served its purpose nobly. For the health standard which is the right of every American cannot be assured without the personnel to implement the technology which is available. And nurses occupy a key position in the health field.

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[6] Today's Diploma Schools of Nursing, pp. 5,6.

Appendixes

Appendix A

Questions used for Registered Nurse inventory from Application for Renewal of License:

1966 Application Information
Important: Please circle number Social Security Number _____
Present Field of Employment: 1. Hosp.-other institution; 2. Sch. of Nurs; 3. Private Duty; 4. Public Health; 5. Sch. Nurse; 6. Industrial; 7. Office (doctor, dentist); 8. Other (specify) _____
Type of position: 1. Adm. or Asst; 2. Consultant; 3. Supv. or Asst; 4. Instructor; 5. Hd. Nurse or Asst; 6 General duty or Staff; 7. Other (specify)_____
Employed by Federal Government Service 1. Yes 2. No. If yes, 1. Military (other than reserve) 2. Civilian.
Educational preparation Basic: 1. Diploma 2. Associate 3. Baccalaureate or higher degree

Highest degree held: 4. Baccalaureate 5. Master's in nursing 6. Master's in other field 7. Doctorate in nursing 8. Doctorate in other field 9. No degree.

If you hold a college degree was psychiatric nursing your area of clinical specialization?

1. Yes 2. No

Present area of clinical practice: 1. Medical 2. Surgical 3. Medical-surgical 4. Pediatric 5. Obstetric 6. Maternal-child health 7. Gynecologic 8. Psychiatric 9. Mental health 0. General practice
Y. Other (specify)_____
Personal: Marital status S M W D Sep. Sex M F Date of Birth_____
Are you actively employed in nursing: Yes No Employed in the State of__
Other states in which currently registered_____
If in Nebraska, in what county do you reside?_____

Questions used for Licensed Practical Nurse inventory from Application for Renewal of License:

Enclosed is $2.00 in check_____, money order_____, currency_____ (at my own risk) for my 1966 license to practice as a licensed practical nurse in Nebraska.

Important: Please circle number Social Security Number: _____

Field of employment: (1) Hosp.; (2) Nursing Home; (3) Private Duty;

(4) Public Health; (5) Industrial; (6) Office (doctor or dentist);

(7) Other (Specify)_____

Type of position: Specify_____

Personal: Circle or complete:

Marital status S M W D Sep. M F. Date of Birth_____

Are you actively employed in nursing? Yes No. Employed in the State of _____

If unemployed give year of last employment_____Other states in

which currently licensed_____

If in Nebraska, in what county do you reside?_____

Appendix B

Information on part time and full time employment of hospital nursing personnel from hospital license renewal form:

2. Complete the following information pertaining to your personnel: (Exclude students from this listing.)

Category of Personnel	Number Employed Full Time	Number Employed Part Time	Total Monthly Hours Part Time Employees
R.N.'s			
L.P.N.'s			
Nurse Aides			

. . .

3. How many and of what category do you have positions budgeted for but unfilled?

4. Fill in the information requested below:

How many student nurses?_____

. . .

Application for Hospital License for period ending Dec. 31, 1966-Page 5

Appendix C

The data reported in this appendix were compiled by the Section of Hospitals and Medical Facilities of the Nebraska Department of Health, Marsha Nunn, Sociologist.

Table C-1

PERSONNEL EMPLOYED IN THE LICENSED NURSING HOMES BY EMPLOYMENT STATUS, NEBRASKA, 31 JANUARY 1967

	Employment Status					
	Total	Administrator	Full Time	Part Time	On Call	Unknown
Registered Nurses	199	23	96	59	4	17
Licensed Practical Nurses	104	20	57	9	4	14
Nurses Aides	1,230	-	806	341	8	75

Table C-2

SIZE OF HOSPITAL BY NURSING PERSONNEL EMPLOYED AND VACANCIES, NEBRASKA, DECEMBER 1966

	R.N.'s			L.P.N.'s			Nurses Aides		
	Full Time	Part Time	Needed**	Full Time	Part Time	Needed**	Full Time	Part Time	Needed**
Total (N=129)*	1,899	1,328	378	633	142	160	3,988	1,451	273
0-20 (N=21)	44	62	8	9	9	4	93	102	13
21-30 (N=30)	107	126	15	94	9	7	227	218	14
31-50 (N=30)	136	209	13	55	18	1	301	266	14
51-75 (N=8)	75	79	9	48	9	7	170	124	7
76-100 (N=10)	152	112	26	36	8	12	309	150	22
101-150 (N=10)	187	115	13	56	15	14	443	140	14
151+ (N=20)	1,198	625	294	335	74	115	2,445	451	189

*Figures for 1966 do not include federal hospitals and also reflect changes in status and existence of hospitals in Nebraska during 1966.

**Seventy-six hospitals did not respond to this item; 17 reported needs but made no estimate.

Table C-3

TYPE OF INSTITUTION BY NURSING PERSONNEL EMPLOYED AND VACANCIES, NEBRASKA, DECEMBER 1966

	R.N.'s			L.P.N.'s			Nurses Aides		
	Full Time	Part Time	Needed**	Full Time	Part Time	Needed**	Full Time	Part Time	Needed**
Total (N=129)*	1,899	1,328	378	633	142	160	3,988	1,451	273
General (N=89)	1,088	898	189	325	80	70	1,394	803	87
Chronic (N=6)	58	42	2	9	6	3	187	68	2
Mental (N=5)	135	20	106	15	-	8	1,079	57	99
Tuberculosis (N=1)	4	-	3	-	-	-	36	2	1
Mentally Retarded (N=1)	10	2	-	1	-	-	387	-	-
General & Mental (N=3)	294	129	63	124	29	67	324	139	70
General & Chronic (N=24)	310	237	15	159	27	12	581	382	14

*Figures for 1966 do not include federal hospitals and also reflect changes in status and existence of hospitals in Nebraska during 1966.

**Seventy-six hospitals did not respond to this item; 17 reported needs but made no estimate.

Table C-4

TYPE OF OWNERSHIP OF HOSPITAL BY NURSING PERSONNEL EMPLOYED AND VACANCIES, NEBRASKA, DECEMBER 1966

	R.N.'s			L.P.N.'s			Nurses Aides		
	Full Time	Part Time	Needed**	Full Time	Part Time	Needed**	Full Time	Part Time	Needed**
Total (N=129)*	1,899	1,328	378	633	142	160	3,988	1,451	273
Proprietary (N=8)	13	34	4	9	5	2	48	51	4
Non-Profit Organization (N=76)	1,377	1,014	235	509	98	126	1,823	1,032	118
County (N=23)	196	162	2	35	27	1	382	242	4
State (N=11)	206	51	129	45	4	18	1,582	68	114
City (N=11)	107	67	8	35	8	13	153	58	33

*Figures for 1966 do not include federal hospitals and also reflect changes in status and existence of hospitals in Nebraska during 1966.

**Seventy-six hospitals did not respond to this item; 17 reported needs but made no estimate.

VT 005 863
Street, Paul
Vocational Rehabilitation Needs and Resources in Eastern Kentucky.

Kentucky Univ., Lexington. Bureau of School Service
Kentucky State Dept. of Education, Frankfort. Bureau of Vocational and Rehabilitation Services
Vocational Rehabilitation Administration (DHEW), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET. RD-1763-G
Pub Date - Jan67 61p.

*RESOURCES; *NEEDS; *STATE PROGRAMS; *VOCATIONAL REHABILITATION; *PROGRAM EVALUATION
KENTUCKY

Vocational rehabilitation needs and resources of the area are described in a form organized to provide the basis for appraising existing programs and making them more effective. Records of 3,830 clients in the 39-county area served by the rehabilitation program in 1964 provided data for the study. A complete catalog was made of resources actually used in the program. Findings and conclusions include: (1) The need for additional funds is confirmed by the "pile up" of cases for which plans are not made until after July 1 when funds for the next fiscal year become available, (2) If a special project involving mentally retarded individuals of the 15 to 25 age group undertaken in 3 counties had been extended to the entire area, the total case load would have been more than doubled, (3) If all counties had operated a program on a par with that of Martin County, the total case load would have been increased two-thirds, (4) If all counties had Vocational Rehabilitation Service offices located in them, the total case load would have been increased 15 percent, and (5) If the program is to be effective, it should involve at least three times as many cases as it did in 1964. (JK)

VT 005 863

ED042060

Vocational Rehabilitation Needs and Resources in Eastern Kentucky

A Study by the Bureau of School Service
University of Kentucky
for the
Bureau of Rehabilitation Services
of the
Kentucky Department of Education

by
Paul Street

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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VT005863

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INTRODUCTION

Rehabilitation has become a profound movement in our society. The rehabilitation concept is emerging as the cornerstone of our public policy in dealing with the problems of disability. We are beginning to realize, in our concern for any disadvantaged group of our people, that rehabilitation of our disabled provides a most appealing and convincing example of applied democracy. The financial import of widespread dependence caused by neglected disability in this country hits at every taxpayer. Obviously, not every disabled person can be restored to activity and work; even so, thousands can be restored to the status of workers and taxpayers.

The Vocational Rehabilitation Act Amendments of 1965 mark the first major revision of the Rehabilitation Law since 1954. Authorizing new and expanded vocational rehabilitation programs, the 1965 Act represents a national commitment to provide additional and improved services to prepare a greater number of physically or mentally disabled young people and adults for suitable employment. For the public vocational rehabilitation program, this act is a milestone on the road to making the benefits of vocational rehabilitation services available to all the disabled who need and can use them. The act contains authority for innovative and broadened efforts running the gamut of the vocational rehabilitation field.

New legislation gives new authority to bring additional federal, state, and local public funds, as well as voluntary resources, into public and voluntary programs of rehabilitation services for the disabled. One set of new provisions is directed to supporting construction of rehabilitation facilities, including centers and workshops, and to improving facilities now operating. Another set is designed to support special and new efforts to make expanded rehabilitation services available to additional groups with severe disabilities. A third set undergirds planning efforts, including state planning, to bring services to all who need them by 1975 and planning for the orderly development of rehabilitation facilities and workshops.

Both state and federal legislation providing for the State-Federal Program of Vocational Rehabilitation is programmed to render special rehabilitation services to handicapped individuals of employable age who have vocational potential within the limits of our funds.

The three criteria of eligibility for services are: the presence of a disability as determined by a qualified physician, psychologist, or psychiatrist; evidence that the disability is an employment handicap to

this individual; and reasonable assurance that the services will render the handicapped individual employable.

Vocational Rehabilitation provides a range of services tailored to each individual's needs, such as: full evaluation, including medical diagnosis, to learn the nature and degree of the disability and to help evaluate the individual's work capacities; counseling and guidance to achieve good vocational adjustment; medical, surgical, psychiatric treatment, hospital care, and related therapy to reduce or remove the disability; training, including vocational, academic and remedial education, and prevocational and personal adjustment training; services in comprehensive or specialized rehabilitation facilities, including workshops and adjustment centers and on-the-job training; maintenance and transportation during rehabilitation; tools, equipment and licenses for work on a job or in establishing a small business; placement in a job suited to the individual's highest physical and mental capacities; and post-placement follow-up to make sure that the placement is satisfactory to the employer and the employee.

It is in the context of an effort to make such a program more effective in one of the acute poverty areas of the nation that the study which follows was developed and supported cooperatively by the federal and Kentucky units which administer the Vocational Rehabilitation Program.

—Ben F. Coffman
Assistant Superintendent for Rehabilitation
Department of Education
Commonwealth of Kentucky

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ESSENTIAL CONCLUSIONS OF STUDY

(Based on analysis of 3,830 cases served by Vocational Rehabilitation Services in a 39-county eastern Kentucky area in 1964.)

1. The need for more funds for operation of the Vocational Rehabilitation Services program in the 39-county area of eastern Kentucky which was the subject of this study appears in the fact that annually there is a "pile up" of cases for which plans are not made until after July 1, when funds for the fiscal year become available.

2. A special project for bringing "MR" cases (primarily youth school drop-outs) into the Vocational Rehabilitation programs in three counties of the area of the study turned up 831 more cases than the "regular" program in the three counties had involved during 1964. If this special project had been extended to all the 39 counties of the study, and had involved similar proportions of the population age 15-25, some 4,820 *more* "MR" clients would have been involved in the program. This effort would have more than doubled the total case load of the program in the 39 counties—would have raised it from 3,830 to an estimated 8,650.

3. If all the 39 counties had operated a program to effect a rate of participation among the adult population equal to that operated in Martin County during 1964, the load for the area would have risen to 6,370 (compared to the actual 3,830), an increase of some two thirds.

4. If all the counties of the study area had had Vocational Rehabilitation Services offices located in them, the load for the area would have been increased an estimated 573 cases—some 15% above the actual load of the area in 1964. (This calculation represents an attempt to adjust figures for all the counties of the study to compensate for the variable of *distance from counseling office*, which has been demonstrated (in another study) to make significant difference in the numbers who will use the service.

5. A staff from the College of Medicine of the University of Kentucky conducted physical examinations of a substantial sample of the adult population of Martin County in early 1965, referring to Vocational Rehabilitation Services all disability cases which appeared to the staff to deserve attention of the Services. Of 1,116 persons examined, 135 were referred to Vocational Rehabilitation Services. Of these, 56 were regarded as qualified to receive services (in the judgment of the Vocational Rehabilitation counselor) if funds had been available. Of these, 40 were actually served, since funds were limited.

Using the proportions represented by these figures and applying them to the existing (1964) programs in all the 39 counties, it was estimated that:

1. Some 25,000 persons of the area are probably demonstrably disabled to an extent and character which might properly concern the Vocational Rehabilitation Services administration.

2. Some 10,000 of these might be expected to qualify for service under prevailing screening standards provided funds were no restriction.

3. Some 7,500 of these might be expected to qualify for service under such standards providing funds are available in the degree they were for cases in the Martin County sample.

If current screening standards other than those imposed by lack of funds continue to be applied, it appears unlikely that Vocational Rehabilitation Services will have met the potential needs of the 39-county area of eastern Kentucky which were the concern of this study until such time as its program involves at least three times as many cases as it did in 1964.

VOCATIONAL REHABILITATION NEEDS AND RESOURCES
in
EASTERN KENTUCKY

A Study by the Bureau of School Service
University of Kentucky
for the
Bureau of Rehabilitation Services
of the
Kentucky Department of Education

PART I

This is a report of a study of the vocational rehabilitation *needs* and *resources* of 39 counties of eastern Kentucky. The specific counties included in the study were selected by the Division of Rehabilitation Services of the Kentucky Department of Education as representative of the Appalachian area, on the assumption that generalizations established in the study might be applicable to the larger area. While descriptions of the counties actually reveal considerable variations in the socio-economic and cultural aspects of the area, a reasonable assumption may be that such variation is typical of all the Appalachian area.

Specifically, as per the agreement for this study, the assignment was to:

1. Define and describe the vocational rehabilitation needs of the thirty-nine county Appalachian area of eastern Kentucky.

2. Define and describe the resources, both directly corrective and educational, now available in the area for meeting those needs.

3. Bring together the information descriptive of the vocational rehabilitation needs and resources of the area in a form so organized that it may provide the basis for an appraisal of the adequacy of existing programs and for planning to make these programs more effective.

Rationale of the Study

This study has the basic aim of producing a realistic interpretation of the *potential* actual needs in a 39-county area for vocational rehabilitation services. Similarly, it calls for an inventory of the actual resources in the area potentially available for use in meeting such needs.

Unfortunately, there was available to those who did this study no practical, direct access to information regarding *all* the needs. This

fact emerges when one considers that a "need" for vocational rehabilitation as interpreted under policies of those administering it can be defined pragmatically only after application of the procedures required for acceptance of an individual client.

A person who presumably "needs" the services of the Bureau of Vocational Rehabilitation cannot actually be tabulated as a "need" unless and until:

1. A physician has affirmed that he has a physical (or psychological) disability.

2. A counselor (representing the administration of the vocational rehabilitation program) has affirmed that this disability constitutes a vocational handicap which by treatment and/or training is to a degree correctible.

3. Or, there is reason to assume that if he were an applicant for vocational rehabilitation services such affirmations would be made by physician and counselor.

The statement above is not meant to suggest that only actual *clients* of the vocational rehabilitation program are *needs*. Rather, one of the prime aims of the study is to discover how many are *potential* as well as *actual* clients. The major problem becomes, therefore, not the counting of actual cases but the development of means by which estimates of needs beyond those represented by actual cases may be made on some rational basis.

An ideal functional definition of need

The vocational rehabilitation program, as distinguished from "welfare" or "charity" or humanitarian-motivated programs, may ideally be conceived as one aimed at an economically sound investment of public funds. This statement is in no sense meant to imply that the program has no incidental humanitarian purposes or that it is set up in *opposition* to such purposes. Rather it combines human-welfare with economic objectives. Its aim is to take a person who is an economic liability to himself and to society as a whole and transfer him to a position of economic adequacy, that he may be a contributor rather than a parasite, not only for society but for himself. This does not mean that *every* client accepted in the program is expected to be vocationally rehabilitated. (An insurance company does not assume that all policy holders will survive to their respective life-expectancy ages.) It does mean, however, that on the average a high enough percentage of those accepted should be restored so that ultimately the investment in the program will be justified economically.

This conception of the program implies a definition of *need* that might be stated thus:

> A *need* is represented by any vocationally handicapped person who has a great enough likelihood of being restored to vocational adequacy, should he participate in the program, that if all such cases as his were accepted the program's investment in their restoration would be returned to society.

This definition implies that the program should be extended in the degree of willingness to accept risk in accepting clients as *nearly as possible* to the "point of diminishing returns," without, of course, being extended beyond that point. Like the manufacturer who seeks to extend his market so long as even a tiny margin of profit is available, so those administering the program should aim to include those cases which, despite comparatively high risk character, nevertheless (on the basis of long-range experience) would return society's investment with even the narrowest margin of "profit"—or since the program is not conceived as a profit venture, would let society "break even."

It appears impractical to interpret such a need as this concept represents in any definite terms through this study. Certainly the definition of any "point of diminishing returns" is beyond the scope of this study, although some relevant information may have been brought to light incidentally. This study may, for instance, make some contribution toward clarification of the concept of the program as an investment in that it reveals that the limits of the program are being set not at the point where counselors reject cases on the basis of high risk alone but at the point where they must respect budget limitations. This is to say: If this study shows that counselors *would* "invest" in more cases which they *would* regard as reasonable risks if ample funds were available, but do not do so because funds must be "stretched," then a *need* for more funds would appear to have been demonstrated—ambiguous though the actual *amount* of the need may be.

A feasible definition of need

All research effort is inevitably limited by the availability of objective information. This effort is no exception. No measuring instrument is currently available by which to gauge the numbers of disabled who, though potentially eligible:

1. Would use vocational rehabilitation services if more funds were available.
2. Would use them if they knew about them.
3. Would use them if they were not fearful
   - —of the stigma of the services' sometimes being associated with "relief" or "welfare," or conversely,
   - —of *losing* a current "relief," "welfare," or "disability" status that means some security,

—of feeling obliged, if they used the services, to accept an undesirable job or one in an undesirable location,

—of doctors, hospitals, and physical treatment.

4. Would use the services if inertia and hopelessness could be dispelled.

Obviously until the numbers of these are known, the *potential* need for the service cannot be estimated with any great degree of accuracy.

The Kentucky State Plan for administration of the program calls for application of three criteria for acceptance of each client:

1. The presence of physical or mental disability and the resulting functional limitation in activities.

2. The existence of a substantial handicap to employment caused by the limitations resulting from such disability.

3. A reasonable expectation that vocational rehabilitation services may render the individual fit to engage in a remunerative occupation.*

Once these criteria have been satisfied by a client, the amount and kind of service actually delivered to him under the vocational rehabilitation program depends partly upon his financial circumstances. From his viewpoint, service is available to him only in the measure that the counselor judges that he has a justifiable financial need for assistance.

It should be made clear, however: Service actually begins when action starts on a case following referral. When a counselor writes to, or calls, or visits a case which has been referred to him, he is actually attempting to guide the prospective client toward becoming a more economically responsible and adequate person. When the checking of a referral results only in a rejection, or reference to some other agency, it represents a screening process as inevitably and legitimately a part of the service as the grading of materials for manufacture of a product.

Obviously, the decisions regarding whether and how much financial help should be given the client involve the counselor in the making of somewhat arbitrary judgments within a range of considerable latitude concerned with balancing of resources of the program against the resources of the client himself. "Need," certainly in a practical sense, exists in degrees and, ultimately, must have a subjective base.

For purposes of this study, it becomes expedient, therefore, to set

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* Kentucky Department of Education, Bureau of Rehabilitation Services, *Counselors' Manual of Operations*, July 1, 1964, Section 5.5, survey interview form, p. 4.

up definitions of needs which can be to an extent objectified. Such *needs*, it appears, may be defined in terms of three levels:

> 1. All persons who have physical and/or mental disabilities which can be validated by appropriate authorities* and who *might*, upon interview with a counselor, be judged to meet the three criteria above.
>
> 2. All persons who have such disabilities whom counselors would accept into the program provided adequate funds were available.
>
> 3. Persons represented by actual cases on record under whatever limitations on funds operate at the moment. (These are, it may be pointed out, the *needs* as defined bit by bit in the individual decisions doctors and counselors have made as they evaluated each case on its merits—particularly counselors who must weigh the exigencies of budget against the risk each client represents.)

Level one represents the "ideal" potential. That is, persons in this category are persons who might properly be expected to consider the service or be solicited as possible clients by the counselor. Obviously, some of this group would not be accepted into the program by present standards, as many are not accepted now after interviews. The proportion accepted, however, would depend upon the future policies of acceptance and the availability of funds.

Level two represents potential cases if adequate funds were provided, if appropriate resources were available to serve them, if the program were widely known and accepted, if referral agencies gave full support, and if counselors felt free to accept clients at a risk approaching what they adjudged to be the "point of diminishing returns."

Level three represents cases actually accepted in the program. It represents the level at which the limitations of budget, of job opportunities, and of available treatement and training resources are considerations, along with judgments of the likelihood that the client is a person of such persistence and responsibility as will make treatment and training effective.

Defining "resources"

Little attempt was made in this study to discover resources for treatment and training in the area beyond those already used. A complete catalog was made of resources (doctors, clinics, hospitals, schools, training programs, apprenticeship arrangements, etc.) actually

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* Generally such disabilities would be affirmed by a medical doctor, psychiatrist, or psychologist. In some instances, however, the vocational rehabilitation counselor may recognize a disability which might not be recognized by these. For example, a counselor may accept a case which calls for cosmetic treatment.

used in the program during the 1964 calendar year. Classifications were made within this catalog, however, by nature of resource (*personnel or facility*) and location. This catalog has been delivered to the Bureau of Vocational Rehabilitation of the Kentucky Department of Education.

Resources are, of course, the converse of *needs.* That is, the greater the unmet need, presumably, the less the resource for meeting that need. As the study team attempted to determine what were the unmet needs (in terms of potential case load if resources were available and applied), they therefore dealt indirectly with the problem of resource limitations, assuming that any potential additional case load uncovered represented a shortage of resources which, when quantified, could readily be translated as a need for so much in funds, personnel, or facility. In a more direct sense, a shortage of resources was indicated in the section of this report dealing with the probable increase in case load which might come if more counseling offices were provided.

Procedures in the study—basic data

The "foundation" data for this study are in the records of some 3,830 clients in the 39-county area who were served by the program in the calendar year 1964. The entire calendar year was used in order that a complete cycle of the program might be comprehended, so that the time when appropriated funds became available an entire period between appropriations would be included. The calendar rather than the fiscal year was used simply because the data would be more recent as a result of the fact that the study itself was originally timed to be completed near the end of a fiscal year. The sampling was for but the one year on the assumption that more recent information would be more valid toward interpretation of current needs. All the clients served by the program in the 39-county area were included in the hope that frequencies would be great enough in sub-groups that generalizations could safely be made on the basis of the data. Included in the samples were clients who had started in years before 1964 and who were carried in the records through 1964 or were terminated during the year. Also, there were cases begun during the year and carried on for the future, and a comparatively few completely processed during the year.

PART II

CHARACTER OF AREA OF STUDY

A widely accepted theory, which in fact represents a construct for explaining the dynamic interrelationships of forces which are determinants of social phenomena, is that a cyclic cause-effect relationship exists among various phases of a situation. Poverty, poor health, dependency, and low levels of employment, education, and income, and also physical disability, are (in some instances partly by definition) measures of each other, for they "conspire" with each other. It would seem reasonable, therefore, to assume that generally the proportion of the disabled in a given group is related to the general economic, health, and educational levels of the group. On such an assumption, there were gathered certain data regarding the 39 counties of the study. Some of these are presented here for any value they may have in suggesting explanations of the findings of this study to the reader. Limitations of this study, however, have precluded any more than a superficial, and unsuccessful, attempt by the study team to produce an "index" based on an amalgam of such information for prediction or projection of disability on a rational basis.

As previously indicated, the counties in the study are different, so different that any assumption that the incidence of disability might be rather evenly distributed throughout them appears unreasonable—though for one hypothetical calculation in this study such an assumption is made. Superficial but extreme differences in size and population are obvious (see maps and population figures in tables which follow). Less obvious, unless one has intimate contacts with the areas, are differences in wealth, economy, culture, and health levels which are "thumb-nailed" here in the tables which follow.

Some comparisons among the counties—rural vs. urban

Below is a ranking of the 39 counties on a "rural-urban" scale developed by Beers and Aurbach and applied to Kentucky counties during the early 1950's. Though conditions in the counties have since changed considerably, especially with decline of employment in the major coal-producing counties and consequent out-migration, the relative positions of the various counties in the ranking would appear to be roughly the same. Among various measures weighted in

this scale are those of educational level, wealth, population per physician, per capita income, percentage of dwellings with running water, mileages of state-maintained roads, and percentage of hospital births.*

The rankings of the 39 counties, including the "scores" Beers and Aurbach assigned them on the index, are (with lower scores representing urban; higher scores, rural):

RURAL-URBAN INDEX

Rank	County	Score	Rank	County	Score
1	Bell	59.5	20	McCreary	95.5
2	Whitley	59.5	21	Lee	100.0
3	Pulaski	68.0	22	Powell	100.0
4	Floyd	73.0	23	Lewis	100.0
5	Bath	73.0	24	Rockcastle	103.0
6	Harlan	73.0	25	Menifee	103.0
7	Estill	82.0	26	Clinton	103.0
8	Rowan	82.0	27	Breathitt	106.0
9	Johnson	85.0	28	Wayne	108.5
10	Russell	85.0	29	Clay	108.5
11	Perry	85.0	30	Magoffin	108.5
12	Pike	88.5	31	Wolfe	111.0
13	Letcher	88.5	32	Casey	115.0
14	Adair	91.0	33	Elliott	116.0
15	Carter	91.0	34	Jackson	116.0
16	Lawrence	95.5	35	Knott	116.0
17	Knox	95.5	36	Leslie	116.0
18	Laurel	95.5	37	Martin	116.0
19	Cumberland	95.5	38	Morgan	116.0
			39	Owsley	116.0

Median score among 120 counties of state 59.5

Draft rejections

Another scale, one that might especially be expected to parallel the incidence of disability, is that developed by the study team on the basis of armed services draft rejection records for 1963-64.** These were rejections for educational, psychological and physical reasons. The 39 counties are ranked, and also indicated are their ranks among the 120 counties of the state.

Health levels

Sutton and Russell in 1964 published a "health level" index of the counties of the state. Here are the scores assigned the 39 counties of this study, in rank order from level of "best health" to lowest health

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* Beers, Howard W., and Aurbach, Herbert A., "How Urban Is your County?" *Kentucky Farm and Home Science*, III, No. 3, Summer 1957, pp. 6-7.

** We are indebted to Ralph J. Ramsey, Rural Sociology, University of Kentucky for gathering the data for the calculations in this table and for the idea of such comparisons.

DRAFT REJECTIONS 1963-64

County	Board	No. Examined	No. Rejected	% Rejected
1. Wayne	Monticello	303	221	73
2. Leslie	Hyden	331	237	72
3. Clay	Manchester	480	334	70
4. Jackson	McKee	285	194	68
5. Rowan	Morehead	223	149	67
6. Wolfe	Campton	133	87	65
7. Lee	Beattyville	138	90	65
8. Martin	Inez	212	138	65
9. Clinton	Albany	189	123	65
10. Menifee	Frenchburg	83	54	65
11. Owsley	Booneville	131	85	65
12. Floyd	Prestonsburg	788	502	64
13. Elliott	Sandy Hook	123	78	63
14. Morgan	West Liberty	173	108	62
15. Knox	Barbourville	432	266	62
16. Magoffin	Salyersville	247	152	62
17. Cumberland	Burkesville	157	96	61
18. Breathitt	Jackson	407	244	60
19. Carter	Olive Hill	444	264	59
20. Lewis	Vanceburg	238	141	59
21. Knott	Hindman	539	318	59
22. Bath	Owingsville	173	100	58
23. Letcher	Whitesburg	593	342	58
24. Perry	Hazard	637	366	57
25. Rockcastle	Mt. Vernon	295	167	57
26. Adair	Columbia	271	153	56
27. Bell	Pineville	615	347	56
28. Whitley	Williamsburg	368	206	56
29. Johnson	Paintsville	405	226	56
30. McCreary	Stearns	315	175	56
31. Lawrence	Louisa	212	115	54
32. Pike	Pikeville	1280	687	54
33. Harlan	Harlan	783	418	53
34. Estill	Irvine	195	104	53
35. Casey	Liberty	317	168	53
36. Laurel	London	441	212	52
37. Russell	Jamestown	252	127	50
38. Pulaski	Somerset	562	278	49
39. Powell	Stanton	85	40	47
Total for Kentucky		36,852	20,315	55

level, with ranks of the respective counties among the 120 counties of the state also.*

HEALTH LEVELS

39 County Rank	County	Index	Rank Among 120 Counties
1-2	Clinton	72	5
1-2	Wolfe	72	5
3-4	Johnson	94	12
3-4	Whitley	94	12
5	Bath	96	14
6	Cumberland	117	20
7	McCreary	125	22
8	Morgan	131	26
9	Adair	138	30

* Sutton, Willis A., and Russell, Jerry. *The Social Dimensions of Kentucky Counties on Each of 81 Characteristics.* (Lexington, Kentucky: Bureau of Community Service, University of Kentucky, September, 1964.)

10-11	Knox	139	32
10-11	Menifee	139	32
12	Pulaski	144	38
13	Lewis	154	43
14	Bell	160	44
15	Owsley	169	50
16	Leslie	180	53
17	Jackson	183	54
18	Lawrence	186	60
19	Martin	189	64
20	Powell	190	66
21	Lee	191	68
22	Elliott	201	76
23	Wayne	203	77
24	Russell	205	78
25	Pike	208	81
26	Breathitt	210	82
27	Estill	211	83
28	Letcher	212	84
29	Harlan	229	94
30	Casey	230	95
31	Rockcastle	231	96
32	Clay	235	100
33	Carter	236	101
34-35	Magoffin	249	106
34-35	Perry	249	106
36-37	Knott	251	109
36-37	Laurel	251	109
38	Floyd	270	114
39	Rowan	323	120
	Mean rank of 39 counties among 120 counties of state		63.1

Per capita income

In per capita individual income in 1963, the 39 counties ranked as follows, with their comparative positions among the 120 counties indicated.*

As can be readily observed by comparisons among these data and those to follow regarding participation in the Vocational Rehabilitation program, the scales do not appear to parallel Vocational Rehabilitation participation levels in the various counties with anything approaching consistency. (It may be noted too that there are some wide disagreements among these scales themselves, though some general agreements do appear.)

Obviously, however, the whole 39-county area appears at a disadvantage to the rest of the state. In none of the three scales where comparisons are made to the remainder of the 120 counties does the average rank of these counties fall within the desirable one-half of the rankings. To such an extent the scales are in agreement. This fact suggests that the scales may be, for general and gross measurements, valid, but not for more refined distinctions—as a ruler may serve to

* Bishop, William D., *Kentucky County Income, 1963, With Comparative Data* 1958-1963, Bureau of Business Research, University of Kentucky, Lexington, Kentucky, 1965, pp. 12-15.

INDIVIDUAL ANNUAL INCOME 1963

	County	Per Capita	Rank Among 120 Counties
1	Harlan	$ 1,293	57
2	Letcher	1,186	74
3	Bath	1,167	75
4	Powell	1,140	77
5	Pulaski	1,132	78
6	Whitley	1,129	79
7	Laurel	1,094	81
8	Perry	1,084	82
9	Bell	1,071	84
10	Leslie	1,049	74
11	Pike	1,020	88
12	Lawrence	1,020	89
13	Floyd	1,016	90
14	Morgan	996	91
15	Cumberland	990	92
16	Johnson	968	94
17	Estill	945	95
18	Lewis	933	96
19	Adair	932	97
20	Rowan	926	98
21	Russell	905	99
22	Casey	871	102
23	Lee	867	103
24	Wayne	855	104
25	Carter	854	105
26	Wolfe	842	106
27	Menifee	828	107
28	Clinton	814	108
29	Elliott	795	110
30	Knott	759	111
31	McCreary	754	112
32	Rockcastle	737	113
33	Jackson	711	114
34	Knox	707	115
35	Clay	698	116
36	Breathitt	697	117
37	Owsley	667	118
38	Magoffin	635	119
39	Martin	473	120
Mean rank of 39 counties among 120 counties of state			97.18

measure a table but not to measure the minute tolerances required for an engine.

Suffice it to say, the study team discovered no more rational "scale" for comparing the various counties on the basis of disability incidence than that represented by the actual experience in numbers of Vocational Rehabilitation cases. Indeed, it appeared advisable to "extract" certain variables in order to arrive at a scaling on this basis. Future research, it would seem, might well be directed toward development of a "scale" or "index" for measuring disability incidence by inference from commonly available data.

Comparison to national study

The Dishart study provides some information on a national

scale against which that of the 39 eastern Kentucky counties of this study may be compared. In general the differences in proportions of major groupings of clients were small. Dishart found 36% of all applicants for service to be females. In this study, women represented only 31.4% of the clients. He reported 5% of age 60 or older; this study found less than 2% in the 60-plus group.

The national proportion of applicants accepted for services, according to Dishart, was 54%—and it was 54.54% for the 39-county area. Nationally, 5,242 of the 39,253 persons (13.35%) not accepted for services were persons who refused to accept the service. In the sample of this study, only 29 (1.66%) of the 1,741 who did not receive services did not do so because of refusal to accept services, according to records. While clients in the 39-county eastern Kentucky area appear to be less likely to reject the services of Vocational Rehabilitation, the overall proportion of those not served for all reasons is astonishingly similar between the two groups: 46.34% of the total sampling nationally, 45.46% of the sampling in this study. It would appear, therefore, that standards for acceptance of clients for service had been applied with rather equal rigor to referrals in both samples.

In kinds of impairments represented in the samples, the proportion in the mental retardation category in this study far exceeded that in the Dishart sample, because of a special project in three of the 39 counties of this study in which intensive effort was made to involve this group—as explained later in this report. When the effects of this special effort are extracted, the two samples have the following parallels.*

COMPARISON OF DISABILITIES REPRESENTED IN CLIENTS OF EASTERN KENTUCKY COUNTIES AND THOSE OF DISHART'S STUDY

	39-County Eastern Kentucky Sample		National Study Sample	
	Number	Percent	Number	Percent
Amputations	121	4.3	3,537	4.2
Orthopedic impairments	757	25.2	19,852	23.4
Blindness and visual defects	283	9.4	7,791	9.2
Deafness and impaired speech	177	5.9	4,285	5.1
Psychosis and neurosis	58	1.9	9,293	11.0
Other personality disorders	30	1.0	4,191	4.9
Mental retardation	47	1.6	5,993	7.1
Cardiac diseases	190	6.3	5,652	6.7
Epilepsy	40	1.3	1,855	2.2
Tuberculosis, pulmonary	132	4.4	2,805	3.3
Hernia	110	3.7	1,741	2.0
Other disabling conditions	914	30.5	16,927	20.0
Not reported	140	4.7	807	1.0
	2,999	100.2	84,699	100.1

* Dishart, Martin, *A National Study of 84,699 Applicants for Services from State Vocational Rehabilitation Agencies in the United States*, National Rehabilitation Association, Washington, D. C., 1964.

While some variations between the respective percentages are obvious—and to be expected—it would appear that none are striking. In general, it appears that the sampling taken in the 39-county area of eastern Kentucky for this study is substantially a miniature of that of the national study. Further, although the area is clearly "disadvantaged" by comparison to the rest of the state (and most certainly the nation), the program of Vocational Rehabilitation as administered in the area is in substantial measure parallel to that of the nation as a whole.

The reality that there is considerable variety in the area of the study should not be overlooked.

Disadvantage in Vocational Rehabilitation resources

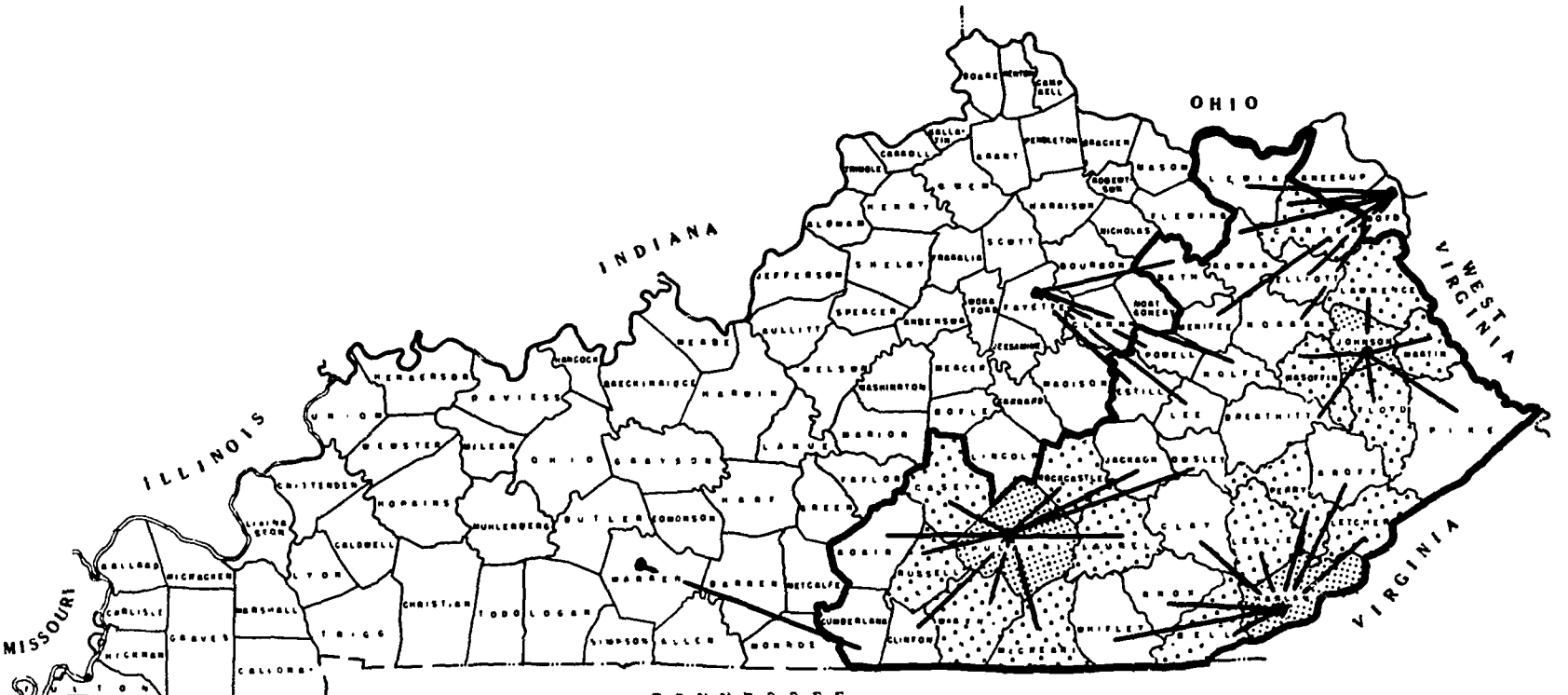
The socio-economic disadvantages which characterize the area undoubtedly impinge upon the Vocational Rehabilitation program with regard to disability level and financial limitations of referrals and also with regard to availability of treatment and training resources. The pattern of frequency of use of various resources in respect to location implies that resources for treatment and training requiring the more technical and elaborate facilities and organization are outside the 39-county area. Note in the table below that while resources located in the referral's own or adjoining county get most frequent use, those in the rest of the 39-county area get little use—suggesting that though physical examinations, minor operations, and some training facilities are locally available, major facilities require more travel. The table below interprets the dispersal of 1,747 uses of treatment and training resources by various clients as reported in this study.

USE OF RESOURCES IN RELATION TO DISTANCE FROM CLIENT

Times used by Some Client	In Immediate or Adjoining County	Elsewhere in 39 Counties	Elsewhere in Kentucky	Out of State
1st	523	41	97	19
2nd	322	56	151	30
3rd	169	31	86	19
4th	57	9	43	10
5th	19	3	19	6
6th	6	2	10	2
7th	5	0	4	0
8th	2	0	3	0
9th	0	0	2	1
	1,103	142	415	87

A consideration which this study team did not investigate was the reasonable likelihood that the distance to some facilities is a deterrent to participation by people of the Appalachian culture which is characterized by provincialism and by strong, local kinship ties.

LOCATIONS OF DISTRICT VOCATIONAL REHABILITATION OFFICES SERVING THE AREA OF THE STUDY



Counties containing district offices

Counties adjoining counties containing district offices

Counties not adjoining counties containing district offices serving them

PART III

BASIC DATA AND SOME IMPLICATIONS OF THEM

The information gathered from the records of the clients of Vocational Rehabilitation Services during the calendar year 1964 provides some patterns which carry implications regarding the potential needs of the area as defined at "Level 2" (see page 13). These implications must be drawn, however, on the basis of particular assumptions which will be pointed out as the information is examined herewith.

Description of clients

Since this study is largely inductive in procedure, conducted on the assumption that exploration might be expected to expose clues to hypotheses which should be subjected to testing, it would appear appropriate, first of all, to get a description of the clients served by the program. True, a simply descriptive presentation, however neatly organized, often offers little tangible evidence to justify generalizations beyond those that are simply descriptive. Occasionally, however, such descriptive presentations, besides orienting the reader to the problems under study, do imply generalizations. Accordingly, a brief description of the character of the clients who were served by the program in 1964 is presented.

It should be noted that the clients included in this report are those who were in "active" status during the calendar year 1964 (January 1, 1964, through December 31, 1964). Included are:

1. Clients held over from previous years whose programs were completed during 1964.
2. Clients held over from previous years whose programs extended beyond 1964.
3. Clients who entered during 1964 and completed their programs during the year.
4. Clients who entered during 1964 but whose programs were not completed that year.

The graphs and tables which follow would appear to be self-explanatory so far as the descriptive character of clients in the sample is concerned. Where the pattern of information is such that vocational rehabilitation needs are implied, the implication and the basis for the implication is explained.

At the end of the calendar year, 1964, records in the six district offices which serve the 39-county area under study showed that 3,830

cases were either still being served by the program or had been served at some time during the year 1964. The status of those cases as of December 31, 1964, is indicated in Graph 1.

Personal characteristics of the 3,830 cases included in this study are indicated in Graph 2. As can be seen, men outnumbered women more than two to one among the clients. The age group of 16-19 years included more than one third of the total. This group was especially enlarged, however, by a special project dealing with the "mentally retarded" in three counties, since mostly the project involved retarded high school students and recent school dropouts.

Major disabling conditions which brought the 3,830 clients into the program are indicated in Graph 3, with principal employment areas from which they came indicated in Graph 4.

A striking variation in the frequency of cases per county appears in Graph 5, and the conversion of frequencies to percentages of the estimated total adult* population in each county as shown in Graph 6 does not reduce the variation substantially. The disparity between percentages of the total population who are involved in the program in Martin County and in Bath County, for instance, is by the ratio of 8:1. (For reasons yet to be explained, the figure for Floyd, Harlan, and Rockcastle counties cannot be appropriately compared to those of the other counties.)

Obviously, some explanation would appear to be in order for differences in frequency of cases among the respective populations of the counties. It seems reasonable to assume, for instance, that the program had not been exhaustively "pushed" in some counties, or that communication channels for informing the public about the program did not exist or were not functioning in some by comparison to others. An attempt is made in this report to analyze and quantify the general need level on the basis of an example which became available just as this study was about to be concluded and for which an extension was granted.

Chronology of status steps in processing clients

The study team hypothesized that limitations in funds might be a limitation also on the Vocational Rehabilitation program. The reason-

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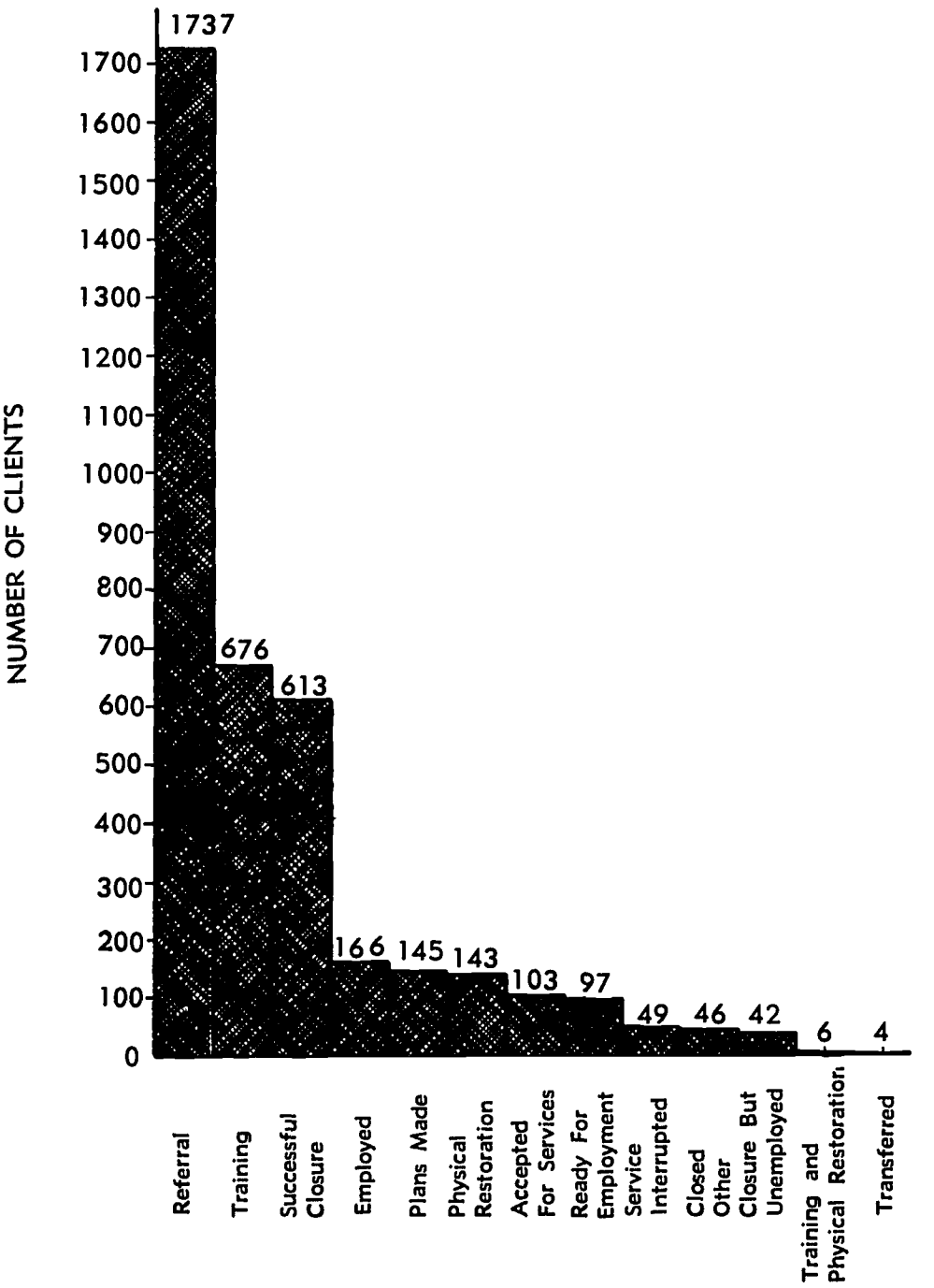
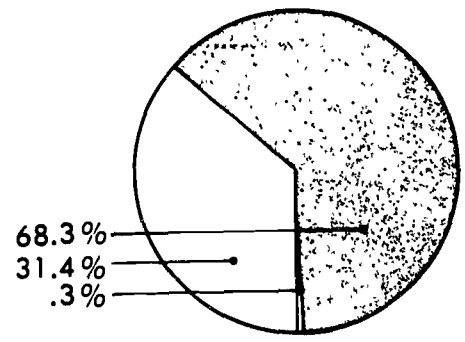
* These estimates are made on the basis of estimates of the July 1, 1964 population, from which the proportion of the population below age 15 was subtracted. This proportion was calculated from 1960 census figures, the assumption being that the proportion would remain fairly constant for the respective counties. The 1964 estimates of total populations per county were provided by Eun Sul Lee and David Kruegel of the Department of Rural Sociology, University of Kentucky.

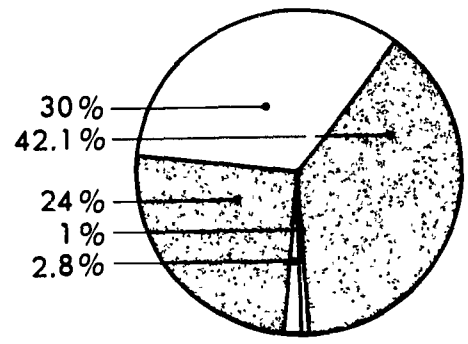
GRAPH 1.—STATUS OF CASES AS OF DECEMBER 31, 1964 OF CLIENTS IN 39 EASTERN KENTUCKY COUNTIES FOR THE 1964 CALENDAR YEAR.

(EXCLUDING 3 NOT REPORTING)



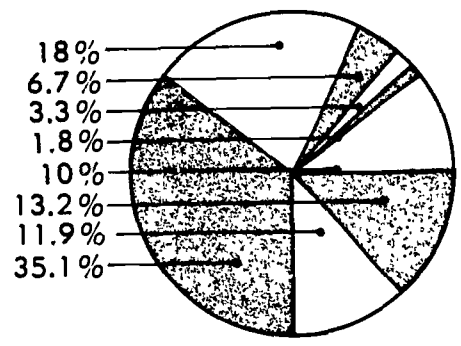
SEX:
MALE: 68.3%
FEMALE: 31.4%
UNREPORTED: .3%





MARITAL STATUS:
MARRIED: 30.0%
SINGLE: 42.1%
DIVORCED: 2.8%
SEPARATED: 1.0%
NOT REPORTED: 24.0%

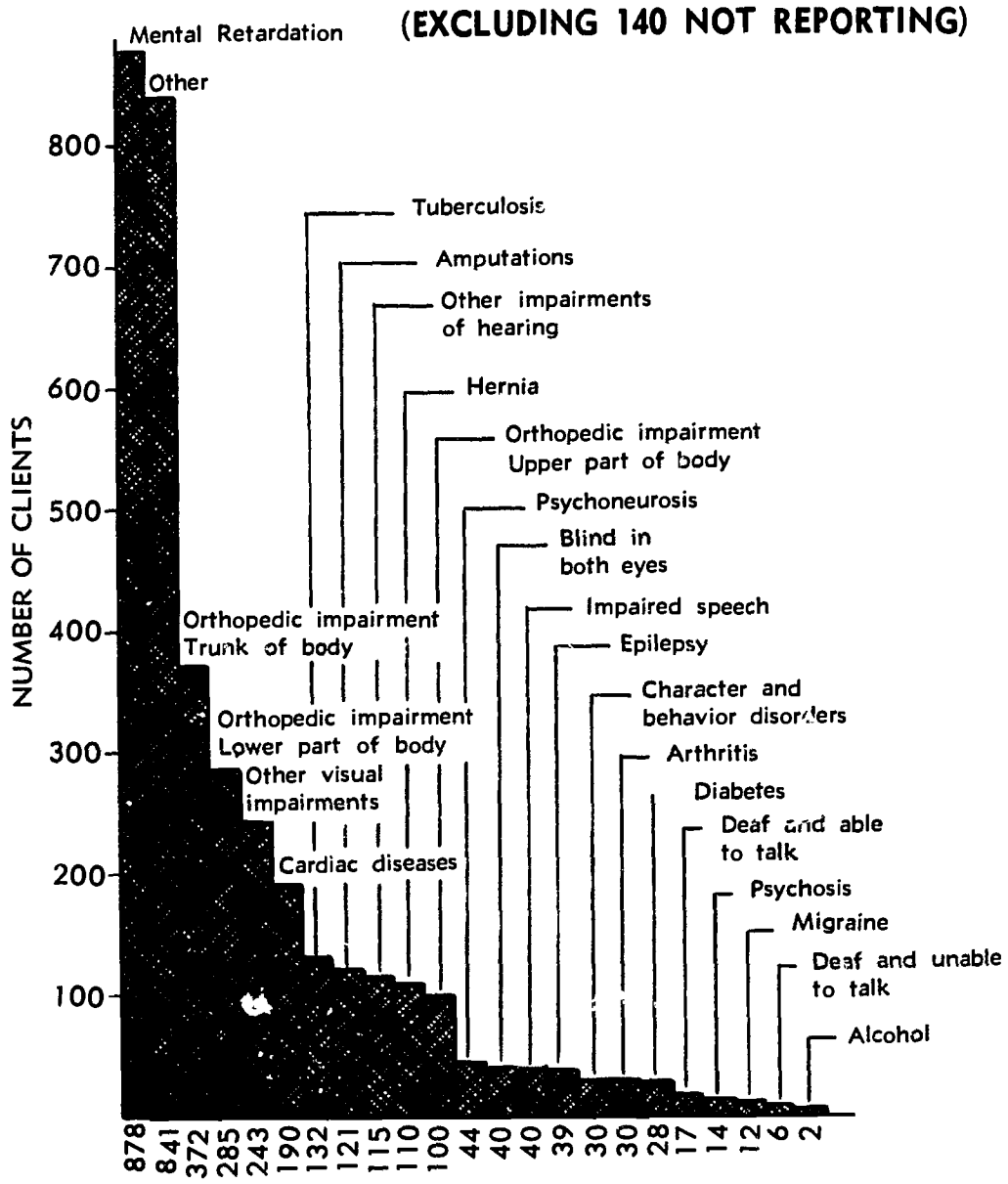
AGE OF CLIENTS:
60 & OVER: 1.8%
50-59. 6.7%
40-49: 11.9%
30-39: 13.2%
20-29: 18.0%
16-19: 35.1%
UNDER 16: 3.3%
UNREPORTED: 10.0%



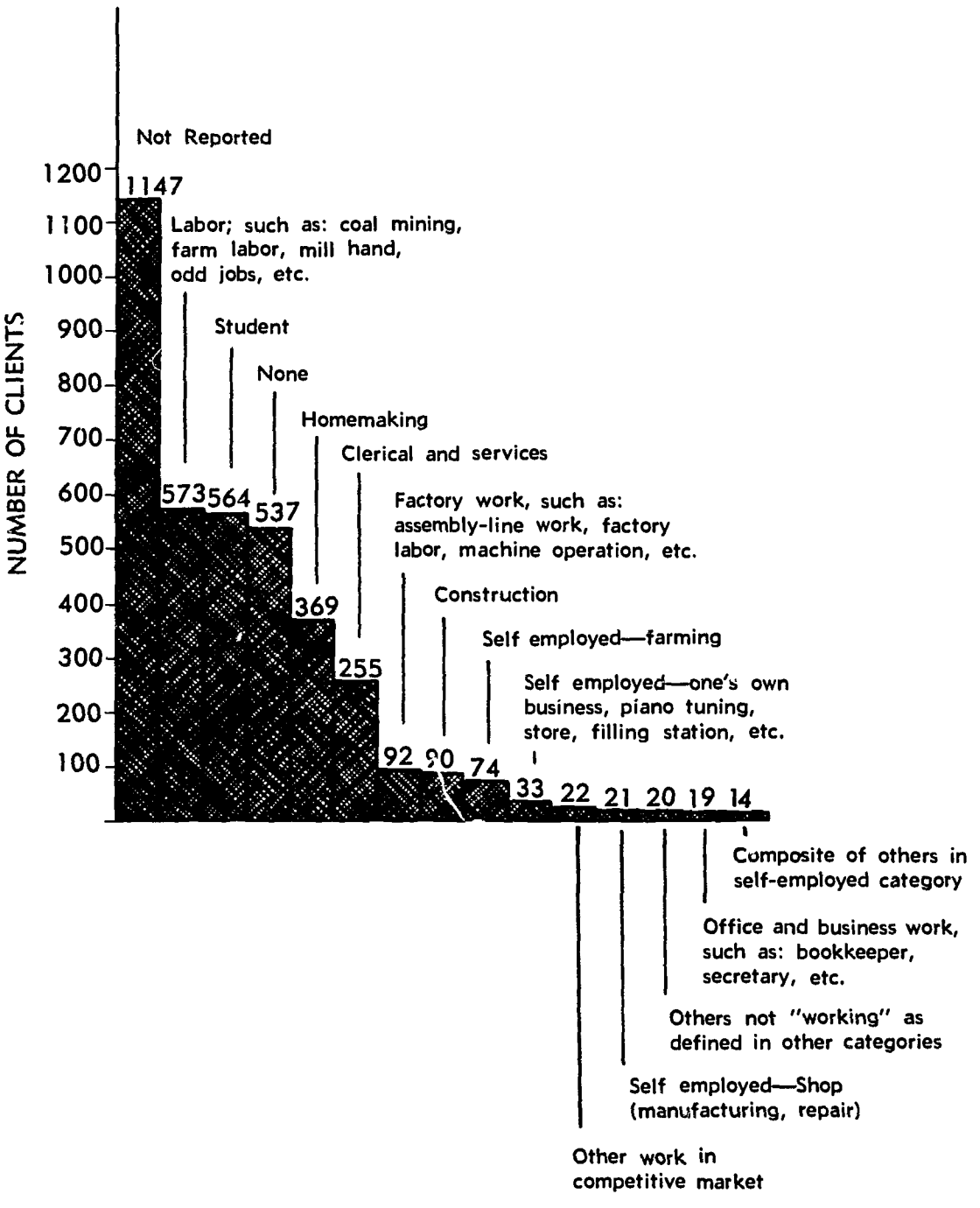
GRAPH 2.—DISTRIBUTION OF TOTAL NUMBER OF CLIENTS ACCORDING TO MARITAL STATUS, SEX, AND AGE, ACCORDING TO A STUDY OF CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR 1964 CALENDAR YEAR.

GRAPH 3.—MAJOR DISABLING CONDITION OF CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR 1964 CALENDAR YEAR.

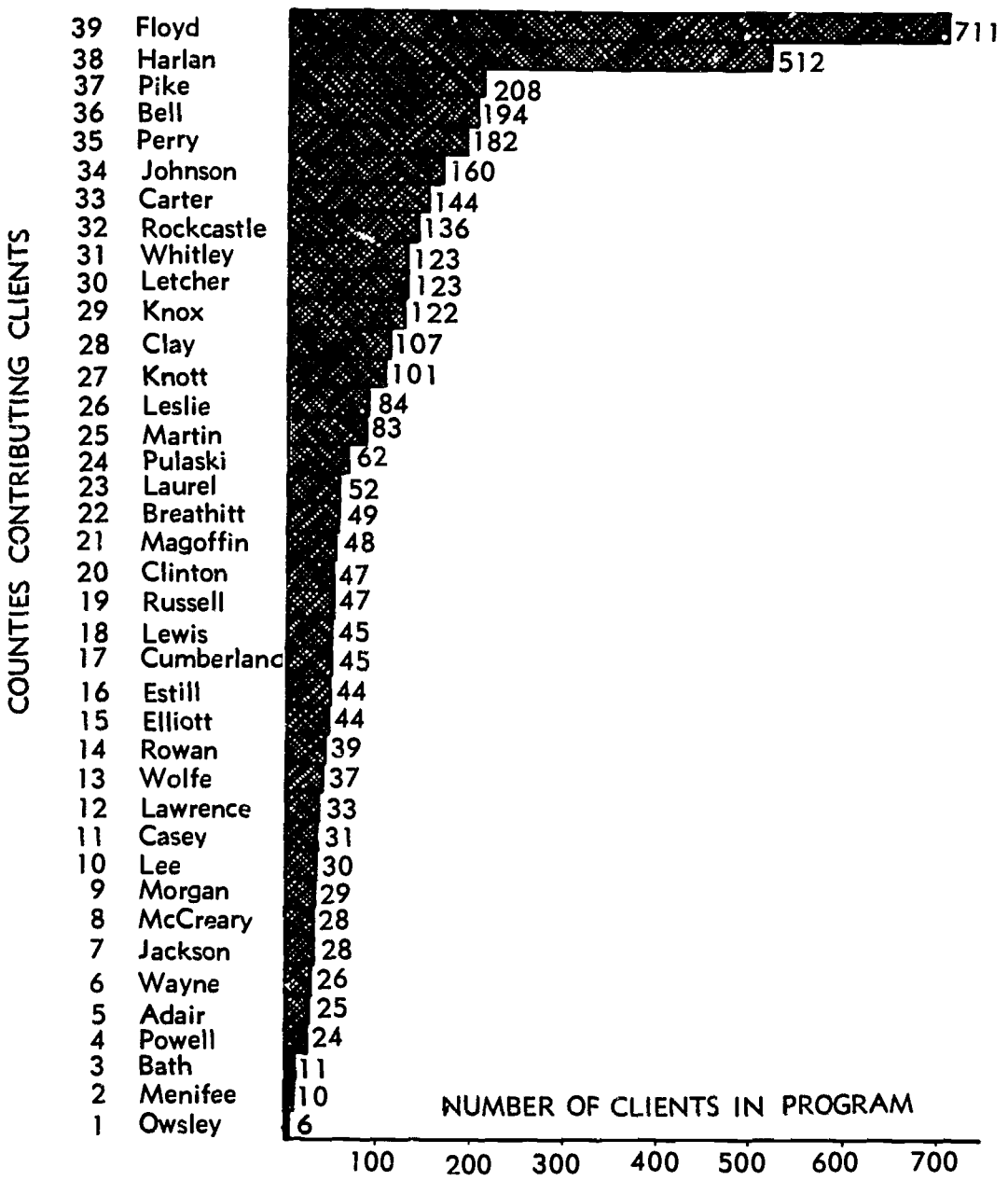
(EXCLUDING 140 NOT REPORTING)



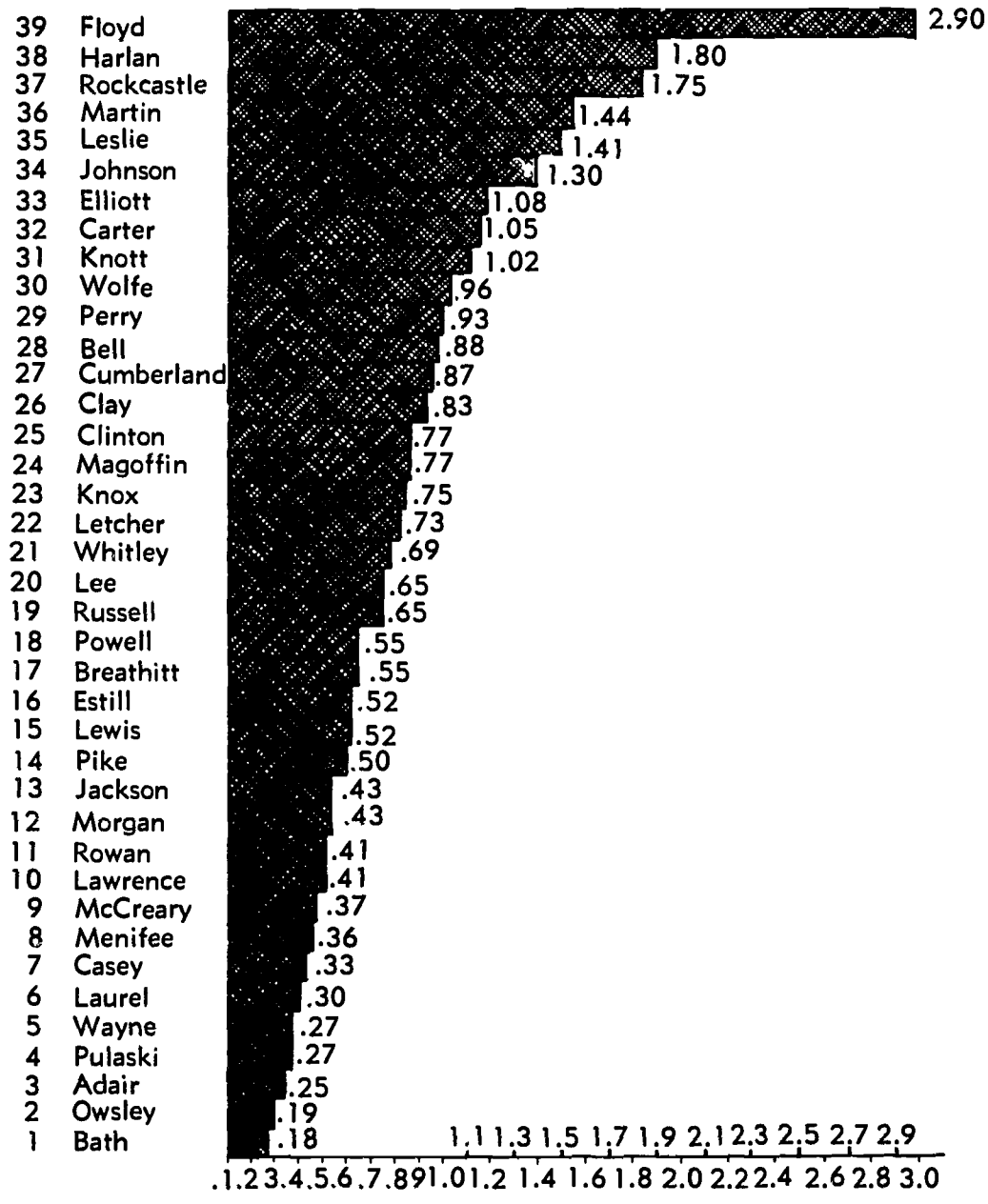
GRAPH 4.—CLASSIFICATION OF PRINCIPAL EMPLOYMENT OF CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR 1964 CALENDAR YEAR.



GRAPH 5.—TOTAL NUMBER OF CLIENTS FROM EACH COUNTY BASED ON A STUDY OF CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR 1964 CALENDAR YEAR.



GRAPH 6.—PERCENT OF ADULT POPULATION OF EACH COUNTY WHO WERE CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR THE 1964 CALENDAR YEAR.



ing was that when funds are available more clients are accepted, then moved along at a pace that "stretches" resources toward availability of more funds again at, ordinarily, the beginning of the fiscal year. It was assumed that if a tendency appeared for processing steps to "pile up" at points which might be related to the availability of funds, the "pile-up" would indicate a need for more funds than are regularly available—a need represented by existence of a group of potential clients who *would* have been served (or would at least have been served *more promptly*) had more funds been available. The reasoning provides a comparatively acceptable rationale for determining whether or not there is a greater need than is being met, but little basis for quantifying that need.

Graphs 7 through 15 are of the total month by month in each status or "step" through which clients are regularly processed. There is a graph for each year in which there were clients who were in the program during the 1964 calendar year. The graphs for 1957 represent, therefore, the clients who were served during the 1957 calendar year and who had continued in the program into 1964. Graph 15 combines the frequencies from all the other graphs for years 1957 through 1964.

Note that despite some seemingly random variations, there tends to be a peak of *making of plans* in July and August—a peak which, it seems reasonable to assume, can be explained as a hold-over of delayed cases, then a sudden openness to acceptance of clients, which we assume to be related to availability of more funds as the fiscal year opens July 1. This rationale offers the obvious implication that there are unmet needs consequent to budget limitations of the program. The amount of those needs can only be judged at this point, perhaps, by an individual's subjective appraisal of the data interpreted in the graphs.

Atypical character of the 1964 data

Unfortunately, there is an obvious bias in the figures just presented which prevents our offering them as a valid sampling of the 39 counties: A special project which operated in three counties during the sample year (1964) "skews" the over-all picture because it greatly enlarges the category, "Mental Retardation." This "skew" expresses itself most obviously, perhaps, in the great proportion of "mental retardation" cases (Graph 3), and in the unusual peak of "referrals" in May 1964 (Graph 14), which marks the initiation of the project in the three counties.

This project, operated in Floyd, Harlan, and Rockcastle counties, was one in which three counselors were especially assigned to involve in the program the "mentally retarded," these being drawn primarily

from the ranks of youth school dropouts.* Psychological examinations were administered to these young people, and those having mental test scores falling between I.Q. 50 and 85 were considered for further service under the program.

This special effort in the three counties may, with some reasonableness, be assumed to have turned up a "need" in the three counties in which the project operated which potentially exists in the other 36 counties in which like conditions generally exist. This is to say:

Special effort revealed a frequency of a particular disability (mental retardation) far greater than appeared under the regular operation of the program (both in the other counties and in the three special project counties *before* the special effort was made). One may choose to assume that the effort in the three counties was in a practical sense exhaustive—that additional effort would not substantially have increased the numbers of mentally "disabled" uncovered among the youth group. Indeed, such an assumption appears if anything *too* conservative. It suggests this simple, limited, generalization:

If equal effort were invested in such a project in the other counties, equal proportions of the population would be revealed as representing a "need" for vocational rehabilitation services to clients of the "mentally retarded" category, assuming basic similarities among the counties.

Some estimate of what these numbers might be will be developed shortly. It appears necessary at this point in this report, however, to adjust the gross figures offered in the preceding graphs so that the special "mentally retarded" group project will not perceptibly "skew" them. Graphs 16 through 18 are an interpretation of the same data which appear in Graphs 3, 5, and 6 respectively, but with the special project cases removed.** They would appear to represent, therefore, a more typical sampling of the program as it operated in the 39-county area in 1964.

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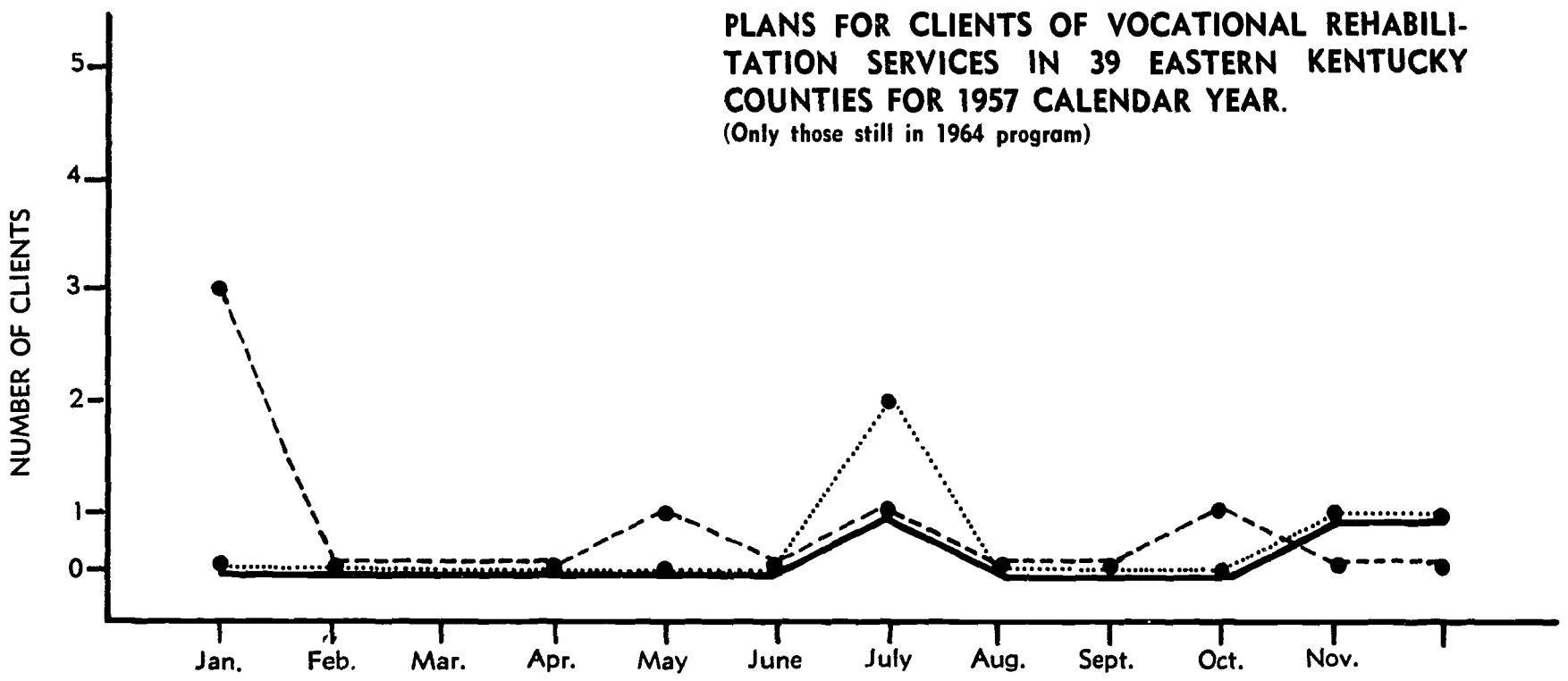
*Actually, the I.Q. score is not the only consideration in the qualification of eligibility for service to "MR's." The statement of criteria for the project includes:

> ". . . The early concept of eligibility for rehabilitation of the mentally retarded seems to over-emphasize the importance of the intelligence quotient, but experience has revealed that other significant areas should be considered for acceptance. Since it seems evident that factors other than sheer lack of intellectual capacity can cause retardation in a functional sense, then other factors must be considered in the total picture of the person's mental retardation in the light of educational, medical, social, environmental, and emotional adjustment." (From *The Establishment of an Organized Coordinated Program of Vocational Rehabilitation and Special Education for the Mentally Retarded*, mimeographed.)

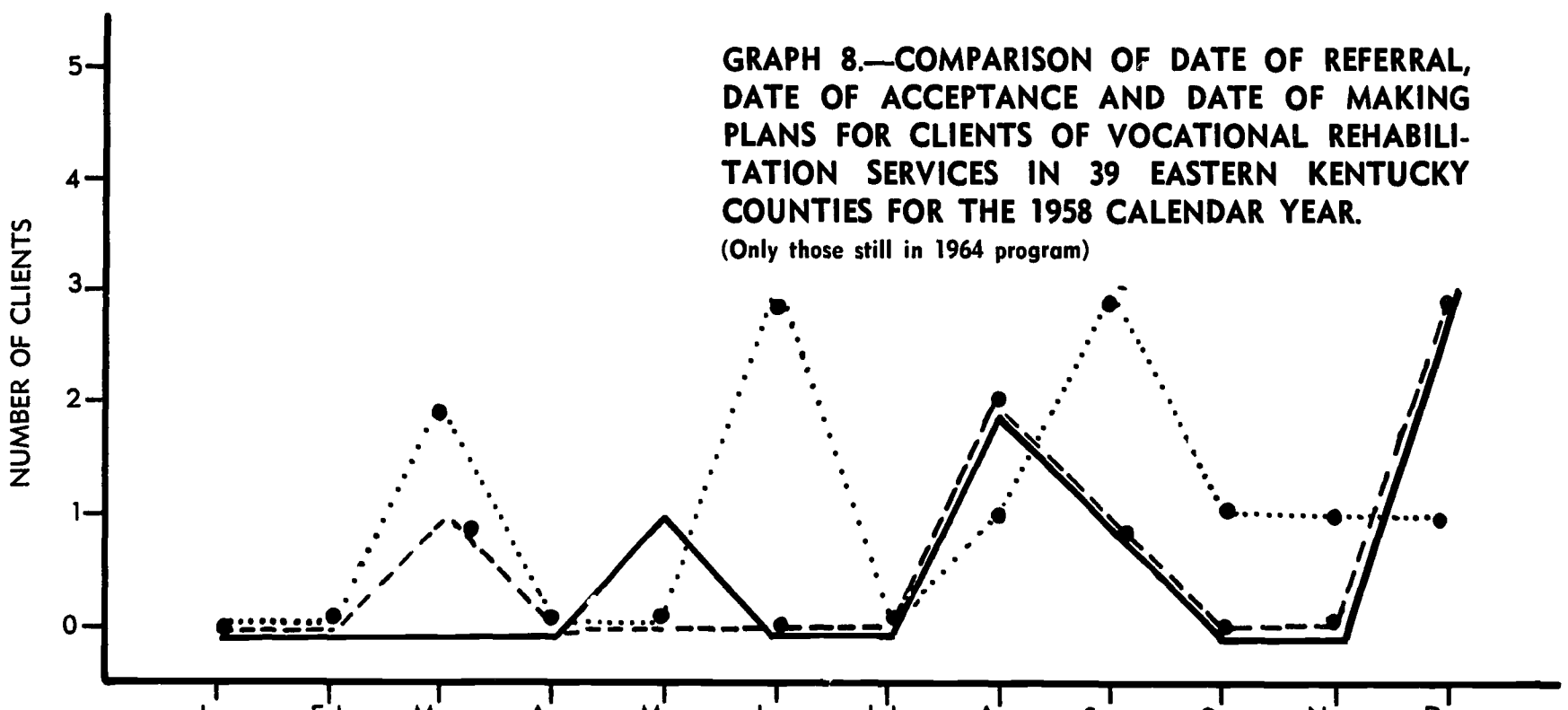
** A project in addition to that for "MR's" operated in two counties in which potential clients referred by Public Assistance (PA) were assured that acceptance of Vocational Rehabilitation services would not jeopardize their relationship to PA. This project did not, however, appear to affect these two counties noticeably.

GRAPH 7.—COMPARISON OF DATE OF REFERRAL, DATE OF ACCEPTANCE AND DATE OF MAKING PLANS FOR CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR 1957 CALENDAR YEAR.
(Only those still in 1964 program)



GRAPH 8.—COMPARISON OF DATE OF REFERRAL, DATE OF ACCEPTANCE AND DATE OF MAKING PLANS FOR CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR THE 1958 CALENDAR YEAR.

(Only those still in 1964 program)



..... Date of Referral

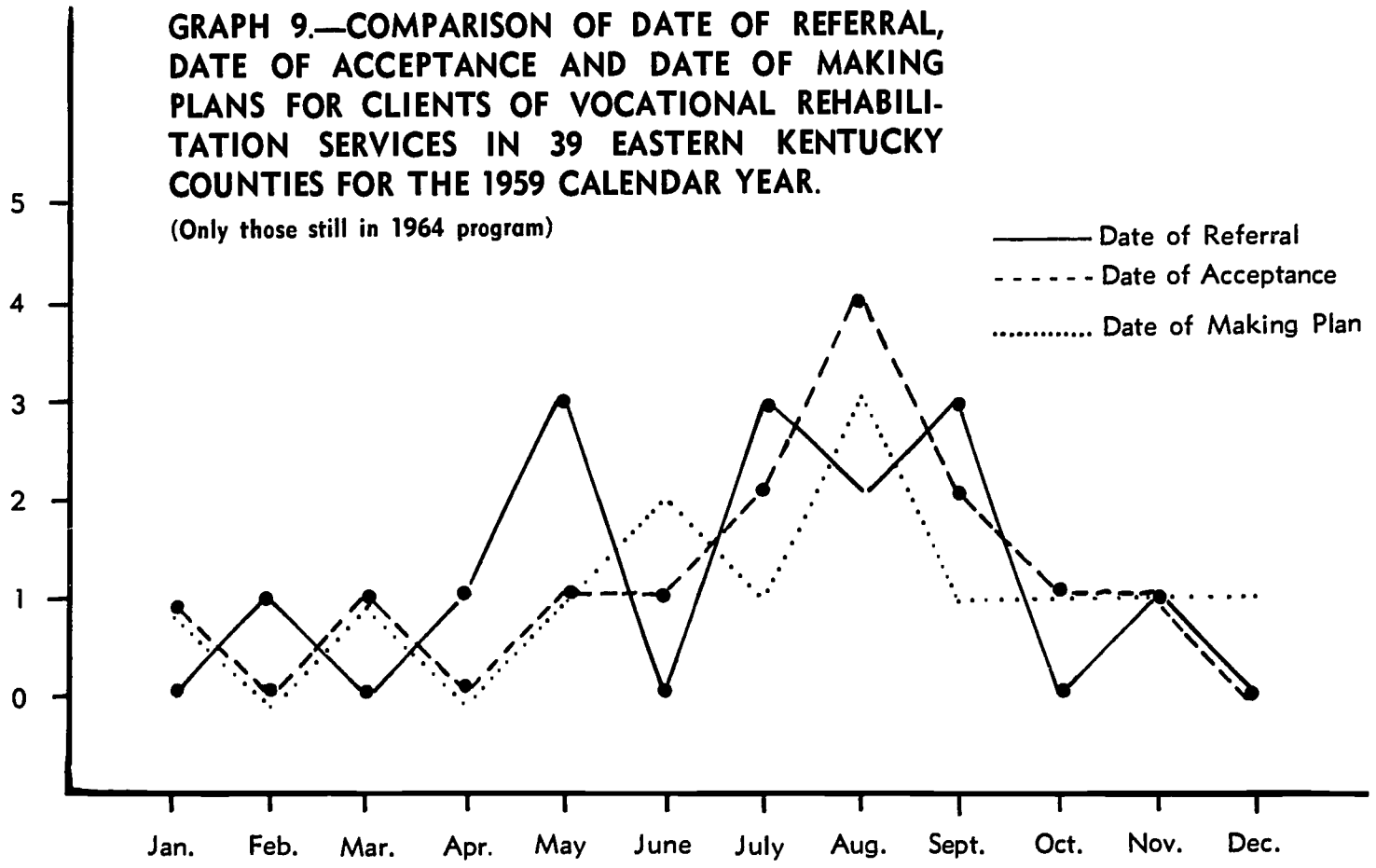
- - - - - - Date of Acceptance

1958

——— Date of Making Plan

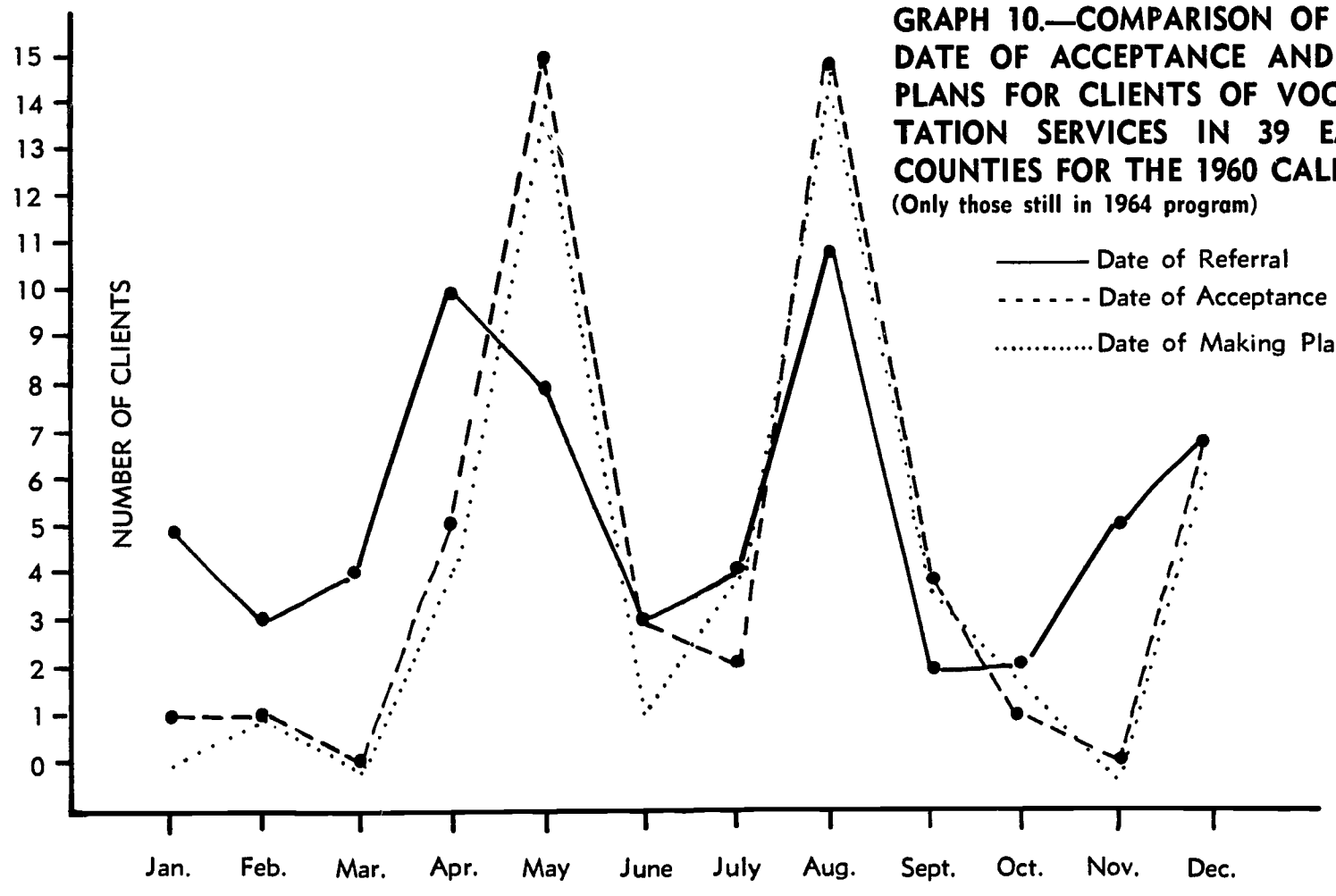
GRAPH 9.—COMPARISON OF DATE OF REFERRAL, DATE OF ACCEPTANCE AND DATE OF MAKING PLANS FOR CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR THE 1959 CALENDAR YEAR.

(Only those still in 1964 program)

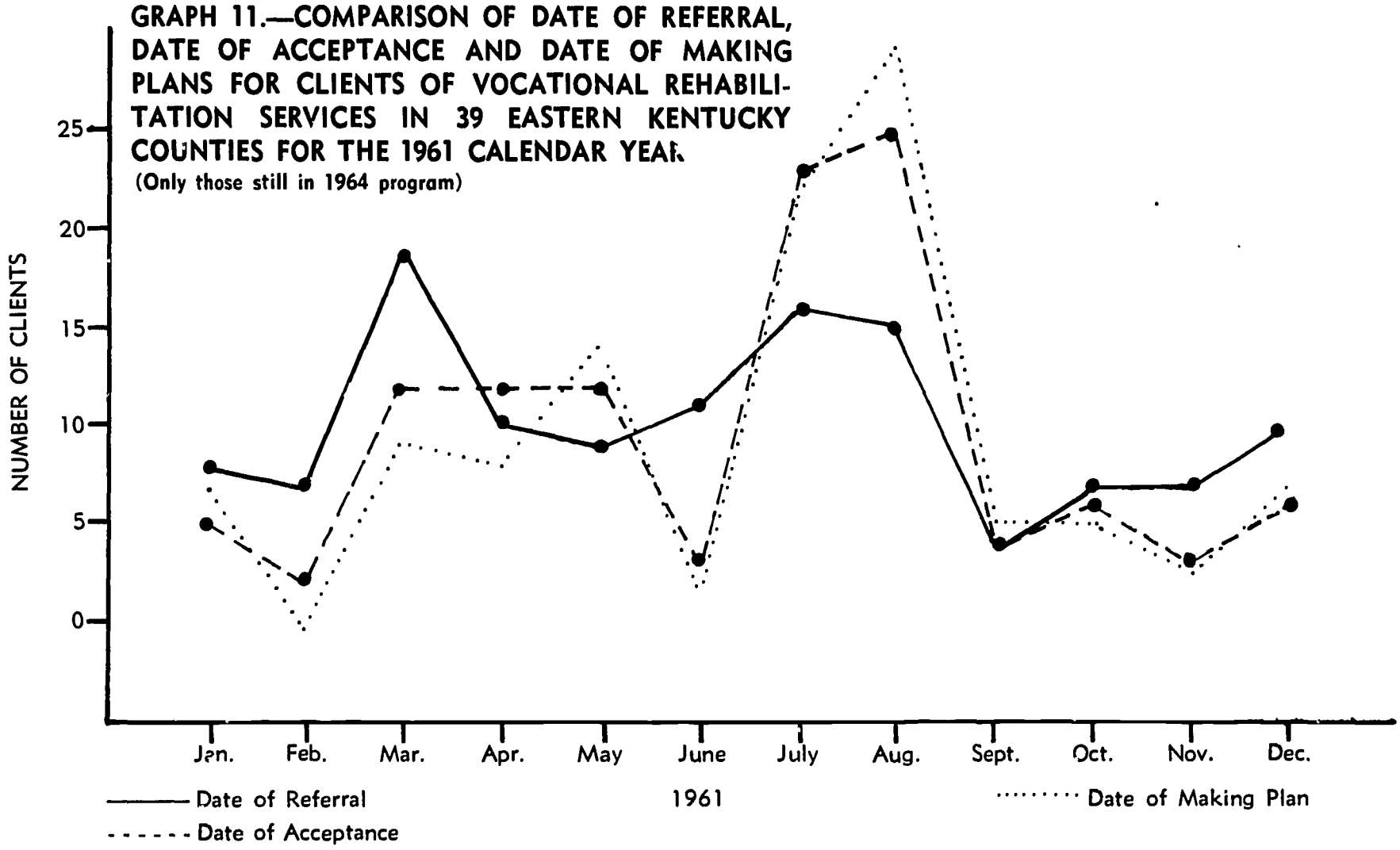


1959

GRAPH 10.—COMPARISON OF DATE OF REFERRAL, DATE OF ACCEPTANCE AND DATE OF MAKING PLANS FOR CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR THE 1960 CALENDAR YEAR
(Only those still in 1964 program)

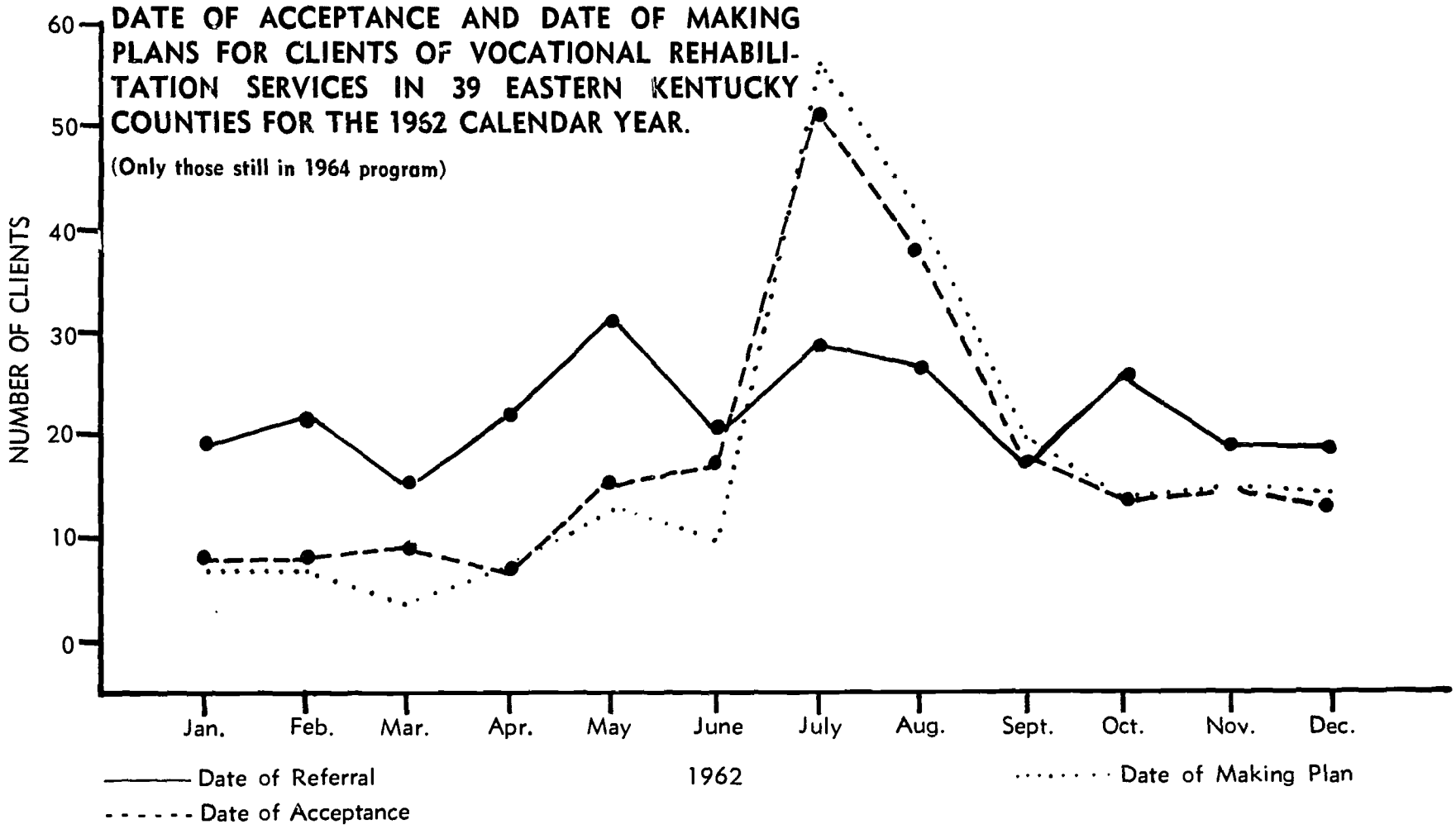


GRAPH 11.—COMPARISON OF DATE OF REFERRAL, DATE OF ACCEPTANCE AND DATE OF MAKING PLANS FOR CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR THE 1961 CALENDAR YEAR.
(Only those still in 1964 program)



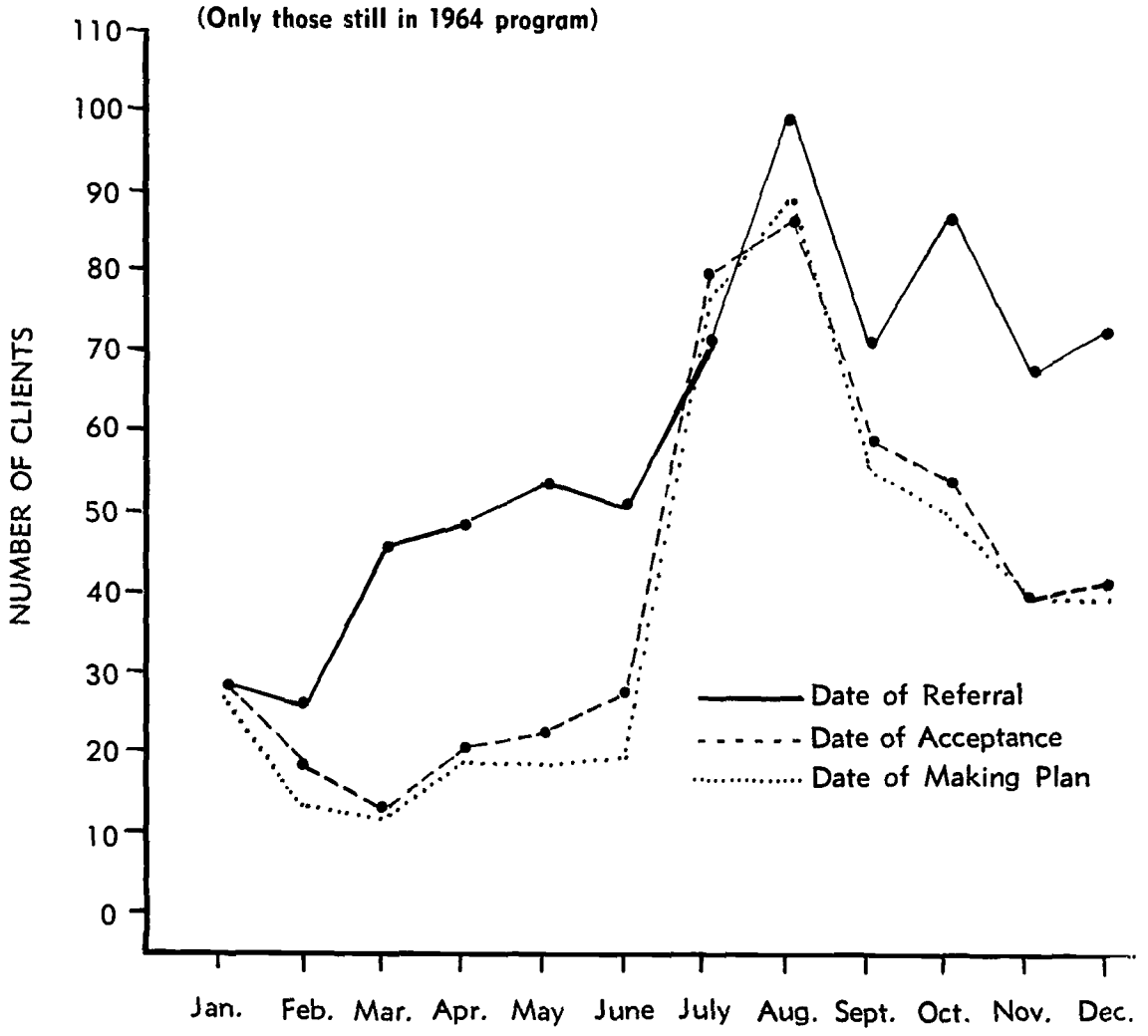
GRAPH 12.—COMPARISON OF DATE OF REFERRAL, DATE OF ACCEPTANCE AND DATE OF MAKING PLANS FOR CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR THE 1962 CALENDAR YEAR.

(Only those still in 1964 program)

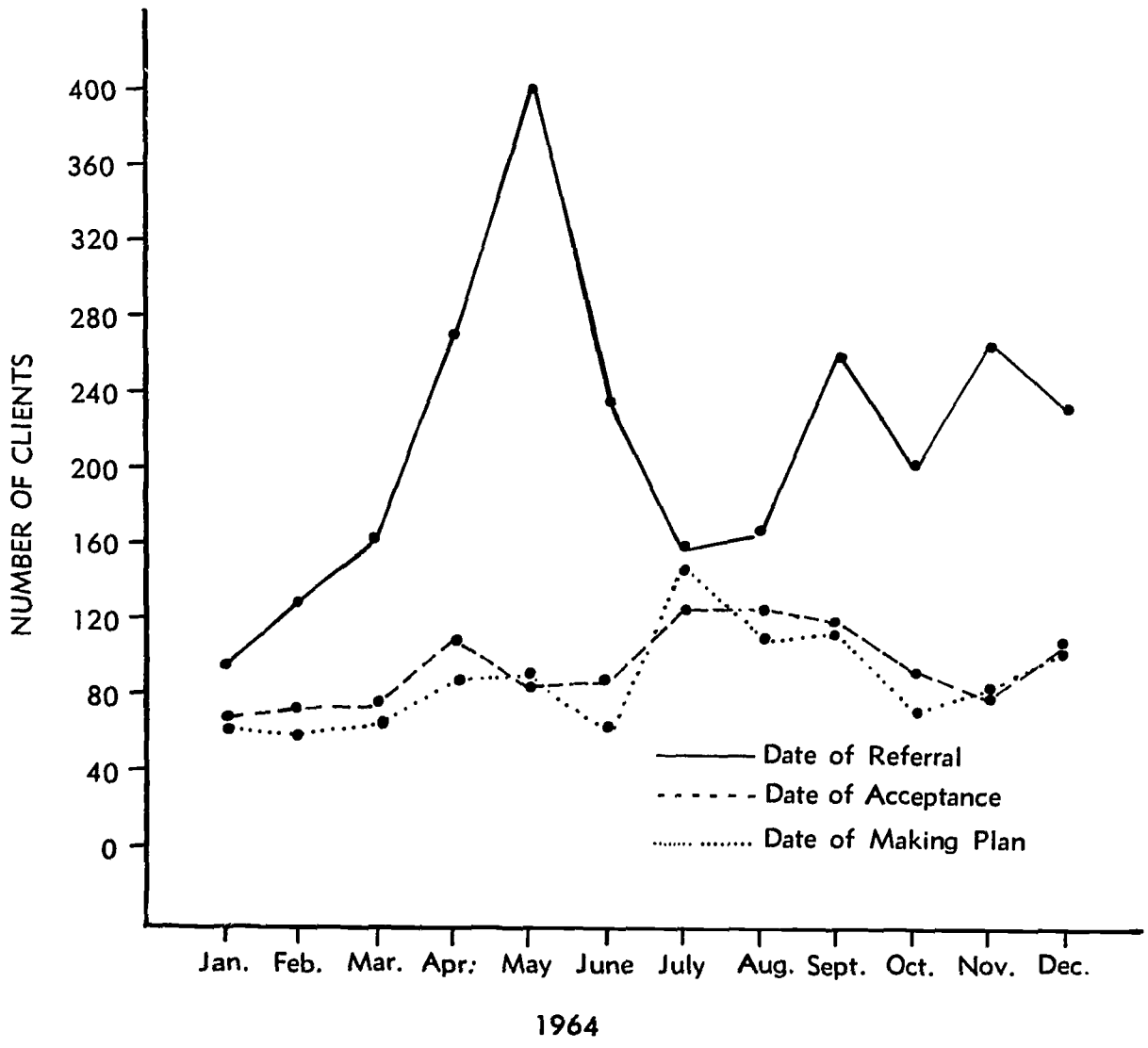


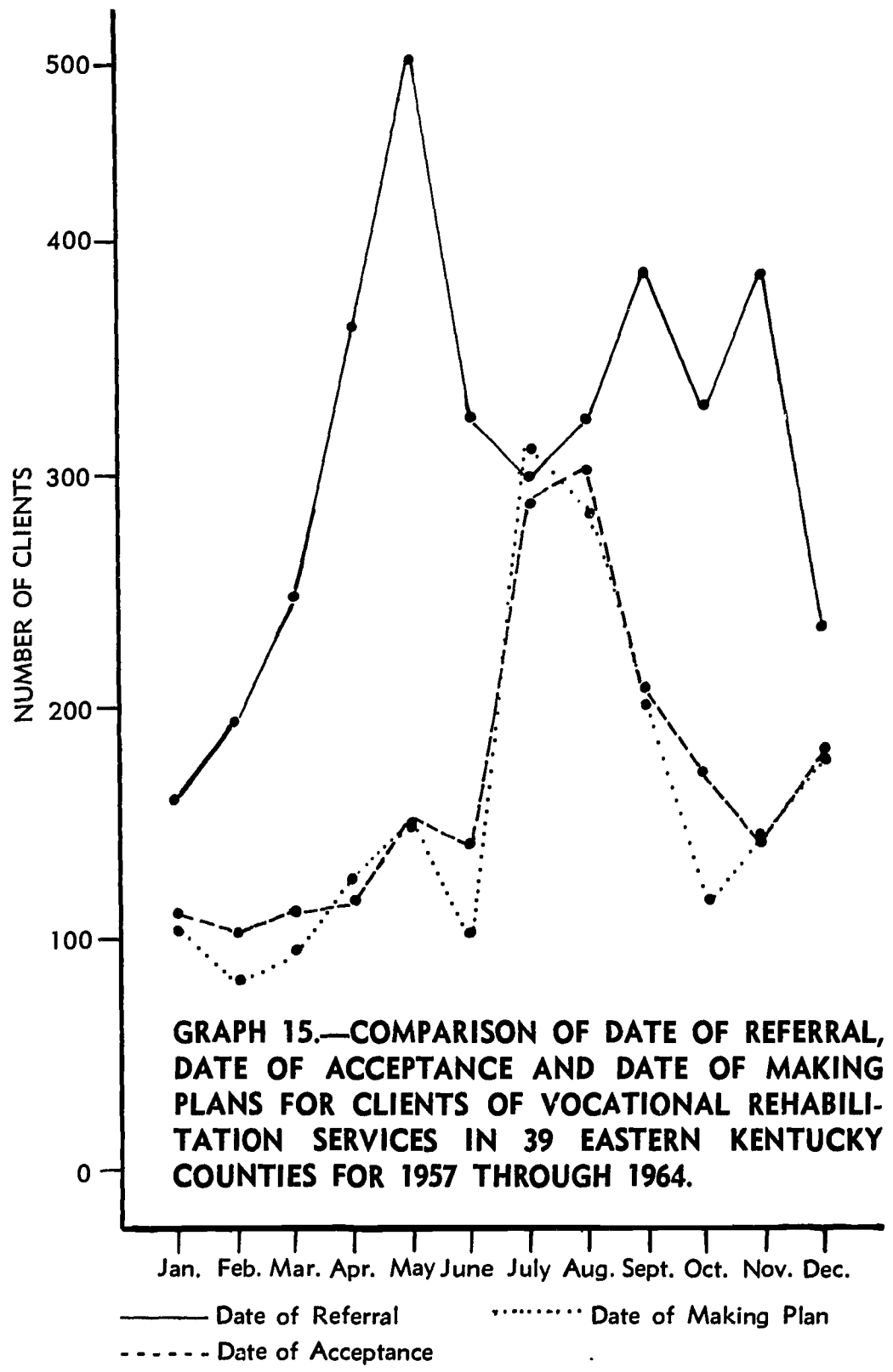
GRAPH 13.—COMPARISON OF DATE OF REFERRAL, DATE OF ACCEPTANCE AND DATE OF MAKING PLANS FOR CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR THE 1963 CALENDAR YEAR.

(Only those still in 1964 program)

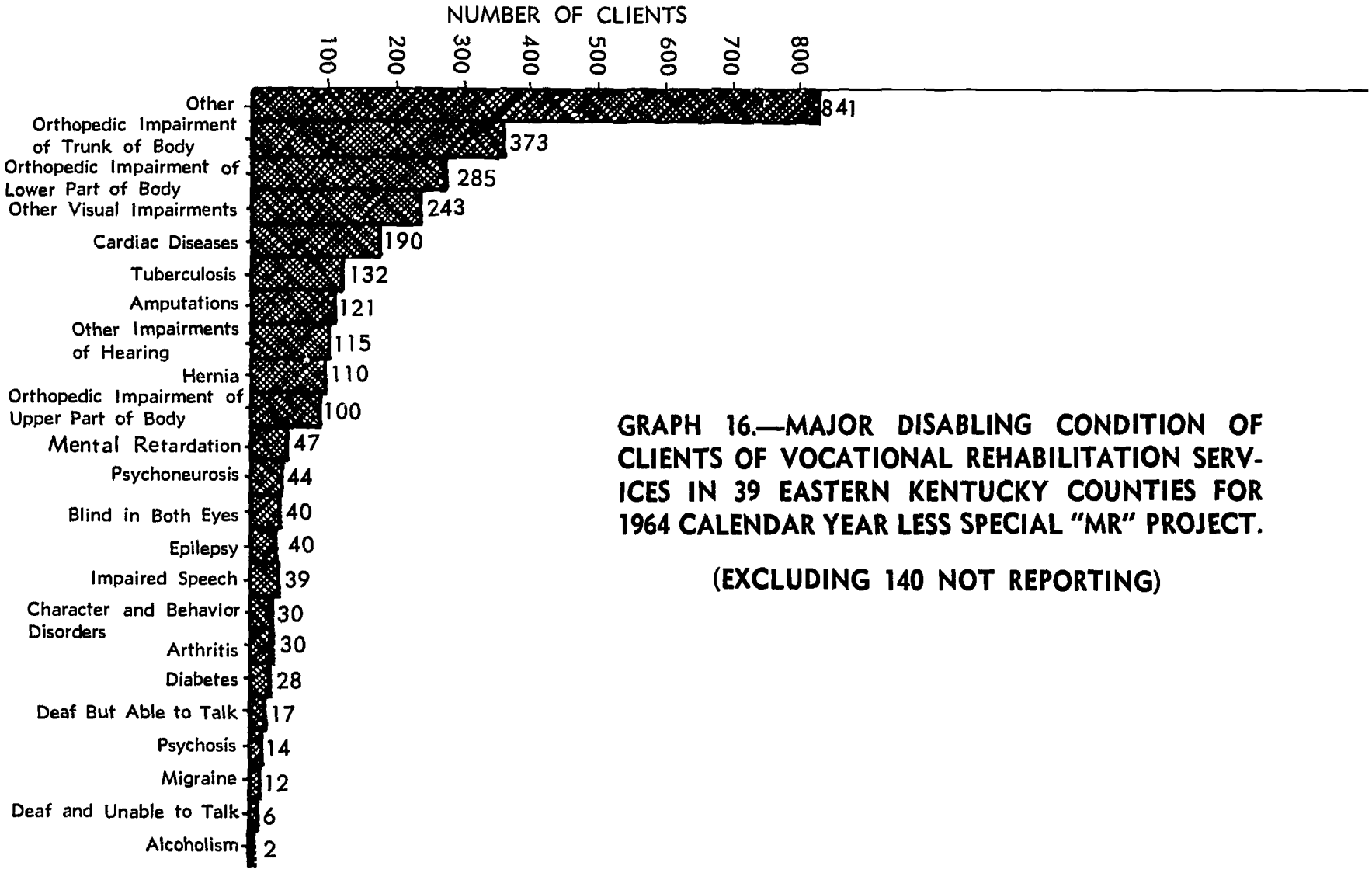


GRAPH 14.—COMPARISON OF DATE OF REFERRAL, DATE OF ACCEPTANCE AND DATE OF MAKING PLANS FOR CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR THE 1964 CALENDAR YEAR.





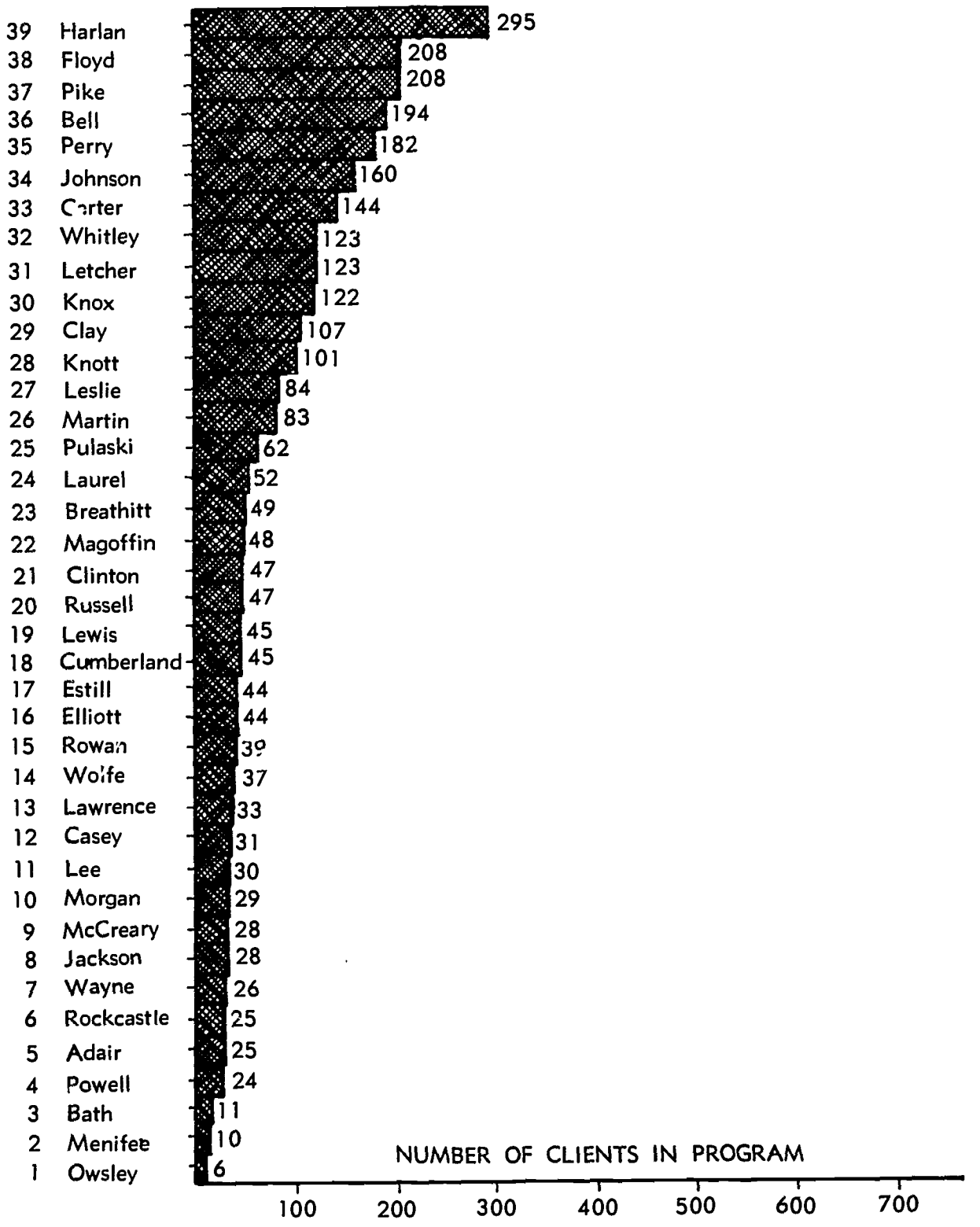
GRAPH 15.—COMPARISON OF DATE OF REFERRAL, DATE OF ACCEPTANCE AND DATE OF MAKING PLANS FOR CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR 1957 THROUGH 1964.



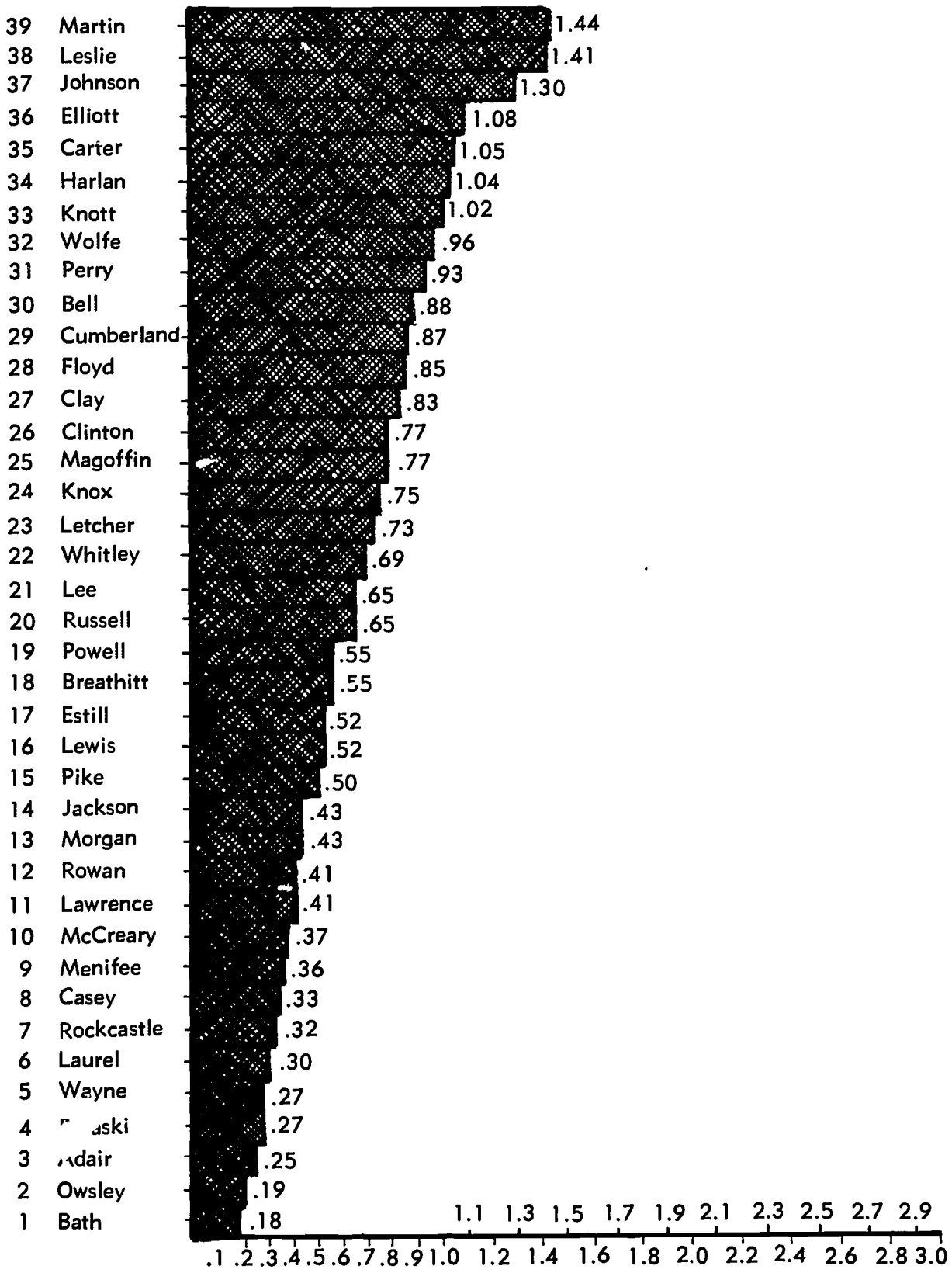
GRAPH 16.—MAJOR DISABLING CONDITION OF CLIENTS OF VOCATIONAL REHABILITATION SERVICES IN 39 EASTERN KENTUCKY COUNTIES FOR 1964 CALENDAR YEAR LESS SPECIAL "MR" PROJECT.

(EXCLUDING 140 NOT REPORTING)

GRAPH 17.—TOTAL NUMBER OF CLIENTS OF VOCATIONAL REHABILITATION SERVICES FROM EACH OF 39 EASTERN KENTUCKY COUNTIES FOR 1964 CALENDAR YEAR LESS SPECIAL "MR" PROJECT.



GRAPH 18.—PERCENTAGE OF CLIENTS OF VOCATIONAL REHABILITATION SERVICES ACCORDING TO ADULT POPULATION IN EACH OF 39 COUNTIES OF EASTERN KENTUCKY FOR 1964 CALENDAR YEAR LESS SPECIAL "MR" PROJECT.



PART IV

SOME ATTEMPTS TO QUANTIFY THE NEEDS

Since, as previously pointed out, the study team were not in a position to screen a sampling of the general population for disability cases and therefore define the potential needs by a direct inference from sample to population, it appeared necessary to use a rationale for estimating the need potential by less direct inference. Fortunately, however, another study being done by the staff of the College of Medicine of the University of Kentucky in one of the 39 counties in early 1965 provided a direct sampling in a sense, opening an opportunity which resulted in extension of this study. The results of this sampling are a concluding part of this report.

Identifying level of need for service to the mentally retarded

The three-county special project for work with the "mentally retarded" involved 831 clients, distributed in the three counties:

Floyd	503
Harlan	217
Rockcastle	111

These figures did not include other clients classified as "MR's" who were regularly in the program independent of the special project.

A simple mathematical operation of dividing the total number of cases in the special project by the total population between ages 15 and 25 years* in the three counties results in a quotient, 4.99%, indicating that roughly 5% of youth of ages 15 to 25 in these counties were found to be eligible for services under the special project (over and above the numbers in these counties—a comparatively modest figure of only 8—of "MR's" who were being served in the program already).

Assuming that the 5% figure might be roughly applicable to the remainder of the counties of the program if the intensive efforts put forth in the three counties had been extended to all, calculations were made as indicated in the table which follows.

On the basis of these estimates, therefore, it appears that if the

* This census classification was used because the program actually was set up to involve those of age 16 through 25.

ESTIMATES OF NUMBER OF "MENTALLY RETARDED" CASES WHICH WOULD HAVE BEEN ELIGIBLE FOR VOCATIONAL REHABILITATION SERVICES IF SPECIAL PROJECT HAD BEEN EXTENDED THROUGH ALL 39 COUNTIES

County	Population Ages 15-25 Estimated for 1963*	Estimated Number "MR's" (5% of Age-Group 15-25)
Adair	2,117	106
Bath	1,272	64
Bell	5,467	273
Breathitt	2,477	124
Carter	3,388	169
Casey	2,216	111
Clay	3,605	180
Clinton	1,380	69
Cumberland	1,076	54
Elliott	1,014	51
Estill	1,844	92
Floyd	6,873	344
Harlan	7,907	394
Jackson	1,642	82
Johnson	3,066	153
Knott	3,037	152
Knox	4,111	206
Laurel	4,042	202
Lawrence	1,747	87
Lee	1,124	56
Leslie	1,715	86
Letcher	4,788	239
Lewis	2,167	108
McCreary	2,034	102
Magoffin	1,762	88
Martin	1,744	87
Menifee	666	33
Morgan	1,590	80
Owsley	759	38
Perry	5,474	274
Pike	11,540	577
Powell	1,081	54
Pulaski	5,056	253
Rockcastle	1,868	93
Rowan	2,685	134
Russell	1,576	79
Wayne	2,278	114
Whitley	3,860	193
Wolfe	990	50
Total	113,028	5,651

* Estimates made by David Krugel, graduate student under Dr. Thomas R. Ford, professor of sociology, University of Kentucky, using "Hamilton Method" of projection from base of 1960 census data. (Cf., C. Horace Hamilton and Joseph Perry, "A Short Method for Projecting Population by Age from One Decennial Census to Another," *Social Forces*, Vol. 41, Dec. 1962, pp. 163-170.)

"MR" project operated in the three counties had been extended with equal intensity to all 39 counties, some 5,651 "MR" clients would have participated instead of only the 831 who did. This is to say, such an extension of the "MR" program would have more than doubled the total number of clients of all kinds served by Vocational Rehabilitation Services in the 39-county area during 1964. Obviously, the potential

clientele for "MR" services in the area—even though the makeshift rationale necessarily used here is of dubious precision—is proportionally great indeed.

Lest such a calculation appear to have produced an astonishingly high figure, consideration should be given to some general figures made available to the study team on results of mental tests reported through the testing programs of the public schools of the area which use the scoring services of the Kentucky Cooperative Testing Service at the University of Kentucky. Mental test answer sheets processed by the service for some schools in wide-spread points of the 39-county area of this study provide 5,443 scores for grades 7 through 12 for the 1964-65 school year. The table on page 48 interprets the proportion in the 50 to 85 I.Q. category.

If one accepts the results of these tests, he may well wonder that even more cases of "MR" disability were not uncovered in the special projects. Obviously, many more 'MR's" exist who would be eligible for vocational rehabilitation services than the projects were able to engage even in the counties in which the special projects operated. The difference perhaps deserves some explanation. These explanations appear:

1. The scores represented in the following table were for "group" tests, paper-and-pencil tests which are ordinarily acceptable to psychologists as useful in measuring large numbers, or for revealing extreme deviates who should be examined individually—but not for careful evaluation of individuals. For satisfactory measurement of the mental ability of an individual as such, an individual test should be used—as was done to determine whether or not referrals in the projects were eligible for the program.

2. Since group tests ordinarily are standardized in urban and suburban settings, instead of mountain-rural settings, they are written "for" the urban-suburban, not the mountain-rural, youngsters. That is, mountain-rural youngsters tend to score a bit below their peers of a more urban orientation. The tests measure differences satisfactorily among culturally homogeneous groups, but usually need some adjustment for "cultural bias" for measuring between groups. It is reasonable to assume, therefore, that the test results reported above classify somewhat larger proportions in the 50 to 85 I.Q. category than results of individually administered tests, or group tests standardized on a mountain-rural population, would have produced.

3. Then, one should be aware that there are "rehabilitation" forces at work in home, school, and community which sometimes accomplish the same task as Vocational Rehabilitation Services would attempt were the case brought to them. That is to say, only when the "redemptive" influences of the environment of the mentally handicapped fail to "redeem" him does he become a potential client for Vocational Rehabilitation.

Considering these arguments, the figure of only 5% of the youth-age population as a potential clientele for the "MR" program of

NUMBERS OF STUDENTS SCORING BETWEEN 50 AND 85 I.Q. ON MENTAL TESTS AMONG 5,453 TESTED IN SCHOOLS OF EASTERN KENTUCKY, 1964-65

Grade 7

Test	County	Number 50 to 85 I.Q.	Total Tested
CTMM	Pulaski	61	156
Otis	Harlan	32	129
Otis	Breathitt	101	311
CTMM	Owsley	22	71
	Total	216	667
	Percent 50 to 85 I.Q. = 32.2%		

Grade 8

Otis	Breathitt	68	282
	Percent 50 to 85 I.Q. = 24.11%		

Grade 9

Otis	Magoffin	67	184
CTMM	Owsley	24	88
Otis	Knox	100	267
Otis	Harlan	150	1,586
Otis	Pulaski	57	376
	Total	398	2,501
	Percent 50 to 85 I.Q. = 15.91%		

Grade 10

Otis	Knox	83	230
CTMM	Owsley	24	65
Otis	Whitley	60	254
Otis	Pulaski	6	54
Otis	Harlan	6	25
CTMM	Breathitt	70	198
	Total	249	826
	Percent 50 to 85 I.Q. = 30.14%		

Grade 11

Otis	Pulaski	30	253
Otis	Harlan	116	436
Otis	Magoffin	27	109
Otis	Floyd	15	219
	Total	188	1,017
	Percent 50 to 85 I.Q. = 18.48%		

Grade 12

Otis	Harlan	3	32
	Percent 50to 85 I.Q. = 9.37%		

Grade Unknown

Test	County	Number 50 to 85 I.Q.	Total Tested
CTMM	Letcher	35	128
	Percent 50 to 85 I.Q. = 27.34%		

Final Totals

42 Schools Tested

5,453 Total Tested

Vocational Rehabilitation Services appears more reasonable, though still perhaps low.

An obvious point should be noted, however—lest anyone jump to the conclusion that these now "modest" estimates portend an impossible task: The task represented by "MR" clients (or all clients, for that matter) is a "verb" and not a 'noun." That is, a sudden campaign to bring into the program all the "MR's" who are potentially eligible will naturally inflate the clientele bulk abnormally because it will bring in those who preferably would have gone through the program in a comparatively steady "flow" in previous years, had the same emphasis upon serving them gone on for several years. Clearly, however, the task level would remain substantially above what it has been under the "regular" program.

Quantifying needs generally

It seems reasonable to assume that areas which are somewhat alike in the conditions ordinarily related to disability may be expected to have somewhat equal disability rates.

It seems reasonable to assume, also, however, that differences in the program, the vagaries of its staffing, the fortuities of its particular setting (even its location with respect to other agencies), the varied professional emphasis and personal enthusiasm of counselors and directors—all part of the human element in any organization—will inevitably affect the limits to which the program will exhaust the need for its service.

As the study team has come to interpret the role of the counselor in their observations of him during this study, they conceive of that role as one requiring him to assess each individual client on the basis of his individual need and potential, but also, antithetically, on the basis of the risk involved in the investment of funds for which the counselor is responsible (funds which, as already noted, are not unlimited). It would seem inevitable that individual differences in the character and perceptions of the most well prepared and responsible counselors would affect the program so that in some areas one kind of client would be accepted more readily into the program than in others, and vice versa. This is to say, human variations in the administration of the program—perhaps actually desirable—are surely inevitable.

The point to be made here is: Variations in the intensity with which the program is pushed toward completely fulfilling the needs of the theoretical potential of clients would appear to be logically inevitable for a variety of reasons, one of them "human."

A third assumption that would appear reasonable is that the

highest level of need demonstrated in any area (by exhaustive effort, favorable location of facilities, community support, promotional communication, etc.) represents a level which *could* (if human and physical circumstances were properly ordered) be demonstrated to exist in any other area of like character, or in proportion to similarities in character. This means that the county of highest level of disability might serve as a "measuring stick" to be used against each other county.

Martin County, for example (Graph 18), had among the 39 counties the highest percentage (1.44%) of its estimated adult population involved in the program in 1964—compared to Bath County with less than one-eighth that percentage (.18%). If Martin County's theoretical disability potential had been exhausted—though for purposes of reasoning here the probability that it had not is being overlooked—it follows that if an equally well advertised, aggressive, and well financed program had been operated in Bath County as in Martin County, the number of cases brought into the program might have been increased approximately eight fold.

If we assume—and we do so with considerable reservation—that Martin County is typical of the 39-county area, it follows that the level of "need" in each county could be estimated as representing a clientele which is 1.44% of its adult population. If 1.44% of the adult population of the 39 counties were so involved, the total load, on the basis of the population estimates previously cited, would rise to 6,370, clearly almost two thirds (66.3%) above the 1964 level of 3,830 cases served in the 39 counties, including the 831 special "MR" cases served in three of the 39 counties. This assumption that Martin County is typical, however, deserves some attention which may be best given after treatment of another aspect of the data.

Although recognizing the vagaries among the data consequent to the inevitable "human" character of the program's administration, the study team nevertheless decided to examine the pattern of participation in the program on the assumption that, at least to some extent, the vagaries would "cancel out" each other—that despite individual variations, strong enough central tendencies might operate proportional to the real needs of the various county populations to justify some generalizations.

It was noted, for example, that the variable of distance of the residence of the client from the counselor's office affected not only the frequency of acceptance of cases into the program but also the frequency of rejection of the service by potential clients. Murphy, in a study developing out of this one, presents the following table:

PATTERNS OF DATA ON LOCATION OF RESIDENCES*

Location of Residences	"AS Group"** Number	%	"DS Group"*** Number	%	"SD Group"**** Number	%
Within the three counties containing District Vocational Rehabilitation Offices	150	21.5	43	14.1	37	17.0
Within the fifteen counties adjoining counties containing District Vocational Rehabilitation Offices	287	41.1	191	62.4	113	51.8
Within the twenty-one counties not adjoining counties containing District Vocational Rehabilitation Offices	262	37.5	72	23.5	68	31.2
Totals	699	100.0	306	100.0	218	100.0

* Murphy, Ottis, *A Comparison of Certain Social Characteristics of Accepted and Rejected Referrals for Vocational Rehabilitation Services*, a dissertation presented in partial fulfillment of requirements for the doctorate, University of Kentucky, 1966, p. 18. The data in this table were placed in a chi-square pattern in the study, with the result that distance was indicated (at a .05 or higher level of confidence) to have an inverse relationship to likelihood of acceptance of service and acceptance for service.

** Group accepted services of Vocational Rehabilitation.

*** Group declined to accept service.

**** Group were denied services—that is, rejected after interview.

Examination of the table above will reveal that, particularly between the first two groups, there was a difference in the percentages as related to distance of clients' residences from counseling offices. For instance, in comparison to that of the other two groups, a higher percentage of those accepted for services ("AS Group") came from the counties containing offices.

When the 39 counties are grouped in relation to the location of vocational counseling offices, as they are in the table which follows, one may observe that:

1. Those counties having counseling offices in them in 1964 had .81% of the adult (age 15 or older) population as clients.
2. Those counties bordering those with counseling offices had .72% of such population as clients.
3. The other counties had only .60% as clients.

If offices were placed in each and all of the 39 counties, one might reason that the number of participants for the areas where no offices are located would be raised in proportion to the difference between the rate of participation in the outlying county groups and the rate in the counties where offices are located.

PARTICIPATION BY COUNTIES GROUPED BY LOCATIONS IN RELATION TO OFFICES, 1964 (See map, page 22.)

Counties with offices:	Adult Population*	Number of Clients	Percentage of Adult Population Served
Harlan	28,381	295	
Johnson	12,343	160	
Pulaski	23,298	62	
Total	64,022	517	.81
Counties bordering counties with offices which served them:			
Bell	22,058	194	
Carter	13,596	144	
Casey	9.469	31	
Floyd	24,523	208	
Laurel	17,259	52	
Lawrence	8,072	33	
Leslie	5,972	84	
Letcher	16,903	123	
McCreary	7,572	28	
Magoffin	6,258	48	
Martin	5,754	83	
Perry	19,581	182	
Rockcastle	7,781	25	
Russell	7,277	47	
Wayne	9,652	26	
Total	181,727	1,308	.72
Counties not bordering counties with offices serving them:			
Adair	9,832	25	
Bath	6,049	11	
Breathitt	8,892	49	
Clay	12,769	107	
Clinton	6,069	47	
Cumberland	5,167	45	
Elliott	4,087	44	
Estill	8,402	44	
Jackson	6,490	28	
Knott	9,895	101	
Knox	16,255	122	
Lee	4,583	30	
Lewis	8,598	45	
Menifee	2,756	10	
Morgan	6,812	29	
Owsley	3,180	6	
Pike	41,305	208	
Powell	4,333	24	
Rowan	9,484	39	
Whitley	17,851	123	
Wolfe	3,838	37	
Total	196,647	1,174	.60

* As explained on page 24, this group is of those above age 14.

This calculation was made for each county by the simple formula:

Percent of participating population in area represented by counties with offices in them (.81%). ÷ Percent of participating population in respective areas represented by: 1) Those bordering counties with offices. (.72%). 2) Those neither bordering office counties nor containing offices (.60%). × Percent of population in respective county who actually participated in 1964. = Estimated percent of population who might have been expected to participate had an office been in the county in 1964.

THEORETICAL LEVEL OF PARTICIPATION IF OFFICES WERE LOCATED IN ALL COUNTIES

County	% Adult Population would be Involved	1964 Adult Population Estimate	Numbers Would be Involved
Martin	1.62	5,754	93
Leslie	1.59	5,972	95
Elliott	1.46	4,087	60
Knott	1.38	9,895	137
Johnson	1.30	12,343	160
Wolfe	1.30	3,838	50
Carter	1.18	13,596	160
Cumberland	1.17	5,167	60
Clay	1.12	12,769	143
Perry	1.05	19,581	206
Clinton	1.04	6,069	63
Harlan	1.04	28,381	295
Knox	1.01	16,255	164
Bell	.99	22,058	218
Floyd	.96	24,523	235
Whitley	.93	17,851	166
Lee	.88	4,583	40
Magoffin	.87	6,258	54
Letcher	.82	16,903	139
Breathitt	.74	8,892	66
Powell	.74	4,333	32
Russell	.73	7,277	53
Estill	.70	8,402	59
Lewis	.70	8,598	60
Pike	.68	41,305	281
Jackson	.58	6,490	38
Morgan	.58	6,812	40
Rowan	.55	9,484	52
Menifee	.49	2,756	14
Lawrence	.46	8,072	37
McCreary	.42	7,572	32
Casey	.37	9,469	35
Rockcastle	.36	7,781	28
Adair	.34	9,832	33
Laurel	.34	17,259	59
Wayne	.30	9,652	29
Pulaski	.27	23,298	63
Owsley	.26	3,180	8
Bath	.24	6,049	15
Total		442,396	3,572

Adjusting the tabulations accordingly, we get the preceding table of purely hypothetical percentages and numbers of the adult population who might be expected to have been involved in 1964 if offices had been located in every county.* Note that the arrangement places counties in rank of their hypothetical participation order percentage-wise.

Assuming, therefore, that by the crude procedure just described we have a ranking of the 39 counties in terms of functional "need" (Level 3—see page 13) adjusted to exclude the variable produced by distance from counseling offices, we can regard the relationships among the counties as reflecting the impacts of forces determining vocational rehabilitation needs. That is, those counties which had the highest levels of participation in the program (as that level is adjusted to exclude the *distance* variable) may be presumed to hold those levels at least in some degree (despite variations in effectiveness of the program and limitations in funds) because conditions within them (rather than distances from counseling offices) determine how many need the service.

The table, theoretically, therefore, interprets a need (at Level 3) which might have been "invited" if offices had been located in each county in 1964, a level which would have raised the number of cases in the 39 counties by 573 or some 15% above the total of 3,830 served that year, including the special projects. This is like saying not that there were more "rabbits," but that with more "traps" more "rabbits" would have been caught—with more offices more clients would have been drawn to use them and would have been accepted for services.

Evidence Based On Martin County Study 1965

Estimated number of vocational rehabilitation clients in 39 eastern Kentucky counties, based on the findings of a special screening project conducted by personnel from the University of Kentucky Medical Center in Martin County, Kentucky.

Personnel from the University of Kentucky Medical Center, supported by a grant from the Division of Community Health Services, U. S. Public Health Service,** conducted a special health screening

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* Of course, increased numbers of clients would mean increased competition among clients for funds. This increase in competition for funds is presumed *not* to take place, so that funds are presumed to be as available as they were in 1964 despite the increased load.

** *Health Status of the Population of Martin County, Kentucky, 1694-1965,* a report by Dr. Keene Watson *et al,* University of Kentucky, on Project CH 19-6 of the Division of Community Health Services, U. S. Public Health Service.

project in Martin County during the spring of 1965. In this project, a stratified sampling of 1,116 adults were actually given a general medical examination.

On the basis of data obtained from records on this project, the three levels of needs as defined on page 13 of this report have been calculated for each of the 39 counties to show what the results would probably have been if money had been available and a like project had been carried out in all 39 counties during the calendar year of 1964.

Level 1 represents the number that would probably have been found to be disabled by medical authorities and referred for vocational rehabilitation services.

Level 2 represents the number of Level 1 who would probably have been accepted and rendered services if an adequate amount of money had been available.

Level 3 represents the number of Level 1 who would actually have been accepted and rendered services if funds had been made available in the same measure to all the 39 counties that they were to the Martin County population that was included in the screening project.

Those who conducted the 1,116 general medical examinations referred a total of 135 individuals to the Bureau of Vocational Rehabilitation Services. This number of referrals provided the basis for calculating the number for Level 1 need in Martin County and, subsequently, for doing so in the other 38 counties.

Forty of the 135 who were referred were rejected, leaving a total of 54 who were neither accepted nor rejected. (All the available money was spent on the 40 who were accepted and served.)

In order to calculate how many would probably have been accepted and served if enough money had been available (Level 2), the study team conferred with the counselor who had handled the referrals from this special screening project and asked him how many of the 54 whose cases were left pending would probably have been accepted for services if money had been available. After careful consideration, he estimated that he would have accepted about 30 percent, or 16, of the group of 54 who were left pending, if money had been available to pay for needed service.

On the basis of this estimation, it was calculated that instead of 40, a total of 56 would have been accepted and served if money had been available. That is, the counselor would have adjudged that number to be acceptable "risks" in terms of the goals of the program.

This number of the referrals provided the basis for calculating the number for Level 2 in Martin County and for the other 38 counties.

By using the numbers representing the three levels—135, 56, and

40–found to exist within the 1,116 adults examined in Martin County, and the number representing the respective estimated adult populations as derived for the table on page 53 of this report, it was a simple matter to project by ratio and proportion the number in each level for each of the 39 counties.

The following table shows the numbers who would have been in each level in each county in 1964 if there had been a screening of the adult populations in all of the 39 counties as was done in the sample of 1,116 in Martin County:

The Number of Vocational Rehabilitation Clients Calculated to be in Each of Three Levels in Each of the 39 Counties During 1964

County	Eligible Adult Population	Level 1	Level 2	Level 3
Adair	9,832	206	84	62
Bath	6,049	91	37	27
Bell	22,058	1,610	660	483
Breathitt	8,892	411	169	123
Carter	13,596	1,199	492	360
Casey	9,469	262	107	79
Clay	12,769	890	365	267
Clinton	6,069	392	161	118
Cumberland	5,167	377	155	113
Elliott	4,087	371	152	111
Estill	8,402	367	150	110
Floyd	24,523	1,758	721	527
Harlan	28,381	2,478	1,016	743
Jackson	6,490	234	96	70
Johnson	12,343	1,347	552	404
Knott	9,895	847	347	254
Knox	16,255	1,024	420	307
Laurel	17,259	435	178	131
Lawrence	8,072	278	114	83
Lee	4,583	250	103	75
Leslie	5,972	707	290	212
Letcher	16,903	1,036	425	311
Lewis	8,598	376	154	113
Magoffin	6,258	404	166	121
Martin	5,754	696	285	209
McCreary	7,572	235	96	71
Manifee	2,756	83	34	25
Morgan	6,812	246	101	74
Owsley	3,180	51	21	15
Perry	19,581	1,529	627	459
Pike	41,305	1,735	711	521
Powell	4,333	200	82	60
Pulaski	23,298	529	217	159
Rockcastle	7,781	209	86	63
Rowan	9,484	326	134	98
Russell	7,277	397	163	119
Wayne	9,652	219	90	66
Whitley	17,851	1,034	424	310
Wolfe	3,838	309	127	93
Total	442,396	25,148	10,312	7,546

Note that the figures in the preceding table do not represent a direct generalization of the proportions of cases to the population of Martin County to the populations of the other 38 counties. Rather, they are estimates based on the assumption that the proportionate increase in case load implied for Martin County (which even before this special effort to identify prospective clients had the highest level of participation among the 39 counties) would apply to the other counties in proportion to their 1964 participation in the program respectively—since Martin County must, for a variety of reasons, be regarded as one of the counties likely to have an unusually high incidence of disability.* That is, it is assumed that as Martin County's incidence rate was increased (*revealed,* actually) by the special program of examinations, so that of others would be increased in proportion to their respective incidence rates under the existing program.

This rationale, in other words, scales the estimates in proportion to the 1964 participation of each county assuming that the program as operated reflects, certainly imperfectly yet in some measure more nearly, the "true" needs of the respective counties.

In retrospect, it appears that the special screening project discovered about eight times (8.395) as many referrals as the usual procedures would have produced (on the basis of the 1964 experience in Martin County). Assuming that the 1964 "base" of experience (not in gross but in terms of proportion of adult population involved) might properly be multiplied by this factor, there was derived an over-all estimate of the Level 1 need of the area: 25,148 or 5.68% of the adult population.

Then, assuming that like proportions as in the Martin County group would have been accepted in the other counties after screening on the basis of criteria *other than cost*, a figure of 10,312 (or 2.33% of the adult population) was assumed to represent the Level 2 need.

Then, assuming that the variable of limitations on funds would continue to be applied in the proportionate degree it did apply to the sample, an estimate of the need at Level 3 was calculated, indicating that some 7,546 (1.71% of the adult population) might be involved were an intensive physical examination program, such as that operated in the Martin County sampling, extended to the entire 39-county area.

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* There is only one doctor to serve the county, and personal income level for the county has been the lowest reported for any county in the state for several years consecutively.

SUMMARY

We have seen that:

1. The "flow" of cases served by the Vocational Rehabilitation program has a somewhat regular annual variation, especially in rate of acceptance and making of plans of clients, apparently related to the beginning of the fiscal year when new funds are usually made available. The fact that there tends to be a "pile up" of cases before July 1 suggests that there are more cases than there are funds for serving them. There appears no practical rationale for quantifying the amount of funds needed to "smooth the flow" of cases; nevertheless, the need for *more* funds seems clearly implied.

2. If the special "MR" project which operated in Floyd, Harlan, and Rockcastle counties during 1964 had been extended with equal intensity over all the 39 counties, the load for "MR" cases alone might well have more than doubled the number of cases served by the program. (The estimate was that some 5,651 "MR" clients, instead of the actual 831, would have participated in the program, an addition of 4,820 more such clients to the 1964 load of 3,830 participants over all.)

3. If the other 38 counties had operated a program to effect a rate of participation equal to that of Martin County in 1964, the load for the area would have risen to 6,370, as compared to the actual 3,830 figures—a two-thirds increase.

4. If arrangements had been made so that Vocational Rehabilitation offices had been located in each of the 39 counties in 1964, the level of participation in the program might have been raised by some 573 cases above that actually experienced. This represents an increase of some 19% above the "regular" case load (exclusive of the special "MR" projects) or 15% above that including the "MR" projects.

Finally, the study team were able to obtain a report of a special study done by a medical staff in Martin County in which a substantial sample of the population were given physical examinations, with each case of disability, as it was adjudged by the staff to represent a case deserving consideration for the Vocational Rehabilitation program, identified and referred to the Service. In consequence, of some 1,116 persons examined, 135 were referred to Vocational Rehabilitation, 40 actually accepted for services, and 16 more identified as eligible if funds had been available. On the basis of these figures, generalizations

have been made regarding the levels of need in the 39 counties, specifically:

1. That some 25,000 adults (age 15 or older) of the 39-county area have disabilities which might properly be the concern of Vocational Rehabilitation Counselors, assuming an intensive effort were made to identify those having disabilities (Level 1).

2. That some 10,000 of these might well be expected to become eligible (by prevailing screening standards) for services if funds were unlimited (Level 2).

3. That some 7,500 of these might well be expected to receive services were funds made available in proportion as they were in the Martin County sampling—whereas only 2,089 were accepted for services in the 39-county area in 1964 (Level 3).

It appears, therefore, that Vocational Rehabilitation Services will not have met the potential needs of the eastern Kentucky area until such time as the program involves more than three times the number who participated in 1964, at least until there is some "catching up" on needs now unmet.

Vocational Rehabilitation Services is generally recognized as an investment by society in human resources which, as it is continually capitalized, pays dividends not only in human but in fiscal values. It appears that society might profit by increasing its investment in Vocational Rehabilitation Services in the 39-county area of eastern Kentucky at least three fold.

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*AMERICAN INDUSTRIAL TECHNICAL EDUCATION CONFERENCE, COLUMBUS, OHIO, JUNE 20-21, 1967

The first annual American Industrial-Technical Education Conference (AITEC) was held during the third National Vocational Industrial Clubs of America Conference. AITEC is comprised of groups of businesses, individuals, and organizations interested in supporting trade and industrial and technical education, and serves as a channel of communication between the members and educators. Major presentations were: (1) "Vocational Industrial-Technical Education--Purposes, Progress, Trends" by Edwin L. Rumpf, (2) "Vocational Industrial-Technical Education--The Congress and the States" by Lowell A. Burkett, (3) "Administration of Vocational Education on the State Level--Services and Issues" by C. Thomas Olivo, and (4) "The Priceless Human Resource--Our Nation's Youth" by Byrl R. Shoemaker. A panel presentation, "Meeting the Needs of Labor and Industry" was also made. (EM)

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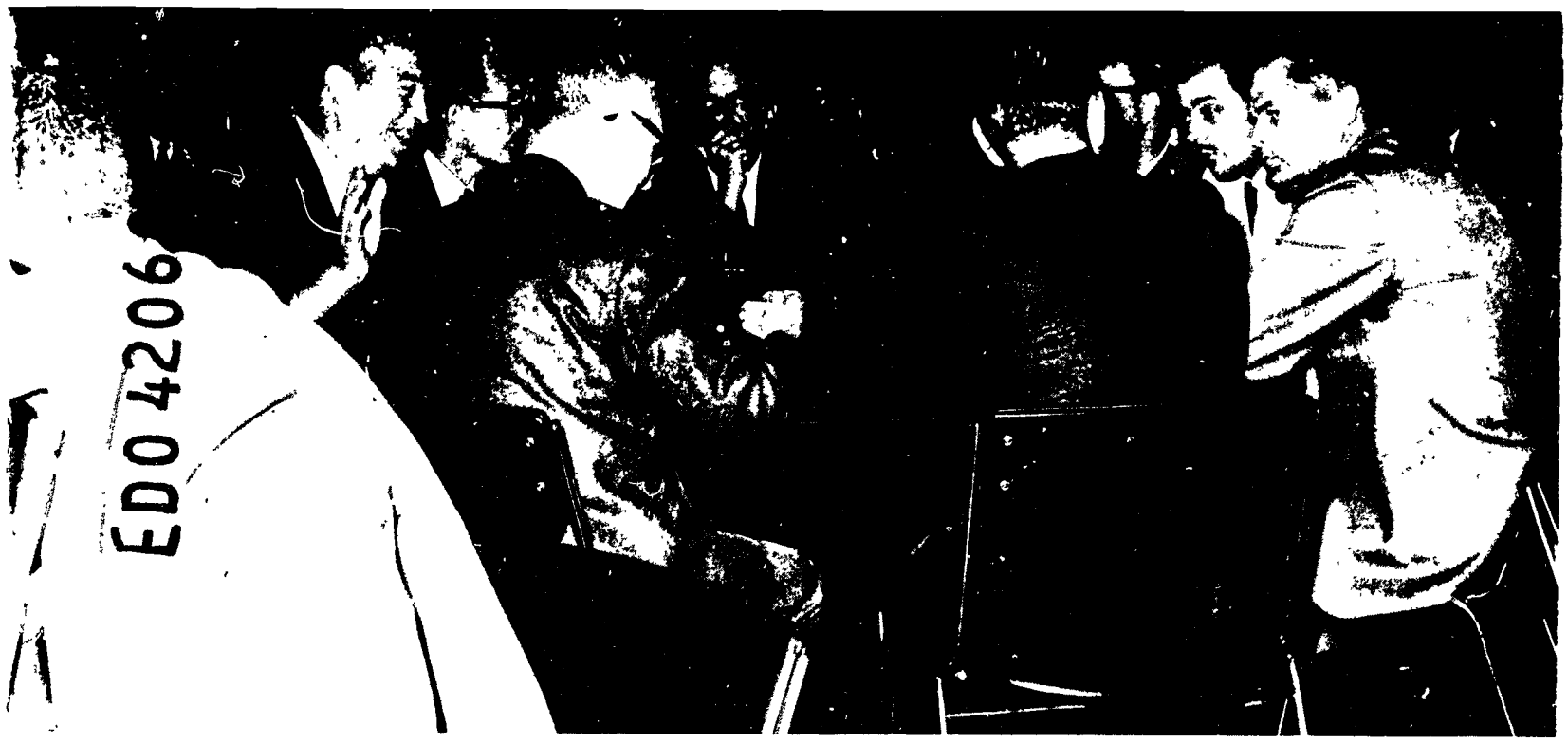

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1st Annual American Industrial-Technical Education Conference

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the Neil House Columbus, Ohio *June 20 & 21, 1967*

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FOREWORD

Vocational education is fifty years old. It was on February 23, 1917 that President Woodrow Wilson affixed his signature to the National Vocational Education (Smith-Hughes) Act which began fifty years of cooperation between the Federal Government and the states in public vocational education.

Over the years trade and industrial education, one important aspect of vocational education, has served millions of students, millions of employees and thousands of industries in America.

To quote Mr. Ernest B. Studebaker, Chief of Trade and Industrial Education, U. S. Office of Education:

"Today, in America, trade and industrial education is truly, by any standard imaginable, big business. Our reports show that last year (1966), we trained over 1,400,000 people—500,000 of those were in the high school, 100,000 were in the post-high-school programs and almost 800,000, 784,000 to be exact, were employees in industry and in the trades."

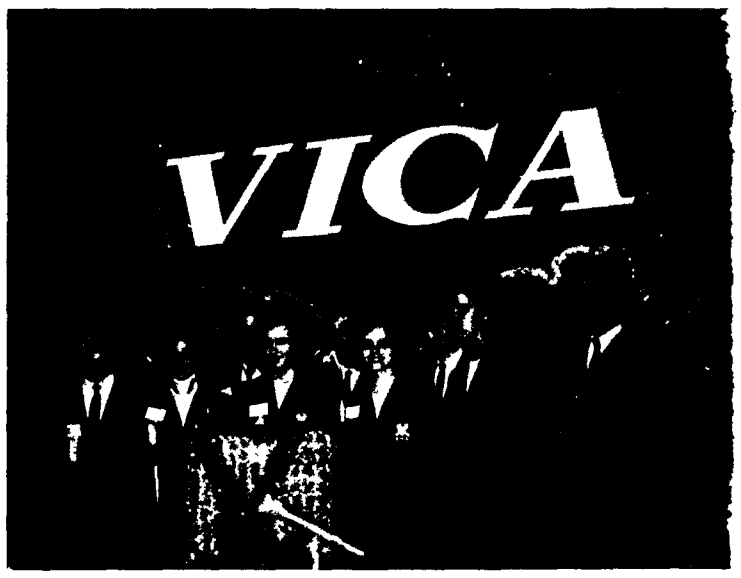
It was for the vast numbers of young people training in the high schools and for the others—the youth that should be training because they will need jobs and because industry will need them, the youth destined to be the dropouts and the pushouts—that the Vocational Industrial Clubs of America was established in May, 1965.

The first American Industrial-Technical Education Conference held during the Third National VICA Leadership Conference in Columbus, Ohio, June 20 and 21, 1967, is viewed by VICA supporters as a step forward in the task of preparing youth for trade, industrial and technical occupations. AITEC is an expression of the concern of industry, labor and education.

The proceedings of the conference presented here, then, relate to the vital and interlocking needs of youth and industry.

AMERICAN INDUSTRIAL-TECHNICAL EDUCATION CONFERENCE and the VICA YOUTH DEVELOPMENT FOUNDATION

The development of vocational trade, industrial and technical youth—through opportunities to work and learn, to develop talents and leadership abilities and to acquire the attributes of character and citizenship that will help them achieve satisfying, purposeful and productive lives—is of primary concern to the Vocational Industrial Clubs of America.



Lending support in the fulfillment of this objective are the members of the American Industrial-Technical Education Conference (AITEC). AITEC is comprised of groups, businesses, individuals or organizations interested in and supporting the training of youth in trade, industrial and technical occupations and the activities of the Youth Development Foundation of the Vocational Industrial Clubs of America.

Meeting annually during VICA's National Leadership Conference, AITEC is conducted by VICA with the assistance of the sponsoring committee of the Youth Development Foundation.

Through this meeting, members are kept abreast of latest developments and trends in vocational industrial-technical education and on the progress and status of VICA. To promote

an exchange of ideas, sessions are not limited to members of AITEC. Invitations are extended to other organizations and businesses. Those attending are special guests of the Vocational Industrial Clubs of America at the Annual Awards Banquet.

Participation in AITEC is voluntary and automatic for groups, businesses and organizations making grants to the Youth Development Foundation or expressing concern and support for the Foundation and its purposes.

The Youth Development Foundation of the Vocational Industrial Clubs of America seeks:

- the advancement of the educational development of students enrolled in trade, industrial and technical education
- the creation and development in American youth of interest in the pursuance of trade, industrial and technical occupations
- the promotion and stimulation of interest in trade, industrial and technical education on the part of the general public

In furthering these objectives, the Foundation will develop and administer programs for the financial assistance of deserving students through grants and scholarships and for the distribution of prizes and awards to students achieving distinction in trade and industrial education. The Foundation seeks to promote national, state and local student contests in public speaking; parliamentary procedure; job application; trade, industrial and technical skills and other areas. In addition, the Foundation will provide for student leadership conferences, and the publication of leadership materials and information for student use.

The American Industrial-Technical Education Conference is a national forum for groups, organizations, individuals and businesses supporting the purposes of trade, industrial and technical education and the Vocational Industrial Clubs of America. The Conference also serves as a channel of communication between business, industrial and labor leaders and trade, industrial and technical educators. It is a vehicle, too, for the special recognition of faithful supporters of action and programs essential to the development of youth.

The development of youth is essential to our national well-being and security. The American Industrial-Technical Education Conference supports the continuing investment in youth which will assure America's world leadership and industrial progress.

THE VOCATIONAL INDUSTRIAL CLUBS OF AMERICA

The Vocational Industrial Clubs of America is a National organization of youth—boys and girls—preparing for careers in industry. These students are studying in more than 100 different trade and industrial curriculums throughout the United States and its territories.

The purpose of a student's participation in VICA is personal development. This is accomplished in student-initiated civic, educational, professional and social activities, supervised by his trade and industrial education teacher and administered by public school officials. VICA activities also foster a respect for the dignity of work; promote high standards in trade ethics, workmanship, scholarship and safety; and develop patriotism by practicing democracy.

VICA was established at a Constitutional Convention, May 6, 7 and 8, 1965 in Nashville, Tennessee. At that time, 20 States adopted a Constitution and elected National officers. As of March, 1968, 32 state and two territorial associations with almost 60,000 members, had affiliated with VICA.

VICA is an organization of State and territorial associations, each operating under the approval of VICA, Inc. The Corporation sponsors VICA, the youth organization, and an Administrative Board composed of members of VICA, Inc., the U. S. Office of Education and the American Vocational Association serves as the adult governing body.

A National Advisory Council provides counsel, advice and assistance to the Administrative Board. Its members are persons from all facets of education, labor and business.

An Executive Secretary, appointed by the Administrative Board, serves as the administrative officer of the National organization in its headquarters in Washington, D. C.

National VICA Headquarters offers guidance and services to the state associations and lends an organizational hand in initiating state and local club programs and helping them to continue. National VICA provides information and materials, conducts conferences and offers consulting services on club organization and youth development.

Through the VICA Youth Development Foundation incorporated April 21, 1967, National VICA sponsors five major youth development activities: leadership development conferences, national competitive activities and leadership awards, leadership development publications and student financial assistance.

The four national conferences held yearly are the National Leadership Conference, the National Officers' Leadership Conference, the State Advisors' Workshop and the American Industrial-Technical Education Conference.

What Was Said About . . .

Abilities of Youth
Dr. Olivo *(page 20, paragraph 1; page 22, paragraph 2)*

Advisory Committees
Dr. Rumpf *(page 14, paragraph 1)*
Mr. Burkett *(page 15, paragraph 5)*
Mr. Burt *(page 35, paragraph 1)*

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Tuesday, June 20
FIRST SESSION

PRESIDING: ERNEST B. STUDEBAKER, Chief
Trade and Industrial Education
U.S. Office of Education

Welcome
LARRY W. JOHNSON
Executive Director
Vocational Industrial Clubs of America

Vocational Industrial-Technical Education—Purpose, Progress, Trends

DR. EDWIN L. RUMPF
Director
State Vocational Services
U. S. Office of Education

Dr. Rumpf joined the U.S. Office of Education in 1962. He came to the Office of Education from the state of Pennsylvania where he was state director of vocational education. In Pennsylvania, he had earlier served as director of vocational education in the city of York. He has taught in Clemson University, Clemson, South Carolina, as visiting professor of trade and industrial education. His experience from 1941 until he entered the state department of education in Pennsylvania included experience as a machine shop instructor in high school trade and industrial programs. Dr. Rumpf has a bachelor of science degree and a master of education degree in industrial education from The Pennsylvania State University. He also received his doctorate from that university.

May I say that I deem it a distinct honor and privilege to participate in this first American Industrial-Technical Education Conference, in short, AITEC. This is indeed an opportunity for us as educators to exchange ideas with people representing national leaders in labor, business and industry. AITEC also provides a means of communication between top industrial leaders, members of the labor organizations and people in education, helping them to understand what training needs are and enabling us to develop realistic training programs to meet these needs. One common concern that I think all of us have is the development of trained and capable manpower. Trained manpower is one of the major keys in the productivity of this nation, which places it in the position of being a world leader.

My presentation relates to one aspect of education, namely vocational industrial education, which can contribute greatly to the development of trained manpower in this country. As leaders of labor, business, industry and education, it may be well for us to look at our economy and its resources as compared to that of Europe. Then we can look at the vocational industrial education program and its potential and how we can work together to improve it.

You know, contrary to what many of us have believed for a long time, we do not have the exclusive rights to technological know-how in this country. Recently, Secretary of Commerce Alexander Trowbridge said, and I quote: "There is no dearth of technological know-how in Europe. Of a hundred or more major advances in technology since World War II, Western Europe accounted for 49 percent, the United States for 31 percent.

There are other reasons besides technology itself that cause Europe to lag technologically behind the United States. Secretary Trowbridge indicated that these could be better explained in terms of productivity, education, economies of sales, managerial environment, natural resources and markets.

For example, think about this: The output per worker is a bit more than half of the American level in Northwestern Europe and only a third of the American level in Italy. In spite of the high quality of education in Europe, a much smaller proportion of persons is exposed to it. One study revealed that two-thirds of the Americans aged 15 through 19 were enrolled in school compared to only 31 percent in France and less than 20 percent in West Germany, Italy and Great Britain. We know that of the age level, 20 to 24, we in the United States have 12 percent enrolled while West Germany with a little better than 4.5 percent led France, Italy and Britain. The United States also had twice the university graduates in science and engineering per million of population that France did and four or five times as many as the other nations.

All of these data tell you little or nothing about the quality of education in these countries or the kinds of educational programs in which the people were enrolled. They do support the fact that there is more educational opportunity in this country for the individual.

In addition, the educational level achieved by persons in their respective countries, among other factors, seems to have a direct relationship to national production. You can go back and look at some of the studies made by the national Chamber of Commerce years ago and you will see the direct correlation between the educational level and the economic level within the communities. Undoubtedly, all of this points up the importance of educational programs, not only in the development of the individual but in the development of the nation's economy and productivity.

So it seems reasonable, therefore, that we should examine the purpose of vocational trade and industrial education and look at what we say about it in the U. S. Office of Education regulations. This is how we define trade and industrial education:

> *"Trade and industrial education means education which includes any subject which is necessary to develop the manipulative skills, technical knowledge and related information such as job attitudes, safety practices, and trade judgment necessary for employment in a trade and industrial occupation."*
>
> *Then, we say:*
>
> *"Such an occupation shall include any craft, skilled trade, or semi-skilled occupation*

which directly functions in the designing, producing, processing, fabricating, assembling, testing, modifying, maintaining, servicing, or repair of any product or commodity."

This definition does sound rather imposing and there is no doubt about it, it is. But I would like to remind you that it represents only one aspect of the broad field of vocational education which is federally supported. Other programs that are supported include ones related to such fields as agriculture, distribution and marketing, home economics, health occupations, office occupations and technical occupations. And historically, many of these have been spawned and supported under the aegis of trade and industrial education. In many states you can still see the evidence of this in the state organizational structure and the various administrative patterns that are being followed. But regardless of how the state chooses to implement the program, the net result is more and greater opportunity for youth and adults in vocational education.

One might well ask, "What is the scope of this program?"

Usually, we do measure progress in terms of those enrolled and the amount of money expended. While this is an important index of progress, I would also like to mention something which impinges upon the qualitative aspect of the program. Back in 1961, about 963,000 were enrolled in this program. This, since 1966, has gone up to about 1,300,000. You might look at it percentage-wise and see that this is a growth of 33 percent during this five-year period. While this is commendable, I would like to point this out: that in 1961 trade and industrial education represented 25 percent of the total enrollment but, in 1966, this had dropped to slightly less than 21 percent. Another way to look at it is to say this: in 1961, one out of every four students in vocational education was in trade and industrial education. In 1966, this had dropped to one out of every five. Maybe some of these results may be attributed to changes in the formula but they should be of sufficient importance to cause people who are responsible for trade and industrial education programs in the states to stop, look and listen as to where they have been and where they intend to go.

Just a word or two about expenditures. In 1964, we had expenditures totalling almost 103 million; in 1966, this was up to better than 186 million or an increase of about 81 percent. It is important to note that while the enrollments represented 21 percent of the total enrollment, the expenditures for trade and industrial education represented about 32 percent.

Of course, this figure can be explained by the fact that usually this kind of educational effort represents a tremendous investment in equipment and facilities.

Well, this gives you some idea of the scope of the program. But let us look at some of the specifics that might have some relevance with respect to the quality of the program. It must be acknowledged that in this kind of brief presentation, you cannot begin to be all-inclusive and I am, perhaps, going to err more on the side of omitting something rather than including something. But just citing a few examples will, I think, give us some kind of a feel for the progress that is being made.

Experience has shown us that in the new area schools that are being built, the programs that are included are predominantly in the field of trade and industrial education. There is no doubt about it that the full impact of this construction will not be felt until the months and years ahead. But, you get some idea of the magnitude of what is taking place in this country when you recognize that in 1965–in one year–214 area vocational school projects were funded with a total expenditure of more than 107 million dollars. And in 1966, 239 area school projects were authorized which will represent finally, when everything is completed, an expenditure of more than 177 million dollars.

You might ask, "Well what is the effect on trade and industrial education?" As we look at it, this will mean a greater variety of offerings to youth and adults in this country, a greater accessibility in terms of vocational education opportunities. Contrast the programs of a few years back, when you had five or six different offerings, with the more than fifty offerings in a new six-million-dollar area school nearing completion in Atlanta, Georgia.

Or think in terms of the network of area schools in Pennsylvania which, when completed, will make a wide variety of vocational offerings readily available to better than 95 percent of the students at the secondary school level. Better than 95 percent will have ready accessibility to these programs across that state. And here is an important thing to note, too. In the federal regulations, we require that there should be a minimum of five offerings in an area school if it is part of the comprehensive high school or part of a junior community college. In Pennsylvania, they have established this standard at ten but the interesting thing to note is that the average number of offerings in each one of the area schools there is twenty–twenty different offerings in each one of these area schools.

Let me move on to another point, relating to how people outside of education look at vocational education. Many think of it as a high school program. Yet reports in our office for the fiscal year 1966 just ended show that 66 percent of the enrollees in trade and industrial education were adults, with 55 percent enrolled in classes which were supplementary to their daily employment. What a wonderful opportunity it is for these adults to upgrade and update their skills and abilities and what an asset these people become to their employers as a result of this training.

Is it any wonder that when prospective plant locations are being thought about that decisions are weighted heavily in favor of those communities that offer a wide variety of vocational education programs of the preparatory and supplementary type for both youth and adults? I think the progressive businessman, industrialist and labor leader have long since learned the truth of the close positive correlation between the well-rounded vocational education program and the economic asset which accrues to the community.

Not often do we find the general school administrator who recognizes the economic asset that can accrue from a comprehensive vocational education program. More infrequently do we find the general school administrator placing as much importance on vocational education offerings as he does on the college preparatory programs. I believe one notable exception to this is in Pittsburgh, Pennsylvania. The school superintendents there, I understand,

are beset by the usual problems plaguing a city and they decided to do something about it. A survey of the recruiting requirements of industry in the Pittsburgh area revealed the need for 190 vocational offerings, 48 of which could be provided at the high-school level and 61 demanding post-high school education. Within a three-year period, the percentage of high school students taking vocational education has increased from less than 20 percent to almost 60 percent—almost 60 percent of the students at the high-school level taking some kind of vocational education. And, over this period, 42 courses were added in response to the needs.

Many states, in addition to reporting significant increases in enrollment, are offering new courses. I am just going to mention a few. Some are in the areas of electronic services, air conditioning for passenger cars, automatic vending machine repair, metallurgy, diesel electric locomotive repair.

Despite all these evidences of progress, much still remains to be done. The problem of providing an adequate supply of well-qualified teachers must be solved. The differential in compensation between the salary of the teacher and the supervisor-administrator is insufficient to attract many of those people who would be willing to assume the additional responsibility. I know we have examples right here in this audience of people who have been attracted from education into industry. It is another one of the problems.

While the efforts of the federal office in many state agencies are commendable with respect to the development of curriculum guides, the total effort is merely a drop in the bucket in terms of the ever-expanding needs that are pressing upon us.

Teacher education programs have also felt the pinch regarding the lack of qualified personnel and, in many instances, teacher education programs have not displayed the type of leadership that is demanded by expanded vocational education opportunities.

Seeking new ways to provide services for a vastly different clientele, I think we have to recognize that the changing needs of business and industry and the changing demands of labor require that we use some different approaches. Additional personnel are needed in guidance and counseling and new directions in research must be made which will be responsible to the operational aspect of the program. We have plenty of research but it has been "up here" somewhere. It has not been directed toward solving some of the operational problems that have been confronting us for many years. What concrete evidence do we have, for example, as we do it in trade and industrial education, that 50 percent of the time should be spent in useful and productive work? What evidence do we have that we ought to have segregated classes and that this is the best and most efficient way to teach vocational education subjects? How can we do our jobs more efficiently and more effectively? Should not the results of research assist us in our future planning and development? What techniques can we use to evaluate our programs?

These questions, I suppose, are directed more to educators than they are to people in business and industry and, yet, they are relevant.

With the advent of program planning budgeting systems (it's PPBS in the Federal

Government), it is no longer sufficient for us to see that we can do the job. What we must be able to say is that we can do the job of training more effectively and more efficiently. In short, whether we like it or not, a new era is upon us in vocational education and in trade and industrial education.

Just as business and industry, if they want to remain competitive and stay in business must apply the principles of cost-benefit analysis to their operations, so we as educators must begin to think in terms of the return on dollar investment. Now this will not be easy but I believe we can start to improve our operation based on what we know from our own background and experience and improve the efficiency of what we are doing. A systematic approach to some of the things I have just mentioned will, I believe, provide sufficient evidence to get us started in some new directions.

What is the relevance of all this to the leaders of labor, business and industry? Let me say that I believe you can help us solve some of these problems. I think you are to be commended for your support of VICA–the Vocational Industrial Clubs of America. The nearly 60,000 members represent those who will assume leadership roles in the industrial world of the future.

Even though this is a most worthy cause, for some of you this participation may be of a kind of passive nature. But I see three very important areas in which we as educators solicit your active participation.

First, you can assist the student to bridge the gap between school and industry and business, by assisting in the development of cooperative industrial education training programs. This would enable students to work part-time on jobs related to the vocational education objective and at the same time permit them to complete their educational program. I headed one of these programs for about twenty years in York, Pennsylvania and I believe that I can commend it and recommend it to you very highly. One thing that a vocational education program can do is act as a selecting and screening device to provide greater assurance to the prospective employer that you will get the kind of person who has the necessary qualifications to do the job. I suggest that you discuss the possibilities of this kind of arrangement with your local or state director of vocational education and then do something about it.

Next, business and industry can make a tremendous contribution by participating in programs that involve the exchange of personnel. The products of the educational system will only be as good as those persons who provide the instruction. For many teachers and other professional personnel to have the benefit of periodic first-hand experiences in business and industry will do much to update and upgrade those people in their specific field of interest. On the other hand, making personnel available on leave from business and industry to educational institutions will do much to insure that the educational program is realistic and geared to the needs of business and industry. I do not think I need to tell you that we have gotten plenty of criticism on this one in the past few years. As I see it, continuous and mutual interchange of personnel and ideas is one way to insure that the graduates of educational institutions will be responsive to the needs of the future.

Finally, active participation by labor, business and industry on representative advisory committees is another way that you can help educators to do a better job. You can assist in determining the vocational education needs of your community and state as these are related to the economy and to the needs of the youth and adults that would be served by these programs. And, believe me, if you are a member of an advisory committee and make a suggestion it is much more important and counts a great deal more than someone in the field of education saying the same thing. In addition, you can help to translate these needs into meaningful educational efforts that will bring the greatest return for the amount of money spent. This is becoming more and more important. Through this means, you can assist in bringing about greater educational opportunities and making them available to the countless youth and adults who can best be served by these programs.

I honestly believe that your participation or the lack of it can spell the difference between the success or failure of trade and industrial education in this country. If you are really and truly interested, you will offer your services at the office of the local or state director of vocational education in your state as soon as possible. You will not wait for an invitation from someone else, you will take the initiative.

As Nicholas Murray Butler, former president of Columbia University, once said:

"I divide the world into three classes: the few who make things happen, the many who watch things happen, and the vast majority who have no idea of what happens."

We need more people who make things happen. I am confident that in this group we have people who will make things happen.

"Vocational Industrial-Technical Education, the Congress and the States"

LOWELL A. BURKETT
Executive Director
American Vocational Association
Washington, D. C.

Mr. Burkett is Executive Director of the American Vocational Association. He was formerly Assistant Executive Secretary and earlier, supervisor for industrial education in Illinois from 1948 to 1956. He has been a local director in Illinois and a cooperative education coordinator in trade and industrial education. A building trades instructor, he served his apprenticeship in the carpentry trade. Mr. Burkett received a bachelor of science and a masters degree from the University of Illinois.

It is a distinct pleasure to have the opportunity to meet with this group of people here today. I always welcome the opportunity to talk with people from labor and industry.

Today, I want to talk a little about the work of the American Vocational Association and what we do, with the idea in mind that we might get closer together in understanding what is supposed to be accomplished through our program of trade and industrial education.

What is the American Vocational Association? It is the professional organization of vocational teachers in this nation of ours. It includes not only trade and industrial educators but they do constitute the greatest number of members in the association.

I would like to talk a bit about what the Congress of the United States is, thinks and does in vocational education and what the states are doing.

The federal government is interested in manpower--and the manpower shortage--because it ties very, very closely into the economy of this nation. And, as Dr. Rumpf has pointed out, the reason that our economy is one of the greatest in the world is the fact that we have developed a source of manpower.

The nation as a whole, the Congress of the United States, is concerned about the defense of the nation and manpower and production are always tied to the defense of the nation.

The first federal act regarding vocational education provided for a few things that I think are essential. One of these is a cooperative working relationship between business, industry and education. The advisory committee concept was instituted in the very beginning of vocational education. The advisory committee is where we find out what needs to be taught, how it is to be taught and to whom it is to be taught, by working cooperatively with the users of the products of vocational education. This concept is important to the nation today. Vocational educators do work closely with business and labor.

I think that there were some very wise things included in the very first vocational education act and in the subsequent acts. The act required at least a 50-50 matching (50 percent federal and 50 percent state or local matching) of funds and this has been a great stimulus in the development of this program. Last year, state and local matching to federal money was about 3.5 dollars to every federal dollar expended on vocational education. This shows a great enthusiasm on the part of local and state communities to help support and develop these programs.

Federal acts are merely a stimulus to get the job done that you need done in training manpower, in the job that we see needs to be done in education to serve the needs of the people. In our classrooms, there are people that need this type of education.

We can look at the history of all the federal acts in vocational education and each time we see new national needs evolving. For example, introduced in the George-Deen Act was marketing distribution, a program which was not conceived as a part of the early acts. And then in 1958, we saw the introduction of technical education, this mid-area of technical manpower we talk so much about today. The technician is the person who works closely with the engineer in science.

We saw, in the Vocational Education Act of 1963 resulting from a study made by the Panel of Consultants on Vocational Education, a new dimension to vocational education--

a broadening of the program to serve the needs of people. And we could see written all through this act again, the necessity of serving the needs of people and of serving the needs of business and industry.

As a national organization, AVA works closely with the national Congress because it is through sources like ours that the members of Congress learn about some of the needs in the field of vocational education.

The American Vocational Association has the responsibility of attempting to inform Congress and the public at large of some of the anticipated needs. Because we are training people today that are going into employment either next year or a few years from now, we have to project ahead. We have also asked the states to do some projecting and here, then, is what we project is needed to fully support a program of vocational education in this country, in dollars, by 1970.

It will take at least 2.5 billion dollars of federal, state and local money to support the anticipated program in the public schools of this nation. We also estimate that we will be serving at least 10 million people in vocational education by 1970. We estimate that it will take 120,000 vocational teachers. Today in this country, in fiscal year 1967, we were short about 10,000 teachers. Classrooms were closed, needs were not served because we did not have teachers.

We have a tremendous job in getting more teachers into the field and helping them to become better teachers through their professional organization, in providing them with what help we can and helping to stimulate their interest in doing a better job to serve the people and the manpower needs of their country.

The Vocational Industrial Clubs of America and AITEC will serve as a means of bringing focus to some of these needs.

We welcome always the opportunity to work with people who have an interest and concern in this whole area. And, as a professional organization, AVA welcomes the opportunity to work with you.

"Administration of Vocational Education on the State Level-Services and Issues"

DR. C. THOMAS OLIVO
Director
Division of Industrial Education
State Education Department
Albany, New York

Dr. Olivo is a graduate of the Brooklyn Technical Institute, did his undergraduate work at State University College in Oswego, New York and his graduate work at Cornell and New York University. He served his apprenticeship as a tool and die maker, and is a former member

of Lodge 556 of the AFL–CIO. Dr. Olivo has been a teacher in machine trades and related subjects. In New York, he served as supervisor of vocational curriculum development, professor of industrial teacher training and chief of the bureau of industrial teacher training before assuming his present position.

My remarks today will be three-fold. First, I would like to talk philosophically. Secondly, I would like to ask some very specific questions and try to answer some about the the how's and where's and what's, the whom's and why's of vocational education. Then, I would like to list about thirteen services and issues and I will make no attempt to divide the services and issues.

You have already heard that you are part of a very significant historical development. Here, in Columbus, you may see for the first time the youth who are committed to a program leading to patriotism, concerned with citizenship, concerned with leadership and, equally important, concerned with occupational competency. And here we are, employers, labor leaders, business leaders and educators, in a common bond where we are trying to interpret our Judaic-Christian concept of the imminent worth of man.

I think we have an understanding of man. We have a freedom of movement, we have a sense of responsibility, we have a faith in people and their future and we have the hope and the determination and the experience, both occupationally and educationally, representing the highest level in the world. And, together, we try to seek some closer bonds to try to implement the concept of man's worth. This, to me, is really the essence of greatness in these United States.

Why do we have vocational education? As Mr. Burkett and Dr. Rumpf indicated, when we talk about vocational education we are really talking agriculture; we are talking commerce, business and distribution; we are talking industry; we are talking of the wage earning areas of home economics. We are talking about vocational education for the well-being of man, for his social well-being and his economic well-being–these things for his family and for his society. You and I as an individual group are talking about this phase of education for our survival, our national survival.

We have vocational education because we have an educational system based on the Mayflower Compact, wherein it was agreed that on these shores man would be responsible for bringing his brother to the next highest potential level. And we have vocational education because it is, at the time, closest to the needs of people.

Vocational education in this nation is training people for entrance into occupations, or re-training for displaced persons, or upgrading, so that we may continuously remain occupationally competitive.

Who needs vocational education? We have conceived a program in this nation of vocational education for youth who are in the secondary schools. And this is the most difficult problem facing any group and any nation–where shall vocational education be given and why shall it be given in the secondary schools? For the very simple reason that, for 80 percent of

our youth, this is the last organized point where they may get instruction in preparation for life.

Now, vocational education may be provided for the out-of-school youth if they are drop-outs, push-outs or graduates without salable skills. And it is available for adults. It is available for these people in a total spectrum, not in the limited perspective that you and we occasionally thought. It is not preparation for the skilled trades, for industrial-technical occupations alone. It is preparation for foremanship, management, supervisory development and, on the other end of the scale, it is for those persons with limited abilities and potential for high level positions. It is for them, too, because they are needed in our society. They are just as important as you and I.

How does a person develop occupational competency? There are three general patterns. One of these is an organized program. It is the institutional program, the school program. The other may be the on-the-job program that industry and labor are predominantly carrying on. Or it may be military in this organized pattern. Or, it may be specialized service or a combination in a cooperative program.

People may also develop occupational competency in a non-structured type of activity. If it is institutional, it may be non-graded because there are many who do not seek preparation at a particular grade level. It may be secondary, it may be post-secondary and it may be continuing.

What shall be taught? We believe, in vocational education, in having some honest educational and training hurdles where we derive the content by actual occupational and job analyses. It is from these types of analyses then that we can identify the skills and the trade theory of the related technological content necessary to perform well on the job at whatever level. From these analyses, we develop our related subject content, whether it be in the area of the mathematics related to the skill or the related science, drawing, art or design. It is from these types of analyses that we get our industrial, our labor, our community relations content. It is from these analyses that we get our safety and hygiene and related education.

We believe and subscribe to that phase of education that develops the social competency necessary for good citizenship. And so, in vocational education, we are not talking about skill development alone; we are talking about the development of an individual in the context of a whole individual.

Whom shall we serve? Well, let me just talk statistically a little bit.

For every year of the ten-year period from 1956 to 1966 (and I will indulge that when the 1967 figures are in you will find that we have had one million every year), we have had one million drop-outs or push-outs. And these are not the disadvantaged youth for when you study them, you find that at least one-fifth of them are in the upper quartile.

What is our retention? What is the problem that we face on the state and national levels?

We know that for every ten students in the fifth grade in 1957 (bear in mind that there are some students that we do not account for honestly and there are some that drop out before the fifth grade), we know that only seven will graduate from high school. Of those seven, 3.8 say they are going to enter college. I dare say that, if you removed your industry and your government subsidies, that it would be even less than that. We know that only 1.9 may graduate in 1969. And we know that our mortality in the post-secondary institutions between the first and second year is at least 50 percent.

We know, for example, taking those statistics and translating them that, for every million youths enrolled in the fifth grade in 1967, 700,000 may graduate, 380,000 may enter college and 190,000 may earn a baccaulareate degree. And yet, in this nation, we are held back on an educational program that provides education for 20 percent–19 percent in this case–and disregards the needs of the 80 percent.

Nationally, in vocational education in this year 1967, there were 12.3 million youth in secondary education and, at the 30 percent level, it is anticipated that we will serve in vocational education in this nation 3.5 million secondary school youth. By 1975, we anticipate that there will be 15 million secondary school youth and we expect that vocational education will serve the needs of one-half of them. And so we look forward to an enrollment of about 7.5 million on the secondary school level or a doubling of the number in eight years.

And, in post-secondary, we anticipate that there will be 1¼ million adults and that we will have to retrain, up-grade and so on 6.5 million. At that time–1975–we will more adequately meet the needs of those youth with special problems and we will approach about three-quarters of a million.

That means that by 1975 we will have the tremendous job of dealing with about 16 million youth and adults in vocational education. Now of these 16 million, approximately 5.7 million will be trade, industrial and industrial-technical students.

What will we need to invest?

In buildings alone, by 1975, there will need to be federal, state and local investments of about 2.7 billion dollars. And there is need at present for federal financing, not to the tune that our Congress has appropriated, but for some 404 million dollars to finance the programs of vocational education. The need for federal funds will triple by 1970.

The teacher's story between 1967 and 1975 is again one of tripling, from 125,000 teachers needed this year to an estimated 350,000 for 1975. And I might say that in our projections, we have always been on the conservative side.

Let me turn to thirteen services and issues with which I am faced on the state level, with which your state supervisors and directors are faced and which confront us nationally.

The first of these issues is one of accessibility and equality. I have chosen my words

deliberately for the first of these. *I am concerned with access–to an equality of educational opportunity for youth and adults commensurate with the varying and unequal abilities, aptitudes and aspirations of each one. Unequal abilities, under public supervision and control, is the right of every individual. Further, these programs shall be accessible to in-school and out-of-school youth and adults regardless of the geographic location of people and the ability of the individual to pay for a foundation which I identify as a preparatory vocational program.*

Now to achieve this goal poses issues to you in industry, labor and education. What kind of a program shall it be? Who shall it be for? When shall it be given? Where and how?

Concerning the second issue, we say that vocational education and specifically, trade, industrial and technical education, is an integral part of the mainstream of a total educational program. Now what is the problem if we implement that? If we achieve this to the degree necessary, we have to face the issue squarely of what happens quantitatively and qualitatively to the educational program that has been geared so far to the needs of the 20 percent. In other words, if we provide education for those who are seeking a vocational education and delete the numbers of those who are in the general academic program, what happens to the quality of that program?

The third issue is one of services. It seems to me that programs of vocational education must have what one of our men described as the "carousel" effect. This term describes the multi-level, multi-track variable scheduling variation in course planning–around the clock and around the year programs that are area-conceived with sufficient flexibility and fluidity to meet as many of the needs of people as possible and a program that will be continuing and continuous throughout man's occupational life span.

If this is our goal, do we have some issues? Do we have some problems? (And these programs we talk about are talked about in the context of preparation for advancement in business, distribution, agriculture, trade, industrial-technical, health, fisheries and the like.)

Since teachers develop content competency in industry, we know there must be provided a sufficient number of teachers and supervisors among state staff with knowledge of national programs, knowledge of your schools and communities and the people of your state, in order to provide the needed leadership to research, to review, to assess, to project, to implement, to supervise and to evaluate vocational industrial-technical education.

To fully staff your state means that you in industry and labor and business need to find ways of releasing some of your top competent persons to serve within the school professions. We know from experience that if we have sufficient professional industrial teacher educators, acting within the academic freedoms which they enjoy and the rapport that their institutions have with industry and labor, that they have the leadership to refine quality and to evolve teacher education programs consistent with your state's coordinated plan. Here again, I am assuming that you in industry will cooperate in ever-increasing measure by making available plant and staff through such activities as summer institutes, curriculum development activities and the like.

Mr. Burkett talked about manpower and here is an issue that we must face squarely: programs of vocational education are educational programs, not manpower programs. Vocational education in this nation is elective and in a democracy there is no agency that may mandate the vocation in which a person may enter or progress. This is the difference, as I take it, between a manpower conscription determination and a free society. I do recognize, however, that we need to develop our programs around valid manpower data. And so we need your support from industry and labor to recognize that we are not a manpower society but rather we are an educational program, permitting an individual to identify that area in which he feels he may best serve.

As was indicated, we have another issue and that is in relation to research programs and the development of potential vocational industrial-technical education leaders through advanced studies. Here we again need the cooperation, the knowledge, the experience of industry and labor. We know that there can be sufficient potential and actual local and state leadership in vocational industrial-technical education among the teachers, the teacher coordinators, the supervisors, the directors and the principals–with industry and with labor in advisory, consulting capacities. There is no question in my thinking that, as a team, we can conceive collectively, plan, promote, initiate, operate, assess, research and refine the finest program of vocational industrial-technical education anywhere in the world to meet the growing and evolving needs.

In providing these services that I have talked about (and these are not as many as can be defined), I recognize that industry, business and labor are committed to the Judaic-Christian concept that I talked about: our concern for the well-being of man and making it possible for him to move continuously to his next highest level.

We know from studies–studies in industry, studies of labor, agriculture, business–that there is interest on your part in vocational education on the secondary school level. You have indicated a need for the product and for vocational education and you have indicated that you will support financially, physically through your plant, socially through employment and the like.

I have a feeling that, while we are committed to serving youth and committed to a program of vocational education, there is sometimes a hesitation and a reluctance to adequately survey those youth in secondary schools. It seems to me, too, that there is need to restudy employment promotional practices. And, in our sophistication, I sense that sometimes we are more committed to an employment practice for top management, for college-oriented or quartile-conscious state-assembled patterns than we are for one that establishes honest educational purposes.

It seems to me that one of the challenges facing us is to recognize the full spectrum of abilities, interests and desires of youth, running this whole spectrum that I talked about, and somehow we need to make employment opportunities possible. We need to study values and to determine the need for a commitment to secondary school youth–a commitment through activities related to an organization like VICA, or DECA (Distributive Education Clubs of America) for those in business, Future Farmers and the like. It is these organizations that

need to develop the citizenship, the leadership and the industrial occupational competency of our young people.

The economic well-being of our nation and its survival depends, in a trite way, on the maximum utilization of our human resource potential. I am concerned with what I think is a short-selling and a short-changing of our youth and our adults. And I am indicating our responsibility in doing that.

Based on years of analysis of trade and industrial occupations, I can say without question to you that there is no skill or body of related technical content–required up to and including the limit of the skilled craftsman and technician–that is outside of the ability of secondary school students who are qualified to master or comprehend. And I would defy you to identify a skill or related knowledge, craft or technical occupation, up to the level of the skilled craftsman, that the youth of our secondary schools who have ability cannot master.

It seems that the future of vocational education, specifically the field of vocational industrial-technical education, was never so bright, never so complex, never so frustrating, never more challenging, never more possible of fulfillment than it is now. It seems, too, that the future for our youth and adults who prepare for vocations is positive.

We will, though, need to harness the energy, the perspective, the dedication, the imagination, the daring and the experience of administrators, supervisors, teacher coordinators, teachers, foremen, management and leaders throughout our industry, if we are to accomplish this end. And then we will need to direct our time, our talents and our efforts to working as a team, to make the potential of our people active.

Wednesday, June 21

SECOND SESSION

PRESIDING: DR. C. THOMAS OLIVO, Director
Division of Industrial Education
State Education Department
Albany, New York

PANEL–"Meeting the Needs of Labor and Industry"

WILLIAM E. LANDIS
Manager
Technical Education
Chrysler Institute
Chrysler Corporation
Detroit, Michigan

Mr. Landis has spent about forty years of his life in the area of personnel and public relations.

With the Chrysler Institute, his work has cut across the corporate span. His prime concern is apprenticeship, technical training and governmental relations. He is a member of the advisory board for the Michigan Security Commission. He is also a member of the advisory board for vocational education in Michigan.

After seeing the young people here at the VICA Awards Banquet last night, I received the biggest thrill of my life and I have been around young people a long time. I have had many experiences in many organizations such as the Boy Scouts and the Boys Clubs of America, Junior Achievement and so on, and I want to commend these young people here and the leadership that has developed an organization within a matter of three years.

We have always said in industry that if educators would give us young people with a basic education, we would do the rest. I think we have overly simplified the problem. When you see the leadership that has been shown here you realize that the leadership abilities these VICA youth display are the things that we need. Believe me, there are prospective executive people in this group. I think that you might say that this is a hidden value of this organization which we in industry have failed to recognize.

I would like to tell you of some of the projects that we are working on at the present time at Chrysler, to give you an indication of how these young people can fit into our problems. I will tell you about some of the things that are happening in our company in training at the moment so that you will get some indication of what we need and how we need these young people.

There are some new requests and apprenticeships that we are going to negotiate this fall. For example, we have service centers run by the corporation and we want auto mechanics. We have 1,000 auto mechanics in a government program throughout the United States, where we cooperate with dealers. It has been a very successful program and, indirectly, VICA has made it possible for us to get a lot of apprentices through their support of our Plymouth trouble-shooting contest. Many of the apprentices that showed an interest through that contest are now in regular apprenticeships in our dealer organization headed up under a Manpower Development and Training Act program and administered by us in Detroit.

You see, this organization has already been of value to us and I do not say this in a mercenary way. I think there has been value received on the other side.

Anyway, we are going to negotiate an auto mechanics program for our own service centers.

Chrysler has a 50,000-mile, five-year warranty on its cars and the quality control that is always a problem becomes doubly so because of the expenditures on this warranty. And so we are going to have an apprenticeship in quality control, which will get into some rather complicated inspection areas.

We are going to have another apprenticeship presented in cost estimating. This is a

salary job but we think that it lends itself beautifully to apprenticeship.

And then, a final one is tool engineering. We will first have a kind of pre-apprenticeship in the tool-making area; then the employee will move on into tool engineering.

There is another problem area and that is the area of numerical control. This requires a great deal more skill than the maintenance of numerical control equipment—when you are using solid state electronics and hydraulics, pneumatics and now we are moving into fluidics. Where it goes from there, we do not know. So we are instituting a formalized program in this area and we expect that we will take young people out of the vocational high school for this program. We have found that the keener people are the younger people that are right out of high school.

Chrysler also has a program that we are working out with five community colleges in our metropolitan area. We are getting them to agree to interchange their credits. This program is designed to make it possible to have a common center where apprentices in the metropolitan Detroit area will be allocated to various community colleges because they are able to give a course at a given time.

If you know anything about apprenticeship, you know that there are so many hours required on-the-job in the shop and so many hours of related training. The problem lies in having the two areas come out even at the end. Where normally our apprenticeship is 8,000 hours with 672 hours of related training, a boy must complete both areas before he can become classified as a journeyman.

With the amount of over-time that has been worked in the Detroit area in the last two years, there is an imbalance between on-the-job training and related training. By getting the five community colleges together with common scheduling, we will always have classes in a particular area when we need them. If my company does not have enough apprentices in a given area for a class, apprentices from other companies would help make up this class.

We think this is great: that the community colleges want to get together in this area. I think it is real progress.

I do want to congratulate VICA. They have done a great deal to help us in our trouble-shooting contest and I want to be on record that the corporation is extremely grateful for the help that we have received from VICA.

We believe the training of young people is the responsibility of industry, labor, the educators and government. It is a four-pronged responsibility and we all have to work together. As far as our corporation is concerned, we want to do everything we can to work with these elements, to make this program or to make all programs of education for young people more attractive.

And I would rather learn from you: What do you want from industry, if you are educators or government or labor people? What do you want from industry? What can we do to help?

I am so favorably impressed by what I have seen at this Third National VICA Conference that I hope we can become involved directly to assist. I think that many companies, when they become aware of what the Vocational Industrial Clubs of America is doing and will do, will want to become involved and not from the standpoint of any value to them directly. It is certainly something that will be good for the country. After what I have seen here of these youth, I am not worrying about the country any more. If this is an example of youth in America and the way it operates, we are in good hands.

LEE CHAPMAN
Grand Lodge Representative
International Association of Machinists
Springfield, Illinois

Mr. Chapman, a former member of the Advisory Committee of the Vocational Industrial Clubs of America, has been honored by the state of Illinois for fathering the T & I youth movement in that state. He is a member of the Illinois vocational education administrative board. The oldest staff member of the International Association of Machinists in terms of years of service, he serves as their director of education for the thirteen central states. Most recently, he has accepted the co-chairmanship of the VICA Youth Development Foundation.

Last evening, as I nervously pondered this appearance I wondered, should I salute you as fellow tax-payers or as fellow employees? I thought about that and after awhile I was confident that either way would be apropos. I also thought that you might not understand what I meant if I were to use the term "fellow employee," so I thought that maybe I had better explain it.

When I use the term "fellow employee," I suggest to you that we have two types of employees in our great country. Both types are absolutely necessary to our free enterprise, capitalistic system. One type of employee is the supervising employee, the other type is the supervised employee. It rather irks me to hear a member of the supervising employee staff refer to himself as: "I'm management." I wonder about this. We are all management in a sense, aren't we? Mary, who operates that punch-press–she's management as far as that punch press is concerned, isn't she? If she isn't, management is not getting the same thing they were buying.

There is another level of management. This is the fellow who owns the stock in the industry. He is the fellow who really calls the shots; he tells us which game to play.

We are all employees and I hope we accept that and accept that we are all also taxpayers.

As a representative of organized labor, I am intensely interested in the employee facet

and, as a member of the Illinois state board of vocational education, I am equally interested in the fellow taxpayer's interest in this. We do have an interest, a great interest.

As to what labor expects of technical vocational education, I could be so extreme as to say that organized labor expects nothing more of that type of education than we do of any other and that is the finest that we are able to provide. We also want to get one hundred pennies worth of education for every dollar we spend.

Let me talk about this thing called counseling for a moment. I am intensely interested in student counseling and that interest impels me to suggest to you that our students are not all receiving the best type of counseling. Far, far too often, we find that the English teacher who has a free period is the counselor. This English teacher may not be equipped to find out what local industry needs in the way of employees.

So we teach vocational agriculture. Believe me, I have nothing against the vocational agriculture program but I do have something against having 8,000 boys in this program and the prospect of absorbing only about 4,000 of them in the industry.

We need a better grade of counseling.

I suppose, since I have mentioned counseling, that I should take counseling back to where it actually belongs, to where it should be and that is with the parents. This is where counseling should have its base and this is where counseling should receive its emphasis.

If there is anything more horrible, I don't know what it is than for a parent to say, "My son is not going to be a bricklayer. He is not going to sweat it out like I've had to. He is going to college."

As soon as the child is old enough to hear his father's voice, he commences hearing this. And at that point, and for no reason at all, the father does not know whether this child possesses the abilities to go on to the halls of higher education. He does not know whether the child possesses the desire to. Nor does this father know whether he is going to be able to finance that education.

So later on, we find a young man who has heard all his life how horrible it is going to be to be a bricklayer, a barber, a machinist, a carpenter, a pipefitter. And I advise you that he would have been fortunate if he could have acquired the skills to do one of those highly skilled jobs. He is a disappointed sort of person, believe me, and this is the type of person who is giving us our problem today.

Inasmuch as it is possible for you and I to do so, let us influence the parent group to leave in the formative minds of their children that it is an honorable thing to work with their hands and that there is nothing undignified in work performed with our hands. For, if there is, I have never noticed it.

You and I should spend a little time with whatever influence we possess to attempt to get our schools to spend a few of their available dollars in the direction of buying some good

counseling for your children. I am thoroughly convinced it is not a question of, "Can we afford this counseling?" It is a question rather of, "Can we afford not to have this counseling for our youth?"

There is a void in this thing called counseling and we are going to have to do something about closing up that void.

You and I last evening enjoyed the refreshing experience of being exposed to several hundred very fine young citizens at the VICA Awards Banquet. I have had the pleasure of being exposed to those youth for the past several years and I found every group equally excellent with those that we were exposed to last night.

But have you thought, have you realized, that we in industry and labor are not going to see many of today's young people again if we do not do something about closing up the counseling void?

We are going to have to do something about it. We are going to have to apply some thinking to this because otherwise we will lose many youth through that void.

As a member of the Illinois State Board of Vocational Education, I believe that vocational education has made tremendous strides in the last four years. There has been constant progress but the big impetus has occurred in the last four years, possibly five. We have much, much room to advance in yet.

We are getting started in establishing vocational centers where we transport the youth from school districts that are not large enough to have their own laboratories and so on into a center where they can receive a good vocational education. We are also just getting into the idea of the two-year junior comprehensive parallel accreditation college containing vocational education and technical education laboratories.

As a member of the Illinois State Board of Vocational Education, within the last 18 months I have seen the expenditure of more dollars than previously I had realized were in this world. I was happy to do so, too, because they were dollars that were being spent in the direction of developing our most valuable asset and that is our youth.

There is just one way for this program to work out to the best for all concerned, for both the individual–the most important facet here–and for industry and labor as a whole. Our youth all ought to be exposed to a good industrial arts program. A good industrial arts program coupled with good counseling ought to help a youth discover: "I would like to be a machinist;" "I would like to be a printer;" "I would like to be a draftsman;" or "I would like to be something else." Then, in the last several years of high school that youth ought to have a really good vocational program in whatever he now finds that he has the aptitudes for and that he would like. He should also be able to move into two years of college in this same area.

Industry and organized labor should, to a greater extent, have joint apprenticeship

committees populated by the gentlemen from the supervising side of the employee family and the supervised side of the employee family. Or, to put it more simply in the generally accepted language, committees populated by people from management and the union.

Let the youth, the potential employee now, be evaluated and be given credit for whatever level of the apprentice program he has acquired in his schooling and let him enter and complete the apprenticeship program. We have now developed a very fine journeyman in whatever it is we need. We have now come up with a well-rounded, well-balanced, emotionally stable journeyman.

We are quite a little way from accomplishing that although much work is being accomplished and we have moved forward a great deal. But this, in my opinion, is the most perfect method we might use to develop the manpower we need.

I have been asked the question: What position has your union taken toward vocational education in the way of encouragement or being active in it?

I am very happy to answer that question. The very fact that I am here ought to indicate that our attitude toward it is good because, after all, the International Association of Machinists paid the bill to get me here. They pay the bill every time that I attend a meeting of the Illinois State Board of Vocational Education. In fact, the International Association of Machinists paid the bill while I helped set up the first program ever used in the state of Nebraska.

I speak for the International Association of Machinists directly and I speak indirectly for all other unions based on my observation and association with them. I know of no union that is not interested in the vocational education program to the extent that the program has communicated with these unions and gotten its message across.

There are, for example, numerous communities in our great country where the building trades unions cooperate with the building trades vocational program in building houses that ultimately will be on the market.

Organized labor does everything that it knows how to do and is capable of doing to help this program.

ROBERT JACOBSEN
Director
Manpower Development and Training
Chamber of Commerce of the United States

Mr. Jacobsen, now involved in manpower development and training for the Chamber of Commerce of the United States, earlier served for twelve years as industrial training manager for an insurance company in central Wisconsin. Prior to that, he was a distributive education coordinator and director of adult education in the state of Minnesota.

I'm glad to be here, because I'm tired.

- I'm tired of hearing that today's young people can't read, write or spell;
- I'm tired of hearing that today's employees have poor attitudes and don't know what it means to do a full day's work;
- I'm tired of hearing employers report they can't find qualified applicants;
- I'm tired of seeing and hearing protestors who seem to have no understanding of the responsibilities that go with freedom;
- I'm tired of trying to guess–is it a boy or girl? under a mop of scraggly hair;
- I'm tired of hearing that young people don't know what they want to do and have no career objectives;
- I'm tired of being told that young people are growing up expecting Washington to plan for and provide for their future;
- I'm tired of hearing vocational teachers complain that they have inadequate teaching facilities and get only the dull, hard to handle students;
- I'm tired of hearing that vocational education programs are out of step with the jobs that are available;
- I'm tired, of being tired!

That's why I'm glad to be here.

I'm glad to be with youth.

I'm glad to be here for throughout the country–from Arkansas to New York, from Georgia to Nevada–VICA youth are there. VICA members, VICA advisors and VICA friends are proving there is reason to be inspired; there is reason to be confident; and there is reason to be optimistic about the future.

I'm glad that, as a representative of the Chamber of Commerce of the United States, I can say to you that business leaders are concerned about the preparation that youth are receiving for productive employment. To document this I am going to share with you quotations from three publications that were on my desk as I packed to leave for this visit with you.

The first two come from the West-Penn Power Company and they concern how West-Penn is trying to attract industry to the western part of Pennsylvania.

George Ritter, President of the Stackpole Carbon Company, St. Mary's, Pennsylvania, had this to say:

> *"The central question facing industry is where it is going to get qualified people to fill the jobs that are being provided through expanded market opportunities for its products. It seems to me that this central and basic question must be answered in some cooperative effort between industry and the community. Chambers of Commerce and others such as industrial development organizations might well re-focus their efforts to include greater emphasis on the support of existing industry rather than on attracting new industry.*
>
> "Many communities throughout WESTern PENNsylvania are presently heeding Mr. Ritter's admonition, with programs designed to combat these problems . . .
>
> "Early last summer, Stackpole Carbon Company officials of Kane, Pennsylvania conferred about the serious matter of whether the Kane area had—or could provide—the 'qualified labor,' skilled, unskilled, to warrant further expansion. Mounting needs for labor forced a decision on whether to continue the Magnet Division in Kane—or move it to another location.
>
> "Kane Area Industrial Development Corporation (KAIDC), and its president, Robert J. Hetznecker, launched a 'Jobs For Generations' program to predict the future for Kane and its industries. Success of this program led to Stackpole Carbon Company's decision to 'go along with Kane.' "

West-Penn Power commented on this by saying they decided it wasn't enough to keep present industry but that they wanted to attract more industry. So in this publication called, Check the Skills You Need, West-Penn says:

> "Whatever your needs in production workers, you'll more than likely find them in WESTern PENNsylvania. They have extensive training and retraining programs continually in session. Each year, too, its secondary, vocational, and technical schools graduate thousands of new young workers (over 60,000 in the last five years). Meanwhile, older experienced workers are learning new skills to meet the growing demands of industry. Result: a highly industrialized work force trained in skills you need.
>
> "HERE'S HOW YOU'LL BENEFIT:
>
> 1. You save recruitment costs.
>
> 2. If you're building, expanding, or relocating in a new or existing plant, your workers are trained before, during, and after construction.
>
> 3. You'll find workers trained in a wide variety of skills, almost without restriction, to fill your needs.

4. Training and retraining programs will fulfill your manpower needs usually at no expense or obligation."

The West-Penn folder goes on to report the results of retraining programs and includes a postal reply card that begins,

"I'd like to discuss the opportunities for training workers for my operation . . ."

This is the sort of message I think that business might well take to vocational educators.

I am not here to advertise just for Pennsylvania. I am here to advertise also for West Virginia. Let me tell you what Weirton Steel says in their new publication issued to commemorate the 25th Anniversary of Weirton's Trade and Industrial School.

First, a quote from Thomas E. Millsop, Honorary Chairman, National Steel Corporation:

"The Weirton Trade and Industrial School is proof that a program tailored locally to meet local requirements can best answer the increasing need for skilled people."

And now this quote from the leaflet's summary:

"In its 26th year, the school performs a service as vital to West Virginia and Weirton area as it has in any period of its existence. Industrial expansion is setting a swift pace in the booming Weirton district, with important new plants sprouting up virtually overnight. The question of whether industrial progress will continue, or come to an abrupt halt because of a shortage of skilled tradesmen, will be ultimately answered by such vocational training programs as found at the Weirton Trade and Industrial School."

Those quotes are eloquent—that is why I had them on my desk—but their message is not unique. It is a message shared by business leaders and I wish that more business leaders would share this with more vocational educators. I wish that the business community would express to vocational educators how they appreciate the benefits of vocational education and how they recognize that the economic growth of a company in a community relates to vocational education. These business leaders believe vocational training is important.

These business leaders are willing to work towards objectives like the Education Committee of the Dallas, Texas, Chamber of Commerce set for itself. *These are objectives that can be important to your community, objectives I think vocational educators would like the business community to share.*

1. *To provide a county-wide voice, representing all communities within the county, in behalf of employment-oriented education;*

2. *To present to school district officials the facts relating to need for employment-oriented education, and to encourage them to give increasing emphasis to this type of education in their facilities and curricula;*

* A checklist of some 30 activities and services provided by industry to occupational education programs of schools is available upon request from the W. E. Upjohn Institute for Employment Research, 1101 17th Street, N. W., Washington, D. C. 20036.

3. *To conduct a continuous educational campaign in behalf of employment-oriented education, utilizing all communications media to the fullest possible extent in demonstrating that no stigma attaches to the boy or girl who prepares himself to meet occupational requirements in the career he or she intends to follow after graduation from school; and to sell parents and school counselors on the need to encourage students to prepare themselves for such job opportunities;*

4. *To communicate with public schools' staffs, and particularly the student counselors, on the community's prospective job opportunities, and the applicable minimum requirements for both general education and specific occupational training.*

5. *To develop and maintain rosters of business and professional men and craftsmen in the various occupations who will make themselves available for career counseling with students; and,*

6. *To communicate to the community the employment-oriented education opportunities which the schools provide, and encourage maximum response to those opportunities.*

Now, how can all this be? How can it be that around the country I find so many reasons for being tired?

How can I all of a sudden find inspiration at VICA's conference? How can I be so certain that business leaders will do these things to reap the benefits of vocational training?

Well, I believe in the power of a good idea. I believe in the power of a good example.

I believe in the strength of leadership.

And that is what I find in VICA, its officers, its members, its faculty advisors, and now in VICA's AITEC friends from business and industry.

I am confident that from this opportunity to see what can be done, from this opportunity you have had to observe here, from this opportunity to share experiences and aspirations, will come the stimulus for MORE of what is making VICA and all vocational training GO—and GROW!

That is why I was glad to be asked to meet with you. That is why all of a sudden I'm no longer tired. And that is what I hope you will gain from this morning's discussion and from your participation in VICA and AITEC activities.

"Industry Participation in Local Vocational and Technical Education Programs"

SAMUEL M. BURT
Special Assistant to the Director
U. S. Employment Service
Washington, D. C.

Mr. Burt was formerly Executive Director of the Education Council of the Graphic Arts Industry. In this capacity, he worked with the Printing Industries of America Inc. in involving printers in local communities in graphic arts education programs in the schools. Prior to accepting his present position, he undertook an intensive, national study under a Ford Foundation grant, on the problem of industry involvement in vocational and technical education.

It has been an article of faith among vocational educators that industry participation can contribute decisively to the shaping of effective occupational education programs. (I might say that when I use the term industry, I use the generic term to refer to representatives of business, the professions, labor and agriculture, as well as trade and industry.) Industry has also wholeheartedly subscribed to this axiom, for there is an obvious interdependence between the economy of our nation and vocational education—with its emphasis on the preparation of youth and adults for jobs and careers in trade, industry, agriculture, business and the sub-professional fields. *Vocational and technical education, more than any other educational discipline, provides unlimited opportunity for involvement of, and participation by, industry. The qualitative extent of such participation can well determine both the practical effectiveness of the occupational education provided by the public schools and the role of the schools in our nation's program for developing its manpower resources.*

I am concerned here primarily with the practices of local schools and school systems in developing industry-education cooperation. But it should be recognized that a number of federal and state government agencies, national employer, trade, labor and professional organizations, as well as national educational associations, play an important role in promoting industry involvement in occupational education.

When industry participates and cooperates in occupational education, it is usually concerned with the initiation of new programs; the expansion or elimination of established programs; the interpretation of studies of manpower and skill requirements in terms of curriculum needs; the development of curricula; the acquisition of shop and laboratory equipment; counseling and recruitment of students; the recruitment and training of instructors; job placement of work-study students; the employment of graduates; public relations; and the evaluation of school programs. I was able to isolate some 30 specific activities in which industry works with school people in the development of vocational and technical education programs.* (As a matter of fact, you will find industry involved in almost everything except administration, the "dirty work" of running the school.) Each of these activities includes a range of services which may be classified as either "advisory" or "operational," depending upon the extent to which educators can persuade industry representatives to become involved.

An example may be useful. Participation by individuals representing industry in the "interpretation of manpower and skill requirements studies" may include: (1) advising school staff as to which employers in the community should be included in the study; (2) advising school staff as to specific information to be included in the survey instrument; (3) providing the information requested in the survey instrument; (4) providing job analysis information; (5) calling on employers in the community urging them to fill in and return the survey instrument; (6) reviewing the survey report prepared by school staff and suggesting revisions when necessary; and (7) testifying at meetings of the board of education in support of the findings of the survey. Thus, we see how industry representatives may participate and become involved in vocational and technical education programs operationally as well as in an advisory capacity.

Another instance in which industry may play such a dual role is in the equipping of a school shop for a particular occupational program. Educators may ask industry for advice regarding specific equipment to be placed in the shop; or they may request industry to arrange for donations of equipment. That industry has donated equipment is well documented in many schools. For example, the Los Angeles Trade-Technical College estimates that the replacement value of its donated equipment is close to $1 million—almost one-quarter of the total value of the equipment in the school.

One of the more disturbing areas of industry-education cooperation is the matter of conducting manpower and skill needs surveys. With funds available under the Vocational Education Act of 1963, a number of school systems are beginning to conduct such studies with their own staff, utilizing the Employment Service reports merely as resource material, if at all. (This, despite the fact that the Act calls for cooperative arrangements between educators and the Employment Service.) Thus, industry is being called upon by both school people and Employment Service staff to supply essentially the same type of information.

While few hold any brief for the present efficacy of Employment Service techniques in conducting manpower and skill needs studies, the Service does employ economists and trained manpower specialists. It would seem more reasonable for the schools to educate Employment Service staff concerning the information they must obtain from such studies, instead of establishing their own organizations and duplicating much of the work being done by the Employment Service; at least, it appears so to industry, which is called upon to participate in such studies. *It also appears logical and reasonable to industry that school counseling and testing be coordinated with the counseling and testing services of the Employment Service, particularly since there is a shortage of professional personnel in these fields. Educators might also consider taking the initiative in integrating and coordinating the counseling and testing services of the schools with such agencies as the Office of Economic Opportunity, the Veterans' Administration, the Vocational Rehabilitation Administration, correctional institutions, etc.*

Educators involving industry people in vocational and technical education programs should be channeling their services into five major capacities: (1) the general advisory committee to the school or school system; (2) the occupational cooperating committee; (3) the Joint Apprenticeship and Training Committee; (4) the school appointed coordinator or special consultant for industry liaison; and (5) the local trade and professional associations in the community. These instrumentalities are not mutually exclusive. Actually, the extent to which they are interrelated can be indicative of a high degree of industry-education cooperation, with each function being used where and when it is best suited to accomplish a particular objective.

Thus, school officials responsible for occupational education have a variety of techniques and instrumentalities available to them for achieving industry-education cooperation. A first step to be considered is the appointment of a general advisory committee by the superintendent of schools and the board of education. The committee should meet periodically, on a continuing basis, to review the over-all occupational education and training program of the community and its schools and its needs, to advise on new requirements and priorities, and to develop "all-industry" student recruitment programs rather than individual industry projects. To assist the general advisory committee in their deliberations, resource staff from the public school system, industry, labor, other public and educational institutions, and the behavioral sciences, should be provided as needed. *The "industry-education team" concept must be expanded to include the expertise of other disciplines in order to meet the challenges posed by technological and societal needs in this last third of the Twentieth Century.*

Reporting to the general advisory committees, specific industry occupational cooperating committees should be organized by the superintendent of schools and his occupational education supervisory staff. These cooperating committees should be part of the central office program, rather than established by individual vocational and technical schools in the school system. Where considered desirable, task force subcommittees of the occupational committees could be provided for individual schools.

A "sine qua non" for developing an effective industry-education cooperative effort is the appointment of industry-liaison consultants by the school system. Industry liaison, both formal and informal, is a vital responsibility of vocational and technical education. It cannot be left to haphazard, accidental and "pressures of the moment" arrangements which prevail when full-time industry-liaison staff is not available.

There is a great need for more effective leadership to be exercised by state vocational and technical education directors and state boards and departments of education in developing a coordinated system of industry-education cooperation for the state and the local school systems within the state. State occupational advisory committees for the major industry complexes should be established as part of the state advisory council organization. Periodic state-wide meetings should be held involving the general advisory and occupational cooperating committees of local schools. Other state and local agencies, and their industry committees, concerned with manpower development and training programs, should be invited to participate in these meetings. State department industry-liaison specialists should be

assisting local industry-liaison staff in their work. These are but a few examples of what must be done at the state level by many states in order to achieve a coordinated and comprehensive state-wide program for meeting the occupational education needs of its citizenry and its industry.

At the national level, the American Vocational Association, the American Industrial Arts Association, and the American Association of Junior Colleges should provide their membership with case-study reports of both formal and informal effective local industry-education cooperative activities and programs on a continuing basis. The same is true for national employer, labor and professional associations. As an example, the Education Department of the AFL–CIO arranged for labor representatives on state vocational education advisory councils to meet with officials of the U. S. Office of Education, on September 8-10, 1965, at Michigan State University. (Proceedings are available from the AFL–CIO Education Department, Washington, D. C.)

The U. S. Office of Education should employ several specialists in the field of industry-education cooperation to develop guidelines for state and local vocational and technical educators, and to assist national industry groups in promoting such cooperation among their memberships. The Office should also immediately revise its 1960 publication concerning local industry-education cooperation in order to bring it up to date with current legislation and to provide guidelines for new dimensions in the partnership of industry, education and other segments of our economy.

This last point may be the most important point to be made, i.e. other segments of our economy must be made partners of the industry-education team if vocational-technical education is to properly meet its responsibilities in providing our nation with a comprehensive system of manpower planning, development and utilization. Vocational-technical education is not only the foundation on which we must build an active national manpower policy, but it also permeates our entire economy, as well as affecting the way of life for many millions of individuals from early teens throughout their entire working life.

If industry-education cooperation and coordination has not been all that we desired in the past, perhaps it has been because we limited our efforts and our vision only to industry-education cooperation. Is not vocational-technical education too big for educators alone to handle, and even too big for joint efforts of only education and industry? This is why I suggest that educators enlist the cooperation of sociologists, economists and other behavioral scientists, as well as a variety of government agencies at all levels in developing a system of vocational-technical education which will be properly coordinated into the total manpower program of our nation. I want to add that as other disciplines and facets of our economy become involved in lending and coordinating their expertise in the programs of vocational-technical education, we will find less carping criticism and more of the kind of effective cooperation which inevitably stems from the intimate knowledge gained in coordinated efforts dedicated toward a common goal.

The beginnings of such coordination at the local, state, regional and national levels are

already beginning to emerge with the recent establishment of the CAMPS program by major federal agencies involved in manpower programs. CAMPS stands for Comprehensive Area Manpower Planning System. Every major city, all states and regional areas (as defined by the U. S. Department of Labor) now have CAMPS committees consisting of representatives of each agency receiving and spending federal monies for education, training, medical and social services and housing. Also serving on these committees are representatives of business and industry. The CAMPS committees are charged with the responsibility for planning a comprehensive and coordinated program of manpower development and utilization. Ultimately, we can hope that other advisory and coordinating committees in the field of education and training, such as the industry-education committees, the MDTA advisory committees, and others, will become part and parcel of the CAMPS structure. It is much too soon to predict the fate of CAMPS but it is certainly fascinating to contemplate its potential for achieving a planned system of manpower programs in which vocational-technical education is basic, through the coordinated cooperative effort of all segments of our economy in a particular community, state and region.

Hopefully, we can work towards this goal. Certainly, continued fragmented, duplicating and uncoordinated effort and expense makes no sense in terms of our nation's objectives concerning rational development of its manpower resources.

Wednesday, June 21

AITEC LUNCHEON

Greetings
LAURENCE R. HOWARD
Educational Consultant
American Gage & Machine Foundation
and
Co Chairman
VICA Youth Development Foundation

"The Priceless Human Resource—Our Nation's Youth"

DR. BYRL SHOEMAKER
Director
Vocational Education
State of Ohio

Dr. Shoemaker is a past president of the American Vocational Association. In 1946, then a machine shop instructor, he organized a Vocational Industrial Club in Findlay High School, Findlay, Ohio, five years before the formation of the Vocational Industrial Clubs of Ohio. He was the first state sponsor of Ohio's Vocational Industrial Club. Dr. Shoemaker has served as a local, district and state supervisor and teacher educator for Trade and Industrial education.

I am honestly pleased to have had this chance to be selected to talk with this group of

people because I think it is an extremely important group of people.

I'm a fortunate man. I'm doing work that I like, that I chose. And not by accident did I choose this field of work. It came as the result of a research study that I conducted back in the middle or early thirties. This research study was conducted right in the city of Columbus. I made this research study with shoe leather, walking around this town looking for work. If there was a place in town that even hinted that they might be hiring a person, I was there. And every place I went, they asked me one stupid question: "What can you do?"

I could say, "Well, I've had four years of Latin, one year of German, four years of math, four years of science and I got good grades."

"Well, that's fine, young man. What can you do?"

I got so desperate I finally went to the Columbus Tool and Die Works and offered to work for nothing if they would let me start to learn the trade. They said I wasn't worth it.

You can talk to me all you want to about those company men who stand up and say, "All I want is a well-rounded individual, I'll do the rest." They haven't talked to their hiring people. Because the question is the same question I am asking the young people today: "What can you do?"

With as low an unemployment rate as we have at 3.6 percent, and an unemployment rate in the group ages 16 to 21 of over 12 percent. you guess what the problem is: people who can't do something that the world's work offers and wants them to do.

I was very pleased this morning as I went by the Chrysler plant in Detroit and saw an eight-story-high sign that says: We Support Vocational Education. I never thought I would live to see the day.

We had just finished a contest in which 96 teens from all over the nation and Alaska were flown to Detroit to participate in a tune-up contest. For many of those boys it was the first time they had been out of their backyard. They were youths from auto mechanics classes throughout the nation being given a chance to come to Detroit and participate and show what they could do. They also took a test of technical knowledge which gave them a chance to gain recognition for what they knew as well as for what they could do.

What I was interested in was that over this Nation, according to Chrysler's figures, 65,000 boys in programs of auto mechanics were affected by this one national contest through local contests, regional contests and the national contest. I could care less about who won because I didn't win. But what I care about is the affect that that had on the 65,000–the affect of someone saying, essentially, that we think enough of you to put you into a situation in which you can become important because of skills and technical knowledge that you have that are going to be saleable when you leave.

Is Chrysler just a very nice company that likes to do nice things for people?

A spokesman of the Chrysler Motor Corporation said the other evening: "We need 50,000 mechanics a year. We're getting 20,000."

We need more mechanics. It's very simple. It was a selfish move and yet it was a wonderful move in terms of the youth. Who lost? Nobody. Who gave? Everyone.

This is the only kind of deal I try to sell anymore, where both sides win and if they don't, forget it: I can't sell it. Today you cannot sell the concept, "You ought to be a nice guy," because somebody needs you to be a nice guy. We've got to sell on the basis of: "It's good for both parties or it isn't going to happen."

I want to set a little stage to explain why you should take an intelligent and selfish interest in something you think is worthwhile.

We have looked at employment in our state—forgive me if I talk about Ohio because that's what I know—but the same figures could be obtained throughout the Nation.

Here is how our curriculum is in our public schools. We find that 3.7 percent are pre-professions requiring a baccalaureate degree (not 20 percent, not 30 percent, not 40 percent, not 50 percent); 3.7 percent in production agriculture; 5.3 percent in off-the-farm agriculture requiring skills and knowledges in agriculture; 14.4 percent in clerical and office; 14.7 percent in distribution. We cannot classify 12.1 percent in one of the other areas. This is how we earned our living in 1960.

This is an important group of people. I'm part of it. I'm also proud that I can earn my living in industry. And I think I'm just a little better for it and for the experiences I have had.

Here is how our curriculum is in our public schools. We find that 3.7 percent are preparing to enter skilled occupations in industry: electricians, machinists, tool and die makers, dental assistants, medical assistants, cosmetologists and so on. There are 3.7 percent preparing to enter skilled occupations in industry; 2.1 percent preparing to enter agriculture; 13.8 percent preparing to enter some phase of business. The problem here is that they take Shorthand I and find that it's tough, so they don't take Shorthand II. Shorthand I without Shorthand II is not worth anything as I can tell you.

We are beginning to build depth programs in office education and right now we have 1.8 percent in depth programs in business and office education. In addition, .1 percent are receiving vocational job training in home economics and 1.3 percent are enrolled in distributive education programs.

In looking at Ohio's overall educational program, we find that of 100 students entering the first grade in Ohio, 95 enter the ninth grade and only 76 graduate from high school.

Out of that 76, 32 will start to college this fall and of those 32 who start to college, 14 will finish. (How many of you could run a business out of over 50 percent scrap? How many of you could run a business on over 50 percent error?) Out of this original 100 today, 14 will graduate from college–an important 14, perhaps the most important 14 in that whole hundred. Our only plea is that the other 86 percent is also important if you want to keep your businesses and industries open. They had better be important to you.

These are the projections. Where are the jobs? You know these figures very well so I will not dwell on them.

True, professionals are going to increase 55 percent. We are going from having 7.6 percent of our population in professions to having about 11.5 percent in professions. There is no question about it.

But technical education is just in its infancy and we have a belief in terms of the design element of technical education. (That is the only area we talk about as "technical." We call machinists, tool and die makers, electricians "skilled." When we use the word "technical" as I use it, I am only using it at the design, semi-professional level.) We think that here is an area in which many of those people who start to college and drop out may be successful if given the opportunity and the goal, to become a part of a technician program.

But the jobs are very simple. No change in unskilled laborers, less farmers, more off-the-farm agriculture jobs for people who know something and can do something.

That's *why* vocational education.

We have given an interest questionaire to over 50,000 young people in this state in which, in secret, they could identify what was going to happen to them, what they thought was going to happen to them. Over 72 percent said they would like to enroll in a vocational program. And they identified the program in which they thought they would like to enroll.

Now we know that 72 percent would not enroll in vocational programs if we set them up for that. It's very simple; you've taught them not to and that they should be ashamed of wanting to be anything except a doctor, lawyer or merchant.

I'm talking to you as a parent. I'm talking to you as a group of industries. What publicity has come out supporting the concept that business and industry need skilled workers; that you had better look to the future to opportunity for your child in the skilled worker field; that if you aren't careful and build and develop programs to serve them they won't have a chance to prepare for the field? How many industries have done this?

And yet, how many industries have come to us in recent years and said: We've got to have machinists; we've got to have this; we've got to have that? All the publicity that goes out says: Is the college of your choice going to be there when you graduate?

I'm pleading, gentlemen. I'm not trying to just be nasty because it's too serious to us. I'm a service agency. I work for you and I work for the schools, so I'm pleading. I'm pleading for an awakening to the need of the total youth.

We cannot keep 100 percent of the youth in school and inflict on them the same 1855 curriculum (1855 is the basis of the subject-centered curriculum for college preparatory education and it is still the basis for it). This subject-centered curriculum is based upon the determination of how to get into college. And yet, you show me one study in which they have proven that the college preparatory program in our public schools is a significant factor in success in college. They have made study after study after study and they are going to keep on making them because they do not like the answer. The answer comes out consistently that it makes no difference what they took in high school; it is how well they did in whatever they took.

This is a fact, gentlemen. If you don't accept this, just look at the research. And we can prove that good students going through vocational programs and graduating (and every one who graduates from our high school vocational program has a first-rate high school diploma in Ohio), if the college will let him in and some of our state universities will, if he has the horsepower and the background, he will succeed in college as well.

This is not the goal of our program. The goal of our program is to prepare youth for employment because we are the only group that is worried about people going to work. College preparatory is not the goal.

But, if a boy says, "I'm going to go to college," we say, "Take the college preparatory course because that's what the colleges want; that will get you further in college, in business. Not that it will make you the best college preparatory entrant, but that's what they want."

What I am saying is that vocational education is good education, if you make it a sound educational program and not a mixture or half-way program between general and vocational.

We are finding a great push to push vocational education into a small part of the curriculum where it really will not interfere with the important part, the college preparatory program. They point their fingers and say, "You aren't flexible."

What they really mean is: "You aren't stupid enough to accept a one or two cut program and a one or two period program as a sound and acceptable vocational program." *Because vocational education is not a subject, it is a program. It is a planned system of education in which you take the occupational choice of the student and you build around this the core of what he needs: the skills, the technical knowledge and the work habits, the attitudes that make a person able to enter skilled work. And you cannot do this in two periods a day.*

We in trade and industrial education tried to insist that in the last two years of a stu-

dent's program we needed three-fourths of his day—a half a day to give the skills of the occupation, two periods to give the math, the science, the related technical knowledge, with the other fourth for the required academics.

They said: "You're taking too much time for vocational education; you've got to be more flexible."

I did a study based on test results in which we compared the three-hour program with the three hours plus two periods and the result was that in regard to level of competence the cooperative program was a better program in terms of the whole trade area. This means that 999 times out of 1,000, the student in the depth program would do better.

So we said, "Well, maybe the other students do get more math and science."

Well, it so happens that in our machine trade test we have a section on math going up to the functions of trigonometry. We also have a section dealing with the principles of science. So we isolated those. We matched IQ's. And we could tell you this: when you give students the time to take math and science, they don't. The students in the vocational program, which had three-fourths of their day pre-empted for vocational education but which required them to take the math and science related to their occupation, did better in the math and science than did the students who did not have it as part of their program.

All I ask is that you read reports which point the finger at vocational education. We have some poor programs and I could take you to some in our state that we are not proud of and that we believe need improvement. There is no question about it.

But look at the whole. Look at the concept.

Why force an auto mechanic to study trigonometry? The principles of learning tell us you will forget it if you do not use it. But the auto mechanic needs a lot more science than any of the rest of the occupations in terms of that area.

So we suggest a curriculum built around the skills and technical knowledge required in that occupation based on an analysis of occupational people from industry, business, labor and management. And we suggest that you invest sufficient time at the other two grade levels to make a significant contribution to the student's ability to do the job.

We have in our vocational schools of Ohio a lower drop-out rate than our average for the state. We'd better have. I have one school that does not and we are not very proud of that school.

We know that we have a high placement of our graduates and we had better because that is our reason for existence and we are measured every year about whether our students go out and get jobs or not.

We believe that to get to a sound program of vocational education you have got to have enough students together to give breadth to the program and to the extent that you restrict the number of the program, to that extent will you get students enrolling in it that cannot succeed? Then they do not have any interest in it. If you only have one program of trade and industrial education, you guess how many of those youth might not have the interest or the ability to succeed.

We in trade and industrial education are willing to serve the less able, the average and the above-average in occupational skill and technical programs. But we say that you do not take one program and water it down to three levels. You build separate programs to let those students achieve at their level of ability and opportunity and success.

When I am before this kind of a group, believe me it is important to me that I try to say to you some of the things that we think are important to you as we move down the line in preparing youth to enter the field of work.

Life is not by bread alone; we know that, too. We are aware of the need of these students for socializing. There is no group that I work with and I work with agriculture, business, distribution, homemaking, that needs this more than the trade and industrial students that are here at this meeting. Because, of all the groups, you have made them ashamed to want to become a part of industry. There is no group that needs this help more, of socializing, of leadership training, of development of inter-personal relationships. There is no group that needs communications skills more. There is no group that needs a private sense of belonging to something more than this group of students.

I have worked with club groups on the local level. I am not just talking now as a state director who is at the top and looks back. I was supporting the need for this type of thing for students when I was in the local community and there was no state organization. I gave evenings and Saturdays to this type of activity because I believed that it was needed for youth.

I happen to think that job is basic to citizenship. We dug up a group of women—and I mean "dug them up" from welfare—who had not worked for so long that they had ceased to be people. We got a wonderful teacher who could tell these women to go home and take a bath and get back. At the end of six or seven weeks—all we were doing was training them to be hotel and motel maids—but at the end of those six or seven weeks they took up a collection of about $2.00. They gave it to the teacher and said, "Would you use this for the next class?"

To me this was the most significant thing that had happened to these people. They had begun to give, for they could see a job ahead. And if they could begin to give, they could begin to be people again.

We happen to think that underlying citizenship is the importance of a job—a way of earning, a way of life.

VICA is a means of providing co-curricular activities. It is an activity to give experience to these people beyond the skills and technical knowledge. Yet, this Vocational Industrial Clubs of America cannot succeed without either monetary or moral support. It will be a hollow shell without your support and I do not only mean dollars.

When we started our Vocational Industrial Club in Ohio, I was the person given responsibility for it. We went to Mr. Davis of the Lincoln Electric Company.

He said, "What do you want? Money?"

I said, "No. At this point I don't need money, I need help. I need the kind of support that your industry people can give: getting behind, saying this is desirable, this is important, we'll meet with you, we'll support your organization, we'll talk to your groups, we'll counsel with them to make them feel important."

This gentleman served as a member of our advisory committee and at his death he left us about several thousand dollars that no one ever asked him for, because he felt it was important that youth have the opportunity.

We need your support through publicity, your support through participation, your support through financial assistance. The Vocational Industrial Clubs will only grow with your support.

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VT 006 143
Careers in the Quantity Food Service Industry, Vocational Guidance Manual.

National Restaurant Association, Chicago, Ill.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - nd 20p.

*FOOD SERVICE WORKERS; *VOCATIONAL COUNSELING; *OCCUPATIONAL HOME ECONOMICS; *TRADE AND INDUSTRIAL EDUCATION; *OCCUPATIONAL INFORMATION

The quanitity food service industry, the nation's fourth largest industry, offers career opportunities to thousands of youth each year. Preparation for a food service industry career is similar to preparation for careers in other industries. Youths can start their career work immediately after graduation from high school or vocational training school. Others may elect to obtain training in community colleges, junior colleges, and technical training schools. Still others become better equipped through 4-year college programs. This career program booklet, prepared for those doing career counseling, is supplemented by newsletters, charts, and a full-color filmstrip. A double page chart lists job descriptions for the kinds of restaurant positions available. Subject matter sections of the booklet are: the restaurant industry, personal qualifications, restaurant organization, advantages in industry, preparing for a career, positions available, high school graduates, junior college graduates, college graduates, questions answered, other sources of information, and the scholarship program. (FP)

VT 006 143

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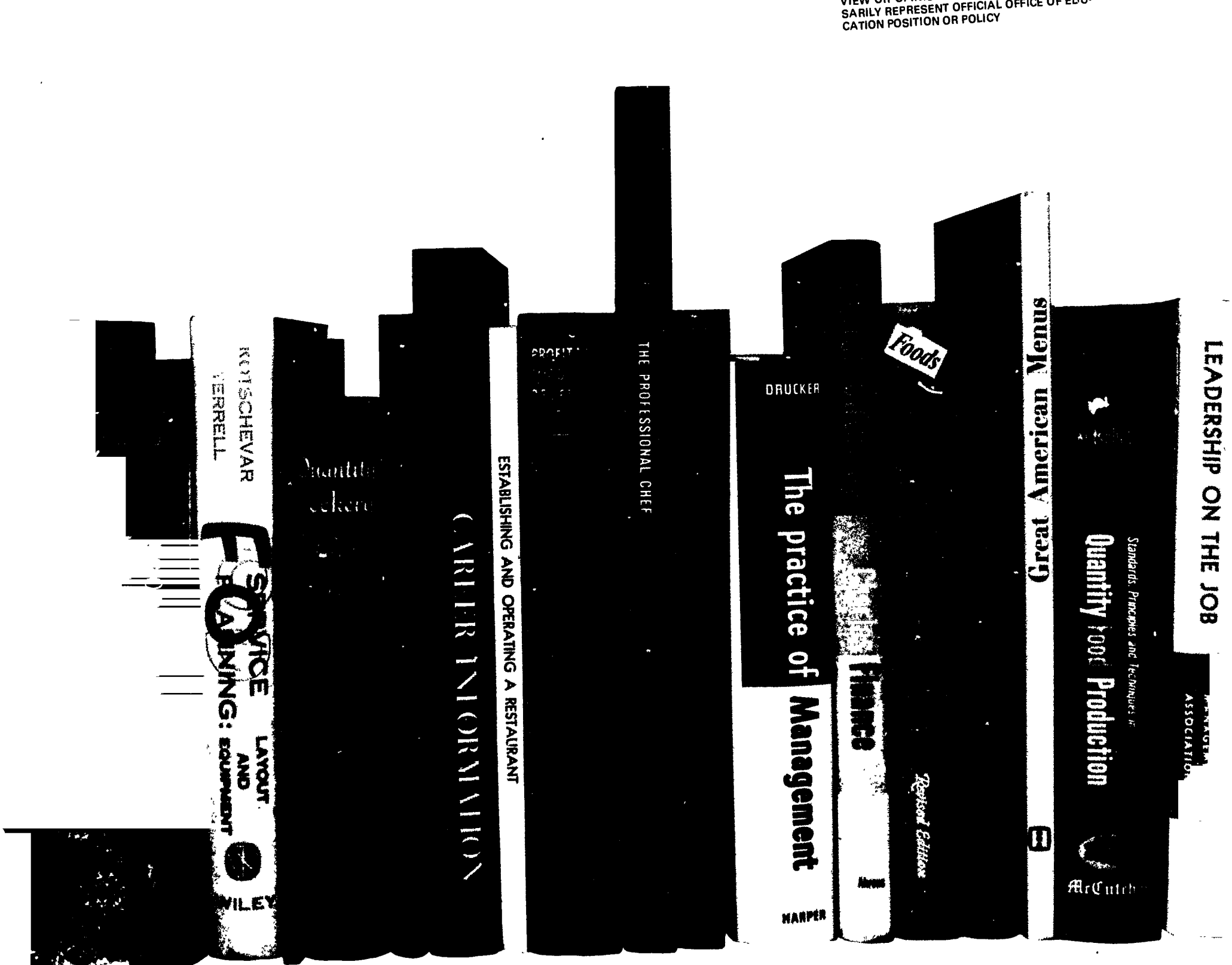
Vocational Guidance Manual

CAREERS
IN THE
QUANTITY FOOD
SERVICE INDUSTRY

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY



produced for the NATIONAL RESTAURANT ASSOCIATION by the H. J. HEINZ COMPANY

A Special Message to Teachers and Career Counselors

Young people want interesting, rewarding careers. They also want security.

The quantity food service industry—the nation's fourth largest industry—offers career opportunities to thousands of youth each year. This is one of the fastest growing industries in the country and, accordingly, needs career people. There actually are more opportunities available today than there are properly trained people, a situation that will continue for many years.

In many ways preparation for a food service industry career is similar to preparation for careers in other industries. Goals vary with people so some youth can start their career work immediately after graduation from high school or vocational training school. Others may elect to obtain training in community colleges, junior colleges and technical training schools. Still others become better equipped for their chosen careers by attending four-year college programs.

One of the purposes of the Careers for Youth Program is to show youth that there are opportunities for interesting, rewarding careers with security in the food service industry. The Careers for Youth Program, sponsored by the H. J. Heinz Company, is administered by the National Restaurant Association.

This booklet, prepared for those doing career counseling, is a part of the Careers program. It is supplemented by newsletters, charts and other materials. A full-color filmstrip has been developed to help tell the career opportunity story. Certain sections of this booklet are available as leaflets for students who plan to terminate their formal education at the end of high school, for students who want to receive training in two-year college or training programs, or for students who plan a complete college education.

In this booklet, we discuss careers in the food service industry. Restaurants represent one (the largest) segment of the industry. The National Restaurant Association believes its Careers for Youth Program benefits the entire food service industry by showing the wonderful career opportunities available today.

In this booklet we also discuss scholarships offered by the H. J. Heinz Company as part of the Careers for Youth Program. Other fine scholarships are available to students interested in food service.

If you, as a career counselor, have any questions about the restaurant industry, please contact us. We want to be of service. We also are happy to receive letters from educators concerning local career programs as well as suggestions for ways we may be of more or better service.

Sincerely,

Chester G. Hall Jr.

CHESTER G. HALL, JR., PH.D.
Director of Education
National Restaurant Association

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CAREERS

A Future for High School Graduates in the Quantity Food Service Industry

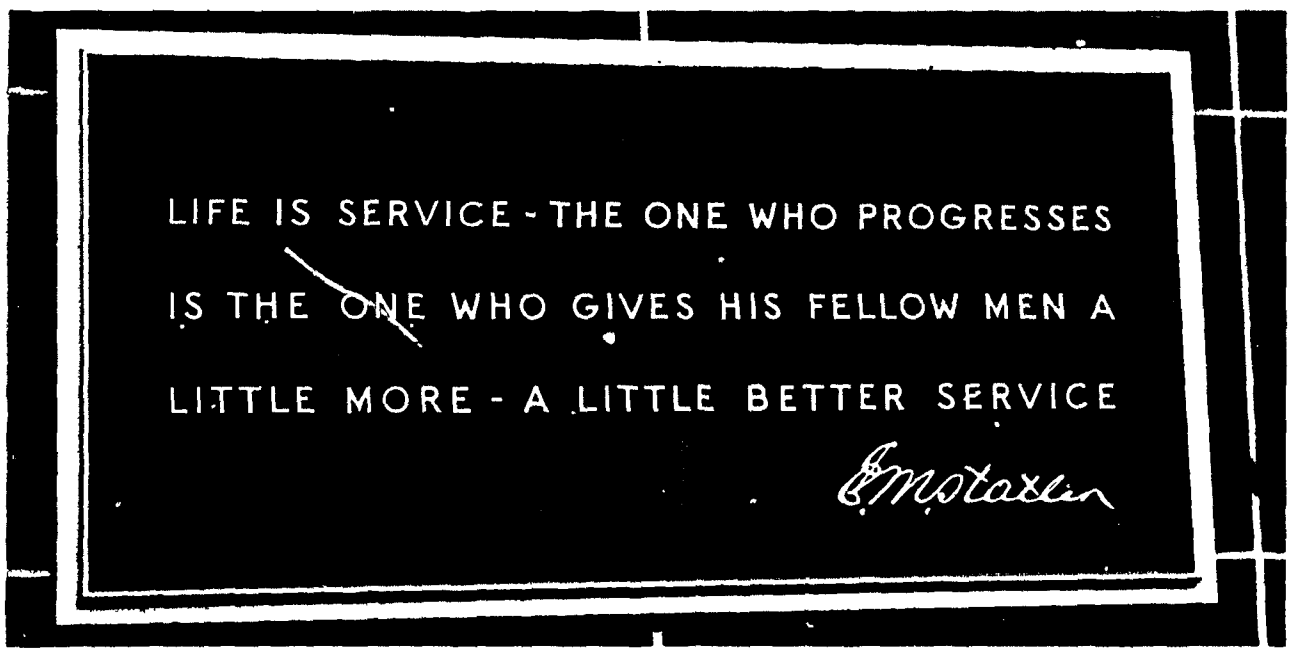
Quantity food service is big business. Americans spend more than $20 billion a year for food eaten away from home, and the volume figure climbs markedly each year. By 1975, at least one of every three meals in the United States will be eaten away from home.

The food service industry needs people to manage, prepare and serve food to meet this rapid growth. The greatest need in the industry today is to attract enough people who seek career opportunities. This need will continue for many years.

Providing a steady demand for men and women trained in food management, food preparation and food service are:

Professional and employed persons and school children who eat noon meals away from home, a traveling public that eats in hotels and restaurants, business and social groups that have luncheons, dinners and banquets, individuals who eat three meals a day in hospitals, colleges and institutions of various kinds, and the people who just like to "eat out" on regular and/or special occasions.

The need for career people exists in the restaurant business. In planning a career, it also is well to remember that hotels, clubs, hospitals, institutions, department stores, industrial plants, colleges, fraternity houses, camps, exhibitions, military installations, railroads and steamships prepare and serve food. They offer steady employment, chances for promotion and substantial salaries.



Who qualifies for a food service career?

Young people who:

Are interested in a dynamic career with opportunities in every locality in the country.

Want a career with excitement, variety and an ever changing pace.

Like to meet people and who is sincerely interested in serving them.

Are interested in the civic, social and cultural aspects of a community.

Are interested in satisfying a basic need essential to everyone—food.

There are more than 60 different types of jobs in the food service industry. There is a type of job to fit almost every intelligence and interest level. With interest, training and experience, a youth has unlimited opportunities.

A career in quantity food service is not an easy business, but it is a profitable one for a person who is at all successful. The industry provides interesting work, a chance for advancement and reasonable security.

(produced for the National Restaurant Association by the H. J. Heinz Company)

CAREERS

A RESTAURANT—whether independent, multiple-unit or chain-owned, whether formal, counter-service or take-out—is planned to serve a particular group of customers. A restaurant is only as successful as the degree to which it pleases this group of customers, serving their wants and wishes within a certain range of prices.

The real masters of the food service industry, then, are the customers who select their restaurant according to the food they want, the occasion, the amount of money they care to spend, and the service they receive.

This is of signal importance to the student seeking a career. The student can decide on the branch of the food service industry in which he wants to work. He can pick his geographic area. He even has some choice of working hours. There can be no question on two points, however. The career-minded student must like people and have an appreciation of food. He must like the idea of being of service to people.

The reputation of a restaurant depends on people . . . not only those it serves . . . but also those it employs. They are the men and women who manage, the men and women who prepare food, and the men and women who come in contact with the customer. They all can "make" or "break" the reputation of the restaurant.

Restaurants Grew with Traveling

A restaurant in the broadest sense is any establishment serving food to people eating away from home. While a great variety of eating establishments are not restaurants in the strictest sense of the word, they are branches of the giant food service industry.

Not too many centuries ago, travelers stopped for food at convenient and friendly homes, or at monasteries or convents. As travel increased it was not always possible or preferable for people to eat at home, so a profitable business began in providing meals for payment. This marked the beginning of inns, taverns and other public eating establishments.

Emphasis has not always been placed on providing atmosphere and service in public eating establishments. However, it is recorded that unique service was part of the picture when the first coffee houses were established in Constantinople in 1554 when beautiful slave girls served food and beverages to the guests.

The development of the restaurant industry in this country was quite similar to the pattern established in Europe and the Middle East. The earliest establishments were caravansaries, monasteries, missions and inns along roads. With the turn of the century, restaurant expansion took a decided upswing and has increased ever since in number and sales volume. As the industry grew, customers started to recognize these businesses as an integral part of a community and its economic welfare and today commercial food service ranks high on the list of American commerce.

"Eating out" is a necessity at least part of the time for many people. "Eating out" also is a luxury. Taking the family out to dinner on special occasions or on a regular basis now is a well established part of the American way of life.

Meeting the wants and needs of people in all walks of life, in all income levels, is a goal of restaurants across the country.

Restaurants Today

The modern food service industry includes:

Table service restaurants, counter service restaurants and hotel restaurants, coffee shops, cafeterias and self-service restaurants, soda fountains and drug store counters, tea rooms and sandwich shops, vending operations, taverns and cocktail lounges, employee cafeterias, catering establishments, industrial plants, officers messes, canteens, construction camps, hospitals, schools, colleges, institutions.

The food service industry is not restricted to stationary establishments. Air lines, steamships, railroads and mobile kitchens serve tens of thou-

sands of meals daily and employ thousands of people to arrange, prepare and serve these meals.

Economic cycles have had some effect on the food service business at times, but not to the extent that they have had on most other businesses in the United States. In spite of the many economic ups and downs experienced during the first 60 years of this century, restaurants have increased with the population. The industry is expanding even more rapidly in the 1960's than it did in the first six decades of the 1900's.

Here are some facts to indicate the size of the food service industry:

Some 750 million meals are served away from home each week in the United States. In some cities people already eat one of every three meals away from home.

Americans now spend more than $20 billion a year for food eaten away from home; by the 1970's it should be close to $30 billion.

Food service establishments employ approximately 3 million people including proprietors and managers. Shorter work weeks and increasing restaurant trade will increase this somewhat, meaning more opportunities for beginners, for those with trade school experience, and for the college graduate.

Restaurants Look Ahead

Restaurateurs search continually for ways to make the industry more efficient, more productive. Standards in the industry have been raised to the point that the successful restaurant of today rivals any skillfully planned, well-run modern business enterprise.

New food processing methods and nutritive findings are readily adopted to make the food service industry an exciting field in which to work. The development of central commissaries, modern transportation and distribution, and availability of all kinds of foods on a year round basis lend themselves to the new glamour attached to this industry.

Standards of sanitation are rigidly enforced in the modern restaurant. Every precaution is taken to keep food and the environment of its preparation and service irreproachably wholesome. Quality foods are carefully selected, stored, prepared and served.

New, improved equipment helps eliminate tasks once considered disagreeable or even drudgery in a restaurant kitchen.

Far-sighted restaurant operators have established excellent employee training programs. The person who wants to learn will find supervisors willing and eager to help. In many restaurant operations, one person is assigned specifically to help train personnel.

The restaurant management itself wants to keep up-to-date on modern management techniques. Many managers attend special restaurant management short courses on college campuses. Others enroll in week-long executive development conferences in order to meet the complicated problems facing business leaders in a rapidly changing economy.

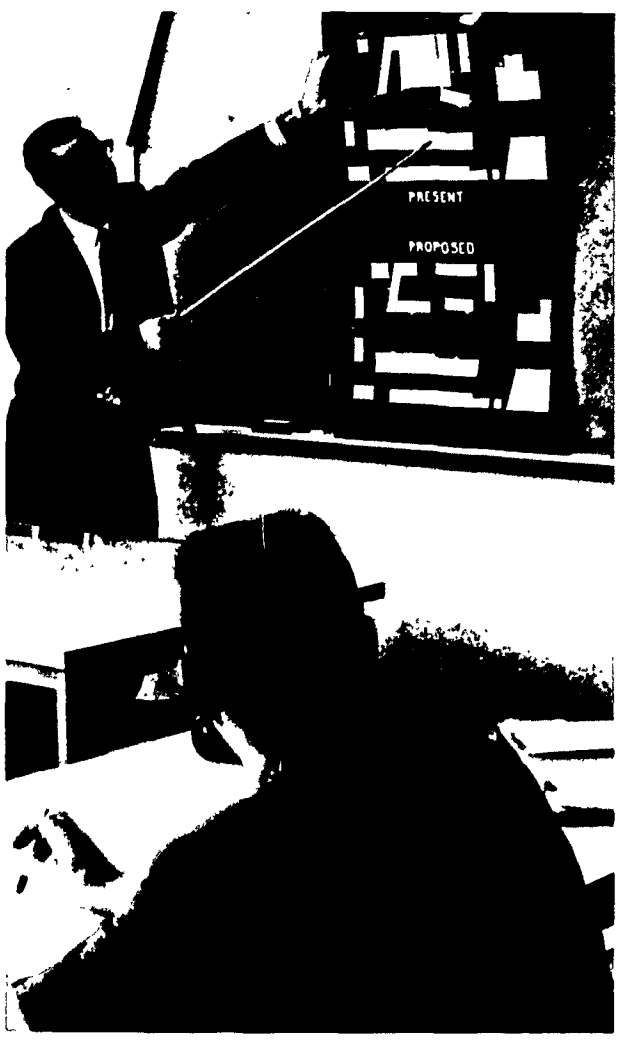
Merchandising has become an integral part of the restaurant business. Included are the development of attractive, appealing menus, written and graphically presented to make the food sound as well as taste good. Special displays, floral arrangements, table appointments, costumes, period rooms and other effects play important parts. Some restaurateurs, recognizing the importance of merchandising, hire specialists in this field.

Personal Qualifications for Food Service Work

WHAT determines if a youth is qualified for a career in the food service industry?

The career counselor is faced with this question. It is not an easy one to answer. Yet, the career counselor must have some guidelines to assist the student in determining if he or she is suited for this field.

The qualifications that can bring



success in restaurant work are similar to those displayed by successful people in most other industries. Restaurant work presents real opportunity for those who meet its demands.

Restaurants have a contrasting variety of operations to be performed —warehousing, manufacturing or processing, and selling or retailing. They have positions offering opportunities for administrative abilities, objective participation and creative talents. Some positions require great executive ability; others diminishing degrees of education and responsibility.

There are certain guidelines which a career counselor can follow to help determine if a student can make the grade in the food service industry.

The student must have a genuine liking for people. This includes the people with whom he works and those for whom he works—the customers. This is basic to success in this business.

The student must have a sincere interest in being of service to people. He must have a feeling that someday will grow into professional pride in getting along with, handling and satisfying people, whether or not they seem difficult to please.

The student must have an appreciation for food, not just as something to eat at mealtime. He must consider food as a valuable commodity that is grown, processed, bought and sold in the form of a restaurant meal.

Beyond these basic points, the student who is considering food service as a career must meet certain specifications that can be applied to most fields. The career counselor is familiar with these.

1. Work habits, punctuality and business-like conduct; personal pride in dress and deportment.
2. Willingness to work hard, ambition to learn, desire to invest time, thought and energy as the price of advancement to success.
3. Emotional stability, ability to adjust, to get along. Does the student react well to justified criticism? How well does the student take direction and control his emotions?
4. Intelligence. The restaurant industry offers a wide variety of jobs, each with different skills requiring different kinds of intelligence. The man or woman able to meet people and seat them in the dining room, differs from the person who creates new recipes. Yet each makes a contribution. There are positions for almost all kinds of intelligence in the modern restaurant.
5. Health and physical stamina. Although research is going on constantly to improve restaurant equipment and eliminate manual labor—it is still an industry requiring health and stamina. Hours are varied. The responsibility of pleasing people and the demands of a restaurant kitchen calls for good physical and mental resources.

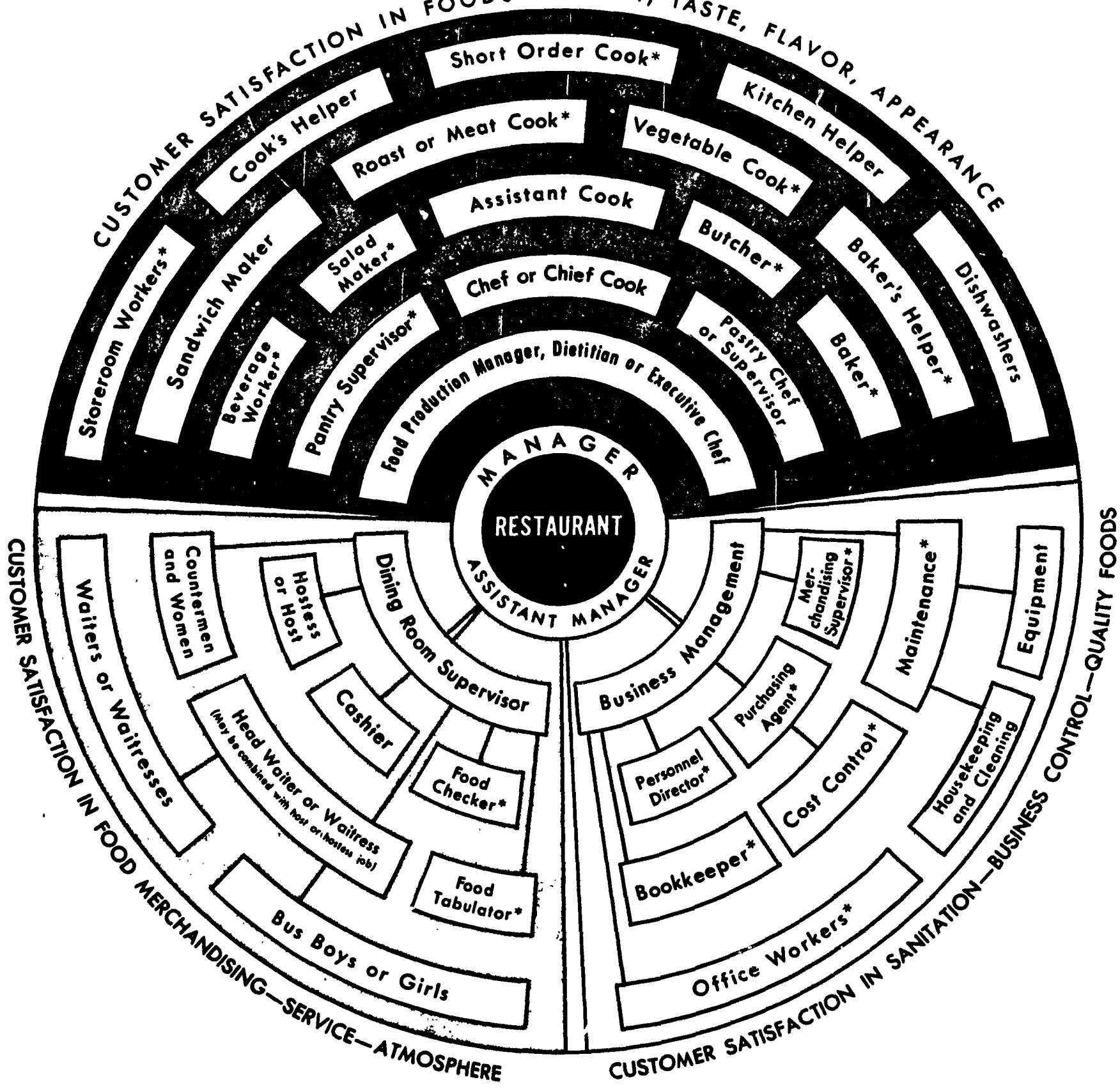
An Added Opportunity

Students considering the restaurant industry as a career have a somewhat unusual opportunity to see "how it works" before making a final decision, or before starting formal education in the field.

Many summer job opportunities are available at restaurants, hotels, and motels, luncheon counters, drug store fountains, hospitals, cafeterias, exhibitions, and resorts. The kinds of positions one may expect to obtain on a part-time basis are those which require no experience, but will give the student an opportunity to see the over-all food service operations.

A career counselor is wise to recommend that a food service career aspirant seek summer work when possible before making a final choice. Students should be encouraged to visit or patronize many different types of food service establishments.

Restaurant Organization



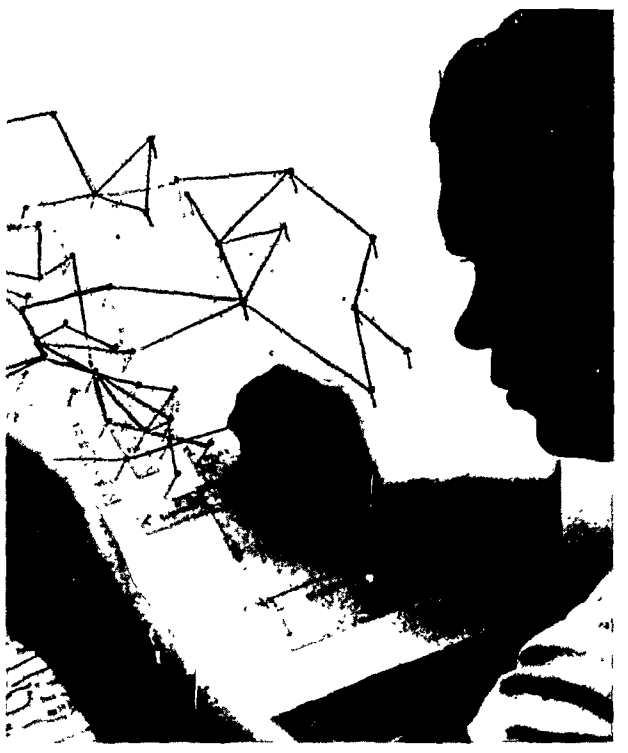
This chart shows some of the positions available in the food service industry. The kinds of work represented by these job listings are done to a greater or lesser degree in practically all eating establishments. In some cases, the jobs have different names. Sometimes one person may be responsible for half a dozen assignments that require eight to ten people in larger restaurants. This chart also illustrates the interdependence of all restaurant positions and demonstrates how the ultimate goal of each one is the pleasing of the customer.

**These jobs, found in some larger restaurants, may be handled by other workers in smaller establishments.*

Advantages in Food Service Careers

Advancement Is Fast

In this rapidly expanding industry there is almost no limit to how far a hard-working, qualified person can progress. A bus boy, who works hard to gain skills all the way, may own his own successful restaurant. The industry is filled with these success stories. If restaurant ownership or management is not a goal, the student can find secure, rewarding employment in a wide choice of restaurant jobs.



Security Is A Fact

With the exception of resort or specialty establishments, restaurants maintain a good, steady, year round business. With population growing and an increasing proportion of the population eating out, the need for qualified restaurant employees will exist for many years. Good employees are in demand. Most restaurant managers want to train, advance and keep the young man or woman who does a good job.

Variety Brings Interest

There is always something new in the food service industry. In the modern well-run restaurant, every job is highly specialized. Each is dependent on the others. The employee has a constant opportunity to gain new skills and to develop poise and self-confidence. He contributes to the well-being and welfare of those he has served.

Salaries Compare Favorably

Salaries vary with location, type of establishment, volume of business, and the complexity of the job. Competition for qualified employees keeps wage scales climbing. It also is a fact that a college food service administration graduate with 12 years of experience earns considerably more than an engineer with a similar period of experience. Some of these figures are shown in other sections of this booklet. The career counselor also can obtain salary statistics from government records or from the executive officer of a state or local restaurant association.

Extra Benefits, Too

Extra employee benefits add considerably to an employee's earning power. In most food service establishments, the employee normally receives one or two complete meals without charge during each working day. The provision and laundering of

uniforms cuts down on usual clothing expense in other occupations. Many restaurants provide hospitalization plans, and health and accident insurance. Some restaurants have pension and profit-sharing plans and bonus arrangements as well as other benefits. Vacation periods are similar t those of other industries.

Location a Matter of Choice

Good positions in all types of eat ing establishments are availabl throughout the United States. The are career opportunities in ever town, city or inhabited part of t country. The career food service e ployee has little difficulty finding e ployment in any section of the natio

Preparing for a Food Service Industry Career

THERE are many ways in which a youth can prepare for a career in the quantity food service industry.

He can consult with the manager of a local hotel, motel or restaurant and express his interest in a career in this industry.

He can enroll in a cooperative vocational education program and ask to be placed in a restaurant job for on-the-job training.

He can enroll in continuing education courses in his own community.

He can contact the nearest community junior college to determine what training is available for the restaurant industry.

He can contact various major colleges and universities to find information on four-year programs of professional education for executive leadership in the industry.

The Career Counselor's Role

No matter what course of action the student follows, one of his first steps should be consultation with his high school career counselor.

The career counselor has many means of obtaining information to help guide the student. Restaurant associations—local, state and national—always are good sources of information. Members and executives of these organizations, knowing the tremendous needs existing in the industry, are eager to provide as much information as is possible. Page 19 of this booklet lists some sources of food service industry information.

The National Restaurant Association encourages career counselors to obtain as much material as possible so needed guidance can be offered to the student who is thinking in terms of food service as a career.

It is hoped that high school Career Day programs will include a representative of the restaurant industry. There are successful restaurateurs in every community who are willing to appear on such programs. If a career counselor does not know of a restaurateur who could handle the assignment, please contact a state restaurant association or the National Restaurant Association.

Above all, career counselors should recommend that the student study various food service operations and seek summer employment in a restaurant. By taking even a beginner's job during vacation, the student has an opportunity to learn by observation.

A Need At High School Level

A trend beginning to take shape in the educational field is the development of high school level food service courses, either in conjunction with vocational training schools or as part of comprehensive high school programs.

A good food preparation and service course in high school provides two avenues of immediate or ultimate occupational goals:

1. A terminal course for youth who have no intentions of pursuing further formal education.
2. An essential background of instruction and practice in food preparation and service for those youth who desire to continue their education to enter the fields of food service supervision or management.

There are a variety of types of food service courses offered in secondary schools. The number is increasing rapidly.

Kinds of Restaurant Positions Available

Management and other special positions for which young men and women may qualify

Restaurant Manager

Coordinates entire operation of restaurant for efficient, courteous food service. May deal with supervisory staff or in smaller organization work with kitchen and dining room personnel directly. Should be familiar with all jobs in restaurant.

Assistant Manager

An understudy to manager. Usually assumes responsibility for over-all operation and also has certain areas of specific responsibility. Takes over completely when manager is not present.

Food Production Manager

Has charge of all food preparation. Must have knowledge of food preparation and appreciation of good food standards. Must be proficient in cost control. Supervises kitchen staff so must know how to work with and direct people.

Chain Executive

Position found in large chain-type operations. Largely administrative work and usually does not involve work directly in contact with food preparation and service although thorough knowledge of food service is needed.

Positions for which young men and women may qualify

BASIC JOB DESCRIPTION
(Varies in Different Restaurants)

Cashier

Receives payment for meals either from customer or waiter or waitress. Must be accurate and fast in making change. May do some tabulating and record keeping. May handle customer complaints. Must be tactful and gracious.

Food Checker

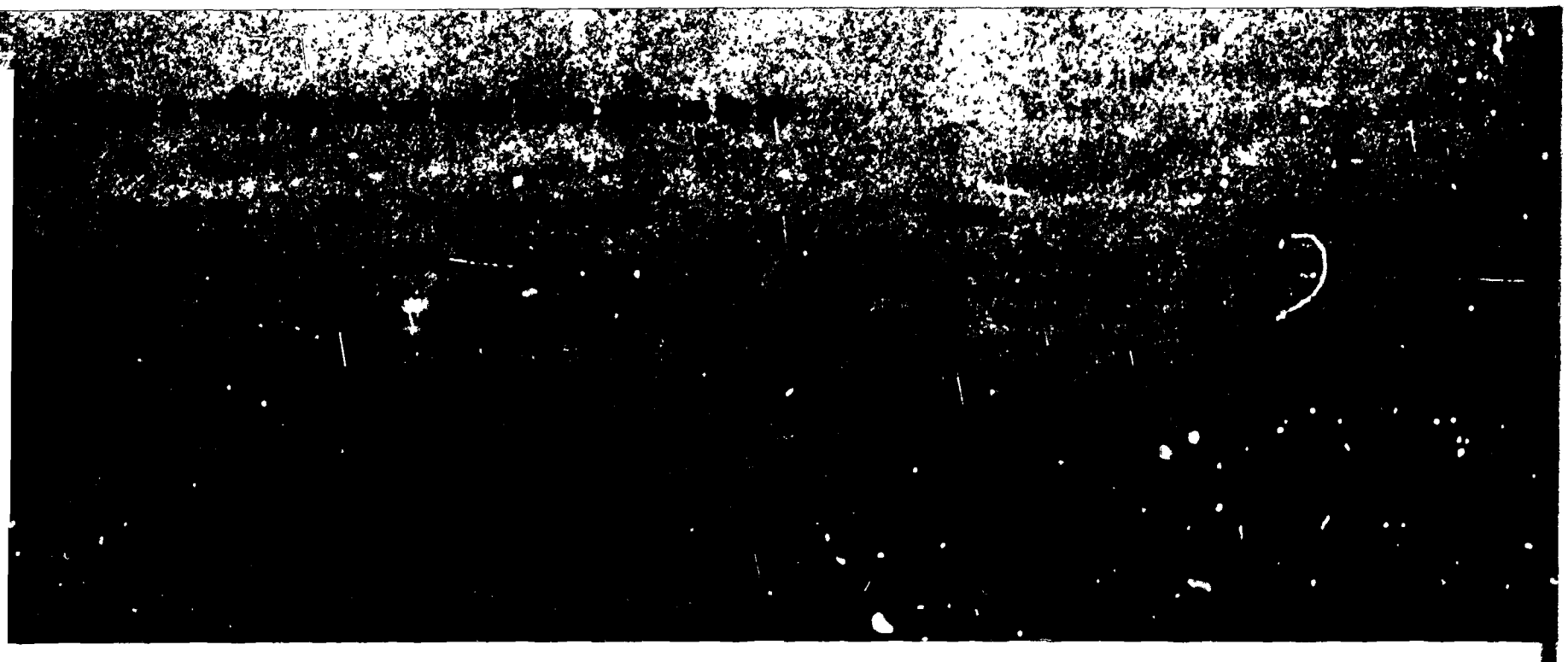
In cafeteria, itemizes and totals customers' orders. In restaurant dining room may check food as it leaves kitchen and tabulate each individual order or portion of food.

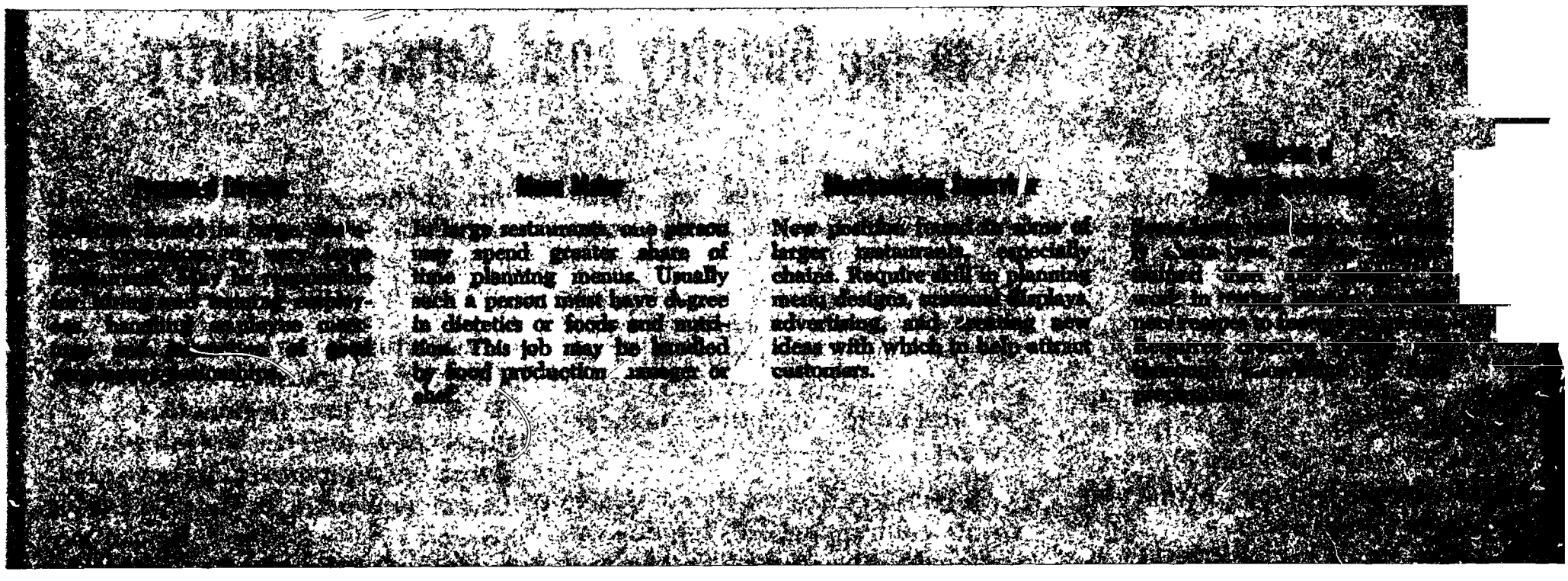
Chef and Cook

Prepares and portions meat, vegetables, sauces, casserole dishes. In large restaurants one may find individual roast or dinner cooks, cold meat cooks, vegetable cooks, sauce cooks, short order cooks, soup cooks.

Pastry Chef and Baker

Bakes cakes, cookies, pies and other pastry type desserts. Bakes bread, rolls, quick breads. Must plan so fresh breads will be ready as needed. In some restaurants skill in cake decorating is required.





Pantry Supervisor

Supervises salad, sandwich and beverage workers. Must know how to set up attractive food arrangements. Requisitions supplies as needed. May oversee cleaning men and women. This job may be responsibility of chef or manager.

Food Service Supervisor

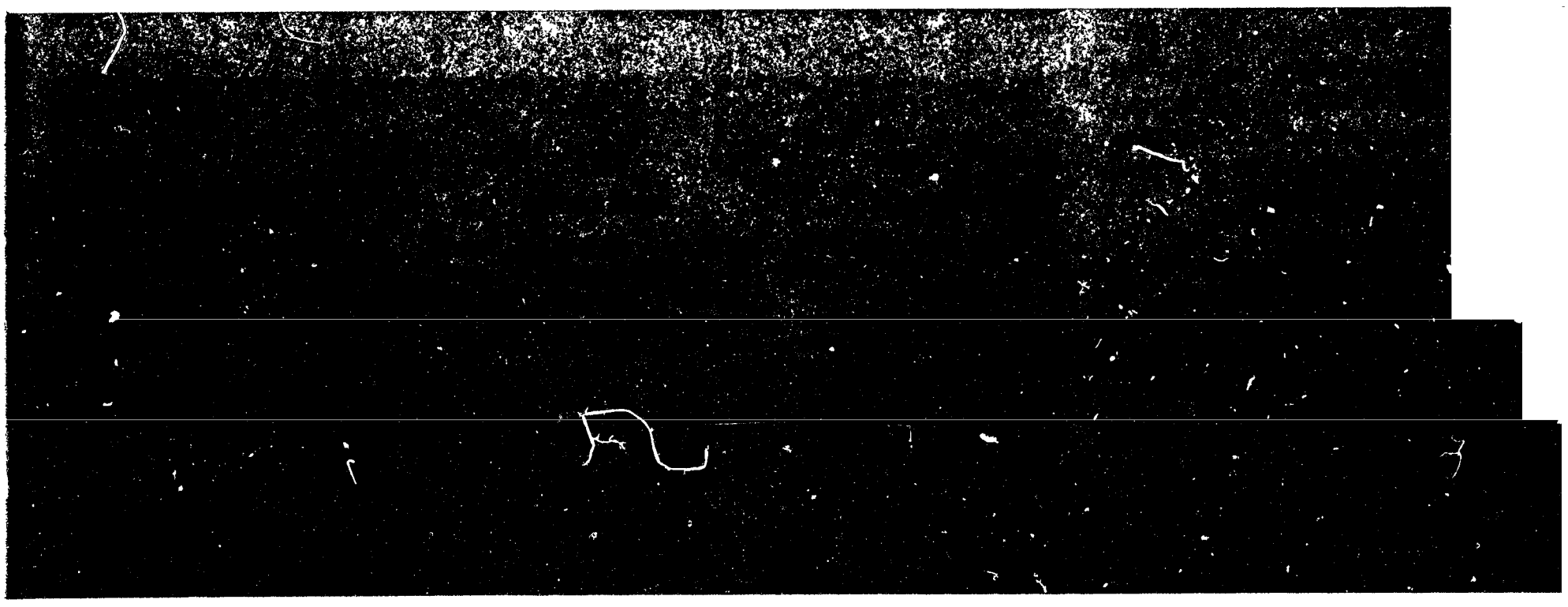
May have title of dining room supervisor, head waitress or counter supervisor. May coordinate dining room activities, train and supervise waiters and waitresses and bus boys. Needs to have leadership qualities. Must be fair and objective.

Purchasing Agent and Storeroom Supervisor

May order, receive, inspect and store all food—distribute to different departments as requisitioned. Keeps running inventory. Must keep posted on market prices. These jobs may be responsibility of manager or chef.

Butcher

Cuts, trims and prepares meats to fill orders of cook. Must be expert at cutting carcass. Stores meat. May also be poultry and fish butcher. May be responsibility of meat cook.



Opportunities for High School Graduates in the Quantity Food Service Industry

TO a large extent, advancement is determined by the individual's ability, his eagerness to learn, his willingness to accept responsibility, and his desire to climb in the business. His chances for advancement to higher positions are great if he applies himself, if he puts his natural resources to work. Progressive organizations are quick in recognizing ability and inventiveness.

However, in restaurant management, as with most professions, the person with the education and training advances more quickly.

It is possible for a person to have a successful career in this business without a college degree. The high school graduate can enter the business directly and work his way to the top. There are hundreds of examples in which people have been successful in this business without college training, an opportunity not always available in many fields.

The opportunity for optimum success without a degree is much more difficult today than it was just a few years ago. Restaurants are looking for trained people to take over management roles as much as possible; they know the value of formal food service training.

In general, a high school graduate who wants to progress in the business will find that he must work longer and perhaps harder to reach the management position he wants. Without a college degree, a student interested in a career in food service has a choice of two procedures:

He can learn the hard way through years of plugging in many jobs and gradually reaching the top. While this method takes a much longer time, it gives the career aspirant a thorough background in all aspects of the business. He becomes a better executive by having worked or received training in every operation in the restaurant including management.

He can get a good foundation in vocational training. This training will not qualify the student to take over operations or management of a restaurant the day he receives his diploma. It will help his progress greatly. In this type of program he will get the theoretical and, in many cases, the practical background for a head start. He will know what the business is all about, although he certainly will have much to learn "on the job."

A high school graduate, without any training in quantity food service, can get a start in the business by going directly to the manager or personnel director of a good restaurant. Successful restaurant men and women are happy to discuss what it takes to build a career in the business; they are honored when asked for advice. If a restaurateur is successful, he is a keen student of human nature and can be helpful.

In starting in the business this way, a high school graduate obviously will be assigned to a beginner's job. No matter how small the first job may be, the career aspirant should have good reason for wanting it. His chances for success will be better if he can say honestly that he wants to make the food service business his career than if he is a "take-any-job" type.

The young man or woman will not get anywhere if he (or she) regards working in a restaurant as a disgrace or merely as a temporary job until something different comes along. Unless he is determined to do a good job, a person would be better to stay out of the restaurant business. This business, more than most, depends on people giving excellent service to customers.

The sharp career aspirant will use his spare time for vocational training and home study. Every state and

practically every city has vocational courses in the food service field. Even if a young person is serving an apprenticeship — in cooking, for example—he should avail himself of all opportunities for training to get some background in other branches of the business. His chances for success will be much better if he does.

A person who wants to enroll in a vocational class should contact the local superintendent of schools or director of vocational education to determine if the subjects he seeks are offered in his community. If not, he should write to the State Director of Vocational Education in his own state and request advice on enrolling in such courses in nearby communities.

In grooming himself for a career, the high school graduate also should read extensively. He should read the trade papers and restaurant business magazines. He should take books on the subjects in which he is most interested, home from the library. Text books provide the fundamentals; trade and business magazines keep the student a step ahead of the next fellow.

Vocational, Trade School Training

In many cases it no longer is necessary for the food service career aspirant to enter the business lacking training. Today, he can receive training in vocational or trade schools. These schools are planned to enable the student to take special training for various types of positions in the food service industry.

Usually these schools combine lecture and discussion classes as well as actual experience "on the job." In many instances, students may divide their time between actual experience on a job in a restaurant and classroom work. Some of the areas of training in food preparation jobs include cooks and chefs, assistant cook, vegetable cook, pantry and cold meat cook, soup and sauce cook, roast and broil cook, fry cook, baker, pastry cook and butcher.

Most trade schools offer special work in menu planning, dining room service, food service standards, restaurant accounting and restaurant public relations.

Although high school graduation is not always required, students are encouraged to finish high school before entering one of the trade schools. Fees are usually modest. Some schools are operated by the public school system and charge no tuition. Many have evening classes for the convenience of students.

Trade schools report that they are unable to meet the demand for graduates. Both trade schools and vocational schools will guide the career aspirant in going after the right kind of job.

Also taking shape today is a trend toward the establishment of food service courses as part of regular high school programs. If a student does not plan to attend college, these courses can provide the best training a person can receive before he enters the business.

Jobs Are Available

There are jobs available to high school graduates who want to get started immediately in the quantity food service business. There are more than a million waiter and waitress jobs, 600,000 cook jobs, 350,000 kitchen worker jobs, and 200,000 counter and fountain worker jobs. More than 150,000 job openings are expected annually in the restaurant industry through the mid-1970's.

As a worker gains experience, he can be promoted rather quickly to better paying jobs or he may advance to supervisory or managerial positions, such as waiter-captain, hostess, dining room manager, maitre d'hotel and manager of the establishment.

Above all, aspirants will find that graduation from high school is advantageous. Most restaurants today demand high school graduates, and many even require inexperienced applicants to have vocational school training. A good educational background is necessary to please an increasingly discriminating public.

Opportunities for Graduates of Two-Year College Programs in the Quantity Food Service Industry

ONE of the newer approaches being utilized to fulfill the tremendous demand for trained people in the quantity food service industry is the two-year formal training program. Hundreds of jobs are open for persons who complete this type of training.

Two-year programs are offered by junior colleges, community colleges and technical institutes. They are designed for students who want a terminal program oriented to the technical or supervisory operations of a restaurant, and equip the student with the background needed to enter the food service administration field at the technical or semi-professional level.

Commercial restaurants are growing in numbers and size, and owners are seeking trained young men and women for careers in management. Formal training is supplying more and more of the industry's leaders. The schools offer specialized instruction which teaches the best known methods to apply to food service administration.

The shortage of trained people has led to the development of the two-year associate degree program.

These two-year courses prepare career aspirants to perform effectively and quickly in supervisory and administrative capacities within various commercial and institutional feeding operations. Graduates qualify for beginning managerial and supervisory positions in the food service centers of restaurants, clubs, colleges, department stores, industrial plants, institutions, hospitals and schools.

There are numerous opportunities for graduates of these programs to become assistant food service directors in hospitals, college food services, school lunch programs, and college student unions. With increased emphasis being placed on good nutrition and the relationship of nutritious food to the industrial productivity of individual workers, more and more cafeterias and other eating places have been established in factories, department stores, offices and other business places. The graduate of a two-year course finds ready employment in these operations.

The training offered by junior colleges, community colleges and approved technical institutes varies somewhat from school to school. Most schools offer similar basic programs, but differ on specialties. In most programs, the student learns to do the principal kinds of restaurant work, but also has an opportunity to specialize in food preparation.

Here are the programs as described by three widely separated schools:

Two-year courses will provide students with understanding in the theory of quantity food service operation and with practical experience in the field. Special theory and practice is provided in food preparation, menu planning, food purchasing and storage, equipment purchasing and layout, personnel management and job analysis, food standards and sanitation. Work is available in diet therapy, catering and beverage control, food cost accounting and record keeping. Basic courses include general offerings in nutrition, chemistry, economics, psychology, sociology, communication skills and physical education.

Two-year mid-management programs provide students with class-

room instruction directly related to their chosen careers in the food service industry. Students also receive laboratory experience and training in food services through part-time employment. The programs provide both theoretical and practical approach.

Food service administration curriculum includes food preparation techniques, nutrition, large quantity food preparation and service, use and care of institutional equipment, record keeping, administration, personnel relations, diet therapy, beverage control, food purchasing and catering.

Depending on the particular school attended and program followed, the degrees awarded after successful completion are associate in science, associate in applied science and associate of arts.

The two-year instruction programs are planned to help the student find immediate employment and to gain promotions after he has had experience in industry and has demonstrated his qualifications.

Because of the variety of training programs offered by different schools, students considering the two-year training approach should learn as much as possible about the offerings of several schools. Information is available from state restaurant associations and the National Restaurant Association or from the schools themselves.

Many industrial leaders believe the two-year program will be the top producer of trained people for the restaurant industry. These programs are particularly appealing to many students because of the new emphasis on community colleges. Frequently, the student can remain at home while taking the associate degree program and also can maintain a part-time job in a restaurant.

Opportunities for College Graduates in the Quantity Food Service Industry

WHILE attention in education circles in recent years has been focused on demands for scientists and engineers, an even greater demand exists for managers who are trained in the scientific and economic aspects of food service. Major restaurants and chains compete yearly for the services of food service graduates at universities across the country. Teams of recruiters from the food service organizations are regular visitors at these schools.

The work and study programs offered by colleges which have specialized four-year curricula in restaurant, hotel and institutional management are generally recognized as the best educational preparation for food service administration. Students earn B.A. or B.S. degrees in restaurant administration, institutional management, dietetics, home economics or business administration. Graduate work also is available in food service administration.

The undergraduate program usually includes preliminary and advanced courses in food preparation, specialized courses in restaurant accounting, catering, management and sanitation, and more general courses such as economics, law, marketing and finance.

The four-year student develops an artistic appreciation of good quality food, and the ability to guide personnel in the production and attractive service of it. Cost control also is emphasized. Courses are developed with the theory that management personnel must be qualified to direct the planning, purchasing, production and service of quality food on a large quantity basis for many kinds of institutions operating under different financial structures and policies.

Another requirement for a degree in many of the universities is three summers of work in restaurant or hotel jobs, ranging from bus boy, food checker and waiter to dining room captain and assistant restaurant manager. The valuable experience and contacts with employers obtained during these summer jobs often are of assistance in obtaining the most desirable management trainee or other restaurant positions after graduation.

Commercial restaurants offer positions such as the following to graduates of four-year programs:

assistant manager
manager
food production supervisor
purchasing agent
food cost accountant
food service director
director of recipe development
personnel director
sales manager
banquet manager

Institutions need these college graduates as:

food service supervisors, managers and directors in college and university residence halls

dietitians in hospitals

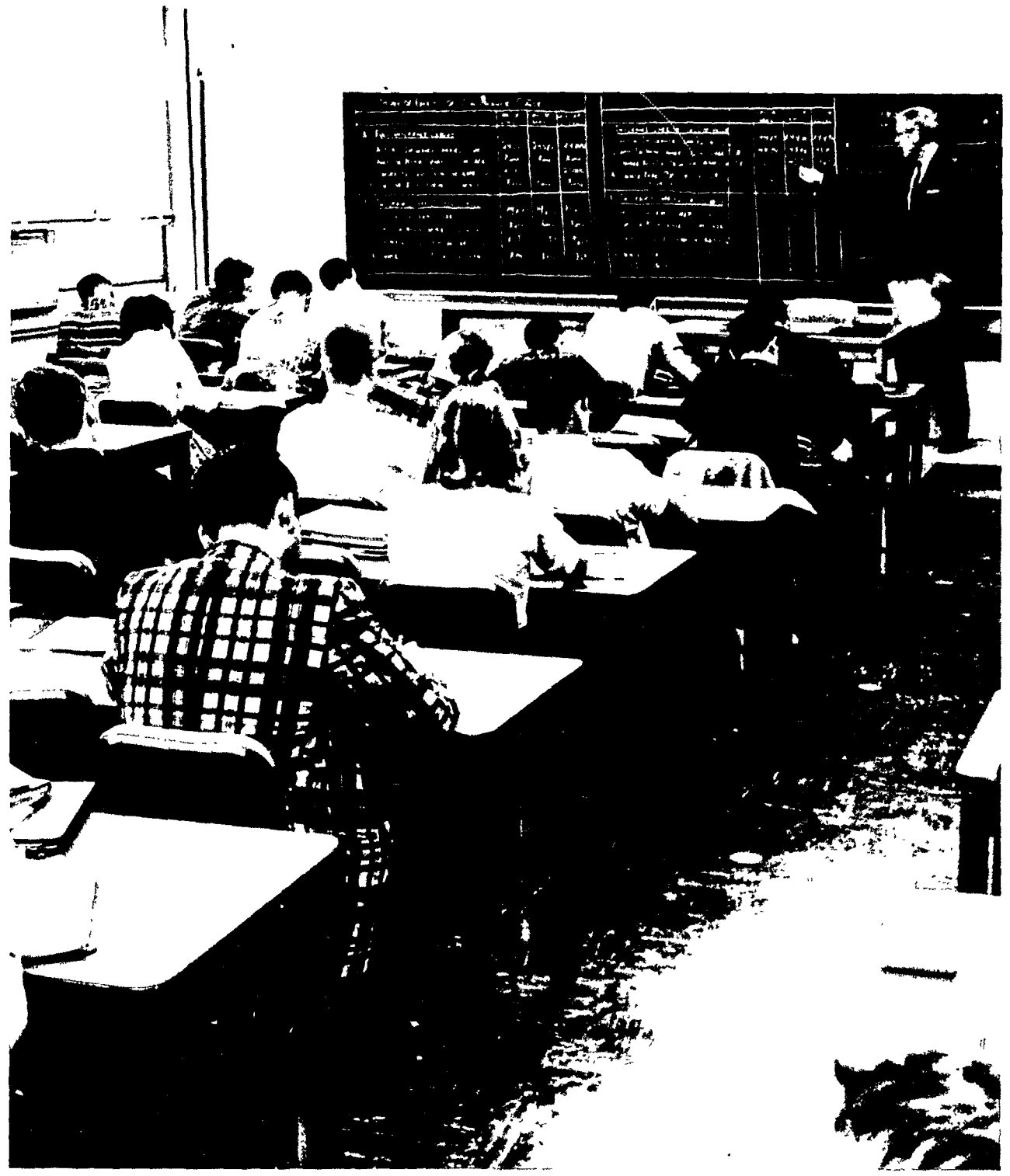
managers and directors of school lunch programs

supervisors and managers of industrial food services

food service managers and directors of other types of institutions wherever people are housed and fed away from home

SCHOLARSHIPS are available for students with superior scholastic records who are in need of financial assistance. In the Careers for Youth Program, the H. J. Heinz Company awards scholarships annually at the National Restaurant Association Show and Exposition. Information on this competitive scholarship program is available from the National Restaurant Association.

Information on food service administration college programs and scholarships is available from the Council on Hotel, Restaurant and Institutional Education, Statler Hall, Cornell University, Ithaca, New York 14850. Interested persons should ask for the Directory of Schools and Colleges Offering Courses for the Training of Managers, Supervisors and Workers in Hotels, Restaurants and Institutions.



Graduates Are Well Paid

Graduates of one of the major hotel and restaurant administration programs average $14,500 annually. The typical graduate with one year on the job earns approximately $7,000 a year including benefits such as room and board.

At another major university offering hotel and restaurant administration programs, there were 378 jobs offered to a graduating class of 86 students. The average starting salary was $481 a month plus meals, laundry and cleaning.

After 12 years out of school, the hotel and restaurant administration graduate earns $5,000 per year more than the engineering graduate.

A Need for Dietitions, Too

There is a great demand for dietitians in commercial food service establishments as well as hospitals. Dietitians in commercial establishments are trained in the business and financial management aspects of the industry. All large cities have restaurant chains, cafeterias, department stores, hotels, and institutions that employ one or more dietitians.

Dietitians in hospitals may fill positions as food production managers to coordinate the entire food operation, including menu planning, food purchasing, supervision of food preparation, preparing special diets, and final service to the patients.

Many dietitians have become successful managers of restaurants and frequently have become traveling supervisors for chain organizations, as well as owners of very successful restaurants.

Answers to Questions

What is the scope of the restaurant industry?

Size: The food service industry ranks among the four largest industries of the nation by dollar volume of sales. There are 600,000 food service establishments located in all parts of the country.

Money Spent: Americans spend more than $25 billion a year for food eaten away from home.

Number of Meals: More than 750,000,000 meals are served each week in public eating places.

People Employed: One of every six persons working in a retail trade is a restaurant employee.

What are the kinds of "eating-out" places?

Cafeterias and buffet service

Counter service

Table service

Drive-in and take-out service

Catering services

In-plant feeding service

In addition, some restaurants specialize in a specific type of food, such as sandwiches, seafoods, steaks or foods of foreign origin. Other restaurants are planned to cater to special groups of customers, such as office workers, business men, factory workers, travelers, family groups.

What are the advantages and disadvantages of restaurant work?

There are opportunities for advancement almost as fast as the particular career aspirant's abilities warrant.

There is job security because the industry will grow with the population and business is steady year round.

The work is interesting with plenty of variety.

Salaries compare favorably with other retail trades.

Total working hours usually are the same as for other types of business, but hours may be rather irregular because of the long hours restaurants stay open.

Good restaurant positions are available throughout the United States.

What personal qualifications are needed for restaurant work?

A person must genuinely like people.

A person must have an interest in serving people.

A person must like food and enjoy working with it.

A person must take pride in his appearance.

A person must be eager to do a good job and learn the progress.

A person must be in good health and physically capable of hard work.

A person must be able to maintain an even disposition under pressure.

OTHER SOURCES OF INFORMATION
About Restaurant Careers

This booklet provides basic facts and answers some of the questions which students may ask about the restaurant field. Here are some other resources:

Visual Aids – Many movies and other filmstrips are available for use in helping interpret the opportunities in the restaurant field. A list and brief description of these visual aids may be obtained by writing the National Restaurant Association.

Local and State Restaurant Association Executives – These men and women welcome the opportunity of helping you. They can provide you with information pertaining especially to your area. They may also assist you in planning activities to acquaint students with the "behind the scenes" operation of restaurants. Write to the Educational Director, National Restaurant Association, if you would like the address of an executive in your area.

Local Restaurant Management – The use of local resources is one of the best ways to help students see a clear picture of actual restaurant operation. Progressive restaurant operators or managers may be invited to talk with your students. Or, there may be dietitians in hospitals who would do likewise.

Field Trips – You might arrange field trips for students through well-run eating establishments. One restaurant manager allowed a special group of students to come in and "take over" the restaurant for a day, under the supervision of some of the regular employees.

OTHER ORGANIZATIONS

Other groups who may be contacted for information on possible food service careers are:

COUNCIL ON HOTEL, RESTAURANT AND INSTITUTIONAL EDUCATION
Statler Hall
Cornell University
Ithaca, New York 14850

AMERICAN HOME ECONOMICS ASSN.
1600 Twentieth Street, N. W.
Washington, D. C. 20009

AMERICAN HOTEL AND MOTEL ASSN.
221 West 57th Street
New York, New York 10019

AMERICAN DIETETICS ASSN.
620 North Michigan Avenue.
Chicago, Illinois 60611

AMERICAN HOSPITAL ASSN.
840 North Lake Shore Drive
Chicago, Illinois 60611

H. J. HEINZ COMPANY
$1,000 Scholarships for College Training

A highlight of the Careers for Youth Program is the annual selection of graduating high school seniors for $1,000 scholarships awarded by the H. J. Heinz Company. The purpose of these scholarships is to assist qualified young men and women interested in the field of food service administration.

The award money is deposited each year with the schools selected by the winners. Funds may be drawn on for tuition and other specific expenses incurred in study toward a degree in some phase of food service administration. Each winner may draw up to $400 the first year and $200 in each of the remaining three years of his college course.

The scholarship program has been approved by the Sanctioning Committee of Secondary School Principals.

The National Restaurant Association will direct the scholarship program. Applicants are judged on scholastic ability, aptitude, and interest in quantity food service, ability to get along with people, character and professional promise. Financial need also is a point of consideration.

Detailed information and application forms are available from the Director of Education, National Restaurant Association, 1530 North Lake Shore Drive, Chicago, Illinois 60610.

Filmstrip Shows Food Service Industry

A full-color filmstrip, "New Horizons in Food Service Careers," has been prepared by the H. J. Heinz Company as part of the Careers for Youth Program. This filmstrip is available to career counselors on a permanent loan basis. The film is useful for Career Days, special school assembly programs, club meetings or parent-teacher meetings. A written narration guide accompanies the filmstrip.

VT 006 158
Computers on the Factory Floor--A Layoff Study. Automation Program Report No. 2.

Bureau of Employment Security (DOL), Washington, D.C.
Wisconsin State Employment Service, Madison
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WISCONSIN

To improve employment services provided to workers displaced by automation, a group of 115 clerical layoffs and 91 professional layoffs from a machinery fabrication firm were compared with a control group of 183 clerical applicants and 122 professional applicants selected from the files of the Milwaukee State Employment Office. Each case was reviewed by the project staff and rated on employability. A detailed analysis of job classifications of the two clerical groups and comparison of the kinds of skills represented in the two professional groups were made to estimate the impact of automation on their skills. The professionals laid off from the fabricating firm were rated more placeable than professional applicants in the control groups and are not expected to suffer greatly because of the layoff as most will be recalled or will benefit from new placements. However, the clerical layoffs were rated less placeable than the control group applicants and will suffer because of age, education, experience, skills, former wages, and expectations. The ability of Employment Service interviewers to recognize problem situations must be increased and the current Employment Service work application card must be revised to provide effective service in today's challenge of constant change. (HC)

VT 006 158

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TED STATES EMPLOYMENT SERVICE

Automation Manpower Services Program

Demonstration Project No. III

AUTOMATION PROGRAM Report No. 2.

July 1963

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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COMPUTERS ON THE FACTORY FLOOR:

A Layoff Study

U. S. DEPARTMENT OF LABOR
W. WILLARD WIRTZ, Secretary

MANPOWER ADMINISTRATION

BUREAU OF EMPLOYMENT SECURITY
Washington 20210, D. C.

WISCONSIN STATE EMPLOYMENT SERVICE
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FOREWORD

Twenty Automation Manpower Services demonstration projects were started in eleven States during 1961-63, to gain experience with labor market problems arising from changing technology and mass layoffs. The projects are financed and guided by the United States Employment Service and conducted by affiliated State Employment Services.

The fundamental aim is to combine action and research to demonstrate what the Employment Service can do in rapidly changing labor markets.

In this general context, the projects are designed to:

1. Provide direct intensified personnel service to affected workers to promote occupational reorientation, minimize duration of unemployment, and to experiment with training and retraining techniques.

2. Analyze changing jobs and staffing patterns to gain information about evolving job content and training requirements in establishments affected by technological change.

3. Conduct labor market and related research in conjunction with these projects to develop procedures and methods that will assist the Employment Service in carrying out effective manpower actions in advance of the development of problems.

While the projects cover a broad range of remedial manpower actions--from the use of training funds to development of aptitude tests for new occupations--not every project includes the whole range of possible actions. Each project is tailored to the manpower problem presented by the particular case, whether it involves layoffs, in-plant workforce adjustments, reduced hiring, or the need for all-out community action.

As each of the present and future projects reaches a point at which summarization of experience and findings is possible, reports will be prepared for this series of Automation Program Reports, so that the project results may be disseminated throughout the public Employment Service system and used to improve manpower planning and operations.

Louis Levine, Director
United States Employment Service

BUREAU OF EMPLOYMENT SECURITY, Robert C. Goodwin, Administrator

PREFACE

The Wisconsin State Employment Service has focused the attention of its Project on Automation and Technological Change (in collaboration with the Automation Manpower Services division of the national office) on a medium-sized insurance company. This establishment, already one of the most efficient in the country in terms of costs per premium dollar, has been engaged for several years in computerizing hand-and-machine office procedures.

The detailed findings of that study will be published separately. Here it is enough to say that immediate in-plant employment consequences of this piece of automation are minimal. There are few layoffs in the main establishment (thus far 9 temporary staff laid off from an affected workforce of 565 on a total payroll of 1,800 persons) although work formerly done by 150 employees of independent branch agents now is incorporated in considerably improved home-office routines. Entry jobs seem to be drying up, and higher requirements for new employees have been established.

The case may be regarded as a model of enlightened personnel policy by a company careful of its community image, and animated at all stages of several years of preliminary planning by a determination not only to reassure but also to protect the workforce in being when the computer was delivered.

Is there an obvious and necessary, perhaps almost automatic, difference between this kind of case and what happens when production processes in a factory begin to be automated? This question engaged the attention of the Wisconsin project as it began to investigate the impending impact of computers in its city (about 70 IBM 1401 machines are on order there) and to interview key officers of middle-sized companies engaged in varying stages of automation.

A hypothesis emerged, and this report discusses a small-scale paper and pencil test of that hypothesis.

F. J. Walsh, Director
Wisconsin State Employment Service

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The Quit Slip

One of the problems in layoffs caused by automation and technological change is continuing emotional identification of the worker with the old employer. This may be "realistic," based on seniority and such fringe benefits as insurance and pension rights, or it may be based on habit, loyalty, pride in the old job and the old employer, even when that old job has vanished.

The quit slip is a document signed by the worker in which he voluntarily renounces all seniority and recall rights. It is sometimes demanded by a new employer as proof that the worker will not leave the new job on a recall to the old one.

Under Wisconsin law, a worker may refuse to accept employment and still remain eligible for unemployment compensation if a quit slip is required by the prospective future employer.

This is a long introduction to a brief snatch of dialogue, typical of the emotional overtones in so many layoff situations:

Company Employment Office Manager:	"Why don't you place A.B.? He's in here every week and constantly calls me. You don't place our layoffs until they have drawn out all their compensation."
Project Leader:	"Do you tell them you can't call them back? Do you tell them to sign quit slips?"
Employment Manager:	"We can't tell them that; they leave here in tears as it is."
Project Leader:	"But you expect us in the Employment Service office to tell them. Would you hire someone without a quit slip yourself?"
Employment Manager:	"No, we couldn't do that."

COMPUTERS ON THE FACTORY FLOOR: A LAYOFF STUDY

The Hypothesis

Automation in financial institutions need not result in immediate layoffs. The automating firm is likely to be aggressive and expanding. The new processes allow new, business-getting things to be done. The work force, especially the females, are likely to be younger than the clerical staff of a factory, with a higher turnover rate. The transition can be carefully planned, and carried through department by department, with temporary or contract help hired for employment expansion during the changeover, when both old and new methods may run simultaneously. Pre-automation procedures are likely to be rational and efficient, as a result of continuing study and improvement.

BUT: installation of data-gathering and data-processing equipment in factories is likely to have more severe, immediate and long-lasting employment consequences. One or more of several reasons may be in play:

(1) The clerical work force in the factory is likely to be older and more firmly attached to the establishment, by formal or informal seniority systems, by the emotional ties stemming from long employment, and by belief in the special nature of the manufacturing process used, with consequent smaller range of experience and skill.

(2) Production-minded management may have in the past ignored paper work or treated it as a necessary evil (in distinction to the financial enterprise where the thing produced is paper) with consequent proliferation of data and data-collection routines that are in fact not needed, or that will not be needed in a rationally planned machine-memory system.

(3) Past special-purpose campaigns may have left small staff clusters not needed in the current or in the new (automated) situation. Examples are special staffs on time-study, costing, work flow, order expediting. A total systems full-flow approach incorporates all of these elements, frequently as by-products of the main flow of data, where it does not eliminate the need for them.

(4) Factory data-collection systems are perhaps more likely to be available in pre-packaged components with canned programs, rationally worked out beforehand and capable of almost immediate installation: perhaps after a two-week break-in period. The need for clerks vanishes at once. This is in contrast to the carefully tailored stage-by-stage introduction of computerized processes in already efficient offices, where personnel redundant in one department can be transferred in stages to other parts of the operation during conversion covering many months.

If these notions are correct, they might be supported by examination of a concrete case of factory clerks displaced by automation. This was in fact attempted in Wisconsin.

The Method

A major employer in the area is a fabricator of special-purpose machinery, here called the ABC Company. Its payroll runs to thousands in many sub-plants. Its product line changes according to market success and failure. Recently it decided to abandon production of a heavy product.

Employment wavers according to production schedules. In January of 1963 its payrolls were 10% above the same month of 1962 and 10% below the same month in 1961.

Automation has begun on the factory floor and the project was aware of the displacement of clerical workers.

Using codes from the Dictionary of Occupational Titles, the project staff established special controls during the month of December, 1962, and the first two weeks of January, 1963. In these six weeks there were registered in the Milwaukee office of the Wisconsin State Employment Service a total of 115 clerical layoffs and 91 professional layoffs from the ABC Company.

Company officials informed the local office that there was small chance of any recall for the clerks or for the professionals.

Most of these layoffs were rated by regular Interviewers in the Milwaukee Employment Service office on a special form prepared by the project. Subsequently these cards were reviewed by the project staff and rated on employment prospects.

To provide a control group for purposes of a comparison, the project staff then drew a 10% sample (every tenth card) of active clerical and professional applications in the Milwaukee office files. This produced a population of 183 clerical applications and 112 professional applications, which were rated on employability by project staff.

Since some comparison in professional judgment of employability as between Interviewers in the Milwaukee office and the project staff was available in the ratings of the ABC groups, the Interviewers were not asked to rate the Control groups drawn from the general office files.

Subsequently a detailed analysis was made of all of the DOT classifications in the two clerical groups--ABC and Control--to attempt to estimate the impact of automation on these skills. A comparison was also made of the kinds of skills represented in the two groups of professionals.

It should be observed that in none of these ratings did the staff of the Automation and Technological Change Project rate the applicants on a face-to-face basis. Their judgments were based on the office records, in the same way that a placement officer would decide on whom to call in for a referral.

A brief study was made, however, of the characteristics of the ABC clerical workers called in to the office during the trial period (to January 11, 1963) and these were related to the Control workers called in and those in counseling during the period.

Summary of Findings

1. Professionals laid off at the ABC Company are not expected to suffer greatly because of the layoff. Individual cases of hardship will no doubt occur but most will be recalled to their old employer and others may benefit in this "dawn" age of automation by new placements. Their ABC salaries do not price them out of the market, and they were rated, as a group, more easily placeable than professional applicants drawn from the active files of the Milwaukee office.

2. But the clerical ABC workers will suffer, particularly the one-third who are males entirely unused to conventional office environments. Their age, education, experience, skills, former wages and expectations all will make placement difficult: rated against clerical applicants drawn from the general files they are much less easy to place.

3. Problems of the worker which result from change, technological or otherwise, are not easily recognizable since they must be identified in an environment of constantly changing relationships. Ability of Interviewers to recognize a problem situation either facilitates, delays, or prevents the use of special local office services available to our clients. The date at which a problem situation is identified is perhaps the critical point. And the Interviewer is the key to this identification.

4. The current work application card (Wisconsin State Employment Service Form 200), which is our basic working tool, is not adequate when faced with today's challenge of constant change. Applications coded only to reveal prior work experience - the past - may no longer be relevant for selection and referral; and applications coded only to reveal placement potential - the future for individual clients - cannot be used to identify changing patterns of occupational opportunities. The format of the WSES-200 itself must be changed. It must be able to facilitate new functions - possibly through a dual coding procedure. The result of this dual coding would provide the Employment Service with a dual end product: (1) A record of the changes in occupational demand, worker attitude and worker status, and (2) An analysis of the potential and trend of future employment.

5. A detailed understanding of the impact of automatic data collection in the factory is necessary, expecially the force of this impact on male factory clerks who lack ordinary secretarial skills. Clerks who are able to type at satisfactory speeds and who also possess good shorthand ability will weather the change best, but the Employment Service must understand how and why the shadow of the computer is beginning to fall on the typewriter, the dictaphone and the steno pad. This means learning a new vocabulary--the automators language--for many who carry ES responsibilities, particularly for consultation with civic authorities concerned with education and with training and retraining.

6. For the immediately affected group of factory clerks--with an average tenure in the old job of 12 years--reorientation will be difficult. Perhaps some period of time must elapse before effective placements can be made. The employer, although informing the Employment Service that chance of recall is small, has not made this clear to the layoffs. Most expect or at least hope for recall. Almost all seem to think of new jobs only in terms of the old occupation. They must be convinced this is not realistic, that other parts of their own personal histories, hobbies, self-studies, work experience must be exploited and that they must make a sharp break with their immediate occupational past and consider retraining if they are to find new work at anywhere comparable to their level of potential performance and former pay rates, or even any new work at all.

To press this point home, we shall turn now to an anecdotal history of one worker who lost his job in a previous layoff at the ABC Company:

I. A REMNANT OF A PREVIOUS LAYOFF

Layoffs in clerical and professional occupations by the ABC Company have occurred before this one and additional layoffs occurred after this period; many workers have been recalled to fill other positions, but remnants remain. We chose to begin this report with the story of one such remnant, a remnant of a previous layoff and possibly a remnant of a man.

The stage in a client's financial and/or emotional deterioration at which a "problem" can be identified frequently is so advanced that total recovery approaches the impossible. This applicant may be of that type. To find out, his case was selected from our files for further study. He had been laid off at ABC during an employment cutback previous to the one on which we based our survey. The longer time-period of his layoff gave us a broader base from which to assess both the applicant and the Employment Service services to him.

This person is "typical" only in the sense that he represents a typical Employment Service problem--the increasing number of long-term unemployed individuals without any single, definable problem. In more than fourteen months, our local office could not place him in suitable work. This was despite the fact that he was exposed to almost all our traditional services, plus a few non-traditional ones. (e.g., MDTA, Older Worker Survey, etc.)

Details on the applicant and on Employment Service service to him:

Occupational Coding: Correspondence Clerk 1-16.01.
Age: 53.
Married: Two children (one in college).
Male Veteran.
Non-handicapped.
High School dropout after 10th grade; REASON: "help--at home".
Vocational training: limited and not recent--in printing.
No specialized office ability such as typing.
Not interested in relocating out of town for work.
Has driver's license--did not have car when registered.
Date of layoff: October 1961.
Type of work experience: For twenty years with last employer in a speciality within a speciality.
(Processed inquiries and orders and expedited orders for foreign shipment of repair parts for one product line of ABC Company).
No other significant work experience--had been a quartermaster Corps supply clerk, U.S.M.C., in World War II.

Type of work preferred--"office".
Salary on last job: $500 per month.
Registered for work (and for unemployment compensation) in December 1961. (During his initial visit, an interviewer telephoned a large local manufacturer that does some export shipping, to see if that company could use him: the answer was "no". There were no current job orders on which he could be referred).

During the next eight and one-half months his card was active; no call-ins on Employment Service job orders were made. During this time apparently he did not return even once "on his own" to check for work. The Unemployment Compensation branch office renewed his work application by mail during this period.

After eight months, a second visit

In August 1962, he came into our office for the second time. His unemployment compensation (and company supplemental benefit) payments had been exhausted. No jobs were available that day but intensive Employment Service service to him began. He filled out a company work application for a local mail-order house that had delegated hiring responsibility to the Employment Service. This was not an application for immediate employment, but for an anticipated seasonal upswing in employment needs. He never did get hired by this firm--possibly because the company reduced personnel requirements by aggressively computerizing their office, stock and shipping records, and have changed to a powered-conveyor stock routing system in their warehouse.

On the same day, our MDTA representative discussed re-training programs with him.

During the next month, he began visiting our local office frequently--sometimes more than once a week. He participated voluntarily in the local Employment Service "Older Worker Survey", giving the Employment Service much more detailed employment information than would normally appear on an application card. As he relaxed his attitude in the type of work he would consider suitable, at least one complete file check was made of all male clerical and "general" (D.O.T. coded 2-9) orders and of civil service listings, without producing any referral possibilities.

He was referred to counseling. The counseling department considered the age barrier the major obstacle to being re-employed as an office worker. During a counseling interview the applicant said he would consider general office or factory bench assembly. This was duly noted on his application. At one point in the counseling process, ABC was contacted to validate the reason for his layoff. The answer: "Laid off for lack of work and modernization" (the underline for emphasis is our own).

A secondary application card coded Selling 1-x5.5 was now prepared, apparently because of the applicant's willingness to try other work and because of the feeling that there are less rigid restrictions as to age, experience, etc., in the area of sales work. The counseling department decided to place the major responsibility for service to this applicant on the Veterans Employment Representative (V.E.R.) because of the greater-than-average difficulties the applicant was having in finding a new job. (His application cards were returned to the "active files" for normal exposure to job call-ins by selection interviewers.)

During the next several months, the V.E.R. attempted numerous job developments for this man without success. He also placed a brief resumé of the applicant and his work experience in the "Veterans in the Labor Market" brochure that was sent to local firms on the labor market mailing list. No indications of employer interest resulted. On his own initiative, the V.E.R. asked our group--The Automation Demonstration Project--to talk to the applicant and give him whatever job-finding suggestion we could, based on our own specialized background. This we did for a couple of hours. Most of our conversation centered around such subjects as: types of occupations that appear to be increasing or decreasing, what local employers hire seasonally and when to apply, in what industrial areas he might best concentrate his job seeking efforts, and in what other types of work an employer might give him preferential hiring consideration because of his experience as a correspondence clerk. We would like to think our conversation helped him--but he still could not find a job.

After fourteen months: a job

In January 1963 he took--and passed--the Milwaukee Vocational School "high school equivalency test" in order to improve his "sale-ability". The V.E.R. had suggested he take this test.

In Spring of 1963 the local office job orders picked up a little. A job order for a correspondence clerk was placed with our Commerical Department and a selection interviewer sent him a call-in card. He reported the next day, but the job had already been filled. So during that visit he was referred to another employer as a tool crib attendant. He was not hired despite the fact that the V.E.R. phoned the employer to boost the applicant.

In April, our office was able to send him out on two more jobs. Both were for work as a watchman for large local foundries. These were not "nothing jobs"; the pay was above average for this type of work. On one of them, the V.E.R. phoned the applicant at home and referred him directly to the employer so someone else wouldn't get there first. Results were the same in both cases--not hired.

By this time, his financial situation was desperate. He asked about odd jobs--none was available that day but an additional secondary card was prepared for that section of our office. Next he applied for relief at the Milwaukee County Department of Public Welfare. He was surprised and embarrassed that we were aware of his relief status.

On May 3, the V.E.R. telphoned him about a part-time job possibility, and was told that he had found a full-time and apparently permanent job. His application cards were routed to our inactive file. The work he found was as a bartender. A psychologist interested in "work therapy" was informed of this case. He could not quite understand the shift to bartending. When informed that the individual was tending bar at a union owned and operated hall, (Craft Union represented by a Local at ABC Company) he explained, "That makes sense; now he can meet his buddies." He explained that individuals confuse the need to work with the need for the work group. He continued, "If the applicant's refusal to accept referral is explained to the applicant as a refusal to leave his buddies in the work group, along with the possibility of continued contact with friends after working hours, a block to re-employment may be removed."

Finally we ask ourselves how many remnants will remain from the current layoff that we have analyzed? Who will identify them? At what stage will they be identified? We noticed deterioration in this client because of his unusually "sharp" appearance during earlier contacts--akin to that of a successful businessman. How many other remnants that did not stand out as this man did have we missed? What will happen to future remnants? More layoffs of this sort of client can be expected from other manufacturing firms currently changing office procedures, systems, and methods.

II. SYNOPSIS OF THE ABC PROFESSIONAL APPLICANT

The professional applicants laid off by ABC (defined in this study as all "0" codes in the Dictionary of Occupational Titles) generally have a readily marketable educational and work background. In addition, the salary of these applicants is not considered extremely high in comparison with similar occupations in other local Milwaukee area industries. Their average weekly salary at ABC was: $133.86; minimum salary: $74.94 for a Detailer (0-48.01) with 6 months experience; and maximum: $198.64 for an Office Manager (0-97.12) with 33 years experience. It is therefore assumed that these people would not refuse referral to other companies on the basis of salary alone.

Most of the professional layoffs were male (93%) with an average age of 38 in a range from 18 to 65 years. Their average length of employment at ABC was 11 1/3 years in a range of employment with the company of 2 months to 39 years.

Automation project staff and Interviewers rated most ABC professional layoffs as "readily placeable" (66% and 63% respectively) and 12% of the total group were called into the WSES office for possible job exposure to other companies by January 11, 1963. Of the Professional Control group, the Automation project staff listed only 38% as "readily placeable" but 33% of this total group were called in for possible job exposure. It should be noted that placeability ratings were based on potential placement through the Wisconsin State Employment Service alone. In other words, many applicants cannot be considered unemployable; they would have greater job opportunities through other agencies since the WSES seldom receives orders for their occupations (for example: Educators through the WSES Teacher's Placement Bureau in Madison, Wisconsin; Musicians through their various unions and organizations, etc.). This type of limitation on placement through the local office applies almost entirely to the sample control group as demonstrated in Table II, a general breakout of the ABC layoffs compared with the control group.

A follow-up survey of ABC professional layoffs as of March 15, 1963, indicated that 51 of the original 91 applicants were no longer actively seeking employment through the local office. Fifty of the 51 inactive cards were of male applicants; five of the original six cards of female applicants were still in the active file. One additional female applicant has since been hired by the Milwaukee local office as an interviewer. The inactive cards are assumed to be of applicants who were recalled to ABC company or had found work elsewhere.

III. SYNOPSIS OF THE ABC CLERICAL APPLICANT

In contrast to the professional applicants, most clerical layoffs were considered difficult to place. Automation project staff rated only 20 of the 115 (17%) of the ABC layoffs as "readily placeable" and the interviewers themselves rated only 14% of this group as "readily placeable"; however, 17% were not rated by the interviewers.

This figure of 14 to 17% "readily placeable" is about half the proportion of clerical applicants in the Control Group who were so rated: 57 of 183, or 31%. It is significant that only 13 of these ABC clerks--all female and all having typing ability--were called in for referral during the test period. A total of 18 call-ins of these 13 persons (subsequently to be called ABC Call-Ins) produced two placements. They represented 11% of their total ABC group, as contrasted to 13 (or 7%) of the Control Group called in during the same period.

The raters used three categories, defined as:

> Readily Placeable (R.P.): "Placeable under current market conditions without resort to existing special or extended services."
>
> Not Readily Placeable (N.R.P.): "Not placeable without special concentrated, additional effort or extended services."
>
> More Readily Placeable (M.R.P.): "Placeable if a number of conditions are modified or changed."

The raters were furnished with 14 examples of factors that might make placement difficult, and were asked to use these categories.* They were:

1. Age
2. Sex
3. Appearance
4. Attitude
5. Personality
6. Type of experience: too broad, too narrow, etc.
7. Education: amount and relevance
8. Vocational training: amount and relevance
9. Salary formerly received or expected
10. Unemployment compensation received
11. Supplemental benefits received
12. Second wage earner in family
13. Employment limitations in occupation in which registered
14. Any other condition or conditions that would limit or enhance the placing of this applicant

* This led to some coding errors by Interviewers who downrated applicants on age or sex but classed them as "More Readily Placeable" as if either factor could be changed in the direction desired. The appendix spells out details of these limiting factors.

These ABC clerks, averaging 43.4 years, were seven years older than the average in the control group. Their average salary at ABC ($95.35 a week) was $25 higher than the average last salary for the control group. They had worked at ABC for 144 months, as against an average last-job tenure of 73 months in the control group. In education (average of 11.8 grades completed) they compared well to the control group. But they rated considerably lower in special job-useful training.

The 13 selected from the ABC group for job referrals were younger (average: 30.7 years), less well-paid, more realistically focussed on jobs they could get. Curiously, fewer than half had been rated as "readily placeable" by the automation project staff, and only 3 of the 13 persons had been so rated by Interviewers when they filed their applications. Only two of the 13 were placed in jobs on these call-ins. Of the Control Group Call-Ins, 11 of the 13 had been rated as "readily placeable" by the project raters.

Placement difficulties were expected for the total group on the score of age, the low educational level of some of the ABC group, the lack of openings for male clerks in the Milwaukee area, high previous salaries, and narrow work experience.

In addition, interviewers might be reluctant to send female ABC layoffs to job referrals because of "possible applicant resistance", since 32% were considered secondary wage earners in their families; and unemployment compensation, coupled with company-paid supplemental benefits, often produced higher money totals than the wages available in new jobs.

A Resurvey on Service

On March 12, 1963, service to all these persons was again surveyed. Of the 115 original ABC clerical applications, 78 were still active; 32 were inactive; and information was unavailable on five. Eight of 26 male applications were inactive, as were 24 of 52 female applications. Of 22 applicants under age 25, 15 were inactive; of these 15, 14 were coded for typing ability. Six applicants had been placed in jobs by the Employment Service and 4 of these 6 were in this group of young typists.

At that point, for the ABC group, clerical call-ins had increased from 11 to 16%, but professional call-ins rose from 12 to 41% and brochure service had been given 9% of the professionals.

By this time, many of the professionals had been recalled to ABC, where a supervisor said that in no case had one of them been assigned to his old job. Each went to a new assignment. But there was no recall for the clerks and none was expected by ABC Company.

Detailed data on both groups are compared in Tables I and II.

These include the personal barriers to re-employment as judged by the raters.

"Employability Enhanced"

Perhaps an explanation should be made for two of the categories used: "work desired enhances employability" and "special training enhances employability".

In the first case, a subjective rating was made on the basis of the answer to the question on the WSES-200: "What kind of work do you prefer?" A basic difference of opinion of the project staff occurred on how to evaluate the answers, but this was resolved in this way:

> If an applicant answered "a job like I had at ABC" or "clerical work", he was rated as desiring "work that enhances employability"; however, if his previous occupation is declining, his desiring only the previous type of work was considered as limiting his employability. We found that applicant answers would have to be re-evaluated using actual potential for placement as the criterion for rating.

Examples of special training that enhances employability for clerical applicants are:

(1) Extensive high school courses in, for example: drafting, mathematics, and the physical sciences.
(2) Vocational school courses in office machines: tabulating, comptometer, key punch, etc.
(3) Vocational school courses to improve typing and/or shorthand skills.
(4) Shop background courses in high school or trade schools which may warrant an additional occupational D.O.T.
(5) Management or sales trainee courses as provided through various educational systems.
(6) Employer trainee courses in management or programming.
(7) Employer training on specific machines, for example: IBM 705, IBM 1401, IBM 7080, and other data processing equipment.

IV. WEAKNESSES IN THE APPLICATION FORM

The collection of all these data produced three problems:

(1) The self-application part of the WSES-200 does not ask sufficient questions or does not ask them the right way. We list some examples.

> (a) The WSES-200 lacks provision for crucial entries. The dynamics of technological change, where past employment may have little relevance to future opportunities, makes it imperative that this information be made available for classification, selection and referral.
>
> (1) What hobbies do you have?
> (2) List significant self-studies you have pursued.
> (3) What was the course content of subjects you had in school?
> (4) What do you consider as an acceptable rate of pay?
> (5) Do you expect recall?
> (6) Will any special problem keep you from finding a new job?

(b) The "work preference" question is not broad enough; it tends to induce an applicant to limit himself to his most recent work experience. It may be better to rephrase the question to include, for instance:

(1) Present entry on WSES-200--"what type of work do you prefer?"
(2) --to this add--"what other type of work would interest you?"
(3) --to this add--"would you like to do sales work?" etc. (depending on what major areas of opportunity exist).

(c) The question on "union membership" would be more meaningful if set up differently; in the present entry on the WSES-200 ("if you are a union member give name and number of local") this question is often left blank.--We suggest:

(1) Are you a union member? Yes ☐ No ☐
(2) Name of Union _____ Number of Union _____.

The present entry permits this bit of information to hang unanswered when no entry is made. Interviewers who assume the answer is "no" because of the omission call in applicants and find some are union members expecting recall. More unfortunate is the applicant whose application is passed over because his status is not known.

(2) That part of the WSES-200 which the interviewer completes is not set up adequately for the selection interviewers to make call-ins. The need to reveal negative answers to questions is evident in other entries on the application.

(a) Negative information can be very valuable, for example: the fact that an applicant does not type. A possible improvement might be:

Type: Yes ☐ No ☐ Speed: Tested ____ Estimated____
Shorthand: Yes ☐ No ☐ Speed: Tested ____ Estimated____

Typing ability, including marginal typing ability, is a major "determining placeability" factor. The possession of this ability by an applicant should be identified on an application even in unrelated areas of the application file.

(b) Many questions are left blank--leaving a selection interviewer without any indication of an applicant's status in the particular area. For instance, it would be preferable to make a "dash" or "none" on each application if SPECIAL TRAINING does not exist. On all areas of the WSES-200 a "dash" or "none" marking by interviewers would clarify and simplify application selection for call-in activity.

(c) In instances when an applicant indicates "expect recall" on the WSES-200, a telephone call by the interviewer or other employer contact would clarify applicant status. The significance of this point is greatly underestimated. When the applicant's recall status is nebulous, all placement activity by the local office is obstructed and tends to deteriorate.

(d) The recall status and attitude status of a laid-off applicant may change. No adequate procedure for updating this exists. Periodic updating on a regular basis could be at least a partial answer. A blank to implement this could be added to the renewal slip currently used to update the application card. Other methods should also be investigated.

(3) Use of application cards as a source for occupational and labor market information.

(a) A dual application coding procedure, where one code would indicate the applicant's previous occupation and the second would indicate placement potential, is needed. Both codes may be identical in some cases. The dual procedure would identify declining occupations and labor market information on the one hand and indicate future applicant placement potential on the other. With the inevitable increase in demand for labor market information which is gathered for manpower planning, plus the emphasis on new direction for workers whose occupations have declined, a dual coding procedure is imperative; otherwise we will have a mixture of the past and the future within one structure. Neither the past nor future is available apart from the other causing any analysis of the applicant file to be distorted, whether it is used to discover declining occupations and industries or whether it is used to identify the potential of available human resources. A dual end purpose for coding necessitates a dual evaluation when coding an application and can only be achieved by a dual coding procedure.

(b) Valuable occupational and labor market information could be gathered from WSES work application cards used in the local office if the question "Why did you leave?" was expanded. An example of this expansion could be:

(1) Why did you leave?
(2) If laid off, why were you laid off?
(3) If there was no further work for you, why was there no work?

V. WHITE-COLLAR TO BLUE-COLLAR JOB SHIFTS

One of the novelties in this layoff was the high rate (39%) of shop clerks who accepted transfer to the factory labor pool as an alternative to layoff. Twenty-one of 54 shop clerks accepted this option, in contrast to a previous layoff there where none of the clerks was willing to join the labor pool.* Company officials now expect that if further reductions in this group of workers occur, many more will join the labor pool, which always has resulted in a reduction in wages.

Duties for men in this labor pool vary greatly and sometimes change from day to day. Jobs include plant maintenance, material handling and in some cases truck driving. Female shop clerks were also offered transfers, but acceptances were almost entirely limited to males. One such transfer--a male clerical supervisor--had been "promoted" more than 10 years ago from shopwork welder.

The layoffs came after changes in systems and procedures that have been under planning at ABC for about three years, and the layoffs occurred even though total employment at ABC Company rose 10% during the period.

* Note: Some of the shop clerks that transferred to the labor pool have since been laid off.

VI. WHY THE LAYOFF HAPPENED

The company used computers to cut costs by computerizing functions; it also cut costs by eliminating or reducing some services (for example, a cut in the number of safety directors) and it also stopped taking new orders for a major product.

Material control (material planning and scheduling) was computerized, removing much of the work from those who formerly did it. The expediting function was eliminated entirely. When planning for the change started, a supervisor commented at that time, "In the next 3 years you won't believe what you see happen around here."

Supervisory structure was changed along with rate changes. Supervisors became working supervisors (resulting in some union objections); they are more directly responsible for the work formerly done by subordinates. This work is now done mostly by the computer. The remainder not done by the computer is now done by the supervisor. At least some of the supervisors had pay reductions. New job evaluations of clerical jobs, including shop clerks, reduced pay by as much as thirty or forty cents an hour.

The number of higher paying clerical positions was reduced substantially by computerizing with the remaining functions given to supervisors. Clerical jobs requiring product knowledge (senior clerks) paying $4,800 to $5,100 a year were generally eliminated, with the work and responsibility assumed by the supervisor aided by computerization. Some of these workers have since been recalled. The simpler clerical functions such as of typists, stenographers, and file clerks, were retained, but they might be reduced drastically at a later date; these are clerical jobs in the $4,100 to $4,600a year bracket and were generally not affected by this layoff.

The number of new jobs and positions created by computerization was insignificant in proportion to the number of positions eliminated by the computer. Actually, the use of paper tape or other mediums for recording constant data and the availability of the computer for storage of these data (for example: "repeat" orders) has reduced the proportion of r outine and repetitive clerical work. The company will get more automatic data gathering machines for both office and shop.

VII. GENERALIZATIONS ON THE JOBS AFFECTED

Direct comparison of ABC with other companies has not been attempted. Instead, a member of the Project Staff reviewed the ABC applications and listed comments on the effect of electronic data processing (EDP) in each occupational area. It is our opinion that the comments are applicable to similar occupations in all manufacturing industries, and possibly could apply to non-manufacturing firms; however, the analysis was directed entirely towards manufacturing firms. The amount of displacement of workers in these areas will depend upon the extent and direction of emphasis for the application of EDP in each individual company and also on the previous methods, procedures, and systems in use.

Originally an attempt was made to compare D.O.T. classifications and D.O.T titles of ABC and sample group layoffs with orders received by the Employment Service commercial office during 1961 and 1962. Distortions in coding prevented making this comparison. This type of comparison could have revealed disproportionate relationships of applicants and orders. Further attempts to compare applicants displaced by automation or other factors with orders, provided that adequate coding for this purpose is used, could furnish considerable information for manpower planning.

(1) Professional occupations: 0-00.00 - 0-99.999

COMMENT: Professional code areas (D.O.T. definition) do not seem to be affected, except as "exception processing" by computer can decrease span of supervision by reducing clerical staff, with resulting decisions to consolidate duties at the "Manager, Office, 0-97.12" D.O.T. level (this is lower Management area, subsidiary in responsibility to D.O.T. "Chief Clerk. 0-97.13"). Exceptions to the above statement are professional D.O.T. classifications which include routine or repetitive clerical functions among the job duties, or where lower level decision-making functions of the "professional" can be assumed by the computer.

(2) Clerical applications: 1-00.00 - 1-49.999

COMMENT: Below we have listed the D.O.T. classification, the D.O.T. title, the ratio of ABC layoffs to the number of applicants found in the 10 percent sampling of the clerical file, and finally, with these comparisons, a general statement on how these occupations are or will be affected by introduction of data-processing technology.

	ABC Control	
Accounting Clerk 1-01.31	2: 3*	In this D.O.T. area, a computer-oriented system can eliminate manual and single-machine records updating work. The only clerical tasks not subject to elimination by computer-oriented systems analysis and applications are those in the job area of "one-time" or other "exception" duties not to be programmed for computer because of costs.
Cost Clerk II 1-01.35	3:2	
Inventory Clerk 1-01.41	3:3	
Material Clerk 1-01.42	1:0	
Posting Clerk 1-01.43	6:2	

Clerk, General 1-04.01	15:14	The 1-04 (non-typing skill)** to the 1-05 (with typing skill)** ratios of ABC layoffs indicates the relative lack of transferability of the non-typist. (Figures are not available on the percentage of office clerks at ABC who have typing ability; thus exact information on transferability effect cannot be obtained.)
Clerk, General Office 1-05.01	13:23	

In recent years Employment Service applicant files in this local office always contain a disproportionately high number of Clerk, General (1-04.01: no typing skill) to Clerk, General Office (1-05.01: with typing skill) as compared to the ratio of employed workers in the two D.O.T. groups, because:

(1) Lack of transferability of the non-typist means more possibility of layoffs, and
(2) Employer job orders often specifically require typing training or experience.

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* Ratio of ABC applicants to 10% sample control group applicants.

** These are coding conventions used by the Local Employment Service Commercial Office to simplify call-in file selection. This indicates that present D.O.T. codes do not segregate application cards into workable basic "skill" groups that are the determining factor in selection and referral of clerical applicants--those of typing ability vs. non-typing ability or typing plus shorthand ability vs. typing ability.

	ABC Control	
Correspondence Clerk 1-16.01	4:1	The possibility of handling routine or repetitive duties on a computer (including credit status on an "updating" basis) with hard-copy (written) computer printout of these data will have the effect of reducing the number of jobs in this area. As an example, a correspondence clerk spends a considerable amount of time in repeat-order work that involves routine information gathering and reproduction of previously recorded data. All tasks of gathering and re-recording constant (recurring) data are subject to clerical procedure and methods change; for example: work can be reduced or eliminated by use of automatic typewriters or by computer printout of repeat information.

File Clerk I 1-17.01	4:1	Ratio of subject layoffs to control group: Layoffs are in inverse proportion to "skill" and responsibility requirements within the D.O.T. "File Clerk I, II, III" structure. This takes on added importance because it is one of the very few clerical code areas that have this type of breakout in the current edition of the "Dictionary of Occupational Titles".
File Clerk II 1-17.02	2:1	
File Clerk III 1-17.03	0:1	

	ABC Control	
Order Clerk II 1-18.63	2:1	Jobs in this area are exceptionally vulnerable because: (1) "One Writing" concept is applicable. Information can be captured on a computer-compatible basis and "straight-lined" to eliminate previous work duplication. The duplication in clerical work processes of manufacturing industries, which was caused by rigid adherence to traditional departmental lines (example: Production Control, Production Scheduling, Inventory Control) can be eliminated by the interdepartmental systems analysis which is implicit in an integrated approach to management operating systems. Also, departmental reports often can be generated without clerical costs when a computer is programmed to break out such reports as a "by-product" or secondary report during more comprehensive data processing runs. (2) "Management by exception" concept is applicable. The computer can be programmed quantitatively to eliminate or simplify routine decision making by discrepancy reporting.
Order Detailer 1-18.64	2:1	
Stock Chaser II 1-18.65	2:1	
Production Clerk II 1-18.66	8:2	
Procurement Clerk 1-19.11	2:1	"Management by exception" concepts are applicable in this job area. Computer memory can store and relate all company order, inventory, work in process, work completed (shipping) and similar information, and break out automatic recorder reports as a by-product of master file updating runs. Forecasting techniques can be incorporated in such computer programs, further limiting personal "decision making" as well as clerical tasks in this job area. In a non-computer system, an automatic typewriter can be used for capture of data on purchase orders or requests. This also has the effect of permanently reducing information retrieval and routine paper work production tasks in repeat-data situations.

	ABC Control	
Duplicating Machine Oper. I 1-25.22	1:0	Several factors can participate in a decline in demand for Duplicating Machine Operations. (1) Systems and procedures analysis can eliminate records (and consequent duplication of records) by showing them to be unnecessary for production function or for review purposes. "One writing" rule can eliminate later, costly duplication. (2) Clerical methods analysis can change the way work is performed. Growing use of automatic typewriters with tape or punch card "memory" is reducing the need for the later copying by Duplicating Machines, reducing or eliminating "get ready" time and thus reducing the number of people needed to operate such machines. Direct copy of computer printed or optical display output, sometimes by micro-photography and selective photo-reproduction, can also affect traditional Duplicating Machine methods.
Duplicating Machine Oper. II 1-25.23	2:0	
Duplicating Machine Oper. III 1-25.25	3:1	
Key Punch Operator 1-25.62	2:3	(Significant differences may be in pay received, level of competence, attitude and employment interest.) A study made of all twenty-four key-punch operators in the District Employment Service file as of 8/30/62 indicated that the majority were "in between" jobs with local contract employment agencies and were housewives whose primary interest was in part-time or temporary work assignments. Of the remainder, employer comments after E.S. referrals indicated that many of these applicants were only marginally qualified, primarily because of slow Key-Punch typing speed. There were four active orders at that time; all stated that on-job experience was required and that school training alone would not qualify.

	ABC Control	
Tabulating Machine Operator 1-25.64	1:1	On 8/30/62, a study of local office orders and applications in this code showed only one job order, which indicated a preference for control panel wiring experience and also required the applicant to relocate outside the Milwaukee labor market area. The total number of applicants in file was 16 (14 male, 2 female), none of whom expressed interest in relocating. These machines are "filtering down": smaller employers are now using them because of lower rental costs. This has prevented the number of positions in this occupational category from declining as fast as might have been expected.
Payroll Clerk 1-26.02	2:2	The two D.O.T. jobs are grouped for study because of their functional and information-content similarity and because of their equal vulnerability to automated systems applications. Several local employers recently have installed new transaction ("point of origin") recorders to replace conventional punch card time clocks. These newer devices automatically transmit the information received by wire to automatic punch card or to computer memory storage units. Some, used on the production floor, can merge work-in-process, cost analysis and piece work pay data. These systems have already caused layoffs in the local market area, but the layoffs are not an adequate standard for measuring their effect because of lateral and vertical transfers. Some employees have accepted "down-grading" to lower paying, less responsible jobs in order to avoid layoffs.
Timekeeper 1-26.03	4:3	

	ABC Control	
Secretary 1-33.01	1:3	See comments under 1-37 codes.
Expediter 1-34.02	3:1	Comments under 1-19.11 are also applicable here. A computer can be used in both internal and external expediting activities, printing out "exception reports" when discrepancies arise between promise (shipping date, etc.) and data on performance (status of work in process, inventory, shipping delay, etc.) for human follow-up. This has the effect of drastically reducing the ratio of routine clerical duties to "decision making" duties of workers in this area; this can reduce or eliminate routine tasks and positions and permit use of remaining workers in less routine positions where the job is more complex.
Specifications Checker 1-35.42	1:0	Same comments apply here as in "Procurement Clerk 1-19.11".
Compiler 1-36.02	1:1	The one ABC layoff in the subject group was a catalog compiler, subjectively organizing material, and was not engaged in routine (name and address, etc.) grouping tasks that could be handled mechanically. No possibility of "automation" here--other factors were involved.

	ABC Control	
Stenographer 1-37.12	4:2	
Typist 1-37.32	2:1	
Clerk-Typist 1-37.34	15:6	Typing ability is still a "negotiable commodity" as indicated by an analysis of all clerical applicants called in for referral and confirm our studies of reassignments within individual insurance companies converting to computer data processing. Typing <u>plus</u> shorthand further enhances chances for call-in and job referral from Employment Service files (or reassignment of employed worker instead of job layoff) provided that these abilities are maintained.
Transcribing Machine Operator 1-37.36	3:2	
Stock Clerk 1-38.01	1:5	Comments under 1-01, 1-18, 1-19, and 1-34 codes apply here to the clerical tasks. As to physical tasks--in our own labor market, unmanned power trucks for inware-house material distribution and retrieval have been in use for at least three years. These devices are pre-programmed for route and destination sensing, and for time length of stops for loading and un-loading. Fully automated, computer controlled warehouses are under development at present.

TABLE I

BREAKOUT OF OCCUPATIONS BY DICTIONARY OF OCCUPATIONAL CODE AND TITLE

The following is the breakout of the Clerical and Professional Occupations by Dictionary of Occupational Code and Title of all applicants studied in this survey.

CLERICAL APPLICANTS

DOT Code	DOT Title	ABC Company Number of Applicants	Control Group* Number of Applicants
1-X1.1	Computing Work		2
1-X2	Recording Work		1
1-X2.0	General Recording Work		11
1-X2.2	Typing (not elsewhere classified)		3
1-X2.3	Stenographic Work		5
1-X2.8	Equipment and Material Checking	1	2
1-X2.9	Routine Recording Work		3
1-X4	General Clerical Work		2
1-X4.0	Classifying and Related Work		2
1-X4.9	Routing Clerical Work (n.e.c.)		1
1-X5.0	General Public Contact Work		2
1-X5.7	Customer Service Work		1
1-01.02	Bookkeeper II		4
1-01.03	Bookkeeper III		3
1-01.31	Accounting Clerk	2	3
1-01.32	Audit Clerk		1
1-01.35	Cost Clerk	3	2
1-01.41	Inventory Clerk	3	3
1-01.42	Material Clerk	1	
1-01.43	Posting Clerk	6	2
1-01.52	Cashier I		1
1-01.53	Cashier II		5
1-02.01	Bookkeeping Machine Operator I		3
1-02.02	Bookkeeping Machine Operator II		2
1-03.02	Policy Change Checker		1
1-03.05	Grocery Checker		3
1-04.01	Clerk, General	15	14
1-05.01	Clerk, General Office	13	23
1-06.58	Real-Estate Clerk		1
1-10.07	Proof Reader		1
1-12.31	Adjustment Clerk		1
1-12.47	Marker		1
1-15.02	Insurance Collector		1
1-16.01	Correspondence Clerk	4	1
1-17.01	File Clerk I	2	1
1-17.02	File Clerk II	2	1
1-17.03	File Clerk III		1

* 10% of active clerical applicants in Milwaukee office of Employment Service, chosen on every tenth card on active file.

DOT Code	DOT Title	ABC Company Number of Applicants	Control Group* Number of Applicants
1-18.01	Mail Clerk		1
1-18.32	Personnel Clerk		1
1-18.43	Receptionist		2
1-18.61	Dispatcher Motor Vehicle		1
1-18.63	Order Clerk II	2	1
1-18.64	Order Detailer	2	1
1-18.65	Stock Chaser	2	1
1-18.66	Production Clerk II	8	2
1-18.82	Billing Clerk II		1
1-19.11	Procurement Clerk	2	1
1-23.14	Messenger		1
1-25.13	Comptometer Operator		3
1-25.22	Duplicating Machine Operator I	1	
1-25.23	Duplicating Machine Operator II	2	
1-25.25	Duplicating Machine Operator IV	3	1
1-25.41	Addressing-Machine Operator		1
1-25.62	Key-Punch Operator	2	3
1-25.64	Tabulating-Machine Operator	1	1
1-25.94	Ticket Machine Operator		1
1-26.02	Payroll Clerk	2	2
1-26.03	Timekeeper	4	3
1-27.10	Mail Sorter		1
1-28.01	Mail Carrier		1
1-33.01	Secretary	1	3
1-34.02	Expeditor	3	1
1-34.04	Retail-Receiving Clerk		2
1-34.10	Sorter		1
1-34.13	Shipping Clerk I		1
1-34.14	Shipping Clerk II		3
1-34.15	Shipping Checker		2
1-35.42	Specifications Checker	1	
1-36.06	Directory Compiler	1	1
1-37.12	Stenographer	4	2
1-37.32	Typist	2	1
1-37.33	Teletype Operator		1
1-37.34	Clerk-Typist	15	6
1-37.36	Dictaphone Operator	3	2
1-38.01	Stock Clerk	1	5
1-38.05	Tool Clerk		2
1-38.51	Storekeeper, Chief		1
1-42.05	Information Operator		1
1-42.32	Telephone Operator		3
1-44.12	Ticket Agent		1
1-80.01	Sales		1
		1	
	TOTAL	115	183

* 10% of active clerical applicants in Milwaukee office of Employment Service, chosen on every tenth card on active file.

PROFESSIONAL APPLICANTS

DOT Code	DOT Title	ABC Company Number of Applicants	Control Group* Number of Applicants
0-X1.3	Artistic Shaping		1
0-X1.5	Artistic Arranging		1
0-X3.5	Copy Writing & Journalism		3
0-X6	Public Service Work		1
0-X6.0	Instructive Service Work		1
0-X6.14	Guidance & Advisory		3
0-X6.25	Protective Service Work		1
0-X7.0	Laboratory Science Work	1	4
0-X7.1	Business Relations & Related		2
0-X7.12	Legal Work		1
0-X7.4	Engineering & Related	4	1
0-X7.44	Mechanical Engineering & Related	1	
0-X7.48	Electrical Engineering & Related	3	2
0-X7.49	Radar Operator		1
0-X7.7	Drafting & Related	7	8
0-X8	Managerial Work		1
0-X8.1	Managerial Work, CAFS		4
0-X8.4	Managerial Work, Industrial		2
0-X8.41	Managerial Work, Manufacturing	1	
0-01.10	Cost Accountant	2	2
0-01.20	Accountant		4
0-01.30	Accountant, Public		1
0-06.44	Editor, Feature		1
0-06.51	Editor, Newspaper		1
0-06.90	Writer, Technical Publications		1
0-06.97	Public Relations Man		1
0-11.50	Teacher, College or University		1
0-14.20	Metallurgist, Physical	1	
0-15.01	Chemical Engineer		1
0-16.01	Civil Engineer		1
0-17.01	Electrical Engineer	7	3
0-18.01	Methods (Industrial) Engineer	3	1
0-19.01	Mechanical Engineer	12	6
0-24.12	Musician, Instrumental		1
0-32.30	Teacher, Vocational Training		1
0-33.10	Nurse, General Duty		1
0-35.73	Physicist		1
0-35.76	Mathematician	1	
0-36.11	Market-Research Analyst		1
0-39.81	Director, Safety	3	
0-39.82	Manager, Employment		1
0-39.83	Manager, Personnel		1
0-41.10	Airplane Pilot, Commercial		1
0-43.60	Floral Designer		1
0-44.21	Commercial Artist, Illustrating		2

*10% of active professional applicants in Milwaukee office of Employment Service, chosen on every tenth card in active file.

DOT Code	DOT Title	ABC Company Number of Applicants	Control Group* Number of Applicants
0-44.26	Art Lay-Out Man		1
0-46.92	Commercial Designer		1
0-48.01	Detailer	6	1
0-48.08	Draftsman, Construction		1
0-48.11	Draftsman, Electrical	4-3*	
0-48.18	Draftsman, Mechanical	10-11*	3
0-48.31	Tracer		1
0-48.41	Tool Designer	9	1
0-50.04	X-Ray Technician, Medical Service		1
0-50.22	Laboratory Assistant	1	1
0-50.40	X-Ray Technician, Any Industry		1
0-56.41	Cameraman		1
0-66.802	Electronics Technician II		1
0-68.13	Tree Surgeon		1
0-68.50	Production (Liaison) Planner	2	1
0-68.51	Machine-Load-Control Planner	1	
0-68.61	Specifications Writer	2	
0-68.64	Estimator	1	1
0-68.71	Employment Interviewer		1
0-69.98	Systems Engineer	1	1
0-69.981	Programmer	2	
0-71.21	Manager, Drive-In		1
0-71.23	Manager, Restaurant		1
0-81.03	Manager, Advertising Agency		1
0-85.10	Manager, Credit and Collection		1
0-87.10	Manager, Apartment House		1
0-88.21	Engineer, Chief, Marine		1
0-91.60	Purchasing Agent	2	2
0-94.911	Contract Specialist		1
0-97.01	President		1
0-97.05	Controller		1
0-97.12	Manager, Office	1	2
0-97.13	Chief Clerk	2	
0-97.41	Manager, Industrial Organization		2
0-97.51	Manager, Production		1
0-98.05	Credit Analyst, Chief		1
0-98.54	Manager, Recreation Establishment		1
0-99.11	Superintendent, Construction	1	2
0-99.85	Manager, Property		1
	TOTAL	91	112

*One applicant's work application code was changed from 0-48.11 to 0-48.18 after this survey started.

TABLE II

COMPARISON OF GROUP CHARACTERISTICS

DESIGNATION	CLERICAL		PROFESSIONAL	
	ABC	Control	ABC	Control
Total Studied:	115	183	91	112
Sex Status (Males):	31%	36%	93%	86%
Age-				
Range - (in years):	(17-68)	(17-72)	(18-65)	(17-75)
Average (mean) in years:	43.49	36.85	38.00	35.20
Marital Status-				
Married:	65%	52%	68%	58%
Single:	25%	36%	26%	35%
Other (Wid.,Sep.,Div.):	10%	12%	6%	7%
Have Dependent Childred:	28%	29%	44%	42%
No Dependent Children:	24%	46%	45%	40%
INA:	48%	25%	11%	18%
Salary-				
Range (Weekly):	($57.45-$141.45)	($17.00-$135.00)	($74.94-$198.64)	($32.00-$385.00)
Average (mean) Weekly:	$95.35	$70.44	$133.86	$139.00
U. C. Claimant-				
Yes:	98%	53%	94%	51%
No:	1%	13%	2%	41%
INA:	1%	34%	4%	8%
Educational Attainment-				
Range - (in years):	(8-17)	(4-18)	(8-18)	(6-19)
Average (mean) in years:	11.82	11.66	13.60	14.00
Under 12 years:	26%	26%	5%	8%
12 years (H.S. Graduate):	54%	55%	32%	25%
Over 12 years (College):	20%	19%	63%	67%
Special Training-				
Enhances Placement:	25%	45%	73%	67%
Does Not Enhance Placement:	17%	7%	3%	2%
INA:	58%	48%	24%	31%
Physical Handicap-				
Yes:	8%	15%	10%	6%
No:	87%	83%	90%	94%
INA:	5%	3%	---	---

DESIGNATION	CLERICAL		PROFESSIONAL	
	ABC	Control	ABC	Control
Work Desired-				
Enhances placement:	67%	72%	78%	75%
Limits placement:	3%	3%	---	17%
INA:	30%	25%	22%	8%
Typing Ability-				
Yes (tested by WSES):	22%	29%	---	---
Yes (not Tested):	27%	37%	3%	13%
None:	16%	10%	---	1%
INA:	35%	24%	97%	86%
Shorthand Ability-				
Yes (tested by WSES):	3%	5%	---	---
Yes (not tested):	9%	12%	---	2%
None:	15%	16%	100%	98%
INA:	73%	67%	---	---
Driver's License-				
Yes:	61%	60%	92%	85%
No:	36%	37%	8%	13%
INA:	3%	3%	---	2%
Automobile for Work-				
Yes:	32%	36%	88%	69%
No:	63%	59%	12%	29%
INA:	5%	5%	---	2%
Part-Time Work Experience-				
Enhance Placement:	3%	10%	14%	20%
Does Not Enhance Placements:	38%	25%	20%	13%
INA:	59%	65%	66%	67%
Hobbies-				
Enhance Placement:	1%	---	4%	---
Do Not Enhance Placement:	1%	1%	---	---
INA:	98%	99%	96%	100%
Will Take Part-Time Work-				
Yes:	25%	34%	23%	32%
No:	68%	45%	70%	56%
INA:	7%	21%	7%	12%
Will Take Seasonal Work-				
Yes:	19%	31%	20%	22%
No:	68%	45%	71%	65%
INA:	13%	24%	9%	13%
Would Move For Work-				
Yes:	6%	11%	36%	40%
No:	88%	70%	59%	54%
INA:	6%	19%	5%	6%
Union Member-				
Yes:	51%	12%	9%	8%
No:	3%	10%	5%	7%
INA:	46%	78%	86%	85%

EMPLOYABILITY	CLERICAL ABC		PROFESSIONAL ABC	
Interviewers' Rating-(1)				
Readily Placeable:	14%		63%	
More Readily Placeable:	40%		35%	
Not Readily Placeable:	29%		2%	
Not Rated:	17%		---	
Project-Staff Rating-(1)	ABC	Control	ABC	Control
Readily Placeable	17%	31%	66%	38%
More Readily Placeable:	26%	27%	23%	37%
Not Readily Placeable:	57%	42%	11%	23%
Not Rated (Information Inconclusive):	---	---	---	2%

EMPLOYMENT LIMITATIONS: (Rated as "Not Readily Placeable or more Readily Placeable") By: Interviewers & Project Staff	CLERICAL			PROFESSIONAL		
	ABC		Control(2)	Control	ABC	
	Line-Inter.	Proj. Staff	Proj. Staff	Proj. Staff	Line-Inter.	Proj. Staff
Age:	20%	28%	12%	7%	16%	11%
Sex:				1%	7%	
Phusical:	1%	7%	15%	4%	2%	4%
Attitdue:	3%	11%	15%	11%	1%	5%
Pregnant:	2%	2%	1%			
Work Experience:	21%	29%	22%	13%	8%	1%
Education:	7%	18%	17%	11%	10%	3%
Vocational Training:	1%	3%	2%	1%		1%
Salary (formerly received or expected):	49%	63%	9%	15%	7%	11%
Claiming Unemployment Compensation:	15%	57%	32%	28%	3%	12%
Supplemental Benefits:	18%	60%	10%	5%	3%	11%
2nd Wage Earner:	8%	32%	19%	3%		
Occupational Code (limits):	8%	15%	4%	29%	13%	7%
Limited Ability:	1%					
Leaving Milwaukee Area:		1%	1%		1%	1%
Expects Recall to Former Employer:					1%	
Police Record:			1%	1%		
Not a Citizen:				1%		
Duration Since Last Job:				2%		
Will Not Give Work History:				1%		
Presently a Student (hours limited):				1%		
Lives out of Area:			1%	2%		
Plans Return to School:						1%
Vocationally Undecided:						1%
Appearance:	3%	3%	1%			
Psychological:			1%			
Legally Incompetent:			1%			
In WSES for Test Only:			1%			
Weight Problem:			1%			
Restricted on Call-In:			1%			
Not Rated:	18%					

NOTE: Percentages used in "Employment Limitations" will not total 100 since some applicants were rated as having more than one limitation. Percentages are of the total applicants in each group who have employment limitations as indicated. Limitations were based on personal interview by line-staff and on an analysis of the WSES-200 by Project-Staff.

(1) See below for guide to ratings.
(2) None of the Control Group was rated by Line-Interviewers.

Designation	CLERICAL ABC	CLERICAL Control	PROFESSIONAL ABC	PROFESSIONAL Control
Entry Applicants:	0.8%	19%	18.6%	33%
Applicants Issued Call-Ins: (1) (2)	11%	7%	12%	33%
Applicants Given Service by Counseling Staff: (1)	0%	6%	0%	2%
Applicants Considered for MDTA Training: (1)	0%	1%	0%	3%
Applicants Given Brochure Service by Professional Staff: (1)	XXX	XXX	0%	10%

INA: Information not available.

(1) Additional service has been given to all applicants in each group since completion of this phase of information gathering; percentages are correct as of 1/11/63.

(2) A follow-up survey of the applicant file (of ABC layoffs only--not Control Group): Clerical completed on 3/12/63, and professional completed 3/15/63, revealed an increase in call-in activity:

Clerical ABC: From 11% to 16%
Professional ABC: From 12% to 41%

And Brochure activity for Professional ABC applicants increased:
From 0 to 9%

CRITERIA FOR RATING PLACEABILITY AS LIMITED (GROUPING OF BOTH "NOT READILY PLACEABLE" AND "MORE READILY PLACEABLE")

AGE: Either retired, near retirement or employed in occupations that usually specify trainees for new hires.

SEX: Usually an applicant of one sex who has been working and/or coded for work in an occupation predominated by the opposite sex; for example: a male stenographer or a female mechanical engineer. This does not mean that such jobs in the local Milwaukee area do not exist, but they are at least scarce and may present a placement problem for these applicants.

APPEARANCE: Physical appearance of person and dress shows neglect and lack of concern or taste on the part of the applicant; for example: a stenographer who applies for a job dressed in brief shorts.

ATTITUDE: Applies to those who expect re-call to their former positions when recall status is indefinite, remote or nonexistent--or who will not consider other occupations even though they are in a declining occupation.

PERSONALITY: Evidences a mental or emotional state that may warrant service of other agencies--or which does not make referral to job openings feasible at the time of interview.

TYPE OF EXPERIENCE: These applicants have been doing very specialized work. In other cases, work in the field for which coded has been minor and would require more experience to become "readily placeable" or applicant lacks some performance requirement.

EDUCATION: Possess below-minimum education compared to requirements specified on Local Office job orders.

VOCATIONAL TRAINING: Applicants seeking work on the basis of indicated vocational training (rather than work experience) when this training would be considered too limited or too out-of-date to have relevance in this occupation.

SALARY FORMERLY RECEIVED OR EXPECTED: Salary requirements or former salaries considerably higher than salaries generally indicated on positions currently available through the local office.

UNEMPLOYMENT COMPENSATION: Unemployment compensation may be sufficiently high (relative to wages of available positions) to eliminate consideration by call-ins or to result in refusal to accept the job offers. Applicants in this category may be difficult to place in jobs when they also receive supplemental and/or severance pay.

SUPPLEMENTAL BENEFITS:	When company supplemental benefits and/or separation pay coupled with unemployment compensation are high, these tend to bridge the gap caused by unemployment especially for layoffs who hope to return to their old job and employer.
SECOND WAGE EARNER:	Applies basically to women whose husbands are currently unemployed.*
LIMITATIONS IN OCCUPATION IN WHICH REGISTERED:	Limited job openings for applicants with these codes. (Some of these applicants may have secondary codes and may be in occupations which are served through other agenices; for example, teachers, musicians, etc.)
OTHER CONDITIONS:	PHYSICAL: A physical handicap which makes finding employment difficult though not necessarily impossible.
	LEAVING MILWAUKEE AREA: Limiting the possibility of placement through the local office by indicating preference for a job pending in another locality.
	VOCATIONALLY UNDECIDED: Further services of WSES or other agencies needed to facilitate placement.
	PLANS RETURN TO SCHOOL: Placeability limited because of future school hours or because applicants are available for temporary work only.
	POLICE RECORD: Special service of WSES needed for placement.
	NOT A CITIZEN: Placeability restricted in some industries under government contract.
	DURATION SINCE LAST JOB: No recent work or training history (applies to control group).

* In the case of married female applicants, it was assumed that the husband was the "bread-winner" and that he was employed. (No verification of this assumption was made by Project Staff.)

TABLE III

COMPARISON OF TOTAL GROUP (ABC AND CONTROL) WITH "CALL-INS"

CLERICAL APPLICANTS*

Designation	Total ABC	ABC Call-Ins	Total Control	Control Call-Ins
Total Under Study	115	13	183	13
Sex Status; Males	31%	8%	36%	15%
Age, in years (Average and range):	43.49 (range 17-68)	30.77 (range 19-59)	36.85 (range 17-72)	22.31 (range 17-38)
Education (years) (average and range):	11.82 (range 8-17)	11.92 (range 10-14)	11.66 (range 4-18)	11.92 (range 10-13)
Salary on Last Job (average weekly):	$95.35	$87.45	$70.44	$74.66
Claiming U. C.:	98%	86%	53%	31%
Special Training Enhances Placement:	25%	69%	45%	92%
Would leave Milwaukee Area for Work:	6%	0%	11%	0%
Rated "Readily Placeable" by Automation Staff:	17%	46%	31%	85%

*Includes all D.O.T. Codes: 1-00.00 - 1-49.99 plus applicant who was coded for sales: 1-80.01.

TABLE IV

COMPARISON OF TOTAL GROUP (ABC AND CONTROL) WITH "CALL-INS" PROFESSIONAL APPLICANTS*

Designation:	Total ABC	ABC Call-Ins	Total Control	Control-Call-Ins
Total Under Study:	91	11	112	37
Sex Status, Males:	93%	100%	86%	92%
Age, in years (average and range):	38.0 (range: 18-65)	40.1 (range: 20-65)	35.2 (range: 17-75)	30.8 (range: 17-61)
Education (years) (Average and range):	13.6 (range: 8-18)	13.3 (range: 12-16)	14.0 (range: 6-19)	14.9 (range: 12-19)
Salary on Last Job (average Weekly):	$133.86	$122.75	$138.57	$105.11
Claiming U. C.	94%	91%	51%	46%
Special Training Enhances Placement:	73%	64%	67%	90%
Would Leave Mil. Area for Work:	36%	18%	40%	54%
Rated: "Readily Placeable" by Automation Staff:	66%	64%	38%	60%

* Includes all D.O.T. "O" Codes.

TABLE V

Characteristics of Special Training Rating on 115 ABC Clerical Layoffs

Employability Rating	No. of Applicants	Percent	Average Age	Months Employed	Education	Female
Enhances	29	25	34.33	105.09	12.575	72.72
Does not enhance	19	17	50.63	158.84	11.00	78.94
No information	36	31	49.48	164.88	11.42	68.57
Inconclusive	31	27	42.96	159.74	11.92	59.25
Total	115	100	43.49	144.2	11.82	68.69

VT 006 165
Grede, John F.
Public Information to Assist in Recruitment for Occupational Programs. Report on Project 28-A8.

Chicago City College, Ill. Office of Occupational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 2Apr68 22p.

*VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; *COMMUNITY COLLEGES; JUNIOR COLLEGES; *RECRUITMENT; CAREER OPPORTUNITIES

In spite of obvious needs for personnel in various occupations, growth in student enrollment in occupational programs has been disappointing. In line with the hypothesis that junior college students and potential students simply do not know about the occupational programs, an advertising agency was engaged to conduct a professional campaign. A sequence of display advertisements were placed in Chicago metropolitan daily newspapers with the main thrust between June and September 1967; a second campaign on a smaller scale preceded the February 1968 registration. A total of 2,041 individuals responded to the summer effort by returning information coupons. Of these, 325 enrolled in either September or February and 81 percent of the 325 took occupational courses. Of the 1,272 individuals who responded to the second campaign, 135 actually enrolled in February. An unanticipated benefit of the experiment was a listing of occupational programs in the order of popularity among prospective students. (JK)

VT 006 165

ED042060

REPORT

on

Project 28-A8

PUBLIC INFORMATION TO ASSIST IN RECRUITMENT

for

OCCUPATIONAL PROGRAMS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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Office of Occupational Education
CHICAGO CITY COLLEGE

John F. Grede

April 2, 1968

VT006165

A PUBLIC INFORMATION PROJECT TO ENCOURAGE ENROLLMENT IN POST-SECONDARY OCCUPATIONAL PROGRAMS

OFFICE OF OCCUPATIONAL EDUCATION
CHICAGO CITY COLLEGE

The Background:

For several years now the literature of the community college movement has emphasized the responsibility of post-secondary education, and particularly community colleges, to provide the trained and educated manpower for a large and expanding segment of the occupational spectrum. The particular part of national manpower needs is variously labeled as semi-professional, technician, mid-managerial, vocational-technical, and most recently and perhaps most accurately as post-secondary occupational education. Whatever the title, the dimensions of the community college responsibility are broad and deep for preparing citizens of all ages for new jobs or to upgrade and update them in their old jobs.

The breadth of responsibility for community colleges is indicated by programs currently offered in four major categories:

- Engineering and Industrial
- Business, Secretarial, and Data Processing
- Health Occupations
- Public & Social Service

Some would add a fifth category for agriculture, or at least an "other" category for a small group of programs that do not conveniently fit into one of the major groupings. The programs in all categories range from a little more than two academic years where summer work is included to perhaps a single short term course, with many intermediate lengths between the extremes.

Since 1959 the Chicago City College has been expanding its commitment to occupational education. Although the development has not been uniform, all eight campuses, including even those with evening programs only, offer over 60 separate programs covering all major categories. The majority are two-year associate degree-type, although more flexible patterns including one-year programs, 28-week programs, four-course sequences, and five-week short term skill courses, are now in operation.

The Problem:

Along with increasing emphasis on occupational education, however, some serious concerns have arisen.

In spite of the obvious need of society for nurses, electronic technicians, highway engineering aides, medical secretaries, and a host of other semi-professional personnel, the growth in student enrollment

has been uneven and disappointing. Student demand has not rushed in to meet the national need with equal enthusiasm in all areas. For example, the Chicago City College has a number of programs with excellent laboratory facilities, well-qualified faculty, and ready placement in jobs for such areas as industrial chemistry, instrumentation, civil technology, metallurgy, mechanical technology, and ornamental horticulture. Many more students in both day and evening classes can be accommodated in any of these offerings, all of which have been operational for three or more years. By contrast, other occupational programs such as child care, teacher aide, data processing, and law enforcement, are readily attracting large numbers.

In addition to the different enrollment patterns in different programs there has been serious concern about the lack of overall commitment of the Chicago City College student body to occupational education. In common with many junior colleges there are too many of our students electing transfer offerings in liberal arts and pre-professional areas, and too few selecting programs leading directly to occupational competence. Two-thirds of Chicago City College students identify themselves as baccalauerate-oriented, while only 15% see themselves as preparing for immediate employment. The balance are pursuing personal objectives, already have degrees, or are uncommitted. Of the two-thirds who say they want to enter a senior college, approximately 15% will actually get in. Many who don't get in might fare better in occupational programs to prepare them better for what they will have to do anyhow.

There is an additional concern, and that is about the general direction of our total occupational program in the eight campuses of the Chicago City College. What kinds of programs do the student-customers want as distinct from the kinds of educated and trained personnel that business, industry, and government want to hire? What kinds of programs do student-customers want in comparison to those programs actually developed, some very carefully and some not so carefully, by the Chicago City College? Some "grass roots" knowledge of what is wanted by our clientele is particularly significant for the Chicago City College as it looks critically at itself, and as it simultaneously searches for new directions and wider responsibilities compatible with its recently acquired independence from the common school system and the Chicago Board of Education.

The Hypothesis:

There were three basic questions to be answered about occupational programs in the Chicago City College:

1. Why did students accept only part of the occupational programs that were allegedly good for them and society?

2. Why didn't a greater percentage of all students take programs allegedly good for them and society?

3. What were they interested in, and what occupational programs would they take?

Many hypotheses could be advanced to help seek the answer to one or more of these problems. One popular response is that the Chicago City College and the high schools of the Chicago area traditionally have emphasized the transfer function. The new student, or even the older one, having no previous exposure to occupational programs in high school, and influenced by the direct or implied attitudes of teachers, counselors, parents, and even peers that vocational-technical education is of lower social status than the degree-oriented "classical" education, avoids occupational programs or takes them only as second choice on a random selection basis. Another hypothesis to explain enrollment problems is that the under-populated programs are pitched at too high a level and can be handled only by high ability students who alternatively could be committed to transfer or pre-professional programs. An additional hypothesis, and a completely unsophisticated one, is that students have a casual "cafeteria" approach to junior college education, and select courses on many non-educational bases such as time, convenience, and what their friends are taking. This view is reinforced under our present tremendous demand situation where often times a student has to take what he can get to make a full program and preserve his draft exempt status. Since 85% of our courses are transfer or general education, and since draft exemption is less well defined in the occupational areas, it would be unrealistic to expect anything but a small proportion of students to register for occupational programs and that registration would perhaps be on a random selection basis. The simplest of all hypotheses, which while not denying the applicability of the others offers an easier opportunity for testing, is that enrolled junior college students, as well as potential ones, simply do not know about the occupational programs. They don't know because counselors, teachers, and parents don't know or don't tell them. Nor does the mass media of television, radio, newspapers, and periodicals provide the information on post-secondary publicly supported opportunities for occupational education. The obvious way to approach this hypothesis was to develop an effective public information program and determine what the effects were.

The Project:

One important aspect of a public information campaign was selected for development and testing. This was a professional advertising campaign conducted through a sequence of display advertisements placed in Chicago metropolitan daily newspapers. Although a small pilot effort was made in January 1967, the main thrust of the advertising campaign was planned to begin in June and end in September 1967, so that the major impact might appear with the opening of the Fall Semester of the Chicago City College. A smaller scale follow-up campaign was planned and implemented to precede the opening of registration for February, 1968.

After proposals were considered from several advertising agencies, the firm of N. W. Ayer & Son, Inc. were engaged to handle the campaign at the customary rate of 15% of the gross costs for display advertising plus nominal make-up charges. The major advertisements were aimed at the general public, with or without high school graduation, and of high school age or older. The theme of personal advancement was stressed, and a return coupon listing all Chicago City College occupational programs was included so that readers could mail it in for further information. Somewhat smaller advertisements were placed on the financial pages of the metropolitan dailies directed toward employers who might encourage employees to seek occupational education through the Chicago City College. Additional information on the planning and rationale of the advertising campaign, as envisioned by Mr. Richard Maas, the representative of N. W. Ayer & Son, Inc., who planned the effort, is contained in Appendix.

The entire proposal was approved as Project #28-A8 by the Research Coordinating Unit of the State Board of Vocational Education, and was funded for a total budget of $9,991. Reimbursement at the rate of 50% will be provided from Federal funds authorized under the Vocational Education Act of 1963.

The Results:

A total of 2041 individuals responded to the 1967 summer series of advertisements by returning the information coupon. Better than half of those who responded reqested information on more than one program. The requests by program are listed below in order of frequency:

Data Processing	437	Merchandising	77
Teacher Aide	297	Bacteriologic Technician	76
Social Service Aide	258	Plant Engineering	76
Accounting	254	Food Service Supervision	65
Business-General	235	Banking and Finance	63
Child Care, Pre-School	227	Histologic Technician	62
Nursing	221	Mechanical Technology	60
Secretarial	165	Law Enforcement	59
Electronics	159	Automotive Technology	52
Clerical	154	Motor Transportation	47
Medical Technology	152	Industrial Design	46
Management	148	Instrumentation	39
Medical Assistant	132	Commercial Music	37
Child Care, Residential	129	Prosthetics	31
Medical Secretary	95	Technical Supervision	30
Home Economics	90	Civil Technology	28
Commercial Art & Adv.	88	Metallurgy	28
Air Conditioning	87	Ornamental Horticulture	23
Drafting	87	Industrial Chemistry	19
Recreation Aide	85	Highway Engineering Aide	18

A comparison of responses to the summer series of advertisements with actual September enrollments revealed that 257 students (12.6%) of those who returned the advertising coupon actually enrolled at one of the eight campuses of the Chicago City College. Enrollments by campus were as follows:

Wilson	67
Loop	48
Southeast	39
Wright	34
Amundsen-Mayfair	27
Bogan	16
Crane	16
Fenger	10

Further information on enrollment was obtained from the questionnaire (see appendix) which was mailed to each respondent and which was returned by 624, approximately 30% of the total. Tabulation of questionnaire information indicated that 297 potential students, 57% of those returning questionnaires, and 14.5% of the original inquirers, planned enrollment for the February term. Unfortunately, later follow up information on those who planned to enroll in February indicated that only 69 of the 297 (23%) actually did what they said they planned to do.

The break down by campus of those planning February enrollment was as follows:

	Planned Feb. Enrollment	Actual Feb. Enrollment
Loop	126	21
Wilson	48	14
Southeast	29	11
Bogan	28	1
Wright	24	6
Crane	15	8
Amundsen-Mayfair	14	5
Fenger	9	2
TV College	4	0

In Summary: of the 2041 original inquirers

257 (12.6%) Enrolled in the September 1967 semester

297 (14.5%) Indicated in writing an intention to enroll in February, 1968

554 (27.1%) Either enrolled in September or intended to enroll within one semester.

Thus: 325 (16.0%) Actually enrolled in either September or February (only 23% of those promising to enroll in February, 1968 actually did so.)

Additional information from the questionnaire indicated that:

81% of those enrolled are taking readily identifiable occupational courses.
19% of those enrolled are taking a wide range of general education courses.

11% of those enrolled are taking full programs (four courses or more).
89% generally enrolled for one course, with a scattering of enrollees taking two courses.

77% of those currently enrolled and responding to the questionnaire plan to continue taking courses for at least an additional semester.

13% of those returning the questionnaire, and certainly a smaller percentage of the total inquirers, seek an associate degree or higher in the occupational area.
17.3% of those returning the questionnaire indicated they wished only to upgrade their present position or prepare for another one and not seek a degree.
69.6% made no response to the question.

Along with the large advertisements with return coupons a parallel series of advertisements appeared on the financial pages and was directed toward employers who presumably might encourage employees to enroll in occupational courses. A total of 44 responses from organizations was tabulated and follow-up information was sent to all with personal interviews provided for a few. No direct return in the form of enrollment was measured from this source, although the general exposure and information provided was undoubtedly beneficial.

A smaller sized advertising campaign was conducted just prior to the opening of the February 1968 term in order to provide some check on the earlier campaign and to continue the momentum previously established. This was a "one shot" effort consisting of large advertisements containing a return coupon with an updated list of cccupational programs. (See Appendix)

A total of 3364 program requests received from 1272 individuals were tabulated as responses to the January, 1968 advertisements. The requests by programs, many of them newly developed since September, are listed below in the order of frequency:

Data Processing (Bus.)	188	Law Enforcement	47
Teacher Aide	156	Air Conditioning	46
Accounting	139	Recreation Aide	46
Management	137	Bacteriologic Technician	41
Nursing	133	Food Service Supervisor	41
Child Care, Pre-School	131	Plant Engineering	41
Social Service Aide	115	Histologic Technician	40

Business-General	112	Inhalation Therapy Aide	40
Data Processing (Tech.)	110	Radiology Technology	34
Secretarial	110	Recreational Therapy Aide	34
Clerical	102	Corrective Therapy Aide	32
Hospital Ward Clerk	96	Instrumentation	29
Electronics	90	Industrial Design	27
Merchandising	77	Ornamental Horticulture	22
Physical Therapy Aide	76	Aviation, General	21
Medical Assistant	75	Automotive Technician	21
Television Courses	72	Rehabilitation Advisor, Building	21
Medical Technician	71	Transfusion Therapy Aide	20
Library Technician	67	Commercial Music	18
Child Care, Residential	63	Liberal Arts	17
Occupational Therapy Aide	61	Motor Transportation	17
Operating Room Technician	60	Prosthetics	15
Commercial Art & Advertis.	60	Metallurgy	14
Home Economics	59	Industrial Chemistry	12
Medical Secretary	58	Paint Technology	11
Dental Assistant	56	Technical Supervision	10
Drafting	53	Highway Engineering Aide	8
Photographic Technician	52	Civil Technology	7
Mechanical Technology	48		

No questionnaire was used to follow up this "one shot" effort. However, analysis of the return coupons from the February advertisement in relation to February enrollment indicated that 10.6% actually enrolled (135 out of 1272 respondents).

CONCLUSIONS:

Characteristics of Enrollees:

It seems obvious that expanded public information in the Chicago area through the medium of the first round of professional display advertising in the metropolitan dailies yielded a sizeable return as measured by direct enrollment related to the advertisements. In comparison to a national school advertising average of 2.9 enrollees per 100 inquiries the Chicago City College return of 16% (12.6% for September with another 3.4% for February) is gratifying. Tentative results on the second round of advertising done in January, 1968 on a very limited "one shot" basis has produced 10.6% enrollees (135 out of 1272 respondents). Undoubtedly the fact of no tuition and the easy commuting distance of Chicago City College campuses helped in accounting for the results. Nevertheless the sheer number of responses and substantial enrollment was much greater than either the Office of Occupational Education or the professional advertising agency had anticipated.

Furthermore, the enrollments were largely (81%) in occupational courses. This was extremely significant since only approximately 15% of courses offered in the Chicago City College are occupational. Since the great bulk of both day and evening courses are in the liberal arts, pre-professional and general education fields, the widest choice of days and hours of classes, factors so important to students, would not be in the occupational areas. Possibly, many

of the respondents to the advertisements have deferred enrollment because they were unable to get programmed satisfactorily.

It is also worthy of note that a high percentage (77%) of those enrolled and responding to the questionnaire are either persistent enough or satisfied sufficiently to plan on contuing their job education at the Chicago City College, at least for an additional semester. Since the questionnaire was distributed about mid-semester there is a reasonable presumption that they had adequate time to find that the occupational programs were significant.

Whether or not any sizeable proportion wish to complete a full two-year occupational program is indeterminate from the results. One may only speculate why 69.6% did not indicate they wanted either a full two-year program or simply updating or preparing for a new job.

It is perhaps unfortunate that the percentage who enrolled as full time students (11%) was so small. It would seem to indicate that the great bulk of respondents, and enrollees, were part-time students, probably working adults, who were taking course work in the evening. The recent high school graduate who would enter a full time preparatory program was not very much in evidence among those who responded.

One additional aspect of the results is perhaps unfortunate also. There was no evidence of conversion of current junior college enrollees from transfer programs to occupational programs. The respondents and enrollees were almost exclusively new to the Chicago City College.

The analysis of enrollee characteristics for the second round of advertising is currently underway and may perhaps indicate some shift. Conceivably many potential full time occupational students may have been discouraged in September by the shortage of student places, the premium placed on early registration, and the relatively small number of day-time occupational courses.

Selection of Occupational Programs:

One of the unanticipated benefits of the advertising experiment was that it gave the Chicago City College a listing of occupational programs ranged in order of popularity among potential students. The listing of programs in order of choice provides a useful check on those programs developed in the Chicago City College over the past nine years. It is something of a "survey after the fact" and emphasizes the demand side of the picture as students see it rather than the national need as industry and business see the need for skilled manpower.

It is perhaps no surprise that Data Processing is by far the most common choice. Of more significance perhaps is the fact that a cluster of programs identified as human services and including Child

Development, Social Service Aide, and Teacher Aide are uniformly near the top. In fact if one were to combine the two Child Development Programs, pre-school and residential, the total would be a close second to Data Processing.

The fact that enrollees selected the Loop and the Wilson campuses more often than others is undoubtedly related to the selection of programs since Data Processing is an important program at the Loop Campus and the Human Services Programs have greatest development at the Wilson Campus.

In the Health Occupations area the well advertised Nursing Program, emphasizing service, was among the leaders. The February advertising included the Crane Campus' new 28-week Allied Health Programs such as Hospital Ward Clerk, Physical Therapy Aide, Operating Room Technician, and Occupational Therapy Aide, and these showed surprising strength of interest.

The Business, Management, and Secretarial Programs showed expected strength and placed high in popularity.

With the exception of Electronics, most of the programs in industrial and engineering technology placed rather far down on the list.

In summary it would appear that the highly advertised, glamorous areas such as Data Processing, Nursing, and Electronics have great popularity. Almost of equal significance, however, are the human services areas centering around health and welfare. The traditional business and secretarial fields still exert a strong pull.

A cursory review of the respondents indicates almost an even balance between men and women respondents (45% men - 55% women), and thus there is no evidence that the pattern of choice was measurably influenced by sex.

Nor was the pattern of choice substantially influenced by residence or race. Responses to the advertisements were fairly well spread over the Chicago metropolitan area, with a sizeable return from the suburbs, and a scattering of responses from nearby states. The replies from predominantly Negro communities were roughly twice the median number for all city districts but this of course would be counteracted by the higher density of population in predominantly Negro districts. A rough estimate of the racial and residence distribution of responses plotted by postal districts is as follows:

Predominantly White Chicago	52%
Predominantly Negro Chicago	33%
Suburban	13%
Out-of-State	2%

A substantial percentage of replies asked for information about more than one kind of program. This perhaps suggests that student interests are not closely focused initially, but tend to include a

cluster of similar programs such as Health Occupations, Human Services, or Industrial Technology. This pattern further suggests that a considerable amount of counseling of a vocational as well as academic nature is essential as a student begins his course work at Chicago City College.

Information and Counseling:

If anything was obvious from the replies to the Chicago City College advertisements, it was that the citizens of Chicago, recent high school graduates and adults alike, are in dire need of information and counseling on occupational education. Hundreds of respondents went beyond the reply coupon and the questionnaire to give details of their academic and occupational problems and to solicit information and advice as to what they should do. Much of what was requested was elemental, yet there seemed to be an almost pathetic eagerness to find out about job training opportunities. A majority of the remarks accompanying the reply coupons indicated that the respondent had not previously been aware of the existence of a tuition-free community college where they could get occupational and other kinds of education. Certainly there is a need for some kind of information center which could process effectively the mass of requests for job training that would follow from a continuing public information program.

Appendix

I. Rationale of Advertising Campaign - N. W. Ayer & Son, Inc.

II. First Round of Advertising - Summer, 1967

- A. Major Advertisement
- B. Small Filler Advertisements
- C. Employer Advertisement
- D. Schedule of Placement of Advertisements

III. Questionnaire Sent to Respondents

IV. Second Round of Advertising, January, 1968

An Analysis of The Advertising Campaign for The Chicago City College's Department of Technical & Occupational Education

The Problem: To inform the citizens of Chicago of the vocational education opportunities available at Chicago City College. Although the campaign was intended to reach as many people as possible, the prime market appeared to be:

1. High school graduates that needed and wanted post high school education, but who because of finances, academic ability, or personal interests were better suited for a vocational program than for the two year academic program.

2. Workers who could improve their position or change to a better position by learning new skills.

3. Employers who would direct their employees to the Chicago City College for vocational training.

4. High school drop-outs (over 19) who now realize the need for a better education.

5. Executives who needed to learn about technical subjects (example, computers) in order to keep pace with ever changing business methods and to better supervise technical personnel.

Media: Selection of media depended on three major factors: 1) Budget, 2) Audience and 3) The message. Since the market was limited to Chicago, regional media was only considered, namely: TV spots, radio spots, metropolitan newspapers, and regional magazines and regional edition of national magazines.

Radio and TV spot announcements were too expensive, offered too brief a time to present the message, and would not reach a cross section of the entire market during any single broadcast.

Media: (contd.)

(Radio stations have distinct listening audiences, for example: WMAQ, WBBM, WGN appeal to adults; WLS and WCFL have a teen audience; WVON reaches the Negro audience.) Each TV time period has a special audience, example: mornings - women and children; afternoons - women and older adults, late afternoons - children; evenings (prime time) - adults. Research reveals also that teens are not great TV watchers when compared to other segments of population.

Similarly, regional magazines and regional editions of national magazines have select audiences. Time also ruled out these magazines since most were already closed for advertising for the months that would have been most effective for the campaign. (August and September).

Newspapers seemed the best media since they are local, reach most of those identified as the intended market and were inexpensive enough to permit a sufficiently large advertisement to present a complete message and to attract the reader's attention.

Timing:

Advertisements had to be placed at the time when the public was beginning to think about education. Back to school ads, sport stories about the College All Stars, college fashion news, etc. created a back to school climate in early August. By mid-August the first ads could appear and still give the Vocational and Occupational staff sufficient time to answer any inquiries generated by the advertisement. It also gave the prospect time to inquire, study the information about the available programs, get further information and guidance, and finally to enroll.

The Message:

The appeal had to be one that would be of common interest to all segments of the identified market; hence, personal advancement was selected. The headline "If your education doesn't go any further... neither will your career!" can be acknowledged and understood by both the drop-out who pushes a broom and the vice president who wants to make the executive board. The body copy of the advertisement expands upon the success through education theme and leads the reader into the specifics of the vocational educational program: eligibility, cost, campus locations, and finally a coupon listing the available programs. An interested prospect simply checks the programs which appeal to him, fills in his name and address, and mails the coupon.

The Message: (contd.) The effectiveness of the advertisements which appeared in the five Chicago daily newspapers can be partially measured by the number of responses from readers (many of whom may eventually enroll at Chicago City College). It can also be surmised that the advertisements were successful if a significant number of students enroll directly into the vocational programs even though they may have not written for information.

Side Effect: Chicago City College was given an image as a single unit by stressing the name Chicago City College in the advertisement. It is hoped that the prospect and the student will identify himself with Chicago City College rather than a branch campus.

If your education doesn't go any further...

neither will your career!

Today's competitive job market demands specialized skills and advanced technological know-how. When you have this background you can win a fine job with a top salary, responsibility and respect.

If you yearn to move up fast, look into Chicago City College. We offer more than 40 TUITION-FREE* programs in Accounting, Management, Nursing, Electronics, Data Processing and many other creative, well-paying fields. (For complete listing of programs see coupon below.)

Who's eligible?

- high school graduates
- adults 19 or over who are not high school graduates
- employees who need advanced and specialized training

Take one course or a short sequence, or take a fully accredited 2-year curriculum leading to an Associate Degree. Nine convenient campuses. Day and evening classes. Semester plan. Dynamic faculty. Vocational guidance, placement service. Sports, social activities. Approved for veterans.

Decide on Chicago City College.
It could open up far-reaching career opportunities for YOU!

AMUNDSEN Campus, 5110 N. Damen (Eve.)
BOGAN Campus, 3939 W. 79th Street
CRANE Campus, 2250 W. Van Buren
FENGER Campus, 11220 S. Wallace
LOOP Campus, 64 E. Lake
MAYFAIR Campus, 4626 N. Knox (Day)
SOUTHEAST Campus, 8600 S. Anthony
WILSON Campus, 7047 S. Stewart
WRIGHT Campus, 3400 N. Austin

*Chicago residents pay NO TUITION—only a general service fee of $10 or less.
(Low tuition to Illinois residents living outside Chicago.)

Registration for Fall Term: Week of September 11

Mail to:

Chicago City College

A PUBLIC INSTITUTION SUPPORTED BY THE CITIZENS OF CHICAGO

Information Center, Room 402, 64 East Lake Street, Chicago, Illinois 60601

I would like information on (check below):

BUSINESS & OFFICE SERVICES
- ☐ Accounting
- ☐ Banking & Finance
- ☐ Business
- ☐ Clerical
- ☐ Commercial Art & Advertising Display
- ☐ Data Processing (Business Option)
- ☐ Management (Provides Work-Experience)
- ☐ Merchandising (Provides Work-Experience)
- ☐ Secretarial

HEALTH OCCUPATIONS
- ☐ Bacteriologic Technician
- ☐ Food Service Supervision
- ☐ Histologic Technician (Testing of Tissue)
- ☐ Medical Assistant
- ☐ Medical Secretary
- ☐ Medical Technologist
- ☐ Nursing (Associate Degree Program)
- ☐ Prosthetics (Design, Build & Fit Artificial Limbs)

INDUSTRIAL & ENGINEERING TECHNOLOGY
- ☐ Air Conditioning
- ☐ Automotive Technology
- ☐ Civil Technology
- ☐ Data Processing
- ☐ Drafting
- ☐ Electronics
- ☐ Highway Engineering Aide
- ☐ Industrial Chemistry
- ☐ Industrial Design
- ☐ Instrumentation
- ☐ Mechanical Technology
- ☐ Metallurgy
- ☐ Motor Transportation (Motor Freight Terminal Oper.)
- ☐ Plant Engineering (Building Operation & Maintenance)
- ☐ Technical Supervision

PUBLIC & SOCIAL SERVICE
- ☐ Child Development (Nursery School Teaching)
- ☐ Child Development (Institutional Care of Children)
- ☐ Law Enforcement
- ☐ Recreation Aide
- ☐ Social Service Aide
- ☐ Teacher Aide (Elementary)

OTHER PROGRAMS
- ☐ Commercial Music
- ☐ Home Economics
- ☐ Ornamental Horticulture
- ☐ Selected Courses via WTTW Television

Name_____

Address_____

City_____ State_____ Zip_____

Earn while you learn!

Chicago City College offers WORK-STUDY programs in Accounting, Secretarial Science, Data Processing, Engineering, Nursing, Police Science, Business Administration, Liberal Arts, Pre-Professional. TUITION FREE to Chicago residents. Open to h.s. grads & adults over 18 who are not h.s. grads. Day & evening. If you want to be a Junior executive, write: Room 402, 64 E. Lake St.

470-6-1967-PP—14 lines—1 col. (1 13-16 ins.) x 14 lines—Newspapers—
N. W. Ayer & Son, Inc.

Help yourself by helping others!

Prepare for PHYSICAL THERAPY, Dental & Medical Technology, Nursing, Chemistry, Chicago City College offers this program & more than 40 others TUITION FREE to Chicago residents. Open to h.s. grads & adults over 18 who are not h.s. grads. Nine campuses. Day & evening. Write: Room 402, 64 East Lake Street.

470-4-1967-PP—14 lines—1 col. (1 13-16 ins.) x 14 lines—Newspapers—
N. W. Ayer & Son, Inc.

Get with the computer age!

Learn **DATA PROCESSING.** Course designed for beginners and more advanced students. Use new IBM 360. Chicago City College offers this program & more than 40 others **TUITION FREE** to Chicago residents. Open to h.s. grads & adults over 18 who are not h.s. grads. Nine campuses. Day & evening. Placement service. Write: Room 402, 64 East Lake Street.

470-5-1967-PP—14 lines—1 col. (1 13-16 ins.) x 14 lines—Newspapers—
N. W. Ayer & Son, Inc.

Like to work outdoors?

Get into **CIVIL TECHNOLOGY!** Build roads, bridges. Help design airports & rocket launching pads. Chicago City College offers this program & more than 40 others **TUITION FREE** to Chicago residents. Open to h.s. grads & adults over 18 who are not h.s. grads. Nine campuses. Day & evening. Placement service. Write: Room 402, 64 East Lake Street.

470-3-1967-PP—14 lines—1 col. (1 13-16 ins.) x 14 lines—Newspapers—
N. W. Ayer & Son, Inc.

Prepare for work with children!

Assist nursery school teachers or instructors of mentally handicapped youngsters. Enroll in **CHILD DEVELOPMENT** courses at Chicago City College. These & more than 40 others **TUITION FREE** to Chicago residents. Open to h.s. grads & adults over 18 who are not h.s. grads. Day & evening. Placement service.
Write: Room 403, 64 East Lake Street

D 470-7-1967-PP—14 lines—1 col. (1 13-16 ins.) x 14 lines—Newspapers, future—
N. W. Ayer & Son, Inc.

College training for law enforcement!

Join the police force or take advanced work & become a public administrator. Chicago City College offers transfer & terminal programs in **LAW ENFORCEMENT** & more than 40 others **TUITION FREE** to Chicago residents. Open to h.s grads & adults over 18 who are not h.s. grads. Day & evening. Placement service.
Write: Room 403, 64 East Lake Street

A 470-7-1967-PP—14 lines—1 col. (1 13-16 ins.) x 14 lines—Newspapers, future—
N. W. Ayer & Son, Inc.

Choose a career in transportation!

Get in to sales, management, supervisory positions for [illegible] Chicago City College. [illegible] **TRANS** [illegible] **TUITION FREE** to Chicago residents. Open to h.s. grads & adults over 18 who are not h.s. grads. Day & evening. Placement service.
Write: Room 403, 64 East Lake Street

Is your [illegible] job?

It can. Study [illegible] **CULTURE** [illegible] Chicago City College offers this [illegible] **TUITION FREE** to Chicago residents. Open to h.s. grads & adults over 18 who are not h.s. grads. Day & evening. Placement service.
Write: Room 403, 64 East Lake Street

Your business is our business!

At Chicago City College we believe in minding your business. We like to see your employees equipped with the latest skills and technological know-how. So—we've established a **TUITION-FREE*** employee training program in more than 40 fields.

City College can prepare your staff members to meet the needs of their present jobs and to be ready when important positions open up within the company. They may need only one course or a short sequence to keep them at peak performance, or they may require our fully accredited two-year degree program.

Advanced and specialized training is offered in Accounting, Management, Electronics, Commercial Art, Data Processing, Secretarial, Nursing and many others. Day and evening classes. Nine convenient campuses. Semester plan. Dynamic faculty. Approved by Veterans Administration.

Look into Chicago City College. It's our business to give your employees the professional and technical training they need to get ahead!

*Chicago residents pay NO TUITION—only a general service fee of $10 or less. (Low tuition to Illinois residents living outside Chicago.)

Registration for Fall Term: Week of September 11

Mail to:

CHICAGO CITY COLLEGE

A Public Institution Supported by the Citizens of Chicago
Information Center, Room 103
61 East Lake Street, Chicago, Illinois 60601

I would like information about:

☐ Business & Office Training ☐ Public & Social Service Programs
☐ Health Occupations ☐ Industrial & Engineering Technology

Name_____ Title_____
Company_____
Address_____
City_____ State_____ Zip_____

N. W. AYER & SON • INC.
SCHEDULE OF ADVERTISING

Client CHICAGO CITY COLLEGE Address CHICAGO, ILLINOIS Date June, 1967

PUBLICATION	KEY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.		
CHICAGO TRIBUNE		453 lines (151 T.C.):				2 times: Aug. 29; Sept. 5								$1,223	10
CHICAGO SUN-TIMES		453 lines (151 T.C.):				1 times: Aug. 13 (Special School & Career									
		Guide)												702	15
CHICAGO SUN-TIMES		453 lines (151 T.C.):				2 times: Aug. 20; Sept. 2								871	57
CHICAGO DAILY NEWS		453 lines (151 T.C.):				2 times: Aug. 16 & 30								804	53
CHICAGO SUN-TIMES		14 lines: 8 times				July 2, 9, 16, 23, 30; Aug. 6, 13 & 27								107	74
CHICAGO DAILY NEWS		14 lines: 8 times				June 28, July 5, 12, 19, 26, Aug. 2, 9 & 23								99	46
CHICAGO AMERICAN		453 lines (151 T.C.):				2 times Aug. 17 and 31								815	40
CHICAGO DEFENDER		453 lines (151 T.C.):				2 times Aug. 15 and 29								319	37
													TOTAL	$4,943	32

N. W. AYER & SON INC.
SCHEDULE OF ADVERTISING

Client CHICAGO CITY COLLEGE Address CHICAGO, ILLINOIS Date JUNE, 1967

PUBLICATION	KEY	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.		
CHICAGO TRIBUNE		168 lines (84 D. C.);				2 times Aug. 22 & Sept. 5 *								533	66
CHICAGO SUN-TIMES		168 lines (84 D. C.);				2 times Aug. 18 & Sept. 1*								352	80
CHICAGO DAILY NEWS		168 lines (84 D. C.);				2 times Aug. 21 & Sept. 4*								336	00
CHICAGO AMERICAN		168 lines (84 D. C.);				2 times Aug. 23 & Aug. 30*								302	40
														$1,524	86

* Financial page requested

** Includes agency commission

10-27-1967

Dear Student:

You responded to an advertisement appearing in Chicago Daily newspapers which announced the various occupational and technical programs offered at Chicago City College. In order to be of service to you we would appreciate your answering the following questions. A stamped, addressed envelope is enclosed for your convenience in returning the questionnaire.

1. After receiving materials from Chicago City College pertaining to the advertisement did you contact any of our nine campuses No____ Yes____
   Name of Campus_____
   By telephone? _____ By letter? _____ In person? _____
   Were you treated courteously? Yes____ No____
   Did you get adequate help? Yes____ No____

2. If you did not contact any campus prior to registration, were you contacted by a campus? No____ Yes____ Which one? _____
   Did you receive a letter? Yes____ No____
   Brochure about a program? Yes____ No____
   Schedule of classes? Yes____ No____

3. Are you enrolled at one of our nine campuses? No____ Yes____
   Name of Campus_____
   Is this your first enrollment at Chicago City College? No____ Yes____
   Day? _____ Evening _____
   Name of courses _____ _____
   _____ _____
   Which courses did you want but couldn't get? _____
   _____ _____

4. Are you enrolled at another institution? No____ Yes____
   Which one? _____

5. Are you employed? No____ Yes____ Full time_____ Part time_____
   Day____ Evening____ In what occupation? _____

6. If you are attending Chicago City College do you expect to:
   Upgrade your present position? Yes____ No____
   Prepare for a new occupation? Yes____ No____
   Secure a degree? Which one? _____
   Prepare to transfer to a 4-year college? Yes____ No____

7. Are you interested in registering for the semester beginning in January 1968?
   Yes____ No____ In which program of courses:
   Program_____
   Courses _____ _____
   _____ _____
   Which campus do you prefer? _____

8. REMARKS_____
   _____
   _____
   _____

Thank you for your cooperation. Please return this questionnaire to

Director
Technical-Occupational Education
CHICAGO CITY COLLEGE
180 N. Michigan Avenue
Chicago, Illinois 60601

10-27-1967

If your education doesn't go any further...

neither will your career!

Today's competitive job market demands specialized skills and advanced technological know-how. When you have this background you can win a fine job with a top salary, responsibility and respect.

If you yearn to move up fast, look into Chicago City College. We offer more than 50 TUITION-FREE* programs in Accounting, Management, Nursing, Electronics, Data Processing and many other creative, well-paying fields. (For complete listing of programs see coupon below.)

Who's eligible?

- high school graduates
- adults 19 or over who are not high school graduates
- employees who need advanced and specialized training

Take one course or a short sequence, or take a fully accredited 2-year curriculum leading to an Associate Degree. Nine convenient campuses. Day and evening classes. Semester plan. Dynamic faculty. Vocational guidance, placement service. Sports, social activities. Approved for veterans.

Decide on Chicago City College.

It could open up far-reaching career opportunities for YOU!

AMUNDSEN Campus, 5110 N. Damen (Eve.) — LOOP Campus, 64 E. Lake
BOGAN Campus, 3939 W. 79th Street — MAYFAIR Campus, 4626 N. Knox (Day)
CRANE Campus, 2250 W. Van Buren — SOUTHEAST Campus, 8600 S. Anthony
FENGER Campus, 11220 S. Wallace — WILSON Campus, 7047 S. Stewart
WRIGHT Campus, 3400 N. Austin

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Mandalfino, S.A.
Potentials of a Centralized Community Homemaker Service--The Cleveland Experience.

National Council for Homemaker Services, Inc., New York, N.Y.
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*OCCUPATIONAL HOME ECONOMICS; *VISITING HOMEMAKERS; *SERVICE WORKERS; FAMILY PROBLEMS; HOME MANAGEMENT; SOCIAL SERVICES; COMPANIONS (OCCUPATION); SPEECHES; *COMMUNITY SERVICES

The Cleveland Homemaker Association, a centralized voluntary community agency, has incorporated, organized, and developed its service to a level approximately 90 percent of the budgeting minimum of 50 homemakers for 1967. Cleveland, like many urban communities, had provided homemaker service for many years but only as adjunctive services within the community service agencies. As the value and effectiveness of the service became known throughout the community, greater demands were made upon these limited services. In June, 1960, the report of the joint committee on casework service to older persons emphasized that many of the homemaker service programs for older persons were equally appropriate for chronically and acutely ill adults and for children in motherless homes. As a result of that report, a committee of leaders from almost every facet of community life was appointed. The results of a 1962 study, to determine the nature and extent of need for homemaker service as identified by health and welfare agencies emphasized the need for homemaker service in the community. The procedures and details for organizing and administering the program are outlined in the document. Centralization, the outstanding achievement of the program, has facilitated better and wider service. In some situations where there has been resistance to case work and nursing service, the homemaker service has bridged the gap. (FP)

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Potentials of a Centralized Community Homemaker Service . . .

The Cleveland Experience

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National Council for Homemaker Services, Inc.
1740 Broadway, New York, N. Y. 10019

NATIONAL COUNCIL FOR HOMEMAKER SERVICES

Its Purpose and Function

The National Council for Homemaker Services was incorporated in 1962 to stimulate the expansion and promote the improvement of Homemaker Services throughout the country. Membership is open to agencies providing Homemaker Services and to organizations and individuals interested in supporting the Council's purposes. Working cooperatively with other national health and welfare organizations and with public and voluntary agencies, the Council:

Promotes understanding of the values of Homemaker Services

Provides a central source of information and a medium through which knowledge and experience can be pooled and made available

Encourages and guides communities in organizing and extending Homemaker Programs

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INTRODUCTION

Reprinted here is a paper which describes in some detail the organization, structure and operation of a centralized community homemaker-home health aide service. It may serve as a helpful guide in areas where there is growing interest in this kind of setting for provision of the service.

The paper was presented by S. A. Mandalfino, Executive Director, Cleveland Homemaker Service Association, at the National Conference on Social Welfare in Dallas, Texas, May 21-26, 1967.

In the same session sponsored by the National Council for Homemaker Services, a paper was presented by Mrs. Grace W. Bell, Chief, Special Services, Methods Group, Bureau of Family Services, Welfare Administration, U. S. Department of Health, Education and Welfare, discussing trends and developments in the field as reflected in material gathered for the 1966-67 Directory of Homemaker-Home Health Aide Services.

Mrs. Bell's paper is reprinted in "Highlights" of the 1967 NCHS Annual Meeting and Forum, available on request from the National Council for Homemaker Services, 1740 Broadway, New York, N. Y. 10019

Clark W. Blackburn, General Director, Family Service Association of America and a member of the NCHS Board of Directors, presided at the Conference session in Dallas.

Miss Jimmie L. Council, Associate Executive Director, Rhode Island Council of Community Services, served as recorder.

POTENTIALS OF A CENTRALIZED COMMUNITY HOMEMAKER SERVICE
(The Cleveland Experience)

By S. A. Mandalfino, M.S.S.A.
Executive Director
Cleveland Homemaker Service Association

Within a comparatively short span of seven months the Cleveland Homemaker Association, a centralized voluntary community agency, was incorporated, organized and developed its service to a level approximately 90 percent of the budgeted minimum of 50 homemakers for 1967. The rapid rate of development can be attributed, in an appreciable degree, to almost optimum community support for the creation of a centralized voluntary service.

The genesis of the new agency reflected an overall community concern for the needs for homemaker service. As the nature and magnitude of the needs became more acute, it was not surprising that the problem merited and received attention and careful consideration by appropriate community groups which eventually led to an organized effort to resolve the problem.

Cleveland, like many urban communities, had provided homemaker services for many years, but only as adjunctive services primarily within the programs of family agencies, both public and voluntary. As the value and effectiveness of the service became known throughout the community, greater demands were made upon these limited services. In addition, other adjunctive programs were being contemplated. The growing demands on professional staff for implementing various agencies' basic programs, budgetary limitations and limited knowledge about requirements for an effective program, hin-

dered progress toward the development of homemaker service to a level commensurate with community needs.

In June, 1960, the Joint Committee on Casework Service to Older Persons reported to the Cleveland Welfare Federation its keen and singular concern for homemaker service by pointing out that:

1. Homemaker services are part of the important community resources needed by older persons to help them maintain an independent or semi-independent existence in their own homes.

2. The provision of homemaker service may be no more costly, and frequently is less costly, than placement in a good nursing home, assuming that the homemaker service can appropriately meet the needs involved in the particular case.

3. Since it is likely that community organized and supplemented homemaker services will need to be expanded to some degree, the community will ultimately have to determine what types of service should be included and under what auspices.

4. Present information is inadequate. In order to plan more effectively in this area, formal study to clarify the quantitative and qualitative aspects of the need will be essential.

The report emphasized that "many of the questions raised by the committee with respect to homemaker service programs for older persons were equally appropriate to chronically and acutely ill adults and to programs serving children in motherless homes." The report recommended:

1. That further study include laymen

and participants from the family and child care fields so that a total rather than a partialized approach might be made.

2. That such committee seek to clarify the quantitative and qualitative aspects as they exist in relation to all categories of need for homemaker service.

3. That the committee make recommendations regarding auspices for administration of homemaker services if it is considered feasible to plan for substantially increased homemaker services.

The Welfare Federation's Planning Committee and Board of Trustees, convinced of universality and urgency of need, appointed the Inter-Council Committee of the Board of Trustees. Representation on the committee was deliberately broad and as all-inclusive as was practicable.

Named to the committee were leaders from almost every facet of community life - lay and professional, public and voluntary, business, industry and labor, and all divisions of health and welfare services. In the latter group were professional representatives of health agencies, hospitals, older person services, family and children's agencies, public housing estates, public welfare services, mental health programs, volunteer services, day nurseries, research and social planning.

Resolute in its determination, the committee requested that the Welfare Federation's Research Department undertake a comprehensive study. Early in 1962 the study got underway, examining the nature and extent of need for homemaker service as expressed by the agencies providing such service as well as needs identified by other health and welfare services. The

study was confined to investigation of the expressed rather than the absolute or total need, since the latter would require a house to house or survey type study based on probability sampling in the community.

An assumption was made that the extent of need, especially for those whose family resources did not permit the working out of private arrangements, would at some point become known through contact with one or another of the community health and welfare services. It was recognized that if the availability of homemaker services had been more widely promoted, the number of need situations identified might have been substantially increased.

Thirty-five health and welfare agencies were invited to participate on the expectation that they might encounter need situations during the study period.

Three major areas were studied:

1. Prevalence and incidence of appropriate need situations

2. Characteristics of incidence of need in terms of:

   a. household composition and size

   b. ability to pay all or part of service fee

   c. type of problem presented and persons in the household who are the bearers of the problem

   d. type of homemaker service required to meet the need

e. type of nursing service received or required

f. probable duration of need and amount of service weekly

g. geographic distribution of instances of need

3. Estimate of number of homemakers required.

In February 1964, the results of the study were presented to the community and the findings were most significant.

During the three-month study period from March 1 through May 31, 1962, 840 cases were identified by the 26 agencies as receiving or as being in need of homemaker service. Of the 609 cases already active with the identifying agencies, 373 (61.2%) were receiving homemaker service. Of the 231 new cases identified, 52 (22.5%) were accepted for service and 179 (77.5%) were not. Of particular significance was the fact that of the six agencies accounting for eight out of ten new instances of need, three provided homemaker service, two purchased such service, and one normally was responsible for a large number of referrals to agencies providing homemaker service.

Of the 840 cases identified as receiving or needing homemaker service, about 43% were families with children and about 57 % were households with aged or adult persons only. Of the 231 newly identified cases 58% were households with children and 42% were households with aged or adult persons only.

Among the newly identified instances of need,

about 42% were judged able to make full or partial payment for the service when available. The proportion able to make full payment was greater for the aged than for families with children.

The problems most frequently presented in the new cases, causing need for homemaker service were: physical incapacity, 55%; hospitalization (usually of the mother), 26%; and disabilities of advanced age, 12%.

Of the cases already active with agencies, 80% were judged to require service for one year or more; for the aged and adult households among these, 94% required long term service. Among the new cases, 50% of the families with children and 84% of the aged households required long-term situations. Needing service for four months or less were 37% of families with children and 10% of the aged households.

Service time required varied widely from a few hours per week to seven days' service for 24 hours a day, the aged households needing proportionately more service of less than 16 hours per week (41%) than families with children (16%).

The number of full-time additional homemakers required to meet fully the expressed need in cases already known to agencies and in those arising in the course of one year was estimated to be 459 -- 247 for households with children and 212 for service to the aged. At the time of the study, the County Welfare Department employed 71 full-time homemakers, the Family Service Association 21, and the Jewish Family Service 10, a total of 102 homemakers for the entire community. The estimated need was over four times that which was available.

Of the 840 cases identified, roughly 37% were cases known to or identified by public assistance programs. Among cases known or identified by other agencies a significant number could qualify for public assistance or were marginal cases. Of significance is the fact that a substantially higher proportion of unmet need, relative to total need expressed, existed in the area beyond the City of Cleveland.

Inasmuch as the Public Welfare Department was the principal supplier of homemaker service, the study questioned whether homemaker service to suburban residents was as readily available as it was to Cleveland residents, similarly to non-public assistance families as to public assistance families.

Publicity given to plans for the creation of the new agency brought a response of such magnitude from individuals and families not known to any health or welfare agencies that the Community Information Service assessed the volume of need from this group as about equal to that identified by the study.

The findings of the study served to place the need for homemaker service high on the list of priorities for community action and support. The Family Service Association, knowing of the establishment of a centralized community homemaker service and faced with having to use its resources of staff and budget for its basic service, discontinued its homemaker service program as of December 31, 1965. Temporary programs were started. The Visiting Nurse Association took on seven of the Family Service homemakers as part of a new home care demonstration project. Anticipating the creation of

the centralized homemaker service, the Jewish Family Service Association expanded its basic program of 12 homemakers by developing a temporary project of 6 homemakers. It was expected that "eventually" the temporary project would be taken over by the centralized service.

Since the County Welfare Department had by far the largest homemaker service, the Inter-Council Committee urged that first steps to provide additional homemaker service be taken by the County. It was further proposed that, should expansion of the County program prove successful, homemaker service to voluntary agencies' clientele might be arranged through cooperative financing.

The County Welfare Department at this time was beset with problems of reorganization and, furthermore, the director and assistant director were about to retire. These and other factors prompted the public agency to determine that any expansion of its homemaker service would have to be related to the needs of public assistance cases.

The Welfare Federation and the Inter-Council Committee for Homemaker Service, determined to expand homemaker service, explored other alternative organizational approaches to realize their goal.

It was concluded that adequate development of this program required the primary and full attention of a strong management group--board and executive leadership. Since prospects were good that a homemaker service agency program could become quite large in a few years and would require its own leadership, no matter how it was structured, it was doubtful whether much,

if any, saving could be achieved through establishing the service under an existing agency.

Finally, the combination of social welfare and health problems which homemaker service aimed to ameliorate was one which did not lend itself to administration through an existing agency. Thus, as a joint venture of interested agencies through the medium of the Welfare Federation, the Cleveland Homemaker Service Association was created as a voluntary community agency to work cooperatively with and complement the County Welfare Department homemaker services, with expectations that the public agency would expand to meet the growing need of the recipients of public assistance and public child welfare.

From more than 100 nominations for board membership made by the boards and executives of the agencies and organizations involved in the homemaker study, a board of trustees of 21 members was elected. This was truly a unique board because its members were experienced leaders from boards of trustees of other agencies interested in homemaker service and all had demonstrated ability in getting programs into action.

The trustees met for the first time on June 6, 1966 and arranged to have the agency incorporated on June 22, 1966. The charge to the trustees and to the agency was to serve the homemaker-home health aide needs of the clients and patients of voluntary health and welfare agencies; to serve the general public on an ability to pay basis; and to serve governmental agencies to the extent that this is feasible on a purchase of service basis.

Other functions of the agency would be:

1. To recruit and train people for homemaker-home health aide work (working with other community organizations which could provide various aspects of entry training and possibly finance parts of the program)

2. To refer homemaker-home health aides for assignments to cooperating agencies which would provide professional supervision on a cooperative basis with homemaker agency staff

3. To provide professional supervision to homemakers placed in homes of families not known to any health or welfare agency.

The sponsors of the agency decided to provide for the development of an agency of "viable" size so that the service might be of sufficient volume to operate efficiently and it would not spend undue time in processing requests which it could not satisfy. With such provision, there could be great potential for growth.

The budgets for the first three years of operation were established to finance minimum levels of operation. It was considered important that the service be developed as rapidly as possible, rather than plan on a prolonged "phasing-up" of the service. Inherent in this financial plan was a recognition that the level of service should go far beyond the budgeted minimum. To allow for this, the Welfare Federation departed from a long standing policy and assured the agency that income which exceeded the regular budget appropriations would not be de-

ducted from the Federation's grant, as is customary, but should be used to expand service. In addition, to subsidize diminishing foundation grants and to cover some increase in service, the Federation committed allocations of $75,000 for the first year, $125,000 for the second year and $175,000 for the third year, provided the United Appeal campaigns were successful in these years and that the agency's performance was satisfactory.

For the growth period of three years, $327,000 in foundation grants was needed. The Welfare Federation obtained two grants totalling $55,000 -- $25,000 from a foundation interested in older persons and $30,000 from the Junior League.

The board of trustees, within a few months after being organized, succeeded in obtaining numerous grants from diversified community foundations. To date, three-fourths of the foundation grants have been realized, with assurance that the balance would be granted in the second and third years as needed. Since the centralized voluntary homemaker-home health aide service would serve a wide spectrum of community needs, including the needs of people who could pay for service, it was anticipated that $40,000 in fees could be realized in the first year, $60,000 in the second year and $80,000 in the third year.

Eventually, about two-thirds of foundation support could be replaced by fees and one-third by Welfare Federation subsidy. The support from Medicare, from sale of service to non-financially participating health and welfare agencies and from other third-party sources, is considered to be of sufficient potential to permit the growth of service to levels substantially above the level made possible within

the basic, structured budget.

Homemaker service to the community was instituted on January 1, 1967 with the transfer of temporary projects from the Visiting Nurse Association to the Cleveland Homemaker Service Association. Additionally, working jointly with the Manpower Development and Training Program, field placements for 12 trainees were arranged with families known to three voluntary health and welfare agencies, with supervision provided on a cooperative basis. The placements were made with the plan that upon completion of the block of field work, if the homemaker were still interested, she would continue serving the same family as an employee of our agency.

Since January 1, all requests for homemaker-home health aide service, other than those handled by the County Welfare Department, have been directed to the new voluntary centralized agency. Up to April 19, 307 applications were received and processed. A total of 108 families were served; 299 families were not served, for a variety of reasons: for 174 families, there was no homemaker available; 88 applications were withdrawn as alternate plans were made. Inappropriate requests totalled 27.

Despite the reticence of some professionals to make referrals at this period of our development, referrals to meet crisis and emergency situations were received from a total of 31 different organizations: 12 hospitals, the Visiting Nurse Association and two other health centers, four family agencies, three boards of education, three community centers, the Office of Economic Opportunity, the Juvenile Court, the Cleveland Guidance Center, Division of Child Welfare, Aid for Aged, and the

Chamber of Commerce. About twice as many referrals were received and processed from the general public (individual persons needing service, families, doctors, employers, attorneys, etc. not known to agencies) than from health and welfare agencies.

To meet properly the surge of requests for homemaker-home health aide service, it became necessary to set priorities of need. In all cases, criteria had to be developed against which the urgency of need was judged. Consequently, for the first time, a single set of criteria is being used in the community and service is provided no longer in accordance with varying priorities and standards of individual agencies. Evaluations of need are made either by the referring agency's professional staff or by our own social service staff. In those situations in which there are indications of a health problem, evaluations are made by the Visiting Nurse Association district nurses.

Before placement of a homemaker-home health aide is made, a pre-placement conference is held with the case worker and/or nurse, the homemaker and the agency's homemaker supervisor to discuss service to be provided. The homemaker is then accompanied to the home by the cooperating agency's social worker or nurse or, in instances where no community agency is active, by our social worker.

Continuing supervision and consultation have been arranged for all cases. In cases involving a health problem, the VNA presently assumes responsibility for nursing supervision in a joint relationship with our staff and other social agencies' case workers.

A variety of needs have been served. Because of urgency, approximately 70% of the cases have been situations of physical illness or incapacity; 20% of the cases have been motherless and/or multi-problem families, and 10% were those with mental illness. As the level of service grows, it is expected that more motherless families will be served. Because of the limitation of homemakers available, housekeeper service only is not being offered. This priority restriction has ruled out service to a great many aged persons to whom such service could have been most beneficial. Future expansion of service will permit the agency to serve this area of need as a preventive measure.

In seeking to provide appropriate auxiliary services to families being served, the agency has become a focal point for joint planning for total family needs, using many community services. Already, meaningful communications have been established with numerous agencies and it appears that there is wide interest in cooperative planning.

The recruitment of homemaker applicants has presented no serious problem to date. Initial publicity about the creation of the new agency provided the greatest number of prospects. Some applicants had been neighborhood staff members of poverty programs which were phasing out and also the Community Information Center of the Welfare Federation had kept a list of women who had expressed interest in our program. About 95% of the prospects came from the central city.

Subsequently, undue travel time and problems of transportation restricted service to the outlying areas of the city and the suburbs. To rectify this situation, the Junior League has undertaken a project to stimulate interest in homemaker service.

Presentations will be made by League members to almost every church women's group in the outlying areas covered by the Greater Cleveland United Appeal. Their first effort will be concentrated in middle class communities. Another approach to recruitment has been to ask agency workers in outlying areas who request service to aid in recruitment, either by suggesting prospects or by putting us in touch with appropriate groups for a recruitment effort. Finally, the most effective recruiters have been members of the homemaker staff who, knowing precisely the type of person needed and the duties of the job, were able to refer friends and acquaintances.

It was decided that it was necessary to pay as adequate an hourly rate as possible at the very outset. The board of trustees readily approved the new minimum hourly rate of $1.40, with provision for an increase of five to ten cents per hour after a probationary period of three months, with merit raises thereafter. Fringe benefits, including vacation, holidays, accumulated sick-leave, etc. were helpful in recruitment.

Dealing with a large number of applicants, it has been possible to be most selective. No formal education qualifications were set. We looked for well adjusted adults who possessed flexibility and warmth, willingness and capacity to learn and a good sense of humor, as well as the other usual requisites. For each person selected, five applicants were seen. This truly was a gargantuan task, but the results have more than justified the effort, for only three of the 35 new trainees either withdrew or were dropped.

Having to provide homemaker-home health aides to serve the most emergent cases, we were compelled to institute homemaker training classes

sooner than was anticipated. With the generous assistance of the Visiting Nurse Association, the Family Service Association and the teaching contribution of two instructors who hold masters' degrees in social work and home economics, it was possible to design and conduct a training class for 15 trainees in February and 20 trainees in March.

The training program was geared to the educational, cultural and experience backgrounds of women who are generally quite unsophisticated but innately intelligent and mature. For expediency it was decided to hold to a two-week program of six and one-half hours each day, five days per week. A longer period of formal classroom instruction presently is considered desirable and future plans will take this into consideration.

The content of the training program covered four primary areas: social work concepts of the family and child, basic health instruction (by VNA), home economics and nutrition, and orientation to working as a member of a multi-disciplinary team. Emphasis was placed on meeting the needs of the clients and patients rather than on housekeeping responsibilities, and teaching was directed toward the role of the homemaker-home health aide in problem-centered situations.

Since the last training program there have been discussions with the Red Cross, the Nutrition Association, the Adult Division of the Cleveland Board of Education, the Cuyahoga Community College, and the Division of General Studies of Cleveland College of Western Reserve University, all of whom are interested in cooperating in the structuring of a unified community training program for homemakers. The possibilities of such a program

are countless and, hopefully, the agency and the community can capitalize on them.

With but a few months experience, it is too soon to formulate any accurate assessment regarding the inter-relationships between our agency and the numerous cooperating health and welfare agencies. By now, almost every agency has knowledge of our service and most have been in touch with us. It can be said that generally there is satisfaction in having a centralized agency with whom to work; this has been especially true of the hospitals and miscellaneous health agencies.

The area requiring greatest attention by the administrative and social service staff is that of working out joint responsibilities between the agency requesting service for its client or patient and our staff with regard to the supervision of the homemaker-home health aide and the need for continuation of service. Depending upon the type and quality of supervision or consultation available to the homemaker from each referring organization, an individual plan of cooperation is worked out. A program of joint evaluation has been accepted by all and has proven to be valuable for on-going assessment of the service and future planning.

It is worth noting that since the creation of this agency the County Welfare Department has promoted the person who represented the agency on the Inter-Council Homemaker Service Committee to the position of executive director, and reorganization of the total agency has been instituted. Because of his interest and conviction regarding homemaker services, the volume of service has doubled to a level of 140 homemakers with plans to expand to 190 homemakers by year's end.

An outstanding development has been the creation of a 24-hour, seven-day per week, emergency homemaker service attached to the County Children's Receiving Home and available to all divisions of the County Welfare Department. This service has proven to be most effective and will be expanded.

To date, responsibility of public and voluntary services has been divided so that, in general, the county serves wards of the county and public assistance families and our agency serves all others. Of course, there have been some situations where service could be provided by either organization and these have been handled on an individual basis, with frequent clearances between the two agencies.

It has been most evident that, to function effectively as a centralized homemaker service, we need a professionally qualified staff for key positions in social work, nursing, home economics and nutrition to give leadership and to handle the multiplicity of situations presented by the host of community agencies.

Because of the nature of the total community need for homemaker service, it has been most advantageous to have the agency oriented primarily to social work. It is recognized that nursing services require professional attention and that the combined programs of social work, medicine and nursing should be appropriately correlated. To achieve this end, the board of trustees has appointed an Advisory Committee on Home Health Aide Service. Membership includes our trustees, who not only are familiar with family and children's work but who have served on boards of health agencies; representatives of two public health nursing organizations, the Chronic Illness Center, the Visiting Nurse Association and two representatives of the medical profession who have had interest in and experience with home-health aide programs. The committee will work with the agency's

staff and the community to recommend standards and procedures for nursing supervision and personal care in home-health aide situations. The committee will be holding its organization meeting soon and there is considerable interest in the potential of this committee for resolving some of the complicating situations which arise in home-health aide service.

To assist the agency and the community to plan for further development of the program, a record of all requests is being kept, forming a central register of need on a continuing basis. Such records, heretofore, have not been available and already current trends of need are identifiable.

Despite our limited experience, it appears that for the Cleveland area, with its network of health and welfare agencies, a centralized service has many advantages. The community has enjoyed the interdisciplinary approach to social and health problems for many years, and through the capable and effective leadership of its Welfare Federation, agencies have been working cooperatively toward providing the best solution for total community needs.

To date, the outstanding achievement has been the ability of the centralized agency to provide, for the first time, homemaker service that has not been fragmented. The needs of the general public, previously almost unserved, are being served in a manner which permits the identification of problem situations which heretofore had gone undetected. In some situations where there had been resistance to case work and nursing service, the homemaker has bridged the gap.

These first months of our existence as an agency have been exciting and rewarding ones.

From our experiences, we have been encouraged in our belief that a centralized community homemaker-home health aide service has greater potential for growth and for meeting total community needs than a fragmented approach by numerous individual agencies. Although there are varying philosophies and concepts which must be mutually resolved as we further develop our service, we cannot conceive of a more effective means of achieving a satisfactory resolution of differences than through a centralized service with proper community support and with a competent staff providing the expertise of many interested professional disciplines.

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Report of Vocational Needs Study Committee.

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VOCATIONAL EDUCATION ACT OF 1963

Seattle Public Schools have developed a variety of programs designed to provide vocational and pre-vocational education for students on the secondary level. The committee recommended that (1) the work experience and pre-vocational programs be expanded, (2) the Tutorial program, designed to provide an opportunity for suspended students to earn their way back to school, be tried and evaluated, and (3) The summer dropout program be continued and an effort be made to learn which factors in a school program cause students to withdraw. Recommendations of the 1960 Citizens' Report relating to present educational and vocational problems, as well as implications of the Vocational Education Act of 1963 for various service areas, project grants, finances, and teacher training are given. The appendix includes relevant papers and speeches on: (1) vocational guidance, (2) model for senior high schools, (3) training youth counselors, (4) the dropouts, (5) trained hands, (6) illusions about the vocational high school, and (7) proposed prevocational program. (FP)

VT 006 168

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SEATTLE PUBLIC SCHOOLS

Report of

VOCATIONAL NEEDS STUDY COMMITTEE

VT006168

June, 1964

ERIC Full Text Provided by ERIC

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VOCATIONAL OBJECTIVES ON THE SECONDARY LEVEL

The role of vocational education in the secondary schools has long been a matter of debate and controversy. State and federal legislation established vocational and technical education as a function of the public schools as early as 1917. A number of factors have conspired to vitiate efforts in this direction until the recent broad revival of interest including the "Vocational Education Act of 1963" which authorized greatly increased federal funds and impetus.

The interest in vocational education suffers from the prevailing attitude that holds only the professional and managerial occupations, requiring college education, in high regard. This tendency has led to a situation which makes our secondary curricula largely college oriented despite the claims that our programs are "comprehensive." Since only about 15 per cent of our students complete their work for a college degree, the need for a different approach, a different curriculum, and different emphases becomes clearly apparent.

The following excerpt from the April 16, 1964 issue of Education U. S. A. states the problem succinctly:

> CHANGE NEEDED FOR THE FORGOTTEN HALF
>
> Attempts to keep up with the rapid change in knowledge are penalizing the lower half of the school population, Kimball Wiles, outgoing president, told the ASCD meeting: "The million dropouts a year represent only a small part of the problem. The curriculum is unsatisfactory for at least 15 million more....It is high time curriculum workers acknowledge this fact and begin to select from the vast reservoir of knowledge some that has relevance...."

The schools are caught in a squeeze between powerful forces. There is the intangible, vague, perhaps even subconscious pressure on students by their parents and their peers to "prepare for college" regardless of financial or academic considerations. There is the pressure by business and industry to equip students with "trained hands" and salable skills in high school. And, as a third pressure, we are reminded that the jobs of the future will demand not only vocational skills

but also more and better general education so that the schools' "products" can get and hold a job and also take further training and retraining as their jobs become obsolete and preparation for new jobs is required. There is no unanimity within these groups. Some tell us that attitudes, attendance, and citizenship are more important than skills. More people lose their jobs because of personality conflicts than because they lack skills. Some industries recommend a good basic education and prefer to train their own employees for specific jobs. Furthermore, it is now estimated that half the students presently in school will work at occupations which do not now exist. Most of the other students will change their jobs several times during their lifetime. Vocational preparation, under these circumstances and while students are still in school, will have to be primerily non-specific and designed to enable the future workers to successfully undertake training and retraining in a changing world of work.

Lowell A. Burkett, Assistant Executive Secretary of the American Vocational Education, says:

> "The question of whether or not public schools should offer vocational education and the corollary question that considers the extent to which these offerings should be provided by other agencies....are issues that beg educational leaders to take a stand."[1]

Dr. J. Chester Swanson, Professor of Education, School of Education, University of California, Berkeley, is more emphatic and goes further in the October, 1963 NEA Journal:

> In answer to the question, "Just what is vocational education?" Dr. Swanson says, "It is no longer just an educational ideal or a sociological goal." ...."Vocational education can accurately be defined as that part of a school curriculum or those on-the-job activities designed to provide the skills and knowledge which will enable the student to obtain employment or to become a more proficient worker in providing economic security for himself and his family."...."If vocational education is to make its utmost contribution to our society, it must be readily available to youths in school and to those youths and adults alike who are out of school and in need of training or

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[1]Bulletin of the N.A.S.S.P., November, 1963, p. 152

retraining."...."Although students who do not succeed in the academic subjects often do well in vocational subjects, failure in academic courses should not be a criterion for entering occupational training."...."Counselors need to turn students, parents, and other teachers away from the idea that vocational students are second-class citizens."

In order to meet more adequately the vocational needs of Seattle youth, the following basic objectives will need sustained attention and continuing implementation:

1. Set up a training program for the out-of-school youth (up to age 18) who wish to return and receive training in reading, writing, speaking, and the use of numbers.

2. Improve the present curricula for those young people going directly to work upon graduation from a secondary school.

3. Provide an improved educational program for the potential dropout.

4. Solicit the cooperation of local community and state agencies in the development of special educational programs for the potential high school dropout.

5. Encourage local community agencies to develop programs that will provide employment and training for young people who need help (16-21 years of age).

6. Provide special school programs (K-12) for those students who are culturally deprived and will comprise a significant proportion of the potential dropouts and the unemployed.

The achievement of the above objectives will not be accomplished by committees sitting around tables finding faults with our present programs. It will take hard work and money. Without community understanding and financial support, progress toward these objectives is doubtful; in fact, the problems could become worse.

However, the community is interested in the welfare of its youth and when the problems are clearly presented and understood, there will be little doubt about support and eventual improvements.

For example, programs designed to reduce dropouts - such as improved counseling, special classes, adjustment programs, reduced class size - are all expensive. The per-pupil cost for programs designed to help the potential dropout is greater

than the cost of educating a student in the regular program. However, the alternatives need to be carefully considered. Even if we disregard the most important personal and human consideration of the school dropout and look at the consequences merely from the taxpayers' dollars and cents point of view, the only conclusion we can logically accept is that we cannot afford not to invest more to improve the schools' holding power.

There is a clearly demonstrated relationship between school dropouts and crime in this country. Statistics in Washington as well as on the national level show that over 90 percent of all prisoners are school dropouts. The 20 billion dollars annual cost of crime exceeds the cost of public education. While no amount of education will completely eliminate crime, increased expenditures to provide meaningful programs for those youth who are now only marking time and waiting until they are legally old enough to quit school, might well result in actual savings in the long run.

The technological developments in industry and agriculture are rapidly eliminating those jobs which were formerly available to the unskilled and the uneducated. Such people are the last to be hired and first to be fired. While unemployment and idleness lead to delinquency and crime, there is another very debilitating and very expensive alternative. Many unprepared youth, who successfully avoid delinquency but cannot find a job eventually become dependent on a welfare program and such programs have been estimated to cost $1,000 per year per person. Here again, better education and better preparation for work might well reduce the total cost to taxpayers by spending a little more for meaningful educational and vocational programs for all youth.

Gardner in his book entitled, Excellence points to the desirable goal:

> "We need excellent physicists and excellent mechanics. We need excellent cabinet members and excellent first-grade teachers. The tone and fiber of our society depend upon a pervasive and almost universal striving for good performance. And we are not going to get that kind of striving, that kind

> of alert and proud attention to performance, unless we can instruct the whole society in a conception of excellence that leaves room for everybody who is willing to strive--a conception of excellence which means that whoever I am or whatever I am doing, provided that I am engaged in a socially acceptable activity, some kind of excellence is within my reach."[1]

Most serious minded people would no doubt agree with Gardner. With the desire of Seattle Public Schools to implement this philosophy, the present "Vocational Needs" Committee was created in February of 1963. There has been a general recognition that we do a good job of educating the college-bound students, however, over half of our students do not go to college (less than 20 percent actually complete a college degree program) and there has been increasing concern regarding our secondary schools' program for this half of our students who will not even begin college work.

It was with these considerations in mind that this committee was appointed and charged with two main purposes:

1. "To give special attention to the vocational needs of the following:

   The student who graduates from high school but does not plan a college education.

   The student who is a potential high school dropout.

2. To make recommendations regarding the final report of the Citizens' Advisory Committee for Vocational Planning, 1960, that relates to the dropout and the vocational high school."

Since the 1960 Report was also concerned with (1) the high school graduate who does not plan a college education and (2) the potential dropout, the present committee examined carefully those recommendations and the following pages will give our reactions and comments to those suggestions which seemed to us to have major implications for our assigned task.

---

[1]John W. Gardner, Excellence: Can We Be Equal and Excellent Too? New York: Harper & Row, Inc., 196.

THE 1960 CITIZENS' REPORT - SOME COMMENTS

The recommendations of the 1960 Citizens' Committee which relate most specifically to the present educational and vocational problems of the secondary schools were:

1. Redesigning education in the comprehensive high school
2. Strengthening present programs (nine points)
3. The Multi-Training School
4. Forestry Camp

In order to present the recommendations of the two committees clearly, the statement of the 1960 Citizens' Committee will be given first and underlined; the present committees reactions and suggestions will be given under "comment."

REDESIGNING EDUCATION

"Continued emphasis must be given to redesigning education in the comprehensive high school to provide more realistically for those who are not preparing for college."

COMMENT:

The committee recommends immediate implementation of the job title Coordinator of Vocational Instruction (Adult Vocational Division). This person should be available to the Secondary Division for the development of curriculum designed to meet the needs of non-college bound students and potential dropouts.

The committee further recommends the Superintendent for the Curriculum Division be requested to examine, evaluate, and revise the present offerings in all departments of instruction in order to provide a purposeful curriculum for every youth. This would mean eliminating some of the traditional college preparatory course content for those youth whose post high school objectives do not include college work.

The Committee recognizes success of any proposed curriculum depends primarily

on the ability and training of the teaching personnel. Implied herein is continuous teacher training in in-service education and at the college level. (See Appendix, page 34, item #8.)

SUGGESTIONS FOR STRENGTHENING OUR PRESENT HIGH SCHOOLS

"The committee believes special consideration should be given to the following points as possible means of strengthening the present educational offerings."

1. "Test early to reveal special aptitudes and vocational interests."

COMMENT:

The wording of this implies that vocational interests are the main concern. The Seattle Public Schools have a thorough testing program in academic subject matter which is consistent from Grades 1 through 9. This is an academic achievement test, rather than an aptitude test. One of the most reliable tests for special aptitudes has been found to be the Differential Aptitudes Test. The City-Wide Testing Committee has already expressed an interest in this test. At least three Seattle high schools use the Differential Aptitudes Test for guidance purposes (Roosevelt, Ballard, Sealth). We propose that this test be used city-wide at 9th grade level.

2. "Present career information to all students early in their school experience."

COMMENT:

Career information is presented to all students early in their school experience through the curriculum. Even in the second grade stories pertain to the lives of "The Milkman," "The Postman," etc. Junior high schools have career days that vary in their methods of presentation. We agree with the recommendation that career information should be presented early to school students. We recommend that each junior high school have the SRA Kit and the Counselor Career Kit available to students both through their libraries and their counseling offices. We

feel this would be a legitimate place to spend money from the Vocation Act of 1963. We suggest that each secondary school have a budget allotted specifically to the Counseling Department in that building to spend for counseling materials. This will require changes in purchasing policies.

We feel also that, to present career information to all students early in school experience, Seattle needs to have a more realistic ratio of counselors to the students they serve. Seattle has made some progress toward decreasing this ratio. It has progressed from a ratio of 1 counselor to 750 students at junior high school to the present status of 1 counselor to 500 pupils. At senior high level it has progressed from 1 counselor to 600 students to the present of 1 counselor to every 400 pupils. In addition to the counselors who deal with students in the junior and senior high schools, a counselor has been added to the Vocational Guidance Center.

We propose the school district assure each secondary school a <u>minimum</u> of three hours daily counseling time to be devoted exclusively to vocational guidance. The committee's intent is to <u>add</u> counseling time for this purpose.

We would like to plan three hours released time for these people during 1964-65.

A great deal of retraining in such academic subjects as math and English is needed in post-high school education and often graduates seeking employment find they also lack sufficient training in these subjects geared to work. Perhaps students who are interested in seeking employment upon graduation would be better prepared if these subjects, when initially taught in high school courses, had more of an orientation toward the world of work. Teachers of these subjects should probably be trained according to vocational standards and possess adequate experience in the world of work. A team teaching approach might be used to advantage in these subjects.

3. "Emphasize continually to <u>all</u> youngsters that education is their most important business."

COMMENT:

Since education includes preparation for the world of work, parents, teachers, counselors, and community must be involved.

4. "Improve understanding by teachers, counselors, and parents of the opportunities in skilled trades and technical areas."

COMMENT:

Since 1960 there has occurred significant expansion of in-service education course offerings in vocational counseling, orientation to vocational education and in current labor market data.

Through the office of State Superintendent for Vocational Education, the local Federal Bureau of Apprenticeship representative, the Washington State Employment Service, and representatives of labor and management, an increase of current information has been provided schools and their vocational counselors for use with teacher and student groups.

The Adult and Vocational Division provides speakers for numerous parent meetings at which education in facts about the labor market, training schools and post-high school opportunity is the objective.

The Career Countdown radio series has provided career information for parents and students for the past two years.

5. "Develop a program of group guidance designed to bring more dignity and prestige to vocational training and blue collar employment in the minds of parents and students."

COMMENT:

Increased activities in secondary school vocational counseling utilizing the speakers available through the Adult and Vocational Division have provided greater awareness of the dignity and prestige of being skilled workers and technicians in our industrial society.

6. "Strengthen the guidance program at the junior high level to help students and parents develop a more realistic appreciation of academic and vocational training as it relates to opportunities in the years ahead."

COMMENT:

The Home Room program, as set up in the junior high schools, is one means of implementing the program. However, we need finances whereby we can supply suitable tools and materials, such as films, books, pamphlets, etc. The ratio of counselor to pupil (450 to 1) should be further reduced in order to implement this program to a greater degree.

7. "Extend the process of ability grouping in required courses so students can be scheduled into classes where they have a reasonable chance of success."

COMMENT:

We believe that an extension of the general process of scheduling students into classes where they have a reasonable chance of success can be further implemented in many ways. When qualified teachers, suitable instructional materials, and realistic class sizes have been provided, experiments in this field have been successful.

8. "Extend to students the privilege of applying to and being accepted at Edison Technical School for the senior year, with the choice of receiving a certificate or diploma from the school where they finished their junior year."

COMMENT:

The process referred to in this recommendation is not currently in effect and this committee does not recommend that it be re-established. Present senior year requirements (Health, Education, and Contemporary Problems) would prevent a student from attending Edison on a full-time basis in the day trades. Even if the arrangements for a student at Edison were possible (by completing required courses in summer school) the idea of receiving a home school diploma tends to imply that a diploma from Edison is somehow inferior.

In addition to these considerations, opportunities are now becoming available for more students to participate in the expanding prevocational program.

9. "Expand the type of program that has been experimentally successful at Franklin High School for the past five years in helping to meet the needs of seriously maladjusted students."

COMMENT:

We believe this is a worthwhile program and that the opportunity for programs of this type should be extended to students of other schools. The committee recommends a class size of ten to twelve students.

THE MULTI-TRAINING SCHOOL

"That early action be taken to plan and develop a high-school level (for high school age) multi-training school to provide prevocational education for some, vocational interest development for others, terminal job training for still others and general training for hundreds of students who for various reasons are not adequately served by the present high school program."

COMMENT:

In the opinion of the committee construction of such a facility would:

1. Cost several millions of dollars which are not presently available

2. Be inadequate to serve what has been determined as over half the total school-age population, i.e., non-college bound students

3. Disregard the high correlation between potential success in academic programs and potential success in development of skills and technical proficiency

4. Necessitate duplication of some facilities which are now adequately serving all students in their present schools, i.e., gymnasiums, cafeterias, etc.

5. Open the door to the "blackboard jungle" type dumping ground, which in turn would present a serious obstacle to the development of positive acceptance by parents and students

See also "Twelve Cherished Illusions Regarding the Vocational High Schools," Appendix, page 48.

FORESTRY CAMP

"The committee believes there is a need for a combined forestry camp and training program. Such a program would provide an opportunity for young

people 16 and 17 years old to combine an education and work experience program preparatory to entering the labor market. Such a work-school oriented camp life will serve as a maturing and growing-up process."

COMMENT:

The committee agrees wholeheartedly with the intent of this recommendation. Some minor activity in this direction has been under way on the state level. The value of such a program has been demonstrated and the demand on the part of teenage boys is great. We urge that responsible citizens exert serious efforts toward a greatly expanded Forestry Camp Program. We also urge support of the Youth Conservation Corps Plan which is a similar federal program now pending before Congress.

The committee further recommends that the schools engage in a cooperative sponsorship by public and private agencies of a work-school program to provide work experience and motivation for non-college students and potential dropouts. (The pamphlet Youth in the World of Work, listed in the bibliography, gives numerous examples of such cooperative efforts throughout the U.S.)

See also page 38 in the appendix which gives a recent announcement of a Youth Opportunity Program to be conducted by the Department of Labor.

IMPLICATIONS OF THE VOCATIONAL EDUCATION ACT OF 1963

During the 16 months of the deliberations of the "Vocational Needs" Committee, a very significant piece of Federal legislation was passed bearing directly on vocational needs of high-school-age youth. A subcommittee was formed to examine possible implications of the act on Seattle Public Schools. Their final report was submitted on May 19, 1964; it was examined by the whole committee and approved with minor changes.

The format of this section of the committee report is similar to that in the preceding section: a pertinent quotation is given from the act followed by "Comment" from the committee.

GENERAL OBSERVATIONS

Quotation from the Act:

AN ACT

"To strengthen and improve the quality of vocational education and to expand the vocational education opportunities in the Nation, to extend for three years the National Defense Education Act of 1958 and Public Laws 815 and 874, Eighty-first Congress (Federally affected areas), and for other purposes."

Comment:

This Act, under proper leadership, makes possible as never before the development of the profession of Vocational Education. As is pointed out by J. Chester Swanson, Professor of Educational Administration, University of California, "Professionally all that this Act does is 'take off the brakes' and provide some 'fuel.' The direction of any motion, the speed of any movement, and the arrival at any landmarks will be the result of professional leadership."

The Act challenges us to be creative, imaginative, and forceful in the improvement and expansion of vocational education. If this is properly done it encourages boys and girls through grades twelve to stay in school. They will have ready access to vocational instruction which will be of high quality, which is realistic with respect to future employment, and which will be suited to the needs, interests, and abilities of persons preparing for known occupations.

FINANCIAL CONSIDERATIONS

Quotation from the Act:

PART A - VOCATIONAL EDUCATION

DECLARATION OF PURPOSE

"SECTION 1. It is the purpose of this part to authorize Federal grants to States to assist them to maintain, extend, and improve existing programs of vocational education, to develop new programs of vocational education, and to provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis, so that persons of all ages in all communities of the State--those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, and those with special educational handicaps--will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training."

USES OF FEDERAL FUNDS

"SECTION 4. (a) Except as otherwise provided in subsection (b), a State's allotment under section 3 may be used, in accordance with its approved State plan, for any or all the following purposes:

"(1) Vocational education for persons attending high school;

"(4) Vocational education for persons who have academic, socio-economic, or other handicaps that prevent them from succeeding in the regular vocational education program;

"(6) Ancillary services and activities to assure quality in all vocational education programs, such as teacher training and supervision, program evaluation, special demonstration and experimental programs, development of instructional materials, and State administration and leadership, including periodic evaluation of State and local vocational education programs and services in light of information regarding current and projected manpower needs and job opportunities.

"(b) At least 33 1/3 per centum of each State's allotment for any fiscal year ending prior to July 1, 1968, and at least 25 per centum of each State's allotment for any subsequent fiscal year shall be used only for the purposes set forth in paragraph (2) or (5) or both of subsection (a), and at least 3 per centum of each State's allotment shall be used only for the purposes set forth in paragraph (6) of subsection (a) except that the Commissioner may, upon request of a State, permit such State to use a smaller percentage

of its allotment for any year for the purposes spceified above if he determines that such smaller percentage will adequately meet such purposes in such State.

(c) Ten per centum of the sums appropriated pursuant to section 2 for each fiscal year shall be used by the Commissioner to make grants to colleges and universities, and other public or nonprofit private agencies and institutions, to State boards, and with the approval of the appropriate State board, the local educational agencies, to pay part of the cost of research and training programs and of experimental, developmental, or pilot programs developed by such institutions, boards, or agencies, and designed to meet the special vocational education needs of youths, particularly youths in economically depressed communities who have academic, socio-economic, or other handicaps that prevent them from succeeding in the regular vocational education programs."

Comment:

The authorized appropriations for all present Vocational Education Programs under the Smith-Hughes, George Barden, and other laws are left undisturbed by the new legislation. In addition to these amounts, the Vocational Education Act of 1963 authorized appropriation by Congress of 60 million dollars for grants in aid to the states in the 1964 fiscal year which ends June 30 and the following amount for subsequent periods:

118.5 million for fiscal year 1965
177.5 million for fiscal year 1966
225.0 million for fiscal year 1967 and for each fiscal year thereafter

Not all this money, if and when it is appropriated by Congress, will be distributed among the states according to formula. One-tenth of each year's appropriation is reserved for "project grants" to be distributed by the U. S. Commissioner of Education. It follows, therefore, that if Congress appropriates the full amount authorized under the new law, the Commissioner will have 6 million to distribute to "project grants" in 1964 fiscal year, 11.85 million in fiscal year 1965, 17.75 million in fiscal year 1966, and 22.5 million in fiscal year 1967 and each fiscal year thereafter. Subtracting these amounts from the full authorization leaves the amounts that would be available for allocation among the states and other jurisdictions on the basis of the formula written into the new law. Basically, under this formula, the greater a state's population between ages 15 and 65, the more Federal funds it would receive. On the other hand, the higher the state's per capita income, the less Federal funds it would receive. The above figures must be considered tentative estimates and for two reasons: First, Congress may not appropriate full amounts authorized by the new law. Second, the actual amounts for each state must be computed each year on the basis of the latest population and income data from the Bureau of the Census.

Tentative appropriation for the State of Washington is shown below.

1964	1965	1966	1967
$801,227	$1,582,454	$2,370,343	$3,004,660

To determine the actual allocations for the State of Washington, we might break down the above figures in the following manner: First, take 3% of the total for each year. That's the amount that must be used for "ancillary services and activities to assure quality in all Vocational Education programs." These include teacher training and supervision, program evaluation, special demonstration, and experimental programs, development of instructional materials and administration and leadership at the state level. State level activities may specifically include periodic evaluation of state and local Vocational Education programs in the light of current and projected manpower needs and opportunities. If a state asks him to, the Commissioner of Education may agree to allow the state to spend less than 3% of its annual allotment for these ancillary services. To gain permission for such a request, however, the Commissioner must be satisfied that the smaller percentage suggested by the state will nevertheless do the job spelled out in law. Now take 1/3 of the state's annual allotment. That's the amount that must be used for construction of area Vocational Education school facilities or for Vocational Education for persons who have completed or left high school and are available for full time study in preparation for entering the labor market. This limitation holds through the 1968 fiscal year. After that, at least 25% of each year's allocation must be used by the state, either for construction of area school or for post-high school programs, or for both. What's left of the state's allocation after making these subtractions may be used for Vocational Education for high school students; for people already in the labor market who need training or retraining to achieve stability or adjustment in their employment; or for people with academic, social, economic or other handicaps that prevent him for succeeding in a regular Vocational Education program.

DISTRIBUTIVE EDUCATION

Quotation from the Act:

> "SECTION 8. The term 'vocational education' means vocational or technical training or retraining which is given in schools or classes....and is conducted as part of a program designed to fit individuals for gainful employment as semi-skilled or skilled workers or technicians in recognized occupations....but excluding any program to fit individuals for employment in occupations which the Commissioner determines, and specifies in regulations, to be generally considered professional or as requiring a baccalaureate or higher degree...."

Comment:

This statement found in the section dealing with definitions is significant to those planning programs for the world of work because it states that a program is eligible for these funds only when the education is designed to fit individuals for gainful employment not requiring a degree.

Quotation from the Act:

> "SECTION 10 (d). Any amounts allocated (or apportioned) under such titles, Act, or Acts for distributive occupations may be used for vocational education for any person over fourteen years of age who has entered upon or is preparing to enter upon such an occupation, and such education need not be provided in part-time or evening schools;"

Comment:

This section removes the restrictions of previous legislation which limited vocational programs in distributive education to classes of students who were required to work part time (Retailing I and II). Now classes may be designed for students who wish to prepare to go to work in distributive or service jobs. Because of the reduction in the age requirements, instruction may begin earlier in high school and a sequence of classes might be planned. For example, introduction to careers in the retail field, personal adjustment to retail or service work, the distribution system, the market function of business, small business ownership.

BUSINESS EDUCATION

Quotation from the Act:

> "SECTION 8. The term 'vocational education' means vocational or technical training or retraining which is given in schools or classes....and is conducted as part of a program designed to fit individuals for gainful employment as semi-skilled or skilled workers or technicians in recognized occupations including any program designed to fit individuals for gainful employment in business and office occupations....but excluding any program to fit individuals for employment in occupations which the Commissioner determines, and specifies in regulations, to be generally considered professional or as requiring a baccalaureate or higher degree."

Comment:

This statement, found in the section dealing with definitions, is significant to those planning programs for the world of work because it states that a program is eligible for those funds only when the education is designed to fit individuals for gainful employment not requiring a degree.

Applying this definition, it is evident that the present business education curriculum of the Seattle schools is vocationally oriented and with simple modifications be able to participate in vocational funds. The bill further provides for implementation of the present business education program and for continued curriculum modification and growth. It also provides for a realignment of courses or for new courses that are related to occupational interests which qualify for vocational reimbursement.

HOME ECONOMICS EDUCATION

Quotation from the Act:

"SECTION 8. For the purposes of this part....

"(1) The term 'vocational education' means vocational or technical training or retraining which is given in schools or classes (including field or laboratory work incidental thereto) under public supervision and control or under contract with a State board or local educational agency, and is conducted as part of a program designed to fit individuals for gainful employment as semi-skilled or skilled workers or technicians in recognized occupations (including any program designed to fit individuals for gainful employment in business and office occupations, and any program designed to fit individuals for gainful employment which may be assisted by Federal funds under the Vocational Education Act of 1949 and supplementary vocational education Acts, but excluding any program to fit individuals for employment in occupations which the Commissioner determines, and specifies in regulations, to be generally considered professional or as requiring a baccalaureate or higher degree)."

"SECTION 10. Notwithstanding anything to the contrary in Title I, II, or III of the Vocational Education Act of 1946 (20 U. S. C. 15i-15m, 15o-15q, 15aa-15jj, 15aaa-15-ggg), or in the Smith-Hughes Act (that is, the Act approved February 23, 1917, as amended (39 Stat. 929, ch. 114; 20 U. S. C. 11-15, 16-28), or in supplementary vocational education Acts....

"(a) any portion of any amount allotted (or apportioned) to any State for any purpose under such titles, Act, or Acts for the fiscal year ending June 30, 1964, or for any fiscal year thereafter, may be transferred to and combined with one or more of the other allotments (or apportionments) of such State for such fiscal year under such titles, Act, or Acts, or under section 3 of this part and used for the purposes for which, and subject to the conditions under which, such other allotment (or apportionment) may be used, if the State board requests, in accordance with regulations of the Commissioner, that such portion be transferred and shows to the satisfaction of the Commissioner that transfer of such portion in the manner requested will promote the purpose of this part;

"(c) (1) any amounts allotted (or apportioned) under such titles, Act, or Acts for home economics may be used for vocational education to fit individuals for gainful employment in any occupation involving knowledge and skills in home economics subjects;

Comment:

Education for home and family living is the major purpose of courses offered to secondary pupils in Seattle high schools. It will obviously continue to be the major focus of instruction and also will continue as the concern of home economics teachers trained in the traditional fields, as Family Foods and Nutrition, Child Development and Family Relations, Home Management, and Clothing and Textiles.

Along with the family as a center for instruction, however, has come a new focus in homemaking education. The Vocational Act of 1963 has added the provision that funds "may be used for vocational education to fit individuals for gainful employment in any occupation involving knowledge and skills in Home Economics subjects." This, of course, emphasizes the need for both coordination and careful delineation of differences between the two objectives, as well as curriculum planning and class programming so that both purposes are served without confusion or harm to either.

At this time, it appears that content added to the secondary school program in Home Economics with wage-earning focus, might best be that involving (1) a sequence of courses which would terminate in employment at graduation time, or (2) a shorter sequence that might "propel" pupils on into Edison Technical School or some other program in Adult Vocational Education. Exploration might be made and pilot programs initiated into such areas as training:

(1) Assistants for Child Care Centers

(2) Assistants in Clothing Alteration Departments

(3) Assistants in Food Services, working under supervision, such as retirement homes, dietary kitchens, catering services.

TRADE AND INDUSTRIAL EDUCATION

Quotation from the Act:

"SECTION 4. (a) Except as otherwise provided in subsection (b), a State's allotment under section 3 may be used, in accordance with its approved State plan, for any or all the following purposes:

"(1) Vocational education for persons attending high school;

"(4) Vocational education for persons who have academic, socio-economic, or other handicaps that prevent them from succeeding in the regular vocational education program;

"(6) Ancillary services and activities to assure quality in all vocational education programs, such as teacher training and supervision, program evaluation, special demonstration and experimental programs, development of instructional materials;

"SECTION 8. For the purposes of this part....

(1) The term 'vocational education' means vocational or technical training or retraining which is given in schools or classes (including field or laboratory work incidental thereto) under public supervision and control or under contract with a State board or local educational agency, and is conducted as part of a program designed to fit individuals for gainful employment as semi-skilled or skilled workers or technicians in recognized occupations (including any program designed to fit individuals for gainful employment in business and office occupations, and any program designed to fit individuals for gainful employment which may be assisted by Federal funds under the Vocational Education Act of 1949 and supplementary vocational education Acts, but excluding any program to fit individuals for employment in occupations which the Commissioner determines, and specifies in regulations, to be generally considered professional or as requiring a baccalaureate or higher degree). --and the acquisition and maintenance and repair of instructional supplies, teaching aids and equipment,

"(3) The term 'school facilities' means classrooms and related facilities.

"SECTION 10. (e) "any amounts allotted"...."for trade and industrial occupations may be used for pre-employment schools".... "persons over fourteen years of age who are in school, and operated for less than nine months per year and less than thirty hours per week and without the requirement that a minimum of 50 per centum of the time be given to practical work"...."if such"...."classes are for single-skilled or semi-skilled occupations which do not require training or work of such duration"....

Comment:

There is clear indication that the Vocational Education Act of 1963 is not intended to supplant, in any way, the Industrial Art programs currently

operating in the high schools. According to the Act, teachers of vocational education in the Trade and Industrial Education field would teach according to vocation education standards by vocationally certified teachers trained to work with high school age youth. These teachers might be recruited from the ranks of the industrial arts teachers whenever these teachers meet the vocational education requirements set up in the State plan.

The new law continues all existing categories under the Smith-Hughes, George-Barden, and other Acts--in all fields including Trade and Industrial Education. All previous authorizations for appropriations are also continued, but with this one, very significant change:

A state's allotments under the old laws may now be transferred--in any amount from one category to another.

The new law also loosens many restrictions in the previous statutes. Trade and Industrial Education schools and classes, for example, may now be operated for less than nine months per year, for less than thirty hours per week, and without devoting half the clock-hours to practical work, if they are giving pre-employment training for single-skilled jobs or for semi-skilled occupations that do not call for such intensive instruction.

Also, the old requirement that one-third of Trade and Industrial funds be spent on part-time schools or classes for employed workers is dropped completely from the new law.

The new law will also qualify for Federal reimbursement many courses on the borderline between T & I and such fields as Home Economics or Distributive Education that presently "fall between the cracks." Since funds may now be transferred between categories, it no longer matters, as much as it once did, whether a given curriculum belongs to T & I or some other program.

PROJECT GRANTS

Quotation from the Act:

"SECTION 4. (c) Ten per centum of the sums appropriated pursuant to section 2 for each fiscal year shall be used by the Commissioner to make grants to colleges and universities, and other public or nonprofit private agencies and institutions, to State boards, and with the approval of the appropriate State board, the local educational agencies, to pay part of the cost of research and training programs and of experimental, developmental, or pilot programs developed by such institutions, boards, or agencies, and designed to meet the special vocational education needs of youths, particularly youths in economically depressed communities who have academic, socio-economic, or other handicaps that prevent them from succeeding in the regular vocational education programs."

Comment:

"Project grants" may be made to local educational agencies by the Federal Commissioner with the approval of the State board. "Project grants" are intended to pay part of the cost of special research and training programs, as well as experimental, developmental, or pilot programs designed to meet various special vocational education needs of youth. This application of funds will probably have greatest use for youth in economically depressed communities (such as Washington, D. C.) who have academic, socio-economic, or other handicaps that prevent them from succeeding in other vocational education programs.

TEACHER TRAINING

Quotation from the Act:

"SECTION 4. (a) Except as otherwise provided in subsection (b), a State's allotment under section 3 may be used, in accordance with its approved State plan, for --"

"(c) Ancillary services and activities to assure quality in all vocational education programs, such as teacher training --"

Comment:

Indications that present programs will be carefully scrutinized are implicit in more than one section of the Act. The Act further suggests the development of new courses for students with special needs, improved guidance and counseling services, more suitable instructional materials, curriculum guides, and revisions in numbers to be trained.

All this points to the need for reviewing the "traditional" teacher training courses offered and updating the over-all teacher training program in order to adequately meet the challenges of the Act.

Colleges and universities will accept the responsibility for training kindergarten teachers, physical education teachers, and industrial arts teacher, but seem to be unwilling to accept a responsibility for producing vocational education teachers.

SUMMARY

The Vocational Education Act of 1963 gives rise to the need for a broadening of our philosophy regarding vocational education. It especially invites an exploration into methods of presenting "related information" in programs involving "similar" occupations. A core of subjects might be developed by the Curriculum Division which teaches skill and knowledge basic to a large number of occupations.

A great deal of retraining in such academic subjects as math and English is often needed in post-high school education and graduates seeking employment frequently find they also lack sufficient training in these subjects geared to work. Perhaps students who are interested in seeking employment upon graduation would be better prepared if these subjects, when initially taught in high school courses, had more of an orientation toward the world of work. Teachers of these subjects should probably be trained according to vocational standards and possess adequate experience in the world of work. A team teaching approach might be used to advantage in these subjects.

"The Vocational Education Act of 1963 will step up and reshape all of industrial education."

--Theodor Schuchat, Washington Correspondent

--this Act "is dramatic evidence of our commitment to education as the key to our social and economic and technological and moral progress."

--this Act "places us in a position to make a major attack on one of the most important obstacles to economic growth and productivity. It is a reaffirmation of our conviction that education is the cornerstone of our freedom."

--President Johnson

We are confronted with the greatest challenge education has ever seen. The "brakes are off." "The sky is the limit." Our leadership must be developed to its greatest extent--then face the future with faith and action.

Remember this--

The real pleasures in life come from meeting its challenges.

SUMMARY AND CONCLUSIONS

Seattle Public Schools have developed a variety of programs designed to provide vocational and prevocational education for students on the secondary level. Programs in distributive education, home economics, and industrial arts should receive additional impetus under the provisions of the Vocational Education Act passed by Congress last year.

The Work Experience Program which involved over a thousand students during the past school year could be expanded greatly particularly in high schools where student participation is only 20% to 25% of that in other high schools.

The prevocational program, begun during 1963-1964, should offer expanding opportunities and will perhaps become a satisfactory answer to those who have been advocating a separate vocational school.

A recently worked-out "Self-Improvement-for-Reinstatement Program" probably to be called "The Tutorial Program," which is designed to provide an opportunity for students who have been suspended to earn their way back to school, deserves a fair trial and evaluation.

The Summer Dropout Program begun in 1963 at the request of, and with funds provided by, President Kennedy should be continued. However, just getting the students who had dropped out of school back into classes is not enough. If 90% of these leave school again within one semester, as predicted by Daniel Schreiber, director of the N. E. A. Dropout Project, then we must take a more serious look at the school program from which these students continue to withdraw.

The central point in this report is that there is a great deal more that needs to be done by educators and the public to make better provisions for the vocational and educational needs of high school youth. There is ample evidence both in this report and in the items of the appendix, that we know what needs to be done. The fact that we still have over a thousand dropouts from Seattle Public Schools each year is certainly a symptom of a situation that requires more vigorous attention than it has received up to now.

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APPENDIX

PRINCIPLES OF VOCATIONAL GUIDANCE[1]

1. The first principle basic to new theory is in essence a total of human personality. Under this point human personality defies categorization and compartmentalization - one needs to look at the individual as an entity - human personality has many facets. Vocational counseling that concerns itself only with a person's interests and aptitudes is inadequate.

2. The second principle that should underlie sound theory stresses the dynamic aspects of personality. Under this, man is an ever-developing, ever-changing being, just as is the society in which he lives. The needs of the teen-ager may not be the same as those he will feel as a man of 30 or 50. Interests change and develop. Interests, like needs, can and do enlarge and diminish, come into being and pass away.

3. The third principle is that a man's work is an integral part of his self-concept. Under this, no constructive approaches to job satisfaction will be forthcoming until they are expressed in terms of the person's needs, motivations, and self-concept. The self-concept is not static, like the personality which it shapes. Self-concept is constantly altering, developing and changing. Vocational choices, therefore, must be an ongoing process and cannot be stabilized at a single point in time.

4. The fourth principle is that cultural values and expectations shape job choices in any society at any time. Under this, American culture is pluralistic. The values the counselor holds are seldom those of the student with whom he works. No counselor can function effectively as a counselor without

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[1]Ruth Barry and Beverly Wolf, An Epitaph for Vocational Guidance. New York Teachers College Press, 1962.

a willingness to accept not only measurable individual differences, but also the fundamental differences in values.

5. The fifth principle to all-effective guidance is the old one of individual differences. Not all students progress or mature at the same rate.

6. The sixth principle is important for education as for guidance: External learnings are relatively unimportant compared with internal learnings. Under this, what is and becomes an integral part of each person, influences directly what the person is and does. Such learnings do not take place overnight, nor are they produced by external informational means. Yet, most current guidance practices do not operate at other than an information-giving or receiving level. In the total picture of human personality, superficial information per se is perhaps the least important ingredient.

Important in the matter of vocational selection is the person's own intimate view of himself, the person's idea of how others see him (and this is very complex), and the person's idea of the person he would <u>like</u> to be.

MODEL FOR SENIOR HIGH SCHOOLS[1]

Although a definitive statement on this point must await further evidence, it seems that continuous contact between the school and out-of-school youth is one of the keys to increasing the number who eventually finish high school. In effect, continuous contact avoids closing the door and encourages those who leave to return.

An experimental model for the high school level should take account of the fact that many potential dropouts are alienated from the rest of the school population. Many high schools receive pupils from junior high and elementary schools in which there has been no special attempt to foster the social acceptance and participation of the potential dropout. A special program in the high school is also required to supply the curriculum content specifically needed by these youth.

1. Identify the youth most likely to drop out. In addition:

   a. Establish diagnostic categories, either as in Table V or by some other rationale;

   b. Determine the number in each category;

   c. Within each category assigned to the special program, match pairs on the basis of sex and the amount of each predisposing characteristic;

   d. Randomly assign one of each pair to the new program.

2. Assign to the staff during the first year, for each 50 identified youth, four teachers and one non-teaching professional. Thereafter, assign five teachers and two non-teaching professionals for each 100 identified youth. One of the persons would serve as the team leader. In addition, there would be required:

   a. A minimum of one summer's work by the staff prior to the actual teaching of the students;

   b. Reduced staff-student contact to allow for team cooperation, especially during the first year.

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[1]Reprint from Procedures for the Identification of Potential High School Dropouts, The Office of the Superintendent of Public Instruction, State of Illinois, 1962.

3. Select for the staff persons who

   a. Can accept and work with adolescents who typically are disliked or ignored by teachers and graduating classmates;

   b. Want to create, and who feel comfortable with the uncertainties of a new program.

   All other considerations must be secondary in staff selection.

4. Encourage the staff of the special program to create a new curriculum which would reject much of the conventional courses in order to include such content and such experience as are shown by experimentation to meet the special needs of potential dropouts. This new curriculum must span all years of possible enrollment, and it should incorporate day-by-day inventions as these occur. Essential provisions of this new curriculum, if its objectives are founded upon the major adult roles the youth will fill, include:

   a. Continuous individual and small group work with basic academic skills, particularly reading, writing, speaking, and in such fields as science, mathematics and social studies.

   b. Vigorous attempts to adapt the materials developed by the outstanding curriculum improvement projects to the needs and abilities of the potential dropouts. Possible materials to be adapted are the mathematics courses of the University of Illinois Committee on School Mathematics (UICSM) and those of the School of Mathematics Study Group (SMSG), the science courses developed by the Physical Science Study Committee, the Chemical Bonds Approach Committee, and the Biological Sciences Curriculum Study. While most of these courses were originally planned for students with above-average academic aptitude, a few bold and creative teachers have taken advantage of the ways in which these courses have been made understandable to boys and girls, and have used parts of the courses with average and below average students. Thus, some evidence has been developed to indicate that being able to discover some of the basic content for himself may be extremely useful and valuable for the student with low academic aptitude.

   c. Work experience in the community, with emphasis on job responsibilities.

   d. Vocational training in those skills which occupational surveys indicate will be in national demand in the future. This may imply somewhat less attention to future local demands, but these must not be ignored.

   e. Preparation for family living.

5. Provide the required equipment, materials, facilities, and in-service training for teachers which they would need to make full and effective use of motion pictures, filmstrips, other visual materials, recordings, programmed units of study, and specially selected books. Aside from the values of the various media in working with potential dropouts, such improvement in the learning resources which teachers can use is likely to contribute to improved teacher morale.

6. Arrange for close identification of the youth and their families with the school. Such arrangements can include:

a. Home visits by all members of the staff,

b. Summer camps and summer projects with supervision and participation by the staff,

c. Broader extracurricular activities such as more intramural rather than varsity athletics,

d. Group counseling.

7. Provide a heavier concentration of guidance and counseling, and psychological services with attention to:

a. Remedial services, especially reading, to strengthen the program outlined in (4) above,

b. Consultation with teachers and case conferences,

c. Clinical counseling.

8. Provide continuous in-service training which should include:

a. Examination of any negative feeling toward specific youngsters under the supervision of one of the staff who has had training in group therapy. (Some schools might prefer an arrangement with an outside person to act as the leader.)

b. Reduction of student-staff contact for each of the new staff members during his first year in the program to one-half or at least two-thirds of the work load in order to provide for cooperative planning, work preparation and evaluation.

c. Continued college course work in those areas the staff believes important. It is not likely that staff members could find training programs specifically designed for the needs of such an experimental program.

d. Feedback to each staff member of his performance, by use of tape recorders, observations of colleagues, reactions of students, and analysis of his methods of evaluating student performances.

e. Extension of contract period to 11 or 12 months the first year, beginning the summer previous to the inception of the program, and to 10 or 11 months in succeeding years.

9. Establish new grading procedures which would:

a. Show individual progress, without value judgment implicit in letter grades, by using objective tests for measurement of

(1) Skills,

(2) Information,

(3) Problem solving.

b. Use staff judgment, especially of the teacher, to assess individual progress in emotional-social adjustment in areas such as:

(1) Relations with classmates,

(2) Appreciation in the arts,

(3) Characteristics needed in adult roles, as leadership, feelings for others.

10. Evaluate the special program as rigorously as possible by studying:

a. The number of boys and girls in the special program who drop out as compared to the number of dropouts among the control population (those members of the matched pairs who remained in the regular program).

b. Follow-up data for boys and girls in the special program on their progress in junior college, technical training, or in occupations.

c. Changes in the predisposing characteristics, which will give preliminary measures of the success of the special program.

d. The rates of dropout among boys and girls with different predisposing characteristics as compared to those in the regular program.

e. Changes in teacher and student morale in the special program, and in the rest of the school.

f. Costs of the special program. Compare the additional costs of the special program with the eventual cost of early dropouts.

11. Allow the staff to innovate!

A RADICAL PRESCRIPTION FOR TEACHING OF READING

(An excerpt from a speech by Calvin E. Gross, Superintendent of Schools, New York City, to the 44th Annual Spring Conference of Magazine Publishers Association on March 24-27, 1963 in Washington, D. C.).

For the slow-learning child, especially if he labors under a cultural handicap, I have a fairly radical prescription. It isn't as simple as it sounds, but it is merely this: that we absolutely insist on mastery of the fundamentals before a child goes on to study something else. I have said to my teachers time after time that I think there are priorities in the curriculum: that English, reading first, is the most important subject we teach. They've never argued with me at all. They know that reading is the fundamental tool for learning all the other subjects.

The trouble is, as far as I know, no school superintendent has ever given his primary teachers the opportunity of teaching reading thoroughly and completely to every child, the way I'm convinced they know how to do it. What we do is prescribe so many minutes per day of this and so many minutes of that. After the teacher has exhausted her reading time allotment then she must pass on to other things: science, social studies, health education, all very valuable, but all lower in priority than reading. And some of her children aren't learning to read as they could if she were able to spend more time with them. But what can the teacher do? She's helpless, and has to watch some children slip farther and farther behind.

Here's where the superintendent has to step in and help. His job is to provide the teacher with what she needs to work effectively (including adequate training) and then stand aside. What we should do, as soon as a child slips below a certain achievement level in reading, is put him in a class that's half as big, and double the time he spends on reading. If he continues to slip, cut

the class size and increase the time once again, because he has to learn to read! We should be very alert and move promptly before there is psychological trauma. Once a child becomes a remedial reading case, it may take years to repair the damage or it may be too late forever.

I want to make it quite clear that when I say "teach reading," I do not mean that pupils shall spend all their time sitting in a small circle with reading textbooks in their hands. The attention span of little children is quite short, a variety of techniques must be used, interspersed with other activities which exercise large muscles and let off steam. Reading is an extremely complicated skill. It is an art, as any good teacher knows. There are many related essential skills and there are many paths to success. I want to underline the obligation for a school system to make a commitment to the principle that reading is the basic intellectual skill, and then do something about it.

There is just no sense at all in pretending to teach world history and biology to a 10th grade student who reads at the fourth grade level. It's worth postponing this and that in favor of reading because once a child can read well, the door is open to other learning, if he can't read well, he'll find locked doors for the rest of his life. I may be wrong about all this but I intend to find out. It seems to me mainly a matter of assessing priorities and then allocating resources. Furthermore, I am not at all sure that it would have to cost a lot of money. Let me just add the footnote that after English comes mathematics. We probably ought to do some pretty hard thinking about the teaching of arithmetic too.

UW TO HELP TRAIN ARMY OF YOUTH COUNSELORS[1]

'Crash Program' Center Here

by Bill Sieverling

The University of Washington will help train counselors for a national network of youth opportunity centers aimed at aiding disadvantaged young people to find jobs and a place in society.

Secretary of Labor W. Willard Wirtz disclosed plans for the youth opportunity program in Washington, D. C. yesterday.

At the same time, he announced a crash program to recruit and train 2,000 counselor aids and youth advisors to help staff the centers.

Wirtz said the Labor Department aims to establish the centers in 105 cities and make them the focal point of an all-out community attack on the problem of youth unemployment.

The University of Washington is one of 24 universities throughout the nation selected to train counselors for the centers.

UW officials are currently drafting a proposal calling for an eight-week training program starting about July 13. It would be an inter-departmental program for about 60 trainees.

Marion E. Marts, UW vice provost, said the proposal will be submitted to the Labor Department next week for review and approval.

A spokesman for the Labor Department here said application forms for the program will be available by the end of the week at State Department of Employment Security offices.

The spokesman said recent college graduates with degrees in sociology or related fields are preferred, but he added that a degree is not an absolute

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[1]From the SEATTLE P.I., June 18, 1964

requirement. There is no age limit.

Written tests will be given applicants at local employment service offices throughout the country on June 27.

Washington State Employment Security Commissioner John F. Gordon said his department will help the Labor Department in recruiting candidates for the program.

Wirtz's announcement indicated that a special effort will be made to enlist returning Peace Corps volunteers.

The announcement also said that at least one youth center will be located in each state.

A Labor Department spokesman here said Seattle has tentatively been selected as the site for one of the centers.

Young people would be referred to the centers by schools, Selective Service boards, community agencies and other groups working with youth.

A young person going to a center would be interviewed and referred to a job if he is adequately prepared for one. If not, he would be tested and referred to a job training program or to other services designed to overcome medical, mental, or other handicaps.

The Counselors would follow through to see that the youth completed training and got a job. They would also help with any problems he might encounter after obtaining employment.

Eventually, it is estimated that 31,000 full-time counselors will be required.

The Labor Department is asking Congress for $38 million to support the centers.

The youth opportunity program is not part of the Johnson Administration's proposed $962.5 million anti-poverty package. But if the war-on-poverty program is enacted, it would provide additional programs to which unskilled and uneducated young people could be referred.

The Dropout[1]

SOCIETY INSISTS HE GO TO SCHOOL, BUT IS IT WISE?

A boy finds that he cannot cope with the social and educational problems of school. He turns 16, the legal age, and quits. He is a dropout. Currently, our society is in a dither to figure out some way to make him go back to school.

But is this sensible? Does it do any good to force youngsters who don't fit to stay in school? Must everyone "play the game" whether or not he has a chance to succeed?

The school in our society is a creature of the middle class. Lower-class youth are forced to compete with middle-class youth for grades and other status rewards. These rewards are given by middle-class teachers using middle-class standards.

Youths from the lower socio-economic classes are not adequately prepared for the kind of competition encountered at school. The early training at home and the attitudes and values of their parents limit their chances of success. When they realize their opportunities are limited, they feel insecure and frustrated. Their personal sense of worth is threatened. They may even lost confidence in their ability to learn those things they are capable of learning.

They Blame the Schools

The failure experienced at school provokes some of these youngsters to reject those middle-class success goals that are not available to them. They often blame the school system for their frustration and failure. Consequently, they feel justified in criticizing and openly attacking the school, the teachers, and the community.

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[1] Delbert S. Elliott, National Observer, Monday, March 23, 1964

Malicious mischief and vandalism are thus an expression of their rejection and disdain for these middle-class goals. Much delinquency is a by-product of failure at school.

Researchers in the field of delinquency are aware of the relationship between delinquency and school dropout. They point to studies that indicate that 35 to 40 per cent of all dropouts appear in juvenile court, that the delinquency rate for dropouts may be 10 times as high as for high school graduates.

Supporting the Theories

But it doesn't necessarily follow that being out of school--supposedly with nothing constructive to do--causes delinquency. It's possible that delinquency and dropout are related because they are different responses to similar problems.

Two separate studies, in Seattle and San Diego, support this explanation. In a 1960 follow-up study of youngsters who had dropped out of Seattle schools during the 1957-58 school year, it was found that 40 per cent had official delinquency records. But 80 per cent of those with records had delinquent referrals before they left school.

In the San Diego study, 90 per cent of the dropout-delinquents became delinquent while in school. Even more striking, the dropouts committed fewer offenses after leaving school than in a comparable period while in school.

Delinquency is only one of several possible reactions to failure at school. Dropping out of school is another. The typical dropout has been failing academically or socially for several years, and as soon as legally possible rejects the school milieu that has repeatedly rejected him.

This decision is not necessarily a bad one. Dropping out of school could eliminate the motivational stimulus to engage in delinquent behavior. The boy or girl who drops out is no longer involved in the unequal competition at school and escapes the frustration of continual failure.

A Double Standard

Yet efforts continue to force children into the middle-class mold. For example, the Michigan State Bar Association's Committee on Juvenile Problems recently proposed that the compulsory age for school attendance be raised from 16 to 17 as a means of dealing with the dropout problem.

That might reduce the dropout rate. It will not, however, solve the basic problem. In fact, it may aggravate it. Although conclusive evidence of relationship is not yet available, it is a fact that while our annual dropout rates have been steadily decreasing, our delinquency rates have been steadily increasing.

Any constructive program aimed at reducing the dropout rate must take into consideration undesirable consequences that may result from forcing young people to stay in school. The probability of delinquency may be increased, and at the same time the school must maintain a double standard. It is expected to provide educational programs of increasing excellence, while simultaneously serving as a community "baby sitter" for students marking time.

Programs designed to lure dropouts back to school have generally failed because the situation that led to the dropping out has not changed; the student was a failure before and becomes a failure again. About 800 dropouts from schools in Washington, D. C., for example, were persuaded to return to school. Within a month, 75 per cent of them left again. Daniel Schreiber, director of the National Education Association's School Dropout Project, suggests that as many as 90 per cent of dropouts who return to school will leave again before the end of the first semester.

The major problem associated with dropout is not the mere act of leaving school. It is the fact that there are no jobs available for this group of unskilled and untrained youth. The efforts to keep all youth in school or to get dropouts back to school will not ultimately solve this employment problem, and raising the compulsory school age will only temporarily postpone it.

Jobs May Be the Answer

The employment problem should be tackled head-on by the community, rather than the schools. Certainly potential dropouts who are intellectually capable of graduation should be encouraged to remain in school. But those who are not should be helped to find jobs or to learn vocational skills necessary for employment. There are now 1,400,000 U. S. youth between the ages of 14 and 19 who are unemployed, and this age group's unemployment rate of 17 per cent may double or triple in the next 10 years.

The community's greatest challenge thus is to find job opportunities for those with limited abilities. This approach to the dropout problem has a major advantage over programs designed to keep all youth in school. It should reduce, rather than increase, the urge to engage in delinquent behavior.

"TRAINED HANDS"

By Louis T. Matter

(Address to the T. & I Section of Washington Vocational Association, Tacoma, Washington)

I am here today not to praise or to criticize, but as a worried citizen, to talk to you about a problem that confronts my type of industry--and to make a few suggestions. Hopefully, suggestions with some merit.

For over 20 years I have worked directly with products of our educational system--college graduates, college dropouts, high school graduates, high school dropouts, grade school graduates, and those who can hardly read or write.

I have also worked with those who have had the foresight and opportunity to take and complete vocational training.

I have interviewed and counselled thousands of young men and women.

So many of the young people who want and need to work have partially trained minds and for the most part woefully untrained hands.

This is my theme today. --The glaring need for trained hands.

For both practical and psychological reasons those students who are not going on to college must have something usable to offer an employer--some tools to work with--something to rely upon. Their self-respect and confidence depends upon it.

I am fully aware that advancing technology is rapidly replacing the work functions of the unskilled and semi-skilled workers, and to some extent the skilled craftsmen.

Several other facts stand out just as strongly to me however:

1. There still are and there will continue to be millions of jobs requiring trained hands.
2. All our young people are not capable of--or will not have--the opportunity to complete college.

3. Our nation is having a tough time creating enough jobs today for each year's addition to the work force. What will it be like when the peak of the baby crop hits us in a couple of years--and from then on.

4. Unemployed young people create an explosive force that can cost us dearly in more ways than one--costs that can be many times higher than the cost of adequate schools.

In what I'm saying, I am not aiming criticism at our school authorities or instructors. The responsibility belongs squarely on the shoulders of all of us. We can solve our problem if we agree on what we need and are willing to pay for it.

I feel, however, that as citizens we have too greatly stressed the need for academic training and have sorely under-rated the need for vocational training.

The tragic results of this philosophy can be seen walking the streets today and they will be there in greater numbers tomorrow.

Unable or unwilling to follow the egg-head route, they drop out along the way and look for a job with nothing to offer in exchange for their wages except a partially trained mind and two wonderful but untrained instruments--their hands.

I thoroughly appreciate that many high school graduates and college dropouts do find work. Industry needs someone and we get by--by encouraging additional training or actually doing it. But many do not find work--and many more are in a type of work for which they are not suited or do not like.

If you think I'm exaggerating, sit in an employment office for a while or interview for apprenticeship programs, such as I do, and I'll guarantee your heart will come near breaking many times.

For apprenticeship, we only consider high school graduates or their equivalent.

There are relatively few apprenticeships open and the high school dropouts don't have a chance. Even the high school graduates are severely screened.

These men are between the ages of 18 and 24--often married--often with children--often out of work from one month to six months. With untrained hands only the most simple jobs are possible for them and there is so little need for

untrained hands.

They are discouraged, sometimes bitter, defiant, and definitely fearful.

As we look forward to our nation's future, I earnestly recommend that we take a good, hard, honest look at our educational system and seriously consider revising our preparatory educational structure.

For what it is worth, I submit the suggestion that we establish two honorable, equal, separate, and accepted routes for our students to follow. The Academic and the Vocational.

I would judge that the determination will need to be made at the 6th or 7th grade level--age 12 to 14--which appears to be the critical point.

By testing, counseling, parent guidance, and other means our youngsters may then be guided onto one path or the other--according to their God-given abilities and have the opportunity to make the most of such attributes as they are blessed with.

I do not believe that we can successfully graft vocational training onto our present school curriculum. It must be permitted to stand on its own feet and be oriented to turn out a finished product of its own.

Our true vocational schools, good as they are, are too few in number and come too late in the life of most of the students who need them.

I firmly believe we must, earlier in a student's life, give him the opportunity, test, guide, and counsel him, into one of two paths--vocational or college.

The vocational student, with a curriculum designed to support the training should prove to be a far better student in his vocational field than he is drifting through a college-oriented course in which he has little interest. Dropouts should be far less as a result.

True vocational training at the high school level should not only produce an individual with a better chance of earning a living, but should also radically change our present apprenticeship concept.

Vocational training must be fully recognized--fully supported--and fully financed--or in my opinion we are going to pay for its lack many times over in very painful ways.

As I have spoken of vocational training, I have placed the emphasis on trained hands. I appreciate that there are some fields such as distributive education where the training is of a different nature, but the concept of true vocational training holds just as well.

Insofar as facilities and teachers are concerned, I see no obstacle to the vocational students and the college preparatory students sharing the same buildings and the same teachers for such basic classroom work as will be common to both. Completely duplicate buildings and instructors should certainly be avoided except as necessary to the course being followed.

By basic studies, I mean the modern version of--reading--writing--and arithmetic--and I would like to add spelling and the ability to communicate.

The vocationally trained high school graduate should also have the road to advanced learning open to him--at technical school--or at our community and junior colleges.

These are my own opinions. I can only hope there is some merit to them.

If I am off the beam, don't hestitate to set me straight, individually or collectively.

Maybe I am like one of the three blind men and the elephant in that oldtime fable. I can only see what I feel.

But this I can tell you for sure--what I feel, and what I see as I look at the next ten years isn't good. There is going to be a large group of youngsters who cannot follow the college trail. Please train their hands so that they have a fighting chance to compete for a living.

TWELVE CHERISHED ILLUSIONS REGARDING THE VOCATIONAL HIGH SCHOOLS

Irving Waldt, Principal
William E. Grady Vocational High School
Brooklyn, N. Y.

ILLUSION 1. A student too retarded to complete, with success, an academic course can be trained to become a skilled mechanic or craftsman. (Those not book-minded are hand-minded.)

THE FACTS ARE: Experimental studies, which have been made in the area, show a high correlation between native ability and success in skilled trades. Experience in the vocational high schools shows dramatically that the retarded student generally is equally retarded in developing the status required for the skilled craftsman. The skilled mechanic or craftsman of today cannot sustain himself in a trade without referring regularly to highly technical trade manuals and handbooks.

ILLUSION 2. A student uninterested in school will have his interests reawakened through the vocational curriculum.

THE FACTS ARE: No study has shown any such relationship to be a general truth. The number of such instances is extremely limited. So infrequently does this phenomenon occur that it cannot be used as a justification for recommending this means of reawakening interest. The reluctant learner generally appears to remain reluctant despite changes in educational environment.

ILLUSION 3. The behavior problems and the emotionally disturbed will be rehabilitated by the occupational therapy program in a vocational high school.

THE FACTS ARE: The vocational high schools are not equipped or geared to provide an educational therapy program nor is occupational therapy one of the objectives inherent in the vocational curriculum. Therapy must be administered not by teachers in schools but rather by therapists, in specially equipped facilities.

ILLUSION 4. The vocational high school student attending a trade school spends his time in shop virtually all day or most of the day.

THE FACTS ARE: The student attending a vocational high school devotes a longer day, only half of which is spent in shop. The remaining half of the day is devoted to an academic program highly similar to that of any academic high school, with the exception that, in place of studying a foreign language, the vocational student studies technology in the form of applied mathematics, science, and drawing.

ILLUSION 5. The vocational high school curriculum will meet the needs and provide for the goals of all youth whose needs and interests are not met by the academic high school.

THE FACTS ARE: The vocational high school curriculum has been organized to meet the special needs and to provide the special goals of youth who have definitive vocational interests and aspirations; whose abilities are such as to enable them to profit from such training. The vocational program is less well-geared to meet the needs and

interests of youth reluctant to attend school than is the academic high school program. The latter program embraces such flexibility and covers so extensive a range that any youth, whose interests and needs cannot be met by the academic high school, will rarely have them met by the vocational high school unless he has an expressed desire and the abilities required to sustain himself in a vocational program.

ILLUSION 6. The vocational high school curriculum provides a second and third track program for the intellectually or emotionally handicapped.

THE FACTS ARE: The vocational high school curriculum is a single-track rather than a multi-track program. The limited enrollment in the vocational high school, plus the requirements set up by Federal, State, and City authorities, severely limit opportunities for setting up special tracks for handicapped students. The curricular structure and the mandates of the vocational high school program narrow its offerings to the ones which will best meet the needs of the students whose goals and aptitudes are those required for entering a skilled trade. Students, who are intellectually or emotionally handicapped, pose the additional problem involved in activities which present hazardous situations wherever tools and power machinery are handled.

ILLUSION 7. The staff employed in the vocational high schools is specially trained and gifted to deal with the intellectually retarded and emotionally maladjusted.

THE FACTS ARE: The teachers employed in the vocational high school are those who have taken the same examinations and have the same qualifications as those employed in any other high school in our system. They are not required to have special training or preparation of a type which would be required to deal with students who have special intellectual or emotional problems.

ILLUSION 8. The needs and goals of the non-retarded and emotionally stable are best met by the academic high school rather than the vocational high school.

THE FACTS ARE: Large numbers of non-retarded and emotionally stable students attend academic high schools, complete the college preparatory course and do not enter college. Many of these students have specific vocational goals but because of environmental and home pressures, prefer to avoid attending a vocational high school. Their needs often would best be met by a vocational program rather than the one which they complete in a neighborhood high school. The presence of a large preponderance of less gifted and emotionally distressed in the vocational high school sets up in the mind of the parent and community, the picture of an unhealthy, unattractive school environment. In this sense, the vocational high schools require an aggressive implementation of a policy making for intellectual integration.

ILLUSION 9. Students who attend vocational high schools have terminal goals and cannot pursue higher educational aspirations in colleges or institutes.

THE FACTS ARE: Hundreds of students who have attended vocational high schools are now attending colleges and have received degrees from colleges, junior colleges, and institutes. Hundreds of others will enter such high educational facilities in the future. Many students enrolled in the technical courses offered by vocational high schools pursue their interests further in engineering schools in the day or evening.

ILLUSION 10. Vocational school preparation is required for success in all occupations.

THE FACTS ARE: The vocational school curriculum is not geared to train those who aspire to many occupational areas. For laborers, production workers, assembly line employees, stock handlers, and numerous other forms of employment, it has been established that on-the-job training is a more effective and rapid means of developing the limited skills required. A three or four year vocational program is a highly questionable use of the taxpayer's money in view of the higher cost of such a program per student as compared with that of the academic high school.

ILLUSION 11. The nature of the vocational curriculum provides such flexibility that programs can be devised to meet the special requirements of deviates and reluctant learners.

THE FACTS ARE: The vocational curriculum is extremely inflexible. The student's day includes the assignment of the student to classes throughout the day with no study periods or other non-class time with the exception of the daily lunch period. The student is required to follow a curriculum pattern and, in most cases, such patterns include either very few or no electives at all. This, in addition to the smaller number of students who can be accommodated in a vocational high school, makes it extremely difficult to develop individually adjusted programs to meet special personal needs.

ILLUSION 12. Parents are reluctant to permit qualified youth to enter vocational high schools because college entrance is the chief goal of the student.

THE FACTS ARE: The factors which often influence a student's selection of a high school are generally superficial in nature. They are often based on the reputation, prestige, or the proximity of the school, and the desire to remain with friends. The large number of children who attend academic high schools and never enter college belies the rationalization that college entrance is the chief reason for the selection of such schools. Illusions of this type, as well as those previously referred to, help to dissuade school personnel, parents, and youth from considering the vocational high school in its proper role. The prestige element will not become operable for the vocational high school until these cherished illusions are brought to light, discussed freely, and their fallaciousness revealed for all to see.

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SEATTLE PUBLIC SCHOOLS

Memorandum

August 2, 1963

To: Fred E. Breit, Deputy Superintendent

From: Douglas E. Sayan, Coordinator, Vocational Needs Study Committee

Subject: Proposed prevocational education pilot program proposals submitted pursuant to the Vocational Needs Study Committee's recommendations of June 1963.

BACKGROUND

At the completion of the committee's deliberations for 1962-63, the following general recommendations were made:

1. Continue the committee study as outlined in the stated objectives.

2. Continue to work toward the establishment of a program which will more nearly meet the curriculum needs of all youth.

3. Establish an interim (summer) committee to continue deliberations.

4. Set up a pilot project in the fall of 1963.

The interim committee met and requested further study and planning preliminary to establishing the following pilot projects pursuant to recommendation four.

INTRODUCTION

The Seattle Public Schools, as any public institution, is responsive to the needs of the patrons it serves. Thus the curriculum is continuously evaluated to ensure comprehensive programming. The proposed secondary school prevocational educational programs are pilot projects of an experimental nature structured to provide:

1. Additional prevocational experiences for youth wishing to pursue post-high school training for business and industry, and

2. A more truly comprehensive curriculum aimed at increasing the holding power of the high school through serving youth who might otherwise decline the traditional program.

PROPOSED PROGRAMS

SECONDARY SCHOOLS	Starting Date
Food Service	
Lincoln High School	September 1963
Franklin High School	January 1964

Proposed Programs (continued)

Secondary Schools	Starting Date
Data Processing	
Edison Technical School	September 1963
General Industrial Shop	
Nathan Hale High School	January 1964
Garfield High School	January 1964
ADULT-VOCATIONAL DIVISION	
Occupational Guidance Center	January 1964
Washington Junior High School grounds	

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March 5, 1964

Mr. Louis Bruno
Superintendent of Public Instruction
State of Washington
Olympia, Washington

Dear Mr. Bruno:

We are confident the Directors and Administrators of Seattle School District No. 1 will be pleased to make their resources available to you as you develop the State plan for Vocational Education in compliance with the regulations governing expenditure of funds available to the state under Public Law 88-210, 1963 and Public Law 87-415, as amended by Public Law 88-214.

Of particular concern to this committee is the need to provide opportunity in the new plan for a realistic program of vocational counseling at the secondary level; a program which is not presently available through the existing State Plan.

According to our Research Department, less than twenty per cent of our high school graduates continue on to complete the requirements for a baccalaureate degree. Approximately fifty per cent of our graduates enter college, however; thus, immediate vocational guidance is vital to fifty per cent of these youth while a delayed need for another thirty per cent of our graduates will exist within one to three years following their college or university matriculation.

Currently in each of our secondary schools some vocational guidance activities occur. However, because of other pressures for the counselor's time (our pupil counselor ratio is one to four hundred students), very little time is in fact available for vocational counseling.

In view of the present finance problems there is no thought of increasing counselor time or of reducing the pupil-counselor ratio to allow more vocational counseling time.

L. Bruno, Olympia
3/5/64

Therefore, in view of the anticipated Federal allotment to the States which is in part for counseling programs, we propose the State plan be written to allow districts to assure each secondary school a minimum of three hours daily vocational counseling time.

We would like to plan three hours released time for these people during 1964-65.

Also, we are proposing a summer workshop during which vocational counselors would examine district-wide practices and then write up a proposed vocational guidance program for grades 7-12.

Cordially,

VOCATIONAL NEEDS STUDY COMMITTEE

Douglas E. Sayan, Coordinator

cc: Herman N. Miller
Assistant Superintendent
Division of Vocational Education

DS: mp

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March 13, 1964

Mr. Douglas E. Sayan, Coordinator
Vocational Needs Study Committee
Administration and Service Center
815 - 4th Avenue North
Seattle, Washington

Dear Mr. Sayan:

This will refer to your letter of March 5 regarding the development of a State Plan for Vocational Education to implement the vocational program under Public Law 88-210.

To date guidelines to assist the State in the preparation of a State Plan and rules and regulations to expedite the Act have not been received from the U. S. Office of Education. Recent information indicates that the Advisory Committee to the U. S. Office of Education has been appointed and is to meet about the middle of April. The vocational staff of the U. S. Office of Education has been preparing State Plan guidelines and rules and regulations and it is anticipated that these will be received soon after they have been reviewed by the Advisory Committee.

Though an authorization is made in the Act, funds have not been appropriated. Again, rumor has it that action may be taken on the supplementary appropriations bill and funds may become available around the first of May.

The vocational staff is working on the revision and addition of the State Plan and hope that only minor revisions will need to be made when guidelines are received. More definite information will be available when the rules and regulations for the administration of the Act are received from the U. S. Office of Education.

Sincerely yours,

(signed)

LOUIS BRUNO
State Superintendent

VT 006 298
Anderson, Katherine Krista
Experiences of Iowa Senior High School Girls in Housing.

Iowa State Univ. of Science and Technology, Ames
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 93p.

SENIORS; FEMALES; INDIVIDUAL CHARACTERISTICS; *STUDENT EXPERIENCE; *HOME ECONOMICS EDUCATION; *HIGH SCHOOL STUDENTS; *HOUSING; FAMILY MANAGEMENT; *HOMEMAKING SKILLS; HOME MANAGEMENT; DECISION MAKING; SOCIAL STATUS; MASTERS THESES
IOWA

To determine family housing experiences and the ways in which grade level, intellectual capacity, place of residence and social status relate to these experiences, 406 randomly selected high school students representing 34 Iowa schools were surveyed. The data were analyzed to determine frequencies of response for each item by grade level, identify clusters of items, and correlate cluster scores with personal characteristics. Simple and routine tasks were found to be performed most frequently while major time consuming tasks were performed less frequently. One quarter or more of the sample had opportunities to help select wall coverings, fabric and non-fabric accessories, recreation equipment, window treatment and furniture. The higher the grade level, the more experience girls had with housecleaning tasks outside the home for pay and with interior decorating activities. The higher the intellectual capacity, the more experience girls had with housecleaning tasks outside the home and with knowledge of social conditions influencing housing. The findings are presented in tabular form. The questionnaire, direction sheet, letters,social status classification, coding plan, and a bibliography are included. This Master of Science Thesis was submitted to Iowa State University of Science and Technology. (FP)

VT 006 298

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Experiences of Iowa Senior High School Girls In Housing

by

Katherine Krista Anderson

VT006298

Directed by

Eleanore L. Kohlmann, Ph.D.
Associate Professor, Home Economics Education

Thesis conducted as part of Project No. 18, Bases for Planning Curricula in Homemaking for Junior and Senior High School Pupils in Iowa, under grant from Iowa Department of Public Instruction, Division of Vocational Education, PL88-210 Sec. 4(a).

Iowa State University
of Science and Technology
Ames, Iowa
1966

EXPERIENCES OF IOWA SENIOR HIGH SCHOOL GIRLS IN HOUSING

by

Katherine Krista Anderson

A Thesis Submitted to the
Graduate Faculty in Partial Fulfillment of
The Requirements for the Degree of
MASTER OF SCIENCE

Major Subject: Home Economics Education

Approved:

Eleanore L. Kohlmann
In Charge of Major Work

Alberta D. Hill
Head of Major Department

J B Page by G Holmes
Dean of Graduate College

Iowa State University
Ames, Iowa

1967

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THE MARGINAL LEGIBILITY OF THIS PAGE IS DUE TO POOR ORIGINAL COPY. BETTER COPY WAS NOT AVAILABLE AT THE TIME OF FILMING. E.D.R.S.

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INTRODUCTION

Formal education is preparation of the pupil to deal with his present and future environment. It assists him in assimilating knowledge with experience to expand concepts and develop generalizations which will help him solve life problems. Hannah defined the functions of formal education when he stated,

> Education can at best only hope to help a student lay down the foundation on which he or she can afterwards build a life that is effective, rewarding, satisfying, and useful, whether judged from the personal point of view or of the society of which we are a part. (6, p. 749)

The planning for formal education involves the determination of components of curriculum appropriate for the learner. To be appropriate, consideration needs to be given to the body of knowledge, the learner and the society in which he lives. Gardner in discussing curriculum planning expressed the importance of these three determinants.

> Today, any consideration of content selection must include provisions for dealing with subject matter, the learner and society--all as one and each interacting to effect desired modifications of behavior. (5, p. 122)

The body of knowledge is a spectrum from which the content for curriculum is selected. The knowledge related to home economics is extensive and varied. Stovall suggested the broad content of home economics and also the depth of concepts, ". . . home economics is concerned with those things that are basic in society -- people, families, and homes....home economics is concerned with life in its broadest sense and the application of learning." (16, p. 537) Each area of home economics has breadth of content within itself as well as being interrelated with other areas. Family housing includes the physical, social, psychological and economic factors as

they influence family shelter.

One of the criteria used to determine appropriateness and applicability of content is society. Contemporary society creates problems and concerns for youth. The problems continue to change with society, forcing educators to continually assess society and the influence it exerts. Certain societal conditions which effect the teenager are the family place of residence and social status and the employment status of the mother.

A second criterion used to determine appropriateness of content is the learner: his stage of maturity, background of experiences, educational needs and personal goals. Knowledge of the learner and his experiences in society can indicate what has been acquired previously and present interests and concerns. Past learnings show where he is in the learning process and his present interests and concerns suggest sources of motivation. The value of knowledge of pupil concerns is expressed by Stratemeyer,

> These everyday concerns of learners are the sources of situations which have meaning for them in the light of their maturity and experience and which provide strong motivation for learning. Expressed or unexpressed, these immediate problems, concerns, and interests need to be the starting points around which classroom experiences are developed. (17, p. 114)

The purposes of the present study were to determine the family housing experiences of Iowa girls in grades 9 through 12; to discover the differences in the kinds and frequency of experiences in relation to grade level and to study relationships between experiences and the grade level, intellectual capacity and place of residence of the girls, social status of the families and working status of the mothers.

REVIEW OF LITERATURE

The literature reviewed included studies concerning experiences of high school pupils in family housing completed in the ten years prior to the present study. The following presentation includes those involving experiences in family housing and the influence of grade level, place of residence and working status of mother. Two investigations regarding the influence of the occupation of the father on pupil experiences were also reviewed. Because occupation of the main provider was a basis used in the present study to establish family social status, these studies were considered relevant. No studies were found concerning the influence of pupil intelligence on experiences in housing. Only those objectives and findings relevant to the present study will be included.

Schwieger (15), in a study completed in 1966, investigated the kind and frequency of experiences Iowa seventh, eighth and ninth grade boys and girls were having in family housing. She also explored the extent to which the experiences differed according to grade level, sex and working status of mother.

Family housing was defined by Schwieger as, ". . . the physical, social, economic and psychological aspects of shelter for those persons forming a single household or living unit" (15, p. 3). Within this definition, she divided the scope of family housing into six major subject matter groupings: cleaning and other household tasks; developing and using storage space within the home; improving physical aspects of the home and making it more attractive; selecting, using and caring for home furnishings and household equipment; family relationships related to housing and safety

in the home.

A questionnaire based on the content of these subject groupings was developed and administered to a statewide random sample of 235 boys and 240 girls. Respondents indicated whether they had participated in the designated experience often, seldom or never. Schwieger defined these options as: often, once every week to once every three weeks; seldom, once a month to once a year and never, no participation in the activity.

Schwieger found more than half of the girls said they often participated in 33 of the 44 household tasks appearing on the questionnaire. Two-thirds or more of the girls reported they often participated in nine of the 23 cleaning, all of the six straightening and organizing, four of the nine laundry and two of the six equipment care tasks.

More ninth grade pupils participated in the tasks than did pupils at the other grade levels. Two-thirds or more of the ninth grade girls often participated in 11 of the 23 cleaning and all of the six straightening and organizing, five of the nine laundry and two of the six equipment care tasks.

Articles of home furnishings and household equipment selected by one-half or more of the ninth grade girls were accessories; lighting; fabrics; window treatment and recreation, hobby and personal grooming equipment. Guides used by two-thirds or more of the girls when selecting the home furnishing articles were color, sturdiness of construction, cost, style, size and pattern. None of the guides were reported to have been used in selecting household equipment by two-thirds or more of the girls.

Pupil participation in remodeling, redecorating and rearranging activities also was investigated by Schwieger. Two-thirds or more of the

ninth grade girls said they had cleaned equipment after use, rearranged storage of items in drawers, rearranged accessories on shelves or bookcases, rearranged storage of items in closet, hung pictures or mirrors, decided where furnishings should be placed, rearranged storage of items in cabinets or cupboards and chosen a color scheme for a room.

How pupil experiences differed according to the working status of the mother was explored. Generally speaking, pupils, regardless of sex or grade level, whose mothers worked for pay outside the home did not carry more responsibilities for household tasks than did those whose mothers did not work. Regarding specific tasks, more pupils whose mothers worked than did not often cleaned the bathtub or shower stall, often watered and cared for house plants, selected or helped to select large kitchen and laundry equipment and painted furniture or accessories. Whereas, more pupils whose mothers did not work selected or helped to select accessories and wall coverings, plastered walls or ceilings and painted or drew pictures.

A study designed to "add to the body of knowledge about adolescent girls and to help build a foundation for the development of effective activity programs for young people" was conducted by the Survey Research Center, University of Michigan, for the Girl Scouts of the United States (4, preface). A sample of 1,925 girls in grades 6 through 12 was interviewed. Among the questions asked were those concerning the amount of responsibility daughters were expected to take in the home.

It was found that one girl in ten assumed major responsibilities in the home and one in twelve had no special duties. Light responsibilities were assumed by 44 per cent and moderate responsibilities by approximately one-third.

With increase in age more responsibilities in household tasks were expected of the girls. Of 259 girls over sixteen, 15 per cent assumed major responsibilities; nearly two-fifths, moderate and nearly one-third light responsibilities. The number with no responsibility, however, increased slightly with increase in age.

The Department of Home Economics of the National Education Association made a study of the home responsibilities of girls in an effort to help teachers ". . . know their students -- their interests, needs, home backgrounds, including the responsibilities they assume in their home -- as a basis for developing an effective home economics education program" (10, p. 1). The study was designed to identify the responsibilities girls assumed in their homes, their attitudes toward these responsibilities and whether girls whose mothers worked outside the home were assuming more responsibilities than those whose mothers did not work.

Junior and senior high school teachers who were members of the Department were asked to cooperate in the study. Five hundred and seventeen teachers returned the survey form. Participants included a total of 48,850 pupils from grades 7 through 12; it was assumed these pupils were fairly representative of pupils in various sized communities. The percentages of pupils from the four high school grades were 9th grade, 23.1 per cent; 10th grade, 17.7 per cent; 11th grade, 10.9 per cent and 12th grade, 10.5 per cent. Slightly over one-third of the pupils in each grade had mothers who worked outside the home.

Housing responsibilities assumed by large proportions of girls at all grade levels were make beds, clean house and iron clothes. Wash windows and clean cupboards were those tasks done by the smallest percentage of

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girls.

Variations in the percentage of girls by grade who did tasks were: more ninth grade than girls in the other three grades made beds and cleaned cupboards, more 12th grade girls washed windows than 9th, 10th or 11th grade, larger percentages of 10th and 11th and of 11th and 12th grade girls respectively dusted furniture and cleaned floors than pupils in other grades.

Place of residence and working status of mother influenced slightly which tasks were done. A slight tendency existed for a smaller percentage of city girls to assume responsibilities than the total, especially with older girls. High school girls were more likely to assume home responsibilities if their mothers worked; the reverse was true at the seventh grade. Differences in the percentage of high school girls who assumed three responsibilities according to working status of mother was greater than the differences for the other responsibilities: make beds, clean house and clean cupboards. Hurt observed the type of tasks done by girls whose mothers worked by those whose mothers did not work: "As they grew older; and, if their mothers worked, they seemed to have more of a managerial role to play judging from their participation in tasks that were less routine in nature." (10, p. 6)

Allbright (1) conducted a study in 1965 to determine the number and type of home responsibilities performed by 25 ninth grade girls enrolled in Homemaking I in a junior high school located within the Dallas-Fort Worth metropolitan area. A further purpose was to relate the number and type of tasks assumed to the employment status of the mother. Ten of the mothers were full-time wage earners while 15 were full-time homemakers.

Information concerning personal and family background and number and kinds of home responsibilities was collected by five instruments. Four of the instruments were developed by the author and the fifth was revised from one developed earlier: Home Management Information Sheet, Home Activities Check List, Check Sheet for Mothers, Home Management Test and Survey Form for Girls, revised.

Data obtained indicated the home activities which pupils performed regularly, occasionally and never. The items most frequently marked as regularly performed by the girls regardless of the employment status of their mothers were cleaning rooms, making beds and cleaning floors. Laundering and ironing clothes were performed occasionally by larger numbers of girls than any other tasks.

Findings regarding the employment status of mother revealed that 9 of the 10 most frequently performed housing activities were the same for daughters of working as for non-working mothers. Those tasks listed as being frequently performed by both groups of girls were vacuum floors, dust furniture, change sheets, make beds, clean the bathtub, hang clothes after undressing, wash dishes, group similar clothes and fold clothes to store. Daughters of full-time wage earners frequently rearranged furniture; whereas, daughters of full-time homemakers frequently cleaned the range. Girls of working mothers laundered clothes and used the dryer more frequently than the girls whose mothers were full-time homemakers; conversely, a larger percentage of the daughters of full-time homemakers ironed and altered clothes. Infrequently performed tasks by both groups were waxing floors, defrosting the refrigerator, yard work and washing windows.

Discovering the responsibilities assumed by girls in their homes was

one of the purposes of a study by Hooley (9), conducted in 1964. One hundred and eighteen girls in grades 7 through 12 in the Middleburg Community School, Elkhart County, Indiana responded to a questionnaire and supervised questioning.

The questionnaire included items designed to provide personal data and identify performance of tasks related to child care, clothing, family living, foods, home nursing, housing and management. Frequency of performing the tasks was indicated as usually, tasks done at least 80 per cent of the time they were done at home; sometimes, tasks done more than half the time; seldom, tasks done less than half the time and never, tasks never done.

Tasks usually done by 75 per cent or more of the girls included make bed, keep room in order; pick up papers, books, clothing and sweep with vacuum weekly. Few girls indicated they chose appliances, dishes or furniture.

The personal characteristics, grade level, employment status of mother and occupation of father, influenced the frequency of participation in the housing tasks; whereas, pupil place of residence had no effect on frequency of participation. There tended to be an increase in participation at the usually and sometimes levels in housing tasks from the seventh to the ninth grades and then a decrease. Girls whose mothers were not employed and those whose mothers had full-time employment participated equally in the tasks with girls whose mothers had part-time employment participating more.

Occupations of fathers were grouped in three employment categories using the U.S. Bureau of Census, Classified Index of Occupations and

Industries. Girls whose fathers were middle class workers reported a higher percentage of participation in homemaking tasks than the other girls. The largest percentage who said they never did the tasks included those whose fathers were in occupations grouped as upper class.

The Mississippi State Board for Vocational Education (14) conducted a study designed to determine the extent to which first year vocational homemaking students shared responsibilities in the home. The sample included 170 high schools for white pupils in Mississippi in which there were first year homemaking classes with a minimum enrollment of 12 pupils; the total sample included 2,645 girls.

Personal information collected regarding each pupil included the occupation of her father or the main provider of the family. Nearly one-fourth of the providers were semi-skilled or unskilled workers. Eighteen per cent of the fathers were farmers and 10 per cent worked at farm, non-farm combinations. Executives, independent business owners and professional people each comprised four per cent of the occupations. Others included managers, clerks, skilled workers, and non-farm combinations.

A pupil whose father was an unskilled worker, skilled worker, a farmer, combination of farm and non-farm jobs or professional worker was more likely to do by herself such jobs as making beds, dusting, cleaning floors, washing windows, laundering curtains and deciding on the order in weekly cleaning than pupils whose fathers were engaged in the other occupations. A pupil whose father was a manager, executive or professional worker was more likely to keep her room in order and select the furnishings for her room.

Pupil participation in the making of major purchases was influenced

also by the occupation of the main provider. Pupils least likely to participate in the decisions about major purchases were those whose fathers were farmers or unemployed. Most likely to participate in the decisions were those whose fathers were manager, executives and professional workers or whose fathers worked in occupations representing a non-farm combination of jobs.

METHOD OF PROCEDURE

Design of the Study

The study was designed to identify the experiences in family housing of Iowa high school girls in grades 9 through 12. A further purpose was to determine the relationships between the experiences and the grade level, intellectual capacity and place of residence of the girls; social status of their families and working status of their mothers.

To define the scope of family housing appropriate at the high school level, the literature was reviewed and staff members in home economics education and subject matter areas concerned with housing were consulted. Literature surveyed consisted of state and local curriculum guides, pupil and teacher references, research reports and other professional publications. Major resources were Concepts and Generalizations: Their Place in High School Home Economics Curriculum Development (2) and the report of a study completed by Schwieger (15). In discussions with consultants, exploration was made of the scope as perceived at present and as anticipated in the near future.

The aspects of housing identified were selection, care and maintenance of housing; selection, use and care of household equipment and home furnishings; interior decoration and national and world social conditions influencing family and public housing. Safety in the home, use of housing facilities for family activity and development and use of work and storage space were also identified but were not selected to be investigated in the present study.

Data to fulfill the purposes of the study were collected by means of a

questionnaire. The kind of data desired of each aspect of housing determined the content of items and the format. Because of the diversity of content, the questionnaire was divided logically into five parts.

The first part dealt with household tasks commonly involved in the care and maintenance of shelters. These tasks vary in degree of complexity and in the frequency with which they are performed in an average household. The respondent was asked to indicate the frequency of performing each task in her home and, if she were employed to do household tasks outside her home, the frequency of performing each task while employed. The options for response were seldom or never, occasionally and often.

Part two contained items concerned with experiences in interior decoration. The listed experiences were of two kinds: participation in making decisions and performance of decorative activities. Pupils responded by indicating which of the experiences they had had.

Part three involved selection of household equipment and home furnishings. For those experiences which the pupil had, she was asked to identify the factors taken into consideration when making the selections.

The fourth part of the questionnaire concerned national and world social conditions that influence family housing. Pupils were asked to indicate the degree of indirect and direct contact they had had with the conditions. The options for response were no experience; heard about (radio, television, conversation); read about (newspaper, magazines) and aware of possible effect upon own family. Pupils were instructed to indicate one or more responses depending upon their experiences. The levels of response were assumed to represent a continuum of increased degree of internalization (12).

The last part of the questionnaire dealt with the selection of family housing. Only those pupils who had moved in the past four years were asked to respond to the section. Respondents were to indicate which decisions they had helped to make and the factors they had considered when making the decisions.

In order to fulfill the purposes of the study, information concerning characteristics of the pupils and their families was requested on the first page of the questionnaire. The respondent was asked to indicate her name, grade in school, family place of residence, working status of mother, occupation of father and the amount of formal education completed by each parent. Additional information requested was whether the family employed someone to do household tasks in the home and whether the respondent did housework for pay outside the home.

A preliminary form of the questionnaire was administered to a group of high school pupils in grades 10 through 12 to observe difficulties in responding, obtain suggestions for improvement and estimate time required for the administration. As a result of the trial use, the format of the part dealing with the selection of household equipment and home furnishings was revised extensively; minor revisions in wording were inserted throughout the questionnaire and item changes, including the elimination of two, the addition of one and the combining of two items, were made. The final form of the questionnaire is included in the Appendix.

A letter and a reply card to be sent to the administrators of schools from which data were to be collected were prepared. The letter explained briefly the purpose of the study and requested cooperation. Space was provided on the card for the administrator to indicate whether his school

would cooperate and the name of the faculty member designated to assist with the administration of the questionnaire. Copies of the letter and reply card are included in the Appendix.

Materials developed to be sent to the person in each school designated to administer the questionnaire were an introductory letter, a sheet of directions and a report form. The letter acknowledged the cooperation of the school administration and briefly explained the study and the role of the one assisting in the collection of data. The sheet of directions gave the steps to follow in administering and returning the questionnaire forms. The report form provided a means for recording the percentile rank on the Iowa Test of Educational Development of each pupil. Copies of the introductory letter, direction sheet and the report form are included in the Appendix.

Sampling Procedure

The procedure used to select schools to participate in the study consisted of drawing a stratified random sample of 35 Iowa high schools. To assure representation, the schools were stratified according to district population and high school enrollment. For each Iowa high school, the enrollment and school district population were obtained from a bulletin prepared by the Iowa Department of Public Instruction (11). Schools which were involved in other research studies being conducted within the College of Home Economics, Iowa State University, during the 1965-1966 school year or who were cooperating as student teaching centers were eliminated.

The remaining schools were listed in descending order both by district population and by school enrollment. Each of the two listings were divided

into four equal parts. A four by four grid was prepared and each school was plotted in the appropriate cell according to the criteria. Of the 16 cells, nine contained only a few schools which were redistributed among the remaining seven cells. The sample of 35 schools was randomly drawn proportionately to the number of schools in the seven remaining cells.

From each school 12 girls were randomly selected, three from each of the grades 9 through 12. The girls were selected by using an alphabetical listing by grade to determine the first girl whose last name began with each of the letters S, M and C. If there was no girl whose last name began with any one of the letters, the same procedure was to be followed for the letters R and B.

Collection of Data

Thirty-two school administrators responded positively to the letter of request with two weeks. The remaining three administrators were contacted by phone and their cooperation was obtained. Three of the administrators requested additional information about the study and to see a copy of the questionnaire before giving their approval.

A packet of materials was mailed to the designated cooperating staff member in each of the participating schools. The packet consisted of the introductory letter, 12 copies of the questionnaire, a report form, a sheet of direction and the mailing labels and postage to be used in returning the forms.

After a two week period the seven schools that had not returned the materials were contacted by phone. Materials were received from six of the schools. Returns from two of the schools were incomplete and one school had

an additional pupil in one grade substitute for the lack of a pupil in another grade. The final result was a return of 406 questionnaires from 34 schools. The number of questionnaires returned by grade level was 103 from the 9th grade; 102, 10th grade; 100, 11th grade and 101, 12th grade. A listing of the schools cooperating in the study is included in the Appendix.

Analysis of Data

Preparation of data for analysis involved two preliminary steps, the determination of a social status score and an intellectual capacity score for each girl. Social status scores were computed from a formula involving the prestige rating of the occupation of the father and the levels of formal education of both parents. The intellectual capacity scores were determined by placing percentile scores from the Iowa Test of Educational Development into decile groups and assigning scores from 0 to 9. The computational procedure for determining the social status score and the coding plan used in processing of data are included in the Appendix.

The analysis involved obtaining frequencies of level of response for each item by grade level, identifying clusters of items, and correlating cluster scores with personal characteristics. Clusters of items were determined by logically grouping related items for the parts dealing with selection of home furnishings and household equipment and national and world social conditions. Clusters of items for the parts concerning household tasks and interior decoration were formed by intercorrelating and by making subjective observations of items within parts of the questionnaire.

Finally, relationships existing between cluster scores and personal characteristics were explored.

FINDINGS AND DISCUSSION

Data were analyzed to determine what experiences Iowa high school girls were having in family housing and how often they were having certain kinds of experiences. Further analyses were made to determine relationships between experiences and grade level, intellectual capacity and residence of the girls, social status of their families and working status of their mothers.

Two criteria were used when selecting the findings to be discussed. One, variation in numbers or percentages of response of 10 or more exists between two or more groups that are being compared. Two, the correlation between an item cluster and a personal characteristic is significant at the one or five per cent level. Certain other results which were believed to be pertinent for curriculum planning but did not meet the above criteria, also, will be noted.

A description of the personal characteristics of those who participated in the study is given as a basis for interpreting the data. Following the description the findings are presented in two parts: first, an identification of the experiences and second, the relationships between experiences and certain personal characteristics.

Personal Characteristics of the Sample

The sample consisted of 406 girls enrolled in Iowa schools, grades 9 through 12. Five personal characteristics were used in analyzing data. They were grade level, intellectual capacity and place of residence of the girls; social status of their families and working status of their mothers.

The number of girls by grade level who participated was 103 from grade nine; 102, grade ten; 100, grade eleven and 101, grade twelve. The slight variation among grades was a result of an incomplete return from two schools and a substitution for lack of a pupil in one grade with an additional girl from another grade by a third school.

The intellectual capacity score for each pupil was determined from a decile grouping of scores on the Iowa Test of Educational Development. The intellectual scores of the girls are shown by grade level in Table 1. Inspection showed a concentration of scores at the upper end of the scale indicating a larger number of girls with higher than with lower capacity participated in the study. Whereas, there was fluctuation in the number of girls in the decile groups when examined by grade, when studied as a total group the number of girls at each higher decile increased progressively. The concentration at the upper end of the scale is especially evident at the 12th grade.

Larger numbers of respondents lived on farms and in town or city than on a rural non-farm residence. The number of pupils from the farm was approximately 10 per cent greater than the number of girls who indicated town or city residence. Only approximately six per cent of the total sample indicated rural non-farm residence. The number of girls by grade level and residence is shown in Table 2.

In determining pupil social status groups an attempt was made to place approximately equal numbers of pupils in each of three groups: lower, middle and higher. This did not prove possible as a large number of girls had the same score. As a result, fewer than one-third of the girls were placed in the lower and more than one-third were in the middle social status

Table 1. Number of girls by grade and intellectual capacity

Grade	Intellectual capacity group										
	NA*	0	1	2	3	4	5	6	7	8	9
9	12	1	4	10	7	10	4	16	9	14	16
10	4	1	6	14	9	6	11	7	17	13	14
11	3	7	6	3	9	13	15	9	11	11	13
12	3	5	6	5	6	3	12	10	16	19	16
Total	22	14	22	32	31	32	42	42	53	57	59

*NA = not available.

Table 2. Number of girls by grade and place of residence

Grade	Place of residence		
	farm	non-farm rural	town or city
9	45	8	50
10	54	5	43
11	45	10	45
12	55	3	43
Total	199	26	181

Table 3. Number of girls by grade and social status group

Grade	Social status group			
	NA*	lower	middle	higher
9	2	36	33	32
10	3	24	40	36
11	6	30	35	29
12	2	27	34	37
Total	13	117	142	134

*NA = not available.

Table 4. Number of girls by grade and working status of mother

Grade	Working status		
	none	less than 35 hours per week	35 hours or more per week
9	60	16	27
10	62	13	27
11	61	11	28
12	68	10	23
Total	251	50	105

group. The variation in group size is especially noticeable in the 10th grade where there were only 24 girls in the lower and 40 in the middle social status group. Table 3 shows the number of girls in lower, middle and higher social status groups.

Mothers of approximately three-fifths of the girls in each grade did not work outside the home for pay. Of the employed mothers, approximately 62 per cent worked full time and the remainder worked less than 35 hours a week. The above findings are presented in Table 4.

Kind and Frequency of Housing Experiences

Household tasks done at home

The number of pupils who indicated participating in household tasks at home without pay will be presented and discussed by clusters of tasks. Findings revealed the extent to which 103, 9th grade; 102, 10th; 100, 11th and 101, 12th grade girls performed the household tasks according to three time frequencies, seldom or never, occasionally and often. The three clusters were entitled light household tasks, heavy household tasks and laundry tasks. Two tasks unrelated to the three clusters are discussed individually.

Light household tasks Large numbers of pupils participated in light household tasks at the often time frequency. Fifty-seven or more girls at each grade level participated often in the tasks: put away toys, books, papers; make beds; dust furniture and accessories and dust or sweep floors, as shown in Figure 1. Two additional tasks performed often by 50 or more of the pupils at almost all grade levels were vacuum rug or carpeting and clean sink.

Figure 1. Number of girls by grade level who performed light household tasks at home according to three time frequencies

In Figure 1 - 4:
SN = seldom or never
O = occasionally
Oft = often

The number of pupils who participated at each grade level:
9th grade - 103
10th grade - 102
11th grade - 100
12th grade - 101

	SN	0	Off
9	9	33	61
10	13	33	66
11	5	31	64
12	5	25	71

Put away toys, books, papers

	SN	0	Off
9	45	40	18
10	35	46	21
11	27	49	24
12	30	52	19

Dust walls or woodwork

9	4	37	62
10	3	29	69
11	5	23	72
12	2	27	72

Make beds

9	27	54	22
10	28	50	24
11	19	50	31
12	26	51	24

Wash, wax, or polish furniture

9	5	41	57
10	5	32	65
11	4	25	71
12	6	35	60

Dust furniture and accessories

9	9	44	50
10	7	29	66
11	4	20	76
12		36	67

Clean sink

9	3	37	60
10	5	34	63
11	5	25	70
12	5	35	61

Dust or sweep floors

9	26	45	29
10	18	39	45
11	9	46	45
12	17	37	47

Clean bathtub or shower stall

9	17	36	50
10	11	38	53
11	12	38	50
12	18	39	44

Vacuum rug or carpeting

More girls performed two of the tasks at the occasional than the often time frequency: wash, wax or polish furniture and dust walls or woodwork. One task, clean bathtub or shower stall, was performed by approximately equal numbers of pupils at the often and occasional time frequencies. More 9th grade girls, however, did the latter task occasionally than did it often while the reverse was true at the 12th grade.

Distribution of pupils among the three time frequencies for five of the simple, routine tasks was similar. The tasks were put away toys, books, papers; make beds; dust furniture and accessories; dust or sweep floors and clean sink. Few pupils at all grade levels reported they seldom or never performed the tasks indicating most high school girls are doing these simple tasks.

For seven of the nine tasks, the number of pupils who reported participating often either increased by grade level or increased up to the 11th grade followed by a decrease at the 12th grade. Those tasks which showed a continuing increase in the number participating often were put away toys, books, papers; make beds and clean bathtub or shower stall. Tasks showing a decrease at the often time frequency for the 12th grade were dust furniture and accessories; dust or sweep floors; wash, wax or polish furniture and clean sink. Generally speaking, the greatest amount of increase occurred between the 9th and 10th grades.

Heavy household tasks Fewer pupils said they participated in the heavy than in the light household tasks at the often time frequency. No task was performed often by 50 or more pupils at all four grade levels. See Figure 2. The task, clean range burners and surfaces, was done often by a larger number of girls at each grade level than the other heavy

Figure 2. Number of girls by grade level who performed heavy household tasks at home according to three time frequencies

SN	0		Oft
9	50	46	7
10	49	42	11
11	40	47	13
12	44	43	14

Dust draperies or upholstered furniture

SN	0		Oft
9	86	15	2
10	76	21	5
11	67	30	3
12	72	24	5

Clean oven

9	43	48	12
10	32	36	34
11	29	40	31
12	33	41	27

Wash floors

9	66	34	3
10	51	42	9
11	45	43	12
12	57	36	8

Wash woodwork or walls

9	61	33	19
10	48	40	16
11	35	46	19
12	55	32	14

Wax or polish floors

9	34	57	12
10	26	57	19
11	16	62	22
12	21	58	22

Clean and straighten storage areas

9	43	42	13
10	42	41	19
11	46	36	18
12	55	32	14

Empty and clean vacuum

9	37	51	15
10	20	60	22
11	18	63	19
12	30	51	20

Wash windows

9	22	42	39
10	25	32	45
11	15	35	50
12	20	37	44

Clean range burners and surfaces

9	53	44	6
10	65	26	9
11	49	43	8
12	61	32	8

Clean basement or attic

9	64	33	6
10	56	40	6
11	50	43	7
12	55	38	8

Defrost or clean refrigerator

household tasks with 50 girls doing it at the 11th grade level.

Larger numbers of pupils indicated occasionally having done the heavy household tasks than having done them often. Fifty-one or more pupils at all grade levels occasionally performed two of the tasks: clean and straighten storage areas and wash windows. Of the pupils who reported not having performed these tasks occasionally, approximately equal numbers said they did them often and seldom or never.

For the remaining tasks in the cluster, large numbers of pupils reported seldom or never performing them. Sixty-seven or more pupils at each grade level seldom or never cleaned the oven. Forty-five or more pupils at each grade level seldom or never defrosted or cleaned the refrigerator, cleaned the basement or attic and washed woodwork or walls. Thirty-five or more pupils at each grade level seldom or never performed the tasks: dust draperies or upholstered furniture, wax or polish floors and empty and clean vacuum.

Laundry tasks Two laundry tasks were done by larger numbers of pupils than were the other tasks in the cluster. Fifty-eight or more girls at each grade level reported often ironing clothing and household items; 43 or more girls at each grade level, often changing sheets on beds. These tasks were done seldom or never by very few pupils at any grade level. See Figure 3.

At the occasional level, the largest number of girls reported hand washing clothes and hanging clothes on the line. These tasks were performed also at the often time frequency by large numbers of girls. The remaining tasks in the cluster, sort clothes for washing, machine wash clothes and dry clothes in dryer, were seldom or never participated in by a

SN	0	Oft
9	19	41	45
10	9	37	56
11	5	44	51
12	8	39	54

Change sheets on bed

SN	0	Oft
9	32	46	26
10	55	56	31
11	29	37	34
12	33	31	37

Dry clothes in dryer

9	50	35	18
10	30	41	31
11	20	40	40
12	23	50	28

Sort clothes for washing

9	10	53	32
10	21	41	40
11	14	48	38
12	14	42	45

Hang clothes on line

9	37	44	22
10	32	41	31
11	21	42	37
12	25	46	56

Machine wash clothes

9	7	38	58
10	6	37	59
11	1	40	59
12	3	30	68

Iron clothing and household items

9	31	47	25
10	26	50	36
11	17	54	29
12	8	60	33

Hand wash clothes

Figure 3. Number of girls by grade level who performed laundry tasks at home according to three time frequencies

9	23	43	35
10	16	50	34
11	14	39	47
12	22	50	29

Dispose of garbage and waste paper

9	73	23	4
10	68	28	4
11	74	23	3
12	74	22	4

Clean garage

Figure 4. Number of girls by grade level who performed certain tasks at home according to three time frequencies

range of 19 to 50 pupils at any grade level.

Findings related to laundry tasks showed an increase by grade level in the number of girls who often participated in the tasks: machine wash clothes, hand wash clothes, dry clothes in dryer, hang clothes on line and iron clothing and household items. One task, hand wash clothes, also showed a continued increase at the occasional time frequency in the number of pupils who did it.

Independent tasks Two household tasks which did not statistically relate to the other household tasks were dispose of garbage and waste paper and clean the garage. Approximately four-fifths of the pupils regardless of grade disposed of garbage and waste paper occasionally or often. The task, clean the garage, was seldom or never done by 68 or more pupils at each grade level. See Figure 4.

Summary Findings show pupils participated frequently in routine and time consuming household tasks. These tasks need to be performed frequently in the home and as a result there is opportunity to do them. Cooperation in performing the tasks gives the girls opportunities to make positive contributions to their families, involving little risk of failure. Daughter assistance reduces or relieves mother of tasks which because of repetition become unrewarding.

The simpler tasks of running a home were assumed to a progressively greater extent by more pupils with advance in grade level. The finding indicates more responsibility was being assumed as the age of pupils increased. For some tasks the decrease which occurred at the 12th grade may be attributable to more demanding school work or to increased pupil interest in social and school activities.

Household tasks done outside the home for pay

Girls who had been employed to do household tasks outside the home for pay were requested to indicate the tasks performed. Household tasks accomplished while caring for children also were to be included. The number of girls by grade who indicated working outside the home for pay was 37 at 9th grade, 31 at 10th, 33 at 11th and 28 at 12th grade. The number of responses at three time frequencies; seldom or never, occasionally and often, were converted to percentages for purpose of making comparisons.

The data will be presented by item clusters. These are entitled housecleaning tasks, kitchen tasks and laundry tasks. Three tasks statistically unrelated to any of the clusters will be discussed independently.

Housecleaning tasks The task — put away toys, books, papers — was done at the often and occasional time frequencies by a larger percentage of girls than were any of the other tasks. When the responses at the two time frequencies were combined, 82 per cent or more of the pupils at each grade level employed to do household tasks reported having participated in it. See Figure 5.

More girls made beds, disposed of garbage and waste paper, dusted furniture and accessories and vacuumed rug or carpeting less frequently than put away toys, books, papers, but they did these tasks more frequently than the remaining seven tasks. A range of 27 to 60 per cent of the pupils at the various grade levels performed these tasks for pay outside the home.

High percentages of pupils who worked outside the home at all grade levels indicated they seldom or never did the remaining housecleaning tasks. Seventy-five per cent or more seldom or never dusted draperies or upholstered furniture, emptied and cleaned the vacuum, washed woodwork or walls

Figure 5. Percentage of girls by grade who performed housecleaning tasks outside the home for pay according to three time frequencies

In Figure 5 - 8:
SN = seldom or never
O = occasionally
Oft = often

The number of pupils who participated at each grade level:
9th grade - 37
10th grade - 31
11th grade - 33
12th grade - 28

*no response at this level

9
10
11
12

9
10
11
12

9
10
11
12

9
10
11
12

SN	0	Oft
9	14	33	51
10	16	36	43
11	15	46	39
12	18	43	39

Put away toys, books, papers

SN	0	Oft
9	84	12
10	74	13	13
11	76	15	9
12	68	21	11

Wash, wax, or polish furniture

SN	0	Oft
9	57	32	11
10	55	19	26
11	53	38	9
12	39	54	7

Make beds

SN	0	Oft
9	87	13
10	84	15	1
11	91	3	6
12	75	21	4

Dust draperies or upholstered furniture

SN	0	Oft
9	65	30	5
10	64	23	10
11	73	21	6
12	47	39	14

Dispose of garbage and waste paper

SN	0	Oft
9	87	13
10	81	16	3
11	88	9	3
12	75	18	7

Empty and clean vacuum

SN	0	Oft
9	65	22	13
10	48	29	23
11	55	30	15
12	39	32	29

Dust furniture and accessories

SN	0	Oft
9	97	3
10	97	3
11	82	12	6
12	79	14	7

Wash woodwork or walls

SN	0	Oft
9	62	30	8
10	53	23	19
11	70	18	12
12	46	22	32

Vacuum rug or carpeting

SN	0	Oft
9	78	22
10	77	16	7
11	73	18	9
12	61	29	10

Wash windows

SN	0	Oft
9	84	13	3
10	84	6	10
11	88	12
12	64	22	14

Dust walls or woodwork

SN	0	Oft
9	92	8
10	94	6
11	97	3
12	89	11

Clean garage

and cleaned the garage. Other tasks seldom or never performed were wash, wax or polish furniture; dust walls or woodwork and wash windows. It can be assumed one reason these tasks are less frequently done is that they are more involved and time consuming and as such cannot be performed while baby sitting.

A trend in the pattern of response by grade level was evident for seven of the tasks. Larger numbers of senior girls than younger girls were doing the tasks outside the home. More senior girls were participating in all housecleaning tasks rather than only the simple, routine tasks frequently associated with baby sitting.

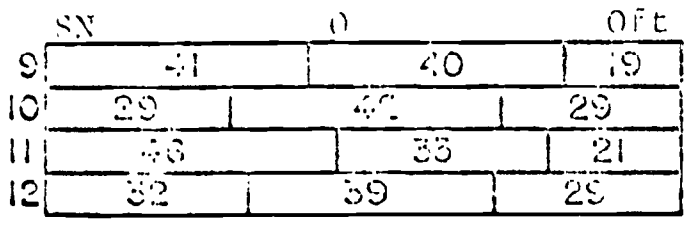
Kitchen tasks Two simple kitchen tasks which are performed frequently in the kitchen were done more frequently by larger percentages of pupils outside the home for pay than the other tasks. These were dust or sweep floors and clean the sink. See Figure 6.

More pupils reported they washed floors than waxed or polished floors. Both tasks were done by a higher percentage of pupils at the senior grade level than at the other three grade levels.

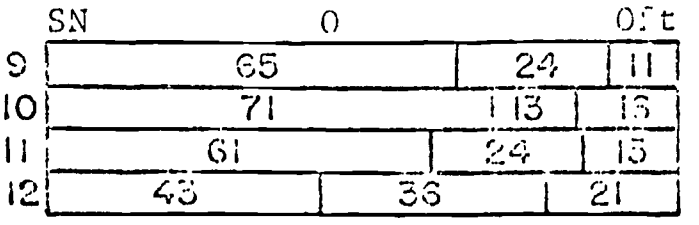
The tasks least frequently done by the largest percentage of pupils at each grade level were clean oven and defrost or clean refrigerator. Three-fourths of the pupils at each grade level seldom or never participated in the two tasks outside the home for pay.

Generally speaking, there was an increase at the 12th grade in the percentage of pupils who occasionally or often did the kitchen tasks. This trend toward more frequent participation by more pupils at the 12th grade level was also evident for housecleaning tasks.

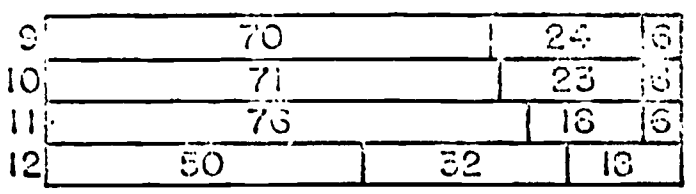
Laundry tasks For purpose of presentation, the data related to the



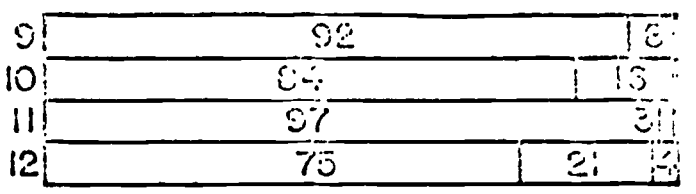
Dust or sweep floors



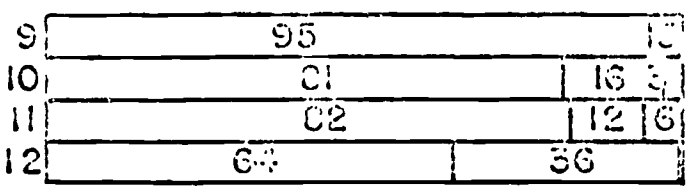
Clean range burners and surfaces



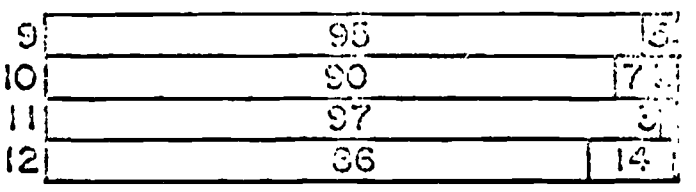
Wash floors



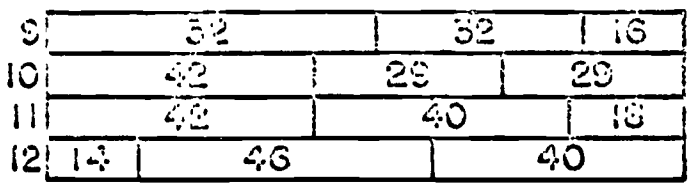
Defrost or clean refrigerator



Wax or polish floors



Clean oven



Clean sink

Figure 6. Percentage of girls by grade who performed kitchen tasks outside the home for pay according to three time frequencies

seven laundry tasks were divided into two groups according to percentages of pupils performing the various tasks. The first group consisted of tasks which the majority of the pupils indicated they seldom or never did outside the home for pay and included: change sheets on bed, sort clothes for washing, machine wash clothes and hand wash clothes. See Figure 7. All of these tasks involve the preparation for and washing of clothes.

The second group consisted of tasks which were performed by larger percentages of pupils in all grades and included: dry clothes in dryer, hang clothes on line and iron clothing and household items. Ironing was done by more girls more frequently than the other tasks suggesting the need for emphasis on the teaching of work simplification skills as well as ironing skills. The data indicate pupils were being asked to assist in the laundry process rather than to initiate and perform the process independently.

Participation in laundry tasks was greater at the 12th grade level than the other three grade levels for two of the seven tasks. Tasks with increased participation were dry clothes in dryer and hang clothes on line.

Independent tasks Three tasks performed outside the home for pay, statistically unrelated to the other tasks were: clean bathtub or shower stall, clean and straighten storage areas and clean basement or attic. The task, clean bathtub or shower stall, was done by from one-third to almost one-half of the girls at each grade level. The number increased from the 9th to the 12th grade. Clean and straighten storage areas was done by fewer girls than the former task. There was a considerable increase, however, in the number of pupils at the 12th grade doing the task. The last unrelated task, clean basement or attic, was seldom or never done by

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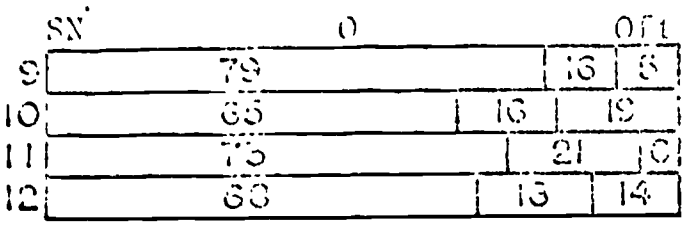
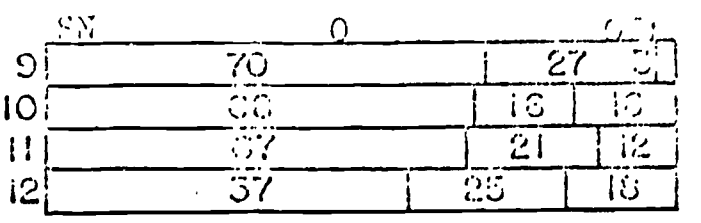
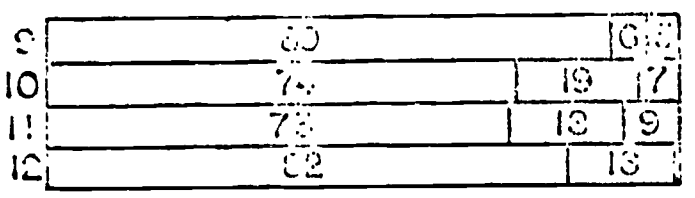


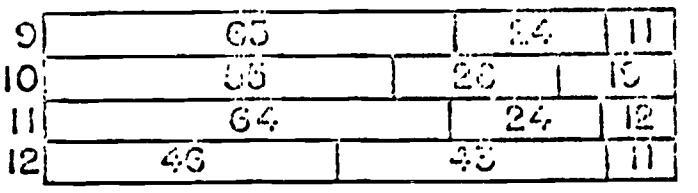
Change sheets on bed



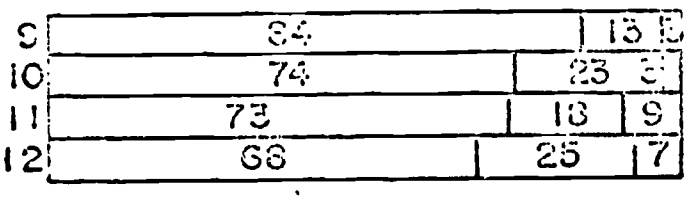
Dry clothes in dryer



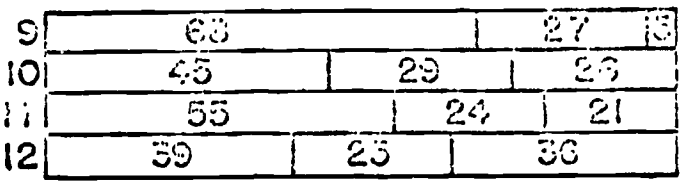
Hand wash clothes



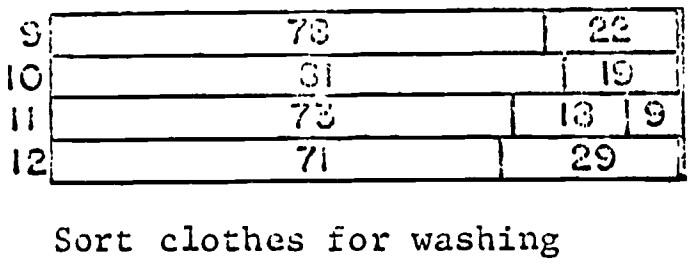
Hang clothes on line



Machine wash clothes

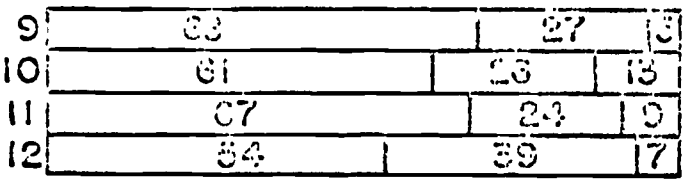


Iron clothing and household items

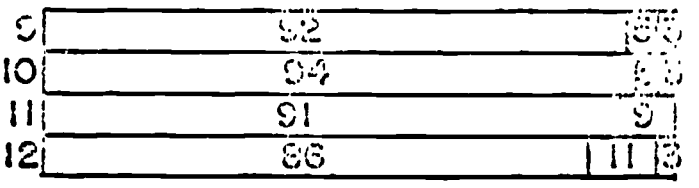


Sort clothes for washing

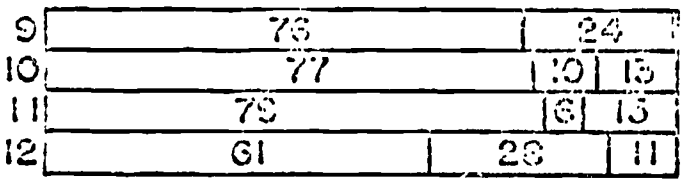
Figure 7. Percentage of girls by grade who performed laundry tasks outside the home for pay according to three time frequencies



Clean bathtub or shower stall



Clean basement or attic



Clean and straighten storage areas

Figure 8. Percentage of girls by grade who performed certain tasks outside the home for pay according to three time frequencies

approximately 90 per cent of the pupils. These findings are shown in Figure 3.

Interior decorating experiences

Pupil participation in the experiences related to interior decoration is shown in Table 5. Two tasks, hang pictures or mirrors and plan a furniture arrangement, were performed by larger numbers of pupils at each grade level than were the other tasks. Both are done in most homes and are simple to do. In contrast, 17 or less pupils at each grade level re-upholstered furniture which is a less frequently performed task and involves more time, skill and expense.

Large numbers of girls also indicated they had helped choose color schemes and paint walls or woodwork. Larger numbers of girls at the 11th and 12th grades than at the lower grades had done the latter. Choosing patterns and textures and refinishing furniture and accessories were done by the fifth and sixth largest numbers of pupils at each grade level. Fewer ninth grade than girls at the other three grade levels chose patterns and textures. Three tasks in addition to re-upholstering furniture were done by small numbers of pupils: making pillows, bed spreads and other accessories; slipcovering furniture and making curtains or draperies.

Selection of articles of home furnishings and household equipment

The number of pupils at each of the four grade levels who selected articles of home furnishings and household equipment are presented in Table 6. Wall coverings were reported to have been selected by more girls at each grade level than any other article. Five additional articles were selected by more than half of the girls at three of the four grade levels. These articles were fabric accessories, non-fabric accessories, recreation

Table 5. Number of girls by grade who participated in interior decorating activities

Practice	9th N=103	10th N=102	11th N=100	12th N=101
Hung pictures or mirrors	97	93	95	94
Planned furniture arrangement for a room	90	92	87	90
Chosen a color scheme for a room	71	79	79	80
Painted walls or woodwork	67	70	85	85
Chosen patterns or textures for a room	51	62	62	68
Painted or refinished furniture or accessories	49	57	66	62
Made pillows, bed spread, or other accessories	30	53	40	39
Slip-covered furniture	20	28	26	26
Made curtains or draperies	11	28	25	26
Re-upholstered furniture	8	14	15	17

equipment, window treatment and furniture.

Cleaning equipment, large kitchen or laundry equipment and plumbing fixtures were selected by smaller numbers of pupils at each grade level than the other articles of furniture and equipment. Reasons for this finding may be the limited number of each article in the home and the infrequency with which they are purchased.

Upon examining data by grade, few differences of ten or more between grades were evident. Generally speaking, more 10th, 11th and 12th grade

Table 6. Number of girls by grade who participated in the selection of home furnishings and household equipment

Furnishings and Equipment	Grade 9 N=103	10 N=102	11 N=100	12 N=101
Wall coverings	66	83	78	76
Fabric accessories	57	67	64	65
Non-fabric accessories	57	64	59	75
Recreation equipment	55	66	66	69
Window treatment	53	65	66	68
Furniture	46	72	61	67
Floor covering	33	45	52	55
Lighting	33	44	42	51
Cleaning equipment	21	27	32	25
Large kitchen or laundry equipment	12	20	23	21
Plumbing fixtures	5	9	12	9

girls had helped select the articles of home furnishings and household equipment than ninth grade girls. Furniture was selected by more 10th than 11th grade girls; floor covering by more 12th than 10th grade girls and non-fabric accessories by more 12th grade girls than girls at the other three grade levels.

Guides used in the selection of home furnishings and household equipment

Pupils who had helped select articles of home furnishing and household equipment were asked to indicate which of the following guides they

considered when making the selection of each article: appearance, harmony with location, construction and materials, safety features, ease of use and storage, potential length of service, cost and guarantee. Respondents were free to mark as many guides as used. Of the pupils who helped select each article, the percentage who considered each guide is presented by grade level in Table 7. In interpreting these data it should be noted that the numbers who selected any one of the articles range from 83 to 5. Guides not applicable to the selection of an article were omitted from the table.

Of the eight guides, three were used in the selection of articles by consistently higher percentages of pupils than were the remaining five. The guide, appearance, was considered by more pupils at each grade level in the selection of seven of the 11 articles. Cost and harmony with location were used by the second and third highest percentages of girls at each grade level in the selection of more articles than any of the other guides.

Wall coverings Five of the eight guides were applicable to the selection of wall coverings. Of these, three were used by 65 per cent or more of the pupils at each grade level. Appearance was considered by a lower percentage of girls at the 10th than at the other three grade levels. Forty-two per cent or less of the pupils in each grade group considered the potential length of service and the construction and materials of the covering. An explanation for the latter finding may be the affluent society of today and the lack of concern people have for future needs.

Fabric accessories Guides used when selecting fabric accessories by 60 per cent or more of the girls at each grade level were appearance, harmony with location, cost and construction and materials. The percentages of girls who considered the latter and also the potential length of service

Table 7. Percentages of girls by grade who used related guides when making selection of furniture and equipment

Guides	9th	10th	11th	12th
Wall coverings	N=66[a]	N=83	N=78	N=76
appearance	94	74	96	93
cost	70	71	80	72
in harmony with location	65	70	71	76
potential length of service	27	42	35	34
construction and materials	23	31	22	22
Fabric accessories	N=57	N=67	N=64	N=65
appearance	98	93	94	95
in harmony with location	77	79	70	83
cost	74	79	77	85
construction and materials	60	76	66	75
potential length of service	42	52	48	55
ease of use and storage	35	36	19	31
guarantee	25	18	6	19
Non-fabric accessories	N=57	N=64	N=59	N=75
appearance	90	94	92	93
in harmony with location	77	77	80	81
cost	56	80	63	72
construction and materials	35	34	25	36
ease of use and storage	26	23	12	23
potential length of service	18	16	7	19
Recreation equipment	N=55	N=66	N=66	N=69
appearance	80	76	74	75
cost	71	88	83	86
guarantee	67	71	68	75
potential length of service	64	61	71	73
construction and materials	55	58	59	67
ease of use and storage	55	55	61	49
safety features	36	35	29	25
in harmony with location	33	47	41	39
Window treatment	N=53	N=65	N=66	N=68
appearance	87	94	96	91
in harmony with location	68	80	77	82
cost	57	75	76	72
construction and materials	57	74	65	68
potential length of service	34	51	44	43
guarantee	25	23	19	13
ease of use and storage	19	26	14	19

[a]Number of girls who helped select the article.

Table 7 (Continued)

Guides	9th	10th	11th	12th
Furniture	N=46	N=72	N=61	N=67
appearance	94	93	93	94
cost	74	79	80	81
in harmony with location	65	65	66	70
construction and materials	50	65	71	66
ease of use and storage	44	32	30	33
guarantee	39	47	36	39
potential length of service	35	58	46	55
Floor coverings	N=33	N=45	N=52	N=55
appearance	94	91	90	93
cost	73	84	77	82
in harmony with location	73	62	69	78
guarantee	36	44	44	47
potential length of service	33	64	54	64
construction and materials	27	64	44	62
ease of use and storage	9	24	6	13
Lighting	N=33	N=44	N=42	N=51
appearance	88	89	76	90
in harmony with location	73	73	69	82
cost	67	84	79	78
safety features	42	48	41	43
guarantee	42	34	19	22
potential length of service	39	46	31	31
ease of use and storage	36	50	21	18
construction and materials	27	46	43	47
Cleaning equipment	N=21	N=27	N=32	N=25
ease of use and storage	71	74	69	64
cost	67	78	78	76
potential length of service	57	67	53	64
guarantee	52	59	41	48
construction and materials	43	44	50	56
safety features	33	56	41	48
appearance	33	37	22	36

Table 7 (Continued)

Guides	9th	10th	11th	12th
Large kitchen or laundry equipment	N=12	N=20	N=23	N=21
cost	67	95	91	91
guarantee	67	85	78	76
appearance	58	90	83	76
potential length of service	58	90	70	71
safety features	58	75	61	62
construction and materials	33	55	48	52
in harmony with location	25	45	48	52
ease of use and storage	8	65	57	48
Plumbing fixtures	N=5	N=9	N=12	N=9
appearance	100	100	92	89
cost	80	89	92	89
in harmony with location	80	44	58	33
safety features	60	67	42	44
construction and materials	60	56	50	78
potential length of service	40	56	58	67
guarantee	40	44	42	78
ease of use and storage	40	22	17	22

were higher at each grade than the percentages who reported having used these same guides in the selection of wall coverings.

Non-fabric accessories In the selection of non-fabric accessories, appearance and harmony with location were considerations by the two largest percentages of pupils at each grade level with the exception of 10th grade. A larger proportion of 10th grade girls considered cost than harmony with location. A smaller proportion of girls considered construction and materials and potential length of service when selecting non-fabric accessories than in selecting accessories.

Recreation equipment Most teenagers are interested in and use a variety of recreation equipment; some of which they pay for personally. It

can be assumed that pupil use and financial involvement and the variety of criteria appropriate for the selection of various articles of recreation equipment influenced the responses. No one guide was considered by more than three-fourths of the girls at all grade levels. Six guides, however, were used by 49 per cent or more of the girls in each grade group. Appearance was the guide reported by the largest percentage of 9th grade girls; whereas, cost by most girls at the other three grade levels.

Window treatment Appearance was used by at least 87 per cent of the girls in each grade group in the selection of window treatment. In harmony with location, cost and construction and materials were regarded by 65 per cent or more of the girls in each grade group with the exception of the 9th grade. There was an increase of 10 or more from the 9th to the 10th grade in the percentages of girls who considered four of the guides.

Furniture Of the girls who helped select furniture, 65 per cent or more at each grade level with the exception of the 9th grade considered the appearance, cost, in harmony with location and construction and materials. Only one-half of the 9th grade pupils considered potential length of service; whereas, more pupils at the 9th than at the other grades regarded ease of use and storage.

Floor coverings Carpeting or rugs usually comprise a large part of the background and influence the total appearance of a room. They are also infrequently purchased and expensive. These factors may have influenced the opportunity for experiences of the pupils. Of those who helped select floor coverings, high percentages at each grade level marked the guides appearance, cost and harmony with location. Larger percentages of girls in grades 10, 11 and 12 marked potential length of service and construction

and materials than 9th graders.

Lighting Higher percentages of the girls in each grade considered appearance, harmony with location and cost when selecting light fixtures than the other five guides. These findings show teenagers were more concerned with the appearance of the fixture in the home than with the service it would give. The construction and safety of the lamp were concerns of only 48 per cent or less of the girls who selected light fixtures at each grade level.

Cleaning equipment When selecting cleaning equipment ease of use and storage, cost and potential length of service were the guides used by the first, second and third largest percentages of pupils at each grade level. A higher percentage of pupils at three of the four grade levels used cost than any of the other guides. No guide was considered by 70 per cent or more of the girls at all grade levels.

Large kitchen or laundry equipment The eight guides appropriate to the selection of large kitchen or laundry equipment were used by 45 per cent or more of the girls at each grade level with three exceptions at the ninth grade. Cost, guarantee, appearance, potential length of service and safety features were considered by 61 per cent or more of the 10th, 11th, and 12th grade pupils. Seven of the eight guides were considered by more 10th grade pupils than pupils at any other grade level.

Plumbing fixtures As was stated earlier, a small number of girls at all grade levels helped select plumbing fixtures with only five ninth graders making the selection. Of these girls, 100 per cent of the 9th and 10th graders said they considered appearance in making the selections. Appearance and cost were considered by 80 per cent or more of the girls at

each grade level. Larger percentages of seniors considered construction and materials and guarantee.

National and world social conditions

Housing experiences in the previously discussed sections concerned overt behaviors such as performing tasks and selecting articles. The present section concerns less active participation; pupils were asked to indicate whether they had heard about, read about, or were aware of the possible effect upon their own families of certain national and world social conditions. The options for responding were assumed to represent a continuum.

For purposes of presentation, findings are reported in two parts according to the content of the items. The items in the first part concerned conditions which urban people have had more opportunity to experience first hand than rural people: increased population of the world, concentration of people living in cities, many people living in slum areas, increase in number of units housing several families and public housing projects.

The second part concerned conditions which were more likely to be experienced universally. These conditions were changes in family housing needs as the number and ages of family members change, increasing amount of money people have to spend for housing, increasing number of homemakers employed outside the home for pay, increase in the luxuries and conveniences people have and expect and increase in the amount of credit used.

Larger numbers of pupils reported they had read about the conditions pertaining to urban living than were aware of the possible effect of the conditions upon their families. See Figure 9. Approximately the same numbers of girls at each grade level reported having read about or being

Figure 9. The number of girls by grade who had experiences related to social conditions which influence housing

In Figure 9:
N = none
H = heard about
R = read about
A = aware of effect

The number of pupils who participated at each grade level:
9th grade - 103
10th grade - 102
11th grade - 100
12th grade - 101

	N	H	R	A
9	3	11	70	13
10	2	9	67	24
11	4	14	63	16
12	3	8	67	

Increased population of the world

	N	H	R	A
9	26	10	17	50
10	22	6	15	57
11	23	14	12	51
12	15	9	10	47

Changes in family housing needs as the number and ages of family members change

9	12	23	54	11
10	10	19	61	12
11	3	25	52	18
12	4	19	60	19

Concentration of people living in cities

9	7	20	22	54
10	11	13	15	63
11	8	17	18	57
12	10	15	17	59

Increasing amount of money people have to spend for housing

9	3	15	75	7
10	4	5	86	5
11	3	16	76	5
12	2	8	84	7

Many people living in slum areas

9	24	27	35	15
10	21	16	41	24
11	13	12	38	38
12	17	8	44	35

Increasing number of homemakers employed outside the home for pay

9	31	27	43	3
10	21	23	51	5
11	14	23	54	9
12	14	25	46	6

Increase in number of units housing several families

9	7	10	23	60
10	14	24	62	
11	9	22	69	
12	9	20	48	

Increase in the luxuries and conveniences people have and expect

9	14	31	55	3
10	14	22	60	6
11	14	22	63	0
12	9	22	64	6

Public housing projects

9	13	22	27	41
10	9	9	34	50
11	11	11	37	51
12	6	6	36	53

Increase in the amount of credit used (loans, time buying, etc.)

aware of the possible effect upon their own family of the increased population of the world and the many people living in slum areas. Larger numbers of pupils at each grade level reported being aware of the possible effect upon their own families of two conditions than the others pertaining to urban living: increased population of the world and concentration of people living in cities. The remaining conditions, increase in the number of units housing several families and public housing projects, are more specific and less publicized.

Pupil response to the items containing content of more universal concern indicated approximately one-half or more of the girls at each grade level was aware of the possible effect upon their own family of changes in family housing needs as the number and ages of family members change, the increasing amount of money people have to spend for housing, the increase in the luxuries and conveniences people have and expect and the increase in the amount of credit used. The number aware of the effect of two of the four conditions increased steadily from the 9th to the 12th grades. The number of pupils who had read about and/or were aware of the possible effect upon their own families of the increasing numbers of homemakers employed outside the home for pay was small but increased steadily from the 9th to the 12th grades.

Selection of housing

The percentage of pupils who helped make decisions concerning the selection of family housing and who considered certain factors in making the decisions are presented by grade in Table 8. Approximately one-third of the ninth graders and one-fourth of the girls in the other three grades indicated they had an opportunity to assist in making such decisions within

Table 8. Percentage of girls by grade who helped make decisions concerning the selection of housing

Decision	Grade 9	10	11	12
	N=35[a]	N=25	N=27	N=26
Helped select the new location of our home	20	36	63	46
Helped select the kind of new housing unit (house, duplex, apartment, mobile home, etc.)	20	24	48	19
Helped decide whether to buy, rent, or build	20	32	33	27
Factors considered	N=15[b]	N=12	N=21	N=12
Surroundings and view	80	83	71	83
Aesthetic appeal	74	66	76	91
Location of schools, churches, business district, work	67	91	76	91
Family goals	60	75	81	91
Costs	54	58	86	91
Health provisions (good water, sewage disposal, garbage disposal)	54	83	57	66
Maintenance required	54	100	43	66
Quality of construction	40	58	48	50
Floor plan	33	42	52	75
Protection (lighted streets, fire, police)	33	58	52	50

[a]Number of girls who had an opportunity to participate in the selection of a housing unit during the past four years.

[b]Number of girls who indicated they were involved in making one or more of the proposed decisions.

the past four years. Only pupils who had made one or more of the three suggested decisions were asked to indicate the factors they had considered when making the decisions.

Higher percentages of girls at the 10th, 11th and 12th grades indicated they had helped select the new location for their home than had made the other proposed decisions. At the ninth grade level, the same percentage of girls had made all three decisions. All decisions were made by a higher percentage of pupils at the 11th than at the 9th, 10th or 12th grade levels.

Of the ten proposed factors that may have influenced decisions, surroundings and view was considered by a larger percentage of ninth grade pupils than any other factor. The second and third largest percentage of this grade group contemplated aesthetic appeal and location with regard to schools, churches, business district and work. The majority of factors, however, were considered by lower percentages of pupils at the 9th than at the other grade levels.

Maintenance required in the new housing was a concern of all 10th grade pupils who participated in selecting family housing. High percentages of 10th grade pupils also indicated concern for location in relation to schools, churches, business district, work , surroundings and view and health provisions. Worthy of note is the increase between the percentages of the 9th and 10th grade levels for several of the factors.

A higher proportion of the 11th than 10th grade girls who had participated in making housing decisions were concerned about cost. Health provisions within the housing unit and the maintenance required were factors of concern to a smaller proportion of 11th graders than 10th graders.

Four factors considered by 91 per cent of the 12th grade girls were

aesthetic appeal; location of schools, churches, business district, work; family goals and cost. The percentages of 12th grade pupils who indicated concern for the maintenance required and floor plan of the home increased over those of 11th grade pupils. Proportions of pupils indicating concern for family goals, costs and the floor plan increased progressively with the advance of grade level.

Relationships of Item Clusters to Personal Characteristics

The sum of scores for each cluster of related experiences was correlated with five personal characteristics: grade level, intellectual capacity and place of residence of the girls; social status of the families and working status of the mothers. Inspection of the resulting coefficients showed 14 statistically highly significant and seven significant relationships; however, few of the correlations were high.

Household tasks done at home

Correlation of item clusters of household tasks with personal characteristics resulted in three significant relationships, which are presented in Table 9. One cluster, heavy household tasks, was not significantly related to any of the characteristics.

The cluster, light household tasks, showed a significant correlation with intelligence and working status of mother. This finding indicated that with increase in intellectual capacity girls tended to do less light household tasks. Also, as the mother works more hours outside the home for pay, the girls tended to do more light household tasks. The laundry cluster correlated positively with grade level indicating that with increase in grade level the girls tended to do more laundry tasks.

Table 9. Correlation of personal characteristics and clusters of household tasks done at home[a]

Personal characteristics	Clusters Light Household	Heavy Household	Laundry
Grade level (9 - 12)	.009	-.039	.107*
Intellectual capacity (low - high)	-.108*	-.045	.033
Place of residence (farm - city)	.004	.102	-.090
Social status (lower - higher)	-.002	-.021	.053
Working status of mother (none - full-time)	.103*	-.022	.052

[a]N = 372.

*r = .102 is significant at the 5 per cent level.

Household tasks done outside the home for pay

The relationships between household tasks performed outside the home for pay and pupil personal characteristics are presented in Table 10. The cluster of housecleaning tasks was positively correlated with all five personal characteristics. The above relationships showed a tendency for the number of housecleaning tasks done outside the home for pay to increase with an increase in grade level and intellectual capacity. The number of tasks done outside the home tended to increase with increased urbanization and girls tended to do more housecleaning tasks with increase in family social status and the number of hours mother works outside the home. The

Table 10. Correlation of personal characteristics and clusters of household tasks done outside the home for pay[a]

Personal characteristics	Clusters		
	House Cleaning	Kitchen	Laundry
Grade level (9 - 12)	.319**	-.038	.095
Intellectual capacity (low - high)	.395**	-.245**	.117
Place of residence (farm - city)	.559**	-.194*	.258**
Social status (lower - higher)	.572**	-.183	.154
Working status of mother (none - full-time)	.270**	-.072	.058

[a] N = 116.

* r = .184 is significant at the 5 per cent level.

** r = .240 is significant at the 1 per cent level.

two strongest relationships were between housecleaning tasks and the place of residence and social status.

The kitchen and laundry task clusters showed two highly significant and one significant relationship with personal characteristics. With an increase in intellectual capacity the girls tended to do fewer kitchen tasks outside the home for pay. Farm girls, rather than city, tended to do more kitchen tasks and conversely, city girls tended to do more laundry tasks than farm girls.

Table 11. Correlation of personal characteristics and clusters concerning interior decoration[a]

Personal characteristics	Clusters	
	Decisions	Activities
Grade level (9 - 12)	.073	.157**
Intellectual capacity (low - high)	.035	-.004
Place of residence (farm - city)	-.028	-.165**
Social status (lower - higher)	.140**	-.009
Working status of mother (none - full-time)	.109*	-.004

[a] N = 372.

*r = .102 is significant at the 5 per cent level.

**r = .134 is significant at the 1 per cent level.

Interior decorating experiences

The clusters of tasks involving decisions and activities in interior decorating were related to certain personal characteristics; whereas, the cluster concerning furniture covering did not relate significantly to any characteristic. Correlation coefficients for the two clusters are presented in Table 11.

The cluster of interior decorating decisions was positively related to working status of mother and social status indicating the number of pupils who made decisions tended to increase with an increase in the amount mother

Table 12. Correlation of personal characteristics and the cluster concerning selection of home furnishings and household equipment[a]

Personal characteristics	
Grade level (9 - 12)	-.168**
Intellectual capacity (low - high)	-.093
Place of residence (farm - city)	.044
Social status (lower - higher)	-.060
Working status of mother (none - full-time)	-.043

[a] N = 372.

** r = .134 is significant at the 1 per cent level.

worked and also with the social status level of the family. Findings concerning interior decorating activities showed the tendency for an increase in the number of pupils doing decorating activities with an increase in grade level and that farm girls were more likely to do more interior decorating activities than city girls.

Selection of articles of home furnishing and household equipment

The number of pupils who had selected articles of home furnishing and household equipment was significantly related to only one characteristic, grade level. See Figure 12. These findings could be interpreted to mean more pupils at the lower grade levels select home furnishings and household equipment than those at the upper grade levels.

National and world social conditions

When the degree of pupil awareness of national and world social conditions effecting family housing was correlated with pupil intellectual capacity, a highly significant relationship was found (.252, r = .134 at one per cent level). This relationship suggested that with increase in intellectual capacity pupils tended to have an increased awareness of these conditions.

SUMMARY AND RECOMMENDATIONS

Planning home economics curriculum in family housing for high school pupils requires knowledge of the interrelated areas of housing, the learner and society. The goal in curriculum development is to plan content appropriate for the learner in society; learnings which will assist the pupil in dealing with her present and future environment. Knowledge of the experiences teenagers are having in family housing is a source of information about the learner and the problems and concerns society creates.

The major purpose of the present study was to determine the housing experiences of Iowa girls in grades 9 through 12. Secondary purposes were to discover the differences in the kind and frequency of experiences in relation to grade level and to study the relationships between experiences and grade level, intellectual capacity and place of residence of the girls; social status of the families and the working status of the mothers.

Data were collected by a questionnaire distributed to a stratified random sample of 403 high school girls representing 34 Iowa schools. Frequency of response was obtained by grade level and presented as raw numbers when the number of respondents was approximately 100. When less, response was presented as percentages. Only differences of 10 or more in responses between grade levels were recognized. Items were grouped into clusters by means of intercorrelation and logic. Cluster scores were correlated with grade level, intelligence, place of residence, social status and working status of mother.

Summary of pupil response to the kind and frequency of experiences in housing:

1. Of the nine light household tasks, six were often done at home by one-half or more of the girls in grades 10, 11 and 12: put away toys, books, papers; make beds; dust furniture and accessories; dust or sweep floors; vacuum rug or carpeting and clean sink. Five of these tasks were often done by one-half or more of the ninth grade girls.

2. Four of the heavy household tasks; wash floors, clean range burners and surfaces, clean and straighten storage areas and wash windows; were performed often or occasionally by 56 per cent or more girls in all grades.

3. The laundry tasks, change sheets on beds and iron clothing and household items were often done by two-fifths or more girls in each grade and hand wash clothes and dry clothes in dryer were often or occasionally done by two-thirds or more girls in each grade.

4. Of the 29 household tasks done outside the home, one task -- pick up toys, books, papers -- was done often or occasionally by 82 per cent or more of the girls in each grade. An additional 12 were done often or occasionally by 24 per cent or more of the girls; whereas, the 16 remaining were seldom or never done by at least 61 per cent.

5. The number of 12th grade girls who did 10 of the 29 household tasks outside the home often or occasionally was 10 per cent greater than the number in the other three grades.

6. Hanging pictures or mirrorsand choosing a color scheme for a room were interior decorating activities done by at least seven out of eight girls in all grades; choose a color scheme for a room and paint walls or woodwork were done by two-thirds or more of the girls.

7. Two-thirds or more girls in each grade helped select wall covering; 45 per cent or more, fabric accessories, non-fabric accessories, recreation equipment, window treatment and furniture; whereas, only one-third or less had helped select cleaning equipment, large kitchen or laundry equipment and plumbing fixtures.

8. More 10th, 11th and 12th grade pupils helped select six of the 11 articles of household equipment and home furnishing than 9th grade pupils.

9. The guides most commonly used in the selection of certain articles of home furnishing and household equipment by girls in all grades were appearance, cost and harmony with location.

10. Fewer ninth grade pupils than pupils at the other three grades considered cost, potential length of service and construction and materials when selecting certain articles of household equipment and home furnishings.

11. At least 40 per cent of the pupils in each grade were aware of the effect of certain housing conditions upon their own family: changes in family housing needs as the number and ages of family members change,

increasing amount of money people have to spend for housing, increase in the luxuries and conveniences people have and expect and increase in the amount of credit used.

12. A higher percentage of 11th and 12th grade girls helped select the new location for their home than helped select the kind of housing or whether to buy, build or rent.

13. A higher percentage of 11th grade girls than girls at the other three grades made two of the three housing selection decisions.

14. Twenty per cent of the ninth grade girls who had the opportunity made each housing selection decision. In general, a smaller percentage of these girls considered the majority of the factors in making housing selection decisions than girls at the other grade levels.

15. The percentage of girls who considered costs, family goals and floor plans increased progressively from the 9th to the 12th grade.

Summary of statistically highly significant correlations between clusters of housing experiences and personal characteristics.

1. The higher the grade level the more experience girls had with housecleaning tasks outside the home for pay and in interior decorating activities.

2. The higher the grade level the less experience girls had with the selection of home furnishings and household equipment.

3. The higher the intellectual capacity the more experience girls had with housecleaning tasks outside the home and social conditions influencing housing.

4. The higher the intellectual capacity the less experience girls had with kitchen tasks outside the home.

5. The more urban the place of residence the more experience girls had with housecleaning and laundry tasks outside the home.

6. Farm girls tended to have more experience with interior decorating activities than city girls.

7. The higher the social status level the more experience girls had with housecleaning tasks outside the home and with interior decorating decisions.

8. The more the mothers worked outside the home the more experiences the girls had with housecleaning outside the home.

Recognizing that pupil experiences are one basis for curriculum development, the following recommendations are made for consideration.

1. Curriculum should include instruction in work skills involved in routine household tasks.

2. Curriculum content include study of the laundry process and less frequently done, major household tasks.

3. Curriculum content include wise buymanship of home furnishings and household equipment.

4. Family and public housing in the social setting be taught at the upper grade levels.

5. Housing selection and the criteria used in selection be taught at the upper grade levels.

6. A similar study of the housing experiences of pupils be conducted in schools and city systems in Iowa and other states. These findings could be compared to findings from the study conducted on the state basis.

7. A more extensive study be conducted with girls who are employed in housing related occupations to determine the kinds and frequency of experiences they are having and the influence of grade level, intellectual capacity, social status, working status of mother and number of hours employed.

8. If the questionnaire were to be used to collect data for another study, revision be made by deleting the request to include the experiences in housing they may have had while baby sitting.

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APPENDIX

MY EXPERIENCES IN HOUSING

We are interested in discovering what experiences high school pupils are having in family housing and housing related employment. The word housing as used here includes selection of housing units, interior design, selection and use of equipment, management, and the interrelationship of people and housing. Will you help us in this study by indicating what experiences you have had during this past summer and present school year?

The questionnaire is in five parts with specific directions preceding each part. Please read and follow the directions with care. This is not a test; there are no wrong answers.

Directions: Please place an X in the appropriate space or supply the requested information in the blank.

1. Name: _____

2. Grade in school: ____ 9th ____ 11th
   ____ 10th ____ 12th

3. Employment of mother: ____ none
   ____ less than 35 hours per week
   ____ 35 hours or more per week

4. Father's main occupation. (If your father is not living with your family, give mother's occupation.) _____

5. Greatest amount of education completed by parents:

	mother	father
less than high school graduation		
graduation from high school.		
completion of a business or trade school course. . .		
attended college		
graduation from a four year college.		
some formal schooling beyond graduation from college		

6. Live on: ____ farm
   ____ non-farm rural
   ____ town or city

7. If town or city, give name: _____

8. Time you have spent doing housework for pay outside your home: (This may include housework done while babysitting.)
   during this past summer ____ hours per week
   during this present school year ____ hours per week

9. Does your family employ someone to help with the housework? ____ yes
   ____ no

   If yes, give total number of hours ____ hours per week

(over)

Part I

Directions: We are interested in knowing how often you do the housekeeping activities listed below both at home and outside your home for pay. The first group of columns to the right is for indicating how frequently you do the activities at home, with or without pay; the second group is for indicating how frequently you do them outside your home for pay. If you do not work outside your home for pay, disregard the second group of columns.

Indicate how frequently you do each activity by marking an x in
column 1 - if you do the activity seldom or never
column 2 - if you do the activity occasionally
column 3 - if you do the activity often

I DO	at home with or without pay			outside home for pay		
	1	2	3	1	2	3
1. Put away toys, books, papers						
2. Make beds.						
3. Dispose of garbage and waste paper						
4. Dust furniture and accessories						
5. Dust or sweep floors						
6. Vacuum rug or carpeting.						
7. Dust walls or woodwork						
8. Wash, wax, or polish furniture						
9. Dust draperies or upholstered furniture. . .						
10. Wash floors.						
11. Wax or polish floors						
12. Empty and clean vacuum						
13. Clean sink						
14. Clean range burners and surfaces						
15. Defrost or clean refrigerator.						
16. Clean oven						
17. Clean bathtub or shower stall.						
18. Change sheets on bed						

I DO	at home with or without pay 1	2	3	outside home for pay 1	2	3
19. Wash woodwork or walls						
20. Clean and straighten storage areas						
21. Wash windows						
22. Clean basement or attic.						
23. Clean garage						
24. Sort clothes for washing						
25. Machine wash clothes						
26. Hand wash clothes.						
27. Dry clothes in dryer						
28. Hang clothes on line						
29. Iron clothing and household items.						

Part II

Directions: Below are listed various interior decorating activities. Place an x in the column to the right indicating whether or not you have done each of the activities.

I HAVE	yes	no
30. Chosen a color scheme for a room		
31. Chosen patterns or textures for a room		
32. Planned furniture arrangement for a room		
33. Painted walls or woodwork.		
34. Painted or refinished furniture or accessories . .		
35. Re-upholstered furniture		
36. Slip-covered furniture		
37. Made curtains or draperies		
38. Hung pictures or mirrors		
39. Made pillows, bed spread or other accessories. . .		

(over)

Part III

Directions: Below, to the left, are listed furnishings for a home and pieces of household equipment; to the right, are 2 groups of columns.

A. Place an x in the first group of columns indicating whether or not you have chosen or helped to choose any of the furnishings or pieces of equipment.

B. For those which you mark yes, place an x in the spaces in the second group of columns indicating the factors you considered in making each choice.

	yes	no	appearance	in harmony with location	construction & materials	safety features	ease of use and storage	potential length of service	cost	guarantee
40. Furniture . . . . . (chair, desk, table, etc.)										
41. Floor covering. . . . . (carpet, tile, etc.)										
42. Wall covering . . . . . (wallpaper, paint, etc.)										
43. Window treatment. . . . . (curtains, draperies, etc.)										
44. Accessories . . . . . (pictures, plants, etc.)										
45. Fabric accessories. . . . . (bedspread, slipcover, etc.)										
46. Lighting. . . . . (floor lamp, table lamp, etc.)										
47. Cleaning equipment. . . . . (vacuum cleaner, broom, etc.)										
48. Large kitchen or laundry equipment (range, refrigerator, washer, etc.)										
49. Recreation equipment. . . . . (radio, phonograph, etc.)										
50. Plumbing fixtures . . . . . (bath tub, sink, etc.)										

Part IV

Directions: Below are listed conditions which influence family housing. Place an x in the space(s) which indicate(s) your experience with each using the following scheme:

1 - none
2 - heard about (radio, T.V., conversation, etc.)
3 - read about (newspaper, magazines, etc.)
4 - aware of possible effect on own family

CONDITIONS	MY EXPERIENCE			
	1	2	3	4
51. increasing population of the world				
52. concentration of people living in cities . .				
53. many people living in slum areas				
54. increase in number of units housing several families				
55. public housing projects.				
56. changes in family housing needs as the number and ages of family members change . .				
57. increasing amount of money people have to spend for housing.				
58. increasing number of homemakers employed outside the home for pay				
59. increase in the luxuries and conveniences people have and expect				
60. increase in the amount of credit used (loans, time buying, etc.)				

(over)

Part V

Directions: If your family has moved (house to house, city to city, etc.) within the past 4 years, place an x in the column indicating whether or not you have done each of the following. If your family has not moved omit this part.

I HAVE	yes	no
61. Helped select the new location of our home		
62. Helped select the kind of new housing unit (house, duplex, apartment, mobile home, etc.).		
63. Helped decide whether to buy, rent or build.		
In making the above decisions, I CONSIDERED THE		
64. location of schools, churches, business district, work		
65. surroundings and view.		
66. protection (lighted streets, fire, police)		
67. health provisions (good water, sewage disposal, garbage disposal).		
68. aesthetic (beauty) appeal.		
69. floor plan		
70. quality of construction.		
71. maintenance required		
72. costs.		
73. family goals		

DIRECTION SHEET

1. Using an alphabetical list of girls by grade level (grades 9, 10, 11, 12)

   a. locate the first girl whose last name begins with the letter S

   b. locate the first girl whose last name begins with the letter M

   c. locate the first girl whose last name begins with the letter C

   If your school does not have girls whose last name begins with these letters, use the same procedure with the letter R, or as a second substitute the letter B. When completed, there should be three girls from each grade level, a total of 12 girls.

2. Administer the questionnaires to the 12 girls selected above either as a group or individually. Twenty minutes should be enough time for them to complete the questionnaire.

3. Explain to the girls how their names were chosen, that this is not a test, and that they are making a contribution to a state wide survey. Read the directions aloud and urge pupils to follow them carefully and to read each item thoroughly. Answer any questions they might have.

4. Item 4 on the first page asks the girl to give the occupation of her father. Instruct the pupils to give the descriptive title of the occupation. In the case of farmers, ask the pupil to specify which type of farmer her father is.

   1 - farmer; owner and operator
   2 - tenant farmer; one who owns livestock and/or machinery and manages the farm
   3 - farm hand

5. Call attention to the fact that there are questions on both sides of the pages. Check the questionnaires as they are turned in to see that all items have been considered.

6. For purposes of analyzing the data, we need to know each pupil's composite percentile rank for the current year on the Iowa Test of Educational Development, given in terms of National Norms. Please record it on the sheet enclosed.

7. When all 12 pupils have responded to the questionnaire and the test ranks have been recorded, please return the materials in the envelope in which you received them. Enclosed are two mailing labels, a label specifying postal class and adequate postage for returning them to us. This material is being mailed to you first class because of the letter enclosed; therefore, you need to cross off or remove 1st class mail markings. The materials will be returned by 4th class mail as specified on the label.

IOWA TEST OF EDUCATIONAL DEVELOPMENT

Composite percentile ranks

	Name	Rank National Norms
9th		
1.	_____	_____
2.	_____	_____
3.	_____	_____
10th		
1.	_____	_____
2.	_____	_____
3.	_____	_____
11th		
1.	_____	_____
2.	_____	_____
3.	_____	_____
12th		
1.	_____	_____
2.	_____	_____
3.	_____	_____

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY
Ames, Iowa 50010

DEPARTMENT OF HOME ECONOMICS EDUCATION

April 13, 1966

Dear Sir:

The Home Economics Education Department at Iowa State University is conducting research which concerns the experiences of Iowa high school pupils related to the preparation, care and maintenance of a house. Knowledge of these experiences will be used in developing curriculum materials for the use of homemaking teachers across the state in planning curriculums in housing.

Your school has been chosen as one in 35 which constitute a representative sample of school systems in Iowa. Participation would involve three girls, randomly selected, from each of grades 9 through 12 who would be asked to complete a questionnaire which will take approximately 20 minutes. We would appreciate your selecting a staff member with whom we can make further arrangements regarding the administration of the questionnaire. The enclosed card is for your reply which we would appreciate receiving within the week.

We sincerely hope you will assist us with this research study. If you have questions regarding the study or this request, please write or feel free to call collect Dr. Eleanore Kohlmann, 515-294-1234.

Sincerely yours,

Marguerite Scruggs, Head
Department of
Home Economics Education

MS:jvz
Encl.

IOWA STATE UNIVERSITY
OF SCIENCE AND TECHNOLOGY
Ames, Iowa 50010

DEPARTMENT OF HOME ECONOMICS EDUCATION

April 1966

Dear Sir,

Your name has been given to us by your administrator as the one we may contact for assistance in collecting data for a research project, discovering the housing experiences of Iowa high school pupils in grades 9-12. Findings from this study will be used to develop home economics curriculum materials.

Enclosed you will find 12 questionnaires, a direction sheet, a sheet for recording percentile ranks on the Iowa test of Educational Development and mailing labels. The direction sheet explains the procedure to be followed in selecting the girls who will complete the questionnaire and for administering and returning it. In selecting the girls, please use an alphabetical list containing the names of all the girls in each grade, not just home economics pupils. We are interested in getting a true representation of all girls in Iowa.

Thank you for your help and cooperation with this research project.

Sincerely,

Eleanore L. Kohlmann
Associate Professor

Following is a copy of the reply card used:

I will cooperate in this study:

_____yes

_____no

Name of staff member with whom we may make further arrangements:

_____

Name_____

School_____

Social Status Classification

The social status scores were determined using a method developed by Hinton (9). The method utilizes a ranking of the prestige of the occupation of the father and the amount of formal education of each parent.

The North-Hatt scale of occupations (14) was used to rank the prestige of the occupations of the fathers. The range of occupational rankings was divided into eleven groups and assigned values of one through eleven.

The educational score of the parent was based upon amount of formal education completed. The educational classification with assigned numerical values is listed below.

Less than high school graduation	1
Graduation from high school	2
Completion of a business or trade school course	3
Attended college	4
Graduation from a four year college	5
Some formal schooling beyond college graduation	6

The social status score for each girl was determined by using the occupational prestige ranking of the father and the formal education score for each parent in the formula below. The resultant scores which ranged from 4 to 34 were divided into three nearly equal groups and designated lower, middle and higher.

Social Status = 2X + Y + Z
- X = numerical value of father's occupation
- Y = numerical value of mother's educational level
- Z = numerical value of father's educational level

Coding Plan

Columns	
5,6	Card number 1 - #1 2 - #2 3 - #3 4 - #4
7,8,9,10	Case number
11	ITED Score 0 - in the 0 to 10th percentile 1 - 11 to 20th percentile 2 - 21 to 30th 3 - 31 to 40th 4 - 41 to 50th 5 - 51 to 60th 6 - 61 to 70th 7 - 71 to 80th 8 - 81 to 90th 9 - 91 to 100th
12	Grade 0 - 9th 1 - 10th 2 - 11th 3 - 12th
13	Employment of Mother 0 - none 1 - less than 35 hours per week 2 - 35 hours or more per week
14	Social Status 0 - lower 1 - middle 2 - higher
15	Place of residence 0 - farm 1 - non-farm rural 2 - town or city

Columns	
16	Time spent doing housework for pay outside your home during this past summer 0 - none 1 - 1-5 hours per week 2 - 6-10 hours 3 - 11-15 4 - 16-20 5 - 21-25 6 - 26-30 7 - 31-35 8 - 36-40
17	Time spent doing housework for pay outside your home during this present school year 0 - none 1 - 1-5 hours per week 2 - 6-10 hours 3 - 11-15 4 - 16-20 5 - 21-25 6 - 26-30 7 - 31-35 8 - 36-40
19 - 47	Part I (items 1 - 29) at home with or without pay (left hand column) 1 - 1 2 - 2 3 - 3
48 - 76	outside home for pay (right hand column) 1 - 1 2 - 2 3 - 3

END OF CARD I

CARD II

Columns	
11 - 15	Repeat columns 11 - 15 on card 1
16 - 25	Part II (items 30 - 39) 1 - yes 2 - no
26 - 36	Part III (items 40 - 50) Choosing furnishings and equipment 1 - yes 2 - no
37 - 44	Factors considered in choosing furniture 1 - yes 2 - no
37	appearance
38	in harmony with location
39	construction and materials
40	safety features
41	ease of use and storage
42	potential length of service
43	cost
44	guarantee
45 - 52	Factors considered in choosing floor covering
53 - 60	Factors considered in choosing wall covering
61 - 68	window treatment
69 - 76	accessories

CARD III

Columns	
11 - 12	Repeat columns 11 and 12 as on card 1
13 - 20	Factors considered in choosing fabric accessories
21 - 28	lighting
29 - 36	cleaning equipment
37 - 44	large kitchen or laundry equipment
45 - 52	recreation equipment
53 - 60	plumbing fixtures
61 - 70	Part IV (items 51 - 60) 1 - 1 2 - 2 3 - 3 4 - 4

Location of schools in which participants were enrolled according to groupings based on school size and school district population.

Group I

Iowa City
Epworth
Marion
Albia
Denison
Council Bluffs
DeWitt
Audubon

Group II

Corning
Onawa

Group III

Delhi
Rockford
Jackson Jct.
Sioux Center
Odebolt

Group IV

Fayette
Armstrong
Garner
Afton

Group V

Sergeant Bluff
Garnavillo
Lake Park
Clarksville
Danville

Group VI

Sioux Rapids
Thompson
Radcliffe
Center Point

Group VII

Martensdale
Union
Ayrshire
Whitting
Blakesburg
Buckingham

VT 006 300
Ebert, Gladys Meyer
Suggestions for Homemaking Programs to Meet Needs of Educable Mentally Retarded Pupils.

Iowa State Univ. of Science and Technology, Ames
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 249p.

*EDUCABLE MENTALLY HANDICAPPED; *CURRICULUM DEVELOPMENT; CASE STUDIES (EDUCATION); MENTAL TESTS; BIBLIOGRAPHIES; COURSE CONTENT; *MASTERS THESES; MENTAL RETARDATION; SECONDARY GRADES; *EDUCATIONAL METHODS; *HOMEMAKING EDUCATION

A pilot study was conducted to gather data upon which to base curriculum decisions for home economics programs for the educable mentally retarded. Characteristics of individuals placed in special education classes were reviewed. Special education teachers, homemaking teachers, supervisors of work-study programs, and employers of girls who had completed the program were interviewed. Five case studies were made of girls enrolled in the senior high school work study program in home economics for the educable mentally retarded. Home economics program content and methods were analyzed. Conclusions were: (1) Curriculum content should be based on occupational and personal adequacy, as well as social competence, (2) Home economics subject matter content should be correlated with the experience units currently presented in special education classes, (3) Content, methods, rate of progress, and evaluation should be planned to allow for individual differences, and (4) Methods should be based on learning theories effective with the educable mentally retarded. The case studies, terminology, mental tests, pertinent statistics, and a bibliography are included in the document. This Master of Science thesis was submitted to Iowa State University of Science and Technology. (FP)

VT 006 300

ED042060

Suggestions for Homemaking Programs To Meet Needs of Educable Mentally Retarded Pupils

by

Gladys Meyer Ebert

Directed by

Alberta D. Hill, Ed.D.
Professor, Home Economics Education

Thesis conducted as part of Project No. 9 and 16, Pilot Study of Employment-Oriented Courses in Home Economics for Academically Retarded, under grant from Iowa Department of Public Instruction, Division of Vocational Education, PL88-210 Sec. 4(a).

Iowa State University
of Science and Technology
Ames, Iowa
1967

VT 006 300

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SUGGESTIONS FOR HOMEMAKING PROGRAMS TO MEET NEEDS OF EDUCABLE MENTALLY RETARDED PUPILS

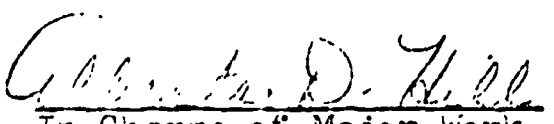
by

Gladys Meyer Ebert

A Thesis Submitted to the
Graduate Faculty in Partial Fulfillment of
The Requirements for the Degree of
MASTER OF SCIENCE

Major Subject: Home Economics Education

Approved: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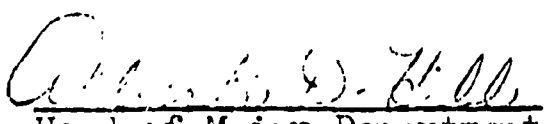
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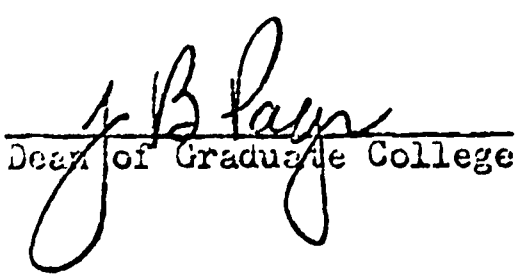
Dean of Graduate College

Iowa State University
Of Science and Technology
Ames, Iowa

1967

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INTRODUCTION

It is generally accepted that the resolution of the problems precipitated by the mentally retarded is no longer the sole responsibility of any single profession or discipline. It is one requiring the efforts, and the pooling of knowledge and information of many, all directed toward the resolution of these problems. Education, then, must assume its part in this responsibility.

The Office of Education (1960) classifies the broad purposes of education in the United States under two main headings:

1. The development of the individual
2. The achievement of the maximum welfare of society through the cooperative efforts of individuals and groups

The USOE explains these broad purposes by adding that it is the first task of education to give "every" individual the opportunity to develop his talents and abilities. Education, as conceived in the United States, is not directed at any one group, but strives, rather, to provide a broad program which considers the great variety, both in type and degree, of talents, aptitudes, and interests represented in the entire population. Individualized instruction and individualized goals, based on the individual needs and differences of all concerned, are of central importance in the development of this program. The ends sought for every individual are physical and mental health, intellectual ability, economic efficiency, moral responsibility, aesthetic appreciation, and a spiritual foundation that will give direction and meaning to life.

To achieve the maximum welfare of society we must depend on the willingness and ability of the individual to apply his talents to the common

good. Therefore, the second major purpose of education is the development of skills and attitudes that lead toward this. The primary requirement for the improvement of society through the cooperative efforts of individuals and groups require a strong sense of civic responsibility and the skills in human relations needed to work effectively with others. The USOE concludes that the achievement of this objective leads to effective citizenship, which is the road to the improvement of society in the immediate community, in the State, in the Nation, and in the World.

The unique purposes of the education of the educable mentally retarded must be patterned after those purposes of education suggested for all if the retarded are to become contributing citizens of the United States with a citizen's corresponding privileges and obligations. The specific content and methods employed, however, must often differ from those of the so-called average student if the educable mentally retarded individuals are to progress toward the objectives of education in the United States.

Tyler (1950) suggests three sources of information to determine the needs (educational objectives) which the school program must meet to fulfill its obligations to the learner: learners themselves, contemporary life, and subject specialists.

In this instance the "learners themselves" would be the individuals in our society that have been placed in the special education classes in our public schools and defined by the public school personnel as educable mentally retarded. This decision is generally made on the basis of IQ tests and the specific recommendations of the special education director for the area, the guidance counselor, the school psychologist, or a consulting psychologist, the classroom teachers directly involved, and the

administration. Consideration is also given to comprehensive medical reports and the wishes of the parents of the individuals involved.

The pupils placed in the special education classes are generally labeled as "retarded" or "handicapped". In keeping with the attitude of delayed development and cautious optimism expressed by Heber (1959), the terms "mental retardation", and "educable mentally retarded", will be used throughout this study.

Approximately a quarter of a million educable mentally retarded children are now enrolled in some type of special classes in public, private, parochial, and residential schools. These children can be helped to become self-sufficient adults if they are carefully guided through special educational techniques. Within the framework of the special "experience areas" recommended as a basis for curriculum used in educating the educable mentally retarded, are many areas of learning that fall within the scope of the discipline of home economics. Thus the home economics teacher with specialized training in the education of the mentally retarded can make a valuable contribution to the education of these individuals.

This study is a pilot investigation designed to obtain information needed as a basis for developing curriculums in home economics programs aimed at meeting the needs of the educable mentally retarded.

REVIEW OF LITERATURE

Relevant literature was reviewed to become more familiar with the criteria for classifying individuals as retarded, their characteristics, special problems, and needs.

Areas considered pertinent to this study, and therefore reviewed, included:

1. Identification and Incidence of Mental Retardation
2. Terminology, Definitions, and Classifications in Mental Retardation
3. Intelligence and Theories of Learning
4. Mental Tests
5. Characteristics of Educable Mentally Retarded
6. Education for the Educable Mentally Retarded
7. Contributions of Home Economics
8. Employment of the Educable Mentally Retarded

Identification and Incidence of Mental Retardation

Mental retardation is considered to be the most significant handicap in our present society. Masland (1958) states that no other forms of disability equal mental retardation in respect to its toll of economic uselessness and human misery.

The exact number of retardates is not known. A comprehensive survey of the number of mentally retarded in a community, using satisfactory techniques for identification, has never been undertaken. It would be a most difficult procedure for several reasons: the percentages of identified mental retardates vary dramatically as a function of age, the

prevalence figures vary markedly as a function of the socioeconomic level of a community or neighborhood, and the criteria of mental subnormality are complex, uncertain, and not self-consistent.

In reference to the variance of percentages as to age, the United States Department of Health, Education, and Welfare (1965), report that the percentage of identified mental retardates increases gradually from birth to age 6, jumps significantly at the age of school entry and continues to rise reaching a peak in the 14-16 year age period. The prevalence then drops rather dramatically from age 16 on. They attribute the high prevalence of identified retardation among school age persons to the following facts: schools are the only community agency having access to, and the means to assess, all persons in the population belonging to a particular age group, and schools, in their academic expectations, apply a more rigorous standard of adaptive behavior than is demanded either of the pre-school or adult age groups.

Dunn (1963) explains the increase in the numbers from age 6 to 16, in our schools identified as mentally retarded by citing the practice followed in most schools. According to the normal probability curve of intelligence, about 5 percent of the school population obtain IQ scores between 50-75. About 2 percent of these are eventually placed in special classes for the mentally retarded. While 5 percent of the school population obtain IQ scores of between 50-75, about one half of this number work up to or near capacity in the regular grades and seem to be reasonably well adjusted. Therefore, they have not been labeled mentally retarded. Special education is designed to serve only those youngsters who are not making reasonably good progress in the regular grades. Most school districts place all

children including the educable mentally retarded in the regular grades at the outset of their school careers. After two or three years of failure in such a school placement, the educable mentally retarded have generally been identified and referred for special class or school placement. This placement is based on the American Association of Mental Deficiency definition which specifies that they have low intelligence, are under 16 years of age, and have an inability to adapt to the regular school program. Those who have studied the problem agree with Dunn (1963) that, "labeling a child as mentally retarded is a serious step and is not done on the basis of IQ score alone" (pp. 73-74).

Neighborhoods with the lowest socioeconomic levels produce the highest percentage of the retarded individuals in our society. The United States Department of Health, Education, and Welfare report states, "The highest incidence occurs among families of those who live in poverty". It is found to be considerably greater than 3 percent among the lowest socioeconomic levels (that is, census tract areas with median education levels of 8 years in school or less and median family income levels of $3,000 per annum or less) while neighborhoods or communities characterized by high incomes and education levels will often have prevalences of less than 1 percent.

Tizard (1953) comments on this fact by stating that there is evidence to suggest that mild subnormality is to a large extent a culturally determined disability and that cultural changes can do much to diminish its occurrence. In Tizard's opinion, the changes that would be most helpful would be better maternal and child health services, more adequate educational provisions, social welfare, vocational guidance and training

services, and a condition of full employment.

The confusion relating to the existing criteria of mental retardation, which makes identification difficult, arises because of errors of measurement, differences in growth patterns, environmental influences, and lack of agreement between the different criteria for diagnosis. All authorities, however, seem to be in agreement in respect to the grave danger involved in identifying a lowered intelligence test score with a lowered level of intelligence, and also the grave danger in confusing lowered intellectual functioning with the condition of mental retardation. So many other factors, they feel, need to be considered (Hutt and Gibby, 1965; Sloan and Birch, 1955; Tizard, 1953).

Tizard (1953) points out that there are at least six criteria to be considered in arriving at a diagnosis of mental retardation which are (1) anatomical and physiological consideration; (2) intellectual measures; (3) educational functioning; (4) social characteristics; (5) emotional reactions; and (6) temperamental considerations. Sloan and Birch (1955) add that the intelligence test score should be used together with other attributes of intellectual retardation, such as vocational, social, maturational, and developmental malfunctioning, to evaluate the child. They state that there are three major areas to be explored before a diagnosis of mental retardation may be properly established: (1) the maturational level; (2) the learning ability; and (3) the social adjustment of the child.

In spite of the many difficulties encountered in attempting a survey of the number of mentally retarded in the United States, an estimate is almost mandatory as a requisite for establishing needed forms of treatment. The United States Department of Health, Education, and Welfare sets the

figure at about 5½ million, of whom approximately five million are mildly or moderately retarded.

The number of mentally retarded enrolled in special education classes has doubled in the last 10 years. However, fewer than 25 percent of retarded children have access to special education today reports the U.S. Department of Health, Education and Welfare (1965), and at least 75,000 specially trained teachers are needed to meet minimum standards—there are about 20,000 today.

Dunn (1963) has compiled a table which gives an estimate of the prevalence of the children classed as exceptional for educational purposes in the United States. He states that summing the percentages in the table would total 12 percent for the population but since some children have multiple disabilities they estimate that approximately 8 percent of the school-age population are now so exceptional in one or more areas as to need one or more special education services. In a community of 120,000 Dunn estimates that approximately one fourth or 30,000 will be of school age. This table shows the relation between the numbers with various disabilities. Often, children who are exceptional in areas other than mental retardation are included in the special education classes in the public schools since they may function as the retarded and need special treatment much the same as the retarded.

Prevalence estimates of the school-age population classified as exceptional for special education purposes (p. 17).

Areas of Exceptionality[a]	Percentage Estimated U.S.O.E.[b]
Intellectually limited	2.3
Educable mentally retarded	(2.0)
Trainable mentally retarded	(0.3)
Intellectually superior (gifted)	2.0
Disturbed and maladjusted	2.0
Emotionally disturbed	
Socially maladjusted	
Speech impaired	3.5
Hearing impaired	0.6
Hard of hearing	(0.5)
Deaf	(0.1)
Visually impaired	0.09
Partially seeing	(0.06)
Blind	(0.03)
Nonsensory physically impaired	2.0
Crippled	(1.0)
Chronic health problems	(1.0)

Since the highest incidence of mental retardation is found in families who live in poverty (United States Department of Health, Education and Welfare, 1965), the author considers it pertinent to this study to review some possible reasons for this occurrence.

There is a growing amount of research that gives support to the theory that mental retardation is caused in part by sub-standard environment. McCandless (1952) pp. 684-685, formulated two learning hypotheses which in a general way illustrate how subcultural mental retardation develops:

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[a]Pupils with multiple special education needs counted more than once

[b]From Mackie, Romain P. Personal Communication 1962

First, the environment from which the subcultural mentally retarded person comes is one providing minimal opportunity for the learning of the skills subsumed under the term intelligence.

Second, the environment from which the subcultural mentally retarded person comes is one in which he has had maximal opportunity to learn "self-defeating" techniques—expectancies of failure, absolute as opposed to abstract thinking, belief in his essential worthlessness, and so on.

McCandless (1952) and Sarason (1953) give brief descriptions of the hopeless environments from which these culturally deprived individuals come. The list includes stark poverty, parental abandonment, social humiliation, rejection and defeat, parental drunkenness, feeblemindedness, and psychosis, school failure and rejection by peers progressively increasing with age, malnutrition, cultural barrenness of the home, parental indifference to the child's educational progress and community success, poor health, bad teeth, retarded growth.

Haeland, Sarason, and Gladwin (1958) made a study of the cultural and environmental factors in relation to causes of mental retardation and stated that cultural and environmental factors, through the establishment of unhealthy or inadequate patterns of intellectual response, may prevent the optimum functioning of the mind in a person whose nervous system is basically capable of normal activity.

Added support is given by Strauss and Kephart (1940), and Clarke and Clarke (1958) on the prognostic value of adverse home conditions when they found in their studies that, "some prognostically important variable exists, even though it has not been clearly identified."

Garrison and Force (1965) also agree with this theory and cite the preponderance of boys and the greater number of special classes in poorer sections as pointing clearly to social-emotional maladjustment and cultural-environment disadvantage as complicating factors in school adjustment and progress, often resulting in mental retardation.

Brief reviews or summaries of several interesting studies that illustrate the effect of environment on intellectual growth and functioning are as follows:

Lantz (1945) demonstrated that a relatively simple and circumscribed experience of failure can prevent children from taking advantage of practice that, under ordinary circumstances, would improve their score on intelligence test items. Such failure had the greatest influence on items that test the thinking process.

Kephart (1940) demonstrated that the longer the time retardates spent in their homes, the lower their IQ's were likely to be. Upon transfer to a relatively privileged institution, where there were about two employees to every seven children, the pattern of IQ change reversed itself, particularly during the first year of their residence. The influence of the environment affects neurologically normal children to a greater extent than brain damaged children, however. Kephart and Strauss (1940) found the neurologically normal children affected to a greater degree than the brain damaged children with similar IQ's.

A study illustrating the effect of school experience is encouraging. Morbois (1942) used elementary school children as subjects and tested the differential effects of attending a rural consolidated or a rural one-room school. The different populations studied were rather closely matched for

all factors but the type of school attended. The study was carried for a two year period. The first group of children reported on experienced their first year of school while the study was in progress. Children attending a rural one room school gained an average of 1 IQ point (from 105-106; rural consolidated-school children gained 5 points (106-111). The difference in these gains was significant. The second group whose first two years of school coincided with the period of the study, showed a 16-point gain for consolidated children (from an average of 105-121); the one room children moved from 105-108. This difference was highly significant. A third group of youngsters had their second and third years of school during the experimental period. The consolidated children changed from 112-116, and the one-room children from 105-103. This group was the smallest and the change did not quite reach significance. Worbois (1942) contributed the differences to the type of teachers' training received by the respective teachers and the richness of experiences provided by the two schools.

Stein and Susser (1963) attempted to bring together evidence which might help define a form of mental subnormality that might be caused by some factors that can delay mental growth and result in mental retardation.

In an earlier follow-up study of educationally subnormal subjects two types of cases were distinguished. The first was a heterogeneous group with presumptive evidence of brain disorder, who came from both "aspirant" and "demotic" subcultural categories, and who tended not to make gains in intelligence scores. The second formed a homogeneous, "clinically normal" group, who came only from the demotic subculture and who did tend to make gains in intelligence scores. It was suggested that the "clinically normal"

type suffers from mental retardation and not from permanent subnormality, and that this condition is specific to the demotic subculture.

The material presented showed that the distribution of clinical types found in the follow-up sample probably held good for the population at large, and was not due to selection by social factors in the referral and ascertainment of backward children. Schools were classified by social standing, and the occurrence of backwardness and of educational subnormality was examined in relation to this classification. The causes of backwardness in school were very different at the extremes of the social scale, and very few cases in schools of high standing were "clinically normal" according to their medical records. In these schools educationally subnormal children had a very high rate of chronic disorders, and these seemed to be a cause of backwardness, and possibly of mental retardation. In schools of low standing, backwardness occurred mainly in "clinically normal" children, and was probably the result of mental retardation.

The effects of environment in creating a condition of retardation that could have been avoided is given increased weight in a study by Skeels and Harms, (1946); Skodak and Skeels, (1949), follow-up studies of the original ones reported.

The reports of the follow-up studies in each of the three studies is as follows:

1. A longitudinal study of 100 adopted children (Skodak and Skeels, (1949). The preliminary indications are that these adoptive children as adults are achieving at levels consistently higher than would have been predicted from the intellectual, educational, or socio-economic level of the biological parents, and equal to

the expectancy for children living in the homes of natural parents capable of providing environmental impacts similar to those which have been provided by the adoptive parents.

2. A study of the effects of differential stimulation on mentally retarded children (Skeels and Dye, 1939). In the original study, 13 children in an experimental group, all mentally retarded at the beginning of the study were transferred at a very young age from one institution to another which provided a much higher degree of one-to-one emotional relationship between mother-surrogates and the children. Later, 11 of these children were placed in adoptive homes.

In the follow-up study, all 13 of the children were self-supporting, and none was in a ward of any institution, private or public. Eleven of the 13 children were married and nine of those had children of their own.

In this study there was a contrast group of 12 children, initially at a higher level of intelligence than those in the experimental group that remained in a relatively nonstimulating institutional environment over a prolonged period of time. These children showed progressive mental retardation—in contrast to a decided increase in rate of mental growth in the group of thirteen children described above.

Of this group of twelve that remained in the institution, 1 died in adolescence following continued residence in a State Institution for the mentally retarded; 4 are still wards of institutions—1 of these is in a mental hospital, and 3 are in institutions for the mentally retarded. Among those no longer wards of institutions only two have married, and one of these is divorced. Two of the four females in the contrast group were

sterilized in late adolescence to preclude the possibility of procreation if later placed out to work.

In education, disparity between the two groups was great. In the group of thirteen, that did not remain in the institution when young, the median grade completed is the 12th. In the contrast group, the median grade completed was 3rd.

Of the group of 13, four subjects completed one year or more of college work, one boy receiving a B.A. degree. Occupationally this group ranges from professional and semi-professional positions to semiskilled labor or domestic work. In the contrast group of 12, 50 percent were unemployed, and those that were employed, with one exception were unskilled laborers.

Another interesting side light of this study is the cost to the state. In the first group of 13, the median total cost is less than $1,000, and in the contrast group of 12, the median total cost ranges from $7,000 to $24,000. The monthly per capita cost to the state at State children's institutions and mental hospitals is more than $200 per month.

In the third study (Skeels and Harms, 1948) there are 3 groups. In one group, 87 children were separated from their natural mothers in early infancy and were placed in adoptive homes before they were 2 years old. The IQ scores of the mothers ranged from 32 to 75. This study included a second group of 111 children whose fathers were at the lowest occupational levels, and a third group of 35 children whose mothers tested below 75 IQ and whose fathers were at the bottom of the socio-economic ladder in terms of occupations. About 80 percent of the children in all three groups were illegitimate. All were placed in adoptive homes before age of 2. The IQ's of these three groups of children were 105.5, 110.3, and 104 respectively.

For none of the three groups does the intelligence of the true mothers account for more than about 5 percent of the variance in child intelligence. In the follow-up study the preliminary findings suggest that the first generation (the children of the original study) compares favorably in occupational status as adults with the Iowa population of comparable ages according to 1960 census figures. The second generation children are scoring average and above on intelligence tests.

Terminology, Definitions and Classifications in Mental Retardation

Terminology

Changes in terminology have continued throughout the years, suggesting that the last word on the subject may not yet have been said.

If we turn from a study of the trend in usage of various terms to the meanings of the terms used to designate "mental retardation," we note that they embody a few fundamental concepts. Silverstein (1963) gives the following examples:

> Feeblemindedness reflects the concept of mental weakness (compare the German 'Schwachsinn'), while 'mental defect' implies 'malfunctioning'. A lack of mental ability, either relative or absolute, underlies 'mental deficiency', 'mental handicap', 'mental inferiority', 'mental subnormality' (the term preferred in England), and 'oligophrenia'; whereas a 'delay' in development is suggested by 'backwardness' (compare the French 'arrieration mentale'), 'mental retardation,' and 'slow learning'. (p. 303)

It would appear that the different connotations of terms correspond to different ways of thinking about the problem in various periods of its history. The current preference for 'mental retardation' with its suggestion of delayed development, seems consistent with the present attitude

of cautious optimism, as represented by an emphasis on active treatment, training, rehabilitation, and research. In contrast, those terms which have the connotation of a lack of ability, or weakness, or family functioning, seem more in keeping with the resignation to custodial care which characterized an earlier period.

The American Association on Mental Deficiency adopted the generic term "mental retardation" in its fifth and latest classification system (Heber, 1959, 1961). Heber stated, in reference to choosing the term "mental retardation", "It incorporates all of the meanings that have been ascribed historically to such concepts as amentia, feeblemindedness, mental deficiency, mental sub-normality, idiocy, imbecility, moronity, etc." (p. 3).

Definition of mental retardation

Definitions range from the very short concise statement, to longer involved explanations relating to specific areas of interest. A short encompassing definition used by the U.S. Department of Health, Education and Welfare in their current publication (1965), states, "It is incomplete mental development. The mentally retarded are those whose normal intellectual growth was arrested at some time before birth, during the birth process or in the early years" (p. 1).

A more specific and technical definition has been adopted by the American Association of Mental Deficiency. Terms used within the definition have in turn been defined, clarifying the exact meanings implied by the definition.

> Mental retardation refers to subaverage general intellectual functioning which originates during the developmental period and is associated with impairment in one or more of the following: (1) Maturation, (2) Learning, and (3) Social Adjustment. (p. 5)

The author has given the specific connotation of the term "mental retardation" as adopted by the American Association of Mental Deficiency. A brief description of the remaining terms as used in the above definition are as follows:

> Subaverage refers to performance which is greater than one Standard Deviation below the population mean of the age group involved on measures of general intellectual functioning.
>
> General Intellectual Functioning—as assessed by performance on one or more of the various objective tests which have been developed for that purpose.
>
> Developmental Period approximately 16 years.
>
> The three aspects of adaptive behavior included in the definition (maturation, learning, and social adjustment) assume different importance as qualifying conditions of mental retardation for different age groups)
>
> Maturation refers to the rate of sequential development of self-help skills of infancy and early childhood such as, sitting, crawling, standing, habit training, interaction with age peers.
>
> "Learning" ability refers to the facility with which knowledge is acquired as a function of experience and these learning difficulties are most manifest in the academic situation. Impaired learning ability is, therefore, particularly important as a qualifying condition of mental retardation during the school years.
>
> "Social Adjustment" is important as a qualifying condition of mental retardation at the adult level. It is assessed in terms of the degree to which the individual is able to maintain himself independently in the community and in gainful employment as well as by his ability to meet and conform to other personal and social responsibilities and standards set by the community.

Classification

The mentally retarded, a broad classification, include children with a large variety of handicaps. Different causes of mental retardation appear to be related to specific personality patterns. Individual children vary widely with respect to the characteristics enumerated in research studies of the mentally retarded. Richmond S. Paine, M.D. (1965) says,

> It is well known to every educator and school psychologist, and to those physicians who have worked with the problem, that different degrees and proportions of the different possible disabilities exist in an almost infinite number of permutations and combinations. Every affected child is in some way different from every other, yet certain threads run through the pattern and can be defined. (p. 108)

To aid accurate recognition, advance fundamental understanding, and facilitate management and treatment, observed phenomena has been grouped into classes or categories. Two types of classifications often exist side by side, a medical classification, with etiologic and pathogenetic implications, and a behavioral classification, with implications for social adaptability, education, and vocational training. In the Behavioral classification, the degree of mental retardation is assessed in two dimensions of behavior, intellectual and social. The criterion for the intellectual functioning is a measured intelligence scale, and the criterion for the social functioning is an adaptive behavior scale. They are given equal weight in diagnosis.

The basis for the gradation used in this classification system, is the standard deviation (SD) of the scale used, and the figures used in the following table (Column I) are based on a scale with a mean of 100 and an SD of 15, such as the Wechsler Intelligence Scale for Children. Each level of the table includes the area within one SD beginning at -1 SD. Using

Table 1. Behavioral classification[a]

Levels	S.D. Range	Description	Column I WAIS WISC IQ range	Column II Stanford Binet	Column III Arthur Scale I
I	1.01 to 2.00	Borderline mental retardation	70-84	68-83	67-83
II	2.01 to 3.00	Mild mental retardation	55-69	52-67	50-66
III	3.01 to 4.00	Moderate mental retardation	40-54	36-51	33-49
IV	4.01 to 5.00	Severe mental retardation	25-39	20-35	16-32
V	5.00	Profound mental retardation	24-below	20	

[a]Heber 1959

this method the confusion and misinterpretation in the comparison of IQ scores derived from different tests or at different ages tends to be eliminated. For example, mental retardation, as measured by the Stanford-Binet (Column II) which has an SD of 16, would begin at 83, and each level would include 16 points on the scale. The table above shows the relation between scores on the 1937 Stanford Binet, the Wechsler Scales, the Arthur Point Scale of Performance, and the degree of retardation.

The Adaptive Behavior Scale of the American Association of Mental Deficiency Behavioral classification (Heber, 1961) describes adaptive behavior in four levels. It is largely based on the Vineland Social Maturity Scale (Heber, 1961). It is interesting to note here that Doll (1947) indicated that the SA (social age) and Social Quotient scores of the Vineland Social Maturity Scale (VSMS) are comparable to the MAs and IQs of the 1937 Stanford-Binet. The AAMD assumes subnormal intellectual functioning to be closely related to subnormal adaptive behavior, but with a closer relation in the lower than in the higher brackets of mental retardation.

Benton (1964) states, however, that "despite the positive association of these two components (measured intelligence and adaptive behavior), the possibility of a significant discrepancy between them in individual cases is believed to be of sufficient importance to warrant a dual class" (p. 26).

The Adaptive Behavior Scale, based on evidences of poor adaptation in relation to independence and social responsibility and measured by suitable instruments as the VSMS with a 16 point SD is as follows:

Behavioral Classification, Adaptive Behavior

Levels	SD Range on scales	Description	Social Quotient Range (SQ)
I	-1.01-2.25	Mild Mental Retardation	64-83
II	-2.26-3.50	Moderate Mental Retardation	44-63
III	-3.51-4.75	Severe Mental Retardation	24-43
IV	-4.75	Profound Mental Retardation	0-23

The Medical Classification adopted by the American Association on Mental Deficiency (Heber, 1959) included eight broad categories which are defined essentially by etiologic or pathogenetic factors as follows:

Outline of Medical Classification of Mental Deficiency

I. Diseases and conditions due to infection.
II. Diseases and conditions due to intoxication.
III. Diseases and conditions due to trauma or physical agent.
IV. Diseases and conditions due to disorder of metabolism, growth or nutrition.
V. Diseases and conditions due to new growths.
VI. Diseases and conditions due to (unknown) prenatal influence.
VII. Diseases and conditions due to unknown or uncertain cause with structural reactions manifest.
VIII. Due to uncertain (or presumed psychologic) cause with functional reaction alone manifest.

Supplementary Classification

1. With genetic component.

2. With secondary cranial anomaly.

3. With impairment of special senses.

4. With convulsive disorder.

5. With psychiatric impairment.

6. With motor dysfunction.

These six supplementary factors may not be used as a primary diagnosis, but Heber felt it helpful to add these to the basic classification. Each

broad category above is supplemented with subgroups which are represented by the second digit of the diagnostic code, as for example, Category I, prenatal infectious encephalopathy is 11, and postnatal infectious encephalopathy is 12. The classification also includes specific diseases which are represented by the third digit of the code. For example, congenital rubella is 11.2, and congenital toxoplasmosis is 11.4 (Heber, 1959).

An understanding of the great disparity in causitive factors, and a basic knowledge of the etiology of mental deficiency is helpful in gaining a perspective of methods to use when working with these individuals, for their welfare and that of societies. A study by Cassel and Riggs (1953), etc., attempted to portray qualitative and quantitative differences in functioning of retarded children from different etiological groups. They used three groups, organic, familial, and unexplained. The unexplained consisted of those whose family history and early years were such that neither familial nor organic factors were thought to be present. The Vineland Social Maturity Scale was used to gather information about the daily behavior and social competence of the subjects. No significant differences were found between groups for the items on the scale including Dressing, Socialization, Occupation, and Communication. The organic group was especially low on activities dependent upon visual-motor coordination and a practical, goal-directed approach to living. The unexplained cases were unique in that they were very poor where effort, dependability, responsibility, and contribution to community welfare were involved. They were described as dependent and egocentric.

In a study by Rain (1952) which was closely related to the Cassel and Riggs (1953) study, non-familial, exogenous children developed social competence at a slower rate than familial, endogenous children.

The word pseudo-retardation has been adopted almost universally to describe this situation, but Albizu-Miranda, Matlin, and Stanton (1966) indicate in reporting on a Puerto Rican study in this area the condition that exists is anything but pseudo. What has been termed pseudo-retardation is an actual inability to function intelligently. It means that adults cannot answer questions which a seven-year-old should be capable of answering. In Puerto Rico large segments of the population are of this type, but pseudo-retardate is not confined to countries with a lower standard of living. A Minneapolis study identified two distinct kinds of retarded populations, defined by their service needs rather than by diagnostic categroy. Deno (1965) related that though the two distinct retarded populations are not entirely dissimilar, the two populations can be separately identified by agency caseload, and they do form contrasting geographic distributions.

Deno (1965) states that the largest population, comprising perhaps 90% of the retarded, consists of those who are found in the public school special classes. "Garden variety" kinds of retardation, with evidence of multiple causation, predominate. There appear to be familial patterns of adaptability in many of the cases, but single-gene-defects and clear clinical types are infrequent. This kind of retarded population has a strong sociological identity, and most of it occurs in the disadvantaged area of the city. The population of the state institution for the educable retarded follows this pattern also, the study relates.

The other retarded population, comprising perhaps 10% of all the retarded, consists of those who are found in state hospitals and in community or day activity programs for trainable retarded. Clinical types are frequent. This kind of retardation is largely independent of sociological disadvantage, and it "can strike anywhere". It arises randomly on the juvenile population base, and is scattered throughout the city. In a reasonably complete tally of all known cases of mental retardation in Minneapolis, age range about ten to seventeen, roughly 7% of all the retarded are of the clinical type.

Intelligence and Theories of Learning

From the earliest writings we find references to differences in mental functioning. For example, more than 2000 years ago Plato suggested in The Republic, that individual variations in intelligence must be a basic determinant of the social and political order in any workable society. Man has pondered the nature of intelligence and its importance in human affairs since the beginnings of civilization, and yet no single definition of intelligence has ever satisfied all or even a majority of those who have been concerned with the concept.

A brief review of the various concepts of intelligence is helpful in evaluating the how and why of the education of the general public and the relationship of intelligence to employment. Theories of intelligence vary widely, and from one point of view could be placed on a continuum with the unitary phenomenon of Spearman (1927) on one end, and the specific phenomenon of Thorndike (1926) on the other end. Spearman (1927) concluded that there is one fundamental general factor that underlies all manifestations of intelligence. He termed this factor "g". Thorndike (1926), at the

other end of the continuum, in reference to theories on intelligence, refutes the idea of general intelligence and believes there are a number of specific intelligences. He groups these many specific intelligences into three categories, abstract, mechanical, and social. The abstract would correlate highly with academic achievement.

There are theories that fall between the extremes of Spearman's (1927) and Thorndike's (1926) theories, and Thurstone's (1935) and Ferguson's (1954, 1956) postulated theories of many intelligences are examples. Thurston states that there is no single general factor of intelligence, but rather twelve primary mental abilities all of which are essentially independent of each other and influence various behaviors in different proportions. Ferguson (1954) states that current approaches to the study of human ability are largely empirical, and he believes that the concept of intelligence is no longer a useful scientific concept except as subsuming some defined set of clearly distinguishable abilities.

There are many who do not feel a need for defining intelligence, and who think of intelligence by whatever it enables us to do. Wechsler (1958) and McCandless (1964) share this attitude. In fact, Wechsler gives an operational explanation of intelligence as follows: "Intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment." In addition, he stresses the fact that many determinants other than intellectual ability per se are involved in intelligent behavior which include goal-directed nature of the behavior, drive, incentive, and personality variables.

McCandless (1964) states that it is well to think of intelligence as problem-solving ability, for practical reasons if for no other. He continues that it involves concentration, speed, depth or power, breadth, and others. Some problems involve only the use of words; others use words to mediate motor pressures; others involve numbers and space. One man can be an excellent farmer but a poor geometrician. Some of the most gifted teachers of arithmetic in the elementary grades do poorly at college algebra. A brilliant physicist may be a poor farmer. Yet there is an amount of generality to problem-solving ability; were the physicist as motivated to farm as he was to study atom splitting, he would probably have been a good farmer.

One basic issue in regard to our concept of intelligence is of major importance in our treatment of the mentally retarded; it is this—are individuals born with a fixed intellectual capacity—is it a constant, or can it be changed. Perry (1954) states:

> If, however, intelligence—again as measured and observed—is regarded as a product of the hypothetical constant intelligence gift—that is, innate biological capacity—and the experience that the person has been through, then it is conceivable that differences in experience (as well as biological gift) will help determine what is measurable and observable as intelligence. The idea that intelligence is a variable product of interaction and not a constant is becoming more generally held. (p. 51)

If we assume that intelligence is constant, then programs for mentally retarded individuals will need to move in directions of improvement of their custodial care and vocational training as persons of limited basic capacities. If we accept the interaction concept, we will endeavor to see what can be done to improve the operating level of mentally retarded individuals to raise their intelligence operating level. As Perry (1954)

states: "The one concept implies making the most of what there is in the capacity of the subnormal person; the other concept implies seeing what can be done to intervene in his subnormal functioning" (p. 53).

Most of the approaches view intelligence as but one part of the total dynamics of the child, one which is related to his total personality and its functioning. The human being functions as a total organism, and so the manifestations of intelligence cannot be separated from the total functioning of the child. In line with this view, Fromm and Hartman (1955) discuss the many factors that interfere with the manifestation of the child's "true" intellectual potentials. These include: (1) neurotic inhibitions, such as inhibition of curiosity and aggression, physical handicaps, or emotional deprivation; (2) learning disabilities, such as inhibited curiosity or specific fears; and (3) temporary intellectual dysfunctioning based on emotional conflict such as examination fear, fear of exhibitionism, or need to exceed potentials. From this discussion it can be concluded that the approach to an understanding of the retarded must be a dynamic one, based upon an understanding of his total personality.

It is recognized that various concepts of intelligence exist, and that individuals seem to possess differing degrees and kinds of intelligence. When relating the concept of intelligence to the mentally retarded we find that they can learn, etc. and there is evidence that intellectual level is not an adequate predictor of the learning of mental defectives and that their learning per se is variable.

A summary compiled by M. Kay Denny (1964) of the review of experiments on learning in the mentally retarded is as follows:

A review of literature indicates rather conclusively the following performance deficits in the mentally retarded:

1. An inhibition deficit is manifested by increased resistance to extinction in classical conditioning, difficulty in discrimination-learning (including differential conditioning), and special susceptibility to disinhibition or distraction.

2. A defect in complex learning is exhibited in poor performance on learning set, delayed reaction, and double alternation.

3. Difficulty in verbal learning is reflected in poor performance in verbal rote learning and abstraction tasks.

4. A lack of verbal control of the motor sphere is congruent with poor semantic conditioning, difficulty in following verbal instructions, ease of learning and lack of verbalization in discrimination reversal, possibly with poor performance on a shielded maze, and possibly with the ease of conditioning finger withdrawal. (pp. 135-136)

On the positive side of the ledger we note the following:

1. When matched on CA with normals, retardates do very poorly at the outset on motor skill tasks but with continued practice show a rapid rate of improvement and, if the task is not too difficult, may even catch up with the normals (can learn if properly motivated or make the required responses).

2. In rote learning, if familiar non-verbal material is used, an association seems to be established as quickly and retained about as well as in the normals, at least for non-institutionalized subjects.

3. There is little evidence of an appreciable retention deficit in any performance area.

4. The retarded can learn to use verbal mediators when specifically trained to do so. (p. 136)

Denny (1964) continues;

> The outlook for the mentally retarded is surprisingly optimistic—at least theoretically. It should be possible to develop appropriate motivational procedures and special training techniques to overcome an appreciable portion of the retardates' difficulties, at least to the extent that they relate to the closely connected deficits in incidental learning, attention, and verbal control. These defects might be amenable to correction by (1) long-term training to attend or orient to stimuli, especially verbal stimuli, and (2) motivating the retarded

> children sufficiently and building in what they failed to learn incidentally during the early years, as, for example, with specially designed and programmed teaching machines. (p. 136)

An understanding of the basic theories of learning that seem to have special relevance to the condition of mental retardation is an aid in gaining an over-all perspective of how to tailor the education of these people to best fit their needs.

The theories of Hebb (1949) and Piaget (1958) have been currently gaining attention as being useful in the area of mental retardation. Benoit (1964) supports Hebb's (1949) neurophychological theory of behavior on the basis of two peculiarities it includes: (1) concern for neurology, and (2) its perceptual foundation. He feels these have marked relevance to learning in the mentally retarded since, for this group, it is important to explore every possible way to maximize functionality.

Hebb's (1949) theory of learning begins with the concept of cell-assembly which Hebb (1949) considers the basic mechanism of sensory and motoric response, and the neurological counterpart of psychological experience. He states that when a sense organ is stimulated it activates a chain of cells located mostly in the upper portions of the central nervous system. He feels that motor impulses act in the same manner. When anything is repeated it strengthens these intercellular bonds through enlargement and multiplication of synaptic knobs by some kind of neurobiotaxis. The rate and limit of strengthening resembles a typical biological exponential curve.

These cell assemblies that have been constituted now become the essential building blocks in associative learning of progressive degrees of complexity. Now, the primitive perceptual structures cooperate to

generate integrators. Such an organizational structure develops when two or more stimulations repeatedly occur within a short time interval. The firing of a perceptual structure tends to bring about the development of a higher-order structure, so that the occurrence of one perceptual act may cause the transmission of excitation through synaptic bridges into the associative structure, and through it deliver facilitation to the other subordinate perceptions, even when the appropriate stimuli is absent.

The superordinate structure consists of the interconnecting neuronal elements and new cells recruited along the way, and it may also include neural elements common to the subordinate structures, as the basis for the perception of partial identities.

Organizational structures are formed as new percepts or more involved perceptual complexes are acquired. And it may be noted that both subordinate and superordinate structures extend into both the sensory and motor segments of the central nervous system, one assisting the other.

Benoit (1964) emphasizes the pertinence of Hebb's theory to the teaching of the mentally retarded because of its concern for making the most of impaired neurology. Hebb (1949) assumes that spread of stimulation at the sensory surface is associated with a more abundant excitation in the higher centers of the nervous system, and that perceptual structures arise more readily; superordinate structures emerge more easily because there is then a greater number of points at which interfacilitation can take place.

Several suggestions for teaching based on this general principle have been outlined by Benoit (1964). A brief summary is as follows:

1. Initial training should be thing-oriented (it provides for fuller cortical participation). If thing percepts are well established, it is

easier to link them to words. Other methods of enlarging stimulus field are:

a. exaggerating slowness of speech

b. distinctiveness in adult speed by sharp inter-word contrasts

c. avoid careless inclusion of reading in the curriculum

d. avoid trying to teach too many associations between written and oral symbols

2. Employ methods of multiplying sensory modalities or dimensions in a given perception.

For example, emphasize design and color when learning the alphabet. Use audio-visual aids whenever possible at every level of learning.

3. Include the motoric portion of the brain as much as possible. For example, apply the do-it-yourself principle, the follow-through of projects, the carrying out of instructions, and adds Benoit, even the vocal recitation of thought sequences.

4. Simplify the learning situation—eliminate or minimize irrelevant stimuli until a habit pattern has been well established.

5. Enable the child to progress in short sequential steps. Each task must be broken down in terms of acquired elements in the child's frame of reference. Units must be carefully chosen to be appropriate for the child's level of ability and readiness.

6. Early learning is of special significance. Every effort must be made to expose the children to all such experiences as may be likely to be within the scope of their readiness, so as to reinforce as many perceptual and organizational structures as possible.

7. Drill is very necessary, and the limit of complexity in integration is low. Therefore it is imperative to stress learning that is within the limits of possibility rather than to try to rise to higher levels.

This condition also emphasizes the need for very careful selection of material to be included in their curriculum—as stated by Benoit (1964), "There is no point to building a base broader than the height of a tower calls for" (p. 161).

8. The motoric sphere is affected much the same as the sensory by condition of retardation, thus the retardate is as likely to fail in precision activities, in complex sequences. They do better on tasks involving large objects, molar muscle systems, and hence lower level integrations. On the basis of this, Benoit (1964) recommends they be oriented to such areas of social service in which interpersonal interaction is primary, and refinement in perception and muscular function is relatively low.

9. New association in the retarded are built up independently of awareness and depends on synchronous perception of related elements. This implies the importance of incidental learning in relation to the retarded. After a certain amount of repetition at this phase, attention may operate at the conscious level.

In addition to the relevance of Hebb's theory of learning to mental retardation, are the theories postulated by Piaget (1958) and Cattell (1960). These theories also appear to have relevance to success on the job—a concept new in research in the area of job success.

To illustrate, in a study conducted at the Laradon Hall Occupational Center, Denver, Colorado (1966), job success appeared to be related to the

fluid intellectual dimension of Cattell's theory of intellectual functioning. This could mean that job success does in fact, have an intellectual dimension that most studies have underestimated, because it is of a different nature than the type of intellectual functioning most heavily measured by standard intelligence tests.

This fluid intellectual dimension also may be related to the level of general mental integration implied by Piaget's (1958) theory which holds, in part, that increasingly complex experiences affect functioning in such a way as to continually prepare the organism to assimilate new and more complex experiences (that were always present but unavailable until the organism is prepared to utilize them). Retardation then might be seen as a breakdown in this process of experiential assimilation at some early level of mental integration.

A brief summary of Piaget's (1958) theory and methods will facilitate insight: Piaget (1958) has not been much interested in the content of intelligence. He has been preoccupied almost exclusively with the functions and the structures which underlie intelligent activity. His theory of intelligence is truly developmental in orientation. He firmly believes that the intellectual functioning of an individual is both quantitatively and qualitatively different at different stages of life. He maintains that we cannot determine where intelligence begins but that we can plot its course of development and its ultimate goal.

Piaget's (1958) developmental approach sees complicated thought processes growing out of simpler ones. Piaget (1958) views intelligence as an inherent need for equilibrium. Intelligence is an act of assimiliation and accommodation. Intelligence as an act of "assimilation" involves an

organization with the world about the individual. Therefore, a response must be made to the world, whether in terms of past behavior or the incorporation of new acts of behavior into experimental meaning. Intelligence also is an aspect of "accommodation", which is the part the environment plays upon the individual. Intelligence, therefore, as adaptive behavior, seeks to find the equilibrium between "accommodation" and "assimilation".

Piaget (1958) proposes three major periods of intellectual development, the first of which is sensorimotor intelligence. This period deals with the child's learning to coordinate various perceptions and overt movements, and it is a period in which he learns to perform a wide variety of successful responses—those producing practical satisfactions. During this first period there is nothing approaching representational thought. The second major period is the preparation for and organization of concrete operations. This period is concerned with the child's acquisition of language and his ability to think representationally and logically about the world. The third period, that of formal operations, deals with the person's development of highly abstract and formal logical systems. It is in this third and last period that he becomes capable of forming true theories about the nature of the world and of utilizing hypothetical-deductive reasoning.

If we can see the educable mentally retarded pupils as children who have not mastered certain stages in intellectual growth, we have potentially a more effective instrument for classroom use than an intelligence classification which may measure ability or capacity but does not actually give too much information as to the nature of the defect. Potentially, the

development of scales of operational schemas can be one of the most stimulating and fruitful breakthroughs in the diagnosis of learning dysfunction.

There are several specific implications for education, and Robinson and Robinson (1965) and Flavell (1963) refer to the following, as applied to three broad areas, placement, curriculum, and teaching methods.

Placement: When adequate techniques have been devised for the systematic assessment of intellectual functioning according to the sequences described by Piaget (1958), it should be possible to use them to determine a child's readiness to profit from various kinds of educational experiences and to adjust his instructional program accordingly.

Curriculum: It should be possible to apply Piaget's system to the problems involved in placing specific content areas at appropriate grade levels and in determining the most appropriate ordering of materials within these areas.

Teaching methods: First, his theory maintains that we learn by doing, that we learn about the world we live in only by actively interacting with it, and especially during the earlier developmental periods, which characterize most school-age retarded children, verbalization is said to follow and not to precede conceptualization. This then, would imply that the best teaching methods would encourage the pupil to interact concretely as much as possible with the material to be mastered.

Second, his theory maintains that one of the basic ways in which an individual learns is through continuous interaction with his peers. Flavell (1963) also comments on this by saying that one can learn the meaning of perspective—and thereby acquire the rationality and objectivity which only a multiperspective view can confer—only by pitting one's

thoughts against those of others and noting similarities and differences. This can be accomplished in the classroom by promoting projects to be undertaken in common, discussion sessions, and etc.

Third, the idea that the attainment of almost any new behavioral sequence involves a step-by-step process implies that the teacher must be sure that each step in the attainment process has been mastered before the next step is considered.

Mental Tests

Tests are used as one basis for classifying students as mentally retarded, consequently, an understanding of the many kinds and functions of tests in the area of intelligence is basic to a study of the educable mentally retarded individuals.

Psychological tests and particularly mental tests are specific samples of behavior and abilities, and the scope of areas measured is greater for some than others. A psychologist may begin by administering a basic battery of tests but in most cases he will need to supplement with other evaluation devices for areas of behavior not adequately measured by the original tests used. Delp (1964) states,

> It would be advisable for psychologists to rate the validity of each test used in terms of the individual being tested, that is, evaluate any factors existing in the individual which might cause constant error in the results for the individual. Reliability of the results could be evaluated in the same manner—with the specific individual in mind. As far as possible, each individual's handicap should be assessed and then a test administered that has been developed and standardized for use with individuals possessing that particular handicap. (p. 43)

The best diagnostic procedure situation, as described by Delp (1964), is to obtain an evaluation that goes beyond reporting of test scores and

the statement of problems. To be useful the report must include descriptions, interpretations, and recommendations which are useful to others in actually improving or solving the basic issues. The evaluative report should include a global description of the individual as a person rather than merely being a set of isolated statements about mental level, personality status, or even specific problems. This global description can lead into a set of recommendations for the person as a unique individual, to his limiting problems, and indicate what might be done to assist this child whether it be in school, home or in an institution, and whether it is related to his mental, emotional, or physical status.

IQ tests are used as one indicator of mental retardation because they do predict success of pupils in our public school systems. In reference to IQ testing for mental retardation, it is well to consider the propositions summarized by Masland, Sarason, and Gladwin (1958):

1. Conventional tests sample a very limited number of intellectual processes, for the most part those kinds of processes which are required in scholastic achievements.

2. Conventional tests, by virtue primarily of their content and means of validation, contain a large element of social class and cultural bias.

3. There is no evidence that the level and kinds of problem-solving behavior signified by scores on conventional tests are highly correlated with non-test problem-solving behavior.

4. It appears that the bulk of the mentally retarded are found primarily in the lower social classes and that the cultural matrix in these classes is different in important respects from that of other groups. Because of the cultural bias in conventional tests, the intellectual

potential of this group, as well as its level of functioning outside the test situation, cannot be assumed to have been adequately assessed.

5. It is becoming more and more apparent that the variety of intellectual processes is far greater than had been thought previously to be the case and that the continued use of conventional tests and test scores in practice and research is likely to be, at best, non-productive. Whatever new knowledge we have (or will obtain) in this respect is due less to a particular method (e.g. factor analysis) than to changes in conceptions about the nature, organization, and variety of intellectual processes. (p. 194)

A number of basic assumptions underlie all intelligence testing, and it is necessary to become familiar with them in order to understand the values and limitations of all intelligence tests. Hutt and Gibby (1965) list the following:

First, whenever a child is given an intelligence test it is assumed that he has had the background and experience suitable to the test that is employed. (For example, a test that is dependent upon language functions cannot be given to a child who has not had an adequate background in such language functions).

Second, it must be assumed that the test is given and scored by an examiner who has been adequately trained in the administration and interpretation of the test.

Third, it is assumed that the child functions on the test in a manner that is indicative of his true capacities. This implies that the child is adequately motivated to take the test, is cooperative in the test situation,

is not unduly anxious, and is not physically incapable of responding maximally to the test items.

Gallagher and Moss (1963) state that there are four major generalities in regard to measures of intelligence that are commonly accepted at this time. These are as follows:

1. It is agreed that intelligence test scores are not too stable in children. They may fluctuate widely during the first ten years of the child's life. It is the experience of the authors, supported by research studies, that the greater the maladjustment of the child, the more likely there will be significant variability in intelligence test scores.

2. The same intelligence tests measure different cognitive functions at different ages.

3. Each test measures only a small part of the complex phenomenon we call intelligence. There are a large number of intelligence tests, each purporting to measure various abilities and cognitive functions. But these tests only tap a portion of the total cognitive abilities of the child. It may well be that some of the more important and fundamental factors are as yet unknown, and so are not evaluated by our present instruments.

4. Intelligence tests have three major functions that are often confused with each other. These are: first, to predict school performance; second, to determine the patterning of abilities in a given child; and third, to provide information leading to clarification of the child's problems.

Since the use of the first intelligence tests, about 50 years ago, many different types of intelligence tests have been developed for use with children. These can be classified into four types: (1) individual tests,

(2) group (paper and pencil) tests, (3) verbal tests, and (4) performance tests.

The individual test, as the name implies, is a test that has been developed for administration to only one person at a time, and this type of test usually provides us with the best possible estimate of the child's intellectual level.

Group and Paper and Pencil Tests are constructed to be given to a number of children simultaneously, and thus save considerable time. Extensive behavioral observations of each child are impossible, however.

Verbal tests require the use of language on the part of the child and may be of the individual or group variety. The use of such tests presupposes that the child has had the average exposure for a child of his age to language experience and has no auditory or speech difficulties.

Performance Tests are non-verbal and do not require any significant use of language on the part of the child. The instructions can often be given in pantomime. These tests are particularly useful with the culturally deprived child, whose experience with language has been inadequate, or a child from a foreign country with a language foreign to this country, or a child with auditory or speech defects.

In connection with intelligence tests the concept of mental age is often confusing. For example, if a child of 8 years has an M.A. (mental age) of 10 years, it does not mean that he is exactly like an average 10-year-old child. An 8-year-old child, a 10-year-old child, and a 12-year-old child, all with an MA of 10 are all quite different due to: a lack of some experiences on his part appropriate for the test, due to emotional factors, and due to certain maturational factors. Hutt and

Gibby (1965) state on page 251, "An M.A. of 10 years simply means that, on a particular test, a child achieved successes that are achieved by average 10-year-old children." We cannot evaluate mental age by itself—it must be considered in relation to the chronological age of the child.

The American Association on Mental Deficiency's Behaviorial classification by Heber (1959) describes mental retardation in two dimensions, namely, measured intelligence and adaptive behavior. The degree of intelligence is assessed in terms of psychometric test performance. Intellectual level is often expressed in mental-age score. Binet and Simon (1916) point out that while intellectual level could be usefully expressed in terms of mental-age score this does not mean that the mental organization of a retarded individual is the same as that of a normal child of the same mental age. Research has tried to determine in what respects the pattern of intellectual performance of mental retardates does differ from that of normal individuals of either the same chronological or the same mental age (MA).

Laycock and Clark (1942) compared the Stanford-Binet performances of contrasting groups of retarded (mean IQ-74) with very bright (mean IQ 123) children, members of each group having been individually matched with respect to MA, sex, socio-economic status, and locality in which they lived. Mean MA for each group of forty subjects was nine years, five months. Their successes on substests from Years VIII through XII of the Scale was determined, and they found the retarded children to appear to be superior on eight subtests and the very bright children to be relatively superior on ten subtests. There was not a demonstrably significant difference, however, on any of the tests. The retarded children excelled on such tasks

as Vocabularly, Making Change, and Absurdities. The investigators contributed these scores to their longer life experience. The very bright children excelled on rote and ideational memory tasks. These findings were confirmed to some degree by a later study by Thompson and Margaret (1947). Both studies found a relative superiority in rote memory task performance on the part of normal children.

There are many intelligence tests, but a few are considered most important and are most commonly used. Among these are the Terman-Merrill revisions of the Stanford-Binet Test which is essentially verbal in nature, and the Wechsler Intelligence Scale for Children which combines both verbal and non-verbal scales.

There are two forms of the Stanford Binet, the first, Form L and the second, Form M. Each form contains a total of 129 items, and the scale extends from the two-year level to the Superior Adult III level, and is thus applicable to individuals ranging in age from early childhood through to the adult level. The items are arranged or grouped by age levels, and increase in difficulty from one year level to the next. For each task correctly completed by the subject, credit is given in terms of months of mental age.

In administering the test, the subject is given items from several levels so that a basal age is established (the highest level at which he passes all the items), and a maximal age (the lowest level at which he fails all the items. Now all the test items of the intervening year levels are administered. Credit in terms of months of mental age is given for each of the items passed and these are added to the basal age giving the mental age of the subject. His IQ is determined by dividing his M.A. by

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his C.A. and multiplying this ratio by 100. In computing the I.Q. of an adult a C.A. of 15 years and 6 months is used regardless of his actual age. The highest possible I.Q. that can be achieved by an adult is 152.

There is a 1960 revision of the Terman-Merrill Stanford-Binet test that is used quite frequently with retarded individuals. The "new" test is called the L-M Form and retains the essential characteristics of the preceding Stanford-Binet tests.

Many authorities give the specific shortcomings of the Stanford-Binet tests, Hutt and Gibby (1965) have summarized them as follows:

1. The scores on the Stanford-Binet do not reflect native capacity, but are affected by previous educational experiences.

2. The subtests are essentially verbal in nature.

3. There is evidence to indicate that cultural differences affect the test scores.

4. Scores at different levels represent different mental abilities.

5. The varying standard deviations affect the various I.Q. distributions.

6. The scores are affected by emotional involvements.

7. Specific mental abilities cannot be defined by use of the test.

In the Wechsler-Bellevue intelligence scale for children each child is given the same test items regardless of his mental or chronological age, and there are no groupings of items according to year level. The child is given credit for each item that he passes. The score is the total of the weighted credits earned on all subtests (the raw sub-test scores are converted into weighted scores and these are then totaled). This total weighted score is then converted directly into an I.Q. by means of tables

for each chronological age group. For example, a child 10 years of age achieving a total weighted score of 80 would score a higher I.Q. than a child 12 years of age achieving the same score.

This scale is divided into two major sections:

1. A verbal scale, yielding a verbal I.Q.
2. A performance scale, yielding a performance I.Q.

The combination of the two scales gives a full-scale I.Q.

The verbal section above is divided into five categories or subtests of items plus an alternate category as follows:

1. General information
2. General comprehension
3. Arithmetic
4. Similarities
5. Vocabulary

The performance section is composed of five subtests plus an alternate category as follows:

1. Picture completion
2. Picture arrangement
3. Block design
4. Object assembly
5. Coding

Hutt and Gibby (1965) found that correlations between the Wechsler scale and other intelligence tests indicate that the verbal portion of the scale correlates most highly with other verbal tests, such as the Revised Stanford-Binet, and the performance section correlates most highly with

other performance tests such as the Grace Arthur Point Scale of Performance Test.

Thorn, Schulman, and Kasper (1962) tested for the reliability and stability of the WISC when used with retarded boys and concluded that under the conditions of their study the WISC was a reliable intelligence test for the mentally retarded children over a short period of time.

A short form has been developed for the Wechsler Intelligence Scale for children. Hutt and Gibby (1965) do not recommend using it with the retarded children for the following reasons: one does not give any intelligence test merely to obtain an I.Q. Giving the test provides an opportunity to interact with the child and to observe his behavioral reactions over a period of time. Any short form must necessarily reduce the amount of total information available to the clinician for evaluation, and since the evaluative process should be as complete as possible, the shortened forms are not advisable.

Kimbrell (1960), comparing the WISC and the Peabody Picture Vocabulary Test (PPVT) and their prediction of academic achievement of 62 children in a state school for defectives with IQ's over 40, obtained a correlation of .43 and .30 between the PPVT and the WISC Verbal and Full Scale IQ's. Academic achievement was predicted to a significant degree by the WISC, but not by the PPVT.

It is also interesting to note that in relation to studies of the performance of mental retardates on the Wechsler scales, retardates present a characteristic subtest profile, relatively high scores result on Object Assembly, Comprehension, and Vocabulary, and relatively low scores on Arithmetic and the digit-reversal aspect of Digit Span. Wechsler (1958)

places particular emphasis on the Arithmetic Subtest, and states that relatively high Arithmetic and Block Design subtest scores argue against a diagnosis of uncomplicated mental retardation. It is also interesting to note that he does not find a bias in favor of relatively high Performance Scale level, which he believes to be more closely associated with delinquency and antisocial trends. Later studies support all of Wechsler's (1958) findings with the exception of some question on the Performance Scale. Some studies have shown Performance Scale level to be equal to or higher than the Verbal Scale level (Sloan and Schneider, 1951; Sandercock and Butler, 1952; Kolstoe, 1954; Beck and Lam, 1955; Newman and Loos, 1955; and Baroff, 1959).

Of special importance to the development of curriculum for the educable mentally retarded is the fact that on the L-M form of the Stanford-Binet test, scatter patterns do not tend to differentiate validly between the familial and organic mental retarded children (Wechsler, 1958). This supports Benoit's (1959) theory. He views mental retardation as a deficit of intellectual function resulting from varied intrapersonal and/or extrapersonal determinants, but having as a common proximate cause a diminished efficiency of the nervous system thus entailing a lessened general capacity for growth in perceptual and conceptual interpretation and consequently in environmental adjustment.

Characteristics of Educable Mentally Retarded

A review of the characteristics of individuals classified as educable mentally retarded gives added insight into the problems encountered by the

public schools when endeavoring to educate them to the maximum of their capabilities.

The erroneous assumption is often made that in the special class the retardate will be with others "like himself" and that the special teacher somehow has a homogeneous group. While the special teacher often has fewer children in his class, the range and variety of characteristics and problems still make for an extremely heterogeneous class. The task of teaching is thus complicated on several dimensions (Garrison and Force, 1965).

This unfortunate heterogeneous situation appears to be present in intensifying degrees where enrollments include I.Q.'s of from 85-50, as shown by an analysis of a special class enrollment by Deno (1963). She found that the pupil with an IQ above 80 was fundamentally different in important characteristics and needs from the one with the IQ below 65. Deno (1965) found the latter group more apt to be obviously defective in functioning and to have more conspicuously deviant appearance and behavior. The pupils above 80 IQ were more apt to be emotionally disturbed, brain damaged, victims of social deprivation or remediable instructional failures rather than retarded in the classical sense. She felt that the differences were large enough to necessitate different kinds of programs and curricula for each.

In spite of wide variations found in the characteristics present in the mentally retarded, studies show that there are certain intellectual and personality characteristics that are frequently associated with the majority of mentally handicapped children. It is these rather common characteristics that teachers who work with and plan for the educable mentally retarded can use to remind themselves of the precautions they must

observe. At the same time teacher's need to be aware of constant need to look for the specific abilities of individual children who may differ in one or all respects from the general characteristics.

The specific characteristics of the mentally retarded have been reviewed and discussed by the author within the framework of education developed by Goldstein and Seigle (1958). They have stated certain assumptions that are helpful in a review of the characteristics of the mentally retarded. First, characteristics associated with the educable mentally handicapped are typical of the characteristics of the population as a whole. Differences in characteristics are a matter of degree and not a matter of kind. For example, any person regardless of intellectual status may, under certain conditions, show evidence of frustration and, to some degree, an inability to handle abstractions in problem solving. Second, while the term "characteristics of the educable mentally handicapped" implies a group behavior, individuals in the group may exhibit any one or combination of characteristics and, in some cases, none worthy of mention. Third, despite the fact that the behavioral characteristics are more frequently noted in the educational setting, the primary characteristics such as rate of mental development and physical status are continuously exerting a critical influence on the total performance of the child.

Goldstein and Seigle (1958) recommend considering the characteristics of the mentally retarded in two categories: (1) the primary characteristics which precipitate and influence certain types of behavior in the educable mentally handicapped, and (2) the secondary characteristics which are manifested by the interaction of the child's inherent characteristics with his physical and social environment.

Primary characteristics

These are the characteristics that are literally built into the child, and are representative of intellectual and physical growth and development. Research and experience have shown that modifications introduced into the child's environment in the form of cultural, dietetic, and educational measures can have a marked effect on the rate and nature of the child's intellectual and physical growth.

Physical characteristics have a limited influence on educational procedures, since the role of the educator is one of regulation and accommodation. He follows the rules or sees that the children follow the prescriptions of the diagnostician and therapist. Rarely, if ever, does the educator initiate direct procedures designed to correct or ameliorate a specific condition.

In general, educable mentally handicapped children follow the same sequence of physical growth and maturation as their normal peers. As a group they are somewhat inferior in size and weight as compared with children of the same age, are more prone to illness and have a greater prevalence of physical handicaps. It is difficult to determine whether characteristics of inferiority in physical development and proneness to illness are directly associated with mental handicap or with environmental conditions or both. Environmental conditions merit considerable attention since studies have shown that, at least in large metropolitan districts, a sizable proportion of educable mentally handicapped children come from substandard homes. Sometimes the existence of a physical handicap and mental handicap may have a direct relationship as in the case of some brain-injured children, and in other cases, the mental handicap may be

independant of the source of the physical handicap. Stein (1963) found rather consistently that the mentally retarded performed at physically lower levels than their normal peer comparison groups. However, he did not find they were inferior physically, but the evidence supported the hypothesis of a significant positive relationship between mental age and motor proficiency. "It appears that the complexity of the movements and the associated intellectual action necessary to carry out the movements could be greater factors in limiting the motor performance of the retardate than the lack of motor ability per se" (Stein, 1963; p. 234).

A study by Canton and Stacey (1951) dealt with manipulative dexterity of mental retardates. A comparison of the performances of groups at three IQ levels, 42-59, 60-69, and 70-82 showed the highest group to be better than the lowest in every case while the middle group was better than the lowest group most of the time and lower than the highest group, but not to a great extent, most of the time.

The group of mental retardates did not compare favorably with normal males in manipulative dexterity.

Francis and Rarick (1960) found that the 14 year old mentally retarded child could not make squat thrusts and standard broad jumps as well as eight year olds of the same sex. The 14 year old's performance in running speed was only up to the standard of normal 10-year-olds. They also lagged one to three years behind the average child in tests of strength and were as much as four years behind norms for average children in the vertical jump.

Sloan (1951) found the retarded to be even more below average in the finer and more intricate motor coordination skills.

Klausmeier and Check (1959) conducted a study to identify and compare characteristics of children of low, average, and high intelligence at a mean age of 113 months. They found that the children of low intelligence (IQ 55-80) did not differ significantly from either the average (IQ 90-110) or the high (IQ 120 and higher) in nine measures: weight, number of permanent teeth, carpal age, emotional adjustment, achievement in relation to capacity, integration of self-concept, expression of emotion, behavior pattern, and estimate of own abilities. The low IQ group was lower than both the average and high IQ group in strength of grip, reading achievement, arithmetic achievement, and language achievement. With a .01 level of statistical significance as the criterion for accepting an hypothesis, it was found that (a) a low level of physical development within the child does not accompany low achievement in arithmetic and reading and (b) uneven physical development within the child does not accompany low achievement in arithmetic and reading. In relation to the hypothesis that within-child variability in strength, intelligence, reading, arithmetic, and language achievement is the same for children of low, average, and high intelligence it was found that average girls were less variable than low boys, low girls, and high boys; that average boys were less variable than low girls and high boys; and that high girls were less variable than low girls. It was also found that within-child variability in reading, arithmetic, and language was less for the average than for the high and low and that the boys as a total group showed less variability than the girls.

The intellectual characteristics of educable mentally handicapped children are similar to those of their normal peers in that they follow the same developmental sequence. Goldstein and Seigle (1958) feel that the

differences that exist are not so much in the kind of characteristics as they are in the rate and degree with which they develop and that educable mentally retarded children learn in the same way as do normal children, through experience. Retarded learn more slowly, however, and they rarely learn as much, particularly in academic areas. In learning they apply the processes of imitation, reasoning, and generalization. They also acquire concepts and develop value systems consistent with social living.

Psychologically, educable mentally handicapped children, like all children, require and seek love, security, recognition, and a sense of belonging. There is a definite relationship between the educable mentally retarded child's basic psychological needs, certain aspects of our culture, and the child's intellectual subnormality. The bright, successful, creative individual is smiled upon by our culture, and is frequently regarded with gestures of affection and recognition. Our culture frowns upon the incompetent and the laggard and confers on him the very antithesis of his basic needs, rejection. Goldstein and Siegle (1958) state, "The classroom should be a desirable locale for the child and acceptance and recognition should not be something he has to earn" (p. 208).

Goldstein and Siegle (1958) indicate use of the mental age to designate intellectual status invokes the notion of abilities as they are related to age. They remind us that the abilities sampled by the test are specific to the test and that no test actually samples all of the abilities of any one child. Also, the life experiences of the educable mentally handicapped child alter the qualitative nature of his mental age simply because he has lived longer and has had experiences not yet available to

the normal and gifted child of the same mental age. Biological factors also affect his performance.

The performance and behavior of the educable mentally handicapped child may vacillate between his mental age and his chronological age depending upon the nature of the task and/or of the situation in which he is involved. For example, it is most frequently found that the educable mentally handicapped child's academic ability will most nearly approximate his mental age while his physical status reflects his chronological age. Emotionally, he will frequently react to many situations in terms of his mental age, and at the same time, his social maturity will, in some areas, approach his chronological age.

A more realistic appraisal of the child's status can be obtained if the mental age is viewed as a maturing phenomenon rather than as a static characteristic.

Johnson and Blake (1960) found that the educable mentally retarded were able to learn, retain and transfer quite complex motor and verbal skills, according to their mental ages.

In respect to learning, related to mental age, Ellis (1963) gives a "stimulus trace theory" in which he contends that, on learning trials, this trace decays faster for the retarded than for the normal of the same age since they have central nervous system dysfunctions possibly of a biochemical nature. Therefore they have poorer short-term memory than the average. However, once they have thoroughly learned, they may retain as well as the average even on a long-term basis. Thus, the problem may not be one of rapid forgetting but one of difficulty in original learning and in not providing for over-learning. Vergason (1962) demonstrated that even

after 30 days the retarded retained verbal materials as well as normals (of the same mental age) when there was extensive, original overlearning. Teachers, therefore need to select tasks which are brief enough and easy enough for the retarded to learn. Then, if there must be much overlearning immediately, the retarded may retain as much simple, rote learning material which does not involve intellectual manipulation as normals of the same mental age.

Johnson (1958) summarizes the learning abilities as based on the concept of mental age as follows:

1. Mentally handicapped children should be reading at their Binet or Verbal M.A. level.

2. The learning rate of mentally handicapped children is at least equal to that of normal children of the same mental age of developmental level. The rate of development is slower for the mentally handicapped.

3. The evidence indicates that the mentally handicapped can generalize or transfer a principle better than normal children of the same mental age.

Secondary characteristics

The secondary characteristics of the educable mentally retarded children are an outcome or expression of confliect or imbalance between the child's primary characteristics and his physical and social environment. These characteristics most frequently take the form of behavior and attitudes.

Behaviors and attitudes most frequently attributed to the educable mentally retarded children include overaggressiveness, self-devaluation,

short attention span, poor memory, delayed language development, low tolerance for frustration, and others.

Secondary characteristics vary in intensity and frequency with the degree and nature of interaction between the primary characteristics and the child's environment, and they are amenable to change. For example, when a teacher sees that an educable child is about to select a task that is far beyond his intellectual ability and directs his attention to a challenging task more within his capabilities, the teacher has manipulated the child's environment so as to reduce the potential for such behaviors as hostility, withdrawal, tantrums, and others.

Goldstein and Seigle's (1958) discussion of secondary characteristics and a review of studies related to these characteristics are given below.

The concept of "frustration-proness" draws into realization the fact that the educable mentally handicapped child is operating in a "normal" world—a world for which he is inadequately equipped, particularly in those duties and activities that call for intellectual adequacy. The educable mentally retarded will probably be faced with difficult or impossible situations more frequently than might be expected for his normal peers, and he is liable to find himself obviously inadequate while others around him succeed. This renders him comparatively more prone to frustration than his normal peers.

The teacher can use this information to advantage in planning activities and tasks for the mentally retarded individual. She will base her planning on considerations more inclusive than the immediate goals of the task. If avoidable frustrations are eliminated in the classroom, the child's frustrations may be reduced to the point where he will be able to

withstand hitherto intolerable situations outside of school and as a result may become more acceptable socially and emotionally.

There are few actual studies of frustration and its effects. Little evidence is available to support the assumption that the mentally retarded are subjected to more frustration than the non-retarded or that they are less tolerant of frustration than nonretarded persons. Dollard (1939), et al. stated the following in relation to the mentally retarded:

> Not only would low intelligence seem likely to increase the amount of frustration experienced by an individual; it would also be expected to diminish the effectiveness of socializing forces in that it would imply a lowered capacity to appreciate the consequences of specific acts. But since the normally intelligent man is instigated both by needs which are actually present and also, perhaps to an even greater extent, by anticipated wants, the person with blunted capacity for looking into the future is likely to have a relatively low level of aspiration and to find acceptable a life status which would be intolerable to a more intelligent person. The same limitation of intelligence which restricts an individual's learning and earning capacities may also make the ensuing low level of accomplishment far less frustrating than it would otherwise be. (pp. 116-117)

The opposite assumption, that retarded persons are subject to more rather than less frustration as a consequence of a reduced ability to achieve desired goals was given support by a study by Sherman and Bell (1951) which reported a significant correlation between the Ohio Mental Ability Tests and a paper and pencil test of frustration.

"Self-devaluation" is a result of imbalance between the child's competencies, intellectual and physical, and the demands of his environment (Goldstein and Seigle, 1958). It most frequently manifests itself in behaviors and attitudes signifying that the child has strong feelings of general unworthiness and that he holds his abilities in low esteem.

Two conditions foster this tendency toward self-devaluation. First, there is the persisting condition of the generally inadequate child searching for his place in a world that stresses adequacy. Second, there is the child's frequent misjudgment of his abilities and limitations.

In relation to the first condition, the mentally retarded is often compared with others his age and found wanting, and worse, he is often compared with younger children who are frequently more adept, swift, and efficient in performing tasks and accomplishments seemingly at his level of achievement.

In respect to the second condition, the educable mentally retarded child's tendency toward self-devaluation is aided by the educable mentally handicapped child's limited ability to assess his capabilities and limitations realistically. Studies have shown that educable mentally handicapped children, when confronted with a task, will more frequently either over or underestimate their abilities than will their normal peers.

Ringness (1961) investigated the reality of retarded children's estimates of their achievement in eight areas: success in learning arithmetic, success in English, spelling and writing, success in reading, acceptance by peers, acceptance by adults, success in sports, leadership of peers, and intelligence. As a result of his findings, Ringness (1961) drew the following conclusions:

1. Mentally retarded children more generally tend to overestimate success than do average or bright children.

2. Bright children tend to rate themselves more highly than retarded and average children, following in that order.

3. Mentally retarded children have a less realistic self-concept than bright or average children.

4. The self-estimate varies not only with the child, but with intelligence, sex, and situation.

5. Self-ratings of mentally retarded children are less reliable than those of average or bright children. (p. 459)

In this study Ringness' states that the use of the term self-concept is idiosyncratic; what was evaluated was the child's ability to judge his performance objectivity and/or the child's aspiration level rather than the child's own feelings about himself.

Goldstein and Seigle (1958) state it might be expected that those children who overestimate their abilities with some degree of consistency will be loading the deck against themselves and in favor of failure. A chain of failing experiences may very well reinforce the child's feelings of unworthiness and establish strong anticipations of failure. The child who underestimates his ability will often find that his finished work is substandard when compared with that of his peers. He may accept this as evidence of inferiority.

Goldstein continues that these children, like all children, set up defenses against failure and against further reinforcement of self-devaluation. One method is to engage in a kind of suspended animation wherein the child manages to stay apart from as many activities or tasks as possible. He becomes engrossed in low level activity (in which he can succeed) and may pursue these for hours. Or he may persevere at an academic task and be very happy at it. This task will most frequently be in the area in which the child has had some success. This he then enjoys,

but even so, if he is pushed too fast or feels that he is being pushed he will become quite anxious.

Goldstein states it is important that the retarded individual gain ability in appraising himself realistically. The extent to which he can correctly estimate his abilities and limitations will frequently determine the quality of his adjustment to society. This may be accomplished in part by manipulation of the child's environment. By arranging conditions and assignments, the teacher can make certain that the child will experience success in almost every undertaking. Gradually, however, the child must be taught that failure does occur and he should be guided toward an understanding of why the failure did occur and could be avoided. Evaluation immediately upon completion of the task is of primary importance since this gives the child an opportunity to relate his abilities and limitations to an immediate, concrete experience.

Self-devaluation has two implications for the adjustment of the educable mentally retarded child. First, his feelings tend to intervene between himself and both academic and social learning to the extent that he works far below his potential. Second, there is the effect of his self-concept. The self-concept formed and reinforced during childhood will persist throughout adulthood.

Conflicts between the educable mentally retarded child's intellectual ability and the demands of academic and social situations often manifest themselves as disabilities in learning. A short summary of the disabilities and their effects are as follows:

1. Oversimplification of concepts

The mentally retarded children as a group tend to do better with concrete or functional ideas and concepts than with abstractions. When asked to describe an object he will do so in terms of its utility, as an orange is for eating, a chair for sitting, etc.

This is not a serious handicap in the early school grades, but as he becomes older his ability to comprehend and to conceptualize lag behind his technical skills in academic areas such as word recognition and computation.

The retarded also oversimplifies the ideas, concepts, and abstractions typical of social learnings. For example, rules for classroom living may be learned to the extent that the child can recite them verbatim, but he may not be able to live up to many of them; or he may be able to give the meaning to each word in a sentence but is not able to grasp the meaning of the sentence.

2. Limited ability in generalization

The mentally retarded child generally has great difficulty in developing generalizations. The more abstract the related concepts in situations embodying a common principle, the more difficulty the educable mentally handicapped child has in seeing the commonalities in the situations. For example, a child may quickly recognize the addition sign in a problem in computation without seeing its relationship to the word "and" in the verbal problem. In social situations he may learn the rules for waiting in line in the cafeteria, but later fail to see the relationship for waiting in line when boarding a school bus (if this has not been taught as a specific rule).

Goldstein and Scigle (1958) suggest that a teacher may manipulate the environment to the advantage of the educable mentally handicapped child by

(1) teaching in such a way that both mechanical and conceptual skills are integral with each lesson and activity, and (2) by helping the child to see how a principle with academic or social connotation applies in a variety of situations.

It is not enough for the pupil to know how to add, he must know when to add. In reading, he must learn to recognize a word on sight and also learn the concepts they represent if his reading is to have any meaning to him. In social situations he must recognize the reasons behind the rules or he will simply obey the rules that are enforced and not apply judgments to similar situations lacking the set rules.

The extent, to which the educable mentally retarded child in the special class is able to acquire and develop a conceptual base for his academic and social learnings may very well determine the extent to which he will generalize desirably both in his youth and in his adulthood.

3. Short memory and attention span

The memory of the retarded tends to be shorter than the memory of the normal child but research gives some indication that certain factors will help the mentally retarded child remember longer. Learnings which have meaning to the student will be remembered longer than those that have relatively little or no meaning. His memory will be improved if he over-learns the material. A little extra time spent on each concept—presenting it in many ways will improve his ability to remember it.

Duration of attention span is directly related to the child's comprehension and interest in the material presented. They are not unlike normal children in that a lack of interest or understanding leads to

fidgeting, poking, humming, or daydreaming; this happens more easily, however, with the retarded.

In summary, Goldstein and Seigle (1958) states that manipulating the classroom environment may help the teacher ameliorate the secondary characteristics of limited memory and short attention span. By ascertaining that classroom work is within the comprehension of the children and by organizing activities and materials so that they stimulate the interest of the children, the teacher may effectively reduce learning loss and disciplinary problems.

4. Limitations in incidental learning

Educable mentally retarded children learn very little that isn't presented in a definite concise manner. His limited ability to learn incidental information indicates that the teacher cannot take for granted that the child will acquire information simply because it is immediately in his presence. The teacher needs to plan in considerable detail not only how she is going to present the central theme but also which of the peripheral learnings she wants the child to acquire.

If special effort has been made to help the children increase their skills of observation the amount of incidental learning may be increased some, but in general, a single idea a teacher feels most important for the child to learn will have to be emphasized.

5. Retarded language development

In language ability, the educable mentally handicapped child most nearly approximates a level consistent with his mental age, and this often applies to his ability to produce language and the quality of the language itself.

At the primary level, some educable mentally handicapped children exhibit speech defects typical of the preschool child. It is important to his progress in school to have his speech corrected by a specialist, for rarely will it cure itself.

One of the more prevalent language characteristics of some educable mentally handicapped children is their tendency to limit their communication to single words or fragments of sentences. In brighter children this might be attributed to laziness or sloppy habits of communication, but in the retarded it is probably due to impoverished ideas or concepts as well as a limited vocabulary.

Perhaps the most consistent finding which emerges from studies of cognitive functioning in mentally retarded children is their marked incapacity for comprehending and manipulating verbal symbols (Burt, 1953; Meyers, et al., 1961).

O'Connor (1958) suggested that whereas motor skills are acquired by a process akin to conditioning, problem solving may be mediated by grasping a principle of solution which depends upon a verbal formulation of the problem. And Osler and Fivel (1961) attributed the more efficient problem solving of rapid learners to their use of mediational concepts and the less efficient performance of slow learners to the gradual strengthening of S-R connections. Griffith (1960) reported that appropriate verbal mediators were necessary to verbalize a concept common to a series of items and that retarded Ss required a larger proportion of such mediators than normal M.A. controls if they were to produce as many verbalizations of concepts.

Milgram and Furth (1963) compared educable retarded children and normal M.A. controls on a series of concept tasks assumed to vary in the

degree to which language experience might facilitate attainment or discovery of the concept. Results confirmed predictions: The retarded performed more poorly in the discovery and application of a language relevant concept that was within their realm of comprehension, but performed as well as normals in solving problems where perceptual rather than verbal modes of solution were assumed to be more suitable.

In a study by Stephens (1966), subnormal (educable mentally retarded subjects) had particular difficulty with functionally based categories and this was greater than could be expected on the basis of reduced mental age. As a result of this evidence it appears that their deficits may be limited to certain types of categories, as for example the functionally based type used in this study. (These are described as Use categories, which describe functional attributes of various objects as opposed to two other categories used in this study, a Type A which was the perceptual categories, based primarily on visual discriminations of perceptual characteristics and Type C, Human categories which relate to differences of various kinds among human beings.)

In summary, Goldstein and Seigle (1958) recommend that the teacher employ many language situations to assist the child in language development. These may range from conversational situations to more complex dramatizations of life situations and role playing.

6. Motivation

In an extensive review of literature Heber (1964) found that the mentally retarded individuals are responsible to variations in type and magnitude of incentive. There is also some evidence to suggest that social

(verbal and non-verbal) reinforcement may be particularly valued by retarded subjects and to a greater extent than is the case with normal subjects.

7. Social learning theory

Heber (1964) concludes,

> As a result of a review of literature in this area, there is a strong suggestion that the performance of retardates may be depressed as a function of generalized expectations of failure and that proportionally more retarded than normals may respond to the threat of failure with decreased rather than increased effort. (p. 170)

8. Educability

Goldstein and Seigle (1958) stress the fact that the most important and constructive characteristic of the educable mentally handicapped child is the reality of his educability. He can learn and is to some degree amenable to education as it is defined in the public school frame of reference.

It is also important to remember that they have both uniqueness, commonalities in ability, performance, and behavior that permit for both individual and group programing and instruction.

For success with the educable mentally retarded it is necessary to have teachers trained to work constructively with them, and teachers and administrators who plan and develop a consistent educational program for them and the ability of teachers and administrators to carry out a comprehensive program of education for them that will fulfill the long-range goals of public school education.

One aspect of the educable mentally retarded individual that has a relationship to all areas of the education of these individuals is the degree to which they are capable of adjusting socially and emotionally.

The manner in which a teacher approaches them, her expectations relating to their degree of social maturity and emotional adjustment depend on her understanding of their social-emotional development.

9. Social-emotional adjustment of the retarded

Studies show that children who are mentally retarded are likely to develop social-emotional adjustment problems as they strive to win acceptance and to satisfy the psychological needs that they have in common with all children. Their intellectual deficit tends to handicap them in interpreting all kinds of experiences that are important to normal social-emotional growth. They experience difficulty from their very first attempts toward adjustment. Webster (1963) stated:

> Practically all retarded children we have observed show poor development in their capacity to make emotionally significant distinctions between the familiar and the nonfamiliar, between friends and strangers, between persons and places or between persons and inanimate objects.
>
> The retarded child's emotional development is impaired by a difficulty in finding new solutions for old conflicts and frustrations. We have noted an impairment in the capacity for spontaneous displacement of drives to new interests. There is a tendency toward repetition and inflexibility in solving emotional problems just as in other functions. (pp. 39-40)

Cromwell (1961) points out the developmental aspects of personality in mentally retarded children in relation to their personality development. "Personality and behavior patterns develop in many mentally retarded children which tend to lower their social and intellectual efficiency a measure below what we would already expect on the basis of constitutional impairments" (p. 46).

Cromwell (1961) presents a very useful theoretical framework for viewing personality development in mentally retarded children that involves

learning and social-learning theory. He indicates that the same basic laws of learning apply to all children, but that failure experiences in retardates have a different effect than in normal children. A teacher who wonders why a mentally retarded child does not try harder if he fails on a particular task will be enlightened by this statement by Cromwell (1961):

> It has been further discussed as to how experiences of failure may be more prevalent among retarded children and may lead to passible-avoidant behavior, lack of responsiveness to failure, and decreased effort in the face of failure. (p. 51)

The picture brightens somewhat, however, when he later states:

> The growth of a higher level motivational system of success-striving and the ability to see success-failure meanings develop gradually with age and conceptual ability of the children. Different rates of growth are expected in retarded and normal individuals. (p. 51)

Johnson (1961) conducted a study to determine the effects of regular-class placement on the adjustment of mentally retarded children. In his study of the acceptance of 600 mentally retarded children in the regular classes, first through fifth, he found thirty-nine children who had IQ's on the Stanford-Binet Scale, of 69 or below. A sociometric study of these six hundred children showed that the mentally retarded children in the grades tended to be isolated and rejected by the other children in the classes.

Johnson (1961) compared these results with results they obtained from a similar study in a progressive school and found similar results. Johnson (1961) attributes the adjustment difficulties of mentally retarded pupils to unsuccessful compensatory reactions related to failure and frustration. He concludes, their peers did not reject them because they lacked ability to perform schoolwork, but because of their behavior, which included

objectionable traits such as fighting, cheating, and lying. Martin (1953) found similar conditions in the parochial school setting.

Jordan (1960) studied the sociometric status of educable retarded children within special classes and found that IQ and social status were positively related. Her over-all status findings confirmed Johnson's results for regular classes; the children lowest in IQ occupy low social positions.

Dexter (1958) has proposed a social theory of mental retardation in which he attempts to explain the effects on the retarded of their continuously being confronted with goals that are unattainable in an essentially competitive society. He states:

> The self-image of the mentally defective in a society which stresses aptitude at intellectual achievement is likely to be negative because the 'looking-glass self' principle operates and they learn from their social contacts and experiences to look down upon and distrust themselves. (p. 924)

Hirsch (1959) discusses the behavior of the retarded child in his attempt to maintain self-esteem in the face of great odds.

He clearly shows the difficulties a retarded child encounters when he attempts to maintain his self-esteem in the face of intellectual or social demands which they can meet only with great difficulty or cannot meet at all. He says that the knowledge that the intelligence is dulled seems to carry with it the false implication that the retarded child is less sensitive to hurt, less responsive to disappointment, and not in need of gratifications which come with the knowledge that one's efforts are appreciated. He continues that the major difference between the retarded child and his normal peer rests in the retarded child's ego limitation. This limitation seriously interferes both with his capacity to obtain, through his own

efforts, optimal needed satisfaction, as well as with his capacity to meet environmental demands. He needs to depend much more on help from others. To the extent that he is surrounded by lenient, supportive adults, he may make a satisfactory emotional adjustment. To the extent that important (to him) adults are inconsistent in their attitudes, overly demanding, undependable, and non-supportive of his efforts, the retarded child's needs emerge with greater urgency. When he finds the demands made upon him confusing or impossible to meet, and when his necessarily limited accomplishments are unappreciated or ridiculed, his symptomatic behavior may become increasingly intensified.

Hirsch (1959) also describes certain typical behavioral manifestations. For example, most children, normal and retarded, do not wish to relinquish control of a situation when they feel they are being evaluated. They probably feel that, once they can no longer direct the course of an interpersonal situation in which they will be asked to "perform" they will find themselves at the mercy of the other, their weaknesses will be discovered and their flaws found out. They need to "control" this situation in order to prevent this from coming about. Retarded children feel the stress of this situation more urgently.

When he is not allowed to reverse the roles, and must relinquish control of the threatening (to him) situation he often reacts by being hyperactive—and at times this takes a "destructive" form. Hirsch (1959) explains that while hyperactivity may well be a direct reflection of organic factors, such as physiological irritability produced by cortical or subcortical scar tissue formation, we know that such behavior increases or abates as the psychological setting in which it occurs changes, that it

intensifies or diminishes as anxiety increases or decreases. In a sense, one might think of the hyperactivity as "ordered disorder", in that it has meaning and at least unconscious purpose—to maintain control of a threatening (to his self-esteem) situation.

Some children choose the exact opposite means of maintaining control of a situation—they become very passive. Frequently mentally retarded children are described as sweet, gentle, malleable, and passive. This passivity seems related to their helplessness; that is, to their inability to apply effective judgment, to generalize and abstract information from the world around them, to use their bodies effectively, and in general to have available the psychological skills necessary for relatively independent functioning. Hirsch (1959) explains that whether a child develops in the direction of passive compliance or obdurate negativism may be related as much to constitutional, temperamental "givens" as to the child's experience within the family setting. This type child has relinquished his autonomy. He relies on others particularly for decision-making. When they are antagonized they react with passive resistance—they are afraid of offending for fear they will be deserted and they realize how much they must depend on these other people. The degree to which this passive solution is a comfortable one, without the accompaniment of chronic anxiety, depends largely on the intrafamilial situation.

In addition to the resistance and submission solutions to threatening situations, is the withdrawal solution. Retarded children who withdraw lack spontaneity. They speak, usually in monosyllables, only when spoken to, and frequently not then. They respond to others by attempting to keep out of the personal interaction as much as possible. Often it is difficult

to distinguish between the retarded who react by withdrawing, and the schizophrenic children.

There are a variety of other behaviors that are fairly characteristic of the intellectually retarded and these are most often understood in terms of the deficit which they reflect. Thus, perseveration, verbal parroting, echolalia, and confabulation are means used by the retarded child to adapt to his situation.

When a retarded literally repeats the words of an examiner he is attempting conversation. This is also true of the extensive questioning by the retarded child. He is striving to establish and maintain a relationship rather than gain information. It may also be an attempt to insure stability. They are often teased and this constant questioning with the assurance of the same answer (by a responsible person they trust) gives them a sense of stability. They can again trust the world, it remains the same. Any change or disorganization of routine disturbs these children. This, discussed above, is described by Werner (1948).

Perseveration is also employed by the retarded as a solution to a distressing or perplexing situation. It is a painless way to get rid of an onerous task or the onerous individual presenting the task.

Retarded children often employ "denial". This may be the basis for the layman's conception of the "happy moron". Children functioning on a retarded level are almost constantly made aware of their inadequacies and as a result are frequently unhappy. The "cheerfulness" sometimes seen represents a more or less successful effort to deny this unhappiness. Sometimes the apparent chronic good humor represents almost conscious role playing. In reality there isn't such a thing as a happy moron.

Denial may take the form of an unrealistically high self-evaluation. When presented with a task much too difficult for him, the retarded child may respond with apparent equanimity: "Oh yes, I know that. I can do all that." He may maintain this position even when failing repeatedly. This may represent a defect in judgment, but it is used more often to cover vulnerability. They just can't afford to admit to themselves that they will be defeated again.

When (mentally retarded) children are given emotional support by parents, teachers, siblings, and other important persons, they may feel much less threatened by their inability. In such a setting inability need not lead to humiliation and nonacceptance. "Accepted" children, although they may intellectually lag far behind their chronological peers, are able non-defensively to admit to, and not be threatened by, lack of knowledge and skill; in consequence they are able to lead comparatively happy, non-anxious and, within their limitations, productive lives.

As a result of reviewing all relevant research in this area, Heber (1964) supports Hirsch's (1959) conclusions with the following statement:

> The few striking and consistent findings from the meager investment in 'personality research' with the retarded converge in highlighting the importance of motivational variables. Even severely retarded persons appear to be responsive to variations in incentive conditions; social reinforcement in the form of verbal praise and encouragement or just simple attention appears to be at least as effective as with normal persons. There is a strong suggestion that the performance of retardates may be depressed as a function of generalized expectations of failure and that proportionately more retarded than normals may respond to the threat of failure with decreased rather than increased effort. (p. 170)

A description of social action in an institution for the retarded gives very thought provoking insight into the social life and values of

mentally retarded patients. Edgerton (1963) made an intensive study by means of various sociometric and participant-observational techniques, extending over a one year period. The Pacific State Hospital chosen for the study has over 1500 employees for 3000 resident patients. Their goal is rehabilitation and release, however, it is recognized that some patients must receive life-long protective care. The setting for this institution is large and varied, almost metropolitan in atmosphere which provides an elaborate setting for a complex patient social system.

There are many staff-organized activities that bring the sexes together but there are also several hours in each day during which patients may meet in a number of areas with very little, if any, immediate supervision. However, employees are constantly on duty and the possibility that prescribed behaviors will be detected is great.

An "elite" group of patients formed. They have explicit criteria for membership and know only their own members. They interact almost exclusively with one another, and rarely condescend to associate with non-members. They share patterns of dress, behavior, valuation and speech which are distinct from those of other patients. Occasionally they take group action to impose sanctions upon errant members or to defend their rights against the infringements of outsiders. This is not a formally organized group with codified right or obligations. However, they do have a sense of "in-group" commonality or "oneness" versus other patients from whom they hold themselves completely aloof. They regard themselves as occupying the apex of the patient status hierarchy and hold non-elite patients (who frequently have IQ's higher than their own) beneath their

contempt. They perceive themselves as elite, and regard their presence in an institution as a cruel miscarriage of justice.

A brief description of the characteristics of the elite group are as follows:

elite	as compared to	non-elite
70% Negro or Mexican American	as compared to	10% of non-elite
lower IQ's in general	" " "	slightly higher IQ's
males about same age	" " "	no statistics
females younger	" " "	females older
enter before adolescence	" " "	enter during adolescence

elite group	non-elite group
6% have handicaps	21% have handicaps
70% Roman Catholic	Predominantly protestant
90% have campus privileges	70% have campus privileges
90% have had police action taken against them	50% have had police action taken against them

Most of the elite group had not been active members of gangs before entering the institution. A few had been exploited by gangs, however. While they have not had experience as members of organized gangs, most of the elite boys had attempted to join gangs before entering the institution.

Admittance to the elite group is a process that differs for boys and girls. The boys must "prove" they are tough and pretend they are admired members of some worthy teen-age delinquent gang, and that they are placed in the hospital as a mental defective, whereas in fact they are normal delinquents and should be in some "respectable" prison. They must also find a sponsor that invites them to join. One last qualification is proving themselves by being "tough". They may have to fight or prove they can. A girl is admitted by being chosen as a girl friend by one of the boy elite members.

All members must acquire certain behaviors and attributes and these are almost identical to those of teen-age young people found "outside". For example, they must learn to dance, and to dance well. They learn all the newest steps and are very proud of their ability. They cultivate a knowledge and appreciation of the newest and most popular music. Some of the elite group attempt to learn to play musical instruments because, as they put it "those outside chicks really dig music". They are very interested in the automobile and learn a surprising amount about them. The boys discuss plans to buy and "soup-up" cars after their release from the hospital. Girls share this interest, and describe their ideal man as one who is "rich, good looking, and drives a nice car".

The elite group take special interest in their clothing. They insist on dressing like teenagers outside the hospital in contrast to rather weird costumes or drab hospital garb of the non-elite group. The elite boy wears his hair carefully combed and long because "chicks like long hair". He also shaves and washes carefully to look his best. Girls follow the same pattern of imitating those on the outside.

Their conversation centers around delinquent activities—none of which can be practiced within the institution. They share an elaborate argot. It is an abbreviated version of Pachuco and teen-age "jive" talk.

They prove their worthiness of membership by fighting and must fight to remain a member. They admire tricky or dirty fighting and say frankly "you can't fight clean". There rarely are fights within the elite group unless there is a change in the elite status hierarchy.

Romance occupies much of the time of the elite patient's time and interest. They rate their girl for their beauty and desirability so that

it is well known among the elite which boys are going with the most desirable girls. Boys want a "steady" girl, not a fickle one who will "throw you over". They perform many favors for each other. For example, the girls iron clothes for the boys, steal clothing for them, counsel them about staying out of trouble and calm them when they are "blown up". Both boys and girls are very serious about their romances while in the institution but believe that if either of them is released it will terminate the romance—temptations are just too great on the "outside".

Their attitude toward work is to "get out of it". They try to find the jobs that require the least amount of effort and the greatest privileges. They also feel a need to test authority and go just as far as they can go to prove their elite status to their fellow members and non-members.

All of the actions of the elite group have the effect, intentional or not, of setting off the elite from all other patients. They go to great effort to prove they are not like the "childish" or "crazy" middle graders or low-graders. They degrade, mistreat, and are contemptuous of other patients. They try to identify themselves with the employees. The employees have made few and inconsistent efforts to remove or reduce the status and power of the elite because they only rarely pose a threat to the administration by collective violation of hospital regulations.

In conclusion Edgerton (1963) asks,

> How can we account for the extraordinarily normal appearance of the elite? Looking either at individual members of the elite or at their collective beliefs and behaviors, it is difficult, if not impossible, to discriminate between them and what we would reasonably expect from 'normal' non-institutionalized persons of comparable age, socioeconomic status, ethnicity and experience. That persons whose IQ's average 55 are capable of conducting social relations of this complexity in an appropriate and

ostensibly 'normal' manner raises fundamental questions about the relationship between whatever it is that IQ tests measure and behavioral competence and appropriateness in everyday life. (p. 384)

Education for the Educable Mentally Retarded

The establishment of special educational programs for the mentally retarded in this country is a little over 100 years old, and the history of special educational classes for the educable mentally retarded in the public schools is even shorter. The first one reportedly was started in Springfield, Massachusetts, in 1897 (Hutt & Gibby, 1965).

However, as early as the 13th century a colony for retardates was established in Belgium and later other custodial places were sometimes established but almost never for training purposes.

The modern period in the education of retardates had its beginning in the work done in the retraining of the blind and the deaf. It was in working with these individuals that much was learned about special methods and techniques suitable for their education. On the basis of these experiences Itard conducted his experiment on the so-called "Wild Boy of Aveyron" in 1798 (Hutt and Gibby, 1965) and the methods developed by Itard greatly influenced educational work with retarded.

In 1832 of the first state-supported institution for the handicapped, the Perkins School for the Blind was established in Massachusetts. Three years later, the Syracuse State School was founded in New York State as an experimental institution. In the last few years of the 19th century public school classes specifically intended for retarded children were established in this country and their growth was slow.

Philosophy

In the public schools significant shifts in educational philosophy, as well as in pedagogical methods, were introduced. Hungerford (1952) has reviewed the major shifts in the basic educational philosophies for the retarded children and reports that the objective for establishing special classes at first was to remove the retarded from the regular classes for the benefit of the teacher and students in the regular class. This was termed the "relief philosophy". Very little was expected from the retarded child. Later it was decided the retarded should be kept happy and placement in a special class was for the purpose of relieving the child from the necessity of competing with normal children and suffering that unnecessary frustration. This "happiness philosophy" was essentially a negative approach to the retarded.

Next came the "salvage philosophy" which emphasized the teaching of academic skills, sometimes at a watered-down level, more often at levels beyond the child's actual capacity to achieve. The main emphasis was on the need to achieve. The "handiwork philosophy" followed which stressed manual activities. The implication was that the retarded child could not learn from books but could learn to do things with his hands.

Finally specialists arrived at the "modern philosophy" era of education for the retarded. This philosophy emphasizes the worthwhileness of the child, assumes that the child can become a contributing member of society, and accepts the essential dignity of the child as a human being while recognizing that the retardate lacks certain skills and talents. Garrison and Force (1965) add that education for the educable mentally retarded now represents an attempt to evaluate carefully the specific

capacities of each child and to assist in developing them to the highest degree of which he is capable. It attempts to be humane and yet realistic. Vocational goals of the educational process are generally emphasized.

As early as 1931 the White House Conference stated:

> Serious consideration must be given to the curriculum best suited to the needs of sub-normal (mentally handicapped) children. The aim is to develop the child's mental capacities and the control of his emotions to the point of adequate social adjustment and the curriculum must necessarily be determined in part by adult requisites. The first point to consider is what work these subnormals (mentally handicapped) will eventually be able to do.

The realization that a child's handicap represents only a minority part of him reflects one of the noteworthy trends in the education of the handicapped which has occurred in the last half century. Now we understand also that the education of the handicapped child must be a continuing process because, like the normal child, he learns and acquires skills by his efforts day after day, year after year.

Program objectives

The type of program favored by educators for the educable mentally retarded, state Graham (1961), is a different developmental program rather than a remedial adaptation of a normal program. Social and vocational competence, broadly conceived, are the major goals for such a program for these individuals.

Stevens and Erdman (1956) state that numerous studies have demonstrated that as adults the mentally retarded have made satisfactory occupational placement and adjustment in those jobs classified as unskilled or semi-skilled and requiring little or no academic or vocational training. This in turn indicated that training should be specifically directed,

particularly for the adolescent and post-adolescent child, toward the attainment of skills in desirable work habits and work attitudes.

Douglas (1944), as early as 1944 felt that emphasis in occupational education should be placed upon those aspects of employment which are common to all jobs. She further was of the opinion that such training should only be initiated after the child has obtained some degree of proficiency in the basic skill subjects.

Closely following this, Hungerford (1948), and others in New York City, extended occupational education so as to embrace the total educational process for mentally retarded pupils. Emphasis in this program was placed upon achieving social and vocational competence and included special emphasis upon personal health, personal grooming, getting and holding a job, getting along with "bosses", getting along with co-workers, reporting for work on time, group relationship, and other closely related areas.

DeProspo (1956) agrees and states that more and more professionals in the field of special education have come to see that the mentally handicapped, if they are to realize their potentialities, must be given a developmental program rather than a remedial or impractical adaptation of a normal program. A valid education, DeProspo (1956) continues (for the mentally retarded) must attempt to give each child a competency in the following: (1) the technique of self-measurement; (2) a knowledge of suitable job families and social requirements; (3) the technique of meshing abilities with vocational and social requirements; (4) the drive or desire for social contribution.

The whole program must be built around the achieving of vocational and social competence, for it is here, believes DeProspo (1956), that the mentally handicapped will most nearly approach normalcy (if anywhere).

A program suggested by DeProspo (1956) seeks to give the mentally handicapped sufficient freedom to enable him to develop his capabilities for self-support and yet sufficient protection from the rigors of competition to keep him from being too hopelessly discouraged to utilize these capabilities. It provides a series of occupational-social skills leading toward a social maturity that includes occupational adjustment as a part of the total adjustment. It includes the following:

1. Occupational Information
2. Vocational Guidance
3. Vocational Training
4. Vocational Placement
5. Social Placement

A brief explanation of the term occupational adjustment would aid clarity. It has a different meaning when used in relation to the education of the mentally retarded than it has to the average individual. As used by DeProspo (1956), occupational adjustment is one of the interrelated, individual goals of the accepted program for special classes.

The goals of special education might be variously termed:

1. Occupational and social adjustment
2. Human relationships
3. Better living
4. Personal development

5. Personal growth

6. Total adjustment

He adds,

> In one sense, all of these are the same thing, yet each is too general a term to serve a very real purpose as an objective. However, one point should not be overlooked. These goals cannot be approached separately. Each is so related to the others that a poor job done in one vitiates the entire educational program. (p. 480)

Martens (1964) has stated some objectives and goals for the education of the mentally retarded as follows:

General objectives:

1. Education for achievement in the world of knowledge
2. Education for achievement in occupational life
3. Education for achievement in social relations
4. Education for achievement in worthwhile use of leisure time

Specific goals:

I. The knowledge and disposition to keep physically well in order to enjoy life to its maximum.

II. An ease and a joy in social relationships that help him to make friends and to participate in social and civic experiences.

III. An ability to plan and to choose his leisure activities wisely.

IV. An ability to live as a contributing member of a family and a neighborhood group, and later to maintain his own home as head of a family.

V. The ability to earn as much of the necessities of life as possible.

VI. The knowledge and ability to spend his salary wisely.

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Kirk and Johnson (1951) state that objectives could be stated in a number of ways and in different terms. They list the following as the more specific aims on which all specialists agree (for the education of the mentally retarded).

1. They should be educated to get along with their fellowmen; i.e., they should develop social competency through numerous social experiences.

2. They should learn to participate in work for the purpose of earning their own living; i.e., they should develop occupational competence through efficient vocational guidance and training as a part of their school experience.

3. They should develop emotional security and independence in the school and in the home through a good mental hygiene program.

4. They should develop habits of health and sanitation through a good program of health education.

5. They should learn the minimum essentials of tool subjects, even though their academic limits are third to fifth grade.

6. They should learn to occupy themselves in wholesome leisure time activities through an educational program that teaches them to enjoy recreational and leisure-time activities.

7. They should learn to become adequate members of a family and a home through an educational program that emphasizes home membership as a function of the curriculum.

8. They should learn to become adequate members of a community through a school program that emphasizes community participation.

They conclude, "The program for the mentally handicapped stresses (1) occupational adequacy, (2) social competence, and (3) personal adequacy.

Stevens (1964) felt there was a need to state the objectives or goals for the education of the mentally retarded in terms of persisting life situations which are a function of the needs of the individual as dictated by his unique growth and the kind of society in which he lives. The objectives stated in terms of what the learner needs rather than in terms of what the teacher should teach are:

1. Learning to maintain a state of physical well-being
2. Learning to live safely
3. Learning to understand one's self
4. Learning to get along with others
5. Learning to communicate ideas
6. Learning to use leisure time
7. Learning to travel and move about
8. Learning to earn a living
9. Learning to be a home-maker
10. Learning to enjoy life through the appreciation of art, dance, and music
11. Learning to adjust to the forces of nature
12. Learning to manage one's money

Blodgett and Warfield (1959) have developed broad goals of education for the retarded based on general child-development theory and the best of educational theory.

These goals are as follows:

1. Being co-operative in situations with other people, having a positive feeling response to others, being willing to do as asked and to follow directions, when requests are reasonable.

2. Ability to delay responses and postpone satisfactions.

3. Developing interests in various sorts of things to do which are satisfying and rewarding to the individual child and which have constructive aspects to contribute to total learning.

4. Having a good feeling about himself—some feeling of self-worth and self-respect, a "liking oneself" feeling that cuts down the need for hostility or resentment; a positive feeling of self-acceptance that permits also acceptance of one's shortcomings and hence ability to accept help from others.

5. Social behavior that other people find acceptable, freedom from annoying or distasteful habits. For example, the retarded child who is always clinging to someone else physically requires in his younger years a considerable amount of affectional reassurance to fulfill his affectional and attention-getting needs before this behavior should be restricted.

6. Developing task orientation and persistence of effort.

7. Acquisition of academic skills, general information, and skills of interpersonal relationships in keeping with the intellectual ability level.

8. Assuming personal responsibility for his own life to the extent that he can; developing a feeling of self-responsibility.

In conclusion, special attention must be given to the labeling and placement of a child in a class for the retarded (Robinson and Robinson, 1965; Kirk, 1958; Hutt and Gibby, 1965). More damage than good might result from a poor diagnoses that materialized in the placement of a child in a class for the mentally retarded that did not belong there. The school administrator is responsible for seeing that only the mentally retarded is placed in the special education class, that is, the child who is diagnosed

as having low intelligence, who is unable to profit sufficiently from the curriculum of the public schools, but who can be educated to become socially adequate and occupationally competent, provided special educational facilities are furnished.

It is of utmost importance that the slow learning child is not confused with and thus treated as the mentally retarded. The slow learning child differs in that he requires a type of curriculum that is an adaptation of the kind of instruction presented in the regular grades. He does not require a different curriculum, but rather special organization within a class.

Whenever there is doubt concerning the classification of the child as a slow learner or mentally retarded, a trial period in a special class is recommended. A thorough study of a child should, in the majority of cases, place the child in the most profitable situation for both the child and society.

Educational placement

Two assumptions Garrison and Force (1965) give that underlie the educational placement of exceptional children are: (1) A careful and complete evaluation, conducted by competent personnel, is essential to the accurate determination of the special needs that a child may have. This means more than a cursory screening or "one-shot" examination by minimally qualified personnel, (2) Once his special needs are identified, the kind of placement that seems best for this particular exceptional child should be provided. There must be alternatives that go beyond the regular classroom with no special service or residential placement that often is largely

custodial. Careful identification and suitable placement have been called "selective placement" in that the kind of placement is chosen that best serves a particular child and his unique needs. If the best kind of placement does not exist in a given community, then steps must be taken to develop such a facility or service.

While many exceptional children may not become "normal" or cured of their disability or condition, their special needs will, hopefully, change or be reduced through special education. Thus, no placement should be seen as permanent but should be open to periodic review when new evidence may be considered. Any placement is being increasingly seen as a flexible matter for all exceptional children. Further, placement in the community in a relatively normal kind of educational setting is generally seen as the goal or ideal placement. Graham (1956) has emphasized this latter point in his remark: "Special education does not relieve the regular school teacher of responsibility for the exceptional child. It offers special services to supplement the regular school program" (p. 34).

Recommended curriculums for the retarded

Since the philosophy in special education is not to train for one specific type of work but rather the development of general skills, attitudes, and habits, the experiences of the student are not limited to one job in out-of-school experience. Furthermore, some firms and employers have voiced their desire to train their own employees in the use of equipment and the performance of tasks which may vary as technological progress affects industry and business (Pinkard, 1966; Laradon Hall Occupational Center, 1966; Cohen, 1964a; Department of Labor, 1966-1967; Deno, 1965).

During the past decade, many school systems have inaugurated programs for the educable mentally retarded of secondary school age. Special classes for these students have been introduced into the communities secondary schools. In this manner the teen-age retarded student has been given an opportunity to associate with his age peers and become an integral part of the secondary school organization. Thus, he is assisted in developing himself personally and socially—factors which are necessary in his preparation for employment.

Curriculum content, whether organized under traditional subject titles or under core units of study, is socio-occupationally oriented. The goals of the program states Cyden (1962) are to develop the individual's capabilities and assist him in discovering his place in the economic society upon completion of his formal schooling. In addition to academics taught by special education teachers and electives in classes for normal students, the special education curriculum provides for work experience as a bridge between school and the world of work, co-ordinated and correlated by special education personnel. Some schools provide counseling for both students and parents as a function of the mental health provisions in the over-all curriculum. Finally, followup studies have been introduced for the purpose of evaluating these emerging curricula as well as a means for implementing the special education curriculum in light of our dynamic society.

In reference to the secondary-school mentally handicapped youth, Kirk (1951) states: Classes and provisions for mentally handicapped youth in the secondary school are for children with low intelligence and not for all

cases of educational and social maladjustments. Pupils assigned to those special facilities have most or all of the following characteristics:

1. Chronological ages approximately thirteen to eighteen years.

2. Mental ages on verbal intelligence tests of about eight to twelve years, and I.Q.'s ranging from approximately 55 or 60 to 75 or 80.

3. Retardation in achievement in the tool subjects of at least three years at the age of thirteen years.

4. Likelihood of failure in adjustment to the curriculum of the regular secondary school.

5. Potentialities for adequate social and occupational adjustment with a curriculum adjusted to their needs.

6. Sufficient social maturity to adjust to the routine requirements of being in a secondary school. This would include finding their way about the school building, adjusting to several teachers, being acceptable (physically and socially) to the other high-school students, and so forth.

Since the secondary school program developed for the educable mentally retarded is unique for them, a label designating this particular program was needed to prevent misinterpretation or confusion with any other curriculums used in the secondary school for average pupils. For this reason the organization of the curriculum has been called experience areas. There is a basic resemblance to both the activity curriculum and the core curriculum used in some programs for the secondary-school pupils.

Kirk (1951) presents a curriculum that evolved from the recognition of the needs and abilities of mentally handicapped youth. It is a continuation of the program of the intermediate class for preadolescents which

emphasized (1) development of skills in the tool subjects, and (2) experiences in the areas of living.

Kirk (1951) states that at the secondary or adolescent level, the pupils have mastered the essentials of the tool subjects which require further development in applying them to functional situations. For this reason he emphasizes (1) areas of experience, and (2) personal guidance, at the secondary level. These two terms are not names of divisions, explains Kirk (1951), but concurrent aspects, and in practice these are integral parts of the whole.

Garrison (1964) presents an opinion that is contrary to Kirk's in respect to mastery of the tool subjects. He states,

> At this level (referring to secondary level) many of the students who have enjoyed a developmental program in the academic processes of reading, arithmetic, spelling, and writing can still profit from a continuation of this program. (p. 297)

Garrison (1964) adds that the curricular experiences for the secondary mentally retarded may be classified under one, two, or all three of the following:

1. Reading, writing, arithmetic experiences as a continuation of a developmental program and as a means to the end of extending and developing concepts.

2. An organization of opportunities for real and vicarious experiences as a means to the end of developing concepts.

3. An organization of experiences and structural situations as a means to the end of developing specific responses.

Each of these activities is a learning experience. A curriculum for mentally retarded children is an organization of opportunities for learning

experiences. From a long-range point of view, the unique learning characteristics of the individual predetermine which experiences would be of the greatest benefit to him. In any one special class there would be some children who could profit from all three kinds of opportunities. Some could profit from two kinds, but all students could profit from only one. Garrison (1964) continues, the problem is one of providing an organizational plan to meet these varying needs.

In reference to the specific experience areas, Kirk (1951) explains that the areas of experience stressed at the intermediate or pre-adolescent level were the adjustment of the child to his physical, social, and personal environment. At the secondary or adolescent level it is necessary to emphasize more specifically the areas of living and the skills and attitudes essential to meeting the requirements of the social and occupational world. Kirk (1951) acknowledges that many such areas could be listed, but explains that most of the areas can be developed around the broad headings of (1) homebuilding, (2) occupational education, (3) societal relationships, and (4) physical and mental health. Garrison (1964) is in complete agreement with Kirk (1951) in this respect and he explains as follows:

> These topics seem to be related to broad areas of living. They provide a frame of reference for the development of academic processes and for an organization of opportunities for experiences for those who have academic abilities as well as those who have few academic abilities. They provide a frame of reference that makes a sequence of specific responses meaningful. (p. 300)

Kirk (1951) emphasizes that these experience areas should not be thought of as cores, since the emphasis may shift from one area to another, while skills or attitudes that are being developed in one area may also

satisfy all of the other areas. Kirk (1951) explains, much of the teaching of skills and development of healthful attitudes necessary for physical and mental health may occur while learning how to clean a stove, while learning how to apply for a job, or while discussing something that will be done the next day. Kirk (1951) continues that this is not incidental teaching but systematic instruction, and the skills developed have more meaning because they are parts related to a much larger system than "Health" as a subject.

A brief summary of each area described by Kirk (1951) is as follows:

1. Homebuilding

This area is emphasized because the mentally handicapped will have homes of their own, or be members of homes both as children and as adults. Just because one is not psychologically ready to have a family there is no reason to believe that one will not have a family. Also, by acquiring the skills of good homebuilding both boys and girls will be exposed to several of the occupational areas in which they eventually will find employment. There are occupational implications in learning how to keep a kitchen clean, to prepare a meal, or to do simple laundry. Household mechanics introduces the boys to some of the possibilities in the occupational area of the building trades. Finally, it teaches good work habits and methods of improving or maintaining their own homes.

2. Occupational education

This area is not to be confused with vocational education or specific trade training. Occupational education includes manners, personal health and appearance, means of getting employment, means of adjusting to accidents and unemployment, getting along with the boss or fellow workers, following directions, discussing vocational goals and skills, traveling in

the city, general job training, and acquiring vocational information. A few of the skills that can be learned in the classroom are learning to fill out an application blank, how to apply for a job, and how to exchange common courtesies which are as important in finding and keeping a job as actually being able to do the work.

3. Societal relationships

This is an intentionally broad area. The other areas were confined to the individual but this area brings in the broader aspects of orientation to society, geographical concepts, citizenship responsibilities, and understanding the culture of which they are a part and product.

The societal relationships include such topics as understanding our present culture, orientation to society, citizenship responsibilities at the pupils' level of operation, meeting and dealing with people, heterosexual relations, functioning democracy, geographical concepts, inter- and intracultural awareness, and respect for the individual. Since it is in this area that the mentally retarded have poor habits and general information, the content here and methodology must be modified to make possible a better understanding of these specifics.

4. Physical and mental health

It is important that emphasis on physical and mental health for these youth be made since they, as a group, tend to have more minor physical handicaps and as a result meet more frustrations in and out of school than the average individual.

The specific areas under this heading may be listed as follows: awareness of bodily functions, practice and concepts in sanitation and hygiene, pride in personal appearance, understanding of health rules, use

of leisure time, establishing adequate values, sense of achievement, acceptance of limitation, personal conduct, establishment of security, and pride in accomplishments.

Kirk (1951) states that the actual curriculum planning depends upon the teacher's ability to work from generalities, objectives, and goals down to specifics. He gives the following suggestions for implementing the curriculum:

1. Determine the major emphasis of the period and the skills or attitudes that you feel should be developed.

2. Consider the resources for implementing the program both within the school and classroom and in the surrounding community (social, welfare, health, and employment agencies; films and film strips; field trips; school activities; community drives and projects; and training aids).

3. Consider possible pupil activities that would give meaning to any concepts that you are trying to develop.

4. Build the program in outline form, then proceed as needed (contacting agencies to set definite times for field trips, ordering films and visual aids, arranging for any necessary purchases or expenditures, or arranging in advance for any cooperation necessary beyond your own).

5. Secure pupil participation in planning experiences and in gathering materials, such as newspapers, magazines, and equipment.

6. Post on the bulletin board the plans proposed and the weekly schedule for films, trips, talks, and other activities.

7. Post the daily activities, listing who is to do what throughout the day.

Guidance programs

Kirk (1951) explained previously that a total program must be permeated with personal guidance. This may be accomplished as follows:

Personal guidance is the recognition of the unique problems of each individual and the formulation of a technique for assisting him in solving those problems. Some of these problems may be in the areas of (1) difficulties in mastering the elements of the tool subjects, (2) personal and social adjustment, and (3) occupational guidance, information, and training.

1. Guidance in the tool subjects. These must not be taught after the traditional pattern. The emphasis on these subjects is not that they be taught as ends but as means to an end. Each student, through group or individual instruction should be brought to a level equal to his potential in that area.

2. Social guidance. Boys and girls have personal problems which they would like to discuss with a teacher whom they respect. Opportunities for personal conferences should be provided so that students may discuss their progress, their personal problems, their relations with their parents or siblings, their state of mind, their attitudes toward their peers, or any problem which confronts them.

Stress should also be placed on social guidance. Sociodrama and self-determined activities are especially effective with pupils of adolescent age.

3. Occupational guidance, information, and training. The guidance counselor may be very helpful, however, they often have very little training in the area of mental retardation. They will be a source of information and help in the following: surveying the community for available

jobs, making employer contacts, gathering job information, doing job placement, and finally following up individuals placed. The job of the special teacher for the mentally retarded includes: (1) teach job information, especially dealing with the larger vocational areas; (2) bring the individuals in his group to an understanding of their abilities and limitations in relation to various job qualifications and requirements; (3) organize a school program that will develop the general skills needed in future occupations; and (4) aid the guidance counselor to understand the children, their special problems, and their abilities in relation to job placement.

Postschool programs

Many of the mentally retarded pupils leave school upon reaching the age of sixteen. Schools seem to assume that these children are slow learners up to this age, but upon dropping out of school, they are expected to become "average learners" in real life situations. Kirk (1951) states,

> Thus, children who need more education over extended periods are actually receiving less attention and shorter school experience than more capable students who remain in school throughout the high school years. They are expected to adjust to the community socially and economically. (p. 227)

Kirk (1951) continues,

> It is unrealistic to presuppose that because a child has been a member of a special class for eight or 10 years, this special program has corrected his basic difficulty—the inability to learn as much in a specified period of time as the average person. Logically, one would expect the mentally handicapped adult to continue to be slow in learning a job, slow in adjusting to social situations, slow in adjusting to change, and restricted in the type of position he can hold. (p. 227)

The need for postschool programs then is evident. Kirk (1951) states that it is the natural outgrowth of the secondary program. It should be a

part of, not apart from, the total educational and guidance program for mentally handicapped children and youth. His education should continue for as long as the student or former student has need for it, that is until he has demonstrated ability to adjust socially and economically in the community.

A statement by Engel (1956) is relevant:

> There is probably no aspect of education of mentally retarded children which is more important than that which concerns itself with the social and occupational adjustment in adult life. Every teacher in special education is concerned with the end result of his training and struggles to prepare his young people so that when they leave school, they will be able to adjust successfully to jobs, to home life, and to their own social group.
>
> Changing social conditions make it increasingly difficult to place boys and girls under sixteen years of age on jobs. This means that the school must not only have a longer program but it must have a different type of program. Not only need the schools be concerned with physical maturity but they must be concerned with social and emotional maturity. (p. 519)

Teachers of mentally retarded

Delp (1958) introduces the idea of the 3 I's—initiative, ingenuity, and imagination in relation to the education of the mentally retarded. He states,

> It is through these concepts that the teacher is able to make the most of the abilities of each child and to give him the most adequate proportions of the 3 R's, the hand and sense training, the social skills and attitudes, as well as the attitudes, work habits, and work skills which give the most promise of success in later adult life where ever the child may find himself, independent in the community, in a sheltered home environment, or, even for some children, in institutions. (p. 12)

Delp (1958) continues by giving the definitions of each of the 3 I's and stating methods of applying these in teaching the mentally retarded child.

1. Initiative—"readiness and ability in initiating action; enterprise; leading to action." (The American College Dictionary, Random House)

Delp (1958) states that at the current level of knowledge as well as the availability of materials, the teacher of the mentally retarded must have and use initiative at a very high level. Each child is different and no class of mentally retarded children has a group of so-called "average" for whom most of the work can be pointed as in the case of a normal school graded class. The teacher is continually faced with new problems which require immediate handling, be they related to actual learning of the individuals in the academic sense or to the action and behavior of these children.

2. Ingenuity—"the quality of showing cleverness of invention or construction; skillfulness of contrivance or design, as of things, actions, etc." (American College Dictionary, Random House)

Delp (1958) sees the problem of motivation as especially crucial in a class for the mentally retarded. Children here have failed so often they frequently see no reason to try something new. The teacher's job is to develop materials, actions, and ideas which are related to the child's needs, in which he as an individual can see some relationships and which can show a sense of achievement when the child has completed them.

3. Imagination—

> The action of forming mental images or concepts of what is not actually present to the senses; the power of reproducing image stored in the memory under the suggestion of associated images or of recombining former experiences in the creation of new images different from any known by experience. (The American College Dictionary, Random House)

Delp (1958) explains the special class as a situation in which every child is literally an individual in most ways and exceptional ways at that. In this class the day-to-day requirements never seem to repeat. Hence a major philosophy and ability of teachers of the mentally retarded is that of "recombining former experiences in the creation of new images different from any known by experience" (p. 15). Due to the primary individualities of the children, the teacher is forced into a day-to-day, educated trial-and-error system of finding ways, means, and materials through which she can reach each child and so foster his development to the maximum of his potentials. An exchange of ideas between teachers of the educable mentally retarded might alleviate this situation to some degree—a teacher may have had an experience with a child which could be repeated some time, somewhere with another child, if communication were improved.

Delp (1958) stresses complete use by teachers of psychological reports and more varied professional help in discovering the true facts concerning each child and in coordinating these true facts for classroom use. It cannot be stressed too much, and Delp (1958) stresses it again, "Never accept a simple IQ score!" (p. 15)

Without information concerning the child and mentally retarded children in general the teacher often uses either of two extremes in their work with the individual. First, they assume that "every child must learn certain basic facts" and so proceed to pressure every child to learn them, without consideration of the individual's particular deficits. The other extreme is that, with information of the child's limitations in a certain area, the teacher makes no attempt to allow the opportunities for learning, simply on the assumption that he will never be able to learn it. An

intermediate approach would appear to be more sound. If a teacher accepts professional knowledge of the child's lack in an area, she should reduce the pressure in that area, in spite of any preconceived attitude of uniform learning and needs. Conversely, because some children apparently are able to learn much more in an area than tests would indicate possible, she should make a variety of opportunities and motivations available so that the child will have the chance to improve, if the proper stimulus can be found.

An attitude which would probably help the teacher is the acceptance of her work as "clinical teaching". This implies a variety of methods, techniques, and approaches which at the extreme accept each child as a different individual. In the special class it might be said that every child is more or less an extreme when compared to the regular classroom. At the same time these children are different from each other in many ways and the teacher must teach in such a way that she is able to develop a certain amount of group feeling and coordination and at the same time be able to consider all of the extreme individual differences present. A method long discussed in college classes on methods is the "experience unit". This allows a theme which is of interest to at least the majority of the class to hold the class unity. At the same time each child can be progressing at his own level and in the directions which offer the most opportunities for success and future educational development. Delp (1958) continues, "It is here that the 3 I's enter completely into the everyday teaching practices" (p. 16).

A list of desirable characteristics for the teacher of the mentally retarded were developed by a discussion group. H. Fields (1953) acted as chairman of this group and summarized the characteristics as follows:

1. Be in sympathy with the philosophy of education for the retarded child.

2. Be an emotionally well-balanced person.

3. Have certain specific traits, such as humor, tack, vitality, patience, sympathy, good personal appearance, originality and creativity, good physical health, and have skills in planning and organizing.

4. Be accepting and understanding of children.

5. Have good interpersonal relationships with others.

6. Be willing to both look for and accept help.

7. Have adequate training.

8. Know the following specific things: the nature of mental retardation, the nature of the world in which the retarded must live, the things necessary to live in such a world, and the way to teach these things effectively.

In the same vein of thought, Mackie, Williams and Dunn (1957) express their views on the personal and professional qualifications required for teaching mentally retarded children in school, interpreting them to parents and the community, and helping them to find their place in a society that does not always understand and accept them.

The following personal characteristics are recommended: He should be genuinely interested in the mentally retarded. He must have a high level of acceptance of the limited capacities of mentally retarded children to conform to the educational and social standards generally set by the school

and the community. He must have a high degree of aptitude, ingenuity, and originality in providing and adapting materials and methods to the various levels and types of the mentally retarded. Finally, he must be intellectually curious about the learning characteristics of the mentally retarded.

They state that there is little exact knowledge about the way in which mentally retarded learn, and there is a lack of appropriate and special methodology pertaining directly to them. However, the teacher should know the story of the pioneer efforts which were made on behalf of these children, as the work of Itard, Seguin, and others, and whose experiments brought about a change of attitudes toward the retarded. He should also have a knowledge of current literature and research dealing with the mentally retarded children and their training.

The distinctive competencies the teacher should have are summarized by Mackie, Williams and Dunn (1957) as follows:

1. Understanding the characteristics of the mentally retarded child and his place in society.

2. Developing a functional curriculum through relating the broad personal and social needs of the mentally retarded.

3. Understanding and applying pedagogical procedures based on an understanding of the known learning characteristics of the mentally retarded.

4. Selecting, developing, and using appropriate instructional materials and equipment in teaching mentally retarded children.

In a study by Harris (1955) three types of teachers' attitudes toward retarded children were explored: persuasive, in which the teacher feels and expresses understanding of the child's problems and returns kindness for

his negative behavior; suggestive and rational, in which the teacher attempts to objectify the pupil's behavior and find reasons for her own behavior; and a disciplining attitude, which is a more restrictive and punitive approach toward the child. In this study he suggests a method for studying the effect of each approach on the child, and concludes that the special class teacher should vary her attitudes in a deliberate manner, and note the effect of each approach upon the individual child.

Kirk and Johnson (1951) compiled the following summary with respect to the best teaching approach to mentally retarded children as follows:

1. Teaching procedures should be organized in harmony with good mental hygiene principles.

2. The child's attention should be focused through positive suggestions and a positive classroom atmosphere of acceptable social behavior.

3. The retarded child should be allowed to plan activities within the range of his interests and abilities.

4. Techniques such as sociodrama should be used for the purpose of developing insights in practical life situations.

5. Self-determining activities should be organized to give children practice in the independent management of their affairs.

Delp (1958) adequately summarizes the available literature relating to teachers and methods by stating,

> A feeling of at least partial security can develop from the knowledge that there is no panacea, no 'canned' set of methods and materials, by which exceptional children can be taught. Rather that, by the very nature of their exceptional differences, the imposition is on the teacher to find the key for each individual child by which he can develop into a more happy, self-sufficient, and partially productive member of society in the future. (p. 17)

Contributions of Home Economics

The special contribution of home economics to the needs of the educable mentally retarded becomes evident when the subject matter content suggested for the curriculum for the educable mentally retarded is reviewed in light of the subject matter content for home economics in the secondary schools formulated by the Division of Vocational and Technical Education, United States Office of Education in the early 1960's. This group defined the structure and content in terms of basic concepts and generalizations in five subject-matter areas. The scope of the program for home economics as conceived by these leaders is as follows (Mallory, 1964):

I. Human Development and the Family
   - A. Universality of individuals and families
   - B. Uniqueness of individuals and families
   - C. Development and socialization of the individual
   - D. Challenge and creative possibilities of change

II. Home Management and Family Economics
   - A. Environmental influences on individual and family management
   - B. Managerial processes
   - C. Effective elements in management

III. Food and Nutrition
   - A. Significance of food
   - B. Nature of food
   - C. Provision of food

IV. Housing

A. Influences of housing on people

B. Factors influencing the form and use of housing

C. Processes in providing housing

V. Textiles and Clothing

A. Significance of textiles and clothing

B. Nature of textiles and clothing

C. Acquisition and use of textiles and clothing

While all areas of this home economics program have been included in some form in the curriculums suggested by specialists for the education of the educable mentally retarded, several areas of this home economics program have been emphasized by these specialists as having special relevance to the education of the educable mentally retarded. These include:[1]

I. Human Development and the Family

C. Development and socialization of the individual

D. Challenge and creative possibilities of change

II. Home Management and Family Economics

A. Environmental influences on individual and family management

B. Managerial processes

C. Effective elements in management

III. Food and Nutrition

C. Provision of food

IV. Housing

C. Processes in providing housing

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[1]DeProspo, 1956; Martens, 1964; Kirk and Johnson, 1951; Stevens, 1964; Garrison, 1964; Karnes, 1963

V. Textiles and Clothing

C. Acquisition and use of textiles and clothing

The special contribution of home economics to the needs of the educable mentally retarded is also evident in the many job opportunities, which relate to the home economics subject areas, suitable for the educable mentally retarded. A list of unskilled and semi-skilled jobs compiled by Downs and True (1962) include the areas of foods and nutrition, clothing, grooming and textiles, management and consumer buying, housing and home decoration, child care and family development, personal and family living, and home nursing.

Employment of the Educable Mentally Retarded

Studies have shown that a large percentage of individuals classified as educable mentally retarded can become gainfully employed. Charles (1953) who conducted one of the most intensive follow-up studies of retarded individuals who had been enrolled in special classes found that more than 80 percent of these "graduates" of the special program were gainfully employed. Although most held laboring types of jobs, some held much higher-level positions, including managerial positions. Charles (1953) added that a few even lived in expensive homes.

Although not all follow-up studies paint such a favorable impression as this one, the general finding is that the mentally retarded individual, except for the lowest grades, is employable, is able to hold a job about as well as the rest of the population during times of reasonably good or very good employment, and is essentially a good law-abiding citizen. Hutt and Gibby (1965) add that with improved vocational training and with the

availability of good and continuing employment counseling, there is every reason to believe that this record can be improved upon. For this reason, and because the alternative is discouraging, and demoralizing to the retardate himself, and costly to both the retardate and the community, it is imperative that the community invest time and money in their education and training.

Research by Di Michael (1953) demonstrated that it was economically feasible to assist the mentally retarded to become employable. He reports that in 1951, 592 mentally retarded individuals were assisted in becoming employed by vocational rehabilitation agencies. Prior to receiving rehabilitation services the mentally retarded group earned approximately $35,900 annually. After receiving the services this same group earned approximately $922,400, nearly 26 times as much. The impact on our economy is considerable since 40 percent of each tax dollar collected by the U.S. Government comes from the personal income of its citizens, and this increase in income changed the status of most included in this study from consuming to contributing members of our society.

Tredgold and Soddy (1963) also report on the valuable contributions of employable retardates. They state that during the war of 1914-1918 there was a very considerable increase in the number of defectives employed. During the World War II, he continues, the situation was similar, there was much more systematic thought given to it, and largely owing to the work of Hargreaves, 1940, an arrangement was made to group stable, high-grade defectives in unarmed companies of the Pioneer Corps, where, with careful leadership, paternal rather than military, they did very valuable work on lines of communication—road-making, dock-operating, etc.

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Nearly all of the unarmed Pioneers (British Army) were high-grade mental defectives. There were considerable numbers employed in factories making war equipment and during the war another considerable number of the high grade mentally retarded were employed in factories making war equipment and in other various forms of civilian employment. Tredgold and Soddy (1963) relates that although there were some failures, the majority of these workers proved themselves capable of working at the same pressure, for the same hours, and of holding their own with their normal companions. The rewarding outcome of this experiment is that their success has led to the continuation of this principle in industry after the war.

Finding the first right job is generally a very crucial step in the career of any individual. There are many factors involved and problems to be met. Pinkard (1965) states that the basic problems confronting a young adult retardate in obtaining his first job do not differ appreciably from the problems which any young adult faces when it comes to actually securing his first job. If there is any one key principle, it would be personal contact with prospective employers.

Pinkard (1965) adds that most young adults do not enter the employment field at the skilled or even semi-skilled level. The first job for any young adult is usually secured through family or friends, and the level of this job is usually in a helper-type capacity. While it is true that within a few weeks or months the teenage person may be working on a semi-skilled level few actually start at this level until they have proven themselves and have acquired at least some work experience.

Dinger (1961) studied the postschool adjustment of former students of special classes in Altoona, Pennsylvania and found: that a diploma was an

aid to job-getting, that most were employed in unskilled or semi-skilled jobs, that for most subjects their present job had been their only employment, that most got their jobs through friends and relatives, and that half had annual incomes higher than beginning teachers with four years of college training.

He also found that there was little correlation between wages and IQ (.21) or between wages and chronological age (.29) for the successful graduates of a special education program.

Similar findings are also reported by O'Connor and Tizard (1956) who found a significant positive relation between score on the Progressive Matrices and rating of employability, nine to twelve months later for 104 "high-grade defective males". They concluded that employability is "to a lesser extent (than to either general locomotor coordination or emotional stability)—also a function of cognitive ability (p. 211).

In adjusting to their jobs, and to their first jobs in particular, Garrison and Force (1965) report that the retardate often falls into the role of the "dumbbell" or the "rube". This particular situation might be avoided if they were more carefully prepared, as Garrison and Force (1965) suggest, "Supervised work experience supplemented by careful vocational orientation and counseling at school would do much to alleviate these problems" (p. 117).

Peckham (1952) made a study of 80 mentally retarded workers and noted ten different kinds of prominent job adjustment problems. Listed in order of frequency of occurrence they are:

1. Lack of acceptance by fellow employees (teasing, etc.)
2. Lack of social and vocational sophistication

3. Salary dissatisfaction

4. Inability to budget properly

5. Lack of initiative and job responsibility

6. Job quitting for capricious reasons without preparation for the future

7. Parental unrealism about client capacities

8. Client unrealism about personal capacities

9. Illiteracy

10. Family over-protection

Some mentally retarded individuals manage to become successfully employed research has shown, and others never do make desirable employees. Vocational Rehabilitation Administration sponsored research at Southern Illinois University analyzed 91 behavioral characteristics in attempting to distinguish between the employed and unemployed mentally retarded. The characteristics measured included background, intelligence, personality, social and vocational skill factors. Warren (1962) later made a factor analysis of these characteristics and found the following significant to the .05 level or beyond for the employed group.

1. Self-confidence

2. Cheerfulness

3. Cooperation with supervisor

4. Cooperation with other employees

5. Respect for supervisor

6. Minding own business

7. Mixing socially with other employees

8. Completing work on time

9. Quality of work
10. Understanding work
11. Initiative

Additional factors that were not significant at the .05 level but were in favor of the employed group were:

1. Accepting criticism
2. Being neat and clean
3. Being on time
4. Being safety conscious
5. Being careful with machines and property

In a study conducted at the McDonald Training Center Foundation, Tampa, Florida, the director of research, Dr. Pinkard (1965), found the following factors contributed to job failure among placements from within the vocational capacity scale sample they worked with in their project.

Factor	Percent
Lack of sufficient speed	15
Lack of dexterity	12
Required excessive supervision	11
Lack of judgment and memory	8
Insecurity in leaving sheltered workshow	8
Unrealistic wage demands by client	7
Transportation problems	7
Client could not work required hours	6
Social or personality problems	5
Unrealistic wage demands by parents	5
Excessive absence and tardiness	4

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Factor	Percent
Poor relationships with co-workers	3
Emotionally upset under pressure	3
Inability to accept criticism	2
Insubordination	2
Trustworthiness doubted	1
Parents moved	1
Excessive drinking	1

These factors are not mutually exclusive and frequently occur in combination—they were tabulated in frequency of occurrence over the broad sample.

Most of the factors are self explanatory, but a few need further explanation to understand the full significance of its relationship to the retarded and job failure.

First, it must be understood that often there are a number of contributing reasons when an individual is released from a job, and many times the employer simply lumps them together in a phrase such as "a little bit of everything", and "he is just no good".

The two most common factors listed were lack of sufficient speed and lack of dexterity, both of which are particularly important to the industrial assembly line type of work. It has been found that while the mentally retarded individuals are well adapted to performing simple stereotyped assembly operations, they are not successful in assembly line type of competitive employment. Pinkard (1965) states, "Our clients can learn the operations required, but cannot meet the production quota" (p. 64).

Pinkard (1965) illustrates with this example,

> Although sewing training is available in the workshop and the workshop has had girls who were quite proficient in sewing machine operation, we have not had a client who could meet industrial production quotas set forth by the highly competitive garment industry. (p. 64)

The employers were perfectly willing to hire the handicapped and were sympathetic with the project but the machinery involved is so expensive that production standards must be maintained by all workers if the employer is to avoid financial loss.

The factor, required excessive supervision, is present to some extent in nearly all of the cases of job failure with retarded clients, reported Pinkard (1965). Lack of speed, poor hand dexterity, bad judgement, faulty memory, etc. all are factors requiring the constant watch of a supervisor.

The factor of transportation is common since most must depend on public transportation.

As a result of these handicaps, and others mentioned previously, the mentally retarded are quite limited in the types of occupations in which they can derive some measure of success.

Fraenkel (1961) has made the following observations in this respect:

> Figures seem to indicate that most mentally retarded persons rehabilitated into employment will work in service occupations, unskilled jobs, and semiskilled work. About a fourth of all retarded ready for competitive employment will secure employment in clerical, sales, and kindred jobs, skilled jobs, and agricultural work and as family workers or homemakers. (p. 102)

A summary compiled by Garrison and Force (1965) of the results of various studies of vocational opportunities and adjustments of mentally retarded individuals indicate the following:

1. The majority of the mentally retarded are capable of learning and performing a wide range of skills.

2. The majority of the mentally retarded can, through proper guidance, become self-supporting and become useful citizens.

3. The great bulk of the mentally retarded work at service jobs and in other areas requiring a low level of skill.

4. The IQ bears little relation to success on the job when a realistic approach is made to the type of work the mentally retarded are capable of performing.

5. Personal-social skills are more important for life adjustment and vocational success than mechanical ability.

The over-all future outlook for the employment of the educable mentally retarded is encouraging, but opportunities for employment are changing in various areas.

Since the slow learner usually must be satisfied with unskilled or semiskilled occupations, changes in these areas of the labor force are having and will continue to have an ever increasing impact on the employment of the educable mentally retarded.

First, in the area of unskilled labor, total employment is expected to show little change, therefore, if over-all population increases, and percentage of mentally retarded to total population remains static, a shortage of job opportunities will occur, assuming the same percentages of the population aspire to this type of employment. The prediction has been made by some writers that job opportunities will lessen in this area due to replacement of workers by machinery. Information in the Occupational Outlook Handbook 1966-1967, United States Department of Labor, however, explains that this decrease will be offset by industrial expansion which will create the need for unskilled laborers.

The employment of semiskilled workers is expected to increase moderately through 1975, however, and it is expected that this group will decrease somewhat as a proportion of the working population. Thus, job opportunities for the educable mentally retarded may be somewhat less than is true at this time.

The group affording the greatest opportunity for employment now and in the future is the service occupations. The major classifications within this group are:

Private household workers-----2½ million-----comprise ¼ of total employment in this group

Protective service workers---900,000---include policemen, guards and firemen, etc.

Other service workers---this group may be separated as follows:

Services related to---	Occupations such as---	Number (Million)
Food preparation and service in restaurants, hotels, institutions	Waiters, bartenders, counter girls	2.3
cleaning and servicing hotels and other buildings	Janitors, charwomen, elevator operators, custodians, porters	1.8
Health care	Hospital attendants, nurse aids	.8
Improving personal appearance	Barbers and cosmotologists	.6
Entertainment in many different places	Ski instructors, ushers, checkroom girls	.1
Miscellaneous activities	Fashion models, airline stewardesses, travel guides	.3

Employment in service occupations is expected to continue to increase very rapidly in the years ahead due to a rise in income levels and an increase in leisure time. Not all areas will increase at the same rate,

however. An increase is predicted for policemen and other protective service workers; attendants in hospitals and in businesses rendering other professional and personal services; beauty operators; cooks, waiters, and others who prepare and serve meals outside private homes; and janitors, caretakers, and building cleaners.

Only a moderate increase is anticipated in the number of workers employed full time in private homes. A decline is expected in jobs as theater usher, elevator operator, porter, bowling alley pinboy, bootblack. This decline will be more than offset by the rise in the other jobs in the service occupations, however. By 1975 it is predicted that as many as 4 million more workers will be employed in the service type occupations. There is reason to believe that the percentage of mentally retarded finding employment will not decrease, due to the rise in jobs in some areas, as service occupations, which may off-set the decline in other areas. The increase in the amount and kinds of education and training becoming available to these individuals may increase their employment opportunities and their success on the job.

METHOD OF PROCEDURE

The present study was a pilot investigation designed to obtain comprehensive information pertaining to educable mentally retarded pupils that could be used as a guide in making suggestions for curriculums in home economics to meet the needs of these individuals.

There is a growing trend for local communities to provide education for the educable mentally retarded, and in many Iowa communities this group meets as a self contained group. Wherever the administration feels they will benefit and can manipulate the schedule to afford such an arrangement, they leave their special teacher for a course in home economics, and occasionally other courses as art, music, and physical education. While home economics has much to offer this group, little special work has been done in developing curriculum or methods of teaching for the educable mentally retarded pupil in home economics courses.

Preliminary to the formulation of plans for this study, specialists in mental retardation, family relations, and home economics education were consulted. On the basis of their suggestions the following plan of work was agreed upon:

1. Review the characteristics of individuals placed in special education classes for the educable mentally retarded in public high schools. Examine methods and curriculum planned to serve their peculiar needs.

2. Interview special education teachers, homemaking teachers, supervisors of work-study programs, and employers of girls who have completed the program. Make personal observations of the girls in the classroom situation.

3. Make case studies of the five girls enrolled in the senior high school program in home economics for the educable mentally retarded. Use school records, observations, and interviews to develop case studies. Change names to protect individuals.

4. Analyze content and methods of home economics program in one senior high program for the academically retarded as taught for the school year 1965-1966.

5. Develop recommendations for methods and a curriculum for the educable mentally retarded individuals enrolled in home economics classes in high schools based on:
   a. Prior research findings
   b. Informal evaluation of the supervisor of the girls employed in sheltered employment as a part of their work-study program, and employers of jobs in unsheltered work situation.
   c. Case studies
   d. Analysis and evaluation of the 1965-1966 curriculum

To become familiar with curriculums used in schools throughout the United States in special classes for the educable mentally retarded, all available curriculum guides were examined, and those not on file, but deemed important to the study, were ordered. A library of these curriculum guides has been established in the department of home economics education, Iowa State University.

Analysis of Senior Home Economics Course for Educable Mentally Retarded

The home economics teacher for the educable mentally retarded pupils during the school year 1965-1966 kept a record of the daily plans used with these retarded pupils.

An analysis of the plans was made to ascertain the topics included during the year, and also, the scope and content of each day's lessons. Particular attention was also given to any reactions of the pupils in relation to any part of the lessons.

A record was made of a description of the topics included in each days lesson, the laboratory experiences, specific reading and writing assignments, both in and outside of class, field trips and resource people used

for class experiences, demonstrations given by instructor, and the names and sources of most of the films used throughout the year.

Interviews and Personal Observations

The amount of data required was comprehensive and detailed, and the attitudes, personalities, mannerisms, work habits, and related characteristics of the girls were important to the study. For this reason, interviews with people who had been or were presently working with the girls was considered advisable. This included the past and present special education teacher, the sheltered workshop employer, and the employers of the girls working in unsheltered employment.

Appointments were made with the special education teacher that worked with the girls during the 1965-1966 school year, and the special education teacher assigned to their special education class for the 1966-1967 school year. The teachers were informed of the kinds of information that would be most helpful to the study when the appointments were made.

At the beginning of the interview permission was asked to use a tape recorder for the purpose of elimination of note taking which can be disrupting, and is generally not as reliable or efficient as a recorded interview for later use.

At a later date the writer analyzed the tapes and classified the information according to:

1. Methods used by the two special education teachers in the classroom and the teachers evaluation of success or failure.

2. Content of the curriculums used and the teachers evaluation of success or failure.

3. Information gained about each girl in the study.

4. Miscellaneous observations that might give insight and be useful to the study.

Prior to scheduling interviews with the employers of the several girls in the study that were currently employed, literature was reviewed in the area of procedure to follow in conducting an interview, job analysis, and employer's ratings of employees.

It was decided that the interviews should be conducted in an informal manner, but to facilitate direction of the interview, a tentative interview guide consisting of forms for a job description, job specifications, and a specific job rating sheet were compiled. The work in this area by Halsey (1944), Paterson, Gerken and Hahn (1953), Dooher and Marquis (1950), and Pinkard (1965) were used as guides.

Studies in the area of employment of the mentally retarded indicate that the educable mentally retarded individuals that find it difficult to hold a job, fail to do so for reasons other than a lack of intelligence, and that the possible defects that need to be remedied include work habits and character (Jordan, 1961; Super, 1957; O'Connor, 1957; Beckham, 1930; Pinkard, 1965; Collman and Newlyn, 1956; Shotwell, 1949; Cohen, 1964b; Laradon Hall Occupational Center, 1966). Thus it was deemed advisable to stress in the interviews questions concerning the degree to which the employee had adjusted to working under the direction of her immediate boss and to her fellow employees, her work habits, amount of supervision required, general health, including absences and tardiness, and appearance, as well as the ability to meet the specific job requirements such as speed and dexterity and physical capacity.

The information obtained from these interviews was reported in the case studies and used as part of the basis on which suggestions for curriculums for these individuals were made.

The first interview was scheduled with the director of the hot lunch program in which Betty was employed in a sheltered work shop environment as part of her work-study program in school.

The second interview was scheduled with the director of the food service division of the institution in which Martha was employed in an unsheltered full time employee basis. The writer was fortunate in being able to secure interviews with both the director and the immediate supervisor under which Martha worked. They gave detailed information of her adjustment and progress to this position—her first experience in the unsheltered world of work.

The third interview was scheduled with the owner of the manufacturing firm in which Janice was employed.

In addition to the information gained through interviews, it was felt that a personal acquaintanceship with the girls, and an opportunity to observe the girls under varying situations in the classroom would provide for a broader perspective and a deeper understanding of their peculiar problems. Opportunities for observing and working and engaging socially with the girls were arranged at intervals throughout the year. Approximately once a month the writer spent the class period with the girls. Included, among others, in these visits were lessons on choosing a wardrobe, clothing construction experiences, taking a written test, and serving a meal with the writer as guest—as well as supervisor of preparations and clean-up.

In addition to observing this class at regular intervals, home economics classes for special education groups were observed in several other schools in the state. The curriculums, methods, special problems, etc. were discussed with the home economics teachers in each school visited.

The information and understanding gained from these experiences was utilized in interpreting the facts given in the interview and the contents of the cumulative folders. It also was considered in developing suggestions for home economics curriculums for the mentally retarded.

Case Studies

In the preliminary plans for this study, specialists in the area of mental retardation, curriculum planning, evaluation, and home economics, suggested that case studies can be helpful guides for revising and writing curriculums, and for suggesting methods that could be used in classroom situations.

Before attempting to write case studies on the five special education class members that were enrolled in the home economics class used as the basis for this study, the writer attempted an extensive review of literature in the area of case studies. A brief review of the definition, purpose and procedure of case studies gives insight relating to the type of information needed for such a study.

Good and Scates (1954) define the case study as a type of historical study which in turn is a type of explanatory study. Explanatory studies in combination with experimental studies do the following:

1. Carry the burden of finding adequate causes
2. Must assess the effects of these causes

3. Are responsible for describing the mechanisms (the necessary structures and the chain of events) by or through which causes act

The specific purpose of the case study is to relate a sequence of facts in a way that makes them intelligible and which accounts for a given result in terms of antecedent steps that one can recognize and understand.

The procedure of the case-study method is to take account of all pertinent aspects of one thing or situation, employing as the unit for study an individual, an institution, a community, or any group considered as a unit.

The case consists of the data relating to some phase of the life history of the unit or relating to the entire life process, whether the unit is an individual, a family, a social group, an institution, or a community.

In reference to the content of a case study, Hinkle and Hinkle (1963 state, "The life history is an account of the life of a person presented in such a manner that the development of habits and attitudes may be traced. The term implies a complete account of all phases of life" (p. 24). And Wallin (1941) adds, "There are at least four conditions which case study data must satisfy, or at least approximate, in order to be considered adequate. These may be described as (1) relevancy, (2) sufficiency, (3) representativeness, and (4) reliability" (p. 188).

Case studies have many uses and their popularity as a research tool is becoming more important as the social sciences grow. Conant says, "I am trying to throw light on the fact that the social sciences in the United States have developed in a rather special way and in this country developed fast."

Jahoda, Deutsch and Cook state:

> Scientists who have worked in relatively unformulated areas, where there is little experience to serve as a guide, have found the 'case study' approach to be a particularly fruitful method for stimulating insights and suggesting hypotheses for research. (p. 42)

They used the example of the theoretical insights of Sigmund Freud which resulted from his intensive case studies of patients, and also the profound changes in our conceptions of the relationships between man and society that developed as the result of anthropological case studies of primitive cultures.

The kinds and amount of information considered relevant for this study was based on case studies used as research tools by Clarke and Clarke (1958), Kirk (1958), Charles (1953) and others in the field of mental retardation, and also the outline suggested by Good and Scates (1954) in their discussion of the case study as a research tool.

CASE STUDIES

A review of literature relating to case studies prefaced the construction of an outline deemed suitable for a study of this nature. The case study outline suggested by Good and Scates (1954) was adopted as a general pattern and adapted for this particular study in accordance to outlines followed by Clarke and Clarke (1958), Kirk (1958), Charles (1953), and others in their use of case studies as research tools in the area of mental retardation.

After all the available data, pertinent to the outline, were collected and studied, a final organizational pattern was devised and followed as far as possible. Variance in kinds of information available for each girl resulted in some differences. The outline used for the five case studies is as follows:

- Birth Date
- School History
  - Reasons included for placement in "special education" program
  - Progress in this program
- Test Data
  - Educational tests
  - Intelligence tests
    - Verbal tests
    - Performance tests
- Study Level
- Physical and Medical Records
  - Weight and height records
  - Vision record
  - Hearing
  - Physical abnormalities and or handicaps
  - Childhood disease—immunization record
  - Teeth
  - Absenteeism

Personal Characteristics
- Physical
- General abilities
- Personal and social

Work Experience
- Sheltered work-shop
- Unsheltered, gainful employment

Future Goals

The information relating to practical skills, home situation, type of house, financial situation, recreation of the family and the girl, and the personal and social aspects of the personal characteristics category were based on observation and experiences of the director of special education, the special education teachers, the home economics teacher, work supervisors, and the writer.

There are a few instances of brief repetition where inclusion of the information gave needed insight in more than one section of the outline. This served to make each section more complete and meaningful, facilitating its usefulness as a reference on which to base the suggestions for curriculums for these individuals.

All names and places have been changed to protect individuals involved in this study.

Case Study of Janice North

Birth date

October 16, 1947

School history

Entered elementary school, September, 1952

Transferred to ungraded school for the retarded, September, 1954

Transferred to junior high school, grade 7, September, 1961

Transferred to high school work study program, September, 1965

Graduated from work study program, May, 1966

Test data

Educational Tests

Age	Grade	Date	Test	Grade Equiv.	Age Equiv.	Joyce's C.A. at that time
5/11	1st	10/53	M. Readiness Form S Score 52	D	22%tile	
6/11	1st	9/54	M. Readiness Form R Score 69	C	45%tile	
8/5	Pri.	3/5/56	Gates Pri. Reading (Word Rec.) Form 3 Score 3	1.8	7-1	8-5 mo.
8/7	Pri.	4/24/56	Gates Pri. Reading (Sentence Reading) Form 3 Score 14	1.53	6-8	8-6 mo.
9/5	Pri.	3/18/57	Stanford Achievement M.	1.8	6/10	9-5 mo.
10/4	Pri.	2/11/58	Metropolitan Achie Pri S	2.3	7/1	10-5 mo.
11/3	Pri.	1/11/59	Stanford Achievement Pri L	2.4	7-5	11-4 mo.
12/3	Elem	2/17/60	Stanford Achievement Form N Score 1.9	3.1	8.11	12-4 mo.
12/11	Inter	2/27/61	Stanford Achievement Inter K	4.5	9.5	13-4½ mo.
	7th	10/3/61	Iowa Basic Skills Triggs Reading Test	4.1	1%tile	

Intelligence Tests

Grade	Date	Test	Form	Score	C.A.	M.A.	IQ
1	9/53	P.M.A.	5-7 ch		5/11	4-10	82
1	9/54	P.M.A.	5-7		6-11	6-0	87
Pri	10-16-56	Wechsler Int. Scale		60	8-0		71
Pri	3-13-58	Wechsler Int. Scale		71	10-5	7-8	79
7	10-3-61	Otis					73

Additional information on the Wechsler Intelligence Scale administered 3-13-58 is as follows:

	Scaled score	IQ
Verbal Scale	29	74
Performance Scale	42	89
Full Scale	71	79

Verbal Tests	Raw Score	Scaled Score	Performance Tests	Raw Score	Scaled Score
Information	8	5	Picture Completion	9-10	8
Comprehension	6	5	Picture Arrangement	20	7
Arithmetic	6	5	Block Design	10	8
Similarities	3-4	5	Object Assembly	21	10
Vocabularly		9	Coding	35	9
(Digit Span)	9				
Sum of Verbal Tests 29			Sum of Performance Tests 42		

Study level

Reading level May, 1966, 6-1 September 1965, 5-1
Arithmetic level May, 1966, 7 September 1965, 6

Physical and medical records

Weight and height records: normal gains throughout school records

Vision: 1952-1953 school report No glasses

R	L
20/40	20/40

Dr. reported that this might be due to immaturity. Did not feel glasses necessary at this time or later.

1953-1954 school report	10/30	10/30
1954-1955	12/30	12/30
1955-1956	14/20	14/20
1956-1957	14/20	14/20
1957-1958	20/20	20/20

This 20/20 vision has continued to present time.

Hearing: normal

Physical abnormalities and or handicaps: none

Childhood diseases: Measles in 1951
Immunization records complete for others as follows: Diptheria, 1948
Smallpox, 1948
Whooping Cough, 1948
Tetanus, 1948
Salk Vaccine, 1955

Teeth: Need attention, doctor calls attention to numerous cavities

Absenteeism:

Year	Absent	Tardy
1952-1953	9 days	0
1953-1954	3 days	5
1954-1955	6½ "	2
1955-1956	8	0
1956-1957	4	0
1957-1958	12½	0
1958-1959	7½	0
1959-1960	11½	0
1960-1961	3	0
1961-1962	10½	2
1962-1963	2½	1
1963-1964	2	1
1964-1965	10	0

Personal characteristics

Physical:

Janice's rate of growth, health, and coordination tend to be normal. In 1960 Janice's teacher stated in the space for comments pertaining to aptitude or special interest that Janice was good at sewing, singing, dancing, and physical education.

Her homemaking instructor in the senior high work-study program stated that she had very good hand coordination.

In her end of year evaluation the homemaking instructor stated that she was not too interested in her appearance or in the areas of grooming.

Her special education teacher stated that she was "just beautiful the night of graduation".

The author observed that the condition of her teeth could be improved and this would improve her appearance. She also needs to improve her grooming standards.

Her school attendance record is excellent, an indication of good health.

General abilities:

Janice made a slow start in school. She was promoted to first grade from kindergarten but was retained in first grade. The following is a report of a parent-teacher conference, November 9, 1954.

Primary points conveyed to the parent by the teacher: Janice is doing better in reading this year. She is in the average reading group now, and I hope she will be able to stay in that group. Numbers still mean very little to Janice. She cannot recognize any number above 5.

Contributions and reactions of parent: Mrs. Parent knew that Janice was doing better this year. Janice talks about it at home. Janice plays school with her little sister.

The following letter was sent to Janice's parents:

May 5, 1954

Dear Mr. and Mrs. Parent:

I want to tell you just a little about Janice. Perhaps Miss Jacobson has told you that Janice finds learning in school a difficult job. In that respect she is similar to Jimmy.

I remember last year you said that Jimmy would probably like a "special" school better since he would be able to keep up. Janice is in somewhat the same situation. I believe Janice would be happier if she were in a "special" school. It appears now that if she stays in her present school she will have to repeat first grade. From then on, even with the repeat in first grade, her work is going to be hard for her.

I would like to suggest that you permit us to send her to a "special" school next year. We would like to hear from you about this recommendation.

David, in third grade, finds learning difficult. He seems a little more able to do his work than Jimmy. However, David will find each grade successively more difficult. We feel we can try him in fourth grade, and then, depending on his progress, we can determine the best plan for him. Of course, David can be enrolled in a "special" school if you wish.

Both Janice and David are very fine children. We enjoy having them in our school, but they are under considerable strain because the requirements in a regular building are necessarily higher than those in a special school. So in thinking of a "special" school, I am trying to help the children.

With best regards, I am.

Very sincerely yours,

Principal

March 13, 1958, the special education director made the following report on Janice:

Mental age: 7 years, 8 months

Classification: Borderline mentally retarded

1. Janice should continue the present program. She is making good adjustments. Her attitudes are good and she possesses a much better outlook now than she did when in a regular class.

2. Janice seems to possess much more ability in the non-verbal areas than she does in the purely verbal and linguistic subjects. It is possible to see her as quite good with certain types of handwork.

3. Janice seems to be a pupil who later on can qualify for a slow class in junior high school.

May 24, 1961, the following letter was sent to the principal of the junior high.

To: Principal, junior high

The attached is a folder for Janice. In line with our procedures for the past several years, I am transferring Janice to your seventh grade so that we can make room for more urgent cases. As you know, we are filled up at the special education school.

Janice is a nice looking girl, and she is making good progress socially and personally. She will be slow academically, but the teachers, knowing her limitations, will be able to adjust her assignments accordingly.

I know Miss Murphy will counsel with the teachers regarding her needs. Janice will become a very fine citizen, I am sure.

Special Education Director

Janice was placed in the seventh grade 1961 to 1962, but was transferred to the work-study program for the remainder of her school career.

According to the homemaking instructor's evaluation, she showed the greatest interest and progress in clothing selection and construction. She was rated as having good hand coordination and the instructor said she was able to analyze ways of doing things, but had difficulty in reading a pattern. Her interest in clothing construction continued after completion

of the unit at school. She later made a dress for her sister and a dress for a college student as well as several dresses for herself.

Her progress was rated as very minimum in the areas of good grooming, care of equipment, and family relations.

She did seem to show some interest in planning to meet the basic 4 and in food preparation.

Personal and social:

Janice has a definite goal in that she plans to be married in the near future. She has a bank account and is saving her money. She also has a hope chest and is adding to its contents. Part of her income is spent for family food, however, and she uses her own money for fabric for the clothes she makes for herself.

From an analysis of the homemaking instructor's year end evaluation of her class participation, it seemed evident that in class work at least Janice was not interested in the care or upkeep of anything, including herself. Her slowest progress was in the areas of grooming, care of clothing, care of equipment, and family relationships. The special education teacher commented on her appearance the night of graduation, however, and described her as looking "beautiful".

The special education teacher said that she felt that Janice had a feeling of belonging to the group in high school. She was in G.R.A. most of the time and was a student council member part of the time. She said her attitude was fairly good toward school. She added that Janice was interested in boys and was dating, and that she seemed to be more advanced socially than some of the class members, or than many seniors in the regular classes.

Janice was described by all as friendly.

In February, 1954, Janice was given the Revised Stanford-Binet Scale, Form L, and the special education director giving the test described Janice as having little self-confidence, inclined to distrust own ability, to be rather shy, and to be easily distracted by extraneous stimuli or by own ideas, but to return readily to a task.

In May, 1960, the guidance instructor described Janice as a timid girl who was slow to respond. She added, "She is not sure of herself but with friendliness and encouragement begins to take an interest."

The homemaking teacher said that Janice would not enter into situations demanding choices, but would readily follow once a choice was made.

Janice's home seems to be close knit and happy. They do things together as trips to a cabin in Minnesota. She has been quite concerned about a brother who is in the service.

home situation

The family moved to the state before Janice's entrance in the public schools.

Her parents attend a church regularly. Both are employed. Mr. is a lineman for the power and light company, and the mother works as a nurses aid at a hospital, and has also worked as a cleaning lady in college dormitories. Janice has two older brothers and one is in the service at the present time. A younger sister was in the 8th grade, 1965-66.

All members of the family present, Mother, Janice, and sister were very pleasant and friendly when the homemaking teacher made her home visit.

They live in an older home. The home and its furnishings give the over-all impression of belonging to a family of below average income. Everything was very neat and clean at the time of the home visit.

Their financial status is probably a little below average family income. Conclusion is based on type of employment of father and mother, condition of home, and from reports from Janice saying she gives her parents part of her income for food and buys her own fabric for the clothes she makes for herself.

Work experience

Janice worked for a time at a motel as part of the work-study program. A report written on 3/10/64 rated her as excellent for punctual, attendance, follows directions, and accepts correction.

She received a good rating for: hard worker, works steadily, works unsupervised, pleasing appearance, polite, well groomed.

She received an average rating for: works well with others, goes out of her way to help, sees things to be done.

On a later report dated 4/13/64 she was rated as "good" in all areas. She worked on an average of 20 hours a week.

Janice's employer described her as follows:

> Janice is one of my best employees. I consider her a high grade employee. She has never had a personality conflict with any of the other employees and all seem to like her. She is friendly and cheerful. She is always well groomed and is so very reliable. She makes a special effort to telephone and report when she finds it necessary to miss part of a day or a day of work. If she knows about it the night before she will call then and report that she won't be able to work the next day. However, she rarely misses work, and she is very punctual.

> Her work is very satisfactory. She is accurate and has sufficient speed. In fact, she is a fast worker. To give you an idea of the kind of girl she is I would like to relate a little incident to you. I was driving down the street one day and saw her walking along the sidewalk. I honked my horn and waved but she ignored me completely. The next day she came into my office so apologetic saying she didn't realize it was me until I had driven on by and it was too late to wave. Now that showed that she wouldn't wave at just anyone that would honk at her as she walked along the street. I am very pleased with her in every respect as an employee, and I sometimes wonder what it is that places these people in these special classes.

Unsheltered gainful employment

1965-1966 employed at a manufacturing company on a part time basis. Janice operates a power sewing machine.

1966, Janice began full-time employment after graduation from the work-study program—same position.

Future goals

Janice plans to continue working at the manufacturing company and is employed there now. She also has plans for marriage. At the time of the homemaking teacher's home visit she showed articles she was collecting and things she was embroidering for her hope chest. Janice dates and is planning marriage in the near future.

Case Study of Kristin Brown

Birth date

February 3, 1950

School history

Entered elementary school, September, 1955

Transferred to ungraded "special" education school, September, 1960

Transferred to junior high school, work-study program, September, 1964

Transferred to high school, September, 1965

Test data

Educational Tests

Age	Gr.	Date	Test	Form	Grade Equiv.
8-7	2	9-15-58	Metropolitan	R.	1.75
9-7	3	9-15-59	Stanford Achievement	K.	2.0
	3	1- -60	Iowa Basic Skills	I.	1.9
11	Ung.	2-14-61	Metro. Achievement	Primary I T	3.0
11	Ung.	3-10-61	Metro. Achievement	Primary II S	3.3

Intelligence Tests

Grade	Date	Test	Form	C.A.	M.A.	IQ
K	4/9/56	WISC		6-2	4-6	71
1 A	9/26/56	S.R.A.		6-7	4-6	68
1 B	9/18/57	S.R.A. Primary Mental	7261	7-8	5-6	72
Intr.	9/28/62	WISC (V-60 P-69)				61

Additional information on the Wechsler Intelligence Scale for Children administered April 9, 1956.

Verbal Scale: 71

Performance Scale: 76

Full Scale: 71

Verbal Tests	Raw Score	Scaled Score	Performance Tests	Raw Score	Scaled Score
Information	4	6	Picture Completion	2	5
Comprehension	3	7	Picture Arrangement	2	6
Arithmetic	1	5	Block Design	3	8
Similarities	0	3	Object Assembly	4	6
Vocabulary	11	6	Coding	20	8
	Sum	27		Sum	33

February 5, 1958, Kristin was given a special test by the regional psychologist to determine her eligibility for special room placement. Results of this Stanford-Binet (L) was:

Chronological Age: 8 years 0 months

Mental Age: 5 years 10 months

I.Q.: 73

Study level

Reading level May, 1966, 6-1 September 1965, 5-1

Arithmetic level May, 1966, 5-1 September 1965, ?

Physical and medical records

Weight and height records:

Average gains throughout school records and average weight and height when entering school at the age of five.

Vision:

	With Glasses R.	With Glasses L.	No Glasses R.	No Glasses L.
1955-1956			20/20	20/20
1956-1957	20/30	20/30	20/30	20/30
1957-1958	20/30	20/30		
1958-1959			20/20	20/30
1959-1960			20/20	20/20
1960-1961			20/20	20/20
1961-1962			20/20	20/20
1962-1963	no record			
1963-1964			20/20	20/20
1964-1965			20/30	20/30
1965-1966	no record			

Hearing:

Normal

Physical abnormalities and or handicaps: none

Childhood diseases:

Red Measles: 1952 German measles: Yes, but date unavailable
Chicken Pox: 1952
Mumps: 1954
Immunization record complete for Diptheria, Whooping Cough, Tetanus, Small Pox, Sabin, and Salk.

Mother stated Kristin had a stomach ulcer and was under the care of their physician, at this time Kristin was in the first grade, 1956-1957, and was six to seven years old.

Teeth: Average. Did return her dental card 1956 and 1958.

Absenteeism:

Year	Days Absent	Tardy
1955-1956	6	
1956-1957	4	
1957-1958	11	
1958-1959	22	
1959-1960	31	Transferred to Meeker
1960-1961	5½	in 1960 -Primary. Promoted
1961-1962	24	to Intermediate-1961
1962-1963	7	

Year	Days Absent
1963-1964	32
1964-1965	30
1965-1966	Absent most of year after the first month. She was transferred to the high school work-study program in September, 1965.

Personal characteristics

Physical:

Kristin's rate of growth, weight gain, and coordination are normal. She seems to be very susceptible to infections and seems to have limited energy compared to girls her age.

The homemaking instructor commented that Kristin appears to be slightly Mongoloid. She was generally neat and clean and quite well groomed.

Kristin's vision and hearing are excellent.

Kristin's attendance record varies from excellent to very poor.

When Kristin was in the first grade the following note was sent to her teacher from her mother:

Dear Mrs. Howe,

I have at last found out what the trouble is with Kristin. After 3 X-rays etc; Had to take her back to Dr. again yeasterday afternoon. The Ex rays shows She has a Stomach Usler. And she hast to be on a diet and a milk and cream ½ to ¾ every two hours during the day. Just 2 ozs. every 2 hours. So I will havest to send it to school with her. And If She'll take it at recess in AM and PM than I can give it to her Just befor she leaves for school and when she come home. Than her pills can be taken at home before she eats. She not to eat no Birthdays treats such as candiy and cakes etc. but can have Ice Cream. Do hope this won't be to much trouble for you to remind her to take her milk at Recess. Sincerley

Mrs. R

Kristin developed from a typical early teen-age girl to a mature young woman during the 1965-1966 school year.

General abilities:

The following information was given on the Weschler Intelligence Scale for Children's record form for the test administered April 9, 1956.

Mental age, 4 years, 6 months

Full Scale I.Q. 71

Classification: Borderline

1. It appeared from the test responses that Kristin is probably mentally retarded at least in a minimum way. The retardation appears to be generalized. However, she was the least able in concept thinking. Also, she was not able to think clearly in relation to number concepts.

2. The following suggestions are made:

   a. Kristin is a likely candidate for special schooling. However she is about one year away from placement. In view of the probability that she will be placed in a special school it might be wise to counsel her parents in that direction, letting them know that she is limited mentally and will need special teaching in a special school.

   b. Kristin is markedly unready for symbol learning in first grade. However, if placement in first grade appears to be the most practical move that may have to be done. Consideration should be given to keeping her in kindergarten another year.

3. It is true that Kristin is shy and inhibited, but those characteristics probably stem from the marked mental limitation. She is about 18 months retarded mentally and socially from most kindergarten children at this time.

Kristin was referred to the regional psychologist by the supervisor of special education on February 5, 1958, to determine special room eligibility. The report of this psychological examination appears under test data.

The present Stanford-Binet score tends to confirm her borderline mentally retarded ability.

Recommendations:

Kristin would probably make a good candidate for the special room, although it is possible that Kristin should be tried in a regular class for another year. Her daily performance might indicate suitability for regular class work since she is not a true mental retardate.

Kristin's elementary teacher for 1958-1959 made the following comment at the end of the year: "I'm afraid Kristin will find it more difficult to keep up as years go on. Her reading ability is far superior to number understanding."

In May, 1960, her elementary teacher said, "Kristin can't succeed in third grade work."

In January, 1960, Kristin took the "New Basic Reading Test" that accompanies the The New Streets and Roads by Marion Monroe, a reading text in The New Basic Readers Curriculum Foundation Series. The results were as follows: Possible score is 10 and the average scores for the students in the United States using this book are listed.

Interpretation	Karen's Score	National Average
I. Sentence Meaning	5	8
II. Sensory Imagery	4	8
III. Relationships	0	8
IV. Motives	0	6

Word Perception		Kristin's Score	National Average
V.	Visual Scrutiny—Meaning	4½	8
VI.	Phonetic Analysis—Meaning	0	5
VII.	Structural Analysis	6½	7

Total 20
Rating Very Low

The following letter was sent to Kristin's parents May, 1960.

Dear Mr. and Mrs. Parent,

I am writing concerning Kristin's placement in the school for the next school year.

Kristin will not be able to succeed in a regular fourth grade. She is not able to work above a first or second grade level in all her subjects at the present time. Therefore, she would be lost in a regular classroom.

Kristin is most cooperative and willing, but she meets constant failure. This is because of a slow learning ability.

I definitely recommend that Kristin be placed in the special education school for the coming 1960-1961 school year. I feel that she will find success and happiness there.

Sincerely,

(Classroom teacher)
(Superintendent)

The special education teacher said that Kristin couldn't stand to have anyone say anything cross or correct her. She said that she corrected her one time and she didn't like it and reacted by not coming to school for a period of time. When she would take her homework to her she said she couldn't get more than a yes or no answer from Kristin.

The homemaking teacher said Kristin was absent so much of the time that she felt she could not evaluate her performance at the end of the year. She did attend the first month and did cut out a skirt and mark and stitch the darts.

Kristin completed a rug on a loom in the special education room at the beginning of the year but would not come to get it—the special education teacher finally took the rug to her. The special education teacher said she did weave a nice rug, and Kristin seemed to be proud of it.

Personal and social

Kristin's parents checked shyness and timidity as two problem areas when they registered Kristin for entrance to school in 1955.

The following comment was made by Kristin's teacher in 1961-1962:

"Very shy and dependent on older peers."

The following comments were made by her 1965-1966 special education teacher:

> I don't know about Kristin—can't stand to have anyone say anything cross to her or correct her. I remember that once I corrected her—she didn't like it—didn't come to school.
>
> When I take her homework to her, and this was often during the year, I couldn't get more than a yes or no answer from her.
>
> She developed so completely last year. When the year started she was a little girl in figure—proportions, and when the year ended she was a fully developed young woman—really very developed. Kristin seemed to be very conscious of these changes taking place and was very self-conscious. She said that one of the boys said things to her about it—I didn't hear him ever say anything, but one doesn't know and it would be like him to do that—boys around 16 often do make comments of that kind to girls of her age, so I don't know—he may have. This seemed to upset her and may have been one reason she didn't want to come to school.
>
> She made a rug on a loom that she was proud of but wouldn't even come to get that, I had to take it to her.
>
> I think she has two parents wound around her finger and that they do as she wants them to.

She has a sister who is a senior (graduated, May, 1966) and she is ashamed of Kristin, or at least treats her that way. The family seem to be embarrased to have her in the special education room and don't think of it as a means of helping her get special help and attention.

Kristin's present special education teacher, 1966-1967, made the following comments:

Kristin is so quiet—hasn't opened up yet. (This was about the 4th week of school) I would guess that she is over protected and babied at home. If she needs this or not I don't know because you can't look back into the past—can guess but don't know the situation unless you have been close to them and I haven't.

Kristin's homemaking teacher made the following comment:

Both parents are most cooperative and were very friendly during the home visit. Kristin has a cat she loves, and she seems to sit home all day watching television.

She stayed with relatives for three weeks in another state last summer (1965) and this was the first time for her to be away from home alone for such a long period of time.

She enjoys sewing and told the special education director that homemaking class was the only thing she liked about school. She enjoys children her mother said and she gets along well with them—her mother used to have a day nursery.

Kristin was very quiet during the home visit and is very withdrawn at school. The special education director said that he had been working with Kristin and felt that she might be emotionally ill. He may try to get her in at the mental health center.

An evaluation was requested by the special education director and the school psychologist examined Kristin, December 3, 1965. The report is as follows: (the following is a typed copy of the report)

Special Education Office

REPORT OF INDIVIDUAL PSYCHOLOGICAL EVALUATION

Name Kristin Brown School High School Grade Ungraded Work-Study

Birthdate 2-3-1950 C.A. 15-10 Date of Service 12-3-1965

Reason for Referral: Kristin had refused to attend school. Therefore, an evaluation was requested.

Discussion:

When I first saw Kristin in her home, she was withdrawn and shy. She refused to say anything when projective devices referred to home or school. She later gave some indications of her feelings, but she continued to be extremely defensive.

In general, her responses about herself indicated: feelings of depression, extreme sensitivity, misunderstanding by others, worries about herself and her future, loneliness, excessive daydreaming, and guilt. She doesn't feel any close ties to her peers at school and lacks a feeling of belonging. She finds it difficult to meet strangers and to speak to people first. She sometimes feels that her parents are too demanding and lack understanding of her.

She remarked that she liked sewing at school, but that she finds mathematics difficult. She also expressed a strong dislike for physical education.

After she was given much emotional support, she set the date when she would come back to school. She kept her promise and returned with her mother.

Suggestions:

1. Develop Kristin's confidence in herself; provide ego support through warmth, kindly interest, and encouragement.
   a. Generously praise her for things she has done.
   b. Give her recognition by looking directly at her now and then.
   c. Confer some responsibilities on her when she has the interest, motivation, skill, and intellectual and emotional readiness for the task.
   d. Ask her for suggestions in areas where she can be helpful.
   e. Inform her of the progress she is making. Use some concrete means, such as a chart or graph, to indicate this to her in a visual way.
   f. Don't hesitate to give her more emotional support than you think she should have, for it is the secure and confident child who moves forward.

2. Help her to learn to accept some failures, but don't allow repeated failure as she will lose the feeling of inner strength that goes with a feeling of accomplishment.

3. Develop feelings of security in her environment by directly assuring her that she is needed and loved.

4. Set a pattern of relaxed calmness. Speak about unpleasant things in a natural manner.

5. Use stories, dramatizations, and discussions to show appropriate ways to develop and to maintain friendships.

6. When she needs correction, talk to her personally about her conduct. Let her suggest her own punishment, if any is necessary, but keep it within bounds.

7. If other children must be dealt with in a severe manner, speak to them when Kristin isn't present. For example, call them out into the hall or send Kristin on an errand so that she doesn't hear your remarks.

8. Help her to express her feelings, especially her agression and guilt, in appropriate ways, such as creative activities.

9. Use stories to show how people can learn to accept both their strengths and their weaknesses. In this manner, Kristin may learn to be more accepting of herself.

Psychologist

State Report Filed Yes Date 12-10-1956

Home situation

Both parents were born out-of-state. The father has an 8th grade education and the mother completed 12th grade.

When Kristin was registered for school in the fall of 1955, her father gave his name of his employer as "Railroad", and the mother classified her employment as "Housewife". At that time, however, the mother was operating a child care center in her home and cared for eight to ten children during the time of their mother's employment or part-time while their mothers had appointments or social engagements.

When Kristin was transferred to a special education school in September, 1966, the father listed his occupation as a cook for a cafe, and the mother listed her occupation as a housewife and clerk.

The family consists of the father, mother, boy, born February 28, 1944, girl, born January 3, 1946, Kristin, born February 3, 1950, and a younger brother, date of birth unavailable at this time, but in 5th grade.

The older sister graduated from high school in June, 1966. The special education instructor stated that she seemed ashamed of Kristin and her placement in the special education program. She said they did not think of this placement as an opportunity for Kristin to get the special help she needed but as degrading.

Both of Kristin's special education instructors—1965-1966, and 1966-1967, and the homemaking instructor said they felt that Kristin dictated to her parents and that her parents seemed to be unsure of the stand they should take in regard to Kristin's situation. Both parents work and are away from home during the day. It is the opinion of the special education teacher (1965-1966) who visited the home often during the year to encourage Kristin to go to school and to take assignments to her that she had missed, that Kristin did nothing all day long except watch television. She is home alone when she is not attending school—and this was infrequent during the year 1965-1966.

They live in an older home that is in good condition. Furnishings are average and home is well kept.

The family income seems to be average or a little below. Both parents apparently must work, and from appearance of the home and material possessions of the children, the parents must budget carefully.

Work experience

Sheltered work-study program:

Kristin has not participated in the work experience aspect of the work-study program.

Unsheltered gainful employment:

Kristin has not been employed commercially except for baby sitting. At one time her mother operated a child care center (not a licensed nursery or school) for working mothers and cared for several children regularly. Kristin played with the children and assisted with their care. This was approximately 1955 to 1962 or 1963 when Kristin would have been five to thirteen years of age. Her mother said that Kristin has always enjoyed children and gets along well with them.

Future goals

Kristin appears to be concerned about her future. In the special evaluation given by the school psychologist who visited with Kristin, December 3, 1965, she stated:

> In general, her responses about herself indicated: feelings of depression, extreme sensitivity, misunderstanding by others, worries about herself and her future, loneliness, excessive day-dreaming, and guilt. (given in entirety under Personal Characteristics, Personal and Social)

Case Study of Martha Black

Birth date

July 6, 1947

School history

Entered private school, September, 1954

Transferred to public junior high school, September, 1962

Transferred to the work-study program, October 23, 1962

Transferred to the work-study program, high school, September 65, 1966

Test data

Educational Tests

Age	Gr.	Date	Test	Form	Grade E.	Norm
8	1	5/16/59	Cath. Basic Read Our New Friends			Very low
9	2	12/10/56	Cath. Basic Read Our New Friends			Average
10	3	5/20/57	Cath. Basic Read Streets & Roads			Low
10	4	11/5/57	Calif. Achievement	W	3.6	
			Reading		3.6	
			Arithmetic		4.0	
			Language		3.2	
	7	1/10/61	Calif. Achievement	Z		
			Reading		5.3	
			Arithmetic		5.9	
			Language		6.7	
13	7	1/10/61	Calif. Achievement			
			Reading		5.3	10%
			Arithmetic		5.9	10%
			Language		6.7	30%
14	8	1/8/62	Iowa Basic Skills (Comp)		5.3	4%
			Vocabulary		4.8	5%
			Reading		6.2	16%
			Language Skills		5.8	14%
			Work Study Skills		5.1	4%
			Arith. Skills		4.7	1%

Intelligence Tests

Grade	Date	Test	Form	C.A.	M.A.	I.Q.
1	6/8/54	Wechsler Intel. Scale for Ch.		7-0		76
2	12/10/55	California Short Form	S	9-9	7-7	78
4	10/15/57	California	S	12-2	11-0	90
7	1/9/61	California	S			83

Study level

Reading level May, 1966, 8-2 September 1965, 7-1

Arithmetic level May, 1966, 5-6 September 1965, no record

Physical and medical records

Weight and height records: Average gains throughout school records.

Vision:

School report

	R.	L.
1956-1957	14/20	14/20
1957-1958	15/15	15/15
1958-1959	20/20	20/20

Hearing: Normal

Physical abnormalities and or handicaps: None

Childhood diseases:

Red Measles 1950
German Measles 1951
Chickenpox 1950
Mumps 1954

Immunization record:

Diptheria	1949-1952
Smallpox	1952
Whooping Cough	1949-1952
Tetanus	1949-1952

Teeth:

Dental card was returned every year between 1954-1960. Her teeth have many fillings but appear well cared for.

Absenteeism:

Year	Absent	Tardy
1954-1955	2½	0
1955-1956	0	0
1956-1957	1	0
1957-1958	3½	0
1958-1959	0	0

Year	Absent	Tardy
1959-1960	2	0
1960-1961	0	0
1961-1962	0	0
1962-1963	2	0
1963-1964	0	1
1964-1965	0	1
1965-1966	0	1

Personal characteristics

Physical:

Martha's growth rate, health record, and coordination appear to be normal. Martha's homemaking instructor, special education instructor, and present employer rate her coordination as average. Her employer said her speed was also adequate for her position which requires a certain amount of piece work—preparing vegetables, grapes, eggs (hard boiled) etc. for salads. In relation to health, her school attendance record was excellent.

Martha was described by her teachers and employer as well-groomed, neat, clean, and attractive. They did add, however, that she has a problem complexion.

General ability:

When Martha transferred to junior high school, her mental age was judged by the special education director to be 11-1 and her I.Q. 71. Her chronological age at this time was 16-2 months. After a trial period of one month, the guidance counselor wrote the following letter to the principal:

> I spoke to you last week about Martha and the possibility of her being considered for the work-study class. The special education director and I have an appointment this morning with Martha's mother. However, whether we are successful in enrolling Martha in the whole program of special work study, or not, I should like to have her transferred into the 5th period home-making class. The homemaking teacher is very much in favor of

this; Martha is willing; Martha's mother is completely agreeable. Could this be done? If so, could it go into effect today? The change will necessitate changing her world history class.

The following was included in the school record:

> April 3, 1963—conference with mother—child had brain injury at birth, is slow—Mother agreeable to extra tutoring if necessary.

Martha's V-score for the Kuder Preference Record, Vocational was 37, indicating her possible inability to take a test this difficult.

Martha's high school homemaking teacher gave the following evaluation of her ability:

> Martha can read and interpret a simple pattern guide. She is capable of following oral directions and demonstrations for putting in a zipper and using seam binding on facings and hem.
>
> Martha needed help in stitching darts. She was unable to determine just how it should be done. When constantly supervised she did well, but, later on, on her own, she stitched one on the right side.

In the homemaking teacher's year end evaluation she stated that Martha showed the greatest progress in grooming, clothing selection, mending, (limited to buttons and snaps), laundry, basic nutrition in meal planning, preparation of food, entertaining, convalescent food needs, and children's food needs.

Her progress was very slow in clothing care other than mending and laundry, and in care of equipment and family relationships. Her interests seemed to be primarily in preparing herself for gainful employment. Where this direct motivation was lacking, she did not seem interested.

Martha's special education teacher made the following evaluation of Martha's intellectual interests and ability:

> Martha is very capable. She did her work well. It was neatly done and was handed in on time. She would ask for resources and materials for things she was writing. Martha also seemed to have a talent for original writing. One of her compositions was published in the English magazine published by the English department at the high school. Martha was so proud of this. Martha also volunteers to do things. For example, she had never done any free hand drawing but was willing to try and drew a picture of a vase of flowers. The art teacher came in and commented on it, said it was very good.

Personal social

Martha has a sister that was just a little older than Martha and was in the same class in school with Martha—the sister was an average student, however, and when Martha was placed in the special education class they were no longer together but did receive their respective diplomas at the same graduation exercise. Martha's special education teacher said she felt that this sister was a little ashamed of Martha. The family too seemed to be more interested in everything the other sister did—her school activities, friends etc. This seemed to make Martha a little self-conscious about her inability to achieve to the sister's level. The parents didn't seem to be doing this consciously—it just seemed to bring them such enjoyment to enter into the other girl's normal interests and activities. They were also interested in Martha's activities but she didn't have as many.

Martha is active in church activities and seems to have enough friends to be happy and busy in her free time. The family attends church regularly and Martha seems to derive pleasure from this association.

Martha established some friendships with the personnel where she was employed during the summer. Her present supervisor stated that she spent her coffee breaks and lunch hour with these friends and seemed happy with them.

Her supervisor also reported her interest in one of the male employees. He stacks dishes and prepares them for the dish washer. He seems to return her interest and when he is attentive she glows and is so pleased, but when he seems to ignore her she is quite unhappy and not in a good mood. They do not seem to feel that she is actually dating him as yet.

Home situation

Both parents were born and raised in the state in which they now live. Martha was born 20 miles from her present home. The father died (date unavailable for these records) and the mother remarried.

Both parents were very cooperative when the special education teacher visited and also during the visit of the homemaking teacher. The step father is employed in an office position at a local business. The mother was not employed outside the home when Martha was in the elementary grades, but is now employed as a clerk.

The family lives in a new ranch style home which is well furnished. The home is in an average income area of the town and is of average size and well kept.

Income seems to be adequate, based on material possessions and the appearance of the family. The car is a newer model; their clothing is average and well kept. Martha has always had adequate medical and dental care.

Work experience

Martha was temporarily employed at the local hospital during the 1963-1964 school year. On March 6, and again on May 6, 1964, an employer's

progress report was sent to the special education director. The report of her progress was as follows:

	March 6	May 6
Reliability:		
1. Punctual	Good	Good
2. Attendance	Good	Good
3. Follows Directions	Average	Average
4. Assumes Responsibility	Poor	Poor
Cooperation:		
1. Works well with others	Average	Average
2. Goes out of her way to help	No, she does not	Average
3. Sees things to be done	No	Average
4. Accepts correction	Average	Average
Industriousness:		
1. Hard worker	Average	Average
2. Works steadily	Average	Average
3. Works unsupervised	NO	Average
Appearance and Personality:		
1. Pleasing	Average	Good
2. Polite	Average	Good
3. Well Groomed	Good	Good

To the question, "Are you satisfied with the worker's progress?" the answer was yes.

Martha's homemaking teacher reported the following:

> Martha has worked afternoons at a snack bar this year. The special education director arranged for the job. Martha has been responsible and has done the job competently. She has been concerned about what she would do after high school. Her sister, who graduated from high school this year (June, 1966), has been accepted in nursing school and Martha spoke of possibly attending a school of practical nursing for a year in another town. After our visit to the cafeteria kitchen here, she decided to apply at the cafeteria where she has been working for a summer job. She made the appointment and went for the interview on her own and obtained a job for the summer and possibly for next year serving on the line and making salads.

Martha worked in the cafeteria for the summer and applied on her own for the position of salad lady in the cafeteria kitchens for the fall of 1966.

Unsheltered gainful employment

Martha was given the position of salad lady in the cafeteria kitchen when the position became available. Her employer evaluated Martha's on the job performance as follows:

> At first she was slow, but she is gaining speed. Her dexterity was rather poor at first, but it too is improving. She does need supervision—if she isn't watched, she tends to take unnecessary time away from her job. She came in the other morning, stated the supervisor, and it was a half hour before she got down to work—went to the bathroom and this and that.
>
> Her attention wanders occasionally, and then she runs to the bathroom.
>
> There is a personality conflict with one of the women who came from another country as a refugee. This woman is so very quick and accurate, and she can't seem to understand why Martha can't speed up her work accordingly.
>
> Martha is well groomed but has a terrible complexion problem—she said she ate too much pie and candy bars. The supervisor reported that when she said, 'Now an attractive girl like you shouldn't be doing that', she hung her head in a shy manner.

When she was hired, it was understood that she was to work from 11-7. At first she seemed pleased, but then began to ask for a time change. These hours did inconvenience her, because she does not drive and must depend on public transportation. If she had earlier hours, it might be possible for her to ride with neighbors or her parents. The supervisor explained that single workers had the later hours because they do not need to be home with their families during the dinner hour. This finally

satisfied her—(previously she might have felt they were discriminating against her because she had been in the special education class in the high school).

The supervisor emphasized that she now has a boy friend and this affects her attitude and disposition to quite a degree. When the boy friend pays attention to her, she is so gay and easy to get along with, but when he fails to give her the attention she craves, she seems quite dejected. The supervisor also commented on Martha's apparent need for attention and approval. She arrives in the morning and comments that she doesn't know if she will ever make it through the day—this brings questions of why etc. and after a little of this dialogue, she seems ready to go to work. It seems to be an effort at conversation and a bid for attention.

In conclusion, the supervisor stated that Martha's progress was satisfactory, and that she is pleased to have Martha as an employee. She expressed surprise at the fact that Martha had been a "special" student, a member of the class for the educable mentally retarded, and said that she never would have guessed that she was a slow learner, however, this information would make her a little more patient with the few personality problems that do arise.

The supervisor has been complimenting Martha whenever possible to raise her self esteem which she sensed needs bolstering.

Future goals

The homemaking teacher stated that Martha was quite concerned about her future during her senior year in school. In fact, it seemed to be the only interest that was capable of motivating her in her homemaking class.

If she could see some connection with possible future employment she would apply herself eagerly, if not, she seemed uninterested. Possibly, as a result of the influence of her sister's plan, Martha seemed to be interested in taking a practical nursing course in some other town. This plan did not materialize, however, and except for the problem of inconvenient hours, she seems content to continue working in her present position.

Case Study of Sally Green

Birth date

August 26, 1946

School history

Attended a public school in a small town from September, 1953, to May, 1956

Transferred to a special school for the retarded in the city in which she now lives, September, 1956

Transferred to the work-study program, in the junior high school, September, 1962

Transferred to the work-study program, in the senior high school, September, 1964

Test data

Educational Tests

Age	Grade	Date	Test	Form	Grade Equiv.	Age Equiv.
9-9	3	6-6-56	Wide Range Achievement		2.2	7-2
10-7	Pri.	3-16-57	Stanford Achievement	Primary M	2.1	7-2
11-6	Pri.	2-11-58	Stanford Achievement	Elementary M	1.9	6-11
12-6	Int.	1-21-59	Stanford Achievement	Elementary L	2.05	7.7
13-6	Int.	2-6-60	Stanford Achievement	Elementary K	2.08	7-10
14-1	Int.	2-28-61	Stanford Achievement	Elementary K	3.3	8.4

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Intelligence Tests

Grade	Date	Test	C.A.	M.A.	IQ
	6-26-64	WAIS (Wechsler) adult Intell. Test	17-8		72
Primary	6-6-56	WISC	9-9	6-4	65
Inter.	24-10-60	WISC	14-2		49

Verbal Tests

	Raw Score '56	'62	'64	Scaled Score '56	'62	'64
Information	6	9	5	4	3	5
Comprehension	6	11	6	5	6	4
Arithmetic	3	2	2	4	0	2
Similarities	4	5	9	5	4	8
Vocabulary	20	23	12	6	4	4
Sum of Verbal tests				24	17	73

Performance Tests

	Raw Score '56	'62	'64	Scaled Score '56	'62	'64
Picture Completion	7	6	6	6	3	6
Picture Arrangement	4	8	12	3	2	6
Block Design	6	4	6	7	1	3
Object Assembly	7.8	13	22	4	4	7
Coding	23	25		6	3	
Sum of Per tests				26	13	75

Mental Age—6 years, 4 months (at 10 years of age)

Study level

Reading level May, 1966, 5-1 September 1965, 3-2

Arithmetic level May, 1966, 5-1 September 1965, 4-2

Physical and medical records

Weight and height records: average gains throughout school records

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Vision:

		R.	L.
1956-1957 school report	14/30	14/30	14/30
Oct. 16, 1957	20/?	20/30	20/30
Oct. 15, 1958	20/30	20/60	20/40
Nov. 16, 1959	20/20	20/30	20/20
April 13, 1961	20/30	20/30	20/30
1961-1962	20/30	20/30	20/30

The following note accompanied the vision test records:

October 15, 1958: Reported vision finding to mother. Child had complete eye examination two years ago by an opthalmologist. No refractor error found then but they will recheck again now. Conference with mother about vision. Child had vision test by two opthalmologists. No refractive error found.

Hearing: normal

Physical abnormalities and or handicaps: none

Childhood diseases: No record of childhood diseases or immunization record available.

Teeth: About average, some fillings, but appear to have had adequate dental attention.

Absenteeism:

Year	Absent	Tardy
1956-1957	8½	0
1957-1958	9	0
1958-1959	8	0
1959-1960	2	0
1960-1961	1	0
1961-1962	11	0
1962-1963	9	0
1963-1964	4½	0
1964-1965	5	0
1965-1966	9	0

Personal characteristics

Physical:

Sally's rate of growth, health, and coordination are normal. Her teacher in the intermediate grades at a special education school made the

following comment on the permanent record: "Is very good at all sports—softball - basket ball - a good loser, plays fair. Sings well"

She is allergic to wool.

She is neat and clean, generally very well groomed.

Her health record is excellent and her school attendance record is excellent.

General abilities:

When Sally transferred to the local school system she was given an intelligence test at the request of her family physician. At that time she was 9 years and 9 months old. Her mental age was calculated to be about 6 years 4 months (based on the IQ test, WISC). Results of the test were: Verbal Scale 67, Performance Scale 67, full scale 65. The following comments were made by the examiner:

> The responses seemed to be valid—Sally responded willingly and clearly on items she knew, but was just as clear when she was unable to respond.
>
> There is little difference between the IQ on the Verbal and Non-Verbal. It appears that Sally can do some hand-work of simple design and structure. She already has attained some knowledge of the reading and numbers process. The latter will have to be taught concretely since Sally is weak in conceptual thinking processes.
>
> Sally performs at about middle second grade level in reading, spelling, and arithmetic. That would seem to be a good place to begin with her lessons.
>
> Sally was friendly, congenial, and smiled quite often when she was in successful situations. She comes from a very good home in that they have trained her well in basic living. The mother, however, has expected way too much from Sally educationally. The special education school placement should contribute greatly to her adjustment and happiness.

In October, 1960, Sally was tested again and received a Full Scale Score of 49 on a WISC test. The comments were as follows:

> Sally was quite sociable, and seemed to have a reasonable amount of self-confidence—if she didn't know an answer after spending a moment thinking about it, she would say 'I don't know,' and she gave her answers readily.

In April, 1964, she was given the WAIS and received a score of 72. The following were comments made pertaining to her progress in the "special" school:

1956-1957: Progress slow--attention span very short--doing second grade work.

1957-1958: Needs guidance in how to study; drill in basic skills necessary.

1958-1959: Made poor to fair progress in all areas except spelling and music--here rated good.

1959-1960: Rated fair to good in all areas.

1960-1961: Matured well this year.

Her homemaking instructor made the following comments:

> She can follow directions if given verbally and with encouragement. She has difficulty in seeing the possible results of a sewing process. She cannot transfer from demonstrations of a pattern guide to her garment. When she was constructing her skirt she had to stitch some of the darts over because they weren't stitched as marked. It was very difficult for her to stitch these. I demonstrated on my skirt twice after the class demonstration, and also helped her guide one on her own skirt.
>
> She has a short attention span, and her interest lagged after completion of the skirt. The blouse she attempted after the skirt was too difficult.

In the homemaking instructor's year end evaluation Sally made "some" progress in the areas of grooming, clothing selection and construction, and all areas of clothing care. In pressing she made better progress. Her success was greatest, and she showed interest in applying her knowledge in

situations outside of school in the following: nutrition, preparation of food, and care of equipment.

The special education teacher made the following comments in respect to Sally's intellectual ability and interests:

> She was very interested in the unit on diseases, and has discovered an interest in arithmetic. I have taught her the fundamental principle of a number line and she can now add and subtract with ease. The other day she said, 'If I had only known this sooner I'd be smart now.' It has given her such self-confidence and enjoyment. She is interested in basic application too. She wanted to know, if one can of food costs so much and then two cans cost so much, is it better to buy the two to get them cheaper, or aren't they cheaper that way—how would one know?

All three of Sally's instructors, the present special education teacher, last year's special education teacher, and her homemaking teacher, commented on her short attention span and the ease with which she is distracted from any task. This latter was also a shortcoming mentioned by the personnel involved in the work-study program.

She has average or above average ability in athletics and sings well.

Personal social:

In the cumulative folder, the special education instructor at the special education school made the following comments:

May 8, 1959: Needs guidance in stability, giggles or laughs at all situations. Needs to know the value of dependability.

May 26, 1961: Sally has matured quite well these past few months.

May 6, 1962: Sally has a tendency to be very dominant and belligerent. She did make good academic progress.

The homemaking instructor's comments were as follows:

> Sally is friendly and outgoing. She has a bank account and has her own savings.

> She finds it difficult to concentrate and found it particularly difficult to concentrate on clothing construction projects. She is easily distracted by other people, and by situations. One day she was 20 minutes late to class coming from her job in the lunch room. She did not seem capable of adjusting to the lesson and reacted by refusing to take part in any class activities that period.
>
> She does not assume responsibility well. She had an assignment to bring an article of clothing from home for a class project and had to be reminded again and again. Days later she finally brought the article.
>
> Sally also seemed to be unsure of herself in new situations. In a foods unit she did not trust her ability to measure ingredients and had a classmate check them for her. When choosing patterns for a clothing construction unit, she was afraid to try a new pattern. She wanted to use a pattern she had used before in a former clothing construction unit.

She did not assume responsibility for being prompt when employed in the school cafeteria on the work-study program. She also demonstrated a need for supervision.

When discussing problem situations in relation to children, Sally had several questions from her observations of a neighbor family. She showed interest and some insight into needs of children in the situations.

The special education instructor for 1965-1966 gave the following information:

> At one time last year Sally began complaining to her that she was receiving annonymous notes. After some time, the instructor began to suspicion that she had been writing them to herself and said, 'Sally, if someone were complaining that someone else were doing something to them that wasn't very nice and then you discovered they were doing it to themself, what would you say to them?' Sally caught on and it was the end of the note writing episode. She seemed aloof for some time after that but gradually came around to being herself again.
>
> The special education instructor continued: She is a nice girl, attends church and is interested in her church activities. She attends Sunday School and sings in the choir. She is now dating and has a boy friend that she is quite serious about. She has talked to me about him.

Sally talked to everyone about her boy friend. She mentioned him to her present special education instructor, 1966-1967. This instructor gave the following information:

> Sally seems to be especially interested in boy-girl relationships at present. She wants to know the role of the girl in dating situations: just how far does the girl go, what are her responsibilities, and all of the problems that are especially unique to women in such situations. The family seems to approve of the boy friend, and she seems to have a good relationship with her mother. She speaks of her mother in very respectful tones and values her mother's opinions and attitudes. She seems to confide in her mother quite a little.

Home situation

The family moved to present location from nearby smaller town in 1956.

Her parents attend church regularly, and both are employed but not outside the home. They own and operate a ceramic shop in their home and sell to wholesale and retail outlets. The father classifies himself as a machinist.

Sally is an adopted girl and has an older adopted brother who is a successful ceramic engineering major at a university. The mother is a university graduate with a major in applied art. The father has a ham radio outfit in the family room. The homemaking teacher reported after a home visit that the family seemed to have many interests. The mother stated that Sally gets the meals and does the cleaning as she is kept very busy with her interests in the ceramic shop. The homemaking teacher's comment was: House seems to be ill-kept both inside and out.

The house is fairly new. It has a fireplace, three bedrooms. The living room is very large with an open dining area that exposes part of the kitchen. There are many antiques placed tastefully around. The

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special education teacher stated that Sally seemed to have absorbed an appreciation for these and art objects—possibly the result of her mother's interest in ceramic art objects.

Judged by condition of home and furnishings, and the care and material possessions of the family, income seems to be adequate.

Work experience

Sally was temporarily employed at a laundry in the second semester of the 1963-1964 school year. On February 14, 1964, her employer gave her the following rating.

Reliability:
Punctual, Excellent
Attendance, Excellent
Follows directions, Needs improvement
Assumes responsibility, Needs improvement

Cooperation:
Works well with others, Between Ex. and good
Goes out of his way to help, Average
Sees things to be done, Between average and poor
Accepts correction, Average

Industriousness:
Hard worker, Average
Works steadily, Average
Works unsupervised, Average

Appearance and Personality:
Pleasing, Average
Polite, Average
Well Groomed, Average

The employers comment to the question, Are you satisfied with worker's progress? was, "Sally works a little too well with others—at times she talks to others with more interest than she gives her work. Perhaps you could help her with this. Thank you."

Sally worked for the manager of the hot lunch program as part of her work-study education during the 1965-1966 school year and again during the 1966-1967 school year.

The manager of the program for the first semester, 1966, made the following comments regarding Sally:

> Sally is a good worker but has her feelings hurt easily. She has a boyfriend this year and the women who worked with her last year feel that this has been wonderful for her—they feel she is more responsible and has greater direction to her life.
>
> This year she does not move from one training situation to another, she has a specific boring job, not on an educational basis. She takes milk out of the cooler and cleans steam tables, and racks the silver ware.

The personnel responsible for placing her explained that it was the intent to place her on one specific job as preparation for this type of placement when she would graduate and find gainful employment on her own. They felt she needed training in adjusting herself to this type of situation now.

The homemaking instructor made the following comments:

> Sally had worked in a laundry and in a hotel previously, but did not like either one, and was not continued at the hotel because she required too much supervision. Arrangements were made, after project director's suggestion, with special education director and school lunch supervisor for her to work in the school cafeteria. There was some difficulty at first getting her to go on time, and then to come to class promptly. The three of us agreed that she would need to be responsible for being prompt to keep the job and she has come through on this very well. She has liked being with the other women, having a job, and having some income of her own. She is proud of knowing something about the kitchen, how things are done, and how to operate the kitchen equipment. Her work has been adequate although not outstanding. She does need supervision. After her attempt to get a job in the nursing home, I talked to the special education director about a summer job for her. He made arrangements for her to interview at the employment office, and then at the hospital, but was accepted at a nursing home. She is to help in the laundry and to assist the nurse's

aids as needed. I had hoped she could continue work with foods, but they felt she should start here and see whether she could work satisfactorily.

Unsheltered gainful employment:

Hotel as a maid. 1965. They did not continue her employment because she needed too much supervision.

Nursing home. Employment as a maid, summer, 1966. When she was hired they informed her it would be temporary as they preferred an older woman. Her employment here lasted one month, and she was replaced by an older woman.

Future goals

Sally planned to seek employment after graduation. She will graduate from the work-study program at the high school the spring of 1967. She is also very interested in a boyfriend at present and if this continues she will probably be planning marriage soon. Her parents approve of this relationship.

Case Study of Betty White

Birth date

January 17, 1950

School history

Attended grade school in a nearby town until 1962. Entered special ungraded school for the retarded, February 19, 1962. The reasons for placement in the "special" school at this time were twofold: (1) the welfare personnel considered her home situation unsuitable for Betty and the school system she was in did not have a special class for pupils needing

specialized help, (2) Betty was placed in a foster home in a town in which a special school was located, by the county welfare personnel.

June, 1964, Betty was transferred to the work study program in the high school and is in this program at the present time, October, 1966. She is employed part-time in the high school cafeteria.

Test data

No data available before 3/17/61.

A WISC was given to Betty by the director of special education on 3/17/61, to re-establish degree of mental retardation. She received a verbal I.Q. of 61 with the listed sub-scores. (below) She received a performance I.Q. of 48 with the listed sub-scores. (below) She received a full scale I.Q. of 51 which places her in the borderline area between trainable and educable mentally retarded.

Verbal		Performance	
Information	4	Picture Completion	4
Comprehension	3	Picture Arrangement	1
Arithmetic	3	Block Design	2
Similarities	5	Object Assembly	2
Vocabulary	4	Coding	4
Digit Span	4		

Achievement:

WRAT Reading 2.9

WRAT Arithmetic 2.2

Study level

Reading level May, 1966, 5-1	September, 1965, 3-1
Arithmetic level May, 1966, 4-2	September, 1965, 3-2

Physical and medical records

Weight and height records: Normal gains throughout school records

Vision:

	With glasses		No glasses	
	R	L	R	L
1962-1963 school report			20/70	20/70
1964-1965 school report	20/40	20/40	20/?	20/?

Hearing: Normal

Physical abnormalities and or handicaps: None

Childhood diseases: No record available

Absenteeism:

School year	Absent	Tardy
1962-1963	1 day	0
1963-1964	4½	0
1964-1965	0	1
1965-1966	1.5	0

Personal characteristics

Physical:

Homemaking teacher's comments: Height, weight, general appearance similar to normal. Betty needs to take better care of her hair and clothes, and her complexion and teeth need medical attention in addition to better routine care. She wears glasses and sometimes has headaches. She doesn't like milk and uses her milk ticket money for ice cream bars and evidently has very little protein in sandwiches for lunch or for dinner at night.

She has difficulty in large muscle activities, such as bowling and skating which they did in physical education this year. She also has difficulty in the small muscle activity of sewing. She couldn't cut around the notches when cutting out her skirt and blouse so she cut them off. Hand sewing is very difficult for her.

Betty is slow at her work and does not manage her time well.

The county special education report, 3/17/61, stated the following:

In spite of the circumstances in which she lives, Betty manages to maintain passable health. She has recently been fitted with

glasses and though she has difficulty keeping them on and clean, they appear to have helped her vision. Her school attendance record is excellent.

General abilities:

On March 17, 1961, the director of special education wrote the following:

> Although Betty tests low enough for a possible placement in a trainable room, the fact that she has been able to achieve second grade reading and arithmetic would indicate that she would feel better placed in an educable room. (Betty was 11 years and 2 months old at that time) It is therefore recommended that Betty be placed in a special room for educable children as soon as is possible.

Betty's Homemaking teacher contributed the following:

> Betty gets confused when she tries to make change. Anything pertaining to numbers and abstract reasoning is difficult for her. She seems to be very slow mentally. When I made a home visit she showed me a recipe file that she was very proud of—it consisted of a pile of recipes with no classification system.
>
> Betty needed individual help in guiding fabric when sewing on a machine.
>
> Betty needs strong motivation and is difficult to persuade, but when she is convinced, she is capable of doing much more than otherwise. She is very easily distracted, however.

In the homemaking teacher's year-end evaluation Betty failed to show any progress in applying outside of class knowledge learned in class. She showed interest and made good progress beyond her previous ability in the following areas:

Nutrition, planning to meet the basic 4
Meal preparation
Knowledge and care of small equipment
Care of refrigerator and range
Family relationships
Stitchery project

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She made <u>some</u> progress from previous ability in the following areas:

Clothing selection
Clothing construction
Mending—buttons, snaps
Spot removal
Pressing
Sweater washing
Laundry
Ironing
Entertaining
Convalescent food needs
Children's food needs

When the class chose their garments for the clothing construction project, Betty wanted a red skirt and proceeded to search for a red skirt in the pattern book.

When preparing reports Betty needed much help in identifying the main points in a paragraph.

The special education teacher related that she had the class hem a skirt for her. Betty insisted she knew just how to do this and went ahead. She didn't know, and it all had to be taken out.

She also said that Betty is interested in crafts and does quite well.

She gained one whole year in reading during the 1965-1966 school year.

She became very panicky in her first sessions in a typing class—too many things presented at one time. She returned to the special education teacher feeling she could never master typing.

Personal and social:

The homemaking teacher reported that Betty was very stubborn. For example, if one member of a class decided on making a certain project for clothing construction, Betty would insist on having that project too, whether it was satisfactory for her or not. As the year progressed she showed great progress in her willingness to do things, or at least to try.

She was also showing some progress in considering someone beside herself, for example, she offered to wash the dishes because Sally was allergic to detergent.

She tends to be rather shy when in the presence of larger groups of people. The previous year the group decided not to have a style show because they would be afraid to get up in front of people—and Betty was especially vocal in her objections.

She fails to take much responsibility for the care of her clothing. She often came to school with blouses that needed buttons or other mending, and her hems were frequently coming undone. Her garments generally needed pressing. She did not remember to keep her blouses tucked in.

All three of Betty's teachers complained of her incessant talking. This has been a fault in her employment in the lunch room, also. For example, the hot lunch supervisor reported that she needed to be real firm with Betty when she came into the office constantly and asked to stop buttering bread and be allowed to go back to the mixers and help make the tartar sauce (or whatever the situation might be). She looked for excuses to come into the office and talk.

When the author substituted for the home economics teacher she found that Betty invented reasons to come and talk constantly--before class, during class, and after class. She seemed to crave attention—any kind of attention.

Betty has a tendency to argue when given direction or criticism. The hot lunch supervisor stated that she had difficulty in training Betty to listen and not argue. Betty seemed to be making some progress. Betty also needed to learn that she needed a supervisor on the job who could give her

direction. She seemed to learn this and now asks who her supervisor will be when assigned to a new work experience. Betty's supervisor reported that she needed much direction and supervision. She also stated that it seemed to be necessary to speak in a "sharp" manner to Betty. The supervisor added that she disliked this because this was not a way in which she was accustomed to work with people, but it seemed to be the only kind of direction Betty understood.

Her 1966-1967 special education teacher reported that Betty is a very hypertense girl very torn with insecurities. She gets panicky at the beginning of a new experience because she is so afraid she won't be able to cope with it. "For example," related the teacher, "in a beginning typing class she became so upset that she responded to the teacher in a fresh way—well, actually," she continued, "I don't think it was so fresh, it was just that this teacher was not used to Betty and her ways. I think that adults who are not used to the needs of these children probably give them too much to do at one time. They can't slow down their demands enough at the beginning."

The special education teacher gave another illustration that gives insight.

> Betty told about dropping a jar of onion salt that broke and spilled all over everything in the hot lunch room. She seemed to be so impressed that no one hollered at her—which indicates that she probably has been brought to task quite a bit for inefficiencies and lack of capabilities.

The special education teacher for 1965-1966 said that Betty is so very grateful and thankful for anything you do for her. She added, however, that she had to be sharp with her in giving directions because it seemed to be the only thing she understood. She said, "The first week of school she

talked incessantly, but I settled it and she seemed to take it nicely and I haven't had any trouble since." She added that Betty was very considerate of older people. One of the boys in the class talked back to an older person and this made Betty feel very badly. She often told the special education teacher that she was a wonderful person.

When the author substituted, Betty seemed to reject her the first time. The other class members were very receptive but Betty gave an answer that was clearly antagonistic to every suggestion or necessary direction (this was during a clothing construction unit and Betty needed almost constant help). She couldn't seem to adjust to a new personality. The second visit she was much more receptive and later she seemed very happy to see the author. The last time the author substituted Betty made a special effort to express her appreciation for having the priviledge of getting to know her and said she hoped she would have her for a teacher again the next year.

The homemaking teacher reported that Betty seemed to spend time worrying about her home situation. During a lesson on laundry techniques Betty began discussing the problem of two new foster children in her home. Then later when the seniors were gone and there were just the two juniors left in the class Betty contributed some observations on her own childhood. She expressed some appreciation for her foster mother and seemed to feel that she felt better in this situation than she had with her father. When discussing problems that come up with children she would say what her Dad would have done and also what the child (herself) would have preferred—which was a different solution.

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Betty's reports and the reports of her teachers indicate she has limited recreation, but she does go to church. The special education teacher said that her church ties seemed to mean a great deal to her.

Home situation

Betty was placed in a foster home on February 19, 1962.

The report of the director of special education at that time stated:

> Betty's mother is dead and her father lives with a Mrs. Smith. Some money was left by the mother to help bring up Betty. The father feels that if he dresses Betty like a girl it is likely to get her into trouble.
>
> Child welfare should keep this girl constantly in mind because the home situation will probably make it necessary for them to enter the picture at some time. Betty's teachers are to be congratulated on what they have been able to do under the circumstances.

The town in which Betty lived did not have special education facilities at that time. The special education director now in charge said both the school and home situation entered into the decision to place Betty in a foster home.

Betty was placed with a Mrs. Jones and is still living with her at this time. Mrs. Jones is in her sixties and earns her living through care of foster children and cleaning homes for other people. At this time she has one other child, a girl a couple years younger than Betty. The two girls sleep together. This girl is also mentally retarded and is reported to be a hyperactive, nervous child.

Comments of the special education teacher 1964-65:

> Mrs. Jones is not polished, she makes her living by cleaning house. Her own children weren't polished—were the hot rodder type and haven't turned out too well. The other girl that lives with Mrs. Jones is hyperactive—hands keep working—keeps talking—no good for Betty. Betty needs relaxed atmosphere and quiet.

I think the training she gets in this home isn't good. She craves love—was so grateful and thankful for anything you do for her. You have to be sharp with her. She doesn't seem to understand anything else.

Betty doesn't seem to have the things she needs—she is wearing the same old jacket she wore last year and it was too small for her then. Mrs. Jones doesn't seem to spend the money on the girls for the things they need. She doesn't have it. Has two retarded girls she cares for now and wants another.

Comments of the special education teacher 1965-66:

A home background is important. Betty doesn't seem to get the attention and love she needs.

Betty refers to her foster mother as 'mother', and to the other foster child in the home, as 'sister', which seems to indicate she does feel as if she had home ties in this situation.

Comments of homemaking teacher 1964-65:

Betty's foster mother lived in a house that was quite old and run down. but has recently moved into a home that is quite new and well kept.

Betty's comment:

She told her homemaking teacher last year that she would like to learn to bake and cook to be able to get supper for her Mother when she came home from work all tired out.

Comments of present director of special education:

> Betty's placement in this home seems to be working out very well. She has made great progress since her placement. Of course, Betty has limitations, there is a ceiling with her limited capabilities.

Comments of the author based on personal observation and information.

The home in which Betty spent the first 11 years of her life was very sub-standard. The house itself looks more like a shack than a house and consists of very few rooms.

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Betty's father lives with a Mrs. Smith in common law. Mrs. Smith dresses in a very bizarre manner—wears many layers of clothing, for example, several dresses over an overall (men's work clothes type) and large men's work shoes. She tops this off with a large man's work hat pulled down over her eyes.

The father drifts from job to job and is often unemployed.

Betty has several uncles and aunts who have above average ability and seem to have many talents. Several have gained state-wide recognition as athletes, were excellent students, and are now successful in business and the professions.

Work experience

Sheltered:

Work study program

Employed in cafeteria and been assigned following tasks:

Buttered the bread for sandwiches
Put out the milk for the cafeteria line
Helped with pots and pans: scraping, soaking, prewashing before placing in dishwasher
"Soped" water out of steam tables that lack drains

Unsheltered gainful employment: None

Future goals

The special education director is hopeful she can be placed in some routine type job after her graduation.

The director of the school hot lunch program where Betty is presently employed under the work-study program reports that Betty needs constant supervision and that she now seems to realize this. When placed in a new situation she immediately asks who her boss will be. At the present time

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she is not working fast enough and is requiring too much supervision to justify being paid. Her employer is hopeful that she will improve and be employable in some routine type job by the end of the school year.

Estimate of Practical Skills

From a review of the lesson plans used by the homemaking teacher, the case studies of the girls, and interviews with the individuals who associated with the girls in the school or work situation, the following evaluation was compiled of their capabilities in relation to practical skills.

Janice North is capable of doing household chores such as the following with a limited amount of supervision:

Purchase a pattern and construct an average garment.

Prepare a simple meal involving use of a range.

Follow average recipe for a cake, pie or cookies using mixer, blender or other equipment.

Sort, pre-treat and launder a family's laundry using automatic washer and dryer.

Iron and press all types of fabrics—she would not need supervision for the ironing or pressing process, but would need help in determining fiber content. Her performance would be acceptable for average wear by most people.

Do simple alterations and mend clothing.

Janice could perform the simpler household chores without supervision, and could also baby sit with children.

Kristin Brown is capable of performing household chores such as the following with a limited amount of supervision:

Simple mending—she can cut with a scissors well and uses a sewing machine well. She is capable of analyzing the problem and applying a simple solution.

Set a table for almost any occasion with some supervision.

Follow a simple recipe. She is capable of using a mixer, blender, and range.

Sort, treat, and launder a family's laundry using automatic washer and dryer.

Iron and press clothing. Could follow directions for pressing various fabrics if given some supervision.

Kristin is capable of performing the simpler household chores such as scrubbing floors, washing windows, washing dishes (and using a dish washer), dusting, etc. without supervision.

According to reports from the senior high school homemaking and special education teacher and work supervisors, Martha Black is capable of performing the following household chores such as the following with a limited amount of supervision:

Simple mending: Martha uses a machine well and would be capable of deciding how to treat elementary situations.

Set a table for a simple meal and if she practiced she would be capable of setting a table for a tea or several course dinner. It is necessary for her to practice the situation exactly as it would be carried out.

Follow a familiar, uncomplicated recipe for a cake or cookies, using a mixer, blender or other equipment.

Sort and launder a family's laundry using an automatic washer and dryer after supervised practice using the equipment.

Iron and press clothing not requiring special treatment or complicated procedure. With practice in giving special specific treatment to various fibers or in pressing more complicated garments Martha could perform well.

Perform the simpler household chores such as scrubbing floors, washing windows, washing dishes, dusting, etc. without supervision.

Sally Green is capable of doing the household chores such as the following with a limited amount of supervision:

Simple mending—she uses a machine well—the mechanical aspect.

Set a table for a simple meal.

Follow a familiar, uncomplicated recipe for a cake or cookies, using a mixer, blender or other equipment. She has difficulty following a recipe.

Sort and launder a family's laundry using an automatic washer and dryer—assuming she had practiced using the equipment.

Iron and press clothing not requiring special treatment or complicated procedure.

Sally could perform the simpler household chores such as scrubbing floors, washing windows, washing dishes, dusting, etc. without supervision.

Betty White is capable of doing household chores such as the following with a limited amount of supervision:

Wash dishes
Set a table
Scrub floors
Wax and dust floors and furniture
Use a vacumn cleaner
Wash windows
Iron and press

For the following chores she would need constant supervision:

Use a sewing machine for simple mending and alteration.

Use an automatic washing machine or wringer type machine.

Prepare a simple meal involving use of a range.

Use an electric mixer.

Read and follow directions in a recipe.

ANALYSIS OF LESSON PLANS FOR 1965-1966 SCHOOL YEAR

The homemaking teacher of the special education class consisting of five girls kept a record of the daily lesson plans. This log included class topics, procedures and a few brief evaluative comments depicting extent to which outcomes were above or below average expectations of the teacher.

An analysis of this log of classes was made for the purpose of developing specific suggestions for planning home economics curriculums to best meet the needs of these educable mentally retarded pupils. In making the analysis direction was sought from comprehensive case studies of the five girls in the special education class in home economics; the review of literature relating to concepts of intelligence, theories of learning, and mental retardation; interviews with employers of graduates of the program and employers who participated in the work study program; parents of the pupils; specialists in the study of mental retardation; and specialists in homemaking education.

Each lesson was analyzed and representative lessons in each subject matter area were chosen for general evaluation by the investigator. The investigator's comments relating to each lesson reported include evaluations applicable to the lessons of similar nature.

Food and Nutrition

Situation A

Lessons relating to basic nutrition were introduced by discussing[1]

[1]"Discussion" as used in teacher's log refers to teacher directed verbal exchange and verbal explanations given by the teacher.

characteristics of physical appearance and emphasizing characteristics which seemed to denote good health.

Investigator's comments

Since the educable mentally retarded pupils are primarily interested in themselves, but tend to be more unaware of their shortcomings then average pupils, (Goldstein and Seigle, 1958; Hirsch 1959; Edgerton 1963) calling attention to and placing special emphasis on the characteristics of good health as they pertain to themselves is one way of motivating these pupils toward wanting to know how to gain and maintain good health. This interest in self could lead to an active interest in nutrition. The homemaking teacher reported that they seemed to become interested.

Verbal descriptions of effects of good health upon appearance may be difficult for some retarded pupils to comprehend. Specialists emphasize the use of visual aids with pupils (Benoit 1964, Abraham 1964) and film strips and films on the effect of nutrition on the body would be helpful.

Situation B

The teacher explained nutrients, the definition and names of various nutrients, and placed each major nutrient in correct space on a chart of four basic food groups.

Investigator's comments

From a study of the characteristics of the retarded pupils, it would seem that the concepts of nutrients and the relation of these concepts to the food one should eat each day is too abstract for these individuals. Such information is probably non-essential in the training to choose

adequate diets based on foods needed by the body to maintain good health (Kirk 1951, Goldstein and Seigle 1958, Slaughter 1964). It is very important that the retarded learn how to choose nutritious diets, states Kirk (1951) and probably equally important for them to learn to do this within a limited budget (Charles 1953, Slaughter 1964).

The author suggests two methods of approach that might be successful. First, basing choice on the basic four food groups using the names of the groups: dairy food, meat, vegetables and fruits, and cereals and breads. The second suggestion: basing choices on basic meal patterns. Although for pupils with greater learning capacity comprehension, not memorization is recommended, for this group. The necessary foods recommended for each day's diet probably should be memorized and repeated in a variety of class experiences until the material was overlearned. With periodic reviews to refresh their memory, this information might well become a part of their storehouse of knowledge, hopefully referred to as a guide for choice of food for themselves and their families throughout their life. Special consideration will need to be given to ethnic background, and an effort made to include foods with which the pupils are familiar and will probably continue to use. Home economics teachers may believe that an important objective is for pupils to learn to like and adopt new foods, but since these individuals tend to like routine and resist change more than the average individual (Goldstein and Seigle 1958, Hirsch 1959), it is doubtful if their basic food habits could be changed to any great extent. Hopefully they will be able to adapt their established patterns of eating to include essential foods in recommended quantities. Laboratory lessons

based on this objective would be essential since they learn "best by doing" (Benoit 1964, Robinson and Robinson 1965).

Situation C

The class analyzed meals using paper models of food placed on flannel board. They discussed each food in terms of color, texture, shape, temperature, time involved to prepare, effect on individual, and the placement on the "basic four" food chart.

Investigator's comments

There were too many concepts presented in this lesson. The multiple ideas tend to confuse these individuals (Robinson and Robinson 1965, Benoit 1964). Also, it is doubtful if these individuals can apply all of the concepts the teacher was trying to develop without becoming confused and frustrated. Applying such concepts involves abstract generalizing quite beyond the abilities of the retarded learner. (Robinson and Robinson 1965, Benoit 1964, Hirsch 1959, Kirk 1951).

The author believes the objectives of lessons in food selection should be limited to recognizing the basic food groups, selecting foods to fit into each group, and organizing the preparation of the meal so it will be prepared and ready to serve at a given time.

Situation D

Viewed film strips on "How to Buy Meat", and "How to Cook Meat".

Investigator's comments

In relation to meat cookery, the author suggests that emphasis could best be placed on basic, most commonly used, methods such as braising,

stewing, pan frying, pan broiling, or broiling (as hamburger). The methods often included in film strips on meat cookery are generally wide in scope and rather sophisticated. Parts of the film strips showing the basic methods might be utilized.

Both film strips were shown in one class period. Additional varied experiences are needed that would help pupils to internalize a few simple concepts before progressing to new concepts (Benoit 1964, Robinson and Robinson 1965). In lessons related to buying meats, it would probably be beneficial to show selected parts of the film strip that relate to the cuts they would more often buy. Then, take a field trip to a meat market to see cuts of meat with teacher guidance in memorizing names of some cuts. It may be important for them to understand that the less expensive cuts are as nutritious as the more expensive cuts, and can generally be as tasty if they are cooked correctly.

The simplified concepts included in film and field trip on meat cookery should be repeated in laboratory practice. This would be a very practical simplified class experience giving them ideas for their meals, and experience in the use of recipes.

Situation E

The teacher analyzed a recipe and explained the form in which a recipe is written, the meaning of recipe terms used, and equipment used.

Investigator's comments

The concepts related could be taught in a variety of ways utilizing several class periods. The concepts probably should be mastered by the girls enrolled in these special classes since generally they will need to

cook and to some extent will use recipes. A presentation of all of the ideas in one class period is unrealistic for these girls since very few had mastered these techniques or become familiar with these concepts before this year (homemaking teacher). The retarded youth learn too slowly to comprehend a number of terms and methods presented in such a brief period of time (Goldstein and Seigle 1958).

The author feels that these lessons could be effectively presented as follows:

First, clarifying simple basic concepts such as "level spoonful" or "creaming" and illustrate meaning, ask pupils to explain terms orally, then, have pupils carry out the process following step by step demonstration of teacher. For example, the term "cream" in relation to the use of shortening in a batter would involve a laboratory lesson on creaming a shortening, and recognizing when it was sufficiently light and fluffy to begin adding the remaining ingredients.

Second, in a laboratory class, provide opportunity for the pupils to practice the techniques of measuring several types of ingredients. This may require more than one class session.

Third, measure each ingredient listed in the recipe in its chronological order (Benoit 1964, Robinson and Robinson 1965), rather than attempting the process of combining any of the ingredients until all have been measured, checked, and double checked against the recipe. This procedure will require an added supply of measuring utensils, and increase dish washing, but it will help eliminate errors and help to promote successful results so important to these pupils. Success helps motivate and give the confidence needed to attempt more difficult preparations

(Kirk 1951, Goldstein and Seigle 1958, Heber 1964). Drill on the names and purposes of the equipment used in this lesson can accompany this lesson, and it may be necessary to spend more than one class period on this phase. Periodic review will also be necessary (Vergason 1962, Ellis 1963).

Situation F

Pupils were asked to double a recipe and then use the doubled recipe in making refrigerator cookies. They had difficulty with the arithmetic.

Investigator's comments

The chance of errors is too great to ever suggest to pupils of this ability level the practice of doubling a recipe. Number concepts are too difficult for them to accomplish this task (Wechsler 1958). If they need double the amount, directions may be given for making the product twice. Considering the time they would need to spend on the arithmetic involved, and then the chance of a complete failure, making the product twice would probably result in a savings of time, energy, and money.

Situation G

As a final project in their foods unit, this group planned, prepared, and served a luncheon to which a guest was invited. The homemaking teacher had planned to be absent, and the author of this study acted as a substitute and "guest" for the day. Prior to this lesson table manners and manners in general had been discussed.

Investigator's comments

This seemed to be an excellent means of evaluating progress of this group in respect to planning and working together; following a time chart

and work plan; employing skills relating to the foods each prepared; setting a table; serving food; entertaining a guest, each playing the role of hostess; and practicing table manners as well as general over-all good manners.

The author had observed progress of this group periodically and agreed with the homemaking teacher that they had made progress in every area. At the beginning of the unit it was almost impossible to get the group to plan or work as a unit.

Much of the preparation was accomplished the day before and some convenience foods were used. The pupils had their schedules planned to accommodate the slowness or special abilities of each. They love to eat, but reminded each other to end the party in time to clean up. Betty insisted on finishing third helpings, however, before she would help cleaning up. The rest seemed to understand, ignored her, and accepted her small help when she was finally ready to give it. Janice and Martha did an excellent job of cleaning up, and Sally followed their directions helping as much as she could. Janice and Martha seemed much more mature and possibly ready for some kind of employment if given enough supervision. They seemed much more sure of themselves in the table setting and cleaning-up tasks then in the actual preparation of the food. The author needed to give direction and assistance in this area.

It is generally advisable to spend as much time as is necessary to teach basic good manners to these pupils (Pinkard 1965, Larradon Hall Occupational Center 1966, and Charles 1953). They often lack a knowledge of manners or are unaware of their lack of manners (Goldstein and Seigle 1958, Ringness 1961), and a knowledge and use of manners is often a help in

securing and keeping employment—they also help open doors for them socially (Charles 1953, Pinkard 1965, Larradon Hall Occupational Center 1966). Lessons relating to manners will need to be presented many times using a variety of methods if these concepts are to be internalized to the extent that they will use them in their everyday living experiences. The use of drill is of primary importance in working with the mentally retarded Robinson and Robinson 1965, Kirk 1958, Garrison 1964, Martens 1964, Goldstein and Seigle 1958, and Benoit 1964).

Home Furnishings and Management

Situation A

The lesson was focused on ways of organizing a work center, ie., food receiving and storage, food preparation, cooking, clean-up and serving. The pupils used kitchen models which each had made in class for checking work centers and then compared work centers in model kitchens to commercial size school lunch kitchens.

Investigator's comments

It may be well to have the academically retarded pupils think through process of organizing a kitchen but it is doubtful if they would gain much by using models. Any transfer of knowledge is particularly difficult for them (Goldstein and Seigle 1958, O'Connor 1958, Griffith 1960) and transfer of an idea from miniature model to actual kitchen would probably be impossible. It would be better to use the unit kitchens in the homemaking department and begin the learning experience with sacks of groceries prepared in advance by the instructor. The girls could "put away" the

groceries. This could be practiced several times with teacher praising correct placement and asking questions about why different groceries were placed where they were. Later the pupils might be asked to go through a teacher directed process of preparing, serving and cleaning-up after a simple meal. By actually working through the procedure they might see advantages in storage areas, preparation areas, etc. arranged in a certain order.

Observing storage, preparation, serving and clean-up areas in a commercial kitchen would probably not be helpful since it would be difficult for these girls to transfer this learning to their own home situations. These individuals will almost never be in a management position in a commercial kitchen (Cohen 1964, Pinkard 1965). Training for correct use of storage and work areas in an institutional kitchen in which they might become employed would need to be specific and for the particular kitchen in which they were working.

Situation B

The lesson on the storage of food seemed to interest pupils and the following day they asked to check out books to prepare and give reports to the class, and then they groaned about all of their homework.

Investigator's comments

This reaction of the girls is interesting and the author agrees with the homemaking teacher who stated that the girls feel a need to be like other girls (Edgerton 1963). They wanted an assignment and homework as an excuse to complain about these the way the other high school students often

complain. Socially they are much nearer their chronological age then their mental age, and have needs much like their age mates (Edgerton 1963).

They may not be very competent at completing any assignment, however, since they seem to need supervision in almost every learning activity (Goldstein and Seigle 1958, Kirk 1951). If the instructor understands pupils inability to follow through and quietly helps them with the work the following day, then it may be helpful to them by bolstering their self confidence and ego to be given some "homework". The author feels this accomplishment would be much more important than the lesson itself (Dexter 1958, Goldstein and Seigle 1958, Heber 1964).

Situation C

The instructor talked about aspects of efficient, well-planned kitchens, and showed pictures and diagrams of various types of kitchens as the L, U, and corridor types.

Investigator's comments

The author concludes, again, that too many concepts were presented in one lesson. It would be very difficult for these mentally retarded pupils to comprehend all of the ideas about kitchens in such a brief space of time (Benoit 1960, Robinson and Robinson 1965).

An instructor would need to sift out carefully the most pertinent and essential information in relation to planning a kitchen if she thought it necessary to include a lesson in this area. There might be arguments for its inclusion, but considering how very valuable their few years in school must be, (Kirk 1951, Garrison 1964, Martens 1964, Sniff 1962, Smith 1954, Slaughter 1964) and how few opportunities these girls will probably have to

plan their own kitchens, (Deno 1965, Pinkard 1965, Charles 1953), it is doubtful if time need be spent on a unit of this kind.

Textiles and Clothing

Situation A

Following several lessons on grooming and the importance of cleanliness and an attractive appearance, the class considered wardrobe needs and then the care and repair of clothing. The homemaking teacher had observed that the girls often wore clothing in need of the type of repair that had been reviewed in class. She requested that the girls each bring clothing from home they could repair in class.

The girls failed to bring the clothing from home to repair during the class period. The homemaking teacher reminded them repeatedly, but they did not bring the articles. They seemed very interested in the project during the class period but failed to carry out the assignment.

Investigator's comments

The failure to bring materials from home is a typical pattern for these pupils to follow. The two special education teachers related many such incidences and recommended that teachers never ask retarded pupils to bring articles from home. The retarded pupil never follows through. One of the teachers suggested the reason was they wanted to forget their homes since many come from below standard backgrounds filled with unhappy experiences. This may be part of the explanation, but girls from average and above average homes also fail to bring articles, and this probably isn't the situation in reference to them. It could be true, of course, that

their home life is quite unhappy too, since parents from the higher social classes are often disappointed in having a retarded child and the child feels this disappointment (Egg 1964, Hutt and Gibby 1965, Garrison and Force 1965). There are often other children in the family who are normal and this retarded child often feels at a disadvantage by comparison (Egg 1964, Garrison and Force 1965). In the school situation surrounded by pupils of like abilities, and a teacher who is understanding and encouraging, he is generally quite satisfied and happy and might not wish to mix school with home (Johnson 1961).

Situation B

Most of the girls chose wool fabric for their clothing project, and the instructor concluded that in most cases the fabric needed to be shrunk. This was discussed and demonstrated in class. The actual shrinking of the fabric was assigned as a home project, but time passed and the fabric was not shrunk. One girl finally brought a sheet to school and the instructor used this to help each girl shrink her fabric at school.

Investigator's comments

The girl that brought the sheet was very eager to begin on her clothing project, and this may have motivated her to the extent that she would bring an article from home. Bringing the sheet to school was a gentle, but possibly not conscious, hint to the instructor that she did not understand the process and was in need of assistance. This pupil and the other girls, never stated that they needed help or that they didn't understand the steps to follow. It was quite evident that they did need help, however, when the instructor began assisting them at school. The need for

help was surprising to the teacher since they had seemed to understand the procedure very well at the time of the demonstration.

Situation C

Lessons were presented on line, space, texture, color, and proportion as they relate to clothing. General principles were illustrated through use of pictures from pattern books and fashion magazines and use of fabric samples.

Investigator's comments

Many of these concepts are too abstract for retarded (Kirk 1951, Robinson and Robinson 1965). We also need to constantly examine the objectives for the educable mentally retarded. Is it absolutely necessary for occupational adequacy, social competence, and personal adequacy to comprehend these concepts (line, space, texture, color, and proportion) in relation to all of their clothing choices? The author feels it would probably be more practical and realistic to present a few clear, concise suggestions of basic costumes that would be suitable for school, church, and the types of recreation in which most of the girls participate. To discuss suitable, attractive clothes for each pupil would be helpful in that special interest in each girl is shown by the instructor. This helps the pupil feel like a worthy individual, a person important in her own right (Smith 1954, Cromwell 1961).

Situation D

The class participated in a field trip to a cleaning establishment where they observed the steps involved in cleaning clothing of various kinds.

The instructor prepared for this field trip by discussing procedures common to laundry and cleaning establishments, and asked the girls to list questions they wanted to ask the manager at the cleaning establishment. Each girl was responsible for several questions. Later she was responsible for reporting on these questions to her fellow classmates.

Investigator's comments

A field trip of this nature may be valuable for several reasons. In this particular class it seemed to develop a desire for a unit on clothing care. Prior to this field trip the instructor reported they seemed very uninterested, and even tended to resent spending time studying about laundering, cleaning, mending, etc. When these girls could see opportunities for possible future employment in these areas, they became interested. It now seemed like a respectable business and not just the duties of a cleaning lady. Studies have shown that the mentally retarded have the same attitudes toward menial labor as individuals with average ability (Rusalem and Cohen 1964) and socially they have aspirations very similar to the average individual of the same chronological age (Edgerton 1963).

Assigning specific questions for each girl to ask during the visit to the cleaning establishment, geared to their individual interests, helped them take an active part in the field trip and class discussion later.

Situation E

The instructor presented several lessons on laundry procedure appropriate for various types of clothing. Included was a discussion on soaps recommended for use in warm, cool, hard, and soft water, use of starch, bleaches, water softeners, bluing, etc.

Investigator's comments

Learning basic laundry procedure that could easily be adapted to an average family's laundry would be very valuable for these mentally retarded pupils since they probably will marry and need to wash the clothing for their family. The girls had not been in the habit of helping their mothers with the family laundry, but if their mothers were convinced that the girls knew how to launder clothing, they might be grateful to have the help. Also, these girls might be asked to perform a family's laundry in the capacity of "cleaning ladies" at some future date.

The inclusion of all of the laundry aids mentioned in the lesson would make the procedure much too complicated for these girls to remember and follow. It would be helpful if the instructor could simplify the procedure as much as is practically possible, and then have the girls practice on laundry supplied by the instructor. If the school does not have laundry facilities, it is generally not too difficult to locate a laundramat or to use the facilities of friends or those belonging to the parents of one of the pupils.

Special education instructors recommended that these pupils avoid the use of chlorine bleaches and bluing. The use of these products may result in clothing that has been ruined through failure to follow the quite involved directions given on the labels of chlorine bleach and bluing containers. These individuals often find it difficult to follow detailed written directions (Benoit 1964, Robinson and Robinson 1965) and it would be difficult for them to attempt to memorize the procedures and precautions involved in the use of chlorine bleaches and bluing.

The appropriate laundry procedures to use for the many types of fabrics used in clothing today present problems much too complicated for these girls to understand or remember. A possible approach would be teaching the importance of saving all the labels that almost always accompany garments. Instructions could be given for placing all labels in a box with a brief description of the garment written on each label. Practice in reading labels and emphasis on importance of re-reading labels pertaining to the particular garment before attempting to launder it would be a part of instruction. The directions given on the labels pertaining to the washing or dry cleaning of a garment are generally quite short, specific and easy to understand—not beyond the reading level of these mentally retarded pupils. The author suggests teaching the following slogan, "When in doubt, send garment to a reliable cleaning establishment". Often for those who have difficulty in following directions and reasoning the more expensive method may be less costly in the long run. They haven't the judgment or ability to engage in many of the "do it yourself" shortcuts or money saving possibilities, as these often require a degree of abstract reasoning beyond their abilities (Goldstein and Seigle 1958, Slaughter 1964, Benoit 1964, Robinson and Robinson 1965).

Situation F

Discussed ironing equipment and arrangement for ease in working and then discussed ironing a blouse.

Investigator's comments

Pressing and ironing is a very necessary and useful skill for these mentally retarded pupils to learn to master. Just discussing these skills

is not enough and would probably be a waste of time (Benoit 1964, Robinson and Robinson 1965). A more effective method would be to set up an ironing board for each girl, plug in and set the temperature dial on an iron, and practice on flat pieces like dish towels. They could then progress to more difficult things. The skill of ironing involves many basic principles that must be taught and practiced step by step (Tod[illegible] [illegible]rton 1963) which could require many class periods depending on rate of progress of individual girls. This would be time well spent because their appearance and that of their family will probably be affected by their ability to iron well if they are responsible for this responsibility in their homes, (Pinkard 1965, Charles 1953, Larrandon Hall Occupational Center, 1966). The skill of ironing and pressing is also one means of earning extra income at home. Speed is important in industry (Pinkard 1965), but not too important at when done in their home. They might not secure employment in industry in this area since many have poor eye hand coordination which prevents them from being competitive from the standpoint of acquiring necessary speed (Canton and Stacey 1951, Sloan 1951, Stein 1963).

Situation C

Several weeks were devoted to a unit on clothing construction.

Investigator's comments

The homemaking instructor made a careful survey to determine each mentally retarded pupils abilities in the class in relation to clothing construction, and made the assignments of their construction projects on the basis of this information. Her survey included questionnaires which asked the girls to check garments they had made and the construction

skills they had mastered, from conferences with their mothers, and actual examination of garments they said they had constructed.

The homemaking teacher reported the girls' skills were much below the predictions made on the basis of the results of the survey, in every case but one, Janice. Their eye-hand coordination was poor, progress was unbelievably slow, and they required constant individual attention and assistance. Once begun, the projects had to be completed because failure would have such adverse effects. The unit required much more time then originally planned, and when they finally finished, the homemaking teacher believed it was doubtful if they had enough mastery of the construction procedures to proceed with any of the procedures on their own. This conclusion was confirmed by observations of the author. There were a few isolated exceptions pertaining to a few of the clothing construction procedures.

The attitude of pupils that they had successfully constructed the garments by themselves, and their pride in this accomplishment was more indicative of their inability to judge their own capabilities (Ringness 1961).

From this experience and from comments made by the special education teachers and other specialists in the area of mental retardation, it can be concluded that the actual construction of clothing with the learning experiences directly related to the construction of a garment, as for example, taking accurate measurements, choosing correct size, style, fabric, making necessary alterations, preparation of fabric, laying pattern on the material or following steps in a construction guide involve concepts too abstract and complicated for educable mentally retarded pupils to

grasp. Furthermore, it is very doubtful if they could apply many of these skills or concepts by themselves at a later date, even with practice to the point of overlearning, since they did not seem capable of initially mastering the underlying principles of each step, possibly because each step requires judgments of which most of these mentally retarded pupils are not capable (Slaughter 1964, DeProspo 1956, Martens 1964, Kirk 1951, Goldstein and Seigle 1956, Benoit 1964, Robinson and Robinson 1965, Todd and Roberts 1963).

Another danger related to the inclusion of a clothing construction unit is the false concepts that the pupils often get regarding their ability. They forget or are not aware that the instructor needed to give as much assistance as is generally the case, and might attempt to construct a garment by themselves later, resulting in failure, frustration, wasted time, money, and energy (Ringness 1961).

Finally, much time is often spent on a clothing construction unit because the mentally retarded need so much individual assistance, and their small eye-hand coordination is often enough below average to make progress very slow (Stein 1963, Canton and Stacey 1951, Sloan 1951). It is well to be reminded again that the mentally retarded pupil's time in school is often short, and since they learn slowly (Benoit 1964, Robinson and Robinson 1965, Vergason 1962, Ellis 1963) valuable class time cannot be wasted on experiences that do not contribute directly to the main objectives (Kirk 1951). This time could generally be spent much more profitably on experiences relating to the basic practical care and simple repair of clothing, or other essential units (Kirk 1951, Sniff 1962, Martens 1964, Garrison 1964, Smith 1954, Slaughter 1964).

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Some homemaking teachers have argued that possibly one out of ten mentally retarded pupils are capable of mastering the steps in a clothing construction unit and can successfully construct garments for themselves and others. If a teacher has a pupil with this ability, special individual instruction could be given, if the time is available, or she could recommend that this particular student capable of mastering the clothing construction techniques enroll in an adult class in beginning clothing construction.

Learning to use and care for a sewing machine is valuable since most can do simple machine mending (Kirk 1951, Garrison 1964, DeProspo 1956, Martens 1964, Sniff 1962, Slaughter 1964). A very few also may secure employment in a factory where they can learn to perform one simple task and acquire the necessary speed to be productive and competitive (Case Study, Janice). Studies show, however, that poor eye-hand coordination possessed by many, and possibly other contributing factors, prevent most of these people from ever gaining the necessary speed to secure and keep employment in a competitive environment (Pinkard 1965, Laradon Hall Occupational Center 1966).

Human Development and the Family

Situation

The homemaking teacher listed problems that provoked arguments in the home situations from the Purdue Opinion Poll by Duvall. The problems chosen from the poll were common problems that had been experienced by these girls. They used role playing to present the problems to the class.

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The mentally retarded pupils presented the problems and then had a discussion involving their homemaking teacher on problem solving. The homemaking teacher presented the steps to follow in solving problems.

Investigator's comments

Sociodrama or role playing has been reported by some teachers of the mentally retarded to be especially effective as a method of developing social concepts (Smith 1954, Kirk 1951, Robinson and Robinson 1965, Benoit 1964). The homemaking teacher in this class also found this to be true.

The acquisition of a pattern to follow in solving problems would be a valuable tool for these students if it were elementary enough for them to use to advantage (Smith 1954, Sniff 1962, Slaughter 1964, Robinson and Robinson 1965, Benoit 1964). In this situation the experiences were common to these girls and the homemaking teacher related that they seemed to grasp the idea of problem solving.

SUGGESTIONS FOR CURRICULUM TO MEET THE NEEDS OF THE EDUCABLE MENTALLY RETARDED

General conclusions and recommendations for homemaking curriculums planned to meet the needs of the educable mentally retarded pupils based on information analyzed for this study are summarized in the following report.

Programs in special education classes for the mentally retarded stress (1) occupational adequacy, (2) social competence, and (3) personal adequacy, (Peck 1966, Kirk 1951, Garrison 1964, Sniff 1962, Martens 1964). If the homemaking programs for these pupils are to meet their special needs, the curriculums should tie in closely with these over-all objectives. The special education teachers consulted in this study emphasized the advantage to both pupils and teachers to correlate the areas of study in the home-making classes with the special education classes. When the experiences in the one build on and emphasize the experiences currently offered in the other, both pupils and teachers profit. Research reports and analyses of this study support the conclusion that these pupils need to overlearn concepts if they are to remember and use them in their out of school experiences (Ellis 1963, Vergason 1962).

Objectives

A brief review of the three objectives will give the scope and limitations of the over-all program and help guide curriculum planning in the area of homemaking for the educable mentally retarded (Kirk and Johnson 1951, DeProspo 1956, Martens 1964, Slaughter 1964).

Occupational adequacy refers to the training of the handicapped child in such a way that he will be able to support himself partially or totally

in some productive activity. It must be emphasized, however, that this does not mean that he should be given specific vocational training. Studies show that he will be most successful in the unskilled and semi-skilled activities, and studies of jobs in these areas show that employers prefer to train employees on the job or give short specific pre-training under their, the companies, direction (Laradon Hall Occupational Center 1966, Cohen 1964b, U.S. Department of Labor 1966-1967, Pinkard 1965, Deno 1966). Studies also indicate that there is very little transfer of learning in the types of training required for employment in these areas.[1] The success of these individuals on the job will depend on more general personal factors, and it is in these areas that help can be given in the public school classes for these people: getting to the job on time, personal appearance, manners, getting along with other employees and the employer, personal health, ability to handle money wisely, safety on the job, responsibility in following directions and carrying the task through to completion, and many other personal characteristics which may be developed from early childhood (Pinkard 1965, Warren 1962). The retarded person needs to develop attitudes and habits which will assist him in becoming as responsible and efficient on the job as is possible for him.

It is also important to consider that most of the educable mentally retarded individuals eventually become self-supporting, but their first years of employment often have been characterized by frequent job changing. They do not tend to become self supporting until later in life. The population in our society with less intelligence often spends the fewest

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[1]From personal communication with Dr. Don C. Charles, Professor of Psychology, Iowa State University, Ames, Iowa.

number of years in formal schooling before entering competitive employment on a full time basis. A plan that would tend to keep educable mentally retarded individuals in school for longer periods of their formative years would be beneficial to them and to society. The work study program has had some success in this respect and is recommended for this purpose. The work study program also serves to give actual experience in the world of work making many of their school experiences more meaningful.

Social competence is an area of study dealing with the individual's ability to get along with his fellow man and should start with the day a child enters school and continue until he is a stable, self supporting adult member of a community. The major goals are the development of personal habits which will help him to get along in his home, with his parents, siblings, then his mate, his children, his neighbors, and his fellow employees. More mentally retarded individuals lose their jobs because of an inability to get along with others then an inability to perform the work satisfactorily (Pinkard 1965, Deno 1965, Warren 1962, Laradon Hall Occupational Center 1966).

Personal adequacy is closely related to social competence but is concerned primarily with the ability of an individual to live within himself. The mentally handicapped, because of their inadequacies, are confronted with many more situations that are frustrating to them than is a normal individual. These frustrations and often resulting failures create a feeling of personal inadequacy often followed by compensatory behavior that is not always acceptable, creating a vicious circle (Hirsch 1959, Cromwell 1961). Most humans strive for security and adequacy. They need to be needed and to feel they belong and are accepted for themselves as they are.

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Teachers of the mentally retarded can help develop a feeling of adequacy by directing activities and experiences to meet these needs. For example, they need to "accomplish" and see by the product of their accomplishments that it is worthwhile (Abraham 1964, Kirk 1951, Goldstein and Seigle 1958, Smith 1954, Slaughter 1964, Sniff 1962). Activities which lead to frustration are to be avoided at all times. They must learn to appreciate the worthwhileness of their accomplishments, whatever they may be (Hirsch 1959, Goldstein and Seigle 1958, Abraham 1964).

Methods

Observation of retarded pupils, the case study review of the characteristics of the girls in the special education class used in this study, and a review of characteristics of the mentally retarded as described by specialists (Goldstein and Seigle 1958, Kirk 1951, Abraham 1964, Garrison and Force 1965, Hutt and Gibby 1965, Hirsch 1959), all support the assumption that there is no such thing as an average or typical mentally retarded pupil. Specialists and teachers, including the three involved in this study reported that they must teach each pupil individually. Individual differences within a class for the mentally retarded are generally much greater than those found within a class of average pupils (Martens 1964, Hutt and Gibby 1965, Kirk 1951). For this reason these classes are limited to 10 or 15 pupils, often less, and each pupil must be studied by the teacher to know how to best meet his special needs (Slaughter 1964, Sniff 1962, Kirk 1951, Garrison 1964).

In homemaking classes it will generally be possible to have all the girls studying together in an area, with generalizations built around

common objectives, but the experiences will often need to be adjusted to each girls particular abilities and needs (Kirk 1951).

An instructor can seldom assume that pupils possess certain areas of knowledge; he can never make this assumption with the mentally retarded. It is always necessary to review basic knowledge on which an experience is built, and to build from the simple to the complex in sequential steps (Benoit 1964, Robinson and Robinson 1965). Instructors not used to working with these individuals often need to be reminded to limit the amount of work given at a time (Benoit 1964). The pupils become easily frustrated and when threatened with defeat usually inherent abstract ideas or complex procedures suitable for the more able pupil, the response is to give up entirely (Heber 1964). A concept may need to be presented through several kinds of experiences (Benoit 1964, Kirk 1951, Smith 1954, Garrison 1964). Their attention span is often short, more closely related to mental age then chronological age (Goldstein and Seigle 1958, Wechsler 1958), and they require variety to prevent boredom (Goldstein and Seigle 1958, Hirsch 1959).

Methods suggested by specialists as those which seem to produce results with the retarded were endorsed by the special education teachers and the homemaking teacher in this study (Cromwell 1961, Abraham 1964, Smith 1954, Benoit 1964, Hirsch 1959, Robinson and Robinson 1965, Deno 1966, Sniff 1962, Garrison 1964, Kirk 1951). A brief review of these are as follows:

Place emphasis on the three "A's"; retarded pupils have greater need than others to feel that they are <u>accepted</u> if they are to achieve their full potential. They need to <u>achieve</u>, to experience the feeling of success.

Protection against failure needs to be an essential part of any teaching method used. And they need affection from parents, teachers, and fellow pupils if they are to develop normally (Abraham 1964, Heber 1964).

Pupils for whom learning is difficult need encouragement, and criticism is to be avoided if at all possible. Before criticizing teachers need to ask, "Isn't there a better method of handling this?" (Goldstein and Seigle 1958, Kirk 1951, Smith 1954, Heber 1964, Abraham 1964)

The positive approach to each learning situation should be used. Retarded find it even more difficult than others to transfer a negative concept, (Garrison 1964, Benoit 1964, Robinson and Robinson 1965, Smith 1954, Slaughter 1964).

They learn best by doing and actual practice in life-like situations is the best approach (Benoit 1964, Robinson and Robinson 1964). The situation, however, needs to be simplified and carefully controlled.

Class periods must be carefully planned to avoid rushing these pupils, especially in any laboratory-type learning experience. They become disoriented and frustrated when rushed and often react by giving up (Stein 1963, Cantor and Stacey 1951, Sloan 1951, Kirk 1951, Goldstein and Seigle 1958, Sherman and Bell 1951).

An instructor may need to spend considerable time introducing a new unit of study as these individuals tend to resist change and new experiences which may present the threat of possible failure, and they can't face another failure (Heber 1964). New topics of study are best accepted if subtley introduced as an on going part of familiar routine.

Directions are most effective if the instructor employs a procedure like the following:

Give oral directions

Use a vocabulary familiar to the pupils

Use as few words as possible

Briefly tell how and if necessary why; check at each point in directions to see if they understand

Do the thing—Demonstrate or illustrate

Provide opportunity for the learner to do separate parts of the process under the instructor's supervision

Check frequently and tactfully until the instructor is assured learner has mastered the task

(Smith 1954, Goldstein and Seigle 1958, Martens 1964, Benoit 1964, Robinson and Robinson 1964)

Visual aids are valuable teaching devices if chosen to meet the needs of the retarded pupils (Benoit 1964, Kirk 1951, Sniff 1962).

References that the girls can use later in their own homes often have greater value then textbooks. Many textbooks develop concepts at a level which these pupils cannot comprehend as easily, if at all, as normal children (Vergason 1962, Ellis 1963) and the textbooks are generally not available for use after they leave school. The kinds of references they need to learn to use, at least in a limited way include some government pamphlets such as those giving consumer information and guides for child care, instruction booklets for appliances, cookbooks, and labels on clothing.

The knowledge of when and how to use the available resources for various kinds of aid in a community is very useful. Field trips are recommended, as for example to agencies as the county extension office, the county nurse, the local mental health clinic, the public library, or

the local hospital. The services at each should be explained as simply as possible (Smith 1954, Sniff 1962, DeProspo 1956, Kirk 1951, Martens 1964, Benoit 1964, Slaughter 1964). It would probably be helpful to them later to encourage them to choose and visit a doctor and a dentist on a "get acquainted" basis in preparation for the time when their services would be needed, and a trial visit by the class would demonstrate the necessary steps to be taken.

These suggestions for methods will not apply in every case, and the teacher will need to tailor her program to meet the needs of each individual. In the final analysis, her evaluation will be based on the growth of the total personality of each pupil (Kirk 1951).

Content

In each subject matter area included in the homemaking program, the following needs to be stressed: cleanliness, appearance, getting along with others, safety, and management. Although there are other competencies that might be included, these have special significance for the future adjustment and adaptation of these individuals to their environment.

A few suggestions pertaining to content, based on recommendations of the special education teachers, the homemaking teachers, specialists in the field of homemaking education and specialists in the area of mental retardation included:

Child care and development (including prenatal care)

Studies show that the educable mentally retarded generally get married and have children. Since they may easily become overwhelmed with the many added duties and responsibilities involved in parenthood, it is recommended

that any training which might contribute toward alleviating this frustrating situation be included in their secondary school curriculum.

Examples are:

1. Detecting signs of pregnancy
2. Importance of consulting a physician when pregnancy first suspected
3. Importance of diet and exercise when pregnant
4. Bathing a baby, with special emphasis on safety
5. Methods to avoid in disciplining children (many cases of child abuse and beating in lower income families).
6. Methods of feeding a baby
   a. The importance of holding a baby while giving him a bottle (if he is not breast fed)
   b. The reasons for and methods used in burping a baby
   c. The problems often encountered when introducing semi-solid foods
7. Practicing safety
   a. The dangers involved in leaving a child in a bath tub unattended for even a minute—for example, leaving a child to answer the phone
   b. Safety measures to take when changing a baby's diapers
      (1) Swallowing safety pins left within his reach
      (2) Falling. It is best to change a baby's diapers on the floor if there is not a safe place available such as a bathinette where the baby can be strapped down tightly
   c. Safety hazards for children
      (1) Tables and furniture from which children may fall
      (2) Unprotected stairways

(3) Ordinary household cleaning agents such as:

Liquid or powdered soaps—when swallowed may get into lungs and cause suffocation

Scouring compounds or ammonia—if swallowed may cause serious burns, suffocation and usually poisonous

Spot removers—often poisonous

(4) Handles of pans which protrude over edges of tables, ranges, etc. where children may reach them and spill contents on themselves

(5) Buckets or pans of hot water left unattended where children might fall into them

There are many that could be added to this list and should be added, as this is just a beginning to give direction. Home visits, conferences with the county nurse, the local welfare worker, the local physicians, parents, etc. would give clues for content.

Care of sick

The majority of educable mentally retarded pupils live in substandard homes and, possibly due to poor diets and inadequate care, tend to be less healthy than average pupils. They also tend to be more unaware of the condition of their bodies, more accident prone, and less capable of handling emergencies or coping with complications accompanying illness. For these reasons, the inclusion of learning experiences relating to the recognition and treatment of illness and injuries are recommended.

Examples of experiences in home nursing might include:

1. Use and care of a fever thermometer.
2. Recognition of a need to consult a physician.
3. Dangers involved in self treatment with patent medicines or home remedies.

4. Ways to report symptoms of illness or extent of injuries to a physician.

5. Importance and method of keeping record of medication prescribed by a physician.

6. Storage of first aid supplies.

7. Simple first aid treatment for minor injuries such as bruises, cuts, or burns.

Home care and furnishings

The majority often live in homes that would be considered below average in cleanliness and appearance. The income in most of these families is below average and is often mismanaged. The special education teachers stressed the importance of preventing pupils from becoming dissatisfied with present home and developing desires for furnishing they may never be able to afford.

The importance of consumer economics cannot be over emphasized in relation to these girls. Due to insecure jobs, higher rate of illness, inability to manage as well as average or above average people, and generally lower incomes, these individuals cannot afford to buy "on time." They do not understand interest rates and payment plans and often become hopelessly and dangerously involved financially in credit plans or high rate loan companies.

Examples of learning experiences relating to the care of the home and its furnishings are:

1. Methods of cleaning walls, floors, woodwork, windows, and equipment.

2. Methods of painting walls—when it is practical, the kind of paint to choose that is very easy to apply, methods of application. Practical experience is valuable here.

3. Awareness of color. Even elementary art principles may be too abstract for these pupils to learn and apply but awareness of color in their surroundings may add some joy to their lives.

4. The elementary techniques involved in painting a dresser or similar piece of furniture.

5. The use of cleaning tools.

Human development and the family

In this area the basic concepts as outlined by the Division of Vocational and Technical Education (USOE) are as applicable to the educable mentally retarded as to the normal or average student. The methods used in presenting them, and the depths of understanding, that is the degree to which the cognitive material is mastered will vary with the ability of the pupil.

I. Universality of the individual and families

Movies, magazines, and encyclopedias (Lands and Peoples) could be used to depict life in other cultures. A comprehension of the way people do live and can live increases their ability to be tolerant and to understand neighbors, friends, and even relatives whose family patterns differ.

The type of employment available to this group often enforces irregular hours for eating and rest, and if an attitude can be developed to tolerate this situation, much frustration and unhappiness might be avoided.

II. Development and socialization of the individual

This is one of the most important areas of study for these individuals since it encompasses the two broad objectives, personal adequacy and social competence, and relates directly

to the third—occupational adequacy. The personal development and socialization is even more important in respect to their occupational adequacy than in the average individual where the specific training for the job may take precedence.

Experiences need to be carefully planned to meet the individual developmental needs as they occur for each.

III. To comprehend "change"

The concept of change is difficult for normal pupils, and consequently more complex for the educable mentally retarded. Studies show (Charles 1953) that the retarded tend to make better adjustments when their jobs and environment do not change often. Conditioning them to accept and adjust to change is a challenge every teacher of the educable mentally retarded must face. Learning that might help to make retraining, shifts in jobs, moving from one neighborhood or area of the country to another less painful include:

1. How to locate agencies such as churches, doctors, dentists, and employment offices.
2. The importance of new ways of doing things.
3. The benefits of training programs for new types of employment.

Food and nutrition

In this area it is necessary to provide experiences that will help promote an awareness of the importance of a well-balanced diet, the ability to recognize a well-balanced diet, and the skills and knowledge involved in providing a well-balanced diet for themselves and their potential families

on a limited budget and time schedule, and possibly limited cooking facilities.

Authorities repeatedly say that the mentally retarded learn best by doing, therefore they need to be involved in the actual practice of planning, shopping, storing, preparing, serving, eating, and cleaning up. Simple menus which include economical, nutritious food are to be used for laboratory practice. It is best to begin with very elementary plans and build slowly toward the more complicated but still relatively simple menus. Practical nutrition can be stressed throughout the foods unit, or where ever lessons relating to food are incorporated in an experience unit.

Use of convenience foods are recommended. Any method or product that can be prepared simply avoiding waste and frustration by the elimination of complicated steps, is an economy in many ways for the educable mentally retarded.

These pupils may learn to evaluate some of the abundance of advertising. Some simple concepts, carefully illustrated and practiced may help them check the nutritive value, the convenience, and the economy of foods advertised. Since advertising may be subtely misleading, and abstract thinking is difficult for these individuals, a full evaluation of advertisement made on the basis of carefully weighed factors, is unrealistic.

Textiles and clothing

The unit on textiles and clothing would probably be most valuable to the future adjustment of these girls if it centered around the choice, care, and simple repair of clothing.

In relation to the choice of clothing, principles of color, texture, line, and design that are quite abstract should be avoided.

Examples of practical, simple ideas to include in relation to the choice of clothing might be:

I. Choice of clothing

1. "Fit" of a garment

a. When a garment is too tight (in relation to, and at times regardless of current styles)—hip, bust, across shoulder, sleeves, neckline, etc.

b. The placement of the waistline

c. Placement of darts—bust, hip, elbow

d. Length of sleeve, fit of underarm seam

e. Evenness of hemline

2. Colors

a. Effect of different colors worn by different people

b. A few very basic rules relating to color combinations

3. Textures—awareness of different texture

4. Fabrics

Stress the practice of reading all labels on all fabrics and garments, and keeping the labels filed for future reference.

In this increasingly complex field of study make an effort to keep the instruction as simple as possible.

Examples of basic ideas might include:

a. Dacron and nylon are fibers that possess considerable strength and tend to increase the wear of cotton fabrics, also tend to make them less apt to wrinkle.

b. Permanent press fabrics require less ironing but alterations may be difficult.

c. Wool garments are generally warmer than cotton, rayon, or nylon.

d. Wool garments generally can't be laundered as easily as cotton, rayon, dacron, or nylon.

II. The care of clothing

This is one of the most valuable areas of study for disadvantaged learners and often one in which they do not have knowledge from home. It may be necessary to visit the homes to gain a background of information relating to the storage facilities available to each girl. This will give an indication of where to begin. The following are examples of basic ideas which might be included.

1. Ways to improvise a clothes storage.

2. Methods of stain removal, cleaning, and pressing of clothes.

3. Procedures for using coin operated cleaning equipment.

4. Steps in simple stain removal.

5. Laundry procedure for a typical family including sorting, pre-treatment of stains and very soiled areas, necessity of mending before laundering, use of laundry aids, etc. It is important to avoid chlorine bleaches and possibly bluing due to possible damage to fabrics from incorrect use.

6. Procedures for using appliances such as washing machine, dryer, and iron.

7. Techniques of ironing—important to appearance of the girls and their families, and there is also the possibility of its becoming a saleable skill.

8. Storage of clothing—daily and seasonal.

III. The repair of clothing

1. Use of the sewing machine in restitching seams, tears, hems.

2. Mending with a needle and thread—tears, seams, hems, etc.

3. Replacing buttons, snaps, etc.

4. Mending with iron-on patches.

Mending that requires complicated processes should not be included, and the girls are generally not capable of these advanced procedures.

SUMMARY

The purposes of this study were threefold: to review the 1965-1966 program in home economics for academically retarded in one high school to identify strengths and weaknesses; to identify characteristics of the educable mentally retarded pupils which would be useful in helping home economics teachers better understand the needs and limitations of these pupils; and to make suggestions for home economics programs in high school for the educable mentally retarded organized in special classes. The suggestions for programs are based on prior research findings, informal evaluation of the supervisor of the girls employed in sheltered employment as a part of their work-study program, evaluation of employers of girls in unsheltered work situations, case studies, and an analysis and evaluation of the 1965-1966 curriculum.

Literature was reviewed in areas relating to intelligence, psychological testing, and mental retardation, including sections on the definition, classification, characteristics, education, and employment of the educable mentally retarded.

To gain information pertaining to the pupils that had been enrolled in the special education class for the year 1965-1966, interviews were held with the 1965-1966 and the 1966-1967 special education teachers, the home economics teachers, the employers of the girls who had graduated from the program in the spring of 1966 and were currently employed, and the employer involved in the work-study aspects of the program. The author also made periodical observations of the girls in the classroom situation during the 1965-1966 school year.

Case studies were made of the five girls enrolled in the work study program. Information reported in the studies was gained from the cumulative folders on file in the school in which they were currently enrolled, and, where possible, folders from any schools attended previously, the two special education teachers, the home economics teachers, the director of special education, the employers of the girls, and personal observations of the author.

An analysis was made of the content and methods of the home economics program for the educable mentally retarded pupils organized into a special education class in the high school. Strengths and weaknesses were identified, based on the comments of the home economics teacher relating to the degree of success experienced by the class, on personal observations of the author, statements pertaining to their characteristics made by the special education teachers, director of special education, and specialists in mental retardation, and a review of literature in this area.

Suggestions for curriculums in home economics to help meet the needs of the educable mentally retarded were made, based on prior research findings, analysis and evaluation of the 1965-1966 curriculum in home economics education for the special education class in high school, informal evaluation of the supervisor of the girls employed in the sheltered employment aspect of the work-study program and employers in unsheltered work situations, and case studies of the five girls enrolled in the home economics class for the special education pupils.

In reviewing the philosophy and objectives for the education of the educable mentally retarded, much in the subject matter content of the discipline of home economics was found to be a necessary part of their

education and training. A summary of the suggestions pertaining to the high school curriculums in home economics for the educable mentally retarded include:

1. To correlate the subject matter content of the home economics program with the experience units currently presented in their special education classes.
2. To plan the content, methods, and rate of progress in a manner that allows for their individual differences, particularly those relating to abilities and needs.
3. To employ the methods based on the theories of learning that seem to have the greatest implications for the educable mentally retarded, namely, Hebb and Piaget. Some of the applications to learning in the mentally retarded include:

Hebb's theory

a. To implement initial training through thing-oriented experiences.

b. To employ methods of multiplying sensory modalities or dimensions in a given perception.

c. To include the motoric portion of the brain as much as possible.

d. To simplify the learning situation—exclude irrelevant stimuli.

e. To present material in short sequential steps.

f. To present experiences as young as possible, within scope of their readiness, since early learning is of special significance for them.

g. To use drill extensively and limit complexity.

h. To avoid precision activities in complex sequences.

i. To specifically teach the necessary material to be learned and not rely or incidental learning, since this is very low in the mentally retarded.

Piaget's theory

a. To adjust a pupil's over-all program and the ordering of materials within each area on the basis of his particular readiness for various kinds of educational experiences.

b. To use teaching methods that would encourage the pupil to interact concretely as much as possible with the material.

c. To encourage projects that would promote the interaction with classmates as discussions, role play, group projects, etc., since individuals, and particularly the educable mentally retarded learn the meaning of perspective through pitting their thoughts against those of others, noting similarities and differences, acquiring rationality and objectivety.

d. To be certain that each step is mastered before preceeding to the next step—and that each step builds on the firm foundation of the preceeding steps.

4. To base the content of the curriculum on the three major objectives, namely, occupational adequacy, social competence, and personal adequacy, and to weigh the importance of everything included against its ultimate benefit to the adjustment of the individual to our democratic society.

5. To recognize the importance of creating a classroom atmosphere of relaxed, cheerful optimism where each pupil is free to try new experiences and is eager to learn because he is accepted as he is and evaluated in terms of his individual progress based on his particular interests and abilities. It is recommended that the teachers remember the following in their relations with the

the educable mentally retarded: motivation, affection, success, achievement, and rapport.

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*OCCUPATIONAL HOME ECONOMICS; *ANNOTATED BIBLIOGRAPHIES; *VISITING HOMEMAKERS; SERVICE OCCUPATIONS; *PROGRAM DESCRIPTIONS; PROGRAM ADMINISTRATION; COMPANIONS (OCCUPATION); MAIDS; SOCIAL SERVICES; HOME MANAGEMENT; *HISTORICAL REVIEWS

Historical origins of the homemaker services date back to 1903. Early services provided by Jewish Welfare groups, the Work Projects Administration, and the Homemaker Services are described. Homemaker Services conferences culminating in the 1964 National Conference on Homemaker Services are outlined chronologically. An annotated bibliography of 517 references classifies materials according to: general orientation, historical background, program descriptions, role of professional workers, meeting special needs, services in other countries, training, guidelines and standards, personnel policies, appraisal of services, finances, directories, manuals, community organization, national committees, and councils, and conferences. Author and subject indexes are included. (FP)

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HOMEMAKER SERVICES—

history and bibliography

MAUD MORLOCK

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foreword

HOMEMAKER SERVICES are built on several premises. One premise is that the family is important in our society. Another is that community life is strengthened when home life is strengthened. Both of these premises are underlined in this pamphlet, ***Homemaker Services: History and Bibliography.*** As you read the historical statement and the annotations to the bibliographical references, the growth of these premises is clearly discernible.

It seemed important to the Children's Bureau at this point in time—the spring of 1964—to look back to the origins of these important community services, to see how they have evolved in the years since they began in the early twenties, and to understand the manner in which they have changed and been modified over the years to meet the needs of people in the complex world we live in today.

The contents of this publication add up to one conclusion. Homemaker services provide a practical, acceptable, and important way of safeguarding the home and close family relationships of many people in the community—children, adults, old people. These services are an essential part of a well-rounded community health and welfare program.

But this broad concept of these services is of recent origin—and is a goal rather than a reality in most communities. Many of us are convinced that as a nation we are only beginning to realize the potentialities of these services. And in the not too far distant future they will be recognized for what they are—a powerful tool with which to maintain family living for many people.

The volume of literature appearing since 1960 attests to the public and professional interest and concern for homemaker services. Of the 517 references in the bibliography, 213 have appeared in the last 4 years. Surely this outpouring of material is a good omen for the future.

The Children's Bureau in producing this pamphlet had the rare good fortune of being able to secure the services of Miss Maud Morlock, formerly Specialist in Homemaker Services in the Division of Social Services of the Children's Bureau. Miss Morlock came to the Bureau in 1936—and made pioneer contributions to the history of homemaker services until her retirement in February 1959. Her extensive knowledge and participation in the growth of homemaker

services, her deep concern with their promise for insuring family living for many people, and her appreciation of the contribution of many professions to these services are all reflected in this publication. The Children's Bureau and the people concerned with homemaker services in all its many forms owe Miss Morlock a debt of gratitude for so ably bringing together the history and the published material on these important services.

Katherine B. Oettinger

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Chief, Children's Bureau
WELFARE ADMINISTRATION

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history

HOMEMAKER SERVICES IN THE UNITED STATES

HOMEMAKER SERVICES got their start in the United States in the early 1920's. But services similar in purpose were established back as far as 1903.

Beginning in 1903, the Family Service Bureau of the Association for the Improvement of the Condition of the Poor in New York City employed four "visiting cleaners" who supplemented the nurses' services by "lifting temporarily the simple, everyday domestic burdens from sick mothers." Later, they were called visiting "housewives." Although their number was always small, never more than four at any one time, they performed a variety of functions, including helping to renovate homes, washing, cleaning, preparing meals, caring for children, and demonstrating "good housekeeping."[1] The emphasis was on improving housekeeping as such.

The work of the visiting housekeepers in Detroit was started by the advisory committee of the Associated Charities in 1913.[2] Much emphasis was placed on food for the family. While, at first, working with a mother in a family on housekeeping skills on an individual basis was given priority, later this was combined with group teaching, both for mothers and for adolescent girls.

Homemaker Services Begin in Philadelphia

Early in 1923, the Jewish Welfare Society of Philadelphia recognized the need for a staff of "motherly" women to act as housekeepers in homes where the mothers were temporarily incapacitated

[1] U.S. Department of Health, Education, and Welfare, Public Health Service: HOMEMAKER SERVICES: Report of the 1959 Conference. Public Health Service Publication 746. Washington, D.C.: U.S. Government Printing Office, 1960. 257 pp. (p. 1.)

[2] Bessie Bishop Bothwell: Visiting Housekeeping Work in Detroit. JOURNAL OF HOME ECONOMICS, 1914, 6, 6–12 (February).

in order to avoid the placement of children in institutions and foster homes.[3 4]

This program is considered to be the first organized "homemaker" program in the United States.[5]

The suggestion to employ such women came from a layman, Morris Kind, at that time president of the Jewish Welfare Society of Philadelphia.

In October of that year, the agency employed two housekeepers to act as substitute mothers in an effort to keep families together through illness or childbirth. The type of woman chosen for this work was "the practical Jewish housewife." It was her duty "to care for the children, plan and prepare the meals, do the marketing and keep the house in order. In other words, she is the mother by proxy . . . ." Her work was carefully supervised by a home economist. Often the housekeeper continued in a teaching capacity with a new and very young mother after the mother's recovery.

At first, only short-term cases of a few weeks' duration were taken. But later, when the introduction of a housekeeper would promote the "best casework solution to the problem," the length of time ceased to be a primary consideration.[6]

Other Early Programs

The Jewish Home Finding Society in Chicago started housekeeping services in November 1924.[7] Jacob Kepecs, the initiator of the service, was concerned because families were "breaking up" as well as "breaking down."[8] For a wide variety of reasons, some parents were no longer able to take care of their children, and foster home placement was being undertaken.

Social agencies had, for some time, recognized the suitability of home care over institutional care, such as an orphanage, and had developed foster home care to provide the individual care and security of a foster family.

Mr. Kepecs believed that sometimes foster care created more problems than it solved. He asked himself two questions: "Do we have

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[3] Zena J. Blanc: What Forces in Jewish Community Life Govern the Number of Dependent Children Admitted to Placement? JEWISH SOCIAL SERVICE QUARTERLY, 1927, 4, 26–35 (September).

[4] Salome S. C. Bernstein: Mothers by Proxy. THE SURVEY, 1926, 56, 81–82 (April 15).

[5] Jacob Kepecs: Housekeeper Service in Motherless Families. PROCEEDINGS OF THE NATIONAL CONFERENCE OF SOCIAL WORK, 1938. (p. 266–278.)

[6] Sadye F. Adelson: Homekeepers. CHILD WELFARE LEAGUE OF AMERICA BULLETIN, 1929, 8, 3–4 (June).

[7] Chicago Jewish Home Finding Society: Back to the Home. THE SURVEY, 1929, 63, p. 87 (October). Also Dorothy A. Alter and Jane Mullenbach: Housekeeper Service Discussed. CHILD WELFARE, 1931, 10, 2–3 (May).

[8] Philip M. Margolis, M.D.: Stabilizing the Family Through Homemaker Service. SOCIAL CASEWORK, 1957, 38, 412–416 (October).

to place children when their mothers are temporarily incapacitated? Wouldn't it be better to bring a substitute mother into the home?"

Housekeepers were selected as needed. They were mature women who had had experience in the care of children and in household management. No effort was made for formal training. They were instructed individually and on the job. The housekeeper was considered an acting mother, in many respects the same as a foster mother.

Since it was important to keep the children with the father, in 1927 the program was enlarged to care for children of widowers.[9] This marked the beginning of a concept of homemaker care extending over more than a few weeks' duration.

In 1929, Mr. Kepecs reported: "Our temporary care problem has been practically solved through these services which are now expanding to long-time cases." [10]

Mr. Kepecs also sounded the call for casework services in relation to homemaker service in 1930. He said, "Emphasis must be laid on the fact that housekeeping is a sound service only if careful casework principles are applied and every case remains an active responsibility of the agency to the end." [11]

Following the passage of the Social Security Act in 1935, Federal grant-in-aid funds became available to States for the development of services in public welfare agencies. With these funds, for the first time State public welfare agencies had the opportunity to develop homemaker services.

Housekeeping Projects During the Depression

The depression speeded the development of another program somewhat similar to homemaker service—housekeeping aides under the Work Projects Administration—by providing funds and a new motive, the employment of needy women.

What was probably the first "public" program for providing "housekeeping" service began in 1933 in Chicago as a Civil Works Administration project.[12]

The Family Service of Cincinnati and Hamilton County also started a visiting housekeeper service in 1933 which, during its first 2 years, was financed by work relief funds. But the primary purpose

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[9] Dorothy A. Alter and Jane Mullenbach: Housekeeper Service Discussed. CHILD WELFARE, 1931, 10, 2–3 (May).

[10] Jacob Kepecs: More About Housekeeping Service. CHILD WELFARE LEAGUE OF AMERICA BULLETIN, 1929, 8, 5–6 (September).

[11] Jacob Kepecs: Housekeeping Service in Chicago. JEWISH SOCIAL SERVICE QUARTERLY, 1930, 6, 114–116 (March–June).

[12] Philip M. Margolis, M.D.: Stabilizing the Family Through Homemaker Service. [In] CASEWORK PAPERS, 1957: National Conference on Social Welfare. New York: Family Service Association of America, 1957. (p. 82–90.)

of the program was not to give employment to housekeepers but to help families in crisis situations.[13]

Caseworkers chose the housekeepers for their ability to supervise children and to manage a household. Weekly training classes were held on such subjects as nutrition, buying of food, and child care.[14]

But, generally speaking, during the next few years the Work Projects Administration developed housekeeping projects primarily as a method of employing needy women. Women in need of financial assistance were assigned through health and welfare agencies to help families with children, the chronically ill, and the aging in their own homes. But the overall purpose for the service was employment needs of the housekeeping aides rather than the care of the people who received it.

A preservice training course varying from 1 to 5 days [15] under the direction of a public health nurse, a home economist, or social worker was usually given to women working as housekeeping aides. When this preliminary instruction was completed, the aide was sent into homes selected as needing the service. A competent supervisor, usually a home economist or nurse, watched the progress of her work and, through individual instruction, sought to improve it.

Beginning about 1938, there began a shift of emphasis from serving short-term cases to serving some chronically ill patients.[16] One large project, started by the Committee on Chronic Illness of the Welfare Council and the Visiting Nurse Service of the Henry Street Settlement House, began operation in 1935 in New York City with the care of the chronically ill as its exclusive purpose. At almost the same time, another project was started for the home care of old-age assistance clients. In 1938, the two were merged under the name of Housekeeping Service for Chronic Patients.[17]

By late 1941, 38,000 [18] housekeeping aides were serving families in 45 States and the District of Columbia.

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[13] Marion Schmadel Goodwin: Housekeeper Service in Family Welfare. [In] PROCEEDINGS OF THE NATIONAL CONFERENCE OF SOCIAL WORK, 1938. (p. 279–287.)

[14] Gretchen Bode: Visiting Housekeeping Service. THE FAMILY, 1938, 19, 50–54 (April).

[15] Frances Preston: Current Practices in Housekeeper Service. Unpublished paper presented at the National Conference of Social Work, 1940, at a joint meeting of the Committee on Homemaker-Housekeeper Service and the Social Welfare and Public Health Department of the American Home Economics Association. Mimeographed by the Children's Bureau, August 1940. 7 pp. (Unpublished.)

[16] Dorothea M. Argo: What Housekeeping Aides Do. AMERICAN JOURNAL OF NURSING, 1941, 41, 775–780 (July).

[17] Marta Fraenkel: HOUSEKEEPING SERVICE FOR CHRONIC PATIENTS: An Analysis of a Service for the Chronically Sick and the Infirm Aged by the Work Projects Administration. New York: Welfare Council of New York City, 1942. 143 pp. (Processed.)

[18] Communication to Maud Morlock from Miss Margaret Badtjer, Home Economist Consultant, Work Projects Administration.

Most of these programs were discontinued when the WPA was terminated in 1942. Few communities made any plans to carry them on. Undoubtedly, one reason was lack of participation on the part of the community in planning and fostering projects. Usually these projects were geared to a sponsoring agency but frequently lacked sufficient backing by the community to insure continuing as an ongoing program.

Homemaker Service in Wartime

In April 1942, the Children's Bureau sent a letter to all private agencies having homemaker service—and replies were received from the majority of them. In general, the replies indicated an increased demand, greater difficulty in obtaining homemakers, and increased wages for homemakers.

Many agencies reported an increasing need for 24-hour service during the mother's illness because of the absence of the father in the armed forces or in defense industries. More families able to pay the full cost were asking for the service.[19]

The National Committee on Homemaker Service

The first national conference on supervised housekeeper service was called in 1937 [20] by the Children's Bureau at the request of the Welfare Council in New York City. This conference led directly to the establishment of a national committee.

Participants in this conference included representatives of public and private agencies in the fields of social work, public health nursing, home economics, and the employment of women workers.

The purpose of the conference was stated as follows: "To think through the possibilities for the future development of housekeeper service in terms of the fundamental principles of organization and satisfactory standards of service and to consider the various means by which the development of such services might be guided along sound lines."

The group recognized that a variety of services had been organized in various communities in which women were being placed in homes of needy families as household aides, housekeepers, and homemakers. These women were performing services ranging from household tasks to full responsibility for the care of children.

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[19] Supervised Homemaker-Housekeeper Committee: SUPERVISED HOMEMAKER SERVICE UNDER WAR CONDITIONS. Newsletter No. 2, 1942. 12 pp. (Mimeographed.) (Available in Children's Bureau files.)

[20] Report on Conference on Housekeeper Service Held Under the Auspices of the Children's Bureau . . . November 6, 1937. 7 pp. (Mimeographed.) (Unpublished.) (Available in Children's Bureau files.)

A careful evaluation of these services was needed with particular emphasis on the cost of caring for children in this way as compared to foster home placement. The requisite qualities of the homemaker were those sought in foster mothers with the additional requirement of flexibility in adjusting to the homes of others.[21]

In general, training on the job was considered most valuable. Instruction should include family problems, child psychology, and habit training. Experience had shown that the service had been particularly successful in agencies employing, as supervisor, a worker with both home economics and social work training.

To give leadership, a national group was essential. A small steering group was appointed. The conferees recognized the need for information on the functioning of homemaker service. As a result, a member of the Children's Bureau staff visited 17 cities having various types of homemaker services.[22]

With one exception, the agencies offering the service were casework agencies providing housekeeper service to families or children through a special unit. The names for these units were interesting: home management service; visiting housekeeper service; motherless family department; homekeeper service; homemaker service; mother substitute service; and home helper unit.

A conference on standards of housekeeper service was called by the Children's Bureau on April 7 and 8, 1939. A small group of representatives from public and voluntary social agencies, WPA, and a school of social work attempted to define and clarify the various types of services given to families through placing a worker in the home for housekeeping activities.

As a result of this latter meeting, the committee felt that the words "visiting housekeeper" did not fully describe the service or give it the status it should have. Consequently, this committee became the Committee on Supervised Homemaker-Housekeeper Service in order to emphasize the broad scope of the service and to indicate that it was agency supervised. This 1939 meeting proved so valuable that the group decided that other meetings should be held—the first of which occurred in connection with the National Conference of Social Work in Buffalo in June 1939.

In 1946, the committee changed its name to the National Committee on Homemaker Service. From that time until it was dissolved in 1962 to be replaced by the National Council for Homemaker Services, this small committee gave valiant leadership to the whole homemaker services movement.

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[21] Late in 1937, the Child Welfare League of America requested information on homemaker service from their member agencies. Twenty-two reported such a service.

[22] Some Characteristics of Housekeeper Service in 10 Agencies. Children's Bureau, 1939. 11 pp. (Mimeographed.)

No detailed account of this committee's activities can be given here. But from the time of its founding, it was a vital force in the development of homemaker services in this country.

Twice a year, the committee held a conference of one or two days' duration—one in the fall and one in connection with the National Conference of Social Work. Its membership was open to any agency employing homemakers, and its meetings to anyone interested in the subject.

It encouraged the preparation of papers for meetings of the various professions (social workers, home economists, public health workers) and of magazine articles for technical and lay audiences.

For several years, the Russell Sage Foundation collected statistics for the committee on homemaker services. When this resource was no longer available, the National Committee, out of its meager funds, employed someone on a part-time basis to collect, analyze, and issue these statistical reports.

For a time, the committee issued a newsletter giving current information on homemaker services. Beginning in 1942, the committee from time to time issued a directory of agencies offering the service.

As one reads the record, one is amazed that a small group of people convinced of the merit of their cause were able to accomplish so much. These activities were on a voluntary basis by individual members, all of whom carried heavy agency responsibilities.

The few resources that the committee had were made to stretch over a wide gamut of activities. In many instances, enthusiasm and devotion proved a good substitute for money. Never with fuel enough to make the fire burn brightly, nevertheless the committee kept the embers of the service glowing.

In 1955, the Child Welfare League of America undertook the task of formulating ***Standards for Homemaker Service for Children.***[22a] The first step was setting up a committee "selected because of their expertness in the field of homemaker service," largely drawn from their membership.

In a very real sense, these standards represented goals for the continuous improvement of homemaker services to children. Issued in 1959, through the years since that time, the standards have offered a base for examining practice and the premises on which it has been developed; for evaluating the services of child welfare agencies in this area and their adequacy in meeting the needs of families and children.

In 1956, the National Committee on Homemaker Service requested the Children's Bureau to explore ways and means for advancing this service more broadly.

[22a] Child Welfare League of America: STANDARDS FOR HOMEMAKER SERVICE FOR CHILDREN: Statement prepared by the Committee on Standards for Homemaker Service. New York: The League, 1959. 45 pp.

In response, the Bureau arranged two small exploratory meetings which were attended by program administrators and representatives of such agencies as the Family Service Association of America, the Child Welfare League of America, the American Medical Association, as well as other units of the U.S. Department of Health, Education, and Welfare.

National Conference on Homemaker Services, 1959

As a result, a National Conference on Homemaker Services, sponsored by 28 national voluntary and health agencies and by 8 units of the Department of Health, Education, and Welfare was held in Chicago, February 10–11, 1959. Five hundred people attended the meeting. The conference had a single purpose—"to stimulate the development of homemaker services throughout the United States." [23]

Those in attendance repeatedly expressed the belief that in community planning priority should be given to services which help people to remain in their own homes, providing it is suitable for them to do so—families with children, the chronically ill, and the aged. Homemaker services are a case in point.

Furthermore, homemaker services should be available to all people in the community who need them, regardless of income or geographic location of the family. To accomplish this, national, State, and local agencies must work together, and there must be teamwork between the health and welfare fields.

Voluntary agencies alone could not provide sufficient homemaker services to meet the increasing demands arising out of conditions due to death, illness, incapacity, infirmity of age, or other social, economic, and emotional difficulties. Public agencies, it was maintained, should provide a broad service to meet all types of problems and should be able to serve all income groups when such service does not duplicate an existing service. Fees for the service should be in accordance with the family's ability to pay.

Programs should be flexible with focus on the needs of people. Services should be used imaginatively and with full knowledge of the many ways homemaker service can strengthen the community.

The following definition of the service was agreed upon by the conference:

> **"Homemaker service is a community service sponsored by a public or voluntary health or welfare agency that employs personnel to furnish home help services to families with children; to convalescent, aged, acutely or chronically ill and disabled persons; or to all of these.**

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[23] Lucille M. Smith: National Conference on Homemaker Services. HOMEMAKER SERVICES BULLETIN (American Medical Association), 1960, 1, 1–4 (March). Also U.S. Department of Health, Education, and Welfare, Public Health Service: HOMEMAKER SERVICES: Report of the 1959 Conference. Public Health Service Publication 746. Washington, D.C.: U.S. Government Printing Office, 1960. 257 pp.

> "Its primary function is the maintenance of household routine and the preservation or creation of wholesome family living in times of stress. Because homemaker service should be offered on the basis of social diagnosis and often a medical diagnosis as well, trained professional persons should evaluate the type of service needed, and the length of time it should be given."

The definition of the homemaker accepted by the conference was as follows:

> "A homemaker is a mature, specially trained woman with skills in homemaking who is employed by a public or voluntary health or welfare agency to help maintain and preserve family life that is threatened with disruption by illness, death, ignorance, social maladjustment or other problems. A pleasant personality, physical and mental well being, experience, and training enable her to assume full or partial responsibility for child or adult care, for household management, and for maintaining a wholesome atmosphere in the home. She does these things under the general supervision of a social worker, nurse, or other appropriate professional person connected with the sponsoring agency."[24]

Conference on Personal Care in Homemaker Services

One national conference often leads to another—and the succeeding conference builds upon the first. This was true of the Conference on Personal Care in Homemaker Services sponsored by the National Health Council. This latter conference made a major contribution to the unfinished business of the National Conference.

It was held at Arden House, Harriman, New York, February 14–16, 1960. The 50 or so participants came from professional organizations and voluntary health agencies concerned with the personal care aspects of homemaker services.

One member in describing the difficulties confronted by the conferees said:

> "An analysis of the group process would probably show: an initial skepticism, somewhat masked by sufficient good will to keep the temperature normal; a burst of enthusiasm in the first session; further but lessened skepticism still flavored with good will; sharper delineation of the problem and apparent impasse; a coming together as each recognized the responsibility and unmet needs currently burdening each other's agencies; mutual respect for the tough work which has been undertaken by the agencies with which the participant was less familiar. And, lastly, there was a scrapping of much of each workshop's initial thinking in order to arrive at consensus on certain important principles and at awareness of those problems which still require deep thinking in the future."

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[24] U.S. Department of Health, Education, and Welfare, Public Health Service: HOMEMAKER SERVICES: Report of the 1959 Conference. Public Health Service Publication 746. Washington, D.C.: U.S. Government Printing Office, 1960. 257 pp. (p. xii.)

The sense of the conference was that homemakers may be taught to give the services that a family member would ordinarily perform for an ill or disabled person.[25]

The 1960 Conference

The 1960 annual conference of the National Committee on Homemaker Service had as its theme: Homemaker Service—A Community Resource for Families. It was held in New York City, October 13–14, 1960.

The conference included general sessions and a series of eight workshops. The conference recognized that the future of homemaker services is not dependent on one but many professional disciplines—doctors, nurses, educators, home economists, social workers, public and voluntary health and welfare agencies, and mental health agencies.

The group was warned not to see homemaker service as a panacea for every problem in the family. Regardless of auspices, the same safeguards need to be provided. Professional supervision and consultation from a variety of professions are essential.

Homemaker services not only can assist in meeting crises in the home but may also serve as a preventive, teaching, and restorative measure.

More effort must be expended in offering formalized training courses to homemakers. Only then will homemaker services be recognized as a skilled occupation or semi-profession.

In October 1961, the Public Health Service with the assistance of the Bureau of Family Services and the Children's Bureau collected information for the 1961 Directory of Homemaker Services. Of the programs listed in the 1961 Directory, only 1 still in existence was established before 1930. In the next decade, 18 programs were added. Between 1940 and 1949, 37 programs developed. The years 1950–1959 saw the greatest acceleration with 118 new programs. Thirty-four programs were added during 1960–1961.[26]

One of the recommendations of the 1959 conference was that an executive committee consider an ongoing mechanism to promote and stimulate the growth of homemaker service on a nationwide basis.

More than a year was spent in exploring ways and means. The decision was reached to establish a new national agency to give leadership to the movement.

The National Health Council and the National Social Welfare Assembly agreed to bring into being an independent voluntary agency

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[25] American Medical Association, Council on Medical Service: Report of Conference on Personal Care in Homemaker Services. HOMEMAKER SERVICES BULLETIN, 1960, 1, 1–4 (July).

[26] Lucille M. Smith: Homemaker Service: Luxury or Necessity? HOMEMAKER SERVICES BULLETIN (American Medical Association), 1963, 4, 2–5 (January).

broadly representative of health and welfare interests and to seek support for a 5-year demonstration to promote homemaker services of high quality.

As a consequence, the National Council for Homemaker Services was established and incorporated in December 1962. The National Committee on Homemaker Service dissolved but left a legacy of many years of effort and achievement.

One of the Council's first activities was to move ahead with plans for the 1964 National Conference on Homemaker Services.

Homemaker Services in 1964

Where did the country stand at the close of 1963 in relation to homemaker services? This was the picture.

programs: their number and distribution

The directory,[27] prepared for the 1964 conference, lists 303 agencies administering homemaker programs in 44 States, the District of Columbia, and Puerto Rico. These agencies employed over 3,900 homemakers and cared for more than 9,500 families in October 1963. This represents approximately a 50 percent increase over 1961 in the number of homemakers employed, and an increase of 75 percent in the number of families served—a truly remarkable achievement in two short years.

In general, the increase in programs occurred in the States already best supplied with such programs. About half of the new agencies are located in the 7 States, each of which had more than 10 agencies in 1961. Three of these States—Connecticut, New York, and North Carolina—had an increase of 8 or more homemaker programs.

The 303 homemaker agencies were located in 204 cities and towns. States such as New York, Pennsylvania, Ohio, and Illinois have a concentration of homemaker services in their metropolitan areas. One hopeful note—many of these programs provide service on a countywide basis so that, in fact, service is available to the residents of these counties living in rural areas, in adjacent communities, and in the suburbs. In some instances, one agency serves several urban areas.

The homemaker agencies of the rural and New England States are more widely dispersed, each usually located in a county seat or small town.

The more than 9,500 families received nearly 490,000 hours of service in October 1963. These numbers represent increases of approximately 75 percent since 1961. The voluntary agencies cared for approximately 65 percent of the families. The number of families

[27] U.S. Department of Health, Education, and Welfare, Public Health Service: DIRECTORY OF HOMEMAKER SERVICES, 1963. Washington, D.C.: U.S. Government Printing Office, 1964. [In press.]

served was about the same for families with children and families with ill or disabled adults or aged persons. Families with children received, however, more hours of service—62 percent of the total.

Sixty-five percent of the agencies serve all types of families; 25 percent serve only families with children; and 10 percent serve only families with ill or disabled adults or aged persons.

What about auspices? The growth of homemaker services has altered very little their distribution among voluntary and public agencies. Sixty percent of all programs are administered by voluntary agencies, with the family and child service agencies outnumbering all others. The visiting nurse-based programs have more than doubled, from 8 to 21. Six hospitals have homemakers among their staff. Although a few independent programs have been added, the proportion remains the same—10 percent. Federal and State public funds have helped stimulate many of these new voluntary programs in family and children's agencies as well as in health agencies through the purchase of services. Hopefully this trend will continue.

The public programs have had a net increase of 49; 27 in welfare, 13 in health, and 9 other. Of the 15 in health agencies, 10 are in the public health nursing divisions of local health departments.

Homemakers are being used more extensively to assist in improving the quality of living for depressed families, such as migrant farm families, in-migrants in large cities, and families living under slum conditions, and to protect from neglect children and the aged. This kind of broadening of service is taking place both in the cities and in the rural areas. Thus, homemaker service, once viewed as a short-term, emergency service for holding families together in time of illness or death, today is used in a wide variety of situations: some preventive, some educational, some therapeutic.

sources of support

Multiple financing of homemaker services is a fairly recent but rapidly growing practice. In times past, the voluntary agencies were usually financed by United Community Funds, local community foundations and trusts, with a very small portion of the budget being met by family fees. Occasionally, the public welfare department purchased service. Today, not only are all these sources of support being used on a wider base but also voluntary health agencies, service clubs, and industries frequently make annual lump sum payments or pay on a fee-for-service basis. A few Blue Cross Associations, which are now financing posthospital home care, also pay for homemaker service.

When homemaker service is operated by public welfare and health agencies, they may get their support from Federal, State, or local appropriations.

Federal funds for homemaker services are available from a variety of sources. The U.S. Department of Health, Education, and Welfare is encouraging development of homemaker services in connection with a variety of programs.

Under the 1962 Public Welfare Amendments, States may obtain 75 percent of the cost of homemaker programs. They need not be limited to recipients of public assistance but can be provided to other low income families and individuals as a way of helping them avoid becoming dependent. The Bureau of Family Services administers public assistance funds and provides assistance to States in planning for homemaker services.

The Children's Bureau administers Federal child welfare funds and plans jointly with States for their use. For the fiscal year 1964, 32 States have made provision for using some of these Federal child welfare services funds for homemaker service. The use of such funds is not limited to children in financial need, but may be used for service to all children regardless of economic or social status, race, color, creed, or citizenship.

No part of the appropriations for child welfare services and services in public assistance, administered by the Welfare Administration, is specifically earmarked for homemaker service grants. But State agencies have wide latitude in developing both their child welfare and public assistance plans, and in so doing can provide for homemaker service.

Both Bureaus offer technical consultation and assistance to State and local public and voluntary agencies and groups.

Demonstration project funds, administered by each Bureau, also are available. These funds can be used to initiate service, paying for full cost, but are not available on a continuing basis. Demonstration projects in welfare agencies can become regular ongoing programs, however, with continuing extensive Federal participation.

Funds for maternal and child health and crippled children's services administered by the Children's Bureau may be used for homemaker services providing the need for such services is directly related to other services being provided through these programs.

Several types of grants-in-aid are available to States through the Public Health Service Act which can, at the State's option, be used to help finance homemaker services programs.

The health funds now most used for homemaker services are those made available through the Community Health Services and Facilities Act of 1961. The Act's purpose is the support of studies, experiments, and demonstrations that will lead to new or improved community health services outside the hospital. Grants have been made for homemaker service programs in family and children's agencies, in independent agencies, visiting nurse associations, and hospitals

that operate home care programs. Grants are also made to State health departments that, in turn, may use the funds for partial financing of programs in voluntary or public health and welfare agencies.

Migrant health, mental health, and other categorical disease programs are also potential sources of "seed" money to start new services.

The Vocational Rehabilitation Administration has a threefold interest in homemaker services: (1) a general concern for helping to develop needed community services; (2) an interest in the possibility of opening jobs for some highly selected handicapped women who have the qualities and capacities for becoming good "homemakers" in an organized homemaker service; and (3) an interest in the development and use of homemaker services to aid in the rehabilitation or care of disabled and chronically ill persons.

Grants may be made to public or nonprofit agencies or institutions for training professional personnel in rehabilitation, and for partial support of research and demonstration projects which will contribute to solution of widespread problems in rehabilitation of the disabled. These grants from Vocational Rehabilitation Administration have included support for a pilot training course to provide homemakers with specific training related to disability and rehabilitation, and projects involving use of homemakers in rehabilitation of the disabled.

The Office of Education recognizes the value to families of homemaker service and its importance as an occupation for women. As the Manpower Development and Training Programs get underway, funds may be used for training women as homemakers. Basic training for homemakers may also be provided through public school vocational and adult education programs, and home economists on the staffs of State boards of vocational education are working with other agencies to help develop such training programs.

But one of the primary problems remains the lack of funds. Even though multiple sources are being used, few, if any, communities have found it possible to offer all the services needed by all economic and age groups.

The Future

Portents are favorable for a major expansion in homemaker services. The 1964 National Conference on Homemaker Services will mark a significant new chapter in our Nation's social history.

Many trends justify these high hopes.

An increasing number of communities are seeing in this service a first line of defense for parents and children against family breakdown, a prophylactic against serious emotional disturbances that

often follow separation, and a resource that maintains and builds family strengths—among the young, adults, and elderly families.

Because example is often a better guide than precept, agencies increasingly use the services of a homemaker to show good child care and household management practices to the mother who lives under deprived circumstances, who lacks experience, or who seems unable to manage her household.

Health agencies are valuing this service, too, for increasing the possibilities of home care for both the physically and mentally ill and the handicapped, for shortening the time patients must be separated from their families, and for permitting more rational use of hospital and sanitaria facilities.

More citizens are sensing the sound economy of providing a service that makes unnecessary the removal of many children from their own homes and their maintenance in foster homes or institutions and a service that reduces the time that sick and elderly persons must be maintained in institutions, such as hospitals, nursing homes, homes for the aged and chronically ill.

As encouraging as the progress has been in homemaker services during the last few years, the United States, as a nation, has only taken the beginning steps toward providing these services on an adequate base for all the families, children, aged, and chronically ill people who need them.

Perhaps 25 years from now as we look back, 1964 will mark the dawn of a new day in caring for these people.

bibliography

1903–1964

GENERAL

Aldrich, C. Knight, M.D.: Medical and Social Responsibility in Homemaker Service. CHILD WELFARE, 1961, 40, 8–11 (January). Also HOMEMAKER SERVICES BULLETIN (American Medical Association), 1961, 2, 2–3 (January).

A psychiatrist shows how homemaker service can be provided as both a medical and as a family and child welfare service. The problem of its professional identity includes questions such as: How much of a nursing service and how much of a social service? Who should be primarily responsible for supervision and standards? Who should determine intake policy? What training should the homemaker have? Who should decide the limits of care? And who should be the homemaker's primary concern, the incapacitated adult or the insecure child?

Aldrich, C. Knight, M.D.: Medical and Social Responsibility in Homemaker Service. [In] PROCEEDINGS: Annual Meeting of the National Committee on Homemaker Service, New York, October 13–14, 1960. 51 pp. (p. 12–16.) (Processed.)

"Homemaker service, as you well know, for practical purposes in this country was born and spent her infancy and early childhood in an economically deprived and depressed family, the Works Progress Administration. She spent her latency period as somewhat of a Cinderella overshadowed by more glamorous siblings—foster home care for example—and only as she has entered adolescence has her true worth begun to be appreciated. . . . I would like to suggest that since you cannot separate clients who need one or the other, one of the goals of any homemaker service should be to provide ongoing nursing *and* casework supervision closely integrated and complementary to each other, by which I do not mean occasional or isolated contact with a consultant from the discipline not represented by the agency, but a consistent collaborative sharing of information and supervision. You cannot compartmentalize this job because you cannot compartmentalize the problems you cope with."

Aldrich, C. Knight, M.D.: A Psychiatrist Looks at Homemaker Service. CHILD WELFARE, 1956, 35, 1–5 (October).

A psychiatrist who served as consultant to the Minneapolis Family and Children's Service says: "I became fascinated by the constructive work in preventive mental health carried out by the Homemaker Division of the agency. Perhaps I learned even more and was even more impressed by the opportunity I had on two or three occasions to talk to a group of 30 very distinguished ladies, the homemakers themselves. Since that time, I have developed a somewhat evangelistic fervor for homemaker service. Not only am I impressed by the capacity of homemaker service to do a first-class job in preventive mental health but I am concerned at its apparent position as a 'stepchild' of casework."

Altschuler, Lydia: Mothers-by-the-Day. TODAY'S WOMAN, 1949, 101–102 (April).

American Cancer Society, New York Cancer Committee: THE HOMEMAKER AND THE CANCER PATIENT. New York: The Society, 1960. 63 pp.

Some of the topics covered include: special needs in the home of a cancer patient; budget; the homemaker, the home, and the people who live in it; food; care of infants and children.

American Home Economics Association, Homemaker Service Committee: THE HOME ECONOMIST LOOKS AT HOMEMAKER SERVICE. Washington, D.C.: The Association, 1963. 4 pp.

This leaflet answers such questions as: What is homemaker service, who needs it, who can obtain it, where to find homemaker service, what does a homemaker do?

American Medical Association, Council on Medical Service: Denver Homemaker Project. HOMEMAKER SERVICES BULLETIN, 1964, 5, 2–3 (January).

"Since 1954 a number of studies in the Denver area had demonstrated the need for homemaker service." The Denver Visiting Nurse Service and the Denver Department of Welfare and the Child Welfare Division of the Department of Welfare were meeting a fraction of the need. "Because a group of interested citizens recognized the need in the Denver metropolitan area for this new dimension in service, the Community Homemaker Service, Inc., was organized. . . . Basically the service has a three-fold purpose and planning is focused on three groups of people—those who can be given an earlier hospital discharge, the chronically ill, and children in need of temporary care in their own homes."

American Medical Association, Council on Medical Service: Homemaker Services in the United States: A Summary. HOMEMAKER SERVICES BULLETIN, 1960, 1, 2–5 (May).

The term "homemaker" is defined. Then origin and growth, homemaker services today, families served, administration, and personnel policies are discussed.

American Public Welfare Association: THE HOMEMAKER IN PUBLIC WELFARE. Chicago: The Association, 1962. 32 pp.

Contains four papers on homemaker services rendered by welfare agencies to older people on old-age assistance. The authors are Grace W. Bell, Mary Gorman, Annie May Pemberton, and Doris E. Williams.

Arnold, Mildred: MEETING FAMILY NEED THROUGH HOMEMAKER SERVICE. Washington, D.C. (20201): Children's Bureau, Welfare Administration, U.S. Department of Health, Education, and Welfare, 1957. 15 pp. (Processed.)

Homemaker service is a service to families—a service that safeguards, protects, stabilizes, and unifies families. "It can be a useful service to all segments of our population—from the very young to the very old."

Arthur, Julietta K.: Homemaker Service: New Trends. [In] HOW TO HELP OLDER PEOPLE: A Guide for You and Your Family. Philadelphia: J. B. Lippincott, 1954. 500 pp. (p. 208–214.)

Among the topics discussed are what homemaker service is, qualifications, duties, and costs.

Arthur, Julietta K.: JOBS FOR WOMEN OVER THIRTY-FIVE. New York: Prentice-Hall, 1947. 253 pp. (esp. p. 24–27.)

Topics include the following: Substitute Mothers Are Needed, Bed and Board of Your Own, Homemaker Idea Is Spreading.

Baldwin, Ruth M.: Values in Long-Time Homemaker Service. SOCIAL CASEWORK, 1953, 34, 124–128 (March). Also MINNESOTA WELFARE, 1953, 9, 12–15 (December).

What constitutes long-time homemaker service, the aims of such service, and the role of the caseworkers are considered.

Bell, Grace W.: Homemaker Service: National Developments. HOMEMAKER SERVICES BULLETIN (American Medical Association), 1962, 3, 2–5 (November).

Reviews homemaker service developments in the United States since the 1958 Conference on Homemaker Services. Some of the topics include homemaker projects with migrants; homemaker in protective service; homemaker service to older people, chronically ill and disabled; and home care by health aides.

Bell, Grace W.: Homemaker Service: National Developments. [In] THE HOMEMAKER IN PUBLIC WELFARE. Chicago: American Public Welfare Association, 1962. 32 pp. (p. 3–10.)

The number of homemaker service programs in public welfare agencies has more than doubled since 1958. This is one of the most significant national developments in homemaker service and public welfare—and the service is being used in new and imaginative ways.

Block, J. L.: When a Family Needs a Friend. READERS DIGEST, 1959, 74, 217–218 (May).

Brodsky, Rose: Homemaker Service for Families with Mental Disorders. Part I: CHILD WELFARE, 1961, 40, 15–19 (October); Part II: CHILD WELFARE, 1961, 40, 18–22 (November).

This article discusses how homemaker service can help the family when one parent is psychiatrically disabled. The role of the psychiatrist and the homemaker is presented. "The service cannot be patient centered, but must concern itself with the family as a whole. We have had brief experience to affirm that homemaker services can be helpful to many families confronted by mental or emotional illness."

Brodsky, Rose: Philosophy and Practices in Homemaker Service. CHILD WELFARE, 1958, 37, 10–15 (July).

Discusses the creative use of homemaker services and their use in achieving casework goals.

Brodsky, Rose: Uses of Homemaker Service to Meet a Variety of Family Needs. [In] PROCEEDINGS: Annual Meeting of the National Committee on Homemaker Service, New York, October 13–14, 1960. 51 pp. (p. 5–11.) (Processed.)

The author, building on her years of experience with homemaker service and fully aware of its value, tries to project "homemakers" as a service available to the total community. "We need homemakers just as we need nurses, teachers, social workers. . . ." Homemaker service is defined as a team service. The homemaker is "an aide to the professional person in carrying out the goals and purposes of the health or welfare service which is under the auspices of a community nonprofit agency." Also described are some of the uses of homemaker service for child care, the aged, the chronically ill, or in psychiatric situations.

Brodsky, Rose and Goldfarb, Dora: The Employment Process in Selecting Homemakers. SOCIAL CASEWORK, 1950, 31, 18–22 (January).

Even though the process of employing homemakers requires the use of casework and diagnostic skills, it should be considered a personal relationship rather than one between an agency and a client.

Child Welfare League of America: HOMEMAKER SERVICE. New York: The League, 1957. 26 pp.

Five articles are reprinted from various issues of CHILD WELFARE. The authors are Earl J. Beatt, Eleanor Taylor, Henrietta L. Gordon, Nora Phillips Johnson, C. Knight Aldrich, M.D.

Child Welfare League of America: NEW APPROACHES TO HOMEMAKER SERVICE. New York: The League, 1963. 20 pp. (65¢.)

This is a collection of three articles reprinted from CHILD WELFARE by Elizabeth Burford; New York City Children's Aid Society; Louise Foresman, Nellie Martin, and others.

Clough, Tracy C. and Wood, Janet C.: Homemaker Service to Children in a Multiple-Function Agency. CHILD WELFARE, 1958, 37, 1–6 (December).

Seeks an answer to the question: Does homemaker service as a child welfare service differ in a multiple-function agency?

Commission on Chronic Illness: Homemaker Service. [In] CHRONIC ILLNESS IN THE UNITED STATES: Care of the Long-Term Patient. Cambridge: Harvard University Press, 1956. 606 pp. (p. 81–88; 520–521.)

The homemaker or housekeeper program is one of the less well-recognized but important services which help long-term patients remain in their homes. Against a backdrop of a brief discussion of the history of the service, discusses its components. The appendix includes a job definition and recommended qualifications for a supervisor of homemaker service.

Copeland, Lynn Preston: Pinch-Hit Mothers. PARENTS' MAGAZINE, 1947, 22, 22; 116–119 (August).

From a simple illustration of the disruptive illness of a mother and the feeling of helplessness about care of three small children, the author describes how homemaker service works in conjunction with the caseworker, health, and other personnel. Suggestions are made on arousing interest in such a service and getting it organized in the community.

Dumpson, James R.: What Is Happening to Families Today? [In] PROCEEDINGS: Annual Meeting of the National Committee on Homemaker Service, New York, October 13–14, 1960. 51 pp. (p. 1–4.) (Processed.)

At the opening meeting of this conference on homemaker service with representatives from all parts of the country, the author reviewed what is happening to people today throughout the United States. He also pinpointed the forces that substantially affect the well-being of families and children. From his experience as Commissioner of the New York City Public Welfare Department with a well-established and growing homemaker service, he considers homemaker service "one of the broad spectrum of preventive and supportive services that the great majority of families in every community need from time to time . . . What is important is that we provide the support of the services necessary to prevent breakdown and pathology in the family and its members . . . . We still act as if the tools for strengthening family life are yet to be developed. We have those tools but in scant supply."

Fitzsimmons, Margaret R.: Homemaker Service: Current Practice and Future Planning. SOCIAL CASEWORK, 1957, 38, 308–314 (June).

"The development of homemaker service has been an evolutionary process that began when agencies first undertook to provide capable, motherly women to work as housekeepers for families during periods of the mother's illness." The next step was the employment of visiting housekeepers. "Later caseworkers began to assist housekeepers to help the children. The term homemaker service was adopted to signify that the agency was taking casework responsibility for the welfare of the children."

Foresman, Louise; Martin, Nell; Safier, Ruth; and Scherer, Lorena: The Team Approach in Protective Service. CHILD WELFARE, 1963, 42, 135–138 (March).

"Child welfare and homemaker service work as a team in providing protective service for children and families." This article shows the effectiveness of this approach in using homemaker service to strengthen the protective services that are offered families. The use of homemaker service is focused on supporting, supplementing, motivating, and teaching. Homemakers are an integral part of the child welfare staff.

Gordon, Henrietta L.: Supervised Homemaker Service. [In] CASEWORK SERVICES FOR CHILDREN: Principles and Practices. Boston: Houghton Mifflin, 1956. 493 pp. (p. 340–369.)

Homemaker service can most effectively help children either by preserving the home until the mother can function adequately, or by giving the parents an opportunity to plan appropriate care and to prepare the children for leaving home. Like every other children's service, the ultimate aim is that the parents will, as a result of the service, be in a better position to carry their parental responsibilities.

Grossman, Carol Z.: When Illness Strikes: Homemaker Service. TODAY'S HEALTH, 1958, 36, 24–25 (February).

Hickey, Margaret: Community Housekeeping. LADIES HOME JOURNAL, 1949, 66, p. 23 (March).

Homemaker Service. PUBLIC AID IN ILLINOIS, 1959, 26, 6–10 (March).

This article, reprinted from the Abbott Laboratories publication WHAT'S NEW (December 1958), presents an excellent description of the various ways homemaker service programs are helping people in their own homes.

Isaac, Sol Morton: Homemaker Service: An Illustration of Inadequacy. [In] HOMEMAKER SERVICES: Report of the 1959 Conference. Public Health Service Publication 746. Washington, D.C., (20402): U.S. Government Printing Office, 1960. 257 pp. (p. 178–184.)

"If homemaker service is not developed, publicized, used, and maintained on a high, principled basis, it will not only fade away but will tend to cheapen the value of all other professional services such as casework counseling and foster home care. It must, in short, live up to its advanced billing."

Johnson, Nora Phillips: Creative Uses of Homemaker Service. CHILD WELFARE, 1956, 35, 10–12 (January).

Some of the concepts suggested in this paper are: "the importance of preserving the child's identity; importance of the mother of the family; awareness that family life can be dislocated when any member is afflicted—therefore, though a mother is not ill, the homemaker may be needed to keep the family together; the need to find ways of helping families with their children before the family breaks up; the influence of fathers on the social and emotional

growth of their children; recognition that length of service must be flexibly adapted to the needs of a child and his family."

Leach, Jean M.: Homemaker Service as a Way of Strengthening Families During Illness. [In] CASEWORK PAPERS, 1958: From National Conference on Social Welfare. New York: Family Service Association of America, 1958. (p. 132–143.)

The focus of this paper is on the preventive aspects of homemaker service. The premise is that supervised homemaker service, as part of a family casework program, helps to prevent family breakdown and the weakening of family

The focus of this paper is on the preventive aspects of homemaker service. should be placed on understanding the person who is ill.

Long, Elizabeth: HOMEMAKER SERVICE IN PUBLIC ASSISTANCE: With a Case Example of Homemaker Service in a Local Welfare Agency. Public Assistance Report No. 31. Washington, D.C. (20201): Bureau of Family Services, Welfare Administration, U.S. Department of Health, Education, and Welfare, 1957. 29 pp. (Processed.)

Homemaker service has different connotations from one agency to another. In some voluntary agencies, it is regarded principally as an adjunct to casework services. Some agencies regard it as an alternative to placement of children away from their own homes. Some agencies have policies prohibiting their homemakers giving any form of nursing care. Others, especially those established under the auspices of health agencies, instruct and encourage their homemakers to give certain kinds of nursing care. In most instances, homemaker service is established within a social or medical agency, but there are communities where homemaker service is a separate agency furnishing service independently for clients of agencies.

MacLennan, Rika: Homemaker Service. [In] SOCIAL WORK YEARBOOK. New York: American Association of Social Workers, 1954. (p. 253–257.)

Growth and development of homemaker service, its values, practices, and recent trends are presented.

MacLennan, Rika: "Supervised" Homemaker Service a Growing Field. JOURNAL OF HOME ECONOMICS, 1951, 43, 285–286 (April).

Explains what homemaker service is and what it can mean to a family, and discusses the important roles that the home economist can fill in this field.

Manginelli, Madeleine VH: HOMEMAKER SERVICE: Meeting Crises in Family Life with a New Horizon in Child Care. New York: Child Welfare League of America, 1941. 34 pp. (Processed.)

An important historical pamphlet, undoubtedly long since out of print, that sketches the essential philosophy underlying homemaker service, values of the service in various types of situations, preparation of families for the service, selection, training, and supervision of homemakers.

Manginelli, Madeleine VH: Homemaker Service as an Aid to War Effort. MONTHLY LABOUR REVIEW, 1943, 56, 913–914 (May).

This is a reprint of "Homemaker Service Geared to the War Effort" by Madeleine VH Manginelli in CHILD WELFARE, 1943, 22, 4–5 (March).

Manginelli, Madeleine VH: Homemaker Service Geared to the War Effort. CHILD WELFARE, 1943, 22, 4–5 (March). Also MONTHLY LABOUR REVIEW, 1943, 56, 913–914 (May).

This article attempts to answer the question: How does homemaker service contribute to the war effort of the community?

Margolis, Philip M., M.D.: Stabilizing the Family Through Homemaker Service. [In] CASEWORK PAPERS, 1957: National Conference on Social Welfare. New York: Family Service Association of America, 1957. (p. 82–90.)

Uses case histories to illustrate the close association of homemaker service with casework in improving family relationships. Chicago is stated to be the location of the first public agency homemaker service.

Margolis, Philip M., M.D.: Stabilizing the Family Through Homemaker Service. SOCIAL CASEWORK, 1957, 38, 412–416 (October).

A proper diagnosis of the family problem is a prerequisite to the establishment of a plan for competent homemaker service. Brief excerpts from several cases brought for psychiatric consultation are used to illustrate the possibilities inherent in a dynamic approach to homemaker service.

Mayo, Leonard W. and Reid, Joseph H.: Social Services for Children and Youth. CHILDREN, 1962, 9, 66–72 (March–April).

"Today children from all walks of life face problems that threaten their wholesome development. At every income level are parents who because of serious, personal problems or conditions beyond their control cannot meet the needs of their children; hence the continuing growth of services for children whose families are unable to meet their needs. . . . In the early days of child welfare programs foster care either in institutions or in private homes became the basic child welfare service. However a shift in emphasis has occurred toward work with children in their own homes and service designed to prevent family breakdown." One such program is homemaker service.

Mitcham, Elizabeth P.: The Job of the Substitute Parent. PUBLIC AID IN ILLINOIS, 1957, 24, 1–5 (April).

This article, addressed to the homemaker, tells her something of the problems she must face in going into a home as a substitute for the mother. Common behavior problems of various age groups are also included.

Morlock, Maud: Homemaker Service. [In] SOCIAL WORK YEARBOOK, 1949. New York: Russell Sage Foundation, 1949. (p. 230–232.)

Summarizes current thinking and practices in homemaker service and its extent as shown by the 1947 directory of agencies providing this service.

Morlock, Maud: Homemaker Service. [In] SOCIAL WORK YEARBOOK, 1951. New York: National Association of Social Workers, 1951. (p. 225–229.)

The basic philosophy and emotional implications of separation of children and aged from their families and what homemaker service can mean in such situations are discussed. Brief report is made on a study of 58 agencies made by the National Committee on Homemaker Service together with comments on the uses of public funds for this purpose, the function of the National Committee on Homemaker Service, and mention of programs in other countries.

Morlock, Maud: Homemaker Service: Keeping Families Together. CHRONIC ILLNESS (Commission on Chronic Illness), 1951, 2, p. 3 (November).

Successful use of homemaker service is reported in such illnesses as tuberculosis, poliomyelitis, multiple sclerosis, cardiac and emotional difficulties.

Morlock, Maud: Homemaker Service Forges Ahead. HIGHLIGHTS, 1946, 7, 116–119 (December).

This is a description of developments in homemaker service during the current year.

Morlock, Maud: Homemaker Service in Public Welfare Agencies. PUBLIC WELFARE, 1949, 7, 132–136 (June–July).

Reports on how some State welfare departments have used Federal funds under the Social Security Act to establish homemaker services for children.

Morlock, Maud: Homemaker Service to Mothers at the Time of Confinement. PUBLIC HEALTH NURSING, 1950, 42, 282–286 (May).

Points out the value of homemaker service during a mother's confinement. The backing of nursing organizations and agencies is essential in starting, strengthening, and interpreting the service.

Morlock, Maud: Homemaker Services: Major Defense for Children. CHILDREN, 1957, 4, 102–106 (May-June).

This article reports on how homemakers in a wide variety of situations make it possible for children to remain in their own homes, not only in cities with formalized programs but also in more sparsely settled rural areas. The qualities desired in the homemaker, how you find her and help her to grow, the importance of the father to the child are a few of the highlights discussed.

Morlock, Maud: When Trouble Comes, Homemakers Pinch Hit for Mothers. NORTH CAROLINA PUBLIC WELFARE NEWS, 1946, 9, 3–4; 8 (December).

"The prospect for the development of homemaker services is bright; first, because as families live today there is a great need for such services, and second, because that need is matched by the need of a large lot of capable, energetic, and home-loving women for just such a job opportunity."

Parsons, Mable H.: A Home Economist in Service to Families with Mental Retardation. CHILDREN, 1960, 7, 184–189 (September-October).

A nurse, a social worker, and a home economist work with families with mentally retarded children. This article features the work of the home economist in improving housekeeping and managerial skills.

Perkins, Juanita Venrick: Home-Saving Through Housekeeper Service. THE CHILD, 1940, 5, 100–103 (October). Also MONTHLY LABOR REVIEW, 1941, 52, 869–871 (April).

Child welfare workers in rural and urban counties in Colorado are encouraged to think of homemaker service as one way of keeping children in their own homes. The types of situations where such care has been given, and some of its problems and advantages are discussed.

Planning Services for Children to Supplement the Home and School. THE CHILD, 1946, 10, 145–146 (March).

Homemaker service is a necessary supplement to other services, particularly for temporary or emergency care such as during the illness of a child. Principles are suggested as guides to develop State and local programs of various types.

President's Commission on the Status of Women: Homemaker Service. [In] Services Related to the Home. REPORT OF THE COMMITTEE ON HOME AND COMMUNITY. Washington, D.C. (20402): U.S. Government Printing Office, 1963. 51 pp. (p. 15–17.)

"The Committee reviewed a broad range of services women need to enable them to function more effectively and efficiently as homemakers. Clearly it was not possible to consider all needs of all women. From the many needs of which it was aware, the Committee focused its attention on three that are of major importance to large numbers of women: specialized homemaker service designed to meet expertly under professional supervision various emergencies and stresses in the home; skilled household service in specialized fields with working conditions and wages in line with acceptable labor standards; and advisory services in home management, including consumer education." What homemaker service is, how it started, its extent in the United States are discussed.

Preston, Frances and MacLennan, Rika: Homemaker Service for Parents and Children. [In] PROCEEDINGS OF THE NATIONAL CONFERENCE OF SOCIAL WORK, 1947. New York: University of Columbia Press, 1947. (p. 279–287.)

Sketches the background for the development of homemaker service programs in the United States and describes the services offered to parents and children by homemaker service programs. Several cases are used for illustration.

Preston, Frances and MacLennan, Rika: Homemaker Service Helps to Preserve Family Life. THE CHILD, 1947, 12, 27–30 (August).

Children thrive best in their own homes, and on that axiom homemaker service is based. Why this is so, how homemaker service is provided, illustra-

tions of its use are given, plus a brief history of its development. The authors of the article, trained in both social work and home economics, have had much experience in this form of care and have contributed greatly to its development.

Reid, Joseph H.: Homemaker Service for Children. CHILDREN, 1958, 5, 210–212 (November-December).

Homemaker service is basic to good standards in other services for children. It should be the first service, not the last, to be considered in most instances when a family asks for child care because of the absence of the mother. Other issues discussed are auspices, financing, and controversial questions about the use of casework.

Richman, Leon H.: Trends in Child Care. JEWISH SOCIAL SERVICE QUARTERLY, 1952, 29, 169–182 (December).

"Some children remain in long-time placement because the widowed father or the chronically ill mother, who is interested in his or her children, cannot maintain a home. Could such homes, however, be kept intact through homemaker service? Why has long-term homemaker service been so slow in developing? Have a few failures frightened the family agencies? Child welfare workers know how difficult it is to reestablish a home once it has been broken. They are also aware of the hazards in placement. It is surprising that children's agencies have not developed homemaker services where family agencies have failed to do so."

Roney, Jay L.: New Approaches to Aid to Dependent Children Through Administrative Policies. CHILDREN, 1959, 6, 163–168 (September-October).

"As another approach to strengthening family life, the agency might arrange to provide a homemaker to teach an inexperienced mother how to manage her home and her budget. A few weeks of homemaker services, made available at the right time and in the right way, may bring permanent improvement in the family's welfare."

Sandusky, Annie Lee: CHILD WELFARE SERVICES: How They Help Children and Their Parents. Children's Bureau Publication 359. Washington, D.C. (20402): U.S. Government Printing Office, 1957. 94 pp. (esp. p. 17–25.)

Describes how homemaker service keeps families together and the part casework plays in helping parents gain an understanding of what they want for their children. Two cases of families using homemaker service are presented.

Sandusky, Annie Lee: Services Holding Families Together. [In] CHILDREN LIVING IN THEIR OWN HOMES: Social Services Provided Through Child Welfare Programs. Children's Bureau Publication 339. Washington, D.C. (20402): U.S. Government Printing Office, 1953. 52 pp. (p. 38–39.)

Welfare agencies have established homemaker services to maintain homes for children. The homemaker supplements but does not supplant what the mother normally does for children. She carries on the same pattern of living the mother has established.

Scherz, Frances H.: Strengthening Family Life Through Social Security. SOCIAL CASEWORK, 1955, 36, 352–359 (October).

Describes the use of homemaker service through aid to dependent children as a means of holding a family together during a mother's illness.

Smith, Lucille M.: Homemaker Service: Luxury or Necessity? HOMEMAKER SERVICES BULLETIN (American Medical Association), 1963, 4, 2–5 (January).

An article which reviews the importance of homemaker service programs, and then briefly reviews the programs of several cities in the United States.

Spaulding, Rita G.: Work with the Father in Homemaker Service. SOCIAL CASEWORK, 1954, 35, 26–32 (January).

Three general categories of situations are considered: short-term illness of mother, long-term illness, and the permanently motherless home.

Stringer, Elizabeth A.: A Homemaker Service Under Private Auspices. CHILD WELFARE, 1964, 43, 128–132 (March).

In the last few years, homemaker service throughout the country has burgeoned from a virtually undeveloped service to a recognized and accepted means of keeping some individuals and families in their homes and preventing family breakdown. The voluntary agency is in a position to venture into new areas of service than is the public agency. The adaptability of homemaker service—the potential it has for extending and blending with the needs of the family—is limited only by the competence, creativity, and the skill of those implementing it.

U.S. Department of Health, Education, and Welfare and U.S. Housing and Home Finance Agency: SERVICES FOR FAMILIES LIVING IN PUBLIC HOUSING: Planning for Health, Education, and Welfare Services in the Public Housing Community. Washington, D.C. (20402): U.S. Government Printing Office, 1963. 67 pp. (esp. p. 15.)

This material, prepared by the Committee on Use of Program Resources, Joint Task Force on Health, Education, and Welfare Services and Housing, "provides information and practical guidelines to the local housing authority that wants to get cooperative services underway. . . . This requires decisions and planning by the State and local agencies administering federally-aided programs. We believe these agencies, working together, can do much more to achieve the objectives of improving the economic and social condition of families living in public housing." Homemaker service is defined and also listed in the charts showing problems, appropriate service, and program resources.

U.S. Department of Health, Education, and Welfare, Public Health Service: Development of Homemaker Service in Small Communities and Rural Areas. [In] HOMEMAKER SERVICES IN THE UNITED STATES, 1958: Reports of Preconference Study Groups. Washington, D.C. (20201): Public Health Service, 1959. 115 pp. (p. 40–45.) (Processed.)

Homemaker service as a social service administered by a social agency is the framework within which consideration is given in this report to provision of such service in small communities and rural areas.

U.S. Department of Health, Education, and Welfare, Public Health Service: Distinctive Needs and Purposes to be Met by Homemaker Services. [In] HOMEMAKER SERVICES IN THE UNITED STATES, 1958: Reports of Preconference Study Groups. Washington, D.C. (20201): Public Health Service, 1959. 115 pp. (p. 1–10.) (Processed.)

"Homemaker services help to safeguard, protect, stabilize, and unify families; the primary objective is to preserve and strengthen family life. These services are equally advantageous whether focused primarily on helping children, or aged, chronically ill, physically handicapped, and emotionally disturbed persons."

U.S. Department of Health, Education, and Welfare, Public Health Service: Establishing a New Homemaker Service. [In] HOMEMAKER SERVICES IN THE UNITED STATES, 1958: Reports of Preconference Study Groups. Washington, D.C. (20201): Public Health Service, 1959. 115 pp. (p. 28–39.) (Processed.)

Homemaker service is fundamentally a service to families and individuals, whether it is focused on children, the aged, the chronically ill, the physically handicapped, the emotionally disturbed. Financial support for the service usually follows good interpretation of need.

U.S. Department of Health, Education, and Welfare, Public Health Service: HOMEMAKER SERVICES IN THE UNITED STATES, 1958: Reports of Preconference Study Groups. Washington, D.C. (20201): Public Health Service, 1959. 115 pp. (Processed.)

In preparation for the 1959 National Conference on Homemaker Services, 11 preconference reports were prepared on various facets of content, administration, and promotion of homemaker services.

U.S. Department of Health, Education, and Welfare, Public Health Service: Industry and Labor and Homemaker Services. [In] HOMEMAKER SERVICES IN THE UNITED STATES, 1958: Reports of Preconference Study Groups. Washington, D.C. (20201): Public Health Service, 1959. 115 pp. (p. 109–115.) (Processed.)

Both industry and labor have a stake in seeing existing programs of homemaker service broadened and more programs established. Some industries and unions have funds which could be used to assist employees to purchase homemaker services.

U.S. Department of Health, Education, and Welfare, [Welfare Administration]: HOMEMAKER SERVICE IN PUBLIC ASSISTANCE. Public Assistance Report No. 31. Washington, D.C. (20201): Bureau of Family Services, 1957. 29 pp. (Processed.)

This pamphlet attempts to evaluate the individual and family problems best served by homemaker service, the other types of home help needed, and ways to make homemaker service more widely available. Also describes the operation of the Cook County, Illinois, homemaker service in a local welfare agency.

Vaughn, James K.: The Development of Homemaker Service. TENNESSEE PUBLIC WELFARE RECORD, 1961, 24, 2–3 (February).

This is a concise history of the development of homemaker service.

Werner, Adelaide: Homemaker Service. [In] SOCIAL WORK YEARBOOK, 1957. New York: National Association of Social Workers, 1957. (p. 287–292.)

A discussion of some recent developments in homemaker service.

Werner, Adelaide: Homemaker Service. [In] SOCIAL WORK YEARBOOK, 1960. New York: National Association of Social Workers, 1960. (p. 297–302.)

Includes a summary of the basic philosophy of homemaker service, historical development, criteria for homemaker service adopted by the National Committee on Homemaker Service at its meeting in 1946, possible consultation through national and Federal agencies, and a report on the 1959 National Conference on Homemaker Services.

Woldman, Elinore R.: Care of Children in Their Own Homes Through Supervised Homemaker Service. THE CHILD, 1940, 5, 75–77 (September).

The first chairman of the National Committee on Supervised Homemaker-Housekeeper Service discusses why such service is essential, its objectives, types of situations requiring such care, how the committee came into being following the conference held in 1937 under auspices of the Children's Bureau, and plans for continuing activity.

Woldman, Elinore R.: New Developments in Supervised Homemaker-Housekeeper Service. JOURNAL OF HOME ECONOMICS, 1940, 32, 237–239 (April).

The first chairman of the National Committee on Supervised Homemaker-Housekeeper Service reports on the growing interest in this subject and the developments of the group later known as the National Committee on Homemaker Service.

Wolff, Myrtle P.: A Public Welfare Worker. [In] Case Conference. CHILDREN, 1961, 8, 106–109 (May-June).

Homemaker service is suggested as one way to help meet the problems of a particular family whose story is submitted for comment to a public health nurse, a medical educator, a public health pediatrician, and a public welfare

worker. "Whose responsibility?" was the question proposed to them. A brief description is given of the homemaker program in the North Carolina State Board of Public Welfare.

HISTORICAL BACKGROUND

1914–1919

Bothwell, Bessie Bishop: Visiting Housekeeping Work in Detroit. JOURNAL OF HOME ECONOMICS, 1914, 6, 6–12 (February).

The work of the visiting housekeeper in Detroit was started by the advisory committee of the Associated Charities in 1913. Introductions to families came from other organizations, particularly health and social agencies. Comment is made that social workers were somewhat slow in learning to use this service. Much emphasis was placed on food for the family. While, at first, working on an individual basis was given priority, later this was combined with group teaching, both for mothers and adolescent girls. This early concept and use of the team undoubtedly influenced the later development of homemaker service as we know it today.

Winslow, Emma: Some Possibilities in the Work of Municipal Visiting Housekeepers. JOURNAL OF HOME ECONOMICS, 1914, 6, 1–6 (February).

This paper, given at the Sixth Annual Meeting of the American Home Economics Association, Ithaca, 1913, may have been the forerunner of later changing concepts about "housekeeper," "homemaker service" and its present emphasis on assisting multiproblem families to give better care to children and the home. The author presents a plan of a corps of visiting housekeepers employed by the city or State who would be qualified to teach mothers in their own homes, if they so wished, and work closely with other health and welfare agencies.

1920–1929

Adelson, Sadye F.: Homekeepers. CHILD WELFARE LEAGUE OF AMERICA BULLETIN, 1929, 8, 3–4 (June).

The need for a staff of motherly women to act as housekeepers in homes where the mothers were temporarily incapacitated was prompted by the frequent placement of children in institutions and foster homes. The Jewish Welfare Society of Philadelphia in October 1923 employed two housekeepers to act as substitute mothers in an effort to keep families together through illness or childbirth. With the return of the mother, the housekeeper continued her teaching job with a new and very important pupil—the new mother. Sixteen housekeepers in 1929 were a part of the Home Economics Department. "At first only short-term cases of a few weeks' duration were taken, but now we are not influenced by the lengths of time the housekeeper will be needed when it is felt that the introduction of a housekeeper into a

particular family group will promote our best casework solution to the problem."

Bernstein, Salome S. C.: Mothers by Proxy. THE SURVEY, 1926, 56, 81–82 (April 15).

A staff of visiting housekeepers was organized October 1923 by the Jewish Welfare Society of Philadelphia, under the supervision of its home economics department. They were to substitute for the mother in her absence. The suggestion to employ such women came from a layman, at that time president of the organization, as a way to avoid placement of the children. Other information about this early service is given.

Bernstein, Salome S. C.: The Visiting Housekeeper. JEWISH SOCIAL SERVICE QUARTERLY, 1925, 2, 10–21 (May).

On October 15, 1923, the first two housekeepers employed by the Jewish Welfare Society of Philadelphia were sent to families. "During 1922 the problem of temporary placement [of children] became quite acute. The situation was alarming. The President and some of the board members were anxious to try out an experiment to see if the difficulty could be solved. In March 1923, a $2,000 appropriation was made for a 3 months' trial. The main purpose was to prevent the breaking up of homes and avoid the many problems which usually arise in placing children by sending a substitute into the home to take the place of the mother during her absence, and thus the Visiting Working Housekeeper plan originated." Tables are given to show some of the results. The article concludes: "Although the Visiting Working Housekeeper plan is still in its infancy, it has shown itself to be feasible. There is still room, however, for the expansion of the scheme to include other emergencies as well as temporary placements. The idea, in its present stage of development, has worked out much more satisfactorily than even the most optimistic member of the group, who formulated the plan, ever dreamed."

Blanc, Zena J.: What Forces in Jewish Community Life Govern the Number of Dependent Children Admitted to Placement? JEWISH SOCIAL SERVICE QUARTERLY, 1927, 4, 26–35 (September).

"Family agencies are finding new ways of meeting situations that formerly called for the placement of children. It was a family agency, namely the Jewish Welfare Society of Philadelphia, that first successfully worked out the plan whereby temporary placements have been materially reduced. I refer here to the plan of sending in a working housekeeper to substitute for a mother who is temporarily incapacitated. Temporary placements until five years ago formed a substantial part of the work of the [Jewish] Children's Bureau and the various children's agencies, but since the establishment of the Jewish Welfare Society's Home Economics Department with its visiting housekeepers bureau, temporary placements have markedly decreased."

[Chicago] Jewish Home Finding Society: Back to the Home. THE SURVEY, 1929, 63, p. 87 (October).

". . . In the current annual report of the Jewish Home Finding Society of Chicago, Jacob Kepecs, its superintendent, tells the results of this plan, which

will be described in a later issue of THE SURVEY. The number of children accepted for placement declined from 315 in 1924 to 187 the following year where housekeeping service was started." In 1928, the society accepted 132 children for placement and aided 229 in their own homes by its housekeeping services.

Cronbach, Abraham: Visiting Housekeeper. [In] Jewish Pioneering in American Social Welfare. AMERICAN JEWISH ARCHIVES, 1951, 3, p. 55 (June).

After an explanation of what this service is, the author states: "The first venture at Visiting Housekeeper or Substitute Mother or Homemaker Service was inaugurated by the Jewish Welfare Society of Philadelphia in October 1923 when it employed 10 women to act in that capacity. . . ."

Editorial: An Institution, A Foster Home, Or Their Own Home? THE FAMILY, 1928, 9, 269–270 (December).

An editorial based on a family where the father went to a mental hospital, public aid was provided, and a visiting housekeeper was sent to teach the mother the rudiments of housekeeping. The children chose to remain together after the mother's death.

Jewish Home Finding Society of Chicago. JEWISH SOCIAL SERVICE QUARTERLY, 1925, 2, 120–121 (December).

"An unhealthy state of affairs in this agency is the turnover and replacement in foster homes. The result is waste of energy and maladjustment. Among the more important causes of the situation are the lack of adequate information regarding the child at time of placement, his background and his needs. . . . In an attempt to meet the situation, the following steps which have been taken are departures for the Jewish Home Finding Society: . . . Housekeepers are used in temporary care cases instead of placing the children whenever conditions are favorable."

Kepecs, Jacob: More About Housekeeping Service. CHILD WELFARE LEAGUE OF AMERICA BULLETIN, 1929, 8, 5–6 (September).

The annual report of the Jewish Home Finding Society of Chicago 1928 reports their progress during a 5-year period. The sudden falling off in placements from 315 in 1924 to 187 in 1925 and the continued decrease in subsequent years was almost entirely due to the substitution of housekeeping service for placements. This service enabled the Society to take care of children in their own homes when the mother was out of the home temporarily and, in some instances, for long periods of time. "Our temporary care problem has been practically solved through these services which we are now expanding to long-time cases. Our housekeeping service has had a rapid growth and is now not only an integral part of our work but is well recognized in the community. We started this service in November 1924. . . ."

Lurie, H. L.: Jewish Communal Progress, Chicago. JEWISH SOCIAL SERVICE QUARTERLY, 1925, 2, 118–121 (December).

Two reports are included in this discussion—one on the Jewish Social Service Bureau and the other, the Jewish Home Finding Society. "The Jewish

Social Service Bureau is experimenting with a combined visitor-housekeeper. A domestic science worker is being trained in the functions of the general caseworker. The families requiring intensive housekeeping supervision in the district will then be turned over to this worker who will be responsible for the general casework as well as for the housekeeping problem. On the other hand, the Jewish Home Finding Society decided that housekeepers should be used in temporary care cases instead of placing the child.

Lurie, H. L.: The Use of a Home Economics Department as a Part of a Family Agency. THE FAMILY, 1928, 9, 193–196 (October).

"The Home Economics Department in this agency [the Chicago Jewish Social Service Bureau] has a staff of three workers: the supervisor, acting as general consultant on home economics problems; an experienced home economist who functions largely through group instruction; and a visiting housekeeper, a graduate nurse who occasionally assumes individual cases for short, intensive periods of home reconstruction." The article describes briefly how the third member of the home economics group and the caseworker institute a short-time, intensive program of home reconstruction where special consultation and class instruction did not work. The aim was to give the family a fresh start and a new incentive.

Nesbitt, Florence: Visiting Housekeepers and Home Economics. [In] SOCIAL WORK YEARBOOK, 1929. New York: National Association of Social Workers, 1929. (p. 465–466.)

The first workers with home economics training in visiting housekeeper programs were employed about 1905. Soon, however, the need for social casework experience in addition was recognized, and workers trained in both fields were found valuable as consultants.

Seligsberg, Alice L.: The Child in the Breaking Home. JEWISH SOCIAL SERVICE QUARTERLY, 1926, 2, 178–185 (March).

"It would, I believe, be greatly to the advantage of children in breaking homes were our family and child-care agencies to plan for the more widespread employment of mothers' helpers or substitutes in homes under their jurisdiction, during the mother's illness." A few examples are given of what other agencies are doing.

Stapleford, F. N.: Use of a Separately Organized Home Economics Group in the Community. THE FAMILY, 1928, 9, 196–198 (October).

The purpose of the visiting housekeepers centers of Toronto has been, from the first, to do educational work in regard to household management and preventive nutrition. The housekeeper must have had some classwork in dietetics before entering a 7 weeks' training course at the center.

Winslow, Emma: The New Visiting Housekeeper: Her Training and Her Work. THE FAMILY, 1920, 1, 11–12 (March).

The social work committee of the American Home Economics Association believes, "It is . . . essential that a social worker have a certain amount of

knowledge of the principles of home economics and it is suggested that schools and colleges giving training for various forms of social work include home economics instruction as part of this training."

1930–1939

Alter, Dorothy A. and Mullenbach, Jane: Housekeeper Service Discussed. Presented at the Child Welfare League of America Midwest Regional Conference. CHILD WELFARE LEAGUE OF AMERICA BULLETIN, 1931, 10, 2–3 (May).

The housekeeping service of the Jewish Home Finding Society of Chicago, started in 1924, is described. Likewise a brief description is given of the housekeeper service, started in 1930, by the Chicago Home for the Friendless. The advantages to children, parents, and the community are given.

Bean, Betty S.: Housekeeping Service in the United States and Canada. THE FAMILY, 1936, 17, 48–52 (April).

Summarizes replies to questionnaires sent to 22 agencies offering housekeeping service: 13 family agencies, 6 children's agencies, and 3 specialized ones. The author concludes: "In recent years housekeeping service has proved one of the most successful means of providing a mother substitute and meeting certain peculiar problems of motherless families." Its advantages are described and also some of the procedures and experiences of the participating agencies.

Beck, Joseph E.: Housekeeper Service in a Children's Program. JEWISH SOCIAL SERVICE QUARTERLY, 1935, 12, 121–122 (September).

Recounts the experience with visiting housekeeper service in the Jewish Welfare Society, Philadelphia. Gives figures on the agency's provision of homemaker services from November 1, 1934, to April 30, 1935. "Visiting Housekeeper Service was originally a substitute for temporary placements; but in many instances it has far outgrown a temporary service. . . . Wherever Visiting Housekeeper Service has been used intelligently and extensively, it has become a major factor in the care of children."

Biggar, James Lyons: Red Cross Visiting Housekeepers. CANADIAN NURSE, 1935, 31, 294–296 (July).

Blackstock, Barbara: The Visiting Housekeeper's Association, Toronto, Ontario. CHILD AND FAMILY WELFARE, 1932, 8, 25–29 (July).

This agency was started in 1924 to supply a trained, supervised worker to meet the need created in the home by illness or incapacitation of the mother and to advance the art of household management and nutrition as a teaching function. The article tells how the services began in an agency with this one specific function in contrast to other somewhat similar programs which are offshoots of another agency.

Bode, Gretchen: Visiting Housekeeping Service. THE FAMILY, 1938, 19, 50–54 (April).

The Associated Charities of Cincinnati inaugurated a visiting housekeeping service in 1933. This article recounts the changes in procedures and policy, together with a description of the practice in 1938.

Child Welfare League of America: Eastern Regional Conference. CHILD WELFARE, 1930, 9, 1–5 (January). (esp. p. 4.)

One session of the conference was devoted to current projects in child care. "The paper given by Miss Lotte Marcuse, Bureau of Jewish Children, Philadelphia, on the use of the housekeeper plan in certain situations as an alternative for temporary shelter of mothers who are incapacitated, summarized the experience of agencies in Baltimore, Philadelphia, and Chicago."

Child Welfare League of America: Housekeeper Service Discussed. CHILD WELFARE, 1931, 10, 2–3 (May).

This topic was included at the Midwest Regional Conference of the Child Welfare League held in Chicago, March 1931. Two staff members of the Jewish Home Finding Society and Home for the Friendless (both in Chicago) discussed their plans of sending competent women into families during a temporary emergency to care for children and to do the housekeeping instead of resorting to foster homes or institutional placement. The Jewish Home Finding Society started housekeeping service in 1924. In 1927, the program was enlarged to care for children of widowers. "Mothers Helpers" are supplied also to families where the mother is a cardiac, neurotic, or a convalescent and unable to do her own work. Often the helper can teach the mother to feed her family better and also improve her housekeeping skills. The great advantages in this plan over other forms of child care are summarized and details of the program given. A somewhat similar summary and description of a similar program of the Chicago Home for the Friendless are given.

Child Welfare League of America: THE STATUS OF HOUSEKEEPER SERVICE AS DEVELOPED BY CHILDREN'S AGENCIES: A Special Bulletin. New York: The League, 1938. 12 pp. (Processed.)

This early report is of great historical interest though undoubtedly out of print. It was compiled from material sent in by member agencies of the League. Requests for information were sent to 169 institutions and agencies in the membership of the League as of December 1, 1937. Replies were received from 139 of the members—22 reported such a service in some degree while 117 had no such service. Of the 22 agencies reporting such a service, 6 had developed it to one of considerable permanency. Comments are made on various aspects of the program, their underlying philosophy and valuable bits of early history of its development. "Our present day belief is that whenever suitable and possible, home and home ties should be maintained for the child. Housekeeper service was organized with this concept in mind."

Cody, Barbara: The Visiting Homemakers Association of Toronto. SOCIAL WELFARE (Social Service Council of Canada), 1936, 16, 87–90 (June).

The article discusses the history of the service and the value of the association as an educational influence in the community.

Cole, Helen D.: Substituting for Mothers. BETTER TIMES (Welfare Council of New York City), 1935, 16, 18–19 (June 3).

Describes the housekeeper service of the Junior League of the City of New York, in cooperation with the Children's Aid Society. The League, wishing to develop a new child care project to replace its discontinued Children's Shelter, set to work to meet the needs of families not already served. The articles gives the story of the first year of work.

de la Fontaine, Elise: Psychological Implications of Home Economics in Casework. THE FAMILY, 1936, 17, 261–267 (December).

Through the use of illustrative material, this article shows how problems of housekeeping are involved with family relationships and personal maladjustments, and how the caseworker and the home economist can cooperate.

de Montalno, Marie: When Age and Illness Meet: New York's Home Care of Dependents. TRAINED NURSE AND HOSPITAL REVIEW, 1939, 102, 315–321 (April).

A description of the Housekeeping Service for Chronic Patients and the Housekeeping Aides Project of the New York City Works Progress Administration. "In 1934 a committee appointed by the authority of the Department of Hospitals made recommendations for improvement in New York City's care of dependent chronic patients. During the same year, a study was conducted jointly by the New York State Department of Social Welfare and the Welfare Council of New York City covering the medical needs of recipients of old age assistance from the Department of Welfare. . . . Because of the conditions, it was recommended that provision be made for housekeeping service and household care of the chronically ill and for the dependent aged who were unable to care for themselves and their homes."

Dixon, Elizabeth S. and Browning, Grace A. [Editors]: Social Case Records. [In] FAMILY WELFARE. Chicago: University of Chicago Press, 1938. 312 pp. (p. 116–143.)

Patrick Kelly applies to the Family Service Society for help in caring for his children following the commitment of his wife to a State mental hospital.

Draper, Laura: Effect of E.R.A. (Emergency Relief Agency) on Local Programs. AMERICAN JOURNAL OF PUBLIC HEALTH, 1936, 26, 462–470 (May).

The visiting housekeeper project was set up by the Department of Public Relief, Minneapolis, primarily for families on relief. The Visiting Nurse Association furnished office space, supplies, and transportation to the project. For 14 months, 5 nutrition workers directed 61 housekeepers in close cooperation with the nursing staff. The purpose was to provide a project

for women on relief and to assist families on relief with budgeting, buying, menu planning, and household management.

Erkens, Josephine: Housekeeper Service Program of the Conference of Catholic Charities. THE FEDERATOR, 1937, 12, 64–72 (April).

This is a report of a study of the fourth year of experience of the Conference of Catholic Charities with providing housekeeper service for children in motherless homes.

Goodwin, Marion Schmadel: Housekeeper Service in Family Welfare. [In] PROCEEDINGS OF THE NATIONAL CONFERENCE OF SOCIAL WORK: Sixty-Fifth Annual Session held in Seattle, Washington, June 26–July 2, 1938. (p. 279–287.)

Describes the service provided by one of the early programs, the Associated Charities, Cincinnati, Ohio, started in 1933.

[Great Britain] The Present Position of the Home Help Movement. MOTHER AND CHILD, 1931, 2, 256–259 (October).

The Home Help Society in 1931 sent questionnaires to 75 local authorities and 8 voluntary agencies who were reported to have home help schemes. The article reports on the 64 replies. The oldest such service reported is the Jewish Sickroom Help Society which started in 1895.

Habink, Ruth: The Substitute Mother Club. THE FAMILY, 1938, 19, 54–56 (April).

In Dayton, Ohio, a club of visiting housekeepers, organized by a caseworker from the Family Welfare Association, carried on its work independently. Activities and values of the service are discussed.

Harris, Thelma: SAFEGUARDING MOTHERLESS CHILDREN: Problems Involved in Placement of Housekeepers in Motherless Homes. Child Welfare League of America Bulletin No. 16. New York: Child Welfare League of America, 1939. 20 pp.

Discusses underlying philosophy of housekeeper service, recruiting and selecting housekeepers, qualifications, preparations for the job, placement and supervision.

Hasenjaeger, Ella: The Subsidiary Worker. AMERICAN JOURNAL OF NURSING, 1938, 38, 772–776 (July).

This is a discussion of the problems raised by the employment of subsidiary workers, including visiting housekeepers, in the care of illness. Recommendation of a committee of the New Jersey State Nurses Association based upon findings of a study are also presented.

Hicks, Lydia T.: Evaluating the Visiting Housekeeper. THE FAMILY, 1937, 18, 124–130 (June).

This article considers what kind of a person a visiting housekeeper should be. "Sending a visiting housekeeper into a motherless home to care for the children—instead of taking them away from all that is known and safe

at a time when calamity has befallen them—is an idea to fire the imagination." Such is the comment about the early program financed and directed by a Board of Junior League members in affiliation with the Children's Aid Society of New York and in existence for 3½ years.

The Housekeeper in Casework. THE SURVEY, 1931, 66, p. 392 (July 15).

"Visiting Housekeeper Service which has long been the tool of the caseworker in Chicago, Boston, and Philadelphia is to be dignified by a survey. The Bureau of Jewish Social Research has been requested by the New York Foundation to report on the service in New York as it has been developed by a committee of the Jewish Social Service Association and the Maternal Aid Society. During the past year, the Association placed housekeepers in 120 families in order to tide over domestic crises and avoid taking children out of their homes. The Jewish Home Finding Society of Chicago has used visiting housekeepers since 1924. The Chicago Home Finding Society started the service last year and counts it as a valuable adjunct to its child welfare program."

Housekeeper Services in the U.S.A. MOTHER AND CHILD, 1938, 9, 259–260 (October).

A description of housekeeper and housekeeping aide services (the latter under Work Projects Administration) with some comparison to the home help service in England.

Jarrett, Mary C.: HOUSEKEEPING SERVICE FOR HOME CARE OF CHRONIC PATIENTS: Report of a W.P.A. Project in New York City, October 1935 to July 1938. (Processed.)

This report, though long out of print, is still available in some libraries. It is included here because of its historical importance. Housekeeping aides were employed 30 hours a week to give service in 3-hour periods to 1,431 chronically ill patients, the records of 600 of which were analyzed for this study. Methods of selecting, training, and supervising aides are described and costs of the service given.

Jarrett, Mary C.: VISITING HOUSEKEEPER SERVICES IN NEW YORK CITY, 1937. New York: Welfare Council of New York City, 1937. 26 pp. (Processed.) Abstract in THE CHILD, 1937, 2, p. 87 (October).

A report of the subcommittee on Housekeeping Services of the Coordinating Committee on Unemployment of the Welfare Council of New York City. Describes six pioneering visiting housekeeper services provided by three private and three public organizations in New York City and also summarizes the history of visiting housekeeper services outside New York City. The three private services in New York employed 50 visiting housekeepers in 1935 and served 300 families with more than 1,000 children. The three public services under the Work Projects Administration, in cooperation with various organizations, employed 1,400 housekeepers at the time the report was prepared, and served 5,000 families in the course of a year. The training and supervision of the housekeepers vary with the agency employing them. Brief reports of the six services are in the appendix.

Jennrich, Lorraine: Some Experiments in Casework in Motherless Families. [In] PROCEEDINGS OF THE NATIONAL CONFERENCE OF SOCIAL WORK: Sixty-Third Annual Session held in Atlantic City, New Jersey, May 18–23, 1936. (p. 158–166.)

This is an evaluation of 130 cases handled by the motherless family department, Milwaukee Family Welfare Association.

Kahn, Dorothy C.: The Influence of Home Economics on Family Case Work: Proceedings of the 1932 Philadelphia Session of the National Conference of Jewish Social Service. JEWISH SOCIAL SERVICE QUARTERLY, 1932, 9, 110–111 (December).

The executive of the Jewish Welfare Society, Philadelphia, states that "home economics as a feature of the work of the family case work agency had its origin in the relief-giving function of the agency. The first appearance of the home economist was as a visiting housekeeper who was placed on the staff of a number of agencies to see that money given as relief was spent as efficiently and wisely as possible. This approach, however uncongenial it may be to present day notions, may be given credit for the concept that relief is an investment in family life and in health." The changes that have come and suggestions for the future relationship of home economics and social work are discussed.

Kepecs, Jacob: Housekeeping Service in Chicago. JEWISH SOCIAL SERVICE QUARTERLY, 1930, 6, 114–119 (March–June).

Describes the setup of the service, costs, type of situations in which it is used, and the qualifications of the workers in this pioneering housekeeping service program established by the Jewish Home Finding Society in 1924. "The service is an unqualified success in temporary cases. It has many advantages as a temporary measure in long-time cases and has good possibilities as a long-time arrangement if the family is well chosen and if the social agencies of the community accept the idea. Emphasis must be laid on the fact that housekeeping is a sound service only if careful casework principles are applied and every case remains an active responsibility of the agency to the end."

Kepecs, Jacob: Housekeeping Service in Motherless Families. [In] PROCEEDINGS OF THE NATIONAL CONFERENCE OF SOCIAL WORK: Sixty-Fifth Annual Session held in Seattle, Washington, June 26–July 2, 1938. (p. 266–278.)

"No organized or systematic effort existed in the United States on behalf of fathers and children until 1923 when the Jewish Family Welfare Society of Philadelphia instituted a housekeeper service to families during the temporary absence of the mother." In addition to items of historical interest on the beginnings of homemaker service and clarification of visiting housekeepers as a home economics function, the author tells of his experience with housekeeper service of nearly 14 years and of its start in the Jewish Home Finding Society, which merged with the Chicago Jewish Children's Bureau in November 1924. Why this service was started, how it operates, reports on a study of the program between November 1924 and April 1937 are among the many items discussed.

Kepecs, Jacob: The Motherless Home. [In] PROCEEDINGS OF THE MINNESOTA STATE CONFERENCE AND INSTITUTE OF SOCIAL WORK, 1932. (p. 53–63.)

A good deal of emphasis is given to the concern and planning for fatherless families but too little thought is given to motherless ones. "Does the motherless family as a social problem require and deserve a different solution? Is it feasible as a matter of practice to maintain motherless homes? and if so, under what conditions? And finally, what are the advantages, possibilities, and limitations of maintaining motherless homes, from the point of view of the members of the family, of the social agency charged with the responsibility, and of the community at large? . . . Many a child does not understand and is shocked when separated from his father because of the loss of his mother. The father becomes a homeless man with his interests in and responsibility for the children gradually slackening. . . . The term 'housekeeping service' as used applies to a practice on the part of caseworking agencies designed to maintain families in the absence of the mother, temporarily or permanently. . . ." Mr. Kepecs ends with a plea for skilled casework and economic assistance to whatever extent may be necessary.

Landis, Rose F.: Home Economics in the Family Agency. JEWISH SOCIAL SERVICE QUARTERLY, 1936, 13, 222–228 (September).

In preparation for this paper, questionnaires were sent to executives and home economists of Jewish agencies. Leading Jewish agencies in the United States have a home economics department, and many others believe they should have this service. However, the role of the home economist has changed. She now consults with the worker instead of the client. Included in her duties are recruitment, training, placement, and supervision of visiting housekeepers. In most agencies, she supervises the visiting housekeeper department which is responsible for home management, cooking, etc. The article discusses additional aspects of visiting housekeeper service.

Landis, Rose F.: Visiting Housekeeper Service. JEWISH SOCIAL SERVICE QUARTERLY, 1935, 11, 307–314 (June).

Describes the service inaugurated by the United Jewish Aid Societies of Brooklyn in September 1929. Includes statistical data on families served in 1934 and extracts from reports in other cities.

Marcuse, Lotte: HOUSEKEEPER SERVICE: A New Tool for the Preservation of Family Life. Child Welfare League of America Bulletin No. 12. New York: The League, 1930. 15 pp.

This pamphlet, long out of print, is an important historical document that is still interesting reading and surprisingly modern in tone. It recounts the development of housekeeping service prior to 1930 and summarizes the practices of three agencies in Baltimore, Philadelphia, and Chicago in the recruiting, selecting, and placing of homemakers.

McKaskle, Herman E.: They Do Care How They Live. The SURVEY, 1935, 71, 76–77 (March).

Describes the visiting housekeeper services to Negro and white families in Pulaski County, Arkansas. Teaching in the home is supplemented by group discussion and demonstration.

Mills, Alden B.: The Need for Subsidiary Workers in Nursing Service as Seen by the Committee on the Costs of Medical Care. AMERICAN JOURNAL OF NURSING, 1934, 34, 591–594 (June).

This is a discussion of the service which the subsidiary worker can render in a community health program.

Milwaukee Society of St. Vincent de Paul: Housekeeper Service. CATHOLIC CHARITIES REVIEW, 1937, 21, p. 21 (January).

The Society of St. Vincent de Paul, Milwaukee, reports on its housekeeper service to 42 motherless families from October 1, 1935 to September 30, 1936. In addition, similar service was given where the mother was absent from the home or incapacitated.

Nesbitt, Florence: Visiting Housekeepers and Home Economists. JOURNAL OF HOME ECONOMICS, 1931, 23, 43–45 (January).

This article attempts to define visiting housekeeper service and the duties involved either with or without home economics and casework training.

New Jersey State Department of Health: Reports of Community Homemaker Services in New Jersey. PUBLIC HEALTH NEWS (New Jersey State Department of Health), 1937, 38, 125–130 (April).

Brief reports on homemaker services in Essex, Bergen, Middlesex, Passaic counties and in Summit, Cranford, Newark, and Trenton are presented.

[New York City] Junior League of the City of New York: MOTHERS ON CALL. Second Report of the Housekeeper Service of the Junior League of the City of New York in cooperation with the Children's Aid Society. New York: Children's Aid Society, 1937. 20 pp.

Presents a review and brief analysis of services performed, facts discovered, and trends revealed.

[New York City] Junior League of the City of New York: SUBSTITUTING FOR MOTHERS: The First Report of the Housekeeper Service of the Junior League of the City of New York in cooperation with the Children's Aid Society. New York: Children's Aid Society, 1935. 23 pp.

This pioneer report is offered "as a record of purpose and progress to date rather than as an exposition of findings. . . ."

Pittsburgh Catholic Charities: Housekeeper Service in Pittsburgh Catholic Charities. CATHOLIC CHARITIES REVIEW, 1937, 21, 145–146 (May).

After 4 years' experience with housekeeper service, Catholic Charities in Pittsburgh studied its program from July 1, 1935 to June 30, 1936.

Pratt, Vocille M.: Home Economics as a Supplemental Service. THE FAMILY, 1936, 17, 267–271 (December).

The contribution which the home economist and the caseworker can make to the solution of problems of homemaking is evaluated.

Rosenberg, Goldye B.: The Home Economists Form a Group. JEWISH SOCIAL SERVICE QUARTERLY, 1931, 7, 20–22 (March).

Home economists in Jewish agencies formed an "unofficial" group. One function was to educate family caseworkers as to what home economics represents. Committees would work on projects and educational material would be compiled. They hope to become a part of the National Conference of Jewish Social Service. Early in November 1930, an all-day meeting was held in New York. A questionnaire letter was sent to all Jewish family agencies to find out which employed home economists, how they functioned. "One organization maintained a Visiting Housekeeper's Service as a distinct function of its Home Economics Department. Another agency gives this service completely apart from its home economics department. A third agency has a Visiting Housekeeper's Service but has no Home Economics Department."

Trippe, Mrs. Juan T.: The Junior League Housekeeper Service. CHILD WELFARE LEAGUE OF AMERICA BULLETIN, 1935, 14, 1; 4; 5; 6 (June).

This article by the chairman of the executive board of this Junior League tells why housekeeper service was selected by the Junior League of New York City as a demonstration project, and how it has continued to succeed as a part of the program of the New York Children's Aid Society.

The Versatile Home Help. MOTHER AND CHILD, 1936, 7, p. 321 (November).

A brief report on the home help service in Birmingham, England.

Waldstein, Sarah: Some Observations on Housekeeper Services: Proceedings of the 1935 Lake Placid Sessions of the National Conference of Jewish Social Service. JEWISH SOCIAL SERVICE QUARTERLY, 1935, 12, p. 123 (September).

Discussion of paper by Joseph E. Beck. Comments that there is a need for a shift of emphasis in housekeeper service from a consideration of the needs of the child to the demands of the total family situation.

Woldman, Elinore R.: Home Management Services. THE FAMILY, 1939, 19, 322–325 (February).

Describes the procedures of the Cleveland Jewish Social Service Bureau in the selection, assignment, supervision, and training of housekeepers.

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PROGRAM DESCRIPTIONS

Health Auspices

American Medical Association: Persistence Succeeds in New Jersey. JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 1959, 169, 1334–1336 (March 21).

This is a brief discussion of the New Jersey homemaker program. Much of its success can be attributed to the persistence of two women.

American Medical Association, Council on Medical Service: Allegheny County Program. HOMEMAKER SERVICES BULLETIN, 1963, 4, 1; 3 (September).

The nurse-aide-housekeeper program of the Allegheny County (Pa.) Visiting Nurse Association initiated in 1961 has made substantial progress. The story is told in this account.

American Medical Association, Council on Medical Service: Homemaker Service in San Francisco. HOMEMAKER SERVICES BULLETIN, 1964, 5, 1; 3 (January).

Since the San Francisco Homemaker Service was established in 1957, it has provided services to its older, chronically ill clients that range from a weekly marketing or cleaning visit, to part-time daily service, to emergency full day service while institutional or other care is being worked out.

American Medical Association, Council on Medical Service: Homemaker Service in Woodbury County. HOMEMAKER SERVICES BULLETIN, 1964, 5, p. 3 (January).

This program in Sioux City, Iowa, available since October 1, 1963, employs eight homemakers. It is administered by the Sioux City Health Department with some funds from the State Department of Health. A brief description is given of the service.

American Medical Association, Council on Medical Service: Homemaker Services in Des Moines, Iowa. HOMEMAKER SERVICES BULLETIN, 1962, 3, p. 1 (January).

Describes plans for a new homemaker care program for ill and handicapped individuals.

American Medical Association, Council on Medical Service: Oregon Demonstration and Research Project. HOMEMAKER SERVICES BULLETIN, 1963, 4, p. 4 (September).

The Eugene-Springfield Area Homemaker Service was formed to serve the aging and chronically ill in the community.

American Medical Association, Council on Medical Service: Two States Launch Home-Centered Programs for Aging. HOMEMAKER SERVICES BULLETIN, 1962, 3, 2–4 (March).

Two new statewide programs of services for older persons are projected for Pennsylvania and California. Both give priority to homemaker service.

American Medical Association, Council on Medical Service: What Does Chr-Ill Service Do? HOMEMAKER SERVICES BULLETIN, 1963, 4, 1; 5–6 (January).

"The operation of the Chr-Ill Service of Essex County, New Jersey, is well illustrated by the case history [of a 70-year-old man] which appeared in the January 1963 issue of the Bulletin of the Essex County Medical Society."

Behan, Rose H.: The New Hampshire Story on Homemaker Service. HOMEMAKER SERVICES BULLETIN (American Medical Association), 1960, 1, 2–4 (November).

This is a brief description of the development of New Hampshire's program of homemaker services under the State Department of Health.

Bloedow, Gerald A.: Minnesota Project: Aging in Rural Areas. AGING, 1962, No. 91, 6–7 (May).

The Minnesota Demonstration Project on Aging was initiated in five rural counties. The objectives of the project were to utilize more fully the available resources in developing adequate programs and opportunities for older citizens. Among the services being organized are homemaker services.

Bonnet, Philip D., M.D., and Yaguda, Mrs. Asher: The Community Homemaker Service in New Jersey. [In] PROCEEDINGS: First National Conference of the Joint Council to Improve the Health Care of the Aged, 1959. 180 pp. (p. 105–108.)

Our social and economic future depends upon keeping families together, helping them survive the disruptive effects of illness, of old age, or any domestic crisis. They have a chance for survival at such critical times when they can continue to live in their own homes.

Catholic Charities of the Archdiocese of New York: FAMILY SERVICES: Homemaker Unit: Report for 1962. New York: Catholic Charities, 1962. 122 pp. (esp. p. 12–14.)

In 1962, there were increasing requests for long-term homemaker service because of chronic illness or incapacity of the mother due to emotional and mental disorder. Twenty-four homemaker services were established this year.

Cherkasky, Martin: The Montefiore Hospital Home Care Program. AMERICAN JOURNAL OF PUBLIC HEALTH, 1949, 39, 163–166 (February).

An explanation of home care and the interrelationship of the various services involved, including housekeeping service provided by the Montefiore Hospital Home Care Program. Emphasis is on seeing the individual as a whole, his relationship to his family, where he lives and works, and the meaning to him of many other factors. Costs, too, are discussed of care in the home in

contrast to that in the hospital. Housekeeping service is provided 5 to 10 hours a week when needed by a patient who would otherwise have to remain in the hospital.

Delaney, Mrs. Thomas F.: Homemaker Service: A Pilot Study in Newark, New Jersey. CHRONIC ILLNESS NEWS LETTER (Commission on Chronic Illness), 1951, 2, p. 2 (November).

Homemaker service, a pilot project of the services for the chronically ill, Essex County, New Jersey, started in 1950, is explained and evaluated a year later.

Fraenkel, Marta: HOUSEKEEPING SERVICE FOR CHRONIC PATIENTS: An Analysis of a Service for the Chronically Sick and the Infirm Aged Operated by the Work Projects Administration. New York: Welfare Council of New York City, 1942. 143 pp. (Processed.)

This is a publication of great historical importance although it is probably unavailable except in libraries. It is a detailed statistical study of 5 years' experience in operating a housekeeping service for the chronically ill.

Goldfarb, Dora and Manko, Phyllis: Homemaker Service in a Medical Setting. CHILDREN, 1957, 4, 213–218 (November–December).

Because new developments in medical care have had a definite effect on the supply and demand for homemaker service, the Jewish Family Service in New York has been providing homemakers to patients carried by three New York hospitals. Details of the plan are described and evaluated.

Huff, Lois G.: GEORGIA'S STORY OF HER AGING: As told by the Georgia Governor's Commission on Aging. Atlanta: The Commission, 1961. 149 pp. (esp. p. 64–65.)

Homemaker service, friendly visitors, and meals-on-wheels are described.

[Indiana, Fort Wayne] Visiting Nurse Service: EXPANSION OF SERVICES TO THE CHRONICALLY ILL: 1962 Progress Report. Fort Wayne: The Service, 1962. 20 pp.

This is a progress report, begun in 1959 by the Visiting Nurse Service of Fort Wayne in cooperation with the Indiana State Board of Health on the home care of the stroke patient. The use of housekeeping aides to assist with housework and cooking as well as to help the nurse with patient care when necessary is part of the plan.

Indiana State Board of Health: HOME CARE OF THE STROKE PATIENT. Indianapolis: The Board, 1962. 49 pp.

This is a report of a stroke patient home care project conducted by the Visiting Nurse Service of Fort Wayne. Helping the stroke patient help himself is the basic intent of the project. The short-term purpose of the project was to demonstrate that the stroke patient with the services of a visiting nurse and a housekeeping aide can take part in a restorative program at home, to the end that independent living will be achieved more rapidly for more patients.

Jewish Family and Children's Service: GERIATRIC HOMEMAKER SERVICE: Development and Present Scope. Roxbury, Mass.: The Service, 1962. 10 pp.

Experiences and development of a homemaker service in operation since 1954.

Murray, D.: How to Keep a Home Running: Essex County, New Jersey, Homemaker Service. SATURDAY EVENING POST, 1955, 228, 42–43 (December 3).

New Jersey State Department of Health, Division of Chronic Illness Control: VISITING HOMEMAKER SERVICE IN NEW JERSEY. Trenton: The Department, 1960. 6 pp.

Describes the New Jersey program and lists local services.

[Pennsylvania] Allegheny County Health and Welfare Association: HOMEMAKER SERVICE: A Plan for a Comprehensive Homemaker Service Program for Allegheny County. Pittsburgh: The Association, 1962. 39 pp. (Processed.) ($2.00.)

A number of factors led to the decision of the Association to undertake a comprehensive study of homemaker service in Allegheny County. Of major importance was the recognition that homemaker service is a valuable tool in preventing institutionalization, a prime goal of health and social welfare programs today. One of the principal conclusions was that homemaker service has an increasingly important role in the total spectrum of community health and welfare services because it is not only a remedial but also a preventive service.

Phillips, Elizabeth C.: Visiting Home Aide Program of the Visiting Nurse Service of Rochester and Monroe County. NURSING OUTLOOK, 1962, 10, 321–324 (May). Also under title Visiting Home Aide Program in Monroe County, HOMEMAKER SERVICES BULLETIN (American Medical Association), 1962, 3, 1–5 (May).

Describes the first year of operation of a home aide service which helped care for 255 adult patients who were well enough to be home but not well enough to be left alone and to care for themselves. Includes information about who is served, hours worked, charges for services, qualifications and training of home aides.

Phillips, Elizabeth C.: Volunteers and the Aging: Meals with a Smile for Older Shut-ins. CATHOLIC CHARITIES REVIEW, 1960, 44, 4–9 (May).

Reviews the history of Meals-on-Wheels in Rochester and Monroe County, New York, and describes the following: Organization of the Project, Objectives, Basic Philosophy, Qualifications of Recipients, Services Rendered, Personnel Used and Other Arrangements, Patients Served, Questions Frequently Asked.

Rubinow, Leonora: Progress in the Community Homemaker Service Program. PUBLIC HEALTH NEWS (New Jersey State Department of Health), 1954, 35, 293–295 (August).

Homemaker service is by no means "peculiar to New Jersey but there are features in the pattern of development here that are unique. It is a form of part-time household assistance to families among whom there is prolonged illness or disability or where, in less serious situations, an easing of the household burdens at the right moment may prevent complications from developing."

[San Francisco] United Community Fund of San Francisco, Social Planning Committee: HOMEMAKER SERVICE: A Report of the Social Planning Committee from the Homemaker Service Study Committee. San Francisco: The Fund, 1961. [45 pp.] (Processed.)

This is a report on the overall picture of the role and function of the San Francisco homemaker services.

Sargent, Emilie G.: Detroit's VNA's Home-Aide Service. NURSING OUTLOOK, 1962, 10, 318–320 (May).

Describes a pioneer program established in 1955 with 29 home aides which fills the needs of a caseload averaging 15,000 patients.

Stanford, Marian R., M.D.: Community Homemaker Service. PUBLIC HEALTH REPORTS, 1960, 75, 1142–1144 (December).

"In New Jersey, community homemaker service has demonstrated its value as one of the important basic resources for preserving homes threatened by the absence or incapacity of the person who formerly carried the chief responsibility for family care and home management. This service is proving especially valuable in meeting the needs of older people living in their own homes . . . . The primary objective is to preserve and strengthen family life, whether it is primarily focused on serving children, the aged, the chronically ill, physically handicapped or the emotionally disturbed." How this is done as a statewide program is described. The Prevention of Chronic Illness Act 1952 required the State Department of Health "to plan for the provision of adequate visiting nurse and housekeeping aid service by appropriate public or private agencies throughout the State, to the end that the nursing and medical care being furnished to the chronic sick in their own homes shall be improved in every manner possible."

Stanford, Marian R., M.D.: Community Homemaker Service of Bergen County. PUBLIC HEALTH NEWS (New Jersey State Department of Health), 1958, 39, 367–380 (December).

This is an analysis of the first complete calendar year of service of the homemaker program in Bergen County, New Jersey. Tables and text present budgets, income, and disbursements.

Stanford, Marian R., M.D.: Homemaker Service in New Jersey. PUBLIC HEALTH REPORTS, 1959, 74, 383–386 (May).

Among the topics discussed are training of homemakers, what they do,

effects of the service, its history and its extent. "From a population standpoint, more than half of the residents of New Jersey now have established homemaker services available to them. Geographically, more than one-third of the State is thus served. One objective of the health department and of its State consultant committee is to have such a service available to all families in New Jersey who need it."

Unterman, David, M.D.; De Aroff, Arthur C., M.D.; and Melaney, Henry E., M.D.: Study of Home Care in a Municipal Hospital. JOURNAL OF AMERICAN MEDICAL ASSOCIATION, 1949, 140, 152–155 (May 14).

A pilot study of home care was conducted on the Third and Fourth (New York University) Medical Division of Bellevue Hospital during the year beginning January 1, 1948—the first application of the principles of home care to a large municipal institution. Medical care to the home required close coordination of the activities of physician, social worker, and nurse. Details are given on selection of patients, description of program, with comment on results, summary, and conclusions. Housekeeping service was provided in selected cases up to 10 hours a week. Among other things, "it has been demonstrated that home care is a practical means of extending continuous medical service to certain indigent patients for whom no such provision otherwise exists. The cost of maintaining a patient at home is approximately one-fourth the cost of hospital care."

Vaughn, M. Elizabeth: The Nutrition Consultant and the Home Aide. JOURNAL OF THE AMERICAN DIETETIC ASSOCIATION, 1963, 43, 435–438 (November).

The home aide program of the visiting nurse association of Detroit provides skilled and supervised home help as an important part of its total service to families. Through participation in the training and supervision of the home aide, the public health nurse, the nutritionists, and other consultants help the aide fulfill her role in maintaining the home and in keeping the family together.

Yaguda, Mrs. Asher: Historical Review of Visiting Homemaker Service in New Jersey, 1953–1961. [In] SUPPLEMENT TO NEW JERSEY PUBLIC HEALTH NEWS, July 1961. Trenton: New Jersey State Department of Health, 1961. 43 pp. (p. 5–9.)

In 1950, the homemaker service that became the pattern for all other homemaker services in the State was launched under the Essex County Service for the Chronically Ill. By 1961, there were 17 services in 14 counties covering more than three-fourths of the State's population; 1,200 homemakers had been trained.

Yaguda, Mrs. Asher: Visiting Homemaker Service in New Jersey, 1953–1961. HOMEMAKER SERVICES BULLETIN (American Medical Association), 1961, 2, 2–4 (May).

A brief survey of the development of homemaker services in New Jersey. The program had its roots in Essex County where, in 1950, it was launched to provide care for patients in their own homes. At first, the service

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was specifically planned for long-term care. Later, the service was provided to short-term patients.

Young, Leontine R.: New Horizons for Homemaker Service. [In] SUPPLEMENT TO NEW JERSEY PUBLIC HEALTH NEWS, July 1961. Trenton: New Jersey State Department of Health, 1961. 43 pp. (p. 42–43.)

"Homemaker service could prevent many child placements, particularly emergency placement. This would mean a longer time service and, in many cases, 24-hour live-in service, but as a preventive to further family breakdown, with its long train of resulting problems, it is one of the most economical and one of the most effective programs . . . it is one of the best investments society can make for the coming generation."

Mental Health Auspices

American Medical Association, Council on Medical Service: Homemaker Service in a Psychiatric Hospital. HOMEMAKER SERVICES BULLETIN, 1961, 2, 1; 4 (January).

Plans are underway at the Evansville State Hospital, Evansville, Indiana, to develop a homemaker service integrated with the total treatment program of the hospital. The 3-year project to begin January 1961 will be directed toward determining the value of homemaker service to a psychiatric treatment program.

Furst, William, M.D.: Understanding Mental Illness. [In] SUPPLEMENT TO NEW JERSEY PUBLIC HEALTH NEWS, July 1961. Trenton: New Jersey State Department of Health, 1961. 43 pp. (p. 35–38; 41.)

Gives a brief case history of a recent experience in which homemaker service was of great help with a mentally ill mother. The added security that the homemaker provided in terms of helping the patient with the care of her child and in the routine of her home life was of inestimable value.

Indiana State Hospital: Mental Hospital as Homemaker Center. AMERICAN JOURNAL OF PUBLIC HEALTH, 1961, 51, 801–802 (May).

Indiana's State Hospital at Evansville undertakes a 3-year homemaker service demonstration project, through financial support of the National Institutes of Mental Health, to ascertain the value of homemaker service to a psychiatric treatment program. Patients can obtain service before admission, during treatment, or upon release, at the discretion of the staff, for periods up to 6 months.

Social Service Auspices

American Medical Association, Council on Medical Service: Homemaker Demonstration in North Carolina. HOMEMAKER SERVICES BULLETIN, 1961, 2, 1; 4 (January).

The departments of public welfare in Harnett, Chatham, and Alamance Counties, North Carolina, are rounding out the second year of a 2-year demonstration project to provide homemaker services for recipients of old age assistance. The service has deterred unnecessary institutionalization of older persons.

American Medical Association, Council on Medical Service: Homemaker Expansion in Chicago. HOMEMAKER SERVICES BULLETIN, 1960, 1, p. 1 (November).

Plans are underway for the Chicago Child and Family Services to double its present staff of 25 homemakers and to expand service into suburban areas.

American Medical Association, Council on Medical Service: Homemaker Program in Tennessee. HOMEMAKER SERVICES BULLETIN, 1961, 2, p. 1 (March).

The Knox County Office of the Tennessee Department of Public Welfare has been carrying on a demonstration program in providing homemaker service since July 1960.

American Medical Association, Council on Medical Service: Homemaker Program in Texas. HOMEMAKER SERVICES BULLETIN, 1961, 2, 1; 5 (May).

Describes the Hidalgo County homemaker program. This program is unique in a number of respects. The homemaker is hired by the child welfare unit to meet the need in a particular family. Usually she is someone from the same neighborhood who knows the family and children. Homemakers are employed in terms of the need in the particular family. Most of the placements are long term, the average being 7 months.

American Medical Association, Council on Medical Service: Homemaker Services in Alaska. HOMEMAKER SERVICES BULLETIN, 1961, 2, p. 1 (November).

The first homemaker service for children in Alaska, initiated in Ketchikan in 1959, is now entering its third year. Homemakers are employed by the hour; round-the-clock service is provided if needed.

American Medical Association, Council on Medical Service: New Service in Oregon. HOMEMAKER SERVICES BULLETIN, 1961, 2, p. 1 (September).

The Multnomah County Homemaker Service established in January 1961 is designed to safeguard family relationships, to hold families together during a crisis, and to avoid neglect and to preserve familiar surroundings for children who might otherwise have to be placed in foster homes or institutions. The homemaker works within a three-way relationship involving the caseworker, the supervisor, and the family.

Argo, Dorothea M.: What Housekeeping Aides Do. AMERICAN JOURNAL OF NURSING, 1941, 41, 775–780 (July).

This is a description of the WPA Housekeeping Aide Project of the Community Service Program in Tennessee, sponsored by the Tennessee Department of Public Welfare. "Tennessee has 800 of the 37,000 housekeeping aides at work in 45 States and the District of Columbia. These aides are unemployed women, certified for relief work. Last year, they served as emergency housekeepers in over 700,000 needy homes. . . ." In Tennessee during 5½ years of operation of this program, 3,000 unemployed certified women have been trained as aides.

Armin, Hilda D.: Casework Aspects of Homemaker Service. JEWISH SOCIAL SERVICE QUARTERLY, 1951, 27, 393–397 (June).

Homemaker service is described as an integral part of the casework program of the Jewish Family and Community Service in Chicago.

Blackburn, Clark W.: Long-Time Temporary Care. (Includes section: Homemakers Decrease Need for Placement.) CHILD WELFARE, 1952, 31, 7–8 (January).

This article is part of a series of discussions of a paper on "Long-Time Temporary Placements" by Mary E. Lewis. The author raises the question of what can be done to prevent temporary placements, comparing it to what the public health field is now doing to prevent disease. He then makes a plea for more adequate casework service for those who need it. He makes the statement that in Family and Children's Service, Minneapolis: "We increased our homemakers in the past 2 years from 6 to 28, enlarged the scope of service from a maximum of a few weeks to longer care in certain situations . . . temporary placements have decreased by an appreciable number."

Brooklyn Bureau of Social Service and the Children's Aid Society: LONG TERM HOMEMAKER SERVICE: Project Report. Brooklyn: Brooklyn Bureau of Social Services and Children's Aid Society, 1958. 38 pp. (Processed.) (75¢.)

This project on long-term homemaker service demonstrated effectively the possibility of this service in strengthening family relationships and of preventing breakdown which might have resulted in the placement of children. Integrated with counseling and other services, it resulted in a positive team approach to a family's problems.

Catholic Charities of the Archdiocese of New York: HOMEMAKERS: Report for 1961. New York: Catholic Charities, 1961. 123 pp. (esp. p. 10–11.)

The homemaker unit with a staff of 88 homemakers enabled 561 families with 1,847 children to maintain normal life during the incapacity of the mother, without endangering the employment of the father or threatening the security of the children. The New York City Department of Welfare purchased care for 261 families.

Chicago Child and Family Services: CHILD AND FAMILY SERVICES. Chicago: The Service, 1963. 14 pp.

This is a brochure describing this agency's services. The first suburban district office for homemaker services has been established in west Chicago. Homemakers resident in the area have been employed, thereby assuring proximity to families requiring service.

Chicago Child and Family Services: Homemaker Service. [In] WHEN A CHILD NEEDS A HOME. Chicago: The Service, 1958. 13 pp. (p. 3.)

The Chicago Home for the Friendless began its homemaker service in 1930, and it is probably one of the few agencies which established such a service before it began foster care.

Chicago Child and Family Services: TRAINED HOMEMAKERS RENDER FIRST AID IN A FAMILY CRISIS. (Reprint in pamphlet form of an article by Sarah Boyden in the Sunday Midwest Magazine, Chicago Sun-Times, February 21, 1960.) Chicago: The Service, 1960. 4 pp.

A vital pioneer program of homemaker service, developed by an old established Chicago agency, the Child and Family Services, has come into its own. It holds families together in misfortune and gives them aid until they are able to help themselves.

Denver Department of Welfare: HOME AID DEMONSTRATION PROJECT . . . August 1961–December 1962. Denver: Denver Department of Welfare, 1963. 15 pp.

Includes pilot programs on homemaker and health services to old age pension and aid to the needy disabled recipients. The objective was to reduce nursing home costs to the State.

Dugger, Katherine: Specialized Services for the Aging. CATHOLIC CHARITIES REVIEW, 1960, 44, 5–8 (March).

The Supervisor of Homemaker Service, Sheltering Arms, Houston, Texas, tells how their organization changed from a small custodial home for indigent elderly women to an agency providing a small unit of group care but also designated by the United Fund to serve those over 65 years in the city and county. Described are a variety of services, including the use of homemakers.

Editorial: Homemaker Service. NEW ENGLAND JOURNAL OF MEDICINE, 1964, 270, 423–424 (February 20).

Attention is called to the Inter-Community Homemaker Service for Brookline, Needham, Newton, and Wellesley, Massachusetts, "formed to help meet needs created by the changing patterns of medical care. . . . It may be assumed that the homemaker as an institution in herself can become an invaluable asset to many communities."

Einstein, Gertrude: The Homemaker's Role in Prevention and Treatment of Family Breakdown. CHILD WELFARE, 1960, 39, 22–25 (May).

This is a description of the homemaker program of the Jewish Family Service of Philadelphia. The application process, how the homemaker functions, and the use of the homemaker when the mother is ill are among the topics presented. This program, in existence for about 40 years, emphasized originally the homemaker as a mother substitute during the absence or disability of the mother. But they were also used as teachers since the agency believed that clients should be educated to follow a pattern of living that was sound in terms of economics and nutrition. This was during a precasework era when we did *for* people, rather than *with* people.

Elliott, Jane: Homemaker Service in North Carolina. PUBLIC WELFARE, 1949, 7, 137–141 (June–July).

This is an account of a demonstration by the State Board of Public Welfare using homemaker service as an alternative to foster care, including a comparison of costs. Concludes that homemaker service is feasible in rural areas.

Fenger, Bodil: Selection of Homemakers for a Family Agency. SOCIAL CASEWORK, 1948, 29, 222–227 (June).

This paper gives the philosophy developed by the Family Services of Cincinnati during its 14 years of experience with a homemaker program and particularly the process of selection of homemakers.

Gemeroy, Marie G.: Use of Visiting Homemaker Service by County Welfare Boards. [In] SUPPLEMENT TO NEW JERSEY PUBLIC HEALTH NEWS, July 1961. Trenton: New Jersey State Department of Health, 1961. 43 pp. (p. 28–29.)

Visiting homemaker services in New Jersey perhaps should consider a new function. "There are many mothers on this program who have no conception of the homemaking function. . . . It would require a liaison with the individual county welfare board. . . ."

Ginns, Sadie J.: The Role of the Family Agency in the Use of Housekeeper Service. JEWISH SOCIAL SERVICE QUARTERLY, 1946, 23, 186–190 (December).

The author states that the Jewish Welfare Society of Philadelphia for at least 25 years has offered housekeeping, now called homemaker services, to assist families to maintain and preserve family life. This is a part of its casework program.

Goldfarb, Dora and Goldfeld, Freda: Inter-Agency Cooperation in Providing Homemaker Service. JOURNAL OF JEWISH COMMUNAL SERVICE, 1958, 34, 298–307 (Spring).

This paper describes a plan of collaboration in providing homemaker service between Jewish Family Service, an agency with a medical program, namely Altro Health and Rehabilitation Service, and Beth Israel, Hillside and Mt. Sinai Hospitals. This coordinated plan of extending homemaker service operated by the family agency directly to the medical agency represents a departure from the general structural relationship among agencies in New York City.

Hickey, Margaret: Homemaker Service in Hartford, Connecticut: Substituting for Mothers. LADIES HOME JOURNAL, 1948, 65, 23; 100 (July).

Hill, M. Esther: Helping Low Income Families. Part II: Through Homemaking Consultants. CHILDREN, 1963, 10, 132–136 (July–August).

This article describes a program developed 15 years ago to improve tenant-landlord relationships and to strengthen individual family life and relations between the school and community. The primary aim is improvment in housekeeping skills and home management through instruction from home economists. Referrals are from social and health agencies and many other sources. The school district of Philadelphia operates it as a special adult education program jointly administered and supervised by the school system division of school extension and home economics education.

Homemaker Services. CHILDREN, 1961, 8, p. 76 (March–April).

A pilot project to extend homemaker service to suburban areas and also to expand it in the city, undertaken by Child and Family Services Agency of Chicago as recommended by the Welfare Council of Chicago.

Hoyle, Bernadette W.: Homemaker Service: A Growing Program in Public Welfare in North Carolina. CAROLINA FARMER, 1963, 18, 10–11; 24 (January).

North Carolina's homemaker service program started in 1947 with a demonstration project in three counties—and the service was confined to families with children. For several years, the development of specialized services for the aged has been stressed, including homemaker services.

Hughes, Georgia P.: Homemaker Service for Migrants. Paper delivered at the annual Homemaker Workshop in Raleigh, August 22–23, 1963. PUBLIC WELFARE NEWS (North Carolina State Board of Public Welfare), 1963, 27, 7–8 (December).

Describes the work of the Carteret County Department of Public Welfare which, in the last 3 years, has employed homemakers to work with the crews of farm workers who come to harvest crops for about 2 months each summer, bringing their families with them.

[Iowa] Earlham Care Program: An Experiment in Community Living. IOWA PUBLIC WELFARE IN ACTION (Iowa State Department of Social Welfare), 1963, 9, 6–10 (Fall).

Among other services projected is the use of homemakers. A training course for personnel serving as homemakers has been held.

[Iowa] Earlham Care Program: A Small Town Organizes Basic Services for Its Aging. AGING, 1963, No. 109, 1–3; 16 (November).

The Earlham home care program, initiated in July 1963, has started the following activities: (1) Homemaker service; (2) handyman service; (3) activity centers; (4) counseling service; (5) transportation within the community; and (6) meals-on-wheels.

Justiss, Howard: Hidalgo County Homemaker Program. PUBLIC HEALTH REPORTS, 1960, 75, 291–294 (April).

"Not one mother has left the hospital against medical advice since homemaker services were provided in a Texas county" by the child welfare unit of the Department of Public Welfare, Edinburg. The article gives pertinent background information about the county and some of its problems, including a high incidence of tuberculosis. It also gives some of the positives and negatives in their homemaker program which is described as "far from perfect, but it is serving a definite purpose for us in Texas by preserving families and saving them from having to go to foster homes."

Kimmel, Dorothy G.: HOMEMAKER SERVICES FOR OLDER PEOPLE. Chicago: American Public Welfare Association, 1955. 15 pp. (30¢.)

This is a description of the homemaker program for the aged operated by the Cuyahoga County, Ohio, Welfare Department.

Kuehn, Barbara: Homemaker Service in Catholic Charities. [In] PROCEEDINGS OF THE 38th MEETING OF THE NATIONAL CONFERENCE OF CATHOLIC CHARITIES, Cleveland, Ohio, September 11–15, 1952. (p. 126–131.)

Describes the homemaker service in Catholic Charities, Brooklyn, New York, started in 1945.

Langer, Marion F.: A Visiting Housekeeper Program. THE FAMILY, 1945, 26, 182–189 (July).

For 16 years, the Jewish Social Service Association, New York City, has provided visiting housekeeper service as part of its family program. Described in the article are policies, procedures, philosophy, training of the housekeeper and her placement, and also the impact of the war on this service.

Lawrence, Mary: The Jewish Children's Bureau of Chicago, Illinois: A Consolidated Child Care Agency. JEWISH SOCIAL SERVICE QUARTERLY, 1940, 16, 284–289 (March).

This article describes the consolidation of a number of children's agencies in Chicago on April 1, 1937, into the Jewish Children's Bureau. Housekeeper service, one of the first programs in the United States, is briefly mentioned.

Lees, Ethel: Assistance vs. Relief: Values of the Change in Approach as Demonstrated by the Chicago Welfare Department's Homemaker Service and Household Training Program. PUBLIC AID IN ILLINOIS, 1951, 18, 8–12 (June).

This program sponsored by the Chicago Welfare Department is proving its value with families on assistance through encouraging more adequate housekeeping and better care of children and other family members. Homemaker service is seen as a way of rehabilitation of these families.

LeVine, Sarah C.: Integrating Homemaker Service with Casework. SOCIAL CASEWORK, 1947, 28, 178–183 (May).

This is a description of the experience of the Jewish Welfare Society of Philadelphia in "reorganizing and revitalizing" its homemaker program as an integral part of its casework services.

Lewis, Harold and Guinessy, Mildred: HELPING THE POOR HOUSEKEEPING FAMILY IN PUBLIC HOUSING: A Research Demonstration Project. A Cooperative Effort of the Friends Neighborhood Guild of the Philadelphia Housing Authority. Philadelphia: Friends Neighborhood Guild, 1963. 335 pp. (Processed.)

A report and evaluation of a program of services to families in public low rent housing in danger of lease cancellation because of chronic poor house-

keeping. This investigation was supported in part by a demonstration grant from the Social Security Administration, U.S. Department of Health, Education, and Welfare, Washington, D.C.

[Los Angeles] Homemaker Service of Los Angeles Region: HOMEMAKER SERVICE: A Helping Hand. Progress Report 1961. Los Angeles: The Service, 1961. 13 pp.

Homemaker Service in Los Angeles, California, is a communitywide, voluntary agency, organized in 1959 to provide emergency or temporary home care to families and individuals in time of crisis. This is a report on the service—its progress and its plans for future growth.

Manginelli, Madeleine VH: Homemaker Service in War Time: THE FAMILY, 1943, 24, 152–153 (June).

How the flexible, short-time homemaker program of the Children's Aid Society, New York City, adapted to wartime is the gist of this brief article. Wives and children in New York, to meet servicemen on furlough with only a few precious hours, appreciate the agency's homemaker. Likewise, a homemaker may be needed for the employed mother with a sick child, or the mother who is ill and the husband working or in the armed services—and maybe there is a new baby.

McCabe, Elinor: Criteria in Meeting Needs for Homemaker Service. [In] SUPPLEMENT TO NEW JERSEY PUBLIC HEALTH NEWS, July 1961. Trenton: New Jersey State Department of Health, 1961. 43 pp. (p. 10–17.)

Describes the homemaker service of the Department of Family Service of Greater Boston. By far, the greatest number of families served have a medical need. Over 100 homemakers are on the payroll. Thirty are paid a guaranteed annual wage and receive a salary, whether or not they are working. The rest are paid $1.25 per hour plus carfare. "In summarizing, we accept all cases in which the families can use a homemaker effectively and have no other resources; where they accept our supervisory role and are willing for us to consult the physician regarding the medical recommendations; where they will cooperate in setting a reasonable fee for reimbursement; and where no other agency is involved or else has authorized our service."

McCabe, Elinor: Development of Homemaker Service in the Greater Boston Area. PUBLIC HEALTH NEWS (New Jersey State Department of Health), 1958, 39, 43–46 (February).

". . . let us put on blinders if need be, but go ahead to provide homemaker needs as best we can, regardless of auspices." The caseworker in a family agency "is primarily concerned with the client and, in my opinion, can rarely give the homemaker the support she needs."

[New York, Binghamton] Family and Children's Society of Broome County: STATEMENT OF POLICY AND PROCEDURE FOR HOMEMAKER SERVICE. Binghamton: The Society, 1961. 29 pp. (Processed.)

Gives a brief history of homemaker service in this county and describes, among other aspects of the service, casework service, administration, selection and training of homemakers, employment status, selection of families for service, and fees.

New York City Department of Welfare: Bureau of Special Services. THE WELFARER, 1960, 12, 8–9 (February).

The Department provides trained homemakers to families in which there are children whose mother or other guardian is temporarily hospitalized or too ill at home to care for her children. Homemakers are also available to older individuals who are recipients of public assistance and who, because of illness or the infirmities of age, are unable to assume full responsibility for the management of themselves after returning from the hospital.

New York City Department of Welfare: Homemaker Service. THE WELFARER, 1960, 12, p. 9 (February).

At present, there are 135 homemakers on the staff of the Homemaking Center. They are noncompetitive civil service employees. Each year, they receive physical examinations. Previous to assignment, they have a comprehensive inservice training program in child care, services to the aged, practical ways of dealing with behavior problems, nutrition, meal planning, purchase and preparation of food, household management, and laundry. Probation is for 6 months after which, if satisfactory, the homemaker receives full civil service status.

[New York] Housing and Redevelopment Board and the Children's Aid Society: Homemaker Service to Families Scheduled for Housing Relocation. HOMEMAKER SERVICES BULLETIN (American Medical Association), 1963, 4, 2–6 (May).

The purpose of this program was to provide homemaker and casework service to a group of families in a highly deteriorated area of New York City. The families were relocated and the homemaker was used to educate the mothers in household management and the caseworker to help them with their social and personal problems.

North Carolina Department of Public Welfare: HOMEMAKER SERVICE IN PUBLIC WELFARE: The North Carolina Experience. Washington, D.C. (20201): Bureau of Family Services, U.S. Department of Health, Education, and Welfare, 1961. 41 pp. (Processed.)

This pamphlet describes how one State, through its program of public assistance and child welfare, developed homemaker service in a variety of situations for children, the aging, and the disabled.

North Carolina State Board of Public Welfare: HOMEMAKER SERVICES FOR THE AGED IN NORTH CAROLINA: Information Bulletin No. 30. Raleigh: The Board, 1963. 12 pp.

Describes homemaker service for the aged in North Carolina: what it is; how it can be obtained; the role of the caseworker; who are employed as homemakers; what their duties are; the history of the service; and some actual stories about the old people who receive it.

North Carolina State Board of Public Welfare: MANUAL ON HOMEMAKER SERVICE. Raleigh: The Board, 1963. 27 pp. (Processed.)

Describes the development of homemaker service in North Carolina, personnel policies, relationships to other staff, families served, the homemaker on the job, what the homemaker does, and inservice training for homemakers.

North Carolina State Board of Public Welfare: PUBLIC WELFARE HOMEMAKERS ON THE JOB IN NORTH CAROLINA. Raleigh: The Board, 1964. 61 pp.

Homemakers or their supervisors have written the case histories included in this booklet describing services rendered to some of the families or individuals who received homemaker service during the past year in North Carolina. These homemakers are full-time employees of county departments of public welfare with merit system status.

North Carolina State Board of Public Welfare: TELL ME ABOUT PUBLIC WELFARE. Raleigh: The Board, [n.d.]. 26 pp. (esp. p. 22.)

Homemaker services are available for aged and disabled persons and for families with children who need special care for a period of time. Homemakers also train inadequate mothers in child care and home management.

Ohio State Department of Public Welfare: BECAUSE OHIO CARES: Homemaker Services to Preserve Home Life in Later Years. Columbus: The Department, 1961. 26 pp.

To explore the value of home care in both rural and urban areas, Franklin County, including the city of Columbus, and Licking County, a semi-rural county, were selected for a pilot project on homemaker service. This is a report of this project.

O'Neill, Virginia: New York City Program For the Aging. AGING, 1963, No. 102, 1–3; 16 (April).

In November 1962, a typical month, the Department of Welfare granted assistance in 145,000 cases involving 360,000 persons, about 50 percent of whom were aged, blind, or handicapped. It is divided into three Bureaus—Special Services, Public Assistance, and Child Welfare. The programs of the Bureau of Special Services are designed to help individuals become self-supporting through employment or attain the greatest possible degree of self-sufficiency through rehabilitation, homemaker service, group activities, and, when necessary, protected living arrangements. "Currently, 65 homemakers, or 25 percent of our total homemaker staff of 261, are assigned to the aged and service a minimum of 260 older persons weekly."

Pemberton, Annie May: Homemaker Services for the Aged. NORTH CAROLINA PUBLIC WELFARE NEWS, 1962, 3, 5–6; 8; 12 (September). Also THE HOMEMAKER IN PUBLIC WELFARE. Chicago: American Public Welfare Association, 1962. 32 pp. (p. 20–23.)

Describes the North Carolina program and includes case examples. "While many aged recipients of homemaker service need the service only on a temporary basis, there is provision for longer term service and stepping up the frequency as well as the period of time of each of the visits as the individual situation changes."

Prescott, Edith: Homemaker Service Established in Cook County. PUBLIC AID IN ILLINOIS, 1952, 19, 3–5 (December).

This article gives a brief and vivid description of the Cook County program. The training program given one initial group of homemakers is particularly interesting.

Presley, Betty L.: Improved Social Functioning Through Public Welfare Services. SOCIAL CASEWORK, 1962, 43, 409–415 (October).

The Director, Marin County Welfare Department, San Rafael, California, describes the services offered, including the use of homemakers. "The service was initiated in 1959 because of the rapid increase in the cost of convalescent care of the aged and because it was a way to keep some individuals in their own homes instead of placing them in nursing homes. . . . The service is currently being used to prevent out-of-home placement of children as well as adults. The homemakers are employed by the department on a regular salaried basis and as a staff service rather than as a form of assistance. The homemakers are under the supervision of the medical social worker. . . . During the past 3 years, the agency's homemaker program has resulted in substantial savings and demonstrated many intangible values in improving the morale and health of clients."

Preston, Frances: Homemaker Services for Older Persons. [In] SELECTED PAPERS IN CASEWORK. Presented at the National Conference of Social Work, 1951. New York: National Association for Social Workers, 1951. (p. 42–48.)

Presents Cleveland's Family Service Association's homemaker program for the aged, started in 1946. "From our experience we conclude that there needs to be a great increase in this service to older persons in the public welfare agencies."

Restad, Wesley: A Homemaker Program to Strengthen Family Life. PUBLIC WELFARE, 1963, 21, 125–128; 150–151 (July).

The impetus for establishing the homemaker service program described in this article grew out of an effort of a rural community taking a look at its services and then effecting a program to meet better the service needs of its people. The program described relates to one facet of the service which was initiated as a result of the chronic illness, disability, and aging project in Morrison County, Minnesota.

St. Louis Health and Welfare Council: Homemaker-Housekeeper Services for the Chronically Ill. AGING, 1963, No. 90, 12–13 (August).

Homemaker services are being provided by five local agencies. In 1961, these served a total of 242 families of which 192 were young families with children and 50 were families of the chronically ill and aged. The high increase in the older population in the area indicates a need to carefully evaluate and expand service to them.

Shier, Bertha R.: A Community Experience in Providing Homemaker Service. JOURNAL OF JEWISH COMMUNAL SERVICE, 1958, 34, 414–418 (Summer).

Describes the homemaker service of the United Jewish Social Services of Kansas City, Missouri. Caseworkers are responsible for direction of the individual family situations, acting as part of the team with the homemaker.

Snyder, Ruth M.: Homemaker Service of the New York City Department of Welfare. HOMEMAKER SERVICES BULLETIN (American Medical Association), 1961, 2, 2–4 (September).

In describing the New York City program of homemaker service, the methods of operation, requirements for a suitable homemaker, methods of recruitment, training, etc., are discussed.

Snyder, Ruth M.: A Public Agency's Homemaker Service Program. CHILD WELFARE, 1964, 43, 124–127 (March).

"Although homemaker service is by no means the solution for all problems facing families with children, it is a helping service of the first order. Designed essentially to prevent separation of children from their parents, when adopted imaginatively, it can and does meet families' special training and rehabilitation needs and replaces inadequacy and discouragement with a feeling of self-worth that comes with improved mothering and homemaking."

Strait, Suzanne Hart: Homemakers to the Rescue. PARENTS MAGAZINE, 1960, 35, 46–47; 100 (July).

The Princeton, New Jersey, Community Homemaker Service started in March 1959 through the joint efforts of the Princeton Council of Community Services and the "Kiwanis Club." It has grown rapidly in response to the urgent need for it—nearly everyone in town now knows there is an answer to the question that haunts all responsible parents: "Who will take care of the children if mother is suddenly laid low?" The article describes how Princeton does it, as well as comments on similar service elsewhere.

[Tennessee, Knox County] Homemaker Service: As the Client Sees It. TENNESSEE PUBLIC WELFARE RECORD, 1961, 24, p. 11 (February).

From the standpoint of families receiving the service, Knox County's homemaker program is a success. Excerpts are given from letters received from these families.

[Tennessee, Knox County] Homemaker Service: As the Committee Sees It. TENNESSEE PUBLIC WELFARE RECORD, 1961, 24, p. 12 (February).

The sponsoring committee was quickly convinced that homemaker service was a service that could greatly benefit Knox County. Describes the committee's contribution to the program.

[Tennessee, Knox County] Homemaker Service: As the Homemaker Sees It. TENNESSEE PUBLIC WELFARE RECORD, 1961, 24, 8–9 (February).

A composite report showing the value of the service from the view of the homemakers.

Trecker, Audrey R. and Trecker, Harleigh B.: Establishment of Homemaker Services. [In] HANDBOOK OF COMMUNITY SERVICE PROJECTS. New York: Association Press, 1960. 519 pp. (p. 464–465.)

Homemaker service keeps the family together during periods of involuntary breakdown.

U.S. Department of Health, Education, and Welfare: Homemaker Service, U.S.A. Bureau of Family Services, 1964. [In Press.]

Addressed to State and local welfare agencies, describes the services and support of a community homemaker services program.

Watkins, Elizabeth G.: Short-Term Homemaker Service. CHILD WELFARE, 1958, 37, 30–31 (May).

Discusses the problems encountered by the Cook County, Illinois, Department of Welfare in the administration of homemaker service to families for brief periods of time.

Watkins, Elizabeth G.: So That Children May Remain in Their Own Homes: Homemaker Service Strengthens Aid to Dependent Children Program. THE CHILD, 1953, 18, 25–29 (October).

The author considers what homemaker service can mean to families and the way it operates in the Cook County Department of Welfare (Chicago, Illinois).

Whitman, Howard: Brightening Old Age in Houston. TODAY'S HEALTH, 1963, 41, 52–53; 60–62 (September).

Reports a visit with a homemaker supervisor who reported on what homemakers could do for old people by going into homes for as little as one day a week.

Williams, Doris E.: A Homemaker Program at the Cross Roads. [In] THE HOMEMAKER IN PUBLIC WELFARE. Chicago: American Public Welfare Association, 1962. 32 pp. (p. 24–32.) Also HOMEMAKER SERVICES BULLETIN (American Medical Association), 1962, 3, 2–5 (September).

"This report is presented in the hope that it will encourage rural child welfare agencies with their limited resources to experiment with a modified homemaker program as a part of their function of protective services to children." The locale of the program is Hidalgo County, Texas.

ROLE OF PROFESSIONAL WORKERS

Home Economists and Nutritionists

Hanchette, Helen W.: Home Economics as a Working Force in Family Case Work. THE FAMILY; 1921, 2, 111–116 (July).

Describes the start of the visiting housekeeper service of the Cleveland Associated Charities. ". . . our development is founded upon one particular theory which has been conclusively demonstrated, that is, that in addition to specialized training in household administration, home economists should have casework training so that they may recognize the delicacy of dealing with people and the character complications often involved in what may appear on the surface as a simple problem of food preparation."

Kaufman, Mildred: The Role of Nutrition in Home Care and Homemaker Programs. AMERICAN JOURNAL OF PUBLIC HEALTH, 1962, 52, 55–60 (January).

The role of nutrition in homemaker service is defined and its importance emphasized in the training of homemakers, both as to normal and special nutritional needs of families. Mentioned is a survey made in April 1959 of 153 homemaker agencies to learn how trained home economists contribute to homemaker service. Brief mention is made of Meals-on-Wheels.

Morlock, Maud: Supervised Homemaker Service. JOURNAL OF HOME ECONOMICS, 1942, 34, 77–80 (February).

Home economists are in a strategic position to contribute to the development of homemaker services through interpreting the need for such services to the community, by assisting committees concerned in planning such programs, and by offering their services in a consultative capacity to social agencies..

Preston, Natalie D.: Homemaker Services. JOURNAL OF HOME ECONOMICS, 1963 55, p. 540 (September).

A homemaker services committee was appointed by the American Home Economics Association in June 1961. A folder, *The Home Economist Looks at Homemaker Service,* has been distributed. Other projects are underway on the role of home economists in homemaker service. Material is also underway on the training of homemakers.

Preston, Natalie D. and Younge, Henri Mae: Homemaker Service and the Home Economist. JOURNAL OF HOME ECONOMICS, 1960, 52, 734–736 (November).

The trend toward homemaker service for adults as well as for families with children requires a revision in the concept of a homemaker as a "substitute mother" and flexibility in the use of existing programs. It means new and different skills for the homemaker and a change in her role. Homemaker service provides a natural setting for the professionally trained home economist, equipped as she is to share her skills with the homemakers who serve the families directly.

Nurses

Ross Laboratories: To Maintain Family Life: Homemaker Service. CURRENTS IN PUBLIC HEALTH (Ross Laboratories), 1962, 2, 1–4 (May).

The nurse's load in a home may be lightened when home care duties are assumed by a homemaker. Also gives a brief history of the development of the service.

Stroup, Leora B.: Home Nursing Aides. AMERICAN JOURNAL OF NURSING, 1940, 40, 255–260 (March).

The Detroit experiment is not attempting to train substitutes for graduate registered nurses. What it aims to do is to provide safe nursing care of all types, including that given by a group of home nursing aides who are trained to bring comfort and happiness and order to homes where illness has disrupted the daily routine of living. "These homes are in need of a person who can manage the home and do the necessary work there between the visits of the visiting nurse. We realized there was need for mature but trained persons to go into homes disrupted by illness as mother substitutes."

Physicians

London, Isabel M.: The Role of the Physician in Visiting Homemaker Service. [In] SUPPLEMENT TO NEW JERSEY PUBLIC HEALTH NEWS, July 1961. Trenton: New Jersey State Department of Health, 1961. 43 pp. (p. 20; 29.)

Homemakers must work closely with the attending physician. No homemaker should be assigned a home with a mentally ill patient without having been carefully selected and oriented.

Psychiatrists

Aldrich, C. Knight, M.D.: Homemaker Service: Adjunct in Mental Hygiene and Socio-psychiatric Rehabilitation. PROGRESS IN PSYCHOTHERAPY, 1959, 4, 159–162.

Homemaker service can be a useful tool in preventive social psychiatry whenever the mother of small or adolescent children is incapacitated for any reason. It is of particular value as an adjunct to treatment and in the rehabilitation of a mother with psychiatric illness.

Aldrich, C. Knight, M.D.: Homemaker Service in Psychiatric Rehabilitation. AMERICAN JOURNAL OF PSYCHIATRY, 1958, 114, 993–997 (May).

Psychiatrists should find homemaker service a new and valuable adjunct in the treatment and rehabilitation of many patients.

Social Workers

Field, Minna: The Role of Medical Social Work in a Hospital Home Care Program. JEWISH SOCIAL SERVICE QUARTERLY, 1947, 24, 103–111 (September).

Describes the home care program of the Montefiore Hospital in New York City and the place of medical social work in it. There is some consideration of the use of homemakers and housekeepers in the program.

[Tennessee, Knox County] Homemaker Service: As the Caseworker Sees It. TENNESSEE PUBLIC WELFARE RECORD, 1961, 24, 6–8 (February).

Homemaker service is not a shortcut for the caseworker, but it does enable the worker to use time that is available to such advantage that service is increased with the ultimate result of a happier, more firmly established family group.

U.S. Department of Health, Education, and Welfare, Public Health Service: Casework and Homemaker Services. [In] HOMEMAKER SERVICES IN THE UNITED STATES, 1958: Reports of Preconference Study Groups. Washington, D.C. (20201): Public Health Service, 1959. 115 pp. (p. 74–81.) (Processed.)

Casework service has proved its value as an integral part of homemaker service in social agencies in helping the family and agency determine the need for the service; in the employment, training, and supervision of the homemakers; and in helping the family solve the problems troubling them.

Children and Families

Boggs, Marjorie H.: Homemaker Service Helps a Motherless Family. Part 1: THE CHILD, 1950, 14, 175–178 (May); Part II: THE CHILD, 1950, 14, 194–195 (June–July).

Two-part article defining, illustrating, and discussing homemaker service given by a social agency to families when the mother is away from home permanently or for an indefinite period of time.

Boggs, Marjorie H.: Some Treatment Implications in the Use of Homemaker Service. THE FAMILY, 1943, 24, 107–112 (May).

The Cleveland family agency shares its philosophy and experience in the placement of homemakers to care for children of widowers or where the family is stunned by what has happened to the mother. Policies, problems, and advantages of the children remaining in their own home are presented.

Fitzsimmons, Margaret R.: Homemaker Service As a Method of Serving Children. [In] SELECTED PAPERS IN CASEWORK. Presented at the National Conference of Social Work, 1951. New York: National Association for Social Workers, 1951. (p. 32–41.)

"Homemaker service in sustaining the family is carrying out not only the aims of modern social welfare programs in prevention and rehabilitation but those of medical care and mental health programs as well."

Goldstein, Carol: The Father and the Care of Motherless Children. [In] Some Special Eligibility Problems in the Illinois Aid to Dependent Children Program. SOCIAL SERVICE REVIEW, 1944, 18, 205–223 (June). (esp. 207–208.)

Discussion of the problems and emotional implications in situations where the mother is out of the home, leaving full responsibility to the father. "In some instances, it seems wholly desirable to trust to the father's care in this situation, but in general the care of the home and children is too much for him to carry alone. . . . He cannot give attention both to the home and to the children, and he should have the services of a housekeeper."

Gordon, Henrietta L.: Homemaker Service as a Children's Casework Service. CHILD WELFARE, 1955, 34, 13–19 (January).

This article discusses some fundamentals in adapting casework skills to homemaker service for children.

Johnson, Nora Phillips: Homemaker Service for Children with Psychiatric Disorders. CHILD WELFARE, 1961, 40, 18–22; 29 (November).

"The unique characteristic of homemaker services in family diagnosis and treatment of emotional disturbances is its placement of a helping person in the child's actual living situation. Advancing treatment through a non-professional person is not new, particularly to caseworkers in foster care. In homemaker service the interlocking roles of professional caseworker and semi-professional homemaker, in cooperation with doctors, nurses and psychiatrists, hasten the acquisition of knowledge and understanding of each family member and of the total family body. Hence choices of treatment can be more wisely determined, initiated earlier, or changed on the basis of daily observation of the family in action."

Jones, Bessie Mae: A Demonstration Homemaker Project. CHILD WELFARE, 1964, 43, 133–136 (March).

Describes the homemaker project of the New Orleans Child Welfare Division of the Louisiana Department of Public Welfare. The purpose of the service was to maintain and strengthen families, but offering it reaffirmed the conviction that education of the parents is an important part of the casework job.

Kozier, Ada: Casework with Parents of Blind Children. SOCIAL CASEWORK, 1962, 43, 15–22 (January).

Casework with the parents of blind children integrates an educational approach with casework counseling. "In some cases, homemakers have been used as a means of breaking the cycle of conflict and negative interaction that

results from the strain in family relationships and the child's reaction to it. The homemaker not only can relieve an overburdened mother of some of the physical strain of caring for the child but also can assuage the mother's guilt by confirming the reality of the mother's difficulties. As a substitute mother to the blind child, she may bring about enough improvement in his disturbed behavior to relieve some of the family strain."

Lenroot, Katharine F.: Current National Developments and Problems for Public Welfare Services for Children. THE CHILD, 1945, 9, 103–106 (January).

In this article, Miss Lenroot speaks of the primary responsibility of welfare departments to make available certain services and facilities, including homemaker, for children of working mothers for whom other services are not sufficient or available elsewhere.

Lundberg, Emma Octavia: Homemaker Service. [In] UNTO THE LEAST OF THESE: Social Service for Children. New York: D. Appleton-Century Co., Inc., 1947. 424 pp. (p. 296–299).

Brief history of organized homemaker services and of the original National Committee on Homemaker Service.

McElroy, Ruth A.: Wartime Need for the Day Care of Children. THE FAMILY, 1942, 23, 123–129 (June).

Supervised homemaker service is recommended as one method for meeting the needs of children for day care in wartime.

Elderly and Chronically Ill

Affleck, Jane F.: Family Agency Service to Older People. SOCIAL CASEWORK, 1957, 38, 171–176 (April). (esp. 174–175.)

Experience has shown that for the majority of the elderly, part-time homemaker service is appropriate.

Burr, James J.: PROTECTIVE SERVICES FOR OLDER PERSONS: A Guide for Public Welfare Planning. Public Assistance Report 54. Washington, D.C. (20402): U.S. Government Printing Office, 1964. 36 pp. (20¢.)

Homemaker service is described as valuable in the social protection of older people. "Homemaker service is complementary to casework service; it supports and supplements social casework itself, and can provide the required social protection to older persons. For example, homemakers can assist older clients by helping them with their physical care problems, helping them get needed exercise, and keeping a watchful eye on those who tend to wander away from home. The skilled homemaker also is able to observe and report indications of increased debility. The homemaker offers to homebound older persons the greatly needed opportunity for social interaction: someone to talk to, someone who answers, someone who is interested and cares about their problems."

Davis, Gertrude R.: Visiting Housekeeper Service for the Aged. SOCIAL CASEWORK, 1948, 29, 22–27 (January).

Three case histories are used to illustrate the value of a housekeeper service for the aged. The qualifications of the housekeeper caring for the old person are also considered.

Dornenburg, Eleanor B.: Homemaker Service for the Aging. CATHOLIC CHARITIES REVIEW, 1953, 37, 120–122 (May).

Discusses the differences between a homemaker, a practical nurse, and a domestic.

Gorman, Mary: Because Ohio Cares. Abstract of a pamphlet, "Because Ohio Cares: Homemaker Services to Preserve Home Life in Later Years." [In] THE HOMEMAKER IN PUBLIC WELFARE. Chicago: American Public Welfare Association, 1962. 32 pp. (p. 11–19.)

To the older adult, home may be his last tangible hold on the feeling of personal security. The pilot project described here demonstrates the many advantages homemaker services offer for older people.

Kramer, Gertrude W.: Geriatric Homemaker Service: Development and Present Scope. HOMEMAKER SERVICES BULLETIN (American Medical Association), 1963, 4, 1–5 (March).

The Jewish Family and Children's Service, Boston, in dealing with an elderly individual, an elderly couple, or a chronically ill person was cognizant of the all-pervading loneliness, the fear of separation, and the loss of confidence and insecurity in these clients. Eight years ago, an awareness of these factors resulted in the establishment of a homemaker service. Homemaker service may be extended on an emergency, short-term basis in cases of convalescence, or where there is need for an interim plan; or on a long-term basis where persons need help in maintaining themselves in their homes.

MacRae, Marjorie: Housekeeping Service Would Shorten Waiting Lists for Nursing Homes. WELFARE REPORTER (New Jersey Department of Institutions and Agencies), 1948, 11, 9–10 (April).

Many elderly persons can remain at home instead of entering nursing homes or institutions for the aged if they have part-time help with housework. Establishment of housekeeper service must be based on careful estimates of needs and resources in a community, and the service must be carefully supervised to insure success.

Morlock, Maud: Keeping Families Together. CHRONIC ILLNESS NEWS LETTER (Commission on Chronic Illness), 1951, 2, p. 3 (November).

Discussed are the needs of the chronically ill for homemaker service and its essential fundamental characteristics.

[Pennsylvania State Commission] News of State Commissions. AGING, 1962, No. 90, p. 8 (April).

Six Pennsylvania counties have received nearly $60,000 from the State Department of Public Welfare to develop services for keeping older people out of institutions. The money was provided as part of a new program started last year to build a broad range of community services, including day care centers, homemaker-housekeeper services, counseling and referral services, and foster home family placement. The program also calls for financial assistance in hiring welfare workers in these counties. To be eligible for the funds, the counties must match at least part of the money they receive from the State.

President's Council on Aging: THE OLDER AMERICAN. Washington, D.C. (20402): U.S. Government Printing Office, 1963. 73 pp. (esp. p. 38.)

A brief description is given of what the homemaker does for the aged, extent of their service, use of Federal funds.

Preston, Frances: Homemaker Service. [In] Serving the Older Person: A Multiple Approach by the Family Agency (A Panel Discussion). SOCIAL CASEWORK, 1954, 35, 299–308 (July). (p. 304–306.)

Homemaker service enables older persons to remain in their own familiar surroundings for a longer period than might otherwise be possible. The service for the older person needs to be flexible. In working with older people, homemakers need the support of casework.

Waterhouse, Alice M.: The Growing Need for Homemaker Service. PUBLIC HEALTH NEWS (New Jersey State Department of Health), 1957, 38, 120–124 (April).

Homemaker service is seen as a resource for the care of the chronically ill. "If we are to improve care of the long-term patient, greater attention must be focused on providing coordinated services to the increasing number of disabled persons at home."

Home Care

American Medical Association, Council on Medical Service: Followup Home Care Workshop. HOMEMAKER SERVICES BULLETIN, 1962, 3, 1–6 (September).

Reports followup activities to a regional workshop on home care held in Chicago, May 1961.

American Medical Association, Council on Medical Service: Homemaker Guide in North Carolina. HOMEMAKER SERVICES BULLETIN, 1963, 4, p. 1 (November).

"The duties and responsibilities of the homemaker are outlined in detail in the 'Guide to the Establishment of a Home Care Program' published by a joint committee of the State medical society, State nurses association, and State board of health of North Carolina."

Bloom, Murray Teigh: One Answer to Our Hospital Shortage. WOMAN'S HOME COMPANION, 1948, 75, 4; 187–188. Same abridged, READER'S DIGEST, 1949, 54, 77–79 (January).

Bluestone, E. M., M.D.: Home Care: An Extramural Hospital Function. SURVEY MIDMONTHLY, 1948, 84, 99–101 (April).

The Director of the Montefiore Hospital, New York, states that "only by a combination of hospital and home care under the same overall medical management can the hospital employ its unique facilities in the field of scientific medicine to best advantage. And this it can do at less cost to the community in the long run." In describing how this is done, housekeeping service is listed as one of the essentials.

Keller, Martin D. and Smith, Charlotte E.: Meals-on-Wheels: 1960. GERIATRICS, 1961, 16, 237–247 (May).

This article reviews the status of Meals-on-Wheels in the United States in 1960. The authors state: The object of this program is "to increase the independence of the recipient. A program of catering to persons unable to prepare meals for themselves and unable to obtain help in doing so can be the spur to the development of housekeeping services; improvement of housing; introduction of recreational and occupational therapy into the home; and provision of medical care, nursing care, physical therapy, and other essentials of home care."

Littauer, David; Flance, I. Jerome; and Wessen, Albert F.: Home Care: Summary of a Comprehensive Study. HOSPITALS, 1961, 35, 41–44 (January).

"Organized or coordinated home care is defined as a phase of comprehensive medical care given to homebound patients not needing hospitalization. The essential elements of home care are medical, nursing and social services and inpatient facilities for those requiring hospitalization. Almost as essential are such elements as physical therapy, homemaker services, etc. . . . Community based programs tend more often to emphasize frequent use of physical therapy and housekeeping services."

Ohio State Medical Association: Suggestions for a Community Home Care Program. CHRONIC ILLNESS NEWS LETTER (Commission on Chronic Illness), 1962, 13, [n.p.] (February).

The Committee on Care of the Aged, Ohio State Medical Association, published a suggested guide for communities desiring to establish a home care program. Outlined are some basic principles involved in home care and the components of a community based program. Homemaker service is listed as an essential.

U.S. Department of Health, Education, and Welfare, Office of Vocational Rehabilitation: THE POTENTIAL OF VOCATIONAL REHABILITATION SERVICES IN A COMMUNTY HOME CARE PROGRAM: San Francisco Home Care Program, 1955–1958, Final Report. Washington, D.C. (20201): Office of Vocational Rehabilitation, [n.d.]. 48 pp.

Although the emphasis is on home care in a context of vocational rehabilitation, the potential of housekeeping aides in this connection recurs in many relationships.

U.S. Department of Health, Education, and Welfare, Public Health Service: National Voluntary Health Agencies and Homemaker Services. [In] HOMEMAKER SERVICES IN THE UNITED STATES, 1958: Reports of Preconference Study Groups. Washington, D.C. (20201): Public Health Service, 1959. 115 pp. (p. 99–108.) (Processed.)

The term "home aide" rather than the term "homemaker" more realistically describes the person needed to assist in the care of the chronically ill or aged individual. National health agencies and their constituent groups should join with local planning groups in order to promote home aide services.

SERVICES IN OTHER COUNTRIES

Affleck, James W.: Social and Preventive Geriatrics: A Survey of Medico-Social Problems Connected with Health and Illness in Later Life. GERIATRICS, 1948, 3, 245–255 (July–August).

The Deputy Medical Superintendent, Municipal General Hospitals, Leeds, England, gives a short historical review of British Welfare Services for the Aged and material on Medico-Social Services, including the use of domestic help or more commonly referred to as "home helps."

American Medical Association, Council on Medical Service: Home-Help to Aging in Sweden. HOMEMAKER SERVICES BULLETIN, 1961, 2, 2–3 (March).

Home help services to older persons and invalids in Sweden were provided in 1959 to 50,500 persons in 710 cities and communities. These services had their beginning in the early 1950's when the Red Cross at Upsala and a number of other communities inaugurated programs to provide housekeeping assistance and elementary sick care to older persons who wished to remain at home.

[Australia] Emergency Aids. [In] SOCIAL CONDITIONS, SOCIAL WELFARE SERVICES: Official Year Book of New South Wales. Sydney: V. C. N. Blight, 1959. 1,128 pp. (p. 459.)

Describes the Housekeeper Emergency Service "Operating in the Sydney metropolitan area and in a number of county centers. It provides help where the householder is unable to carry out normal household duties because of sickness or other emergency. The service is provided for a limited period, except in special circumstances such as where a mother has had tuberculosis or poliomyelitis. The amount charged for the service depends upon individual family circumstances. Home aides as distinct from housekeepers, are available for aged persons and for certain cases of particular need to perform heavy work, such as washing and ironing, for one or two days a week."

[Australia] "Home Helps" for Australian Families. THE CHILD, 1948, 13, 70–71 (November).

In each of Australia's six States, some household help can be had by mothers of young children when they are ill, or having a baby, or when some other emergency makes it impossible for them to manage their households.

Bacon, L. J., M.D.: Home Helps and the Future. (Extract from an address by the Deputy County Medical Officer of Health, Hampshire, England.) JOURNAL OF THE INSTITUTE OF HOME HELP ORGANISERS (British), 1963, issue 24, 18–20 (December).

The future pattern of the hospital services is bound to have its impact on the home help service. The patient treated at home by his general practitioner instead of being admitted to the hospital is the very one who is likely to need home help and "the same applies to the patient discharged earlier from the hospital—whether it be a maternity case or any other."

Beauchamp, A.: Domiciliary Midwifery Services: The Future. ROYAL SOCIETY OF HEALTH JOURNAL (British), 1960, 80, 206–208 (May–June).

Over England as a whole, some 35 percent of all births take place in the home. "The problem of home helps is by no means solved, either in quantity or quality of service. . . . While these women are there [in the home], they are not there long enough. . . . I believe that many more women would want to have their babies at home if sufficient home helps were available."

Beveridge, Sir William: 344. Household Help in Sickness. [In] SOCIAL INSURANCE AND ALLIED SERVICES. New York: Macmillan, 1942. 299 pp. (p. 132.)

"The comprehensive health service should include means of giving household help to housewives, where this appears to be necessary to make possible their most effective medical treatment."

Canadian Welfare Council: THE TRAINING OF VISITING HOMEMAKERS. Ottawa, Ontario: The Council, 1963. 8 pp.

This is an outline of a minimum training course for visiting homemakers and was prepared by the Committee on Homemaker Services, Family and Child Welfare Division, the Canadian Welfare Council. The requirements for training homemakers set out in this booklet are basic for any training course, long or short.

Canadian Welfare Council, Research Branch. THE CANADIAN HOMEMAKER: A Survey of Agency Personnel Practices. Ottawa, Ontario: The Council, 1960. 28 pp. (50¢.) (Processed.)

This report is based on a survey of homemaker practices in 41 Canadian agencies—4 provincial agencies, 9 family service agencies, a children's aid society, and 27 Red Cross branches. No effort has been made to draw up personnel standards. Although mimeographed, it can be obtained from the Council.

Chalke, H. D.: The Aged in Their Own Homes: A Further Survey. BRITISH MEDICAL JOURNAL (British Medical Association), 1957 [n.v.], 694–696 (September 21).

"In 1950 in two metropolitan boroughs of London, Lewisham and Camberwell, a preliminary survey was made of households that were being assisted

by the domestic help service because of general illness. The survey aimed at obtaining a general picture of the severity of the problem of home care of the aged and chronic sick. An account of the findings (by Chalke and Benjamin, 1951) stressed the need to provide domestic assistance before the old people living alone became bed ridden and helpless, and before infirmity, aggravated by lack of assistance, had become irreparable. . . ." Later surveys undertaken in 1951, 1953, and 1956 underlined the findings of the first study. Their conclusion is: "The Home Help Service is playing a part which cannot be measured in terms of hours of work, or domestic duties performed—it goes far beyond that, and no statistical survey can give a complete picture of the assistance and companionship it provides."

Chalke, H. D. and Benjamin, B.: The Aged in Their Own Homes (From the Public Health Department, London County Council). THE LANCET, 1953, 264, 588–590 (March 21). See also BRITISH MEDICAL JOURNAL (British Medical Association), 1957 [n.v.], 694–696 (September 21) for a more detailed description of these surveys.

A brief report of a preliminary survey made in 1950 in Lewisham and Camberwell of households assisted by the domestic help service because of illness. A followup study was made in the same area and on the same subject in 1951. Details of their findings are given in the article.

Daley, Sir Allen: The British Home Help Service. AMERICAN JOURNAL OF NURSING 1952, 52, 991–993 (August).

A physician who has known Home Help Service since 1920 when he was a health officer in a seaport town reports on his experience with it and the growth of its use during the years. He says: "There is no doubt that this service meets a need and its existence often enables persons who otherwise would have to be admitted to a hospital for the chronic sick to remain at home."

Donahue, Wilma: Chapter V, Housing and Community Services. [In] Burgess, Ernest W. [Editor]: AGING IN WESTERN SOCIETIES. Chicago: University of Chicago Press, 1960. 492 pp. (p. 143–154.)

For approximately the last 10 years, most of the countries of Western Europe and Great Britain have been developing systems of interrelated and coordinated services to prolong the period of usefulness, health, and independent living of old people. Among these services are home helps. Gives material on home helps employed in the various countries, fee rates, recruitment, training, salaries, and supervision. The section concludes that "the recognition of the middle-aged woman as a person whose natural experiences as a mother and housewife especially fit her to undertake the role of home helper is serving a dual purpose—the older people receive badly needed services and the middle-aged woman finds a new and meaningful role when her duties as a parent are finished."

Doodson, Norman: Services for the Aged in Britain. CANADIAN WELFARE, 1964, 40, 23–28 (January–February). (esp. p. 26.)

Many old people are not physically or mentally capable of living completely independent lives and need some help either daily or for two or three days a week. To meet this need, local authorities employ domestic helps to visit different homes as directed, to clean, to do the shopping, and to cook the meals. This service has developed rapidly. The number of helps employed by local authorities increased from 30,000 in 1953 to over 55,000 in 1962. The number of elderly or chronic sick assisted each year grew from 100,000 to 265,000.

Editorial: MOTHER AND CHILD, 1948, 18, 204–205 (January).

"Home help" in Great Britain and "domestic help"—how and to whom provided with comments on provision for "home helps" in Sweden and brief comment on the National Health Service Act of Great Britain.

[Finland] Help to Families: Homemaker Schools. INTERNATIONAL CHILD WELFARE REVIEW, 1957, 11, 50–51.

"At present there are just over 1,000 homemakers working in the field; the estimated need is for 2,000. It is emphasized that the task of the homemaker is not only to help with the housework, but to guide and help the housewife to organize her domestic work and the care of her children. . . ." A special law passed in 1951 guarantees State subsidies to homemaker institutes. Earlier history of the program is included in the article.

Grant, Christine: The Development of the Domestic Help Service. ROYAL SANITARY INSTITUTE JOURNAL, 1955, 75, 235–243 (March).

A survey of cases to whom assistance had been given in Essex, England, by the domestic help service since 1950 showed the following categories: maternity, acute sick, tuberculosis, chronic sick, aged non-sick, and others.

[Great Britain] British Health Act: [In] The Effects of Recent Social Legislation on the Health of Mothers and Children. MOTHER AND CHILD, 1949, 20, 122–138 (August). (p. 127–128.)

The home help service in Glasgow has proved one of the most satisfactory and repaying services under the new legislation. Glasgow has over 650 helps and has no difficulty in getting recruits. Over 200 attend maternity and child welfare cases, and the others are engaged mainly in the care of cases of acute illness or the aged and chronic sick.

[Great Britain] British Institute of Home Help Organizers: AN INTRODUCTION TO HOME HELP SERVICE OF THE UNITED KINGDOM. Nottingham, England: The Institute, 1963. 6 pp.

Home helps are mainly recruited from "amongst married women who are already experienced in the domestic tasks of cleaning, cooking, and general housewifery." Most local authorities employ a high percentage of part-time workers, as this "enables women with families to combine a home help job with running their own homes. Home helps are provided for households where such help is required owing to the presence of any person who is ill, lying in, an

expectant mother, aged, mentally defective or a child not over compulsory school age."

[Great Britain] Domestic Help Services Progress During the Year. [In] REPORT OF THE MINISTRY OF HEALTH FOR THE YEAR ENDING DECEMBER 31, 1960. London: Her Majesty's Stationery Office, 1960. 269 pp. (p. 105–107.)

"There was further increase during the year of about 8 percent in the total number of households which received assistance from the domestic help service which rose from 289,500 in 1959 to 312,003 in 1960. . . ." Whole-time home helps came to 2,528; part-time, 46,786—a total of 49,314. "The work of the home help is very varied, often difficult, and always rewarding. Care continues to be taken in recruiting the kind of person who can provide this high level of service required. There is evidence of the satisfaction it can give, and the sense of vocation which these workers possess, in the readiness of many home helps to give additional service, particularly to the elderly, beyond that for which they are paid. Some authorities are now recognizing continued devoted service by giving long service medals to home helps who have served for more than 10 years. . . ."

[Great Britain] Domestic Home Help Service. [In] Part I. The National Health Service. REPORT OF THE MINISTRY OF HEALTH. London: Her Majesty's Stationery Office, 1958. 254 pp. (p. 99–100.)

Experience has shown that one of the most important requisites for a satisfactory service is the appointment of a good administrator. "Domestic help organisers have the responsibility for recruiting staff of the right caliber, of training them and of inspiring them with their own sense of taking part in a vital public service."

[Great Britain] Home Help. THE LANCET, 1944, 248 858–859 (December 30).

Comments on plans for the extension of home help service in a wide variety of situations through a greater extension of power to local authorities by the government. Women will be allowed to leave even munition making to take up full-time work as home helps. "This is a service which, well begun now, may remain as a benefit in time of peace."

[Great Britain] Home Help Service. [In] Part I. The Health and Welfare Service. REPORT OF THE MINISTRY OF HEALTH. London: Her Majesty's Stationery Office, 1962. 250 pp. (p. 85–88; 229.)

"Earlier reports have commented on the rapid expansion of the home help service, and on the significant social changes affecting the needs it serves and the modes of its development to meet them." Figures are given for each year since 1953. "The number of organisers and home helps have increased and that while most organisers work whole-time, the proportion of part-time home helps increased from 89 percent in 1953 to 95 percent in 1961." The number of cases receiving home help service in 1953 was 198,789 and in 1961, was 328,275. In 1961, the percentage of circumstances in which service was given was: old age and chronic sickness, 76 percent; maternity, 11 percent; tuberculosis, 1 percent;

other, 12 percent. Information is given on cost. Examples are given in Middlesex of the interest shown by the husbands of home helps.

[Great Britain] Home Help Service. [In] Part I. The National Health Service. REPORT OF THE MINISTRY OF HEALTH. London: Her Majesty's Stationery Office, 1950. 228 pp. (p. 48.)

"Section 29 of the National Health Service Act, 1946, refers to the provision of 'domestic help,' but the provisions which it authorizes has come to be generally known as the 'home help service.' During the year, the service expanded vigorously, particularly in rural areas, although these presented many difficulties of organization. Some rural counties employed a nucleus of mobile home helps, ready if necessary to spend nights away from their own homes."

[Great Britain] Home Help Service. [In] Section III. Local Health Authority Services. REPORT OF THE MINISTRY OF HEALTH. London: Her Majesty's Stationery Office, 1951. 119 pp. (p. 48.)

[Great Britain] Home Helps. [In] Part I. Health and Welfare Services. REPORT OF THE DEPARTMENT OF HEALTH FOR SCOTLAND, 1961: Presented to Parliament by the Secretary of State for Scotland by Command of Her Majesty. Edinburgh: Her Majesty's Stationery Office, 1962. 83 pp. (p. 43.)

"The equivalent of 3,895 home helps were employed compared with 3,840 during 1960. Many Medical Officers of Health claim that their home help services keep people, especially old people, at home who would otherwise have to be accommodated in hospitals." A table is given showing the kinds of illness and other conditions among the people receiving home help service in Glasgow.

[Great Britain] Home Helps. THE LANCET, 1946, 250 (No. 6408), p. 940 (June 22).

A brief statement on home help service in England. ". . . many services of the kind are merely a hope of things to come, rather than a living body of women able to clean a house and feed a family. The Minister of Health has set himself . . . to woo home helps from their lairs and has had several schemes investigated in the hope of finding the secret of success."

[Great Britain] Home Helps. THE MEDICAL OFFICER (London), 1954, 92, 158–159 (September).

Over 25,000 home helps are employed in England and Wales—a seventh of them on full-time employment. Critical comments, both positive and negative, are made about the program.

[Great Britain] Home Helps. MOTHER AND CHILD, 1939, 10, p. 336 (December).

The Borough of Eccles (Lancashire) England reports on its use of home helps over a 15-year period.

[Great Britain] National Baby Welfare Council: Home Helps and Their Jobs. MOTHER AND CHILD, 1950, 21, 22–23 (April).

Extracts from some prize winning essays submitted by practicing homemakers in a national contest.

[Great Britain] National Baby Welfare Council: My Job. (An essay which won first prize in the competition for home helps organized by the Council.) MOTHER AND CHILD, 1950, 20, p. 343 (March).

Recounts the experiences of a home help during and after the war.

[Great Britain] The National Institute of House Workers in Great Britain. INTERNATIONAL LABOUR REVIEW, 1946, 53, 421–422 (January–June).

The British Government has decided to set up a National Institute of House Workers as recommended by the Ministry of Labour and National Service. "In cooperation with the employment exchanges, the Institute will place such workers either with employers or with the expanding Home Helps Service."

[Great Britian] Plan for the Post War Organization of Domestic Employment. INTERNATIONAL LABOUR REVIEW, 1945, 52, 536–537 (July–December).

"The British Ministry of Labour and National Service has recently published a White Paper containing the results of a survey of the schemes for the post-war organization of private domestic employment received by the Ministry and recommendations on future plans, made after consultation with appropriate individuals and associations. The inquiry was initiated in March 1944." A National Institute of House Workers would be established. It also recommended extension of the home help scheme.

Höjer, Karl J.: SOCIAL WELFARE IN SWEDEN. Stockholm: The Swedish Institute, 1949. 154 pp. (esp. p. 120–121.)

Domestic aid service is included as a part of the chapter on social casework. "This service is designed to relieve the critical situation that often arises when the mother of small children is temporarily incapacitated. It sends a trained home assistant to take charge of the household during the emergency . . . she is a substitute housekeeper." Domestic aid has proven an exceedingly valuable service and represents "preventive social welfare" in the best sense of the term. ". . . Both the government and the county councils subsidize the service which was inaugurated in 1944, and is expanding rapidly. In 1948, the government granted funds to maintain a staff of 2,500 home assistants."

Home Aide Services. [In] Facilities for Women Workers with Home Responsibilities. INTERNATIONAL LABOUR REVIEW, 1951, 63, 287–301 (March). (p. 290–292.)

"Home aide services are known to be functioning to a greater or lesser extent in Australia, Belgium, Canada, Denmark, Finland, France, New Zealand, Norway, Poland, Sweden, Switzerland, the United Kingdom, and the United States. There seems to be a general tendency for the movement to develop from a private philanthropic initiative for the benefit of a limited number of families into a social service organized and controlled by public authorities, financed or

subsidized from the public funds, and, as far as the size of the service permits, available to all on the basis of specified needs." Brief comments are given on such things as standards, circumstances under which given (illness, etc.), in some countries defined by legislation, duties of home aides and payment. "The provision of home aides is a recent service which is still in the early stages of development. Consequently, few statistics are available to show its extent in the various countries." However, some figures are given. At present, the demand exceeds the supply in most countries.

Home Aides Service. INTERNATIONAL LABOUR REVIEW, 1947, 56, 39–46 (July).

Homemaker services in Great Britain, New Zealand, Sweden, Denmark, Australia, and Canada are described. Working conditions, wage standards, and the significance of homemaker service in raising the standards and social status of domestic service workers are stressed.

Home Help. CHILDREN, 1954, 1, p. 158 (July–August).

Description of a home help development by the London (England) County Council's Public Health Department started in December 1953 which enables children to remain in their own homes when temporarily deprived of care of parents or guardians.

International Labour Office: Facilities for Women Workers with Home Responsibilities. INTERNATIONAL LABOUR REVIEW, 1951, 63, 287–301 (March). (esp. p. 290–292.)

"The institution of home aid services to help the housewife in times of emergency and special hardship is a social measure which is receiving increased official support in many countries and which directly benefits the woman who combines motherhood with employment. . . ." The duties of home aides usually cover housework, shopping, and the care of children, and sometimes include care of the sick.

Johansson, B. A.: Domestic Workers in Sweden: The Social Home Aid Service. INTERNATIONAL LABOUR REVIEW, 1953, 67, 364–365 (April).

For 10 years, Sweden has had a corps of home aides in the service of the local authorities (paid in part by a state subsidy) whose function it is to help where the housewife is ill or a person living alone is unable, on account of sickness or age, to manage the household work. The number of full-time home aides (employed throughout the year) in Sweden is about 3,000. Other brief facts about the services are given.

Johnson, Nora Phillips: Homemaker Services in Europe. [In] HOMEMAKER SERVICES: Report of the 1959 Conference. Public Health Service Publication 746. Washington, D.C. (20402): U.S. Government Printing Office, 1960. 257 pp. (p. 184–189.)

Dislocations in family life during and following World War II gave tremendous impetus to the development of homemaker services in Europe. Most of the countries, which originally established homemaker services to keep

children in their own homes during the temporary absence of the mother due to illness, have broadened their services to include the aged, the physically or mentally ill, and single adults.

Kruse, Margrethe: The Relief Housewife in Denmark: A New Type of Social Legislation is Helping to Solve Some of the Problems of Family Care in Danish Homes. AMERICAN JOURNAL OF NURSING, 1951, 51, 105–108 (February).

Housewife relief, or aid to homemakers, was started in Denmark during World War II as an occupational opportunity for women who were unemployed for long periods. In most cases, private associations administered the program. The Housewife Relief Act became effective in October 1949—and housewife relief became a new and rather essential part of social legislation in Denmark.

Larsson, Sigrid: Homemakers Help Finnish Mothers. THE CHILD, 1948, 13, p. 6 (July).

With the growth of public health nursing in Finland, the need for homemakers has become better recognized. Public health nurses feel they can do very little for a mother who is ill or having a baby unless there is someone to care for the household, the children, the cattle, and the garden. The Director of Child Welfare and Health Activities, Mannerheim League for Child Welfare (section of Finnish Red Cross) tells how this is done and the extent of the program.

MacDonald, Theresa: The Home Help Service: WVS (Women's Voluntary Services) and Home Helps. MOTHER AND CHILD, 1950, 20, 340–342 (March).

A brief picture of home help service in Great Britain and some of its history.

MacDonald, Theresa: Home Helps in Great Britain. THE CHILD, 1949, 13, 178–181; 190 (June).

Home help services in Great Britain flourish as part of a complete program of welfare services. According to the Minister of Health, home helps are an integral part of the service, and the work of the family doctor and home nurse will be seriously hampered unless there are adequate home help services throughout the country.

Mortimer, M. M.: The Home Help Service: 1. General Considerations. MOTHER AND CHILD, 1950, 20, 305–306 (February).

Provisions for home help service as defined in the National Health Service Act is described and brief comments made about it.

National Association of Home Help Organizers (London, England): HOME HELP AND THE NATIONS: Being a Full Report of the Proceedings of the First International Conference on the Home Help Service Held in London, 7th, 8th, and 9th, May 1952. London: The Association, 1952. 149 pp.

This is a report on the First International Conference on Home Help Service held in London, England, May 1952. Information is given on programs

in the United States, Great Britain, the Scandinavian countries, Germany, France, Switzerland, Austria, Holland, and Belgium.

Nelson, George R. [Editor]: Home Help Services. [In] FREEDOM AND WELFARE: Social Patterns in the Northern Countries of Europe. The Ministries of Social Affairs of Denmark, Finland, Iceland, Norway, Sweden, 1953. 539 pp. (p. 276–277.)

Describes the home help services in the northern countries of Europe.

[New Zealand] Social Security Pensions . . . Domestic Assistance. [In] THE NEW ZEALAND OFFICIAL YEAR BOOK. 64th edition. Wellington, N.Z.: Department of Statistics, 1959. 1,309 pp. (p. 198–221.)

Monetary assistance is made by the government to approved, incorporated associations formed for the purpose of providing domestic assistance in homes where certain situations exist. The number of domestic assistants increased from 7,015 in 1953–54 to 12,560 in 1957–58.

Nordstrom, Margareta: Home-Help to Aging in Sweden. HOMEMAKER SERVICES BULLETIN (American Medical Association), 1961, 2, 2–3 (March).

A brief description of Sweden's homemaker services plan for older persons.

Nordstrom, Margareta: Social Home Help Services in Sweden. INTERNATIONAL LABOUR REVIEW, 1963, 88, 366–379 (October).

The author, member of Parliament and adviser to the National Social Welfare Board, says: "In Sweden, people who are temporarily unable to cope with their daily housework because of sickness or professional obligations, as well as old people, can obtain assistance for as long as may be needed from the corps of qualified 'home helps' employed, supervised, and paid by the local authorities in almost every community in the country." The article gives a brief history of the service, training of home helps, wages, home help to families with children, the aged, and in situations of prolonged illness.

Norman, F. M.: The Home Help Service: Training and Examination. MOTHER AND CHILD, 1950, 20, 306–308 (February).

Among the aims of the National Institute of Homemakers are to raise the status of domestic workers, provide for their training and for a diploma, and to provide help to housewives on an hourly basis. Many so trained are experienced "home helps" employed by local health authorities.

Patterson, Mary T.: An Experiment in the Rehabilitation of Problem Families: A Survey of the Use of Specially Trained Home Helps in One London (England) Division. PUBLIC HEALTH (British), 1960, 74, 467–473 (September).

This article describes an attempt to rehabilitate a group of families through the use of home helps who have been given special training. The aim was to try to keep the family together as a unit and to maintain an acceptable standard of care for the growing children. Further details and case illustrations are given as well as brief evaluations.

Richey, M. L.: The Home Help. MOTHER AND CHILD, 1954, 24, 262–264 (March).

The chairman of the National Association of Home Help Organisers reviews types of situations where assistance by home helps is given under provision of the National Health Service Act of Great Britain, such as post partum care, elderly and chronically ill, tubercular, and emergency situations. The use of male home helps to care for older men is also described.

Schwartz, Doris R.: The Swedish Homemaker: A Friend in Need. PUBLIC HEALTH NURSING, 1950, 42, 333–334 (June).

A staff member of the visiting nurse association, Brooklyn, describes homemaker service as a part of her observation and participation in public health nursing in Sweden. "On one topic, I met with enthusiastic and almost universal cheers. These were reserved for that national phenomenon—the homemaker, frequently called the home sister."

Settle, Allison: London Develops Homemaker Service. CHILD WELFARE, 1947, 26, 10; 11 (November).

A brief description of home help service in Great Britain, given primarily when mothers are ill but being expanded to meet emergency illness of elderly people.

Simpson, Grace: The Home Help Service: Problems and Solutions. MOTHER AND CHILD, 1948, 18, 208–211 (January).

Describes home help service begun in 1930 in Lewisham, one of the most populous boroughs in the county of London.

Swedish Social Welfare Board: Social Domestic Aid Service. [In] SOCIAL SWEDEN. Stockholm: The Board, 1952. 462 pp. (p. 207–210.)

The scope of the "social domestic aid service" is to provide "capable domestic assistance in homes in pressing need thereof owing to illness, confinement of the mother or other contingency." This service has been provided in Sweden since the early 1920's, sponsored chiefly by such organizations as the Swedish Red Cross, occasionally with financial aid of local authorities. In 1943, a national scheme of social domestic aid service was enacted and the service brought under the administration of local authorities. In 1951, State grants-in-aid were paid to "near 2,800 full-time social home helps . . . this relatively cheap social service may avert or supplant more abrasive and costly public measures."

Unger, Muer G.: Home Aides Services. INTERNATIONAL LABOUR REVIEW, 1947, 56, 39–46 (July).

"By Home Aides Service is meant the provision of domestic help to households in cases of hardship or emergency. . . . Most of the services now being developed are organized or controlled by public authorities and are financed or subsidized by the State or local authorities. Home aides thus tend to become a new type of welfare public servant." Brief information is given on such programs in Great Britain, New Zealand, Sweden, Denmark, Australia, and Canada.

United Nations, Department of Economic and Social Affairs: Home-Help Service. INTERNATIONAL SOCIAL SERVICE REVIEW, 1956, 1, 45–60 (January).

Reviews material available to the United Nations on the home help services in 12 countries and describes the evolution of the services, administration, financing, and training.

United Nations, Department of Social Affairs: CHILDREN DEPRIVED OF A NORMAL HOME LIFE. New York: United Nations, 1952. 38 pp. (esp. p. 14–15.)

In recent years, quite a few countries have developed family assistant service or home help programs. In some countries, these programs are subsidized by the government, for example, Belgium, Canada, Denmark, France, Sweden, and the United States.

TRAINING

American Medical Association, Council on Medical Service: Homemaker Training at Rutgers University. HOMEMAKER SERVICES BULLETIN, 1961, 2, 3–4 (March).

From 1954 to 1960, some 963 persons completed the special courses in homemaker training given by the Rutgers State University Extension Division in cooperation with the New Jersey State Department of Health. Brief paragraphs describe the eight aspects of homemaker service which make up the format of the course.

Blue Cross, Blue Shield: Capable Hands . . . Willing Hearts. CURRENTS (Iowa Medical Service), 163, 18, 6–7 (July).

The homemaker's primary function is to give simple care to the patient. She receives special training to prepare her in home management skills, to work with families troubled by illness, and to accept different ways of living.

Burford, Elizabeth: A Formalized Homemaker Training Program. CHILD WELFARE, 1962, 41, 313–317 (September).

The Child and Family Services Agency in Chicago examines its program for training homemakers, partly because of its expansion of the service through opening district offices in three suburban areas and extension of service to the chronically ill and aged. Philosophy, method, and content of training is given, plus other material of value. This is the first agency training program for homemakers that includes a course given under the auspices of a graduate school of social work.

Indiana State Board of Health: MANUAL FOR TRAINING PERSONNEL FOR HOMEMAKER SERVICES. Indianapolis: The Board, 1963. 26 pp.

This manual was prepared through the joint efforts of the Indiana State Board of Health, Indiana Employment Security Division, Indiana Department

of Public Instruction, and the Indianapolis Adult Education and Extended School Services. It was devised to serve as a guide to training programs.

Louisiana State University: Training Home Economists to Train Homemakers. AGING, 1963, No. 102, p. 7 (April).

"In September 1962, the School of Home Economics at Louisiana State University was awarded a Public Health Service grant for use in preparing home economics teachers to train visiting homemakers. The project is being conducted with assistance from a State Advisory Committee consisting of representatives from the Departments of Education, Labor and Welfare, the Board of Health, the Medical Society, and the Committee on Aging. Pilot studies are being conducted in six selected parishes. In each, a community advisory committee has been organized composed of representatives from local agencies."

Louisiana State University, School of Home Economics: HOMEMAKER SERVICE: Training Syllabus. Baton Rouge: The University, 1963. 70 pp. (Processed.)

This syllabus was developed to assist the home economics teacher in organizing and teaching homemaker service training programs. The areas included in the syllabus are those "thought to be most important for the training of homemakers." Among the items are: working with people in homes, understanding the chronically ill and aged, understanding mental health, rehabilitation of the aged and ill, family life in relation to basic nutrition and food preparation, household management, caring for children.

Louisiana State University, School of Home Economics: HOMEMAKER SERVICE IN LOUISIANA: To Help Families in Time of Stress. Baton Rouge: Homemaker Service Training Program, the University [1963]. 4 pp. (Processed.)

Homemaker trainees receive a 20-hour special training program provided by the State Department of Education through the public school system. The key persons in this program are the home economics teachers who have received supplemental training from the School of Home Economics that prepares them to organize homemaker service programs.

New Jersey State Department of Health, Division of Chronic Illness Control: VISITING HOMEMAKER SERVICE TRAINING COURSE: A Cooperative Project with the Visiting Homemaker Service of New Jersey and Rutgers State University, University Extension Service. Trenton: The Department, 1960. 56 pp. ($1.00.)

New Jersey has pioneered in the development of a State visiting homemaker service program as an outgrowth of the Chronic Illness Law of 1952. A training course was undertaken for the orientation of qualified women, many of whom have successfully reared their own families. The course of training as outlined in this manual provides 22 hours of instruction.

New York City Department of Welfare: American Red Cross Training in Home Nursing for Homemakers. THE WELFARER, 1960, 12, 13–14 (January).

Homemakers assigned to the Division of Homemaker Service have had the benefit of four 3-hour sessions on home nursing. This training was designed to improve the quality of service and to develop added skills through providing a better understanding of the principles involved in the kind of things homemakers have been doing throughout the year in their assignments in caring for the ill.

New York City Department of Welfare: American Red Cross Training in Home Nursing for Homemakers. THE WELFARER, 1964, 16, 13–14 (January).

Four 3-hour sessions on home nursing were given to homemakers of the Department of Welfare of New York City. Supervising field workers and home economists on the Department staff have also had a similar course. Many of the homemakers assist in homes where there is illness.

U.S. Department of Health, Education, and Welfare, Office of Education: THE VISITING HOMEMAKER: A Suggested Guide for a Training Program. Manpower Development and Training Program. Washington, D.C. (20402): U.S. Government Printing Office, 1964. 18 pp.

This guide provides resource material from which a local training program can be developed. Two suggested schedules for training are included, but each training program should be adapted to each group of trainees.

GUIDELINES AND STANDARDS

Chambers, Katherine N.: The Intake Process in Homemaker Service Cases. SOCIAL CASEWORK, 1955, 36, 214–220 (May).

Such topics as planning with physicians for payment of services, and for setting goals are covered in this consideration of the intake process.

Child Welfare League of America: STANDARDS FOR HOMEMAKER SERVICE FOR CHILDREN: Statement prepared by the Committee on Standards for Homemaker Service. New York: The League, 1959. 45 pp.

Incorporates suggestions from 40 member agencies. Subjects covered include: homemaker service as a child welfare service; role and development of the homemaker; casework in homemaker service; organization and administration; and community planning.

Morlock, Maud and Hewell, Barbara: HOMEMAKER SERVICE: A Method of Child Care. Children's Bureau Publication 296. Washington, D.C. (20402): U.S. Government Printing Office, 1946. 36 pp.

This bulletin presents basic procedures and fundamental principles in the organization of a program of homemaker service. The material is based on the experience of social agencies that have used homemaker service as one method of assistance to families.

National Health Council: GUIDES TO ACTION ON CHRONIC ILLNESS—TODAY, TOMORROW, TOGETHER: Growing out of the 1956 National Health Forum, March 21–22, New York City. New York: The Council, 1956. 88 pp. (esp. p. 80–87.)

Reports on a panel discussion which includes a brief description of the homemakers program in Essex County, New Jersey, and two answers to the question of whether homemaker service is provided when mothers are mentally ill.

[U.S. Department of Health, Education, and Welfare, Welfare Administration]: SUPERVISED HOMEMAKER SERVICES: A Method of Child Care. Children's Bureau Publication 296. Washington, D.C. (20402): U.S. Government Printing Office, 1943. 36 pp.

Basic procedures and fundamental principles in the organization of a program of homemaker service are outlined. The material is based on discussions initiated by the Committee on Supervised Homemaker Service, composed primarily of representatives of private social agencies using this service to serve families. Case illustrations of five types of homemaker services are included in the appendix.

Wood, Janet C.: Homemaker Service Practices. [In] Readers Forum. CHILD WELFARE, 1960, 39, 31–32 (May).

Two questions, prompted by the recently issued STANDARDS FOR HOMEMAKER SERVICE FOR CHILDREN by the Child Welfare League of America, are: How can homemaker service be used to help widowers with young children? How can we treat the pain of separation of the homemaker from the family, particularly as this affects the children? The impressions of a supervisor of a homemaker unit of a family and children's service are given.

PERSONNEL POLICIES

Duston, Esther H.: Study of Existing Personnel Practices for Homemakers. HIGHLIGHTS (Family Service Association), 1942, 2, 140–143 (January).

This study gives a general cross-section of personnel practices in 50 agencies.

Giles, John Robert: Individualized Selection of Homemakers. SOCIAL CASEWORK, 1957, 38, 251–254 (May).

The homemaker must provide love, understanding, and companionship to the children without weakening their ties to their own mother. She must work with the agency and the husband in solving the many difficulties that are almost certain to arise.

Mitchiner, Myron J.: Homemaker Service Keeps Families Together. PUBLIC WELFARE NEWS (North Carolina State Board of Public Welfare), 1955, 18, 4–5 (June).

This article lists the North Carolina merit system regulations for homemakers employed regularly and also points out the value of a homemaker service program.

U.S. Department of Health, Education, and Welfare, Public Health Service: Recruitment, Training, and Personnel Policies. [In] HOMEMAKER SERVICES IN THE UNITED STATES, 1958: Reports of Preconference Study Groups. Washington, D.C. (20201): Public Health Service, 1959. 115 pp. (p. 53–73.) (Processed.)

Certain requisites, including established qualifications, sound methods of selection, and adequate job description, are the basis for recruitment for any homemaker service. The qualifications required of homemakers necessitates carefully designed training programs, the essentials for which are described.

APPRAISAL OF SERVICES

Demonstration Projects

Fox, Flora: Home Care Programs of Homes for the Aged. JEWISH SOCIAL SERVICE QUARTERLY, 1953, 29, 302–309 (March).

This is a brief account of 4 years' experience with a demonstration project on home care of the aged. Homemaker services were included, and the special qualifications that homemakers caring for the aged must have are discussed.

[New York City] Children's Aid Society: Extended Homemaker Service for Children. HOMEMAKER SERVICES BULLETIN, 1963, 4, 3–4 (November).

The results of this project clearly demonstrate the value of providing homemaker service on an expanded basis, up to 24 hours a day if necessary for the two-fold purpose of better meeting the varied needs of children and their families while reducing the financial cost to the community.

[New York City] Children's Aid Society: Nine- to Twenty-four-hour Homemaker Service Project. Part I: CHILD WELFARE, 1962, 41, 99–103 (March); Part II: CHILD WELFARE, 1962, 41, 153–158 (April). Also available from Child Welfare League of America. (20¢.)

This is a report in two parts of a project that demonstrated conclusively that homemaker service beyond the usual 8-hour day can prevent some children from being placed in temporary shelter and at approximately one-third of the cost. Significant factors contributing to the success of the project were the use of experienced caseworkers and homemakers, ability to respond promptly to requests, flexibility regarding hours of service, etc.

[New York City] Community Service Society, Division of Family Services: REPORT OF THE EXTENDED HOMEMAKER SERVICE PROJECT. New York: The Society, 1958. 108 pp. (Processed.)

This project, carried on for 3½ years was made possible by a grant from the Greater New York Fund and the Doris Duke Foundation. Thirty-five families received extended home service during the period the project was in operation, April 1, 1954 through September 30, 1957. Topic headings are: Project Plan; Needs and Problems in 35 Project Families and Outcome of Service; Statistical Information; Cost; and Conclusions and Recommendations.

[New York City] Welfare Council: End of WPA Service Deplored by Council. BETTER TIMES, 1943, 24 (No. 28), 1; 3 (April 2).

The WPA Housekeeping Project, started in February 1934, has been discontinued. "In 9 years, 60,524 households have been served including those with acute and chronic illness. In a statement, the Welfare Council of New York City, representing some 700 health and welfare agencies urged continuation of the vital service by the city administration. . . . Failure to replace the service, according to the Welfare Council, will result in longer hospital stay for patients, transfer of other patients to homes for the chronically ill and for the aged, temporary foster care of children, increase of expensive visiting nurse care, and neglect of many infirm aged."

North Carolina State Board of Public Welfare: HOMEMAKER SERVICES FOR THE AGED IN NORTH CAROLINA. Information Bulletin No. 30. Raleigh: The Board, 1960. 12 pp.

Describes a 2-year demonstration project in which older persons on public assistance in three counties were provided with needed homemaker services by the county welfare agency.

Shames, Miriam: Use of Homemaker Service in Families That Neglect Their Children. SOCIAL WORK, 1964, 9, 12–18 (January).

This paper described a project undertaken by Homemaker Service and the Neglect Unit of the Los Angeles County Bureau of Public Assistance, Aid to Needy Children Program, to demonstrate what homemakers could do as teachers in homes in which standards of household management were so poor as to seriously jeopardize the health and welfare of the children in the family. All had been receiving assistance for many years, and none responded to social workers' efforts to help them improve their standards of household management or child care. The close correlation found at the end of the first year between the rates of improvement in the home and in the children was conclusive. The striking correspondence between parental progress and the children's progress left no doubt of the validity of the treatment techniques used.

[Tennessee, Knox County] Homemaker Service: As the Agency Sees It. TENNESSEE PUBLIC WELFARE RECORD, 1961, 24, 4–6 (February).

Describes the process that setting up the pilot project on homemaker services in Knox County entailed from the view of the agency.

Winston, Ellen and Wolff, Myrtle P.: Integration of Services in a Public Welfare Program. SOCIAL CASEWORK, 1962, 43, 403–408 (October).

Homemaker service in North Carolina was started in three counties in 1947. Homemaker service is now a general service offered in a number of counties in a wide variety of cases, serving all types of families, with and without financial need. In 1958, a second project, supported by a foundation grant, was initiated in three counties to demonstrate the value of homemaker service for recipients of old age assistance. The same principles and policies were used as had been developed in the program for children.

Wolff, Myrtle P.: Surmounting the Hurdles to Homemaker Services. CHILDREN, 1959, 6, 17–22 (January–February). Also HOMEMAKER SERVICES BULLETIN (American Medical Association), 1961, 2, 2–5 (November).

Demonstrations of homemaker service by the North Carolina State Board of Public Welfare over an 8-year period proved that this service is of immeasurable value to children in sparing them the trauma of separation from their homes and their families.

Studies

American Public Health Association: Ill, Aged and Disabled Need Homemakers. [In] APHA Conference Report, 1958: A Special Section. PUBLIC HEALTH REPORTS, 1959, 74, 239–240 (March).

This is a digest of the 1958 survey by Maryland Y. Pennell and Lucille M. Smith.

[Baltimore] Health and Welfare Council of the Baltimore Area: STUDY OF HOMEMAKER SERVICE NEEDS IN METROPOLITAN BALTIMORE. Baltimore: The Council, 1962. 31 pp. (Processed.)

This study of homemaker services in the Baltimore area outlines a plan for the augmentation and development of such services in Maryland.

[Campbell, Hilary]: PRACTICES IN HOMEMAKER SERVICE AS REPORTED BY AGENCIES PROVIDING THE SERVICE. A study made by the National Committee on Homemaker Service in cooperation with the Children's Bureau. Washington, D.C. (20201): Children's Bureau, Welfare Administration, U.S. Department of Health, Education, and Welfare, 1951. 19 pp. (Processed.)

The philosophy behind homemaker service is belief in the values of family life. Fifty-eight agencies reported on the kinds of service offered and the people who received it, fees, the homemaker staff, salary, work week, etc.

Chambers, Katherine N.: First Steps in Homemaker Service: A Study of Applications. SOCIAL CASEWORK, 1954, 35, 111–117 (March).

Family and Children's Service, Minneapolis, studied all applications for homemaker service January 1 to March 31, 1953, to enlarge its understanding of the needs of the community as requested of the agency and to clarify how

to meet these needs. Some of the topics included in the article are: volume of applications, area of service, application sources and interpretation, telephone application interviews, and unmet needs in the community.

Farkas, Ruth Lewis: Visiting Housekeepers: Thesis. [In] DISSERTATION ABSTRACTS (New York University), 1959, 19, 2178–2179.

The function of a social agency homemaker, her activities and relationship to a client family: a study of social agency homemakers, their attitudes and relationship to the families they serve, and how these relationships affect the quality of the service.

Hill, Ruth: Focusing Attention on Older People's Needs. SOCIAL CASEWORK, 1949, 30, 405–411 (December).

This is a report of a study of the needs of older people, made by the Family Service Society of Hartford, Connecticut, starting in 1947, with the employment for 18 months of a director of the "Old Age Project." Its purpose was "to assist older people of Hartford County in their efforts to maintain normal living." A visiting housekeeping demonstration was soon started. The improvement in daily order and comfort which came about through regular help from housekeepers was startling. Other details about the demonstration are given.

Kronick, Eleanor: Requests for Homemaker Service in a Family Agency (Family Consultation Service, Cincinnati, Ohio). Abstracts of Theses, Smith College School for Social Work, 1944. SMITH COLLEGE STUDIES IN SOCIAL WORK, 1944, 15, p. 155 (December).

Low, Seth: Child Welfare Services, 1962: Their Range and Extent. WELFARE IN REVIEW (Welfare Administration, U.S. Department of Health, Education, and Welfare), 1963, 1, 10–16 (July). (esp. p. 14–15.)

Homemaker service is scarce. Only 1 percent of the children served by public and voluntary child welfare agencies on one day in 1961 were receiving homemaker service.

[New Jersey] Homemaker Service: A Progress Report on the New Jersey Pilot Study. Report of a Survey by the Preconference Study Group. CHRONIC ILLNESS NEWSLETTER (Commission on Chronic Illness), 1954, 5, 2–4 (February).

In some cities, "the extra pair of hands in the home during an illness-crisis" is given by a new and growing group of women called "homemakers." "They are trained in the art of providing and maintaining a comfortable home atmosphere, are assigned to a family in trouble caused by the illness of one of its members, usually the mother, and are responsible for helping the family through its crisis until they are able to manage alone." Such a service is the pioneering project in Essex County, New Jersey Service for the Chronically Ill, under the Essex County Medical Society.

[New York City] Community Council of Greater New York: HOME AIDE SERVICE NEEDS OF HEALTH AGENCY CLIENTELE: A Study of the Need for Services in the Home Among Clients of Hospital Social Service Departments and Other Health Agencies in New York City, November 1960. New York: The Council, 1961. 53 pp.

"Over the years, the Community Council has been interested in strengthening and expanding the homemaker services available to meet the needs of the people of this city. Through its Committee on Homemaker Services, the Council has provided a vehicle for planning and coordinating these services. . . . The analysis of the findings in the current study makes clear that there is an immediate need for a substantial expansion of existing programs."

[New York City] Community Council of Greater New York: HOMEMAKER SERVICE PROGRAMS IN NEW YORK CITY, 1959. New York: Research Department, The Council, 1959. 21 pp. (Processed.)

Nine agencies participated in this study. It shows how homemaker services have expanded in New York City in recent years.

[New York City] Hospital Council of Greater New York: Housekeepers and Homemakers. [In] ORGANIZED HOME MEDICAL CARE IN NEW YORK CITY: A Study of 19 Programs. New York: The Council, 1956. 538 pp. (p. 198; 379; 454–455.)

"Arrangements for housekeeping personnel varied among the different home care programs. It was impossible to estimate the number utilized because they were drawn from such miscellaneous sources (e.g., patients, families or neighbors, unofficial pools of names kept by individual social workers, and the New York State Employment Service). On the other hand, the number of trained homemakers was known fairly accurately, since the Department of Welfare's staff of 95 homemakers constituted almost the only source of such personnel used by the 19 home care programs studied. . . . The number of trained homemakers was grossly inadequate to meet the needs of the patients in the 19 programs studied. . . ."

Pennell, Maryland Y. and Smith, Lucille M.: Characteristics of Families Served by Homemakers. AMERICAN JOURNAL OF PUBLIC HEALTH, 1959, 49, 1467–1474 (November).

From the viewpoint of the community and the family, the use of homemaker service may be more economical and socially useful than to use hospitals, nursing homes, or foster homes. The needs that require such services are surveyed in this article.

Steinle, John G. and Associates: HOME CARE AND HOUSING NEEDS OF THE AGED: A Report on a Study for the New York State Division of Housing. New York: New York State Division of Housing, 1958. 56 pp.

"This is the report of a special study conducted under contract with the State of New York to determine the need for and feasibility of special programs to meet the requirements of home care for the aged in public and private housing." One of the items reported on is housekeeping service. This includes a summary of the housekeeper service of WPA days.

Stewart, William H.; Pennell, Maryland Y.; and Smith, Lucille M.: HOMEMAKER SERVICES IN THE UNITED STATES, 1958: A Nationwide Study. Public Health Service Publication 644. Washington, D.C. (20402): U.S. Government Printing Office, 1958. 92 pp. (Processed.)

This study, based on information collected during February and March 1958 from 150 agencies, presents and analyzes data on the homemakers who were employed and the families that received the service.

Surveys

American Home Economics Association, Subcommittee on Homemaker Services, AHEA Health and Welfare Section: Many Home Economists Aid Homemaker Service. JOURNAL OF HOME ECONOMICS, 1960, 52, p. 205 (March).

Report on a study through questionnaires to agencies providing homemaker service listed in the 1958 Directory of Homemaker Service to ascertain the role of home economists in such programs.

American Medical Association, Council on Medical Service: Extended Homemaker Service for Children. HOMEMAKER SERVICES BULLETIN, 1963, 4, 2–3 (November).

Reports findings from a project recently undertaken by the Children's Aid Society of New York City. "Homemaker service is no panacea for all problems of child welfare. Its effectiveness depends to a great extent on accurate diagnosis of the family's problem and setting realistic goals. . . . This appraisal must be based on an understanding of the individuals involved, their capacities and limitations, their desires and plans." Under these circumstances, homemaker service offers great potential for keeping families together during times of crisis.

American Medical Association, Council on Medical Service: ORGANIZED "HOME CARE" PROGRAMS IN THE UNITED STATES. Chicago: The Council, 1956. 57 pp.

This survey by the Committee on Indigent Care presents information on 31 home care programs, 28 of which provide or purchase some homemaker service.

American Medical Association, Council on Medical Service: Organized "Home Care" Programs in the United States: A Report by the Committee on Indigent Care. JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 1957, 164, 298–305 (May).

After defining home care, a 7-page questionnaire was sent to all organizations noted in literature as having such programs. Details of replies are given on such items as administration, organization, purpose, source of referral, types of patients, etc. "Homemaker service would include the preparation of meals and menu-planning, care of children in the home, marketing, and other domestic work necessary to maintain the home." Social services were included in the expected plan for home care.

Child Welfare League of America and National Committee on Homemaker Service: Homemaker Service as a Child Welfare Service. CHILD WELFARE, 1951, 30, 14–15 (April).

Reports on the results from questionnaires sent by the National Committee on Homemaker Service regarding practices of agencies in providing homemaker services for an indefinite period of time.

Commission on Chronic Illness: Homemaker Service for Chronically Ill and for Older Persons. [In] CARE OF THE LONG-TERM PATIENT: Source Book on Size and Characteristics of the Problem. National Conference on the Care of the Long-Term Patient Under the Auspices of the Commission on Chronic Illness, March 18–20, 1954. Public Health Service Publication 344. Washington, D.C. (20402): U.S. Government Printing Office, 1954. 124 pp. (p. 38–40).

Homemaker service for older persons has been developing slowly for the last 10 years. In the summer of 1953, schedules were sent to 99 agencies in the United States offering homemaker services. Fifty reported homemaker services for the chronically ill or older persons. Such service was reported in 22 States by 8 public and 42 private agencies.

Rosenbaum, Aline M.: AN ANALYSIS OF CURRENT PRACTICES OF THE VISITING HOUSEKEEPER SERVICE OF THE JEWISH SOCIAL SERVICE ASSOCIATION AND ITS RELATION TO THE COMMUNITY. New York: The Association, 1941. 44 pp.

This report is based on a comprehensive survey of the Visiting Housekeeper Service of the Jewish Social Service Association undertaken in the spring of 1940 to determine how the service was functioning and what direction it should take in its further development. It points up findings and conclusions of general interest.

U.S. Department of Health, Education, and Welfare, Public Health Service: HOMEMAKER SERVICES IN THE UNITED STATES, 1958: Twelve Statements Describing Different Types of Homemaker Services. Public Health Service Publication 645. Washington, D.C. (20402): U.S. Government Printing Office, 1958. 99 pp. (Processed.)

The programs described were chosen to illustrate major variations in administration. Among the programs presented are those of the New York City Children's Aid Society, Cook County Department of Public Welfare, Boston Family Service Association, New York City Department of Welfare, San Francisco Homemaker Service, Cincinnati Family Service, Colorado State Department of Public Welfare, North Carolina State Board of Public Welfare, New Jersey State Department of Health, New York City Jewish Family Service.

U.S. Department of Health, Education, and Welfare, Public Health Service: Homemakers. PUBLIC HEALTH REPORTS, 1962, 77, p. 834 (October).

Statistical information and brief comments on homemaker service as revealed by the 1961 Directory issued by the U.S. Department of Health, Education, and Welfare.

Wilson, Ralph L.: Homemaking Services for the Geriatric Patient: Based on a Study of Needs of a California County. GERIATRICS, 1958, 13, 251–253 (April).

A California county welfare department proposes homemaker service as a partial answer to the problem of caring for the aged.

FINANCES

Cleveland Associated Charities: Financial Guide for Homemaker Service. CHILD WELFARE, 1943, 22, p. 12 (September).

A guide for estimating the ability of a family to meet some or all of the cost of homemaker service, with brief discussion about its use.

Family Service Association of America: Foundation Finances Demonstrations in 40 FSAA Agencies. AGING, 1962, No. 89, 2–3 (March).

"A Ford Foundation grant to the Family Service Association of America (FSAA) will finance a 3-year program of demonstrations by 40 of its member agencies in 31 local communities, to improve counseling, homemaker services, foster care, friendly visiting and other services to the aging. . . ."

Family Service Association of America: $300,000 Ford Foundation Grant to Family Service Association. AGING, 1960, No. 74, p. 6 (December).

The Ford Foundation has approved a grant to the Family Service Association of America for a concentrated 4-year program to improve counseling, homemaker services, foster care, and other specialized services.

[New York City] Welfare and Health Council: FEE CHARGING FOR FAMILY CASEWORK AND HOMEMAKER SERVICES IN NEW YORK CITY: A Survey of Current Policies and Practices. New York: The Council, 1955. 34 pp. (Processed.)

This is one of the few studies on fees including homemaker services. The eight agencies which provide homemaker service all obtain reimbursement for part of the expense if the client is able to pay. They all provide homemaker service without restriction to specific income groups although two stress service to marginal and middle income groups. For these eight agencies, the amount a particular family pays is determined by relating its income to some family budget standard or to the family's expenditures.

Wade, Jean: Homemakers Save Taxpayers' Dollars. NEWSLETTER (Oregon State Public Welfare Commission), 1961, 1, 1; 3 (November).

"In addition to the intangibles of giving at least a measure of peace of mind and security to such persons as the elderly, disabled or blind recipients who are enabled to live in their own homes, and the happiness of children and parents able to remain together," homemaker service affords substantial savings in both nursing home and foster care services.

U.S. Department of Health, Education, and Welfare, Public Health Service: Financial Aspects of Homemaker Services. [In] HOMEMAKER SERVICES IN THE UNITED STATES, 1958: Reports of Preconference Study Groups. Washington, D.C. (20201): Public Health Service, 1959. 115 p. (p. 82–92.) (Processed.)

Program planning and financial planning go hand in hand. The budget is an expression of policy—one of the most specific and clear-cut. Within limits, the more specific the various expenditure items are set up and the greater care with which expenditures are allocated, the greater the ease and accuracy with which it is possible to begin to estimate the actual cost of service.

U.S. Department of Health, Education, and Welfare, Public Health Service: Homemaker Services and Health Insurance. [In] HOMEMAKER SERVICES IN THE UNITED STATES, 1958: Reports of Preconference Study Groups. Washington, D.C. (20201): Public Health Service, 1959. 115 pp. (p. 93–98.) (Processed.)

The problem to which this study group addressed itself is: Could or should homemaker service be included as a benefit under the various types of health insurance plans? The conclusion was "it seems unlikely that homemaker service will be included in health insurance in the near future" even though the group recognized that: "Antidotes are needed to the present tendency to insure primarily for hospital and institutional care."

DIRECTORIES

American Home Economics Association: DIRECTORY OF PROFESSIONAL HOME ECONOMISTS IN HOMEMAKER SERVICES. Washington, D.C.: The Association, 1960. 19 pp. (Processed.)

Home economists, nutritionists, and dietitians employed by or serving as consultants to agencies with homemaker services are listed.

American Medical Association, Council on Medical Service: National Growth in Services. HOMEMAKER SERVICES BULLETIN, 1962, 3, 1; 6 (September).

The 1958 directory of homemaker services listed 145 agencies providing homemaker service. Sixty-three additional programs are listed in the 1962 directory for a total of 208.

[U.S. Department of Health, Education, and Welfare, Welfare Administration]: DIRECTORY OF PRIVATE AGENCIES HAVING PROGRAMS OF SUPERVISED HOMEMAKER SERVICE. Washington, D.C.: Children's Bureau, 1942. 26 pp. (Processed.) (Available in Children's Bureau files.)

This directory of agencies providing homemaker services includes 41 agencies in 28 cities in the United States and 4 agencies in Canadian cities.

[U.S. Department of Health, Education, and Welfare, Welfare Administration]: DIRECTORY OF AGENCIES PROVIDING HOMEMAKER SERVICE. Issued in cooperation with the National Committee on Homemaker Service. Washington, D.C.: Children's Bureau, 1947. 23 pp. (Processed.) (Available in Children's Bureau files.)

Fifty-two agencies in the United States and 6 in Canada were sponsoring homemaker services. Generally speaking, service is given for comparatively short periods varying from a few weeks to perhaps 6 months. All but two agencies provided homemakers to care for children; 26 agencies provided care to aged persons, and 19 agencies to the chronically ill.

[U.S. Department of Health, Education, and Welfare, Welfare Administration]: HOMEMAKER SERVICE IN THE UNITED STATES AND CANADA: A Directory of Agencies. Issued in cooperation with the National Committee on Homemaker Service. Washington, D.C.: Children's Bureau, 1949. 14 pp. (Processed.) (Available in Children's Bureau files.)

Seventy-two agencies reported homemaker service programs. Sixty-six of these agencies were located in the United States, 1 in Puerto Rico, and 5 in Canada. Fifty agencies of the 72 reported that their programs started between 1940–1949; 16 began between 1930–1939; 3 began in the period 1920–1929; 3 did not report the date their program started.

U.S. Department of Health, Education, and Welfare, [Welfare Administration]: HOMEMAKER SERVICE IN THE UNITED STATES, 1954: A Directory of Agencies. Issued in cooperation with the National Committee on Homemaker Service. Washington, D.C.: Children's Bureau, 1954. 13 pp. (Processed.) (Available in Children's Bureau files.)

Ninety-seven agencies in 29 States, the District of Columbia, and Puerto Rico have programs of homemaker service.

U.S. Department of Health, Education, and Welfare, [Welfare Administration]: HOMEMAKER SERVICE, 1956: A Directory of Agencies in the United States and Canada. Issued in cooperation with the National Committee on Homemaker Service. Washington, D.C.: Children's Bureau, 1956. 28 pp. (Processed.) (Available in Children's Bureau files.)

Eighty-nine cities in 31 States, the District of Columbia, and Puerto Rico have homemaker service. All agencies with one or two exceptions offered service to families. Two-thirds had some service available for the aged, more than half for chronically ill and single adults, three-fourths for the physically and emotionally handicapped.

U.S. Department of Health, Education, and Welfare [Welfare Administration]: HOMEMAKER AND RELATED SERVICE, 1958: A Directory of Agencies in the United States. Children's Bureau Publication 370. (Also Public Health Service Publication 598 and Public Assistance Report 34.) Washington, D.C.: Children's Bureau, 1958. 75 pp. (Processed.)

A total of 145 agencies in 32 States and the District of Columbia provided homemaker and related services in the continental United States in the spring

of 1958. Homemaker services are available in about 150 of the 3,100 counties. The agencies providing service are located in 104 cities.

U.S. Department of Health, Education, and Welfare, Public Health Service: DIRECTORY OF HOMEMAKER SERVICES. Public Health Service Publication 928. Washington, D.C. (20402): U.S. Government Printing Office, 1961. 217 pp. (Processed.) ($1.00.)

This directory lists 208 agencies that provide homemaker service in 40 States, the District of Columbia, and Puerto Rico. These agencies employed nearly 2,700 homemakers and cared for approximately 5,500 families during one month in the fall of 1961. Nearly 70 percent of the homemaker service programs were administered by family agencies.

U.S. Department of Health, Education, and Welfare, Public Health Service: DIRECTORY OF HOMEMAKER SERVICES, 1963. Washington, D.C. (20402): U.S. Government Printing Office, 1964. [In press.]

This directory lists 303 administering homemaker programs in 44 States, the District of Columbia, and Puerto Rico. These agencies employed over 3,900 homemakers and cared for more than 9,500 families in October 1963. This represents approximately a 50 percent increase over 1961 in the number of homemakers employed, and an increase of 75 percent in the number of families served.

MANUALS

Louisiana State University, School of Home Economics: VISITING HOMEMAKER SERVICE HANDBOOK. Baton Rouge: The University, 1963. 24 pp. (Processed.)

Describes the purposes and needs for visiting homemaker service, who pays the homemaker, what her duties are, agencies with which she works, problems, etc.

[New Jersey] Chr-Ill Service: HOMEMAKER MANUAL. East Orange: The Service, 1963. 16 pp. (Procesed.) (75¢.)

Chr-Ill Service, Inc., a voluntary health agency organized in 1948, is under the auspices of the Essex County Medical Society. Homemaker service was undertaken in 1950. Among the topics included in the manual are: What is a homemaker? What are her qualities, duties, training, salary? Other details about the program are given.

[New Jersey] Visiting Homemaker Association: STATISTICS AND COSTS FOR VISITING HOMEMAKER SERVICES IN NEW JERSEY: A Manual for Recording, Compiling, and Reporting Data. Trenton: New Jersey State Department of Health [1962.] 28 pp. (Processed.) (50¢.)

This manual provides for the reporting of basic statistics and costs. It contains a workable method for gathering, compiling, and reporting statistical information on the service and outlines an acceptable method of cost computation by means of which realistic costs may be obtained.

New Jersey State Department of Health, Division of Chronic Illness Control: COMMUNITY HOMEMAKER SERVICE MANUAL. 3rd edition. Trenton: The Department, 1956. 30 pp.

This manual suggests plans and procedures for the establishment of community homemaker services.

New Jersey State Department of Health, Division of Chronic Illness Control: PRESENTING VISITING HOMEMAKER SERVICE IN NEW JERSEY. Trenton: The Department, 1960. 12 pp.

This is an illustrated pamphlet that describes the New Jersey homemaker program.

For the Agency

American Medical Association: HOW TO PLAN A COMMUNITY HOMEMAKER SERVICE. Chicago: The Association, 1962. 32 pp.

A practical, step-by-step manual suggesting plans and procedures for establishing a community homemaker service. Prepared by the Committee on Community Services of the Woman's Auxiliary of the AMA, its suggestions are based on the composite experience of many homemaker services and the studies of services made throughout the Nation.

American Medical Association, Council on Medical Service: How to Operate a Community Homemaker Service. HOMEMAKER SERVICES BULLETIN, 1963, 4, 2–3 (September).

This is a reprint of a chapter from a manual issued by the Council on Medical Services. It deals with selecting and training homemakers.

Brodsky, Rose: HANDBOOK OF SELECTED POLICIES, PROCEDURES AND PERTINENT FORMS. New York: Association for Homemaker Service, Inc., 1963 (August). 93 pp.

The philosophy of the agency can be summarized as follows: "Only when the public agency will broaden its scope in making homemaker services available as a basic child care service, no different from foster care, namely as a 'way of life' can homemaker service then more truly reach its fuller potential."

Brodsky, Rose: MANUAL ON FAMILY AIDE SERVICE (Homemaker Service). Long Island, N.Y.: Jewish Community Services, 1961. 79 pp. (Processed.)

This is the third edition of a manual first issued in October 1950. It is concerned with the total program: staff (professional, supervisory, casework, clerical, and family aides); casework philosophy and practice; job content; supervision and training; and personnel practices.

For the Homemaker

Colorado State Department of Public Welfare, Division of Child Welfare: HANDBOOK FOR HOMEMAKERS. Denver: The Department, 1960. 21 pp. (Processed.)

The purpose of this manual is to help the homemaker understand her place in the child welfare program of the county welfare department and to provide information that will be useful to her in carrying out her duties.

Furst, William, M.D., and Hunt, Lucille: A PRIMER ON MENTAL HEALTH COMMUNICATION FOR VISITING HOMEMAKERS. East Orange, N.J.: Chr-Ill Service [n.d.]. 12 pp.

The homemaker must be an exceptionally *human* being, "with an appreciation of human values, an inherent instinct for that which is fine, sincere, honest, and that greatest of gifts: an understanding heart."

[Texas] Austin Child and Family Service: HANDBOOK FOR HOMEMAKERS. Austin: The Service, 1964. 31 pp. (Processed.)

This pamphlet is addressed to homemakers. It is written to set down what responsibilities are assigned to homemakers, to guide them, to protect them from difficulties, and to answer "some of the questions people may ask you about homemaker service."

COMMUNITY ORGANIZATION

Beatt, Earl J.: Community Organization to Meet Homemaker Service Need. CHILD WELFARE, 1957, 36, 7–13 (July).

Explores the uses of homemaker service as a basic child welfare service and discusses organization, administration, and financing.

Chicago Child and Family Services: CHILDREN BELONG IN FAMILIES. Chicago: The Service, [n.d.] 12 pp. (esp. p. 5.)

As pioneers in the child care field (established in 1858 as the Chicago Home for the Friendless), Chicago Child and Family Services has developed a three-prong service: homemaker service, foster home placement, and counseling service.

Craig, Catharine P.: Start Homemaker Service? Let's Talk It Over. HOMEMAKER SERVICES BULLETIN (American Medical Association), 1962, 3, 2–3 (July). Also PENNSYLVANIA MEDICAL JOURNAL, 1962, 65, 627–629 (May).

Although written for the Woman's Auxiliary of the Berks County, Pennsylvania, Medical Society, this article contains numerous suggestions that may be helpful for other groups planning a community homemaker service.

District of Columbia Medical Society: Nursing Homes and Homemaker Service. MEDICAL ANNALS OF THE DISTRICT OF COLUMBIA, 1962, 31, 47–49 (January).

Homemaker service is discussed by the Committee on Public Health of the Medical Society of the District of Columbia and representatives of Homemaker Service of the National Capital Area. "There were many details of interest in connection with the functions of the Homemaker Service which impressed the Committee. The Chairman inquired of its representatives what the society, which has already endorsed its activities, could do to help their organization."

Epstein, Henry: Homemaker Service. [In] CHILDREN NEED FAMILIES: A Second Look at Delinquency Prevention. A Report to the Mayor, City of New York. New York: Executive Office of the Mayor, 1955. 60 pp. (p. 34–36.)

"Consider only the relative cost of homemaker service and the care of children outside their own homes. Children in placement costs the city an average of $1200 per annum; there are two or three children (on the average) in every family applying for homemaker service. A homemaker salary averages $3,000 a year. In other words we can keep children in their own homes without spending a penny more for homemakers than for the admittedly less desirable course of placement, with all the attendant heartaches of a family dispersed, with the very future of the family problematical."

Flater, Ruth Louise: Day Care of Children of Working Mothers: The Problems in a "Boom" War-Industry Town. CHILD WELFARE LEAGUE OF AMERICA BULLETIN, 1943, 22,7; 9–11 (October).

This article describes conditions and problems in Texarkana (Texas and Arkansas) in wartime and the resulting effect on children. Counseling services, nursery and day care, and homemaker service were ways considered to meet some of the serious problems.

Fredrickson, Hazel: Individual Placement-Homemaker Service. [In] THE CHILD AND HIS WELFARE. 2nd edition. San Francisco: W. H. Freeman and Co., 1957. 363 pp. (p. 211–213.)

Homemaker service appears to have a rightful place in a children's program and to warrant more extensive development.

Jarrett, Mary C.: Combating Chronic Illness. PUBLIC WELFARE, 1945, 3, 129–131 (June).

The former secretary, Committee on Chronic Illness, Welfare Council, New York, and responsible for studies on this subject in New York City, Rochester, and Cleveland, speaks of the growing awareness of the need for planning in a variety of ways. She speaks as follows of "housekeeping aides" as they were called in the WPA program. "Many chronically ill persons who are not strong enough to do all their housework can manage with some assistance from a housekeeping aide. Many semi-invalids living alone can remain happily in the community with a little help of this kind. A housekeeping service is an

economy for the community and its benefits in human welfare and happiness are incalculable."

Klein, S. Flora: Housekeepers Should Keep House. SURVEY MID-MONTHLY, 1941, 77, 177–178 (June).

Communities are urged to evaluate what the Work Projects Housekeeping Aides have contributed and what is to be done if this service is discontinued. The author also discusses other questions, such as what does a social worker hope to accomplish when she sends a visiting housekeeper to a family, and what are the duties of this woman as well as the supervision she needs?

Knott, Leslie W., M.D.: Community Health Services to the Aged and Chronically Ill. PUBLIC HEALTH REPORTS, 1962, 77, 1–6 (January).

". . . The Community Health Services and Facilities Act of 1961 resulted directly from the Administration's awareness that facilities and services are not available in most communities to provide good quality, comprehensive health care outside the hospital." Explanation is given on how communities can obtain project grants. "First and foremost, some organized community group must take the leadership in becoming familiar with grant requirements and in developing suitable projects for consideration. . . . This may be a local governmental health or welfare department or some established nonprofit agency." The article quotes Dr. Luther L. Terry, Surgeon General of the Public Health Service: "In treating the chronically ill and aged particularly, we need visiting nurses, physical therapists, homemaker aides, and many others who are employed by health departments and other community organizations."

Lester, Eileen E.: Building Community Support. [In] SUPPLEMENT TO NEW JERSEY PUBLIC HEALTH NEWS, July 1961. Trenton: New Jersey State Department of Health, 1961. 43 pp. (p. 20–25.)

Homemaker services, particularly those established in the 1960's, should be thought of as an integral part of the medical care resources of the country. They must be available on a long-time basis to help individuals who are chronically ill, handicapped, or aged. Their effectiveness must be measured against all of the other related services in the community.

National League for Nursing, Public Health Nursing Department: HOMEMAKER SERVICE: An Aid for Public Health Nursing. New York: The League, 1959. 5 pp.

Lists 14 statements of beliefs to which public health nurses subscribe, and discusses the need, nature, and administration of homemaker service as a supportive service in caring for aged or chronically ill patients at home.

[New York City] Community Council of Greater New York: To Safeguard the Family. SOCIAL SERVICE REVIEW, 1961, 35, 317–318 (September).

This is a digest of a report issued by the Community Council of Greater New York. The digest concludes, "In many cities today the need for homemaker service has been highlighted. Especially is this true in suburban areas where young families are living and the illness of the mother may create severe

problems for the children and the husband . . . our impression is that we have a long way to go before we can really provide a service which seems to many of us to be essential to avoid family breakdown."

New York City Welfare Council Promotes Visiting Housekeeper Service. THE CHILD, 1946, 10, p. 148 (March).

A 5-point program is being promoted by the Council: (1) To bring about full development of housekeeper services under both voluntary and public auspices; (2) To make studies and determine volume and need; (3) To insure coordination of service; (4) To plan demonstrations and set standards for improved procedures; and (5) To promote public understanding and support of homemaker service.

Oettinger, Katherine B.: Current Concerns of the Children's Bureau. CHILDREN, 1958, 5, 123–128 (July–August).

"Increased attention to serving children in their own homes points up the need for a much greater expansion of homemaker service. To this end Federal agencies and 24 national organizations are sponsoring a national conference to take place in 1959. A study of existing homemaker services is underway, and study groups in various cities are preparing material on various phases of the subject."

Oettinger, Katherine B.: The Needs of Individuals and Families for Homemaker Service. [In] HOMEMAKER SERVICES: Report of the 1959 Conference. Public Health Service Publication 746. Washington, D.C. (20402): U.S. Government Printing Office, 1960. 257 pp. (p. 161–169.)

"Somehow we must call on our ingenuity, imagination, and inventiveness to put together the ingredients of a new concept of homemaker service. . . . And what is most important, this service must be available to *all* families and individuals who could use it to safeguard their homes and family relationships."

President's Commission on the Status of Women: AMERICAN WOMEN: Report of the President's Commission on the Status of Women 1963. Washington, D.C. (20402): U.S. Government Printing Office, 1963. 86 pp. (p. 22.)

One of the recommendations of this report is: "Family services under public and private auspices to help families avoid or overcome breakdown or dependency and establish a soundly based homelife, and professionally supervised homemaker services to meet emergency or other special needs should be strengthened, extended, or established where lacking."

President's Council on Aging: DO YOU HAVE HOMEMAKER SERVICE IN YOUR TOWN?: For the Aging, For Families with Children, For the Chronically Ill, For the Disabled. Washington, D.C. (20402): U.S. Government Printing Office, 1963. 4 pp.

Among the topics included are: Definition of the service, who needs it, what it can do, how to develop and expand it, resources to help to start it, and a brief reference list.

Price, David E., M.D.: Health-Welfare Partnership. [In] HOMEMAKER SERVICES: Report of the 1959 Conference. Public Health Service Publication 746. Washington, D.C. (20402): U.S. Government Printing Office, 1960. 257 pp. (p. 170–177.) Also JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 1959, 170, 692–695 (June 6).

"For the health professions, homemaker services offer a quick lift in an overburdened time." Long-term illnesses trap whole families, affecting both the well and the rich, threatening established ways of life, draining finances, wearing out affection. Homemaker service can do much to mitigate these effects.

Richman, Leon H.: Differential Planning in Child Welfare. [In] CASEWORK PAPERS, 1958: National Conference on Social Welfare, 1958. (p. 97–113.)

"Sound planning for children is [also] hampered because of the nonexistence of homemaker service in about one-third of the States and the limited scope of its function where it has developed. Homemaker service enables the home to function for the child when the mother cannot carry her family responsibilities. The achievements of this service in preventing placement of children are so well documented that it is not surprising that child placement workers feel frustrated when they have to place children because the community has failed to establish a homemaker program." The author makes other suggestions on the importance of this specific service.

Richman, Leon H.: Differential Planning in Child Welfare. CHILD WELFARE, 1958, 37, 1–9 (July).

"During the past few years, the literature in child welfare has been re-

emphasizing the importance of a family of his own for every child. Some contend that this recognition of this concept heralds a redirection in child welfare, by stressing help to children in their own homes rather than through placement. . . . Absence of homemaker service in about one-third of the States and its limited scope elsewhere also interfered with sound planning for children. This resource enables the home to function for the child when the mother cannot carry her responsibilities. Since this service is of proven value in preventing placement of children, it is frustrating to have to place them because the community has failed to establish a homemaker program. It is equally unsound to place children because of administrative policies prohibiting only one child, because of the cost involved. Moreover, service should not be limited to families already at the breaking point. The concept of the service should be broadened, so that it can be utilized to strengthen family life by maintaining or reestablishing a stable home, thereby assuring the normal development of children."

Sandusky, Annie Lee: Homemaker Service to Maintain Home. [In] PUBLIC WELFARE SERVICES TO CHILDREN IN THEIR OWN HOMES. New York: Child Welfare League of America, 1957. 15 pp. (p. 11–12.) (30¢.)

The placement of a homemaker in the home when circumstances make it plain that the family should be maintained is an effective way to keep the family together. Public welfare agencies have been slow in developing homemaker programs and in utilizing the service when it is available under other auspices in the community.

Simon, Esther: The Changing Face of Child Placement Facilities and Its Reflection on Practice. JOURNAL OF JEWISH COMMUNAL SERVICE, 1960, 37, 164–173 (Winter).

"It is clear that the broad social and economic changes which have occurred over the past few decades have affected the nature of Jewish social services. For child care, this has been reflected in various modifications of placement facilities and in extensions of programs to children and families in their own homes. . . . The rapid growth of homemaker service throughout the country is another one of the community services which has affected the numbers of children coming into placement, particularly for short-term care. However, the concept of long-time homemaker service, which has been a more recent development and especially as we have seen it in New York City, has truly 'moved into the home.' The provision of homemaker service for periods of a year or more has changed the picture of children moving out of their homes in cases of death of one parent, long-time illness, etc., and represents a way of preserving the home for the child."

Smith, Lucille M.: HOMEMAKER SERVICES: In Chronic Disease Control. University of Michigan, Continued Education Series No. 88. Ann Arbor: School of Public Health, University of Michigan, 1960. 211 pp.

Discusses some of the major issues which have slowed the development of homemaker service. Many people in the United States needing homemaker service do not need or will not use social service. The matter of auspices is secondary to the necessity of professional service whether it be from a social worker, nurse, home economist, or other professional person.

Taylor, Eleanor: Integrating Homemaker Service into an Agency Program. CHILD WELFARE, 1955, 34, 10–13 (January).

"The advantages of a new service must often be proved before it can be accepted and paid for with local or private funds." This article tells how, after an experimental program proved its value, homemaker service became a permanent part of the community's social services.

Thomas, Rachel: The Relationship of Public Health Nursing to Visiting Homemaker Service. [In] SUPPLEMENT TO NEW JERSEY PUBLIC HEALTH NEWS, July 1961. Trenton: New Jersey State Department of Health, 1961. 43 pp. (p. 27; 29.)

Homemaker service is essential to the needs of the community; it should work closely with the public nursing agency; and the charge for the service should be determined by cost analysis in a business-like fashion.

Thompson, Marion J.: The Relationship of Homemaker Service to Social Casework. [In] SUPPLEMENT TO NEW JERSEY PUBLIC HEALTH NEWS, July 1961. Trenton: New Jersey State Department of Health, 1961. 43 pp. (p. 30–34; 41.)

The author discusses the meaning homemaker service has to other social agencies, the therapeutic results of a well-executed homemaker service, communication between homemaker service and social agencies, and the ethic and legal implications involving the service.

U.S. Department of Health, Education, and Welfare, Public Health Service: Statewide Action to Promote Establishment of Homemaker Service. [In] HOMEMAKER SERVICES IN THE UNITED STATES, 1958: Reports of Preconference Study Groups. Washington, D.C. (20201): Public Health Service, 1959. 115 pp. (p. 11–27.) (Processed.)

This is a guide to the stimulation and organization of statewide community services.

U.S. Department of Health, Education, and Welfare [Welfare Administration]: HOMEMAKER SERVICE. Children's Bureau Folder 46. Washington, D.C. (20402): U.S. Government Printing Office, 1958. 36 pp.

Homemaker service is built on several premises. One is that the family is important to our society. Another that community life is strengthened when home life is strengthened.

Homemaker service provides a practical, acceptable, and important way of safeguarding the home and close family relationships of many people in the community. It is an essential part of a well-rounded community health and welfare program.

Wolff, Myrtle P.: Homemaker Service for Children and Their Families. NORTH CAROLINA PUBLIC WELFARE NEWS, 1962, 26, 4; 10; 11–12 (September).

"Homemaker service as a casework tool has increased the numbers of socially ill families who will be helped to a self-sustaining future. . . . To those who say, 'But we cannot afford homemaker service,' we say, 'You cannot afford not to have it, if you truly wish to give families every opportunity to become self-sustaining.'"

NATIONAL COMMITTEES AND COUNCILS

American Medical Association, Council on Medical Service: The National Council for Homemaker Services: Purposes and Program. HOMEMAKER SERVICE BULLETIN, 1964, 5, 1; 4 (January).

The Council has been formed to stimulate the expansion of homemaker services throughout the country and to promote improvement in the quality of service. The first major undertaking of the National Council for Homemaker Services will be to hold a National Conference on Homemaker Service, April 29–May 1, 1964.

National Council for Homemaker Services: NEW HORIZONS FOR AN ESSENTIAL HEALTH AND WELFARE SERVICE. New York: The Council, 1963. 6 pp.

Describes the establishment and projected activities of this new National Council for Homemaker Services, established and incorporated in December 1962.

National Council for Homemaker Services. CHILDREN, 1963, 10, 120–121 (May–June).

This new voluntary agency was incorporated January 1963 bringing to fruition a recommendation of the 1959 National Conference on Homemaker Services.

CONFERENCES

Abbott, Elizabeth: How Home Care Helps You. HARVEST YEARS, 1963, 3, 4–9 (August).

This report of the Third National Conference of the Joint Council to Improve the Health Care of the Aged includes a section on homemaker service. Who are the "all purpose" women who can go into the home to care for the aged ill? "They are women who are selected because they are capable without being compulsive . . . sympathetic without being sentimental . . . adaptable to all sorts of people and situations." Through training and supervision by caseworkers, they identify themselves with the goals of the agency.

American Medical Association, Council on Medical Service: Conclusions and Recommendations of the National Conference on Homemaker Services, 1959. HOMEMAKER SERVICES BULLETIN, 1960 (First Issue), 1–4 (January).

The article reproduces the conclusions and recommendations dealing with auspices, organization, operating policies, financing, and expansion of homemaker programs.

American Medical Association, Council on Medical Service: Princeton Conference. CHRONIC ILLNESS NEWSLETTER, 1963, 14, 2–3 (August).

The Chronic Disease and Community Health Services Divisions, U.S. Public Health Service, sponsored a conference, May 27–29, 1963, for the 31 homemaker service programs in 19 different States being assisted under contracts, demonstration grants and formula grants. The conference was organized by Rutgers University and the New Jersey State Department of Health. A report of the conference will be published.

American Medical Association, Council on Medical Service: Report of Conference on Personal Care in Homemaker Services. HOMEMAKER SERVICES BULLETIN, 1960, 1, 1–4 (July).

The Conference on Personal Care in Homemaker Services sponsored by the National Health Council built on the 1959 National Conference and made a major contribution to an area little touched before. This conference considered guidelines to personal care and concluded that this care should be an integral part of a homemaker program.

American Medical Association, Council on Medical Service: Statewide Meeting in Connecticut. HOMEMAKER SERVICES BULLETIN, 1961, 2, p. 1 (March).

The Connecticut Health League, representing 42 medical, health, and education agencies in the State, sponsored the first Connecticut Conference on Homemaker Services, December 7, 1960. The conference, attended by 250 persons, urged the formation of a statewide technical advisory committee.

[Australia] National Health and Medical Research Council: The Home Help Problem in Australia. INTERNATIONAL LABOUR REVIEW, 1945, 52, 418–419 (July–December).

The National Health and Medical Research Council of the Commonwealth of Australia, meeting in Canberra in November 1944, makes recommendations for developing home help for mothers. Such a program is an urgent need because of the declining birth rate. The report states emphatically that "there should be an adequate service of home help for every mother and, if this is impossible, there should be such a service for women at least one month before and one month after confinement."

Canadian Welfare Council: HOMEMAKER SERVICES: A Community Asset. Report of a workshop held at the Canadian Conference on Social Work, June 1954, Toronto, Ontario. Ottawa, Ontario: The Council, 1954. 22 pp.

Conference on Housekeeper Service. THE CHILD, 1938, 2, 239–240 (May).

The first conference held under auspices of the Children's Bureau on this service in November 1937 is described. The agencies represented provided in some instances only one type of service; others met varied needs of families by providing homemaker services, housekeeping-aid services, and educational services through a visiting housekeeper. Discussion brought out the need for job analysis, clarification of the junctions of different types of workers, development of terminology to make possible more accurate analysis of the work on which further information could be based. A national agency is needed that would see the problem in its broad relationship to the fields of social work, health, home economics, and the employment of women workers.

David, Wilfred D., M.D.: The Homemaker and Personal Care. HOMEMAKER SERVICES BULLETIN (American Medical Association), 1960, 1, 1–4 (September).

This is a keynote address on personal care delivered at a meeting held at Arden House. "Let us not view the homemaker as a hazardous radiation exposure in our midst on which rigid limits must be imposed. Instead let us view her as a source of a particular kind of service whose benefits will be cumulative throughout our society."

Egan, Mary C.: Conference Considers Aspects of Homemaker Services. JOURNAL OF HOME ECONOMICS, 1960, 52, p. 375 (May).

This is a brief report on Personal Care in Homemaker Services, held at Arden House, New York, February 14–16, 1960. The ways in which home economists can carry forward some of the conference recommendations are described.

[Great Britain] National Baby Welfare Council: Annual General Meeting. MOTHER AND CHILD, 1949, 20, 74–81 (June).

A report of the annual meeting held in London, April 26, 1949, to discuss "Help in the Home." Various people speak of their experience with the home help program.

Home Help Conference. MOTHER AND CHILD, 1952, 23, 136–137 (August).

Brief summaries of papers given at the first International Home Help Conference in London for three days in May 1952.

Homemaker As One Prescription for Today's Troubled Family. JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 1959, 169, 1334–1336 (March 21).

The American Medical Association reaffirms its continuing interest in homemaker service, its active participation in committee work on this subject, including planning for the 1959 National Conference on Homemaker Services. The article includes historical comment and recommendations of study groups at the 1959 meeting.

Homemaker Services in a Public Welfare Agency. [In] 1957 National Biennial Round Table Conference of APWA. PUBLIC WELFARE, 1958, 16, 75–76 (January).

Homemaker service is a specialized but basic service of the social agency which helps to maintain the home when the persons responsible for family management are absent or incapacitated.

Hunt, Maurice O.: Child Welfare. [In] SOCIAL WORK YEARBOOK, 1960. New York: National Association of Social Workers, 1960. (p. 141–157; esp. 146–147.)

The advantages of homemaker services are stressed. Brief comments are included on extent of services in 1958 and on the National Conference on Homemaker Services held in Chicago in 1959.

Kennedy, Zalia: A Much Needed Family Service: Highlights of the 20th Annual Meeting, National Committee on Homemaker Service. CATHOLIC CHARITIES REVEW, 1961, 45, 12–16 (April).

This report of a meeting held in New York City on October 13 and 14, 1960, under the sponsorship of the National Committee on Homemaker Service, had as its theme "Homemaker Service: A Community Resource for Families." Approximately 450 professional and lay people, representing some 300 agencies—28 States, Canada, South Africa, the Virgin Islands, and Finland—were represented. The papers presented reflected the broadening concept of homemaker service and its concern to many disciplines.

Morlock, Maud: Homemaker Service in Wartime. CHILD WELFARE LEAGUE OF AMERICA BULLETIN, 1943, 22, 12–13 (January).

Representatives of social agencies under the auspices of the Committee on Supervised Homemaker Service met in New York in November 1942 to discuss

the effect of the war on homemaker service, the problems presented in this time of crisis, the importance of homemaker service in helping families in a period of unusual strain and anxiety, and the long hours of employment. Five ways are given in which homemaker service can make a contribution.

Morlock, Maud: Homemaker Services. CHILDREN, 1959, 6, 194–195 (September–October).

A brief report on the International Conference on Homemaker Services held in May 1959 in Zeist, the Netherlands. About 150 people from 11 Western European countries, the United States and Canada attended—doctors, nurses, educators, social workers, clergymen, and labor leaders. Papers and discussion brought out many similarities and differences in their programs and in their administration.

Morlock, Maud: International Conference on Homemaker Services. SOCIAL SECURITY BULLETIN, 1959, 22, 20–21 (September).

The first International Conference on Homemaker Services was held in Zeist, Holland, in May 1959. Representatives from 13 countries attended. Members seemed united in their belief in the family as an institution and—particularly because of the problems facing families today—in homemaker service as an essential part of welfare and health services.

Morlock, Maud: A New Look at Homemaker Services. CHILDREN, 1959, 6, 108–112 (May–June).

This is a report of the 1959 National Conference on Homemaker Services, Chicago. Included are such items as a description of the structure of the conference, its recurring ideas, new emphases, prevention, controversial issues, casework, and followup of the conference.

National Conference on Homemaker Services. SOCIAL LEGISLATION INFORMATION SERVICE, 1959, 6, 33–38 (February 23).

This is a brief account of the 1959 Conference on Homemaker Services.

[New York City] Community Council of Greater New York: Homemaker Services. [In] WAYS OF STRENGTHENING FAMILY LIFE: Proceedings of the Community Council of New York, Conference on Preventive Services, February 6, 1958. 53 pp. (p. 38–43.) (Processed.)

This conference was planned by the Committee on Preventive Services of the Council. "In recent years, New York City, like many other large urban communities, has become increasingly concerned with the alarming increase in family disintegration leading to the placement of children. Cost to the community at large, and to the afflicted individuals, is high in terms of money, incalculable in terms of human misery. Here in New York City, the crisis is especially acute as witness the 1,600 children awaiting long-term foster care placement. Many of these youngsters wait in overcrowded shelters, others in hospitals, many more in badly disorganized homes." Three separate workshops discussed Family Counseling, Day Care, and Homemaker Services. Recommendations on homemaker service were among those growing out of the discussions of the homemaker group.

[New York City] Community Council of Greater New York: Report of Homemaker Services Workshop. [In] PROCEEDINGS: Community Council of New York Conference on Preventive Services, February 6, 1958. New York: The Council, 1958. 53 pp. (p. 37–43.)

Includes in this report of a conference on ways of strengthening family life a workshop on homemaker services.

North Carolina State Board of Public Welfare: Second Annual Homemaker Workshop. NORTH CAROLINA PUBLIC WELFARE NEWS, 1963, 27, p. 11 (September).

This second annual workshop was attended by 51 homemakers and supervisors from the 20 county departments of public welfare who have the homemaker program. "The workshop provided stimulus for the homemakers and an opportunity to share experiences and exchange ideas."

Oettinger, Katherine B.: Present View and Future Action in Homemaker Services. [In] PROCEEDINGS: Annual Meeting of the National Committee on Homemaker Service, New York, October 13–14, 1960. 51 pp. (p. 17–24.) (Processed.)

The author refers to participants in this conference as "social engineers, attempting to blast through the rock of community apathy to build new roads of community service. One of these roads was to be a growing network of homemaker services." She compares the present to 1959 when the National Homemakers Conference was held. She reviews the past of the National Committee on Homemaker Service and of attempts for an adequately supported national organization on this subject. She raises many pertinent questions, some of which are answered.

Seals, Lottie: National Homemaker Conference. TENNESSEE PUBLIC WELFARE RECORD, 1961, 24, 13–14 (February).

Reports on the National Conference on Homemaker Service held in New York City, October 13–14, 1960.

Smith, Lucille M.: National Conference on Homemaker Services. HOMEMAKER SERVICES BULLETIN (American Medical Association), 1960, 1, 1–4 (March).

Describes the 1959 National Conference on Homemaker Services from the initiation of the idea some 3½ years previously, through the preconference work, and summarizes the conference itself.

U.S. Department of Health, Education, and Welfare, Public Health Service: HOMEMAKER SERVICES. Bureau of State Services, Executive Memorandum, 1963, No. 10, 6–8 (August 23).

Representatives of the 31 homemaker service programs being assisted under Public Health Service contracts, demonstrations grants, or formula grants came together to Rutgers University in Princeton for a national workshop on homemaker service.

U.S. Department of Health, Education, and Welfare, Public Health Service: HOMEMAKER SERVICES: Report of the 1959 Conference. Public Health Service Publication 746. Washington, D.C. (20402): U.S. Government Printing Office, 1960. 257 pp. ($1.25.)

The National Conference on Homemaker Services met in Chicago on February 10–11, 1959. The Conference was divided into five sections: What distinctive needs and purposes can be met by homemaker services? Who needs homemaker services? How to plan and organize homemaker services? What is good administration in homemaker services? How to develop community understanding and support of homemaker services?

U.S. Department of Health, Education, and Welfare, Public Health Service: National Homemakers Conference. PUBLIC HEALTH REPORTS, 1959, 74, p. 386 (May).

Brief report on the National Conference on Homemaker Services held in Chicago in February 1959.

Werner, Adelaide: A Homemakers' Get-Together. HIGHLIGHTS (Family Service Association), 1948, 9, 62–63 (April).

This article reports on the first meeting where homemakers from six agencies in New York City shared their experiences and heard about homemaker service in other countries.

White House Conference on Aging: THE NATION AND ITS OLDER PEOPLE: Report of the White House Conference on Aging, January 9–12, 1961. Washington, D.C. (20201): U.S. Department of Health, Education, and Welfare, 1961. 333 pp. (esp. p. 174.)

Many older persons can remain in or return to their own homes with the aid of homemaker service. Homemaker service can help older persons to use their capabilities to the fullest degree in personal and home care and for a more satisfying life. Because of these unique values, homemaker service should be available in every community.

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WELFARE ADMINISTRATION

● Children's Bureau

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Practical Nurse Education Program Practices in Connecticut Vocational-Technical Schools.

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*HEALTH OCCUPATIONS EDUCATION; *PRACTICAL NURSING; *ADMINISTRATIVE POLICY; *PROGRAM ADMINISTRATION; STATE STANDARDS; VOCATIONAL SCHOOLS
CONNECTICUT

The manual covers the history, purpose, philosophy, objectives, principles of operation, and policies of the practical nurse education program. Principles of operation consider program accreditation, administrative authority, participation and accreditation of affiliating hospitals, responsibilities of the Vocational Education Department, and responsibilities of affiliating hospitals. Policies are given for selection and training of instructors, qualifications and duties of the clinical program coordinator, student selection, student uniforms, student expenses, transportation, tuition, textbooks, absence and vacation, transfer to another hospital or center, credit for previous nursing experience, maintenance during the clinical period, evaluation, dismissal, withdrawal, capping and graduation exercises, review week, state board transcripts, filing of records, local faculty meeting, and curriculum day meetings. A complete set of sample forms used in the practical nurse program is included. (JK)

VT 006 348

VT004700

Bulletin #35
DIVISION OF VOCATIONAL EDUCATION

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PRACTICAL NURSE EDUCATION PROGRAM

PRACTICES

IN

CONNECTICUT

VOCATIONAL-TECHNICAL SCHOOLS

VT006340

Bureau of Vocational-Technical Schools
State Department of Education
Hartford, Connecticut
June, 1966

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CONNECTICUT

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The Connecticut Practical Nurse Education Program

Introduction and History:

To help the growing need for auxiliary nursing personnel in the hospital and in the home, the Connecticut State Department of Education and the Connecticut State Board of Examiners for Nursing instituted a one-year Trained Attendant course in the fall of 1942. This course was offered at the State Trade School in New Britain and consisted of 3 months of classroom instruction and 9 months of clinical experience at two cooperating hospitals; namely, Windham Community Memorial Hospital in Willimantic and the Griffin Hospital in Derby. One year later, in 1943, fourteen (14) students completed the Trained Attendant course and successfully passed the examination for licensure.

Since the inauguration of this Trained Attendant course, the State of Connecticut, as well as the entire nation, experienced an increasing demand for an expansion of hospitals and other health agencies. This expansion necessarily increased the need for additional medical personnel of all types, but especially for nursing personnel. In June, 1947, a recommendation was made for expansion of the Trained Attendant course, and in January, 1948, two additional centers were established; namely, in New Haven and in Bridgeport.

In the past 15 years, there have been ever increasing demands for a larger and more rapid expansion of this program. In order to help meet these demands, the Connecticut State Department of Education and the Connecticut State Board of Nurse Examiners have endeavored to expand the program, which today is officially known as the Connecticut Practical Nurse Education Program. As of September, 1965, there are six technical school centers: Bridgeport, New Britain, Hamden, Willimantic, Stamford, and Waterbury conducting this program with 14 cooperating hospitals. In addition, a pilot program for selected psychiatric aides who were employed in a state mental institution and who desired to become Licensed Practical Nurses was conducted in the Norwich area in 1963. (State Board Exam. statistics compiled from November 1961 through June 1963 indicate a total of 483 students who successfully passed the L.P.N. examinations).

In view of this marked expansion, the primary concern of both the Connecticut State Department of Education and the Connecticut State Board of Examiners for Nursing has been that this growth and expansion proceed in the right direction. Although many changes and adaptations have been made, the purpose, philosophy and objectives of this Program have remained stable.

Purpose:

The purpose of the Practical Nurse Education Program is to educate qualified men and women to assist the professional nurse in the care of patients within the scope and limitations indicated by the accepted definition of the Practical Nurse.

The practice of practical nursing as defined in the General Statutes of Connecticut, Chapter 378, Section 20-87 (b) reads as follows:

"The practice of practical nursing means the performance for compensation of selected acts in the care of the ill, injured, or infirm under the direction of a registered professional nurse or a licensed physician or a licensed dentist; and not requiring the substantial specialized skill, judgment, and knowledge required in professional nursing."

Philosophy:

Nursing has come to mean the care of the individual, his body, mind, and spirit. It has come to include an understanding of the individual, of his place in the family and the community, and the interdependency of these factors. It has likewise meant the teaching of patients and those involved in the care of the sick and a sharing in the positive health plan on all levels. Nursing, thus, may be viewed as both an art and a science.

It is an established fact that the professional nurse is prepared and qualified to exercise leadership in nursing education and administration, to deal with the more complex nursing situations which demand a high degree of skill and judgment because of a broad background of scientific, psychological, social, and spiritual knowledge. However, there is an increasing need for good bedside nursing care for individuals who are not acutely ill. Selected individuals, therefore, who for various reasons do not have the time, money, or scholastic preparation to fulfill the qualifications required of a professional nurse but who possess the ability, desire, and personality to care for the sick can be taught to give complete bedside nursing care to those patients who are less acutely ill and to assist the professional nurse in the care of those more acutely ill. These individuals would meet the requirements for admission to the Licensed Practical Nurse Program. They should be prepared to function as part of a nursing team and should be recognized not as a nurse of a lower degree, but as an able practitioner within those areas of nursing functions which are indicated in the "Statement of Functions of the Licensed Practical Nurse". (See the American Journal of Nursing, April, 1957, Vol. 57, No. 4). Individuals who are well prepared in the practical nursing field would, therefore, aid the professional nurse in utilizing her more extensive preparation in the promotion of better nursing care for patients and improvement of health conditions in the community.

Objectives:

1. To provide a progressive and correlated program of study and experience which will promote the acquisition of necessary concepts, skills, and understanding by practical nurse students so that they may function effectively in giving nursing care to selected patients with emphasis on the comfort and safety of the patient.

2. To aid the students in understanding and appreciating the essential relationships and cooperative responsibilities in the school, the home, and the hospital.

3. To aid the students in developing an appreciation of their role in the total health care of the community.

4. To assist the students in developing intellectually, culturally, socially, and spiritually in order to assume an effective role as a good nurse and citizen.

5. To stimulate the students to pursue and further their personal and vocational growth and development.

Accreditation:

General Statutes of Connecticut, Practical Nurse Education, Chapter 378, Section 20-90-26 reads as follows:

"There is one form of organization for schools of practical nurse education, conducted by the Connecticut State Department of Education, Division of Vocational Education. The administration and controlling body of the school of practical nursing shall demonstrate concern for the needs of the nursing education program and its continuing effectiveness."

Administration of the Practical Nurse Education Programs:

Practical Nurse Education programs in Connecticut are administered by the State Department of Education through the Division of Vocational Education and with the approval of the Connecticut State Board of Examiners for Nursing. (See Connecticut State Board of Education chart and the Division of Vocational Education chart).

Policy re. Participation of Affiliating Hospitals:

The State Department of Education through the Division of Vocational Education and the Connecticut State Board of Examiners for Nursing evaluate requests received from hospitals for participation in the Practical Nurse Education Program. (See Form VT-222-K).

These are some of the important factors which are considered:

1. The need for this type of program in a specific area, especially after careful evaluation of the needs for and availability of nursing personnel.

2. The availability of desirable clinical facilities and qualified nursing faculty and staff.

3. The availability of Technical School facilities, funds, and faculty to establish such a program.

When approval has been granted for inaugurating a Practical Nurse Education program, a written condition of agreement is established between the Connecticut State Board of Education and the affiliating hospital. This agreement states the responsibilities of the participating agencies. (See Form VT-222-K).

Accreditation of Affiliated Hospital:

General Statutes of Connecticut, Chapter 378, Section 20-90-27 reads as follows:

"The hospital with which the school is connected shall be approved by the appropriate accrediting bodies and provide adequate clinical services for the student program. All four required clinical services should be provided for in that hospital."

Policy re. Responsibilities of Vocational Education Department:

The following are the Education Department's duties listed in the written agreement:

1. Supply necessary copies of a prospectus describing the program.

2. Assist in recruitment and refer applicants to hospital authorities.

3. Review credentials of student candidates recommended by the hospital and in consultation with the hospital representatives determine those to be admitted to the program.

4. Determine the number of applicants who may be accepted for each class based on facilities available.

5. Provide teaching personnel and assume instructional costs during the pre-clinical period for each class admitted.

6. Conduct the program in accordance with outlines of instruction developed in cooperation with and approved by the State Board of Examiners for Nursing.

7. Furnish the necessary forms for recording the progress of students in the clinical areas.

8. Provide a coordinating service which will assist the hospital in establishing and maintaining effective learning conditions during the clinical period.

9. Issue certificates to students who successfully complete the program.

Policy re. Responsibilities of Affiliating Hospitals:

The following are the affiliating hospitals' duties listed in the written agreement:

1. Recruitment

   a. Provide publicity, carry on correspondence and interview prospective students.

   b. Collect information about candidates necessary to determine their eligibility for admission to the program and to make copies of such information available to the State Board of Education.

2. Admissions

   a. Assemble the minimum number of acceptable students when a class is to be conducted. The customary minimum is twenty-four students.

   b. Plan for the assembling of two class groups to begin the program in September and February.

3. Clinical Experience Period

a. Provide classroom instruction and supervised clinical experience for 8 months which will enable each student to complete the necessary learning experiences.

b. Provide a qualified coordinator and assistants as indicated to direct and conduct the program of clinical supervision and instruction. (Assume all costs of instruction and supervision of students until such time as adequate funds can be provided by the Education Department for this phase of education).

4. Maintenance During Clinical Period

a. Awards in aid of Practical Nursing Education: Provision should be made for the establishment and administration of a program of financial assistance and awards.

b. Provide meals, for student, while on duty, during the clinical period.

5. Health Care

a. Provide for pre-admission physical examination for applicants, or if desired, applicants may consult private physician.

b. Provide for minor health care for each student during the clinical period.

6. Absence and Vacation

a. During the clinical period, one week of vacation and one week of sick leave is allowed.

b. Each student is entitled to one day's leave for each hospital holiday which occurs during the clinical period.

c. Absence of students for any reason beyond those stated above must be compensated for.

d. Absences for exceptional reasons may be arranged only if the request is submitted well in advance and meets with the Co-ordinator's approval. All class work missed because of absence for illness or other cause must be made up. Family responsibilities must be arranged, so that they will not interfere with attendance and home studies. Frequent or prolonged absences may indicate the need for a leave of absence until a desirable state of health is attained or home problems resolved, so that an uninterrupted educational program can be pursued.

7. Certificates and Progress Records

a. Sign school certificates as the affiliating hospital.

b. Transmit copies of all clinical period progress records to the Department of Education, Technical School Office, Practical Nurse Education Department.

The written agreement between the State Board of Education and the affiliating hospital shall continue in force unless deemed inadequate by the State Board of Education and the Board of Examiners for Nursing.

Policy re. Selection and Training of Instructors in the Practical Nurse Education Program:

Prospective instructors may make their applications directly to the various technical school Directors, or to the Supervisor of the L.P.N. Program in the Division of Vocational Education. The applicant's records are then forwarded to the State Department of Education which reviews them and informs the Director of the technical school of the acceptance or rejection of the applicant.

Desired Personal Qualifications of Instructors:

1. Age - most desirable between 25-35 years. Each applicant will be considered on an individual basis.

2. Sex - female

3. Instructors are expected to possess leadership qualities and have a genuine interest and firm belief in the value of the Practical Nurse Education Program.

4. Instructors are expected to have ability to understand and adjust to the scope and limitations of the course of study and the qualifications and needs of the students.

5. Instructors are expected to be able to cooperate with members of hospital staffs and work well with others.

6. Instructors are expected to have good health and character records.

Requirements for Practical Nurse Teachers in Vocational Education:

Certification:

Candidate must meet state vocational teacher certification requirements for "Teacher of Skilled Trades."

This classification takes into consideration the professional education and experiences of the graduate professional nursing program.

Certification is the responsibility of the individual. Details of certification requirements can be found in the official bulletin of the State Board of Education, "Regulations for Teachers' Certificates", current edition available from the Bureau of Teacher Certification, State Office Building, Hartford.

Administrative Interpretation:

Probationary Employment:

1. Graduated from an approved school of professional nursing.

2. Registered as a professional nurse in Connecticut.

3. A Baccalaureate degree from an approved institution.

4. Completed a minimum of six semester hours in methods and materials of instruction.

5. Experience in teaching in an accredited School of Nursing of in an accredited School of Practical Nursing.

6. Completed eight years of experience in nursing including student years.

Continuing Employment:

1. Three years of satisfactory service as an instructor of Practical Nursing under the Provisional Certificate.

2. Completion of a Master's degree or thirty semester hours of approved professional study which may be graduate or undergraduate credit, including such courses as Curriculum Development, Occupational Analysis, Mental Hygiene, Psychology of Learning, Principles of Guidance, Principles of Vocational-Technical Education, Educational Measurements, Team Nursing.

Suggested Courses for Practical Nurse Instructors to meet Provisional and Standard Certificate Requirements:

(Professional Education Courses and V.I.E. Course Equivalencies)
30 semester hours of undergraduate - graduate credit.

Credits	Course Titles
3	Occupational Analysis
2	Laboratory and Shop Organization and Management
3	Principles of Vocational-Technical Education
2-3	Legal Aspects (Nursing, Education)
2-3	Mental Hygiene
3	Teaching of Vocational-Technical Education
3	Techniques of Instruction (Conference)
3	Principles of Guidance
2-3	Curriculum Development (Nursing, Education)
3	Preparation of Instructional Materials (Nursing, Education
2-3	Principles of Supervision
3	History and Philosophy of Education
2-3	Child Growth and Development
2	Psychology of Learning
3	Adolescent Psychology
2	Evaluation of Learning
3	Audio-Visual Education
2-3	School and Community Health
2	Principles of Secondary Education

Administrative Requirements for Advancement in the System - (Bulletin #30-p. 35)

For advancement from Instructor to Senior Instructor grade, five years of satisfactory teaching and 300 clock-hours of professional credit are required.

For advancement from Department Head to Senior Department, five years of satisfactory experience as Department Head and 450 clock-hours of professional credit are required.

Qualifications Required for Instructor in Nutrition, Cooking, and Home Management in the Practical Nursing Program.

Certification:

Candidate must meet state vocational teacher certification requirements for "Teacher of Skilled Trades."

Certification is the responsibility of the individual. Details of certification requirements can be found in the official bulletin of the State Board of Education. "Regulation for Teachers' Certificates", current edition available from the Bureau of Teacher Certification, State Office Building, Hartford.

Administrative Interpretation:

Probationary Employment:

1. Have a Baccalaureate degree from an approved institution with a major in Foods and Nutrition.

2. Have completed an internship program in a hospital or institution approved by the American Dietetic Association.

3. Completed a minimum of six semester hours (or 2 courses in "Teaching of Vocational Industrial Education"). These courses are to be completed prior to certification or within the first year of employment.

Continuing Employment:

1. Three years of satisfactory service as an instructor of Foods and Nutrition in the Practical Nursing Program under the Provisional Certificate.

2. Completion of a Master's degree or thirty semester hours of approved professional study which may be graduate or undergraduate credit, including such courses as Curriculum Development, Occupational Analysis, Mental Hygiene, Psychology of Learning, Principles of Guidance, Principles of Vocational-Technical Education, Educational Measurements, Team Nursing.

List of Suggested Courses to Meet Provisional and Standard Certificate Requirements:

See page 8

Administrative Requirements for Advancement in the System:

See Bulletin #30, p. 35 and p. 9 in this bulletin.

Policy re. Qualifications and Duties of Clinical Program Coordinator in Practical Nurse Education Program:

Qualifications:

1. A Baccalaureate degree from an approved institution. A Master's degree or matriculation for a Master's degree is desirable.

2. Experience in teaching and supervision in nursing education.

3. Should have a genuine interest and firm belief in the value of the Licensed Practical Nurse Program.

4. Should have the ability to understand and adjust to the scope and limitations of the one-year course of study.

5. Should be able to understand the qualifications, needs, and special problems of the one-year adult program.

6. Should have the ability to establish and maintain effective working relationships with program and hospital personnel.

Duties:

1. To process and select the required number of acceptable students for admission to the Practical Nurse Education Program.

   a. Publicize the course.

   b. Recruit, carry on the correspondence, and conduct personal interviews with prospective students.

   c. Provide for the conducting of selected pre-admission aptitude tests and physical examinations.

   d. Collect and assemble credentials of applicants.

   e. Present the credentials for approval at the Admissions Committee meeting.

2. To organize and direct the educational program of instruction and supervised experience during the clinical period to meet the requirements in the approved program of study.

   a. To arrange rotation for clinical experience.

   b. To provide Orientation demonstration, direct supervision, and routine supervised practice. These tasks are performed personally and/or delegated to qualified individual(s).

   c. To arrange for at least 4 hours of class per week: formal class, demonstration, conferences, Team Leader instruction, ward instruction, etc.

d. To keep records of attendance at class, experience, and progress in learning on appropriate Department of Education forms and in accordance with the Department of Education directives.

e. To send complete records to the Technical School Practical Nurse instructor within one week of the student's completion date of the program.

3. To coordinate the program with hospital personnel practices, and other educational programs so that good rapport results throughout.

4. To provide guidance and periodic progress evaluation of Practical Nurse students.

5. To supervise the health program of the Practical Nurse students.

6. To request the guidance and assistance of the State Supervisor whenever it seems indicated.

7. To report any problems and consult with the Technical School Director or State Supervisor concerning possible action, solution, and decision.

Policy re. The Selection of Students (Admission Standards)

A brief statement of admission requirements appears in the Practical Nurse brochure. Additional information and explanation follows:

1. Age - between 18 and 50 years of age.

Birth certificate is to be viewed and noted during the interview and returned to the applicant. In lieu of a birth certificate, evidence such as citizen papers, voting permit, baptismal certificate, etc. is acceptable. The applicant must have reached her 19th birthday in order to be eligible to take the State Board licensing examination.

Applicants approaching 50 years of age should be given a careful and thorough physical examination and should display alertness and vigor. Individual consideration is necessary for any applicant over 50 years of age.

2. Scholastic Background:

Graduation (4 years) of high school necessary for applicants under 20 years of age; 2 years (8 credits) or the equivalent if applicant is 20 years of age or over.

The equivalent requirement may be met in either of two ways:

a. Take the High School Equivalency Examination given by the State Department of Education and pass at the 10th grade level. Arrangements for this examination may be made by contacting the Bureau of Youth Services, State Office Building, Hartford, Connecticut.

b. Take the National League for Nursing Pre-Admission and Classification Examination (P.A.C.E) for practical nurse applicants. Above 50 per cent performance in each area tested or a comprehensive percentile total placement of 70 or more is accepted in lieu of two

years of high school credit.

The four years of high school means graduation from an accredited four year course. Grades and class placement should also be considered.

3. Admission Examinations:

An Otis score (I.Q.) of 95 has been accepted as the minimum indication of potential ability to meet the scholastic requirements of the course. No exception may be made to this minimum unless other outstanding qualifications are listed in the applicant's total record and are voted as acceptable by the Admissions Committee. If an applicant does not achieve an Otis score of 95 and wishes to retake the test, an opportunit to do so may be offered no earlier than 3 months after the original test date.

The National League for Nursing Pre-Admission and Classification Examination (P.A.C.E) is administered to all Practical Nurse applicants. A total or comprehensive percentile score of 50 is the acceptable minimum; however, special emphasis and consideration should be given to the percentile scores in the Vocabulary, Spelling, and Reading areas.

4. Good Health:

Basic criteria - Health shall be such that the Practical Nurse student will give satisfactory and safe care to patients and also not endanger his or her own physical and mental health in meeting the vigorous activities of nursing.

A physical examination is required prior to acceptance. (Health examination forms will be supplied by the Division of Vocational Education).

a. Applicants must place in Class I. Class II is acceptable only if applicant's own physician approves participation in Program and Admissions Committee also approves application.

b. Negative Chest X-ray and V.D. test are required.

c. Vaccination for smallpox is required. Immunization against typhoid, diphtheria, poliomyelitis, and tetanus is advised and may be required by affiliating hospitals.

d. Weight - Overweight and underweight are to be considered on an individual basis. Applicant should be under physician's care and must present evidence of efforts to remedy condition before acceptance into Program. Health problems due to overweight or underweight should be considered as well as the general appearance of the student as a desirable representative of the Practical Nurse Program.

e. Eyesight - Vision in at least one eye should be 20/20 or corrected to 20/20 by glasses. No eye condition which may be detrimental to patient care or student's success in Program is acceptable.

f. Hearing - Careful consideration should be given to this faculty.

g. Emotional Stability - Must be established.

h. Good Character - Is determined from the five references requested on the application form (VT-222-A). All reports should be favorable. References from relatives and friends are not considered valid.

i. Genuine liking for people and interest in caring for the sick. References and a personal interview will be the determinants.

Policy re. Student Uniforms, etc.

1. Student Uniforms - The applicant purchases his or her own uniforms from a uniform company designated by the State program. A uniform order blank is sent to the student with the acceptance letter.

The complete practical nurse uniform consists of a blue and white drip-dry dress with attached white collar and cuffs, sleeve insignia, white shoes and stockings, a white school cap, a watch with a second hand, a pen, and bandage scissors.

A complete uniform is to be worn during the entire program.

2. Student Costs:

Approximately $100 will be needed for uniforms and textbooks. The student may live at home or provide his or her own maintenance during the one year program.

3. Outside Employment:

The following points should be stressed to a prospective student during the interview:

a. There will be no time for outside employment, as the one year practical nurse program is very concentrated and will demand the student's full time and attention.

b. Daily attendance and a passing grade must be maintained.

c. Finances must be planned to meet the necessary costs for the year.

4. Transportation:

Out-of-town Connecticut resident students under 21 years of age are paid transportation costs, while they are attending the pre-clinical phase of the program at the vocational-technical school. (Guidance Director at the Technical School will provide additional information).

5. Tuition:

There are no tuition charges for Connecticut residents enrolled in the Practical Nurse Education Program. A tuition fee, determined annually by the Director of the Bureau of Vocational Education, is charged to out-of-state students. This fee refers to the pre-clinical phase of 16 weeks only, and will be calculated as one-tenth of the annual rate for each month of technical school classes.

6. Textbooks:

Each Practical Nurse student is required to purchase five texts for use during the pre-clinical phase of the program: (a) practical nursing, (b) personal and vocational relationships, (c) medical dictionary, (d) anatomy paperback manual or workbook, (e) nutrition workbook. These texts are standard in all Technical School centers, and no substitution may be made without the approval of the Curriculum Committee and the State Supervisor. Additional excellent up-to-date books are to be placed in the Practical Nurse Department Reference Library for student use.

During the clinical period, the Hospital Coordinator may require one or two texts to be purchased by the students; e.g. Medical and Surgical Nursing and State Board Exam. Review. Other texts should be freely available in the Reference Library.

A list of the necessary textbooks for use during the pre-clinical period with the source for purchase, will be sent to the applicant with the acceptance letter. Students should have texts available for the first session of class.

7. Absence and Vacation:

During the pre-clinical period, a maximum of 3 days absence because of illness, or other valid reason, is allowed. Any additional absences must be considered on a individual basis and discussed with the State Supervisor of the Program. It may be necessary for the student to withdraw and to re-apply for the succeeding class.

Days on which the vocational-technical schools are closed are considered vacation days and credited as pre-clinical vacation.

During the clinical period, one week vacation is allowed and one week of sick leave is allowed.

Each student is entitled to one day's leave for each hospital holiday which occurs during the clinical period.

Absences for exceptional reasons may be arranged only if the request is submitted well in advance and meets with the Coordinator's approval. All class work missed because of absence for illness or other cause must be made up. Family responsibilities must be arranged, so that they will not interfere with attendance and home studies. Frequent or prolonged a sences may indicate the need for a leave of absence until a desirable state of health is attained or home problems resolved, so that an uninterrupted educational program can be pursued.

8. Transferral to Other Practical Nurse Education Center or Hospital:

It is expected that the applicant will complete the pre-clinical program at the technical school and the clinical at the hospital where the individual's application was accepted and credentials processed. If a transfer is requested, withdrawalffrom the program is required. Pursuant to such withdrawal, application must be made to enroll in the next Practical Nurse class at the desired hospital. Transferrals are considered only on an individual basis by the State Supervisor. The decision of the State Supervisor shall be adhered to.

9. Credit for Former Nursing Experience:

The State Board of Examiners for Nursing and the Practical Nurse Education Program Supervisor have issued the following directive:

"Effective November 1, 1963, any applicant to the Connecticut Practical Nurse Education Program who has had previous training in a professional nursing school should be advised:

(1) To submit her former nursing school transcript for evaluation to the State Board of Examiners for Nursing, 79 Elm Street, Hartford, Connecticut, if she has had theory and experience in all the nursing service areas which are required in the Connecticut Practical Nurse Education Program. If the evaluation indicates she has had adequate preparation, whe will be admitted to a practical nurse licensing examination.

(2) If there is a deficiency in any of the nursing areas, either in theory or experience, no credit will be given for any previous experience in the other various nursing service areas. The applicant, therefore, will need to pursue the entire one-year program of practical nurse training - classroom and clinical areas."

10. Maintenance During Clinical Period:

a. Awards in aid of Practical Nursing Education: Provision should be made for the establishment and administration of a program of financial assistance and awards.

b. Provide meals, for student, while on duty, during the clinical period.

Policy re. Marking, Grading, and Evaluation of Student Performance:

To the extent that a numerical grade can be given as an evaluation of student performance, 70 per cent is considered as the minimum passing grade.

During the pre-clinical period, the faculty at the Technical School and during the clinical period, the faculty at the hospital is charged with the responsibility of determining the extent of adequacy which expresses the minimum required for a passing grade of 70 per cent.

The responsibilities and functions required of a Licensed Practical Nurse must be considered by the faculty in determining whether or not the student in question would serve society better in a role which requires less demanding abilities than those necessary for a Licensed Practical Nurse.

The following words, letters, and numbers should be used in all Practical Nurse Education centers to designate student performance:

Superior or Excellent = A+ (100-96) A to A- = 95-90

Above average or very good = B (89-85)

Average or good = C (84-75)

Below average or fair = D (74-70)

Low, poor, failure = F (69 and below)

The faculty will evaluate the student's performance in three areas: acquisition of knowledge, development of skills, and demonstration of suitable personal attributes. The student must demonstrate to the faculty adequate progress in these three areas to receive a passing grade of 70%.

Policy re. Dismissal of Student From Program:

It is urged that students receive encouragement, as well as guidance, during the first month in the pre-clinical period to allow for adjustment to the classroom situation. The faculty should, however, observe each student's performance carefully and if any deficiency is displayed by a student in demonstrating satisfactory adjustment, progress, and achievement, the instructor should:

1. Schedule a conference to determine the cause of the deficiency.

2. Give the student special assistance and guidance.

3. Allow two weeks for demonstration of adequate improvement.

Procedure During Pre-Clinical Period:

1. The Director of the Vocational-Technical School will be notified by the Practical Nurse Education Department Head of the student's inadequacy and of the outcome of the conference.

2. If, at the termination of the two weeks' probationary period, adequate improvement is not evidenced, the Director will be so advised.

3. A copy of this notification as well as complete information of the outcome will be sent to the Coordinator of the affiliating hospital and to the State Supervisor of the Practical Nurse Education Program.

4. A copy of this notification will be sent to the parents or guardian of of students who are under 21 years of age.

5. Recommendation for dismissal will be made by the faculty, but actual dismissa will be the responsibility of the Director of the Vocational-Technical School.

6. No student will proceed to the clinical phase of the Program if a passing grade of at least 70% has not been achieved in each subject offered during the pre-clinical period.

Procedure During Clinical Period: (The same principles and procedures will apply as listed above)

A student whose achievement, academic or clinical, is such that the hospital does not wish him or her to remain in the hospital or give care to patients may be suspended immediately by the Director of Nursing of the affiliating hospital. The Coordinator of the Practical Nurse Education Program will notify the Director of the Vocational-Technical School and the State Supervisor of the Practical Nurse Education Program of the action taken.

Dismissal from the program remains the responsibility of the Director of the Vocational-Technical School.

Policy re. Withdrawal of Student From Program:

Procedure During Pre-Clinical Period:

1. Any student withdrawing from the Practical Nurse Education Program, for other than unsatisfactory adjustment or achievement, must submit a letter of resignation to the Director of the Vocational-Technical School and the Coordinator of the Practical Nurse Education Program at the affiliating hospital. This letter will be placed in the student's folder.

2. If at a future time, the student seeks re-admission to the program, the complete record will need review and evaluation by the Admissions' Committee.

3. Any unusual situation or circumstances should be referred to the State Supervisor of the Practical Nurse Education Program.

Procedure During Clinical Period:

The same procedure will apply as listed above.

Policy re. Capping and Graduation Exercises:

Capping:

A white practical nurse's cap (part of standard Practical Nurse uniform outfit) is awarded the student at the successful completion of the pre-clinical period of 16 weeks. The Director of the Vocational-Technical School, or his representative, attends simple ceremonies for this capping held for the immediate class members in the Practical Nurse Department.

Graduation Exercises:

At the termination of the 12 months' Practical Nurse Education Program, graduation exercises will be held at the Vocational-Technical School, with the assistance and participation of the affiliating hospitals' Practical Nurse Education faculty. These exercises are conducted during the final week (Review week) of the program.

Students who have successfully completed the total course will be awarded a white practical nurses' cap with a band of two-tone grosgrain ribbon attached to both sides of the cap. The band colors will be those of the Vocational-Technical School in which the Practical Nurse Education Program is conducted.

Directive re. Placing of Ribbons on L.P.N. Caps: (Issued 5/27/59)

"Place one end of 6" length of ribbon even with the corners of the back fold tab. Fasten down firmly with invisible (clear) tape or sew neatly.

Bring end of ribbon up and over the edge of the cap on an angle to a point not more than 2½" or 3" from the end corner of the cap. Fasten on the inside with invisible (clear) tape or sew neatly. Repeat on the other side.

Ribbon is worn on both sides of the cap. Be sure ribbon is as tight and neat as possible.

Use white pins only to fasten cap."

Caps will be presented to the graduates by the Coordinator of the Practical Nurse Education Program in the affiliating hospital.

Certificates designating the students as graduates of the Practical Nurse Education Program will be presented by the Director of the Vocational-Technical School or a representative from the Division of Vocational Education.

Policy re. Review Week, State Board Transcripts, Filing of Records:

Review Week:

Students spend the final week of the 12 months' Practical Nurse Education Program at the Vocational-Technical School as a review week in preparation for the State Board Licensing Examination. One month before Review Week the Practical Nurse instructor will administer a N.L.N. Achievement Test, so that test results may be discussed during the terminal class period (Review Week). Copies of the test results are to be sent to the Practical Nurse Education Coordinator at the affiliating hospital and the State Supervisor of the Practical Nurse Education Program.

State Board Transcripts:

After Review Week, the Practical Nurse Education Coordinators at the affiliating hospitals will forward the complete record of each practical nurse student to the Practical Nurse instructors at the Vocational-Technical Schools.

The Practical Nurse instructors will then transcribe the information from each students' summary record (VT-222-SR) to two copies of State Board form (L.P.N. 2-Rev. 63). One copy of this State Board form and one copy of the high school record of each Practical Nurse student is forwarded to the State Board of Examiners for Nursing. A copy of the P.A.C.E. results is to be forwarded with the record of all applicants for the L.P.N. State Board examination who do not have the two years of high school required and are employing the P.A.C.E. as an equivalency. These records must be filed with the State Board of Examiners for Nursing at least four weeks prior to the examination; i.e. on or before the filing date listed in the annual State Board Examination calendar.

Filing of Records:

The following forms are to be retained in the individual Practical Nurse student folders which are kept in the permanent files at the Vocational-Technical Schools where the Practical Nurse Education Programs are conducted:

1. Original application form (VT-222-A)
2. Medical History (VT-222-A-1)
3. Summary Record (VT-222-SR)
4. State Board Summary Sheet (L.P.N.-2-Rev. 63)
5. State Board Examination results

Discretion should be used about retaining letters of reference, resignation, etc. which may be important at some future date.

Policy re. Local Faculty Meetings:

It is desirable to have each of the nine Practical Nurse Education Program areas: Bridgeport, Stamford, New Haven, New Britain, Willimantic, Waterbury, Danbury, Middletown, and Hartford hold local faculty meetings.

Objectives:

These meetings should:

1. Provide an opportunity for discussion of mutual problems, students' progress, and the implementation of the Department of Education requirements and recommendations.

2. Constitute a work group for the State Curriculum Committee to work on common problems and recommend modifications to the Department of Education Curriculum Committee.

3. Provide closer and more coordinated working relationships between the Vocational-Technical School and the affiliating hospitals' faculties.

Meetings:

Meetings should be held in October, January, and May at which times plans may be made for the school year, capping and graduation exercises, etc. The date and time convenient, as far as possible, for all members, should be arranged; the place of the meetings should be rotated among the cooperating agencies.

Members:

The Chairman will be the Practical Nurse Education Program Department Head from the Vocational-Technical School, who will serve in this position for a one-year term. The position will then be held in succession by the Practical Nurse instructors and Coordinators from the affiliating hospitals. Members will be the Director of the Vocational-Technical School, or his representative, and all the Practical Nurse Education Program Vocational-Technical School and affiliating hospitals' faculties.

Role of the Chairman:

1. Prepare an agenda at least three weeks in advance of the meeting and forward to the State Practical Nurse Education Program Supervisor and the Director of the Vocational-Technical School for review and approval.

2. Distribute copies of the agenda at least two weeks in advance of the meeting to all Practical Nurse Education Program personnel concerned.

3. Conduct the meeting, lead discussion, etc.

4. Has no vote in the meeting.

Role of Secretary:

The secretary will serve for a one-year term. The position will be held in succession by a member of the Vocational-Technical School and affiliating hospitals' faculties.

The secretary will:

1. Conduct correspondence as directed by the chairman.

2. Record minutes and read them at each meeting.

3. Send copies of the minutes of the previous meeting to the State Practical Nurse Education Program Supervisor and all members of the faculty groups.

Policy re. Curriculum Committee:

The Practical Nurse Education Program is included in the state-wide curriculum committee organization and as such will observe and participate in all Curriculum Days as designated in the school calendar. (See Bulletin #30-pgs. 28-31).

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

LIST OF P.N.E. PROGRAM FORMS TO BE USED

Progress Report Booklet (not included in Bulletin)	VT-222
Application for Admission to P.N.E. Program	VT-222-A
Medical History	VT-222-A-1
Admission Credentials	VT-222-B
Interview of P.N.E. Program Candidate	VT-222-C
Patient-Centered Case Study	VT-222-CS
Reference Letter	VT-222-D
Check List sent with Reference Letter	VT-222-D-1
Supervised Clinical Experience Records	
Medical, Surgical, Pediatrics	VT-222-E-1
Convalescent Maternity Patient, Newborn, and Formula Room	VT-222-E-2
Acceptance Letter sent to applicant	VT-222-F
Check List sent with Acceptance Letter	VT-222-F-1
Letter scheduling interview, pr-entrance test, physical exam	VT-222-G
Evaluation of Student's Service Experience	VT-222-H
Guide for Evaluation of Student's Service Experience	VT-222-H-1
Rejection Letter	VT-222-I
Information Letter	VT-222-J
Hospital Application Form (Clinical Facilities Available)	VT-222-K
Condition of Agreement between Department of Education and Affiliating Hospital	VT-222-K-1
L.P.N. Pin Order	VT-222-L
Monthly Attendance Record	VT-222-M
Probation Letter	VT-222-N
Personal Data Card (Sample card not in Bulletin)	VT-222-P
Summary Record (for student record folder)	VT-222-SR
Summary Record (for student)	VT-222-SR-1

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

VT-222-A
(1966)

Practical Nurse Education Program

APPLICATION FOR ADMISSION TO PRACTICAL NURSE EDUCATION PROGRAM

DATE OF APPLICATION _____

NAME _____ AGE _____ DATE OF BIRTH _____
(Last) (First) (Middle)

ADDRESS _____ TEL. _____
(Number and Street) (City or Town)

MARRIED _____ SINGLE _____ WIDOWED _____ DIVORCED _____ MAIDEN NAME _____

HIGH SCHOOL _____
(Name of High School) (City or Town) (State)

FROM _____ TO _____
(Month and Year) (Month and Year)

_____
(Maiden name, or name when attending High School)

EXPERIENCE AND OCCUPATION SINCE LEAVING SCHOOL:
If this includes a course in care of the sick, give name and address of Institution or individual who can supply a transcript of your experience.

REFERENCES:
Give full name and street address of five persons, (other than relatives) who have known you during the last five years and to whom we may write for information about you, such as:

	NAME	STREET ADDRESS	CITY	STATE
EMPLOYER				
PHYSICIAN				
NURSE or ATTORNEY				
GUIDANCE COUNSELOR (INSTRUCTOR)				
CLERGYMAN				

Have you at any previous time, made application to a P.N.E. Program? No _____
Yes _____

If yes, where and when? _____ _____ _____
School Location Year

RETURN THIS APPLICATION TO:
The Coordinator of the P.N.E. Program at ONLY ONE of the hospitals listed in the brochure.

VT-222-A-1
(1966)

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

Practical Nurse Education Program

MEDICAL HISTORY

Name _____ Date of Birth _____ S W M D

Address _____ Telephone _____

Please complete this portion of form only and bring with you to the interview.

MEDICAL HISTORY

Past History (Circle conditions you have had and give date)

Anemia	Gonorrhea	Nerve Disease
Arm or Leg Injury	Hay Fever	Paralysis
Arthritis	Headaches	Pleurisy
Asthma	Head Injury	Pneumonia
Back Injury	Hearing Disturbance	Rheumatic Fever
Bleeding Tendency	Heart Disease	Scarlet Fever
Body Deformity	Hernia (Rupture)	Smallpox
Cancer, Tumor, Cysts	High Blood Pressure	Stomach or Intestinal Disorder
Chicken Pox	Jaundice (Liver, Gallbladder)	Syphilis
Diabetes	Kidney Disease	Thyroid Disease
Diphtheria	Malaria	Tuberculosis
Drug Allergies	Menstrual Disturbanct	Typhoid
Epilepsy	Mental Disease	Visual Disturbance
German Measles	Mumps	

What is your general health? Excellent Good Fair Poor

Any family history of T.B., diabetes, or mental illness?

Have you ever had any difficulty in walking, standing or sitting?

Are you under a physician's care at present? If so, for what?

When was your last visit to the dentist? What is the condition of your teeth?

Have you ever been hospitalized? If so, for what and date?

Have you ever had an operation? If so, for what and date?

When did you have your last chest x-ray?

Have you ever been immunized against smallpox, tetanus and poliomyelitis? If yes, give dates of most recent immunization.

Usual Weight: Height:

Have you ever received compensation benefits for injuries sustained during previous employment?

Other Information:
(If necessary, please list additional information on an attached sheet.)

I certify that the above is true and complete to the best of my knowledge.

PHYSICAL EXAMINATION Date _____

GENERAL APPEARANCE: Good _____ Fair _____ Poor _____ Weight____

EYES: Visual acuity (with/without glasses R 20/_____ L 20/_____

Reaction: Light _____ Accommodation _____

EARS: Gross _____ Drums _____ Hearing Acuity _____

NOSE: _____ THROAT: Tonsils _____ Thyroid _____

MOUTH: Teeth _____ NECK: Glands _____

BREASTS: _____

CHEST: Lungs: Percussion _____ Auscultation _____

Heart: Rhythm _____ Pulse _____ BP _____/____

Murmurs _____ Size _____

ABDOMEN: Organs _____ Masses _____ Scars _____

BACK: Contour _____ Tenderness _____

HERNIA: _____

GYN: _____

LEGS: Feet _____ Symptoms _____

ARMS: Deformity, Scars _____ Symptoms _____

REFLEXES: _____

SUITABLE FOR EMPLOYMENT: Yes _____ No _____ Waiver _____ Deferred __

REMARKS: (Work tolerance, waiver)

OTHER REPORTS:

Check (✓) when the following are completed:

Chest x-ray _____

Urinalysis _____

C. B. C. _____

V. D. R. L., Wassermann, etc. _____

Do you believe that this individual is in suitable physical and emotional condition for training in practical nursing?

If not, why?

Signed: _____ M.D.
Examiner

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

VT-222-B
(1966)

Practical Nurse Education Program

ADMISSION CREDENTIALS

TECHNICAL SCHOOL HOSPITAL DATE

Name and Address	Age	Marital Status	No. of Children & Ages	Yrs. of H.S. & Rank	Otis Score	P.A.C.E. Score	Ref.	Interview	Health	Comments

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

VT-222-C
(1966)

Practical Nurse Education Program

INTERVIEW OF P.N.E.P. CANDIDATE

Name _____ S M W D
(Last) (First) (Initial)

Address _____ _____
(Number) (Street, Ave., Rd.) (City or Town)

Credentials:

Previous General Educational Experience: _____ Transcripts Rec'd___
Grade (Yrs.)

Previous Nursing Experience:

Birth Certificate or Proof of Age Viewed:

Learned of Course:

Financial Status:

Home Responsibilities:

Children: _____ Ages: _____
(Number)

Transportation Arrangements:

Appearance:

Present Study Habits:

General Impression and Recommendations:

_____ _____
Date Interviewer

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

VT-222 CS
(1966)

Practical Nurse Education Program

PATIENT-CENTERED CASE STUDY

I. OBJECTIVES:

A. To help the student

1. discover and implement pertinent nursing concepts in planning, giving and evaluating total patient care and considering the patient as an individual.

2. recognize the patient's social background, economic level, cultural background, hobbies and interests and be aware of their importance in giving total patient care.

B. To encourage the student to develop further nursing knowledge and skills, concerning the patient, through research.

C. To aid the student in recognizing the necessary modifications in routine care.

D. To encourage her use of Safety and Comfort Measures, as well as diversional therapy, when giving patient care.

E. To develop her ability in making more pertinent observations of the patient.

F. To provide an opportunity for written expression and thought organization.

G. To provide an opportunity for the use of the problem solving technique.

II. PATIENT SELECTION:

A. With the approval of the clinical instructor, select a case which is interesting to you.

B. You should care for the patient for at least 3 days.

C. Spend as much time as possible with your patient in purposeful activities.

D. Keep daily notes on your observations and care.

E. Keep in mind that your patient is an individual.

F. Be familiar with your patient's entire record.

G. Ask questions of your team leader or head nurse and supplement their information by reading texts and other reference materials.

GUIDE FOR PATIENT CARE STUDY

I. Social and Economic Information:

A. Patient's name (use initials - no identifying information)
B. Address
C. Nursing information
D. Date of admission
E. Date of discharge
F. Age
G. Diagnosis
H. Marital status
I. Family size
J. Religion
K. Race and nationality
L. Education
M. Occupation
N. Income
O. Type of community
P. Home facilities
Q. Family responsibilities
R. Economic responsibilities

II. Psychosocial Information

A. Attitude of patient toward illness
B. Attitude of family toward patient
C. Attitude toward hospital situation

III. Medical History Information

A. Brief definition of disease
B. Brief medical history relating to illness
C. Present illness - onset, duration and treatment prior to admission

IV. Diagnostic Procedures

A. Include results and what they signify - be able to compare the normals - relate the nurse's responsibilities to the collection of specimens or preparation of the patient.
X-ray
Laboratory
Others

V. Signs and Symptoms

1.	2.	3.
List classic symptoms and underscore those displayed by the patient.	Check symptoms listed in Columns (1) and (3) alleviated by nursing measures exclusively	List additional symptoms displayed by patient not listed in column 1.

VI. Surgical Information:

If patient were treated surgically (operation), explain what was done, etc

VII. Medications

A. Type of medication and why given?
B. Dosage
C. Method of administration
D. Action
E. Toxicology - did patient manifest toxic sign? If so, explain how they were handled, etc.
F. Contraindications
G. Attitude of patient toward administration of medication.

VIII. Nursing care of patient

A. Physical needs of the patient:

1. Position
2. Attention to skin
3. Comfort measures
4. Fluid management
5. Nutrition and diet
6. Elimination
7. Urinary output
8. Sleep and rest
9. Physical activity and moving
10. Safety factors
11. Care of immediate environment
12. Physical therapy

B. Psychological needs of the patient:

C. Social and economic needs of the patient:

D. Therapeutic needs of the patient:

1. What treatments were used and why?

2. What complications could occur? Did they occur? If so, explain?

E. The patient's need for learning and the intellectual needs of the patient.

1. Maintenance of health

a. What does the patient or the family need to be taught in relation to the recurrence of the disease?

b. What future care is necessary to prevent complications of the present illness?

2. Care and rehabilitation during illness and recovery

   a. What type of rehabilitation is important?

   b. What diversional or recreational activity may be developed that may aid him in his work following his recuperation?

   c. Do the patient and his family know the limit of his capacity so that he will not undertake activity for which he is unfit?

F. Home care

1. What plans were made for home care; for follow-up?

2. Who will take care of patient at home? What have they been taught?

3. If additional expenses are necessary, how will they be met?

IX. Bibliography

VT-222-D
(1966)

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

Practical Nurse Education Program

Dear

has applied for admission to the Practical Nurse Education Program, conducted by the Connecticut State Department of Education in cooperation with Hospital. This applicant has given us your name as a reference. Information which you give us will be treated as confidential and used only by the Admissions Committee of the Practical Nurse Education Program. Your thoughtful and frank estimate of the candidate's qualifications will be helpful to the Committee as it considers this application.

Attached is a list of characteristics which you may have observed in the applicant. Please check in the suitable column and feel free to add any comments you may desire.

Your cooperation in this matter will be appreciated greatly.

KINDLY RETURN THIS FORM TO:

Coordinator

Practical Nurse Education Program

Hospital

Connecticut

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

VT-222-D1
(1966)

Practical Nurse Education Program

Applicant's Name

How long have you known the applicant? _____ Years

In what relationship?

	Almost Always	Usually	Occasionally	Seldom	Have Not Observed
HEALTH AND PERSONAL APPEARANCE A. Appears healthy					
B. Is neat					
C. Is emotionally stable					
D. Has good attendance record					
ABILITY AND PERFORMANCE A. Is observant					
B. Is interested in learning					
C. Works well without reminding					
D. Plans well					
E. Is conscientious					
PERSONAL AND SOCIAL MATURITY A. Is dependable					
B. Accepts criticism without resentment					
C. Works to accomplish a planned purpose					
D. Uses good judgment					
E. Displays integrity					
F. Has a sense of humor					
G. Adjusts well to persons and situations					

	Almost Always	Usually	Occasionally	Seldom	Have Not Observed
1. Is kind					
2. Is tolerant					
3. Is considerate of others' needs					
4. Is cooperative					
5. Is tactful					
H. Shows initiative					
I. Is respected and liked by co-workers in community					

ADDITIONAL COMMENTS:

If an employer, please list:

Date of employment
Position held
Quality of work
Reason for leaving
Would you re-employ?
If not, why?

Signature _____

Position _____

PLEASE RETURN THIS FORM TO:

_____ P.N.E. Coordinator

_____ Hospital

_____ Connecticut

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

V T - 222 - E1

Licensed Practical Nurse Program

VOC. TEC. SCHOOL_____ HOSPITAL_____

Supervised Clinical Experience Record

Medical_____ Surgical_____ Pediatric_____

Student_____ Assignment date_____ to_____

CONDITION	CASE DAYS	CONDITION	CASE DAYS
RESPIRATORY		CIRCULATORY	
GASTRO INTESTINAL		REPRODUCTIVE	
		MUSCULO SKELETAL	
URINARY			
		EYE OR EAR	
NERVOUS			
		ENDOCRINE	
GERIATRIC			
		SKIN	

CONNECTICUT STATE DEPARTMENT OF EDUCATION V T - 222 - E2
Division of Vocational Education
Hartford

LICENSED PRACTICAL NURSE PROGRAM

VOC. TECH SCHOOL_____ HOSPITAL_____

Supervised Clinical Experience Record
Convalescence Maternity Patient, Newborn and Formula Room

Student_____ Assignment date_____ to_____

CONDITION	Maternity Case Days

CONDITION	Newborn Case Days

TYPE OF FORMULA — Preparation of Formula

KIND OF MILK	MODIFIED WITH	TIME PREPARED

VT-222-F
(1966)

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

Practical Nurse Education Program

Dear

We are pleased to inform you that your application to the Connecticut State Department of Education Practical Nurse Education Program has been reviewed by the Admissions Committee and received favorable consideration. You have, therefore, been given final acceptance for the _____ class.

Please check and return the enclosed form as soon as possible, as there are long waiting lists of persons interested in the Practical Nurse Education Program. If your reply is not received soon, it will be necessrry to assign your place in class to someone on the waiting list.

We are looking forward to having you as a member of the Practical Nurse Education Program.

Sincerely yours,

Coordinator

Practical Nurse Education Program

Hospital

Connecticut

Enc.

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

VT-222-F-1
(1966)

Practical Nurse Education Program

Dear

Please check one of the following statements:

I shall be present for the _____ class of the Practical Nurse Education Program at the _____ Vocational-Technical School.

I shall not be present for the _____ class of the Practical Nurse Education Program at the _____ Vocational-Technical School.

Reason:

I am no longer interested in the Practical Nurse Education Program.

Please withdraw my application from your files. _____

Signed _____
(Name)

_____
(Address)

_____
(City, Town) (State)

Date _____

Please forward this form to:

_____ Coordinator

Practical Nurse Education Program

_____ Hospital

_____ Connecticut

VT-222-G
(1966)

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

Practical Nurse Education Program

Dear

We have your application for the Practical Nurse Education Program and before submitting it to the Admissions Committee, it will be necessary for you to come to Hospital for _____ an interview

_____ a pre-entrance test

_____ a physical examination

Please report promptly at:

Day	Date	Hour	Floor	Room	Office

Please bring either your birth certificates or proof of age with you. If you are reporting for an interview or a physical examination, please complete the enclosed Medical History and bring with you. It is essential that you report at the above-mentioned time, if you wish to be considered for the _____ _____ class. If there is some valid reason why you are unable to keep this appointment, please notify us immediately.

Sincerely yours,

Coordinator

Practical Nurse Education Program

Hospital

Connecticut

VT-222-H
(1966)

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

Practical Nurse Education Program

Hospital _____ Day Reported on Service _____

Student _____ Day Left Service _____

Service and Unit _____ Final Grade _____

EVALUATION OF STUDENT PRACTICAL NURSE'S SERVICE EXPERIENCE

	Always	Usually	Occasionally	Seldom	Have Not Observed
I. HEALTH AND PERSONAL APPEARANCE					
A. Exhibits good health					
B. Observes good health					
C. Neat: in uniform, in work					
D. Emotionally stable					
E. Has good attendance record					
II. ABILITY AND PERFORMANCE					
A. Alert					
B. Interested in learning					
C. Works, plans and organizes well					
D. Has manual dexterity					
III. PERSONAL AND SOCIAL MATURITY					
A. Accepts responsibility					
B. Is objective					
C. Works to accomplish a planned purpose					
D. Uses good judgment					
E. Exercises conscience and displays integrity					
F. Has an appropriate sense of humor					

(over)

	Always	Usually	Occasionally	Seldom	Have not observed
G. Adjusts well					
H. Shows initiative					

COMMENTS:

Head Nurse's:

Date_____Signature _____

Coordinator's:

Date_____Signature _____

Student's Evaluation of Experience:

Date_____Signature _____

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

Practical Nurse Education Program

GUIDE FOR EVALUATION OF STUDENT PRACTICAL NURSE'S SERVICE EXPERIENCE

The following is a guide to assist you in the evaluation of the performance of student practical nurses. Each item which is to be checked on the student's evaluation form is listed in more detail in this guide so as to indicate what characteristics are to be evaluated. Every student may not necessarily exhibit each of these traits; however, if one characteristic is outstandingly present or absent, it may be advisable to indicate this under "Comments".

	Consistently	Usually	Occasionally	Seldom
I. HEALTH AND PERSONAL APPEARANCE				
A. Exhibits good health				
1. Appears rested each morning				
2. Able to perform assignments without undue fatigue				
B. Observes good health habits				
1. Washes hands between each patient				
2. Uses measures to prevent spread of communicable diseases: disposable tissues when coughing, sneezing				
3. Has good posture				
4. Practices good body mechanics for herself and in the care of patients				
5. Reports to health clinic when indicated				

	Consistently	Usually	Occasionally	Seldom
C. Neat				
1. In uniform:				
a. clean uniform				
b. personal cleanliness: hair, body, nails				
c. clean shoes				
d. no jewelry				
2. In work on clinical area				
a. patients' soiled linen in laundry bag				
b. patients' bedside stand kept tidy				
c. aids in keeping patient's rooms neat				
d. aids in keeping service rooms neat				
e. charting is legible, clear				
3. Written class assignments - neat				
D. Emotionally stable				
1. Performs assignments without undue mental strain				
2. Maintains equanimity and composure in stress situations				
E. Has good attendance record				
1. Personal health				
2. Other responsibilities				
II. ABILITY AND PERFORMANCE				
A. Alert				
1. Follows directions intelligently				
2. Makes worthwhile contributions to conferences				
3. Knows patients' diagnoses				
4. Observes changes in patients' condition				

	Consistently	Usually	Occasionally	Seldom
5. Makes effective adaptations in nursing care to meet individual needs				
6. Learns principles of care and applies them in new situations				
7. Recognizes and reports important symptoms at the appropriate time				
B. Interested in learning				
1. Requests new experiences in nursing care on clinical unit				
2. Asks pertinent questions of unit personnel				
3. Reads about patient's diagnoses				
4. Understands reasons for treatments				
5. Requests supervision when doing a procedure for the first time				
6. Attentive and alert in class				
C. Works, plans, and organizes well				
1. Does procedures as taught				
2. Economical of time, energy, supplies				
3. Thorough - gives complete care to patients				
4. Accomplishes a normal assignment in a reasonable period of time				
III. PERSONAL AND SOCIAL MATURITY				
A. Accepts responsibility				
1. Punctual				
a. reporting on duty				
b. charting				
c. getting to class				
d. completing assignments				
e. handing in record of nursing care days				
f. preparing nursing care study				
g. handing in weekly time card in correct form				
h. having Progress Record check list signed				

	Consistently	Usually	Occasionally
B. Is objective			
1. Accepts suggestions for improvement graciously			
2. Offers intellegent sympathy to patients			
3. Accepts supervision as an aid to learning			
4. Readily admits mistakes, inquires how they can be corrected			
5. Uses good judgment in essentials of care to be given when pressed for time			
6. Recognizes own strengths and weaknesses			
7. Does not react personally to patient behavior			
C. Works to accomplish a planned purpose			
1. Willingly sacrifices time, energy, and personal desires to achieve goals			
D. Uses good judgment			
1. Presents her problems to the proper person			
2. Handles complaints tactfully			
3. Seeks help of experienced personnel when patient refuses care or when she has problems regarding nursing care			
E. Exercises conscience and displays integrety			
1. Does not perform care which she is not authorized to perform			
2. Does not discuss patients' confidences with classmates or others			
3. Does not use hospital property for personal use			
4. Is economical in use of hospital supplies			
5. Supports hospital policies			

	Consistently	Usually	Occasionally	Seldom
6. Reports mistakes in nursing care immediately				
7. Considers the rights of others when requests for desirable time off duty are made				
F. Has an appropiate sense of humor				
1. Sees the humorous side of things				
2. Doesn't take self too seriously				
G. Adjusts well and is accepted by own group				
1. Establishes and maintains good relationships with other student practical nurses				
2. Establishes and maintains appropiate relationships with male personnel-- i.e. patients, doctors, male aids, etc.				
3. Meets new situations calmly				
4. Is tactful				
5. Is cooperative - observes rules and upholds policies				
6. Is poised				
7. Is courteous				
8. Is kind				
9. Attempts to understand and be considerate of all personnel with whom she works a. makes reasonable adjustments in work hours when requested without complaining				
10. Exercises self-control in tense situations				
H. Shows initiative				
1. Sees work to be done and shows initiative in doing it				

VT-222-I
(1966)

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

Practical Nurse Education Program

Dear

We appreciate your interest in requesting admission to the Connecticut State Department of Education, Practical Nurse Education Program conducted at _____ Vocational-Technical School in cooperation with _____ Hospital. The credentials which you have submitted with your application have been considered carefully by the Admissions Committee.

Unfortunately, the evaluation of your total record indicates that you do not meet the minimum entrance requirements.

We regret to inform you that the Admissions Committee did not vote favorably on your request for admission. Further clarification of your ineligibility will be substantiated upon request.

Yours truly,

Coordinator

Practical Nurse Education Program

Hospital

Connecticut

VT-222-J
(1966)

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

Practical Nurse Education Program

Dear

Enclosed you will find information about the Connecticut Practical Nurse Education Program.

If you are interested in this course, please fill out the enclosed application blank and return to the Practical Nurse Education Program Coordinator at the hospital where you desire to have your clinical experience. Two transcripts of your high school or other secondary school record should also be forwarded to the Coordinator.

Our class quotas have been filled rapidly; therefore, we urge you to act promptly in order that all details may be completed and that you be considered a candidate for one of these classes.

Yours truly,

Coordinator

Practical Nurse Education Program

Hospital

Connecticut

Enc.

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

Licensed Practical Nurse Program

CLINICAL FACILITIES OFFERED FOR THE LICENSED PRACTICAL NURSE COURSE

_____Hospital

Authorized for conducting nursing service to patients by_____

Hospital bed capacity_____

Daily average number of patients_____

	Nursing Staff	Number
Medical_____	Director	_____
Surgical_____	Assistants	_____
Pediatric_____	Supervisors	_____
Maternity_____	Assistant	_____
Newborn_____	Head Nurses	_____
	General Staff	_____
	L.P.N.	_____
	Auxiliary	_____

Number of students enrolled in School of Nursing

1st Year_____ 2nd Year_____ 3rd Year_____

Qualifications of Nursing Staff

Name	School of Nursing	Post Graduate Education and Exp.
Director		
Assistants		

Qualifications of Nursing Staff (continued)

Name	School of Nursing	Post Graduate Education and Exp.
Assistants (continued)		
Coordinator L.P.N. Program		
Supervisors		
Assistant Supervisor		

Others who may assist with L.P.N. Program

Head Nurses

Others who may assist with L.P.N. Program (continued)

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

Licensed Practical Nurse Program

Classroom Facilities:

Residence Facilities:

Health Care Policies:

Recreational Opportunities:

Brief statement of purpose of participation in the Licensed Practical Nurse Program

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Licensed Practical Nurse Program

Condition of Agreement Between the Connecticut State Board of Education and The _____ Hospital in accordance with the provisions of 1404 of the General Statutes Supplement to the General Statutes of Connecticut.

The State Board of Education through _____ Technical School and _____ Hospital, _____ propose to maintain jointly a twelve month program for the preparation of Licensed Practical Nurses in accordance with the Requirements for Accredited Schools of Licensed Practical Nursing established by the Board of Examiners for Nursing. To accomplish this purpose they mutually and severally agree to carry out the respective duties and responsibilities as hereinafter set forth:

The _____ Hospital

agrees to:

1. Recruitment

a. Provide publicity, carry on correpondence and interview prospective students.

b. Collect information about candidates necessary to determine their eligibility for admission to the program and to make copies of such information available to the State Board of Education.

a. Supply necessary copies of a prospectus describing the program.

b. Assist in recruitment and refer applicants to hospital authorities.

2. Admissions		
	a. Assemble the minimum number of acceptable students when a class is to be conducted. The customary minimum is twenty-four students.	a. Review credentials of student candidates recommended by the hospital and in consultation with the hospital representatives determine those to be admitted to the program.
	b. Plan for the assembling of two or three class groups to begin the program in September and February, or September, December, and for March.	b. Determine the number of applicants who may be accepted for each class based on facilities available.
3. Pre-Clinical (School) Period		a. Provide teaching personnel and assume instructional costs during the preclinical period for each class admitted.
		b. Conduct the program in accordance with outlines of instruction developed in cooperation with and approved by the State Board of Examiners for Nursing.
4. Clinical Experience (Hospital) Period		
	a. Provide classroom instruction and supervised clinical experience for 8 or 9 months which will enable each student to complete the necessary learning experiences.	a. Furnish the necessary forms for recording the progress of students in the clinical areas.
		b. Provide a coordinating service which will assist the hospital in establishing and maintaining effective learning conditions during the clinical period.

b. Provide a qualified coordinator and assistants as indicated to direct and conduct the program of clinical supervision and instruction. (Assume all costs of instruction and supervision of students until such time as adequate funds can be provided by the Education Department for this phase of Education.)

b. Provide a coordinating service which will assist the hospital in establishing and maintaining effective learning conditions during the clinical period.

5. Maintenance During Clinical Period

a. Pay each student, in lieu of housing, by the hospital, the sum of $30.00 per month.

b. Provide meals and laundry service for student uniforms during the clinical period.

c. Pay each student a monthly stipend of $25.00.

d. Provide conditions which will enhance recognition on the nursing team.

6. Health Care

a. Give physical examinations to applicants prior to admission to the school program.

b. Provide for incidental health care for each student during the clinical period.

c. Health care which is not hospital service connected will be at the students' expense.

7. Absence

a. Students who have completed six months of the clinical period will be allowed one week's sick leave with payment of stipend.

b. A leave of absence without pay for vacation purposes is granted to each student during the clinical period.

c. Each student is entitled to one day with pay for each hospital holiday which occurs during the clinical period.

d. Absence of students for any reason beyond those stated above must be compensated for.

8. Certificates and Progress Records

a. Sign school certificates as the affiliating hospital.

b. Transmit copies of all clinical period progress records to the Department of Education, Technical School Office, Licensed Practical Nursing Department.

a. Issue certificates to students who successfully complete the program.

This agreement shall become effective on _____ and shall continue in force until it is terminated by either party upon a written notice of not less than one year except that the State Board of Education may terminate it by a shorter notice in the event that appropriations made by the General Assembly do not provide adequate funds for this program.

Signed:

For the _____ Hospital

_____ Director

_____ Date

_____ Director of Nursing

_____ Date

For the State Board of Education

_____ Secretary

_____ Date

_____ Director of Vocational Education

_____ Date

_____ Director, Technical School

_____ Date

2/26/64

VT-222-L
(1966)

L.P.N. Pin Order

1. L.P.N. License Number _____

2. Date license was issued _____

3. Center at which P.N.E. course was taken _____ Tech. School

   _____ Hospital

4. Initials (3) to be engraved on pin _____

5. Pin desired: Solid gold $11.50 _____ Gold filled $6.50 _____

6. Name and address to which pin is to be sent:

   _____ Name

   _____ Address

   _____

7. Check or money order made payable to Le Witt Jewelers is to be given or sent to P.N.E. instructor at Technical School. Do not send order directly to the Jewelers.

VT-222-L
(1966)

L.P.N. Pin Order

1. L.P.N. License Number _____

2. Date license was issued _____

3. Center at which P.N.E. course was taken _____ Tech. School

   _____ Hospital

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   _____ Name

   _____ Address

   _____

7. Check or money order made payable to Le Witt Jewelers is to be given or sent to P.N.E. instructor at Technical School. Do not send order directly to the Jewelers.

V T - 222 - M

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

Licensed Practical Nurse Program

MONTHLY ATTENDANCE RECORD

Location _____ Month _____

NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

VT-222-N

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education
Hartford

Dear

It is with regret that we inform you that _____ is not achieving at a satisfactory level in the Connecticut State Department of Education, Practical Nurse Education Program, in cooperation with _____ _____ Hospital.

She was informed of her status in the program on _____ and is on probation with _____. During this time we hope she will demonstrate and maintain sufficient improvement, so that we shall be able to permit her to continue in the program.

As you may presume, the Admissions Committee gives careful consideration to the credentials of each applicant, and only those candidates whose abilities are commensurate with possible satisfactory achievement are accepted.

We hope that she will be successful in her efforts.

Sincerely yours,

Instructor
Coordinator

Practical Nurse Education Program

School
Hospital
Connecticut

VT - 222 - SR1

CONNECTICUT STATE DEPARTMENT OF EDUCATION

DIVISION OF VOCATIONAL EDUCATION

HARTFORD

PRACTICAL NURSE EDUCATION PROGRAM

SUMMARY RECORD

_____ _____

Student Hospital

Preclinical period from_____to_____

Biological and Physical Sciences	Grade
Body Structure and Function	_____
Elementary Bacteriology	_____
Nutrition	_____
Introduction to Practical Nursing	_____
Interpersonal Relations	_____
Legal Aspects	_____
Concepts of Health	_____
Basic Fundamentals of Nursing Technics	_____
Introduction to Med. & Surg. Nursing	_____
Introduction to Obstetrical Nursing	_____
Introduction to Pediatric Nursing	_____
Common Drugs and Administration	_____
First Aid and Disaster Nursing	_____
Diet Therapy	_____

VT 006 393
Dean, Ernest H.
A Summary of a Research Study Entitled--Implications of Vocational Education for Plant Site Location.
Utah Technical Coll., Provo
MF AVAILABLE IN VT-ERIC SET.
OEG-4-7-068498-0408 08
BR-6-8498
Pub Date - 67 20p.

*GEOGRAPHICAL LOCATION; *INDUSTRY; *SCHOOL INDUSTRY RELATIONSHIP; SELECTION; *VOCATIONAL EDUCATION; SURVEYS; TECHNICAL EDUCATION

"Implications of Vocational Education for Plant Site Location" is summarized. See abstract of ED 014 569 (VT 003 386, ARM Spring 1968) which is the complete study. (EM)

VT 006 393

ED042060

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& WELFARE
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A SUMMARY OF A RESEARCH STUDY

ENTITLED

"IMPLICATIONS OF VOCATIONAL EDUCATION FOR PLANT SITE LOCATION."

PREPARED BY

ERNEST H. DEAN

RESEARCH DIRECTOR

UTAH TECHNICAL COLLEGE AT PROVO, UTAH

MAY 31, 1967

VT006393

OFFICE OF EDUCATION GRANT NUMBER

4-7-068498-0408
The Vocational Education Act of 1963,
P.L. 88-210 Section 4 (c)

APPROVED PROJECT TITLE

Implications of Vocational Education for Plant Site Location

INVESTIGATOR

Ernest H. Dean
Research Director
Utah Technical College at Provo, Utah

GRANTEE INSTITUTION

Utah Technical College at Provo, Utah
(Formerly Utah Trade Technical Institute)

DURATION

September 22, 1966 through May 31, 1967

HYPOTHESIS AND OBJECTIVES

Many educators and industry people contend that vocational education is a significant factor in locating their new plant sites. It is the hypothesis of this study that these claims and projections are based upon limited observation, and in no instance, upon investigative research to validate their contentions.

The problem, then, is to indicate either a positive or negative relationship of vocational education as a factor in plant site selections.

Another hypothesis advanced by this study is that very little has been written, substantiated by research, upon vocational-technical education as a factor in manufacturing plant site selection. The problem, stated in its several dimensions, was:

1. To determine if vocational-technical education was considered by manufacturers as a factor in their plant site selections.

2. A determination of the factors considered in the plant site selection process. (Vocational-Technical education was considered in rank of importance with the other factors.)

3. To determine if certain organizations, including vocational school educators, were looked to for assistance in the selection process.

4. To determine if public relations efforts, such as school information brochures, were helpful in the selection process.

5. To determine if plant site selectors visit the vocational school facilities prior to selection of their sites.

6. To determine if plant site selectors secure a commitment from vocational-technical schools of their willingness and ability to train workers for the company.

7. To determine the preference placed upon kinds of schools conducting vocational education as factors in the selection process.

8. To determine the importance placed upon levels of vocational education in the selection process.

9. To determine the specific vocational courses which are factors in the selection process.

10. To designate the importance of certain factors, such as community attitude toward vocational education, which might enhance vocational-technical education as a factor in the selection process.

11. To designate the importance of the proximity of the vocational school to the proposed plant site in the selection process.

12. To designate the relative importance placed upon vocational-technical education as a factor in plant site selection, by various categories of the manufacturing industry.

13. To determine if companies of varying sizes assess vocational-technical education differently in the selection process.

14. To determine if companies, locating plants in the several states covered in this project, assess vocational-technical education differently in the selection process.

15. To determine alternatives to vocational-technical education as factors in the selection process.

16. To compare results of this study to other studies that have designated plant site selection factors, and to determine the degree of correlation.

COROLLARY OBJECTIVES

It is anticipated that three corollary objectives would grow out of the project, including:

1. A report would be available to supply vocational school administrators with valid information, determined through research, as to whether or not vocational or technical education curriculum offerings in their community can attract new industry, or help existing industry expand their operations. With this information, each curriculum in vocational or technical education can be evaluated as to its effectiveness in meeting some of the needs of industry.

2. The same report could be used to supply state directors of vocational education with information which could help them to parcel out Federal and state money to the several areas of the state, for expanding or building new vocational and technical education facilities and programs.

3. To determine if a commitment by state or local boards of education to provide vocational and/or technical education facilities and programs, in an area where they do not exist, is sufficient to encourage a new manufacturing company to locate in any given area.

PROCEDURE

The following steps were taken in drafting the Research Proposal and conducting the study:

1. A first step was to determine if the project was meaningful and desirable for vocational school people, industrialists, chambers of commerce, etc.

2. A second step was to seek the advice of research specialists as to the best methods to use to gather the information.

3. These steps were followed by an extensive survey of the literature, to validate the hypothesis that very little was written about the importance of vocational-technical education as a factor in manufacturing plant site selections.

4. The research proposal and the questionnaire were drafted and given to several vocational school personnel and industrialists, to have them evaluate both, in terms of information to be obtained and methods of acquiring the information.

5. After changes were made, the proposal was submitted to the Research Division of the U. S. Office of Education for their approval.

6. The U. S. Office of Education recommended that consultants be selected to evaluate the project and questionnaire. A statistician and an economist were employed, and did make several recommendations, which were encompassed in the project, and then approved by the U. S. Office of Education.

7. After the project was approved, vocational educators, chambers of commerce, manufacturing associations, and government officials in the seven states were contacted and asked to supply lists of the new manufacturing plants which had located in their states since January 1, 1960.

8. Lists of the new companies were made, indicating the type of business, number of employees, and location.

9. An itinerary was established, wherein the chief investigator traveled through the seven states, contacting the company officials at their plant locations. The selection process was done by getting a map of the city, and identifying the company location on the map. All companies which could be located were then identified according to number of employees, and type of product manufactured. Some of each category were then singled out for interview. The selection process amounted to ease of locating the various plants.

10. The series of interviews took place in each state, and were followed by sending the questionnaire to all known companies that had not been interviewed.

11. Follow-up letters were sent to those companies failing to answer the first correspondence.

12. The results obtained from the interviews and questionnaires were cut on IBM key punch cards.

13. The information on the cards was then programmed through the computor, where statistical analysis of the data was made.

14. The report was written, typed, reproduced and assembled for distribution.

15. A summary paper was then prepared and presented to the U. S. Office of Education.

CONCLUSIONS, INFERENCES, AND RECOMMENDATIONS

The following conclusions, inferences, and recommendations are based upon five considerations, namely:

1. The Series of Interviews
2. The Returned Questionnaires
3. A Fortune Survey of Plant Site Selection Factors
4. Other Related Literature
5. Statistical Analysis of 1, 2, and 3 above.

Conclusions. Many conclusions could have been included, but in the interest of the reader have been minimized to indicate the

more important ones. However, no effort has been made to further place any order of importance among the conclusions listed in this report.

Conclusion Number 1. Vocational education is a factor considered by the intermountain manufacturing industry, as they investigate their new plant sites. Many inferences can be drawn to substantiate this conclusion, including:

1. Of 28 different plant site selection factors submitted by the manufacturing industry, vocational education ranks approximately in the middle in degree of importance.

2. Some categories of the manufacturing industry rate vocational education as being more significant, as a plant site selection factor than do other types of manufacturers. Some who place a high degree of importance are:

   (a) Clothing Manufacturers who rate vocational education within the 9 most important factors considered.

   (b) Metal Fabrication and Plating, wherein the Questionnaire Group rated vocational education Number 5 factor in importance, and the Interviewee Group rated vocational education Number 11.

   (c) Electronic-Electrical-Refrigeration, wherein the Questionnaire Group rated vocational education Number 4 in importance, and the Interviewee Group rated it Number 14.

Some manufacturing categories who place less significance upon vocational education as a factor in the selection process are:

   (a) Wood Products and Construction Products, wherein vocational education was not indicated as a significant factor by either the Questionnaire Group or the Interviewee Group.

(b) Foods-Feeds-Minerals-Chemicals-Fertilizers, wherein the Questionnaire Group failed to rate vocational education as a factor, and wherein the Interviewee Group rated vocational education as being Number 16 in importance.

Conclusion Number 2. There is a difference between manufacturers who hire large numbers of employees and those who employ smaller numbers of employees, in their assessment of vocational education as a plant site selection factor.

Plants who employ more than 100 employees place greater significance upon vocational education. The report substantiates this conclusion, wherein 74% of the companies employing over 100 employees indicated vocational education as a plant site selection factor, as contrasted to 58% of the smaller companies indicating vocational education as a consideration.

Conclusion Number 3. There is a difference from state to state as to the significance that relatively new manufacturing industry, within each state, places upon vocational education as a plant site selection factor. Perhaps this conclusion will draw "Plaudits" from vocational educators in some states, and "Brick Bats" in other of the seven states. However, this research project does relate to emphasis on a state basis, and bears out this inference.

Two-thirds of the manufacturing industry in four of the seven states rate vocational education as a plant site selection factor,

these states being Colorado, Arizona, Nevada, and Utah. Three other states, New Mexico, Idaho, and Wyoming, figure to be only one-half indicating vocational education as a plant site selection factor.

Conclusion Number 4. Some of the manufacturing categories consider vocational education as a significant factor prior to expanding their plant operations. These manufacturing categories are:

1. Clothing Manufacturers, wherein 73% so indicated.
2. Mobile Equipment and Machinery, wherein 70% so indicated.
3. Electronics-Electrical-Refrigeration, wherein 60% so indicated.

Conclusion Number 5. Very few manufacturing companies indicated that a lack of vocational education was a significant enough factor to reject a plant site.

This conclusion is borne out where only three manufacturing companies stated they rejected plant sites due to a lack of vocational education. Two of these were electronic plants employing large numbers of employees, and one was a clothing firm who had four locations in one state, all of which were small plants.

Conclusion Number 6. The closer a vocational school is located to a plant site, the more significant it is as a plant site selection factor. This inference is drawn from the fact that over 90% of the respondents who answered the question, from both the Interviewee Group

and the Questionnaire Group, responded that anywhere within a community, county, or within 20 miles, was significant as a plant site selection factor, whereas only one-half of the same Interviewee Group and one-fourth of the Questionnaire Group indicated within 80 miles, or anywhere in the state as being significant.

Conclusion Number 7. Vocational education to train skilled craftsmen, technicians, and semi-skilled workers are very important programs in the eyes of the manufacturing industry who consider vocational education a plant site selection factor. Over three-fourths of both the Interviewee Group and Questionnaire Group indicate this contention to be correct.

Conclusion Number 8. Community attitude towards vocational education is a significant factor to the manufacturing industry who consider vocational education a factor in their plant site selections. Over 90% of these respondents substantiated this conclusion.

Conclusion Number 9. Tools and equipment are important aspects of a vocational education program, as manufacturers consider their plant site selections.

Ninety-three per cent of the respondents favoring vocational education as a plant site selection factor indicated this to be a correct conclusion.

Conclusion Number 10. In-plant training by vocational educators did not warrant the same degree of importance to the manufacturing industry as did vocational education at a vocational school.

The survey showed an approximate ratio of 90 to 40 in preference of the vocational school setting.

Conclusion Number 11. In college credit vs terminal credit, we found little basis for one answer as to most preferred.

The Interviewee Group indicated college credit preference, wherein the Questionnaire Group indicated terminal credit as being preferred.

Conclusion Number 12. Some vocational school training programs lend themselves to more kinds of manufacturing industry than do others in the selection process.

The five most mentioned kinds of vocational education programs, together with number of times mentioned as a factor in the plant site selection process, are:

1.	Machine Shop	58 Mentions
2.	Metal Fabrication	44 Mentions
3.	Electronics	44 Mentions
4.	Business and Secretarial	44 Mentions
5.	Electrical	34 Mentions

Conclusion Number 13. In lieu of vocational education, the manufacturing industry looks to other means to fulfill its training

needs. The most favored responses were:

1.	Will do their own training	67 Mentions
2.	Will look to other agencies to help in their training	67 Mentions
3.	Will look to employment service to recruit skilled and technical labor force	42 Mentions
4.	Will accept a commitment from vocational education schools to train labor force	39 Mentions

Conclusion Number 14. Conclusion Number 13 is approximately the same regardless of the size of business, or from which of the seven states the manufacturing company is located.

Conclusion Number 15. Less than 50% of those companies who considered vocational education a plant site selection factor went to the extent of securing a commitment to train their workers.

This is borne out in that only 27% of the Interviewee Group and 44% of the Questionnaire Group secured commitments.

Conclusion Number 16. Approximately one-fourth of the respondents visited vocational schools in consideration of selecting their plant sites.

Conclusion Number 17. Public supported universities, colleges, community colleges, junior colleges, high schools, and trade-technical

institutes are preferred over private schools as factors in the plant site selection process, the most preferred being universities and colleges, followed by community colleges, junior colleges, and high schools with strong vocational programs.

Conclusion Number 18. Brochures indicating vocational education available in the community are helpful to manufacturers in their plant site selection process. Approximately 70% of all respondents reacted favorably to this conclusion.

Conclusion Number 19. Brochures indicating vocational education available in a state are slightly more helpful to the plant site selector than are the community brochures.

Conclusion Number 20. An insufficient number of brochures, indicating available vocational education, are prepared and placed in the hands of plant site selectors. Only one-third of the Interviewee Group indicated they had received advertising brochures concerning vocational education, while investigating plant sites. Contrast this with the 70% who indicated brochures as being helpful, and you have the basis for this conclusion.

Conclusion Number 21. Plant site selectors solicit aid from organizations, government, and education, in the selection process. Also, they have a preference based upon experience in helping select the plant site.

Great importance was placed upon aid from allied business associations, including banks, utilities, companies with a symbiotic relationship, chambers of commerce, and local government officials.

Conclusion Number 22. Vocational education can exert more effort in aiding plant site selectors in selecting their plant sites.

The Interviewee Group rated vocational education Number 8 out of 10 considerations.

Conclusion Number 23. The states which have less new manufacturing industry tend to rate vocational education lower as a plant site selection factor. This might be subject for more in-depth study by some researcher.

Perhaps emphasis should be placed upon plant site selection factors other than vocational education in the conclusions, because this, too, was a substantial part of the survey.

Conclusion Number 24. The following six factors are considered most important in the plant site selection process of the manufacturing industry locating their plants in the Intermountain States:

FACTOR	NUMBER OF TIMES MENTIONED
Labor Supply	128
Ground Transportation	75
Market	73
Land	60
Residence of Owners	50
Available Buildings	49

The following six factors are considered most important in the plant site selection process which takes place in the Intermountain States, when a coupling process is made of closely related factors:

#1. Labor Supply and Labor Relations

#2. Ground and Air Transportation

#3. Available Land and Buildings

#4. Market and Proximity to Market

#5. College Education and Vocational Education

#6. Allied Business and Federal Business Relations

These conclusions can be substantiated by the following tables. Considering all respondents' selection of their #1 rated factor in importance in the selection process, the following rankings would be evident:

FACTOR	NUMBER OF 1ST PLACE MENTIONS
a. Residence of Owners	27
b. Labor Supply	25
c. Market	17
d. Available Land	16
e. Allied Business Relations	12
f. Equidistant from Market	12

When closely related factors are coupled, the ratings appear as follows:

FACTOR	NUMBER OF 1ST PLACE MENTIONS
a. Labor Supply & Labor Relations	32
b. Market and Equidistant to Market	29
c. Residence of Owners	27
d. Available Land & Buildings	27
e. Allied Business & Federal Business Relations	22
f. Air & Ground Transportation	15

When weighted scores are applied to single factors we have:

FACTOR	WEIGHTED SCORES
1. Labor Supply	807
2. Market	544
3. Ground Transportation	527
4. Available Land	465
5. Buildings	350
6. Air Transportation	276

When a coupling process is applied to weighted scores we have:

FACTOR	WEIGHTED SCORES
#1. Labor Supply & Labor Relations	1021
#2. Available Land and Buildings	815
#3. Ground & Air Transportation	803
#4. Market and Proximity to Market	782
#5. Allied & Federal Business Relations	448
#6. College Education and Vocational Education	376

Conclusion Number 25. It is concluded that tables such as are included in the report are the most meaningful and descriptive statistics

which can be applied to the report.

It is further concluded that rank order correlations and chi square, when applied to the statistical information contained in the report, tell a meaningless and distorted story.*

When one considers the number of first place mentions, weighted scores, or closely coupled related factors, the rank order changes. One rank correlation is included, comparing selection factors of the Interviewee Group with the Questionnaire Group:

FACTOR	INTERVIEWEE GROUP	QUESTIONNAIRE GROUP	d	d^2
Available Land & Buildings	1	4	3	9
Labor Supply & Labor Relations	2	1	-1	1
Market & Proximity to Market	3	3	0	0
Ground & Air Transportation	4	2	-2	4
Raw Materials & Utilities	5	5	0	0
				14

$$r = 1 - \frac{6 \sum_{i=1}^{N} di^2}{N(N^2-1)}$$

$$r = 1 - \frac{6(14)}{5(24)}$$

$$r = 1 - \frac{84}{120}$$

$$r = 1 - .70$$

$$4 = .30$$

* .30 equals a positive correlation which could be more significant.

Recommendations. A few recommendations seem important as a result of the study. They are as follows:

1. Vocational educators can be helpful to the manufacturing industry in their plant site selection process by providing brochures about vocational education, both on a state and community basis.

2. Vocational educators can do more to help the team of government officials and business organizations in advancing the cause of their state and community in soliciting manufacturing industry.

3. Some of the businesses recruit trained personnel from everywhere. Therefore, it behooves the vocational school people to advertise their schools, and to accentuate their efforts in job placement of their students.

4. Someone needs to either prove the Fortune Study correct, or incorrect, as it relates to their projections of the Intermountain West, and especially their rank of the states within the Intermountain West. (See Pages 36-38 of this report for the Fortune projections.)

5. Follow-up studies could be made to determine:

   a. A comparison of kinds of labor supply in the plant site selection process.

   b. A comparison of the different taxes and incentives as factors in the selection process.

c. A comparison of the relationship of various allied businesses in the selection process.

d. A comparison of factors which constitute community size and advantages.

6. A study of the part the manufacturing industry plays in the economy of the seven states. This, in turn, could be compared to the findings of this study.

THE END

VT 006 402
From Sixth Form to Industry; Report of a Conference of Schools and Industry Organized by the Federation of British Industries, the Headmasters' Conference and the Incorporated Association of Headmasters (St. Catharine's College, Cambridge (England) June 27-29, 1963).

Federation of British Industries, London (England)
MF AVAILABLE IN VT-ERIC SET.
Federation of British Industries, 21 Tothill Street, London, S.W.1, England ($.60).
Pub Date - Jun63 76p.

*CONFERENCE REPORTS; STUDENT ATTITUDES; INDUSTRY; *EMPLOYMENT OPPORTUNITIES; MANAGEMENT EDUCATION; TECHNICAL EDUCATION; ADMISSION CRITERIA; *ECONOMIC FACTORS; *EDUCATIONAL NEEDS; *VOCATIONAL EDUCATION; MANPOWER NEEDS; FOREIGN COUNTRIES
*CONFERENCE OF SCHOOLS AND INDUSTRY FROM SIXTH FORM TO INDUSTRY, CAMBRIDGE, ENGLAND, JUNE 27-29, 1963

Presentations made at this four-day conference included: (1) "The Sixth Former on the Threshold of Industry" by J.A. Pope, (2) "The Attitude of the Boy to Industry" by J.C. Dancy, (3) "The Needs of Industry Now and in the Future" by Peter Runge, (4) "Training for Management in Light of Modern Scientific Sociological Developments" by R. Moore, (5) "Value of Degree and Diploma Studies and the Use of First Class Ability in Industry" by T.J.P. York, (6) "Technological Education and the Need for More Really Able Boys to Take Up Engineering" by Elvet Lewis, (7) "Economic Factors in Education and Training, and Liaison between Schools, Colleges, and Industry" by J. Grange Moore, (8) "The Needs of Industry in the Arts and Sciences with Particular Reference to Languages and Mathematics" by E.R.L. Lewis, and (9) "Alternative Means of Selection for Further Education and Training" by E.S.M. Chadwick. (EM)

VT 006 402

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THE OHIO STATE UNIVERSITY

Report of a Conference of Schools and Industry

FROM SIXTH FORM TO INDUSTRY

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Organised by the
Federation of British Industries, the
Headmasters' Conference and the
Incorporated Association of Headmasters,
and held at St. Catharine's College, Cambridge
27th to 29th June, 1963

VT006402

FEDERATION OF BRITISH INDUSTRIES,
21, Tothill Street, London, S.W.1

Conference Committee

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THE OHIO STATE UNIVERSITY

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Conference Organiser

Lt. Col. R. B. Williams, O.B.E.

CHAIRMAN OF THE CONFERENCE

Mr. Peter Runge, President, F.B.I.

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SESSION 1: Chairman, Mr. Peter Runge

The Sixth Former on the Threshold of Industry

Dr. J. A. POPE
Research Director of Mirrlees National
Chairman of the F.B.I. Education Committee

ALTHOUGH OUR PRESIDENT, Mr. Peter Runge, has already given the address of welcome to members of the Conference, as Chairman of the F.B.I. Education Committee I would like to take this early opportunity to say how much we from industry welcome this opportunity of meeting those who are the controlling force in the world of education.

As a result of this Conference I hope we shall get to know and understand much better the problems we are each facing.

During the next few minutes I hope to elaborate on a thesis which, if correct, demonstrates that at the moment there are a number of social and economic trends in industry which will demand that the schools and industry must work more closely together, not only for the well-being of the country as a whole, but in order that the schools may carry out their full responsibilities to the pupils under their care.

Obviously this responsibility is not one-sided and industry has its part to play and hence the desirability of building up a partnership in the coming years.

The Image of Industry

Although Mr. Dancy is dealing with "The Attitude to Industry of the Boy, the Parent and the School", I must ask myself what kind of image does the boy have of industry while in the sixth form. Certain professions have by good fortune, or due to their continual contact with the public, created a very good public image of themselves. This applies in particular to medicine and law. Others by more subtle methods, such as playing on the moral innotation of various words, have created a kind of halo of virtue, for example,

"the humanities", "the fine arts", and "pure science". I suppose somewhere there are subjects which could be classed as "the inhumanities", "the coarse arts", and "the impure sciences". Actually I know that in the academic mind there is a subject classed as the impure science; it is "technology". Simply by choosing the words "pure science" for what is really analytical science, by implication every other scientific activity is impure.

In the economic field the word "growth" is becoming a prestige symbol. And as economic growth depends upon technology more than anything else, it would not be a bad idea (except that it is too late) to imitate our colleagues in other fields and re-christen technology as the "growth sciences". The effort on recruitment would be considerable.

What image has industry created for itself ? Here I think we shall find that industry as a whole has been more careless and more muddle-headed about its public image than any other branch of human society.

There are a number of phrases which epitomise certain groups of people. For example "the harassed housewife" gives a pretty clear picture of the current social problem of a young wife bringing up a family of small children. Equally, "the absent-minded professor" immediately brings to one's mind a vivid "type picture". So does the phrase "the scholarly schoolmaster". What has industry got in this category ? Amazing as it may seem its public image is epitomised by "the tired business man". This then is the clarion call for the sixth former to join the ranks of industry. Is it this word picture of languidity, of potential exhaustion, which is to inspire the bright, energetic and ambitious sixth former to desire to join the ranks of industry ? But if, however, we assume that the boy is seriously considering an industrial career, what is the next impact that industry makes upon him ? There are the large and glaring adverts on the back pages of our Sunday newspapers, which are printed so large that you can only conclude that either industry has an inferiority complex par excellence or that it only employs short-sighted people who can only read large print !

Often, however, we break out in the grand style. In our daily papers he will see a photograph of a distinguished chairman of a company, always leaning slightly forwards as a symbol of taking you into his confidence, under which a half page of print will deal with his annual report. This, of course, can be very impressive and

awe-inspiring to be able to read the inner thoughts of those who shape our economic destiny. It can, however, be bewildering if, after having read the chairman's report where he says that business is better this year than it was last and that the future is promising and he is facing it with great confidence, you turn to the stock market prices and find that after the chairman's statement the shares for that particular company have fallen !

You may be forgiven if you wonder who is fooling whom !

Couple with all this the comparison between the glittering careers detailed in the Sunday papers which offer "security", "rapid promotion", "a job at the top for the best" etc. with the bad press that industry invariably gets due to redundancies and changes in industrial policy. We can only conclude that the public image of industry is anaemic and confusing.

It is just not that a business career, which in America is regarded as of the highest status, in this country is regarded as third class, but rather that the image that industry creates for itself is a complex combination of contradictions, of the drab and the flamboyant, of the pompous and the subservient, of luxury and insecurity.

It is a question whether industry has within itself that degree of self-confidence and sense of purpose that is necessary to create a dynamic and attractive public image. It is due to a bad public image, as well as the influence of the schools, that the larger portion of the able boys go into the various professions and leave industry alone. (In this context a career in technology is synonymous with an industrial career). I would like to stress that to some extent the bad distribution of the nation's manpower is industry's own fault.

For the health of the nation we must have the correct distribution of our able manpower. We need good doctors, lawyers, teachers and research scientists; but it is industry alone that creates the wealth that pays the wages which can be taxed in order that schools, universities, health services and other social services can exist.

Earthy as it may sound, the making of things to sell and selling them successfully is the only way that we can exist as a nation. Every headmaster here this evening depends just as much on the successful sales effort of British industry as industry does itself. Not a single person in the community is immune from the bad effects of failure in this field.

While the largest proportion of our national productivity goes on consumer goods for the home market, nevertheless we depend

for our food supplies upon our export effort and it is in the export field that we must succeed if our standard of living is to be maintained, let alone increased.

In the case of Britain we are perhaps more exposed that most, seeing that we have to import over 50 per cent of our food — it is not only for the luxuries of life but for the sheer necessities that we are dependent upon our exports. Furthermore, in this generation our competitive position in the World has been lower than any other time since the Industrial Revolution. To a large extent, the Industrial Revolution depended upon steam as the main source of power, and the utilisation of our iron ore supplies; the steam plant in those days being coal burning. In our present age our iron ore supplies are inadequate and of an inferior quality to those existing in other nations, and coal, whilst still our main source of power, is rapidly being replaced by oil as the centre of industrial power. It is not so much that we are dependent upon oil for the direct generation of electrical power, but that the oil industry provides so many by-products on which current society depends. For example, the whole plastics industry depends upon the by-products of the oil industry. We in Britain have no indigenous oil supply.

The question of our survival as a major economic power is very much in the balance. Certainly we have very few natural environmental conditions in our favour.

Under these stringent conditions it is extremely important that the nation should get its priorities correct.

One of the most valuable assets is, of course, our manpower. For this reason in our present age, education takes a prominent place in any economic or social programme. But being enthusiastic over education is not enough. Unless the inherent talents we have in this nation are utilised in such a way that they are of the maximum advantage to all concerned, then we shall face a very difficult time.

Our competitors, who have more abundant natural resources than Britain, have for a long time accepted the importance of technology in education whereas in this country we have had a very heavy bias towards the arts and pure science.

The recent researches carried out by the Department of Education of Oxford University, on the academic attainment of students choosing science or engineering, must alarm anyone who is aware of the industrial competition this country will have to face in the future. To find, for example, that of the best boys choosing science

or technology as a career over 60 per cent choose pure science, while under 20 per cent choose engineering.

This distribution is completely out of keeping with the national need and can, in the long run, only lead to disastrous results.

If one couples with this the fact that although there is a shortage of technologists, and although a large number of university applicants were turned down last year, there were still over 200 vacant places in university Faculties of Technology, one can only conclude that, if this trend continues, we are heading towards an economic crisis which can only end in lowering the relative standards of living in this country and weakening substantially our potential as a world trading nation.

The public schools and grammar schools must take some responsibility for this, since the kind of emphasis they create, consciously and unconsciously, on the young peoples' minds must affect to a great degree the kind of careers the girls and boys ultimately select. It is therefore very disappointing to learn from the minutes of the Oxford Conference in 1961 on Technology and the Grammar Schools, that the new Physics Syllabus proposed by the Science Masters' Association does not involve a new approach which could do something to rectify the present unsatisfactory condition.

In the conversion of a scientific principle into an industrial process problems of construction, mechanisation and control will arise which must be solved before the process can become effective. On these problems no precise scientific knowledge exists, and it is here that technological research and engineering provide the vital link, and this is where the effort of this country is weak.

An examination of our export and import figures between 1954 and 1961 show some interesting results (the figures are approximate). During this period our imports have increased by 30 per cent and our exports by 38 per cent, but even in 1961 our imports exceeded our exports by 20 per cent. During this same period manufactured goods exported increased by 43 per cent, and the engineering and metals industries exports increased by 64 per cent. Also in 1961 the engineering and metals industries contributed 63.7 per cent to the total manufactured goods exported, and this represented 55.5 per cent of our total export effort. It is not difficult to see that this country is still not bridging the gap between its exports and imports, but that the greatest increase in exports has been in the engineering and metals industries, i.e. in the technological industries. It is also

these industries which have the greatest potential for expansion, and if we are to balance our trading budget then these fields must expand. It is doubtful whether they can expand greatly without a larger percentage of the best brains in the country. It is for this reason that the Oxford investigation is so disappointing and alarming and the general attitude to technology so disappointing.

The Second Line in the Sixth Form

Certain professions set their standards very high; law and medicine to mention only two. This can be done if the profession concerned represents only a small section of the community, but a general application of high standards cannot be applied if the group concerned represents a large portion of the community. One of the hard facts of life is that this country has to be run by the particular type of human species that the women of Britain happen to breed and not by a race of hypothetical supermen.

As obviously the major section of the community are in industry or commerce, industry must within itself provide fruitful employment for the whole range of intelligence, ability and character existing in Britain today, and while I have already made a plea for a bigger share of the best men in the sixths forms entering industry (primarily in technology), we must also be interested in the second line in the sixth form. As a continuation of studies at school until 17 or 18 years of age becomes more popular, so this second stream becomes more important.

It is amazing how our whole educational system is bent towards the 5 per cent who enter university, giving often second class attention to the remaining 15 per cent of the 20 per cent of the age group in our grammar schools.

The people I have in mind are the boys who get five 'O' levels and two 'A' levels, who have a good sound character and qualities of leadership. They are the kind of boys who will probably enter industry straight from school and do a sandwich course at a CAT.

Some schools are only beginning to realise that there are universities outside Oxford and Cambridge, and I doubt whether many grammar schools have studied fully the function of CAT's — their growth, their method of government and the regulations governing the award of the diploma of technology. (They may soon be degree-awarding bodies). The growth of these institutions is considerable.

At the moment there are 7,300 full time students in the CAT's

registered for the Diploma of Technology. Also at the present time I believe there are 9,500 degree students registered in technical colleges.

Adding these together there is a total of approximately 17,000 students studying degree courses or the equivalent in the various technical colleges, i.e. equivalent to about four good size universities.

We must not forget the impact of the CAT's and Regional Technical Colleges on higher education in the country.

The Schools on the Threshold of Industry

Not only is the sixth former on the threshold of industry, but the schools themselves are on this threshold too. In the future the majority of sixth form students may not go to the university direct but may enter industry straight from school, taking one of the sandwich courses provided by the CAT's and Regional Technical Colleges. It is therefore important that the schools should get to know industry better. This applies particularly to the science masters. Most grammar schools know Oxford and Cambridge well, they know the provincial universities not quite so well, but what do they know of the various careers in industry, for example, in the fields of management, technical sales, design or research ? And how these various fields of activity differ in the electrical industry, the heavy engineering industry, the textile industry or the chemical industry ?

It is impossible for one individual, or one school, to have a profound understanding of the whole of British industry. But I suggest that a well educated man must know the prime functions of the various facets of industry. What masters here present have had industrial experience ? How many of your staff have spent more than a month in industry during the past three years ? Is there a desire within the schools to get to grips with industry, or is your school society and fellowship within the teaching profession so cosy that you do not wish to venture outside it ?

Industry is not cosy, it exists at all times on the edge of survival; it is in the forefront of the cut and thrust of competition; it is challenging, inspiring, and in most cases rewarding in ways other than material; it is essentially creative. But it is also at times risky and provides a sense of adventure.

We must, however, remind ourselves that it is on the success of industry that all other national success depends. As much as I welcome this conference, you do not get to know industry by

attending it, no more than we get to know your schools by meeting you. The staff of schools must spend some time in industry to learn first hand what it is all about.

Who is to guide the sixth former

Who is to guide the sixth former ? It must be his form master who often knows the boy's abilities and limitations better than his own parents. But how can he guide him to an industrial career if he has no first hand knowledge of industry himself ? The sixth former will not feel that he is on the threshold but rather on the edge of a vast unknown chasm being guided and advised by masters who have no knowledge of industry, while the image of industry presented to the boy by industry itself is half cartoon and half fact. For the sixth former industry is shrouded in darkness and mystery.

The development of modern technology and the changing fortunes of this nation have caused industry to have a more central position regarding social and material development. Much more so than it had in the past.

It is doubtful whether industry itself is aware of these changes and here we must educate ourselves and if need be invite help from outside in order that we may see ourselves as we truly are.

The initial responsibility for guiding young people must lie with the schools, and for this reason the schools must get to know and understand industry better. Industry, in its turn, must do its best to assist the schools to do this, but there is little that industry can do unless the need is felt by the schools.

The Attitude to Industry of the Boy, the Parent and the School

Mr. J. C. DANCY
Master of Marlborough College

I BEGIN WITH A WORD of warm thanks on behalf of the schools to the F.B.I. and organisers who have called this conference. Our response has already been shown by our heavy over subscription of the places available. Our gratitude I think we shall show best by talking straight, by avoiding speech-day phrases and pious platitudes — as usual, a rich platitude is poor gratitude.

In accordance with that principle, I feel we must first set in its perspective this very real problem of the shortage of top-class recruits to industry. We, in the schools, know that there is — or there appears to be — a shortage of top-class recruits at present to any job you like to name. Certainly all the professions say they are short of alpha men. And it is not easy to make out a convincing case for the superior importance of one type of job over against another: the country vitally needs its manufacturers and its exporters — there's no question about that — but it also vitally needs its doctors, its airmen, its judges and even its dons and beaks.

In this wider context, our first job in the schools, as I see it, is to discover and to nourish these alpha men, the country's future talent. And I would say in passing that *if* the shortage of such men is real, not merely apparent, then we in education are failing at a pretty deep level — not so much, in my view, by over-specialisation, as by overstressing the analytical at the expense of the imaginative qualities.

Secondly we must show the greatest responsibility in helping boys to make up their minds about their careers. This responsibility is a double — and a doubly difficult — one. Any schoolmaster would put first his responsibility to the boy to help him to choose the career in which he can fulfil himself. Second, however, is certainly a responsibility we all have to society, the responsibility to see in so far as we can, that this talent is fairly spread.

In the narrower context which we are considering at this conference — that of careers in industry — there are additional difficulties. Industry is so vast and so varied that very few generalisations can legitimately be made about it. What is true of one firm or section of industry, is untrue of another. It must be difficult enough, even for anyone who works in industry, to advise a boy out of his own knowledge: for a schoolmaster I should say it is virtually impossible. Dr. Pope was urging "the staff of schools to spend some time in industry to learn what it is about". I am bound to say I doubt how far this is practicable advice.

However I will try to be positive. I think schools have two jobs to perform in this narrower context: each of them can be formed only in concert with industry itself.

First the schools, with industry, must feel a responsibility for the image of industry among their boys: in particular they may need to devote thought to removing misconceptions about it. Secondly the schools, with industry, must provide factual information to boys who need it. In both cases I believe the responsibility of industry is primary: only industry in the last resort can improve its image or provide the factual information. But we in the schools can help in both cases.

I will take these two points in turn. But before I do, I ought to come clean over one thing. I am down to speak about the attitude of parents, boys and teachers. But I am going to say little about teachers and even less about parents. In my experience the attitudes of the parents are in fact the most important influence on the boys; but by the same token you can infer the parents from the boy's *a posteriori* ; and anything you do to correct the attitude of the boys will have beneficial repercussions on the parents too.

As to our colleagues, the members of our Common Rooms, there *is* perhaps a job to be done there, but for myself I don't see a clear solution. For example, it is fairly widely believed that science teachers, at least unconsciously, influence their best boys towards research and against technology; and this is ascribed to their lack of experience of industry. I believe it may not be quite as simple as that. Think, for example, of the growing trickle of men who are coming into teaching nowadays more or less disillusioned with industry: what, I wonder, is their influence likely to be on boys who are considering an industry career ? Actual experience of industry can be a two-edged weapon.

I am therefore going to concentrate on *boys'* attitudes to industry. And I cannot resist the temptation here to interpolate a grammatical comment. Parents and teachers are common in gender, but what of boys ? Are we to take it in Churchill's phrase that boys embrace girls ? I know the Conference had to be severely restricted in numbers, but perhaps on another occasion it might be possible to bring the headmistresses in on this question — for surely, to take one example, the engineering profession should be open, like architecture, to girls no less than to boys.

But I come back to boys, and their attitude to industry. In order to be as objective as possible, I recently asked all members of the second and third year Sixth at Marlborough to complete a questionnaire. The questionnaire was designed to elicit their ideas of a career in industry. I realise that the results are open to criticism on two counts. First Marlborough may well not be typical among schools; how far it is so, I must leave to my colleagues to tell you. Secondly the questions were general (perhaps too general to be altogether scholarly); so in presenting you with the answers here I shall confine myself to broad trends.

The first trend was that there was scarcely any significant difference in the attitudes of the 85 boys reading arts and the 110 reading mathematics and science; that was my first surprise.

I found six main opinions held, three favourable to industry and three unfavourable. I will start with the latter.

First, the boys believe that in industry the work itself is monotonous and the surroundings unattractive. (Here incidentally is another case where actual experience of industry is two-edged: the most vocal expression of this attitude came from a form which had last year spent a week working on the shop floor of a nearby factory). Clearly there is truth in this view: inevitably factory life *is* unattractive in some ways. But as a criticism it should not be allowed to go unanswered; and the appropriate counter, in my view, is an emphasis on the opportunities for variety and for travel that the big firm can offer later on to the successful man.

Second — fasten your seat-belts — British industry is thought to be stagnant and unreceptive to new ideas, at least as compared with other countries. I have not followed this one up systematically with boys, but in conversation I find the opinion that the scientists and engineers have too little power in industry and that too high a proportion of seats on the Boards go to Chartered Accountants and

Secretaries. Now whether this is true or not I cannot say: but if it is widely thought to be true it will *become* true, since your ablest scientists will avoid a career where they think the road to the top is partially closed to them.

The third criticism, however, is the most searching of all. It emerges when their separate answers to three different questions are put together. Boys at Marlborough believe that people working in industry have low ideals of service, and are mainly interested in money; they believe that if you are in industry yourself, your concern for the men below you will not significantly help your career forward; they believe that a job in industry gives you a very small chance of doing good in the world. If I were an industrialist I should be more worried by *these* misapprehensions — and I call them *mis*-apprehensions advisedly — than by the others.

I heard the other day of an industrialist who visited a school to interview a boy who was interested in a job. After the interview he reported to the Careers masters, "That boy shouldn't go into industry", he said, "he's got too strong a sense of service". The Careers master told me the story and added "For the Lord's sake don't repeat it; think of the harm it would do".

And so it would. For however unrepresentative Marlborough boys may be in other respects, they are like the rest of their age group in having a strong streak of idealism. Most of them — including the best — want to spend their lives doing something for other people, preferably in some sense helping those who need help. Some are shy of personal contacts and would prefer to do good by stealth; but many — especially on the arts side — want to devote themselves to work with and for people. The picture of industry that must be put to them is that given me by a friend in T.I.

"Industry is not vast numbers of faceless men and women operating with fantastic efficiency. Business is people, *live* people, nice and nasty, stupid and clever, ruthless, hopeless, gutless, and often very fearful people who need a lot of help and understanding."

Here is a similar judgement at a more impersonal level, by a Socialist M.P., Antony Crosland. It comes from his book *The Conservative Enemy* published in 1963. He says there are three types of firms in British industry today.

"Third, and now perhaps most typical amongst very large firms, is the company which pursues rapid growth and high profit — but subject to its 'sense of social responsibility' and its desire for good

public and labour relations. Its Chairman will dilate on the duty of industry, not to the shareholder alone, but also to the consumer, the worker and the public at large. And some at least of this talk is reflected in company policy. Such a firm will prefer profit retention to large dividend increases. It may give a higher priority to exports than profit considerations alone would warrant. It will have good relations with the Trade Unions, a system of works councils, and an elaborate grievance procedure. It will meet a fall in demand by short-time working rather than by dismissing the workers it cannot profitably employ. Even when in a monopoly position, it may ' act with a sense of responsibility ' by holding prices down to a ' fair ' level which does not exploit its monopoly strength. In the siting of new plants it will take account of government policy and local unemployment. It will operate expensive welfare programmes, make gifts to education, patronise the arts, and participate in local community affairs. Its goals are a ' fair ' rather than a maximum profit, reasonably rapid growth, and the warm glow which comes from a sense of public duty." If you leave out the little sting in the tail, the image of British industry — as a place where in the last resort people count more than profits — is one that in my view is vitally needed to correct the misapprehensions of schoolboys. How to put it across is a major problem of public relations — to which I will come back.

Now I turn to opinions of boys which are neutral or positively *favourable* to industry.

First: in the eyes of boys industry ranks highest for pay, and the quality, which above all brings you to the top in it is ambition, push or drive. There again is your public image of industry, at least in the minds of the boys I have to teach: not the tired businessman, but the tycoon. Yet this is not the judgement of cynics; it is noticeable, for example, that boys ranked ' good connections ' very low among the aids to success.

Secondly: they believe that in industry you get a responsible job (a job, that is, in which you are responsible both for decisions and for people), with difficult problems to solve, in which brains definitely count. The part of this which surprised me was the boys' recognition of the difficulty of the problems to be solved. This is important if you are going to do something to counteract the glamour of research. For the research-minded boy is usually the boy who likes solving problems, and it should be possible to make him see that the prob-

lems, that have to be solved in industry, are usually *more* complex and *more* subtle than those of the laboratory, in that they involve human beings.

Thirdly, the boys rejected the view that applied science is somehow sordid, and instead accepted the view that it is creative. In judging so, they ran counter to the results of the survey done by the O.U. Department of Education; yet I confess that over this matter I am not surprised. I do not mean to deny any validity to that survey; clearly there must be *something* in it. To some extent perhaps Marlborough is untypical in having a tradition of engineering, which has recently been consolidated by the creation of an Engineering Upper Sixth. But in general I am sure that what puts the sons of the professional classes off industry — in so far as they are so put off — is not the thought that technology is sordid but the image of Dives.

At this point I want to stick my neck out. I believe that one of the things that has contributed to this image of Dives, has been the Industrial Scholarships to the University. In the minds of some boys — and also some of their teachers — these scholarships have awoken old suspicions. A great deal of money is promised to a boy — often a boy with no particular ability and less need — and it is given not by industry as a whole, but by individual firms: that is to say, the money is used, not to attract a boy from some other career into industry, but to attract him from one firm within industry to another. But whatever the reasons, I think my colleagues will agree it is a *fact* that the existence of these scholarships has not been favourable to the image of industry in the schools.

Dare I go further ? All of us here, I believe, would feel that the Industrial Fund for Science was a model, both in conception and execution, of the way in which industry can both help those who need help, and at the same time enhance its own image. (The Trevelyan Scholarships were not much less successful as an idea). There is, as it happens, a somewhat similar situation now with regard to language laboratories. The schools need the machines. Industry needs more linguists. I am given to understand that the sum spent by industry, in any one year, on Industrial Scholarships would provide a language laboratory for every grammar school in this country — not only H.M.C. but I.A.H.M. This may not be absolutely true, but I think it gives a correct idea of the order of magnitude involved.

But I must come down to earth. I said it is our responsibility as Headmasters to assist you in your task of correcting the image and providing the information. Here are some ideas on this which I have collected from colleagues and from boys.

First, the information we have at present is fantastically difficult to use. It is as if there were 500 Colleges each at Oxford and Cambridge, each with its own entry requirements, its own courses and its own finances. At present each firm provides its own "glossy" and its own visiting speaker. We desperately need some literature put out centrally, telling boys what goes on in industry *as a whole.* We need a book that does for industry what a recent little book does for business — it's called *And Now to Business* by Peter Hadley. We also need a panel of lecturers set up *centrally* by the F.B.I., young, dynamic but sensitive, and specially chosen for their ability in that most difficult of arts, talking to sixth-formers in large numbers.

A second idea is one which we at Marlborough have borrowed from Uppingham and are going to try later this term. We are running a two-day Conference after 'A' level for 85 leavers on "Responsibility in Industry". There will be talks by visitors (including a Trades Unionist) and discussions among syndicates followed by reporting back — much as we are having at this Conference. We are unashamed about the title "Responsibility": our boys are aiming for positions of responsibility, and there is no point in burking the fact. Opinion in the school is favourable to the idea of the Conference, and we hope it will be an opportunity both to correct the image and to disseminate information.

There's a third idea I should like put out for discussion. Now that University places are being filled earlier in the year, many boys have six or nine months between school and University. For many boys I teach, an excellent way of spending these ' months between ' would be three months working in industry, followed by three or more months travel on the Continent.

The time in industry would give them a change of environment, some knowledge of men — and women, perhaps — and some money with which to travel. It would also give them an insight into the type of career which nearly half of them will in fact follow. I am not thinking here of the scientists so much as of the arts men. I am told that even they could be given a real job to do — not just a job invented as an excuse for pocket money. For example, they could do two weeks on the shop floor, followed by a month each in two

or three of the following departments: works study, labour and safety. They would also need to be given a weekly tutorial with one of the managers, so that they could see industry through the eyes of management as well as of men.

Those who leave school in December could work from mid-January to the end of March; those who leave in March could work from mid-April to the end of June. This would give time for foreign travel before going up to University — a course at a foreign University, a course in industry abroad, attendance at an International Works project, or just the usual tour of the continent with friends.

I think this way of spending the 'months between' would be well worthwhile — and I know a number of boys would welcome it. Initially it would no doubt need to be worked out on a small scale; but if it were going to increase, as I think it could and should, it would soon need the blessing and the co-ordination of the F.B.I.

Finally, I want to come back to this fundamental question of the image of industry. When the War Office was worried recently about the image of the Army in the minds of the young, it called in a high powered firm of public relations consultants. I am not sure how effective was the advice actually given — but I believe the idea was sound in principle and is worth the consideration of the F.B.I. My own feeling is that there is need not only of short-term tactical measures, some of which I have described, but also of some long-term strategic planning.

Take the influence of novels for example. Think what Sir Charles Snow has done to glamourize scientific research among the intelligent young. Consider the words of a recent editorial comment in the *T.E.S.*, that by comparison with most scientific research, the life of your typical plant maintenance engineer reads like something out of a novel about James Bond. Yet where are the great novels about engineering — or indeed about industry as a whole ? As Roy Fuller wrote in the May issue of *The Director* : "Of the novelists who have become famous since the last war scarcely one has any real mastery over the material that constitutes and rules the working life of the majority of the population". He suggests there that "a few groups might put a promising novelist of 30 or so on their main board, at once relieving him of financial worry and giving him a chance to know their organisation". In my view, this would be money eminently well spent. A good novel would be filmed and its publicity value would be enormous.

This leads me on to a pet notion of my own. What I should like to see is a TV serial as authentic in atmosphere as Coronation Street but set, like Compact or Harpers West One, in a medium-sized industrial firm. It would need tremendously skilful handling, but I believe that it could be done and that from the long term point of view, it might even solve this problem.

For at present there is something of a vicious circle. The image of industry is tarnished, so good applicants are short. Since they are short, individual firms compete for them; but the competition itself and some of the means employed in it only go to tarnish the image further.

The only way in which the circle can be broken is by *joint action* by some central body representing industry — joint action, that is, in correcting an image and in supplying information. I am told by friends in industry that to ask for such joint action is to cry for the moon, since the whole of industry is built upon the principle of competition between firms. If that is true, the outlook is grim; I prefer to believe that it is not true, and I rest my hope for better things upon the Federation of British Industries."

* * *

The President thanked Dr. Pope and Mr. Dancy for their stimulating addresses. The Conference would wish to debate the practical suggestions made, but the challenge in part of Mr. Dancy's speech must be answered at once. From his own experience, he strongly refuted the idea that industry was monotonous, unattractive, and unreceptive to new ideas. That it had low ideals of service was completely untrue. He could not over-emphasise the very strong sense of responsibility and care for the well-being of all members of the industrial organisations of which he had personal experience or the challenge and fulfilment, in deep degree, of the human aspects and interests of all members of the team of which any good company was composed.

SESSION II: Chairman, Mr. F. H. Perkins, O.B.E.

Questions to the Speakers

Dr. J. A. POPE and Mr. J. C. DANCY

1. Was too much attention being paid to the more able boy ?

The schools might be more open to the accusation that too much time was spent on the less able boy, though the prize day lists gave a contradictory impression. Practice varied among schools over the age of entry to GCE 'O' level, but the staff available inevitably must be spread over all streams. Some industrialists felt that more attention should be paid to the bright boys in the national interest. The speed of development however varied with the boy, some would progress quickly, others slowly and all do best at their own tempo.

2. What do boys dislike about industry and what can industry do about it ?

The image of Dives seemed to be the one which was most disliked. Boys were a complex of idealism and cynicism, and were very much on their guard against sales talk. They expected to suspect. The necessary approach to them must be from a general, rather than particular, aspect, e.g. on the responsibilities of personnel management, rather than the attractions of an individual firm. The existing publications in careers in industry were composed of pages provided by particular firms. This was contrary to the interests of boys who wanted to know about the structure of industry and the life led. There were plenty of glossies but no diagrams. A book on industry on the lines of Peter Hadley's *And Now to Business* would be a most useful ' text book ' for schools.

A number of boys visited firms while still at school. It was not easy to give them a true picture, for example, of the engineering they would carry out when entering industry. On the other hand, a book might only give a romanticised version. The talks by the Public Schools Appointment Bureau were a valuable means of giving a true picture. It was important that those who talked to boys were experienced in this art. The sense of service was very strong in

industry and any suggestion to the contrary should be strongly refuted.

3. **Were the schools paying too much attention to developing an analytical sense at the expense of the imaginative ?**

The recent approach to science would seem to support this. More thought should be given to the relationship with technology. Engineering must be based upon good maths and physics, but the syllabuses for 'A' level GCE were tied to degree requirements, and the possibility of setting different questions on easy principles, or easy questions on different principles seemed to have been overlooked.

If the mathematician found his working wrong, he tore up his papers. If the engineer built a bridge, he must not fail. His depth of knowledge must therefore be deeper. Engineering was not just applied science. It lived ahead of knowledge, and based decisions on experience. The engineer was already getting energy from steam, while the physicist was deciding whether it was a material substance or not. What was wanted was not a First Class degree man in all subjects, but one who had a feel for and harmony with nature. The school workshop was in danger of being a hobbies room, rather than an engineering shop.

The science syllabus was not the responsibility of Headmasters, but of the Universities, and entry to universities was based on factual knowledge. Not all schools were, however, obsessed with getting boys into Oxford or Cambridge.

4. **What was the responsibility of industry and of schools to boys without the necessary 'A' levels for entry to University or Colleges of Advanced Technology ?**

There was a great opportunity for industry to recruit many good boys who did not get into universities, boys with ideas and qualities of the kind required. One of the difficulties was absorbing boys, in the 18 to 18½ years' group, who lacked the qualifications to take ONC. The delay in his study could mean a delay in higher training till the age of 23. One answer might be the experiment going on at the school in Nottingham, where boys were given a different kind of education. A link between such methods and the professional bodies could remove the difficulty of the 18 year old. On the other hand, two years' delay was not calamitous, and in the longer term late developers had proved most successful.

But industry was not concerned only with the highest ability

group. It wanted a full cross section of ability, and particularly boys who could work with others and get things done. The danger point came with those whose ability did not measure up to their ambition.

5. **Is the question of security a factor in the image of industry ? And how can masters be enabled to get to know industry better ?**

Security could be a factor, but this had not been considered so when drafting the Marlborough questionnaire. Direct approaches could be made to firms for visits by masters, but this might not produce the desired results. Industry should advise the schools on this.

The security aspect was of importance to the sort of public served by the school. The recollections of the 1930's were still strong with some parents, and the urge for qualifications like accountancy and secretaries' examinations followed. It was further emphasised by take-over bids and redundancies in smaller firms. Could not men from industry go into schools more. In some schools there was a number entering on a part-time basis, and this method could considerably ease the serious shortage of maths masters, which would persist till the late 60s.

It was not easy for industry to release such men, and, for the three days a week suggested, desperately difficult to complete the work which had to be done, and still release them for this period. A good deal however was done to assist Technical Colleges in the evenings. Could the timetable be stretched to permit this in schools too ?

General comments

It was noted that Iliffe Books Ltd. had published a *Careers Guide* and that the F.B.I. had set up a careers card index scheme. Perhaps neither completely fitted the need, but there was also a panel of industrialists in the London and South Eastern Region who were ready to give talks to careers' masters. Very little use had, however, been made of them. The idea of short courses and experience in firms could be usefully applied on a local basis. Some industries had offered an open invitation to maths and science masters to see the science departments, and to take part in the work, but not all offers had been taken up. On attachments to schools, there had been one instance where the arrangement had fallen down, because of the difficulty of including industrial science in the school timetable.

On books of reference the Oxford University Department of Education booklet on Engineering Science in the Universities was a useful innovation.

The real problem was one of finance and manpower. Companies had no spare staff and though one day a week on attachment to a school might be economically practicable the manpower position would not allow it. More men were needed in engineering. Until schools provided them the spiral would continue.

The needs of Industry Now and in The Future

Mr. PETER RUNGE
President of the Federation of British Industries

THERE IS AN ADVERTISEMENT on television that starts "I have exactly 30 seconds to persuade you not to be a danger to other road users" or words to that effect. This morning I have exactly 60 times as long to persuade an infinitely more intelligent audience, but one which is more effectively "captive", as the jargon has it, not to be a danger to industry by following a policy of over-specialisation in the young.

The dangers of over-specialisation

Over-specialisation is a menace. It is widening the gap between men of science and men of affairs; between the back room and the managing director's office; between research and production. It is, in my view, denying the future leaders of industry the sort of adult education they should have, and in many cases denying them any adult education at all. That will be my theme this morning. Let us examine it for truth. If it is true, let us examine it for importance. If it is important, let us look for the remedy.

Too few graduates in top management

The title of this Conference is "From Sixth Form to Industry". You will forgive me if, in this address, I do not confine myself to talking about the people who go directly into industry from the sixth form, but extend my subject to include those who go into industry via the Universities. Although much of what I shall have to say will apply to the whole range of the requirements of industry, I have had particularly in mind "top management material". This is a vague phrase by which I mean those people who get involved in major decisions of policy, or who are destined to become so involved. They embrace perhaps ½ per cent of industry's working force, say 75,000 people requiring an intake of 2,500 a year. One-half per cent of industry's force does not sound much but it is

equivalent to a tenth of the total output of graduates. The percentage it represents of *available* graduates is much higher because industry is inclined only to have the last call, after the requirements of the professions and the Civil Service have been covered. And as only a proportion of graduates entering industry reach the top one can reliably surmise that industry, so far from having recruited its present top management mainly from university graduates, is not even now recruiting even a majority of graduates for future top management.

I have not been able to get any figures to substantiate this, but the Institute of Directors has provided me with an analysis of their 40,000 members. They are not of course by any means the same people as are embraced by top management, but a very large proportion, indeed almost certainly a majority, double the part of director with that of manager, and this analysis can be taken as reliably indicating the composition of top management as a whole. The analysis blows sky high the myth that the Board rooms are dominated by Oxford and Cambridge graduates. They amount in fact to only 7 per cent of the total of which two-thirds come from Cambridge, and one-third from Oxford. There is another 7 per cent with degrees from other Universities, and there are 64 per cent who depend on experience alone. The other 22 per cent have qualifications of one sort or another. I should point out that these averages do not mark some sinister difference between large and small companies. Even the large companies can only boast of 26 per cent of their directors having degrees.

I have little doubt that the 64 per cent who depend on experience alone as well as many of the 22 per cent with special qualifications, would have gained from having been to a university, and I believe that this view would also be held by the vast majority of the people themselves concerned. The process of education is not over at the age of 17 or 18. The mind is extremely receptive at that age, and with intelligent people there is not yet an overwhelming yearning to be working for one's living. So far as I was concerned this came when I was 21 or 22, and I suspect that I was typical of the majority. I might add that the yearning did not last long once I found out what it entailed.

Examination mania and increased competitiveness

We do not know, of course, why the present leaders in industry

did not go to Universities; whether it was a lack of inclination or of money. We do know, however, that had the same people been living today, it would not have been inclination or money which would have counted but whether Universities were prepared to have them at all. Industry, therefore, is vitally interested in the methods of selection which are being employed by the Universities. Chief amongst these is the competitive exam. I fear that examination mania is growing. Oxford, I am told, is moving rapidly towards a system of competitive commoner entrance, and so have some colleges at Cambridge although others, I note with pleasure and approval, are still holding out against this tyranny. Mr. Harold Wilson has made it clear that a Socialist government would seek to rely completely on a common competitive exam for entry to a University, and according to some sources would not allow the products of fee paying schools to sit for such an exam. To me, it seems that for scholars an examination is appropriate, but that for commoner entry 'A' level results should be taken as a qualifying standard — as recommended in the Crowther Report — and selection finally determined by headmasters' reports and college interviews. Intellectual stamina and the ability to stand up to a University course and University life, in all its aspects, are more important for commoners than the marks they happen to get in a particular examination on a particular day.

I am the first to acknowledge that exams are necessary as a measure of professional qualification. There is no alternative for a surgeon, an architect, an accountant or a midwife, except to pass an exam in order to prove competence. And the same thing applies to the General Certificate of Education; that is a measure of a certain standard of literacy. But if you extend the principle and allow only the most successful candidates in one examination to compete in the next, you are creating a new class of person — the good exam taker labelled B.A., M.A. or B.SC. or what you will.

Examinations no criterion for leadership

No harm, you can say, need come of this. We want our corps d'elite of good exam takers. But supposing certain high positions of responsibility are closed to all but those with the right label; what then ? I agree that good exam takers very often make extremely good administrators. But you know many of them do not, because they cannot apply their knowledge. Exams do not measure the

ability to make a fearless decision, instead of a convenient compromise. Exams do not measure mental and physical courage. Exams do not measure robust health; impressive appearance; confidence in manner; tact or charm. Examinations do not measure powers of leadership. In fact they by no means measure all the desirable qualities and they certainly give no indication of the most important attribute of all — whether the candidate has a built-in resistance to ulcers.

I believe myself, however, that the future leaders of industry will be chosen for their powers of leadership, and *not* for their ability to pass exams. In that case do not, for pity's sake, deny them a University education. That is a sure way of making them resistant to change and suspicious of scholarship. And while I am on the subject do not, for pity's sake, deny to the eggheads the society of rowing and rugger types. It takes all sorts to make a world, and it takes all sorts to contribute to life at a University if it is fully to reward those fortunate enough to go there.

The academic attitude

The responsibility for exam mania rests, in my view, with the University authorities. They tolerate it, partly because competitive exam results are such a simple method of rationing something for which the demand is twice that of the supply, and partly for a more subtle reason. There is a natural wish on the part of parents to see their children grow in their own image, or an idealised version of it. Certainly the ones that do so are their favourites. I have a suspicion that the same applies to the attitude of University dons towards their students. The great majority of dons have been drawn from a type which enjoys learning for learning's sake. They have sought the kind of life which is led in a University as much as a means to pursue their own academic leanings as to have the satisfaction of imparting their knowledge and thinking to others. I am not decrying this — to be frank I admire the detachment of academics — I am doing no more than point out that it is natural for them to seek to attract to their Universities men of their own type — men who find it easy to concentrate on a single subject, men who can absorb knowledge easily and express themselves well in writing. Just those people in fact who have been successfully crammed.

The lure of science

University selection methods have a special bearing on scientists.

Science nowadays has a special glamour all of its own. If you are a scientist you are with it. The Universities are falling over themselves to extend their science schools. I think that is a correct policy but the effect of this popularity of the sciences is intense competition to get to a University to read science. The entrance exams are competitive and their syllabuses narrow. The inevitable result has been that schools are increasingly taking on the role of crammers and that boys are being made to specialise at much too young an age. I could not be more disapproving and I believe that the schoolmasters here share my views.

The teenage scientist

Let us take the case of a boy whose schoolmaster, or whose parents, or he himself is determined to read science and determined to go to a University. We forthwith conspire to deprive him of a general education in order to get him through the necessary exams. He gives up history, literature and modern languages while he is still too young to think of them as anything except lessons. And in their place he does maths, physics and chemistry. He becomes a specialist before he has reached his teens and a dull dog in his twenties. And I fear that, all too often, once a specialist always a specialist. There are those, of course, who jump clear, but there are others who become and remain narrow in outlook, the nature of whose training has effectively smothered any incipient qualities of balance and judgement — those being the qualities most required in a policy maker. A potential leader has been lost to industry.

Or take the case of a boy who does not get the urge to read science until he is sixteen or whose parents or schoolmaster discourage it. With the time at his disposal, he is unable to get high enough marks in a competitive science exam to gain himself a place in a University. He has two courses open to him. If his wish to read science is very strong, he satisfies himself with what he can get at school and gives up the idea of going to a University. If his wish to go to a University is very strong, he gives up the idea of reading science and takes a degree in some other subject. In either event, if he goes into industry he will not be as well equipped as he would have liked, or as industry would have liked. He never intended to become a pure scientist. What he wanted was a scientific background to a general education. Why should the system frustrate his wishes ?

In case it should be thought that I have had to conjure up these

bogies to make my case, I should like you to know that my examples are based on the experiences of two boys whose circumstances I know intimately. The first had a brother who got eight 'O' levels when he was fifteen, three 'A' levels in maths, physics and chemistry and 'S' levels in chemistry and physics. He was turned down by Oxbridge. With this example in front of him, the younger brother has started specialising in science at the age of fourteen and so far has collected eight 'O' levels. He is being crammed for the University and deliberately being given a narrow education. My second case concerns a boy who got eight 'O' levels including Greek and Latin, and then decided he would like to read science. He collected three 'A' levels in chemistry, physics and maths and was turned down by Oxbridge, on the grounds that he was the worst candidate academically that had been interviewed. He was being deliberately prevented from reading chemistry as a background to a general education.

Two cultures

It is almost as though an attempt was being made to create two cultures, when surely our aim should be to move in the opposite direction. During the war, Sir Winston used to complain that it was frequently almost impossible for the policy makers to communicate with the scientists — they were on different wave lengths. But at the same time as he was criticising the scientists, he was employing Lord Cherwell — primarily a scientist — to submit Service Department papers to most searching mathematical analysis, and he was using the Professor's genius in presenting quantitative arguments to devastating effect.

The fact of the matter is that the scientist is often extremely bad at expressing himself, his reading having been confined to his own text books; he is often uncompromising, even bigotted, and oblivious of political forces. But while in this sense he is a dreamer he is at the same time a realist, in that he likes to have the pros and cons of a course of action expressed in quantities. He is intolerant of generalities. If he is told the answer is a lemon, he wants to know how many lemons; if it is a case of the higher the fewer, he wants to know how high and how few. I refuse to believe that it is impossible to have the good qualities without the bad. I refuse to believe that the educational system must turn out *either* a humanist *or* a scientist. Is industry doomed for always to employing one of each ? Can't you find a way to give us the equivalent of two for the price

of one ? As Mr. Petersen has put it, the two intellectual disciplines "scientific method" and "sympathic insight" should be balanced within the *student* rather than within the student *body*. Follow his precept and you will succeed in modernising the humanist *and* humanising the scientist.

Liaison between schools and industry

I need not, in this company, flog the fact that the prosperity of British industry is vital to the nation. Nor need we debate the truism that you cannot have a prosperous industry unless it is well managed. And it is obvious that we must not leave its management to chance. Occasionally industry finds its higher management from outside its own ranks, but normally it comes from within. When you, who are headmasters, look at your sixth forms will you remember that if talent is to be evenly spread, a half of them should be going into the management ranks of industry. Will you also remember that several, from each year, are going to get to the very top. What, you may ask, does industry recommend you to do about it ? First I suggest that you keep in the closest touch with industry. Could more masters be given experience in industry ? After all, most industrialists have been to school; cannot there be a little return visiting ? I know this is easier said than done, but ways of achieving it should be re-examined. If longer summer holidays, at the expense of Christmas and Easter on the American pattern, would make temporary employment of masters by industry easier, do not let us be frightened of examining even that sacrilege.

The importance of mathematics

Secondly, may I suggest that you remember the importance of mathematics. I do not mean really advanced mathematics — that is something for the specialist, although one cannot help remembering that a double first in the old days meant a first in greats and maths. What I mean is the importance of a well developed mathematical sense. In my judgement, the theory of statistics, the solving of algebraic equations and the summing of series should be within the capacity of everyone at least to understand. Apart from being indispensable tools of management they are fascinating subjects. I leave it to you to decide whether it is necessary to reach this stage through the worthless study of geometry.

Foreign languages

Thirdly may I remind you of industry's need of people who can

speak foreign languages. If we must export or die, and if we have not acquired the death wish just yet, we had better start learning the languages of our customers p.d.q. And pray do not be too proud to employ foreigners to teach the languages. In that way we can learn to speak with an accent which can be understood.

Successful business demands good leadership

Fourthly and finally, may I impress on you that industry is concerned with people as well as with machines. Running industry does not mean juggling with figures in books or putting bits of paper in a file; it means dealing with human beings and getting the best out of them; it means in fact leadership. The successful running of a business demands good leadership. What industry requires, and what the nation requires is that men with the qualities of leadership are given the training in their formative years which will enhance the effectiveness of those qualities. It is in the schools that this training is started. The need for it is not confined to those who are academically the most brilliant, neither must it be deemed to have been wasted if it does not result in first class honours degrees. Industry naturally wants its leaders to have the mental capacity and powers of judgement necessary to make the right commercial decisions. But above all industry wants its leaders to *be* people who *understand* people.

Education as a preparation for life

I hope I have not given you the impression that I view education only as a preparation for making a living. It is, in fact, a preparation for life and life has — thank God — many facets besides that of earning money. And the further we advance materially, the greater are the opportunities of savouring these other facets. Education must prepare us to get the most out of life. I am not one to scorn the simple pleasures, or sneer at the topics of conversation heard in the commuters' railway compartment — last night's telly programme; how the chryssie cuttings are coming along; whether anthracite is better than coke for the boiler; how the car is going. There is nothing to be ashamed about in being interested in daily chores. But one has to admit that life, for a great many people in England, is deadly dull, and that they bring it on themselves. There is too little colour, sparkle, wit, humour, charm or fun.

This drabness comes from having been "taught subjects", in place of having been educated. In past ages we had our cultured men —

men who were well travelled, who spoke with ease on many subjects, who were students of foreign affairs, who were cosmopolitan in outlook — but they came from the leisured classes. I hope the passing of the leisured classes is not to be accompanied by the passing of the cultured man, or his confinement in the Chancelleries of the world. There is room for the man of culture and savoir faire in industry too. Help us to make sure that we do not become so dull, earnest and pompous in industry that we frighten him away.

Not an investment project

Education, let me repeat, is a preparation for life. We in industry can tell the scholastic world what we think our bit of life requires by way of training and teaching, but we do not believe — and here I quote from a recent newspaper article — "that a rigorous economic analysis is needed to establish *relative rates of return* to the relevant forms of higher education". This is an alliterative abomination. I do not believe that the education services of this country and the dedicated men and women who run them, and who hold the future of the younger generation in their hands, can be treated as though they were an investment project. Industry may deal with material things but it deals with human beings too. It is not insensitive to spiritual and moral values. And rest assured that our advice is friendly advice; we know, like you know, that there are many aspects of the British educational system which are the envy of the world. We understand and applaud the pride you take in the work you do.

SESSION III: Chairman, Dr. J. A. Pope

Syndicate Reports

Syndicate 1: Training for Management in the Light of Modern Scientific and Sociological Developments

Chairman: Mr. R. Moore, C.B.E.
Rapporteur: Mr. T. W. Brown

Background. Should future managers be given formal training ? If so, at what stage ? And how ? Personnel aspects as distinct from technical ones. Management versus supervision. Workers' voice in management. Communication as the essential key to personnel management.

It is not suggested that management needs should directly condition education in schools, but the qualities and attitudes of mind required are common needs of everyday life, and an increasing knowledge of and interest in the environment should be part of everyone's education. Good human relationships and ability to communicate should be an important aim of education, and these too are among the essential needs of management and can and should be progressively developed during as well as after the formal educational stage.

Report. Management broadly connotes executive control. It is not a profession but a range of human activities. The range of knowledge required in the technological age is greater than ever before and managers need more "know-how". This involves selection of the man for the job rather than for management, and the ability to do two or three jobs really well, while at the same time possessing the resilience to meet changing conditions through a wide breath of understanding. In this, liberal Arts Colleges could contribute to the overall training scheme.

Personality must play as important a part as academic attainment. The manager must be able to discern and assess the effectiveness of the means of attaining his objective.

At present, men who reach junior management positions are those who had been to university, often on the Arts side. Of the ten industrialists in the syndicate, four had studied Arts subjects. It was considered, therefore, important that more opportunities should be provided for future managers to obtain practical experience of the job.

On the whole, boys leaving school were not sufficiently aware of the environment they were entering, or had learnt a mass of factual detail without understanding the fundamental principles of science. They were usually insufficiently trained to take their place within a group, because of the individual methods of their education. More group projects, and less separation into arts and science sides, would be beneficial to the school curriculum. Maths was particularly important to the potential manager, and sixth form studies could profitably include statistics. What was needed was the ability to relate their knowledge to day to day experiences.

In the choice of careers, a greater spirit of adventure would be welcomed. More information by careers masters should be available to boys of all levels of ability. Perhaps more guidance could be given by headmasters to the choice of subjects, though this was not accepted fully by the headmasters.

On the question of communication, and the methods by which schools could develop an understanding of all sorts and conditions of men, it was noted that workers generally did not expect to have a voice in the management of the company, but only in their own wellbeing. Younger men will often be better able to communicate ideas to the workers, but needed not only human understanding, but a broadening of knowledge and an understanding of the language and feeling of the shop floor. A sense of timing and an awareness of the likely reaction was equally important.

Group responsibility and group loyalty were important, but there were times when the majority vote was not the correct answer. The two routes of communication, from management and from shop stewards, did not always run on parallel lines, and it was here that breakdowns occurred. Despite the evidence of good relations between management and workers it was possible for national union policy to conflict with decisions taken and for divided loyalties to arise. Prior consultation was therefore imperative, and the practice of management/worker consultation and good shop steward development essential. It was possible for there to be better consultation

between management and the shop floor, than between the levels of management itself.

On the selection and training of managers two main methods were outlined: selection at 18 years followed by a 2½ year general practical course and a three year intensive course of study and practice in specific jobs: and deferred selection until after specific training and general experience. Instruction in specific techniques was essential, and a case for increased use of business administration schools, as well as of university courses and research in group control.

The objects of Headmasters' reports requested by industry were to find out the boy's understanding of the knowledge he had acquired, his ability to maintain a point of view and conviction, his reliability and character, and his ability and desire to learn more, as well as his intellectual sparkle.

Syndicate 2: The value of degree and diploma studies and the use of first class ability in industry

Chairman: Mr. T. J. P. York
Rapporteur: Mr. D. P. M. Michael

Background. Sharing high ability between education, government, industry and professions. Rewards. Types of high ability in industry. Degrees and diplomas compared (subjects, standards and methods of attainment). Postgraduate diplomas. Co-operation between colleges and industry.

The Diploma in Technology is becoming increasingly recognised as having the status officially accorded to it of the standard of a good degree. It is proving in fact to have a greater value in that it results from an integrated course of education and training, which purports to meet the specific needs of subsequent employment.

What it has not yet achieved is the appeal to the boy of high ability that for years has characterised the systems in Europe where pure science is a poor relation of the technologies. With the opening

up of opportunities for higher education to all, the bright boy no longer leaves school early. Industry has been deprived of this source of future engineers and designers of high ability, benefitting from a number of years' experience before reaching senior appointments, and must look to the sixth form and to Universities for the managers and directors of tomorrow.

Industry must be able to attract its share of high ability groups if the nation is to maintain its position and standard of living.

Report. In attempting to define "first class ability" or "high ability" in an industrial context, all agreed that high industrial ability and high academic ability were not necessarily synonymous. It was however also agreed that industry must receive its fair share of able boys.

Personal qualities and additional skills were required by even the top graduates entering industry, and scientists for example needed courses in management studies. Importance might be attached to academic qualifications at the outset of a man's career, but the extent and variety of the practical experience he acquired later became increasingly important.

It was not easy to diagnose, and thereby to advise, those boys who would benefit best by courses for pure science degrees, technological degrees or diplomas of technology, and there was a tendency to regard these three in decreasing order of merit, but strenuous efforts were made to avoid giving utterance to this thought. It was stated that too many students at university were not deriving benefit, and some would have been better advised to undertake the more practical courses offered by the CATs and Diplomas in Technology which were still comparatively new.

On the placing in industry of non-graduates, i.e. non-science boys with good personal qualities and one or more 'A' levels, it was agreed that, provided they were prepared to come in at a low level, chances of promotion were there. The impression that personnel management offered a point of entry for these and for graduates was however a misleading one, since such appointments were normally made from those who were already in industry and showed special skill in handling men. In effect every manager was a personnel manager, since every manager had to manage people.

Opportunities for non-scientists included accountancy, cost and works accountancy, office management, sales, purchasing, market research, advertising, works study, and organisation and method.

More could be done by firms in the reception of sixth formers into industry. Sandwich courses had the additional advantage of providing an additional source of help to student employees through their colleagues in the firm. On the whole, the picture of a general reluctance on the part of good boys was a distorted one, and in any case was different in different regions. There was no such reluctance in the Midlands or in the harder-headed North.

Courses in technology, as for example the Manchester degree in textile chemistry, was far from limiting in its scope. Less than 10 per cent was of a specialist nature, and 90 per cent similar to that in the pure chemistry degree course. The textile chemist could therefore be as effective a teacher in a school as a graduate in pure chemistry.

For men with specialist qualifications in maths or science, there were ample opportunities for promotion to management rank. Most firms had staff appraisal procedures, picking out those ready to assume greater responsibility. Mechanical skill was important at the beginning, but its importance receded with promotion.

The Marlborough picture of the boy bringing back from a short works course an unhappy and misguided idea of industry was overstressed. Short works courses were necessary, and should be encouraged among all schools. The converse of short schools courses for industrialists was suggested, and, with the fervent plea of one industrialist in the syndicate for more attention to punctuation, the syndicate discussion came to a full stop !

Syndicate 3: Technological education and the need for more really able boys to take up engineering

Chairman: Dr. E. Lewis
Rapporteur: Mr. W. S. Brace

Background. Technology versus applied science. Does technology require the absolutely first-class men ? If so, should they be taught mainly in colleges of technology ? The status of primary and secondary technologies. Part-time studies, sandwich courses, and

diplomas in technology (for which industrial training is required). "Associated" or "Involved" liberal studies. The hard way.

The alarming ignorance and misconception among sixth-formers, even on the science side, of what the technologies involve was emphasised in the Oxford Report already issued to members of the Conference. The action taken by the Oxford Department of Education in carrying out this survey, their subsequent issue of authoritative information on engineering courses in Universities, and the vigorous work undertaken by the Public Schools Appointments Bureau constitute an important attack upon this problem.

The increase in the number of students taking the Diploma of Technology is encouraging, but the numbers are still comparatively small.

Report. General education and preparation for a technical career in a technical age had changed with the changing times. In the past education had been based on the classics, later on pure science, and was now centring on technology. A broad study of science, rather than specialism, was what was wanted. Industry needed men who could think and tackle problems, in other words who could apply their knowledge creatively and imaginatively.

Engineering was concerned not with physical principles but with their application, and development could involve many difficulties. Much of the technical training was under review in Colleges, but there was little true technical education. The whole training needed to be liberalised.

Problems of export and of labour relations suggest deferment of specialisation, in order to preserve breadth of study, but engineering itself provided a broader discipline than pure science.

The aims should be to develop minds, rather than to prepare for careers, and there was a case for a supplementary year's course in technology, after following a course in pure science which was often unrelated to industry's needs.

The foreign language report of the North Western Branch of the I.A.H.M. closely matched the requirements of industry. A new G.C.E. 'O' level was required, directed towards communication rather than analysis of the language, and there was much concern over the lack of use of languages among students.

Discussion of these three Reports

The position of the College of Advanced Technology was funda-

mental to all the problems discussed. Present society was centred on technology. Technical education needed to be widely based, but liberal studies superimposed were not the answer. Specialisation in technology should be introduced as late as possible. In this country, where sixth-form studies were more specialised than anywhere else, was this not putting the cart before the horse ?

On the use of languages, schools should not be regarded as vocational training centres. The use of languages should be part of a normal activity, and should be developed by the student himself as a continuing personal interest.

Sixth-form subjects in some schools were grouped to provide a variety of study — the English course at Manchester Grammar school was based on a period, or subject, treated in depth, not for facts but for character of mind. On the other hand, certian groupings were directed by university requirements. These were not necessarily incompatible, nor was it likely to be possible to get boys to abandon these, except for career prospects. Progress had, however, been made over specialisation, particularly since the last Conference, and too gloomy a view should not be taken. Boys were being better educated, the sixth form working time was being pruned, and at least one third of the time was devoted to non specialist work. A boy taking history would also tend to do reasonably high maths, and science boys were doing some history too. It would be an advantage to study industrial relations after learning the history of the nineteenth century. Many changes were being made, and there was a greater willingness among boys to accept them.

In the metal industries, the man with a diploma in technology could reach middle management early in life, particularly if his subsequent part-time education had included a course in management studies at Oxbridge, where both streams of education should come into contact. The technical training in university courses should not be overlooked. The incentive provided in applied science and technology could be extremely valuable.

Syndicate 4: Economic factors in education and training and liaison between schools, colleges and industry

Chairman: Mr. E. S. M. Chadwick
Rapporteur: Mr. J. V. Oates

Background. Growing cost of all education and training. The share borne by industry, including wages and salaries of trainees. Is liaison adequate ? If not, how should it be improved ? Fluctuations in recruitment. Mobility of trained men.

The Education Act 1962 and subsequent Award Regulations have clarified the statutory position regarding fees and maintenance of students at degree level. In practice, however, the load on L.E.A.S and industry is proving heavy and increased numbers have counteracted any easement.

At levels below degree courses, L.E.A.S have discretion over maintenance awards in so far as their funds allow. Industry accepts that there will be a certain amount of loss of trained men, but there is a limit to the numbers whose training can be covered. The Industrial Training Bill will spread some of the load but will not provide, from the levy itself, massive funds for new schemes.

Broader education and training would produce greater flexibility and reduce retraining problems. Clear assessment of the needs and economic planning in their provision are essential.

Report. With the new pattern of State grants, there was no longer the same need for industrial scholarships, and it was for consideration whether the money should go to other uses. Industry's contribution towards costs for thick sandwich students could be considered part of the total sum spent by industry in this field and the total was considerable. Industrial scholarships had decreased with the increase in State grants, and should be considered as a general aid to technical education, since most companies allowed the student so assisted complete freedom in his choice of employment after training. There was a case for retaining the scholarship in cases where the means test still reduced State grants, as in areas where the pattern of grants was not as generous as in England, e.g. Channel Islands and the Isle of Man.

Provision of science laboratories, and equipment for Sixth forms, could profitably be reviewed, and the evidence submitted to the F.B.I. for appropriate action.

The cost of training a student apprentice was about £3,500, and the proposed Industrial Training Bill was unlikely to bring much relief to companies in this field. There was a national shortage of good sixth formers entering the engineering industry, and it was therefore proper to offer financial incentives to potential recruits. In this the State had a responsibility for maintaining the size and effectiveness of the training, particularly in times of economic difficulty for industrial companies. Otherwise the whole training scheme would be subject to undesirable fluctuation.

On the question of liaison, attention was directed to the school leavers, of eighteen or nineteen, without sufficient 'A' levels to secure university entrance or admission to a C.A.T. He was unlikely to become a craftsman, and so there were no union restrictions on age or on completion of studies or training beyond the age of twenty-one. A less academic syllabus might be formulated were it possible, at the age of sixteen, to assess accurately those who would not obtain the minimum 'A' levels. This could not however be predicted, and in many cases it would be improper to deny them a normal Sixth form education.

In this background, the closest liaison between schools and industry was essential, to provide a gradual awareness and knowledge of the problems affecting both. Economic factors for the student included the postponement of earning capacity, or at least a reduced salary at an age and in an environment where it was normal for full adult rates to be paid. Expenditure by the L.E.A. towards his further education was also involved.

The old sixteen year entry to industry, which produced high grade craftsmen and technicians, was no longer available, and increased recruitment was necessary at the age of eighteen to provide the technicians required.

Finally guidance was needed by boys coming into industry beyond travelling distance from their homes over selection of lodging, and pastoral care during the early months should be provided.

Syndicate 5: The needs of industry in the arts and sciences with particular reference to languages and mathematics

Chairman: Mr. E. R. L. Lewis
Rapporteur: Mr. J. S. McGavin

Background. The Arts man in industry as specialist (e.g. in languages), and as general administrator, or executive. The social scientist. The "two cultures". What kind of language training is best? The danger point in mathematics. Can a mathematics man be anything but a "boffin"?

Education and training must provide a broader foundation than the present specialisms allow. There is a need for more scientists, more technologists, more technicians, and more skilled men and their special knowledge will always be required. The growing complexity of industry and commerce, and the social political and economic conditions demand also an understanding of the influences outside this narrow field. The problems of international trade have emphasised the need for practical skills in languages, and the difficulties facing both the linguist and technologist inadequately equipped to cover both fields.

The Arts man lacks the maths necessary for even the broadest idea of the sciences, and his knowledge has no relation to the contemporary scene. The scientist is often accused of inability to express himself in his own language, and often has no command of other languages, or familiarity with the social sciences.

Report. While there was good understanding of the kind of qualifications and training needed on the technical side for boys from sixth form coming directly into industry, that for the boy from the non-science side was far from clear to the schools. Industry should therefore provide this information.

The employment such boys would be expected to fill, after initial experience, would be mainly in sales, buying, transport, accountancy, personnel, and, where technical aspects were not dominant, in production. The qualities looked for were those required for any responsible *job*, but in industry, in particular, where jobs were not normally defined, resourcefulness and initiative were important. As

responsibilities increased, less and less detailed guidance would be given.

Previous education would invariably have been conditioned by the requirements of universities and professional bodies, despite the fact that only about a third of the sixth forms would proceed to the University. On the other hand study of economics, geography, physics, language or maths at school, does not necessarily produce economists, geographers, physicists, linguists or mathematicians. The course of study should be regarded as providing the necessary educational background for later entry into industry.

Competence in at least one foreign language should be an essential part of this educational background, not because speaking languages was a job, but as part of a general equipment. The requirement for professional linguists in industry was comparatively small. The developments towards introducing a foreign language at the age of nine or ten, and the applied language approach, would open the way to a greater fluency and use.

The new and revolutionary methods being tried in teaching maths to young children were welcomed, and should make it easier for all sixth formers to have achieved 'O' level maths, though there could be no rigid insistence over this. It was, however, desirable that the non-scientists should be given an appreciation of mathematics as a tool, and taught not to be afraid of it. A limiting factor was the shortage of maths teachers. It was suggested that chartered accountancy could provide a good commercial training for entry to industry.

There was room for improvement in the information available to schools on the opportunities in industry for boys from the arts side, and a clearer idea of how the Sixth former would be trained in industry to ensure the best use of his abilities.

Syndicate 6: Alternative means of selection for further education and training

Chairman: Mr. J. Grange Moore
Rapporteur: Mr. D. G. Stradling

Background. Selection versus allocation. Tests, interviews, probation. Danger of aiming too high. Present qualities versus potential. Specialisation and over-specialisation. Opportunities for training in industry. Firms which train for others.

Facilities for further education and training are increasing rapidly and schemes for sandwich courses, block and day release, and evening studies are attracting more students every year. To be fully effective, however, facilities must match the needs of individual trainees and the employments to which they relate, and it will be a long time before individual wishes can completely decide what course should be followed.

Selection is therefore involved, and evaluation and assessment are prior essentials. These demand a realistic examination of knowledge, skill and qualities required for particular employments and the numbers involved. They also demand a measure of potential and attainment. For both to coincide, education and industry must be in closest liaison.

Report. Selection at school was determined by university entry requirements which made competitive examinations inevitable. This led to a streaming on the Arts and Science sides, though there was no complete dichotomy. The greater difficulty lay in advising a boy on the appropriate level at which he should aim. Those who deserved to get to the University generally got there and it was not accepted that there was a large unsatisfied demand of boys of the necessary calibre. There was equally no shortage of boys of all-round ability.

Selection within industry was often based on intensive procedures involving assessment of previous achievement, extended interview techniques, and group selection over two or three days, coupled with intelligency and aptitude tests. Great importance was placed upon headmasters reports, and their co-operation and the trouble taken over them was much appreciated. The reliability of some of the test scores had been confirmed by first class achievement in the Diploma of Technology.

Training combined Technical College study and practice within the firms. The better boys took the Diploma, most of them in Engineering, and though it was early to assess its final value, experience so far showed it in a very favourable light. A good Diploma of Technology was better than a poor degree.

For those who did not qualify for Diploma of Technology courses, the teaching at Technical Colleges was unfortunately often indifferent and uninspired, and failed to stretch the students' abilities. Block release was growing as an alternative to day-release, and for O.N.D. and H.N.D. full-time courses were in the end better. Study in college and practical training within the firm could be more closely related, though there were a number of difficulties over complete integration. Over-narrow experience was to be avoided, and, during the period of training, introduction to a number of different departments should be provided for.

On the possibility of changing objectives as inclinations and abilities developed, the later entry at 18 created some difficulties but, if the training programme was flexible, transfers should be possible. It was certainly possible to proceed from a National Certificate Course to a Diploma of Technology. Many large firms employed graduates in engineering. It was more difficult and required more attention to train the Arts graduates who had a trained mind but no saleable commodity.

Discussion of these three Reports

The selective procedures used by the larger industries resulted in a firm contract of five years' guaranteed remuneration for one out of about 200 interviewed for each post, and the scholarship offered to some was worth some £2,000 to £2,500. The interview took 40 to 60 minutes. This was followed by a day at the firm, and three or four separate interviews with the Education and Personnel Officers and the Head of the Department concerned. The Headmaster's Report was considered and one or two tests given to the candidate. The programme was assisted by other apprentices who looked after him. All this used previously to be carried out in school holiday periods. With the Central Admissions procedure for universities it now had to be carried out in term time.

Industrial scholarships were not unanimously opposed by Headmasters, particularly in view of the means test effect on awards, and the increased cost of university education. A review would be wel-

comed, provided this did not presuppose their cessation. On the other hand, any spare funds could profitably be directed towards language laboratories for the schools.

The methods being adopted in maths teaching were not new, and changes had been going on for a long time. A new report would however soon be published, pressing for a change in the G.C.E. 'O' and 'A' level.

There was concern that, although large firms had enlightened training schemes, a large number of boys would be going to the small firms, who had either vague or non-existent schemes. On the other hand training schemes were required by the very size of some firms, and it was true to say that some small firms gave as good if not better training than big ones. Without some plan of succession and opportunities for advancement, there was an inevitable loss of trainees. In this, small firms gave a better overall picture. The new Industrial Training Bill, expected in the autumn and promised in the White Paper of December, 1962, would spread the load and cover all firms with regard to both cost and organisation of training, and ensure improvement where required.

Industrial scholarships did not constitute the only assistance given by industry. Schools were assisted both by cash and in kind when situated near large industries. The less fortunate were those in isolated and rural areas.

Recruiting to industry was for employment in industry and not for a particular job. All procedures followed from this. There might be a variety of qualifications, but in the end it was results that counted. What was important was that the choice of career should be the right one.

SESSION IV: Chairman, Mr. F. H. Perkins, O.B.E.

Brains Trust

Members : Mr. A. N. Gilkes, *Director, P.S.A.B.*
Mr. K. B. Webb, *Headmaster Luton Grammar School*
Mr. R. G. Beldam, *Director, Beldam Asbestos Ltd.*
Mr. J. O. Knowles, *Director, Metal Industries Ltd.*

The Chairman introduced the Brains Trust.

He himself had been in a position to watch the technical change and growth which had taken place in the space of a generation. It was his belief and that in I.C.I. that there had been more development and change in this period that in the whole of the previous life of the Company. It was indeed fantastic and almost frightening that now there was a plant costing between £3½ and 4 million operated by four process workers. This was indicative of the rate of change which faced us in the 20 or 30 years ahead.

He did not see this resulting in a conglomeration of very large units but a growing importance of small firms and of specialisation perhaps at reduced cost. This was of importance to sixth formers coming directly into industry.

He then called for the first question to the team.

Would the decimal system make life easier ?

Mr. Gilkes said that he would regret it but was sure that it would have to come, and to be efficient we should accept it.

Mr. Knowles said that, in the background of export to various countries and the international movement towards decimalisation in currency and measure, this was inevitable. Even the U.S.A., with only 4 to 5 per cent of its output devoted to export, was now having to look at this change.

Mr. Webb outlined the advantages of the duodecimal system in that it permitted the use of the fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$ and $\frac{1}{6}$ whereas the decimal systems provided only $\frac{1}{2}$ and $\frac{1}{5}$.

Mr. Beldam said that he hoped it would be brought in quickly. The longer the change was delayed the more expensive it would become, particularly to the large firms. His own was growing all the time.

From the conference members came the comment that there were at least four different tons and both a decimal inch and a standard inch.

Residence was considered important in universities but was there not a case for non-residential universities to overcome the present shortage of places ?

Mr. Webb agreed that there was a need for an increase of places and that the basis of the university lay mainly in the teaching staff and their relationship with the students. The building of more sleeping accommodation for students in the face of a national housing need was also worrying. On the other hand there was some doubt whether there was a large untapped reservoir of talent not reaching universities or appropriate colleges.

Mr. Gilkes accepted the suggestion only as a temporary expedient and to provide more quickly greater opportunity for advanced education. He would strongly regret such provision becoming the pattern for the future. The evening contacts between students provided the means of much of what was learnt. The Arts side would benefit more than the science side who had the C.A.T.S as well as the universities.

Mr. Knowles said that the university meant more than a course taken by a number of people. It should be a period during which men should mix, talk and work with other people. In engineering no one could work by himself, and everyone must meet people in all grades. In preparation for this there must be some period of meeting universally.

Mr. Beldam instanced the discussions that had gone on between conference members the previous evening, long after the formal sessions had finished. This breadth of interchange would not be provided by cutting off contacts at 10 o'clock.

In discussion a fourth term was suggested, provided the way of doing this was clearly set out. On the technical side there was a misapprehension that it would be easy. A further suggestion was that the economic difficulty might be solved if new universities were

located at seaside towns where the accommodation could be filled during vacations. A university course which compelled residence at home would be little better than a correspondence course.

The point was made that day universities could lead to the location of universities in conurbations, one university serving one town. This would destroy the idea of a university. Many students now coming to the universities needed the very experience which would be denied them. The doubt was again expressed whether there was an untapped reservoir of university talent. If there were, then administrative objections to full provision must be swept aside, but it was difficult to obtain firm information.

There was a danger at present of universities becoming increasingly vocational, with a few really scholarly students content to live on a student pittance because of their enthusiasm for learning. This was reflected in the behaviour pattern which was beginning to dominate universities to their detriment.

Sixth formers do not regard themselves as a body. Do not those who do not go to university feel that they have failed in their achievement ?

Mr. Knowles said that his companies generally employed from 500 to 1,500 people, and had a certain amount of autonomy within the larger group to which they belonged. They wanted men with a diploma of technology rather than a degree in this size of company, and their problem was to recruit the boy of 16 to 18, who would become a technician or a technologist, rather than the man of 21 or 22 who was extremely ignorant of everything. *Mr. Webb* said that the technician would come from the Fifth Form rather than the Sixth Form.

Mr. Gilkes said that this question involved also the problem of the pure scientist, which had not been tackled and required deep investigation. There was a prejudice against applied science. Schoolmasters were unconsciously responsible for this and nad been inflexible in their approach to the problem. The P.S.A.B. could help the grammar schools to develop a similar service to that provided by his bureau for the public schools. Some 1,000 boys a year went on works courses, and the administration of this occupied about half the time of one of his staff. In January a conference was being held to give careers masters information on what happens to the 25-35 year old group in industry.

Mr. Beldam said that firms of up to 500 employees needed men with brains, who could do a variety of jobs. This image needed to be built up in the schools.

In discussion it was stated that considerable improvement was required in providing the opportunity for schools to see what industry had to offer. The Ministry of Labour and Youth Employment Executive service varied greatly from area to area and arranged few works courses. Information on how firms were organised and how they developed would be of great value.

The Science Masters' Association meeting at the Manchester College of Technology, where the whole tenor had been directed to the place of the sixth former in industry, was quoted. Schools had developed a close contact with industry, but the science masters needed help in putting ideas across and in getting to grips with industry.

Short works courses for schools began eight years ago, but there was now a need for four times the number to meet the demand. In large industrial areas they could be arranged within easy travelling distance. In others, a one week course should not be difficult to arrange, and would be less expensive than those organised by the P.S.A.B. It required enterprise on the part of headmasters, and the assistance of regional bodies such as the F.B.I. Regional Councils.

British industry was not one homogeneous whole. Liaison between school and industry must be developed on a regional and local basis, but rural areas were difficult, and in Scotland the problem had not yet been solved.

Schools could more often ask industrialists to speak at Speech Days, and also invite them to come to answer questions, rather than to provide short visits to factories, which were of limited value. It would be no bad thing to re-introduce a "civics" syllabus including something of industry. It was noted that, when asked, industry had readily accepted requests.

On the question of pure or applied science, it was stated that many boys taking pure science, except in biology, did think in terms of industry. Geology and metallurgy, for example, did not prepare for glass technology as well as pure science did. There was an enormous variety of problems in industry, and in many a good background of science was valuable as a basis for later learning of the technology. It was, on the other hand, important to remember that the young man coming into industry would not necessarily

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practice specialist engineering or any other technology, and needed most of all to be competent as a businessman. It would be wrong to think that a specialist would only practice his speciality. His progress would depend upon his general abilities within the environment.

In the training for management what are the technological and sociological developments referred to ?

Mr. Knowles said that in this technical age management must understand the experts whatever the initial training, and management communication must use increasingly technical media in many directions, e.g. computers. The techniques of management required refresher courses to bring management up-to-date in new tools, and a wide knowledge and understanding of the developing technologies.

Mr. Webb said that the sociological influences included the increased power of Trade Unions without reduction of responsibility. There was a place for the men trained in the classics and in history, to provide a bridge of understanding in human relations and to break down the "we" and "they" attitude and to harmonise relationships. Improvement in manager/worker relationship was the field to which the arts man with a measure of technical "know-how" could usefully contribute.

Mr. Beldam emphasised the importance of a capacity to weld a team together. The Trade Unions did a good job despite their poor image. They were composed of ordinary people who produced reasonable answers. There was a place for the arts man in export and selling, and not all of this was devoted towards selling highly technical equipment to Russia or Japan.

Mr. Gilkes said that on the sociological side industry looked after its members very much better than it did forty years ago. Headmasters would however like to feel that the boys who left them with proved powers of leadership were well looked after in industry, and were under tutor supervision and given work that was stimulating. Supervision should give attention to the whole person.

In discussion it was noted that professional institutions were paying particular attention to this. Better communication in industry was being developed both upwards and downwards from management, through various short courses including particularly those for foremen and supervisors. University social study courses were also

a help to management. It was the human relationships in industry which made it run smoothly. There were examples of admirable guidance and help during the first twelve months for those entering with the Diploma of Technology in, for example, mechanical engineering.

There were three main problems to be analysed in this context: motivation, management of ideas and of men, community relations. Regarding motivation, work could be considered as a punishment, which was paid for by recompence in pay. But men went on strike, not only for money but also for status. This applied to both arts men and scientists, and applied equally in the professional field, and in the impulse which made men want to do research. Management of ideas and of men, as opposed to materials, as instanced in design etc., demanded the nurture of men of ideas, and the provision for them of administrative problems and the necessary responsibility and reward. The relationship of industry to the community outside the factory called for a new set of values. Outside the works a man might be the mayor, inside he might be the chauffeur. The position of management, in relation to the community, was made more difficult by the intensive pressure which prevented many from having the time to give to local or higher government, and by the nature of their position which could make such participation an embarrassment.

Joint F.B.I./Schools Standing Committee

It would be of very great value if a standing joint committee of Headmasters and the F.B.I. could be set up, to meet say twice a year, to consider what had been put forward at the Conference and to undertake some fundamental thinking. Could this be arranged ?

The panel supported this proposal fully and the Conference gave unanimous approval.

SESSION V: Chairman, Dr. J. A. Pope

Closing Address

Sir Reginald Verdon-Smith

LAST NOVEMBER Sir Norman Kipping invited me to come to this Conference with the mandate that I was to "gather up the threads in the closing address". It was with more temerity than good sense that I agreed. As usual on such occasions, a task which seemed tolerably manageable at a distance of seven or eight months has, in the last forty-eight hours, assumed alarming proportions.

However, I must now try to tell you what I think you ought to have thought, or, in other words, do justice to the very wide range of wisdom and expertise which has been displayed by speakers, syndicates and brains trusts alike. In so doing I will seek to bring out what seem to me to be the new points — plus the contemporary variations on old points — which may possibly guide schools and industry in the cultivation of mutual understanding which has been so much a feature of the Conference.

Forgive me if my commentary is rather scrappy: the subjects covered by the six syndicates have been admirably digested by the rapporteurs but each one deserves far more than the passing references I can give them.

First a word about the background of the Conference. It was I believe prompted by the Headmasters this time: for their initiative, as well as for their participation, we in industry must be most grateful. Quite a few of us will remember the first of these occasions — initiated by the F.B.I. and held at Ashorne Hill in November, 1955. For purposes of perspective it is worth reflecting for a moment on some of the changes that have come about during the interval of nearly eight years, and also on some of the points where little or no change can be seen. In 1955, although ten years had passed since the war ended, the prime object of the Conference was for Headmasters and industry to meet each other — in many cases almost for the first time — and we spent quite a lot of time defining our respective points of view. Subjects in the agenda included "The Task of Modern Industry", "The Aims of the Schools and how

they are achieved", and so on. My impression is that the present Conference, although covering much the same field, has been very much more sophisticated — a reflection I believe of the fact that since 1955 we really have progressed a long way in mutual understanding; in consequence we have been able to concern ourselves much more with defining particular problems and pointing the way to practical measures — and urged on by the President and the Chairman to be forthright we have also felt it less necessary to be cautiously polite.

In industry — and despite what has been said to the contrary the F.B.I. must speak for industry collectively however varied its pattern and performance — during these eight years we have been going through a phase of rapid technical change and many sections of industry have increasingly come under the influence of scientific development previously familiar in comparatively few places — for example the application of statistical methods and computer techniques to forecasting and control in businesses very different in character from those with which Mr. Perkins and myself were concerned. At the same time the rapid growth of larger units, necessary to take full advantage of technical development, has added urgency to the development of rational techniques of management and has increasingly professionalised the ranks of higher management. The pressure of competition, especially in overseas markets, has added economic realism to company policies, and in many parts of industry pressure on profit margins has made itself felt with uncomfortable but invigorating consequences. By and large I would regard the record of industry in these eight years as constructive, realistic and encouraging, and the place of industry in the economy as far better understood both by Government and the public generally. Mr. Dancy's quotation from Mr. Crosland's book is in fact a genuine acknowledgment of quite a general state of affairs, and for this the F.B.I. can properly take a great deal of credit.

In education, too, much has been happening — more perhaps than in any similar length of time. In terms of physical resources many more school places have been provided; very large extensions have been made to Universities; the establishment of the new Universities is gathering momentum; Colleges of Advanced Technology are going ahead faster than most people thought possible, and the provision of science buildings and equipment by the Industrial Fund has had a far reaching effect on the ratio of scientists in

sixth forms. In terms of ideas, we have had successive Government White Papers which have marked a revolution in official thought about technical education. The Crowther Report has given the nation a broad perspective view of secondary education generally, and there is a genuine readiness among schoolmasters to question inherited practices and to change them if they no longer meet contemporary needs. I have in mind, for example, the willing part which a group of schools is playing in the University of Southampton School Mathematics project. And in the relations between schools and employers — all employers, not just industry — the Careers Master has blossomed into a really significant contributor to every boy's opportunity in life.

On the other hand, both industry and education have to acknowledge some major disappointments. In the case of industry, some are due to the simple fact that there are also very able people in other countries who have been moving ahead at least as fast as ourselves; some are due to the change in our international status; some due to hesitations in national economic policy. I suppose more disappointing than anything has been our lack of real success in industrial relations. This is not the place to argue the reasons but it is not for lack of trying that we are still in trouble. Personally I would like to see some of these alpha boys, of whom everyone wants his fair share, coaxed into the administration of the Trade Union movement by an enlightened application of any Industrial Scholarships which do not pass the test of the careful look recommended by Syndicate 3.

As for the schools — you, too, have had some disappointments. It was one thing to provide the laboratories — it is another to find the physicists, chemists, and mathematicians to use them to the best advantage.

As for the burdens imposed by University entrance, you have been grumbling about them for years but you have not met with much success in shifting the burden. I hope that the applause accorded to Mr. Runge's attack on specialisation run wild means that, inspired by his challenge, a fresh attack will be launched and that, converting Dr. Pope's advice to your own use, you will ask the Dons "difficult questions about easy principles and not accept easy answers to your difficult questions".

Mr. Dancy was very frank in saying that very few schools had really paid much attention to the development of the creative and

imaginative qualities instead of the analytical, and there is a general feeling abroad that we still know very little about education for the technologically-based society we have developed.

Judging from the report of Syndicate 5, you have so far made far too little progress with the development of language teaching: and as for physics, both Dr. Pope and others had some hard things to say about the Science Masters Association. Although Mr. Walker repudiated your criticisms, I was not wholly persuaded that all is absolutely well in this hard pressed section of the teaching profession.

So it is against this background, compounded of progress and the lack of it, that I think we should try to measure the work of this Conference. May I pick out one or two highlights ?

If you can remember as far back as Thursday evening after dinner, you will recall those two excellently provocative opening addresses by Dr. Pope and Mr. Dancy. Both accepted without question the cardinal importance for this country of having efficient and successful productive industry, and of attracting into it ability at all levels of management. Dr. Pope saw this as a task involving a partnership between schools and industry. Mr. Dancy did not disagree, but reminded us that industry could not expect an unreasonable proportion of able boys — a point with which no one would quarrel until you come to detailed definition of reasonable proportions, and assess the merits of some of the rival claimants.

Both speakers then discussed the so-called image of industry and the ignorance or misapprehension said to be prevailing in schools. Personally I found Dr. Pope's self-flagellation almost masochistic: I hope he did not mean us to take him too seriously. For myself I believe far more boys than ever before have some remarkably sensible ideas about those parts of industry which happen to be within their own experience, but of course their range of contacts will be limited and will reflect vividly their particular experience good or bad. Ask yourself how you would have answered the Oxford questionnaire when you were in the sixth form years ago, and do not expect old heads on young shoulders and comprehensive experience too early in life. The best answer to the image problem lies mostly in local contacts between schools and the firms they know or ought to know — visits, vacation courses, occasional conferences between groups of Headmasters and career masters and groups from local industry — the sort of thing that Mr. Gilkes and the Public Schools Appointments Bureau will be doing at their September conference

in Bristol. Just like advertising a branded product, it has to be a continuous operation. Exactly how far these exchanges can be carried is not easy to judge. I would agree with Mr. Dancy that it is hardly practicable for the staff of schools to "spend time in industry learning what it is all about", but I am sure more can be done — and not only with the careers masters but with form masters, housemasters and others — by occasional visits, discussions, open days, and the like. I am myself most impressed with the extent of vacation courses mentioned by Mr. Gilkes — surely a very effective technique to be more widely copied.

In passing may I add this: many comments during the Conference coming from the industrial side have demonstrated a real lack of knowledge in industry about modern teaching practice, curricula, diversified activities and so on. Too many of us base our opinions on our own schooldays but as one headmaster claimed, there have been more changes in the school in the last fifteen years than in the previous 100, and some of us must recognise we are getting out of date.

So it looks as though there is a two-way traffic to be arranged for in the better presentation of our respective images to each other.

On the subject of misleading influences, Mr. Dancy made a point which was new to me. He referred to the "growing trickle of men who are coming into teaching nowadays more or less disillusioned with industry" whose influence could be damaging. No doubt there are isolated cases, as there have been in the past, but I wonder what evidence there is that the trickle is *growing*. There were audible sounds of approval when he made this comment — I think we ought to have some reliable evidence before accepting it. (Mr. Walker made it clear that science masters generally have quite a different opinion).

Next may I come to Mr. Dancy's Marlborough questionnaire. You will remember that he was careful to say Marlborough might not be typical — we will not go into that question now: what he did not emphasize was the heavily loaded nature of some of the questions, for example

" Which of the following pairs of contradictory statements seem to you nearer the truth ? "

(a) People in industry generally have high ideals e.g. of service to the community, looking after their workers etc.

(b) People in industry are mainly interested in money.

This seems to me to be an unfair over-simplification, unfair both to the boys and to industry.

What people in industry ? What industries ? Does not Mr. Dancy really mean business activities of all sorts ? Who are these hard faced men of whom he spoke ?

I know that questionnaires have become a popular form of statistical research wherever you have a captive statistical universe, but I rather object to questions which are designed to elicit a sort of general moral condemnation which is not necessarily meaningful. All sorts of people are interested in their salaries and the standard of living of their families — why not ? Perhaps I may be permitted to suggest that any sixth form schoolboy invited to answer questions about the activities of the National Union of Teachers could be forgiven for thinking salaries are thought to be pretty important in the teaching profession. It is surely not incompatible to be interested in money and yet to have very high standards of service to the community — and I think the deliberate juxtaposition of these questions was less than fair.

Then there was Mr. Dancy's story of the industrialist who said "do not encourage that boy to go into industry: he has got too strong a sense of service". Well — what a thoroughly stupid remark: we were told not to repeat it but I see it has not gone unnoticed in this morning's press. I hope you will treat it with the contempt it deserves. It is not that there is not a vestige of truth in it — there are selfish men in most walks of life — but it is so absurdly sweeping as to be worthless. I was delighted when Mr. Runge sprang to his feet to demolish a similar criticism yesterday morning. Even so it would be foolish to ignore the substance behind the point and it is very much in our interest to eradicate it so far as we can.

I think we ought next to observe that *both* opening speakers had some pertinent comments on the Oxford Report's finding that sixth form boys favour pure science in contrast to technology. Broadly speaking the Oxford Report seems to have been accepted as reliable, but one interesting point was that the Marlborough questionnaire did not agree with the Oxford report: and Mr. Dancy said that this might be because Marlborough had introduced an Engineering Upper Sixth. I would like someone to pursue the whole question of the impact of an engineering sixth on the sixth generally, e.g. What categories of boys go into an engineering sixth and why ? As Mr. Dancy said in another connexion, this may be a two-edged sword—

I hope not, but I was rather alarmed by a subsequent reference to a technical sixth requiring a sort of sub-standard 'A' level. This might well prove a disaster for those who are seeking to attract to industry high fliers as well as second raters.

Dr. Pope very rightly underlined the serious consequences for the country if the Oxford Report is correct, and also made some wise observations on the relative merit of *careers* in technology compared with those in scientific research, greatly to the advantage of technology. I am sure that there is a great deal in his view — it is one which should be further developed and illustrated with good examples. He himself rattled off a series of fascinating illustrations of basic principles of applied physics and of engineering: what I think we also want, in that book which Mr. Dancy wishes us to produce about life and work in industry, is some good descriptive material — really up to date — covering the wide range of applications of technology and showing just how interesting and worthwhile such jobs can be.

In connexion with technology in industry, another point to be underlined — mentioned by Dr. Pope and discussed in several of the syndicates — is the place of the Colleges of Advanced Technology. Dr. Pope emphasised the progress they are making: others said it is early days to judge them. Someone else made the point that they vary in quality very much at present both by institution and by faculty. This is inevitable in a phase of such rapid development but you can be quite sure that, following the Robbins Committee report, Colleges of Advanced Technology will inevitably become an increasingly vital part of the higher education system of the country and that schools and industry alike will be as much concerned with them as with the Universities. In such a period of change one must try to keep closely in touch with developments and not base one's opinions on obsolescent experience.

I said earlier that I thought the speakers had been admirably provocative: in this respect I am sorry, Mr. Chairman, that on your own admission you spared the President from questions. He was splendidly provocative, but his challenge had to go unanswered. This greatly disappointed me because I wanted to hear the argument about excessive specialisation contested by those with contemporary experience. Many of us in industry have undoubtedly suffered — either by limitations in our own education or vicariously in that of our technical colleagues — from this notorious feature of English

education, and we shall take a lot of persuading that the schools have nowadays changed all that, notwithstanding the impressive disclaimer put by the High Master of Manchester Grammar School. Those who feel that all is well should I think re-read Crowther Volume 1, Chapter 25, pages 282 and 283, bearing in mind that Mr. Mason's predecessor at Manchester was a member of the Committee.

This brings me to another point which obviously needs further examination — there is evident concern as to whether both schools and industry are doing their best for boys who do not get a University place — or perhaps more particularly for those who stay on beyond 16 but never have much hope of a University place. Syndicate discussion brought out the anxiety of parents on this score and the tendency to go for safe dull occupations — mostly in business rather than industry. I think it would not be unreasonable to say that as long as there is a sufficiency of humdrum jobs it is surely just as well to steer boys towards them, but what is important is to do as the President urged and, by giving them during their school life as broad a range of interests as possible, to illuminate and stimulate their general attitude to life. In fact, of course, the degree to which schools have done this in extra curricular activities is one of the really dramatic changes in school life during our generation, but one is less certain about the curriculum itself.

On occasions like this much is said about how industry ought to second staff to schools, and industrial members are made to look rather apologetic when they start saying it cannot be done. As Mr. Grange Moore said, we really do a tremendous lot of this for the Technical Colleges in terms of evening classes and voluntary participation by our staff, but we are not organised to provide sabbatical terms and we try not to carry passengers. If we have got to spare staff for educational purposes the first duty is to train them themselves — in management development and in other specialised ways — for it is certain beyond doubt that the educational process must continue for each of us throughout our working lives.

But having said this I recognise that, if the spirit of mutual interchange of experience is to be realised in practice, the idea discussed (in Syndicate 1, I think) of fairly short industrial attachments to schools does perhaps deserve experimentation and I hope this could be attempted — not on the basis of a part time teaching appointment but as a special assignment.

Turning to specific points made in Syndicate reports and not already mentioned may I comment as follows:

Syndicate 1 produced a very succinct summary of qualities required for management which I shall adopt for future reference. In general terms their comments would have very wide acceptance but there is no doubt that management development and the education of managers is a most thorny subject on which there is not yet an established corpus of authoritative opinion. Industry itself is far from united: the best that can be said of many firms' attitude is as I think *The Times* remarked "there is a dawning appreciation that productivity may depend more on quality of organisation than on labour's contribution". The F.B.I. publication to be issued in a day or two is a most able and exhaustive statement on the subject and should be among the recommended reading of all who are interested. I hope you will take a good look at it.

Two Syndicates referred to the non-scientist non-graduate 18-year old entry and both tried to illustrate the sort of openings they could look forward to. This is an important field and it deserves a more comprehensive and considered study. Either the F.B.I. or B.A.C.I.E. could do some effective work here and an explanatory booklet would undoubtedly be a useful publication.

Several Syndicates were worried about the status of technology and whether technological studies are a lower form of life. It would indeed be disastrous to the whole cause of the Conference if schoolmasters established in their own minds at this stage a sort of order of precedence between University science, University technology, and Colleges of Advanced Technology. Terminology has frequently bedevilled education and I am clear that much needs to be done to present the claims of technology, on which Dr. Pope spoke so eloquently, in the proper light. From what was said it sounds as though what Manchester — and Bolton — think today, other places further south will not think until tomorrow — unless we do something about it.

For myself I have great sympathy with those who wish to defer specialised technological training as long as possible in favour of more liberal studies earlier but I am not sure if this is practicable: we have for the present, and until places in Universities and Colleges of Advanced Technology exceed demand, to tolerate the paradox that acquisition of information necessary for entry qualifications often has to have first claim in sixth forms and that liberal studies

later on may even be more acceptable to the boy himself. Certainly let us not darken counsel by decrying liberal arts in Technical Colleges.

Turning away from technology, several Syndicates touched on the use of language laboratories and their possible introduction in schools. There is widespread evidence of their usefulness but the work going on in this country is a long way behind that elsewhere. The best form of equipment, its intelligent use, the cost of providing it — all these require careful study and advice and I understand that the F.B.I. has a programme of work in this field of which we shall hear more shortly.

The report of Syndicate 6 interested me both as demonstrating the extent to which many companies have developed careful and thorough selection procedures and also as underlining the importance attached to headmasters' reports. In asking for headmasters' reports we in industry should not forget the very considerable burden of work entailed by these, not least because clerical help in schools is limited by the cost. One hears stories of the annoyance often caused by inconsiderate use of reports and of discourteous forms of request for them: it is up to all of us concerned to see that the practice of our own companies is beyond reproach.

The same Syndicate's observations on various features of technical training covered much important ground in a few sentences. Strictures about the Technical Colleges are of course familiar: for decades they have been the poor relations of education, but I believe it is fair to say that the wind of change has been blowing crisply there and within the limits of staff available real improvements are being made — often with great help from industry — and here as elsewhere we should be open-minded and ready to modify old prejudices by keeping close to new developments.

As for practical training within industry, here again there are big changes in progress — and not before it is time. I would not myself be quite so sanguine about the small firms: at their best they do undoubtedly have practical disincentives, and for many of them nothing less than the Government's Industrial Training Act will force them to a wider — and more expensive — sense of responsibility. This will be a long slow process.

I want to conclude by asking a question very like that which Mr. Pedley put to the Conference at the end of the Brains Trust — Where does all this accumulation of informed analysis, all this concentrated

attention to our subject lead us ? Shall we just go away after another interesting and friendly meeting of a comparatively small group, or can we aim at a more purposeful conclusion ?

One thing is clear: we must not let another seven or eight years go by before we combine to look at these topics again. It is not for me to commit the F.B.I. to specific measures, but from discussions with quite a few of those present I am clear that there is a wish for regular and sustained attention to our mutual problems. Additional Committees are not popular with busy people, but there is clearly a case for a joint standing group representative of both parties and meeting fairly regularly — say twice a year — if the partnership is to achieve results. I hope something of this sort can be arranged, and that their first task will be to go through the report of this Conference and select for action as many as possible of the subjects we have mentioned which need pursuing further. My impression is that a continuing joint effort on these lines would have widespread support both in the schools and in industry, and that in this way we could do much to influence the development of national policy.

In suggesting positive action on these lines I have in mind the opening paragraph of the Crowther Report. May I read it to you as my conclusion:

"Looked at from where we are now, the prospect may seem daunting — there is so much to be done. Looked at, however, in the light of the distance that we as a nation have come in the last hundred years, the prospect is surely encouraging. Each step forward, which seemed so difficult at the time and to many so intolerably expensive, has quickly been found to have justified itself and indeed to have paid for itself. We could not as a nation enjoy the standard of living we have today on the education we gave our children a hundred or even fifty years ago. If we are to build a higher standard of living — and, what is more important, if we are to have higher standards in life — we shall need a firmer educational base than we have today. Materially and morally, we are compelled to go forward."

The Chairman, in thanking Sir Reginald, said that the spontaneous applause said more than he could express in words in appreciation of a masterly summary making a splendid finish to a Conference which could be regarded as a successful one.

The suggestion of Mr. Pedley would be most carefully considered and he was confident that something constructive would come of it.

Appreciation was due to the organising committee of the Conference under the chairmanship of Mr. F. H. Perkins and to the secretaries and organisers who had worked behind the scenes over the last two days.

Mr. D. R. Wigram, Chairman of the Headmasters' Conference, expressed the thanks of all members of the Conference first to the F.B.I. for their enterprise in allowing the Conference to take place, secondly for the excellence of the Chairmanship of meetings and the sparkle of the speeches, the delightful speech of the President and the most brilliant and competent summing-up just heard which would be long remembered, and thirdly to those who had made possible the personal contacts which had been so happy a feature of this Conference and which many would think had been one of its most valuable features. None of this would have been possible without the organisers and he would mention the Conference Secretary and Conference Organiser, to whom the work of making the conference run so smoothly and delightfully for all was very much due.

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During the National Conference on Social Welfare in Chicago, May 29 through June 3, 1966, the National Association for Retarded Children and the National Council for Homemaker Services sponsored a meeting on organizing and conducting homemaker services for families with a mentally retarded member. Papers included in the document are; (1) "Extending and Improving Homemaker Services to Families with a Mentally Retarded Member" by Katherine Brownell Oettinger, (2) "The Homemaker Service in a Voluntary Agency for Families with Retarded Children" by Rose Brodsky, and (3) "Homemaker Service in a Public Agency for Families with a Retarded Member" by Wallace H. Kuralt. (JK)

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Mrs. Gilbert W. Humphrey, Ohio
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Edward Maguire, Jr., N. Y.
Mrs. Geneva Mathiasen, N. Y.
Mrs. Alan R. Morse, Mass.
Miss Elisabeth C. Phillips, N. Y.
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Mrs. Elizabeth G. Watkins, Ill.
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Mrs. George L. West, Pa.
Laurence M. Williams, La.
Mrs. John G. Winchester, N. Y.
Dr. Ellen Winston, D. C.
Mrs. Asher Yaguda, N. J.

Executive Director:

Mrs. Betty H. Andersen

INTRODUCTION

The three papers which follow were given during the National Conference on Social Welfare, Chicago, Illinois, May 29th through June 3rd, 1966.

The papers stemmed from the interest of the National Association for Retarded Children and the National Council for Homemaker Services which were joint sponsors of a June 2nd meeting on organizing and conducting homemaker services for families with a mentally retarded member.

The first paper, by Mrs. Katherine Brownell Oettinger, Chief, Children's Bureau, Welfare Administration, Department of Health, Education, and Welfare, is entitled "Extending and Improving Homemaker Services to Families with a Mentally Retarded Member."

The second, given by Mrs. Rose Brodsky, Executive Director of the Association for Homemaker Services, New York City, is concerned with "The Role of a Voluntary Agency in Providing Homemaker Services to Families with a Mentally Retarded Member."

The third, prepared by Mr. Wallace H. Kuralt, Director, Mecklenburg County, North Carolina Department of Public Welfare, discussed "A Public Welfare Program for Providing Homemaker Services to families with a Mentally Retarded Member."

PRESENT TRENDS AND FUTURE HOPES

Mrs. Katherine Brownell Oettinger
Chief, Children's Bureau
Department of Health, Education, and
Welfare

There are few parallels to the rate of progress achieved in the span of a few years in both service and research for mentally retarded children.

The movement which began with the parents of such children, now so strong and vocal through their local units and through the National Association for Retarded Children has been joined by other groups, of which the National Council for Homemaker Services is typical, whose own programs pay particular attention to the needs of the retarded.

This voluntary segment is joined by government, Federal, State and local. All are carrying out service programs for mentally retarded children.

This service union has been enriched further by the research to identify causes of mental retardation and to develop methods of preventing or ameliorating these conditions.

And, finally, the American people have become aware that mentally retarded children have the same needs and desires as others, and that they are entitled to have a part in community life, and to associate with others, thus giving richer meaning to their lives.

In the framework of this union of so many elements in common cause, I will delineate the services which the Children's Bureau is providing to the mentally retarded.

The program began after testimony before the House Appropriations Committee brought about an earmarking of $1 million in the 1957 fiscal year to expand maternal and child health services by establishing special projects for mentally retarded children.

Starting with demonstration projects utilizing the services of a clinic team, and spurred by increased Congressional appropriations, the Bureau's efforts to find cases early, evaluate lacks, and provide the help these children and their families need have led to a rapidly expanding program.

By the end of last year, for example, 142 clinics were serving 46,000 retarded children. Of these 97 serving some 30,000 children, were supported in whole or in part by Bureau funds.

On a par with the need of service programs for the retarded was the crucial need to train professional persons to work for the mentally retarded. The Bureau uses grants for fellowships, supports and participates in institutes, conferences and other short-term training sessions, gives consultation on course curriculum, arranges for clinical

experience in mental retardation clinics, and distributes information materials to professional workers.

At the present time, the Bureau is using funds made possible under the 1965 Amendments to the Social Security Act to train pediatricians, nurses, dentists, nutritionists, clinical psychologists, social workers, occupational therapists, physical therapists, speech and hearing therapists, cytogeneticist and biochemists, among others.

In our current appropriation request, the Congress is considering the sum of $4 million to help staff six university-affiliated mental retardation centers to be built this year. These centers will be the first authorized under P.L. 88-164 which will offer a range of services for the mentally retarded. They will demonstrate, as well, programs of specialized services for the diagnosis, treatment, education training and care of mentally retarded children, including those with physical handicaps. The centers will be resources for the training of physicians and other personnel needed for research, diagnosis, training or care.

Another example of the Bureau's emphasis on training, specifically in social work, is a recent tabulation which shows that now at least 27 child welfare-related mental retardation agencies provide field experiences to students who plan careers in mental retardation agencies.

In cooperation with the Child Welfare League of America and the NARC, the Children's Bureau also has helped support refresher courses for child welfare workers already engaged in mental retardation programs. Workshops planned particularly to meet the needs of directors of social services in State institutions for the retarded, in recent years have been held in connection with the annual conferences of the American Association on Mental Deficency. These refresher courses and workshops will continue to be a part of the Bureau's training efforts.

Of course, every step taken to prevent retardation gives new hope. The 1963 Maternal and Child Health and Mental Retardation Planning Amendments, so strongly supported by the late President Kennedy, opened new areas in reaching preventive goals.

Acting on the knowledge that premature birth increases twenty times the hazards of mental retardation, the Amendments authorized a program of maternity and infant care projects to provide health care to prospective mothers who would not receive this care because of low income or other reasons beyond their control.

Now some 51 maternity and infant care projects are underway, many in urban areas reaching large numbers. By the end of last year, some 75,000

pregnant women, most of high risk, had been benefitted by this program. As it expands, many more will receive supervision which should help enable them to deliver normal babies at full term.

Moreover, this program provides for hospital care of premature infan[t] - or babies born with other disadvantages. At the same time that it gives optimum postnatal care to the mother, it assures that if her baby needs special help, he will stay in the hospital until he can go home safely.

Adequate health care of a woman during pregnancy can help prevent retardation in her baby. Equally important is the opportunity to put all scientific discoveries to work as they may detect potential causes of mental retardation. Every State is now screening infants for phenylketonuria, an inborn error of metabolism responsible in the past for one percent of the population in State institutions for the mentally retarded. This program grew out of the field trials of an assay test supported by the Children's Bureau and covered more than 400,000 newborn babies in 29 States. The field trials proved that PKU occurs more frequently than thought -- once in every 10,000 births. The condition usually responds to dietary treatment. So hopefully similar screening to other inborn metabolic errors, when appropriate measures are found, will prevent retardation.

Efforts are being expanded to reach mentally retarded children with crippling conditions. One use of the funds made available to the Bureau under the 1963 Amendments provides to mentally retarded children in institutions orthopedic and other services which had not been available.

Also through the Bureau's crippled children's programs, some 14 projects have been approved including chromosome analysis and diagnosis of various conditions which may be genetic and result in mental retardation. These analyses can serve as a basis for counseling when parents seek advice on genetic questions.

It is here that the social worker has opportunity for application of casework services, not only in identifying some of the psycho-social problems that genetic disorders can bring but also to help the family solve its problems. Particularly, the social worker can offer help to each family member in alleviating the ego injury that discovery of a genetic disorder can bring.

These are examples of how the Bureau's efforts to approach the problems of mental retardation have sought to balance both health and social service needs. Mentally retarded children and their families need specialized social services which can be responsive to situa-

tions which if left untreated, could lead to family disintegration and the placement of children in institutions.

Today, every State public welfare program offers some social services for mentally retarded children. Conservatively, it is estimated that 37,200 mentally retarded children now receive services from public child welfare agencies and that, in addition, more than 5,500 are served by voluntary child welfare agencies.

The increasing pace of efforts to offer those supportive services to the retarded and their families is gratifying. They have tremendous meaning for family members and offer guidelines for the development of future programs.

Last month, I attended a luncheon sponsored by Retarded Infants Service, Inc., at which one such program was described. This project has real significance in expanding use of subprofessional staff, working with professional staff, to provide additional services to retarded children.

I was extremely interested at the successful outcome of this project, for it is my belief that the rate at which future hopes are realized may be determined by the degree to which use is made of subprofessional personnel in ways which advance goals and at the same time give them a sense of identity and contribution to a joint effort.

A great upsurge of interest has taken place both in public welfare programs and in social welfare programs under voluntary sponsorship to include mentally retarded children in day care programs. These are taking a variety of directions. Some projects operate entirely for mentally retarded children. Others serve both normal and retarded children. Also, there has been a lowering of the age range at which mentally retarded children are included in one or another form of day care service.

These programs improvise to include needed medical services without departing from what good day care should provide in the life of the child.

Much is being learned about the role the socio-recreative programming can play for both the normal and disadvantaged child. The 1962 report of the President's Panel on Mental Retardation stressed the need for "healthy, growth-promoting play" for the mentally retarded child.

But when socio-recreative programming is undertaken an important obligation is to insure that the social interaction planned is not with a group of children so far advanced mentally as to hinder achieving the set goal.

One of the greatest gaps which must command more attention, is the need of more knowledge about the retarded adolescent. Unfortunately, a shortage of services for them not only grows out of the inadequacies of basic generic services, but also stems from the tendency either to consider the needs of the retarded as secondary or not consider them at all. The Children's Bureau is intent upon combating exclusion of the retarded adolescent from existing services and at the same time hopes to stimulate new services which will help meet his needs.

The Bureau is supporting research at the Flower Fifth Avenue Hospital in New York for experimental group therapy with moderately retarded adolescents and their parents to measure advantages of such therapy and establish guidelines for its practice.

But much more is needed. The role of adolescent clinics in helping the adolescent retarded must be expanded. The earmarking of funds for the mentally retarded in crippled children's programs gives an opportunity to provide more service to the older retarded child who has a related handicap. The new program for children and youth, that includes health services for the school age child, is an additional resource for providing service to the retarded adolescent.

A recent study shows that some 20,000 adolescent mentally retarded children receive public child welfare services. This indicates the magnitude of child welfare's responsibility to serve these children and of its concern for improving services in all ways.

Of course, much more research, many more demonstrations will be needed. But there are other areas of equal concern. One result of the report of the President's Panel on Mental Retardation urged a review of laws which may apply to mentally retarded children, including commitment care, and guardianship. The Children's Bureau is now supporting such a study, as well as research to evaluate the quality of a family's decision regarding institutionalizing a retarded child.

What is hoped will be a very revealing study about the prevalence of mental retardation and its relation to social, economic and demographic characteristics of the individual and his household has been undertaken under the maternal and child health research and demonstration program.

As one of the arms of the Welfare Administration, the Bureau will be watching the opportunities which may be extended to the administration under Title XIX of the 1965 Social Security Amendments to extend medical or health care to any medically needy child or youth under 21. Presently, the Amendment provides that

States have the option of participating in this new medical assistance program, but if they wish to continue to receive Federal funds for medical care for recipients of public assistance, they must establish such programs by the beginning of 1970.

As we pursue these interrelated efforts, we are hearing of programs which were started with the Bureau's help which already have meant vast differences in the lives of children. In rural Kentucky, for example, a project supported by Children's Bureau funds has proved that home care of retarded children can be a significant factor in raising their I.Q. In the Kentucky project, the average increase in I.Q. was 14 points. This project also has served to demonstrate the great care needed to distinguish between truly retarded children and those functioning at what appears to be a retarded level because of cultural and economic deprivation.

In looking toward the future, the Bureau's plans on behalf of the mentally retarded can be summed up in a phrase: to do more of everything. More emphasis is needed on prevention of retardation through improved prenatal services, on community programs for mentally retarded children; on child welfare services for them; on clinic centers for the evaluation and treatment of mentally retarded children with physical handicaps, on genetic and biochemical laboratory services and genetic counseling; on attention to the needs

of special groups, such as the retarded adolescent.

Every effort should be made to reach new horizons. We can hope, with Mr. Thomas Tucker of NARC, that by the year 2000, there will be no new cases of mental retardation because all the factors causing it will have been isolated and solutions found for the problems they now create.

The Children's Bureau will continue to encourage research and demonstration projects, and will increase its efforts to prepare materials, both technical and general, useful to those concerned with mental retardation.

The Bureau will work to help increase trained professional workers and to offer training projects for subprofessional workers.

This much can be clearly seen of the job ahead. No effort will be wasted. Who knows when vast scientific research now underway in mental retardation will yield such promise and importance that it will add new dimensions to our programs?

One thing is certain. The cooperative and imaginative partnership existing between public and voluntary efforts on behalf of retarded children will continue to grow. With determination and dedication, let all move ahead in hope and confidence.

HOMEMAKER SERVICE IN A VOLUNTARY AGENCY FOR FAMILIES WITH RETARDED CHILDREN

Mrs. Rose Brodsky, Executive Director
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New York City

It is encouraging to note that there has been relatively significant expansion of homemaker service these past few years. Yet, on the whole, this development has been within the confines of traditional uses of the service. Most services are geared to the illness or absence of a mother where children need care, or to the care of the elderly who are ill or infirm. Few services are available where the handicapped child is the focus of need. Although Medicare may bring about further expansion, this too may remain in existing channels.

The restrictive application of homemaker service is puzzling, considering the inherent flexibility in the nature of the service itself which can respond with sensitivity to broad manifold community needs. The value for individuals and families in remaining at home and in the community, where feasible, is generally acknowledged. Homemaker service is more economical than placement services and lends itself to rapid expansion where funds become available. Yet departures from the initial concepts around the uses of homemaker service are relatively few, and often are set up as a demonstration rather than basic program.

In recent years there has been a strong movement toward recognition of the needs of the retarded and their families. Our purpose here is to examine how homemaker service can become integrated and accepted as one of the basic services geared to the specific needs of these families, along with the more developed services offered, such as clinical diagnostic services, educational, institutional, and other placement services.

Our agency, the Association for Homemaker Service, was organized in New York City five years ago, as a family centered casework agency with homemaker service as its sole function. It is a voluntary agency, independent, non-sectarian, non-profit, and city wide.

As a new agency we were determined not to be bound by tradition. Our development of program was to be geared to community need, though budgetary considerations form natural boundaries. Thus our gamut of homemaker service is multiple and varied, all based on the essential purpose of helping to maintain individuals and families in their own homes, where this is the best and most desirable plan to accomplish a health and/or social welfare goal.

We began with child care, and soon expanded to include the chronically ill, the handicapped, and the elderly. We did not impose an arbitrary limit in

terms of number of hours given, or length of service. We permitted the needs of the client to shape our policies, and did not force him into alternatives, which would be unacceptable to him, provided homemaker service was a suitable plan. It is patent that in many situations community responsibility for long term care is inescapable. Dependent children can not be abandoned. Some chronically ill and handicapped need help for much of their lives. The needs of the elderly often increase with time. In our work as a homemaker service agency, we do not view our service as a panacea. We value other services, such as foster care and institutional services as essential. Our philosophy is that clients should have a true choice from among the available constellation of services, including homemaker service, on a flexible basis, with casework help to assist them attain a solution most meaningful to them. In keeping with this approach, our service is offered from part-time up to 24 hours around the clock, on all or any of the seven days of the week, for so long as the service has purpose for the family toward accomplishing valid objectives, no matter what the time span, even in terms of years. It can be preventive, rehabilitative, educative or supportive, and is used on a differential basis. Homemaker service alone might accomplish the goal. Often it serves as a diagnostic tool, with the caseworker helping the family determine and move toward a plan more suitable for them.

Our homemakers are staff members, recruited, employed, trained and supervised by the professional social work staff, which insures the professional quality and continuity of service. Their guaranteed salary and fringe benefits also contribute toward staff stability. The uniform worn by the homemaker attests to her agency status. Nine homemakers are assigned to each caseworker. Together caseworker and homemaker form an integrated team, each with her own discipline, to accomplish the goals of the service.

The job of the homemaker is composed of two aspects - the psychological and the concrete. Her job is a unique combination of clearly and carefully selected tasks which are comparable to, but not identical with, elements in the work of the social worker, nurse. companion, housekeeper, assistant to the parents, substitute parent, and household worker. Because of some overlap, the function of the homemaker is often confused with the others mentioned above. Yet there are many responsibilities carried by the other disciplines which are clearly proscribed for the homemaker. Those tasks specifically defined for her, both tangible and psychological, combined with her teamwork with the caseworker, constitute the homemaker's job in our service. The caseworker places and supervises the homemaker in each household. She integrates the role of the homemaker in her casework process with the family. Her focus, in

working with the family, is on the use of the service itself, and those individual and family problems which might emerge or result from the impact of the situation necessitating homemaker service. The caseworker also coordinates our work with that of any other discipline or service involved with a given family.

By the end of the third year, our agency had built a staff of 110 regular homemakers, 30 additional for relief coverage, and concomitant professional and preprofessional staff. The unexpected and rapid expansion of our agency was made possible in large measure by the purchase of service by several public and voluntary health and social agencies.

It appears that national health agencies and foundations concerned with a particular disease or handicap tend to focus on research, diagnosis, treatment, appliances, and concern with placement facilities, some educational and rehabilitative. There seems to be a reluctance by many to offer homemaker service. There are some exceptions. In our own experience, the American Cancer Society, New York City Division, which had been placing its own staff homemakers under the administrative supervision of a nurse, gave that up. Instead the Society has been purchasing our caseworker-homemaker service for its total program for the past two and one-half years. Its staff does the telephone screening of referrals. Our caseworker then carries casework responsibility from

intake to closing, including supervision of our homemaker. There is recognition that while extensive and intensive research to conquer the disease is going on, families hit by the tragedy often need immediate home help. Homemaker service might be the most desirable and economical answer, where it can be an adequate choice, as against placement in a hospital or institution.

Recently, the United Cerebral Palsy Association, in its Annual National Conference, scheduled an all day workshop to examine the need for homemaker service, and how it might be developed for its groups. The one local chapter which started a small service under the supervision of its social work director served as an example of what might be accomplished, not only in meeting a need, but its effect in stimulating fund-raising activities.

The question is whether it might be possible for any of the organizations and foundations concerned specifically with the retarded to review their policies, and consider whether they can undertake some financial responsibility for homemaker service as an integral part of their existing constellation of services. Local voluntary service agencies are often limited in their fund-raising base. The national health organizations might be reaching groups with special identifications and interests. The auspices under which homemaker services are initiated, developed or

expanded for families with the retarded can vary, and the structure might well flow from the pattern of organization in any given community. The essential consideration is whether funds can be freed, allocated, or channeled for homemaker service where this would better serve the home care needs of families with retarded children who for so long have been overlooked in this regard.

We were early approached for homemaker service by the Retarded Infants Services, Inc., a local voluntary agency, with several services other than homemaker for families with young retarded children. It had heretofore found difficulty in referring families for homemaker service where the need centered on the retarded person. We accepted referrals, with the Retarded Infants Services contributing a partial fee. Families paid something where they could. Our agency carried the major cost.

The families served had much in common, with variables unique to each. The following case illustrates problems which are experienced by many families with a retarded child:

> A mother, in an advanced stage of pregnancy, could no longer manage. Her retarded child, under three, was large, heavy, severely handicapped, wore braces, needed considerable lifting, and had to be dressed and fed. Despite

great love and devotion to this child, the parents had agreed to his placement in an institution as the best plan for him as well as the family. However, there was a waiting period. Two older school-age children were being badly affected by being overly burdened with helping care for their little brother. The father, unskilled, worked long hours, and was not too available for helping. Much had gone into this couple's decision to risk planning for another baby. There was danger of a miscarriage.

The placement of our trained homemaker who concentrated on care of the retardate, and assisted with household tasks, gave immediate relief to the mother and the older children. Only now could the older children have the parental attention they needed. The homemaker, as part of the team, shared with the caseworker her observations about the family's needs and reactions. The parents used their relationship with the caseworker to come to grips with their naturally continuing ambivalence over the retarded child's impending institutionalization, moving toward some further

resolution of their conflict. They could admit concern about their older children, and the risk in having another baby.

The hours of service and the role of the homemaker shifted, contingent on whether the mother was in the home or in the hospital giving birth. The homemaker is trained never to usurp a parental role, and yet assist as fully as needed.

Service continued throughout the mother's convalescence which coincided with the placement of the retarded child. This was a logical ending for the service.

Our joint experience with these cases resulted in a joint three-year demonstration project made possible by a grant from the Children's Bureau of the Department of Health, Education, and Welfare. It was agreed that a demonstration with research could serve to examine the value of homemaker service to families with young retarded children.

The Retarded Infants Services was to be the referral source, with its caseworker doing the initial intake. One of our caseworkers was assigned to place and supervise our six homemakers selected for the project. She also maintained the casework process with the families around the use of the service with a focus on those aspects of family need and problem created by the reality of a retarded child. When homemaker

service was completed, the clients were referred back to the Retarded Infants Services for a follow-up casework interview.

At the outset, the professional staff and homemakers involved in the demonstration were given orientation as a group, which included field visits to clinics and placement facilities for the retarded. Once cases were under our care, our own staff had special on-going training meetings.

While working on the Research Design with the Research Director, it was agreed to set up a second group of cases as a control group. These families would be helped by home aides, through the Retarded Infants Services, a service which it had already been offering. These aides are domestic workers whom they recruit selectively on an as needed basis. The aide's job is to help care for the children and do light cleaning and cooking. The agency's caseworker was available to these families where they needed help in the relationship to the retarded child, and with regard to planning.

The families who received homemaker service in this project represented a microcosm of the broad spectrum of almost inevitable need in one form or another. Some families had a pattern of denial which blocked them from consider-

ing valid placement. Others were so rejecting of the child as to move to placement prematurely, resulting in guilt and excessive conflict. A difference in reaction between parents led to marital tensions. Other children in the family generally were affected by the situation. The introjection of the tangible aspects of the homemaker's help could relax a family so that more balanced relationships might be restored. Also casework help was more effectively utilized. Parents are often too blocked emotionally to help the retarded child realize his potential. The trained homemaker can help him accomplish more. This then might make a definitive diagnosis more possible, which is then a clearer basis for sounder planning in making choices between keeping a child at home, or appropriate placement. And sometimes just periodic relief through homemaker service can make the difference between a plan at home or placement.

The final report firmly attests to the value of both kinds of home services in the demonstration. However, with the differential structure in the two services, homemaker service and home aide service, there were naturally some inherent differences. The cases for both groups were chosen at random. The mother was present in the home for part or all of the time throughout service in all the cases in both groups. Many of the cases had basic similarities. Some showed strikingly comparable results. Others

responded with some differences. One thing emerges with clarity. Families with retarded children can benefit markedly from responsible home services under professional auspices, the form and structure naturally determined by the resources in any given community. The final report is available from either our agency, the Association for Homemaker Service, or the Retarded Infants Services.

An important by-product of our initial readiness to give homemaker service to families with retarded children and our subsequent work in the demonstration has had an impact on the agency staff, as a whole, although only a few were directly involved. The total professional staff was kept related through case presentations and group discussions with casework and homemaker staff. The interest was vital and vivid and stimulated staff growth and development. We now find ourselves attuned to the special needs of these families regardless of the basis which triggers the need for service; and we apply our newly found skills. In case after case where service is purchased by other agencies for traditional reasons, such as a mother's illness, we find retarded adults and/or children for whom there has been no planning. While we can help with this once we are in there, and apply our knowledge to helping plan for retarded adults, or children, we are concerned

that these families would usually not have been accepted for homemaker service by the referring agencies were the request based solely on the family's inability to cope with the pressures in planning for the care of a retarded family member. Nor can we account for the numerous families who do not get to services until they are in serious crisis situations.

In conclusion, one might state that as social agencies we should be attuned to the needs as projected by families with retarded members. It is from them that we must learn how to serve. We must throw off the shackles of tradition and be ready to develop services as needed although we all recognize this is necessarily contingent on available funds. On the whole, recruitment and training of homemakers pose no insuperable problem. Service should be available on a broad flexible basis, with no arbitrary time limits. These families should have a valid choice between keeping the retardate at home, where feasible, and if homemaker service can make this possible, or resorting to placement. Families should not be forced into rigid, unacceptable solutions. The voluntary service agencies might redefine policies even within their existing resources. The national and local organizations and foundations concerned with the retarded might explore their possible role in making homemaker service more available to families with retarded members. The auspices and structures can be varied and flexible in both public and voluntary agencies, depending on the pattern in the

community and funds available. Homemaker service should take its rightful place as a basic health and welfare service, applied with the kind of creativity and imagination which is inherent in this service. Our thesis is dual - more homemaker service with added scope to include families where the focus of service is necessitated by a retarded family member - and the search for funds from every available source to allow for the expansion and development of such homemaker services, where appropriate, in the voluntary agency.

HOMEMAKER SERVICE IN A PUBLIC AGENCY

FOR FAMILIES WITH A RETARDED MEMBER

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It is difficult to understand why social caseworkers in the United States have been so slow to accept homemaker service as a valuable adjunct to casework. There has certainly been an opportunity to see fine examples of homemaker service in Scandinavian countries for many years; but even in my own agency where we have had a full time Homemaker Service Program for eight years, the caseworkers for the first five years were much slower in making extensive use of the program than seemed justifiable. Doctors and nurses in the community, on the other hand, have been so enthusiastic over what homemakers can do in a family situation that there has been difficulty in handling the number of requests received from these sources. Perhaps now that preventive social services are coming into focus, a new interest of social caseworkers in developing and using homemaker services can be expected.

In the last few years, public welfare agencies have been able to increase staffs and decrease case loads through the benefits of the 1962 amendments to the Social Security Act. This has permitted social caseworkers to spend more time with the family, to do much more purposeful planning

with the family, and for the first time, really to get the insight into family problems which a caseworker should have. With a greater involvement of the caseworker with the intimate problems of the family the need for homemaker service is beginning to be apparent and a greatly increased demand is being made for homemakers to complement the work of the caseworker.

One of the very attractive aspects of homemaker service is its flexibility. Largely through use of Children's Bureau funds there is greater freedom to determine the manner in which homemakers are used.

In the beginning of the program, interest was focused on meeting crisis situations in families. Frequently the crisis was a suddenly occurring medical problem. Some years ago when this type of problem developed in a family and other family members or a relative who lived close by could step in, look after the household, care for the children, and meet the crisis so that the medical problem could be treated promptly and the family held together. Today with mobile populations, with more and more fathers who have traveling jobs, and with greater concentration of people in cities, families too often are strangers in the community. They have no relatives or friends upon whom they can call in an emergency.

Then too, domestic service, although not a substitute for homemaker service, is far more difficult to obtain then in past years. In fact, in many localities it is impossible to obtain in any circumstances.

> A Swiss family moved to Charlotte with a new born child. Within a few days the mother had a surgical emergency. The father, an engineer could not locate help. The doctor suggested homemaker service. After a few days of homemaker service, the caseworker had found a substitute foster homemaker who was employed by the father. The whole episode was handled without the father losing time from his new job. The mother was freed from worry in her illness. The infant's needs were met by a homemaker until a substitute could be hired.

Under these circumstances, it is only natural that homemaker service should be readily accepted as part of an agency or community program to meet crisis situations in the family. But a homemaker service program designed to meet crisis situations is a very difficult program to administer. It often calls for almost instantaneous action. It calls for the availability of homemaker personnel around the clock, including week-ends. And such a program does not fit conveniently into the usual five day, forty hour week pattern followed by most social agencies.

> A Department of Public Welfare foster mother was hospitalized with influenze and all four children in her home were ill. A homemaker was placed around the clock until the mother was able to resume her responsibilities.

This kind of program really presents a challenge to the caseworker who often finds it difficult to separate herself from a well-planned, orderly procedure in her contacts with families. It may be necessary, then, in operating a homemaker service designed to meet crisis situations to have a staff of caseworkers and supervisors especially assigned to a homemaker division who are prepared to step into the breach quickly and meet the situation competently.

Today there is more awareness than ever before of the cultural differences between very poor families and middle class families. (Children, in order to develop normally, need to be exposed to conditions and opportunities which, if they are economically handicapped, are usually not available to them within their own homes or even in the neighborhood in which they live.) The presence of a homemaker of the same peer group is one way to give both the children and the parents new exposures. By means of constant association over a period of time, the families come to be aware that there are ways of improving

their living conditions and widening their horizons. The homemaker, in cooperation with the caseworker, can help both children and parents to take beginning steps to avail themselves of resources in the community which lead to a better life. Sometimes these beginning steps are as simple as learning how to pronounce words correctly and so make the children's speech understandable to others.

> A small crippled boy, wearing bilateral braces, was referred by caseworker to Homemaker Service primarily for transportation to clinic and follow through on giving home physical therapy. The homemaker took an interest in his problems and worked with him intensively within the home, following the orthopedic doctor's instruction closely. The homemaker also stimulated the child's imagination with books and neighborhood trips, worked with him on pronunciation and enunciation. He was encouraged to be less dependent upon others and is now attending public school and making tremendous progress. The orthopedic doctor and therapist both credit the homemaker with being responsible for the excellent prognosis on this child.

Our homemakers work very closely with public assistance recipients and also with the Surplus Food Distribution Program. They go into homes and hold group meetings

to show families how to prepare more attractive, appetizing meals out of the same food items that the family has always used; how to make use of new foods; how to manage their money; how to improve their housekeeping. Not least important, homemakers are helping families see dirt and disorder for the first time.

> Mrs. Montgomery's application for public housing was rejected because of poor personal habits and unsatisfactory housekeeping. A homemaker worked closely with her to help her improve her housekeeping methods and personal cleanliness and within six months the family moved to good housing.

Homemakers can be particularly useful in caring for children so that the mother can participate in community programs, so that she can get away from pressures, or so that she can get to a clinic or to a doctor. No one knows the number of parents who suffer in silence under the burden of caring for brain-damaged or retarded children. Often the mother cannot get out of the home; the parents cannot go out together; the child drains the health of both until something gives way. These cases usually come to the attention of public welfare agencies when a doctor calls to say "the mother has cracked up" or the father has lost his job because the

emotional strain was reflected in his performance. Now we are seeking these cases before the health of parents is destroyed. A homemaker in the home one day a week makes it possible for the parents to lead a more normal life--to get out and have fun--to get away from the tension-charged home setting long enough to permit them to maintain a healthful outlook on life and a realistic attitude toward the child and his problems.

> Mrs. Davis was referred for Homemaker Service by her doctor. The mother was close to the breaking point from tensions and the physical strain of caring for her hyperactive retarded child. The homemaker in the home one day a week permitted the mother to get away from home and participate in community affairs. Tension was relieved and the family was helped to make long term plans for the child.

Homemakers often provide transportation to get children to dentists, doctors, and to other places that children need to go. But this is not just baby sitting or taxi services. They use these opportunities to lift the children's sights. A good homemaker is able not only to assume many of the responsibilities of the mother during her illness but also to support her and help her to become a stronger parent. Many families for the first time are helped, through the support and encouragement of a homemaker; to try out new plans.

An overly protective mother, Mrs. James, was encouraged by the continuing association with the homemaker to allow her son, age 4, to attend a day care center.

Much of the homemaker service given to the aged is directed toward keeping the older person in his own home when this is emotionally significant.

Homemaker service, however, must not be considered as a separate, independent service. Properly it should be considered as merely one part of a total spectrum offering comprehensive social services to the family. (Incidently, this presents a glimpse of public welfare of the future.) Homemaker services may make it possible for a family to take the first steps toward participating in a day care program, in formal education or in a family planning program. The presence of a homemaker and her convictions about the need for over-all family planning may make it possible for the parents to move in this direction. In fact, ninety percent of the new clients going to family planning clinics in our community are those who get there because of the activities of homemakers.

The exciting possibilities of using sub-professional staff to motivate those in need have been given recognition on a global basis. Elizabeth Wickenden, now with Social Welfare Assembly, wrote to me

saying: "Recently, while in India I cited your experience with the use of sub-professional workers as family planning 'salesmen' and suggested that this might prove a logical and practical way to use some of their U.S. counterpart money".

Population specialists from Taiwan have also carried home with them the exciting story of our use of sub-professional staff to promote family planning.

Family planning does not begin and end with a decision as to the size of the family. Homemakers, in coordination with caseworkers, are helping families to plan purposefully for the achievements of objectives within reach of their children. This kind of planning brings about much better results than could possibly have been attained without a homemaker in the picture. Thus, homemakers frequently step into a family situation to meet a crisis, and they do it exceedingly well. There are preventive aspects to the work of homemakers. Frequently before they leave an assignment they have been able to help the family in averting a more serious situation. Too often situations facing the family would not have become emergant had planning been done earlier. If parents had known how to plan, many of the personal injuries and illnesses affecting family members could have been avoided. Homemakers are helping life become more purposeful. The mere fact that homemakers themselves are often indigenous workers gives the family hope that they

too can plan, and work, and attain their goals.

Where do we go from here? First, we can expect greatly increased demands for more and better homemaker services. Second, as we get a sharper focus on preventive social services we will learn better ways to use homemakers, better ways to train and supervise them. Third, homemaker services will make a unique contribution to social work through its use of sub-professional, indigenous workers. The success of these workers in "getting to families" will surely produce some re-evaluation of the caseworker's role, will bring about closer identity with the client and a demand for greater accountability of social work.

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4-H CLUBS

The development of youth and adult leadership is a primary responsibility of agricultural and extension educators. To assist agricultural and extension personnel in providing leadership and direction, and in developing leadership qualities and abilities of those in their communities, a graduate workshop was held by the New Mexico State University. Contained in the workshop report are papers relating to leadership development: (1) Identifying Leadership, (2) 4-H Adult Leadership Development, (3) Leadership Development Through the Use of Advisory Committees, (4) Developing Community and County Leadership, (5) Preparing Leaders, (6) Adult Leadership Development and Education, (7) Evaluating Leadership, (8) Military Leadership, (9) Types of Leadership, and (10) Problems in 4-H and Extension. (DM)

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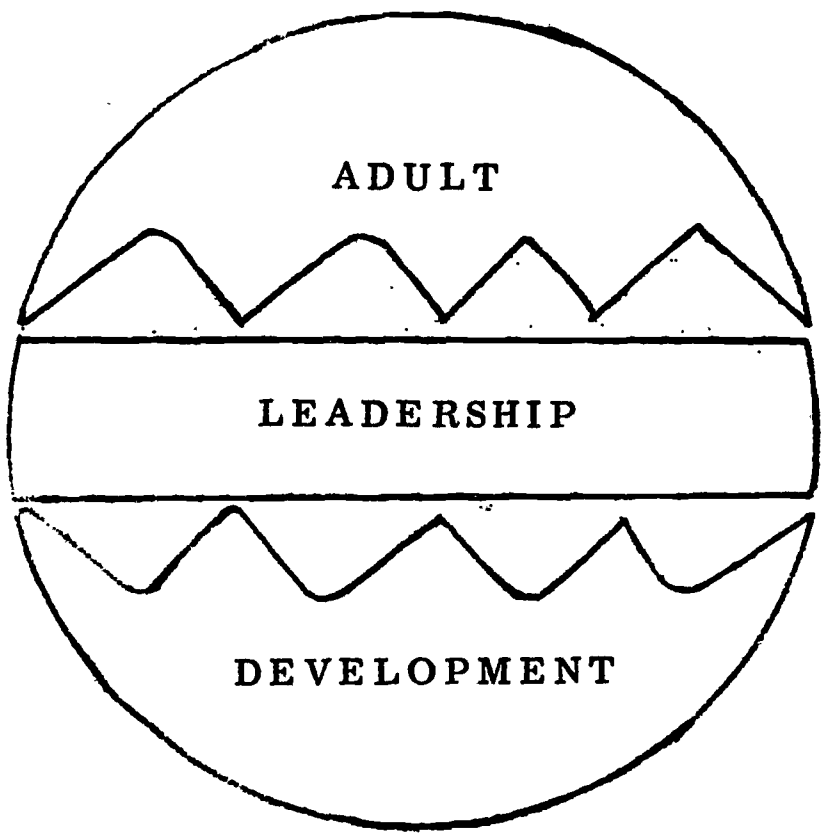

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College of Agriculture & Home Economics
Department of Agricultural & Extension Education
University Park, New Mexico

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ADULT LEADERSHIP DEVELOPMENT

A Graduate Workshop Summary Report,
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Adult Leadership Development

NEW MEXICO STATE UNIVERSITY
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FOREWORD

The development of both young and adult leadership is a primary responsibility for those engaged in the fields of agricultural and extension education. As technology accelerates change, the function of leadership in a changing society will be increasingly important.

Agricultural and Extension personnel are faced with the task of providing leadership and direction and in developing leadership qualities and abilities with those in their communities and counties. It is simply not enough to identify leadership. Plans must be developed to help people to solve problems and plan for the future; both individually and collectively.

J.D. McComas
Associate Professor and Head
Department of Agricultural and
Extension Education

IDENTIFYING LEADERSHIP

Keith Austin, Las Cruces, N.M.
Carson Edwards, Abilene, Texas
Abdul R. Khateeb, Sudan

Agricultural & Extension Education 516

DEFINING LEADERSHIP

Whenever two or more people are assembled, there will arise a leader. With the very formation of a group, some members are almost certain to take a more active role than others, to be preferred to others, to be listened to with more respect than others, to be dominant over others. However, it is practically impossible to give an accurate definition of leadership, therefore, the writers have grouped together a number of definitions that may define leadership in various situations. These definitions are classified under general and democratic definitions.

GENERAL DEFINITIONS

Krech, Crutchfield, and Ballachey define leaders as those members of the group who influence the activities of the group. There are at least three corollaries to this definition. First, by this definition all members of the group are, at least to some degree, leaders. This is so simply because every member to some degree must of necessity influence the activities of other members in the group. Leadership, in other words, is a quantitative variable, not an all-or-none matter. Properly, we should not speak of leaders versus followers but of the amount of leadership vested in any given person. However, those members of the group who outstandingly influence the group may be termed the "leaders."

The second corollary is that leadership acts are interpersonal behavior events--instances of interaction. Like all forms of interaction, leadership works two ways; the leader influences the follower and the follower influences the leader.

The third corollary is simply that we must differentiate between the leader as the individual who has a significant amount of influence and the official head of a group who may have very little influence.[1]

Ordway Tead defines leadership thusly, "Leadership is the activity of influencing people to cooperate toward some goal which they have come to find desirable." A starting point, a goal, and planned progression from the one to or toward the other are inherent in this definition. A direct contact between the leader and those lead is implied, and stress is placed not so much upon the achievements of the leader as upon the sense of fulfillment and satisfaction gained by the followers as well as by the leader.[2]

Lang and Lang discuss four elements which they feel must be included in the definition of leadership. They state that "leadership is (a) role performance, (b) the influence of which is (c) central with regard to (d) collective action."[3]

Leadership is a process whereby an individual directs, guides, or influences the thoughts, feelings, or behavior of others. Leadership is found in various forms; it may be direct or subtle, overt or dominant, planned or unplanned, conscious or unconscious.[4]

Leadership cannot exist in isolation, since there cannot be a leader without a follower. A person may have a high degree of leadership qualities

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[1]David Krech, Richard S. Crutchfield and Egerton L. Ballachey, Individual in Society, (New York, San Francisco, Toronto, London: McGraw-Hill Book Company, Inc., 1962) p. 423.

[2]The Spirit and Philosophy of Extension Work, (Washington, 1952), p. 153.

[3]Kurt Lang and Gladys E. Lang, Collective Dynamics, (New York: Thomas Y. Crowell Company, 1961), p. 231.

[4]Clodus R. Smith, "Leaders are Born and Trained," Extension Service Review, Vol. 34, (September, 1963), p. 175.

and his solution to a group problem may be excellent; however, he is not a leader until his solution is communicated, and then not until other people are associated with him in giving expression to his ideas. Therefore, it can be concluded that for leadership there must be a leader and a follower that are united by common goals, with a will to lead by the leader and a will to follow by the other.[5]

Bass gave the following accumulation of definitions from various sources: (1) an interaction between members of a group; (2) leaders as agents of change, as persons whose acts affect other people more than other people affect them; (3) controlled interaction--an interaction between two persons rather than merely an act by one; (4) behavior involved in the execution of a given position; all the behavior of the individual selected as leaders; any positive influence act; behavior of any individual that makes a difference in the behavior of characteristics of the group; behavior of an individual when he is directing the activities of a group.[6]

The author's definition of educational leadership as given in Leadership for Improving Instruction (yearbook 1960), is "That action or behavior among individuals and groups which causes both the individual and the groups to move toward educational goals that are increasingly mutually acceptable

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[5]Cecil A. Gibb, The Principles and Traits of Leadership, Small Group Studies in Social Interaction, Editor, A. Paul Hare, Edgar F. Borgatta, and Robert F. Bales (New York: Alford A. Knaph, Inc., 1961), p. 91-92.

[6]Bernard M. Bass, Leadership, Psychology, and Organizational Behavior, (New York: Harper and Raw, 1960), p. 89-90.

to them."[7] They also say, "the term leader is ascribed to a person because of his competence to help people make decisions and fulfill the functions which, in general, are mutually acceptable to them--not because of his birth or other circumstances place him in a position of high status."[8]

Warters defines leadership in terms of the interaction of a number of constant variables--personality traits, the particular situation, and the group's structure, performance goals, members and expectations of leaders.[9]

Leadership is dependent on three complex variables: (1) the individual, (2) the followers, and (3) the situation.[10] It has been said that leaders are made, not born. In the past it was thought that certain individuals, because of their personalities were limited in their ability to achieve leadership roles. It was further felt that leadership traits were inherited. In experience, leadership training proves that leadership skills can be learned and taught. Such a concept of leadership gives the individual hope that community leadership can be developed.[11]

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[7]Leadership for Improving Instruction, (Association for Supervision and Curriculum Development, Washington, D. C. Yearbook 1960), p. 27.

[8]Ibid., p. 52.

[9]Jane Warters, Group Guidance, (New York: McGraw-Hill Book Company, Inc., 1960), p. 27.

[10]Chester I. Barnard, Organization and Management, (Cambridge, Massachusetts: Harvard University Press, 1956), p. 84.

[11]Leland P. Bradford and Gordon L. Lippitt, "The Individual Counts...in Effective Group Relations, "Group Development (Washington 6, D. C.: National Training Laboratories and National Education Association, 1961), p. 29.

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DEMOCRATIC DEFINITION

Democratic leadership is the means by which one or more persons aid a group in setting and attaining desirable goals. There is real distinction between democratic leadership and leadership in general. The distinction is sharpest if we observe a highly regarded definition of leadership in general and compare it with that of democratic leadership as stated. Ordway Tead defines leadership thus: "Leadership is the activity of influencing people to cooperate toward some goal which they come to find desirable."[12]

The distinction is largely one of influence. In democratic leadership the focus is not to influence people but to aid people. It is the distinction between my solution and our solution. Democratic leadership puts the "out" in focus. Authoritarian leadership puts the "my" in focus. Leadership can be either, or at any point in between. The principles of democratic leadership help to better define "democratic" leadership and will keep the "our" concept in focus.[12] These principles are: (1) Principle of Challenge, (2) Principle of Participation, (3) Principle of Sharing, (4) Principle of Knowledge, (5) Principle of Habit, (6) Principle of the Group Mind, (7) Principle of Purpose, (8) Principle of Process, (9) Principle of Direction, (10) Principle of Emulation, (11) Principle of Learning, (12) Principle of Experience, (13) Principle of Flexibility, (14) Principle of Integration, (15) Principle of Service, (16) Principle of Leadership Satisfactions.[13]

SUMMARY

It is practically impossible to give an accurate definition of leadership. However, a distinction between the terms, true leaders and official heads should be made. True leaders are those members of a group or organization who outstandingly influence the activities of the members of the group and who plan a central role in defining group goals and in determining the ideology of the group.

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[12]Burton W. Kreitlow, E. W. Aiton, Andrew P. Torrence, Leadership for Action in Rural Communities, (Danville, Illinois, The Interstate Printers and Publishers, Inc., 1960) p. 57.

[13]Ibid.

Official heads are those members of groups or organizations who are officially assigned the responsibility for leading the group. The influence of the head of a group may or may not be accepted by the membership.[14]

General definitions of leadership tend to use the term "to influence." The definition of democratic leadership is to aid. Democratic leadership is guided by a variety of principles.

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[14]Krech, loc. cit., p. 452-453.

TYPES OF LEADERSHIP

The types of Leadership.

1. Authoritarian
2. Democratic
3. Laissez-faire

Definition of Authoritarian leadership. In the authoritarian leadership the decisions are made by one person or a few persons who act without consulting the members of the group. The leader then sees that the members execute his plans without question or criticism.[15]

Characteristics of an Authoritarian Person. "The authoritarian person is one who, because of his learned way of adjusting to parental authority and to people, is characterized by the following:

1.) great conventionality
2.) scorn for the out-group or for any who depart from standard in-group values and virtues.
3.) an open hostility combined with overt submission to the strong
4.) an opposition to the soft, the idealistic and the human
5.) a calculating or bargaining orientation to people
6.) and an intellectual rigidity with a great intolerance for ambiguity."[16]

Authoritarians tend, generally, to prefer status ladened leadership, to accept strongly directive leadership, and to talk in terms of "power" words when characterizing "Good" leaders. They nominate "power" figures as admired great persons, they accept doctors and teachers as leaders, they prefer prestigeful "fixers" when in need of information or advice they express a willingness to accept strongly directive leadership on the part of the boss,

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[15]Burton W. Kreitlow, E. W. Aiton, Andrew P. Torrence, Leadership for Action in Rural Communities (Interstate Printers and Publishers, Inc.), Illinois, 1960, p. 86.

[16]Harold Guetzkow, Groups, Leadership and Men, (New York: Russell and Russell, Inc., 1963), p. 163.

the group leader, or the "best leader" anywhere."[17]

Once in a leadership position, the authoritarian may use his position more for the enhancement of his own status than for the filling of his social function. He may demand differential respect and rigid discipline.[18]

The Autocratic Atmosphere. "In the autocratic atmosphere the teacher determines all policies and details."[19]

The group atmosphere may be determined by the leader. "There can be an authoritarian atmosphere. The responsibility is with the authority and no one may participate or initiate action except at the dictate of the authoritarian leader. It is assumed that the authority knows best what the group should believe and do. Group member behavior is directed toward the authority's predetermined ends."[20]

The Autocratic Group. One individual or a "power clique" controls the autocratic group. The members may go through the motions of democratic behavior, however they are almost compelled to accept the decisions of the leader. In this type of group the communication tends to be one way from

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[17]Ibid.

[18]Ibid.

[19]D. M. Hall, Dynamics of Group Action (Illinois: The Interstate Printers and Publishers, Inc., 1960), p. 12.

[20]George M. Beal, Joe M. Bohlen, J. Neil Raudabargh, Leadership and Dynamic Group Action (Iowa: The Iowa State University Press, 1962), p. 83.

the leaders to the followers. "Ideas are accepted on the basis of their origin, not on their intrinsic merit. When the leader advances a proposal it is usually accepted. When a member attempts to reverse the direction of communication he is usually squelched."[21] A classical example of the autocratic group is the military unit.

Autocratic compared to Democratic. "The autocratic group can not compete with the democratic in all round productivity. Within these groups are found excessive irritability, hostility, and aggression, often directed toward fellow members as well as toward the autocratic leader. The members of such a group are apt to be apathetic in their general attitude even when secretly discontented. Individuals are much more dependent and show a minimum of creativity. When the autocrat is absent little or no action ensues."[22] Later you may see this in contrast to the democratic type leadership group.

The Advantages of the Authoritarian Leadership.

1. Time is saved since all the decisions are made by the leader and executed by the group.
2. The member feels secure when told what to do instead of having to make his own decisions.
3. Fewer trained and dedicated leaders are required.
4. Reasonable to work with large numbers.[23]

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[21] Ibid., p. 25.

[22] Ibid., p. 26.

[23] Kreitlow, Aiton, Torrence. Op. cit., p. 88.

The Disadvantages of Authoritarian Leadership. "Some advantages of authoritarian leadership are:

1. It often leads to dissatisfaction and rebellion.
2. It does not provide for the development of the members of the group.
3. It does not provide for perpetuation of the group.
4. It does not utilize the full resources of the group in arriving at decisions.
5. It often squelches initiative and originality on the part of the members.
6. It is costly and sometimes fatal for the leader to err.
7. It is not acceptable to highly-training persons.
8. It does not consider the worth and dignity of an individual.
9. It does not usually build moral which is essential for loyalty to the cause.
10. It often selects leaders on the faulty basis of heredity, influence, position in the community, etc., who prove incapable of meeting the demands of leadership."[24]

Definition of Democratic leadership. "Democratic leadership is the means by which one or more persons aid a group in setting and attaining desirable goals." "The ideal of democratic leadership is composed of participation, equality, human relationship, individuality, and group authority among all members of the group including the leader."[25]

The Democratic Leader. This is a leader who endeavors to share with his group decision-making, planning and scheduling. He helps the group to understand clearly the basis for his decisions. He encourages participation, opinion-giving and decision-making, and a feeling of responsibility for the success of the work on the part of everyone. He is concerned that each

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[24] Ibid., p. 90.

[25] Ibid., p. 56.

member clearly understands his work. He delivers objectively his praise and criticisms in terms of work results and never personally in terms of what he may or may not like. He encourages worth-while suggestions and the development of new procedures.[26]

The fundamental to a faith in the democratic group process:

1. "Groups of ordinary people have, within the range of their capacities, the ability to recognize, define, and solve their common problems and to satisfy their common needs by working together.

2. Group action is based upon group consensus achieved through the participation of all members according to their differential abilities to contribute. It follows from this that group activities are more acceptable and more successful when evolved by the group as a whole than when a product of the drive of any individual or clique. It is a corollary that all group members, not only certain leaders, are responsible for the quality of group production.

3. Group productivity can be increased through efforts both of the entire membership and of individual members to improve their human relations skills, to foster better group interaction and also by continual evaluation of progress toward goals and of the means used to attain such progress."[27]

The Democratic Atmosphere. Within the democratic atmosphere the leadership is shared by all, and individuals strive to recognize and play roles needed for group productivity. The responsibility of the leader and the members in this type of atmosphere is to create conditions under which group members are best able to work together to accomplish chosen ends.[28]

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[26]Kenneth D. Benne and Bozidar Muntyan, Human Relations in Curriculum Change (New York: Dryden Press, Inc., 1951), pp. 118-121.

[27]Beal, Bohlen, and Raudabaugh, Op. cit., p. 24.

[28]Ibid. p. 83.

The Democratic Group. The democratic concept of leadership relies on the degree to which it helps the people whom it affects. In a democracy, it is held that decisions must be made on the basis of the most objective data possible. It is leadership action whereby the intelligence of the people is brought to bear on the problem.[29]

Basis of comparison of the Democratic group. "Democratic groups have greater motivation toward work, more member satisfaction, and greater productivity. There is less discontent among members and less evidence of frustration and aggression. There is more friendliness, cooperation, and group-centeredness when democracy prevails. Despite the group orientation it has been demonstrated that more individual initiative is displayed. When a group or its action is criticized, there is little or no tendency to use an individual as a scapegoat. A basic principle of rational behavior is that the means used must be consistent with the ends sought. This principle applies to both individual and group behavior. Thus, if one of the ends of our society and the groups that operate within it is to promote the basic goals of democracy, it would seem logical that democratic, rather than authoritarian or laissez-faire means should be used to attain those goals.[30]

Advantages of the Democratic Leadership

Advantages.

1. Decisions which grow out of group discussions bring about better results than decisions that are handed down by one man.
2. People cooperate more readily in promoting activities which they helped to formulate.

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[29]Association for Supervision and Curriculum Development, "Leadership for Improving Instruction" Year Book, 1960), pp. 51-52.

[30]Beal, Bohlen and Raudabaugh. Op. cit., p. 26.

3. Draws out individual members of the group and develops leadership.
4. It develops clear thinking, open minded individuals.
5. It provides for continual improvement based on exchange of ideas and opinions of the members of the group.[31]

Disadvantages of Democratic Leadership.

1. It might easily lead to the monopolization of the discussions by one or two members of the group.
2. It requires more skill on the part of the leader.
3. It may allow a very vocal minority to dominate a passive majority.
4. It is sometimes difficult for people who are not accustomed to group work to accept the ideas of others, even in the light of evidence, when these ideas are opposed to their own.
5. It is not easily used when large numbers of people are involved.[32]

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[31]Kreitlow, Aiton, Torrence. Op. cit., p. 88.

[32]Ibid., p. 91.

Distinguishing Characteristics of

AUTHORITARIAN AND DEMOCRATIC Forms of Leadership

Authoritarian	Democratic
1. Based on power over members of the group.	1. Based on power with members of the group.
2. Based on the belief that the leader is superior and knows better than others what should be done and should direct the group accordingly.	2. Based on the belief that the members of the group have the capacity to make their own decisions.
3. Based on devotion to self.	3. Based on devotion to group.
4. Based on the importance of end-results alone.	4. Based on the importance of means as well as end-results.
5. Based on pre-determined plans of the leader.	5. Based on group-determined plans.
6. Based on secrecy of over-all plans.	6. Based on knowledge of over-all plans.
7. Based on manipulation of members of the group.	7. Based on assistance to members of the group.
8. Based on imposed discipline.	8. Based on self-discipline.
9. Based on dependence of members of the group on the leader.	9. Based on interaction among members of the group and between the members of the group and the leader.
10. Based on strict obedience without question.	10. Based on the right of the members of the group to ask questions to help determine the policies and actions.
11. Based on the philosophy that decisions should be formulated by one man.	11. Based on philosophy that policies and decisions should grow out of ideas and suggestions from the group.
12. Based on orders with little consideration for the will of the group.	12. Based on consultations and respect for the will of the group.

Burton W. Kreitlow, E. W. Aiton, Andrew P. Torrence, Leadership for Action in Rural Communities (Illinois: The Interstate Printers and Publishers, Inc., 1960), p. 87.

Definition of Laissez-faire. In the laissez-faire type leadership the group members are left to work on their own. There is no leader participation and very little direction.[33]

The Laissez-faire Person. This is the leader who has no confidence in his ability to supervise and consequently stays away from the group. He leaves too much responsibility with others. He is incapable of making decisions or helping the group arrive at decisions.

a. Group members have little interest in their job and its improvement.
b. There is practically no team work.
c. Has the lowest moral and productivity.[34]

The Laissez-faire Group. This group is characterized by its lack of organization. "A good example may be the ordinary precinct organization of a political party. The leadership tends to be passive and the influence of the membership on each other is casual. Only as an election approaches does the group show any signs of life."[35]

The characteristics of the Laissez-faire. "The principle characteristic of the laissez-faire group is its lack of productivity. Individuality is often exhibited, but can not be channeled into useful fields. The general feeling of a lack of progress tends to make the membership uninterested and apathetic."[36]

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[33]Jane Warters, Group Guidance (New York: McGraw-Hill Book Company, Inc., 1960), p. 42.

[34]Benne and Muntyan. Op. cit., p. 118-121.

[35]Beal, Bohlen, and Raudabaugh. Op. cit., p. 25.

[36]Ibid., p. 26.

The defects of Laissez-faire leadership. One of the defects of this type of group is its inability to accomplish any purpose. There is no individual initiative. The only time any accomplishment is made is when a more defined organization is formed. Then the group actually becomes democratic and there is some progress made. Even a greater defect of this group is the easy seizing of control of this group by an individual who wants to use the group to meet his own end and he therefore converts the group into an autocracy.[37]

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[37] Ibid., p. 25.

IDENTIFYING THE LEADER

There are two principal ways to identify the leaders of a group: (1) we may ask the members of the group whom they regard as the most influential in directing the group (self-report method); (2) we may ask observers of the group to name the members who seem to exert influence over their fellow members, or to record the relative frequency of effective influence-acts of the members of the group (observation method).

THE SELF-REPORT METHOD

Two principal self-report methods have been developed and applied to the study of groups: the field-interview method and the sociometric method.

Field Interview Method. The investigator, in carrying on field work, lives closely with the people he is studying. He talks with members of the group; he observes their forms of behavior in the home, in places of work, and in other situations; he attends their rites; he questions them about traditional practices. He is a participant observer.

The major field technique is the interview with informants--members of the group who report to the investigator on the way of life of their people.[38]

Rogers, in his book, Diffusion of Innovations, said the following about informants:

> Key informants in a social system may be asked to designate the opinion leaders. The informants are selected subjectively as persons likely to know who the opinion leaders are. A similar use of key informants or "raters" has been made in social stratification studies to determine the prestige ratings of local people. Key informants are usually cost-saving and time-saving when compared to sociometric methods; however, both techniques suffer equally from lack of applicability to sample designs where only a portion of an audience is interviewed.

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[38]David Krech, Richard S. Crutchfield, and Egerton L. Ballachey, Individual in Society, (New York, San Francisco, Toronto, London, McGraw-Hill Book Company, Inc., 1962), p. 358-423.

Rogers also discussed another field interview technique which he termed as the Self-Designating Technique:

> This technique consists of asking a respondent a series of questions to determine the degree to which he perceives himself to be an opinion leader. This method is dependent upon the accuracy with which respondents can identify and report their self-images. One advantage of the self-designating technique is that it measures the individual's perceptions of his opinion leadership, which is actually what affects his behavior. As the W. I. Thomas theorem states, if men define situations as real, they are real in their consequences.

Sociometric Method. Originally this method was used to establish the pattern of feelings of acceptance and rejection, of like and dislike, that exists among the members of a group. The method involves asking each member of the group to name privately the other persons in the group with whom he would like and with whom he would not like, to engage in some particular activity, e.g., living with as a roommate, working with, spending leisure time with.

The sociometric method has been extended to include other ways of discerning the interpersonal relations among people, beyond what is revealed in their reported feelings about others. Thus we may record the frequency of contact (or duration of contact) between pairs of individuals. Where such contacts are largely voluntary it is assumed that their frequency provides a good measure of group structure.[40]

In agriculture the sociometric technique has been helpful in locating the opinion leaders. Members of a group are asked to whom they go for advice and information about an idea. A great number of respondents must be interrogated

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[39]Everett M. Rogers, Diffusion of Innovations (New York: The Free Press of Glenco London, Macmillan, New York, 1962), p. 229-230.

[40]Kretch, Clutchfield, Ballachey, op. cit., p. 390.

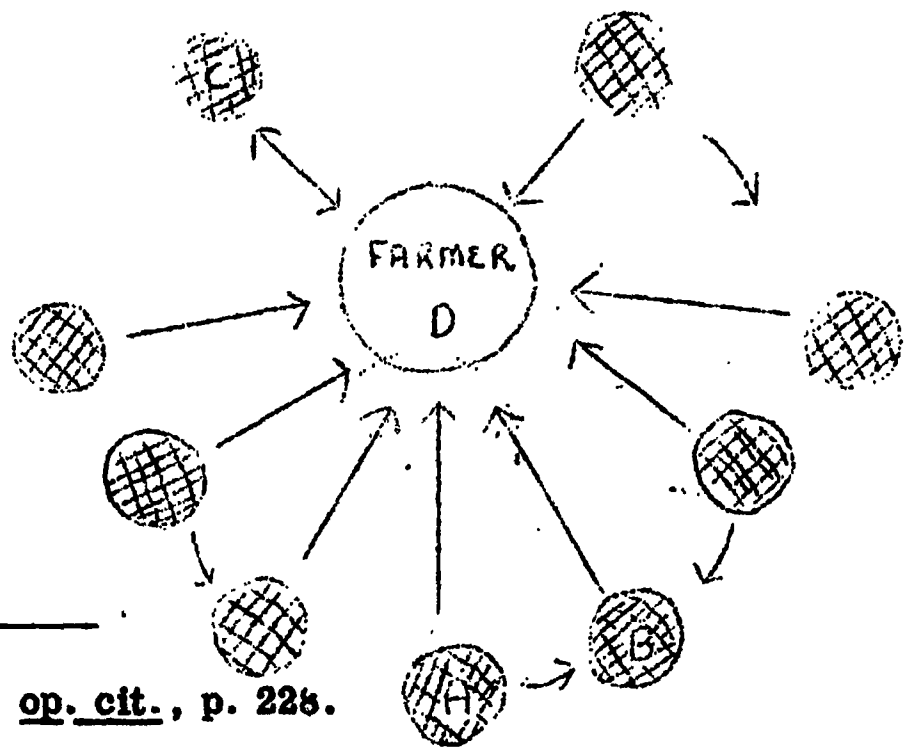
to locate a small number of opinion leaders. This method is probably more applicable to a research design where all members of a social system are interviewed, rather than where a relatively small sample within a larger universe is contacted.[41]

All data secured from sociometric interviews are used to construct a sociogram, which pictures for the whole group all the patterns of mutual like, dislike, and indifference, and the patterns of interaction.

Observation Method. The observation method was principally designed to be used in laboratory situations. However, the method of participant observation has been applied to the study of groups in their natural setting. The trained observers watch the group in action and made systematic records of what they see.[42]

THE SOCIOGRAM

The choices of individuals within a group, when asked who they like best, would support as a leader, or would like least, are shown in a chart such as Figure 1 which is called a sociogram.



[41]Rogers, op. cit., p. 225.

[42]Kretch, Clutchfield, Ballachey, op. cit., p. 384.

Figure 1, Sociogram showing visiting patterns among Maryland farm families. This sociogram shows who visits whom in a Maryland neighborhood. The arrows indicate the direction of the sociometric choices when the farmers were asked whom they visited. For example, Farmer A said that he visited Farmer B; this relationship is shown as an arrow from A to B. If the relationship is two-way, as between Farmers C and D, then the arrow is double-headed. Sociograms are a useful way to indicate key leaders or "influentials" in an informal group. Farmer D received visits from nine other families and appears to be a key leader in this neighborhood. By working closely with this leader, a county Extension agent or other professional workers could probably reach many other farmers indirectly.[43]

A SELF-DESIGNATING LEADERSHIP SCALE

The following are some sample questions that could be used to construct a self-designating scale for opinion leaders. They are taken from a study of the diffusion of new farm ideas among Ohio farmers (Rogers, 1957c). This self-designating opinion leadership scale consisted of six items:

1. During the past six months have you told anyone about some new farming practice?
2. Compared with your circle of friends (a) are you more or (b) are you less likely to be asked for advice about new farming practices?
3. Thinking back to your last discussion about some new farm practices, (a) were you asked for your opinion of the new practice or (b) did you ask someone else?
4. When you and your friends discuss new ideas about farm practices, what part do you play? (a) mainly listen or (b) try to convince them of your ideas?
5. Which of these happens more often, (a) do you tell your neighbors about some new farm practice, or (b) do they tell you about a new practice?

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[43]Everett M. Rogers, Social Change in Rural Society, (New York: Appleton-Century-Crofts, Inc., 1960), p. 81.

6. Do you have the feeling that you are generally regarded by your friends and neighbors as a good source of advice about new farm practices?

The distribution of scores on this simple opinion leadership scale can be rated into leaders and followers.[44]

SUMMARY

There are two principal ways to identify the leaders of a group: (1) self-reporting method, (2) observation method.

The self-reporting method consists of two main methods, (1) the investigator lives, works, talks and observes the members of the group (field interview); (2) the investigator asks members of the group to whom they go for advice and information about an idea (sociometric method).

Field interviews can be conducted two ways: (1) key informants, persons are selected for interview that are likely to know who the leaders are, (2) self-designating technique, a person is asked a series of questions to determine the degree he perceives himself as a leader.

The observation method is principally used in the laboratory situation; however, members of a group can be studied in their natural setting by a participant observer. The trained observer watches the group in action and records what he sees.

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[44]Everett M. Rogers, Diffusion of Innovations, (New York: The Free Press of Glencoe London: Macmillan New York, 1962), p. 230.

LEADERSHIP CHARACTERISTICS

Since an early date in the history of mankind, the subject of leadership characteristics have been of an endless concern to prophets, historians, political thinkers and most recently to sociology scientists.

The methods which have been employed for the identification and study of the personal characteristics of leaders have been limited to the personality of the leader himself rather than the situations and environments surrounding him. However, and in spite of the various surveys made in attempt to define leadership traits, no agreement has generally been reached as to this effect.

To analyze this situation, it was obvious that the changing leadership traits are attributed to the changing conditions in which the leaders existed. The natural evolution of the individual in the community and the changing conditions of mankind in the different societies from age to age and from one generation to the other did affect the leadership concept and characteristics in particular.

Michael S. Olmstead defined leadership traits as intelligence, courage, independence, considerateness and decisiveness.[45]

A comprehensive study was made by Brown and Cohn in an attempt to include all studies bearing on the problem of traits and personal factors associated with

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[45]Michael S. Olmsted, The Small Group (New York: Random House, 1959), p. 134.

leadership. They adopted the following methods in getting to the leaders characteristics:

(a) Observation of behavior in group situations.

(b) Choice of associates (voting).

(c) Nomination or rating by qualified observers.

(d) Selection (and rating or testing) of persons occupying positions of leadership.

(e) Analysis of biographical and case history data.[46]

One of the most striking facts about the outcome of the survey made was that little uniformity was found among the leaders' traits. Only intelligence, initiative and responsibility were mentioned twice among other items.

The factors which have been found to be associated with leadership were classified under the general heading of capacity, achievement, responsibility, participation and status:

(1) Capacity: (Intelligence, alertness, verbal facility, originality, judgment).

(2) Achievement (Scholarship, knowledge, athletic accomplishments).

(3) Responsibility (Dependability, initiative, persistence, aggressiveness, self confidence, desire to excel).

(4) Participation (Activity, sociability, cooperation, adaptability, humor).

(5) Status (Socio-economic position, popularity).

(6) Situation (Mental level, status, skills, needs and interests of followers, objectives to be achieved).

A person does not become a leader by virtue of the possession of some combination of traits, but the pattern of personal characteristics of the leader must bear some relevant relationship to the characteristics activities and goals

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[46]C. C. Brown and Thomas S. Cohn, The Study of Leadership (Danville, Illinois: Interstate Printers, 1958), p. 50.

of the followers. Thus, leadership must be conceived in terms of the interaction of variables which are in constant flux and change.

Newstetter, Feldstein and Newcomb, report that:

> "Being accepted or rejected is not determined by the cordiality or antagonism of the individuals treatment of his fellows, nor evidently, is the individuals treatment of his fellows much affected by the degree to which he is already being accepted or rejected by them. Their treatment of him is related to their acceptance or rejection of him. Their treatment of him is, of course, a reaction to some or all of his behaviors, but we have been completely unsuccessful in attempting to measure what these behaviors are". [47]

The authors conclude that these findings provide "devastating evidence" against the concept of the operation of measurable traits in determing social interaction. Brown and Cohn intimate that the findings of Newstetter and his associates do not appear to provide direct evidence either for or against a theory of traits, but they do indicate that the complex of factors that determines an individuals' status in a group is most difficult to isolate and evaluate.

Ackerson, [48] made some relevant observations on this point. He reported that, "the correlation for leaders and followers are not of opposite sign and similar magnitude as would be expected of traits supposed to be antithetical". These may not be the opposite poles of a single underlying trait. It may be that the true antithesis of leader is not follower, but indifference and that indicates the incapacity or unwillingness either to lead or to follow: Thus it may under other conditions take the role of follower, while the true opposite is represented by the child who neither leads nor follows.*

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[47] Ibid., p. 59.

[48] Ibid., p. 60.

Cartwright and Zander's viewpoint in the group functions to which leadership is to be defined is that "It is not possible at the present stage of research on groups to develop fully satisfactory designation of those group functions which are peculiarly functions of leadership. A more promising endeavor, at least for the present, is to identify the various group functions, without deciding finally whether or not to label each specifically as a function of leadership."[49]

Homans describes leadership as follows:

> "The fact is that leadership in a group may at one time be abrupt, forceful, centralized, with all communications originating with the leader, and at another time slow, relaxed, dispersed, with much communication back and forth between leader and followers. Each mode is acceptable, appropriate and authoritative, but each in different circumstances."[50]

Helen Jennings wrote that leadership "appears as a process in which no one individual has a major role but in which relatively many share."[51] Another definiti' , by the same writer is "Both isolation and leadership were found to be products of interpersonal interaction and not of attributes residing with persons."[52]

Thomas Gordon[53] stated that Jenkins[54] has reaced a similar conclusion after

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[49]Darwin Cartwright and Alvin Zander, Group Dynamics (Evanston, Illinois: Row, Peterson Company, 1960), p. 539.

[50]Homans, op. cit., p. 419

[51]Helen Jennings, Leadership and Isolation (New York: Longmans Green and Company, 1943), p. 539.

[52]Ibid.

[53]Thomas Gordon, Group Centered Leadership (Boston: Houghton Mifflin, 1955), p. 48.

[54]Jenkins, W.O. A Review of Leadership Studies with Particular Reference to Military Problems.

an extensive review of leadership studies and he quoted the following text:

> "Leadership is specific to the particular situation under investigation. Who becomes a leader of a given group engaging in a particular activity and what the leadership characterisitcs are in the given case are a function of the specific situation including the measuring instruments employed by the investigator. Related to this conclusion is the general finding of wide variations in the characteristics of individuals who become leaders in similar situations, and even greater divergence in leadership behavior in different situations."

All of these studies were used as an evidence against the theory of leadership traits and characteristics and the situational aspects of leadership has eventually become a necessity in the studies of recent social scientists. They also treated the leadership phenomenon from another angle apart from the leader and situation point of view and that was the follower role.

Sanford wrote as quoted by Thomas Gordon:

> "It can also be strongly argued that the follower, too, must be studied if we are to see most clearly what happens in a leadership event. It is the follower as an individual who perceives the leader who perceived the situation and who, in the last analysis, accepts or rejects leadership. The followers' persistent motives, points of view, frames of reference or attitudes will have a hand in determining what he perceives and how he reacts to it. These psychological factors in the individual follower cannot be ignored in our search for a science of leadership."[55]

Cecil Gibb emphasizes this this interactional aspect of leadership:

> "Leadership is always relative to the situation-relative, that is, in two senses (a) that leadership flourishes only in a problem situation and (b) that the nature of the leadership role is determined by the goal of the group; and this is, in fact, the second principle of leadership, that it is always toward some objective goal. The third principle is that leadership is a process of mutual stimulation- a social interactional phenomenon in which the attitudes, ideals and aspirations of the followers play as important a determining role as to the individuality and personality of the leader."[56]

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[55] F.H. Sanford, "Leadership Identification and Acceptance", p. 159.

[56] C.A. Gibb, "The Principles and traits of Leadership", p. 272.

Stogdill, after examining a large number of leadership studies aimed at isolation the traits of effective leaders, comes to the following conclusion:

> "The qualities, characteristics and skills required in a leader are determined to a large extent by the demands of situation in which he is to function as a leader."[57]

> "More recently the follower has been systematically considered as a major variable in leadership research. This approach focuses on personal needs, assuming that the most effective leader is the one who most nearly satisfies the needs of his followers".[58]

From the above studies it was made clear that leadership traits cannot be a matter of passive status or merely of possessing some combination of traits. It is a joint relationship existing between the leader and the group, through which he acquires the leaders' traits and by the group cooperation, he can demonstrate his capacity for shouldering his responsibilities as an organizer and leader. His powers are derived partly from the group in one hand and from his intelligence, alertness to the needs and motives of others, insight into situations on the other hand. These traits must be supported by sense of responsibility, initiative, persistence and self confidence.

In summarizing the foregoing, we can say that the leaders' characteristics and traits can not be identified as a definite contribution to the leaders' personality. The study on leadership characteristics and traits must be combined with a similar study on the followers and the situations in which they exist. His success

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[57]Ralph M. Stogdill, "Personal Factors Associated with Leadership", A survey of the Literature, Journal of Psychology, Vol. 25, p. 63, Jan. 1948.

[58]Robert Tannebaum, Leadership and Organization (New York: McGraw-Hill Company, 1961), p. 23.

or failure, his personality, his traits and characteristics as a leader are the products of the group, the situation, and himself.

DEVELOPING LEADERSHIP

"What can be done in a broad sense"?

A similar question to the above bearing the same meaning was asked in short interviews with some agriculture and extension leaders at NMSU. The answers given were almost the same as to how leadership could be developed. Some of their answers were as follows:

1) Putting peoples in positions of responsibility.
2) Helping create situations that give leadership experience.
3) By motivation.

These answers were of course relating to the formal type of leaders working, though under planned objectives, but execution of such objectives and fostering of new ideas was left to their discretion.

Kreitlow, Aiton and Torrence summarized their ideas with regard to this subject as follows:

A. Helping Leaders in Groups

1) Pre-service meetings for prospective leaders.
2) Meetings for new leaders
3) Problem clinics, based on actual or simulated cases.
4) Subject matter institutes.
5) Demonstrations by experienced leaders or members.
6) Special parent-leader meetings to discuss needs of youth and the community.
7) Tours and educational trips.
8) Symposium by several authorities on objectives or philosophy.
9) Work sessions to practice skills of teaching.
10) Construction, procurement or use of visual aids.
11) Child study groups.[59]

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[59]Kreitlow, Aiton, Torrence, Leadership For Action in Rural Communities, (The Interstate Printers and Publishers, Inc., Danville, Illinois, 1960)

12) Achievement events, fairs, exhibits.
13) Recognition events and special awards.
14) Buzz sessions, brainstorming, discussions.
15) Socio-drama, pageants, puppet shows.
16) Luncheon or dinner seminars and chalk talks.
17) Discussion and analysis of research or study projects.

B. Helping Leaders through Mass Communication.

1) Leader-letter or house organ.
2) News, magazine, radio and TV features.
3) Circular letters, bulletins, books.
4) Public exhbits, movies, recordings, signboards.
5) Leader manuals, teaching materials.

C. Helping Leaders in Other Ways.

1) Personal visits, letters, telephone calls and office calls.
2) Visits to the leaders' group or activity.
3) Participation in evaluation or study projects.
4) Praise and recognition of progress and accomplishment.
5) Providing needed materials, organization or assistance on time and in a usable way.
6) Understanding and counsel on special problems.
7) Inspiration, enthusiasm and good example.

WHAT CAN THE EXTENSION SERVICE DO TO DEVELOP LEADERS?

Extension personnel are educators, advisers, surveyors of information, executives, and representatives of the United States Department of Agriculture.[60] They function mainly as teachers. As teachers, they want to develop new and improved practices, ideas, skills, habits, interests, attitudes, appreciations, values, and understanding. In order to accomplish any of these tasks, leaders must first be developed. Without first developing leaders there is no direction, no goals, no interests, and no accomplishment.[61]

"One of the worst and most frequent tricks perpetuated on human society is to urge leadership on a willing victim without providing at the same time for pre-service and beginning assistance. This practice accounts for the initial hesitancy and early drop-out of many volunteer leaders."[62]

"The following is a summary of methods for helping leaders."

1. Pre-service meetings for prospective leaders.
2. Meetings for new leaders.
3. Problem clinics, based on actual or simulated cases.
4. Subject matter institutes.
5. Demonstrations by experienced leaders or members.
6. Special parent-leader meetings to discuss needs of youth and the community.
7. Tours and educational trips.
8. Work sessions to practice skills of teaching.
9. Construction, procurement of use of visual aids.
10. Achievement events, fairs, exhibits.
11. Recognition events and special awards.[63]

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[60]The United States Department of Agriculture, The Yearbook of Agriculture 1962. "The County Agent", p. 616.

[61]Agriculture Extension Service, New Mexico 4-H Club Leaders' Handbook. (New Mexico College of Agricultural Extension Service), p. 35.

[62]Burton W. Kreitlow, E. W. Aiton, Andrew P. Torrence, Leadership for Action in Rural Communities (Illinois: Interstate Printers and Publishers, Inc., 1960), p. 135.

[63]Ibid., p. 145.

Leadership programs alone are not the only means of developing leaders. The 4-H leader is to help each member in the club find out what he wants to do with himself; then try to help him do it. The leader may open doors through project work and club activities which will help the individual to see his goals, but the leader does not set the goals for the individual. The leader may teach him to think but does not think for him. The individual may be counseled with, but no one tries to manage him. The leaders job is to teach, but not govern; to guide but not control. Individuals learn best by making decisions and thinking for themselves as a result certain leadership qualities are developed or strengthened.[64]

"The 4-H Club project is the basis on which the club project is the basis on which the club program is built. Projects are individual tasks which have definite minimum requirements for completion. Project reports are also required. Members begin their work with a project and continue working on projects during their membership."[65] This is just another segment of 4-H work which helps to educate boys and girls for leadership positions.

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[64]New Mexico State University, Agriculture Extension Service. Op. cit., p. 10.

[65]Ibid., p. 13.

SUMMARY OF PERSONAL INTERVIEWS

Interviews were conducted to obtain greater insight about leadership and leader-characteristics. A total of nine persons were interviewed. They were: a college dean, state 4-H club leader, rancher, farmer, farm bureau president, county agricultural agent, housewife, local 4-H club leader, and an assistant director of the cooperative extension service.

A summary of their answers are contained in the following sample of the questionnaire.

IDENTIFYING LEADERSHIP

1. WHO DO YOU CONSIDER TO BE THE MOST OUTSTANDING AGRICULTURAL LEADER IN NEW MEXICO?

   Eight different persons were named, varying from college professors to large landowners.

2. WHO DO YOU CONSIDER TO BE THE MOST OUTSTANDING AGRICULTURAL LEADER IN DONA ANA COUNTY?

   Six different persons were named for Dona Ana County.

3. WHAT CHARACTERISTICS MAKE THESE PERSONS STRONG LEADERS?

   Sincere, confident, well-informed, progressive, financially able, pleasing personality, personal drive, ability to speak, successful, dependable, friendly, sets the example.

4. HOW DOES THE EXTENSION SERVICE DEVELOP LEADERSHIP?

   Recognize and encourages people to become involved in organizations, motivate people, organize groups, works with 4-H clubs, works with adult leaders, conducts leader education short courses, encourages people to accept positions of responsibility, creates situations for leadership experience.

5. WHAT COULD THE EXTENSION SERVICE DO TO DEVELOP BETTER LEADERSHIP IN DONA ANA COUNTY?

Conduct leader training programs, provide more opportunity for leadership development, conduct leadership contests, encourage people to take the lead, conduct unified programs, develop leadership in set programs, work more closely with farm organizations and encourage these organizations to carry on leadership seminars, place more emphasis on recotnition and development.

6. WHAT CAN BE DONE TO IMPROVE LEADERSHIP IN NEW MEXICO?

Give more time to develop potential leaders through organized programs, leadership training programs, train the agents who in turn train the local leaders, delegation of responsibilities, more participation in the farm bureau and train 4-H club leaders for specific jobs.

7. WHAT CHARACTERISTICS WOULD YOU LIKE A GOOD AGRICULTURAL LEADER TO HAVE?

Interest in people, dedication to his ideas, fair and just, honest and alert, able to listen, respectable appearance, knowledge of field, ability to speak, well liked, forceful, tactful, well-informed, young, intelligent, energetic and unbiased.

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4-H ADULT LEADERSHIP DEVELOPMENT

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a Committee Report

Presented in Partial Fulfillment

of the Requirements for the Course

Agricultural Extension Education 516

New Mexico State University

University Park, New Mexico

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by

Herman C. Baca, Clariece Hall,

and James R. Sais

CHAPTER I

INTRODUCTION

Leadership development is a popular topic for the educator, the psychologist, the sociologist, and the church worker, however, to the extension worker the concept of adult leadership development has special and unique qualities. The success of the extension worker's youth program rests on the foundation of a sufficient number of well qualified volunteer 4-H leaders.[1]

Extension workers can neither personally lead each 4-H Club nor be expected to have all the specialized talents required by the 4-H Club program. Adult 4-H leaders who have special abilities and a spirit of inventiveness should be identified, developed, and utilized to develop responsible and capable 4-H Club members.[2]

The primary objective of an adult leadership development program should be based on the philosophy of increasing the reach of 4-H for the development of a greater number of boys and girls. Their informal educational needs and interests should be met more effectively and efficiently.[3]

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[1]Clodus R. Smith, "Leaders Are Born and Trained," Extension Service Review, Vol. 34 (September, 1963), pp. 174-175.

[2]Ibid.

[3]Lloyd L. Rutledge, "Program Development through Leadership Development," Extension Service Review, Vol. 33 (October, 1962), p. 199.

It is an error to doubt that potential leaders are present. A community is never void of potential adult leadership. Potential leaders are all about us--given a situation and stimulation, they will evolve. The community is a natural setting for 4-H leadership development. These people only need to be motivated to be developed. Alert extension workers recognize these activities as opportunity for adult leadership development. Adult leadership development is vital and essential to a successful extension youth program. Challenging extension activities are reaching an increased number of people creating new leadership needs. To satisfy these needs, desirable persons who are potential 4-H leaders should be stimulated to serve.[4]

Adult leadership development makes a big contribution to extension education, because it contributes toward the development of the individual's intellectual ability, skills, emotional qualities and philosophy of service.[5]

I. THE SITUATION IN NEW MEXICO

In 1961 a county 4-H program evaluation was completed by the New Mexico State 4-H Club staff in 31 New Mexico counties. The evaluation revealed low re-enrollment, short member and leader tenure, need for leadership development,

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[4]Smith, op. cit., p. 175.

[5]Rutledge, op. cit., p. 199.

and low membership compared to agent time spent in 4-H Club work.[6]

As a result of the county 4-H program evaluations and findings from the Western States Study on leader training, a need for more emphasis on the involvement of adult leaders in the 4-H Club program was strongly indicated. Assistance was requested from Dr. E. J. Niederfrank, Extension Rural Sociologist, Federal Extension Service, in developing a state program on 4-H leadership development. The meeting resulted in the establishment of a basic objective to place greater emphasis on local leadership development in the New Mexico 4-H Club program by increasing the quality and quantity of education of 4-H Club members, through more and better involvement of the adult local leaders. Dr. Niederfrank and the state 4-H staff members developed a training program for agents in the area of leadership development.[7]

In 1964 twenty-seven counties in New Mexico were participating in the leadership development program.[8]

In 1963 a total of 1137 Four-H voluntary leaders were actively engaged in the state 4-H Club program. The average number of leaders served in New Mexico per agent year was 36 leaders in comparison to the Western States

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[6] Leadership Development Program in New Mexico, New Mexico State University, Cooperative Extension Service, Mimeograph 4-H 3/64 (March, 1964), p. 1.

[7] Ibid., pp. 1-2

[8] Statement by Dorman C. Brookey, personal interview.

average of 109 leaders per agent year.[9]

The development program of assisting leaders varies widely according to community needs, cultural situations, and according to present quality of leadership and resources available in the counties. Training 4-H leaders implies an effort to stimulate and encourage a development of knowledge, skills, and attitudes that will improve the quality of results and the pleasure and satisfaction that is received from successful leadership performance. Frequently the extension worker will encounter the unlearning of old practices and the removing of blocks to leadership activities as well as stimulating new ideas or procedures.[10]

II. THE PROBLEM

Problems in adult 4-H leadership development in New Mexico were defined by the committee as follows:

1. To obtain 4-H leaders. There is a need to identify leaders, to recognize potential leaders, and to enlist volunteer leaders for the 4-H Club program.

2. To educate 4-H Club leaders. The committee felt a need to find leaders' educational needs, to determine methods of meeting the leaders' needs, and to develop an effective leader development program.

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[9]Statement by Toribio D. Apodaca, personal interview.

[10] Burton W. Kreitlow, E.W. Aiton, and Andrew P. Torrence, Leadership for Action in Rural Communities (Danville, Illinois: The Interstate Printers and Publishers, Inc., 1960), pp. 133-134.

3. To retain present 4-H Club leaders. There is a need in New Mexico for providing recognition for local leaders.

4. To identify the role of the Extension worker in the 4-H Club program.

CHAPTER II

OBTAINING 4-H LEADERS

I. IDENTIFYING LEADERS

A leader should develop early a definite philosophy of life. Life is not a problem. It is a task to be lived.[1] The youth's loyal enthusiasm for his organized group is directly related to the values found within it.[2]

Rogers states three main methods of identifying leaders: (1) The sociometric technique consists of asking group members to whom they go for advice and information about an idea. (2) Key informants in a social system may be asked to designate the leaders. (3) The self-designating technique consists of asking a respondent a series of questions to determine the degree to which he perceives himself to be a leader.[3]

Roberts says that adult leaders of teen-age groups need these qualifications: Intelligence, understanding, and wisdom. Intelligent adult leaders see to it that youth have opportunity to find what they are looking for through their chosen organization. Understanding adult leaders see to it that opportunity is provided for satisfying the individual and group action in relation to the values found. Wise adult leaders see to it that opportunity is provided for young people

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[1]William Peterson, The Spirit and Philosophy of Extension Work (Washington: United States Department of Agriculture and Epsilon Sigma Phi National Honorary Fraternity, 1952), p. 137.

[2]Dorothy M. Roberts, Leadership of Teen-Age Groups (New York: American Book-Stratford Press, Inc., 1950), p. 70.

[3]Everett M. Rogers, Diffusion of Innovations (New York: The Free Press of Glencoe, 1962), pp. 228-230.

to choose those programs which will help them to become discriminating about all values.[4]

Each group may include three kinds of local leaders in the 4-H Club organization. These are known as the organizational, project or activity, and special meeting leaders.

Research reports have revealed some facts about what kind of people should be local leaders: "They should be slightly above the group with which they will work as to income, success, education, and social level. They need to be social and community minded. They need to feel they have the time, although they may be the busiest person in the community."[5]

A summary of the ideas of some two hundred teen-age boys and girls on leader qualifications reveals that "understanding and liking us" was most mentioned by them while the others in order of importance were: Interest, knowledge, and experience.[6]

Trecker lists some 4-H leader qualifications as:

1. People whose own groups have been satisfactory and productive.

2. Family background.

3. How the leader works with community groups.

4. A good team worker

5. Familiar with 4-H program if possible.

6. Awareness of needs of young people.

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[4]Roberts, op. cit., pp. 70-71.

[5]R.C. Clark and W.E. Skelton in "Role of the Agent in Leader Training" by Laurel K. Sabrosky, Journal of Cooperative Extension, Vol. I, No. 1 (Spring, 1963), p. 32.

[6]Roberts, op. cit., p. 71.

7. Leader should be flexible and adaptive to respond to changing moods.

8. Understanding self and awareness of strength and limitations.[7]

Club leaders could effectively grade themselves by checking their own qualities and attitudes against the 4-H members' requirements. "The capacity for genuinely liking young people, individually and in groups, is the one essential for good leadership. Most of the other requirements will come, given a little time, by themselves. Those that do not come can be learned."[8]

The basic characteristics of leaders which are found ready-made are health and energy, intelligence, friendliness, dependability, courage, patience, etc. Those that can be improved in a leader are training and experience, subject matter knowledge, enthusiasm or singleness of purpose, ability to teach or stimulate, and ability to organize, to delegate, and to plan.[9]

Characteristics of good work relationships according to Trecker are:

1. Leaders are clear on their goals, purposes, and what they are working for.

2. They work planfully, systematically, and in an organized way in relation to a realistic time budget.

3. There is an evident mutual respect, confidence, and trust in one another.

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[7]Harleigh B. Trecker, "Democratic Leadership - Challenge and Responsibility", presented at National 4-H Club Congress, Chicago, Illinois (November, 1959).

[8]Roberts, op. cit., pp. 72-73.

[9]Lincoln D. Kelsey and Cannon C. Hearne, Cooperative Extension Work (Ithaca, New York: Comstock Publishing Associates, second edition, 1955) P. 204.

4. There is evidence that there is a warm, friendly, relaxed, open free, and frank attitude toward one another.[10]

II. ENLISTING 4-H LEADERS

It is not an easy task to find capable adults who are willing to give time to youth. A qualified person could be hired if the money were available; however, since funds are not available, the volunteer leader is the most desirable source for 4-H Club leadership.

An appeal through mass media communication in the form of radio talks, newspaper articles, talks to service and civic clubs, women's clubs, churches, school teachers, parents of 4-H Club members, and community leaders would be a desirable means for securing volunteer leaders.[11] The talks telling why the leaders are needed and what the adult will be required to do should be carefully prepared with enthusiasm and frankness. Mention some of the youth-expected qualifications for a leader. Close the talks with some real challenge of the job and that it is worthy of the best adults.[12] When leaders have responded they should be called together to discuss plans and details. A discussion of the objectives the leaders may have in undertaking the assignment is advisable.[13]

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[10]Trecker, loc. cit.

[11]Roberts, op. cit., pp. 75-78

[12]Ibid.

[13]Roberts, op. cit., p. 108.

Kelsey and Hearne list the following steps in discovering leaders:

1. What is the job to be done?
2. What characteristics and skills does this job require?
3. Where is the person with these qualifications?
4. What group will support or follow this person?
5. Of the qualities he has
   (a) Which of them may be improved by training?
   (b) Which may not be changed materially?
6. Of the qualities he lacks
   (a) Which may be developed by experience and training?
   (b) Which may he never hope to have?
7. On what basis shall a qualified person be induced to serve?[14]

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[14]Kelsey and Hearne, op. cit., p. 204.

CHAPTER III

EDUCATING LEADERS

I. NEEDS OF A 4-H LEADER

Before an effective leadership development program can be outlined, the basic needs of a 4-H leader should be considered. New and inexperienced leaders especially need assistance and encouragement in undertaking a leadership position. Kreitlow, Aiton and Torrence mention these needs of a new leader: strong motivation and reassurance, clarification of objectives and purposes, to feel qualified, knowledge about the organization, to feel his office is important, knowledge in human relations, help in learning to evaluate results.[1]

In his master's report on motivating 4-H leaders in a training program, Bill Borst lists the following four basic training needs of 4-H leaders:

1. To see their needs in terms of their job.
2. To be motivated to solve their problems.
3. To have adequate information about their job.
4. To know how to keep the interest of boys and girls.[2]

Sabrosky gives these sources of information for planning any educational program: "(1) The needs as displayed by a study of the situation; (2) the

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[1]Burton W. Kreitlow, E.W. Aiton, and Andrew P. Torrence, Leadership for Action in Rural Communities (Illinois: The Interstate Printers and Publishers, Inc., 1960) p. 137.

[2]Bill Borst, Unpublished Master's Report on Motivating 4-H Leaders in a Training Program (Colorado State University, Fort Collins, 1962) pp. 36-39.

interests of the individuals being trained (sometimes called their recognized needs as well as interests); and (3) the knowledge of the professional person as to what the person or persons need in light of the situation."[3]

T.T. Martin in his presentation at the Maryland State Extension Conference listed the following topics on which leaders need assistance from professional Extension workers:

1. New Leaders Need to Know the Following:

   a. What is expected of them.
   b. How to execute their duties.
   c. What helps are available to do the job.
   d. The importance of community and parent cooperation.
   e. The meaning of 4-H Club Work.
   f. How to carry out an organizational and project meeting.
   g. Project subject matter.

2. Leaders of Longer Tenure Need Training in the Following:

   a. Subject matter.
   b. Carrying on recreational activities.
   c. How to get parent cooperation.
   d. How to keep parent cooperation.

3. Points to be Included in the Training of 4-H Leaders:

   a. How to organize and hold a club meeting.
   b. How to understand boys and girls of different ages.
   c. The importance of parent and community cooperation and what it involves.
   d. How to designate responsibility and get cooperation.
   e. How to conduct project activities needing professional training, such as demonstrations, judging and contests.
   f. Reasons for and uses made of records and reports for which leaders are responsible.
   g. Importance of completing projects to the development of boys and girls.[4]

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[3]Laurel K. Sabrosky, "Role of the Agent in Leader Training," Journal of Cooperative Extension, Vol. I (Spring, 1963), p. 35.

[4]T. T. Martin, "Are You Sure Your Leaders Understand?", Presented to the Maryland State Extension Conference (December, 1957).

According to Kreitlow, Aiton and Torrence difficulties of leaders mentioned most frequently are:

> Training judging teams; training demonstration teams; developing community and parental cooperation; helping members to keep and complete project records; getting and holding the interest of 4-H members; planning the program and making it a year-around one; getting members to plan their own program; planning and attending 4-H events and activities; arranging details, attending, and guiding regular club meetings; dividing responsibilities among other people; getting material and equipment for project work, and lack of time to supervise the program adequately.[5]

There is a question which arises at this point as to who is best qualified to determine the actual needs of leaders for training. From information obtained from a questionnaire sent to 198 Four-H Club leaders in five states, Borst found that leaders want to have a part in planning their training. They want training on information which meets their current needs, and they learn better when they are allowed to participate in the training program.[6] Many people seem to agree that leaders themselves would be best qualified to determine the areas of their greatest need; however, Sabrosky states that leaders, especially first-year leaders, are probably not as qualified as Extension agents to determine the needs of leaders for training. He says:

> "Rather than either agents or leaders having the major say in what to include in leader training, perhaps it should be planned jointly. As second choice, perhaps Extension workers should have major say. Major say does not necessarily mean they have the total say. Giving leaders the major say might be a poor third choice."[7]

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[5]Kreitlow, Aiton and Torrence, op. cit., p. 135.

[6]Borst, op. cit., p. 33.

[7]Sabrosky, op. cit., pp. 35-36.

II. METHODS OF TRAINING 4-H LEADERS

In his study, Borst found that leaders prefer varied presentations in leader training. Different methods could be used, but if the object is to teach, lectures should be used. If the object is to change conduct or attitudes, leaders need to be involved in the session. Leaders like informality and relaxation at the meetings. Training methods in order of preference by the leaders include county 4-H events, leader training meetings, training workshops, agent visits (preferred by full time farmers), 4-H office visits, phone calls, leader council meetings, and training letters.[8]

There are many methods by which information and instruction may be given to leaders. Kelsey and Hearne give this list of devices for training:

1. Training meetings: (a) to teach principles, (b) to give practice in in conducting meetings or interviews.
2. Handbook for leaders (looseleaf).
3. Regular service letter for leaders (punched for the handbook).
4. Occasional circular letters and personal letters.
5. Printed leaflets, bulletins, or books.
6. Visits to the leader by the agent.
7. Apprenticeship: (a) substituting for and assisting other leaders, (b) performing selected tasks under instruction and observation, such as presiding at part of a meeting.

Kreitlow, Aiton and Torrence list additional means of helping leaders in groups. Some of these are:

1. Pre-service meetings for prospective leaders.
2. Meetings for new leaders.
3. Subject matter institutes.
4. Demonstrations by experienced leaders or members.
5. Special parent-leader meetings to discuss needs of youth.
6. Tours and educational trips.

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[8]Borst, op. cit., p. 34.

[9]Lincoln D. Kelsey and Cannon C. Hearne, Cooperative Extension Work (Ithaca, New York: Comstock Publishing Associates, 1963), p. 236.

7. Symposium by several authorities on objectives or philosophy.
8. Work sessions to practice skills of teaching.
9. Construction, procurement or use of visual aids.
10. Achievement events, fairs, exhibits.
11. Buzz sessions, brainstorming, discussions.
12. Socio-drama, pageants, puppet shows.
13. Luncheon or dinner seminars and chalk talks.[10]

III. 4-H LEADERSHIP DEVELOPMENT PROGRAM

As a result of the county 4-H program evaluations in 1960-61, the New Mexico State 4-H Club Staff composed of Dorman C. Brookey, Tiny Faye Jones, and Toribio Apodaca with the assistance of Dr. E. J. Niederfrank, Extension Rural Sociologist, Federal Extension Service, developed a program of leadership development for 4-H Club leaders in New Mexico. The program was initiated in four pilot counties--Bernalillo, Colfax, Santa Fe, and Torrance. Agents from these counties met with the state 4-H staff for an orientation meeting and subsequent training meetings throughout 1961-63. Topics to receive priority at each meeting were selected by the agents.[11]

The state 4-H staff developed and prepared training material for each topic including an agent's guide and leader's guide as well as visuals, such as charts and flannel-graph cutouts, to be used at leader training meetings. The 4-H staff members conducted training sessions on each of the topics to introduce and familiarize the material to the agents. The agents were encouraged to set up systematic leader training in their respective counties consisting of 4-H leader short courses of two-hour sessions to be conducted within a fairly short period

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[10]Kreitlow, Aiton, and Torrence, op. cit., pp. 145-146.

[11]Leadership Development Program in New Mexico, New Mexico State University, Cooperative Extension Service, Mimeograph 4-H 3/64 (March, 1964), pp. 1-3.

of time. Pilot counties initiated leader training programs in their counties. In 1962, additional counties were brought into the program, and at the present time twenty-seven New Mexico counties are participating.[12]

The following are leader training topics for which training material has been prepared:

4-H History, Objectives and Philosophy
Planning Local 4-H Club Programs
Understanding and Working with Youth
4-H Project Selection
4-H Record Keeping
4-H Leader Responsibilities
Teaching Techniques and Methods
Local 4-H Program Evaluation
4-H Leader Record Keeping
Officer Training and Parliamentary Procedure
Working With Project Leaders
Planning Local 4-H Club Activities and Events
Recognition and Awards in 4-H Club Work

State 4-H staff members will continue to prepare leader training material as topics are selected by counties in the program.[13]

The training program has been well accepted by Extension agents throughout the states. They have found the material useful not only for leaders, but also as a source of information on the 4-H program in New Mexico.[14]

In addition to the training topics listed above, New Mexico 4-H Club leaders and the state 4-H staff have expressed a need for more leader instruction and training in subject matter areas. This training is given by Extension agents

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[12] Leadership Development Program in New Mexico, op. cit., p. 3.

[13] Ibid., p. 4.

[14] Opinion by Tiny Faye Jones.

in cooperation with state Extension specialists using 4-H project material and leader guides as developed by the specialists. Methods of presentation include training meetings and workshops.

CHAPTER IV

RETAINING ADULT CLUB LEADERS

I. WHY DO 4-H CLUB LEADERS QUIT?

In a study by the Western Region 4-H Study Committee, composed of ten Western States, including New Mexico, research indicated a rapid turn over in volunteer 4-H Club leaders. In the study one-half of the local leaders were first year leaders, indicating a fifty per cent turn over of leaders for the club year 1954-1955. Another one-third of the leaders were second and third year leaders.[1]

In 1963, New Mexico had a total of 1137 Four-H Club leaders; 403 of this number were first year leaders.[2] County extension workers in New Mexico have been posed with the question, "Why do 4-H leaders quit after the first year?"

Martin gives the following reasons why 4-H Club leaders quit:

1. Main Reasons Why Leaders Quit.

    a. Conflict of club work with home and occupational duties.
    b. Lack of interest and cooperation by parents and the community.
    c. Ill health of the leader or someone else in the family.

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[1]Laurel K. Sabrosky and Fern S. Kelley, Let's Strengthen our Local 4-H Leader Training (Washington: U.S. Government Printing Office, Federal Extension Service Pa-395, 1959), pp. 1-4.

[2]New Mexico Annual Statistical Report, 1963, New Mexico Cooperative Extension Service.

2. Less Frequent Reasons Why Leaders Quit.

a. Moving from the community.
b. Lack of interest and cooperation by the members.
c. The failure of members to organize a club.
d. Lack of training in club work.
e. Addition of too many community responsibilities.

3. Other Reasons Why Leaders Quit.

a. Competition for time and interest of membership by other organizations.
b. Objections from the families of the members.
c. The club program being too full.
d. Lack of standards in judging.
e. Members being too scattered to form a club.
f. Lack of meeting place.
g. Poor relationship between leaders.
h. Requirements of more time than leaders could give.
i. Heavy personal expense involved.
j. Belief that they have done their share and that others should carry on.[3]

In an interview with New Mexico State 4-H Staff members the following reasons were given as to why they felt first year leaders quit:

1. Leadership is not divided and defined. Leaders do not understand what their responsibilities are.

2. Leaders feel no security from boys, girls, or parents for the amount of time they devote to the program.

3. Leaders in today's society tend to have the feeling of, "Why not let Mrs. Smith do it; I have already done my share."

4. There is inadequate orientation by agents in presenting the true facts of what the leader will encounter. Agents tend to give only "the brighter side of the picture."

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[3]T. T. Martin, The 4-H Club Leader's Handbook (New York: Harper and Brothers, 1956), pp. 59-60.

5. Leaders receive inadequate leader training.

6. First year leaders think they must compete with leaders with more tenure, not realizing that it takes time for results, thus leaders feel failure.[4]

In the Western Region Study recommendations for retaining leaders were to provide a more effective leader training. The committee stated, "There is a strong possibility that a trained local leader will stay with the program." In their findings forty-five per cent of the local adult leaders in the study had not attended leader training meetings. Leaders who did attend went to an average of two meetings per year. In their recommendations, the committee emphasized that new leaders need considerable assistance, in both methods and subject matter.[5]

Kreitlow, Aiton, and Torrence state five ways to decrease the difficulties of the leaders as follows:

1. Adjust the program to reduce leaders' difficulties.
2. Redistribute or redefine the functions to be preformed by local leaders, extension workers, parents and members.
3. Select leaders whose qualifications are such that they will not encounter difficulty.
4. Prepare leaders so that they will have less difficulty with their work.
5. By appropriate supervision and recognition increase the enthusiasm of local leaders and their desire and interest in overcoming difficulty.[6]

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[4]Opinions expressed by New Mexico State 4-H Club Staff, personal interview.

[5]Sabrosky and Kelley, op. cit., pp. 3-4.

[6]Burton W. Kreitlow, E. W. Aiton, and Andrew P. Torrence, Leadership for Action in Rural Communities (Danville, Illinois: The Interstate Printers and Publishers, Inc., 1960), pp. 135-136.

Kelsey and Hearne suggest the following methods of maintaining interest and enthusiasm of local extension leaders:

1. Give the community an understanding of the local leader's job.
2. Give local leaders an understanding of their job and its importance.
3. Ask for suggestions, advice, and participation from local leaders.
4. Help and encourage local leaders.
5. Avoid overloading leaders.
6. Organize the program carefully.
7. Arrange for public and official recognition for leaders.[7]

III. RECOGNITION FOR ADULT 4-H CLUB LEADERS

Recognizing and thanking 4-H Club leaders, who have contributed their time, energy, and thought to the 4-H Club program is important in maintaining a corps of highly trained, qualified, and dedicated 4-H Club leaders.[8]

Recognition is a tool that extension workers can apply to aid leaders in having a more satisfying experience in club leadership. An adult 4-H leader must have recognition that gives real satisfaction and which is the result of sincere effort.[9]

Kreitlow, Alton, and Torrence list two extreme types of leader motivations, indicating that there are many gradients and combinations in between:

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[7]Lincoln D. Kelsey and Cannon C. Hearne, Cooperative Extension Work (Ithaca, New York: Comstock Publishing Associates, 1963), pp. 238-242.

[8]V. Joseph McAuliffe, Recognizing and Thanking 4-H Leaders, Federal Extension Service, U.S. Department of Agriculture, Pamphlet 518 (Washington: U.S. Government Printing Office, 1962).

[9]Recognition and Awards in 4-H Club Work, New Mexico Leadership Series, New Mexico State University, Cooperative Extension Service, Number 200 L-11, p. 2.

"(1) A seeking of personal glory and gain. (2) A genuine joy and satisfaction in serving."[10]

The leader seeking personal glory or gain may be a form of self-centered leadership, while the other is a form of service.[11] Regardless of the motives of the leaders it is only courteous to recognize and thank leaders for their dedications in helping the extension program and in helping 4-H Club members in becoming better citizens.

McAuliffe indicates that perhaps the highest form of recognition a leader can receive is to be asked to assume an important role and then be allowed to perform this function. The role assumed by the 4-H adult leader should be classified as an important phase in the overall extension program. The agent's responsibility is to give and clarify guidelines in helping the leader develop skills and understanding to carry out the responsibility.[12]

The New Mexico State 4-H Club staff indicated that frequently Extension workers try to recognize leaders by presenting "material" recognition, while 4-H leaders indicate that a "pat on the back" and a thanks from the extension agent, club members, and parents are more meaningful to them than pins, certificates, etc.[13]

The aim of the Extension worker for a plan for leader recognition is to

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[10]Kreitlow, Aiton, and Torrence, op. cit., pp. 41-42.

[11]Ibid.

[12]McAuliffe, loc. cit.

[13]Opinions expressed by New Mexico State 4-H Club Staff, personal interview.

show leaders that the community and extension service value them and their efforts.[14]

Sabrosky said in a speech to State 4-H Club leaders at National 4-H Club Congress:

> The local 4-H leader is a more modest, unassuming person than the extension worker thinks he is. A local event put on to honor him, a county-wide leaders' banquet, or publicity in the newspaper, are not as important to him as a word of appreciation spoken by the county extension worker. Perhaps there are some modest, unassuming extension workers, too, since they do not consider it very important for them to express appreciation to a local leader. Both extension workers and local leaders are what you might call "small-town, neighborly" kind of people. Both thought it real nice for the individual club member and the members' parents to express appreciation to the local leader.[15]

Recognizing and thanking leaders can be indicated by having a special banquet or dinner in their honor for the work they have done. An annual banquet should be planned for a time when leaders can rededicate themselves and have their spirits lifted. The banquet should be held in a place other than the usual. The banquet should have the leaders' names listed on printed programs and all leaders should be seated at the head table. Arrangements for 4-H Club members, 4-H alumni, and community leaders should be among those thanking leaders.[16] The leader should not be invited to a dinner at which he is to receive a reward for services and make him pay for his dinner.

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[14]McAuliffe, loc. cit.

[15]Laurel K. Sabrosky, "How Do People See 4-H?" Mimeograph ER&T-172(10-62) Federal Extension Service, U.S. Department of Agriculture: (November, 1963), p. 4.

[16]McAuliffe, op. cit.

He may be better able to pay for his dinner than the organization, however, it detracts from his estimation of the importance of the work he has done.[17]

Leader recognition by use of pins, certificates, or awards can be used effectively if planned with care. These can be used to mark special points of leader tenure or outstanding progress in certain areas, such as safety, health, or community service. It is important to recognize all leaders equally with out too much attention given to any one individual.[18]

In New Mexico the counties determine to what extent recognition awards are used, although the state has established policies on awards that may be chosen so recognition will be consistent throughout the state.[19]

The State 4-H Club office sends a certificate, at no expense to the counties, to each leader eligible for each fifth year of service.[20]

News articles and feature stories are a means of recognizing 4-H Club leaders. Local leaders should be given mention in newspaper articles when giving publicity to clubs and members. Feature stories about effective leadership or outstanding performance should also be used.[21]

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[17]Lincoln D. Kelsey and Cannon C. Hearne, Cooperative Extension Work (Ithaca, New York: Comstock Publishing Associates, 1963), pp. 241-242.

[18]McAuliffe, loc. cit.

[19]New Mexico 4-H Club Leaders' Handbook, Agricultural Extension Service, Circular 291 (New Mexico College of Agriculture and Mechanic Arts: November, 1958), p. 42.

[20]Ibid.

[21]McAuliffe, loc. cit.

The use of outstanding leaders on radio or television programs is also a method or providing recognition for 4-H leaders.[22]

Kelsey and Hearne list other methods of recognition which include:

1. Have formal letter of appointment from an official in the extension service.
2. Furnish loose-leaf notebook with 4-H emblem to leaders.
3. Present leaders with identification cards as 4-H Club leaders signed by county and state extension personnel.
4. Letters of appreciation from county, state, and national officials for outstanding service.[23]

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[22]Ibid.

[23]Kelsey and Hearne, op. cit., pp. 241-242.

CHAPTER V

THE ROLE OF THE EXTENSION WORKER

The Extension worker, as a professional leader, must understand the actions of people about him, by the study of sociology, psychology, anthropology, and applied aspects of leadership. The Extension worker must know how to stimulate and train members of a group to function as leaders. He must be capable of allowing leaders to carry on the work he has started, while retaining his position of close confidence, but still providing ideas, encouragement, and direction.[1]

The Extension worker should perform professionaily, with and through local leaders acting as an educator of leaders instead of direct teaching of 4-H Club members.[2]

The knowledge of working with and through adult volunteer leaders is, by far, not complete. There are many areas of concern in which the Extension worker must operate by intuition and judgement. However, enough is known of some of the aspects of working with leaders to make the agent's work more than mere guess work. The Extension worker should know something of what leaders say they need, he should know from observation and study that leaders are often recruited but not trained, and he should have some clues as to who might best choose those to serve as leaders.[3]

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[1]Lincoln D. Kelsey and Cannon C. Hearne, Cooperative Extension Work (Ithaca, New York: Comstock Publishing Associates, 1963), pp. 228-230.

[2]Laurel K. Sabrosky, "Role of the Agent in Leader Training," Journal of Cooperative Extension, Vol. 1, No. 1 (Spring, 1963), pp. 31-37.

[3]Ibid.

Sabrosky considered the Extension worker as a supervisor of local leaders; a supervisor in the sense of training, helping, planning, encouraging, recognizing, shifting responsibilities, evaluating, and providing materials and ideas.[4]

The Extension worker, as supervisor should understand his own feelings about his purpose and accept responsibility for helping other people to learn, grow, and perform better. It is also important that he understands the leaders as individuals, aware of their motives, and their particular needs for help. It is also important that the Extension worker understand the youth with whom leaders are engaged and the contributions that the 4-H Club program can make in meeting their needs now and in the future.[5]

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[4]Ibid.

[5]Harleigh B. Trecker, "Democratic Leadership - Challenge and Responsibility," Presented at National 4-H Club Congress, Chicago, Illinois (November, 1959).

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LEADERSHIP DEVELOPMENT

THROUGH THE USE OF ADVISORY COMMITTEES

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ERIC

CHAPTER I

THE SITUATION AND PROBLEM

An advisory council has been found to be one of the most effective devices for implementing the principle that those affected by a program should have a part, directly or indirectly, in formulating the program.

This is an organization for voluntary effort to solve problems of common concern in a community which are beyond the ability of the individual citizen, family or single organization to solve alone.

Advisory council members need to have imagination, vision and perspectives beyond community boundaries. It is imperative that educators play a prominent role in establishing and maintaining effective council members. One must not feel that leader training or education is being neglected by assuring one's self of a highly competent planning council at the beginning. These people will continue to grow in competence and should become "super" leaders. In view of these facts, it is paramount that advisory councils be in a position to assist people in studying and solving their own problems.

I. THE SITUATION

There are a number of advisory councils in New Mexico. From a survey conducted by the committee the following advisory councils were found to exist:

Economics

1. Rural Area Development
2. Area Redevelopment Act
3. Overall Economic Development Program
4. Chamber of Commerce
5. Tribal Council

Agriculture

1. Livestock Marketing Association
2. Agriculture Stabilization Conservation Service
3. Soil Conservation District
4. Future Farmers of America
5. Farm Bureau Organization
6. Technical Action Panel
7. Sheep Association
8. Cattle Association
9. Chili Growers' Association
10. North Eastern New Mexico Breeding Association

Sociological

1. Women's Extension Council
2. 4-H Club Council
3. Parent-Teacher Association
4. Confederation of Women's Clubs Association
5. County Fair Association

THE PROBLEM

In studying the list of advisory councils in New Mexico, the committee concluded that there was a need for additional councils.

Advisory councils for the following categories were suggested:

1. Career Occupational Training for Unemployed People
2. Hospital Facilities
3. Retirement
4. Recreation
5. Tourism
6. Community Beautification
7. Community Center Facilities

CHAPTER II

OBJECTIVES

Like any other organization, to be effective an advisory council must have a purpose. Organizing one because somebody thinks it is a good idea is not solid planning.[1]

Some of the objectives of an advisory council will pertain to current problems which need immediate attention and should be achieved the first year. Others will be less urgent and may be delayed until the following year or later years. All objectives in a long-time plan should be listed and ways and means of accomplishing the objectives for the current year developed. Each year ways and means of accomplishing the objectives need to be developed and the necessary changes made in the long-time plan. Some of the objectives may cover a period of several years, while others may be of shorter duration.[2]

In developing objectives for an advisory council, existing lists of objectives should be reviewed and accepted, or revised to meet present and local conditions.[3]

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[1]Burton W. Kreitlow, et. al., Leadership for Action in Rural Communities, (Danville, Illinois: The Interstate Printers & Publishers, Inc., 1960), p. 174.

[2]Lloyd J. Phipps, Handbook on Teaching Vocational Agriculture, (Danville, Illinois: Interstate Printing Co., 1952), p. 83.

[3]Ibid., pp. 82-83.

CHAPTER III

PURPOSE AND FUNCTIONS

The general purpose of an advisory council is to improve all phases of community life. The most vital part of a council's job is to study problems and needs and to plan cooperatively to meet them. This is done by:

1. Encouraging informed citizen participation
2. Fact-finding
3. Developing public understanding and support
4. Coordinating community activities and services
5. Cooperative action[1]

Encouraging Informed Citizen Participation

Citizen participation in community life is the foundation of a strong democracy. But an active citizen must be a well-informed citizen. A truly representative council educates for civic leadership.[2]

Fact Finding

One of the most valuable things a community council can do is to continually and carefully gather facts about its community--its health, human relations, education, recreation, religious, economic, and welfare needs--and to agree on how these needs can best be met.[3]

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[1]Burton W. Kreitlow, et. al., Leadership for Action in Rural Communities (Danville, Illinois: The Interstate Printers, 1960), p. 169.

[2]Ibid.

[3]Ibid., pp. 169-170

Developing Public Understanding and Support

A community council stimulates public awareness of community problems, develops an understanding of how the community deals with these problems, and gains support for the necessary services and programs. This can be done by sponsoring public meetings and forums; maintaining speakers' bureaus; distributing studies and reports; and getting publicity through the press and radio. Community understanding of needs and services develops through council delegates' reports to their own organizations.[4]

Coordinating Community Activities and Services

Community councils provide a meeting ground for people from different public or voluntary agencies or organizations to come together, share their experiences, understand each others' viewpoints, and agree on some definite plans. By working voluntarily on joint projects, community leaders learn to lift their eyes from their own specialized interests and take a look at the whole community. When advisable, they assign parts of the total job to suitable organizations so that people will receive the best possible services with the least duplication of effort, time, and money.[5]

Cooperative Action

After considering the facts and agreeing upon a logical course of action, the council takes steps to carry out its plans. This may require modifying an existing service or developing an entirely new one. In any case, interested citizens and organizations arrive at a joint decision.[6]

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[4]Ibid., p. 170.

[5]Ibid., pp. 170-171.

[6]Ibid., p. 171.

CHAPTER IV

IDENTIFYING AND SELECTING COMMITTEE MEMBERS

When a staff sets out to develop an educational program for the people of a community, those who do the planning must be capable of performing that function. Selection of countywide council members should not be left to chance. It should be a systematic process focused on abilities to do the job effectively.[1]

Mere representation of groups and interests is not enough. The practice of each of several organizations in a county sending its president or electing someone to represent the group may have serious limitations.[2]

Individuals who are elected or appointed by their group may have vested interests. They may feel obliged to get their group's interests high on the priority list. They are apt to owe first loyalty to this special interest group rather than the countywide planning council. Such a selection procedure does not assure that the member has the leadership traits, abilities, and willingness to express himself well nor to represent objectively the people of his community. In fact, it may get over-representation of certain kinds of individuals.[3]

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[1]Gale L. Vandenberg,"Getting the Most from Planning Councils," Extension Service Review, Vol. 32, (Washington, 25, D.C.: United States Government Printing Office, February, 1961), p. 29.

[2]Ibid.

[3]Ibid.

Advisory councils should make use of all available information and resources in achieving its purpose. There are many people whose interests, skills, and specialized knowledge would be helpful. Some of these resources are:

1. County superintendent of schools.
2. County nurses
3. County extension agents
4. County welfare directors[4]

Also, there are consultants and specialists from colleges, universities, private organizations, and state departments and agencies in the fields of community planning, health, education, vocational education, recreation, youth problems and social and civic problems. If called upon, these people will be glad to assist the council to carry out its purposes.[5]

Another criterion in the selection of council members is that all members should be representative of the county but no member should come to the council representing a group. All council members should have as their responsibility the representation of the county and not the responsiblity of "grinding the ax" of a specific group whom he represents.[6]

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[4]Burton W. Kreitlow, et. al., Leadership for Action in Rural Communities (Danville, Illinois: The Interstate Printers, 1960), pp. 176-177.

[5]Ibid., p. 177.

[6]Lloyd J. Phipps, Handbook on Teaching Vocational Agriculture (Danville, Illinois: Interstate Printing Co., 1952), p. 73.

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CHAPTER V

THE ROLE OF COMMITTEE MEMBERS

Role expectations from committee members should be analyzed according to four segments as follows:

1. Administrative functions
2. Programming functions
3. Committee relationships
4. Committee maintenance[1]

In general, committee members should assist with all areas of the program development and functioning of the organization, such as:

1. Local policy making
2. Program planning
3. Program execution
4. Program evaluation[2]

In a research made in Pennsylvania of 170 executive committee members and 32 county agents in eight counties, the following perception of committee members' roles was observed, centered around program determination, execution, and evaluation.

Executive Committee Members

1. To help plan the annual program
2. To initiate ideas at committee meetings
3. To secure information locally for the committee
4. To present reports relative to the program
5. To consider planning at all their executive meetings.[3]

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[1]Bond L. Bible, "The County Committeeman in Extension Programming," Extension Service Review, Vol. 31, (Washington 25, D.C.: United States Government Printing Office, December, 1960), p. 243.

[2]Ibid.

[3]Ibid.

Other Committee Members

1. To participate and assist in the program planning process.
2. They should be informed on all activities of the organization.
3. To carry out detailed program determination.
4. To perform the planning functions.
5. To publicize meetings.
6. To assist in locating facilities for demonstration teaching.
7. To discuss problems with others.
8. To assume responsibilities.
9. To evaluate effectiveness of the program.[4]

The professional person has a specific role in an advisory council, although the latter can and does occur without such professionals being present or involved. In community development professional personnel are the agents for change and function in an educative rather than a change-oriented leadership capacity. They are not themselves the determinants of the change but act in the nature of catalytic agents facilitating the process of change by helping the community acquire the knowledge and skills essential to the successful accomplishment of change.[5]

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[4]Ibid., pp. 243-252

[5]Lowry Nelson, Ph.D., et. al., Community Structure and Change, (New York: The Macmillan Co., 1960), p. 31.

CHAPTER VI

CONTINUITY AND ROTATION OF COMMITTEE MEMBERS

After a council has been established, committee members must be informed of their responsibility. This may be done by having the committee study and develop their own constitution and by-laws.[1]

One of the major reasons for the failure of an advisory committee is that the committee members do not realize the scope of their responsibility; or that their duties are not clearly understood.[2]

Lay committees should assume their proper role. While such groups can be used effectively to assist the leader in many phases of the program, certain professional responsibilities must be carried on by the leader. Committees should not be asked to do work or make decisions that are clearly the responsibility of the leader.[3]

Any organization that continues to function effectively is one that has a definite purpose which is known and accepted by its membership. Committees can be used successfully for assisting in the planning, evaluating, and execution of programs. Committees should meet often enough to maintain an active and interested membership.[4]

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[1]James McComas, "Ten Commandments in Using Advisory Committees," The Agricultural Education Magazine, Vol. 35, (October, 1962), p. 71.

[2]Ibid.

[3]Ibid.

[4]Ibid., pp. 71-72.

Appointment to membership of lay committees gives the members status. How well this status is maintained depends upon the activity of the committee and the program undertaken by it. The leader of the committee should plan for membership recognition through public meetings, newspapers, radio, and other promotional activities.[5]

An advisory council, having awakened people, stays awake by moving on to new responsibilities. Planning new activities for expanding skills are essential in the continuity of membership.[6]

Failure of membership continuity in an advisory council may be due to:

1. Being dominated by the agent or some person in the committee.
2. Meetings being poorly planned.
3. Committees being too large.
4. Conflict of personal interests in place of goals of committee.
5. Agent tries to select everyone that has some point of views as he has.[7]

Rotation of committee members in an advisory council is essential.

1. Rotate committee members so that no member will stay in the same committee for more than two or three years to provide new experiences.

2. Elect officers in a staggering manner to assure the council of officers with some knowledge of their responsibilities.

3. Rotation of committee members provides perpetuation of the group for leadership training and also provides the organization with experienced membership.

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[5]Ibid., p. 72.

[6]Baker Brownell, The Cultivation of Community Leaders, (New York: Harper & Brothers Publishers, 1953), p. 51.

[7]Talk by Jack Tejada, New Mexico Extension Service, August 21, 1964.

CHAPTER VII

USING EXISTING COMMITTEES FROM OTHER AGENCIES

Good public relations is essential to an advisory council. This can well be accomplished by using existing committees from other agencies.

Many organizations are often in a position where they can provide community leadership and assist advisory committees in promoting their programs.

In Extension Service work the following organizations can be of great benefit to 4-H and Women's Extension councils:

1. Public Service Company
2. Southern Union Gas Company
3. Soil Conservation District
4. Dairy Association
5. School Administrators and Teachers

Committees from these agencies through the use of demonstrations or talks can provide invaluable information and techniques to Extension Service groups.

CHAPTER VIII

DIFFICULTIES IN KEEPING ADVISORY COUNCILS OPERATING EFFICIENTLY

An advisory council more often fails and is discarded because its possibilities for usefulness are not fully realized. One which is designed merely to tell the public what the organization is doing or proposes to do and to secure uncritical approval of these activities is a fraud and will be a failure.[1]

The major reason for the failure of an advisory council is that the committees do not realize the scope of their responsibility, or that their duties are not clearly understood.[2]

Other factors encountered from keeping a council operating efficiently are:

1. Absence of careful planning
2. Dictating by leaders
3. Setting policies for the council by outsiders
4. Absence of line of authority
5. Lack of responsibilities
6. Failure to use committees
7. Absence of the principle of sharing leadership[3]

When undesirable results are obtained from advisory groups it is usually because (1) the leader does not know the role of a professional worker, (2) the advisory groups do not understand their functions, (3) no definite policies for the operation of the advisory groups have been established, (4) advisory groups are asked to perform functions which they are not capable of performing.[4]

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[1]Herbert M. Hamlin, Agricultural Education in Community Schools, (Danville, Illinois: The Interstate Printers and Publishers, 1949), pp. 113-114.

[2]James McComas, "Ten Commandments in Using Advisory Committees," The Agricultural Education Magazine, Vol. 35, (October, 1962), p. 71.

[3]Ibid.

[4]Lloyd J. Phipps, Successful Practices in Adult Farmer Education, (Danville, Illinois: The Interstate Printers and Publishers, 1954), pp. 290-291.

CHAPTER IX

ADVANTAGES AND DISADVANTAGES OF AN ADVISORY COUNCIL

Advisory committees seldom accomplish miracles. They do, however, offer new challenges and valuable direction to those who are able to use their recommendations to their training and experiences. They often serve as a stimulus to further their qualifications as leaders.[1]

There are many advantages to an advisory council which outweight the disadvantages. Some of these are:

Advantages

1. Finding work more successful and more satisfying.
2. Developing personally and professionally.
3. Working with a group instead of alone.
4. Engaging with other members in significant tasks.
5. Sharing many of their difficult decisions with the council so that these decisions are wiser, and do not bear the full responsibilities for making them.
6. Receive loyal support of capable men.
7. Through the council members, the leader may hear commendations of some of his efforts and criticisms of others and he may adjust his program accordingly.
8. Members' maturity makes up for his immaturity; their experience offsets his experience.
9. There is always a dangerous tendency for a leader to become a dictator. A council provides a check upon this tendency.

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[1]Herbert M. Hamlin, Agricultural Education in Community Schools, (Danville, Illinois: The Interstate Printers and Publishers, 1949), pp. 117-118.

10. A council serves as an ideal school for democratic leadership.[2]
11. Develops leadership.
12. Promotes good public relations.

Disadvantages

1. Confusion of thought and difference of opinion.
2. Goals become further confused by the efforts of various agencies to modify or at least restate their programs in accordance with the aims of the council.
3. The first concern of an advisory council is with the fundamental needs of the people and in a typical American community, county or state leads to the development of a local government.[3]

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[2]Jesse Frederick Steiner, Community Organization, (New York: D. Appleton-Century Co., 1930), pp. 161-162.

[3]Ibid., p. 52.

CHAPTER X

ORGANIZATION

There is no set pattern for organizing an advisory council. Each community will develop its own plans according to its own circumstances.[1]

An advisory council should consist of people who share common interests or beliefs who have bonded together voluntarily to further their interests regardless of motives.[2]

It is undesirable to select membership for an advisory council from all the so called "key farmers", "office holders", or "paper leaders" in the community. These terms usually refer to the persons in a community who hold many offices due to their family background, financial status, or age. If a council is composed of individuals of this type, it may be found that the council is ineffective because the members are busy serving the community that they have little time left for the council. It may be found that because of favored financial status the members do not understand the problems of those less favored. It is even more serious to have a council composed of professional office holders, who have been before the public eye so long that they neither represent nor have a following in the community.[3]

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[1]Lloyd J. Phipps, Successful Practices in Adult Farmer Education, (Danville, Illinois: The Interstate Printers and Publishers, 1954), p. 73.

[2]Talk by Jack Tejada, New Mexico State Extension Service, August 21, 1964.

[3]Phipps, op. cit., p. 73.

One sure way to impair the effectiveness of an advisory committee is to organize it yourself and then inform officials of other organizations that such a council exists.[4]

An advisory council, to be effective should have a membership of not less than eight nor more than fifteen.[5]

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[4]James McComas, "Ten Commandments in Using Advisory Committees," Agricultural Education, Vol. 35, (October, 1962), p. 71.

[5]Ibid.

CHAPTER XI

EVALUATION

An event has been defined as "a function with a special purpose, such as a 4-H club achievement day, 4-H club rally, or a 4-H club parade.

A successful event usually is carefully planned in advance, then carried out according to plan, and finally evaluated by the adult leaders, junior leaders, members, and parents, if they helped conduct the event, by checking a schedule sheet which has been prepared in advance.[1]

For program evaluation responsibilities, there might be major differences among members of an advisory committee. In a study made by Bible, about one-half of the committee members said this was their duty entirely but only three per cent of the agents felt that way. About half of the committee members and ninety per cent of the agents felt it was a joint activity.[2]

A council should evaluate the accomplishments in terms of the objectives for the year. In other words, an appraisal should be make of the long-time plan to see how it is working out. On the basis of this evaluation, ways and means for the improvement of the program should be decided by the council. Some of the objectives may need to be revised or eliminated while

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[1]T. T. Martin, The 4-H Club Leader's Handbook, (New York: Harper & Brothers, 1956), p. 122.

[2]Emory J. Brown, "The Executive Committee," The Evaluator, Number 9, (November, 1959), p. 6.

CHAPTER XII

CONCLUSION

Research concerning leadership development through the use of advisory committees is encouraging and no doubt will extend a means of providing information to willing leaders. Nevertheless, one has to be practical and realize that we are dealing with human beings and some leaders will fall by the way-side. These leaders would rather choose to flow down the current rather than attempt to divert the water and channel it in a direction where it could be utilized if the leaders would acquaint themselves with such publication used in this paper. Perhaps other means can be used in conjunction for the purpose of creating a greater inspiration in promoting advisory committees whereby this information could be given to leaders.

RECOMMENDATIONS

Educators could be of great help in conducting workshops in this particular field. This would be a very fruitful undertaking for organizations.

Instead of organizing different councils to meet these problems, it would be more practical to set up one good advisory council in a community to give attention to any of these problems as they arise, and to coordinate the activities of existing councils.

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DEVELOPING COMMUNITY AND COUNTY LEADERSHIP

A Committee Report

Agricultural Extension Education 516

by

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I. INTRODUCTION

This committee was assigned the responsibility of answering the following questions:

1. What is community development?
2. What is the role of the state Extension staff in state and county programs, including RAD and other development programs?
3. What is the role of the county agent in county programs to develop community and county leadership?
4. How can cooperation of other agencies working in these programs be improved?
5. What is the diffusion process and how can it be used in community development?
6. What is the Extension agent's role in the diffusion process?
7. What factors impede community change?

The committee made a review of the literature in order to answer the questions just listed. The information obtained is included in this report.

II. REVIEW OF THE LITERATURE

Community development. Webster gives the following definition of a community: Community - a group of people living together and having interests, work, etc., in common. He defines development as a step or stage in growth, advancement, etc.[1] One Extension Service definition for community is as the family is a basic

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[1] Webster's New World Dictionary, College Edition, (World Publishing Company)

unit in our society, the local community is a basic multiple-family unit.[2]

Other definitions include:

There are at least two concepts of the world community. Extension workers are likely, at first thought, to define a community as a group of people who:

1. Live in a more or less contiguous area.

2. Identify themselves as members of their community.

3. Share important interests, attitudes and activities.

4. Join together to furnish services or facilities which they could not provide as adequately or economically either as individuals or as families.[3]

A second concept is the broader one brought into being by present-day living conditions. It may involve a much greater geographical area and people of widely varying interests, attitudes and activities. These people become a "community" as they are brought together by some common need, goal, or activity.[4]

Every community is a dynamic living entity which is constantly generating change within itself as well as adapting in response to outside forces. Because the needs to be met are themselves dynamic, community improvement and resource development must be a continuous process rather than a one-time undertaking.[5]

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[2]Cooperative Extension Service, The Cooperative Extension Service Today (Washington: Government Printing Office, 1958), pp. 11-12.

[3]Cooperative Extension Service, A Guide to Extension Programs for the Future (Washington: Government Printing Office, 1959), pp. 38-40.

[4]Ibid.

[5]Ibid.

This committee has originated its own definition of community development. Community development could be defined as a program which mobilizes and utilizes resources (natural, human, and institutional), public or private, of any urban or rural, or combination of urban and rural, geographical area, including but not limited to a metropolitan area, county, city, town, or multicounty unit to reach community goals or objectives.

The role of the state Extension staff in state and county programs.

Before delineating the role of the county and state Extension staff in community development, it would be desirable to discuss Extension's basic objectives and responsibilities in community development programs. The types of communities and kinds of community resources should also be discussed briefly.

Generally there are about four types of communities in New Mexico--urban, suburban, rural, and unincorporated villages. Each type of community has its own separate and individual development problems.

Extension workers will find themselves working with three kinds of community resources:

NATURAL - the land, water, climate, minerals, etc.

HUMAN - the people and their attitudes, skills and talents.

INSTITUTIONAL - the schools, churches, markets, government groups, and other organizations and services which fill community needs.[6]

In rendering is assistance, Extension will serve many types of communities in a variety of projects. Yet its basic objective will always be the same--

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[6] Ibid.

the development of people themselves, helping them to approach their potential in knowledge, abilities, skills, attitudes and appreciations.[7]

> Extension's basic objective in community improvement work is the development of the ability of people through their own initiative, to identify and solve the various problems affecting their welfare. This includes developing the ability of people to function cooperatively as a unit in the effort to solve common problems.
>
> Specific Extension objectives of community improvement and resource development should include:
>
> 1. Developing people so they may, through their own initiative, identify and solve the various problems affecting their welfare. This includes developing the ability of people to function cooperatively as a unit in the effort to solve common problems.
>
> 2. Stimulating the development of adequate community or area organizations and providing guidance and assistance to such organizations.
>
> 3. Locating and training local leadership.
>
> 4. Cooperating with local people, other public agencies, and lay organizations in community improvement and resource development.
>
> 5. Assisting community groups in obtaining information and other assistance needed from organizations other than the Extension Service.
>
> 6. Providing technical or subject matter information in agriculture and home economics and related subjects in which Extension staff members have competence.
>
> 7. Planning and conducting demonstrations portraying improved practices in agriculture and home economics.
>
> 8. Providing educational experiences which will emphasize both the development of the individual and of physical resources.
>
> 9. Helping develop a framework through which a community can evaluate its resources and progress and be made aware of its potential.
>
> 10. Assisting all groups of individuals whose activities or interests may be relevant to community improvement and resource development.[8]

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[7] Ibid.

[8] Ibid.

Both economic and social objectives are appropriate in community improvement and resource development.

Economic considerations often provide a good starting point, because of the vital interest they arouse and because when successful they make many social objectives attainable. However, the people themselves should decide on goals or areas of work. Obviously, the process of community improvement must lead to accomplishment if it is to attract and hold the interest of people.

Ideally, the community improvement process should be one in which all the people in a community can be involved. The community-wide approach enables Extension to reach many individuals and groups which it has not been able to involve effectively through the more traditional methods.[9]

The Extension Service has a responsibility to render appropriate educational assistance in helping people to understand such matters as:

1. Adequate standards for community services.

2. Efficient methods of providing such services.

3. Methods of orderly planning.

4. Competitive uses of land and the relationship to proper community growth.

5. Solution of problems found in special community areas within metropolitan areas, such as the rural-urban fringe and the rural slum.

6. Joint concerns and the responsibilities of rural and urban people for community problems which occur where city and country meet.

7. Methods of improving conditions and available services provided by health, education, recreation, religious, and other governmental and private institutions.

In addition to such work on a local community basis, Extension has a responsibility to provide educational and leadership assistance to people on a county-wide or area basis in developing organized programs of benefit to both farm and non-farm residents. Extension has had long experience in helping people organize for group action. It can successfully provide the stimulus and guidance that will enable local people to develop and carry through area-wide improvement programs to strengthen the local economy, and otherwise enhance the level of well-being of the people in the area.

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[9] Ibid.

Extension can and should cooperate with local people, other public agencies, and lay organizations in efforts to improve agriculture, promote non-farm employment opportunities, strengthen community services and institutions, and in other ways encourage the optimum development and utilization of all local resources. Extension is now engaged in organized cooperative activities that encourage such joint action between rural and urban residents and between farmers, industrialists, other businessmen, and public officials. Such efforts are resulting in the improved welfare of both farm and urban residents, and should be expanded as widely and as rapidly as is feasible.[10]

The role of the state Extension staff in relation to RAD and other development programs. The Cooperative Extension Service has definite educational responsibilities.....in several rural development programs. The biggest, and perhaps most important development program is the Rural Area Development Program (RAD). The over-all goal of the RAD program is to bring Federal, state and local organizations together to help people develop the total resources in rural areas - human, natural, and institutional. The Cooperative Extension Service has the responsibility for the organizational and educational leadership in the RAD program.

Many special program tools are found within the total RAD program. Some of these special programs existing in New Mexico are: (1) Rural Renewal (FHA), (2) Watershed Projects, P. L. 566 (SCS), (3) Resource Conservation and Development projects (RC&D), (SCS), (4) Manpower Development and Training Act (Labor Department), (5) Vocational Education Act of 1963 (U.S. Department of Health, Education, and Welfare), and (6) ASCS cost sharing programs.

As mentioned above, Extension's main responsibility in the RAD programs is organization and education. The role of state staff RAD specialist, in this case, is to help organize and educate the local RAD organizations. After the

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[10]Cooperative Extension Service, loc. cit.

organization, other state state staff personnel could be called upon as resource people to aid the local RAD group.

Another sub-program of the RAD program in New Mexico is the Northern New Mexico seven county association, called the Northern New Mexico Regional Development Association. This association was organized to take action on problems and projects affecting the seven county area. The role of the state staff with this body is to provide needed information, and training in organizational procedure, committee work, and program planning. Another role of the staff would be to act as resource people to the association and present or prepare any needed information.

A recent program just passed by congress is the Economic Opportunity Act of 1964 (H.R. 11377). While specific agency assignment have not been made yet, it is assumed that the Cooperative Extension Service will have some educational responsibilities. In this case, the state staff will be involved, and they could possibly be called upon to be resource people.

The role of the state staff in community development is in most cases organization and educational in nature. After the organization process is completed, there is a continuous educational and advisory function that is needed. Some state staff members will be called upon to act as resource people. These staff members have the information the agent or organization needs, or these staff members know when to go or who to see to get the information.

The state staff should work with and through the county agents directly. Indirectly, they can work with organizations or agencies, but they should keep the agent informed of progress, etc.

The role of the county agent in county programs to develop community and county leadership. There are various basic responsibilities which county Extension workers, as professional people, have in community development. One basic responsibility of county Extension workers is to be sure that their aims and objectives are based on the needs, both felt and unfelt, of the people of the community.[11] Many times, this may be done by arranging conferences with their supervisors from the University to develop a common understanding of the total process, the objectives sought, and individual roles and responsibilities in relation to community goals.[12]

A second basic responsibility is to involve people in making community needs felt, in planning programs to meet these needs, and in putting these programs into effect. While the involvement of people is of primary importance, emphasis should be on quality participation--mere numbers participating should not be the sole aim.[13] The most successful programs are likely to be those which involve the community most fully and call on all its resources.[14]

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[11]American Country Life Association, Inc., Making The Most Of Human Resources Through Rural Community Development (Rural Educational Institutions' and Agencies' Responsibility in Rural Development. Chicago: Miller Publishing Company, 1959), p. 58.

[12]Gale L. Vandenberg, Total Resource Development in Wisconsin (Madison: University of Wisconsin Extension Service, 1963), p. 5.

[13]American Country Life Association, Inc., loc. cit.

[14]U.S. Department of Labor, Design for Community Action (How to mobilize community resources to help youth enter the world of work. Washington D. C.: U.S. Government Printing Office, 1962), p. 24.

A third responsibility, resting primarily with the Extension worker, is to organize a "team" approach with lay leaders in developing aims, objectives, and programs. These lay leaders should place emphasis on making sound decisions for action. Extension workers must be interested in serving people in the community and in helping them reach solutions to their problems.[15]

The means of involving people in the community for community development can be varied. Many times, county Extension agents must take the initiative in securing an objective evaluation of present aims and programs and in collecting background information on the local situation. They must then be ready to project proposed plans for action and at the same time remain within the interests, wants, values, and desires of the people.[16]

The importance of collecting background information is emphasized by Hoiberg when he states that:

> Enthusiasm for a community improvement program is a fine thing, but if it is not to misfire, it must be undergirded with a store of factual information pertinent to the topic at hand. Many well-meaning groups have learned the hard way that it is difficult indeed to build a stable and enduring program without first acquiring certain basic data to guide them in their endeavors.[17]

County Extension workers must constantly evaluate the aims and objectives of their own county programs in light of the total community situations, needs, and changes effecting the program. In order to serve the community effectively,

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[15]American Country Life Association, Inc., loc. cit.

[16]Ibid.

[17]Otto G. Hoiberg, Exploring The Small Community (Nebraska: University of Nebraska Press, 1955), p. 15.

they must maintain inter-agency and inter-institutional cooperation for effective community development.[18] Agencies, both private and governmental, play a vital role in programs effecting a community. There must be communication between agencies and common objectives must be recognized by all.

Involving people in a community, can be done effectively through the use of key leaders. Key leaders are social action leaders who are behind programs and activities in a community. They can involve others and influence others toward action.[19]

The American Country Life Association, Inc., states that:

> In the process of involvement timeliness and the type of approach--general in nature or specific as to a given situation or problem--must be considered. Initial involvement of key leaders can test the significance, value, and urgency of a problem or proposal. Sanction by key leaders will facilitate plans for involvement of other people in the community. The involvement of key leaders will also facilitate diffusion of information, analysis of the situation, keeping proposals in line with real needs, and getting a feeling of the community social climate. Thinking must be generated prior to decision making; the decisions must be those of the people as too many professional decisions are wrong.[20]

Special interest groups and community organizations integrated into a working relationship is the essential social machinery for obtaining community action. These groups or organizations arise in response to the recognition of some common need. This recognition may be brought about spontaneously and may arise out of a local situation, or it may be stimulated by someone who has come in from the outside.[21]

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[18]American Country Life Association, Inc., op. cit., pp. 58-59.

[19]Ibid., p. 59.

[20]Ibid.

[21]Dwight Sanderson and Robert A. Polson, Rural Community Organization (New York: John Wiley & Sons, Inc., 1939), p. 339.

The preceding responsiblities of county Extension workers involve general principles which must be considered in community development. The methods used in adhering to these principles varies with the situation which may exist in any community. With this in mind, the following steps for the implementation of a community development program can be listed.

1. Define Extension Agent roles and responsibilities.
2. Organize a county or community-wide committee to guide in directing the work of specific projects.
3. Clarify the role and responsibilities of the committee.
4. Committee conduct a situation survey of their county or community to include:
   - A. Map of the area.
   - B. General characteristics of the area.
   - C. County or community resources.
   - D. Economic status of the area.
5. Based on the survey, identify problems which confront the area.
6. Decide which programs have prospects for success.
7. Make decision as to which program or programs will be selected for possible action.
8. Make recommendations as to solution of problem.
9. Coordinate action toward solution of problem.
10. Promote the recommended solution into adoption.[22]

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[22]Gale L. Vandenberg, op. cit., pp. 5-8.

Often, it is feasible for a large county or community development committee to form sub-committees to work on various aspects of a specific problem. In this way, a concentrated effort can be obtained by the group and the solution to the problem will be obtained much faster. Each sub-committee should have one or more resource people. These individuals have special knowledge, background and interest in the subject area. It is in this area that a county Extension worker can call in a state Extension specialist to help a sub-committee do its work. Local resource people can also help in this respect.

The Extension agent is involved in the procedure which a sub-committee follows in its work. He may help in or encourage the following:

1. Acquaint the members with each other.

2. Brief everyone regarding the end objectives and the procedures to attain them, including the resource people roles.

3. Review and study facts--data provided plus other information supplied by the members. Become familiar with all the current resources in the sub-committee area and with the current situation. You may need to tour parts of the county.

4. Identify situations that need to be improved or changed.

5. Discuss various alternatives for effecting such change.

6. Decide which are the most important changes needed.

7. Determine which agencies or organizations ought to carry out each proposed action.

8. Identify items that several counties or communities need to consider jointly.

9. Write a report for the general committee and the county or community committee.

10. Possibly continue as an action committee.[23]

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[23]Ibid., p. 9.

In summary, the role of the county Extension agent in community development work should include effective program planning. This program planning should:

1. be based on careful analysis of situation.

2. be orientated to economic, technical and social level of people. Should interest all levels.

3. be educational and directed toward bringing about improvement by people who can solve their own problems.

4. be arrived at democratically through participation of lay people, entire Extension staff, and others who can contribute (agencies and organizations).

5. make maximum use of voluntary leadership in planning and execution.

6. be flexible for short and long-range goals.

7. provide for selection of problems for action that will meet recognized needs.

8. provide well-defined objectives - understandable by the people.

9. be achievable.

10. provide for evaluation of results.[24]

The improvement of cooperation with other agencies in community development work. The matter of improving inter-agency activities and cooperation needs some consideration. Generally, inter-agency rivalry or personality conflicts are the cause of most of the friction.

One method for improving relations and cooperation would be agencies meeting at top levels (state level) and discussing and assigning the various functions each agency is to perform in each program as that program is developed or enacted in Congress. Agency heads (state level) should then disseminate this

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[24]L. S. Kurtz, Assistant Director, Cooperative Extension Service, New Mexico State University.

information down through their various chains of command. Each agency should then stay within its assigned responsibilities. Agencies going beyond their responsibilities and infringing upon other agencies can and will cause conflict. Heads of agencies should keep such infringements at a minimum.

The problem of personality conflicts can be overcome by agency transfers, etc. This is actually an administrative problem.

All agencies should keep other agencies informed of their respective activities within each program. This could go further and even include keeping the various subject matter specialists within agencies informed. For example, the SCS has certain subject matter specialists corresponding to existing Extension specialists. If both specialists are working in the same area in the same program they should know what each is doing and how.

Agency cooperation can lead to a unified attack on development problems. If cooperation is lacking, each agency goes its own way, "the left hand doesn't know what the right is doing," and everyone suffers. Lack of cooperation can stifle a program before it gets started and cause friction area-wide.

The diffusion process and how it can be used in community development. The culture of nations and man has been altered with time. Mankind has been in a struggle with the new things which have altered the course of his life. He has been in a struggle with the ideas which have diffused into human life and appeared as cultural changes. How did these changes take place? How can a community change? These questions can be answered by saying that changes can be brought about by new ideas and thoughts or the adoption of innovation in a community.[25]

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[25]Everett M. Rogers, Diffusion of Innovations (New York: Free Press of Glencoe, 1962), p. 1.

Rogers in his book Diffusion of Innovation, discusses innovations and their adoption.[26] Before starting on his theory, various definitions in his work should be clarified. Rogers defines diffusion "as the process by which an innovation spreads".[27] Innovation is "an idea perceived as new by the individual".[28] The diffusion process is defined by Rogers as "the spread of a new idea from its source of invention or creation to its ultimate users or adopters".[29] The culture of people is not stable and what the people in a community believe does not mean that they will never accept new ideas. New ideas may be accepted within a few months of their introduction or it may take years for their adoption. It depends on the attitude of the people and their belief in science and technology.[30]

The diffusion process depends, first of all, on the existence of a new idea. The idea may be created in the community of society or it may enter the community from an outside source. Not all the individuals found in a rural community will react to a new idea in the same manner. This reaction affects the diffusion of ideas in a community. Many times, the question is asked, how can a new idea in a community be spread and then adopted on a wide scale? Let's assume the idea is the artificial breeding of cows. What can be done to make this an accepted

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[26]Ibid.

[27]Ibid., p. 13.

[28]Ibid.

[29]Ibid.

[30]Ibid., p. 2.

practice in the community? In this community are two farmers called "Smith" and "Sonny". They tell the others about the new idea. These two farmers are known as opinion leaders. Rogers defines them as "those individuals from whom others seek information and advice".[31] George knew about the new idea from Smith, and it might be that he decided to use and adopt the new method. When he decides to adopt the new idea it means he has believed in it and he is satisfied with the innovation. Then the adoption process takes place. It passes through many stages, from the time George first heard about the idea until it was fully adopted. To this point, we have mentioned two kinds of processes: the diffusion process and the adoption process of the new idea. What is the difference or differences between them? The diffusion process as Rogers states in his book, "deals with the spread of new ideas in a social system"[32] while the adoption process "deals with the adoption of a new idea by one individual".[33]

Five stages in the adoption process are mentioned by Rogers: awareness, interest, evaluation, trial, and adoption. The adoption period extends from the time George agreed to use the artificial breeding on his dairy cows until the time he decided to continue the full use of this new practice. In this case, the adoption process passed through all the different stages. When the farmers reaches the evaluation stage he might find that the old method he is using is of more benefit to him, thus the new method is discontinued. In this case, he is called a re-

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[31] Ibid., p. 208.

[32] Ibid. p. 18.

[33] Ibid., p. 17-18.

jector because he decided not to continue the adoption of the new method. So the adoption process is also a type of decision making activity. What usually happens, is that a farmer hears about a new idea and decides to use it. In most cases, he then ceases to use the method that the innovation replaces.[34]

Rogers continues to discuss the five stages in the adoption process, namely awareness, interest, evaluation, trial, and adoption.[35]

In the awareness stage, the individual hears about the innovation or reads about it in a magazine. He thus becomes exposed to it, but he needs more information concerning it. An individual might become aware of an innovation by accident. Hassinger states that "awareness must be initiated by the individual".[36]

During the interest stage, the individual becomes more interested in the new idea and he starts looking for more information about it. In this stage he is more involved with the innovation than he was in the awareness stage.[37]

The evaluation stage will see the individual studying the innovation and deciding whether to use it or not. He seeks more information and advice. He is not sure of the results of the new idea. It carries a risk and puts him in a critical position.[38]

The individual, during the trial stage, has decided to use the innovation, but will not run a risk, so will try the new idea on a narrow scale. By demonstration,

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[34]Ibid., pp. 12-20.

[35]Ibid., p. 81.

[36]Ibid., p. 82.

[37]Ibid., pp. 82-83.

[38]Ibid., pp. 83-84.

he will determine its usefullness and whether to adopt it fully. Rejection may occur at any stage, and in most cases it occurs in this stage.[39]

The adoption stage comes finally and the individual decides to continue the full use of the innovation. The trial results have proven to him the usefullness of this new idea, and the innovation has passed through its different stages. The length of time required for an idea to pass through this process, the diffusion process, from awareness stage to the adoption stage, is known as the adoption period. It can be measured in days, months, or years.[40]

The role of the county agent and the consequences of innovations. The change agent, and taking the county Extension agent as an example, is a professional person who attempts to influence adoption decisions toward a direction that he feels is desirable. Change agents play a vital role and can shorten the adoption period of an innovation. They can speed the process up by making the information about the new idea more available thus causing the awareness stage to begin earlier. His influence may be in two directions. He may attempt to speed up the diffusion process and help in the adoption of the innovation, or he may attempt to slow the diffusion process and prevent the adoption of an idea. This occurs when the county agent is sponsoring an idea and a new idea comes along to compete with his. He then attempts to prevent the diffusion of this new idea. County agents can be of great effect in preventing the diffusion of unrecommended ideas.[41]

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[39]Ibid., pp. 84-85.

[40]Ibid. p. 86.

[41]Ibid.

The county agent, as a change agent, works with individuals and takes the new ideas from the professional and research sources to them. He functions as a communication link between two social systems. His position is located midway between the Extension Service, which he represents, and the individuals with whom he works. He is expected to make adjustments between the two different societies. Preiss, from his study about the more successful county agent, suggests that the more successful county agents were those who disregarded the expectations of the Extension Service in favor of those of their local client system.[42]

What is the relationships between the extent of the Extension agent's efforts and the results he secures? Stone, studied that relationship in Michigan. The new idea was the use of artificial breeding. Eighteen county agents were involved from 1943 to 1950. The results showed that in the first three years there was a parallel relationship between the amount of the agent's efforts and the adoption of the innovation. After this, the efforts of the agents decreased, but the farmers continued using the new idea and the adoption kept up at the same rate. The results suggest that there is not necessarily a direct relationship between the efforts of the agent and the adoption of an innovation.[43]

The county agent plays an important role in securing the adoption of innovation. After the adoption of the idea, he is responsible for the consequence of the innovation he introduces to the community.

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[42] Ibid., pp. 255-256.

[43] Ibid., p. 259.

Many times, an innovation will be overadopted. This can occur when a new idea is adopted under conditions that experts would consider undesirable. Rogers cites a good example of this among farmers in the Midwest in 1949 and 1950.

> Farmers were so enthusiastic about 2, 4-D weed spray that they applied it to many cornfields where resulting increase in yields did not justify its use. Observers estimate that millions of dollars were lost through overadoption of the weed spray before farmers learned to use it more wisely.[44]

Overadoption usually occurs from insufficient knowledge about the innovation. Extension agents can control the rate of adoption by individuals, by making information available concerning the innovation.

Another example cited is:

> Some families, in a zeal for canning, filled jars with sweet potatoes, pumpkins, and turnips. These could have been stored without canning. Many were so proud of their canned goods the first year they would not open their jars. Change agents realized the need to teach the families how to use the food they had been taught to can.[45]

These examples imply that the change agent's role may include discouraging overadoption as well as encouraging adoption. The responsibility is not fulfilled with the adoption of an innovation. Assistance is needed in the proper use of the innovation.

The people who come to the United States from other countries to study or receive training, or to teach in the United States are change agents. They go back to their homes with new ideas and thoughts. They transfer new ideas from one culture to another. The same is true when the American people go abroad. This is a good communication for exchange of thoughts by which societies can

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[44]Everett M. Rogers, "The Adoption Process", Journal of Cooperative Extension, I (Spring, 1963), p. 21.

[45]Ibid.

be developed. They are change agents because of the new ideas they have.

Factors which impede community change. The leaders of a community feel the needs of their community more than the other individuals. They believe in developing their community and know its problems. They take the lead in finding solutions to these problems. Leaders, many times, face difficulties when they try to change a community. It is these difficulties or factors that impede community change that they must learn to recognize.

In any community, no matter in what country of the world, there are people who are against any changes in their community. These kind of people do not believe that changes will lead to progress. They are satisfied with their life as it is, and wish to go back to "the good old days". These people will provide leadership for those who would like to go backward. A county agent, trying to introduce a new idea, may confront a group telling him to "leave us alone, we are enjoying our life as it is". These people will not prevent community change, but they will slow the speed of the change. A long time will pass before the community can get the change to progress. Natural scientists discovered that nothing is changeless in the world of nature. Stability and change are relative, depending on certain conditions.

Another factor which has an effect on community change and development is the interest, customs, and traditions found in any community. These are powerful forces, and if misunderstood by leaders, they become impeding factors. A successful leader is one who knows the people, their beliefs, habits, and works with them at their level. Many leaders become unaccepted in their communities because they do not understand the people and recognize them as they are.

Leaders, who lack qualifications to be leaders, are factors that delay community improvement. This kind of leadership is quite apparent in the case of charasmatic leaders. They might inherit their positions as leaders, but their leadership is without goals and objectives. In most cases, they oppose any changes in their community because when the changes take place, and the community benefits, they will lose their inherited leadership. This is true in many of the Asian countries where they have remained as they are without noticeable changes. Unqualified leaders exist and flourish among people who are hungry and uneducated and vanish among educated groups with high standards of living. Many kings and princes who had their leadership position given to them were against any change which might make the life of the people better. They were against education, having new roads, and freedom of the people until they were thrown out by the people themselves, and replaced by other leaders.

The standard of living and the level of education of a people in a community have an influence on the community changes which take place. The natural resources and the physical creations of man have an important bearing on the economic and social life of a community. Any changes in the physical resources of a country as a whole, or community as a unit, are reflected in all other phases of society. The presence of great quantities of these resources contributes to a higher standard of living when these resources are utilized. This utilization is accomplished by improved methods of production and distribution of goods. People with a high education are more willing to accept new ideas. They always look for a better life. In ancient times, people accepted the leadership of dictators, or leaders, without knowledge or objectives because of their low standard of living and lack of education. They were satisfied with their life and

did not care about a better one. With the coming of better educational opportunities, people have recognized leaders who have led them to a better life.

Rural people have been regarded as religious. They tend to be conservative in their religion. Religious places have been an important institution in rural communities. Many men developed their leadership in these institutions. No religion, whatever it stands for, has been against desirable changes, but by the name of the religions many changes have been resisted. Many new scientific methods, like the artificial breeding of cows, were opposed by some religious people saying that they were against their religious beliefs. It is not the fault of religion, but the fault of those who hide behind them. Many superstitious people relate their superstitions to the religions and stand against any change.

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PREPARING LEADERS

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> Leadership can in part be learned.
>
> --Mary Follett

Two words that we will be using are (1) organization and (2) committee. We need to understand some basic differences and some similarities between an organization, club, association, and a committee.

Organization (Club)

People who share a common interest or belief and who have voluntarily banded together to further their interest regardless of motives. It is not necessary to have a specific job to do. It is not necessarily for the improvement of society or to do good.

...a form of association in which there is more or less an established pattern of behavior among its members — Birds of a feather flock together.

...has to do with social accommodation and social adjustment. People like to feel they belong to something. The organization (club) gives them an opportunity to do what they want to do but cannot do it by themselves. Also gives their beliefs some support.

...arises from an idea. Someone supplies an idea and the idea spreads. When enough people become interested and are stimulated, they move to do something about it and usually an organization is formed.

...derives its power from the constitution and by-laws or the rules agreed upon.

...usually has a variety of interests or activities going on at the same time. Let us name and give some examples of various kinds of organizations. (Get audience participation in naming kinds of organizations and if possible, the purpose for which they are formed.)

Organization	Purpose
1) 4-H Clubs	Self-improvement; community improvement
2) PTA	School improvement
3) Religious	Self-improvement, spiritually
4) Women's Ext. Clubs	Self-improvement; community improvement
5) Political	Improvement of government
6) Bridge clubs	Social, get-acquainted, recreation
7) Rotary Club, Lions	Civic, community improvement, get-acquainted
8) Farm Bureau	Preservation of agriculture and the farm family
9) Photography club	Development of special interest or skill

Committee

A committee is a group of people who have been invited, sought because of their qualifications, and have accepted to serve in group action toward the solution of a specific problem or assignment.

The committee members may or may not have a common interest, but the committee does have a specific job to do.

A committee does not spring from thin air, it arises from a need or a want to find the solution to some specific problem.

...a committee is an important group because it is special.

...a committee should have only one central task to do; one point of focus. In this respect, it is different from an organization or club which may have a variety of interests or activities.

...a committee derives its power from the source of its appointment.

...a committee has a parent group to which it is subordinate or responsible.

Types of Committees

There are two main types of committees: (1) standing and (2) special.

To be most effective, an organization should have both standing and special committees.

Standing Committee - is a long-time rather permanent kind. It is standing by for when it is needed. It assumes a long-time responsibility which functions throughout the years.

Example: In 4-H we have a program committee.
maybe a recreational committee.
maybe a membership committee.

Special Committee - one created to do a short-time assignment.

When the assignement has been completed, it has no further purpose and should be disbanded. Sometimes a special committee is known as a task or a sub-committee.

It is part of a larger group which may be another committee, or the club or organization itself.

Why have Committees?

In general, we in the United States accept that the committee system-- the team approach--way of arriving at decisions or solutions is, in the long-run, a more acceptable, effective, and permanent way.

Many committees are formed because:

1) We cannot do all the work ourselves, no matter how hard we try.
2) We have faith in other people that they know what they want, and have the ability to solve their own problems, but are looking to someone to give them guidance and direction.
3) We have faith in people that they will help to carry out what they help to plan.
4) We believe that committees are ways of distributing responsibilities.
5) We believe that committees are ways for people to learn and to develop greater skills.

We who hold leadership positions will want to learn these points and understand what they mean. If one does not believe in these five points, I would doubt that they are a leader. I would question their ability as a leader.

What about a Committee?

A committee is composed of three ingredients: (1) members, (2) leaders, and (3) programs. In this respect, a committee and club or organization are similar.

Members - are people engaged in group action (not individual action) and who have a specific job to do. (If you want to do something by yourself, don't take the time of others.)

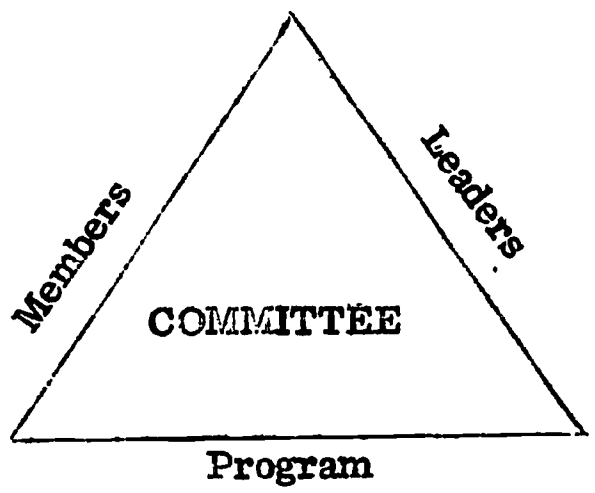
Leaders - are people who can get the members to do what is assigned to them or what needs to be done.

...people who influence the attitudes and activities of others.

...people who train others to be masters of their problems in many situations.

There are many more definitions which could be used to describe leaders.

Program - the activities; what the members do.



Organizations and committees do not exist without leaders, nor do leaders exist without followers, neither do committees last without activities, which we call program. Therefore, rarely will you find a committee ready-made, it must be tailor-made.

WHAT ABOUT MEMBERS, LEADERS, AND THE PROGRAM?

Previously, I pointed out some of the differences and some similarities of a club, or an organization, and a committee. Let's review these:

...Both must have members, leaders, and a program.

...A club may have a variety of purposes or interests.

...A committee should have only one purpose or one assignment at a time.

In a club, the members are banded together voluntarily.

In a committee, the members are sought because of their qualifications to do a certain job.

In a club, the members share a common interest or belief.

In a committee, the members may or may not share the same interest or belief.

Now, let's discuss more in detail about members, leaders, and the program.

What about the Members?

In a democracy members are followers of leaders--men and women who work with the leader, not for the leader. Members are people who jointly work for a common purpose.

The members of a club or organization join because they want to join. They may have many reasons why they want to be members.

The members of a committee may or may not be volunteers. The main point is that they should have the qualifications to complete the assignment given them and accept the responsibility for doing the job in the best manner possible, considering of course, the time, resources, and other limitations.

Also, members are people who are engaged in group action and not individual action.

Why Do People Become Members?

The principal things that people desire in a committee or club situation are:

1) Accomplishment - "Look what WE have done." People get a satisfaction from having done something as a group because:

a) There is power in group action.

b) Individual members get the feeling that they have become masters of a challenge, a problem, or a situation.

c) Individual members get the feeling they can accomplish certain purposes that cannot be secured individually.

d) Group action may lead to social control.

2) New Experiences - "There is power in knowledge." Basically, we all have a desire to attain more information or to discover something new or different because there is power and prestige in knowledge. Others see in the group an opportunity to do something purposeful, meaningful, or that is fun.

3) Attention or Prestige - "I belong." "I am a member." Each of us has a certain desire to be noticed and to be accepted. We find security in a group. We get identity: "I am a member of, or I belong to _____."

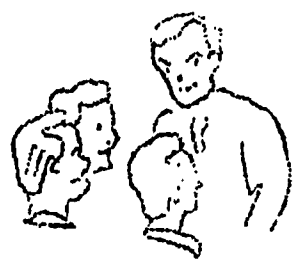
Recognition or Public Admiration - "Look who is doing it or is working on it." "I have been selected to work on _____ committee." Each of us seeks some form of recognition or public admiration. Being selected as member of a committee gives certain leadership recognition.

There are other reasons - The desire to belong, or be wanted. (Be one of the herd). The desire to develop skills - abilities to do something with your hands.

Note that in each situation, a reward is sought. Many people don't usually join clubs or accept committee membership for the physical exercise it may produce. They have desires which tend to produce certain rewards in the form of satisfaction to a need or a want. The reward or satisfaction is not limited to the promotion of action which primarily benefits the individual himself. Many people get great satisfaction when they are devoted to something worthwhile outside of themselves. An example is a 4-H Club leader. The satisfaction comes from seeing others develop in abilities and in intellegencies as well as economically and socially.

What About the Leaders?

Without leaders, there is hardly ever successful action. No matter what and how abundant the resources are.



There are many statements that describe a leader. Almost everyone has some leadership capacity, although it may vary in quality.

...Leaders are people who influence the attitudes and actions of others. It may be for good or bad. 1/

...Leaders are people with leadership ability, that is, ability to inspire and guide in getting the job done or accomplishing what the group sets out to do.

...Leaders are people who take responsibility and have responsibility; people who make others feel their responsibilities.

1/ E. J. Neiderfrank, rural sociologist, Federal Extension Service, USDA (mimeographed material).

...Leaders are people who can think out decisions slowly, yet who may not have the largest share in the decision-making.

...Leaders permit their group to influence their decisions.

...Leaders are people who energize their group.

...Leaders are not necessarily the people in the chairman's or president's chair.

Types of Leaders

Within each community, there are two general types of leaders:

1) Informal Leaders

...Some people are leaders because some individual or group looks upon them as people they can depend or count on, and whose opinions must be respected; people that we rely on to represent our interest.

...These leaders depend on a "following" for their leadership place or their status. Examples are the political bosses, community leaders, or merchants. They represent themselves by what they can do, what they know, or what they possess.

...These leaders have, in their respective places or situations, "earned" leadership status.

2) Formal Leaders

...These people hold a certain office or position, presumably because of their qualifications. For example, the chairman of an organization or committee, a priest, a judge, a mayor, a county committeeman, a county commissioner, a county extension agent, a teacher, etc.

...These leaders may or may not have loyal following. They may be leaders only by virtue of assignment or election to the position rather than through "earned" leadership. (One would like to think of this as the exception rather than the rule.)

...These leaders often are delegated a great deal of power over things and over people. Examples are a state policeman, a state governor, or a judge.

In a democracy, we believe that lasting leadership can neither be assumed nor assigned--it must be EARNED.

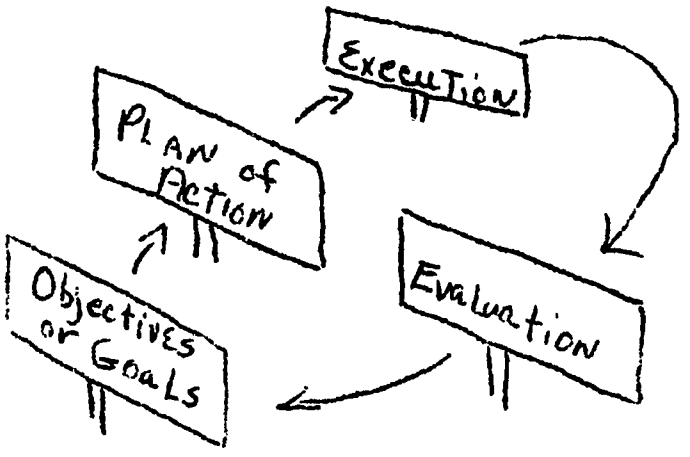
There are "behind the scene" people who many times are stronger leaders than leaders who are "active" members of the committee or club. Examples are priests and ministers, merchants, political bosses, and people that have much information and "know how."

Responsibilities of Leaders

Thomas Fensler says, "The responsibilities of the leaders are different from those of the group members, but first of all the leader must know how to be a good member before his leadership is effective. The leader must, in short, be the best group member."1/

What About the Program?

In a committee, the program is what the members do; the total sum of their activities toward solving the specific job or assignment.



It is important to the members of any committee (or group, for that matter) to see action.

The goal of any committee or organization is action; it exists to get something done. But whatever the action, it is best that it be the group's action as this will tend to satisfy some basic need or desire of the members and accomplish a purpose--good or bad. The way to move members of committees to action is to make the activity either satisfying in itself (get together just because you like to), or in what it leads to (physical results), or both. In other words, the action must

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1/ Thomas Fensler, Creative Power Through Discussion, Harper and Brothers, New York, 1950, pp. 179-180.

lead to something worthwhile (to the members but not necessarily to all society); to discover and solve a problem. This brings us to the point of knowing in which direction the club, organization, or committee is supposed to move.

What is the Purpose of any Committee?

The fatal wound to a committee is often caused by the weapon of indecision of not knowing what to do or which way to go. Committees need to have some purposes, objectives, and/or goals.

The Objective or Goal

An objective expresses "who" is going to do "what."

...It refers to the direction in which the people move.

...It must be seen within the ability of the group to solve.

Sometimes people get assignments for things they cannot do, either because they do not have the information, or the resources are not available.

...It is best that objectives be in writing--all members working for the same purpose.

...Setting objectives is the responsibility of the chairman assisted by the leader or leaders of the group; as in a 4-H Club.

...Committee members should accept the objectives. This assures that they better understand the purpose or reason for doing what they are asked to do.

A goal specifies how far you expect to move within a specified amount of time. It is important to set a time limit to your committee work.

WHAT DOES A COMMITTEE NEED?

1) Members - people who are willing and able to work toward the solution of a problem.

2) Leaders - people who can influence and guide other people toward the desired action.

3) Program - something to do--activities, challenges.

4) Plans - gives all concerned an understanding of purposes, activities, and procedures. Answers who is to do what, when, and where.

5) Information - lack of information decreases the function of the members. The information should include what is expected of the committee, the present situation, some indication of where the answer may be found, and some indication of how the data obtained or recommendations made are going to be used.

6) Facts - are the basis for sound decision making.

7) Direction - understanding of the purpose is the foundation for action.

8) Action - is the justification for the existence of the committee.

9) Follow-up - lets the members know that someone is interested and that their help is needed and wanted.

10) Time Limit - prevents getting too stale; forces members to action.

11) Publicity - gives personal recognition and seeks public support for the effort and action. Also senses the reaction of the public.

12) Evaluation - keeps the efforts geared to the purpose and answers what has been accomplished of that which was planned or attempted.

SOME SUGGESTIONS FOR MAKING MORE EFFECTIVE USE OF COMMITTEES

First supply the answers to these questions:

1. **Is this committee really needed?**

2. **What kind of leadership and care (feeding) is the committee getting or going to get?**

3. **What personal satisfaction, physical or otherwise, are members getting or will get from being members?**

4. **Do the committee members understand what they are supposed to do?**

Then consider these factors offered by Trecker[1/] and others:

1. **Keep the number of committees to a minimum. Too many committees become burdensome to train, direct, coordinate, and supervise.**

2. **Small committees will usually do a better job than large committees.**

3. **Explain with sincerity what is expected of the committee and, if possible, how much time it will require. Avoid "starving" a committee for lack of knowing what to do.**

4. **Written instruction of purpose and assignments are better than verbal misunderstanding.**

5. **To "talk people into" accepting committee responsibilities is unwise. They may neither give the time nor have the interest.**

6. **Choose members as individuals rather than as representatives of some special interest group.**

7. **Contact people face-to-face, if possible, when you want them to accept committee responsibilities.**

8. **Have some experienced and unexperienced people as members.**

9. **Choose members who can work together.**

10. **Choose members with ability to get things done.**

11. **Choose members who can and will devote time to the committee.**

12. **Report frequently to the committee, let members know you want to assist and that you need a solution to an assignment.**

13. **Keep members informed of the progress of other related committees.**

1/ Harleigh B. and Audrey Trecker, How to Work with Groups.

14. Leave the "how to do it" as much as possible to the committee.

15. Insist on some kind of report periodically.

16. Recognize each member of a committee. Treat all members alike.

17. Enforee the rules of the game--that is, conduct the business is accordance with the by-laws, constitution, and standard parliamentary procedure or rules.

SUMMARY

ADULT LEADERSHIP DEVELOPMENT

and

EDUCATION

Angela Lawrence
Angel Gomez

August 10-28, 1964
New Mexico State University

INTRODUCTION

The course in "Adult Leadership Development and Education" was conducted in such a manner as to cover the philosophy, objectives, and organization of a program to develop adult leadership. It included theories of leadership, the establishment of lay and professional functions in leadership, and the means of working in complex leadership situations.

The majority of the persons participating in the course were staff personnel of the Cooperative Extension Service, while the other participants were involved in other areas of adult education or felt a need for subject matter in this area. Dr. Philip J. Leyendecker, Dean of the School of Agriculture and Director of the Cooperative Extension Service at New Mexico State University, emphasized the value of the course when he stated that:

> We, who are engaged in adult education, must work more and more with and through community leaders to become more effective in our educational responsibilities. The skillful use of community leadership is a "must" if we are to expand our teaching effectiveness. We who help people to help themselves need to re-evaluate and sharpen our professional acumen to develop new ways and means to be of greater service to those with whom we work.

SETTING THE STAGE FOR THE COURSE OF STUDY

Definitions of Leadership. In order to set the stage for the succeeding three weeks of study, the group discussed their ideas of leadership, based on their experiences, and presented various definitions of leadership as they viewed it. The definitions presented are as follows:

1. Leadership is the ability to direct, guide, or influence the actions of other individuals or groups.

2. A leader is a person that can motivate people to some action or desired goal, voluntarily or by force, or threat of reprisal.

3. Leadership is the ability to influence changes in behavior or attitudes of others.

4. Leadership is the amount of influence of one person over other members of his group to achieve group action.

5. Leadership includes those characteristics which set aside a person as one who is an instigator or starter of an action in a group.

6. Leadership is the establishment of a good human relationship between a person and his group in order to make a change toward their improvement, not declinement.[1]

It became clear to the group that one concise definition of leadership is difficult to find. Almost everyone has a definition for leadership, but no one has a definition that can be accepted by all. The same is true for established leadership in our society. There are many leaders in various aspects of our life, but not one leader who is accepted by everyone.

Early in the study of leadership, various aspects of leaders and leadership were identified. The questions do leaders need to have an objective in mind, and others, were examined as food for thought to be considered during our study.

Other concepts included influences which had a bearing on leadership development such as environment, heredity, and inter-action with other individuals.[2] It was also noted that the type of community structure influences leadership roles.

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[1]Definitions obtained from class members at the beginning of class.

[2]Kreitlow, Burton W., E. W. Aiton, and Andrew P. Torrence, Leadership for Action in Rural Communities (Illinois: The Interstate Printers and Publishers, Inc., 1960), pp. 3-9.

Opinion Leaders. Studies by Everett Rogers[3] concerning opinion leaders were presented to the group. Rogers defined an opinion leader as "an individual to whom others look for information or advice." It was noted that recognition or identification of opinion leaders could be done by using three methods, namely:

1. by asking other persons in the community who they considered to be leaders in their locality.
2. by self-designating individuals.
3. by going to key people in the community and asking them who they considered to be leaders in their locality.

Various characteristics of opinion leaders were noted in that they probably conformed more to their group or organization than did non-leaders. They tended to use more mass media and more technical means of communication. It was mentioned that for each issue there was a set of opinion leaders.[4]

Opinion leaders, as stated by Rogers, have definite roles in the acceptance of educational innovations. Even with opinion leaders helping in quickening the diffusion process, time is needed for ideas to be accepted by a society. It is estimated that it takes an average of fifty years for an educational innovation to be accepted by a society. The innovation needed to be communicated to the people and this process of communication takes time. This is a two-step process from mass media to the people. Many times, early adopters of a new idea can be opinion leaders.

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[3]Everett Rogers, Associate Professor of Rural Sociology and State Leader, Resource Development, Ohio State University, Columbus, Ohio.

[4]Ibid.

Change agents in a society can be aided by opinion leaders such as in the case when a change agent discontinues his efforts toward an innovation, yet the innovation continues to be accepted by the people. The opinion leader has taken up where the change agent has left off.

Problems confronting Extension agents in New Mexico. Numerous problems confronting Extension agents in New Mexico were listed as a guide to our studies in leadership. These problems were as follow:

1. retaining voluntary leaders in Extension programs.
2. obtaining leaders for Extension programs.
3. varying audiences faced by Extension personnel.
4. giving recognition to leaders.
5. identifying and selecting leaders.
6. overworking our leaders.
7. distances from training sessions faced by our leaders.
8. lacking provisions for continuity in leadership.

The group also listed problems concerning work with committees. These problems are listed as follow:

1. inactivity of committees.
2. committees with no responsibility.
3. committees uncertain as to what to do.
4. committees having no sense of direction.
5. selection of committee members.
6. over-all concept of Extension work is not understood by committees.

Mr. Jacob Tejada, Extension Training Officer for the Cooperative Extension Service, listed four reasons why Extension workers have difficulty in carrying out their jobs. He stated that "we fail to focus on the responsibility of Extension; we do not recognize ourselves as leaders; we are not effectively trained to be leaders; and we cannot cope with already established leadership." He continued by saying that:

1. Leadership can be learned.
2. Leadership can be taught.
3. Everyone has some leadership capacity, although it may vary in quality.
4. Without leaders, rarely will anything worthwhile result or happen no matter how abundant the resources.
5. Lasting leadership cannot be assigned nor assumed, it must be earned.

The stage is set. With the group discussions and resource personnel presentations initiating the course of study, the stage was set for the group to continue their three weeks of study on leadership.

III. INDIVIDUAL PRESENTATION SUMMARIES BY RESOURCE PERSONNEL

EVALUATING LEADERSHIP

BY

Mr. Jacob Tejada
State Extension Service Training Officer and Professor
Department of Agricultural & Extension Education

Mr. Tejada stated that when we deal with group action we have to work with people, and when we work with people we usually work with organizations.

He defined the following:

1. Organization - people who share common interests or beliefs or who have banded together voluntarily to further their interests. This is an association whereby there is an established pattern of behavior and in which it supports its members. An association arises from an idea and receives its power from the rules and regulations which have been set up.

2. Committee - people who have been invited and sought because of their qualifications and who accept to serve in group action towards a solution of a specific problem or assignment. A committee arises from a need or a want to solve a special problem and derives its power from the source of its appointment. A committee is a subgroup of an organization.

   a. Standing committee - is a committee which is there in case it is needed.
   b. Special committee - this committee is appointed to serve a special assignment and is a short time committee.

Why do we have committees ?

1. We cannot solve problems alone.
2. We have faith in people that they know what they want but need guidance.
3. People work best in something they are involved in.
4. They provide a means of distributing responsibilities.
5. It is a way of learning and developing skills.

Dr. McComas summarized this presentation as follows:

1. Key to the success of an advisory council and committee.
   a. selection
   b. understanding functions
   c. organization
   d. member centered
   e. membership rotation

f. use results of deliberations
g. give committees worthwhile responsibilities, don't use them as "rubber-stamp" committees
h. recognition of members
i. evaluation

2. Why do committees fail?
   a. nature of responsibilities of agent and committee members
   b. failure to develop written policies
   c. failure of minority group to support committee decision
   d. committee or members fail to change educational methods to fit the times
   e. leader wants to show his power
   f. inability to recognize the complexity of human relations
   g. failure of committee member and leader to work together
   h. when committee chairman accepts to be chairman on a split decision of the group
   i. when leader assumes the position in social or political organization opposed by committee
   j. when committee members are politically ambitious

3. Why people become leaders.
   a. they are respected
   b. they are competent
   c. have status or position
   d. have power
   e. have followers
   f. have influence
   g. can organize and unite group for action
   h. have demonstrated leadership ability

Three ingredients of a committee are:

1. Leaders - influence the attitudes and actions of others.
2. Members - involve in group action.
3. Program - total sum of what they do.

Why do we join committees:

1. Accomplishment - to accomplish an objective which cannot be accomplished by the individual alone.
2. New experiences - ther is power in knowledge.
3. Attention - we want prestige, we find identity in a group.
4. Satisfaction - when we see something or someone else develop.

Leaders

1. Make people feel their responsibilities.
2. They energize a group.

Types of leaders:

1. Formal - office or position holder because of their qualifications, (Example - teacher, priest, lawyer). May or may not have loyal following. Are delegated a great deal of power and responsiblity. They have been assigned to the position.

2. Informal - are leaders because people believe in them for guidance, have loyal following, they are not appointed or delegated.

Program

1. Why do people take action?
   a. Fear of reprisal
   b. To accomplish a purpose
   c. Hope for reward
   d. To discover and solve problems

2. A group or committee must know where to do and how to get there.

Objectives

1. Refers to the direction in which the group will go.
2. Must be within the abilities of the group.
3. Setting objectives must be the responsibility of the leader assisted by group.
4. Committee members should accept them.
5. Important to set a time for accomplishing objectives.

Military Leadership

by
Captain John Hesse
Doctoral Student
College of Engineering

Captain Hesse mentioned that military leadership must accomplish the mission which has been assigned to the group it leads. There must, of course, be some modification of basic leadership concepts as seen in civilian leadership. To accomplish a mission in the military, some type of organization is needed. Military leadership, as in civilian leadership, deals with people. It is involved with career personnel, who make up less than ten per cent of the military (Army); draftees, who make up eighty to eighty-five per cent; and enlistees, who make up two to five per cent of the military (Army). It is this last group that are more difficult to lead because they are unmotivated toward life in general.

The military operates under a rank structure which involves enlisted men, non-commissioned officers, warrant officers (normally not leaders), and officers found at the top. This rank structure has its problems. New officers usually do not have experience in a leadership role, yet must rank nine-tenths of the Army personnel. They hold rank over men twenty years their senior in age and experience.

Captain Hesse listed three characteristics of good officers which he felt were important in leadership. These characteristics were fairness, impartiality, and decisiveness. All of these characteristics must be exercised with maturity, he stated. A good officer must make a decision, even if it is wrong. This, however, must be tempered with good judgement.

The functional role of a military leader is to furnish direction in keeping a group oriented toward the mission. A leader will be judged on his ability to accomplish his mission and not whether his people love him. Many times, the job of keeping a group oriented to the mission is difficult because the chain of command tends to make many decisions obscure. The original decision passed through many command levels and many times changes in form. A military leader should not question his orders and automatic obedience is essential in the military.

Captain Hesse listed four major responsibilities of a military leader. They are as follow:

1. to accomplish the mission.
2. to be responsible for and to his own unit and the welfare of his men.
3. to be responsible for two way communication in his unit.
4. to have technical competence and competence as a leader to get along with people which is far more important than technical competence.

A military leader is responsible for unit goals and standards. He must help meet the personal needs of his men. Enlisted men look to the chain of command to satisfy their goals. It is the source of their motivations which can be positive or negative. Positive motivations include raises, promotions, and more desirable work conditions. Negative motivations can include court martials, non-judicial punishment, and reprisal. It is important for the military leader to know his men, and to recognize their needs and sources of motivation. He must also deal with two types of failures as far as men are concerned. One failure is due to the man who lacks ability to carry out his job and the second type of failure is motivational in nature. For these reasons, the military leader should assign jobs according to abilities of the men and he should know his men.

Captain Hesse, in concluding, stated that, "the winning of battles is the product of the winning of men", and that, "personnel will fail to accomplish their mission only if there has been a failure on the part of leadership".

In summary, Captain Hesse pointed out the following:

1. Leadership implies direction.
2. Military leadership is a modification of basic leadership concepts.
3. Leaders must utilize the experiences of those with whom they work.
4. Personnel will fail to accomplish a mission only if leadership fails.
5. Leaders must furnish direction in order to accomplish the job.
6. Military authority cannot be questioned.
7. The mission is primary and the individual is secondary (unique in military structure).
8. Two-way communication is needed so that personnel will understand their role.
9. Leaders must have technical competence.
10. Both positive and negative motivations must be wisely handled by leaders.
11. A leader is responsible for what his group does or doesn't do.
12. No two leaders are alike.

Types of Leadership
(A Psychologist's Point of View)

by

Dr. Claude Dove
Emeritis Head, Department of Psychology

Leaders are no different than anyone else who we may see in any busy community. From the standpoint of psychology, not too much is known. Leaders, from a psychological standpoint, have certain characteristics. These characteristics are:

1. A leader is a highly intelligent person.
2. A leader is a highly informed person.
3. A leader takes advantage of opportunities.
4. A leader knows people and their aspirations and uses them.
5. A leader has energy and uses it.
6. A leader has a combination of personality traits, which makes him attractive to other people.

History has been written from two viewpoints. Some historians have written history from the point of view that men create history. These historians felt that in the past there were men that had such leadership potential and demonstrated this ability that they turned events in their favor. On the other hand, some historians felt that situations which existed in the past created the men which we are now familiar with as having lead great social movements. It can safely be said, that the second viewpoint prevails among most men.

Dr. Dove continued his discussion on leadership by saying that good leaders have a sense of direction and objectives in mind. They should try to eliminate their position. This means that leaders should develop people so that leadership is no longer needed.

Three methods of developing leadership abilities in people were mentioned by Dr. Dove. They are:

1. Give opportunities for leadership.

2. Make people independent.

3. Start working with people where they are, economically and socially.

TYPES OF LEADERSHIP

A Mental Health Director's Point of View

By

Miss Elizabeth Madore, Director
Dona Ana Mental Health Services

1. Board of Directors —— Policy
2. Ex-Officio Committee --
3. Professional Committee - See that policies are sound

Recommended the book, "How to Pick Men" by Jack McQuaig
386 Park Ave. South
New York, 16, New York

VOLUNTEER LEADERS

1. Pick a person who likes to learn - educator.
2. Pick a person who likes to try new things, and who likes to have other people try new things.
3. One who likes group he is responsible for.
4. Pick a person who is cooperative.
5. Outline the job and pick a person who fills the characteristics of this job.
6. Attitudes of the people - positive attitudes.
7. Are they the kind that like to do a good job?
8. Are they stable - do they follow a job through?
9. Maturity. -
10. Aptitudes - what skills do they have and what skills can they develop. (20% of the salesmen sell 80% of the products.)
11. You are better off with nobody than with the wrong person.

INTERVIEWING

1. Try to get the other person to talk more than you.
2. Listen to what you are saying and listen to what he is saying.
3. Try to see how he is feeling - personal interviews.
4. Try to see how you feel as he is talking.

SELECTING

Policy Making Group:

1. Consider image and impact they have in the community.
   a. do not choose someone who is too controversial.
2. Sophisticated - one who gets things done (parliamentary procedure.)
3. Their interest in the work they are doing.

General - Ex-officio:

1. Select those who get along with other agencies.

Professional:

1. Competency.

HOW TO TREAT THESE PEOPLE

1. Prepare agenda ahead - to avoid boredom and to save these people time; treat them right.
2. Have a secretary.
3. Have policies ready with their corrections made ahead.
4. Do not encourage their presence unless meeting applies to their profession or job.
5. Orient board about what you are trying to do.
   a. discuss issues which are coming up with historical background.

WORKING WITH OTHER AGENCIES

1. Get to know them - visit with them and let them know you.
2. Do not expect to be popular with everybody.
3. Do not stay away from agencies (people), even if you do not get along with them - involve them in what you are doing.
4. Talk in the same language.

THE WAY TO IMPRESS A COMMUNITY IS TO GIVE THEM THE BEST SERVICE YOU CAN!

PROBLEMS IN 4-H AND EXTENSION

By

Dorman Brookey
State 4-H Club Leader

Extension Service Situation in New Mexico:

	1964	1963
Clubs	460	450
Members	8173	7690
Women's Extension Clubs	1296	1187
Bernalillo County 4-H membership	988	
Sandoval County 4-H membership	29	

What is the potential in New Mexico of 4-H membership?
175,000

Recruiting 4-H Leaders:

1. We need to recruit for a specific job.
   a. At one time we were losing leaders because they were serving as organization leaders to turn in reports to the office.
   b. Now we want to recruit leaders to do a job - these jobs should be defined to leaders.

Difficulties encountered in having too many project leaders:

1. Project leaders not knowing responsibilities of organization leader.
2. Agents requesting all project leaders to attend training meetings which do not concern them.

The strength of 4-H clubs is in business meetings. In the officers of the club fulfilling their jobs.

Resource people who help in 4-H should participate in one thing - crafts, etc.

Agent should keep list of prospective resource people to help. These people should start at the bottom of the ladder and work up.

Leader Recognition:

1. Leaders lack recognition from 4-H members parents.
2. Leaders have been getting standard recognition; such as, pins and service awards.

Leader Training:

In 1964 there were 311 leader training meetings held.

Weakness in Leadership Program:

1. Agents do not want to take time to train people to take over responsibilities. Reasons:
   a. Have no faith in people.
   b. Lack of interest in training meetings.
2. Agents look at extension program as <u>our</u> program instead of looking at it as <u>their</u> program - the communities' and counties' program.

At present there are 26 counties in New Mexico in leader training.

Summary by Dr. McComas:

We want leaders with those same qualities that we want from agents - leaders that can get the best out of 4-H members.

Four-H members who are not qualified to be officers can develop to this by participating in committees and club activities.

Councils should approve leaders and not agents, or a list of criteria should be given a prospective leader and he can decide whether he meets the qualifications.

ERIC

THE USE OF ADVISORY COMMITTEES

BY

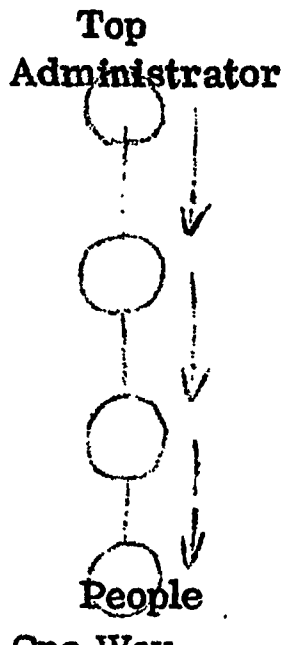
Dr. James McComas

This presentation included things to remember in order to have a successful advisory council.

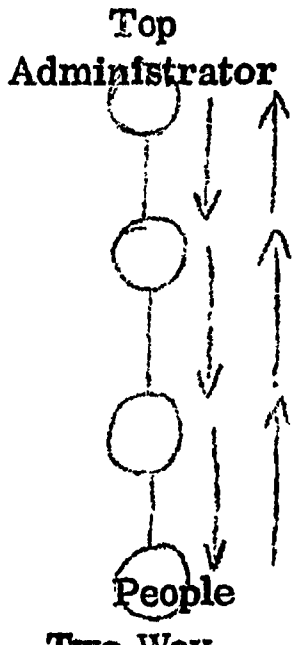
1. We should know level of education of members.
2. Have a prior meeting with the officers of the council.
3. Ideas will move very slowly through a society.
4. If council is a failure, it might be that a different type of council be set up - a change in membership.
5. Have membership representation from different communities.
6. Membership should be from eight to fifteen.
7. Problems in working with committee are due to
   a. communications
   b. difference in problems

In organizing an advisory council we should:

1. Have clear in mind what committee is to do.
2. Communicate this to the committee.
3. Strive for representation in terms of age, occupation, etc.
4. Have faith in the democratic process.
5. Provide means of rotation of members.
6. Must not set ourselves up as head of the committee.
7. Do the necessary leg work before the meeting.
8. Let committee do its own work.
9. Set up definite meeting dates and time, and meet often.
10. Philosophies:



One Way
Communication



Two Way
Communication
(involve members)

Why have advisory councils?

a. No agent can reflect values for all the people.
b. To help communicate to others goals, objectives, etc.
c. To defend the program against criticism.
d. To operate on a premise of shared responsibility.

Pitfalls of an advisory council:

1. Lack of knowledge of how council should operate.
2. Takes time and involves more meetings than members hope to attend.
3. Quality of members do not meet qualifications.
4. Lack of accomplishments.
5. Conflict of perception of roles of members.

EVALUATION

The course was well organized and members developed through the use of a variety of outside speakers and through working in different committee assignments.

The class interest was held high because of different occupations held by class members.

Each individual was given the opportunity to improve his program by preparing a paper using the materials taught in the class as it pertained to his individual situation.

The course gave a basic understanding of leadership and taught how we could educate those people we come in contant with for leadership.

VT 006 465
Edwards, Mabel I.
Selected References on Homemaker-Health Aide Services (An Annotated Bibliography).

Iowa Univ., Iowa City. Inst. of Gerontology
National Council for Homemaker Services, New York, N.Y.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jul66 52p.

*VISITING HOMEMAKERS; *COMPANIONS (OCCUPATION); *OCCUPATIONAL HOME ECONOMICS; *ANNOTATED BIBLIOGRAPHIES; SERVICE OCCUPATIONS; *RESOURCE MATERIALS

An annotated bibliography has been prepared for those seeking help in initiating or developing a homemaker service. Item selection criteria applied to 700 available references were: (1) date of publication, (2) availability to reader, and (3) appropriateness to the subject. Definitions for Homemaker and Homemaker-Home Health Aide Services are given. Items are listed under the categories: General References, Training Homemakers, Standards and Personnel Policies, Bibliographies, Directories, Newsletters and Bulletins, Conference Reports and Proceedings, State Programs, Program Descriptions, Professional Workers, Homemakers and Home Care Programs in Iowa, Federal Programs for Homemaker Services, Selected Publications on Federal Programs, Handbooks, Guides, and Manuals, and films, filmstrips, slides, plays, and exhibits. Organizations and training centers are also described. (FP)

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SELECTED REFERENCES

on

HOMEMAKER-HEALTH AIDE SERVICES

(An Annotated Bibliography)

Prepared

by the

Institute of Gerontology
University of Iowa
Iowa City, Iowa

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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July, 1966

National Council for Homemaker Services
1790 Broadway – New York 19, New York

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Foreword

Any person or group of persons interested in initiating or developing a homemaker service naturally turns to the literature for information. This annotated bibliography has been prepared mainly for those wishing to know where to look for help.

As the title indicates, the list is highly selective. The great volume of publications on homemaker services appearing since 1960 plus the format and type of this presentation has made this necessary. Items have been arranged by subject category. For quick reference, the table of contents may be used.

Three criteria were used as the basis for item selection: (1) Date of publication. More recent items were given priority. (2) Availability to the reader. The list has been limited to those materials easy to obtain. In many cases, a free copy may be secured. (3) Appropriateness to the subject. Items were chosen carefully to provide a fairly wide sampling of the somewhere near 700 references available.

With the exception of a few, all items were examined by the compiler, and are either on file at the Institute of Gerontology or in the University Libraries. While these may be borrowed, readers are urged to obtain their own copy. Most of the references may also be secured on loan from the Library of the National Council for Homemaker Services.

The compiler expresses gratitude to the many organizations and agencies for being so generous with their publications. Special thanks goes to the National Council for Homemaker Services, the various departments of HEW, the AMA Council on Medical Services, Training Center for Coordinated Home Care and Other Out-of-Hospital Health Services of the Jewish Hospital of Saint Louis, The Association for Homemaker Service, Inc. (of New York City), Director of Social Service of the State Hospital, Evansville, Indiana, and many others. Homemaker Services: History and Bibliography by Maud Morlock was particularly helpful.

Iowa City, Iowa
July 26, 1966.

Mrs. Mabel I. Edwards, Compiler
Research Associate and Bulletin Editor,
Institute of Gerontology,
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DEFINITIONS

The definition of "Homemaker" and "Homemaker-Home Health Aide Service" have been developed by the National Council for Homemaker Services as follows:

Homemaker - "a mature, specially trained woman with skills in homemaking who is employed by a public or voluntary health or welfare agency to help maintain and preserve family life that is threatened with disruption by illness, death, ignorance, social maladjustment or other problems. A pleasant personality, physical and mental well being, experience and training enable her to assume full or partial responsibility for child or adult care, for household management and for maintaining a wholesome atmosphere in the home. She does these things under the general supervision of a social worker, nurse or other appropriate professional person connected with the sponsoring agency. She exercises initiative and judgment in the performance of her duties, recognizes the limits of her responsibility, works cooperatively with family members and shares her observations and problems with those responsible for the homemaker service program."

Homemaker-Home Health Aide Service - "an organized program provided through a public or voluntary non-profit agency. Qualified persons known as homemaker-home health aides are employed, trained and assigned by this agency to help maintain, strengthen and safeguard the care of children and the functioning of dependent, physically or emotionally ill or handicapped children and adults in their homes where no responsible person is available for this purpose. The appropriate professional staff of the agency establishes with applicants the need for the service, develops a suitable plan to meet it, assigns and supervises the homemaker-home health aides and continually evaluates whether the help given meets the diagnosed needs of its recipients."

What Homemaker Services Can Do?

- -- Prolong independent living for the aging or the disabled.
- -- Enable families to care for their aging or ill without exhausting their own physical, financial and emotional resources.
- -- Strengthen family life by raising the level of living and preventing the development of serious social situation.
- -- Hold families together in times of short-term or chronic illness, hospitalization, convalescence, desertion, death or other stresses.
- -- Permit the employed father to keep his job when his wife is unable to care for the home.
- -- Enable the working mother to keep her job when there is no one else to care for the child or other person who is ill.
- -- Help a new or expectant mother in continuing the normal household routine.
- -- Help parents to learn better methods of child care and housekeeping.

HOMEMAKER-HEALTH AIDE SERVICES

General References

Do You Have a Homemaker Service in Your Town? President's Council on Aging, Washington, D.C. 20201, August, 1963, 4 pp. Single copy free.

Defines homemaker service, tells who needs it, what homemaker services do, resources to help get one started, and how to develop a service.

Historical Back Ground

(Reader is referred to Homemaker Services: History and Bibliography by Maud Morlock, Children's Bureau, Welfare Administration, D/HEW, 1964, pages 1-15; an excellent historial account of homemaker service development in the U.S., 1903-1964, and pages 31-43 - lists of important references by time periods, 1914-1919; 1920-1929; 1930-1939.)

Home Care of the Sick, Public Health Service, D/HEW, Washington, D.C. PHS publication No. 70, folder, 1961

Contains useful suggestions for proper care of a patient at home.

Homemakers - A National Need, by Ellen Winston. U.S. Commissioner of Welfare, D/HEW, Washington, D.C. Reprint (Delivered at the National Conference on Homemaker Services, Opening Session, Mayflower Hotel, Washington, D.C., April 29, 1964.)

The Homemaker in Public Welfare, American Public Welfare Association, 1313 East 60th Street, Chicago, 1962, 32 pp.

Four papers on role of homemaker service provided by Welfare Agencies to old age assistance recipients. (Papers by Grace W. Bell, Mary Gorman, Annie May Pemberton, and Doris E. Williams.)

Homemaker Service, Children's Bureau, Social Security Administration, D/HEW, Washington, D.C. Folder No. 46 - 1958. Reprinted 1962, 36 pp. (15¢, Government Printing Service.)

Pocket size booklet describing how a homemaker service works, and its functions with examples, how a service gets started, how it is financed, training of the homemakers, who receives the services, who pays for it, and the premises upon which it is built.

Homemaker Service - A Community Resource, by Grace L. Hewell. (Reprint, Indicators, May, 1964.) Write: Office of Program Analysis, Office of the Assistant Secretary (for Legislation), D/HEW, Washington, D.C. 20201. Single copy free

An excellent summary and definitions, components of the service, trends, problems of expansion, HEW support, and new horizons for homemaker service.

Homemaker Services - for Families and Individuals. Public Affairs Pamphlets, 381 Park Avenue, South, New York, New York 10016. Pamphlet #371, March, 1965, 25 cents

Describes how homemaker service may be utilized, the function of homemakers, and the importance of the service.

Homemaker Service - New Developments in the Public Welfare Field by Grace W. Bell. Bureau of Family Services, Welfare Administration, D/HEW, Washington, D.C. 20201, May 21, 1963. Mimeographed paper

Homemaker Services in Public Welfare. Welfare Administration, U.S. D/HEW, Washington, D.C. 20201, April, 1964, 16 pp.

Booklet explaining briefly the role of homemaker services to public welfare agencies and how such a service may be financed. Contains many pictures.

Homemaker Services in the United States; 1958, Public Health Service, D/HEW, Washington, D.C. 20201, (1959), 115 pp.

In preparation for the 1959 National Conference on Homemaker Services, reports were prepared by 11 preconference study groups on various aspects of homemaker services -- e.g., content, administration, promotion, etc. Included are the following reports with significance for the present:

(1) Development of Homemaker Services in Small Communities and Rural Areas.
(2) Distinctive Needs and Purposes Met by Homemaker Services.
(3) Establishing a New Homemaker Service.
(4) Industry and Labor in Homemaker Services.

Homemaker Services in the United States, 1958. Public Health Service, U.S. D/HEW, Washington, D.C. 20402, 1958, 99 pp. (PHS Publication No. 645)

Twelve article describing different types of homemaker services and illustrating major variations in administration; programs included: New York City Children's Aid Society; Cook County (Illinois) Department of Public Welfare; Boston Family Service Association; New York City Department of Welfare; San Francisco Homemaker Service; Cincinnati Family Service; Colorado State Department of Public Welfare; New Jersey State Department of Health; and New York City Jewish Family Service.

Homemaker Services in the United States: A Summary. AMA Council on Medical Services, Homemaker Services Bulletin, May, 1960

Defines homemaker services, traces origin and growth, and discusses families served, administration, and personnel policies.

Let's Understand Home Care, Publications Department, American Public Welfare Association, 1313 East 60th Street, Chicago, 60637 (1964), 36 pp., $1.00

Four main articles which supplement information given in guides concerning the basic elements of home care, administration, costs, comprehensiveness of services, and types of home care programs.

Needs of the Long-Term Patient, Department of Community Health and Health Education, AMA, 535 North Dearborn, Chicago 60601, 1964, 44 pp.

Definition of long-term patient, his distinguishing characteristics and needs, coordination of various types of facilities for meeting his needs, rehabilitation and the importance of homemaker services in this phase of his care, implications for the health professions and the integration of general medical care.

New Approaches to Homemaker Service, Child Welfare League of America, New York, New York, 1963, 20 pp., 65 cents.

A collection of three articles reprinted from Child Welfare (Articles by Elizabeth Burford, New York City Children's Aid Society, Nellie Martin, Louise Foresman, et al)

Handbooks, Guides and Manuals

Community Homemaker Service Manual, Division of Chronic Illness Control, State Department of Health, Trenton, New Jersey, 1956, 30 pp.

Describes plans and procedures for the establishment of a community homemaker service.

Handbook for Homemakers, Austin Child and Family Service, Austin, Texas, 1964, 31 pp.

Describes responsibilities of homemakers, suggestions for solution of problems and difficulties, and explains what a homemaker service is.

Handbook for Homemakers, Division of Child Welfare, State Department of Public Welfare, Denver, Colorado, 1960, 21 pp.

A manual describing the role of homemakers in the child welfare program of the County Welfare Department, and to furnish guidance to the homemaker in her duties.

Handbook of Selected Policies, Procedures, and Pertinent Forms. The Association for Homemaker Service, 297 Park Avenue, South, New York, New York 10010, 1964, 94 pp., $2.50 including postage.

Published by the Association for Homemaker Service of New York City, this Handbook of selected policies, procedures, and pertinent forms, was written as a guide for its own staff. It contains basic information useful to any agency planning or setting up a homemaker service. The core of this Handbook is on the use of Forms involved in accounting and clerical work performed by the total staff. The Handbook serves as a framework within which the service operates. The historical background of the Association, the listing, explanation, and illustration of all Forms makes this a useful guide for homemaker service operation.

Home Health Agency Manual, HIM-11, Social Security Administration, D/HEW, Washington, D.C. or your regional Social Security Administration officer, 1966, 42 pp.

Details in billing procedures as well as Start of Care procedures. Highly useful to agencies with Medicare participants.

Homemaker Manual, Chr-Ill Service, East Orange, New Jersey, 1963, 16 pp., 75¢

Defines homemaker service, gives duties, personal qualities, training, salary, etc. of homemakers. (Note: Chr-Ill Service, Inc., a voluntary health agency organized in 1948 under sponsorship of the Essex County Medical Society, started Homemaker Services in 1950.)

How to Plan a Community Homemaker Service. Woman's Auxiliary to the American Medical Association, 535 North Dearborn Street, Chicago 10, 1962, 32 pp. Single copy free

The first manual in a series of two by the Women's Auxiliary to the AMA suggests plans and step-by-step procedures for establishing a community homemaker service. The suggestions are the result of the composite experience of many services and of some of the studies made throughout the nation. They should, of course, be adopted to meet the needs of the individual community. Included are chapters on basic purposes, organization and planning, auspices, suggested constitution and by-laws, publicity, selection of staff, financing, screening and recruitment of homemakers, training programs, operating procedures, and suggested forms and records.

How to Operate a Community Homemaker Service. Woman's Auxiliary to the American Medical Association, 535 North Dearborn Street, Chicago 10, 36 pp. Single copy free.

A second manual by the Women's Auxiliary to the AMA is designed to suggest efficient administrative techniques and procedures in operating a community homemaker service. (A companion piece to the first Manual listed above.)

(Note: Mrs. Asher Yaguda was Chairman of the Homemaker Service Manual Committee, and Mrs. Eileen Lester served as a member of the committee.)

Manual on Family Aide Service by Rose Brodsky, Jewish Community Services of Long Island, 89-31 161st Street, Jamaica, New York, 1965, 79 pp., $1.25. (Third edition of manual issued October, 1950).

Covers the total homemaker service program - staff (all levels), casework practice and philosophy, job descriptions, supervision and training, and personal policies and practices.

Procedure for Developing a Homemaker-Health Aide Service in Iowa, prepared by Bernice Bateson, District Home Economics Program Leader, and Margaret Yoder, Assistant State Leader, Home Economics Program, Cooperative Extension Service, Iowa State University, Ames, Iowa, May, 1966, 20 pp.

A manual outlining in detail the steps for setting up a homemaker service in general but stresses the idea that there is no set procedure for establishing a homemaker service; rather the service must be tailored to the resources and needs of the community; covers the basic aspects of homemaker service with many suggestions; includes questionnaires for three types of surveys, and a suggested Constitution and By-laws and a bibliography.

Specifications With Regard to Architectural and Physical Barriers in the Patients Home, National Society for Crippled Children and Adults, 2023 West Ogden Avenue Chicago 60612

A 12-page set of specifications and physical arrangements in a patient's home involving minor structural and environmental changes necessary for independence and mobility of patient after discharge from hospital or during convalescense. Very useful to Home Health Agencies.

Standards for Accounting and Financial Reporting for Voluntary Health and Welfare Organizations, 1964. National Health Council, New York, New York 10019

A useful reference when setting up a financial system in an agency.

Statistics and Costs for Visiting Homemaker Services in New Jersey, Visiting Homemaker Association, New Jersey State Department of Health, Trenton, New Jersey, 1962, 28 pp., 50¢

A manual for recording, compiling and reporting the data of basic statistics and costs; presents a workable method for statistical information and a realistic method of cost computation.

Suggested Statistics and Cost Accounting for Homemaker Services, Connecticut State Department of Health, 165 Capitol Avenue, Hartford, Connecticut 06115

A manual of suggested uniform procedures for recording, compiling and reporting data.

Visiting Homemaker Service Handbook, School of Home Economics, Louisiana State University, Baton Rouge, 1963, 24 pp.

Describes the functions of a visiting homemaker service, the duties and services provided by a homemaker, how service is paid for, relationship to agencies she works with, etc.

Two publications from Montefiore Hospital and Medical Center, Director, Training Programs in Home Care, Home Care and Extended Services, 111 East 210th Street, Bronx, New York, 10467, 1966:

(1) Guide to Organized Home Care, n/c
(2) Selected Case Histories, 50 cents

Home Care Program of the Montefiore Hospital Association of Western Pennsylvania. Address inquiries to Educational Director, Training and Information Center for Home Care and Related Community Services for the Chronically Ill, Montefiore Hospital Association of Western Pennsylvania, 3459 Fifth Avenue, Pittsburgh, Pennsylvania, 15213

(Note: A hospital-based coordinated home care services program developed from a pilot study commencing in 1952 and culminating in a Department of Home Care established in 1961 as part of the hospital's optimum continuity of care goal. Several excellent publications of interest to anyone concerned with a home care program are available as follows:)

Three excellent volumes of Selected Papers from Seminars and Institutes of the 1962 program of the Montefiore Hospital Home Care Training and Information Center, a cooperative endeavor with the U.S. Public Health Service; provide a variety of educational and observational experiences for hospital administrators, physicians, nurses, social workers and home care services personnel concerned with coordinated home care and community services for the chronically ill and aged. Single copies $3.00; set of 3 volumes, $7.50.

(1) The Physician and Hospital Home Care, 1963, 95 pp. Represents the contributions from a scientific seminar of Pennsylvania physicians. Emphasizes practical considerations.

(2) Coordinated Home Care for Hospitals, 1963, 174 pp. Geared to interdisciplinary health professionals with an interest in home care programs.

(3) The Patient Comes First, 1963. Selected papers highlighting social work participation in home care programs. An educational program for social work supervisors.

(4) (In process) - Nursing Services in a Coordinated Home Care Program. (Available, August, 1966.

Three Case Books (Related materials organized on a framework of those major groups of patients served in the Coordinated Home Care Program of Montefiore Hospital of Western Pennsylvania.) Single copies $3.00. Three volume set $7.50

(1) Case Book of a Coordinated Home Care Program (May, 1963) 200 pp. Nine case records describe the coordinated services of home care physician, nurse, and social worker to patients who are on the home care program for both limited and long-term periods. Cases illustrate a wide range of diagnoses and family living patterns.

(2) Casebook - Home Care Services for the Terminal Patient and his Family, 1965, 131 pp. For use by physicians, nurses, social workers, clergymen, and others in the helping professions. Nine case records illustrate ways in which families responded to the crisis of a dying member and identify the gamut of services provided by the Home Care Department in easing the care of an ill child or adult.

(3) Casebook of a Coordinated Home Care Program for Children, 1966, 200 pp. For health and welfare professionals concerned with the care of children; cases illustrate the advantages in a family-centered approach of a professional team; a wide range of diagnoses and socio-economic backgrounds are included; emphasis on utilizing the strengths of multi-problem families who participated in their ill child's case at home.

The Montefiore Hospital Home Care Program - A Manual, 1965, 24 pp.

Describes philosophy, purpose, administration, and criteria for patient eligibility.

THE ASSOCIATION FOR HOMEMAKER SERVICES, INC., 297 Park Avenue, South, New York City, New York, is a non-sectarian social agency affiliated with the Federation of Protestant Welfare Agencies. Beginning service in December, 1960, it provides homemaker services - on a purchase of service basis - city wide with 24-hour service. The program has been expanded greatly through demonstration grants and arrangements with social agencies. Mrs. Rose Brodsky, executive director, is the author of several useful training publications as follows:

Handbook of Selected Policies, Procedures and Pertinent Forms (1963). See pp. 3-4 this bibliography

"Problems in Supervision and Learning in the Multiple Service Agency," Jewish Social Service Quarterly, 1948

"Supervision and Training of Homemaker Staff," Annual Report of National Committee on Homemaker Service, 1955

"Philosophy and Practice in Homemaker Service," Child Welfare, July, 1958

"Manual on Family Aide (Homemaker Service)," Jewish Community Service on Long Island, 89 - 161st Street, Jamaica, New York, $1.25

"Administrative Aspects in 24-hour Homemaker Service," presented at National Conference on Homemaker Services, Washington, D.C., April, 1964

"The Use of Homemaker Service in Psychiatric Situations," Child Welfare, October, 1961. (Presented at Eastern Regional Conference of the Child Welfare League - 1961).

"Homemaker Service - under Whose Auspices and For What Purpose?" Published in Annual Report of National Committee on Homemaker Service - 1955. (Presented at 1955 Conference)

"What is Distinctive in Family Service." Paper presented at Tenth Anniversary Conference of Jewish Community Services of Long Island - 1953

Training Homemakers

"A Formalized Homemaker Training Program" by Elizabeth Burford, Child Welfare (September) 1962, 41, 313-317

Philosophy, method, and content of the Child and Family Services Agency of Chicago homemaker training program is examined; program includes a course given under the auspices of a graduate school of social work.

Guide for Training Homemakers, State of Illinois, Department of Children and Family Services, Division of Child Welfare, 528 South Fifth Street, Springfield, Illinois 6270 (January, 1965), 69 pp.

A guide for training homemakers to be employed for service to children and families. Prepared by Miss Mary C. Traskey, Supervisor of Homemaker Service, the manual presents in outline form the history and philosophy of social welfare, a beginning identification with the agency, the emotional components of family life, knowledge and skills necessary to serve families with children, basic rules for safety and health care in the home, and a beginning understanding of the emotional needs of children. An excellent presentation.

Homemaker Training Course, Training Center for Comprehensive Care, Lemuel Shattuck Hospital, 170 Morton Street, Jamaica Plain, Massachusetts 02130. Write, Mrs. Suzanne B. Greenberg

"Current Concepts in Administration for Homemaker-Home Health Aide Agencies" -- a recently completed training course of five weekly sessions with follow-up meeting this fall; developed to orient and up-date participants in administration and supervisory techniques and skills.

The following six papers presented at the meetings available by writing Mrs. Greenberg. (see above);

"The Intake Process in Homemaker Service Cases," Katherine N. Chambers

"In-Service Training of Homemakers," Marilyn M. Barron

"Personal Care in Homemaker Programs," Brahna Trager

"In-Service Training," Adelma E. Mooth

"Concepts in the Supervisory Process," Adelma E. Mooth

"Considerations in the Supervisory Process with Homemakers," Marilyn M. Barron

Homemaker Service: Training Syllabus, School of Home Economics, Louisiana State University, Baton Rouge, Louisiana, 1963, 70 pp.

A syllabus prepared to help home economics teachers in organizing and teaching homemaker service training programs, e.g., in homes, aged and chronically ill, mental patients, family life, caring for children, nutrition, food and household management.

Manual for Training Personnel for Homemaker Services. Indiana State Board of Health, Indianapolis, Indiana, 1963, 26 pp.

A guide to training programs prepared jointly by the Indiana State Board of Health, Indiana Employment Security Division, Indiana Department of Public Instruction and the Indianapolis Adult Education and Extended School Services.

The Training of Visiting Homemakers. Canadian Welfare Council, 55 Parkdale Avenue, Ottawa 3, Ontario, Canada, March, 1963, 8 pp., 25¢

Presents a detailed outline for a minimum training course for visiting homemakers. Intended as a guide for those who may wish to set up such a service; deals with selection of candidates, duration, instruction facilities and planning of the course, the content, and further training once the basic course is completed.

Visiting Homemaker Service Training Course Manual. The New Jersey Department of Health, Chronic Illness Control Division, Trenton 25, New Jersey, 1962, $1.00

Presents a complete teaching plan

Planning for Long-Term Patient Care. Proceedings of a Seminar, January 24-25, 1963. Training Center for Coordinated Home Care and other Out-of-Hospital Health Services, 216 South Kingshighway, St. Louis, Missouri 63110

Describes the nature and extend of long-term patient care services to executives of health insurance plans, health and welfare councils, hospital associations and other health services concerned with care of the chronically ill and physically disabled. Much information useful in training professionals in long-term care concepts.

The Visiting Homemaker: A Suggested Guide for a Training Program. Office of Education, U.S. D/HEW, Washington, D.C. 20402, 1964, 18 pp.

A Manpower Development and Training Program. Resource material from which a local training program can be developed. Two programs are suggested with the direction that each training program should be adopted to each group of trainees.

Visiting Homemaker Service Training Course Manual, The New Jersey Department of Health, Chronic Illness Control Division, Trenton 25, New Jersey, 1962, 56 pp., $1.00

Presents a complete teaching plan; provides 22 hours of instruction. A cooperative project with the Visiting Homemaker Service of New Jersey and Rutgers State University, University Extension Service.

Training Center for Coordinated Home Care and Other Out-of-Hospital Health Services, Jewish Hospital of Saint Louis, 216 South Kingshighway, St. Louis, Missouri

The Center provides short courses, seminars, lectures, and conferences for health care executives, physicians, dentists, students in health professional schools, volunteer workers, and community leaders. Information is collected for exchange and teaching materials developed which can be used in training professionals in home care concepts. Homemaking is a part of the total concept. The Training Center, established in 1953 under a U.S. Public Health Service grant, receives support from the Jewish Federation of St. Louis and the United Fund of Greater St. Louis.

Publications are available as follows:

Jewish Hospital of St. Louis Home Care Program, 24 pp., 1965. A descriptive brochure.

Home Care Newsletter (bi-monthly), free

Symposium on Research in Long-Term Care, September 25-27, 1963. Proceedings. A collection of prepared papers covering issues in research, methodology, unpublished reports of on-going research, various aspects of long-term illness, organizational patterns, and ways of studying this type of illness. 114 pp., $1.50

Manual on Rehabilitation Nursing. Prepared by Departments of Nursing and of Rehabilitation. A reference manual for nurses in specific rehabilitation nursing procedures and a summary of principles and procedures of professions comprising the medical-rehabilitation team. 84 pp. Bibliography, $4.00

Symposium for Audiologists and Speech Pathologists on Caring for Chronically Ill and Aged Patients. June 15-16, 1964. Proceedings. Presents papers covering the most recent concepts in etiology, diagnosis, and therapy of speech and hearing problems; how to deal with patient problems, and chronic diseases which often underlie communication problems. Extensive bibliography prepared by D. E. Morley, Ph. D. University of Michigan, 144 pp., $1.50

Planning for Long-Term Patient Care. Proceedings of a seminar held January 24-25, 1963 describing the nature and extent of long-term care services, coordinated home care services and costs and financing of such care. Description of the Training Center and its objectives. 194 pp., $1.50

Social Workers and Long Term Care, $1.50

APA Monograph No. 9 on Home Care (Based on description of organization and operation of Jewish Hospital Program. $2.75

APH Monograph No. 13. A Chronic Disease Unit in a General Hospital: Analysis of Six Years' Operating Experience, $1.75

Publications pending:

(1) Manual on Physical Therapy (1966), $4.00
(2) Medical Evaluation for Vocational Counselors, $2.00
(3) Preventive Medicine and Long Term Care: Selections from the Symposium for Medical Educators, held June, 1965, $3.00

"Rutgers University Training Program for Homemakers," Homemaker Services Bulletin, March, 1961, 2, 3-4

Describes briefly the eight aspects of homemaker service covered in the program. (From 1954-1960, over 963 persons completed the course given at Rutgers University in cooperation with the New Jersey State Department of Health.)

Standards and Personnel Policies

"The Case for Standards in Home Care Programs," by Jack Kaster in The Gerontologist, 3(March, 1963), pp. 14-17

Examines three types of home care programs (hospital-based, community-based, agency-based) using a sample set of standards.

"Homemaker Services Keep Families Together," by Myron J. Mitchiner, Public Welfare News (North Carolina State Board of Public Welfare), June, 1955

Lists the regulations of the North Carolina merit system for regularly employed homemakers; points out values of the system.

"Recruitment, Training, and Personnel Policies," Public Health Service, D/HEW, Washington, D.C. 20201, in Homemaker Services in the United States: 1958, 1959, pp. 53-73. (Processed)

Reports of Preconference (1959) Study Groups presents certain requisites, i.e., established qualifications, sound methods of selection, and adequate job descriptions as the basis for recruitment; describes the essentials which must be incorporated in training program design.

Standards for Homemaker-Home Health Aide Services. National Council for Homemaker Services, Inc., 1790 Broadway, New York, New York 10019, September, 1965, 48 pp., $1.00

A guide and standards code applicable to all Homemaker-Home Health Aide Agencies. Each of the seven chapters covering the major categories of organization and administration of a service is divided into introduction, outline of principles, and summary statement. A new definition of Homemaker-Home Health Aide Service is presented. The manual was developed by a Committee of seventeen representatives of national, health, and welfare agencies, with Mrs. Marion Yaguda as Chairman of the Committee on Standards.

Standards for Homemaker Service for Children. Prepared by Committee on Standards for Homemaker Service, Child Welfare League of America, 44 East 23rd Street, New York, New York 10010, 1959, 45 pp.

Suggestions from 40 member agencies incorporated under following categories: homemaker service as a child welfare service; role and development of the homemaker; casework in a homemaker service, organization and administration; and community planning.

"Study of Existing Personnel Practices for Homemakers," by Esther Dutton, Highlights, Family Service Association, January, 1942, 140-143

An earlier study which gives a general cross-section of personnel practices in fifty agencies.

Supervised Homemaker Services: A Method of Child Care, Children's Bureau (Publication No. 296), Welfare Administration, D/HEW, Washington, D.C. 20402, 1943, 36 pp.

Outlines basic procedures and fundamental principle for organizing a homemaker service; basic material gathered by Committee on Supervised Homemaker Service from social agencies using homemaker service as one method of assistance to families. Five types of homemaker services (case illustrations) given in appendix.

Bibliographies

Bibliography on Organized Home Care, Director, Training Programs in Home Care, Home Care and Extended Services, Montefiore Hospital and Medical Center, 111 East 210th Street, Bronx, New York 10467, 1966 - up-to-date list of references.

Homemaker Services: Bibliography, compiled by Library of the National Council on the Aging, 49 West 45th Street, New York, New York 10036, 1965, 15 cents

Lists 27 informational sources for homemaker programs - pamphlets, training programs, reports, pilot projects, home aide programs, homemaker services for older persons, and other selected references.

Homemaker Service - A Bridge to the Future, Librarian, Colorado State Department of Public Welfare, 777 Cherokee Street, Denver, Colorado, recent, $1.00

Contains a general listing of new and current writings plus some older basic publications that are still available.

Homemaker Services: History and Bibliography, compiled by Maude Morlock, Children's Bureau, Welfare Administration, D/HEW, Washington, D.C. 20402. Children's Bureau Publication, No. 410, (1964), 116 pp., 40 cents

An excellent historical account and comprehensive annotated bibliography of published materials arranged categorically, most of which are still available; probably the most complete list of references on homemaker services available at present. The author, now retired, is a former specialist in Homemaker Services in the Division of Social Services of the Children's Bureau.

Homemaker Services for Older People, OA No. 302, Selected References on Aging, Office of Aging, D/HEW, Washington, D.C., (1962), 4 pp.

A brief list of selected references.

Selected References on Coordinated Home Care Services for the Chronically Ill and Aged, compiled by Mabel I. Edwards, Research Associate, Institute of Gerontology, University of Iowa, Iowa City, Iowa 52240. Mimeographed, 1965, pp. 30

Lists general references, survey and study reports, types of programs, Dental, Homemaker, and Meals-on-Wheels, Newsletters and Bulletins, examples of current research programs and descriptive notes on home care programs in Iowa.

Directories

Homemaker and Related Services, 1958. Public Health Service, U.S. Department of Health, Education, & Welfare, Washington, D.C., Public Health Publication No. 598

Listing of agencies compiled to be used in connection with the National Conference on Homemaker and Related Services, February, 1959. A survey by the PHS found 145 agencies in 32 states with homemaker service available in 150 counties and 104 cities; only one agency established prior to 1930 with 1925 the earliest date reported. Sixteen programs were started during the thirties, 44 during the forties, 54 in the period 1950-1955, and 24 in the next two years. Home help service was furnished to families with children, aged persons and/or long-term patients.

Directory of Homemaker Services, 1961. Public Health Service, U.S. D/HEW, Washington, D.C., 1962, 217 pp. (Government Printing Service, $1.00, PHS Publication No. 928)

Compiled jointly by the Public Health Service, Bureau of Family Services and the Children's Bureau; lists a questionnaire sent out in homemaker programs in the U.S. as of October, 1961; presents certain facts concerning each agency. (The only agency listed for Iowa -- Waterloo -- established in 1960, was discontinued later.)

Directory of Homemaker Services, 1963. Division of Community Health Services, Public Health Services, D/HEW, Washington, D.C. 20201, February, 1964, 324 pp. (Government Printing Service, $1.50, PHS Publication No. 928)

A revision of the 1961 Directory; lists 303 agencies with homemaker programs in 44 states, and in 240 towns and cities; 50 per cent increase in services located in seven states; 20 agencies listed in 1961 no longer in operation due to withdrawal of financial support or inability to recruit homemakers. Two services were listed for Iowa -- Des Moines and Earlham

1963 Directory of Homemaker Services. Public Health Service Publication No. 928. U.S. Government Printing Office, Washington, D.C. 20402, revised 1964, 324 pp. $1.50

This Directory lists 303 agencies which administer homemaker service in 44 states, the District of Columbia, and Puerto Rico.

Additions to the 1963 Directory of Homemaker Services, January, 1965, issue of Homemaker Services, The American Medical Association Council on Medical Service, 535 North Dearborn Street, Chicago 60610. Free

A listing of 28 homemaker services established since the 1963 Directory of such services was published. Contains three in Iowa (Burlington, Davenport, and Sioux City.)

(Note: Homemaker Services Bulletin carries listings and announcements of new services. A revision of the 1963 Directory is under way by NCHS.)

Directory of Homemaker-Home Health Aide Services in Connecticut, (1965) Connecticut State Department of Health, 79 Elm Street, Hartford, Connecticut 06115, October, 1965, 24 pp.

The 1965 revision of the Directory, compiled for information purposes only, was supported by a Community Health Project Grant from the PHS of HEW

Films, Film Strips, Slides and Exhibits

SLIDE FILM: WHAT IS HOMEMAKER SERVICE? Slide film, 10 min. Available from the National Council for Homemaker Services, 1790 Broadway, New York, New York 10019, $5.00 per two week loan

Explains how a family with three young children is helped by a homemaker service when the mother is hospitalized; discusses homemaker's duties in the home, and her relationship to family members and agency staff. A useful device for introducing to agencies operating such a service and groups wishing to establish one, the purpose, value and need for homemaker service; stimulates public interest, and is useful in recruitment and training of staff.A narrator explains that Homemaker Service is not just for families with children, that it has great value for the chronically ill and aged, the mentally ill, and the physically handicapped.

FILM: HOME AGAIN, B and W film, 16 mm. sound, 35 min. Produced by and available from Mental Health Film Board, 116 East 38th Street, New York, New York. Small service charge; also available from local film libraries.

Stresses how important it is to maintain stable family life in time of a crisis, in this case, a woman recuperating from a heart ailment; also shows how a community can help. Lead played by Martha Scott.

FILM: WHEN THE BOUGH BREAKS. Color film, 16 mm., sound. Available The Family Service Association of Nassau County, 290 Old Country Road, Mineola, New York, $5.00 rental; $100. purchase price.

A dramatization of homemaker services in a family situation involving the illness of the mother.

FILM STRIP: ENTER HOPE, Color, 35 mm. Film strip with recording, 15 min. Write State Consultant Committee, Community Homemaker Service, Division of Chronic Diseases Control, State Department of Health, Trenton, New Jersey

A true story of Community Homemaker Services in New Jersey showing the training of homemakers, the kinds of services they give, and the benefits accruing to the patient, the aged, and family groups. Need for showing are a 35 mm. film strip projector and a record player for a 16-inch 33 1/3 recording.

PLAY: TO TEMPER THE WIND, Half-hour play. Write: Plays for Living, Family Service Association of America, 44 East 23rd Street, New York, New York 10010. Perusal copy $2.00. Production kit of six copies, $12.00. No royalty. Scripts give acting directions and a discussion guide for chairman.

The threat of family breakdown and how homemaker service helped is the theme of the new play by Elizabeth Drake. The 30-minute drama gives a moving interpretation of how the service helped a father, his three children, and an elderly grandmother are enabled to stay together at home when the mother was hospitalized after a serious accident. Play can be staged in a large auditorium, luncheon, or hotel dinner meeting, or in a classroom. No special props needed. An excellent media for local agencies or groups who wish to present, in dramatic form, the value of homemaker service in preserving family unity. The play was originally produced by FSAA for the National Council for Homemaker Services and has been widely used.

PLAY: THE DOOR IS OPEN, a half-hour drama, by Stephan Chodorov, produced by Plays For Living, Family Service Association of America, 44 East 23rd Street, New York, New York 10010. No royalty.

Produced by FSAA for the Vocational Rehabilitation Administration, D/HEW. A new play presenting the importance of trained personnel to aid the stroke victim and his family, of which the visiting homemaker is an important member of the home care team.

EXHIBIT: HOMEMAKER SERVICE EXHIBIT. Available through American Medical Association, 535 North Dearborn Street, Chicago, Illinois

Suitable for large meetings.

EXHIBIT: FOLDING TABLE TOP EXHIBIT. Available, Visiting Homemaker Service of New Jersey, Inc., 1100 Raymond Boulevard, Newark, New Jersey.

Newsletters and Bulletins

Chronic Illness Newsletter. AMA Council on Medical Service, 535 North Dearborn Street, Chicago. Free. Includes current news items, announcements, longer articles and detailed information on chronic illness. Contains excellent articles on the various aspects of home care.

Coordinated Home Care Newsletter, published by the Training Center for Coordinated Home Care and Other Out-of-Hospital Health Services, Jewish Hospital of St. Louis, 216 South Kingshighway, St. Louis, Missouri 631000. Monthly. Free

Contains descriptions and news items of the St. Louis Home Care Program, announcements, and one longer article on home care services in each issue. A very timely and newsy reference.

Headlines of Homemaker Services, (for the Chronically Ill and Aged), Committee on Aging, Health and Welfare Council, 417 North Tenth Street, St. Louis, Missouri 63101

A monthly Newsletter covering the activities of the Homemaker Services demonstration program sponsored by the Health and Welfare Council of St. Louis. Also includes short articles and announcements. Discontinued with March, 1966 issue at close of project.

Homemaker Services Bulletin, AMA Council on Medical Services, 535 North Dearborn Street, Chicago. Published bi-monthly to alternate with News. (see below)

One of the best and most useful sources of current information on homemaker services throughout the U.S. Contains news briefs, descriptions of service programs, references, longer articles, conference news, new publications, and periodically contains additional listing to Homemaker Service Directory (1963). Published by AMA in cooperation with the National Council for Homemaker Services "to report on the development and expansion of this needed family service."

News, Newsletter, National Council for Homemaker Services, 1790 Broadway, New York, New York 10019. 4 pp.

Published five times a year beginning October, 1964 in alternate months (except August) to the Homemaker Services Bulletin which is published bi-monthly by the American Medical Association in cooperation with the NCHS. The News reports national developments, trends, and progress, providing a "direct line" for a two-way flow of communication between the Council and many organizations and agencies working to extend homemaker services. Free.

Conference Reports and Proceedings

The Proceedings of the International Congress in Paris (1962) on Home Help Services, translated and published by the Welfare Administration, D/HEW, free
W A Publication No. 10

Sets forth the principles developed at the first Congress of the International Council of Home Help Services following its official organization; contains five papers by representatives from France, Great Britain, Germany, Sweden, Holland, a review of workshops, two main addresses, and a brief summary of services in eleven European countries, Canada, and Japan. Contains much valuable information for homemaker personnel in the U.S.

Note #1: The International Council of Home Help Services was initiated at the 1959 International Congress in Holland and was formally organized at a meeting of delegates immediately preceding the 1962 Congress in Paris. The United States is represented through the National Council for Homemaker Services by Mrs. Grace Bell.

Note #2: Another International Publication of interest is: Homehelp, International Council of Homehelp Services. Available from the National Council for Homemaker Services, 1790 Broadway, New York, New York, 56 pp., $1.00

First "really authoritative work on the home help services all over the world;" data compiled from questionnaires sent out by Holland and Germany; presents brief description of home help services in the countries who have developed them; the International Council, its functions, regulations, membership, etc.

Highlights, National Council for Homemaker Services, 1790 Broadway, New York, New York 10010. Free copy upon request.

The interim report of the 1964 National Conference of Homemaker Services, compiled and published by the American Medical Association as a public service.

Proceedings of the First National Conference of the Joint Council To Improve the Health Care of the Aged, The Council, 139 North Clark Street, Chicago. Single copy on request, 1959, 180 pp.

Proceedings of the first national conference of the Joint Council, held in Washington, D.C., June 12-13, 1959. It covers, in general, basic information on the needs of the aged, with histories of successful experiments in the health care of the aged that have resulted from local effort. The four members of the Joint Council are the American Medical Association, American Hospital Association, American Dental Association, and American Nursing Home Association.

While the entire proceedings is of significance to home care, the two symposiums on "Programs for Health Care of the Aged" contain excellent papers on specific aspects of home care programs.

Proceedings of Workshop on Home Care Services. American Hospital Association, 840 North Lake Shore Drive, Chicago, 1960

Report of a workshop held under joint sponsorship of the American Hospital Association, American Medical Association, Blue Cross Commission, Blue Shield Medical Care Plans, and U.S. Public Health Service, Chicago, April 20-22, 1960. Representatives of the health professions, hospital and public health administrators, health insurance plans, and other related organizations met to consider methods of stimulating the growth and development of organized home care. Four discussion groups were organized, which were able to identify the major obstacles to home care development and methods were considered as to how these might be overcome. Effective methods of promoting home care by local, state, and national organizations were also considered. An important reference.

Professional Workers

Home Economists and Nutritionists

"Homemaker Services," by Natalie D. Preston, Journal of Home Economics, September, 1963, p. 540

The American Home Economics Association appointed a homemaker services committee in 1961. A folder, The Home Economist Looks at Homemaker Service has been distributed. Other projects under way.

"Homemaker Service and the Home Economist," by Natalie D. Preston and Henri Mae Younge, in Journal of Home Economics, November, 1960, pp. 734-736

Trend toward revision of the concept of a homemaker as a "substitute mother" and flexibility in use of programs; means change in homemaker's role; homemaker service, a natural setting for the professionally trained home economist to share her skills with homemaker who works directly with the family.

"Many Home Economists Aid Homemaker Service," Journal of Home Economics, March, 1960, p. 205

Report of a questionnaire study by the Subcommittee on Homemaker Services of the American Home Economics Association Health and Welfare Committee.

"The Nutrition Consultant and the Home Aide," by Elizabeth M. Vaugh, Journal of the American Dietetic Association, November, 1963, pp. 435-438

Home aide program of VNA of Detroit provides skilled and supervised home help. Nutritionists help aide in her role.

"The Role of Nutrition in Home Care and Homemaker Programs," by Mildred Kaufman, American Journal of Public Health, January, 1962, pp. 55-60

Defines role of nutrition and its importance emphasized in training homemakers. Brief mention of meals-on-wheels.

Nurses

"Detroit's VNA's Home-Aide Service," by Emilie G. Sargent, Nursing Outlook, May, 1962, 318-320

Describes pioneer program established in 1955 - 29 home aides - caseload of 15,000 patients.

Home Health Aide Service in Relation to Public Health Nursing, Department of Public Health Nursing, National League for Nursing, 10 Columbus Circle, New York, New York 10010, 1965, pamphlet, 35¢

Defines home health aide service as "the simple personal care functions a worker may perform under nursing supervision where there is an ill or disabled person in the home." Describes the close interrelationship of home health aide service with public health nursing and how each enhances the other for the benefit of patients, families, and communities.

"To Maintain Family Life: Homemaker Service," Rosa Laboratories, Currents in Public Health, May, 1962, pp. 1-4

Homemaker lightens nurse's load in a home; brief description of service development.

Physical Therapist

Proceedings of a Seminar: Role of the Physical Therapist in Home Care and Nursing Home Programs, by David Littauer, M.D., and Robert Hickock, R.P.T.

Seminar held at The Jewish Hospital of Saint Louis, Missouri, March 29-30, 1963. Up-to-date information on this type of service to the homebound aged.

Physicians

"The Role of the Physician in Visiting Homemaker Service," by Isabel M. London, in Supplement to New Jersey Public Health News, July, 1961, New Jersey State Department of Health, Trenton, pp. 20; 29

Homemakers must work closely with the physician. Care must be taken in assignment of homemaker to a case with relationship to condition of patient.

Physician and Patient Attitudes Toward the Allentown Hospital Care Program, Allentown Hospital Association, Allentown, Pennsylvania, February 28, 1965, 144 pp.

A very well written report of a study to find out what factors influence physicians to accept or reject home care and to find means to motivate them toward participation; also to train physicians and paramedical personnel through this program and to provide homemaking services from the hospital-staff nursing aides; study methodology and findings well presented; interview schedules included in appendix. Financed by a U.S. Public Health Service grant.

Psychiatrists

"Geriatric Aspects for a Psychiatric Home Care Programme," Colin M. Smith, M.D., and D. G. McKerracher, M.D., Journal of the American Geriatrics Society, April, 1963, pp. 339-346

Describes geriatric aspects of the Psychiatric Home Care Program conducted by the Psychiatric Department, University of Saskatchewan Hospital, Saskatoon, Canada, under a grant by NIMH, Washington, D.C. and Canadian Mental Health Association.

"Homemaker Service in a Psychiatric Care Program," Homemaker Services Bulletin, January, 1966

Description of the three-year demonstration project in a psychiatric treatment program at Evansville State Hospital, Evansville, Indiana. Abstracted from a speech by Jackson C. Humphrey, ACSW, Director of Social Services, Evansville State Hospital, to an AMA Conference on Aging and Long-Term Care, Oklahoma City, October 15, 1964.

Psychiatric Homemaker Service Program, Evansville State Hospital, Evansville, Indiana

The Evansville State Hospital, a Psychiatric Treatment Center serving 1,200 patients from a 15 county area, instituted the first Homemaker Service to be given from a State Mental Hospital through a 3-year demonstration project under a National Institute of Mental Health Demonstration Project.

The Homemaker Supervisor is the key member of the training team of Social Worker, Psychologist, Psychiatric Nurse, and Home Economist providing the specialized 96-hour training course leading to certification of the Psychiatric Homemaker.

Social Workers

"Casework and Homemaker Services," in Homemaker Services in the United States: 1958. Public Health Service, D/HEW, Washington, D.C. 20201, 1959, 115 pp., pp. 74-81

Reports of Preconference study groups. Casework service proved to be of value in helping social agencies and families determine the need for service, in helping train homemakers, and in helping families solve problems.

"Homemaker Service: As the Caseworker Sees It." Tennessee Public Welfare Record, February, 1961, pp. 6-8

Homemaker service as a help to the social worker -- enables use of available time to better advantage.

Journals concerned with Social Welfare which contain articles on Homemaker Service:

Proceedings of the National Conference of Social Work

Jewish Social Service Quarterly

Family Welfare

Social Welfare

Child Welfare

Social Work Yearbook

Social Casework

HOMEMAKER AND HOME CARE PROGRAMS IN IOWA

The following section describes briefly the homemaker-home care programs in Iowa at the present time. These programs have all been organized within the past five years.

Burlington

Southeastern Iowa Homemaker-Home Health Aide Service
522 North Third Street
Burlington, Iowa

A Public Agency
Burlington-Des Moines County Health Unit

Under the new name given above, and through the efforts of Kenneth J. Goldsberry, Administrator-Sanitarian of the Des Moines County Health Unit, the Des Moines County Home Care Service has been reorganized this past year into a multi-county Home Care Service to include southeastern counties in Iowa. The first such program to be set up in Iowa, the basic concept was developed by the highly successful Des Moines County Health Unit over the past three years, i.e., that a homemaker service can best serve the community if it is health oriented. The new service is, therefore, a health service that includes personal care provided under the direction of a physician.

The Constitution and By-Laws adopted by the Board of Directors in February, 1966, incorporate significant changes in board membership to include members from each county into which the service extends, and to allow for the formation of an Executive Council. Henry County, the first to come into the service, started its program on March 1, 1966. Since then Louisa and Muscatine Counties have organized services. The Des Moines County office in Burlington will continue to serve as the home office for the expanded service.

Changing the name of the organization permits expansion of the service without regard for political subdivision boundaries. It also enables qualification under Medicare definitions, and allows retention of the homemaker identity associated with the federal grant under which the Des Moines County Health Unit functions.

Services rendered include Visiting Homemaker and Casework Services. The program is coordinated with the Visiting Nurse Association, Public Health Nurses, Meals-On-Wheels and other community resources. It is supported by a federal grant administered through the Iowa State Department of Health (Division of Chronic Diseases). Priority of service is given the chronically ill, aged, and disabled. When funds are available any health problem, regardless of age, is taken care of. Homemaker services include housekeeping, meal preparation, marketing, personal care and handyman. Especially helpful to the program is a telephone answering service and radio time given by Station KBUR in finding available community resources for the program. Fees collected meet only a part of the total costs of operation.

The full cost of providing a homemaker is approximately $2.50 per hour. The homemaker is paid $1.25 per hour. In certain instances, the service pays her travel. At the present time, no expansion of administrative staff is planned (full-time director and secretary). As the program grows in adjoining counties, a homemaker in each county will probably be classified as a supervisor. An anticipated total cost in each county of $1.75 per hour becomes more realistic to the individual or agency who will be paying full cost of the service.

Cedar Rapids

Homemaker Service Agency
Court House
Cedar Rapids, Iowa

A Public Agency
Family Service Agency

Mrs. Max Stern, Homemaker Supervisor

Homemaker Service was organized in Cedar Rapids in December, 1965, to provide stabilizing in-the-home service to families undergoing periods of crises or stress. Two week-long training for home health aide programs were given in June for the 16 women attached to the Homemaker Service Agency to equip them to handle the increased home health care work-load anticipated under Medicare. Training homemakers as home health aides will partially relieve public health nurses, who expect a sizeable increase in the number of home calls. Plans are underway to recruit and train an additional 16 homemakers as home health aides. (Financial support comes from both federal and community funds.)

The Cedar Rapids Service is under contract to the Public Health Nursing Association, which qualifies under Social Security's Medicare program as the home health agency in Linn County. Homemaker Service will bill PHNA for the services the homemakers provide. The nursing association will in turn be reimbursed with Medicare funds.

Through the use of home health aides, the professional nurses will be able to expand their services, concentrating on services the aides are not qualified to perform. During the week-long training program, the aides are instructed in bathing bed patients, transferring patients from bed to wheelchair without use of legs, some aspects of physical therapy, use of bedpan, taking temperatures, making the patient more comfortable using materials found in the home, nutrition and special diets, emotional implications of illness, and understanding the elderly.

The Homemaker Service is especially beneficial for the elderly. With auxiliary help from home health aides, many older persons living alone, when released from a hospital, may go directly home. Formerly, they had to go to a nursing home. The program will also help to keep older persons in their own homes, thus postponing the time when domiciliary care will be necessary.

The homemaker supervisor screens cases very carefully. For those who merits the service, she determines how much service will be provided. In the first month, ten families had received aid. During April, 1966, the total of familes served had increased to 18 with 873 hours of service given.

Home health aides differ from homemakers in that they have at least an additional week's training. They work more closely with the nurse and are always under her supervision. A housekeeper is accustomed to doing what she is asked to do by the family. When she becomes a home health aide, she may be asked not to do the dishes, but to stack them beside the sink, pull up the stool, help the patient onto the stool, and encourage the patient to do them herself. It takes more time and is often not as easy as if she did it herself. But with the nurse's support in this plan, the aide learns that this is a therapeutic method of helping a handicapped person to become more independent. The aim of the nursing service is always to promote the maximum independence in activities of daily living of which the patient is capable.

Centerville

Appanoose County Homemaker's Health Service
Court House
Centerville, Iowa

A Public Agency
Department of Public Health

Mrs. Lorraine Ramos, R.N., Supervisor

The Appanoose County Homemaker's Health Service, which went into service July 15, 1965, is a county-wide program and is the first rural service of its kind in Iowa. The Service is housed in the Public Health Nursing Office with a paid staff of one person - a director-secretary who takes care of financial arrangements for the service and also serves as secretary to the Public Health Nurse. After receiving the referral from the director-secretary, the Public Health Nurse visits the home, makes an evaluation, and places a home health aide in the home under the supervision of the Public Health Nurse.

The Service is financed through a federal grant administered by the State Department of Health. This pays the salary of the director-secretary and supplements when there are no other funds available. A fee of $1.25 per hour is charged, of which $1.00 is paid to the home health aide. Services given to recipients of welfare program funds are paid for by the Welfare Department.

The first class of ten home health aides was trained under a federal grant through the Man Power Training Act at the local junior college. A second group of ten were trained through the Homemaker's Office with instruction being given by a Home Economist and Public Health Nurse with help from other professional nurses. A limited amount of bedside nursing was given in addition to the home skills. During March, 1966, 22 cases were served by 13 home health aides, with 1,175 hours of service. The oldest patient was 93 and the youngest was 72. Disabilities range from a fractured hip to C.V.A's, mental illness, diabetes, and cancer. Clients served were all over 65 years of age except one young mother with both wrists broken in a fall. When time and personnel permit, services are provided for others in addition to the chronically ill and aged.

The problem of transportation incurred in a county-wide program has been met largely by selecting trainees from throughout the county. This eliminates long drives, with the longest distance traveled being no more than 15 miles. The county is well known by the public health nurse, thus making it easy for her to assume the responsibility of the home visit and supervision of the home health aide as well as the placement of the right aide in the right home. Also, a majority of the cases are in need of nursing care in addition to homemaker services.

The Appanoose County program has proved to be very economical. No high salaried director has been necessary since the Public Health Nurse supervises both programs with the help of a well trained secretary. Articles of Incorporation have been drawn up legally. A "meals-on-wheels" service has been added recently. Appanoose County has a total population of 16,000 with 21 per cent over 65 years of age.

(Editorial Note: This project had its beginning through the efforts of an interested citizen, Mrs. Oscar Gavronsky, who had used the Homemaker Services in Polk County for her mother. Mrs. Gavronsky held the organizational meeting at her home.)

Davenport

Homemaker Service of Scott County
115 1/2 West Sixth Street
Davenport, Iowa

A Public Agency
Visiting Nurse
Association

Mrs. Lilah Bell, Director

Homemaker Services were established in November, 1963 as a five-year pilot project financed by Federal Community Health Services and Facilities funds, administered through the Iowa State Department of Health. The service is administered by the Visiting Nurse Association and is limited to families with older or chronically ill patients. The homemakers receive training in new trainee sessions held every few months, and taught by physicians, home economists, visiting nurses, and social workers.

A uniform and emblem have been adopted by the homemakers in the Davenport unit, creating a feeling of identification among the homemakers themselves as well as promoting a public image of the homemaker service as a part of the community. The Scott Homemakers are paid $1.25 per hour, and fees are based on cost of services provided and the family's ability to pay. About 75 per cent of their salaries are recovered through fees. During the first four months of operation, nine homemakers serviced 16 families.

On March 31, 1966, and after 2 1/2 years in operation, the Scott County Homemaker Service had trained 84 women in seven training sessions. Thirty-two women were working and serving 65 families per month. Service hours average 2,500 per month, of which about half the total cost of the program is collected in fees. The balance is still financed by federal and state funds through the grant.

Over 70 per cent of the patients are 65 years of age or over. Of those under 65, i.e., the chronically ill adult, at least half have multiple sclerosis. The service is still limited to the Davenport-Bettendorf area, but it is hoped that it can be extended into the county if women and transportation can be obtained. A descriptive brochure of the service is available.

Des Moines

Des Moines-Polk County Home Care-
Homemaker Service
Argonne Armory
East First & Des Moines Streets
Des Moines, Iowa

Voluntary Agency

Mrs. Frances Shambaugh, Director

The Homemaker Program was established in 1962 under a three year demonstration grant from the U.S. Public Health Service. Initially the program was co-administered by the Des Moines Council of Social Agencies and the Des Moines City-County Health Department. The project was undertaken with the close cooperation and support of the Polk County Medical Society, the Medical Society Auxiliary, and numerous other local, private, and public agencies. The program was established in response to findings of an earlier survey conducted by the Council of Social Agencies into the needs of the chronically ill and disabled patients in nursing homes, hospitals, and under care of health and casework agencies in Polk County.

Des Moines (continued)

In May, 1966 Articles of Incorporation were filed to establish this service as a voluntary agency. It has a Board of Directors, a citizen's Advisory Committee and a full-time director. Project-grant support from the State Department of Health continues at a reduced rate through 1968.

A complete homemaker service-home care program is available to both self-supporting and indigent patients. It consists of the coordinated medical care, public health nursing, hospital care, casework services, rehabilitation and the homemaker services to individuals in their homes. Rehabilitation and vocational training services are available from the Division of Vocational Rehabilitation, the County Society for Crippled Children, Goodwill Industries, Inc., and the Iowa Employment Service.

Homemaker-Home Health Aides are certified through the Department of Adult Education, Des Moines Public Schools after satisfactory completion of 30 hours of basic training. Training courses are conducted four times annually. There is no fee for the training. Certificates are provided by the Department of Adult Education, Des Moines Public Schools, on completion of the course. Only graduates of the course are selected for assignment by the Homemaker Service. Each trainee is given a physical examination, including a chest x-ray, prior to assignment as a certified Home Health Aide-Homemaker.

Patients are charged fees based on cost and graduated according to ability to pay. The regular fee is $1.25 per hour. The supervisor sends a notice of the hours and amount due for service to the patient or family. In cases where only a partial fee is paid, the bill shows the total cost so the recipient has a full understanding of the real contribution made by the Service.

The Des Moines-Polk County Homemaker program is the first service to be established in the State and also the first of its kind, i.e., in a city-county health department. This service points up the importance of total community involvement in the initial planning. Without the participation of professional associations (physicians, nurses, educators, case workers) and community agencies (public and private), official bodies (local and state health departments, city government and public school officials), and civic groups, plans may not succeed. Homemaker Services to the chronically ill and aged must be widely understood if programs are to be inaugurated.

Dubuque

Dubuque Homemaker Project
County Social Welfare Department
Dubuque, Iowa

A Public Agency
Dubuque County Social
Welfare Department

Mrs. Ilene Jury, Supervisor

The Dubuque Homemaker Project, started on April 1, 1966, is structured as an integral part of the County Department of Social Welfare and the State Department of Social Welfare. A comprehensive survey in March, 1965, sponsored jointly by the city, county, and voluntary service agencies of the community, singled out as one of the pressing needs the lack of homemaker services to hold families together. The project is financed from funds from the Childrens' Bureau administered through the State Department of Social Welfare. Families served are those with children.

Dubuque (continued)

The Homemaker supervisor trained six homemakers, who are hired as full-time employees under the Merit System. Homemakers work a 40-hour-week, with flexible hours, working weekends when emergencies arise. A fee schedule has been devised based on the family's weekly net income and the number of family members. The fee paid is a percentage of $1.50 per hour, depending on the two variable factors. The homemakers keep their own expense accounts, time reports, and write a brief narrative report, weekly, with comments by family members which indicate how the service is reaching the people.

Training consists of pre-service and in-service. Pre-service includes: the philosophy of homemaker service, the relationship of homemaker service to the County Welfare Department and the home, household management and actual practice in meal planning for low-income families. Field trips are made to Day Care Centers and to a Mental Health Institute. Homemaker Service is team-work: the homemaker, homemaker supervisor, homemaker staff meetings, and field trip (APWA) conference.

The first six-weeks report showed four homemakers employed (one dropped out during pre-service training; one injured), twelve families served, and eight currently being served with two pending.

Homemakers in the home act as a substitute parent, and in time of illness, help the mother to improve physical conditions of the home and to become a better manager of time and money. When additional funds are available, the service will be made available to all persons, adults as well as children.

Sioux City

Homemaker Service
City Health Department
P. O. Box 447
Sioux City, Iowa

Public Health Agency
Sioux City Health Department

Mrs. Barbara D. Friend, Director

Homemaker Service, started on October 1, 1963, is administered by the Sioux City Health Department under the guidance of an advisory committee. The program furnishes home help to families with children, to convalescent, aging, acutely or chronically ill, and disabled persons. Families will be given instruction in better housekeeping methods when necessary.

Service is available to all residents in the Sioux City-Woodbury County area, provided on a flexible basis to meet the needs in the family situation. Requests for services are made to the City Health Department by physicians, social workers, nurses, and health agencies, and also individuals. (Brochure available)

Homemakers are paid by the City Health Department partly from funds from the State Department of Health. No money is exchanged directly between homemaker and family. Fees are assessed by the City Health Department on ability to pay and are used for remuneration of the homemakers. Fees are paid in some instances by interested health and welfare agencies on behalf of their clients.

Sioux City (continued)

Out of 175 cases served to date, 53 have been elderly. An evaluation of the Sioux City program made by the Director stresses the importance of the service to the elderly:

"The time is ripe for the concerted, vigorous action that Homemaker Service is providing for the elderly. It seems to be taking its proper place in the total community Health & Welfare resources because it has proved its social and economic values as a flexible and practical way of helping the elderly to remain in their own homes. We have found that the rise in costs of institutional care has spurred a greater demand for this program. We have seen that as people grow older they have felt themselves being 'put on a shelf.' However, if Homemaker service is provided, the confidence of these senior citizens begins to increase and their attitudes of self-worth is confirmed again. Increasing age and the death of a spouse have left many older persons in virtual isolation. With early and understanding help our homemakers have successfully given security to these people and lifted their morale a great deal. Not wanting to go to a nursing home one of the heartwarming comments has been -- "Homemaker Service has been a Godsend." We have discovered that too many elderly people neglect themselves -- their diets, their health, their dress. With homemaker service to correct these trends, this neglect rarely reaches a crises state which would completely immobilize them.

"The homemaker has been an invaluable observer and reporter to different agencies and the professional members of the health team. From intimate association, her observations on the problems of the older person has been of inestimable help in analysis, diagnosis, and planning for either medical or social care or treatment.

"One important thing that is needed for the elderly in our community is an Errand Service. Usually, the elderly person is not agile enough to take a bus back and forth nor can he afford a taxi. He must depend upon a neighbor and many times the neighbor is not available. An Errand Service would be of great help to many families.

"In summary, then, homemaker service has proven to be a unique service to an aged person. It helps to protect him from neglect and from harm to himself. It is certainly one prescription for the elderly."

EARLHAM HOME CARE PROGRAM

Earlham Care Program
Box 282
Earlham, Iowa

Voluntary Community
Service Agency

Norman McIntyre, Program Director

This five-year home care pilot project began operation on September 1, 1963 with John Carson as Program Director. (Mr. Carson, who resigned as director April 1, 1965 to accept an administrative position with the Nebraska State Department of Health, was succeeded by Norman McIntyre.) The program is supported by federal funds from the U.S. Department of Health, Education, & Welfare, administered by the State Department of Health. The program was established following the dictates of an intensive survey by the Earlham Development Committee and the Earlham Ministerial Association of the older persons in an attempt to determine their needs and problems. Instead of the anticipated finding that a nursing home would be indicated, the greatest need turned out to be a program offering a variety of services that would enable the older residents to go on living in their own homes, and with help, to remain independent for a much longer time.

The responsibility for coordinating the program objectives and services is a full-time director assisted by a secretary. The program is governed by a locally elected board of directors representing the local churches, the community School District, and other civic bodies.

The Earlham program is unique in two ways: (1) A small rural community is pooling its resources, and with the assistance of federal funds, offers an excellent example of person-to-person total community involvement in setting up a workable home care program for its elderly residents. (2) In a single program, a variety of services that the aged themselves had said they wanted are being offered.

Seven basic services are provided: homemaker, meals-on-wheels, handyman, visiting nurse, a transportational media, friendly visitations, a counseling service and an employment center. The program is located in a remodeled building in the downtown area, which also serves as a center for the older residents. With the exception of the visiting nurse program, each has been utilized, some more than others. A physician and nurse prescribe the medical and personal services. A social worker participates in evaluating a need with the client. In 1965, a 20-bed nursing home began operation, thus adding to the basic services already offered by the program with Mr. McIntyre serving as the administrator.

The Earlham Care Program has been assisted by the Iowa Heart Association, the Arthritis and Rheumatism Foundation, the Iowa State Department of Health in addition to the U.S. Department of Health, Education, & Welfare, and the Madison County Department of Social Welfare.

Two serious questions can be raised: (1) How will the program be financed when the grant is no longer available? (2) Will personnel always be available to carry out the needed tasks of such a program? (Earlham has a population of only about 800.)

Federal Programs for Homemaker Services

Once a state has established, in its public assistance programs, the basic services as defined by the Federal Government, which entitles it to receive Federal Funds covering 75 percent of their cost the state can also get from the Federal Government, 75 percent of the cost of providing a variety of supplementary services through its public assistance programs.

The following section presents an outline of the various Federal Agencies supplying funds for homemaker services with references for further information, including studies and research projects.

The Department of Health, Education, and Welfare gives by far the strongest support. The list of general references follows the outline of Federal Programs. Anyone interested in this aspect of homemaker services is advised to contact the government agency concerned or the Iowa State Department of Health, Division of Chronic Diseases.

The Department of Health, Education, and Welfare

The Welfare Administration

The Bureau of Family Services and the Children's Eureau are strong supporters of homemaker services. (Financial support, consultation, technical assistance.)

Financial Support--Program Grants: Welfare Public Assistance Funds may be used to finance homemaker demonstration projects - collect data that will subsequently enable the State Public Welfare agency to develop homemaker servies as part of a statewide plan.

(a) Project Funds ("time-limited") may enable a community to establish one aspect of a total service and at the same time lay a sound administrative framework for a multi-purpose community homemaker service.

(b) Formula grant funds for the chronically ill or aging available through State Health Departments. An increasing number of states are encouraging local communities to develop good project proposals for the chronically ill and aging which may be funded. Easis of 75% Federal and 25% state or local funds.

Consultation Services: By the Children's Bureau is provided to all agencies, organizations and groups concerned with the helath and welfare of children and their families; by the Bureau of Family Services to state and local departments of public welfare and other community groups, specifically to needy and low-income families, and to the aged or disabled, who may need homemaker services. Arrangements for consultation to state and local welfare agencies are coordinated through both the regional representatives of both Bureaus. Iowa is in the Region VI: Dept. HEW, 601 E. 12th St., Kansas City, Mo. 64106.

Homemaker Specialists are available in both Bureaus for technical assistance, who concentrate on the promotion, development and extension of Homemaker Service through the country. These specialists are trained to provide consultation; distribute interpretative materials, serve as leaders or participants in workshops and institutes; and address various groups.

Development and distribution of interpretative materials and guides to agencies, groups and individuals is a continuing activity of both Bureaus. Guides to promote quality practice in accordance with accepted standards are especially important.

Participation in planning for State, Regional or National Meetings, and as workshops or institute leaders or speakers by homemaker specialists: Two broad areas (1) Administrative planning, organization, and development; (2) Homemaker practice in accordance with accepted standards.

Public Health Service

Community Health Services and Facilities Act of 1961 makes funds available for the support of studies, experiments, and demonstrations that will lead to new or improved community health services outside the hospital. Project proposals may be submitted by public or nonprofit voluntary agencies and organizations. Project grants given for statewide support of and development of homemaker services in various settings. Formula grant funds given to State Health Departments to stimulate the development of out-of-hospital services, including homemaker. Write: Grants Management Branch, Bureau of State Services, Public Health Service, Department of HEW, Washington, D. C. (Consult Division of Chronic Diseases, State Department of Health, State Office Bldg., Des Moines, Iowa.)

Vocational Rehabilitation Administration--a three-fold interest in homemaker services:

1. Development of community services;
2. Possibility of opening jobs for some highly selective handicapped women as homemakers; and
3. Development and use of homemaker services to aid in rehabilitation or care of disabled and chronically ill persons.

Training Grant Program in cooperation with State Vocational Rehabilitation Service, supports a pilot training course to provide specific training related to disability and rehabilitation to homemakers. (Contact local VR Service.)

Social Security Administration provides:

1. A direct service to those beneficiary families and single individuals who might not be able otherwise to continue functioning adequately in their own homes because of illness or other problems; and
2. A potential source of employment for mature women who wish to supplement their social security benefits through full or parttime employment, and for older widows not yet 62.

Office of Education

Sponsors two programs under:

(1) Manpower Development and Training Act provides for programs for training of women to be employed as homemakers.

(2) Vocational Educational Acts of 1963 authorize additional funds for preparation of persons for employment. Public schools may expand programs to train women for homemaker services.

Administration on Aging

The AoA uses the means at its command to stimulate the organization of Homemaker Services in communities and works closely with all other government agencies. Through field trips, consultations, workshops and institutes, the central and regional office staffs work with State Commissions on Aging and voluntary organizations to promote, encourage and organize homemaker services on a statewide basis through State Departments of Health and/or Public Welfare in community agencies.

In Iowa, AoA regional office in Kansas City, the Iowa Commission on Aging and the State Department of Health will work closely on this effort. (See Program for first homemaker services conference in Iowa, p. of this bibliography.)

Office of Economic Opportunity

In cooperation with the Public Health Service the OEO has inaugurated a program for training home health aides to be implemented through the OEO's Community Action Programs. Two objectives: (1) To improve and extend home health services in communities, and (2) To provide employment for home health aides 45 years of age and older workers with income levels of less than $3,000. Write CAP, Office of Economic Opportunity, Washington, D.C. or contact local CAP director.:

Program for the Training of Homemaker Home Health Aides, Community Action Program, Office of Economic Opportunity, 1200 Nineteenth St., Washington, D.C. 20025. (Iowa: OEO Office, State Director, Capitol Bldg., Des Moines, Iowa.)

Program inaugurated by the U. S. Public Health Service in cooperation with the OEO for demonstration units in a few states, to be implemented by $20 million available July 1, 1966. Purposes: (1) To improve and extend home health services to older people, and (2) To provide employment as home health aides for 45 years of age and older workers, with income levels of less than $3,000. The PHS (professional aspects) will recruit, train, and support the use of up to 10,000 home health aides, trained to assist visiting medical personnel, to perform light housekeeping skills, and to provide client-oriented activities, e.g., see medications are taken and to act as companions. ($20 million available for program, July 1, 1966.)

Selected Publications on Federal Programs

Office of Economic Opportunity, 1200 Nineteenth St., Washington, D.C. 20025.

Catalog of Federal Programs for Individual and Community Improvement, Dec. 15, 1965, 414 pp.

Office of Education, Department of HEW, Washington, D. C.

The Visiting Homemaker: A Suggested Guide for a Training Program by the Manpower Development Training Program, 1964. 18 pp.

Office of Program Analysis, Office of the Assistant Secretary (of Legislation), U.S. Department of HEW, Washington, D. C. 20201.

Homemaker Service: A Community Resource by Grace L. Hewell. Reprinted Indicators, May 1964. 20 pp. An excellent reference covering development of homemaker services.

Goals for Community Services, Planning for Community Needs in Health, Education, and Welfare, Aug. 1963. 20 pp. (15¢)

Handbook on Programs of the U.S. Department of Health, Education, and Welfare: 1964-65 Edition. A very informative reference.

Part I: Introduction, Major Programs and Legislative Achievements--Major Social Trends and HEW Activities.

Part II: Organization and Fact Sheets-- program-by-program description, problems, current data on projects and programs. ($1.75)

Grants-in-Aid and Other Financial Assistance Programs, 1964-65 edition. Supplement to the Handbook on Programs of the U.S. D/ HEW. (See above)

Public Health Service, D/HEW, Washington, D. C. 20201.

"Home Care Programs--Their Impact on the Hospital's Role in Medical Care," by Peter Rogatz and Guido M. Crocetti, American Journal of Public Health, Sept. 1958, 1125-1133.

Project Grants--Community Health Services for Chronically Ill and Aged, PHS Publication. No. 881.

Community Health Services for the Chronically Ill and Aged. PHS Pub. #2881.

Medical Care in Transition. PHS Publication #1128 (Vol. I: 433 pp.) and Vol. II, 389 pp.), 1964. Includes several articles on home care.

Survey of Coordinated Home Care Programs: 1963. PHS Publication #1062, 47 pp. An excellent report on coordinated home care in the United States.

Community Mental Health Advances, National Institute of Health, PHS publ.

Grants for Research in Community Health, Bureau of State Services, PHS Publication No. 1090.

Project Grants in Community Health, PHS Publication No. 1289.

Grants-in-Aid and Other Financial Assistance Programs. ($2.25)

Home Care of the Sick, PHS Publication No. 70. Folder of excellent suggestions for home nursing.

Procedures for Area Wide Health Planning. PHS Publication No. 930-B-3.

Publications: Welfare Administration, D/HEW

Legislative and Related Developments: Implication for Homemaker Services, 13 pp. Mimeographed. Single copy free.

A Constructive Public Welfare Program, Sept. 1965, 24 pp. Single copy free.

Homemaker Service in Public Assistance, Public Assistance Report #31, 1957.

Homemaker Service in Public Welfare: The North Carolina Experience--Bureau of Family Services.

Aid to Disabled.

Aid to Families with Dependent Children--Children's Bureau.

Serving People in Need, Public Assistance Under the Social Security Act, Report #47, Bureau of Family Services.

Child Welfare Services, Children's Bureau.

Homemaker Service, Publication, #46, Children's Bureau.

Homemaker Services: History and Bibliography, by Maud Morlock, 1964. 116 pp. Children's Bureau Publ. No. 410.

Social Security Administration, D/HEW, Baltimore, Maryland.

Conditions of Participation for Home Health Agencies (under Title XVIII of Medicare) 1966. A very important guide containing specifications.

Your Social Security and many other up-to-date publications re: The Recent Amendments to the Social Security Act of 1935.

Vocational Rehabilitation Administration, D/HEW

Description of Program and Procedures for Applying for Grants.
Research and Demonstration Grants, An Annotated Listing.
Vocational Rehabilitation Administration Training Grants Program.

STATE CONFERENCE ON HOMEMAKER SERVICE IN IOWA
Sun Room, Memorial Union, Iowa State University
Ames, Iowa - July 27, 1966

Presiding - S. P. Leinbach, M.D.
President, Iowa Medical Society

8:30 - 9:00	Registration and Coffee
9:00 - 9:15	Welcome and Opening Remarks S. P. Leinbach, M.D., President, Iowa Medical Society Arthur Downing, Chairman, Iowa State Board of Social Welfare Arthur P. Long, M.D., Dr. P.H., Commissioner of Public Health Iowa State Department of Health
9:15 - 10:00	What is a Homemaker Service Frederick C. Swartz, M.D. Chairman, American Medical Association Council on Aging
10:00 - 10:45	Homemaker Services - Their Relationship to Public Welfare Mrs. Gladys Lawson, National Specialist Homemaker Service, Children's Bureau Department of Health, Education, & Welfare
10:45 - 11:30	Homemaker-Home Health Aides - Their Relationship to General Health Services Eileen Lester, Consultant Home Health and Related Service Branch U. S. Public Health Service Department of Health, Education, & Welfare
11:30 - 1:00	Luncheon - Memorial Union Cafeteria Line - South Ball Room
1:00 - 1:45	Operational Programs - Sun Room Mrs. Frances Shambaugh, Director, Des Moines-Polk County Homemaker Program Mrs. Jessie Stern, Director, Linn County Homemaker Program Mrs. Ilene Jury, Supervisor of Homemaker Service Dubuque County Department of Social Welfare
2:00 - 3:00	Workshops - Location to be announced 1. Organizing a Service 2. Training, recruiting and supervision of Homemakers 3. Financing 4. Existing Agency Workshop - operational problems
3:15 - 4:00	Panel Summation Panel and Resource People
4:00	Adjourn

Addendum

(Publications too late for inclusion in the Regular Listing)

Report and Recommendations of the Ad Hoc Committee on Home Health Services to the Governor's Citizens Council on Aging. Mrs. Walter W. Walker, Chm., Governor's Citizens Council on Aging, 1121 Hennepin Avenue, Minneapolis, Minn. March 18, 1966, mimeographed.

The report of the Ad Hoc Committee appointed at the request of the Minnesota Department of Health is meant to serve as the basis for action in strengthening the state home health care program to meet the demands expected as a result of Medicare. The publication covers the work of the committee, summary of findings of sub-committees, with suggestions for legislative action. Appendix includes maps, roster of existing services, organizations developing training programs, bibliography.

A Directory of Iowa's Human and Community Development Resources, Research Branch, Iowa State Manpower Development Council, 500 East Locust St., Des Moines, Iowa 50139. July 1966, 104 pp. Vaughn Manley, Research Director.

A listing developed to provide information on social and environmental services available to Iowans through public and private offices in-state and out-of-state.

Prospective users fall into two general categories: (1) program administrators and their staff who offer services to the public and are often presented with opportunities to refer clients to other agencies for services and information, and (2) policy makers who are charged with developing community, area, or state service systems.

Attention is directed to the introductory statements on philosophy and organization of the directory. This publication presents the first such ready reference of Iowa's community resources as to the need, nature of the resource, local and state agency or association to contact.

Materials from The Association for Homemaker Services, Inc., 297 Park Ave., South, New York, N. Y. Mrs. Rose Brodsky, Exeuctive Director.

Related materials, publications and forms used by the Association. Several papers by Mrs. Brodsky and the Five Year Report give historical and developmental material about the agency. Many of these materials are listed in the bibliography.

Organizations and Training Centers

Organizations

NATIONAL COUNCIL FOR HOMEMAKER SERVICES, INC., 1790 Broadway, New York, N. Y. 10019. (Mrs. Betty Anderson, Exec. Director)

The NCHS was established and incorporated in December, 1962, on a 5-year federal demonstration grant and under the sponsorship of the National Health Council and the National Social Welfare Assembly. Forerunner was the Committee on Supervised Homemaker-Housekeeper Service (1939 Children's Bureau) which later became the National Committee on Homemaker Services (1946) and then the National Council for Homemaker Services (1962). The Council is an independent voluntary agency, broadly representative of health and welfare interests. Its first major activity was the 1964 National Conference on Homemaker Services, for which the Council cooperated in the preparation of the 1963 Directory of Homemaker Services prepared by the U. S. Public Health Service. A revision is under way to bring the Directory up to date through a national survey of all known homemaker services.

Through a broad program of field visits, consultations, conferences, and clearing house operations, the Council works with other national, health and welfare organizations, and voluntary agencies. It promotes the expansion and improvement of homemaker services serving (1) to provide a central source of information and clearinghouse, (2) to develop standards for homemaker service, (3) to publish reports and distribute educational materials, and (4) to sponsor conferences and seminars.

It has several major publications: 1964 National Conference on Homemaker Services; Standards for Homemaker-Home-Health Aide Services (1965); Homemaker Services Bulletin (bi-monthly and jointly with AMA); News (bimonthly); "What is Homemaker Service?" (a slide film); and many others. (Write for list of publications.)

Membership in the Council is open to local agencies providing homemaker services and to individuals and organizations interested in supporting the Council's purposes. Membership categories: Active (local agencies) $25.00; Sponsoring Organizations (Supporting $100; Subscribing $500; Sustaining $1,000 and over); Individuals (Supporting $10; Subscribing $25; Sustaining $100 and over). (Application for membership plus list of privileges of members may be secured by directing your request to the above address.)

HOMEMAKER SERVICE COMMITTEE, American Home Economics Association, 1600 Twentieth St., N.W., Washington, D.C. The AHEA is a membership organization dedicated to the attainment of well-being for families, improvement of homes, and preservation of values significant to family life. In many localities, home economists are working with Homemaker programs in various ways, e.g., serving as consultants, instructors in training and orientation, administrators and supervisors of programs, and members of study committees in Health and Welfare Councils. Publication: The Home Economist Looks at Homemaker Services.

American Medical Association, 535 N. Dearborn St., Chicago, Ill. 60601.

The AMA has been a major supporter of the development of homemaker services, both financially and promotionally, through contributions, assistance, and publications. The following three AMA groups have been especially active in these activities:

(1) The Women's Auxiliary of the AMA has helped stimulate homemaker services for many years. Following the 1959 National Conference on Homemaker Services the Auxiliary increased its efforts and published two excellent manuals How to Plan a Community Homemaker Service (1961) and How to Operate a Community Homemaker Service (1963). The Committee on Community Service of the Women's Auxiliary is prepared to help state and county auxiliary groups in exploring the need for homemaker service and to offer consultation on organization and technical aspects of a project.

(2) The Medical Council of the AMA is cooperating with the Executive Committee of the National Conference on Homemaker Services in the publication of The Homemaker Services Bulletin which reports on local activities in developing this much needed family service.

(3) Department of Community Health and Health Education of the AMA has published Needs of the Long-Term Patient (1964), a booklet focused on the needs of those persons who are significantly incapacitated by chronic disease, accident or genetic defect for a considerable length of time.

Association for Homemaker Service, Inc., 297 Park Avenue South, New York, N.Y. Mrs. Rose Brodsky, Executive Director.

The Association is a non-sectarian social agency providing child-centered homemaker service on a city wide basis. Initially sponsored by the Federation of Protestant Welfare Agencies, Inc., the Association was assisted by them with incorporation, organization, appointment of a Board of Directors, and helping find foundation grants as well as individual contributions. To start, service was given to families paying a fee based on a sliding scale. Through an arrangement with the Department of Social Welfare families under their care were serviced on a purchase of service basis. Service was offered on a parttime up to round-the-clock 24-hour service, seven days a week. In November 1961 a grant made it possible to service the elderly. From 40 homemakers in 1962, the service had grown to 130 in 1964.

The homemakers are regular staff members, recruited, employed on a guaranteed salary basis, trained, and supervised by the agency's professional social work staff. Nine homemakers and a caseworker form a team to accomplish the casework goal. Service is provided on a contract basis on a purchase of service arrangement with several public and voluntary social and heal th agencies. Recently the Association took over the entire homemaker staff and caseload of the American Cancer Society.

In addition to regular service several demonstration projects have been undertaken, some jointly with the Department of Public Welfare, e.g., 24-hour service, long term case in a motherless home, a mentally ill mother to avoid hospitalization, retarded children, home care needs of the aged, and cancer patients. A sustained in-service training program for the homemakers and student training programs in both Columbia and New York Universities have been developed.

These wide experiences are recorded in a wealth of articles by Mrs. Brodsky and publications regarding the service. One especially useful publication is Hand book of Selected Policies, Procedures, and Pertinent Forms (revised May 1964) which contains sample copies of the many excellent forms developed by the Service, statistics, fees, plan forms, coverages, schedules, in-take procedures, etc. (Write Mrs. Brodsky for list of available publications.)

Training Centers

Mrs. Sandra C. Howell, Coordinator and Research Associate, Training Center for Coordinated Home Care and Other Out-of-Hospital Services, The Jewish Hospital of St. Louis, 216 South Kindshighway, St. Louis, Mo. 63110.

A three-year study and demonstration project on homemaker services and sponsored by the Health and Welfare Council of St. Louis, has been completed. The project has two phases. The second phase involved a demonstration in centralized recruitment, screening, and training of homemaker personnel. Through four agencies, service was provided to the 167 chronically ill or aging families in this part of the project. (See p. 10 this bibliography.) A synopsis of the final Report is available from the Health and Welfare Council of St. Louis, 417 N. Tenth St., St. Louis, Mo. 63101. The Hospital now holds periodically short courses, Institutes, Workshops and training courses for home care personnel.

Miss Cynthia Jean Stewart, Coordinator, Home Care Program, School of Public Health, University of Michigan, Ann Arbor, Michigan.

Regional Home Care Institutes, workshops, and conferences are held periodically by the Home Care Program division of the University of Michigan School of Public Health, and are attended by directors and other professionals associated with hospitals and other health agencies sponsoring homecare programs. Reprints of papers presented at the conferences are available.

Mrs. Miriam Nikkila, Coordinator, Home Care Program, Visiting Nurse Assn. of Greater Detroit, 4421 Woodward Ave., Detroit, Mich. 48201.

The UNA of Greater Detroit works closely with the University of Michigan program. (See above.)

Professional Services Section, Manpower Development and Training Program, U. S. Office of Education, Department of HEW, Washington, D. C.

The Visiting Homemaker: A Suggested Training Program, Office of Educa., Department of HEW, Washington, D. C. 14 pp, 1964, GPO, 20¢. Homemaker Service was one of the nine occupations for which a training manual has been developed by the Professional Services Section of the Manpower Development Training Program. This guide contains resource materials and training program outline for use in such programs throughout the U.S. (See p. 40 this bibliography.)

Department of Home Care, Montefiore Hospital and Medical Center, Bronx, New York. 10467.

A three week training program in coordinated home care is offered and offers participation in clinical and administrative activities, home visits, case reviews, and visits to agencies.

Montefiore Hospital Association of Western Pennsylvania, 3459 Fifth Avenue, Pittsburgh, Penna. 15213. (See p. 6, 7 this Bibliography.)

The Association for Homemaker Service, 297 Park Avenue, New York, N. Y. 10014. (See pp. 3-4, 7, this Bibliography.)

Training Center for Comprehensive Care, Lemuel Shattuck Hospital, 170 Morton Street, Jamaica Plain, Mass. 02130. (See p. 8 this Bibliography.)

School of Home Economics, Louisiana State University, Baton Rouge, La. (See p. 8 this Bibliography.)

Homemaker Training Program, Rutgers-The State University, University Extension Division, New Brunswick, N. J.

New Jersey has pioneered in the development of a State Visiting Homemaker Service program under the leadership of Mrs. Asker Yaguda, chm. of the state consultant committee. In 1960 the Visiting Homemaker Service of New Jersey was incorporated and in cooperation with the Essex County Medical Society a local part-time homemaker service was initiated. From this small beginning, the service is now statewide.

The formal course for training homemakers provides 22 hours of instruction, available without cost to each of the Services now functioning in the state, whenever they have a class of 15 women. The course has been given 68 times at convenient locations throughout the state to well over 1,000 women. Instructors are approved and the course supervised by the Extension Division of Rutgers financed by a grant from the State Department of Health. The course is coordinated by the Division of Chronic Illness Control of the New Jersey Department of Health. See Homemaker Service Training Course, p. 9 this bibliography.

VT 006 506
Smith, Veta Smith
Ability of a Value Inventory to Discriminate Among Homemakers with Different Characteristics.

Iowa State Univ. of Science and Technology, Ames
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 69p.

HOMEMAKING EDUCATION; *FAMILY LIFE; *PERSONAL VALUES; RATING SCALES; MASTERS THESES; ADULT EDUCATION; *ADULT CHARACTERISTICS; *HOMEMAKERS

This survey was made to learn if the inventory "Preferences of a Homemaker" developed by Smith discriminates among homemakers according to socio-economic status, age, educational level, having or not having children, number of children now living in the home, employment status, hours worked weekly, and pay per month. A stratified random sample of 281 participants were administered a rating scale type instrument comprised of 17 value status and 18 family life value items. Statistical analysis revealed one significant response variation attributable to personal characteristics. Homemakers having children but none living at home valued family life most, these with children at home ranked next, and those having no children valued it least. Conclusions are: (1) The inventory discriminates among homemakers in general on the values of status and family life, (2) It does not discriminate among homemakers according to their personal characteristics except when children are involved, and (3) Homemakers scores were higher on the family life scale than on the status scale. Recommendations are (1) to survey to compare with the surveyed sample, (2) to make several statistical adjustment in the inventory and (3) to disseminate the inventory to adult counselors and educators. A reference list, charts and tables, a follow-up letter, and the instrument and interpretation key are included. This masters thesis was submitted to Iowa State University of Science and Technology. (FP)

VT 006 506

ED042060

ABILITY OF A VALUE INVENTORY TO DISCRIMINATE AMONG HOMEMAKERS WITH DIFFERENT CHARACTERISTICS

Veta Smith Smith

VT006506

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OFFICE OF EDUCATION
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Ability of a Value Inventory To Discriminate Among Homemakers With Different Characteristics

by

Veta Smith Smith

Directed by

Eleanore L. Kohlmann, Ph.D.
Associate Professor, Home Economics Education

Thesis conducted as part of Project No. 17, Personal Values of Family Members and Their Relationship to Satisfying Home Life and Successful Employment, under grant from Iowa Department of Public Instruction, Division of Vocational Education, PL88-210 Sec. 4(a).

Iowa State University
of Science and Technology
Ames, Iowa
1968

ABILITY OF A VALUE INVENTORY TO DISCRIMINATE AMONG HOMEMAKERS WITH DIFFERENT CHARACTERISTICS

by

Veta Smith Smith

A Thesis Submitted to the
Graduate Faculty in Partial Fulfillment of
The Requirements for the Degree of
MASTER OF SCIENCE

Major Subject: Home Economics Education

Approved:

Eleanore L. Kohlmeier
In Charge of Major Work

Albert D. Hill
Head of Major Department

Dean of Graduate College

Iowa State University
Ames, Iowa
1968

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INTRODUCTION

Concern with psychological values of individuals and their effect on behavior has increased in recent years among professionals working with people of all ages. That greater recognition is being given to the impact of values on behavior is reflected in the number of studies being reported in the journals of several disciplines. Continued efforts and ingenuity in methodology are needed to develop adequate measures of values as primary components of individual behavior and of the functioning of society (20).

Two schools of thought were found in the literature regarding the intensity of values and their effect as causal components of behavior. Some theorists believe values are the substance of self and as such are an integral part of behavior, that values are adhered to very closely and only with great thought and consideration are they changed (7, 16). Other theorists believe social behavior is determined by values if they are implanted in the control system of the individual and are not counteracted by other values. They believe that the culture is becoming more heterogeneous and that accompanying this change is a reduction in the preciseness and intensity of personal values. This conclusion results from the fact that generalized values may not be manifested by a consistently clear pattern of behaviors among people (20).

Another approach involves both of these theories in that the proponents believe values are of two distinctly different types: "instrumental values" being those that are influenced and changed as societal changes and needs arise; and "intrinsic values" being those that resist change, worth being attached to the thing valued for its own sake (20). Recognition of the diversity of beliefs about the nature of values and their causal effect on behavior makes more challenging the development of standardized instruments for use in the measuring of them.

With the increased concern for the relationship between values and behavior, studies are being made to identify values of specific groups of individuals. Researchers believe common personal characteristics among individuals belonging to the same groups may tend to produce similarities among the values they hold.

It has been theorized that the behaviors of members within a social level are more nearly alike and, hence, different from the behavior of people from other classes. Each level tends to have its own motivations and satisfactions (10). It is assumed that similarities of behavior within a class are a manifestation of similarities in value orientation among the individuals belonging to that class.

A series of studies has been conducted in an attempt to develop an inventory to identify values of women related to home economics. In research conducted by Smith (14) work was

continued on an inventory to measure the values of homemakers begun by Kohlmann (6). It was believed that such an instrument would be of value to educators working with women in areas related to personal and family living. She recommended that the inventory be administered to homemakers of different socio-economic levels to test the ability to discriminate among them.

The purpose of the present study was to test the inventory to see if it discriminated among homemakers according to different personal characteristics. These were: socio-economic status, marital status, age, educational level, having or not having children, number of children now living at home, employment status, hours worked weekly, and pay per month.

Because the study succeeds others in the development of the inventory to identify the values of homemakers, the definition of value used by Smith (14) was accepted for the study:

> . . . an enduring preference characteristic of an individual which influences the actions, decisions and desires in his daily life (14, p. 4).

REVIEW OF LITERATURE

As background for the present investigation the literature was searched for studies dealing with the identification of psychological values of individuals, and the relationship between values and certain personal characteristics. A number of studies have been reported within the past five years which have investigated values of specific segments of the adult population. Several of these incorporated the personal characteristics of age, socio-economic level, and residential location, which were of concern in the present study. Also included in this review is the study in which the inventory, Preferences of a Homemaker, used in the present study was developed. A few studies reported here involved methods of determining the socio-economic level of participants for which control was sought in the present study.

Studies That Identified Values of Specific Populations

All of the studies dealing with values reviewed here are investigations which incorporated one or more of the personal characteristics examined in the present study, and which used different types of adult populations. Specific types of populations included: homemakers of different socio-economic levels, men and women with different socio-economic backgrounds and from different age groups, and undergraduate college students from home towns of different sizes.

Believing that psychological values account for the fundamental differences among human beings, Burns (1), in 1964, did a study of clothing purchase practices of homemakers and related these practices to certain values. Of the six values identified by Sprangler as influencing man, Burns selected five as appropriate for her study: aesthetic, economic, social-love of mankind, social-belongingness, and political. She associated certain clothing purchase practices with each of these values. Volunteer homemakers from local church groups participated by responding to a questionnaire about their clothing purchase practices. Groups selected were those generally considered by the community to represent different socio-economic levels. A modified Warner scale was used to assign homemakers within the church groups to various socio-economic levels.

An examination of the results according to socio-economic status indicated that homemakers representing the high group tended to have high median scores for clothing purchase practices believed to represent the values: aesthetic, political, social-love of mankind, and social-belongingness. Homemakers from the middle group had high median scores for those practices thought to represent the values, economic and social-love of mankind. If it may be assumed that the clothing purchase practices did represent the designated values, the instrument used by Burns did discriminate among homemaker consumers according to socio-economic level on the values of

aesthetic, economic, social-belongingness, and political. Since all socio-economic groups scored high for the value social-love of mankind, it could not be concluded that the inventory discriminated among homemakers on this value.

Larson (9), in 1966, made an analytic study of selected health knowledge, values, and practices as related to social class. An adult sample representative of various socio-economic groups was used for the investigation. Participants were asked to rank a list of desires and needs and a list of occupations in order of desirability and importance to them. The desires and needs indicated personal preferences: the occupational rankings, status ordering. Findings indicated some significant differences existed between the upper and lower socio-economic levels on the desiderata and occupational orderings. The upper socio-economic group tended to place greater value on being in good health, having good education, being respected by people, having children, and having friends. The lower level attached more value to: being clean, owning a home, having insurance, and living in a good neighborhood. The occupation ranked significantly more important by the upper level was that of businessman; whereas, the lower level ranked the occupations of policeman, plumber, and waiter or waitress as more important.

Smith (15) in 1962, did a study to determine if there were age-associated shifts in personal values of adults, and if so, were the shifts relevant to the personality patterns of

later maturity. He stated four hypotheses, one of which is related to the present study: that age associated differences do exist in the value systems of people at various stages of adulthood.

Two instruments were used to test the hypothesis. The Personal Value Inventory was used to measure differences in the goal-hierarchies of three age groups of adults and of the individuals within the groups. It consisted of 54 self-referent statements constructed to include common roles and personal life goals. The social life roles studied were: parent, homemaker, spouse, worker, user of leisure time, friend, and the spiritual. Life goals selected were: freedom, altruism, new experience, power, recognition, response, security, achievement, and physical well-being.

The second instrument, Self-Report Inventory, measured the degree of satisfaction experienced by the participant in given areas. It consisted of 72 self-referent statements in six content areas: self, others, young people, authority, work, and reality. The participants responded according to a five unit continuum from "most like me" to "least like me." An overall score was considered an estimate of adjustment.

The sample consisted of three groups of married, upper-middle class adults who were residents of a northwest area of San Antonio, Texas, at the time of the study. The groups each involved 18 men and 18 women and represented three age categories: 20-30, 40-50, and 65-85 years. The three age groups

were selected as a limiting factor in the selection of participants as they were believed to represent crucial years in the lives of individuals: 20-30 years representing the early years of marriage; 40-50 years, the sexual climacteric; and 65-85 years, retirement.

Findings showed no significant goal differences among the three age groups. Significant differences at the .01 level were found among the three ages in their emphasis on life roles. There was evidence of decreasing differences among the roles as age increased.

McCalister (11), in 1965, tested the sociological theory that value differences of individuals do exist between communities which are essentially rural and those which are essentially urban in nature. The theory included the belief that the structural complexity of communities as social systems is related to the value structure of the people of the communities. Three assumptions were made: 1) the values held as normal by a society are internalized by the population and are manifested in behavior as role expectations; 2) in situations where values conflict, the strongest values of the society will tend to dominate; and 3) the controlling values of a society can be identified by observing the role expectations consistently preferred by individuals in the society who are involved in value conflict situations.

A self-administered questionnaire consisting of 28 items was given to 561 University of Tennessee undergraduate

students: 268 men, and 293 women. Fourteen of the items were related to the problem being explored, and the other 14 were used to conceal the exact nature of the study and to provide data for another investigation. The 14 items related to the study by McCalister were included to obtain two general types of information: data about the social background characteristics of the respondents, and data related to the respondents' personal attitudes. The independent variables included were age, sex, number of years of college attendance, past geographical mobility, farm or nonfarm residence, size of home town, state of residence, distance of home town from nearest community of 100,000 or more, occupational classification of father, and level of formal education attained by father. The dependent variable involved a set of four role conflict situations. The respondent was forced to select a solution which would indicate role expectations related to universalistic or particularistic values. McCalister identified universalistic values as those representing "duty to society", whereas particularistic values represent "duty to friends".

McCalister concluded that values related to universalism were associated with structurally complex communities; whereas, those related to particularism tended to be associated with structural simplicity. He identified two contemporary positions that might be accepted in relation to the existence of value differences. With the marked swing to urbanization, social class as a structural determinant of values has

increased while the effects of the community have decreased. The second position was that the community structure still tends to be related to the social value differences separate from social class, even though the more distinct rural-urban differences are diminishing.

In studying the possible existence of a typical American value system or core culture, Gruen (5) in 1964, identified 24 attributes or values considered to be typical of a majority of Americans by psychologists, sociologists, and historians. The 24 so-called, typical American values included:

belief in upward mobility with stress on achievement and success
belief in freedom
optimism in one's own efforts
belief in equality and in humanitarianism
belief in the perfectibility of man
faith in man as the master of his fate
concern with material well-being and material comforts
extroversion with its preferences for doing rather than for contemplating
openness to inter-personal relationships and relatively free access to outer layers of one's personality with attendant informality
preference for youth and beauty
belief in the necessity for hard work and the idealization of productivity
avoidance of idle moments except as "health measures"
postponement of gratification for the future
use of external criteria to define social roles
stress on efficiency and practicality
belief in secular rationality
a moral orientation to the world
inhibition and control of inner feelings and emotions
avoidance of sensuality
preference for orderliness
regularity and cleanliness
external conformity
preference for easy adjustment and the avoidance of conflicts
preference for small autonomous families (5, pp. 1-2).

Gruen formulated six hypotheses, two of which have relationship to the present study:

> Hypothesis 1: Most of the values mentioned above do hang together in a meaningful fashion and should be found occurring together either as the accepted standard or as the rejected standard in a majority of available samples of Americans.
>
> Hypothesis 2: The core culture should be most strongly expressed by members of the lower-middle and upper-lower class (5, pp. 4-5).

As a first step in attempting to determine if a core of typical cultural values really existed in the minds of Americans, Gruen developed a questionnaire containing 76 items representing the 24 values. The instrument was administered to 114 college undergraduates and 101 upper-middle class parents. Analysis revealed 26 items with significant biserial r's. Some non-significant items were rewritten and new items were added to form a 59 item scale that was then administered to 255 adults. Analysis yielded 40 items with significant biserial r's representing 17 values. These items made up the final scale. From high correlations of items with the total score and from the results of factor analysis, Gruen concluded that the 17 values areas tended to cluster together. The tendency was for a person accepting the items representing one value to accept items representing the other 16. Therefore, the first hypothesis was accepted. The resulting 17 values were grouped into four major areas as follows:

A. Vigorous pursuit of status change.
   1. Upward mobility and role change emphasis vs. stable role development as criterion for success.
   2. Postponement of gratification for the future vs. immediate enjoyment of wishes.
   3. Optimism in one's own efforts.

B. Tendency to prefer external attributes of people and social relationships.
   4. Social extroversion vs. cultivation of a few close friends.
   5. External and stereotyped expression vs. unique and genuine expressions of feelings.
   6. Idealization of youth and beauty vs. respect for age and experience.
   7. Lack of interest in reading and in books.

C. Standardized behavior.
   8. Conformity to community standards vs. tolerance for individualistic standards.
   9. Preference to work for a stable, well-known organization.

D. Impulse restriction and control.
   10. Tight control of emotion vs. free expression of feelings.
   11. Concern with regularity vs. spontaneous scheduling of daily routine.
   12. Extreme concern for cleanliness vs. functional cleanliness.
   13. Preference for bland food vs. enhancement of flavor by spices and sauces.
   14. Belief in romantic love vs. love as a developing process.
   15. Emphasis on activity to prevent sensual experience vs. enjoyment of sensual experience.
   16. Emphasis on keeping busy vs. enjoyment of idle time for its own sake.
   17. Relaxation as a health measure vs. enjoyment of relaxation for its own sake (5, pp. 14-15).

The second hypothesis was tested by comparing the means of three American samples: 101 upper-middle class adults, 139 lower-middle class adults, and 105 upper-lower class adults. The results indicated a greater total acceptance of the core culture pattern with a decrease in the socio status of the

adults, with the highest degree of acceptance for the core culture values among the upper-lower class. From these results Gruen accepted the second hypothesis that the core culture was most strongly expressed in the lower-middle and upper-lower classes, but he also recognized that, contrary to expectation, the upper-lower social group had a higher acceptance of the core cultural values than did the lower-middle group.

Gruen also studied the American samples according to the personal characteristics of sex, marital status, religious preference, occupational status, education, age, and culture. Analysis of variance and t-tests revealed no significant differences in the responses according to sex, marital status or religious preference. Significant score increases did occur with age by decades, especially from the 40's to 50's. Gruen speculated that increasing age makes one more conservative, but indicated a more likely explanation was that changes in American value systems have occurred through recent decades (5). Highly significant differences were found between occupational status and core culture acceptance. The higher the occupational status of the participant, the lower the mean score for the core culture values. Acceptance of core culture values increased as the educational level lowered, with unskilled and uneducated persons having the highest scores.

Gruen concluded that the instrument did discriminate among extreme groups, that is, groups having either very high or very low scores on the continuum indicating high or low

acceptance of the core culture values. He emphasized, however, that the instrument could not be used to define the values of intermediate groups, that is, groups or individuals attaining scores along the middle of the continuum. Two persons scoring along the middle of the continuum could have very different value orientations because they may have indicated very high or low acceptance of opposite items. The core culture, then, does not represent a single homogeneous value complex for Americans but a meaningful group of values typical of the "common man" portion of the American population. Gruen believed the differences within, and cross-over among sample groups, indicated heterogeniety and diversity may be emerging in the value orientation of the upper class segments of the population.

Study That Developed the Inventory, Preferences of a Homemaker

The ultimate goal of a study completed by Smith (14), in 1966, was an inventory that would identify personal values of homemakers. The form would be used by workers with adults for improving adult education programs, and in counseling situations. The investigation involved refining a value instrument developed by Kohlmann (6), in 1961.

The values included in the study were: concern for others, family life, friendship, status, health, work efficiency, economy, and education. Smith hypothesized that: 1) homemakers have a hierarchy of values and that this

hierarchy differs among homemakers; and 2) each item in the inventory is a measure of the value content indicated.

In the process of refining the inventory developed by Kohlmann, Smith eliminated some items, reworded others, and wrote some new ones. Because she anticipated the final form of the inventory would be forced-choice, she was concerned with determining social desirability and ambiguity indices for each item. The 312 items selected for use were grouped into a form entitled, "Image of a Homemaker". Directions for responding to the items were also changed to allow the participant to indicate how well she would like to be described by the behavior identified in each item. The method of response was a certainty scale from 1 to 99. The higher the number used by the homemaker, the more certain she was that she would like to be described by the item; a response of 50 indicated she was uncertain; and the lower the number below 50, the less she would like to be described by the item.

The sample to obtain responses for factor analyzing included volunteers from groups of women in the near vicinity and women from nine states. An attempt was made to include respondents from varying age groups, socio-economic levels, and number of children; but the results indicated more of the respondents were young, from the middle socio-economic group, and had some college education.

From these data a factor analysis of the items was done to identify value clusters. Correlations were made between

the responses for all possible pairs of 312 items. An examination of the correlation matrix yielded only two qualifying factors. Smith concluded if homemakers do discriminate among the eight values, this instrument only measured two.

After identifying the items in the two factors, each item was evaluated to see 1) if it contributed to the reliability of the factor, and 2) if its contents were the best available to contribute an idea or behavior to the factor. It was found that 19 items in Factor I had a reliability coefficient of .839. One item did not contribute to the reliability of the factor and one duplicated the idea of another item. These two items were eliminated from the factor. Factor II contained 101 items representing several values originally believed to be in the study. In order to obtain a smaller group of items having the highest possible reliability coefficient, paired items correlating .50 and above were selected. Eighteen items meeting this criteria had a reliability factor of .960. These items were evaluated according to the above criteria and according to duplication of idea, distribution of judged value content, and representation of home economics areas. Three items that duplicated others in the factor were replaced so as to better balance the content representation of the factor. The final factor of 18 items had a reliability coefficient of .954.

Using the two factors identified through the analysis, Smith prepared the final inventory. "Preferences of a

Homemaker". Items from the factors were randomly assigned a position in the new inventory. A revised certainty scale was the method used for responding. Using a continuum from 1 to 11 involved fewer choices for the homemaker than did the 1 to 99 scale, but it still required discrimination among the responses. According to this method, a response of a higher number indicated what the homemaker did or would do if she had the opportunity, a response of six indicated uncertainty, and the lower the response below six, the less likely she would be to perform the behavior described.

Factors I and II were entitled Status and Family Life respectively, because the behavioral descriptions of the items appeared to exemplify these values. Smith defined these values as follows: Status is "holding a position equal to or better than other people with whom a person is associated"; and Family Life as a value indicates ". . . behaviors of a homemaker in her home and with her family" (14, pp. 77-78). The status seeking behaviors in the scale involved social aspiration; whereas, the family life behaviors tended to involve conformity. Smith believed homemakers wishing to achieve a high socio-economic level would tend to score higher on the Status Scale and lower on the Family Life Scale than those homemakers who did not have such aspirations.

Smith hypothesized that the scores on the inventory scales would correlate with the socio-economic level of the homemaker: scores on the Family Life Scale would correlate positively;

whereas, scores on the Status Scale would correlate negatively. She thus assumed homemakers in the lower socio-economic class would score higher on the Status Scale and lower on the Family Life Scale than homemakers of other socio-economic classes, and that the opposite would be true for the middle group of homemakers. Smith recommended that a study be made of the use of the inventory by relating the scores of the homemakers on the two scales to socio-economic background.

Studies That Involved Socio-Economic Status of Individuals

A number of studies were reviewed for the purpose of identifying methods that have been used to determine socio-economic level of individuals. Three methods found to have been commonly employed will be reported here: 1) occupational and/or educational status, 2) "Index of Status Characteristics", prepared by Warner (19), and 3) geographic location of residence. A combination of the three has also been used. Some of the studies cited below have been previously reviewed; and, therefore, only aspects of each dealing with the identification of the socio-economic level will be discussed here.

One method for separating participants into socio-economic levels is the occupation and/or amount of education achieved. This method was used by Friedlander (4), Duza (3), and McCalister (11).

Friedlander did a study, in 1966, in which he attempted to determine the importance for satisfaction in life of

work-related and nonwork-related factors. He used the occupation of the head of the household as a basis for determining socio-economic status. Subjects for the study, all civil service resident employees in a government community, were classified into two occupational groups, blue and white collar workers. Within these two occupational groups Friedlander included socio-economic groupings in which the "style of life" for membership was similar. He divided each occupational group into three socio-economic groupings: low, middle, and high, and assigned the heads of households to the groups according to the relative level reached within the occupational group.

Duza (3), in 1965, studied child rearing attitudes of adults, and attempted to see if attitudes differed among adults of different socio-economic levels. In order to stratify the sample into socio-economic groups, occupational data were obtained by questionnaire. Respondents were divided into two groups, professional and blue collar occupations, to represent high and low social status.

McCalister (11), in 1965, did a comparative study of rural and urban community value orientations with undergraduate students at the University of Tennessee. He included items on a questionnaire to obtain information about the occupation and educational level attained by the father of the respondent. This information was then used to establish the socio-economic status of the subject.

A second method used by a number of investigators separated the respondents into different socio-economic groups according to the Index of Status Characteristics developed by Warner (19). This technique involves four kinds of personal information about each individual: occupation, source of income, house type, and dwelling area. A final score obtained by weighting these four factors was transformed according to a predetermined scale prepared by Warner, thus identifying the socio-economic status of the individual. Burns (1) and Nesbitt (12) used this method in their studies.

Burns, in 1964, attempted to relate the clothing purchase practices of homemakers to personal values, and to see if differences existed among the homemakers according to socio-economic level. Her subjects were volunteers from local church groups in a Pennsylvania community. The church groups used were selected because they were believed to be representative of high and low socio-economic groups. It was assumed some middle class homemakers would be found among both of the groups when the personal data were assessed. Data were collected by means of a questionnaire which included items pertaining to certain personal characteristics. A modified Warner scale was used to assign homemakers into three socio-economic groups. Burns used the educational attainment of the head of the household as a substitute for place of residence in the community on the Warner formula.

In 1966, Nesbitt (12) did a study to determine the relationship between standards in economic value systems and social status with a sample of adults in Boise, Idaho. As a first step in the sampling process, she randomly selected pages in the Boise City Directory from which participants were drawn. Using information available in the directory on these individuals, she computed the social status indexes according to the procedure developed by Warner. Three socio-economic groups were determined. From these groups she randomly drew participants for the study. When the interviews were made with the subjects by home extension agents, additional personal information was collected to verify the assigned socio-economic status level of each homemaker.

A third method for determining socio-economic status of individuals is based on the characteristic living conditions within a geographic area. The assumption made is that a majority of the residents living in a given area will be representative of the status of the entire area. This method was used by Larson (9), Wainscott (18), and Larson (8).

Larson (9), in 1966, did a study to determine value differences and value consensus of one member from each of 150 families of different socio-economic levels. In order to stratify the population according to socio-economic level, Larson used sections of a city which had been previously mapped and classified on a numerical scale by a city planning commission. These sections were believed to be representative of

five different types of residential areas based on: value of home based property taxes, proximity to industrial area, proximity to railroads, proximity to recreational area, zoning classification, type of housing development, and extent of blight. From each of these, blocks were randomly selected to locate the participants. When the data were collected, additional information was obtained about the educational and occupational status of the head of household. This information was then combined with the residential location to establish the socio-economic status of each participant.

Another study using geographic location to determine socio-economic level was done by Wainscott (18), in 1966. The purpose of the study was to determine the buying practices of individuals from the low socio-economic group in Denton, Texas. She identified low status subjects by using geographic areas established by the 1965 Survey Committee of the Denton Community Action Program as low socio-economic areas. From these areas she then randomly selected blocks and households to be contacted by the investigators.

Larson (8), in 1967, did a study in the city of Des Moines, Iowa, to determine the contributions wives were making to family economic development through paid employment and voluntary participation in community affairs. Because Larson wanted to determine differences that might exist among homemakers from different socio-economic levels, she controlled the sample selection to include three different levels. Using the

descriptive data from the 1960 decennial census of population and housing for the 47 tracts in the city of Des Moines, the socio-economic status of the residents of each tract was established. Ranks were made of median family incomes, median years of education completed by all residents 25 years or older, and cumulative estimates of housing conditions for each tract. The housing condition for each tract was based on the percentage of house units rated as sound, the average value of owner-occupied dwellings, and the average contract rent.

An overall rank was determined from the means of the descriptive data ranks for each tract. These rankings were divided into thirds and were considered to represent three socio-economic levels. From each strata five tracts and from each tract ten blocks were randomly selected. Given households on each block were designated as participating households for the investigator to contact.

In order to determine the adequacy of this method for stratifying the population, Larson collected additional information on personal characteristics of the 328 participating families during interviews. Information collected included: total family income, educational attainment of husbands and wives, housing condition as judged by the investigator, age of the husband and wife, and the employment status of the wife. Correlations were then made between the estimated, geographically determined, socio-economic status and the additional information collected.

Findings indicated a high correlation between the estimated socio-economic status and the actual money income of families. A positive association was reported between estimated status and educational attainment of both husbands and wives. Housing condition was highly associated with the estimated status, and the age levels of the husband and wife tended to increase progressively with socio-economic class. It was found that 60 percent of the lower and middle class and 42 percent of the upper class wives worked for pay. Chi square tests revealed an association at the .02 level of significance between the estimated socio-economic status and the employment earning of the wife. The socio-economic class scores for the families were associated with the strata in which they lived. It was concluded, therefore, that the use of census tracts in determining geographic strata was an adequate means for identifying individuals according to socio-economic class.

METHOD OF PROCEDURE

Objectives of the Study

The research was planned to determine if the inventory, Preferences of a Homemaker, developed by Smith (14) discriminates among homemakers who differ on certain personal characteristics. The characteristics were age, marital status, socio-economic status, educational level, having or not having children, number of children living at home at the time of the survey, and employment status. Smith had recommended that the inventory be tested by using it with homemakers of different socio-economic levels. She hypothesized that the two scales in the inventory will correlate with socio-economic level; the Family Life Scale correlating positively, the Status Scale negatively.

The Inventory

The inventory, Preferences of a Homemaker, was used to collect data as it had been developed by Smith (14). In order to fulfill the purposes of the study, certain personal information was needed about each homemaker. A data sheet was developed for the homemaker to describe herself. The options provided for each of the personal characteristics were: age--15 to 19, 20 to 29, 30 to 39, 40 to 49, 50 to 59, and 60 years or over; marital status--married or single; education completed--first through twelfth grades, one through eight years of college, and technical education; having or not having

children, and if having children--how many, what ages, and the number living at home at the time of the survey; employed or unemployed, and if employed--the occupation title or description, the number of hours worked weekly--1 to 10, 11 to 21, 21 to 30, 31 to 40, and over 40 hours, and pay earned monthly--less than $100, more than $100, $200, $300, $400, and $500. (See Appendix for a copy of the inventory and data sheet).

Selection of Sample

A survey of literature indicated three methods frequently used as basis for establishing socio-economic level of individuals that could be used with homemakers. Classifying participants according to the occupation of the head of the household was the method used by Duza (3), Friedlander (4), and McCalister (11). The Index of Status Characteristics developed by Warner was used by Burns (1) and Nesbitt (12). A third method, geographic areas, was used by Larson (9), Wainscott (18), and Larson (8). The latter method was built on the assumption that a majority of the residents living in a given locale will be representative of the socio-economic status of the entire area.

After weighing the advantages and disadvantages of the methods, the decision was made to determine socio-economic level of homemakers in the present study according to geographic areas. This method was selected because it appeared

to provide an efficient means for stratifying a population and permitted sampling an equal number of homemakers from each socio-economic group.

A limitation of the study was that only a segment of the population was used, and that the segment included homemakers varying within the categories of the personal characteristics. The decision was made that only homemakers from a city would participate in the study on the basis of the following rationale: that a city 1) would provide a more dense population from which to obtain data, 2) could be more systematically divided into socio-economic groups, and 3) would furnish a wider range among groups, than would more rural areas. After considering several large Iowa cities, Des Moines was selected because its proximity to Iowa State University provided for efficient and economical collection of data.

With the assistance of the Survey Unit, Statistical Laboratory, Iowa State University, a stratified random sample of households in the city of Des Moines was drawn. Information obtained from the U. S. Bureau of the Census, Census of Population and Housing: 1960 (17) was used to rank the forty-seven census tracts of Des Moines according to the following: median family income, median years of education completed by persons twenty-five years old and over, and cumulative estimates of housing condition. The overall ranking of the tracts based on the mean score of the ranks of the three tract characteristics as established by Larson (8, p. 46) was divided into thirds

and assumed to represent three socio-economic levels. Because one tract was a highly industrial area having few households, it was omitted from the study. From each stratum, an equal number of tracts and from each tract an equal number of blocks were randomly selected. Once the blocks were established, the City Directory for metropolitan Des Moines (2) was used to locate households on the block, and block maps were drawn. Using random selection technique, start and stop points were designated on each block map indicating households to be contacted by the researcher. An arbitrary decision was made to have one hundred homemakers from each of the three socio-economic groups respond to the questionnaire.

Collection of Data

Collection of data was by personal contact of the researcher. The procedure used was to call at the door of each household designated and request to speak to the homemaker. Given a brief explanation of the study, the homemaker was asked to participate. When willingness was indicated, directions for responding to the questionnaire were given, and a copy was left with the homemaker to complete at her convenience. Arrangements were made to have the completed inventory collected toward the end of the same day. In some cases when the homemaker was not home or could not complete the questionnaire on the day contacted, an addressed, stamped envelope was left for the return of the questionnaire by mail. Most

surveying was done on weekdays, but Saturday trips were made in an attempt to contact households where no one was home on weekdays. No evening calls were attempted.

In order to expedite the collection of data, an attempt was made to contact all the designated households in two tracts from the same area of Des Moines each day. When the initial attempt failed to produce the desired number of respondents, return trips were made to the neighborhoods. The researcher found that she was able to call at approximately 62 households on fourteen blocks each day. Of the calls made, an average of 35 contacts was made with an occupant, resulting in about 22 completed inventories by pick up or mail.

A total of 869 households was approached to achieve the goal of obtaining one hundred completed inventories for each socio-economic group. The following percentages indicate the proportion of the total sample from each group:

high socio-economic group	30.2%
middle socio-economic group	31.3%
low socio-economic group	38.5%

Table 1 shows the number of households where calls were made and the success achieved in reaching an occupant. In the high and low socio-economic groups it was possible to establish contact with an occupant approximately 54 percent of the time, while the middle group was contacted 64 percent of the time. Contact was established with 57 percent or 497 of the sampled households.

Table 1. Number of household units in the sample and the degree of success in contacting an occupant, by socio-economic group

Socio-economic group	Household units approached N	Occupant contacted N	Occupant not contacted N
High	259	140	119
Middle	276	177	99
Low	334	180	154

The degree of success in obtaining participation from the occupant contacted is indicated in Table 2. Of all households contacted, homemakers in 47 percent completed the questionnaire on the same day. The high socio-economic homemakers complied with the request 55 percent of the time on the day contacted, the low group 45.5 percent of the time, and the middle group 43 percent. Additional stress was given to completing the inventory on the same day for the low socio-economic group, and these were picked up by the investigator because experience indicated a poor return resulted when the inventory was left for return by mail.

Slightly more than one fourth of the total number of questionnaires distributed were returned by mail. The researcher requested that they be returned within a week. If after ten days the questionnaire had not been received, a follow-up card was mailed to the homemaker. (See Appendix).

Table 2. Number of occupants contacted and the degree of success in soliciting participation, by socio-economic group

Socio-economic group	Inventory completed on call day N	Inventory to be returned by mail N	Refused to participate N	House vacant or no homemaker N
High	77	34	23	6
Middle	76	63	26	12
Low	82	34	36	28
Total	235	131	85	46

Ninety follow-up cards were sent. A direct relationship between the socio-economic level of the homemaker and likelihood that she would return the completed questionnaire by mail was observed. Of the inventories left with the high socio-economic homemakers, 79 percent were returned; middle socio-economic group, 60 percent; and low group, 47 percent. From the entire group of questionnaires left for return by mail, 62 percent were returned.

Among the socio-economic groups the low group had the largest percentage of homemakers refusing to participate, approximately 20 percent of those contacted; whereas, the middle group had the smallest percentage refusing, approximately 15 percent. A considerably larger proportion of the households was found vacant or having no homemaker in the

tracts representing the low socio-economic level than in the other two strata.

Collection of the data was considered completed when there were 102 completed inventories for the high socio-economic group, 115 for the middle group, and 98 for the low group. Of 315 questionnaires completed, 16 or five percent were not usable. A nearly equal proportion of unusable questionnaires was found among those completed by homemakers from each socio-economic group. Reasons for classifying questionnaires as unusable included: personal data insufficient, five; responses incorrectly recorded, four; failure to respond to all items, six; and received by mail too late for analysis, one.

Because of the small number of participants indicating single status and/or being between 15 and 19 years of age, the decision was made to eliminate the questionnaires from these homemakers for the analysis of data. The analysis then included 281 questionnaires distributed among the three socio-economic groups as reported in Table 3. This number represented 68.5 percent of the high, 56.5 percent of the middle, and 47.2 percent of the low socio-economic homemakers contacted. Of the total number of households approached in each group sampled, 37 percent of the high, 36.2 of the middle, and 25.4 of the low were used in the analysis.

Eight personal characteristic variables remained in the study after marital status was eliminated by the exclusion of single women. Whereas some attempt was made to obtain

approximately the same number of cases from each level of socio-economic status, no controls were placed on the remaining variables. In order to make the groups sufficiently large for the statistical computations, some groups of participants representing different categories of the personal characteristic variables were combined. The number of cases in final categories for each personal characteristic variable is given in Tables 3 through 10.

Table 3. Number of cases according to socio-economic status

Socio-economic status	Cases N
High	96
Middle	100
Low	85

Table 4. Number of cases by family status

Family status	Cases N
No children	23
Having children but none living at home	63
Having children at home	195

Table 5. Number of cases according to the number of children living at home

Number of children	Cases N
Zero	86
One	57
Two	41
Three	54
Four or more	43

Table 6. Number of cases by age

Age	Cases N
20-29 years	68
30-39 years	76
40-49 years	50
50-59 years	41
60 years or older	46

Table 7. Number of cases by educational level achieved

Educational level	Cases N
1-9th grades	40
10-11th grades	44
Completed high school	99
1-2 years of college	40
Completed special training	33
3 or more years of college	25

Table 8. Number of cases according to employment status

Employment status	Cases N
Unemployed	205
Employed	76

Table 9. Number of cases according to the number of hours employed weekly

Hours employed	Cases N
None: unemployed	205
Less than 30 hours	28
30 hours or more	48

Table 10. Number of cases according to pay earned monthly

Amount of pay	Cases N
None: unemployed	205
Less than $300	49
$300 or more	27

Analysis of Data

The inventory consisted of thirty-five items, each of which represented one of the two value scales, Family Life and Status. Identification of items according to scale is given in the Appendix. The homemaker responded to each item by indicating how descriptive she believed the behavior was of her, along a continuum represented by numbers from one to eleven. Each response was transformed to a normalized rank:

Homemaker response to the item	Transformed score
1	0
2	3
3	5
4	6
5	7
6	8
7	9
8	10
9	11
10	13
11	16

A score was calculated for each homemaker by determining the sum of normalized ranks for each scale.

A frequency count was made of the number of homemakers having every possible score on each value scale, both for the total sample and for the categories within the characteristic variables. Scores ranged from zero to 160 on the Status Scale, and from 111 to 288 on the Family Life Scale. The median scores for the scales were 62 and 235, respectively.

The Numerical Analysis-Programming Office, Statistical Laboratory, Iowa State University, assisted in computing the

analysis of data. The chi square technique was used to identify differences that exist among groups. In order that the expected value in each cell would be at least five, some groups of personal characteristics were combined, and a minimum number of subjects per column was determined for each matrix according to the following formula:

$$N = \frac{5T}{S}$$

N = minimum number of subjects per column

T = total number of cases in the study

S = smallest variable group total for each table

Beginning with the lowest scale score for each matrix, intervals were determined by counting the cases in all columns, until reaching a total of the minimum number or the smallest number above the minimum that did not divide any homemakers scoring the same. The computations were completed by the Statistical Laboratory.

FINDINGS AND DISCUSSION

In order to fulfill the purpose of the study, the value inventory, Preferences of a Homemaker, was administered to 281 homemakers. The responses to the items were analyzed by means of the chi square technique to determine if homemakers varying in their personal characteristics responded differently. To facilitate the presentation of data, findings related to the Family Life and Status Scales will be discussed separately, and then remarks pertinent to both will be made. Suggestions regarding future use of the inventory, also, will be given.

Family Life Scale

For each of the 18 items comprising the Family Life Scale, the homemaker selected the number between 1 and 11 on the response continuum that best described her behavior or what she would do if given a chance. For the analysis, each response was transformed yielding potential scale scores of 0 to 288. The scores for the homemakers, however, ranged from 111 to 288 with the mean score, 230. This finding confirmed the conclusion drawn by Smith (14), that the items in the scale had high social desirability.

The results of the chi square calculations indicated the response differences among homemakers having diverse personal backgrounds were not significant except for one characteristic. The difference according to family status, that is, having or not having children, was significant beyond the .05

level. Table 11 shows chi squares for each personal characteristic variable studied.

The homemakers were grouped into the three categories of family status: those having no children; those having children but having none living at home at the time of the survey; and those with children living at home when surveyed. In the process of computing the chi squares, the frequency distribution was divided into five score ranges, each having no less than 59 cases with the exception of the group on the highest end of the continuum which contained only 42. The distribution of homemakers according to family status is given in Figure 1. The profile illustrates the proportions of the three groups of homemakers scoring within each range of scores, and indicates where the greatest differences occurred among the groups. When interpreting the profiles in Figure 1, the reader is reminded of the uneven distribution of homemakers among the family status groups. A larger proportion of homemakers having no children scored lower on the Family Life Scale than did those having children. Data on the profile show that 42 percent of the homemakers having no children scored in the lowest range of scores; whereas, only 20 percent of those having children at home, and 17 percent of those with children not living at home scored in that range.

In contrast, when combining the two highest ranges of scores, a larger proportion of homemakers having children scored in these ranges than those without children. The

Table 11. Chi squares for personal characteristic variables on the Family Life Scale

Personal characteristic	d.f.	Chi square	Chi square p = .05
Socio-economic level	30	33.75694	43.773
Family status--having or not having children	8	17.00685*	15.507
Number of children at home	28	26.93097	41.337
Age	28	26.08250	41.337
Education achieved	20	23.64900	31.410
Employment status	14	20.34694	23.685
Number of hours worked weekly	10	6.38177	18.307
Earning per month	10	9.80730	18.307

*Significant beyond the five percent level.

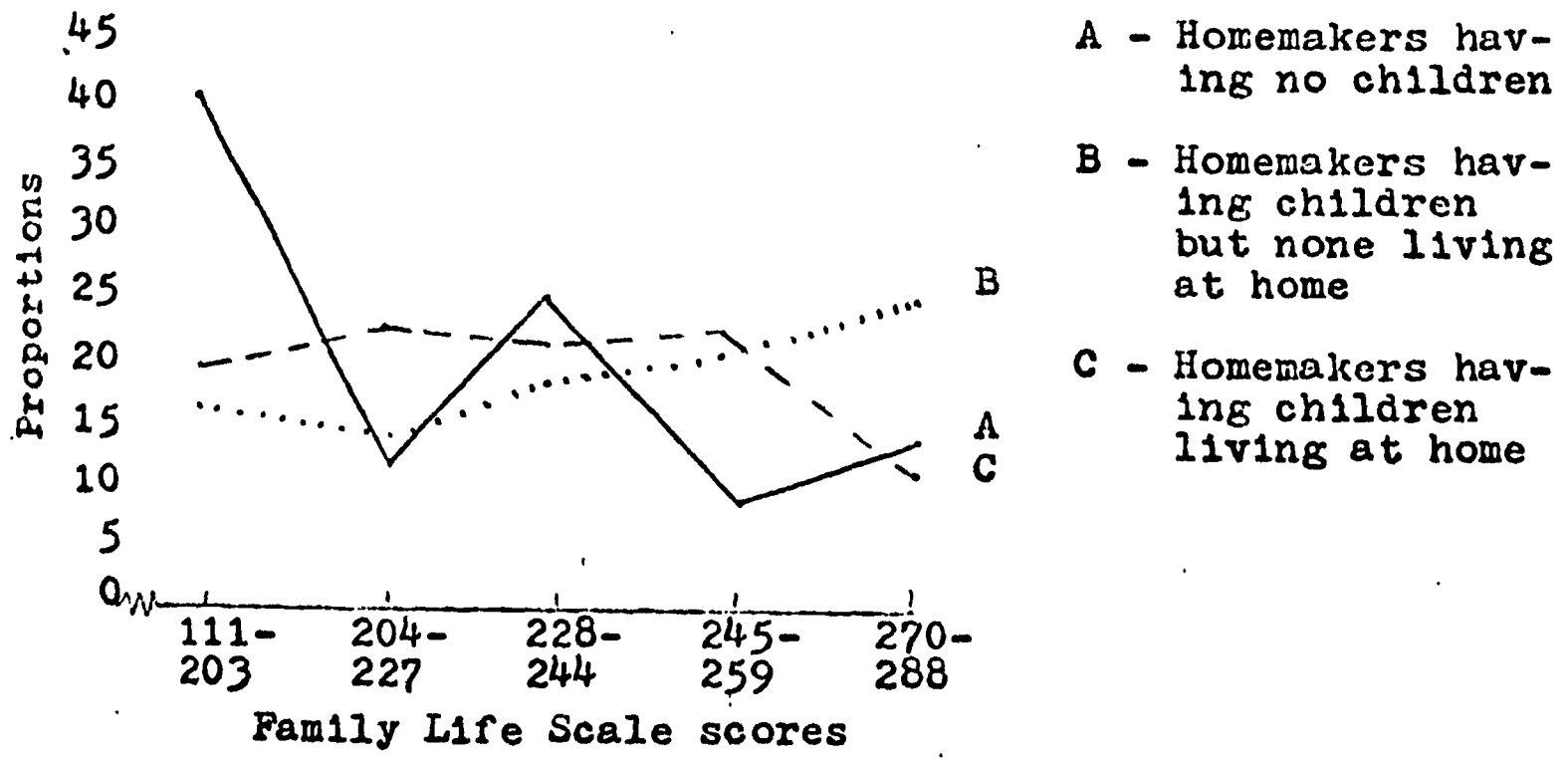

Figure 1. Profiles of scores for three groups of homemakers according to family status

percentages for the groups were as follows: 21 percent of the homemakers having no children, 34 percent of those with children at home, and 49 percent of homemakers having children away from home. Homemakers in the "empty nest" stage of the family life cycle valued family life most, and those having no children valued it least.

Many of the items on the Family Life Scale had to do with relationships of the homemaker with children. Some homemakers not having children expressed difficulty in responding to these items. One might question, therefore, whether these homemakers really differ on the value, family life, from those having children, or whether it was the items comprising the scale and the instructions for responding to the items which caused the differences to occur.

Status Scale

The method of response and the analysis for the Status Scale was identical to that used for the Family Life Scale. The potential scores for the 17 items in the scale ranged from 0 to 272. The scores received by the homemakers ranged from 0 to 160 with the mean score being 60.5. Findings reported in Table 12 indicate there were no significant differences among the responses of the homemakers to the items according to the personal characteristics under study as tested by chi square.

One characteristic, the number of children living at home, had a chi square considerably closer to significance

than any other, .07 level. It could be concluded from the finding that this characteristic was more influential in determining the responses of homemakers to the items on this scale than were other personal characteristics. Indications were that those homemakers having larger families tended to score lower, thus valuing status less than homemakers having smaller families.

Table 12. Chi squares for personal characteristic variables on the Status Scale

Personal characteristic	d.f.	Chi square	Chi square p = .05
Socio-economic level	30	38.07047	43.773
Family status--having or not having children	8	10.98181	15.507
Number of children at home	28	39.41078	41.337
Age	28	36.58311	41.337
Education achieved	20	24.14726	31.410
Employment status	14	10.19116	23.685
Number of hours worked weekly	10	5.32891	18.307
Earning per month	10	4.11537	18.307

Discussion of Findings

It was anticipated that the inventory, Preferences of a Homemaker, would discriminate among individuals and/or groups of women on the two values, status and family life. Smith (14)

established the internal consistency reliability coefficients for the scales Status and Family Life at .824 and .954, respectively. The present study was to test the ability of the inventory to identify response differences among groups of homemakers with diverse personal characteristics.

Although the present study failed to identify response differences among homemakers according to their personal characteristics, it appeared that the women did vary in response to the items. The wide distribution of scores for each scale indicates the inventory does have the ability to discriminate among homemakers in general, and that homemakers apparently do differ in the degree to which they value status and family life.

There are several possible reasons for the failure of the analysis to show differences among the responses of groups of homemakers according to personal characteristics. 1) The values may not be influenced by the characteristics of the homemaker, but instead may be such an integral part of the culture that they are found in varying degrees among all groups. 2) The personal characteristics may not operate independently as they were analyzed, but instead a combination of characteristics may be more influential. 3) Different personal characteristics may be more influential for certain individuals than are others. 4) The inventory may not be sufficiently refined to identify existing differences.

The belief that certain values may be such an integral part of the culture that they are found in varying degrees among all groups of people is consistent with the findings of the study by Gruen (5). He identified 17 values which seem to belong together so that an individual selecting items representative of one value would be likely to select items representative of the other sixteen. Although his analysis did yield differences by age and occupational status, Gruen had analyzed the values collectively rather than individually. It could be interpreted that both of the values included in Preferences of a Homemaker may be part of a core culture of values which receive varying degrees of acceptance among all groups of homemakers.

The personal characteristic of primary concern in the study was socio-economic level. An attempt was made to obtain equal representation of three socio-economic levels through the sampling procedure. The findings, however, indicated no significant difference in the way homemakers responded to the inventory for either scale between the levels. This could have resulted from the means of identifying homemakers for the three levels. If additional information had been used to supplement geographic location of residence in determining the appropriate levels, a more refined determination of socio-economic level would have resulted.

The distribution of total scores for each scale is reported by deciles in Table 13. Although only the transformed

Table 13. Distribution of scale scores by deciles

Decile point	Status Scale		Family Life Scale	
	Raw scores	Transformed scores	Raw scores	Transformed scores
9	68	102	193	274
8	51	85	190	264
7	46	74	185	250
6	41	64	183	242
5	37	57	180	235
4	34	50	175	223
3	30	39	170	214
2	28	34	164	201
1	25	25	144	180

scores were used in analyzing the data, both raw scores and the equivalent transformed scores are included in the table. The ranges of scores on the scales for the homemakers were:

	Status Scale	Family Life Scale
raw scores	17-126	75-198
transformed scores	0-160	111-288

Most of the homemakers scored well above the midpoint on the continuum of the Family Life Scale, 136 (transformed score); whereas, a majority scored well below the midpoint on the Status Scale, 128 (transformed score). This confirms the conclusion by Smith (14) regarding the social desirability differences of the scales.

Suggestions for Use of the Inventory

The fact that the instrument does not discriminate according to the personal characteristics indicates responses to the instrument are not strongly influenced by current position in life. Since, however, it is apparent that the inventory does discriminate among homemakers in general, on both of the values, it could be used by workers with adults to determine scale scores for given individuals or groups of women. The resulting data could be compared with the frequency distributions established in the study. From the comparison, the adult worker can determine the relative position of his participants in relation to a randomly sampled group of city homemakers, and thus know the diversity existing among the adults with whom he is working and their general orientation as related to these values. Suggestions for interpreting data are given in the Appendix.

SUMMARY AND RECOMMENDATIONS

The psychological values a person holds are believed to affect all aspects of his living. Values of homemakers are of particular interest to workers with adults in continuing education because it is thought that some knowledge of the values system of a homemaker would improve predictions of her actions and attitudes as a person, family member, student, and citizen.

In refining an instrument to identify the values of homemakers, Smith (14) analyzed responses which revealed the existence of two factors. They were labeled values of status and family life, according to the nature of the content of the items within the clusters, and became the scales of an inventory entitled Preferences of a Homemaker. The following definitions used by Smith were accepted for the present study:

> value is ". . . an enduring preference characteristic of an individual which influences the actions, decisions and desires in his daily life" (14, p. 4).
>
> status is "holding a position equal to or better than other people with whom a person is associated" (14, p. 77).
>
> family life is ". . . behaviors of a homemaker in her home and with her family" (14, p. 76).

The purpose of the present study was to test the ability of the Smith inventory to discriminate among homemakers according to certain personal characteristics. The characteristics were: socio-economic status, age, educational level, having or not having children, number of children now living

at home, employment status, hours worked weekly, and pay per month. Of the variables only one, socio-economic status, was controlled in the sample selection.

The instrument was used without modification except that a data sheet was developed and attached for the purpose of collecting the personal information about each homemaker. Thirty-five items comprised the inventory; 17 exemplifying the value status and 18 representing family life. The method of response was a certainty scale of 1 to 11, indicating the degree to which the homemaker believed the behavior described by the item was typical of what she does or would do if given the opportunity.

The 281 participants for the study were obtained from a stratified random sample of Des Moines, Iowa, households. Information obtained from the U. S. Bureau of the Census, Census of the Population and Housing: 1960 (17), was used to stratify census tracts into three socio-economic levels. Collection of data was by personal contact of the researcher with the homemaker. Processing of the data consisted of transforming the item responses of the homemakers to normalized ranks, establishing scale scores, and computing chi square calculations.

Findings revealed the response differences among homemakers varying as to personal characteristic were not significant except for one characteristic on the Family Life Scale. The difference in response according to family status was

significant beyond the .05 level. The results indicated homemakers having children but none living at home valued family life most, homemakers having children at home ranked next, and homemakers having no children valued it least.

After using the inventory, Preferences of a Homemaker, the following conclusions were reached: 1) the inventory does discriminate among homemakers in general on the values status and family life; 2) the inventory does not discriminate among homemakers according to their personal characteristics except when children are involved; and 3) as Smith anticipated, scores of homemakers were higher on the Family Life Scale than on the Status Scale.

Recommendations for use of the inventory are:

1. Administer the instrument to Iowa homemakers in nonurban areas to discover the extent to which they would respond differently than did homemakers of Des Moines, Iowa.

2. Analyze the scale scores of nonurban homemakers according to their personal characteristics and compare the results with those of the present study.

3. If there appears to be no difference between the scores of urban and nonurban homemakers, combine all scores on a single frequency distribution and reestablish decile points.

4. Establish mean scores and standard deviations for each item, and for the two scales.

5. Omit the number of hours worked weekly and pay earned

monthly from the personal data sheet as the results do not justify their inclusion.

6. Determine a means for collecting additional information for establishing the socio-economic level of individual homemakers.

7. Make the inventory and instructions for determining and interpreting the results available to adult counselors and educators for use.

8. Locate an additional instrument which could be used with Preferences of a Homemaker for identifying other values held by homemakers.

9. Omit the data relating to stratum, segment, and researcher on the instruction page of the instrument as it is not pertinent to further collection of data in nonurban areas or by counselors and educators.

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APPENDIX

The following is a copy of the follow-up card sent to homemakers who had agreed to participate in the study:

April 11, 1967

Dear Homemaker:

Recently you were asked by a representative from Iowa State University to participate in a survey, "Preferences of a Homemaker". At that time the representative also gave you a self-addressed, stamped envelope to return the questionnaire by mail. We have not received your questionnaire, and would like to encourage you to complete and return it as soon as possible. If you have misplaced this questionnaire, please let us know and we will see that you receive another copy.

Thank you for your cooperation.

Sincerely,

Eleanore L. Kohlmann Ph.D.

Items for the two scales comprising the inventory, Preferences of a Homemaker, by cluster:

Status Scale	Family Life Scale
2	1
3	4
5	6
8	7
10	9
11	13
12	15
14	16
17	18
19	21
20	22
23	24
25	26
27	29
28	32
30	33
31	34
	35

Value Inventory:
Preferences of a Homemaker

Stratum _____ Segment _____ Household number _____

Researcher _____ Date _____

(00250)

PREFERENCES OF A HOMEMAKER

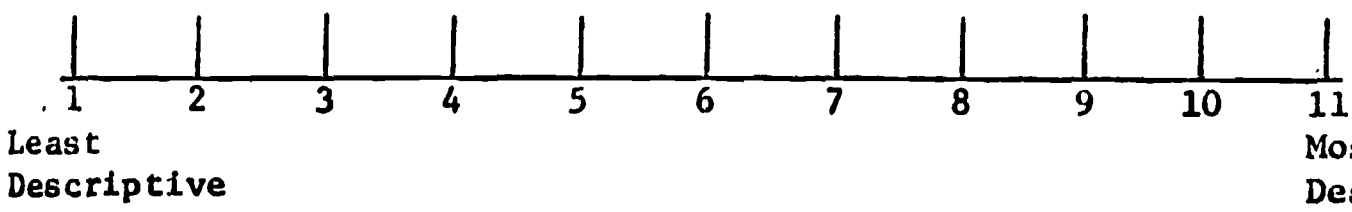
Iowa State University
Home Economics Education

On the following pages are statements describing a homemaker. We are interested in how well you feel each of these statements describe what you actually do or would do if you had the opportunity.

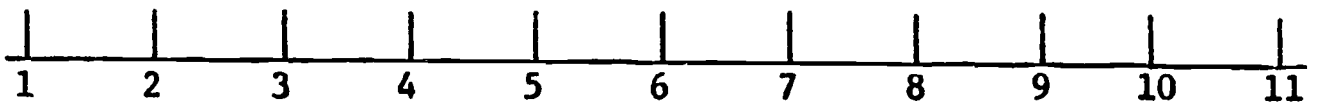
1. If the statement describes very well what you do or would do, indicate this by marking "11" in the blank to the right of the statement.

2. If the statement describes very poorly what you do or would do, indicate this by marking "1" in the blank.

3. Use numbers between 1 and 11 for various degrees of description.



This is not a test. There are no right and wrong answers. Your choices should describe what you do at the present time not what you think you should do. Be sure to read each statement carefully.



1. I see that temperature and ventilation of my house are correct for health. ____

2. I neglect my home responsibilities to work in an organization so I will be eligible for office. ____

3. I provide my children with everything they want because I want to be good to them. ____

4. I see to it that my children take good care of their own clothing to make them last longer. ____

5. I join in activities that are "the things to do" in my crowd whether I am interested in doing them or not. ____

6. I encourage my child to hunt for information that will help him learn. ____

7. I help my children to develop qualities which make them more friendly. ____

8. I buy shoes according to style rather than fit. ____

9. I go out of my way to help a friend who is alone. ____

10. I wear the latest styles in clothing. ____

11. I am known in the neighborhood for the elaborate parties I give. ____

12. I manage my food budget so I can afford to serve expensive foods when I entertain. ____

13. I conscientiously consider the rights of others. ____

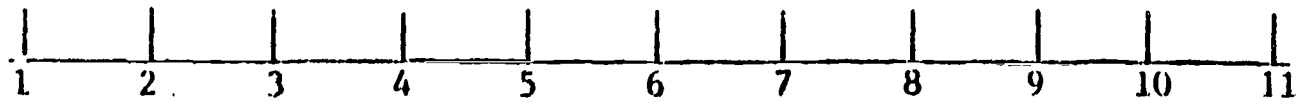
14. I practice making a baked product many times in order to gain enough skill to make one that I hope will get a blue ribbon at the fair. ____

15. I arrange my time so I can do things with other family members. ____

16. I find ways to encourage my children to like foods which make up a balanced diet. ____

17. I buy beauty aids without hesitation if they will improve my looks. ____

18. I adjust my ways of living as the needs of the family change. ____



Least Descriptive — Most Descriptive

19. I subscribe to several women's magazines to keep up to date with the latest fashions. _____

20. I have my hair cut and set regularly according to the latest styles. _____

21. I take into account the wishes and feelings of others when making a decision involving a group. _____

22. I encourage family projects, outings and activities. _____

23. I work hard in an organization so I will be eligible for office _____

24. I take care to avoid waste in the use of household supplies such as soaps, cleaning powders, etc. _____

25. I choose to buy a home in a neighborhood where important families live even though it means going heavily into debt. _____

26. I always treat public property as well as I do my own. _____

27. I give my child rewards as an incentive to work for high grades. _____

28. I strive to look as young as possible. _____

29. I take precautions for safety measures that will prevent injuries. _____

30. I spend more money than I can afford to join my friends in doing things that they are interested in doing. _____

31. I control my weight by constantly restricting my diet so that I have an attractive figure that will be admired. _____

32. I strive to do a task right in the first place to avoid having to take time to do it over. _____

33. I make a point of repairing minor damages around the house in order to save time and energy required for a major repair job later. _____

34. I help my children realize the importance of education in the world today. _____

35. I make my home a place where family members enjoy doing things together. _____

WE ALSO NEED SOME INFORMATION ABOUT YOU!

We do not want your name, but we would like to know:
(Please mark (X) all items that describe you.)

Are you or have you ever been married? Yes_____ No_____

Do you have children? Yes_____ No_____

If yes, how many children do you have?_____

If yes, what are the ages of your children?_____

If yes, indicate the number now living at home:_____

Indicate below your appropriate age range. Mark one.

15 to 19_____	40 to 49_____
20 to 29_____	50 to 59_____
30 to 39_____	60 or over_____

Indicate the number of years of education you have completed. Circle one number.

Elementary grades	1 2 3 4 5 6 7 8
High school	1 2 3 4
College	1 2 3 4 5 6 7 8

Technical Education--Indicate license or degree obtained, such as practical nurse, beautician, stenographer, etc.:

_____

Are you presently employed for pay? Yes_____ No_____

If employed, indicate below the number of hours you work for pay each week. Mark one.

1 to 10_____	31 to 40_____
11 to 20_____	over 40_____
21 to 30_____	

If employed, what pay do you earn monthly? Mark one.

less than $100_____ more than $100_____ more than $200_____

more than $300_____ more than $400_____ more than $500_____

Indicate your occupation by title or description:_____

Suggestions for Summarizing and Interpreting Responses on Preferences of a Homemaker

When administering the inventory to a group of homemakers individual totals, ranges within the groups, and mean scores of the group may be determined. Calculate the total score for each scale by adding together the responses to the items comprising the scale.

Items in the Status Scale		Items in the Family Life Scale	
2	17	1	21
3	19	4	22
5	20	6	24
8	23	7	26
10	25	9	29
11	27	13	32
12	28	15	33
14	30	16	34
	31	18	35

Using the total score distribution by deciles chart below, the position of the individuals and/or the group as a whole can be established relative to a sample of Des Moines, Iowa, homemakers. The chart indicates the range and decile points of the distribution for the 281 Des Moines homemakers who participated in the study.

		Status Scale	Family Life Scale
Highest score		126	198
Decile point:	9	68	193
	8	51	190
	7	46	185
	6	41	183
	5	37	180
	4	34	175
	3	30	170
	2	28	164
	1	25	144
Lowest score		17	75

Example: The scores received by a homemaker were 42 and 172, respectively, on the Status and Family Life Scales. A score of 42 on the Status Scale is located just above the sixth decile point indicating that slightly more than 60 percent of the Des Moines homemakers scored lower on the scale

than did this homemaker. According to this finding, it is believed this homemaker values status more highly than a majority of the sample homemakers. On the Family Life Scale, the 172 score is just above the third decile point indicating slightly more than 30 percent of the Des Moines homemakers scored lower on the scale than did this homemaker; thus she values family life less than a majority of homemakers sampled.

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Program Summaries of the Annual Industrial Education Conference (13th, Stout State University, Menomonie, Wisconsin, October 21, 1966).

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WISCONSIN; *INDUSTRIAL EDUCATION CONFERENCE (13th ANNUAL, MENOMONIE, WISCONSIN, OCTOBER 21, 1966

This conference attended by state department officials, school administrators, industrial management personnel, labor representatives, and teachers, had as its theme "Secondary School Vocational Education." The presentations, included in summarized form, are: (1) "The Hallmarks of a Quality High School Vocational Education Program" by William Kahl, (2) "Competencies Required for a Teacher of Secondary School Vocational Education" by George Kinsler, (3) "Implications for Teaching Preparation--Present and Future" by E. Robert Rudinger, (4) "The Role of the State Coordinator" by Richard Roberts, (5) "Psychological Background for Vocational Education" by Erich R. Oetting, (6) "Secondary School Vocational Education--Its Relationship with Apprenticeship" by Charles Nye, (7) "A Progress Report on a Pilot Program" by Edward Krig, (8) "Competencies the Secondary Vocational Education Student Should Possess to Enter the Technical School" by Earl F. Jaeger, (9) "A Progress Report on a Pilot Program by an Administrator" by Edmund F. Schwan, (10) "The Technical Institute Administrator's Reactions to Secondary School Vocational Education" by Alun C. Thomas, (11) "The Role of the High School Guidance Counselor in the Vocational Program" by Wayne J. Harrison, Jr., and (12) "Industrial Management Reactions to the Secondary School Vocational Education Program" by F.W. Churchill. (EM)

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Secondary School Vocational Education*

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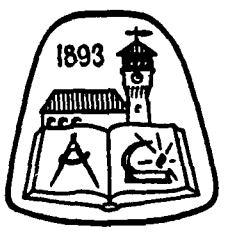

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* *13th Annual*
Industrial Education Conference
Stout State University
Menomonie, Wisconsin
October 21, 1966

ERIC

Program Summaries of the 13th Annual

INDUSTRIAL EDUCATION CONFERENCE

at

Stout State University

Menomonie, Wisconsin

October 21, 1966

Jack B. Sampson, Conference Chairman

Kenneth J. Erickson, Assistant Chairman

F O R E W O R D

Welcome to the Thirteenth Annual Fall Conference conducted at Stout State University.

Early each spring plans start for the fall conference. Suggestions from participants, faculty, and administration are considered in the development of the particular conference theme and programs that support the theme.

"Secondary School Vocational Education" as a conference theme was considered very appropriate because of the great strides that are being made in the field of vocational education at this time. The vocational education act of 1963 gave impetus to the pilot school programs in Wisconsin. This plus the leadership role of Wisconsin in the vocational education field further supports the need for conventions and conferences dealing with all aspects of vocational education.

The keynote address and all twelve programs give insight into the secondary school vocational education programs in Wisconsin as seen by state department officials, secondary and vocational school administrators, management personnel, labor representatives, and teachers.

It is hoped that your day at the thirteenth Annual Industrial Education Conference will be educational, interesting, and pleasant.

Dr. Jack B. Sampson
Professor of Industrial Education
Conference Chairman
Stout State University

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THE HALLMARKS OF A QUALITY HIGH SCHOOL VOCATIONAL EDUCATION PROGRAM

By: William C. Kahl, Superintendent
Wisconsin Department of Public Instruction
Madison, Wisconsin

I. Introduction

Vocational education is indeed in "the mainstream of education" today. Throughout the state of Wisconsin, many groups and many persons are discussing various facets of the programs of education which help prepare young people and adults for the world of work. The program planned for this Thirteenth Annual Conference focuses on some of the critical areas of the vocational education program being developed in our state. I am very pleased to be able to participate with you in this important conference.

The April 1965 edition of the Phi Delta Kappan was devoted to "The Swing to Vocational and Technical Education." Perhaps this phrase accurately describes the current scene in education, for there is much evidence of the "pendulum" moving back to center. It is the hope and concern of all educators that, as the pendulum swings back through its cycle of development and progress in education, a balance in the total program of education will be achieved whereby adequate programs are provided for persons of all levels of ability and needs.

II. Concern for Quality

We see a very healthy and wholesome concern in the state for the development of programs of quality education for all students. Programs in vocational education, both on the high school and post-high school levels, are being developed by means of guidelines which help insure that these programs are realistic in light of present and future labor market demands. The work of

advisory committees and joint curriculum planning committees in which both post-high school and high school teachers participate, the establishment of the work experience requirement for vocationally licensed teachers, and the general direction and leadership provided on the local and state levels are all important factors in upgrading vocational education and in gaining for it its rightful place in the school program.

A new look is being taken at vocational education on all levels, including high school vocational education within the framework of the comprehensive high school, vocational and technical education of a highly specialized nature on the post-high school level, and the area concept of vocational technical education which will make programs of high quality available on an equal basis to every person in this state. The relationship of the high school to the post-high school program, the concern for developing a harmonious system of education that will best serve the needs and interests of the taxpayer, the student, and the employer, is foremost in the thinking of educators who are planning these programs in our state.

III. The Emerging High School Program

In the past, high schools in Wisconsin have offered some courses in vocational education. We know, for instance, that programs in vocational agriculture and vocational homemaking have served students throughout our state for many years. These programs, supervised by staff persons of the State Vocational Board, have been reimbursed by federal funds available under the Smith-Hughes Act. In addition, the advanced courses offered in business education and industrial arts have helped produce employable skills for many high school graduates entering the labor market. Offerings in the field of business education, particularly as related to secretarial and clerical work, are perhaps among the best examples of traditional high school programs in vocational education.

However, a new emphasis and a new direction have been very much needed in the high school program. It has become evident that a greater variety of courses in vocational education and courses with greater depth and breadth are desirable. Educators have realized that some of the courses offered to students seeking employment upon graduation from school were not realistic in terms of the requirements of the labor market. The utilization of the total resources of the community--the joining together of educators and persons from the business world--to help in the planning of programs is recognized as imperative. The need to relate the high school program with those programs offered in the vocational-technical schools on the post-high school level has also become manifest.

In March of 1965, 34 high schools scattered throughout the state were selected by the Department of Public Instruction to operate as pilot schools in high school vocational education. A great deal has been said and written about the selection of these schools and the initial developmental phases which staff persons in these schools went through. It will suffice to say this morning that these 34 schools are helping to give direction to the development of high school vocational education in our state and that local vocational education coordinators who have been given special training are guiding the development of local programs. The pilot schools are trying out ideas and methods which, if successful, will be set out as models for others to follow. It is, of course, the desire of our Department to serve all of the schools of the state as effectively and as realistically as possible. Consequently, other schools have been invited to participate in the pilot school program on a more limited basis. At the present time more than 70 high schools throughout our state have one or more approved programs in vocational high school education.

I would be remiss if I did not comment on the counseling function of the emerging high school programs. The need of students for sound guidance and counseling with respect to their future in the world of work is a very significant one. The response by guidance personnel throughout the state has been very encouraging; much of the initial effort in guidance and counseling has been directed toward young people interested in programs of education or occupations not requiring a four-year baccalaureate degree. The "Combined Vocational Education-Guidance" research project conducted in cooperation with the Center for Studies in Vocational-Technical Education at the University of Wisconsin has great potential in aiding this aspect of our total program.

IV. Early Developments in the Pilot High School Program

The objectives of the high school vocational education program are twofold in nature: (1) to prepare for immediate employment those high school students who, upon graduation, will not go on to further education or training or who may postpone further education and training until a later time, and (2) to enable those students who will go on to school to enter advanced programs of vocational technical education which are offered on the post-high school level. To achieve these ends, a realistic program of vocational guidance and counseling must be developed on the high school level. In addition students must be given the opportunity to pursue the kinds of courses of instruction which will put them on the path to ultimate job attainment and success.

Although the pilot high school program is just entering its second year of operation, it is possible at this time to point to some developments in these schools which are significant. It would be possible to select almost any one of the 34 schools as an example of some significant activity in progress; the particular schools I will refer to were chosen because they incorporate some unique program features.

The senior high school at Oshkosh has developed a comprehensive vocational education program and has utilized the cooperative method to a large extent. During this school year, the following courses are being offered to students there:

Distributive Education Co-op

Secretarial Office Practice Co-op

Clerical Office Practice

T.V. and Radio Repair Co-op

Food Service Co-op

In addition to the programs which are reimbursed with funds from the 1963 Vocational Education Act, an automotive class for high school students is being taught by the local vocational school. At this time, activities are being developed in the industrial education program and additional course offerings should be forthcoming in that area.

In the new senior high school at Superior, a broad program of vocational education courses has been instituted. The following are exemplary of courses available to the students at Superior:

Machine Drafting

Woodworking

Electronics

Small Engine Repair

Sheet Metal

Secretarial Office Practice

Distributive Education

Clerical Office Practice

Blueprint Reading and Metals and Building Trades

At Plymouth High School, the following programs have been developed and are offered to the students of that school:

Secretarial Office Practice

Small Engine Repair

Graphic Arts

Distributive Education

Institutional Food Service

Agriculture-Related Occupations

The Milwaukee Public Schools have responded favorably to this program; each of the fifteen high schools in Milwaukee has one or more approved vocational education program. Curriculum writing workshops have been developed and set up by the Milwaukee Public Schools, and some excellent publications providing needed materials for vocational education instructors have been produced at part of this program. The Milwaukee Public Schools have also established a comprehensive testing program to discover students' abilities as well as their mental and academic traits. The guidance and counseling program for vocational education students has been expanded with the assistance of the Department's new program. Students who have participated in approved, reimbursed programs and have graduated from several of the pilot schools in Milwaukee have received significant recognition in both the apprenticeship program and other employment situations.

In the Kenosha Bradford High School, a special program has been set up to serve the needs of lower ability students that are not met by the regular clerical and secretarial office practice programs. The employment needs of these students have been provided in a realistic way by developing basic employable competencies.

At St. Croix Falls, a very fine effort has been made to provide a program of vocational education for students attending one of the smaller high schools.

The development of programs in office education and in industrial education has been among the highlights there. A rather diversified program in each area is being offered, and a close working relationship with industry in the St. Croix Falls area is being cultivated.

The special accomplishment of the Brillion schools, not among the pilot school group, should be noted. The administration of the Brillion High School took the initiative to develop a vocational education program to serve the students of many schools in the Brillion area. Courage and real effort were necessary to do this for the problems encountered were new and complex. A special shop program was developed, instructors were secured, and equipment was procured. As a result, students from high schools in that area are today served in a very realistic and important way by a joint program in mechanics and industrial operations offered at Brillion. Each of the students pursues a regular course of study in his own school and then participates in the special vocational education program in trades and industry during the afternoon in a special building in Brillion.

I wish that time permitted me to make reference to many other fine things being done in the schools throughout our state, but time is indeed short. However, one other highlight which should be underscored in this report is the very excellent articulation of high school and post-high school programs in the Wausau area. Through leadership provided by the Northeastern Technical Institute and the Wausau High School, a joint committee which includes the D. C. Everest High School has been meeting to help plan and develop programs of vocational education on both levels. There is much evidence of the benefits which have accrued to both high school and post-high school students. The efforts of this committee--which is under the direction of Mr. Robert Sorenson of the Northeastern Technical Institute, are paying real dividends to all concerned.

V. The Role of Industrial Arts

One of the questions frequently raised is: What is the role of industrial arts in this program? Because you are persons who are interested in the industrial arts and in trade and industrial education, I do want to make some mention of the role of industrial arts in the high school setting. Industrial arts has been carefully scrutinized by many educators and an adjustment in many programs of industrial arts has been found necessarily and perhaps overdue. The exact direction of this change in the industrial arts program is not clear at this time. The American Industries experiment in the teaching of concepts related to industrial processes may provide a large part of the answer. We are quite sure that the industrial arts program of the future will be materially different from that which has been offered by our high schools in the immediate past. More than ever, we as educators are today being challenged to make our programs of education serve the needs of our students in light of their projected life and career activities. Industrial arts serves both the academic or general education, and the pre-vocational needs of students.

Vocational education is built on a base of experiences in general and exploratory education. Industrial arts can, in a very realistic and meaningful way, help students learn more about the processes of industry as well as the skills and requirements of various occupations. Industrial arts lays the foundation of skills, knowledge, and abilities upon which vocational competencies can later be built.

According to the capstone concept of high school vocational education, students normally do not enter a truly vocational program until they have reached their junior or senior year. Only with a sound background in industrial arts, can students realistically enter these capstone programs and develop the competencies desired.

The new industrial arts programs will include an emphasis on lecture-classroom work. The importance of related instruction in vocational education is quite evident. More and more, industrial education students will need to engage in a study of processes and techniques that require reading and inquiry outside the classroom as well as work with equipment in the shop laboratory.

At the present, a study, under the direction of our state supervisor of trade and industrial education, Mr. Richard Roberts, is examining the need of beginning employees and apprentices in our state for related instruction. The results of this survey should provide direction to industrial education programs on the introductory or industrial arts level as well as on the capstone or vocational education level. The teaching of meaningful courses in shop and trade mathematics and in such areas as blueprint reading will undoubtedly become a vital part of the programs of industrial education in the future.

VI. Summary

Vocational education as it is now conceptualized has indeed become a real partner with general education in our public schools. Vocational education properly developed is an important component in the total educational effort on all levels. In this discussion today, I have attempted to relate some of the concerns and developments in vocational education as a whole. I have tried to point out the principles and philosophies which are so important to the development of the kinds of programs desired. The "Hallmarks of a Quality Vocational Education Program" must be kept ever before us--to help guide our immediate activity and to help serve as points for evaluation as we look at the progress being made. A copy of the "Hallmarks of a Quality High School Vocational Education Program," which was developed

by the vocational education staff of our Department, is included in the transcript of this presentation. I encourage you to read it, to reflect upon the challenges which it presents, to make these hallmarks a vital part of the activity in your schools.

Again, I am pleased to have had this opportunity to participate in this very fine conference. As vocational education in Wisconsin moves forward, we are anxious to be of service in whatever way possible.

State Department of Public Instruction
Madison, Wisconsin

THE HALLMARKS OF A QUALITY HIGH SCHOOL VOCATIONAL EDUCATION PROGRAM

A TOTAL BALANCED PROGRAM OF EDUCATION RATHER THAN ISOLATED "COURSES" OR "SHOPS"
GENERAL EDUCATION AND VOCATIONAL EDUCATION DO NOT "COMPETE" WITH EACH OTHER BUT SERVE AS PARTNERS IN PREPARING STUDENTS FOR OCCUPATIONS
CURRICULUMS ARE FASHIONED ON REALISTIC NEEDS OF OCCUPATIONAL AREAS
FLEXIBLE SCHEDULING AND CURRICULUM PATTERNS PROVIDE OPPORTUNITIES FOR SPECIAL, SHORT COURSES AS WELL AS TRADITIONAL COURSES
PROGRAMS ARE DESIGNED TO DEVELOP OCCUPATIONAL COMPETENCIES, OR TO LEAD STUDENTS INTO CONTINUED STUDY IN A VOCATIONAL OR TECHNICAL SCHOOL WHERE NECESSARY.
PHILOSOPHY OF SCHOOL PERMITS AND ENCOURAGES RESEARCH AND EXPERIMENTATION FOR IMPROVEMENT OF OCCUPATION PREPARATION PROGRAM

STUDENTS MAKE A CAREER CHOICE BEFORE ENTERING A PROGRAM (A CAREER OBJECTIVE IMPROVES EFFECTIVENESS OF STUDENT'S LEARNING)
INSTRUCTORS UP-DATE THEIR VOCATIONAL EDUCATION COMPETENCIES RELATING TO COURSE CONTENT, TEACHING METHODS, AND JOB UNDERSTANDINGS
TEAM TEACHING OR INTER-DEPARTMENTAL SEQUENCES ARE USED WHEN AN OCCUPATION REQUIRES COMPETENCIES THAT SPAN TWO OR MORE OCCUPATIONAL AREAS
COOPERATIVE EDUCATION PROGRAMS ARE PROVIDED IN EACH OCCUPATIONAL AREA WHEN POSSIBLE
MEANINGFUL PARTICIPATING EXPERIENCES ARE PROVIDED AS IN-SCHOOL OR OUT-OF-SCHOOL ACTIVITIES FOR STUDENTS NOT ENROLLED IN COOPERATIVE PROGRAMS
VOCATIONAL YOUTH ORGANIZATIONS SERVE AS VITAL ADJUNCTS TO THE INSTRUCTIONAL PROGRAMS IN EACH OCCUPATIONAL AREA

EFFECTIVE USE IS MADE OF OUTSIDE RESOURCES, INCLUDING THE BUSINESS AND INDUSTRIAL COMMUNITY AND SPECIAL AUDIO-VISUAL MATERIALS RELATED TO THE OCCUPATIONS
FACILITIES AND EQUIPMENT USED ARE COMPARABLE TO THOSE FOUND IN THE OCCUPATIONS
LIBRARY AND SPECIAL SOURCE MATERIAL IS PROVIDED FOR ALL OCCUPATIONAL TRAINING PROGRAMS

COUNSELING AND GUIDANCE TAKES INTO CONSIDERATION INDIVIDUAL NEEDS, INTERESTS, AND APTITUDES IN RELATION TO EMPLOYMENT REQUIREMENTS
ADVISORY COMMITTEES ARE USED EFFECTIVELY IN PLANNING, DEVELOPING, AND EVALUATING PROGRAMS
AN ADEQUATE STAFF OF VOCATIONALLY COMPETENT AND QUALIFIED TEACHERS IS GIVEN SUFFICIENT TIME TO PLAN AND CONDUCT MEANINGFUL PROGRAMS
STUDENTS ARE GIVEN ASSISTANCE BY THE SCHOOL IN SEEKING EMPLOYMENT
EVALUATION OF PROGRAM INCLUDES FOLLOW-UP STUDIES OF THE JOB SUCCESS OF GRADUATES

COMPETENCIES REQUIRED FOR A TEACHER OF SECONDARY SCHOOL VOCATIONAL EDUCATION

By: George R. Kinsler, Supervisor
Vocational, Technical and Adult Education
State Board of Vocational, Technical and Adult Education
Madison, Wisconsin

This is indeed a privilege to speak to this group, whose main responsibility is the education of people. We here today who have responsibilities for the education of children, young people, and adults are, of course, very much concerned with the competencies of teachers.

Let us look for a moment at this word "competency". This, of course, gives reference to competence and competence means sufficient for the necessity of life, sufficiency without success, without excess, quality of being competent, fitness, ability, proficiency and we can go on identifying many synonyms for this word "competency". In this particular discussion we are concerned with the competencies required for a teacher in secondary school vocational education and being realistic in our approach to this, we must first give some considerations as to what do we need the competencies for. In so doing, we can say that our purpose is to develop in a student the proper ATTITUDES, sufficient SKILLS, and adequate KNOWLEDGE to make him a contributing citizen in our complex society.

If we are to develop proper SKILLS, KNOWLEDGES, and ATTITUDES in our students we must have a basic educational philosophy. This educational philosophy must be compatible with the educational program in which we are involved. We speak of a philosophy as an expression of feelings, attitudes or impressions relative to a given experience or situation. In the development of an education philosophy one should take into consideration the changing world of today. In developing a philosophy of vocational education we must adjust to the needs of our society, and specifically, the business and industrial needs

of our society. To aid one in identifying themselves more closely with the vocational philosophy, a bulletin, "Vocational Education for American Youth", published by the American Vocational Association, reads as follows: "Some years ago the term vocational education was misinterpreted to mean only those forms of education or training absolutely essential for the performance of specialized occupational skills. Now in the usually accepted sense vocational education on the secondary level includes any and all knowledge and training that will contribute to satisfying a useful life of employment. This involves education in general together with emphasis on preparation for entree into an occupational field. It also includes education and training for those employed persons who need further knowledge or added skills to keep pace with changing conditions and to retain employment already held. It may provide training for improvement or advancement in such employment or for transfer from one field of occupation to another as made necessary by technological change."

It has also been stated that the central purpose of vocational education is to fit persons for useful employment. It must be obvious to you that I have been discussing some basic thoughts that pertain to a philosophy that would be compatible to vocational education.

In order to better identify vocational education we should mention several means by which one may be able to recognize vocational instruction. Quite often people hide it under a guise of a specific type of title. As we all know, titles are very deceiving. Therefore, I would suggest that in reviewing an educational program that is supposed to be of a vocational nature, we should look for instruction in the types of KNOWLEDGES, SKILLS, and ATTITUDES that will provide the learner with the <u>needed competencies to be a worker or employee in his occupation</u>. It would also be normal to assume that the type of education that the learner is receiving would serve him better in his every day responsibilities on the job, than the individual who would be employed in a

different occupation. We should find in reviewing the educational facility that the methods of instruction and equipment used for this instruction would be similar in nature to that found in the industries for which the learner is being prepared. I am sure that each of you through your professional growth programs have been exposed to the long listings of items that can be used to recognize vocational instruction in educational programs.

However, we are here primarily to discuss competencies of secondary school vocational education teachers. Momentarily, I would like to pause to quote from our good friend Homer Rose in his book, The Instructor and His Job. He says, "The competent instructor in the classroom and on the job is the builder of bridges between expanding and changing subject matter on one side and a wide range of personalities on the other. Personalities of people who must learn new theories, new attitudes, and new skills. An instructor is successful only to the extent that he enables his students to learn what they need to know at the right time, rapidly and well. The measure of his success is the learning which results from his instruction."

Up to this point, we have referred to secondary school vocational education. I would like to make one point very clear. Many of us who have been involved in vocational technical education for considerable time, feel very strongly that when we discuss vocational education with its central purpose which is to fit persons for useful employment for their lifes endeavor, we do not distinguish as to the level at which this education is taking place. Vocational education is vocational education regardless of the level at which it is being taught. Its primary purpose should be for useful employment. If we refer back to Mr. Rose's statement involving the competent instructor we will find that he does not identify competency specifically with vocational education. An instructor to be competent whether it be in vocational education, general education, or higher education, he still has to have some very basic and sound attributes.

Mr. Rose also identifies in his book six broad qualities of a person who wants to become an instructor. They are:

1. Competence in the subject being taught.
2. Mastery of the techniques of instruction.
3. Resourcefulness and creativeness.
4. The habit of evaluation.
5. The desire to teach.
6. To develop good personal relationships.

I would also like to refer to the Office of Education bulletin entitled, "Teacher Competencies in Trade and Industrial Education." This publication is dated 1960. It involves a very extensive survey in which an attempt was made to identify the competencies needed for trade and industrial instructors. After considerable research they identified the competencies into two major areas. Those considered to be in the area of knowledge understanding and concepts, and those which imply action or the ability to do or use skills and techniques. These two broad categories were identified more clearly in the following list that refers to groups of competencies:

1. The orientation to public education.
2. Interpersonal and group relations.
3. Understanding the student and the learning situation.
4. Developing functional curriculums.
5. Selecting, developing and using instructional materials.
6. Teaching methods.
7. Shop and classroom organizations in management.

If we review rather briefly the six items as identified by Mr. Rose and also the seven items identified as competencies in the Office of Education bulletin, "Teacher Competencies in Trade and Industrial Education", we will find them very similar in nature. However, I would like to elaborate in more detail on each of the seven identified in the United States Office of Education bulletin.

ORIENTATION TO PUBLIC EDUCATION

Let us discuss "orientation to public education". For an instructor to accept his role as an instructional staff member, he must have a very thorough understanding of the communities basic philosophy in general education and specifically in vocational education in which he is accepting this responsibility. Without a thorough understanding of this philosophy it would be very difficult for the instructor to develop the attitudes necessary for his students to effectively participate as future citizens in his community. To better identify the type of competencies that are in this area of orientation to public education we might note such items as; a knowledge and understanding of the value and importance of good public relations to support the educational program in the community. The ability to work as a member of a professional team in planning a suitable education program for the vocational students.

INTERPERSONAL GROUP RELATIONS

This particular competency is required in an area which relies highly on insights as well as learned techniques in dealing with people.

As an educator one's responsibility is to work with his fellow man and his fellow teachers, with organized groups, with workers in industry, with parents as well as his students. He must in this particular competency area be able to work with his supervisors and accept supervision. He must understand the value of a good public relations program in an educational system and how important it is that the instructor contribute to this public relations program. In this category would also fall his ability to work with labor and management, in the placement of students, in keeping up-to-date in his knowledge and skills. This is an area where if he is weak in his competencies he will find it difficult to develop cooperative programs for vocational students.

UNDERSTANDING THE STUDENT AND THE LEARNING SITUATION

The next competency listed which is "understanding the student and the learning situation". This particular competency is a very complex one. It involves the use of the knowledges that we as professional people have learned as we have participated in our educational programs in the formal manner as well as the many attributes taught to us from day to day as we associate with our fellow man. Competencies here fall in such categories as a knowledge and understanding of the sensory aspects of learning. Let us discuss this one situation.

I wonder how often many of us who have developed courses of study and instructional materials of many natures have given the proper consideration to the importance the five senses play in learning. The senses of sight, hearing, touch, smell and taste. We know that the sense of sight is used the greater share of the time in learning, and of course, hearing next and then touch, smell and taste. Quite often we can combine the use of these in developing instructional materials and we see the use of these from day to day through the many medias that are now being used to draw peoples attention and hold it. Do we give proper consideration to these? This is a very important facet of teaching in vocational education and a competency that we have too often overlooked.

This particular area is a broad one and we could list many many competencies that could be learned. Generally speaking, we come back to dealing with humans and how they learn and it is suffice to say that we must understand this as competent teachers.

DEVELOPING FUNCTIONAL CURRICULUMS

For one to have the competency of "developing functional curriculums" it requires an understanding of the occupation, tests, and specialized training in how to analyze the occupation for learning information so that it can be organized into an instructional program. A program that is attractive to the student so he can raadily move from one area to another in the learning sequence and have the normal amount of progress necessary to be competent in the occupation.

This is an area where the instructors experience of working with advisory groups from his occupational area would be used. This is also where he would use the competency of knowing what are acceptable standards of workmanship for the occupation. We can say a functional curriculum is one in which the learner can progress from his instructional program to his employment "work" responsibility with a minimum of additional learning to be a productive employee.

SELECTING, DEVELOPING AND USING INSTRUCTIONAL MATERIALS

In "selecting, developing and using instructional materials" we are dealing with many media and the instructor must have the competencies to identify the type of media to use for the particular instruction that is taking place as he proceeds through the development of his curriculum. This is gained through the alertness of the instructor to changes that are taking place in the field of audio visual and the development of specific instructional materials such as transparencies, programmed instruction and others.

Included in this particular competency is the area of evaluation. As an instructor in an educational program we must be able to evaluate ourselves and our students constantly for without evaluation we have no reason to believe that we are improving ourselves or conveying to the learners the KNOWLEDGES, SKILLS, and very important, the ATTITUDES that are necessary for the learner to compete in the industrial world today.

TEACHING METHODS

In this competency, "teaching methods," we are dealing with one of the most important facets and that is the development of the student's attitude as it relates to safety practices and the methodology that the instructor has to use in instilling in the student the safety consciousness that will carry over into his actual performance when he accepts the responsibility of working in industry. It is quite important that the instructor have the ability to maintain interest and stimulate interest throughout his instruction. This would also include the ability to develop an appreciation for good workmanship and to demonstrate

skill in the particular trade. The instructor must have the competency of tieing all of this together so that good instructional methods are used in his teaching. It is in this particular competency that the instructor must show that he has the capacity to demonstrate well the skills necessary that the student or learner is to obtain so that he can become profiolent and grow to be a contributing individual when he become an employee in industry. All of us know, "How to" is a very important facet of vocational teaching.

SHOP AND CLASSROOM ORGANIZATION AND MANAGEMENT

The competency of "shop and classroom organization and management" deals with some basic areas which includes attitudes development in the student. We find that through teaching the student good classroom organization he learns respect and an understanding of the need for an organizational pattern in an industrial complex. Unless he is adequately exposed to these in organization problems in his instructional program they will be foreign to him in his employment. Without proper attitude development for an industrial organization the learner may develop problems on job entry with his supervisor.

We have reviewed very briefly some competencies required for teachers of secondary school vocational education and basically, we are talking about vocational education and general education. These competencies are necessary tools of teachers if they are to develop the proper ATTITUDES, SKILLS, and KNOWLEDGES in their students. For we as teachers to develop these competencies, we must take advantage of the different facets of learning available to us. We must go to higher education where one of the important competencies is dealt with and that is the subject of psychology. I sometimes feel that because an instructor has been exposed to one or two courses in psychology that he feels he has become a psychologist, when he is just beginning to learn about his fellow men from these basic courses. It is only as we delve more deeply into this area that we can become more competent instructors.

In this so called, formal method of attaining competency, also falls the area of work experience. This is one of the very important facets of competencies that we must have if we are to convey to the student of today the problems that he is to face as he accepts employment in our industrial complex. Without this work experience we would not be able to identify to our students such information as: The basic nomenclature used in the occupation, the importance of production as it relates to profit in industry, that without high quality production we would not have sufficient saleable products so that the employer can compete in the competitive market of today. Without this work experience the instructor would not be able to understand the types of attitudes necessary for the student to survive in an industry for it is only as we participate with our fellow workmen on the job that we are able to interpret and gain an insight to the problems involved in working in the very demanding mental and physical situations of our society.

The informal development of competencies for teaching in educational programs would occur through the social experiences and recreational experiences. We are dealing primarily with our ability to associate with our fellow man in a different environment and in so doing we develop competencies wo that we can associate with our students in an educational environment. We must bring together through constant review of our past experiences and new experiences and through a planned program the competencies that will contribute specifically and indirectly to making us a teacher and especially a vocational teacher that is capable of accepting the responsibility of the education for the children, youth and the adults of today.

We started out by stating that students have a basic need for the development of their ATTITUDES, their KNOWLEDGES and their SKILLS. Please keep in mind that this presentation is just touching the surface in identifying the competencies needed to accomplish this.

Of the many items of a specific nature that we have discussed, the following are the ones that I would say are most important in terms of an individual performing as a master teacher.

One must develop and have a sound philosophy that matches the educational program in which he is involved.

He must be able to identify how humans learn as well as the psychological aspects that affect men in getting along with each other such as communicating with each other.

A teacher must have the knowledges and skills that are prevalent in the occupational field in which he is teaching. He must have the competencies to tie together and bring all of these to bear in the development of instructional material. Instructional materials that will inspire the individual or the learner as well as impart to this learner the abilities necessary for successful employment and to become a contributing citizen in his community.

IMPLICATIONS OF EXPANDED VOCATIONAL-INDUSTRIAL EDUCATION PROGRAMS TO TEACHER EDUCATION

By: E. Robert Rudiger, Head
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The quality of any vocational-industrial education program is directly related to the level of competence of the teachers involved. These competencies can and must be developed through effective teacher education programs. Not only is teacher education concerned with pre-service preparation, but also in-service training which is equally important.

To teach and teach effectively in the field of vocational-industrial education, teachers must have trade competence and experience plus professional teacher education. Generally speaking, vocational-industrial teacher competencies may be divided into two basic categories: (1) Those considered to be in the area of knowledge, understandings and concepts; and (2) those which imply action or the ability to do or to use skills and techniques.

One source of potential teachers is to recruit from the ranks of journeymen and foremen of proven ability in their occupational field. The other source is to recruit from the industrial arts teaching field. In the first case, teacher education programs have the task of developing effective teaching skills and philosophy. In the latter case, provisions must be made whereby the eligible candidate can obtain meaningful work experience to enable him to meet certification requirements.

In a study[1] recently completed by the U. S. Office of Education staff, professional personnel having direct contact with teachers of T & I subjects

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[1] Teacher Competencies in Trade and Industrial Education, U.S. Department of H.E.W., Office of Education, Government Printing Office, Washington, D.C., 1960, p. 33.

(e.g., Supervisory Personnel and Teacher Educators) were asked to evaluate specific types of competence developed through the professional preparation of recently prepared teachers. The results of this phase of the study are as follows:

PROFESSIONAL PREPARATION	PER CENT SATISFIED
Do teachers prepared within the last five years have ----	
Sufficient experience in:	
1. The skills of the trade to be taught	72
2. The preparation of instructional materials	30
3. Teaching shop and related subjects	40
Adequate preparation in:	
4. Planning for instruction	50
5. Class organization and management	55
6. Testing and evaluation	28
7. Keeping records and making reports	47
Adequate understanding of:	
8. The philosophy of public education	36
9. The objectives of trade and industrial education	68
10. The basic principles of learning	49
11. Teaching methods and their application	53
12. Teaching aids and devices and their application	41
The ability to:	
13. Develop an effective course of study	46
14. Demonstrate the skills of the trade	76
15. Maintain acceptable discipline	62
16. Develop safe work habits	74
17. Motivate students	44
18. Work as a member of a professional team	

PROFESSIONAL PREPARATION	PER CENT SATISFIED
Adequate basic orientation to:	
19. Industry - school - community relationships	39
20. The total educational program of the community	25
21. The types, locations, and services provided by community organizations	23
A tendency to:	
22. Be "isolationists" by maintaining a separatist attitude	46
23. Teach at an appropriate level	67
24. Accept responsibility for extra-curricular activities	58

As another part of this same study[2], successful teachers of T & I subjects were asked to evaluate the relative importance of the contribution of special teacher preparation courses to their success as teachers.

The ten teacher training courses which were ranked as most important are:

1. Trade Analysis and Course Construction
2. Methods of Teaching Industrial Subjects
3. Development of Instructional Materials
4. Shop Organization and Management
5. Vocational Curriculum Construction
6. Tests and Measurements
7. Industrial and Public Relations
8. Principles and Philosophy of Vocational Education
9. Related Instruction for Apprentices
10. Educational and Industrial Coordination

Implications for Teacher Education

1. A high order of selective teacher recruitment and selective retention is necessary.

2. Professional courses must be continually evaluated and improved.

3. More training programs in or by industry should be encouraged.

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[2] Ibid, p. 37.

4. Teachers should be encouraged to participate in training programs offered by industry.

5. More research should be conducted that will result in more and better curriculum materials.

6. Teacher internship programs should be further developed.

7. Cooperative work experience programs should be developed with selected industries.

8. Teacher in-service training should be provided by the teacher training institution on the local level.

9. Technical workshops should be offered in selected subject areas through cooperative effort of the state department of instruction and the teacher training institutions.

10. Cooperative teacher education programs need to be developed between accredited vocational-technical schools and teacher training institutions.

11. Technical offerings at teacher training institutions need to be expanded in breadth and depth.

12. Opportunity should be provided and teachers encouraged to keep up-to-date.

13. Advisory committees should be formulated and utilized to improve the overall teacher training program.

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ROLE OF THE STATE SUPERVISOR IN HIGH SCHOOL VOCATIONAL EDUCATION

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I will direct my comments toward the duties of the supervisor in the high school programs. Generally some of these duties are the same as the post-high school supervisors, although there are some differences depending on the specific assignment of the post-high school supervisors (such as supervisors of teachers certification, apprenticeship training, etc.).

It was the era of the sputnik and space exploration that has made vocational education a reality in Wisconsin high schools. At the time of the first exploration much emphasis was put on science and mathematics. Today, however, we find the need for skilled help is critical and now you would find the emphasis placed on Vocational Education. The Vocational Education Act of 1963 (P.L. 88-210) made it possible to accentuate the high school programs in the field af trade and industrial education, business education, distributive education, home economics, wage-earning occupations, and agriculture related subjects. You will notice I referred to the last two subject areas differently than home economics or agriculture. Agriculture and home ec do receive federal support in the high schools under the Smith-Hughes and George Barden Acts. This is administered by the State Board of Vocational, Technical and Adult Education. The Home Economics Wage-Earning Occupations and Agriculture-Related subjects are supervised by the Department of Public Instruction.

Because of the 1963 Vocational Act, the DPI has an inter-agency agreement with the SBVTAE which provides for an administrative unit within the DPI to administer funds and to develop the vocational programs in the high schools. The high schools were alloted 35 percent of the funds under the 1963 Act to support needed activities.

At the present time the vocational department of the Department of Public Instruction consists of a program administrator, and supervisor in business education, distributive education, trade and industrial education, and home economics. The ag-related programs are supervised by the distributive education supervisor at present with the assistance of the State Board supervisors in Vo-Ag.

The role of the state supervisors can be explained in the words "SPACE AGE." With this in mind, let's take an imaginary flight into space and spell out the letters that represent some of these responsibilities.

On the first orbit we find the letter "S" representing Service. This service is offered to the schools in the form of conducting inservice workshops for schools that are in the vocational program and also those schools that are interested in developing new courses. The supervisors conduct workshops in curriculum development and also for the local vocational education coordinators (LVEC's-people that administer the programs in the schools). The supervisors are asked to make presentations at the local schools' inservice meeting. They are also called upon as a consultant in planning shops, facilities, and courses pertaining to their specific subject field.

On the second orbit we come in view of the letter "P". This represents the word Promotion. The state supervisors promote vocational education through youth groups. Many of these groups are established and are affiliated with a national organization. These groups are an integral part of vocational education and often the state supervisor is ex-officio officer of the State clubs. He also promotes vocational education by writing articles for national magazines, newspapers, newsletters, and appearing on radio and television. Another media is talking to PTA groups and at conferences such as this one at Stout State University.

Into the third orbit contact is made with the letter "A". This letter represents the word Articulation. It is a responsibility of the supervisors to articulate the high school progress with those of the post-high school so that the students will be better prepared to enter the post-high technical schools. This is done by developing joint conferences and encouraging teachers to visit the technical schools. The apprenticeable fields must be articulated also. In the case of trade and industrial education, it means a close working relationship with the industrial commission and the trade associations.

We must also articulate vocational education with the universities. Presently, there are a number of research projects being conducted that will help upgrade the entire field of vocatinnal education.

On orbit number four we sight the letter "C". This stands for Communications. It is necessary, as a supervisor, to communicate with the administrators in the local schools. He also corresponds with the teachers and LVEC's about program development. The supervisor becomes an information center for people attending summer school. He communicates with supervisors and attends conferences held in other states. It is an important duty of the supervisor to keep others in the Department of Public Instruction informed about vocational education. This is accomplished by attending and participating in monthly meetings. The supervisors also attend meetings conducted by the U.S.O.E. each year. National conventions are also a part of comuunications by the supervisors. Close contact is being maintained with the State Board of Vocational, Technical, and Adult Education. Many times we will be asked to attend meetings jointly and also to appear on programs sponsored by each department. The final approvals of the high school programs are reviewed and passed on at one of the formal meetings of the State Board. He must also communicate with his state advisory committee and keep them informed about the programs.

On the final orbit of this short space flight we find the letter "E". This represents the word Evaluation. It is the supervisor's responsibility to evaluate the pilot programs (schools designated by the DPI to participate in the first high school vocational education programs). This includes course content, safety, resource materials, and equipment. New schools that are interested in vocational education must also be evaluated to see if they meet the criteria for vocational education that was developed by the Department of Public Instruction. He also evaluates the proposals submitted for federal aid, checks the certification of the vocational teachers and makes the decision to issue the vocational license. And last, but not least, he must evaluate himself and the accomplishment of the programs he supervises. A detailed evaluation is sent to the U.S.O.E. every year.

I have talked about the role of the State Supervisor and tried to explain some of his responsibilities in the program through the word "SPACE". As we jetson back into the world of work, we intercept the word "AGE". This should represent three words that best sum up this topic, that is: Advancement to Greatness through the Escalation of Vocational Education.

We can see many possibilities for the Vocational programs but like the space craft that needs excellent guidance and team work to function properly, we also need this type of cooperation in order to be successful.

BACKGROUNDS IN PSYCHOLOGY FOR VOCATIONAL EDUCATION

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Many of you likely feel that I should recognize you and call you by name, and, perhaps I should.

There was the extrovert who was at a meeting of this kind when he saw a man he thought he recognized. He rushed up to this gentleman who happened to be quite introverted; and he gave him a tremendous blow on the back, grabbed his hand, began to pump it up and down, and said, "Old Jim Simpkins, my old buddy, you old horse thief. It has been a long time since I saw you. I certainly am astonished at the changes in you. You used to be tall and handsome and slender, and now you're fat. You have changed tremendously." The introvert slyly answered, "But----I'm not Jim Simpkins." The extrovert said, "So you've changed your name, too."

This is the way of life. We grow fatter or slimmer, we grow more or less hair and we change with the times. So it is with education. Both change and growth are inevitable. At one point in time, emphasis is on general education, at another on vocational education. Today it seems the vocational emphasis is everywhere. It is rather safe to say that philosophically, politically, and psychologically vocational education has been accepted. This is shown historically by the George Dean and George Bardin Acts, reinforced by the Vocational Education Act of 1963 and further reinforced by moved into the Job Corps and other training program. I need not mention our Wisconsin developments in broadening and financially supporting vocational education.

At Stout we are proud to be associated with this emphasis and this growth.

In my only visit to New Haven and the Yale Campus, I noted that the inscription at the entrance to Harkness Hall reads:

"For God, for Country and for Yale."

I am proud to be associated with Stout, for the inscription inside the entrance of our Harvey Hall reads:

"For the Promotion of Learning, Industry, Skill and Honor".

This we believe! We hope that the emphasis at Stout will always remain thus.

In discussing the topic assigned me, "Background in Psychology for Vocational Education," it appears to me that for our purposes we are trying to break down certain types of education needlessly.

The fundamental difficulty, I gather, is like the gentlemen who was going to swear off the consumption of all liquors. This was back in the days of the swinging doors. He felt he could best do this by an abrupt conditioning. Well, after work that evening he walked down the street, came to his usual watering place and decided to walk past on the opposite side of the street, just to prove to himself that he could do it. He said to himself, "Bill Doakes, I bet you can walk down the opposite side of the street and never look across at the swining doors." And he did--he walked down the street and never glanced across. He got past the swinging doors. Then he said to himself, "Now look, Bill Doakes, I bet a man of your will power can go past those doors and not look over." Again he was successful; he didn't turn his head. Then he said to himself, "I'm proud of you, Bill Doakes. I bet you can turn and sniff." And so he did, and tested himself, and succeeded. When he got past the doors the third time he congratulated himself heartily and said, "Bill Doakes, you have done wonders. I'm proud of you. Come in now and I'll buy you a drink."

So it is with general education and vocational education. We try to swear off one or the other, but we always come back to both.

To the psychologist education is education, learning is learning, experience is experience, and there are no several "breeds" of education all backed by different psychological principles or theoretical approaches. In this sense, all education is vocational and vocational education is general.

With this in mind we can approach our subject with the same objectives as though we were treating education in general. Thus we are exploring the psychological background of general educatinn. For this treatment let us look at what psychology attempts to do.

I like to refer to Floyd Ruch[1] who, in his sixth edition of Psychology and Life, states, "Psychology attempts to describe human behavior, to predict human behavior, and to control human behavior." The description of human behavior always involves the question, what makes man behave as he does, and the answer invariably becomes, human motivation.

> When we think of the complexity of human motivation, we see it in action in the Scottish Minister who came one cold morning to the church, and the sexton was helping him arrange things and the sexton noticed that the minister had a frog in his throat. The sexton reached for a little flask of "highland dew," and he said, "Here, take a drink to clear your pipes so you can preach a better sermon," and the minister, to the sexton's surprise, refused the offer. He said, "No! No! Take the stuff away. I will have none of the devil's brew." The sexton was surprised. He said, "Why won't you take a drink? You know you'll preach a better sermon if you have it, and it is all to the greater glory of God." The minister

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[1] Ruch, Floyd L., Psychology and Life - 6th Ed., Scott Foresman and Company, 1963, Ch. I.

said, "No, I will not." The sexton said: "Then give me a reason why." The preacher said, "I'll give you three reasons why I can't. The first reason is I am a teetotaler. The second reason is that I am about to preach a temperance sermon, and the third reason is that I have already had a wee drop too much."

In spite of the complexity of motivation, however, some progress has recently been made by researchers in a Model for the Analysis of Motivation.

Before you is a diagram which roughly represents a new idea in understanding motivation. The information has been drawn from presently ongoing research by R. D. Boyd[1] of the University of Wisconsin with additional information taken from the writings of Maslow and Erickson.[2]

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[1] Boyd, R. D., Model for the Analysis of Motivation, Adult Education, Autumn, 1965.

[2] Erickson, E., Childhood and Society, 2nd Ed., Nortons, N. Y. 1964, Ch. VII.

MOTIVATION

	SOURCE	AROUSAL	EXPRESSION	REWARD (PUNISHMENT
PHYSIOLOGICAL	Physical needs: Hunger Health Sex Activity	Growth Maturation Pubertal changes Activity	Disturbed equilibrium Responsiveness Acquisition Interest	Restored equilibrium Anxiety Reduction Satisfaction Higher Goals
PSYCHOLOGICAL	Need for: Love Recognition Understanding Security	Search for: Image realization Contentment Identification Value Development	Experimentation in: Independence Attitude development Social development Ideal development	Self-acceptance Self-appreciation Self-assurance Self-determination
SOCIAL-CULTURAL	Culture Sub culture Institutions Family Peer groups	Desire for: Belonging Acceptance Friendships Group membership	Striving for: Leadership Followership Social Contentment Social responsibility	Membership in groups Participation in groups Acceptance in groups Approval of groups

This fabric or model can be compared to an architectural blueprint. It is only a two-dimensional sketch of a multi-dimensional structure. This drawing does not show the innumerable components of the human and interpersonal relationships just as the blueprint does not show the infinite number of structural components. We can use it then as a guide, but must apply our experience and judgement in developing motivation.

As we examine this information, bear in mind a number of considerations. First, this is not a complete representation of motivation. It is rather a general framework that we draw upon for ideas in implementing interest, enthusiam, and motivation in classrooms, technical laboratories, and shops.

Second, there is a constant interplay of all areas integrally woven into reward and punishment. This is shown, for example, by the idea of "value development" found under arousal. Both psychological values (those of the individual) and social cultural values (demands of his peers, parents, teachers, and society as a whole) contribute to arousal and expression before rewards are obtained.

Third, a person cannot be dissected and fit accordingly into any part of the diagram. The diagram is only useful to the extent that it aids understanding of motivation of a total individual in a total environment.

> It is like the Quaker's advice to his son on his wedding day. "When thou went courting, I told thee to keep thine eyes open. Now that thou art married, I tell thee to keep them half shut."

Now let's turn to the diagram for a pragmatic application, remembering that thee must keep thine eyes open to the whole fabric as the Quaker's son was advised to do while courting. Three sciences seeking to understand man are represented in the horizontal rows. The four vertical columns, reading from

from left to right represent the process of motivation. Each should not be thought of as distinct "slots" or categories, but as areas of emphasis recalling that this is a fabric of motivation not a series of crossing threads.

The four vertical columns: source, arousal, expression and reward-punishment roughly represent the process of motivation. The source is ususally within the individual as he finds himself within a greater sociol-cultural sphere. The arousal stems usually from relationships with others or pressures from his social environment or his physical growth. Expression usually shows itself, for our purposes, in academic improvement and the reward (hopefully reward) expresses itself often in social adjustment and in vocational competence.

The source of all human motivation is basic needs, and according to Maslow, these can be arranged in a hierarchy: Physiological needs, Safety, Love and Belongingness, Esteem, Self-actualization, Knowledge and Aesthetic Values.

This hierarchy is not far removed from an ordered list of man's wants as presented by Dr. Small, a noted sociologist of my undergraduate years. He said, "Man's wants fall into this order: health, wealth, sociability, knowledge, beauty, and rightness." Regardless of the order, Maslow's list of human needs has been fairly well accepted by scholars in the field.

As the first example, let's investigate an understanding of motivation on the physiological plane. Hunger is probably the best example as a source of arousal. It is stimulated by the desire for growth in a broad sense. As the body uses fuel, it seeks a replacement for what has been used. Expression in the form of behavior comes as acquisition, and reward is the satisfaction gained in eating. This reward will not necessarily be in the form of eating, but will probably be expressed by a student as "A man wants to make a good living." "A man likes a good salary". Implied in this is his recognition of a primary need.

Let's consider again the needs of all humans as outlined by Maslow: "Physical, safety, belongingness and love, esteem, self-actualization, knowledge and understanding, aesthetic values." We can reduce this list to three basic needs of man:

1. We must have physical needs satisfied,
2. We must be wanted for who we are.
3. We must be wanted for what we can do.

Maslow presented this in the form of a hierarchy and goes on to state that, "A person does not function to his capacity at the later needs until his primary needs have been satisfied." This is easily understood by looking at the extremes in the hierarchy. Man seldom concerns himself with aesthetic values when he is starving.

From an observation of the hierarchy of needs it becomes apparent that a number of these needs can be satisfied through education, and some are particularly well-satisfied by vocational education. These may be listed as safety, belongingness, esteem, self-actualization, knowledge and understanding. In the simpler outline these can be re-stated: We must be wanted for who we are. We must be wanted for what we can do.

In further considering these needs we will not confine ourselves to one category such as psychological needs, but will make a sort of grid out of the psychological and social-cultural areas.

Man must be wanted as a person and be secure in a technological era. Let us look at security within man's social-cultural environment in terms of what it means to be wanted in a constantly changing world of work. The implication is quite obvious, but brings to mind a concept known at "future shock" much mentioned in social-psychological literature today. How can the working man feel secure in an environment or in an occupation that may not exist tomorrow?

What does it mean, if a man's years of training and experience become worthless overnight? Are our ideas of training for "The Job" sound? What is a safe job? I quote from Alvin Toffler in Horizon:

> "We are now living through the second great divide in human history, comparable in magnitude only with that first break in historic continuity--the shift from barbarism to civilization...
>
> The mood, the pace, the very 'feel' of existence, as well as one's underlying notions of time, beauty, space and social relations will be shaken.....
>
> Given these changes, it becomes quite impossible to sustain the argument that what is happening now is anything like 'normal' ' progress, even for the kind of industrial society we have known for the past century. It is not merely a 'second industrial revolution.' Viewed as a violent break with historic continuity, our age takes on a significance that few ages in the past have had."

All education then, faces the problem of training for a future that is at most only partially known.

Psychologically, this presents a tremendous problem when "arousal" comes from the prospect of future contentment. Hopefully, we can teach and train so transfer of learning is possible in this rapidly changing technological era.

The psychology involved has been well researched. If we hope to have transfer we must know what transfers and then teach for transfer. From research we know that similar elements, comcepts and generalizations, methods of work and attitudes and ideals will transfer. It gives us, who are working in psychology, some satisfaction to know that presently researchers and others interested in

industrial and in vocational education on our campus, as well as country-wide, are beginning to make use of some or all of the above known principles. As an illustration I refer, with some pride, to the American Industry Project on our campus, which is greatly concerned with concept development in the teaching of industry.

Success obtained in a vocationally oriented study-learning program in which the first experiences are rewarding, can yield for the individual in addition to knowledge and skill, feelings of appreciation and self-actualization. Thus the "fabric model" begins to become meaningful.

Recognition, appreciation, belongingness, and self-actualization have a commonness in that arousal is gained by the individual in looking inward and asking himself, What do I expect to become?" He begins to form an image for his future. We need to aid him in clarifying his self-concept.

The self-concept and future image do not develop in a vacuum; rather they develop in the total social-cultural psychological environment in which the individual finds himself. Thus, feelings of reward and punishment will often stem from the attitudes and the behavior of the faculty, the total culture or sub-culture in which the learner lives.

"Arousal" may come from many sources; family encouragement and enthusiasm, teacher encouragement and enthusiasm, peer groups or the sub-culture. Lack of "arousal" may also find its roots here.

"Reward" similarly may come from the named sources or may be withheld by them. Then, too, what is reward for one may be punishment for another.

When we look at this grid or "fabric", it likely strikes us as a vastly over-simplified presentation of what makes humans behave as they do. It does, however, have significance. It does not discount the theoretical concept now commonly accepted by psychologists, that every person must be wanted:

a. for who he is

b. for what he can do

It does follow the now generally accepted theory that human needs, in great part at least, determine behavior.

It does, in the midst of a great movement toward associative learning, programmed instruction, and machine learning, reassert the necessary connection between the theoretical concept of the psychology of learning and the development of an educational technology.

It does take into account that it is the whole individual, as he sees himself, who grows, behaves, learns and changes.

This subject is endless. To aid you in your work as vocational teachers, I have appended some implications of psychology to vocational education[1] under the heading that psychology attempts to do. You may want to glance at these for more structures help than I can give you in a short talk. Space and time make it essential that I shop.

A science teacher measures 5 quarts of water in a demonstration before his class, then he tried to pour it into a 3 quart container.

Of course, water spilled all over, and he explained to the class, "This proves that more cannot be put into a space than space can hold."

Just then a buxom young miss came in the door, in slacks, and completely disproved his statement.

[1] Appendix I

Appendix I

Implications of Psychology for Vocational Education

I. All education is vocational. Today with rapid change all around us, vocational education becomes general.

II. It is the whole individual as he sees himself, who grows, behaves and learns in a total environment.

III. Psychology attempts to describe, predict, and control human behavior.

Describing, predicting, and controlling human behavior also implies that the vocational teacher:

1. Establish some kind of common purpose at the beginning of each activity.
   a. Recognize the spontaneous interests of students; where possible build group interests around them.
   b. Relate each learning to previous interests.

2. Develop long-term interests in students.
   a. Know and use each person's existing interests.
   b. Develop new interests by introducing new experiences and making them satisfying.
   c. Build interests through using physical activity, appealing to the desire for investigation and adventure, social situations and realism.

3. Help students set their own standards for accomplishment.
   a. Avoid imposing goals that are foreign to the student.
   b. Avoid adding to a strong self-imposed motivation.

4. Help students set realistic goals for themselves.
   a. Help the learner to know his abilities so that he may choose goals wisely.
   b. Individualize goals wherever possible.
   c. Dignify all goals so that each person can retain self-respect.

5. Adapt to the student's natural tempo of work wherever possible.
   a. Do not urge students to hurry or slow down.
   b. Interrupt the learner's rhythem for emphasis only.

6. Make time-scheduling a part of the planning of each activity.
   a. Stress quality of work as well as speed.
   b. Stress work-units rather than time-units.

7. Evaluate each learning experience in a suitable way.
   a. Make sure the information given is specific.
   b. Emphasize correct ways of doing things rather than mistakes,
   c. Give information on accomplishment immediately after learning.

8. Use positive feeling tone in activities you wish the student to remember and repeat.
   a. Keep the balance of feeling tone positive for each learner.
   b. Arrange situations in which the person can succeed.
   c. Vary the feeling tone from time to time.

9. Use competition chiefly as self-competition against the student's own record.
   a. Avoid competition between the individuals.
   b. Make the competition easy enough that the learner can succeed.
   c. Use competition chiefly where speed or overlearning is important.

10. Use cooperative group work.
   a. Use group work chiefly with older students.
   b. Use cooperation for problem-solving and where quality of work is important.
   c. Form groups that are small and homogeneous, follow social attractions, and give students some opportunity to choose.

11. Vary the order and context in which materials is presented.
   a. Ask for recall in a different order or context.
   b. Use many different sources presenting the same facts.
   c. Use intensive study only for memorization or exact reproduction.

12. Use material at the student's normal learning level.
   a. Determine each person's individual learning potential.
   b. Avoid giving him tasks that are too long or too complex.

13. Choose material that is meaningful for the learner.
   a. Present new learnings in a familiar context.
   b. Build meanings through experience and discussion.
   c. Encourage the students to look for logical relationships and principles in all types of material.
   d. Spend relatively large amounts of time developing concepts, relatively little on drill unless drill is desired.

14. Choose learning units that are simply and clearly structures, and follow that structure in presentation.
   a. Start by presenting the whole situation.
   b. Isolate any segments that may be difficult or that must be mastered.

15. Try to make each impression vivid.
   a. Use contrast.
   b. Use movement.
   c. Vary the procedure to retain novelty.

16. Present material through as many sensory modalities as you can.
   a. Encourage the learner to speak as he learns whenever it is appropriate.
   b. Encourage manipulation of materials for kinesthetic and motor impression.
   c. Use pictures, graphs and maps to help the person visualize what he is learning.

17. Provide for reaction on the part of the student in every learning situation.
    a. Stress discussion, attempted recall, note taking, and questioning.
    b. Avoid lecturing, passive reading and too much demonstration.

18. Provide just enough help to keep the learner moving ahead.
    a. Give help as soon as it is needed.
    b. Give most of the help early in the learning.
    c. Give help in a form that requires action on the part of the student.
    d. Give help in positive rather than negative form.

19. Encourage the student to solve problems for himself.
    a. Encourage him to explore the problem freely at first.
    b. Give him clues for solution through questions or experience, not through statements or demonstrations.
    c. Stress skills, attitudes and processes that will transfer to other problem-solving situations.

20. Expect some forgetting after every learning.
    a. Expect rapid forgetting immediately after learning.
    b. Expect rapid forgetting of new or formal learning.

21. Adapt procedures for preventing forgetting to the kind of use you expect the person to have for the material.
    a. Teach skills to the level of permanent recall.
    b. Teach most content to the level of recognition.
    c. Develop positive attitudes and appreciations along with recognition, skill and recall.

22. Provide overlearning to get permanent retention at the level of recall or skill.
    a. Check the accuracy of practice to prevent modification.
    b. Stop overlearning at any sign of satiation or negativism.

23. Distribute the learning periods to get permanent retention at the skill level or recall level.
    a. Make the initial period long enough to review the whole process or material.
    b. Decrease the length of practice periods systematically.
    c. Adapt the length of rest periods to the length of work periods.

24. Emphasize generalization when possible.
    a. Bring learnings together in time, place, mode of presentation, context, meaning and set.
    b. Make the classroom as much like the transfer situation as possible.
    c. Emphasize similarities, relationships and comparisons.
    d. Stress generalizations and broad concepts.
    e. Teach for conscious transfer through analysis of methods, principles and applications.

VOCATIONAL, INDUSTRIAL EDUCATION IN THE HIGH SCHOOL AS IT RELATES TO APPRENTICESHIP TRAINING

BY: Charles T. Nye, Director
Apprenticeship Training
State Industrial Commission
Madison, Wisconsin

Today, in Wisconsin, we have the tightest labor market in our history. Barring unforeseen circumstances, it would appear this situation will continue indefinitely. Through the Administration's Great Society Program, primarily, the Manpower Development and Training Act, and through the efforts of industry almost every available skilled or trainable person, is now in training or working on a job requiring some degree of skill. This puts the graduating classes of our Public and Parochial High Schools in a most enviable bargaining position; -- provided they have been prepared in school to qualify for training in a skilled occupation. As to numbers, without belaboring a point, well in excess of 40,000 High School graduates will be on the labor market each spring. Industry will be waiting for them expectantly, and the type of job or training program they get, will depend much on the kind of vocational guidance and preparation they get in school. This is a tremendous challenge to vocational education in our High Schools, and a challenge that must be met expediently but cautiously.

Most of you are award there has been a tremendous up-surge in our Apprenticeship Program. In less than two years, the number of sctive apprentices has grown from less than 4,000 to almost 7,000. There are several specific reasons for the increase in the number of apprentices, but the basic reason is recognition by employers throughout the State of the worth of our formal Apprenticeship Program and the understanding that the only way that they can get skilled people is to train them themselves. I believe it

can be assumed that any qualified High School graduate, who has decided to go into an Apprenticeship Program will be afforded the opportunity to do so. We are not suggesting that there will be an opportunity for all 40,000 plus graduates in Apprenticeship. First off, some 20,000 of these graduates will be women. Although there are opportunities in Apprenticeship for women, it is still basically a program for young men. The Apprenticeship Program never has been, nor will it be, a program for the borderline student or the drop-out. But as stated above, we believe that any qualified High School graduate who decides to enter an Apprenticeship program can do so.

The schools are finding and are going to find, that industry will be wooing them for their potential apprentices. Individual plants and statewide industry groups will be presenting the opportunities available to a graduate apprentice in their establishments. A basic example of this is the automotive and power-equipment industry which, until recently, has not engaged in formal apprenticeship training to any degree. On a statewide basis auto dealers and garages, trucking establishments and the farm equipment industry now all have well-established apprenticeship programs. These offer excellent opportunities for boys from rural Wisconsin to get into the automotive and power-equipment fields without necessarily leaving their community. At the recent statewide Apprenticeship, Labor Management Education Conference in Milwaukee, the automotive and power-equipment group resolved that as an industry they would present to all High Schools and Vocational Schools the attractive opportunities in their industry.

Mose of the foregoing has presented an attractive picture of the opportunities available to Wisconsin youth for a full time career through Apprenticeship Training. In the foregoing, however, we also urge caution on the part of Vocational and Technical Educational representatives in the

High Schools. Although organized Labor and Management in industry will expect that the graduate who is going into Apprenticeship Training be well prepared; -- they don't, however, expect the apprentice candidate to be skilled in the particular occupation. Industry reserves the prerogative of supplying the skilled training in all apprenticeable occupations. In implementing the Vocational Education Act of 1963, there was a natural assumption made by the schools that the trades could be taught in the school. Part of this assumption may have been attributed to the philosophical change taking place in some of our schools of Vocational, Technical and Adult Education where they are restructuring their program as Technical Schools or Community Colleges. Each parochial and public high school and each vocational school in Wisconsin have been supplied with the Industrial Commission publication "Counselor's Guide to Apprenticeable Occupations." This publication contains a list of apprenticeable occupations by industry in the building trades, the industrial trades, the graphic arts, and service industries. In these apprenticeable occupations, vocational technical and guidance personnel in the schools, should get in touch with the Apprenticeship Division of the Industrial Commission or the industry before developing vocational programs and, in particular, so-called Work-Study Programs. In the early stages of program development under the Vocational Education Act, an attempt to develop vocational work-study programs in the building trades met immediate resistance from the building trades industry. In this respect then, High Schools should develop the same type of curricula to prepare the student for entrance into apprenticeship as they do for entrance into our schools of higher learning. Here, too, the schools should go to industry to find out what courses industry feels will best prepare the student for entrance into apprenticeship in the industry. In addition, it would be well for vocational instructors, coordinators, and counselors to establish a working relationship with vocational schools and local employment service offices.

Vocational education in the high schools has come a long way since the Act was passed. The Vocational Education Department of the State Department of Public Instruction is engaged in a comprehensive survey of apprentices now indentured who were high school graduates in an attempt to determine from their experience the type of graduate that would have been best suited to prepare them for apprenticeship training while they were in high school. The Vocational Department has also worked out a good relationship with this office and industry on how to prepare students for entrance into Apprenticeship Training.

It would be my recommendation; (1) that insofar as practicable, in preparing students for entrance into apprenticeable occupations, that the emphasis be placed on presentation of courses recommended by industry as best preparation for the particular trade; (2) that industrial arts courses involving use of tools, machinery, and equipment be utilized primarily to familiarize prospective apprentices with the use of such tools, machinery, and equipment and not designed to attempt to develop any high degree of skill in the trade.

Perhaps the most important point brought out in this rather lengthy dissertation is the fact that no longer does the high school graduate need to beg, borrow, or steal his opportunity to become an apprentice. The demand for the highly skilled mechanic or technician in industry today, and in the future, is as great or greater than the demand for graduates of our schools of higher learning.

A PROGRESS REPORT ON A PILOT PROGRAM BY A TEACHER

BY: Mr. Edward Kriz, Vocational Coordinator
Tremper High School
Kenosha, Wisconsin

A brief introductinn relating to the Wisconsin Pilot School Program with taped messages from the following Pilot cities:

Wausau ---------- Dale Bartel

Superior ---------- Ernie Nelson

Milwaukee --------- Walter Cave

Union Grove ------- All Pitts

Kenosha ---------- Miss Lois Campbell

COMPETENCIES THE SECONDARY VOCATIONAL EDUCATION STUDENT SHOULD POSSESS TO ENTER THE TECHNICAL SCHOOL

BY: Earl F. Jaeger, Chairman
Racine Technical Institute
Racine, Wisconsin

Before embarking on the main theme of my thesis, it might be well to briefly review the Vocational Education Act of 1963 and more specifically the "Statement" that was developed by a State Steering Committee appointed in 1965. I also want to digress for a bit and give an overview of technical education, in that it will enable me to build a case for the competencies that will be mentioned later on.

The "Statement" which was developed by the State Steering Committee says, that vocational education programs must be realistic in preparing potentially employable students for available entry occupations.

The "Statement" also states that for those occupations which require and demand training beyond the high school level in a sub-professional (technical) area our high school courses should be specific in helping students prepare to enter post-secondary programs which will lead to advanced vocational or technical placement.

In other words, as I see it, the high school vocational education program has two objectives:

1. To train students for entry occupations upon graduation from high school.
2. To provide high school students with the specific academic training that is required for entrance and potential success in post-secondary technical education.

Just recently I received for review and comment a preliminary draft of materials on technical education that were developed by an Ad Hoc Committee on Technical Education during the past summer.

This Ad Hoc Committee identifies Technical Education as being concerned with that body of knowledge organized in a planned sequence of classroom and laboratory experiences, usually at the post secondary level, preparing students for a cluster of job opportunities in a field of technology. It requires a knowledge of mathematics, the sciences associated with the technology; an understanding of the methods, skills, materials, and processes commonly used in the technology; and extensive knowledge of a field of specialization; and sufficient depth in the basic communication skills and related general education topics.

Technical education prepares for the occupational area between the skilled employee and the professional employee such as the doctor, the engineer, the scientist; and is on the continuum nearest to the professional employee.

The technical curriculum must be so structured so that it prepares the graduate to enter a job and be productive with a minimum of additional training after employment to provide him with a background which will enable him to advance with the development in the technology, and to enable him with a reasonable amount of experience and additional education to advance into positions of increased responsibility.

The technician is usually employed in direct support of the professional employee. For example, the engineering technician will be capable of performing such duties as designing, developing, testing, modifying of products and processes, production planning, writing reports, preparing estimates; analyzing and diagnosing technical problems that involve independent decisions, and

solving a wide range of technical problems by applying his background in the technical specialities -- mathematics, science, and communicative skills.

One of the most distinguishing characteristics of technical education is its base of mathematics and science. It is this base that enables a student of technology to expand his knowledge, to transfer ideas from one technical application to another, and to continue study in his chosen field after graduation.

Technical study at any level requires a foundation of mathematics and science. Mathematics is a basic tools of learning from the most elementary stages of a high school physics course to a post-doctoral study in some esoteric scientific field. The physical sciences are no less important. Without a knowledge of scientific principles, it is impossible to study with any depth in a specialized field of technology. Our total scientific knowledge is said to be doubling every ten years and technology has become the framework of our economic and social structure.

Modern technology, based as it is on change, has little in common with traditional ways of doing things. It would be unrealistic to expect that traditional ways of teaching mathematics and science would be adequate for the great variety of educational programs that related in one way or another to technology. Instruction in mathematics and science is undergoing changes at all levels of education.

The problem of providing effective and efficient mathematics and science instruction is especially acute in the two-year post-high school technology curriculum. This post-high school program is a unique educational package. It borrows heavily from higher education for its content and from vocational education for its objectives. But its curriculum and its instructional processes are strictly its own. Neither the university nor the vocational school provide

a pattern for the course work in a technical curriculum.

The traditional courses of a multi-purpose university, college, or junior college do not provide the kind of mathematics and science instruction required in a technical curriculum. Colleges usually operate on the "goods-by-the-yard" system. Standardized mathematics and science courses are pulled from the shelf supermarket style. While this kind of curriculum design may be satisfactory for the four-year college curriculum, it is highly unsatisfactory for technical education. For one thing, the structure of a college curriculum is entirely different from that of a technical curriculum. In engineering, for example, mathematics and science courses make up the half of the study program. The student is given an extensive program of mathematics, physics and chemistry before he enters upon any study of a specialized nature. A two-year technology curriculum cannot afford the luxury of this kind of a plan. It is necessary, for a number of well-established reasons, to introduce the technical study in the first term of a technical program. Concurrent courses in mathematics and science must be coordinated with the technical study. For this reason, if for no other, mathematics and science courses designed for an engineering curriculum are inefficient in a technical curriculum.

Neither do the traditional methods of trade training provide the answer. Trade training normally requires a person-to-person relationship, with a single instructor responsible for most, if not all, of the training program. Skills and knowledge are integrated by the trade instructor who relates mathematics and science directly to the needs of the trade. Technical training requires an entirely different approach.

First of all, the instruction is a team job. The subject matter, in any technology, is far too broad to be taught by any one person. Mathematics, physical sciences and technical courses are frequently taught by separate in-

structors, each of whom is a specialist in his field. Secondly, the mathematics and sciences of the technical curriculum are not job skills, per se; they are learning skills. The content of mathematics and science courses is determined by thespecific needs of technical courses. The mathematics needed, for example, in a materials testing course may be well beyond the mathematics used by the graduate technician in his job functions. These three factors; the separation of mathematics and science into discrete courses, the coordination of course work required in the tight vertical structure of the two-year curriculum, and the emphasis on principles rather than job skills, put special requirements on the math and science programs in technical curriculums.

As a means of presenting the significant points of conclusion, I will describe the mathematics and science program in a typical school offering engineering technology programs. This school offers several two-year post-high school technology curriculums. A flexibility of schedules is provided. Entering students are average in ability based on national nroms for junior college freshmen. Entrance requirements include two-years of high school mathematics.

The mathematics and science program in this school has the following characteristics:

The mathematics program consists of algebra, trigonometry, and selected topics of analytic geometry and calculus. Two courses are required, a first semester course in slide rule, algebra and trigonometry and a second semester course which includes algebra, analytical trigonometry, and selected topics in analytic geometry and calculus. Algebra and trigonometry are functional in nature. Instruction is aimed at developing practical problem-solving skills. Emphasis is on the <u>use</u> of formula - not the mechanics of formula derivation. Analytic Geometry and Calculus are introduced by special application. The purpose is to introduce the fundamental concepts of higher mathematics.

Coordination of mathematics instruction with technical courses is accomplished in two ways:

1. Mathematics courses give special emphasis to the topics being used in technical courses. Technical courses provide the applications of mathematics being taught in mathematics courses.
2. Instructors in technical courses review or reteach the mathematics needed in these courses.

The physical science part of the technical program consists of selected topics in physics and a chemistry course. Physics - mechanics, and Physics - heat, light and sound are required in all technical curriculums. Physics courses have a base of mathematics which include algebra and trigonometry. Higher mathematics is not used.

The foregoing description is oversimplified. Many philosophical and practical problems arise in the developing of a program in such broad and comprehensive fields of mathematics and science. There are areas of disagreement, for example, between advocates of pure mathematics and proponents of applied mathematics. In some schools, mathematics is taught as it is needed. In other schools, a "common core" of mathematics for all technology curriculums is provided. And this is also true in the physical sciences.

The experiences of technical educators have shown that some of the traditional methods of teaching mathematics and science are not satisfactory for technical education. Technical education has a form and a character of its own. Its genesis may lead some to call it a hybrid form of education--a strange mixture of college and vocational education. If this kind of mixture is necessary, so be it. It will be infinitely better than a failure to provide good educational services by refusing to change from our traditional ways of doing things.

Forgive me for digressing as I have, but I feel that this was necessary in order to pour the foundation for the competencies that I believe are necessary for any individual entering an engineering technology program.

It is quite obvious from the foregoing remarks that mathematics is the most important criteria for success in any engineering technology curriculum. I cannot stress this enough. Without proficiency in mathematics, either at the technical or pre-technical level, the technician or prospective technician does not have a chance of succeeding.

It has taken me quite a long time to come to the main point of this dissertation which is the competencies that are required of high school vocational education students for entrance to a Technical Institute.

The high school student who wishes to enter an engineering technology curriculum must satisfy these general admission requirements:

1. Graduation from high school or its equivalent.
2. Evidence of sufficient motivation and interest for satisfactory achievement in the curriculum.

In addition, most engineering technology programs require these minimum high school units:

1. Three years of English.
2. At least two years of mathematics, one in algebra and one in plane geometry, or the equivalent in integrated modern mathematics. Additional mathematics in intermediate algebra and trigonometry is desirable.
3. One year of physical science.

These requirements mean that anyone interested in a career as an engineering technician must start planning early. He should take all the academic mathematics and science he can in high school. High school English is also important. The engineering technician must develop skill in writing technical reports and the ability to express himself effectively to those with whom he works. These abilities require a sound background in English.

If the secondary vocational education student comes to the Technical Institute with these competencies, especially with good mathematics preparation, there is little doubt about his succeeding in his chosen technical curriculum. He will be prepared to pursue successfully the rigorous technology curriculum and upon graduation in two years assume the responsibilities of the engineering technician.

PROGRESS REPORT: VEA PILOT PROGRAM

BY: E. F. Schwan, Superintendent
Monona Grove High School
Monona Grove, Wisconsin

I. A brief description of school district characteristics

- A. Size of High School
- B. Vocational and Post-High School Orientation of district
- C. Vocational Emphasis of the Madison Area
  - Office Workers
  - Distributive Occupations
  - Technical and Semi-technical
  - Construction
- D. Program of Studies, Required Sequence,
  - Enrollment in the areas of
  - Industrial Arts and Business Education
- E. Philosophy of the school staff and board of education

II. Administrative Reasons for Involvement in the program

- A. Curricular obsolescence in Industrial Arts
- B. Growing awareness of the need for technical education
- C. Growing percentage of college-bound
- D. Competition for scholarship and rank in class
- E. Follow-up studies of graduates showing need for attention to alternatives to liberal arts college offerings

III. Our Experience in the Program

- A. Assessment of Strengths
  1. Leadership
  2. Up-dated programs in Business Education
  3. Strong Guidance department support
  4. Beginning courses in Distributive Education
  5. An awakening of Industrial Arts Staff members to a need for program change
- B. Our First Year Emphasis as a Pilot School
  1. Additional time for planning and coordination
  2. Additional time for vocational counseling
  3. Refinement of programs in Bookkeeping, Clerical Office Practice and Secretarial Science
  4. Employment of a Distributive Education Specialist
  5. Organization of 1st courses in Distributive Education and Electricity
  6. Equipment of laboratories in Shorthand and Electricity
  7. In-service orientation

C. Expansion of Program in Second Year
   1. Summer Workshops for curriculum writing
   2. Capstone Course for Distributive Education
   3. Second year course in Electronics
   4. Welding and Machine Shop units in Metals
   5. Beginnings of a Distributive Education laboratory
   6. Organization of lay Advisory Committees in 4 Industrial Arts Areas and in Distributive Education
   7. Articulation of Business Education and Electronics with Madison Vocational School and professional trade school programs
   8. Effective placement of metals students with work experience program

D. Plans for Expansion - Our Goals for the near future
   1. Capstone Courses in 12th grade in all qualified programs.
   2. Articulation with Vocational School Technical programs for advanced placement, where appropriate.
   3. Expansion to Graphic Arts, and more varied metals units.
   4. Involvement of Home Economics Department.
   5. Modivication of woods and drafting programs.

IV. "Incidental" Results: General Education Gains

A. Beginning in Inter-Departmental planning.
B. Re-designing of 9th grade exploratory program in Industrial Arts
C. In-Service Stimulation and Training
D. A Junior High Exploratory program in the practical arts
E. General use of aptitude testing and awareness of the need for refined instruments of testing, grade 9.
F. Effective follow-up of Students, 2 years and 4 years after graduation.

V. Evaluation of the Total Experience

A. Strength of the program
   1. Its emphasis upon pilot programs
   2. Its emphasis upon up-dating equipment
   3. In-Service development of coordinators
   4. The time taken for initial planning
   5. Workshops for curriculum development
   6. Workshops for staff orientation
   7. Involvement of guidance staffs
   8. Use of lay committees
   9. Articulation with Vocational and Technical Schools

B. Some areas for Continued Concern or Emphasis

1. A matter of legislative philosophic intent: 100% Career objective for students in high schools vocational programs.
2. Need for creating a modified image of vocational or career education.
3. Need for greater State Department identification with "foundation" programs.
4. Continued supervision and evaluation of pilot programs by State Department
5. Continued assistance of the State Department in articulation efforts with management and labor.
6. Continued in-service training programs for both special and general staff orientation.

THE TECHNICAL INSTITUTE ADMINISTRATOR'S REACTIONS TO SECONDARY SCHOOL VOCATIONAL EDUCATION

BY: Alun C. Thomas, Assistant Supervisor
Technical Education
Madison Vocational, Technical and Adult Schools
Madison, Wisconsin

It is a real pleasure to be invited to share with you today my experience in the field of Vocational-Technical education. A person fifty miles from home, I understand, is considered an expert. Fine, then I'm an expert if you use the definition of an expert as X the unknown quantity and spurt as a drip under pressure. In truth, we in education, have a situation of an unknown quantity and sure we are under pressure from almost every conceivable angle to provide the leadership in solving these problems.

Let us look at the manpower needs as they exist today, and see if we cannot project some of the needs for 1970, or perhaps guesstime for 1975. We are told that we have about 85 cars on the road for every mechanic. By 1970, if we produce 20,000 mechanics per year, we will have about the same ratio of 85 cars per mechanics. The problem is that we cannot produce 20,000 mechanics per year.

Let us look at another area, such as the health occupations or paramedical. We are told that to meet the increased needs in these areas, it will be necessary to employ 11,000 per month for the next eight years. We have had problems preparing or finding enough interested persons to become nurses since I can remember.

Another area presents a different kind of problem, such as the metals removal area. At present in the U.S.A., we have about 600,000 people employed in the product phases of the metals area. Machinist, assemblers, polishers,

welders, etc., make up this group. We have about 260,000 experimental machinists who work in specialty fields and research centers. We have about 120,000 tool and die makers. We are reducing the number of production workers at about the same rate that we need tool and die makers. This is due to many reasons -- one of which is automation. The problem is, how can we prepare the 45,000 tool and die makers we need right now?

If we look at the employment situation at present, we find we have mass unemployment and welfare cases, while at the same time, we have drastic employment needs and unlimited overtime. While our Government spends millions on the poverty programs, everyone of which has an educational clause in it, where have we been; or for that matter, where are we now? Last summer, the Chrysler Corporation set up for employment of about 30,000 workers for the assembly plant. At the end of the employment period, 500 had been hired. The Admiral Corporation is putting in a plant at Sun Prairie now and has flooded the news media with appeals for help. I could mention many others situation such at this, but I'm sure you are all aware of them.

The employment potential is high and many agencies stand ready to help us in ascertaining the needs. The needs of the business and industrial community are quite easy to determine, but the human and individual needs are yet to be coped with.

To cope with these problems, we usually call upon our team to aid in solutions. Just as sure as the attributes of a football team make them an eleven-man winning combination, so will similar attributes make our team a winning combination.

Our team is made up of students, teachers, administrators, parents, colleges, industries, government, and/or whoever we want to ask to participate.

Let us take an industrial team and see how we fit into the overall picture. The industrial manpower team called engineering might look like this:

Manpower Team		
100 Engineers	200 - 500 Technicians	1000 Craftsmen

Each member of this team came through the secondary school system. Here they got their fundamentals and selected the next step to take. Some went to the Services (military), some went into employment, some went on to some form of higher education, and others waited to see what would happen. Many met with success, others with failure, while the majority were, to some degree, of a combination.

To me, the real significant role of secondary education is to aid each student to prepare himself for life's journey. By this I do not mean to replace the home and church, but to supplement these institutions. Yes, I mean to get his three R's to the best of his ability, but more to recognize his abilities honestly so he can select his career. I'm told we have guidance counselors to aid the student. This is fine, and may God bless them for their efforts and assistance. I have yet to meet one who can counsel a student in a dozen areas of work. For the most part, they drop a Dictionary of Occupation Titles or some flyers before the student and inform him that they should help him decide.

He goes to classes, most of them selected and prescribed to take care of the things that he needs. If he attends regularly and behaves himself, he will likely graduate. He may graduate in one of the tracts which was determined by his achievement. The major emphasis is upon the college tract because our society puts status upon this route. This is a good route for those who benefit from it. However, it is no more a cure-all than the Navy corpman who prescribed aspirin for all cases.

For some time we have had a "Madison Plan". A student may attend high school and come to us (Madison Vocational, Technical and Adult Schools) for their shop work. We have found over the years that there is a reluctance to break peer groups in order that they may attend. Those who did attend had difficulty in adjusting to older, more mature students. Less than 5% would seek employment in the areas of preparation. Many students showed considerable improvement in all subject areas related to their field of work after joining us. The students who came to us for exploration were short changed. They went into our various shops without having the slightest idea of the areas of employment, or even what the craftman's responsibilities, working conditions, preparation, or pay were. We are now setting up exploratory courses and programs to fill this need.

We in Madison are progressing toward the function of a community college. I find this term misunderstood quite often so I would like to take the liberty to explain it. In principle we are serving the needs of the community in which we reside. The programs include vocational preparation, technical education, extension education, adult education, and college parallel education. Further breakdown into a department or school such as Trade-Technical may clear up some points. In this school we have vocational or hardware oriented programs, apprentice related training, technical or engineering assistance programs, trade extension courses and programs, and college parallel programs. In nearly all cases, the general education or academic studies school supplies some of the course offerings. The enrollment in the vocational, technical, and related apprentice programs is about equally balanced in each area. The college parallel series is just starting, but we are finding combination programs developing between the college parallel and technical for those who select this route. The trade extension is considerably the largest and will likely grow the most.

Each year as we counsel students seeking enrollment, we find that they are ill-prepared in selection of programs. Some are ill-prepared in content, but each one is interested in further information. With the increase in the number of applications, more are prepared to launch on the program of their choice, but proportionally the larger percentage are not prepared. Therefore, we have found it necessary to develop pre-vocational and pre-tech programs.

We in Vocational-Technical education would like to see a closer coordination between all educational institutions so we might better serve the needs of industry and the individual. Coordination with industry so that we are knowledgeable in the areas of need. It takes us two to four years to tool up for the first graduate and this is a costly delay. Yes, we will make some mistakes, but we learn from these also.

I would hope that the secondary schools would carefully consider a much better vocational guidance program. One that would enable the student to visit industry to see first hand the manufacturing processes and the role of the people who make it possible. I would like to see an integration of the sciences and mathematics so vital to the materials, processes and services of today's craftsmen. More competition such as FFA, Plymouth Trouble-Shooting Contest, Ford Contest, etc., to incite interest and reward excellence. More stress on the economics such as budgeting, purchasing, repairing, estimating. Less emphasis on birdhouses, drawing plate after plate, funnels, etc. More emphasis on good basic fundamental skills with an understanding of the reasons for doing them in the way they are taught.

We are not the only people in the training and education business. The industries say to us, give them the basics of both skill and knowledge and we will adapt them to our product, our plant, and our methods. The Armed Services

do a considerable amount of training. The apprenticeships available are a joint training program at considerable cost to the employer. The government is picking up a large section such as the group which recently opened in Camp McCoy.

We have need for teachers who can qualify for teaching in the vocational-technical areas. The requirements are high. Teaching degrees with work experience is sort of doubling up, but it is necessary. Good teachers are hard to acquire. Upgrading of staff is a continual problem, even though we use the institutes, summer programs, and work experience. It takes about three years to develop a good teacher into a good staff member in our area of work. The life blood of our institution is the excellence of staff and their interaction as a team. There is not a night that I go home that I'm not thankful for the knowledge and skill of that group as a backup team. They are dedicated active participants in the school and the community, as I'm sure this fine group assembled here today is.

I hope that I have raised a few questions in your mind. My faith in the ingenuity and skill of the industrial educators of America, and specifically of Wisconsin, is well-founded. May we together, the University here at Stout, the fine secondary schools of Wisconsin, the Vocational-Technical institutions, and the other State agencies, keep moving forward in our service to the people in our communities.

Thanks.

THE ROLE OF THE GUIDANCE COUNSELOR WITH THE VOCATIONAL EDUCATION PROGRAM

BY: Wayne J. Harrison, Jr., Supervisor
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I remember my first mechanical drawing course in the 7th grade. Frankly, my work was messy. I remember my first wood shop project. My breadboard had four dimensions instead of three: 12" x 4" x 3/4" x 1/2". I remember a tendon rattling in the mortise of the piano bench I made. I remember the varnish that was sticky on the end table; not for days, but for weeks. However, the finished products were good enough to give me above average grades.

In the 9th grade we studied occupational information as part of the English class. I studied the occupation of civil engineering after taking an interest test which showed I liked the out-of-doors and working with my hands. As my interest profile indicated, I grew upon a farm. Next year I enrolled in mechanics and electricity. Fortunately, the mechanics course consisted of one period a day for four days in class and the fifth day we gained experience as a mechanics helper in a local garage. I discovered from that experience that my interest in working with my hands did not compensate for the dirt and grease that I wore back to school at the end of each experience period.

It was not until I got out of the Navy that I found out the real reason why I should not go into civil engineering. In taking the Veterans Administration Aptitude Test, I was told by the VA counselor that the one field in which I would have real difficulty was engineering. Why? My test scores on spacial relationships were very low. That test certainly helped me to make a decision.

I then enrolled in the school of business in a midwestern university. I found I liked speech, social studies, as well as business organization and management. I remember back in high school when I presumptiously said to myself, I'm sure I could teach better than this chemistry teacher. So, why not put my interests together and become a business teacher. The following summer I got a job selling and did well in it. However, I remember telling my father before I started, "I don't see how you can sell a house for $15,000." Then he gave me the marketing concept: I don't sell, I find out the prospect's needs and then find a house to fit those needs.

While talking to the person registering students for the school of business at a teachers college the next year, I learned about distributive education. I wasn't too excited about teaching typing and bookkeeping as I am not detail conscious. I liked counseling as I had been a camp counselor one summer. Therefore, the idea of cooperative education was particularly appealing to me. This method of instruction wherein students receive on-the-job training as well as classroom instruction seemed to me to be a real opportunity for rapport to develop between teacher and student. The vocational youth group of DECA, I discovered, also provided a chance for good rapport and counseling via an informal relationship.

The above true story illustrates several truths that have since been born out by research and experience.

1. An interest test by itself is not good vocational guidance.
2. A unit on vocations alone is not good vocational guidance.
3. Taking a course in industrial arts does not give a person a "feel" for all trades.
4. Occupational experience such as mechanics helper or a salesman does give a person an insight into these occupations.
5. Aptitude testing is essential to good vocational guidance since aptitudes do not change appreciably.

6. Vocational guidance and particularly occupational information is generally a hit or miss affair in our modern schools.

Has guidance improved? In visiting schools throughout the state, I find that vocational guidance generally includes the following:

A unit in social studies
One planned counseling session per year during the 9th and 10th grades
The GATB for the non-college bound seniors
Some occupational experience for secretarial office education students
Scheduling and counseling sessions for 8th graders
A career day
Academic achievement and college aptitude testing.

Now, obviously a school with a program like that is doing a better job than the occupational information unit in my high school English class. But is it sufficient? I say no!

What, then, is the role of the guidance counselor today, especially in a modern high school offering vocational education programs? First, the requirement of the vocational education program, and the requirement of the Vocational Education Act of 1963, is that the student have a career objective. Now, I did not say career choice. Career choice gives the connotation that it is permanent. We know that no career choice is permanent, even a teacher, doctor, or lawyer. Your job description is changing in teaching, particularly if you "go" vocational or if you adopt the new American Industries approach to industrial arts. No occupation is static today. They are all changing and require the worker to continue his education.

When does the career objective need to be made a matter of record? It must be made a matter of record before beginning the vocational capstone course in the senior year. This means moving the career objective down from graduation time to the junior year. It also means that the students should begin making tentative career objectives in approximately the 8th grade.

I asked my 14 year old son who has just entered high school if he thinks it is important to choose a career at his age. He said no, and I agree with him. However, he did say, "I have to start thinking about it because I have to know what courses to take." He is right. For example, he had to decide between industrial arts and agriculture. Those courses certainly represent two different segments of our economy and work force.

To produce a valid career objective at least one year earlier than we have had in the past is a challenge. There are a number of things that should be done. First of all, the process of assimilating occupational information should be more extensive. There must be a continuous process of learning occupational information from kindergarten through one's lifetime. Secondly, the process must be more intensive in order that the future worker has more information and a better "feel" for the occupations.

Let's look at extensiveness first. Children, teenagers, and adults are all bombarded with many ideas concerning vocations. Many of the erroneous ideas about occupations comes through such modern media as television. A function of TV is to produce laughter rather than factual information via shows such as: Mr. Peepers, Dr. Casey, Our Miss Brooks, and Ann Sothern as the Private Secretary. In this day of rapid change we need a continuous flow of information about occupations. One estimate predicts that by the year 1975, 80 million people will be in new occupations. This means a continuous flow of information will be needed about occupations in addition to retraining that of workers that will be necessary.

The second thrust I mentioned was intensity. Certainly, a career day and some sporadic counseling is not the answer. We need a program in vocational guidance. The sample program that we are encouraging in our 34 pilot schools

is as follows: 1. Units on occupations in social studies classes in the elementary school. Some references are made to occupations in elementary education; however, this occupational information needs to be more factual and more complete; 2. More units or courses concerning Orientation to Occupations should be offered in the middle school. These units or courses should include more than skills. The courses should include occupational information, on-the-job field trips and individual over-the-shoulder observations of workers. In addition, aptitude and interest tests should be begun at this level; 3. In the 9th grade a course for all students concerning an orientation to the world of work should be instigated. For example, Franklin High School, one of the pilot schools, is beginning a course this fall entitled Introduction to American Careers. This course is not taught by one person, but by a team composed of the guidance counselors, a local vocational coordinator, vocational teachers and lay business and industrial employers and employees. It is held twice a week alternating with physical education; 4. Additional aptitude testing should be begun in the 10th and 11th grades. Some pilot schools are experimenting with the Wisconsin Employment Test called the General Aptitude Test Battery.

Regular individual and group counseling should be continued. Field interviews by individuals as their interests and career objectives mature should be provided. Work experience is very important in obtaining a "feel" of the occupation.

Students should begin to cluster preferences. They should know whether they have the interest and aptitude in things oriented occupations, data oriented occupations, or people orientated occupations. These categories are used to cluster occupations in the new edition of the Dictionary of Occupational Titles. These clusters conveniently fit the large areas of

vocational education that we are implementing such as: trade and industrial education, business and office education, marketing and distributive education. We do know that a person has to be somewhat "things" orientated to succeed in most trade and industrial occupations. A person who is data and "detail" conscious would probably like bookkeeping or clerical occupations. A person with good communications ability probably would enjoy secretarial occupations provided they were also "detail" conscious. Finally, students interested in people would probably enjoy marketing and distributive educations. Certainly, these interest clusters have been formed in some students quite early in the high school and in junior high school. 5. By the end of the junior year, students should have a career objective for a cluster of occupations or one specific occupation. Some students will have a career objective fairly firm prior to the junior year. Some won't be firm in their objectives until they go to college or work after high school. But certainly, we can improve on the percentage who now don't have the slightest idea of what they want to do. 6. After the student enters the vocational course in the senior year, vocational guidance should continue. The vocational teacher will have a responsibility to give the students insights into the occupation for which he is being trained as well as related occupations. Cooperative education certainly lends itself to providing these insights. If the student finds that he doesn't like the work that he has entered, at least he has eliminated one (or a cluster) of occupations from his decision making process. If he does like it, he can either go into that occupation after graduation or upgrade his level of employability by attending a vocational school.

In addition to the problem of a career objective being made a matter of record prior to entering a vocational course, the guidance counselor needs to work closely with the coordinating-teacher of a cooperative program. Not only does the student need a career objective upon which to "hang" or associate

his learnings, but he must be employable; this means application blanks, interviews, and records of discipline, tardiness, attendance and health.

Part of a sound vocational education is the requirement of a follow-up study of the graduates. The evaluation of the program hinges upon the success of the graduates in a field for which they were training. A good follow-up will not only tell us how many actually went into the occupation, but it will show the strengths and weaknesses of the workers competencies in relation to the job. We are then in a position to improve the vocational program. When was the last time your school had a follow-up study of your students that included questions on what instruction they would have liked to have had?

Placement is also a responsibility of a school with a vocational program. Students need help in locating a job consistent with their abilities and their preparation through vocational education. In cooperative education programs, placement "comes naturally" since most students "go" full time with the company in which they have been training during the school year.

In summary I have said these things:

1. We have not done a job in vocational guidance in the past in most schools.

2. Vocational guidance needs to be extensive via a continuous process grade school through high school and throughout life.

3. Vocational guidance needs to be intensive enough to do the job by means of courses in occupations.

4. Every school should have a follow-up study of their students, particularly if they are in the vocational education program.

5. A good placement program for the graduates should be instigated.

These five items define the role of the vocational guidance person in relationship to a vocational guidance program.

Now what can you vocational educators do?

1. Help guidance set up courses and units on occupations and experiences.

2. Help guidance teach courses and units.

3. Involve your advisory committee in orientation to their occupations.

4. Call a meeting of guidance personnel and explain the requirements of your courses. Personally, I found this to be an effective tool in helping to orient guidance personnel to requirements and opportunities of a vocational program on the local level.

5. Learn something about guidance. We sometimes wonder why guidance personnel are not experts on our courses and our occupations for which we are training. Communication is a two-way street. We also need to learn about guidance methods, testing, etc. This means we need to take some courses, read the Personnel and Guidance Journal, attend guidance meetings, and uncover tests that relate to your program.

   Similarly, the counselor needs to upgrade himself by job observations, work experience, vocational guidance seminars. And most important, the counselor must commit at least an equal portion of his time to work-bound students as he does to the college-bound.

6. Finally, both counselors and vocational educators need to be professionals because it takes a professional to do a real job of vocational education and guidance. Some one defined a professional person as: "One who does things that should be done when he doesn't want to do them."

INDUSTRIAL MANAGEMENT REACTIONS TO THE SECONDARY SCHOOL VOCATIONAL EDUCATION PROGRAM

BY: Frank W. Churchill, Supervisor
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It is becoming increasingly more important for industry to hire the most qualified people available. Economic grwoth has been largely responsible for this. But the scope of the rising economy is often distorted. Published reports which indicate that profits are the highest in history are misleading. They report dollar volume of profits rather than percent of profits in terms of capital investment. Rising operating costs vs. profit dollars has caused industry to curtail some of its expansion projects. Investment of this type would create new job opportunities--opportunities needed and sought after by many high school students.

Management is interested and concerned about the practical and human aspects of helping the high school graduate achieve employment with an opportunity to grow and develop professionally. The problems they face are those of reconciling their need to compete in the market place to stay in business with their responsibility to the community to support various forms of on-the-job training programs designed to fit youth into the business.

Despite the continuing low profit margin, industry continues to participate in aiding youth to select on a qualitative basis a job which will match his particular incentives and aspirations.

One function and responsibility of the vocational educational program in the secondary school is to give the student a broad and comprehensive insight into the relationship between the classroom and the real world. Most

individuals commit themselves to an occupational choice with a single decision and are thereafter the beneficiaries or victims of their choice for the rest of their employable lives.

Another function of a vocational educational program is to increase the lead time between the act of commiting oneself to a particular job and the act of implementing the choice of employment.

When determining the occupational areas of instruction for the school, research should preceed, to determine on a geographic basis, job parameters and job opportunities.

Present projections of occupational labor markets are usually short term and relevant to immediate needs. They are decentralized and tend to be uncoordinated. Longer term projections are more generalized and of little value and meaning in guidance and counseling. Complicating this is the fact that in the larger labor markets education, business and labor are too frequently unsympathetic andinsensitive to each other's problems.

If I appear critical of the educational system it is because I feel responsible as a recipient of their product to speak out as a dissatisfied customer must do. I have observed too long the philosophy of educators as that of education as an end in itself rather than an instrument for individual and social goals. It has visualized its part as that of satisfying consumer wants. It has failed to see these demands as ultimate goals rather than ultimate ends.

To this is added to the already confused mind of the student, his unfitness to pursue the vocation of his choice because of some nebulous criteria based on personal feelings or other less qualified facts. In other instances the student is allowed to pick and choose at will finally encompassing himself with a jungle of indecision.

Now that I have bared my inner feelings I shall try to be more specific and constructive.

The task of adapting and directing a vocational educational program toward specific end has two goals. The first is the definition of these ends. The second is the definition of the quality and quantity of the education required.

The definition of the ends is simply to prepare the individual to meet his occupational and social obligation to his fullest potential. This, however, is not as simply achieved as it is simply stated.

Factors having a heavy influence on the development of the individual by adapting education are economic development and the advancement of technology. Economic development is a gradual change effected by normal advances in technical knowhow and its implementation. Advancement of technology is generally accompanied by radical change.

Adaptation to both is necessary. The role of the educator is to prepare the student to adapt to it, help him from developing a false or distorted perspective of it, and show him how he can contribute to the change. The last of these is most difficult to achieve and yet has the greatest impact. His contribution will be in the implementation of technical knowledge and ability to increase profits and decrease costs for his employer.

Considering that the adopted vocational program in the school is structured ideally to meet all of the prescribed needs of the student and industry there is still a need to reassess continually our policy on the use of the individual and his skills.

No matter how well the secondary school plays its role in providing appropriate preparation, only the near perfect student could make immediate and rational adjustments to demands and opportunities in industry.

For many, industry's continual changing in management philosophy and implementation of technology will impose constraints. These constraints in turn generate a chain reaction of job choice, living standard, sociological adaptation and overall contribution to society.

I have obviously avoided any discussion on what trades need be considered or depth to which the technology should penetrate.

Emphasizing again a needed change in educator's philosophy of their role, I should like to compare their charge to that of industry. It is not enough to develop a highly marketable product; but to be prepared to sell the product on its merits to satisfy the consumer's needs for increased profits at a minimal investment and with low maintenance.

We want to be sold. We also want to provide some of the engineering. Please accept our bid to participate.

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The program was developed from suggestions of persons attending previous conferences. Summaries are given of:. (1) "The 'U' in Improving Instruction" by William J. Michaels, (2) "Research and the Classroom" by Robert S. Swanson, (3) "Implementing Research" by John Furlong, (4) "Local Industrial Education Teacher Organizations" by Robert Duren, (5) "Vocational Industrial Education in the High School Curriculum" by Robert Ristau, (6) "The Conceptual Study of American Industry" by Wesley Face and Eugene Flug, (7) "Computers and Programming Simplified" by Clifford Gauthier, (8) "Submitting Articles for Publication" by Robert Phelps, (9) "Public Relations for I.E. Teachers" by Robert Rudiger, (10) "The Use of Programmed Instruction in Industrial Arts" by Armand Hofer, (11) "Student Industrial Arts Clubs" by Jack Sampson, and (12) "Textbooks, Their Use and Abuse" by Raymond Cornwell. (HC)

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Improving Instruction in Industrial Education*

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* *12th Annual*
Industrial Education Conference
Stout State University
Menomonie, Wisconsin
October 15, 1965

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Program Summaries of the 12th Annual

Industrial Education Conference

at

Stout State University

Menomonie, Wisconsin

October 15, 1965

Neal W. Prichard, Conference Chairman

Jack B. Sampson, Assistant Chairman

F O R E W O R D

Welcome to this, the 12th Annual Industrial Education Workshop. This one day meeting is designed to assist you on-the-job, and we are confident it will do just that.

The first Industrial Education Workshop was held October 10, 1954. When planning our first workshop, we counted the number of Industrial Arts teachers located in Wisconsin, and within a 100-mile radius of Menomonie. This census listed 77 industrial arts teachers. We then thought that if we could attract one-third of these teachers, or about 25, we would be doing very well. We were pleasantly surprised when 50 industrial arts teachers registered for the first fall Industrial Education Workshop.

Over the past 11 years, approximately 2,000 persons have attended these fall conferences and listened to or looked at over 140 programs or demonstrations. These 2,000 teachers and administrators registered from seven states: Michigan, Illinois, Iowa, Minnesota, North Dakota, South Dakota, and Wisconsin.

Those making presentations and giving demonstrations have been high school teachers, college instructors, and persons from industry. Twenty-five formal programs are scheduled for this, the 12th Annual Workshop, and we expect an attendance of over 225 persons. The programs scheduled for you today have been suggested by persons who have attended previous conferences.

If you wish to have a special demonstration or topic presented this next year, let us hear from you. I can assure you that we will make every effort to schedule the program or programs suggested.

Welcome to the campus, and I hope your day will be most pleasant and fruitful.

Dr. John A. Jarvis
Dean of Instruction
Stout State University

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THE "U" IN IMPROVING INSTRUCTION

A discussion of the importance of the individual teacher in improving the learning process of his students.

You as an individual teacher are the most important factor in improving instruction of industrial education. Administrators and supervisors can try to motivate you. Local, state, and national programs can be developed in the name of improving instruction. There are numerous periodical articles constantly devoted to this subject, and even books have been written. All of these are fine, but when we get down to cases, any improvement in instruction is directly related to the changes which you institute from day to day in your classroom or shop.

It all boils down to a single question. What changes can you make to improve the teaching and learning that takes place under your direction? This explains the selection of a title for this brief talk. The letter U is about in the middle of the word INSTRUCTION. You, the teacher, are exactly in the middle and you ought to be doing something about it.

There are many approaches I might use in talking with you about improving instruction. I have chosen to speak rather informally instead of trying to present a documented essay or paper. I wish to ask a series of questions which every teacher ought to ask himself if he is interested in improving his teaching. The questions will not be all that might be asked, nor are they in any order of importance. But I hope they might tend to motivate and, I am sure, they can be at least a slight help in getting one started in the right direction.

When I ask these questions, I am directing them toward myself, trying to resurrect the sorts of questions I did ask, or should have asked, when I was in a teaching position somewhat different from that which I now hold. My first question to myself, and thus indirectly to you, is this:

What is your attitude toward change? Unless we wish to make changes, there is no use whatever in trying to follow a program for improving instruction.

The universality of change, the perasiveness of change, and the dynamics of change are facts of life. We as teachers often like to talk about the many changes taking place around us. But we tend to be rather inept in making changes in our own teaching. We hear so much these days about change and the implications of change that we tend to

nod agreement, then hide our heads in the sand of complacency and fall back on old habits and practices. This is a typical defense mechanism at work. Most people tend to resist change, especially when it threatens security and status. You and I are no exceptions.

But change is being forced upon us in the schools whether we like it or not. Herein lies the greatest challenge facing teachers of industrial education. Many teachers of industrial education, as well as teachers in other fields, are on the defensive. Look around you. You will find colleagues who are frustrated, insecure, defeatists, and expousers of a negative attitude. They have not been able to adapt themselves to the changes in education which have already taken place.

But we have seen nothing yet. As I dictate these notes, I have before me a resume of recent actions in our national congress. These bills are not yet in final form. In a few weeks they will be. Whatever form they take, they will generate changes that will affect the teaching activities of each of us.

I repeat, what is your attitude toward change? If you want to continue in the pattern of the good old days, then I doubt that you should even attempt to listen further to me. But if you still think you can take it, I hope I can ask some questions which can motivate you and get you excited about making some changes in your day-to-day activities in

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your classrooms and shops, some changes which can provide the thrills that go along with doing a better job of helping young people. Which leads me to the next question--

What is your working definition of teaching? Many people on our schools' payrolls go through the motions of taking care of so many young people each day, but without having a real functional understanding of what teaching is. I daresay if I were to ask each of you right now to write down a definition of teaching, we would have some interesting statements which could serve as the basis for an entire discussion. I know this to be true because I have asked many future teachers, perhaps some of you, to write such a definition.

I think each of you ought to go back home and write down what you mean when you say you are teaching industrial education. You ought to be honest with yourself. You can use this as a starting point in any attempts to improve instruction. I can give you a few ideas, but what I think is not nearly as important as what you think, and on that basis, what you do from day to day.

Teaching is more than showing how, directing, imparting knowledge of, giving lessons in--this is one of the dictionary definitions.

Teaching is more than making assignments and listening to recitations.

Teaching is more than letting the students make a series of projects.

Teaching is more than conducting a lesson hearing room.

In my book, teaching is helping people learn. It is as simple and complex as that. If you wish to improve your instruction, you ought to ask yourself: How do I help people learn? then, Am I helping my students learn? and finally, How well did I help my students learn?

This means that learning must be basic in any description of definition of teaching. Good teaching means good learning, which leads me to the next question--

What is your working definition of learning? Here again it would be interesting to have your written reactions, but I will skip hurriedly to my over-simplified reactions to this question.

Learning is a change in behavior. It is as simple as that. A person who has learned something has changed.

Most psychologists would add a clause: Learning is a change in behavior which results from experience.

When a teacher helps people learn, he helps them change their behavior. I am speaking here of behavior in a broad sense--thinking behavior, acting behavior, knowing behavior, feeling behavior.

If we want to improve our instruction, we must do a better job of providing the kinds of experiences which help the learner to change his behavior in directions which are in keeping with the goals he has set forth.

In improving instruction, you search for new methods to do a better job of teaching. This means that you strive to do a better job of helping people learn. This means you find a way to do a better job of providing the kinds of experiences so that your students can learn what you would like them to learn. This means you strive to do whatever may be necessary and desirable to help them change their behavior in positive directions.

As many of you know from experience and from exposure to courses on this topic the psychology of learning is a complicated subject. I submit to you, however, that most, or all, of us can be on the road toward improvement of instruction if we tend to set forth a working definition of what we mean by learning and in context of our teaching.

What is your working definition of education? Here again one can find many ideas, many definitions in the literature. The important point, it seems to me, is to set forth your own definition, one which, perhaps uses the ideas of others, but is a definition with which you can live in the context of your day to day activities.

I have an over-simplified definition--education is learning to do. When I say education is learning to do, I mean it is learning to read, learning to spell, learning to manipulate, learning to evaluate, learning to cooperate, learning to appreciate--learning to do.

Alfred North Whitehead, the philosopher, used these words: "Education is the acquisition of the art of the utilization of knowledge." This still fits my briefer definition, learning to do, learning how to use knowledge.

John Ruskin was emphasizing this fact when he wrote that "Education does not mean teaching people what they do not know. It means teaching them to behave as they do not behave."

This falls in line with the thought that teaching is a process of helping people to learn, which means helping them to change their behavior in positive directions.

What is your working definition of education toward which you direct day-to-day teaching activities?

In this outline, how well have you stated your objectives?

If you were to force me to ask only one question which might be helpful for anyone wishing to improve instruction, this would be it: How well have you stated and defined your objectives? My experience in preparing teachers leads me to state that this is an area in which we have failed most miserably. Countless words have been written about the need for stating objectives. Each of you has likely had many experiences in preparing objectives. My experiences in working with graduate students when I raised the question of objectives was very often this: "Do we have to get started on that again? We have talked about

objectives ever since we started college. Now you want us to do it again."

Yes, I want you to do it again because this is the area in which the break-through must occur before we do much in the way of anything significant toward improving instruction and thus the learning that takes place.

Defining objectives is a difficult task. I submit, however, that the lack of properly defined, properly understood objectives is very often the reason for poor instruction.

I can offer my definition for what it may be worth: An educational objective is a statement of intent describing what the learner will be like or what he will be able to do if he has successfully completed the learning experiences. Such a description will be in terms of observable behavior (using the term behavior in a broad sense: thinking behavior, performing behavior, feeling behavior). How well have you defined your day-to-day, week-to-week, month-to-month, and year-to-year teaching-learning objectives?

Robert Mager was expressing my strong feelings on this subject when he wrote "I cannot emphasize too strongly the point that an instructor will function in a fog of his own making until he knows just what he wants his student to be able to do at the end of the instruction."

Any improvement in the definition of teaching-learning objectives is almost bound to result in an improvement in instruction.

What are your immediate and long range goals for self-improvement? Have you ever set forth the goals which you would like to achieve this month, this semester, this year, or during the next ten years? This could be an interesting exercise. I have tried it. I have found that if I make myself write things on paper, it produces better thinking on my part. Very often I have not achieved what I wrote down on paper, but sometimes the side effects of this attempt to set forth some goals have been more beneficial than actual achievement of the goals.

Here at Stout we ask each department to set forth the goals which they hope to achieve during the next year; then a year later we ask them to evaluate the extent to which these goals have been achieved. I suspect some of the departments have merely gone through the motions. For others, I know this evaluation has been helpful. Certainly it has been helpful to me and to the Dean of Instruction as we attempt to keep in touch with the thinking of our staff members who are striving to go forward.

I submit that this same approach can have real value for any teacher, as well as any department.

What do you read? A teacher who wishes to improve his instruction should be a reader. Books should be his provocative companions;

the same is true for the various types of professional literature which he should have at his fingertips. I suspect there is a very high correlation between the desire of a person to improve his instruction and the amount of both professional and general reading which this person does.

Of course, the choice of reading is important. I can use my own case as an example. I am called upon to do a great deal of reading, day in and day out; night in and night out. I do not have time to do the kind of reading I did five years ago. As a result, if I were to go into a full teaching schedule again, I would be at a distinct disadvantage. Except in a couple of areas, I expect I would be doing a much poorer job of teaching than was the case five years ago.

What experiments have you tried during the past year? Teaching can be drudgery or it can be fun. I suspect the teacher who has the most fun is he who is constantly experimenting with new techniques, new ideas, new methods. Why not get your students into the act as you experiment with new materials, new approaches, completely different ways of doing things. Some of my fondest memories in the classroom are related to trying the new and different, in having the students play a major part in determining what the new and different procedure should be. They were not always successful. Some students rebelled at having to do things differently or trying things out on their own, or having

to operate without clear-cut instruction. Sometimes the results were not very successful, but even in such cases, I think the idea of experimentation was more important than the results that were forthcoming or the specific knowledge that was learned.

This whole business of learning how to learn may be the most important outcome you help your students to achieve.

What kinds of reports do you make to the administration about your teaching efforts? Each teacher ought to make a written report at least once each year to the supervisor or administrator. Such reports should set forth the plans that were envisioned at the start of the year, the problems which were encountered, the successes which were achieved, the suggestions which grew out of the year's activities, and the goals which should be set forth for the following year.

There should be a dollars and cents report in terms of equipment and materials that might be needed as well as any other information which gives the administrator or the supervisor a picture of what you have done. If your supervisor or administrator does not require such a report from you, it would be my suggestion that you start this year to prepare this report. My experience indicates that you will be surprised at what help this can be, not only in improving your instruction, but in improving your relationships with those who are your superiors.

What do you do to improve your speech? There is much I might suggest in this area, but let me summarize it very briefly. The most important tool which you have at your command as a teacher is your voice. At the same time, it is the most neglected tool as far as most teachers are concerned. I am not a speech teacher, and I cannot give you detailed suggestions, but I know that most teachers can make rapid improvement if they will set about methodically to improve the quality, the tone, the enunciation, the pronunciation that they use each day in their teaching activities.

What do you know and do about your individual student? Perhaps this should have been high on the list, although I said there was no order of importance. Actually, the only reason you are in business is to help your students learn. In my experience, the outstanding teacher is the one who takes a personal interest in his students, who knows a great deal about each of them, and who does many things aside from formal instruction in helping his students to learn, whether it is the subject matter at hand or whatever the student needs to learn.

I think an effective means of evaluating teachers, or at least one of the most effective, would be to have an indication of how much time the teacher spends with individual students. Following that, it would be interesting to find out the nature of his contacts with the students.

Then I think one would have a very clear-cut picture of how effective this teacher is in helping his students to learn, in guiding them and helping them to mature, and helping them learn how to learn.

Dr. Robert S. Swanson
Dean, Applied Science and Technology
Stout State University

RESEARCH AND THE CLASSROOM

A discussion of the kinds of research that are practical for the individual teacher within the confines of his own class without the aid of large grants.

Research is a magic word with professionals and the lay public alike. Even the man-on-the-street talks glibly of research and its promises for the future. And it is not just glib talk; great sums of money are available to interested and qualified researchers. For example, the Elementary and Secondary Education Act of 1965 adds $45 million to the $25 million annual appropriation contained in the Cooperative Research Act of 1954. The Vocational Education Act of 1963 provides $22.5 million annually.

In your own field, Stout State University recently received a grant of over $700,000 to develop a new approach to industrial arts and Ohio State University was awarded over $200,000 for a similar purpose.

It is interesting and inspiring to hear of such grand scale research proposals, but the classroom teacher can come away rather awestruck and thinking that there is little place in the pattern for him.

What is the place for classroom teachers in performing and using research, but still primarily concerned with teaching?

It is easy to point out that teachers should be aware of and study research findings and put them into practice. Many lists of sources of such reports are available. I would suggest that all teachers study them. But I am very wary of the prospects of sweeping changes resulting from merely reading research reports, even very fine ones. For example, John Fuzak[1] was given the top research award in 1958 by the American Technical Society for a study of a simple means of predicting success with manipulative activity in junior high industrial arts. The study was publicized widely in clear, concise terms. Yet I doubt that it has influenced practice to any extent.

I believe that it is necessary for teachers to take a different view of research if they are ever going to become involved with the process (as well as the products) themselves. This is the view of research as "the process by which practitioners attempt to study their problems scientifically in order to guide, correct, and evaluate their decisions and actions." This kind of research has been variously termed "action research" by Corey,[2] "classroom research" by the American Council on Industrial Arts Teachers Education,"[3] and "research for the practitioner" by Barnes.[4]

For those interested in greater detail, I commend these three references to your study.

A number of developments have encouraged this kind of research.

1. The tools of research, notably statistics, have been developed to deal with groups which do not fit a known distribution. Techniques of dealing with small groups have been developed.

2. Teachers today generally have more preparation in research procedures.

3. Research has gained popularity generally and practitioners are more concerned with attempting to solve their problems scientifically.

WHY SHOULD THE CLASSROOM TEACHER BE INVOLVED WITH RESEARCH?

The practitioner in education is constantly faced with new proposals in content, method, and organization. He asks the question, "Is this approach better?" When he looks at research reports, he finds the term, "no significant difference."

> For example, the Review of Educational Research for April, 1962, reviewed research completed on new educational media for the preceding six years. The overall verdict about instructional television was 'no significant differences' when televised instruction was compared with ordinary classroom instruction. In regard to self-teaching devices and programed materials (teaching machines), the most popular finding again was 'no significant differences' compared with ordinary instruction. Language laboratories came out somewhat better, chiefly because the amount of research

> being done was so sparse, and the review ended with the observation that much more controlled research is vitally needed.[5]

When one looks at individual researches, however, he often finds that in a particular case, with a particular teacher, and a particular class, a given method does produce superior results. Professional evaluation is likely to say that such results are invalid because they cannot be generalized beyond the confines of the experiment. However, the fact that a method works better for a particular teacher in a particular class is extremely important to that teacher and those students. A continuous evaluation of results by the individual teacher may produce no new general theory but it can result in his teaching being improved. The main point of this research is to carefully assay results--something that many of us never do. I would guess that most people do not really know whether their innovations were successful or not.

People in the fields of industrial, vocational, and technical education are proponents of student involvement in the learning process. Similarly, instructor involvement with the research process is important. This may seem to imply that we must discover everything for ourselves; such is not the case. But it seems to me that those who become involved with research are more likely to become aware of other research, too. This is an untested hypothesis on my part.

WHY IS THE CLASSROOM TEACHER IN A GOOD POSITION TO DO RESEARCH?

The situation in which the individual teacher operates possesses many characteristics facilitating research of one type which are not commonly available to professional researchers.

Proximity to Educational Problems. The individual teacher is at the point of contact with educational problems of at least some types. He is in a position that forces him to be concerned with many practical problems of class organization and control, content selection and presentation, and evaluation.

Possibility of Longitudinal Studies. In so much research done for a graduate degree, the individual is primarily concerned with finishing the degree and modifications in design or longitudinal studies are ruled out. It is doubtful if many graduate advisers would recommend that a candidate do an "eight-year study." The result has often been investigation of extremely short-term projects; for example, a ten-minute lesson with an immediate test and a retention test ten days later.

Reality of the Experimental Situation. So many graduate studies are performed in sterile and artificial situations where controls unlike those in practice are used. Some of the studies where taped or filmed instructions are used to insure uniformity of treatment are not typical

of the practical situation and while they may add to the general fund of knowledge they are not of very direct help in the solution of problems.

A Fertile Source of Data. In his normal activity, the teacher collects data daily. He keeps records, records observations, and makes judgments and evaluations. Care in collecting these data can provide vast amounts of useful research materials.

THE RESEARCH PROCESS

How to go about it? We may well agree that there is a need for research but just never get at it. As a first step, I recommend that every teacher have an on-going research project of some type. This need not consume great amounts of time. In fact, once the framework is set up, the collection of data need involve little time other than that which is a normal part of teaching.

A formalized procedure can aid our thinking in deciding on researchable problems and means of attacking them. Remember that our purpose here is "to study problems scientifically in order to guide, correct, and evaluate decisions and actions." An adaptation of Dewey's process of reflective thinking can serve as a guide:

1. Specification of a problem - development of a hypothesis
2. Design of the approach
3. Collection of data
4. Summarization and analysis of data
5. Drawing of conclusions for action

Certainly everyone is aware that research does not proceed neatly in these categories or in this precise order. The outline does, however, provide a good basis for consideration of the various facets of problem development.

Specification of the Problem -- Development of a Hypothesis. An important beginning in any investigation, no matter how informal, is to specify the problem as clearly as possible. If this is not done, it is doubtful that pertinent information will be collected. Often the identification of the problem is one of the most difficult aspects of research.

A clear concise method of accomplishing this is to state a hypothesis for testing. Barnes[6] identifies two kinds of hypothesis, the research hypothesis and the null hypothesis.

The research hypothesis is often stated in "if-then" terms -- "if the teacher uses programmed learning for Unit A, then the students will learn more."

The null hypothesis is stated when statistical procedures are to be employed. The null is the hypothesis of "no difference" -- "there will be no difference in the learning of students in Units A taught by programmed learning or by lecture-demonstrations."

Design of the Approach to the Solution of the Problem. Decide who will be involved in the study. What will be considered data and how it

will be gathered. On what basis will results be regarded as accepting or rejecting the hypothesis?

Collection of the Data. Follow the design in assembling data.

Summarization and Analysis of the Data. Place data in the form to best show how it bears on the problem. Employ statistical or other devices to decide whether the hypothesis was an adequate prediction to results.

Drawing Conclusions for Action. Look back at the original problem; should some action be taken as a result of the findings? Does the hypothesis need restatement for further investigation?

FOOTNOTES

1. John A. Fuzak, Research Report on the Role of Physical Maturation in Determining the Ability of Junior High School Boys to Perform Complex Finger Coordinative Activities in Industrial Arts, and an Index to Level of Ability. Chicago, Ill.: American Technical Society, 1958.

2. Stephen M. Corey, Action Research to Improve School Practices, New York: Teachers College, Columbia University, 1953.

3. American Council on Industrial Arts Teacher Education, Classroom Research in Industrial Arts, Bloomington, Ill.:

4. Fred P. Barnes, Research for the Practitioner in Education, Washington, D. C.: Department of Elementary School Principals, National Education Association, 1964.

5. Barnes, p. 3.

6. Barnes, p. 31.

Dr. John Furlong
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IMPLEMENTING RESEARCH

A report on how the classroom teachers can make use of research in improving their instructional program.

"The trouble with most people who teach Industrial Arts or Vocational Education is that they read about research other people are doing in the teaching of the various shop subjects." I have made this statement many times to colleagues and invariably the result is a look that says everyone knows you should read the new things that others are discovering and doing in the field or how else can you keep up-to-date. At this point we are in agreement, but the real problem is that we don't go to the next step, which is to seek ways and means to implement research findings into our own teaching. When a new product such as a machine or a tool is developed (as a result of research) teachers are quick in wanting to have money spent to purchase this new tool. They want the latest and the best of tools, machines and equipment in their classrooms and shops. I can remember fifteen years ago when the "satin finish" first came out on micrometers, and the demand was so great from machine shop people that the company was many months behind in filling orders.

When you read about this new tool, machine, or piece of equipment, you proceed to take the necessary steps to obtain it and put it into use. You, as the classroom teacher, should proceed to take the necessary steps to obtain research studies and results and put them into use. I submit that you as a teacher of Industrial Arts or Vocational Education can and should implement the advances in the science of teaching and learning.

People are your subjects when you teach and there is little question that the human is loaded with variables. Yet you, the teacher, are the closest to your pupils and should be in the best position to investigate and do research on their problems of learning. Further than that, you as a teacher should be able to not only comprehend but to put into practice those techniques which other teachers through research have found useful, have described in writing, and which are appropriate to your field of teaching.

In an attempt to set some reasonable direction for discussing our topic "Implementing Research" I would limit my suggestions on how teachers can make use of research in improving their instruction to the area of reading and applying research.

There are a large number of sources where you, the teacher, can obtain information about research which you can apply and which is

either completed or in progress. One of the most practical and effective places to contact is the graduate studies department in your field of a nearby college or university. Their personnel will be happy to make research studies and reports available, including masters and doctoral studies.

Many of the larger colleges and universities have a research center or department of research and institutional studies which can provide not only a wide variety of completed research reports, but in many cases can give much valuable assistance in designing or conducting research in your specific area. Montclair State College of Montclair, New Jersey, provides abstracts annually of graduate students' investigation, experimentation, and application of research findings to the improvement of the educational process. The complete research report for each abstract is on file in their library. Their 1964 bulletin is entitled "Research Abstracts" and is listed as Volume 56, Number 5.

The Faculty Research Edition of the Savannah State College Bulletin, Volume 17, Number 2, December, 1963, Savannah, Georgia, is primarily a medium for their faculty and contains pure research as well as creative writing. However, scholarly papers from other faculties are invited and printed. They do not print manuscripts that have already been published or accepted for publication. The purpose of

their Committee on Faculty Research is to stimulate and encourage studies relating to the institution and the fields of special interest to faculty and staff.

The Fund for the Advancement of Education, 477 Madison Avenue, New York 22, New York, which was established by the Ford Foundation, is an example of a private foundation type of organization that provides financial assistance, as well as professional assistance, in continuing research which seeks promising ways to advance education.

Conferences and conventions provide speakers and reports, as well as pamphlets, which are practical in their assistance to teachers who want to do research which will improve their instruction. The National Association of Industrial Teacher Educators, The American Vocational Association, and the American Industrial Arts Association are all industrial teacher organizations which serve to aid teachers wishing to do classroom research.

The State Departments of Education and the U. S. Department of Health, Education and Welfare provide a wide variety of booklets, pamphlets and reports in the area of research. The U. S. Office of Education in Washington, D. C. provides a listing of available research publications. They have a wide variety of information and aids which you can obtain by contacting them.

On our own campus, Dr. Wayne Courtney has been added to the Graduate School staff to facilitate a smoothly functioning program of teacher education and to identify relationships between the State Board of Vocational and Adult Education and Stout State University relative to the concerns with teacher preparation and development. His activities in the area of research will include:

1. Plan and develop research projects in cooperation with the State Board of Vocational and Adult Education, local schools, and individual students--both degree and non-degree.

2. Plan, execute, and supervise research activities individually or in connection with others within the university.

3. Engage in cooperative projects with such groups as North Central Region Research Committee, the AVA, and the USOE.

4. Participate in the State Research Committee composed of representatives of various agencies concerned with vocational, technical and adult education chaired by the State Supervisor responsible for research.

This is possible through an excellent cooperative spirit and activity between the U. S. Office of Education, the State Board of Vocational Education, and Stout State University.

In 1957 I completed a research study which, as its purpose, attempted to discover, through the use of a concentrated case study

technique, the problems and accomplishments of beginning instructors teaching trade and industrial evening extension classes in a large metropolitan vocational school.

In attempting to accomplish this purpose, I followed six general steps:

1. The literature dealing with vocational education teaching and supervision, studies of teacher effectiveness, case study method, interview technique, and observation technique was reviewed.

2. Because of the personal nature of the data, it was necessary for me to establish rapport with and maintain cooperation of the teachers and the administrative and supervisory personnel who were directly concerned with the study. This was achieved through personal contacts prior to the start of the study, and through assurances of confidential treatment of obtained data.

3. To help overcome the bias which could result from the lack of personal experience with newly devised instruments and procedures, a pilot study was conducted in another metropolitan vocational school. An interview guide and procedure, an observation technique, and a student report on classroom teaching form were developed for use in this study.

4. Interviews were conducted with the eight beginning instructors who were under study in this investigation. Aids used to minimize

error in the interviews were: (1) an interview guide and procedure sheet based primarily on the review of literature, (2) a tape recorder to record the interviews for later transcription. Each interview lasted about one hour.

5. Observations were made of the instructional activities in the classrooms of the eight instructors under study. Observed classroom activities were recorded by the diary method. Relatively simple mechanical aids such as a watch, outline guides, and seating charts were used to minimize the subjectiveness of personal observations. A total of ninety classroom observations were scheduled and reported. Each observation period, randomly chosen, consisted of either the first or second half of the instruction for the evening, and covered from one to one and one-half hours of class time. The observations were confined primarily to three broad areas of teacher activity; (1) motivation, (2) development of understanding, and (3) student use of instruction within the classroom.

6. Anonymous student reactions to the teaching were obtained by means of a combination of multiple choice items, an objective check list, and free comments of students. These forms were administered at the last meeting of each class. The observer and each teacher likewise completed the rating forms.

The following generalizations grew out of the conclusions presented for the individual cases.

1. The lack of an effective planned system of instruction adversely affected the quality of teaching done by the instructors. Planning varied from using not a single written word of an outline to a textbook which was completely covered page by page. Instructors usually arrived early and prepared what would be taught that evening -- little planning was done on how it was to be taught.

2. There was little teacher planned motivation which could be considered as developing the students' interest in what was to be learned. Only one instructor consistently reviewed the students' previous learnings to form a base upon which to teach new material. Most instructors apparently believed that the students were interested in learning what the course offered and that was why they came to class. Of the teacher activities which were of a motivational nature, most occurred accidentally rather than because of teacher planning.

3. Personal relationships between administrators and instructors were excellent. However, there was a lack of effective communication with respect to such things as utilization of visual aids and the obtaining of necessary instructional materials.

4. The instructors desired a record and evaluation of their progress and achievement. Some means which they suggested to accomp-

lish this were: (1) to provide a special person whose job would be to come into class, observe and give constructive criticism after class, (2) to check on the success of students after they leave a course, (3) to keep a continuous record of students' progress within the course, and (4) to evaluate student drop-outs.

5. The instructors were continually faced with the problem of tardiness. In some instances, students did not arrive until the second half of the class period.

6. There was no uniform pre-service teacher training received by the instructors. While two of the eight instructors had received vocational teacher training prior to teaching, the others had not. All indicated such training would have been helpful.

7. Insufficient attention was paid to the work needs of the students. The instructors lacked a knowledge of the students' work experience and education background. This was noticeable in the kind of learning activity carried on in class, the motivational technique of the instructors, and methods employed in interpreting the subject matter to the students. In each case, the instruction could have been improved by relating it closer to the individual needs of the students.

8. There was a wide range in the classroom opportunities for students to use what they learned in class. These differences existed not only between separate courses taught by different instructors,

but between various class sessions of a course taught by any one instructor.

9. The instructors were highly competent in their knowledge of the field they were teaching. They were able to answer students' questions on almost any phase of the course being taught.

10. Most students believed they received worthwhile instruction. The students indicated this in their ratings of the classroom teaching and by the fact that most of them continued attending class.

Let me conclude by telling you that since my experience on that study, the case study techniques have been used by me in helping myself to improve in administration, supervision, and my own classroom teaching. I have changed a number of my teaching practices. From a firsthand experience viewpoint, I recommend you make use of research in improving your instructional program.

Mr. Robert Duran
Industrial Arts Instructor
Regis High School, Eau Claire, Wisconsin

LOCAL INDUSTRIAL EDUCATION TEACHER ORGANIZATIONS

A discussion of problems encountered and procedures followed in organizing area industrial education teachers for the purpose of profession growth. Mr. Duren is a charter member and president of the Northwest Wisconsin Industrial-Technical Education Association.

ORGANIZATION OF THE N. W. I. T. E. A.

At the 1963 Northwestern Wisconsin Education Association Convention in Eau Claire, where industrial arts and technical teachers were holding their annual Roundtable meeting, a group of teachers made the suggestion that an organization be formed which would meet periodically throughout the academic year. It was the consensus of opinion that one meeting per year was insufficient to meet the needs of the professional teacher. Consequently, a committee was formed to organize the suggested club or organization.

Many committee meetings followed and with the advice from teachers who were familiar with industrial arts clubs in the past a set of goals and purposes was listed.

1. To encourage persons concerned with industrial arts and technical education to participate in professional activities.

2. To foster the improvement of facilities and educational programs in industrial arts and technical education.

3. To promote an exchange of ideas among industrial arts teachers, technical teachers, school administrators, and representatives of industry.

4. To identify youth talented in technical fields and encourage them to undertake advanced work.

5. To provide a means by which the industrial arts and technical teachers in the northwest area of Wisconsin can become better acquainted.

6. To promote public understanding of the purposes, programs, and needs of industrial arts and technical education.

Letters were sent by the committee to all industrial arts and technical teachers in the area informing them of the proposed organization and of an organizational meeting. The meeting was held at the Eau Claire Technical Institute with the following aims:

1. To select a name for the organization.

2. To set the amount of annual dues.

3. To decide upon the number of meetings to be held each year.

4. To elect a slate of officers.

5. To divide the area into 5 sections and select area representatives.

6. To authorize the planning committee to plan the constitution and organizational structure of the club.

The meeting proved to be very successful as the preliminary work for the organization was finalized. The name for the club was agreed upon to be: Northwest Wisconsin Industrial Technical Education Association. The amount of annual dues was set at $2.00. Five meetings per year were recommended. The officers were elected. The northwestern section of Wisconsin was divided into five areas and area representatives were chosen. The planning committee was authorized to draw up a constitution and submit it to the members for their approval. The constitution was drawn up, submitted to, and approved by the members at another meeting. Future ideas for the organization were also presented to the members for their evaluation:

1. Curriculum Improvement

   Ideas from other members

   Tricks of the trade

   Saturday workshops

   Comparing courses of study

   Planning high school classes to meet the needs of technical and college standards

2. Public Relations

Guidance

Displays

Open House

Publications (Newsletter to members)

Administration

Television

3. Facilities

Shop layouts

Equipment

Lecture-demonstration sheets and techniques

Purchasing and budget planning

Inventory and record keeping

4. Keeping up-to-date through

Field trips to other schools and industry

Exchange of project plans

Newsletter

N. W. I. T. E. A. IN ACTION

The past two years have been very successful beginning years for the N. W. I. T. E. A. The membership has grown to 87 members. Teachers who have had no contact with others in their particular field have gained new acquaintances and have found themselves

discussing and solving problems encountered in their teaching situations. Members who have not belonged to professional organizations have become more conscientious of their role in their field. The inexperienced teachers have had an opportunity to gain good professional attitudes by the example of and the leadership of the more experienced teachers.

All of the members have gained knowledge and experience by hearing speakers with topics related to their field and by seeing industry in action. Topics and tours of industry have been:

Topics

1. Teacher Liability in the Classroom
2. Problems of Industrial Processes in Turkey
3. Power Mechanics and How to Incorporate it Into the School Program
4. The Conceptual Approach to Industrial Education
5. Modern and Future Concepts in the Power Mechanics Curriculum

Tours

1. Eau Claire North High School (new school and shops)
2. Eau Claire Technical Institute (new school and shops)
3. Chippewa Falls Vocational School
4. Johnson Manufacturing Company - Chippewa Falls

5. Fabri-Tek Inc. - Eau Claire

6. Frederick Post Company - Owen

7. Shell Lake Boat Company - Shell Lake

8. Peterson Boat Company - Shell Lake

N. W. I. T. E. A. IN THE FUTURE

The responsibility for the future success of the N. W. I. T. E. A. is in the hands of the officers and members. Success can only be obtained by the re-evaluation of the objectives of the club and the participation of all the members.

It is reasonable to believe that from the activities carried on and by the interest shown by the members during the past two years, the N. W. I. T. E. A. should grow to become an ever increasing popular and valuable professional organization.

Mr. Robert Ristau
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Department of Public Instruction
Madison, Wisconsin

VOCATIONAL INDUSTRIAL EDUCATION IN THE HIGH SCHOOL CURRICULUM

A summary of pilot vocational programs operating in the state and suggestions for participating. The Vocational Education Act of 1963.

As we look ahead to the development of new programs in secondary school vocational education, the area of vocational industrial education looms prominently as one needing careful study and consideration.

Although it is undoubtedly safe to assume that many of you are familiar with the Vocational Education Act of 1963 and are conversive with the historic report by the Panel of Consultants, it seems appropriate to preface our discussion with a review and summary of some of the significant aspects of both the Consultants' report and the 1963 Act.

The Panel of Consultants "laid it on the line" when making their recommendations; among their recommendations the following are of particular significance to high school educators:

1. All high school students should have access to vocational education programs;
2. Programs should be developed for more occupations;

3. Quality students should be maintained;

4. The curriculum should be derived from an analysis of common features of occupations.

The 1963 Act followed very closely the recommendations made by the Panel. The Act set out a mandate, it seems to me, for us to develop more and better vocational education programs as part of our total high school curriculum. It further challenges us to realistically prepare for employment high school graduates who will enter the labor market upon graduation, and our objective must be specific in terms of developing an employable person ready to meet the current needs of today's occupations.

In initiating the program of vocational education for our Wisconsin high schools, it seemed most desirable to turn to a complete pilot study in vocational education. The many kinds of programs possible under the Act, the many approaches to implementation, and the great potential for a variety of activities made possible by the Act, all indicated that the initial program development needed careful direction. We sought and obtained a selected group of schools willing to experiment, [illegible] theories, and "reach out" for new programs. Today we have 34 Wisconsin high school participating in the initial stages of the development of programs of vocational education.

I think there has been some misunderstanding concerning the selection process used in determining pilot schools. We did not attempt to pick only those schools which had existing programs which were excellent or outstanding in the various fields. As a matter of fact, some of the schools selected were brought into this program because of certain problems which their schools presented. We attempted to obtain a true cross section of schools in terms of size of school, geographic location, and economic conditions within the community; this was accomplished to the satisfaction of those of us who are working with this program.

Our pilot schools have a great challenge before them: to develop to the greatest extent possible in every community represented, broad programs of opportunities in vocational education. And that is the challenge clear and simple. We have not and will not hand down to schools a series of courses which must be added to their curriculum. This is, and must be, a local community-oriented program. In every school and community situation in our pilot school program there will be conducted a thorough, realistic study of the potential for new programs based on needs of students and of businesses and industry. Some existing courses need revamping; some new courses need to be introduced; new testing and guidance programs need to be developed; staff members need to be re-oriented; cooperative

education as a dynamic part of vocational education needs to be tried out.

We expect to see cooperative education programs--those programs where students are enrolled in "capstone" courses in high school and also placed on jobs for part of the school day where the school and the employer share in the responsibility for the training and supervision of the student--to be developed in many occupational areas. We know that there are problems with cooperative education programs in the T & I area, but one of the things that our pilot schools are doing is to make a thorough attempt to develop cooperative education programs in each curriculum area. Where cooperative education programs, as such, can not be developed, our vocational courses need to include some realistic "participating experiences" which will give students insights into the actual job and its working conditions and which will help them become better prepared for the particular occupational field that they are hoping to enter.

Now, in the general area of vocational industrial high school education the 1963 Act makes possible a new kind of flexibility and we expect to see some desirable innovation to the traditional T & I programs that were developed in other states under Smith-Hughes and other Acts. We had to begin our new efforts in T & I without a special resource person on our staff; so, in conference with

Dr. Jarvis and others, it was decided that appointing a State Steering Committee for High School Trade and Industrial Education would be a very desirable move for us. A State Steering Committee was set up, and several meetings were held during the winter and spring of 1965 and a statement on high school vocational industrial education was developed. I would like to briefly review that statement with you, because it is an excellent one and helps put vocational industrial education into the perspective which it needs in the high school program.

The "Statement" says, to begin with, that the program of industrial arts presenting the broad base courses with a general emphasis in skills and knowledge related to industrial processes is still a vital part of the high school program. It explains that high school students should be encouraged to take various industrial arts courses to help get exposure in a realistic way to a variety of industrial education experiences. It states that programs to be developed in vocational industrial education will generally be found on the 12th grade level, thereby giving students an opportunity to specialize after they have had an opportunity to go through the basic, fundamental, exploratory courses. It further says that these senior level ("capstone") courses should be developed with the assistance of advisory committees which represent both the educational institution and the industrial society

which together share a concern for the education of these students. It further goes on to say that vocational education programs must be realistic in preparing potentially employable students for available entry occupations. Students completing these vocational courses should develop occupational competencies which will allow them not only to secure jobs but to have initial success in carrying on required duties.

The "Statement" also states that for those occupations which require and demand training beyond the high school level in a sub-professional (technical) area our high school courses should be specific in helping students prepare to enter post-secondary programs which will lead to advanced vocational or technical placement. It seems to me that this latter point has a tremendous potential in industrial and technical education where such factors as required equipment, qualified instructors, age restrictions in terms of employment, and the amount of time needed to develop proficiency are handicaps in terms of what can be done realistically on the high school level.

We have a tremendous potential for vocational industrial education within our Wisconsin high schools. Last year, for instance, there were 108,996 student enrollments in Industrial Arts subjects. Enrollments in some of the advanced courses looked like this: General Shop IV: 2,479; Metals IV: 505; Woodworking IV: 1,140; Auto

Mechanics II: 808; Printing: 2,921. Classes in Mechanical Drawing, beyond the second year of drawing, enrolled 180 students. (And, 301 girls enrolled in Industrial Arts; does that surprise you?) Certainly these figures tell a story in terms of our ability to reach and influence young people in our school systems in terms of our programs of industrial education. I don't know how many of the above courses were "vocational", but certainly they must have pointed many students towards trade and industrial occupations. Added to these this year are courses with a specific orientation to available occupations; courses such as welding, carpentry, machine drafting, and electronics will offer new opportunities for vocational preparation to capable students in our pilot high schools.

Just a few weeks ago, the State Employment Service analyzed job vacancy data for Milwaukee, Waukesha, and Ozaukee Counties, and recommended to us the following specific occupational areas as having "implications for vocational training in secondary schools" (the quotations are those of the W.S.E.S., and they considered both jobs available and levels of training required): printing, drafting, machining, welding, construction trades, and auto mechanics. An analysis of similar data for Wood County resulted in similar conclusions. We need to supplement such recommendations with local surveys and job analyses.

Where possible, we need to broaden our vocational education offerings and prepare students for job clusters where commonalities in training needs can be identified. Some of our new courses will be pre-technical in nature, and very likely they will attract many more and probably better students into our industrial education departments. We have a responsibility to make these offerings of high-quality if we are to attract and obtain high-quality students.

One of the changes that vocational education will bring to us is the evaluation that is part of the new vocational program. This will be done not on the basis of the number of "A" and "B" grades which are given, nor on the nice projects which students complete as part of some course requirements--but on the number of students who leave these courses, successfully enter the labor market, and secure employment related to their area of preparation. An exception to this, of course, will be for those students who are enrolled in courses designed to prepare students for entry into a specific post-secondary advanced vocational or technical program. In those cases, our evaluation will be based on the number of students who successfully enter the post-secondary programs and achieve advanced placement in them. Hopefully, we will be concerned enough to follow these students through their post-secondary education careers to see whether or not they successfully complete the programs on that level.

But, in any case, we will know whether or not we have "hit the mark" with our efforts to provide realistic programs in light of today's needs. It seems to me that this kind of evaluation should be a welcome addition to our school analysis, and it also points out even more clearly the reason for the requirement in our program that students make a "career choice" prior to entering our programs. This requirement also demands that we have an accurate analysis of the labor market; our teachers need to have occupational experience so that they know the "in's and outs" of the occupations for which their students are being prepared; and advisory committees and other resources need to be effectively utilized to keep our programs in tune with the changing demands of industry.

What makes one course "vocational" and another "non-vocational"? That isn't an easy question to answer. But Mr. Prichard suggested that I try to explain what makes a course "reimbursable" and so I will attempt to summarize our requirements for you. Our discussion to this point hopefully has shed some light on the answer, but I will try to be more specific at this point.

First of all, we have to stop kidding ourselves about whether or not we are really concerned with preparing our students for jobs. The stated objective of the course must be the preparation of students for specific kinds of occupations, and these need to be identified by

D. O. T. job classifications; our vocational courses should prepare students for job clusters where possible.

Secondly, students must be selected for vocational courses on the basis of (1) their interest in the occupation prepared for, (2) their abilities and aptitudes, and (3) their potential for employment. This is an important factor, and it underscores the need for a good, well-organized pattern of introductory or exploratory courses in the early years of high school as well as a good guidance and counseling program. Prior to enrolling in a vocational "capstone" course a student should have received some good foundation instruction in courses which have a broader objective than the vocational course itself, (most of our industrial arts programs accomplish that objective).

Thirdly, instructors must have some firsthand knowledge of the occupations for which they are preparing students--they must have worked in the occupational area involved and must be up-to-date in terms of current job requirements and operations. The teacher of the "capstone" course must hold a vocational license issued by the Department of Public Instruction.

In addition, there must be an Advisory Committee on the local level to help give advice and direction for the courses being taught. The nature of the instruction itself, the kinds of equipment used, the kinds of processes and operations taught must be realistic in terms of modern-day job requirements.

Before we can consider reimbursement for any course, then, the local school must submit to us in writing the plan to be followed in accomplishing the points stated above. These plans are submitted in application form on our Form HSVE-3 and are carefully reviewed by us. Upon approval of the course and the local plan, various expenditures are either approved or "lined out", as the case may be, and a copy of the approved project is returned to the local school. This local plan then remains on file in the Department of Public Instruction as a kind of contract between the local school and the State Department for the operation of the program, and it substantiates the ultimate expenditure of federal funds for that particular project.

In conclusion, I would like to share this definition of vocational education with you. Vocational education today is a total program of education--dynamic, flexible, and realistic, concerned with the total development of an employable student in terms of attitudes, work habits, skills, and related knowledge. Although the direction for new programs in T & I on the high school level is not particularly clear, we won't get needed answers by standing still or waiting for others to find the answers for us. What we do today and tomorrow must be based on a realistic identification of needs and on sound planning. We are interested in the American Industry conceptual teaching experiment; it may be the answer to modern industry's needs, or it may

become a part of the answer. We are all interested in the same thing: a program of education that will serve our high school students in their need to realistically get ready to assume their roles as wage earners in industry. Only one thing seems evident: change is needed and change there will be, and we'd best be ready and willing to adapt ourselves to it. The answer to the question, "What is the best total program of education for the comprehensive high school of today and tomorrow?" will be forthcoming; let us hope that we in vocational education, especially in industrial education, are a vital part of that answer.

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THE CONCEPTUAL STUDY OF AMERICAN INDUSTRY

A progress report on the program including operations at junior high, senior high, and college levels, problems encountered, new developments, and outlook for the future.

This is a report on a research project being conducted at Stout State University. It is a project which is developing a new curriculum area for the study of industry. This new curriculum area will be called "American Industry," not merely to coin a new name but to differentiate it from other proposals.

This project has developed through three stages of funding. A small grant of $7900 was obtained in 1964 through the U. S. Office of Education. This grant was used to develop the rationale and identify ten secondary teachers in Minnesota and Wisconsin who were interested in developing a new curriculum. A second grant of $65,000 was obtained from the Ford Foundation to cover the costs of a summer workshop for the participating secondary teachers and for a pilot year in which different approaches were tried in the schools. We are presently entering a five year study, funded by the U. S. Office of

Education, with a budget of $202,000 for the first year. At the conclusion of this study a complete curriculum in American Industry, plus the instructional materials will be developed. It is also expected that a suggested teacher education program will be developed by the termination of this grant. The effectiveness of this curriculum in developing an understanding of American Industry will be carefully evaluated.

At present, there are seven full-time, professional staff members, plus three secretaries and eight graduate assistants working on the American Industry Project. Seventeen teachers in Minnesota and Wisconsin are engaged in teaching a first level course for the American Industry curriculum.

OBJECTIVES OF THE STUDY

The objectives for the program in American Industry have grown from a careful study of previous statements of the purposes of American secondary schools.

An early statement of objectives by the Commission on the Reorganization of Secondary Education proposed the well-known seven cardinal principles. In 1938, the NEA Educational Policies Commission reduced these seven cardinal principles to four: self realization, human relationship, economic efficiency, and civic responsibility.

Acceptance of these broad goals, dipping into every facet of human life, has led the schools to assume many responsibilities

that were formerly considered the domain of other institutions in our society. While the public has come to recognize that the schools must consider all these factors, they have also shown a growing concern that the primary mission of the schools not become obscured.

As a result of this concern, the Educational Policies Commission, in 1961, isolated the central purpose education as the development of the rational powers of man.[1] The Commission clearly stated that this is not a unique contribution of education, nor is it the sole purpose. It represents, rather, an attempt to convey the idea that the rational powers are central to all other qualities of the human spirit.

A corollary of this central purpose lies in the responsibility of the schools to acquire, preserve and disseminate that knowledge which has been developed and refined by the human intellect and which interacts with man's environment.

The broad objectives of the American Industry program were derived directly from an acceptance of this clarified purpose of education. They are (a) to develop an understanding of those concepts that apply directly to industry and (b) to develop the ability to solve problems related to industry.

The emergence of technology as an ever more potent force in the molding of society appears to justify the inclusion of a study of industry in the public school curriculum. The problems of the future are

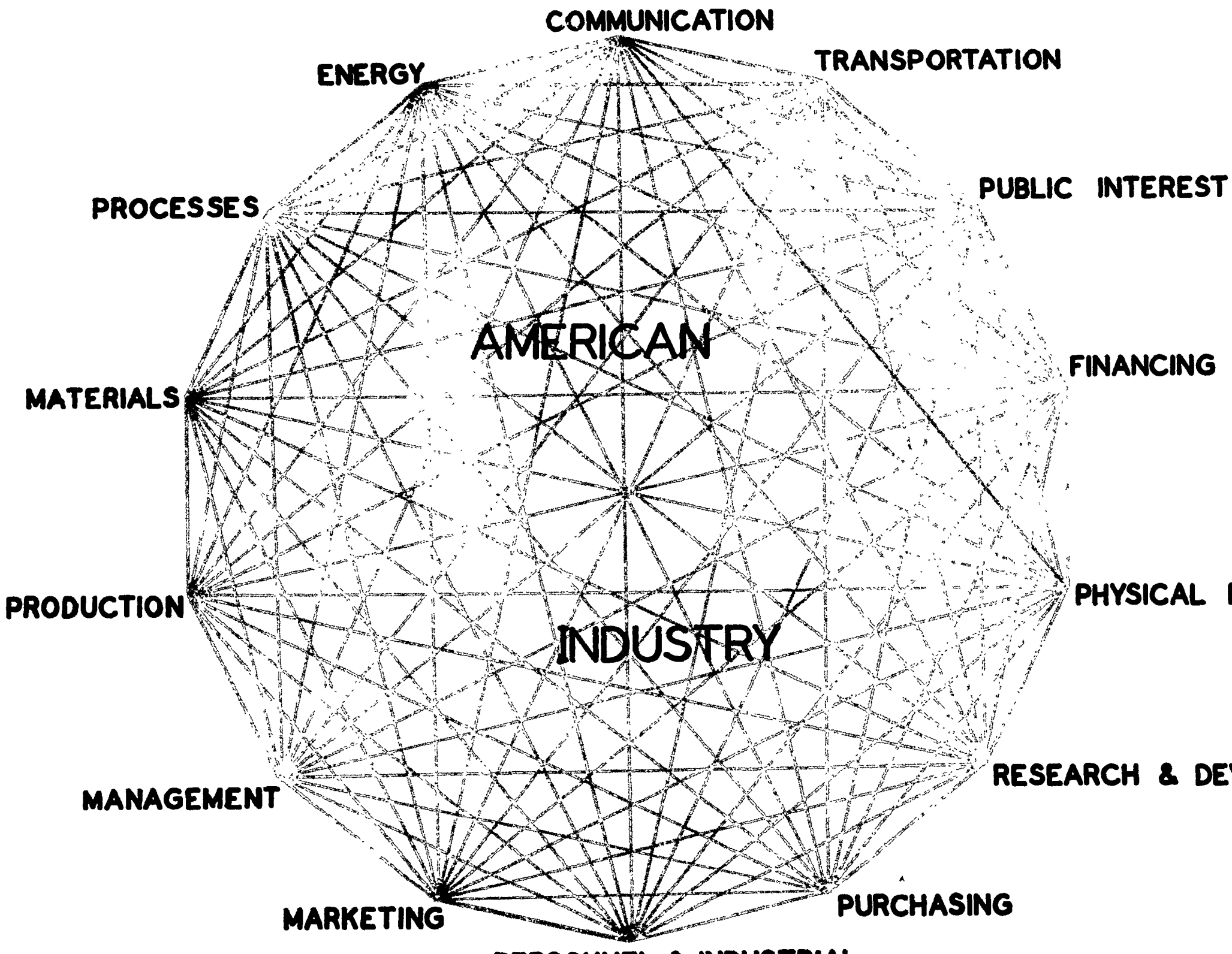
inseparable from increasing industrialization, and young people must be led to an adequate understanding of these forces that impinge upon their daily lives.

STRUCTURE OF AMERICAN INDUSTRY

The recognition that content taught in the typical industrial arts shop is basically lacking in coherent structure led to what is regarded as one of the primary strengths of the program of American Industry. The typical industrial arts offerings have been based upon an analysis of selected trades in order to identify specific manipulative operations and related information. The program of American Industry, on the other hand, is based on an approach that attempts to identify basic concepts common to a variety of industries.

Structure, as used here, simply refers to a unified, basic description of the several facets of industry as found in contemporary American society. Industry is conceived in this structure as consisting of several major areas, each of which is further subdivided into still smaller units. Industry, for the purpose of this project, is defined as an institution in our culture which, through the application of knowledge and the utilization of men, money, machines, and materials, produces goods or services to meet the needs of man.

The figure, "Structure of Industry Showing Major Concepts," graphically presents this process of analysis. The breakdown does



THE STRUCTURE OF INDUSTRY

not stop here; it continues to still smaller units, until the ultimate goal--a minor concept-- is reached. It should be emphasized that each level, division and subdivision represents a concept--something to be studied for understanding.

It must be stressed that this structure, unlike those of many other proposals, attempts to categorize understandings rather than specific industries, materials, or occupations. Thus, understanding of concepts derived from this structure would be universally applicable in any specific industry which encompasses it.

THE CONCEPTUAL APPROACH

The increasing complexity of this technological age, leading to massive accumulations of knowledge, has made untenable the atomictic approach to the development of teaching content. It must be recognized that the dynamic nature of knowledge makes continuous demands for change on the part of man. While specific knowledge tends to change rapidly, broader concepts are more stable, although it must be admitted that even concepts may change in time. The concentration upon the acquisition of concepts rather than the emphasis on specifics should, however, enhance the possibility of retention, transfer and application of knowledge to new and different situations.

After a rather exhaustive review of the literature on conceptual learning, the following definition of a concept was developed for the

purpose of this project. A concept is a psychological construct resulting from a variety of experiences (detached from the many situations giving rise to it) fixed by a work or other symbol, having functional value to the individual in his thinking and behavior. Since concepts are the materials and tools of thought processes, most scholars in this field would agree that they are the most precious products of the educational process.

Concepts may be grasped at all levels of understanding from concrete to abstract; from vague to clear; from inexact to definite. Because of the wide range of understanding possible in the process of developing concepts, this program is cognizant of the variance of individual differences in students. One student may have a very low level of understanding of a given concept and another a much higher level. The important consideration, however, is that they both have understanding.

McDonald speaks of two types of concepts. Informal concepts are seen as those which man forms independently and haphazardly as he interacts with his environment. Formal concepts are identified as those which the school systematically attempts to develop.[2] The task ahead lies in identifying the formal concepts which will complete the structure of industry shown in the figure.

Before the student can progress in the development of a broad concept, he must have a basic system of concepts built upon previous

experience. Without this background to draw upon, he will find it difficult if not impossible to categorize the various processes presented. Secondly, he has to react to the material presented; it is necessary for him to take an active part in the process.

This point deserves further emphasis. The need for active participation in concept formation is repeatedly stressed in writings on the subject. The nature of the activities required varies in accordance with the learner's degree of sophistication in the subject matter under study. In the early stages of the acquisition of new concepts which are quite different from the experiential background of the learner, direct involvement is essential. For this reason, the industrial arts laboratory has been chosen as the place in which to introduce the study of industry.

Basic to concept formation is the role played by the senses in perceiving objects, events and attributes. Keith pointed out the abstract nature of a concept developed through perception but rooted in reality: "The concept is not cut off from concrete reality, it is simply the mind's way of thinking the many into one, or as philosophers say, finding unity in variety."[3]

THE PROGRAM AS A REPLACEMENT

As stated previously, the evolving program of American Industry is not envisioned as merely a new approach, or addition, to present

industrial arts offerings, but rather as displacing the traditional programs in the secondary schools. The thinking of leaders in the field as expressed in professional publications and convention proceedings, in addition to personal observations of the writers over the past ten years, has brought a full realization of the need for a drastic reorientation. Modal practice in industrial arts reflects a lack of logical consistency growing out of a variety of educational philosophies.

A summary comparison of some of the essential characteristics of American industry and industrial arts may be seen on the following table:

ESSENTIAL CHARACTERISTICS OF AMERICAN INDUSTRY AND INDUSTRIAL ARTS COMPARED

1. Industrial Arts: Composed of knowledges concerned with production in specific industries for pre-vocational or avocational purposes.	American Industry: Composed of a study of the knowledge that contributes to an understanding of the total institution of industry for general educational purposes.
2. Industrial Arts: The selection of specific industries from among the many possible choices has led to a multiplicity of laboratory and curriculum patterns,	American Industry: The identification of a structure composed of underlying concepts should make possible the development of a coherent, unified, national curriculum and the standardization of

making a coherent, unified, national program most difficult to achieve.	laboratory facilities.
3. Industrial Arts: Pre-selected skills, representative of the industry under study, are identified and serve as the orientation for the course of study.	American Industry: Concepts serve as the orientation for the course of study. Specific skills are introduced as they become necessary in the activities designed for the development of the concept.
4. Industrial Arts: Attempts to duplicate the tools and machines of industry necessary to develop pre-selected skills and specific knowledges.	American Industry: Makes no attempt to duplicate the tools and machines of industry, but utilizes what facilities are needed to develop understanding of concepts.

UP TO THIS POINT

It is expected that during the pilot study a great number of questions will emerge. As these questions are identified, further study and experimentation will seek answers. It must be re-emphasized that the program is still in the developmental stages; however, the project staff is confident that the basic rationale provides the needed direction. Whether or not it meets full acceptance, all those involved

in the project are proceeding with the exhilarating feeling that they have accepted the challenge of defining the discipline represented by American Industry.

FOOTNOTES

1. Educational Policies Commission. "The Central Purpose of American Education." (Washington, D. C.: National Education Association, 1961), p. 4.

2. Frederick J. McDonald. Educational Psychology. (San Francisco: Wadsworth Publishing Co., Inc. 1959), p. 133.

3. John A. H. Keith. Elementary Education. (Chicago: Scott, Foresman and Co. 1907), pp. 128-29.

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COMPUTERS AND PROGRAMMING SIMPLIFIED

An introduction to data processing including the operation, function and use of the IBM 1620 computer.

The discussion will be concentrated on the IBM 1620 digital, general purpose, stored programmed computer system with an introduction to Fortran the debugging of the source deck, compilation of the object deck and the obtaining of the solution to the given problem will be given. It will be noted that a digital computer deals with discrete quantities such as a desk calculator in comparison to an anolog computer which deals with continuous quantities such as the basic slide rule making the answers an approximation. Comparison of computer systems will show that no matter what type are being used, the five areas of operations input, memory, arithmetic-logic, control and output are the same. In discussing the concept of a stored program, it will be pointed out that a stored program is the ability to store a program within the computer, which is a detailed list of instruction or commands which a computer is to carry out in the solution of problems or in the manipulation of data.

In the demonstration, the Fortran used will be Basic Fortran (Fortran with Format) and the problem to be coded will be to find

solutions to given performance and economy formulas where the independent variables can vary through a given range of values. The performance formula used is for predicting the performance of a given make of car in accelerating from 0 - 60 miles per hour and the solution will be in seconds. The economy formula to be used is for predicting the economy of a car traveling at 50 miles per hour and the solution will be in miles per gallon.

The following bibliography can be consulted to give one an introduction to Fortran Programming and to help one understand computer systems to a small degree.

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SUBMITTING ARTICLES FOR PUBLICATION

Instruction concerning the requirements and suggestions for submitting publications to newspapers and periodicals.

Every teacher, at one time or another, feels that he has something important, professionally important, to say to his colleagues. Maybe he has tried out a new teaching method and found it especially effective. Maybe he has discovered that a project he has used several times in a shop course has applications that he hadn't dreamed of. Maybe he just wants to get something off his chest.

Usually when one of us finds himself in that position, one of two things happens. Either he sends the article off to a magazine or he procrastinates and often sees somebody else get into print with the very idea he had been thinking of writing about.

Even when the prospective article writer does whip the material up and send it off, it is often rejected. Sometimes the reason for rejection has nothing to do with the way the article was written or submitted. The editor may just not have been in the mood for that sort of article that day. (All editors put much faith in the feelings in their bones.) Perhaps the editor was planning the current issue

around a theme entirely unrelated to our hero's article topic. These are reasons for rejection--and there are many others--that no writer can fight successfully. But, there are other reasons for rejection that the wouldbe author can combat.

The leading causes of article rejection that can be countered successfully are three: (1) Failure to chose the right magazine, (2) Failure to take into account the publication's time table, and (3) Slip-shod organization and presentation of the article's content.

Although most writers of professional articles are concerned primarily with the idea they want to convey, they will invariably fail to get it published if they don't give massive consideration to the wouldbe audience. Countless articles have failed, not because they weren't worth publishing, but because they were sent to the wrong magazine.

The best way to determine whether your article is right for a given magazine is to study that magazine carefully over a period of months or maybe even years, if it is a monthly. And then decide whether your article is enough like those that have been published previously to fit the magazine's needs. The magazine's needs, of course, are based on what it considers to be the needs and wants of its readers. So a study of the readership of a magazine can also be helpful to the writer trying to decide whether to submit an article to it. If, for

instance, your article is supposed, in your opinion, to appeal to a broad cross-section of teachers of industrial and technical subjects, then you probably wouldn't want to send it to a magazine whose subscribers were drawn almost exclusively from only one phase of the industrial arts teaching field.

It is quite possible that even after close study of a magazine, the writer will not be able to decide whether his article is right for that publication. If this is the case, write to the editor and ask him--before you waste your time. In the trade, this letter is known as a query. It should include a summary of the content (a brief summary) of your proposed article, and, if possible, a sample of it--maybe the first paragraph.

Often a perfectly good article is rejected, not because it was sent to the wrong magazine, but because it was sent at the wrong time. Remember that magazines work weeks and months ahead of publication. A writer can't expect to submit an article to a monthly magazine 15 days in advance of the publication date and get it published. An article should be submitted to a monthly magazine three months in advance of the expected publication date--sometimes more. The interval can be reduced for publications that appear more often. But regardless of the frequency of publication, the writer should be sure to give the editor more time than you think he needs to make his

choice. If you are in doubt, write and ask him.

An editor will put up with a lot for an article he really wants. He'll even accept it in pencil. But there are few articles that an editor wants that badly, and he probably will arbitrarily throw a penciled piece away, confident that there are others, probably on the same topic and probably better, in the same mail. A wouldbe article writer should never tempt an editor that way. It stands to reason that an article that is attractively presented--other things being equal--will have a better chance of being accepted than the one that is not. Attractively presented, in this case, means typewritten, double-spaced, with no erasures and as few inked corrections as possible. (Some are permissible.)

Beyond the physical appearance of the article there are writing requirements that should be met. The article should be organized carefully. The general format for a professional article--one that deals with a professional or technical topic--is the same as that for a good speech. It should have an introduction which tells the audience what the article is going to say, an explanation which gives detail, and a summary which tells what the article has said.

More and more professional and technical publications are moving to an introductory summary--a summary at the beginning rather than the end. The writer should study his magazine to see whether it has

adopted this practice, and, if so, imitate it. Otherwise the standard formula is acceptable.

Beyond that formula the writer should try his best to make his article interesting even though its primary purpose probably is not to entertain. An attention-catching beginning is always recommended--even for the most stodgy academic periodical. All other things being equal, the writer should use as few words as possible to do the job. Don't scrimp and save for the sake of scrimping and saving, but avoid using four words if one or two will do.

Don't fall all over yourself repeating points already made in an effort to carry the reader along with you, but try to lead him just the same. Reading an article is much like taking a long trip. If you have a map to follow and can check off the towns or miles as you go, the trip is less tedious. In the same way, an article which reminds the reader from time to time where he's going and where he has been is easier to read than one that makes the reader constantly look back to see what has been said and glance warily ahead to see how much more there is. Anybody who has read a textbook knows the feeling. And all editors have read textbooks.

So, if you have the urge to write an article, first ask yourself who might be interested in your topic and choose the magazine that person reads. Then make sure you write the article in plenty of time to get

it to the magazine several months ahead of the expected publication date. When you're ready to write, make it look good, and as you write, pity the poor reader and make it worth his while.

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PUBLIC RELATIONS FOR I. E. TEACHERS

A discussion of how you can improve your image in the eyes of the administrator, counselor and public.

Technically speaking, public relations is defined as a science which seeks to bring about a harmony of understanding between any group and the public it serves and upon whose goodwill it depends.

For too long of a time, we, as teachers, have been guilty of talking only among ourselves. It is time we start telling our story to students, administrators, and to the public.

Industry would not survive very long if it did not continually advertise its contributions to the public. Moreover, no one industry tells the public about another industry's product or service. A similar parallel exists in our profession. Teachers of other subject areas do not spend time extolling the merits of another subject area. Each must tell their own story.

It is high time that we in the industrial education field make a concerted effort of public relations. We are relatively new in education circles and are misunderstood by many people. Furthermore, our administrators have a very time-consuming job which leaves

them little time to promote any single subject. In many cases, we ourselves, are not too certain of our purposes. Therefore how can we expect our administrators to be well versed in all different subject areas? Actually when we were hired, we were selected to take care of our own subject areas and our task as a teacher includes not only teaching the students, but the administration and public as well.

This is no small task when one realizes that our field is undergoing rapid changes in technology. Then, too, we represent but a small part of the total number of teachers employed. It may surprise you to learn that there are only about 40,000 industrial arts teachers in the whole United States. This number, when divided into a population of 192,000,000, results in a ratio of only about one industrial arts teacher for every 5,000 people. While this fact should make you feel important, it should also make you realize the task ahead.

Whether you are aware of it or not, as an industrial education teacher you are the nucleus of public relations. The impression you make on the public is public relations . . . and you cannot avoid engaging in it.

It has been stated that good public relations is 90 percent doing a good job and 10 percent telling people about it. So after assuring yourself that you are doing the best possible job, then you must develop a plan to make the public aware of it. In other words, plan ways

and means of first deserving and then winning the enthusiastic support of the public.

The program of public relations that you develop should seek to accomplish these goals:

1. To inform students, administrators, and parents about the subject area called industrial education.

2. To generate interest and obtain support of the community in maintaining a continual, effective up-to-date industrial education offering.

3. To interpret, inform, and clarify any misconceptions about industrial education.

4. To establish rapport between the personnel of the school and the community with your subject area.

5. To open, and keep open, the lines of communication between the public and your department.

6. To continue to point out the need for industrial education for all youth and adults.

The effectiveness of your public relations will be determined, in part, by the media selected and the projects undertaken. The size of your community will certainly affect the range of your public relations program. Devices, techniques, and procedures should be mobilized to best fit the needs of your particular community.

The usual devices or media generally available to most industrial education teachers can be listed as follows: (1) Home visitation, (2) Personal notes, (3) Parent conference, (4) Open house, (5) Community projects, (6) Adult classes, (7) Circulate magazine articles, (8) Use specialists from community, (9) Set up faculty night, (10) Help fellow staff with simple problems, (11) Newspaper, (12) Speak before civic and public groups, (13) Radio and TV, (14) Project displays, (15) New equipment displays, and (16) Student I. E. Club.

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THE USE OF PROGRAMED INSTRUCTION IN INDUSTRIAL ARTS

An introduction to programed instruction with specific suggestions for its use in Industrial Education, including the values, advantages, and limitations.

Programed instruction, through its ability to provide efficient, individualized instruction with little or no help from the teacher, appears to have great potential in providing industrial arts teachers with a means of greatly improving both the quality and quantity of their instruction.

Industry is rapidly accepting this form of instruction for many different types of training because they have found it to be advantageous in its ability to provide individual instruction, to produce better results in less time, and at the same time bring about a savings in the total cost of instruction. Military schools in their large scale training programs have likewise achieved better learning in less time and at a very substantial saving in training cost.

While programed instruction is a relatively new development, it is actually a combination of elements that have been used previously.

The written and graphic instruction that communicates the material to the student is not new. Programed instruction differs from other instruction in that the material is presented in very small units, the student is required to respond after each unit, and he knows immediately whether his responses are correct. The combination of frequent active student responses and the student's knowledge of whether he is "getting the material" serves to improve motivation and to make the learning stronger. In addition to this combination, programed materials, if properly prepared, differ from text books in that they have been tested or tried out to see if students can understand each of the points the writer has attempted to present. Since programed instruction presents information and checks on whether it has been understood, it is a valuable means of individualized instruction.

The initial emphasis in programed instruction was on teaching "machines." However, the machine is primarily only a means of presenting the material to be learned and has not been found to be any more effective for presenting the material than a programed book. It is the program (the material presented) that does the teaching, not the machine. Therefore, unless a record is needed of student responses or unusual control over the presentation is needed, teaching machines would not be recommended. The future of teaching machines appears to be in the type of machine that uses a computer.

Computer-based teaching machines are capable of more sophisticated branching and more types of presentation such as motion picture clips, and appear to have advantages over the present programed books and teaching teaching machines. A large majority of the programs currently available are in book form.

There are two main styles of programed instruction, linear or constructed response, and branching or multiple choice. In linear programs, the student writes or "thinks" his response to each statement or question. Each student follows the same path through the material. In branching programs, the material is usually presented in larger units and the students' understanding is tested by multiple choice questions. If the student chooses the wrong answer, he is told why the answer is wrong. Multiple choice questions may be used to route students through the material in large steps or in small steps according to their ability. A large majority of the programs currently available are in linear form, but this may be only because they are easier to write. Studies have not shown either form consistently superior to the other. It appears that the linear form might be more efficient for teaching rote material such as terminology and branching programs better for teaching discrimination or problem solving. Both forms do teach, so in choosing a program you need not be concerned with which style of program it is.

Very little programed material is commercially available in the industrial arts area, so it is not possible to say how well it works in this area on the basis of widespread use. However, if programed instruction has been found effective in industrial and military applications, and in public schools in the mathematics, science, and other subject matter areas, it should certainly be able to provide effective instruction in the industrial arts areas.

Studies of the use of programed materials on a limited basis have shown that programed materials can teach the related technical material in the junior high school industrial arts courses as well as can be done by reading assignments and lectures, and in a shorter length of time. Another type of programed materials has been found to be as effective as teacher demonstrations for teaching many of the manipulative operations that are taught in industrial arts, and when the students used the programed materials they required much less individual assistance than when performing an operation immediately after watching a demonstration.

The possible uses of programed instruction in industrial arts are many and add up to a substantial contribution to improving the effectiveness of the instruction.

The use of programs will allow each student to move through the technical material at a rate commensurate with his ability rather than

by group assignment of materials or by lecturing to the "average" student at the expense of both the slower and faster students.

The teacher will be relieved of much of the job of teaching manipulative operations. The better students should be able to perform almost any manipulative operation that is commonly found in industrial arts instruction with no previous instruction and practically no assistance. And, in all cases the student would get the instruction only after he was ready to perform the operation. Of course, in cases where the operation is dangerous, the instructor would need to check the set-up and be present when the operation was performed.

Programs in book form are easily used as homework assignments or for in-class study. They may be used as the main presentation, as supplementary material for the fast students, or as remedial material for slow students. Although slow students take longer to learn a given amount of material, they are able to master the material by proceeding at a rate that is within their ability. Make-up work because of absences would cease to be a problem.

Since not many programs are available in the industrial arts area, the question arises as to what the teacher should do about programed instruction at present. Since the writing of programs is a very time consuming job, all that most teachers can do is to be prepared to use the programs when they become available. Know the advantages of

programs and how they might be used in your area of instruction. When programs are available, be willing to try them out and encourage others to do the same. When programs are available, you should introduce your students to them carefully. It has been found that when students and teachers do not understand programed instruction the programs will lose their effectiveness and will not be accepted by the students.

In selecting programs for possible use in your classes, the following procedure is suggested:

1. Check the content of the program to see if it is sound. This is done by reading through the whole program and noting the different items of content and the correctness of the statements made.

2. See if the content presented will fit your particular class. Many programs will not fit perfectly and will require supplementary instruction at certain points as determined by the teacher. If a program requires too much supplementary instruction to fit your program, it might not be worthwhile.

3. Before adopting a program on a large scale, you should see how well the program communicates or teaches with the ability level and background of your students. The ability of a program to teach cannot be determined by the teacher reading the program. This can be determined only by trying it out on a small group of students.

A number of books are available that present a more detailed discussion of programed instruction than this short presentation. If you desire further information on programed instruction, the following publications are recommended:

Cram, David, Explaining "Teaching Machines" and Programming. San Francisco: Fearon Publishers, 1961.

Written in linear and branching style. Introduction and comparison of linear and branching styles of programming, other programing styles and teaching machines. Several teaching machines are pictured on pp. 83-86.

Fry, Edward B., Teaching Machines and Programmed Instruction, An Introduction. New York: McGraw-Hill Book Co., Inc., 1963.

General textbook on programmed instruction.

Mager, Robert F., Preparing Objectives for Programmed Instruction. San Francisco: Fearon Publishers, 1962.

Programmed book on writing the type of objectives needed for preparing programs.

Markle, Susan Meyer, Good Frames and Bad: A Grammar of Frame Writing. New York: John Wiley & Sons, Inc., 1964.

Designed to teach how to write program frames. Partly programmed. Chapters on: Linear Programming, Intrinsic Programming, The Third and Other Forces, Editing.

Hendershot, Carl H., Programmed Learning: A Bibliography of Programs Presentation Devices, 3rd ed., Bay City, Michigan: Carl H. Hendershot, 1965.

Lists all available programs by subject areas and by publisher. Also lists publishers of programs and equipment suppliers. Supplements available 3 times a year to keep bibliography up-to-date.

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STUDENT INDUSTRIAL ARTS CLUBS

A presentation on developing industrial arts clubs, activities that can be carried on, the values for students, the responsibilities of the advisor and community reactions.

A look at the annual from any high school in the United States provides sufficient evidence to the popularity of clubs in secondary schools. The enthusiasm and interest students develop in the high school clubs re-occurs when they attend institutions of higher learning. Annuals from these institutions attest to this fact. The Education Index under the entry "clubs" directs the reader to at least twenty-five other entries pertaining to clubs. Just about every subject field as well as many special interest areas have clubs. Our primary concern for this paper is with industrial arts clubs, but this does not preclude that persons interested in developing clubs in other areas would not find information of value.

Most articles written about student clubs were written by enthusiastic advisors, sponsors, or leaders. The purposes for writing were to inform readers of the host of desirable changes in students who participate in club activities. After reading these articles most persons would be sold on student clubs.

Mr. Donald Anderson, teacher of industrial arts at Badger High School in Lake Geneva, Wisconsin, investigated and experimented with an industrial arts club. His report titled "A Proposed Plan for an Industrial Arts Club at the Secondary Level" is an excellent source of information on industrial arts club activities and values.

The general format for this paper will include: Values of Industrial Arts Clubs supported with information gleaned from articles pertaining to clubs and handbooks of national organizations sponsoring clubs; the organization of clubs with recommendations from books on organizing clubs; club activities and programs which were suggested by authors of periodical articles and through research papers; and other information of interest to persons forming or sponsoring clubs.

VALUES

The increase in the amount of knowledge that needs to be transmitted is tremendous. Industrial Arts teachers, if they are to prepare their students for life in the industrial society, must keep pace with increases in knowledge and change. Since the formal class period is not changing other means of meeting goals must be provided. The industrial arts club is presented as a vehicle through which certain phases of instruction can be accomplished in a fashion that is amenable to students and teachers.

The U. S. Department of Health, Education and Welfare in their booklet, Educational Values in Club Programs, presents values based on the groups that assist or participate in club programs. The following list is taken from that publication:

A. Values for Students

1. Participate in a group concerned with their chosen occupational or interest field.
2. Associate with people that are recognized leaders in those fields.
3. Secure prestige and recognition by participating in a variety of challenging projects.
4. Pursue excellence in peer-approved activities.
5. Live in a social atmosphere in which they have a feeling of acceptance.

B. Values for Educators

1. Present techniques for developing motivation through self-determined student goals.
2. Develop through practice, democratic principles which are essential elements of citizenship.
3. Present club activities which offer an opportunity to develop an understanding and an appreciation of the free competitive system.

4. Develop relationships of club activities to the classroom program as a means of motivating student achievement in the total school program.

5. Present activities in the club program which will be useful in communicating essential aspects of industrial arts to various community groups.

C. Values for Community Leaders

1. Encourage students to explore business and industry.

2. Make a contribution to school activities.

3. Plan approaches for creating individual and group initiative.

4. Present opportunity for students to practice elements of leadership which are essential in business and industry.

5. Plan programs which help to explain the free enterprise system.

Research and writing support the listed values. The "proof of the pudding", so to speak, is presented by researchers and authors who have had experiences with clubs. These people are enthusiastic in their claims for club activities.

Mr. Donald Anderson in his research investigated the grade point averages of students who participated in his club program. He discovered that: (1) their over-all grade point average increased during their membership in the club, and (2) their grade point average in industrial education improved also. In addition to the changes observed

in academic achievement he noted changed attitudes in regard to school, especially industrial arts class. The activities of this club drew recognition from the student body, the teachers, the administration, and the community. These activities of the club aided not only the student members, but the industrial arts department as well.

One likes to stay as close to the topic as possible, but especially suitable materials not directly related may sometime be valuable. Such material was available in Social Education, February, 1965, in an article titled "How a History Club Can Inspire Students." The club was organized in and has been in operation since 1962. It was formed in the hopes that the student members might gain enthusiasm for the study of history. The results were far beyond the hopes of the original goal. The students in this club: developed the desire to study history more deeply; have become more concerned with community affairs; have enjoyed the personal satisfaction of a job well done; have learned how to do research and write up the necessary reports; did become active participants in discussion groups and experienced real-life lessons in social studies. We in industrial arts can learn from such examples.

ORGANIZING CLUBS

Successful undertakings are often preceded and followed by writings supporting the events. The writings generally include how to do

the successful event. This is true of club activities. The U. S. Department of Health, Education and Welfare, the American Industrial Arts Association, and the Texas Industrial Arts Association are three organizations that provide handbooks which contain information on organizing student clubs.

The Handbook of the Texas Industrial Arts Association has an eight point directive on the organizing of student associations that are valuable:

1. A minimum of 12 interested students.
2. A willing Industrial Arts teacher to advise or sponsor the group.
3. The project (formation of club) should be cleared through administrative channels.
4. Obtain constitution and Handbook from secretary of Texas Industrial Arts Association.
5. Appoint a committee to study constitution, by-laws, and Handbook and report recommendations.
6. If interest remains after study and report, a meeting should be called and officers elected.
7. An area sponsor or advisor should be invited in to get the group started.
8. A good work plan should be immediately started and followed.

The American Industrial Arts Association recommends essentially the same procedure for starting clubs.

These organizations can supply, in addition to the handbooks mentioned, other literature regarding clubs and club activities. They all make suggestions on other phases of the club program too.

CLUB ACTIVITIES AND PROGRAMS

Knowing values and organizing procedures is important, but most persons interested in starting clubs want to know "what do you do in the club?"

The Texas handbook lists two pages of activities under headings of Community Service, School Service, Club Promotional Activities, and Fund Raising Activities.

The U. S. Office of Education publication on clubs discusses areas for activities that provide opportunities for the members under such topics as cooperation, competition, social values, communications, recognition, and leadership and fellowship. They divide the above topics into five broad areas: Professional, Financial, Civic, Service, and Social.

These publications are certainly excellent sources for ideas, but we might still be interested in the success that actual operating clubs have had. An article by Rex Miller in the May-June, 1965 issue of the Journal of Industrial Arts Education has a list of activities

successfully being carried on by 19 active clubs in New York State. These are: semi-formal dances; community project "Operation Toys for Tots"; school projects in the form of signs and labels; tool box loan program; making scenery and putting on one act plays; showing movies during school lunch hour to finance field trips; a carnival held to raise money to provide a scholarship for their club; overnight hikes and paper drives by one physically active club; sponsoring radio or photography clubs as subdivisions of the main club; and county fair exhibits.

From my own experience with a college club, some activities we carried on would be suitable for high school groups too. They would also fit into those areas recommended by the American Industrial Arts Association and the Texas Industrial Arts Association. They were: inviting in men from business and industry for a program; acting as float specialists for the construction of floats during special school events; perform services for or in the school industrial arts department; sponsor a party at which student made prizes were used (the party was a money making event); and sponsoring of an industrial arts fair. The April, 1962 issue of the Industrial Arts and Vocational Education magazine indicated that the State University of New York at Buffalo does much the same thing.

I would like to mention some of the activities that Don Anderson's club elected to do, and did with success. His boys produced and sold products; they called in guest speakers such as architects, contractors, etc.; contracted the construction of floats, went on field trips, and sponsored a student craftsman's fair. You may wish to direct questions to Don on his success with his club.

As you can see, the clubs of industrial arts students meet the values stated through many activities that are interesting and rewarding to the boys. The most important thing is that these experiences are educational experiences.

OTHER INFORMATION

Nothing helps to promote activities like items that direct recognition to the individual as a participant. This can be accomplished in club activities in industrial arts.

Mention was made in one article where the club designed an emblemwhich they silk screened on felt and used these patches on their blazers, jackets, etc. Other emblem adaptations would certainly be possible too.

On the national level there is jewelry available through Balfour which is the official jewelry of the American Industrial Arts Association and its affiliates. This jewelry is available for high school and

college clubs in addition to the organization jewelry for members of the American Industrial Arts Association.

Many clubs use wallet size membership cards like other professional organizations. Clubs with national affiliation can receive their cards from the national office of A. I. A. A. Nonaffiliated clubs can, many times, print their own or may be able to get a donated print job of this nature.

These are by no means an end to the possibilities, each club can develop their own tastes in emblems, jewelry, and other means of recognition for club activities.

CONCLUSION

In closing let me point out that the formation of student clubs is on the increase. This is true at all levels as illustrated by the formation of the Vocational Industrial Clubs of America, which is a national association of trade and industrial education students. They are affiliated with the American Vocational Association. It was officially organized in May of this year. This group takes its place alongside the Future Farmers of America, The Future Homemakers of America, and the Distributive Education Clubs of America, to mention a few.

These clubs have true educational value which is the primary reason for their growth and the hardy support they receive everywhere they function.

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TEXTBOOKS, THEIR USE AND ABUSE

Suggestions for your proper utilization of textbooks along with some of the mistakes that teachers make with their textbooks.

Shops and laboratories in schools were instituted as a part of the revolution against meaningless instruction and excessive verbalization in teaching. Thus, today, laboratory teaching methods emphasize concrete experiences and not word learnings, so that instruction can begin with valid student experiences.

One of the major problems in industrial education is that this revolution has often been carried so far that course content is limited to those operations which can be demonstrated by the teacher. Industrial arts is defined as general education, but is it being taught as general education? In true general education, it is necessary to develop abilities such as these:

1. Ability to evaluate and discuss a topic with more than rote use of terms.

2. Ability to see universal concepts in specific experiences, and to infer meanings for living from school examples.

3. Ability to interpret tables, graphs, charts, reference materials, and other information sources.

Therefore, we must not lose sight of the fact that some concepts, abstractions and verbalizations are major objectives to grow out of the manipulative operations we are teaching. Shop teaching techniques limited solely to "show and tell" are sometimes the bottleneck which limits these broader understandings, and which also keep better students out of the shop.

How do we teach for these broader understandings? We simply make more effective use of the teaching tools we now have available. Books continue to be the most simple, the most effective tool for broadened learnings, the home base from which all types of learning experiences can originate, although we do not want to overlook the importance of various projected materials, field trips, models, and other visualizations.

Many types of books are prepared for school use. There are textbooks--both basal and supplemental when more than one title is listed. There are a number of auxiliary materials to back up textbooks: lab manuals, study guides, workbooks, activity and project books, teacher's manuals or special editions, and books of instruction sheets. In addition to printed matter, there are other auxiliary materials such as correlated projecturals and film strips, as well as

correlated equipment of various kinds. Finally, there are reference books for both student and teacher: encyclopedias, dictionaries, handbooks, manuals of various kinds, yearbooks, and catalogs. Here we are primarily interested in textbooks, but all are closely related.

There are a number of reasons for using textbooks. Several have to do with improved efficiency and economy. As students can read from 2 to 10 times faster than the instructor can lecture, a text can communicate faster, and at the same time, allow for greater individual differences. Assigning homework in the text frees class time for other techniques, frees the instructor for more individual instruction, and frees him from being the fountainhead of all information. Presentations in good modern textbooks incorporate more illustrations than the typical lecture, so learning can be better. Textbooks have proven to be the most convenient tool, as well as the most inexpensive one, for the scope of content involved. Textbooks also broaden course offerings in several ways. They give direction and organization. They provide necessary related instruction often omitted in day-to-day class work--the concepts, the modern industrial processes too complex to do in class, and the guidance information. Individual research and good study habits are encouraged. Texts are a permanent information source which can be studied and reviewed as necessary. Finally, the

class-adopted textbook, if properly used, can advance the status of the class so that a full range of student abilities will be attracted.

Teachers have found it beneficial to vary the assigned use of the text from time to time. Reading may be assigned as an introduction to a demonstration or a lecture. Occasionally, the text may be used as the only source of information on topics never discussed or demonstrated in class. It may also serve as a review or follow-up of material presented in class, or as a memory refresher for slower students who may have forgotten a needed procedure. Textbooks also aid in planning projects or experiments, either group or individual, and provide a source for extra research for superior students. However, be careful to avoid these abuses of texts.

1. Used as the sole source of course content. Do use supplementary materials, as well as library and reference materials. Acquaint the student with sources which will be useful after the course is over. If the subject is new to you as an instructor, read at least one other text, as well as other sources, so that your presentations are not merely a duplication of what is studied in the book.

2. Used to displace activity. The text should augment, not replace, activity. Shops and laboratories are basically created for activity--but it should be intelligent activity aimed at more than mimicking the teacher's demonstration.

3. Used as a substitute for a teaching tool which will do a particular job better. Films, illustrated talks, demonstrations, field trips--each is needed for certain jobs.

4. Used as a disciplinary measure. This is the opposite of motivating learning.

5. Used as a substitute for the teacher. The teacher must still introduce, motivate, guide, prompt, encourage, evaluate, and know the overall picture as well as the possible pitfalls waiting for the student.

Here are some suggestions for making the best use of a textbook. Know the available books, evaluate them, select ones that best meet the desired objectives and content of the course. Become familiar with the text--take the course yourself first. Provide students with a guide or course outline, and each student with his own book so that he can study in a free period or at home. Make regular assignments and hold students accountable by evaluating their comprehension with quizzes and exams. Allow for some options to challenge various interests and abilities.

When first evaluating a text, always start at the front of the book, rather than paging through it haphazardly from the back. Scan the preface to determine the purpose and approach of the book. Study the table of contents, noting the organization, sequence, and coverage.

Check typical units of special interest. Be careful of over emphasis on pretty covers, of gaudy and unfunctional use of color, of uncoordinated illustrations, or of old editions in new dress.

When it comes time to make a final textbook selection, be sure you have identified all those available and that you are familiar with each of them. Inquiries sent to leading publishers may turn up new titles just being released. If a selection committee is involved, limit the subject fields so judgments are based on first-hand knowledge. Establish criteria for judging the books, make a score card and rate each book on both physical criteria and content criteria.

Here is a listing of some physical criteria to consider.

1. Binding: paper or cloth cover; sewn, glued, or stapled. Does it open flat? Does it meet rigid BMI specifications?

2. Paper: weight, capacity, finish, general quality.

3. Type: Is legibility appropriate for grade level? Do headings stand out? Is size and arrangement economical of space?

4. Text arrangement: columns, margins, line length, attractive and legible.

5. Illustrations: clear, good size, well chosen to add meaning, carefully coordinated with text on same page.

6. Color: used when needed. Is the color functional and in good taste or merely decorative? Can extra cost of color be justified?

7. Design: attractive, appropriate.

8. Size: number of pages, cost.

9. Reference materials: index, tables, appendix.

10. Available auxiliary materials: manuals and guides for study, for lab work, and for the teacher; answer key, related visuals or hardware.

Here is a listing of some content criteria to consider.

1. Author: his qualifications as subject matter authority, his knowledge of teaching and of students, his ability to communicate.

2. Copyright date: number of editions, completeness of revisions.

3. Philosophy: underlying assumptions, approach used.

4. Writing style: reading level (Flesch, Dale-Chall), interest level, vocabulary level, tight and to the point, logical and easy to follow.

5. Coverage of how-to-units: skills and process operation.

6. Coverage of related units: necessary technical information modern industry, guidance, management fields, history, general concepts, related fields.

7. Usability: for developing skills? understandings? attitudes?

8. Safety information: separate, integral, or lacking?

9. Organization: Is it teachable?

10. Comprehensiveness: breadth of coverage, needed depth for each unit.

11. Study helps: italics used for emphasis; new words defined, listed, pronounced; review questions, application questions, problems, suggested activities; bibliography, related manuals, others in series.

Remember the acid test of a textbook is to try it with your own students. Find out if it will actually work as it should. One way of meeting the challenges of broader content and new processes is to improve your teaching efficiency through the use of a good textbook.

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Zook, Wayne Harold
Personnel and Training Needs for Skilled and Technical Workers in Iowa Industries Manufacturing and Fabricating Plastics.
Iowa State Univ. of Science and Technology, Ames
Iowa State Dept. of Public Instruction, Des Moines. Div. of Vocational Education
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*OCCUPATIONAL SURVEYS; *MANUFACTURING INDUSTRY; *PLASTICS; *EDUCATIONAL NEEDS; EMPLOYMENT OPPORTUNITIES; *MANPOWER NEEDS; SKILLED OCCUPATIONS; TECHNICAL OCCUPATIONS
IOWA

This survey was conducted to identify Iowa plastics industries and the trained personnel needed to man these industries. Replies to a mailed questionnaire were received from 96 of the 177 establishments in the population. Findings included: (1) 2,122 of the 28,252 employees were considered skilled plastic workers, (2) In-company training was the major source of workers for 75 percent of the industries, (3) 3,287 additional employees would be needed by January, 1969, (4) Training needs vary with size, process, and product, (5) Molding is the principle process, (6) Thermoplastics are the principle production material, and (7) New educational programs related to this industrial segment are needed. (EM)

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PERSONNEL AND TRAINING NEEDS FOR SKILLED AND TECHNICAL WORKERS IN IOWA INDUSTRIES MANUFACTURING AND FABRICATING PLASTICS

by

WAYNE H. ZOOK

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This is an abstract of a dissertation submitted to Iowa State University of Science and Technology by Wayne H. Zook in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

The study was conducted with the cooperation of the Iowa State Department of Public Instruction and the Industrial Education Department at Iowa State University.

The study was conducted under the direction of Professor Lowell L. Carver and Dr. Ray Bryan.

PERSONNEL AND TRAINING NEEDS FOR SKILLED AND TECHNICAL WORKERS IN IOWA INDUSTRIES MANUFACTURING AND FABRICATING PLASTICS

by

Wayne Harold Zook

PURPOSE OF THE STUDY

The 1963 Vocational Education Act provided the impetus and financial assistance needed for the establishment of area vocational schools in Iowa. The establishment of the area vocational schools created a need for extensive research to ascertain the type of curriculums which will best meet the needs of the state. After extensive consideration and consultation with industrial education faculty members at Iowa State University it was established that a study should be conducted in the area of plastics. Individuals associated with the field of plastics had expressed a need for such a study. For this reason it was decided that a study should be conducted to ascertain the type and number of skilled workers which are needed at the present time and in the next five years. The study included all plastic manufacturing and fabricating firms in the state.

Before educational programs can be developed to meet the needs of the plastic industry and to attract additional industries to Iowa, two specific questions need to be answered. These questions are: (1) What type of training is required to develop skilled workers to meet the needs of plastic industries? (2) How many skilled workers are needed immediately and in the next five years to meet the demands of the expanding plastic industry?

The answers to these questions are necessary if Iowa is to offer the best possible training programs in the area vocational schools and community colleges for the preparation of skilled plastic workers. It is for this reason that a study of the future needs of the plastic industries was necessary.

The objectives of this study were:

1. To identify Iowa plastic industries.

2. To identify the employee training needs of all Iowa plastic industries.

   a. To ascertain the skills and knowledge desired of perspective employees by Iowa industries.

   b. To categorize employee training needs for each area school district according to the number of skilled workers needed and the specific skills required.

3. To ascertain the number of trained and skilled employees needed at the present time and in the next five years.

4. To ascertain the present sources of plastic workers being hired by the Iowa industries.

5. To ascertain the extent and type of inservice training being conducted by the Iowa plastic industries.

6. To ascertain the production processes used by the various plastic industries in Iowa.

7. To ascertain the production materials used by the Iowa plastic industries and the types of products for which they are used.

8. To ascertain the extent of use of various processes as indicated by the Iowa plastic industries.

9. To draw some implications for the development of instructional programs.

Delimitations of the Study

This study was limited to those industries in Iowa that were engaged in plastic manufacturing or processing at the time the study was being conducted. The study also included those industries whose projected plans indicated that they would be adding a plastic division to their operation within the next five years.

For the purpose of this study the chemical formulation of the plastic materials was not included.

Definitions

For the purpose of this study the following terms were defined as follows:

Area School is a school or program involving more than one county. It offers specialized training and retraining in vocational or technical education which is available to the student at low cost in his own community. These schools are sponsored and operated by local communities and the state.

Plastic Industries are industries involved in the production of plastic resins, or involved in the fabrication of products from this material. Industries who were large users of plastic materials and make plastic parts on their own premises were included in the general term, plastic industry.

Occupational Survey refers to an investigation and evaluation to gather pertinent information about a single industry or the occupations of an area to determine the need for training, the prevalent practices, the labor supply and turnover, and the resulting data are used for the purpose of revising school offerings to meet local needs and maintaining the vocational program at a realistic level.

Skilled Worker refers to one competent to perform, with a high degree of expertness, the work in one or more specialized divisions of a given trade.

Technical Education is education to earn a living in an occupation in which success is dependent largely upon technical information and understanding of the laws of science and principles of technology as applied to modern design, production, distribution, and service.

Funding

A research proposal, stating the objectives of the study, method of procedure, review of literature, and budget required to defray the cost of the study was submitted to the Research Coordinating Unit, Vocational Education Branch, Iowa State Department of Public Instruction in 1967. The State Research Committee reviewed the proposal and recommended that it be approved for funding. The proposal was approved by the Associate Superintendent of the Vocational Education Branch, State Department of Public Instruction and funds were made available to conduct the study.

METHOD OF PROCEDURE

After the research project was approved, an extensive search of literature was undertaken to augment the author's knowledge in the field of plastics and to aid in the development of a survey instrument. The review of literature was broken into four divisions: studies in plastic technology, studies for the development of technical curriculum, technology studies done in the State of Iowa, and forecasts for the future of the plastic industry.

The population for the study included all plastic manufacturers and fabricators in Iowa. A listing of the firms to which the study pertained was not readily available. The final list was compiled from the Iowa Manufacturers Directory, the Center for Industrial Research and Service, telephone directories, and plastic supply firms. In an effort to insure that all industries engaged in plastic manufacturing were included in the population, a postal card questionnaire was sent to all industries which manufactured a product which the author thought might involve the use of plastic.

The purpose of the postal card questionnaire was to ascertain if the manufacturing firm should be included in the survey. The double postal card questionnaire was sent to 314 firms. At the end of two weeks the return numbered 129 or 41 percent. A followup postal card brought the return to 213 or 68 percent.

Whether an industry was included in the final population was determined by their response to the questions, "Does your company employ skilled plastic workers at the present time?" and "Do you plan to employ skilled plastic workers five years from now?" If the response was "yes" to either of the questions, the firm was included in the final population and received the second questionnaire. Those firms which did not return the questionnaire but were strongly suspected of being plastic manufacturers were contacted personally. The affirmative response on the returned postal card questionnaires and the personal responses brought the total population to 177 who received the main questionnaire.

The main questionnaire was constructed at the same time that the population was being determined by means of a return postal card questionnaire. To make the main questionnaire as valid as possible, 27 plastic industries were selected to serve as an advisory committee to aid in the construction of the questionnaire. Since the plastic industry is representative of six basic manufacturing processes, industries were selected which were representative of each of the processes to serve in the advisory capacity. Consideration was also given to size of the industry and geographical area in the establishment of the advisory committee in an effort to provide a true picture of the plastic industry as it exists in the State of Iowa. The person or persons being interviewed were asked questions relative to their specific processes. The comments and suggestions offered by the industries interviewed were used to develop the final form of the questionnaire. The response of the advisory committee affirmed the need for a study of this nature.

Due to the nature of the study, the industries contacted for personal interviews were asked to comment on the definition or description of the various processes and materials common to their manufacturing processes.

The main questionnaire was constructed in several parts to collect the data necessary to answer the objects set forth for the research project. The questionnaire was divided into the following parts: production processes, production materials, fabricating and finishing, related industrial areas, general education, major product, terms used to refer to workers, sources of plastic workers, in-company training programs, source of molds, number now employed, number to be employed one year from now, and number expected to be employed in five years. Questions were also asked relative to type of immediate job vacancies that the industry had, the type of work or job title, and whether the company would be interested in short courses if they were available.

The final form of the main questionnaires was mailed to the 177 industries in Iowa which were manufacturers of plastics or fabricators of plastics. A follow-up letter and questionnaire was sent to each industry who had failed to respond at the end of the two week period. The first follow-up letter increased the return to 65 percent. A second follow-up letter was sent to the remaining industries who had failed to respond two weeks later. After the second follow-up letter, the return was 84 percent.

If an industry failed to respond to the second follow-up letter, a telephone call was placed to encourage the firm to respond. The final response was 165 or 93 percent.

The letter enclosed with the questionnaire explained the purpose of the survey and asked the firm to complete the questionnaire or return it blank if it did not apply to their company. One hundred sixty-five industries returned the questionnaire. Three were discarded because they were incomplete and 12 were returned indicating that the industry had ceased to operate between the time the original population was established and the mailing of the main questionnaire.

Fifty-four industries returned the questionnaire blank indicating that although they were engaged in the manufacture or fabrication of a plastic product, the nature of the work involved did not require a skilled worker. Since the study was designed to determine the needs of skilled plastic workers, these industries are not handled in the study.

The data obtained from the questionnaire were coded and placed on IBM punched cards for sorting and tabualtion at the Iowa State University Computer Center. The data were then presented in tabular or graphical form.

FINDINGS

The purpose of this study was to ascertain training needs for skilled plastic workers in the state of Iowa. Not only immediate needs were considered, but also the projected needs of the plastic industries in Iowa for the next five years as the industries rapidly expand.

The findings were presented in four major divisions to fulfill the objectives of the study. The divisions were: (1) information relative to the respondents, (2) sources of skilled plastic workers, (3) training requirements of the plastic industries, and (4) the number of skilled workers needed by the plastic industries. The findings were also presented by merged area, product manufactured, size of industry and principle production processes.

The population for the study included all industries in Iowa which were plastic manufacturers or fabricators. However, the plastic industries were a very diverse group from the standpoint of processes, materials, and finished products.

The study revealed that a considerable number of industries were regarded as plastic industries from the standpoint of their finished product, but indicated that highly skilled workers were not essential for production. Of the 165 returned questionnaires, 54 indicated that they did not use skilled workers at this time. The researcher did not consider the responses from this group of industries because the scope of the study was limited to skilled plastic workers.

General Findings Concerning Respondents

Data concerning the area and size distribution of the participating industries in the study were presented in Table 1.

Table 1. Distribution of responding industries by size and merged area in Iowa

Size by numbers of employees	II	III	IV	V	VI	VII	VIII	IX	X	XI	XIII	XIV	XV	XVI	Total
1-20	6	2	1	5	3	2	0	0	3	7	3	1	4	5	42
21-50	0	0	0	1	2	2	2	2	1	6	0	0	0	0	16
51-100	1	0	0	0	1	0	1	3	1	3	0	0	1	0	11
101-250	0	0	0	1	0	1	0	0	1	2	0	0	1	0	6
251-500	1	2	0	0	0	2	0	0	3	0	0	0	0	1	9
500-1000	0	0	0	0	0	0	1	3	2	1	0	0	0	0	7
over 1000	0	0	0	0	0	0	0	1	1	1	0	0	0	2	5
Total	8	4	1	7	6	7	4	9	12	20	3	1	6	8	96

The category of 1 to 20 employees had the greatest representation in the study with 42 industries in this category. However, from the standpoint of total number of employees, the five industries represented as employing over 1000 persons totaled more employees than the 42 industries in the first category. With the exception of merged areas I and XII, all areas were represented by at least one plastic industry which responded to the questionnaire. Merged area XI had the most industries represented with a total number of 20. Merged area X rated second largest with a total of 12 responding industries. Table 1 showed that the greatest number of responding industries fell in the category of industries employing less than 20 workers. This category contained 42 industries or a total of 43.7 percent of the respondents. As shown in Table 1, the smaller the total number of employees, the greater the number of respondents. From this it was evident that most of the plastic industries in Iowa were small in nature with 43.7 percent of the respondents employing less than 20 people. A search of Table 1 revealed that 42.6 percent of the responding industries were located in areas IX, X, and XI.

The distribution of industries in each of the merged areas by the major product manufactured was presented in Table 2. The two digit Standard Industrial Classification code was used to classify the products. It was illustrated in Table 2 that 32 or 33.3 percent of the responding industries fell in the SIC Product Classification of 30. Of the 32 with an SIC rating of 30.9 or 9.3 percent were in area XI. Just over 56 percent of the industries manufactured products in two classifications: rubber and miscellaneous plastic products, and miscellaneous manufacturing industries. These two groups were represented in all areas with the exception of areas I and XII which did not have any responding plastic industries.

Table 2. Distribution of responding industries by major product and merged area

SIC number	Product classification	II	III	IV	V	VI	VII	VIII	IX	X	XI	XIII	XIV	XV	XVI	Total
23	Apparel and other finished products											1		1		2
24	Lumber and wood products							1								1
25	Furniture and fixtures	1				1										2
26	Paper and allied products									1	3	1		1		6
27	Printing, publishing and allied products						1									1
28	Chemicals and allied products								1	2	1					4
30	Rubber and misc. plastic products	3		1	4	3	2	2	3	1	9			3	3	34
32	Stone, clay and glass products						1				1					2
34	Fabricated metal products									2	1					3
35	Machinery except electrical							1			2			1	1	5
36	Electrical machinery, equipment and supplies									3	2					5
37	Transportation equipment	2			3	1				1						7
38	Professional, scientific, and controlling instruments							2				1				3
39	Misc. manufacturing industries	4		4		1	2	1	3	2	1		1		3	20

Table 3. Distribution of industrial personnel who filled out the questionnaire

Job or position	Number
President, vice president, owner, secretary-traasurer, secretary, purchase agent	69
Manager, superintendent, supervisor, foreman	14
Director of industrial relations, research, personnel manager, general supervisor	8
Engineering	5

Employment Findings

One of the prime objectives of the study was to determine the number of persons engaged in skilled plastic work in Iowa and to obtain employment projections for the future. A composite of the employment data obtained from the questionnaire was presented in Table 4. All industries were able to provide employment figures through 1969.

Table 4. Composite of employment data obtained from the questionnaire

Employees (N = 96)	Employed Sept. 1, 1966	Employed Jan. 1, 1968	Needed by Jan. 1, 1969	Needed by Jan. 1, 1973[a]
Molding	1,379	1,655	1,940	1,404[b]
Thermoforming	140	180	267	206[c]
Casting	82	205	210	67[b]
Reinforcing	42	55	78	181[e]
Foaming	11	18	22	23[f]
Coating	7	9	10	3[g]
Total employees	25,770	28,252	31,539	33,423[h]

[a]All industries were not able to provide this information.

[b]24 of 42 industries reporting

[c]12 of 30 industries reporting

[d]4 of 7 industries reporting

[e]6 of 11 industries reporting

[f]2 of 3 industries reporting

[g]2 of 3 industries reporting

[h]51 of 96 industries reporting

To provide a more complete picture, the data in Table 4 were broken down by the major production processes employed by each industry responding to the questionnaire. Thus, molding in Table 4 referred to those industries indicating molding as their major production process, etc. The data in the table revealed the number of skilled plastic workers employed September 1, 1966, and January 1, 1968. The table also presented the number of additional skilled employees the industries anticipated employing in 1969 and 1973. However, only 53 percent of the industries indicated that they could project their needs beyond one year. An examination of the table revealed that additional employees were anticipated in all production areas. The greatest need for skilled workers was indicated by those industries employing the molding processes. Table 4 showed that there was a need for 285 additional skilled plastic workers in the molding processes by January 1, 1969. However, the industries that reported in the area of coating indicated that only one additional skilled worker would be needed in 1969. A further examination of the table revealed that the plastic industry will need a total of 405 skilled workers by January 1, 1969, all production processes combined. Many of the industries did not complete the blank provided on the survey instrument pertaining to the number of additional skilled workers they would need in five years and indicated that an accurate projection could not be made.

Employment needs by size of industry

Employment figures for skilled plastic workers and total employment figures by size of industries were shown in Table 5. The data showed that industries which employed between 251 and 500 persons had the greatest number of skilled plastic workers. This category indicated that it employed 699 skilled workers in the industries primarily engaged in plastic molding. However, further examination of the table revealed that industries which employed over 1,000 total employees did not employ as many skilled workers as the 251-500 category.

Table 5. Employment of skilled plastic workers and total employment by size of industries in 1968

Topic	Size by number of employees 1-20	21-50	51-100	101-250	251-500	501-1000	over 1000	Total plastic employees
Molding	127	19	80	147	669	123	490	1655
Thermoforming	30	35	25	75	5	5	5	180
Casting	14	3	38	150	0	0	0	205
Reinforcing	39	0	11	0	5	0	0	55
Foaming	8	10	0	0	0	0	0	18
Coating	3	6	0	0	0	0	0	9
Total	432	488	684	1524	2794	5765	16565	28252

The responding industries indicated that of the skilled plastic production processes, molding employed the greatest number of employees. Additional personnel needed in 1969 by size of industries was presented in Table 6. Examination of the table revealed a need for 405 skilled plastic workers with 285 of the workers listed in the molding category. Although each of the production processes was represented in the table, coating indicated that only one additional skilled worker would be needed by 1969. It is interesting to note that industries employing over 1,000 anticipated a need for 105 skilled workers in the molding processes, while industries employing 251-500 employees anticipated a need for only an additional 71 workers.

Table 6. Additional personnel needed 1969 by size of industries

Topic	Size by number of employees 1-20	21-50	51-100	101-250	251-500	501-1000	over 1000	Total plastic employees
Molding	63	5	24	5	71	12	105	285
Thermoforming	25	19	8	21	6	1	7	87
Casting	0	1	4	0	0	0	0	5
Reinforcing	20	0	1	0	2	0	0	23
Foaming	4	-	-	-	-	-	-	4
Coating	-	1	-	-	-	-	-	1
Total	184	96	104	157	740	610	1,396	3,287

The data in Table 7 showed that "rubber and miscellaneous plastic products" and "miscellaneous manufacturing industries" employed the most skilled plastic workers. Further analysis of the table indicated that "chemicals and allied products" represented the greatest number of skilled workers in casting. It was interesting to note that the category of "electrical machinery, equipment, and supplies" employed the most total employees, yet was represented in only one of the plastic production processes, molding.

The additional skilled plastic personnel and total employment needs by major product by January 1, 1969, were shown in Table 8. A total of 285 additional employees were anticipated by those industries whose major production process was listed as molding. Of the 285 additional employees needed, 112 were in those industries whose major product classification was "rubber and miscellaneous plastic products," and 76 were in "miscellaneous manufacturing products."

Table 7. Number of skilled plastic personnel and total employees by major product manufactured in 1968

Product classification	Molding	Thermo-forming	Casting	Rein-forcing	Foaming	Coating	Total employees
23	-	-	-	-	-	-	77
24 Lumber and wood products	6	-	-	-	-	-	10
25 Furniture and fixtures	-	4	-	-	-	-	33
26 Paper and allied products	455	83	-	-	-	-	1250
27 Printing, publishing and allied products	-	-	-	-	-	1	8
28 Chemicals and allied products	5	.5	150	2	-	-	2567
30 Rubber and misc. plastic products	424	61	3	33	18	-	2847
32 Stone, clay and glass products	29	-	-	-	-	-	195
34 Primary metal industries	10	2	-	-	-	2	812
35 Machinery except electrical	10	-	10	2	-	-	57
36 Electrical machinery, equipment and supplies	288	-	-	-	-	-	16145
37 Transportation equipment	2	-	-	6	-	-	21
38 Professional, scientific, and controlling instruments	-	3	3	-	-	-	1503
39 Misc. manufacturing industries	426	22	39	12	-	6	2727
Total	1655	180	205	55	18	9	28,252

Table 8. Additional skilled plastic personnel and total employees needed by 1969 by major product manufactured

Product classification		Molding	Thermo-forming	Casting	Rein-forcing	Foaming	Coating	Total employees
23		-	1	-	-	-	-	6
24	Lumber and wood products	3	-	-	-	-	-	3
25	Furniture and fixtures	-	1	-	-	-	-	4
26	Paper and allied products	55	20	-	-	-	-	125
27	Printing, publishing and allied products	-	10	-	-	-	-	1
28	Chemical and allied products	5	4	-	-	-	-	233
30	Rubber and misc. plastic products	112	38	1	17	4	-	742
32	Stone, clay and glass products	1	-	-	-	-	-	165
34	Primary metal industries	2	-	-	-	-	-	102
35	Machinery except electrical	2	-	-	-	-	-	5
36	Electrical machinery, equipment and supplies	27	-	-	-	-	-	1518
37	Transportation equipment	2	6	-	2	-	-	35
38	Professional, scientific, and controlling instruments	-	1	-	-	-	-	1
39	Misc. manufacturing	76	6	4	4	-	1	347
Total		285	87	5	23	4	1	3287

Data in Table 9 showed number of skilled plastic workers and total number of employees by merged areas. Merged area X had the most skilled plastic workers of any of the areas reporting. There were 637 employees in those industries whose major production process was molding in merged area X. Merged areas II and V were the only areas which indicated that there were more skilled workers in reinforcing than in molding. The greatest number of total employees was reported by merged area X.

Table 9. Number of skilled plastic personnel and total employees by merged area in 1968

Merged area	Molding	Thermo-forming	Casting	Rein-forcing	Foaming	Coating	Total employment
II	10	1	-	14	6	-	81
III	253	-	-	1	-	-	633
IV	-	-	-	-	-	-	0
V	8	12	1	20	-	-	233
VI	35	4	-	2	10	-	192
VII	9	3	-	-	-	1	533
VIII	18	-	-	-	-	6	119
IX	51	24	38	11	-	-	4122
X	637	12	150	3	-	2	15739
XI	117	98	3	2	-	-	3322
XIII	-	7	-	-	-	-	10
XIV	1	-	-	-	-	-	5
XV	304	1	10	-	2	-	2884
Total	1655	180	205	55	18	9	28252

Immediate openings In an effort to provide a complete picture of employment needs, the respondents were asked to indicate their immediate openings. Table 10 revealed the number of immediate openings by size of industry and merged area. Area X had 30 immediate openings with 23 of the openings in the size category of 251-500 employees. Areas XVI and XV had 18 and 15 openings respectively.

Table 10. Number of immediate openings by size of industry and merged area

Merged area	Number of employees 1-20	21-50	51-100	101-250	251-500	501-1000	over 1000	N
II	6	-	-	-	3	-	-	9
III	5	-	-	-	-	-	-	5
IV	-	-	-	-	-	-	-	0
V	5	-	-	-	-	-	-	5
VI	-	2	6	-	-	-	-	8
VII	-	2	-	-	-	-	-	2
VIII	-	1	-	-	-	3	-	4
IX	-	-	4	-	-	-	-	4
X	1	2	-	4	23	-	-	30
XI	4	3	4	-	-	-	-	11
XII	-	-	-	-	-	-	-	0
XIV	1	-	-	-	-	-	-	1
XV	5	-	10	-	-	-	-	15
XVI	7	-	-	-	1	-	10	18
Total	34	10	24	4	27	3	10	112

The distribution of immediate openings by product manufactured was shown in Table 11. The table revealed that 37 of the immediate openings were in the "miscellaneous rubber and plastic product" classification, with 25 immediate openings in the "miscellaneous manufacturing industries," and 22 in "paper and allied products."

Table 11. Distribution of immediate openings by product manufactured

Product classification		Number
24	Lumber and wood products	3
25	Furniture and fixtures	1
26	Paper and allied products	22
28	Chemicals and allied products	6
30	Rubber and misc. plastic products	37
35	Machinery, except electrical	3
36	Electrical machinery, equipment and supplies	1
37	Transportation equipment	4
39	Misc. manufacturing industries	25
Total		112

Source of molds

In answer to the question, "Does your company make its own molds?" 47 or 48.96 percent of the respondents answered "yes" that they did make their own molds. Table 12 revealed the distribution of the industries that indicated that they made their own molds by merged area and size of industry. From the table it was evident that the smaller industries which use molds in their production process did make their own molds as a rule. Only three industries employing over 1,000 employees made their own molds. Area XI contained eight industries that made their own molds.

Table 12. Companies that make their own molds by merged area and size of industry

Number of employees	Merged area II	III	IV	V	VI	VII	VIII	IX	X	XI	XIII	XIV	XV	XVI	Total
1-20	2	2	1	2	3	-	-	-	2	3	1	1	3	4	24
21-50	-	-	-	-	1	2	-	1	-	2	-	-	-	-	6
51-100	-	-	-	-	1	-	-	-	1	2	-	-	-	-	4
101-250	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
251-500	1	1	-	-	-	2	-	-	1	-	-	-	-	-	5
501-1000	-	-	-	-	-	-	-	1	2	1	-	-	-	-	4
over 1000	-	-	-	-	-	-	-	-	1	-	-	-	-	2	3
Total	3	3	1	2	5	5	0	2	7	8	1	1	3	6	47

The number of industries that make their own molds by product manufactured was revealed in Table 13, classified by product manufactured. From the table it was evident that "miscellaneous rubber and plastic products" were represented by the greatest number of industries making their own molds, with 18 indicating that they make their own molds. "Miscellaneous manufacturing industries" contained 11 industries that made their own molds.

Table 13. Industries that make their own molds by product manufactured

Product classification	Number
Paper and allied products	1
Chemicals and allied products	2
Rubber and misc. plastic products	18
Stone, clay and glass products	2
Fabricated metal products	1
Machinery except electrical	4
Electrical machinery, equipment and supplies	3
Transportation equipment	1
Professional, scientific, and controlling instruments	1
Miscellaneous manufacturing industries	11
Total	47

Information in Tables 13 through 16 presented information concerning whether the responding industries relied completely on making their own molds, or completely on purchasing all molds, or if they incorporated both construction and purchasing of molds. The information in Table 14 represented the responding industries engaged in molding as a production process by size of industry. From the table it was evident that 26 of the industries relied solely on the purchase of molds as a source, while 25 made all of their own molds. It was interesting to note that an additional 20 industries incorporated both the construction and purchase of molds. Industries employing 1 through 20 made most of their own molds with a total of 16 responding in this category.

Table 14. Composite of source of molds by size of industry

Size of industry	Make all molds	Purchase all molds	Both make and purchase molds
1-20	16	8	8
21-50	2	7	3
51-100	2	3	2
101-250	-	2	1
251-500	3	3	2
501-1000	1	3	2
over 1000	1	0	2
Total	25	26	20

Data in Table 15 indicated the source of molds by merged area. It was shown in Table 15 that areas X and XI each had five companies which indicated that they made all of their own molds, and four and six companies respectively that indicated that they purchased all of their own molds.

Table 15. Composite of source of molds by merged area

Merged area	Make all molds	Purchase all molds	Both make and purchase molds
II	2	2	1
III	2	-	1
IV	-	-	1
V	2	4	-
VI	1	2	3
VII	2	-	3
IX	-	2	1
X	5	4	2
XI	5	6	3
XIII	1	-	-
XIV	-	-	1
XV	1	-	2
XVI	4	2	2
Total	25	26	20

The source of molds by product manufactured was shown in Table 16. Inspection of the table revealed that of the 39 industries classified as "manufacturing miscellaneous rubber and plastic products," eight made all of their own molds, and an additional eight both made and purchased molds, and 13 purchased all of their molds.

Table 16. Composite of source of molds by product manufactured

Product manufactured		Make all Molds	Purchase all molds	Both make and purchase molds
24	Lumber and wood products	-	1	-
25	Furniture and fixtures	-	1	-
26	Paper and allied products	1	1	-
28	Chemicals and allied products	2	1	-
30	Rubber and misc. plastic products	8	13	8
32	Stone, clay and glass products	1	-	1
34	Fabricated metal products	1	1	-
35	Machinery except electrical	4	-	1
36	Electrical machinery, equipment and supplies	-	2	3
37	Transportation equipment	2	1	1
38	Professional, scientific, and controlling instruments	1	1	-
39	Misc. manufacturing industries	5	4	6
Total		25	26	20

Source of purchased molds Data in Table 17 indicated the number of industries purchasing molds by size of industry. Examination of the table revealed that the smaller the industry, the greater the number purchasing molds. However, molding as a production process was better represented by the smaller industries. Analysis of the table indicated that 26 of the 46 industries purchasing molds purchased them out of state.

Table 17. Source of purchased molds by size of industry

Number of employees	Purchase molds in-state	Purchase molds out-of-state	Purchase molds both in-state and out-of-state
1-20	5	8	3
21-50	4	3	3
51-100	1	4	-
100-250	-	1	2
251-500	-	5	-
501-1000	-	4	1
over 1000	-	1	1
Total	10	26	10

The source of purchased molds by merged areas was shown in Table 18. Examination of the table revealed that 26 of the 46 industries purchasing molds procured them out of state. Area XI indicated that 9 industries purchased molds with four purchasing in-state and two purchasing both in-state and out of state.

Table 18. Source of purchased molds by merged area

Merged area	Purchase molds out of state	Purchase molds in-state	Purchase molds both in-state and out of state
II	3	-	-
III	1	-	-
IV	-	1	-
V	2	2	1
VI	4	1	-
VII	1	1	1
VIII	2	-	1
IX	1	1	1
X	5	-	1
XI	3	4	2
XIII	-	-	-
XIV	1	-	-
XV	-	-	2
XVI	3	-	1
Total	26	10	10

Information in Table 19 showed the source of purchased molds by product manufactured. Industries which produced "miscellaneous rubber and plastic products" and "miscellaneous manufactured products" indicated the greatest number of industries purchasing all of their molds. Eight industries in each of these two categories purchased molds out of state.

Table 19. Source of purchased molds by product manufactured

Product manufactured		Purchase molds out of state	Purchase molds in-state	Purchase molds both in-state and out of state
24	Lumber and wood	1	-	-
25	Furniture and fixtures	1	-	-
26	Paper and allied products	1	-	-
28	Chemicals and allied products	-	-	1
30	Rubber and misc. plastic products	8	7	6
32	Stone, clay and glass products	-	1	-
34	Fabricated metal products	-	1	1
35	Machinery except	-	-	1

Table 19. (Continued)

Product manufactured	Purchase molds out of state	Purchase molds in-state	Purchase molds both in-state and out of state
36 Electrical machinery, equipment and supplies	5	-	-
37 Transportation equipment	2	-	-
38 Professional, scientific and controlling instruments	-	-	1
39 Misc. manufacturing industries	8	1	1
Total	26	10	10

Source of Skilled Plastic Workers

The questionnaire asked the responding industires to indicate the sources of personnel who perform skilled plastic work. The sources of skilled plastic workers in Iowa were illustrated in Table 20.

The category of in-company training programs was checked by the respondents as the most used source of workers. In-company training was checked as being the source of workers by 75 percent of the respondents. Other companies received the second highest rank as a source of skilled plastic workers with 33.3 percent listing it as a source of workers.

Table 20. Sources of skilled plastic workers

Source	Yes		No		Total	
	no.	%	no.	%	no.	%
In-company training programs	72	75	24	25	96	100
Other companies	32	33.3	64	66.6	96	100
Technical schools	17	17.7	79	82.3	96	100
Military service	4	4.2	92	95.8	96	100
Other sources	11	11.4	85	88.6	96	100

Data in Table 21 showed the source of skilled plastic workers by merged area. A search of the table revealed that many industries employed more than one source for skilled plastic workers. With no exception, in-company training was the primary source of workers.

Table 21. Number of industries indicating each source of personnel who perform skilled plastic work by merged area

Area	N	Technical schools	Military service	In-company training	Other companies	Other sources
II	8	1	0	8	2	1
III	4	0	0	3	1	1
IV	1	0	0	1	0	0
V	7	0	0	2	0	0
VI	6	1	0	5	3	1
VII	7	2	0	4	1	2
VIII	4	3	0	3	1	1
IX	9	2	0	7	4	2
X	12	5	1	12	5	0
XI	20	2	0	14	11	2
XIII	3	0	0	2	0	1
XIV	1	0	0	1	1	0
XV	6	0	2	6	2	0
XVI	8	1	1	6	1	0
Total	96	17	4	76	32	11

A further breakdown of the source of skilled plastic workers by the size of industry was provided in Table 22. Examination of entries in the table revealed that 41 percent of the industries which have in-company training programs fell in the range of companies that employ less than 20 employees.

Table 22 Number of industries indicating each source of plastic worker by size of industry

Size by number of employees	Technical schools	Military service	In-company training	Other companies	Other sources
1-20	1	0	31	7	5
21-50	4	0	11	7	2
51-100	1	1	10	6	2
101-250	3	1	4	4	0
251-500	2	1	7	3	1
501-1000	3	0	6	5	1
over 1000	2	1	5	1	0
Total	16	4	74	33	11

Information in Table 23 revealed the types of in-company training most frequently used to develop skilled plastic workers. It was evident from the table that on the job training was the most prevalent method used by the companies in all merged areas. Apprenticeship training was the second most used type of in-company training.

The questionnaire asked that other types of training provided by the company be specified. Among those listed were Iowa State University Extension courses in management, formal in-plant school, correspondence schools, and trade publications.

Table 23. Type of in-company training provided by merged areas

Type of training	II	III	IV	V	VI	VII	VIII	IX	X	XI	XIII	XIV	XV	XVI
Apprenticeship	1	1	0	3	2	0	0	1	3	0	0	0	1	2
On the job training	8	3	1	4	5	4	4	6	11	12	3	1	5	4
Vocational-technical	0	0	0	1	0	1	0	0	1	1	0	0	0	0
Other	1	0	0	0	1	0	0	0	2	2	0	0	1	1
Total	10	4	1	8	8	5	4	7	17	15	3	1	7	7

The type of in-company training provided by the Iowa plastic industries by size of industry was shown in Table 24. A study of the table revealed that on the job training was the most frequently used type of training when considered on the basis of size of industry. A search of the table indicated that 68 of the respondents listed on the job training as the most frequently used in-company training technique.

Table 24. Type of in-company training provided by Iowa plastic industries by size of industry

Size by number of employees	Apprenticeship	On the job training	Vocational technical	Other
1-20	8	27	1	2
21-50	1	9	0	2
51-100	1	10	0	1
101-250	0	4	3	1
251-500	1	8	0	1
501-1000	1	5	0	0
over 1000	1	5	1	0
Total	13	68	5	8

SUMMARY

The plastic industries in this study employed a total of 28,252 persons, of which 2,122 were regarded skilled plastic workers as of January 1, 1968. The category of one to 20 employees had the greatest representation in the study, with 42 industries or 43.7 percent of the respondents.

Merged areas X and XI had the greatest number of plastic industries with each area reporting 12 and 20 respectively, or 33 percent of the industries represented in the study. Approximately 56 percent of the industries manufactured products in two Standard Industrial Classifications. The classifications were "rubber and miscellaneous plastic products" and "miscellaneous manufacturing industries." Of the responding industries, 30.2 percent were located in three counties.

In-company training was indicated as the main source of skilled workers by the plastic industries. In-company training was checked as the major source of workers by 75 percent of the industries. The second most frequently indicated source of workers was other companies with 33.3 percent of the respondents listing it as a source of skilled workers.

On the job training was listed as the most frequently used in-company training technique with 68 of the respondents indicating it as their first choice. Apprenticeship training was used by 15.5 percent of the industries to train tool and die workers and machinists.

Those industries which indicated that molding was their major production process showed the greatest need for additional skilled plastic workers. A total of 285 additional employees will be needed by those industries whose major production process was listed as molding by 1969. Casting as a production process ranked second in terms of the number of employees as of January 1, 1968. However, thermoforming showed a projected need by 1969 of 87 additional skilled workers as compared with casting with a need of five additional skilled workers.

It was estimated that 3,287 additional employees would be needed by the entire industry by January 1, 1969.

The results of the survey revealed that industries employing between 251 and 500 persons employed the greatest number of skilled plastic workers. However, industries employing over 1000 workers anticipated a need for 105 skilled workers in the molding processes by 1969. Industries which employed between 251 and 500 employees anticipated a need for only 71 additional workers.

A total of 112 additional employees was expected to be needed by those industries whose major product classification was "rubber and miscellaneous plastic products" by January 1, 1969.

Merged area X had the most skilled plastic workers employed in 1968 with 804 reported as employed in this area. Of the skilled workers employed in 1968 in merged area X, 637 were employed in some phase of molding.

Thermoplastic plastics were ranked as the production material most frequently used by the industries. Polyethylene was given a composite rating designating it as the most important thermoplastic production material. Of the thermosetting plastic production materials, epoxy ranked first with polyester second in order of importance.

The responding industries indicated that there were 112 immediate openings for skilled plastic workers in the state. The greatest number of openings was in merged area X, which reported 30 openings. By size of industries, those industries employing one to 20 persons had the greatest number of openings with a need for 34 skilled workers. When the number of immediate openings was considered by product manufactured, those companies manufacturing and fabricating "rubber and miscellaneous plastic products" had 37 immediate openings for skilled plastic workers.

As a result of this study the following conclusions were drawn:

1. The manufacturing industries of Iowa have a definite need for skilled workers in the field of plastics.

2. The training needs vary with the size of the industry, merged area, principle process used, and product manufactured.

3. It is very difficult for industries to predict the number of additional employees beyond one year.

4. The main source of skilled plastic workers is in-company training programs.

5. On the job training is the most frequently used type of in-company training by the Iowa plastic industries.

6. Molding is the major plastic production process used by plastic industries in Iowa.

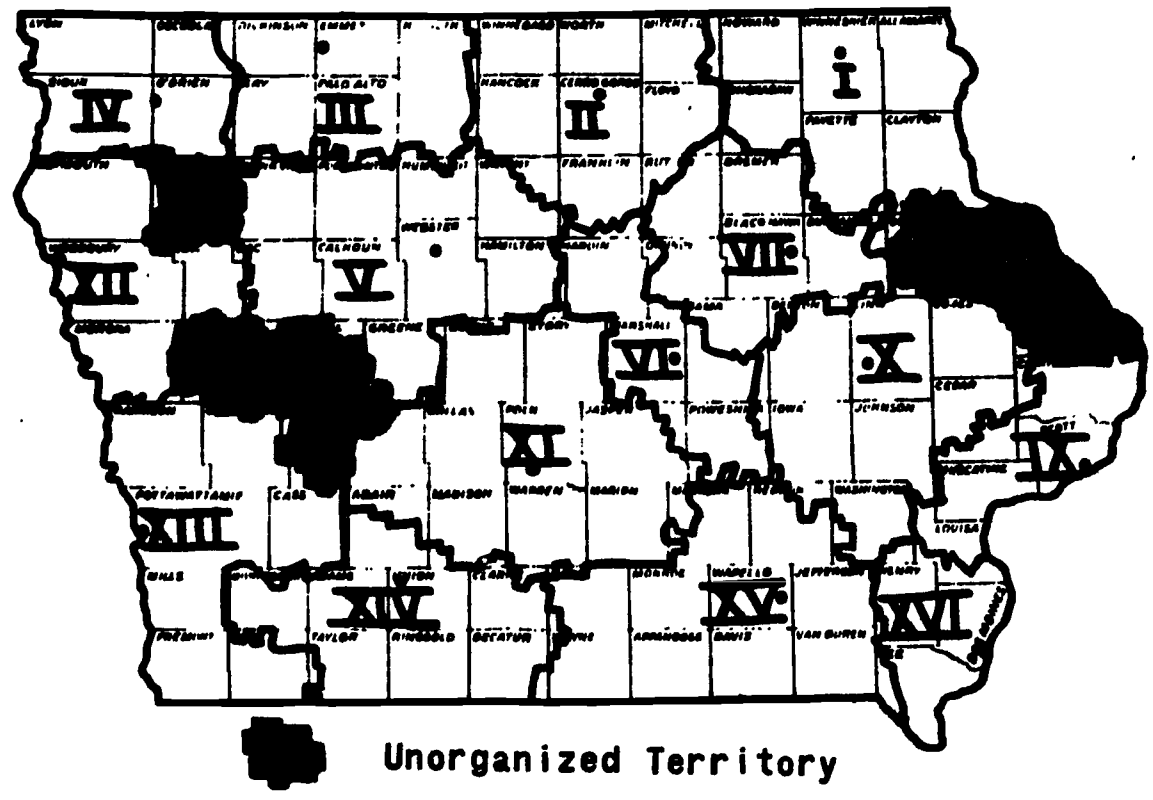
7. The major production material used is thermoplastics.

8. There is a need for the development of instructional programs in the field of plastics in the Iowa area vocational schools.

IMPLICATIONS

The findings of this study indicated a definite need for skilled workers for the Iowa industries manufacturing and fabricating plastics. The sources of skilled plastic workers in Iowa appear limited. The projected manpower needs of these industries shows that this shortage will no doubt become more acute.

It is apparent from the information gathered in this study that training programs are needed in the area vocational-technical schools in Iowa to meet this demand. A study of this nature provides justification for the establishment of a training program in plastics in Iowa.



Administrative Centers of Area Schools in Iowa approved by the State Board of Public Instruction:

Area Community Colleges:

Area XI Ankeny
Area X Cedar Rapids
Area IX Bettendorf
Area V Fort Dodge
Area XVI Burlington
Area XIII Council Bluffs
Area XIV Creston
Area II Mason City
Area III Estherville
Area VI Marshalltown

Area Vocational Schools:

Area I Calmar
Area VII Waterloo
Area IV Sheldon
Area XII Sioux City
Area XV Ottumwa

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Cassell, Frank H.
Corporate Manpower Planning. Special Release 6.

Minnesota Univ., Minneapolis. Industrial Relations Center
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*PERSONNEL POLICY; ADMINISTRATIVE PROBLEMS; *PROGRAM PLANNING; *MANPOWER NEEDS; *MANPOWER DEVELOPMENT; LABOR SUPPLY; MANAGEMENT EDUCATION; MANPOWER UTILIZATION; LABOR MARKET; *INDUSTRY

The shortage of manpower is resulting in reduced productivity, poor service, shoddy workmanship, rising labor costs, and talent pirating by other corporations. Educational lag of those currently employed and the unwillingness of people to keep their knowledge current, coupled with demands for higher levels of knowledge, and more up-to-date knowledge diminishes the supply of qualified manpower. Two basic labor supplies are available: those lacking necessary skills but readily trainable, and the poorly qualified needing employability development. The personnel function of industry must become involved in manpower planning through the: (1) assessment of current manpower needs, (2) assessment of future work force needs, (3) assessment of available manpower resources within the organization, and (4) development of a policy to enlarge the supply of qualified people. Interaction of public and private knowledge in the field of manpower would draw together at the local, regional, and federal levels the necessary resources to assess respective needs. Manpower planning is needed to stretch scarce manpower resources, enhance productivity, and insure that manpower becomes a source of opportunity gained. This document is an address presented to a working session of a research conference at the Industrial Relations Center of the University of Minnesota. (DM)

VT 006 617

INDUSTRIAL RELATIONS CENTER
UNIVERSITY OF MINNESOTA

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CORPORATE MANPOWER PLANNING

Frank H. Cassell

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Special Release 6 — February 1968

Introduction

American management is beginning to awaken to a realization of the vital importance of manpower planning. Failure to give appropriate recognition to this function until recently represents one of the most fantastic omissions in the history of management practice. Fortunately, enlightened leaders in the managerial community have seen both the dangers of omission and the positive potential of sound long-range manpower planning. At present, such planning is virtually in its infancy. The factors underlying anticipated manpower needs, for example, are diverse, complex and at present obscure. Much research is needed—much experimentation will be required.

Manpower planning is currently being pressed at many levels, macro and micro. The Industrial Relations Center at Minnesota has been doing preliminary survey work in the area of manpower forecasting at the firm level. The results of a preliminary survey of policy and practice (largely drawn from firms in the Minneapolis-St. Paul area) formed the subject of a special conference among firms participating in the survey, who met at the IRC to "pool and compare their ignorance." Participants were practically unanimous in their desire to continue their efforts to improve manpower planning and forecasting through continued and expanded joint experimentation with the IRC.

Much of this enthusiasm was generated by the "kick-off" session which opened the conference. We were unusually fortunate to have the right man in the right place for this vital keynote address. Frank H. Cassell, occupies a well deserved niche among the outstanding leaders in the field of manpower and industrial relations. His many-faceted and distinguished career embraces both public and private service as evidenced by the fact that he has recently left the post as Director of the U.S. Employment Service to return to his familiar major base of operations at Inland Steel Company. His remarks on the need for and importance of manpower planning are so urgently important that they truly constitute "required reading" for every would-be thinking manager in our economy. Unfortunately for this purpose our research conference was a *working session*, limited to some twenty people. Hence we are reproducing his remarks in our IRC Special Release series so that they may reach a selected audience of thousands of outstanding managers, union leaders, government officials and other leaders. Please loan your copy to an associate, and if you need extra copies,

please let us know. We will be glad to oblige while the supply lasts. As usual, your comments and suggestions will be sincerely appreciated. We are all in this together—academicians and practitioners alike. We can and will expand our stock of tested knowledge and understanding through our joint efforts. We appreciate the help you give us in designing and answering our research questions. We also appreciate your substantive leadership in helping light the way for the entire field. Frank Cassell's paper provides an inspiring example.

Herbert G. Heneman, Jr.
Director

Corporate Manpower Planning

An Address By

FRANK H. CASSELL
Assistant to the Vice President
Administration

Inland Steel Company

It is highly unlikely that we would be here today discussing Corporate Manpower Planning except for the fact that there exists in the United States, and has existed over a considerable period of time, a shortage of manpower to man the jobs of industry, government, education and other segments of the society. And this shortage promises to continue into the future.

Scarcity of labor, (along with capital and land) once the backbone of "The Dismal Science," has come alive in the daily experience of almost every American from the housewife to corporation president.

The economist would say that productivity is being adversely affected. But the housewife would complain about poor service and shoddy workmanship; the employer would deplore the rising costs of labor and the pirating of talent by his competitors.

Why the shortage of manpower? What is different today from the past?

Change of a fundamental nature has occurred; it is the commitment of the nation to a policy of full employment. Though this goal was expressed in an Act of Congress over twenty years ago, it is only recently that people of this country have begun to turn the commitment into reality.

A full employment policy, however, has varying degrees of impact upon employment, depending on the level of skill, knowledge, and experience needed, and the availability of those qualities in the work force by geographical area.

For example at a 4.1% overall employment rate unemployment for people with varying skills are as follows:

Managers and officials	0.9
Professional, technical and kindred workers	1.5
Craftsmen, foremen and kindred workers	2.2
Clerical and kindred workers	3.7
Service workers, ex. private workers	5.1
Operatives and kindred workers	5.4
Laborers (non farm)	8.1

These substantial differences mask even greater variation among specific occupations.

In similar vein geographical imbalances can show simultaneously an excess of welders in Portland, Oregon, and a shortage in Milwaukee; or they can show an excess of secretaries in Los Angeles and shortages in New York City and Chicago.

Additional imbalances show up according to degrees of experience in the workforce as reflected by unemployment rates by age.

Age	%
16-17	13.2
18-19	11.4
20-24	4.9
25-54	1.9

But these imbalances are more than just a reflection of demand, they are also a reflection of supply. In the age grouping 35-39, for example, the Census Bureau predicts a decline of 6% by 1970. This portends a shortage of executives which will have to be met by upgrading of younger or less qualified people.

At the current level of national technological sophistication a full employment policy results in almost irreducible unemployment rates for the highly skilled and experienced, and for those considered trainable, stable, reliable, pliable, disciplined, and consistently productive. The high unemployment rates are among people lacking these characteristics.

We have therefore available to us to fill shortages two basic labor supplies: those lacking necessary skills who are readily trainable and therefore ready to be upgraded to fill shortages, and the poorly qualified who need employability development to equip them to hold a job on one of the beginning rungs of the job ladder.

Mammoth advances in science and technology are only the reflections of deeper change. The world in which we live, and society itself, is simply more complicated than that of our parents. We need to know more things than they did; our children will need to know more than we do, especially as we place more and more demands upon our economic system and technology to improve the quality of life, maintain leadership in the world, and to solve our human relations problems.

Technology, and this includes the complexities of modern society, business and government, is often beyond reach of many of the current generation of leaders.

These advances cut two ways. On the one hand they increase demand for high talent manpower. On the other hand they make qualifying for the occupations more difficult. They push up educational requirements beyond those possessed by the currently employed labor force and faster than the

educational systems in many parts of the nation are raising their standards, thus limiting the total supply.

Accompanying these developments is the increasing pressure on people in the labor force to adapt to these changes; not just once, but continuously. This has accelerated the number of early dropouts from the industrial workforce, both laborer and engineer. One could speculate that the trend toward earlier retirements is a response to these pressures made possible by liberalized pension provisions.

In such fields as aerospace, missiles, electronic and electrical equipment, and nuclear energy the engineer's knowledge is often considered obsolete in 10 years, and his skills are not easily transferrable to traditional industry, and often there is a severe pay adjustment (down) problem.

Briefly therefore, demands for higher levels of knowledge, educational lag of those currently employed, unwillingness of people to undergo the strains of keeping up to date, and demand for more and more people with more and more recent knowledge diminishes the supply of qualified manpower.

A third development is the widening spectrum of occupations in the high-talent category.

There are today twice as many groups in the occupational classification structure for high-talent occupations—i.e., professional, technical and managerial—as there were as recently as 10 years ago. Some of this is due to an increase in new types of jobs, but some also is because occupations which have been relatively obscure have now moved to the forefront. Mathematics is an example here. Occupations in mathematics have become so important to the economy that they are no longer considered mere adjuncts to the other sciences. They stand on their own.

New occupations are competitive with older and more traditional jobs. Business occupations are receiving stiff competition from the professions, and from such service fields as education and social welfare.

The career of businessman is pitted against careers which are essentially non-business, and which provide different satisfactions.

The graduating college senior today has at least double the number of job options (not offers) open to him as were open to his father when he graduated from college. This does not include the graduate education option. This happens in part because he is better educated. This in itself opens up more options to him.

In business itself, there has been a proliferation of new occupations and careers which has further expanded the range of job options. And this has added further to the shortage of such manpower. The fastest growing occupations are characterized by practically universal demand. These include all

types of engineers, agronomists, economists, sociologists, geologists, physicists and many other occupations in the high talent category.

A fourth contributor to manpower shortages arises out of the country's determination to fully employ its people and to bring an end to poverty. We aim for almost everyone to at least graduate from high school. The percentage of none-white men who finished high school rose in the 6 years (1960-66) from 36% to 53%; non-white women 41% to 49%; male whites 63% to 73%, and white females 65% to 74%. This adds to the already high demand for manpower in the education and social service fields both private and public.

Furthermore, our efforts to educate everyone have created a shortage of people who can aid those who need special help to acquire the needed training and education.

The new expectation by society that everybody be given opportunity to enter the mainstream, regardless of capability, has created need for more and better qualified talent, more recently trained and educated, which has further compounded the shortage of high-talent manpower. Teaching, the largest profession, will need one-half million more full time teachers reaching 2.5 million by 1970.

In even more direct competition with industry for high talent manpower is university teaching which will grow much faster than secondary school teaching. By 1970 college teachers will number 315,000, up 80% from 1960; this is needed to take care of the unprecedented numbers of young people going to college.

The decision to end poverty has affected the character of jobs and work far beyond education per se. New industries have been created to produce a new educational technology which facilitates individual training of the individual. Other companies are deeply involved in the process of making people employable through literacy and skill training—people who were previously discarded as unfit for competitive work.

Fifth, new millions of Americans are becoming members of the affluent society, and other millions are affluent at even higher levels. Their basic needs having been satisfied they are devoting more and more of their disposable income to improving the quality of their lives.

During the period 1947-1966 families with incomes of $7000 or more rose for whites from 21% to 55%; for non-whites from 6% to 28%. (A $7000 income today was equivalent in purchasing power to about $5000 in 1947.)

This is adding additional new jobs and careers to the spectrum, especially in the service to people area.

We want higher education of one form or another to be within the reach of most, if not all, of our children regardless of their economic con-

dition. We want the poor to have health coverage the same as the wealthy.

We want our diminishing living space to be more comfortable, cleaner, and purer. Seventy percent of our population is crowded into only one percent of the land. We aim to end deterioration and decay in our cities.

We want our people to live more peaceably together, to have more respect for their neighbor's rights.

We want to conserve that which adds beauty to our lives; to build institutions which add diversity and quality to our lives. We want to provide theater and opera and all the cultural advantages a poor society could not even think about, let alone realize.

All this has spawned hundreds of new occupations and careers, all requiring more training and education (but often at less pay than industry) to fill the jobs growing out of the existence of affluence and poverty side by side. Much of this is in the area of government employment. From 1960-1975 government employment is estimated to rise 51% from 8.5 million to 12.8 million.

But the real competition lies in the enlarged range of occupations and careers which fulfill more completely than ever before possible, for more people, their unique needs, abilities, and life desires.

Career options arising out of expanding knowledge, growing technological complexity, full employment, the drive to end poverty, the extension of full and equal opportunity to all citizens, and the desire to raise the quality of living, have been in the direction of service toward one's fellow man, challenging to the intellect, and relatively free of the rigidities of organizational structure.

Existence of these new careers extends competition for manpower beyond mere wages to fulfilling the needs of the human spirit. Competition for the scarce scientist has caused the altering of conditions of work in the industrial laboratory to more nearly approximate the university campus and laboratory.

These new and different occupations and industries are attracting manpower, especially creative talent, away from business into work which provides the opportunity to exercise their concern with improving society. These careers appeal to the idealism of youth, and even of many adults. They are influencing the career preferences of some of the best brains coming out of our universities.

The sixth development affecting demand and competition for manpower is the mobility of our educated manpower; which means simply that with a technology which is common to the world, the competition for manpower is not only nation-wide, it is increasingly world-wide; skills and knowl-

edge furthermore are transportable and usable almost everywhere. The competition may be next door or it may be 10,000 miles away.

Though management may not have done this kind of analysis, it is conscious and concerned about manpower as never before because it has been confronted daily by shortages ranging from laborer to engineer and executive. It is aware, painfully so, of the pressure of starting engineer and technician salaries upon the total wage structure of the organization.

The shortage, furthermore, seems chronic. Persistence of the shortage can be seen not only by failure of annual recruiting campaigns, but also by the quality of the intake of manpower. Starting pay rates for engineers have been moving up at the rate of 5% to 7% per year for the last several years, faster than most other industrial occupations, but not faster than professors' salaries which have been rising at a similar pace.[1]

The shortage has made management aware of more than the absence of hands to do the work, it is beginning to see the value of the presence of talent as a competitive force.

In this connection, Governor Otto Kerner of Illinois in discussing the brain drain from the midwest estimated a loss to the midwest of $50,000 a year per Ph.D. who migrated out of the region. This was a minimal estimate. This reasoning is also valid when applied to an individual company.

The overall picture is even more dramatic than the experience of individual companies. Professional and technical employment has had an extraordinary growth—to more than 9.3 million in 1966 from fewer than 4 million in 1947. This increase of well over 100% was five times the rate of increase in employment generally over the same period. This shortage is reflected in an unemployment rate of 1.3%, well below the frictional minimum associated with efficient functioning of the labor market.

Looking ahead to 1975 the technical and professional occupations will likely grow another forty percent to nearly 13 million; twice as fast as for all occupations (twenty percent). And the needs in the natural sciences and engineering will grow even faster. But the country will graduate fewer than half the number needed to meet its engineering needs.

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[1] The average differential in 1950 between a bachelor's degree in engineering and a bachelor's degree in a nontechnical field was $25 a month. In 1967 the difference between a bachelor's degree in engineering and a nontechnical degree has increased to $125 a month.

In 1950, the average difference between a bachelor's and master's degree in any given field was about $40 per month. Today the difference between a bachelor's and master's degree averages about $200 per month.

However, during the last five years, starting salaries for college graduates have increased from 6 to 9% a year depending upon the degree. The total managerial salary structure has been rising at a rate of only 5% per year.

(Information developed by George J. Yoxall, Manager, Personnel and Training, Inland Steel Company.)

This is illustrative of a large shortage problem which affects hundreds of occupations. It suggests also that management's usual response of more and better recruiting will fall short of coping with manpower realities. All that can possibly happen, given this response, is wage bidding which results merely in transferring the shortage problem from one employer to another at a higher price at each exchange.

But that response is tiresome, and it is probably uneconomic. Management will insist on more options. It will ultimately insist upon the systematic and economic allocation and management of manpower paralleling the management of the other scarce resource, money.

Management is, however, beginning to realize belatedly that perhaps substitution of capital for low skill labor has created a greater need for high level talents for which machines cannot substitute, which is both costly and scarce—and which promises to be even more costly and scare in the future as increasing amounts of capital are invested in sophisticated technology and labor saving equipment.

A likely consequence is that the personnel function, as we know it, is in for a radical overhaul if not elimination. It has been largely a passive function, responding to current manpower needs as determined day to day by operating users of manpower. As one observer said recently, personnel people are doing a better and better job of selecting from a poorer and poorer crop. Selection techniques may have improved, but enlarging the supply, and devising substitutions to stretch the supply have largely been left in the realm of economic theory.

The most common (and initial) response to manpower shortages, interestingly enough, seems to be exploitation of the external labor market (recruiting). In the beginning it is random, later it is planned. Elementary assessments are made of current needs and tentative projections are made into the immediate future. There is, however, little knowledge of the supply or competitive demand.

Wages are raised hopefully to increase the supply. If that doesn't work training is instituted. In some cases conditions of work are improved to increase the attractiveness of the company to the potential recruits. But meeting shortages has been essentially an ad-hoc adjustment process. Perhaps this is because some people continue to expect a depression to return and solve the shortage problem.

Consequently little systematic thought has been devoted by corporate personnel departments to the operation of the internal labor market, or the external labor market, or the interaction between the two.

The functions of recruitment, screening, industrial engineering (job design), training and labor-management relations, and wage and salary administration have not generally been thought of as interacting variables

which can produce manpower options and substitutions as the means to increase the labor supply.

But labor market theory is about to come out of the books into the operating arena, and it is the purpose of the balance of this paper to reflect a bit on how labor market theory may transform personnel administration as a function into Corporate Manpower Planning, and how CMP could become the means for both relieving persisting manpower problems and anticipating and planning to meet future problems.

Corporate Manpower Planning has been divided by some writers into two major parts: Manpower Forecasting, and Manpower Development. This division may be broken down further into four parts:

First, assessment of current corporate manpower needs as to numbers, skill or occupational mix, and quality of the workforce.

Second, assessment of available manpower resources within the organization, i.e., what is the ability and capacity of the present workforce as to its potential for development and its adaptability to the changing workforce needs of the company.

Third, forecasting workforce needs of the company based upon assessment of the impact of investment and facilities plans on the manpower mix and manpower training lead times as knowledge and skill levels respond to the technology. The manpower need, occupation by occupation, has to be related to the external supply estimated to be available to the organization. At a more sophisticated level, product and process design will need to be related to supply-demand characteristics of the labor market especially as design may result in labor costs which the product cannot carry in the market. This means building the engineering function into the manpower planning process so that design can make manpower substitution possible. (Use of lesser skilled and more plentiful labor.)

Fourth, development of Human Resource Policy which is fundamenally a matter of enlarging the supply of qualified people available to man the jobs and to meet forecasted needs. This consists of the management of a series of competing forms of adjustment between the external and internal labor markets and within each market.

The forms of adjustment consist of the ability to vary recruiting methods, hiring standards, pay, the quantity and quality of internal training procedures, and even the job structure, through changes in machinery and work methods. This permits the internal labor market to adapt itself structurally and operationally to changing conditions both internally and externally.[2]

[2] The concept of the interaction of the variables of the internal and external labor markets is the subject of analysis by Piore and Doeringer in an unpublished paper, from which this paper has borrowed.

The relationships between the company and the external market consist of adjusting to a number of variables including (a) compensation, (b) hiring criteria, (c) screening procedures, (d) recruitment procedures, (e) size and characteristics of the labor supply outside the company, (f) the job structure of the plant, (g) shop administrative rules, and (h) training procedures.

Each of these is a cost variable. They are adjustable; that is, they enable the plant to adjust to the external supply by varying the use of each of these variables. They permit also the application of cost benefit analysis to relate various inputs to outcomes and thereby to maximize effectiveness.

The internal labor market includes the places where entry may be made into the workforce, the routes of internal movement, and the rules which determine the worker's priority for movement (such as promotions and transfers), and create barriers to movement.

The routes of movement are determined in part by training requirements and by training costs. These are sometimes called natural training progressions or promotional ladders.

The amount and type of training offered workers inside the company will enable the employer to vary both the skill level and quality required for entrance into the company. Stated another way, training enables substitution of lower qualified labor for higher qualified but scarce labor.

The availability of training furthermore removes a constraint upon the introduction of new machinery, new methods, and corporate expansion since the firm does not have to rely exclusively upon the availability of particular skills in the external market.

In another dimension of operation of the internal labor market, the introduction of training procedures at a time when the unemployment rate drops to four percent or less it (training) may prevent plant productivity from dropping thus compensating in part for the inexperience and lack of skill or good work habits of those still available in the external labor market. The cost of training can buy a stable level of productivity if not an increase.

To increase the internal supply as the external supply shrinks in numbers and quality, job ladders may be modified, transfers may have to be made easier, intermediate skill jobs may have to be created to facilitate training and upgrading, and the relative weighing of ability and seniority may have to be modified as skill requirements change. The barriers erected to limit internal job mobility and restrict the internal labor supply arise out of adjustment of such factors as corporate organization and collective bargaining. Because removal of these barriers is sticky, resort is often made to the external market first.

The interaction between these variables produces an infinite number of combinations. The company is in effect solving what is, in principle, a

set of simultaneous questions. At present these are largely a series of separate decisions. The purpose of corporate manpower planning therefore is to tie together decisions concerning investment and technology with those concerning recruiting, screening, compensation, training, job structure, avenues of mobility, and work rules, in such way as to provide cost tradeoffs, and decision options which can be ranked according to various forms of advantage.

Forecasting of corporate manpower needs therefore becomes the leading edge of manpower planning which enables plans to be laid in advance for the selection of appropriate instruments of adjustment (often competing) to enable the company to respond efficiently to anticipated changes in the market, in technological change, and in corporate goals.

Such forecasting depends upon a close interaction of views between corporate financial and facilities planning and corporate manpower planning. It facilitates, furthermore, not only manpower adjustments to technological and market changes but also enables manpower considerations to be injected into the investment decisions respecting plant expansion, new machines and new plant locations.

Is forecasting of manpower need difficult or even possible? Yes in both cases. There is evidence from Job Vacancy Studies made by BLS and USES that corporations are willing to report their job vacancies, that the techniques of reporting such vacancies have progressed to the point where their reliability is reasonably well established. Nine out of ten establishments correctly reported their total vacancies, and 85% of employers said in a followup survey that they would be willing to report on a continuing basis; only 5% said they would be unwilling to report job vacancies. The reporting of job vacancies consistently and over a sustained period gives the employer a more complete measure of the demand for labor—something we have never had before.[3]

Such data furthermore can be used by business firms to get a picture of the areas in which they are recruiting workers, and thereby develop more effective recruiting and plant location policies. Until now corporate manpower planners have had available to them information on employment, unemployment, labor force participation, wages, turnover and working hours, and even characteristics of workers seeking jobs, but this is mostly indirect information about demand. The vacancy studies give promise of filling this gap.

As industry's capability develops in this regard, its information will aid the government in improving the quality of its manpower supply and de-

[3] (Job Vacancy Statistics, Hearings before the Sub-Committee on Economic Statistics of the Joint Economic Committee, Congress of the United States, Eighty-ninth Session, May 17 and 18, 1966, P. 30.)

mand data. Industry's knowledge of the external labor market will of course be enhanced, and this in turn will improve its interaction with the labor market both informationally and operationally.

It will of course be necessary to extend such forecasting to other segments of the society—education, hospitals, etc. As stated earlier in this paper the manpower supply is available to all segments of the society, not just business.

Finally, to assure fullest interaction of public and private knowledge in the field of manpower we may want to consider adaptation of indicative planning techniques developed in France. This would draw together at the local, regional, and Federal levels, corporate operating, finance, engineering and manpower people with government, academicians and educators to exchange knowledge and assess their respective needs. This process would likely occur outside government, but provision should be made to transmit and exchange knowledge with government on a systematic basis so that the society as a whole would benefit from the thought flowing from this exchange.

Whatever we may say, the logic is with widespread development of corporate manpower planning because management needs it; to stretch scarce manpower resources, to prevent decline in productivity, to enhance it; to insure that manpower does not become the source of opportunities lost but rather a source of opportunity gained.

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Occupational employment data updating the 1966 edition and additional data of interest to social science researchers and students are presented. The data, covering the period 1960-1966, were compiled from a national sampling of employer reports, licensing statistics, professional society membership records, and household interviews. Twenty-four tables present data totals on average annual employment by occupational groups, selected professional groups, industries, size of establishment, and governmental agencies. (EM)

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occupational employment statistics 1960-66

Bulletin 1579

U.S. DEPARTMENT OF LABOR
Willard Wirtz, Secretary

BUREAU OF LABOR STATISTICS
Arthur M. Ross, Commissioner

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JANUARY 1968

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Preface

This bulletin is the second in a series. The first, Occupational Employment Statistics, Sources and Data, (Report 305, June 1966), presented information on occupational employment for the Nation and for selected industries through 1964 and when available, for 1965. The present bulletin has two objectives. First, statistics thought to be of continuing importance are updated and whenever possible include the year 1966. Second, new occupational employment data of potential interest to researchers and students of the social sciences are presented.

This bulletin was prepared by Arthur J. Gartaganis.

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Occupational Employment Statistics 1960—66

Chapter 1. Introduction

Significant changes in occupational employment patterns have occurred since World War II. Professional and technical employment has more than doubled; employment in clerical and service occupations has increased more than 60 percent; blue-collar workers have increased only 15 percent; and employment in the agricultural sector has dropped one-half. Within each of these groups the detailed occupations exhibit diverse movements. These changes affect future employment opportunities and concern government officials and educators interested in reducing unemployment and preparing workers for the acquisition of skills required in the future.

The manpower analyst is confronted with two problems: What are the present, and what will be the future occupational patterns? This bulletin may be helpful in coping with these problems. It presents a substantial body of data on occupational employment by detailed industry and for the national economy. Special emphasis is placed on the more important and fast-growing white-collar occupations such as scientists, engineers, technicians, teachers, and health workers. Previously published data have been updated, and newly published or previously unpublished material appear for the first time. Knowledge of past trends is of great importance in attempting to forecast future occupational employment patterns. Historical employment series are shown, and sources of additional historical information are cited. Finally, mention is made of the results of occupational employment studies due to be published in the near future.

Tables 1 through 6 of this bulletin present occupational employment data based on statistics collected from a nationwide sample of households in the monthly survey of the labor force and indicate their reliability. The occupational data from the survey are comprehensive and include self-employed and agricultural workers as well as those on payrolls. Workers who have two jobs or more are counted only in their primary occupation. The monthly estimates from the survey of total employment and unemployment are critical measures of the performance of the economy. Total employment distributed among a number of occupational groups is shown for 1947—66 in tables 1 and 2. Similar data for 1958—66, which conform to the new definition of the labor force established in 1967 (excluding 14- and 15-year-olds), are presented in table 3. Table 6 presents the first published detailed occupational employment data based on the labor force survey of households. Because of sampling error, (tables 4 and 5) estimates of employment in numerically smaller occupations are not as reliable as estimates for occupations which have high employment. Response error also is likely to be significant for some occupations. Consequently, data for 1962—66 are shown for about 60 occupations each employing at least 200,000 at some time during this period.

Data developed from licensing statistics and from membership records and estimates of professional societies provide employment information for the nine professional occupations shown in table 7. Most of the statistics in this table are not subject to sampling error, and response errors are generally small. Also, data are presented for some occupations having fewer than 200,000 workers which, if based on the monthly household survey, would be subject to relatively high sampling error. Although not included in this report, licensing records may also provide information on the geographical distribution of workers in some occupations.

Tables 8 through 14 and 18 through 24 present data on employment by occupation collected from industry establishments. These include both sample surveys of employers and almost complete counts of employment in a limited number of industries. Table 8 presents statistics on teachers and librarians collected from school systems by the Office of Education. Employment by occupation in regulated interstate industries such as railroads, airlines, and telephone communications, is described in table 9. Employment figures for engineers, scientists, and technicians in industry and occupational detail during 1961—66 are presented in tables 10 through 14. Tables 18 through 21 show employment in these professional occupations

by universities and other research organizations in 1961 and 1965. White-collar occupational employment through 1966 in Federal Government is presented in detail in tables 22–23. State government employment in 1964 and local government employment in 1963 are shown in table 24.

The data from employers provide information on the industrial distribution of some occupations, and, conversely, partial or complete occupational patterns for some industries. Information of the latter type is particularly useful in estimating future occupational employment requirements, since projections of output and total employment by industry are made periodically. Expansion of the Bureau's program to collect occupational information from employers is expected to yield additional information on the occupational composition of industry employment.

Data in this bulletin compiled from employer reports and those based on licensing statistics and membership records of professional societies are considered more accurate than estimates for the same occupations obtained through the monthly labor force survey, because of the size of the sampling error in the latter survey and because occupational data from employers probably has less response error than occupational information supplied by households.

Chapter 2. Occupational Data Based on Monthly Household Surveys of the Labor Force

Occupational statistics based on nationwide surveys of households are collected monthly[1] by the Bureau of Census for the Bureau of Labor Statistics. Occupational employment estimates based upon these data are published monthly in the Department of Labor publication Employment and Earnings and Monthly Report on the Labor Force. These figures include farm workers and the self-employed and are the only comprehensive estimates of occupational employment in the United States between decennial years.

Tables 1–4 and 6 present annual averages of these monthly data. Employment in the United States from 1947–56 for 11 occupational groupings is presented in table 2. During 1947–53 this information was obtained by interviewing 21,000 households in 68 sample areas distributed throughout the continental United States. In February 1954 the number of sample areas was increased to 230, and in May 1956 these estimates were further improved when the sample was expanded to include 35,000 interviewed households located in 330 sample areas. In January 1960 Alaska and Hawaii were added to the sample, and in December 1961 the number of sample areas was increased slightly to 357.[2] The expansion in coverage permitted a breakdown into 23 different occupational groupings. The 1957–66 occupational employment series in table 1 reflect these changes and improvements.

Commencing with January 1967 two revisions influence these occupational employment series.[3] First, there has been another improvement in the employment estimates since the sample size has been increased to 52,500 interview households distributed over 449 sample areas. Second, the lower age limit for official statistics on employment and other manpower concepts has been raised from 14 to 16 years of age. Employment of 14- and 15-year-olds is not very large and is concentrated primarily in certain occupational groupings. They are now excluded from these occupational groupings. However, separate series for employment of these youngsters, by major occupation, are now being published. For purposes of comparison, table 3 presents employment excluding 14- and 15-year-olds for selected occupational groupings from 1958–66.

Annual averages of these data for 1967 will appear in the January 1968 issue of the Employment and Earnings and Monthly Report on the Labor Force. This monthly publication appears about the middle of each month and contains occupational group and industry data as of the previous month. Less detailed employment information may be obtained somewhat earlier from the U.S. Department of Labor monthly news release, The Employment Situation. This publication appears about the 10th of each month and contains employment and unemployment data for broad occupational groupings, industry employment data, and analysis of current labor force trends.

The monthly occupational estimates are subject to response and to sampling errors. Response errors arise because the respondent, frequently a housewife, does not have sufficient information about the job title or job duties of working family members, or because occupational upgrading occurs. In the latter case for example, machine-tool operators are identified as machinists and engineering aids as engineers.[4]

Continued improvements in survey techniques and sampling characteristics during the last 20 years have reduced the sampling error as illustrated in tables 4 and 5.[5] These tables present two aspects of the improving reliability. As size of the occupational category increases, the standard error will tend to increase absolutely but to decrease as a percent of the estimates. Further, the reliability of the larger estimates has improved faster than that of the smaller estimates.

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[1] Previous to 1958, occupational data were collected on a quarterly basis.

[2] A description of the methodology of these surveys is contained in BLS Report 313 and Current Population Reports, Series P-23, No. 22, Concepts and Methods Used in Manpower Statistics from the Current Population Survey, June 1967.

[3] Employment and Earnings and Monthly Report on the Labor Force, February 1967, pp. 3–13, U. S. Department of Labor, Bureau of Labor Statistics contains a detailed analysis of the extent and effect of these revisions.

[4] Additional discussion of this topic is contained in Occupational Employment Statistics, Sources and Data, Report 305 U. S. Department of Labor, Bureau of Labor Statistics, 1966, pp. 15 and 24–29.

[5] These tables provide information on the sampling error for the average of the 12 monthly estimates. Sampling error for monthly estimates is available in the Technical Note sections of Employment and Earnings and Monthly Report on the Labor Force.

Commencing in 1962, annual average employment information from the monthly household survey has been tabulated into about 300 occupations or occupational groupings. The smaller occupations are subject to considerable sampling variability. Consequently, only about 60 occupations and occupational categories which employed at least 200,000 in any year from 1962–66 are presented in table 6.

Table 1. Average Annual Employment, 14 Years of Age and Older, by Occupational Group, From the Monthly Household Survey of the Labor Force, 1957-66

(In thousands)

Occupational group	1966	1965	1964	1963	1962	1961	1960	1959	1958	1957
Total	74,065	72,179	70,357	68,809	67,846	66,796	66,681	65,581	63,966	65,016
White-collar workers	33,332	32,104	31,125	30,182	29,901	29,124	28,726	27,798	27,056	26,451
Professional, technical, and kindred workers	9,323	8,883	8,550	8,263	8,040	7,705	7,475	7,143	6,961	6,468
Medical and other health workers	1,506	1,486	1,405	1,351	1,353	1,328	1,299	1,240	1,247	1,156
Teachers, except college	2,020	1,881	1,878	1,817	1,713	1,642	1,620	1,500	1,494	1,347
Other professional and technical	5,797	5,516	5,267	5,095	4,974	4,735	4,555	4,404	4,221	3,968
Managers, officials, and proprietors, except farm	7,404	7,340	7,452	7,293	7,408	7,119	7,067	6,935	6,785	6,703
Salaried workers	4,685	4,427	4,296	4,148	4,053	3,750	3,524	3,416	3,259	3,044
Self-employed workers in retail trade	1,263	1,389	1,474	1,441	1,583	1,664	1,767	1,736	1,770	1,834
Self-employed workers, except retail trade	1,456	1,524	1,682	1,704	1,773	1,705	1,776	1,783	1,756	1,824
Clerical workers	11,846	11,166	10,667	10,270	10,107	9,861	9,783	9,326	9,137	9,152
Stenographers, typists, and secretaries	3,086	2,880	2,708	2,631	2,511	2,405	2,386	2,320	2,241	2,162
Other clerical workers	8,760	8,286	7,959	7,639	7,596	7,456	7,397	7,006	6,895	6,990
Salesworkers	4,759	4,715	4,456	4,356	4,346	4,439	4,401	4,394	4,173	4,128
Retail trade	2,866	2,877	2,635	2,582	2,529	2,586	2,591	2,579	2,468	2,488
Other salesworkers	1,893	1,838	1,821	1,774	1,817	1,853	1,810	1,815	1,705	1,640
Blue-collar workers	27,167	26,466	25,534	24,982	24,278	23,862	24,211	24,162	23,510	24,874
Craftsmen and foremen	9,598	9,221	8,986	8,924	8,678	8,623	8,560	8,561	8,469	8,664
Carpenters	853	850	820	814	812	815	832	846	854	900
Construction craftsmen, except carpenters	1,978	1,839	1,793	1,796	1,705	1,691	1,722	1,726	1,621	1,675
Mechanics and repairmen	2,393	2,337	2,226	2,206	2,145	2,122	2,017	2,047	2,076	2,031
Metal craftsmen, except mechanics	1,180	1,112	1,091	1,079	1,046	1,021	1,090	1,082	1,048	1,182
Other craftsmen and kindred workers	1,849	1,818	1,831	1,786	1,751	1,825	1,762	1,738	1,710	1,709
Foremen, not elsewhere classified	1,345	1,265	1,225	1,243	1,218	1,149	1,137	1,122	1,159	1,168
Operatives	13,879	13,390	12,924	12,507	12,041	11,762	11,986	11,858	11,441	12,530
Drivers and deliverymen	2,580	2,505	2,511	2,446	2,352	2,351	2,375	2,378	2,255	2,330
Other operatives	11,299	10,885	10,413	10,061	9,689	9,411	9,611	9,479	9,185	10,200
Durable goods manufacturing	4,645	4,298	3,966	3,862	3,611	3,356	3,477	3,484	3,203	3,802
Nondurable goods manufacturing	3,779	3,700	3,573	3,462	3,314	3,314	3,344	3,215	3,206	3,451
Nonmanufacturing industries	2,875	2,887	2,874	2,737	2,764	2,741	2,790	2,780	2,776	2,947
Nonfarm laborers	3,690	3,855	3,624	3,551	3,559	3,477	3,665	3,743	3,600	3,680
Construction	724	805	787	730	747	750	797	837	806	(1)
Manufacturing	1,098	1,091	1,027	1,003	1,017	986	1,137	1,178	1,079	(1)
Other industries	1,868	1,959	1,810	1,818	1,796	1,741	1,730	1,727	1,715	(1)
Service workers	9,689	9,342	9,256	9,032	8,802	8,640	8,349	8,040	7,809	7,632
Private household workers	2,249	2,251	2,322	2,306	2,341	2,317	2,216	2,197	2,204	2,098
Other service workers	7,440	7,091	6,934	6,726	6,461	6,323	6,133	5,843	5,605	5,534
Protective service workers	886	874	891	846	805	775	766	760	741	742
Waiters, cooks, and bartenders	2,007	1,958	1,911	1,866	1,774	1,715	1,676	1,631	1,539	1,589
Other service workers	4,547	4,259	4,132	4,014	3,882	3,833	3,690	3,451	3,324	3,204
Farm workers	3,876	4,265	4,444	4,615	4,866	5,170	5,395	5,582	5,591	6,059
Farmers and farm managers	2,095	2,244	2,320	2,396	2,595	2,711	2,780	3,019	3,083	3,329
Farm laborers and foremen	1,781	2,021	2,124	2,219	2,271	2,459	2,615	2,563	2,508	2,730
Paid workers	1,104	1,249	1,324	1,397	1,382	1,489	1,572	1,454	1,439	1,489
Unpaid family workers	677	772	800	822	889	970	1,043	1,109	1,069	1,242

[1] Not available.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 2. Average Annual Employment, 14 Years of Age and Older, by Occupational Group, From the Monthly Household Survey of the Labor Force, 1947-56[1]

(In thousands)

Occupational group	1956	1955	1954	1953	1952	1951	1950	1949	1948	1947
Total	64,928	62,998	61,160	61,778	60,989	60,854	59,648	58,489	59,307	57,843
White-collar workers	25,597	24,553	23,891	23,614	23,070	22,413	22,373	21,636	21,400	20,185
Professional, technical, and kindred workers	6,096	5,782	5,588	5,448	5,092	4,788	4,490	4,028	3,977	3,795
Managers, officials, and proprietors, except farm	6,552	6,442	6,201	6,396	6,182	6,220	6,429	6,433	6,344	5,795
Clerical and kindred workers	8,838	8,359	8,168	7,991	8,122	7,655	7,632	7,438	7,438	7,200
Salesworkers	4,111	3,970	3,934	3,779	3,674	3,750	3,822	3,737	3,641	3,395
Blue-collar workers	25,179	24,729	24,167	24,991	24,802	25,009	23,336	22,770	23,988	23,554
Craftsmen, foremen, and kindred workers	8,693	8,315	8,311	8,588	8,743	8,434	7,670	7,625	8,119	7,754
Operatives and kindred workers	12,816	12,740	12,253	12,747	12,352	12,623	12,146	11,780	12,396	12,274
Laborers, except farm and mine	3,670	3,674	3,603	3,656	3,707	3,952	3,520	3,365	3,473	3,526
Service workers	7,609	7,101	6,755	6,949	6,488	6,533	6,535	6,266	6,040	5,987
Private household workers	2,124	1,946	1,760	1,850	1,805	1,869	1,883	1,757	1,754	1,731
Other service workers	5,485	5,155	4,995	5,099	4,683	4,664	4,652	4,509	4,286	4,256
Farm workers	6,544	6,616	6,348	6,224	6,632	6,900	7,408	7,819	7,881	8,120
Farmers and farm managers	3,655	3,782	3,853	3,842	3,963	4,025	4,393	4,703	4,668	4,995
Farm laborers and foremen	2,889	2,834	2,495	2,382	2,669	2,875	3,015	3,116	3,213	3,125

[1] Data for 1947-56 have not been adjusted to reflect changes in the definitions of employment and unemployment adopted in January 1957. On the average, total employment declined and unemployment increased by about one-quarter million as a result of the change. The change mainly affected nonagricultural industries, but its impact on any occupational category would be relatively small.

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 3. Average Annual Employment, 16 Years of Age and Older, by Occupational Group, From the Monthly Household Survey of the Labor Force, 1958-66

(In thousands)

Occupational group	1966	1965	1964	1963	1962	1961	1960	1959	1958
Total	72,898	71,088	69,305	67,762	66,702	65,746	65,778	64,630	63,036
White-collar workers	33,068	31,849	30,866	29,943	29,632	28,884	28,516	27,574	26,827
Professional and technical	9,309	8,883	8,550	8,263	8,040	7,705	7,474	7,143	6,961
Managers, officials, and proprietors	7,406	7,340	7,451	7,293	7,408	7,119	7,067	6,935	6,785
Clerical workers	11,812	11,129	10,629	10,237	10,065	9,828	9,759	9,297	9,104
Salesworkers	4,541	4,497	4,237	4,150	4,118	4,232	4,216	4,199	3,977
Blue-collar workers	26,950	26,246	25,331	24,778	24,048	23,683	24,067	24,009	23,356
Craftsmen and foremen	9,585	9,222	8,986	8,925	8,678	8,623	8,560	8,561	8,469
Operatives	13,831	13,336	12,866	12,456	11,979	11,712	11,950	11,813	11,392
Nonfarm laborers	3,534	3,688	3,479	3,397	3,391	3,348	3,557	3,635	3,495
Service workers	9,211	8,936	8,890	8,670	8,383	8,261	8,031	7,720	7,515
Private household workers	1,904	1,957	2,040	2,029	2,023	2,036	1,980	1,966	1,991
Other service workers	7,307	6,980	6,851	6,641	6,360	6,226	6,051	5,754	5,524
Farm workers	3,670	4,057	4,219	4,372	4,639	4,917	5,163	5,327	5,338
Farmers and farm managers	2,094	2,244	2,320	2,396	2,595	2,711	2,781	3,019	3,083
Farm laborers and foremen	1,576	1,814	1,899	1,976	2,045	2,206	2,383	2,309	2,255

NOTE: Because of rounding, sums of individual items may not equal totals.

Table 4. The Standard Error[1] of the Annual Average of the Monthly Estimates From the Household Survey, 1950-51, 1955-56, and 1967

(In thousands)

Annual average employment	1950	1951	1955	1956	1967
10	4	5	3	2	2
50	12	13	6	5	4
100	17	17	8	7	5
250	([2])	([2])	13	11	9
300	33	30	([2])	([2])	([2])
500	43	39	19	15	13
1,000	64	54	27	21	18
2,500	107	85	40	34	27
5,000	170	121	58	45	38
10,000	241	165	76	63	51
20,000	376	224	103	80	67
30,000	([2])	([2])	116	94	76
40,000	572	277	125	98	80

[1] The standard error is a measure of sampling variability, that is, the variations that might occur by chance because only a sample of the population is surveyed. The chances are about 2 out of 3 that an estimate from the sample would differ from a complete census by less than the standard error. The chances are 19 out of 20 that the difference would be less than twice the standard error.

[2] Not available in source report.

SOURCE: 1950–56 from the U.S. Department of Commerce publications Current Population Reports, Annual Report on the Labor Force, Series P-50, No. 31, 1950; ibid., No. 40, 1951; ibid., No. 67, 1955; ibid., No. 72, 1956.

1967 from U.S. Department of Labor Employment and Earnings and Monthly Report on the Labor Force, February 1967.

Table 5. The Standard Error of the Annual Average as a Percent of Estimated Annual Average Employment, 1950-51, 1955-56, and 1967

(In thousands)

Annual average employment	1950	1951	1955	1956	1967
10	40.0	50.0	30.0	20.0	20.0
50	24.0	26.0	12.0	10.0	8.0
100	17.0	17.0	8.0	7.0	5.0
250	([1])	([1])	5.2	4.4	3.6
300	11.0	10.0	([1])	([1])	([1])
500	8.6	7.8	3.8	3.0	2.6
1,000	6.4	5.4	2.7	2.1	1.8
2,500	4.3	3.4	1.6	1.4	1.1
5,000	3.4	2.4	1.2	.9	.9
10,000	2.4	1.7	.8	.6	.5
20,000	1.9	1.1	.5	.4	.3
30,000	([1])	([1])	.4	.3	.3
40,000	1.4	.7	.3	.2	.2

[1] Not available in source report.

SOURCE: See table 4.

Table 6. Employment in Numerically Important Occupations, 1962-66

(In thousands)

Occupation	1966	1965	1964	1963	1962
Professional workers:					
Engineers, technical, total	1,117	1,055	1,059	1,041	1,004
Engineers, electrical	279	266	272	255	248
Engineers, mechanical	215	204	206	201	210
Engineers, other	623	585	581	585	546
Natural scientists	193	206	192	188	180
Draftsmen	270	264	240	260	266
Technicians, other engineering and physical science	261	237	227	220	229
Nurses, professional	637	644	594	558	591
Physicians and surgeons	277	252	247	248	238
Technicians, medical and dental	224	206	189	171	171
College presidents, professors, and instructors, not elsewhere classified	266	256	232	189	172
Teachers, elementary schools	1,148	1,034	1,069	1,058	977
Teachers, secondary schools	739	697	678	649	597
Accountants and auditors	606	574	573	564	518
Clergymen	187	194	199	219	220
Lawyers and judges	260	269	260	239	247
Clerical workers:					
Secretaries, stenographers, and typists	3,072	2,875	2,717	2,630	2,500
Secretaries	2,159	2,024	1,845	1,760	1,655
Stenographers	207	208	230	249	245
Typists	706	643	642	621	600
Office-machine operators	470	437	417	410	399
Bookkeepers and accounting clerks	1,204	1,160	1,149	1,100	1,094
Cashiers	688	657	604	551	544
Mail carriers	239	219	201	208	206
Postal clerks	257	242	226	230	244
Shipping and receiving clerks	352	327	356	336	331
Telephone operators	373	346	351	319	328
Craftsmen, foremen, and kindred workers:					
Carpenters	860	851	830	811	819
Brickmasons, stonemasons, and tile setters	193	207	195	183	191
Electricians	439	391	370	385	388
Excavating, grading, and road machinery operators	304	273	273	285	248
Painters, construction and maintenance	474	455	428	435	395
Plumbers and pipefitters	334	301	305	295	280
Foremen, not elsewhere classified	1,349	1,292	1,241	1,251	1,227
Machinists	459	430	414	418	402
Toolmakers, diemakers, and die setters	207	185	201	192	175
Linemen and servicemen, telephone, telegraph, and power	372	337	350	322	312
Mechanics and repairmen	2,403	2,331	2,234	2,213	2,155
Mechanics, motor vehicle	784	791	761	734	676
Stationary engineers	184	189	181	200	181
Operatives and kindred workers:					
Truck and tractor drivers	1,635	1,582	1,571	1,568	1,544
Deliverymen and routemen	579	577	601	538	492
Welders and flame-cutters	507	464	423	408	366
Attendants, auto service and parking	394	391	416	390	390
Laundry and drycleaning operatives	408	417	391	392	399
Meat cutters, except slaughter and packinghouse	173	194	198	203	196
Mine operatives and laborers, not elsewhere classified	179	204	208	202	201
Assemblers	784	712	657	635	596
Inspectors	573	543	538	534	518
Sewers and stitchers, manufacturing	872	819	797	764	707
Service workers, except private household:					
Guards, watchmen, and doorkeepers	315	287	314	295	300
Policemen and detectives	316	330	319	303	281
Cooks, except private household	647	657	604	615	571
Counter and fountain workers	237	206	204	173	163
Waiters and waitresses	953	940	939	938	913
Attendants, hospital and other institutions	663	605	558	532	509
Charwomen and cleaners	289	259	248	246	216
Janitors and sextons	856	794	762	725	677
Practical nurses	270	285	287	273	254

SOURCE: Monthly Household Survey of the Labor Force conducted by the Bureau of Labor Statistics. Survey results not published.

Chapter 3. Employment Data for Selected Proffessional Occupations

Professional societies compile occupational statistics from State licensure data, membership lists, and other sources. These estimates are adjusted to correct problems such as overcounting due to multiple licensing (in various States, for example), nonmembers, and retirees who may be leaving or entering the active ranks. Although not all societies compile data on a systematic or regular basis, reliable estimates are available for a number of professions. Current sources and descriptions of the occupations presented in table 7 are given below.

Dentists

Distribution of Dentists in the United States, by State, Region, District, and County, various editions, an annual report of the American Dental Association based on a count of licensed dentists listed in the American Dental Directory. The employment estimate in table 7 excludes military and retired personnel to conform to a civilian labor force concept.

Nurses

Facts About Nursing, various editions, an annual report of the American Nurses' Association. The interagency Conference on Nursing Statistics, including representatives of The American Nursing Association, the National League for Nursing, and the U.S. Public Health Serivce, meets biennially to prepare a joint estimate based on their data and on records, registration data, and employment data obtained from the American Hospital Association, American Osteopathic Association, State Boards of Nursing, American Red Cross, National Student Nurses' Association, National Federation of Licensed Practical Nurses, and Bureau of Labor Statistics.

Osteopaths

A Statistical Study of the Osteopathic Professional, an annual report of The American Osteopathic Association. Data in table 7

Table 7. Occupational Employment Data Available From Professional Associations, 1960–66

(In thousands)

Occupation	1966	1965	1964	1963	1962	1961	1960
Health professions:[1]							
Dentists	(2)	91	90	89	89	88	87
Nurses—professional	621	(3)	582	(3)	550	(3)	504
Osteopaths	(2)	11	11	11	11	12	12
Pharmacists	121	118	118	117	117	117	117
Physicians	272	265	255	248	239	231	224
Podiatrists	(2)	8	8	8	8	(3)	(3)
Veterinarians	23	(3)	21	(3)	21	(3)	20
Other professions:							
Architects—registered	32	32	30	(3)	27	(3)	26
Foresters	23	(3)	(3)	(3)	20	18	(3)

[1] For a detailed and comprehensive presentation of employment and other characteristics of health professions and occupations see Health Resource Statistics, Health, Manpower,1965, 1966, U. S. Department of Health, Education, and Welfare, Public Health Service.

[2] Not yet available.

[3] No estimates made.

are a count of licensed osteopaths and exclude the retired and those for whom status was not reported.

Note: Approximately 2,200 osteopaths in California were awarded M.D. degrees in 1962, thus decreasing the number of Doctors of Osteopathy in that year.

Pharmacists

N.A.B.P. Bulletin, National Association of Boards of Pharmacy. Employment statistics have been compiled annually in the winter edition. They represent a count of registered pharmacists engaged in practice obtained from N.A.B.P. census and licensing data.

Physicians

A.M.A. Directory Reports Service, a quarterly report of the American Medical Association. Data in table 7 refer to licensed physicians as of the end of each year shown, except for 1966 which are midyear estimates, and exclude military and retired M.D.'s and M.D.'s other than those in Federal employment who have a temporary foreign address.

Podiatrists

American Podiatry Association reports based on State licensing: Podiatry as a Career, by Wilfred E. Belleau revised 1965 edition for 1962 data; Numbers and the Podiatry Professions, by Lloyd E. Blauch, for 1963 data, and Journal of the American Podiatry Association: March 1965; "1964 Survey of the Podiatry Profession: The Podiatrist; Distribution Education, Organizational Relationships," by Lloyd E. Blauch. Estimate for 1965 furnished by the American Podiatry Association.

Veterinarians

A.V.M.A. Directory, a biennial publication of the American Veterinary Medical Association. Data in table 7 refer to licensed veterinarians, excluding those who are retired.

Architects

Data are an unduplicated count of architects registered in each State compiled by the National Council of Architecture Registration Boards, Architectural Institute of America. Some retired registered architects may be included.

Foresters

Datum for 1961 is from a survey of alumni by colleges granting degrees in forestry plus a count of the nondegree members of the Society of American Foresters. It was published in an article "How Many Foresters" by F.H. Eyre in the Journal of Forestry, 1962. The 1962 and 1966 data are estimates made by the Society. They are based upon the 1961 figure and have been adjusted to include recent entrants (degree recipients) and exclude retired personnel.

Chapter 4. Employment of Teachers and Librarians

The Office of Education in the U.S. Department of Health, Education, and Welfare compiles and publishes statistics relating to the educational system. Recent editions of Projections of Educational Statistics furnished information on the supply and demand of teachers over the next 10 years. The Digest of Educational Statistics provides data on librarians. The number of employed teachers and librarians from 1959–66 is presented in table 8.

Table 8. Employment of Teachers and Librarians, in Fall of School Year, 1959–60 Through 1965–66

(In thousands)

Occupation	1965-66	1964-65	1963-64	1962-63	1961-62	1960-61	1959-60
Elementary and secondary [1]	1,942	1,872	1,797	1,717	1,657	1,594	1,531
Elementary school teachers	1,120	1,090	1,053	1,026	1,002	984	952
Public	968	940	908	886	869	858	832
Nonpublic	152	150	145	140	133	126	120
Secondary school teachers	823	782	743	690	655	610	580
Public	749	708	669	621	592	550	524
Nonpublic	74	74	74	69	63	60	56
College instructional staff [2]	432	389	358	336	313	296	283
Instructors or above	367	331	305	287	267	254	245
Full time	245	221	205	192	179	170	164
Part time	122	110	101	95	88	84	81
Junior instructional staff	65	58	53	49	46	42	39
Librarians [3]	81	77	73	69	66	63	62
Public elementary and secondary	28	27	25	23	22	20	20
Nonpublic elementary and secondary	5	5	4	4	4	3	3
College and university	14	12	12	11	10	10	9
Public library	22	21	21	20	20	20	20
Special library	13	12	12	10	10	10	10

[1] Projections of Educational Statistics to 1975–76, 1966 ed., U. S. Department of Health, Education, and Welfare, Office of Education, publication No. OE-10030-66, table 22. Data for 1964–65 were revised. Data for 1965–66 are preliminary.

[2] Ibid., table 27. Data cover only faculty for resident instruction in degree-credit courses. They do not include professional staff for general administration, student personnel services, or organized research; faculty for resident instruction in other than degree-credit courses; extension staff; professional library staff; instructional staff for elementary or secondary instruction; and other faculty. Data for 1960–61, 1962–63, and 1965–66 are estimates.

[3] Digest of Educational Statistics, 1965 ed., U. S. Department of Health, Education, and Welfare, Office of Education, publication No. OE-10024-65, table 128. Ibid., 1966 ed., No. OE-10024-66, table 138.

NOTE: Because of rounding, sums of individual items may not equal totals.

Chapter 5. Occupational Employment Data for Regulated Interstate Industries

Railroad, pipeline, airline, telephone, and telegraph companies which are engaged in interstate commerce file reports with Federal regulatory agencies which include data on employment by occupation. Industry coverage is very comprehensive, since almost all business units in these industries are involved in interstate activities. Selected employment data from these reports are presented in table 9. The sources are described below.

Class I Railroads

Railroad companies which have annual operating revenues of $5 million or more are classified as Class I railroads. These companies, which include over 95 percent of the railroad industry's employment, submit annual reports to the ICC which summarizes them in Statement No. M-300, Wage Statistics of Class I Railroads in U.S. In these reports employment is divided into 128 occupational categories. A few of these categories are groupings of not entirely related occupations. Only a limited number of divisions which do not contain a mixture of occupations are presented in this bulletin.

Railway Express Agency

Annual issues of Transport Statistics in U.S., Part 3, The Railway Express Agency Inc., Interstate Commerce Commission, Bureau of Transport Economics and Statistics.

Pullman Company

Ibid., Part 2, The Pullman Co.

Oil Pipelines

Ibid., Part 6, Oil Pipelines, the data in this report account for more than 85 percent of industry employment.

Scheduled Airlines

Air Transport Facts and Figures, 1966, 1967 Air Transport Association of America. This Association obtained the data from airlines industry information filed with the Civil Aeronautics Board. The Federal Aviation Agency also obtains and publishes, in great detail, employment and other scheduled airlines information in its annual publication FAA Statistical Handbook of Aviation. These data account for over 80 percent of the airline industry employment.

Telephones

Industry Wage Survey: Communications, published annually by the U.S. Department of Labor, Bureau of Labor Statistics. The data are compiled from annual reports filed with the Federal Communications Commission by telephone carriers which had annual revenues exceeding $1 million in 1965 and $250,000 previously. The Annual Statistical Volume, published by the U.S. Independent Telephone Association, presents employment data compiled from an annual survey of independent telephone companies. The data in table 9 represent an unduplicated combination of the two studies. Except for some officials and managerial assistants employed by the Bell System, these data represent, substantially, the whole industry.

Telegraph

Industry Wage Survey: Communications, published annually by the U.S. Department of Labor, Bureau of Labor Statistics. The data are compiled from annual reports filed with the Federal Communications Commission by all companies in the telegraph industry having annual revenues exceeding $50,000. These represent about 90 percent of industry employment.

Table 9. Employment in Selected Occupations, Regulated Interstate Industries, 1960-65

(In thousands)

Occupation [1]	1965	1964	1963	1962	1961	1960
Class I railroads (line-haul)	640.0	665.0	680.0	700.1	717.5	780.5
Conductors, railroad	38.0	37.4	37.1	37.0	36.9	39.0
Office-machine operators	6.1	6.0	6.0	6.3	6.6	7.0
Secretaries	3.4	3.4	3.5	3.5	3.6	3.8
Stenographers and typists	8.0	8.3	8.6	9.0	9.5	10.4
Telephone operators	2.0	2.1	2.3	2.4	2.5	2.8
Carpenters	5.7	6.0	6.1	6.3	6.5	7.1
Linemen and servicemen (Telephone and Telegraph)	2.2	2.3	2.3	2.3	2.4	2.5
Blacksmiths, forgemen, and hammermen	1.8	1.8	1.8	1.8	1.7	2.0
Boilermakers	1.8	1.9	2.0	2.0	2.1	2.3
Stationary engineers	.7	.8	.8	.9	.9	1.0
Locomotive engineers	35.1	34.3	33.9	34.2	34.1	36.2
Locomotive firemen	21.8	30.0	35.9	36.5	36.6	38.8
Drivers and deliverymen	5.9	5.8	5.8	5.8	5.7	5.9
Railway Express Agency, Inc	32.1	31.4	30.4	30.4	30.4	30.8
Drivers and deliverymen	10.4	10.0	9.6	9.4	9.2	9.0
Train messengers	.9	1.1	1.1	1.2	1.3	1.5
Warehouse and platform laborers	5.9	5.7	5.3	5.2	5.3	5.5
The Pullman Company	5.3	5.5	5.9	6.4	6.7	7.3
Conductors	.5	.5	.6	.6	.6	.7
Porters	2.1	2.2	2.2	2.5	2.6	2.9
Oil pipelines	16.9	17.1	18.2	19.2	20.3	21.3
Station engineers and pumpers	2.3	2.5	2.5	2.8	3.0	3.3
Gager-deliverymen and oil receivers	2.9	2.9	3.1	3.2	3.4	3.6
Pipeline repairmen	1.5	1.7	1.8	2.0	2.1	2.3
Other mechanics	.7	.7	.7	.7	.7	.8
Laborers	1.1	1.1	1.2	1.2	1.1	1.1
Scheduled airlines	205.9	191.8	178.9	172.8	169.9	166.1
Airline pilots and copilots	16.3	15.1	14.3	13.8	13.9	13.5
Airline stewardesses and pursers	17.1	14.5	13.1	12.2	11.9	10.6
Other flight personnel	4.8	4.4	4.0	4.2	4.2	3.8
Communications personnel	3.2	3.2	3.7	3.4	3.7	4.2
Mechanics and maintenance personnel	40.7	39.4	34.5	34.9	34.1	34.2
Aircraft and traffic service personnel	56.3	51.9	49.1	46.7	44.6	43.3
Office employees	42.9	40.3	37.9	37.0	36.6	35.4
All other employees	24.7	23.0	22.4	20.7	20.9	21.1
Telephone industry	722.5	699.9	678.7	669.6	672.5	694.9
Professional and semiprofessional personnel	67.5	64.0	60.9	53.4	52.0	50.5
Business office and sales employees	54.3	52.7	51.4	52.0	51.6	49.8
Clerical employees	152.2	147.9	142.5	142.9	142.6	144.9
Telephone operators	199.1	193.1	189.2	188.5	196.8	216.3
Foremen, telephone craftsmen	28.9	27.2	26.1	25.9	25.5	26.0
Central office craftsmen	69.0	65.9	63.1	62.0	59.1	58.0
Installation and exchange repair craftsmen	79.6	77.7	75.1	73.2	72.0	71.2
Line, cable, and conduit craftsmen	39.2	38.3	37.0	38.1	38.8	43.0
Building, supplies, and motor vehicle employees	24.9	25.4	26.0	27.2	27.9	28.8
Laborers	.4	.4	.4	.5	.5	.5
Other employees, not elsewhere classified	2.7	2.3	2.4	1.4	1.5	1.7
Telegraph industry	30.9	31.6	32.8	34.9	36.5	37.6
Professional and semiprofessional personnel	1.4	1.2	1.2	1.4	1.4	1.4
Office superintendents	2.6	2.6	2.8	2.9	3.0	3.1
Sales employees	.5	.5	.5	.6	.6	.6
Clerical employees	7.2	7.3	7.7	8.1	8.5	8.7
Telegraph operators	6.1	6.3	7.0	7.4	8.0	8.7
Telephone operators	1.3	1.3	1.5	1.6	1.8	1.9
Construction, installation, and repair employees	6.9	6.9	6.5	7.1	6.9	6.6
Building service employees	.6	.6	.7	.8	.9	.9
Messengers	4.3	4.5	5.0	5.1	5.6	5.9

[1] Industry totals include data not shown separately.

SOURCE: See text, p. 12.

Chapter 6. Employment in Engineering, Scientific, and Technical Occupations in Private Industry

Beginning in the middle of the past decade, the Bureau of Labor Statistics conducted a series of employment surveys of scientists, engineers, and technicians in private industry. The National Science Foundation[6] sponsored the early surveys and presented information on employment of scientists and engineers, the number in research and development, and the costs of research and development.[7] Employment data were requested on persons working in each occupation regardless of their educational background.

Some of the results of the 1961 through 1966 surveys are presented in this report. Tables 10 through 14 include occupational employment of engineers, nine scientific occupations, and seven technician occupations by industry.[8] The later occupational-industry series are not exactly comparable to their pre-1961 counterparts, as a number of revisions and improvements have been made. Data by size of establishment and information about the numbers employed in sales, research, and other employment functions were obtained also but not shown in this report.

Sampling Procedures

Prior to 1961 the sampling unit was a company. Companies not meeting the minimum employment specified—or "cut-off" point—which varied from industry to industry were excluded from the survey. Beginning in 1961, because of many technical problems the individual establishment, rather than the company, was chosen as the sampling unit.[9] By 1962, the sample frame was increased to 350,000 establishments from which emerged a sample of 15,000.[10]

For 1965 and later surveys the sample frame was increased to about 530,000, the number of sampled establishments to 24,000, and minor modifications were made in cut-off points.

The influence of excluded establishments is very strong in certain industries which include large numbers of very small-size establishments. In the contract construction industry this exclusion biases downward the estimates of engineering employment. Although the wholesale and retail trade and the finance, insurance, and real estate industries include large numbers of smaller establishments, employment of scientific and technical personnel is not important in these sectors. Some understatement of engineers and scientists who are self-employed also appears to exist in a few of the service industries.[11]

Significant changes have been made in the industry and occupational detail presented. By 1964 the American economy had been subdivided into about 60 industry categories.

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[6] National Science Foundation reports: Science and Engineering in American Industry, Final Report on a 1953–54 Survey (October 1956), and 1956 Survey (November 1956); Scientific and Technical Personnel in Industry, 1960 (1961); Scientific and Technical Personnel in American Industry, Report on a 1959 Survey (1962); and U.S. Department of Labor's Employment of Scientific and Technical Personnel in Industry, 1962, BLS Bulletin 1418 (1964).

[7] The Foundation's activities which gather information about expenditures for research and development have been expanded greatly and now constitute the subject of separate publications. For example, see Federal Funds for Research, Development, and Other Scientific Activities, Fiscal Years 1965, 1966, and 1967 vol. XV, July 1966. Since expenditure decisions are made for forthcoming fiscal years, this may serve as a helpful guide to employment forecasting.

The Foundation also has been compiling and publishing information upon the educational background, employment characteristics, present and expected supply and demand, and the general status of scientific and technical personnel in the national economic and social context. The latest in a series of publications containing a broad range of information is Scientific and Technical Manpower Resources, Summary Information on Employment, Characteristics, Supply, and Training, November 1964.

[8] A publication containing the 1961–66 data is in preparation. It will contain slightly more detailed industry and occupational patterns than are included in tables 10 through 14. Results of the 1967 survey have been received and are being tabulated.

[9] See table 15 for a presentation of these cutoff points by industry.

[10] The basic list of establishments is comprised of those reporting to State employment security agencies and of interstate railroads and related companies. These number over 2 million and include about four-fifths of the Nation's employed. From this list, all establishments below a minimum size which varies from industry to industry are excluded. Also excluded are those industries which employ negligible numbers of scientists, e.g., farms; or which pose unusual sampling problems, e.g., nonprofit institutions; or which are the subject of separate exhaustive studies, e.g., education and hospitals. The remaining establishments—or sample frame—then are stratified by region, industry, and size of establishment. The surveyed establishments then are selected randomly from the sample frame.

[11] These surveys account for about 95 percent of the engineers, technicians, and scientists employment in private industry, where the latter is defined as the total excluding government, educational institutions, and nonprofit organizations.

Starting with the 1965 survey, more than 80 industry categories were tabulated. In all cases the Bureau of the Budget's standard industrial classification (SIC) system is used. Except for engineers, greater occupational detail is now available. Data for seven engineering occupations were obtained in the first survey, but now there exists only an "all engineers" occupational category. A survey in 1963 to explore the possibility of separate reporting by major branch of engineering revealed that many establishments would find it difficult to provide this information without a major increase in their work load. The number of scientific occupations was increased from 8 to 13, and the number of technician occupations from 1 "catch-all" to 8 groupings.

The magnitude of the sampling variability, or relative standard error, of these occupational estimates has not been ascertained in the 1961 and later surveys. However, estimates of the sampling variability in the January 1960 data have been calculated and are presented in tables 16 and 17. [12] Although these refer to company data, they are thought to be close approximations for most industries to corresponding standard errors which can be obtained from the data, commencing in 1961, based upon establishment information.

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12 See Scientific and Technical Personnel in Industry, 1960, 1961, National Science Foundation, Appendixes B and C for detailed presentation of the survey problems involved.

Table 10. Employment of Engineers, by Industry, as of January 1, 1961-66

(In thousands)

SIC code	Industry	1966	1965	1964	1963	1962	1961
	All industries	775.9	749.1	720.3	711.7	671.2	643.2
07-09	Agriculture, forestry, and fisheries	(1)	(1)	(1)	(1)	(1)	(1)
10-14	Mining	17.1	17.3	17.5	17.9	16.5	17.2
15-17	Contract construction	46.7	42.0	38.8	38.8	37.5	36.2
	Manufacturing	536.0	519.7	502.4	502.6	472.1	450.4
19	Ordnance and accessories	51.5	50.6	47.4	46.2	41.1	36.2
20	Food and kindred products	4.9	4.8	4.8	5.6	5.5	5.8
22	Textile mill products	3.1	2.9	3.3	2.9	2.7	2.6
23	Apparel and other finished products	.6	.5				
24	Lumber and wood products	..8	.7	1.8	1.6	1.6	1.6
25	Furniture and fixtures	1.4	1.3				
26	Paper and allied products	9.7	9.6	9.3	9.5	9.5	9.0
27	Printing and publishing	1.1	1.1	.9	.9	.9	.8
28	Chemicals and allied products	40.6	38.6	39.3	34.6	33.2	32.2
29	Petroleum refining and related industries	9.9	10.1	10.5	10.3	10.1	10.0
30	Rubber and miscellaneous plastics products	7.8	7.2	6.6	6.1	5.8	5.8
31	Leather and leather products	.5	.5	.4	.4	.4	.4
32	Stone, clay, and glass products	8.9	8.4	8.3	8.5	8.4	8.1
33	Primary metal industries	20.5	20.0	19.4	20.3	21.1	20.5
34	Fabricated metal products	27.9	26.2	24.8	24.7	23.9	23.9
35	Machinery, except electrical	75.1	73.5	69.3	69.6	65.3	62.3
36	Electrical machinery, equipment, and supplies	135.6	132.2	129.5	133.9	122.7	117.7
37	Transportation equipment	103.4	100.5	96.7	97.3	90.5	85.9
38	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks	29.6	27.9	26.7	26.8	25.9	24.3
39	Other manufacturing industries[2]	3.2	3.1	3.4	3.8	3.5	3.3
	Transportation, communications, and utilities	51.6	50.8	46.6	44.8	44.7	43.2
40	Railroad transportation	4.1	4.1	8.8	8.3	8.7	8.8
41-47	Other transportation services	4.3	4.4				
48	Communication	17.1	16.8	13.7	12.9	12.8	12.5
49	Electric, gas, and sanitary services	26.1	25.5	24.1	23.6	23.2	21.9
50-59	Wholesale and retail trade	23.0	21.6	20.6	19.2	18.4	17.7
60-67	Finance, insurance, and real estate	4.2	4.0	3.5	3.1	3.1	2.5
	Services	97.3	93.7	90.9	85.3	78.9	75.7
70-79	Hotel, personal, business, repair, amusement, recreation and legal	36.1	35.2	36.8	35.4	(3)	(3)
807	Medical and dental laboratories	(1)	(1)	.1	.1	(3)	(3)
891	Engineering and architectural services	61.2	58.5	54.0	49.8	(3)	(3)

[1] Less than 50.
[2] Includes SIC 21 tobacco manufactures.
[3] Not available.

NOTE: Because of rounding, sums of individual items may not equal totals.

SOURCE: Preliminary data from sample surveys conducted by the U.S. Department of Labor, Bureau of Labor Statistics. Establishments below a minimum specified size, determined separately for each major industry group, were excluded from the survey. This exclusion does not significantly affect the above data. Governments, universities, and nonprofit organizations were not surveyed.

Table 11. Employment of Scientists, by Industry, as of January 1, 1961-66

(In thousands)

SIC code	Industry	1966	1965	1964	1963	1962	1961
	All industries	178.	169.7	164.9	159.5	155.3	150.8
07-09	Agriculture, forestry, and fisheries	0.4	0.4	0.4	0.4	0.4	0.4
10-14	Mining	12.0	11.6	10.9	10.8	10.8	10.8
15-17	Contract construction	.4	.4	.3	.3	.2	.2
	Manufactruing	130.1	124.6	122.3	119.9	117.8	116.1
19	Ordnance and accessories	8.3	7.7	7.1	6.6	5.9	4.4
20	Food and kindred products	6.9	7.2	7.2	7.5	7.0	7.2
22	Textile mill products	2.1	2.0	1.7	1.3	1.3	1.3
23	Apparel and other finished products	.3	.3				
24	Lumber and wood products	.2	.2	.2	.2	.2	.2
25	Furniture and fixtures	(1)	(1)				
26	Paper and allied products	4.1	3.8	4.0	3.8	3.8	3.6
27	Printing and publishing	.2	.2	.4	.3	.2	.2
28	Chemicals and allied products	57.1	53.3	51.8	49.9	49.9	50.2
29	Petroleum refining and related industries	4.0	4.0	4.3	4.3	4.2	4.2
30	Rubber and miscellaneous plastics products	3.3	3.0	3.0	3.0	2.6	2.6
31	Leather and leather products	.2	.1	.1	.2	.2	.2
32	Stone, clay, and glass products	1.7	1.6	1.6	1.6	1.6	1.5
33	Primary metal industries	7.3	7.2	7.8	8.5	9.2	9.8
34	Fabricated metal products	2.4	2.6	2.5	2.3	2.1	2.1
35	Machinery, except electrical	6.5	6.5	5.5	5.7	5.2	4.9
36	Electrical machinery, equipment and supplies	9.2	9.2	10.0	10.3	9.4	9.0
37	Transportation equipment	8.9	8.7	9.1	8.8	8.7	9.4
38	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks	6.0	5.4	4.8	4.6	4.5	4.2
39	Other manufacturing industries[2]	1.3	1.3	1.2	1.0	1.0	1.1
	Transportation, communication, and utilities	1.8	1.8	2.0	1.7	1.6	1.6
40	Railroad transportation	.4	.4	.6	.5	.5	.5
41-47	Other transportation services	.1	.1				
48	Communication	.2	.1	.2	.1	.1	.1
49	Electric, gas, and sanitary services	1.2	1.2	1.2	1.1	1.0	1.0
50-59	Wholesale and retail trade	8.6	7.9	6.8	6.7	6.1	5.6
60-67	Finance, insurance, and real estate	4.8	4.4	3.8	3.2	3.2	2.9
	Services	20.5	18.6	18.4	16.5	15.2	13.2
70-79 81	Hotel, personal, business, repair, amusement, recreation and legal	16.2	15.0	14.1	13.1	(3)	(3)
807	Medical and dental laboratories	1.4	1.3	1.2	1.1	(3)	(3)
891	Engineering and architectural services	2.9	2.2	3.1	2.3	(3)	(3)

[1] Less than 50.
[2] Includes SIC 21 tobacco manufactures.
[3] Not available.

NOTE: Because of rounding, sums of individual items may not equal totals.

SOURCE: Preliminary data from sample surveys conducted by the U.S. Department of Labor, Bureau of Labor Statistics. Establishments below a minimum specified size, determined separately for each major industry group, were excluded from the survey. This exclusion does not significantly affect the above data. Governments, universities, and nonprofit organizations were not surveyed.

Table 12. Employment of Technicians, by Industry, as of January 1, 1961-66

(In thousands)

SIC code	Industry	1966	1965	1964	1963	1962	1961
	All industries	673.2	645.3	638.7	623.8	594.6	555.1
07-09	Agriculture, forestry, and fisheries	1.0	1.0	1.5	2.0	2.1	1.8
10-14	Mining	10.2	10.2	11.3	11.2	11.2	11.1
15-17	Contract construction	30.2	25.7	28.8	27.8	26.2	26.0
	Manufacturing	380.2	366.9	369.4	370.1	355.4	329.2
19	Ordnance and accessories	19.0	19.1	19.2	19.3	18.2	16.9
20	Food and kindred products	4.2	4.1	4.7	4.0	3.9	3.2
22	Textile mill products	2.4	2.2	3.5	2.6	2.8	2.5
23	Apparel and other finished products	.1	.1	.2	.2		
24	Lumber and wood products	.7	.6	.9	1.0	2.4	2.0
25	Furniture and fixtures	1.5	1.4	1.8	1.4		
26	Paper and allied products	6.0	6.0	6.3	6.3	6.2	5.6
27	Printing and publishing	.7	.6	1.0	.8	.8	.9
28	Chemical and allied products	38.3	36.7	37.9	36.9	35.5	35.6
29	Petroleum refining and related industries	5.8	5.7	4.6	4.7	5.8	5.4
30	Rubber and miscellaneous plastics products	4.9	5.0	4.7	4.9	5.4	5.4
31	Leather and leather products	.3	.3	.4	.3		
32	Stone, clay, and glass products	5.6	5.6	5.8	5.7	5.4	5.1
33	Primary metal industries	17.6	17.4	17.3	16.5	18.1	15.9
34	Fabricated metal products	24.7	24.7	25.4	25.3	25.8	23.3
35	Machinery, except electrical	67.4	65.5	64.9	61.7	57.9	53.8
36	Electrical machinery, equipment, and supplies	99.5	92.9	93.4	98.8	92.6	84.1
37	Transportation equipment	58.4	56.9	55.9	55.3	51.2	47.8
38	Professional, scientific, and controlling instruments; photographs and optical goods; watches and clocks	20.2	19.3	18.7	20.6	20.0	18.5
39	Other manufacturing industries [1]	3.0	2.9	3.8	3.8	3.4	3.2
	Transportation, communication, and utilities	58.4	56.9	57.9	55.6	54.3	52.3
40	Railroad transportation	4.7	4.5	6.5	6.0	6.0	6.2
41-47	Other transportation services	2.1	2.1				
48	Communication	31.7	30.6	31.3	30.7	30.4	29.8
49	Electric, gas, and sanitary services	19.8	19.6	20.1	18.9	17.9	16.3
50-59	Wholesale and retail trade	31.2	28.9	25.8	23.2	21.6	22.9
60-67	Finance, insurance, and real estate	5.8	5.2	4.6	4.6	4.4	4.2
	Services	156.2	150.5	139.7	129.2	119.4	107.6
70-79, 81	Hotel, personal, business, repair, amusement, recreation, and legal	39.9	39.6	40.3	39.7	(2)	(2)
807	Medical and dental laboratories	18.5	18.6	18.7	16.2	(2)	(2)
891	Engineering and architectural services	97.8	92.3	80.6	73.2	(2)	(2)

[1] Includes SIC 21 tobacco manufactures.
[2] Not available.

NOTE: Because of rounding, sums of individual items may not equal totals.

SOURCE: Preliminary data from sample surveys conducted by the U.S. Department of Labor, Bureau of Labor Statistics. Establishments below a minimum specified size, determined separately for each major industry group, were excluded from the survey. This exclusion does not significantly affect the above data. Governments, universities, and nonprofit organizations were not surveyed.

Table 13. Employment of Scientists, by Occupation and Industry, as of January 1, 1966

(In thousands)

SIC code	Industry	Total	Agricultural	Biologists	Chemical	Geologists	Mathematical	Medical	Metallurgical	Physical	Other
	All industries	178.7	4.9	9.1	84.5	13.8	27.3	4.3	10.9	15.1	8.8
07-09	Agriculture, forestry, and fisheries	0.4	0.4	[1]	[2]	[2]	[1]	[2]	[2]	[2]	[1]
10-14	Mining	12.0	.1	[1]	0.8	10.5	0.2	[2]	0.3	[1]	0.1
15-17	Contract construction	.4	[1]	[2]	[1]	.1	.3	[2]	[1]	[1]	[2]
	Manufacturing	130.1	3.0	7.4	73.1	.8	15.3	2.9	9.9	10.9	6.7
19	Ordnance and accessories	8.4	[1]	.2	1.5	.2	3.1	[1]	.5	2.4	.4
20	Food and kindred products	6.9	1.2	.7	4.3	[1]	.1	[1]	[1]	[1]	.6
21	Textile mill products	2.1	[2]	[1]	1.7	[1]	.3	[1]	[2]	[1]	.1
23	Apparel and other finished products	.3	[2]	[2]	.3	[2]	[1]	[2]	[2]	[2]	[1]
24	Lumber and wood products	.2	.1	[1]	.1	[1]	[1]	[2]	[2]	[2]	.1
25	Furniture and fixtures	[1]	[2]	[2]	[1]	[2]	[1]	[2]	[1]	[2]	[2]
26	Paper and allied products	4.1	.6	[1]	2.6	[1]	.3	[1]	[1]	.1	.4
27	Printing and publishing	.2	[1]	[2]	.2	[1]	.1	[1]	[1]	[1]	[1]
28	Chemicals and allied products	57.1	1.0	6.2	40.2	.1	1.3	2.6	.7	2.0	2.8
29	Petroleum refining and related industries	4.0	[1]	[1]	3.3	.1	.2	[2]	[1]	.2	.1
30	Rubber and miscellaneous plastics products	3.3	[1]	[1]	2.9	[1]	[1]	[1]	[1]	.1	.3
31	Leather and leather products	.2	[2]	[2]	.1	[2]	[1]	[2]	[1]	[2]	[2]
32	Stone, clay, and glass products	1.7	[1]	[1]	1.2	.1	.1	[2]	.1	.1	.1
33	Primary metal industries	7.3	[1]	[1]	2.2	.1	.3	[1]	4.5	[1]	.1
34	Fabricated metal products	2.4	[1]	[1]	.8	[1]	.5	[1]	.6	.2	.2
35	Machinery, except electrical	6.5	.1	.1	1.7	[1]	2.7	[1]	1.1	.7	.1
36	Electrical machinery, equipment, and supplies	9.2	[1]	.1	2.6	[1]	2.5	[1]	.6	2.5	.8
37	Transportation equipment	8.9	[1]	.1	2.2	[1]	3.3	[1]	1.6	1.4	.3
38	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks	6.0	[2]	.1	4.1	[1]	.2	.1	.1	1.0	.3
39	Other manufacturing industries[3]	1.3	[1]	[1]	1.1	[2]	.1	[1]	[1]	.1	[1]
	Transportation, communication, and utilities	1.8	.2	[1]	.6	.4	.5	[1]	[1]	[1]	.1
40	Railroad transportation	.4	[1]	[1]	.1	[1]	.1	[1]	[1]	[1]	[1]
41-47	Other transportation services	.1	[2]	[2]	[1]	[1]	[1]	[1]	[2]	[1]	[2]
48	Communication	.2	[2]	[2]	[1]	[2]	.1	[2]	[1]	[1]	[1]
49	Electric, gas, and sanitary services	1.2	.1	[1]	.5	.3	.2	[1]	[1]	[1]	[1]
50-59	Wholesale and retail trade	8.6	.6	.3	4.0	.2	1.8	.1	.1	.2	1.2
60-67	Finance, insurance, and real estate	4.8	.1	[1]	[1]	[1]	4.6	.1	[2]	[2]	[1]
	Services	20.5	.6	1.3	6.0	2.0	4.5	1.1	.5	4.0	.6
70-79, 81	Hotel, personal, business, amusement, recreation, and legal	16.2	.6	.3	5.2	1.3	3.7	1.0	.4	3.3	.3
807	Medical and dental laboratories	1.4	[2]	.9	.3	[2]	[1]	.1	[2]	[2]	[1]
891	Engineering and architectural services	2.9	[1]	.1	.4	.6	.8	[1]	.1	.6	.3

[1] Less than 50.
[2] Not available.
[3] Includes SIC 21 tobacco manufactures.

NOTE: Because of rounding, sums of individual items may not equal totals.

SOURCE: Preliminary data from sample surveys conducted by the U.S. Department of Labor, Bureau of Labor Statistics. Establishments below a minimum specified size determined separately for each major industry group, were excluded from the survey. This exclusion does not significantly affect the above data. Governments, universities, and nonprofit organizations were not surveyed.

Table 14. Employment of Technicians, by Occupation and Industry, as of January 1, 1966

(In thousands)

SIC code	Industry	Total	Draftsmen	Surveyors	Electrical and electronic	Other engineering and physical science	Biological and agricultural	Medical and dental	Other life science
	All industries	673.2	244.6	26.6	150.3	149.5	6.3	22.1	73.7
07-09	Agriculture, forestry, and fisheries	1.0	[1]	[2]	[1]	[2]	0.6	[1]	.4
10-14	Mining	10.2	3.7	1.6	1.0	2.0	[1]	[1]	1.8
15-17	Contract construction	30.2	18.3	3.1	4.6	1.0	[2]	[1]	3.2
	Manufacturing	380.2	128.5	1.6	88.7	112.4	4.7	1.1	43.3
19	Ordnance and accessories	19.0	4.2	[1]	8.7	4.9	.2	[1]	1.0
20	Food and kindred products	4.2	.6	[1]	.3	1.2	.7	[1]	1.4
22	Textile mill products	2.4	.3	[2]	.3	.8	[1]	[2]	1.0
23	Apparel and other finished products	.1	[1]	[1]	[1]	[1]	[2]	[2]	.1
24	Lumber and wood products	.7	.4	.1	[1]	.1	[1]	[2]	[1]
25	Furniture and fixtures	1.5	1.3	[2]	[1]	.1	[2]	[2]	.1
26	Paper and allied products	6.0	1.2	.1	.4	3.2	.1	[1]	1.0
27	Printing and publishing	.7	.3	[1]	.1	.1	[1]	[1]	.2
28	Chemicals and allied products	38.3	3.7	[1]	1.3	23.1	3.2	.4	6.5
29	Petroleum refining and related industries	5.8	.7	[1]	.3	3.2	[1]	[1]	1.6
30	Rubber and miscellaneous plastics products	4.9	1.3	[2]	.2	2.5	[1]	[1]	.9
31	Leather and leather products	.3	.1	[2]	[2]	.2	[1]	[2]	[1]
32	Stone, clay, and glass products	5.6	2.4	[1]	.4	1.7	[1]	[1]	1.0
33	Primary metal industries	17.6	4.7	.3	1.8	7.2	[1]	.1	3.6
34	Fabricated metal products	24.7	16.6	.1	.9	5.4	[1]	[1]	1.5
35	Machinery, except electrical	67.4	35.6	.2	11.6	13.1	.1	[1]	6.8
36	Electrical machinery, equipment, and supplies	99.5	27.6	.6	46.6	16.1	.1	.1	8.4
37	Transportation equipment	58.4	20.5	.1	9.7	23.9	[1]	.1	4.2
38	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks	20.2	6.0	[1]	5.6	4.4	.1	.2	3.8
39	Other manufacturing industries [3]	3.0	1.0	[2]	.4	1.2	.1	[2]	.3
	Transportation, communication, and utilities	58.4	9.7	2.7	26.5	13.3	[1]	[1]	6.0
40	Railroad transportation	4.7	1.8	.8	.7	.8	[2]	[1]	.6
41-47	Other transportation services	2.1	.3	.4	.9	.1	[2]	[1]	.4
48	Communication	31.7	1.1	.2	19.1	8.5	[2]	[2]	2.9
49	Electric, gas, and sanitary services	19.8	6.4	1.4	5.9	3.9	[1]	[1]	2.2
50-59	Wholesale and retail trade	31.2	5.0	[1]	15.2	3.1	[1]	4.2	3.6
60-67	Finance, insurance, and real estate	5.8	.4	[2]	.2	.9	[2]	.1	4.2
	Services	156.2	78.9	17.6	14.2	16.8	1.0	16.7	11.2
70-79, 81	Hotel, personal, business, amusement, recreation, and legal	39.9	10.7	.8	10.2	12.2	.8	[1]	5.2
807	Medical and dental laboratories	18.5	[1]	[2]	[1]	[1]	.1	16.7	1.7
891	Engineering and architectural services	97.8	68.1	16.8	4.0	4.5	.1	[1]	4.3

[1] Less than 50.
[2] Not available.
[3] Includes SIC 21 tobacco manufactures.

NOTE: Because of rounding, sums of individual items may not equal totals.

SOURCE: Preliminary data from sample surveys conducted by the U.S. Department of Labor, Bureau of Labor Statistics. Establishments below a minimum specified size, determined separately for each major industry group, were excluded from the survey. This exclusion does not significantly affect the above data. Governments, universities, and nonprofit organizations were not surveyed.

Table 15. Minimum Employment[1] Size of Establishments, by Industry, Covered by the 1961-66 Surveys

SIC code	Industry	1961-64	1965-66
07-09	Agriculture, forestry, and fisheries	50	10
10-14	Mining:		
10	Metal	10	10
11-12	Anthracite, bituminous, and lignite	10	10
13	Crude petroleum and natural gas	1	4
14	Nonmetallic minerals, except fuels	10	10
15-17	Contract construction	10	4
	Manufacturing:		
19	Ordnance and accessories	1	4
20	Food and kindred products	10	10
21	Tobacco manufactures	10	50
22	Textile mill products	50	50
23	Apparel and other finished products	10	100
24	Lumber and wood products	50	50
25	Furniture and fixtures	50	50
26	Paper and allied products	10	10
27	Printing and publishing	10	100
28	Chemicals and allied products	1	4
29	Petroleum refining and related industries	1	10
30	Rubber and miscellaneous plastics products	10	10
31	Leather and leather products	10	50
32	Stone, clay, and glass products	10	4
33	Primary metal industries	1	4
34	Fabricated metal products	1	4
35	Machinery, except electrical	1	1
36	Electrical machinery, equipment, and supplies	1	4
37	Transportation equipment	1	4
38	Professional, scientific, and controlling instruments; photographic and optical goods; watches and clocks	1	4
39	Miscellaneous manufacturing industries	10	10
	Transportation, communication, and utilities:		
40	Railroad transportation	100	50
41-47	Other transportation services	1	50
48	Communication	1	4
49	Electric, gas, and sanitary services	1	4
50-59	Wholesale and retail trade	50	10
60-67	Finance, insurance, and real estate	50	50
	Services:		
739	Commercial laboratories; business and management consulting services	1	1
807	Medical and dental laboratories	1	1
891	Engineering and architectural services	1	1
70-79 (excl. 739), 81	Other services	50	100

[1] Slightly different minimum employment sizes may apply to some sectors within major industry groups.

SOURCE: 1961-64 Employment of Scientific and Technical Personnel in Industry, 1962, BLS Bulletin 1418, p. 73.

1965-66 Bureau of Labor Statistics, unpublished data.

Table 16. Relative Standard Errors for Scientists and Engineers, and for Technicians, by Industry, January 1960

(In percent)

Industry	Scientists and engineers	Technicians
All industries	2	3
Construction	12	26
Food and kindred products	8	14
Textile mill products and apparel	17	22
Paper and allied products	7	15
Chemicals and allied products	2	4
Petroleum products and extraction	5	8
Stone, clay, and glass products	8	11
Primary metal industries	3	3
Fabricated metal products and/or ordnance	13	16
Machinery, except electrical	3	4
Electrical equipment	5	5
Motor vehicles and equipment	1	1
Aircraft and parts	1	1
Professional and scientific instruments	8	13
Other manufacturing industries	7	21
Transportation and other public utilities	5	18
Other nonmanufacturing industries	6	10

SOURCE: Scientific and Technical Personnel in Industry 1960, 1961, National Science Foundation, p. 45.

Table 17. Relative Standard Errors for Engineers, Scientists, and Technicians, All Industries, January 1960

Occupation	Percent
Engineers	2
Scientists:	
Chemists	3
Physicists	4
Metallurgists	6
Geologists and geophysicists	7
Mathematicians	5
Medical scientists	8
Agricultural scientists	9
Biological scientists	7
Other scientists	9
Technicians	3
Draftsmen	3
Engineering and physical science	3
Medical, agricultural, and biological	8
All other	6

SOURCE: Scientific and Technical Personnel in Industry, 1960, 1961, National Science Foundation, p. 46.

Chapter 7. Employment of Engineers, Scientists, and Technicians by Universities and Colleges, and by Scientific and Research Nonprofit Organizations

The National Science Foundation has conducted two surveys in which employment information for scientific and technical personnel was requested from almost 2,000 institutions of higher education. These included universities, colleges, agricultural experiment stations, medical schools, and Federally Funded Research and Development Centers. These centers are research and development organizations administered on a contractual basis by educational institutions but financed exclusively or substantially by the Federal Government. Estimates were made for nonrespondents who generally had small science and engineering programs so that these surveys represent, substantially, the national total. Some of the results appear in tables 18 through 20 which present employment by universities and colleges of engineers and scientists in 1961 and 1965 and of technicians in 1965.

In a recent publication,[13] the Foundation has evaluated the supply and demand factors which influence the number of scientists and engineers engaged in teaching and research in institutions of higher education and has estimated their annual staffing requirements through 1975.

A survey of scientists, engineers, and technicians in independent nonprofit institutions also has been made by the National Science Foundation.[14]

This survey included organizations financing or performing research and development or disseminating scientific and technical information. These groups are characterized by a large number of small units and pose special sampling problems. Employment of engineers, scientists, and technicians by these institutions in 1965 is presented in table 21. Excluded from the survey were voluntary nonprofit hospitals and health agencies.

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[13] Science and Engineering Staff in Universities and Colleges, 1965–75, May 1967, National Science Foundation.

[14] Scientific Activities of Nonprofit Institutions—1964 Expenditures and January 1965 Manpower, 1967. National Science Foundation.

Table 18. Employment of Engineers and Scientists, by Universities and Colleges, March 1961

(In thousands)

Field of employment	Full-time			Part-time		
	Total	Faculty [1]	Other [2]	Total [3]	Faculty [1]	Other [3]
Engineers	18.6	12.6	6.0	8.7	3.0	5.7
Aeronautical and astronautical	.9	.4	.4	.4	.1	.3
Agricultural	.7	.6	.1	.1	([4])	.1
Chemical	1.3	.9	.4	1.1	.1	1.0
Civil	2.6	2.2	.3	1.3	.4	.9
Electrical	5.3	2.8	2.5	2.1	.9	1.3
Mechanical	4.3	2.7	1.6	1.7	.7	1.0
Metallurgical	.6	.4	.2	.4	.1	.4
Other engineers	3.0	2.5	.5	1.6	.7	.9
Physical scientists	30.0	22.1	7.9	19.1	4.6	14.5
Chemists	9.3	6.7	2.6	6.5	.9	5.6
Earth scientists	2.3	1.8	.5	1.6	.2	1.4
Physicists and astronomers	8.3	5.1	3.2	5.4	1.1	4.3
Mathematicians	9.5	8.2	1.4	5.3	2.3	3.0
Other physical scientists	.6	.4	.2	.3	.1	.2
Life scientists	42.6	30.0	12.6	20.6	8.1	12.5
Agricultural scientists [5]	6.5	5.3	1.2	2.3	.2	2.1
Biological scientists [6]	21.3	16.3	5.0	9.8	2.2	7.6
Medical scientists [7]	14.8	8.4	6.4	8.6	5.8	2.8
Psychologists	5.3	4.8	.4	3.9	1.6	2.3
Social scientists	18.5	17.7	.8	8.4	3.6	4.8
Economists	5.5	5.2	.3	2.7	1.1	1.6
Sociologists	3.1	2.9	.1	1.5	.8	.7
Political scientists	2.6	2.5	.1	1.2	.5	.7
Other social scientists [8]	7.3	7.0	.3	3.1	1.3	1.8

[1] Primarily in teaching.

[2] Primarily in research and development, administrative, and other nonteaching functions. Includes all full-time graduate students. They are not separated by function.

[3] Includes all part-time graduate students. They are not separated by function.

[4] Less then 50.

[5] Includes commodity related agricultural scientists.

[6] Includes anatomists, biochemists, microbiologists, pathologists, pharmacologists, physiologists, biologists, botanists, entomologists, zoologists, and other life scientists.

[7] Includes clinical medical scientists and other clinical scientists.

[8] Includes geographers, historians, and other social scientists.

NOTE: Because of rounding, sums of individual items may not equal totals.

SOURCE: Scientists and Engineers in Colleges and Universities, 1961, December 1961, National Science Foundation.

Table 19. Employment of Engineers and Scientists, by Universities and Colleges, January 1965[1]

(In thousands)

Field of employment	Full-time			Part-time[2]		
	Total	Teaching	Other[3]	Total	Teaching	Other[4]
Engineers	22.9	13.2	9.7	14.5	7.1	7.4
Aeronautical	1.1	.6	.6	.9	.4	.6
Chemical	1.6	1.0	.6	1.6	.7	1.0
Civil	2.8	2.2	.6	2.0	.9	1.0
Electrical	6.7	3.2	3.5	3.7	2.1	1.6
Mechanical	4.7	2.9	1.8	2.4	1.5	.9
Industrial	1.0	.8	.3	.6	.4	.1
Other engineers	4.9	2.6	2.3	3.3	1.2	2.1
Physical scientists	38.7	26.6	12.1	29.4	18.2	11.2
Chemists	11.0	7.3	3.7	9.9	5.8	4.2
Earth scientists	3.7	2.7	1.0	2.8	1.6	1.1
Physicists	10.4	6.0	4.4	8.1	4.1	4.0
Mathematicians	11.9	10.0	1.9	7.7	6.4	1.3
Other physical scientists	1.8	.7	1.1	1.0	.3	.7
Life scientists	63.4	29.3	34.1	38.0	20.2	17.8
Agricultural scientists	13.4	2.9	10.5	5.0	1.0	4.0
Biological scientists	21.0	12.7	8.3	12.4	6.7	5.7
Medical Scientists	29.0	13.7	15.3	20.6	12.5	8.1
Psychologists	7.1	5.7	1.3	5.7	3.7	2.1
Social scientists	26.6	22.9	3.6	14.3	10.8	3.4
Economists	6.4	5.1	1.3	3.7	2.6	1.1
Sociologists	4.9	4.3	.5	3.0	2.2	.8
Political scientists	4.9	4.5	.4	2.3	1.9	.4
Other social scientists	10.4	9.0	1.4	5.3	4.2	1.1
Other scientists—not specified	.9	.5	.4	.2	.1	.1

[1] Includes employment in Federally Funded Research and Development Centers administered by universities and colleges. These centers accounted for almost 5 percent of employment and were almost exclusively involved in research and development.

[2] Graduate students accounted for slightly more than one-half of all part-time employees and were concentrated in the physical sciences occupations. Other part-time employees were concentrated in the life sciences occupations.

[3] Includes administrative and other functions. Over 70 percent were involved with research and development functions. Less than 20 percent were employed in the Federally Funded Research and Development Centers.

[4] Includes administrative and other functions. Almost all were employed by the universities and colleges, and over 85 percent were involved with research and development functions.

NOTE: Because of rounding, sums of individual items may not equal totals.

SOURCE: Unpublished survey data compiled by the National Science Foundation.

Table 20. Employment of Technicians, by Universities and Colleges, January 1965[1]

(In thousands)

Field of employment	Total	Research and development	Other activities
Total	47.0	36.2	10.8
Engineering and physical science	16.0	14.1	1.9
Life science	26.1	19.0	7.1
Social science	1.2	1.0	.2
Other	3.7	2.1	1.6

[1] Includes employment in Federally Funded Research and Development Centers managed exclusively or primarily by universities and colleges. These Centers accounted for less than 20 percent of employment and were engaged almost exclusively in research and development.

SOURCE: Unpublished survey data compiled by the National Science Foundation.

Table 21. Employment of Engineers, Scientists, and Technicians by Independent Nonprofit Institutions, January 1965[1]

(In thousands)

Field of employment	Employment[2]
Engineers	4.8
Physical scientists	4.0
Mathematicians	1.6
Life scientists	5.0
Psychologists	.8
Social scientists	1.8
Technicians[3]	6.9

[1] Includes independent research institutes and operating foundations, Federally Funded Research and Development Centers administered by nonprofit institutions, private philanthropic foundations, professional and technical societies, academies of science, science museums, botanical gardens, zoological parks, and other nonprofit organizations.

[2] Full-time plus part-time workers. Almost 90 percent were involved in research and development.

[3] Includes engineering and physical science, life science, psychology, social science, and other science technicians.

SOURCE: Scientific Activities of Nonprofit Institutions—1964 Expenditures and January 1965 Manpower, 1967 National Science Foundation.

Chapter 8. Occupational Employment in Federal, State, and Local Governments

Federal Government

Relatively current Federal Government occupational employment data are presented in the Civil Service Commission's publication Current Federal Work Force Data.[15] This semiannual publication contains total governments employment excluding the Post Office,[16] the Central Intelligence Agency, and the National Security Agency, as of June 30, and of December 31. However, no detailed information is reported on occupational and other employment characteristics by agency. The end-of-year figures are population data and represent an actual count of all Federal employees. The midyear data are estimates obtained from a 10-percent sample of each occupation series' employment. Table 22 shows data for 157 occupational series, each employing at least 1,000 persons during December 31, 1964, through June 30, 1966. Based on current and expected trends in Federal agency programs, 4-year projections of employment in these 157 occupations are presented in the Commission's annual publication Federal Work Force Outlook.[17]

Comprehensive occupational data, by Federal agency, are collected and tabulated annually. In the Commission's latest publication containing information on professional, technical, clerical, and related workers. Occupations of Federal White-Collar Workers, October 31, 1961, statistics are presented for over 500 occupational series for each of 21 agencies (including one catch-all category).[18] Unpublished white-collar worker data are available for 1962, 1964, and 1966. Information is presented for almost 900 categories of craftsmen, operatives, laborers, and related workers for each of 19 agencies (including one catch-all category) in the Commission's publication Occupations of Federal Blue-Collar Workers, October 31, 1960.[19] Unpublished blue-collar worker data for 1961, 1962, 1965, and 1966 are available.

State and Local Governments

Employment of scientific, professional, and technical personnel by State governments in January 1964 and by local governments in October 1963 was obtained from sample surveys conducted by the Bureau of Labor Statistics and is shown in table 19. State data are for the 50 States and exclude State educational institutions. Similar surveys of State governments employment were made for 1959 and 1962.[20] Local governments data exclude all governmental administration units of less than 25,000 population (except certain special districts) and all educational institutions.

The Bureau of Labor Statistics presently is conducting a survey of State governments occupational employment in 1967 and is considering a future study of local governments occupational employment.

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[15] Current Federal Work Force Data as of June, 1966, March 1967, U.S. Civil Service Commission. Data for December 1964 and June 1965 appear in the September 1966 publication. Data for June 1964 are in the August 1965 publication.

[16] Employment in selected postal occupations during 1960–66 is presented in table 23.

[17] The third report in this series, covering the fiscal years 1967–70, was published in May 1967.

[18] Earlier data are contained in similarly titled publications dated Aug. 31, 1954; Feb. 28, 1957; Oct. 31, 1958; Oct. 31, 1959; and Oct. 31, 1960. Data for 1947 and 1951 are in the BLS Bulletin 1117, which was published in cooperation with the Civil Service Commission.

[19] Earlier data are contained in similarly titled publications dated Feb. 28, 1957; Oct. 31, 1958; Oct. 31, 1960; and Oct. 31, 1961.

[20] Employment of Scientific and Technical Personnel in State Government Agencies, Report on a 1959 Survey, 1961, National Science Foundation. This survey was sponsored by the National Science Foundation and conducted by the U.S. Department of Labor, Bureau of Labor Statistics.

Employment of Scientific and Technical Personnel in State Government Agencies, 1962, Bulletin 1412, U.S. Department of Labor, Bureau of Labor Statistics.

Table 22. Federal Employment in White-Collar Occupations, 1964-66

Series code	Series	June 30, 1966[1]	December 31, 1965[2]	December 31, 1964[2]
	All white-collar occupations	1,190,250	1,143,055	1,074,697
	Professional occupations	226,185	224,937	214,237
	Social science	9,533	8,693	7,633
0110	Economics	5,443	4,533	3,641
0180	Psychology	1,863	1,817	1,843
0185	Social work	2,227	2,343	2,149
	Agricultural science	17,307	16,734	16,263
0401	Biology	1,243	1,059	1,027
0457	Soil conservation	4,856	4,742	4,780
0460	Forestry	6,094	6,184	5,974
0470	Soil science	1,893	1,873	1,903
0475	Farm management loan	3,221	2,876	2,579
	Accounting	31,219	31,540	31,038
0510	Accounting	18,236	18,677	18,265
0512	Internal revenue agent	12,983	12,863	12,773
	Medical	38,033	37,738	35,344
0602	Medical officer	12,511	12,886	11,613
0610	Nurse	24,462	23,807	22,570
0630	Dietitian	1,060	1,045	1,161
0701	Veterinary	2,352	2,447	2,285
	Engineering	72,136	71,195	67,976
0801	General engineering	11,741	11,215	10,359
0808	Architecture	1,491	1,455	1,383
0810	Civil engineering	[3] 18,516	13,901	8,461
0811	Construction engineering	-	1,835	3,451
0812	Structural engineering	-	590	1,286
0813	Hydraulic engineering	-	936	2,178
0820	Highway engineering	-	1,268	1,938
0830	Mechanical engineering	8,709	8,660	8,376
0850	Electrical engineering	4,181	4,314	4,370
0855	Electronic engineering	14,566	14,465	13,776
0861	Aerospace engineering	8,599	8,090	7,970
0871	Naval architecture	1,046	1,055	1,100
0893	Chemical engineering	1,280	1,342	1,290
0896	Industrial engineering	2,007	2,069	2,038
0905	Attorney	9,378	9,264	9,057
1224	Patent examining	1,116	1,066	1,106
	Physical science	27,007	26,460	26,018
1301	General physical science	6,309	6,388	6,466
1310	Physics	5,339	5,127	5,026
1320	Chemistry	8,150	7,831	7,716
1340	Meteorology	2,261	2,220	2,190
1350	Geology	1,933	1,949	1,965
1370	Cartography	3,015	2,945	2,655
	Mathematics	3,924	3,721	3,512
1520	Mathematics	3,432	3,308	3,089
1529	Mathematical statistics	492	413	423
1710	Education	14,180	16,079	14,005
	Administrative-technical (general) occupations	316,392	297,758	282,266
	Safety, security	3,882	3,772	3,533
0016	Safety management	1,579	1,579	1,420
0080	Security	2,303	2,193	2,113
0132	Intelligence	3,015	2,952	2,776
0188	Recreation	1,944	1,829	1,811

See footnotes at end of table.

Table 22. Federal Employment in White-Collar Occupations, 1964-66—Continued

Series code	Series	June 30, 1966[1]	December 31, 1965[2]	December 31, 1964[2]
	Personnel	16,337	15,419	14,987
0201	Personnel administration	8,268	8,036	7,959
0212	Staffing	3,781	3,263	2,949
0221	Classification	2,452	2,385	2,433
0235	Employee development	1,836	1,735	1,646
	Computer and management services	42,819	40,645	38,486
0330	Systems administration	1,336	1,349	1,107
0331	Digital computer programer	4,624	6,251	5,438
0332	Systems operation	5,011	4,459	3,728
0334	Systems analysis	6,845	3,882	3,354
0341	Administrative officer	9,445	9,445	9,500
0342	Office services	2,029	1,876	2,008
0343	Management analysis	8,731	8,592	8,313
0344	Management technician	3,792	3,539	3,529
0362	EAM project planning	1,006	1,252	1,509
	Agricultural support	8,675	7,276	6,329
0403	Microbiology	1,485	1,408	1,215
0404	Biology laboratory technician	4,094	2,716	2,237
0458	Soil conservation aid	3,096	3,152	2,877
	Accounting, finance support	26,555	26,594	26,805
0501	General accounting, budget	10,524	10,638	11,073
0525	Accounting technician	12,799	12,947	12,990
0570	Financial institution examiner	3,232	3,009	2,742
	Medical	4,687	4,274	4,114
0645	Medical technician	3,052	2,735	2,639
0647	Radiology technician	1,635	1,539	1,475
	Engineering support	57,765	53,205	49,883
0802	Engineering technician	26,706	23,673	21,785
0809	Construction inspection	2,956	2,985	2,772
0817	Surveying technician	5,500	4,992	4,597
0818	Engineering drafting	3,994	3,974	3,893
0856	Electronic technician	18,609	17,581	16,836
	Fine arts	9,129	8,532	8,319
1020	Illustrating	2,475	2,405	2,369
1060	Photography	2,897	2,479	2,500
1081	Public information	1,890	1,827	1,731
1082	Writing and editing	1,867	1,821	1,719
	Business and industry	39,348	37,257	36,068
1101	General business and industry	2,845	2,294	1,942
1102	Contract procurement	16,674	15,440	14,971
1104	Property disposal	1,315	1,368	1,336
1150	Industrial specialist	4,486	4,011	3,802
1152	Production control	6,168	6,345	6,531
1165	Loan specialist	2,255	2,303	2,179
1170	Realty	2,991	2,882	2,751
1171	Appraising, assessing	2,614	2,614	2,556
	Physical science support	9,828	9,085	8,039
1311	Physical science technician	3,566	3,207	2,898
1341	Meterological technician	2,678	2,597	2,607
1371	Cartographic aides	3,584	3,281	2,534
1410	Librarian	3,751	3,569	3,387
1530	Statistician	2,736	2,688	2,337
	Equipment and construction	15,794	14,455	13,704
1640	Construction maintenance	2,783	2,701	2,568
1670	Equipment specialist	13,011	11,754	11,136
1712	Instruction	9,252	8,283	6,622
	Investigation	4,661	4,614	4,373
1810	General investigation	2,739	2,749	2,821
1825	Aviation safety officer	1,922	1,865	1,552

See footnotes at end of table.

Table 22. Federal Employment in White-Collar Occupations, 1964-66—Continued

Series code	Series	June 30, 1966 [1]	December 31, 1965 [2]	December 31, 1964 [2]
	Inspection and quality control	13,368	12,121	9,543
1901	General commodity quality control and inspection	2,515	2,370	2,123
1903	Quality control and inspection management	2,366	2,048	1,550
1936	Electronic equipment	3,059	2,690	2,368
1940	Mechanical equipment	2,100	1,670	1,404
1942	Aircraft quality control and inspection	2,238	2,090	1,008
1950	Missile quality control and inspection	1,090	1,253	1,090
	Supply	31,587	30,565	31,299
2001	General supply	10,141	10,477	11,785
2010	Supply requirements	14,970	13,704	13,033
2030	Storage management	1,127	1,081	1,172
2050	Cataloging	3,865	3,865	3,917
2090	Publication	1,484	1,438	1,392
	Transportation	11,259	10,623	9,851
2101	General transportation	1,629	1,675	1,794
2130	Traffic management	1,734	1,528	1,486
2131	Freight rate	2,202	2,255	2,263
2132	Travel	1,426	1,307	1,401
2134	Shipment	2,414	2,348	1,894
2181	Aircraft operation	1,854	1,510	1,013
	Administrative-technical (Government) occupations	94,808	91,294	87,459
0007	Correctional institution administration	2,934	2,915	2,905
0105	Social insurance administration	10,218	9,703	8,503
	Accounting	17,827	16,191	15,145
0526	Tax technician	2,808	2,798	2,798
0560	Budget	6,112	6,035	5,958
0592	Tax accounting	8,907	7,358	6,389
0685	Public health program specialist	1,898	1,845	1,646
	Claims examining	11,247	10,564	9,885
0962	Contract representative	1,201	1,110	1,168
0963	Legal institution examining	1,941	1,894	1,894
0993	Social security claims	5,702	5,683	5,071
0996	Veterans claims examining	2,403	1,877	1,752
1169	Collection officer	6,200	6,241	6,422
	Investigation	24,653	23,488	22,428
1811	Criminal investigation	12,941	12,249	11,258
1813	Wage and hour law enforcement	1,255	1,139	1,162
1816	Immigration inspection	1,247	1,229	1,159
1854	Alcohol, tobacco tax	1,178	1,090	1,149
1863	Food inspection	3,952	3,845	3,723
1890	Customs inspection	2,826	2,711	2,667
1896	Immigration patrol	1,254	1,225	1,310
1980	Agricultural grading	2,600	2,940	2,923
2152	Air traffic control	17,231	17,407	17,602
	Aid-assistant occupations	44,937	42,595	41,496
	Medical support	42,990	40,809	39,903
0621	Nursing assistant	38,378	36,617	35,955
0636	Physical therapy assistant	1,011	1,029	1,047
0681	Dental assistant	1,647	1,395	1,308
0699	Medical aid	1,954	1,768	1,593
1411	Library assistant	1,947	1,786	1,593
	Clerical (specialized) occupations	107,033	101,049	90,382
	Personnel clerical	14,692	12,734	12,050
0203	Personnel clerical	7,165	6,699	6,081
0204	Military personnel clerical	7,527	6,035	5,969

See footnotes at end of table.

Table 22. Federal Employment in White-Collar Occupations, 1964-66—Continued

Series code	Series	June 30, 1966[1]	December 31, 1965[2]	December 31, 1964[2]
0309	Correspondence clerk	1,742	1,716	1,729
	Accounting clerical	29,051	27,941	27,080
0520	Accounts maintenance	12,475	12,019	11,626
0540	Voucher examining	5,553	5,495	5,447
0544	Time, leave, and payroll	4,576	4,439	4,355
0545	Military pay	4,307	3,947	3,598
0590	Time, leave	2,140	2,041	2,054
0998	Claims clerical	10,025	9,412	2,873
1531	Statistical clerical	6,888	6,898	7,019
	Supply clerical	44,635	42,348	39,631
2020	Purchasing	8,837	8,491	8,186
2040	Stock control	32,896	31,137	28,994
2091	Sales store	2,902	2,720	2,451
	Clerical (general) occupations	277,400	259,117	241,616
	Office occupations	274,178	255,791	238,300
0302	Messenger	1,620	1,578	1,702
0305	File, mail	27,224	25,379	23,967
0312	Clerk-stenographer	52,771	51,726	51,859
0316	Clerk-dictating machine	6,620	6,522	6,493
0318	Secretary	58,544	56,028	54,935
0322	Clerk-typist	95,426	84,695	70,647
0350	Office machine operations	1,561	1,478	1,487
0356	Card punch	16,139	14,229	12,276
0359	EAM operations	5,132	5,113	5,836
0382	Telephone operation	7,071	7,041	6,756
0385	Teletypist	2,070	2,002	2,342
0530	Cash clerical	3,222	3,326	3,316
	Other occupations	123,495	126,305	117,241
	Miscellaneous	28,531	27,569	27,085
0081	Fire	11,814	11,277	11,406
0083	Police	2,774	2,840	2,554
0085	Guard	13,943	13,452	13,125
0301	General clerical and administrative	94,964	98,736	90,156

[1] Based upon a 10 percent sample.
[2] Total population.
[3] Coverage of 0810 expanded to include series 0811, 0812, 0813 and 0820 which were discontinued in 1966.

SOURCE: Data for 1964 and 1965 are from Current Federal Workforce Data, September 1966, U.S. Civil Service Commission. Data for 1966, ibid., March 1967.

Table 23. Employment in Selected Post Office Occupations, 1960-66

(In thousands)

Occupation	1966	1965	1964	1963	1962	1961	1960
All occupations	692	610	593	590	585	580	568
Postmasters[1]	33	33	34	34	35	35	35
Supervisors	33	32	32	32	31	31	30
Postal clerks	300	250	240	239	239	239	234
Mail carriers[2]	225	207	202	200	198	195	190
Special delivery carriers	5	4	4	4	4	4	5
Mail handlers	44	32	32	31	31	30	29

[1] Does not include assistant postmasters.
[2] Includes part-time carriers on a full-time equivalent basis.

NOTE: Data are as of October.

SOURCE: Post Office Department. Bureau of Finance and Administration Paid Employees Report, Form 1988.

Table 24. Employment of Scientific, Professional, and Technical Personnel by State and Local Governments

(In thousands)

Occupation	State government January 1964	Local government[1] October 1963
All occupations	156.8	[2]134.4
Engineers	34.5	22.3
Civil engineers	31.0	17.1
Electrical engineers	([3])	2.3
Mechanical engineers	([3])	1.3
Traffic engineers	([3])	.7
Sanitary engineers	1.2	([3])
Other engineers	2.3	.8
Scientists	16.7	5.9
Chemists	1.4	1.2
Geologists and geophysicists	1.0	([4])
Other physical scientists	.1	.1
Agricultural scientists	3.3	.9
Biomedical scientists	2.0	1.8
Other life scientists	2.9	.3
Mathematicians	.3	.1
Statisticians	1.6	.4
Economists	.7	.2
Sociologists and anthropologists	.2	([5])
Other social scientists	.5	.4
Clinical psychologists	2.0	([6])
Social psychologists	.1	([6])
Other psychologists	.4	.7
Social workers	9.2	([7])
Selected health professions[8]	36.2	73.9
Public health officers (M. D.)	.8	1.9
Psychiatrists (M. D.)	3.8	.8
All other physicians (M. D. and D. O.)	4.4	10.8
Dentists (D. D. S. or D. D. M.)	1.0	1.0
Professional nurses (R. N.)	21.6	51.6
Veterinarians (D. V. M.)	1.1	.4
Sanitarians	3.4	7.3
Technicians	60.2	32.3
Draftsmen	7.9	7.9
Surveyors	12.0	5.5
Engineering technicians	30.5	7.2
Physical science technicians	1.5	1.1
Agricultural technicians	2.0	.5
Biological technicians	1.8	([9])
Medical and dental technicians	3.7	9.2
Other technicians	.8	.9

[1] Data are only for city, county, and township governments which have a population for the governmental unit of 25,000 or more, and for certain districts which were sampled with certainty probability.

[2] Excludes social workers. See footnote 7.

[3] Included with civil engineers.

[4] Included with other physical scientists.

[5] Included with other social scientists.

[6] Included with other psychologists.

[7] Data not collected.

[8] The relevant occupations do not include physicians and dentists dealing with patients.

[9] Included with agricultural technicians.

NOTE: Because of rounding, sums of individual items may not equal totals.

SOURCE: Local data—Department of Labor, Bureau of Labor Statistics, unpublished sample survey preliminary data. State data—Employment of Scientific, Professional, and Technical Personnel in State Governments, January 1964. BLS Bulletin 1557, (1967).

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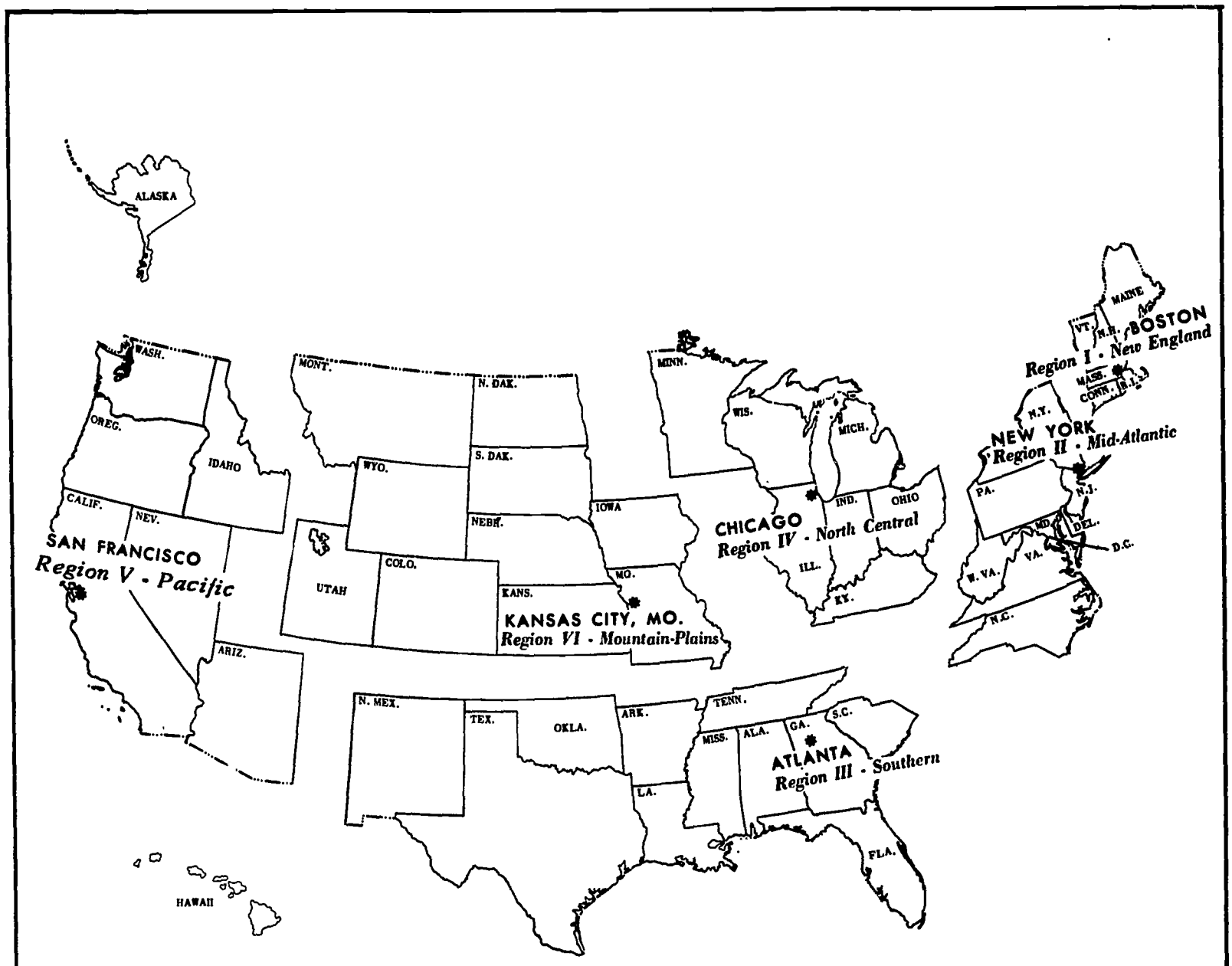

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This bulletin describes the manpower policies and experiences of four telephone companies in cushioning the impact of technological change on their employees. Such change involved the addition of fully automatic telephone switching equipment reducing the need for female manual telephone operators. A formal systemwide policy on manpower planning in existence several decades prior to the changes, had as its major feature a development in advance of the number of operators needed after the change. The unions and employees were notified of the changes and the options months before the scheduled change. In most cases unions were concerned with enforcing seniority. Companies enforced strict control over hiring at an early date, hiring temporary help, if necessary. Transfers to other offices were offered to those who would not have jobs after the change, but due to family responsibilities, some women accepted layoff with severance pay. Retraining for long distance, information, and intercept operating was provided to most of the displaced manual operators. (EM)

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MANPOWER PLANNING FOR TECHNOLOGICAL CHANGE

Case Studies of Telephone Operators

BULLETIN NO. 1574

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UNITED STATES DEPARTMENT OF LABOR
Willard Wirtz, Secretary

BUREAU OF LABOR STATISTICS
Arthur M. Ross, Commissioner

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PREFACE

Technological changes are a strategic factor in the growth of the economy. These advances, however, may be accompanied by displacement of labor, shifts in location of jobs, and changes in skill requirements. If efforts are made to manage changes in an orderly way, adverse effects on the status and security of individual employees can be significantly reduced.

This bulletin describes the manpower policies and experiences of several telephone companies in cushioning the impact of technological change on their employees. This account of the benefits and problems of manpower planning by these companies should have value for others who are planning to introduce major changes in their own offices or plants.

This bulletin is one in a series of case studies of manpower planning for technological change. Other studies cover the experiences of a government agency and an electric power company.

This study is based on information collected through interviews with company officials and officers of the employees' union, and on documents and data from company files. The Bureau of Labor Statistics is deeply grateful for their assistance and cooperation.

Data were collected for this study by Richard Riche and Herbert Hammerman, and the report was written by Audrey Freedman, under the supervision of Edgar Weinberg, Chief, Division of Technological Studies. These studies are part of the Bureau's research program on productivity, technology, and growth, under the general direction of Jerome A. Mark, Assistant Commissioner.

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Chapter I. Introduction

In its consideration of the benefits and problems of automation and other technological changes, the President's Advisory Committee on Labor-Management Policy, a tripartite group of labor, management, and public leaders, unanimously agreed on three general points in 1962: "First, automation and technological progress are essential to the gneral wefare, the economic strength, and the defense of the Nation. Second, this progress can and must be achieved without the sacrifice of human values and without inequitable cost in terms of individual interests. Third, the achievement of maximum technological development with adequate safeguards against economic injury to individuals depends upon a combination of private and governmental action consonant with the principles of a free society."1/

Specifically, the Advisory Committee recommended, among other measures, that serious consideration be given to "acceptance by management of responsibility for taking measures, to the maximum extent practicable, for lessening the impact of technological change, including (a) adequate leadtime, (b) open reporting to the employees involved, (c) cooperation with representatives of the employees to meet the problems involved, (d) cooperation with public employment services, (e) the timing of changes, to the extent possible, so that potential unemployment will be cushioned by expected expansion of operations and normal attrition in the work force (through separations resulting from retirement, quits, and so forth)." The Committee also recommended that "private employers and unions faced with automation or technological changes should make every reasonable effort to enable workers who are being displaced, and who need to be retrained, to qualify for new jobs available with the same employer and to enjoy a means of support while so engaged."

Following this report, the President's Committee sponsored several meetings of management and labor representatives to discuss the benefits and problems of private adjustment methods. In a summary of the major conclusions of the discussions, it was stated: "Diversity is the key to any consideration of private adjustment techniques... the private adjustments utilized in any situation are heavily dependent upon the size of the firm, the size of the union, the extent of the organization of the industry or the nature of the labor market. Also, adjustment methods are dependent upon the kind of economic processes that are contributing to the changes that cause displacement as well as the economic health of the industry. Finally, different approaches must be developed to meet the specific demands of the labor force in terms of age, sex, skill level, basic education geographic location, etc."2/

The Bureau of Labor Statistics has made case studies in several different industries which describe experiences with manpower planning that follow the Committee's general guidelines. Additional studies have been recommended by students of labor in the United States and international bodies such as the Organization for Economic Cooperation and Development. In 1966, the National Commission on Technology, Automation and

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1/ The Benefits and Problems Incident to Automation and Other Technological Adcances, President's Advisory Committee on Labor-Management Policy, January 11, 1962, 11 pp.

Excerpts from this report appear in the Monthly Labor Review, February 1962, pp. 139-144.

2/ Seminars on Private Adjustments to Automation and Technological Change, May-June 1964, President's Advisory Committee on Labor-Management Policy, p. A-4.

Economic Progress stated "Because of the dearth of available information, we suggest that the Department of Labor and the Department of Commerce systematically investigate and report publicly on successful private adjustment programs developed through either collective bargaining or the unilateral efforts of management. This would not only add to the present store of general knowledge about the adequacy of adjustment coverage, but would also permit more extensive communication about effective adjustment programs among and between employers, employees, and unions."3/

3/ Technology and the American Economy, Report of the National Commission on Technology, Automation, and Economic Progress, Vol. I, February 1966, p. 60.

This report describes the manpower planning policies of several companies within the Bell Telephone System and the operation and results of these policies in several cases of conversion from manual to long distance dial telephone systems. The companies were selected because they had made deliberate efforts to plan the orderly adjustment of employees.

This bulletin was based on case studies and union contracts records and documents presenting company policies in dial conversions. Four conversions in three states were surveyed: one located in a large city, and three in small towns. Officials of the companies, and unions representing the employees, were interviewed to supplement the information obtained from records and documents.

Chapter II. Summary and Highlights

Over many decades, changing technology has been a major characteristic of the telephone industry. To facilitate the orderly introduction of changes affecting operators, the major telephone companies developed a systematic program to minimize possible adverse affects on employees.

Nature of the Change

Technological change in the four case studies involved the introduction of fully automatic telephone switching equipment, for both long distance and local calls, which drastically reduced the need for local manual telephone operators. All of these employees were women. Engineering and installation of the equipment required several years of advance planning. This long lead-time afforded opportunities for manpower planning, retraining, and application of various adjustment techniques.

Manpower Planning

A formal systemwide policy on manpower planning in dial conversions had existed for several decades prior to the changes. Fairly detailed guidelines for coordinating technical and manpower changes were set forth in a comprehensive policy document. The objectives of manpower planning were: to retain as many employees as possible, to provide "suitable" transfer, to avoid downgrading employees, and to avoid a surplus work force. In practice, local management adapted the general policy guidelines to fit the particular circumstances of the individual town or office.

A major feature in planning these cases was the development, in advance, of estimates of the number of operators who would be needed after the change, and the number of operators for whom some adjustments would be necessary (retirement, transfer, etc.). These estimates were periodically revised as conditions changed. A second major feature was the ability of each office in the study to broaden the scope of its manpower planning to take account of opportunities in other departments and in nearby offices and towns to which displaced employees could transfer.

Advance Notice

The unions and employees were notified many months before the change was scheduled to take place. Employees were informed about transfer and training opportunities, and the number of employees who would continue as operators, several months before the conversion. Personal interviews were then held to inform each employee of options available to her, and to motivate her to plan her own future and determine her choice.

Union-Management Negotiations

Union contracts, in the case study companies, provide for early notice to the union and negotiation of force reduction moves. Union-management meetings held during the preconversion period provided a means for direct communication between employees and management about the change and the employees affected. They also led to discussions of alternative plans for layoffs or part timing. In most cases, the unions were concerned with enforcing the role of seniority in all manpower adjustment measures.

Use of Attrition and Controlled Hiring

In order to reduce employment through attrition, the companies instituted strict control over hiring at an early date. Hiring of permanent employees ceased 1 year or more before conversion. As losses from quits and retirements reduced the regular work force, temporary employees were hired; overtime was scheduled; and vaca-

tions, retirements, and leaves of absence were postponed in order to maintain the level of available man-hours without hiring regular employees. Despite these efforts to retain all employees and a relatively high rate of voluntary turnover among women workers, it was necessary for some employees to transfer or be laid off in each of the offices studied.

Transfer and Reassignment

Transfer to other offices were offered to all regular employees who would not have a job after cutover. Employees who transferred maintained their seniority for purposes of job security and pension and other benefit rights, including vacation length. The transfers were arranged, in most cases, to offices with the same or a higher wage rate. In one case study, both management and the union were concerned that the transfer of a large number of employees, who had a decade or more of seniority, would adversely affect the choice of shift and vacation dates of employees in the receiving offices.

Layoff, Severance Pay, and Rehiring Rights

Because family responsibilities precluded transferring to telephone openings in other towns, some women accepted layoff with severance pay, the only other option open to them. Severance benefits were paid to nearly all of the regular employees who could not transfer. In accordance with the understanding made at the time of hiring, none of the temporary employees who were laid off received severance pay. Contracts covering three of the case study offices provided that regular employees on layoff for less than a year should receive preference, in order of seniority, if additional hiring should take place in jobs for which they qualify. Some laid-off operators were rehired under this provision, as business increased and/or turnover created vacancies.

Training and Retraining

The manual telephone operators who were displaced by new equipment were most easily retrained to long distance, information, or intercept operating. All were offered this retraining, and all but a few were able to learn the new procedures. Some retraining was also given in clerical jobs in other departments but none for outside jobs.

Older Workers

Individual interviews and advance notice were particularly helpful to older employees, by allowing sufficient time for individual adjustment to occur. Training, also, was flexible enough to permit the older worker to learn more slowly, or to take less demanding intercept positions. Since severance pay was based on length of service, older workers who could not retire were given a relatively large lump sum at layoff. This proved important to the older worker who was unable to relocate.

Coordination With Public Agencies

Although, in one case, the company attempted to obtain jobs in another plant for some employees who were laid off, none of the case study offices notified or worked with public agencies in advance or during the changeover. The offices acted to minimize employee adjustment problems through internal planning, but their greatly reduced operator requirements reduced openings in each community for young, unskilled, female high school graduates. To this extent, the problems of vocational guidance, placement counseling, and job creation were increased for public agencies in these communities.

Chapter III. Manpower and Telephone Technology

This chapter describes the telephone industry, its work force, and the types of technological change which affect telephone operators. It presents the background from which the manpower policy (described in Chapter IV) has been developed.

Employment in the Industry

The telephone communication industry employed over 800,000 persons in mid 1967, making it one of the largest industries in the Nation. Although employment has increased since 1964, the trend in employment between 1957 and 1963 was downward. Future prospects are for a stable or slightly rising level of employment over the next decade.

Employment in a typical company may be classified into five broad groups: About 40 percent are employed in the Plant Department, which installs and maintains wire, cable, telephones, and maintains central office equipment; one-third are in the Traffic Department, which provides service to customers placing calls; one-tenth are in the Commercial Department, which handles sales and collections; less than one-tenth are in the Accounting Department; and about one-tenth are in the managerial and professional group.

Women constitute over half of the work force. They are concentrated in the Traffic Department and in clerical jobs in Plant, Commercial, and Accounting Departments. The Traffic Department hires young girls mostly from high school, trains them as operators, and promotes some to service assistant, assistant chief operator, and chief operator. Turnover is high among telephone operators, particularly in the first 2 years of service. After the second year of service, the proportion of women who remain in the company for very long periods rises sharply.

Today, telephone operators make up close to 200,000 employees or about 28 percent of the industry's work force. About two-thirds handle toll calls exclusively; about a fifth provide information on all types of calls; and the rest handle intercept calls (wrong number, number changed, etc.) and other types of special services.

Collective Bargaining

Most of the workers in the industry are covered by collective bargaining agreements, negotiated company by company. Although there are about 2,500 operating companies in the industry, about 85 percent of all employees work for the Bell System of 23 companies, each of which provides service to one State or more. The leading union is the Communications Workers of America, AFL-CIO, which encompasses all crafts and departments and represents a majority of nonsupervisory workers in the industry. The International Brotherhood of Electrical Workers, AFL-CIO, represents selected departments in some companies. A large number of independent unions typically represent one department in one company. Some have formed federations or alliances.

Union locals may be organized along departmental lines, i.e., separate plant, traffic, commercial, and accounting locals in each town. In some companies, all workers in one town may belong to the same local.

Contract provisions about wage rates, call-in pay, night-work differentials, termination pay, and holidays vary among companies. The noncontributory retirement and disability plan, however, is the same throughout the Bell System.

Technological Changes Affecting Operators

The telephone industry has undergone several major technological changes in over

75 years of its history. These changes have emerged from extensive research and development programs and long-term technical planning that are characteristic of the industry. Rapid expansion of service also has taken place; between 1920 and 1966, the number of telephones operated by the largest system increased tenfold, the number of calls increased ninefold.

One of the first major changes was local dial conversion. First introduced in the 1920's, dial conversions were made gradually, central office by central office. By 1930, nearly a third of all Bell telephones were equipped for local dialing; by 1940, about 60 percent were dial. At the present time, virtually all United States telephones are dial.

As operator handling of local calls was eliminated, a series of changes also reduced the amount of operator time required for long distance toll service. First, during the late 1940's toll operators began to dial the long-distance telephones rather than make connections manually connecting with numerous other long-distance operators and tieing together a route to the distant city. Because of operator long-distance dialing, the originating operator could handle the call more quickly. For many calls (depending upon the route and traffic conditions), the assistance of other operators along the call's route was eliminated.

The second innovation in toll call handling, "mark-sensing," not only saved operator time, but also saved clerical man-hours in the Traffic and Accounting Departments. The toll operator rapidly marked punch cards (to indicate calling number and called number) rather than prepare a time-consuming, handwritten record. Clerical time was saved because the marked card could be machine-read ("sensed") and tabulated. Mark-sensing required the retraining of tens-of-thousands of toll operators.

The third toll innovation, automatic customer distance dialing eliminated all operator handling on dialable station-to-station calls. Because the great bulk of all telephone calls--distant as well as local--were being made without any operator assistance, some special services--person-to-person, credit card, and collect calls, information and intercept--still require human intervention. For each of these types of calls, operator man-hours are being reduced by installation of semiautomatic, sometimes computer-assisted, equipment. All of the changes in operating methods drastically reduced man-hours per call but made no change in the industry's practice of hiring untrained women.

Manpower Outlook

In the future, very rapid expansion is expected in data transmission utilizing telephone company facilities. Overseas and domestic toll calls will grow rapidly, as will special services to business users.

The relative proportion of telephone operators in the industry's employment will probably continue to decline over the next decade. Local- and long-distance dialing have already reduced the proportion of operators from over half of total telephone employment in 1945 to 28 percent in 1966. By 1975, operators may constitute a little over one-fifth of total employment. Although employment will also be lower, the industry will need to hire many women to replace operators who quit or retire and, in some areas, to meet growing demand for services.

By 1975, most telephone operators will be working at new, desklike equipment which switches all calls automatically. With the aid of special purpose computers, the operator will handle person-to-person, credit card, collect, third-number charge, pay-station, and time-and-charges calls with only momentary intervention. Moreover, information operating and intercept calls may be totally or partially computerized.

In summary, the telephone industry has a long history of planned technological change, with each development preparing the way for the next. The problems of human adjustment and manpower planning for these innovations are discussed in the following chapters.

Chapter IV. Manpower Planning Policy

Although dial conversion of the entire telephone system was "gradual," spanning several decades, the change in any one town or exchange was fairly abrupt. Technical preparations are extensive and prolonged. However, the moment its telephone system begins operating automatically, a whole town's requirements for operators might be reduced from several hundred to a few dozen. Some offices built exclusively for local manual operations might be shut down permanently at the cutover hour.

To cope with the human problems of this extensive changeover, companies comprising the Bell Telephone System developed at an early stage a detailed statement of manpower policy which provided for close coordination of personnel with technical planning in all cases of dial conversion. The objectives of this manpower planning policy are set forth in the system's manual describing the procedures to be followed by local offices, as follows:

1. "To retain as many as possible of those who wish to continue to work.

2. "To place in suitable positions those whom it is necessary to transfer.

3. "To avoid reducing in rank any regularly appointed nonmanagement employee with a title above that of operator.

4. "To avoid a surplus after the cutover."

This policy has been applied in thousands of conversions over the past several decades in all parts of the country. Although some of it has been modified by union contract provisions relating to seniority rights and layoffs, it remains substantially intact. This chapter presents a generalized version of the policy and program. The next chapter describes how it was carried out in four specific cases of dial conversion during the late 1950's and early 1960's.

Advance Planning

Planning for the change involved both technical and personnel phases. Technical preparations for dial conversions require about 3 or 4 years of complex engineering work, from the decision to install the dial system to the moment of cutover, when all calls are routed through the dial system. Switching equipment for automatic dial offices must be planned, engineered, manufactured, and (until recently) installed on a custom basis. Current and future communications needs of the community must be surveyed, decisions made with the equipment manufacturer about type of equipment to be used, and tentative installation schedules established. These technological and organizational necessities create a long leadtime which the operating company can use to plan its manpower adjustment steps.

The specific circumstances of each cutover influences the particular emphasis to be followed in planning manpower policy. If the conversion affects only one office of a large city, the emphasis of planning is on transferring employees elsewhere within the city. There is a wider choice of jobs in other departments available to employees who must leave the operating force. If the cutover is in a small, single-office city (or encompasses many exchanges in a larger city), fewer local opportunities are available and wider transfer areas must be considered.

Timing of the conversion is also critical. A cutover scheduled just before the busy season (usually June through September) will leave fewer redundant workers immediately after the cutover because of the seasonally heavy traffic load. Other special circumstances which planners must take into account are: the age distribution of employees; nearness to other towns (and their operator surplus or shortage status); the union contract clauses which deal with seniority; and layoff and transfer actions.

Estimate of Work Force Requirements

Planners need basic information about total traffic man-hours required before cutover, immediately after cutover, and for several months thereafter, so that normal operations can continue while personnel changes take place. Operator man-hour requirements are calculated by dividing the expected volume of calls which require operator attention by average operator time per call. This figure is estimated long before cutover and covers the precutover period plus several months thereafter. It is adjusted if new information indicates a change in circumstances.

The calculations are complicated by such elements as peak periods, lower average operator speeds with a predominantly inexperienced work force (or the converse), and estimates about call volume which extend 2 or 3 years into the future. Such forecasts are developed from company information concerning community growth and are updated regularly at management forecasting conferences attended by all departments of the operating company. Changes in traffic volume, changes in work per call, and changes in the installation schedule may require review of the entire work force estimate. The program is usually reviewed at 3-month intervals until a year before the cutover. During the last year, the plan is usually reviewed monthly.

The estimated operator man-hour requirements after cutover are subtracted from the precutover requirements. After an adjustment for hours consumed by vacations, leaves of absence, and training time, this yields an estimate of the number of operators who will no longer be needed in this office after conversion.

Next, the company estimates normal attrition in the work force (by applying the office's turnover rate to the current operator totals). If this attrition, over the 1 or 2 year preconversion period, will reduce the current work force to the estimated postcutover requirements, the company knows that layoff of the specific operators then working may not be necessary. It will then stop hiring "regular" employees. From this point on, the employees who leave through normal attrition are replaced with temporary or term employees, who are told that their jobs will probably not extend beyond the cutover date. The company often recruits former operators for these temporary positions in order to avoid training an inexperienced new employee who would be on the job for only a year or less.

Despite planned reduction by attrition, a number of regular employees may not be needed after cutover because automatic dialing reduces operator requirements so drastically. Using the same methods as above, the company can calculate in advance how many of these regular employees would no longer be needed in the office; and, moving down the seniority roster, the company can then identify these operators. Thus, a year or two in advance of the cutover, the company knows, relatively accurately, who will be required to transfer or retrain. It is then in a position to plan transfer actions, schedule training, and develop other means of retaining workers who want to continue working in the industry.

Advance Notice and Consultation

When the company has developed its estimates to this point--where the seniority date for retention in the office is known--it informs the union and the employees. The union is informed in advance of employees and public, "so that there will be no misunderstanding and so that questions or discussions among the employees, if taken to the union, may be given answers in accordance with the facts." (From company policy document.) The company may give the union its estimate of work force to be retained--which also indicates the required seniority for an employee to be sure that she will be retained. The company also may describe its planned adjustment steps with the union at this time, usually 1 or 2 years before conversion. Conferences with the union may continue with regularity throughout the period prior to cutover.

The collective bargaining agreement in some companies provided for a 30-day period (from the date of notification of the decision to install new equipment) to negotiate any special arrangement for manpower changes which departs from the written contract provisions. If special procedures are not negotiated during this period, the general contract provisions usually require that layoffs be made in inverse order of seniority within the Bell Systems.

The employees are notified immediately after the union, and given the same information about the change. They are told how much seniority will be required to remain in the office (if this estimate has been developed). This serves to help the less senior operators to plan for possible transfer.

Later, a management official holds individual conferences with each employee to determine her wishes as to retirement, retraining, transfer, and other options available in this office's plan. This information, together with data on work experience, seniority, and other personnel information, is used in planning the adjustments necessary to assure individual placement after conversion. The company policy manual states:

"It is well to keep in mind in this connection, that in addition to the effect on the general employment situation, it is better from a service and cost standpoint to retain in the System experienced employees for whom a considerable investment for training has already been made, than to engage and train new people in some places while laying off experienced employees in others."

Application of Attrition

A variety of methods is used to avoid adding permanent employees to the work force during the period immediately prior to conversion and to maximize the effect of attrition after the cutover. These are:

1. Postponing retirements, vacations, and leaves of absence.
2. Postponing some training.
3. Postponing other company activity which can be performed later.
4. Reducing work time per call.
5. Borrowing operators from other offices.
6. Curtailing absences.
7. Scheduling regular overtime tours of duty.
8. Hiring temporary or term employees.

These measures result in temporarily increasing the number of man-hours available for operations, without hiring additional permanent employees. The artificial stretching of man-hours involved in the first method results in a spurt of retirements, vacations, and leaves of absence among regular employees immediately after cutover. Deferred training is undertaken now, overtime is stopped, borrowed employees are returned, and postponed misscellaneous projects are begun. All of these measures reduce available operator man-hours after conversion, thus permitting some regular employees to be retained who might otherwise have been laid off. In effect, the man-hours that were "artificially" expanded just prior to conversion are now contracted suddenly, in order to retain as many permanent employees as possible.

Transfers and Reassignment

A frequently-used method of retaining employees is to transfer them to other offices in the same city, or to other departments, or to other cities. The system tries to preserve its investment in training (several hundred dollars per operator) by using experienced employees, wherever possible, to fill operator vacancies. Opportunity for transfer is particularly good in a steadily growing system which employs nearly 200,000 operators; has offices in most of the cities, suburbs, and small towns of the United States; and has a turnover rate which generates many thousands of new vacancies each year. Transfers are not prevented by union barriers between craft or departmental lines.

An effort is made to create local transfer possibilities in advance of cutover. Traffic Department jobs to which displaced employ-

ees may be reassigned include information, intercept, and toll operator positions, either within the same office or in another exchange. Where other central offices are within the same commuting area as the affected office, the man-hour "stretching" procedures described on page 9 may be applied to another office in order to create openings for incoming transfers at cutover. This procedure would be most likely when one exchange, in a city of several exchanges, is switched to dial.

Seniority, qualifications, home address, and transportation availability are all considered in determining who should be transferred. Transfers to nonoperator jobs (such as clerk) in the traffic and other departments also may be made. Other departments may become part of the manpower plan. They also may be asked to lower their age requirements in order to accept the operators for training. Operators may consider such transfers as advantageous because they may carry a better work schedule or higher wage rates.

The company's policy may involve arranging transfers to distant cities for employees for whom no local positions can be found. This is particularly necessary when a whole town is converted to dial at one time. Such transfers are usually arranged far in advance of the conversion.

If the number of surplus employees in the town to be cut over is expected to be large, the statewide operating company may institute a work force planning program in one or more distant cities in order to create vacancies into which surplus operators can transfer. The distant office selected for intransferring will also postpone vacations, leaves of absence, and retirements until the cutover date. It may even hire temporary employees. At cutover, this distant office will then have vacancies for the incoming transferees.

It appears, from the pattern of transfer offers in the case studies, that the system usually offers transfers into jobs and into areas where the new wage rate will be about the same as the operator's present wage. The policy document does not suggest that transportation or moving expenses be paid.

Employees who transfer within the system generally retain their system seniority for purposes of job security (layoff order), relative pay level, pension and sickness benefits, and length of vacation. Seniority for choice of shift and choice of vacation may be suspended until the next regular rescheduling, so that the incoming transferee does not bump numerous other employees from their regular shift and their planned vacation. Shift choice is important to an operator because some tours of duty occur during evening and night hours and on weekends.

Retirement Programs

Older employees are encouraged to retire after the cutover, if they are eligible for pensions. Precutover interviews, in which various alternatives are offered, include a discussion of retirement benefits with the employees whose age and service were sufficient to qualify.

Pensions are available to all system employees on the same basis and are not vested. They are granted automatically to women employees at age 65 if they have 15 years of system service; or at ages 55 to 65 upon employee's request, if they have 20 years of service. At the discretion of the management-operated Employees' Benefit Committee, pensions may be granted to women with 25 years of service if they have reached the age of 50, or with 30 years of service at any age. Monthly pension payments are 1 percent of the employee's average pay during his last 5 years of service, multiplied by total years of service. When the retiree is eligible for social security, an amount equal to one-quarter of the social security benefit is deducted from the system pension payment.

Severance Pay

If a regular employee is unable to transfer and is laid off and is not eligible for a

pension, she may be given severance pay. Severance pay and pension benefits cannot both be collected. Severance pay provisions are common in the communications industry (telephone and telegraph).4/ Of the 81 "major" agreements (those which cover 1,000 workers or more) in the industry, all but 5 specifically provide some type of severance payment. In contrast, in the electric and gas utility industry, only 21 of the 86 major agreements provide severance or layoff benefits. In the telephone industry, payment amounts depend on the worker's weekly wage, multiplied by a length of service factor. All but two of the agreements in this industry have a minimum service requirement, usually between 6 months and 1 year.

One system contract states:

> "Each regular employee laid off as a result of force surplus, other than employees who are offered and refuse employment in a related or reasonably equivalent occupation and within reasonable commuting distance of their then place of employment, will be paid a layoff allowance."

If the operating company has been able to carry out all aspects of its manpower plan, and has been hiring temporary or term employees to fill vacancies over the last year or more before the cutover, the number of termination payments which must be made may be quite small.

Assistance in Finding a Job Outside the Telephone Industry

The system policy document provides that any office that must layoff employees should take steps to help surplus operators find jobs in other industries "because of possible hardship, possible unfavorable public reaction, and possible impairment of the company's reputation as an employer." It also recommends that the operating company contact "other likely employers (especially those who have private branch exchange switchboards) either directly or through the Chamber of Commerce." If any job openings are located, the company informs operators who were looking for work directly. The company policy also states: "Granting employees time off to seek other positions may be considered." No explicit mention is made about contacting the State Employment Service as a mean of assisting employees to find jobs.

Training and Retraining

In a typical dial conversion, the operators who are no longer needed are those skilled only in local switchboard operations. Since these employees are already familiar with basic operating practice and the general functioning of switchboards, they are more easily retrained to operate toll boards or to handle information or intercept positions than any other position in the company.

Since toll service accounts for most of the operator positions, it provides most of the openings available to transferees. Toll operating is the most complicated operator position, requiring the operator to respond to a wider variety of requests and service conditions. Therefore, toll training generally requires 3 weeks; information training takes 1 week; intercept training a few days.

Highly developed training programs exist for nearly all jobs in the system, even at the nonmanagement supervisory level. Therefore, retraining can be accomplished relatively smoothly by assigning a surplus operator to any one of a number of courses already being given in many departments and occupations. This policy enables some operators to remain at work without relocating to another town.

Rehiring Rights

Union contracts often provide that laid off employees are to be rehired in inverse order of seniority before new employees can be hired. The rehiring rights may be limited

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4/ Severance Pay and Layoff Benefit Plans, Bulletin No. 1425-2, Bureau of Labor Statistics, U.S. Department of Labor, March 1965.

to employees who have been laid off for less than 1 or 2 years and are qualified for the type of job which is being filled. Payment of severance benefits does not affect recall rights. Employees on layoff keep the company informed of their address so that they may be contacted when hiring takes place. If they are recalled in fewer weeks than the number paid for by a separation allowance, employees repay the difference between the allowance and their wage rate for the period laid off.

Chapter V. Manpower Planning in Operation: Four Case Studies

The case studies presented in this chapter describe the application of the general policy of the Bell System in four instances of conversion from manual equipment to automatic dialing for local and long-distance service combined. These dial conversions were unusual in the industry's technological history, since most exchanges had been converted to local dial many years before long-distance dialing was installed. Thus, three of the case studies represented an extreme telescoping of change for the type of small town affected. The fourth case study was a conversion of one manual exchange in a large city where all other exchanges had already been converted to dial.

The long-distance dial equipment installed was the most advanced type in use at the time of the case studies. It contained automatic number identification equipment, which permits dialed toll calls to go through without the operator's intervention to determine the calling number.

Labor requirements were reduced drastically: In office A, by 40 percent; office B, by 47 percent; office C, by 85 percent; and office D was closed down. The employees directly affected were operators, service assistants, assistant chief operators, and chief operators. All of these employees were women. Although this type of dial conversion also affected some plant and accounting jobs, such jobs were not studied.

Three of the offices affected (described in text and tables as A, B, and C) were located in towns of 40 to 50,000 in the Appalachian region. Unemployment was relatively high, ranging from 5 to 13 percent, during the cutover period. The fourth office (D) was the last manual central office in a large Eastern city. Because of its size, the city had many central offices to which employees could be transferred.

The operators in two offices (B and C) were represented by the Communications Workers of America; in the other two offices (A and D), by a statewide independent union. All offices had been represented by the same union for at least a decade prior to the conversion.

The age distribution of employees varied among the four offices; office B had the youngest work force (about 75 percent had less than 10 years of service), and office D, the oldest (44 percent of the work force had less than 10 years service). In fact, a number of operators in office D had transferred to the office as manual operators when other offices in that city had been converted to dial. Table 1 indicates the seniority level of employees in each office.

Table 1. Seniority of Affected Regular Employees at Time of Cutover

Years of company service at cutover	Office A	Office B	Office C	Office D
	Percent distribution of affected employees			
Total	100.0	100.0	100.0	100.0
30 and over	5.5	6.2	5.4	19.1
25 - 29	3.4	1.7	.8	4.2
20 - 24	1.4	3.9	2.3	8.4
15 - 19	9.7	1.1	11.5	9.6
10 - 14	9.0	12.4	18.5	15.1
5 - 9	29.7	37.1	40.0	15.7
Less than 5	41.4	37.6	21.5	28.9

NOTE: Because of rounding, sums of individual items may not equal 100.

SOURCE: Company records.

Technical Preparations and Manpower Planning

In all four cases, advance planning of both the technological and personnel adjustments began several years before the cutover. In office B, for example, planning began 2 years in advance; in office C, 3 1/2 years in advance. In both of these offices, a specific management official was put in full charge of cutover arrangements, both personnel and technical. The District Traffic Engineer was in charge of office B's conversion. In office

C; a Traffic Supervisor was sent to the town to plan and carry out all aspects of the conversion.

The technical phases of planning involved various time consuming preparatory activities related to purchasing and installing equipment. Preparing the complex specifications for manufacture and assembly of switching equipment in one community, for example, required 5 man-years of engineering work by the equipment manufacturer. Installation took 8 months. During this period, the operating company had responsibility for training operators, instructing customers, compiling and publishing a directory, and making a great variety of community arrangements to minimize customer confusion with the new dial system.

The manpower phases of this planning involved forecasting in advance for employment requirements as described on page 8. For example, 21 months before the cutover, office C estimated turnover rates, retirement rates, and work force needs for each month over the next 2 years. It also estimated work force needs after conversion. These data were applied to total employment to estimate the number of employees who would have to transfer or be laid off. This estimate was revised periodically, to take account of changes in turnover rates, call volume, new postcutover work force estimates, and the results of employee interviews concerning willingness to transfer. The estimate prepared 2 years before cutover proved to be quite inaccurate, chiefly because the necessary postcutover force had been overestimated. The estimates prepared 8 months prior to cutover, however, proved to be very close to the actual result.

Advance Notice

Unions and employees were notified far in advance of the change. In office A, the union and employees were notified about 20 months prior to conversion. A formal union-management meeting was held just prior to employee notification. In offices A and D, meetings began a year prior to cutover; in office C, 17 months prior to cutover. Office B did not carry on formal consultation with the union but notified the local of cutover plans 2 years prior to the date of conversion.

In all offices, the union contracts required that the company notify the union of "an occasion for the adoption of a program of mass or general layoffs or part-timing (less than a normal workweek) or both" for regular employees. (The contract covering office C does not include "part-timing" but is otherwise the same.) All four contracts provide that, within 30 days of such notice, either (1) a special layoff or part-timing arrangement shall have been negotiated, or (2) contract provisions shall apply which require that inverse order of seniority be observed in layoffs. (See appendix A for contracts in the case study offices.)

At the time of notification, planning in all four offices had progressed to the point where management was able to give the union the approximate cutover date, some indication of how many employees would be retained, and transfer information. For example, in office D, management was able to inform the union that all manual operators would be retrained for toll work, that they would be transferred to other offices within the city in advance of cutover (and be replaced by temporary workers), and that the retraining and transfer program would begin 10 months before cutover. In office C, management indicated the seniority date of the least senior employee who could be retained in the office and explained how transfers would be arranged.

Union-Management Negotiations

In office A, management proposed as an alternative to the contract provision regarding layoffs, that the less senior half of the regular employees be given part-time work --about 2-1/2 days a week--that they also be offered transfers, and that some special temporary clerical projects be brought into office A to occupy the surplus force immediately after cutover. The union counterproposed that the workday for all regular office A operators should be cut 1 hour, at no cut

in pay; that employees should be offered expense-paid transfers anywhere in the system, by seniority; and that pensions be provided to all employees with 20 years service. The union was firmly opposed to part-timing, partly because it would reduce the operators' income while preventing them from obtaining unemployment compensation. After three negotiating sessions, the company agreed to pay transportation and moving expenses to transferees. Since the union was opposed to part-timing, the company withdrew this proposal and returned to the contract's layoff procedure.

Union-management meetings in office D, which was to be closed, dealt at length with transfer provisions. All employees had to transfer to other offices in the city. Management proposed that the choice of office to which they would like to be transferred not be offered in order of seniority. Instead, management proposed that the seniority list be split into four groups, and the limited number of transfer openings in each office be apportioned among the four groups. Within each group, choice would be made by seniority. A result of this method would be that the operator, for example, who was 41st in order of seniority could have last choice in transfer opportunities, while the operator who was 42d on the seniority roster could have first choice.

CHART I

CHRONOLOGY OF UNION-MANAGEMENT [1] MEETINGS IN OFFICE C

About 20 months prior to cutover

Management informed union local that a dial cutover was being planned. The contract procedure for work force surplus was discussed. Management indicated that an announcement would be made to employees.

16 months prior to cutover

Management informed union of estimated office size after cutover, and explained how it had estimated the seniority date of the least senior operator to remain in office C. (This estimate was revised at a later meeting because turnover had been underestimated slightly.)

Management informed union that each operator would be interviewed next month to determine whether or not she will want a transfer to another exchange elsewhere in the State.

In response to a union question, management said that it "would not use the cutover as a means of getting rid of attendance problems, but attendance will continue to be stressed."

Union asked if senior operators could bump junior employees in other departments. Management said no.

15 months prior to cutover

The union stated that temporary employees are unhappy with their constantly changing work schedules. It wanted to know how many could be reclassified as regular, so that they could obtain a fixed working tour. Management agreed to find out and inform the union.

The union asked for clarification of the transfer procedure. Management said that it would offer transfers in inverse order of seniority, as close to cutover as possible. Union and management reviewed results of the individual operator interviews concerning their desire to transfer and their choice of locations.

Managment agreed to pay a layoff allowance to a regular (not term or temporary) employee who had accepted a transfer, then later decided not to transfer. However, it would not pay a layoff allowance to an employee who refused to transfer to a toll job in the same town as office C.

Union asked that the layoffs be applicable to all departments (to create jobs for senior operators who would otherwise have to move). Management refused.

9 months prior to cutover

Discussed position of employees with enough seniority to remain in town C, but who are on leave of absence at cutover. Union indicated that it would make sure that seniority was strictly observed in offering jobs to employees returning from such leaves. (A grievance later was filed on this issue.)

Management indicated the wage grade which operators and service assistants would be offered if they were hired by the Commercial Department.

Management said that if there were no extenuating circumstances, an operator could be required to work a 6-day week "as a condition of continued employment." (This scheduling was used to add man-hours before cutover.)

See footnote at end of chart.

6 months prior to cutover

Management answered a union question about employees below the seniority level for retention. About five will be used for a temporary plant job and may be needed again later (by the time the temporary project is completed) as operators.

Management told the union when vacations would begin (a month after cutover). Vacations could be chosen for the following 6 months.

Management altered its earlier position on operators who refuse transfer. If a long-service employee (who could have been retained in office C) accepted a transfer, then later decided not to go, she would not be given a lay-off allowance.

Management answered a query about a second layoff subsequent to cutover by stating that this might be a possibility, but that the company was considering scheduling vacations to avoid layoffs. This would help absorb the force during this period in the expectation that traffic growth and force turnover would nullify the surplus.

1/ At early meetings, an international union representative joined the officers of the local. Management was usually represented by the District Traffic Manager, Traffic Manager, and Chief Operator.

Source: Company minutes of meetings.

The union proposed six groups, rather than four groups, since it was concerned that the relative position on the seniority roster of operators in the offices receiving the transferred employees would be lowered by an influx of more senior employees from office D. This would adversely affect the receiving office operators' choice of hours and vacations. The company and union agreed to proceed on the basis of six groups.

Chart I presents a chronological account of meetings between labor and management representatives at office C. These discussions began about 20 months prior to the cutover and dealt with many of the personnel problems of the change.

Employee Interviews

Interviews were held with the employees in offices B, C, and D to inform them of the choice in transfers, training, or other adjustments. The interviewer was either the management person in charge of the cutover or one of his staff. This far-in-advance notice and variety of choice were particularly helpful to women workers in preparing their family for the change. Women are not expected to put job or career above family convenience or preference, even if they support the family (as was the case for many of the women operators in these case studies). The following notes made by a personnel interviewer illustrate some of the problems that arose:

"Husband is going to look for work (now unemployed), and if he finds employment, she will want a transfer to that city. Otherwise will work until cutover."

"Will accept transfer to P. City. Prefers to go as close to cutover as possible, since her son is in school and she wants him to finish the year here. Divorced; supports self and child."

"Father will not permit her to transfer anywhere. When she becomes 21 may change her plans."

10 months later:
"Has decided to transfer to Washington, D. C."

"Single; supports parents. Will talk to family and let us know about transfer. Mother's health not good."

9 months later:
"Cannot transfer. Must take layoff."

"Husband's job is not a good one as far as wages. He is trying to find a better job. Car will not be paid for until 7/61."

10 months later:
"Will transfer to W. City at cutover. Husband unemployed."

Use of Attrition

In all offices, regular employees who left during the year preceding the cutover were replaced with temporary workers. In addition, in offices B, C, and D, transfers took place during the few months prior to cutover, and the vacancies thus produced were filled with temporary workers. As a result of these measures, temporary employees accounted for over a third of the total operator force in offices C and D, and nearly a fourth of the operating force in office B by cutover time.

Overtime was used in all four case study offices to add to operator man-hours. Usually, operators were scheduled for a 6-day week, rather than a longer day. Table 2 shows that about one-quarter of the total man-hours required to operate office B were obtained through the use of temporary employees and overtime scheduling. The peak in overtime at 11-12 months prior to conversion was due to a seasonal peak traffic. The cutover was planned for 1 year later, when another seasonal peak in traffic would require extra operator man-hours, and therefore would result in fewer layoffs immediately after cutover.

Offices A, B, and C postponed vacations until after the cutover (although two vacations each week were permitted in office A). In office C, this measure added the man-hours equivalent of five workers to the

operating force during the 3 months prior to conversion. Office C had estimated its turnover during the year of conversion to be 35 percent; during the year preceding conversion, 20 percent. It began filling the vacancies created by this attrition with term employees 2 years before cutover. One year before cutover, vacancies were filled with temporary workers.

Transfers

The company arranged to transfer some operators to other offices in all four cases. In offices A, B, and C, jobs in other towns, mostly within the State, were available for some employees; in office D, the jobs were within the city. Nearly all of these moves were to other types of traffic work (usually toll, information, or intercept operating). In all four cases taken together, only five employees were transferred into another department in the same town.

The transfers to other cities and offices did not all take place immediately at the cutover. They were spread out over a period of months preceding cutover, in order to lessen the training load on the receiving office. Office C, for example, shifted 14 operators to a single small town. After transfer, they had to be trained for toll operations. Therefore, these transfers were spread out over several months to prevent a sudden influx of untrained operators into one office. Similarly, office D moved 132 operators to other offices in the same city over a period of several weeks. All of them had to be retrained for toll work. In both offices, as regular operators moved, their positions were covered either by hiring additional temporary employees or by scheduling overtime.

The system usually does not pay moving or transportation costs to employees who are required to transfer. In office A, however, transportation and some moving costs were paid to the 11 employees who moved to another town. Also, at the time office C closed, the telephone company of a large city a few hundred miles away was recruiting high school girls in office C's town because of a serious operator shortage. The company was paying transportation expenses to girls who moved to the city. Therefore, when office C was cutover, the same offer of transportation expenses was

Table 2. Office B: Anticipated Use of Regular and Temporary Employees and Overtime Prior to Cutover, by Selec ed Months

Months prior to cutover	Estimated force required	Estimated total number of employees available	Estimated force composition				Estimated overtime	
			Regular employees		Temporary employees		Equivalent employees represented by overtime	Percent of total force
			Number	Percent of total required	Number	Percent of total required		
18	218	218	218	100	-	-	-	-
12	208	190	185	89	5	2	18	9
11	218	196	183	84	13	6	22	10
10	225	204	182	81	22	10	21	9
9	227	214	181	80	33	15	13	6
8	235	218	180	77	38	16	17	7
7	221	221	179	81	42	19	0	-
6	222	222	178	80	44	20	0	-
5	224	224	177	79	47	21	0	-
4	225	221	175	78	46	20	4	2
3	226	215	173	77	42	19	11	5
2	230	209	172	75	37	16	21	9
1	225	203	170	76	33	15	22	10

NOTE: Because of rounding, sums of individual items may not equal 100.

SOURCE: Derived from company records.

made to any operators in office C who wanted to transfer to the city. In spite of this offer and a higher operator wage scale, only one of the displaced office C operators took a job in the distant city.

Two offices in the same State created openings for 26 operators of office C by planning their hiring during the 3 months prior to cutover. In office A, nonoperating departments of the company (in the same town) restricted hiring in certain occupations for 1 year preceding cutover. However, these measures produced only one opening. Table 3 shows the disposition of affected employees in the four case studies near the cutover date.

Layoff and Severance Pay

Estimates of the number of persons who might be without jobs at the cutover dates were made during the pre-cutover period. In office C, these estimates were revised every 6 months or so, taking into account interview results, retirements, and turnover. The actual number laid off was higher than the number estimated 21 months in advance.

All regular employees were offered the option of transferring in the four case studies (although not always to the city of their choice). Nevertheless, layoffs took place because of the inability of some operators to move. Many of these regular employees had families and were homeowners. For these and other personal reasons, transfers were rejected by 142 of the 222 regular employees who would be laid off if they did not transfer. Twenty-eight of the 142 were able to retire because of their length of service or the discretion of the benefit committee. Eighteen took a leave of absence. The remaining 96 operators who could not transfer were laid off; all but 17 received layoff pay.

In office C, which had the largest number of laid-off employees (39), layoff payments ranged from $107 for an employee with 2 1/4 year's service to $1,001 for an employee

Table 3. Disposition of Affected Employees in Four Case Studies Near the Cutover Date

Employment status	Number of employees			
	Office A	Office B	Office C	Office D
Total affected	154	216	262	[1] 265
Regular employees, total	126	158	157	165
Retained, total	103	142	86	148
Retained in department	91	115	40	-
Transferred to another department	1	-	4	2
Transferred to another office in the same city	-	-	-	146
Transferred to another city	11	27	42	-
Not retained, total	23	16	71	17
Leave of absence (may be temporary)	3	-	15	-
Retired	3	-	6	4
Resigned (no termination pay)	-	3	11	13
Laid off (termination pay)	18	13	39	-
Term, temporary, and occasional employees, total	28	58	105	[2] 100
Retained, total (transferred to another city)	1	5	([3])	([3])
Not retained, total (laid off, no termination pay)	27	53	([3])	([3])

[1] An estimated 100 temporary employees included in total.
[2] No exact data available; about 100 temporary employees were used.
[3] Information not available.

SOURCE: Company records and case study interviews.

with 9 years service. The average severance benefit was about $350. (See table 4.) These benefits were calculated on the basis of wages paid in the early 1960's and do not reflect current higher wage rates. In offices A and C, about a third of these laid-off regular employees were rehired within a year or two after cutover, due to increased business and turnover. Employees probably were eligible for State unemployment insurance in addition to severance pay.

Table 4. Office C: Distribution of Separation Allowances

Range in amount of separation allowance	Number of employees receiving allowance
Total	39
$700 and over	5
$600 - $699	2
$500 - $599	1
$400 - $499	1
$300 - $399	8
$200 - $299	7
$100 - $199	15
Less than $100	-

SOURCE: Derived from company records.

Company Help in Finding Other Jobs

Only office C made contacts with other firms. Here, five production-worker jobs were located in a nearby manufacturing plant. In no case did the operating companies contact the State employment service.

Retraining

Nearly all retraining in the four cases involved training operators to work toll boards. A few were retrained for information and intercept work; only five were trained for jobs in other departments. Toll training took 3 weeks, in most cases, but extra time was given to operators who had difficulty learning toll board procedures. In training, the operators sat at a regular switchboard and handled a variety of simulated calls and signals. This type of training may have been less upsetting to older experienced operators than classroom instruction.

Upgrading and Downgrading

In nearly all cases, transfers were arranged to towns with the same wage scale for operators; some transfers were to larger cities with a higher wage scale. In office B, most of the transfer openings which were available for operator choice were in towns with a wage rate between $0.50 and $7.50 higher a week. In offices A and C, most transfer openings were to towns with the same operator wage scale. In office D, operators shifted within the same town, so their wage scale remained the same.

In office C, downgrading took place, primarily because the position "Service Assistant" was no longer required after cutover. Eleven Service Assistants and one Assistant Chief Operator were downgraded to operator positions, at lower pay rates. One Assistant Chief Operator was moved to another department to prevent her being downgraded to operator.

Older Worker Adjustment

In the case study situations, manual operators who were unfamiliar with toll practice had to be trained on this service for the first time. Older operators who had trouble adjusting to toll work were given more time to learn or were trained for the somewhat less rigorous intercept or information positions. Office C interview notes illustrate the older worker's problems:

Operator 6 (54 years old. 31 years' service)

> "Still wants to work on. Definitely would not be interested in transfer. Has house to finish paying for. Doesn't want pension while her health is good. Does not feel she is as efficient as she should be on the toll board. Apprehensive about toll training. Afraid it may be difficult for her in the new office."
>
> (This operator did remain at work and did adjust to toll operating.)

However, some of the resignations and retirements in office D were due to inability to learn toll work, even though extra training time was given.

Several management steps were particularly helpful to older workers. The advance notice of change, which came 1 to 3 years before cutover, gave older operators time to adjust to the idea that they would have to learn new skills. In addition, the training course was adjusted, to some extent, to the individual student's learning speed. Finally the company benefit Committee appears to have taken the cutover situation into account and granted applications for early retirement to operators who felt that they could not adapt to the new situation (see p. 10 for early retirement terms).

Appendix A. Union Contract Provisions at Office B.

Article V - Seniority

Section 1. It is agreed that work requirements, service conditions, and the ability of the employee developed through previous training and experience in the work involved as determined by Company are the controlling factors in the selection of working tours and vacation periods. If such requirements do not operate to the contrary:

(a) seniority based on net credited service shall govern the selection of vacation periods by all employees (other than Traffic central office operating employees) within each working group in each office, and

(b) except as provided in Section 2 of this Article, seniority based on net credited service shall govern the selection by plant employees working in central offices and Traffic central office operating employees of tours and vacation periods within each working group in each central office unit; provided that in the case of Traffic Service Assistants, Traffic Service Observers, and Senior Central Office Clerks, seniority based on continuous service, including time spent in management positions, since last appointment to this level, less periods of leaves of absence, shall govern prior to October 4, 1953, and commencing October 4, 1953, all periods paid for of one day or more in managment positions or within that particular job classification. In the administration of this Section, it is understood that no credit for previous service in any of these positions shall be given upon reappointment if the employee, since, October 4, 1953, has (1) elected to return to a lower rated position in the bargaining unit, or (2) been demoted to a lower rated job in the bargaining unit for any cause other than force surplus. An employee in one of these job classifications returning from a leave of absence after the effective date of this Agreement shall receive credit for all previously accumulated seniority upon reinstatement in the position held before leave of absence began.

Section 2. Traffic central office operating employees who are transferred from an office within Company's territory or from another Bell System Company into a new location within Company's territory, and employees transferred from other departments of Company into Traffic central office operating job classifications, shall be assigned whatever vacant tour remains on the schedule at the time of transfer without depriving any present employee of the tour she then is entitled to. As vacancies occur through resignation, promotions, transfers out, or other causes, the employee shall step into such vacancies on the seniority list until she has attained her proper place in the schedule in accordance with her seniority, but not later than the starting date for the first selection of tours on the basic schedule after the employee transfers to the office involved.

Section 4. It is agreed that Traffic central office operating employees shall normally be allowed to select working tours, generally not less than every 90 days nor more than 120 days; provided, however, that such selections may be made more or less frequently when Company determines that force and service conditions require.

Article VII - General Layoffs and Part-Timing

Section 1. Whenever, in the judgment of Company, there exists an occasion for the adoption of a program of mass or general layoffs or part-timing (less than a normal work week) or both, of regular full-time and regular part-time non-supervisory employees of Company, Company agrees before proceeding with such program, in the following sequence, to:

(a) Lay off all occasional and temporary employees engaged within the job classifications and exchanges affected in a sequence to be determined by Company.

(b) Notify Union of its intention to introduce such program and negotiate with Union in regard to the method or methods to be employed.

Section 2. Company shall determine the extent of the reductions required, the effective date or dates thereof, the exchanges, and the job classifications involved.

Section 3. If an agreement as to the method or methods to be employed in introducing such program is not reached by Company and Union within thirty days from the date of such meeting, Company may then proceed as hereinafter outlined.

Section 4. The order of layoff within job classifications and exchanges selected shall be by length of service groups and in the sequence outlined below, provided that all employees shall be laid off in the inverse order of their seniority:

(a) Employees with less than two years of net credited service.

(b) Employees with two or more but less than three years of not credited service.

(c) Employees with three or more but less than four years of net credited service.

(d) Each subsequent group after the third length of service group specified above shall be composed of employees in each next successive year of net credited service.

Section 5. Each regular employee with one or more years of net credited service laid off under the provisions of Section 4 of this Article (including those laid off in accordance with the terms of any further agreements reached with Union) shall receive, in addition to any vacation payment to which he may be entitled, a layoff allowance in accordance with the following:

Completed Net Credited Service	Weeks' Basic Pay
1 year	1
2 years	2
3 years	3
4 years	4
5 years	5

5 years, 6 months	6
6 years	7
6 years, 6 months	8
7 years	9
7 years, 6 months	10
8 years	11
8 years, 6 months	12
9 years	13
9 years, 6 months	14
10 years	15
10 years, 4 months	16
10 years, 8 months	17
11 years	18
11 years, 4 months	19
11 years, 8 months	20
12 years	21
12 years, 4 months	22
12 years, 8 months	23
13 years	24
13 years, 4 months	25
13 years, 8 months	26
14 years	27
14 years, 4 months	28
14 years, 8 months	29
15 years	30

Note: For each completed four months of net credited service beyond 15 years, one additional week's basic wages will be added to the above. In cases where an employee has more than fifteen years of net credited service, Company may, in its discretion, make payments in addition to those provided above; such additional payments to be determined by Company on an individual basis. It is understood that Company may in its discretion pay a layoff allowance in any of the above situations in an amount greater than that provided for herein.

If an employee receives a layoff allowance and is subsequently reengaged by Company, and the number of weeks since the date of his layoff is less than the number of weeks' basic pay received as a layoff allowance, the amount paid to the employee for the excess number of weeks shall be refunded to Company through payroll deductions in each payroll period at the rate of ten per cent of the employee's basic weekly wage.

An employee reengaged and again laid off after having former service accredited shall be paid the difference between the amount of the layoff allowance computed under the above schedule, and any former layoff payment which he may have received as a result of the previous layoff and not refunded.

Section 6. The provisions of this Article shall not be construed to prevent Company at any time from:

(a) Transferring employees from one job classification to another (either at the same location or in another location) or transferring employees from one location to another without change in job classification.

(b) Making layoffs or part-timing in any job classification and exchange on account of the normal fluctuations of the business because of minor readjustments of forces or because of changes in practices, types of equipment, or methods of operation.

(c) Engaging line construction or tree trimming crews on an independent contractor relationship or engaging any person on a temporary or occasional basis.

(d) Making layoffs or part-timing within any job classification, working force, or exchange because of reductions in work volumes or force requirements caused directly or indirectly by conditions resulting from a labor dispute.

(e) Retaining necessary employees in those job classifications requiring specialized pre-employment training.

Section 7. Section 5 of this Article shall also apply to regular full-time and regular part-time employees in cases of individual layoffs because of lack of work.

* * * * * * * *

Article X - Termination Allowances

Section 1. Termination allowances in amounts computed in accordance with Section 3 of this Article will be paid to regular full-time employees having three (3) or more years of net credited service whose service is terminated by Company under any of the following conditions as determined by Company:

(a) Dismissed (except for misconduct) - employees having completed three (3) or more years of net credited service at the time of dismissal.

(b) Retired at the age of 65 without a pension.

Section 2. Termination allowances will not be paid to employees who are dismissed for misconduct, resign, or receive a Company pension, or who otherwise leave the service under conditions not specified in Section 1 of this Article.

Section 3. The amount of the termination allowances paid in accordance with this Article will be computed as follows:

Completed Net Credited Service	Weeks' Basic Pay
3 years	3
4 years	4
5 years	5
5 years, 6 months	6
6 years	7
6 years, 6 months	8
7 years	9
7 years, 6 months	10

8 years	11
8 years, 6 months	12
9 years	13
9 years, 6 months	14
10 years	15
10 years, 4 months	16
10 years, 8 months	17
11 years	18
11 years, 4 months	19
11 years, 8 months	20
12 years	21
12 years, 4 months	22
12 years, 8 months	23
13 years	24
13 years, 4 months	25
13 years, 8 months	26
14 years	27
14 years, 4 months	28
14 years, 8 months	29
15 years	30

Note: For each completed four months of net credited service beyond 15 years, one additional week's basic wages will be added to the above.

An employee qualified to receive a termination allowance under this Article who leaves the service before receiving a vacation which he is eligible to receive at the time of his separation shall receive vacation pay in addition to the termination allowance.

Company may in its discretion pay termination allowances in amounts greater than those provided in this Section 3, such amounts to be determined by Company on an individual basis.

Section 4. If an employee received a termination allowance and is subsequently reengaged by Company, and the number of weeks since the date of his separation is less than the number of weeks' basis wages received by the employee as a termination allowance, the amount paid to the employee for the excess number of weeks shall be refunded to Company through payroll deduction in each payroll period at the rate of 10 percent of the employee's basic weekly wage.

An employee reengaged and again separated from the payroll after having former service credited shall be paid the difference between the amount of the termination allowance computed in accordance with the provisions of this Article and any former termination allowance which he may have received as a result of a previous separation and not refunded to Company.

* * * * * * * * *

Section 3. "Regular employees" are persons whose employment is reasonably expected to be permanent at the time they are engaged although it may be terminated subsequently by action on the part of the Company or the employee.

Section 4. "Temporary employees," as used in this agreement, shall be deemed to mean those employees whose employment is intended to last more than three (3) weeks but not more than one (1) year. Such employees shall be reclassified as "regular employees" if their employment exceeds one (1) year of continuous service since date of last engagement.

* * * * * * * *

Section 6. The term "Traffic central office operating employees" shall be deemed to mean Traffic operators and employees engaged in the Traffic Department as Service Assistants, Service Observers, Senior Central Office Clerks, and Central Office Clerks.

* * * * * * * *

Section 14. The term "net credited service" shall mean Bell System net credited service as determined by Company and shown on Company's records.

Union Contract Provisions at Office C.

Article 25 - General Layoffs and Rehiring

Section 1. Whenever, in the judgment of the Company, there exists an occasion for the adoption of a program of mass or general layoffs of regular full-time nonsupervisory employees of the Company, the Company agrees before proceeding with such program to:

(a) In a sequence to be determined by the Company, lay off all occasional and temporary employees and all regular employees with less than one (1) year's net credited service engaged within the job classifications and exchanges affected.

(b) Notify the Union of its intention to introduce such program and negotiate with the Union in regard to the method or methods to be employed.

Section 2. The Company shall determine the extent of the reductions required, the effective date or dates thereof, the exchanges, and the job classifications involved.

Section 3. The Union agrees to meet with the Company and if an agreement as to the method or methods to be employed in introducing such program is not reached by the Company and the Union within thirty (30) days from the date of notification referred to in Section 1 (b), the Union agrees that the Company may then proceed as hereinafter outlined in this Article.

Section 4. The order of layoff within any job classification and exchange selected shall be by the length of service groups and in the sequence outlined below, provided that all employees shall be laid off in the inverse order of their seniority.

(a) Employees with more than one (1) but less than two (2) years of net credited service.

(b) Each subsequent group shall be composed of employees in each next successive year of net credited service.

Section 5. Each regular full-time employee with [illegible] (1) or more years of net credited service laid off under the provisions of Section [illegible] of this Article (including those laid off in accordance with the terms of any further agreements reached with the Union) shall receive, in addition to any vacation payment to which he may be entitled, a layoff allowance in accordance with the following:

(a) One (1) week's basic pay for each completed year of net credited service up to and including five (5) years.

(b) One (1) week's basic pay for each completed six (6) months of net credited service beyond five (5) years and up to and including ten (10) years.

(c) One (1) week's basic pay for each completed four (4) months of net credited service beyond ten (10) years.

(d) In cases where an employee has more than fifteen (15) years of net credited service, the Company may, in its discretion, make payments in addition to those provided under (a), (b), and (c) above, such additional payments to be determined by the Company on an individual basis.

It is understood that the Company may, in its discretion, pay a layoff allowance in any of the above situations in an amount greater than that provided for herein.

If an employee receives a layoff allowance and is subsequently reengaged by the Company, and the number of weeks since the date of his layoff is less than the number of weeks' basic pay received as a layoff allowance, the amount paid to the employee for the excess number of weeks shall be refunded to the Company through payroll deductions in each payroll period at the rate of 10 percent of the employee's basic weekly wage.

An employee reengaged and again laid off after having former service accredited shall be paid the difference between the amount of the layoff allowance computed under the above schedule and any former layoff payment which he may have received as a result of the previous layoff and not refunded.

Section 6. The provisions of this Article shall not be construed to prevent the Company at any time from:

(a) Transferring employees from one job classification to another (either at the same location or in another location) or transferring employees from one location to another without change in job classification;

(b) Making incidental layoffs in any job classification and exchange on account of the normal fluctuations of the business or because of minor readadjustments of force;

(c) Engaging line construction or tree trimming crews on an independent contractor relationship or engaging any person on a temporary or occasional basis;

(d) Laying off employees engaged for a definite time or for the duration of a specific project or condition without regard to their Company service, even though such employees may have been carried on the payroll as regular employees;

(e) Retaining necessary employees in those job classifications requiring specialized pre-employment training.

Section 7. If, after a period of layoff, the Company again desires to increase the number of its regular nonsupervisory employees within a job classification and exchange in which there has been a mass or general layoff, the Company agrees to offer reemployment, under the conditions hereinafter provided, to former regular employees previously engaged in such job classification and exchange. Such reemployment shall be offered to employees in the inverse order in which they were laid off, subject to the following conditions:

(a) The former employee had one (1) year or more of net credited service at the time he was laid off.

(b) The period of time since the layoff of the former employee has not exceeded one (1) year.

(c) The former employee is qualified, in the judgment of the Company, to perform the available work at the time the offer of reemployment is made.

(d) The former employee shall accept and be available for reemployment within seven (7) days after the date of the mailing by the Company of the offer of reemployment. It shall be the obligation of former employees to keep the Company advised of their home addresses, and the Company shall be deemed to have complied with the provisions of this Paragraph upon mailing the offer of reemployment to the last known address of the former employee.

* * * * * * * * *

Article 27 - Termination Allowances

Section 1. Termination allowances in amounts computed in accordance with Section 3 of this Article will be paid to regular full-time employees having three (3) or more years of net credited service whose service is terminated by the Company under any of the following conditions as determined by the Company:

(a) Dismissed (except for misconduct), for employees having completed three (3) or more years of net credited service at the time of dismissal.

(b) Retired at the age of sixty-five (65) without a pension.

Section 2. Termination allowances will not be paid to employees who are dismissed for misconduct, resign, or receive a Company pension, or who otherwise leave the service under conditions not specified in Section 1 of this Article.

Section 3. The amount of the termination allowances paid in accordance with this Article will be computed as follows:

(a) One (1) week's basic wages for each completed year of net credited service up to and including five (5) years.

(b) One (1) week's basic wages for each completed six (6) months of net credited service beyond five (5) years and up to and including ten (10) years.

(c) One (1) week's basic wages for each completed four (4) months of net credited service beyond ten (10) years.

An employee qualified to receive a termination allowance under this Article who leaves the service before receiving a vacation, which he is eligible to receive at the time of his separation, shall receive vacation pay in addition to the termination allowance.

The Company may, in its discretion, pay termination allowances in amounts greater than those provided in this Section, such amounts to be determined by the Company on an individual basis.

Section 4.

(a) If an employee receives a termination allowance and is subsequently reengaged by the Company, and the number of weeks since the date of his separation is less than the number of weeks' basic wages received by the employee as a termination allowance, the amount paid to the employee for the excess number of weeks shall be refunded to the Company through payroll deduction in each payroll period at the rate of 10 percent of the employee's basic weekly wage.

(b) An employee reengaged and again separated from the payroll after having former service credited, shall be paid the difference between the amount of the termination allowance computed in accordance with the provisions of this Article and any former termination allowance which he may have received as a result of a previous separation and not refunded to the Company.

Section 5. Questions arising under this Article may be referred to the grievance procedure, but neither the interpretation nor the application of the provisions of this Article shall be subject to arbitration.

* * * * * * * * *

Section 3. "Regular employees" are persons whose employment is reasonably expected to be permanent at the time they are engaged although it may be terminated subsequently by action on the part of the Company or the employee.

Section 4. "Temporary employees" are persons whose employment is intended to last more than three (3) weeks but not more than one (1) year. Such employees shall be reclassified as "regular employees" if their employment exceeds one (1) year continuous service since date of last engagement.

Section 5. "Occasional employees" are persons whose employment is intended to last for a single period of three (3) weeks or less, or intermittently for periods of three (3) weeks or less.

Section 7. The term "Traffic central office operating employees shall be deemed to mean Traffic operators and employees engaged in the Traffic Department as Service Assistants, Service Observers, and Routine Clerks.

Section 15. The term "net credited service" shall mean Bell System net credited service as determined by the Company and shown on the Company's records.

Appendix B. Selected Bibliography on Adjusting to Technological Change

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Joseph, Michael P., And Others
The Minneapolis Work Opportunity Center. A Summary of Activity and Research for the Period, May, 1966 to June, 1968.

Minneapolis Public Schools, Minn. Work Opportunity Center
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jun68 43p.

*WORK STUDY PROGRAMS; VOCATIONAL ADJUSTMENT; *TEACHING TECHNIQUES; DROPOUT PROGRAMS; *DROPOUT REHABILITATION; *PROGRAM DESCRIPTIONS; STUDENT EMPLOYMENT; COSTS; *STUDENT CHARACTERISTICS
MINNEAPOLIS WORK OPPORTUNITY CENTER

The Center's program involves skill training, academic study, job orientation, counseling, and attitude modification. Since September, 1966, 1,830 students had made contacts with the Center and 879 of these had finished orientation and training. Intake procedure included psychological testing, health examinations, and personal data collection. Some of the 18 programs are: (1) Child Care, (2) Distributive Education, (3) Dry Cleaning, (4) Homemaking, (5) Machine Shop, (6) Mathematics, (7) Social Studies, (8) Tailoring, and (9) Welding. During the first 2 years of operation $1,126,880.92 was expended indicating a $1,282 cost for each of the 879 students who finished the programs. Specific techniques are discussed and the results of local research on students and program success are presented. (EM)

VT 006 714

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JUL 11 1968

The Minneapolis Work Opportunity Center.

ED042060

A Summary

of

Activity and Research

for the period

May, 1966

to

June, 1968

VT006714

107 Southeast Fourth Street

Minneapolis, Minnesota

55414

MINNEAPOLIS PUBLIC SCHOOLS

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INTRODUCTION

The Minneapolis Work Opportunity Center is, in many ways, a unique educational venture. During the past twenty-four months since the inception of the program, the staff has reached out into the community and has offered another and fresh start to educationally disillusioned youth.

Any new program, which has as its objective the modification of behavior patterns deeply embedded in individual personalities, will have its share of successes as well as disappointments. The goal for all should be learning. For students, new insights into their role in society. For staff, new ways to reach, hold and successfully assist in modifying old patterns of adjustment.

This report is an attempt to chronicle the activities and costs of the Work Opportunity Center through an analysis of a series of studies completed over the period 1 May, 1966 through 3 May, 1968. Emphasis is on phases of our program which differentiate it from the offerings and techniques commonly found in the conventional schools.

OBJECTIVES AND THEIR IMPLEMENTATION

Skill training, related academic subjects, job orientation, counseling, and attitudinal modification are at the core of the Center program. All energies are focused on assisting each person as an individual deserving of every opportunity for success. This principle is translated into a number of specific procedures.

1. Outreach: seek out youth who could benefit from the Program.
2. Personalized schedule: individualized course work to be completed at a pace set by pupil and teacher.
3. Motivational devices: techniques aimed at the satisfaction of student needs as they relate to learning.
4. Curriculum development: design, conduct, and evaluate new approaches to subject matter. Share these with other schools of all types.
5. Counseling: provide supportive counseling as student progresses in his work. Help him to know himself.
6. Work attitude orientation: what is required of a good employee.
7. Skill training and related subjects.
8. Job placement and follow-up.
9. Referrals: each student should have the opportunity to obtain needed help whether at the Center or from other agencies.
10. Continuous evaluation: study the effectiveness of every phase of operation. Share meaningful results with the community.

STUDENTS

Many studies have been conducted in an effort to respond to questions concerning the type of adolescent who seeks the services of the Center. Information has been gathered on the neighborhoods in which they live, student personality traits, health status, academic background, home environment, and the extent of participation in the WOC program.

Number of Students

Students were first admitted to the Center in September, 1966. The initial group of eleven enrollees concentrated on developmental work in reading, mathematics and communications. Additional students joined this program until it numbered 45 on December 31, 1966. As the technical skills areas began operating, recruiting procedures were accelerated. The last areas were opened for class during April, 1967. At that time our enrollment had reached a total of 250. Up to date enrollment and attendance studies chart our growth.

Total number of students who came to the Center for an interview since September, 1966. (This number includes repeaters - those who come once, disappear, and return weeks or months later)	1,830
Students who were interviewed, and who attended orientation.	1,271
Students who finished orientation and completed a program of training.	879

Personality

Students were asked to respond to a list of adjectives which could be used to describe oneself. The self-perceptions of our clientele differed

significantly from the ways which achieving students rate themselves. Our students generally perceive themselves as lazy, a rebel, one who postpones, impatient, nervous, reckless, etc.

A series of incomplete sentences was presented to incoming students from April, 1967 through May, 1967. Stimuli consisted of openings relating to school, the future, home, self, others. The responses of a sample of 35 enrollees were analyzed by a panel of four counselors. Answers were assigned a negative, neutral, or positive tone. Though responses to several of the 20 open-ended sentences were more often positive than negative, the majority of the responses were negatively slanted.

As part of Orientation during February, 1968, a group of 56 enrollees were asked to fill out a form containing a series of questions concerning the particular job to which they aspired. When asked whether they would be willing to spend the time necessary to prepare for the job, 91% responded "yes". Seventy-nine percent said they have or could develop the personal qualifications for the job, and 77% thought their chances for advancement were good or excellent. These responses come from a group who average less than 7 academic credits (28 needed for graduation from high school), and whose median age is 17 years. The incongruity of these evaluations of self, when contrasted with those given above, are evident.

Each teacher was asked at some time during the past months to prepare a report on his or her area of instruction. A section on "student characteristics" was included in each report. Culling through these descriptions, a number of traits seem to be repeated by the majority of reporters:

- Dejection by past experiences.

- Appear suspicious or surprised when praised.
- Short attention span.
- Bring home tensions and personal problems to class.
- Poor self-image.
- Need for correct diet, exercise, posture, good-grooming and training in human relations.
- Poor retention.
- Negative attitudes toward work.
- Poor conceptualization of career goals and job obligations.
- Need and want direction in learning.
- Respond well to a friendly, low-pressure environment.
- Tend to be loners at first.

Health Status

The majority of students who enroll in the Center undergo a complete physical examination at the Hennepin County General Hospital. Follow-up services are provided either at the hospital or by the student's personal physician. Two studies were conducted relative to the results of the examinations.

During the period 1 February, 1967 through 30 November, 1967, 174 students were examined. Of these, 75 students (43%) required referrals other than dental. The nature of the referrals were varied, including psychiatric, eye, ear, orthopedic, and obesity. Of the 75, only 57 students accepted a total 99 referrals. During the same ten month period, 260 public school N.Y.C. students, in the same socio-economic group as our clientele, were referred for physical examinations. Of this group, only

65 (25%) needed further medical treatment. When this 25% is compared to the 43% of our students, the difference in percentage is significant at the .01 level.

During a more recent study covering the period 3 January 1968 through 24 April 1968, 105 students received physicals. Over 207 referrals have been made as a result of these tests.

Educational Background

The educational experience of a person is most frequently judged as the number of credits earned, the number of years of schooling, degrees obtained, etc. With such criteria, our clientele appear poor indeed.

As part of an in-depth study of our first 42 students (March, 1967) the following data was collected:

Average number of credits 6

Median number of credits 6

Range 0-23

50% had completed less than one semester of senior high school work (5 credits)

80% had completed less than one year of senior high school.

On the average, each student was 24 credits or 2½ years away from a diploma.

Monthly studies of new enrollees present a more heterogeneous picture than the one presented above. Data collected during the first 16 months (above group included) of student enrollment presents the following picture:

5% of those admitted were high school graduates.

18% of those admitted were classified as seniors.

41% of those admitted were classified as juniors.

33% of those admitted were classified as sophomores.

3% of those admitted were classified as 9th graders.

This proportion has been maintained during the first four months of 1968 with minor fluctuations.

Mobility may be a potent factor in school dropouts. In the study of our first 42 students it was found that half of the group had attended six or more schools, with a high of 15. Seventy percent of the children of minority families had been in at least five or more schools.

Change in the composition of our student body exerts an effect on the counseling and instructional programs. In these areas of student assistance, several new programs are presently being conducted and evaluated. The outcome may provide a more realistic procedure in helping youth become successes.

Home Background

Two reports have shed light on the family environment of our students. During March, 1967 an in-depth study was made of the first 42 students to enroll and matriculate at the Center. The study was made to provide the faculty with as much information about our clientele as was possible to give. The second analysis was based on a random sample of 71 students enrolled in the program after January 3, 1968. The majority of this group are still coming to class.

	Living with both parents			Parents divorced, separated, one parent dead		
	M	F	Total	M	F	Total
First 42 Students M = 32 F = 10	64%	44%	59%	36%	56%	41%
Jan. '68 - April '68 Sample M = 45 F = 26	33%	35%	34%	60%	58%	59%

In a study of 60 students belonging to racial minorities (18% of student body), the following data was presented:

- 41% were living with both natural parents.
- 38% had one parent missing due to divorce, separation, or death.

Previous Schools

The Center has enrolled dropouts from every one of the 11 other high schools in Minneapolis. Two of the schools, one in a "depressed" area, the other on its fringes, account for about 45% of our enrollment. Two other target area schools are represented with about 8% each. Parochial and out of city schools are the source of 10%. Thus, approximately 60% of our clientele come from four area schools.

Attendance Patterns

Poor attendance has been a characteristic of the educational experience of most dropout youth. A study of the first 42 WOC students showed:

- 61% were absent more than 15 days per year.
- Number of such absences ranged as high as 60 per year.

A study of 60 students from minority groups showed that:

- 80% were absent more than 25 days per year.
- 50% were absent more than 60 days per year.
- Average attendance was 65%.

An enrollment and attendance study was made covering the first 16 months of Center operation. Some significant findings are summarized:

- When all students are included the average attendance fluctuated around a 40% figure.
- When those attending only once every week or every two weeks were excluded, the average jumped to about 55%.
- No significant differences in the attendance patterns of girls and boys.
- Older students tend to be better attenders.

More recent analyses - January, 1968 through April, 1968 - have shown an upward trend in the attendance curve from the 40% mark to a present figure close to 60%. New techniques of outreach have contributed to this improved figure.

A random selection of 50 students was made from the files of students who have withdrawn from the Center. The average time span of attendance was computed.

	N	Range	Attendance Mean	Attendance Median
Males	36	21 to 253 days	86.3 days (4.5 mos.)	79.5 days
Females	14	18 to 235 days	93.7 days (4.9 mos.)	75.5 days
Total	50	18 to 253 days	88.5 days (4.7 mos.)	79.5 days

During October, 1967 a preliminary study was made of students who withdrew from the Center during the month of September, 1967.

Size of Sample	Average No. of Weeks In Attendance
Males = 15	27.6
Females = 25	19.6
Total = 40	20.7

PROGRAMS

In this section of the summary, studies will be presented which pertain to curriculum, counseling, personal service, coordinators, orientation, and follow-up procedures. Emphasis will be placed on materials and techniques which have been successful with our clientele. Per pupil cost estimates are included at the end of this section.

CURRICULUM

The basic differences between instruction at the Work Opportunity Center and in conventional schools are in the setting and the approach.

The setting is a non-school type building with an informal, relaxed atmosphere. Class size is small. No one is ever "too busy" to give a student some of his time when the student needs it. The unique feature of our "rules and regulations" is that they are either functional or non-existent. A basic requirement is 30 clock hours of instruction in a technical area before a program change can be made. Other than that, decisions are made by students, with all the help they need or will accept from teachers, counselors, social workers, coordinators, clerical staff and administration.

The approach focuses on the individual. His needs are paramount. Each student is accepted as he is. His level of achievement or performance is determined, not assumed. He is taken from where he is, and is taken as far as he will go in the shortest possible time. No instructor or student is burdened with a standardized curriculum or a fixed set of materials. Grades are not given. Content is broken down into small instructional units in order to provide continuing positive reinforcement and to avoid frustration. Successes, however insignificant, are emphasized. Instructors are sincere in their efforts with students for two reasons: 1. Teacher selection was based largely upon the possession of this characteristic of sincerity and, 2. An instructor without a sincere approach would soon have an empty classroom, for the only "hold" he has on his students are the relationships he can establish with them. These positive relationships are not always easy to establish, in fact, are not established at all in some cases (we have our dropouts, too).

The results of this kind of an approach are satisfying when evaluated in terms of positive attitudinal changes over a period of time. An outstanding example is the fact that in a school population where approximately one-fourth of the students are on probation or parole, and nearly all have dropped out of the conventional school, there has not been one discipline problem in a classroom or training area.

Common Techniques

1. Teacher-student talks. Teachers endeavor to determine where a student is, achievement-wise, and works with him from that point.
2. Subject matter content is broken down into short instructional units, one-half to two or three hours in length.

3. Students are praised for completing a short unit. They receive awards of merit for completing groups of units three or four weeks in length.
4. Students are often allowed to make their own choice as to what materials they will read or study.
5. Work and a record of progress is frequently kept up to date by the student. Self-evaluation - kept in individual student folders.
6. Teachers encourage students to move on to a more difficult task when success has been achieved on an easier one.
7. Open door policy - a student may come in anytime either to work or ask a question.
8. Frequent, well organized field trips. Students decide where to go and what to look for.
9. Students are required to make written comment on what they read - little correction - emphasis on expression - teacher learns from and about student.
10. Good attendance is encouraged - emphasis is placed on days attended, not days missed.
11. In some areas students are occasionally given blocks of work and allowed to progress as fast as possible.
12. Students keep own attendance by signing in and out of class.
13. Students are urged to call in when they are going to be absent. If they don't call, the instructor or outreach worker calls the student.
14. Classroom atmosphere is informal, relaxed, conductive to self-expression. Adverse competition is all but eliminated.
15. Student participation in planning the next day's work increases attendance.

16. Success is increased greatly when class size is kept small. This permits more individual attention, closer supervision, and programs of instruction tailored to individual needs and rates of learning.

17. Incoming students are given a brief test to determine reading level. Instructors are made aware of the student's reading ability. Student may also be programmed into a remedial reading situation.

18. Student and teacher work out the fine points of scheduling - agree on short and long-term goals.

19. Programming the student and the jobs through the shop in a manner followed in industry.

20. Length of class periods and courses are flexible - depends on student proficiency and attitude.

21. Accept each individual as worthy regardless of the negative personality characteristics he may possess.

22. The use of advanced students to assist in the instruction of newer students has positive effects on both.

23. Establish a "helping" relationship..."I am going to help you get ready for this job." This approach emphasizes "partnership" in learning.

24. Get the students "doing" as soon as possible.

25. Two or more training areas cooperate in teaching several phases of a course, e.g. Dry Cleaning - Distributive Ed. - Home Ec. (sewing).

26. Lecturing, preaching, bossing, or threatening by instructor is avoided.

27. No homework is assigned unless student expresses a desire for it.

28. Most technical areas require very little reading or written work. Emphasis is placed on performance.

29. New students enter the program every week.

30. Students in food preparation plan a menu for the week and then prepare all of the food - cafeteria-classroom is open to the public.

31. When a student exhibits greater than average interest in an area or department he is encouraged to specialize.

32. Regular office desks and equipment are used in Business Education. Room is arranged like an office.

33. Test each student for reading level when they enter the Work Opportunity Center.

34. Students are encouraged to underline words or phrases in paperbacks or magazines. Instructor then goes over these with student.

35. Never tell a student he is not capable of doing something. Present realistic alternatives.

36. Never react negatively or emotionally.

37. Be kind to each student. Stress the positive. Care about them.

38. Personalize instruction, post their pictures or portraits (pencil sketches). Admire their dress and comment favorably if it is in good taste.

39. Encourage them to get more education.

40. Use of tape recorder for improving oral language usage.

41. Show a student a process, then let him try it by himself. Come back and show him again if necessary. If he had difficulty he will be much more receptive the second time.

42. Manikin used for student demonstration work in nurses aide classroom.

43. Overhead projector used for small group presentations.

44. Students receive practical experience in a hospital or nursing home under the supervision of the instructor.

45. Demonstrations and/or experiments are carried out by student or instructor. This has the effect of motivating students to try their hand at another art-form.

Materials Used

1. Short, teacher-made, materials on a variety of topics.
2. Pamphlets and paperbacks.
3. Programmed materials are used with more accelerated students and are supported by individual discussions and problem solving sessions.
4. Materials in related subjects are selected and are directed toward the student's vocational interest area.
5. Newspapers and a large selection of current magazines.
6. Trade and industrial publications.
7. A wide variety of Government Printing Office publications.
8. An individual study sequence in psychology. Promotes self-understanding.
9. Series of questions, the answers to which can be found in current magazines, pamphlets, almanacs, atlases or filmstrips.
10. Materials with large print are selected more often than those with small print.
11. Teachers use selected sections from books that are good rather than using the whole books.
12. Language lessons using local examples and student written sentences.
13. Retail sales language lessons using D. E. materials and taught in D.E. area.
14. A capitalization card game designed by the students and instructor.

15. Programmed texts used in a few areas to polish basic skills.

16. A series of mounted polaroid pictures to show the steps in a process.

17. Sound filmstrips used in several areas with projectors that are designed for viewing by one to three persons. Student operated.

18. New words are being learned in reading through the use of a modified tape recording machine utilizing cards with a strip of magnetic tape attached (Bell & Howell Language Master).

19. Films and sets of slides produced by industry are available for loan or purchase - several areas use them.

20. Teacher designed training guides in checker-cashier and dry cleaning counter girls are used successfully.

21. Pre-recorded vocabulary on tapes for work on pronunciation.

22. Samples or portions of garments are made up showing steps and/or techniques of clothing construction. These are displayed on a series of flip charts.

23. Production printing jobs are accepted from outside organizations <u>if</u> they can be fitted into the training schedule.

24. Students browse and select books on art. They are encouraged to take these home for reading. If book is a paperback they may keep it.

<u>Motivational Devices</u>

Many new and exciting techniques have been devised to keep students motivated. Much of the success of the program can be traced to the versatility and penchant for creativity in our staff. Some of the most successful of the devices are briefly explained here.

1. Polaroid Camera - Pictures are taken of the student at the beginning of a sewing project, as it progresses and at its completion. These pictures along with samples of the material and different details are mounted on an accordian pleated story board. Students stop frequently to look at their progress and the progress of others. They also get great pleasure out of bringing in their friends to show them what they have accomplished.

2. Successful Student Display - A large bulletin board upon which is displayed a close-up snapshot of each student who has gained clerical employment after having attended the Work Opportunity Center and has taken business training. A caption under the picture simply lists his name, place of employment, and the type work being performed. Some are depicted by two photos in a "before" and "after" set up. Prospective and beginning business students seem highly motivated by this display as they see the success being enjoyed by those portrayed.

3. Chart of Learning Units - A chart is on display in the business room depicting the various courses being offered. These courses are subdivided into fractional parts or learning units. The unique feature of the chart is in the visual subdividing. It is greatly simplified so that the student is not threatened by a feeling of insurmountable course work. Credit or check off is made early and quickly after the completion of the most rudimentary accomplishment. This is recorded on the business student's record card. As the student progresses through the learning units, credit and check off is given at specific junctures.

4. Student Projects - Student owned engines and private non-school engines receive much more enthusiasm than do school training engines.

5. Time Clock - Most small engines students become hourly employees. A timeclock was introduced as a training device. Use of this clock has motivated students toward better attendance. It has also simplified record keeping and provides a quick, line of sight reference showing who is in the shop.

6. Art Shows - Several Art Shows have been set up at W.O.C. and at other places around the city. Work that is on display is also for sale. Student finds greater reward in the fact that people actually liked his work well enough to buy it -- money received seems to be secondary.

7. Field Trips - Trips to art museums, galleries, studios, exhibits, theatres, hikes and/or sketching, trips to dancing studio, farm, river, city, zoo.

8. Short Term Assignments - Short term assignments have been found to be one of the better motivational devices in that the student will begin the assignment if he can see the end.

9. Timeclock - A time clock is used in the Distributive Education Classroom as it would be used in a place of business. Each student "punches" in or out for class as they would on a job. A student is assigned a rate per hour to calculate his earnings. Problems in determining deductions are also used. As a student advances from Basic, to Intermediate, and Advanced, his salary rate goes up.

10. Checklist - A checklist of assignments, worksheets, projects, meetings, and activities is maintained. As each student in the class completes the activity a checkmark is put in the proper square. All items on the checklist are to be completed before the end of a course.

11. Awards of Merit - The award of merit is used in the Distributive Education and Homemaking Departments. The awards are issued to students for attending various series of classes and for completing certain tasks and assignments.

12. Books Expendable - This is a program which makes paperback books of all types freely available to the students. Several hundred volumes are on display, in bookstore-type wire racks, in the Reading Center. Students have complete freedom of choice in selection and are not required to seek permission before withdrawing a book. They are, however, encouraged to return the book when they have finished with it and to "swap" it for another. New titles are added each month to keep the collection up-to-date and to stimulate interest.

13. Insignia - Kitchen divided into five levels of accomplishment. Sleeve stripes awarded students for performance and attendance in various levels, also informs the public of the student's position in the kitchen. Students attend and perform to be promoted from one level to another. Promotion based on agreement of Instructor and student department head. Voted on by entire kitchen staff.

14. Award of Merit - This award is given after the completion of a certain achievement or after spending a certain number of hours with much growth and progress in our area. Making many colors available for matting purposes gives more desirability to the award.

15. Path to Charm - On "The Path To Charm" sheet, students plot their course with various colored stars as they complete units of study. Pictures made with the Polaroid camera inserted inside a felt paper frame add recognition and a personal touch which the students need so desperately. Pictures are taken as girls progress on the path and are used to replace previous pictures in the frames.

16. Point System - Because English is a high school requirement, credit is the final goal of students. A point system is used for continual reinforcement, record keeping, and evaluation. A fifty point reading requirement is part of the work for the first credit; the second credit is equal to ninety class hours worth of work.

17. Written Contract System - Students enter into a written contract with counselors, teacher and others concerned. It "binds" both the student and the staff. He agrees to attend for a specific number of class hours, a specific number of days per week with the contract written for a relatively short period of time, depending on the resources of the student.

18. Consultations - Individual and group consultations with students help eliminate grievences, improves attitudes, improves attendance, and makes the student feel important. Also helps instructors determine student needs, desires, etc. and do a better job of referral to other departments.

19. Re-Organization of Service Station - Peg board for tools - shelving for oil, etc. - rearranging of impulse sales items, painting back room and office, complete change of salesroom and office area. Helped establish a proprietory attitude in students - its "our" or "my" station now.

20. Uniforms - Maintain an adequate supply of uniforms and lockers at the Service Station and Food Services. This provides clean uniforms at all times. Has definitely been a motivating factor.

COUNSELING AND GUIDANCE TECHNIQUES

1. Traditional Counseling and Guidance Techniques Seem at Times Inappropriate in the Centers Program.

Both individual and group counseling approaches have been used in the program. However, the most effective counseling technique tends to be the individual counseling interview. In this regard, approximately fifty percent of the individual counseling contacts are on a self-referral basis.

Non-direct, client-centered, or relationship approaches do not appear to be as effective as more active and directive techniques. Many of the students want direction and expect outside imposed limits. They tend to balk at any attempt to move until they are strongly encouraged to do so or, to say the least, strongly encouraged to do something.

These students, by leaving high school before completion, are often rebelling against many types of authority figures and school failures. They profess to being very capable in meeting their needs. And yet, after a year and a half, we have come to the conclusion that our students are in greater need for direction than the students who are able to complete their high school education. The counselors have found it necessary to be quite direct in helping the student set up short-range and long-range goals. Furthermore, definite limits with continuous follow-up must be used.

Sociobehavioral approaches seem to be relatively effective. When short term behavioral goals are identified and reinforcement techniques are employed, the students generally make progress. The concept of extinction in the sociobehavioral approach also is valuable. When a student comes to the counselor to unburden troubles, discuss family crises, and expand on his negative feelings about himself, he is encouraged to concentrate rather on the positive aspects of his present environment and success. A stress is placed on a bright future rather than a dismal past.

2. The Role of the Counselor at the Work Opportunity Center Varies in Many Ways from the Role of a Counselor in a Conventional School.

Primary in this regard is the non-administrative status of the counselor. At the Center, the counselor is part of a team working to help the student and is not burdened with administrative responsibilities as he would be in a conventional school. The counselors at the Center are not so deeply involved in granting and counting high school credits,

discipline problems, failure notices, class transfers, and other minor responsibilities that are unique to each school. The counselor is able to expend more time and energy on helping a student evaluate his own skills, interests, desires, performances, and experiences.

Work Opportunity Center counselors are responsible for a smaller number of students than are counselors in the conventional school. The students at the Center require continuity and follow-up, services that are impossible in the conventional school because of the great number of students with which the staff must deal. Although the total number is small, the counselor's time used for follow-up is extensive.

3. Written Contract System

Students enter into a binding written contract with counselors, teacher and others concerned. It binds both the student and the staff. He agrees to attend for a specific number of class hours, a specific number of days per week with the contract written for a relatively short period of time, depending on the resources of the student.

PERSONAL SERVICE

Case Work

The staff has not been developing new techniques in case work so much as applying existing knowledge and discovering which methods and techniques are most applicable to the unique situation of the Center.

It has been found, for instance, that it is most necessary to be very available to our students, almost like "demand feeding." Our students are, on the whole, quite immature and seek immediate help for immediate problems

and do not respond well to being held to regular appointments. We have also found that the "life space interview" is very useful and necessary with our students. The "life space interview" is the type of interview that takes place in the hallways, on the stairways or wherever the opportunity for being involved with a student presents itself.

Initially, the staff centers most of their attention on identifying problems and making appropriate referrals to various community resources. At this point, they are much more inclined to do the case work themselves because it has been found that so many of our students and their families simply do not follow through with the initial referral and that they continue bringing their concerns and problems to us. The staff is well aware that this can be argued in many different ways but for whatever it is worth, they are definitely leaning now in the direction of doing more of the case work job themselves.

Group Work

The group work program is leaning heavily on behavior modification theory and is being integrated into the classroom situation. The instructor and the group worker become partners in working out the total classroom operation.

Because of the fluid nature of our student population, the group workers have to be greatly flexible and work with their group whenever and wherever the opportunity presents itself. The groups cannot be counted on to keep regular, scheduled appointments. A group worker and the school nurse have teamed up as instructors in a sex education program. This is a very good combination and goes over very well with our students. The school nurse is

basically responsible for presenting the anatomical and physiological facts, and the group worker helps the students ask personal questions and discuss their feelings about the material presented. The group worker is attuned to those individual students who evidence more than the ordinary amount of concern or conflict about this subject and the group worker takes responsibility for seeing that these students receive some individual attention.

A group worker has been responsible for the Students Advisory Committee which has been one of the very best means of helping some students. The contribution that the Student Advisory Committee has made to the Center has been substantial and important, but probably more important is the value that participating in this group has proven to be to the individual student. By and large, our students are students who have not participated to any great extent in extra-curricular activities. The value of using a group worker to sponsor this committee is that he utilized group work skills in enabling the individual students to become full, participating members of the committee.

Outreach and Recruiting

One of the most useful techniques that our neighborhood aides have used in helping new students get started here at the Center is to provide transportation for the first few days or weeks. We have found that many students who do not get started on their own will respond to this very personal attention.

Neighborhood aides have been assigned to certain instructors to work closely with them around attendance problems. The instructor informs the aide each day about those students he believes should have some form of

personal contact before his absence develops into a more serious problem. This technique is proving to be very effective and workable.

WORK COORDINATORS

The coordinators have almost two years of experience with the clientele of the Center. Many of their original techniques have been modified as a result of feedback from students, faculty, and employers.

Rapport With Employers

Call on old and new contacts in the Metropolitan Area and explain the program - 12 month school, flexible scheduling, kinds of students we are working with, their availability for jobs.

Explain to employers that the students come to the Center with a very poor self-image and have faced failure more often than success.

Getting Acquainted With Students

Work on attitudes. Explain to students that they are hired on skills learned, but 99% of the time they are fired because of their incapability of getting along with co-workers and having a bad attitude. Instill ideas of dependability, reliability, honesty and cooperativeness with school and employer. Pre-test students - in the business area we give vocabulary, numerical, figure aptitude, general clerical, etc. - to determine weaknesses and also to make it easier for them when tested on the job.

Student is Placed

If students are not coming on time, if they are not groomed properly, if skills are weak, a follow-up is made by the coordinator two or three times a week with teachers, students, and employers.

Explain to students about withholding taxes, social security, vacations, hospital benefits, coffee breaks, etc.

Good supervision on the job and at school is important for the student to mature.

Coordinators also work with graduates who come back for more skills. They are most always looking for full-time work at the end of their training.

The most difficult problem we seem to have is creating the understanding with our students that they are beginners. They want to start at $2 to $4 an hour, when the minimum is $1.60.

We also have to demonstrate to these students that every day is not going to be a "Utopia" on the job. They don't want to get bored, and when they do they are ready to quit the job.

ORIENTATION

The program for orientation of new students has undergone several changes. The first program was designed for a full week. As the result of a thorough discussion with all members of the faculty, the time was cut to three days, then to two days. Time of the week was also changed several times. Thursday and Fridays were utilized, but a number of students failed to return on Monday. A format utilizing the first two days of each week is presently being evaluated. The schedule for these two days consists of group meetings and individual interviews, as well as a tour of the building.

Each new enrollee has his own time sheet, and his appointments are scheduled in such a fashion as to eliminate undue waiting. The present schedule appears to be working as well as can be expected. New approaches

are always being considered.

Staff members feel that:

- The program aids students in communicating. They are less reticent, and more informed about the program they are undertaking.
- Students appear to have better occupational goals.

COST OF WCC AND OTHER PROGRAMS

During the first two years of Center operation - 1 May, 1966 through 30 April, 1968 - a total of $1,126,880.92 has been expended. This figure includes all costs: fixed charges, salaries, equipment, materials, supplies and travel.

During this period of 24 months:

1. 1830 students sought help from the Center.
2. Of this number, 1271 were interviewed and went through orientation;
3. Of this number, 879 completed a course of study and training.

Students who came just for interviews profited from Center services such as counseling, outreach, and some job placements. Approximately 10% of the time of staff members in these areas was spent with this group.

If the group of 1830 was used as a base for estimating cost, the cost per pupil would be:	$ 616.00
If the 1271 figure is used:	1154.00
If the 879 figure is used:	1282.00

A realistic cost per pupil lies somewhere around the $1100.00 mark. Of course, this cost will decrease during the coming year as fixed costs -

rent, equipment - decrease.

A survey was made of other services in the State:

Minnesota State Department of Corrections

	Cost per person for one year
Red Wing (Boys)	$3,263.00
Sauk Center (Girls)	4,434.00
Willow River	2,941.00
Thistle Dew	3,201.00
St. Croix	3,314.00
Rochester	3,646.00
Lino Lakes	6,203.00

The Child Welfare League of America reports that the average cost of care per child in residential treatment centers ranges from $10,000 to $14,000 per year.

Cost of a pupil in the Minneapolis Vocational High School	* $ 985.00
Cost per pupil in the conventional high school	* 647.00

Cost per pupil at the Center compares most favorably with cost in correctional institutions; favorably with that at the Vocational High School. Though our cost is almost twice that of the conventional school, the number of personnel per pupil is almost twice that in a conventional setting.

* Mr. Donald R. Wahlund
Director of Finance
Minneapolis Public Schools

STUDIES PERTAINING TO STUDENTS WHO WITHDREW FROM THE CENTER

The objectives of the Work Opportunity Center focus on preparing youth for suitable occupations as well as a successful adjustment to the society in which they function. Several follow-up studies have helped us answer the question, "After WOC - What?"

Reasons For Withdrawing

As each student leaves the Center he has an interview with a counselor, coordinator, or a member of the Personal Service Department. The reason for leaving the program is discussed, and the student is invited to return whenever the staff can be of service to him.

Reasons Given For Leaving
January, 1967 - May 31, 1968

Reason	Percent
Working on a job obtained through our Coordinators	35%
Graduated from High School through the aegis of the Center (this includes 33 students who graduated, plus 10 who received GED diplomas)	4%
Returned to High School	7%
Military Service	5%
Moved from city	6%
*Lack of attendance at the Center	27%
Other reasons: illness, pregnancy, institutionalized, etc.	16%

* The number in this category is diminishing. Outreach workers are contacting students at home and in their recreation spots. They are being

brought back into the program. Reaction by the students is highly positive. They appreciate the special attention and interest they receive.

Returnees to Regular High School

Twenty-six percent of the June-October, 1967 withdrawals returned to a regular high school for a second time. Of these 45 returnees, 60% were boys. Of the 45 who returned, 25 (56%) still attend. The remaining 20 withdrew a second time to work (45%), to return to WOC (35%), or to go into military service (10%). Those who persisted showed a better attendance pattern and earned a significantly higher proportion of passing grades than they did before dropping out of high school. The teachers and counselors of the returnees made positive comments concerning school adjustment for 60% of those who remained and expressed negative evaluations for only 16%.

Sixty percent of those who persisted in school and 41% of those who dropped out again rated WOC as helpful in their decision to return to school. They appreciated the freedom of movement, the special interest shown, and the opportunity to choose a course and work at their own rate.

Attender-Non-Attender Follow-Up Study

Two matched groups of people represent the samples studied. One group came for information and then attended the Center (ATT); the other, made up of dropouts from the same locale and age, came to the Center for information at the same time but never registered for classes (NON-ATT). The original study done in the Spring of 1967, sought out answers to many questions relative to student plans, hopes, etc. In the follow-up study, made six months later, the two groups were compared on a number of important factors. Personal interviews were conducted with 83% of the samples. Of the remaining

17%: 3 were in service, 3 males were incarcerated and one girl was in a special institution.

During the six months between the original study and the follow-up:

- 62% of Att group were employed earned an average of $1.75 per hour.
- 43% of Non-Att group were employed earning an average of $1.60 per hour.
- 53% had earned an average of 4.9 credits each.
- None of the Non-Att group had advanced academically.
- WOC attenders had made progress in occupational training.
- 90% of Att group rated themselves as satisfied with their activities of the past 6 months.
- 38% of Non-Att group were satisfied.
- The majority of both groups felt they were getting along very well on their jobs, "OK" at home, and "OK" with themselves.
- In a self-rating of their futures: 55% of Att group and 20% of Non-Atts felt that their futures was bright.

A Five Month Follow-Up of Students Who Withdrew For Lack of Attendance

A sample was selected consisting of 22 students who gave as their reason for withdrawal - "haven't attended regularly, and want to drop out now." Members of this group were contacted five months after they left the Center.

The outreach workers were able to reach only 50% of the group. The whereabouts of the other half is unknown to neighbors, and even relatives, who have been contacted.

Persons contacted:

Males = 6

Females = 5

- 3 of the boys are working, three are not.
- 2 of the unemployed boys were brought back to the Center for additional courses by the outreach workers.
- WOC has secured jobs for three of the girls.

Job Studies

Upon completion of a Center program, the student meets with the instructor, counselor, and coordinator. If the teacher and counselor feel that the student is ready for a job, the coordinator makes several contacts. The student is prepared for the interviews and a placement is made. As our training program has progressed, more prepared students are finding successful employment.

Jobs Secured
October, 1966 - October, 1967

Type of Program	Boys Working	Girls Working	Total
Distributive	19	11	30
Office		35	35
Trades & Industry	75	34	109
Miscellaneous	5	1	6
Neighborhood Youth Corps	6	7	13
Plans for Progress	15	7	22
Total	120	95	215
October 1967 - June 1968			
Distributive	7	29	36
Office	7	47	54
Trades & Industry	129	37	166
Neighborhood Youth Corps	6	7	13
Plans for Progress	22	12	34
*Work Study Program	14	9	23
Total	195	141	336

* Money for this program provided by State Vocational Funds plus school funds on a matching basis.

Work Study Program

A program designed for students who want to attend school, but who need money for bus fare, clothes, etc. Students work at the Center for several hours each day and are paid at the rate of $1.40 per hour. This type of financial assistance has proved a strong factor in maintaining

young people in our training areas.

- 34 have been employed in this program since it was introduced: 19 boys and 15 girls.
- 11 are still working: 6 girls and 5 boys.
- The program has cost only about $950.00 since its inception.
- A work attitudes program is being developed. Students will meet once a week to investigate and discuss the types of adjustment needed to make jobs successful.

Job Placements - A Follow-Up

In July, 1967, a study was made of students who worked full or part-time during the period January 1, 1967 through June 30, 1967. The study focused on two groups:

Work and Attend Center	M	= 54
	F	= 34
Total		= 88

Withdrew from Center to work	M	= 24
	F	= 2
Total		= 26

Results

In general, the Coordinators agree that the student who attends W.O.C. regularly, or fairly regularly, usually has a satisfactory work experience and has been able to hold the job because of regular attendance. Students with irregular attendance patterns think they can act the same on a job and do not last. Members of this group are brought back to the Center for more work in skills and attitude change before being put in another work situation.

The Coordinators are constantly working with employers in evaluating student's performance on jobs. This information is shared with staff members. In most cases, employers are more disappointed with student attitudes, attendance, and a general willingness to work, than they are with the student's level of skill.

Students working full or part-time, and who are attending W.O.C., are receiving valuable training, both on the job and in their training areas. The student who has received training at the Center and who wants to work at his outside job, and who has the proper work attitude, is succeeding. Employers have commented that students with these positive attitudes are among the best employees the companies have had for some time.

We find there is a direct relationship between attendance at W.O.C. and success on the job. Good attendance at W.O.C. provides more hours for training and usually means a more sincere attitude. Likewise poor school attendance is generally reflected in poor job attendance, often resulting in dismissal from the company.

The 26 former students are presently working at their first full-time job, or in some cases, their second or third. Their job success can be traced to proper attitudes, good skill training, and the personal contact with an interested instructor.

Contacts are kept up with this non-attending group. In many cases, Coordinators and Counselors have helped these students concerning future plans, additional training, etc.

Job success is strongly related to positive work attitudes and motivation. Employers will cooperate at great lengths to assist students in their efforts to advance. Students who attend W.O.C. with regularity usually succeed on the job in which they are placed. Those who come occasionally attempt to do the same on their jobs. This behavior results in dismissal. Students who are dismissed from, or voluntarily drop out of jobs, are encouraged to return to the Center for additional help in skill training or attitudinal change.

Conclusions

1. Job success is strongly related to positive work attitudes and motivation.
2. Employers will cooperate at great lengths to assist students in their efforts to advance.
3. Students who attend W.O.C. with regularity usually succeed on the job in which they are placed. Those who come occasionally attempt to do the same on their jobs. This behavior results in dismissal.
4. Students who are dismissed from, or voluntarily drop out of jobs, are encouraged to return to the Center for additional help in skill training or attitudinal change.

A Six-Month Follow-Up: Jobs

During October, 1967 a preliminary study was made of students who withdrew from the Center during the month of September, 1967.

Size of Sample		Average No.of Weeks in Attendance	
Males	= 15	Males	= 27.6
Females	= 25	Females	= 19.6
Total	= 40	Total	= 20.7

Of the above group, 20 withdrew to work at full-time positions. Six months later - in March, 1968 - an attempt was made to personally contact each of these 20.

- twelve (60%) appear to have made an adequate adjustment and are successfully employed.
- seven (35%) have either left the city or have left no forwarding address.

Attitudes and Personality Traits of Job Applicants

In October, 1967 a study was made of student attitudes toward jobs, employer evaluations, and coordinator reactions. The sample of 38 was a

random selection from among the 200 students who had been placed on jobs prior to the cut-off date for the study. A summary of this study is presented.

Summary

The characteristics detected by the Coordinator - immaturity, maturity, shyness, eagerness, good attitudes, poor attitudes, dependence, independence - mediate in the student's personal and inter-personal relationships at school and on the job.

Job mobility, due either to failure or boredom, seems a commonplace in the areas of unskilled or semi-skilled positions that are available to most of our clientele. It appears that the student aspires to a higher paying job for the money alone. They do not consider the training, education, seniority, and other pertinent factors that influence the securing of such positions. Their education in this phase of job orientation must be stressed, and a realization of one's present capacity be recognized.

The consensus of the Coordinators, as expressed in the sample, is a positive one. The vast majority of placements result in a satisfactory experience for both employee and employer. Student growth is evident in many of the cases. Unsuccessful cases have returned to the Center for more work and counseling.

STUDIES AND REPORTS

1 May 1966 - 31 May 1968

The studies and reports referred to in this summary are available to interested parties. Requests can be addressed to the Work Opportunity Center. Titles and publication dates are reproduced here.

Objectives

Initial and Revised Proposals	March, 1966 and December, 1966
Various flyers used for publicity purposes	

Students

Prospective Clients: The Pool of High School Dropouts in Minneapolis	June, 1966
First 12 students: An In-Depth Study	November, 1966
First 42 students: An In-Depth Study	March, 1967
First Minority Group Study	April, 1967
In-Depth Study of Students Admitted during January, 1967	May, 1967
A Study of Students who Attended vs. a Matched Group of Non-Attenders	June, 1967
A Sentence Completion Test: Validity Study	June, 1967
An Adjective Check List: Validity Study	June, 1967
A Study of Student Withdrawals	July, 1967
Second Minority Group Study	October, 1967
Student Eating Habits: Questionnaire	October, 1967
Student Recruiters	November, 1967

Health Status: Reports on Physical Examinations	November, 1967 and June, 1968
Study of Students Enrolled During September, 1967	December, 1967
The Attender-Non-Attender Study:	
A 6-Month Follow-Up	January, 1968
A 16 Month Enrollment and Attendance Analysis	January, 1968
Study of The Effects of a "Waiting to Enroll" List	January, 1968
Returnees to Regular High Schools	January, 1968
Withdrawals: Reasons Given	Monthly Reports
Effects of Group Therapy on Attendance	
and Achievement	March, 1968
A Five Month Follow-up of Students Who Withdrew	
After Poor Attendance	March, 1968
Measuring Attitude Change With the Adjective	
Check List	June, 1968

Programs

Business	Food Services	Reading
Child Care	Graphic Arts	Service Station (Auto)
Creative Art	Homemaking	Small Engines
Distributive Education	Machine Shop	Social Studies
Dry Cleaning	Mathematics	Tailoring
English	Nurse's Aide-Orderly	Welding

The following curriculum techniques and materials are available for each of the above areas:

1. Preliminary Course Descriptions

History of the occupation

Occupational Outlook

Objectives

How objectives can be attained

Instructional units

Glossary of terms

Bibliography

2. Some Successful Techniques and Observations of Student Motivation

Description of the facility

Student characteristics

Successful procedures

Instructor's Remarks

3. Case Studies

General information about the student

Diagnosis and interpretation of problem

Treatment

Results

Prognosis

Attendance Awards - Coupons	Continued evaluation
Achievement Awards - Certificates of Merit	On-going
Food Services Program	January, 1968
Reading Level of Students	August, 1967 June, 1968
Evaluation of Counseling Techniques	March, 1968
Concern Sheets	May, 1968
Initial Orientation Program	April, 1967

Revised Orientation Program	September, 1967
A New Orientation Program	February, 1968
Job Placement Study	July, 1967
Job Placements - A Follow-up	October, 1967
Six Month Study - Follow-up of Workers	March, 1968
Monthly Letters dated last day of each month:	June, 1966 through May, 1968

Reports on activities in the following areas:

In-Service Programs

Curriculum

Counseling

Personal Service

Work Coordinators

Research

Eight Quarterly Reports presenting summaries of pertinent research

CONCLUSION

Even a scanning of the studies and research reports presented in this summary of Center activities will bring out the positive influence our program has had on many of the dropouts and hard to reach youth. Young people have been given training in useful skills, have earned high school credit, have completed graduation requirements, have secured meaningful and satisfying employment, have modified their attitudes toward work, significant others, and themselves.

If securing a position commensurate with one's abilities and becoming a wage earner is a sign of "success", then our work has been worthwhile with two out of three who enroll. Results of studies comparing our students with peers who have not availed themselves of the Center, are a strong and positive affirmation of our purpose and programs.

Staff members are continuously evaluating their own performance. New techniques and materials are tried every day. Students are brought into the evaluation process. It is their criticisms - positive and negative - which so often provide the needed insight to revise. We are not the same staff, nor are our present programs the same as those of last year. Next year, at this time, we hope to know more than we know now.

VT 007 137
Bennett, Robert, And Others
Cooperative-Distributive Education, An Alternate Semester Program; A Research and Development Project in Community College Cooperative Education with Emphasis on Distributive Business Careers. Sections I and II.

San Mateo Coll., Calif.
California State Dept. of Education, Sacramento. Business Education Div.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 14p.

*DISTRIBUTIVE EDUCATION; *POST SECONDARY EDUCATION; *COOPERATIVE EDUCATION; EMPLOYER ATTITUDES; *PROGRAM DEVELOPMENT; PROGRAM DESCRIPTIONS; *COMMUNITY COLLEGES; PROGRAM PLANNING; FEASIBILITY STUDIES; COMMUNITY SURVEYS

Cooperative Education, continuous college enrollment combined with part-time work stations, is studied as a plan for students seeking distributive careers at the community college level. During spring semester of 1968 (the period of this study), 34 students at the College of San Mateo were on Cooperative Work stations, and 250 students had requested admission to the program. Section I summarizes the responses of 50 employer interviews and cites civilian employment statistics for the area evidence of the widespread need for employees in distributive careers. Section II describes the alternate semester cooperative education work study plan for college students, summarizes previous studies, and gives a brief historical sketch of this movement in education. Some findings were: (1) 80 percent of the employers interviewed are in agreement with the principles of cooperative education as a work study plan which could be used by their businesses, (2) Opportunities for recruiting young college trained employees and full-time coverage of work stations are the two most commonly stated reasons for interest in the plan, (3) Employers interviewed for this study are entirely receptive to hiring minority student employees on the cooperative plan, and (4) Cooperative education serves as a student recruiting device for distributive careers. (MM)

VT 007 137

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SEP 10 1968

SECTIONS I & II

COOPERATIVE - DISTRIBUTIVE

EDUCATION

An Alternate Semester Program

A RESEARCH AND DEVELOPMENT PROJECT
IN COMMUNITY COLLEGE COOPERATIVE EDUCATION
WITH EMPHASIS ON DISTRIBUTIVE BUSINESS CAREERS

CO-SPONSORED BY COLLEGE OF SAN MATEO AND
THE CALIFORNIA DEPARTMENT OF EDUCATION, BUSINESS EDUCATION DIVISION.

(Spring Semester, 1968)

******

California Dept. of Education
Bureau of Business Education

R. C. Van Wagenen,
Bureau Chief

College of San Mateo
San Mateo, California

Julio L. Bortolazzo,
President & Superintendent

BOARD OF TRUSTEES, SAN MATEO JUNIOR COLLEGE DISTRICT

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VT007137

Report prepared by Dr. Robert Bennett
Coordinator of Cooperative Education

Mr. William Janssen, Marketing Internship
Instructor, College of San Mateo

Mrs. Nancy Rowland, Technical Assistant

SECTION I

DISTRIBUTIVE CAREERS THROUGH COOPERATIVE EDUCATION

THE NEED

Junior colleges need to develop curricular offerings to prepare students for participation in the trillion dollar per year economy which has been predicted for the year 1972.[1]

THE PLAN

Among the more promising college curriculum developments for this purpose is a plan called Cooperative Education. This plan combines college study with paid work experience in business or industry. The most common type of program allows two students to hold one full-time work station. During a school semester, one student is enrolled in school full-time, while the other is employed. At the semester break, they exchange positions. By this means, students can gain a college education which includes advancement in a field of employment.

Other Cooperative plans have been developed for students who desire a continuous college enrollment combined with part-time work stations. Reduced study load is a necessary consideration. Special arrangements may provide for day or evening college study combined with flexible working hours.

Further research is needed to develop other methods for involving fully employed workers, day or swing-shift, in work-study processes for upgrading and updating skills.

A STUDY

College of San Mateo and the Bureau of Business Education of the California Department of Education have cooperated in a study of the feasibility of using the Cooperative Education plan for students seeking Distributive careers. The study is limited to students from College of San Mateo during spring semester of 1968 and employers of the San Francisco Bay Area.

Answers to the following questions have been sought:

1. To what extent are employers willing to establish Cooperative work stations for students?

2. For what reasons will employers use the Cooperative plan?

3. Are employers willing to place minority students in all Cooperative work stations?

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[1] Pusinski, Roman C., Chairman of the Subcommittee on Education in the United States Senate. Reported in Our System of Distribution and Its Challenge to Educators, R. C. Van Wagenen, Bureau of Business Education, California Department of Education, 1968.

4. Can direct involvement of students in Distributive work stations serve as a recruiting device to lead students toward Distributive career goals?

5. To what extent are students interested in alternating semester work-study programs?

6. Are employers more interested in part-time or full-time employment of students in work-study programs?

A REPORT IN THREE PARTS

This report is divided into three sections.

Section I provides a summary of new information gained through this study.

Table 1 summarizes the responses of 50 employers which were interviewed. An attempt was made to select a cross-section of business and industry primarily involved with marketing and distribution of products.

Table 2 shows civilian employment statistics for the San Francisco Bay Area which are cited as additional evidence of the wide-spread need for employees in Distributive careers.

Section II describes the alternate semester Cooperative Education work-study plan for college students. Included are summaries of previous studies and a brief historical sketch of this movement in education.

Section III summarizes reports from participants in this study and initial pilot program.

Direct reporting of student and employer statements about the Cooperative Education-Distributive alternating semester plan serves to provide the reader with an expression of the feelings and attitudes of participants in the study. Statistical data do not always provide this information.

The following conclusions and observations result from information gained from this study. The recommendations have evolved from the new information, combined with previous studies and current experience with Cooperative Education at College of San Mateo.

CONCLUSIONS

EMPLOYER INTEREST

* 54 percent of the fifty employers interviewed stated that the alternate semester plan for Distributive Careers Through Cooperative Education is a practical plan for recruiting and developing new personnel in their place of business.

* An additional 12 percent believe it may be possible to develop alternate semester Cooperative plans to meet their needs.

* 14 percent of the employers stated that a Cooperative plan based upon part-time work combined with continuous enrollment in school would be more practical for their businesses.

* A total of 80 percent of the employers interviewed are in agreement with the principle of Cooperative Education as a work-study plan which could be used by their businesses.

* 20 percent of the employers interviewed stated that they saw no possibility of such a program working in their company.

REASONS FOR ACCEPTANCE

* Opportunities for recruiting young college trained employees and full-time coverage of work stations are the two most commonly stated reasons for interest in the plan.

MINORITY STUDENTS

* Employers interviewed for this study are entirely receptive to the hiring of minority student employees on the Cooperative plan. There is no evidence of discriminatory hiring practices for capable workers. Further study of this point over a longer period of time will be necessary to adequately demonstrate employer practices.

RECRUITING

* Cooperative Education serves as a recruiting device for Distributive careers. Students in data processing, accounting, management, and technical majors often begin working in distributive work stations. As an example, one student enrolled in commercial aviation works for a wholesale aviation parts and supply distributor. He sees an interesting career in aviation sales developing as a result of this experience.

OBSERVATIONS

STUDENT

* During the semester of this project, 34 students at College of San Mateo are on Cooperative work stations. 250 students have requested admission to the program and active files are completed for these students.

4-4 PLAN

* Part-time work combined with study (sometimes called the 4-4 plan) is acceptable to businessmen if a full morning and a full afternoon schedule can be combined. Scheduling of classes for students becomes difficult, however. The student often misses his lunch time in driving to his job. Work stations are limited to close commuting distance from the school.

SWING SHIFT

* Many companies like to employ students on full-time swing shift work. Colleges may not be aware of the numbers of students attempting full employment and maintenance of studies. Selective service requirements have forced many low-income students to attend college this way. Twelve units of credit are a minimum load for deferment. However, veterans and women students can carry a reduced class load and make slow, but satisfactory progress with this full work arrangement.

TABLE 1

WOULD YOU USE COOPERATIVE EDUCATION STUDENT EMPLOYEES IN YOUR PLACE OF BUSINESS?

A SUMMARY OF EMPLOYER RESPONSES TO INTERVIEWS.

Type of Business	Yes	Maybe	Part-time Only	No
TOTAL (50)	27	6	7	10
	54%	12%	14%	20%
Grocery Markets	3		1	
Appliance Co. (Wholesale)	1			
Department Stores	3	3	2	3
Shoe Stores	2	1		
Food Processing	1			2
Clothing Stores	3		3	1
Clothing (Wholesale)	1			
Drug Store	1			
Insurance Companies	1			2
Home Furnishings	1		1	1
Union Representative	1			
Bank Managers	1			1
Publishing Company	1			
Paper Products	1			
Petroleum Marketing	2			
Airlines (Transportation)	2	1		
Aviation (Parts & Supplies)	1			
Government Service	1	1		

RECOMMENDATIONS

I. A California master plan for college work-study programs should be developed.

There is a definite need for development of a California master plan for Cooperative Education work-study programs at the junior college and higher education level. Areas of specific emphasis should include Distributive careers.

Master planning should be concerned with school-industry relationships, junior college, and other higher education work-study programs.

II. Promotion of alternate semester Cooperative Education-Distributive programs for junior colleges should be undertaken.

Evidence from this study and other studies shows that the alternate semester Cooperative program is a method of improving the educational curriculum for many students. Community involvement, reduced educational cost and improved employment possibilities result from this kind of program.

Although Eastern colleges have led the way in developing the Cooperative plan, it is evident that the philosophy of the California Junior College system is in accord with the Cooperative Educational design.

III. Development of financial support for college work-study Distributive programs.

Financial support is the key to successful programs. Evidence has been presented to show that Cooperative Education is a plan which is acceptable to business and industry. Students do receive educational benefits not available in traditional college programs. Successful operation, however, depends upon adequate counseling, supervision, and work-station development.

IV. Development of "open-ended" terminal college Distributive programs should be promoted.

Evidence developed from work-study programs points to the need for new conceptual models for attainment of professional credentials. Intermediate terminal goals ought to be available. They should lead directly toward higher educational objectives.

Associate in Arts Distributive terminal programs should lead more directly to junior and senior year college Bachelor Degree programs with little loss of credit in transfer for those students who are capable of advanced programs. Cooperative work-study programs can provide new models of continuity.

V. A pilot project in Trade and Transportation Through Cooperative Education is needed.

A study of the employment patterns in the San Francisco Bay Area shows the need for taking another step in Distributive career educational development. This crossroads of world transportation industries is an ideal location to develop a program of work-study education in Trade and Transportation.

SECTION II

WHAT IS COOPERATIVE EDUCATION-DISTRIBUTIVE?

* The Cooperative Education plan provides students with off-campus educational work experience in a Distributive career setting, alternating with on-campus study in traditional college classes.

* Two students alternate periods of work and study. Neither is attempting to work and attend college at the same time. Business is assured a full-time, highly motivated, responsible employee on a regular basis.

* Students gain a deeper understanding of the relationship between classroom theory and practical application in business, technical, and liberal arts fields.

* Productive employment under realistic competitive conditions in a real-life, adult-dominated environment provides students with insights that enrich their educational experience.

* Dean Roy Wooldridge (Northeastern University): "It is called 'Cooperative Education' because it is dependent upon the cooperation of employers and educators in combining to form a superior total educational program for the students. This program has an interrelated work and study content, carefully planned and supervised to produce optimum educational results for each student involved."

* The plan is now in use in more than 75 colleges throughout the United States. Northeastern University in Massachusetts (enrollment 15,000) requires all students to participate in technical or liberal arts work assignments in alternate semesters. Antioch College in Ohio has a similar required program in liberal arts fields. The plan at College of San Mateo is an optional program involving both technical and liberal arts students.

* Dr. Ralph W. Tyler (Stanford University), Chairman of the National Commission for Cooperative Education: "Cooperative Education gives a student an education qualitatively superior in some respects to a conventional college education. Cooperative students become more mature, and their records in graduate school and in employment show that Cooperative Education is the first-rate college education."

ADVANTAGES OF COOPERATIVE EDUCATION

College of San Mateo has developed its present form of Cooperative Education from the more than 60 years' experience of other colleges and universities operating such plans. Fifty-one institutions of higher learning currently enroll from 100 to 7,000 students each, in various forms of work-study college programs, and 24 other institutions enroll lesser numbers.

The National Commission for Cooperative Education has defined this enriched form of college education as one which integrates classroom experience with practical work experience in business, industry, government or service-type work situations. The work experience constitutes a regular and essential element in the educative process. There is direct liaison between the administration of the institution and the employing firm. Work experience is an integral part of the college degree program, and the institution takes a definite responsibility for this integration.

In some programs, such as those at Drexel Institute, University of Cincinnati, University of Detroit, and Antioch College, as well as Northeastern University, all students in certain colleges of the institutions are included in the program, and the faculty coordinators must find employment opportunities for a wide cross-section of students. In others, such as those at Georgia Institute of Technology, University of Tennessee, University of South Florida, and Northwestern University, the program is optional; therefore, only part of the student body is participating in the work-study alternation. College of San Mateo offers this optional plan.

In 1960, a study of Cooperative Education* in the United States found the following advantages in this type of higher education program:

1. By coordinating work experience with the campus educational program, theory and practice are more closely related. Students find that their studies have greater meaning.

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*The complete documentation of this study is contained in a book, "Work-Study College Programs: Appraisal and Report of the Study of Cooperative Education," by James W. Wilson and Edward H. Lyons, published by Harper and Brothers of New York. A summary of this study is contained in the "Report on Cooperative Education," by Ralph W. Tyler and Annice L. Mills.

2. Coordination of work and study improves student motivation. As students see the relationship between the jobs they hold and the principles they are studying on the campus, greater interest in academic work develops.

3. Most students in Cooperative Education develop greater understanding of other people and greater human-relations skills. This comes about because their work experience involves them with co-workers who come from a variety of backgrounds, and because success at their jobs requires constructive relationships with colleagues. Particularly important in this connection is the value obtained from the contacts made with adults in a variety of situations, thus helping to break down the segregation of college students into wholly adolescent communities.

4. Cooperative Education helps markedly to orient college students to the world of work. It provides students with opportunities for exploring their own abilities in connection with real jobs. Students are exposed to a direct means of gaining vocational information and guidance, not only about the occupations in which they are employed, but in a number of related fields as well.

5. Cooperative Education makes higher education possible and attractive to many young people who would not otherwise go to college. The earnings of the students while on the job have enabled many to attend college who could not otherwise have done so. This is beneficial not only to the individual, but also to the nation with its increasing need for well-educated people in science, engineering, business, and the professions.

6. Work experience brings a greater sense of responsibility, greater dependence upon the student's own judgment, and a corresponding development of maturity.

7. Cooperative Education gives the student contacts which are useful in later occupational placement. It also gives many students a head start in salary and position when they graduate from college and go into full-time jobs.

8. As work programs are planned and developed and as students rotate from college to work and back to college again, the faculty can maintain a closer relationship with business, industry, and the professions. This generally results in more effective teaching, since faculty members are kept up to date on the latest developments in their fields. Another incentive for faculty members to keep up with contemporary developments comes from the students, who are frequently on the frontiers of knowledge in their job assignments.

9. Because Cooperative Education is usually organized so that half of the student body is at work while the other half is on the campus, there is more efficient utilization of the college plant and other facilities.

10. It has been the experience of existing Cooperative Education institutions that a program which enables students to work and earn while learning is acceptable to parents who ordinarily exclude higher education in family planning.

11. A number of the colleges have discovered that Cooperative Education provides greater recognition of the services that colleges are rendering to the community and thus furnishes an additional basis for the community's moral and financial support of higher education.

12. Students in Cooperative programs constitute an excellent source of manpower for semi-skilled and subprofessional work. In most industrial and business communities, there are many jobs that fall within this category; they are normally above the capabilities of a high school graduate and yet beneath the interest of the fully trained college or junior college graduate. These positions are important from the employer's point of view. He wants them adequately filled, and he wants to avoid the cost and inconvenience of excessive turnover. Cooperative students serve his needs to perfection. Both student motivation and the supervisory participation of his college practically assure the continuity sought by the employer. Furthermore, students placed in such jobs bring to them enthusiasm, interest, and a higher-than-normal level of ability.

13. Work-study Cooperative Education programs also have the value to employers of contributing to the recruitment and retention of gifted employees, as well as retaining them in their own communities. Employers in the community find that the Cooperative program helps maintain a flow of trained personnel and personnel-in-training into their organizations. The program serves to attract promising young people into diverse occupational areas. Employers can use the system as an actual testing ground to identify and select persons with needed abilities and talents. During the work periods, the employer can study the aptitudes of the student within the actual environment of his own organization, using his own supervisory personnel to observe and assess. This yields the basis for sound judgment about the student's long-range potential as a permanent employee. Experience indicates that approximately 50-75 percent of the students exposed to this process will remain with their employers after graduation.

14. Studies of Cooperative experiences show another advantage for employers on the level of maximizing talent utilization. The use of Cooperative students to handle duties now performed by high-priced skilled workers or professionals releases the latter from performing "chore" jobs beneath the level of their skills. This does not mean that full-time workers are replaced by Cooperative students, but rather that they are liberated to spend full time on more suitable and productive work. This arrangement is mutually beneficial to the student, the employer, and the skilled worker. The student gains experience; the employer attains a more efficient use of personnel in all grades; and the skilled worker finds himself properly engaged in tasks commensurate with his capabilities.

VALUE OF WORK EXPERIENCE

The purpose of the Cooperative program is to strengthen and enrich the education received by college students. It exposes students to situations that are educationally, socially, culturally, and geographically different from life on the college campus or the life students have lived in previous situations. A result of the Cooperative Education experience is to broaden the student's understanding of the world in which he lives.

The values of employment for exploring careers and for professional development are obvious and widely acknowledged. College of San Mateo is equally concerned with helping the student find the best and most stimulating opportunity for educational growth. The type of work placement is determined by the interest and needs of the student.

In "Work-Study College Programs," Wilson and Lyons point out that because jobs involve students with co-workers from a variety of backgrounds and require constructive relationships with colleagues, most students develop greater understanding of other people and greater skills in human relations. Work with adults is also a bridge between students' years of schooling--living with their contemporaries--and their adult life among mixed groups. For many women, it may be their only working experience before marriage. And the plan enables students to discover the satisfaction of service to others.

Off-campus experience in different kinds of work, employing organizations, personal associations and community settings can extend what is learned in the classroom. The student should learn to relate classroom knowledge to these experiences and evaluate off-campus experiences in class, with his advisers and in conversation with other students. From the combination of work and study, the student usually gains greater interest in academic work, increased responsibility for his own efforts, and reliance on his own judgment.

PROCEDURE

The Cooperative plan is not a complex operation. Work periods are based on the length of the semester. While one student is working, his counterpart is studying on campus. Since students alternate between study and work periods, each job can be filled continuously by a series of qualified students.

Once each work period, a coordinator from College of San Mateo will visit the employer and the student on the job to discuss the employment experience and make arrangements for the next student who will take the job for the following semester. At this time, plans are also made for the present student to return for more advanced training and employment in the following semesters.

The student constantly re-evaluates his career aims as he progresses through the college program. If his work experience has been successful and satisfying, it may reinforce his previous decision to pursue a particular career. On the other hand, an unsatisfactory period of employment may serve as an indication of a need for appraisal of the total program and reconsideration of goals.

This calendar shows how two students share the same job, alternating each semester:

Student	F	S	SS	F	S	SS	F	S
A			W*	W		W		W
B			W		W		W	

Legend:
F - Fall Semester
S - Spring Semester
SS - Summer Semester
* - Optional

	On Campus
W	Work Period

SELECTIVE SERVICE DEFERMENT

All approved Cooperative work assignments are a regular part of the college educational program. The same selective service status applies to the student's time spent on work station as would apply if he were on campus.

It is necessary that all Cooperative students be registered each semester, whether studying on-campus or on work station.

COOPERATIVE EDUCATION CREDIT

In terms of curricula, the Associate in Arts degree programs and the transfer programs at College of San Mateo currently require from 60 to 65 academic credits. If a student were to enroll in a program of work-study alternation for a full two-year period, including the summers which are traditionally a work period for most students anyway, and then to complete an additional full semester the following year, the end result would be to accumulate 50-60 academic credits in the process. This is in addition to the educational growth from the equal amount of time spent in industry, business, or the professions.

The problem immediately arises as to the method of recording off-campus education-related work experience and the academic value which should be attached to this experience.

Consideration might well be given to the credit a student would normally be eligible to receive from work experience in traditional programs. It would be a most reasonable procedure to continue within the provisions of the present California Administrative Code, Title V, Section 115.22, providing that:

> The district shall grant to a pupil for the satisfactory completion of Work Experience Education credit in an amount not to exceed:
>
> (b) In Junior Colleges, a total of 16 credit hours made up of one or a combination of two or more of the following types:
>
> (1) For Exploratory Work Experience Education: Three (3) credit hours per semester with a maximum of one semester.
>
> (2) For General Work Experience Education: Three (3) credit hours per semester with a maximum total of six (6) credit hours.
>
> (3) For Vocational Work Experience Education: Four (4) credit hours per semester with a maximum total of sixteen (16) credit hours.

EVALUATION

On the following page is shown a typical form of student employee evaluation report which is completed each semester. In addition, the student maintains a log of his activities for purposes of study during the college semester. These reports and logs serve as a check on the work station and the progress of the student.

COLLEGE OF SAN MATEO

DEPARTMENT OF CO-OPERATIVE EDUCATION

SAN MATEO, CALIFORNIA

STUDENT REPORT

(TO BE FILLED OUT BY STUDENT)

INSTRUCTIONS: The student should complete this portion of the report form and leave it with the employer for his evaluation. The employer should mail this form to the College in the accompanying self-addressed envelope.

Date May 22, 1963

Name Smith, James R.
(Last) (First) (Middle)

College San Mateo Major [illegible] Year Sr. 1/2 Division B

Employing Firm S.F. Bay Airlines

Department Maintenance Job Title Stock Clerk

Supervisor's Name R. Jones Title Mgr.

Attendance: Time Late 0 Reason —
Times Absent 1 Reason Illness

Gross Pay: Hour $ 2.21 Gross Pay
Week $ 88.40 Full Period $ 1149.20

Brief Job Description:

I am in charge of ordering and stocking parts and materials for the maintenance division.

Comments:

For my next Co-op assignment I have been advanced to the Air Freight sales division.

I-31

EMPLOYER'S EVALUATION

(TO BE FILLED OUT BY [illegible])

The employer will please express his candid opinion of [illegible] employ. Criticisms and comments are earnestly solicited. This information will be utilized by the coordinator for the guidance of the student.

RELATIONS WITH OTHERS
- [X] Exceptionally well accepted
- [ ] Works well with others
- [ ] Gets along satisfactorily
- [ ] Has some difficulty working with others
- [ ] Works very poorly with others

JUDGMENT
- [ ] Exceptionally mature
- [X] Above average in making decisions
- [ ] Usually makes the right decision
- [ ] Often uses poor judgment
- [ ] Consistently uses bad judgment

ABILITY TO LEARN
- [ ] Learns very quickly
- [X] Learns rapidly
- [ ] Average in learning
- [ ] Rather slow to learn
- [ ] Very slow to learn

ATTITUDE—APPLICATION TO WORK
- [ ] Outstanding in enthusiasm
- [X] Very interested and industrious
- [ ] Average in diligence and interest
- [ ] Somewhat indifferent
- [ ] Definitely not interested

DEPENDABILITY
- [X] Completely dependable
- [ ] Above average in dependability
- [ ] Usually dependable
- [ ] Sometimes neglectful or careless
- [ ] Unreliable

QUALITY OF WORK
- [X] Excellent
- [ ] Very good
- [ ] Average
- [ ] Below average
- [ ] Very poor

	Reg.	Irreg.		Reg.	Irreg.
ATTENDANCE:	[X]	[ ]	PUNCTUALITY	[X]	[ ]

	Excellent	Very Good	Average	Marginal	Poor
OVERALL RATING:	[X]	[ ]	[ ]	[ ]	[ ]

COMMENTS (over if necessary)

Jim has proven to be an excellent employee. He is next in line for advancement.

(Signed) Robert N Jones
(Company Representative)

This report has been discussed with the student — Yes [X] No [ ]

VT 007 191
Nursing Careers Among the American Indians.

Public Health Service (DHEW), Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Publication No. 1606
Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.
Pub Date - nd 12p.

*PUBLIC HEALTH; *INDIANS; *NURSES; *CAREER OPPORTUNITIES
UNITED STATES PUBLIC HEALTH SERVICE; FEDERAL CIVIL SERVICE

Graduates of 2, 3, and 4-year nursing programs are eligible for civil service appointments with the Division of Indian Health. Appointments through the Commissioned Corps of the Public Health Service require an academic degree from an accredited university. The pamphlet describes the kinds of service in which the nurse would participate, explains Civil Service and Commissioned Corps grade levels, indicates appointment procedures, and discusses benefits to the individual. (JK)

VT 007 191

U S DEPARTMENT OF HEALTH, EDUCATION
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Nursing Careers

ED042060

American Indians

VT007191

Four Ages: **Infancy, Youth, Middle Age, and Old Age**

Butterfly: **Everlasting Life**

Thunderbird: **Sacred Bearer of Happiness Unlimited**

Nurse assists physician in outpatient clinic.

For sale by the Superintendent of Documents
Washington, D.C. 20402 – Price 15 cents
U.S. Government Printing Office

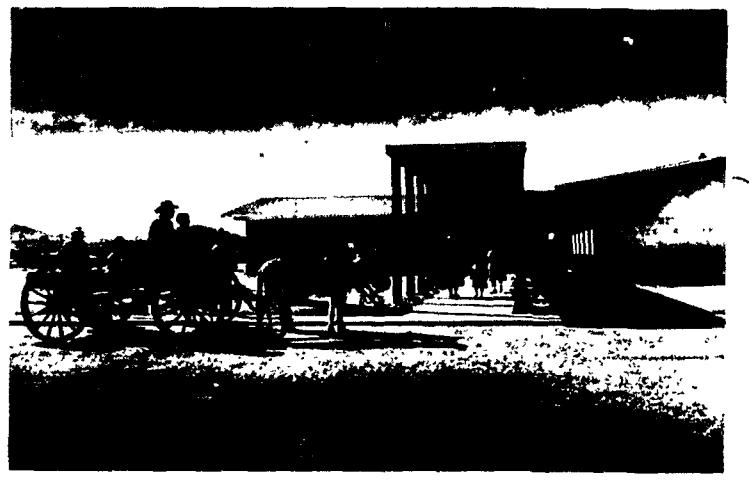
Nursing Careers among the American Indians

A NURSING assignment with the Indian Health Program in clinical or public health nursing challenges you to demonstrate your highest professional competence. Considerable personal satisfaction results from making a worthwhile contribution to the health of more than 385,000 American Indians, including 43,000 Alaska Natives (Indians, Eskimos, and Aleuts).

HEALTH FACILITIES FOR THE INDIANS

The Division of Indian Health of the Public Health Service, U.S. Department of Health, Education, and Welfare, is responsible for health services to the Indians. The Division administers the largest combined public health and medical care program of the Federal Government outside of the Armed Forces. The Division operates 51 hospitals, 47 health centers, including 16 school health centers, and more than 200 health stations and field clinics.

These facilities are located in 24 States, including Alaska, and most are on reservations where the Indian people live. The majority are west of the Mississippi River. Some occupy sites of old frontier posts, steeped in tradition and colorful history. Others are near national parks and other points of scenic interest that are high on the tourist's list of travel "musts." In addition to enhancing your professional background, you can enrich your personal life by exploring the culture and artistry of the American Indians.



Public Health Service Indian Hospital, Papago Reservation, Sells, Arizona.

YOUR CAREER IN INDIAN HEALTH

Clinical nurses work in field clinics or in Indian hospitals which vary in size from 20 to 400 beds. Most of these are general hospitals. Each offers unusual variety in nursing experiences and responsibilities.

The public health nurse works with physicians, dentists, sanitary engineers, educators, and other allied health and welfare personnel. Providing services on a family centered basis, the public health nurse coordinates nursing services between the hospital, clinic, school, and home.

APPOINTMENTS TO THE JOB

As a graduate professional nurse, you may join the Division of Indian Health through one of two personnel systems: the Commissioned Corps of the Public Health Service or the Federal Civil Service.

CIVIL SERVICE APPOINTMENTS

Basic requirements are:

1. United States citizenship.
2. Graduation from an approved school of professional nursing (2-, 3-, or 4-year program).
3. Current registration as a graduate professional nurse in a State or in the District of Columbia.
4. Physical eligibility.

9000 Rockville Pike
Bethesda, Maryland 20014
Attention: Office of Personnel

and indicate your special interest in the Indian Health Program.

Appropriate Commissioned Corps or Civil Service application forms will be mailed promptly upon receipt of the attached postal card.

HOW YOU BENEFIT

Nursing in the Division of Indian Health offers you these professional and personal benefits:

1. Opportunities for advanced training and education through individualized career development program.
2. Promotions from within staff.
3. Cash uniform allowance (Civil Service).
4. Paid vacation and sick leave.
5. Health insurance and life insurance.
6. Longevity pay increases for all grades.
7. Merit increases.
8. Generous retirement benefits.

Most of all, as a nurse in the Indian Health Program, you will find job satisfaction while contributing your share to the improvement of the health of the American Indian.

Dog sleds carry supplies from plane to clinic in remote Eskimo villages.

PUBLIC HEALTH SERVICE

INDIAN HEALTH AREA OFFICES

The Offices listed below have recruitment responsibilities in the geographic areas under their jurisdiction:

ABERDEEN, South Dakota 57401
Indian Health Area Office
422½ South Main Street
North Dakota, South Dakota, Nebraska,
Minnesota, Michigan, Wisconsin, and Iowa

ALBUQUERQUE, New Mexico 87101
Indian Health Area Office
Room 4005 Federal Office Building and
U. S. Courthouse, 500 Gold Avenue, S.W.
New Mexico, Colorado

ANCHORAGE, Alaska 99501
Alaska Native Health Service Area Office
P. O. Box 7-741
Alaska

BILLINGS, Montana 59102
Indian Health Area Office
3 - 7th Street West or P. O. Box 2143
Montana, Wyoming

OKLAHOMA CITY, Oklahoma 73102
Indian Health Area Office
506 Petroleum Club Building
120 Robert S. Kerr Avenue
Oklahoma, Kansas, Mississippi, North Carolina,
South Carolina, and Florida

PHOENIX, Arizona 85016
Indian Health Area Office
4110 North 16th Street
Arizona (except Navajo Reservation), Nevada,
Utah, and California

PORTLAND, Oregon 97204
Indian Health Area Office
Room 603, 208 SW Fifth Avenue
Oregon, Washington, and Idaho

WINDOW ROCK, Arizona 86515
Navajo Indian Health Area Office
P. O. Box 188
Arizona, New Mexico, Utah
(Navajo Reservation)

Public Health Service Publication No. 1626

6 2

5. Public health nurses must be either (a) graduates of a 4-year baccalaureate program which included public health nursing preparation approved by the National League for Nursing, or (b) registered nurses who in addition have successfully completed a university program of study (30 semester hours) in public health nursing which meets the requirements of the National League for Nursing.

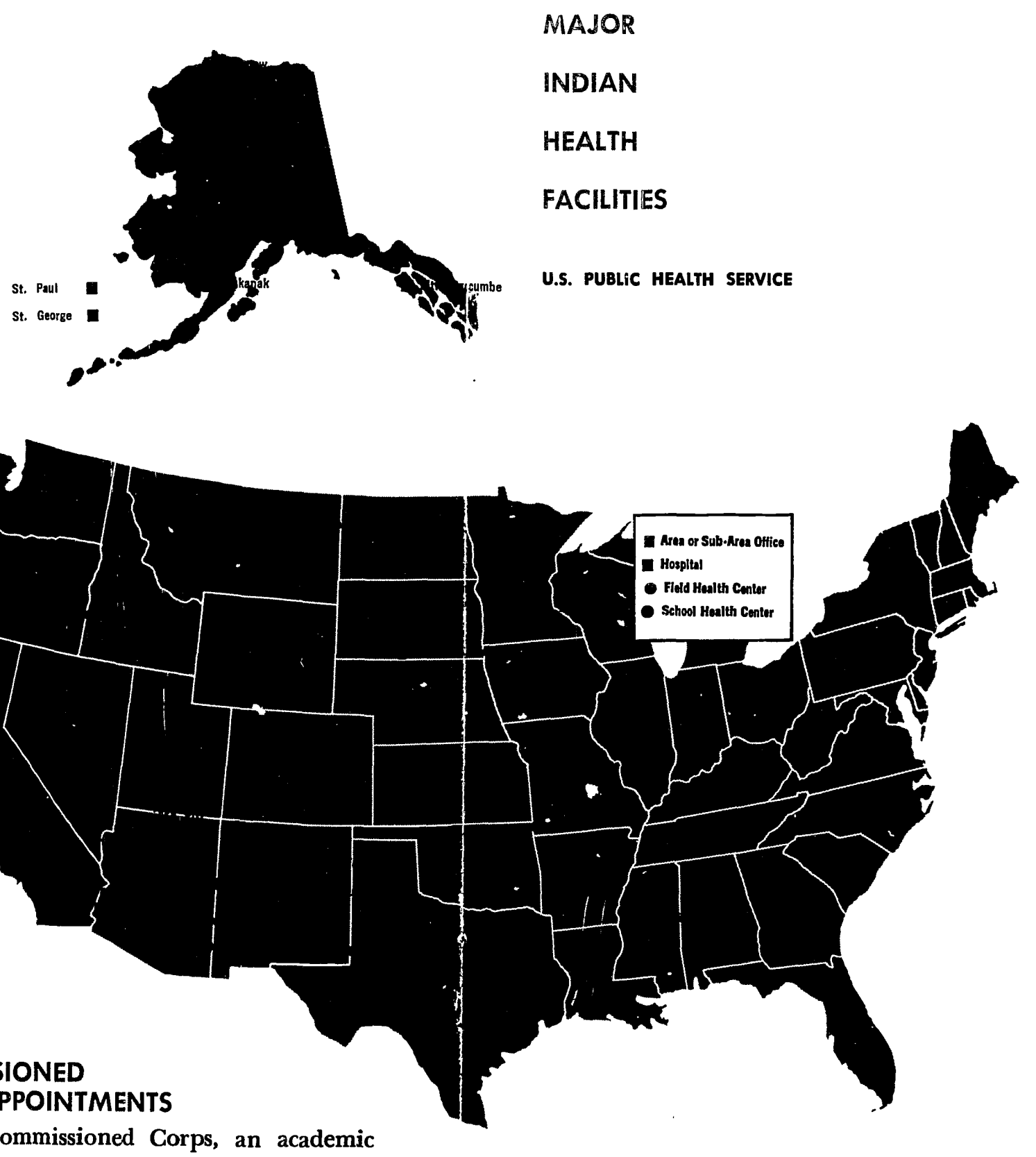
ANNUAL SALARY BY GRADE (Civil Service)

Employment is offered at the following grade levels:

Director of Nursing	GS-8-12
Supervising Nurse	GS-8-10
Head Nurse	GS-7
Public Health Nurse	GS-5-9
Staff Nurse	GS-4-6

See insert for salaries for these grade levels. Travel expenses to your duty station will be paid. If you choose to work in Alaska, you will also receive a cost of living allowance equal to 25 percent of your base pay. This allowance is not subject to Federal income tax.

Public health nurses provide family centered service. A baby is weighed in an Indian home with an interested audience as the public health nurse counsels the mother in relation to infant and child care.



MAJOR INDIAN HEALTH FACILITIES

U.S. PUBLIC HEALTH SERVICE

COMMISSIONED CORPS APPOINTMENTS

For the Commissioned Corps, an academic degree from an accredited university is required. Candidates for the Corps are usually commissioned in three grades—Junior Assistant, Assistant, and Senior Assistant—equiva-

lent to the Navy grades of Ensign, Lieutenant (jg), and Lieutenant.

Rank, pay, allowances, leave, medical care, pay and allowance increases, and retirement correspond to those for commissioned personnel in the Armed Forces. (See insert for pay and allowances for each grade.) Commissioned officers are reimbursed for transportation and moving expenses to their first duty stations and for subsequent changes of station.

APPOINTMENT PROCEDURES

For Civil Service positions, complete application Forms 57 and 2380 which you may obtain from a post office, an Indian Health Area Office, the Division of Indian Health, or a regional office of the Civil Service Commission. Send the completed forms to the Chief, Nursing Services Branch, Division of Indian Health, Public Health Service, 7915 Eastern Avenue, Silver Spring, Maryland 20910, or to the Indian Health Area Office of your choice. (See list of Area Offices on page 6.)

For a commission in the Public Health Service, apply by writing to:

Surgeon General
Public Health Service
U.S. Department of Health, Education, and Welfare

Mooney Falls in Supai Canyon in Northwestern Arizona.

(Cut along this line)

Surgeon General
Public Health Service
U.S. Department of Health, Education, and Welfare
9000 Rockville Pike
Bethesda, Maryland 20014

Date _____

DEAR SIR: Please send me necessary forms to apply for a nursing position in the Division of Indian Health.

Check One CIVIL SERVICE ☐ COMMISSIONED CORPS ☐

Name _____

Address _____

4¢
stamp

Surgeon General
Public Health Service
U.S. Department of Health, Education, and Welfare
9000 Rockville Pike
Bethesda, Maryland 20014

(Attention: Chief, Nursing Services Branch, Division of Indian Health.)

VT 007 192
Minutes. Annual Meeting (Washington, D.C., April 27, 28, 1967).

President's Committee on Employment of the Handicapped, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 67 68p.

*CONFERENCE REPORTS; *PHYSICALLY HANDICAPPED; *MENTALLY HANDICAPPED; *NATIONAL ORGANIZATIONS; *REHABILITATION PROGRAMS
*THE PRESIDENT'S COMMITTEE ON EMPLOYMENT OF THE HANDICAPPED, WASHINGTON, D.C., APRIL 27-28, 1967

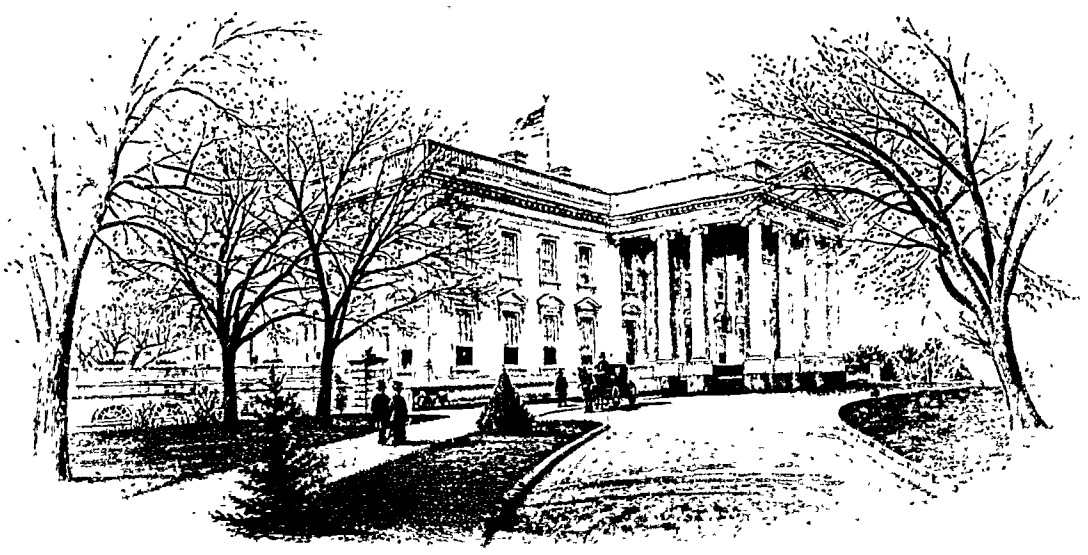
During the first morning of the 29th Annual President's Committee on Employment of the Handicapped, presentations were given by Margaret Mead, Frank Blair, and Hubert H. Humphrey. Awards for "Handicapped American of the Year," "Ability Counts," and "Distinguished Service" were also given. Afternoon panel discussions were: (1) Sheltered Workshops: New Departures; (2) Medical Criteria for Employment Readiness; (3) Total Rehabilitation: The Social and Economic Need of Our Time; (4) Cooperation, Coordination, and Communications in Hiring the Handicapped Worldwide; (5) Vocational and Technical Education for the Physically Handicapped and Mentally Retarded, (6) The Disabled Veteran Comes Home; (7) Employment of the Mentally Restored: Three Approaches; and (8) Handicapped Homemakers. The second morning was devoted to eight demonstrations of personal success or useful methods by handicapped persons. Other convention activities included: (1) a luncheon to honor "old timers," (2) an address by Paul A. Strachan, and (3) a Women's Committee banquet. (EM)

VT 007 192

ED042060

C1
68p*

MINUTES



ANNUAL MEETING

The President's Committee on Employment of the Handicapped

Washington, D.C.

APRIL 27 *and* 28, 1967

VT007192

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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Foreword

I hope these Minutes bring back happy memories of the 1967 Annual Meeting of the President's Committee.

I hope they heighten your awareness of the great achievements in behalf of the handicapped over the past two decades of our Committee history.

And I hope they sharpen our awareness of the vast amount of work and effort that lie ahead—before we can truly say that there is equality of job opportunity for all the handicapped of our land.

May these Minutes refresh our spirits for future achievements.

Good fortune to you!

HAROLD RUSSELL
Chairman

Planning Committee for Annual Meeting

Rear Admiral Bartholomew W. Hogan, (MC) USN Ret., *Chairman*

Terence E. Carroll
John M. Couric
Russell J. N. Dean
John A. DeChant
Charles L. Eby
Cyrus G. Flanders
Col. Henry E. Kendall
Donald W. Lief
Mrs. Edward C. Moynihan
John A. Nesbitt
James M. Newmyer
John F. Radowich
Edward F. Rose
Rex Taylor
Mrs. W. Willard Wirtz

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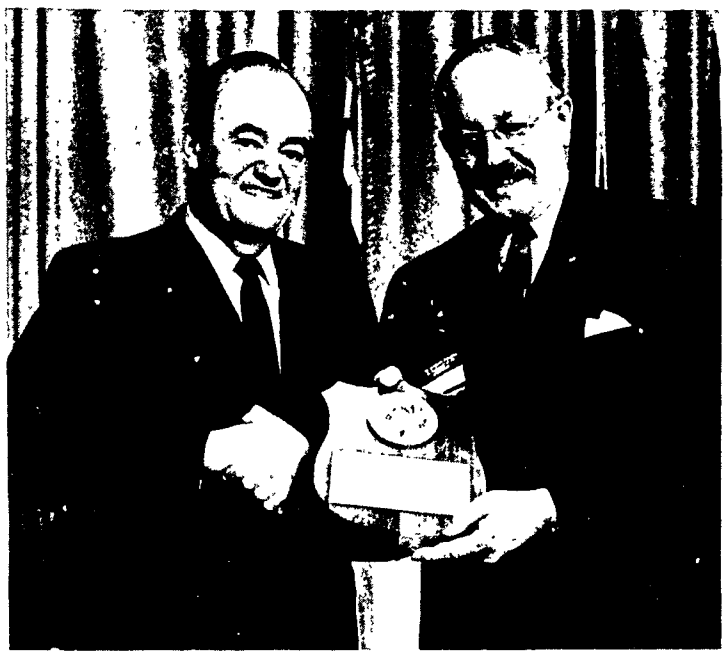
THE FIRST MORNING . . .

Above left: Vice President Hubert H. Humphrey is shown with Art Edgerton, the Handicapped American of the Year.

Above right: Frank Blair, "Today," NBC News, as he delivered the *Tribute to Courage*.

Left: Mr. and Mrs. Edgerton with the Vice President.

Below: At the end of the Thursday morning session, the Vice President moved into the audience.

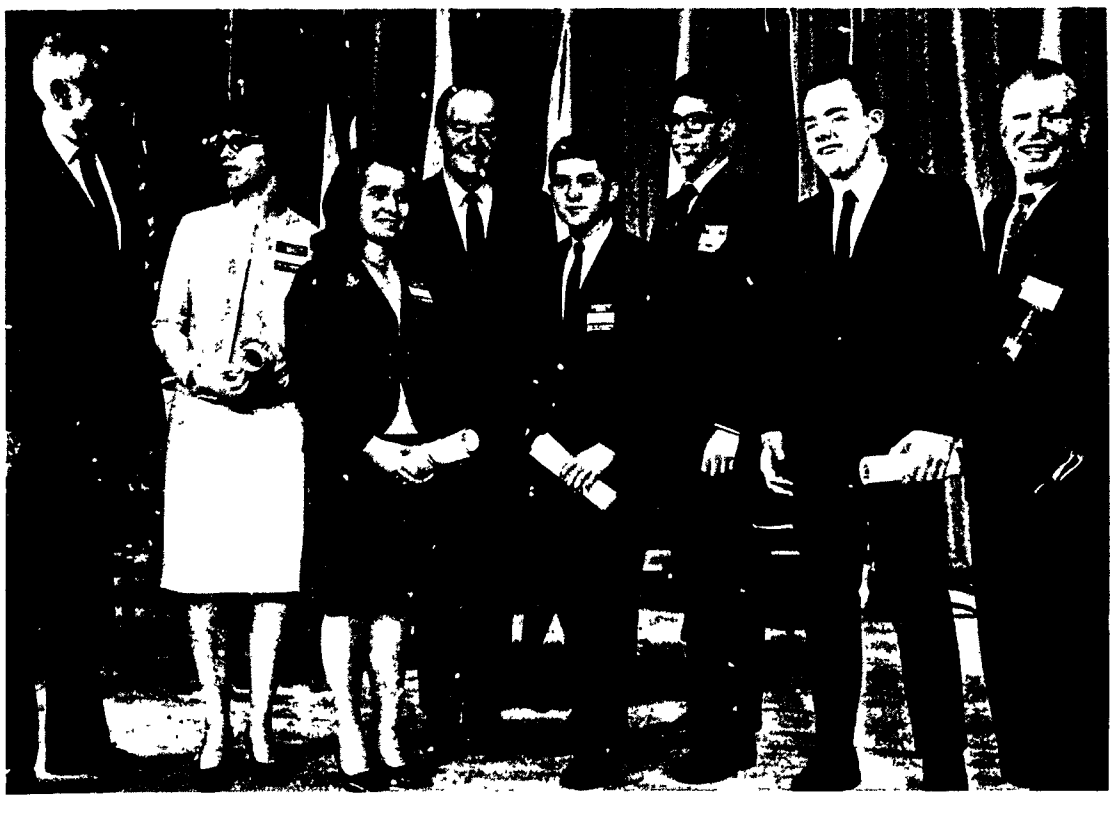


Above: The Vice President presents the Distinguished Service Award to Ralph T. Collins, M.D., and Paul A. Strachan.

Right: Anthony J. Caserta, Director, AMVET National Service Foundation.

Below (left to right): John W. Unger, National Commander, Disabled American Veterans; Janie Lessenberry, Humboldt, Tenn., 5th place, National "Ability Counts" Contest; Lorraine Liston, Springdale, Conn., 4th place; Vice President Humphrey; Louis E. Bathen, Baton Rouge, La., 1st place; Lew Cramer, Mesa, Ariz., 3rd place; Wendell B. Phillips III, Reno, Nev., 2nd place; and Harold Russell, Chairman, President's Committee.

Plaques to high schools of the five national winners are contributed by Mrs. A. B. "Dolly" Cohen (lower right), Cincinnati, Ohio.



Top: National "Ability Counts" Contest Luncheon.

Center: Chairman Harold Russell presents a silver bowl to Vice Chairman Gordon M. Freeman, International President of the International Brotherhood of Electrical Workers, in appreciation for his service as Chairman of the Executive Committee of the President's Committee.

Bottom (left): Henry Viscardi.

Bottom (right): Margaret Mead, Ph.D.

ONE MORNING IN MAY

The bright morning sun gave a white gleam to the giant oval Washington Hilton Hotel in Washington, D.C. Red and yellow tulips vied with blossoming dogwood trees for attention. Above the din of early morning traffic, birds warbled.

This was Thursday, April 27, 1967. It was the first day of the Annual Meeting of the President's Committee on Employment of the Handicapped.

In record numbers, men and women from ever State and from foreign lands poured into the chandeliered lobbies of the hotel. Greetings between people who hadn't seen each other for a long while, new introductions, laughter, serious talk—voices blended into a roaring sea of sound.

The handicapped were there—wheelchairs, white canes, braces, prosthetic appliances of all kinds.

A throng of 3,000 people descended into the International Ballroom, where the United States Marine Band was playing before the meeting began.

THE MEETING BEGINS

At 9:30, Harold Russell, Chairman of the President's Committee, called the meeting to order. Rabbi Henry Segal of Congregation B'nai Israel in Washington, D.C., delivered the invocation. Then came the Roll Call of States by Henry Viscardi, President of Abilities, Inc., of Albertson, N.Y., long-time member of the Executive Committee of the President's Committee, and New York Governor's Committee Chairman.

And then Harold Russell delivered his words of welcome.

Mr. Russell's Address

My warm greetings to all the friends of the handicapped—to friends old and friends new.

Each year we grow, not only in numbers but in diversity. Each year I see new faces as well as old. Growth and cooperation have been the keys to our success.

This is a very special Annual Meeting. It comes on the eve of the twentieth anniversary of the President's Committee—20 years of growth.

In the beginning, there was an idea in the mind of a man who refused to take "no" for an answer: Paul Strachan, whom we honor today. There were others, too. There was a President who heeded their voices. With a stroke of his pen, Harry Truman created this Committee. It has been strongly supported by every President since then.

There were early meetings that wouldn't even have filled this stage. There was a staff of one who often wondered where the next paycheck would come from. There was a Chairman, Admiral Ross T McIntire, who had visions of the Committee's future greatness.

If you want an idea of how far we have come, think back to 1947. The war over. We were retooling for peace and there weren't enough jobs for everyone, particularly the handicapped. There weren't enough rehabilitation facilities, nor enough workshops. There weren't enough people in the fields of rehabilitation and placement. But, there *was* plenty of one thing—rejection. Too many people didn't believe that the handicapped had abilities and needed only the chance to prove it. Too many people thought of the handicapped as pencil-sellers on street corners.

But, those also were days of bright beginnings. Vocational rehabilitation was starting to build steam. The Veterans Administration program of training disabled veterans was making history. The Employment Service technique of selective placement of the handicapped was catching on. America was beginning to do away with the snake pits in its mental hospitals. A small group of parents of retarded children started a movement that brought new hope to the retarded everywhere.

Then came the Fifties, and so many things happened. Congress passed a great law giving a bold new push to vocational rehabilitation. The President's Committee gained a new Chairman, General Mel Maas, blind but with a heart that could see. Governors' Committees in the States and Mayors' Committees in the cities and towns grew in numbers and strength. Our Annual Meetings almost began to fill the Auditorium on Constitution Avenue, but we never dreamed we would outgrow it.

And time passed, with more change. Modern drugs and modern rehabilitation began to bring the mentally restored and mentally retarded back to their communities, but who would hire them? And so the President's Committee, on Valentine's Day, 1962, in President Kennedy's office, broadened its responsibilities to include the mentally restored and mentally retarded.

And more and more groups joined forces: architects and builders, eliminating the barriers in buildings that kept out the handicapped; women's organizations, mobilizing thousands of active women across the country; educators, striving to improve acceptance of the handicapped in the Nation's school systems; artists and industrial designers, bringing into being

"Project Earning Power" which holds so much promise to the handicapped in workshops or in home employment; leaders of rural America, to build acceptance of the handicapped in farm communities. These, and so many more: business and industry, labor, the mass media, medicine, insurance, the health agencies—truly, a cross-section of all America, marching together, a fast-growing army of volunteers enlisted for the duration to serve the handicapped.

All these, plus the strong right arms of the "handicapped" program, the Chairmen and Executive Secretaries of Governors' Committees, most of whom are in the audience today, men and women whose labors are without end and whose achievements are beyond number. I salute them in particular.

This is the way we have grown. This is the way we have helped build toward brighter and better days for the handicapped. This has been our act of creation, making us feel both proud and humble at the same time.

So here we are, twenty years later, and we ask ourselves: Where do we go from here?

So much needs to be done. It can be done through cooperation, coordination, and communication. With your help, it *will* be done.

As we look ahead, one of our major problems is tied to the affluence of America. We are all for affluence, we all like prosperity. But, there are some problems for the handicapped that go hand-in-hand with prosperity.

Let's look at some numbers. Employment today is at an all-time record of 74-million people. In another three years, the Labor Department expects it to rise above 80-million. Unemployment is down around two and a half million, an all-time low. In fact, says Secretary Wirtz, unemployment today has become more personal than economic; the only way to reduce it further is to develop people's skills for the jobs now going begging. Almost everywhere, you hear reports of empty jobs with no takers. You get the impression that the big problem in America is not for the unemployed to find jobs, but for the jobs to find the unemployed. If you are not careful, you could smugly feel that all's well in the world.

Nothing could be so dangerous—for the handicapped and, for America.

Certainly, there are plenty of job openings—for trained people, at the right time and in the right place. Certainly, more and more handicapped people are finding work—as word spreads of their fine job record and even finer attitude toward work.

But, not everyone has the same chance to share in this sunshine of affluence. So we can't rest.

What about the seriously handicapped? What about the blind, with a 60 percent rate of unemployment? What about those with cerebral palsy, with an unemployment rate of more than 90 percent? What about the paralyzed, with unemployment running higher than 60 percent? What about the thousands of cardiacs employers won't hire? What about those with epilepsy? We don't know their rates of unemployment, since most epileptics hide their disability. And, what about the *under*-employed, people not working to their capacity? They may pose a bigger problem than we might think.

Many of the seriously handicapped aren't even counted as unemployed any more. To be counted, you have to be actively seeking work. Once you crawl behind that blank wall of rejection, you become what Sylvia Porters calls a "labor force drop-out," You're not even a number. Prosperity may be all around you, but it doesn't touch you.

Fortunately, something is going to be done about the seriously handicapped. I am pleased to announce that the Nation's leading health agencies, represented by the National Health Council, are joining forces with the President's Committee in an intensive campaign to promote jobs for the seriously handicapped. It will not be an easy war, nor will it be a quick one. I do not expect to come here next year with a communique about the glorious victory. But a good start has been made. This program has begun with cooperation. It will proceed through mutual coordination. It will succeed through proper communication.

Now, what about the training needs of the handicapped? In these days of affluence and record-high employment, there are jobs to be had. But, they are for workers with training and skills—or, at very least, for those with high motivation.

The unskilled, untrained and unmotivated have been crowded out. As automation makes further inroads, still more will be forced out. To put it mildly, the training needs of the handicapped are acute.

Right now, there is a great interest in hiring the mentally retarded for many lesser-skilled jobs. But employers want retarded people who have been trained in work habits and in basic skills. There are plenty of retarded people in this country, but there are *not* plenty who have had training.

There's a similar situation among the mentally restored. Today, long-term mental patients are leaving hospitals in record numbers, thanks to modern drugs and modern therapies. They could work if they could be motivated and trained; skills grow rusty after years

of disuse. But, there are not enough facilities to fill their needs.

And, what of the physically handicapped? It takes much time and money to train the severely handicapped—the blind, to use braille instruments; the deaf, to read lips of other workers; the paraplegics, to navigate and work in a wheelchair. The more serious the disability, the more time it takes. We still lack enough facilities for all who need them.

You know our needs. For every sheltered workshop, we need two; for every rehabilitation center, we need at least two; for every public school special education class, we need three.

But, there *is* hope ahead.

The new VRA amendments are part of that hope. They authorize grants to give a big boost to workshops.

The Department of Defense and the General Services Administration are part of that hope. They are really trying to divert business to the workshops of this country.

Our own "Project Earning Power" is part of that hope. By enlisting the Nation's top designers, we plan to upgrade products made in workshops, so that they can give more work to more handicapped people.

State rehabilitation agencies are part of that hope. They are serving more and more handicapped—a record-breaking 154,000 last year; many more this year.

The Labor Department's manpower programs are part of that hope. This wonderful program takes the initiative in going out and reaching the hard-core unemployed, the handicapped included. It provides whatever training and encouragement they need and helps them find the right jobs. The State Employment Services are giving outstanding cooperation to these programs, particularly the Human Resources Development or "Outreach" program.

In all these elements of hope, we don't expect quick miracles. But a good start has been made.

A good start, but much work ahead. We cannot be lulled by rosy reports of our country's economic heatlh. We cannot be lulled by our many past accomplishments.

Much work ahead, too, for the backbone of this entire movement, the hundreds of local Committees on Employment of the Handicapped everywhere in the United States. Strong local Committees can unlock many doors. They can promote training. They can promote jobs. Local Committees are where the employers are, where the jobs are, where the handicapped are. They can bring them all together, for the benefit of all.

We have made good beginnings, but so much remains to be done before we can honestly say that the handicapped—ALL the handicapped—have a real share in our national affluence.

Our work is far from over.

Our goal is a modest one—that every handicapped man and woman who wants to work and who has the ability to work should have the opportunity to work.

A modest goal, yet a practical one.

What we have accomplished so far has been done in a most remarkable partnership between Government and private groups. Nowhere else in the world has there been such a powerful force assembled, as our own great voluntary program of jobs for the handicapped.

For twenty years, the vital private organizations have been working together with Government at all levels for the benefit of the handicapped. Is it any wonder that God has so richly blessed our great country?

I ask you to rededicate yourselves, to join with our President and our Government with renewed vigor and courage, so that this crusade can move ahead. May God bless our future dreams and our actions, just as he has blessed us in the past.

"LADY OF THE CENTURY"

She carried a forked walking stick taller than she. Only five feet two, she stood on a suitcase to deliver the keynote address. Introducing her, Harold Russell listed her many professions: ethnologist, anthropologist, sociologist, educator, professor, world traveler, author. And he noted that she had been named as one of the *Outstanding Women of the Twentieth Century.*

She is, of course, Margaret Mead.

Dr. Margaret Mead's Address

When paleontologists hunt for the bones of early man—and, you know, very few survived; usually because somebody was home the day there was an earthquake—we sometimes find a few good relics.

We may find the skeleton of an adult with a bad fracture that has healed; then we know we are approaching what we regard as true humanity. This is a strong point in the history of the development of man; this means that someone who fell when he was hunting, or was injured in some other way, as an adult had been fed and cared for by the other members of the group.

We know that hundreds of thousands of years must

have passed before man reached the point where he could care for anyone who was disabled. In that early world there was little hope of survival of any infant who showed any deviation from the norm.

From that time on through history, man has been able to absorb more and more kinds of people into the "nation" of human beings. This is becoming true for anyone who has lost the use of one of his senses or one of his limbs; it also is becoming true for children and women who have slowly approached the status of "human beings." It has taken us a very long time to incorporate all the members of society into our own group. It has taken a much longer time to recognize the people on the next hill as human beings, also.

There are many people for whom the word "human being" means only members of their own tribe. All others are "steak eaters" or "snake eaters." If we look over the whole panorama of life today, we see some very primitive people, such as the people of New Guinea where I have been working. Here, I have never known a congenital handicapped person. I don't believe one would live if he were born. Those people still don't have the physical and spiritual energy to keep alive anyone not healthy enough to be able to make a contribution to the society.

It has been a long time to today, when we are able to keep alive almost every child who is born.

Now, if we judge civilization, and use as one of our measures of progress the capacity to include more and more people as being worthy of saving and worthy of living, we can look at our present position in the United States, and be proud.

The word "handicapped" that your Committee uses was a word developed in relation to games. "Fair play" is a word you cannot translate into many other languages. It is an English-speaking notion. It is based on the principle that you declare everybody equal. You give those who need it a handicap and then you proceed. This is an extraordinarily interesting idea. It has been the background for many things we do, and for the demand that every human being of right age should be able to work and have the opportunity to work.

I want to present something today that is a step further. I want to suggest that instead of stopping at the point where we want to treat every person as equal, we go a step further. We should go beyond that and ask what each handicapped person can contribute to us.

We are far too fixated on the notion that if we can only equip every handicapped person to function as if they were like other people, that is enough. I don't think that is enough. I think it is important to say instead, "What do they have that other people don't have?" "What do they contribute that other people don't contribute?"

The first thing that man with his fractured leg contribute was the idea of responsible compassion to human culture. The first people on earth who were injured and cared for broadened our humanity and brought us closer to the kind of humanity we cherish today. All people who have lost an arm or leg or sight or hearing or anything else challenge our imaginations. Shall they have broadened our culture, too? They have made contributions to our culture on a level that is meaningful to this audience, and is meaningful to me because I have spent quite a little time in a wheelchair with a bad ankle.

Every time a building is built with a ramp, people in wheelchairs can use it. But so can old ladies and old gentlemen and children who have just learned to walk. In a sense, this device for the handicapped has benefited all.

A few years ago I was interviewed by a boy who was eligible under a State law for an education. He had cerebral palsy. He asked me if it would pay to enroll because he had to convince the State that he could earn a living. I asked if he could manage stairs. He said, "Yes." I asked, "What can you do that other people can't do?" He looked astonished. After quite a little thought he said, "I can move around in the dark." I asked, "Where did you learn?" He said, "I went to a camp with blind children and I watched them and I learned too."

This, at a very simple level, is an example of borrowing an extra skill, an extra ability to use one sense instead of another, so that we get a higher total level of capacity to use the senses we have.

They have been doing experiments on the learning capacity of a little animal called the kangaroo rat that lives in a burrow under the ground. He digs tunnels exactly as wide as his whiskers. He finds his way through the tunnels by feeling the walls with those whiskers. First they taught the kangaroo rat to run mazes. Then they cut off his whiskers. He had to find his way around as best he could without them. But then they grew back again. And a miracle. He had learned a great deal more than he knew before. He had been running around those mazes, having to use his head and his brains instead of his whiskers.

This, again, is what I mean. Five years ago I met a young blind anthropologist who was skilled in using all the devices we have invented for the blind. Yesterday he passed his doctoral examinations after spending

a year in one of the villages of the blind in Mexico, where sighted persons rarely go. In his dissertation he described this small society. He noted that all of the children in this society have as the major part of their childhood, the function of serving as the eyes of the blind. No blind person is ever without a lively, interested child. I asked the young anthropologist what he learned in this special community. He said, "I had to learn to trust those children completely. Unless I could trust them completely they couldn't lead me safely and I would land in the river."

Out of his research we have a new understanding of a culture we could not have had access to otherwise.

Every person with a handicap of any sort lives in a world inaccessible to other people. He has a contribution to make to other people that is different. He has a contribution to make to us.

I am holding an English walking stick. I have done a great deal of experimenting with this stick. I use it because I have a bad ankle. No one associates my stick with a handicap because it is so peculiar. People think I use the stick for exploring, and they look at it with delight. But then I tell them I use it because of my bad ankle, because I am handicapped. And immediately they turn their eyes away. Their eyes drop.

Not until we can make it as part of our whole approach to realize what we owe to the handicapped—what we owe to them in expanding our humanity and our imagination and our understanding of the world—not until then will we be able to lift up our eyes and look people straight in the face.

FRANK BLAIR OF NBC

"When most Americans get out of bed in the morning," said Harold Russell, "the first things they do are heat the coffee and tune in on the 'Today' Show. The news of the day is presented with words familiar to all: 'And now, here's Frank Blair with the news.'

"I am fortunate to say to you this morning, 'And now, here's Frank Blair with *A Tribute to Courage.*' "

Tribute to Courage

What is courage, that men revere it, and nations honor it?

We might say courage is the evidence of man's unconquerable spirit in the face of adversity. We might, less loftily, call it a stubborn refusal to accept defeat.

Whatever it may be, courage is more easily illustrated than defined.

Art Edgerton, the man we salute today as Handicapped American of 1966, has been illustrating courage since he was born blind into a world of poverty and sickness, 39 years ago.

No extra measures of love and sympathy greeted this special baby. Instead of tenderness and concern, he met indifference and neglect. His parents, beaten by life and without hope, were totally unable to equip their sightless child for his future.

How does a youngster—a blind youngster—survive such a situation without being completely crushed?

Art Edgerton recalls: "Somehow, I knew there was a life better than the one I had, and something made me keep reaching for it. I got sick and tired of people who didn't care, people who kept saying I couldn't do things. I learned that if I wanted something—a fire truck or any kind of toy—I had to find a way to get it myself. Even if it meant crude attempt and stumbling around, I had to get up and try. The word 'alternative' wasn't in my vocabulary then, but I knew I had to change the way things were."

Eventually, of course, the boy met people who *did* care, and love and help. He was enrolled at a school for the blind in Philadelphia, and found in Braille the key to a new world. His musical talent—one of the few legacies from a gifted but unsuccessful jazz musician father—was also a passport to a fuller life.

But first, the inevitable frustrations. The boy was told that he could never learn to play the piano or organ, althought he *might* master the drums. Refusing to accept this, he arranged to study theory and harmony on a trial basis. He became an accomplished enough pianist to perform with the Philadelphia Youth Orchestra.

After high school, more eager than ever for knowledge and independence, the blind teenager struggled on to college, to major in sociology. But his love of music, and his determination to be accepted for his talent rather than rejected for his handicap, made him choose music as a career.

Tours of World War II service camps with Count Basie and Lionel Hampton were followed by a rapid succession of jobs. He was pianist and organist, disc jockey and emcee, at radio stations in Philadelphia, New York, and New Jersey.

Then, he joined a jazz combo for a tour of the midwest. Even past experience with one-night stands hadn't prepared him for the disaster that followed: the group broke up in Toledo, Ohio, and Art was left stranded, friendless, and robbed of his possessions.

How does a man—a blind man—react to such a blow? If he's Art Edgerton, he starts, even if slowly and painfully, to pull himself up again.

He knew he had to change things, just as he had

known it as a small boy.

Almost destitute, he rented a room bordering the city's hard core poverty area. The job hunt began, among strangers. As days and weeks dragged on, a truth became very clear to Art Edgerton: in the eyes of most prospective employers, the double handicap of being blind and Negro completely eclipsed his experience, education and talent.

Finally, when despair was taking over, his luck changed. St. Francis deSales, a boys' school, hired him part-time, as music teacher. He secured temporary work with Goodwill Industries, and they arranged an audition for a job as studio organist at WTOL-Radio. He got the job and eventually became late-night disc jockey, as well.

At this point, Art Edgerton's life took a dramatic turn.

One of his colleagues, recognizing Art's growing interest in the news department, encouraged him to train for news work. The friend learned Braille, himself in order to be a better teacher. He taught Art how to operate the necessary electronic equipment. Together, they set up a code filing system. Art mastered gathering news by phone, fingers flying as he took notes in Braille with stylus and slate. On a conventional typewriter, he transcribed notes into finished copy. Now, he was ready to function in a desk job as newsman.

Management, unfortunately, wasn't as adaptable as Art Edgerton. It took a long time to convince them that a blind man could also be a newsman. But waiting was something at which Art was expert, and finally, he was assigned to the news desk full-time.

The telephone remained a primary source of information. However, Art sometimes moved out into the community, as reporter-on-the-spot. Fires, traffic accidents, civic meetings made up his beat.

Through his efforts, the radio station for which he worked, aired, for the first time, comprehensive news of civil rights activities. Art covered the NAACP Convention in Atlanta, in 1961, and the historic 1963 March on Washington.

Soon competing news media in the city followed suit and gave the subject of civil rights its just share of air time and newspaper space.

As a result, many people in the community and in the state credit Art Edgerton with "keeping the lid on" potentially explosive situations in Toledo. This he accomplished not as a Negro but as a reporter gathering and disseminating facts—facts that led to understanding and ultimately, to harmony.

Some who laud Art Edgerton for this achievement say his race gives him an *entree,* at times, that might be denied a white reporter. They hasten to add that his unshakeable objectivity is, therefore, all the more wonderful. As one person observed: "He is, in the best sense of the word, a man 'blind' to color."

Is this not, in itself, an evidence of courage?

The cause of youth is another that Art Edgerton has served well. Both as newsman and private citizen he is involved with young people and their problems. His own experience with poverty, disability and discrimination equips him to advise—and inspire—those tempted to drop out of the mainstream of society. It also makes him a stern counselor of those who wallow in self pity.

And the physically handicapped—those who have not yet fared as well as he—get a full measure of attention from Art Edgerton. He is active in local, state, and national efforts to gain for the handicapped the recognition and opportunities that are due them. It is lovely, poetic justice that at this very time last year—and the year before—Art Edgerton was attending Annual Meetings of this President's Committee as a working volunteer and a member of the press corps.

These are some of the facts of a man's life.

What of his philosophy?

The strongest of Art Edgerton's beliefs is his almost obsessive conviction that human beings must strive to establish contact with their fellow men.

This conviction has undoubtedly been nurtured by his experience as a professional communicator, and by the support of his wife, Della, whom he married a year ago.

But it had its beginning with a youngster isolated more by lack of understanding than by sightlessness. It grew in the schoolboy thwarted by teachers who lacked vision. And it came to fruition when the mature job seeker was rejected for his blindness and his color.

There are other tenets in Art Edgerton's creed.

Of himself and of others with handicaps he says: "What bothers me so much is the waste of potential and the lack of recognition. Each man has to discover his own abilities and resources. Then, others have to acknowledge them. Recognition is what motivates people to become assets rather than liabilities. People must be guided and helped to use their talents."

He pleads, too, for patience. It's typical of the man that he directs *this* appeal to the handicapped: He says: "We must try to develop patience. People don't always do things when we want them to, but when they want to, or when they can. We, the handicapped, have to understand this."

If Art Edgerton has his way, life will allow him the opportunity to utilize, in the service of others, the very special experience, talent and outlook that are his and no other man's.

As we honor him today as Handicapped American of 1966, we wish him the fulfillment of his dream, and Godspeed.

A LIFE-LONG SUPPORTER

"I happen to know that from his earliest days in public life, our next speaker has been a strong supporter of programs leading to better things for all handicapped people," said Harold Russell. "Ladies and gentlemen, the Vice President of the United States, the Honorable Hubert H. Humphrey."

The Vice President's Address

Thank you very much, my long-time dear friend Harold Russell.

Spring-time in our Nation's Capital brings cherry blossoms, the baseball season and an even more refreshing event—your Annual Meeting of the President's Committee on the Handicapped.

What a "vitamin tonic" your meeting is—not just to a former pharmacist, but to everyone privileged to see the zest of champions for human dignity at work.

It is a joy to visit with you again—for this third year in a row. I bring you the renewed personal greetings of President Johnson. You are the leaders of *his* Committee, the President's Committee.

You represent as courageous and far-visioned a group of men and women as will assemble at any time in our Nation's Capital. You are the voice, the conscience, the strong "right arm" of your President in the good fight for economic justice for the disabled.

As individuals, many of you may need a cane or crutch or electronic aid, a brace or wheelchair, but you have what life really requires: you have heart and spirit and will. You do move—not just yourselves—but the whole Nation forward—forward over obstacles of misunderstanding and indifference. You help the disabled move forward through factory gates that for too long have been half-closed, forward to better white collar and blue collar jobs, yes, forward to buildings and homes designed for the handicapped.

As I look around this room today, I see so many living examples of triumphant human spirit, of the victory of ability over disability.

There is so much in my heart that I would like to say about each of your leaders, about Chairman Harold Russell, about Colonel Bill McCahill, Bernie Posner, and so many others.

I want to convey my special congratulations to Art Edgerton. What an inspiration Art is as the winner of the "Handicapped Man of the Year" Award. Art symbolizes not only those disabled Americans who deservedly win public acclaim, but the vast number of other disabled.

They are relatively unknown, but each day they win quiet victories over impairment. The presence of my old and dear friend, a great pioneer, Paul Strachan, is a vivid reminder of how this entire program got started—in Employ the Handicapped Week and in the President's Committee on the Handicapped.

Paul never would quite "hear" a "No" answer when a "Yes" was crucial to an advance for the disabled.

Loss of hearing, loss of sight, loss of arms or limbs, paralysis, cerebral palsy, mental handicaps, convulsive disorders—this is not a catalog of defeat, my friends; it is a cavalcade of victories of the spirit over the flesh, of spunk over resignation.

I salute you. I pledge your Government's continued all-out effort for this cause. We have come a long way. We are approaching the long-sought goal, next year, of 200,000 Americans to be vocationally rehabilitated in a 12-month period. That is still not enough, not nearly enough; the human backlog—awaiting training and re-training—is still enormous, but we are at least keeping up our pace.

In this year's budget, I am glad to say, the President has proposed $331 million for Federal matching grants to the States; it was only $23 million in 1955 and $171 million in the 1966 fiscal year.

Our State Governors and legislators deserve credit for their increased investment in matching the Federal grants.

But what better investment could they or we make than in increased earning power, increased tax-paying power, dignity power for the disabled?

Before me, I see another form of power—the "youth power" of the winners of the high school survey contest—"Ability Counts." I congratulate these fine young men and women.

The well-being of youth itself is very much on our minds and in our hearts.

At this very time, I am engaged in an urgent new program which will be of particular help to the Nation's young—including, hopefully, the physically and mentally handicapped. By Executive Order, President Johnson has established a new President's Council on Youth Opportunity, of which I am privileged to be

Chairman. Its goal is to help expand job as well as recreational opportunities for the young, especially during the hot summer months ahead.

In 1965, and again in 1966, with the help of private industry, we helped generate one million extra jobs for needy teenagers. We are going to far surpass that mark this year.

It is my hope that during the coming summer months, disadvantaged youngsters who have handicaps will be given special opportunity.

Simultaneously, we expect to expand summer camp, sports, educational, cultural and other programs, for millions of well and handicapped youngsters in inner cities, in ghetto areas, in sweltering tenements.

You who have been bed-ridden, you who have lived so many years in wheelchairs—you know what it is to be confined—physically or mentally—without suitable outlets for energy or interest.

This is what I ask every Governor, every Mayor, every civic organization to help provide—suitable outlets, for the energies of interests of restless young people during the hot, otherwise idle and frustrated months ahead.

One of the President's mandates is for "programs designed to identify, diagnose and treat the illnesses and handicapping conditions of youth who participate in these summer programs."

We do need "early medical warning systems" to detect disability.

No one here need be reminded that much of the anguish of a disability might be avoided if only illness and potential disability could be spotted in time and correctve action taken. Our goal, however, is to open health and other opportunities for every age bracket and not just for the summer months—for the entire year.

Freedom is our goal—freedom from the tyranny of a birth or later defect, freedom from the insecurity of joblessness or underemployment, freedom from discrimination.

There is just one so-called "National Liberation Front" which all Americans can rightly support. I refer to a voluntary, truly democratic alliance in our country to liberate human beings from the bondage of hopelessness, of despair, of bleak, barren lives.

Some people offer cure-alls; "there ought to be a law," they say; or "we ought to repeal some laws."

But we have good laws for the handicapped; our job is to fulfill them and make sure they are not crippled or starved by forces of reaction.

Make no mistake; backward-looking forces are definitely at work; they may act under many high-sounding appeals; but their target is the same—to undermine the War Against Poverty, the peaceful effort for human rights, to tear up the foundations of equal education, equal housing, equal jobs for all.

Let us remember—

Equality must mean equality for all—no exceptions, no "yes, buts," no asterisked footnotes, imposing limits.

The sacred documents—the charters—of this land do not promise justice and equality just for the physically and mentally blessed, or for geniuses, or for the rich, the goodlooking, the clean cut, the city dweller, the Caucasian—but for all God's children, of every race, creed, color, of every circumstance of birth, of every level of I.Q.

Not long ago, it was my pleasure to see some of the remarkable handiwork of a group of the handicapped, in this instance, the mentally retarded. Our good friend, Hank Viscardi, one of the most remarkable leaders in this entire program—showed members of the President's Committee on Mental Retardation some perfectly beautiful glass engraved plates his workers had made.

Mrs. Humphrey is a member of the President's Committee and is particularly interested in opening vocational opportunities for the retarded. Seeing that impressive glassware served as another reminder of what so many individuals can do—if given the chance, if given training.

What does it really take? It takes precisely what this audience represents: volunteer-power—work-power.

You are citizen-volunteers—of the President's Committee, of Governors' Committees, of local committees in hundreds of towns. You are the partners of professionals—of physicians and rehabilitation specialists, of placement experts. And you are doers—speakers—petitioners—catalysts.

If some volunteers could bring about the amazing progress you have already achieved, just think what two times and three times your number could do—can do—should do—in the bright years ahead.

So, I ask: whom and how many have you recruited lately? Have you inventoried your lists of volunteers? Have you shelved, or better still, brought to life any "deadwood" who do not actually contribute to this cause? Have you reached out to every segment of opinion moulders in your community? Have you enlisted the talent, the drive, the zest of youth?

And what about your constituency? Have you sought jobs for everyone—not just for the "walking wounded" but for the elderly victim of degenerative disease, for

the hidden away, the restored mind; for the totally rejected, the despised—the ex-alcoholic, the disabled ex-convict, the disfigured? Every life is worth saving—salvaging.

We are an affluent country, enjoying full employment and unprecedented prosperity; but we are not so rich that we can be prodigal with any human resources. Our handicapped must be enabled to participate full in every phase of society. We simply cannot afford to be deprived of their talents and skills. We cannot afford the economic loss of their wasted ability.

And we cannot be faithful to our own inner voice, to our religion, to our ethics by being untrue to those who have suffered some physical or mental misfortune.

I believe in people helping people—now. Every time a new trainee learns a skill in a sheltered workshop, every time an epileptic punches a timeclock in a good job; every time a blind person nimbly assembles a delicate instrument, every time a paraplegic wheels up a ramp to an assembly line or desk; every time an amputee—a deaf person—a mute—enjoys the thrill of opening a new pay envelope, he or she is a living testimonial to our enlightenment and our justice and our plain good sense.

We need millions more of such "living monuments"—human beings whose enhanced skills and happier lives attest to their own and to society's faith.

This is my message today—a message of pride in the past, of salute to the present and commitment to an ever brighter future for the handicapped.

Let all year be springtime, hope-time, fulfillment-time for the handicapped.

Americans should be a joyful people. John Adams called it "the spirit of public happiness." You don't prove yourself to be an intelligent person or a great person when looking grumpy. Just remember the great things we are doing and the greater things yet to be done. Remember that you are living at a time when we have the capacity to do greater things than anyone ever dreamed possible.

Be happy—not frivolously—but be filled with the sense of public happiness that comes in the knowing that you are a participant of the great affairs of a great Nation. In the knowledge that you are contributing something to this country. Be happy in the recognition that you are the important one and it is you and you alone that will make the difference. So, get in there and work. Thank you.

THE HANDICAPPED AMERICAN AWARD

Next, the Vice President presented the President's Trophy to the 1966 "Handicapped American of the Year," Art Edgerton, newsman and musical director of WTOL-TV in Toledo, Ohio—blind from birth, and a long-time worker for jobs for the handicapped.

The Trophy, made by handicapped students at the Institute for the Rehabilitation of the Disabled in New York City, was handed to the Vice President by the Institute's Vice President, Mrs. William S. Kilborne. The Vice President in turn presented it to Mr. Edgerton.

Art Edgerton

Mr. Vice President, Chairman Russell, and distinguished guests: Certainly, standing here and using the two words in the English language that have been so prevalent throughout time—"thank you"—is somewhat inadequate. I feel like the elephant who carried the mouse across the bridge. It was a rocky ride. When they reached the other side the mouse said, "See, I caused the bridge to rock!"

I am glad the Vice President used that one word "responsibility." Not only responsibility for employers, but responsibility for all individuals. He also used the word "citizen," and certainly the greatest word in the English language is "citizen." Wrapped up in it are the hopes and dreams, the self-reliance, of the people.

The self-sustaining person goes forth with renewed vigor. Things like this can make those of us who are handicapped feel a part of this Nation.

I spoke to Chairman Russell last night. Our job is only beginning. Dissemination of news is only a career for us. This is a bigger and better opportunity to serve our country. His responsibility, and ours, is with the millions of Art Edgertons all over the country. We make ourselves available for you to do what the Vice President said you must do, can do, and will do.

In this land of ours, opportunity looms its gracious head above the avenues of diversity. There are prejudices, but only in a land like this, only in a country of opportunity like this, only with men and leaders such as we have in Congress, in our State legislatures, and certainly in the White House, can hopes be fulfilled for us.

Those of us who are handicapped, those of us who are limited, those of us who are facing the obstacles, I lend my voice, my talents and energies and efforts along with those of the President and the Vice President—to join their team, to be a leader and carry the ball through the line in the land of America.

MORE PRESENTATIONS

Next, the Vice President presented awards to the

national winners of the "Ability Counts" survey contest for high school students.

The winners: Louis E. Bathen, Istrouma High School, Baton Rouge, La., first prize of $1,000; Wendell Brooks Phillips III, Reno High School, Reno, Nev., second prize of $600; Lew Cramer, Westwood High School, Mesa, Ariz., third prize of $400; Lorraine Liston, Stamford Catholic High School, Stamford, Conn., fourth prize of $300; Janie Lessenberry, Humboldt High School, Humboldt. Tenn., fifth prize of $200.

Then, the Vice President presented President's Committee Distinguished Service Awards to Dr. Ralph T. Collins, Rochester, N.Y., Chairman of the Committee on the Mentally Handicapped of the President's Committee and Consultant in Psychiatry to the Eastman Kodak Co., and to Paul A. Strachan, President of the American Institute for Human Engineering in Brooksville, Fla., and founder of the President's Committee two decades ago, for their outstanding service over the years to the cause of the handicapped.

Finally, two announcements were made:

Mr. Anthony J. Caserta, President, the National Service Foundation of the Amercian Veterans of World War II, formalized establishment of two scholarship funds of $1,000 each, to be given annually to a worthy handicapped young man and handicapped young lady for their college careers. The scholarships are to begin with the fall semester of 1967.

The International Association of Machinists announced that beginning this year it will present a $1,000 award to each person selected "Handicapped American of the Year." Art Edgerton was the first recipient.

The morning session recessed at noon.

THE FIRST AFTERNOON . . .

Concurrent

Panels

SHELTERED WORKSHOPS: NEW DEPARTURES

Moderator: James H. Sears, Manager, Personnel Placement, Employee Relations Department, E. I. du Pont de Nemours and Company, Inc., Wilmington, Del.

Panelists:

Arthur H. Korn, Chief, Section of Handicapped Worker Problems, Wage and Hour and Public Contracts Divisions, U.S. Department of Labor

Robert L. Treanor, Senior Staff Assistant to the Director, Small Business and Economic Utilization Policy, U.S. Department of Defense

Willman A. Massie, Executive Secretary, National Policy and Performance Council, Division of Rehabilitation Facilities, Vocational Rehabilitation Administration, Department of Health, Education, and Welfare

Gordon Petrie, President, Phoenix Products, Inc., Long Beach, Calif.

Recorder: Leslie B. Cole, Coordinator of Placement and Training, D.C. Department of Vocational Rehabilitation, Washington, D.C.

Left to right: Arthur H. Korn, James H. Sears, Willman A. Massie, Robert L. Treanor, and Gordon Petrie.

"Let's not call them 'sheltered workshops' any more. Let's just call them 'workshops,' " proposed Mr. Sears, the moderator. He contended that the word "sheltered" had a negative connotation to employers.

Mr. Korn described the effects of the new 1966 Amendments to the Fair Labor Standards Act on workshops. The law has created three new concepts, he said: (1) a floor wage below which the handicapped may not be paid (with some exceptions); (2) a distinction between two types of workshops—the regular workshop geared to reasonably productive workers, and the work activities center geared to the severely handicapped with inconsequential production capacities; (3) joint responsibility by State vocational rehabilitation agencies and Wage and Hour and Public Contracts Divisions to certify that certain categories of the handicapped be granted exceptions to minimum wages.

Mr. Treanor discussed the efforts of the Department of Defense to encourage prime contractors to arrange for subcontracts with workshops for the handicapped. A directory of workshops has been distributed to all Defense Department procurement offices and to major prime contractors, he said. Also, a forceful reminder is attached to every contract awarded. Workshops themselves can stay alert to new business opportunities by keeping in touch with local Chambers of Commerce and other business associations. Also, lists of contract counselors may be obtained from the Department of Defense, he said.

Mr. Massie cited a recent study of opinions of vocational counselors, who agreed that the growth of workshops is the Number One need in the field of rehabilitation. Growth alone is not enough, he said; better budgets and better physical accommodations also are needed. The Vocational Rehabilitation Amendments hold out much hope for workshops, by authorizing loans, direct grants and technical assistance.

Mr. Petrie described "Project Earning Power" as a means of mobilizing the talents of leading experts in product development, production and marketing of saleable items made by the handicapped. In the Los Angeles area, he said, orders have exceeded 25,800 items, so far.

MEDICAL CRITERIA FOR EMPLOYMENT READINESS

Chairman: Edward C. Holmblad, M.D., Chairman, Medical Committee, The President's Committee

Moderator: John H. Aldes, M.D., Director, Ben R. Meyer Rehabilitation Center, Cedars of Lebanon Hospital, Cedars-Sinai Medical Center, Los Angeles, Calif.

Panelists:

The Cancer Patient—Thomas J. Hartford, M.D., Vice President for Area Medical Programs, American Cancer Society, Washington, D.C.

The Cardiac—George A. Hellmuth, M.D., Director, Comprehensive Medicine, Marquette University School of Medicine, Milwaukee, Wis.

The Cerebral Palsied—Herman J. Bearzy, M.D., Director, Department of Physical Medicine and Rehabilitation, Miami Valley Hospital, Dayton, Ohio

The Diabetic—Joseph T. Beardwood, Jr., M.D., Chairman, Committee on Employment, American Diabetes Association, Inc., New York, N.Y.

The Epileptic—Donald S. Frank, Project Coordinator, The Epilepsy Foundation, Washington, D.C.

The Tuberculous—Oscar A. Sander, M.D., Clinical Professor of Occupational and Environmental Medicine, Marquette University School of Medicine, Milwaukee, Wis.

Recorder: Mrs. June M. Cochran, Personal Secretary to General Medical Director, Chesapeake and Potomac Telephone Company, Washington, D.C.

(Left to right): Mrs. June M. Cochran, Recorder; Oscar A. Sander, M.D.; Herman J. Bearzy, M.D.; Thomas J. Hartford, M.D.; John H. Aldes, M.D.; Moderator; George A. Hellmuth, M.D.; Joseph T. Beardwood, Jr., M.D.; Donald S. Frank.

Said Dr. Hartford: "As far as the majority of cancer patients are concerned, especially after rehabilitation, most have so little handicap that employers should not hesitate to employ them based on their ability to produce."

Some firms have been reluctant to reemploy them, he added, because of the fear of subsequent accidents which would result in large awards from the industrial accident commission. A review of these cases indicated "few filings alleging cancer as a result of an injury, few appeals to the appelate courts, very few cases held compensable," he said.

Dr. Hellmuth described medical guidelines for the employment of cardiac patients, which had been developed by a study of 500 cases by the Marquette University School of Medicine Cardiac Work Classification Unit. The study showed that under proper work conditions, most cardiacs can hold productive jobs.

What's needed, he said, is for industry to accept the physician's role in assisting the cardiac patient to become "an effective worker under the principles presented in the medical criteria."

Noted Dr. Bearzy: "The basic problem today is not that the cerebral palsied cannot do the work, but that the employment market is prejudiced against individuals who do not meet normal physical and mental standards for certain job classifications. The so-called norms have been coded in specific job work requirements and personnel procedures."

Teamwork is needed to help the cerebral palsied person break into the job market. Members of the team should be the physician, social worker, vocational counselor and other specialists as required.

What they must do, Dr. Bearzy suggested, is to evaluate the palsied person's residual abilities and record them in a clear form. From this evaluation can come a true picture of the job potentials of the cerebral palsied. Assuming that job potentials exist, all must take part in educating employers on the merits of hiring those who can work in spite of their handicaps.

Dr. Beardwood proposed a set of standards for the employment of persons with diabetes. Among them: Diabetics should present notes from their physicians to the personnel manager, stating that they are controlled diabetics and are examined regularly; efforts should be made to place them on regular shifts when possible; they should carry cards identifying their conditions; they should receive complete physical examinations at least yearly.

Diabetics can perform most types of jobs, said Dr. Beardwood. "The Governor of a Western State is a diabetic, a former cabinet member is a diabetic and they are many instances of diabetic athletes, statesmen, executives, doctors, nurses, actors, actresses and others in many phases of life."

Mr. Frank described the current Labor Department-Epilepsy Foundation demonstration project in providing group vocational counseling to persons with epilepsy. Counselors, he said, take into account the nature of the job itself, the nature of the person with epilepsy, the nature of his seizure problem—and then make referrals accordingly.

"Our program to this point has had virtually no problem in placing the skilled and educated person with epilepsy who has sufficiently recovered his self assurance, the wisdom and acument to make a good appearance in the employment interview," he said.

Dr. Sander remarked that the treatment of persons with tuberculosis is a far cry today from fifteen years ago. "The drug isoniazid (I.N.H.) has become re-

markably effective. . . . Workers with active TB today are not rushed to a sanatorium as once they were in the past. They are studied first to determine whether they have tubercle bacilli in their sputum. If they do, a short period of sanatorium observation and care still is considered advisable. However, when bacilli are not found, they are started on I.N.H. medication and kept at work, with periodic chest x-ray films made to determine if the lesion is disappearing."

(*A complete report of the medical panel will appear later as a separate publication.*)

TOTAL REHABILITATION: THE SOCIAL AND ECONOMIC NEED OF OUR TIME

Moderator: Honorable William J. Hart, Secretary of Labor and Industry, Harrisburg, Pa.

Presentations:

Counseling and Preparation of the Handicapped for Today's Jobs—James D. Dunlop, Director of Industrial Relations, National Industrial Council, Washington, D.C.

Rehabilitation—A Window to the Future—Claude A. Myer, Acting Director, Division of Vocational Rehabilitation, Raleigh, N.C.

Placement—A Window to the Future—Mary M. Dewey, Director, Conn. State Employment Service, Hartford, Conn.

Summarizer: E. B. Whitten, Executive Director, National Rehabilitation Association, Washington, D.C.

Audience Discussion

Discussion Leader: Col. Henry E. Kendall, Chairman, Employment Security Commission, Raleigh, N.C.

Recorder: James F. Brown, Executive Secretary, Wisconsin Governor's Committee on Employment of the Handicapped, Madison, Wis.

(Left to right): E. B. Whitten; Col. Henry E. Kendall, Honorable William J. Hart; James D. Dunlop; Claude A. Myer; Mary M. Dewey.

Mr. Dunlop said that if the words "rehabilitation" and "mentally retarded" can be clarified to employers, a great deal would be accomplished in opening new opportunities for the handicapped. "Rehabilitation," he said, often is considered something to be avoided; it must be defined in terms of the individual cases involved, not in broad general terms. "Mentally retarded" sometimes implies a total lack of ability; employers must come to realize that the retarded can have abilities and can develop into loyal employees.

The greatest challenge of the day, said Mr. Myer, is to "formulate and administer new experiences in rehabilitation to meet unmet needs, when the unmet needs themselves are in a state of constant change." Many of the people in greatest need—mentally retarded, mentally ill, public offenders, severely physically handicapped, alcoholics, some others—"are few in number on the State vocational rehabilitation agency's list of successful placements." But there's bright hope for the future, he pointed out, in the planning for comprehensive vocational rehabilitation programs, now going on in all the States.

Mrs. Dewey described an employment program for the mentally retarded conducted by the Mansfield State Training School in Connecticut. Not only was the program eminently successful, but it also brought to light some valuable concepts in placement of the retarded. For example, the most critical stage of employment of the retarded was the first few days on the job, she said. "If, through intensified supervision and followup, the retardate was assisted in clearing the crucial hurdle of adjustment, he had at least an average chance of success. The retarded seldom failed because of their inability to perform the required functions. Most often, they failed because of maladaptive social behavior, no small part of which could be attributed to anxiety and frustrations during the initial stages of employment."

Mr. Whitten concluded by remarking that effective rehabilitation depends on understanding the kind of world we shall be living in in the future. There will be a period of "great economic expansion"; there will be a shorter work week; there will be thousands of new jobs created on the American scene; there will be a mobile work force; there will be a need to retrain people for up to half a dozen different kinds of work during their lifetimes. For the handicapped, he said, this means they must have a better basic education; better training in basic skills that can be adapted to many kinds of work; better preparation for a world that places a premium on adaptability.

COOPERATION, COORDINATION, AND COMMUNICATIONS IN HIRING THE HANDICAPPED WORLDWIDE

Moderator: Dr. Frank H. Krusen, Chairman, Committee for the Handicapped, People-to-People Program, and Professor and Coordinator, Department of Physical Medicine and Rehabilitation, Temple University School of Medicine, Philadelphia, Pa.

Panelists:

Dr. James F. Garrett, Associate Commissioner, Research and Training, Vocational Rehabilitation Administration, Department of Health, Education, and Welfare

Dr. P. J. Trevethan, Chairman, World Commission on Vocational Rehabilitation, Chicago, Ill., and Trevethan Associates, Bethesda, Md.

John A. Nesbitt, Assistant Secretary General, International Society for Rehabilitation of the Disabled, New York, N.Y.

Dr. Aleksander Hulek, Chief, Rehabilitation Unit for the Disabled, United Nations, N.Y.

Mrs. Teresa Serra, General Secretary, Associazione Italiana per l'Assistenza agli Spastici, Rome, Italy

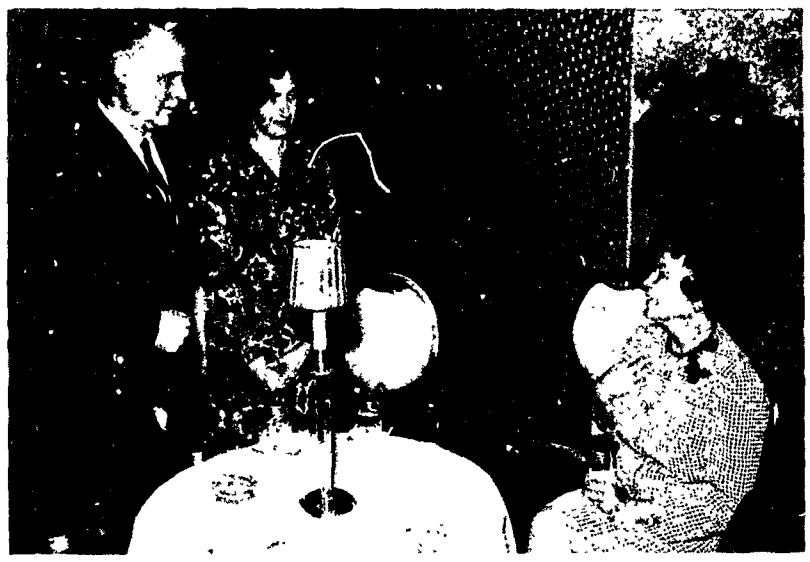
Commander Ian R. Henderson, General Secretary, British Council for Rehabilitation of the Disabled, London, England

Joseph N. Malone, National Organization for Rehabilitation, Dublin, Ireland

Pastor Werner Dicke, Orthopadische Heil-und Lehranstalt, Annastift, Deutschland

Audience Discussion

Recorder: Robert G. Anders, Executive Secretary, Committee for the Handicapped, People-to-People Program, Washington, D.C.



Dr. Frank H. Krusen, People-to-People Committee Chairman (left), and Mrs. Margaret Hovey Walker (seated), are caught by the cameraman at the head table reception sponsored by the IBEW prior to the International Banquet. Standing are Mr. Joseph Malone, North American Manager of the Irish Tourist Board and 1969 ISRD Congress host, Mrs. Teresa Serra, of Rome, Italy; and the Chairman of the U.S. Committee of the ISRD, Mr. G. Andrews Espy, of Cincinnati. Mrs. Walker is a well-known world traveler who has circumnavigated the globe several times in her wheelchair.

Two visitors from afar, Dr. Paul E. Paulson of Norway (left) and Dr. Carmel Goldwater, from Hong Kong, discuss architectural barriers with Mrs. Ellen Black (right) of the Women's Committee. Dr. Goldwater was enroute home to her permanent residence in the United Kingdom after two years in rehabilitation medicine in Hong Kong. Mrs. Black is a top volunteer in the Easter Seal Society.

Pastor Werner Dicke listens to Mr. James C. Butler from Australia (center) while Canada's Ian Campbell (right) looks on.

Participants in the WCVR Seminar in Berlin in September 1966 renew friendships. Mrs. Henri Esquerre of the Women's Committee chats with ISRD Assistant Secretary General John Nesbitt and WCVR Chairman P. J. Trevethan. Dr. Trevethan is former Executive Vice President of Goodwill Industries, Inc. Mr. Nesbitt is WCVR Secretary.

In connection with the 1967 Annual Meeting and International Panel, the World Commission on Vocational Rehabilitation held a supper meeting for interested internationalists. Seated clockwise around the table from bottom center: Mr. Butler (Australia), Mrs. Campbell (Canada), Cmdr. Henderson (United Kingdom), Dr. Goldwater (United Kingdom), Mr. Campbell, Mr. Anders (USA), Mrs. Henderlider (USA), Pastor Dicke (Germany), Mrs. Devereux, Dr. Trevethan, Mr. Linck, Dr. Krusen, Mrs. Trevethan, Mr. Nesbitt, Mr. Russell, and Miss Dunnigan, all USA, and Dr. Paulson (Norway).

Dr. Garrett described international research activities in vocational rehabilitation, noting that "the collaborative research projects being supported with counterpart funds add to the quality and productivity of our domestic programs. Similarly, our domestic research enriches the programs in cooperative nations."

Mr. Nesbitt said that "since the end of World War II, we have witnessed a growth in international cooperation that parallels the expansion of services at the national level. This effort requires an ongoing forum for free and open exchange. Through meetings and communications services, the International Society has provided a continuing form of immeasureable value to the global rehabilitation movement."

Dr. Trevethan disclosed that the World Commission of the International Society for the Rehabilitation of the Disabled is expanding its services. Plans call for a seminar in Halle, Germany; a North American Conference of Administrators of Vocational Rehabilitation Programs; a seminar in Hong Kong; a seminar in Ireland prior to the Eleventh World Congress; many other steps.

Dr. Hulek, commenting on United Nations programs for the disabled, noted there are four UN agencies (ILO, WHO, UNESCO and UNICEF) and some 30 nongovernmental world organizations working in the development of rehabilitation around the world.

Mrs. Serra called for more sheltered workshops for the seriously handicapped, particularly those with cerebral palsy. She mentioned particularly the Australian Industrial Center for spastics, which employs 120 cerebral palsied persons along with 320 able-bodied workers. "This example indicates one of the possible solutions to the problem of employment of the more severely disabled," she said.

Commander Henderson described Great Britain's Rehabilitation Council, made up of representatives from medicine, labor, business and public agencies. The Council has been disseminating information about rehablitation around the world, he said.

Mr. Malone described a new project in Ireland that has opened up new opportunities for the handicapped: "We hold a series of luncheons and dinners paid for by the state. To those dinners we invite employers who meet with other employers who already employ the handicapped. At the end of each session we arrange to present the case histories of several handicapped people who have been placed into jobs. This method has proven practical."

Pastor Dicke remarked that in Germany "we have many laws for social welfare, good laws for rehabilitation. This morning, Vice President Humphrey said that the people now have to use these laws effectively. This is our problem and our duty in Germany. We can receive from you the experience how to use the good laws, in our country."

(*A complete report of this panel will appear later as a separate document.*)

VOCATIONAL AND TECHNICAL EDUCATION FOR THE PHYSICALLY HANDICAPPED AND MENTALLY RETARDED

Chairman: Armour J. Blackburn, Ph.D., Dean of Students, Howard University, Washington, D.C., and Chairman, Education Committee, The President's Committee

Moderator: Harold L. Kugler, Vocational Education Specialist, American Vocational Association, Inc., Washington, D.C.

Panelists:

Federal Programs—Miss Barbara H. Kemp, Program Specialist for Persons with Special Needs, Division of Vocational and Technical Education, U.S. Office of Education

Mentally Retarded—John W. Kidd, Ed. D., Assistant Superintendent Department for the Mentally Retarded, Special School District, St. Louis County, St. Louis, Mo.

Physically Handicapped—Dr. Kenneth E. Carl, President, The Williamsport Area Community College, Williamsport, Pa.

The Role of a State Director—Robert M. Worthington, Ph.D., Assistant Commissioner of Education, Division of Vocational Education, Trenton, N.J.

Recorder: Miss Wanda Redd, Information Officer, Division of Employment Security, Department of Labor, Baton Rouge, La.

Miss Wanda Redd; Robert Worthington; John Kidd, Ph.D.; Miss Barbara Kemp; Kenneth Carl, Ph.D.; Harold L. Kugler; and Armour J. Blackburn, Ph.D.

Miss Kemp suggested that the field of vocational education spend more effort in developing the curriculum "to prepare persons as para-professionals and sub-professional aides. The occupational possibilities are growing. It is here that many of the handicapped can give great service, as library aides, teacher aides, recreation aides and the like."

Dr. Kidd commented that "we don't know what the mentally retarded can learn. I can't find anyone anywhere with legitimate evidence on the subject. Sure, it might take five or ten years to do a definitive study. But it is not now being done. It should."

Dr. Carl proposed a national followup program to see that the Nation's handicapped citizens keep their job skills up to date. "We have been very lax in this," he said. "We have closed the case files and given our clients our best wishes." Instead, followup is urgently needed.

Dr. Worthington described New Jersey's recent activities in vocational rehabilitation. Four years ago, 3 percent of secondary school students were enrolled in vocational education programs; today, 21 percent are taking them. Better funding, better staffing, greater emphasis have helped bring about the increase, he said.

THE DISABLED VETERAN COMES HOME

Ralph Webster represented the VA for a great many years on the Committee on Disabled Veterans, and he was scheduled as the lead-off panelist. Deputy VA Administrator Brickfield, who filled in for Mr. Webster, was able to find a copy of the remarks that Mr. Webster had prepared and he delivered these as Ralph Webster would have done. The text of Mr. Webster's remarks was within the framework of problems of the disabled Vietnam veteran and was titled, "A Nation Faces its Responsibilities."

Moderator: Norman D. Jones, Director, National Rehabilitation Service, Veterans of Foreign Wars, Washington, D.C., and Chairman, Committee on Disabled Veterans, The President's Committee

Panelists:

A Nation Faces Its Responsibilities—Cyril Brickfield, Deputy Administrator of Veterans Affairs, Veterans Administration

Disabled Veterans on the Job—Employer Viewpoints—Hugh J. MacLeod, Administrator, Community Business Services Associates, 3M Company, St. Paul, Minn.

Pitfalls Awaiting the Military Retiree—Col. Herbert B. Allen, Assistant Director, Compensation Administration, U.S. Department of Defense

A Disabled Veteran Speaks on Architectural and Other Job Barriers—Howard L. Bennett, Executive Secretary, Paralyzed Veterans of America, Inc., Washington, D.C.

Recorder: Stanley A. Jones, Executive Secretary, Maine Governor's Committee on Employment of the Handicapped, Portland, Maine

Standing: Norman D. Jones; seated left to right: Cyril F. Brickfield, Hugh J. MacLeod, Howard L. Bennett, Col. Herbert B. Allen.

Mr. Brickfield paid tribute to the late Ralph F. Webster of the VA, who had died the day before. Mr. Webster was to have been a panelist. He then described recent innovations in the field of veterans' affairs: a Veterans Advisory Commission holding hearings around the country, to gain a "grass roots" viewpoint of veterans' opinions; a contact service by telephone rather than personal visits; a team of contact representatives in Vietnam advising servicemen about their benefits.

Mr. MacLeod gave a project report of his company's project of placing the seriously handicapped in business for themselves, providing copying and reproduction services. The average disabled businessman has built his income to the point where he could match the income of his community within three years, he said.

Colonel Allen said that many military retirees face prejudice in finding employment because employers have the mistaken notion that, being retired, they must have been totally and permanently disabled. This is not at all the case; military retirees can offer much to the labor market, he said.

Mr. Bennett discussed some of the roadblocks to employment he had observed (he is confined to a wheelchair): no place to park near work, high insurance premium charges made to the handicapped, public transportation systems not accessible to the handicapped, disqualification of teachers who are handicapped in many school districts across the United States.

EMPLOYMENT OF THE MENTALLY RESTORED: THREE APPROACHES

Moderator: Edward F. Rose, Director, Employment Programs for the Handicapped, U.S. Civil Service Commission

One Employer's Viewpoint

Robert M. Palmer, Manager, Community Relations, Polaroid Corporation, Cambridge, Mass.

An Employer Committee in Action: Employer Liaison Committee, D.C. Mental Health Association

Serge Sacknoff, Vice President, Sloane/Mayer Company, Washington, D.C.

Mrs. Gertrude T. Bigman, Supervisor; D.C. Department of Vocational Rehabilitation Unit, St. Elizabeths Hospital Washington, D.C.

Gerald Cohen, Personnel Director, Drug Fair Drug Stores, Alexandria, Va.

Gordon Graham, Personnel Director, Hechinger Company, Washington, D.C.

Robert Wilson, Personnel Director, Howard University, Washington, D.C.

Psychodrama: A Demonstration

James M. Enneis, Supervisory Psychodramatist, St. Elizabeths Hospital, Washington, D.C.

Don Edward Clarkson, Psychodramatist, St. Elizabeths, Hospital, Washington, D.C.

Norman Griffith Zinger, Psychodramatist, St. Elizabeths Hospital, Washington, D.C.

Recorder: Mrs. Hallie Young, Assistant to the Executive Director, D.C. Association for Mental Health, Washington, D.C.

Mr. Palmer described his company's problems and progress in hiring the mentally restored. What's needed, he said, is followup by the mental hospital; good training of supervisors who will be working with the mentally restored. Fellow-employee attitudes usually have been "very good," he noted.

Next, a demonstration meeting of the Employer Liaison Committee of the D.C. Mental Health Association was held on stage—to show the audience how employers go about interviewing mental patients about to be discharged, to help them with their employment problems. Serge Sacknoff, Chairman, said that 64 patients had been processed by the Committee; 32 were placed. Salaries ranged from $56 to $152 a week.

Finally, a demonstration of group psychodrama was held, with members of the audience participating. A young man played the part of an ex-patient looking for a job. Others took roles as counselors, employers, other members of the Community. A great deal of enlightenment of the problems of the mentally restored came out of this demonstration.

HANDICAPPED HOMEMAKERS

General Chairman: Dr. Elizabeth Eckhardt May, Consultant, Rehabilitation in Homemaking, Braddock Heights, Md.

Specially Designed Fashions for Men and Women

Session Chairman: Miss Marjorie Fish, OTR, Training Consultant, Vocational Rehabilitation Administration, Department of Health, Education, and Welfare

Panelists:

Mrs. Dorothy A. Behrens, Designer of Special Clothing, Vocational Guidance and Rehabilitation Services, Cleveland, Ohio

William T. Leinenweber, Executive Director, Leinweber Foundation, Inc., Chicago, Ill.

Miss Virginia Pope, President, Clothing Research and Development Foundation, Inc., New York, N.Y.

Recorder: Mrs. Lois Schwab, Ed.D., Associate Professor, Department of Family Economics and Management, University of Nebraska, Lincoln, Nebr.

The Best in Films on Independence in Homemaking

Presented by: Mrs. Neva R. Waggoner, Consultant, Rehabilitation in Homemaking, Storrs, Conn.

Mrs. Dorothy A. Behrens, Designer of Special Clothing, Vocational Guidance and Rehabilitation Services, Cleveland, Ohio (right), displays some of the clothing which was exhibited at the fashion show for the handicapped.

William T. Leinenweber, Chicago, Ill., shows a custom-made overcoat adapted for men in wheelchairs. His company, Leinenweber Foundation, Inc., provides special tailoring services for handicapped men to facilitate dressing and improving appearance.

Miss Virginia Pope, President (extreme left) and Mrs. Helen Cookman, Executive Director (extreme right), of the Clothing Research and Development Foundation, New York, N.Y., are shown with the models who wore their specially designed clothing for the handicapped at the Handicapped Homemakers panel session.

Miss Pope said that clothing for the handicapped should be precisely-engineered, of enduring fabric and beautiful. Items of clothing should not look different from those worn by the non-handicapped; the handicapped do not want to stand out, she pointed out.

She described the work of the Clothing Research and Development Foundation, which seeks to encourage leading designers to fashion clothing which the handicapped can use, under a "Functional Fashion" label. A fashion pattern company is promoting clothes with "Functional Fashion" features; also a design school is teaching students to design clothing for the handicapped, she said.

Mrs. Helen Cookman and Miss Muriel Zimmerman modeled "Functional Fashion" clothing. Mr. Leinenweber showed his line of custom clothing for men who must remain in a seated position in a wheelchair. Mrs. Behrens noted that independence of dressing is part of the rehabilitation process; therefore, clothing must be of concern to those in the field of rehabilitation.

Mrs. Neva Waggoner reviewed films which describe special problems of handicapped homemakers. Among them: "An Approach to Work Simplification for Handicapped Homemakers" and "Where There's A Will."

THE INTERNATIONAL BANQUET . . .

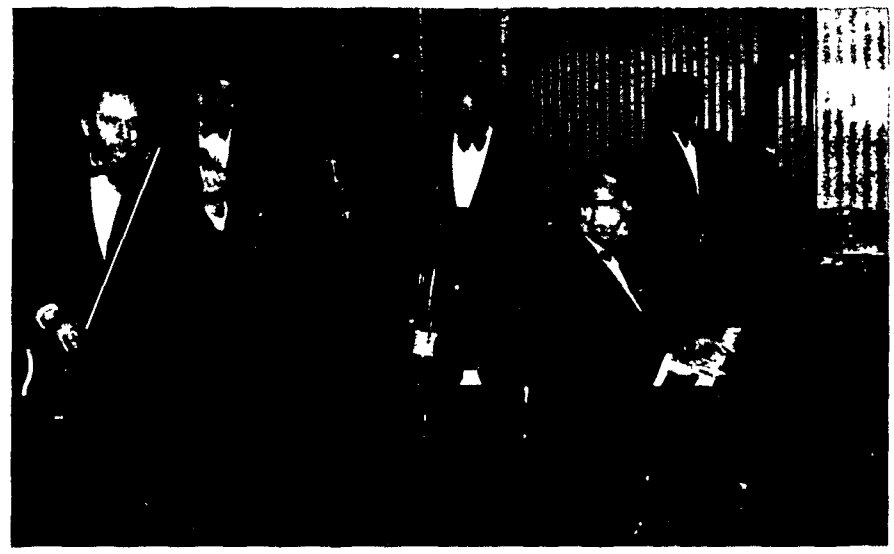
Above left: the Irish Ambassador to the United States and Mrs. William P. Fay (left) engage in animated conversation with fellow internationalists at the reception preceding the International Banquet of the President's Committee on Employment of the Handicapped (April 27th). Others shown (left to right) are Vice Chairman Leonard Mayo; Mrs. Teresa Serra, Associazione Italiana per l'Assistenza agli Spastici, Italy; Miss Mary E. Switzer, U.S. Commissioner of Vocational Rehabilitation Administration; and Joseph N. Malone, National Organization for Rehabilitation, Ireland.

Above right: Mark Evans, Vice President for Public Affairs, Metromedia, Inc.

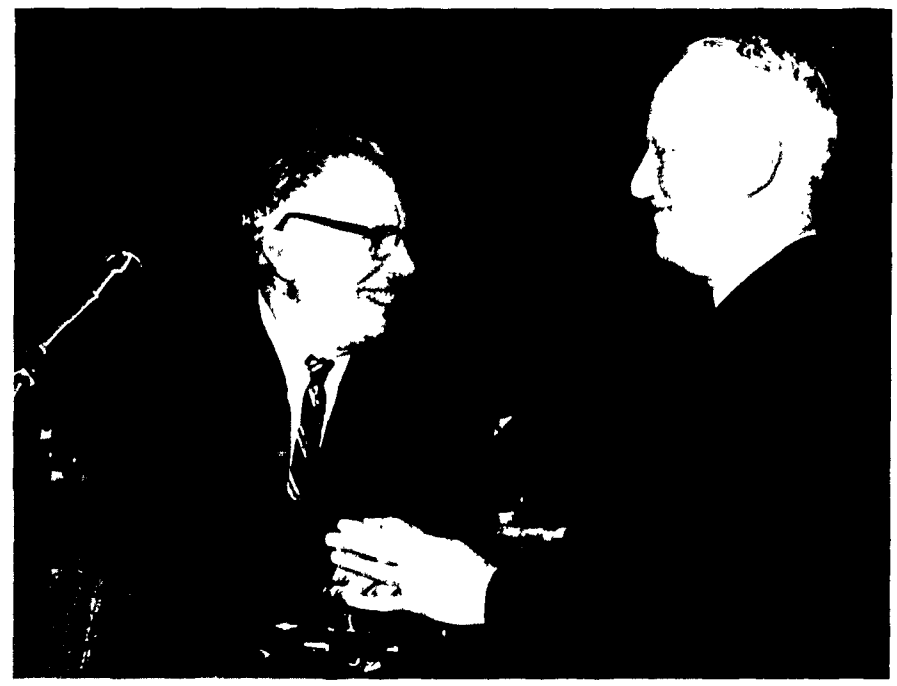
Dr. Frank H. Krusen presented People-to-People Citations to Mrs. C. R. Henderlider, Cleveland, Ohio, and Dr. William B. Walsh, President, Project Hope.

Norman Acton, Secretary General of the World Veterans Federation (left), presents the WVF Trophy to PC Chairman Harold Russell. Other persons who have received this Trophy in the past are as follows: Vincent Auriol of France (1964); UN Secretary U Thant (1965); General K. S. Thimayya of India, Commander of UN Forces in Cypress (1965); and Dr. Howard Rusk of the United States (1966). The trophy is awarded by the WVF through its Auxiliary Board.

Right: Harold Russell presents the President's Committee Distinguished Service award to Donald V. Wilson (right), President of the Leonard Wood Memorial for the Eradication of Leprosy.

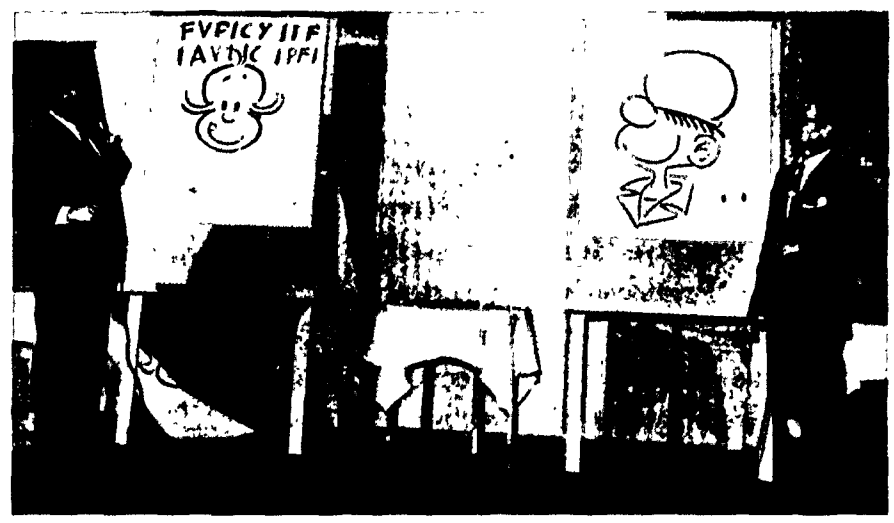


Instrumental music for reception and banquet was provided through the courtesy of the Recording Industry's Trust Fund with cooperation of Local 161—American Federation of Musicians (AFL-CIO).



Cartoonists Dik Browne (left) and Mort Walker demonstrate their talented pens and sparkling wit during the banquet. Browne is the creator of the cartoon strip "Hi and Lois," and Walker, the famed "Beetle Bailey." Together with their EMCEE, Allen Saunders, the three cartoonists put on a never-to-be-forgotten show.

Chatting with other panelists and handicapped delegates is Allen Saunders, second left, creator of the famed "Mary Worth" cartoon strip and Chairman of Cartoonists Committee. Saunders and his two pals, Mort Walker and Dik Browne, were the entertainment hit of the banquet.



A JOYOUS OCCASION

Good company, fine food, a spirit of gayety—these were the hallmarks of the International Banquet on Thursday evening in the International Ballroom of the Washington Hilton Hotel.

There was sparkle everywhere. The music sparkled—provided by the Record Industry's Trust Fund in cooperation with Local 161 of the American Federation of Musicians. The table setting sparkled. The lights overhead sparkled and twinkled. And the program sparkled. Gifts from Garfinkels and Paraplegic Manufacturing Company added to the sparkle also.

Mark Evans, Vice President for Public Affairs of Metromedia, Inc., Washington, D.C., and one of the area's leading television personalities, was a superb master of ceremonies.

Dr. Harold H. Wilke, Executive Director of the Council for Church and Ministry of the United Church of Christ, delivered the Invocation. Hardly anyone noticed that Reverend Wilke was born without arms.

Harold Russell presented the Distinguished Service Award of the President's Committee to Donald V. Wilson, President of the Leonard Wood Memorial for the Eradication of Leprosy, for his many years of outstanding service as Secretary General of the International Society for Rehabilitation of the Disabled. Dr. Frank H. Krusen, Chairman of the People-to-People Committee for the Handicapped, presented citations to Mrs. Ruth Henderlider of Cleveland, Ohio, and Dr. William B. Walsh, President of Project HOPE, for their dedicated service to the handicapped around the world.

Next, Allen Saunders, cartoonist-creator of "Mary Worth" and "Steve Roper" and Chairman of the Cartoonists Committee of the President's Committee, entertained with a "chalk talk." He was joined by Dik Browne, creator of the "Hi and Lois" comic strip, and Mort Walker, of the "Beetle Bailey" strip.

Featured speaker of the evening was Norman Acton, Secretary General of the World Veterans Federation.

Mr. Acton:

Speaking as one who has had the opportunity of observing the rehabilitation scene from an international perspective for some years, I would like to assure the President's Committee that your constant concern with the progress of services for the disabled around the world has been received in other countries with great warmth and gratitude. The hand of friendship and cooperation extended for two decades by the President's Committee has been welcomed and appreciated as a true manifestation of the spirit of the people of this country.

I have been asked to make some observations on the present situation in the rehabilitation field around the world. I would like simply to give you a few impressions based on some years of experience in international organizations deeply concerned with the problems of disability.

Of all fields of human endeavor, I know of none in which there has been greater real progress in the past 20 years than in this complex of interests and activities we call rehabilitation. We all know that what we are talking about was to many people something new at the end of World War II; today, there are few people in the developed countries who do not know something of what we mean by rehabilitation. We all remember how in the 1940's and early 1950's, many countries were making their first, tentative efforts to organize some rudiments of a service; today, there are few countries without some substantial beginnings, and there are many with programs in stages of vital development.

Why has there been such significant progress in the development of services for the disabled in recent years? I would cite three factors:

First, the purpose and aim of rehabilitation is essentially logical and valid. I don't need to tell you that the objectives we seek can be proved to be sound and efficient whether they are evaluated by the criteria of ethics, of social progress or of the most pragmatic economics. In an era when mankind has for the first time accepted the possibility of organizing to cope with the problems of society, rehabilitation has enjoyed a high priority because of its validity, and, let's face it, because the need for services has been more apparent than in some other fields.

Second, the field of service for the disabled has benefited more than I can describe by the quality of the people who have engaged themselves in it. Speaking as one who has been on the fringes of this work, I welcome this opportunity to pay tribute to that wonderful fraternity of people who make up the world of rehabilitation. Many of the world's problems—including, I assure you, the division of Germany, tension in the Middle East and the conflict in Vietnam—would be a great deal closer to solution if the parties concerned could capture the spirit of cooperative endeavor that exists in the rehabilitation fraternity; and could identify as you have done the reality of the goals which, when we reduce human aspiration to the essentials, are the same for us all.

The third factor has been the warm and bright

light of excitement that has permeated most activities in this field. The satisfactions of service have been magnified by the thrills of new discoveries; the reward of lives given new values has been multiplied by the friendships which span nations and continents. It has become so well known that it is almost trite to say it again: whenever and wherever you have contact with programs for the disabled, you find the spark of pioneering combined with the concept of genuine service to produce a sense of dynamic purpose that I can only describe as excitement.

I would like to use these three factors—the validity of the purpose, the quality of the people and the excitement of the experience—to evaluate today's rehabilitation picture as seen from the international point of view.

If the purpose of our rehabilitation activity has been valid in the past, it is certainly even more so today. We all know that our increased ability to prolong life must be accompanied by an improved capacity to make life worth the prolongation; and that often means the replacement, augmentation or re-training of necessary functions in an ever increasing number of people. It is obvious that technological development is constantly reducing the vocational, educational and recreational limitations of disability, but making even more challenging the problem we have done the least to solve—the social limitations of disability. We may regard with pride the quality of many of our services, but I think few of us would claim that they are perfect, even in the most advanced countries. I need not belabor the point that the requirements of the world's disabled population are not yet being met, and whatever validity of purpose may have existed in the past remains and is more clearly understood as a major challenge of our time.

At the same time, we must recognize that mankind also has a number of other problems, and many of them are equally important. The questions of population explosion and hunger, taken separately, thrust on us two of our greatest challenges; taken together they threaten the existence of human society as we know it. In this country, and in the world, the struggle to give reality to the concepts of human rights and freedoms is certainly a priority demand on our attention. And so on through a myriad of issues, the burdens of our complex society are many and demanding. I know that none of us wishes to divert attention or support from the efforts that must be made for the solution of each of the grave problems confronting our nations and our world, but nevertheless we must make certain that our particular area of activity receives its fair share of both material and human support.

At the international level in particular, we must not lose sight of the need to continue pressing the validity of our purpose; because it is at that level, in the United Nations, the Specialized Agencies and other international bodies, that the problems and demands of mankind are seen in their greatest complexity. It is there that, despite the great work that has been done, there is a constant danger that the help available for rehabilitation programs will be curtailed or lost as too many demands are made on too few resources.

I would like, therefore, to repeat a plea I have made on other occasions. I urge that each one of you, through your organizations, your representatives in the Congress and whatever other means and channels you have available, make certain that your government not only continues to accord an appropriate priority to services for the disabled in your country, but also reflects that emphasis in its participation in international institutions. The United Nations, the World Health Organization, the International Labor Office, UNICEF, UNESCO: these are the inter-governmental organizations that should, and in some cases do play a major part in the international rehabilitation effort. We must never forget, however, that what they do, and what resources they have, are both a result of the attitudes, and ultimately of the votes, of the national governments which are their members. As citizens, therefore, it is our responsibility to make certain that our government, in its participation in and support of these world bodies, stresses the importance of there being sufficient budget, sufficient qualified staff and sufficient attention to insure that continuing progress will be achieved in the development of services for the disabled.

In my opinion, the United Nations and the International Labor Office are today conducting the programs in this field which we should expect as a minimum. The other—the World Health Organization, UNICEF and UNESCO—are not; and, so far as I know, the delegations of the United States to these bodies have not insisted that they should. That may suggest a starting point for your efforts; but we cannot relax on any front—and that is why I urge that we take every opportunity to stress the importance of this work in all of the related agencies.

The honest praise I have accorded to the people of the rehabilitation fraternity might lead you to believe that I believe there are no problems in this area of our evaluation. Unfortunately that is not the case. In most, if not all countries, the number of persons professionally engaged in this field of work is insuffi-

cient. There are problems of training facilities, conditions of work, competition from other professions also seeking personnel, and others of which we are all aware. They exist in the most advanced countries. The much greater problem, however, is that of the newly developing countries, and I would like to say a special word about it.

In general, the personnel problems of rehabilitation projects in the newly developing countries result from some combination of the following situations: an insufficient system of primary education to prepare large numbers of young people for specialized training of the type we require; a serious deficiency or complete absence of specialized training facilities for the disciplines associated with services for the disabled; and a public mind which does not yet accord an appropriate importance and status to work in the rehabilitation field.

Thanks to priority efforts being made by many countries, aided by the various forms of international cooperation, an increasing number of young people with a primary education is being produced by the school systems of the developing countries. The solution of this aspect of the problem is beyond our scope. We must be aware of it, however, and be prepared to be flexible and imaginative in making use of such preparation and such skill as we can find.

Until now, the lack of specialized training facilities in the developing areas has led us to put great emphasis on bringing a relatively few qualified individuals to the more developed countries for training. This has often produced favorable results, especially when the individuals have returned to their own countries and taken leadership in establishing training programs there. I believe, however, that we all realize that this is not in the long run the method on which we can rely. It does not make sense economically, it cannot possibly cope with the problem in its full dimensions, and it necessarily inhibits or distorts to some degree the evolution of an indigenous rehabilitation movement as a part of the development process in the new countries.

Obviously, it will never be a question of using only one method or the other, and there will always be a need for opportunities for some individuals to travel to other countries for training. I am convinced, however, that we will be only scratching the surface of the problem in most of the newly developing countries until we have found more and better ways to take the training to the people where they need and will use it, rather than relying on the contrary process.

The question of the public image of rehabilitation as a profession and as a career is necessarily related to the entire evolution of our work. As local programs are launched and succeed, as individuals who undertake a career in such programs make their successes, as training facilities become available, so there will be increased understanding of the work, appreciation of the efforts of those engaged in it, and improvement of their status. This question is also related to the third factor in my evaluation—what I have called the excitement of the experience—and I will turn to that in just a moment.

Before doing so, however, I would like to mention another aspect of the question of the rehabilitation fraternity. I have been talking about those who engage themselves professionally in services for the disabled, but there is another very important category of people: those whose profession is something else, but who interest themselves in rehabilitation activity and play an active role stimulating, supporting and aiding it. We all know that, in many cases, local and national programs can trace their origins to the initiative and dedication of such individuals. One of the great achievements of the President's Committee has been its success in reaching out to the community at large and in converting so many people not only to accept the principles and objectives of rehabilitation, but also to engage themselves in active work.

Thanks to the activities of the President's Committee and a number of other great organizations in this country, the rehabilitation fraternity can now be counted in the millions and that goes a long way towards explaining the broad base of support from both governmental and private sources upon which your programs can draw. Similar progress has been made in some other countries, but I earnestly believe that a major challenge for us all is that of breaking through to the larger public in many countries. Too often our programs are encased in shells of indifference, misinformation, tradition and even jealousy or over-possessiveness on the part of those who may have originated or developed the groundwork. The techniques of the President's Committee or of any other institution are not necessarily exportable, but the spirit and example can certainly be used effectively. I would encourage anyone who has contacts or responsibilities in the international sphere constantly to urge that high priority be given to measures which will be appropriate to the social situation in the country concerned and will obtain the interest and involvement of a wider segment of the public than is usually the case.

The last point, as every other I have made, is both cause and effect of what I have called the excitement

of the experience. It might seem that when we have a sufficient number of competent and dedicated people engaged in what we know is an important, socially and economically valid field of interest, we have enough. My view is that there must also be the electric impulse of pioneering, of confronting and overcoming difficulty, of applying to every phase of work in the rehabilitation field the courage, the stamina and the essential optimism which we know must make up the character of the successfully rehabilitated individual.

I have said that we have had such excitement and that it has been one of the foundations of our progress, and I know that is true. But, I wonder if we can be entirely certain that we are maintaining it. Especially in the international realm, I compare the spirit of today's programs with the flavor of those days nearly 20 years ago when the combined international program of the United Nations, the Specialized Agencies and the Non-Governmental Organizations was created and launched, and I wonder if we are attacking today's problems with the same crusading zeal?

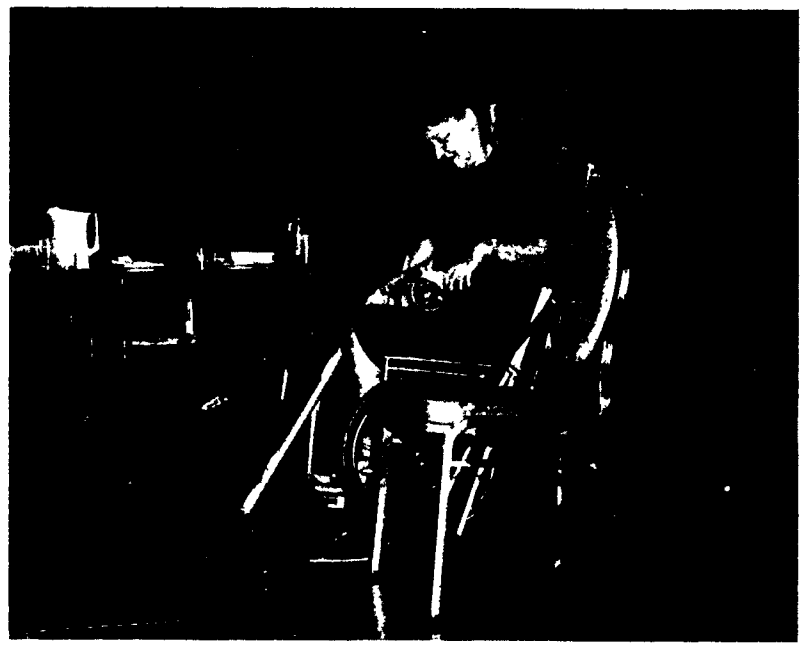
I suggest that we make certain that we are still crusaders in the world. One final characteristic of the rehabilitation fraternity is that it is made up of people who have seen the real potentiality of the human spirit and are consequently ready and eager to join hands across the various boundaries which separate mankind in order to help each other. It is for that simple reason that work for the disabled has been one of the most successful channels of international understanding and cooperation. It is for that simple—but vastly important—reason that we must make certain that the international activity of the rehabilitation fraternity continues, and expands.

FRIDAY MORNING . . .

Mrs. Helen Tullis, Baltimore, Md., shows her skills in preparing vegetables for a tossed salad despite total blindness. Mrs. Tullis is an accomplished homemaker and employs many of the work simplification principles developed by Dr. Lillian Gilbreth, Industrial Engineer.

M/Sgt. V. J. Hope who lost his right hand in Vietnam last September demonstrates his ability to flip the pancakes he prepared during the display of the varied talents of handicapped homemakers. He is back on active duty at Fort Belvoir, Va., following rehabilitative services at Walter Reed General Hospital, Washington, D.C.

Mrs. Neva R. Waggoner, Storres, Conn., shows John Batchelder, WMAL-ABC TV personality, and Dr. Elizabeth Eckhardt May, consultant in handicapped homemaking, Braddock Heights, Md., how she does all of her home laundry with one hand—including ironing, pinning clothes on the line, and folding operations.



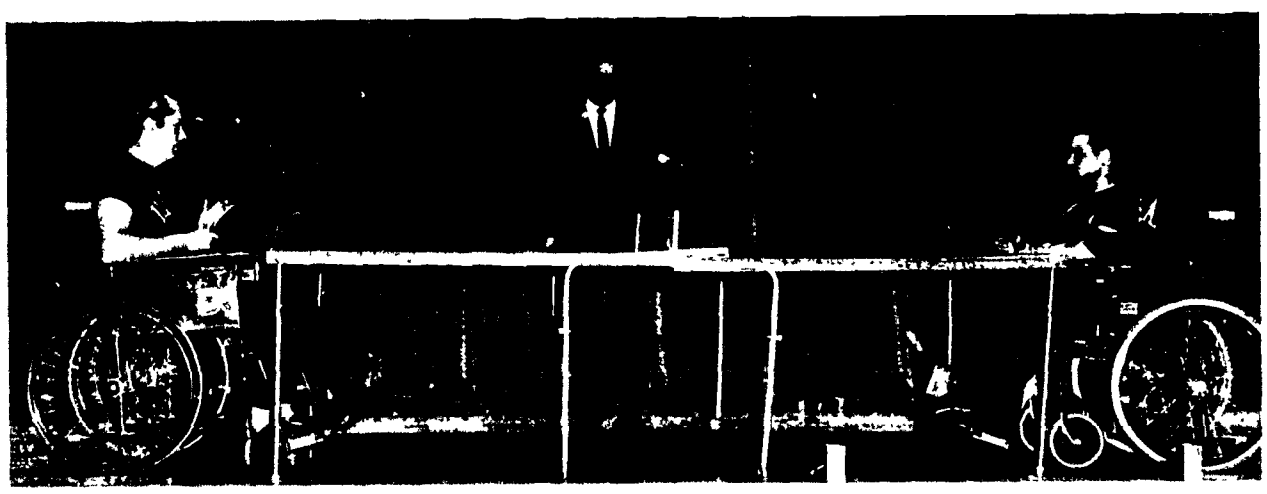
Although confined to her wheelchair for many years by polio residuals, Mrs. Margaret Hovey Walker, Pacific Palisades, Calif., has managed her home, raised a family, and participated in many community betterment projects. She shows her ability to do essential cleaning tasks from her wheelchair with well-chosen but readily available tools.

Artistic talent that won out over physical paralysis was demonstrated by Glen A. Fowler, outstanding graduate of Famous Artists Schools.

The handicapped in industry were represented by Jim Lewis (left), an electronics assembler from Lockheed Missiles and Space Company. The skills he explained to commentator John Batchelder have made him a valued employee.

Frances Cannon, deaf medical histopathological technician at the National Institute of Dental Research, NIH, showed Annual Meeting audience how she prepares tissues for pathological review by dental scientists.

A lively game of table tennis by members of the U.S. Wheelchair Sports Demonstration Team was a highlight of the Friday morning program.



A MORNING OF DEMONSTRATIONS

What have the handicapped been able to do for themselves? That was the theme of the Friday morning session of the Annual Meeting, presided over by Mrs. Jayne Baker Spain, Vice Chairman of the President's Committee.

Commentaries were supplied by John Batchelder, TV personality at WMAL-ABC in Washington, D.C.

The first demonstration, presided over by Dr. Elizabeth Eckhardt May, dealt with the principles of work simplification as they apply to the handicapped in homemaking activities.

Master Sergeant V. J. Hope of Fort Belvoir, Va., who lost an arm in service, demonstrated his ability to make pancakes with one hand—including flipping them high in the air. Mrs. Helen Tullis of Baltimore, Md., blind, showed her salad-making ability on stage. Mrs. Neva R. Waggoner of Storrs, Conn., with one arm, demonstrated how easily she could do the family laundry. And Mrs. Margaret Hovey Walker of Pacific Palisades, Calif., in a wheelchair, showed how effortlessly she can dust and vacuum.

Next, Glen A. Fowler of Salisbury, Mass., well-known artist affiliated with Famous Artists Schools, Inc., and almost completely paralyzed, demonstrated how he paints landscapes by holding the paint brush between his teeth. A collection of his paintings was on display on stage.

Jim Lewis, electronics assembler at the Lockheed Missiles and Space Company, Sunnyvale, Calif., with deformed hands and artificial legs, showed his skills at fine welding and assembly work. To top it off, he sat down at the piano and played and sang an original composition.

Mrs. Frances Cannon, medical histopathological technician at the National Institute of Dental Research in Bethesda, Md., totally deaf, demonstrated her job of preparing slides of human tissues for examination under microscopes.

Under the direction of Benjamin H. Lipton, Director of the Bulova School of Watchmaking, four paralyzed athletes took part in a fast-moving game of table tennis in wheelchairs. The participants: Hubert Beckles of Springfield Gardens, Long Island, N.Y.; Robert Classon, Manhattan, N.Y.; David Vincent, Bronx, N.Y., and Alonzo Wilkins, Manhattan, N.Y.

So ended the demonstrations. The final feature of the morning was a talk by a person who had come a long way in overcoming his handicap of spastic paralysis, Herman Robinson of Elizabethton, Tenn., Chairman of the Tennessee Governor's Committee on Employment of the Handicapped.

Mr. Robinson's Comments

We COULD close this program RIGHT NOW—and maybe we SHOULD. What can I say that can add anything to what these people, these HANDICAPPED people, have just DEMONSTRATED to you?

I tell you that if we didn't have a good picture of what our work is all about, we have it NOW.

The only question remaining is: "What are we going to DO about it?"

We hear a lot about PROBLEMS.

We do not hear enough about OPPORTUNITIES.

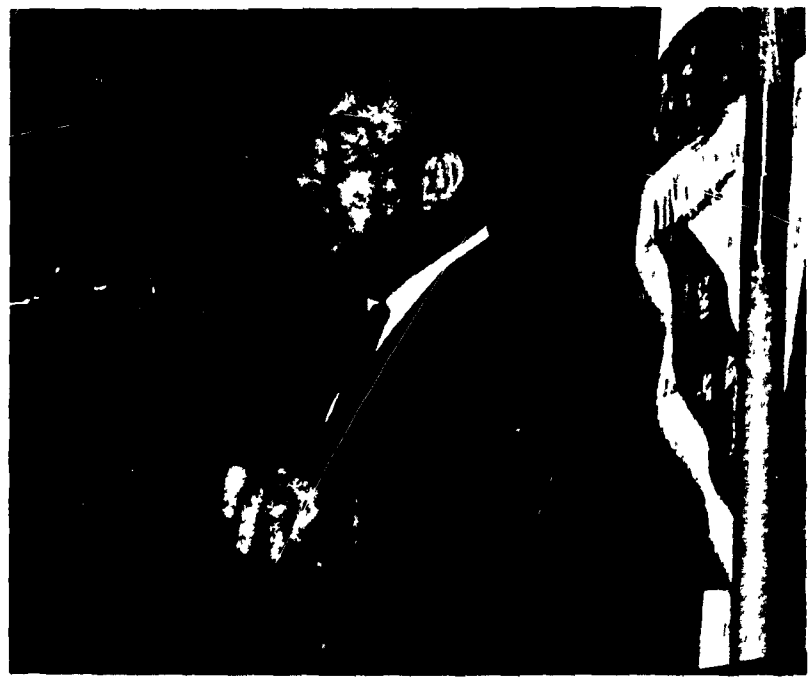
I believe we have as many OPPORTUNITIES in this world as we have problems.

And what we have seen with our own eyes yesterday and this morning shows us clearly what can happen when we apply our opportunities TO our problems. . . .

My home town is nestled in the Appalachians.

The other day a lady walked into our 10-cent store to buy a birthday present for her 10-year-old son.

The clerk pulled down one of those PUT-TO-GETHER toys . . . YOU know the kind. They come with an assortment of NUTS, BOLTS, SCREWS,



WHEELS, CIRCLES, SQUARES, GEE-HAWS AND HEE-HAWS—a little bit of EVERYTHING.

"But," asked the mother, "Isn't this a little COMPLICATED for a young boy?"

"Oh no, not complicated," the clerk told her, "but EDUCATIONAL! It helps a boy adjust to the world

in which he lives. You SEE, no matter HOW he puts it together, it's WRONG!"

A pretty good COMMENTARY, wouldn't you say?

It DOES seem that no matter how we put it together, it's wrong.

VIETNAM . . . the POPULATION EXPLOSION . . . THE SOARING CRIME RATE . . . the CLIMBING DIVORCE RATE . . . RIOTS and DEMONSTRATIONS IN THE STREETS . . . REVOLTS ON THE COLLEGE CAMPUS . . . DISRESPECT FOR THE FLAG . . . BEATNIKS AND VIETNIKS.

Yes, these we have WITH us. . . .

But they are not EVERYTHING.

In some areas of endeavor, in some parts of our society, the picture is more cheerful. We are beginning to put the puzzle together RIGHT.

Our program this morning is surely proof of THAT. So don't sell us short. We are not ABOUT to give up the fight.

It was my priviledge a couple of years ago to visit Russia on a PEOPLE-TO-PEOPLE mission.

While I was there I think I LEARNED some things.

ONE—the Russian PEOPLE are a lot like our PEOPLE.

TWO—the Russians don't HAVE hire-the-handicapped-problems.

Under THEIR system, the M.D. tells the commissar what a man is capable of doing. The commissar tells the factory head of the farm manager to put him to work—and that takes care of that.

Everybody does SOMETHING—he does what he is TOLD to do.

Those who DON'T or CAN'T aren't likely to EAT. It's that COLD-Blooded—and the state determines WHAT, WHEN, WHERE, WHY AND HOW.

Now, in our democratic society, we can't ORDER any individual—handicapped or not—to take this or that job.

Thank God, there is a right of CHOICE here—and the individual—although handicapped is not yet the pawn of the state. May he NEVER be!

But the free and voluntary nature of our way DOES impose its penalties. We have to do by UNDERSTANDING and COMPASSION and WISDOM what the COMMUNISTS do by decree and edict.

That's our PROBLEM in this matter of hiring the handicapped. That's why it is hard to put the pieces of the jig-saw TOGETHER. And that's why I am here on this occasion—I want to TALK to you about it.

We need to look our problems and fears in the eye—and conquer them.

And we need to be able to see the OPPORTUNITIES that ALWAYS ACCOMPANY our problems.

Some of us, unfortunately, never see beyond the PROBLEMS.

There are quite a few "FEAR WORDS" among us today.

WAR is one—and with reason.

RACE is one. . . .

POVERTY is one. . . .

DEMONSTRATION is one. . . .

STRIKE is one. . . .

CANCER is one. . . .

And HANDICAPPED is one—a BIG one.

Some of us start dodging and ducking when the word "handicapped" is mentioned.

Yet we know that there is more trouble in this area than any other, in so far as problems of employment are concerned.

I don't have to tell you that UNEMPLOYMENT percentages are DOWN, OVERALL.

But they remain RELATIVELY HIGH among the handicapped, as you know.

HANDICAP? POVERTY? TROUBLE? Don't all these tend to go together?

Employ the handicapped, and you begin curing some OTHER sicknesses, too.

Now, ladies and gentlemen, I am not speaking THEORETICALLY. I am not telling you something I have READ. I am not just repeating what somebody BELIEVES.

I am telling you what I have EXPERIENCED.

I was handicapped from BIRTH. I still AM. The doctors told my mother and father I would never walk or talk—and I DIDN'T until I was seven years old.

They said I would never LEARN anything—but I DID learn, not much maybe, but SOMETHING.

And here I am today doing the best I can with what I have—not doing very well, perhaps, but DOING, nevertheless.

What I have done, others can do BETTER—if given the CHANCE. And they must be GIVEN the chance.

If kind and concerned individuals hadn't given me a chance, I would have been a NOTHING: Certainly I would not be addressing you here today.

My affliction was spastic paralysis. My HANDS shook. I walked like a man who had too much to DRINK. People got out of my way when I came down the STREET.

But I got the crazy idea I could play FOOTBALL—and EVERYBODY LAUGHED. It was a big JOKE, in and out of school.

Then came the big TURNING POINT in my life. The high school coach took me in hand. He made me the waterboy, and I was HAPPY.

But I doubt that HE was happy. Because on several occasions I spilled so much water that opposing teams accused him of "wetting down" the field.

And our players would say "Coach, don't let HERMAN have the ball. He'll shake all the AIR out of it."

Oh yes, it was a BIG JOKE—and the fellows couldn't get ENOUGH of it.

But, let me tell you, the NEXT YEAR or two, they got enough! For I went out and MIXED with them—and eventually made the TEAM. And started GIVING OUT as many licks as I was getting!

When I would make a bad mistake, Coach would say, "Herman, you just stay in there and keep plugging." He was an inspiration THROUGH THE YEARS.

They called him "Mule," and I think that was because he was too darn stubborn to give up on people like me.

I am so humbly glad that "Mule" never did laugh at me back in those days when I was a blundering kid, and he was a young coach turning out champions.

Would you like to SEE "Mule"? He's HERE.

Stand up, "Mule", and let them SEE you.

I couldn't forget "Mule" in a THOUSAND YEARS.

There is ANOTHER gentleman I can't forget—ANOTHER who saw beyond my PROBLEM and gave me an opportunity.

When I came out of college back in the depression years, I had an idea I could be a newspaper reporter. I had dabbled some in the writing game, particularly sports, and fancied myself A SECOND GRANTLAND RICE.

But I could hardly hold a pencil. And a typewriter seemed to write in ANOTHER LANGUAGE when I BEAT ON THE KEYS.

I did a little checking—and found out newspapers were LAYING OFF men, not taking them ON.

Even so, I had enough GALL—or something—to barge into the office of the publisher of the Johnson City Press-Chronicle—and ask for a job.

Looking back on it, I marvel at the whole episode—why I went IN, and why he didn't kick me OUT.

It must have been a miracle, for this HARD-HEADED BUSINESSMAN, this REALIST in so many areas of life, let me give him my sales pitch—and hired me on the SPOT.

Sometimes, even now, I think it was ALL JUST A WONDERFUL DREAM.

We tell the handicapped people to have faith—and that is fine. But their faith often is not enough. WE must have faith, too, as this PUBLISHER had. For it was not MY faith that brought me out of the shadows into the sunlight, it was HIS.

And so it is with many of the handicapped people. Perhaps I didn't have too much faith, but my publisher friend had faith. And the fact that I overcame my difficulties is creditable to HIM, not me.

But, at any rate, I am so happy this understanding publisher who was willing to take the gamble—and what a gamble it WAS—is sharing this occasion with us. Will Mr. Carl A. Jones, my great and good friend, please rise? . . .

I will never get through thanking GOD for Mr. Jones.

And since I'm in a thankful mood, I want to include just one more person.

Some few years after graduating from Mule's football team, I met the most wonderful girl in the world. And to my surprise—and everybody else's—she agreed to be my wife. Marrying her was the greatest thing I ever DID.

We rejoice in the happy years we have had and in the two fine children we have. . . .

I want you to meet this girl—Marjorie.

Ladies and gentlemen, I hope you will pardon these little exercises in sentimentality. I just wanted to offer "living proof" of what I have been saying—that the handicapped can live NORMAL, USEFUL, EVENTFUL lives—if given the chance.

We speak of the GREAT SOCIETY and the ABUNDANT LIFE. Truly we ARE a great society, the greatest the world has ever known.

But we are not a COMPLETE society. We will not be a COMPLETE society until we find a way to give every individual an opportunity to live and have his being to the full extent of his capabilities.

We cannot say, "That person is HANDICAPPED"—and dismiss him from our minds.

We cannot say, "That little girl has CEREBRAL PALSY, What a PITY!"

We cannot say, "That boy is RETARDED. There is no place for him."

No, we must face up to our responsibilities and do what WE know OUGHT to be done and CAN be done.

The Bible says, "Be ye DOERS of the word, and not hearers only."

The Great Society will glow somewhat dimly until our social understanding catches up to our political and scientific understanding.

We are going to the MOON.

YES, but we have unfinished business here on EARTH.

We are designing computers that will do the work of millions of men!

Yes, but we must not forget HUMAN values.

We are going to re-build our CITIES and criss-cross the nation with multi-lane HIGHWAYS.

Yes, but we must not ignore the yearning in the heart of a boy, or the emptiness in the soul of a girl.

We are striving to end WAR and usher in "Peace on earth, goodwill toward Men."

Yes, but let us not forget that there can be no real peace until there is peace within the INDIVIDUAL.

It is to these human values that the President's Committee on Employment of the Handicapped is dedicated.

And it is to these values ladies, and gentlemen, that I would direct YOUR attention.

So often we take an individual to the top of the mountain and show him the promised land . . . but then we do not help him enter it.

At BEST, our time on this earth is SHORT.

And with the passing of every year, our chances to do something USEFUL and leave some imprint on the sands of time are SLIPPING AWAY.

We have spent TWO DAYS here reviewing our work and getting a line on our problems.

Now, do we go back home—determined to do more—each as he is able, than we have done before?

You and I, united in a great mission, are privileged to live in one of the summit times of history.

Destiny beckons. The next few years can bring decisive break-throughs for handicapped people . . . if we do our job NOW.

Are we equal to the challenge?

Are we ready to live a day at a time, striving to be USEFUL, striving to find THE ANSWERS, seeking to serve the mission to which God is CALLING US?

Are we ready to devote ourselves to something BIGGER THAN WE ARE?

Are we ready to OPEN A DOOR OR A WINDOW for somebody?

Are we ready to offer help, REAL HELP? Ladies and gentlemen are we?

Are you? Am I? Are we in earnest about THIS?

Are we going to translate TALK into ACTION?

Are we going to justify the time we spent here?

Are we going to measure up as men and women worthy of a high calling—worthy in the sight of man and God?

If NOT, we have wasted our TIME.

Go back to your home determined to give more of yourself in TIME, in TALENT, in ENERGY . . . and more of your strength in carrying the message and telling the story to others.

Ah, how much it helps all of us to have someone PULLING FOR US, someone offering GUIDELINES. Someone saying in so many words, "I CARE WHAT HAPPENS TO YOU. I want you to win out. I am with you all the way."

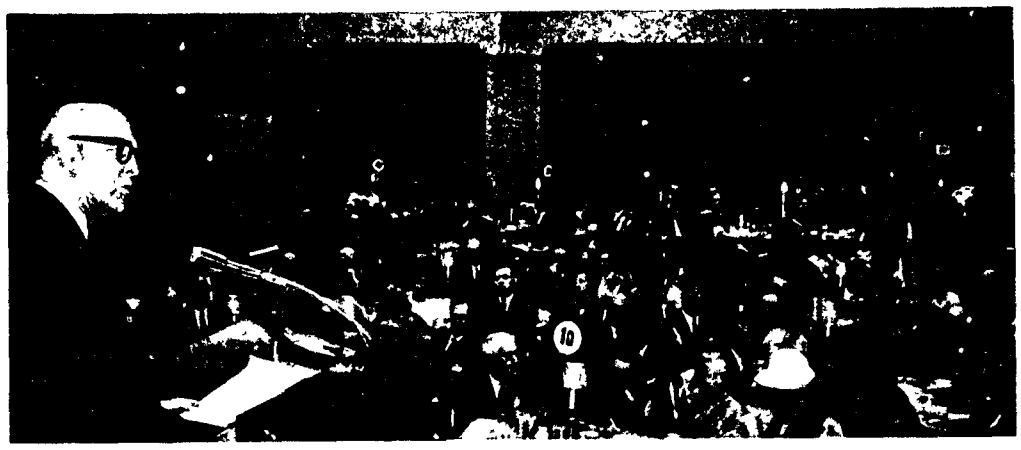
Let us resolve, even now, to DO and BE our BEST—Let us be DOERS of the word, and not HEARERS only.

Are YOU ready to do this?

Am I?

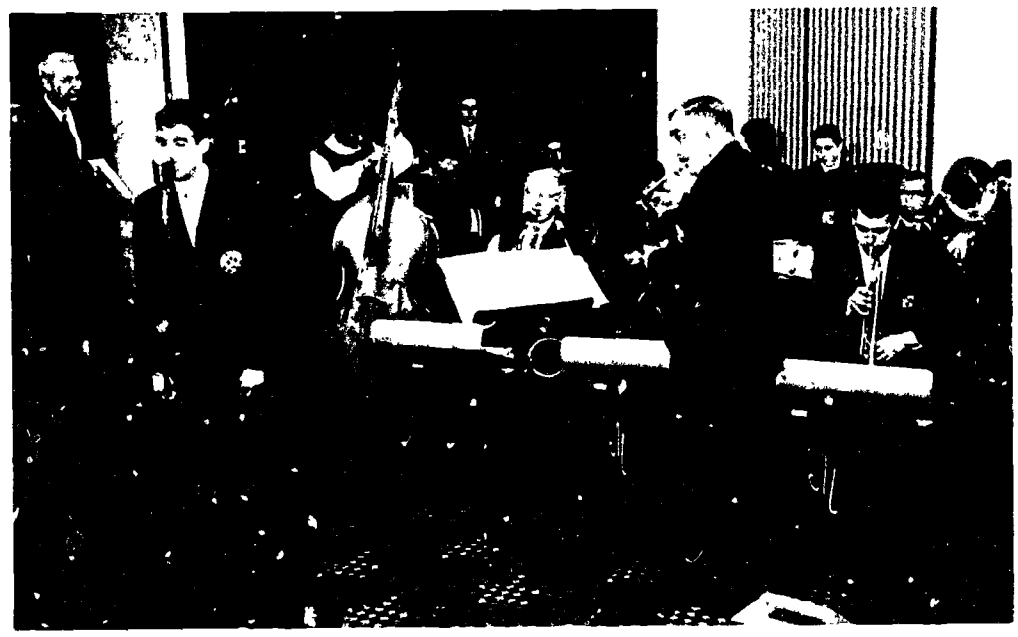
With God's help, we can move MOUNTAINS.

FRIDAY LUNCHEON . . .



Senator Lister Hill (above), speaking at the Volunteers Luncheon urges "Volunteers at the state and local level" to take the plans, programs, and ideas developed by the President's Committee and mold them for use in their communities. At right, Senator Hill receives the Committee's Distinguished Service Award.

Paul Strachan, one of the originators of the hire-the-handicapped program, urges coordination of all Federal programs dealing with the handicapped in speech at volunteers luncheon.



Mansfield (Conn.) Training School Band provided the musical selections.

Hon. Robert Ramspeck Master of Ceremonies.

James A. Krueger (left), Los Angeles, Calif., receives the Federal Aviation Administration's "Handicapped Employee of the Year" award from General William F. McKee (center), FAA Administrator, as Mrs. Krueger looks on.

SOMETHING OLD, SOMETHING NEW

Friday's luncheon was mainly to honor the "old timers" who had been involved in employment of the handicapped ever since the President's Committee was first established two decades ago.

Master of Ceremonies was Robert Ramspeck, former Congressman from Georgia, former Chairman of the Civil Service Commission, and one of the first Vice Chairmen of the President's Committee on Employment of the Handicapped. The Invocation was delivered by the Rev. Thomas Brew, S.J., of Mercy Hospital in Baltimore, Md. Music was supplied by a band from thc Mansfield Training School for the Mentally Retarded in Mansfield, Conn.

Yet something new was added, too. The luncheon was the occasion for the Federal Aviation Agency to honor its first "Handicapped Employee of the Year" under its new awards program, James A. Krueger of Los Angeles, Calif. Krueger, an acute arthritic, is an engineering field specialist concerned with the certification of new models of aircraft. In making the presentation, General William F. McKee, USAF (Ret.), Administrator of FAA, commented:

"You can see that all of us who rely upon safe flight owe a lot to Mr. Krueger—not because he's special as a physically handicapped employee, but because he is special as a bright, talented and conscientious engineer."

The purpose of FAA's awards program—the first in the Federal Government—was, as General McKee put it, "not so much a contest as an effort to make all of our 44,000 employees aware of the invaluable work being done by their handicapped colleagues."

Next, Senator Lister Hill was presented the Distinguished Service Award of the President's Committee for his years of achievements for the handicapped as Chairman of the Senate Committee on Labor and Public Welfare and as Chairman of the Appropriations Subcommittee on Labor and H. E. W.

Senator Hill was a featured speaker at the luncheon.

Senator Hill's Remarks

Luke, the Beloved Physician, tells us that one of life's sorrows is the impermanence of its joys. Certainly, the joy of this occasion and the honor that you have done me will ever live in my mind and in my heart. It will indeed be an inspiration to me and a challenge for the great tasks that lie ahead, and I shall ever be grateful to you.

At a volunteer's luncheon in honor of "old timers," it is fitting that we look back over the last 20 years and see whence we have come together, because these years have had an impact on history and we owe it to the future to place their events on record.

It is also proper that we share our own bit of history with today's newcomers to encourage them to build on our own foundations. That's the way progress is made.

It is altogether fitting and proper that we should do this, together, while thanking God for His past blessings upon our work and asking Him to energize our spirits that we may not weary in our work for others.

Twenty years ago—in 1947—a number of significant events were set in motion which profoundly affected world history. One of these was the Truman Doctrine which halted the spread of Communism in Turkey and Greece and established as national policy both economic and military aid to nations threatened by Communists. The following spring, Congress enacted the Marshall Plan which helped Europe to help itself and saved Europe from economic and political chaos following World War II.

In the halls of Congress during this time, a Joint Resolution was being considered which would establish an annual appropriation for the work of The President's Committee on National Employ the Physically Handicapped Week, which had come into being in the fall of 1947. Such was the preoccupation of the Congress at that time, as we focused our eyes on the necessity of saving the Free World, that this Joint Resolution wasn't passed until two years later.

The Truman Doctrine and the Marshall Plan both have passed into history, having done the job for which they were intended. But, the President's Committee on Employment of the Handicapped, its name shortened twice in the intervening years since 1947, is still at work, still doing the job for which it was intended by its founders. I can assure you that the Congress of the United States and four Presidents are proud of your work and, so long as you remain true to your task, will continue to give you the tools with which to carry on.

Some of the architects of the President's Committee are with us today, Paul Strachan, among them. Others have gone to their eternal reward. Admiral Ross T McIntire lies on a grassy hill across the Potomac at Arlington, a brief walk from the last resting place of our martyred President Kennedy. As the first Chairman of the President's Committee, Admiral McIntire established a tradition of volunteer service on which his two successors have built wisely and well. The

second Chairman, General Melvin J. Maas, also sleeps on another Arlington Cemetery hill, close by the Marine Corps Headquarters which he loved and with a clear view of the Capitol where he served his country so well. Well do I remember Mel Maas on a visit that he made to my home city of Montgomery, Alabama. Made totally blind in his service in the Marines in World War II, denied the light of day, he cast the radiance of heaven all about us. As Members of Congress, Mel Maas and I were privileged to serve and work with our good friend, your distinguished toastmaster of today, Bob Ramspeck, when the world and we were somewhat younger. You all know of the energy and dedication of today's Chairman, Harold Russell, the valiant warrior fighting for our country in World War II, and today the valiant warrior fighting for the handicapped, the disadvantaged, the deprived.

Paul Strachan, together with Mildred Scott and Millard Rice, had made possible the 1945 Resolution establishing an annual week on employing the physically handicapped. I am delighted that Paul is with us today and to know that he will share with you the historical background of "NEPH" Week.

When General Graves B. Erskine decided that the Retraining and Reemployment Administration back in 1946 ought to do something about jobs for the handicapped, it was Millard Rice who suggested that Paul Strachan be invited to assist. The result was the Citizen's Cooperating Committee of RRA, the actual predecessor of today's President's Committee.

Paul Strachan worked with Admiral McIntire and Dr. Merle E. Frampton not only in establishing the President's Committee, but in obtaining the Congressional Joint Resolution in 1949 which provided for appropriations annually.

In proposing what came to be known as the Truman Doctrine, President Truman stated that it was the foreign policy of the United States, among other things, to create "conditions in which we and other nations will be able to work out a way of life free from coercion." He said that we must "support freed peoples who are resisting attempted subjugation by armed minorities or by outside pressures." None of us would deny the intelligent self-interest which has made such a principle an accepted part of our national life.

President Truman didn't use the same or similar language in support of a President's Committee in that same year of 1947, but he might well have done so. Let's substitute a few words and see how the Truman Doctrine for Europe sounds when applied to the handicapped in America. What is our work all about if it is not the creation of conditions in which the handicapped will be able to work out a way of life free from the coercion of the denial of jobs which they could well do. What are we doing if we are not supporting handicapped people who are resisting the attempted subjugation by thoughtless and biased outside pressures. There are no "armed minorities" who prey on the handicapped. It might almost be better if there were, for they would be visible and we could find, fix and destroy them as General Maas would have urged in the vocabulary of the military. No, the coercion, subjugation and outside pressures are in the subconscious, lurking beneath the surface and dangerous not only to the handicapped, but to employers as well, since they deny faithful workers to employers crying for more hands to get on with tomorrow's work.

Just as the Truman Doctrine of 1947 and the Marshall Plan which shortly followed it brought promise and life indeed to untold millions, so also has National Employ the Physically Handicapped Week and the President's Committee and Governors' Committees and local committees which followed brought promise and life itself to countless millions of Americans.

It is so easy to think of the beginnings of the President's Committees as occurring "only yesterday." We have lost some of our noble leaders, but most of us are still here, serving the same cause of the handicapped that motivated us twenty years ago. There is a great sense of continuity and purpose that, I believe, carries us forward with enthusiasm and renewed vigor in this magnificent crusade.

May I say that my Father was a surgeon and one of the early pioneers in the field of helping the severely handicapped to lead lives of usefulness and dignity. I have seen firsthand the task involved and the challenge before us. I can tell you that it has been one of the richest joys of my life on Capitol Hill to respond favorably to the recommendations of the Chairmen of the President's Committee.

During the brief twenty years that the President's Committee has been in existence, an entire revolution has taken place.

Life for the handicapped is not today the same as it was back in 1947—and let us hope we never return to those days. Think of what strides have been made for the handicapped in the last twenty years:

Vocational rehabilitation has been broadened and strengthened and refined—so that it not only serves many more people than ever before, but so that it also has become a dominant force in research into

all aspects of rehabilitation. Twenty years ago, 48,000 handicapped persons were rehabilitated, this past year 154,000—a three-fold increase in two decades.

National attention at long last was turned toward the mentally retarded and mentally restored. Miracles of medicine and therapy brought them to the threshold of normal, productive life—and the President's Committee and Governors' and local Committees provided the essential ingredients of hope and opportunity. As a result, the mentally retarded and mentally restored have been finding jobs as never before; these decades, in a sense, belong in part to them.

I am happy to note that approximately 10,000 retarded persons were trained and placed in job situations in 1966 through the combined efforts of federal and state programs, and it is a source of deep satisfaction to all of us in the Congress that our own national government has pioneered in placing these once forgotten and neglected people in 40 different kinds of jobs where 90 percent have performed successfully.

In this same year, 14,000 mentally ill persons were rehabilitated and placed in productive jobs—double the 1961 figure, and four times the 1957 figure. Furthermore, for the first time in the history of the Vocational Rehabilitation Administration, the number of mentally restored rehabilitated persons exceeded 10 percent of the total number of people rehabilitated in this country.

Since 1947, employment opportunities for the handicapped have greatly increased. Prejudice has lessened substantially for most of the handicapped, and I have no doubt that it will continue to do so.

It is good that you have set aside this lunch hour to share some of your proud history with today's volunteers. However, we should all keep in mind that any national movement such as employing the handicapped has some of the aspects of an iceberg in that you only see that part which stands out of the water. Four-fifths of the volunteers, like the four-fifths of the iceberg, remain hidden. But, what would an iceberg be minus the 80 percent of it which doesn't show, which gives it strength, which provides the broad base on which the peak can stand out as a beacon for the world to see?

So, in honoring the leaders, the founders, the men and women of courage and vision, we do this well aware that they could not have achieved, could not have progressed, could not have continued the fight without the support and selfless dedication of the 80 percent of the workers. This 80 percent includes the state and local committee leaders, the representatives of countless organizations who worked with and for the handicapped through their unions, their employer organizations, their veterans groups, their local, state and national associations, clubs, churches and medical groups. Those of us who have the responsibility of leadership may receive awards and trophies, but it is this 80 percent who have the actual satisfaction of seeing the handicapped we jointly serve, of consummating almost another resurrection in the person and the family of a severely handicapped man or woman gainfully employed because somebody dared to care enough to make this extra effort.

I would like to thank all the State Chairmen and Secretaries here today and all the other volunteers around the country, out of whose ranks will come the State Chairmen and Secretaries of tomorrow. No matter what the Chairmen and Vice Chairmen of the President's Committee plan, no matter what the Committee staff proposes in memo or manuscript, not very much is ever going to happen unless volunteers at the state and local level take these plans and these ideas and adapt and adopt them as best they know how within their own area, in close cooperation with the public and private agencies who have the direct responsibility of serving the handicapped. Saying this, I want to urge each of you to look around you and see if there aren't some people coming up who can do more than they have been allowed to do.

Also, when you get back home, look into things at your State Capitol and see if legislators are matching the available money for rehabilitation which the Congress appropriates, or if the handicapped in your state are being denied a chance simply because nobody has been able to tell the story that rehabilitation doesn't cost, it pays.

Again, when you get back to your cities, towns and counties, check around and see if there isn't a great deal more that could be done if someone were willing to lead the way. In a volunteer program such as jobs for the handicapped, the responsibility of the volunteer is constant and heavy.

I am proud to salute you, old timers and newcomers, dedicated vocational rehabilitation and employment service personnel and equally dedicated volunteers.

In enriching the life of the handicapped of our beloved country and of the world, you have learned that it is more blessed to give than to receive. For, in serving others, you have found yourselves and have made our Judeo-Christian ethic a vital part of your daily lives. In the confidence of knowledge, in the strength of integrity, in the tenderness of sympathy, in the fellowship of humility, and with the love of

God, we shall continue to wage the battle for the handicapped.

THE FOUNDER

Final speaker of the afternoon was Paul A. Strachan, President of the American Institute for Human Engineering, and the original sponsor of National Employ the Physically Handicapped Week and also—as Mr. Ramspeck remarked—"the person most responsible for the establishment of the President's Committee, back in 1947."

Mr. Strachan's Remarks

Mr. Chairman, Members of the Committee, and friends of the handicapped, I thank the Chairman, and the Committee for having bestowed upon me the Distinguished Service Award yesterday.

As the originator of this movement, I believe all of you would like to know how this Committee and "NEPH Week" came into being, and I shall recall this to your memory by citing the action of Congress on the last day of the Session.

The hands of the clock facing the Vice-President's rostrum in the Senate Chamber moved slowly forward. As said, as it was the last day of the Session, contrary to conditions usual at such times, the Senate had almost full attendance.

"Dear Alben" Barkley, the Majority Leader, and Wallace White, Minority Leader, had a gentleman's agreement that no legislation would be voted on that day, as the House had adjourned the previous day and the Senate Session, therefore, was more or less to clean up odds and ends.

However, "NATIONAL EMPLOY THE PHYSICALLY HANDICAPPED WEEK," House Joint Resolution 23, (which became Public Law 176) had passed the House, and awaited action by the Senate.

Upon learning of the gentleman's agreement, Senator Harley M. Kilgore, of West Virginia, was pressed by me to call Leader Barkley's attention to the fact that House Resolution 23 had been approved by the House and, anticipating no opposition, the Senate could simply take routine action to enact it.

With the aid of Sen. Pat McCarran, of Nevada, Chairman of the Senate Judiciary Committee, which had charge of the Resolution, we succeeded in getting that Committee to approve action and Senators Barkley and White were so notified.

Sen. Barkley had no objection to setting aside the gentleman's agreement, but Sen. White stated that Sen. Aiken, of Vermont, had objected to the Resolution and that his approval was necessary.

On learning that Sen. Aiken was in Vermont, his home State, we spent considerable time in long-distance phoning to reach him, and finally, when the matter was explained, he stated that he had been under an erroneous impression about the Resolution, and, learning the facts, he waived objection.

We so told Senators Barkley, White, and Kilgore. As stated, the Senate had certain routine business to complete, and action was taken very slowly.

The clock's hands moved slowly towards 4 PM, and then 5 PM, but still, no action on the Resolution. We knew that the Senate intended adjournment at about 5:30 to 6 PM, and were fearful that our measure would get lost in the shuffle and, if so, we would have the same dreary business of having it reintroduced; action by both House and Senate, and we had already spent more than 5 years of hard work on it, and we did not want to spend two years more. So our anxiety was keen.

At 5:30 PM, in order to attend to some important business, we returned to our Headquarters, 1370 National Press Bldg., Washington, where we phoned to various Senators to try to speed action on the Resolution.

At nearly 6 PM, we received word that our Resolution had been approved by the Senate and, our nearly 6 year battle to have it acted upon had been capped by a win!

The purpose of "NATIONAL EMPLOY THE PHYSICALLY HANDICAPPED WEEK" was, and is, to unite Governments-Federal, State, County, and Municipal,—with all private industries, businesses and organizations, to further employment of what was, then, 23,000,000 (now, 1967, more than 72,000,000 Handicapped, of whom some 20,000,000 are from 60% to 100% Severely Handicapped), which include the Blind, Partially Sighted, Deaf, Hard of Hearing, Arthritics, Amputees, Cardiacs, Cerebral Palsied, Diabetics, Epileptics, victims of Cancer, Muscular Dystrophy, Multiple Sclerosis, Poliomyelitis, Rheumatism, Tuberculosis, and other "cripplers," as well as those having Congenital Defects and Deformities. The Resolution reads, as follows:

> "WHEREAS: There is now, and shall be for some time to come, a positive necessity for utilizing every available ounce of manpower in America, and
> WHEREAS: The growing and acute problems of the physically handicapped, who number approximately 25,000,000 citizens, who are being augmented by an average of 800,000 citizens injured in industry, yearly,—to say nothing of those who

have been, or will be, injured or diseased as a result of military service,—is engaging more and more attention of the Federal Government and Private Industry, and

WHEREAS: Rehabilitation and Placement of the Physically Handicapped are among the most important problems in our national economy, as, if a means is provided to make such people self-supporting, wholly or in part, the entire Nation will be beneficiary, because of lessening drain upon national finance, and

WHEREAS: Congress and the Chief Executive have expressed concern and have initiated constantly expanding programs on behalf of the physically handicapped, as well as leaders in private industry, now, therefore, be it

"RESOLVED: BY THE SENATE, and HOUSE OF REPRESENTATIVES OF THE UNITED STATES, IN CONGRESS ASSEMBLED, etc.,"

"That, hereafter, the first week in October of each year shall be designated as 'NATIONAL EMPLOY THE PHYSICALLY HANDICAPPED WEEK.' During said week, appropriate ceremonies are to be held throughout the Nation, the purpose of which shall be to enlist public support for and interest in the employment of otherwise qualified, but physically handicapped workers.

The President is hereby requested to issue a suitable proclamation each year, and the Governors of States, Mayors of Cities, and heads of other instrumentalities of Government, as well as leaders of Industry, educational; religious groups; labor, veterans; women; farm; scientific and professional and all other organizations and individuals at interest, are invited to participate."

* * * * * * * * *

The foregoing Resolution was unanimously adopted by House and Senate, and Sponsored by Sen. Harley M. Kilgore, of West Virginia, and Representative Jerry Voorhis, of California, and Signed by President Truman on August 11, 1945, as House Joint Resolution 23, now Public Law 176. The "WEEK," then, was simply an effort on my part to direct public attention to the problems and needs of our millions of handicapped.

I pressed my friend, Secretary of Labor, Lewis B. Schwellenbach, to establish this Committee, with President Truman's approval, and that was done.

It has been estimated that operations stemming from the "WEEK" have been the means of affording employment to more than 5,000,000 Handicapped, who earned more than $4,000,000,000 and paid taxes of more than $1,000,000,000 and, its beneficent movement has benefited the Handicapped in many other ways, including Social Acceptance,—far better programs of Rehabilitation and Employment, etc.

I wish to commend all of you for the fine work you have done, in aiding the Handicapped. You have, thus, contributed greatly to the nation's welfare, by putting many people, hitherto on charity rolls, to work, so that they became tax-payers instead of tax-eaters.

But, the job is incomplete. We must have more study of the problems of the handicapped, including medical, educational, counseling, and above all, EMPLOYMENT OF HANDICAPPED.

I am afraid that still too many of our industrialists and business men are like the Internal Revenue Agent, who said to the Taxpayer, "We sympathize with your problems, but they won't fit into our computer!"

Suitable employment is the key to the whole handicapped program, because, if a man can't work, Why? Does he need medical service; counseling; education and training and, above all, proper placement? If so, the answer is to aid such individual by applying the best remedy that will fit him for a job.

Then, too, we need many, many more carefully trained counselors, placement officers, and welfare workers, to say nothing of the great need for more physicians, surgeons, and therapists.

Present plans, involving new legislation, already pin-point these needs, and we hope that Congress will speedily approve such legislation, and the Administration implement it, as it does NOT pour taxpayers' money down a rathole, but utilizes it to help handicapped to help themselves, thus easing the strain on the rest of our population in having to carry these people on welfare rolls, or on charity.

Although the work of this Committee, and other public and private agencies have ameliorated, to some extent, the needs and miseries of the handicapped, yet, the handicapped population has not diminished, but, as is shown by official reports, we still have an increase of some 300,000 handicapped, each year, from accidents, injuries, and diseases. The American Medical Association says there are approximately 72,000,000 or more of our population, in some degree handicapped.

One thing I have pounded on, for more than 40 years: That, THE FEDERAL GOVERNMENT NEEDS, AND MUST HAVE, A COORDINATOR FOR THE PRESENT 57 programs that deal with this problem. At the time this Committee was founded, President Truman, then Secretary of Labor Lewis B.

Schwellenbach, and myself, discussed this phase, at length, and it was agreed that, when the Committee got properly organized, say, in a year or so, we would propose it have THE Coordinator of all Handicapped Programs in the Federal Service.

This would not mean that present agencies would be abolished, but, their work would and should be integrated. I recommend that the Committee take appropriate action to launch this necessary move. Surely, after 20 years, we have learned enough to qualify it.

Now, I come to the close of my peroration. I just arose from a sickbed, and am weak, but willing. Leukemia is a tough disease to battle, and it may well be that I shall not be around to trouble you, or others, within a year or so.

During my long illness I reflected on what I would do with my remaining time. I decided to resume activities to set up the AMERICAN INSTITUTE FOR HUMAN ENGINEERING, in Florida, to be the one spot in all the world wherein handicapped might be treated; trained; counseled and guided, and, by participating in a well-organized job referral and placement phase, become qualified to take their places as full-fledged citizens of our great Nation.

This job is a MUST! The INSTITUTE is badly needed, and should have the support of every humanitarian, thinking person.

The Florida location would provide needed climatic advantages to expedite return to health and usefulness,—and it is nearer to the most popular States than is the West Coast.

I know this will require brains, money, and enthusiasm and boundless energy, and we would welcome all of you as Members of the INSTITUTE. If you are interested, write me, Route 1, Box 135, Brooksville, Florida, and I will send you a pamphlet describing the INSTITUTE program.

Again, I want to thank all of you for what you have done for the handicapped, and urge that you redouble your efforts in the future. This is one thing you cannot pick up in the morning, and then, lay it down for the rest of the day. NO! The great needs and problems of the handicapped require continual and continuous study and action.

For long intervals over the past 46 years, I have dedicated myself to advancing the program for handicapped. Now, that my time is limited, I can say, with our late, great Vice-President Barkley, who stated, in effect, "I would rather serve the poor and needy, than sit in the seats of the mighty!"

Then, he fell dead in front of his audience, and I feel the same way about serving the handicapped.

I thank you.

WOMEN'S COMMITTEE BANQUET . . .

Chairman Harold Russell and Miss Chloe Gifford, a Vice Chairman of the Women's Committee, cut the ribbon to officially open the Exhibit Hall at the Annual Meeting.

Labor Secretary W. Willard Wirtz and Mrs. Wirtz are shown examining some of the materials available in the Exhibit Hall.

Guests at the Women's Committee Reception prior to the banquet on Wednesday night include from left: Father John McRae, New Zealand; Rev. James M. Windham, First Baptist Church, Silver Spring, Md.; Edward C. Moynihan; Mrs. Moynihan, a Vice Chairman of the Women's Committee; Leonard Mayo, Vice Chairman of the President's Committee; Dr. Dorothy C. Stratton, Chairman of the Women's Committee; and Harold Russell, Chairman of the President's Committee.

The University of Nebraska School of Home Economics and the Nebraska Heart Association drove this unique bus to Washington to display the work simplification features built into the interior that enable handicapped persons to live more easily and take care of everyday needs in their homes.

Members of the Women's Committee, Dr. Marion Mill Preminger (left), Mrs. Dorothy Devereux (center), and Mrs. Norman Marlowe (right), enjoy the reception before the banquet with guests, Dr. Ruth Farkas (second from left), of New York City and Miss Indra Gevi (second from right), Tecate, Calif.

Mrs. Jayne Baker Spain, newly appointed Chairman of the Women's Committee and Vice Chairman of the President's Committee, at the podium during the banquet. Seated, left to right, are: Mrs. W. Willard Wirtz, Secretary of Transportation Alan S. Boyd, Dr. Dorothy C. Stratton, and Chairman Harold Russell.

Secretary of Transportation Alan S. Boyd addresses the guests at the Women's Committee Banquet. Mrs. Boyd, Mrs. Jayne B. Spain, and Labor Secretary Wirtz, backs to camera, can be seen from center foreground to right corner.

Miss Dianne Sue Feller, Miss Montana of 1965, provides the vocal entertainment at the banquet.

WEDNESDAY EVENING

It all started with a ribbon-cutting ceremony at 6:15, as Harold Russell and Miss Chloe Gifford, Vice Chairman of the Women's Committee, cut the ribbon and opened up the exhibit area in the Exhibit Hall of the Washington Hilton Hotel with Secretary of Labor and Mrs. W. Willard Wirtz present and participating in the activities.

Then came an informal reception, through the courtesy of the International Brotherhood of Electrical Workers.

The Banquet followed. Mistress of Ceremonies was Dr. Dorothy C. Stratton, Chairman of the Women's Committee. Musical selections were by Miss Dianne Sue Feller who was "Miss Montana of 1965."

And the speaker of the evening was Alan S. Boyd, Secretary of Transportation—the newest member of the President's Cabinet.

Mr. Boyd's Remarks

This word that expresses our deep concern, this word "handicap," has a very long and revealing history.

Three hundred years ago, they say, it was a kind of lottery. You put your *hand in a cap*, and won or lost depending on what you drew out.

Then handicap became a term used in horse racing. You had an umpire who attempted to equalize the competition by making the faster animals carry an extra weight.

And that led to the meaning of handicap which occupies the attention of this Committee. It has no connection at all with gambling or racing, though it may indeed affect winning or losing.

It is the idea of a *human* handicap, a disability that weighs upon a person's efforts, making success in life much more difficult.

We are concerned with the physical and psychic handicaps which literally tens of millions of Americans temporarily or permanently endure.

We are deeply distressed by the fact that a widespread indifference, or thoughtlessness, in our society has made such handicaps even more of a personal burden than they need be.

You leaders of the Women's Committee of the President's Committee on Employment of the Handicapped are attending this 20th anniversary meeting to review the progress that has been made—the progress that your own organizations are helping to make—in overcoming society's indifference to this problem.

For though we cannot add or subtract weights to equalize all of life's competition, it *is* in our power to remove irrational and arbitrary barriers at the starting gate.

I speak without any pretense of expert knowledge on the employment problem, as such. Your Committee and its consultants have outstanding competence in that area.

My personal interest is in the contribution that government can make towards solving what is perhaps the greatest of the ancillary problems. I refer, of course, to existing restraints on the *mobility* of handicapped persons.

In the words of Dr. Stratton, we must pay "closer attention to the needs of those individuals who are deprived of many normal activities because it is virtually impossible for them to reach their destinations—be it for employment, business or pleasure—because of physical barriers."

I want you to know that the new Department of Transportation arrived on the scene, less than a month ago, with a public statement of our concern for the transportation needs of physically handicapped people.

We are pleased at the prospect of working with your own Ad Hoc Committee on Transportation. We share your determination that these efforts be not only concerted but intelligently directed.

In that regard, I am reminded of the story of the second-grade teacher who was straining to help a pupil put on his galoshes. After five minutes of exertion, the little boy announced: "They were hard to get on because they're not mine."

In despair, the teacher struggled to get them off again. Just as soon as they were off, the youngster spoke again: "They're my brother's, but I wear them because I don't have any."

For heaven's sake, let us begin our work with precise definitions.

Who are the handicapped?

They are people who have lost some of their ability to get around and do things. People in wheelchairs, in braces, on crutches. People with broken legs and slipped discs. People with arthritis, asthma, emphysema, heart disease. Old people who are not so nimble. Pregnant women—yes, and mothers with small children.

How many are there? How numerous are these handicapped people?

There are two ways of answering that question, and both answers are fantastically high. When you count the number of temporarily handicapped—people handicapped at one time or another in their lives—that means the great majority of our citizens.

For example, every year, about 4 million American women experience the last months of pregnancy. And 80 million people suffered some incapacity between 1961-63. And around 20 million of our citizens are 65 and over.

Estimates of the present number of handicapped people range from 10 to 15 percent of our total population. Dr. Howard Rusk suggests that by 1980, *half* the American population will be permanently handicapped, suffering from a chronic disease, or past 65.

Next question: What are the transportation implications?

Please permit me to answer that question with another question: Would *you* have been able to come to this meeting in a wheelchair?

Without a lot of special assistance, I think you would have found the obstacles almost insuperable.

Design, building design as well as transportation design, conspires to rob the handicapped person of his mobility.

Stairs without ramps or elevators. Door jambs and aisles that are too narrow. Turnstiles and revolving doors. Ticket counters that are too high and telephones that are unreachable. And on and on.

In a society that prides itself on its compassion, on its fundamental concern for the human values, we have, it seems to me, omitted consideration for that which is most characteristically human—our weakness, our frailty, our imperfection.

Our buildings and our vehicles are designed to meet a wide range of environmental conditions, but for only a narrow range of personal conditions.

I know of great railroads serving this nation who are actively seeking passenger business but neglect provisions for the handicapped.

I know of great bus lines serving this nation who depend on passenger business but have no special program to facilitate use of buses by the handicapped.

There are no subway systems in existence at present which are readily accessible to the handicapped.

Such attitudes are an indictment of our civilization. They are also a sign of financial shortsightedness, since handicapped people represent a sizable percent of potential transit users.

Fortunately, this indifference is not characteristic of the entire transportation industry.

The principal airlines, and aircraft manufacturers, have a historic interest in human factors and a generally enlightened approach to handicapped-passenger service.

The great automobile manufacturers have shown themselves responsive to the new safety standards, which suggests a broadened interest in the application of Detroit's engineering genius to improvement of the human environment.

Two major rent-a-car firms now offer hand-controlled automobiles at no extra cost in our largest cities.

Taxi companies in several cities provide cabs with ramps that lower to the sidewalk.

Some motel chains are erecting motel units that are said to be free of architectural barriers.

And a great rapid transit system now under construction on the West Coast is incorporating some partial provisions for handicapped users in its station plans.

Welcome signs of progress, of course. But I hardly need add that only a pitifully small fraction of our handicapped population are, or will be, benefitted. A prominent Philadephia builder estimates that 30 million handicapped people are still "forced to remain outside looking in."

In short, the contribution by private industry is only in its beginning stages. So, logically, the next question is, What has the Federal Government been doing to improve the situation?

This problem of providing the handicapped with greater mobility is one that is being worked on by several Departments and agencies. President Johnson has stimulated this effort with repeated reminders that ours must be a compassionate society if it is to be a great society.

I should mention first the work of the Veterans Administration. The VA has done (and is still doing) an inspiring job of helping our handicapped veterans return to as full a possession of personal mobility as possible. This agency has no power to change present conditions in public transportation. But the VA has developed, among its other contributions, a car that can be driven by a person with *four* paralyzed limbs. Previously, the VA had evolved car controls for veterans with paralyzed legs.

One result of that, incidentally, is that we found out paraplegics are safer drivers than the average motorist.

You should be aware of comparable research for the handicapped civilian done by the Vocational Rehabilitation Administration of the Department of Health, Education and Welfare. One of their many studies concerned the feasibility of outside elevators. Another assessed the state-of-the-art of vehicles for the disabled. Another, in cooperation with research people at NASA, is looking into the possible adaptability of the moon-walker to fit the needs of severely handicapped people on earth. And I think we can give the VRA's past work with the Civil Aeronautics Board much credit for the present laudable policy of the airlines.

There is commendable work being done by the Department of Housing and Urban Development. HUD is sponsoring a study by the National Academy of Sciences to develop criteria for nonrail urban mass transit vehicles. And one of the important considerations of this project is ". . . special service to particular segments of the population, such as the aged and the physically and economically handicapped."

I should also describe current activities in this field by agencies of the Department of Transportation.

The National Highway Safety Bureau is developing safety standards for the special controls on cars for the handicapped.

The Federal Highway Administration, in its urban design policy statement, recommends ramps for pedestrian overpasses in cities. Unfortunately, it does not have the power to insist on them.

Similarly, this agency has been urging the States to provide ramps, for example, at safety rest areas on highways. But the decision to do so rests with the State highway planners.

Many State highway construction codes do indeed specify such ramps. Where they do not, some persuasion by local citizens might be appropriate.

Perhaps the major contribution by the Department of Transportation, at this time, is our High Speed Ground Transportation project in the Northeast corridor. In the plan to connect Boston, New York and Washington by rapid rail, a very great emphasis has been placed on human engineering. In other words, we want people to feel so *good* about this mode of

transportation, when the demonstration trains start running, later this year, that a great new demand for rapid rail service will be created.

Here are some of the features that one does not have to be handicapped in order to appreciate:

The station platforms will be level with the trains. There will be ramps to the station platforms. Fresh air will be constantly circulated in the cars and kept at a comfortable temperature. There will be smoother starts and stops. There will be carts, not unlike those at the supermarket, to pile one's luggage onto.

Such design features, developed for the convenience of all patrons, are of special benefit to the handicapped customers.

These examples of dedicated effort in various Federal agencies are not mentioned to elicit a pat on the back. Far from it. We all agree that not nearly enough has been done.

While there exists no lack of interest and sympathetic understanding, there is, at present, an "accomplishment gap."

To narrow that gap, I have asked the Assistant Secretary for Policy Development, in the Department of Transportation, to plan and to support long-range research offering hope of greater mobility for America's handicapped citizens.

In my opinion, however, the best immediate hope lies in the persevering efforts of your Committee and its parent organization. Obviously, the work of the President's Committee on Employment of the Handicapped is unduplicated at the national level. No other group in our society—not in government, not in industry, not in private institutions—can attack this problem on as broad a front.

On the question of transportation for disabled people, there are conspicuous targets for education and persuasion: transportation firms themselves, transportation unions, local political institutions, communications media, civic groups, et cetera. That is all familiar ground to members of this group, and I would not presume to suggest your priorities.

However, I am going to state what I regard as our major problem in this work. It is the difficulty we encounter in the key professions of engineering and architecture. There are too few advocates of humane design within the professions. In fact, a recent study of design engineers (admittedly, done on a small scale) came to the conclusion that

> "Design engineers have little or no interest in human factors, human factors information, or in the application of human factors criteria to design."

With a number of honorable exceptions, engineers and architects are still constructing for users who are statistical abstractions; average men, median men, percentile men.

In a strangely idealistic way—in a loving way, almost—they design for men and women who will never weaken, never get old, never be deformed, never break down, never change.

How can we get our message across to these otherworldly gentlemen, so deeply immersed in their stress calculations, so nuts-and-bolts practical, so confident in their definition of efficiency?

Can they be persuaded to *factor* in compassion?

Or should we, perhaps, repeat the ancient words of the Roman philosopher, Seneca, who said:

"God divided man into *men*, that they might help each other."

On this and other serious questions, American looks to the leadership of this Committee.

ERIC

Related Meetings

Each year, organizations in the field of the handicapped schedule meetings of their own at the time of the Annual Meeting of the President's Committee.

The World Commission on Vocational Rehabilitation met the Tuesday before the opening day of the Annual Meeting. The Executive Committee of the President's Committee met on Wednesday morning. The People-to-People Committee for the Handicapped met Wednesday afternoon. The Women's Committee of the President's Committee held its meeting all day Wednesday, culminating in the banquet that evening.

Also, the Medical Committee, the Committee on the Mentally Handicapped, the U.S. Committee of the International Society for the Rehabilitation of the Disabled and "Project Earning Power" held meetings during the week.

A busy time, indeed.

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TENNESSEE

Two characteristics of our economy which can reveal changes in labor force composition are sources of civilian participation income and employment by industry. In terms of absolute change, manufacturing leads the productive sector with an absolute increase from $691 million in 1950 to $1.81 billion in 1964. Employment in the productive sector increased 4.8 percent in Tennessee between 1950-1960 while in the United States it decreased 0.6 percent. Crucial trends affecting occupational education are (1) The economic impact and employment potential of the extractive sector, particularly agriculture, is declining in Tennessee, (2) The economic impact and employment potential of the service sector is increasing, and (3) The economic impact and employment potential of the productive sector, particularly manufacturing, is increasing. Similar trends exist for the nation. Within manufacturing the growth of apparel and electricial machinery industries indicates increased employment of women, with a general increase in the manufacturing skill base. Growth by level of skill in Tennessee seems to fit the skill-growth model hypothesized by Wilber E. Moore (in "Social Change") and the state is entering the third stage of development resulting from an expansion of market and a growth of income. A skilled work force can influence the location of new industry and a plausible prediction might be that by improving an individual's qualifications through trade and industrial education, both the labor market and the economy will be improved. (EM)

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Research in Trade and Industrial Education in Tennessee
The Tennessee Manufacturing Economy

Dr. William R. Schriver

"Our raison d'etre, our very reason to be, is to produce graduates of vocational training programs that possess both the skills and the willingness to become producing members of our economy, i.e. to be employable. Immediately, there obtains a two-phase program in any viable trade and industry program. First, we must consider willingness - willingness to become trained and willingness to seek and hold a job even at the cost sometimes, unfortunately, of migration from areas of low employment potential to those of high potential. This point involves a whole dimension of motivation and guidance that is inherent to any vocational education or training program. The purpose of this paper, however, is to develop the second point, that of identifying and training for specific skills in present or anticipated high demand by our economy. The first point, that of guidance and motivation, although of crucial importance, was mentioned merely to illustrate that it cannot be neglected in our research and implementation efforts if we are to adequately discharge our responsibilities.

Before we investigate employment and other growth trends in our Tennessee economy, let us first define what we mean by 'economy.' Generally, economics studies how men and society choose to employ scarce productive resources to produce various goods and services and distribute them for consumption among various people and groups in society. The economy is the institution encompassing those economic organizations that produce and distribute the goods and services. In relating our interests to economics, we can see that the economy is the institution that demands our output -- labor possessing the skills and willingness to use them. It is the economic institution (including both public and private organizations) that determine the types and quantity of skills to be employed in the production process. Thus, we are led to the proposition, although perhaps with some circumlocution, that by studying our economy we can determine present labor demands and by studying changes or trends in our economy we can anticipate or project future labor demands by type and quantity.

The productive process of our economy consists of the systematic organization of four factors -- land, labor, capital and entrepreneurship or management. Different types of economic endeavors require different combinations of the productive factors giving rise to various types of economic structures. We can classify regions or industries according to their prevalent economic structure as labor intense, capital intense, etc. This discussion will help us understand changes in the Tennessee economy, or its evolution, with consequent changes in its demand for different qualities and quantities of labor.

There are two different descriptors of our economy that can reveal changes

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in the composition of our labor force -- (1) sources of civilian participation income; and (2) employment by industry.

Figure 1 shows graphically the sources of civilian participation income by extractive, productive and service sectors during 1950, 1960 and 1964 for Tennessee, adjacent states (Alabama, Arkansas, Georgia, Kentucky, Mississippi, Missouri, North Carolina and Virginia) and the United States. Generally, it can be seen that Tennessee's, adjacent states' and the United State's income from extractive sources decreased while income from service sources increased. In the productive sector the trend was nonlinear. Income from the productive sector increased relative to the other sectors from 1950 to 1960 in Tennessee and adjacent states, remaining the same in the United States, but decreased in all three cases from 1960 to 1964. The relative gains accrued, in all three categories, to the services sector. These data or subsequently discussed data should not be misinterpreted to imply absolute gains or losses in sources of income but merely gains or losses relative to the percent of total personal income.

Table 1 reveals the specific breakdown by industry during 1950, 1960 and 1964 for each sector shown in Figure 1. From Table 1 not only can each general industry within a sector be identified but absolute gains and losses can be read directly from the table. Table 2 shows the percentage changes of the general industries within each sector during the 1950-1964 interval.

Tables 1 and 2 reveal that in terms of percentage growth in Tennessee the service sector had the highest growth rate as a source of income, with finance, insurance and real estate leading in that sector. The productive sector also had a high growth rate with manufacturing leading as a source of income. There was a noticeable decrease in the extractive sector lead by a decrease in agriculture as a source of income.

In terms of absolute change, the productive sector in Tennessee led in source of income with manufacturing showing the greatest absolute growth, increasing from $691 million in 1950 to $1.81 billion in 1964.

The second descriptor to be discussed is employment by sector. Figure 2, as we would expect, shows much the same growth pattern as Figure 1, except that it only covers the census of population years, 1950-1960. The exception to the similarity of the growth pattern in source of income and employment is that employment in the productive sector decreased by six-tenths of a percent between 1950-1960 while this sector increased in employment in Tennessee (4.8 percent) and the adjacent states (5.8 percent). Tables 3 and 4 reveal that manufacturing was the only general industry in the productive sector in the United States that showed an employment gain as contrasted with employment gains in all general industries in the productive sector except construction and

transportation and utilities in Tennessee and transportation and utilities in the adjacent states.

The analysis of both sources of income and employment reveal three general trends in Tennessee that are of crucial importance to the long range planning for occupational education in general and trade and industry in particular. (1) The economic impact and employment potential in the extractive sector, particularly agriculture, is declining in Tennessee; (2) the economic impact and employment potential of the service sector is increasing; and (3) the economic impact and employment potential of the productive sector, with signal emphasis on manufacturing, is increasing. Credence in the validity of these trends is further supported by similar movements in the economy of the nation and adjacent states.

Let us now focus our attention upon the manufacturing sector of the Tennessee economy since it is of particular interest to this group. Table 5 shows employment in Tennessee manufacturing industries in 1954 and 1963, percent change, and a ranking of industries by employment for both base periods. The greatest percentage gains occurred in the electrical machinery, transportation and apparel industries and the greatest percentage losses occurred in the instruments and related products, petroleum and tobacco manufacturing industries. In terms of absolute gains we see that the growth of the apparel industry overshadowed all other growth, gaining 26 thousand employees and replacing the chemical industry as number one in manufacturing employment.

Table 6 reveals growth trends in manufacturing employment from 1963 through 1965, the latest year for which data are available. It can be seen that generally the same industries leading in employment growth between 1954 and 1963 maintained high growth during the latter interval although in a different order. The transportation equipment industry, furniture and fixtures industry and non-electrical machinery industry lead the other manufacturing industries in employment growth. Although precise data are not available, the electrical machinery industry has shown extremely high employment growth in Tennessee since 1965.

The analysis of manufacturing employment in Tennessee reveals at least two major trends: (1) higher participation of women in manufacturing employment as evidenced by growth in the apparel and electrical machinery industries; (2) a general increase in the skill base within the manufacturing labor force.

As a further elaboration of the second trend, it is interesting to note that Tennessee has enjoyed high growth in industries requiring more and higher industrial skills. Between 1950 and 1960 the following changes occurred in the skill composition of the Tennessee work force: (1) the high skilled category

increased by 18.8 percent - includes professional and technical; managers, officials and proprietors; craftsmen and foremen; (2) the medium skill category increased by 23.0 percent - includes clerical, sales, operatives, and service workers; (3) the low skill category increased by 4.9 percent - includes household workers and laborers.

The growth by level of skill in the Tennessee work force appears to 'fit' the skill-growth model hypothesized by Wilber E. Moore (in Social Change) and shown as Figure 3. It can be seen that in the earliest stages of industrialization growth is highest in the low and high skills; in the 'transitional' or 'early mature' stage growth is highest in the low skill category; and in the advanced stage growth is highest in the medium skill category.

In reviewing the industrial growth of Tennessee, it is observed that the State has followed a development pattern consistent with more developed areas. In the earlier period, industries developed in Tennessee primarily as a consequence of natural resources. In the second stage, industries developed as a result of a comparative advantage in costs, especially labor cost.

There is evidence that the Tennessee economy is entering the third stage of development which results from an expansion of markets and growth of income. As this more advanced stage is entered, the economy will experience growth in capital-intensive industries which require large inputs of high industrial skills. Specifically, Tennessee has a high potential for continued growth in the transportation equipment and both electrical and non-electrical machinery industries. This last prediction is based upon an investigation of industrial growth undertaken at Memphis State University with which I was associated.

The implications of the preceding paper are clear. Not only have certain employment trends been documented that bear directly and heavily upon future planning for occupational education but a rubric has been demonstrated if Tennessee is to develop its full employment potential, both quantitatively and qualitatively. We must relate occupational education and training to the labor demands, present and expected, of the Tennessee economy. Also we have the additional responsibility to assist in the attraction of new industry and consequent income generation through occupational training investments. In the past material capital attracted human capital (a term used by economist that means, generally, skilled workers,) i.e. a manufacturing plant was located in an undeveloped area, then a work force was recruited and trained. There is now considerable evidence that increasingly in the future human capital will attract material capital, i.e. a skilled work force in an undeveloped area (in the industrial sense) may attract a more advanced industrial base.

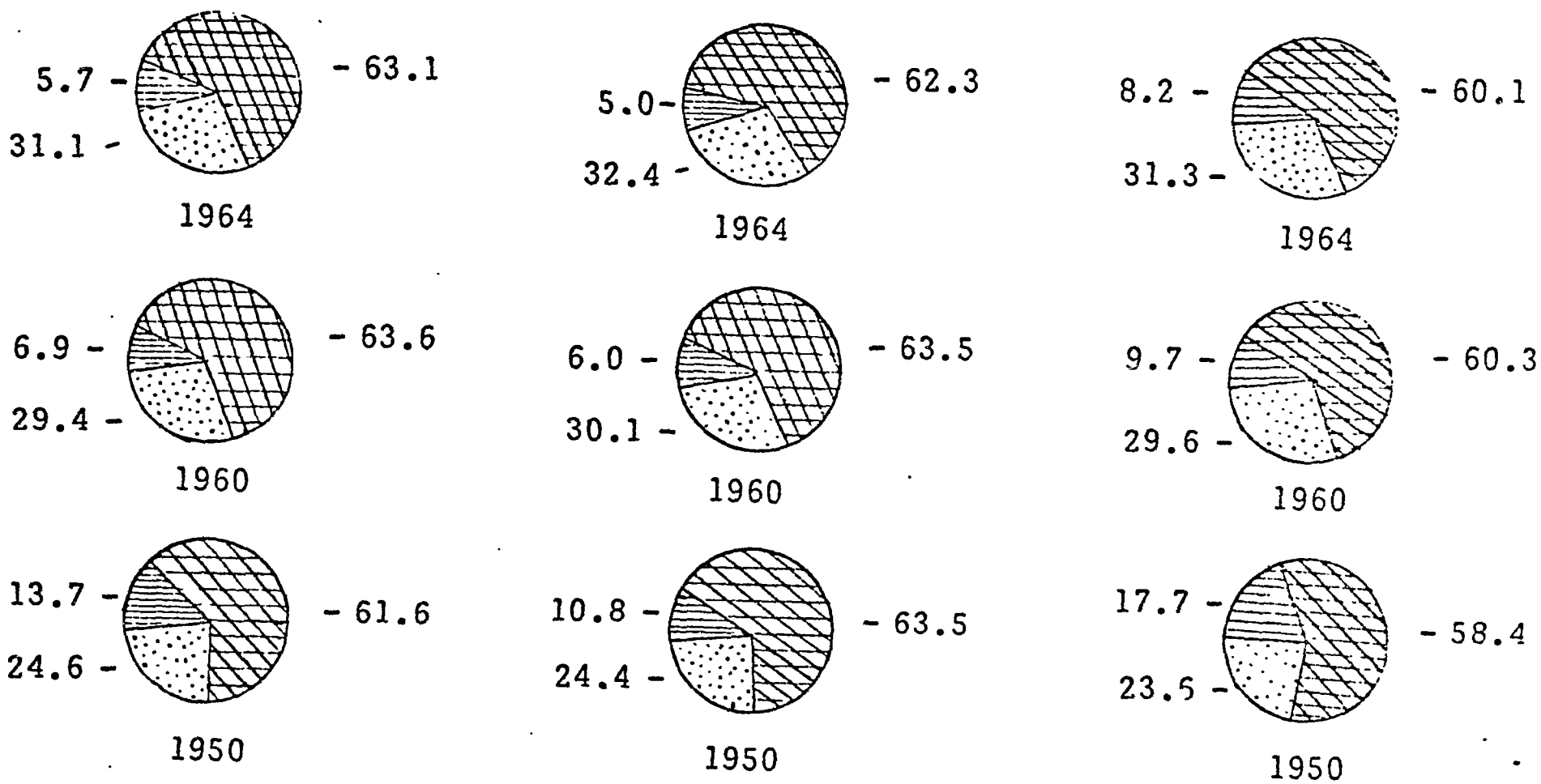
It appears quite plausible to predict that as training in trade and industry plays an increasingly important part in the qualification of individuals for the

labor market on the one hand and in the efficient development of the economy on the other, the development of and reliance upon sound research will also become increasingly important. Only through sound and relevant research can we solve the age-old problems of what, when, how and to whom and have confidence in our solution.

In closing, let me point out, in case there is any misunderstanding, it is not the intention of those of us engaged in research to force our research proposals and programs upon you; hoping they will be accepted by you. Rather, the relationship between us must be in the opposite direction. The relevance of our research is uniquely dependent upon your expertise as participant observers.

FIGURE 1

SOURCES OF INCOME
1950-1964

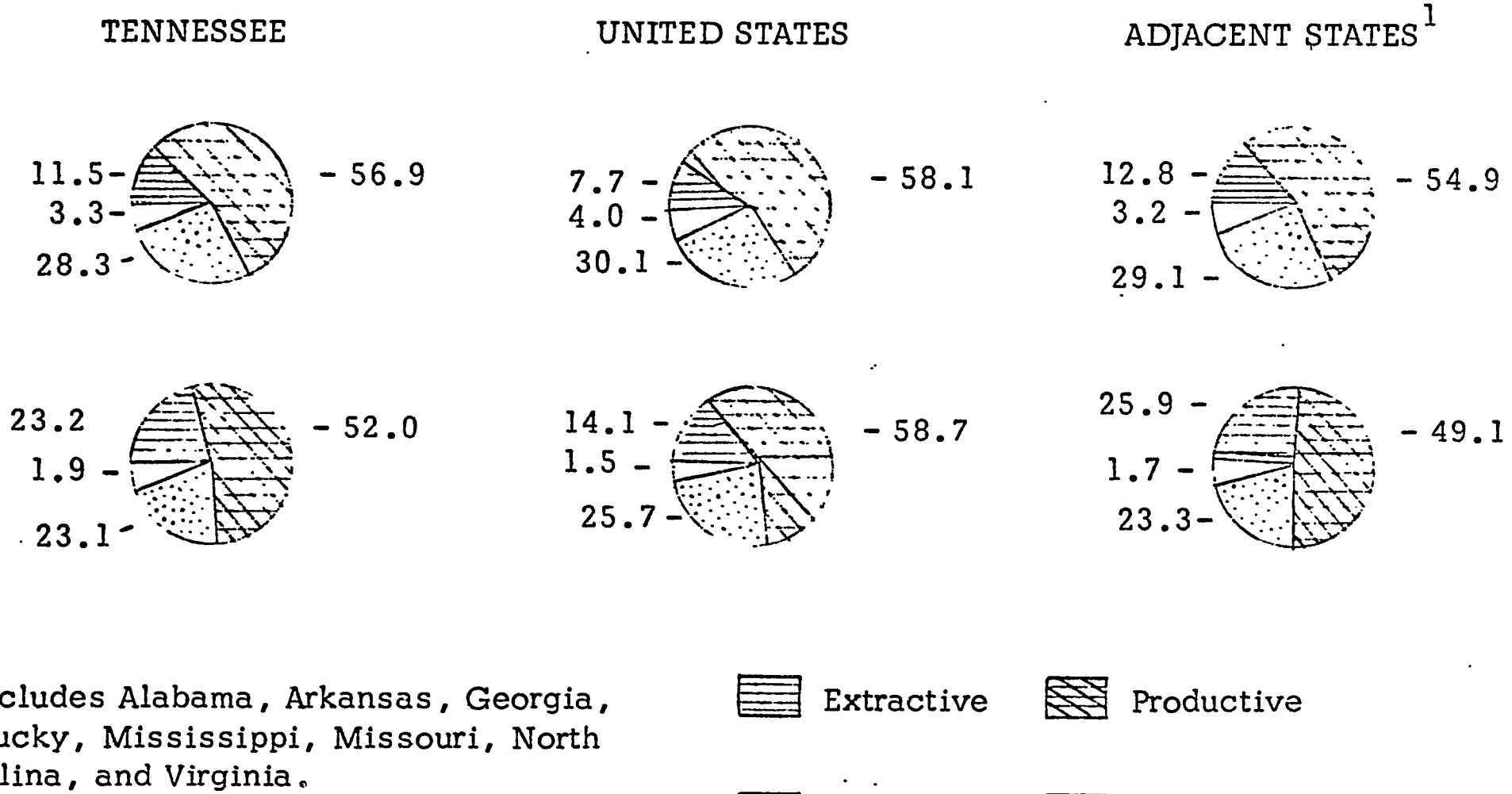


[1] Includes Alabama, Arkansas, Georgia, Kentucky, Mississippi, Missouri, North Carolina and Virginia.

Source: Survey of Current Business

FIGURE 2

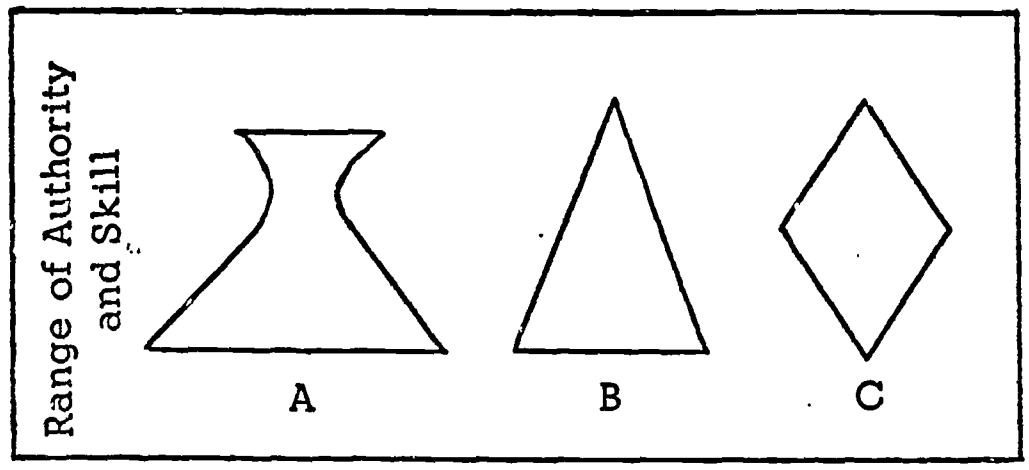
EMPLOYMENT DISTRIBUTION



[1] Includes Alabama, Arkansas, Georgia, Kentucky, Mississippi, Missouri, North Carolina, and Virginia.

Source: Census of population 1950 and 1960

FIGURE 3



Distribution of industrial personnel by degree of authority and skill:

A. Earliest stage of industrialization
B. "Transitional" or "early mature" stage of industrialization
C. "Advanced" industrialization

TABLE I

Type of Industry	Tennessee Millions	Tennessee Per Cent	Adjacent States Millions	Adjacent States Per Cent	United States Millions	United States Per Cent
1950						
Extractive						
Total	$ 362	13.7	$ 3,666	17.7	$ 19,587	10.8
Farms	326	12.3	3,231	15.6	16,020	8.9
Mining	36	1.4	435	2.1	3,567	2.0
Productive						
Total	1,630	61.6	12,123	58.4	116,699	64.5
Contract Construction	178	6.7	1,152	5.6	10,736	5.9
Manufacturing	691	26.1	4,982	24.0	52,870	29.2
Wholesale and Retail Trade	550	20.8	4,229	20.4	37,926	21.0
Transportation	168	6.3	1,291	6.2	10,618	5.9
Communications and Other Utilities	43	1.6	469	2.3	4,549	2.5
Service						
Total	652	24.6	4,892	23.6	44,092	24.4
Finance, Insurance, and Real Estate	88	3.3	651	3.1	7,031	3.9
Services	286	10.8	2,091	10.1	20,062	11.1
Government	278	10.5	2,150	10.4	16,999	9.4
Others						
Total	3	0.1	72	0.3	567	0.3
Grand Total	2,647	100.0	20,753	100.0	180,945	100.0
1960						
Extractive						
Total	$ 311	6.9	$ 3,486	9.7	$ 19,300	6.0
Farms	280	6.2	3,012	8.4	14,951	4.7
Mining	31	0.7	474	1.3	4,349	1.4
Productive						
Total	2,859	63.6	21,624	60.3	202,887	63.5
Contract Construction	279	6.2	2,300	6.4	21,038	6.6
Manufacturing	1,369	30.4	9,374	26.1	94,589	29.6
Wholesale and Retail Trade	899	20.0	7,012	19.5	62,385	19.5
Transportation	224	5.0	1,958	5.5	15,922	5.0
Communications and Other Utilities	88	2.0	980	2.7	8,953	2.8
Service						
Total	1,321	29.4	10,630	29.6	96,120	30.1
Finance, Insurance, and Real Estate	200	4.4	1,598	4.5	16,247	5.1
Services	548	12.2	4,167	11.6	41,666	13.0
Government	573	12.7	4,865	13.6	38,207	12.0
Others						
Total	6	0.1	135	0.4	1,037	0.3
Grand Total	4,497	100.0	35,875	100.0	319,344	100.0

TABLE II

PERCENTAGE CHANGES

Type of Industry	Total Income 1950-1964			Actual Percentage Change 1950-1964			Tenn. Income As % of U. S.	
	Tenn.	Adjacent[2] States	U. S.	Tenn.	Adjacent[2] States	U. S.	1960	1964
Extractive								
Total	- 8.8	1.9	- 1.4	- 8.0	- 9.5	- 5.8	1.85	1.71
Farms	- 9.2	1.2	- 7.2	- 7.2	- 8.4	- 5.0	2.03	1.99
Mining	- 5.6	7.1	24.5	- 0.8	- 1.1	- 0.8	1.01	0.77
Productive								
Total	122.9	125.1	106.4	1.5	1.7	- 2.2	1.40	1.51
Contract Construction	103.4	163.9	133.8	- 0.4	1.1	1.6	1.66	1.44
Manufacturing	161.9	144.7	114.2	5.3	2.9	0.1	1.31	1.60
Wholesale and Retail Trade	99.6	103.1	94.6	- 1.7	- 1.5	- 1.9	1.45	1.49
Transportation	65.2	74.0	68.5	- 1.8	- 1.3	- 1.3	1.58	1.46
Communications and Other Utilities	137.2	159.5	137.8	0.2	0.4	0.3	0.95	0.94
Service								
Total	174.4	190.2	184.0	6.5	7.7	8.0	1.48	1.43
Finance, Insurance, and Real Estate	201.1	220.7	188.6	1.3	1.5	1.3	1.25	1.31
Services	144.8	155.3	163.6	1.4	1.7	2.6	1.43	1.32
Government	196.4	214.9	206.0	3.8	4.5	4.1	1.64	1.58
Others								
Total	200.0	136.1	137.0	0.1	0.1	---	0.53	0.67
Grand Total	117.6	118.7	113.7	---	---	---	1.46	1.49

TABLE III

1950

Type of Industry	Tennessee Number Employed (000)	Tennessee Per Cent	Adjacent States Number Employed (000)	Adjacent States Per Cent	United States Number Employed (000)	United States Per Cent
Extractive						
Total	263	23.2	2,258	25.9	7,965	14.1
Agriculture	247	21.8	2,072	23.8	6,909	12.2
Forestry and Fisheries	1	0.1	32	0.4	125	0.2
Mining	15	1.3	154	1.8	931	1.6
Productive						
Total	590	52.0	4,279	49.1	33,101	58.7
Construction	80	7.0	506	5.8	3,458	6.1
Manufacturing	241	21.2	1,816	20.9	14,686	26.0
Wholesale Trade	35	3.1	242	2.8	1,965	3.5
Retail Trade	157	13.9	1,151	13.2	8,542	15.1
Transportation and Utilities	77	6.8	564	6.5	4,450	7.9
Service						
Total	262	23.1	2,026	23.3	14,527	25.7
Finance, Insurance, and Real Estate	26	2.3	197	2.3	1,920	3.4
Business and Repair Services	23	2.0	170	2.0	1,308	2.3
Personal Services	82	7.2	639	7.3	3,465	6.1
Entertainment and Recreation	7	0.6	62	0.7	493	0.9
Professional and Related Services	87	7.7	608	7.0	4,827	8.6
Public Administration	37	3.3	348	4.0	2,515	4.5
Not Reported						
Total	20	1.8	145	1.7	843	1.5
Grand Total	1,135	100.0	8,707	100.0	56,435	100.0

1960

Type of Industry	Tennessee Number Employed (000)	Tennessee Per Cent	Adjacent States Number Employed (000)	Adjacent States Per Cent	United States Number Employed (000)	United States Per Cent
Extractive						
Total	142	11.5	1,170	12.8	5,004	7.7
Agriculture	131	10.7	1,050	11.5	4,257	6.6
Forestry and Fisheries	1	0.1	24	0.3	93	0.1
Mining	9	0.7	96	1.1	654	1.0
Productive						
Total	697	56.8	5,028	54.9	37,580	58.1
Construction	83	6.7	574	6.3	3,816	5.9
Manufacturing	318	26.0	2,287	25.0	17,513	27.1
Wholesale Trade	42	3.4	271	3.0	2,213	3.4
Retail Trade	177	14.4	1,317	14.4	9,580	14.8
Transportation and Utilities	78	6.3	579	6.3	4,458	6.9
Service						
Total	343	28.3	2,659	29.1	19,448	30.1
Finance, Insurance, and Real Estate	40	3.3	295	3.2	2,695	4.2
Business and Repair Services	28	2.4	181	2.0	1,811	2.8
Personal Services	94	7.7	720	7.9	3,859	6.0
Entertainment and Recreation	7	0.6	51	0.6	503	0.8
Professional and Related Services	130	10.6	948	10.4	7,578	11.7
Public Administration	45	3.7	465	5.1	3,203	5.0
Not Reported						
Total	41	3.3	296	3.2	2,608	4.0
Grand Total	1,222	100.0	9,153	100.0	64,639	100.0

TABLE IV

EMPLOYMENT COMPARISONS

Type of Industry	1950-1960 Per Cent Change Total Employment			Actual Percentage Change 1950-1960			Tennessee Employment As Per Cent of U.S.	
	Tennessee	Adjacent States	U.S.	Tennessee	Adjacent States	U.S.	1950	1960
Extractive								
Total	--46.2	--48.2	--37.2	--11.7	--13.1	--6.4	3.3	2.8
Agriculture	--46.8	--49.3	--38.4	--11.1	--12.3	--5.6	3.6	3.1
Forestry and Fisheries	--	--23.8	--25.4	--	-- 0.1	--0.1	1.1	1.5
Mining	--39.3	--37.6	--29.7	-- 0.6	-- 0.7	--0.6	1.6	1.3
Productive								
Total	18.1	17.5	13.5	4.8	5.8	--0.6	1.8	1.9
Construction	3.1	13.5	10.4	-- 0.3	0.5	--0.2	2.3	2.2
Manufacturing	32.0	26.0	19.3	4.8	4.1	1.1	1.6	1.8
Wholesale Trade	19.9	12.1	12.6	0.3	0.2	--0.1	1.8	1.9
Retail Trade	12.5	14.4	12.1	0.5	1.2	--0.3	1.8	1.8
Transportation and Utilities	1.0	2.7	0.2	-- 0.5	-- 0.2	--1.0	1.7	1.7
Service								
Total	31.2	31.3	33.9	5.2	5.8	4.4	1.8	1.8
Finance, Insurance, and Real Estate	54.9	49.9	40.4	1.0	0.9	0.8	1.3	1.5
Business and Repair Services	24.9	6.2	23.2	0.4	--	0.2	1.7	1.7
Personal Services	14.0	12.5	11.4	0.5	0.6	--0.1	2.4	2.4
Entertainment and Recreation	6.0	--17.6	1.9	--	-- 0.1	--0.1	1.4	1.4
Professional and Related Services	48.6	55.8	57.0	2.9	3.4	3.1	1.8	1.7
Public Administration	20.6	33.4	27.4	0.4	1.1	0.5	1.5	1.4
Not Reported								
Total	98.5	103.3	209.3	1.5	1.5	2.5	2.4	1.6
Grand Total	7.7	5.1	14.5	--	--	--	2.0	1.9

TABLE V

MANUFACTURING EMPLOYMENT BY INDUSTRY
TENNESSEE
1954 AND 1963

Industry	Employees 1954 Total	Employees 1954 Per Cent	Employees 1963 Total	Employees 1963 Per Cent	Per Cent Change 1954-1963	Rank 1954	Rank 1963
Total Civilian Labor Force	1,242,665		1,462,100		17.7	--	--
Manufacturing Employment	267,496	100.0	340,670	100.0	27.4	--	--
SIC							
20 Food & Kindred Products	27,362	10.2	32,890	9.7	20.2	3	3
21 Tobacco Manufactures	1,250	0.5	991	0.3	--20.7	19	19
22 Textile Mill Products	33,365	12.5	30,326	8.9	-- 9.1	2	4
23 Apparel & Related Products	27,303	10.2	53,324	15.7	95.3	4	1
24 Lumber and Wood Products	18,016	6.7	16,965	5.0	-- 5.8	5	7
25 Furniture and Fixtures	10,061	3.8	18,120	5.3	80.1	10	5
26 Paper and Allied Products	7,925	3.0	9,975	2.9	25.9	14	15
27 Printing and Publishing	10,067	3.8	13,663	4.0	35.7	9	11
28 Chemicals & Allied Products	42,885	16.0	39,971	11.7	-- 6.8	1	2
29 Petroleum and Coal Products	456	0.2	300	0.1	--34.2	20	20
30 Rubber & Plastics Products	5,367	2.0	7,752	2.3	44.4	16	16
31 Leather and Leather Products	10,833	4.0	15,679	4.6	44.7	8	9
32 Stone, Clay, & Glass Products	8,483	3.2	13,858	4.1	63.4	12	10
33 Primary Metal Industries	11,579	4.3	13,309	3.9	14.9	7	12
34 Fabricated Metal Products	16,528	6.2	16,823	4.9	1.8	6	8
35 Machinery, Except Electrical	8,397	3.1	10,096	3.0	20.2	13	14
36 Electrical Machinery	3,967	1.5	17,752	5.2	347.5	17	6
37 Transportation Equipment	5,680	2.1	11,706	3.4	106.1	15	13
38 Instruments & Related Products	2,175	0.8	1,395	0.4	--35.9	18	18
39 Miscellaneous Manufacturing	8,900	3.3	7,684	2.3	--13.7	11	17
Administrative & Auxiliary	6,897	2.6	8,091	2.4	17.3	--	--
Manufacturing Employment as Per Cent of Total Civilian Labor Force		21.5		23.3			

[a]Tennessee Department of Labor, Bureau of Employment Security Worksheets
[b]Estimate
Source: CENSUS OF MANUFACTURES, 1954.
CENSUS OF MANUFACTURES, 1963.

TABLE VI

GROWTH RATES IN TENNESSEE INDUSTRIES
1963-1965

Industry	Number	Per Cent Increase
Transportation Equipment	4,000	54.8
Furniture and Fixtures	4,900	27.4
Machinery, Except Electrical	2,000	20.6
Fabricated Metal Products	3,400	19.1
Apparel and Related Products	10,100	18.7
Rubber and Plastics Products	1,100	14.9
Chemicals and Allied Products	6,200	13.6
Paper and Allied Products	1,100	11.3
Primary Metal Industries	1,700	10.9
Electrical Machinery	1,700	8.7
Leather and Leather Products	1,600	8.6

Source: Tennessee Department of Employment Security.

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*DISTRIBUTIVE EDUCATION; *PROJECT TRAINING METHODS; *TEACHER ATTITUDES; *COURSE EVALUATION; *EDUCATIONAL PLANNING

Seventeen teachers teaching 11th grade distributive education classes by the project method of instruction were asked to react to three questions: (1) What are the best points of project training? (2) What are the greatest problem areas of project training? and (3) What advice would you have for a teacher about to go into the first year of project training? The teacher's reactions to the three questions are compiled in this document. (MM)

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RESEARCH AND DEVELOPMENT PROGRAM IN VOCATIONAL-TECHNICAL EDUCATION
1967 Seminar in Distributive Teacher Education

Volume III, SEMINAR PAPERS AND DOCUMENTS
A. PREPARED PAPERS

No #1

Reactions to Project Training by Research Associates in Experimental DE High School Programs

by

Edward Ferguson, Jr.*

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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This paper is an edited collection of tape-recorded comments and reactions to project training carried out in 17 clinical sites in Michigan High Schools.

VT007217

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REACTION TO PROJECT TRAINING

The following excerpts were obtained from 17 teachers who have been teaching an eleventh-grade distributive education class by the project method of instruction since September 1966.

The comments were obtained at a workshop held in early April 1967. The seventeen teachers, all involved in a research venture with Michigan State University were asked to react to three questions: (1) What are the best points of project training? (2) What are the greatest problem areas of project training? (3) What advice would you have for a teacher about to go into the first year of project training? Their reactions to the three questions are presented here uncut, although a 30-minute tape has been made of selected comments made by the project method teachers. A loan copy of the tape will be made available upon request.

What are the best points of project training?

Project training allows a concentrated look at occupations. Our school has no other organized plan for the investigation of occupational information.

The student has the opportunity to change without the process creating hardships. In cooperative training, if the student becomes dissatisfied, he cannot easily change jobs.

In small communities the project plan is a good alternative for the cooperative plan. In our community, jobs don't exist to fit some career goals.

The method lends itself and even encourages relating classroom material to the career goals of the individual students.

Students with reading problems will many times accept projects which involve physical activity rather than reading.

Some of the best points of project training are the possibilities of allowing for individual differences in job goals; the outline approach, including the use of projects which should make keeping the program updated easier; the idea of students meeting, conversing with and observing people actually working in job areas; the fact that students are learning (the hard way, but learning) to take responsibility, meet deadlines, manage time. The theory here is so good. It merits any time we must spend to improve and perfect it.

The project method develops a positive self-image within the student because he is encouraged to select what he is interested in and feels he can be more successful in. He is guided through steps to accomplish his goal at his own rate and through communicative methods that he can do best. Creativeness on the part of the student also helps the instructor in planning on specific levels. The student responds more favorably because he is not pressured and feels that he is capable of doing as requested.

What the student does is more meaningful because he understands what and why he is doing in a particular project. Through actual experience he solves many problems which might not be understood through other teaching methods.

It gives a new awareness of what will really be expected on the job, as well as helps the student realize what is required if he is to be successful in a given area of employment.

As students are made aware of what is expected, they are inclined to start applying the concept; i.e., improving personal appearance during the unit on good grooming.

I have used individualized projects in the D.E. classroom for a number of years. However, I have never had the opportunity to sit down and develop a format that would meet the needs of each individual student. I feel the project materials can be developed to do just this. The projects increase in depth as the school year progresses, allowing the student to become involved in an area of interest rather than being or feeling pushed into an interest area.

The project method lends itself to flexibility; numerous activities involving groups and individuals can be intervoven into the class materials.

Probably the best point is that each unit presented starts with a stated objective that the students are aware of as well as the instructor. All activities have an objective, reason for, and purpose that leads to a goal (short and/or long range).

The project method lends itself to vocational guidance. Students are never asked to do or participate in any activity that has not first been presented through lecture, conference, panel, etc.

Project training affords an opportunity for students to choose a specific job goal and learn as much as they desire about that job. Emphasis is on career planning. If the teacher can properly motivate the students, there is no end to what they can learn with the project materials. Through the use of the projects, the students are better able to develop a D.E. personality.

The project method has helped influence some of the men on the advisory group to cooperate more fully with the over-all program. Several of our local retailers have complained for years that the emphasis on vocational training has been with office practice and trade and industrial education. This program indicates to them that they should gain benefits, too.

Students are exposed to practical situations through participation in the projects.

This has given me a group that my administration will allow to do special projects, such as the Gamble and J.C. Penney Washington's Birthday promotions.

Project training develops good pupil-teacher relationships, with many students finding themselves interested for the first time in what the future holds for them, especially in the area of specific occupations. The students also develop new attitudes in their treatment of others both in and out of school.

When the student is interested in a career, the project class does provide a deeper look into this career than on e could ever achieve in the course of a normal retailing class.

A lot of good ideas have been put together and used in teaching subject matter. A very compact collection of teaching materials has been provided.

In a small school, the use of the project method is ideal for use in a class preparatory for cooperative training. This should insure a better motivated and trained cooperative student and a more valuable employee. The student should be at a level of learning and achievement to rapidly assume positions of authority after high school.

Businessmen are participating without obligation. Later they could become training station employers.

Students can pursue an occupation as far as they wish. The need for students to pinpoint an occupational interest at this point is a great benefit gained by students.

The availability of materials from a definite source, such as M.S.U.

Some of the projects which enabled students to get involved, such as the career manual project.

Student interest can be kept high because they realize that you are interested in their personal job goals.

Units of study have been most helpful -- more material is always better than not enough.

Our meetings during the year have been great -- the exchange of ideas, projects, and thoughts, etc.

I liked the idea of having a personal conference with each student at the beginning of the year -- provided insight into some of their problems and thinking (we used personal data sheets).

Students really like the idea of DECA; it went over very well in our school system.

Several good points of project training are: more student participation, ability to stagger difficulty of the work according to the ability level of the student, participation of students at an early age in the emplbyment community, projects dealing with business community contacts, and development of students' ability to work in small groups.

Project training provides for one course within the school curriculum that can meet a variety of student and vocational interests.

Many high school students are not mature enough to assume cooperative positions, and this method of instruction provides for the students a business-oriented exposure on a selected and limited basis.

Students posessing a definite vocational interest become highly motivated because of the individualized method of instruction. The students are exposed to a non-textbook method of instruction, also.

Project training has many merits for students. More students can be handled in preparation for jobs. Where there is a lack of training stations, projects can be used in place of practical experience.

Classroom instruction can be geared to various job interests by the use of individualized projects.

Projects can be geared to the mental abilities of the individual students.

Students can see results of their efforts in the classroom whereas this is sometimes difficult to achieve in an on-the-job situation.

I think the best point of project training is the fact that we are looking at students as individuals, not en masse. They achieve an identity and are allowed to explore their individual interests. They do not necessarily receive the censorship of other students or their abilities or level of achievement because they work individually rather than in competition with others.

I like the results of the students' self-evaluation and occupational goal. Although there have been many revisions and doubts, this has been more meaningful than in previous eleventh-grade classes where the students had not identified with a field such as a cooperative job. The second result has been tremendous growth of the students' confidence and verbal skills from the class role-playing, employer interviews, and class discussions. Their involvement and desire to share experiences gained from individual projects also indicated student growth and progress.

What are the greates problem areas in project training?

Some of the greates problem areas were getting students to identify job goals (Perhaps, in some way, this could be done the semester previous to their taking the project class); creating enough projects for the students to do which relate to their individual job goals; finding enough general projects for all students to become involved in; difficulty of relating all the material to each individual students' job goals; finding enough time to devote to the project class (Perhaps a teacher not involved in coordination activities should teach the project class).

Students are used to textbooks and seem a little uncertain without something. This is true of those who have no or few reading problems.

Since this is the first year for DE in our school, the counselors were not fully aware of what DE is and therefore some students were placed in the class who would have found other classes more profitable.

Personality conflicts of students seem to appear more often in this class than in others. There exists a certain intolerance of the opinions of others.

Some bad points of project training are: problem of localizing or fitting projects to needs of individual students and individual communities; lack of direction -- project method is undirected in nature and with low achievers this is difficult to handle; students are creatures of their educational environments--they are used to assignments, texts, review, tests, etc., and if not directed properly may fall by the wayside; lack of effective guidance function in selecting students for the project class (To be successful in the DE project endeavor, students must first have career interests in the field of distribution. Then theory may become reality.);

materials should be individual teacher designed.

I found it difficult to evaluate projects and assign grades to them. The written comment on the project training record is not enough. Points have to be assigned to each individual project. Because of the individual interest areas, there is a variation of information and work on the different levels.

There is a need to provide time to interview, prepare, and keep up with the paper work. It is also difficult to work the teaching schedule in with students' schedules.

The classroom teaching method easily becomes constant lecturing.

One of the greatest problem areas is holding student interest, especially when considerable lecture is necessary. It is also a problem to convince the students that many businessmen are interested in students and will cooperate with them. Working with an advisory committee can be somewhat of a problem, especially during their initiation. The teacher should have more control in student selection. There is also a lack of understanding of DE by others on the faculty, due often to misinformation.

Students who are shy have an immediate problem of projecting themselves into the project activities that require visiting distributive businesses.

As our units developed, the problem arose of maintaining student interest during lecture sessions.

The students are not accustomed to individual grading scales, lack of "busy work", lack of text assignments. But now they know what to expect.

A great deal of time is necessary for effective preparation, contacting employers, and personal evaluation of projects and assignments.

I have an ideal situation of fifteen students who were selected by me from the students who signed up for the introductory course.

The greatest problem area is numbers. Individualizing instruction is difficult with an overwhelming number of students. Record-keeping is also prohibitive.

Another area which needs improvement, I feel, is in our instructional methods. I find myself lecturing most of the time. Student interest, enthusiasm, and motivation are minimal in this way. Students seem to need a security blanket, like a book, and I don't think this is such a bad idea. They need assignments almost daily and letting them read a chapter related to a new topic certainly wouldn't hurt.

The amount of handout materials (I wonder if they read them if we don't go over them in class) is also overwhelming.

The development of the DE program in the school should also be of some concern. Trying to develop a program, with modular flexible scheduling, and teaching the pilot class seems to spread one too thin, to a point where I don't feel I am doing anything correctly and well.

If the students are willing to state a job objective (one that they are really interested in, not one which just comes to mind), instruction would be much easier.

Cooperation between the community, school officials, and faculty (including counselors) can be a problem. I am in an apathetic community, have an apathetic, uninterested faculty and administrators who are too busy and "think they know it all" to cooperate. However, my counselors are wonderful and will do almost anything I ask--but, knowing nothing about this area of education clearly can be a problem.

This year my students were not selected. Next year's students must be oriented vocationally toward DE, so I am getting closer, little by little, to self-selection of students in my class.

Not being a coordinator myself, nor being given the time for such activities, causes a problem as to my ability to achieve community cooperation.

One of the greatest problems to the teacher in coordinating an effective project training program is the time factor. It is clear from my experience that the time required to set up, introduce, coordinate, and evaluate 26 different goal-directed and individual projects once a week is clearly impossible without a preparation period solely reserved for such project training coordinators. Project training released time must be provided on an equal par with regular cooperative training.

Second is the student selection problem. It is clear that correct selection of students is essential for effective training. When the project class is used as a "dumping" ground, as was my experience, the interest level of most of the students is too low and incompatible with DE goals, etc., to allow meaningful project experience. Personal responsibility to utilize assigned projects correctly is lacking in a person who actually has no interest in DE, doesn't intend to go into distribution, etc. Because of the time factor, the teacher can't devote enough individual time to each student necessary to motivate individual project accomplishment if those students have no interest in the program to begin with. Calling a spade a spade, guidance personnel must be brought into the program more effectively or project training fails.

Another serious problem which hinders project training is student mobility. In order for projects to succeed, the student must be able to get around to various resource spots to conduct many of the projects.

Lack of resource material in the high school is a serious drawback to projects involving independent studies. This goes for related class instructional materials. I found that students must have something to refer to when a lecture is used. Most textbooks I've seen aren't the answer. Perhaps development of our own "text" along the lines of the project training outline units might be the answer.

Lack of individual projects specifically designed around S.I.C. occupations forces the instructor to give blanket projects which may be able to be used by the student to investigate career interests if that student is sincere and responsible, but more often such blanket assignments don't spell out clearly what the student should do, which is needed in high school -- so the student does nothing in the end.

The biggest problems I've faced have been indifference from students who were not coordinator-selected and lack of time to do an effective job. The amount of time needed for this program is unbelievable and was certainly underestimated when the program was begun. One other problem area is probably the lack of student ability to grasp all this theory through classroom discussion and lecture without the aid of a text or outline. In my particular case, lack of public transportation for students, lack of some types of distributive businesses in the area, and the early hour of the class (7:20-8:10 a.m.) have been additional disadvantages to the class success.

Lack of selection of participants in the program results in students who have no occupational interest in the field of distribution.

Project training records are not usable in many cases.

Students prefer assignments to do in a short span of time rather than a project to be done for an extended length of time.

Lack of student materials leaves a void that students don't like. They want written material which they can refer to, such as a text.

Evaluation of students is difficult when all they are interested in is the final grade.

Teacher time needed to prepare for classroom instruction is much too great to fit into an average teaching day, and still devote the time necessary for preparing for other classes and departmental activities. One hour a day extra is not sufficient.

Lack of cooperation from outside resource people can also be a problem. It is difficult to get people to come in during class because of job conflicts.

There is not enough time for individual conferences with students because of their school schedules.

Selection of students is a primary problem.
Projects must be meaningful to students.
There are limited facilities in small towns for all occupational areas.
Students lack a prior consideration of an occupational interest area.
Students have very limited exposure to the jobs in industry that are available.
Lack of text is a new and confusing situation for students.
Students get as much or as little from the class as they wish.

Selection of students would be helpful in getting off to a better start; but, on the other hand, many of the capable students would not be selected if we chose on the basis of what we arbitrarily judge as "good". This means the emotionally disturbed student who may be a pest because of the experience he is involved in; but, relieved of the situation and put into another classroom environment, he could perhaps do superior work. So, if perhaps in some way we could be aware of why the student is as he is, this course could be the key to helping him find himself and become more interested in his future.

Materials necessary for doing the work is important. Students are sometimes unable to purchase materials (for example, the student who does very good art work but cannot afford the brushes, paint, etc.). Even obtaining advertisements from newspapers was a problem to those who do not subscribe to newspapers and magazines.

Some problems arise when there are students in the class who are not interested in going into the area of distribution. It is difficult to sell students going into a vocational area in which the average wage for salespeople in our area is around $2 an hour.

Projects require students to spend considerable time after school. If too many projects are assigned, students resent contributing so much time when they can't relate the importance of the project to their individual vocational goals.

Testing can become a problem because students are required to take a number of aptitude, preference, and achievement tests. Students are also pressured to take college boards, PSAT, SAT, and others. After a while the students rebel against doing their best on the tests.

Students in my area have had no previous business courses. We don t have a curriculum that can offer them any exposure to any areas of distribution prior to their taking this course.

DECA has not been well accepted but this is probably as much my fault as anyone's. I'm not a strong club advisor and I don't enjoy the activity.

Students would benefit from a textbook, workbook, or syllabus. They cannot concentrate on lectures alone, do not know how to take notes, and their interest spans are short.

Students dumped into class because of schedules or the lack of understanding of counselors are a discipline problem. It is almost like a game to them.

It is difficult for the teacher to keep everyone constructively occupied at all times. I overcame this by adding a textbook a third of the way through the year. This allowed me an opportunity to keep order and talk to individual students. It also gave the students additional reading material, or a different view from the lectures. It also gave sources for assignments or additional written drills for the students.

Project training records are a time consuming activity. They are difficult to fill out in duplicate for each one.

The mass handouts were troublesome. It would be much better to have student handbooks.

Business people do not cooperate with interviews, etc. I have had to call on personal acquaintances to do them as a favor to me.

Students are reluctant to go out into the community to do projects. They are used to a routine procedure and do not want to go out of their way at all. In-class projects are easier to do and enable me to work with students.

The level of the material was too high for my students. The teacher must then do a lot of extra imaginative thinking to help students see material within their limited frame of references and within their intellectual abilities or understanding.

Student selection is the chief problem. I believe the teacher-coordinator should have something to say about the selection of students. Before selection or during the selection process, the student should be informed about the "area of occupational interest" -- what it means and how it is connected with the project plan. Family cooperation should be enlisted and included.

The units of material should be related in some way to a textbook. (security blanket) Students are lost without something to hang on to. I find myself teaching a class how to listen and take notes.

Evaluation of students is a problem. Students want something to go on -- "How will we be graded? It would be ideal if the course could be ungraded. What happens when you have an active student (many projects completed) and one not so active?

Transportation and location of businesses also cause difficulty. Students must have a car; not all students have the cooperation of their families. All businesses will not cooperate.

Students hesitate about career objectives; it is too much of a harness. "Area of occupational interest" seems to be a better term.

Some problem areas are selection of students for the program or pre-screening and introducing the students to the project training method. Preparing of illustrative and visual materials insuring that all interest areas can be related is also an important consideration.

Individual records on student projects and methods of evaluation of progress of students provide a new type of problem different from regular evaluation methods used.

Arranging for and following up projects with businessmen within the community without additional released time or coordination time poses a big problem.

The arrangement of units of instruction into a more meaningful and logical order for beginning students is necessary. There is a need for smaller individual assignments which can and should be done by all the students.

The great necessity to rely on the lecture method can become boring for students at this age level.

What advice would you have for a teacher about to go into the first year of Project training?

To a new project training teacher, I would advise insistence on released time to coordinate the project training. Also, the course outline should be made up as a handout and used as sort of a text, except that it would be just an outline and more flexible than a text. One other important factor -- be able to plan ahead, master the outline, have visual aids planned and prepared well in advance. And definitely, the coordinator (teacher) must be in on the scheduling of students into the class.

This project method is a lot of work and requires a great deal of flexibility; if you are not able to give these two things, then forget it. If you can, then it will be a very rewarding experience for you as well as the students.

Prepare a sufficient supply of materials and aids. Contact local distributive businessmen and explain projects to them. Arrange with some businesses to have your project students do their projects at their businesses.

Have some arrangement with counselors to screen students to make sure the broad occupational areas fit into DE.

Check to see if job goals are realistic for the student.

Start early in making a resource file.

Arrange with the guidance department so that students can be screened according to career interest and desire.

Be prepared, with materials prepared well ahead of time.

Released time is essential.

Educate the community, school, businessmen as to what exactly is being done.

It is probably a good idea to be a coordinator -- materials available and work stations on hand to make up worthwhile projects.

Certainly the workshop was most helpful. The new teacher must be sold on the program and willing to work over and above regular hours.

Prepare much in the line of AV materials -- keeps student interest.

Use a variety of methods in presentation of materials.

It is necessary to have a good working relationship with vocational directors and staff (counselors included).

Make sure you have time, proper students who can benefit from this instruction, (After all, this is occupational instruction and not a survey course for someone who needs an extra credit.) and some idea of what kind of individual experiences each type of student may be able to find within his community.

Be sure that you are assigned coordination time in addition to the normal preparation time if you are to teach the project method. Special arrangements should be made with employers in the community prior to the start of the class.

A strong preparation in the broad field of DE is necessary to be effective in the classroom. Visual aids and illustrations should be developed early because of the time expended for teaching, coordinating, and evaluating. Actual experience is valuable.

A knowledge of DECA, its programs and operations, will greatly aid in the fulfillment of course objectives.

You must be able to select students who are to be in the project class. Selection should involve a personal interview based on what the student feels he is interested in or thinks he might be interested in.

You must be able and ready to work, work, work.

You must not give up when the students do -- keep plugging.

You must be prepared for an abundance of disappointment.

Whatever you do, do not go back to the textbook and give up on the materials. They can and will work, if you do.

I would advise a new teacher to study the projects carefully and assign only those that have appeal to a particular student; to emphasize that students must have a sincere interest in their vocational goals; that students will attempt to fake a vocational goal if a parent, relative, or good friend is working the area; that students will not always be truthful on the survey projects and many times will not complete work as assigned but will make up answers; that few other teachers and administrators as well as employers in the community have understanding of DE. I would suggest adding retail and marketing to this description.

Use a textbook right from the beginning.

Have students only who are interested in distribution.

Have counselors give the tests so that students' feel more comfortable taking the tests and answering personal questions, since they are used to counselors in this role rather than classroom teachers (refers to tests given as part of the research study.)

Start out with "doing" projects in class, fun ones like display, sales demonstrations. The material on employment, distribution, etc., was dreadfully boring to my students.

Start DECA in the beginning and have everyone join. It's a great teaching aid if all participate and work on contests, etc.

The new teacher needs to learn to know each student individually as soon as possible. She should make assignments on the level of the student who is to do it. She should use the method that the student can use more successfully, providing for the student a freedom of expression.

Inform the school, the community, and the businessmen and parents of the meaning of DE. Work with counselors to be sure they know the type of students you want. Interview students prior to placing them in the class to determine that a SOLID career objective is in mind.

You must constantly take time to plan and create -- plan and create-- Otherwise, project training cannot and will not be successful. This must be done for each individual student.

The teacher should be willing to spend more than the average amount of time in preparation for work both in and out of the classroom. The teacher should be dedicated to the cause of helping each student find himself and then proceed in his area of interest, even if this is in another area of study. The teacher should have better than average relationships with other faculty members and the administration, or the program is in jeopardy.

Spend many hours going over the entire year's work before school starts to see what you have to work with and where you will ultimately end up.

Try to get administrators to realize the time necessary for class preparation and how much you need their cooperation to make the program work.

Work with the guidance department to select students.

Be able to adjust the program to the caliber of your students. Know what you can eliminate before students get so lost or bored that you lose them completely.

Don't get too discouraged or you will get an ulcer and turn gray. It's just not worth it. Something good will result from your efforts regardless of the problems you have to face.

VT 007 218
Follow-Up Study of MDTA E and D Project Conducted at Agricultural and Industrial State University at Nashville.

Bureau of Social Science Research, Inc., Washington, D.C.
Office of Manpower Policy, Evaluation, and Research (DOL), Washington, D.C.
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OFFICE OF MANPOWER, AUTOMATION, AND TRAINING; OMAT; TENNESSEE

A 36-week experimental and demonstration project in basic education and job training for 180 adults from three rural areas of Tennessee was evaluated to ascertain implications for future manpower development programs. Group and individual counseling, housing, training allowances and per diem were provided for trainees in meat processing, park services or livestock maintenance. Some findings from interviews with 112 trainees and 157 applicants not accepted for training were: (1) The hard-core are more easily recruited by hard-core participants in the program, (2) Differentiated recruiting methods should be used with heterogenous populations, (3) Special training is usually necessary for staff members without previous experience in working with poverty groups, (4) Trainees should have intensive counseling available in scheduled group counseling sessions, (5) The training program was not effectively coordinated with realistic placement plans, (6) Individual attention by the staff is necessary, and (7) Training programs must be suited to the needs of the population. Some recommendations were that basic education be provided at the trainees' home site and job training be provided by the university and that training allowances be provided between termination of training and actual placement so project staff members could remain in contact until the individual is placed in a job. (DM)

VT 007 218

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FOLLOW-UP STUDY OF MDTA E & D PROJECT CONDUCTED AT AGRICULTURAL AND INDUSTRIAL ST TE UNIVERSITY AT NASHVILLE

Submitted to:

Office of Manpower Policy, Evaluation, and Research
U. S. Department of Labor
(Contract 83-08-03)

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VT007218

July, 1967

BSSR:369

ERIC

FOREWORD

This report is one of a series of reports on each of eight experimental and demonstration training projects followed up by the Bureau of Social Science Research under Contract Number 83-08-03 with the Office of Manpower, Automation and Training (now the Office of Manpower Policy, Evaluation and Research) of the U. S. Department of Labor.* The eight training projects were conducted by seven institutions scattered from Michigan to Florida. Six of the institutions were considered to be "predominately Negro" colleges: Bluefield State College (West Virginia), Florida A & M University, Morgan State College (Maryland), A & T College of North Carolina, Tennessee A & I State University, and Tuskegee Institute (Alabama). The seventh institution was the Job Training Center in Lansing sponsored by the Michigan Catholic Conference. An over-all report will pool the experiences of the several projects and consider their implications for future manpower development programs.

The follow-up studies had three general objectives:

1. to document that the target populations--individuals with especially difficult employment problems--were serviced, that they are trainable and that these institutions can train them;

2. to document whether the training may have affected the employment situation of the trainees: that "trainability" leads to "employability"; and,

3. to identify components of the training projects and community characteristics which may have contributed to the training and employment outcomes.

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*The terms are used interchangeably in this report.

The "ideal" research design called for "before-after" studies. The timing of the award of the follow-up contract by OMAT to BSSR precluded the execution in its pure form of this design. The contract was awarded after one project had terminated, four others had begun, and the remaining three were about to begin. In all reports the "before" data are based on retrospective observations.

The study plan called for the integration of three distinct bodies of data into detailed reports on the individual projects. The starting point for the analysis was a series of discussions with members of the project staff at each of the training centers. These discussions yielded detailed information about the actual conduct of each project, its goals and methods. From these meetings and discussions it was possible to assemble pertinent histories for each project. Because of the method employed, the central perspective of each history was that of the persons charged with the conduct of the individual projects: the administrators, the instructors and counselors, and officials of the public agencies who may have cooperated in the conduct of the projects. In addition, records which helped to clarify the goals and conduct of the projects were made available to BSSR by OMAT.

This administrative perspective was broadened by a second body of data concerning special conditions in each of the areas where training was given. Discussions about local factors that would affect the outcome of the training projects were held with civic and business leaders in each area by members of BSSR's Study Team. From these discussions information was obtained concerning employment conditions in each area, hiring practices and preferences, skill requirements, etc. Thus, we knew

a great deal about these projects and their settings, but the information we had was from the perspectives of the project personnel and people in what might be called the "power structure" of the local community.

To round out the picture of the projects, it was deemed necessary to view them from the perspective of the people they were designed to serve. This information was obtained through personal interviews by specially trained interviewers. The sampling plan called for interviewing all trainees and a sample of persons who applied for but who did not begin training. Interviewing took place from six to twelve months after the completion of training. The respondents were asked about their personal and economic situations at the time they applied for training in addition to their experiences with the training project and their current situation.

In most interviewing areas no experienced interviewers were available; pools of potential interviewers were formed through the recruitment efforts of BSSR field directors. Negro school teachers were the primary source in most areas. In all, more than one hundred and fifty interviewing recruits passed "screening," passed training, and conducted one or more interviews.

Interviewers underwent intensive training by BSSR field directors to locate the respondents whose addresses, although verified by the Post Office, were up to two years old--and to conduct the lengthy follow-up interview. Where respondents were concentrated, interviewers could be supervised locally; where respondents were scattered, interviewers were supervised by mail and phone from BSSR in Washington, D. C. In either case, all interviews were subjected to quality control procedures designed to yield a high level of completeness and consistency among responses. As a result item response rates are extremely high for all "critical" items in the schedules.

Approximately 2400 persons who applied for training at any of the projects were to be interviewed; completed interviews were obtained from about 1700, a response rate of over 70 per cent. About three-fourths of those who began training at any project were interviewed; the rate ranged among the projects from 53 per cent to 96 per cent. Response rates for those who applied for but who did not begin training were somewhat lower. The latter group, it should be noted, could provide a basis for evaluating the recruitment and selection procedures of the projects and, under special circumstances, could serve also as a control group with respect to the effectiveness of training.

The authorship of each individual report was assigned to a permanent staff member of BSSR who also was responsible for the analysis of the several bodies of information available about a project, but each report is also based upon the research contributions of many staff members of BSSR. The studies were under the over-all coordination of Dr. Robert T. Bower, Director, BSSR, with the assistance of Laure M. Sharp, Senior Research Associate. Leslie J. Silverman, Research Associate, was the Study Director, and, together with Mrs. Bettye K. Eidson and Miss N. March Hoffman, Research Analysts, designed the studies. The BSSR Study Team consisted of Dr. Frank Cotton, Mississippi State University; Dr. Lewis Jones, Fisk University; and Dr. Charles Grosser, New York University. Field operations for the trainee follow-up in Tennessee were conducted from March through June, 1966, directed by Gene Peterson. Dr. Samuel Lyerly designed the statistical procedures used in the various reports, and Richard Jones provided data processing consultation. Frank Davis supervised the coding operations and Miss Megan McLaughlin supervised the interviewers and the quality control operation. Donald Goldstein was the programmer. Miss Angeles Buenaventura, Miss Diantha Stevenson and Mrs. Mary Helen Shortridge also provided valuable assistance.

We are grateful to many individuals throughout the Manpower Administration of the Department of Labor who assisted us. Within OMPER, Mr. Robert Lafaso, our first project officer, and Mr. L. B. Wallerstein, who succeeded him, provided valuable guidance and met our requests in a most satisfactory manner.

We are grateful also to the directors and staffs of the training projects who cheerfully underwent so many hours of interviewing by BSSR staff. The helpfulness of employers of trainees, officials of state and local Employment Security Commission offices, and state education agencies is acknowledged and appreciated.

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I. INTRODUCTION

From January to September of 1965, a period of 36 weeks, an OMAT experimental and demonstration project was conducted at Tennessee Agricultural and Industrial State University at Nashville. The project was staffed by University personnel who offered a program of basic education and job training for 180 adults, men and women, Negroes and whites, predominantly from three rural areas of the state.

All of those selected for training were to receive basic education, and each was to be placed in one of three occupational training groups: meat processing, park services or livestock maintenance. Those whose homes were distant from the project were to be housed by the University, and training allowances and a $5 per diem to cover expenses were available to anyone whose level of need qualified him to receive one or both. Group and individual counseling were to be provided. Having presumably determined a demand for workers in the chosen occupations before initiating the program, the project staff was to promote job development so as to place the graduates in training-related work.

The original proposal called for a number of experimental and demonstration features. The recruitment staff would go out to the rural areas and demonstrate an effective method for reaching the hardcore poor. Experimental groups would be set up to study the relative effectiveness of three different methods of basic education. Twenty entire families would be moved to Nashville so that the staff could study the problems of adjustment in transition from the rural to the urban milieu.

From its genesis the program appears to have had the full blessing of the University staff and State officials. Dr. Davis, the President of the University, enlisted the interest of the Governor, the State Employment Security Service, the State Vocational Education Department, the State Department of Public Roads, the State Park Department and a wide variety of officials and other useful and influential persons in the local and regional areas. Advisory boards were established in each of the three rural areas of the state where the project planned to recruit. These boards were composed of community leaders--doctors, lawyers, merchants, politicians--whose membership gave the project prestige. At the target sites Community Councils were formed for the purpose of contacting potential recruits to explain the program to them. Councils were made up of persons believed to have direct contact with the target population--ministers, social workers, civil rights workers and the like.

All the evidence suggests that the project was welcomed and that it began with most auspicious official support at State, local and University levels. But, as we would expect in the case of any innovative program, not all of the plans succeeded. It is the purpose of this report to describe the program as it was planned and as it was executed in the hope that future programs of this type might benefit. First we will describe and evaluate the recruitment program, then describe the basic education and job training, then look at special facets of the program and evaluate job placement. Finally we will offer some recommendations based on the study of this program.

The usual sources, as discussed in the Foreword, were utilized for this report. Because relatively little data was available from

project sources, this report is largely based on the BSSR Study Team reports and on interviews with 112 trainees and 157 applicants (persons who applied but were not accepted for training). Those interviewed constitute approximately 60 per cent of all trainees and 80 per cent of all applicants (for further discussion, see p. 6).

II. RECRUITMENT

Procurement of Applicants

Recruitment took place in November and December of 1964. Four predominantly rural counties in each of three areas of the state were selected for attention. In western Tennessee and in the area directly south of Nashville the rural poor were known to be predominantly Negro, whereas in the Cumberland plateau area east of Nashville, the population is almost entirely white. By choosing these three areas, the project staff could expect to fulfill the mandate to reach the rural poor and also achieve a racially integrated program. Applicants from other places were welcome but not systematically sought.

In each of the areas, Community Council members were asked to pass along the word that a training program was about to begin. They were urged to encourage eligible persons to apply. Announcements were made in newspapers and on the radio. In addition, over a period of about a month, a mobile unit visited the three areas to recruit. The unit was staffed by a racially integrated crew and was escorted from place to place by highway patrol cars. The escort was provided to communicate official approval and to preclude civil rights incidents.

Confident that the mobile unit would reach the needy as more conventional techniques would not, the staff nevertheless provided for demonstration of effectiveness. Four counties in each area were designated for recruitment; in two, only the conventional recruitment procedures were used, whereas the other two were also visited by the mobile unit and its crew.

In connection with its agricultural extension program, the University had used the mobile unit technique effectively and had developed what they regarded as a successful format that was adapted to this project, as follows. After an invocation, a few short speeches and sometimes a demonstration of meat processing (one of the three training occupations; the others selected were park services and livestock maintenance), members of the audience were encouraged to complete applications, talk to staff members and ask questions. Speaking of an occasion when he visited a mobile unit recruitment session, the Project Director compared it to a revival meeting. People came in large numbers, expressed the belief that the crew had come "to save them," brought lunches to eat on the lawn, and ended the gathering with group singing.

Not all of those who came to the meetings or made application for training were eligible. The staff estimated they received about a thousand applications in the field, but said that only about two in every five could receive consideration under the criteria of eligibility and retained in their files only those applications.[1]

Persons over the age of 19, whose family income was under $1,200 for the preceding year, and who had less than an eighth grade education were to be accepted for training. Heads of household were preferred; an applicant who was not the head but living in a family whose income was under $1,200 was also deemed eligible.

Despite a concerted effort put forth by the staff and the appeal of the mobile unit, the project had difficulty in finding a sufficient number of recruits who were eligible and wanted to enroll. When it was

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[1]A total of 369: 180 who were eventually accepted for training and 189 who were not.

time for the program to begin there were still 20 vacancies. The staff announced the vacancies to those who had reported for training, suggesting that they tell their friends and neighbors about the program. Within three days the additional recruits appeared, and were found to be more deprived than those originally recruited. The staff concluded that the mobile unit "was successful in recruiting the hardcore, but it takes the hardcore to recruit the hard-hardcore." They felt that the earlier recruits were able to dispel the fears of the more deprived and could assure them that the project staff members were sympathetic and able.

Staff members estimated that two-thirds of the trainees had enrolled because of contact with the mobile unit crew. When the trainees were asked in posttraining interviews whether or not they had had any contact with program staff personnel before beginning training, half of them said that they had.[2]

We have no reason to assume that recruitment activity was different in the three areas of the state. However, the mobile unit appears to have been more effective in western and southern Tennessee than it was in the Cumberland plateau area. About two-thirds of the trainees who came from the first two areas reported contact with staff personnel; only one-fourth of those from eastern Tennessee did so (see Table 1). In view of the differences in racial composition in different areas, this finding suggests that the Negro poor were more susceptible to the mobile unit appeal, whereas the white trainees were much more likely to respond through other channels.

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[2]Of course, it is possible that actual contact was greater than reported; where mobile unit programs took place at schools or at offices of the Employment Service, trainees may have identified the contact with the local organization rather than with the project staff.

As we will see later on, the Negro recruits were more underemployed, whereas the whites were unemployed in greater proportion, and this difference may account somewhat for the greater tendency of the whites to come to the program through the Employment Service.

TABLE 1

PROPORTION FROM EACH AREA OF STATE WHO REPORTED PRETRAINING CONTACT WITH PROJECT STAFF

Area of State	Total Number of Trainees	Per Cent Reporting Pretraining Contact
Trainees from western Tennessee	40	63
Trainees from southern Tennessee	16	70
Trainees from eastern Tennessee	47	28
Trainees from project area	7	100
Trainees from other areas	2	-

Selection of Trainees

We have data only for the 112 trainees and 157 applicants who could be located for interviews.[3] Hereafter, when we speak of either trainees or of applicants who were not accepted for training, we refer only to those who were interviewed six months after the completion of the training program.

[3]One can only speculate about the bias introduced by partial coverage. Those who could not be located or had moved away might be visualized as itinerant workers who were most needy; on the other hand, they could be those who were enterprising enough to move to a better labor market. We have no way of knowing, and think it likely they are not exclusively at either end of the spectrum.

Data from the trainee and applicant interviews suggest the order of priorities that guided the staff in selecting out some for training. Apparently they wanted to achieve racial balance. To do so they had to accept nearly all the white applicants--those from eastern Tennessee--and reject a large proportion of the Negroes--those from western Tennessee (see Table 2).

TABLE 2

PROPORTIONS OF TRAINEES AND APPLICANTS
FROM DIFFERENT AREAS OF TENNESSEE
(In Percentages)

Geographic Origin	Trainees (N=112)		Applicants (N=157)		Total (N=269)
Western counties	36	(40)	58	(91)	49
Southern counties	14	(16)	22	(35)	19
Eastern counties	42	(47)	2	(3)	18
Project area	6	(7)	18	(28)	13
Other Tennessee	2	(2)	-	-	1
Total	100		100		100

All but three of the applicants from eastern Tennessee were enrolled, as compared to about one of every two and a half from the western counties and one in three of those from the southern counties. This was based on the desire for an integrated program affording both racial and geographic diversity. The Project Director said the staff felt that it would be "good for" the Negroes from western Tennessee to have contact with the whites from the eastern sector.

Other considerations affected the choice of trainees. The number of women was limited because only meat processing was considered suitable for women. The facilities limited the number who could be enrolled; therefore, most of the women applicants were rejected.

Not all of the applicants were interested in being trained in the three occupations in which training was to be offered. Retrospectively, at the time of interview when they were asked to recall how they felt when they first heard of the program, those who had been selected for training reported much greater interest in one or more of the occupations than those who did not enter the program. Three-fifths of those not selected for training said they did not want to be trained in any of the occupations, as compared to less than one-fifth of those selected. Only 8 per cent of those not selected said they were willing to be trained in more than one of the proffered occupations, as compared to 20 per cent of the trainees.

When both applicants and trainees were asked whether they thought each of the training occupations offered steady, year-around work, and whether they thought the occupation was a good-paying one, applicants and trainees differed as follows(see Table 3).

TABLE 3

APPLICANTS' AND TRAINEES' EVALUATIONS OF TRAINING OCCUPATIONS AS BOTH "STEADY" AND "GOOD PAYING"
(In Percentages)

Training Occupation	Applicants (N=157)	Trainees (N=112)	Per Cent Difference
Meat Processing	75	96	21
Park Services	28	47	19
Livestock Maintenance	33	63	30

One could infer that the trainees had set their sights lower than had the applicants and were, therefore, more willing to accept any kind of training. Of course, opinions expressed retrospectively about matters of choice are subject to question. Those who were not accepted for training might be expressing a "sour grapes" rationalization of their rejection, while those who were accepted might be justifying their decisions to participate, or the staff's selection of them as worthy candidates. On the other hand, if the data reflect real opinions at the time of application, it is not surprising that the project staff preferred to select trainees who wanted to be trained.

The project staff said they chose for training those who were most needy. When we compared the socioeconomic characteristics of the trainees with those of the applicants there were important differences, as shown in Table 4.

TABLE 4

COMPARISON OF SOCIOECONOMIC CHARACTERISTICS OF APPLICANTS AND TRAINEES

	Applicants (N=157)		Trainees (N=112)	
	Base N	%	Base N	%
Employed at time of application and regarded job as "steady"	109	40	70	23
Period of more than 15 months unemployment at some time since first began to work	157	33	112	67
Female	157	55	112	14
Head of household	157	49	112	72
Less than eighth grade education	157	28	112	54

Half as many trainees as applicants thought the jobs they had when they applied for training were steady[4] and twice as high a proportion of the trainees said that since they first started working they had been unemployed for 15 months or longer at one time; 55 per cent of the applicants, but only 14 per cent of the trainees were women and, of course, more of the men were heads of households. Those who were rejected were also more likely to have had a better education.

The data in Table 4 support the staff's contention that those selected for training were more deprived than those rejected.

The Social Characteristics of the Trainees

Altogether there were 180 trainees. We interviewed 96 males and 16 females.

Forty of these trainees, 32 men and 8 women, all Negro, came from 7 counties in western Tennessee; three-fourths resided on farms or other rural places. Only a third had less than eighth grade educations, but the BSSR interviewers reported that three-fourths of them had some difficulty in speaking or in understanding the interview.[5] Only 6 had ever served in the Armed Forces, an indication of inability to meet physical or mental requirements.

Another 47 trainees who were interviewed were from the Cumberland plateau area about half-way between Knoxville and Nashville.

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[4]A similar proportion of applicants and trainees were unemployed at the time.

[5]We recognize that one interviewer's ratings are not necessarily comparable to those of another. All were asked to rate respondents on "general ability in understanding and answering questions." Interviewers were alike on the whole in having middle class occupations (or in being wives of men with middle class occupations). By and large Negroes interviewed Negroes and whites interviewed whites.

Two-thirds of these came from farms or other rural places; 92 per cent had less than eighth grade educations, although the interviewers rated two-thirds of them fluent in conversing and understanding. There were 46 whites and one Negro. One-third had served in the Armed Forces.

Six counties south of the Nashville area, just north of the Alabama line, contributed another 16 of the trainees who were interviewed, 9 men and 7 women, 14 of whom were Negro. Half had less than eighth grade educations, none had been in military service, and the interviewers rated 43 per cent as having some difficulty in speaking or understanding. Only one-fourth resided on farms or at other country places.

Seven of the interviewed trainees resided in or near Nashville at the time they applied for training, and 2 others came from other parts of the state. These included 1 woman and 8 men, 5 Negroes and 4 whites. Only 3 of the 9 reported rural residence at the time of application. Two-thirds had less than eighth grade educations; 5 of the 8 men reported military service; and all but one of both men and women were rated fluent in English.

Table 5 summarizes a few of the census-type characteristics of the trainees who were interviewed. The white males were older, more likely to be married, heads of households, had less education but had been in military service in greater proportion. The higher education of the Negroes is partly a function of their youth; in line with the pattern in the country as a whole, the younger persons reported more education.[6]

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[6]These data indicate that many trainees had gone beyond the eighth grade and therefore did not meet the educational criterion for eligibility. Project staff members said that some trainees falsified their educational records on their applications in order to get into the training program; by the time this was discovered the training program was in progress, and no sanctions were imposed.

TABLE 5

CENSUS-TYPE CHARACTERISTICS OF THE TRAINEES INTERVIEWED
(In Percentages)

	White Male (N=52)	Negro Male (N=44)	Negro Female (N=16)
Marital Status			
Married	85	63	31
Single	4	21	31
Divorced, widowed or separated	11	16	38
Total	100	100	100
Head of Household			
Head of household	80	75	50
Age			
25 or younger	14	30	25
26-45	58	43	50
46 and over	28	27	25
Total	100	100	100
Military Service			
Never in military service	67	82	100
Education			
8th grade or less	96	52	56
9th-11th grade	4	30	25
12th grade[a]	-	18	19
Total	100	100	100

[a]One trainee who had been educated beyond 12th grade is included here.

But years of school attendance may not reflect educational level. When interviewer ratings of trainees' ability to understand and answer the interview questions were related to years of education, we see that those who had finished high school received the lowest ratings over-all (see Table 6).

TABLE 6

YEARS OF SCHOOLING RELATED TO INTERVIEWERS' RATINGS OF RESPONDENTS' ABILITY TO UNDERSTAND AND ANSWER QUESTIONS

Years of Schooling	Rated by Interviewer as Fluent	
	N	%
4 years or less	27	48
5-8 years	55	53
9-11	19	58
12 or more	11	40

About half of the white men, three-fourths of the Negro men and four-fifths of the Negro women had never lived outside of Tennessee. The majority of the white men and Negro women who had migrated had moved from non-neighboring states. The older trainees were more likely to have migrated than were the younger ones. None of the high school graduates had lived anywhere but in Tennessee, whereas a little over a fourth of those with less education reported an out-of-state residence at some time.

The typical Negro trainee from western Tennessee had a very different employment history than the white from eastern Tennessee (see Table 7).

TABLE 7

ECONOMIC STATUS PRIOR TO TRAINING OF TRAINEES
BY AREA OF RESIDENCE

	Western Tennessee[a] (N=40)		Southern Tennessee[b] (N=16)		Eastern Tennessee[c] (N=47)		Other[d] (N=9)	
	Base N[e]	%	Base N	%	Base N	%	Base N	%
Prior to Time of Application								
Primary occupation farm owner, operator, tenant or laborer	40	85	16	25	47	42	9	33
Six years or more on a single job	40	53	16	38	47	28	9	22
12-month income entirely from employment of trainee or other household members	40	78	16	44	47	62	9	55
Unemployed at some time during 12 months before application	40	40	16	44	47	66	9	55
Unemployed 27 weeks or more	16	44	7	29	32	28	9	11
At Time of Application								
Unemployed	40	38	16	13	47	45	9	44
Employed	40	62	16	87	47	55	9	56
Receiving less than $1 per hour at time of application	22	82	13	77	21	57	4	25
Job held at time of application considered "steady"	24	21	14	36	26	12	9	0

[a]32 Negro men, 8 Negro women

[b]7 Negro men, 7 Negro women, 2 white men

[c]1 Negro man, 46 white men

[d]4 Negro men, 1 Negro woman, 4 white men

[e]The N's shown here for each vertical row represent the base numbers for the computation of all corresponding percentages. No complete distributions are shown. For example, the first line in the table should be read as follows: 85% of all Western Tennessee trainees were farmers, compared to 25% of the Southern, 42% of the Eastern and 33% of the other Tennessee trainees.

The former was twice as likely as the latter to consider farming his primary occupation and to report that he had had one job as long as 6 years. He was a little less likely than the white to have been unemployed at the time of application for training, and a good deal less likely to say he was unemployed at some time during the year preceding application; however, if he was unemployed when he applied he had been out of work for a longer period of time. Negroes from western Tennessee were more likely to regard their jobs as steady, but also reported a lower wage over-all, although wage income very likely was supplemented by the nonmoney "income" attendant to residence on a farm.

Compared to the western and eastern groups, Negroes and whites from southern Tennessee and other parts of the state occupied an intermediate position with respect to unemployment, and those from southern Tennessee showed low rates of pay. Fewer of these trainees than those from the other two areas considered farming their primary occupation.

Since, among these trainees, residence, race, educational achievement and age are strongly correlated, it is impossible to analyze separately the effect that education or age has on employment for either race. The whites from eastern Tennessee had had less education and were also older than the Negro trainees. These two characteristics may account for the differences in their economic situations, but we would be more inclined to stress differences in the economic character of the areas or to say that, because of the character of an area, the training program appealed to different kinds of persons at different places.

In a number of ways, those who are younger appeared to be at a greater advantage in the employment market, but the fact that those in

the middle age range were disproportionately farm workers introduces another confounding element in demonstrating a consistent pattern between age and economic situation.

Assuming that the trainees gave us correct information in the interviews, not all of the trainees came from families with incomes below $1,200 (see Table 8).

TABLE 8

HOUSEHOLD INCOME LEVEL OF TRAINEES
FOR THE YEAR PRECEDING APPLICATION
TO THE TRAINING PROGRAM
(In Percentages)

Household Income	Trainees (N=112)
Less than $1,000	36
$1,000-$1,499	17
$1,500-$1,999	11
$2,000-$2,499	11
$2,500-$2,999	4
$3,000 or more	16
Don't know or no answer	5
Total	100

According to staff members, that was a recruitment goal, but it was obviously not achieved. According to interview data, at least half the trainees came from households with higher incomes.

Among all the trainees, there were approximately two household units with a single wage-earner for every one household in which there was more than one wage earner during the 12 months before the program began. Only 9 trainees said they lived in households where more than 2 persons were employed. Although close to half of the respondents had a higher income than was specified in the original recruitment goals two-thirds were clearly the main wage-earner in their families and thus members of the target population for the project.

Considering the economic level of the trainees, half having pretraining household incomes below $1,500, surprisingly few of them reported having gone at any time to the Welfare Department for assistance. Only 35 of the 112 said they had ever applied for assistance; of those who had applied, 26 said they had gone and had received help, and 9 said assistance had not been given. Eight of the trainees said that Welfare was their main source of income in the year preceding application for training, and another 7 said they received some Welfare assistance, although it was not the major source of income.

Those who said they had been to Welfare for help said they did so for the reasons enumerated in Table 9.

TABLE 9

TYPE OF ASSISTANCE TRAINEES HAD REQUESTED FROM WELFARE DEPARTMENT

Assistance Requested	Number of Requests
Financial support for the family	6
Financial support for children	9
Help for a disabled family member	7
To meet needs for medical care	3
To get surplus foods or stamps	4
To get a job	7
Other reasons	1
Total	37[a]

[a]Two of the 35 trainees had requested two types of assistance.

When all forms of public funds are taken into account--Welfare, unemployment compensation, pensions or social security, veterans' allowances, workmen's compensation, payments to farmers--only 5 per cent of the trainees said any one or all of these were the major source of support for the household during the year before application for training, but 31 per cent said they had received some income from one or more of them. During the year prior to application, two-thirds of the trainees had subsisted solely on the income of employed household members.

In general, it is clear that not all trainees met all of the eligibility requirements originally established. Very likely the project staff could not recruit enough persons who met all the criteria. All but 2 of the trainees qualified on at least one criterion; each either came from a family with a very low income, or had little education, or was personally under or unemployed at the time of application. Two trainees appear not to have been eligible on any of the specified qualities.

III. BASIC EDUCATION

Program Plan and Staff Members' Evaluations

All of the trainees received between two and three hours a day of basic education consisting of instruction in reading, writing and arithmetic. The original proposal called for the trainees to take the GATB test before entrance, but because some could not read, and others read at a low level, those plans were abandoned. Instead, trainees were placed in basic education sections on the basis of tests measuring reading and arithmetic grade levels.

The University's Director of Basic Education was responsible for providing teachers from the University's faculty. An experimental-demonstration feature was built into the program. Three teaching methods were used: the Henney system, traditional methods of elementary education, and machine teaching under the supervision of a teacher.

Dr. Lee Henney was brought to the University to act as a consultant. Before the program began he conducted a five day seminar to instruct teachers in his methods. He also established procedures for testing the relative merits of the three teaching methods. Twenty trainees were assigned to a class to be taught by the machine method, another 25 were taught by a single teacher using traditional methods, and the remainder were divided into seven classes of about 15 trainees to be taught by the Henney method. Presumably assignments were made so as to approximate experimental conditions; in other words, trainees in one or more of the Henney-method classes were matched to trainees being taught by the other two methods.

On the basis of midpoint tests and qualitative observation, the training staff believed that trainees who were taught by the Henney method moved fastest. The machine method was considered least productive. Although the method was supervised by a teacher, the staff said it minimized interpersonal interaction, something they felt to be a sine qua non of success in basic education designed to educate the adult poor. Illness necessitated two changes of teachers for the group studying with machines; this may have affected trainee progress. In comparison with the Henney system, the traditional elementary method was also devalued because "it moved too slowly." It would appear, however, that the experiment was not carried out with sufficient scientific rigor (viz. teacher turnover in the machine study group) for a definitive judgment to be made. It should also be noted that the results of the Henney system are subject to a standard error of 1.5 grades.

The Project Director said that before the training began they had expected to raise trainees' basic skills about four grade levels during the 36-week period. At the halfway point he said that tests revealed the trainees had advanced an average of about a grade and a half. Another staff member, one of the basic education teachers, felt it was realistic to expect no more than one and a half years' advancement in a 9-month period with trainees of this type. The Director cited these accomplishments: of those who could not read when the project began, none reached more than second-grade level during the four and a half months; of the 19 trainees who had no score on the tests at entrance, only one failed to score at the midpoint. Some of the trainees had

advanced four grades during the first four and a half months. Achievement was correlated with the first test score; the higher the score on the first test, the greater the progress during the first half of the program.

The Project Director felt that a person would need to reach a sixth or seventh grade level to get along well in the field of livestock maintenance, a fifth or sixth grade level to work in meat processing, and, depending upon the level of responsibility, one might get along in park services jobs with anything from a second to an eighth grade education. Although we have no achievement scores for individual trainees, it is clear that not all would have been qualified for these jobs at the end of the training period. Apart from the actual need for basic education to perform on the job, the Project Director said that some employers gave reading and arithmetic tests to all applicants and would not employ persons who could not pass them irrespective of their skill on the job.

Not all of the class time was spent on communications and arithmetic. Recognizing a need for cultural development, the staff also decided to bring into the basic education classes certain extracurricular content. For example, there were guest lecturers who talked about such things as investments, venereal disease, employment, health, child care and the like. The staff borrowed a telephone system from the telephone company to give trainees practice in making calls for employment interviews; small teams of trainees with a trainee leader engaged in role playing. Some teachers had trainees write job resumes. "The OMAT Journal" was published by trainees under the supervision of the basic education staff.

An effort was made to integrate basic education and job training, although it was not sufficient to satisfy some of the staff members. Job

skills teachers developed lists of words that trainees would need to know, and basic education teachers included them in vocabulary training. Staff members met from time to time to achieve over-all integration.

At the end of the program, basic education instructors agreed that in future programs there should be more pretraining preparation of the staff, including identification of areas of cultural deprivation and accumulation of ideas about techniques to be used. They also felt more time should be set aside during training for individual instruction and counseling.

Trainee Evaluations of Basic Education Program

When the trainees were asked:

> Was the basic education training you got mostly to make you a better reader of newspapers, magazines and books, or was it mostly to help you to learn the work skills?

one-fourth of the trainees said "better reader," another fourth said "to learn work skills," and the remainder (43%) said "both." If we consider that the respondent was specifically asked to choose one or the other as the superordinate goal, the fact that almost half of those interviewed proffered an answer of "both" suggests that the two goals were equally stressed, and that trainees viewed the basic education courses as having both kinds of usefulness. When race and sex were related to perception of utility, Negro women were only half as likely as either white or Negro men to see the basic education as serving both ends, and more likely to say it was "to learn work skills."

One possible explanation for the different attitude of the Negro women lies in their perception of need for basic education in order to

learn occupational skills. Trainees were also asked:

> Do you feel that you would have learned the work skills in which you were being trained just as well without the basic education training?

Almost three-fourths said they needed the basic education for job training. But more of the Negroes, particularly the Negro women, said they needed it (see Table 10).

TABLE 10

PERCEPTION OF NEED FOR BASIC EDUCATION REGARDING JOB TRAINING BY RACE AND SEX
(In Percentages)

	White Males (N=47)[a]	Negro Males (N=43)	Negro Females (N=16)
Needed basic education for job training	60	74	81
Could have done without basic education	6	2	-
Knew enough without it	28	16	19
Other	6	8	-
Total	100	100	100

[a]Excludes 4 trainees who were early drop-outs and did not complete the basic education course.

There was only a slight relationship between level of prior education and trainees' perceptions of the need for basic education; those with less education expressed only slightly more need for it. This is further supporting evidence for an earlier finding stressing the lack of correlation between years of formal schooling and level of educational

achievement (see Table 6, page 14). Age bore a stronger relationship, and the older trainees more often said it was needed.

Two-thirds of the trainees thought that if one acquired enough basic education an employer would hire him, even if he did not have a high school diploma.

IV. OCCUPATIONAL TRAINING

The Training Courses

Tennessee A & I has a walking-horse stable and a dairy unit as well as a meat processing laboratory; the University grounds and nearby parks offer opportunity for training. Undoubtedly the University had the requisite specialization and personnel to offer training in livestock maintenance, meat processing and park services.[7] There is, in fact, much to suggest that the choice of training occupations was made more with reference to existent University facilities than to the needs of the trainees or the job market. Although the Employment Service certified a need for training in the three occupations and apparently influenced the project staff to abandon plans for training in certain other occupations,[8] we shall see later that the necessary job openings did not materialize.

Apparently it was believed, with little empirical supporting evidence, that the Appalachian highway program would provide new jobs in park services in the Cumberland plateau area, that the increased number

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[7]Staff members had only two criticisms to offer of the University as a training site: (a) classrooms were not always suitable because of lack of space, and (b) for the first two months of training the livestock maintenance classes did not have enough animals at their disposal.

[8]An official of the Employment Service said that the project staff first wanted to train for "pie in the sky" occupations and added that E.S. had had to "bring them down to earth." However, when asked what other areas of job training had been considered, the Project Director mentioned beauty culture, barbering, walking horses, farm mechanics and dairy farm hands--in other words mostly occupations which were at about the same level as those ultimately chosen.

of businessmen and professionals owning and operating "hobby" farms would generate a demand for livestock maintenance personnel, and that meat processing was a field open to all, in which demand for labor exceeded the supply.

Having decided on the training areas, the staff planned a skills training program of four hours a day, five days a week, for 36 weeks. Trainees assigned to meat processing were divided into small teams and taught in the meat processing lab; all received very much the same instruction. Those in park services were given specialized tasks, depending upon aptitude and ability; the training ranged from elementary lawn care and gardening to experience with road building equipment. Training took place mainly on the campus but occasionally trainees worked in nearby parks. Those in livestock maintenance worked with animals in the dairy and stables and received uniform training.

Placement of Trainees in Occupational Training Courses

Staff members stated that because they envisaged the development of park service jobs in eastern Tennessee they assigned many trainees from eastern Tennessee to the program (see Table 11).

TABLE 11

ASSIGNMENT OF INTERVIEWED TRAINEES TO OCCUPATIONAL TRAINING BY RACE AND SEX
(In Percentages)

Trained in:	White Males (N=51)	Negro Males (N=44)	Negro Females (N=16)
Meat Processing	12	23	100
Park Services	82	54	-
Livestock Maintenance	2	23	-
None[a]	4	-	-
Total	100	100	100

[a]A few trainees dropped out of the program so early that they cannot be said to have received job training

They believed livestock maintenance jobs would more likely develop in western Tennessee, and that trainees from that area would be best placed in that group. Meat processing jobs were thought to be more widely available, but because this was the only training occupation suitable for women, only half of the slots were open to men.[9] But because the staff also wanted to integrate all training groups, trainees were not assigned exclusively on the basis of home site.

The data in Table 11, showing the pattern of assignment to training course by race and sex of trainee, bear out the statements made by the staff. The white males, nearly all of whom came from the Cumberland plateau, were overrepresented in the park services course; the Negro males, nearly all of them from western Tennessee, were over-represented in meat processing and livestock maintenance. All 16 of the women were assigned to meat processing.

Trainees assigned to livestock maintenance were younger and better educated than other trainees; 5 out of the 11 interviewed had finished high school. Trainees assigned to park services were least well educated, a function of the lower educational level of the whites from the Cumberland plateau. If we can judge by employment at the time of making application to the project, those who went into meat processing were most employable and least likely to have come from farming occupations.

When trainees were asked whether they knew at the time of application that training would be offered in a particular occupation, the answers varied, but, by and large, the trainees had apparently been told what kind of training to expect before they came to the program. From the

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[9]Altogether, 28 trainees were graduated in livestock maintenance, 75 in park services, and an unknown number in meat processing. Among the trainees we interviewed, there were 11 in livestock maintenance, 32 in meat processing and 65 in park services.

information obtained in the interview, it is not altogether clear how specific assignments were made; as previously mentioned, sex and geographic origin were apparently the chief determinants. It turned out that meat processing was the most popular of the three occupations, and livestock maintenance by far the least popular. We do not know whether this was a function of the salesmanship of the recruitment staff or purely a matter of trainee taste. All but five of the trainees who were interviewed said that when the program was beginning they thought meat processing would offer steady, good-paying work; almost half thought that probably there would be enough jobs for all who were trained; and slightly more than half said they wanted that kind of training. By contrast, although two-thirds of the trainees thought livestock maintenance would be steady and good-paying, and half thought when training began that there would be enough jobs for everyone, only 14 per cent said that they wanted that kind of training. About half of the trainees thought that park services would offer steady, good-paying jobs, about half thought there would be enough jobs, and about the same number said they thought they would like that kind of training. Meat processing and park services both appear to have been a good deal more popular than livestock maintenance.

It is noteworthy that although nearly all the trainees wanted to be trained in one or more of the occupations, about half of them said they thought (prior to beginning training) that there would not be enough jobs for all who were trained. Even though their pessimism was warranted, it also must have had a bearing on the motivation the trainees brought to the project. This brings home once more the importance of coordinating training with known and visible job opportunities--or alternatively, of not initiating programs unless such opportunities are indeed available.

V. OTHER FACETS OF THE PROGRAM

Participation in the Life of the University

Basic education and job training occupied about 7 hours of each day. The schedule allowed for occasional sessions of group counseling. At the end of the day, 45 of the trainees (of those we interviewed) returned to their homes, 13 returned to off-campus housing provided by the University in the city of Nashville, and 53 went to rooms in University dormitories. Those trainees who could not commute were assigned to dormitory housing until all the spaces allocated were filled. The remainder were housed in homes or apartments in the city. Only 7 entire families moved to Nashville; the staff had failed to anticipate the financial problems attendant to moving the families, and were unable to find 20 families who could manage the expense.[10]

On-campus housing was integrated, but because more of the Negro men were able to commute from home, there were three white men for every Negro man and every 1.5 Negro women in the dormitories.[11] While

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[10]The staff deemed 7 cases too few for the study of the problem of transition from the rural to the urban milieu. They abandoned their original plans, but did conduct intensive case study interviews with members of the 7 families. A sociologist from the University of Tennessee in Knoxville was the research consultant who suggested the case study approach.

[11]The imbalanced racial composition in on-campus housing obstructs a study of differential benefits by type of residents. For example, there were more dropouts among the on-campus residents but that is because the whites from eastern Tennessee lived on campus in greater proportion and also dropped out in greater proportion. Only if the trainees on campus had been somewhat similar to the others could we infer that residence per se accounted for differences like the one just noted.

one might expect that integrated housing at a southern university would create problems, there is nothing to indicate that race was a source of conflict at any time. The staff said that some sex and liquor problems developed in the dormitories, but gave no further details.

The project was predicated on the availability of on-campus residential facilities and trainee participation in the life of the university. As was the case elsewhere, when training projects were placed in an established institution which has other central purposes--specifically, a university setting--this arrangement was bound to lead to some conflicts over use of space, facilities, etc. However, in general, it appears that thanks to its facilities the institution was able to give a great many valuable services to the trainees, and that the residential arrangement benefited those who lived on campus.

All trainees were given University activity tickets, and they were welcomed at University dining rooms. Two of the trainees were subsequently admitted to the University as students,[12] a step the staff believed they would not have taken had it not been for the stimulation and encouragement they received from University people.

Trainee Problems and Staff Services

All trainees were given physical examinations at Meharry Medical College. Some received treatment, and a number were provided with eye glasses. One trainee who had difficulty providing for the care of her children was permitted to bring them to live on campus with her. Apparently the staff members did whatever they could to make it possible for trainees to complete training.

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[12]These were the two trainees who met none of the criteria for eligibility. (See Chapter II, Recruitment, p. 19.)

Trainees were asked what problems they had had, either personal or project-connected, while they were in training.[13] We computed the total number of problems mentioned by each trainee (see Table 12).

TABLE 12

TYPES OF PROBLEMS REPORTED BY TRAINEES

Trainee Mentioned:	Home Site of Trainee						Other	
	Western Tennessee		Southern Tennessee		Eastern Tennessee			
	N	%	N	%	N	%	N	%
More than one personal problem	40	38	16	50	47	60	9	77
One or more project-connected problems	40	33	16	50	47	57	9	67

As the data of Table 12 show, the trainees from western Tennessee, predominantly Negro men, enumerated fewer problems than other trainees, and those from eastern Tennessee, the project area and other parts of the state were either objectively or subjectively more heavily burdened.

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[13]The questions read as follows:

While you were in the program did you . . .
Worry about having your children cared for?
Have trouble providing for your family?
Have problems or worries about owing money?
Have trouble with the police?
Need your teeth fixed or need eye glasses?
Need other medical or health care?
Have problems with drinking in your family?
Have problems with getting or keeping housing for your family?
Begin losing interest in getting trained?

While you were in training, did you have any other problem or worry that made you miss classes? . . . What was that problem or worry?

While you were in the program, did you have any problems or worries about whether you would get to finish or complete the program? When. . .? What . . .?

While you were still in the program did you have any problems or worries about whether you would get a job at the end of your training? When . . .? What . . .?

Personal problems were also the main reason why some trainees failed to complete the program, judging from the interviews conducted with 27 dropouts. Most of them said they had left the program because of some sort of personal problem. When they were asked:

> Did you leave only for some reason of your own or did the project people tell you that they didn't think you ought to stay in the training?

and then,

> What was the main reason at the time?

most of the trainees said they departed for reasons of their own. Only three said that they were asked to leave (see Table 13).

TABLE 13

TRAINEES' PRINCIPAL REASON FOR DROPPING OUT OF THE PROGRAM

Reason for Dropping Out of Program:	Number of Cases
Personal dissatisfaction with program	3
Personal problems	11
Occupational problems, e.g. needed a job	4
Own reasons (not specified)	1
Told to leave	3
Other reasons	5
Total	27

Illness or homesickness accounted for about a fourth of the early departures, and another quarter left because they got jobs. An equal number expressed dissatisfaction with some aspect of the program: one

disliked the dormitory conditions, one felt the training was poor, one said the allowance was too small, one did not want to be trained in any of the three occupations, and two said they were dissatisfied, but gave no specific reason. A few had family problems that made it necessary for them to leave.[14]

Staff members were awed by the number of problems that the trainees exhibited. Apparently no one at the project had anticipated the level of cultural deprivation, the slow rate of learning, the accumulation of medical needs among the trainees. Individual counseling was available, but trainees were shy about taking advantage of it. Staff members felt that the trainees should have had more intensive counseling, and suggested that a greater number of group counseling sessions should have been scheduled.

Because of the social, educational and cultural deprivation of the target population, the project staff thought it would be better in the future to provide basic education and cultural enrichment at the home sites, and bring trainees to the University for job training only after they had achieved a minimum level of education.

Provision of Training Allowances

The project staff also felt that the training allowance was so high as to spoil trainees for jobs in training-related occupations. At the beginning some trainees received as much as $73 a week, including allowance and subsistence, and this amount was later raised to a maximum of $93 a week. The staff thought it would be impossible to place any of the trainees on jobs that would pay as much.

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[14] A few trainees gave more than one reason.

Whether or not the trainees were spoiled, their expectations appear to have been fairly reasonable as they recalled them at the time of interview. When they were asked whether, at the time they were in training, they thought they would be willing to take any kind of a good job or whether they wanted only training-related work, a little more than half said they would be satisfied with any good-paying job. When they were asked the lowest wage they would be willing to accept, two-thirds wanted between $1.25 and $1.34 per hour, some were willing to accept less than $1.05, and only half a dozen wanted as much as $1.95 per hour. All but two said they would have been willing to enter the training occupation at the bottom level. One out of two trainees said he would have been willing to work anywhere in the country, and another third would have worked anywhere in the state of Tennessee.

As one might expect, women were least willing to migrate, but were more willing to take "any good job," and Negro men had slightly higher expectations than did others. Those in livestock maintenance (only 11 trainees of those interviewed) were most committed to getting a job in that exact field, and they also anticipated slightly higher paying positions.

Recreation

A staff member planned recreation for the trainees and they were permitted to initiate group activities for themselves. They organized a softball team that played in the intracity competition. They planned a formal dance, which was apparently inspired by the University dances. There were special programs and field trips, game nights and interfamily get-togethers. The staff member felt there should have been even more planned recreation, partly because the trainees spent their money unwisely when left to their own devices.

VI. JOB PLACEMENT

Without any doubt, job placement was the weakest feature of the training project. Although it was difficult for the BSSR Study Team to obtain accurate placement figures at the time of the interview because of intervening job changes, the Team's conclusion was that of the 112 trainees who were interviewed, only 10 were placed in training-related work; many more had found employment not related to their training. A month before the project ended, the Project Director had expressed confidence that there would be training-related jobs for most, if not all, trainees, but the jobs did not materialize. One can identify some of the reasons for failure and speculate about others.

1. Either the relationship which the project staff had established with outside agencies fell apart at this point, or a job market in the three training occupations did not exist.

2. The occupational training instructors did not consider all of the trainees qualified for employment. An instructor in livestock maintenance estimated that about 70 per cent of the trainees were competent to work in the field. Another in meat processing thought about half deserved consideration for employment in training-related jobs. Since park services offered jobs at various levels of competence, it was easier for the trainees to qualify in this field; one of the instructors suggested that all trainees could hold jobs at some level, provided jobs were available.

3. When interviewed by the BSSR Team, project personnel expressed astonishment at the extent to which trainees were psychologically and

socially deprived, and commented on the lack of commitment of some of the trainees to middle class values. The BSSR Team speculated that the staff may have been hesitant to recommend such trainees, irrespective of their occupational skill.

4. The BSSR Team was told that the State Employment Service had agreed to fund five positions for placement of the trainees, but the assistance was not forthcoming. Instead, project personnel with little or no experience in job placement took on the task.

5. The BSSR Team felt that one of the major obstacles was the premature discontinuation of allowances between completion of training and job placement. Most of the trainees' homes were some distance from the training site. If living allowances were discontinued when the project came to an end and trainees had not found jobs, very likely they had to return home, where they would be out of touch with project staff members.

6. Trainees who had studied meat processing were in the position to be most easily placed because of the demand but it was difficult to place the 16 women and the older men in this occupation because of age-sex discrimination.

Data from the trainee interviews help to evaluate the extent to which each of these factors contributed to the project's failure to place trainees in jobs.

At the time of interview by BSSR, the trainees were asked if they were referred to any employers by the project, and then if they were referred to the Employment Service for job placement. The project staff referred 60 of them to at least one employer, and 63 said they had been referred to the Employment Service to get a job. Half of those trained

in meat processing and about 40 per cent of those in park services had been referred by project personnel, but none of those in livestock maintenance reported a project-initiated referral. Thirty-six trainees among those we interviewed said they were not referred either to employers or the Employment Service when the project ended.

Forty-nine of the trainees followed through on one or more of the job referrals made by project personnel. Nearly all of the trainees who were told to do so went to the Employment Service; a few not referred initiated the call themselves. Of the 11 who did not pursue project referrals either to employers or to the Employment Service, the reason most often given was the idea that the jobs would be "bad jobs"; assumed lack of qualifications were also mentioned by several trainees.

The majority of trainees used several job-seeking methods. Twenty-four of the trainees said that: (1) they were referred to employers by the project staff, (2) they were referred to the Employment Service, and (3) they also engaged in job search on their own. Another 41 reported both Employment Service visits and independent job search on their own. Twenty-six went out to look for jobs on their own, without any referral, and only 10 reported no job searching activity of any kind. White men and Negro women were twice as likely as Negro men to be active job-seekers using several approaches to find employment.

Of the 31 trainees who followed up on referrals to employers by the project personnel, 6 got jobs (see Table 14). Of the 63 who went to the Employment Service, 13 got jobs. Of the 6 who got their jobs through project referrals, 4 said the jobs bore no relationship to the training field, 1 said there was some similarity, and 1 said he was doing just what he was trained to do. Of the 13 who got jobs through the Employment

Service, 11 considered the jobs in no way similar to the training occupation, 1 thought there were some similarities, and 1 was doing what he had been trained to do.

TABLE 14

JOB REFERRALS, JOB PLACEMENT, AND RELATION TO TRAINING

Source of Referral	Total Number of:		Number of Jobs with Relation to Training Occupation:		
	Referrals[a]	Job Placements	Not Similar	Similar	Exactly the Same
Project	49	6	4	1	1
Employment Service	63	13	11	1	1
Trainees own search	102	43	37	4	2

[a]Total of referrals adds to more than 112 (the total number of trainees) because some trainees used more than one job-seeking method.

The trainees seem to have done as well on their own, if not better. Thirty-seven reported getting jobs because of their own search, although these jobs were not related to the training occupations. Another 4 found jobs on their own that were similar to those for which they were trained, and 2 got jobs on their own that they considered to be exactly those they were trained for. All in all, we find that only 10 of the trainees we interviewed considered the jobs they got after training bore any similarity to those for which they were trained, and the trainees found 6 of the 10 on their own.

It is possible that in their own job search, the trainees had some direct or indirect assistance from Community Council persons in

their home areas. We did not ask about that kind of intervention. Almost all of the project job development activities were for jobs in the project area, the home residence of only 7 of the trainees. Half of the trainees had an interval of unemployment before finding work, and some were still unemployed at the time of interview.

To the extent that the goal of the project was to train people and then place them at the close of training in specific occupations, we would have to say that the Tennessee A & I project was most unsuccessful. But our conclusions may be different if we think in terms of the development of self-discipline, of a dignified self-image, and of the capacity to get along in the society. These are changes that many of the project staff felt they could detect in the trainees at the end of the 36 week period. The staff reported that all of the trainees had become more literate and generally more competent; they were proud of their achievements and demonstrated increased capacity to cope with the world. We did not try, in our follow-up, to measure directly such qualitative changes. They might be reflected indirectly in increased employability.

It can be assumed that the training might pay off at a later period, when new job opportunities, which the project anticipated would develop sooner, actually do open up in the area.

Furthermore, despite the lack of placement in training-related occupations, there was a direct, beneficial outcome: more of the trainees were employed after training. When we compare the number of trainees who were employed at the time they applied to the project with the number who were employed at the time of interview, we find a marked change (see Table 15).

TABLE 15

COMPARISONS OF PRETRAINING AND POSTTRAINING EMPLOYMENT OF APPLICANTS AND TRAINEES

	Per Cent Employed				
	At Time Applied for Training		At Time of Interview 6 Months after Training		Per Cent Increase
	N	%	N	%	
Trainees	112	61	112	83	22
Applicants	157	68	157	78	10

Sixty-one per cent of the trainees were employed just before training began while 83 per cent were employed 6 months after training. Can we attribute this change to benefits accruing from the training, or does it merely reflect a possible upturn in the economy and a general reduction in unemployment?

To answer this question we could look at Labor Department statistics for the country as a whole, or for the state of Tennessee, but those figures do not necessarily reflect the situation of the target population for this project. It is possibly more to the point to determine whether employment increased equally among both those who were trained and those who applied for training but were not accepted. If the identical pattern emerges in the two groups, then we would infer that increased employment among the trainees may reflect the effects of the training program.

The data indicate that both groups changed in the same direction; an increased proportion of both were employed at the later time. But the increased employment is more marked among the trainees.

As the reader will remember, the trainees and the applicants are dissimilar in a number of respects. For example, there were only 3 white men among the applicants, and there were many more Negro women. Changes in the job market probably affect men and women differently and the Negroes and the white men came from different areas of Tennessee so we would have to control for at least race and sex to determine whether the difference in rate of unemployment between trainees and applicants reflects training or is attributable to other characteristics of the two groups.

Because there are so few white men among the applicants, the comparisons must be limited to Negro men and women.[15]

In Table 16, we can see immediately that the increase of employment among Negro trainees is characteristic only of the men. Employment among Negro women trainees decreased slightly (one trainee, previously employed, was unemployed at the time of interview); employment increased--also very slightly--among Negro women applicants. Among the Negro men, a slightly higher proportion of the trainees moved from unemployment to employment, and a slightly higher proportion of the applicants moved from

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[15]The pattern for white male trainees is almost identical to that for Negro males.

PRETRAINING AND POSTTRAINING UNEMPLOYMENT OF WHITE MALE TRAINEES

6 Months After Project Ended	Total	At Time Applied for Training	
		Employed	Unemployed
Total	50	29	21
Employed	43	27	16
Unemployed	7	2	5

employment to unemployment. However, the differences between the two are so slight as to preclude any inference that the higher rate of employment is training-connected.

TABLE 16

PRETRAINING AND POSTTRAINING EMPLOYMENT
OF NEGRO APPLICANTS AND TRAINEES
(In Percentages)

	Per Cent Employed		Per Cent Increase
	At Time Applied for Training	At Time of Interview 6 Months after Training	
Negro Males			
Trainees (N=44)	59	84	25
Applicants (N=68)	65	82	17
Negro Females			
Trainees (N=16)	81	75	-6
Applicants (N=87)	71	75	4

When we controlled for race and sex we found that the greater increase in employment for trainees in Table 15 could be explained. Negro trainees and applicants showed almost identical patterns of increased employment. It is clearly a difference in racial and sexual composition of the two groups that accounts for the difference found in the earlier table.

Another way of measuring training benefits is by comparing pay levels for trainees employed both before and after training. Comparing

only Negroes, male and female, trainees and applicants, we find that whereas two-thirds of the low income Negro males among both trainees and applicants were receiving less than $1.00 an hour at the first time period, six months after training only 22 per cent of the Negro male trainees, as compared with 48 per cent of the Negro male applicants, were still receiving less than $1.00 an hour. Although the number of persons is small, there is an indication that more of the Negro male trainees than of the Negro male applicants had moved out of the bottom pay category.

Employed Negro women trainees did not experience a comparable increase in pay levels. Eighty per cent of the Negro women trainees were still receiving less than $1.00 an hour, while only 68 per cent of the Negro women applicants were at that pay level.

When comparing trainees and applicants it should be remembered that applicants enjoyed some advantages over trainees because the project staff intended to choose from all those who applied for training the candidates they regarded as most deprived. Therefore, if the trainees were doing about as well as the better-equipped applicants at the time of the posttraining interview, this strongly suggests that the training was indeed helpful.

This is further confirmed by the trainees' own perceptions. Despite the fact that so few of them got training-related jobs, when they were asked to give an over-all evaluation of the program, 70 per cent said they thought it had "worked out well." Four out of 5 of those who completed training felt that they had been well trained and had learned enough to function quickly and well in the training occupation. Nine of the others said they thought the training period was too short. Only 2 criticized the teaching, and 4 complained about some lack of material or equipment.

VII. SUMMARY AND CONCLUSIONS

The program staff made an earnest effort to recruit the rural poor. Slightly more than half of the trainees in the program reported household cash incomes of less than $1,500, and four-fifths reported incomes of less than $3,000 a year before training. Most of the trainees were below the poverty level, but about half were not from the most deprived sector of the state's population. As others have found, recruiting the hardcore is a difficult assignment; the poor tend to be relatively invisible and immobile, either because they lack the physical and mental energy that participation demands, or because they have so many problems that they cannot envisage a training program as a solution, or possibly because they are shy or alienated from the society.

It was found in this project that it takes the hardcore to recruit the hard-hardcore, and that the earlier recruits were able to dispel the fears of the more deprived and could assure them that the project staff members were sympathetic and able. The use of the snowballing recruitment technique should be used in projects of this type as much as possible to penetrate into the truly deprived sector.

The mobile unit apparently was most successful with the Negro poor; white trainees were much more likely to respond through other channels. Because the whites were unemployed in greater proportion than the Negroes--who were more often underemployed--they were more likely to be reached through the Employment Service. This suggests the need for carefully looking at the various components of the target population, and

to use several differentiated recruiting methods with heterogeneous populations.

Undoubtedly the University's instructors were well prepared to give instruction in basic education and in the chosen job skills, but they had had little experience with the poor. By and large, the staff explained program failures in terms of trainee qualities; e.g., many trainees learned very slowly, they were culturally deprived, or they had personality traits or qualities of character that limited their desirability as employees. It is clear from this project, and from other college-based programs for the rural poor, that special training is usually necessary for staff members who have not had previous experience in working with such groups. Furthermore, some of the difficulties which, according to the staff, hampered training should have been handled by counselors. Individual counseling was available, but trainees were apparently shy about taking advantage of it. Staff members felt that the trainees should have had more intensive counseling, and suggested that a greater number of group counseling sessions should have been scheduled. This method, which was used successfully in other projects, was apparently not tried in Tennessee.

An alternative suggestion, made by some T & I staff members, was that because of the social, educational and cultural deprivation of the target population, it would be better in the future to provide basic education and cultural enrichment at the home sites, and bring trainees to the University for job training only after they had achieved a minimum level of education. Although this method might have drawbacks, it might be worth trying in cases where a competent team could be assembled at a rural site.

The weakest feature of the Tennessee training program was job development and placement. Even allowing for trainee inadequacies it is apparent that not enough was done to coordinate the training program with realistic placement plans. Some of the difficulty may have resulted from the geographic dispersion of the trainee population. The need to accept relocation within the state was not taken into account in planning for the trainees. Since most of the trainees' homes were some distance from the training site, and living allowances were discontinued when the project came to an end, trainees returned home and were out of touch with project staff members at a time when they should have received further placement assistance. One solution to the difficulty might be a more lenient policy of continuing training allowances between termination of training and actual placement.

Tennessee A & I University was subsequently in the rare position of putting into practice what had been learned through its first E & D project. Shortly after the first program ended, a second training program was funded. In view of staff members' stated reservations about the capacity of all the trainees to qualify for employment and the marked failure of the job placement, it is of interest to ask what adjustments were made in the second training program offered by Tennessee A & I.

On the whole, the second training program was to operate much as did the first with the exception that trainees in the second program were to receive some on-the-job training and received classroom instruction in a semitutorial fashion. One professional teacher was assigned to each group of 20 trainees, assisted by five graduate students, one

assigned to each group of 4 trainees to work with them in the classroom and be available after class hours for assistance and counsel.[16] If lack of individual attention was the cause of the failure of the first program, then the second program should have been more successful. If better placement results after the second program, then the staff will be justified in having made this type of change.

However, some features of the first program of which the staff had been critical were not changed. Several staff members felt that the first training program was too short, yet the second program ran for the same length of time--36 weeks. Although there was very little training-related employment of the trainees of the first program, two of the training occupations, park services and meat processing, were repeated in the second program, along with two new ones, commercial food processing and custodial maintenance. If there was little market for persons trained in the two occupations at the first time period then it would seem to be unwise to train others in the same occupations in a second program unless the labor market for these occupations has changed since the time BSSR staff estimated demand. To fail in a second effort is to risk reinforcing an image of failure with respect to job placement, undoubtedly a salient aspect to the trainees in developing motivation to enter and stick with training. According to a project report in the OMPER files, only 82 trainees were graduated from the second program although 170 openings were proposed.

There is always a danger that programs will be continued or repeated because they can be conveniently fitted into the existing

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[16]Information source: Tennessee A & I's proposal for a second program.

structure of a university or other training institution, rather than because they are well suited to the needs of the population to be trained. It is up to the funding agency to guard against this tendency. Having said this, however, we must remember that many of the presumed benefits accruing from the training experience elude measurement. We cannot know how the trainee's perception of himself in relation to society may have changed any more than we can be sure that changes that took place would not have taken place if he had not participated in the program. It can be argued that under most circumstances, an inadequate program is better than no program at all. This, however, should not be an excuse for giving up the search for truly effective programs which would yield a measurable improvement in the employment situation of the poor.

VT 007 219
Evaluation of the Job Upgrading Programs as Expanded Through the Use of Elementary and Secondary Education Act, Title I, Funds, April--August, 1966.

Detroit Public Schools, Mich. Research and Development Dept.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Apr67 20p.

*PILOT PROJECTS; *DROPOUT REHABILITATION; *ON THE JOB TRAINING; *FEDERAL AID; REMEDIAL READING PROGRAMS; CASE STUDIES (EDUCATION); PROGRAM EVALUATION
ELEMENTARY SECONDARY EDUCATION ACT, TITLE I; ESEA

To evaluate the effectiveness of a program to upgrade the employability of school dropouts and potential dropouts, 1,035 trainees enrolled in the regular program, 1965-1966, and 440 enrolled in the operational phase of the expanded program, May-August, 1966 were studied. Trainees assigned to remedial work in reading were administered a standardized test at the beginning and conclusion of the instructional phase. The central staff and teacher-coordinators provided reports and responded to an evaluation survey instrument. Findings indicated that paid work training from May through August increased more than tenfold compared with the previous 4-month period. Data available on trainees participating in the summer program indicate that by September, 16 percent were employed, 36 percent were returning to regular school, 36 percent were still in the job upgrading program as active students or on follow up, and 12 percent had left the program. Seventy percent of the teacher-coordinators responding to a survey felt that the job upgrading program would be more effective if there were a city-wide policy defining a positive closer relationship between the job upgrading and the regular school program. (CH)

VT 007 219

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Detroit Public Schools

SUMMARY OF PROJECT EVALUATION (ESEA, TITLE I)

Research and Development May, 1967

Title Evaluation of the Job Upgrading Program as Expanded through the Use of Elementary and Secondary Education Act, Title I, Funds.

Purpose To evaluate the effectiveness of the Job Upgrading Program as expanded through the use of ESEA, Title I, Funds, in upgrading the employability of school dropouts and potential dropouts.

Investigator The Research and Development Department, Project Evaluation Section

Period The funding period for the expanded program was April--August 1966. Data from the more limited, regular program, September, 1965--April, 1966, are also used in the evaluation.

Subjects Subjects were 1035 trainees enrolled in the regular program, 1965-66, 470 during the operational phase of the expanded program, May-August, 1966.

Procedures Because the activities, subjects, and financing of the regular Job Upgrading Program and the expanded program were overlapping and intermixed, the evaluation includes the processes and products of the entire program from September, 1965, through August, 1966. Trainees assigned to remedial work in reading were administered a standardized test at the beginning and at the conclusion of the instructional phase. The central staff and teacher-coordinators provided reports and responded to an evaluation survey instrument.

Analysis Simple accounting procedures were applied in comparing the expanded program with the program in effect prior to ESEA, Title I, assistance. Content analyses were made of free responses to questions. Data collected from the pretest and the posttest were subjected to the median test for statistical significances of differences.

Findings Funding of the program made possible the opening of 4 new day and 3 new evening job centers during the regular school years. The services offered through centers in operation during July and August were almost tripled. Paid work training from May through August was increased more than tenfold as compared with the typical four-month period prior to ESEA, Title I, funding.

Data available on all the trainees who participated in the program during the summer indicate that at the beginning of school in September, 16 percent were employed, 36 percent were returning to regular school, 36 percent were still in the Job Upgrading Program as active students or on followup, and 12 percent had left the program.

VT007219

Though not statistically significant, the mean of the gains in reading achievement of the trainees to whom the Stanford Intermediate II Reading Test was administered as a pretest and as a posttest was three months in Word Meaning and two months in Paragraph Meaning.

75 percent of the teacher-coordinators who responded to a survey felt that the course of study needed to be revised and/or updated.

70 percent of the teacher-coordinators who responded to a survey felt that the Job Upgrading Program would be more effective if there were a city-wide policy defining a positive, closer relationship between the Job Upgrading and the regular school program.

EVALUATION OF THE

JOB UPGRADING PROGRAM AS EXPANDED THROUGH THE USE OF ELEMENTARY AND SECONDARY EDUCATION ACT, TITLE I, FUNDS,

APRIL--AUGUST, 1966

Research and Development Department
Program Evaluation Section
Detroit Public Schools, Mich.
April, 1967

EVALUATION OF THE JOB UPGRADING PROGRAM AS EXPANDED THROUGH THE USE OF ELEMENTARY AND SECONDARY EDUCATION ACT, TITLE I, FUNDS

Background of the Program

The Problem

The Job Upgrading Program in the Detroit Public Schools began with one center in 1949 and by 1960 had grown to eleven centers. Although the program was well accepted and there was an urgent need for its expansion, lack of money prevented the opening of new centers in the period between 1960 and 1965.

The program, as originally conceived and as operated during its first fifteen years, was designed to help develop attitudes, skills, and competencies needed by achool dropouts in order for them to secure and hold employment. Under the program, the dropout enrolls on a voluntary basis. He receives individual counseling and individualized instruction designed to upgrade his employability. When the teacher-coordinator of a center feels that a trainee is ready for actual work training, he is assigned to a job with a social agency or a private non-profit organization for six weeks of supervised and paid work experience.

The types of youth served by the program are

former special education students, as defined in the Administrative Handbook, who have reached their full potential in the regular school program and who are now interested in training geared toward employment,

former high school students who had left school on their own volition and who wish to reenter school on a full-time basis,

dropouts who were truant while enrolled in a regular school program and now wish to prove to the school administration that they deserve another chance to show that they should be allowed to reenter regular school,

dropouts who wish to continue their education in the evening because they are employed during the day, and

dropouts who need remedial help in reading and/or arithmetic in order to help upgrade their employability.

The need for more services for the dropouts of the Detroit Public Schools was shown by the waiting lists existing in the centers located in the inner city. Although subsidies for work experiences granted by the McGregor Fund and the City of Detroit have amounted to $20,000 annually, the funds were sufficient to provide work experiences for only one-third of the youth enrolled in the Job Upgrading Program. Other specialized services, such as remedial reading instruction, could not be furnished because of inadequacies of funds. Lack of equipment and supplies also prevented the optimum operation of the program.

A proposal, "The Job Upgrading Project" was submitted for financing to meet these needs through the Elementary and Secondary Education Act, Title I. This proposal was accepted and a budget of $244,288 was provided for the expansion of the program from April 1 through August 31, 1966.

The Job Upgrading Project provided for the expansion of the existing Job Upgrading Program through the establishment of more centers, through the establishment of a wider eligibility base, through provision of more opportunities for work experiences, and through the provision of more services, supplies, and equipment.

Development of the Project

After the funding of the project under the Elementary and Secondary Education Act, Title I, plans proceeded for implementing the proposals for expansion. Following regular Board of Education personnel procedures, applicants for the position of teacher-coordinator in the Job Upgrading Program were screened. Eight teachers were accepted and took over their new positions during the month of May. One teacher-coordinator was brought to the central office to assist the project director in establishing new work stations and in the training of new personnel.

Additional clerical help--a clerk-typist and a student assistant--was hired for the central office. Equipment and supplies for the new centers, as well as the central office, were ordered.

Publicity about the expansion of the program was arranged for in the "Detroit Schools" and in many local neighborhood papers. Letters and referral forms were sent to all referral agencies and parochial schools.

Part of the funded project provided for the hiring of thirteen teachers to conduct remediation in reading for the youths who would be enrolled in Job Upgrading during the eight-week summer program at the centers qualifying under ESEA. A training session for the teachers who were hired for this phase of the program was conducted by personnel from the Communication Skills Centers Project. This provision for remedial reading gave recognition to the idea that acceptable reading skills are considered to be a practical necessity in upgrading a person's potential for employment. Moreover, since the successful completion of high school in itself increases job possibilities, improved reading is a definite asset to those young people who return to school, either full time or for one or two classes.

The Evaluation Plan

Because the existing Job Upgrading Program was expanded and supported in part through money provided for the ESEA, Title I, Job Upgrading Project, it was neither practical nor feasible to limit the evaluation to that part of the total program which was solely supported through funds provided through ESEA, Title I. The evaluation, therefore, embraces both the portions of the program supported by ESEA funds and that supported by funds from other sources. (Where any differentiation is possible, the part of the total program which is financed solely by ESEA, Title I, funds will be designated by the word <u>project</u> rather than <u>program</u>.) Simple accounting procedures are used to give some comparison of the services to Job Upgrading enrollees during the period of ESEA funding of the program with those supplied during similar periods prior to the funding. As part of the <u>product</u>

evaluation, applied to the outcomes of the project, trainees assigned to remedial work in reading were administered a standardized test at the beginning and at the conclusion of their instruction to help in determining its effectiveness. Data from these pre- and posttests in reading were subjected to the non-parametric median test for statistical significance of differences. Reports of teacher-coordinators to their central office were used to obtain followup data on the trainees. Finally, an evaluation survey form filled out by the professional staff constituted a part of the process evaluation applied to the operation of the project and program.

Product Evaluation

Findings from the Data

Findings concerning the products, or outcomes, of the program are related to behavioral objectives stated in the evaluation design submitted with the project proposal.

Objective 1: The Job Upgrading Program will be expanded to render its services to more of the disadvantaged out-of-school youth. This expansion will include not only more centers to be operated during the day, but also centers to be operated in the late afternoon and evening.

The extent of the expansion of the Job Upgrading Program is shown in the following table and discussion.

Numbers of Job Upgrading Centers in the Original Program, 1965-66, and in the Expanded Program, May--August, 1966

Program	Numbers of Centers		
	Regular School Year		Summer Session
	Daytime	Evening	Daytime
Original, 1965-66	11	0	11 (4 weeks each)
Expanded, May--August, 1966	15	3	15 (8 weeks each)

The project funded through ESEA, Title I, funds made possible the opening and staffing of 4 new daytime and 3 new evening job upgrading centers, increasing the services of 11 centers from 4 to 8 weeks during the summer, and the opening of 4 new centers for 8 weeks during the summer.

The eligibility base was expanded during the summer months by the acceptance of pupils, currently in the regular school program, who were referred to the project director as potential dropouts.

Remedial reading instruction was offered at 13 centers during the summer months.

More work experiences and more widely diversified work experiences were provided.

More office and classroom equipment and supplies, including grooming supplies for pupils, were supplied.

The expansion of the Job Upgrading Program through the use of ESEA, Title I, funds made possible the inclusion of 470 additional students during the period of funding--May through August, 1966.

Objective 2: Trainees will upgrade their employability through

improved grooming,
improved personal presentation,
improved work habits, and
increased knowledge of entry jobs, telephone techniques, and interview techniques.

Because the project became operational before the evaluation began, there was no time to create instruments for determining or recording pre- and post experience data on these qualities and knowledges. Inspection of the Manual of Procedures for the Job Upgrading Program shows the instructional program to consist of individual counseling, guidance, and training in an informal workshop atmosphere. Specially designed projects or lesson sheets are completed by trainees, checked by the teacher, and discussed with the trainee. Practice interviews, study of want ads, grooming, use of the telephone, use of street maps and directories, cash register

use, and lectures are part of the job training curriculum. Lesson sheets include units on manners, filling out application blanks, learning how to get a good job, personality, reading, arithmetic, grooming, health, labor laws, sources of employment information, succeeding on the job, and finding one's way about the city.

The findings reported later under Objective 8 are presumptive evidence of the attainment of Objective 2.

Objective 3: Trainees will upgrade their employability through the development or improvement of occupational skills by taking classes in a regular school program.

Objective 6: Interested trainees will be enrolled in regular school classes and/or trade oriented classes.

The number of students enrolled in the program from September, 1965, through June, 1966, was 1178. One hundred forty-three of this 1178 were Job Upgrading Project students, whose entry into the program was made possible by the expansion of the program through ESEA, Title I, funds.

Credits in regular school were earned by 267 trainees, or 27 percent of the 1035 pupils enrolled in the program from September, 1965, through June, 1966. The new centers were unable to contribute to this phase of the program because they opened in May, much too late for Job Upgraders to enroll in classes.

While these trainees are not from the expanded portion of the program which is supported by ESEA, Title I, funds and cannot be designated as project trainees, the findings are indicative of what may be expected of all trainees. A summary of the school marks that were earned by trainees who took classes in the regular school follows.

School Marks	Frequency of Earned Marks
A	19
B	68
C	185
D	242

Data on the number of failing marks (E) and the particular classes in which credits were earned were not available. However, on the premise that the advancement of a trainee's formal education increases his employability, it may be assumed that Objectives 3 and 6 are being met.

Objective 4: Trainees will improve their performance on lessons that pertain to job application forms, arithmetic, and alphabetizing.

Although all trainees were given lessons in filling out job application forms, and some were given instructions in alphabetizing and arithmetic; no pre- and post experience data were gathered as evidence of improvement.

Objective 5: Trainees who are assigned to teachers for remediation in arithmetic and/or reading will improve their skills in either or both of these two areas.

An eight-week remedial reading program was initiated at the beginning of the regular summer session, but the remediation program in arithmetic was not undertaken because of a shortage of qualified personnel.

The Stanford Intermediate II Reading Test was administered initially and finally to measure changes in reading skills of trainees receiving remedial instruction in reading. The pretest was administered to 295 trainees in the Job Upgrading Project. Of these 295 youths, 177 also took the posttest. The fact that 118 of the pretested group did not take the posttest may be attributed to the fact that the Job Upgrading Program is a voluntary one. There was a strong feeling among staff members that pressure should not be put on the trainees.

The following are the reading achievement means of the pretest and of the posttest scores, in grade equivalent units, for the 177 enrollees.

Means of Grade Equivalent Scores of 177 Job Upgrading Trainees on the Stanford Intermediate II Reading Test

Subtest	Means of Grade Equivalent Scores		
	Pre-test	Post-test	Net Change
Word Meaning	5.2	5.5	+ .3
Paragraph Meaning	5.2	5.4	+ .2

Pupils taking the test had had an average (median) of thirteen remedial sessions of 30-45 minutes of remedial instruction or working with remediation materials. While the median test of statistical significance of differences showed that the improvements in scores from pretest to posttest are not statistically significant, it should be noted that pupils in the Job Upgrading Project are primarily dropouts whose school achievements have been considerably below normal. Their initial reading achievement mean in grade equivalent units of 5.2, as compared with the norm of 10+ for sixteen-year-old pupils, suggests how great is their lack of achievement in reading. A gain of 2 or 3 months over a two-month period, with 13 remediation sessions, therefore, is indicative of movement in the positive direction for the group.

Objective 7: The work experience phase of the program will be increased so that all participants will receive six weeks of supervised and paid on-the-job training with a social agency or a non-profit organization.

During May and June, all eligible trainees received work experience as compared to approximately one-third of those who were eligible prior to ESEA funding.

Work experience for the 8 week summer session increased from 20 to 32 hours per week.

From May through August, approximately 430 trainees participated in the work experience phase of the program, worked approximately 74,000 hours, and earned about $92,000. During an average four-month period before involvement with ESEA funds, 85 trainees earned $8,000.

One of the largest hospitals in the metropolitan area opened work stations exclusively for Job Upgrading enrollees in one of its departments. After completion of their training, 20 enrollees were put on the regular payroll of the hospital on a full-time basis. The hospital is continuing to provide work stations and to consider the trainees for full-time work.

In spite of the increased facilities provided under project funds, there was a waiting list of 146 dropouts seeking admission to the Job Upgrading Project; 59 of these were seeking admission to centers newly established under ESEA, Title I, funds.

Objective 8: Trainees who have participated in the Job Upgrading Program will

return to a regular school program,
secure a full-time job, or
keep a full-time job.

The "Interim Followup Report on Job Upgraders Active in the Summer Program, 1966," issued by the program director, shows that among 453 summer trainees, 163 or 36 percent were returning to regular school in the fall; 73 or 16 percent had entered full-time employment; 51 or 12 percent had left the program; and 166 were still in the program or had completed it and were maintaining contact with the centers. Thirty of the 73 trainees entering full-time employment were hired by the employers with whom they had worked during their work-training experience in the program.

Objective 9: The Job Upgrading Program will provide six months of followup service after a youth has terminated participation in the program.

Discussions with the project director and coordinators indicate that all dropouts who are enrolled in the program automatically are transferred to a six-month followup membership list upon separation. The followup service is rendered to all trainees after separation regardless of status; that is, those who do not complete the program are contacted for followup service as well as those who do complete the program.

The purpose of the followup by the teacher-coordinator is in keeping with the general objective of the Job Upgrading Program. In general, the teacher-coordinators make their contacts in person every four to six weeks, either at the home or place of employment of the former trainee. At the end of June there were 180 former trainees on the followup membership list, and at the end of August there were 83.

Objective 10: The upgrading of employability of youths who have participated in the program will have desirable effects for several years.

No evaluative data were collected in reference to this objective. This objective requires a followup study of some duration. It involves obtaining information related to the former trainee's stability of employment and his performance on the job.

Reports on Individual Trainees

Job Upgrading counselors were asked in June, 1966, to give brief descriptions of some of the outstanding successes of the program. The descriptions which they gave are not typical of all results of the project. There were failures; many of the changes in trainees are not dramatic. However, the descriptions which follow give evidence of some success, and incarnate some of the ideals and objectives of the project:

The Case of Donna D.

"In September, 1964, I enrolled Donna D., a June 'graduate' of Logan Special B. Besides mental retardation, Donna suffered from epilepsy which was partially controlled by medication. She was an extremely shy and nervous child; she cried throughout every contact I had with her for about the first six weeks. I learned that she was the only abnormal child in her home and, though the eldest, she felt inferior to her brother and sister. She had never experienced success and was fearful of failure should she attempt to accomplish anything else.

"Over her objections, I decided to place her on a work experience. I knew of only one assignment, the Thompson Home, where the supervisor would have the understanding to handle such a person. I briefed Miss Barber in advance about Donna. The first month Donna cried continually; however, she was never late or absent. An additional six-week assignment was granted by the Job Upgrading Central Office, after which I arranged to have her sponsored by the Division of Vocational Rehabilitation for an additional thirteen weeks.

"Knowing that the staff liked her very much, I asked Miss Barber if a permanent place was available for Donna. Miss Barber was able to convince the Board of Directors that Donna should become a regular staff member in the food preparation department.

"No one would believe that this well-groomed, nineteen-year-old girl with the shy but friendly smile was the same girl who, twelve months before, was untidy and completely uncommunicative. She has truly taken her place in society."

The Case of Annie

"Annie came to the Job Upgrading Program in July, 1966. She had been referred to us by the school as a dropout. She called and made arrangements for her interview and was accepted for the program, but did not report to us for several weeks. She did call to tell us her mother had been called South as there had been a death in the family. We later found that one of Annie's strongest points was her dependability.

"Annie's counselor told us she was a nice girl, but her attendance had been irregular. In checking further, we found she had been at Ford Hospital undergoing a series of tests, and she suffered from severe headaches. From time to time, Annie did call in to say that she was ill.

"We have recently placed Annie in a training station at a nursery in Detroit where she is doing a beautiful job so far. Her supervisor finds her a real joy to work with."

The Case of Mary J.

"On November 16, 1965, Mary J. was referred to the Southwestern Job Upgrading class by a friend already enrolled in the program. Mary had dropped out of the Special Prep class at Chadsey a few days earlier to try to find employment.

"Shortly after her enrollment in December 2, 1965, she was placed in the advanced clothing class. Mary was regular in her attendance and appeared to be a shy, quiet young lady who did her work diligently. On January 9, 1966, her vocational rehabilitation case worker made arrangements for Mary to attend a private sewing school for twelve weeks. Here Mary was taught various types of sewing but was not quite ready to move into a job as a power sewing machine operator.

"Mary returned to the Job Upgrading class for assistance in locating a job after completing her sewing course. She was referred to a neighborhood glove manufacturer who agreed to 'try her out for a few weeks.' He was very impressed with Mary's dependability and conscientiousness and, even though her production was below standard, he kept her on the job.

"Several months have passed, and Mary's work has improved slowly but steadily, and she is now able to compete with the other employee's production."

The Case of John G.

"John G. had dropped out of school in midterm as a 12A who needed only ten hours to graduate. There was much pressure on him at home to quit school and start earning some money. He was referred to me by his counselor. After talking to John, I concluded that, if I could help him get a part-time job, perhaps I could get him to remain in school and graduate. Fortunately I was able to get that opportunity for him in a few days. He worked every day in the afternoon and proved reliable. The employer offered him permanent full-time employment when he graduated last June. John has managed to upgrade himself since then by finding a job in a tool and die shop as an apprentice."

Summary of Findings of the Product Evaluation

On the basis of the incomplete data, there seems to be evidence that trainees have increased their employability through experiences in the Job Upgrading Program. A considerable number of those in the summer Job Upgrading Project--about one-sixth--have obtained full-time employment, many of them now being on the payrolls of institutions sponsoring their work training. One large hospital has placed over 20 of the trainees on its payroll.

Preliminary reports tend to indicate that more than the usual number of summer trainees--approximately one-third--were returning to school in the fall with the intention of remaining until graduation. The job upgrading teachers feel that there is some relationship between the greater amount of work experience and the number of students returning to school. A combination of factors may be involved. The trainee has an opportunity to obtain first-hand knowledge of the world of work. He has an opportunity to talk to adults on the job and possibly to identify with some of them. Longer work hours mean less leisure time. The holding power of the job also means that the teacher-coordinator has more time to counsel and work with the trainee. All or any one of these factors may have had some influence in causing a possible self-reassessment on the part of the trainee.

About one-eighth of the project summer trainees have dropped out of the program. Considering the facts that participation in the program is entirely voluntary and that the trainees are persons who have already evidenced their rejection of the school program by dropping out of school before graduation, the rate of attrition for the summer Job Upgrading Project seems to be low.

Some progress has been made in the improvement of reading skills so necessary for obtaining and holding employment and for success in school.

Teachers, at their final meeting in August, displayed enthusiasm for the type of work in which they were engaged. They felt that the trainees had made good progress, both in the attitudes conducive to employability and in the skills, especially reading, necessary for employment.

Funding of the program made possible the opening of 4 new day and 3 new evening job centers during the regular school years. The paid work training offered through centers in operation during May through August was increased more than tenfold as compared with the typical four-months period prior to ESEA, Title I, funding.

Process Evaluation

The chief aim of the process evaluation is the identification of changes that should be introduced to increase the effectiveness of the operation of the project in attaining its general objectives. Included is an examination of the effectiveness of the methods, facilities, and services provided. After the end of the summer session, 14 of the 19 members of the professional staff of the Job Upgrading Program responded to an evaluation survey. They were asked to recommend changes in the program that might add to its effectiveness. The following table contains a summary of the more frequently mentioned responses.

Recommendations of 14 Summer Session Staff Members for Improving the Job Upgrading Program

Recommendation	Frequency of Mention
Revise and/or update the course of study.	11
Obtain a city-wide policy defining positive, closer relationships between the Job Upgrading and the regular school programs.	10
Make available to trainees a variety of realistic and lengthened on-the-job work assignments.	6
Continue a followup of trainees beyond the 6 month period.	4
Investigate the possible use of tests or other techniques to help determine the need for the program.	3
Provide each center with projectors, record players, up-to-date cash register models, and up-to-date visual aid lists.	3

A large number of the respondents felt that the course of study required updating and revision. Several suggested development of materials geared to the poor reader and the slow learner. In addition, lesson sheets are needed for use with newly acquired audiovisual materials.

In view of the staff responses, it would seem that the course of study and lesson sheets should be revised and updated. However, this need has been long recognized by those in the program, and through funds now available under ESEA, the project director has planned several staff workshops. These workshops will be concerned primarily with the revision of the Job Upgrading Manual of Procedure and the development of a curriculum guide. In turn, it is hoped that the new curriculum guide will eventually lead to the revision of the lesson sheets.

At the present time, a prospective referral must be dropped from the school rolls before he can be accepted into the Job Upgrading Program as a trainee. In this respect, the Job Upgrading Program is not part of a regular school curriculum. On the other hand, the centers are housed in schools; hence, they are subject to some jurisdiction by principals. As a consequence of this dichotomous role--being divorced from the regular school curriculum, yet increasingly dependent upon the school and its services--the coordinators find themselves subject to varying degrees of consideration and cooperation from individual school authorities. For this reason, over two-thirds of the respondents to the survey suggested a city-wide policy defining a positive, closer relationship between the Job Upgrading and the regular school programs.

The number of trainees returning to regular school has been increasing over the years. For the first 16 years of the program, the ratio of those going into employment to those returning to school was 3 to 1. For the past five years, the the ratio has been 3 to 2. Because of this trend and because of the emphasis that is placed on keeping youths in school, thought has been given on ways to serve these youths better. Thus, two recommendations have already been submitted to an

assistant superintendent for consideration; namely,

> include the Job Upgrading Program in the regular school program, and
>
> permit potential dropouts to transfer into the program rather than have them first marked as "Left" on school records.

Including Job Upgrading in the regular curriculum would also serve another purpose. It would give greater recognition to the program and the services it renders, and thus make more possible a uniform policy regarding its relationships to a school program. Involved in this recommendation is equal consideration in the assignment for class space for Job Upgraders on the same basis as for students in regular school. Hopefully, the policy would allow trainees to enroll in classes determined by their individual needs, rather than by the space available after the students in regular school have been programmed.

Other recommendations from the staff included,

> provision for remedial reading instruction for trainees during the regular school year, and
>
> provision for groups of trainees to visit industry and business.

Cost Analysis

The budget of the Job Upgrading Project to expand the Job Upgrading Program is $224,288. The project balance sheet of January 31, 1967, showed that $175,940 has been expended and that an estimated debit of $52,500 was still outstanding. A rough estimate of the total cost of the project is, therefore, about $228,500 for the period from April 1 through August 31, 1966. This cost is additional to the operating cost of the existing Job Upgrading Program. Because trainees received services provided under the existing Job Upgrading Program as well as service provided by the expansion of the program, it is impossible to give even a rough estimate of cost per trainee for the additional services provided.

The fact that 73 of the summer-time trainees were employed at the end of their training, 163 were returning to the regular school program, and another 166 were still in or had completed the program suggests that the employability of 402 youth has been or is being increased. It cannot be even speculated as to what addition to the gross national product during the next 30 years can be attributed to their job upgrading training. Neither can it be speculated as to what reduction in public welfare and crime costs can be attributed to their training. The entire program is predicated on the belief that it will increase the employability of youth, that this employability will persist over a long period of time, and that both the individuals concerned and society will benefit from this increased employability.

Conclusion

The acquisition of ESEA funds made possible increased facilities and staff for the Job Upgrading Program. In turn, the services that the program offered were made available to larger numbers of school dropouts and to potential dropouts. However, in spite of the increased facilities, the list of dropouts waiting for enrollment at the end of June totalled 146. Of this number 59 were waiting for enrollment in the new centers funded under ESEA. The fact that within a two-month period the number of applicants for enrollment in the new centers exceeded the capacity of the centers by about 40 percent might very well be indicative of a felt need on the part of the dropouts.

Findings of the evaluation study have shown that because of the extension of the Job Upgrading services financed under ESEA, Title I, 470 more young people were able to enter job upgrading classes.

As of August, 1966, 73 of the 453 youth enrolled in the summer program had become gainfully employed; 163 had returned to regular school classes; and another 166 were still in or had completed the job upgrading classes. 51 had dropped out

of the program. (Pupils taking classes in regular school received average marks of "C-.")

Pupils taking remedial reading instruction made small gains in understanding word and paragraph meanings, although they continued to be very retarded in reading achievement. Analysis of lesson sheets and teachers' guides for the program showed that pupils also received practical instruction in such things as proper grooming, filling out job application forms, reading city maps, and studying "Help Wanted" sections of the newspapers. In addition to this classroom training, they received supervision in paid employment.

Teachers indicated that there is a need for revising the course of study for the program and rewriting the lesson sheets.

While the program fell short of the achievement of some of its objectives, it seems to be making definite contributions to the increasing of the employability of youth who needed its services.

A complete evaluation of the program is not possible until study can be made of its long-range effects. However, data collected thus far indicate the need for the continuation and expansion of the program.

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Schnack, Dermot J.
An Interview with Your Coordinator of Vocational Guidance.

Ohio State Dept. of Education, Columbus. Div. of Guidance and Testing
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*OCCUPATIONAL GUIDANCE; *VOCATIONAL COUNSELING; VOCATIONAL EDUCATION; PROGRAM DEVELOPMENT; *STAFF ROLE; STAFF ORIENTATION; *QUESTION ANSWER INTERVIEWS; GUIDANCE SERVICES; STATE PROGRAMS; STATE SUPERVISORS
OHIO

The services available from the coordinator of vocational guidance, a new position in the Division of Guidance and Testing in the State of Ohio, are clarified. Specific information is given on: the need for these personnel, an occupational profile, typical activities requiring travel, activities found in most programs, the place of counseling in vocational guidance, program development, and types of schools employing vocational guidance coordinators. (CH)

VT 007 225

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AN INTERVIEW

WITH YOUR COORDINATOR OF VOCATIONAL GUIDANCE

By
Dermot J. Schnack
Coordinator of Vocational Guidance
Guidance Services Section, Division of Guidance and Testing

Enclosure with November/December, 1966 issue of "Ohio Guidance News & Views"
DIVISION OF GUIDANCE AND TESTING
State Department of Education
751 Northwest Boulevard, Columbus, Ohio 43212

VT007225

AN INTERVIEW
WITH YOUR COORDINATOR OF VOCATIONAL GUIDANCE

By: Dermot J. Schnack
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Guidance Services Section, Division of Guidance and Testing

Editor's Note: The following report will clarify the services available from the Coordinator of Vocational Guidance, a new position in the Division of Guidance and Testing.

Question: -- Mr. Schnack, why is there a "Coordinator" of vocational guidance in the Division of Guidance and Testing?

Answer: -- The Coordinator's position was created in order to provide liaison between the Division of Vocational Education and the Division of Guidance and Testing as well as to provide Vocational Guidance Coordinators in vocational settings with a contact person who is available to provide guidance services tailored to their special circumstances.

Question: -- What is a Vocational Guidance Coordinator?

Answer: -- A Vocational Guidance Coordinator in Ohio schools is a school counselor who is employed in a secondary school which provides at least five distinct approved vocational education programs. The position of an approved Vocational Guidance Coordinator is reimbursed for one-half the counselor's salary up to a maximum of $4,500.00. The travel allowance of the Vocational Guidance Coordinator is also reimbursed at the rate of ~~three-quarters~~ one-half the expenditure by the local board of education up to a maximum of $300.00. Reimbursement funds are provided through the Division of Vocational Education from appropriations available under the Vocational Education Act of 1963.

Question: -- What is the meaning of "five distinct" vocational programs?

Answer: -- A rule of thumb is that a program from each vocational education service constitutes a "distinct" program. Thus, one program each from Agriculture, Business Education, Distributive Education, Home Economics Education, and Trade & Industrial Education clearly meets the requirements. However, five programs, approved by the Division of Vocational Edu-

cation, meet this requirement. For example, Cosmetology and Auto Mechanics, both T. & I. programs, are counted as two distinct programs.

Question: -- How does the Vocational Guidance Coordinator use the travel allowance?

Answer: -- The Vocational Guidance Coordinator participates in activities which require him to leave the vocational school. Typical activities requiring travel are:

1. Consultation with school counselors in feeder schools.

2. Participation in orientation programs designed for pupils, parents, patrons, and teachers.

3. Cooperation with the Employment Service in implementing the E.S. Cooperative School program.

4. Collection and dissemination of occupational information.

5. Participation in public relations activities.

6. Coordination of placement programs.

7. Identification of potential vocational enrollees.

8. Visitation to places of employment in the school district.

9. Promotion of professional guidance associations.

10. Determination of the effectiveness of guidance.

Question: -- In what other program activities does the vocational guidance coordinator participate?

Answer: -- The activities of the Vocational Guidance Coordinator will vary from school to school; however, there are some activities which are probably found in most programs:

1. Establishing and maintaining cooperative working relations with other members of the counseling staff.

2. Describing programs of vocational education to pupils and parents.

3. Identifying criteria for placement in the vocational program.

4. Developing selection procedures.

5. Surveying student needs.

6. Providing counseling for students who request it.

7. Communicating with administrators and school patrons about student characteristics, student needs, and student accomplishments.

8. Publishing information about employment opportunities.

9. Using school and community resources for placement.

10. Applying follow-up techniques.

11. Evaluating the guidance program.

12. Cooperating in staff in-service education programs.

Question: -- Do you see counseling being relegated to a minor place in the activities of the guidance program?

Answer: -- Counseling as a part of the guidance program appears to be relegated to a minor role because of the emphasis in

the answers on activities. In actual practice, the place of counseling in a guidance program serving students enrolled in vocational education depends upon the numbers and the competence of personnel, the number, nature, and priorities assigned to other guidance program activities, the length of time the guidance program has been in existence, the type of school in which the guidance program functions and the nature of the community from which the students come.

Question: -- Are there any other special requirements for the establishment of a Vocational Guidance Coordinator position?

Answer: -- Vocational Guidance Coordinators are required to be certificated school counselors, and must attend or have attended a summer Vocational Guidance Seminar. The Division of Guidance and Testing screens the applications for reimbursement of a Vocational Guidance Coordinator in order to determine whether or not the addition of a Vocational Guidance Coordinator represents an expansion of the guidance services presently available in the school system. If the employment does not represent an expansion of the guidance program, the request is denied.

Question: -- We sometimes are faced with the problem of having more qualified and interested students than places for them in certain vocational courses. Do you have any recommendations for handling this problem?

Answer: -- If the students are equally qualified then I would support random or chance selection. Inform all applicants who are qualified of their status and then employ a selection procedure such as drawing names by chance or use a table of random numbers. There are at least two advantages to this approach: (1) Qualified students are recognized as being qualified; and (2) The need for an expansion of vocational education opportunities is made clear.

Question: -- What do you suggest be done when there are not enough qualified students for a particular course?

Answer: -- Hopefully, the courses can be filled without requiring that the school counselor become a recruiter. Tentative course selection in the 9th grade may serve to identify problem

areas while there is time sufficient enough to launch a concerted effort to fill vacancies. It is in situations such as this that the value of the Vocational Guidance Coordinator becomes manifest. An action program to enroll students might include the following:

1. Review all the facts with the selection committee.

2. Consult with the Director of Vocational Education.

3. Revise or modify the selection criteria.

4. Use vocational educators as resources in communicating with prospective students.

5. Provide an opportunity for graduates of the vocational course in question to potential enrollees.

6. Inform community and civic leaders of the situation and enlist their aid in a publicity campaign.

Question: -- In what types of schools are Vocational Guidance Coordinators employed?

Answer: -- Vocational Guidance Coordinators, of whom there are 33 in Ohio, are typically employed in one of four settings:

1. Joint Vocational Schools.

2. Comprehensive High Schools.

3. Vocational Schools.

4. Administrative units serving a city system.

5. Technical Institutes, Schools or Colleges

Question: -- Do you expect an increase in the number of Vocational Guidance Coordinators?

Answer: -- Assuming that funds are sufficient for the future, we anticipate a five-fold increase in the next three years. By 1970 there may be as many as 150 Vocational Guidance Coordinators in Ohio.

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Enclosure with November/December, 1966 issue of "Ohio Guidance News & Views"
DIVISION OF GUIDANCE AND TESTING
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Student Vocational Interest Survey.

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To aid students in making vocational choices, this survey was devised. The first part includes a 200-item forced choice student vocational interest questionnaire with accompanying questionnaire report form, group analysis of vocational choice selection form, questionnaire interpretation key, and tabulation instructions. The purpose of this section is to determine the activities a student likes, dislikes or is unsure about. The second part is a training and vocational choice record which determines student's educational and vocational plans. Categories of general interest include: (1) vocational training, (2) vocational training and college plans, (3) vocational training and educational or training plans other than college, (4) college plans, (5) educational or training plans other than college, and (6) undecided or no preference for a particular course of study. Vocational service areas are: business and office, distributive education, home economics, agriculture, and trade and industrial education. (CH)

VT 007 227

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STUDENT VOCATIONAL INTEREST SURVEY

VT007227

STUDENT VOCATIONAL INTEREST QUESTIONNAIRE

Your school and community are interested in helping students do the best possible job of choosing and preparing for a field of work in line with their abilities and interests and in which they will have a reasonable opportunity for employment. With the information you furnish and information about job opportunities, your school should be able to do more to help students make wise vocational choices and plans.

This questionnaire is divided into two parts, the Activity Interest Section and the Training and Vocational Choice Record. The purpose of the Activity Interest Section is to determine what activities you like, dislike, or are unsure about. The Training and Vocational Choice Record is to obtain information about your educational and vocational plans.

INSTRUCTIONS

A. A separate answer sheet should be used to mark responses to interest items included in this questionnaire booklet. Please do not mark in the booklet.

B. Read carefully each interest item listed and respond to them on the separate answer sheet if you:

	L	?	D	
1.	●	○	○	like the activity
2.	○	●	○	are not sure if activity is liked or disliked
3.	○	○	●	dislike the activity

C. After you have responded to the 200 interest items, complete the Training and Vocational Choice Record on the back of the answer sheet.

1. Working with business records, such as sales slips, receipts, bills, records and amount of goods purchased or work done.

2. Helping in the supervision of children's activities.

3. Buying merchandise to be resold in a retail or wholesale business.

4. Operating adding machines and calculators.

5. Helping to care for an elderly person in performing personal services.

6. Acting as a receptionist.

7. Displaying horticultural plants including flowering ornamental and vegetable plants.

8. Planning and organizing household activities and managing a home.

9. Taking the responsibility of caring for children while parents are at work.

10. Working in a print shop or publishing company.

11. Sorting, indexing, and assembling papers and other written records.

12. Operating a sewing machine.

13. Collecting information to compile reports.

14. Selecting, storing, and displaying of fresh fruits and vegetables.

15. Arranging food so that it is attractive and appetizing.

16. Accepting deposits or loan payments as a teller in a bank.

17. Taking apart mechanical things and putting them back together again.

18. Reading instructions or interpreting rough sketches to help plan sheetmetal objects.

19. Treating animals for diseases and parasites.

20. Cleaning a house.

21. Contracting many retail and wholesale businesses to show merchandise.

22. Working on engine ignition and carburetion systems.

23. Laying out designs on sheetmetal.

24. Carrying trays, cleaning utensils and assisting nurses in caring for patients.

25. Working with ideas such as planning, designing, drawing, or writing.

26. Studying ways of increasing the profits from farm crops.

27. Finding out what profit or losses a business makes.

28. Setting a table and serving food correctly.

29. Managing a retail, wholesale, or service establishment.

30. Serving meals to persons who are ill.

31. Cleaning, pressing and mending clothing.

32. Figuring out arithmetic problems using multiplications, divisions, squares and square roots.

33. Advising customers on the use of chemicals for weed and insect control.

34. Leading groups of children in their activities such as games, crafts and sports.

35. Operating a printing press.

36. Teaching simple games and songs to young children.

37. Working on furnaces and air conditioners.

38. Writing letters for and reading to an elderly or ill person.

39. Grading fresh fruits and vegetables.

40. Taking dictation in shorthand or on a shorthand machine.

41. Helping children to get along with other children.

42. Examining mechanical equipment for wear or damaged parts to determined repair needs.

43. Helping to prepare and serve foods.

44. Cutting and shaping metal objects or parts using handtools and machines.

45. Helping people to choose new merchandise wisely.

46. Greasing and oiling machines.

47. Selling various items of merchandise or service such as automobiles, clothing, electrical appliances, insurance, etc.

48. Planning an electrical system for buildings.

49. Working on a job that requires strength and active movements.

50. Taking orders and serving food in a restaurant.

51. Planning menus and preparing meals.

52. Helping prepare special diets for a patient.

53. Copying long lists of numbers and checking to be sure they are copied right.

54. Helping in the care of young children in a nursery school.

55. Supervising other employees in a retail, wholesale, or service establishment.

56. Copying figures or words neatly and orderly.

57. Setting type by hand or machine for printing or working with sizes, styles and spacing type.

58. Visiting persons who are ill.

59. Advising concerning identification of plants, insects, and diseases.

60. Working with people.

61. Working in an office.

62. Planning the arrangement of pictures or printing articles on a page to make it look attractive.

63. Reading stories to children.

64. Preparing fruit and vegetables for marketing including trimming, washing, and packaging.

65. Operating keypunch machines.

66. Baking pies, cakes, and pastries.

67. Interviewing people applying for a charge account in retail or wholesale businesses.

68. Repairing or replacing worn or damaged motor or other mechanical parts of an automobile or diesel truck.

69. Operating welding equipment.

70. Sewing by hand.

71. Reading about new developments in textiles and new fashions.

72. Giving permanents and other treatment for women's hair.

73. Informing customers what an article of merchandise or service will do for them.

74. Caring for children in a private home.

75. Making clothes for others.

76. Working with doctors and nurses to help sick people.

77. Typing letters and reports.

78. Arranging attractive displays of merchandise.

79. Helping farmers in preparing an economical feeding program for their livestock.

80. Filing written reports alphabetically or according to subject matter.

81. Using electric household appliances.

82. Proof reading printed copy.

83. Explaining uses of new products or services to people.

84. Displaying and selling home and garden plants, shrubs, and equipment.

85. Operating office machines.

86. Typing from a dictation machine.

87. Selecting seed and maintaining turf grasses.

88. Fitting and altering garments.

89. Receiving, inspecting, weighing, and handling fruit or vegetable products.

90. Figuring out logical and orderly steps to work problems.

91. Shopping for food.

92. Tuning up motors to see that they are running right.

93. Helping people to select goods or services.

94. Working with decorators.

95. Reading and trying out new recipes.

96. Giving manicure and hand care treatments.

97. Developing advertisements to sell merchandise or services.

98. Doing laundry and ironing.

99. Working with my hands.

100. Shopping for patterns and fabrics.

101. Receiving, checking purchase orders against invoices and storing supplies for resale.

102. Testing radio and television sets.

103. Working outdoors.

104. Constructing and using plant growing structures such as greenhouses.

105. Making chemical laboratory experiments.

106. Working in a scientific laboratory.

107. Using hand and power tools.

108. Making calculations to determine angles, curves, or shapes of small wooden parts.

109. Repairing and maintaining garden tractors and lawn equipment.

110. Changing fuses and fixing short circuits.

111. Keeping machinery in a factory in operation.

112. Studying the theory of electricity including direct and alternating current, volts, amperes, ohms, etc.

113. Supervising crews in the sodding and seeding of lawn areas.

114. Studying consumer preferences.

115. Working in a dentist's laboratory.

116. Working in factory, garage, or workshop.

117. Running machines that cut or grind small shavings from metal parts.

118. Keeping experiment records, charts and graphs.

119. Supervising the preparation and sale of floral products.

120. Working with a microscope to study minute objects.

121. Operating metal working machines such as engine lathes, milling machines, power hacksaws, grinders and shapers.

122. Feeding and caring for livestock.

123. Repairing furniture.

124. Studying ways of increasing the profits from livestock.

125. Shaping metal parts from blueprints and specifications.

126. Finishing or refinishing fine wood surfaces using shellac, stains, varnishes, and other wood finishing materials.

127. Working in a bakery.

128. Helping farmers to determine the machinery needs for their farm business.

129. Selecting or designing hair styles.

130. Maintaining and repairing gasoline engines.

131. Creating posters and show cards to advertise products or events.

132. Cutting, tinting, and dyeing hair.

133. Studying soil characteristics.

134. Displaying garden store products.

135. Repairing bus, truck, tractor and heavy duty diesel engines.

136. Operating and maintaining special turf equipment such as mowers.

137. Growing and marketing flowers.

138. Assisting a dentist during treatment of patients.

139. Preparing and packaging flowers for sale.

140. Working in a service station or garage.

141. Developing and drawing up plans for the construction of a bridge or building.

142. Studying how plants grow.

143. Working with lumber, paints, masonry, building materials, etc.

144. Preparing landscape plans for home or public grounds.

145. Working in a cleaning and pressing establishment.

146. Working the mathematical problems necessary to draw things to scale.

147. Working with wood, fabrics and leather.

148. Operating machinery or equipment.

149. Giving first aid treatment.

150. Pruning, fertilizing, and caring for ornamental shrubs and shade trees.

151. Using carpenter's tools to perform general carpentry work such as erecting wood building frames, laying floors, and installing wood trim.

152. Working from exact tracings or copies of plans or designs made by someone else.

153. Assembling or adjusting machinery and explaining to customers how a machine works.

154. Repairing or replacing defective parts in radio or television sets.

155. Giving skin beauty treatments.

156. Recognizing and controlling plant insects and diseases.

157. Designing and preparing diagrams and sketches for publications and exhibitions.

158. Designing lawn areas for commercial concerns such as golf course, parks, factories, etc.

159. Identifying shrubs and trees.

160. Working on a job that is active and requires the use of math problems, formulas and bookkeeping procedures.

161. Repairing damaged automobiles by replacing broken body parts and pounding out dents.

162. Working with projects that control soil erosion.

163. Assisting in the preparation of foods in quantity.

164. Designing and making floral displays.

165. Working with gauges and tools that make very fine measurements.

166. Running lathes, drill presses, and other machine shop equipment.

167. Working with laundry and dry cleaning equipment.

168. Studying the effect of different fertilizers.

169. Supervising the selection and planting of ornamental shrubs and shade trees.

170. Working on a job that requires very delicate hand movements and very close inspection and precision.

171. Assembling electrical equipment or motors.

172. Growing and marketing of nursery and greenhouse produce.

173. Drawing things to exact scale.

174. Working as a nurses aide in a hospital or as a practical nurse at home.

175. Advising customers concerning fertilizing and control of insects and diseases of plants, shrubs, and trees.

176. Giving shampoo and scalp treatments.

177. Replacing or repairing worn or damaged parts of wooden structures, such as window or door frames, steps, beams or scaffolds.

178. Working from blueprints.

179. Wiring, splicing, soldering and installing electrical connections.

180. Supervising the transplanting of nursery crops.

181. Installing and adjusting automatic equipment.

182. Illustrating stories, advertisements or articles in books.

183. Designing and installing drainage systems for lawn areas or golf greens.

184. Developing new kinds of flowering plants through controlled breeding techniques.

185. Lettering signs or posters and advertising copy for magazines or newspapers.

186. Taking and developing dental X-rays.

187. Designing machinery and mechanical or electrical equipment.

188. Improving livestock production through animal selection and breeding programs.

189. Making corsages.

190. Painting and refinishing automobiles or repaired body sections.

191. Laying out and caring for flowers and shrub gardens.

192. Repairing electrical stoves, vacuum cleaners, fans and motors.

193. Working with cooking ingredients.

194. Making an analysis of soil to determine specific fertilizer needs.

195. Planning wiring diagrams and installing electrical wiring circuits, outlets and fixtures.

196. Making experiments using principles of physics.

197. Working in cloth and fabrics.

198. Identifying and using plants for the landscaping of homes and public buildings and grounds.

199. Repairing buildings.

200. Using drafting tools to prepare detailed plans and drawings of things to be built.

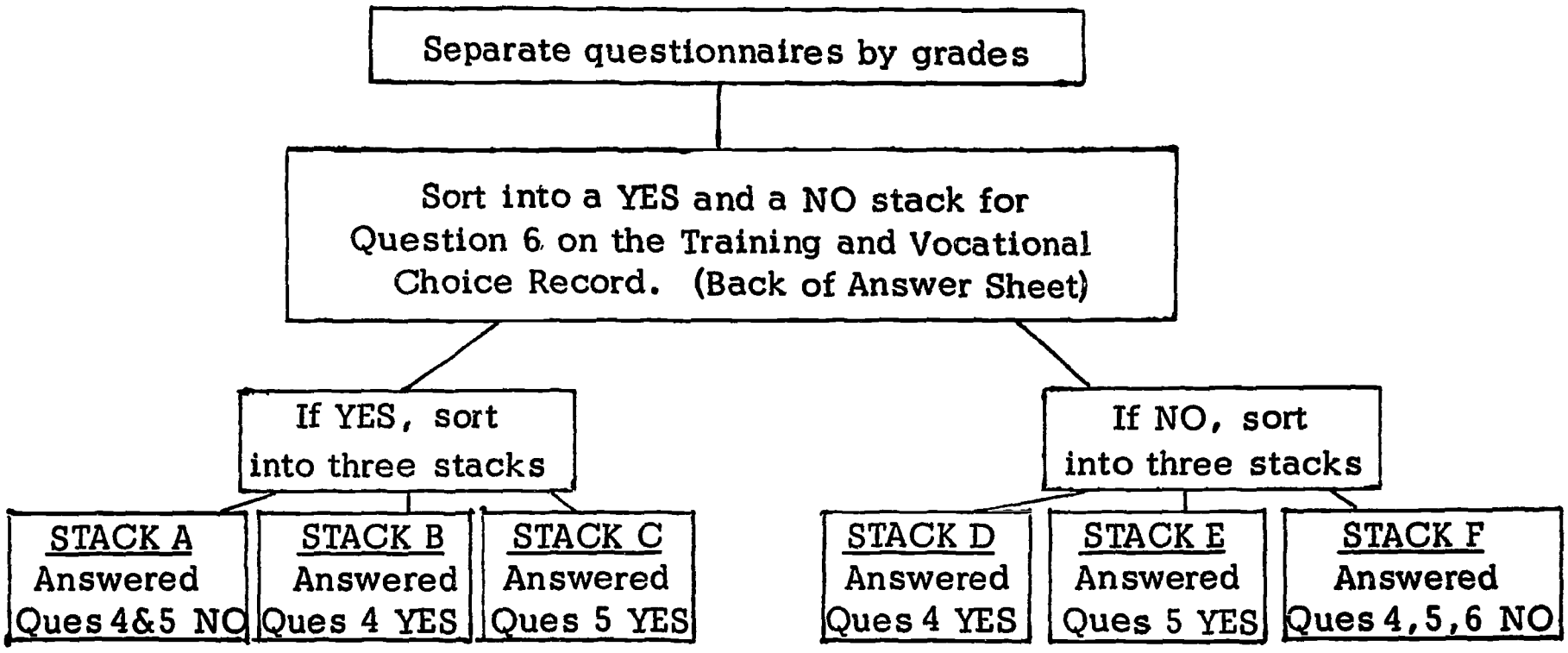
STUDENT VOCATIONAL SURVEY RESULTS

	School S	J	T	%	School S	J	T	%
A. Vocational Training								
B. Vocational Training and College Plans								
C. Voc. Tr. and Non-College Educ. Plans								
D. College								
E. Educ. and Tr. Other than College								
F. Undecided or No Course Preference								
Total								

Vocational Course Selection	1st Choice C	I	T	2nd Choice	1st Choice C	I	T	2nd Choice
1. Bookkeeping and Accounting								
2. General Clerical								
3. Stenographic								
4. Data Processing								
5. Retail								
6. Wholesale								
7. Service Establishments								
8. Child Care								
9. Food Service								
10. Clothing Service								
11. Nursing and Rest Home Aide								
12. Homemaker's Assistant								
13. Production Agriculture								
14. Agriculture Equipment and Mechanics								
15. Agriculture Business and Services								
16. Production Horticulture								
17. Produce Processing and Marketing								
18. Greenhouse Operation								
19. Floristry								
20. Landscaping and Nursery								
21. Turf Management								
22. Garden Center Operations								
23. Auto Mechanics								
24. Auto Body and Fender Repair								
25. Beauty Operator (Cosmetology)								
26. Building Maintenance Mechanic								
27. Carpenter								
28. Commercial Art								
29. Commercial Cooking and Baking								
30. Dental Assistant								
31. Diesel Engine Mechanic								
32. Draftsman								
33. Electrician								
34. Fabric Service								
35. Furniture Upholstery and Repair								
36. Industrial Laboratory Assistant								
37. Machinist								
38. Machinery Maintenance and Service Mechanic								
39. Medical Laboratory Assistant								
40. Nurse's Aide and Practical Nursing								
41. Printing								
42. Refrigeration and Heating Service								
43. Radio and Television - Electronics								
44. Tailoring and Dressmaking								
45. Utility and Appliance Mechanic								
46. Welding and Sheetmetal								
47. Other								
48. No Second Choice								

C.1

VOCATIONAL SURVEY TABULATION INSTRUCTIONS



After sort is completed:

1. Count the number of questionnaires in each stack (A,B,C,D,E,F) and record on the Student Educational interest report form.

2. Check the appropriate group letter (A,B,C,D,E,F) in the box at the top right-hand side of the answer sheet.

3. Stacks D, E, and F may be set aside as no further tabulation of them is necessary.

Repeat the entire above process if only six students are involved and if only one grade level was tabulated

4. Combine sophomore and junior A, B, and C questionnaires.

5. On the Training and Vocational Choice Record side of the answer sheet, students have indicated first and second choices of vocational courses by a "1" and "2". Record these (by number) in the box on the front side of the answer sheet.

6. Separate into stacks for appropriate courses indicated as first choice.

7. Use scoring stencil to check the consistency of student interests with course selection. Course selection is considered consistent with interests where half or more of the interest items are marked "L". The number of "L" responses needed for interests to be rated as "consistent" will be indicated on the scoring stencil.

8. In the box on the front of the answer sheet, circle "C" if consistent or "I" if inconsistent.

9. For each vocational course, tabulate the number of Consistent or Inconsistent first choice selections on the Vocational Course Selection report form.

STUDENT INTEREST QUESTIONNAIRE INTERPRETATION KEY

VOCATIONAL COURSE — **ITEMS PERTAINING TO COURSE**

Business and Office Education

1. Bookkeeping and Accounting - 1, 4, 27, 53, 56, 61, 85, 160.
2. General Clerical - 1, 6, 11, 13, 56, 60, 61, 77, 80, 85, 86.
3. Stenographic - 1, 6, 40, 60, 61, 77, 85, 86.
4. Date Processing - 1, 11, 13, 32, 53, 61, 65, 85, 90, 160.

Distributive Education

5. Retail
6. Wholesale
7. Service Establishments

1, 3, 6, 14, 21, 29, 45, 47, 55, 60, 64, 67, 73, 78, 83, 93, 97, 101, 114, 119, 131, 140.

Home Economics

8. Child Care - 2, 9, 34, 36, 41, 54, 60, 63, 74, 90, 182.
9. Food Service - 6, 15, 27, 28, 29, 30, 39, 43, 50, 51, 52, 55, 60, 66, 78, 83, 89, 90, 91, 95, 99, 101, 114, 127, 163, 193.
10. Clothing Service - 1, 12, 25, 27, 29, 31, 60, 70, 71, 75, 78, 88, 90, 99, 100, 114, 131, 145, 167, 170, 197.
11. Nursing & Rest Home Aide - 5, 24, 30, 38, 52, 58, 60, 76, 99, 149, 174.
12. Homemaker's Assistant - 8, 20, 60, 90, 91, 94, 99.

Agriculture

13. Production Agriculture - 19, 26, 48, 49, 59, 90, 99, 103, 105, 107, 110, 118, 120, 122, 124, 130, 142, 148, 156, 162, 168, 179, 181, 188, 194.
14. Agric. Equip. & Mech. - 17, 22, 32, 42, 46, 69, 90, 92, 99, 101, 107, 116, 128, 130, 148, 153, 181, 196.
15. Agric. Bus. & Serv. - 1, 27, 33, 59, 60, 73, 78, 79, 83, 93, 99, 101, 109, 156, 160, 168, 175, 194.
16. Production Horticulture - 59, 99, 103, 104, 118, 120, 133, 142, 150, 156, 168, 172, 184, 194.
17. Produce Processing & Marketing - 14, 39, 64, 89, 99, 114.
18. Greenhouse Operation - 59, 99, 104, 105, 137, 142, 156, 168, 172, 184, 194.
19. Floristry - 99, 119, 137, 139, 164, 184, 189.
20. Landscaping & Nursery - 59, 99, 103, 107, 109, 130, 144, 148, 150, 156, 158, 159, 169, 172, 175, 180, 191, 198.
21. Turf Management - 87, 99, 103, 113, 130, 133, 136, 156, 158, 183, 194.
22. Garden Center Operations - 7, 33, 73, 84, 99, 109, 130, 134, 159, 175.

STUDENT INTEREST QUESTIONNAIRE INTERPRETATION KEY (continued)

VOCATIONAL COURSE	ITEMS PERTAINING TO COURSE

Trade and Industrial Education

23. Auto Mechanics - 17, 22, 42, 46, 49, 68, 92, 99, 107, 116, 130, 140, 148.
24. Auto Body and Fender Repair - 49, 99, 107, 116, 140, 148, 161, 190.
25. Beauty Operator (Cosmetology) - 60, 72, 96, 99, 129, 132, 155, 176.
26. Building Maintenance Mechanic - 18, 23, 49, 99, 107, 110, 126, 143, 148, 151, 152, 177, 178, 195, 199.
27. Carpenter - 49, 99, 107, 108, 126, 148, 151, 152, 177, 178.
28. Commercial Art - 25, 99, 131, 157, 182, 185.
29. Commercial Cooking and Baking - 15, 51, 60, 66, 99, 127, 163, 193.
30. Dental Assistant - 49, 60, 99, 115, 138, 186.
31. Diesel Engine Mechanic - 17, 22, 46, 49, 68, 92, 99, 107, 116, 117, 135, 165, 166.
32. Draftsman - 25, 99, 141, 146, 152, 173, 178, 187, 200.
33. Electrician - 99, 110, 112, 170, 171, 179, 192, 195.
34. Fabric Service - 31, 49, 99, 116, 145, 167, 197.
35. Furniture Upholstery and Repair - 25, 94, 99, 107, 116, 123, 126, 147.
36. Industrial Laboratory Assistant - 99, 105, 106, 118, 120, 196.
37. Machinist - 49, 121, 125, 165, 166, 178.
38. Machinery Mainten. & Service Mech. - 17, 44, 46, 49, 69, 92, 99, 107, 111, 116, 117, 152, 165, 166, 178.
39. Medical Laboratory Assistant - 76, 99, 105, 106, 118, 120.
40. Nurse's Aide and Practical Nursing - 24, 38, 49, 52, 58, 60, 76, 99, 149, 174.
41. Printing - 10, 35, 57, 82, 99.
42. Refrigeration and Heating Service - 17, 18, 23, 37, 42, 46, 49, 69, 110, 165, 179.
43. Radio and Television - Electronics - 99, 102, 110, 112, 154, 160, 170, 179.
44. Tailoring and Dressmaking - 12, 25, 71, 75, 99, 116.
45. Utility and Appliance Mechanic - 17, 42, 49, 99, 107, 178, 179, 192, 195.
46. Welding and Sheetmetal - 18, 23, 44, 49, 69, 99, 116, 117, 121, 125, 178.

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DJS:hac:bb

STUDENT VOCATIONAL INTEREST QUESTIONNAIRE REPORT FORM
School _____

Student General Interest

Student Choice	10th Grade	11th Grade	Total
A. Vocational Training	____	____	____
B. Vocational Training and College Plans	____	____	____
C. Vocational Training and Educational or Training Plans other than College	____	____	____
D. College Plans	____	____	____
E. Educational or Training Plans other than College	____	____	____
F. Undecided or no Preference for a Particular Course of Study	____	____	____
Totals	____	____	____

Group Analysis of Vocational Course Selection

Vocational Course	FIRST CHOICE			SECOND CHOICE
	Consistent Total	Inconsistent Total	Total "C" and "I"	No consistent check needed Total
BUSINESS & OFFICE				
1. Bookkeeping & Acctg.				
2. General Clerical				
3. Stenographic				
4. Data Processing				
DISTRIBUTIVE EDUCATION				
5. Retail				
6. Wholesale				
7. Ser. Establishments				
HOME ECONOMICS				
8. Child Care				
9. Food Service				
10. Clothing Service				
11. Nursing& Rest Home Aide				

Group Analysis of Vocational Course Selection (Continued)

Vocational Course	FIRST CHOICE			SECOND CHOICE
	Consistent Total	Inconsistent Total	Total "C" and "I"	No consistent check needed Total
AGRICULTURE				
13. Production Agriculture				
14. Agric. Equip. & Mech.				
15. Agric. Business & Ser.				
16. Prod. Horticulture				
17. Prod. Proc. & Marketing				
18. Greenhouse Operation				
19. Floristry				
20. Landscaping & Nursery				
21. Turf Management				
22. Garden Center Ops.				
TRADE & INDUSTRIAL EDUC.				
23. Auto Mechanics				
24. Auto Body&Fender Repair				
25. Beauty Operator				
26. Bldg. Mainten. Mech.				
27. Carpenter				
28. Commercial Art				
29. Com. Cooking&Baking				
30. Dental Assistant				
31. Diesel Engine Mech.				
32. Draftsman				
33. Electrician				
34. Fabric Service				
35. Furn. Upholstery&Repair				
36. Indust. Laboratory Asst.				
37. Machinist				
38. Mach. Main.&Ser. Mech.				
39. Medical Laboratory Asst.				
40. Nurse's Aide&Practical N.				
41. Printing				
42. Refrig.&Heating Ser.				
43. Radio&TV - Electronics				
44. Tailoring & Dressmaking				
45. Utility & Appli. Mech.				
46. Welding & Sheetmetal				
47. Other				
48.	No Second Choice			

STUDENT VOCATIONAL INTEREST QUESTIONNAIRE

Name _____ Sex _____ (M or F)

School _____ Grade _____

DO NOT WRITE IN THIS SPACE			
A ___ D ___ B ___ E ___ C ___ F ___	1st choice ____ 2nd choice ____	L ___ ? ___ O ___	C I

	L	?	D
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Form 1 - 10-65 - R

Division of Guidance and Testing, 751 Northwest Boulevard, Columbus, Ohio 43212

TRAINING AND VOCATIONAL CHOICE RECORD

The main purpose of vocational courses in a high school is to help young people prepare for beginning employment in a particular field of work. Your answers to the following questions will help your school to plan the best possible high school courses for students whether they plan to go to work immediately after graduation or go on to college Please answer them as completely and accurately as possible.

WHAT ARE YOUR PLANS? In each of the following, check the one answer which best applies to you.

1. I have:
   - ____ a. A definite plan for my life work.
   - ____ b. Sort of a plan.
   - ____ c. No idea of what I want to do or be.

2. My parents:
   - ____ a. Know of my plans and agree.
   - ____ b. Know of my plans but disagree.
   - ____ c. Do not know of my plans.

3. I plan to stay in high school until I graduate.
   - ____ a. Yes.
   - ____ b. No.

4. I am planning to go to college:
   - ____ a. Yes.
   - ____ b. No.

5. I am planning some further training after high school other than college. (Examples: nurse's training, business school, technical school, etc.)
   - ____ a. Yes.
   - ____ b. No.

6. I would like to have the opportunity to take some vocational training in high school.
   - ____ a. Yes.
   - ____ b. No.

If your answer to question 6 is "*Yes*," indicate your course choice by writing "1" on the line in front of your first choice and "2" on the line in front of your second choice.

(Do not indicate more than one first choice and one second choice.

BUSINESS AND OFFICE EDUCATION

____ 1. Bookkeeping and Accounting
____ 2. General Clerical
____ 3. Stenographic
____ 4. Data Processing

DISTRIBUTIVE EDUCATION

____ 5. Retail
____ 6. Wholesale
____ 7. Service Establishments

HOME ECONOMICS

____ 8. Child Care
____ 9. Food Service
____ 10. Clothing Service
____ 11. Nursing and Rest Home Aide
____ 12. Homemaker's Assistant

AGRICULTURE

____ 13. Production Agriculture
____ 14. Agriculture Equipment and Mechanics
____ 15. Agriculture Business and Services
____ 16. Production Horticulture
____ 17. Produce Processing and Marketing
____ 18. Greenhouse Operation
____ 19. Floristry
____ 20. Landscaping and Nursery
____ 21. Turf Management
____ 22. Garden Center Operations

TRADE AND INDUSTRIAL EDUCATION

____ 23. Auto Mechanics
____ 24. Auto Body and Fender Repair
____ 25. Beauty Operator (Cosmetology)
____ 26. Building Maintenance Mechanic
____ 27. Carpenter
____ 28. Commercial Art
____ 29. Commercial Cooking and Baking
____ 30. Dental Assistant
____ 31. Diesel Engine Mechanic
____ 32. Draftsman
____ 33. Electrician
____ 34. Fabric Service
____ 35. Furniture Upholstery and Repair
____ 36. Industrial Laboratory Assistant
____ 37. Machinist
____ 38. Machinery Maintenance and Service Mechanic
____ 39. Medical Laboratory Assistant
____ 40. Nurse's Aide and Practical Nursing
____ 41. Printing
____ 42. Refrigeration and Heating Service
____ 43. Radio and Television - Electronics
____ 44. Tailoring and Dressmaking
____ 45. Utility and Appliance Mechanic
____ 46. Welding and Sheetmetal

I would be interested in taking a vocational course not listed. It is _____

VT 007 231
Walton, Barbara J.
Final Report and Evaluation of the Women's Talent Corps New Careers Program 1966-67.

Women's Talent Corps, New York, N.Y.
Office of Economic Opportunity, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - May68 61p.

*WORKING WOMEN; *TECHNICAL EDUCATION; PROGRAM EVALUATION; *EDUCATIONAL DISADVANTAGEMENT; *COMMUNITY SERVICE PROGRAMS; *SERVICE OCCUPATIONS
WOMEN'S TALENT CORPS; WTC

The Women's Talent Corps (WTC), funded by an Office of Economic Opportunity "Title 207" demonstration grant, proposed to: (1) train women from low-income areas to serve as paraprofessionals in community service agencies of New York, and (2) create permanent jobs where none had previously existed in these agencies by demonstrating what trained community women could do. By bringing community residents into schools, hospitals, and settlement houses, it was hoped that growing distrust and even hostility between professionals in social service and the community they serve would diminish. The WTC established a training institute to provide both classroom work and on-the-job experience staffed with instructors who were former professionals. Major accomplishments were: (1) providing remunerative employment in human service fields for all of its graduates, (2) creating new paraprofessional jobs in New York City schools where none had existed before and laying the foundation for such jobs in other community agencies, (3) establishing a college of human services insuring the continued professional growth of new careerists in community service fields, and (4) stimulating personal and intellectual growth in a group of underprivileged community women. An evaluation report considers: (1) recruitment and selection, (2) the training programs, (3) the coordinators, and (4) institutional change. Follow-up data and conclusions concerning the program's impact as well as the problems it has encountered are included. (FP)

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FINAL REPORT AND EVALUATION

of

The Women's Talent Corps New Careers Program

1966-67

Staff Report Prepared by Barbara J. Walton

May 1968

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I. SUMMARY OF RESULTS

A. Background of the Women's Talent Corps

The Women's Talent Corps (WTC) was founded in 1964 and incorporated in March 1965 at a time when civil rights militancy and the demand for integrated quality education had reached new heights. Against this background, two related problems came into sharp focus in the minds of its founders: the need to "humanize" and expand services in the social sector of the economy, and the need to utilize the talent and energy of people living in disadvantaged areas who were unemployed or underemployed.

Funded by the Office of Economic Opportunity in September 1966 under a "Title 207" demonstration grant, the WTC proposed to: (1) train women from low-income areas to serve as paraprofessionals in the over-burdened, understaffed community service agencies of New York City, and (2) create permanent jobs in these agencies where none had previously existed by demonstrating in practice what trained community women could do. It was also hoped that bringing community residents into schools, hospitals and settlement houses would help reduce the growing distrust and even hostility between professionals in social service and the community they served.

To carry out its program, the WTC established a training institute which provided both classroom work and on-the-job experience, relating academic learning to specific needs in the job-training agency. A unique feature of the program was the use of instructors or "coordinators" who worked with the trainee both in the classroom and in the field, and were themselves former professionals. Community agencies participated directly in the program, and were, in fact, an integral part of the training operation. They served both as training sites and prototype organizations, demonstrating the feasibility of using community women in meaningful new paraprofessional jobs.

Conceived independently of the "new careers" movement, the WTC represented one of the first attempts to implement a program where people of low income could perform functions needed by society, and at the same time create careers in social service for themselves.

B. Major Accomplishments

The major accomplishments of the WTC during its first year of operation can be summarized as follows: 1) providing remunerative employment in human service fields for all of its graduates; 2) creating new paraprofessional jobs in New York City schools where none had existed before, and laying the foundation for such jobs in other community agencies; 3) establishing a "College for Human Services" to ensure the continued professional growth of new careerists in community service fields; and 4) stimulating personal and intellectual growth in a group of underprivileged community women.

Remunerative Employment in the Human Services

Of the 120 women accepted in 1966-67, 113 completed the thirty-week period of academic and field training and were placed in permanent jobs.[1] Roughly, two-thirds were placed in schools as teacher and guidance assistants and one-third in other community agencies as social work assistants, research assistants, occupational and recreational therapy assistants and mental health workers. (One graduate immediately entered college.) Initially, approximately three-fourths were employed by the agency in which they had trained. One-fourth were offered positions in similar human service agencies. A list of final job placements is found in Attachment A.

Economic Impact of the Program

In January 1968, 3 months after our last group of trainees was graduated, a follow-up questionnaire was sent to all 113 graduates of the 1966-67 program. All but two of those who did not return the questionnaire were contacted by phone.

Of the 111 from whom information was gathered, 98 were employed, 11 were unemployed, and 2 were in college full time.

1. During the course of the program, six women resigned due to illness, and one was asked to resign because she was unable to meet the demands of the program.

Of the 11 unemployed, five are unable to work full time because of child care problems--we are seeking part time employment for these women; one is seeking a new position because the program she worked in has been discontinued; three women are unable to work because of ill health, and the remaining two do not wish to be employed at this time (one of them is pursuing her high school equivalency full time.)

Of the 98 employed graduates, 94 were working in human service fields, 3 were in non-human service fields, and 1 was employed, but no further data is available. Of these 94, 61 were employed in the schools (52 as Educational Assistants to teachers and guidance counselors and 9 as Family Assistants in the College Bound program); 15 were in hospitals (6 as occupational or recreational therapists assistants, 2 as mental health workers, 3 as social work assistants, and 4 in various other units); 2 were directing their own social welfare programs; 3 are doing private nursing; and 13 are working in various positions in private and public social agencies including community centers, research institutes, and social welfare centers.

The effect of training on the economic positions of the trainees was significant, although not as great as had been hoped, due primarily to the low salaries paid to teaching and guidance assistants (-new positions).

Salaries for the trainees range from a low of $2100 for one woman employed only part time to a high of nearly $9000 for the women directing their own programs. The lowest salaries remain those of the women employed in the schools. They are being paid at the rate of $2.25 an hour for Educational Assistants to $2.50 an hour for Family Assistants in the College Bound Program.

With the exception of the one woman who was working only part time in a social service agency, 54 of the 55 women earning $3000 or less were employed as Educational Assistants in the schools. This sum accounts for a 30-hour week for only 10 months of employment, however, and does not include the summer earnings of those women who continue to work in the school summer programs. Also, this was the first year that such positions existed, having been created as a result of the efforts of the Women's Talent Corps. It is expected that the City-Wide Para-Professional Association and the unions will succeed in getting the salaries raised for the Assistants who join the school system at this new pedagogical level.

The 7 women who were employed in the schools as Family Assistants in the College Bound program average approximately $3900 annually. The majority of non-school employees were earning between $4000 and $5000 annually. Ten of the graduates were earning more than $5000 annually.

As mentioned above, all but 3 of those working are still in human service occupations. This contrasts with the kinds of jobs held by these women prior to training, jobs which consisted primarily of dead-end occupations, such as selling ice cream, making out laundry tickets, domestic service, or tagging merchandise in a department store. Twenty-one of the respondents declared their intention to enter college at a later date, and more than half reported that they were continuing their education part-time; 17 were working for high school diplomas.

2. Creation of New Positions

A second major result of the WTC program was to open up some 1000 new positions for teacher and guidance assistants in the New York City Public schools, and to achieve agreement in principle on a new career line, permitting those in the newly-created jobs to move upward. This is of special significance because of the danger in anti-poverty training programs that participants will find themselves in dead-end jobs with no possibility of advancement. One school district has asked the WTC for 400 more trainees in 1968. Another offered to pay the total training cost in order to be sure of receiving trainees. Still another has set up its own program, hired a coordinator and sent her to WTC headquarters to learn the job.

The opening of new positions was accomplished through a campaign which received the support of the United Federation of Teachers, which, at first, was not convinced that the proposed jobs were pedagogical in nature and deserved recognition by a teacher's union. After intensive discussions and consultation with the WTC during the fall of 1966 and 1967, the UFT agreed to support the new job line and joined the WTC in its efforts to persuade the Board of Education.

Equally important in opening the new positions was the excellent performance of the women who were already filling paraprofessional roles in the schools as part of their training. The usefulness of the new function was thereby demonstrated concretely to school administrators, who joined the campaign to persuade the Board. This helped greatly to speed up acceptance of the new position by the bureaucracy.

Once accepted in principle, the main problem became how to get immediate action by the Board, so that deadlines and conditions set by the terms of the WTC grant could be met. One of these conditions was that training agencies should share the cost of the training with the WTC at about the half-way point. This was part of the strategy of creating a new position. Through the joint efforts and pressures exerted by many groups, the Board was finally persuaded to share the cost of training, as well as to establish the new positions. Altogether, the creation of a job line in the schools where none had existed before must stand as a major accomplishment of the WTC's first year.

Success in opening new jobs in the schools spurred the WTC to a full-scale campaign in the hospitals and other organizations serving the community. Most of these organizations were highly receptive to the idea of paraprofessional assistants, but encountered strong opposition and delaying tactics from central personnel offices, budget directors and unions when they tried to establish such positions officially. Many hospitals, and a few private agencies, were able to re-allocate funds, so that they could fit WTC graduates into existing jobs, but establishing a city-wide job line for paraprofessionals in all the human services, and securing the support of professional associations and unions, are tasks that remain to be done.

Permanent New Positions?

How secure are the new jobs that have been established? Are they likely to disappear as time passes and attention is focused on other problems? The danger of retrogression cannot be overlooked. Long-term success may well depend on follow-up by the WTC or by the Talent Corps Association (a professional organization formed by WTC alumnae in cooperation with other New York City paraprofessionals) to make sure that the newly-created jobs become permanent, and that opportunity for advancement is kept open. There are encouraging signs that the Board

of Education, at least, has adopted the new careers concept as its own and is moving ahead to increase the number of such openings in the schools. The newness of the national concern with improved education and public service for the poor, however, makes it necessary to wage a continuing campaign for new careers in all the helping professions. This the WTC hopes to do.

C. Establishment of a College for Human Services

A third result of the WTC program, one having special significance for the future, was the establishment of a new educational institution at the community college level, specializing in education for human service occupations. Formation of a service-oriented, two-year college was a logical result of both the need for an institution which would permit continued advancement of paraprofessionals through job-based training and education, and the shortage of institutions catering to adults of limited education and financial means. Frankly dedicated to education for service rather than for its own sake, the College hopes to provide a unique educational opportunity for the underprivileged. The

curriculum developed for the 1966-67 WTC Training Institute consisted of six-eight weeks in the classroom followed by approximately six months of practical training on the job, with refresher courses as needed. This inter-related class-field formula provided a model for the curriculum of the new College for Human Services, which combines factual knowledge and concepts from the social sciences and education with practical knowledge based on experience in the training agency. The use of "coordinator trainers" as instructors both in the classroom and in the training agency provided a model for the "field faculty" of the College for Human Services, a faculty which moves with the student into the field to teach and tutor him there.

The coordinators played an important role in the development of curriculum for the training institute, and will continue to do so in the new College. They are ideally placed to discover learning gaps and to suggest ways in which classroom work could be related more closely to job needs. Recommendations made by the coordinators during the course of the 1966-67 program led to intensive efforts to strengthen remedial courses, increase the use of techniques such as role-playing to dramatize human

relations problems, and provide a stronger foundation for specific job skills which some training agencies failed to teach adequately. During the summer a group of coordinators worked intensively on portions of the curriculum for the College under the guidance of a staff curriculum specialist, who formulated the themes, areas and concepts and wove these portions into a core program. Many of the Coordinator-Trainers are now on the faculty.

Although the WTC has inaugurated the first year of the College for Human Services, the final outcome of this unusual experiment is not certain. Funds are not yet available for a second year, which would lead to the Associate of Arts degree and give graduates further educational choices and job mobility. Potential sources of support in government, foundations and education are slow to grant recognition to a new educational institution having unorthodox ideas and using unconventional methods. The groundwork has been laid, however, for an exciting experiment in public service education which, if it continues, could bring about basic changes in professional education in America.

Personal Change and Growth

A final concrete result of the WTC program, while not its raison d'etre, was personal and intellectual growth in the women who participated. An increase in self-confidence, improved human relations and evidence of a "new lease on life" are some of the changes documented in trainee and staff reports. The group trained was, of course, selected for a certain minimum level of verbal ability and for expressed desire to be of service to the community, but this did not mean that they were destined to advance without help. While some would perhaps have realized their potential on their own, participation in the program was for many the decisive influence. Put in simplest terms, it gave form and direction to their aspirations and convinced them that they had the capacity to succeed. It lifted their sights and improved their prospects immeasurably.

The coordinators noted changes from week to week: "The women have changed personally. They have perked up, especially in appearance. They look more professional, and have really changed physically." In some cases overt changes in behavior and appearance were dramatic:

"Chewing gum and cigarettes, her constant companions, have disappeared. Her bleached hair is giving way to black. From a vague 'yah' in group conferences to a comprehensive presentation, M. has developed remarkably. She spends her evenings making lesson plans and enters the classroom not only on time, but with a purposeful stride. She is at the teacher's side constantly, seeking more knowledge which she incorporates into her work with her pupil. Often she disagrees with the teacher's approach but is not daunted if she is unsuccessful in what she does. Some day she will be an excellent teacher, for even now she does a remarkable job. What she lacks in knowledge, she makes up in courage." 2

In other cases the change was less overt but equally significant for the individual:

"I used to feel very depressed. All the time I stayed at home, very unhappy, thinking there's nothing I can do but stay here. Now there's a great change. By helping somebody I can do something else besides staying home. I feel so much better, feel good, happy. Helping people makes this program special. People you've helped tell you they appreciate it -- they're happy...I'm so much happier. Outside it doesn't show but inside me it shows. My husband notices that I act more calm, take things more easy, try to be different. I can understand certain people better in the neighborhood--like their behavior comes from their past. I see them differently. With my boy, too, I'm calmer. (For example?) I learned tolerance. If my boy wants to play outside

2. Case History

> and I don't want him to. I would yell. After this and all the psychology, I talk in a nice way to him and let him do it for a couple of hours and he comes back then. I see things differently -- my family, people. I find a way to see through people, see something's bothering them and I can help. The orientation helped a lot -- how to get acquainted with people and to get along with them. It's hard to push, but if I want to go anywhere I must push very hard. WTC is a big help for me to push. At first I thought I never could do it, but I started doing and feel so much better." 3

The beneficial effects of the program sometimes took the form of improved family and community relationships. Children were proud of their mothers, more willing to help with the housework, "stopped being truant" and took a new interest in school work. Husbands stopped drinking or gave up drugs or went back to college. "My husband enrolled in college when I did." While a few women encountered community resentment of their new status as paraprofessionals, others found that they were welcomed as helpers and interpreters of the community to the outside world. The whole neighborhood turned out to cheer one

3. Follow-up Interview #201 (Selby) Carol Selby, Research Assistant to Dr. Hope Leichter, Assistant Professor at Columbia University, consultant on research to WTC.

corpswoman when she returned home from a television appearance in which she had described the WTC and her hopes for the future. By and large, then, it can be said that program participation had a beneficial effect on personal lives. (Attachment B contains case histories of trainees whose lives were significantly affected by the training experience.)

II. OPERATIONAL EVALUATION

II. EVALUATION OF OPERATIONS

An objective evaluation of the WTC program must await the passage of time and the availabilty of more research data to provide the necessary perspective. Nevertheless, an attempt will be made here to examine the operating experience of the WTC as it looks to a staff observer at the end of the first year, and to draw certain conclusions concerning the program's impact, as well as the problems it has encountered.

A. Recruitment and Selection of Trainees

The recruitment of women for the WTC program posed relatively few operating problems, and was carried out successfully. Freedom to conduct its own recruitment in disadvantaged areas using a wide variety of channels, and to make its own final selections independent of training agencies, was a tremendous administrative asset and accounted in good part for the ease with which this phase of the program was carried out.[4] There was no shortage of applicants meeting

4. This stands in contrast to some other new careers training projects where both recruitment and final selection were in the hands of cooperating agencies, resulting in delay of operations and loss of candidates.

both poverty criteria and the basic WTC requirement of motivation to serve the community.

Soundings taken in a series of local meetings before the program got under way officially had indicated that there was a large, untapped reservoir of energy and talent among women in poor neighborhoods, and that interest in training for career jobs in the human services was great. Only experience would show, however, whether this expressed interest would be translated into action. It was possible that, despite initial enthusiasm for a novel idea, relatively few women would be able to make the necessary practical arrangements. The number of applicants was at all times more than the WTC could handle, and at the close of the 1966-67 program, a backlog of some 2500 applications was on hand for the 200 places available for 1968. "The talent we sought in the community did, indeed, exist and in abundance. The first group of applicants seemed self-selected, so obvious were their abilities, their aspirations and their determination to be trained and employable on an equal basis with more privileged citizens..."[5]

5. Institute Training Director, letter, Summer 1967.

In selecting trainees, the criteria used by the WTC intentionally omitted the usual educational prerequisites, such as a high school diploma, substituting (in addition to poverty-level income) the ability to read and write, plus evidence of a desire to service others. These minimum criteria represented a conscious effort to de-emphasize academic credentials which, if required for eligibility, would have excluded the very people the Women's Talent Corps wanted to reach. Through oral interviews the WTC staff, including a psychologist and a social worker, sought to weigh the potential of each applicant, "take into consideration the 'whole woman', analyze all her capabilities, rather than grading her on her mastery of white, middle-class verbal ability...test what she can do with what she is given."[6]

This approach worked well in practice. On the basis of a year's observation and experience with the trainees, one coordinator concluded:

> "Some of our best trainees, who did not have high school diplomas, proved far superior to some who did have theirs. Our trainees had many strengths that cannot be measured -- understanding, compassion, patience, insight, rapport with children.

6. Coordinator's Report, January 18, 1968 (Saletan)

> Even in the measure of basic skills in reading, writing and speaking, the high school diploma was not a reliable indicator of the achievement level. We should encourage our trainees to try to meet educational requirements, but they should not be initial requirements." 7

B. The Training Program

The fact that no one was excluded from the program for lack of a high school diploma did not mean that the training program was geared to a low level of ability or was short on academic content. Quite to the contrary, the curriculum stressed academic concepts, as well as improvement in reading and writing skills. A notable aspect of the curriculum, very possibly unique among anti-poverty programs, was the assumption that the trainees were interested in, and capable of mastering factual and theoretical material related to community service and that, under pressure to absorb this kind of material, their reading and writing ability would improve, helping them to "become more competitive in a credentialing society." [8]

7. Coordinator's Report, January 22, 1968 (Smigel)

8. Seattle New Careers Project, Report No. 1 n.d. (October 1967?) p.39.

In contrast to some new careers training programs, the classroom part of the WTC training program was handled by the organization itself, rather than by a community college or other educational institution. This had definite advantages.[9] It permitted the WTC to develop its own high-quality program, using many kinds of material from the social sciences and education and relating this in a flexible manner to community service. The eight week "orientation" program stressed not only improvement of reading and writing skills, which were most definitely needed, but the importance of understanding certain facts and concepts familiar to teachers and social workers, and of developing certain attitudes that would help them handle the human relations problems in the field.

9. A fine New Careers Project sponsored by the U. S. Department of Labor and the Economic Opportunity Board in Seattle described the handicap imposed by too close an association with a single educational facility, as follows: "The Project is powerless to negotiate modification of courses to meet the needs of the trainees, or to negotiate the institution of courses not now in existence to complement a given On-the-Job-Training Program. Further...the Project cannot deal with other, perhaps better equipped, junior colleges..."

On a typical day during the orientation period the trainees would be exposed to concepts from the fields of Economics, Family Sociology, Education, Guidance Counseling and Intergroup Relations. These might include, for example, the importance of work roles in society, the need of human beings for a sense of belonging, a child's need for love, the difference between deviant and delinquent behavior and the mechanism of scapegoating. On hand to present this material, in addition to selected WTC directors and staff members, might be the head of a Sociology department at a university, the research director of a municipal agency dealing with slum problems, a practicing professional from one of the helping professions, the director of a community agency and, possibly, a member of the WTC Board of Directors. Learning was reinforced by small-group discussions and role-playing, as well as by review of what had been learned the day before. Specific techniques needed in different kinds of paraprofessional jobs were also dealt with in preliminary fashion during orientation sessions, with more detailed treatment delegated to the field training agencies. Throughout all sessions the

importance of communicating clearly, writing well, and thinking objectively was stressed.

How can a unique curriculum of this kind be evaluated? Not according to conventional criteria, certainly. The curriculum was ambitious, demanding a great deal from participants; the approach was pragmatic, since there was no pre-existing model on which to rely, and the atmosphere was stimulating due to the pioneering nature of the project. Both staff and trainees felt that they were involved in a social experiment of some significance, an attitude which gave the orientation period a certain heady quality difficult to describe or duplicate. Some of this quality is conveyed by a trainee who wrote: "My mind spins with all I have learned, all I hope to learn, my expectations, my ambitions, my wants, my needs and my dreams."[10]

The amount of material absorbed by each trainee undoubtedly varied tremendously according to the individual.

10. WTC Progress Report No. 4, December 1966. This report contains additional material on the orientation program and its effect on participants.

Written tests were given but were used as learning instruments, which was in line with the WTC policy of judging each trainee on a personal basis over a period of time, and of evaluating her potential in terms of what she could do rather than what she knew. The average ratio of one instructor to six trainees made individual judgments both feasible and quite accurate. The close relationship that developed between trainees and trainers as a result of the low ratio, and how this affected learning, will be described in detail in a later section.

Development of a public service-related curriculum for new careers training is still in its early stages. The WTC has made a promising start during its first year, but it is only a beginning. Effective techniques for translating social science knowledge into on-the-job know-how remain to be worked out. Criticism by the trainees and staff of the WTC led to program modifications during the course of the first year, and the process of adjusting course content and technique to the needs in the field is continuing during 1968. Curriculum development is seen by the WTC as the major challenge of the year ahead.

On balance, the creation of a high-quality orientation program from scratch, without clear-cut precedents to follow, and with severe shortages of time and staff, must be viewed as a substantial achievement. (The schedule of orientation - 8 week session - for 1966-67 can be found in Attachment C). The curriculum for the full 30 weeks has been further developed as a "core" curriculum for the College for Human Services and will be distributed in the future.

Field Training and Experience

At the conclusion of orientation, trainees were assigned to twenty-eight "field placement" agencies throughout New York City for practical training.[11] Here they were expected not only to learn, but to perform useful work. Specifically, they were expected, with the help of their coordinator, to: 1) lighten the workload and increase the effectiveness of the professional to whom they were assigned as an assistant; 2) to acquire the

11. These agencies included 16 schools, 5 hospitals, 5 neighborhood houses, 1 research center and 1 day residence center.

practical know-how and skills needed to perform the function of paraprofessional assistant in their particular agency; and 3) delineate the elements of the job, so that a new position could be established by the agency.[12] The degree of success in accomplishing these three ambitious goals varied tremendously with the trainee and with the leadership in the institution to which she was assigned.

Usefulness to the Agency

Most of the women seem to have made a significant contribution to the work of the training agency. The expectation (perhaps faith would be a better word) that value would be received was an important factor in the decision of schools, hospitals and other agencies to accept trainees, and it is, therefore, gratifying to find that this expectation was generally met, sometimes to a far greater extent than anticipated. "My program has never been so effective as in the last few months with your Corpswomen working with us,"[13] declared one administrator.

12. This function will be discussed in Section C dealing with the role of the coordinator.

13. Coordinator's Report, Summer 1967 (Buchanan)

And a WTC coordinator reported: "From the principal on down, all the administrators are delighted, especially since our women show up so well in their know-how, as compared to the college-trained assistants who don't seem to know how to make the first move."[14]

The areas in which the trainees made the largest contribution were generally those predicted in the original WTC project proposal. In the schools, they improved communication with the community, interpreting the school to the parents, and the parents to the school. They worked effectively in the classroom with children who had learning problems, and in the guidance office with children who needed special counseling. Without usurping the functions of the professional, they made it possible for (and sometimes challenged) her to use her specialized knowledge and skills more effectively. A follow-up interview with a school principal points this up:

> "Mr. G. said that he had requested 20 more women and felt that the Teacher Assistants played a vital role in helping the school. He discussed their liaison function with the community and how they could really

14. Coordinator's Report, date? (Saletan)

communicate to the parents of the community and the children in their classes. He felt that they were very valuable and because of this had put them in classroom situations where they were needed the most.

He also said that there had been no teacher resentment, but that the reverse had been true, and that teachers had requested teaching assistants. Asked why he thought there had been no teacher resentment, he answered that the women had been so good and performed so well that teachers saw how much could be accomplished with their extra help...He stressed the importance of having people from the community work in the schools, and said that, off the record, the teachers themselves had to do a better job with the teaching assistants in the room. He gave us some examples of the women's successes in the school, and how they could give immediate attention to problems of truancy, discipline, etc." 15

The variety of ways in which a trainee was able to relieve the teacher, perform functions which might otherwise have been neglected and help an individual child is described graphically in a follow-up report:

> "The Corpswoman helped with remedial reading and with math, and she set up a health and cleanliness observation. She would inspect the children, do some counselling, send some to the nurse, and give them advice on how to improve. For example, one child had ring worms in his head. The CW helped him with

15. Follow-up Report, Nov. 15, 1967 (Liss)

his work, and noticed that he always put his pencil to his head, and wore a dirty wool cap. The CW asked him if his mother put on ointment, and he said yes. The CW encouraged him to bathe, and told him to get a different kind of hat. By June, he had improved so much. His mother sent aletter to the teacher saying how satisfied she was to see an improvement in her child." 16

Other trainees proved similarly useful in a hospital setting:

"The women's main job was to serve as community people. They interpreted the agency to the community and explained the community to professionals in the agency. For example, many people in the community were afraid of Psychiatry, thinking of it as a 'crazy house'. These women, knowing the community, could explain what really happened and how the hospital could be of help to people with problems. They also had a list of community resources and were able to serve as source people in the community. The agency staff immediately began to see that these women are very capable people and could be extremely useful. New areas opened up as the women's abilities were observed. In the summer program, they were able to participate in the General Hospital Social Work Department program, rather than remaining only in Psychiatry." 17

Learning on the job

The second important purpose of the field experience

16. Follow-up Report #128 (Selby)

17. Follow-up Report #156 (Selby)

was to provide practical training, a continuation of the learning process started in the classroom, with emphasis on job-related skills. The amount of actual training received depended heavily on the characteristics of the individual teacher or social worker to whom the trainee was assigned. While agency directors readily accepted responsibility for training (or gave it lip-service) the lower echelons were sometimes less enthusiastic "having endured innumerable trainees from other programs", as one WTC coordinator put it. Trainees learned most from professional supervisors who were themselves excellent teachers and were sufficiently confident in performing their own job functions to create a learning situation for someone else.

> "Mr. R. (the teacher) explained everything he was teaching to her and showed her how to explain it to the slower children. During class, she sat among some of the slower children and watched to see how they received what he taught. When activities changed so that she could talk to them, she went over the lesson with them until they understood it. I watched her do this several times, and she taught them slowly and patiently. One girl had a hard time catching on the simplest arithmetic and Mrs. W. continued to be calm and patient. Mr. T. was very much

impressed with her. He told me he'd had lots of student teachers, but Mrs. W's attitude toward children and her job was immeasurably superior to that of any of them." 18

And in another report the WTC coordinator declared:

"I am firmly convinced that the best training is done by a 'master teacher' -- a teacher who has been on the job long enough to do it with a masterful, individual style, with confidence, with originality and creativity. Those who learned the most about teaching learned it through the day-by-day observation of an excellent teacher at work..." 19

Fortunately, trainees were also able to learn from unfavorable situations. "One of my teachers was very inexperienced and by working with her I learned to cope with situations I might not have otherwise." [20] Another trainee put it more bluntly: "One thing I have learned: All professionals are not professional, and I have learned how not to teach." [21]

18. Summer Report of Field Training Director, Summer 1967

19. Coordinator's Report, August 1967 (Younger)

20. Follow-up Report #111 (Selby)

21. Ibid

One trainee even learned from a situation which apparently involved both professional jealousy and racial antagonism:

> "Mrs. G. (the teacher) was very much opposed to the role of the teacher assistant. She had several conversations with Mrs. C. in which she said that this idea of creating jobs for Negroes was bad, that Negroes should earn their equality by being better than white people. She refused to call her anything but an 'aide', and she didn't give Mrs. C. any work to do. Mrs. C. handled this situation very well. She never let Mrs. G. make her lose her temper or be rude, but she did not act subservient either. She expressed her anger talking about it afterwards with the other CW and with me.
>
> She also created her own work by looking for opportunities. She listened carefully to the lessons Mrs. G. taught and watched the children closely to see how well they understood. When she saw they didn't, she sat down next to them and went over the lesson. She also created the kind of relationship with the children that made them approach her with problems they couldn't solve. So, she created her own small work group, and did it in such a way that Mrs. G. didn't resent it." 22

In ideal situations supervisors were able to combine instructing the trainee with fulfilling the needs of the agency, fitting the Corpswoman into on-going operations in such a way that she truly "learned by doing".

22. Summer Report of Field Training Director, Summer 1967

A hospital supervisor in the field of occupational therapy described this process as follows:

> "For the first twelve weeks the trainees are trained in practical techniques by observing and working on the ward with a therapist. At first, they observe until they feel comfortable. Then they work under the supervision of a therapist and finally work without supervision. The second twelve weeks training is independent practice with consultation from the staff trainer. During this phase trainees are assigned to their own OT ward programs." 23

In one unusual case, training was completely subordinated to other considerations, because the agency directors believed that the more the trainees learned, the less useful they would be! The agency was conducting a research project which involved analysis of the child-rearing practices of low-income mothers, and it viewed WTC trainees as promising subjects for study. While the women were warmly welcomed and encouraged to contribute information and ideas (which the women found highly gratifying), attempts by the coordinator to continue the training process were rebuffed. "Any effort to supplement the program with written work or outside reading was considered inhibiting and irrelevant. Every effort to enhance the Corpswomen's

23, Memorandum from Paterson to Zitrin, March 22, 1967

professional competence was opposed by the staff. They insisted that such additional training would conflict with the spontaneous climate needed for the project."[24] Although this attitude was eventually overcome, there was for a time a clear divergence of interest between agency aims and those of the WTC.

On balance, then, it appears that the practical training aspect of the program succeeded in providing both training for the women and service for the agency. Its success is all the more remarkable considering the inhospitable atmosphere that existed in some communities as a result of racial tensions. The schools, in particular, were badly affected. Caught between the demands of the community for integration and reform, and the vacillation of the Board of Education, some local schools were barely able to function, much less try out new experiments. Conditions seemed far from propitious for demonstrating anything -- much less that Negro and Puerto Rican women from the community could work with and contribute to an established institution.

24. Coordinator's Report, August 1967 (Bloom)

Some training arrangements worked out only because of the patience, courage and perseverance of the trainees, their coordinators and a few determined school officials. One group, for example, arrived at their training site during an outbreak of Negro anti-semitism directed against Jewish teachers in the school. Somehow they managed to do a creative job amidst fear and confusion, working with hostile teachers and a pre-occupied administration. The coordinator succeeded in maintaining trainee morale and in helping supervising teachers perform their training role. In another instance, teachers complained to the union that community women were coming there to spy on them. Their attitude changed only after a series of meetings in which the precise role of the trainees and the purpose of the WTC program was explained.

Actually, the very social ferment that created day-to-day crises in some agencies also provided the impetus that spurred acceptance of paraprofessionals. In the schools especially the need for radical change was dramatized daily in the press. The more enlightened administrators saw the WTC program as a way of doing something about

both teacher shortages and community relations, of re-establishing a dialogue between black pupils and white teachers, black parents and white administrators. Without the powerful stimulus provided by community pressure and unrest, the lethargy which characterized (and still characterizes) New York City schools and governmental departments might never have been overcome, even to a limited extent, to make room for the WTC experiment.

C. <u>The Coordinators</u>

Much of the credit for the success of the training program in the field must go to the coordinators assigned to each trainee, and to the ingenuity with which they performed their demanding jobs. The coordinator was conceived of as a person who would assist the trainee to learn, both in the field and in the classroom, would provide psychological support to the trainee in the handling of human relations and job-related-problems, and would act as an intermediary between the agency and the trainee. It was clearly impossible to expect the agency itself to take on the full burden of integrating a newcomer into the

organization, training her, and at the same time developing a new kind of job for her.[25] The coordinator, therefore, also played a key part in preparing job descriptions and creating job lines.

Background of the Coordinators

In recruiting coordinators the WTC selected mature professional women who combined a genuine concern with social problems with a realistic approach to their solution. It was important that those hired not underestimate the difficulty of the job they were undertaking. In interviewing, the WTC staff tried to separate the women who had just discovered the existence of poverty from those who had long been aware of the problem. "Hard-headed do-gooders" may be a contradiction in terms, but it comes closest to describing a WTC coordinator. Other personal

25. Henry Saltzman, in a supplementary chapter to New Careers for the Poor by Arthur Pearl and Frank Riessman writes: "The responsibility for training and supervising these new employees cannot be lightly deposited on the doorsteps of already burdened and harassed school principals and classroom teachers. The orientation of professional staff to the work of the new workers, the advanced planning and definition of work roles, the structure for mediating between professionals and nonprofessionals, the working out of procedures for upgrading the new workers, etc. are nowhere clearly defined."

qualities required were ingenuity, self-confidence and ability to work independently, handling difficult situations with little day-to-day guidance from headquarters.

Professionally, the backgrounds of the coordinators were primarily in education and social work. Over half were teachers, and a third had professional experience in social work and welfare fields. Only three actually held social work degrees due to heavy competition from better paying organizations offering full-time employment. All of the coordinators had been involved in socially-useful activities ranging from the League of Women Voters, the Boy Scouts and the Red Cross, to organizing tenants, tutoring high school students and campaigning for civil rights. Their ages ranged from 27 to 70; the majority were mature women and mothers, and many of them were retired. Perhaps a third were Jewish, two were Negro and one was Puerto Rican.[26]

26. A systematic effort was made by the WTC to recruit Negro and Puerto Rican coordinators, but even with the help of Board members and professional organizations, such as the Association of Black Social Workers, this effort was not notably successful. The low salary and part-time nature of the coordinator's job discouraged potential applicants.

Relationship Between Coordinator and Trainee

It is evident that the success of the training program required a close working relationship between the coordinator and her group of trainees. This relationship was not one that could necessarily be taken for granted. The attempt to bring together, in a time of unparalleled social upheaval, a group of primarily white, middle-class college women and a group of Negro and Puerto Rican women from ghetto areas could easily have misfired. Reports submitted by both coordinators and trainees, however, indicate that despite occasional moments of stress, an effective working relationship was achieved. Both groups had certain doubts at the outset, but these were generally dispelled in face to face encounters as they discovered similarities in outlook. "These women want for their children what middle class people want for theirs," noted a Coordinator..."I think no one person is all middle class or all working class. Each person is a little of both."[27]

Several factors combined to weld coordinators and trainees into an effective team. Both were working toward a common goal which they believed to be vitally important.

27. Follow-up Report #157 (Selby)

Both felt themselves involved in a new and challenging experiment of real social significance, and were conscious of their pioneering role. And both came to realize that they had a lot to learn from each other. The trainees were not alone in acquiring new skills and attitudes. Coordinators tended to feel that they gained as much from the program as did the trainees. There was little of the "I give and you take" atmosphere which so often prevails in anti-poverty programs. The atmosphere of mutual learning was further enhanced by having coordinators attend the same classes as trainees, take notes, ask questions, and visibly "learn." Undertaken of necessity to begin with, the joint training of both groups had concrete psychological advantages in terms of both trainee morale and of "integrating" paraprofessional education at the very outset. The Executive Director of the WTC described these advantages as follows:

> "We are training a faculty of professionals by letting them sit in the classroom with the trainee and go through the same educational experience, prior to movement into the field. It has made it possible to have integrated education immediately. It has tended to raise the motivational level and expectations of each and every trainee. What

effect does it have on the trainee to see a professional taking notes on the same material which she is expected to absorb? This is bound to influence the trainee's view of herself. We make an assumption that the professional knows something about a particular body of knowledge, but that her competence in working with a low-income trainee is not perfected. The need to look inside herself, to examine her motivations, has caused anxiety on the part of some coordinators, exhilaration on the part of others, and probably also an esprit de corps which could not be achieved were it white in the pulpit and black in the audience...I think, then, that one hypothesis which is beginning to prove itself is that educators of the future, working with urban groups, will have to go through a process of re-education themselves, and that process cannot take place without a total integrated effort with the student." 28

While coordinators and trainees sometimes developed a warm personal relationship, this generally did not result in a loss of perspective with regard to the basic purposes of the program. Personal friendships were valued, but were recognized as irrelevant to the growth of a sound professional relationship based on mutal respect and common goals. A perceptive coordinator wrote:

> "Day by day, week by week, the relationship of coordinator to corpswoman was intensified. Their honesty with me, their consistently creative performance, even their weaknesses, earned them my determination to carry them individually and as a group just as far as I

28. Memorandum, May 22, 1967, "Some Thoughts on the College for Human Services."

could in this learning and working experience. At times, they seemed too dependent, as after a small failure. Other times they regarded me as a co-worker. This led to one corpswoman saying in her term paper that 'our relationship was very deep.'" 29

Generalizing from her experience, the same coordinator analyzed the relationship further:

"The WTC served as a vehicle for respect to develop between a colored person and a white person...As one Corpswoman put it: 'You treated me as a person, and that's the way I thought of you.' Another said, when I asked her directly about the possibility or impossibility of the white, middle-class coordinator understanding the Negro Corpswoman: 'You seemed to understand me as a woman, and I was grateful.'" 30

Sometimes the personal problems of the trainee intruded into the working relationship. Where this affected job performance, the coordinator had to be concerned in some degree. "The first question I had to decide was whether to become involved in the trainee's personal problems and to what extent." Most coordinators found that there were severe limits to the help they could give. Trainees often had personal problems of long standing which could be approached only marginally. A trainee with a chronically sick child, for example, could at best be helped to understand what her

29. Coordinator's Report, Summer 1967 (Buchanan)

30. Ibid

real alternatives were and to face them realistically. Coordinators learned that they must try to provide moral support without creating dependency. This was not easy to do, but most seem to have succeeded.

The combination of personal and professional counseling at its best comes through in this description of the coordinator's functions as seen by a trainee:

> "My coordinator comes in and observes us while we teach, and we discuss it later. We go over the task reports about what we are doing and discuss personal problems. If personal problems distract us, we cannot be ourselves. Also our coordinator and job supervisor talked and both seemed pleased with me. Without the coordinators, I don't think things would have gone as smoothly.." 31

Not all trainees were uncritical of their coordinators. One complained of overzealousness. "She's too willing. She's like a mother-in-law...She seems to be over-acting the part." Another noted that not all trainees felt free, as she did, to bring their problems to their coordinator, or had confidence in her judgment. "Other coordinators come to <u>my</u> coordinator to find out what's going on!" she noted with pride. The same trainee detected a stereotyped attitude toward the problems of slum children in the way

31. Follow-up Report #111 (Selby)

a coordinator presented an oral report on her work:

> "She started out: 'These children are from Harlem, from broken homes, on welfare, so you can see the problems they face.' You don't have to hear anything else she has to say. She stereotyped it. (My own coordinator) just said: 'We're going to P.S. 71, a Junior High School. Let's go in and see what's there." 32

The Coordinator as Catalyst and Intermediary

How exactly did the coordinator fulfil her demanding role as catalyst in the learning process and intermediary with the training agency? Here are some typical examples of the ways in which coordinators helped trainees to learn:

- A trainee in a school was assigned to a teacher who was experimenting with a new and simplified alphabet, the Initial Teaching Alphabet, in a first grade class. "When you first come into the classroom you think everything is misspelled. This confused L. (the trainee) at first. She took some materials home with her to study, but she still seemed a little confused...Then I met her again and things seemed to straighten out. Now I think she is able to read it, and it will work out just fine."

- A trainee was disturbed by the unusual amount of physical activity in the classroom of the teacher to whom she was assigned, a teacher who handled children with emotional problems. "I tried to explain to her that (such activity) is usual with

32. Follow-up Report #240 (Selby)

children of this type, and reassure her that Miss N. knew what she was doing, and that this was the approach she used. Miss N. says her philosophy is to have fun with these children because so many have problems...I think it will work out. Yesterday Miss N. was very happy to report that she could turn part of the class directly over to (the trainee).

-In a case involving guidance assistants the coordinator went over the case histories and other documents in the files of the guidance office with the trainees, helping them to understand the purpose of each form, and the kinds of information it contained. This enabled the trainees to know students they were working with better and to learn where to find information needed for reports which the guidance counselor had asked them to prepare.

In many cases coordinators tactfully prodded supervisory personnel to give trainees more responsible and meaningful work in accordance with their abilities:

-A group of trainees became restless and demoralized as a result of the extended briefings they received on how to teach remedial reading, when they were, in fact, ready to start teaching themselves. "Mrs. F. (the supervising teacher) has no concept of the kind of people they are or the level at which they can operate. So I went up to the remedial reading room. I decided to jump in with both feet, so I said: 'I know you've been training them and you've been spending a lot of time on it...Could we each have a child now and see what we can do and you watch us to see whether we've picked up what you're doing?' And the teacher got the message and she said: 'Well, you know, some training was necessary.

> You can't just turn them over to the child immediately.' And I said: "I realize that. I think what you've done is marvelous.'... And in fifteen or twenty minutes it did work..."

Coordinators had to mediate not only with the trainee's immediate supervisor, but be willing to take the matter to higher authority if necessary:

> "At the beginning of the on-the-job training period, one corpswoman was placed in an Arts and Crafts program for young children in a neighborhood center. The supervisor promised help in new craft skills needed in the program, but none was ever given. The afternoon program was planned and conducted by the corpswoman alone, often with my help. My conversations with the supervisor brought no positive results. Finally, I requested an appointment with the agency director for myself and the corpswoman. This led to my meeting with the supervisor and the director. The supervisor praised the corpswoman highly for her 'almost professional' work. We all agreed that the corpswoman was not in a challenging situation, and eventually had her placement changed to another department of the agency...Without the coordinator taking the lead in this change, the corpswoman might well have been left to the mercy of this supervisor." 33

There were, of course, cases where immediate supervisors assessed the abilities of a trainee accurately from the beginning and no special prodding by the coordinator was needed: 33.

Coordinator's Report, Summer 1967 (Buchanan)

"The teacher with whom J. is working is not at all threatened by outside help. She uses J. in ways suited to her abilities and recognizes that she is less able to cope with abstract ideas." Another coordinator was concerned that teachers "might simply assign a variety of mechanical tasks (but)most of them quickly saw that these things could be done better by themselves, and that it would be in working with individual children or small groups of children that assistants would prove most helpful. This was the area in which the Corpswomen felt that they could contribute the most, and where teachers most appreciated them." 34

Or again:

"A social work assistant in a hospital established such rapport with the medical student to whom she was assigned that her coordinator was able to report: 'I don't know what Mrs. H. is doing, she's doing so much. All I know is that she's working with a most dynamic student who's really go go. He is a quick worker, an active worker, and Mrs. H. is keeping right up with him. She comes out and she says: 'This is wonderful. This is just the level I like to work on.'" 35

Delineation of Jobs

The delineation of job functions, permitting establishment of new job lines could not have been accomplished without the coordinator. If left to either the agency or the

34. Coordinator's Report, August 25, 1967 (Younger)

35. Tape recording, First Coordinator's Meeting, January 1967

trainee alone, this important function would in most cases have fallen by the wayside. Ideally coordinators should spend time at the training agency working out job functions before the arrival of the trainee. In practice, however, limited staff permitted advance planning in relatively few cases, which meant that the delineation of job functions began at the same time as performance of the job. Nevertheless, the system seems to have worked. The coordinators were able to prepare detailed job descriptions showing work at many different levels of responsibility performed by trainees. These were invaluable in convincing both the union and the Board of Education that the training positions should become permanent positions, and new job lines should be established.

Not only was the coordinator needed to clarify and commit to paper the jobs the trainees were performing, but she had to make sure the job was a "meaningful" one; i.e. used the trainee's full potential and established a foundation for future advancement. The temptation for the agency to assign trainees to routine clerical functions was great, and coordinators found themselves fighting against

this continually. An influential school department head tried to press guidance assistants into service addressing envelopes for an extended period of time. He argued that this was an emergency, and was 'for the good of the school.' Only the tactful but firm refusal of the coordinator in a direct confrontation, kept the trainees from being sidetracked into routine work.

Another coordinator reported that her school persisted in viewing WTC trainees as "aides", and resisted the idea of training them to any significant degree. This school had a great many aides, which made it necessary to distinguish constantly between the paraprofessional work done by corpswoman and the more routine functions, requiring no special training, performed by school aides. She found that a constant educational process was necessary within the school itself in order to maintain the distinction and protect the quality of the job the trainee was doing. All of this has important implications, of course, for the problem of ensuring the career potential of "new careers" jobs.

D. Institutional Change

New Careers theory assumes that two kinds of institutional change will take place as a result of introducing paraprofessionals into schools and community agencies: change in the job functions performed by professionals (teachers, social workers, etc.) and change in the quality of the service rendered to the community by the new team of professionals and paraprofessionals working together.

It is too soon to say whether large-scale institutional change will result from new careers programs. Some evidence of change, however, can be found in the experience of the WTC. As shown earlier, many teachers re-cast their own functions, so that they could assign meaningful tasks to trainees, showing a willingness to make room for a new kind of helper. "The supervisor immediately recognized the ability of the trainee, gave her books to study, assignments to carry out and meaningful tasks to perform." was the kind of teacher reaction that offered a real possibility of job changes. Improvements in the quality of service also occurred. A trainee and her

coordinator working in a guidance office, for example, established "incentive interviews" with students who were doing <u>well</u> in school, encouraging them to continue their good work. No one had thought of, or perhaps had time for this kind of positive counseling previously.

The likelihood of significant institutional change will depend in part on how the "new careerists" themselves view their role in the agency, and how actively they seek to bring about changes from within. Even as trainees, a critical problem for the corpswomen, not always fully articulated, was to work out their own relationship to "the establishment," a relationship that would satisfy both their desire to belong and their sense of responsibility to the community. Some felt that they should not rock the boat, but rather strive to work in closest harmony with others in the system. Working in a school, explained one Puerto Rican trainee, "doesn't mean that we are to take upon ourselves and change things around. We have to be willing to help in what matters we can, regardless of color. Our goal should be unity."[36]

36. Follow-up survey, February 1968 (de Jesus)

A coordinator noted in the early months of the program that several of her trainees had already taken on certain of the less desirable attitudes of the teachers in the school, apparently in order to feel themselves truly professional. She wrote:

> "I have noticed that the trainees very quickly adopt the ways of the staff of the school. They smile infrequently and tend to be quite brusk with the students. I have spoken of this, but see very little result. It seems to me that the trainees should be made constantly aware of one of the original functions, which was to bridge the gap between the school and the community. I think they have a very difficult task since they want to be a part of the school and, therefore, use as a mode those they see around them." 37

At the other end of the scale were trainees who, while performing well and enjoying their work, felt uneasy about their relationship to the agency. Had they "sold out" to the establishment? They expressed doubts about what they were doing, and questioned whether helping a few children would actively further social change in their community or in the school system. At times they expressed feelings of helplessness and discouragement as a result of being "such

37. Coordinator's Report (Prem)

a powerless Negro group in the enormity of the school bureaucracy," as one coordinator put it. She added:

> "It is imperative that they keep their roots in the community from which they come, and in the school community, too, if it is a different one. If they identify fully with the schools, they will soon lose the trust of the community..." 38

The WTC, in its Handbook for New Corpswomen, deals with the problem of conflicting loyalties as follows:

> "To find yourself part of "the system". The same system which you as a community resident may have criticized, can be deeply disturbing. This can be true whether you find yourself in a school, hospital or a settlement house. On the other hand, you may begin to see the professional's problems in a new light. This, too, may be confusing.
>
> Keep in mind, however, that one reason for creating these new career lines for paraprofessionals is to help change these institutions so that they can reach more people, more effectively. By being there you can help make the school, the guidance office or the clinic more sensitive and responsive to your community.
>
> Your new role is challenging, demanding and may bring you new dilemmas (which side are you on?); there is no single or simple answer. All we hope is that your decisions will be sound and that the new experiences will be part of new directions for you."

38. Coordinator's final report, August 1967 (Younger)

One index of whether WTC graduates identify with the establishment, will be the number of teacher assistants joining the union. The United Federation of Teachers is courting teacher and guidance assistants assiduously, a tribute to their performance on the job, as well as to the far-sightedness of the union. Ideally, it should be possible for paraprofessionals to work within a union to bring about social change. At present, however, this may be difficult, given their small numbers and lack of influence within the much larger body of union members. An association of paraprofessionals has recently been formed in New York City by those working in the human services, the City-Wide Paraprofessional Association. It has developed from the efforts of various groups like the Talent Corps Association and Two Bridges, graduates of the Mobilization for Youth, Gouverneur Hospital Program and others joining together. As it grows, it will undoubtedly help new careerists develop both self confidence and leverage of their own, which will, in turn, increase their capacity to bring about institutional change.

Possibly the most valuable function the Women's Talent Corps has performed and can continue to perform at this point in time is to take on the task of tilting with the bureaucratic windmill wherever it affects human services, whether found in big government, big unions or big business. The task of breaking through the protective layers of administration which effectively prevent change is central to its purposes. The role of the small unique organization in bringing about innovation and change is described in inimitable fashion by Marshall McLuhan, and provides an appropriate note on which to close:

> "Any innovation threatens the equilibrium of existing organization. In big industry new ideas are invited to rear their heads so that they can be clobbered at once. The idea department of a big firm is a sort of lab for isolating dangerous viruses. When one is found, it is assigned to a group for neutralizing and immunizing treatment. It is comical, therefore, when anybody applies to a big corporation with a new idea that would result in a great 'increase of production and sales.' Such an increase would be a disaster for the existing management. They would have to make way for new management. Therefore, no new idea ever starts from a big operation. It must assail the organization from outside, through some small but competing organization." 41

41. Understanding Media; the Extensions of Man, McGraw Hill, 1964

ATTACHMENTS

A. LIST OF FINAL JOB PLACEMENTS FOR 113 GRADUATES

B. CASE HISTORIES OF SELECTED WTC GRADUATES

C. SCHEDULE OF ORIENTATION-LECTURES, 1966-67

VT 007 234
Statutes Concerning Joint Vocational School Districts.

Ohio State Dept. of Education, Columbus. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Feb68 14p.

*ANNOTATED BIBLIOGRAPHIES; *VOCATIONAL EDUCATION; *EDUCATIONAL LEGISLATION
*OHIO

So that local schools and their staff may better interpret legislation concerning establishment, change, and improvement of vocational education programs, abstracts are included of recent state legislation concerning such statutes as; plan for a joint vocational school, creation of a joint vocational district, bond issue, tax levy, school foundation allocations, facility sharing, and student loans. If additional information is needed about a specific piece of legislation, the administrator may consult the legislative bill designated in each abstract. (CH)

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STATUTES CONCERNING JOINT VOCATIONAL SCHOOL DISTRICTS

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State of Ohio
February, 1968

Division of Vocational Education State Department of Education

Columbus 15, Ohio

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STATUTES CONCERNING JOINT VOCATIONAL SCHOOL DISTRICTS

February, 1968

Ohio State Board of Education

Martin W. Essex
State Superintendent of Public Instruction
State Department of Education

Byrl R. Shoemaker
Division of Vocational Education

PREFACE

In recent years the State Legislature has shown an increased interest in vocational education. This has resulted in considerable modification of and addition to existing legislation concerning vocational education.

The purpose of this publication is to assist the local schools and their staff in better interpreting the legislation concerning establishment, change, and improvement of vocational education programs.

The publication contains abstracts of state legislation concerning vocational education. If additional information is needed concerning a specific piece of legislation, the administrator may consult the legislative bill. These have been designated by the section number listed by the abstract.

The Division of Vocational Education will be happy to assist schools and their staff in interpreting statutes pertaining to vocational education.

Byrl R. Shoemaker, Director
Division of Vocational Education
State Department of Education

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STATUTES CONCERNING JOINT VOCATIONAL SCHOOL DISTRICTS

JV 3311.16 Plan for joint vocational school districts:

Any local, exempted village, city, or county board of education, or any combination of such districts, referred to in sections 3311.16, 3311.17, and 3311.18 of the Revised Code as the initiating unit, may make or contract for the making of a study pertaining to the need to establish within a county, or within an area comprised of two or more adjoining counties, a joint vocational school district, and for the preparation of a plan for the establishment and operation of a joint vocational school district covering the territory of two or more school districts within such county or counties. Any local, exempted village, or city school district in the county or counties may participate with the initiating unit in the cost of such study and plan. Such plan shall be submitted to the state board of education by the initiating unit. (130 v H 597. Effective 10/7/63. 129 v 1544)

A joint vocational school district covers the territory of two or more school districts within a county, and there is no requirement that said school districts be contiguous. 1962 OAG 3333.

JV 3311.17 Submission of plan to participating districts:

On approval of the plan by the state board of education, the initiating unit shall file a copy of such plan with the board of education of each district whose territory is proposed to be included in the proposed joint vocational school district. Within thirty days after receiving such copy, such board of education shall determine whether its district shall become a part of the proposed joint vocational school district. If one or more boards of education decide not to become a part of such proposed district, a revised plan shall be prepared by the initiating unit, and if such revised plan is approved by the state board of education such initiating unit shall file the revised plan with the board of education of each district whose territory is proposed to be included in the proposed joint vocational school district. Within thirty days thereafter, each such district shall determine whether its district shall become a part of the proposed joint vocational school district. (130 v H 597. Effective 10/7/63. 129 v 1544)

JV 3311.18 Creation of joint vocational school district:

Subject to the consent of the board of education of each school district whose territory is proposed to be included within a joint vocational school district, the initiating unit may create a joint vocational school district within the county or within an area comprised of two or more adjoining counties, composed of the territory of all the school districts whose boards of education have approved the formation of the joint vocational school district. The effective date for the establishment of such district shall be designated by the initiating unit. A school district shall not lose its separate identity or legal existence by reason of becoming a part of a joint vocational school district. (130 v H 597. Effective 10/7/63. 129 v 1544)

JV 3311.19 Joint vocational school district board, clerk, executive officer:

The management and control of a joint vocational school district shall be vested in the joint vocational school district board of education.

Where a joint vocational school district is composed only of two or more local school districts located in one county, or when all the participating districts are in one county and the boards of such participating districts so choose, the county board of education of the county in which the joint vocational school district is located shall serve as the joint vocational school district board of education. Where a joint vocational school district is composed of local school districts of more than one county, or of any combination of county, local city, or exempted village school districts, unless administration by the county board of education has been chosen by all the participating districts in one county pursuant to this section, then the board of education of the joint vocational school district shall be composed of one or more persons who are members of the boards of education from each of the city, exempted village, or county school districts affected to be appointed by the boards of education of such school districts. In such joint vocational school districts the number and terms of members of the joint vocational school district board of education and the allocation of a given number of members to each of the city, exempted village, and county districts shall be determined in the plan for such district, provided that each such joint vocational school district board of education shall be composed of an odd number of members.

The vocational schools in such joint vocational school district shall be available to all youth of school age within the joint vocational school district subject to the rules and regulations adopted by the joint vocational school district board of education in regard to the standards requisite to admission. A joint vocational school district board of education shall have the same powers, duties, and authority for the management and operation of such joint vocational school district as is granted by law to a board of education of a city school district, and shall be subject to all the provisions of law that apply to a city school district.

Where a county board of education serves as the joint vocational school district board of education the county superintendent of schools shall be the executive officer for the joint vocational school district and the board may provide for additional compensation to be paid to him by the joint vocational school district but he shall have no continuing tenure other than that of county superintendent. The superintendent of schools of a joint vocational school district shall exercise the duties and authority vested by law in a superintendent of schools pertaining to the operation of a school district and the employment and supervision of its personnel. The joint vocational school district board of education shall appoint a clerk of the joint vocational school district who shall be the fiscal officer for such district and who shall have all the powers, duties, and authority vested by law in a clerk of a board of education.

Where a county board of education serves as the joint vocational school district board of education such board may appoint the county superintendent

of schools as the clerk of the joint vocational school district. (130 v H 587, Effective 10/7/63. 129 v 1544)

JV 3311.20 Bond issue, notes:

A joint vocational school district board of education by a vote of at least two-thirds of its full membership may, at any time, submit to the electors of the joint vocational school district the question of issuing bonds of such district for the purpose of paying the cost of purchasing a site or enlargement thereof, and for the erection and equipment of buildings, or the purpose of enlarging, improving, or rebuilding thereof, and also the necessity of a levy of a tax outside the limitation imposed by Section 2 of Article XII, Ohio Constitution, to pay the interest on and retire such bonds. The proceedings for such election and for the issuance and sale of such bonds shall be the same as required of a board of education by sections 133.01 to 133.65, inclusive of the Revised Code, provided that such bond issue may be submitted to the electors and such bonds may be issued for any one or more improvements which the district is authorized to acquire or construct notwithstanding the fact that such improvements may not be for a single purpose under section 133.10 of the Revised Code. The voting requirements for approval of the question of issuing bonds under this section shall be the same as required by section 133.18 of the Revised Code. On approval of such question, the joint vocational school district board of education may proceed with the issuance of such bonds and the levy of a tax outside a ten-mill limitation, sufficient in amount to pay the interest on and retire such bonds at maturity. Notes may be issued in anticipation of such bonds as provided in section 133.32 of the Revised Code.

The auditor of the County containing the most populous portion of the joint vocational district shall certify the average annual levy necessary to pay the interest on and retire such bonds as provided in section 133.09 of the Revised Code. If the joint vocational school district is located in more than one county, such auditor shall obtain the assistance of the auditor of each county in which territory of such district is located in order to certify a uniform annual levy within such district. The board of elections of the county containing the most populous portion of the joint vocational school district shall receive resolutions for filing and send them to the boards of elections of all other counties in which territory of such district is located and shall furnish all ballots for the election, as provided in section 3505.071 of the Revised Code, and shall prepare the election notice, and the board of elections of each county in which territory of such district is located shall make the other necessary arrangements for the submission of the question to the electors of the district. The joint vocational school district board of education shall be the taxing authority of the district as this term is used in sections 133.01 to 133.65, inclusive of the Revised Code. The annual levy necessary to pay the principal and interest on such bonds shall be made by said board and shall be extended by the auditor of each county in which territory of the joint vocational school district is located on the tax lists of the school districts in his county participating in the joint vocational school district for each year for which the levy is made and shall be placed for collection on the tax duplicates of such districts in his county to be collected at the same time and in the same manner as other taxes

on such duplicates. Such taxes authorized by this section when collected shall be paid to the clerk of the joint vocational school district and deposited by him to the credit of the bond retirement fund. (130 v H 597. Effective 10/7/63. 130 v H 1; 129 v 1544)

JV 3311.21 Tax levy, notes:

The board of education of the joint vocational school district by a vote of two-thirds of its full membership may at any time adopt a resolution declaring the necessity to levy a tax in excess of the ten-mill limitation for a period not to exceed ten years to provide funds for any one or more of the following purposes, which may be stated in the following manner in such resolution, the ballot, and the notice of election: purchasing a site or enlargement thereof and for the erection and equipment of buildings of for the purpose of enlarging, improving, or rebuilding thereof or for a continuing period for the purpose of providing for the current expenses of the joint vocational school district. Such resolution shall specify the amount of the proposed additional rate. On the adoption of such resolution the joint vocational school district board of education shall certify such resolution to the board of elections of the county containing the most populous portion of the joint vocational school district, which board shall receive resolutions for filing and send them to the boards of elections of all other counties in which territory of such joint vocational school district is located and shall furnish all ballots for the election, as provided in section 3505.071 of the Revised Code and shall prepare the election notice, and the board of elections of each county in which the territory of such district is located shall make the other necessary arrangements for the submission of the question to the electors of the joint vocational school district at the next primary or general election occurring not less than thirty days after such resolution was received from the joint vocational school district board of education, or at a special election to be held at a time designated by such joint vocational school district board of education, which date shall not be earlier than twenty-five days after the adoption and certification of such resolution nor later than one hundred twenty days thereafter.

The board of elections of the county or counties in which territory of the joint vocational school district is located shall cause to be published in a newspaper of general circulation in such district an advertisement of the proposed tax levy question together with a statement of the amount of the proposed additional levy once each week for three consecutive weeks, prior to the election at which the question is to appear on the ballot.

If a majority of the electors voting on the question of levying such tax vote in favor of such levy, the joint vocational school district board of education shall annually make the levy within such district at the additional rate, or at any lesser rate, and the county auditor of each affected county shall annually place such levy on the tax duplicate of the school districts in his county participating in the joint vocational school district. The taxes realized from said levy shall be collected at the same time and in the same manner as other taxes on such duplicate and said taxes, when collected, shall be paid to the clerk of the joint vocational school district and deposited by him to a special fund which shall be established by the joint vocational school district board of education for all revenue derived from

any tax levied pursuant to this section and for the proceeds of anticipation notes which shall be deposited in such fund. After the approval of such levy the joint vocational school district board of education may anticipate a fraction of the proceeds of such levy and from time to time, during the life of such levy, but in any year prior to the time when the tax collection from such levy so anticipated can be made for that year, issue anticipation notes in an amount not exceeding fifty per cent of the estimated proceeds of such levy to be collected in each year over a period of five years after the date of the issuance of such notes, less an amount equal to the proceeds of such levy obligated for each year by the issuance of anticipation notes, provided, that the total amount maturing in any one year shall not exceed fifty per cent of the anticipated proceeds of such levy for that year. Each issue of notes shall be sold as provided in sections 133.01 to 133.65, inclusive, of the Revised Code and shall, except for such limitation that the total amount of such notes maturing in any one year shall not exceed fifty per cent of the anticipated proceeds of such levy for that year, mature serially in substantially equal installments, during each remaining year of the levy, not to exceed five, after their issuance. If such notes are issued, the amount necessary to pay the interest and principal thereon shall be deemed appropriated for such purposes from the proceeds of such levy, and appropriations from such levy by the joint vocational school district board of education shall be limited each year to the balance available in excess of such amount. Any levy to provide for current operating revenues passed under the authority of section 3311.21 of the Revised Code may be reduced pursuant to the provisions of section 5705.261 (5705.26.1), 5705.31, 5705.331 (5705.33.1), or 5713.11, of the Revised Code, and any other levy passed under the authority of such section may be reduced pursuant to the provisions of section 5705.261 (5705.26.1) of the Revised Code. (Effective 10/7/67)

JV 3311.211 Tuition, acceptance of funds:

The board of education of the joint vocational school district shall be authorized to charge and collect tuition for the attendance of pupils who are school residents of districts not a part of the joint vocational school district pursuant to arrangements made between the board of education of such district and the joint vocational school district board of education. The board of education of the joint vocational school district may accept gifts, grants, federal funds, tuition, and other allocations of funds for the purposes of erecting, repairing, and equipping buildings and for the cost of operation of the vocational schools of such district (129 v 1544. Effective 10/26/61)

JV 3311.212 Use of buildings:

The board of education of a school district which is a part of a joint vocational school district and the board of education of such joint vocational school district may enter into agreements to permit the school buildings of the district first noted to be used for the purposes of carrying on a vocational school program. Such use may be either free of cost or pursuant to such rental arrangements as may be stipulated in such agreements. (129 v 1544. Effective 10/26/61)

JV 3311.213 Enlargement of existing joint vocational school district:

With the approval of the board of education of a joint vocational school district which is in existence, any other school district in the county or counties comprising the joint vocational school district may become a part of the joint vocational school district. On the adoption of a resolution of approval by the board of education of the joint vocational school district, it shall advertise a copy of such resolution in a newspaper of general circulation in the school district proposing to become a part of such joint vocational school district once each week for at least two weeks immediately following the date of the adoption of such resolution. Such resolution shall become legally effective on the sixtieth day after its adoption unless prior to the expiration of such sixty-day period qualified electors residing in the school district proposed to become a part of the joint vocational school district equal in number to a majority of the qualified electors voting at the last general election file with such board of education a petition of remonstrance against such transfer. If such resolution becomes legally effective, the board of education of the joint vocational school district shall notify the county in which the school district becoming a part of the joint vocational school district is located, who shall thereupon have any outstanding levy for building purposes, bond retirement or current expenses in force in the joint vocational school district spread over the territory of the school district becoming a part of the joint vocational school district. On the addition of a county, city, or exempted village school district to the joint vocational school district, pursuant to this section, the board of education of such joint vocational school district shall submit to the state board of education a proposal to enlarge the membership of such board by the addition of one or more persons at least one of whom shall be a member of the board of education of such additional school district, and the term of each such additional member. On the addition of a local school district to the joint vocational school district, pursuant to this section, the board of education of such joint vocational school district may submit to the state board of education a proposal to enlarge the membership of such board by the addition of one or more persons who are members of the county board of education of such additional local school district. On approval by the state board of education additional members shall be added to such joint vocational school district board of education. (130 v H 597. Effective 10/7/63. 129 v 1544)

JV 3311.214 School Foundation allocations; calculation of teacher units:

Pupils in a joint vocational school district continue to be enrolled in the school district of their school residence and should be considered as such in the calculation of teacher units under section 3317.05 of the Revised Code.

Each vocational education unit or fraction thereof mairtained by a joint vocational school district and approved annually by the state board of education shall be counted as one approved teacher unit or fraction thereof and the units so approved shall be allotted to the joint vocational school district board of education that has the management and control of the vocational school in such joint vocational school district, to be computed in the same manner as prescribed by section 3317.05 of the Revised Code. (130 v H 597. Effective 10/7/63. 129 v 1544)

There is no provision in 3317.02 and 3317.051 or elsewhere by which a joint vocational school district created pursuant to 3311.16 et. seq. may be allotted state funds. 1962 OAG 3333.

JV 3311.215 Use and construction of facilities:

Facilities of the joint vocational school districts may be used for post-high school training, technical training, and re-training programs of vocational education. A joint vocational school district operating a vocational school may construct, maintain, and operate facilities other than those used for vocational training to be used solely for post-high school training, technical training, re-training programs of vocational education, dormitories, and other facilities for the use of any student. (Effective 10/7/67)

JV 3311.216 Funds:

All joint vocational school district funds shall be kept in depositories selected pursuant to the provisions of sections 135.01 to 135.23, inclusive, of the Revised Code. The clerk of the joint vocational school district shall be the custodian of such funds. Such funds shall be disbursed only pursuant to warrant signed by such clerk and a person so authorized by the board of education of the joint vocational school district, and pursuant to order of such board approving such expenditure. No contract of such board of education involving the expenditure of money shall become effective until the fiscal officer of the joint vocational school district certifies there are funds in the treasury and otherwise unappropriated sufficient to provide thereof. (129 v 1544. Effective 10/26/61)

JV 3311.217 Dissolution of district:

Upon approval by a majority of the full membership of the board of education of a joint vocational school district, or upon the receipt of resolutions formally adopted by a majority of the boards of education of the school districts participating in the joint vocational school district, the board of education of the joint vocational school district shall adopt and send to the state board of education a resolution requesting the dissolution of the joint vocational school district. Such resolution shall state the reasons for the proposed dissolution of the joint vocational school district, shall set forth a plan for the equitable adjustment, division, and disposition of the assets, property, debts, and obligations of the joint vocational school district, and shall provide that the tax duplicate of each participating school district shall be bound for and assume its share of the outstanding indebtedness of the joint vocational school district. Upon approval of the resolution by the state board of education, the joint vocational school district shall be dissolved in accordance with the provisions of the resolution. (130 v H 597. Effective 10/7/63. 129 v 1544)

A joint vocational school district is an entity in itself separate and apart from any other school district, and a bond issue submitted to the electors of a joint vocational school district under 3311.20 does not create an indebtedness in any other school district. 1962 OAG 3333.

JV 3311.218 Sharing of facilities and funds:

The board of education of a joint vocational school district may enter into a written agreement with the board of trustees of any technical institute district, the boundaries of which are coterminous with such joint vocational school district, which agreement may provide for the sharing of use of any physical facility or equipment owned or used by either district. Such agreement may further provide that the joint vocational school district may contribute a portion of its funds for current operating expenses, regardless of whether such funds are derived from a tax levy or otherwise, to the technical institute district to be expended by the technical institute district for any lawful purpose. The agreement shall require the approval by resolution of both boards and shall be executed by the president and clerk of both boards. A copy of such agreement shall be filed with the board of regents and a copy shall be filed with the state board of education. (Effective 11/21/67.

JV 3313.12 Remuneration of board of trustees:

Requires that members of joint vocational school district boards of education be paid compensation not exceeding $20 per meeting, and mileage at the rate of 10¢ per mile to and from meetings of the board not exceeding 12 meetings in one year. (Effective 11/5/1965)

JV 3313.35 Counsel for school boards:

Requires the prosecuting attorney of the most populous county containing a school district which is a member of a joint vocational school district to be the legal advisor for the district. (Effective 12/11/67)

JV 3313.40 School district vocational education program

Requires each city, exempted village, and local school district either to establish and maintain a vocational education program adequate to prepare students for an occupation, or to contract with another school district to privide such training, or to participate in a joint vocational school district; requires the vocational programs to meet standards adopted by the state board of education; modifies the laws pertaining to the issuance of age and schooling certificates effective July 1, 1967, by repealing a requirement that a child who receives such a certificate must pass a test for completion of the work of the seventh grade, and establishing a new requirement that certificates may be granted only to those children who have completed a vocational course designed to prepare students for an occupation; repeals the authority of parents, guardians, or other persons having the care of the school age child to instruct the child, and modifies a requirement that such parents, guardians, or other persons cause the child to be instructed, by requiring that they cause the child to attend a school which meets a minimum requirement established by the state board of education or otherwise cause him to be instructed according to law; requires every child of school age who has not been adjudged incapable of profiting substantially by further instruction to attend a school which conforms to the minimum standards until one of the following occurs: (1) the child receives a high school diploma (as in prior law); (2) the child receives an age and schooling certificate; (3) the child receives a certificate of exemption from the compulsory attendance laws under the standards adopted by the state board. (Effective 6/1/67)

JV 3313.64.3 Student safety:

Extends to all schools a requirement that pupils and teachers in public schools wear industrial quality eye protective devices in certain vocational classes and laboratories; requires industrial commission approval and adoption of revisions in the standards set by the United States of America Standards Institute, Inc. for industrial quality eye protective devices; limits the authority of a school board to furnish such devices to pupils and teachers and to purchase them in large quantities and sell them at cost to pupils and teachers in its system; limits the duty of a board to furnish such equipment to visitors to class-rooms and laboratories in its system. (Effective 12/1/1967)

JV 3351.05 Student loans:

Changes the name of the Ohio Higher Education Assistance Commission to the Ohio Student Loan Commission; extends authority of the commission to guarantee loans for vocational and technical education: adds state and federal grants and advances to the commission's sources of funds and designates the commission as the state agency authorized to enter into contracts concerning specified federal student aid programs; applies the $1,000 maximum loan guarantee under prior law to undergraduates, permits a $1,500 guarantee for graduates, and raises from $5,000 to $9,000 the maximum of guaranteed loans to any person; revises interest limit on guaranteed loans from five and one-half per cent per year to the rate permitted under the federal programs; authorizes commission employment of a private collection agency to collect defaulted loans; designates federal credit unions and insurance companies as approved leaders. (Emergency: Effective 7/2/67)

TI 4713.01 Cosmetology, license:

Establishes a license for instructors in licensed schools of cosmetology, and requires persons teaching in such schools to be licensed as cosmetologists and as instructors, except that schools may employ unlicensed persons as teachers of related subjects; requires applicants for licenses as instructors to be of good moral character, have the equivalent of an Ohio public school twelfth grade education, and either to have practiced cosmetology in Ohio for a period of 12 months or have completed 1,000 hours if "instructor training" as a "junior instructor" in a licensed school of cosmetology; defines junior instructors as licensed cosmetologists engaged in learning the occupation of instructor; requires schools of cosmetology training junior instructors to: (1) certify the name and beginning date of training to the state board of cosmetology; (2) have no more than one junior instructor for each instructor in the school, and no more than six junior instructors at any one time; (3) allow junior instructors a "regular quota" of students, as prescribed by the board, provided that an instructor is present; and (4) compensate junior instructors; establishes an initial license fee for instructors at $5, and a renewal fee at $3; requires the board to issue a license to all persons who were instructors in licensed schools of cosmetology prior to the effective date of this act, upon the filing of an application and certification by the school that such person taught in the school at that time, regardless of other required qualifications for instructors.

Permits any person who completes a vocational program in cosmetology in an Ohio public school to apply for a cosmetologist's or manicurist's license, provided that an applicant for a cosmetologist's license must have an eighth grade public school education with at least 1,500 hours of instruction in cosmetology, and an applicant for a manicurist's license must have 150 hours in cosmetology training. (Effective 9/16/65)

VT 007 243
Miller, Harris E.
A Survey of Vocational Education Interest Among Sophomores in Six Iron Range School Districts.

Minnesota Univ., Duluth. Educational Research and Development Council of Northeast Minnesota
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Mar68 26p.

*VOCATIONAL EDUCATION; *EDUCATIONAL INTEREST; *STUDENT INTERESTS; *GRADE 10; VOCATIONAL INTERESTS; SCHOOL SURVEYS; QUESTIONNAIRES
MINNESOTA

Seven hundred and fifty-three sophomore students in six contiguous high schools representing a logical grouping for cooperative course offerings in vocational education were surveyed to learn their interest in vocational courses and which courses would be desired. Two hundred and twenty-four students indicated a preference for vocational education with an additional potential coming from 326 students for whom this kind of experience was selected as a second choice. Few specific courses attracted an appreciable number of students, but tables listing courses in rank order of preference are given. The questionnaire is included. (CH)

VT 007 243

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THE EDUCATIONAL RESEARCH AND DEVELOPMENT COUNCIL of NORTHEAST MINNESOTA

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26p.

A SURVEY OF VOCATIONAL EDUCATION INTEREST AMONG SOPHOMORES IN SIX IRON RANGE SCHOOL DISTRICTS

VT007243

A SURVEY OF VOCATIONAL EDUCATION INTEREST AMONG SOPHOMORES IN SIX IRON RANGE SCHOOL DISTRICTS

Survey Conducted by
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March, 1968

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PARTICIPATING SCHOOLS

Aurora-Hoyt Lakes High School, Aurora, Minnesota
G. J. Rubash, Superintendent
Arthur R. Moscatelli, Principal

Biwabik High School, Biwabik, Minnesota
Victor L. Reishus, Superintendent
A. T. LaZella, Principal

Eveleth High School, Eveleth, Minnesota
Sig K. Rimestad, Superintendent
Joseph Jirik, Principal

Gilbert High School, Gilbert, Minnesota
Myron Fahey, Superintendent
Lyle Stoefen, Principal

Mountain Iron High School, Mountain Iron, Minnesota
George Moe, Superintendent
Chester Bakkum, Principal

Roosevelt Senior High School, Virginia, Minnesota
E. N. Kerola, Superintendent
John H. Lind, Principal

PREFACE

This report has been prepared in answer to a request from six member school districts of the RAND Council for a survey of the post-high school educational/vocational plans of the students in their respective schools. These six school districts are: Aurora-Hoyt Lakes, Biwabik, Eveleth, Gilbert, Mountain Iron, and Virginia. This information was sought as part of the data relevant to preparing a proposal whereby a number of school districts might cooperatively develop and initiate a program for high school level vocational education. The substance of the proposal is the provision for the essential specialized training facilities and staff in one location (the Eveleth School District) to which the other cooperating schools would send their vocational students for that portion of their instruction requiring these specialized instructional resources. The rationale being that these schools might develop collectively, programs which, because of the size limitations, could not be achieved individually.

Mr. Rimestad, Superintendent of Schools for the Eveleth School District, and Mr. Joseph Jirik, principal of the Eveleth High School, conceived the design for this cooperative venture. The RAND Council sponsored a meeting of the administrators of the neighboring school districts for the purpose of discussing the project. From this meeting came a declaration of interest and an agreement by each high school to participate in the survey.

In presenting this report, the survey director expresses sincere appreciation to the principals of each of the high schools and their staffs for their excellent cooperation. The RAND Council is pleased to have been invited by these member schools to assist with this phase of the project, and hopes that this report of the student survey will be helpful in determining the need and feasibility of the project. It has indeed been a privilege to serve these cooperating schools in their efforts to provide improved and expanded educational services for the students in their communities.

Sincerely yours,

Harris E. Miller

Harris E. Miller
Director of Research
Educational Research and Development
Council of Northeast Minnesota

THE PROBLEM

> One of the most striking developments in American secondary education during the past 25 to 30 years has been the increasingly important position that vocational education has assumed. During this time, schools have added greatly to their offerings in this area and numerous pieces of federal legislation culminating in the Vocational Education Act of 1963 have been passed.[1]

In the survey of secondary education in Minnesota, part of the statewide study quoted above, it was observed that one measure of the adequacy of a secondary program, particularly in meeting the needs of the noncollege bound student, is the presence of approved special departments.[2] While vocational programs have grown in number, it is true that the extent of such programs is proportional to the size of the school district. Smaller districts, because of insufficient enrollment, are unable to offer a variety of vocational courses. Choices among vocational course offerings are generally meager for students attending small high schools.

The proposal to combine the resources of a group of school districts would obviously enlarge the student population pool, and accordantly should increase the potential number of students who might appropriately elect to enroll in vocational programs. The primary problem with which this survey was concerned was to assess the extent of interest in vocational education among the students in the six contiguous high schools which represent a logical grouping for this cooperative venture. An ancillary question dealt with the kinds of vocational programs which are attractive to those students interested in vocational education.

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[1] Education 1967, A Statewide Study of Elementary, Secondary, and Area Vocational-Technical Education in Minnesota (Minneapolis: Bureau of Field Studies and Surveys, College of Education, University of Minnesota, 1967), p. 86.

[2] Loc. cit.

THE PROCEDURE

The instability of career choices by high school students is well documented. This is an understandable circumstance, and is sometimes offered as an argument against early career planning. The "Domian Report" quotes a study which shows in part, two things: (1) career choice stability is directly related to the grade level of the students--greater stability being evident at the higher grade levels, and (2) for eleventh grade boys and girls, only 29 and 37 percent, respectively, enter the career of their initially stated choice within one year of graduation.[3] Interpreting findings such as this is difficult for two reasons. The one-year follow-up interval may be too restrictive. Many possible reasons can be conjectured for students' failure to be occupied in the vocation of choice within one year--lack of immediate job vacancies, desire for a brief interim experience, military service, etc. A later follow-up might prove a higher incidence of congruence between plans and reality. A second concern in interpreting the findings of studies of career choice stability is that of the degree of departure from initial career plans. For a student to train in office machine repair and then become employed as a salesman in office machines is less incongruous than for a student to pursue a course in welding and then become a barber. In the first example there seems a reasonable position from which to assume that the vocational training had relevance for the eventual occupation although the employment might be counted in a survey as differing from the career choice indicated by the training which the student acquired.

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[3] Ibid. p. 91.

Since this survey is concerned essentially with high school level vocational training, student decisions to elect such training must necessarily be made no later than the end of their sophomore year if the training is to involve a two-year program integrated with the general program of high school studies. This arrangement has the advantage of permitting a student to acquire the necessary credits for a high school diploma as well as the skills taught in the vocational course. With the need to declare a vocational course decision during the tenth grade in mind, the survey was conducted only among boys and girls presently enrolled at this grade level. To survey older students regarding choices they might have made in retrospect would lead to even less reliable evidence upon which to draw conclusions from the data.

The most efficient technique for gathering the data for this survey was judged to be the use of a questionnaire instrument. A copy of the questionnaire appears in Appendix A. The instrument was designed firstly to identify those students who had some interest in vocational education, and secondly to assess the strength of this interest, and finally to obtain an estimate of the number of students who might reasonably be expected to elect a high school level vocational course assuming a set of pertinent conditions. An ancillary item was included to obtain a demand index for specific courses.

The degree of interest in vocational training was measured by a three-point scale. The specific interest in high school vocational training was measured by a four-point scale. The course demand index was obtained from a tabulation of positive responses to a list of possible course offerings. This list was developed by listing all of the courses presently being offered by the 26 area vocational-technical schools eliminating the obviously duplicate courses. There remain on the list, unfortunately, a number of cases

in which somewhat different course titles probably refer to courses with very similar content. The effect of this, however, does not appear to lessen the validity of this item whose sole purpose was to obtain a rough measure of the relative demand for specific courses.

The questionnaire was intended to be completed by each tenth grade boy and girl in each of the six survey schools. The questionnaires were distributed to the principals of each of the high schools with the necessary instructions for using the instrument. A special point was made of the importance of reading the item instructions and the item questions to the students in order that misunderstandings due to reading disabilities among some students would not invalidate their responses. The questionnaires were completed anonymously, collected within each school, and returned by mail to the RAND Council offices for tabulation.

THE RESULTS

A total of 753 student survey questionnaires (409 boys and 344 girls) was received from the six high schools. The exact enrollment of tenth grade students in each of these schools was not available, but the number of responses is judged to represent close to a 100 percent sample of the sophomore class population of these six schools. Whatever small number of students were missed, due largely to their absence on the day the instrument was administered, is not considered to represent a bias in the data collection.

The post-high school plans of the tenth grade boys and girls in the survey is shown in Tables 1 and 2 respectively. These tables represent the first choice of students by school district. Both the actual number of

TABLE I

NATURE AND FREQUENCY OF
POST-HIGH SCHOOL PLANS OF SOPHOMORE BOYS
IN SIX IRON RANGE SCHOOL DISTRICTS BY DISTRICT

Post-High School Plans	SCHOOL DISTRICT													
	Aurora-Hoyt Lakes		Biwabik		Eveleth		Gilbert		Mt. Iron		Virginia		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
College	63	55.8	19	61.3	42	60.9	19	57.6	12	33.3	67	52.8	222	54.3
Training other than college	26	23.0	8	25.8	16	23.2	11	33.3	17	47.2	33	25.9	111	27.1
Military Service	20	17.7	4	12.9	10	14.5	3	9.1	6	16.7	18	14.2	61	14.9
Remain on farm	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Undecided*	4	3.5	--	--	1	1.4	--	--	1	2.8	9	7.1	15	3.7
TOTAL	113	100.0	31	100.0	69	100.0	33	100.0	36	100.0	127	100.0	409	100.0

* Includes students who failed to respond to item on questionnaire

TABLE II

NATURE AND FREQUENCY OF PREFERRED
POST-HIGH SCHOOL PLANS OF SOPHOMORE GIRLS
IN SIX IRON RANGE SCHOOL DISTRICTS BY DISTRICT

Post-High School Plans	SCHOOL DISTRICT													
	Aurora-Hoyt Lakes		Biwabik		Eveleth		Gilbert		Mt. Iron		Virginia		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
College	48	64.0	11	55.0	35	62.5	23	59.0	24	61.5	63	54.8	204	59.3
Training other than college	21	28.0	7	35.0	17	30.4	14	35.9	11	28.2	43	37.4	113	32.8
Military Service	1	1.3	1	5.0	1	1.8	--	--	1	2.6	--	--	4	1.2
Remain on farm	--	--	1	5.0	--	--	--	--	--	--	--	--	1	0.3
Full-time housewife	3	4.0	--	--	2	3.6	1	2.6	2	5.1	4	3.5	12	3.5
Undecided*	2	2.7	--	--	1	1.8	1	2.6	1	2.6	5	4.3	10	2.9
TOTAL	75	100.0	20	100.0	56	100.1	39	100.1	39	100.0	115	100.0	344	100.0

* Includes students who failed to respond to item on questionnaire

students in each choice category is shown as well as the percent this number is of the total in each school. In each school both boys and girls, with one exception, chose "college" most frequently as their first choice of post-high school plans. The range in this category was from a high of 64 percent of the girls in Aurora-Hoyt Lakes to a low of 33 percent of the boys in Mountain Iron. The average percent of college oriented students among the six schools was 54.3 percent for boys and 59.3 percent for girls. A total of 222 boys and 204 girls expressed a preference for college attendance after graduation from high school.

The choice of "training other than college" ranked second among the options in all districts except for the boys in the Mountain Iron School District who made this response in greater number than did those choosing "college." Among the total number of boys in the six schools, 111 (27.1 percent of the total) chose this category as their first choice. Correspondingly, 113 girls (32.8 percent of the total) chose this category. Altogether 224 students or 29.7 percent of the sophomores in these six schools indicated a preference for vocational training as a post-high school endeavor.

In both of the above categories of post-high school education, the girls responded positively in relatively greater strength than did the boys. Examining the responses to the remaining options provides a clue to the explanation for this. Nearly 15 percent of the boys quite realistically chose "military service" as their first choice. (Choice as used here does not necessarily mean a voluntary choice, but rather their recognition of the realities of the times.)

Tables III and IV show the combined choices of tenth grade boys and girls respectively in the six high schools. The tables break down the second choice post-graduation plans within each category of first choices. For example, according to Table III, 222 boys selected "college" as their first choice. Of these 222 boys, 130 indicated "other training" as their second choice, 57 selected "military service" as their second choice, 32 were undecided, and three failed to respond to any second choice option.

The purpose for this within-choice tabulation was to examine the possibilities which might occur if first choice plans failed to materialize. Of the 222 boys and 204 girls who chose "college" as their first choice, 130 boys and 150 girls chose "training other than college" as their second choice. There is no way of knowing how many of these college bound students will eventually desist in their pursuit of a college education and turn to an alternative, but whatever number there are, a large proportion can be expected to seek vocational education. Altogether 165 boys and 161 girls listed vocational training as their first alternative if their original first choices were abandoned. In addition, 34 boys,whose first choice of post-high school plans was to enter military service, chose vocational training as the next alternative.

In summary, the data from the questionnaires indicates a total of 224 students presently in the tenth grade who have shown a preference for vocational education with an additional potential coming from the 326 students for whom this kind of experience is a second choice.

The results of the survey to this point have dealt with stated post-graduation plans of the students, but do reveal the strength of these commitments. To interpret the extent of the indicated interests, an item on the

TABLE III

FIRST AND SECOND CHOICE OF POST-HIGH SCHOOL PLANS OF TENTH GRADE BOYS

IN SIX IRON RANGE SCHOOL DISTRICTS

		SECOND CHOICE						
FIRST CHOICE	No.	College	Other Training	Military	Farm	Housewife	Undecided	No Response
College	222 (54.3)	--	130	57	--	--	32	3
Other Training	111 (27.1)	11	--	64	3	--	26	7
Military	61 (14.9)	15	34	--	--	--	9	3
Farm	(0.0)	--	--	--	--	--	--	--
Undecided	10 (2.4)	5	1	3	--	--	--	1
No Response	5 (1.2)	--	--	--	--	--	--	5
TOTAL	409 (99.9)							
SECOND CHOICE TOTALS		31 (7.6)	165 (40.3)	124 (30.3)	3 (0.7)	-- (0.0)	67 (16.4)	19 (4.6)

Note: Figures in parentheses represent per cent number in each category is of total.

TABLE IV

FIRST AND SECOND CHOICE OF POST-HIGH SCHOOL PLANS OF TENTH GRADE GIRLS IN SIX IRON RANGE SCHOOL DISTRICTS

		SECOND CHOICE						
FIRST CHOICE	No.	College	Other Training	Military	Farm	Housewife	Undecided	No Response
College	204 (59.3)	--	150	5	--	8	34	7
Other Training	113 (32.8)	22	--	11	1	31	46	2
Military	4 (1.2)	--	2	--	1	1	--	--
Farm	1 (0.3)	--	--	--	--	1	--	--
Housewife	12 (3.5)	--	6	--	--	--	4	2
Undecided	8 (2.3)	--	3	--	--	1	--	4
No Response	2 (0.6)	--	--	--	--	--	--	2
TOTAL	344 (100.0)							
SECOND CHOICE TOTALS		22 (6.4)	161 (46.8)	16 (4.7)	2 (0.6)	42 (12.2)	84 (24.4)	17 (4.9)

Note: Figures in parentheses represent per cent number in each category is of total.

questionnaire was devised to assess this variable. The questionnaires were separated into two groups on the basis of those who registered either a first or second preference for vocational education, and those who revealed preferences for any of the other options. The questionnaires which thus represented the responses of students with some interest in vocational training were tabulated on the basis of a three-point scale of interest intensity. The results are given in Table V. The data shows that 111 boys and 89 girls are "seriously interested," and 117 boys and 129 girls are "moderately interested." These figures can reasonably be interpreted to mean that some number in excess of 200 students, boys and girls combined, could be expected to pursue a program of vocational training. Four of the six districts provide the bulk of the seriously interested students. In order they are: Aurora-Hoyt Lakes, Virginia, Eveleth and Mountain Iron.

The crucial question with which this survey was concerned was student interest in high school level vocational education. In framing this item an attempt was made to depict the nature of the program and certain conditions which would be germane. The understanding was presented that such a program would be integrated with the general program of studies so that students would meet high school graduation requirements; and that although the specialized training would take place in a neighboring community, the students would identify with their own community school and participate in that school's student activities. The degree of interest in high school vocational courses is shown in Table VI. Only students who had indicated some interest in vocational education were included in this tabulation. This resulted in a total of 276 boys and 274 girls. Of this total of 550 students, 230

TABLE V

EXTENT OF INTEREST IN POST-HIGH SCHOOL VOCATIONAL TRAINING

AMONG TENTH GRADE STUDENTS IN SIX IRON RANGE SCHOOL DISTRICTS*

School District	Seriously Interested		Moderately Interested		Slightly Interested		No Response	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Aurora-Hoyt Lakes	34	27	33	31	3	8	1	1
Biwabik	5	2	7	11	7	1	--	1
Eveleth	20	14	18	17	10	17	1	--
Gilbert	9	8	9	18	3	5	--	2
Mt. Iron	15	14	11	11	3	3	1	--
Virginia	28	24	39	41	16	17	3	1
TOTAL	111	89	117	129	42	51	6	5

* Includes only students who indicated plans to pursue vocational training as either their first or second choice of post-high school plans.

TABLE VI

EXTENT OF INTEREST IN HIGH SCHOOL VOCATIONAL TRAINING
AMONG TENTH GRADE STUDENTS IN SIX IRON RANGE SCHOOL DISTRICTS*

School District	Much Interest		Moderate Interest		Slight Interest		No Interest		No Response	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Aurora-Hoyt Lakes	33	34	30	26	7	5	1	--	--	--
Biwabik	8	3	6	10	5	1	--	1	--	--
Eveleth	21	16	18	16	6	8	4	7	--	1
Gilbert	10	7	7	15	3	4	3	3	--	4
Mt. Iron	15	14	8	9	5	4	1	1	1	--
Virginia	36	33	28	27	13	14	4	8	5	1
TOTAL	123	107	97	103	39	36	13	20	6	6

* Includes only students who indicated plans to pursue vocational training as either their first or second choice of post-high school plans

indicated "much interest" in a high school level vocational program. This total represented 123 boys and 107 girls. There was a sizable number who responded with "moderate interest," and only 18.8 percent of the boys and 20.4 percent of the girls showed "slight interest" or "no interest." These data can probably be taken to mean that more than 230 students now enrolled in the tenth grade in the six survey schools have sufficient interest in vocational courses to enroll in a high school vocational program of studies. It is interesting to note that a comparison of Tables V and VI reveals a somewhat greater interest in a high school vocational program than in post-high school vocational training.

An adjunct to the basic survey was an item designed to estimate the preferences of students for specific vocational courses. The results of this portion of the survey are shown in Tables VII and VIII. Table VII lists separately for boys and girls the courses in rank order of preference. The course in first position on each list represents one with four times the appeal of the course listed last. Courses tied in tally counts are indicated by brackets. Table VIII contains the same kind of information except that the courses are listed in order of their combined appeal for boys and girls. Few of the courses attract an appreciable number of both boys and girls, but the order is indicative of their relative demand when the total potential vocational student enrollment is considered.

TABLE VII

COURSES LISTED IN RANK ORDER OF DEMAND

Boys	Girls
1. Auto mechanics	1. Secretary, general
2. Welding	2. Cosmetology
3. Auto body repair	3. Legal secretary
4. Architectural drafting	4. Licensed practical nurse
5. Mechanic (marine and small engines)	5. Interior design and sales
6. Carpentry	6. Hospital station secretary
7. Electrician (construction)	7. Medical secretary
8. (Electronics (computer maintenance)	8. Practical nursing
9. (Engineering drafting	9. (Clerical, general
	10. (Educational secretary
10. (Heavy equipment operation	11. Stenography
11. (Mechanic attendance (automotive service station)	12. (Dental assistant
	13. (Medical laboratory assistant
	14. Clerical training--data processing
12. (Aviation mechanics	15. Clerical recordkeeping
13. (Truck mechanic	16. Apparel arts
	17. Nursing home aide
14. Machinist	18. Commercial art
15. Technical drafting	19. (Bakery procedures
16. Diesel engine mechanics	20. (Retail floristry
17. Automotive services	21. Dietician assistant
18. Machine operator	22. Hotel/restaurant cooking
19. Radio and television repair	23. Tailoring
20. Mechanical drafting technician	24. Junior accounting
21. Electronic data processing	25. Needle arts
22. Building construction	
23. (Heavy equipment maintenance	
24. (Partsman (automotive)	
25. (Tool and die maker	

TABLE VIII

COURSES LISTED IN RANK ORDER
OF TOTAL DEMAND OF BOYS AND
GIRLS COMBINED

1. Secretary, general
2. Cosmetology
3. Auto mechanics
4. Welding
5. Legal secretary
6. (Interior design and sales
7. (Clerk, general
8. Licensed practical nurse
9. Clerical training--data processing
10. Architectural drafting
11. (Medical laboratory assistant
12. (Hospital station secretary
13. (Auto body repair
14. Medical secretary
15. (Practical nursing
16. (Dental assistant
17. (Stenography
18. (Educational secretary
19. Mechanic (marine and small engines)
20. Clerical recordkeeping
21. Carpentry
22. Commercial art
23. Electrician (construction)
24. Electronics (computer maintenance)
25. Engineering drafting

IN CONCLUSION

Before attempting to draw conclusions from the survey results, it is important to state the assumptions which pertain and serve to qualify the conclusions. First, the results cannot be generalized to other future groups of students unless the assumption is valid that this year's tenth grade students are typical and do not differ from classes that will follow. A second assumption is that the students responded candidly to the items on the questionnaire. A third assumption, and one which cannot be expected to hold perfectly, is that the responses which were tabulated at this time would remain stable through the period of advance planning for the succeeding school year. This stability is of lesser importance if the changes in educational/vocational interests are counterbalanced. The stability of interest is of no significance for the purpose of this study if equal numbers of students shift toward and away from vocational education.

In planning any expansion of vocational education opportunities, student interest is obviously only one factor which needs to be considered. The lists showing specific course preferences which are indicated in this report ought not to be taken as recommendations for the actual program of course offerings. They merit consideration in arriving at decisions affecting program content, along with other information such as costs of instruction; capital outlay for equipment, employment opportunities for graduates, etc.

A final point calls for attention. The data support an estimate of a minimum of 230 potential high school vocational education enrollers from the six high schools surveyed. The actual enrollment could easily exceed this number if no qualifications are placed on the admission of students. However, this estimated enrollment is predicted on the participation of all six of the proposed project schools. Withdrawal of the larger districts would materially reduce the

potential vocational course enrollment. Aurora-Hoyt Lakes and Virginia each account for approximately 25 percent of the total potential number of boys in the program and almost one-third of the girls. The loss of both of these school districts would be cause for seriously questioning the feasibility of a cooperative project among the remaining four smaller schools. The principal benefit of a cooperative program is that it makes possible provisions for meeting a wide range of student interests. This benefit would not be incurred if the enrollment were to be markedly reduced.

APPENDIX A

VOCATIONAL TRAINING INTEREST SURVEY

School _____

Grade _____

Sex (M or F) _____

The purpose of this questionnaire is to find out what interest there is among students in certain Iron Range high schools for vocational education or training. Please answer the questions which follow as honestly as you can at this time. Many students in high school have not yet made vocational decisions. Even if you are not certain about your future plans, try to indicate what you think would be the most likely choices you will make.

1. Do you plan to graduate from high school? (check one)

yes ____
no ____

2-3. If you do not plan to graduate from high school what are your occupational plans? On the list below indicate your first choice by placing a "1" opposite the appropriate heading. If your first choice did not work out, what would be your second choice? Write a "2" opposite your second choice.

Occupational training other than college	____
Immediate employment	____
Military service	____
Remain on farm	____
Full-time housewife	____
Undecided	____

4-5. If you do plan to graduate from high school, what are your post-high school plans? On the list below indicate your first choice by placing a "1" opposite the heading. If your first choice did not work out, what would be your second choice? Write a "2" opposite your second choice.

College	____
Occupational training other than college	____
Military service	____
Remain on farm	____
Full-time housewife	____
Undecided	____

If you marked "occupational training other than college" as either your first or second choice on one of the lists above, please continue to mark this questionnaire.

6. The basic purpose of vocational trade or industrial education is to prepare students for advantageous initial entry into employment in a specific or closely allied trade, industrial, technical or service occupation. Teachers in these training programs are occupationally competent. The tools, equipment and materials used in the training are those used in the corresponding occupation. With this brief description of vocational training, indicate the extent of your interest in taking this kind of training after you leave high school. Assume the course you are interested in would be available in

your town or one close by. Check only one of the following responses.

I am very seriously interested . . . . . ___
I am moderately interested . . . . . ___
I am only slightly interested . . . . . ___

7. Often vocational training is offered to students as a full-time in-school program while they are still in high school. These programs may include part-time on-the-job training. What would be your interest in this kind of program beginning in your junior or senior year if the right course was available? Assume the following conditions:

   a. students would receive regular diplomas by taking the necessary required courses along with their vocational courses;

   b. students would be eligible for all student activities in their regular school including interscholastic athletics;

   c. most students would have to spend part of the day in a school in a nearby town for the special technical training. Transportation would be provided.

Check only one of following statements to indicate your reaction.

I would be very much interested in such a program . . . . . ___
I would be moderately interested in such a program . . . . . ___
I would be only slightly interested in such a program . . . ___
I would have no interest in such a program . . . . . ___

8. On the next page are listed a number of courses which are typically offered in vocational education programs. Please read through the entire list and circle the number of those that are of possible interest to you. You may mark as many as you find that hold a serious interest for you.

1. Agricultural chemicals--sales and service
2. Agricultural farm management
3. Agricultural sales technician
4. Apparel arts
5. Appliance repair
6. Architectural drafting
7. Auto body repair
8. Automobile management
9. Auto mechanics
10. Automotive services
11. Aviation mechanics
12. Bakery procedures
13. Barbering
14. Bricklayer
15. Building construction
16. Cabinetmaking
17. Carpentry
18. Chef
19. Clerical, general
20. Clerical recordkeeping
21. Clerical training--data processing
22. Commercial art
23. Cosmetology
24. Dental assistant
25. Design technology
26. Diesel engine mechanics and maintenance
27. Dietician assistant
28. Educational secretary
29. Electrician (contruction)
30. Electronics (computer maintenance)
31. Electronic data processing
32. Electronic technician (communications)
33. Electronic technician (industrial)
34. Engineering drafting
35. Farm equipment mechanics
36. Farm equipment sales and service
37. Fluid power technology
38. Food service management
39. Graphic arts (letter press)
40. Graphic arts (photolithography)
41. Graphic arts (offset printing)
42. Heavy equipment operation
43. Heavy equipment maintenance
44. Highway technician
45. Hospital station secretary
46. Hotel/restaurant cooking
47. Industrial chemistry
48. Industrial drafting technology
49. Industrial maintenance electrician
50. Institutional cook
51. Interior design and sales assistant
52. Junior accounting
53. Legal secretary
54. Licensed practical nurse
55. Lineman electrician
56. Machine operator
57. Machinist
58. Marketing
59. Mechanical drafting technician
60. Mechanic attendance (automotive service station)
61. Mechanic (marine and small engines)
62. Mechanic (office machines)
63. Mechanical repair (refrigeration and heating)
64. Medical laboratory assistant
65. Medical office service
66. Medical secretary
67. Metal arts
68. Needle arts
69. Nursery (landscape technology)
70. Nursing home aide
71. Optical technology
72. Paper and pulp technology
73. Partsman training (automotive)
74. Patternmaking
75. Plastics technology
76. Plumbing
77. Power plant operator
78. Practical nursing
79. Production art
80. Radio and television repair
81. Retail floristry
82. Sales and marketing
83. Sales management
84. Secretary, general
85. Sheet metal
86. Shoe repair
87. Stenography
88. Tabulation equipment operator
89. Tailoring
90. Technical drafting
91. Technical writing
92. Tool and die maker
93. Tool design technician
94. Truck mechanic
95. Upholstering
96. Watch repair
97. Welding

Other courses of interest

98. _____
99. _____

VT 007 247
Gillie, Angelo C.
The Role of the University in Community College Technical Education.

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*AMERICAN SOCIETY FOR ENGINEERING EDUCATION, UNIVERSITY OF CALIFORNIA, LOS ANGELES, JUNE 17-20, 1968

Certain technical education leaders have sought the involvement of universities to attack the problems peculiar to the training of technicians in technical institutes and community colleges. Some areas in which universities can promote, improve, and expand community college technicial education are: (1) teacher education, (2) research, (3) evaluation, (4) design and development of new curriculums, (5) updating existing curriculums, and (6) assistance in the establishment of technical education programs for ghetto youth. (DM)

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THE ROLE OF THE UNIVERSITY IN COMMUNITY COLLEGE TECHNICAL EDUCATION

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Abstract

This paper deals with several of the more important roles being assumed by universities in the promotion and improvement of community college technical education. It is pointed out that two-year college technical education, once almost exclusively found in the technical institutes, is now moving into the public community-junior college arena. This mix of technical education and the community college is creating effects which are changing certain aspects of both technical education and the public junior college.

Associated with this recent movement in technical education are the roles being taken on by the universities. The six roles identified and considered in this paper are: 1. teacher education 2. research 3. evaluation 4. design and development of new curriculums 5. updating existing curriculums 6. design and development of technical education programs for urban youth.

VT007247

The involvement of universities in various segments of american society has steadily increased in the past century. The inauguration of the Morrill Act of 1862 was one of the earlier efforts to encourage the development of institutions of higher learning which would lend their expertise to the preparation of people for occupations other than theology, law, and medicine. That act provided the initial impetus for higher education to give serious attention to the practical arts and world of work. Once the precedence had been established, it became easier for universities to become engaged in various activities that were not of a traditional academic nature. This trend has progressed to the point where various institutions and agencies are continuously knocking on the doors of the universities, asking for their help in finding solutions to their many and diverse problems. The reaction to these demands varies from one university to another, but almost every university has become involved with its larger community in attempts to find solutions to problems of its region and state.

Now that technical education has moved into the public community college area, certain technical education leaders have sought the involvement of the universities. Community college technical education, besides having the problems associated with technical institute technical education, has additional problems associated with community college type

education. It is felt by many that some of these problems can be attacked most effectively if the technical educators can find support and assistance from the universities. Some of the roles of the modern university that relate to the interests of community college technical educators deal with: (a) teacher education (b) research (c) evaluation (d) design and development of new curriculums (e) updating existing curriculums (f) assistance in the establishment of technical education programs for ghetto youth. This paper takes the position that it is from these six roles that the university can be of greatest service to technical education in the community college. Let us examine them in greater detail.

A. Teacher Education

In spite of the fact that teaching has been a recognized occupation and profession for hundreds of years, evidence shows that virtually nothing has been done toward developing a science of teacher education. Moss (1:26)described that dilemma in this way:

> We need a system of verified principles which will permit us to understand and control the teacher education process. At present we are still operating programs primarily on the basis of tradition, 'convention', wisdom, and personal experience. This does not imply that current teacher education practices are necessarily bad, only that we really don't know their worth, and that we cannot be reasonably confident about judging suggested means for improving present practices.

It is here suggested that some of the very complex and persistent problems associated with community college technical education teacher preparation must be submitted to a long-range systematic research effort conducted by the universities. Moss (1:3) proposed one research model which has considerable merit in that it provides direction to research efforts in the area of technical teacher education.

Using the Moss model as a guide for the direction of research into technical teacher preparation, the activities can be subdivided into the following broad categories:

1. Studies relating to the objectives of technical teacher preparation programs.

2. Studies dealing with the human resources from which potential technical teachers can be drawn.

3. Studies dealing with the varieties of technical teacher education programs that could be devised.

4. Studies aimed at developing effective methods of recruiting the right individuals into technical teacher preparation programs.

5. Studies designed to evaluate the educational experience being provided by ongoing technical teacher preparation programs.

Miller (2:30) proposed a system approach to designing programs in technical teacher education. Based on his model, he proceeded to analyze several aspects of technical teacher preparation programs, including the following: 1. Role of the technical teacher. 2. Selection and recruitment of

technical teachers. 3. Technical teacher training programs. 4. Evaluation of technical teachers.

It can be seen that certain similarities exist between the Moss and the Miller models. This is a welcomed indication that technical educators are becoming more seriously concerned about developing long range models for the study of the many processes and activities involved with technical teacher preparation programs. As stated before, the use of such models as a framework from which various research efforts can embark, can hopefully result in some perceptable movement toward making a science out of technical teacher preparation. The role of the universities is clear here, they should spearhead this improvement movement and carry on the leadership needed in the overall research effort.

Roney (3) recently cited the need for the establishment of relevant professional education for administrators dealing with technical education programs, inservice education for employed technical professors, and preservice education for future technical education teachers. There has been some progress in all of these directions, but much more needs to be done. The Purdue plan for the preparation of technical teachers, as described by Arnold (4:9-11), is an excellent example of an attempt to meet the need for more technical teachers. The Purdue curriculum is a third and fourth year program which

draws its input from graduates of associate-degree technical programs. Therefore, it is seen that the technical programs of the two-year colleges, in addition to providing technicians for the world of work, is increasingly being looked to as an important source of potential technical teachers. One of the most innovative aspects of this program is the cooperative internship-the device through which the potential teacher may obtain a one year work experience in his area of speciality and also receive academic credit for it. Other technical teacher programs, which look to the graduate of two year college technology programs for their inputs, are being planned in several universities.

It seems to this writer that this is a hopeful beginning of getting away from those stullifying elements of traditionalism that have blocked real progress in the matter of recruiting, training, and modernizing technical teachers. Some leaders in technical education are now prepared to question the real relevancy of requiring the technical teacher to have a first degree in enginecring. Also overdue for examination is the requirement that the technical teacher have a large number of years of industrial experience to his credit. It has yet to be proven that engineers are the best technical teachers, and also unproven is that a long experience in industry is going to assure us that we are hiring either a good or an up-to-date instructor.

One of the few studies that delved into the characteristics of those technical education teachers that were considered successful by their administrators was conducted by Storm (5:7). Two of his findings, which relate to the kinds of backgrounds commonly found in those technical teachers that were considered to be successful were as follows (5:7):

> Technical instructors who enter teaching from a background of technician work in industry are generally considered more successful than those who enter with a background in engineering.
>
> and
>
> More high-rated instructors possess advanced degrees in education than lower rated instructors.

It seems that more studies of this nature should be conducted by universities , so as to further determine the relevancy of an engineering background to effective teaching in the technician area. Furthermore, universities should seek to become more involved in technician teacher preparation programs which have a well conceived approach to evaluation. This evaluation plan, not evident in any program seen by this writer, should be built in as an integral part of the program, but at the same time be financially independent of it. In this way it would take on the characteristics of research and inquiry and not simply become a mechanism for the collection of data. The evaluation effort should begin with identification of potential technical teachers,

continue on with the evaluation of the program and follow through with an evaluation of the graduate for at least the first five years of his teaching career. The type of teacher produced by these programs should also be compared, in tangible ways, with technical teachers that have other backgrounds in terms of education, training and experience. One or two carefully designed and carried out longitudinal studies of this type would be a major step toward knocking down the remaining walls of traditionalism that have been plaguing technical education almost since its inception. The technical teachers preparation effort is probably one of the most important roles the universities can play in the betterment of two-year college technical education.

B. Research

A list of suggestions for research and development activities in technical education teacher preparation was compiled by Miller (2:23-32). These suggestions were submitted by a number of the nation's foremost technical education researchers, teacher educators and administrators who served as consultants on the Miller project. The recommendations he obtained fell into a total of 24 categories. Koschler developed a modest list of research needs in technical education programs (6:19), and it covered 14 areas. Other lists of research needs and

priorities are in existence. But what are the most pressing areas of inquiries in which research should first turn? The answer to the question would invariably depend upon the interests and biases of the person responding to it. Therefore, the following statements obviously reflects this writer's perception of those topics believed to be of greater importance.

Broadly speaking, a major research thrust should be aimed at learning more about technician type students and their environments. There has been a number of studies in student and school environmental characteristics (7:690-730) (8:811-845) (9:536-562), but relatively little of this past effort is directly applicable to technician students in the two-year college and technical institute. One such study is presently in progress, which is entitled "A Comparison of Environmental Press and Selected Student Characteristics in a Community College and Technical Institute" (10). The population used in this research consists of students enrolled in four career curriculums in a large technical institute and a medium size community college (both public supported). The curriculums are Electrical Technology, Nursing, Business Administration and Secretarial Science. A total of about 900 students were involved in the beginning phase of this study. Phase one of

of this study included the administration of several instruments to each entering student in the four curriculums prior to attending their first class session. These established the basis for obtaining information in the initial part of the investigation before the students were subjected to the influence of the college environment. An interim follow-up has been conducted during the spring of 1968 and the final administration of instruments will be conducted during April and May of 1969. The data obtained from this study will provide a basis for identification of those elements between certain student characteristics and institutional characteristics that appear most often in those students that have completed their programs. The results will hopefully also provide indications of those combined student and institutional characteristics which are most often found in students dropping out of their programs. If clear-cut trends, which are statistically valid and reliable, are identified by this study, it might serve as the launching point for a similar study conducted on a wider scale, both geographically and in types of programs. Other studies of this type, which attempt to find ways of matching students to programs and institutions are sorely needed. Although the two-year college is the arena for these studies, it is logical for the universities to assume the role of leadership in their design and conduct.

C. Evaluation

Much more effort is needed in the area of evaluation. Evaluation in many instances has meant nothing more than directing inquiries into attrition rates and whether or not graduates of a program obtained a position in industry. The contention here is that the use of such devices, with the claim that they are satisfactory methods of program evaluation, is based on shortsightedness on the part of the technical educators. This writer has learned of more than one case where the technical educators in certain programs took pride in the fact that less than half of the enrolling freshmen graduated from that course two years later. This represents a shameful waste of human resources. Certainly this calls for an attempt to devise a model of evaluation that would encompass all aspects of the program from student selection to long range follow-up, as shown in Fig. 1.

The development of a model for the evaluation of community college technical education which is both continuous and longitudinal in nature can be a joint endeavor between the university and the two-year colleges. An additional role of the university in such an activity could include its overall administration, as well as the translation of the mass of accumulated data into suggestions and proposals that could lead

A MODEL FOR CONTINUOUS-LONGITUDINAL VALUATION

OF

COMMUNITY COLLEGE TECHNICAL EDUCATION

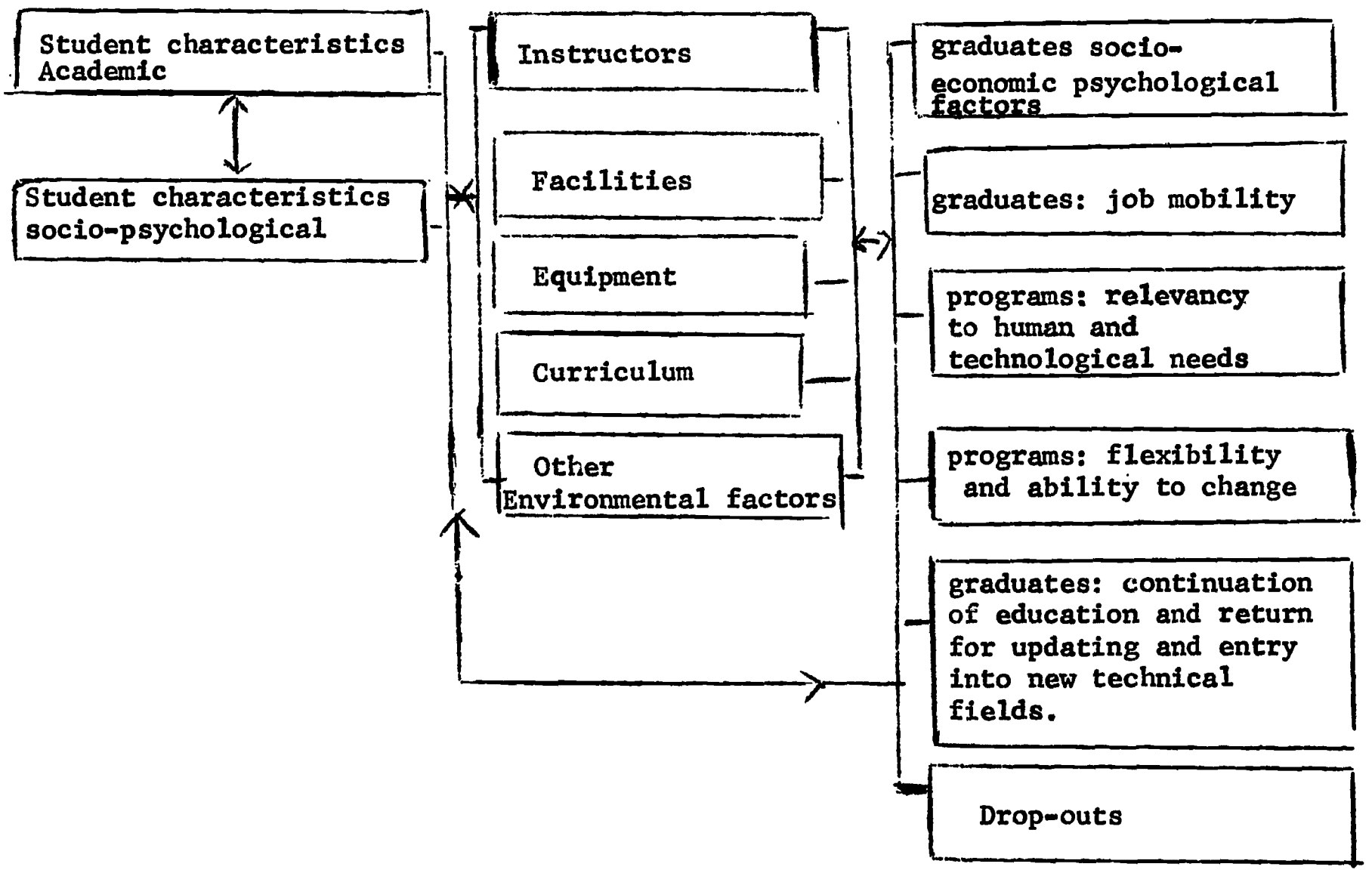

Figure 1

to action—action that would produce changes which would improve the process of educating and preparing technicians for the future. Certain precautions must be noted however. The overall evaluation must be based on the goals of the technical educators and not on the sole goals of the evaluator(s). Stating this in another way, the evaluator's first task is to identify the goals of the technical educators. Then the evaluator(s) should focus on determining the extent to which the educational program is meeting the objectives of the technical educators (such as producing a competent and well adjusted technician) while at the same time determining whether any damaging changes are taking place (such as developing a dislike for a certain subject) during the process. The best evaluation of a curriculum is in terms of its effects upon the student, and this type of investigation must be longitudinal in nature.

D. Design and Development of New Curriculum:

The universities can also play a role in the design and development of new curriculums. Nelson (11) has indicated how special research centers could serve as agencies for the development of programs in emerging technologies. Perhaps these centers could enter into cooperative arrangements with universities and community colleges for the purpose of identifying new curriculums in community college technical education. Roles of this type could be assumed by the Center for Vocational and Technical Education at The Ohio State University (12), as well as other government supported research centers.

E. Updating of Existing Curriculums

The updating of existing curriculums is just as high on the research priority list as are studies dealing with the emergence of new programs. The universities can provide the thrust for developing curriculum modernization studies. Such efforts would require cooperation between selected elements in industry, the community colleges and the universities. One model for updating two-year college technical programs has been recently designed and tested by this writer (13:17-21) (14:15-16), and its overall characteristics are shown in Fig. 2. This same model can also be utilized as an approach to the development of new curriculums.

F. Technical Education for Urban Youth

The provision of technical education for urban youth presents a new set of problems that are superimposed on the already existing problems confronting technical educators. That is, the problems of preparing competent instructors, designing schemes for continuous and total evaluation, designing and updating curriculums so as to insure relevancy, and the recruitment of students are also present with this type of technical education. It can be said that these problems are even more difficult to solve when the goals of the programs are set for urban youth. Superimposed on the obstacles just stated

A MODEL FOR CONDUCTING STUDIES FOR
UPDATING EXISTING CURRICULUMS

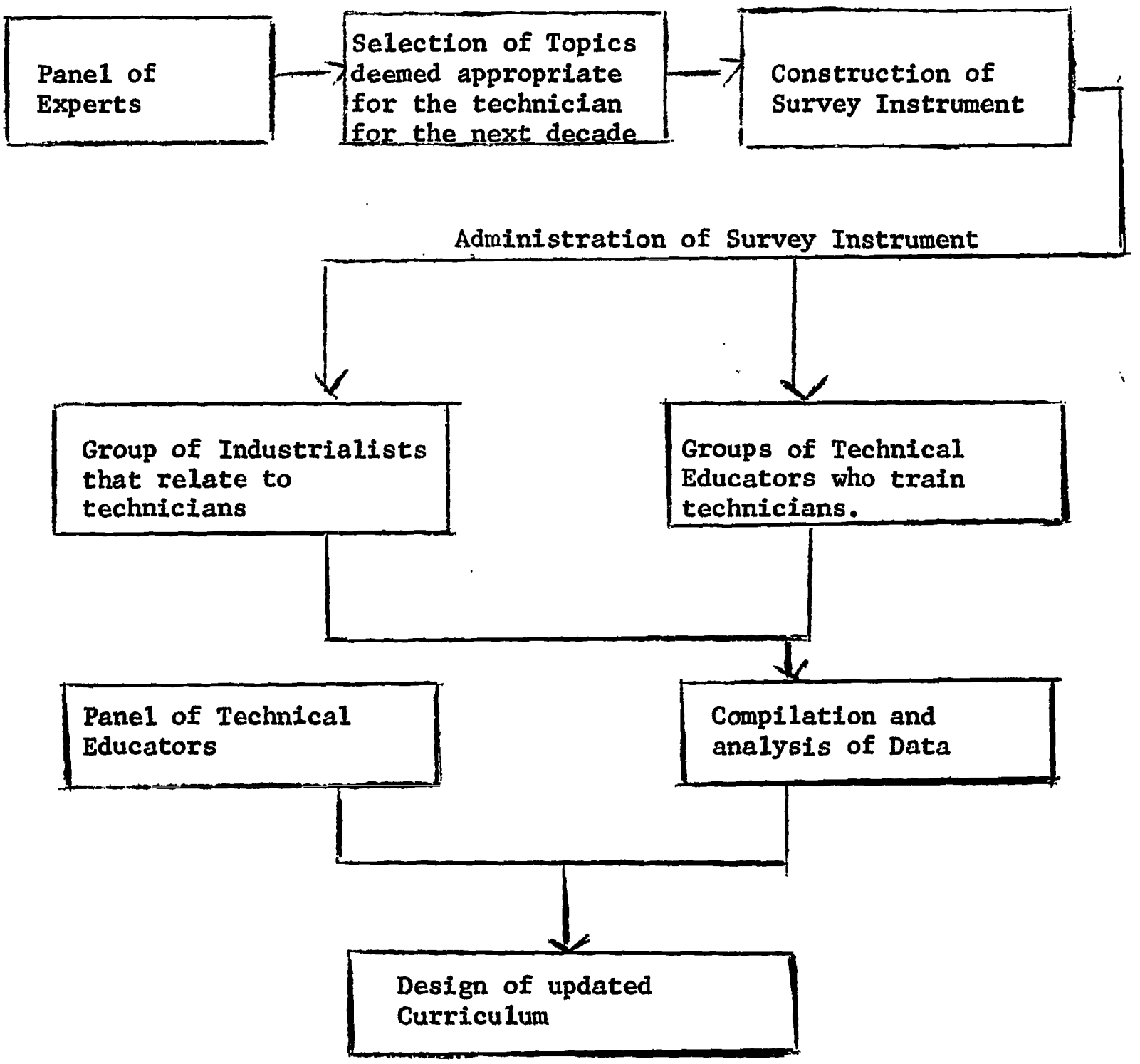

Figure 2

are very severe problems dealing with the psychology of disadvantaged youth as it relates to society, education, training, and the world of work. Many intelligent technical educators are beginning to recognize the futility of expecting ghetto youth to "lift themselves by their bootstraps" into the world of middle class values. There are a few in the vanguard of technical education leadership who sense the need to design programs around the <u>needs of individuals rather than around the needs of industry.</u>

This reversal in the approach to the design of technical education programs calls for sweeping changes in all aspects of the effort—new kinds of instructors, increased diversity in the level of curriculums, the introduction of technician work practicums with academic credit, an entirely new approach to the supporting work in mathematics and sciences, and a new kind of general education that uses no books. New Programs should be moving in at least some of the directions indicated above. The plea being made here is that a systematic, continuous and longitudinal evaluation system be incorporated as an integral part of each experimental or demonstration curriculum. Let's make a science out of community college technical education program design and development. Again, the role of the university is clear—a cooperative agency in the design, conduct, and evaluation of these programs.

Conclusions:

In the past, the educational stronghold of two-year technical education was the technical institute. That era is now well behind us and the main thrust for technician education is found in the public community-junior college. This institution provides a new setting for technical education, an environment in which there is great potential for a true student mix. Furthermore, general education is viewed with greater acceptance and worth in the community college, perhaps wisely so in view of the fact that preparing youth for leisure and family living are considered as being just as important as preparing them for the world of work.

The emergence of the public community college upon the technical education scene has created a new kind of technical education. It is a historical fact that the blending of an existing type of education (technical education in this instance) into a new kind of educational institution (i.e. the public community-junior college) usually results in a modification of both the educational program and the institution. Hopefully, we will obtain a better kind of technical education in an improved version of the public community-junior college. A vital aspect of this new variety of technical education is the increased involvement of the university. This paper has addressed

itself to only six of the many roles the university could assume in an attempt to promote, improve and expand community college technical education. Hopefully, the role of the university in the days ahead will be even greater than that found today.

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The vocational area of auto mechanics was used as a vehicle for developing a model for determining the competencies required by semi-skilled and skilled workers in a vocational area. A review of literature pertinent to the training of auto mechanics was made to establish a list of job titles and competencies within each job title. The list of job titles and competencies was made into an interview form, and a second interview form was developed to secure a listing of the social competencies needed by each job title. The forms were used to interview workers, supervisors, and management personnel from a sample cross section of different types and

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ANALYZING VOCATIONAL COMPETENCIES IN AUTO MECHANICS

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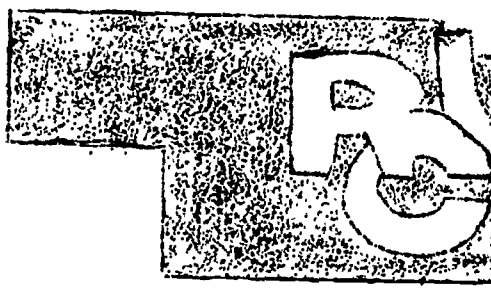

October, 1968

VT007258

NEBRASKA RESEARCH COORDINATING UNIT

FOR

VOCATIONAL EDUCATION

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ANALYZING VOCATIONAL COMPETENCIES IN AUTO MECHANICS

October, 1968

Leon P. Engelbart

NEBRASKA RESEARCH COORDINATING UNIT

FOR

VOCATIONAL EDUCATION

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ANALYZING VOCATIONAL COMPETENCIES IN AUTO MECHANICS

INTRODUCTION

Background

Occupational education in a modern society is faced with serious difficulties. On the one hand, occupational training is criticized for not providing specific job skills which would provide a reasonable level of job proficiency in a short period of time. On the other hand, if occupational education is too job specific, employment opportunities are limited upon graduation. With the rapid changes in our technological society the individual might be seriously hampered in his ability to change occupational fields at a later time in life. (1:1)

This dilemma has caused vocational educators to have differing viewpoints. They are the job cluster and the job title viewpoints. Those educators associating themselves with the job cluster idea are scrutinizing occupations in order to uncover occupational commonalities. The educators who are training students according to job titles are studying the occupations in order to uncover the specific competencies required for employment.

In either case, the need for competency studies in occupational fields is imperative.

Purpose of the study

To develop a model for determining the competencies required by semi-skilled and skilled workers in a vocational area.

In order to develop this model, one specific area of vocational education was chosen as the vehicle for determing the procedure. Two general limitations were recognized: first, that the area being studied should have a high need for semi-skilled and skilled workers; and second, that the area is included in the Trades and Industries programs as specified in the Standard Terminology For Instruction in Local and State School Systems (11). of the United States Office of Education.

Determining Vocational Area

The search for an area of vocational education with a high need for trained workers started with a study of needs on the state level. The most comprehensive study available was the

quarterly report of the Nebraska Department of Labor. Their "Unfilled Openings Survey" of August, 1967, reported that there were nine job titles listed ten or more times for each of the last three quarters. These included registered nurse, medical and health worker, miscellaneous; clerk, general office; insurance salesman; waiter or waitress, related food services; chefs and cooks, hotels and restaurants; porters and cleaners; farm hand, general; and auto mechanics (7).

The Nebraska Vocational Technical Schools placement report (7) for September and December graduates for 1967 reported that auto mechanics was the only area with more than one hundred requests for seventy or more graduates and one of these was for diesel graduates who start their training in the auto mechanics area (8).

The recently completed occupational survey in Nebraska, which was conducted by the Nebraska Research Coordinating for Vocational Education, reported a very high need in three areas for trained workers. They were in the automotive field, construction, and food related occupations (7).

The need for construction workers was probably reported as very high because the survey was taken at the end of the peak season reports, and the questionnaire was worded to show turnover as well as expansion. This turnover is high in construction because the workers return to the union labor pool after completion of the job.

REVIEW OF LITERATURE

Introduction

In reviewing the literature pertinent to this study one becomes acutely aware of the many competencies required of skilled automotive technicians. These competencies are subject to change in our constantly changing society. Vocational education should always be in the process of revision in order to meet these changes.

Job Titles and Competencies

The Standard Terminology For Instruction In Local And State Systems (12) published by the United States Office of Education in 1967 lists four separate categories under the general title of automotive industries. They are (1) body and fender, (2) mechanics, (3) specialization, and (4) others.

The body and fender area was not considered for this study as the training programs are not related to the mechanics training program. An example of the form in which these categories are described is as follows:

Mechanics--Learning experiences concerned with the components of the vehicle, including engine, power transmission, steering, brakes, and electrical systems. Included is training in the use of diagnostic and testing equipment and tools in the repair process (11:587).

In presenting the facts concerning Career Opportunities in the Retail Automotive Business the General Motors Corporation discussed nine job titles and the general duties performed by each which are apropos (2:10-29). The job descriptions are written for a large dealership and many of these jobs would be combined in smaller businesses.

The lubrication man (1) lubricates moving parts; (2) checks for wear and looseness; (3) reports any need for service; (4) checks oil levels in crankcase, transmission and differential; (5) corrects fluid level in battery, radiator, and master brake cylinder; (6) tests the strength of anti-freeze; (7) checks air in tires; (8) inspects tires for improper wear; (9) recommends front end work if needed; and (10) rotates tires when needed.

The car washer (1) washes cars, (2) polishes finishes, (3) cleans upholstery, (4) steams car engines, and (5) does many utility jobs.

The light repair mechanic (1) inspects and adjusts on new cars, (2) does similar checks after specified mileage, (3) road tests cars, and (4) makes any further adjustments necessary.

The heavy repair mechanic works on (1) crankshafts, (2) connecting rods and bearings, (3) pistons, (4) pins and rings, (5) camshafts and valves, (6) automatic and manual transmissions, and (7) driveshafts--on rings and pinion gears and axles.

The front end and steering specialist (1) aligns wheels for correct camber and caster, (2) straightens wheels if bent or out of balance, and (3) checks and adjusts steering rods and knuckles.

The tune up and diagnosis man uses analyzing equipment to check (1) compression, ignition, and carburetion; (2) distributor, condenser, and coil; (3) faults in carburetion and fuel intake; (4) ignition timing and valve operation; (5) piston rings and cylinder wall wear; (6) leaks in head gaskets; (7) battery, wiring system, starter and generator.

The electrical repair technician specializes (1) minor radio adjustments, (2) electric windows, (3) seat adjusters, (4) automatic tops, (5) electronic headlight controls, (6) panel instruments, (7) voltage regulator, (8) generating circuit, and (9) cranking motor circuit. He probably needs previous experience in a regular light repair job.

The brake specialist (1) services power brakes, (2) relines brake shoes, (3) re-surfaces drums, (4) services master and wheel cylinders, and (5) generally checks the hydraulic brake system assembly and mechanical linkages.

The gas island salesman (1) sells gas and oil and (2) sells and services tires, batteries, accessories, and incidental supplies.

The Dictionary of Occupational Titles lists many specific job titles in the field of auto mechanics. Nine of these are relevant to this study. They are air conditioning mechanic, automotive-generator-and-starter repairman, automobile-accessories installer, automobile-service mechanic, automobile-service-station attendant, automobile washer, transmission mechanic, automobile mechanic, and automobile-radiator man. The following is an example of how each of these job titles is described in the Dictionary:

> AUTOMOBILE MECHANIC---Repairs and overhauls automobiles, buses, trucks and other automotive vehicles. Plans work procedure, using charts, technical manuals, and experience. Raises vehicle, using hydraulic jack or hoist, to gain access to mechanical units bolted to underside of vehicle. Removes unit, such as engine, transmission, or differential, using wrenches and hoist. Disassembles unit and inspects parts for wear, using micrometers, calipers, and thickness gauges. Repairs or replaces parts such as pistons, rods, gears, valves, and bearings using mechanics hand-tools. Overhauls or replaces carburetors, blowers, generators, distributors, starters, and pumps. Rebuilds parts, such as crankshafts and cylinder blocks, using lathes, shapers, drill presses and welding equipment. Rewires ignition systems, lights, and instrument panel. Relines and adjusts brakes, aligns front end, repairs or replaces shock absorbers, and solders leaks in radiator. Mends damaged body and fender by hammering out or filling in dents and welding broken parts. Replaces and adjusts headlights, and installs and repairs accessories, such as radios, heaters, mirrors and windshield wipers. (10:32)

The Phillips Petroleum Company has the following competencies listed in their training programs:

1. Driveway service and selling.
2. Station appearance and housekeeping.
3. Performance of all paid services:
   a. Philcheck lubrication.
   b. Wheel bearing service.
   c. Transmission and differential servicing.

d. Tire servicing.
e. Battery servicing.
f. Servicing of accessory items.
g. Spark plug servicing.
h. Filter servicing.
i. All other services performed in the station.

4. Handling of cash and credit cards.
5. Shift accounting records and reports.
6. Maintaining complete Philcheck system, including follow-up.
7. Display and merchandising.
8. Inventory control:
   a. Stock control.
   b. Balancing the inventory.
   c. Ordering of merchandise.
   d. Verification of merchandise received.
   e. Physical verification of at least one product line daily.
9. Spend portion of time working night shift.
10. Solicitation: ---- (10)

The competencies required of a volume gas station attendant were listed in the literature from the Ginn Oil Company. They consisted of (1) clean windows (2) check oil and water (3) pump gas and (4) make change. Ginn also listed some specific needs of a personal and social nature: (1) clean, neat, attractive appearance (2) hustle (3) friendliness (4) use of proper names or titles and (5) good customer relations. (3)

The "Motor's Flat Rate & Parts Manual" is a listing of all of the jobs that need to be done in maintaining a car. It contains a listing of the labor and parts needed for each job and for every type of car. The appropriate jobs are grouped under the following headings: (1) tune-up and ignition; (2) engine assembly and cylinder block; (3) cylinder heads and valves; (4) timing case and camshaft; (5)pistons, rings, pins, bearings, and crankshaft; (6) engine oiling and crankcase ventilation; (7) vibration damper; (8) flywheel and engine mounts; (9) carburetor; (10) fuel pump, tank, gauges and lines; (11) manifold, mufflers and exhaust pipes; (12) radiator, hoses, and heater; (13) water pump, fan temperature gauge, thermostat and water jacket; (14) starting motor; (15) generator, voltage regulator, and ammeter; (16) battery cables, wiring, horn and windshield wiper; (17) lamps and light switches; (18) clutch and three speed transmission; (19) four speed transmission; (20) gearshift, speedometer, and tachometer; (21) universals, torque tube, and rear axle; (22) brakes; (23) wheels, hubs and drums; (24) front suspension and steering linkage; (25) manual steering gear; (26) power steering; (27) rear suspension; and (28) convertible top motor and pumps. (5)

The training programs developed at the Lincoln Job Corps were unique in their structure. (4) They trained corpsmen for specific job titles which were arranged on a graduated difficulty scale. The actual training was arranged by tool stations. Two typical training stations are as follows:

Tool Station #7 - Using the Screwdriver

#1-Remove and Replace Headlamp using Phillips and Straight Bladed Screwdriver.
#2-With Screwdriver and Wrench Remove and Replace Points and Condenser.
#3-Adjust Car Door Using Phillips Screwdriver.
#4-Adjusting the Steering Gear Box using Screwdriver and Wrench and Spring Steel Gauge.
#5-Remove and Replace Radiator Hoses.

Tool Station #8 - Check-Out Service Station Attendant Tasks

#1-Pump Gas.
#2-Credit Card Sale and Ring Up.
#3-Dismount and Repair Tire.
#4-Check Under Hood - specified fluid levels.
#5-Wash Windshield or Clean Fender.
#6-One Cleaning Task.
#7-Remove and Replace Generator or Alternator (Wrenches and Screwdriver)

From this review of literature the following list of job titles and competencies in each job title was developed:

VOLUME GAS STATION ATTENDANT COMPETENCIES

1. Pump gas
2. Clean all windows
3. Check crankcase oil level
4. Check cooling system liquid level
5. Visual inspection for possible troubles
6. Test anti-freeze
7. Process credit card
8. Use cash register and make change
9. Keep running inventory
10. Shift check in or out
11. Clean driveway
12. Clean pumps
13. Clean restrooms
14. Clean station proper

SERVICE STATION ATTENDANT COMPETENCIES

1. Pump gas
2. Check oil level in crankcase
3. Check battery liquid level
4. Check liquid level in windshield washer
5. Check liquid level in radiator
6. Clean all windows
7. Vacuum car floors
8. Repair tube type tire
9. Repair tubeless type tire
10. Rotate tires
11. Wash car body
12. Wax and buff car
13. Clean driveway area
14. Clean restroom
15. Clean service area of station
16. Clean customer area of station
17. Clean tools
18. Check tire pressure
19. Test anti-freeze
20. Stock restroom supplies
21. Stock station supplies
22. Use cash register and make change
23. Use credit cards
24. Use all pricing information
25. Use appropriate adjustment procedures
26. Keep station records
27. Do shift check out procedures
28. Arrange displays

SERVICE STATION MECHANIC COMPETENCIES

(In addition to those performed when working as an attendant)

1. Change oil
2. Change oil filter
3. Lubricate grease fittings
4. Check differential liquid level
5. Check power steering liquid level
6. Check transmission liquid level
7. Check brake fluid liquid level
8. Lubricate front wheel bearings
9. Extended service lubrication
10. Install seat belts
11. Install side view mirror
12. Minor brake adjustment
13. Disassemble and clean self-adjusting mechanism of brake assembly
14. Bleed brakes

15. Adjust parking brake
16. Remove and replace muffler
17. Remove and replace tail pipe
18. Remove and replace shocks
19. Remove and replace valve cover gasket
20. Remove and replace fan belt
21. Remove and replace thermostat
22. Remove and replace radiator hose
23. Remove and replace radiator
24. Remove and replace water pump
25. Back flush cooling system
26. Remove and replace air cleaner
27. Remove and replace gas line filter
28. Remove and replace fuel pump
29. Remove and replace carburetor
30. Adjust carburetor speed
31. Adjust automatic choke
32. Test battery for charge
33. Remove and replace battery
34. Remove and replace headlamps
35. Remove and replace flasher
36. Remove and replace fuses
37. Remove and replace starter
38. Remove and replace generator or alternator
39. Clean and adjust spark plugs
40. Do minor tuneup

MAINTENANCE MECHANIC COMPETENCIES

(In addition to those performed as a service station mechanic)

1. Adjusting car door
2. Adjusting steering gear box
3. Remove and replace ball joints
4. Remove and replace tie rod ends using pry bar
5. Centering steering wheel using tie rod sleeve wrench
6. Adjusting toe in and toe out by using trammel bar
7. Adjusting camber on Chevrolet using shims
8. Adjusting caster on Chevrolet using shims
9. Balancing tires on car using tire balancing machine
10. Adjusting caster, camber toe in and steering wheel centering by use of electronic equipment
11. Test compression with gauge
12. Test vacuum with gauge
13. Clean and check positive crankcase ventilating system
14. Analyze battery conditions
15. Test distributor with distributor testing machine
16. Test timing with timing light

17. Test generator output with electrical equipment
18. Test voltage regulator for alternator relay
19. Test resistances with ohmeter
20. Test with use of tachometer
21. Test with use of dwell meter
22. Test with use of scope

AUTOMOBILE MECHANIC COMPETENCIES

(In addition to those performed as a maintenance mechanic)

1. Remove and replace Delco-Morraine brake shoes
2. Remove and replace Bendix self-adjusting rear brakes
3. Remove and replace Bendix Duo-Servo brake shoes
4. Remove and replace disc brakes
5. Overhaul master cylinder
6. Overhaul wheel cylinder
7. Reface brake drum
8. Overhaul 4 barrel carburetor
9. Check heat riser for carburetor
10. Overhaul starter
11. Wire spark plugs and distributor for firing sequence
12. Test wiring harness for circuits
13. Overhaul distributor
14. Remove, replace and adjust:
15. Oil pump
16. Piston and rings
17. Connecting rod
18. Oil pan
19. Fly wheel
20. Crankshaft
21. Timing gear of cam and crankshaft
22. Cylinder head
23. Rocker Arms
24. Valves in cylinder head
25. Grinding valves
26. Seating valves

TRANSMISSION AND DIFFERENTIAL MECHANIC

1. Remove and replace drive shaft
2. Remove and replace rear universal joint
3. Remove and replace front universal joint
4. Remove and replace rear axle shaft
5. Remove and replace pinion seal of differential
6. Remove and replace carrier from/in housing
7. Remove and replace differential case
8. Remove and replace internal parts
9. Remove and replace bearings
10. Remove and replace pinion ear

11. Adjust bearing preload
12. Adjust carrier bearing preload
13. Adjust backlash with dial motor
14. Check tooth contact pattern
15. Remove and replace clutch disc and pressure plate
16. Remove and replace pilot bearing from the flywheel
17. Remove and replace transmission
18. Remove and replace side panel
19. Remove and replace case extension
20. Inspect gears
21. Remove and replace main shaft assembly
22. Remove and replace main shaft
23. Remove and replace cluster gear
24. Disassemble and reassemble overdrive unit

AUTOMATIC TRANSMISSIONS

1. Trouble shooting procedure
2. Remove and replace transmission
3. Remove and replace converter assembly
4. Remove and replace ring gear assembly
5. Eliminate oil leaks at front of transmission
6. Eliminate oil leaks at rear of transmission
7. Renew front oil pump seal
8. Remove and replace front oil pump
9. Overhaul rear oil pump
10. Renew extension housing oil seal
11. Renew parking prawl
12. Overhaul control valve assembly
13. Renew throttle lever or seals
14. Renew manual control or seals
15. Renew governor assembly
16. Overhaul front servo
17. Overhaul reverse servo
18. Adjust front and rear bands
19. Renew oil pan gasket
20. Remove and replace vacuum diaphragm unit
21. Adjust neutral switch
22. Adjust manual and throttle linkages

AIR CONDITIONING SPECIALIST

1. Trouble shooting procedures
2. Evacuate system
3. Charge system
4. Renew seals
5. Renew dehydrator
6. Renew sight glass
7. Renew E.R.P. valve

8. Renew hot gas-by-pass valve
9. Renew suction throttling valve
10. Renew compressor
11. Renew blower assembly
12. Renew vacuum switches
13. Renew air valve vacuum diaphragm
14. Renew hoses
15. Renew receiver strainer
16. Overhaul clutch
17. Overhaul compressor

RADIATOR REPAIR SPECIALIST

1. Trouble shooting procedures
2. Recognition of engine problems as diagnosed by cooling system symptoms
3. Remove hoses and radiator
4. Test radiator
5. Solder and repair radiator
6. Replace radiator and hoses

This list of job titles and competencies was then made into an interview form A/.

In order to secure a listing of the social competencies needed by each job title a general social skill interview form was devised B/. The basic ideas for this form were developed by reviewing the Lincoln Job Corps "Social Skill Evaluation" form C/.

ANALYSIS OF DATA

Introduction

The two questionnaire forms which were developed from the review of literature were used to interview workers, supervisors and management from each of the proposed job titles. In general, three workers, one supervisor, and one person from management were interviewed for each job title. A sampling for the interviews included a cross section of the different types and sizes of companies.

Job Titles

As the data were collected, it became apparent that the job titles used in the interview form would need to be revised to conform more closely to those currently being used in industry.

1. The title of Volume Gas Station Attendant seemed to suffice as a substitute for the Dictionary of Occupational Titles

description of a Self Service Station Attendant. The duties performed were very similar, at least for women customers.

2. The Service Station Attendant has some overlapping functions with the Volume Gas Station Attendant. According to industry, the lubrication competencies of the Service Station Mechanic should be added to this attendant category. This job title could be considered to consist of several specific specialists. Among these are tire, wash, wax and buff, and lubrication specialists.

3. The competencies of the Service Station Mechanic changed considerably as a result of the interviews in industry. The lubrication competencies were changed to the category of attendant; all of the Maintenance Mechanic competencies were added, as well as the brake, fuel and electrical competencies from the Automobile Mechanic category. Several more specialists were suggested by the people being interviewed as belonging in the Service Station Mechanic group. The area is composed of the following specialists: (1) exhaust system, (2) brake system, (3) front system, (4) tuneup and electrical system, (5) quick service, and (6) light repair.

The Service Station Mechanic is the only person who would need all of the competencies learned as a Volume Gas Station Attendant. The Light Repair Specialist would have a need for several competencies from the Service Station Attendant area, namely those competencies related to special lubrication problems and tire balancing.

4. The title Automotive Technician assumes an understanding of almost all of the Service Station Mechanic competencies in addition to those competencies performed by the following specialists: Heavy Repair, Automatic Transmissions, Air Conditioning, and Foreign Cars.

The Heavy Repair Specialist needs the background of a Light Repair Specialist, where as the Automatic Transmission Specialist probably would not require this background, except that it would be valuable in diagnostic procedures.

The air conditioning specialist would not require a background in other training were it not for the seasonal nature of his work. Because of this, industry suggested the Light Repair Specialist background for slack season work.

The automatic transmission and air conditioning work were not performed by two small, rural, and independent garages. They said it was too expensive for training and tools to keep current in these fields.

5. Two job titles were classified under the general title of Specialist. They were Radiator and Foreign Car Repairman.

None of the general automotive shops interviewed did their own radiator repair. They sent this work out to the specialist. This specialist would benefit from the Quick Service Specialist background. This is especially true in diagnostic problems.

The individual who was interviewed as a specialist in foreign car repair said that the only special competency required was an understanding of the metric system. All other competencies were very similar with those needed in the repair of American made cars.

Analysis of Skill Competencies by Job Titles

In analyzing the raw data collected in the interviews, a chart D/ was made of each job title's competencies. As shown in Table 1, these summary charts were condensed into a master table which shows the individual competencies needed by workers in each job title.

TABLE #1
SUMMARY OF COMPETENCIES REQUIRED BY JOB TITLES
1967-1968

#	Competency	Individual Job Titles* 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1.	Pump gas	*											*						
2.	Clean all windows, head and tail lights	*				*							*						
3.	Check crankcase oil level	*				*							*						
4.	Check cooling system liquid level	*				*							*						
5.	Visual inspection for possible troubles	*				*							*						
6.	Process credit card	*				*							*						
7.	Use of cash drawer or make change from pocket	*																	
8.	Keep running inventory	*																	
9.	Test anti-freeze	*				*							*						
10.	Shift change procedure	*				*							*						
11.	Clean driveway	*				*							*						
12.	Clean pumps inside and outside	*				*							*						
13.	Clean and stock restrooms	*				*							*						

* See Job Title Index at end of table.

Table #1 Continued

#	Competency	Individual Job Titles* 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
14.	Clean customer area of station	*				*							*						
15.	Check tire pressure		*										*						
16.	Rotate tires		*			*							*						
17.	Repair tubeless type tires		*			*							*						
18.	Repair tube type tire		*			*							*						
19.	Balance tires using spinner and hub		*									*	*		*	*		*	
20.	Balance tires using tire balancing machine		*									*	*		*	*		*	
21.	Wash car inside and out			*		*							*						
22.	Vacuum car floors			*	*	*							*						
23.	Wax and buff car body			*		*							*						
24.	Change oil				*	*							*						
25.	Change oil filter				*	*							*						
26.	Lubricate grease fittings				*	*							*						
27.	Check differential liquid level				*	*							*						
28.	Check power steering liquid level				*	*							*						
29.	Check transmission liquid level				*	*							*						
30.	Check brake fluid liquid level				*	*							*						
31.	Lubricate front wheel bearings				*	*						*	*		*	*	*	*	*
32.	Extended service lubrication				*	*						*	*		*	*	*	*	*
33.	Check battery liquid level				*	*							*						
34.	Check liquid level in windshield washer				*	*							*						
35.	Clean service bays				*	*							*						
36.	Stock station supplies					*							*						
37.	Use cash register and make change					*							*						
38.	Use all pricing information					*							*						
39.	Use appropriate adjustment procedures					*							*						
40.	Arrange displays					*							*						
41.	Change air filter					*						*	*		*	*		*	
42.	R&R muffler						*				*	*	*		*	*	*	*	*
43.	R&R shocks						*		*		*	*	*		*	*	*	*	*
44.	Use cutting torch						*				*	*	*		*	*	*	*	*
45.	R&R tail pipe						*				*	*	*		*	*	*	*	*
46.	Minor brake adjustment							*			*	*	*		*	*	*	*	*
47.	Disassemble and clean self adjusting mechanism of brake assembly							*				*	*		*	*	*	*	*

* See Job Title Index at end of table.

Table #1 Continued

#	Competency	Individual Job Titles* 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
48.	Bleed brakes							*				*	*		*	*	*	*	*
49.	Adjust parking brake							*			*	*	*		*	*	*	*	*
50.	R&R Delco Morrain brake shoes							*				*	*		*	*	*	*	*
51.	R&R Bendix self-adjusting rear brakes							*				*	*		*	*	*	*	*
52.	R&R Bendix Duo-Servo brake shoes							*					*		*	*	*	*	*
53.	R&R disc brakes							*				*	*		*	*	*	*	*
54.	Overhaul master cylinder							*				*	*		*	*	*	*	*
55.	Overhaul wheel cylinder							*				*	*		*	*	*	*	*
56.	Reface brake drum							*				*	*		*	*	*	*	*
57.	Service power brakes							*				*	*		*	*	*	*	*
58.	Adjust steering gear box								*			*	*		*	*	*	*	*
59.	R&R Ball joints								*			*	*		*	*	*	*	*
60.	R&R tie rods								*			*	*		*	*	*	*	*
61.	Center steering wheel using tie rod sleeve wrench								*			*	*		*	*	*	*	*
62.	Adjusting toe in and toe out by using trammel bar								*			*	*		*	*	*	*	*
63.	Adjusting caster camber, toe in and steering wheel by using electronic equipment								*			*	*		*	*	*	*	*
64.	Test compression with gauge									*		*	*	*	*	*	*	*	*
65.	Test vacuum with gauge									*		*	*	*	*	*	*	*	*
66.	Test distributor with distributor testing machine									*		*	*	*	*	*	*	*	*
67.	Test timing with light									*		*	*	*	*	*	*	*	*
68.	Test generator output with electrical equipment									*		*	*		*	*	*	*	*
69.	Test voltage regulator or alternator relay									*		*	*		*	*	*	*	*
70.	Test resistance with ohmeter									*		*	*		*	*	*	*	*
71.	Test with use of tacho-meter									*		*	*		*	*	*	*	*
72.	Test with use of dwell meter									*		*	*	*	*	*	*	*	*
73.	Test with use of scope									*		*	*	*	*	*	*	*	*
74.	Overhaul starter									*		*	*		*	*	*	*	*
75.	Wire spark plug and distributor									*		*	*		*	*	*	*	*
76.	Test wiring harness circuits									*		*	*	*	*	*	*	*	*

* See Job Title Index at end of table.

Table #1 Continued

#	Competency	Individual Job Titles* 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
77.	Overhaul distributor									*		*	*		*	*	*	*	*
78.	Minor tune-up									*	*	*	*		*	*	*	*	*
79.	Clean and adjust spark plugs									*	*	*	*		*	*	*	*	*
80.	Analyze battery conditions									*	*	*	*		*	*	*	*	*
81.	Test battery for charge									*	*	*	*		*	*	*	*	*
82.	R&R battery									*	*	*	*		*	*	*	*	*
83.	R&R headlamps									*	*	*	*		*	*	*	*	*
84.	R&R flasher									*	*	*	*		*	*	*	*	*
85.	R&R fuses									*	*	*	*		*	*	*	*	*
86.	R&R starter									*	*	*	*	*	*	*	*	*	*
87.	R&R generator or alternator									*	*	*	*	*	*	*	*	*	*
88.	Install radio									*	*	*	*		*	*	*	*	*
89.	Solder wiring									*	*	*	*		*	*	*	*	*
90.	Exhaust analization									*		*	*	*	*	*	*	*	*
91.	R&R gas line filter									*	*	*	*		*	*	*	*	*
92.	R&R fuel pump									*	*	*	*		*	*	*	*	*
93.	R&R carburetor									*	*	*	*	*	*	*	*	*	*
94.	Adjust carburetor speed									*	*	*	*	*	*	*	*	*	*
95.	Adjust automatic choke									*	*	*	*	*	*	*	*	*	*
96.	Overhaul 4 barrel carburetor									*		*	*		*	*	*	*	*
97.	R&R valve cover gasket										*	*	*	*	*	*	*	*	*
98.	R&R fan belt										*	*	*	*	*	*	*	*	*
99.	R&R thermostat										*	*	*	*	*	*	*	*	*
100.	R&R radiator hose										*	*	*	*	*	*	*	*	*
101.	R&R radiator										*	*	*		*	*	*	*	*
102.	R&R water pump										*	*	*	*	*	*	*	*	*
103.	Backflush cooling system										*	*	*		*	*	*	*	*
104.	Solder										*	*	*		*	*	*	*	*
105.	Braze										*	*	*		*	*	*	*	*
106.	Electric weld										*	*	*		*	*	*	*	*
107.	Towing instructions											*	*		*	*	*	*	*
108.	Adjust car door										*	*	*	*	*	*	*	*	*
109.	Clean and check positive crankcase ventilating system										*	*	*		*	*	*	*	*
110.	Install seat belt										*	*	*		*	*	*	*	*
111.	Install side view mirror										*	*	*		*	*	*	*	*
112.	R&R oil pump													*		*	*		*
113.	R&R Piston and rings													*		*	*		*
114.	R&R Connecting rod													*		*	*		*
115.	R&R Oil pan													*		*	*		*
116.	R&R Fly wheel													*		*	*		*

* See Job Title Index at end of table.

Table #1 Continued

#	Competency	Individual Job Titles* 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
117.	R&R crankshaft													*		*	*		*
118.	R&R camshaft bearing													*		*	*		*
119.	R&R mainbearing													*		*	*		*
120.	R&R and adjust timing gear of cam and crankshaft													*		*	*		*
121.	R&R cylinder head													*		*	*		*
122.	R&R rocker arms													*		*	*		*
123.	R&R valves in cylinder head													*		*	*		*
124.	Grinding valves													*		*	*		*
125.	Seating valves													*		*	*		*
126.	R&R air conditioner													*		*	*		*
127.	Recharge air conditioner													*		*	*		*
128.	R&R drive shaft													*		*	*		*
129.	R&R rear universal joint													*		*	*		*
130.	R&R rear axle shaft seal													*		*	*		*
131.	R&R rear axle shaft													*		*	*		*
132.	R&R pinion seal of differential													*		*	*		*
133.	R&R carrier from housing													*		*	*		*
134.	R&R differential case													*		*	*		*
135.	R&R internal parts													*		*	*		*
136.	R&R bearings													*		*	*		*
137.	R&R pinion ear													*		*	*		*
138.	Adjust bearing preload													*		*	*		*
139.	Adjust backlash with dial motor													*		*	*		*
140.	Adjust carrier bearing preload													*		*	*		*
141.	Check tooth contact pattern													*		*	*		*
142.	R&R clutch disc and pressure plate													*		*	*		*
143.	R&R pilot bearing from the flywheel													*		*	*		*
144.	R&R transmission													*		*	*		*
145.	R&R aide panel													*		*	*		*
146.	R&R case extension													*		*	*		*
147.	Inspect gears													*		*	*		*
148.	R&R main shaft assembly													*		*	*		*
149.	R&R main shaft													*		*	*		*
150.	R&R cluster gear													*		*	*		*
151.	Disassemble & reassemble overdrive unit													*		*	*		*
152.	Automatic transmission diagnosis														*		*		*

* See Job Title Index at end of table

Table #1 Continued

#	Competency	Individual Job Titles 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
153.	R&R transmission														*		*		*
154.	R&R converter assembly														*		*		*
155.	R&R ring gear assembly														*		*		*
156.	Eliminate oil leaks at front of transmission														*		*		*
157.	Eliminate oil leaks at rear of transmission														*		*		*
158.	Renew front oil pump seal														*		*		*
159.	R&R front oil pump														*		*		*
160.	Overhaul rear oil														*		*		*
161.	Renew extension housing oil seal														*		*		*
162.	Renew parking prawl														*		*		*
163.	Overhaul control valve assembly														*		*		*
164.	Renew throttle lever or seals														*		*		*
165.	Renew manual control or seals														*		*		*
166.	Renew governor assembly														*		*		*
167.	Overhaul front servo														*		*		*
168.	Overhaul reverse servo														*		*		*
169.	Adjust front & rear bands														*		*		*
170.	Renew oil pan gasket														*		*		*
171.	R&R vacuum diaphragm unit														*		*		*
172.	Adjust neutral switch																		
173.	Adjust manual & throttle linkages														*		*		*
174.	Air conditioning diagnosis																*		*
175.	Evacuate system														*		*		*
176.	Charge system														*		*		*
177.	Renew seals														*		*		*
178.	Renew dehydrator														*		*		*
179.	Renew sight glass														*		*		*
180.	Renew E.R.P. valve														*		*		*
181.	Renew hot gas-by-pass valve														*		*		*
182.	Renew suction throttling valve														*		*		*
183.	Renew compressor														*		*		*
184.	Renew blower assembly														*		*		*
185.	Renew vacuum switches														*		*		*
186.	Renew air valve vacuum diaphragm														*		*		*

* See Job Title Index at end of table.

Table #1 Continued

#	Competency	Individual Job Titles* 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
187.	Renew hoses	* * *
188.	Renew receiver strainer	* * *
189.	Overhaul clutch	* * *
190.	Overhaul compressor	* * *
191.	Install air conditioner	* * *
192.	Understand metric system	* *
193.	Diagnosis of cooling system leaks	*
194.	Diagnosis of other heating problems	*
195.	Remove hoses and radiator	*
196.	Test radiator	*
197.	Solder radiator	*
198.	Braze radiator	*
199.	Electric weld on radiator	*
200.	Replace radiator hoses	*
201.	Clean radiator with chemicals	*
202.	R&R heater and heater system	*

* JOB TITLE INDEX

1. Volume gas station attendant
2. Tire specialist
3. Wash and wax specialist
4. Lubrication specialist
5. Service station attendant
6. Exhaust system specialist
7. Brake system specialist
8. Front system specialist
9. Tune up and electrical specialist
10. Quick service specialist
11. Light repair specialist
12. Service station mechanic
13. Heavy repair specialist
14. Automatic transmission specialist
15. Air conditioning specialist
16. Automotive technician
17. Radiator specialist
18. Foreign car specialist

1. Volume Gas Station Attendant. All of the listed competencies were checked as important by a minimum of four of the five respondents. Changes in wording were suggested in two competencies. To "Clean all windows" should be added the words "head and tail lights." "Check cooling system liquid level" should have the words "when asked" added to it. Two respondents suggested adding the competency of "Clean inside of pumps."

2. Service Station Attendant. This title includes three specialists otherwise known as lubrication, tire, and wash and wax specialists. Most of the listed competencies were checked as important by four or more of those interviewed. "Vacuum car floors" was checked by three people who said it should be included in the lube and/or wash job. "Clean tools" was left unchecked as very few tools would be used by people in this job title. "And pumps" should be added to the competency "clean driveway area." "Stock restroom supplies" should be part of "clean restrooms." "Keep station records" was listed by four out of five respondents as being the manager's responsibility.

All of those people interviewed suggested adding the following competencies to the job title of Service Station Attendant: (1) change oil, (2) change oil filter, (3) lubricate grease fittings, (4) check differential liquid level, (5) check power steering liquid level, (6) check transmission liquid level, (7) check brake fluid liquid level (8) lubricate front wheel bearings, and (9) extended service lubrication.

3. Service Station Mechanic. This title assumes those competencies under Service Station Attendant have been previously mastered. It also includes the following specialists: Exhaust System, Brake System, Front System, Tuneup and Electrical System, Quick Service and Light Repair Specialists.

Four of five service station mechanics said they did not (1) "adjust camber or caster by using shims," (2) "adjust caster, camber, toe in steering wheel centering by use of electronic equipment," and (3) "reface brake drum."

When Automotive Technicians reviewed this category, four or more suggested adding the following competencies to the Service Station Mechanic area. They were (1) using cutting torch, (2) using electric welder, (3) towing instructions, (4) exhaust analysis, (5) brazing, (6) soldering, (7) caring for power brakes, and (8) servicing automatic choke.

4. Automotive Technician. This title assumes that all of the competencies needed as a Service Station Mechanic are needed except for those competencies which could be classified as the duties of a Service Station Attendant. The following specialists would be a part of this general title: Heavy Repair, Automatic Transmission, and Air Conditioning Specialists.

The technicians suggested adding these competencies: (1) remove and replace camshaft, (2) remove and replace main bearings, (3) remove and replace rear axle shaft seal, (4) remove and replace air conditioners and, (5) recharge air conditioners, to the list for Heavy Repair Specialist.

The list of competencies needed by the Automatic Transmission Specialist was considered complete. Opinions were divided as to the need for the background of Quick Service Specialist. Those respondents who said this background was not needed did feel that these Automatic Transmission Specialists did need other training for the times when work is slack in their specialty.

"The installation of air conditioners" should be added to the Air Conditioning Specialists' list of competencies. Most of the respondents said they needed some of the competencies of a Quick Service Specialist for working on air conditioners. They were all in agreement that some other training background was needed during the slack season in order to be employable.

5. Others. The one radiator repair specialist who was interviewed added the following competencies to the list: (1) brazing, (2) electric welding, (3) use chemicals for cleaning, (4) heater repair. He also suggested a need for Quick Service Specialist training for diagnosing troubles which were described by the customer as radiator problems but were really other heating problems, such as poor motor timing.

The one foreign car specialist suggested that (1) knowledge of the metric system, (2) availability of specification books and, (3) a set of the smaller metric tools were the only competencies and tools needed by an Automotive Technician to be fully competent Foreign Car Specialists.

Analysis of General Related Competencies by Job Titles

The raw data from the interview forms was recorded on a summary chart E/. The information from this chart is condensed in Table 2.

TABLE #2

AVERAGE IMPORTANCE OF GENERAL RELATED COMPETENCIES
AS REPORTED BY JOB TITLE RESPONDENTS, 1968

Competency	Volume Gas Station Attendant	Service Station Attendant	Service Station Mechanic	Automotive Technician	Radiator Specialist
Clean neat attractive appearance.	3.8	3.8	3.8	3.7	4.0
Uses correct names for tools, places and things.	3.0	2.4	2.6	3.7	3.0
Can communicate well with fellow employees, employer and customer.	3.6	3.8	3.8	3.8	4.0
Refers to people by their proper name and titles.	3.6	3.4	3.5	3.1	4.0
Accepts constructive and helpful advice.	3.8	3.6	3.4	3.8	4.0
Follows directions.	3.8	3.8	3.8	3.9	4.0
Follows recommended safety rules.	3.6	4.0	4.0	3.8	4.0
Arrives at work and meetings on time.	3.8	4.0	4.0	3.8	4.0
Able to handle personal problems without getting them involved on the job.	3.6	3.6	3.6	3.9	4.0
Generally has a positive attitude.	3.6	3.4	3.4	3.8	4.0

1. Volume Gas Station Attendant. All ten competencies were rated as of average or higher need. Management was much more realistic than the workers themselves. Management said they would be happy to hire people with average ability in these jobs. "Uses correct names for tools, places and things" was rated the lowest.

2. Service Station Attendant. Nine of the categories were rated average or higher. "Uses correct names for tools, places and things" was again rated the lowest.

3. Service Station Mechanic. All ten categories were rated as average or higher. "Uses correct names for tools, places and things" continued to be rated the lowest.

4. Automotive Technician. All ten categories received a rating of average or higher. "Refers to people by their proper names and titles" was clearly of the lowest need, however. This probably points out that these people work much more with things than people; this was not the case with the three previous job titles.

5. Others. The general related competencies needed for a Foreign Car Specialist are the same as those needed by the Automotive Technician.

The Radiator Repair Specialist rate all areas of high need except "Use correct names for tools, places and things." He spends a considerable amount of his time in working with the customer.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Vocational educators face many problems in determining curriculum content. This content should be derived from an analysis of competencies required of workers on the job. This study has attempted to develop a procedure for securing a list of these competencies for most vocational fields. It is suggested that the local educator can adapt any or all of this procedure to his own situation.

The recommended procedure is as follows:

1. Determine the need.
   a. Locally - surveys, interested groups, and labor department area surveys.
   b. State and national - reports and surveys.

2. Develop a working list of job titles and competencies by analyzing:
   a. Dictionary of Occupational Titles.(10)
   b. Standard Terminology For Instruction in Local and State School Systems (11) of the United States Office of Education.
   c. Published materials from industry.

3. Select a panel of experts from industry made up of workers, supervisors, and management.

4. Interview the panel of experts to critique the list of job titles and competencies.
   a. Assemble the panel of experts for a day. The strengths of this method are that it is quicker and that a consensus of opinion might be reached on the spot.
   b. Alternate method - interview the panel of experts, individually at home or on the job. The main strengths of this method are that (1) more people may be contacted for each job title, (2) they are much more free to express their opinions, and (3) there is better cooperation from the members as they do not miss work or need to spend extra money for transportation and meals.

5. Analyze the collected information to determine the general and specific job titles by the competencies performed. By analyzing these specific job titles, training programs can be developed for semi-skilled and skilled workers which will more nearly match these individuals interests and abilities.

In developing this procedure, a secondary benefit resulted. This was the development of a competency list by job titles for the general field of auto mechanics; it is summarized in Table 2.

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APPENDIX A

(Copy)

SPECIFIC COMPETENCIES

Page #_____

Job Title_____

Job Title of Person Being Interviewed_____

Instructions:

1. Look over the list of skills and draw a line through any skill not needed for this job title.
2. Add any skills needed for this job title which are not listed.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

APPENDIX B

(Copy)

GENERAL RELATED COMPETENCIES

Page #____

Job Title_____

Job Title of Person Being Interviewed_____

Instructions: In the column at the right hand side please rate each skill according to the following scale:

1. Not needed
2. Little need
3. Average need
4. High need

---

1. Clean, neat, attractive appearance. . . . . ____
2. Uses correct names for tools, places and things . . . ____
3. Can communicate well with fellow employees, employer, and customer. . . . . ____
4. Refers to persons by their proper names and titles. . ____
5. Accepts constructive and helpful advice . . . . . ____
6. Follows directions. . . . . ____
7. Follows recommended safety rules. . . . . ____
8. Arrives at work and meetings on time. . . . . ____
9. Able to handle personal problems without getting them involved on the job. . . . . ____
10. Generally has a positive attitude . . . . . ____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____

APPENDIX C

(Copy)

SOCIAL SKILL EVALUATION

Corpsman's Name_____ Date_____ Evaluator_____

Most Recent Tool Station Completed_____ check one RA Instructor

Interview Date & Time_____ Counselor's Signature_____

At designated tool stations, circle the selected ratings and forward this form to the Counselor for use in an interview with the Corpsman.

0 - So lacking in this skill he is dangerous to himself and others.
2 - Below average in this skill and requires much additional training.
4 - About average for the citizen who would be employable in the job skill level which the Corpsman is presently achieving.
6 - Above average in this skill.
8 - So far above average in this skill that he serves as an example for others to follow.

I. Appropriate use of language (saying the right thing at the right time)

A. Uses the correct names for tool station and residence objects, places, activities.
0 2 4 6 8

B. Has adequate verbal skill to verbalize the step-by-step procedures required by the six-step method.
0 2 4 6 8

C. Expresses self without use of swear words and foul language in training and social situations.
0 2 4 6 8

D. Refers to people by their proper names and titles.
0 2 4 6 8

E. Knows and uses words that express how he feels.
0 2 4 6 8

II. Responsibility (meeting obligations)

A. Follows directions given by the Instructor and RA.
0 2 4 6 8

B. Follows necessary safety procedures when working on tool stations and dorm duties.
0 2 4 6 8

C. Keeps his living or working area neat and clean.
0 2 4 6 8

D. Completes project assignments in back-up class to support the group leader.
0 2 4 6 8

E. Arrives at work, class or meetings on time (check incident report file).
0 2 4 6 8

III. Stress Resistance (keeping your cool) (being able to take it)

A. Works steadily on a task until it is completed (even if it requires him to fall behind his training group).

0 2 4 6 8

B. Accepts failure, disappointment and difficulty but still keeps trying.

0 2 4 6 8

C. Accepts constructive, helpful advice when asked to fill out a T.G.I.F.

0 2 4 6 8

D. Generally has a positive attitude about what is happening to him in the training program.

0 2 4 6 8

IV. Relation to Future Time (planning ahead)

A. Puts off present pleasure for future gain (is goal orientated)

0 2 4 6 8

B. Plans ahead for leaves, passes and progress in the training program.

0 2 4 6 8

C. Budgets his pay so that it lasts for the entire pay period in emergencies.

0 2 4 6 8

APPENDIX D

RESPONSES TO COMPETENCIES
BY JOB TITLES

VOLUME GAS STATION ATTENDANT

#	Competency	1	2	3	4	5	T
1.	Pump gas	*	*	*	*	*	5
2.	Clean all windows, head and tail lights	*	*	*	*	*	5
3.	Check crankcase oil level (when asked)	*	*	*	*	*	5
4.	Check cooling system liquid level (when asked)	*		*	*	*	4
5.	Visible inspection for possible troubles						
6.	Test anti-freeze	*	*	*	*		4
7.	Process credit card	*	*	*	*	*	5
8.	Use of cash drawer and make change from pocket	*	*	*	*	*	5
9.	Keep running inventory	*	*	*	*	*	5
10.	Shift check in or out procedure	*	*	*	*	*	5
11.	Clean driveway	*	*	*	*	*	5
12.	Clean pumps	*	*	*	*	*	5
13.	Clean and stock restrooms	*	*	*	*	*	5
14.	Clean station proper	*	*	*	*	*	5
15.	Clean pump inside			*	*		2
16.	Change tires or mount			*			1
17.	Charge batteries in car			*			1

SERVICE STATION ATTENDANT

#	Competency	1	2	3	4	5	T
1.	Pump gas	*	*	*	*	*	5
2.	Check oil level in crankcase	*	*	*	*	*	5
3.	Check battery liquid level	*	*	*	*	*	5
4.	Check liquid level in windshield washer	*	*	*	*	*	5
5.	Check liquid level in radiator	*	*	*	*	*	5
6.	Clean all windows	*	*	*	*	*	5
7.	Visual check tires	*	*	*	*	*	5
8.	Vacuum car floors with lube or wash		*	*	*		3
9.	Repair tube type tire	*	*	*	*	*	5
10.	Repair tubeless type tire	*	*	*	*	*	5
11.	Rotate tires	*	*	*	*	*	5
12.	Wash car body	*	*	*	*	*	5
13.	Wax and buff car	*	*	*	*	*	5
14.	Clean driveway area and pumps	*	*	*	*	*	5
15.	Clean restroom and stock supplies	*	*	*	*	*	5
16.	Clean service area of station	*	*	*	*	*	5
17.	Clean customer area of station	*	*	*	*	*	5
18.	Clean tools						
19.	Check tire pressure	*	*	*	*	*	5
20.	Test anti-freeze	*	*	*	*	*	5
21.	Stock restroom supplies (include in cleaning)						
22.	Stock station supplies		*	*	*	*	4
23.	Use cash register and make change	*	*	*	*	*	5
24.	Use credit cards	*	*	*	*	*	5
25.	Use all pricing information	*	*	*	*	*	5
26.	Use appropriate adjustment procedure	*	*	*	*	*	5
27.	Keep station records			*			1
28.	Do shift check out procedure	*	*	*	*	*	5
29.	Arrange displays		*	*	*	*	4
30.	Clean station window				*		1
31.	Change oil	*	*	*	*	*	5
32.	Change oil filter and vacuum	*	*	*	*	*	5
33.	Lubricate grease fittings	*	*	*	*	*	5
34.	Check differential liquid level	*	*	*	*	*	5
35.	Check power steering liquid level	*	*	*	*	*	5
36.	Check transmission liquid level	*	*	*	*	*	5
37.	Check brake fluid liquid level	*	*	*	*	*	5
38.	Lubricate front wheel bearings	*	*	*	*	*	5
39.	Extended service lubrication	*	*	*	*	*	5

LIGHT REPAIR MECHANIC

#	Competency	1	2	3	4	5	T
1.	Install seat belts	*	*	*			3
2.	Install side view mirror	*	*	*	*	*	5
3.	Minor brake adjustment	*	*	*	*	*	5
4.	Disassemble and clean self-adjusting mechanism of brake assembly or R&R	*	*	*	*	*	5
5.	Bleed brakes	*	*	*	*	*	5
6.	Adjust parking brake	*	*	*	*	*	5
7.	Remove and replace muffler	*	*	*	*	*	5
8.	R&R tail pipe	*	*	*	*	*	5
9.	R&R shocks	*	*	*	*	*	5
10.	R&R valve cover gasket	*	*	*	*	*	5
11.	R&R fan belt	*	*	*	*	*	5
12.	R&R thermostat	*	*	*	*	*	5
13.	R&R radiator hose	*	*	*	*	*	5
14.	R&R radiator	*	*	*	*	*	5
15.	R&R water pumps	*	*		*	*	4
16.	Back flush cooling system	*			*	*	3
17.	R&R air cleaners	*	*	*	*	*	5
18.	R&R gas line filter	*	*	*	*	*	5
19.	R&R fuel pump	*	*	*	*	*	5
20.	R&R carburetor	*	*		*	*	4
21.	Adjust carburetor speed	*	*	*	*	*	5
22.	Adjust automatic choke	*	*	*	*	*	5
23.	Test battery for charge	*	*	*	*	*	5
24.	R&R battery	*	*	*	*	*	5
25.	R&R headlamps	*	*	*	*	*	5
26.	R&R flasher	*	*	*	*	*	5
27.	R&R fuses	*	*	*	*	*	5
28.	R&R starter	*	*		*	*	4
29.	R&R generator or alternator	*	*		*	*	4
30.	Clean and adjust spark plugs	*	*	*	*	*	5
31.	Do minor tuneup	*	*	*	*	*	5
32.	Adjust car door					*	1
33.	Adjust steering gear box	*	*		*		3
34.	R&R ball joints	*	*		*		3
35.		*	*		*		3
36.	Centering steering wheel using tie rod sleeve wrench	*	*		*		3
37.	Adjusting camber on Chevrolet using shims	*	*				2
38.	Adjusting caster on Chevrolet using shims	*	*				2
39.	Balancing tires on car using tire balancing machine	*	*	*		*	4
40.	Balancing tires on car using spinner and hub	*	*	*	*	*	5
41.	Adjusting caster, camber toe in and steering wheel centering by using electronic equipment	*	*				2
42.	Test compression with gauge	*	*	*	*	*	5
43.	Test vacuum with gauge	*	*	*	*	*	5
44.	Clean and check positive crankcase ventilating system	*	*	*	*	*	5

Cont.

#	Competency	1	2	3	4	5	T
45.	Adjust toe in and toe out using trammel bar	*	*	*	*	*	5
46.	Analyze battery conditions	*	*	*	*	*	5
47.	Test distributor with machine	*		*	*	*	4
48.	Test timing with timing wires	*	*	*	*	*	5
49.	Test generator out-put with electrical equipment	*	*		*	*	4
50.	Test voltage regulator for alternator relay	*	*		*	*	4
51.	Test resistances with ohmeter	*	*		*		3
52.	Test with use of tachometer	*	*	*	*	*	5
53.	Test with use of dwell meter	*	*	*	*	*	5
54.	Test with use of scope	*	*	*	*	*	5
55.	R&R Delco-Morraine brake shoes	*	*	*	*	*	5
56.	R&R Bendix self-adjusting rear brakes	*	*	*	*	*	5
57.	R&R Bendix Duo-Servo brake shoes	*	*	*	*	*	5
58.	R&R disc brakes	*	*	*	*		4
59.	Overhaul master	*	*	*	*	*	5
60.	Overhaul wheel cylinder	*	*	*	*	*	5
61.	Reface brake drum	*	*				2
62.	Overhaul 4 barrel carburetor	*	*		*		3
63.	Check heat riser for carburetor	*	*	*	*		4
64.	Overhaul starter	*	*		*	*	4
65.	Wire speaker plugs and distributor for firing	*	*	*	*	*	5
66.	Test wiring harness for circuit	*	*	*	*	*	5
67.	Overhaul distributor	*	*	*	*	*	5

ADDITIONAL COMPETENCIES FOR LIGHT REPAIR MECHANICS AS SUGGESTED BY HEAVY DUTY SPECIALISTS

#	Competency	1	2	3	4	5	T
68.	Repair windshield wiper motor, switch and washer	*					1
69.	Use welding torch	*	*	*	*	*	5
70.	Use electric weld	*	*	*	*	*	5
71.	Towing instructions	*	*	*	*	*	5
72.	Exhaust analysis	*	*	*	*	*	5
73.	Brazing	*	*	*	*	*	5
74.	Soldering	*	*	*	*		4
75.	Power brakes	*	*	*	*	*	5
76.	Foreign cars (know metric system and have extra set of small metric wrenches)					*	1

HEAVY DUTY SPECIALIST

#	Competency	1	2	3	4	5	T
1.	Remove, replace & adjust oil pumps	*	*	*	*	*	5
2.	Remove, replace & adjust piston and rings	*	*	*	*	*	5
3.	Remove replace & adjust connecting rod	*	*	*	*	*	5
4.	Remove, replace & adjust oil pan	*	*	*	*	*	5
5.	Remove, replace & adjust fly wheel	*	*	*	*	*	5
6.	Remove, replace & adjust crankshaft	*	*	*	*	*	5
7.	R&R main bearing	*	*	*	*		4
8.	Remove, replace & adjust timing gear of cam and crankshaft	*	*	*	*	*	5
9.	Remove, replace and adjust cylinder head	*	*	*	*	*	5
10.	Remove, replace and adjust rocker arms	*	*	*	*	*	5
11.	Remove, replace and adjust valves in cylinder head	*	*	*	*	*	5
12.	R&R air conditioner	*	*	*	*	*	5
13.	Recharge air conditioner	*	*	*	*	*	5
14.	Grinding valves	*	*	*	*	*	5
15.	Seating valves	*	*	*	*	*	5
16.	Know metric system (tools for foreign cars)					*	1
17.	R&R drive shaft	*	*	*	*	*	5
18.	R&R rear universal joint	*	*	*	*	*	5
19.	R&R rear axle shaft seal	*	*	*	*	*	5
20.	R&R rear axle shaft	*	*	*	*	*	5
21.	R&R pinion seal of differential	*	*	*	*	*	5
22.	R&R carrier from/in housing	*	*	*	*	*	5
23.	R&R differential case	*	*	*	*	*	5
24.	R&R internal parts	*	*	*	*	*	5
25.	R&R bearings	*	*	*	*	*	5
26.	R&R pinion ear	*	*	*	*	*	5
27.	Adjust bearing preload	*	*	*	*	*	5
28.	Adjust carrier bearing preload	*	*	*	*	*	5
29.	Adjust backlash with dial motor	*	*	*	*	*	5
30.	Check tooth contact pattern	*	*	*	*	*	5
31.	R&R clutch disc and pressure plate	*	*	*	*	*	5
32.	R&R pilot bearing from the flywheel	*	*	*	*	*	5
33.	R&R transmission	*	*	*	*	*	5
34.	R&R side panel	*	*	*	*	*	5
35.	R&R case extension	*	*	*	*	*	5
36.	Inspect gears	*	*	*	*	*	5
37.	R&R main shaft assembly	*	*	*	*	*	5
38.	R&R main shaft	*	*	*	*	*	5
39.	R&R cluster gear	*	*	*	*	*	5
40.	Disassembly and reassemble overdrive unit	*	*	*	*		4
41.	R&R camshaft bearings						

AUTOMATIC TRANSMISSIONS SPECIALISTS

#	Competency	1	2	3	4	5a *	5b *	T
1.	Trouble shooting procedure	*	*	*	*			4
2.	R&R transmission	*	*	*	*			4
3.	R&R converter assembly	*	*	*	*			4
4.	R&R ring gear assembly	*	*	*	*			4
5.	Eliminate oil leaks at front of transmission	*	*	*	*			4
6.	Eliminate oil leaks at rear of transmission	*	*	*	*			4
7.	Renew front oil pump seal	*	*	*	*			4
8.	R&R front oil pump	*	*	*	*			4
9.	Overhaul rear oil pump	*	*	*	*			4
10.	Renew extension housing oil seal	*	*	*	*			4
11.	Renew parking prawl	*	*	*	*			4
12.	Overhaul control valve assembly	*	*	*	*			4
13.	Renew throttle lever or seals	*	*	*	*			4
14.	Renew manual control or seals	*	*	*	*			4
15.	Renew governor assembly	*	*	*	*			4
16.	Overhaul front servo	*	*	*	*			4
17.	Overhaul reverse servo	*	*	*	*			4
18.	Adjust front and rear bands	*	*	*	*			4
19.	Renew oil pan gasket	*	*	*	*			4
20.	R&R vacuum diagraph	*	*	*	*			4
21.	Adjust neutral switch	*	*	*	*			4
22.	Adjust manual and throttle linkages	*	*	*	*			4
23.	Light mechanic skills needed	*	*	*	*			4
24.	Heavy mechanic skills needed	*						1

* 5a and 5b - Small town garage, no automatic transmission work was done.

AIR CONDITIONING SPECIALIST

#	Competency	1	2	3	4	5a *	5b *	T
1.	Trouble shooting procedure	*	*	*	*			4
2.	Evacuate system	*	*	*	*			4
3.	Charge system	*	*	*	*			4
4.	Renew seals	*	*	*	*			4
5.	Renew dehydrator	*	*	*	*			4
6.	Renew sight glass	*	*	*	*			4
7.	Renew E.R.P. valve	*	*	*	*			4
8.	Renew hot gas-by-pass valve	*	*	*	*			4
9.	Renew suction throttling valve	*	*	*	*			4
10.	Renew compressor	*	*	*	*			4
11.	Renew blower assembly	*	*	*	*			4
12.	Renew vacuum switches	*	*	*	*			4
13.	Renew air valve vacuum diaphram	*	*	*	*			4
14.	Renew hoses	*	*	*	*			4
15.	Renew receiver strainer	*	*	*	*			4
16.	Overhaul clutch	*	*	*	*			4
17.	Overhaul compressor	*	*	*	*			4
18.	Install air conditioner		*					1
19.	Light mechanic skills needed	*	*	*	*			4
20.	Heavy mechanic skills needed	*	*	*	*			4
21.	Cooling system knowledge needed		*					1
22.	Refrigeration principles needed	*						1
23.	Electrical system knowledge needed	*	*					2
24.	Vacuum system knowledge needed	*						1

* 5a and 5b - small town garages, no air conditioning work was done.

RADIATOR REPAIR SPECIALIST

#	Competency	1
1.	Trouble shooting procedures or diagnosis of heating problems such as:	
	Use timing light	*
	Head gasket leaks	*
2.	Recognition of engine problems as diagnosed by cooling system symptoms.	*
3.	Remove hoses and radiator	*
4.	Test radiator	*
	Brazing	*
	Electric welding	*
	Soldering	*
5.	Replace radiator hoses	*
6.	Use chemicals in cleaning	*
7.	R&R heater and heater systems (includes some electrical work.)	*
8.	Probably best to be prepared as a light repair mechanic first.	*

APPENDIX E

RESPONSES FOR GENERAL RELATED COMPETENCIES

#	Competency	Volume Gas Station Attendant						Service Station Attendant						Service Station Mechanic					
		1	2	3	4	5	Av.	1	2	3	4	5	Av.	1	2	3	4	5	Av.
1.	Clean neat attractive appearance	4	4	4	4	3	3.8	4	4	4	3	4	3.8	4	4	4	3	4	3.8
2.	Uses correct names for tools, places and things	1	4	3	4	3	3.0	2	3	3	3	1	2.4	3	3	3	3	1	2.6
3.	Can communicate well with fellow employees, employer and customer	3	4	4	4	3	3.6	4	3	4	4	4	3.6	4	3	4	4	4	3.8
4.	Refers to people by their proper names and titles	4	4	4	3	3	3.6	4	4	4	3	2	3.4	4	4	4	3	2	3.4
5.	Accepts constructive and helpful advice	4	4	4	4	3	3.8	4	3	3	3	4	3.6	4	3	3	3	4	3.6
6.	Follows directions	4	4	4	4	3	3.8	4	3	4	4	4	3.8	4	3	4	4	4	3.8
7.	Follows recommended safety rules	3	4	4	4	3	3.6	4	4	4	4	4	4.0	4	4	4	4	4	4.0
8.	Arrives at work and meetings on time	4	4	4	4	3	3.8	4	4	4	4	4	4.0	4	4	4	4	4	4.0
9.	Able to handle personal problems without getting them involved on the job	4	4	4	4	2	3.6	4	3	3	3	4	3.6	4	3	3	3	4	3.6
10.	Generally has a positive attitude	4	4	4	4	2	3.6	4	3	4	3	3	3.4	4	3	4	3	3	3.4
11.	Know customers			4															
12.	Sales attitude				4														
13.	Know customer				3														
14.	Honesty - Integrity					3													
15.	Manager should be out meeting public									4									

RESPONSES FOR GENERAL RELATED COMPETENCIES (Cont.)

#	Competency	Heavy Repair Specialist						Automatic Transmission Specialist						Air Conditioning Specialist					
		1	2	3	4	5	Av.	1	2	3	4	5	Av.	1	2	3	4	5	Av.
1.	Clean neat attractive appearance	4	4	4	4	4	4.0	3	3	4	3		3.25	3	4	4	3		3.5
2.	Uses correct names for tools, places and things.	4	4	3	3	4	3.6	3	4	4	4		3.75	4	3	4	4		3.75
3.	Can communicate well with fellow employees, employer and customer	4	4	4	3	4	3.8	4	4	4	3		3.75	3	4	4	4		3.75
4.	Refers to people by their proper names and titles	4	2	4	4	2	3.2	1	3	4	3		2.75	3	4	4	3		3.5
5.	Accepts constructive and helpful advice	4	4	4	4	4	4.0	4	3	4	4		3.75	4	4	4	3		3.75
6.	Follow directions	4	4	3	4	3	3.6	4	4	4	4		4.0	4	4	4	4		4.0
7.	Follow recommended safety rules	4	4	4	4	3	3.8	4	4	4	4		4.0	4	4	3	4		3.75
8.	Arrives at work and meetings on time	4	3	4	3	4	3.6	4	4	4	4		4.0	4	4	4	4		4.0
9.	Able to handle personal problems without getting them involved on the job	4	4	3	4	4	3.8	4	4	4	4		4.0	4	4	4	4		4.0
10.	Generally has a positive attitude	4	3	4	3	4	3.6	4	4	4	4		4.0	4	4	4	4		4.0

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Occupational Demand in Indiana.

Indiana Employment Security Div., Indianapolis. Research and Statistics Section
Indiana State Board of Vocational and Technical Education, Indianapolis
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INDIANA

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OCCUPATIONAL DEMAND IN INDIANA

1) Indiana Employment, by Industry

2) Projected 5-Year Needs by Occupational Group

3) Occupational Needs by Curriculum Areas

Prepared for the Indiana State Board of Vocational and Technical Education

INDIANA EMPLOYMENT SECURITY DIVISION
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VT007281

I N T R O D U C T I O N

The following material is presented in accordance with the requirements of the Vocational Education Act of 1963 and the agreement with the Indiana State Board of Vocational and Technical Education. The material is provided for the purpose of planning vocational and technical education curricula.

PART I A resume of the present and anticipated employment conditions in the State, including a distribution of employment by industry group.

This material provides a background of economic conditions and shows the relative importance of broad types of products and services provided. Occupational needs in the State are influenced by the industry distribution, for instance -- printing industry employment comprises only 1.4 per cent and lumber and furniture only 1.8 per cent of total employment in the State, while the metals manufacturing employment (primary metals, fabricated metals, transportation equipment and machinery manufacturing) constitute 22.8 per cent and wholesale and retail trade 17.0 per cent. This is significant in considering allotment of available funds to match the vocational training needs peculiar to Indiana's industry.

PART II A table showing the five-year expansion and replacement needs for occupational groups and the selected occupations for which data were available.

This listing represents some of the important occupations in the State and all of the major occupational groups, except laborers, into which employment is traditionally grouped. The groupings correspond to Federal census arrangements and the occupations are those shown in the Bureau of Labor Statistics material, based on census data.

This table cannot be arranged in curriculum areas; however, it is included to show needs for workers in specific occupations and to show relative total needs among the broad occupational categories. It should be noted that not all of these jobs will be open to vocational high school graduates; some will require more advanced training or experience, or will have other hiring limitations such as a minimum age. Nevertheless, there will be many open to trained youth.

PART III A table and narrative for each curriculum area, with the number of training-related job openings received during a one-year period in the local offices of the Indiana Employment Security Division along with supplementary occupational data where available.

Occupational needs data available from a number of sources were accumulated and are presented by curriculum area. Job openings placed with the 34 Indiana Employment Security Division offices over a one-year period were tabulated and placement experience reviewed. This information was augmented when possible by other available data because the proportion of employer job openings filed with the Employment Service offices varies among the types of occupations. For example, a high proportion of the service and clerical openings occurring is received (also, turnover in these types of occupations is high) while the proportion of all professional and technical openings is much smaller.

The lists of job openings by occupation and curriculum area include occupations for which local offices had ten or more openings during the year, excluding some for which vocational training obviously was not necessary or feasible. For each occupation listed, a letter code is assigned to indicate the relative ease of filling experienced by the local offices. A few easy-to-fill occupations are included; however, it is felt that it would be more economical to concentrate training resources elsewhere.

1967 ANNUAL AVERAGE INDIANA EMPLOYMENT
(Figures in Thousands)

Industry group	Employment	
	Number	As % of Total
TOTAL	2,001.4	100.0%
In nonfarm industries	1,773.9	88.6
Manufacturing	714.4	35.7
Durable goods	548.5	27.4
Lumber and wood products	11.3	.6
Furniture	24.4	1.2
Stone-clay-glass	26.2	1.3
Primary metals	110.7	5.5
Steel mills	67.0	-
Fabricated metals	52.5	2.6
Structural metal products	13.7	-
Nonelectrical machinery	69.3	3.5
General industrial machinery	22.8	-
Electrical machinery	124.0	6.2
Radios, tvs, phones, electronic components	59.5	-
Equipment for autos, aircraft,railroads	25.3	-
Transportation equipment	99.6	5.0
Autos and parts	59.2	-
Aircraft and parts	23.1	-
Instruments	5.7	.3
Other durable goods (ord.,misc. mfg.)	24.7	1.2
Nondurable goods	165.9	8.3
Food	44.6	2.2
Canning and preserving	5.2	-
Apparel and textiles	14.5	.7
Paper	15.2	.8
Printing	27.4	1.4
Newspapers	10.0	-
Commercial printing	6.2	-
Chemicals	26.7	1.3
Drugs and medicines	14.5	-
Petroleum refining	7.2	.4
Rubber and plastics products	27.4	1.4
Other nondurable goods (tobacco,leather)	3.0	.1
Nonmanufacturing	1,059.4	52.9
Mining and quarrying	7.2	.4
Contract construction	84.2	4.2
Transportation, comm., utilities	97.1	4.9
Transportation	58.1	-
Trucking & warehousing	28.7	-
Communication	21.0	-
Utilities	17.9	-
Wholesale & retail trade	340.9	17.0
Wholesale trade	71.0	-
Retail trade	269.9	-
General merchandise	53.1	-
Finance, insurance, real estate	68.9	3.4
Service and miscellaneous	192.0	9.6
Government	269.2	13.5
Educational services	132.9	-
All other nonagricultural	165.2	8.3
Agricultural	62.4	3.1

Indiana's nonfarm industries employment advanced by 36,700 from 1966 to 1967. The nonmanufacturing sector expanded by 4.1 per cent, or 41,800 workers while manufacturing as a whole suffered a minor loss. This loss was due largely to work stoppages in a number of industries although slackening of product demand was a contributing factor in the electrical machinery and furniture groups. The transportation equipment employment total remained relatively unchanged as the automobile subgroup decreased and the aircraft and parts group increased. Steel mill employment declined slightly; part of the loss was due to the lack of qualified manpower.

Minor employment gains occurred in the nonelectrical machinery, instruments, stone-clay-glass, paper, printing and chemical industry groups. The "other durable goods" group, which includes ordnance and miscellaneous manufacturing, recorded a large increase, 7,400, with the increase reflecting the needs for the Vietnam War.

The nonmanufacturing sector showed growth in most industry divisions. Contract construction employment increased by 7.7 per cent; the trade division added 8,700 new workers, a 2.6 per cent gain; the services division which includes such establishments as auto repair shops, garages, lodging places, cleaners, private hospitals and private schools added 9,800 new employees for a growth rate of 5.4 per cent. The government division showed an increase of 15,000 with well over half of this in school employment.

In fiscal 1969, the economic expansion of the State is expected to continue, with nonmanufacturing divisions showing the greatest gains. Contract construction employment is expected to register one of the largest percentage increases if mortgage money for home building is readily available. Employment in this industry is not only highly seasonal but is influenced by other factors in the economy. The retail trade group is expected to show the greatest numerical gain in employment. This group, along with finance-insurance-real estate, services and government will continue to absorb most of the increase in the labor force.

In the manufacturing group, employment is expected to rise in the transportation equipment and electrical machinery industries with an anticipated increase in consumer demand. The increase in residential construction should bolster employment in other durable goods manufacturing industries. Employment in primary metals is not expected to increase significantly. The nondurable goods industry groups will continue their relatively stable level of growth with the apparel industry regaining some of its previous losses.

The agricultural sector will continue its long-term downtrend. The long-term outlook for most other industry divisions is for increasing employment with a higher growth rate in nonmanufacturing than in manufacturing industry groups.

JOB OPPORTUNITIES BY OCCUPATIONAL GROUP
PROJECTED 5-YEAR NEEDS

OCCUPATIONAL TITLE	REPLACEMENT AND EXPANSION NEEDS FIVE YEARS	
PROFESSIONAL, TECHNICAL & KINDRED OCCUPATIONS	75,700	
Draftsmen		2,700
Technicians, Excluding Medical & Dental		7,100
Medical & Dental Technicians		2,200
Accountants & Auditors		3,300
MANAGERS, OFFICIALS AND PROPRIETORS	50,000	
Purchasing Agents		1,100
CLERICAL AND KINDRED WORKERS	98,000	
Stenographers, Typists and Secretaries		31,700
Office Machine Operators		6,400
Accounting Clerks		3,200
Bookkeepers, Hand		4,500
Bank Tellers		1,000
Cashiers		3,700
Shipping and Receiving Clerks		3,000
Telephone Operators		2,300
SALES WORKERS	34,600	
Insurance Agents and Brokers		2,500
Real Estate Agents and Brokers		1,400
CRAFTSMEN, FOREMEN & KINDRED WORKERS	56,000	
Construction Craftsmen		15,700
Carpenters		3,300
Brickmasons, Stone & Tile Setters		800
Cement and Concrete Finishers		200
Electricians		2,500
Excavating, Grading Machine Operators		1,300
Painters & Paperhangers		1,700
Plasterers		250
Plumbers and Pipefitters		2,100
Roofers & Slaters		280
Structural Metal Workers		600
Upholsterers		300
Stationary Engineers		1,100

OCCUPATIONAL TITLE	REPLACEMENT AND EXPANSION NEEDS FIVE YEARS	
CRAFTSMEN, FOREMEN & KINDRED WORKERS -- (continued)		
Metalworking Craftsmen, Except Mechanics	11,700	
Skilled Machining Workers		5,600
Blacksmiths Forgemen, Hammermen		370
Boilermakers		220
Heat Treaters, Annealers, Tempers		280
Millwrights		780
Molders, Metal (Except Coremakers)		790
Patternmakers, Metal and Wood		520
Rollers and Roll Hands		540
Sheet Metal Workers		1,160
Toolmakers, Diemakers, Setters		1,400
Mechanics and Repairmen	15,800	
Airplane Mechanics & Repairmen		440
Motor Vehicle Mechanics		3,600
Office Machine Mechanics		400
Radio and TV Mechanics		460
Railroad and Car Shop Mechanics		140
Transportation & Public Utilities Craftsmen	1,220	
Linemen & Servicemen		340
Locomotive Engineers		300
Other Craftsmen and Kindred Workers	8,800	
Bakers		260
Cabinetmakers		660
Cranemen, Hoistmen, Derrickmen		1,400
Jewelers & Watchmakers		140
Opticians & Lens Grinders		100
Printing Trades Craftsmen	1,100	
Compositors & Typesetters		400
Photoengravers & Lithographers		170
Pressmen and Plate Printers		260
OPERATIVES AND KINDRED WORKERS	83,500	
Drivers, Bus, Truck and Tractor		6,100
Deliverymen, Routemen, Cab Drivers		3,300

OCCUPATIONAL TITLE	REPLACEMENT AND EXPANSION NEEDS FIVE YEARS	
OPERATIVES AND KINDRED WORKERS - (continued)		
Semiskilled Metalworking Occupations	10,500	
Machine Tool Operators		1,600
Welders and Flame Cutters		2,100
Meatcutters, Except Meatpacking		1,200
Sewers and Stitchers, Manufacturing		1,600
Laundry and Dry Cleaning Workers		1,900
FARMERS AND FARM WORKERS	8,200	
SERVICE WORKERS	84,800	
Protective Service Workers		6,900
Guards, Watchmen		3,100
Cooks, Except Private Household		5,800
Waiters and Waitresses		8,600
Attendants, Hospital and Other Institutions		5,000
Practical Nurses		5,400
PRIVATE HOUSEHOLD WORKERS	10,000	

PART III, CURRICULUM AREA INFORMATION

01--AGRICULTURAL EDUCATION

04--DISTRIBUTIVE EDUCATION

07--HEALTH OCCUPATIONS EDUCATION
TABLE I--PERSONNEL NEEDS IN INDIANA HOSPITALS
TABLE II--ANTICIPATED NEEDS IN INDIANA HOSPITALS

09--HOME ECONOMICS EDUCATION

14--BUSINESS AND OFFICE EDUCATION
MANPOWER REQUIREMENTS IN DATA PROCESSING OCCUPATIONS, IN FORT WAYNE, INDIANAPOLIS AND THE GARY AREA

16--TECHNICAL OCCUPATIONS EDUCATION

17--TRADE AND INDUSTRIAL EDUCATION

01--AGRICULTURAL EDUCATION

OCCUPATION	1-YEAR ES JOB OPENINGS	EASE OF FILLING (SEE KEY)	OCCUPATION	1-YEAR ES JOB OPENINGS	EASE OF FILLING (SEE KEY)
FARMING			FOOD PROCESSING WORKERS		
Grain Farming	2,351	A	Butcher, All Around Slaughtering	20	C
Vegetable Farming	3,415	A	Boner, Slaughter House	15	C
Fruit and Nut Farming	191	B	Quality Control Technician	10	A
Horticultural Specialty	501	A			
Gardening and Groundskeeping	828	B	SERVICE WORKERS		
Dairy Farming	47	C	Animal Caretaking	83	C
Poultry Farming	18	A			
General Farming	234	B	TOTAL OPENINGS, ALL OCCUPATIONS		7,770
Farm Irrigation	39	A			
Farm Equipment Operators	18	A			

KEY TO EASE OF FILLING:

A--Easy to Fill--81 to 100 per cent filled
B--Relatively Easy to Fill--61 to 80 per cent filled
C--Difficult to Fill--60 or less per cent filled

TREND

Employment in agriculture in Indiana has been declining steadily and the outlook for the future is for further decline, especially in the farm laborer classification. Currently, the proportion of farm workers to total employment is less than the National average. However, over the next five-year period, approximately 8,200 farmers and farm workers will be needed to fill vacancies left by those who die, retire or leave the work force for other reasons.

OCCUPATIONAL NEEDS

Over the year, Employment Service local office job openings related to agricultural education amounted to less than 8,000 throughout the State. Of these, most jobs fell in the easy-to-fill category and less than .04 per cent listed high school graduation as a requirement of the job. Most of those requiring high school education were in the gardening and groundskeeping group. In vegetable and grain farming, only five openings required more than an 8th grade education.

Training needs in the food processing industry will be small in those occupations relating to agriculture. Increases which occur will be in the nature of technical occupations requiring chemical or mechanical skills training.

In the service industries, there will be increases in all occupations and the needs for animal caretakers is expected to increase also. This group includes occupations concerned with boarding, breeding, plucking, grooming, cleaning, training or treating animals in kennels, veterinary hospitals, zoos and related environments. It does not include feeding and care of animals in stockyards preparatory to slaughtering.

04--DISTRIBUTIVE EDUCATION

OCCUPATION	1-YEAR ES JOB OPENINGS	EASE OF FILLING (SEE KEY)
MANAGERS AND RELATED OCCUPATIONS		
Managers, Sales	12	C
Store Managers	161	C
Managers, Financial Institutions	36	C
Traffic and Warehouse Managers	15	C
Manager Trainees	284	C
Public Relations Men	23	C
Underwriters	11	C
Purchasing Agents	45	C
SALES WORKERS		
Sales Clerks	1,284	B
Salesmen and Sales-Persons,Commodities	2,999	C
Salesmen, Services	60	C
Routemen, Salesmen-Drivers	750	B
Insurance Agents and Brokers	159	B
Salesmen, Real Estate	15	B
MERCHANDISING WORKERS		
Department Heads, Supermarket	108	C
Cashier-Checkers	625	B
Sales Closers	11	C
Drapery Hangers	20	C
MOTOR FREIGHT AND TRANSPORTATION WORKERS		
Truck Drivers, Light	1,640	B
Truck Drivers, Heavy	541	B
Tank Truck Drivers	42	C
Tractor Trailer Truck Drivers	313	B
Van Drivers	43	C
Bus and Taxi Drivers	140	C
Dispatcher-Starters	51	C
Ticket Agents	28	C
TOTAL OPENINGS, ALL OCCUPATIONS		9,416

KEY TO EASE OF FILLING:

A--Easy to Fill--81 to 100 per cent of openings were filled
B--Relatively Easy to Fill--61 to 80 per cent of openings were filled
C--Difficult to Fill--60 or less per cent of openings were filled

TREND

Wholesale and retail trade, where most of distributive education curriculum area jobs are found, represents 17 per cent of all employment in the State. Employment in this group averaged 340,900 in 1967. Employment in retail trade is expected to show the greatest numerical gain in workers of any industry division in fiscal 1969. The long-term trend is also for increased employment.

OCCUPATIONAL NEEDS

Sales workers represent over a third of all employment in the wholesale and retail trade division. In the next five-year period, nearly 35,000 people will be needed for expansion and to replace workers who die, retire or leave the occupation. Many of these openings can be filled by high school graduates.

Employment in sales-related jobs such as managers and merchandising workers will also increase proportionately as retail and wholesale trade industries expand. Increased activity in the movement of goods will create a growing demand for truck drivers and related occupations.

Job openings in the local offices of the Indiana Employment Security Division over the year included about 9,400 jobs for which training could be offered in a distributive education program. Many of these jobs would be particularly suited for setting up or expanding cooperative education training. About half of these openings were for sales workers. More than 600 were management-related; nearly half of these were in the trainee class. Not all of these could be filled by trainees with only a high school education; jobs such as purchasing agents, underwriters, public relations men, traffic and warehouse managers and insurance agents would be likely to require post-high school training or adult evening courses to qualify.

Many of the job openings in the distributive education curriculum area are hard to fill for reasons other than a lack of trained people. Some of the sales clerks openings were hard to fill because of lack of transportation to shopping centers, undesirable hours of work, or a pay scale lower than that in other types of jobs. For some jobs in which product knowledge was an important factor, experience was required by the employer.

07--HEALTH OCCUPATIONS EDUCATION

OCCUPATION	1-YEAR ES JOB OPENINGS	EASE OF FILLING (SEE KEY)
ADVANCED TRAINING OCCUPATIONS (DEGREE AND/OR LICENSE NEEDED)		
Professional Nurses	64	C
Licensed Practical Nurses	169	C
Radiologic Technicians	27	C
OTHER HEALTH OCCUPATIONS		
Aides, Orderlies, and Attendants	1,377	B
Psychiatric Aides	85	C
Unlicensed Practical Nurses	435	C
Laboratory Assistants	44	C
Dental Laboratory Technicians	19	C
TOTAL OPENINGS, ALL OCCUPATIONS		2,220

KEY TO EASE OF FILLING:

A--Easy to Fill--81 to 100 per cent of openings were filled
B--Relatively Easy to Fill--61 to 80 per cent of openings were filled
C--Difficult to Fill--60 or less per cent of openings were filled

TREND

In 1966, nearly 31,000 professional and technical workers were employed in health occupations in Indiana hospitals. In addition,many thousands were employed in clinics, physicians' and dentists' offices, nursing homes and government agencies, as well as a few in industry. Employment in hospitals is expected to increase by one to one and one-half per cent per year for the next five years; the number of nursing homes and personnel to staff them will expand also.

OCCUPATIONAL NEEDS

Expansion needs for hospitals alone will involve the addition of at least 4,000 professional and technical workers in the next five years. Another 5,200 annually will be needed in hospitals to replace those who retire, die, or leave the occupation. In hospitals and in other health service establishments the greatest number of people will be needed in the occupations of professional nurse and aide, orderly and attendant. Substantial needs will occur also in the occupation of licensed practical nurse, and medical and dental technician.

Many of these workers can be prepared in a vocational high school or post-high school training program geared to hospital standards. Workers in the health service occupations are in short supply and accelerated training will be needed to fill the anticipated demand.

More than 2,200 job openings in health-related occupations were received by the local offices of the Employment Security Division over the past year. Most of the openings were in the difficult to fill class. Many of these jobs could be filled by workers trained in vocational high school courses. Advanced training in hospital associated courses would be needed for the occupations of professional nurse, licensed practical nurse, medical technologist and radiologic technologist; however, pre-professional training courses could be provided at the high school level.

The following two tables, taken from Manpower Requirements in Indiana Hospitals, augment the information given in the job openings table:

TABLE I

PERSONNEL NEEDS IN INDIANA HOSPITALS
1966-1967

CATEGORY OF PERSONNEL	TOTAL STAFF APRIL 1966	VACANCIES APRIL 1966	NEEDS FOR OPTIMUM CARE ADDITIONS 1967	NEEDS FOR OPTIMUM CARE TOTAL STAFF 1967	ANNUAL REPLACEMENTS	TOTAL NEEDS 1966-67
TOTAL	49,084	2,685	3,139	54,908	5,807	11,631
PROFESSIONAL NURSES	8,781	878	937	10,596	1,642	3,457
LICENSED PRACTICAL NURSES	2,355	349	411	3,115	667	1,427
AIDES, ORDERLIES & ATTENDANTS	9,435	446	554	10,435	1,576	2,576
PSYCHIATRIC AIDES	3,957	364	253	4,574	691	1,308
MEDICAL TECHNOLOGISTS	1,251	136	180	1,567	240	556
HISTOLOGIC TECHNOLOGISTS	51	1	2	54	2	5
RADIOLOGIC TECHNOLOGISTS	604	50	77	731	114	241
LABORATORY ASSISTANTS	387	23	37	447	32	92
MEDICAL RECORDS LIBRARIANS & TECHNICIANS	464	29	35	528	28	92
SURGICAL TECHNICIANS	361	35	35	431	20	90
DIETITIANS	240	41	25	306	9	75
FOOD SERVICE MANAGERS	156	18	7	181	8	33
CYTOTECHNOLOGISTS	29	1	4	34	1	6
ELECTROCARDIOGRAPH TECHNICIANS	103	8	8	119	3	19
ELECTROENCEPHALOGRAM TECHNICIANS	37	1	5	43	1	7
X-RAY ASSISTANTS	150	7	16	173	27	50
OCCUPATIONAL THERAPISTS	67	11	23	101	3	37
OCCUPATIONAL THERAPY ASSISTANTS	81	2	7	90	4	13
PHYSICAL THERAPISTS	127	23	25	175	5	53
PHYSICAL THERAPY ASSISTANTS	132	9	15	156	6	30
SPEECH PATHOLOGISTS & AUDIOLOGISTS	11	1	7	19	1	9
RECREATION THERAPISTS	158	10	41	209	6	57
INHALATION THERAPISTS	163	33	38	234	7	78
PHARMACISTS	227	28	15	270	8	51
PHARMACY ASSISTANTS	147	7	7	161	7	21
MEDICAL LIBRARIANS	66	8	12	86	2	22
SOCIAL WORKERS	218	31	70	319	9	110
SOCIAL WORKER ASSISTANTS	16	3	2	21	1	6
ALL OTHER PROFESSIONAL AND TECHNICAL OCCUPATIONS	1,085	131	98	1,314	37	266
TOTAL, PROFESSIONAL & TECHNICAL	30,859	2,684	2,946	36,489	5,157	10,787
FOOD SERVICE WORKERS	5,000	0	33	5,033	191	224
LAUNDRY WORKERS	1,632	0	6	1,638	62	68
HOUSEKEEPING WORKERS	3,041	0	57	3,098	118	175
MAINTENANCE WORKERS	2,539	0	46	2,585	52	98
MANAGEMENT	858	1	6	865	24	31
SECRETARIAL-CLERICAL	5,155	0	45	5,200	203	248
TOTAL NONPROFESSIONAL	18,225	1	193	18,419	650	844

Source: Manpower Requirements In Indiana Hospitals
INDIANA EMPLOYMENT SECURITY DIVISION

TABLE II

ANTICIPATED PERSONNEL NEEDS IN INDIANA HOSPITALS
1967, 1970 and 1975

CATEGORY OF PERSONNEL	STAFF NEEDED FOR OPTIMUM PATIENT CARE				
				CHANGE FROM	
	1967	1970	1975	1967-1970	1970-1975
TOTAL	54,908	57,145	61,490	2,237	4,345
PROFESSIONAL NURSES	10,596	11,028	11,866	432	838
LICENSED PRACTICAL NURSES	3,115	3,242	3,488	127	246
AIDES, ORDERLIES & ATTENDANTS	10,435	10,860	11,686	425	826
PSYCHIATRIC AIDES	4,574	4,760	5,122	186	362
MEDICAL TECHNOLOGISTS	1,567	1,631	1,755	64	124
HISTOLOGIC TECHNOLOGISTS	54	56	60	2	4
RADIOLOGIC TECHNOLOGISTS	731	761	818	30	57
LABORATORY ASSISTANTS	447	465	501	18	36
MEDICAL RECORDS LIBRARIANS & TECHNICIANS	528	550	592	22	42
SURGICAL TECHNICIANS	431	449	483	18	34
DIETITIANS	306	318	342	12	24
FOOD SERVICE MANAGERS	181	189	203	8	14
CYTOTECHNOLOGISTS	34	35	38	1	3
ELECTRCCARDIOGRAPH TECHNICIANS	119	124	133	5	9
ELECTROENCEPHALOGRAM TECHNICIANS	43	45	48	2	3
X-RAY ASSISTANTS	173	180	194	7	14
OCCUPATIONAL THERAPISTS	101	105	113	4	8
OCCUPATIONAL THERAPY ASSISTANTS	90	94	101	4	7
PHYSICAL THERAPISTS	175	182	196	7	14
PHYSICAL THERAPY ASSISTANTS	156	162	175	6	13
SPEECH PATHOLOGISTS & AUDIOLOGISTS	19	20	22	1	2
RECREATION THERAPISTS	209	218	234	9	16
INHALATION THERAPISTS	234	243	262	9	19
PHARMACISTS	270	281	303	11	22
PHARMACY ASSISTANTS	161	167	180	6	13
MEDICAL LIBRARIANS	86	90	97	4	7
SOCIAL WORKERS	319	332	357	13	25
SOCIAL WORKER ASSISTANTS	21	22	23	1	1
ALL OTHER PROFESSIONAL AND TECHNICAL OCCUPATIONS	1,314	1,367	1,472	53	105
TOTAL, PROFESSIONAL & TECHNICAL	36,489	37,976	40,864	1,487	2,888
FOOD SERVICE WORKERS	5,033	5,238	5,637	205	399
LAUNDRY WORKERS	1,638	1,705	1,834	67	129
HOUSEKEEPING WORKERS	3,098	3,224	3,469	126	245
MAINTENANCE WORKERS	2,585	2,690	2,895	105	205
MANAGEMENT	865	900	968	35	68
SECRETARIAL-CLERICAL	5,200	5,412	5,823	212	411
TOTAL NONPROFESSIONAL	18,419	19,169	20,626	750	1,457

Source: Manpower Requirements In Indiana Hospitals
INDIANA EMPLOYMENT SECURITY DIVISION

09--HOME ECONOMICS EDUCATION

OCCUPATION	1-YEAR ES JOB OPENINGS	EASE OF FILLING (SEE KEY)
CARE AND GUIDANCE OF CHILDREN		
Child-Care Attendants	59	C
House Mothers	24	C
Nursemaids	4,619	C
CLOTHING MANAGEMENT, PRODUCTION AND SERVICES		
Alteration Tailors	59	C
Tailor-Seamstresses	77	C
Sewing Machine Operators, Garment	440	A
Sewing Machine Operators, Nongarment	330	B
Sewing Machine Operators, Automatic	14	A
Laundresses, Private Family	266	A
FOOD MANAGEMENT, PRODUCTION AND SERVICES		
Cooks and Chefs	1,258	C
Short-Order Cooks	1,328	C
Meat Cutters	274	C
Pantrymen	463	C
Waiters-Waitresses	6,523	C
Cooks, Domestic	106	C
INSTITUTIONAL AND HOME MANAGEMENT		
Superintendent, Institution	30	C
Hotel Housekeepers	61	C
Maids and Housemen	1,393	B
Maids, Domestic	4,758	C
Housekeepers, Private Family	254	C
OTHER OCCUPATIONAL PREPARATION		
Cosmetologists	68	C
Instructors and Demonstrators	68	C
Models	10	C
TOTAL OPENINGS, ALL OCCUPATIONS		22,482

KEY TO EASE OF FILLING:

A--Easy to Fill--81 to 100 per cent of openings were filled
B--Relatively Easy to Fill--61 to 80 per cent of openings were filled
C--Difficult to Fill--60 or less per cent of openings were filled

TREND

Employment in the occupations related to home economics training is on the increase in Indiana. Jobs in the service industries and occupations as a whole will grow at a faster rate than any other group over the next few years. Expansion and replacement needs over the next five years will require 84,800 service workers, many of whom can be trained in vocational high school courses.

OCCUPATIONAL NEEDS

About 5,800 cooks will be needed outside of those working in private households. Training in this occupation should be altered to meet the needs of hotel and restaurant firms, where the majority of these workers currently are men. Courses in quantity food preparation and kitchen management are necessary to qualify these workers to meet the needs of industrial employers. A very small proportion of the need will be for private household cooks.

Jobs will also be available for about 8,600 waiters and waitresses. However, it is questionable whether or not these workers should be trained for this vocation in high school since it requires very short-term training and is usually given by employers on the job. Many workers who follow this profession have a loose attachment to the occupation--leaving the occupation for higher paying jobs when they are available and returning when other jobs are difficult to find.

Last year, local offices of the Indiana State Employment Security Division received a total of more than 22,000 openings in occupations related to the home economics curriculum area. Employers throughout the State placed orders for 1,258 job openings for cooks and chefs, 1,323 openings for short-order cooks, and 106 openings for domestic cooks; all were in the hard-to-fill category. Waiters and waitresses accounted for 6,500 openings. These figures include some turnover, since many of the workers in hotel and restaurant occupations tend to change jobs fairly frequently. Employment Security local offices receive a large percentage of the total openings in these occupations; therefore, it is possible that this figure inflates the total net needs.

In the clothing management, production, and services curriculum area, the hard-to-fill jobs were in the highly-skilled occupations of alteration tailor and tailor-seamstress categories. Lesser skilled jobs such as sewing-machine operators and laundresses in private homes were easy to fill. Sewing machine operators usually receive short-term on-the-job training on industrial type machinery supplied by the employing firm.

All of the occupations except maids and housemen in the institutional and home management curriculum area were hard to fill. Trained hotel housekeepers are particularly scarce due to a lack of available training facilities in the area.

Another factor influencing the scarcity of household workers is the booming economy in Indiana. Private industry hires many of those who would enter household jobs if other more lucrative employment were not available. In the domestic jobs, part of the problem is due to the lack of prestige and a lower pay scale traditionally associated with this type of employment.

14--BUSINESS AND OFFICE EDUCATION

OCCUPATION	1-YEAR ES JOB OPENINGS	EASE OF FILLING (SEE KEY)
ACCOUNTING & COMPUTING		
Accountants & Auditors*	215	C
Billing Machine Operators	55	B
Bookkeeping Machine Operators	362	C
Computing Machine Operators	166	C
Accounting Clerks	430	C
Posting Clerks	108	B
Bookkeepers	787	C
Cashiers	1,021	C
Tellers	186	B
BUSINESS DATA PROCESSING SYSTEMS		
Programers, Business*	43	C
Computer Operators	48	C
Tabulating Machine Operators	83	C
Sorting Machine Operators	10	C
Other Equipment Operators	10	C
FILING, OFFICE MACHINES, AND GENERAL OFFICE		
Duplicating Machine Operators	95	C
Embossing Machine Operators	44	A
Proof Machine Operators	30	C
Clerks, General Office	3,656	C
Brokerage Clerks	29	C
Blueprint Machine Operators	19	C
Photolith Operators	26	A
File Clerks	285	B
INFORMATION COMMUNICATION		
Correspondence Clerks	37	C
Mail Clerks	189	B
Post Office Clerks	73	B
Telephone Operators	357	C
Receptionists & Related	581	C
Service Clerks	669	B
Messengers, Office Boys, Delivery Boys	567	B
MATERIALS SUPPORT OCCUPATIONS		
Estimators*	31	C
Production Clerks	197	C
Shipping and Receiving Clerks	622	C
Stock Clerks and Related Occupations	1,668	B
PERSONNEL, TRAINING AND RELATED		
Personnel and Training Administration Occupations*	117	C
Personnel Clerks	68	B
STENOGRAPHIC, SECRETARIAL AND RELATED		
Stenographers	743	C
Secretaries	1,282	C
Transcribing Machine Operators	191	C
SUPERVISORY AND ADMINISTRATIVE MANAGEMENT		
Administrative Assistants*	109	C
General Foremen*	36	B

OCCUPATION	1-YEAR ES JOB OPENINGS	EASE OF FILLING (SEE KEY)	OCCUPATION	1-YEAR ES JOB OPENINGS	EASE OF FILLING (SEE KEY)
TYPING AND RELATED			MISCELLANEOUS OFFICE		
Typists	443	C	Collectors	182	C
Clerk-Typists	2,948	C	Adjusters	33	C
Keypunch Operators	470	C	Hotel Clerks	138	C
			TOTAL OPENINGS, ALL OCCUPATIONS		19,509

* Skills in these occupations would require more advanced training; however, certain basic skills could be acquired at the Vocational High School level.

KEY TO EASE OF FILLING:

A--Easy to Fill--81 to 100 per cent of openings were filled
B--Relatively Easy to Fill--61 to 80 per cent of openings were filled
C--Difficult to Fill--60 or less per cent of openings were filled

TREND

Employment in occupations related to business and office education will experience a rapid growth in the coming years. Most of these occupations fall in the clerical and kindred workers classification; others are in the professional, technical and managerial group. (Part II, Page 1)

OCCUPATIONAL NEEDS

In the next five years, 98,000 clerical and kindred workers will be needed for expansion and to replace those who die, retire or leave the occupation. Of these, stenographers, typists and secretaries will require the largest number of trained people with needs for 31,700 workers. Other needs will include 6,400 office machine operators (including data processing machine operators), 3,200 accounting clerks, 4,500 bookkeepers, 1,000 bank tellers, 3,700 cashiers, 3,000 shipping and receiving clerks, and 2,300 telephone operators. Many of these jobs can be filled by trained vocational high school graduates.

There were nearly 20,000 job openings related to the business and office education curriculum area in the local offices of the Employment Security Division in Indiana over the year. Most of these jobs required only training which could be acquired in high school; however, some would require more advanced training in post-high school education courses.

Growth rates will vary among the various occupations within the broad groupings. One of the fastest growing fields of work is the business and data processing curriculum area. A survey covering the three major employment areas (Fort Wayne, Indianapolis, and the Gary area) revealed that opportunities in four occupations

will provide nearly 1,000 job opportunities annually. Three of these occupations are in the business and office education curriculum area.

In January 1968, Fort Wayne, Indianapolis and Gary area employment comprised 40.7 per cent of total nonfarm employment in the State. However, since data processing systems usage is concentrated in the larger firms and more populous areas, more than half of the workers in this field are employed in these major areas. The following tables, taken from three surveys conducted by J. P. Lisack, Purdue University School of Technology, give anticipated requirements in selected data processing occupations in these areas. This information is given to augment the data recorded in the Job Openings table, since Employment Security Offices do not receive a large proportion of the total openings available, especially in the more technical occupations.

In the three major areas surveyed, estimated annual requirements for programers amounted to 215, computer and related equipment operators 203, and keypunch and related occupations were 448. Most of these jobs could be filled by trained high school graduates, with the exception of programers, who are required to have more advanced training. Shortages of programers have been persistent and have become more acute as computer usage has increased. The most numerous workers are in the clerical and operations classification; jobs in this category are nearly 53 per cent of the total employed in data-processing systems. These jobs are the most easily trained in a vocational high school program.

In the accounting and computing curriculum area, job openings were in a variety of occupations including accountants and auditors, bookkeepers and cashiers. Training courses in vocational high school could be offered in all of these occupations; however, accountants and auditors would require much more advanced training to achieve competency levels required by employers.

Over the next five years, replacement and expansion needs in this occupation will require 3,300 workers to meet the anticipated needs. There has been a shortage of trained people in this profession for a number of years and the outlook is for a continuing shortage unless training is greatly accelerated. In spite of the increase in the use of computers, bookkeepers are still very difficult to find, particularly those who can handle a complete set of books and understand tax work.

Persistent shortages exist for stenographers, secretaries, typists, general office clerks and most other jobs which involve competency in typing. There is always a large number of partially qualified typists available who do not meet minimum typing standards of employers. Also, numerous surveys of employers have shown that applicants lack understanding of the basic fundamentals of English necessary to perform typing and secretarial jobs. Standards for vocationally oriented office courses should be evaluated in terms of employer requirements.

MANPOWER REQUIREMENTS IN DATA PROCESSING OCCUPATIONS

ANNUAL REQUIREMENTS FOR GRADUATES FROM HIGH SCHOOL AND POST-HIGH SCHOOL COMMERCIAL, VOCATIONAL AND TECHNICAL TRAINING PROGRAMS IN THREE INDIANA AREAS

OCCUPATION	ANNUAL REQUIREMENTS IN THREE MAJOR AREAS			THREE-AREA TOTALS
	FORT WAYNE	INDIANAPOLIS	GARY AREA	
Programers, Business	75	113	27	215
Computer Maintenance Technicians	19	46	42	107
Keypunch Operators, Verifiers, and Related Occupations	84	229	135	448
Computer and Related Equipment Operators	44	82	77	203
TOTAL	222	470	281	973

THREE-AREA DISTRIBUTION OF EMPLOYMENT BY OCCUPATIONAL GROUPS

METROPOLITAN AREA	CURRENT NUMBER OF EDP JOBS	EDP OCCUPATIONAL GROUPS			
		ANALYSTS AND PROGRAMERS	MANAGERS AND SUPERVISORS	CLERICAL AND OPERATIONS	MAINTENANCE
INDIANAPOLIS	2,124 100.0%	611 28.8%	140 6.6%	1,169 55.0%	204 9.6%
FORT WAYNE	747 100.0%	218 29.2%	64 8.6%	385 51.5%	80 10.7%
GARY AREA	1,153 100.0%	336 29.0%	86 7.4%	590 51.5%	146 12.6%
		29.0%	7.5%	52.5%	11.0%

SOURCE: Professor J. P. Lisack, School of Technology, Purdue University, Lafayette, Indiana - from three studies of Manpower Requirements in Computer and Electronic Data Processing Occupations in Fort Wayne, Indianapolis and the Gary area.

This material was taken from the only three surveys of this kind available. Fort Wayne, Indianapolis and the Gary-Hammond-East Chicago areas employ about 40.7 per cent of total nonfarm employment in the State; however, they employ more than half of the data-processing workers. These workers are concentrated in the larger firms and more populous areas.

16--TECHNICAL OCCUPATIONS EDUCATION

OCCUPATION	1-YEAR ES JOB OPENINGS	EASE OF FILLING (SEE KEY)
CHEMICAL TECHNOLOGY		
Chemistry Laboratory Technicians	63	B
Laboratory Testers	116	C
Laboratory Assistants	72	A
CIVIL TECHNOLOGY		
Surveyors	15	C
Rodmen	53	C
Chainmen	31	A
ELECTRICAL AND ELECTRONICS TECHNOLOGY		
Electrical and Electronics Technicians	63	B
Electronics Assemblers, Developmental	28	A
MISCELLANEOUS TECHNICAL WORK		
Scientific Helpers	29	C
Quality Control Technicians	16	C
INDUSTRIAL TECHNOLOGY		
Industrial Engineering Testers and Technicians	23	C
MECHANICAL TECHNOLOGY		
Mechanical Engineering Technicians	29	C
METALLURGY TECHNOLOGY		
Testers and Laboratory Assistants, Metallurgy	12	C
SOCIAL SERVICE WORK		
Camp Counselors	60	C
Program Aides, Group Work	48	B
TOTAL OPENINGS, ALL OCCUPATIONS		663

KEY TO EASE OF FILLING:

A--Easy to Fill--81 to 100 per cent of openings were filled
B--Relatively Easy to Fill--61 to 80 per cent of openings were filled
C--Difficult to Fill--60 or less per cent of openings were filled

TREND

Workers in the technical occupational group will increase rapidly. Over the next five years, approximately 7,100 technicians (excluding medical and dental) will be needed to fill new jobs created by expansion and to replace those who die, retire, or leave the occupation.

OCCUPATIONAL NEEDS

Job openings in local offices of the Employment Security Division over the year totaled 663 in the technical education curriculum area. These openings are fairly representative of the types of openings available; however, they are not representative of the number of jobs available. Most local offices receive a fairly small number of the total job openings for technicians in the area. Employers tend to use other methods to recruit this type of worker. On-campus recruitment, advertising in newspapers and trade journals are utilized to a great extent.

Many of these occupations require training beyond a high school level to qualify. Training in chemistry, electricity and electronics in high school are beneficial in beginning jobs such as laboratory assistants and scientific helpers. Also, physics and mechanics courses are helpful in preparing interested students to enter post-high school training of a more advanced technical nature.

17--TRADE AND INDUSTRIAL EDUCATION

OCCUPATION	1-YEAR ES JOB OPENINGS	EASE OF FILLING (SEE KEY)
Draftsmen	**432**	
Architectural	62	C
Electrical	20	C
Civil	30	C
Mechanical	225	C
Detailer	95	C
Commercial Artists	27	C
Designers	32	C
Dry Cleaners	37	C
Pressing Occupations	320	C
Molders and Coremakers	63	C
Food Processing Workers	**148**	
Mixing Machine Operators	51	A
Cake Icers & Decorators	15	C
Cooks, Bakers, Ovenmen	82	C
Machine Trades (Skilled)	**1,398**	
Machinists	436	C
Job Setters	77	C
Tool Inspectors	30	C
Grinder Operators, Tool	45	C
Grinder Set-Up and Operators	15	C
Turning Machine Spec.	171	C
Boring Machine Spec.	217	C
Milling and Planing Machine Specialists	32	C
Engine Lathe Operators & Set-Up Men	29	C
Inspectors, Floor	107	C
Metal Fabricators	239	B
Machine Trades (Semiskilled)	**1,671**	
Production Grinder Set-Up and Operators	74	B
Production Lathe Oper.	148	B
Production Milling Machine Operators	31	C
Inspectors, General	49	B
Multi-Purpose Machine Operators	12	C
Machine Operators, Production	877	A
Extrusion Operators	70	A
Punch Press Operators	279	B
Forming Press Operators	99	B
Brake Operators	32	C
Mechanics & Repairmen	**1,677**	
Automobile Mechanics	726	C
Auto-Body Repairmen	140	C
Railroad Mechanics	22	C
Farm Equipment Mechanics	12	C
Diesel Mechanics	63	C
Machine Repairmen	56	C
Other Mechanics & Repairmen, Industrial Machinery	30	C
Maintenance Men, Factory	154	C
Office Machine Servicemen	114	C
Mechanics, Utility Services	40	C
Millwrights	208	C
Vending Machine Repairmen	81	C
Bicycle Repairmen	31	C
Printing & Related Occupations	**457**	
Bindery Workers	253	B
Typesetters (Linotype)	11	C
Printing Press Operators	64	C
Photoengravers, & Lithographers	25	C
Compositors	30	C
Darkroom Workers	74	B
Woodworking & Related Occupations	**492**	
Cabinetmakers	31	C
Woodworking Mach.Oper.	250	B
Millmen, Woodworking	29	C
Furniture Finishers	21	C
Furniture Upholsterers	161	B

OCCUPATION	1-YEAR ES JOB OPENINGS	EASE OF FILLING (SEE KEY)
Electrical Workers	662	
Radio & TV Repairmen	64	C
Radio Equipment Mechanics	13	B
Electric Motor Repairmen	26	B
Electronics Mechanics	27	C
Linemen	27	C
Telephone Equipment Repairmen and Installers	70	C
Electricians	157	C
Large Electrical Appliance Installers & Servicemen	41	C
Small Appliance Repairmen	103	C
Electrical Equipment Repairmen & Installers	134	C
Welders and Related Occupations	1,126	
Arc Welders	904	C
Gas Welders	14	C
Resistance Welders	20	A
Brazers	28	C
Lead Burners	22	B
Flame Cutters	138	B
Construction Occupations and Related	2,634	
Structural Steel Workers	44	C
Sheet Metal Workers	129	B
Ornamental Iron Workers & Layout Men	46	C
Painters	499	B
Painters, Rough	132	A
Decorative Painters	29	B
Painters, Spray	173	B
Plasterers, & Dry Wall Applicators	31	C
Insulation Installers	51	C
Maintenance Men, Building	292	C
Carpenters, Maintenance	43	B
Carpenters (Const.)	431	B
Carpenters, Rough	117	B
Bricklayers	52	C
Stonemasons	13	C
Tuck Pointers	28	A
Cement Masons	35	C
Roofers	152	B
Plumbers & Pipefitters	125	C
Furnace Installers & Repairmen	87	C
Glaziers & Glass Installers	125	B
Miscellaneous Vehicle Operators	575	
Concrete Mixer Drivers	14	B
Dump Truck Drivers	138	B
Hoist & Crane Operators	93	B
Industrial Truck Oper.	238	B
Tractor Operators	22	C
Excavating and Grading Machine Operators	70	C
Automobile Service Station Workers	611	
Tire Repairmen	186	C
Lubrication Men	425	C
Power Plant Workers	111	
Stationary Engineers	30	C
Boiler Firemen	69	C
Power Plant Operators	12	C
TOTAL OPENINGS, ALL OCCUPATIONS		12,473

KEY TO EASE OF FILLING:

A--Easy to Fill--81 to 100 per cent of openings were filled
B--Relatively Easy to Fill--61 to 80 per cent of openings were filled
C--Difficult to Fill--60 or less per cent of openings were filled

TREND

Most of the occupations in the trade and industrial education area are in the craftsmen and operatives categories; these two broad occupational categories make up about 40 per cent of all employment in the State. A great proportion, but not all, of the occupations in these groups is found in the manufacturing and construction industry divisions with some in the services division. Employment in these industry groups totaled about 815,000 in 1967. The outlook for each group in fiscal 1969 is for continued growth and the trend in the next five years is upward, also.

OCCUPATIONAL NEEDS

Occupations in this instructional area include many that are of vital importance to industry in Indiana and many that have been in the persistent shortage category since World War II. Some are apprenticeable occupations for which training could not be completed in a vocational high school program; however, pre-apprenticeship training in these skills could decrease the time needed to complete the total program after high school graduation.

The craftsmen group includes many occupations in which Indiana training facilities (both on and off the job) have failed to produce an adequate supply to meet the demands of industry. In the next five years, 56,000 workers in this group will be needed to fill expansion needs and to replace those who die, retire or leave the occupation. Many of these could be at least partially trained in high school or in adult evening courses.

In the next five years, nearly 16,000 openings will be available to construction craftsmen, with carpenters leading the list with 3,300 anticipated openings. Needs for trained electricians will be 2,500, excavating and grading machine operators 1,300, painters and paperhangers 1,700, plumbers and pipefitters 2,100, and stationary engineers 1,100.

Demand for metalworking craftsmen will create 11,700 openings; skilled machining jobs alone (including machinists and related jobs) will require 5,600 workers. Nearly 1,200 sheet metal workers and 1,400 tool and die makers will also be needed. There will be another 10,500 openings for semiskilled metalworkers. More than 2,000 of these will be welders and flame cutters, and 1,600 machine tool operators will be needed.

An estimated 16,000 mechanics and repairmen will be needed in five years; nearly one-third of these will be motor vehicle mechanics.

Openings for 2,700 draftsmen of all types are anticipated; however, many of these will need more training in post-high school specialized courses in order to qualify. Beginning drafting jobs are becoming more and more technical as the use of machines replaces the tracing and other lesser skilled duties of the job. The trend of the future is toward more technical knowledge as the demands of industry change.

Job openings listed last year in the Indiana Employment Security Division local offices totaled more than 12,000 in occupations related to trade and industrial education. Most of these openings were in the hard-to-fill category and have been listed as persistent shortages for a number of years.

There were more than 3,000 job openings in skilled and semiskilled machine trades occupations and more than 2,600 in construction and related occupations. There were also large numbers of openings for a wide variety of mechanics and repairmen.

There were nearly 900 openings listed for skilled auto mechanics and body repairmen; these openings have long been in the hard-to-fill category because of a lack of people trained to meet employers' specifications. Although there are auto mechanics available, few employers are interested in applicants who have not been thoroughly trained in engine, transmission and/or power system repair. It is likely that the quality as well as the quantity of training provided needs to be reviewed in some of the existing facilities. Local offices also listed more than 600 openings for tire repairmen and lubrication men in auto service stations.

Although courses for welders in many areas have been repeatedly given under MDTA programs, there is still a shortage of workers in most areas. There were 1,100 openings for welders and related occupations in local offices over the year; skilled welders were listed as hard to fill.

VT 007 273
Concept of a Total Program in Education for the World of Work.
Delaware Occupational Research Coordinating Unit, Dover
MF AVAILABLE IN VT-ERIC SET.
Pub Date - nd 20p.

*PROGRAM DEVELOPMENT; *OCCUPATIONAL MOBILITY; *VOCATIONAL EDUCATION; *EDUCATIONAL PROGRAMS
DELAWARE

The concept of "education for the world of work" has for its objective the preparation of each individual to meet successfully the problems of life in his physical, social and political environment. This concept is concerned with the total program of education, not only for persons in school, but for those out of school and unemployed, for those already in the labor market but who need training or re-training, and for those who are emotionally, economically or physically handicapped. Only 76 out of every 100 entering students complete high school and, of these, 40 will enter college but only 20 will finish a 2- or 4-year program. This means that approximately two-thirds of the original 100 ninth graders are left untrained for productive work of any kind. In this context, the secondary school must fulfill its responsibility by providing (1) an academic program for college entrance, and (2) a practical arts or technical program, either in the high school or in a separate vocational-technical high school. (CH)

VT 007 273

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20 p. A

VT007273

DEVELOPMENT OF A TOTAL PROGRAM

EDUCATION FOR THE WORLD OF WORK

Delaware Occupational Research Coordinating Unit
State Board For Vocational - Technical Education

CONCEPT OF A TOTAL PROGRAM

IN

EDUCATION FOR THE WORLD OF WORK

The concept of "Education for the World of Work" has for its objective the preparation of each individual to meet successfully the problems of life in his physical, social, and political environment.

This concept is concerned with a total program of education not only for persons in school, but for those out of school and unemployed, for those already in the labor market but who need training or retraining, and for those persons who are emotionally, economically, or physically handicapped.

In its concern for people to be served rather than subjects to be taught, the total program of education envisions the development of each individual to his highest potential. At the same time, it assumes the responsibility to provide training and retraining for that individual so that he might function and thrive in a complex industrial environment. To thrive in this environment, each person must be given the opportunity to attain an occupational competence consistent with his ability and his interests, based on the economic structure of the community, of the state, and of the nation.

The individual can start to gain this competence after the completion of his elementary education and/or junior high school experience. And with suitable guidance, he can progress through the *high school* as far as his occupational interests, ambition and

capabilities can carry him. At the same time, he should be able to acquire the general education necessary for social adjustment or for higher educational attainment.

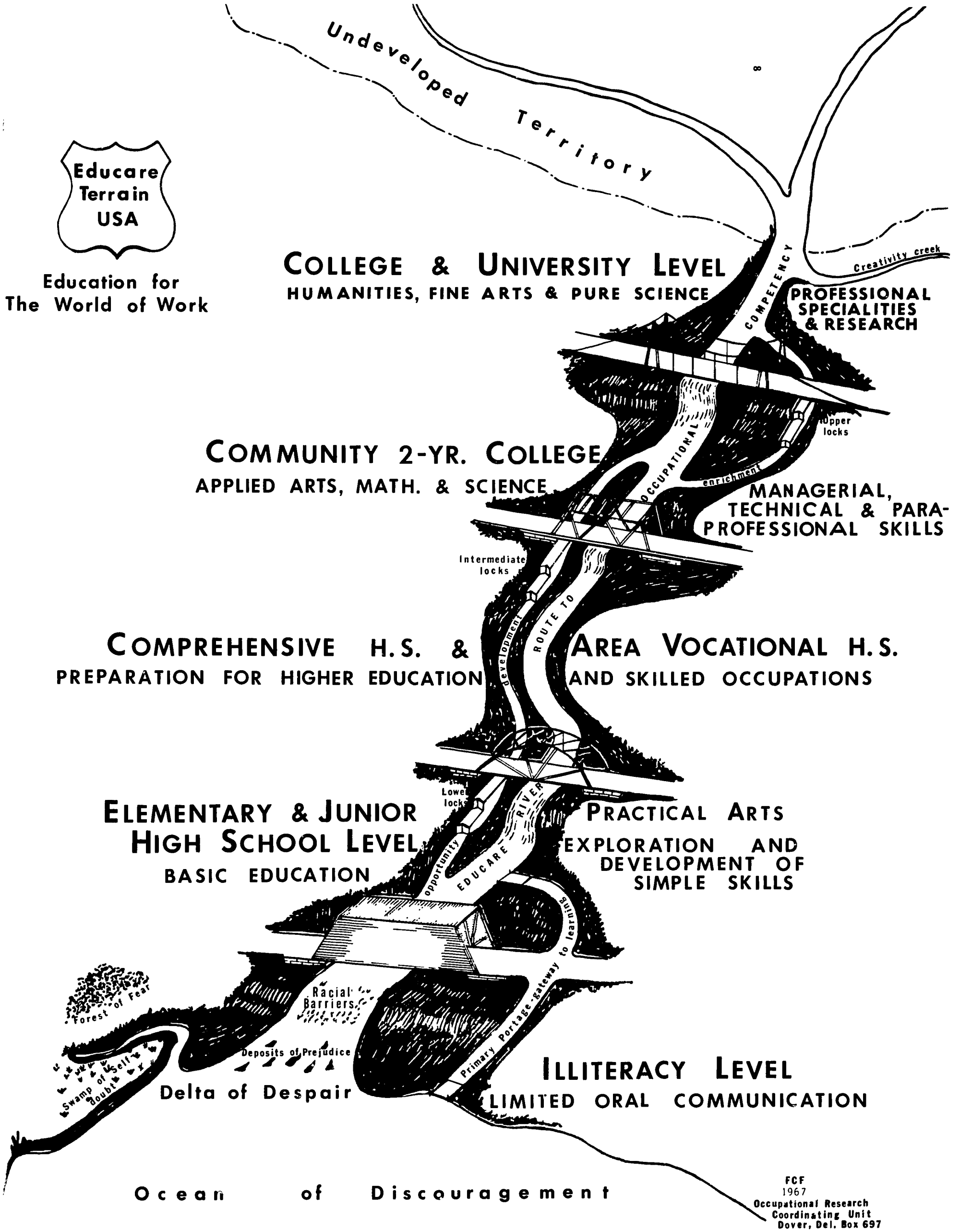
At the *post high school level* (community college), the para-professional, technical and managerial assistant fields are open to him, either for direct, gainful employment or as preparation for a professional specialty attainable through further study at the *college and university level.*

If we can envision the route to occupational competency in the form of a map, which for convenience we call *Educare Terrain,* this lets us talk about education in its broadest sense. It lets us think of the colleges and universities as *the* "vocational" schools for scientists, doctors, lawyers, engineers, military personnel, managers, etc. To the degree that these institutions prepare their students professionally to live and function successfully in our fast moving, fluid, change-oriented society - this will be the measure of *their* success as instruments for change and growth in the *highest* level of educational endeavor.

This lets us think next of the ancillary, supportive groups: the para-professionals, the technicians, the detailers, the assistants who, in about a four-to-one ratio, are necessary to back up the university educated professionals. And, again, to the degree to which the next level, the technical institutes and community colleges, prepares their para-professional students to function successfully in their role - this will be the measure of *their* success as "vocational" schools of an *intermediate* level.

Educare Terrain USA

Education for The World of Work



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1967
Occupational Research Coordinating Unit
Dover, Del. Box 697

This brings us then to consideration of the high school level. At this level it has been found that hundreds of thousands of youths of high school age in this great land of ours are, as yet, not being trained or equipped to secure for themselves gainful, satisfying, dignified employment in any occupational field whatsoever! They have had no vocational training, no work experience, not even job-related general education to offset their resulting frustration and disillusionment, if they drop out, as many do. Even if they graduate, unless somehow they pick up an occupational competence, they are doomed by a lifetime of idleness to roam the streets, to drift into deliquency, or to relieve their "quiet despair" through drugs, alcohol and the dole.

This one fact alone demands a radical shift in educational emphasis to meet the needs of these youth. *The secondary school can no longer evade its responsibility to provide training for work and to accept this duty as an integral part of its total function.*

Girls as well as boys must be served. The disadvantaged, the slow learner and the potential dropout must be given an opportunity to attain occupational competence consistent with his abilities and interests and the economic needs of the community and the state.

Thanks to the massive fiscal aid given to education by the Federal government through various acts since 1961, and particularly by the Vocational Education Act of 1963, the high schools can, if they will, meet their responsibility to provide a comprehensive, total program of education for the youth entrusted to their care.

There is also inherent in the new acts a clear mandate to provide means to update skills already learned, to train persons of all ages realistically in terms of actual and anticipated requirements for gainful employment.

This clearly indicates that the schools of today, particularly from the elementary level upward, with but a small change in emphasis and method, could provide up to *half time* in laboratories, shops, studios, field study and cooperative endeavors, without detracting from the intellectual progress of those who now spend the whole day in academic study and recitation.

An educational system which provides occupational competence for a scanty few, while an unsatisfied sixty percent or more roam the streets aimlessly, is out of tune with the times. Further, it is in great danger of becoming mute and ineffectual in the social orchestra should the *single academic string*, on which it too often depends, finally break!

Life, as we well know, involves not only living but the ability to earn that living. A total program of education must be concerned with both. *Yet, many communities have neglected to provide for any type of occupational education.* Thus, most of the graduates (or dropouts) have none of the skills so necessary today for earning a living. In an editorial in School Shop magazine[1], Lawrence Prakken gave an astonishing set of figures, which show what happens to a typical group of 9th graders in an educational system geared only for college entrance.

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[1]Lawrence Prakken , "School Shop Talk," School Shop, Vol. XXVI, No. 1 (September 1966), p. 2.

Only 76 out of 100 ever complete high school, and, of these, 40 will enter college, but only 20 will finish a two- or a four-year program. This means that approximately two-thirds of the original 100 ninth graders are left out of the picture, untrained for productive work of any kind. Is this the best that can be done for our young people? We hope not. Conditions *are* changing; the nation is awakening to the need. Congress is providing aid through the Vocational Act of 1963 to produce the necessary changes, but the states and communities must also assume their part of the burden. After all, it is *their* children who are being deprived.

The significance of the difference between the earlier acts to aid vocational education and the Vocational Act of 1963 will be felt in the widened provisions for maintaining, extending and improving vocational education services for these distinct groups or purposes:

- High school youth,
- Post high school youth and adults,
- Persons in the labor market who need retraining,
- Academic, social and/or economically handicapped,
- Construction and equipping facilities,
- Provision of supportive services and activities.

The new act is creative in concept. It is realistic in approach. It even provides the means for needy students to earn while they learn, to sustain themselves while developing saleable skills. The Act also enourages research, experimentation and innovation. It provides everything but the will to do and the

spirit of dedication. These, as always, have to flow from the minds and hearts of the teachers, the teacher-educators, the administrators, the advisory committees, the ancillary service personnel, and the members of the state and local governments.

The new Act permits, perhaps for the first time, the concept of a total program of education from the elementary grades to the university level and beyond, for those who can profit from it. It also makes possible a new emphasis on education for the *world of work* and for successful living in this world for those who want to work.

We do not, we cannot, we must not support the thesis of elite, nonworking, nonproducing groups in our society. If any exist, they are throw-backs to a by-gone era. They, likewise, are a monument to the imperfections of our economic and educational systems. The continued support of anyone in idleness who is capable of self-support is repugnant to the democratic ideal, an affront to the dignity of man, and a constant threat to our way of life.

Heretofore, in a less complex agrarian economy, the low man on the educational totem pole could eek out a bare existence, unsupported by a dole. While not affluent, he had at least the means to obtain food, shelter, and clothing. He could dwell, if he so chose, in the delta of the river of life moderately content and socially stable.

But this is no longer possible. The significant change in our generation is that those who once could dwell and find sus-

tenance, such as it was at the delta, must now move upstream or perish, or else be supported in idleness by others, forever.

It follows, then, that those upstream must migrate a little farther to make room for those below. The all compelling pressure of the "delta dwellers" has become impossible to contain. Their vital need for sustenance, their human need for dignity, their social urge to be a productive member of a productive group are strong forces which can no longer be diverted. But these forces can be contained if sensible, uncomplicated, understandable programs of education can be made available to all.

We need, urgently, to settle for a central simple theme to describe our educational philosophy. We need a diagram, a picture, that the ordinary man can comprehend. We need a direction in which our whole national effort can be pointed. We educators ought, soon, to divert the energy we expend trying to place many heads on the same body to purposes more worthy. We need a comprehensive map of educational terrain, so that any weary traveller can spot a place to rest and from which the more intrepid can gain strength to move on.

We are living in a process world. What we so carefully define today may be gone tomorrow. Our society is admittedly complex. Preparation for living productively in it is arduous. The top level goals are, for some, almost unattainable. The means of support for the necessary education and training are negligible, compared with what we, as a people, spend for less important things.

If we could agree on a single goal for education, then the search for occupational competency could be an exciting trip up "Educare River", where suitable portages, locks and bridges enable the exploring student to surmount the natural obstacles encountered. At each of the levels, he would be free to remain, or to rest momentarily, or to continue on his journey to whatever competency his interests, capacities or spirit could carry him. This opportunity to rest, to stay or to continue is of vital concern, for the reality of education is neither fixed in time nor space. It is a continuum -- always in the process of becoming something more. There is no end -- only a beginning and a direction.

This is part of the reason why restless man has ever travelled toward the setting sun and why, having completed the full circle, he is now seeking reality in space -- and beyond the first planet, that he will inevitably reach, there is another, and another, and another --

This relentless urge, this drive, this eternal search for new knowledge is equalled only by what Alexis de Tocqueville shrewdly observed in 1835 to be the dominant theme of American behavior, our preoccupation, yes, even our obsession, with change. But very new, since de Tocqueville's time, is the geometric acceleration of this change which we scarcely have come to realize. Yet, it is here; it is the controlling force of our time. It is driving our industrial and commercial enterprises to new heights and has forced the value of our gross national production to an unprecedented and astronomical figure.

Whether we like it or not, "the impact of automation on the labor market has been profound", Grant Venn says. He further states, "Automatic elevators have recently displaced 40,000 elevator operators in New York City alone. New equipment in the Census Bureau enabled 50 statisticians to do the work in 1960 that required 4,000 such people in 1956. The check writing staff in the U. S. Treasury Department has been reduced from 400 people to four. The airline flight engineer and the railroad fireman may soon disappear completely. Thirty thousand packing house workers have been automated out of their jobs in the past few years. Enormous machines have reduced employment in the coal fields from 415,000 in 1950 to 136,000 in 1962. While construction work has leaped 32 percent since 1956, constructions jobs, themselves, have shown a 24 percent decline."

Ralph Bellman, a computer expert for the Rand Corporation, says, "Industrial automation has reached the point of no return. The scientific knowledge to automate American industry almost completely is already available and is certain to be used. Banks could cut their staffs in half easily by further automation; the steel and automotive industries could increase their use of automation a hundredfold. Lower and middle management, as well as production workers, will be displaced, for there will be no need for decision making at that level. Unemployment, resulting from automation, would be greater right now except that many industries are holding back - at a sacrifice to their profits - to avoid increasing the severity of the problem. Self-restraint on the part of

industries cannot continue indefinitely. Automation, itself, will produce few jobs. Two percent of the population will, in the discernible future, be able to produce all the goods needed to feed, clothe, and run our society."

Drastic change is upon us, but our social agencies, education among them, seemingly have been unwilling or unable to "get with it", as our younger generation would say. Isn't it time we did!

Whether one picture, one plea will ever have any positive influence on deep seated contrary convictions is a moot question. Often efforts at change result only in anchoring more firmly that which might slowly emerge if left undisturbed. This is the calculated risk of the surgeon incising a malignant tumor. Should not we, who are engaged in education, be equally daring?

In an increasingly affluent society, these youngsters are demanding their share of success. They "know the score". They know that the rewards in our culture are attuned to success. They have learned to expect its promise.

A society "conceived in liberty and dedicated to the proposition that all men are created equal" cannot become a "great society" so long as *any* of its citizens are denied a due measure of success and the opportunity or means of achieving it.

Life without some indication of success is empty. It is this emptiness which gives rise to frustrations, the results of which

we witness daily in violence and crime of all sorts, in campaigns of hate, in the tragic withdrawal of some of our young people, and in the queer, quiet bewilderment of the elderly.

If, in its very nature, a society changes progressively or abruptly from an agrarian to an industrial economy, then its social institutions *must* change. In fact, the institutions should become literally the agents for change, not members of a mopping-up squad, as is too often the case.

To be agents for change demands creative ability, vision and courage -- vision to set out for goals seen from afar, healthy skepticism toward things as they are, and the courage to create new pathways to things as they should be.

It remains then for the institutions at all levels to provide the means for fulfillment and to keep these means flexible. This means design for change, not design for fixity. It means a willingness, even an eagerness, to entertain new ideas. It means the establishment of a dignified "retirement system" for old, threadbare ideas no longer operative or productive.

It means, further, an acceptance of education as *the* agent for change rather than a repository for ossified doctrine, obsolete practices, or a "recapitorium" for race experiences which should have, long ago, been given decent burial.

This calls for an exquisite sensitivity to the ever-changing needs of society. It calls for more than colorless platitudes and

foggy abstractions. It calls for action research of a high order. It demands a single, functional, demonstrable aim for education: The development of the individual to his highest potential for purposeful living and gainful employment in the social environment of his time. It demands an end to the hydra-headed monster that passes for education in these United States.

This means the development of education in terms of elements common to many activities, of clusters of skills instead of single specialties. Narrow specialties, which rob the individual of an opportunity to do creative work, or to take joy in doing it, or to externalize his ideas and to appease his elemental desire to vary from routine, is not good education, neither is it good occupational education. The art, not the trade, is fundamental. Art is eternal, but the trade classification of today may be a memory tomorrow. A look at the want ad section of almost any newspaper bears this out. There are job titles and tasks unheard of ten years ago. There are job descriptions literally crying for versatility. The phrase "challenging diversified duties" repeatedly appears to echo the cry. Even machinists are promised "a wide variety of work". One advertisement includes "operation of machine *and* woodworking equipment"! Another calls for a "feel for mechanisms". And those at a higher level require a "broad working knowledge of steam, air, hydraulics and machine design, including an understanding of vibration and stress analysis".

In the subways and trains there is currently displayed a poster furnished by an advertising council. Its slogan, "You can't fill

today's jobs with yesterday's skills", points out the direction all education must take to insure the development of the individual toward successful living in our technological society. To enjoy life, one must live; to live, one must work productively; to work productively, one must have a saleable competence; and to have a competence today, one must be educated to function in society as it *is*, not as it once was, nor as some would perpetuate it.

Students need help. The generation born a little over 20 years ago started out as 3,000,000 strong. It now numbers about 2,750,000. Secretary of Labor, W. Willard Wirtz, in a 1967 address, described what has happened to that generation.

Wirtz said about 500,000 are graduating from college. Another 250,000 are girls who are married. It is the other 2,000,000 that concerns Wirtz. Almost 1,000,000 dropped out of elementary or high school. Most of the remaining 1,000,000 finished high school, then stopped their formal education.

Of this group of 2,000,000, he said, about 1,500,000 are working, 250,000 are in military service, and the remainder -- 250,000 -- are "doing nothing - unemployed".

Wirtz said there is less difference among these last three groups than may appear, "For a large percentage of those who *are* working are in unskilled, deadend jobs, which machines will in all likelihood take over."

The problem is not wholly one of dropouts. The unemployment

rate for 18- and 19-year-old high school graduates, according to Wirtz, is higher today than it was for *all* teenagers 10 years ago.

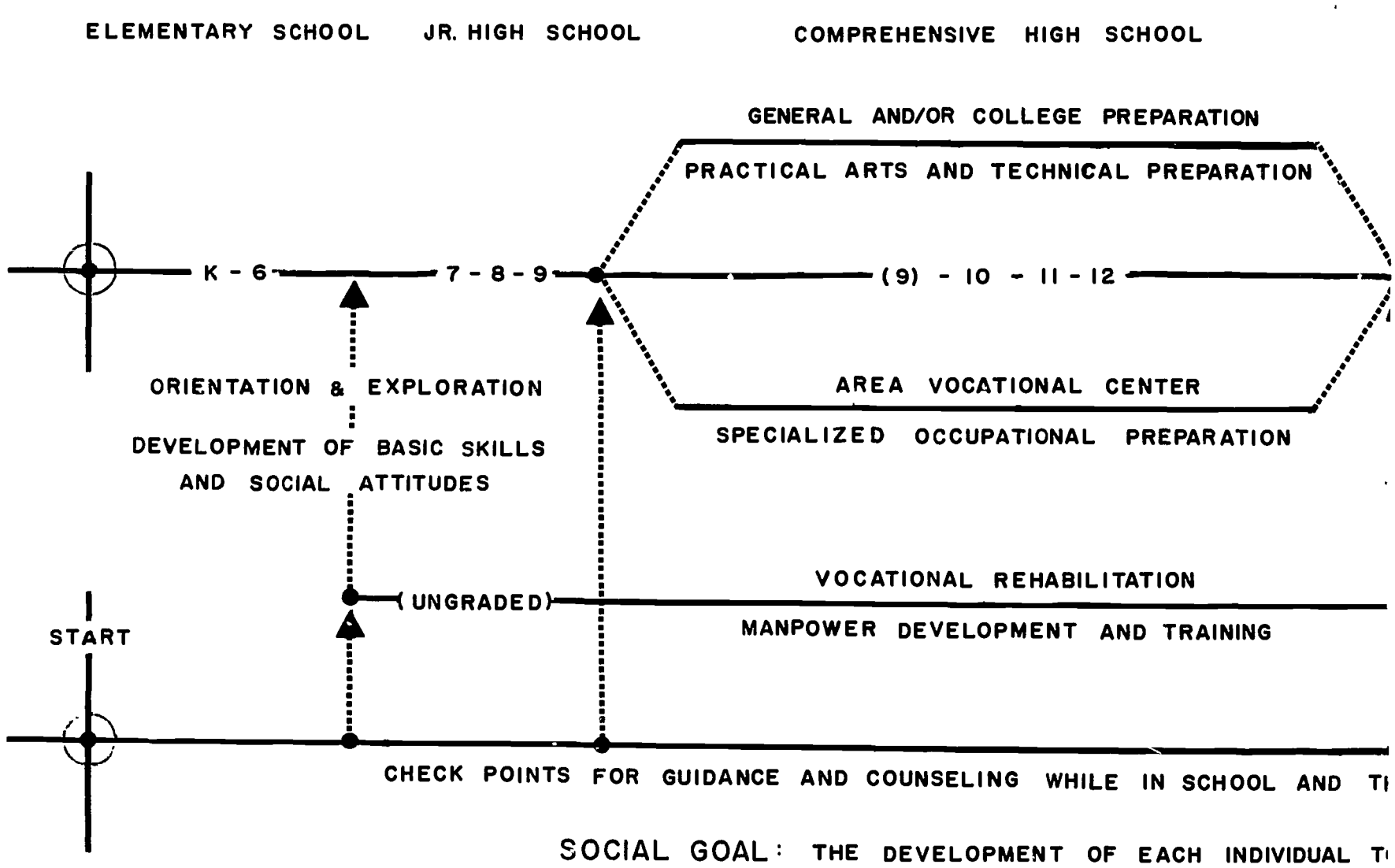
Wirtz said that the United States, which has the most extensive educational system in the world and the strongest economy, puts its youth through a "period of bitter and embittering unemployment," chiefly because it has done little or nothing about "building bridges between education and work. Public schooling prepares the student for college, not for work."

Some nations, Sweden is one, offer work experience to students in their last two years of high school. Wirtz recommends that public schools in the United States adopt this plan. Only one in six high school students goes on to college; the remainder must go immediately to work. Without prior experience in the work force or adequate counseling and vocational guidance, the students who do *not* go on to college are, in truth, greatly disadvantaged and sadly neglected.

Since words alone cannot present adquately the flow and process nature of education, an additional chart (figure 2) is needed to show graphically the parallel nature of the various pathways opened up by the unidirectional concept of a total program of education.

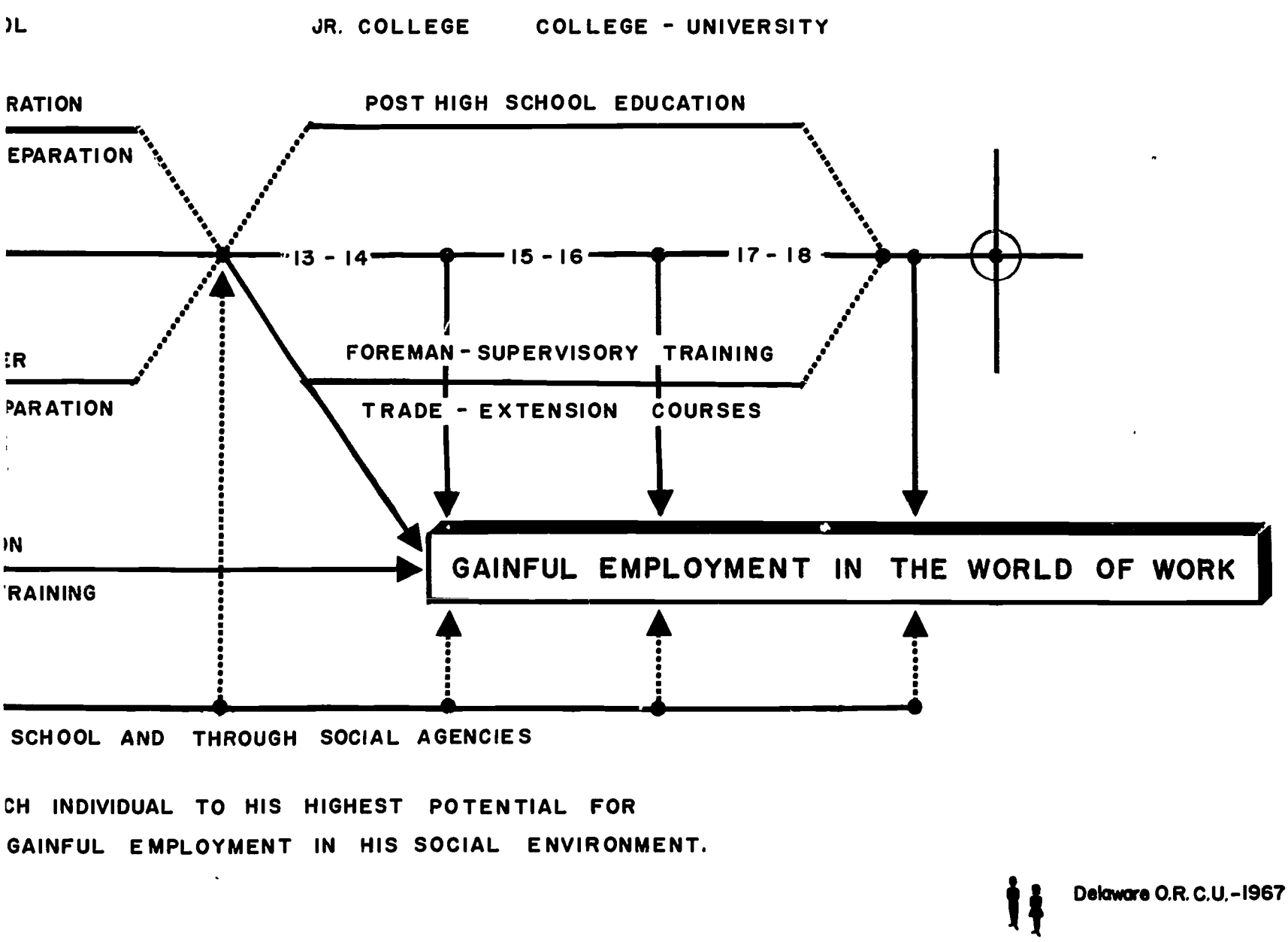
Starting with the kindergarten and progressing under a graded, or even ungraded primary education, the development of basic skills and social attitudes takes place. These basic skills and attitudes can more realistically be learned if they are oriented to the "work of the world", than if tied to leisure or to some other undefined or distant goal.

A TOTAL PROGRAM OF EDUCATION - PATHWAY



SOCIAL GOAL: THE DEVELOPMENT OF EACH INDIVIDUAL T
PURPOSEFUL LIVING AND GAINFUL EMPLO

PATHWAYS FOR INDIVIDUAL COMPETENCY



CH INDIVIDUAL TO HIS HIGHEST POTENTIAL FOR
GAINFUL EMPLOYMENT IN HIS SOCIAL ENVIRONMENT.

Delaware O.R.C.U.-1967

The pragmatic and social attitude of being sometime able to earn a living must start at this level, if we ever hope to make education meaningful to youngsters. The possibilities for orientation and exploration are practically unlimited at this period in the life of a child. It is at this time that his imagination and zest for new knowledge and experiences are at an all time high. This is his time for ceaseless questioning; this is also his time for fulfillment or betrayal.

As he proceeds through the grades, he reaches the next plateau of secondary education, where he should have the alternative, in a *truly comprehensive* high school, to prepare to enter into the world of work *or* to partake of education aimed at later gainful employment. In some school systems, he has a more direct path -- an area centered facility for education leading to technical or specialized occupational preparation.

In either case, the way should be left open for entrance either into work or for continued education at the junior college, college and university level. And backstopping these formal institutional resources, the ungraded manpower development and training centers and the vocational rehabilitation facilities provide the remaining pathways for the attainment of individual competency.

Paralleling all of this is the counseling line which should provide continual and checkpoint guidance in school and afterward, as long as the need is felt. The guidance personnel functioning on this line had better be prepared to offer *vocational* as well as educational guidance, if they hope to retain their objectivity and professional integrity.

SUMMARY

After basic education in grades K to six and occupational exploratory education in the junior high school, there should be three pathways open in the high school program, if it is truly comprehensive.

- A student might prepare in an academic program for college entrance and progress all or part way through a university before seeking gainful employment.

- Or, he might pursue a practical arts or technical program in high school, continue on to a junior college or a technical institute, or go directly into employment.

- In some communities, specialized occupational education is made possible in separate vocational-technical high schools. This is the third pathway.

For the student who might be forced to drop out of a school program for health or other reasons and who did not acquire a saleable skill, it is still possible for him or her, through manpower development courses or a rehabilitation program, to gain a competency for gainful employment.

VT 007 274
Memorandum on the Association's Role and Function in the Training of Auxiliary Personnel.

American Association of Dental Schools, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Mar68 6p.

DENTISTRY; *DENTAL AUXILIARIES; *HEALTH OCCUPATIONS EDUCATION; *PROFESSIONAL EDUCATION; DENTAL ASSOCIATIONS; PROGRAM DEVELOPMENT; MANPOWER NEEDS; ACCREDITATION (INSTITUTIONS); *POLICY
*AMERICAN ASSOCIATION OF DENTAL SCHOOLS

The House of Delegates approved in March 1965 a guideline for action, leadership, and responsibility in the training of dental auxiliary personnel. The Association believes that these auxiliaries should be trained in university-based dental schools and health sciences centers; however, the utilization of other educational resources in the community is encouraged. Member institutions are urged to give full cooperation to other educational institutions engaged in planning and developing programs. Recommendations are that pre- and post-accreditation consultation and guidance services be developed within each member institution under the direction of the Association and in cooperation with the Council on Dental Education of the American Dental Association and the educational divisions of the American Dental Hygienists' Association and the American Dental Assistants Association. The kinds of consultation and guidance which might reasonably be requested by the educational facility planning or operating a program for dental auxiliaries are outlined. (JK)

VT 007 274

ED042060

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Memorandum on the Association's Role and Function in the Training of Auxiliary Personnel*

I - Introduction

Along with other health professions and allied health organizations, the dental profession has been involved for several years in an effort to increase its capacity for the delivery of health care and to improve its system for delivering care to larger sectors of the population. Such an effort requires the successful collaboration of all persons and agencies having an interest in increasing the profession's capacity for service for a growing number of people who expect and demand good oral health. Practitioners, educators, public health workers and allied health organizations have now begun to pool their collective resources in a dynamic effort to avert a threatened manpower shortage.

Health Manpower Landmarks of 1967. Since the passage of the Health Professions Educational Assistance Act of 1963, with subsequent amendments, and the Allied Health Professions Personnel Training Act of 1966, member institutions of the American Association of Dental Schools have joined the effort of the profession and the government to expand the nation's educational capacity for the training of both professional and auxiliary manpower. It is anticipated that the number of dental graduates and graduates of accredited dental auxiliary training programs will be substantially increased by 1970.

Some of the signs and trends pointing to the determination of dental educators and practitioners to solve the problems of manpower and care delivery have emerged from several important, late 1967, meetings and conferences of the Association, American Dental Association and national advisory commissions concerned with health manpower needs. In October 1967, a meeting of a Special Committee on Association Role and Function recommended "that the Association must concern itself with the changing relationship of the professional practitioner to the auxiliaries and provide guidance for auxiliary education. For example, educational research in the training and utilization of auxiliaries is an illustration of the leadership which the Association might provide among the dental schools."

In November 1967, the House of Delegates of the American Dental Association received a comprehensive, documented statement prepared by the Councils on Dental Education, Health and Legislation on "The Training and Utilization of Dental Hygienists and Assistants." The Joint Council report presented a broad view of the growing

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* Approved by the House of Delegates, March, 1968.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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dental economy and included a careful assessment of current educational capacity and future manpower needs. For the second time in two years, the American Dental Association's House of Delegates has urged constituent dental societies and state boards of dental examiners to revise the dental practice laws to permit wider utilization of the services of dental auxiliary personnel. Finally, also in November 1967, the President's National Advisory Commission on Health Manpower released the first volume of a report which, in its Introduction, stated that a national health manpower crisis exists. The Commission report mandates the continued expansion of teaching and research facilities for both professional and allied health personnel.

In view of the foregoing developments, the American Association of Dental Schools believes that it is increasingly important to urge its members to give utmost consideration to the task of training both professional and auxiliary personnel. Despite greatly expanded efforts to meet the impending manpower shortages in dentistry, a continuing effort to achieve these goals must be exerted for some years to come. It can be anticipated that the partnership between the profession and the government in such an effort will intensify further, as new patterns of legislative support for health manpower education are jointly conceived and implemented.

II - Role of the Dental Faculties in Improving and Expanding Educational Capacity

The American Association of Dental Schools is confident that its member institutions will be able to meet and respond to the demands and expectations of the society for greatly increased service by providing an adequate supply of educationally qualified professional and allied professional personnel. To achieve this objective, the Association believes that every available training facility of the community and the university should be fully utilized under the leadership and guidance of the dental faculties. To the extent possible, the Association believes that dental auxiliary personnel preferably should be trained in university-based dental schools and health sciences centers but that other educational resources of the community should also be utilized to supplement the resources of the schools of dentistry. For example, the Association believes that one-year technical programs for dental assistants can be offered appropriately by junior and community colleges, by technical training centers and institutes and by public schools in evening adult training divisions. Similarly, the Association believes that associate degree programs for dental assistants, hygienists and laboratory technician programs can be offered in a variety of settings.

Training of Dental Auxiliaries in Non-Dental School Facilities. The Association urges member institutions to give full and vigorous cooperation to educators from other educational institutions who are engaged either in planning new programs or conducting accredited programs for dental personnel. In many communities, it will be possible for dental schools and community colleges, or area vocational schools, for example, to combine their facilities for the training of dental auxiliaries. Dental educators are therefore urged to supply leadership in such instances and to provide qualified consultants, as needed, to assist educators in non-dental school settings to design curriculums and to coordinate both general and technical studies. Faculties of member institutions of the Association are therefore urged to provide consultants and technical assistance to the maximum extent possible to program planners and administrators in institutions which lack the resources of a dental school.

III - Association Leadership and Responsibility: A Program of Counseling and Guidance

The American Association of Dental Schools strongly urges faculties of member institutions to participate actively in the education of all dental auxiliary personnel, whether the programs are conducted in dental schools or medical centers, or in institutions having no direct affiliation with a dental school. As the profession's capacity for training auxiliary personnel continues to expand, and as experimental studies in extending the duties of auxiliaries are further developed, the Association believes it is increasingly urgent that dental educators be prepared to provide leadership in the maintenance of the highest quality of training commensurate with the duties each auxiliary is expected to perform.

As of December 31, 1967, there are 59 accredited dental hygiene, 103 dental assisting, and 13 dental laboratory technology programs in the United States. In addition to these, 20 dental hygiene, 26 dental assisting and 7 dental laboratory technology programs are in some stages of active development and seeking accreditation by the Council on Dental Education. An increasing number of new programs and prospective programs will be located in institutions having no direct affiliation with a dental school. Thus, it is apparent that the need will exist for some time to come for a pre-accreditation and post-accreditation program of consultation and guidance. It is urged that such programs be developed within each member institution, under the direction of the Association, and in cooperation with the Council on Dental Education of the American Dental Association and the educational divisions of the American Dental Hygienists' Association and the American Dental Assistants Association.

Pre-accreditation Counseling Services. While it is comparatively easy for member institutions themselves to develop and establish new programs for the training of auxiliaries, early planning and development of new programs in settings which do not have the full resources of a dental school and staff are often difficult undertakings.

The Association believes that dental educators should be fully responsive to the needs of educational institutions which lack the resources of a dental school in the early planning and development of new programs. Within the area of geographic influence, dental schools are urged to provide consultants as needed to assist planning committees of new programs in developing facilities, curriculums and staffs in dental assisting, dental hygiene and dental laboratory technology.

Some of the needs of planning committees which are most commonly encountered, and which dental faculty consultants might reasonably be requested to provide are the following:

1. Assistance to state and local dental advisory committees with planning and conduct of manpower surveys to determine the extent of the profession's state and local need for auxiliaries;

2. Assistance and guidance with the design and planning of teaching facilities;

3. Counseling in the development of equipment lists and lists of expendable supplies;

4. Counseling related to financial needs for capital and operating funds;

5. Guidance in developing teaching aids and models;

6. Counseling in curriculum planning, preparation of course objectives and course outlines;

7. Assistance in planning student recruitment programs and recruitment of staff and faculty;

8. Assistance and guidance in identifying facilities and offices required for clinical and practical experience in each auxiliary specialization; and

9. Guidance in establishing local advisory committees and in the effective utilization of resource people.

Post-accreditation Counseling and Guidance Services. Many new programs in institutions not affiliated with a dental school are able to meet, and often exceed minimum accreditation standards determined by the dental profession. On the other hand, the incidence is increasing where some of the new programs are able to earn only provisional accreditation from the Council on Dental Education. The Association believes that member institutions should provide leadership and assistance to new program directors and faculties which, in the view of the Council on Dental Education have experienced difficulty in achieving initial accreditation, or which are expected to have some difficulty in maintaining accreditation.

In an effort to provide post-accreditation assistance, if needed and requested, the Association believes that member institutions should be able to provide the following types of services:

1. Counseling in the teaching of the dental sciences and the preclinical and clinical sciences;

2. Guidance in curriculum design and revision;

3. Assistance with the development of clinical and practical experiences and training;

4. Assistance with the development of teaching models, teaching aids and teaching materials;

5. Guidance in improving laboratory and clinical facilities;

6. Counseling in the coordination of general and technical studies;

7. Assistance in providing special consultants for teaching of the dental sciences, the preclinical, and clinical sciences.

IV - Conclusion

The American Association of Dental Schools hopes that this memorandum will be used by member institutions as a guideline for action, leadership, and responsibility in the training of dental auxiliary personnel. The lists of services recommended for the pre- and post-accreditation stages of developing programs are not exhaustive. It is hoped, however, that this memorandum will favorably influence the role and responsibility which the dental faculties might assume

to maintain the highest standards of educational quality. The growth and expansion of the profession's educational capacity in the past decade has been impressive but the need for educationally qualified auxiliaries continues to be extensive. Only when all member institutions fully assume responsibility for the training of auxiliary personnel will assurance be provided to the dental practitioner that adequate supportive manpower is available to assist him with the delivery of the highest quality of dental care.

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OKLAHOMA

A feasibility study was conducted to determine the interest in and the need for post-secondary occupational home economics programs in Oklahoma. The researcher interviewed 10 school administrators and instructors, 92 business organizations, and 678 students. The majority of business and school personnel were interested in developing some programs in each of the five basic home economics areas. The sample agreed on the need for observation and work experience as part of the occupational training. The greatest interest was shown for child care and guidance and the least for institutional management. The most desirable curriculums was 25 percent general education and 75 percent vocational-technical training. According to the employers, there is a major need for positive attitudes toward work. The researcher recommends that more occupational home economics programs be implemented in the Northern Area of the state. Other recommendations relate to improvement of the instrument, survey techniques and curricular decisions. The data are reported in tabular form, and the interview schedules are appended. (FP)

VT 007 292

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DETERMINING EMPLOYMENT NEEDS, EDUCATIONAL FEASIBILITIES, AND POTENTIAL ENROLLMENTS IN OCCUPATIONAL HOME ECONOMICS AT THE POST-SECONDARY LEVEL IN OKLAHOMA

by
Lillie McCray Robinson

VT007292

R C U
VOCATIONAL
RESEARCH
COORDINATING
UNIT
OKLAHOMA
STATE
UNIVERSITY

Research Report Number 7

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Lillie McCray Robinson

Oklahoma Vocational
Research Coordinating Unit
Stillwater, Oklahoma
July, 1968

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CHAPTER I

DESCRIPTION OF THE STUDY

The vocational home economics leaders of the secondary programs have given most of their time and attention to the development of programs which were aimed at preparation for home and family living. Home economics is now accepting the dual responsibility of preparing for homemaking and for occupational education on the secondary and post-secondary levels. The provisions of the Vocational Education Act of 1963 have indicated the need for home economics to provide education for wage earning in occupations which utilize knowledge and skills commonly considered a part of home economics. Home economics educators throughout the nation have shown increasing concern in recent years for the responsibility of educating persons at the secondary and post-secondary levels for employment. This concern is reflected in the statement of multiple purposes as presented by Hill: (3, p. 38)

1. Improve the quality of family living so all families may provide the needs basic to the development of individuals and to the maintenance of good mental health.

2. Develop abilities needed for the occupation of homemaking--guidance of children, management of resources, and feeding, clothing and housing families.

3. Enable families to fulfill their functions as basic economic units of the society--development, allocation and expenditure of family resources.

4. Develop occupational competence in a variety of occupations, other than homemaking within one's own home; help meet manpower needs of our society; enable persons to increase financial resources of families.

There is a variety of jobs today which require the use of knowledge and skills derived from home economics courses. These jobs require workers with competences which will enable them to become contributing members to the world of work. It is evidenced that an increasing number of women enter the labor market yearly, remain for longer periods within their life times and are capable of performing in a greater variety of jobs than ever before. These facts identify a need for home economists to develop occupationally-oriented curricula for those students who plan to become employed immediately after completing high school. These facts have implications also for those who plan to complete two years of post-secondary school work before employment.

Persons who desire to be employed in jobs which use home economics knowledge and skills will need to obtain training before accepting employment. Some may need retraining and/or updating of their training in order to remain or advance in their present positions. Home economics, through occupationally-oriented programs, can contribute to the improvement of family life by providing educational programs necessary for preparing individuals for occupations which utilize home economics knowledge and skills. Some of these programs would also contribute to the living conditions of families.

The major responsibility for training for occupations which utilize home economics knowledge and skills rests with home economics educators.

Because of the basic place which work experiences occupy, employers in business organizations have a contribution to make toward developing adequately trained personnel for the labor market. The responsibility of providing this type of training has been shared by some educators and employers in recent years by offering gainful employment programs in home economics at the secondary level. This responsibility has been extended through some post-secondary programs, the majority of which have been developed recently.

The present study developed from a concern for the initiation of occupational home economics programs on the post-secondary level in Oklahoma. It was the belief of the researcher that many students are interested in home economics positions but lack the financial resources, interests, motivation, or scholastic ability required to succeed in a professional curriculum. Another belief was that employers of business establishments and supervisors of child care agencies are interested in hiring trained personnel to fill positions and in allowing present employees to obtain additional preparation for advanced positions in the establishments. The researcher also believes that the area vocational-technical centers and junior colleges in Oklahoma have the potential for contributing much to present and future labor needs by providing semi-professional training for students who desire work upon completion of a post-secondary school program of less than four years of study.

Objectives of the Study

One objective of the study was to determine if employers in business organizations felt there was a need for personnel trained in

selected occupations which utilize knowledge and skills in home economics subject matter areas at the post-secondary level in Oklahoma. A second objective was to determine if administrative and faculty interests, educational facilities, and potential student enrollment encourage the consideration of developing home economics occupationally-oriented programs at selected junior colleges and area vocational-technical centers at the post-secondary level in Oklahoma. Specifically, through the study the researcher sought answers to the following questions:

1. Do agencies and business establishments in Oklahoma perceive a need for occupationally-oriented programs in home economics at the post-secondary level?

2. Are there junior college and area vocational-technical center administrators and faculty interested in developing occupationally-oriented programs?

3. Are there students interested in enrolling in occupationally-oriented programs to justify the development of such programs?

4. Should one or more occupationally-oriented programs be recommedned for development at the schools studied? If so, which of the programs?

CHAPTER II

METHODOLOGY OF THE STUDY

The study was a survey designed to ascertain the feasibility for developing occupational programs in home economics at the post-secondary level in Oklahoma. The researcher attempted through the study to determine if post-secondary school administrators and instructors were interested in developing home economics occupationally-oriented curricula; if business organizations were interested in hiring persons who had completed the curricula; and if students were interested in enrolling in home economics occupationally-oriented curricula. It was hoped the findings of this study could be used in making recommendations for developing occupational programs at selected post-secondary schools in Oklahoma. It was also hoped the instruments developed and method used could be employed by others in assessing needs for occupational programs at post-secondary schools in Oklahoma.

Development of the Instruments

In developing instruments for use with the study, the researcher surveyed several interview schedules which had been used in the collection of data for studies similar to this study. No instrument sufficiently contained items which would encompass the information for which the researcher hoped to obtain through this study. As a result,

instruments were developed for collecting the data. The interview schedules used with institutions and business organizations were based on items from Cozine's Interview Schedule of Business Establishments (2, pp. 29-51) and Voth's Questionnaire on Occupational Preparation in Junior Colleges (6, pp. 1-4). The interest inventory used with the students was based on items from Bentley's My Future Plans scale (1, pp. 328-332).

The procedure in developing the instruments was as follows:

1. Related instruments were studied in an effort to determine the form which should be used.
2. Texts and recent publications in the field of home economics along with publications released by state departments of education were studied.
3. A list of occupationally-oriented curricula was developed for each of the five areas of home economics.
4. A list of questions was drafted for use in developing the instruments.
5. The three instruments were then drafted and compared. This was done in an effort to determine if the answers to the questions would yield similar information.
6. Each instrument was checked by the thesis adviser. Revisions were made where recommended.
7. Each instrument was then reviewed in consultation with the statistician of the Research Coordinating Unit, Oklahoma State University. The purpose of the review was to determine if the subsequent data could be effectively computerized.

8. The instruments were tested with employers in home economics related organizations. Junior college personnel and high school students also served as interviewees for the testing of their respective instruments. These individuals rendered helpful suggestions regarding improving the clarity of the instruments.
9. The suggestions were considered and the three instruments were revised and printed. These instruments were used with the business personnel, post-secondary school personnel, and students enrolled at selected high schools, area vocational-technical centers, and junior colleges.

Collection and Analysis of the Data

The sample of business organizations and institutions was selected from among those who met an established criteria. A statement of the criteria follows:

1. The junior colleges and area vocational-technical centers should:
   a. Be located in a city in which a sample of at least five business establishments and child care agencies can be selected from four of the five home economics areas to be studied.
   b. Be in operation for at least one year with an on-going home economics program at the time of the interview.

c. Employ teachers of home economics courses who are interested in occupational home economics.

d. Be able to acquire facilities appropriate for meaningful academic and work-related experiences.

2. The business establishments and child care agencies should:

a. Be established within the limits of the area in which the area vocational-technical center or junior college is located.

b. Be interested in educational programs focused upon occupational preparation in the area which utilizes home economics knowledge and skills.

c. Be those which employ persons in one or more of the five areas of home economics to be studied.

d. Be those in the location which employ the greatest number of workers in the home economics subject area studied.

3. Students should:

a. Be in attendance at public secondary schools which are located within a 30 mile radius of the respective area vocational-technical center or junior college.

b. Be enrolled in at least one home economics course at the time of the interview.

c. Be classified as seniors at the high school, juniors or seniors at the area vocational-technical centers, or as first or second year junior college students at the time of the interview.

d. Be in attendance at the junior college, area vocational-technical center, or at one of five high schools selected through a stratified random sample.

The managers of business establishments, supervisors of child care agencies, principals and superintendents of high schools, presidents of junior colleges and directors of area vocational-technical centers were contacted by mail. The purpose of the study was explained and the participation of these personnel was solicited.

Five business organizations in each of the five areas of home economics occupations were selected for the study in each of the four locations. In locations in which less than five organizations were established, the population of the organization was asked to participate. A telephone call to managers and supervisors was made to verify their participation in the study. A suitable time for an interview was agreed upon. Interviews which ranged in time from 30 minutes to two hours in length were held with these personnel. The type of information sought through the interview was that which indicated (1) general information about the agency or business, (2) a willingness of business personnel to cooperate and participate in training programs, (3) preferable types of programs for post-secondary schools, and (4) needs for and interests in hiring persons who are trained in occupationally-oriented curricula at the post-secondary level.

Two area vocational-technical centers and two junior colleges were selected for the study. Presidents and directors of these institutions were contacted by telephone regarding their willingness

to participate in the study. A time for the interview was established. The home economics teachers and chief administrator of these institutions were interviewed. The interviews lasted from 40 to 60 minutes in length.

The type of data sought through the interviews with these persons was that which indicated (1) general information about the present programs at the institutions, (2) the interest of administrators and home economics faculty in developing a training program, (3) the preferable type of occupational program for the post-secondary school curricula, and (4) interests of the administrators and instructors in developing selected occupationally-oriented curricula at the post-secondary level.

A time for discussing occupational home economics and administering the interest inventories to the students enrolled in home economics classes was agreed upon in consultation with the home economics instructor. At the given time, students were brought together as a group or in regular class periods for the discussion and administration of the inventory. The researcher utilized approximately 50 minutes with the students at each group meeting. During the meeting, the purpose of the study was explained and occupational home economics was discussed. Particular emphasis was given to educational requirements, possibilities for employment, salary ranges, job requirements, and possibilities for advancement in each of the five areas of the study. Students were instructed to complete the inventory in the presence of the researcher. Questions were asked and answered regarding the correct procedure for responding to items on the inventory.

The high school principals were telephoned to verify their participation in the study. When the principals indicated a willingness to participate, the schedule for home economics classes which enrolled senior students was obtained and a desirable date for the visit to the school was agreed upon. In many cases, these appointments were made in consultation with the home economics teacher of the classes in which the inventories were to be administered.

Five high schools in each of the four locations of the State in which senior students were enrolled in home economics classes were selected. The researcher utilized one class period with the students at high schools in three of the four locations. Home economics instructors at one location administered the inventories to their students. These instructors were instructed to follow the same procedure as the researcher. The occupational phase of home economics was discussed and inventories were administered during the class period the senior students normally were scheduled for their home economics courses. The procedure followed in working with the students in area vocational-technical centers was the same as that for the high school students.

The inventories for the three groups of students were designed to obtain (1) information regarding the home economics courses the students had taken, (2) interests of students in pursuing occupational home economics at the semiprofessional level, (3) feelings of the students about training for occupations which utilize home economics knowledge and skills, and (4) plans of the students for next year. Responses were obtained from a total of 678 students.

The Oklahoma State University Computer Center was used to make the analysis of the data. This consisted of frequency counts of the various categories and tabulations of total responses to the alternative possible answers for each of the three groups of respondents as a whole. Percentage counts were also made. Frequency and percentage counts were made for the three groups of respondents by locations, for the students by individual schools, for institution personnel by individual institution, and for business representatives by individual areas of home economics.

A summary of the analysis is shown in the appendices and discussed in detail in chapter three of this study. The data were used as a basis for:

1. Determining the interest of employers in employing students who complete the occupational curricula at the post-secondary level.
2. Determining the interests of administrators and faculty in developing occupationally-oriented curricula in one or more of the home economics areas studied.
3. Determining the interests of students in enrolling in a post-secondary occupationally-oriented curriculum which leads to immediate employment.
4. Making recommendations for one or more occupationally-oriented curricula at the semiprofessional level if the findings indicate.

Summary

In summary, the methodology used in this study included a survey

of related interview schedules and questionnaires. Instruments used in the study were based on Cozine's Interview Schedule of Business Establishments, Voth's Questionnaire on Occupational Preparation in Junior Colleges, and Bentley's My Future Plans scale.

Area vocational-technical centers and junior colleges were selected from the population of state junior colleges and area vocational-technical centers in Oklahoma which met an established criteria. Administrators, instructors, and students at these institutions participated in the study. Twenty high schools were included in the study. A total of 92 business organizations participated in the study. In locations where less than five business organizations of one subject area was established, the population of that area participated. The Care and Guidance of Children area was the only area of the five which had less than five establishments in all locations studied.

Three groups of participants were visited, the data were collected and summarized. The Oklahoma State Computer Center obtained frequency and percentage counts for the data.

CHAPTER III

PRESENTATION OF THE DATA

This chapter summarizes the findings of interviews made with employers in 92 business organizations related to home economics. Six hundred and seventy-eight students who were in attendance at 20 high schools, two area vocational-technical centers and two junior colleges were interviewed. Administrators and home economics instructors at the area vocational-technical centers and junior colleges were interviewed. Data from these three groups of people were obtained for four locations within Oklahoma.

The four locations will be identified by roman numerals as they are referred to throughout the presentation and as they are listed in the tables and appendices. Location I is in the Northeastern area of the State. Location II is in the Northern area. Location III is in the Southern area and Location IV is in the Southwestern area of the State.

The objective of this chapter is to present data relating to the research questions posed in Chapter I of the study. Specifically, through this chapter the researcher will present the findings of the study as revealed through the interview process. For the business organizations, the researcher will describe the

(1) employment patterns and the feeling of adequacy of workers in each area of home economics.

(2) interests of business organizations in cooperating and participating in occupational programs.

(3) preferable types of programs for the training as indicated by the business organizations.

(4) interest of business organizations in persons prepared in each of the five home economics occupational curricula.

For the school personnel, the researcher will describe

(1) the educational characteristics of the institutions.

(2) the interests of the school personnel in developing occupational programs.

(3) preferences of school personnel for types of occupational programs.

(4) the interests of school personnel in preparing persons in each of the five home economics occupational curricula.

For the students, the researcher will describe

(1) certain general information about the student's home economics interest and background.

(2) the interests of the students in pursuing occupational home economics at the post-secondary level.

(3) the interests of the students in enrolling in each of the curricula in the five areas of home economics.

The researcher believes that the type of responses and the trends found in these locations may also be found among other locations with similar characteristics; however, the descriptions and observations of data will be limited to the four locations studied. The recommendations for development of occupational programs will be limited to the four locations studied.

The chapter is divided into four sections. The first section shows the information obtained for business organizations. The second shows the information obtained for the school personnel and the third

deals with information obtained for the students. The last section treats recommendations for developing occupational curricula in each of the four locations.

BUSINESS ESTABLISHMENTS AND AGENCIES

Questions asked business managers in five home economics related areas through interview sessions were designed to answer research question one:

> Do agencies and business establishments in Oklahoma perceive a need for occupationally-oriented programs in home economics at the post-secondary level?

The interview schedule can be found in Appendix B.

Employment Patterns and Feeling of Adequacy

There were 92 business establishments and child care agencies surveyed in the study. Data from these organizations were collected from persons in managerial positions at each establishment. Of the persons contacted, 11 (12 percent) were supervisors of child care centers, 73 (79.3 percent) were managers or administrators and eight (8.7 percent) were personnel managers of the other four home economics related areas.

Each person interviewed was asked if he felt there was a shortage of trained workers in his area of business. Table I shows the responses for this question according to subject area. Of the 92 persons contacted, more than three-fourths (82.6 percent) answered "yes," less than one-fourth (16.3 percent) answered "no" and one person answered "uncertain." In studying the Table, one can see the Care and Guidance of Children area showed the greatest percentage of

negative responses. Many of the supervisors qualified their answer by saying they were always able to employ persons in the center when they needed additional help and these persons were usually employed at the helper level.

TABLE I

TOTAL RESPONSES OF BUSINESS PERSONNEL REGARDING EMPLOYMENT SHORTAGE BY HOME ECONOMICS AREA

Home Economics Area	Yes		No		Uncertain		Total	
	#	%	#	%	#	%	#	%
Food Management, Production, and Services	19	95	1	5	0	0	20	100
Clothing Management, Production, and Services	16	80	4	20	0	0	20	100
Care and Guidance of Children	7	58	5	42	0	0	12	100
Home Furnishing, Equipment, and Services	17	85	2	10	1	5	20	100
Institutional Management and Supporting Services	17	85	3	15	0	0	20	100
TOTAL	76	82.6	15	16.3	1	1.1	92	100

To obtain a picture of the employment needs of the five home economics related areas, the researcher asked questions which would show the number of present employees, replacement needs, expanding needs, new employees, and if there were decreases in personnel. This information was obtained for full-time and part-time paid employees. There

were no volunteer workers in the businesses. These data are presented in Table II.

TABLE II

TOTAL PAID EMPLOYEES FOR THE ORGANIZATIONS INTERVIEWED AND FUTURE PREDICTIONS

Employers	Present	Replace-ment	Expand-ing	New Employees	Decreas-ing	Total in 2 Years
Full-time Paid	2,829	395	147	542	0	2,976
Part-time Paid	550	109	18	127	9	559
TOTAL	3,379	504	165	669	9	3,535

One can see from the table that the organizations expect replacements for about 15 percent of the employees within two years. All of the decreases in employees are expected to be with part-time employees. Proportionately, more expansion is expected among full-time employees. The data also show that nearly 700 new employees are needed in these areas within two years.

There were five levels of employment presented to each employer. The employers were asked to indicate the number of employees hired at each level, the level most difficult to fill, and the level least difficult to fill. Table III shows this distribution for the business organizations interviewed by employment level. The data in Table III show that the greatest number of replacement and expansion needs are expected at the helper and assistant levels. No turnover is expected at the manager and supervisory levels. Nearly all of the new employees

are needed to fill positions at the helper and assistant levels. The post-secondary programs can train persons at the assistant level who would be qualified for positions at these levels.

TABLE III

LEVELS OF EMPLOYMENT FOR THE BUSINESS ORGANIZATIONS INTERVIEWED AND FUTURE PREDICTIONS

Employment Level	Present	Replace-ment	Expand-ing	New Employees	Decreas-ing	Total in 2 Years
Helper	1,492	419	108	527	0	1,600
Assistant	1,266	81	54	135	7	1,313
Midmanager	371	4	2	6	1	372
Manager	96	0	1	0	1	95
Supervisor	154	0	1	1	0	155
TOTAL	3,379	504	165	669	9	3,535

Table IV shows the information regarding the levels most and least difficult to fill. An observation of Table IV shows that nearly all of the employers were able to identify one level as most difficult and one level as least difficult to fill. A few employers felt all levels were equally as difficult or that no difficulty had been experienced in employing personnel at the levels needed. Some employers who responded to the item added they had little difficulty filling some positions but much difficulty keeping the positions filled. According to the employers, this difficulty was caused by the high mobility rate of persons in helper and assistant level positions. The majority of

employers felt the helper level was least difficult to fill. Some employers felt the managerial level was least difficult to fill because the need for managers was not as great as the need at other levels of employment. Some employers commented that while there were fewer openings at the supervisory level, the competencies needed to qualify for the position made this level most difficult to fill.

TABLE IV

EMPLOYMENT LEVELS MOST AND LEAST DIFFICULT TO FILL

Level	Helper	Assistant	Mid-Manager	Manager	Supervisor	Total Number
Most Difficult	17	32	10	2	21	82
Least Difficult	48	14	3	12	6	83

Table V shows the sources in which employers utilize in obtaining employees to fill positions in the establishments. It should be noted that three employers did not indicate a source for this question. These employers replied their business was very stable and they had not had to employ new personnel.

The campus placement offices and private employment agencies were the sources used least by business managers. The majority of employers used public contacts and direct contact by the prospective employees most frequently. A great number of employers, nearly one-fourth, advertised for prospective employees.

The majority of employers in the business establishments felt

there were needs for additional workers who were trained in the area of work in which they were hired to perform. Many supervisors in the child care area had experienced little difficulty in obtaining personnel. Much of this was attributed to the fact that their employees were hired at the helper level.

About one-fifth of the employers in the areas studied were hired on a part-time basis. All decreases in staff projected for the next

TABLE V

UTILIZATION OF PLACEMENT SOURCES
BY EMPLOYERS

Source	No. of Persons Who Used the Source	%
Campus Placement Office	1	1
Public Employment Agency	13	14
Private Employment Agency	1	1
Advertisements	21	23
Contact by Employer	3	3
Contact by Employee	24	28
Public Contacts	24	28
Advisory Committee	2	2
Other	0	0
TOTAL	89	100

two years were for the part-time employees. The greatest number of replacements, expansions, and decreases for the next two years is expected to be at the helper and assistant levels. Almost no turnover is expected at the midmanager, manager, and supervisory levels.

Campus placement offices and private employment agencies were used least by employers. Public contacts and direct contact by the prospective employee were the two sources used most by employers when seeking persons to fill the positions.

Interests of Business Employers in Occupational Programs

When the employers were asked if they were interested in working with school personnel in developing occupational programs, the vast majority (84.8 percent) answered "yes," less than one-fourth (13.0 percent) answered "no," and two employers answered "uncertain." Those who were uncertain qualified their answers by saying they would have to clear the matter with the owner of the business before they could give a definite positive or negative answer. Some of the employers who answered "no" added that the company had its own training program or that they preferred to train the employees themselves.

Of the 78 persons who were interested in working with the schools in developing training programs, nearly one-fourth (23.1 percent) preferred to serve in an advisory capacity. Seven (9 percent) preferred to serve as consultants, 11 (14 percent) preferred to assist with the development of skills of the enrollees, a little over one-half (51.2 percent) were interested in serving in all three capacities, and two preferred to serve in other capacities.

When employers were asked: "Would you hire persons who had completed the semiprofessional program if there were openings at the levels of work in which you needed help?" Nearly all employers answered "yes" (91.3 percent). Three answered "no," and five were

uncertain. The employers who answered "no" felt they would not be in favor of paying the salary the trained persons would desire or that the business would not need additional employees.

One way of keeping employees abreast of new trends in their area of work is through study. (5, p. 38) Employers were asked "Would you be interested in having presently employed workers obtain further training in preparation for new or advanced positions if the junior college or area vocational-technical center were to make this training available?" More than one-half (57.6 percent) of the employers answered "yes," a little over one-fourth (26.1 percent) answered "no," and the remaining employers (16.3 percent) answered "uncertain." Many of the employers who answered "no" added that they did not feel their present employees could gain from enrolling in courses at this level. Some of the employers who answered "uncertain" felt they should leave the decision with each employee. They added that if there were employees who wished to attend classes, they would cooperate by rearranging the work schedules of those who wished to attend classes.

The provisions for students to observe and receive work experience while enrolled at the institution has been recommended by some educators. (4, p. vi; 7, p. 2) The researcher sought the reactions of employers regarding their willingness to permit students to observe and receive work experience at the establishments. Table VI shows these reactions.

It can be observed that employers in Location II were most willing to permit students to observe and receive work experience at the establishments. In each location, those employers who answered "no" felt they would not be able to pay a student for working or they would

not have adequate time to supervise the experiences of a student. Many of the employers who answered "uncertain" wanted to clear the request with the owner. Others felt certain basic rules or policies should be developed and agreed upon by the business and institution before they could give a definite positive or negative reply. Also, some of the managers who answered "uncertain" said their answer would be "yes" if they were not required to pay any of the wages for the students while they worked at the business.

TABLE VI

WILLINGNESS OF EMPLOYERS TO PERMIT STUDENTS TO OBSERVE AND RECEIVE WORK EXPERIENCES AT ESTABLISHMENTS BY LOCATIONS

Location	Will Permit		Will Not Permit		Uncertain		Total for Location	
	#	%	#	%	#	%	#	%
I	18	81.0	0	0	4	19.0	22	100.0
II	22	88.0	2	8.0	1	4.0	25	100.0
III	14	66.7	2	9.5	5	28.8	21	100.0
IV	19	79.2	1	4.2	4	16.7	24	100.0
TOTAL	73	79.1	5	5.5	14	15.4	92	100.0

In summary, the general attitude of the business managers regarding development of occupational programs in home economics was highly positive. It has been seen that the majority of the employers were interested in working with school personnel in one or more capacities in developing occupational programs. Nearly all employers stated they

would hire persons who had completed a program and more than one-half were interested in their present employees obtaining additional training.

The majority of employers in each location was willing to allow students to observe and receive work experience; however, some employers had reservations. Employers in Location II were most willing to cooperate and employers in Location III expressed the greatest amount of reservations.

Preferable Types of Programs for Training

The researcher presented two types of programs to each employer. Program A was a post-secondary school training period which was 100 percent vocational-technical. Program B was a post-secondary school training period which was primarily vocational-technical but included courses in general education. Each employer selected the program he felt should be developed.

One-third (33.7 percent) of the employers interviewed preferred Program A. They felt the time spent for such occupational training should be a concentration of preparation for the job. Nearly two-thirds (64.1 percent) of the employers preferred Program B. This group believed general education was a necessary part of any training and that the occupational program should certainly include some courses in general education. Two employers preferred a third type of program to the two types presented. One employer believed the training period should be primarily liberal arts education with vocational-technical education courses. The other employer preferred a

program which was more of an apprenticeship nature and provided much on-the-job experience.

Sixty-two employers reacted to a question designed to ascertain from each, his estimate of the most desirable percentage of courses in general education for the occupational training. Four percentages were listed: 15 percent; 25 percent; 35 percent; and 45 percent. The sixty-two employers were those who preferred Program B, those who preferred other programs, and one employer who preferred Program A. Table VII shows the distribution of answers given by these employers.

TABLE VII

PERCENTAGE OF GENERAL EDUCATION COURSES FOR OCCUPATIONAL PREPARATION BY LOCATIONS

Location	15%		25%		35%		45%		Total	
	#	%	#	%	#	%	#	%	#	%
I	1	1.6	9	14.5	1	1.6	2	3.2	13	21.0
II	2	3.2	11	17.7	1	1.6	1	1.6	15	24.2
III	4	6.5	9	14.5	1	1.6	1	1.6	15	24.2
IV	2	3.2	12	19.4	3	4.8	2	3.2	19	30.6
TOTAL	9	14.5	41	66.1	6	9.7	6	9.7	62	100.0

One can observe from Table VII that the majority of employers in each location believe general education courses should occupy 25 percent of the occupational training curriculum. This appears to agree with the findings of the Voth (6) study.

Five distributions of training time were presented to the employers. Each distribution consisted of a percentage of time for theory

would hire persons who had completed a program and more than one-half were interested in their present employees obtaining additional training.

The majority of employers in each location was willing to allow students to observe and receive work experience; however, some employers had reservations. Employers in Location II were most willing to cooperate and employers in Location III expressed the greatest amount of reservations.

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The researcher presented two types of programs to each employer. Program A was a post-secondary school training period which was 100 percent vocational-technical. Program B was a post-secondary school training period which was primarily vocational-technical but included courses in general education. Each employer selected the program he felt should be developed.

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	#	%	#	%	#	%	#	%	#	%
I	1	1.6	9	14.5	1	1.6	2	3.2	13	21.0
II	2	3.2	11	17.7	1	1.6	1	1.6	15	24.2
III	4	6.5	9	14.5	1	1.6	1	1.6	15	24.2
IV	2	3.2	12	19.4	3	4.8	2	3.2	19	30.6
TOTAL	9	14.5	41	66.1	6	9.7	6	9.7	62	100.0

One can observe from Table VII that the majority of employers in each location believe general education courses should occupy 25 percent of the occupational training curriculum. This appears to agree with the findings of the Voth (6) study.

Five distributions of training time were presented to the employers. Each distribution consisted of a percentage of time for theory

and development of background knowledge along with a percentage of time for the development of technical skills and knowledge for the job. Each employer selected the time in which he preferred as a most desirable combination for the training. Table VIII shows the reactions of employers to the question. Two employers preferred a distribution different from the five listed. This distribution is included in the Table.

TABLE VIII

FREQUENCY AND PERCENT OF EMPLOYERS WHO REACTED TO DISTRIBUTIONS OF TRAINING TIME IN THE OCCUPATIONAL PROGRAMS BY LOCATIONS

Distributions of Training Time	LOCATIONS I #	I %	II #	II %	III #	III %	IV #	IV %	Total #	Total %
25% Theory 75% Skills	9	9.8	18	19.6	14	15.2	8	8.7	49	53.3
33% Theory 67% Skills	2	2.2	0	0	0	0	0	0	2	2.2
40% Theory 60% Skills	0	0	1	1.1	4	4.3	5	5.4	10	10.8
50% Theory 50% Skills	9	9.8	4	4.3	2	2.2	9	9.8	24	26.1
60% Theory 40% Skills	2	2.2	2	2.2	0	0	0	0	4	4.3
75% Theory 25% Skills	0	0	0	0	1	1.1	2	2.2	3	3.3
Total	22	23.9	25	27.2	21	22.8	24	26.1	92	100.0

One may note from the Table that more than one-half (53.3 percent) of the employers who were interviewed preferred a distribution in which

one-fourth time is spent in theory and development of general background knowledge along with three-fourths of the time spent on the development of basic knowledge and technical skills for the job. The smallest number of employers, two, felt the distribution should be one-third theory and two-thirds skills. It is noted that this distribution is the next progression in size relationship, yet few people desired the combination.

Each employer was asked if he thought students enrolled in occupational home economics programs should have background knowledge and understanding of one area with intensive training in one aspect only of this knowledge. Each was also asked if the program should provide background knowledge and understanding of an area, with training in several aspects, hence less intensive training in any one application. About one-fifth (21.7 percent) of the group felt students should be intensively trained in one aspect of an area. Approximately three-fourths (76.1 percent) felt students should be provided background knowledge and understanding in an area but should also have training in several aspects of the area. Two persons believed neither of the two programs should be developed, but that students should have intense training in several aspects of one area.

It is the general belief among some employers that persons who plan to enter the labor force should possess a positive attitude toward work, be able to relate positively with people, and possess knowledge and skills for the job. (4) The employers in this study were asked to indicate the one quality which they felt was the most important. More than one-half (54.4 percent) of the employers thought positive

attitudes toward work was the quality needed most by employees. About one-fifth (22.2 percent) believed positive relationships with people was the quality needed most. Almost one-fifth (18.9 percent) thought the employees needed knowledge and skills for the job more than any other quality. Four employers were unable to rate one quality above the others. Three of these employers felt all three qualities were needed most. One employer believed positive attitudes toward work and knowledge and skills for the job were needed equally as much.

A summary of the findings showed that nearly two-thirds of the employers preferred the program which included general education along with vocational-technical training. Of these employers, two-thirds preferred a program in which one-fourth of the courses are general education courses.

More than one-half of the employers preferred that 25 percent of the time in training be spent in theory development and the remaining 75 percent be spent in developing technical skills and knowledge for the job. Three-fourths of the group felt students should be provided background knowledge and understanding in an area but should also have training in several aspects of the area.

Although nearly all employers believed the employees should possess positive attitudes toward work, positive relationships with people, and knowledge and skills for the job, more than one-half of the employers thought positive attitudes toward work was the quality needed most by employees. The remaining two qualities were selected in nearly equal amounts by employers.

Interest of Employers in Home Economics Occupational Curricula

Employers in each of the five home economics related areas were asked to rate their degree of interest in employing persons who had completed an occupational curriculum. Each employer was asked to react only to the curricula in his business area. Tables IX, X, XI, XII, and XIII show the interests of employers in each of the five areas. An observation of Table IX reveals that employers in food establishments are most interested in persons prepared in a quantity foods preparation curriculum. Employers in food establishments are least interested in persons who have completed a curriculum in school lunch management. Over one-half of the employers in food establishments were highly interested in persons who had completed curricula in food supervision, food handling, and distribution and quantity purchasing. Some employers suggested that by combining two or more of the closely related curricula, the students could obtain a broader background and could advance more quickly when placed on jobs.

An observation of Table X reveals that employers in the Clothing Management, Production, and Service area were most interested in persons who had completed a retailing and salesmanship. Least interest was shown for persons in the power machine operation curriculum. High interest was shown by one-half of the employers for persons in dressmaking and clothing and design curricula. Many employers said the demand was not great enough in their location for persons with training in millinery, factory line supervision or laboratory technician training.

TABLE IX

INTERESTS OF EMPLOYERS IN GRADUATES OF FOOD MANAGEMENT, PRODUCTION, AND SERVICES CURRICULA

Curricula	Highly Interested		Moderately Interested		Slightly Interested		Not Interested		Total	
	#	%	#	%	#	%	#	%	#	%
Catering Service	3	15	4	20	5	25	8	40	20	100
Quantity Food Preparation	15	75	2	10	0	0	3	15	20	100
Food Supervision	11	55	5	25	1	5	3	15	20	100
Dietary Science	4	20	7	35	2	10	7	35	20	100
Food Handling and Distribution	11	55	6	30	0	0	3	15	20	100
Food Service and Hotel Administration	4	20	3	15	3	15	10	50	20	100
Quantity Purchasing	10	50	2	10	4	20	4	20	20	100
Laboratory Technician in Food and Nutrition	2	10	3	15	8	40	7	35	20	100
Bakery	7	35	7	35	3	15	3	15	20	100
Food Processing	6	30	5	25	5	25	4	20	20	100
School Lunch Management	1	5	1	5	3	15	15	75	20	100

TABLE X

INTERESTS OF EMPLOYERS IN GRADUATES OF CLOTHING MANAGEMENT, PRODUCTION, AND SERVICES CURRICULA

Curricula	Highly Interested		Moderately Interested		Slightly Interested		Not Interested		Total	
	#	%	#	%	#	%	#	%	#	%
Clothing Maintenance	8	40	5	25	2	10	5	25	20	100
Dressmaking and Alterations	10	50	6	30	1	5	3	15	20	100
Retailing and Salesmanship	16	80	1	5	0	0	3	15	20	100
Clothing and Design	10	50	2	10	2	10	6	30	20	100
Garment Construction	7	35	7	35	1	5	5	25	20	100
Millinery	4	20	3	15	2	10	11	55	20	100
Laboratory Technician in Clothing and Textiles	2	10	3	15	4	20	11	55	20	100
Power Machine Operations	4	20	0	0	1	5	15	75	20	100
Factory Line Supervision	6	30	0	0	3	15	11	55	20	100

Table XI reveals that child care supervision and nursery school education were two curricula in which supervisors in the area of Care and Guidance of Children showed a high interest. The curriculum of least interest to the supervisors was care for the handicapped. The Care and Guidance of Children was another occupational area in which

the employers felt the combination of two or more curricula would serve to prepare persons to perform in a wider range of capacities, thus develop a more competent employee for the job.

TABLE XI

INTERESTS OF EMPLOYERS IN GRADUATES OF CARE AND GUIDANCE OF CHILDREN CURRICULA

Curricula	Highly Interested		Moderately Interested		Slightly Interested		Not Interested		Total	
	#	%	#	%	#	%	#	%	#	%
Child Care Supervision	11	91.7	1	8.3	0	0	0	0	12	100
Kindergarten Education	4	33.3	4	33.3	2	16.7	2	16.7	12	100
Recreational Services	5	41.7	5	41.7	1	8.3	1	8.3	12	100
Care for the Handicapped	2	16.7	3	25,0	2	16.7	5	41.6	12	100
Nursery School Education	10	83.3	2	16,7	0	0	0	0	12	100
Teacher's Aide	4	33.3	3	25.0	2	16.7	3	25.0	12	100

In Table XII, more interest was shown by employers for persons who had completed curricula in retailing and salesmanship and in interior decoration. Least interest was shown for persons who had completed a furniture refinishing curriculum. The equipment and appliance curriculum was not very attractive to employers as a separate curriculum. Some employers felt the competencies of persons in this

curriculum are used by persons in the salesmanship area and the two curricula should be taught as one curriculum.

TABLE XII

INTERESTS OF EMPLOYERS IN GRADUATES OF HOME FURNISHING, EQUIPMENT, AND SERVICES CURRICULA

Curricula	Highly Interested		Moderately Interested		Slightly Interested		Not Interested		Total	
	#	%	#	%	#	%	#	%	#	%
Furniture Refinishing	5	25	2	10	0	0	13	65	20	100
Equipment and Appliance Demonstration	5	25	2	10	2	10	11	55	20	100
Interior Decoration	14	70	2	10	1	5	3	15	20	100
Retailing and Sales-manship	15	75	3	15	1	5	1	5	20	100
Upholstery and Drapery Making	11	55	2	10	2	10	5	25	20	100

In Table XIII, the curriculum attracting the greatest interest by employers in the Institutional Services area was housekeeping technology. Most employers in this area showed little interest for the other curricula. Some employers indicated that some of the skills associated with home health care technology, homemaker's services, and home management can be adapted to institutional work but persons who had completed the curricula would be suited more for work in private homes. Most of the employers felt the demand for public

housing managers was not very great in their locations.

TABLE XIII
INTERESTS OF EMPLOYERS IN GRADUATES OF INSTITUTIONAL MANAGEMENT AND SUPPORTING SERVICES CURRICULA

Curricula	Highly Interested		Moderately Interested		Slightly Interested		Not Interested		Total	
	#	%	#	%	#	%	#	%	#	%
Home Health Care	4	20	2	10	2	10	12	60	20	100
Homemaker's Services	0	0	3	15	1	4	16	80	20	100
Housekeeping Technology	16	80	3	15	0	0	1	5	20	100
Public Housing Management	0	0	3	15	3	15	14	70	20	100
Home Management	4	20	2	10	3	15	11	55	20	100
Hotel-Motel Management	4	20	3	15	3	15	10	50	20	100

The Institutional Services area was the area in which most employers indicated they had trained their own employees in the past because the salaries which trained persons would desire would be beyond that which the company could pay.

In summary, these data reveal that in general, the majority of the business employers who were interviewed for this study were receptive toward occupational preparation. Many were willing to work with school personnel in developing a program and in providing work stations for the students.

Although most of the employers believed an employee needed all three qualities stressed when preparing for an occupation, many employers felt if the employee maintained a positive attitude toward work, he would have little difficulty attaining the other two qualities: positive relationships with people and knowledge and skills for the job.

Varying degrees of interest were shown for hiring persons who had completed an occupational curriculum at the post-secondary level. Business managers tended to react more favorably to the curricula which were designed to prepare persons for work in the areas closely related to their business interests.

SCHOOL PERSONNEL

The interview schedule used when interviews were made with administrators and home economics instructors at two junior colleges and two area vocational-technical centers was designed to seek an answer to research question two of the study:

> Are there junior college and area vocational-technical center administrators and faculty interested in developing occupationally-oriented programs?

The interview schedule is a part of Appendix A of this study.

Educational Characteristics of the Institutions

There was a total of four administrators and six instructors who responded to the interview schedule. Home economics related programs were offered at both area vocational-technical centers. Courses in all areas of home economics except Institutional Management and

Supporting Services were offered at both junior colleges.

All administrators and instructors in the study felt there was a need for training workers at a semiprofessional level in home economics. When asked to identify the area or areas in which they felt there was a need for training in their location, the personnel at the junior colleges felt occupational programs should be developed in all areas except Institutional Services. The area vocational-technical center personnel in Location II believed occupational programs should be developed in clothing, food and child care areas. Area vocational-technical center personnel in Location III preferred that occupational preparation be limited to the foods area.

All home economics instructors were employed on a full-time basis. Three instructors were employed at the junior colleges and three were employed at the area vocational-technical centers. There were no replacement needs and no institution was expecting to reduce its home economics faculty. If the present enrollments continue to increase, four additional teaching personnel would be needed within two years. These additional personnel needs were suggested by the administrators. The combined enrollment in home economics for the four schools is 185. This number is expected to reach 310 by 1970. These totals do not include the non-majors who elect home economics courses at the junior colleges.

Three institutions offered a preprofessional curriculum and two offered occupational curricula at the high school level. No school offered an occupational home economics curriculum at the post-secondary level. One area vocational-technical center, however, had

immediate plans for offering occupational training in foods to an adult group.

When instructors and administrators were asked if they would require the students to observe and receive work experience as a part of their occupational preparation, all except one answered "yes." The one person answered "no" with an explanation.

In summary, the data for the school personnel showed that:

(1) all instructors, and administrators believed there was a need for training workers at the semiprofessional level in home economics related occupations.

(2) the personnel showed a willingness to develop curricula in the five areas; however, least interest was shown for developing curricula in the home furnishing and institutional services areas.

(3) the area vocational-technical center personnel showed a greater interest for providing training for updating the skills of workers already in the labor force.

(4) nearly all personnel would require the students to observe and receive work experience as a part of their occupational preparation. One instructor had reservations regarding the possibilities for scheduling such experiences.

Preferable Type of Post-Secondary School Training

Two types of programs for post-secondary school preparation were presented to each educator. Program A consisted of a post-secondary

school training period which is 100 percent vocational-technical. Program B consisted of a post-secondary school training period which is primarily vocational-technical but includes courses in general education. One instructor preferred Program A and the remaining nine educators preferred Program B.

Percentage of courses in general education were listed as 15 percent, 25 percent, 35 percent, and 45 percent. The persons who favored Program B were asked to select the percentage of courses in general education most desirable for the training. One person (11 percent) selected 15 percent general education courses as most desirable, five persons (56 percent) selected 25 percent, and two persons (22 percent) selected 35 percent. No one selected 45 percent; however, one administrator (11 percent) preferred that 40 percent of the course be offered in general education.

A question which dealt with the division of the training time in the occupational programs was presented to the school personnel. One phase dealt with the percentage of time spent on theory and development of background knowledge. The other phase focused upon percentage of time spent on development of technical knowledge and skills for the job. Table XIV shows the reaction of the school personnel to the question. The Table reveals that the majority of the school personnel questioned preferred a program which consisted of 25 percent theory along with 75 percent technical skills. Only three of the distributions were considered by this group.

There were two types of programs offered as preparation for a career employee. Program A suggested background knowledge and understanding in one area with intensive training in one aspect only of

this knowledge. Program B suggested background knowledge and understanding in one area with training in several aspects, hence, less intensive training in any one application. All school personnel preferred Program B.

TABLE XIV

FREQUENCY AND PERCENT OF EMPLOYERS WHO REACTED TO DISTRIBUTIONS OF TRAINING TIME IN THE OCCUPATIONAL PROGRAMS BY LOCATIONS

Distributions of Training Time	LOCATIONS I		II		III		IV		Total	
	#	%	#	%	#	%	#	%	#	%
25% Theory 75% Skills	2	20	2	20	0	0	3	30	7	70
33% Theory 67% Skills	0	0	0	0	2	20	0	0	2	20
40% Theory 60% Skills	0	0	1	10	0	0	0	0	1	10
50% Theory 50% Skills	0	0	0	0	0	0	0	0	0	0
60% Theory 40% Skills	0	0	0	0	0	0	0	0	0	0
75% Theory 25% Skills	0	0	0	0	0	0	0	0	0	0
TOTAL	2	20	3	30	2	20	3	30	10	100

The administrators and instructors were asked to indicate which of the three qualities they felt an occupational program should stress most: positive attitudes toward work; positive relationships with people; or knowledge and skills for the job. The majority (40 percent)

of the educators thought the quality needing most stress was positive attitudes toward work. Positive relationships with people was chosen by 30 percent of the educators. The remaining 30 percent selected knowledge and skills for the job as the quality an occupational program should stress most.

In summary, nearly all instructors preferred to offer a program which is primarily vocational-technical but includes courses in general education. One-half of the personnel preferred that one-fourth of the curriculum be composed of general education courses. About three-fourths of the school personnel preferred that 25 percent of the time be spent in theory development and the remaining 75 percent be spent in the development of technical skills.

All school personnel preferred to develop curricula in which background knowledge and understanding in one area was the focus with training in several aspects of that area. Hence, the students would be more broadly prepared in the area in which they are employed.

The majority of personnel felt the quality which needed most stress while students were in school was positive attitudes toward work. Positive relationships with people and knowledge and skills for the job were selected by equal numbers of the personnel.

Interest of School Personnel in Developing Occupational Curricula

Thirty-six occupationally-oriented curricula which can be adapted to local employment needs were presented to each administrator and instructor. Each was asked to rate the degree to which he was interested in developing each of the curricula at his school. Each was

reminded to consider the present and projected educational facilities and faculty competencies in making the decision. Some administrators and instructors rated the curricula in each home economics related area and some rated curricula in the areas in which they felt there were potentials for development.

Nine persons reacted to the Food Management, Production, and Services and the Institutional Management and Supporting Services Curricula. Eight persons reacted to the Clothing Management, Production, and Services; Care and Guidance of Children; and Home Furnishings, Equipment, and Services curricula. Tables XV, XVI, XVII, XVIII, and XIX show the interests of the school personnel in developing occupational curricula in the home economics related areas studied.

An observation of Table XV shows quantity food preparation, food supervision, and quantity purchasing were the three curricula in the Food Management, Production, and Services area in which three-fourths of the school personnel showed a high interest. Least interest was shown for developing catering services, food processing, and school lunch management curricula.

In Table XVI, a high interest of school personnel was shown for dressmaking and alteration, garment construction, and clothing and design curricula. Many instructors believed their present facilities and competencies would be an asset in developing these curricula. Some instructors felt concepts of clothing maintenance could be combined in one or more of the other curricula. As a result, the students would be more broadly trained in related areas of clothing competencies. Least interest was shown for preparing persons in a factory line supervision curriculum.

TABLE XV

INTERESTS OF SCHOOL PERSONNEL IN DEVELOPING FOOD MANAGEMENT, PRODUCTION, AND SERVICES CURRICULA

Curricula	Highly Interested		Moderately Interested		Slightly Interested		Not Interested		Total	
	#	%	#	%	#	%	#	%	#	%*
Catering Services	3	33.3	2	22.2	4	44.4	0	0	9	99.9
Quantity Food Preparation	7	77.7	1	11.1	1	11.1	0	0	9	99.9
Food Supervision	7	77.7	1	11.1	1	11.1	0	0	9	99.9
Dietary Science	4	44.4	4	44.4	1	11.1	0	0	9	99.9
Food Handling and Distribution	4	44.4	4	44.4	1	11.1	0	0	9	99.9
Food Service and Hotel Administration	5	55.5	2	22.2	1	11.1	1	11.1	9	99.9
Quantity Purchasing	7	77.7	2	22.2	0	0	0	0	9	99.9
Laboratory Technician in Food and Nutrition	4	44.4	3	33.3	1	11.1	1	11.1	9	99.9
Bakery	4	44.4	2	22.2	1	11.1	2	22.2	9	99.9
Food Processing	3	33.3	2	22.2	0	0	2	22.2	9	99.9
School Lunch	3	33.3	3	33.3	2	22.2	1	11.1	9	99.9

* These percentage totals were obtained to the nearest point.

TABLE XVI

INTERESTS OF SCHOOL PERSONNEL IN DEVELOPING CLOTHING MANAGEMENT, PRODUCTION, AND SERVICES CURRICULA

Curricula	Highly Interested		Moderately Interested		Slightly Interested		Not Interested		Total	
	#	%	#	%	#	%	#	%	#	%
Clothing Maintenance	5	62.5	1	12.5	1	12.5	1	12.5	8	100
Dressmaking and Alterations	6	75.0	1	12.5	1	12.5	0	0	8	100
Retailing and Salesmanship	3	37.5	5	62.5	0	0	0	0	8	100
Clothing and Design	6	75.0	1	12.5	1	12.5	0	0	8	100
Garment Construction	6	75.0	1	12.5	1	12.5	0	0	8	100
Millinery	3	37.5	4	50.0	0	0	1	12.5	8	100
Laboratory Technician in Clothing and Textiles	4	50.0	2	25.0	1	12.5	1	12.5	8	100
Factory Line Supervision	1	12.5	3	37.5	1	12.5	3	37.5	8	100
Power Machine Operation	3	37.5	1	12.5	1	12.5	3	37.5	8	100

Table XVII shows that the school personnel were highly interested in developing all curricula in the Care and Guidance of Children area except the teacher's aide curriculum. Only one-fourth of the personnel showed a high interest in this curriculum.

TABLE XVII

INTERESTS OF SCHOOL PERSONNEL IN DEVELOPING CARE AND GUIDANCE OF CHILDREN CURRICULA

Curricula	Highly Interested		Moderately Interested		Slightly Interested		Not Interested		Total	
	#	%	#	%	#	%	#	%	#	%
Child Care Supervision	7	87.5	0	0	1	12.5	0	0	8	100
Kindergarten Education	6	75.0	0	0	0	0	2	25.0	8	100
Recreational Services	6	75.0	1	12.5	0	0	1	12.5	8	100
Care for the Handicapped	5	62.5	2	25.0	0	0	1	12.5	8	100
Nursery School Education	6	75.0	1	12.5	1	12.5	0	0	8	100
Teacher's Aide	2	25.0	3	37.5	1	12.5	2	25.0	8	100

Table XVIII revealed that one-half of the school personnel were highly interested in developing a curriculum in interior decoration. The other one-half were moderately interested. From one-fourth to one-third of the personnel showed a high interest in the other curricula. One-half of the school personnel who responded were not interested in developing a curriculum in furniture refinishing.

Table XIX showed that most of the personnel were not interested in developing curricula in the Institutional Management and Supporting Services Area.

In summary, the school personnel showed a high interest in

developing occupational programs in home economics at the post-secondary level. Junior college personnel were not interested, however, in developing programs for the retraining of adults at this level.

It seems the curricula in the Institutional Management and Supporting Services area were of least interest to the administrators and instructors. The Care and Guidance of Children area appeared to be the area in which greatest interest was shown for developing curricula.

TABLE XVIII

INTERESTS OF SCHOOL PERSONNEL IN DEVELOPING HOME FURNISHING, EQUIPMENT, AND SERVICES CURRICULA

Curricula	Highly Interested		Moderately Interested		Slightly Interested		Not Interested		Total	
	#	%	#	%	#	%	#	%	#	%
Furniture Refinishing	2	25.0	2	25.0	0	0	4	50.0	8	100
Equipment and Appliance Demonstration	3	37.5	2	25.0	2	25.0	1	12.5	8	100
Interior Decoration	4	50.0	4	50.0	0	0	0	0	8	100
Retailing and Salesmanship	3	37.5	2	25.0	0	0	3	37.5	8	100
Upholstery and Drapery Making	3	37.5	1	12.5	3	37.5	1	12.5	8	100

TABLE XIX

INTERESTS OF SCHOOL PERSONNEL IN DEVELOPING INSTITUTIONAL MANAGEMENT AND SUPPORTING SERVICES CURRICULA

Curricula	Highly Interested #	%	Moderately Interested #	%	Slightly Interested #	%	Not Interested #	%	Total #	%*
Home Health Care Technology	3	33.3	1	11.1	0	0	5	55.5	9	99.9
Homemaker's Services	2	22.2	1	11.1	1	11.1	5	55.5	9	99.9
Housekeeping Technology	3	33.3	0	0	2	22.2	4	44.4	9	99.9
Public Housing Management	2	22.2	1	11.1	0	0	6	66.6	9	99.9
Hotel-Motel Management	3	33.3	2	22.2	0	0	4	44.4	9	99.9
Home Management	2	22.2	2	22.2	2	22.2	3	33.3	9	99.9

* These percentage totals were obtained to the nearest point.

STUDENTS

A student interest inventory was designed to answer question three of the study:

> Are there students interested in enrolling in occupationally-oriented programs to justify the development of such programs?

Data were collected from 678 students for the study. This represented senior students enrolled in home economics at 20 high schools, seniors and juniors enrolled in occupational home economics courses at the two

participating area vocational-technical centers, and first and second year students enrolled in one or more home economics courses at the two participating junior colleges. Of this group, 40 students were classified as juniors in high school, 550 were classified as seniors, 57 were junior college freshmen and 31 were classified as junior college sophomores. Eighty-one percent of the students interviewed were high school seniors.

Home Economics Interests and Background of the Students

To obtain some knowledge of the student's background in home economics, each was asked to circle the home economics courses she had taken. This number included the course in home economics in which the students were presently enrolled. A course was counted as one year of study in any area or in several units of home economics. Table XX shows the number of students who had enrolled in one or more courses in home economics. Though the majority of students had taken only two courses in home economics, more students had taken four courses than three. Only a small number of students had taken five and six courses. Table XX also shows the information regarding courses by locations. The largest percentage of students in three of the four locations had taken four years of home economics. The largest percentage of students in Location II had taken only one home economics course.

Only the junior college students were asked to indicate if they were majoring in home economics or in another program of study. Of the 88 junior college students responding through the interview, 74 (84 percent) were home economics majors and 14 (16 percent) were majoring in other fields.

TABLE XX

TOTAL HOME ECONOMICS COURSES ALL STUDENTS HAVE HAD BY LOCATIONS

Years of Home Economics	LOCATIONS I #	I %	II #	II %	III #	III %	IV #	IV %	Total #
One Year H. E.	6	7.1	161	41.3	2	2.9	3	2.2	172
Two Years H. E.	7	8.2	141	36.2	16	23.2	15	11.2	179
Three Years H. E.	18	21.2	64	16.4	22	31.9	15	11.2	119
Four Years H. E.	37	43.5	21	5.4	26	37.7	63	47.0	147
Five Years H. E.	17	20.0	3	.7	2	2.9	33	24.7	55
Six Years H. E.	0	0	0	0	1	1.4	5	3.7	6
TOTAL	85	100	390	100	69	100	134	100	678

The plans of students for next year were analyzed for 365 students. This figure was more than one-half of the total group. The remaining 313 students listed a number of plans. Table XXI shows the plans of 365 students for next year. The largest number of students who listed one plan composed the "other" category. The smallest number of students expected to attend an area vocational-technical center. The researcher believes the student's concept of the area center was that of the high school vocational training and not at a post-secondary school level.

TABLE XXI

PLANS OF STUDENTS FOR NEXT YEAR

Plan	# Students	% Students
1. Get a job	64	17.5
2. Become a homemaker	21	5.8
3. Return to high school	17	4.7
4. Attend a junior college and major in home economics	31	8.4
5. Attend an area vocational-technical center and major in home economics	2	.6
6. Attend a four-year college and major in home economics	54	14.6
7. Other plans (attend college in another major, marry, travel, etc.)	151	41.3
8. Undecided	25	6.9
TOTAL	365	99.8*

* Discrepancy due to rounding off to nearest tenth percent.

In analyzing the data according to locations, the researcher observed that Location II accounted for 107 of the 151 answers attributed to number seven, Other Plans. Location II also accounted for 59 of the 64 students who checked plan one, Get a Job. It was noted that no student in Location III planned to get a job next year; however, 15 of the 26 students who responded to this question had other plans. Of the four locations, students in Location IV composed the greatest number who planned to attend a four-year college and major in

home economics. Eighteen of the 19 students were currently enrolled at a post-secondary school. It should be remembered that the total number of students in no location was recorded for this item.

Students were asked to indicate their most important source of obtaining a job. Four hundred and sixteen students listed one source while the remaining 262 students listed a combination of sources. The results of the 416 students who named one source is shown in Table XXII.

One can see the majority of students use public employment agencies and direct contact by the employer more than any other source. Direct contact by employee and friends and neighbors were used by a number of students. Few students utilized the services of advisory committees and private employment agencies.

In summary, this portion of the student data has shown that the majority of students had enrolled in two home economics courses at the time of the interview. Location II was the only location in which the majority of students had taken only one course. The major number of students in the other locations had enrolled in four courses.

Nearly one-half of the students who responded by checking one plan indicated they had other plans. This category included plans to get married, enter the armed forces, travel, or attend college in another field. Several students who checked this category indicated their plans for next year were to attend a four-year college in another major. A substantial number of students planned to get a job.

TABLE XXII

UTILIZATION OF EMPLOYMENT SOURCES BY STUDENTS

Source	# Students	% Students
1. Campus department or placement bureau	36	8.5
2. Public employment agencies	100	24.4
3. Private employment agencies	10	2.4
4. Advisory Committees	4	.9
5. Friends and neighbors	50	12.0
6. Family	32	7.6
7. Direct contact by employer	123	29.6
8. Direct contact by employee	61	14.6
TOTAL	416	100.0

Interests of Students in Pursuing Home Economics Occupational Curricula

The interest of students in each of the five areas of home economics was studied. Students as a group, indicated a greater interest in the clothing area than in any other area. Care and Guidance of Children ranked second, Home Furnishing, Equipment and Service ranked third, and the Foods area ranked fourth. Institutional Management and Supporting Services was of least interest to the group as a whole.

Students were asked to answer "yes" or "no" to the question: "Would you be able to complete an occupational program?" They were also instructed when answering, to think of their ability also in

terms of the likelihood of their remaining in the location long enough to complete a curriculum, their financial conditions, scholastic abilities, and interests in training at the semiprofessional level of education. Six hundred and seventy-seven students answered the question. This number accounted for everyone except one senior student. Four hundred and forty-three (65.4 percent) of these students answered "yes" and 234 (34.6 percent) answered "no." When these data were calculated by grade level, the first year junior college students showed the greatest interest in the occupational program with 79.3 percent "yes" and 20.7 percent "no" answers. The three other grades ranged from 63.9 percent to 67.5 percent "yes" and 32.5 percent to 36.1 percent "no" answers.

When the students were asked "Would you like to observe and work part-time in a business establishment or agency for a time while training?" all students except one senior answered. Four out of five students (80.6 percent) answered "yes" and one in five students (19.4 percent) answered "no." When the answers were analyzed by grade level, the eleventh grade students were most in favor of observing and working part-time. Nearly all of the eleventh grade students (92.5 percent) answered "yes." Senior students were least in favor of observing and working part-time while enrolled in school. Four out of five of the senior students answered "yes" to the question.

All except two senior students responded to the question: "Which of the qualities below do you believe an employer most desires in an employee: positive attitudes toward work; positive relationships with people; knowledge and skills for the job." Positive attitudes toward

work was checked by approximately one-third (34.5 percent) of the students. Approximately one-fifth (19.2 percent) of the students believed positive relationships with people was the quality most desired by employers. The largest percentage of the students (46.3 percent) believed knowledge and skills for the job was the quality desired most by employers.

This portion of the data for the students has shown that the majority of the students:

(1) felt they would be able to complete an occupational program,

(2) would like to observe and work part-time in an establishment while training for an occupation,

(3) believed knowledge and skills for the job was the quality desired most by employers.

Interests of Students in Enrolling in Occupational Curricula

The students were asked to indicate their feeling about enrolling in each of the occupational programs in each of the five home economics related areas. There were four degrees of interest from which the students could choose. If a student checked the first degree, this indicated she was eager to train for the job. If degree two was checked, the student was definitely interested in preparing for the job. A check in the third degree indicated the student was undecided about training for the job and a check in the fourth degree indicated the student preferred not to prepare for the job.

Six students failed to indicate an interest in enrolling in any of

the curricula in the Clothing Management, Production, and Services and in the Food Management, Production, and Services areas. Nine students failed to indicate an interest in preparing for any of the curricula in the Care and Guidance of Children area. Ten students did not indicate an interest in preparing for any of the curricula in the Home Furnishing and Equipment nor in the Institutional Management and Supporting Services area.

Data showing the interests of students in enrolling in occupational programs at the semiprofessional level will be presented in table form. Each of the five occupational areas is represented for the group as a whole. Data for the students by locations are presented in Appendix A.

One can see from an observation of Table XXIII that less than 50 percent of the students were interested in enrolling in any of the Food Management, Production, and Services curricula. The foods area was the fourth choice for an area of interest as chosen by the majority of the students.

Table XXIV shows more than 50 percent of the students preferred not to train in seven of the nine occupations in the Clothing Management, Production, and Services area. The curriculum in the clothing area with most appeal to students is clothing and design. A substantial amount of interest was also shown for the retailing and salesmanship curriculum. It should be remembered that the clothing area was the first choice of the majority of students.

More interest was shown by students for the Care and Guidance of Children occupations than for any area. This information is

TABLE XXIII

INTERESTS OF STUDENTS IN ENROLLING IN FOOD MANAGEMENT, PRODUCTION, AND SERVICES CURRICULA

Curricula	Eager #	Eager %	Interested #	Interested %	Undecided #	Undecided %	Prefer Not #	Prefer Not %	Total #	Total %
Catering Services	25	3.7	41	6.1	127	18.9	479	71.3	672	100
Quantity Food Preparation	29	4.3	67	10.0	127	18.9	449	66.8	672	100
Food Supervision	40	6.0	74	11.0	171	25.4	387	57.6	672	100
Dietary Science	40	6.0	83	12.4	145	21.6	404	60.1	672	100
Food Handling and Distribution	25	3.7	48	7.1	110	16.4	489	72.8	672	100
Food Service and Hotel Administration	35	5.2	92	13.7	145	21.6	400	59.5	672	100
Quantity Purchasing	30	4.5	62	9.2	152	22.6	428	63.7	672	100
Laboratory Technician in Food and Nutrition	56	8.3	93	13.8	126	18.8	397	59.1	672	100
Bakery	69	10.3	124	18.5	139	20.7	340	50.6	672	100
Food Processing	31	4.6	61	9.1	146	21.7	434	64.6	672	100
School Lunch Management	21	3.1	49	7.3	113	16.8	488	72.7	672	100

TABLE XXIV

INTERESTS OF STUDENTS IN ENROLLING IN CLOTHING MANAGEMENT, PRODUCTION, AND SERVICES CURRICULA

Curricula	Eager		Interested		Undecided		Prefer Not		Total	
	#	%	#	%	#	%	#	%	#	%
Clothing Maintenance	50	7.4	85	12.6	143	21.3	394	58.6	672	100
Dressmaking and Alterations	79	11.8	121	18.0	133	19.8	339	50.4	672	100
Retailing and Salesmanship	105	15.6	177	26.3	135	20.1	255	37.9	672	100
Clothing and Design	160	23.8	181	26.9	129	19.2	203	30.2	672	100
Garment Construction	85	12.6	102	15.2	142	21.1	343	51.0	672	100
Millinery	34	5.1	76	11.3	125	18.6	437	65.0	672	100
Laboratory Technician in Clothing and Textiles	49	7.3	82	12.2	140	20.8	401	59.7	672	100
Factory Line Supervision	27	4.0	80	11.9	123	18.3	442	65.8	672	100
Power Machine Operation	33	4.9	58	8.6	96	14.3	485	72.2	672	100

indicated in Table XXV. Nearly one-half of the students were eager or definitely interested in training for four of the six curricula in this area. Care for the handicapped and teacher's aide were the two curricula of least interest.

TABLE XXV

INTERESTS OF STUDENTS IN ENROLLING IN CARE AND GUIDANCE OF CHILDREN CURRICULA

Curricula	Eager #	Eager %	Interested #	Interested %	Undecided #	Undecided %	Prefer Not #	Prefer Not %	Total #	Total %
Child Care Supervision	151	22.6	198	29.6	118	17.6	202	30.2	669	100
Kinder-garten Education	134	20.0	190	28.4	116	17.3	229	34.2	669	100
Recreation-al Services	111	16.6	200	29.9	149	22.3	209	31.2	669	100
Care for the Handicapped	108	16.1	168	25.1	135	20.2	258	38.6	669	100
Nursery School Education	130	19.4	172	25.7	114	17.0	253	37.8	669	100
Teacher's Aide	110	16.4	171	25.6	129	19.3	258	38.7	669	100

It can be noted from an observation of Table XXVI that more than 50 percent of the students preferred not to train for employment in four of the five curricula cited in the Home Furnishing, Equipment, and Services area. The greatest interest, however, was shown for the curriculum in interior decoration.

Of the five home economics related areas, students showed less interest for training in occupations in the institutional services area than any. This was the area in which the majority of students were least interested. Of the six curricula listed in Table XXVII, hotel-motel management was most appealing to the students.

TABLE XXVI

INTERESTS OF STUDENTS IN ENROLLING IN HOME FURNISHING, EQUIPMENT, AND SERVICES CURRICULA

Curricula	Eager #	Eager %	Interested #	Interested %	Undecided #	Undecided %	Prefer Not #	Prefer Not %	Total #	Total %
Furniture Refinishing	48	7.2	106	15.9	137	20.5	377	56.4	668	100
Equipment and Appliance Demonstration	54	8.1	121	18.1	128	19.2	365	54.6	668	100
Interior Decoration	182	27.2	192	28.7	111	16.6	183	27.4	668	100
Retailing and Salesmanship	68	10.2	131	19.6	128	19.2	341	51.0	668	100
Upholstery and Drapery Making	41	6.1	71	10.6	122	18.3	434	65.0	668	100

Although little eagerness was shown by the students for training in home economics related occupations when one observed the percentage for the columns, the number of students who responded in the eager and definitely interested categories were substantially great enough to justify the development of curricula in each of the five areas.

In summary, the data show that students were not very eager to enroll in occupational programs at the post-secondary level. Many of the students had other plans for next year. The researcher believes these plans had an effect upon the way the students in this study reacted to the proposed curricula.

The majority of students believed they would be able to complete

TABLE XXVII

INTERESTS OF STUDENTS IN ENROLLING IN INSTITUTIONAL MANAGEMENT AND SUPPORTING SERVICES CURRICULA

Curricula	Eager #	Eager %	Interested #	Interested %	Undecided #	Undecided %	Prefer Not #	Prefer Not %	Total #	Total %
Home Health Care Technology	40	6.0	103	15.4	157	23.5	368	55.1	668	100
Homemaker's Services	46	6.9	98	14.7	129	19.3	395	59.1	668	100
Housekeeping Technology	56	8.4	88	13.2	110	16.5	414	62.0	668	100
Public Housing Management	44	6.6	80	12.0	154	23.1	390	58.4	668	100
Hotel-Motel Management	27	4.1	76	11.5	195	29.4	365	55.1	668	100
Home Management	102	15.3	112	16.8	120	18.0	334	50.0	668	100

an occupational program. The majority of students also believed they would enjoy observing and working part-time at an establishment in the type of work for which they were being trained.

RECOMMENDATIONS FOR DEVELOPING OCCUPATIONAL CURRICULA IN THE LOCATIONS STUDIED

This section of the chapter is designed to answer the research question:

> Should one or more occupationally-oriented programs be recommended for development at the post-secondary schools studied? If so, which of the programs?

The researcher will seek to answer this question by comparing the responses from the three groups of people in the four locations studied. The interview schedules and interest inventory designed for each group were structured so that each group of people was required to respond to questions which would yield similar information. The students were not asked questions which related to their interest in developing occupational programs. Nor were they asked questions regarding the types of occupational programs which should be developed.

The business and school personnel were asked a question regarding the need for additional personnel at the semiprofessional level. The majority of the business employers answered "yes" when asked if they felt there was a shortage of workers in their area of major interest. When school personnel were asked: "Do you feel a need for training workers at the semiprofessional level in home economics?" all personnel answered "yes." Another question which related to the need for the program was question eight. The business employers were asked if they would be interested in working with the area vocational-technical center or the junior college in developing a training program in the area of interest. If the answer was "yes," the capacity of cooperation was sought. The vast majority of the managers answered "yes" and all specified a capacity. More than one-half of the employers indicated they would be interested in working in all capacities suggested on the interview schedule. (See Appendix A.) All school personnel were willing to develop a program which leads to immediate employment of students. When the 678 students were asked if they would be able to complete an occupational program, a majority

(65.4 percent) answered "yes." Nearly all of the employers (91.3 percent) were willing to hire persons who had completed an occupational program if there were openings at the level in which workers were needed.

The three groups responded to a question regarding observation and work experience. Table VI shows by location, the willingness of business employers to permit students to observe and receive work experience at their establishments. An average of four-fifths (79.1 percent) of the employers would permit observations and work experience. Nearly all of the school personnel indicated they would require the students to observe and receive work experience as a part of the occupational preparation. The one instructor in Location II who answered no, added that she would make this a requirement if these experiences could be scheduled for Saturdays, after school hours, or during the summer months. More than three-fourths of the students (80.6 percent) answered "yes" when asked if they would like observing and working part-time in a business establishment while in post-secondary school. When the students were analyzed by locations, the greatest percentage of interest was shown by students in Location III.

Preferable types of programs were discussed with the business representatives and school personnel. (See questions 10, 11, 12, and 13 of the Interview Schedule for School Personnel and questions 12, 13, 14, and 15 of the Interview Schedule for Agencies and Business Establishments in Appendix A.) For question 12, nearly two-thirds of the business representatives preferred Program B, a post-secondary period which is primarily vocational-technical but includes courses

in general education. For question 10, nearly all of the school personnel preferred Program B. Table VII shows the information by locations for business representatives regarding question 13. The reactions of the school personnel to this question showed that about three-fourths of the group preferred that 25 percent of the courses be in general education. When analyzed by locations, the researcher observed that:

1. Both persons in Location I preferred that 25 percent of the courses be in general education.

2. The one person who desired Program A was in Location II and did not respond to this question. One person in this location preferred 15 percent and the other person preferred 25 percent of the courses in general education.

3. Both persons in Location III preferred that general education courses comprise 25 percent of the curriculum.

4. The two instructors in Location IV preferred 35 percent of the curriculum be composed of general education courses. The administrator suggested that the general education requirement be 40 percent.

Tables VIII and XIV show the reactions of business personnel by location to question 14 and school personnel by location to question 12. It can be seen that the majority of persons in both groups prefer that students spend one-fourth of the time in theory and three-fourths in the development of technical skills for the job.

The last question in this series dealt with the intensiveness of the training. Three-fourths of the business personnel and all of the school personnel felt Program B should be provided.

All interviewees were asked a question regarding qualities an occupational program should stress. (Appendix A.) More than one-half of the business representatives (54.4 percent) believed most

emphasis should be placed upon positive attitudes toward work. A substantial portion of school personnel also felt most emphasis should be placed upon developing positive attitudes toward work (four or 40 percent). A large number of students believed most stress should be placed upon providing knowledge and skills for the job (46.3 percent).

Table XXVII (Appendix B) is a comparison by locations of the reactions of business personnel, school personnel, and students to the curricula in the five home economics related areas. The curricula have been assigned numbers, however, the names appear in Appendix B and elsewhere in this chapter. An analysis of the table reveals certain general interests about the three groups as a total. These interests were summarized by home economics area.

1. Business and school personnel showed a higher interest in developing curricula in quantity food preparation in three of the four locations than in any other curriculum in the food area.
2. All three groups in three locations were more interested in developing a curriculum in clothing and design than in any other curriculum in the clothing area.
3. Greatest interest was shown in the Care and Guidance of Children area for the curriculum in child care supervision in all locations.
4. In the home furnishing area, the interior decoration curriculum was most appealing to all groups in all locations.
5. Business representatives in the institutional management area in all locations were most interested in the

development of a curriculum in housekeeping technology. The school personnel and students in each location showed little interest in the curriculum.

6. Greatest interest was shown by all three groups of people in each location for the Care and Guidance of Children area.

The Table also shows that in the food area, the three groups in Location I showed most interest for food supervision and bakery curricula. However, the business establishments and school personnel were highly interested in quantity food preparation. The students showed less interest here.

In the clothing area for Location I, a comparison of the three groups reveal highest interest in clothing and design. This accounted for three-fifths of the business personnel, all of the school personnel, and nearly one-fourth of the students.

All business personnel and all school personnel were highly interested in developing programs in child care supervision and recreational services. A greater percentage of students were also eager to train in these areas. All school personnel and many students were highly interested in kindergarten education but only one-half of the child care supervisors in the location showed a high interest.

All business personnel and all school personnel were highly interested in developing a curriculum in interior decoration. It can also be noted that the greatest percentage of students were eager to train in this curriculum. The three groups were not as interested in the other curricula in this area.

Of the three groups, the business representatives showed the highest interest in developing a curriculum in housekeeping technology. This accounted for three-fifths of the business personnel. The majority of the business personnel were not interested in the other curricula. One-half of the school personnel were highly interested and the other one-half was not interested in this home economics area. The students also showed little interest in the area.

When a comparison was made of the three groups in Location II, it was found for the foods area that greatest interest was shown by all groups for the bakery curriculum.

Dressmaking and alterations was most appealing to the groups. All business personnel, one-half school personnel and a number of students were highly interested in the curriculum. High interest was generally shown by two of the three groups in the other curricula.

Of the six curricula in the Care and Guidance of Children area, greatest interest was shown for child care supervision and nursery school education.

Interior decoration rated highest among the groups in the home furnishing area. Three-fifths of the business personnel, one-half of the school personnel, and nearly one-fourth of the students expressed a high interest in the curriculum.

School personnel and students showed little interest for curricula in the institutional services area. Business personnel showed some interest in housekeeping technology and the remaining groups were more interested in home management.

The comparison of the responses for the groups in Location III

for foods curricula revealed that most interest was shown for quantity food preparation. Varying degrees of interest was shown by each group for the other curricula.

Only one-half of the school personnel in this location responded to curricula needs in the remaining four areas. The highest positive relationship was shown for the curriculum in clothing and design.

A high interest was shown by the groups for developing a curriculum in child care supervision. A high interest was shown by the school personnel and students for the care for the handicapped curriculum. The child care supervisor, however, was only slightly interested in the curriculum.

Little agreement was shown by the three groups for interest in curricula in home furnishing area. The three groups showed a high interest in interior decoration only.

Again, the business personnel were highly interested in the housekeeping technology curriculum and the school personnel and students showed little interest. School personnel were most interested in home health care technology and students were most interested in hotel-motel management.

The greatest interest shown by business and school personnel in Location IV for the food area was in the quantity food preparation curriculum. Students showed little interest in this curriculum. Their greatest interest appeared to have been for a dietary science curriculum.

Two-thirds of the school personnel and a little more than one-fourth of the students showed a high interest in clothing and design.

This curriculum has appeared to be of average interest with business personnel as compared to the other curricula considered for development in the area.

Comparatively, high interest was shown by all groups for the curricula in the Care and Guidance of Children area. All business personnel, two-thirds of the school personnel and nearly one-third of the students were highly interested in child care supervision. This was the largest percentage of student interest in any of the child care curricula. More than one-third of the students were also definitely interested in training in the child care supervision curriculum. Similar interest was shown by the three groups for the nursery school education curricula.

Interest of business and school personnel in the home furnishing area was quite varied. The students showed a definite interest in the interior decoration curriculum; however, more interest was shown for this curriculum by business and school personnel than any other in the area.

All business personnel were highly interested in the development of a housekeeping technology curriculum. The vast majority of school personnel and students were not interested in the curriculum. It can also be noted that very little interest was shown for the other curricula in the institutional services area.

The recommendations for developing curricula in each of the four locations were made on the basis of proposed criteria. A statement of the criteria follows: At least

1. Three-fifths of the business personnel in the home

economics related area should respond in the highest degree (highly interested in graduates of the curriculum).

2. One-half of the school personnel should respond in the highest degree (highly interested in developing the curriculum).
3. Forty students should respond in the first two degrees (eager and definitely interested in enrolling in the curriculum). Because of the smaller number of students in some locations, the researcher will consider less than forty students in the two degrees if the number is at least one-third of the total number of students responding in that location.
4. Two of the three groups should be composed of at least the minimum numbers required in one, two, and three above.

The city in which the junior college in Location I is established had a population of 13,000 people in 1965. There is one senior high school in the city; however, there are other high schools in surrounding counties. Many students from outside the city and county in which the junior college is located are in attendance at the college. After receiving training, many of these students are expected to return to their home towns. Other students migrate to other sections within and out of the State.

The city is a part of a rural area of Oklahoma. Although it appears that the number of business establishments within the city could not absorb many students who might be trained for employment at

the post-secondary level, it is suggested that many students would probably seek jobs in other cities.

Table XXIX shows the curricula in each home economics area which have potential for development in Location I. The researcher suggests that in curricula where the business establishments have little or no interest in developing the occupational programs, that a more extensive investigation should be made to determine if the conditions are desirable for developing the program.

One can see from the Table that curricula in each of the home economics areas met the criteria. The researcher recommends for Location I, the development of the

1. Four curricula in the food area. The managers and school personnel appear to be highly interested in the curricula. The number of students was below the one-third necessary to meet the criterion regarding student interest; however, the number meets the state requirements for organization of a new class.

2. Three curricula in the clothing area. Interest was shown by all groups for the curricula.

3. Four curricula in the child care area. The three groups appeared to be highly interested in these curricula. The researcher wishes to emphasize that the two supervisors who responded in the study composed the population of the child care supervisors in this area. While there is a need for additional provisions for the care of children, the researcher also questions the likelihood that adequate provisions can be made for observation and work experiences as well as for job placement of the great number of interested students if all of

TABLE XXIX

SUMMARY OF SPECIFIC CURRICULA MEETING THE PROPOSED CRITERIA FOR LOCATION I

Food Management, Production and Services	Business (N = 5) %	School (N = 2) %	Students (N = 85) #
Quantity Food Preparation	80	100	20
Food Supervision	100	100	21
Dietary Science	60	100	25
Quantity Purchasing	80	50	22
Clothing Management, Production, and Services			
Retailing and Salesmanship	60	50	47
Clothing and Design	60	100	47
Garment Construction	60	50	30
Care and Guidance of Children	**(N = 2)**		
Child Care Supervision	100	100	62
Kindergarten Education	50	100	65
Recreational Services	100	100	57
Nursery School Education	50	50	61
Home Furnishing, Equipment, and Services	**(N = 5)**		
Interior Decoration	100	100	62
Retailing and Salesmanship	80	50	34
Upholstery and Drapery Making	60	100	24
Institutional Management and Supporting Services			
Housekeeping Technology	60	50	29
Hotel-Motel Management	--	50	42

these curricula were developed in this location. There is a possibility that two or more of the curricula could be combined to form a cluster. This should result in a more broadly trained person for a position in the child care area.

4. Three curricula in the home furnishing area. High interest is shown among the groups for the curricula. When choices must be made regarding which of a number of curricula should be developed, the researcher recommends that the curriculum which attracts the highest interests of business and school personnel should receive first consideration.

5. Two curricula in the institutional services area. The researcher recommends that further investigation be made prior to developing these curricula. The recommendation is made on the basis of the degree of interest shown by the business and school personnel.

An area vocational-technical center is established in Location II. The city in which the area vocational-technical center is located had a population of 280,000 people in 1965 and is a metropolitan area.

The majority of the students in this area attended the area vocational-technical center from within the city. There are some students from surrounding counties who may attend the center. The vast number of establishments within the location in each of the home economics areas suggested to the researcher that employment opportunities, as well as opportunities for observing and receiving work experiences, are adequate if occupational programs were developed in Location II.

Table XXX shows the curricula in each home economics area which have potential for development in the location.

TABLE XXX

SUMMARY OF SPECIFIC CURRICULA MEETING THE PROPOSED CRITERIA FOR LOCATION II

Food Management, Production and Services	Business (N = 5) %	School (N = 2) %	Students (N = 385) #
Quantity Food Preparation	60	50	39
Food Supervision	20	50	50
Dietary Science	—	50	44
Food Service and Hotel Administration	40	50	66
Quantity Purchasing	20	100	45
Laboratory Technician in Food and Nutrition	—	50	67
Bakery	60	100	96
Food Processing	20	100	49
Clothing Management, Production, and Services			
Clothing Maintenance	80	50	70
Dressmaking and Alterations	80	100	106
Retailing and Salesmanship	100	50	132
Clothing and Design	20	100	174
Garment Construction	20	100	113
Factory Line Supervision	60	100	56

TABLE XXX (CONTINUED)

Care and Guidance of Children	Business (N = 5) %	School (N = 2) %	Students (N = 385) #
Child Care Supervision	80	100	162
Kindergarten Education	20	50	135
Recreational Services	40	50	136
Care for the Handicapped	20	50	128
Nursery School Education	100	100	130
Teacher's Aide	60	--	127
Home Furnishing, Equipment, and Services			
Interior Decoration	60	50	171
Retailing and Salesmanship	80	50	98
Upholstery and Drapery Making	60	50	53
Institutional Management and Supporting Services			
Housekeeping Technology	60	50	92
Home Management	40	50	49
Hotel-Motel Management	40	50	122

The researcher recommends for the Location, the development of

1. Eight of the 11 curricula in the food area. The researcher recommends that for the curricula in which the interest of business personnel is low, that a more extensive investigation be made prior to developing the curricula. Where the interest of business and school personnel is low, the researcher questions the development of the curricula.

2. Six of the nine curricula in the clothing area. High interest was shown by the three groups for most of the curricula in the clothing area. The similarities of some of these curricula might make conditions possible for combining two or more of the curricula to form one broad curriculum.

3. All curricula in the child care area. Two or more curricula may be combined to form one broad curriculum. A broad program was recommended by the child care supervisors and by some of the school personnel.

4. Three curricula in the home furnishing area. Since the interest of school personnel and business personnel is less than for other areas, the researcher questions the development of an occupational program in this area at this time.

5. Three curricula in institutional services. The proposed criteria were met, however, the interest of the groups in this location is considerably lower than for other areas of home economics. The researcher recommends that additional investigation of the three groups be made before developing programs in this area.

An area vocational-technical center is established in Location III. The city had a population of 23,000 people in 1967. The population of the labor drawing area of the county and seven adjacent counties was 143,861 persons in 1960.

The city in which the area vocational-technical center is located has two high schools. Many of the students who attend the area vocational-technical center are from surrounding counties as well as from the city. The researcher feels that although the businesses in four

of the home economics areas can absorb several new employees, many students would probably return to their home towns after completing the training.

Table XXXI shows the curricula in each home economics related area which have potential for development in Location III.

TABLE XXXI

SUMMARY OF SPECIFIC CURRICULA MEETING THE PROPOSED CRITERIA FOR LOCATION III

Food Management, Production, and Services	Business (N = 5) %	School (N = 2) %	Students (N = 69) #
Quantity Food Preparation	100	100	22
Food Supervision	60	100	23
Quantity Purchasing	60	100	12
Bakery	--	50	30
Clothing Management, Production and Services		**(N = 1)**	
Dressmaking and Alterations	60	100	32
Retailing and Salesmanship	80	--	36
Clothing and Design	80	--	38
Garment Construction	20	100	26
Care and Guidance of Children	**(N = 1)**	**(N = 1)**	
Child Care Supervision	100	100	43
Care for the Handicapped	--	100	35
Nursery School Education	100	--	37
Home Furnishing, Equipment and Services	**(N = 5)**		
Interior Decoration	80	--	47
Retailing and Salesmanship	60	--	25

The researcher recommends for Location III the development of

1. Four curricula in the food area. The researcher questions the development of two of these curricula because of the low interest shown by one group. In these cases, reinterviewing the business and school groups should prove valuable.

2. Four curricula in the clothing area. The business personnel showed a high interest in the development of three curricula, but the interest of school personnel was varied. There are possibilities for combining two of the curricula to form a broad program.

3. Three curricula in the child care area. There is a high interest among the groups for the child care supervision curriculum. Since one group in each of the two remaining curricula did not express an interest in a curriculum, the researcher questions the development of these curricula without further investigation.

4. Two curricula in the home furnishing area. These curricula were recommended because of the interest shown by the business personnel and students. The school personnel should evaluate their potential for offering the curricula when considering possibilities for developing occupational programs at the post-secondary level.

A junior college is established in Location IV. The city had a population of 250,000 persons in 1965. The area is primarily an agricultural area. There are two high schools within the city. There are several high schools in surrounding counties. Many students from outside the city and county in which the junior college is located are in attendance at the junior college. After receiving training, many of these students return to their home towns and some migrate to other

cities. A study of the city shows that there are a number of establishments in each of the five home economics areas which could utilize the skills of trained persons. It is the belief of the researcher that many of the students who receive the training will return to their homes and to other locations within the State. Some students will seek employment in the city.

Table XXXII shows the curricula in each home economics area which have potential for development in Location IV.

TABLE XXXII

SUMMARY OF SPECIFIC CURRICULA MEETING THE PROPOSED CRITERIA FOR LOCATION IV

Food Management, Production, and Services	Business (N = 5) %	School (N = 3) %	Students (N = 131) #
Quantity Food Preparation	60	66.7	15
Clothing Management, Production, and Services			
Retailing and Salesmanship	80	33.3	68
Clothing and Design	40	66.7	83
Care and Guidance of Children	**(N = 4)**		
Child Care Supervision	100	66.7	82
Kindergarten Education	50	100	84
Recreational Services	25	100	70
Care for the Handicapped	25	66.7	63
Nursery School Education	75	100	74
Teacher's Aide	25	66.7	70
Home Furnishing, Equipment, and Services			
Retailing and Salesmanship	80	33.3	43

The researcher recommends for Location IV, the development of

1. A curriculum in the food area. A number of business and school personnel were highly interested in the program. A few students were interested.

2. Two curricula in the clothing area. The students showed a high interest in the curricula. Since the curricula are related, the researcher recommends that they be combined to form a broader curriculum.

3. All the curricula in the child care area. A high interest was shown by the three groups for most of the curricula. The researcher recommends that some of the curricula be combined. This would prepare a person with a broader background. It would also make greater provisions for adequate observation and work experiences.

4. One curriculum in the home furnishing area. The researcher hesitates to recommend the curriculum because of interest shown by two of the groups. The school personnel were below the required percentage and the students barely met the criteria. The business personnel were highly interested in the curriculum.

In summary, information obtained through interviews made of business personnel in five areas of home economics in four locations of the State was analyzed and presented in an effort to answer research question one of the study. The data presented has shown that business personnel perceive a need for developing occupational home economics programs at the post-secondary level in Oklahoma.

School personnel in four locations of the State, representing two area vocational-technical centers and two junior colleges were

interviewed in an effort to obtain information which would aid in answering question two of the study. This information was analyzed and presented in this chapter. The data revealed that school personnel felt there was a need for developing occupationally-oriented programs at the semiprofessional level. These personnel were interested in developing such programs.

Students enrolled in selected high schools, area vocational-technical centers, and junior colleges were interviewed in an effort to obtain information which when analyzed, would answer question three of the study. The data showed that there were numbers of students interested in the programs which would justify the development of some programs in some areas of occupational home economics.

The information from the three groups served to answer question four of the study. This was done by comparing the responses of the groups to the similar questions on the interview schedules and interest inventory. Data in this chapter have shown that occupationally-oriented programs should be recommended for development at the schools studied. These recommendations are presented in this chapter.

CHAPTER IV

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary

This study was concerned with determining if occupationally-oriented curricula in home economics should be developed at the post-secondary level in Oklahoma. Because of the inherent advantages of the interview approach, it was used in this survey to collect the data.

It was the belief of the researcher that a broader insight into the need for establishing occupational programs could be obtained if three groups of people were interviewed. The design of the study included these items:

1. A survey of business organizations to determine if employers felt a need for trained workers in their areas of work. The willingness of employers to work with school personnel in developing occupational programs, training students, and hiring the students who had completed an occupational program was also determined.

2. A survey of school personnel to determine if they felt a need for training students at the post-secondary level in home economics occupationally-oriented curricula. The willingness of school personnel to develop occupational programs and train the students was also determined.

3. A survey of students to determine if they would be interested in completing an occupational curriculum on the post-secondary level at an area vocational-technical center or a junior college.

4. A comparison of the findings from the three groups of people in order to make recommendations for the development of one or more occupationally-oriented curricula in each of the four locations which were a part of this study.

The researcher reviewed literature relating to vocational legislation affecting home economics, educational goals of two-year post-secondary schools, characteristics of students, need for training programs, beliefs of educators and business personnel regarding occupational preparation, and types of training programs needed. The literature revealed that many two-year post-secondary schools were accepting the challenge to modify their objectives and provide occupational training for students who plan to enter the world of work immediately upon completing an occupationally-oriented curriculum. In some junior colleges, the number of home economics students who receive certificates and associate degrees has increased because of the development of the occupational aspect at this level. The studies revealed needs for additional employees trained in each of the five home economics areas studied. Home economics educators are becoming increasingly cognizant of their responsibility for training persons for the labor force who utilize home economics knowledge and skills as a part of their job.

Data were collected by interviewing 92 business employers, 10 administrators and home economics instructors at two area vocational-technical centers and two junior colleges, and 678 students enrolled in

home economics at 20 selected high schools and the participating area vocational-technical centers and junior colleges. These groups comprised the personnel who indicated a willingness to participate in the study when they were contacted by mail and later by telephone. The administrators at each high school and each participating post-secondary school were contacted regarding their permission to allow the students at the schools to participate in the study. The contacts made of the administrators employed much of the same procedure as those made of the employers in the business organizations. The interviews with the school personnel and students were about one hour in length. Interviews with the business managers ranged from approximately one-half hour to two hours in length.

It was hoped the analysis of the data would provide some bases for determining if occupational programs in home economics are needed at the post-secondary level and for making recommendations for developing the occupational programs needed. Carefully planned occupational programs should be helpful in raising the living conditions of those persons who enroll and receive employment as a result of having completed a curriculum. The subsequent employment of the trained individuals should serve as an asset to many business organizations, thereby aiding the economy in general.

Conclusions

The recommendations for developing occupational programs in each of the four locations studied were based on the findings from the data presented in this study. Data were collected from business

organizations, school personnel, and students. The business personnel were asked to respond to the items on the interview schedule as they affected his situation. Each employer reacted to only the occupational curricula in his area of major interest. The school personnel and students reacted to occupational curricula in each of the five home economics related areas.

The majority of business and school personnel was interested in developing some occupational programs in each of the five areas. Both groups believed students should observe and receive work experience as a part of the occupational training. The majority of students believed they would be able to complete an occupational program and would like observing and working part-time in a business establishment while training for a job. Although the percentage of students who indicated an eagerness to train in each of the home economics related areas was small, the actual numbers of students were substantial for some of the curricula. The greatest amount of interest was shown for curricula in the Care and Guidance of Children area. The least amount of interest was shown for curricula in the Institutional Management and Supporting Services area.

Although many supervisors of child care centers believed the need for additional trained personnel in the Care and Guidance of Children area was small, all supervisors were highly interested in working with school personnel in developing occupational curricula in the area. Least interest was shown for the curriculum in the care for the handicapped. Most of the supervisors said they were not equipped to provide adequate care for the handicapped child. As a result, they discouraged

parents of these children from seeking the services of their establishments.

The most desirable curricula are those which include about 25 percent of the course work in general education. Most of the employers and school personnel also preferred a distribution in which 25 percent of the time is spent in theory and development of background knowledge along with the remaining 75 percent of the time spent in the development of technical skills and knowledge for the job.

Positive attitudes toward work was the quality believed by the majority of the business and school personnel to be most needed by the employers. Many students believed knowledge and skills for the job was the quality desired most by employers.

After comparing the findings of the three groups by locations, the researcher recommended the development of more curricula in Location II than in any of the four locations. These recommendations were based on the evidence that the compared findings of the three groups in this location showed a greater interest in more of the occupational curricula. The findings of the study also revealed that curricula in all five areas were recommended for two locations. No curriculum in the Institutional Management and Supporting Services area was recommended for development in two locations at the post-secondary level. These decisions were based on the indication that the interests shown by the school personnel and the students were not sufficiently high in Locations III and IV in any curriculum in that area. The decisions were also based on the fact that business personnel showed a high interest in only one of the curricula in this occupational area.

There were other curricula which had potential for development in each of the four locations; however, it is the opinion of the researcher that the school personnel should consider developing occupational curricula after a careful consideration of the educational facilities and instructional personnel has been made. The availability of adequate observation and work experience stations should be determined prior to developing the curriculum. Opportunities for employment should also be determined before an institution embarks upon developing occupational curricula, especially those curricula which entail the use of a great amount of funds, facilities, and time.

Most of the business personnel and all of the school personnel were highly interested in seeing the occupational aspect of home economics developed at the post-secondary level. They believed it would provide an avenue through which more individuals could obtain additional education and at the same time become prepared in an occupation which would lead immediately to employment. Many of the students commented that an occupational program would be very beneficial for those persons who want only two years of training before they enter a job. All students who commented about the occupational program indicated they believed the program would be beneficial to those who enrolled.

After conducting the study, the researcher believes the interview approach can be effective with similar surveys to identify curricula with potential for development at the post-secondary level in the occupational aspect of home economics. The needs of business organizations, the interests of students, and the educational facilities and

instructional competencies of school personnel should be considered when planning occupational programs. It is believed by the researcher that the process of interviewing the three groups of people who will be involved in the programs is one approach which can effectively be used to help determine the curricula which should be developed.

Recommendations

The researcher recommends that the survey approach be used by supervisors when planning to add occupational programs to the state vocational home economics offerings. A survey of the need could be employed through interviewing the three groups who would be involved.

School personnel could survey their local communities using this procedure before developing new curricula. This would provide a broader insight into the needs of the business establishments, the interests of the students and would help the school personnel to evaluate their potential for offering new curricula.

The researcher recommends that when possible, the population of the business organizations in the related area be surveyed in the location. The population of students enrolled at the levels in school who could benefit from the first courses in the new curriculum should be interviewed. The proposed curriculum should be discussed with the students before they are requested to react to the interest inventory. Students and business representatives should have all information needed in order to render meaningful replies to the interviewer. The items on the interview schedule should be so stated that they mean the same to each person who reacts to the instrument.

The instruments used in this study were developed for use by others when engaged in similar surveys. The researcher wishes to emphasize the fact that the instruments were used with small samples in each home economics area as well as with small samples of school personnel and students. Portions of the instruments should be revised if information in a more detailed form is desired from the groups.

There is a need for additional research in the area of occupational home economics at the post-secondary level. Competencies needed by students at this level in occupationally-oriented curricula should be studied. The length of time needed for the completion of occupational curricula in these five areas of home economics should also be studied. Course combinations and sequences at this educational level merit some research. The length and sequences of observation and work experiences should be considered for study.

The researcher offers the results of the present study in the hope that they might be utilized by persons who plan and develop occupational home economics programs for locations with similar characteristics of the locations studied by the researcher. The results of this study may also have implications for other locations. It should be remembered that this study, the identification of interests, was the initial stage in the development of occupational programs. There are other factors which should be considered before a location develops one or more occupationally-oriented curricula.

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APPENDIX A

INTERVIEW SCHEDULE FOR AGENCIES AND BUSINESS ESTABLISHMENTS

Schedule_____
Date of Interview_____

PART A: Personal Data

1. Name: Address:
2. Position:
3. Agency or Business: Phone:

PART B: General Information about the Agency or Business

4. ____ Food Management, Production, and Services
   ____ Clothing Management, Production, and Services
   ____ Care and Guidance of Children
   ____ Home Furnishing, Equipment, and Services
   ____ Institutional Management and Supporting Services

5. Do you feel there is a shortage of trained workers in the area checked in four above? Yes____ No____

6. Number of employees in the area checked employed by your firm.

	Total (Present Employees)	Replacement (Number Needed)	Expanding (Number Needed)	Contracting (Numbers)	No Change	Total Expected in 2 Years
Type of Employment						
Full time paid						
Part time paid						
Full time volunteer						
Part time volunteer						
Levels of Employment						
Helper						
Assistant						
Midmanager						
Manager						
Supervisor						

Which level is most difficult to fill? _____

Which level is least difficult to fill? _____

7. What is the most important source you use to find persons to fill jobs?

____ Campus placement bureau or department
____ Employment agencies (public)
____ Employment agencies (private)
____ Advertise
____ Direct contact by employer
____ Direct contact by employee
____ Public Contacts
____ Advisory Committee
____ Other

PART C: Interest in Cooperating and Participating in an Occupational Program

8. Would you be interested in working with the area vocational-technical center or the junior college in developing a training program in an occupational area? Yes____ No____ In what capacity? Advising____ Consulting____ Assisting in skills development____ Other (list) _____

9. Would you hire persons who have completed the semiprofessional program if there were openings at the levels of work needed? Yes____ No____ Uncertain____. Explain_____
_____

10. Would you be interested in having presently employed workers to obtain further training in preparation for new or advanced positions if a junior college or area center were to make this training available? Yes____ No____ Uncertain____. Explain
_____

11. Would you cooperate by permitting trainees to observe and receive work experience at your establishment? Yes____ No____ Uncertain ____. Explain_____

PART D: Preferable Type of Program for Post-Secondary School Training

12. Which of the following types of programs, A or B, is preferable as preparation for a career employee in your organization?

____ Program A: A post-secondary school training period which is one hundred percent vocational-technical.
____ Program B: A post-secondary training period which is primarily vocational-technical, but includes courses in general education.

13. If a post-secondary school training period included courses in general education, which would you estimate to be the most desirable percentage of courses in general education for the training?
____15% ____ 25% ____ 35% ____ 45%

14. Which of the following distributions of the training time in the program is preferable to spend in the vocational-technical training?

	Distribution				
	A	B	C	D	E
Percent of time spent on theory and development of background knowledge.	25%	40%	50%	60%	75%
Percent of time spent on development of technical skills and knowledge for the job.	75%	60%	50%	40%	25%

15. Which of the following types of programs, A or B, is preferable as preparation for a career-employee in your organization?

____ Program A: Background knowledge and understanding of one area with intensive training in one aspect only of this knowledge.

____ Program B: Background knowledge and understanding of an area with training in several aspects, hence less intensive training in any one application.

16. Which of the qualities below do you desire <u>most</u> in an employee?

____ Positive attitudes toward work.
____ Positive relationships with people.
____ Knowledge and skills for the job.

PART E: Occupationally-Oriented Curricula at Post-Secondary School Level

17. Thirty-six occupationally-oriented curricula suited to the program of a junior college or area vocational-technical center are listed below. Please rate the degree to which, in your opinion, each of these curricula would be helpful in preparing a person to qualify for a position in your organization by checking the appropriate column to the right. On the far right, please comment on concepts unique to "helpful" curricula.

CURRICULA	Highly Interested A	Moderately Interested B	Slightly Interested C	Not Interested D	Comments
Food Management, Production, and Services					
Catering Services					
Quantity Food Preparation					
Food Supervision					
Dietary Science					
Food Handling and Distribution					
Food Service and Hotel Administration					
Quantity Purchasing					
Laboratory Technician in Foods and Nutrition					
Bakery					
Food Processing					
School Lunch Management					
Other					

PART E: Continued

Thirty-six occupationally-oriented curricula suited to the program of a junior college or area vocational-technical center are listed below. Please rate the degree to which, in your opinion, each of these curricula would be helpful in preparing a person to qualify for a position in your organization by checking the appropriate column to the right. On the far right, please comment on concepts unique to "helpful" curricula.

CURRICULA	Highly Interested A	Moderately Interested B	Slightly Interested C	Not Interested D	Comments
Clothing Management, Production, and Services					
Clothing Maintenance					
Dressmaking and Alterations					
Retailing and Salesmanship					
Clothing and Design					
Garment Construction					
Millinery					
Laboratory Technician in Clothing and Textiles					
Power Machine Operation					
Factory Line Supervision					
Other					

PART E: Continued

Thirty-six occupationally-oriented curricula suited to the program of a junior college or area vocational-technical center are listed below. Please rate the degree to which, in your opinion, each of these curricula would be helpful in preparing a person to qualify for a position in your organization by checking the appropriate column to the right. On the far right, please comment on concepts unique to "helpful" curricula.

CURRICULA	Highly Interested A	Moderately Interested B	Slightly Interested C	Not Interested D	Comments
Care and Guidance of Children					
Child Care Supervision					
Kindergarten Education					
Recreational Services					
Care for the Handicapped					
Nursery School Education					
Teacher's Aide					
Other					
Home Furnishings, Equipment and Services					
Furniture Refinishing					
Equipment and Appliance Demonstration					
Interior Decoration					
Retailing and Sales-manship					
Upholstery and Drapery Making					
Other					

PART E: Continued

Thirty-six occupationally-oriented curricula suited to the program of a junior college or area vocational-technical center are listed below. Please rate the degree to which, in your opinion, each of these curricula would be helpful in preparing a person to qualify for a position in your organization by checking the appropriate column to the right. On the far right, please comment on concepts unique to "helpful" curricula.

CURRICULA	Highly Interested A	Moderately Interested B	Slightly Interested C	Not Interested D	Comments
Institutional Management and Supporting Services					
Home Health Care Technology					
Homemaker's Services					
Housekeeping Technology					
Public Housing Management					
Home Management					
Hotel-Motel Management					
Other					

18. Please comment freely.

INTERVIEW SCHEDULE FOR SCHOOL PERSONNEL

Schedule _____
Date of Interview _____

PART A: Personal Data

1. Name: Address of School:
2. Position:
3. School: Phone:

PART B: General Information about the School or Department

4. Areas of home economics offered:

___ Food and Nutrition--Management, Production, and Services
___ Clothing and Textiles--Management, Production, and Services
___ Care and Guidance of Children
___ Home Furnishing, Equipment, and Services
___ Institutional Management and Supporting Services

5. Do you feel a need for training workers at the semiprofessional level in home economics? Yes__No__In which area(s)_____

6. Number of home economics staff at your school.

Type of Employment	Total (Present Employees)	Replacement (Number Needed)	Expanding (Number Needed)	Contracting (Numbers)	No Change	Total Expected in 2 Years
Full time paid						
Part time paid						
Full time volunteer						
Part time volunteer						
Type of Curricula						
Preprofessional Curriculum						
Terminal Curriculum						
High School Curriculum						
Occupational Curriculum						

Enrollment in home economics now___Expected enrollment within two years___.

7. What is the most important source of jobs for your students?

____ Campus placement bureau or department
____ Employment agencies (public)
____ Employment agencies (private)
____ Advertisements
____ Direct contact by employer
____ Direct contact by employee
____ Friends and neighbors
____ Family (including relatives)
____ Advisory Committee

PART C: Interest in Developing Occupational Program(s)

8. If there were evidences of employment needs in the area, would you be interested in developing a program which leads to immediate employment of the students? Yes___ No___ For junior college or area vocational-technical center students____ For retraining experienced workers____.

9. Would you require the students to observe and receive work experiences as a part of their occupational preparation? Yes__No__

PART D: Preferable Type of Program for Post-Secondary School Training

10. Which of the following types of programs, A or B, is preferable as preparation for an occupation in a home economics related area?

____ Program A: A post-secondary school training period which is one hundred percent vocational-technical.
____ Program B: A post-secondary school training period which is primarily vocational-technical but includes courses in general education.

11. If a post-secondary school training period included courses in general education, which would you feel to be the most desirable percentage of courses in general education for such training?
____ 15% ____ 25% ____ 35% ____ 45%

12. Which of the following distributions of the training time in the program is preferable to spend in the vocational-technical training?

	Distribution				
	A	B	C	D	E
Percent of time spent on theory and development of background knowledge.	25%	40%	50%	60%	75%
Percent of time spent on development of technical skills and knowledge for the job.	75%	60%	50%	40%	25%

13. Which of the following types of programs, A or B, is preferable to offer as preparation for a career-employee?

____ Program A: Background knowledge and understanding of one area with intensive training in one aspect only of this knowledge.

____ Program B: Background knowledge and understanding in one area, with training in several aspects; hence, less intensive training in any one application.

14. Which of the qualities below do you believe an occupational education program should stress <u>most</u>?

____ Positive attitudes toward work.
____ Positive relationships with people.
____ Knowledge and skills for the job.

PART E: Occupationally-Oriented Curricula at Post-Secondary School Level.

15. Thirty-six occupationally-oriented curricula which can be adapted to local employment needs are listed below. Please rate the degree to which you are interested in developing each of these curricula at your junior college or area vocational-technical center. (Consider the present and projected educational facilities and faculty competencies.) On the far right, please comment on concepts unique to the interested curricula.

CURRICULA	Highly Interested A	Moderately Interested B	Slightly Interested C	Not Interested D	Comments
Food Management, Production and Services					
Catering Services					
Quantity Food Preparation					
Food Supervision					
Dietary Science					
Food Handling and Distribution					
Food Service and Hotel Administration					
Quantity Purchasing					
Laboratory Technician in Foods and Nutrition					
Bakery					
Food Processing					
School Lunch Management					
Other					

PART E: Continued

Thirty-six occupationally-oriented curricula which can be adapted to local employment needs are listed below. Please rate the degree to which you are interested in developing each of these curricula at your junior college or area vocational-technical center. (Consider the present and projected educational facilities and faculty competencies.) On the far right, please comment on concepts unique to the interested curricula.

CURRICULA	Highly Interested A	Moderately Interested B	Slightly Interested C	Not Interested D	Comments
Clothing Management, Production, and Services					
Clothing Maintenance					
Dressmaking and Alterations					
Retailing and Salesmanship					
Clothing and Design					
Garment Construction					
Millinery					
Laboratory Technician in Clothing and Textiles					
Power Machine Operation					
Factory Line Supervision					
Other					

PART E: Continued

Thirty-six occupationally-oriented curricula which can be adapted to local employment needs are listed below. Please rate the degree to which you are interested in developing each of these curricula at your junior college or area vocational-technical center. (Consider the present and projected educational facilities and faculty competencies.) On the far right, please comment on concepts unique to the interested curricula.

CURRICULA	Highly Interested A	Moderately Interested B	Slightly Interested C	Not Interested D	Comments
Care and Guidance of Children					
Child Care Supervision					
Kindergarten Education					
Recreational Services					
Care for the Handicapped					
Nursery School Education					
Teacher's Aide					
Other					
Home Furnishing, Equipment and Services					
Furniture Refinishing					
Equipment and Appliance Demonstration					
Interior Decoration					
Retailing and Salesmanship					
Upholstery and Drapery Making					
Other					

PART E: Continued

Thirty-six occupationally-oriented curricula which can be adapted to local employment needs are listed below. Please rate the degree to which you are interested in developing each of these curricula at your junior college or area vocational-technical center. (Consider the present and projected educational facilities and faculty competencies.) On the far right, please comment on concepts unique to the interested curricula.

CURRICULA	Highly Interested A	Moderately Interested B	Slightly Interested C	Not Interested D	Comments
Institutional Management and Supporting Services					
Home Health Care Technology					
Homemaker's Services					
Housekeeping Technology					
Public Housing Management					
Home Management					
Hotel-Motel Management					
Other					

16. Please comment freely.

STUDENT OCCUPATIONAL INTEREST INVENTORY

Date_____

PART A: Personal Data

1. Name: (Optional)
2. Grade:
3. School:

PART B: General Information about Yourself

4. Circle the home economics courses you have had. Home Economics I, II, III, IV, Family Living, Wage Earning, HE at JC, HE at AC.

5. Post-High School Major: Home Economics___ Other_____

6. Check your plans for next year.

____ Get a job
____ Become a homemaker
____ Return to high school
____ Attend a 4-year college or university, major in home economics
____ Attend a junior college, major in home economics
____ Attend an area center in home economics
____ Have not decided
____ Other Plans

7. What is your most important source of obtaining a job?

____ Campus placement bureau or department
____ Employment agencies (public)
____ Employment agencies (private)
____ Direct contact by employer
____ Direct contact by student of employer
____ Friends and neighbors
____ Family (including relatives)
____ Advisory committee

PART C: Interest in Pursuing Occupational Home Economics at Semi-professional Level.

8. Number the following areas according to your interest in enrolling in an occupational curriculum at the junior college or area vocational-technical center if there were evidences you could obtain a job immediately upon completing the program.

____ Food Management, Production, and Services
____ Clothing Management, Production, and Services
____ Care and Guidance of Children
____ Home Furnishing, Equipment, and Services
____ Institutional Management and Supporting Services

9. Would you be able to complete an occupational program? Yes__ No__

10. Would you like to observe and work part-time in a business establishment or agency for a time while training? Yes__ No__

11. Which of the qualities below do you believe an employer desires most in an employee?

____ Positive attitudes toward work
____ Positive relationships with people
____ Knowledge and skills for the job

PART D: Occupationally-Oriented Curricula at Post-Secondary School Level

12. Below are listed some curricula for which you may enroll at a junior college or area vocational-technical center. Should you decide to continue your education at this level in an occupational program, which of these statements would describe your feelings about training for the jobs?

1. I would be eager to train for this job. (E)
2. I would be definitely interested in training for this job. (I)
3. I am undecided about training for this job. (U)
4. I would prefer not to train for this job. (P)

Place the letter in the column which best describes your feelings about each curriculum.

JOB AREA	How I Feel About the Job			
	E	I	U	P
Food Management, Production, and Services				
Catering Services				
Quantity Food Preparation				
Food Supervision				
Dietary Science				
Food Handling and Distribution				
Food Service and Hotel Administration				
Quantity Purchasing				
Laboratory Technician in Foods and Nutrition				
Bakery				
Food Processing				
School Lunch Management				

JOB AREA	How I Feel About the Job			
	E	I	U	P
Clothing Management, Production, and Services				
Clothing Maintenance				
Dressmaking and Alterations				
Retailing and Salesmanship				
Clothing and Design				
Garment Construction				
Millinery				
Laboratory Technician in Clothing and Textiles				
Power Machine Operation				
Factory Line Supervision				
Care and Guidance of Children				
Child Care Supervision				
Kindergarten Education				
Recreational Services				
Care for the Handicapped				
Nursery School Education				
Teacher's Aide				
Other				

JOB AREA	How I Feel About the Job			
	E	I	U	P
Home Furnishing, Equipment, and Services				
Furniture Refinishing				
Equipment and Appliance Demonstration				
Interior Decoration				
Retailing and Salesmanship				
Upholstery and Drapery Making				
Other				
Institutional Management and Supporting Services				
Home Health Care Technology				
Homemaker's Services				
Housekeeping Technology				
Public Housing Management				
Home Management				
Hotel-Motel Management				
Other				

13. Please comment freely about the semiprofessional program.

APPENDIX B

TABLE XXVII

INTEREST IN FOOD MANAGEMENT, PRODUCTION, AND SERVICES CURRICULA BY LOCATION

		LOCATION I												LOCATION II											
		Business				School				Students				Business				School				Students			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	#	1	2	1	1	1	1			4	7	19	55	1	1	2	1	1		1		12	14	69	290
	%	20	40	20	20	50	50			4.7	8.2	22.4	64.7	20	20	40	20	50		50		3.1	3.6	17.9	75.3
2	#	4			1	2				5	15	21	44	3			2	1	1			13	26	65	281
	%	80			20	100				5.9	17.6	24.7	51.8	60			40	50	50			3.4	6.8	16.9	73.0
3	#	5				2				9	12	31	33	1	1	1	2	1	1			20	30	82	253
	%	100				100				10.6	14.1	36.5	38.8	20	20	20	40	50	50			5.2	7.8	21.3	65.7
4	#	3		1	1	2				8	17	21	39		1	1	3	1		1		12	32	77	264
	%	60		20	20	100				9.4	20.0	24.7	45.9		20	20	60	50		50		3.1	8.3	20.0	68.6
5	#	2	2		1	1	1			4	12	22	47	2	1		2	2				11	19	59	296
	%	40	40		20	50	50			4.7	14.1	25.9	55.3	40	20		40	100				2.9	4.9	15.3	76.9
6	#			1	4	2				6	14	19	46	2	1		2	1			1	23	43	79	240
	%			20	80	100				7.1	16.5	22.4	54.1	40	20		40	50			50	6.0	11.2	20.5	62.3
7	#	4			1	1	1			7	15	26	37	1		2	2	2				15	30	83	257
	%	80			20	50	50			8.2	17.6	30.6	43.5	20		40	40	100				3.9	7.8	21.6	66.8
8	#	2		1	2	2				11	21	16	37		1	1	3	1			1	28	39	69	249
	%	40		20	40	100				12.9	24.7	18.8	43.5		20	20	60	50			50	7.3	10.1	17.9	64.7
9	#	2	2		1	1	1			11	19	22	33	3		1	1	2				41	55	72	217
	%	40	40		20	50	50			12.9	22.4	25.9	38.8	60		20	20	100				10.6	14.3	18.7	56.4
10	#	2	1	1	1	1	1			6	10	26	43	1	2		2	2				18	31	77	259
	%	40	20	20	20	50	50			7.1	11.8	30.6	50.6	20	40		40	100				4.7	8.1	20.0	67.3
11	#		1	1	3	1	1			7	7	21	50			1	4	1	1			7	19	50	309
	%		20	20	60	50	50			8.2	8.2	24.7	58.8			20	80	50	50			1.8	4.9	13.0	80.3

TABLE XXVII (CONTINUED)

INTEREST IN CLOTHING MANAGEMENT, PRODUCTION, AND SERVICES CURRICULA BY LOCATION

		LOCATION I												LOCATION II											
		Business				School				Students				Business				School				Students			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	#	2	2		1	2				9	24	17	35	4			1	1		1		28	42	85	230
	%	40	40		20	100				10.6	28.2	20	41.2	80			20	50		50		7.3	10.9	22.1	59.7
2	#	2	1	1	1	2				10	23	16	36	4	1			2				52	54	68	211
	%	40	20	20	20	100				11.8	27.1	18.8	42.4	80	20			100				13.5	14.0	17.7	54.8
3	#	3			2	1	1			15	32	20	18	5				1	1			55	77	71	182
	%	60			40	50	50			17.6	37.6	23.5	21.2	100				50	50			14.3	20.0	18.4	47.3
4	#	3			2	2				20	27	20	18	1	1	1	2	2				82	92	71	141
	%	60			40	100				23.5	31.8	23.5	21.2	20	20	20	40	100				21.2	23.8	18.4	36.5
5	#	3	1		1	1	1			10	20	22	33	1	2	1	1	2				56	57	80	192
	%	60	20		20	50	50			11.8	23.5	25.9	38.8	20	40	20	20	100				14.5	14.8	20.8	49.9
6	#	1		1	3		2			4	9	18	54	1			4		2			19	32	65	269
	%	20		20	60		100			4.7	10.6	21.2	63.5	20			80		100			4.9	8.3	16.9	69.9
7	#	1		2	2	2				8	17	23	37	1	1		3		1	1		23	34	72	256
	%	20		40	40	100				9.4	20.0	27.1	43.5	20	20		60		50	50		6.0	8.8	18.7	66.5
8	#	1			4	1	1			1	14	19	51	2			3		2			19	43	63	260
	%	20			80	50	50			1.2	16.5	22.4	60.0	40			60		100			4.9	11.2	16.4	67.5
9	#	2		1	2	1	1			2	9	20	54	3		1	1	2				22	34	51	278
	%	40		20	40	50	50			2.4	10.6	23.5	63.5	60		20	20	100				5.7	8.8	13.2	72.2

TABLE XXVII (CONTINUED)

INTEREST IN CARE AND GUIDANCE OF CHILDREN CURRICULA BY LOCATIONS

		LOCATION I												LOCATION II											
		Business				School				Students				Business				School				Students			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	#	2				2				32	30	10	13	4	1			2				65	97	66	155
	%	100				100				37.6	35.3	11.8	15.3	80	20			100				17.0	25.3	17.2	40.5
2	#	1			1	2				28	37	6	14	1	1	2	1	1			1	52	83	68	180
	%	50			50	100				32.9	43.5	7.1	16.5	20	20	40	20	50			50	13.6	21.7	17.8	47.0
3	#	2				2				23	34	14	14	2	2		1	1			1	45	91	91	156
	%	100				100				27.1	40.0	16.5	16.5	40	40		20	50			50	11.7	23.8	23.8	40.7
4	#		2			1	1			19	31	14	21	1	1		3	1			1	44	84	74	181
	%		100			50	50			22.4	36.5	16.5	24.9	20	20		60	50			50	11.5	21.9	19.3	47.3
5	#	1	1			1	1			22	39	11	13	5				2				56	74	63	190
	%	50	50			50	50			25.9	45.9	12.9	15.3	100				100				14.6	19.3	16.4	49.6
6	#		1		1		2			21	31	19	14	3		1	1		1		1	45	82	66	190
	%		50		50		100			24.7	36.5	22.4	16.5	60		20	20		50		50	11.7	21.4	17.2	49.6

TABLE XXVII (CONTINUED)

INTEREST IN HOME FURNISHING, EQUIPMENT, AND SERVICES CURRICULA BY LOCATIONS

		LOCATION I												LOCATION II									
		Business				School				Students				Business				School				Students			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	#	1	1		3	1	1			8	27	19	31	2	1		2				2	22	42	71	247
	%	20	20		60	50	50			9.4	31.8	22.4	36.5	40	20		40				100	5.8	11.0	18.6	64.7
2	#		1	1	3	1	1			9	27	19	30	2			3			1	1	25	48	71	238
	%		20	20	60	50	50			10.6	31.8	22.4	35.3	40			60			50	50	6.5	12.6	18.6	62.3
3	#	5				2				27	35	13	10	3			2	1	1			81	90	65	146
	%	100				100				31.8	41.2	15.3	11.8	60			40	50	50			21.2	23.6	17.0	38.2
4	#	4	1			1	1			8	26	19	32	4	1			1			1	39	59	66	218
	%	80	20			50	50			9.4	30.6	22.4	37.6	80	20			50			50	10.2	15.4	17.3	57.1
5	#	3	1	1		2				9	15	18	43	3			2	1		1		20	33	56	273
	%	60	20	20		100				10.6	17.6	21.2	50.6	60			40	50		50		5.2	8.6	14.7	71.5

TABLE XXVII (CONTINUED)

INTEREST IN INSTITUTIONAL MANAGEMENT, AND SUPPORTING SERVICES CURRICULA BY LOCATIONS

		LOCATION I												LOCATION II											
		Business				School				Students				Business				School				Students			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	#	1	1		3	1			1	8	23	26	28	2	1	1	1		1		1	23	52	83	224
	%	20	20		60	50			50	9.4	27.1	30.6	32.9	40	20	20	20		50		50	6.0	13.6	21.7	58.6
2	#		1		4	1			1	9	18	20	38		1	1	3			1	1	27	54	76	225
	%		20		80	50			50	10.6	21.2	23.5	44.7		20	20	60			50	50	7.1	14.1	19.9	58.9
3	#	3	1		1	1			1	8	21	21	35	3	2			1			1	38	54	57	233
	%	60	20		20	50			50	9.4	24.7	24.7	41.2	60	40			50			50	9.9	14.1	14.9	61.0
4	#		1		4	1			1	7	16	25	37			2	3		1		1	34	32	77	239
	%		20		80	50			50	8.2	18.8	29.4	43.5			40	60		50		50	8.9	8.4	20.2	62.6
5	#	1	1		3	1			1	5	21	28	28	2		2	1	1			1	17	32	120	213
	%	20	20		60	50			50	6.1	25.6	34.1	34.1	40		40	20	50			50	4.5	8.4	31.4	55.8
6	#		1	1	3	1			1	11	31	23	20	2		1	2	1		1		65	57	52	208
	%		20	20	60	50			50	12.9	36.5	27.1	23.5	40		20	40	50		50		17.0	14.9	13.6	54.5

TABLE XXVII (CONTINUED)

INTEREST IN FOOD MANAGEMENT, PRODUCTION, AND SERVICES CURRICULA BY LOCATION

		LOCATION III												LOCATION IV											
		Business				School				Students				Business				School				Students			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	#	1		1	3	1		1		6	5	17	41		1	1	3		1	2		3	15	23	93
	%	20		20	60	50		50		8.7	7.2	24.6	59.4		20	20	60		33.3	66.7		2.2	11.2	17.2	69.4
2	#	5				2				7	15	14	33	3	2			2		1		4	11	28	91
	%	100				100				10.1	21.7	20.3	47.8	60	40			66.7		33.3		3.0	8.2	20.9	67.9
3	#	3	1		1	2				5	18	19	27	2	3			2		1		6	14	39	75
	%	60	20		20	100				7.2	26.1	27.5	39.1	40	60			66.7		33.3		4.5	10.4	29.1	56.0
4	#	1	3		1		2			8	14	13	34		3		2	1	2			12	21	34	67
	%	20	60		20		100			11.6	20.3	18.8	49.3		60		40	33.1	66.7			9.0	15.7	25.4	50.0
5	#	4	1				2			5	6	14	44	3	2			1	1	1		5	11	16	102
	%	80	20				100			7.2	8.7	20.3	63.8	60	40			33.3	33.3	33.3		3.7	8.2	11.9	76.1
6	#	1	1	1	2	1		1		3	17	12	37	1	1	1	2	1	2			4	18	35	77
	%	20	20	20	40	50		50		4.3	24.6	17.4	53.6	20	20	20	40	33.3	66.7			3.0	13.4	26.1	57.5
7	#	3		1	1	2				6	6	13	44	2	2	1		2	1			2	11	31	90
	%	60		20	20	100				8.7	8.7	18.8	63.8	40	40	20		66.7	33.3			1.5	8.2	23.1	67.2
8	#			4	1		2			9	10	14	36		2	2	1	1	1	1		8	23	28	75
	%			80	20		100			13.0	14.5	20.3	52.2		40	40	20	33.3	33.3	33.3		6.0	17.2	20.9	56.0
9	#		4	1		1	1			7	23	11	28	2	1	1	1			1	2	10	27	35	62
	%		80	20		50	50			10.1	33.3	15.9	40.6	40	20	20	20			33.3	66.7	7.5	20.1	26.1	46.3
10	#	2	1	1	1		2			3	8	18	40	1	1	3			1		2	4	12	26	92
	%	40	20	20	20		100			4.3	11.6	26.1	58.0	20	20	60			33.3		66.7	3.0	9.0	19.4	68.7
11	#	1		1	3	1	1			5	9	15	40				5			2	1	2	14	27	90
	%	20		20	60	50	50			7.2	13.0	21.7	58.0				100			66.7	33.3	1.5	10.5	20.3	67.7

TABLE XXVII (CONTINUED)

INTEREST IN CLOTHING MANAGEMENT, PRODUCTION, AND SERVICES BY LOCATIONS

		LOCATION III												LOCATION IV											
		Business				School				Students				Business				School				Students			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	#	2	1	1	1		1			9	15	14	31		2	1	2	2			1	4	4	28	98
	%	40	20	20	20		100			13.0	21.7	20.3	44.9		40	20	40	66.7			33.3	3.0	3.0	20.9	73.1
2	#	3	2			1				11	21	14	23	1	2		2	1	1	1		6	24	35	69
	%	60	40			100				15.9	30.4	20.3	33.3	20	40		40	33.3	33.3	33.3		4.5	17.9	26.1	51.5
3	#	4			1		1			14	22	12	21	4	1			1	2			22	46	32	34
	%	80			20		100			20.3	31.9	17.4	30.4	80	20			33.3	66.7			16.4	34.3	23.9	25.4
4	#	4		1			1			23	15	10	21	2	1		2	2		1		35	48	28	23
	%	80		20			100			33.3	21.7	14.5	30.4	40	20		40	66.7		33.3		26.1	35.8	20.9	17.2
5	#	1	3		1	1				15	11	19	24	2	1		2	2		1		4	14	22	94
	%	20	60		20	100				21.7	15.9	27.5	34.8	40	20		40	66.7		33.3		3.0	10.4	16.4	70.1
6	#		2	1	2	1				7	14	16	32	2	1		2	2			1	4	21	26	83
	%		40	20	40	100				10.1	20.3	23.2	46.4	40	20		40	66.7			33.3	3.0	15.7	19.4	61.9
7	#			2	3		1			10	13	10	36		2		3	2			1	8	18	36	72
	%			40	60		100			14.5	18.8	14.5	52.2		40		60	66.7			33.3	6.0	13.4	26.9	53.7
8	#			1	4			1		5	6	18	40	1			4				3	2	17	23	92
	%			20	80			100		7.2	8.7	26.1	58.0	20			80				100	1.5	12.7	17.2	68.7
9	#			1	4			1		6	9	11	43	1			4				3	3	6	14	111
	%			20	80			100		8.7	13.0	15.9	62.3	20			80				100	2.2	4.5	10.4	82.8

TABLE XXVII (CONTINUED)

INTEREST IN CARE AND GUIDANCE OF CHILDREN CURRICULA BY LOCATIONS

		LOCATION III												LOCATION IV											
		Business				School				Students				Business				School				Students			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	#	1				1				18	25	9	17	4				2		1		36	46	33	18
	%	100				100				26.1	36.2	13.0	24.6	100				66.7		33.3		27.1	34.6	24.8	13.5
2	#		1						1	19	21	16	13	2	2			3				35	49	26	23
	%		100						100	27.5	30.4	23.2	18.8	50	50			100				26.3	36.8	19.5	17.3
3	#			1			1			19	29	14	7	1	3			3				24	46	30	33
	%			100			100			27.5	42.0	20.3	10.1	25	75			100				18.0	34.6	22.6	24.8
4	#			1		1				21	14	16	18	1		1	2	2	1			24	39	31	39
	%			100		100				30.4	20.3	23.2	26.1	25		25	50	66.7	33.3			18.0	29.3	23.3	29.3
5	#	1					1			19	18	15	17	3	1			3				33	41	26	33
	%	100					100			27.5	26.1	21.7	24.6	75	25			100				24.8	30.8	19.5	24.8
6	#			1				1		15	17	16	21	1	2	1		2		1		29	41	29	34
	%			100				100		21.7	24.6	23.2	30.4	25	50	25		66.7		33.3		21.8	30.8	21.8	25.6

TABLE XXVII (CONTINUED)

INTEREST IN HOME FURNISHING, EQUIPMENT, AND SERVICES CURRICULA BY LOCATIONS

		LOCATION III												LOCATION IV											
		Business				School				Students				Business				School				Students			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	#	1			4				1	10	10	10	39	1			4	1	1		1	8	28	37	60
	%	20			80				100	14.5	14.5	14.5	56.5	20			80	33.3	33.3		33.3	6.0	21.1	27.8	45.1
2	#	1		1	3	1				6	15	13	35	2	1		2	1	1	1		15	31	25	62
	%	20		20	60	100				8.7	21.7	18.8	50.7	40	20		40	33.3	33.3	33.3		11.3	23.3	18.8	46.6
3	#	4		1			1			21	26	11	11	2	2		1	1	2			53	42	22	16
	%	80		20			100			30.4	37.7	15.9	15.9	40	40		20	33.3	66.7			39.8	31.6	16.5	12.0
4	#	3	1		1				1	9	16	9	35	4		1		1	1		1	13	30	34	56
	%	60	20		20				100	13.0	23.2	13.0	50.7	80		20		33.3	33.3		33.3	9.8	22.6	25.6	42.1
5	#	2	1	1	1			1		7	10	14	38	3			2		1	1	1	5	13	34	81
	%	40	20	20	20			100		10.1	14.5	20.3	55.1	60			40		33.3	33.3	33.3	3.8	9.8	25.6	60.9

TABLE XXVII (CONTINUED)

INTEREST IN INSTITUTIONAL MANAGEMENT AND SUPPORTING SERVICES CURRICULA BY LOCATIONS

		LOCATION III												LOCATION IV											
		Business				School				Students				Business				School				Students			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	#	1			4	1				5	11	15	38			1	4				3	4	17	34	78
	%	20			80	100				7.2	15.9	21.7	55.1			20	80				100	3.0	12.8	25.6	58.6
2	#		1		4		1			7	16	9	37				5				3	3	10	25	95
	%		20		80		100			10.1	23.2	13.0	53.6				100				100	2.3	7.5	18.8	71.4
3	#	5						1		7	7	11	44	5						1	2	3	6	22	102
	%	100						100		10.1	10.1	15.9	63.8	100						33.3	66.7	2.3	4.5	16.5	76.7
4	#		1		4				1	3	13	9	44		1	1	3	1			2		19	44	70
	%		20		80				100	4.3	18.8	13.0	63.8		20	20	60	33.3			66.7		14.3	33.1	52.6
5	#	1			4		1			3	12	15	37		1	1	3			1	2	2	12	32	87
	%	20			80		100			4.5	17.9	22.4	55.2		20	20	60			33.3	66.7	1.5	9.0	24.1	65.4
6	#	1	2		2		1			11	13	12	33	1		1	3			1	2	15	11	34	73
	%	20	40		40		100			15.9	18.8	17.4	47.8	20		20	60			33.3	66.7	11.3	8.3	25.6	54.9

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Career-Oriented Training; A Necessary Step Beyond Job Training.

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*NEW CAREERS

Thousands of jobs are vacant for lack of trained, skilled personnel to fill them, with an intensification of shortages in the highly-skilled human services occupations. Public service agencies are encouraged to utilize the new careers concept which approaches job progression and concurrent training as a long-range goal so that a "ladder" to professional status is created with the entry-level job as the first rung. (JK)

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CAREER-ORIENTED TRAINING

A Necessary Step Beyond Job Training

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CAREER-ORIENTED TRAINING
A Necessary Step Beyond Job Training

The Paradox of Poverty Amidst Plenty

A national dilemna of the first magnitude is the persistence of chronic poverty and unemployment, despite unprecedented economic growth.

By 1966, after six years of sustained expansion, our Gross National Product reached a record $740 billion; it is expected to exceed $785 billion in 1967. Civilian employment in 1966 averaged 74.1 million; and the U. S. Department of Labor is projecting an expanding labor force of 81.6 million at the end of 1967.

At the other end of the economic spectrum, there exists a poverty population of 32.5 million people. They include the unemployed, the underemployed and their families plus a significant number of persons who, although within the normal working age group and in need of jobs, are not in the work force. In 1966, the number of people unemployed totaled 3 million. Add to this another 1.8 million underemployed (working on short work weeks, or part time, for economic reasons beyond their control). For 1967, the Labor Department expects the rate of unemployment to continue at slightly less than 4%.

HERE IS THE PARADOX. THERE ARE THOUSANDS OF JOBS VACANT FOR LACK OF THE TRAINED, SKILLED PERSONNEL TO FILL THEM.

Late in 1965 and early 1966, the Labor Department reported a significant development in the job market. Long-standing shortages of professional and technical personnel intensified and new shortages appeared. These were prevalent in highly-skilled occupations in the human service fields. For example, in the health and education areas, the needs for registered nurses, licensed practical nurses, medical technicians, and teachers could not be met. There are still not enough applicants with appropriate work experience

and education to fill these jobs and other vacancies in "shortage occupations". At present, the National League of Nursing estimates an unmet need for 125,000 registered nurses. This deficit is expected to increase to 344,000 by the year 1970. At that time, the Labor Department foresees a further shortage of 500,000 elementary and secondary school teachers.

The Crux of the Problem

Can we close the accelerating gap between job vacancies and the unemployed/underemployed poor who now lack the skills to fill them?

Varied approaches to skills training and work experience for the poor have been tried by private industry, by labor unions and by all levels of government agencies. Generally speaking, these programs have reached relatively small segments of the target population. Industry and labor tend to select those people who most nearly approximate, in education and potential, employees alreadydoing the jobs for which new trainees are being sought. The majority of government programs have taught specific vocational skills which are geared to not-always-current regional labor shortages. The jobs, if and when trainees secure them, are low in pay, marginal in a fluctuating labor market, and usually dead-ended.

The obvious need is for large-scale, quality training programs geared to the poverty population -- programs which can quickly transfer massive numbers of people from the debit side of the employment ledger to the ranks of permanent, fully-employed members of American society.

The New Careers Concept of Training

New Careers approaches job training with immediate job skills as the short-range goal and with a long-range goal of job progression and concurrent training. Together, they create the "ladder" to professional status for which the entry-level job is the first rung.

We are proposing that public service agencies (where the shortage of trained personnel on all levels is most acute) implement the Scheuer-Nelson Subprofessional Career Act. The Act provides funds and guidelines for agencies' management to re-distribute work loads, creating new jobs for new employees. Non-professional functions would be transferred to the new workers who (after short-term initial training) would enter agencies' employ as Health Aides, Welfare Aides, Housing Aides, Teacher Aides, etc., etc.

Fresh Incentives to Job Seekers

Poor people, for whom a career opportunity in human services offers multiple motivation, will gain immediate jobs, beginning skills training, and a planned progression of advancement both in work and in education. The explicit benefits are job permanency, personal and occupational growth, plus the mobility that accrues to marketable skills. It is possible for each person to exercise a range of choices that can advance him from an entry-level job through to subprofessional and full professional status.

The Employer Agency Gains

Immediately, a cadre of workers with beginning skills can relieve overburdened professional staffs of the simpler, more routine tasks. Professionals can gain blocks of time to concentrate more on agency work which requires professional training and expertise.

The entire agency can increase the effectiveness of its services, both in quantity and quality. The new employees' life-styles and backgrounds especially suit them to bridge the "communications gap" which often exits between the professional staff and the population being served.

Coordinated Job Training and Education -- An Antioch Plan for the Poor

Approximately one-fifth of the new employee's work week would be "released time" for acquiring additional training in order to increase his effectiveness on the job. This same time can be phased for additional formal education (a high school diploma for example) and supportive counseling.

Beyond this point, systematic in-service courses must be provided for which college credits can be obtained. These courses could be site-based at the job. The New York State Board of Regents has provided certain guidelines for the college accreditation of off-campus experience and training. Fairleigh Dickinson University in New Jersey has introduced college courses, such as Early Childhood Education, directly in the field for Head Start school aides. The career opportunity for these new sub-professionals offers continued college training toward a professional degree in education.

Site-based courses are an important consideration for disadvantaged people who have had negative educational experiences, and for whom a transitional step is useful to assist them back into the education system. Many programs, such as Project APEX at New York University, have had considerable difficulties with disadvantaged youngsters in college courses given on campus. Partly this is because the courses themselves were not attuned to the experience and background of the disadvantaged youngster and partly because the youngsters themselves are thrown into new turf. Both of these impediments to learning can be reduced by developing field-based courses and having clinical instructors provide these courses at the job site.

Initially, if a college has not developed a specific curriculum for this purpose, it is going to be particularly important to select professors who show a great deal of interest in developing such courses. Simultaneously, new syllabi will have to be developed to assist them in providing these courses. The syllabi will have to be directed toward lesson plans that utilize field experience and relate this experience to concepts and systematic learning. The mode of discussion should be heavily related to problems experienced by the trainees in their work settings. In developing these curriculum designs, it will be important to observe the initial experience of self-selected clinical professors. These professors should be brought together for conferences and discussions, and their methods should be carefully observed in order to codify their experience.

Another possibility presents itself. Agency professionals who are responsible for on-the-job supervision of new subprofessionals could participate in the planning and development of the curriculum designs of site-based courses. Professional personnel could, perhaps, accrue credits through this activity for their own educational advancement.

For the new careerist, the educational plan suggested has the advantage of allowing him to complete his college degree in five to six years' time while working full-time. It accelerates his entire educational process; and his increasing knowledge and skills inure to the benefit of the employing agency. Actually, if credit is provided for some of his on-the-job experience, the acquisition of the degree can be further accelerated. (A recent precedent is the accreditation benefits given to World War II veterans for their military experience.)

The model resembles, in many respects, the education-cum-work plan developed at Antioch, Bard, and a number of other colleges, where students take supervised jobs in the field during a portion of the year and for which they receive college credit. Junior colleges, community colleges and some universities are quite interested in providing this continuing education in the field. It is suggested that special funds be allotted from the Scheuer-Nelson Work Training Program and from the Higher Education Act in order to encourage subprofessionals to move up the job ladder via career-oriented college education.

It is clear, then, that Career-Oriented Training is not the typical on-the-job vestibule training which is directed solely toward aiding the trainee to learn his job and perform it more efficiently. Career-Oriented Training is based on policy-directed strategy for training. The goal is careers, not simply jobs, and the design reflects this policy.

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BELL, ARTHUR P. Characteristics and Performances of High School Graduates and Non-Graduates in One-Year Programs in the Community College System of Institutions in North Carolina. Thesis, D. Ed., 1966, The Pennsylvania State University. 185 p. Library, The Pennsylvania State University, University Park.

Purpose. -- To compare characteristics and performance of high school graduates and non-graduates who completed one-year programs in the Industrial Education Centers in North Carolina and to determine relationships of characteristics to performance. Four major hypotheses were tested: (1) There are no significant differences in the characteristics of students who were graduated from high school and those who were not graduated. (2) There are no significant differences in the performance of students who were graduated from high school and those who were not graduated. (3) There are no significant relationships between the characteristics and post-high school institution grades of the students. (4) There are no significant relationships between the characteristics and length of time spent in training by the students to complete one-year vocational programs.

Method. -- Twelve post-high school institutions of less than the baccalaureate degree level were selected. The sample included 1,005 students enrolled in thirteen different one-year vocational curriculums. There were 622 high school graduates and 383 non-graduates who enrolled during or after the school year of 1961-62 and who completed their programs prior to January 1965. The data were taken from records on file at the institutions. The .05 level was chosen for tests of significance.

Findings. -- The graduates were younger than the non-graduates. More females than males had graduated from high school. More single students were high school graduates. More students with no military service than those with military service had graduated from high school. The graduates made higher scores on seven of nine aptitudes tested.

The graduates spent less time in training to complete their programs and achieved higher grades. Significant positive correlations between high school grades and post-high school institution grades for both the graduates and non-graduates were found. There were significant positive correlations between mean aptitude test scores and post-high school instituion grades for both the graduates and non-graduates.

The females made higher grades than the males. The married students made higher grades than the single students. There were no signigcant relationships between area of residence, military service, and employment status at time of application for enrollment and grades achieved. More females than males completed their programs in one year. Students with no military service completed their programs in less time than the students with military service. The students not employed at the time of application for enrollment spent less time in training than those employed.

CORMAN, ALBERT R. The Employment Status of Male High School Graduates of Fulton County Schools from 1956 to 1964. Paper, M. Ed., 1965, The Pennsylvania State University. 57 p. Library, The Pennsylvania State University, University Park.

Purpose. -- To complete an employment survey of male graduates of the four high schools of Fulton County, Pennsylvania, and to compare the graduates of agricultural curriculums to graduates of non-agricultural curriculums during alternate years from 1956 to 1964 for selected relationships.

Method. -- A questionnaire was developed to secure background information on the employment status of the male graduates of the high schools of Fulton County, Pennsylvania. The questionnaire was used to record information for male graduates obtained by personal interview when possible. Identical questionnaires were sent to those whom it was not possible to contact individually. The replies were organized into percentages in tabular form for evaluation. Each table was developed around a single question to compare graduates of agricultural curriculums with graduates of non-agricultural curriculums.

Findings. -- The results of the study show that there is positive evidence that graduates of agricultural curriculums in Fulton County, Pennsylvania, in alternate years from 1956 to 1964 when surveyed in 1965, had a higher rate of employment, a greater percentage of full-time employment, tended to hold their present employment positions for a longer period of time, were employed in more jobs requiring highly-skilled workers, had more opportunity for advancement, and held a greater number of jobs in Fulton County than did graduates of non-agricultural curriculums.

GUNDERSON, ORLEY D. An Analysis of Occupational Titles and Competencies Needed in Off-Farm Agricultural Supplies Businesses. Thesis, M.S., 1966, The Pennsylvania State University. 116 p. Library, The Pennsylvania State University, University Park.

Purpose. -- The objectives were (1) to identify and determine commonalities among occupational titles for entry and advancement in employment in two types of agricultural supplies businesses, (2) to identify, rate, and group the competencies needed To Enter and To Advance, and (3) to determine differences in levels of competency needed by employees To Enter and To Advance in each occupational group in cooperative and in independent agricultural supplies businesses.

Method. -- An interview schedule was used to determine ratings of agricultural and business competencies needed by workers in fifteen occupational titles. Data were collected by interview with 95 persons in ten cooperative agricultural supplies stores and with 63 persons in thirteen independent agricultural supplies stores. The businesses were selected to represent different store sizes and were widely distributed over the agricultural areas of Pennsylvania.

Findings. -- Factor analysis indicated that there were meaningful occupational title groups at both the To Enter and To Advance levels in the two types of agricultural supplies businesses. Service worker, salesman, office worker, and manager were groups of titles for both entry and advancement in employment in the cooperative stores. Salesman and office worker, equipment service worker, manager, and general service worker were groups of titles for both entry and advancement in the independent stores.

Factor analysis indicated that there were meaningful groups of competencies required of employees To Enter and To Advance in the two types of businesses. The competency factors were plant science, animal science, agricultural mechanics, business management and economics, employee traits and job responsibilities, and office skills and practices.

Competency factor scores were computed to determine differences in levels of competency needed To Enter and To Advance. The level of competency needed To Advance was higher than To Enter for all occupational groups in both kinds of agricultural supplies stores. Managers were found to require the highest level of competency both To Enter and To Advance in both groups of stores. Business competencies were required at higher levels by more occupational groups than were agricultural competencies.

Seventy-nine per cent of the employees interviewed in cooperative stores and 78 per cent of those in independent stores indicated that a farm background was most desirable for occupations in agricultural supplies businesses. It was recommended that further research be conducted in the area of occupational experience programs and that emphasis be given to supporting education among vocational fields.

HEANEY, DONALD S. Off-Farm Agricultural Occupations in Montana: Employment and Education. Thesis, D.Ed., 1966, The Pennsylvania State University. 186 p. Library, The Pennsylvania State University, University Park.

Purpose. -- (1) To identify present and emerging agricultural occupations, other than farming, for which vocational and technical education should be available, (2) to estimate present and anticipated numbers of employees, (3) to estimate annual turnover and entry opportunities, (4) to determine competencies needed for entry and advancement, (5) and to determine job characteristics.

Method. -- Data were obtained by personal interviews with managers in a random sample of 161 businesses in ten selected trade and service centers in Montana. The communities were selected on the basis of their importance as agricultural areas, number of high school vocational agriculture departments, geographical location, and size.

Findings. -- There were 1,127 businesses and services in the ten communities which hired employees needing agricultural competency. The individuals interviewed indicated 337 off-farm agricultural job titles within these businesses and services. The 1,127 businesses and services employed 21,854 workers of which 12,369 or 56.6 per cent needed agricultural competency. Of the 12,369 workers, 10,087 were full-time employees and 2,282 were part-time employees.

Three of the occupational families - Farm Supplies and Equipment, Farm Services, and Livestock and Poultry Industry - represented 65 per cent of the total number of businesses and 64 per cent of the employees. Skilled and semi-skilled levels of employment represented 85.5 per cent of the total number of employees needing agricultural competencies.

Employers expect to hire 8,428 employees during the next five years. Farm Supplies and Equipment, Farm Services, Livestock and Poultry Industry, and Ornamental Horticulture families account for 85.6 per cent of the employees to be hired in the next five years.

Factoring of the competency ratings to enter produced 12 competency factors. They were: Animal Science, Agricultural Mechanization, Forestry, Crop Science, Range Management, Agricultural Business Management, Farm Buildings, Soil and Water Management, Agricultural Chemicals, Rural Electrification, Forestry Management, and Animal Breeding and Selection. When the competency ratings were factored to advance they were found to be the same as to enter except for the last factor. A new factor, Lumbering Industry, was introduced in place of Animal Breeding and Selection.

HOOVER, N. K., McCLAY, D. R., and STEVENS, G. Z. Off-Farm Agricultural Occupations in Pennsylvania -- Employment Opportunities and Technical Education Needs. Staff Study, Teacher Education Research Series, Volume 7, Number 1, 1966, The Pennsylvania State University. 36 p. Department of Agricultural Education, The Pennsylvania State University, University Park.

Purpose. -- To identify agricultural occupations and job titles in Pennsylvania and to estimate the present numbers of employees and annual entry opportunities; to identify the clusters of competencies and job titles associated with entry and advancement in off-farm agricultural occupations; and to determine characteristics of off-farm agricultural occupations for the purpose of developing technical education programs.

Method. -- A list of all businesses by counties was obtained from the Pennsylvania Department of Labor, Bureau of Employment Security. A committee, in each county, selected from the total list of businesses those that were thought to have employees who needed agricultural competencies and added ones not included in the B. E. S. list.

In 29 counties, a 33 per cent random sample of businesses was interviewed and estimates were based on the sample. These data were then used, through linear relationship, as a basis for estimating the number of off-farm agricultural employees in each of the other 38 counties. Factor analysis was used to identify the clusters of competencies and job titles.

Findings. -- (1) If persons to be hired during the next five years are to have some technical education in agriculture, each school presently offering agriculture will have to provide 12 graduates for full-time employment and 6 graduates for part-time employment per year; (2) Employers expect about a fourteen per cent increase in the number of employees needing agricultural competencies in the next five years. This parallels the anticipated expansion in the total labor force; (3) Three occupational areas -- Agricultural Supplies and Equipment; Livestock, Dairy and Poultry Products; and Ornamental Horticulture -- account for 74 per cent of the businesses, 73 per cent of the current employees needing agricultural competencies, and 71 per cent of the employees to be hired in the next five years. Of 163 job titles, 37 account for 75 per cent of new employees, not including professional workers, in the next five years; (4) Agricultural competencies needed are mainly determined by the products handled by the business. Many of the agricultural subjects taught to students preparing for production farming also will be needed by students who enter off-farm agricultural occupations; and (5) Salesmanship, human relations, and business management are competencies that are needed by all employees, but in varying degrees. There are many instances in which vocational agriculture may support, or be supported by, other vocational subjects taught.

KIGER, GERALD M. A Follow-Up Study of Graduates of Lampeter-Strasburg High School. Thesis, M.Ed., 1965, The Pennsylvania State University. 43 p. Library, The Pennsylvania State University, University Park.

Purpose. -- The purpose of this study was to determine whether Lampeter-Strasburg High School is meeting the needs of its students and if it is adequately preparing them for their role in society. It determined changes that graduates of the school felt needed to be made if the school is to succeed in helping students meet their vocational goals.

Method. -- A questionnaire was mailed to the graduates of the classes of 1957, 1958, 1962, and 1963. The reason for using the classes of 1957 and 1958 was that these were the first two classes to be graduated from the new junior-senior high school resulting from the union of three smaller school districts. The classes of 1962 and 1963 were used so that the comparison between the two groups would represent a five-year span of time. Two hundred and ninety-two questionnaires were mailed to graduates. One hundred and seventy-one or 58.5 per cent of the forms were returned.

Findings. -- Eighty-four per cent of the graduates who returned completed forms indicated that the school had succeeded in providing them with an adequate educational background. Most of the graduates who indicated that they were not adequately equipped to progress in their vocational plans following graduation specified a need for most education in business. The failure of the graduates to get the education they needed was not due to a lack of subjects being offered but to their placement in or pursuit of the wrong courses.

LEBO, CHARLES F. The Development and Evaluation of a New Reimbursement Affidavit for School Districts Reporting Vocational Agriculture Programs. Thesis, M. Ed., 1966, The Pennsylvania State University. 71 p. Library, The Pennsylvania State University, University Park.

Purpose. -- To develop a new vocational agriculture reimbursement affidavit for Pennsylvania school districts. The form is for the use of local school districts for reporting reimbursement information required under existing Federal and Pennsylvania laws.

Method. -- A trial affidavit was developed by using information from twenty states to revise the Pennsylvania affidavit. Changes were made in content, design, and in mathematical computation. An evaluation instrument was designed to determine the attitudes and opinions of selected school administrators, teachers of agriculture, and area advisers concerning the trial affidavit.

Evaluation questionnaires, existing reimbursement affidavits, and trial reimbursement affidavits were sent to 25 school administrators, 25 teachers of agriculture and 18 area agricultural education advisers. Fifty-eight, or 85 per cent of the evaluation questionnaires were completed and returned.

Findings. -- School administrators, teachers of agriculture and area agricultural education advisers were in agreement in their comparison of the two affidavits. All were favorable to the content, design and mathematical computation components of the trial affidavit, thus, indicating their acceptance of it. All indicated that enough information had been included to insure the proper completion of the affidavit. The spacing used on the affidavit made it easier to complete than the existing affidavit.

A number of suggested changes or modifications were recommended as a result of the evaluations made of the trial affidavit. Many of these recommendations were incorporated into the final edition of the instrument.

LINDLEY, WILLIAM I. Estimate and Prediction of Persons Employed in Five Off-Farm Agricultural Occupation Areas by Counties in Pennsylvania. Thesis, M.S., 1966, The Pennsylvania State University. 55 p. Library, The Pennsylvania State University, University Park.

Purpose. -- (1) To locate factors related to the number of off-farm agricultural employees in 29 surveyed counties of Pennsylvania, (2) to use the factors to predict the number of current, full-time, off-farm agricultural employees, by counties, in the state of Pennsylvania, (3) to predict the number of off-farm agricultural employees currently working part-time, and the full-time and part-time workers to be hired during the next five years.

Method. -- The Pennsylvania occupations study provided an estimate of the number of off-farm agricultural employees in 29 counties. In this report the data from the Pennsylvania agricultural occupations study were used as a basis for the development of multiple regression equations to estimate the number of current full-time employees in five off-farm agricultural areas. It was necessary to find factors that had a positive, linear relationship with the number of workers needing agricultural competence. Seventeen factors, most of them data from state reports on the agricultural productivity of each county, were used in the regression equations. Part-time current employees, and full-time and part-time employees to be hired during the next five years were estimated from the ratio of those groups to full-time current employees in the 29 county survey.

Findings. -- (1) Seventeen factors were used as variables in multiple regression equations to estimate the current number of full-time employees with a satisfactory degree of accuracy. The fraction of explained variance for the equation for each of the five occupation areas was as follows: Farm Machinery, 0.880; Feed and Farm Supplies, 0.976; Livestock and Poultry, 0.907; Crops and Forestry, 0.694; Ornamental Horticulture, 0.959. (2) The actual number of businesses needing employees with agricultural skills and knowledge proved to be the factor most closely ralated to the number of workers. This variable was among the six most important factors in all five of the occupation areas. (3) There were an estimated 43,057 current full-time off-farm agricultural employees in the five occupation areas. Of the total, 10.2 per cent were employed in farm machinery occupations, 25.9 per cent were in feed and farm supplies occupations, 21.0 per cent were in livestock and poultry occupations, 11.2 per cent were in crops and forestry occupations and 31.7 per cent were in ornamental horticulture occupations. (4) In the more urban counties of the state, ornamental horticulture was found to employ half or more of the total off-farm workers needing agriculture knowledge and skills. Ornamental horticulture managers and owners of businesses stated that they would hire 1.6 times as many part-time workers as full-time employees during the next five years.

LOVE, EDWIN LAMAR. An Analysis of Job Titles and of Competencies Needed in Off-Farm Agricultural Occupations in Pennsylvania. Thesis, D.Ed., 1966, The Pennsylvania State University. 133 p. Library, The Pennsylvania State University, University Park.

Purpose. -- To identify the clusters of competencies and job titles associated with entry and advancement in off-farm agricultural occupations and to determine differences in the levels of selected vocational competencies needed. The occupations areas were: agricultural mechanics, agricultural supplies, food products, forestry, and ornamental horticulture.

Method. -- Job interviews were made with a random sample of employers in seventeen Pennsylvania counties. Two random samples of 105 each were drawn from all of the job interviews. A sample of 105 job interviews was drawn from each of the five off-farm agricultural occupations areas. Competency factors for competencies needed To Enter and To Advance in off-farm agricultural occupations were determined by factor analysis with varimax rotation. An inversion of the data made possible the separate factoring of job titles in the random samples and in each of the five off-farm agricultural occupations areas. All data were analyzed for twelve competency and twelve job title factors. Competency factor mean scores were computed to determine differences in training needed To Enter and To Advance in each occupation group.

Findings. -- Job title factor groups To Enter and To Advance for manager, salesman, technician, and service worker were important job titles in the two random samples. The job title factor of manager was important in each of the five off-farm agricultural occupation areas. The job title group for salesman appeared in the To Advance factoring in the agricultural supplies area. The job title factor group for technician was important To Enter and To Advance in the occupation areas of agricultural supplies, forestry, and ornamental horticulture. A factor group for bookkeeper appeared in both To Enter and To Advance in agricultural mechanics and agricultural supplies. A factor group for mechanic was found in agricultural mechanics occupations.

The competency factors in agriculture were plant science, animal science, agricultural mechanics and agricultural business management. Among business and distributive competencies the factor groups were business management and economics, sales and business skills, job and employee characteristics, and employee-supervisor relations. In trade and industrial competencies the factor groups were building construction technology, industrial mechanics, industrial quality control, and electricity and electronics.

PARK, EUGENE K. Employment Trends of Agriculture Graduates, Penns Valley High School, Spring Mills, Pennsylvania. Thesis, M. Ed., 1966, The Pennsylvania State University. 50 p. Library, the Pennsylvania State University, University Park.

Purpose. -- To determine the percentages of two groups of graduates of the Vocational Agriculture Department, Penns Valley High School, Spring Mills, Pennsylvania, which were employed in each of five types of occupations, and to determine if any trends had developed in the types, sequences, and tenure of employment within the various occupations.

Method. -- Employment information sheets were mailed to 141 graduates (1950 - 1963) of the Vocational Agriculture Department of Penns Valley High School. Reminder cards were sent to those who did not reply within three weeks. For comparison purposes, two groups of graduates were established: Group I, 1950 - 1956; and Group II, 1957 - 1963. Two periods of time were used so that the two groups could be compared. Period 1 was from June 1950 to March 1958 and Period 2, from June 1957 to March 1965.

When employment histories were received, each job was classified into one of five types of occupations--farming, farm services, off-farm agriculture, non-agriculture, and military service. Percentages of graduates employed in the five occupation categories were arranged in table form. Job sequence diagrams were drawn for both Group I and Group II to show occupations held by graduates in each job sequence. Employment summary tables were formulated to show the number of graduates employed in each of the five types of occupations for jobs held in sequence one through eight. The number of persons employed, the range of time the jobs were held, and the average tenure for the jobs may be compared by type of job or by the sequential position of the jobs within the employment careers.

Findings. -- This study showed more graduates in farm services and off-farm agriculture than have previous studies. More Penns Valley graduates enter farming for their first job than the other four types of occupations combined. Group II had a higher percentage in farming and military service and a lower percentage in non-agriculture jobs than did Group I. Military service appeared to be only a temporary interruption to the type of work graduates followed.

Seventy-nine percent of the graduates in Groups I and II followed a type of employment similar to their first or second job throughout their employment history. The type of occupation and the position of the job in the sequence made very little difference in the average tenure for Group II, but for Group I, the tenure varied considerably with the position of the job in the sequence.

PAULES, JACKIE H. An Analysis of Competencies Needed in Occupations in the Processing and Marketing of Dairy Products. Thesis, M.S., 1966, The Pennsylvania State University. 79 p. Library, The Pennsylvania State University, University Park.

Purpose. -- The objectives were (1) to identify and determine commonalities among occupational titles for entry and advancement in employment in dairy processing plants, (2) to identify, rate, and group the competencies needed To Enter and To Advance, and (3) to determine differences in levels of competency needed by employees To Enter and To Advance in each occupational group in dairy processing plants.

Method. -- An interview schedule was used to determine ratings of agricultural, business, and trade and industrial competencies needed by employees in fifteen occupational titles. Data were collected by interviews with plant managers and/or personnel managers in seven dairy processing plants in Allegheny County, Pennsylvania. The plants were large enough to have employees in all of fifteen occupational titles.

Findings. -- Factor analysis indicated that there were meaningful occupaional title groups at both the To Enter and the To Advance level. The groups that factored at the To Enter level were: salesman, technician, plant worker (mechanic), office worker, personnel manager, plant worker, and supervisor. Sales manager, technician, plant worker (mechanic), office worker, salesman, supervisor, and plant processor were groups of titles which factored in the To Advance data. Salesman, technician, plant worker (mechanic), office worker, and supervisor were occupational title groups at both levels.

Factor analysis indicated that there were meaningful groups of competencies required of employees To Enter and To Advance in dairy processing plants. The competency factors at both levels were personnel relations, milk production technology, processing (mechanics and maintenance), office services, sales management and salesmanship, and milk processing technology.

Competency factor scores were computed to determine differences in degree of competency needed To Enter and To Advance. The competency needed To Advance was higher than To Enter for all occupational groups. The competency factors for milk processing technology and sales management and salesmanship represented the largest number of increases at the To Advance level.

A baccalaureate degree was most desirable for managerial occupational titles (except sales manager) and for fieldmen and quality control technicians. Other occupational titles required either high school graduation or a post-high school technical education. Except for fieldmen, administrators placed little emphasis on experience background when considering prospective employees. Five of seven administrators said that a farm background is desirable for the fieldman. On-the-job training in the plant was the most widely used type of in-service education. Courses offered by agricultural colleges and public schools (adult education) were also important sources of in-service education. It was recommended that agriculture departments in high schools and area vocational-technical schools consider the development of educational programs for employees in dairy processing plants. Such programs should include sales management and salesmanship and milk processing technology.

REICHARD, GERALD W. An Evaluation of Measured and Stated Interests in Agriculture of Eighth Grade Boys in Franklin County, Pennsylvania. Thesis, M.Ed., 1966, The Pennsylvania State University. 66 p. Library, The Pennsylvania State University, University Park.

Purpose. -- (1) To inventory interests and other personal and environmental characteristics of eighth grade boys, (2) to determine relationships among interests and characteristics of all boys and of those who plan to elect agriculture in high school, and (3) to show how information about students, courses offered, and employment opportunities may be used in guidance and counseling.

Method. -- The Vocational Agriculture Interest Inventory and the Kuder General Interest Survey, Form E, were administered to 862 eighth grade boys in the ten high schools in the Franklin County Vocational-Technical School attendance area in November, 1965. The student survey form printed on the back of the answer sheet of the Vocational Agriculture Interest Inventory provided the information on personal and family characteristics and student plans. Nine hypotheses were tested at the .05 level.

Findings. -- The mean Vocational Agriculture Interest Inventory score of 41.9 for all students was lower than the 52.1 mean score of the norm group in twenty smaller schools in 1960 on which the test was constructed. The Kuder General Interest Survey, Form E, mean scores on the Persuasive and Clerical scales were higher than for the national norm group; and the Musical mean score was lower. The Outdoor scale of the Kuder correlated .639 with the Vocational Agriculture Interest Inventory. The fraction of explained variance was .409 for this one variable alone; with all ten scales of the Kuder included the variance accounted for was .439.

The Vocational Agriculture Interest Inventory scores of boys from families living on farms and engaged in full-time farming were higher than the scores of boys from part-time farming or non-farming and urban families. Scores of boys planning to enter an agricultural occupation and of students intending to elect agriculture in high school were significantly higher than scores of other boys.

There were 168 eighth grade boys who expressed an intention to elect agriculture in high school, 76 of whom were from families engaged in full-time farming or part-time farming. The Franklin County area has agriculture employment opportunities for more persons than are being graduated with training for agricultural production or off-farm agricultural occupations.

STAUFFER, ROBERT HARRY. Learning Orientation Priorities of Cooperative Extension Clientele in Selected Pennsylvania Counties. Thesis, D.Ed., 1966. The Pennsylvania State University. 74 p. Library, The Pennsylvania State University, University Park.

Purpose. -- The study was designed to test the Houle theory that adults have three orientations toward learning: the goal, the activity, and the knowledge orientations. The theory had been developed from an intensive study of taped interviews with 22 unusually active, or intensely involved, adult learners. This study focused on a larger group of adults. The purpose was to determine learning orientation priorities of men and women who attended agricultural and home economics meetings of Cooperative Extension.

Method. -- Sheffield developed a schedule to test the Houle theory with 453 conferees in a residential adult education environment. The scaled learning-orientation items in the Sheffield schedule were revised and eight items were added. Demographic factors included were age, sex, years of formal education, occupation and degree of participation. The schedule was administered to 704 adults in attendance at 32 Cooperative Extension meetings in 16 Pennsylvania counties. Statistical treatment included factor analysis, correlation, and analysis of variance.

Findings. -- Three primary learning orientations found among Cooperative Extension clientele were knowledge, affiliation, and occupation. Individuals with a knowledge orientation sought intellectual satisfactions through learning. Affiliation-oriented individuals sought personal associations and friendships. Adults with an occupation orientation sought vocational competency and guidance to secure professional advancement. The knowledge orientation was related to the knowledge orientation described by Houle. The affiliation orientation was related to Houle's activity category. The goal orientation developed by Houle was not as specific as the occupation category of this research.

Alleviation, civic altruism, and insight were secondary learning orientations. Adults with an insight orientation engaged in discussion of ideas and acquisition of understanding of basic concepts. The alleviation orientation can be compared with the need-for-activity and desire-for-activity orientations developed by Sheffield. Civic altruism is related to the personal goal and societal goal orientations of Sheffield. The insight orientation was not described by Houle or Sheffield.

The occupation orientation had higher priority among men than women. The older clientele attended meetings for affiliation reasons and to alleviate boredom and frustration. Homemakers desired knowledge and association with others. Farmers were interested in occupational improvement. Manager-professionals, sales and service personnel, and young adults who had acquired higher levels of formal education considered knowledge and occupational improvement to be the important reasons for attending Extension meetings.

STEVENS, GLENN Z. Graduate Education and Eligibility for Sabbatical Leave of Teachers of Agriculture in Pennsylvania. Staff Study, 1966, The Pennsylvania State University. 12 p. Teacher Education Research Series, Volume 7, Number 4, Department of Agricultural Education.

Purpose. -- To determine advanced degree status and plans, eligibility for sabbatical leave, graduate credits earned above the bachelors degree, certification, and subject matter areas of specialization of teachers of agriculture and area advisers of agricultural education. Comparisons were made with data from a similar study five years earlier and with statistics for all secondary teachers in Pennsylvania.

Method. -- With cooperation of the Department of Public Instruction, Bureau of Technical and Continuing Education, Agricultural Education Division, a data schedule was completed by 18 area agricultural education advisers and the 283 teachers of agriculture employed in 230 high schools in Pennsylvania near the end of the 1965-66 school year.

Findings. -- The bachelors degrees of 258 teachers of agriculture and 14 area advisers were earned in Agricultural Education. Twenty teachers and four area advisers majored in other specializations in agriculture. The remaining five teachers hold first degrees in related fields. The bachelors degrees of 267 teachers and 14 area advisers were from The Pennsylvania State University. Five earned the degree at West Virginia University and four at the University of Maryland.

Masters degrees have been completed by 127 teachers and 13 area advisers; eighty per cent of the men earning the degree at Penn State in Agricultural Education. Twenty five teachers have a masters equivalent certificate issued by the State Department of Public Instruction, of whom five are candidates for a masters degree. Sixty nine other teachers are active candidates for a masters degree, mostly younger men.

Only 18 teachers have taken advantage of the provisions of the School Code that make professional employees eligible for sabbatical leave at half salary after ten years of teaching. There were 140 teachers of agriculture eligible for a sabbatical leave in 1966 who did not take it. About 16 more teachers will become eligible in each of the next nine years. Some will specialize in a subject field, in administration or guidance, while others work in a related industry or in another country. Many should earn an advanced degree and return to the schools from which they are on leave.

There are but 14 teachers who have secondary principal certification and seven are qualified in guidance. Seven teachers and four area advisers have vocational director certification. A fourth of the teachers and advisers declared that they have competency specialization in dairying, agricultural mechanics or agronomy. Sixty nine teachers named more than one area of special ability but 89 teachers listed none. Eight area advisers would instruct groups of teachers in inservice classes in one or more special subjects.

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ZIEBER, KENNETH W. An analysis of the Problem of Overfeeding and Underfeeding Cows in the Herds of Eighteen Dairymen Studying Dairy Cattle Nutrition. Thesis, M. S., The Pennsylvania State University. 35 p. Library, The Pennsylvania State University, University Park.

Purpose. -- To survey and make comparisons of the dairy feeding practices of young adult farmers attending two dairy cattle nutrition classes. To determine if cows were being overfed and underfed digestible protein (DP) and total digestible nutrients (TDN) during the first, second, and third 100 days of their lactation.

Method. -- Eighteen diarymen were selected from two young adult farmer classes. Three cows were randomly selected from the herd of each dairyman, one each from all producing cows in the first, second, and third 100 days of their lactations. Cows not in normal health or in "heat" were eliminated. A record was made of necessary information about each cow to calculate her needs for DP and TDN. Feeding practices were recorded. All forages were chemically analyzed to estimate the content of DP and TDN. The DP and TDN requirements of each cow were computed. Comparisons were made between the nutrients required and nutrients received. A cow receiving more or less nutrients than she needed was overfed or underfed, respectively.

Findings. -- For the cows included in the study, DP was fed at approximately the required level during the first 100 days of lactation, and at a rate significantly higher than required during the second and third 100 days of lactation. Cows in the first 100 days of their lactation were underfed at a rate of 1.77 pounds of TDN per day but the difference was insignificant by correlated t-test. During the second 100 days of their lactation, cows were overfed at a rate of 1.82 pounds of TDN per day but again the difference was insignificant. TDN was fed at a rate significantly lower than required during the third 100 days of the lactation period.

Non-DHIA cows were significantly overfed DP during the second 100 days of their lactations and significantly underfed TDN during the third 100 days of their lactation.

Grain and hay appeared to be equally good sources of DP. Grain and silage appeared to be equally good sources of TDN. Half of the eighteen dairymen were lead-feeding, seventeen provided cows free-access to water, seven fed salt free-choice, three fed minerals free-choice, all fed salt in the ration, and seventeen fed minerals in the ration.

The Pennsylvania State University
Agricultural Experiment Station
College of Agriculture
Department of Agricultural Education

ACTIVE STAFF RESEARCH PROJECTS -- December, 1966

1140 The On-Farm Service Center in Mechanized Farming. F. Anthony, O.A. Kimmel, T. A. Hoerner.

1194 Pre-Employment Experiences of Graduates in Agricultural Education as Related to Tenure in Teaching Vocational Agriculture. D. R. McClay.

1195 Physical-Plant and Equipment Requirements for Departments of Vocational Agriculture in Pennsylvania High Schools. F. Anthony, T. A. Hoerner.

1208 Determination of Efficiency Factors and Standards, and Satisfactory Sampling Methods in Vocational Agriculture. G. Z. Stevens, N. K. Hoover.

1224 Supervision and Administration of Instruction in Vocational Agriculture. G. Z. Stevens.

1426-C A Comparison of Methods of Teaching Firearm and Hunting Safety in Selected Pennsylvania Schools. F. Anthony.

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Pilot Programs in Agricultural Business Management Education. G. Z. Stevens, H. F. Doran.

Pilot Programs in Land Management Education. G. Z. Stevens, S. M. Curtis.

VT 007 340
Perception of Job Opportunities Among Low-Income Groups in Missouri.

Missouri Agricultural Experiment Station, Columbia
Office of Manpower Policy, Evaluation, and Research (DOL), Washington, D.C.
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*EMPLOYMENT OPPORTUNITIES; *PERCEPTION; *LOW INCOME GROUPS; URBAN AREAS; *ADULTS; STATE SURVEYS; TEENAGERS; UNDEREMPLOYED; FEDERAL PROGRAMS; *RACIAL DIFFERENCES
NEIGHBORHOOD YOUTH CORPS; MISSOURI

The objectives of this project were to: (1) provide descriptive and analytical material concerning the perception of job opportunities among low-income groups in Missouri, and (2) provide jobs and useful training for a number of teenagers involved in the Youth Corps program. Data were gathered by means of an area probability sample in low income urban areas, defined by using tract data from the 1960 U.S. Census of Population. Participants in the Job Corps program conducted 1,600 interviews in seven urban areas of St. Louis, Kansas City, Columbia, Sedalia, Fulton, Rolla, and Jefferson City. Generalizations from the findings include: (1) Unemployment among Negro low-income groups is higher than among comparable white groups, (2) Low-income groups are relatively realistic in their perception of their skills and the type of jobs for which they qualify, and (3) Low-income groups, either through lack of knowledge or through distrust, are not taking advantage of the employment agencies or job training programs available to them, but Negroes use both types of agencies more often than do whites. (CH)

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PERCEPTION OF JOB OPPORTUNITIES AMONG LOW-INCOME GROUPS IN MISSOURI

VT 007 340

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BACKGROUND, PURPOSE, AIMS OF THE STUDY

REX R. CAMPBELL AND SUSAN A. MULVEY*

Both social scientists and public officials concerned with the problems of employment have recognized that certain individuals and groups tend to have distorted or incorrect ideas and perceptions of the work situation or their opportunities for employment. These distorted perceptions can, of course, have profound effects on the national employment picture. Many people have ideas and perceptions about the job market, job training, requirements for jobs, and the existence of discrimination which do not accurately reflect the facts. The problem is significant because these distorted perceptions are likely to be held by members of low-income groups, placing them at even more of a disadvantage in terms of employment.

The project was designed with two objectives in mind:

1. To provide descriptive and analytical material concerning the perception of job opportunities among low-income groups in Missouri.
2. To provide jobs and, it was hoped, useful training for a number of teen-agers involved in the Youth Corps Program.

A sub-purpose was to collect, by means of cross-racial and intra-racial interviews, some initial data to be used in an analysis of the differential responses made relating to various external characteristics of interviewers.

For the first purpose of the study, the following areas of inquiry were thought to be relevant.

1. General demographic information—needed for purposes of analysis and comparison.
2. Information about present and past employment. This section included data on how jobs were found, qualifications and training thought to be necessary for the jobs, and also satisfaction with the job.
3. Questions concerning methods and agencies used in looking for work. It was hoped that this section would provide information about the perceptions of the usefulness and availability of existing agencies and also the extent to which more informal methods were used.
4. Data dealing with the desirability and/or availability of job training. Many officials are concerned about the problems of disseminating information on retraining programs. It was felt that this section could indicate the extent to which low-income groups were aware of and understood the purposes of programs which were, in fact, designed to help them.
5. Information dealing with what a better job might mean. This was included in order that some idea of the group's expectations might be gained.
6. The group's view of the employment situation in the area. This could provide a direct check on the discrepancy between perception and reality.
7. Data concerning discrimination. This section included questions dealing with all types of discrimination: educational (that is, did the respondent feel he was discriminated against because he lacked education or training), sexual, age, racial, and others.

The secondary purpose aimed at discovering whether or not there would be differences in response related to racial characteristics of the interviewer and the respondent. It was decided that the four possible combinations (Negro interviewer-Negro respondent, Negro interviewer-white respondent, white interviewer-white respondent, and white interviewer-Negro respondent) would be compared on selected questions which might be affected by racial concerns.

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Finally, a note on the organization of the report and the treatment of the data. A short discussion of the research design will be presented, to include sampling and interviewing techniques. The finding will be examined for the total sample and by race. Also there will be a short, preliminary analysis of the differences in response as related to racial combinations, and in conclusion, a general summary and analysis.

RESEARCH DESIGN

The data was gathered by means of an area probability sample in low-income urban areas of the state. An income level of the area was defined by using tract data from the 1960 U.S. Census of Population. Some 1,600 interviews were collected in seven urban areas in Missouri: St. Louis, Kansas City, Columbia, Sedalia, Fulton, Rolla, and Jefferson City.

The interviewing was done by participants in the Job Corps Program. The interviewers were selected by means of a simple ability test and then received the same type of training given professional interviewers. They were more closely supervised than is usual for professional interviewers. Some purposive selection of sample for different interviewers was necessary to make sure each interviewer collected inter- as well as intra-racial interviews.

The male or female head of the household was interviewed whenever possible; when that could not be done, either the spouse or some other adult within the household was questioned.

THE SAMPLE

DEMOGRAPHIC CHARACTERISTICS

As expected, the percentage of non-white households in the sample was disproportionately high in relation to the non-white population of the state; 55.5 percent of the families were classified as non-white whereas non-whites comprise only 9.2 percent of the Missouri population. The average population per household was 3.2 which is nearly equal to that of the state (3.1); this low average is related to the large number of aged individuals in the sample who for the most part lived alone or in households of two (the other individual was either the spouse or an aged friend or relative). The income dispersion of the sample is compared with that of the state in Table 1. The median income of the sample is considerably lower than that of the state.

TABLE 1-- PERCENTAGE DISTRIBUTION OF INCOME, AND MEDIAN INCOME, FOR THE POPULATION OF MISSOURI AND FOR THE SAMPLE

Total Income	The State Percent	The Sample Percent
under 1,000	15.6	15.9
1,000 to 1,999	12.5	16.2
2,000 to 2,999	10.2	16.5
3,000 to 3,999	9.8	11.1
4,000 to 4,999	10.2	10.0
5,000 to 5,999	10.2	10.1
6,000 to 6,999	8.1	6.5
7,000 to 10,000	14.0	9.0
over 10,000	9.3	4.7
Median Income	$4,186	$3,500

Heads of Households—Since the detailed information dealt only with the head of the household the following demographic material concerning the heads is presented. Only 66.4 percent of the heads in the sample were male, while 81.4 percent of the heads in the total population were male. This seems to reflect the higher percentage of aged in the sample rather than the racial makeup of the sample. As shall be seen later, there is almost no difference in terms of the sex of the head among the racial groups.

The age distribution of the heads for the sample and for the total population of the state is presented in Table 2. It reveals that the low-income group contains a higher percentage of individuals over 65 years than does the state population. This was expected since clustering at the extremes of youth and old age is typical of a low-income group. The educational distribution for the sample compared to that of the state is found in Table 3. This table shows that the educational attainment of the low-income group is not much different than that of the state. Only among the group which completed 16 or more years of school is there any real difference and that is relatively slight. This high attainment may be related to the fact that the sample was taken in urban areas which tend towards higher levels of educational achievement.

The last general demographic characteristic to be treated is employment status. In the sample it was found that 58.9 percent of the heads were employed, 12.7 percent were unemployed (4.2 percent of the state population was unemployed), 28.1 percent were disabled or retired, and .3 percent were students. As expected, the unemployment rate was high as was the percentage of retired or disabled individuals.

TABLE 2-- PERCENTAGE DISTRIBUTION OF THE AGE OF THE HEAD OF THE HOUSEHOLD FOR THE POPULATION OF MISSOURI AND FOR THE SAMPLE

Age Group	The State Percent	The Sample Percent
19 years & under	.6	.8
20 to 24 years	4.6	6.1
25 to 29 years	7.6	5.9
30 to 34 years	9.0	6.9
35 to 39 years	9.9	7.6
40 to 44 years	9.4	7.8
45 to 49 years	10.0	8.3
50 to 54 years	9.8	8.5
55 to 59 years	9.4	7.2
60 to 64 years	8.3	9.7
65 and over	22.0	29.0
No age given	-	2.1

TABLE 3--PERCENTAGE DISTRIBUTION OF YEARS OF SCHOOL COMPLETED BY THE HEAD OF THE HOUSEHOLD FOR THE POPULATION OF MISSOURI AND FOR THE SAMPLE

Years of School Completed	The State Percent	The Sample Percent
0-8 years	45.8	42.9
9-12 years	38.8	42.0
13-15 years	7.8	8.2
16 years or more	7.6	5.9
No answer given	-	1.0

DETAILED EMPLOYMENT DATA

Present and Past Employment—In terms of occupational classification, it was found that 55 percent of the employed in the sample were service workers, laborers, or operatives; 16 percent were craftsmen or foremen; 15 percent were clerical and sales workers; and 13 percent were managers, proprietors, professional, and technical workers. For the most part the individuals included in the last group (managers, proprietors, professionals, or technical workers) were proprietors of very small businesses or minor technical workers. Few (12 percent) of the heads of households had received formal training for the jobs they held, 41 percent had no previous training and 41 percent had informal training.

When the respondents were asked about how they obtained their present jobs, 77.7 percent said they had used what might be termed informal methods, i.e., friends and relatives, places they thought might have jobs, or newspapers. Only 2.8 percent used local, state, or federal employment services. It seems that individuals in the sample were either unaware of, or placed little faith in, the governmental agencies which are now increasingly interested in their problems.

The employed heads of households were for the most part (83.8 percent) satisfied with their present jobs, 11.3 percent felt "so-so" about their jobs, and only 4.9 percent felt their jobs were not very good or couldn't stand them.

In reference to past employment, it was found that more than 80 percent of the employed heads had held two or more jobs prior to obtaining their present jobs. Most of these jobs were low status, characterized by long hours and low wages. There was little or no indication of vertical mobility.

Future Employment and Unemployment—59 percent of the heads were employed and not looking for a job, 10 percent were unemployed and looking for another job, and 3 percent were unemployed but not looking for a job. Of those who were unemployed and not looking for a job, 27 percent were not looking for a job because they were in ill health or disabled, 61 percent because they were retired or too old, and only 2 percent because they were afraid of losing some type of welfare payments.

When the individuals looking for a job were questioned about their experiences, aspirations, and perception of the job market, the following picture emerged. Most of the heads were looking for about the same kinds of jobs that they held or that they had previously held. The heads felt that very few of the jobs they wanted had any special training requirements. It is likely that most of those looking for work were realistic in their appraisal of what type of training they would need since few "low status" jobs require anything but previous experience and/or minimal educational achievement. While a large percentage indicated that they had tried informal means of finding work, almost 30 percent used public employment agencies. The Missouri State Employment Agency was ranked number two in terms of helpfulness in looking for a job. (See Table 4 for ranking.) Perhaps such agencies are becoming more significant as a result of increased expenditures and dissemination of information concerning their services.

Those in the sample tended to feel it would be hard

TABLE 4--RANK OF PLACES USED TO SEEK EMPLOYMENT (FROM "BEST" TO "LEAST HELPFUL" IN LOOKING FOR A JOB).

Place	Rank
Places where I thought jobs might be available	1
Missouri State Employment Service	2
Friends	3
Private Employment Agency	4
Newspapers, Radio, T.V., etc.	5
Union	6
Local Welfare Office	7
School	8

to get a job in their area. This was consistent with the feeling of those who were looking for jobs—that they would not have an easy time finding them. When asked what a better job would mean to him, 84.5 percent of the heads felt it would mean more money and better conditions (shorter hours, less travel distance to and from work, longer vacations). Very few were concerned with equal treatment or more prestige. They seemed to realize that their opportunities for finding power and prestige by means of employment were severely limited. However, their hopes cannot be termed unrealistic since it is quite possible for individuals in "low status" or "unclean" jobs to gain at least a relative degree of material prosperity. However, although these gains may seem large to the individual and may make it possible for him to support his family, they are not, in most cases, sufficient to break down what has been called the "poverty syndrome." Thus the children remain educationally and culturally deprived, often lacking the achievement motivation (with all of its concomitant anxieties) which, rightly or wrongly, is required for "success" or upward mobility.

Job Training—In general, the respondents were neither informed nor enthusiastic about job-training programs. More than 40 percent of the heads said they thought they could get some type of retraining; however, when they were asked what kinds they thought were available, many named private technical schools and only a small percentage mentioned adult education classes or vocational rehabilitation programs. Only 24 percent had ever thought of taking job training, and very few (less than 5 percent of those looking for jobs) were participating in any program. The heads, especially those with families, were more knowledgeable about youth employment training programs since quite a number of the teenagers in the sample were employed by the Job Corps.

DISCRIMINATION

Only 22 percent of the heads of households admitted that they had been turned down for a job. Of that group, 31 percent felt they had been turned down due to lack of experience or training, 29 percent because they were Negro, 20 percent due to their age, 12 percent because of inadequate education, and 8 percent because they were disabled. Thus, the group perceived (most likely realistically) education or training and race as the most important factors in employment discrimination.

Most of the heads felt that it would not be more difficult for a Negro to get the same job that they held or had held. This, of course, is biased by the large percentage of Negroes in the sample and the problem will be discussed later in the racial breakdown. A little more than 10 percent said they knew of an actual instance of racial discrimination. Over 80 percent felt there is less hiring discrimination now than five years ago. When asked what type of job they thought would give a Negro the best possible chance of equal treatment, a janitor was ranked highest followed closely by mailmen, teachers, doctors, and lawyers. Only a small percentage felt Negroes would have equal chances as salesmen, clerks, or mechanics.

Generally the heads felt women had fairly equal chances for employment. Very few of the heads were aware of any set retirement age for their job. This may reflect the fact that few individuals in the low-income group can look forward to an enjoyable, secure retirement or it may indicate that this group is not very well informed about the formal procedures of their employers.

RACIAL DIFFERENCES

Only those areas in which a significant difference between Negro and white respondents was found to exist, or in which a similarity is notable, will be discussed in the following presentation.

GENERAL DEMOGRAPHIC DATA

The population per household was, as expected, greater for the Negro group (3.6 percent) than for the white (2.7 percent). Surprisingly, the percentage of female heads of households was the same for both groups (33 percent). This is probably due to the higher percentage of people over 65 in the white group. Those over 65 tended to be widows living alone or with another widow on some sort of retirement benefits. Omitting those over 65, the white group was slightly younger than the Negro. About 14 percent of the Negro heads of households were unemployed compared with 11 percent of the whites. More than 32 percent of the whites were retired as were 23 percent of the Negroes.

DETAILED EMPLOYMENT DATA

Past and Present Employment—In terms of occupational classification, the percentage of Negroes working as laborers and private household workers was much higher than in the white group. The whites surpassed the Negro group in percentage of professional and managerial workers. Negroes had considerably less formal training for their jobs than did whites.

Negroes were more likely to have used governmental agencies in locating their present jobs. This is probably due to the fact that they would expect less discrimination from these agencies.

The whites tended to be more satisfied with their jobs than the Negroes.

Future Employment and Unemployment—More Negroes, employed and unemployed, were looking for jobs. The Negroes ranked the Missouri State Employment Service number one, whereas the whites ranked "places I thought jobs might be available" number one. The Negroes were more optimistic about their chances of getting a job than the whites.

Job Training—The Negroes were more informed about, and interested in the Job Corps. Whites responded as if they felt the programs were not designed for them. They were not as eager as were Negroes to take advantage of such programs.

DISCRIMINATION

Negroes were more sensitive to racial prejudice than were whites. They knew of more cases of discriminatory practices. Whites were less likely to say that Negroes would have an equal chance in getting the jobs they held. They were also more likely to feel that Negroes would have equal chances in "low status" jobs such as janitors or mechanics.

INTRA-RACIAL AND INTERRACIAL INTERVIEWING

As the project was designed and carried out, steps were taken to make sure that there were significant numbers of cross-racial and intra-racial interviews. In this way it would be possible to discover whether or not racial differences and similarities between respondent and interviewer would have a significant effect on the way in which questions were answered. In terms of this problem, a very basic hypothesis was to be tested. It was thought that interracial interviews would have, in certain selected areas, a significantly different pattern of response than would intra-racial interviews. To make a preliminary test the interviews were divided into four groups: Negro interviewer-Negro respondent, white interviewer-white respondent, Negro interviewer-white respondent, and white interviewer-Negro respondent. These four groups were compared on certain selected questions dealing with opinions about racial discrimination. The findings were as follows.

Whites were less likely to admit to a Negro interviewer that they had been turned down for a job (17.3 percent) than they were to a white interviewer (25.4 percent). They were also less likely to admit to a Negro

(3.0 percent) than a white (7.1 percent) that they felt they were turned down due to age. Yet they more readily admitted they were turned down because of inadequate education, training or experience to Negroes (6.5 percent) than to whites (3.9 percent). It was speculated that they perhaps feared showing any signs of diminishing strength to Negroes, preferring instead to blame inadequate education. Or perhaps they were in effect saying to the Negro "Look, I suffer from just as many inequalities of opportunities as you do, but I'm not making a fuss over it."

Negroes were more apt to tell Negro interviewers that they felt it was more difficult for a non-white to obtain a job like theirs (23.2 percent) than they were to tell white interviewers (13.6 percent). Whites also were more pessimistic about the question to interviewers of their own race (30.7 percent) than to Negroes (22.1 percent). This seems to show that respondents generally felt more free to express opinions and feelings to members of their own race. This was pointed out when the respondents were asked if they knew personally of any company or person in their area who discriminated in hiring. The Negro respondents answered "yes" 21.8 percent of the time to Negro interviewers but only 14.6 percent of the time to white interviewers.

When asked about the lessening of hiring discrimination in the last five years, 82.4 percent of the Negro-Negro combinations felt there had been a lessening while only 73.6 percent of the white interviewer-Negro respondent group answered in this way. Researchers speculated that Negroes may have failed to express as much optimism to whites as they did to Negroes for fear that if they appeared satisfied, white support for their efforts would fade.

In response to what they would do if they were discriminated against and felt they were qualified, several important differences among the four groups were found. Negroes were much more likely to tell Negroes that they would appeal to CORE or the NAACP (16.0 percent) than they were to tell whites (3.6 percent). In fact, Negroes, when looking for employment, more often used governmental agencies than did the whites. Negroes more often told whites that they would do nothing (40.0 percent) than they did other Negroes (28.1 percent).

Whites, also, told members of their own race they would do nothing (49.3 percent) more than they did Negro interviewers (37.2 percent). Perhaps they were reminded, merely because they were talking with a Negro, that something can be done about discrimination. Respondents had a more emotional response (expressing anger, fear, hostility towards the interviewer) to the question when being interviewed by members of the opposite race (11.8 percent and 12.8 percent) than when interviewed by members of their own race (6.6 percent and 8.4 percent).

Whites responded emotionally (11.2 percent) more often than Negroes (7.2 percent). This emotional response reflects the inherent tension in the situation and perhaps was a way of expressing suppressed racial prejudice.

Finally, whites more often told Negro interviewers that they would just keep trying (24.6 percent) than they did interviewers of their own race (14.3 percent). Researchers speculated that perhaps the whites were more likely to express the traditional WASP values to Negroes in an attempt to show disapproval toward the Negroes' active and vocal demand for equality.

SUMMARY AND CONCLUSIONS

From the above findings the following generalizations and analysis have been drawn:

1) Low-income groups contain a large percentage of aged individuals. There was a higher percentage of whites over 65 in the sample than there were Negroes. The problem of poverty is more widespread in the Negro population. A significant amount of white poverty is due to a loss of income by the aged population which is to be expected.

2) Unemployment among Negro low-income groups is higher than among comparable white groups.

3) Low-income groups are relatively realistic in their perception of their skills and the types of jobs they are qualified for. Their views of the job market are also realistic, as are their hopes for getting ahead.

4) Low-income groups, either through lack of knowledge or through distrust, are not taking advantage of the employment agencies or job training programs available to them; however, the use of such agencies is increasing. Negroes use both types of agencies more often than do whites.

5) In general, members of low-income groups know why they are discriminated against in hiring. Whites are less likely to know any way to combat this discrimination than Negroes.

6) The biggest problems concerning the perception of job opportunities among low-income groups which have emerged from this study are lack of information and apathy. This group must be told about the opportunities available and then encouraged and even prodded into taking advantage of them.

7) A significant difference in the responses of inter- and intra-racial interview pairs does exist, especially when questions deal with racial matters. Various explanations were offered to account for the findings, all of them are tentative and impressionistic but have provided fruitful leads for continuing research into the problem.

VT 007 349
A Study of the Comparative Teaching Efficiency of a Multi-Media Instructional System Versus the Traditional Lecture Method for Youth Who Have Academic and Socioeconomic Handicaps. Final Report.

Mount San Jacinto Coll., Gilman Hot Springs, Calif.
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*TRADE AND INDUSTRIAL EDUCATION; *MULTIMEDIA INSTRUCTION; *SLOW LEARNERS; AUDIOVISUAL INSTRUCTION; VIDEO TAPE RECORDINGS; BEHAVIORAL OBJECTIVES; *PROGRAM EVALUATION; *AUTO MECHANICS (OCCUPATION)

A multi-media instructional system was developed to compare with the typical lecture method of presentation. Automotive instructors wrote behavioral objectives for every job or operation the student was expected to know at the end of the program. Then the instructor produced or purchased from commercial sources a film strip and audio tape for the objectives best presented through this media. Concept titles and presentation media are listed in chart form for: (1) Auto Mechanics, and (2) Auto Body Technology. Steps in developing the radio visual program include writing behavior objectives, writing the script, producing story boards, writing supplementary materials, producing tape and film, and using and evaluating multi-media in the classroom. Conclusions were that the multi-media system of instruction has advantages for students with academic and socioeconomic handicaps. Instructors are freed from extensive lecture work and have more time to attend to individual learning needs. The system allows the student to set his own learning pace and reduces need for highly developed reading and study skills. (FP)

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A
Study
Of The Comparative Teaching Efficiency Of A Multi-Media Instructional System Versus The Traditional Lecture Method For Youth Who Have Academic And Socioeconomic Handicaps

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Final Report
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Mt. San Jacinto College
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ERIC

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INTRCDUCTION

This pilot program has been an experimental effort, aimed at determining the increased teaching efficiency which may result from the use of a multi-media instructional system, as compared in terms of results, with the use of the typical lecture method of presentation of related material.

Multi-media refers to instructor-produced audio tapes, film strips, pre-tests, work sheets, job sheets and other individual instructional material. This material is based on instructor-written objectives expressed in terms of student behavior.

The automotive instructors at Mt. San Jacinto College, took as their first assignment, the task of writing student behavioral objectives. An objective was written for every job, or operation, that the instructor wanted the student to know at the end of the program.

With these objectives in mind, the instructor then produced or purchased from commercial sources, a film strip and audio tape for those objectives that could best be taught with this media of instruction.

The following pages list the titles of each topic, and part, that are presently in classroom use.

AUTO MECHANICS MULTI-MEDIA

Number	Name	Film Strip	Tape	Pre-Test	Work Sheet	Job Sheet	Info. Sheet
A-1	Work Orders	MSJC	MSJC		MSJC		
A-2	Safety	MSJC	MSJC		MSJC		MSJC
C-2	Arc Welding Equipment	Mc-Graw Hill	MSJC		MSJC		
C-3	Arc Welding	Mc-Graw Hill	MSJC		MSJC	MSJC	
C-4	Gas Welding Safety And Equipment	MSJC	MSJC		MSJC		
C-5	Gas Welding	MSJC	MSJC		MSJC	3 MSJC	
C-6	Oxy-Acetylene Welding	Cal Poly	Cal Poly		MSJC	MSJC	
E-1	Conventional Steering And Front Suspension - Principles Of Operation	Ford	Ford		MSJC		
E-2	Wheel Alignment	MSJC	MSJC		MSJC	2 MSJC	MSJC
E-3	The Why & How Of Wheel Balancing	MSJC	MSJC		MSJC	MSJC	MSJC
E-4	Wheel Alignment Principles	John Bean	John Bean		MSJC	MSJC	
E-5	Ford Intregral Power Steering	Ford	Ford		MSJC		
F-1	Basic Automotive Brakes	Ford	Ford		MSJC		
F-2	A Brake Job	MSJC	MSJC		MSJC	4 MSJC	MSJC
G-1	Clutch And Fluid Drive Systems	MSJC	MSJC		MSJC	MSJC	
H-1	Principles Of Gears And Standard Transmissions	MSJC	MSJC		MSJC	MSJC	
I-1	Rear Axle And Drive Line	Ford	Ford				
I-2	Bronco 4 Wheel Drive	Ford	Ford				
J-1	Gasoline Engines - Principles Of Operation	Ford	Ford		MSJC		MSJC
J-2	Engine Power And How It's Rated	MSJC	MSJC		MSJC		MSJC
J-3	How The Internal Combustion Engine Operates	MSJC	MSJC		MSJC		
J-4	Diagnosing Excessive Oil Consumption	Dana Parts	MSJC		MSJC		
J-5	Diagnose It First	Dana Parts	MSJC		MSJC	MSJC	

Number	Name	Film Strip	Tape	Pre-Test	Work Sheet	Job Sheet	Info. Sheet
J-6	Engine Disassemble	MSJC	MSJC		MSJC	MSJC	
J-7	Installing Piston Rings In Farm Tractors	Dana Parts	MSJC		MSJC		
J-8	High Power Top Inch	Dana Parts	MSJC		MSJC		
J-9	Measuring And Inspecting Engine Parts	MSJC	MSJC		MSJC	MSJC	
J-15	Prescription For Longer Valve Life	Dana Parts	MSJC		MSJC	MSJC	
J-18	Lubrication of the Internal Combustion Engine	MSJC	MSJC		MSJC		MSJC
J-19	Cooling System - Maintenance and Diagnosis	Ford	Ford		MSJC		
J-20	How To Assemble Your Engine	MSJC	MSJC		MSJC		
J-30	How Ford Diesel Engines Develop Power	Ford	Ford		MSJC		
K-1	Fuel Systems - Principles of Operation	Ford	Ford		MSJC		
L-1	Basic Carburetion	Rochester	MSJC		MSJC		
L-2	Autolite Model 4300 Carburetor	Ford	Ford		MSJC		
L-4	Rochester B, BC, BV Carburetors	Rochester	MSJC		MSJC		
L-5	Rochester 2G, 2GC, 2GV Carburetors	Rochester	MSJC		MSJC		
L-6	Rochester H, HV Carburetors	Rochester	MSJC		MSJC		
L-7	Rochester 4G, 4GC Carburetors	Rochester	MSJC		MSJC		
M-1	Fundamentals Of Electricity	Ford	Ford		MSJC		
M-2	Electric Current Principles	Mc-Graw Hill	MSJC	MSJC	MSJC		
M-3	Electric Current Measurements	Mc-Graw Hill	MSJC	MSJC	MSJC		MSJC
M-4	Principles of Electromagnets	Mc-Graw Hill	MSJC	MSJC	MSJC		MSJC
M-5	Application of Electromagnets	Mc-Graw Hill	MSJC	MSJC	MSJC		
M-8	Introduction to Automotive Electrical System	Delco Remy	Delco Remy		MSJC		
M-9	Storage Battery Principles	Mc-Graw Hill	MSJC	MSJC	MSJC		MSJC

Number	Name	Film Strip	Tape	Pre-Test	Work Sheet	Job Sheet	Info. Sheet
M-10	Storage Battery Operation	Mc-Graw Hill Delco	MSJC Delco	MSJC	MSJC		
M-11	It's Easy To Be An Expert	Remy	Remy		MSJC		
M-20	Switches, Relays And Lights	Mc-Graw Hill	MSJC	MSJC	MSJC		
M-21	Gauges And Wiring	Mc-Graw Hill Delco	MSJC Delco	MSJC	MSJC		
M-30	The Cranking Circuit And How It Works	Remy	Remy		MSJC		
M-31	Starting System Principles	Mc-Graw Hill	MSJC	MSJC	MSJC		
M-32	Starter System Controls	Mc-Graw Hill	MSJC	MSJC	MSJC		
M-33	Starter System Drives	Mc-Graw Hill	MSJC	MSJC	MSJC		
M-40	Regulation And The Charging Circuit	Delco Remy	Delco Remy		MSJC		
M-41	Generators	Mc-Graw Hill	MSJC	MSJC	MSJC		
M-42	Generator Output And Regulators	Mc-Graw Hill	MSJC	MSJC	MSJC		
M-45	Delcotron Generator	Delco Remy	Delco Remy		MSJC		
M-49	Ignition System - Principles Of Operation	Ford	Ford		MSJC		
M-50	Ignition System	Mc-Graw Hill	MSJC	MSJC	MSJC	2 MSJC	
M-51	Ignition Distributor	Mc-Graw Hill Delco	MSJC Delco	MSJC	MSJC		
M-52	20,000 Volts Under The Hood	Remy	Remy		MSJC		
M-55	Rotunda RE-881 Analyzer	Ford	Ford		MSJC		
M-60	Noise, Vibration And Harshness	Ford	Ford				
N-2	Diagnosing And Adjusting The C-6 Transmission	Ford	Ford				
N-3	How The C-6 Transmission Works	Ford	Ford				
N-14	1964 Cruise-O-Matic, Adjustments And Repair	Ford	Ford				
N-20	Hydra-Matic, Principles Of Operation	G.M.	MSJC		MSJC		
N-21	Hydra-Matic, Disassembly And Inspection	G.M.	MSJC				
P-1	How Air Conditioning Works	Ford	Ford				

AUTO BODY TECHNOLOGY MULTI-MEDIA

Number	Name	Film Strip	Tape	Pre-Test	Work Sheet	Job Sheet	Info. Sheet
A-1	Work Orders	MSJC	MSJC		MSJC		
A-2	Safety	MSJC	MSJC		MSJC		MSJC
D-2	Selecting And Using Arc Welding	Mc-Graw Hill	MSJC		MSJC		
D-3	Practicing Arc Welding	Mc-Graw Hill	MSJC		MSJC	MSJC	
D-4	Gas Welding Safety And Equipment	MSJC	MSJC		MSJC		
D-5	Gas Welding	MSJC	MSJC		MSJC	MSJC	
D-6	Oxy-Acetylene Welding	Cal Poly	Cal Poly		MSJC	MSJC	
E-1	Switches, Relays And Lights	MSJC	MSJC		MSJC		
G-1	Body And Frame Construction	MSJC	MSJC	MSJC	MSJC		
G-2	Quality Body Work	Ford	Ford		MSJC	MSJC	
G-3	Water And Dust Leaks	Ford	Ford		MSJC	MSJC	
G-6	Wheel Alignment Principles	John Bean	John Bean		MSJC	MSJC	MSJC
G-7	Wheel Alignment	MSJC	MSJC		MSJC	MSJC	MSJC
H-1	Auto Glass	MSJC	MSJC	MSJC	MSJC	MSJC	MSJC
I-2	Shrinking	Jam Handy	Jam Handy		MSJC	MSJC	
I-3	Filling With Solder	Jam Handy	Jam Handy		MSJC	MSJC	
I-4	Filling With Plastic	Jam Handy	Jam Handy		MSJC	MSJC	
J-1	Fender Repair Using Jack And Hoist	Jam Handy	Jam Handy		MSJC	MSJC	
J-2	Rear Deck Lid Repair	Jam Handy	Jam Handy		MSJC	MSJC	
M-1	Frame Damage Analysis And Correction	MSJC	MSJC	MSJC	MSJC	MSJC	MSJC
N-1	Painting Equipment	MSJC	MSJC	MSJC	MSJC	MSJC	MSJC
N-2	Preparation For Painting	MSJC	MSJC	MSJC	MSJC	MSJC	MSJC
N-3	Acrilic Finisher	Ford	Ford		MSJC		MSJC
N-5	Painting	MSJC	MSJC	MSJC	MSJC	MSJC	MSJC
N-6	Painting Problems	MSJC	MSJC	MSJC	MSJC	MSJC	MSJC

REVIEW OF PROGRESS

Writing Behavioral Objectives

Each instructor assigned to write multi-media was also assigned to write a syllabus, for the course, for which he was responsible. A major part of each syllabus was a comprehensive list of behavioral objectives, both general and specific. The following are samples taken from both automotive technology, and auto body technology:

General Objective - Automotive Technology:

To diagnose and repair brake problems to a degree of accuracy that will qualify you for a position as a brake specialist in an automotive repair shop.

Specific Objective - Automotive Technology:

To remove, overhaul and replace the master cylinder of an American-built automobile, to include bleeding and adjusting the brakes to manufacturers' specifications. The time limit will be twice that allowed in the flat rate manual.

General Objective - Auto Body Technology:

To prepare and paint an automobile using the equipment and procedures taught in the class.

Specific Objective - Auto Body Technology:

To correctly prepare a rear quarter panel for painting using the following operations:

a. featheredging
b. masking
c. cleaning
d. spraying primer
e. glazing
f. sanding
g. tacking

The time allowed will be set by the instructor and students as part of the estimate.

Writing of the Scripts:

All scripts have been written by instructors of the Automotive Department. Information for the scripts have come from such sources as text books, repair manuals, technical manuals, training manuals, motor manuals, and the past experience of the instructors.

Procedure for writing the scripts, was to first analyze the objectives for the topic and then outline the material to be covered. From the instructor-prepared outline, the narrative script was written by the instructor.

The following is the first page of a script in its original form before the illustrations have been selected.

ENGINE POWER AND HOW IT IS RATED J-2

We live in a world of measurements. Everything we buy or sell involves some kind of measurement. The automobile, to the confusion of many of us, has many different types of measurements, such as horsepower ratings, both SAE and brake; torque, piston displacement, cubic inches, compression ratio, bore, and stroke. Also many types of engine efficiency such as mechanical, volumetric and thermal.

Not all of these are vital to the automotive mechanic; however the more we know about the automobile, the better equipped we will be to handle the problems of repairing it. In this film strip and tape, we will endeavor to give at least a definition for the important measuring terms used on the internal combustion engine.

The most basic engine measure is piston displacement. The picture on this frame shows a cross section of a piston and cylinder. At the top of the cylinder is a dotted line that indicates top dead center, or the highest point of travel, for the top of the piston. Near the bottom of the cylinder is another dotted line indicating bottom dead center, or the lowest point of travel, for the top of the piston. The area between these two lines is the length of the piston stroke. As the piston moves from bottom dead center to top dead center, the top of the piston pushes the air ahead of it, and out of the cylinder. We could then say that the piston displacement refers to the amount of space through which the top surface of the piston passes as it moves from bottom dead center to top dead center. Thus, total piston displacement is easily calculated by using this simple mathematical formula:

area x stroke x number of cylinders = displacement

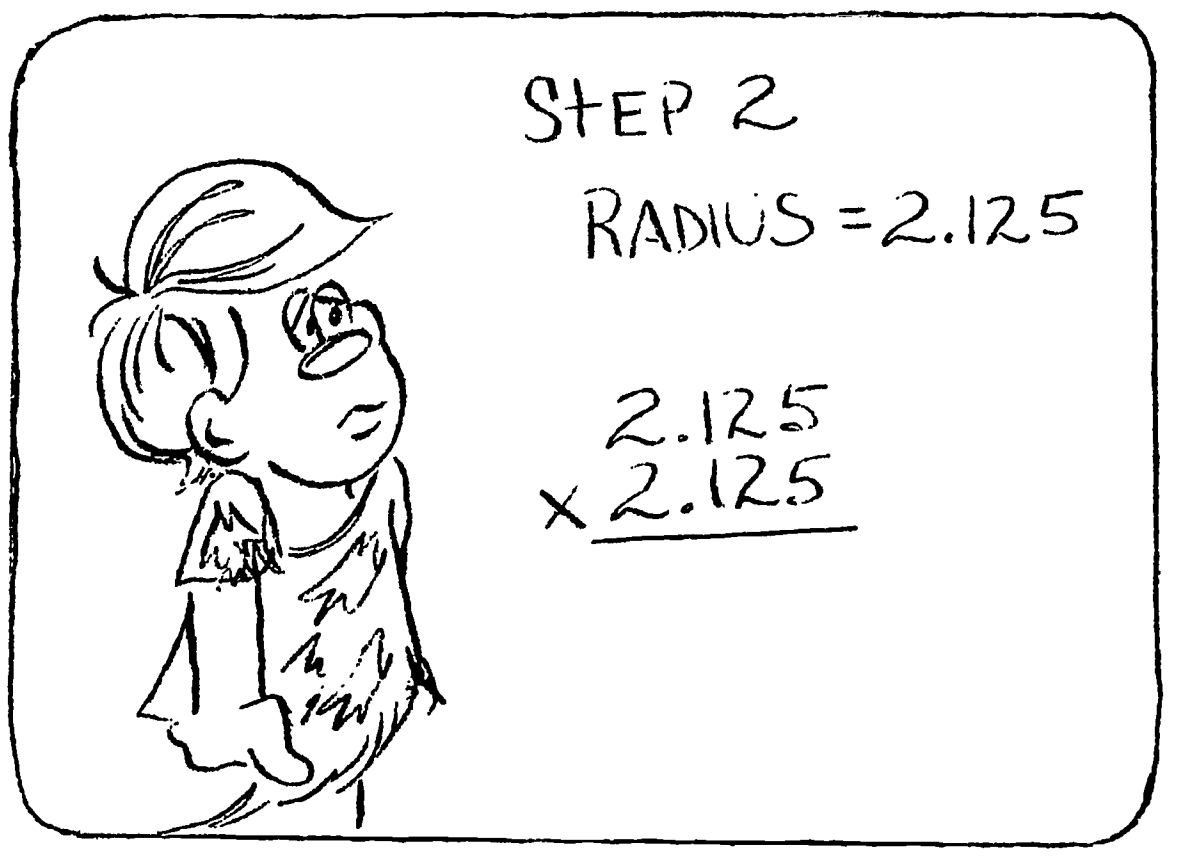
Producing Story Boards:

With the script written, the instructor then prepares a story board, or illustrations that are used with the script. In many cases, the script is changed to meet the ideas illustrated by the story board.

Below is an example of one frame from a story board.

Filmstrip _____

Frame _____



The story board and script compliment each other at this point. The instructor must make certain that the story board best illustrates the written script.

Writing of Supplementary Materials:

Materials such as work sheets, job sheets, and information sheets, have been written to supplement the film strips and tapes. Each film strip and tape is accompanied by a work sheet. The student is required to answer questions and work out problems pertaining to the information in the film and on the tape. Where needed, a job sheet and information sheet has been written. The job sheet gives the student the procedure needed to do a particular job, while the information sheet gives the student important related information

Tape Production:

The tapes have been produced by the staff of Mt. San Jacinto College, with narration by Mr. Jack Sands, of the Hemet radio station.

Film Production:

The films have also been produced by the staff of Mt. San Jacinto College. Production has included not only the photography work, but also the necessary art work for many of the illustrations.

Class Room Use of Multi-Media:

The main purpose of multi-media is to allow the student to progress at his own speed. The multi-media material is controlled by the teacher or a teaching assistant, and checked out to the student. The student may move as quickly, or as slowly, through a course of study as necessary. The film strips and tapes, along with the written material, will give the student the basic fundamentals on the subject. The student views the film, listens to the tape, and, on a work sheet, writes his responses to questions asked on the work sheet and tape. Where possible, the answer is also given the student, so he will know if he has the correct response. The students are called together for small and large group sessions to discuss and review any topic necessary. The instructor supplements the film strip and tape material with lectures, demonstrations and discussions, where necessary.

Evaluation of Multi-Media:

The detailed and complete evaluation of the multi-media method of instruction program was severely handicapped by the fact that instructional materials were being produced at the same time the instruction was taking place.

The writing and production of the multi-media materials took a minimum of a few weeks, and at times, several months. The result was that students received conventional classroom, and shop instruction first; and at some later date the multi-media on that subject became available.

Educators who have not had the experience of working with disadvantaged students may not be able to appreciate the problems encountered in conducting a program of this kind. The inability of the sponsoring agency (Work Training Unit of the Department of Public Assistance), to control its recipients, is transferred to the educational institution. Even the most dedicated educators are continually frustrated in their efforts to teach (and to measure results) by poor attendance, poor attitudes, and poor motivation. The wide variation in academic ability, and the impact of socio-economic handicaps, were frequently the cause of abortive efforts to measure instructional variables.

As a result of these complications, measurement of the instructional variables, such as order of content, pacing, opportunity to practice, knowledge of results, reinforcement, multi-receptor learning style, ability to generalize, instructional strategy and effect of instructional media, was largely limited to the effect of instructional media, and measurement of improvement in general education achievement.

Comparative measurements were made to evaluate the effectiveness of the tapes, and film strips, as instructional materials. In the automotive shop, the class was split into two matched groups according to verbal SCAT scores, age, experience and general aptitude.

Both groups received conventional classroom instruction, and one group studied the tapes and film strips as supplemental instruction. Raw test scores are shown below:

	Control	Multi-Media
	23	24
	20	22
	26	27
	14	19
	21	26
	21	27
	24	28
Average	21.3	24.7

When subjected to Fisher's test of significance for small samples, using Fisher's Table of "t", this test proved to be highly significant at the 1% level of confidence.

In the auto body and fender shop, instruction in oxyacetylene welding was given to the entire group, and a test was given; then all the students studied the tapes and film strips, and the same test was given again. The pre-multi-media and post-multi-media scores are shown below:

	Pre-Multi-Media	Post-Multi-Media
	95	95
	70	70
	85	95
	90	95
	95	95
	80	95
	80	95
	85	100
	80	100
	80	100
	70	85
	80	90
	90	90
Average	83.1	92.7

Even though all students did not show improvement, this test does show a significant difference when measured at the 1% level of confidence.

Late in the spring semester, the General Educational Development (GED) test was given to ten students who had not completed high school. Their average standard scores were as follows: 57, 55, 54, 49, 47, 46, 45, 44, 37, and 34. A passing score on this test is an average standard score of 45 or better. Two of the three students who failed to achieve a passing score had been enrolled in the program for three months or less. The SCAT test was used to measure general educational achievement. Most of the students took the SCAT test when they entered the program, and it was given in a different form in May. Comparative scores are shown below:

RAW SCORES ON SCAT TEST

	Verbal		Quantitative	
	First Test	Second Test	First Test	Second Test
	287	292	286	291
	296	301	256	291
	284	293	291	304
	281	288	278	289
	260	283	256	262
	271	263	256	268
	299	299	279	292
	300	301	260	283
	283	271	262	291
	281	288	289	301
Average	284.2	287.9	271.3	287.2*
12th Gr. Percentile	45-68	55-75	8-24	28-51

*Scores on the Quantitative part of the test showed significant improvement when measured at the 1% level of confidence.

Teacher Reaction to Multi-Media:

The teaching staff of Mt. San Jacinto College feels that the multi-media program has provided the means to more effectively teach skills to the socially and economically deprived student. Many of our students under M.D.T.A., and Inland Empire, programs are people who have very little typical academic ability. The multi-media has given them a chance to spend as much time as necessary to master a concept. The multi-media also gives each student an opportunity to hear the lesson presented in the same manner.

If a student is late in starting a program, or is absent on a given day, he can receive the necessary lessons without taking the teacher away from present activities to review the subject. The multi-media has allowed the instructors at Mt. San Jacinto College to graduate some of the better students midway through the 40-week program. As the better students using multi-media graduate, the College is able to bring in new students, and bring them up-to-date with the class.

The multi-media releases the teacher for more personal contact with the individual student, through small group discussion and individual help.

Student Reaction to Multi-Media:

Each student in the automotive multi-media program was asked to fill out a multi-media questionnaire. Student responses to the multi-media questionnaire were generally favorable to the multi-media approach to instruction. In answering Question 10, 56% said they found multi-media instruction "more", or "much more", effective than traditional instruction. On Question 14, 80% of the students responded "yes"; they would take another course taught in the multi-media fashion. On Question 15, 43% of the students said they would prefer that this course be taught in the traditional method.

Evaluation Of Students:

The students studied in this program were referred to the College by the Work Training Unit of the Riverside County Department of Public Assistance. The following data describes the students:

	Range	Average
Age	18 to 49	30.3
Years of school completed	7 to 14	9.9
Number of dependents	2 to 9	4.2
Twelfth grade percentile	0.6 - 5 to 99. - 99.6	Verbal 16 - 38
Rankings on SCAT test	0 - 0 to 91 - 97	Quantitation 0 - .0
Percent Spanish surnames		25%
Percent non-white		12%

All of the enrollees were unemployed and receiving financial assistance from the Department of Public Assistance. Socio-economic handicaps were evident, and exemplified in problems with transportation, health (student and/or family members), conflicts with the law, court appearances, police detention, financial problems and poor work habits. These kinds of problems had great impact on learning attitudes and attendance, and resulted in a high rate of student turn-over. At the end of the first 68 days of instruction, a detailed study of attendance was made and revealed that the average rate of attendance of those still enrolled was about 80% for technical instruction, and about 70% for basic education.

Conclusions:

The multi-media system of instruction has advantages for students who have academic and socio-economic handicaps. These students may be expected to have wide variations in academic ability, lack of motivation, poor attendance and poor work habits. The use of multi-media frees the instructor from extensive lecture work, and allows him to give greater attention to individual learning needs. The multi-media system allows the student to set his own learning pace, and reduces the need for highly-developed reading and study skills.

Measured in terms of student and teacher reaction, achievement on subject matter tests and standardized tests, the multi-media instructional system appears to be an efficient method of teaching students who have academic and socio-economic handicaps.

The results of the work on this project would indicate the need for further study during the 1968-1969 school year. Present plans call for only regular college students in the automotive shops, and it is planned that measurements of the instructional variables will be continued.

VT 007 361
Smith, J. Gary
A Survey of Need for a Fishery and Marine Resources Technology Program at College of the Redwoods.

California State Dept. of Education, Sacramento. Bureau of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Feb68 53p.

*OCCUPATIONAL SURVEYS; *EDUCATIONAL PLANNING; *FISHERIES; *SKILLED OCCUPATIONS; TECHNICAL OCCUPATIONS; CURRICULUM; EMPLOYMENT; EMPLOYMENT OPPORTUNITIES; *EDUCATIONAL NEEDS; EMPLOYMENT QUALIFICATIONS; QUESTIONNAIRES; BIBLIOGRAPHIES
CALIFORNIA

The objectives of this survey were (1) to establish data concerning the present and future status of fisheries occupations on the north coast of California and indicate other areas of need, and (2) to investigate the need for an articulated program in the area of marine resources utilizing College of the Redwoods and Humbolt State College. A questionnaire was mailed to 372 commercial fishermen belonging to fishery assocations servicing north coast fishing ports. Data from 85 returned questionnaires, interviews with management representatives of the fishing industry, and meetings with organizational groups were used to examine job opportunities, present employment, seasonal patterns and turnovers, job requirements, training requirements, and attitude toward training. There were 336 job opportunities for qualified seafood processors and at least 24 jobs available to trained fishermen. An expected increase in production and continued expansion of the fishing industry will create additional needs for trained manpower. Recommendations were that a fishery and marine resources technology curriculum be initiated at College of the Redwoods, with suggestions for specific curriculum areas, facility requirements, and program articulation. (HC)

VT 007 361

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A SURVEY OF NEED

for a

FISHERY AND MARINE RESOURCES TECHNOLOGY PROGRAM

at

COLLEGE OF THE REDWOODS

by

J. Gary Smith, Consultant

The Research Reported Herein was Supported by the
California State Department of Education,
Bureau of Vocational Education

AT007361

February, 1968

Dr. Ellsworth Briggs
Vice-President, Instruction
College of the Redwoods
Eureka, California

Dear Dr. Briggs:

I am pleased to submit "A Survey of Need for Fishery and Marine Resources Technology," a report concerning the advisability of establishing vocational-technical education in marine technology at College of the Redwoods.

The survey describes occupational characteristics of the fishing industry from Fort Bragg to the Oregon border as expressed by persons in the fishing community whose interests and activities are maritime in nature. Also represented are the results of preliminary planning for the coordination of an articulated program in the area of marine resources technology. The coordinated plan utilizes College of the Redwoods, Humboldt State College, and Humboldt Bay Fisheries Association.

Suitable educational programs for training persons in fishery and marine resources technology are vitally needed in the north coast fishing industry. I feel this report will significantly assist in your endeavor to aid this important industry.

Sincerely,

J. Gary Smith

J. Gary Smith
Consultant

Acknowledgments

The research herein was supported by funds provided for Technical-Educational Projects under Title III George-Barden Act administered by the California State Department of Education.

The survey could not have met the established objectives without the assistance of a number of people:

Dr. William A. Stanton, Dean of Vocational-Technical Education and Dr. Ellsworth R. Briggs, Vice President, Instruction, College of the Redwoods.

Dr. John W. DeWitt, Professor of Fisheries, Humboldt State College. Dr. DeWitt is responsible for coordinating the project with Humboldt State College administration and staff and formalizing the institutional concept presented in the survey.

Mr. Fred Phebus, Mr. William Hill, Mr. Bud Thomas, Mr. Lawrence Lazio, Mr. Julian Wojcik, Mr. Ray Walker, and Mr. Francis Douglas, members of the Humboldt Bay Fisheries Association.

Reverend Carroll Stover, former Occupational Analyst, and his predecessor, Mr. Rod Sandretto, California Department of Employment.

Mr. Maurice Fjelstad, fisheries undergraduate student, a tabulation volunteer.

To all of these persons, I am greatly indebted.

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INTRODUCTION

Vocational-technical education in fishery and marine resources technology is virtually nonexistent in California today. Until recently, it was nonexistent in the United States. Recent developments, however, have caused business, government and educators to focus their attention on education programs as a means of exploiting the vast potential of the ocean's resources.

Since World War II, considerable attention has been given to the ocean as a potential source to feed the world's growing population. The total world's fish production until this time was relatively stable at about 40 billion pounds. During the next 10 years following the War, production increased nearly 4.5 percent to a total harvest of over 60 billion pounds. Since that time, the catch has nearly doubled, to where the present world production is more than 115 billion pounds.

Paradoxically, the growth of the United States fishing industry during this 30-year period has remained static. Total production has stabilized between 4 and 5 billion pounds. This is particularly alarming since the domestic consumption of fish and fishery products has increased at a rate equivalent to the total world fishery production. The failure of the United States fishing industry to keep pace with the consumption level has resulted in the increased utilization of imported seafood products. For instance, in 1948 the United States fishing fleet supplied about 80 percent of the edible seafood supply while today it supplies only 30 percent.

The general problem is, apparently, a stable but low consumer demand for domestic fishery products, while fishery imports have expanded to meet the desires and demands of the growing American population. This relative stability of domestic production and an increased amount of import products have enabled the fishing industry of other countries to prosper while the United States has remained dormant.

Until 1957, the United States ranked second among fishing nations. In that year, mainland China forged ahead of the United States. Both Peru and Russia moved ahead of the United States in 1960. Presently, the United States ranks

sixth among world fishing nations, having been replaced as the fifth ranking nation in 1966 by Norway. Ironically, the American markets for fish and seafood products have continued to be among the world's largest.

The fishing industry in California also has been adversely affected by increased fishery import competition.

Fresh seafood products receive the greatest consumer demand in California. Per capita consumption data presented in the California Fish and Wildlife Plan indicates the State's population consumes 16.8 pounds of edible seafood products each year; 12.0 pounds are fresh fishery products. To supply this demand, nearly 420 million pounds of whole fresh fishery products are needed. The current harvest of approximately 66 million pounds supplies less than 20 percent of the fresh seafood demand.

The lack of coastal fishery resources cannot be attributed to the present dilemma. Fish resources off California, in general, are abundant, according to state and federal surveys. While only a few species, such as sardines and Pacific mackerel, are at a low level and need protection, most fish populations are healthy and could withstand greater harvest without harm to the resource. The increasing incidence of Soviet fishing vessels off California offer additional proof of the abundance of fishery resources. Shellfish resources found in the nearshore environment are more fully utilized than fish resources. There have been occasions, however, when marketing problems have curtailed full utilization due to higher demands for imported shellfish products.

Clearly, the present dilemma facing the State and Nation did not happen overnight. A number of reasons have been suggested why fish production has lagged in the face of expanding markets and the presence of large domestic resources. These range from statements of inefficiency of the fleet to lack of protection of supply from competitors; but whatever the causes may be, one fact is evident. As the State's population continues to grow and the demand for seafood products increases, it seems inevitable that the contribution of domestic production will diminish unless the fishing industry is able to find new ways of increasing their productivity.

Since World War II, fishing has gradually changed from being a semiskilled hunting operation to a skilled trade or profession. The techniques of processing,

distributing, and marketing seafood products, too, have changed as new quantity and quality demands have shown the need for improved technology and the creation of new products. The increasing demand for fishery products from the sea has placed greater emphasis on the marine sciences to improve fishing methods and fishery technology. Clearly, the need for training is in many respects proportional to the benefits returned to the economies producing the seafood products. It is becoming increasingly apparent that organized training in fishery and marine resources technology is long overdue.

In the past, fishery occupational training—training in the operation and production phases of the industry—has mainly been concerned with "on-the-job" programs by individual boat captains and experienced fish plant personnel. In the last decade, progress has been made, however, in formulating fishing technology into disciplines sufficiently well-defined that training centers and schools are becoming established.

Training in the marine sciences has been, for the most part, wholly academic and limited to single objective programs leading to professional diplomas. Much of the work performed by the marine scientist is technical and can be handled by trained technologists. Vocational-technical training in multiobjective programs could provide the media for translating academic achievements to meaningful information of use to fishermen and the fishing industry. Such training is not presently available in California.

In 1965, representatives of the north coast fishing industry contacted the Eureka office of Marine Resources Operations, California Department of Fish and Game, for information regarding their need for fishery training. Their interest resulted from learning of such training being offered in Massachusetts under the Manpower Development and Training Act (MDTA). A subsequent meeting with California Department of Employment personnel resulted in the submission of a MDTA proposal by the Department of Employment to train men in the occupation of fishermen. Unfortunately, personnel changes in the local Employment office and an exhausted fiscal budget for MDTA programs precluded establishment of the training.

Late in 1966, College of the Redwoods became interested in local fishery training problems through the efforts of the Effective Citizens League. A meeting between fishing industry representatives, Humboldt State College staff and Marine

Resources Operations personnel, and College of the Redwoods staff disclosed definite employment needs in the community. As a result of the meeting, College of the Redwoods agreed to inquire into the availability of funds to initiate a study plan for surveying the training needs of the north coast fishing industry.

In February 1967, the necessary financial assistance to support consultant services to survey the need for Fishery and Marine Resources Technology at College of the Redwoods was obtained. These funds were secured under Title III, George-Barden Act, administered by the California State Department of Education for technical education projects.

This report presents the results of the survey.

BACKGROUND

Fresh fish and shellfish production is the mainstay of the north coast fishing industry. The area's production, centered around four major ports—Crescent City in Del Norte County, Eureka and Fields Landing in Humboldt County, and Fort Bragg in Mendocino County—has grown to where it has become a leading north coast basic industry. The stability of fishery production in each county is dependent upon weather conditions, seasonal availability of desired fish and shellfish species, favorable marketing conditions, and the availability of an adequate work force at sea and ashore.

During the past four decades, nearly 900 million pounds of fresh fish and shellfish valued at 315 million dollars to the local economy have been landed at the area's fishing ports. The present annual contribution of nearly 40 million pounds supplies almost 60 percent of the State's fresh seafood market. An estimated value to the local economy for this production is nearly 20 million dollars. The present and future production of the north coast fishing is being threatened, however, by antiquated legislation, competition with foreign fishing vessels, difficult financing conditions, and relatively better economic opportunities in other fields. These problems are further aggravated by the increasing complexity of harvesting, processing, distributing, and marketing of seafood products.

An aggregation of some 30 to 40 fish and shellfish species makes up the area's annual catch. The capture of many of these species is regulated by a season, a quota, or a specific fishing gear restriction imposed by the California Department of Fish and Game to maintain and insure profitable harvests. As a result, commercial fishermen have become specialists in harvesting certain species. The fish plant personnel, too, have become specialists in processing the specific fishery harvests. The successful and profitable harvesting, processing, distributing, and marketing of local seafoods relies heavily on maintaining a skilled labor force.

Presently, the north coast fishing industry provides about 1900 job opportunities for area residents. Including goods and services provided in direct support of the fishing industry, as much as 3 percent of the north coast labor force may be associated with fishing activities. The projected employment in two years will require nearly a 45 percent increase in plant personnel as the local industry

prepares to meet future consumer demands.

Many of the projected job openings result from industry's plans to expand north coast facilities. In Crescent City, two fish plants will be constructed in 1968-69. Aside from providing facilities to handle additional vessels, the proposed operations will include fish and shellfish processing. Two fish companies and an oyster company are planning facilities on Humboldt Bay. Facilities for additional vessels and processing will result from the establishment of these companies. Fort Bragg, too, has plans for expanding their fishery operations. The limited mooring basin in Noyo Harbor is currently being enlarged and expanded to provide space for a larger fishing fleet. At least one company also has expressed interest in remodeling its plant to install processing facilities. Clearly, all of these proposed expansion plans will require manpower to carry out their respective operations. The ability of these north coast areas to recruit fishermen and plant personnel to support plant operations will be the measure of their success.

THE SURVEY

Following consultations with the Dean, Vocational-Technical Education, at College of the Redwoods, a research proposal was drafted to establish guidelines for the survey. Specifically, the proposal requested investigation and reports on the employment situation in the fishing industry from Fort Bragg to the Oregon line. Suggested investigation areas included average age, training requirements, annual turnover, and employer attitude toward junior college training. In addition, preliminary planning for coordination of an articulated program in the area of marine resources technology utilizing College of the Redwoods and Humboldt State College was requested.

From these survey requirements, two educational objectives were established. They are as follows:

1. to establish data concerning the present and future status of fisheries occupations on the north coast of California and indicate other areas of need; and
2. to investigate the need for an articulated program in the area of marine resources utilizing College of the Redwoods and Humboldt State College.

Following is the general sequence of events leading to the completion of the Survey of Need for Fishery and Marine Resources Technology as presented in this report.

A local ad hoc Advisory Committee was formed of persons with various backgrounds of marine experience to provide an appropriate cross section of opinions relating to fishery occupations. The use of fishermen and fishing industry association members facilitated the availability of interested and qualified persons. A list of ad hoc committee members appears in Appendix A.

Next, a sample mail questionnaire, for distribution to north coast commercial fishermen, was submitted to the ad hoc committee. Following their suggestions, the questionnaire was refined and mailed to commercial fishermen belonging to fishery associations servicing north coast fishing ports.

During the months following, numerous interviews and meetings were held with representatives of the fishing industry, associated maritime businesses, federal and state governments, and educational institutions serving the north coast community.

A survey of existing fishery and marine technology also was conducted to gain information useful in developing curriculum ideas.

The information gathered from mail questionnaire returns, interviews and meetings, and surveying existing programs was assembled in preparing the final report.

Mail Questionnaire

The mail questionnaire distributed to north coast commercial fishermen was sufficiently detailed to reflect their thoughts and opinions on training in their occupation. Sections were developed on personal history, work experience, training requirements, turnover, attitudes toward training, and other pertinent data to their occupation. Much of the data is detailed beyond the requirements of the survey, but were included to provide useful information for future reference. A sample questionnaire appears in Appendix B.

Of the fishermen association members contributing to north coast fisheries, 372 questionnaires were mailed to active members representing captains and crews of private and company-owned fishing vessels. Mailing lists were obtained from the following fishermen associations:

1. Fishermen's Marketing Association, Inc., 2334-C Maple Lane, Eureka 95501, Fred Phebus, Manager. This is a bottomfish fishermen association having 68 members working on 20 vessels in the Fort Bragg, Eureka, and Crescent City area.

2. Humboldt Fishermen's Marketing Association, Inc., 129 Second Street, Eureka 95501, William Hill, Secretary. One hundred forty-five members working on 92 crab and shrimp vessels are affiliated with this association. The members reside in all three north coast counties.

3. Salmon Trollers Marketing Association, Inc., Post Office Box 137, Fort Bragg 95437, Robert Higgs, Secretary, represents 207 salmon fishermen servicing 196 boats.

4. Fishermen's Marketing Association of Bodega Bay, Post Office Box 321, Bodega Bay 94923 represents 80 members operating 80 salmon and crab vessels. Daniel Church is Secretary.

Eighty-five commercial fishermen returned questionnaires; four were returned without sufficient addresses or due to persons moving without leaving forwarding addresses. A detailed synopsis of the questionnaire respondents is presented in Appendix C.

Interviews with representatives of the north coast fishing industry—plant managers, floor supervisors, and plant personnel—were contacted to review the tentative technology program and solicit their opinions on the present and future needs of the industry. The plant occupational groups included were (a) filleting; (b) crab picking; (c) shrimp picking; (d) oyster shucking; (e) salmon packing; and (f) miscellaneous [animal food production, freezer operations, etc.].

Meetings were held to review the tentative marine resources technology program and to gain support and direction to the entire survey. Organizational group representatives contacted were (a) occupational analyst; (b) apprenticeship standards; (c) marine resources development; (d) seafood marketing; (e) community development; (f) port authority; (g) labor relations; and (h) education [continuation high school, college, and junior college]. In addition to occupational needs, areas of personal development, community responsibility, and financial considerations were discussed.

The broad scope of the survey was presented to the Dean of Administrative Affairs and members of the Fisheries staff at Humboldt State College to obtain their opinions of the program. Their interest in the project provided the basis for subsequent meetings to discuss preliminary planning for the coordination of an articulated program in marine resources technology between College of the Redwoods and Humboldt State College.

The survey also included several trips to view local facilities and discuss project plans with area representatives at Fort Bragg and Crescent City.

One out-of-state trip was made to Clatsop Community College, Astoria, Oregon. The occasion provided an opportunity to confer with Paul Toloven, Chairman, Division of Vocational-Technical Education, and Jerrold Elsbree, coordinator of Marine Technology, on their curriculum, enrollment, and facilities. Additional information of value to the project was gained by the accompaniment of two Eureka fishery association representatives—Fred Phebus, Manager, Fishermen's Marketing Association, Inc., and William Hill, Secretary, Humboldt Fishermen's Marketing Association, Inc. These gentlemen provided introductions and the opportunity to discuss problems of fishery and marine resources technology with many fishermen and industry representatives from the Pacific northwest.

Existing Programs

A survey of existing programs related to fishery and marine resources technology was conducted to gather information on the past success of vocational-technical training and to obtain curriculum suggestions. These efforts disclosed six institutions offering an Associate Arts program in various phases of fishery and marine resources technology. A summary of their programs appears in Appendix C.

In addition, three fishermen training courses sponsored by the Federal Manpower Development and Training Act (MDTA) have been completed. Two of these programs, one in 1965 and the other in 1966, were 12-week courses presented in Massachusetts; the third, a 6-week course, was conducted in Alaska in 1966. MDTA programs are on-the-job training programs that follow a format of both classroom work and sea experience aboard commercial fishing vessels.

A joint two-year fisherman training program sponsored by the United States Bureau of Commercial Fisheries and the Hawaii State Department of Education was initiated in 1965 to train 30 men. This program, however, was terminated before its expiration date as only six trainees remained at the end of 22 months. Reasons given for the failure were..."Some (trainees) were on probation, some were mentally retarded, and some were just unemployable"...; there were no minimum entrance requirements to qualify prospective trainees.

Certain individual courses available at the Vancouver Vocational Institute, British Columbia, may be combined to form some important elements of fishery and marine resources technology. An organized program, however, is not presently available.

Internationally, many fishery programs are well established. For instance, the Soviet Union has 24 fishery schools with an enrollment of 56,000 men and women. Over 19,000 students are enrolled in secondary-school fishery training programs. Japan has 15,000 persons in fishery training schools, while the United States as of 1965 offered fishery vocational training to less than 100 high school students.

Various excellent oceanography and fisheries programs, as well as merchant marine cadet training, are provided at a number of institutions. These are usually of four years' duration and lead to professional degrees. They are not an object of this survey in fishery and marine resources technology, which was confined to programs up to and including the Associate Arts degree level.

Prior to and during the survey, a collection of technical material helpful in conducting the survey and pertinent to marine technology education was assembled. These are listed in the bibliography. The materials include books, news articles, directories, pamphlets, brochures, and other associated papers which could comprise the nucleus of a reference library on the subject.

RESULTS OF THE SURVEY

The survey data indicated an immediate need for persons trained in fishery occupations of fishermen and seafood processors. In addition, several occupational areas requiring trained marine technicians or specialists were suggested.

Information relating to these fishery and technical occupational groups is presented in this section. The topics include: job opportunities, present employment, seasonal patterns and turnovers, job requirements, training requirements and attitude toward training.

Fishermen Occupation

Job Opportunities

The need for qualified crewmen and replacement personnel for retiring fishermen provides the job opportunities for persons wishing to enter the occupation.

The number of potential job openings for the occupation of fisherman determined from the survey is 24 men per year. Although the annual turnover rate may reflect a higher number, much of the turnover is caused by fishermen's sons returning to school and a shifting of crew members from one vessel to another. It is felt that the 24 potential job openings reflect the most immediate needs of the area's prospective employers.

For the ambitious and energetic persons wishing to become a fisherman, there appears ample opportunity for advancement to a vessel owner or captain. Many captains and crewmen are at or beyond retirement age. In addition, most crew members presently employed on vessels have little desire to become captains because of their advanced age or lack of background necessary to advance to captain. Young men possessing the knowledge and skills of modern fishing methods are needed to update and upgrade the fishing industry.

Present Employment

An estimate of the numbers of men presently employed as fishermen was obtained from California Department of Fish and Game Commercial Fishing Licenses issued for the 1966-67 license year. In an effort to determine the number of local men deriving a majority of their livelihood from fishing, the following categories

were established: 1) Commercial—men working on documented vessels; these men are regarded as bona fide fishermen deriving their livelihood as a captain or crew member. 2) Semicommercial—men owning or operating undocumented vessels usually less than 30 feet in length; this contingent of small vessels, commonly referred to as the "splinter fleet," is usually operated by men supplementing their summer income fishing for salmon. 3) Shore—these men are commonly smelt and surfperch fishermen seeking to supplement their income during certain seasons of the year. Using these categories, minus the annual turnover rate discussed in the section following, it is estimated there are 910 commercial fishermen residing on the north coast that depend on fishing for a majority of their livelihood. The tabulation of these data are presented by area of reference.

Commercial Fishermen Employment
Tabulation of License Data by Area

Area	Category	Number of Men
Del Norte County	Total	267
	Commercial	158
	Semi-Commercial	73
	Shore	36
Humboldt County	Total	794
	Commercial	409
	Semi-Commercial	276
	Shore	109
Mendocino County*	Total	207
	Commercial	207

*Complete data not available

In addition to these north coast residents, 303 commercial fishing licenses were issued to out-of-state residents of Oregon, Washington, and Alaska. These nonresident fishermen representing 35 percent of commercial fishermen on the north coast are significant in that they sometimes seek crew men while fishing in California.

Other information describing men presently employed as fishermen was obtained from the survey. These data may be useful in characterizing the occupation.

The approximate age structure of fishermen is as follows: under 20 years of age, 7 percent; 21-30 years of age, 16 percent; 31-40 years of age, 19 percent;

41-50 years of age, 23 percent; 51-60 years of age, 23 percent; over 60 years of age, 11 percent. The average age of all north coast fishermen is 44 years.

The survey data disclosed 94 percent of north coast fishermen are married and are heads of households. The average number of dependents per household is three.

Fishermen in the survey area averaged over 16 years experience in their occupation. The approximate experience structure is as follows: 15 percent worked less than 5 years, 24 percent have worked 6-10 years, 18 percent have 11-15 years experience, 12 percent have worked 21-25 years, 5 percent have 26-30 years experience, 7 percent have 31-35 years experience, 4 percent have 36-40 years experience, and 1 percent have over 40 years in their occupation.

North coast fishermen paid on a share basis earn approximately $9,000 per annum. The median annual income for all north coast fishermen was $8,400 for crew members, $9,500 for captains. Gross incomes reported ranged from less than $4,000 to over $20,000 per year. The median income for captains engaged in more than one seasonal fishery was about $12,000 per annum. Shares are determined by subtracting trip expenses (ice, fuel, etc.) from the gross value of the catch and apportioning the net return among the captain and crew. A major share is also alloted to the vessel for insurance, maintenance, and equipment repair.

Seasonal Patterns and Turnover

Although fishing is a year-around activity, it is generally characterized by fishermen participation in several seasonal fisheries. Drag fishing for bottomfish by trawler vessels is the only continous year-around fishing activity. Other fishermen, fishing on one or more vessels during the year, are engaged in one or more fisheries regulated by the State of California or by the seasonal availability of certain fish species. Fisheries having regulated seasons include: crab, December through June; salmon, April to September; and shrimp, May through September or until an annual quota established by the California Department of Fish and Game is filled. Migrating albacore tuna appear on the north coast sporadically between July and September and are captured in varying amounts according to their availability.

The movement of fishermen from one fishery to another during a season usually does not result in the loss of employment. There is actually little overlap

between the various fisheries as seasonal availability, quotas, or market conditions govern the real length of each fishery. During periods of inclement weather and between seasons, fishermen must spend considerable time ashore preparing, maintaining, or repairing their vessels and fishing gear. All crew men are expected to assist in these chores. There are men, however, who leave the occupation to accept other employment during that time.

It is difficult to ascertain a true turnover rate from the survey questionnaires. Ninety percent of the respondents were captains, a position less likely to change except by retirement or emigration from the north coast.

Following the preliminary analysis of the questionnaires, inquiry was made regarding turnover rates of local fishermen association memberships. The best available information indicates a 20 to 25 percent turnover for fishermen on the north coast. It was learned marginal workers are traditionally unstable and account for most of the turnover experienced by vessel crews.

Job Requirements

The requirements for men entering the occupation of fishermen were determined from the opinions of presently employed fishermen as prospective employers. The ability of beginning fishermen to prove themselves fit at sea was the most important job requirement stressed by survey respondents. They noted that many men interested in the occupation have been forced to seek other employment because of chronic seasickness.

Apparently, prior sea experience is not a prerequisite nor is it necessarily responsible for currently employed fishermen entering the occupation. Considering the average age and length of experience, many north coast fishermen gained employment during the fisheries peak production years following World War II. About one-quarter of the respondents served in the maritime branches of the Navy, Coast Guard, and Merchant Marine. Another twenty-five percent served in the Army and Marine Corps. Nearly half of the commercial fishermen are nonveterans.

Other considerations of the occupation include working long hours during extended periods at sea, working in adverse weather, and working without assigned days off. At sea, the safety of the vessel and fellow workers also depends on a crewman's ability to follow instructions and to work well with other crew men.

With few exceptions, commercial fishermen are expected to furnish their own foul-weather equipment and share in the food expenses while at sea.

Training Requirements

Although few vessels go to sea with less than a full crew, many carry a less-than-qualified crew. The survey indicated that the acceptance of untrained men was costly in terms of sharing the work load. Only 9 percent of untrained men were reportedly able to accomplish more than their assigned duty, 30 percent were just able to do their share, and the majority, 48 percent, were not competent enough to do their share of the work load.

The questionnaires also provided information on the duration of training required to obtain the necessary skill needed to perform the duties of a crew member. Fifty-four percent of the responding fishermen felt more than 6 trips were required, 35 percent indicated 3-6 trips were sufficient, and only 11 percent suggested 3 trips or less were required to become a good worker. These data suggest approximately 150 to 200 hours sea experience are necessary to become a qualified crew member.

The choice of training subjects presented in the questionnaire resulted from suggestions made by the Advisory Committee. Fourteen subject areas were compared in six occupational categories. Additional space in the questionnaire also was provided for writing in other suggested subjects. Nearly 40 percent of the respondents wrote in additional topics for consideration. The most significant additional request was for basic cooking, as the newest man hired on a vessel is expected to prepare all meals while at sea.

The tentative training subjects were marked by each fisherman according to their order of importance. In the final analysis, the greatest number of responses for any subject was used as a base to rank the other subjects relative to the dominant subject (Appendix D).

The training subjects ranked for all responses are as follows:

1. Care and handling of fish at sea.
2. Operation and maintenance of navigation aids and equipment.
3. Navigational procedures.
4. Basic fishing gear.
5. Knots, ropes, and splicing.
6. Emergency first aid.

7. Safety procedures at sea.
8. Identification of important fish species.
9. Emergency plumbing, electrical, and carpentry skills.
10. Operation and maintenance of radio equipment.
11. General habits of important fish species.
12. Basic bookkeeping, fish marketing, and economics of fishing.
13. Principles of fishery management.
14. Basic cooking.[1]

Attitude Toward Training

North coast fishermen respond favorably to vocational training in their occupation. Prospective employers expressed their willingness to support the training program through their respective fishermen associations. It was the fishermen's requests that prompted action leading to the present survey.

When commercial fishermen were asked if training would have helped them when they began fishing, 81 percent felt training would have been beneficial. After reviewing the suggested training requirements presented in the questionnaire, only 10 percent of the respondents retained a negative attitude toward training in their occupation.

Seafood Processor Occupation

Job Opportunities

The present and future marketing commitments by the north coast fishing industry will require an expanded labor force to convert raw fishery products into a usable form. Employee data obtained from industry representatives on present job opportunities and those anticipated in 1969 indicate their need for additional seafood processors will increase 30 percent. The greatest increase will be in Crescent City, where two new fish processing plants will require nearly triple the present labor force.

To obtain the number of potential seafood processor job openings, management representatives of the north coast fishing industry were asked their present needs and those anticipated in two years. Their reply indicated an immediate need for 77 crab pickers, 11 fish filleters, 273 shrimp pickers, and at least 5 oyster shuckers. If the industry's plans for expansion materialize in the next two years, an additional 490 job opportunities will become available.

[1]Basic cooking added as a result of write-in requests.

Present Employment

Del Norte, Humboldt, and Mendocino county fish processors provided the following synopsis of their present and anticipated employment by occupational group. From their estimates, there are presently 1,138 job opportunities, with a projected 1,628 anticipated in 1969.

North Coast Seafood Processor Employment Survey

County	Type of Operation	Employment Present	Employment Anticipated in 2 years
Del Norte	Total	105	335
	Crab picking	30	90
	Fish filleting	0	40
	Shrimp processing	60	180
	Salmon processing	15	25
Humboldt	Total	918	1,158
	Crab picking	325	410
	Fish filleting	88	118
	Shrimp picking	445	500
	Salmon processing	35	50
	Oyster shucking	25	80
Mendocino	Total	115	135
	Crab picking	30	30
	Fish filleting	20	40
	Shrimp picking	40	40
	Salmon processing	25	25
	Grand Total	1,138	1,628

Nearly all currently employed seafood processors are women. During the summer months high school students, including some male students, are employed in local processing plants. In many cases, seafood processing is the only summer employment available to these students.

The majority of women working as seafood processors are married and depend on processor's wages to supplement their family income. Many of the workers are wives of fishermen.

All seafood processors on the north coast are piece workers, paid on their per pound production, and/or receive the guaranteed minimum wage of $1.40 per hour. Experienced workers earn between $1.50 and $3.00 per hour, averaging ap-

proximately $1.80 per hour over the year. A gross annual income for all workers averaging about $1,500 to $2,600 may be biased, however, due to a high turnover rate that tends to lower the average wage. Seafood processors are eligible for unemployment benefits and receive additional income from this source.

Seasonal Patterns and Turnover

Analogous to the occupation of fishermen, seafood processor employment trends follow the seasonal fisheries and availability of fish and shellfish species.

The large number of job openings for seafood processors is reflected in the occupation's turnover rate. It was learned from the survey that 50 percent of shrimp pickers, 20 percent of crab pickers, 15 percent of oyster shuckers, and 10 percent of fish filleters leave their occupation each year. Although many of the seafood processors retire from the occupation because of age, sickness, change in family circumstances, and geographical relocation, the major cause reported was the lack of skill required of the occupation.

This is particularly prevalent in the shrimp picking occupation, where a 50 percent turnover is experienced. Speed and agility required to peel the outer husk from small shrimp is frustrating to many beginning pickers attempting to accumulate sufficient poundage and an acceptable daily wage. The use of a large student labor force, during the summer shrimp season, adds to this turnover rate. Transportation difficulties, family vacations, attitude toward working, and personal problems seemingly contribute to their transient pattern.

During other fishery seasons, the work force is composed of persons relying on their employment to supplement their family income. These persons, having developed greater skill in their occupation, are able to participate in more than one seasonal fishery and, therefore, help stabilize the turnover rate.

Fish filleting and oyster shucking are, for the most part, year-around occupations. Many of the shrimp and crab pickers would be eligible for these more stable jobs if they possessed the knowledge and skills of the occupation.

Job Requirements

Perhaps the single, most important quality required of seafood processors is their willingness to work. Under the piecework system, workers are paid for their

own productivity. High production, therefore, requires speed and agility with their hands, alertness, and concentration.

Seafood processors must accept working long hours standing at a work station, and working in the cool wet surroundings of a shore plant. An ability to follow instructions and work well in close proximity to fellow workers is also required of the occupation.

It is understood that seafood processors will furnish their work aprons, boots, and any other special equipment required of their occupation.

Training Requirements

The subjects required for seafood processor training were obtained from north coast fishing industry representatives and their plant supervisory personnel. A composite of the suggested subjects includes: (1) preservation and processing methods at sea and ashore, (2) identification, morphology, and anatomy of important fish and shellfish, (3) care and maintenance of processing tools and equipment, (4) first-aid procedures, (5) introduction to fishing equipment, terminology, and techniques, (6) sanitation, including microbiology and the effect of bacteria on fish spoilage, (7) plant safety, (8) fishery marketing procedures, (9) elementary bookkeeping, (10) economic management of commercial fisheries, and (11) general education requirements necessary for personal development.

It was emphasized that, in addition to these subjects, practical experience is vital. An estimate of the on-the-job experience was subsequently obtained during the survey. Industry representatives suggested that the minimum hours of practical training should be 40 hours for crab pickers, 60 hours for shrimp pickers, 120 hours for fish filleters, and at least 160 hours for oyster shuckers.

A training program designed along these guidelines would provide persons with sufficient skills and knowledge to work with minimum supervision and proficiency to produce poundage sufficient to earn the guaranteed minimum wage.

Attitude Toward Training

Employers and employees in the north coast fishing industry unanimously favored educational training in seafood processing. Employers felt academic and practical training provided in an educational program would not only afford skilled

workers but could increase the productivity and efficiency of plant operations by stimulating existing workers and raising plant morale. The employees would benefit from higher earnings and gain personal confidence from their achievements.

Marine Technology Occupations

During the survey, all persons interviewed were asked to express occupational areas of marine technology they felt would benefit north coast fisheries. These occupational areas are considered technician or specialist vocations requiring specific knowledge and skills to assist government scientists and industry and provide educational opportunities for individuals wishing to enter private business.

The following list is a summary of the suggestions presented.

Suggested Marine Resources Technology
Occupational Needs

Occupation	Govern-ment	Private Industry	Private Business	Educa-tional Inst.
Fishing Gear Specialist	X			
Oceanographic Technician	X			X
Fisheries Marketing Specialist	X			
Biological Aid	X			X
Seafood Inspector	X			
Water Quality Technician	X	X		
Fisheries Technician	X			
Seafood Technologist	X	X		
Fish Hatchery Specialist	X			
Fish Cannery Technician	X	X		
Law Enforcement Officer	X			
Marine Engine Repair Mechanic		X	X	
Stevedore		X		
Shipwright Apprentice		X	X	
Towboat or Launch Crewman		X		
Marine Electronics Specialist		X	X	
Refrigeration Specialist		X	X	
Marine Radio Technician		X	X	
Marine Hardware Salesman		X	X	

Specific data relating to job openings, present employment, seasonality and turnover, and job and training requirements were not determined during the survey.

POSSIBLE AND RECOMMENDED PROGRAMS FOR MEETING THE FISHERY AND MARINE TECHNOLOGY NEEDS ON THE NORTH COAST

The results of the survey reflect definite occupational training needs throughout the north coast fishing industry for which vocational-technical education appears favorable.

During their first two years, College of the Redwoods has conducted 25 different training projects in cooperation with the local office of the California Department of Employment. Through these projects, nearly 500 persons have completed training. As vocational-technical education has become an integral part of College of the Redwoods offerings, it is recommended that a Fishery and Marine Technology curriculum be initiated for the following reasons:

1. A high unemployment rate exists on the north coast, in the area served by College of the Redwoods. The unemployed persons provide a potential trainable work force that could maintain a responsible community.
2. The north coast is the center of fresh fish and shellfish production in California.
3. The focal point of north coast fishing activity is on Humboldt Bay, within sight of the College, providing an environment ideally suited for training.
4. Fort Bragg and Crescent City, other major ports, are sites for branch campuses of the College.
5. Man-made maritime installations, wharves, docks, repair yards, and government installations assure continuous waterfront activity.
6. A large diversified fishing fleet operates out of local ports within commuting distance of the College and branch campuses.
7. Within the local communities are many persons whose occupational activities are maritime in nature, many of whom are available to assist on advisory committees, with some being available as instructors.
8. The presence of Humboldt State College and its new marine laboratory, a short distance from College of the Redwoods, provides an academic environment that lends distinction to vocational-technical programs. The College also provides advanced curricula for students wishing to continue into academic careers.
9. There is no institution offering fishery and marine resources technology curricula, as envisioned in this survey, in California at this time.

A Fishery and Marine Resources Technology Curriculum at College of the Redwoods

The presentation of a curriculum in Fishery and Marine Resources Technology that will satisfy the immediate and long-term needs of the fishing industry must be practical, yet sufficient in scope to provide the knowledge and skills required in a diversified industry. A logical approach to the development of a diversified curriculum should be a four-stage program that provides (a) terminal vocational training at the Associate Arts Degree level, (b) terminal vocational training at the Vocational Diploma level, (c) disciplines for persons presently employed in maritime activity who wish to update or upgrade their present positions, and (d) opportunities for students to continue their education at levels leading to advanced degrees.

Curriculum Objectives

The Associate Arts program would provide advance knowledge and skills at the technician or aid level. It should not be a scaled-down version of professional training in fisheries or oceanography. Persons completing course work at the technician or aid level will be expected to serve a supporting role to the professional. Draftsman, surveyor's aid, nurse's aid, and dental technician are examples of successful training programs currently presented at College of the Redwoods. Where the professions are not featured, graduates would seek their own competitive levels, or would become individual business operators sufficiently trained to succeed in areas of their own interest.

A well-planned curriculum would also provide students the opportunity to continue their education at levels above the Associate Arts Degree. It appears likely that some students given the confidence and stimulation in fishery and marine resources technology may wish to remain in school and prepare for other vocations. Their enthusiasm should not be curtailed by a dead-end curriculum but enhanced by the availability of articulated programs.

The Vocational Diploma program would provide those persons seeking new employment or retraining the knowledge and skills to gain immediate employment in one of the fishery occupations. Training would provide a minimum of academic course work and a maximum of practical on-the-job experience.

Many persons presently employed in maritime occupations may be interested in updating or upgrading their present positions. A diversified curriculum would provide this opportunity.

Specific Curriculum Aims

The curriculum in fishery and marine resources technology should consist of an integrated series of courses designed to accommodate the requirements of persons who intend to gain sufficient training to become employable at beginning positions in any one of a family of job opportunities. These positions will vary widely in specific requirements, but do contain basic elements in common. Among these are a knowledge of the terms used in maritime circles, familiarity with boats and dockside activities, and proficiency with those basic skills in mathematics, mechanics, physics, and self-expression, which are applicable in a variety of maritime job opportunities.

Included in the curriculum should be courses in general education intended to provide student trainees a sense of individual initiative and responsibility. A specified amount of these types of courses is necessary in programs leading to the Associate Arts Degree. Their value would also be of primary significance to persons completing the Vocational Diploma program.

The curriculum should be sufficiently specific to provide the student trainee an opportunity to accomplish the following objectives:

Discover whether seasickness will prevent him from working at sea.

Become familiar with and feel at ease aboard various classes of vessels in a manner that will allow him to begin as an efficient crew member.

Learn how to perform the practical aspects of seamanship and boat handling.

Know the basic fundamentals of boat and dockside equipment maintenance.

Understand coastal navigation and Rules of the Road.

Learn how to operate instruments such as radio, loran, radar, and depth finders.

Make minor adjustments on internal-combustion engines and auxiliary engines.

Solve practical problems involving mathematics and the physical sciences in support of job performances.

Use and develop his ability to follow instructions, oral and written, as well as to communicate his ideas to others.

Learn fishing techniques currently used on the north coast. This should include the methods of harvesting, processing, distributing, and marketing of the various fishes as well as crab, shrimp, and oysters.

Become educated in the sanitation and personal hygiene procedures at sea and ashore, in respect to quality control.

Know the importance of constantly observing safety procedures in the execution of job assignments.

Become educated in the supporting role often occupied by technicians in creating an effective team approach with professionals.

Develop a feeling of pride in himself and toward his role in maritime activity.

In meeting these objectives, the curriculum should be designed with flexibility so that periodic refinement, when necessary, may be accomplished to insure maximum benefits to the student trainee and the industry.

Tentative Curriculum

The tentative curriculum presented in this section for Fishery and Marine Resources Technology is intended to serve as a point of beginning, a catalyst to solicit reaction and suggestions. It is a synthesis of existing marine technology programs, suggestions from representatives of the fishing industry and educators.

Marine Resources Technology.—Suggestions for a marine resources technology program leading to an Associate Arts Degree is presented first as courses in the program may be used in a Vocational Diploma program. General education and elective courses should be integrated in the curriculum to provide options for students to pursue individual interests. An asterisk appears by those courses.

Suggested Marine Resources Technology Program

*English Composition
Economics of Fishery Production
*Mathematics (by eligibility)
*Standard and Advanced First Aid and Safety
Seamanship
Fishing Gear
*Applied Accounting
*General Physics
Marine Engineering
*Navigation I
*Natural Resources Conservation
*United States History and American Institutions
*Fundamentals of Speech
Fishery Technology
Fishing Methods

*Introduction to Business Organization
Seafood Marketing and Processing
Personal and Industrial Relations
Applied Oceanography
Electives
*Introduction to Meteorology
*Welding Technology or Welding Skills
Galley Cooking
Vessel Construction and Appraisal
*Introduction to Chemistry
*Business Letter Writing or Report Writing
*Merchandising
*Salesmanship
*Introduction to Data Processing
*Microbiology
*Elementary Biometrics
*Fish Culture

*Existing courses presently offered at College of the Redwoods

Fishery Occupational Program.—A Fishery Occupational Program would provide student trainees the basic knowledge and skills necessary to qualify for a Vocational Diploma. In addition to the completion of selected courses for the Marine Resources Technology program, the majority of their training should be on-the-job experience. Representatives of fishermen associations and the industry have suggested the following minimum on-the-job experience:

Occupation	Hours
Crewman on fishing vessel	200
Crab picker	40
Shrimp picker	60
Fish filleter	120
Oyster shucker	160

Training for Updating and Upgrading.—Course work applicable to updating and upgrading most likely would be limited to the selection of specific courses of interest. In some instances where lengthy courses may not be practical, the presentation of seminars or workshops would provide the desired results. Illustrative examples of such courses or subjects are:

Fundamentals of Marine Law
New Product and By-product Development
Small Business Financing
Marine Diesel Repair
Welding

Potential Student Trainees

To successfully implement a Fishery and Marine Resources Technology curriculum, an adequate supply of potential student trainees must be available. It was learned during the survey that a large number of such persons reside on the north coast.

Many potential student trainees for fishery occupational training are available from the adult population. The following personal characteristics for those persons were obtained from the California Department of Employment.

Of the available male population, approximately 75 percent are heads of households or heads of families. About 15 percent of these men will be unemployment insurance claimants. Their age structure is as follows: under 20 years of age, 5 percent; 20-25 years of age, 25 percent; 26-35 years of age, 65 percent; above 35 years, only 5 percent. It is anticipated that approximately 65 percent will have completed the 12th grade, and 30 percent will have completed at least the 10th grade.

The age structure projected for the potential female student trainees is approximately: 5 percent between the ages of 22-27; 85 percent between the ages of 28-38; over 38 years of age, about 10 percent. Approximately 25 percent will have obtained a high school diploma, nearly 41 percent have completed grades 9 through 11, while 34 percent have completed the 8th grade or less.

Although the majority of potential student trainees are available from the adult population, high school and continuation high school graduates should be recruited for the training program. This should apply particularly to male students needed for fishermen occupational training.

It has been noted that many young people on the north coast leave the area to seek higher education at various schools and colleges and do not return. These persons, capable of higher academic achievement, should be encouraged to enter marine technology training and obtain degrees as technicians or specialists in maritime disciplines. Seemingly, this would help halt the "brain drain" reported on the north coast.

Facility Requirements

It is assumed the necessary facilities for classroom instruction can be provided by College of the Redwoods. There will be need, however, for additional special facilities to provide on-the-job training for both fishery and marine technology student trainees. On-the-job training at sea and in seafood processing will probably present the most immediate need for facilities. To meet these needs, a vessel for training and adequate space in a processing plant will be required.

Training Vessel.—Sea experience would be an essential part of training in a Fishery and Marine Resources Technology curriculum. The procurement of a vessel for training can be accomplished in three ways: (a) charter, (b) acquisition, and (c) loan.

Charter.—The charter of a commercial vessel is common among agencies and institutions needing boat time to accomplish short-term projects.

The primary advantage of a charter vessel is that the institution hiring the vessel need not be concerned with the fiscal responsibility of vessel operation and maintenance. Vessel operators interested and qualified provide maximum efficiency at minimum cost.

A chief disadvantage arises when a vessel is desired for multiuse projects. The equipment and space requirements of the vessel are usually specialized for a single purpose operation.

Generally, the cost of chartering a vessel ranges from $200 a day for a small vessel to $600 a day for larger vessels. Many commercial fishermen on the north coast have experience in chartering and are willing to provide their services to the proposed training program.

Acquisition.—A market exists for both commercial fishing and government surplus vessels. The rule-of-thumb applied to purchasing commercial fishing vessels is: their resale value is approximately $1,500 per linear foot. Government surplus vessels available through the Department of Navy are open for bid. No attempt was made to determine the amount of successful bids.

The advantage of an institutionally owned vessel is the flexibility of use and availability. The vessel may be outfitted in the exact manner desired by the operating institution. During unscheduled periods, the vessel may be chartered to other institutions, thus defraying operational costs.

The main disadvantage of owning a vessel, in addition to obtaining funds for purchasing and properly equipping the vessel, is the maintenance, operation, and personal costs. Government surplus vessels require additional capital outlay, as they must be accepted "as is" and renovated from a "mothball" fleet.

The possibility of obtaining a large, fully equipped research vessel may be feasible. The California Department of Fish and Game currently has budgeted for replacing their research vessel, N. B. Scofield. If certain fiscal policies governing the construction of a replacement vessel are overcome, the N. B. Scofield may be available as early as 1969. The Oceanography Department at Humboldt State College already has expressed interest in obtaining the 100-foot Scofield at a reported cost of 50 thousand dollars. Perhaps a cost-sharing agreement with Humboldt State College might be arranged to obtain the State vessel.

Loan.—Under certain conditions, the United States Department of Defense will loan military vessels to institutions. The details of the agreement are complex; however, this possibility should be investigated further. The advantages and disadvantages of obtaining a loan vessel are similar to those for purchasing a government vessel.

Fish Processing Plant Facilities.—North coast seafood processors have expressed a willingness to cooperate and assist in initiating a fishery and marine resources technology program. Arrangements for training facilities utilizing space in local fishery plants can be made through the Humboldt Bay Fisheries Association of Eureka, 4 "C" Street, Eureka, California 95501.

An Articulated Fishery & Marine Resources Technology Program

The second objective of the survey was preliminary planning for coordination of an articulated program for marine resources technology involving College of the Redwoods and Humboldt State College. The most apparent advantage to an articulated program would be optimum curriculum development and benefits at minimum costs.

Cost-sharing in vessel procurement and maintenance, instructors, and instruction materials and facilities are examples of benefits envisioned by an articulated program.

Conferences with Humboldt State College administration and Fisheries staff revealed their interest and the possibility of participating in a Fishery and Marine Resources Technology program.

Subsequent discussions led to a plan for articulation. This plan—Concept of an Institute of Fisheries Technology, Development, Research, and Extension—is presented below as it was originally drafted:

Concept of an Institute of Fisheries Technology, Development, Research, and Extension

I. Basic Concept

The general idea is for the establishment of an Institute that would be the principal focal point of commercial fisheries technology on the north coast. The Institute would be, at least at first, a Humboldt State College legal entity, but in operation it would be a formal joint endeavor by Humboldt State College, College of the Redwoods, and the fishing industry. The Institute would work with many individual groups and agencies in carrying out its programs.[1]

The Institute would help coordinate many training, development, research, and extension programs in fisheries technology managed by member agencies, and ultimately would organize and manage similar programs of its own for the benefit of member or outside agencies or groups. It would acquire vessels, gear, facilities, and equipment for lease or charter by members and other agencies or individuals.

The Institute would be managed by member agency representatives. Technical work by the Institute would be performed by paid technicians. Its operation would be financed primarily by funds obtained from other than member agency sources.

II. Outline of Main Purposes

A. To provide a main focal point for marine fisheries technology activities on the north coast.

B. To provide area-wide coordination of marine technological training, research, development, and extension services.

C. To provide, through joint ownership and coordination, services, equipment and facilities to agencies, groups, and individuals with special marine technological needs.

D. To provide greater opportunities and more flexibility for developing and financing programs in fisheries technology.

E. To conduct surveys, studies, and analyses of needs, conditions, and status of fisheries technology on the north coast.

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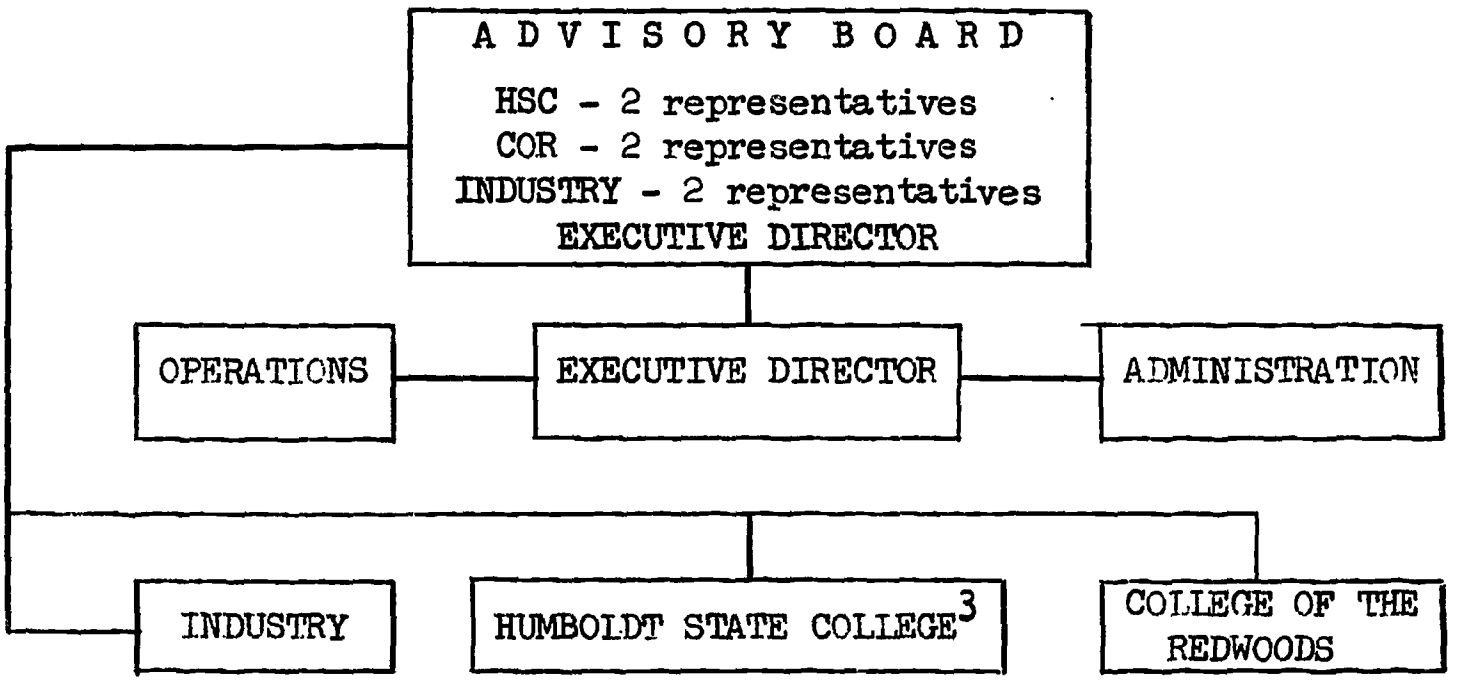
[1] Appendix E lists some of the groups and agencies that would constitute or cooperate with the Institute.

III. General Structure[2]



IV. Some Possible Coordinated Programs (and the Management Agency)

A. Commercial fishermen (vocational diploma) training—College of the Redwoods.

B. Food processing and handling (vocational diploma) training—College of the Redwoods.

C. Oceanographic technologist (vocational diploma) training—College of the Redwoods.

D. Preparatory training for professional fisheries or marine science curriculum—College of the Redwoods.

E. Terminal professional training in fisheries or marine science—Humboldt State College.

F. Peace Corps fisheries cooperative training program—Humboldt State College.

G. Industry in-service training and workshops—the Institute.

H. Extension (gear development and use, seafood processing development, marketing, and financing)—the Institute.

I. Placement of workers—the Institute.

J. Dissemination of information—the Institute.

/s/ John DeWitt
Professor of Fisheries, Humboldt State College

/s/ J. Gary Smith
Consultant, College of the Redwoods

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[2]See Appendix F for more detailed list of personnel.

[3]See Appendix G for HSC units that could be associated with the Institute.

Representation of the north coast fishing industry in the articulated program was deemed necessary as their advice would be vital in formulating a practical and well-diversified program. Their participation also provides an instructional entity composed of the total fishing community. Members of the industry would be selected from the Humboldt Bay Fisheries Association, whose membership is composed of fishermen, fish dealers and processors, an oyster culturist, a fuel distributor, and an ice-and-cold-storage plant manager, all doing business in the north coast community.

SUMMARY

A need for revitalization of quality control and merchandising programs by the fishing industry makes vocational-technical education programs essential to the well-being of the north coast community. Conclusions reached from the study of survey questionnaires, interviews and informal discussions with persons in industry, government, and education indicate a Fishery and Marine Resources Technology program would add substantially to the overall development of the area's fishing industry.

Job opportunities are available. Data obtained from the survey indicate there are presently 366 job opportunities for qualified seafood processors and at least 24 jobs available to trained fishermen. An expected increase in production and plans for continued expansion of the fishing industry will require skilled manpower. In fact, by 1969 the north coast fishing industry has anticipated a need for an additional 490 employees. A high number of unemployed workers residing within short distance of the College of the Redwoods campus and branch campuses are available for training. Given the necessary knowledge and skills, these persons could provide much of the manpower needed.

At a time when commercial fishermen must pay higher prices to maintain their vessels and higher salaries to their crews, their cost of training an inexperienced man denies them the reserve capital necessary to keep pace with modern fisheries technology. The stress of these burdens is evidenced by the lack of young men entering the occupation. The availability of younger trained men could stimulate greater incentive for the entire industry.

Although the north coast fresh seafood industry is the State's most productive fresh fish producer, it is faced with greater competition not only from foreign imports but also from the consumers' preference for other protein sources. Decreased production costs provided by a skilled and knowledgeable labor force can accumulate capital necessary for improved product quality and merchandising.

Both fishermen training and seafood processing training are ideally suited for inclusion in a Vocational Diploma program. This program, leading to production and performance in less scientific occupations, could also provide training

courses necessary for updating and upgrading persons presently employed in fishery occupations.

Fishery and Marine Resources Technology programs in areas other than on-the-job training expressed by local industry are also necessary. The array of other marine associated vocations provide disciplines at the Associate Arts degree level. A diversified curriculum that provides opportunities for aids, specialists, and technicians can be expanded as specific job requirements are identified. Such a curriculum would also provide the opportunity for continued education toward advanced degrees.

Many on-going courses presently offered at College of the Redwoods provide the nucleus of instruction necessary to establish a tentative curriculum in Fishery and Marine Resources Technology. The remaining disciplines suggested in the tentative curriculum are practical and would be taught by persons in the industry having the specialized skills and knowledge related to the suggested courses. Many such persons reside on the north coast and would be available as instructors.

The establishment of an articulated program appears favorable within an institution structure that includes representatives of the north coast fishing industry. The creation of an institute, however, will require further investigation and formal endorsement by the College of the Redwoods, Humboldt State College, and the Humboldt Bay Fisheries Association.

Recommendations

A Fishery and Marine Resources Technology curriculum should be presented at College of the Redwoods.

The curriculum should include two options. One should be a Vocational Degree program leading to production and performance training of fishermen and seafood processors and providing for updating and upgrading persons presently employed in these occupations. The second option should lead to positions of a technical level that qualify for an Associate Arts degree. Graduates in this program would serve in a supporting role to the biological scientist or oceanographer in positions such as laboratory assistants or scientific aids.

It is recommended that the first quarter of instruction present a Vocational Diploma program for fishermen and seafood processors. A curriculum suited to this program should be developed through refinement of the tentative curriculum. This curriculum refinement should begin at the earliest date by College of the Redwoods staff with the assistance of a local advisory committee selected from members of the ad hoc Advisory Committee.

Instructors for the Vocational Diploma program should be selected from qualified persons working in fishermen and seafood processor occupations wherever possible. This is important to the successful integration of graduates into the present working community.

At the earliest date, investigation of the institution plan should be carried out with particular emphasis on achieving formal endorsement by College of the Redwoods, Humboldt State College, and Humboldt Bay Fisheries Association.

An Associate Arts Degree program should be developed from the tentative curriculum presented in the survey. It is recommended that this should be accomplished with or without the institution plan endorsement.

Existing courses at College of the Redwoods should be part of the curriculum wherever feasible. Several existing courses have been indicated in the tentative curriculum.

Instruction at sea should be a feature of the curriculum. This is particularly important in a Vocational Diploma program for fishermen occupational training.

It is recommended that a vessel for training not be procured until the success of the program is determined. Arrangements should be made with vessel owners within the area for chartering commercial craft.

It is recommended that College of the Redwoods initiate procedures, through appropriate channels of the junior college system, to establish a coordinating committee that would review and evaluate proposed marine technology curricula on a state-wide basis. Several state institutions are expressing interest in establishing marine technology programs. Without proper coordination, a surplus of employable persons might be created if the various institutions were all offering similar vocational-technical education.

APPENDIX A

Local ad hoc Advisory Committee

Name	Position
Fred Phebus	Manager, Fishermens Marketing Association
William Hill	Secretary, Humboldt Fishermens Marketing Association
Lawrence Lazio	Vice President, Tom Lazio Fish Company
Julian Wojcik	Manager, Humboldt Seafoods
Tom Neil	Humboldt Seafoods
Bud Thomas	Vice President, Eureka Fisheries, Incorporated
Charles Timmons	Eureka Fisheries, Incorporated
Raymond Walker	Manager, Nor-Cal Seafoods
Louis Covallini	Manager, A. Paladini Fish Company
Lillian Miller	A. Paladini Fish Company
Carl Brower	Manager, Crescent City Port Authority
Harold Moran	Executive Director, Effective Citizens League
Francis Douglas	Manager, Coast Oyster Company
Frank Powers	Principal, Arcata Continuation High School
Dr. John DeWitt	Professor of Fisheries, Humboldt State College
Dr. Richard Ridenhour	Assistant Professor of Fisheries, Humboldt State College
William Meyers	Consultant, Division of Apprenticeship Standards
Rod Sandretto	Occupational Analyst, California Department of Employment
Reverend Carroll Stover	Formerly Occupational Analyst, California Department of Employment
Mrs. Guy Griffin	California Department of Employment
Ralph Terrandini	Marketing Specialist, Bureau of Commercial Fisheries
Doyle Gates	Assistant Chief, Marine Resources Branch

APPENDIX B

Selected Educational Institutions
Offering Associate Arts Degree In Marine Technology

Institution Offering Program	Year Started	Initial Enrollment	Own Training Vessel	Object of Training Offered							Remarks
				CF	FOA	FPFS	BMR	ME	FGS	O	
Maine Vocational-Technical School, Maine	1959	4	Yes	X	X	X	X			X	Over 100 applicants, second year
Cape Fear Technical Institute, North Carolina	1964	18	Yes	X	X	X		X		X	Facilities for 160 students
College of Fisheries, St.Johns, Newfoundland	1964	200	Yes	X	X	X	X	X	X	X	6-wk.—3-1/2 yr.programs, ea. category
Clatsop Community College, Oregon	1966	10	Yes	X	X	X	X	X		X	
Peninsula College Washington	1966	?	No					X			
College of Fisheries, Rhode Island	1967	40	Yes	X	X	X	X	X	X	X	Similar to College in Newfoundland

Key: CF - Commercial Fishermen
FOA - Fishery Oceanograph Aids
FPFS - Fish Processor Food Science
BMR - Boat Maintenance and Repair
ME - Marine Engineering
FGS - Fish Gear Specialists
O - Other

APPENDIX C

TO: North Coast Fishermen

SUBJECT: Commercial Fishermen Questionnaire

Your opinions are needed to provide information about California commercial fishermen and their future needs. To obtain the necessary data, a short questionnaire is attached to this memorandum.

Please fill in all blanks that apply to your knowledge of commercial fishing. A few minutes of your time can provide valuable information needed to help you in the future. Feel free to use the back of the questionnaire for any personal comments about commercial fishing.

When you have completed the form, please return it in the enclosed self-addressed and stamped envelope.

The results of this survey will be available to you through your local fisherman's association.

Sincerely,

/s/ J. Gary Smith

J. Gary Smith, Consultant
College of the Redwoods

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Encls.

COMMERCIAL FISHERMEN QUESTIONNAIRE

Personal Data:

Age: _____ Married: Yes ____ No ____ Number of Dependents: ____

Military Status: Veteran ____ Non-Veteran ____

Branch of Service: ____ Army ____ Air Force

____ Navy ____ Marine Corps

____ Coast Guard ____ National Guard

****

1. How many years have you been commercial fishing? _____

2. What position do you presently hold on a vessel?

____ Crew Member ____ Captain ____ Unemployed

3. What was your gross income last year?

____ less than $4,000 ____ $10,000 to $12,000

____ $4,000 to $6,000 ____ $12,000 to $15,000

____ $6,000 to $8,000 ____ $15,000 to $20,000

____ $8,000 to $10,000 ____ more than $20,000

4. Did your earnings come from working on more than one vessel? _____

5. What type of fishing do you do?

____ Albacore ____ Long-line

____ Bottomfish ____ Salmon

____ Crab ____ Shrimp

____ Other (Specify) _____

6. At what port do you usually deliver?

____ Crescent City ____ Bodega Bay

____ Trinidad ____ Point Reyes

____ Eureka ____ San Francisco

____ Fort Bragg ____ Other

7. What kind of vessel do you work on?

____ Privately owned ____ Company-owned

8. What is the gross tonnage of the vessel you work on? _____

9. What is the overall length of the vessel?

____ 24 feet or less
____ 25 to 39 feet
____ 40 to 64 feet
____ 65 to 84 feet
____ 85 to 99 feet
____ 100 feet and over

10. During your fishing experience, have you ever worked with a "green man"?

____ Yes ____ No

11. How did the man perform his duties?

____ more than his share
____ just his share
____ not able to do his share

12. In your opinion, how long does it take a "green man" to become a good working fisherman?

____ 1 trip
____ 1 to 3 trips
____ 3 to 6 trips
____ more than 6 trips

13. In your opinion, do you feel training in basic fishing skills would have helped you when you started fishing?

____ Yes ____ No

14. Assuming a fishermen training program was available, which of the following subjects do you feel would benefit a beginning fisherman?

____ operation and maintenance of navigational equipment (loran, radar, D.F., etc.)
____ basic navigational procedures (how to read charts, etc.)
____ operation and maintenance of radio equipment
____ safety procedures (fire, life saving, etc.)
____ emergency first aid
____ identification of important fish species
____ general habits of important fish species
____ care and handling of fish at sea (icing, sorting, etc.)
____ assembly and care of basic fishing gear (net mending, crab trap repair, assembly of trolling gear, etc.)
____ knots, rope, and cable splicing
____ basic trouble-shooting skills for marine diesels and auxiliary engines
____ emergency plumbing, electrical, and carpentry skills
____ basic bookkeeping, fish marketing, and economics of fishing
____ principals of fisheries management

15. If the subjects you checked above were available when you started fishing, would you have enrolled in a training program?

____ Yes ____ No ____ No opinion

16. Are there any other subjects you feel should be considered in a fisherman training program?

____ Yes ____ No ____ No opinion

17. If you answered "Yes" on Question 16, write the subjects you feel should be included below:

_____

_____

_____

18. In your opinion, do you feel there are any other areas of the commercial fishing industry that might benefit from special training programs? If so, indicate in the area below:

_____

_____

_____

_____

_____

19. Use the following space for additional remarks or suggestions you might wish to make:

APPENDIX D

Synthesis of the Commercial Fishermen Questionnaire

Personal Data

		Occupational Groups						
		A	B	C	D	E	F	All
Average Age		44	50	43	40	42	44	44
Per Cent Married		100	92	88	93	100	100	94
Average Number of Dependents		3	2	3	3	2	3	3
Per Cent Veterans		63	42	47	53	60	50	51
Branch of Service (in per cent):	Army	33	20	38	25	100	25	34
	Navy	42	20	50	38	-	25	34
	Coast Guard	-	20	12	12	-	25	11
	Air Force	17	-	-	-	-	12	7
	Marine Corps	8	40	-	12	-	12	11
	Merchant Marine	-	-	-	12	-	-	2

Occupational Data

	Occupational Groups						
	A	B	C	D	E	F	All
Average number of years commercial fished	19	16	16	15	12	17	16
Per cent respondent classification							
Captain	63	100	100	100	100	75	88
Crew member	37	-	-	-	-	25	12
Per cent earnings from one vessel	73	100	94	53	80	56	88
Per cent privately owned vessels	79	100	100	100	100	100	95

Gross Annual Income

		Occupational Groups						
		A	B	C	D	E	F	All
Per cent income group:	Less than $4,000	-	33	-	-	-	-	5
	$4,000 to $6,000	5	33	24	7	-	15	15
	$6,000 to $8,000	26	17	6	7	40	23	17
	$8,000 to $10,000	26	-	29	7	-	-	14
	$10,000 to $12,000	5	-	6	7	40	-	7
	$12,000 to $15,000	10	17	12	28	-	-	14
	$15,000 to $20,000	5	-	12	13	20	23	9
Per cent nonresponse		5	-	12	7	-	-	5

Key: A - Bottomfish
B - Salmon
C - Salmon-Albacore
D - Salmon-Albacore-Crab
E - Salmon-Crab
F - Miscellaneous

Fishery Type - All Occupational Groups Combined

Fishery Type	Per Cent
Albacore	48
Bottomfish	31
Crab	36
Longline	5
Salmon	62
Shrimp	5
Other (whaling, cod jigging, and charter boat)	2

Area of Activity

	Occupational Groups						
	A	B	C	D	E	F	All
Per Cent Deliveries to Area							
Crescent City	-	-	12	7	20	31	10
Trinidad	-	-	-	-	-	8	1
Eureka	90	8	53	60	60	54	57
Fort Bragg	5	75	76	40	80	15	43
Bodega Bay	5	42	24	20	60	15	22
Point Reyes	-	17	6	13	40	-	9
San Francisco	-	-	24	13	40	-	11
Other	-	17	59	20	20	15	23

Vessel Particulars

	Occupational Groups						
	A	B	C	D	E	F	All
Average Gross Tonnage	54	8	19	17	11	22	22
Per Cent Overall Length Class							
24 feet or less	-	-	-	-	-	-	-
25 to 39 feet	-	83	18	27	80	22	28
40 to 64 feet	47	17	82	73	20	70	58
65 to 84 feet	53	-	-	-	-	8	14
85 to 99 feet	-	-	-	-	-	-	-
100 feet and over	-	-	-	-	-	-	-

Key: A - Bottomfish
B - Salmon
C - Salmon-Albacore
D - Salmon-Albacore-Crab
E - Salmon-Crab
F - Miscellaneous

Work Experience

	Occupational Groups						
	A	B	C	D	E	F	All
Per cent having experience with untrained crew member	95	75	82	100	100	70	90
Per cent response to untrained person's performance							
did more than his share	-	8	6	20	20	-	9
just did his share	15	42	18	47	60	23	30
did less than his share	74	17	41	40	40	53	48
no opinion	15	33	35	-	-	24	23
Per cent response to time required to train crew member							
one trip	-	-	-	-	20	8	2
one to three trips	10	8	12	20	-	-	9
three to six trips	26	33	59	7	20	38	31
more than six trips	62	50	24	67	40	46	50
no opinion	10	8	6	7	20	8	8

Opinions on Fishermen Training

	Occupational Groups						
	A	B	C	D	E	F	All
Per cent response toward training when asked if it would have helped when they began fishing							
in favor	100	83	65	73	80	92	81
not in favor	-	17	29	20	20	8	15
no response	-	-	6	7	-	-	4
Per cent response toward training after reviewing suggested subjects and asked if they would have enrolled							
in favor	95	51	59	60	40	54	67
not in favor	-	8	12	13	-	23	10
no response	5	33	29	27	60	23	23

Key: A - Bottomfish
B - Salmon
C - Salmon-Albacore
D - Salmon-Albacore-Crab
E - Salmon-Crab
F - Miscellaneous

Subject Preference by Occupational Group

Subjects	Occupational Groups A	B	C	D	E	F	All
1. Care and handling of fish at sea	100	92	65	86	80	77	85
2. Operation and maintenance of navigational equipment	90	75	100	73	80	69	52
3. Basic navigational procedures	68	83	100	80	80	77	83
4. Assembly and care of basic fishing gear	100	83	70	67	60	85	79
5. Basic trouble-shooting skills for marine diesels & auxiliary engines	63	83	94	60	80	54	74
6. Knots, rope and cable splicing	95	58	47	60	80	54	67
7. Emergency first aid	68	67	65	53	40	38	65
8. Safety procedures	68	67	47	60	80	46	60
9. Identification of important fish species	84	42	29	47	60	38	53
10. Emergency plumbing, electrical, and carpentry skills	42	58	59	67	40	31	53
11. Operation and maintenance of radio equipment	53	67	59	47	60	38	52
12. General habits of important fish species	31	58	47	67	40	38	50
13. Basic bookkeeping, fish marketing, and economics of fishing	26	33	59	40	40	23	37
14. Principles of fishery management	21	25	41	33	40	15	28
15. Basic cooking	31	-	6	20	-	-	14

Key: A - Bottomfish
B - Salmon
C - Salmon-Albacore
D - Salmon-Albacore-Crab
E - Salmon-Crab
F - Miscellaneous

APPENDIX E

Groups or Agencies that would Constitute or Cooperate with the Institute

A. Humboldt State College
   1. Marine Station
   2. Peace Corps training programs
   3. Center for Community Development
   4. Division of Natural Resources (Fisheries, Oceanography)
   5. Division of Biological Sciences
   6. National Science Foundation programs

B. College of the Redwoods (Division of Technical and Vocational Education)

C. High Schools (including "Continuation programs")

D. Humboldt Bay Marketing Association

E. Fishermen's Marketing Association (Eureka)

F. Fishermen's Marketing Association (Fort Bragg)

G. Halibut Producers Cooperative (Eureka)

H. United States Department of Interior
   1. Bureau of Commercial Fisheries, Fish and Wildlife Service
   2. Cooperative Fishery Research Unit (Humboldt State College)

I. California Department of Fish and Game (Marine Resources)

J. Butchers' Union (Eureka)

K. Stevedores' Union (Eureka)

L. Effective Citizens League

M. Chambers of Commerce

N. Humboldt Bay Harbor Commission

O. United States Coast Guard

P. University of California Extension Service (Eureka)

Q. Humboldt Bay Development Agency

R. California Seafood Institute

S. United States Navy (Research Unit)

T. California Department of Employment

APPENDIX F

Detailed List of Personnel that would Staff the Institute Office

1. Advisory Board - seven members
   a. Two representatives from Humboldt State College (unsalaried)
   b. Two representatives from College of the Redwoods (unsalaried)
   c. Two representatives from the fishing industry (as represented by the Humboldt Bay Marketing Association, Eureka) (unsalaried)
   d. Executive Officer

2. Secretary-Manager
   a. Secretary-Manager (full-time; salaried)
   b. Secretary (full-time; salaried)

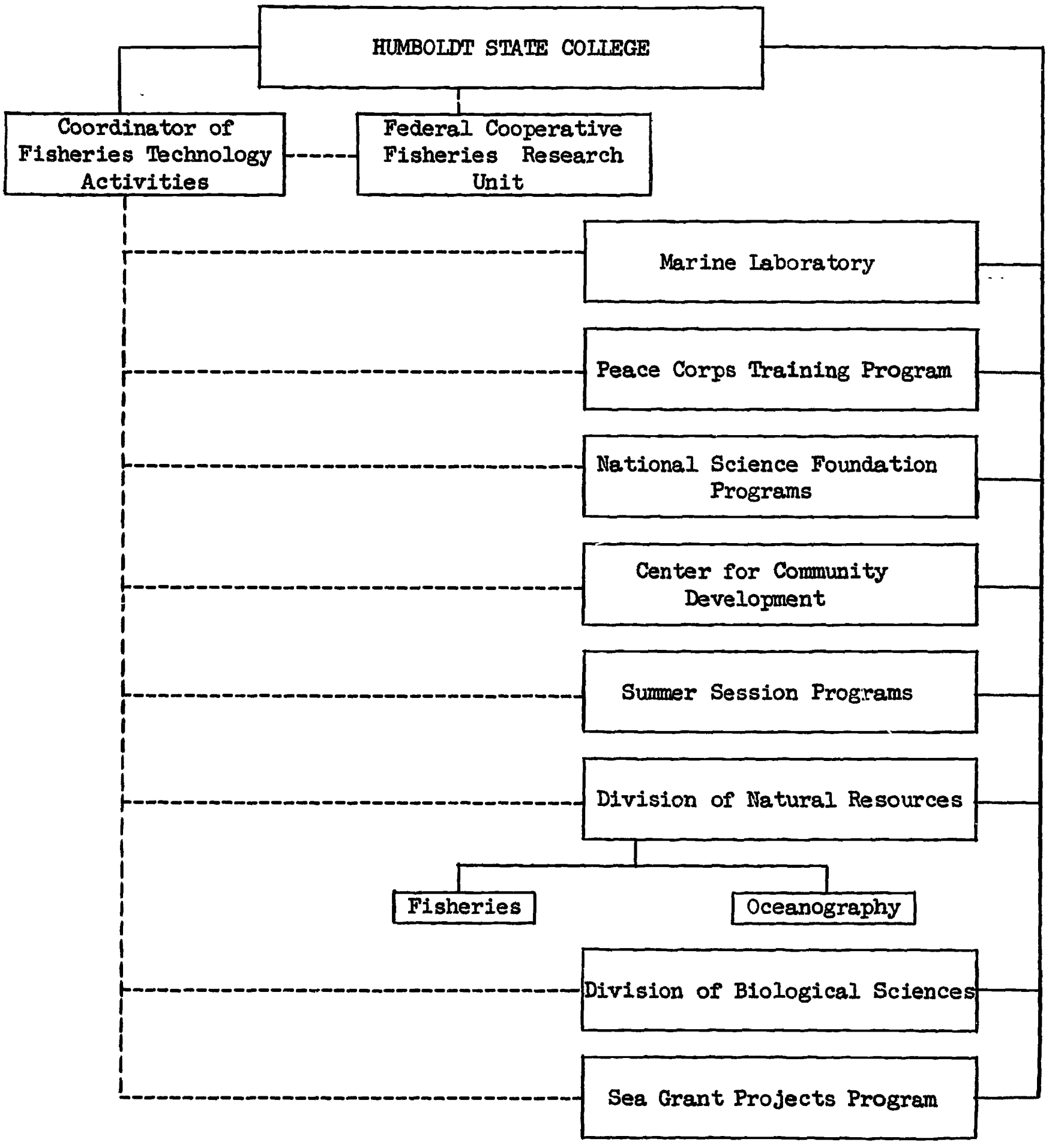
3. Administration
   a. Secretary-Manager
   *b. Fiscal Officer (full-time; salaried)
   *c. Secretary (full-time; salaried)

4. Operations
   *a. Section Chief (full-time; salaried)
   *b. Vessel Captain (full-time; salaried)
   *c. Ship's Crew (full-time; salaried)
   *d. Maintenance and Repair Crew (salaried)
   *e. Gear and Instrumentation Technicians (salaried)
   *f. Project Leaders (salaried)
   *g. Extension Agent (salaried)
   *h. Clerical staff (salaried)

*Personnel to be added as required and when financing is available.

APPENDIX G

Humboldt State College Units that Could be Associated with the Institute of Fisheries Technology



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VT 007 410
What is the Responsibility of Business in Modernizing Education?

Chamber of Commerce of the United States, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Chamber of Commerce of the United States, 1615 H Street, N.W., Washington, D.C. 20006 ($1.50).
Pub Date - nd 24p.

*EDUCATIONAL IMPROVEMENT; *SCHOOL INDUSTRY RELATIONSHIP; *COMMUNITY INVOLVEMENT; ADVISORY COMMITTEES; SCHOOL SURVEYS

The status of education today and the means by which businessmen can help determine local needs in education are discussed. A recent nationwide survey of the Manpower Research Council revealed that businessmen, particularly middle management personnel, have definite views about the adequacy of schools in their communities. Of the 930 business firms interviewed, 57 percent said local schools and training institutions were not meeting their companies' manpower needs, 51 percent said their communities lacked training facilities, and 89 percent said they would serve on advisory programs to review the educational programs of their communities. The discussion addresses business involvement in the modernization of education, the utility of school surveys in educational reorganization and program improvement, and a community approach to modernizing education. (CH)

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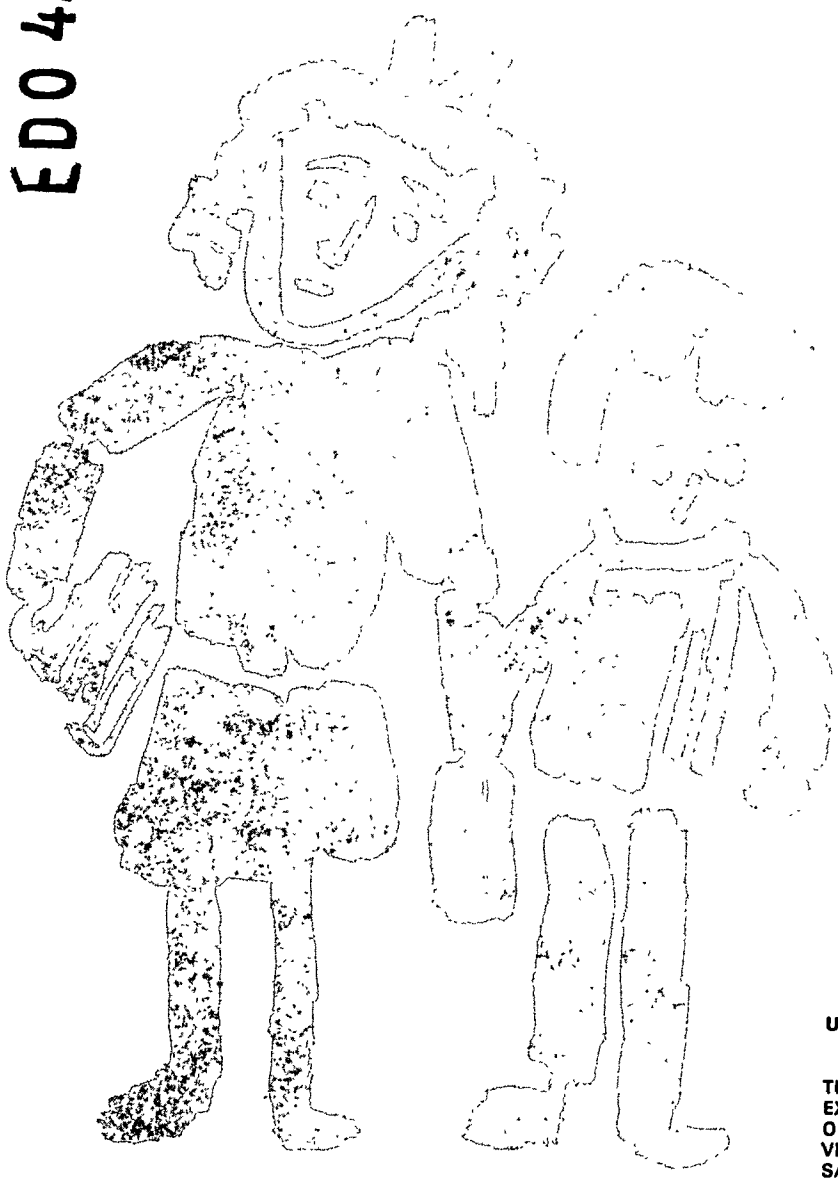

WHAT IS THE RESPONSIBILITY OF BUSINESS IN MODERNIZING EDUCATION?

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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VT 007410

Chamber of Commerce of the United States

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INTRODUCTION

No previous generation has experienced change so rapid, so diverse, so complex as the youth of America now face. New knowledge is exploding into every aspect of American life and is producing as yet uncontrolled—and often unanalyzed—social phenomena.

In a single generation we have moved from recession scarcity for the many to affluence for the many; from relative geographic fixity to continuous mobility; from a shortage of work to a shortage of workmen; from the limitations of organic fuels to the unlimited potential of nuclear energy; and from an acceptance of a common system of values to a fluidity which challenges our moral courage.

To manage such drastic change in our economic and social structure then is the challenge of leaders for today—and tomorrow. To meet the challenge, Samuel Gould has said, "We must change ourselves and at the same time be the foremost interpreters of change—and to neglect either one is to court tragedy."

Public education systems share this challenge to change themselves at the same time that they interpret social and economic change to American youth. As former Education Commissioner Francis Keppel once said, "Education is indeed too important to be left to educators."

But is it enough that a huge "learning industry" has evolved in the last decade to help educators achieve both types of change in American education? Do businessmen generally have any responsibility for modernizing school systems in their communities or regions?

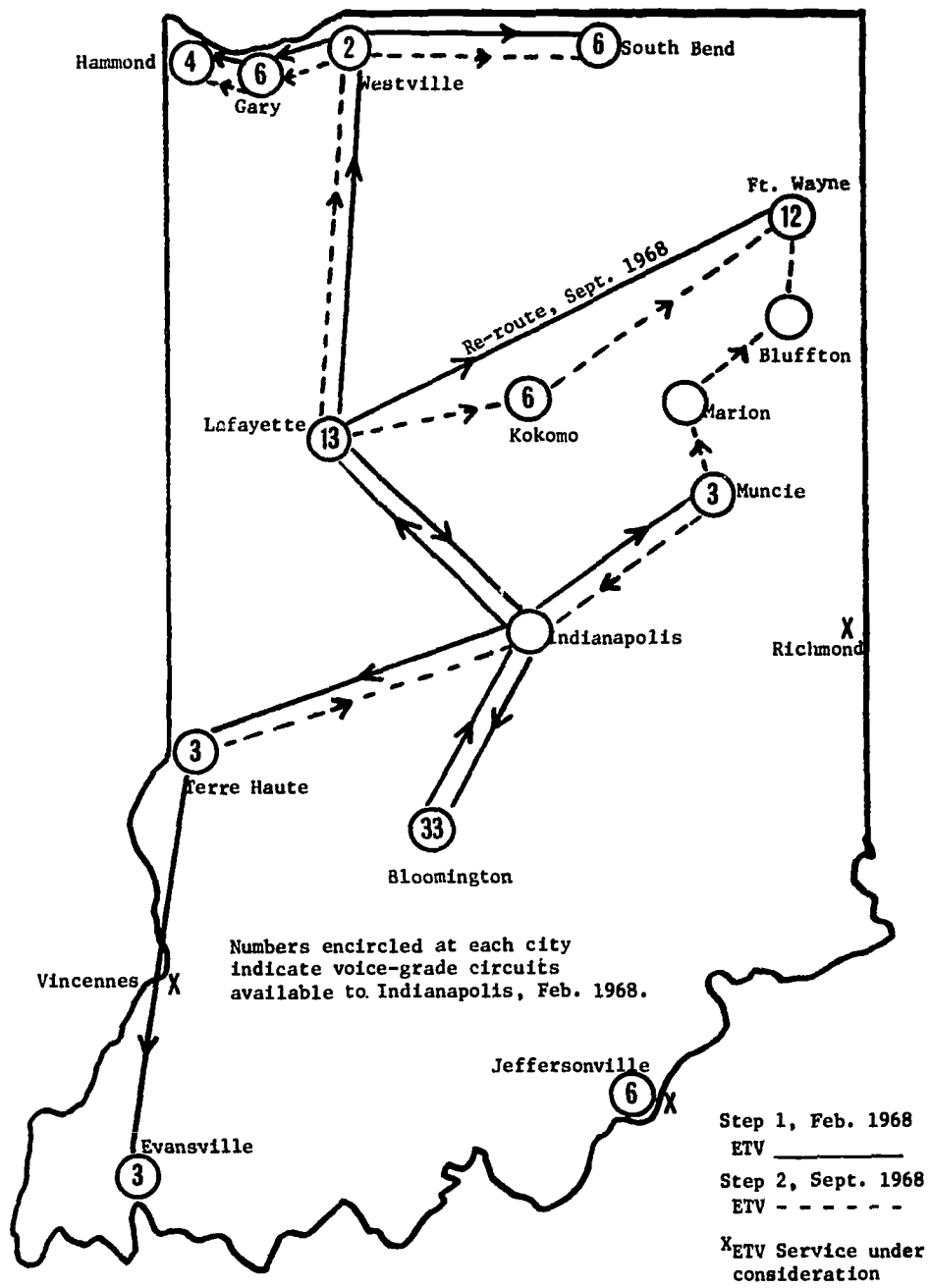
Some educators—and some businessmen—deny any such responsibility other than appropriate financial support for their schools. At the other extreme there are those who feel strongly that much of public education might well be returned to private management through contracts for specific student development, whether in reading or occupational skills.

This pamphlet summarizes the status of education today and the means by which businessmen could help determine local needs in education if they wish to help resolve them. What happens in your schools can be influenced by business leaders whenever they decide to accept responsibilities for changes that are now in process. The National Chamber believes they should do so.

ARCH N. BOOTH
Executive Vice President
Chamber of Commerce of the United States

[1] IN SEARCH OF LEADERS, G. Kerry Smith, Editor. "Leadership in a Time of Educational Change" by Samuel B. Gould, Chancellor, State University of New York, p. 125.

INDIANA TELECOMMUNICATIONS NETWORK



October 30, 1967

Statewide ETV network, with two-way audio communication, now operative in Indiana to interchange full-credit college courses and update competence of professionals, such as pharmacists, lawyers, engineers, doctors, teachers, etc. Example: Some 500 pharmacists met via the network to view a video tape from the University of Pennsylvania, hear a panel of Purdue and Butler University professors discuss new developments, and have a two-way discussion with the panel for an additional hour.

Education—1967-68

Education is the largest and possibly the most important enterprise of the American people. Formal education in 1967-68 involves over 60 million students, teachers, administrators and board members, and annual expenditures in excess of $52 billion. Adult and informal education—by business, proprietary schools, welfare agencies and other groups—involves many other millions of people and another $25 billion. The success or failure of this total enterprise in human growth and development is fundamental to the American concept of "Life, Liberty, and the pursuit of Happiness."

New dimensions of responsibility and new concepts of organizing the learning process demand a reexamination of the adequacy of our educational institutions in preparing Americans for our rapidly changing society. If a "Necessary Revolution in American Education"[2] is in the making, what responsibilities should the business community share with other community groups in encouraging and guiding it?

> "The well-established and highly regarded right of every American to the opportunity for a sound basic education *requires our constant attention* to see that such education is, in fact, always available and available to all."[3]

This proclamation of policy for the Chamber of Commerce of the United States was unanimously endorsed by its voting membership. Its economic, social and political justification has been repeatedly documented in research studies of the National Chamber, such as *"Education—an Investment in People," "Youth and the War on Poverty,"* and the Third Task Force Report on *"The Disadvantaged Poor: Education and Employment."* This has been the theme of programs advocated for the business community for over twenty years.

Business leaders in many communities responded strongly to the postwar challenge of an exploding population. More people meant expanding markets for new products and services—*if* people were ready for them—*if* they were upgraded in their productivity and their appreciation of "better" standards of living—and this depended on "better" education.

Intelligent self-interest justified and required business collaboration

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[2] Francis Keppel, 1966: Harper and Row.
[3] *POLICY DECLARATIONS* of the Chamber of Commerce of the United States.

in a rapid expansion and improvement of school systems, in reorganizing and consolidating school districts and in creating a climate for new methods and new courses of instruction—and a million new classrooms have been built; four-fifths of all school districts have been consolidated; teachers have doubled in number and in salary; and the proportion of Americans completing high school and continuing through college has risen rapidly.

Youth or Schools That Failed

The hard fact remains that schools have increased more in quantity than in the quality of their adaptation to changing social and economic conditions; the inflexibility of prewar processes still prevails in many "self-contained" elementary classrooms and in the "Carnegie unit" concept of secondary education. A "sound basic education" for a technological age has not been (and is not) "always available and available for all" students in many school systems.

Current social conditions, current attitudes of youth, and current shortages of skilled manpower required for economic growth prove this point. Two million unfilled job opportunities today stand in sharp contrast to the millions of functional illiterates who are unemployed or untrainable for better jobs.

The rate of youthful unemployment is triple that of the labor force as a whole and six times as high in metropolitan areas. The divorce rate for teen-age marriages is three to four times the national average, and 44 percent of all brides are teen-agers. The rejection of our affluent society by "well-educated" beatniks, the converse rejection by society of untrained dropouts, the rising rate of youthful crime and delinquency, the high proportion of youth participating in the riots of the long, hot 1967 summer, all prove the point.

If "The Public Schools are Failing"[4] in our urban areas as Christopher Jencks wrote two years ago, this failure is a community failure, in the home, in the church, and in the business community as well as in the school. It is these basic institutions of society that have been delegating more and more of their earlier responsibility for oncoming generations to the schools—from codes of conduct to career counsel-

[4] *Saturday Evening Post*, April 23, 1966.

ing, from physical fitness to the philosophy of life, from safety education to sex education.

Community leaders failed to realize the full portent of mass mobility, of mass communications, and of the skill levels required by increasing cybernation—and the converse desperation of those human beings left further and further behind because of their inability to comprehend or contribute to their community's expanding affluence. While school leaders may have shared in this lack of sensitivity, the community power structures of our cities neither demanded nor enabled their school systems to respond to changing human and economic needs.

The Need for Change

It is clear, therefore, that our schools need the understanding and help of business, and this means much more than dollar support. Every community needs to involve business leaders in its plans to provide more appropriate opportunities for learning and training through more effective teaching and more efficient organization and administration of schools.

Well-rationalized inertia in both business and education continues, however, to deter this conversion of potential business assistance into community action programs for school improvement. The "equal educational opportunity" slogan has continued to delay the development of "appropriate" opportunities in our schools to accommodate diverse aptitudes, abilities and environments of the public school population.[5]

Early identification of individual differences, and curricular adaptation to such differences, continue to be only unrealized goals of most elementary schools; but research has revealed wide variation in mental (and physical) maturation rates because of diverse environmental influences.[6] Elementary classes of 35-40 pupils per teacher are commonplace, especially in our larger cities where routine experiences geared to the "average" of a grade (however graded) often bore

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[5] John W. Gardner: EXCELLENCE: CAN WE BE EQUAL AND EXCELLENT, TOO? Harper and Row: 1967.

[6] For a full review of the educational problems and opportunities of children of the poor, read the Chamber Task Force Report *The Disadvantaged Poor: Education and Employment.*

the brighter and frustrate the duller or disadvantaged child.[7] Where primary education thus does not even get off to a good start, a high rate of "social promotion" becomes expedient. Many of the eventual "dropouts" and some of the "graduates" of such schools fail to get a "sound basic education"—even in the 3R's—and there are no literacy tests for school leaving or even for graduation.

Federally-sponsored research and teacher training programs have brought a "modern" version of academic subjects (e.g., modern mathematics and science) into many schools. Yet vocational-technical career goals appropriate to most of the teen-age population have rarely been of major influence in such curriculum development; potential employers—and their job analysts—have seldom been consulted about the content or skill required for successful careers; evaluation processes have not evolved in terms of readiness for useful living. Both in the business community and the educational profession, the debate continues about the degree to which public education should be responsible for preparing young people for the world of work.[8] Subject-matter academicians seldom collaborate with vocational teachers, and the false dichotomy between knowledge and the application of knowledge, the "knowers" and the "doers," continues to divide both the courses and the personnel of education. Where compulsory academic education continues to frustrate the less verbal, though potentially good "learner by doing," he often becomes a dropout, lacking both self-understanding and readiness for the world of work.[9]

Yet businessmen have seldom pressed boards of education, administrators or teachers to expand and improve guidance programs, work-study programs or on-the-job training, and thus build a prestige for functional education comparable to that of college-preparatory courses. Schools in which the myth of "going to college" dominates curriculum and guidance programs (and parental thinking) are the breeding grounds for delinquency among the youth who need prepara-

---

[7] Joan Roberts: SCHOOL CHILDREN IN THE URBAN SLUMS; Free Press: New York City, 1967. (Mental: pp. 91-98; physical: pp. 10-19)

[8] "The Role of the Secondary Schools in the Preparation of Youth for Employment": Institute for Research on Human Resources, Penn State University.

[9] For further discussion, see *The Disadvantaged Poor: Education and Employment*, pp. 49-53.

tion for the world of work.[10] The rapid rise in the non-college-going school population, especially in larger cities, has magnified this failure to identify occupational aptitudes and abilities and guide them toward career opportunities now going begging.

Federal Answers to State Inertia

The failures of public education to keep up with the needs of a free society entering a technological age are recited in the introductory sections of the many federal laws of the last decade enacted in the field of education and training. Modifications of content and methodology, expansions of scope and responsibility, innovations in organization and instruction—at every level of education, from nursery school to vocational school to graduate school—have been instituted under the aegis of some 175 programs in 40 different federal agencies.

This largely uncoordinated federal involvement in the "revolution" is apparent, but comparable responses of the states through new laws or programs has gone largely unresearched. In fact, so little communication has taken place that an Education Commission of the States was created in 1966 through which a clearinghouse of effective modernization efforts and collective research to guide further improvements might be available to all state and local leaders.[11]

Business Involvement is Essential

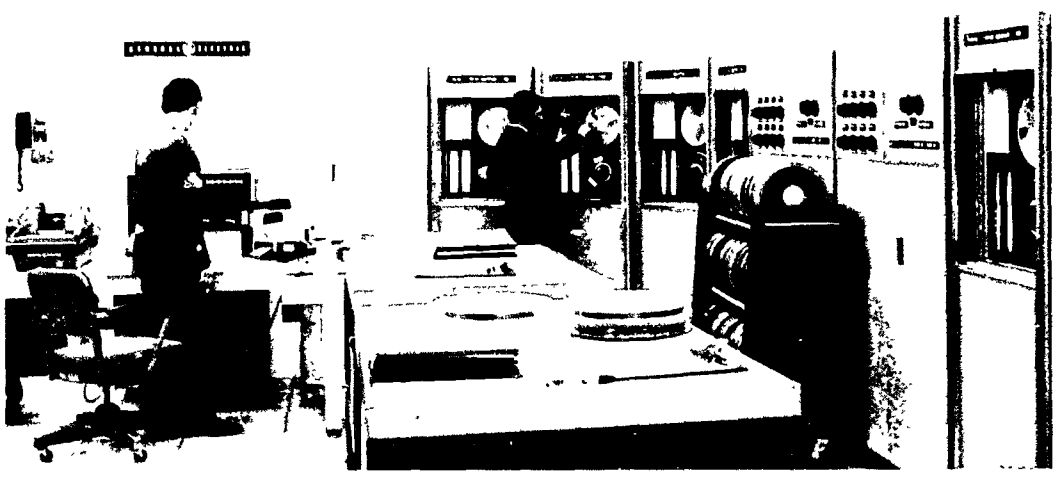
Whether the "revolution" in education continues to be directed by a myriad of federal programs or through a resurgence of state and local leadership, or by some combination of the two, the modernization of our schools will need continuous advice and assistance from the business community.

For example:

1) Any realistic inventory or prediction of needed manpower to guide the expansion of vocational-technical education requires widespread business participation.
2) Any realistic follow up of school graduates or school leavers to discover the quality of their performance in the labor force and in

[10] Business has contributed to this myth by making high school diplomas a prerequisite to jobs requiring little abstract academic knowledge—and by requiring college degrees for technical and supervisory positions, even though only 12% of the present labor force now have such an academic background.

[11] Home Office: Denver, Colorado. Executive Director: Dr. Wendell H. Pierce



Data processing center for New York state's new Basic Educational Data System. BEDS was launched in October, 1967 to collect and make available to all qualified users all pertinent information about the pupils, schools, professional staff members, and curricula of all districts in the state. Three machine-readable report forms will be collected each fall, replacing 22 previous report forms and the innumerable files they filled. Additional sub-systems on school finances, facilities, higher education, and non-public schools are planned.

society—and hence, the effectiveness of their school preparation—requires the participation of business.

3) The modernization of school construction to house new processes of teaching and administration depends on the collaboration of that segment of the business community with educational leaders.

4) Likewise, the expanding "learning industry" must be in two-way communication with school and college leaders if educational technology is to be appropriate and effective; and such technology must also be consonant with business' analyses of its own manpower needs.

In general, the climate for necessary changes in education can only develop rationally and rapidly in a community where two-way communication between business and education is well established and continuous.

Whether such business collaboration in modernizing education is pursued directly through leadership in modernizing state and local school systems, or indirectly through contracts with federal agencies instituting programs to change the schools, there can be no doubt that business must accept a major share of the responsibility for the outcome of the educational revolution now in process.

This pamphlet therefore outlines approaches now being taken, and others that may be feasible, to help businessmen identify and fulfill their responsibility for improving education in their community and state.

Understanding Where You Are

The modernization of educational processes in a community is not achieved by "one-shot" projects which special interests groups may urge and assist the schools to undertake. Realistic "help" in formulating a total community effort to improve educational opportunities must be based on a comprehensive and objective analysis of the facts about the kinds, quantity and quality of the opportunities for education and training actually operating in the overall school system of the region. Only such a full view of school conditions, and their consequences, will reveal necessary and viable changes—and thus suggest priorities in the immediate and longer-range projects that should be pursued.

The comprehensive survey necessary is not alone that of conditions in public education; much information about public school conditions should be available from school authorities. Comparable information about private schools, parochial schools, proprietary schools, and the many types of adult training and education provided by business and other agencies, has rarely been assembled in most communities. It is this full factual data about the total education and training opportunity that should be comprehended by businessmen if they are to understand the alternatives facing their community with respect to necessary improvements in the development of their human resources.

Here are a few of the categories of information which should be assembled by any community group before attempting to identify these alternatives or set priorities for projects that communities should undertake:

—The facts about the collective educational plant of a community, e.g., the number, location, age, and physical condition of buildings used for education and training;

—The operating conditions within present education and training institutions, e.g., the enrollments, the transportation provided, the courses of training offered, the size of classes, the equipments available, and the quality of staff;

—The policies of operation, e.g., school board (state and local) policies, admission policies (of public and non-public schools), and the collaboration between public, private and informal institutions as to policies and planning;

—The fiscal conditions of education and training, e.g., the sources of

income, expenditures per (or costs to) students, and any cost-benefit analyses available;

—Inventories of achievement, e.g., follow-up analyses of graduates (or dropouts) and their performance in college or at work in home and community life;

—The manpower needs of the community, e.g., job opportunities current and anticipated, unemployment rates, crime and delinquency trends, welfare rates;

—The educational programs of diverse community groups, e.g., the religious groups, civic and service clubs, women's clubs, welfare agencies, business and labor;

—The special educational needs of various groups, e.g., the culturally deprived, the highly gifted, the illiterate adult.

With such a comprehensive understanding of the educational conditions prevailing in a community, and agencies already attempting to modify or improve them, community leaders can outline and organize a program of total development for human resources of the region. In this crystallization of an action program, business leaders can and should play a prominent role.

"Consultant and Consulting Organization"[12] identifies the many firms and individuals available to community groups to advise or contract with them in surveying education and training processes now operative or projected. Many colleges and universities also have research and service bureaus that provide consultants, directors or teams of researchers to conduct such surveys. Local and state government agencies can also help.

Emerging Problems—Some Typical Conditions

A comprehensive survey of education and training opportunities in a community will reveal conditions which suggest immediate and/or long-range improvements by:

1) coordinating present programs,
2) introducing new elements (and eliminating others) within existing programs, or
3) by creating entirely new systems to replace or expand those now operating.

[12] Wanserman and Greer, Graduate School of Business and Public Administration, Cornell University, 1966, $15.

Interviews held in Baltimore during their "Operation Native Son." Similar Community Career Opportunities Conferences were held in some 150 cities during the Christmas holidays in 1967, bringing together college seniors and prospective employers.

Recent educational research, including some comprehensive community surveys, has resulted in proposals for new and expanded educational opportunities in some communities and suggests that similar modifications or expansions of educational processes may be desirable in other communities.

A New Emphasis on Pre-School

The phrase "pre-school" education is a misnomer. Changing rates of maturation of young children indicate that organized instruction is appropriate and necessary at earlier ages (especially for disadvantaged children) than those now prescribed by compulsory attendance laws.

The gap in rates of maturation during early childhood appears to have been widened between the disadvantaged slum child and the relatively affluent middle-class child; and this was the primary justifica-

Computer-assisted instruction in geometry for a 10-year-old fifth grader at Florida State's University school. CAI Research at FSU is a joint study with IBM and the Florida State Department of Education.

tion for the Head Start Program of the Office of Economic Opportunity. Much less heralded, but equally necessary, have been recent modifications in state school laws permitting and, in a few states, requiring the establishment of kindergartens for 5-year olds. Educators have long advocated earlier (age three or four) identification of the gifted children of a community whose "head start" may be as significant for society as the special efforts to have the disadvantaged catch up to current norms.

Primary Education

Innovations in "pre-school" education will obviously be ineffective if the sequence in organized development does not carry through into the elementary schools. Recent research has shown that gains achieved in the so-called "Head Start" program appear to be lost when children return to their old sequence in public education.[13] This is less a criticism of the Head Start program than of the regular program in educa-

[13] PHI DELTA KAPPA JOURNAL, March, 1967: "Two Years of Head Start," William F. Brazziel, pp. 345-348.

tion. In the comparatively few school systems where well-organized guidance programs are operating, based on early identification of children's aptitudes and abilities, a trend toward ungraded primary schools is emerging.[14]

In addition, the isolated neighborhood school is being challenged by current proposals in several large cities to replace them with educational parks in the interest of economy and effectiveness. The term "educational park" is being used to describe a cluster of school buildings in a planned campus. These clusters may be limited to kindergarten through elementary school, or may be used to provide a comprehensive secondary school program—and could provide an entire kindergarten through high school program. Their advantages include:

1) they minimize the effects of transfer between schools;
2) they maintain a racially and environmentally balanced pattern proportionate to that of the community;
3) they can avoid overcrowding or underutilization, assuming appropriate busing service;
4) they are more economical to build and operate (than neighborhood schools), and
5) they provide maximum variety in instructional services to accommodate student variations in ability and aptitude.

A social "mix" of environments, races and religions, as well as abilities and aptitudes, is accomplished.[15]

In contrast, the concept of neighborhood schools is receiving additional support in many of the major cities and in some large metropolitan counties where plans are underway to decentralize large school systems and develop administrative policies, curricula, and methods of instruction, which the people of the neighborhood believe to be appropriate to the needs and opportunities of their children.[16]

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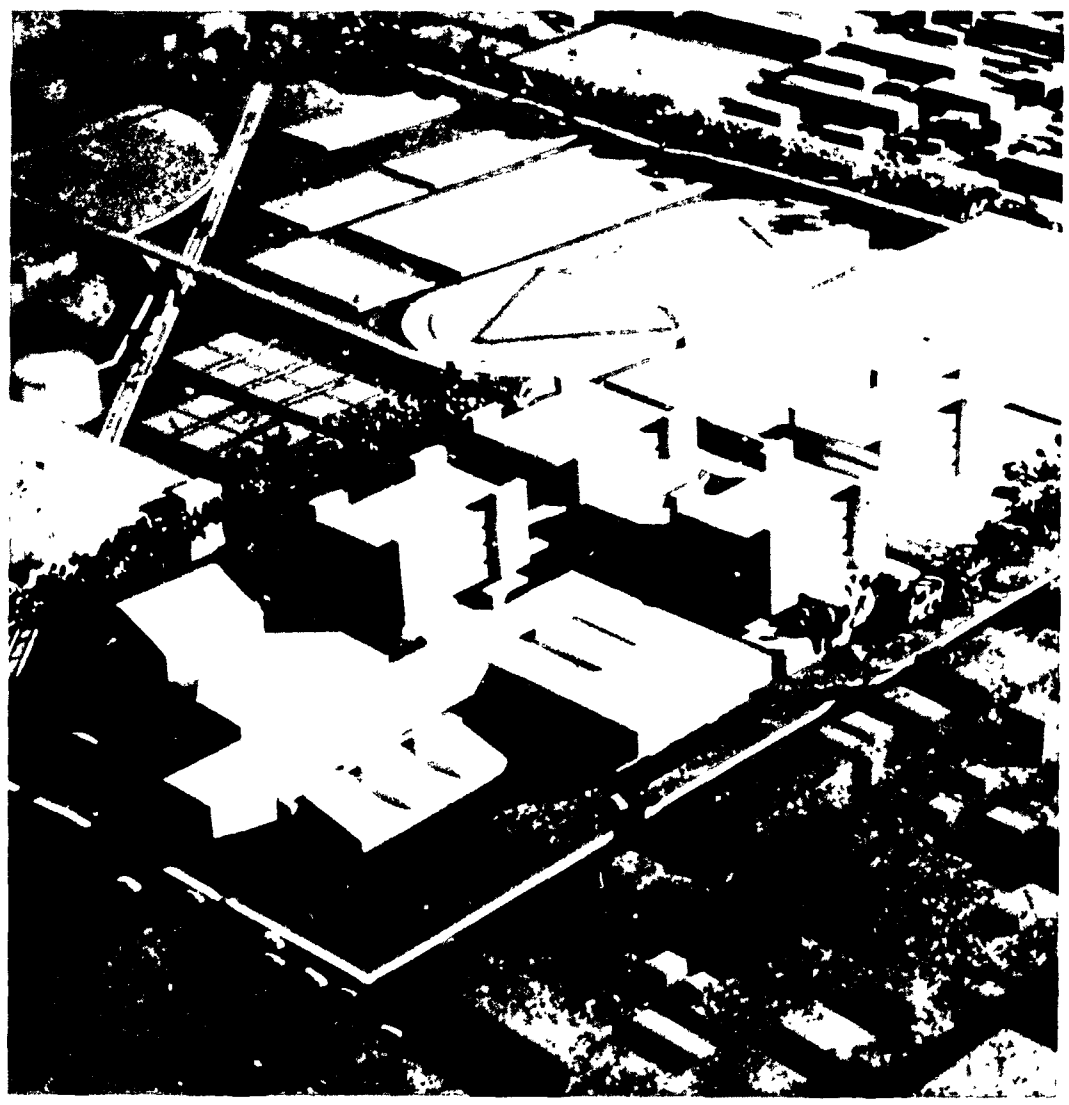
[14] An "ungraded" school identifies each child's abilities and motivates him to use them at his optimum rate. It thus recognizes individual differences—innate and environmental—by stressing "success" in learning at the best rate each child can achieve. In terms of national "norms" of achievement, any child might be at different "grade levels" in different subject areas—and children of the same age would seldom be at the same grade level in all areas.

[15] Campus Site Planning Center, City School District, Syracuse, New York: "The Campus Plan for Future Elementary School Construction."

[16] Such decentralization plans are in various stages of development in New York City, Philadelphia and Chicago and are being discussed in Washington, D.C. and Fairfax County, Virginia.

Intermediate and Secondary Education

Various school authorities are now predicting a reorganization of public education into such an ungraded primary followed by an intermediate school which would, in turn, lead to a new concept of secondary education, such as the comprehensive super-high schools now being planned in some large cities.[17]



One of the five Great High Schools of Pittsburg now being planned in a "massive effort to revolutionize urban education" to provide a new order of excellence through education that is relevant to the abilities and interests of all youth and adults and to the manpower needs of the co.. .unity.

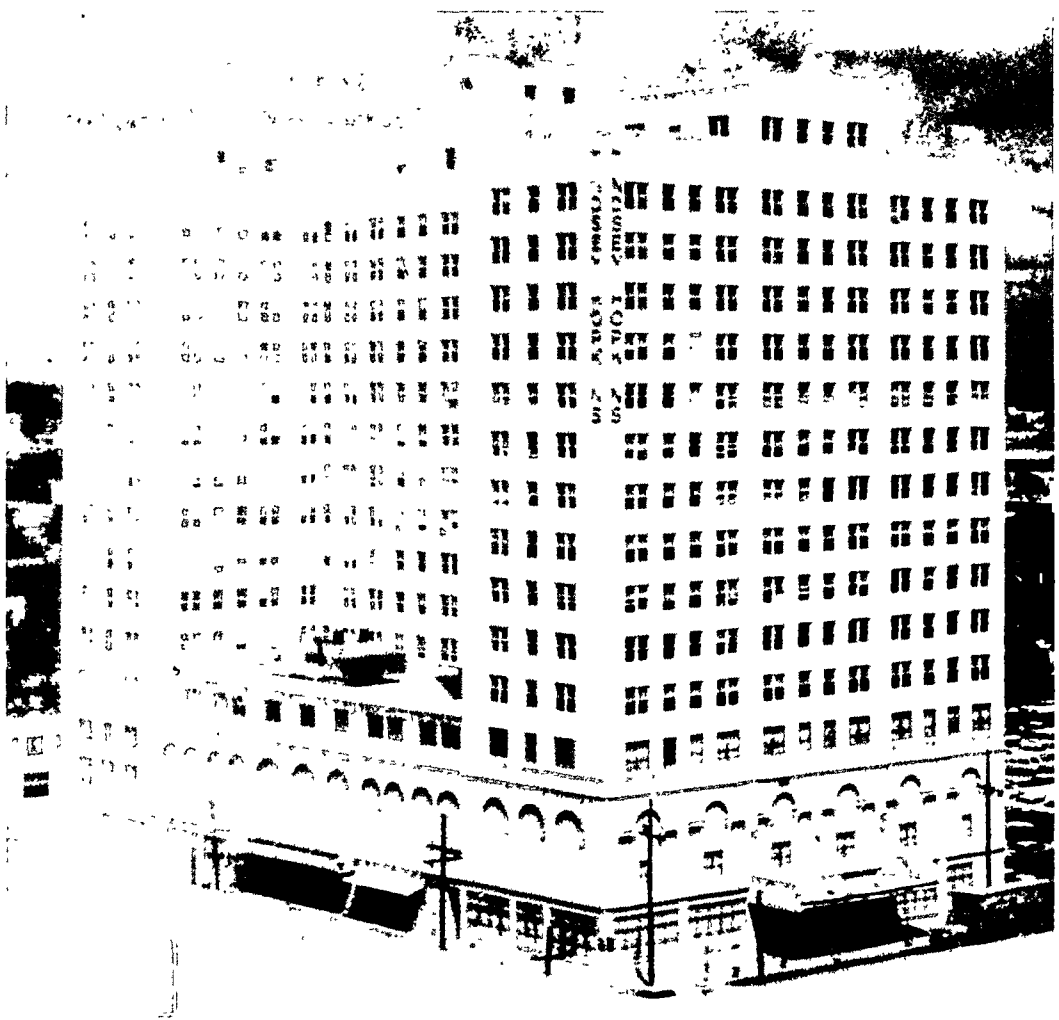
[17] Pittsburgh, Pennsylvania, now planning to replace its present high schools with five massive "great high schools" at the cost of $120 million.

Whether such a sequence occurs in a series of separate schools or an educational park K-12 complex, students would become truly literate before entering the intermediate school. Here they would explore their own aptitudes and interests in the world around them—its languages, its history and its development, and its use of knowledge to meet human needs. When this core of literacy and knowledge essential to citizenship is combined with self-understanding and some comprehension of economic opportunities, career planning can begin, and wise choices made among the diverse courses of study and training which a comprehensive high school offers.

Vocational-Technical Schools

Diverse new programs in vocational-technical education have evolved from recent state and federal legislation. Comprehensive curricula in high schools have been developed, various types of area vocational schools have been started or proposed, and direct articulation with secondary education has been instituted in hundreds of new community colleges. Advisory committees composed of knowledgeable leaders from business, labor and the professions have been essential guides on this expansion.

More regional and state planning of total vocational-technical opportunities is urged by the Education Commission of the States. Cooperative research in school districts to be served by an area vocational school or community college has paid immense dividends—but confusion about new programs exists in the minds of students, and the public, where such coordination has not taken place. A recent report from Jacksonville, Florida illustrates the potential leadership of chambers of commerce in bringing together the leaders of all public, private and business training programs to identify the whole gamut of vocational-technical training available in the region. When all of the course structures and methods of training were thus reviewed in comparison with the manpower needs identified through a job opportunities survey, it became apparent that there were not only duplications in training opportunities, but also gaps. Chambers of commerce thus could coordinate a continuing inventory of manpower needs as they compare with all types of training opportunities available and can be of great assistance, both in curriculum development



Lindsey Hopkins Educational Center, Miami, Florida, which, with 13 branch centers, provides all levels of adult education and served over 65,000 adults without tuition in 1967. Business, professional, and labor leaders, serving on general advisory boards and 50 advisory craft (for specific occupations) committees, keep the curricula, methodology, equipments, guidance, and placement of students in tune with community manpower needs.

and in the guidance processes of both public and private schools.[18]

This need for leadership in coordinating vocational-technical training opportunities was identified in each of the five Total Community Development Seminars held by the Chamber of Commerce of the United States in 1966-67.

[18] Jacksonville Area Chamber of Commerce, Jacksonville, Florida: "Jacksonville Area Industrial Training."

Some "Correctable" Secondary School Conditions Revealed by Research

In the high schools of one community, three-fourths of the students were found to be taking some type of college-preparatory course, even though no more than 50 percent of the graduates were going on to college.

In another community, 50 percent of the ninth grade classes were shown to have later sought direct entry into the labor force, after either dropping out or graduating, but only 20 percent of these ninth graders were guided into vocational or technical training courses.

In surveys of unemployed youth, age 16-21, a large proportion have been found to have had no training for the world of work; among graduates of vocational-technical courses in some communities, many failed to get a job after completing the courses; others sought to continue their education—but lacked prerequisites for it.

Proprietary training schools adapt to the needs of young people and the job opportunities of a region, for the obvious reason that students will not pay for courses that lead nowhere. Comparable market pressures have not yet been brought to bear on many of the public schools, with the result that obsolete courses preparing young people for jobs that no longer exist may continue indefinitely. Some mechanism must be instituted in such communities to collect and disseminate information about changing manpower needs, as they should relate to the guidance of youth, and hence the curricular emphases of the community's education and training processes.

Conversely, in communities that have found their academic processes to not be producing their "share" of "merit scholars" or recipients of scholarships (even though test scores showed no significant deviation from national norms in the ability of students), some mechanism is needed to improve either the curricula, the teaching or the guidance programs of their schools.

The general problem emerging from community surveys as well as research on the learning process is that of "making education relevant" to today's world. This was the thesis presented to the New Jersey Governor's Conference on Education last year by Marvin J. Feldman

of the Ford Foundation,[19] i.e., modern education must be relevant to the living conditions, the economic opportunities and the responsibilities of citizenship in our changing society—as well as the abilities, aptitudes, interests, and environmental backgrounds of students. The "revolution" in education is essentially seeking for such relevance that people of all ages will be habituated in "learning more in less time."

Suggestions for Action in Modernizing Education

Public education comprises the largest segment of the budget of any community, employs the most people, and directly affects the life of almost all citizens. Hence the modernization of education is a critical part of the modernization of local government.

The recent publication of the Chamber of Commerce on the means of "Modernizing Local Government,"[20] therefore, contains generalizations of particular applicability to educational processes. It points out alternatives for communities of different sizes, whether metropolitan, suburban or rural, and well illustrates the relation of school projects to the many state and federal programs that may assist or delay such community action.

State laws, as interpreted by state departments of education, for example, may be controlling influences on needed reorganization or decentralization of school systems or on the taxing and borrowing authority of a community or on the cooperation of adjoining communities.

Whatever the educational conditions may be in a given community, the plan of action described in the Chamber's publication *Forward America—A Process for Mobilizing Total Community Resources,*[21] applies to the specific problems of total human resource development.

A first step must be the assembly of community leaders representing all segments of society and all community organizations which can help plan the comprehensive survey suggested on page 7. While educators, school boards or government officials may be instrumental in calling this conference, they must not dominate it. Nor should busi-

[19] "Making Education Relevant," Marvin J. Feldman, Governor's Conference on Education, Rutgers University.

[20] "Modernizing Local Government," Chamber of Commerce of the United States, 1615 H Street, Washington, D.C. 20006.

[21] *Forward America—A Process for Mobilizing Total Community Resources,* Chamber of Commerce of the United States, 1615 H Street, Washington, D.C. 20006.

nessmen wait for school and government officials to call such a meeting; business can take the initiative through their chamber of commerce and/or other community groups.

From this first meeting, a steering committee can be established to work out a plan for securing such broad-scale information about community school conditions and for financing the research and publicity for its publications.

Following such a survey, the steering committee should call community-wide meetings to consider the conditions revealed and the long- and short-range projects suggested to correct them. Once such tentative goals and priorities in modernizing a community's educational processes are established, special study committees should be organized to collect the best illustrations available and the most effective courses of action which might be considered or recommended to the steering committee, pursuant to any one objective. (See eight categories, pages 7 and 8.)

From the several study committees, the steering committee then can select the most viable immediate and long-range projects. Throughout this process, the committee will, of course, work with the administrative and policy-making bodies of local education or training institutions to secure their concurrence and participation in such an overall community action program; but the outcome must stem from community-wide concern and understanding about educational opportunities.

With such an action program evolving from this total community effort to understand its educational needs, publicity campaigns through all community groups could be undertaken to pursue the projects in the order of their priority.

Research materials and other assistance from a wide variety of governmental and educational organizations could be secured, and the cooperation of the entire education and training community brought to bear on public understanding of the need for and consequences of thus modernizing educational processes.

The National School Boards Association, the National Education Association, the state and national associations of school administrators, the American Vocational Association, and many other professional groups would endorse such a total community effort to improve

the effectiveness of its education and training processes; but the leadership must come from diverse local organizations, including that of the business community.

What Business Can Do

Businessmen, through their many types or organizations, and particularly through education or civic committees of chambers of commerce, are already organized to some degree to bring about such a full comprehension of the educational opportunities available in their community. Many other types of organizations within the community are similarly organized and disposed to determine the "facts" about their community's total education and training process.

Communication between such groups is often negligible, and hence collaboration of all community organizations in a total developmental effort seldom takes place. The resulting diffusion of effort, and sometimes competition among special purpose groups interested in only one aspect of the educational process, may actually deter collective community planning and priority setting.

The question "What Can Business Do," President L. W. Moore of the American Oil Company said recently, "baffles us only because we haven't asked the right people."[22] President Moore urged that "more people in middle management consider it a part of their *normal responsibilities* to study ways to attack such community problems." A recent nation-wide survey of the Manpower Research Council revealed that business has definite views about the adequacy of schools in their communities. Of the 930 business firms interviewed, 57 percent said that local schools and training institutions were not meeting their companies' manpower needs; 51 percent said their community lacked training facilities, and 89 percent said they would "serve on an advisory program to review the educational program" in their communities.

Here is an invitation to organizational leadership! Businessmen are recognizing that an upgrading of productivity as well as consumer appreciation is essential to economic growth and social stability in their communities. As the primary employer of human resources and

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[22]Commencement Address, Institute for Management, Northwestern University School of Business, Evanston, Illinois, August 25, 1967.

the primary source of school revenues, business leaders have unique justification for requesting an evaluation and coordination of community efforts in education. The resources at the command of business for research, for organization, for public relations, and for financing indicate that the business community can be the focal point for developing a climate for change and improvement and will expect their organizations, including chambers of commerce, to collaborate in a total community effort to modernize education.

While business leaders and chambers of commerce should take the long-range view of the "revolution" in their community's schools (see pages 7 and 16), there are many specific problems facing education which businessmen could help resolve at once.

Education Committees in many chambers have already established continuous communications between business leaders and educators through full-day explorations of each other's plants and processes. These Business-Education Days should lead to direct assistance programs, e.g., in student visits to business and industry, and other career guidance projects, in orientation-to-the-community days for new teachers, in advisory committees through which business and professional leaders identify area manpower need and opportunities and appropriate vocational-technical courses, including the equipment and personnel required to teach them.[23]

Even more obvious is the assistance businessmen could offer to school officials in their own area of enterprise—in transportation problems, in maintenance problems, on materials or design of equipments or construction, on improved methods of purchasing, cost accounting, and data processing—and even on personnel practices.

Finally, the best thinking of the business community should be represented in the political arena, where decision-making about education actually takes place. The direction of change in education is primarily the responsibility of boards of education, city councils, state legislatures, and the executives they appoint. Business leaders should influence community and state decisions designed to modernize their educational processes by supporting, or being candidates for office in, such local and state legislative bodies.

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[23] Michigan Bell Telephone and Chrysler Corporation's adoptions of high schools in Detroit illustrate the ability of a company to improve vocational-technical courses and provide auxiliary instruction where necessary, e.g., provide modern equipments, remedial tutoring, on-the-job training, and placement service.

1967-68
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VT 007 442
An Evaluation of The Curriculum Guide for Home Economics in New Hampshire Grades 9-12.

New Hampshire Research Coordinating Unit for Vocational-Technical Education, Concord
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*HOMEMAKING EDUCATION; *HOME ECONOMICS TEACHERS; *CURRICULUM EVALUATION; QUESTIONNAIRES; SECONDARY GRADES; *STATE CURRICULUM GUIDE
NEW HAMPSHIRE

Home economics teachers were surveyed to determine the use and effectiveness of a 1965 New Hampshire Home Economics Curriculum Guide in order to gather qualitative and quantitative data from which inferences may be drawn and necessary change planned. The responses of the 103 teachers classified according to experience are presented by survey questions in tabular form. Strengths and weaknesses of the curriculum guide reported by teachers were: (1) They used it, (2) It was recommended for beginning and student teachers, (3) Only about half of the school's principals and guidance counselors were aware it existed, (4) It was weak in fulfilling needs of unique students and in problem solving, (5) Specialized guides are needed for foods and nutrition, family life, and child development, (6) It is a useful reference tool, (7) The majority feel that revision or supplementation in content areas is needed. The questionnaire is appended. (FP)

VT 007 442

ED042060

Curriculum Guide Evaluation

U.S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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Home Economics

007442

AN EVALUATION

of

THE CURRICULUM GUIDE

for

HOME ECONOMICS

IN NEW HAMPSHIRE

GRADES 9-12

1968

Research Coordinating Unit

New Hampshire State Department of Education

Division of Vocational-Technical Education

Concord, New Hampshire

PREFACE

The development of curriculum and subsequent implementation by local teachers has long been recognized as one of the more effective techniques for directing educational change. However, it is imperative to continuously examine and revise curriculum materials in order to keep pace with the changing needs of students.

In 1965, a New Hampshire Home Economics Curriculum Guide was published by the Division of Vocational-Technical Education, State Department of Education, as an aid to teachers and administrators in developing and improving local programs of home economics. During the past year, an extensive evaluation was made of the use and effectiveness of the Guide in order to gather qualitative and quantitative data from which inferences may be drawn and necessary change planned. Mrs. Marceline Boomer, Interim Consultant for Home Economics Education, directed the project in cooperation with Dr. Richard L. Barker, Director of the New Hampshire Research Coordinating Unit. Miss Jane Brickett, Research Intern, is to be commended for her contribution to the completion of the project.

The responses to a survey instrument administered to all home economics teachers in the state are contained on the following pages. Gratitude is expressed to the teachers who completed the questionnaire and helped produce the significant results which will provide direction for future curriculum efforts. Special thanks are extended to the committee who participated in the development of the instrument:

Mrs. Phyllis Bodwell, Chairman of the Home Economics Department at Milford Jr.-Sr. High School, Milford.

Mrs. Frances Bolles, Chairman of the Home Economics Department at Keene High School, Keene.

Mrs. Edna Mann, Home Economics teacher at Monadnock Regional High School, Swanzey.

Dr. Marjory Wybourn, Chairman of the Home Economics Department at the University of New Hampshire, Durham.

HOME ECONOMICS CURRICULUM GUIDE EVALUATION STUDY

In 1965, the Vocational-Technical Education Division of the New Hampshire State Department of Education, with the help of home economics teacher educators and teachers throughout the state, compiled a Curriculum Guide for Home Economics teachers. In the spring of 1968, the Guide was evaluated by sending out survey instruments (see Appendix, page 25) to all home economics teachers in the state. One hundred and three teachers (75%) returned the instrument. The figures reported herein are based on these returns. Returns were separated according to the number of years of teaching experience possessed by respondents. Those with five or less years experience were put into one category and those with six or more years into the other category. This was done for comparison reasons. Results were also recorded as a percentage of the total number of responses. The resulting data are presented by questions as asked on the original survey instrument.

TABLE I

OVER-ALL APPRAISAL OF THE CURRICULUM GUIDE

Responses	1-5 Years Experience	6 Or More Years Experience	All Teachers
Very Useful	19%	43%	34%
Fairly Useful	76%	43%	56%
Of Little Value	5%	12%	9%
Of No Value	0%	2%	1%
Total	100%	100%	100%

Table I indicates that the Guide was definitely useful as 90% of the teachers responding found it either "very" or "fairly useful." Teachers with less experience in the classroom were more cautious in their answers, but overwhelmingly indicated that the Guide is "fairly useful." This correlates very

closely with the next question which was concerned with the regularity of a teacher's reference to the Curriculum Guide.

TABLE 2

REGULARITY OF REFERENCES TO THE CURRICULUM GUIDE

Responses	1-5 Years Experience	6 Or More Years Experience	All Teachers
Regularly	17%	30%	25%
Occasionally	56%	50%	52%
Seldom	12%	18%	16%
Never	0%	2%	1%
No Response	15%	0%	6%
Total	100%	100%	100%

Figures in Table 2 show that those who found the Guide "very useful" also tended to use it regularly. However, it is interesting to note that the figures are slightly lower in Table 2 when compared to Table 1. One might therefore assume that most teachers (77%) use the Guide at least occasionally.

TABLE 3

RECOMMENDING CURRICULUM GUIDE TO BEGINNING TEACHERS

Responses	1-5 Years Experience	6 Or More Years Experience	All Teachers
Yes	97%	92%	94%
No	3%	3%	3%
No Response	0%	5%	3%
Total	100%	100%	100%

Table 3 shows that 94% of all teachers recommend the Guide to beginning teachers. It is interesting to note that a greater percentage of less experienced teachers recommended the Guide as they had tended to be more cautious in appraising its usefulness.

TABLE 4

AWARENESS OF THE CURRICULUM GUIDE BY GUIDANCE COUNSELORS AND PRINCIPALS

Responses	1-5 Years Experience	6 Or More Years Experience	All Teachers
	GUIDANCE COUNSELORS		
Yes	27%	52%	42%
No	15%	2%	7%
Uncertain	46%	38%	41%
No Response	12%	8%	10%
Total	100%	100%	100%
	PRINCIPALS		
Yes	54%	50%	51%
No	5%	0%	2%
Uncertain	34%	45%	41%
No Response	7%	5%	6%
Total	100%	100%	100%

Table 4 depicts the awareness of the Curriculum Guide by guidance counselors and principals. It appears that there is not a great amount of communication between home economics teachers and these two groups. This shows up in the large percentage (41%) of uncertain responses. Many comments were written on the survey instrument to the effect that the principal and guidance counselor had been given copies of the Curriculum Guide, but that the teacher was not certain if they were aware of its contents. Perhaps this is due to little follow-up communication. It appears that teachers have more communication with the principal, as far as curriculum matters are concerned, than with the guidance counselor. This is demonstrated by 51% of all teachers responding "yes" to the principal's awareness and 42% to the guidance counselor's awareness. This relationship is especially true with less experienced teachers.

TABLE 5

HELP CURRICULUM GUIDE GIVES IN PLANNING WITH STUDENTS

Responses	1-5 Years Experience	6 Or More Years Experience	All Teachers
Yes	66%	60%	62%
No	22%	22%	23%
No Response	12%	18%	15%
Total	100%	100%	100%

Table 5 shows that the Curriculum Guide definitely helps teachers in planning curriculum with the students as indicated by a 62% "yes" response from all teachers. Many of those who checked "no" made the comment that, in their particular school, curriculum is not planned with the students, but rather by the teachers. It is interesting to note that those less experienced teachers use the Guide slightly more in planning with the students.

TABLE 6

HELP THE CURRICULUM GUIDE GIVES IN FULFILLING THE NEEDS OF STUDENTS

Group of Students		Yes	No	Partially	Does Not Apply	No Response	Total
Boys	1-5 Years Experience	0%	17%	12%	50%	21%	100%
	6 Or More Years Experience	5%	8%	15%	50%	22%	100%
	All Teachers	3%	12%	14%	50%	21%	100%
Youth With Special Needs	1-5 Years Experience	7%	16%	51%	14%	12%	100%
	6 Or More Years Experience	13%	10%	28%	11%	38%	100%
	All Teachers	11%	12%	38%	12%	27%	100%
Less Mature Individuals	1-5 Years Experience	18%	14%	41%	7%	20%	100%
	6 Or More Years Experience	20%	8%	39%	5%	28%	100%
	All Teachers	19%	11%	39%	6%	25%	100%

Table 6 (cont'd)

Group of Students	Teachers	Yes	No	Partially	Does Not Apply	No Response	Total
Slow Learners	1-5 Years Experience	23%	20%	41%	3%	13%	100%
	6 Or More Years Experience	20%	4%	39%	6%	31%	100%
	All Teachers	21%	11%	40%	4%	24%	100%
College-Bound Youth	1-5 Years Experience	36%	5%	27%	16%	16%	100%
	6 Or More Years Experience	26%	2%	26%	17%	29%	100%
	All Teachers	30%	3%	27%	17%	23%	100%
Students in Wage-Earning	1-5 Years Experience	12%	9%	21%	35%	23%	100%
	6 Or More Years	12%	12%	15%	33%	28%	100%
	All Teachers	12%	11%	17%	24%	26%	100%

Table 6 gives a measure of the helpfulness of the Curriculum Guide in fulfilling the needs of special groups of students. All that can be concluded as to the Guide's help in fulfilling the needs of boys is that it is not particularly effective. However, with 71% of all teachers responding that the area does not apply, or not responding at all, this conclusion is not decisive. This evidently is the result of a very small enrollment of boys in home economics classes in the state, thus creating an unrealistic sample to determine the effectiveness of the Guide. It appears that one should conclude that the Guide is weak concerning youths with special needs as 38% of all teachers responded that it is only "partially" helpful. This would indicate a definite area in which the Guide could be strengthened. Within this group of students as elsewhere in Table 6, it can be noticed that the experienced teacher has not responded as often as the beginning teacher. As there is little in the Guide concerning the less mature individual, it is therefore natural that it would not help fulfill the needs of this particular group to any extent. Thus, it is not surprising to see most of the responses (39% of all teachers) falling into the "partially helpful" category.

The Guide appears to be just about as useful for the slow learner as for the less mature individual as depicted by a 40% "partial" response by all teachers. It is interesting to note that the beginning teacher finds the Guide less useful than the experienced teacher in this area. The Guide appears to be helpful concerning college-bound youths as 57% of all teachers responding found it of some help, with a larger percentage answering "yes" (30%) than "partially helpful" (27%). Only 3% of all teachers found the Guide of no help at all for this group of students. This would seem to indicate that one of the strong areas of the Guide is in the area of the college-bound youth and perhaps there is already an adequate amount of information concerning this group in comparison with the other five groups of students. As far as wage-earning students are concerned, the reply is ambivalent as there is nothing specific in the Guide concerning these students and there are very few of these programs in New Hampshire high schools. This explains the high response in the "does not apply" (24%) and "no response" (26%) categories indicated by all teachers. This also explains the small, but about even, distribution of responses falling into the "yes" (12%), "no" (11%), and "partially helpful" (17%) categories. Therefore, it is impossible to arrive at an accurate evaluation of the Guide's usefulness in this area when the positive response is so small and divided. Table 6 in its entirity indicates that the Curriculum Guide is rather weak in fulfilling the needs of unique groups of students. It therefore appears that the Guide was primarily designed to fulfill the needs of home economics students who follow the regular program of study.

TABLE 7

THE CLASSES IN WHICH THE CURRICULUM GUIDE IS MOST USED

Class	1-5 Years Experience	6 Or More Years Experience	All Teachers
7th and 8th Grade	22%	18%	20%
Home Economics I	22%	16%	18%
Home Economics II	14%	17%	16%
Home Economics III	27%	20%	23%
Home Economics IV	0%	5%	3%
Specialization	6%	9%	9%
No Response	6%	15%	11%
Total	100%	100%	100%

There are several observations that can be made about Table 7. The first is that the Curriculum Guide is used most often in Home Economics III (23%) and in the 7th and 8th grades (20%). These figures tend to reflect the classes which the individual teachers taught. Also, Home Economics IV was not included in the original survey instrument, so those responding in that category had to write it in. Therefore, the figure is not accurate. Taking into consideration that 7th and 8th grade classes and Home Economics I have the greatest number of classes, it is a reasonable conclusion that the Guide is more useful in Home Economics III than the figures indicate.

TABLE 8

FREQUENCY OF EVALUATION OF STATED OUTCOMES USING THE CURRICULUM GUIDE

Responses	1-5 Years Experience	6 Or More Years Experience	All Teachers
Always	11%	5%	7%
Often	26%	54%	43%
Seldom	42%	25%	32%
Never	13%	2%	6%
No Response	8%	14%	12%
Total	100%	100%	100%

From Table 8, it is evident that most teachers do some evaluation to determine if they have accomplished the stated outcomes in the Guide. The experienced teacher does this considerably more often but appears to be rather cautious in the use of the word "always." One can conclude that evaluation is being done fairly regularly and note the small percentage (18%) of those who answered "never" or who did not respond.

TABLE 9

DEGREE OF ASSISTANCE THE CURRICULUM GUIDE OFFERS THE TEACHER IN GIVING CONSIDERATION TO THE STUDENTS' NEEDS

Area	Teachers	Extensive	Adequate	Limited	None	No Response	Total
Information To Be Acquired	1-5 Years Experience	14%	55%	9%	5%	17%	100%
	6 Or More Years Experience	12%	47%	17%	0%	24%	100%
	All Teachers	13%	50%	14%	2%	21%	100%
Interest To Be Cultivated	1-5 Years Experience	7%	52%	22%	2%	17%	100%
	6 Or More Years Experience	10%	42%	20%	0%	28%	100%
	All Teachers	9%	46%	20%	1%	24%	100%

Table 9 (cont'd)

Area	Teachers	Extensive	Adequate	Limited	None	No Response	Total
Skills To Be Developed	1-5 Years Experience	19%	38%	22%	2%	19%	100%
	6 Or More Years Experience	10%	37%	27%	0%	26%	100%
	All Teachers	14%	37%	25%	1%	23%	100%
Attitudes And Values To Be Developed	1-5 Years Experience	24%	36%	19%	2%	19%	100%
	6 Or More Years Experience	24%	36%	10%	0%	30%	100%
	All Teachers	24%	35%	14%	1%	26%	100%
Developing Ability in Problem Solving	1-5 Years Experience	7%	29%	40%	5%	19%	100%
	6 Or More Years Experience	8%	17%	41%	0%	34%	100%
	All Teachers	8%	22%	40%	2%	28%	100%

Figures in Table 9 indicate that the Curriculum Guide adequately assists the teacher in giving consideration to the student's needs except in the area of developing ability in problem solving. The strongest parts of the Guide are in (1) information to be acquired, (2) attitudes and values to be developed, and in (3) interest to be cultivated. In developing ability in problem solving, the Guide appears to be exceptionally weak as evidenced by many teachers checking "limited assistance." This indicates a possible area for improvement. It is interesting to note the large percentages of no responses, particularly among the experienced teachers.

TABLE 10

OPINION ON SPECIALIZATION COURSE GUIDES

Subject	Teachers	Yes	No	Uncertain	Does Not Apply	Response	Total
Foods and Nutrition	1-5 Years Experience	53%	5%	9%	0%	33%	100%
	6 Or More Years Experience	62%	2%	5%	2%	29%	100%
	All Teachers	58%	3%	7%	1%	31%	100%
Child Growth and Development	1-5 Years Experience	52%	4%	7%	4%	33%	100%
	6 Or More Years Experience	48%	2%	2%	3%	45%	100%
	All Teachers	49%	3%	4%	4%	40%	100%
Clothing and Textiles	1-5 Years Experience	43%	5%	12%	2%	38%	100%
	6 Or More Years Experience	41%	7%	2%	2%	48%	100%
	All Teachers	42%	6%	6%	2%	44%	100%
Housing and Home Furnishings	1-5 Years Experience	41%	7%	10%	7%	35%	100%
	6 Or More Years Experience	40%	2%	3%	2%	53%	100%
	All Teachers	40%	4%	6%	4%	46%	100%
Family Life Education	1-5 Years Experience	65%	2%	2%	2%	29%	100%
	6 Or More Years Experience	52%	0%	3%	2%	43%	100%
	All Teachers	57%	1%	3%	2%	37%	100%
Senior Survey	1-5 Years Experience	42%	2%	4%	9%	42%	100%
	6 Or More Years Experience	34%	0%	3%	3%	60%	100%
	All Teachers	37%	1%	4%	6%	52%	100%

Table 10 shows that teachers either have a definite interest in the development of specialization guides to complement the existing Curriculum Guide or that they have no interest in them whatsoever. This is indicated by the large number of responses in the "yes" column and by those who did not answer at all. The greatest interest shown in specialization guides is in the areas of (1) foods and nutrition, (2) family life education, and (3) child growth and development. In these areas, 50% or more teachers would like further guidance. The smallest amount of interest shown was in a specialization guide for senior survey where 37% of all teachers checked "yes." This response leads one to the conclusion that the development of specialization guides is desired by home economics teachers. It is interesting to note that in all areas, except for foods and nutrition, the less experienced teachers were more in favor of specialization guides than the experienced teachers. Furthermore, the experienced teachers demonstrated less interest as evidenced by the substantially greater frequency of "no" responses.

TABLE 11

USE FREQUENCY OF THE CURRICULUM GUIDE FOR SPECIFIC REFERENCES

Use	Teachers	Regularly	Occasionally	Seldom	Never	No Response	Total
To Plan Course of Study	1-5 Years Experience	37%	53%	5%	0%	5%	100%
	6 Or More Years Experience	53%	20%	9%	3%	15%	100%
	All Teachers	46%	34%	7%	2%	11%	100%
To Devise Lesson Plans	1-5 Years Experience	10%	59%	22%	7%	2%	100%
	6 Or More Years Experience	13%	50%	10%	10%	17%	100%
	All Teachers	12%	53%	15%	9%	11%	100%

Table 11 (cont'd)

Use	Teachers	Regularly	Occasionally	Seldom	Never	No Response	Total
To Seek Out Learning Experiences	1-5 Years Experience	21%	60%	12%	0%	8%	100%
	6 Or More Years Experience	27%	40%	15%	5%	13%	100%
	All Teachers	24%	48%	14%	3%	11%	100%
As an Aid in Selecting Instructional Materials	1-5 Years Experience	21%	56%	12%	2%	7%	100%
	6 Or More Years Experience	27%	53%	7%	3%	10%	100%
	All Teachers	24%	54%	9%	3%	10%	100%
To Teach Directly From	1-5 Years Experience	0%	19%	22%	45%	14%	100%
	6 Or More Years Experience	0%	22%	27%	28%	23%	100%
	All Teachers	0%	21%	24%	35%	20%	100%
To Fill Out Local and State Reports	1-5 Years Experience	5%	29%	9%	43%	14%	100%
	6 Or More Years Experience	3%	32%	10%	27%	28%	100%
	All Teachers	4%	31%	10%	33%	22%	100%

The responses of home economics teachers, as shown in Table 11, demonstrate that the Curriculum Guide is being used as a reference for teaching, its basic purpose. This is indicated by 80% of all teachers using the Guide to plan a course of study, 65% using it to devise lesson plans, 72% using it to seek out learning experiences, and 78% of these teachers using it as an aid in selecting instructional materials. The Guide is not designed to teach directly from and 59% of the teachers do not use it for such purposes. Not a single teacher responded that she regularly taught directly from the Guide, which shows appropriate usage. Also, few teachers use it to fill out local and state reports. It is interesting to note that a great number of responses are in the "occasionally" column which appears to indicate that teachers are not dependent on the Guide as a single source of information.

TABLE 12

APPROPRIATENESS AND MEANINGFULNESS OF THE SUGGESTIONS UNDER EACH GOAL IN THE CURRICULUM GUIDE
(Suggestions under each goal are appropriate and meaningful)

Responses	1-5 Years Experience	6 Or More Years Experience	All Teachers
Strongly Agree	8%	2%	5%
Agree	66%	65%	65%
Disagree	8%	0%	3%
Strongly Disagree	0%	0%	0%
No Response	18%	33%	27%
Total	100%	100%	100%

Table 12 indicates that the suggestions under each goal are definitely appropriate and meaningful. It appears that a good job was done in determining the goals and that there is little dissatisfaction with these suggestions.

TABLE 13

USEFULNESS OF THE CURRICULUM GUIDE IN SPECIALIZED AREAS

Area	Teachers	Extensive	Adequate	Limited	None	Does Not Apply	No Response	T.
Foods and Nutrition	1-5 Years Experience	12%	46%	10%	0%	0%	32%	100%
	6 Or More Years Experience	9%	37%	17%	0%	4%	33%	100%
	All Teachers	11%	40%	14%	0%	2%	33%	100%
Personal and Family Relationships and Development	1-5 Years Experience	13%	33%	20%	3%	3%	28%	100%
	6 Or More Years Experience	6%	39%	16%	0%	8%	31%	100%
	All Teachers	9%	36%	18%	1%	6%	30%	100%
Management	1-5 Years Experience	7%	22%	32%	2%	0%	37%	100%
	6 Or More Years Experience	2%	38%	17%	0%	3%	40%	100%
	All Teachers	4%	32%	23%	1%	2%	38%	100%

Table 13 (cont'd)

Area	Teachers	Extensive	Adequate	Limited	None	Does Not Apply	No Response	T.
Clothing and Textiles	1-5 Years Experience	5%	35%	28%	2%	2%	28%	100%
	6 Or More Years Experience	7%	30%	17%	0%	10%	36%	100%
	All Teachers	6%	32%	21%	1%	7%	33%	100%
Health and Home Safety	1-5 Years Experience	5%	27%	22%	0%	5%	41%	100%
	6 Or More Years Experience	10%	32%	18%	2%	2%	36%	100%
	All Teachers	8%	30%	20%	1%	3%	38%	100%
Child Growth and Development	1-5 Years Experience	5%	38%	18%	3%	10%	28%	100%
	6 Or More Years Experience	3%	32%	18%	0%	12%	36%	100%
	All Teachers	4%	34%	17%	1%	11%	33%	100%
Housing & Home Furnishings	1-5 Years Experience	10%	28%	18%	5%	7%	32%	100%
	6 Or More Years Experience	2%	27%	22%	0%	8%	41%	100%
	All Teachers	5%	27%	20%	2%	8%	38%	100%
Consumer Education	1-5 Years Experience	7%	22%	29%	3%	0%	39%	100%
	6 Or More Years Experience	8%	23%	25%	0%	2%	42%	100%
	All Teachers	8%	23%	27%	1%	1%	40%	100%

Table 13 is in response to the question: "To what degree is the Guide useful in the following areas?" Results indicate the usefulness of the Guide in the rank given in the table. Order was determined by adding the extensive and adequate columns together and ranking the areas according to that percentage. It is found that the first six areas (1) Foods and Nutrition, (2) Personal and Family Relationships and Development, (3) Management, (4) Clothing and Textiles, (5) Health and Home Safety, and (6) Child Growth and Development) all rank very closely (38% to 51%).

The last two areas (Housing and Home Furnishings) rank somewhat lower with the largest numbers concentrated in the "limited" and "adequate" columns. It should be pointed out that the large number of "no responses" (about one-third of the respondents) tend to make any conclusions questionable.

TABLE 14

TEACHERS RECEIVING ORGANIZED INSTRUCTION ON THE USE OF THE CURRICULUM GUIDE

Responses	1-5 Years Experience	6 Or More Years Experience	All Teachers
Yes	50%	61%	57%
No	48%	34%	39%
No Response	2%	5%	4%
Total	100%	100%	100%

TABLE 15

METHOD OF RECEIVING INSTRUCTION

Method	1-5 Years Experience	6 Or More Years Experience	All Teachers
Undergraduate	38%	0%	17%
Student Teacher	25%	0%	11%
Master's Program	0%	0%	0%
Workshop or Group Conference	9%	79%	48%
Individual Conference	28%	18%	23%
Committee Work	0%	2%	1%
Total	100%	100%	100%

Table 14 shows that more than half of all teachers (57%) have received organized instruction in the use of the Guide. A large portion of the beginning teachers received their instruction in college, while the more experienced teacher received her instruction in a group conference or workshop as demonstrated in Table 15.

TABLE 16

DESIRE FOR FURTHER INSTRUCTION ON THE USE OF THE CURRICULUM GUIDE

Response	1-5 Years Experience	6 Or More Years Experience	All Teachers
Yes	34%	22%	27%
No	49%	48%	48%
No Response	17%	30%	25%
Total	100%	100%	100%

Table 16 indicates that many of those who have not received instruction on the use of the Guide in the past would like to receive it now. One should point out that the large response in the "no" column (48%) is not discouraging as the Guide is not new and many teachers have already received a sufficient amount of instruction.

TABLE 17

THE ENCOURAGEMENT OF STUDENT TEACHERS TO USE THE CURRICULUM GUIDE

Response	1-5 Years Experience	6 Or More Years Experience	All Teachers
Yes	20%	30%	26%
No	12%	3%	7%
Does not apply to me. I have had none since 1965.	63%	50%	55%
No response	5%	17%	12%
Total	100%	100%	100%

A large percentage (55%) of teachers have not had a student teacher since the Guide was published. However, those who have tend to encourage them to use the Guide quite consistently as evidenced by 26% of all teachers, out of 33% who have student teachers, responding "yes" in Table 17.

TABLE 18

DISTRIBUTION OF TEACHERS BY CLASSES TAUGHT

Class	1-5 Years Experience	6 Or More Years Experience	All Teachers
7th Grade	56%	45%	50%
8th Grade	61%	50%	54%
Home Economics I	66%	55%	59%
Home Economics II	51%	52%	51%
Home Economics III	66%	48%	55%
Home Economics IV	12%	18%	16%
Specialization	32%	42%	37%
No Response	5%	13%	10%

Table 18 shows the distribution of teachers by classes in which they teach. The largest number (59%) of teachers are in Home Economics I classes, with a decline in the upper level classes. Teachers tend to teach at a number of different levels within their school system. Also, it is noted that concentrations of the less experienced teachers are in the lower levels.

TABLE 19

USEFULNESS OF THE SUGGESTIONS IN THE CURRICULUM GUIDE IN DEVELOPING PLANS

Item	Teachers	Very Useful	Fairly Useful	Of Little Value	Of No Value	No Response	Total
References & Resources	1-5 Years Experience	44%	36%	15%	0%	5%	100%
	6 Or More Years Experience	33%	47%	2%	0%	18%	100%
	All Teachers	38%	42%	7%	0%	13%	100%
Suggested Teaching Methods	1-5 Years Experience	21%	56%	13%	0%	10%	100%
	6 Or More Years Experience	17%	50%	10%	2%	21%	100%
	All Teachers	18%	53%	11%	1%	17%	100%

From Table 19 one may discover that 80% (42% + 38%) of all teachers find the references and resources suggested by the Guide useful in developing plans. This, coupled with only 7% response "of little value," indicates it is a strong area in the Curriculum Guide and probably needs little major revision. The suggested teaching methods appear to be less useful, but 71% (18% + 53%) of all teachers find them useful to some extent. This answer supports Table 11 on the Usefulness of the Guide in Developing Plans.

TABLE 20

USEFULNESS OF SPECIFIC SUGGESTIONS IN THE CURRICULUM GUIDE

Item	Teachers	Very Useful	Fairly Useful	Of Little Value	Of No Value	Does Not Apply	No Response	T.
Emphasis	1-5 Years Experience	39%	34%	7%	5%	0%	15%	100%
	6 Or More Years Experience	34%	36%	3%	2%	3%	22%	100%
	All Teachers	36%	35%	5%	3%	2%	19%	100%
Suggested Goals	1-5 Years Experience	37%	46%	5%	2%	3%	7%	100%
	6 Or More Years Experience	36%	44%	5%	0%	0%	15%	100%
	All Teachers	36%	45%	5%	1%	1%	12%	100%
Learning Experiences	1-5 Years Experience	39%	49%	5%	0%	0%	7%	100%
	6 Or More Years Experience	34%	46%	7%	0%	0%	13%	100%
	All Teachers	36%	47%	6%	0%	0%	11%	100%
Outcomes	1-5 Years Experience	14%	43%	21%	10%	0%	12%	100%
	6 Or More Years Experience	16%	36%	12%	0%	0%	36%	100%
	All Teachers	16%	39%	15%	4%	0%	26%	100%
Home Experiences	1-5 Years Experience	8%	25%	20%	13%	17%	17%	100%
	6 Or More Years Experience	7%	28%	17%	7%	13%	28%	100%
	All Teachers	7%	27%	18%	9%	15%	24%	100%

Table 20 (cont'd)

FHA Activities	1-5 Years Experience	5%	22%	8%	8%	40%	17%	100%
	6 Or More Experience	3%	13%	4%	3%	45%	31%	100%
	All Teachers	4%	17%	6%	5%	43%	25%	100%

Table 20 shows the extent of the usefulness of specific suggestions as listed in the Guide. In the areas of (1) Emphasis, (2) Suggested Goals, and (3) Learning Experiences, the Guide appears to be of great value. However, in the areas of Outcomes and Home Experiences, the Guide seems to be of less value to the teachers. These are possible areas for improvement in the Guide. Although many schools do not have FHA chapters, the Guide appears to be fairly useful to those that do. Again, one should notice the comparatively high figure of no response, especially among the experienced teachers.

TABLE 21

COMPARISON OF MAJOR AREAS OF EMPHASIS BETWEEN THE TEACHER USE AND THE GUIDE'S RECOMMENDATIONS

Class	Teacher Use		Guide Recommendations
	Emphases	% of Time	
Grade 7	Foods and Nutrition	34%	Foods and Nutrition
	Clothing and Textiles	11%	Management (as related)
			Home Care and Family Responsibilities
			Consumer Education (as related)
Grade 8	Clothing and Textiles	35%	Clothing and Textiles
			Management (as related)
			Personal Development and Relationships
			Consumer Education (as related)
Home Economics I	Foods and Nutrition	50%	Management of Family Meals
	Clothing and Textiles	26%	Health
			Improving Consumer Knowledge
Home Economics II	Clothing and Textiles	45%	Management in Clothing Activities
	Foods and Nutrition	20%	Personal Development and Problems Related to Mental and Physical Health

Home Economics III	Personal and Family Relationships and Development	24%	Management of Home and Family Life
	Housing and Home Furnishings	21%	
	Child Growth and Development	12%	
	Clothing and Textiles	11%	
Home Economics IV	Personal and Family Relationships and Development	33%	Management of Home and Family Life
	Child Growth and Development	19%	
	Foods and Nutrition	10%	
Specialization	Clothing and Textiles	23%	Advanced and Personal Clothing Construction
	Child Growth and Development	20%	Child Psychology
	Foods and Nutrition	16%	Nutrition
	Housing and Home Furnishings	11%	Interior Decoration Family Life Education Senior Survey

Table 21 compares the areas which the Home Economics teacher is emphasizing with the suggested areas of emphasis in the Curriculum Guide. The average percentage of time per year spent in the area is included and only those areas in which at least 10% of time was spent are included. Until the student progresses to Home Economics III, the major emphases are on Foods and Clothing, almost to the exclusion of everything else. This does not compare well with the recommended emphases in the Curriculum Guide. This situation indicates that a greater amount of communication with teachers is needed as the Guide cannot be fully utilized if it is inconsistent with the classroom situation. The suggestions in the Curriculum Guide and the actual areas of emphasis in Home Economics III, Home Economics IV, and Specialization classes correlate very closely and show that the Guide meets the needs and desires of teachers in this area. There is no time allotment given in the Guide as it is felt that equal emphasis should be placed in each area, although this does not necessarily mean an equal amount of time should be spent on each area.

TABLE 22

RECOMMENDATIONS FOR REVISING AND/OR SUPPLEMENTING THE CURRICULUM GUIDE

Response	1-5 Years Experience	6 Or More Years Experience	All Teachers
Yes	74%	60%	65%
No	13%	19%	17%
No Response	13%	21%	18%
Total	100%	100%	100%

AREAS NEEDING REVISION AND/OR SUPPLEMENTATION

Content	42%	33%	37%
Structure	21%	17%	19%
Other	32%	40%	36%
No Response	5%	10%	8%
Total	100%	100%	100%

WILLINGNESS TO ASSIST

Yes	48%	59%	54%
No	41%	19%	28%
No Response	11%	22%	18%
Total	100%	100%	100%

Figures in Table 22 show there is a definite interest among teachers in revising or supplementing the Curriculum Guide. It appears that the less experienced teacher is more in favor of revision as shown by 74% of the responses under "yes." The areas emphasized by those teachers who felt revision was necessary are basically content oriented. The "other" suggestions were basically in specific content areas, so therefore, 73% of all teachers felt that the Guide's content needs changing. A few more than half or 54% of the teachers are willing to assist in revising the Guide, although the experienced teacher is more willing.

This may be because she feels more confident in the fields of home economics and teaching.

CONCLUSIONS

1. The study indicates that the Curriculum Guide is definitely useful to home economics teachers.
2. The regularity of use correlates very closely with the Guide's usefulness.
3. Teachers overwhelmingly (94%) recommend the Curriculum Guide to beginning teachers.
4. There is not a great amount of communication between home economics teachers and principals, and guidance counselors, as about one-half of the latter two groups are definitely aware of the Curriculum Guide's presence.
5. The Guide is helpful in planning curriculum with the students.
6. The Curriculum Guide is weak in fulfilling the needs of unique groups of students.
7. The Guide is used most often in Home Economics III.
8. Most teachers do some evaluation of the stated outcomes.
9. Adequate assistance in giving consideration to students' needs is provided except in developing ability in problem solving.
10. There is definitely a desire for the development of specialization guides especially in (1) Foods and Nutrition, (2) Family Life Education, and (3) Child Growth and Development.
11. The Guide is used as a reference manual for teachers, most of whom consider it reasonably useful.
12. The suggestions under each goal are generally appropriate and meaningful.
13. The Guide is useful in specialized areas.
14. Fifty-seven percent of all teachers have received organized instruction, most often in college (the less experienced teacher) or in a group workshop (the experienced teacher). Many teachers who have not received instruction now desire it.

15. Those who have had student teachers encourage them to use the Curriculum Guide.

16. The specific suggestions (Emphases, Suggested Goals, Learning Experiences, Outcomes, Home Experiences, and FHA Activities) are useful.

17. Until Home Economics III, Clothing and Foods are emphasized to the exclusion of almost everything else which does not agree with the Curriculum Guide's recommendations. However, the emphases in Home Economics III, Home Economics IV, and in Specialization courses correlate quite closely with the Guide's suggestions.

18. Many (65%) of all teachers felt that the Curriculum Guide needs revision or supplementation in the content oriented areas.

This evaluation study has shown the strengths and weaknesses of the Curriculum Guide as a useful tool for high school home economics teachers. It has also shown up a definite need for revision and supplementation to improve the specialization areas. One notices that many teachers are not too enthusiastic about the Curriculum Guide as indicated by the substantial number of blank spaces in the returns. However, the responses have given very specific help regarding the Guide's effectiveness. These will be a useful guide in the revision process.

APPENDIX

New Hampshire
State Department of Education
Division of Vocational-Technical Education
Concord, N. H. 03301

HOME ECONOMICS CURRICULUM GUIDE EVALUATION STUDY

Confidential Survey

Your help is needed in evaluating the effectiveness of the Curriculum Guide for Home Economics developed in 1965. We would appreciate your frank and prompt reply to the questions listed below. The specific information that you provide will be kept confidential.

Please complete the survey form today and return not later than March 1 to the:

New Hampshire Research Coordinating Unit
for Vocational and Technical Education
State Department of Education
Stickney Avenue
Concord, New Hampshire 03301

Your name and address (optional) _____

_____

_____

Name of school (optional) _____

Years of teaching experience _____; Years at your present school _____;
Number of teachers in your department _____;
Number of students in your school _____, in your department _____.

Please check the program pattern below which you follow at your school:

____(1) Homemaking - 7
Homemaking - 8
Home Economics - I
Home Economics - II
Home Economics - III

____(2) Homemaking - 7
Homemaking - 8
Home Economics - I
Home Economics - II
Home Economics - III
Specialization

____(3) (No 7th and 8th grade program)
Home Economics - I
Home Economics - II
Home Economics - III
Specialization

____(4) (No 7th and 8th grade program)
Home Economics - I
Home Economics - II
Home Economics - III

____(5) Other - specify:

1. Under your situation, what is your overall appraisal of the Guide?

____(1) Very useful
____(2) Fairly useful
____(3) Of little value
____(4) Of no value

2. Do you refer to the Guide --

____(1) Regularly
____(2) Occasionally
____(3) Seldom
____(4) Never

3. Would you recommend the Guide to beginning home economics teachers?

____Yes
____No

4. Is your guidance counselor aware of the Guide contents? ____Yes
____No
____Uncertain

The principal? ____Yes
____No
____Uncertain

5. Does the Guide help you to fulfill the needs of the following groups of students? (check)

GROUP	Yes	No	Partially	Does Not Apply
(a) Boys				
(b) Youth with special needs				
(c) Less mature individuals				
(d) Slow learners				
(e) College-bound youth				
(f) Students in wage earning				

6. In which class do you use the Guide most?

____ 7th and 8th
____ Home Economics I
____ Home Economics II
____ Home Economics III
____ Specialization

7. Would you like to see specialization course guides for the following? (check) (For example see pages 12 and 13 of the Guide.)

SUBJECT	Yes	No	Uncertain	Does Not Apply
(a) Foods and Nutrition				
(b) Child Growth and Development				
(c) Clothing and Textiles				
(d) Housing and Home Furnishings				
(e) Family Life Education				
(f) Senior Survey				
(g) Other (specify):				

8. How often do you use the Guide for the following? (check)

USE	Regularly	Occa-sionally	Seldom	Never
(a) To fill out local and state reports				
(b) To plan course of study				
(c) To teach directly from				
(d) To devise lesson plans				
(e) As an aid in selecting instructional materials				
(f) To seek out learning experiences				

9. To what degree does the Guide assist the teacher in giving consideration to students' needs in the following areas? (check)

AREA	Extensive	Adequate	Limited	None
(a) Information to be acquired				
(b) Interest to be cultivated				
(c) Skills to be developed				
(d) Attitudes and values to be developed				
(e) Developing ability in problem solving				

10. To what degree is the Guide useful in the following areas? (check)

AREA	Extensive	Adequate	Limited	None	Does Not Apply
(a) Personal and Family Relationships and Development					
(b) Management					
(c) Clothing and Textiles					
(d) Health and Home Safety					
(e) Child Growth and Development					
(f) Housing and Home Furnishings					
(g) Foods and Nutrition					
(h) Consumer Education					

11. Does the Guide help you in planning curriculum with your students?

____Yes
____No

12. As you use the Guide do you evaluate to determine if you have accomplished the stated outcomes?

____(1) Always
____(2) Often
____(3) Seldom
____(4) Never

If so, how? _____

_____

_____

13. Have you received organized instruction on how to use the Guide? ____Yes
____No

If yes, how? (check)

____(a) As an undergraduate
____(b) As a student teacher
____(c) In a Master's program
____(d) Within a workshop
____(e) Individual conference (by whom? _____)

14. Do you encourage your student teachers to use the Guide?

____(1) Yes
____(2) No
____(3) Does not apply to me, I have had none since 1965.

15. Would you like further instruction on how to effectively use the Guide?

____Yes If yes, how? _____
____No _____

16. The Guide includes the items listed below. To what extent were these suggestions useful to you? (check)

ITEM	Very Useful	Fairly Useful	Of Little Value	Of No Value	Does Not Apply
(a) Emphasis					
(b) Suggested goals					
(c) Learning experiences					
(d) Outcomes					
(e) Home experiences					
(f) FHA activities					

17. The suggestions listed under each goal are generally appropriate and meaningful -

____(1) Strongly agree
____(2) Agree
____(3) Disagree
____(4) Strongly disagree

18. The chart below is taken from the Guide, pages 10 and 11. Please indicate in the spaces provided the approximate number of days (if any) that you will teach each area this year. (Emphasized items are indicated in the Guide by an *.)

	GRADE LEVEL					
	7	8	H.E.I	H.E.II	H.E.III	Spec.
I TEACH GRADES:						
APPROXIMATE MINUTES PER DAY:						
Personal and Family Relationships and Development						
Management						
Clothing and Textiles						
Health and Home Safety						
Child Growth and Development						
Housing and Home Furnishings						
Foods and Nutrition						
Consumer Education						
Other (specify):						
TOTAL DAYS:						

19. Part III of the Guide includes the items listed below. To what extent were these suggestions useful to you in developing plans? (check)

ITEM	Very Useful	Fairly Useful	Of Little Value	Of No Value
(a) Suggested teaching methods				
(b) References and resources				

20. Would you recommend revising and/or supplementing the Guide?

____Yes
____No

If yes, what areas need to be revised and/or supplemented?

____(1) Content
____(2) Structure
____(3) Other (specify) _____

If so, would you be willing to assist?

____Yes
____No

VT-#170
10/15/68

VT 007 478
Randleman, Robert R.; Wheeler, David N.
Report of an Evaluation of a Summer Institute for Training Researchers in Occupational Education.

Minnesota Research Coordinating Unit in Occupational Education, Minneapolis
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Sep68 17p.

*RESEARCHERS; *VOCATIONAL EDUCATION; *INSTITUTES (TRAINING PROGRAMS); RESEARCH PROJECTS; RESEARCH DESIGN; RESEARCH SKILLS

Thirty trainees from a three-state area participated in a 7-week institute designed to train researchers in occupational education. The program consisted of lectures, discussions, small group laboratory sessions, individual consultations and independent study. By the end of the institute, each participant was expected to have written a research proposal and to conduct the proposed research upon returning to their respective schools. Evaluation data collected during the institute indicated improved attitudes toward and understanding of research procedures and tools. The follow-up study showed that 9 months after the institute, one project had been completed, and 10 projects were reported as being under way. Fourteen trainees reported they had revised studies in mind, 14 reported plans for additional course work, 5 reported completion of courses, 1 reported a change to full-time research work, and 5 planned to work in part-time research positions. It was concluded that the major strengths of the institute were: (1) exposure to research methodology and techniques, (2) opportunity for guided review and critiques of completed research, (3) development of a research proposal, and (4) exposure to different points of view gained through discussions with others. The diversity of the participants' background in statistics and inadequate statistical foundation in the institute program were considered as major weaknesses of the program. (FP)

VT 007 478

ED042060

REPORT OF AN EVALUATION OF A SUMMER INSTITUTE FOR TRAINING RESEARCHERS IN OCCUPATIONAL EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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VT007478

MINNESOTA
RESEARCH COORDINATION UNIT
IN OCCUPATIONAL EDUCATION
University of Minnesota, Minneapolis, Minnesota

September, 1968

INTRODUCTION

Educators have become increasingly aware of the need for an expanded research and developmental effort in vocational education. The tempo of activity has risen markedly as a result of the encouragement given under the Vocational Education Act of 1963. This Act made available sufficient supporting funds, provided clarification of direction for research and indirectly increased the demand for qualified research personnel. Vocational educators from the three-state area of Minnesota, North Dakota and South Dakota, believing the last factor to be perhaps the most serious problem, proposed that an effort be made to develop qualified researchers by training existing school personnel. The result was the 1966 Summer Institute for Training Researchers in Occupational Education.

Institute Objectives

The purpose of the institute was to train researchers in occupational education. Specific objectives, set forth in the institute proposal, were as follows:

a. To interest selected participants in the conduct of research dealing with the critical occupational educational problems identified by advisory groups in Minnesota, North Dakota, and South Dakota.

b. To develop the general research competencies of participants.

c. To assist participants in the formulation of specific, relevant research proposals.

The institute was conducted over a seven-week period with thirty trainees selected at random from among a pool of applicants from the three-state area who met the established qualifications. Basically, the program consisted of four types of activities: (a) lectures and discussions of research procedures and tools, (b) small group laboratory sessions for discussing specific applications of the lecture material, (c) individual consultations, and (d) independent study (See Appendix, p. 14).

By the end of the seven week period, each participant was expected to have written a research proposal. The proposal was intended to be a practical and realistic application of research tools and techniques to problems identified and of interest to institute trainees. It was expected that each of the trainees, upon returning to their respective schools, would conduct the proposed research.

Evaluation of the Institute

Preceding the institute, a two-part evaluation program was developed. The first part of the evaluation program was conducted during the seven week institute period. The second part, a follow-up study, was conducted during the Spring of 1967.

The evaluation program, designed to assess the degree to which the institute was successful in meeting its objectives, specifically considered the following four factors:

a. Attitudes of the participants toward research.
b. Knowledge and capability of the participants in research activities.
c. Involvement and success of the participants in research activities.
d. Overall organization and conduct of the institute.

Instrumentation

Data for evaluation of the institute were gathered utilizing four specially designed instruments, supplemented by personal interviews. Data were gathered both from the participants and from the teaching and administrative staff of the institute.

One of the specially constructed evaluative instruments was a 44-item multiple choice test designed to measure knowledge of research methodology and techniques. The test was administered to trainees at the beginning of the seven week program and again at the completion of the institute.

A second instrument, a 20-item opinionnaire, was designed to yield a measure of attitudes toward research. It was administered to trainees prior to the start of the institute and again at the completion of the seven week training period. The opinionnaire was also administered to nine faculty members and advanced graduate students who were involved with the conduct of the institute.

A third device, a 15-item open-ended opinionnaire, was completed by each of the participants at the conclusion of the seven week program. In addition, personal interviews were conducted by the evaluation consultant with each of the thirty participants. The tape-recorded interviews provided an opportunity for the trainees to express their opinions regarding the intent and conduct of the institute. Written comments and reactions were also obtained from the lecture and laboratory instructors.

A fourth instrument was an open-ended questionnaire-opinionnaire mailed to trainees during May, 1967. This follow-up instrument provided information concerning the status of trainee research activities nine months after completion of the institute. It also asked for further evaluative opinions regarding the conduct of the institute.

FINDINGS AND INTERPRETATIONS

Evaluative data, along with interpretive comments and tentative conclusions, are presented below.

Institute Objectives

Objective (a). To interest selected participants in the conduct of research dealing with the critical occupational education problems identified by advisory groups in Minnesota, North Dakota, and South Dakota.

Follow-up data was obtained from all thirty trainees and revealed one research project completed nine months after the proposal had been developed, ten projects were reported as being underway, and eight projects as being indefinitely postponed. Eleven projects were reported as dropped.[1] In terms of research completed nine months after completion of the institute, the institute cannot be considered successful; in terms of those completed and underway, the institute may have been a qualified success. Table I presents a summary of the status of research projects nine months after their development.

Other somewhat less tangible indices, however, offered more encouragement. In the same follow-up, fourteen trainees reported that they had revised studies in mind, and fourteen reported that they intended taking additional course work in the area of research. Five trainees had already taken courses during the 1966-67 school year. In addition, one trainee reported that he expected to work in a full-time research capacity, while five trainees planned to work in part-time research positions. Four individuals reported that their professional responsibilities had been altered as a result of participation in the institute.

A 20-item opinionnaire was administered as a pre- and post-instrument, and was also administered once to the nine instructors and advanced graduate students who conducted the institute. The 20 items, along with the percent distribution of the respondents, are reported in Table II. Although the original instrument had a 5-choice Likert-type scale, the percentages, as reported in Table II, are shown with the extreme categories collapsed (agree and inclined to agree are collapsed; disagree and inclined to disagree are collapsed). "Pre-Administration" refers to the initial administration to the 30 participants, "Post-Administration" refers to the administration of the instrument to the participants during the final week of the institute, and "Jury" refers to the results of administration of the instrument to the nine institute staff members.

---

[1] A questionnaire was also sent to those applicants to the institute who had not been randomly selected as participants. Despite several letters and telephone calls, insufficient returns were secured from this group to warrant using the data for comparative purposes.

Table I

STATUS OF RESEARCH PROJECTS AS REPORTED NINE MONTHS AFTER PROPOSAL DEVELOPMENT

Project Status		No. of Projects
Projects completed		1
Projects underway		10
Projects postponed		8
Reasons given for projects postponed:		
Lack of time	4	
Unfeasible	2	
Discouraged by administration	1	
Would replicate a prior study	1	
Projects dropped		11
Reasons given for projects dropped:		
Lack of time	4	
Unfeasible	2	
Discouraged by administration	2	
Would replicate a prior study	1	
Other	2	
Total projects		30

Table II

RESULTS OF THE ADMINISTRATION OF A 20-ITEM OPINIONNAIRE

	PRE=ADMINISTRATION			POST=ADMINISTRATION			JURY		
	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree
1. Involvement in research provides an effective avenue for professional growth.	100	-	-	100	-	-	100	-	-
2. Research conducted by students pursuing academic degrees typically provides little of significance.	43	10	47	53	-	47	67	-	33
*3. Experimental research designs are not appropriate to classroom research.	10	40	50	17	3	80	-	44	56
4. Public schools should provide financial assistance to teachers who wish to do research.	87	10	3	94	3	3	89	-	11

Table II (continued)

	PRE-ADMINISTRATION			POST-ADMINISTRATION			JURY		
	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree
5. A major criticism can be made of research in education in that it is not student oriented.	27	40	33	30	20	50	33	11	56
6. Teachers should be given credit, by reducing class loads, for conducting research.	73	7	20	87	3	10	89	11	-
7. Research results should be made readily available to teachers.	100	-	-	100	-	-	100	-	-
8. The quantity of research done far exceeds the quality.	50	40	10	70	13	17	100	-	-
9. Most of the research done in education has very little significance for the classroom.	40	17	43	33	7	60	44	12	44

Table II (continued)

	PRE-ADMINISTRATION			POST-ADMINISTRATION			JURY		
	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree
*10. The conduct of research is a highly specialized activity.	77	6	17	97	-	3	89	-	11
11. Statistical techniques tend to be far more sophisticated than the data treated in educational research.	47	43	10	53	10	37	56	-	44
*12. The use of secondary school student's class time for research purposes is justifiable.	83	-	17	90	7	3	89	-	11
*13. Action research, aimed at solving local problems, is more important than fundamental research which attempts to establish and/or verify theory.	47	40	13	30	20	50	11	23	66

Table II (continued)

	PRE-ADMINISTRATION			POST-ADMINISTRATION			JURY		
	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree
14. Courses in research techniques should be part of every prospective teacher's undergraduate program.	60	3	37	76	7	17	56	-	44
15. A sound foundation in mathematics is necessary before one can undertake a research project.	54	23	23	54	6	40	11	-	89
16. Command of research techniques is appropriate to college level teachers rather than secondary school personnel.	17	13	70	20	7	73	11	11	78
*17. Extensive training in research techniques is imperative if one is to produce significant research.	37	37	26	77	3	20	44	-	56

Table II (continued)

	PRE-ADMINISTRATION			POST-ADMINISTRATION			JURY		
	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree	Agree and inclined to agree	Cannot say	Disagree and inclined to disagree
18. Research reports are written for other researchers and not for the classroom teachers.	- 57	10	33	54	13	33	89	11	-
19. Teachers do not use research findings because the results are not reported in an understandable form.	66	17	17	80	7	13	44	34	22
20. Research is the primary source of improvement in teaching methods and curriculum development.	70	13	17	83	7	10	89	-	11

Reference to Table II will show that there were some shifts in the opinions of the trainee toward favorable research attitudes. The response patterns of the pre- and post-data were analyzed before the data were collapsed. A Sign Test indicated that five items in the opinionnaire (asterisked) showed significant shifts in opinion (at the .05 level). Trainees seemed to: (a) look more favorable upon experimental research design in classroom research, (b) agree, more than previously, that it is justifiable to use student's class time for research purposes, (c) regard fundamental research more favorable than action research, (d) realize more clearly that the conduct of research is a highly specialized activity, and (e) believe that extensive training in research techniques is necessary in order to produce significant results.

Objective (b). To develop the general research competencies of participants.

Results on a paper-and-pencil test of knowledge of research methods and techniques administered as a pre- and post-test, are reported in Table III.

Table III

RESULTS OF THE ADMINISTRATION OF A 44 ITEM MULTIPLE-CHOICE TEST AS PRE- AND POST-TEST

	Mean	Standard Deviation
Pre-test	15.4	7.3
Post-test	27.3	4.9

The relatively large difference in mean scores between the two administrations of the test is evidence of a practical gain in understanding. The trainees also became more homogeneous in terms of research understanding, as indicated by the lower standard deviation in scores on the post-test. The wide range in scores on the pre-test has implications for selection criteria. These implications will be discussed in a later section of the report.

Objective (c). To assist participants in the formulation of specific, relevant research proposals.

All thirty of the participants to the institute completed a research proposal. The proposals were written, edited, and revised individually until they were judged acceptable by the institute staff. It may be concluded, then, that this criterion was satisfactorily met

ubject-Matter Content and Learning Activities

The subject-matter content of the institute seems to have been appropriately choosen and resented, as judged by the expressed opinions of the trainees, as well as by comments of the nstitute staff. An attempt to provide some familiarity and degree of competency in the use of nferential statistics did not, however, seem to have been successful. A recurring comment in he personal interviews was that the assumed level of prior statistical background was too igh, and that the pace at which the material was presented was too rapid. Suggestions from he participants for improvement of the statistical portion of the institute included: a) An introductory programmed statistics workbook to be completed before the institute begins, b) statistical summary sheet, and/or worksheets, and (c) a statistics text to parallel and supplement the lectures.

As opposed to the statistical segment of the institute, the portion of the content dealing ith research methodology and techniques for conducting research were considered by the partic-pants to have been very successful. By-and-large, the content and activities of the laboratory essions were also considered to have been successful, rewarding experiences. The laboratory ctivities did, however, suffer somewhat from an absence of specific purpose, and also from a ack of close coordination with the lecture sessions.

Development of a research proposal was generally regarded by the participants as an excellent learning experience. However, several of the trainees felt that a more important out-come of the institute was an acquired insight into research interpretation. Finally, a criti-cism expressed by several of the trainees concerned a lack of prior information about the criteria to be used for assigning final institute grades.

Participants

The instructional staff was regarded as very effective. One apparent exception was the instructor for statistics, who was almost unanimously regarded by the participants as ineffective.

Some of the problems encountered, especially with the statistical portion of the institute, ight have been alleviated by the use of selection criteria that would have insured a more omogeneous group. One possibility might have been to select the participants on the basis of their acceptability to the University's Graduate School. On the other hand, it was the opinion of several respondents that the diversity in background among the trainees contributed greatly to the strength of the institute. The opportunities for interaction on an equal basis with staff and trainees of differing fields and academic disciplines were regarded as very important concomitant benefits of attending the institute.

Organization

Duration of the institute (seven weeks) seemed to be adequate for covering the intended content. As previously noted, however, the amount of inferential statistics attempted in this period of time proved unrealistically ambitious. With regard to facilities, the classroom was

considered uncomfortable warm and noisy, but otherwise adequate. Many of the trainees encountered problems with securing reference materials. Although most felt that the brief library orientation provided by the institute was adequate, almost all mentioned difficulties in obtaining material from the main campus library. A useful alternative source proved to be the specialized library of the Minnesota Research Coordination Unit, as well as the private collections of the instructors.

A number of participants commented on the fact that they were largely unaware of the purpose of the institute prior to their arrival on campus. Better information in this regard might also have allowed some consideration, and preliminary background study, of one or several possible problem areas in which research proposals could have been developed.

In terms of the day-to-day conduct of the institute two suggestions were frequently made. One was that a significant block of free time be set aside for independent research and study one day a week. A second suggestion was that a more formally organized opportunity for small group interaction was needed. The several trainees who stayed in the same on-campus dormitory were especially aware of the value of the opportunity to interact with one another.

CONCLUSIONS

Major Strengths of the Institute

Exposure of the trainees to research methodology and techniques, and the opportunity for guided review and critiques of completed research were among the important strengths of the institute. The opportunity to develop a research proposal was a valuable activity in conjunction with the study of research methodology and technique. Exposure to different points of view gained through discussions with others in different areas of education also must be regarded as a significant strength of the institute.

Major Weaknesses of the Institute

Perhaps the greatest weakness of the institute lay in its failure to provide students with an adequate understanding of statistical tools. This failure was probably due to a combination of factors: the short period of time, the heterogeneity of the group, and questionable instruction. Finally, it may have been that the development of the research proposal came to be regarded as an end in itself, rather than being considered one step in the research process.

Judged on the several criteria available, the institute may be termed a success. As rated by the instructors, the completed research proposals were of high quality. Twenty-eight of the thirty participants indicated that they would be interested in attending a second research institute, although there was no particular consensus of opinion on what a second institute might include. Some, for instance, suggested an institute devoted almost entirely statistical techniques. Others supported the idea of an institute concerned with the interpretation of completed research.

In terms of the actual effect of the institute on the participants, the follow-up indicated that many noted an increased "research orientation" in themselves. They noted also that their behavior had been changed in such ways as (a) being more critical in the reading of professional literature, (b) taking, or planning to take, related course work, (c) acting as a staff research resource person, and (d) searching out appropriate research findings related to their own work. In fact, as suggested by one of the principal instructors of the institute, it would appear that the program was fairly successful in producing research "consumers", if not equally as successful in developing research "producers".

APPENDIX

CONTENT AND TIME ALLOCATIONS FOR THE SEVEN WEEK INSTITUTE

Lecture Sessions	Laboratory Sessions and Individual Consultation
PHASE I - TWO WEEKS	
(3 hrs per day, M, T, W, Th, F)	(Laboratory, 2 hrs. per day, T, Th; Consultation, 2 hrs. per day, M, F)
I. Overview of the Research Process A. Orientation to the institute B. Introduction to research in occupational education C. Selecting and defining the problem and developing research questions or hypotheses D. Types of research studies, determining the kinds of information required, prerequisites for useful data E. Selecting sources of information (population and sampling) *F. Developing data collection instruments G. The critical evaluation of research reports H. The design of experiments *I. Planning the treatment of data	I. Outlining a Proposal on a Researchable Occupational Education Problem A. Discussing research problems suggested by the advisory committees in the states represented B. Selecting individual problem-areas of interest C. Techniques for reviewing the literature D. Defining a research problem in operational terms E. Selecting hypotheses and examining limitations and assumptions F. Determining the appropriate research design G. Selecting the population and sample
PHASE II - ONE AND ONE HALF WEEKS	
(3 hrs. per day, M, T, W, Th, F)	(Laboratory, 2 hrs. per day, T, Th; Consultation, 2 hrs. per day, M, F,)
II. Principles of Selecting, Constructing and Utilizing Data Collection Instruments	II. Constructing Data Collection Instruments A. Applying principles of constructing instruments to selected examples and problems

*These topics serve as an introduction to the more detailed presentation in Phases II and III; they are needed so that participants may (a) see the relationship of the topics to the total research process, and (b) begin outlining research proposals.

A. Achievement tests

B. Attitude inventories

C. Interview schedules

D. Questionnaires

B. Selecting and/or beginning to develop the instruments needed for individual problems

PHASE III - TWO WEEKS

(3 hrs. per day, M, T, W, Th, F,)

III. Introduction to Analysis Procedures

A. Measures of central tendency and variability

B. Linear regression and correlation

C. Testing for differences between means

D. Chi-square tests

E. Linear multiple regression

(Laboratory, 2 hrs. per day, T, Th; Consultation, 2 hrs. per day, M, F)

III. Application of Analysis Procedures

A. Applying analysis procedures to selected examples and problems

B. Utilizing mock data to practice applying the techniques most appropriate to selected research problems

PHASE IV - ONE HALF WEEK

(3 hrs, per day, W, Th, F)

IV. How to Apply for and Utilize Funds Available for Research

A. Sources and application procedures

B. Budgetary considerations

(Consultation, 2 hrs. per day, Th, F)

PHASE V - ONE WEEK

(Consultation, 4 hrs. per day, M, T, W, Th, F)

VT 007 481
Peters, Irene; Fuller, Chester W.
Workshop Guidelines to Prepare Inservice Educators for Health-Care Agencies.

New Hampshire Research Coordinating Unit for Vocational-Technical Education, Concord
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 30p.

*GUIDELINES; *TEACHER WORKSHOPS; *NURSES AIDES; TEACHING GUIDES; HOSPITALS; NURSING HOMES; *HEALTH OCCUPATIONS EDUCATION; TEACHING METHODS; TEACHER EVALUATION; STUDENT EVALUATION

A 5-day workshop to prepare selected registered nurses to teach supportive personnel in hospitals, county homes, nursing homes, and home health agencies is outlined. Included are statements of rationale and objectives, a listing of agencies to be contacted for assistance, suggestions for scheduling and selecting a setting for the workshop, and guidelines for the workshop format. Appendixes include: (1) a sample workshop schedule, (2) materials on the "do and tell" method of teaching, principles of learning, supervision, and role play, (3) suggested plans for group discussion and demonstration of hobbies, (4) guidelines for planning and conducting a nurse aide training course, and (5) forms for evaluation of an instructor's teaching performance and of an aide's behavioral change. A bibliography is included. (JK)

VT 007 481

ED042060

WORKSHOP GUIDELINES
TO PREPARE INSERVICE EDUCATORS
FOR HEALTH-CARE AGENCIES

H. Irene Peters
State Department of Education
Division of Vocational-Technical Education

Chester W. Fuller
American Red Cross
Maine, New Hampshire and Vermont

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P R E F A C E

"Workshop Guidelines to Prepare Inservice Educators for Health-Care Agencies" has been prepared to describe a short-term preparatory program designed to meet a growing need for inservice educators in New Hampshire health-care agencies.

The idea for the workshop grew out of a naive attempt to provide refresher experience for ancillary personnel in New Hampshire nursing homes, many of whom had never had what could even be described as on-the-job training. From this experience came the idea to prepare a selected registered nurse from each institution who would return to teach other personnel in the health-care agency.

The simple, four-step Red Cross teaching method serves as the basic teaching technique. Nurses are encouraged to think and act like educators. A special Instructor's Guide for Teaching Nurses' Aides has been prepared as a teaching tool.

We believe that our interagency workshops are creating a new awareness of the need for inservice education among administrators, a renewed interest and pride among registered nurses, a growing sense of responsibility and concern among supportive personnel, and most importantly, higher standards of care for our patients.

Guidelines for a 5-Day Teacher-Training Workshop To Prepare Inservice Educators For New Hampshire Health-Care Agencies

Rationale

Qualified inservice educators are not readily available nor, in most cases, economically feasible for most hospitals, county homes, nursing homes and home health agencies at the present time. Staff nurses in these facilities often have more knowledge of principles of geriatric and rehabilitative nursing than they realize. Work-oriented teaching methods would enable them to share this knowledge with auxiliary personnel.

Workshop Objectives

1. To promote safe minimum standards of patient-care by stimulating registered nurses to perceive themselves as inservice educators.
2. To help inservice educators identify and focus upon patient-care and communications problems in teaching.
3. To provide teaching techniques and materials for the conduct of a continuing inservice educational program.

Workshop Method

To involve registered nurses in a simulated inservice education program for auxiliary health workers.

Agencies to Contact for Assistance

Division of Vocational-Technical Education - Consultant, Health Occupations Education -- to coordinate workshop arrangements, provide course outlines and financial resources.

Local Red Cross Chapter - to arrange for provision of instructor-training with Regional Red Cross Nursing Consultant.

State Department of Health - Bureau of Hospital Services -- to identify health-care agency needs and act as liaison between the project and administrators.

State association of American hospitals or nursing homes - educational chairman -- for publicity and follow-through to assist inservice educators to establish aide-training courses in their communities and to encourage health-care agencies to meet federal and state licensure and inservice requirements.

Formula

A five-day workshop, 8 - 4 p.m every day. Nursing Homes are often better able to release personnel for part of two consecutive weeks rather than all of one week. A workable format includes Wednesday through Friday of one week, followed by Monday and Tuesday of the next.

Facility

While the nursing home may be a suitable facility for conducting aide-training programs, registered nurses seem to be attracted to courses offered in an educational setting. If a classroom with running water is available in a post-secondary educational institution, beds and equipment can be provided by Red Cross. Representatives of medical supply houses also welcome such an opportunity to make nurses acquainted with their supply line.

Format

(See "Suggested Schedule," in Appendix, page 9)

FIRST DAY:

1. Opening Session
    a. Welcome by instructor-supervisor.
    b. Brief history of interagency cooperation.

c. Short, relevant talk by representatives of all cooperating agencies.

2. Introduction to the Course

a. Discussion of workshop objectives and means of achieving them. Explanation of how a simple teaching method which incorporates basic learning principles can be applied to patient-care practices to initiate a pattern for inservice education.

b. Have the class complete personal information forms, including name, address, background, schooling, and any relevant health problems which might affect class participation.

3. Issue Red Cross Form #1082.

4. Issue course materials.

5. Class Poll

a. What type of institution represented.

b. How many beds.

c. How many RN's and LPN's.

d. How many aides.

e. Particular institutional problems - as feeding, loss of employee-time due to injury, difficulties in instructing new and/or older personnel in simple techniques as bed bath, thermometer technique, etc.

f. Aide/R.N. and/or aide/patient areas of difficulty, including poor communications.

6. Coffee Break

During the break, the instructor-supervisor quickly reviews the completed personnel information forms (Red Cross Form #1082),

pairs the class so that each student is matched with another who is not known to her and who has as few common interests as possible.

7. Film* "Role of the Nursing Home" - sets the mood for the course and lowers tension in the group.

8. Demonstration #1

   How to make a newspaper bag.

   This will introduce the "Do and Tell" Method - a way of learning to instruct others.

9. Demonstration #2

   Hand washing - using the "Do and Tell" Teaching Method.

10. "After Lunch" Assignment

    Each person will be required to introduce her class partner. The introduction may be given in any way, not to exceed 3 minutes.

LUNCH --- During the lunch hour the instructor-supervisor reviews the particular needs of the class and makes out the second day assignment. (A student with recent surgery could demonstrate patient-feeding rather than body mechanics). Several students are selected to demonstrate a given skill utilizing the "Do and Tell" Method (using the materials given out in the morning session).

11. Inter-class Introductions

    This provides an opportunity for students to become better acquainted and recognize commonalities and differences.

---

* Each film should be given an introduction, with time provided for a critique afterward.

Since much of the work to be done in the ensuing days will consist of friendly observation and constructive criticism, it is important to get the class to pull together as quickly as possible.

12. Morning demonstrations are completed.

13. Description and detailed explanation of the "Do and Tell" Method. (See Appendix, page 8)

14. "Next Day" Assignment

The reading assignments for the second day are based upon the demonstration selected by the instructor-supervisor for presentation the following morning. "Patients" are asked to come in slacks or shorts. A sound first demonstration for trainee-instructor is a bed bath, which emphasizes body mechanics, communications and nursing sciences. All students who are physically able will role-play a "patient" in order to better understand what the patient feels.

FOLLOWING DAYS:

In order to provide a course which begins and ends on time, a daily time-schedule should be made out IN PENCIL and followed as closely as possible. (See Suggested Schedule, Appendix, p.9) It will serve as a guide and as a reminder that too much time should not be spent on minor points. Unexpected events may drastically effect the schedule.

To provide continuity of demonstration and return-demonstration, the following rotation technique, made out by the instructor-supervisor, assures every student an opportunity to assume all four

roles of the team members:

NAME	First Rotation	Second Rotation	Third Rotation	Fourth Rotation	Fifth Rotation
JONES	Instructor	Checker	Observer #2	Observer #1	Patient
SMITH	Patient	Instructor	Checker	Observer #2	Observer #1
BROWN	Observer #1	Patient	Instructor	Checker	Observer #2
WELLES	Observer #2	Observer #1	Patient	Instructor	Checker
MEYERS	Checker (With "Guide" open)	Observer #2	Observer #1	Patient	Instructor

"Change of pace topics" as listed below may be integrated with instruction for course enrichment. (See Appendix B)

Principles of Learning

Nine Points of Effective Supervision

Some General Hints on Role Play

Class Discussions

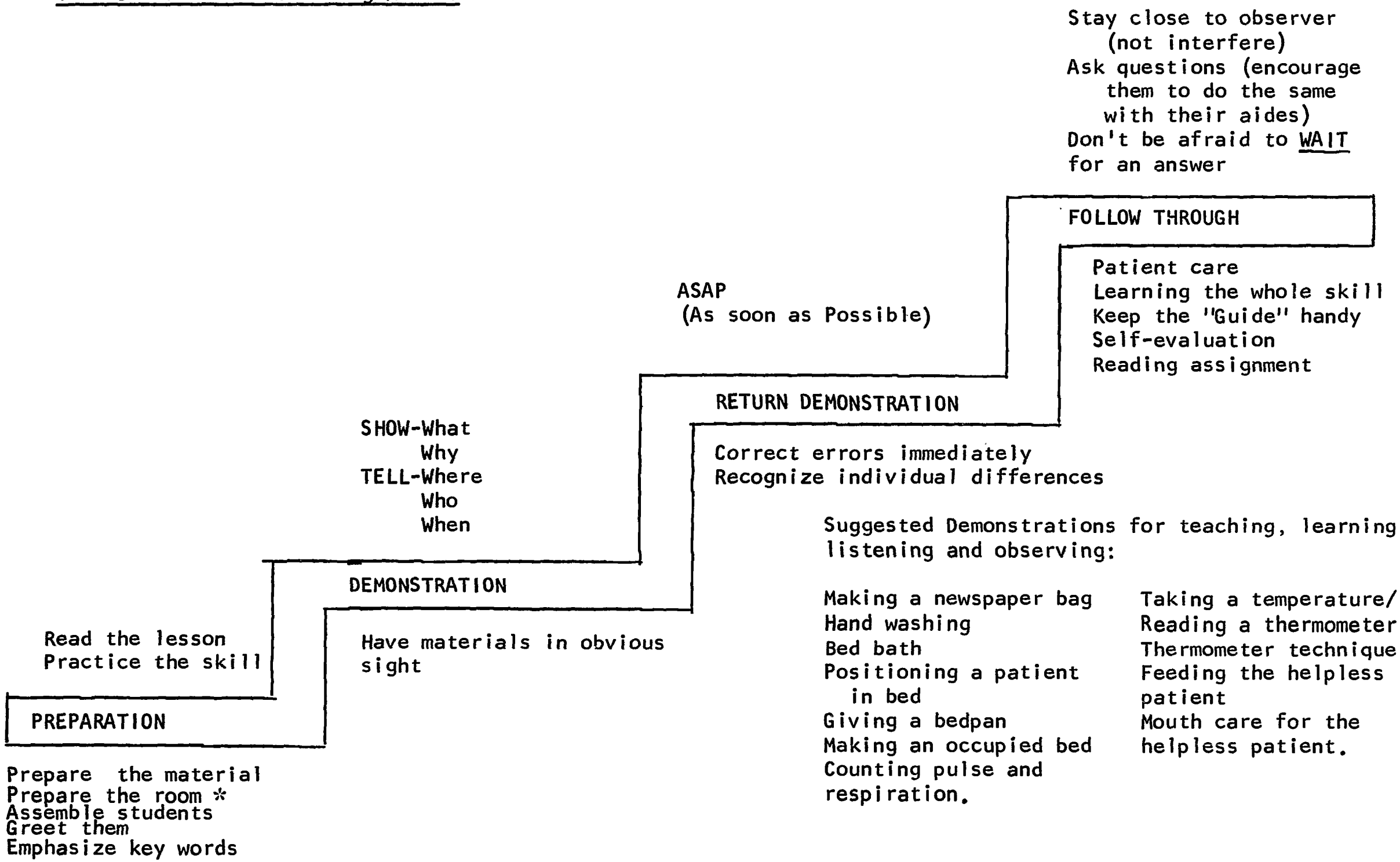
Hobbies

APPENDIX A

The "Do and Tell" Teaching Method

Suggested Schedule

The "Do and Tell" Teaching Method



Suggested Demonstrations for teaching, learning, listening and observing:

- Making a newspaper bag
- Hand washing
- Bed bath
- Positioning a patient in bed
- Giving a bedpan
- Making an occupied bed
- Counting pulse and respiration.
- Taking a temperature/ Reading a thermometer
- Thermometer technique
- Feeding the helpless patient
- Mouth care for the helpless patient.

Suggested Schedule

WEDNESDAY	THURSDAY	FRIDAY	MONDAY	TUESDAY
1. Opening Session a. History of Inter-agency cooperation (all agencies represented) 2. Introduction to Course a. Goals & Means b. Method 3. Issue R.C. Form #1082 4. Issue Course Materials 5. Class Poll 6. Coffee Break 7. Film "Role of Nursing Home" and Discussion 8. Demonstration #1 How to Make a Newspaper Bag 9. Demonstration #2 Hand Washing 10. Give "After-Lunch" Assignment	1. Open & Review 2. Demonstration #3 Bed Bath 3. Coffee Break 4. Film "Image in the Mirror" - R.C. 5. Return Demonstration #3	1. Open & Review 2. Demonstration #4 Body Mechanics by 3 Student Instructors - returned by whole class 3. Role Play Situations (based upon needs of the group)	1. Open & Review 2. Demonstration #5 (as thermometer technique) chosen and taught by student instructors 3. Return of Demonstration #5	1. Selection and practice teaching (group choices) 2. Student Presentation of a Recreational Hobby
LUNCH	**LUNCH**	**LUNCH**	**LUNCH**	**LUNCH**
11. Inter-class introductions 12. Finish Demonstrations 13. Description & detailed explanation of "Do and Tell" teaching method 14. Give assignment for following day	6. Practice teaching based upon principles Demonstration 1 & 2 (all groups) 7. Film - depending upon group needs 8. Practice teaching of Demonstration #3 9. Class assignments	4. Practice teaching based upon Demonstration #4 5. Issue "Instructor's Guide for Training Nurses' Aides" - discuss and make assignments for following week	4. Small group discussions on selected problems 5. Nine points of effective supervision 6. Film "To Care Enough" 7. Completion of R.C. Form #2824 "Application for RC Nurse Enrollment"	3. How to Plan and Conduct a Course 4. Instruction in how to complete R.C. Form #306 "Class Report in Nursing Services" including the ordering and completion of necessary forms 5. Graduation ceremony and presentation of special certificates (all agencies represented

APPENDIX B

Change of Pace Topics

Principles of Learning — 10 min.

1. Learning Reactions

Thorndike	Bagley & Cohen	5 Day Workshop
Readiness	Mindset	Motivation (willingness to learn)
Exercise	Activity	Do and Tell Practice
Effect	Feeling	Sense of Satisfaction Feeling of achievement and success

2. Begin where the learner is, then add to his knowledge.

3. Learning should proceed from the simple to the complex.

4. Understand What You Hear

   a. Men at the vice-presidential level understand about 2/3 of what they hear from the top.

   b. Men at the general supervisor level get 56% of it.

   c. Men at the plant manager level get 40%.

   d. Men at the foreman level get 30%.

   e. Men on the production line get 20%.

The ability to understand what his superiors tell him sets a man apart. (excerpt from Understand What You Hear - reprints may be obtained for 10 cents a copy postpaid from Nation's Business, 1615 H. St., N.W., Washington 6, D.C. Please enclose remittance.)

Nine Points of Effective Supervision — 10-15 min.

Supervision means much more than observing. It means understanding, having insight, listening, and being willing to help with personal and job-related problems.

1. Know your prejudices about people.
2. Observe details, avoid general impressions.
3. Observe steadily - change estimates as often as necessary. Make sizing-up a steady habit.
4. Study behavior and performance, NOT appearance.
5. Study primary qualities, not superficialities.
6. Look for characteristics - don't judge as good or bad.
7. Use reasonable standards.
8. Let the other person do most of the talking.
9. Know WHY you rate another person as you do.

Some General Hints on Role Play

Role play is used in different ways to accomplish different purposes.

The key to being a successful participant in a role-playing exercise is being yourself -- NOT pretending to be a person with a different personality. It is NOT acting ... but it is projecting yourself through a "role" and "situation" which is designed to provide an opportunity to test and practice certain skills and/or attitudes.

One of the problems in role playing occurs when role players feel they must "defend to the end" their given role positions. Successful role players begin from certain defined positions and then move either together or apart as they project themselves, their ideas, their attitudes and their skills into a situation.

In a nutshell, role playing requires projecting the "real" you into an artificially created situation ... not projecting an artificially created you into a real situation. The value of role playing, therefore, lies in the opportunity it provides to have a variety of near-real experiences in a single classroom.

Class Discussions — 1 Hour

1. Divide the class into two or more discussion groups. Ask each group to select a group leader.
2. Explain the functions of a group leader.
   a. Start the discussion
   b. Bring out main ideas
   c. Answer questions
   d. Keep the group on the topic
   e. Ask thought-provoking questions
   f. Keep the discussion moving
   g. Overcome silence
   h. Encourage all to contribute
   i. Moderate disagreements
   j. Bring out the silent members and calm the vocal ones
   k. Point out prejudices
   l. Allow time for thought
   m. Listen
   n. Define and redefine the problem
   o. Seek opinions
   p. Change the pace
   q. Handle hostility
   r. Encourage the group to manage the discussion
   s. Bring the group to an orderly conclusion
   t. Test the consensus of opinion
   u. Summarize
3. Distribute list of "Group Discussion Topics" for group

selection (see attached list). Where two or more groups are used, time should be allowed for each group to select, discuss and summarize their topic and present their conclusions to the entire class. Allow time for questions.

4. Open discussion

Suggested Discussion Topics:

Examples of topics which might come under consideration in a group discussion of problems of the institutionalized patient:

Medicare/Medicaid

Aging

Love/Consideration

Investments

Hospitalization

Good vs. Poor Health

Diet

Nursing or Golden Age Projects

Loss of function(s) e.g. sight, deafness

Being dependent after a life of independence

Schedule changes: hygiene

meals

bathing

Community living

Invasion of privacy

The ever increasing possibility of facing death

Increasing amounts of time with not too much to do

Loss of being valued for: being a parent

being an employee

being a taxpayer

being a contributing part of a community

Hobbies

One might wonder why hobbies are included on the last day of class. Remember, one goal of the course is to help nurses to become effective teachers. A second goal is to demonstrate how hobbies can be utilized with therapeutic effect in the nursing home. A true test of the "Do and Tell" method of teaching is for a student to present a hobby with which the majority of the student body is unfamiliar. The presenting student has from 5 - 10 minutes to "teach" his hobby to the group, and virtually, the only way to do this is to utilize the "Do and Tell" method. The student must make a very thorough review of the method, and adapt his hobby to this method, so that he may be understood.

The hobby assignment is given on the second day of the course. On the third day, before the weekend, the instructor asks what each student will be presenting in order to avoid duplications. If anyone doesn't have a hobby, the instructor gives a hobby, such as reading a newspaper as if one were on a New York subway. The student-instructor should demonstrate that the newspaper hobby has application to older persons who can benefit from range-of-motion activity as well as bringing the joy of the printed word back into focus.

Other hobbies might include how to make a paper airplane, how to tie a fishing fly, or how to care and groom a live pet (good therapy for disturbed patients).

APPENDIX C

How to Plan and Conduct a Nurse-Aide Training Course

Evaluation of Instructor's Teaching Performance

Evaluation of Aide's Behavioral Change

Criteria for Determining Behavioral Changes in a Nurse's Aide

How to Plan and Conduct a Nurse-Aide Training Course

By this time the trainee-instructor should be thoroughly familiar with "Suggested Guidelines for Upgrading Ancillary Personnel in Hospitals, County Homes and Nursing Homes" which prefaces the Instructor's Guide for Teaching Nurses' Aides.[1]

A short (30-hour) refresher course for nurses' aides who are currently employed is a sound means of introducing inservice education to administration and staff and is a comfortable way to begin your teaching.

Helpful Hints:

1. Be prepared to demonstrate the need for the course. Administration may feel that personnel cannot be freed to take the course, and employees may not feel the need for it. (A review of the implications of federal legislation is a convincing argument.)
2. The state association which represents the health-care agency may have an educational committee which will publicize proposed courses, assist individual institutions to establish courses, and serve as liaison among agencies wishing to share instructor and/or classroom facilities.
3. A 30-hour course may be presented 2 or 3 hours a day, one or two days a week, or 6 hours a day for five days, according to local conditions.
4. Be thoroughly familiar with the Instructor's Guide for Teaching Nurses' Aides and all other course material. Use visual aids.

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[1] H. Irene Peters and Dorothy K. Rich, New Hampshire State Department of Education, 1968.

Use tests and quizzes as they are needed. (See Instructor's Guide for Teaching Nurses' Aides, page 113.)

5. Seek and evaluate attitudes and feelings continuously.

6. Seek an evaluation of the course to measure:[2]

   a. instructor's teaching and its effect.

   b. insight into need for further inservice education.

7. Plan a simple finishing ceremony. Invite administrators as well as relatives of the enrollees. A certificate of completion bearing the insignia of the Department of Education, Department of Health & Welfare, American Red Cross and the state hospital or nursing home association should be awarded to the trainees and may be signed by the instructor and administrator.

8. Remember that your aide-training course is a reportable Red Cross course:

   a. Fill out Class Report Form #306 - send first two copies to your local Red Cross Chapter, retain the third for your records. Red Cross Modified Home Nursing certificates for nurses' aides who completed the refresher course are ordered from and returned to you by the local chapter upon submission of this form.

9. The principles of learning and procedures of teaching which have been learned at the workshop can be applied to any and all teaching situations. The inservice educator will find that the teaching method taught here can be used to orient new

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[2] See evaluation forms, Appendix C.

employees, provide pre-service training or continuing educational programs, meet the needs of professionals as well as paraprofessionals, and to present more complex and sophisticated content.

Evaluation of Instructor's Teaching Performance

(To be filled out by student immediately upon completion of course)

Educational Objectives - to help the learner:	Rating Scale: Unsatisfactory	Satisfactory
Acquire knowledge:		
1. Was the material covered in class accurate, authentic and current?		
2. Was the instructor's language simple and positive?		
3. Was it suited to the subject under discussion?		
Develop the ability to use new knowledge to solve problems under changing circumstances:		
4. Were the students' questions answered accurately and simply?		
5. Were the room, the equipment, and the supplies arranged for most effective use?		
6. Did the instructor recognize individual differences and deal with them properly?		
Develop skill in demonstrating procedures:		
7. Did the procedure demonstrated follow the pattern shown in the instructor's guide and/or the film?		
8. Was the demonstration completed within the time limit?		
9. Was it performed in full view of all the class members?		
10. Was the explanation adequate?		
11. Were the following essentials of nursing applied correctly?		
a. Safety?		
b. Effectiveness?		
c. Comfort?		
d. Economy of time, effort and material?		
e. Appearance?		
12. Was there evidence that the lesson taught and the supplies used had been adequately prepared?		
13. Did the instructor maintain orderliness?		
14. Did the demonstration show how to protect the patient, the nurse, the bedding and the furniture?		

	Unsatis-factory	Satis-factory
Develop the ability to use visual aids effectively:		
15. Were the visual aids pertinent, accessible, and appropriately used?		
16. Were they easy for everyone to see?		
17. Were they interpreted correctly?		
Develop attitudes that promote growth and development:		
18. Did the instructor show:		
a. Enthusiasm for the subject and appreciation of its value?		
b. A sympathetic interest in and a response to the differing needs and interests of class members?		
c. Good will toward other members of the teaching staff?		
d. Interest in receiving helpful supervision?		
e. The ability to appraise her own performance?		
f. Readiness to derive benefit from supervision and to accept suggestions?		
Relate learning to daily living in the home and the community:		
19. Did she furnish information about the purposes and facilities of local health agencies and suggest how to take advantage of them?		
20. Did she direct attention to the individual's responsibility in promoting personal and community health?		
21. Did she relate such procedures as hand washing and correct posture to daily living?		
Establish and maintain rapport with the class and promote active group participation:		
22. Was there evidence of mutual good will and response?		
23. Were the students eager to participate in class activity?		
24. Was praise given when praise was due?		
25. Were corrections made and accepted in good spirit?		
26. Did class members who appeared to be timid or retiring seem to gain confidence and show increasing interest?		

Maintain acceptable personal appearance and behavior:	Unsatis-factory	Satis-factory
27. Was the instructor well-groomed, clean and appropriately dressed?		
28. Was her posture correct at all times?		
29. Was her voice pleasant?		
30. Was her speech clear and correct?		

Evaluation of Aide's Behavioral Change

(To be completed by head nurses
at 3 and 6 month intervals)

Since taking the course, has this aide shown a change in performance and/or attitude:

	Change	No Change	No Opportunity
1. Anticipating the physical needs of patients	____	____	____
2. Anticipating the mental or emotion needs of patients	____	____	____
3. Maintaining safety of patients and/or environment	____	____	____
4. Maintaining personal hygiene	____	____	____
5. Washing hands thoroughly and frequently	____	____	____
6. Wearing a protective garment when needed	____	____	____
7. Disposing of waste	____	____	____
8. Encouraging adequate nutritional habits of patients	____	____	____
9. Feeding helpless patients	____	____	____
10. Assisting patients who can feed themselves	____	____	____
11. Recording daily care	____	____	____
12. Reporting observations	____	____	____
13. Taking temperature, pulse and respirations (if permitted)	____	____	____
14. Maintaining personal posture, using principles of body mechanics	____	____	____
15. Protecting patient's joints and muscles	____	____	____
16. Preventing bedsores	____	____	____
17. Moving or assisting patients in moving in bed	____	____	____
18. Moving or assisting patients in moving from bed to chair, chair to bed	____	____	____
19. Giving a bedpan or urinal	____	____	____
20. Assisting patients with commode or toilet	____	____	____
21. Bathing a helpless patient	____	____	____
22. Assisting a patient with shower or tub bath	____	____	____
23. Making an occupied bed	____	____	____

Criteria for Determining Behavioral Change in a Nurses Aide

Rating Scale
None-Much
0 - 5

Self-Rating by Nurses Aide

Attitude:

1. Growth in understanding of older persons: _____

2. Job satisfaction as affected by changing attitude toward older persons: _____

Performance:

3. Ability to perform tasks in relation to care of patient and patient's environment: _____

4. Job satisfaction as affected by changing ability: _____

Rating by Nursing Supervisor

Attitude:

1. Apparent growth in understanding of older persons: _____

2. Apparent job satisfaction as affected by changing attitude toward older persons: _____

Performance:

3. Efficiency and/or effectiveness of performance in relation to care of patient and patient's environment: _____

4. Apparent job satisfaction as affected by changing performance: _____

Resources and Bibliography

Resources:

New England Dairy and Food Council
1034 Commonwealth Avenue
Boston, Massachusetts

National Dairy Council
111 N. Canal Street
Chicago 6, Illinois

$3.50 for food models (Write with letterhead of agency)

The Home Nursing Story. A series of ten 1/2 hour films. (Red Cross)

An instructor's workbook (ARC 1662) for use with the film series.

A student workbook (ARC 1666) for use with the film series.

To Care Enough. Film.

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American Red Cross. Home Nursing Instructor's Guide (ARC 1615).

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American Red Cross. Programmed Instruction, Instructor's Manual (ARC 1671).

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Goldfarb, Alvin I., M.D. "Responsibilities of Our Aged," AJN, November, 1964.

Hublicker, Irene M., Ph.D. "Fostering Self Respect in Aged Patients," AJN, March, 1964.

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"Teaching Students to Teach" Nursing Outlook, September Issue, 1967.

"Understand What You Hear" Reprinted from Nation's Business, October 1961. 10¢/ copy $7.00 per 100. Nation's Business, 1615 H St., N.W. Washington 6, D.C. Enclose Remittance.

VT 007 586
Reasearch Utilization. Report of a Conference (Apache Junction, Arizona, September 4-6, 1968).

Arizona Occupational Research Coordinating Unit, Phoenix
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 29p.

*RESEARCH COORDINATING UNITS; *CONFERENCE REPORTS; *RESEARCH PROBLEMS; *STATE DEPARTMENTS OF EDUCATION; RESEARCH SKILLS; *RESEARCH UTILIZATION; TEACHER EDUCATION
ARIZONA; CONFERENCE, APACHE JUNCTION, ARIZONA, SEPTEMBER 4, 5, 6, 1968

After being given a pre-conference quiz to determine the participants' knowledge and use of reasearch information sources, the staff of the Arizona State Department of Vocational Education met for three days to explore ideas and learn to utilize research. Four research reviews were presented and data concerning the participants' reactions to the research and the reviews were collected. Participants were placed in four groups and each was given a hypothetical research problem. The solutions involved research design, research information, decision making, and identification of unanswered questions. Other sessions were devoted to state enrollment data and its applications, and to evaluation of teacher education programs. Questionnaires are included. (EM)

VT 007 586

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RESEARCH UTILIZATION

REPORT OF A CONFERENCE

PROGRESS THROUGH RESEARCH . . PROGRESS THROUGH RESEARCH . . PROGRESS THROUGH RESEARCH . . PROGRESS THROUGH RESEARCH . . PROGRESS THROUGH RESEARCH . . PROGRESS THROUGH RESEARCH

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FOR THE STATE DEPARTMENT OF VOCATIONAL EDUCATION

ERIC

RESEARCH UTILIZATION

Report of a Conference

Department Staff
State Department of Vocational Education

Superstition Inn
Apache Junction, Arizona
September 4,5,6, 1968

Sponsored by
Arizona Research Coordinating Unit

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INTRODUCTION

The entire staff of the Arizona State Department of Vocational Education met for three days in Superstition Inn at Apache Junction for this conference. Included were the Director, Assistant Director, all supervisors, assistant supervisors, county coordinators, Dr. W. Patrick Loyd from the U.S. Regional Office of Education in San Francisco, and the RCU staff. Away from the interruptions of office routine, the resources now available for progress through research were presented and critically examined. Six half-day sessions were held, each dealing with a special area of current research activity in Arizona's vocational education program. This report contains a description of each session, copies of materials presented, and summaries of the participants' responses to three information and evaluation questionnaires used during the conference.

FIRST SESSION

Department Staff Meeting

The purpose of the meeting was to explore new ideas and learn how to utilize research. Mr. Cullison gave a brief report on the Four Corners Commission planning for vocational education in Arizona. The Commission was created by Congress to improve the economic status of the four states -- Arizona, New Mexico, Colorado and Utah -- through stimulating industry, business and employment. The Arizona State Department of Vocational Education will be called on for assistance in developing a master plan for vocational education and training. Sterling Research Institute in Washington, D.C. will be designing the master plan.

Brief oral reports of recent activities were given by several staff members. Dale Gibson reported on a conference of twenty western states on "Leadership Development in Vocational-Technical Education." Carlos Moore reported on the national FFA.

SECOND SESSION

Research Symposium

Purpose and Source of Support: The central purpose of the Conference was to increase knowledge of research and research utilization by the State Department staff. It was supported entirely from the RCU Discretionary Award

Fund, a portion of 4(C) funds given to each RCU this year for local and state research activities. The research symposium concentrated on selected research reports, availability of research, utilizing research, and personal involvement.

Pre-Conference Quiz: Questionnaires were distributed to the participants to identify levels of knowledge of research, location of materials, and utilization.* The responses indicated that in knowledge of research all participants had read or examined several research reports during the past year, at least one person had done so in each of the nine categories during the past months; within the past months more than one-third of the group had read reports in curriculum research, manpower research, and program evaluation.

Within the past year these percentages of the participants had read research reports of the kinds indicated:

90%	Curriculum Research
80%	Manpower Research
70%	Program Development
70%	Program Evaluation
60%	Facilities or Equipment Research
60%	Follow-up or Program Effectiveness
50%	Educational Methods
40%	Motivational or Career Selection Research
30%	Cost Benefits Research

Twenty-four of the Conference participants had read or examined more than one research report in the same category. Altogether in the past year members of the group collectively had read or examined at least 167 research reports -- an average of seven per person -- more than one research report every other month. Only 58% of the group however, could identify any part of this research when asked, and altogether only 27 of the 167 reports read could be identified. One-fifth of the group identified at least one research report published outside of Arizona which had been heard of but not read.

Four out of five persons in the group had requested research services of the State Employment Service during the past year. Two-thirds had requested such services from the State Department of Vocational Education. Fewer than one-third had asked the RCU for research. About the same number had gone directly to ERIC, and the university libraries. One out of six had requested research services from the State Department of Public Instruction, and from public school libraries.

Three-fourths of the Conference participants knew the RCU has a complete set of AIM and ARM. Half of them knew the RCU had the entire collection of RIE. One-third knew the RCU had the Ohio State Center's Review and Synthesis series. However, three-fourths thought the RCU had the complete series of ERIC microfiche. Two-thirds to three-fourths knew what is in AIM and ARM, but two-

*Copies of the questionnaires used in the Conference are found in the Appendix.

thirds did not realize that AIM and ARM do not contain research reviews. Slightly more than half knew the kinds and extent of research materials contained in the RCU library -- or did a good job of guessing. Fewer than half knew the extent of the RCU computer cataloguing of these materials.

About half of the participants had personal knowledge of the adoption of a new curriculum or program, modification of a existing curriculum, field test, pilot or demonstration project, or other actions taken as a direct result of research reports or research projects. Nearly one-third knew of vocational research being utilized by agencies or institutions in Arizona other than the schools. (This indicates a fairly substantial amount of research utilization in Arizona during the past year, unless most of the participants were referring to the same research.)

More than half of the participants had personally in the past year given research reports to teachers or administrators, recommended new curricula based on research, recommended curriculum changes as a result of research, and recommended other actions affecting vocational education in a school in Arizona -- all as direct results of research reports or research findings. This appeared to be an usually high degree of personal involvement in research activities by members of the state department staff.

Research Reviews: Several research reports in the RCU library had been reviewed by Arizona vocational educators previous to the conference, and copies of these reviews were distributed. There were two objectives in this part of the symposium: (1) to give the participants new information about kinds of vocational research available, about specific research described in the reports, and the reviewer's opinions of the results of the research; and (2) to give the participants an opportunity to raise questions about the research and the reviewer's opinions. These questions would include significance of the results, implications, weaknesses and unsupported conclusions, and professional competence of the researcher and the reviewer.

In other words, the purpose here as explained in the Conference was to create a dialogue -- a continuing discussion of the merits and faults, the value and benefits to vocational education, and new areas of further research opened up by each report. Such a dialogue should eventually bring under professional scrutiny everything of any importance that comes from vocational research efforts all over the country, now and from now on. Two specific benefits are sought from such a dialogue: (1) the really important research findings will be sifted out from a growing volume of reports; and (2) the reports that do contain information of definite value to vocational education will be read.

The reports which had been reviewed for this Conference had not been selected at random, although they appeared to have been. Some did not even seem to have been worth reviewing. This fact in itself demonstrated one of the essential needs in vocational research -- the necessity to review many reports before spending time and money getting a few of them into the hands of educators. On the other hand, the reviewer might be wrong. The next step,

therefore, was to review the reviewer. This was done in open discussion and on a check list distributed to each Conference participant.

Actually, the participants were told, all of the reports reviewed for this Conference would not have been selected for review ordinarily. The criteria for selection by the RCU are three: (1) reputation of the author, publisher, and funding agency; (2) cost and size of the project; and (3) a preliminary examination of the report for apparent scholarly excellence and significance of results. All of the reports reviewed for the Conference did not meet these criteria, but each was a serious study which had taken time and money to produce, and each deserved serious consideration.

Conference Response to Reviews:

1. Occupational Opportunities in Nebraska, Nebraska Research Coordinating Unit, University of Nebraska, 1963, reviewed by William Anderson, Arizona State Supervisor of Industrial Arts.* There was divided opinion about whether this research report contained anything remarkably new. Forty percent said it did; 50% said it did not; 5% had no opinion. Eighty percent said the research report seemed to agree with what they already knew. Half of the group did not know if it agreed with other research they were familiar with; most of the others said it did.

The reviewer was not considered to have been too critical (by 90% of the participants), nor too easily influenced (85% of the participants). There was divided opinion on whether the reviewer's personal convictions were evident but most said they were not. Three-fourths of the group agreed with the reviewer's recommendations of persons whose attention should be called to this report, but 10% definitely disagreed. Half of the group felt they should read the report; 35% did not think so. About the same number thought they would read the report. Three-fourths were certain they knew where to get the report; the rest thought they probably knew.

2. The Influence of Industrial Arts Experience on Grades Earned in Post-High School Trade and Technical Curriculums, Jerome Moss, Jr., University of Minnesota, 1966, reviewed by Marvin Seglem. None of the participants felt there was anything remarkably new in the results of this research. They either did not know or did not think it agreed with the information they already had. The same was true as to other research they had heard of. Most of the group felt the reviewer was not too critical, but 20% thought he was. Very few thought the reviewer was too easily influenced by the report. Nearly half believed the convictions of the reviewer were not evident in the review; 35% thought they were.

Half of the group felt the reviewer's recommendations of persons in Arizona who should have this report were correct. No one felt as a result of the review that he or she should read the report, and no one intended to. Most of them indicated they knew where to find it if they wanted it.

3. Using Programmed Instruction in Occupational Education, Robert E. Norton, The University of the State of New York, 1967, reviewed by Carol Ellsworth. Most of the group took the reviewer's word for it that there was nothing really new in this research report. It agreed with what half

*Reviews are found in the Appendix.

of them said they already knew, and most of the others were undecided on this point. About the same was true of other research that participants in the Conference knew of. Three-fourths of the group did not think the reviewer was too critical, but more than half felt she had been too easily influenced. Only a few felt her personal convications influenced her evaluations; half of the group felt they did not.

Most of the participants agreed with the reviewer's recommendations of persons who should have this report. Forty percent felt that they should read it; 40% thought not. Slightly fewer thought they actually would read it, and most of the group knew where to find it if they wanted it.

4. Arizona Junior Colleges: An Investment in Educational Opportunities for Youth and Adults, Margden B. Stokes, University of Arizona, reviewed by J.R. Cullison. Most of the group felt from Mr. Cullisons's review that there is new information in this report. Half of them believed it agrees with what they already knew, but the rest were not sure. They also thought it probably agreed with other research, but did not know. The reviewer was certainly not thought to be too critical nor too easily influenced by the results of the research report. A few thought his personal convictions influenced his review, but half of the group thought not.

Most of the group agreed with the reviewer's recommendations of who should have this report. Three-fourths felt they themselves should read it, and half thought they would read it. Everyone knew where to find it when they wanted it.

Research Utilization: The Conference was divided into four groups and each group given a hypothetical assignment. Copies of the assignment had been prepared in advance and were given to each person. The participants were instructed to go into group meetings and prepare answers to the assignments, then return to the general session. An oral report was given by one member of each group describing how the assignment had been carried out. This was followed by open discussion of the problems encountered, questions raised, and recommendations.

Each group was given a problem requiring research. The problems were hypothetical, but they closely paralleled actual problems existing at the present time in Arizona. Group assignments were to describe exactly how research was used in solving the problems, with specific answers to the following questions: What kind of research did you look for? Who did you ask for assistance? Where did you look? What did you do with what you got? How did you know you had found all there was available? How did you know it was reliable? How did you decide what to use and what to discard? What research did you use in seeking solution to your problem? What kinds of research were you unable to find which would have been helpful?

The assignments were:

Group I. You are a special committee of vocational teachers and community representatives. Your high school has an enrollment of 350 students. Half of the seniors went on to college last year. One-third of them failed or dropped out. None of these have returned home, and only a few of

those who did not go on to college still live in the neighborhood.

The major source of income in the community is agriculture. The only vocational courses in the high school are agriculture, home economics, office occupations and distributive education, plus industrial arts. Total enrollment in these courses last year was 82 students, with agriculture and home economics accounting for slightly more than half.

The high school principal has asked you to determine: (A) If the present vocational program should be changed in any way; (B) If additional courses should be offered; (C) If so, what should they be; and (D) Should any other actions be taken affecting vocational education at this school either for the benefit of the students or of the community?

Group II. You are a special committee called together by the superintendent of a large metropolitan high school district. You represent the State Department of Vocational Education, the State Employment Service, several members of the vocational faculty, and employer representatives.

The district has recently completed a large new vocational building. Programs offered are agriculture, sheet metal work, wood working, machine shop, electricity and electronics, auto body and engine repair, home economics, practical nursing, cosmetology, office occupations and distributive education. The building is well equipped, but is being used at only fifty percent of capacity.

The superintendent has asked you to determine: (A) If the present vocational program should be changed in any way; (B) If additional courses should be offered; (C) If so, what should they be; and (D) Should any other actions be taken affecting vocational education at this school either for the benefit of the students or of the community?

Group III. You are a special committee of vocational teachers and community representatives asked to serve by the principal of the high school. The high school has 1,800 students. Five years ago it had 600 students. Several new industries have moved into the area following completion of an interstate highway which links the community with two major metropolitan areas.

The high school offers the same vocational education programs it did five year ago -- agriculture, home economics, and typing -- with the addition of distributive education.

The principal has asked you to determine: (A) If the present vocational program should be changed in any way; (B) If additional courses should be offered; (C) If so, what should they be; and (D) Should any other actions be taken affecting vocational education at this school either for the benefit of the students or of the community?

Group IV. You are a special committee in the State Department of Vocational Education. The Director has asked you to recommend a course of

action to meet the problem of low enrollment in vocational education in many schools in the state. These are schools in which less than one-fourth of the students enroll in any vocational courses. Approximately the same number go on and complete a college degree. Half of the students end up with neither a college education nor an employable skill.

The Director has asked you to determine: (A) If the present vocational program should be changed in any way; (B) If additional courses should be offered; (C) If so, what should they be; and (D) Should any other actions be taken affecting vocational education at this school either for the benefit of the students or of the community?

Time available in the Conference permitted oral reports on these assignments only, with no permanent record of the way they were carried out. The oral reports were excellent and reflected considerable thought in approaching situations requiring research. Conference participants reported that the exercise increased their own awareness of difficulties encountered in applying research and of the resources available for assistance.

THIRD SESSION

Students With Special Needs

This session dealt more with the problem of identifying students with special needs, and developing vocational education to meet their requirements, than with the research as such. The Conference participants were divided into four groups, the same four groups given research assignments in the previous session. After thirty minutes of individual effort in group session, they reassembled for a panel report presented by three of the State Department Staff.

Kay Paxton, Supervisor of Special Needs, discussed the early stages of serving people with special needs. Work has been done with the hard core unemployed, but most administrators are concerned about the large groups whose needs are not being met. A report from a recent Conference on poverty pointed out the cycle in which many of the poor find themselves: students cannot succeed in school because of economic handicaps, and they cannot overcome the handicaps without succeeding in school. Mrs. Paxton said there is much that is not being done. She felt guidelines must be developed for a plan of action.

Don Hiserodt, Director of Manpower Development, gave a report on the high school skill center. He said he believed the intent of Congress in its current program is to solve "people-problems," and that is the job to be done. Special needs can be eliminated if vocational education does its job. He described the Work Opportunity Center in Minneapolis for youths 16-21 years of age, which is designed to get the dropouts in this group back in school but in a different school atmosphere than they had known before. The Opportunity Center has many supportive services available to the students including work experience, guidance, medical care, and job placement. The program includes general education as well as skill training, and students may graduate from the Center with a G.E.D. certificate or transfer back to their regular high school.

Bill Anderson, State Supervisor of Industrial Arts, reported on the Colorado Attitude Conference which he and a member of the RCU staff had attended sponsored by the Rocky Mountain Regional Laboratory. This Conference was part of a project on the development of attitudes which make people employable and is being carried out in a number of junior high schools in which Douglas in Arizona is one. A position paper identifies three areas of concern in the project: (1) unemployment -- those who cannot achieve job success; (2) overemployment -- those who have been placed in jobs above their abilities; and (3) underemployment -- those who are employed below their level of ability. The Rocky Mountain Regional Laboratory is studying four basic areas in its World of Work program: the nature of employability; the nature of the world of work; the nature of a career; and the contribution of formal education to these.

Bill said the Rocky Mountain Laboratory's World of Work project is based on several assumptions: (1) man must learn in order to live; (2) all people can and do learn; (3) education is justified to shorten the learning time; (4) all formal education has an occupational end; and (5) when learning ceases boredom sets in. Dr. Bush, Director of the Laboratory, considers this last point the key to both job success and job transfer.

Following the panel discussion, Gene Dorr, Assistant Director of Vocational Education, concluded the session on students with special needs with a discussion of "Where Do We Go From Here?" He said we have examined the problem, now we must decide what we intend to do about it. From the earlier group meetings and the panel presentations, these were the recommendations of the Conference: (1) develop films for parents to gain family support; (2) develop an Administrator's package for dealing with students with special needs; (3) establish priorities; (4) work with advisory committees; (5) establish criteria for selection of teachers; (6) work with teacher education classes and teacher education conferences; (7) discourage labeling of special needs classes; (8) add the topic of special needs to the agenda of decision-makers conferences; (9) develop job placement in vocational education; (10) work closely with the Employment Service and social welfare agencies; (11) increase vocational guidance efforts; and (12) hold workshops on students with special needs for teachers in vocational education.

FOURTH SESSION

Application of Enrollment Data

The Wednesday afternoon session was devoted to an explanation of the enrollment data gathered by the State Department and analyzed by the RCU. The group was divided into small groups by service so that the data presented would be meaningful. Enrollment and follow-up procedures and the mechanics involved were covered first. The booklets provided to the teachers were explained by service area.

Mr. Dorr then presented the print-outs by service to the groups. He explained the various sets of printouts: i.e. enrollment by course, school and instructor; status by service by course; high school student by status and service; miscellaneous O.E. codes by service; no status students by alphabetical listing; junior college students by status and service; 4048 breakout by O.E. code indicating COOP and Special Needs; and finally, the entire vocational education file in an unduplicated count by occupational classification.

Because this was the first opportunity most of the supervisors have had to work with these data a detailed explanation was given. A Questionnaire -- work sheet * was distributed and the rest of the session was spent working on the problems. Gene Dorr, Paul Bennewitz and Diane McCarthy assisted the supervisors by answering questions and helping find the proper data.

FIFTH SESSION

Enrollment Data As A Management Tool

Thursday morning the group was once again divided into groups by service and worked on using the enrollment data explained previously as a management tool. For the first time the Division of Vocational Education is able to identify, by service and enrollment, all of the vocational programs offered at each high school. By carefully identifying each program in this way, the supervisors are aware of those schools that need either special help or extra attention. The supervisors can also plan trips to these schools more realistically and also know in advance the subject on which they will speak to the teachers. All of the supervisors were most enthusiastic about having this information available. Gene Dorr passed out 30 problems * to each staff member which were to be answered and returned to him. Paul Bennewitz and Diane McCarthy assisted Gene Dorr in answering questions and assisting staff members in filling out the problem sheets. The group then heard Paul Bennewitz explain various ways in which additional data can be gathered. He specifically explained the cards used to identify the businesses employing students in the Cooperative programs. These cards are keypunched and the information stored.

Diane McCarthy then asked the group for suggestions on the services the RCU might provide. These included: enrollment data for each state

*Attached as Appendix C.
*Attached as Appendix D.

supervisor; a printout of special needs students for Kay Paxton; a separate enrollment timetable for Health Services; increased dissemination of available RCU materials (including reviews); and visits by state staff to see RCU facilities.

SIXTH SESSION

Vocational Teacher Education in Arizona

The group met again in the afternoon in work session to hear Dr. Robert Kerwood, Pima County Coordinator, explain his evaluation of the teacher education program instrument. This instrument was designed by him and has been field tested in all 50 states. The instrument and results were the basis of his doctoral dissertation. The group broke up into the four original work groups to discuss this instrument after a brief explanation of it by Dr. Kerwood. The four groups spent approximately one hour in lively discussion of this instrument. A general discussion followed in which ideas from the various groups were presented to the entire group. Everyone was pleased with the dialogue which followed -- many problem areas were discussed and reviewed. Dr. Kerwood then asked that each staff member complete the instrument and send it to him.

The Conference adjourned at 3:00 p.m.

CONFERENCE EVALUATION

At the conclusion of the three-day Conference, participants were given a Conference evaluation questionnaire. Ninety-one percent said they felt the session on student data and follow-up may have benefited them in their work, and nearly one-third considered this the most valuable session of the Conference. The Research Symposium (second session) was reported beneficial to 87% of the participants, as was the session on students with special needs. The sessions on enrollment data as a management tool and vocational teacher education research were reported as beneficial to 83% of the group.

The most valuable experience of the Conference to most participants was the opportunity to exchange ideas, followed by the opportunity to concentrate on particular areas of common interest without interruption, the opportunity to get better acquainted with other members of the staff, new ideas and information, and more inspiration in their work in that order.

Ninety-six percent said their knowledge of research availability in Arizona had increased as a result of the Conference; 81% said their interest in being personally involved with vocational research had increased; 87% said their knowledge of the kinds of research had increased and they felt that utilization of vocational research may be increased in the schools as a

result of the Conference. Seventy-four percent said their knoweldge of specific research had been increased, but the other 26% said theirs had not.

Beneficial results from the sessions on enrollment and follow-up data were reported by 87% of the participants, and 91% felt the data processing system instituted this year will bring changes in vocational-technical education in the State. Eighty-three percent felt it will have greater benefits than they had previously realized. Ninety-one percent felt that further improvements could be made in the enrollment procedures, and 78% believed additional information should be gathered. Most participants were undecided about gathering additional data in the follow-up of former students.

Between 70% and 90% of the Conference participants said that as a result they would be better able to identify enrollment problems in particular schools, be able to increase the cost-effectiveness ratios of some vocational education programs, be able to plan their work more efficiently, and be able to offer more effective assistance to teachers in the schools. About half felt that as a result of the Conference more students may be given occupational skill for employment.

Two-thirds of the group felt that identifying students with special needs had been made easier, and one-third disagreed. Seventy-eight percent did not believe vocational education for students with special needs is more important than for other students, but 13% said they felt it was. About half of the group believed vocational education is making substantial progress in this area; one-fourth did not believe it is, and the others were not sure.

Thirty percent said they felt teacher education in Arizona is increasing in effectiveness, and 44% said they felt it was not. More than three-fourths of the group said they felt that vocational teacher-education generally is not keeping up with the changing demands in vocational education. Nearly two-thirds felt that research may lead to major changes in methodology and requirements for certification.

No recommendations were made for improving future conferences. Subjects recommended for future conferences were: teacher education; cooperation between services; teacher recruitment and selection; more on enrollment and follow-up; pre-vocational education; more on students with special needs; and new vocational education programs. The leading preference was teacher education, recommended by about half of the participants.

As a result of this Conference and the reaction of those who participated, the RCU is scheduling a second conference of a similar nature for teacher educators. Following that, consideration will be given to a third for junior college and perhaps high school vocational-technical administrators. Each of these will be supported from the Discretionary Award Fund to develop greater knowledge of research materials and greater utilization of research in vocational education in Arizona.

APPENDIX A

ARIZONA STATE DEPARTMENT OF VOCATIONAL EDUCATION RESEARCH CONFERENCE
SUPERSTITION INN
September 3 - 5, 1968

PRE-CONFERENCE QUIZ

RESEARCH MATERIALS, AVAILABILITY AND UTILIZATION

INSTRUCTIONS: Please answer the questions below with complete frankness and candor. Do not write your name or give other indication of your position. Do not be embarassed by your answers. This questionnaire is intended simply to establish a base-line of information from which to develop areas of special emphasis for the Conference. Answer all questions as quickly as you can.

I. Knowledge of Research

1. Have you personally read a report or examined the results of a project in:

	During past month		During past 6 months		During past year	
	Yes	No	Yes	No	Yes	No
(a) Curriculum research?	☐	☐	☐	☐	☐	☐
(b) Manpower research?	☐	☐	☐	☐	☐	☐
(c) Educational methods research?	☐	☐	☐	☐	☐	☐
(d) Program development research?	☐	☐	☐	☐	☐	☐
(e) Program evaluation?	☐	☐	☐	☐	☐	☐
(f) Cost benefits research?	☐	☐	☐	☐	☐	☐
(g) Motivational or career selection research?	☐	☐	☐	☐	☐	☐
(h) Facilities or equipment research?	☐	☐	☐	☐	☐	☐
(i) Follow-up or program effectiveness research?	☐	☐	☐	☐	☐	☐

2. If you have read or examined more than one research report in any of the categories above, put a circle around that box.

3. If you answered yes to any of the categories above, list the title, author, or other identification of the research.

_____ _____

_____ _____

4. Please give the title, author, or other identification of a research report published outside of Arizona in the past year which you have heard of but have not read._____

II. Research Availability

1. Have you requested research information or reports from the following services during the past year:

	Yes	No
(a) Arizona RCU?	☐	☐
(b) Arizona Employment Service?	☐	☐
(c) State Department of Public Instruction?	☐	☐
(d) State Department of Vocational Education?	☐	☐
(e) University library?	☐	☐
(f) Public school library?	☐	☐
(g) ERIC?	☐	☐

2. Does the Arizona RCU have a complete set of:

	Yes	No
(a) Research in Education?	☐	☐
(b) AIM and ARM?	☐	☐
(c) Review and Synthesis?	☐	☐
(d) ERIC microfiche?	☐	☐

3. Do Aim and Arm contain:

	Yes	No
(a) Abstracts of research materials?	☐	☐
(b) Lists of research materials indexed by subject, title, and author?	☐	☐
(c) Lists of microfiche?	☐	☐
(d) Reviews of research materials?	☐	☐
(e) Locations and cost of research materials?	☐	☐

4. Do research materials in the RCU library include:

	Yes	No
(a) All ERIC microfiche available from the Ohio State input center?	☐	☐
(b) U.S. Government, university, and commercial publications?	☐	☐
(c) All service and major occupational areas?	☐	☐
(d) Manpower and employment data?	☐	☐
(e) Reports of national conferences and workshops?	☐	☐

5. Does the computerized cross-indexing of research materials in the RCU library include:

	Yes	No
(a) More than 800 shelved publications?	☐	☐
(b) More than 350 items on microfiche?	☐	☐
(c) The complete bibliographies in all seven issues of the Review and Synthesis series?	☐	☐

	Yes	No
(d) The entire collection of the National Center for Vocational Research at the University of Wisconsin?	☐	☐
(e) Nearly all unpublished local reports from other states collected by research coordinating units?	☐	☐

III. Research Utilization

1. Do you have personal knowledge of a vocational educator in your field of specialization in an Arizona high school or junior college who has during the past year:

	Yes	No
(a) Adopted a new curriculum or program based on research?	☐	☐
(b) Modified an exising curriculum or program as a result of research findings?	☐	☐
(c) Designed or proposed a research project based on the results of previous research?	☐	☐
(d) Conducted a field test, pilot, or demonstration program based on research findings?	☐	☐
(e) Took any other action affecting vocational-technical education as a direct result of a research report or a research project?	☐	☐

2. Do you have personal knowledge of any agency or institution in Arizona other than a school utilizing the results of vocational research in the past year? Yes ☐ No ☐

IV. Research Involvement

1. Have you personally given a research report on the findings of a research project to a teacher or administrator:

	Yes	No
(a) In the past month?	☐	☐
(b) In the past 6 months?	☐	☐
(c) In the past year?	☐	☐

2. Have you personally recommended a new curriculum or program in any school in Arizona within the past year based on a research report or the results of a research project? Yes ☐ No ☐

3. Have you personally recommended changes or modifications of a curriculum or program in any school in Arizona in the past year as a direct result of a research report or research findings? Yes ☐ No ☐

4. Have you personally recommended any other action affecting vocational education in a school in Arizona during the past year as a result of a research report or research findings? Yes ☐ No ☐

APPENDIX B

Research Symposium

Individual Response to Research Reviews

Instructions: Give your personal opinion of the questions below in response to each review on the following scale of values:

A - Definitely yes
B - Probably yes
C - You don't know
D - Probably no
E - Definitely no

	1st Review	2nd Review	3rd Review	4th Review
1. Do you feel there is anything remarkably new in the results of this research?	A B C D E	A B C D E	A B C D E	A B C D E
2. Does the research report seem to agree with what you already know?	A B C D E	A B C D E	A B C D E	A B C D E
3. Does the research report seem to agree with other research that you know of?	A B C D E	A B C D E	A B C D E	A B C D E
4. Do you think the reviewer may have been too critical of the report?	A B C D E	A B C D E	A B C D E	A B C D E
5. Do you think the reviewer may have been too easily influenced by the report?	A B C D E	A B C D E	A B C D E	A B C D E
6. Do you feel that the personal convictions of the reviewer may have influenced his evaluation of the research?	A B C D E	A B C D E	A B C D E	A B C D E
7. Do you agree with the reviewer's recommendations of persons whose attention should be called to this report?	A B C D E	A B C D E	A B C D E	A B C D E
8. Do you think you should read the report?	A B C D E	A B C D E	A B C D E	A B C D E
9. Do you think you will read the report?	A B C D E	A B C D E	A B C D E	A B C D E
10. Do you know how to get a copy of the report?	A B C D E	A B C D E	A B C D E	A B C D E

APPENDIX C

APPLICATION OF ENROLLMENT DATA

1. Name school having largest enrollment in your service.

   School Name_____ Instructor(s)_____
   Total V. E. Enrollment
   (your service)_____ _____

2. Name school having lowest enrollment in your service.

   School Name_____ Total V.E. Enrollment
   Instructor_____ (your service)_____

3. What county do you have the greatest percentage of schools offering your program?
   County Name_____

4. In what county do you have the weakest percentage of schools offering your program?
   County Name_____

5. How many students in your service took courses out of your service area?
   Number_____

6. Using question #5, what service was by volume the highest in providing additional vocational courses for your area? Lowest?

   Highest_____ Lowest_____

7. In your beginning course, how many students had the following status numbers?

Number of Course_____	High School	Jr. College
Status #1	_____	_____
Status #3	_____	_____
Status #5	_____	_____

8. Supply the name and social security number of a student in Maricopa County that is taking your beginning course and has a status of #1.

School_____ Student's Name_____

School No._____ Social Security #_____

Instructor_____ Status_____

Total enrolled in this class_____

9. Provide the status breakdown of one course for all status numbers.

Service_____ Course No._____

Status #	Male	Female
_____	____	_____
_____	____	_____
_____	____	_____

APPENDIX C (con't)

12. What is the total (duplicated) follow-up for your service for 1967-68?

Service Level:		Number	Percentage
	High School	_____	_____
	Jr. College	_____	_____

13. Name an instructor that <u>failed to provide</u> the following information.

Social Security # _____ Instructor _____

School _____ Course No. _____

14. Proper O. E. Code (if any)_____ Instructor_____

School_____ Course No._____

15. Status number (none available)

Student's Name_____ Instructor_____

School_____ Course No._____

16. Name a student that was classified as a special need student?

Name_____ Instructor_____

School_____ Course No._____

Special Needs Code_____

17. How many students dropped from school and your service with entry level skills?

Total High School_____

Total Jr. College_____ Grand Total_____

18. What was the junior college course in your service that was offered at the most campuses?

Course Title_____

No. of campuses offered_____ Total Enrollment_____

19. How many special needs students did you serve during fiscal 1968?

High School_____ Adult_____

Jr. College_____ Total_____

20. Name the school in each county that has the lowest percentage of their student body taking Vocational Education.

County_____

School_____

Percentage_____

APPENDIX D

MANAGE BY EXCEPTION

1. Name the three programs you need to visit first this school year due to facts noted by D. P.

   A. Name of Institution_____

      Instructor(s)_____ _____

      _____ _____

      Reason(s) why?_____

      _____

      _____

      _____

   B. Name of Institution_____

      Instructor(s)_____ _____

      _____ _____

      Reason(s) why?_____

      _____

      _____

      _____

   C. Name of Institution_____

      Instructor(s)_____ _____

      _____ _____

      Reason(s) why?_____

      _____

      _____

      _____

2. Name three programs you want your T. E. to visit early this fall.

A. Institution_____

Instructor(s)_____ _____

_____ _____

Reason(s) why?_____

_____

_____

_____

B. Institution_____

Instructor(s)_____ _____

_____ _____

Reason(s) why?_____

_____

_____

_____

C. Institution_____

Instructor(s)_____ _____

_____ _____

Reason(s) why?_____

_____

_____

_____

3. Establish the low enrollment exception you want for your service.

By course no._____

By level of institution (high school or jr. college)_____

Basic reason why?_____

_____

_____

_____

Number of courses in schools below this level this past year?_____

4. Establish the high enrollment exception you want for your service.

By course no._____

By level of institution (high school or jr. college)_____

Basic reason why?_____

_____

_____

_____

Number of courses in schools above this point this past year?_____

5. What is the number of F.Y. 1968 students in your service that have indicated taking additional work in your service next year?

Service_____ Number (total)_____

Is this what you feel it should be?_____

Why?_____

_____

6. What course carried the largest number of students indicating they plan to continue work in this service area?

Service_____ No. of students indicating they plan to continue next year_____

Course No._____

Is this a good number to carry over?_____

7. The chart showing enrollment breakout by status all services indicates that 8.2% of the high school and jr. college gainful enrollment dropped out with one of the following reasons:

Graduated but <u>has not</u> completed basic entry level requirement and <u>is not</u> planning additional preparation in this career goal.	440
Dropped from school by school authorities <u>without</u> entry level skills.	410
Failed program and withdrew <u>without</u> entry level skills.	381
Lost interest in program as a career and withdrew <u>without</u> entry level skills.	521
	1,752

What part of this large figure belongs to your service?_____

What could be done to cut down on this loss?_____

_____

_____

What implications do you see relating to this statistic?_____

_____

8. What course in your service provides the highest number of students to be followed-up?

Service_____ Total number_____

Course_____

Is this logical?_____ Why?_____

_____

_____

9. Roughly estimate (by checking D. P. print-outs) the number of students in your service that use a miscellaneous O.E. Code for career interest number.

Number_____ Service_____

Why do you feel the miscellaneous number was used this often?_____

_____

10. What O.E. Code in your service had the highest enrollment?

    O.E. Code_____ Number_____

11. How many completed this O.E. Code?

    High School Male_____ Female_____

    Jr. College Male_____ Female_____

12. What is the total number of students indicating status number 5 in your service?_____

    What is your reaction to this number as related to total enrollment?

    _____

    _____

    Does this indicate any type of action needed? If so, what and why?

    _____

    _____

    _____

13. Questions to ask regarding low enrollments in V. E. courses.

    A. Is enrollment sufficient to cause a break even or better on cost for instruction, space and equipment?

    B. What is the potential for this course and program in the particular school or college?

    C. Is this a new offering or has the course been part of the curriculum for some time?

    D. What is the share of the school's enrollment? Is this sufficient? What does the next three years outlook appear to be in enrollment?

    E. What other V. E. programs are offered in the school? Are they receiving better percentages in enrollment? What is the contribution and value of this course to the V. E. services offered?

    F. Other

14. What questions should be asked regarding high enrollments for heavy teacher-student loads?

A. _____

_____

_____

B. _____

_____

_____

C. _____

_____

_____

15. What additional information would you like on enrollment cards for your service? Briefly describe.

_____

_____

_____

_____

_____

APPENDIX E

ARIZONA STATE DEPARTMENT OF VOCATIONAL EDUCATION RESEARCH CONFERENCE
SUPERSTITION INN
September 3 - 5, 1968

CONFERENCE EVALUATION QUESTIONNAIRE

1. Which sessions of this conference do you feel may have benefited you in your work?

   (a) Tuesday afternoon - Research Symposium ☐

   (b) Wednesday forenoon - Special Needs ☐

   (c) Wednesday afternoon - Enrollment and Follow-up Procedures ☐

   (d) Thursday forenoon - Enrollment Data as a Management Tool ☐

   (e) Thursday afternoon - Vocational Teacher Education ☐

2. Circle the box in question No. 1 which you feel benefited you most.

3. What do you feel was particularly valuable to you personally in this conference?

   (a) New ideas and information ☐

   (b) The opportunity to exchange ideas ☐

   (c) The opportunity to concentrate on particular areas of common interest without interruption ☐

   (d) The opportunity to get better acquainted with other members of the staff ☐

   (e) More inspiration in your work ☐

4. As a result of this conference do you feel:

	Yes	No
(a) That your knowledge of the kinds of vocational research has increased?	☐	☐
(b) That your knowledge of specific vocational research has increased?	☐	☐
(c) That your knowledge of research availability in Arizona has increased?	☐	☐
(d) That utilization of vocational research may be increased in the schools?	☐	☐
(e) That your interest in being personally involved with vocational research has increased?	☐	☐

5. As a result of this conference do you feel:

	Yes	No
(a) That you have a better idea of the new enrollment and follow-up data processing system and how it works?	☐	☐
(b) That this system will have greater benefits for you than you had previously realized?	☐	☐
(c) That this system will bring about changes in vocational technical education in Arizona?	☐	☐

	Yes	No
(d) That further inprovements can be made in the enrollment procedures?	☐	☐
(e) That additional information should be included in the enrollment data?	☐	☐
(f) That additional information should be included in the follow-up data?	☐	☐

6. As a result of this conference do you feel:

(a) That you will better be able to identify enrollment problems in particular schools?	☐	☐
(b) That you may be able to increase the cost-effectiveness ratio of some vocational education programs?	☐	☐
(c) That you will be able to plan your work during the year more efficiently?	☐	☐
(d) That you will be able to offer more effective assistance to teachers in the schools?	☐	☐
(e) That more students may be given occupational skills for employment?	☐	☐

7. As a result of this conference do you feel:

(a) That identifying students with special needs has been made easier?	☐	☐
(b) That providing vocational education for students with special needs is more important than for other students?	☐	☐
(c) That vocational education is making substantial progress in helping students with special needs?	☐	☐

8. As a result of this conference do you feel:

(a) That vocational teacher education in Arizona is increasing in effectiveness?	☐	☐
(b) That vocational teacher education generally is keeping up with the changing demands in vocational education?	☐	☐
(c) That research in vocational teacher education may lead to major changes in methodology and requirements for certification?	☐	☐

9. What recommendations do you have, if any, for improving future conferences?

_____

_____

_____

10. What subjects do you recommend should be included in future conferences?

_____

_____

_____

VT 007 602
Exploring Michigan's Employment Expectations. A Summary Based on the Findings of the Michigan Manpower Study.

Michigan Employment Security Commission, Detroit
Housing and Home Finance Agency, Washington, D.C. Urban Renewal Administration
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Apr68 35p.

*MANPOWER DEVELOPMENT; *MANPOWER NEEDS; *EMPLOYMENT OPPORTUNITIES; *EMPLOYMENT QUALIFICATIONS; *POPULATION GROWTH; OCCUPATIONS; WOMEN WORKERS; TECHNOLOGICAL ADVANCEMENT; JOB SKILLS; LABOR FORCE; ECONOMIC FACTORS; MANUFACTURING INDUSTRY; TABLES (DATA); CHARTS
MICHIGAN

The 1980 labor supply and demand in Michigan for significant occupations and industries is projected through the development of necessary data such as information on the skills that are currently available, the kinds of jobs that will exist in the future, and the skills that will be needed for these jobs. By 1980, Michigan's population is expected to be around 10.2 million, an increase of nearly 2.4 million, or about 30 percent from 1960. About 85 percent of this growth will be in the population 14 years of age and over, and this will mean a greater than proportional growth in the labor force, nearly 40 percent between 1960 and 1980. Employment in manufacturing, accounting for 38 percent of Michigan's employment in 1960, will constitute less than 30 percent of total employment in 1980. Major findings of the study are summarized in charts, graphs and tables as a simplified layman's report useful to employers, teachers, and the general public. (CH)

VT 007 602

DEPARTMENT OF LABOR

MICHIGAN EMPLOYMENT SECURITY COMMISSION

STATE OF MICHIGAN

GEORGE ROMNEY, *Governor*

COMMISSIONERS

CHESTER A. CAHN, *Chairman*

WALTER A. CAMPBELL · ALEX FULLER · FRANK C. PADZIESKI

MALCOLM R. LOVELL, JR., *Director*

ED042060

EXPLORING MICHIGAN'S EMPLOYMENT EXPECTATIONS

A SUMMARY BASED ON THE FINDINGS OF

The Michigan Manpower Study

APRIL 1968

MICHIGAN EMPLOYMENT SECURITY COMMISSION
7310 Woodward Avenue—Detroit, Michigan 48202

The preparation of the *Michigan Manpower Study*, of which this document is a summary, was financially aided through a Federal grant from the Urban Renewal Administration of the Housing and Home Finance Agency, under the Urban Planning Assistance Program authorized by Section 701 of the Housing Act of 1954, as amended and as authorized by the Governor's Interdepartmental Resource Development Committee of the State of Michigan, administered by the Michigan Office of Economic Expansion.

VT007602

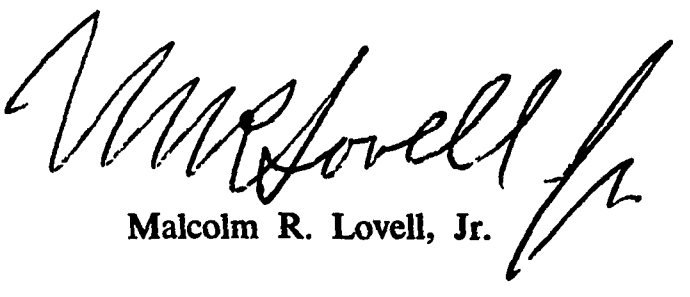
introduction

The present decade has been a period which, for rapidity of social, technological, economic, and demographic change, is without parallel in the history of our country. The acceleration of technological change and the shortening of the period during which new developments are diffused through our culture are elements of profound significance to every one concerned with the development and utilization of our manpower resources.

Coming changes in the shape and dimension of the manpower picture will exert a direct impact on the future planning of employers, educators, labor organizations, social agencies, and a host of other groups with closely related interests. From whatever aspect we view it, manpower is particularly susceptible to the vicissitudes of change. Occupations change in content, become obsolescent, or are completely phased out. Old skills must be updated or discarded. New products and new processes require new kinds of workers. Muscle, and the kinds of machine which are essentially extensions of human muscle, are replaced by brain power and machines which are essentially extensions of the human brain.

All of this implies that the proper development and utilization of manpower cannot be achieved without the development of a body of information on the skills that are available today, the kinds of jobs that will exist in the future, and the skills that will be needed for those jobs. The *Michigan Manpower Study*, financed by the Michigan Employment Security Commission and the Michigan Departments of Commerce and Education, was undertaken by the Battelle Memorial Institute to project to 1980 labor supply and demand in Michigan for significant occupations and industries, thus making a beginning on the development of the necessary body of data. The present publication is a summary of the major findings of the *Michigan Manpower Study*. This version has been prepared as a simplified "layman's" report useful to employers, teachers, and the general public.

The *Michigan Manpower Study* is only a beginning. Plans are under way for more detailed studies, utilizing the basic findings, which will make these findings more useful in the actual development of curricula in our secondary schools, so that the kinds of training available will be more closely correlated with projected labor demand than has been true in the past. Other studies, dealing with such related topics as gross labor demand by occupation, including replacement of workers leaving their occupations, are in the planning stage. Even without these more detailed studies, however, we believe the information developed in the *Michigan Manpower Study* to be of considerable importance and significance to those with an interest in manpower problems.



Malcolm R. Lovell, Jr.

assumptions

- During the remainder of the 60's and during the 70's, it is assumed that there will be no major economic recession which will seriously affect the long term growth pattern in the State.

- National productivity will grow at an approximate annual rate of 3.4%.

- Despite changing technology, the automobile will continue to be the major means of inter-city and intra-city transportation.

- An average annual growth rate of 4.5% in the Gross National Product for the 1960-1980 period is assumed.

highlights . . . . . .

1. . .

By 1980, Gross National Product (GNP) should reach an unprecedented $1.2 trillion, in terms of 1960 dollars, or more than double the 1960 level of approximately $500 billion.

2. . .

By 1980, Michigan's population is expected to be around 10.2 million, an increase of nearly 2.4 million, or about 30%, from 1960. About 85% of this growth will be in the population 14 years of age and over, and this will mean a greater-than-proportional growth in the labor force, nearly 40% between 1960 and 1980.

TABLE A

MICHIGAN

Population, Labor Force, and Employment
Actual 1960 and Projected for 1970 and 1980
(Data in thousands)

	1960	1970	1980	Percent Gain 1960-1980
Total Population	7824	8600	10200	30.4%
Population, 14 and over	5349	6100	7400	38.3%
Civilian Labor Force	2944	3400	4100	39.3%
Labor Force Participation Rate	55.0%	55.7%	55.8%	.8%*
Employed	2727	3200	3900	43.0%

* Represents actual net change in participation rates rather than relative change.

. . . . . .

. . .3

In 1960, about 37% of the labor force was 45 years of age or older. By 1980, about 34% will fall into this older worker category.

. . .4

While the overall growth in employment will be about the same as in the labor force, the occupational makeup of the labor force in 1980, and the industrial distribution of employment, will be significantly different from what they were in 1960.

. . .5

Employment in manufacturing, which accounted for 38% of Michigan's employment in 1960, is expected to grow at an extremely slow rate throughout the decade of the 70's, and by 1980, manufacturing employment will constitute less than 30% of total employment in Michigan.

. . .6

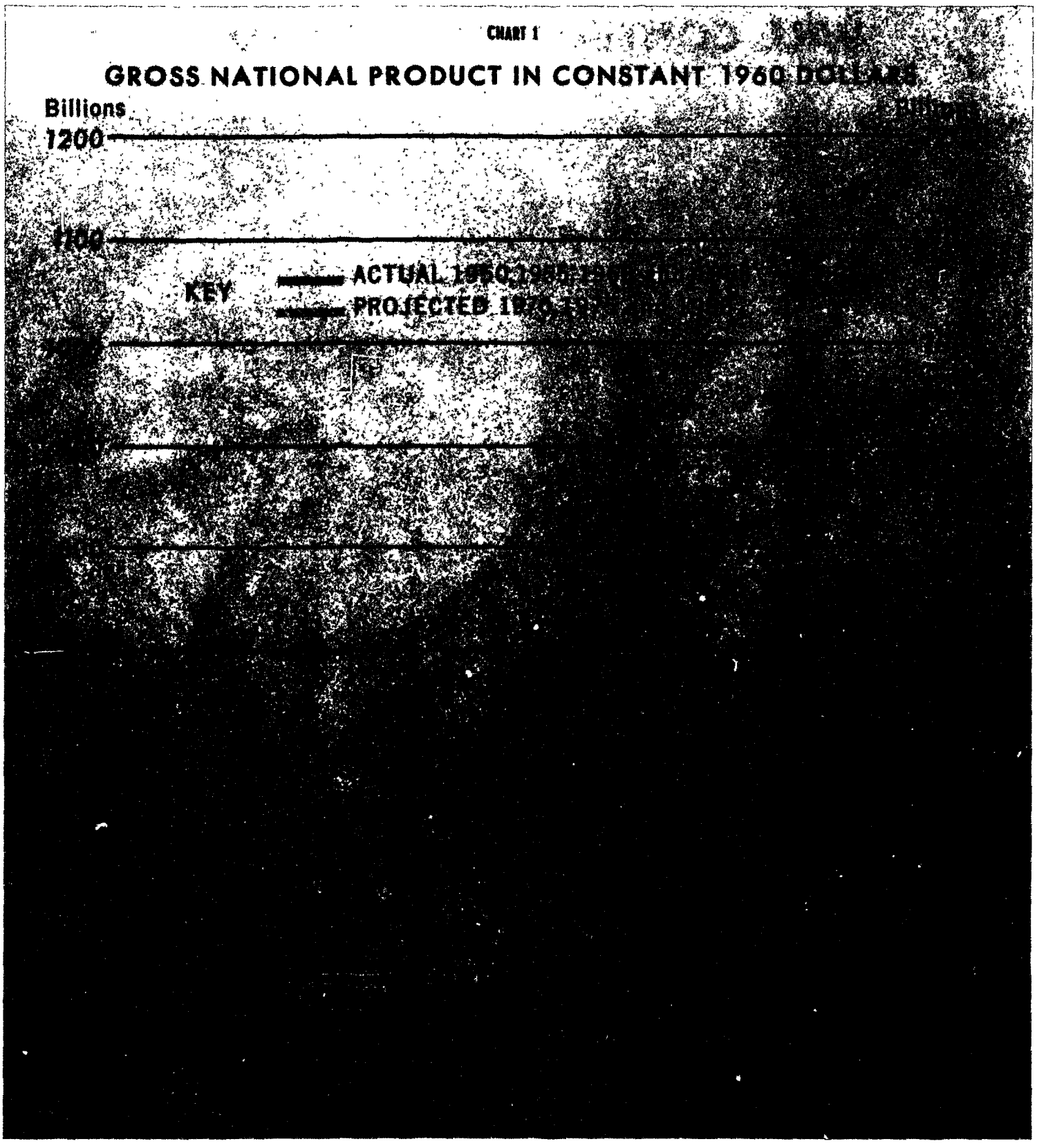
In 1960, one person in eight in the employed labor force was engaged, either as a self-employed individual, or as an employee of a professional organization, in the supplying of professional services. By 1980, more than one person in five will be so employed.

SOLID GROWTH OF NATIONAL ECONOMY IS ANTICIPATED

It is expected that the national economy will continue to expand at a fairly high rate in the years ahead. The Gross National Product (GNP) which can be defined as the dollar value of the total output of goods and services in the United States, was $503.8 billion in 1960. The projected GNP for 1980 in constant 1960 dollars is $1.2 trillion, or more than double the 1960 level. (see chart 1)—The average annual rate of growth will be about 4.5%.

As GNP increases more rapidly than employment, there will be a concomitant rise in the standard of living, with the average worker having about 40% more purchasing power to buy more and better products and services than in 1960. Increased efficiency in the production of goods and services in the American economy has traditionally resulted in higher wages and salaries, rather than in large reductions in the number of hours worked. It is expected that this situation will continue. By 1980, average family income will be around $9,450 (in 1960 dollars), by contrast with the 1960 level of $6,800.

GNP 1960 $500 BILLION
1980 $1.2 TRILLION



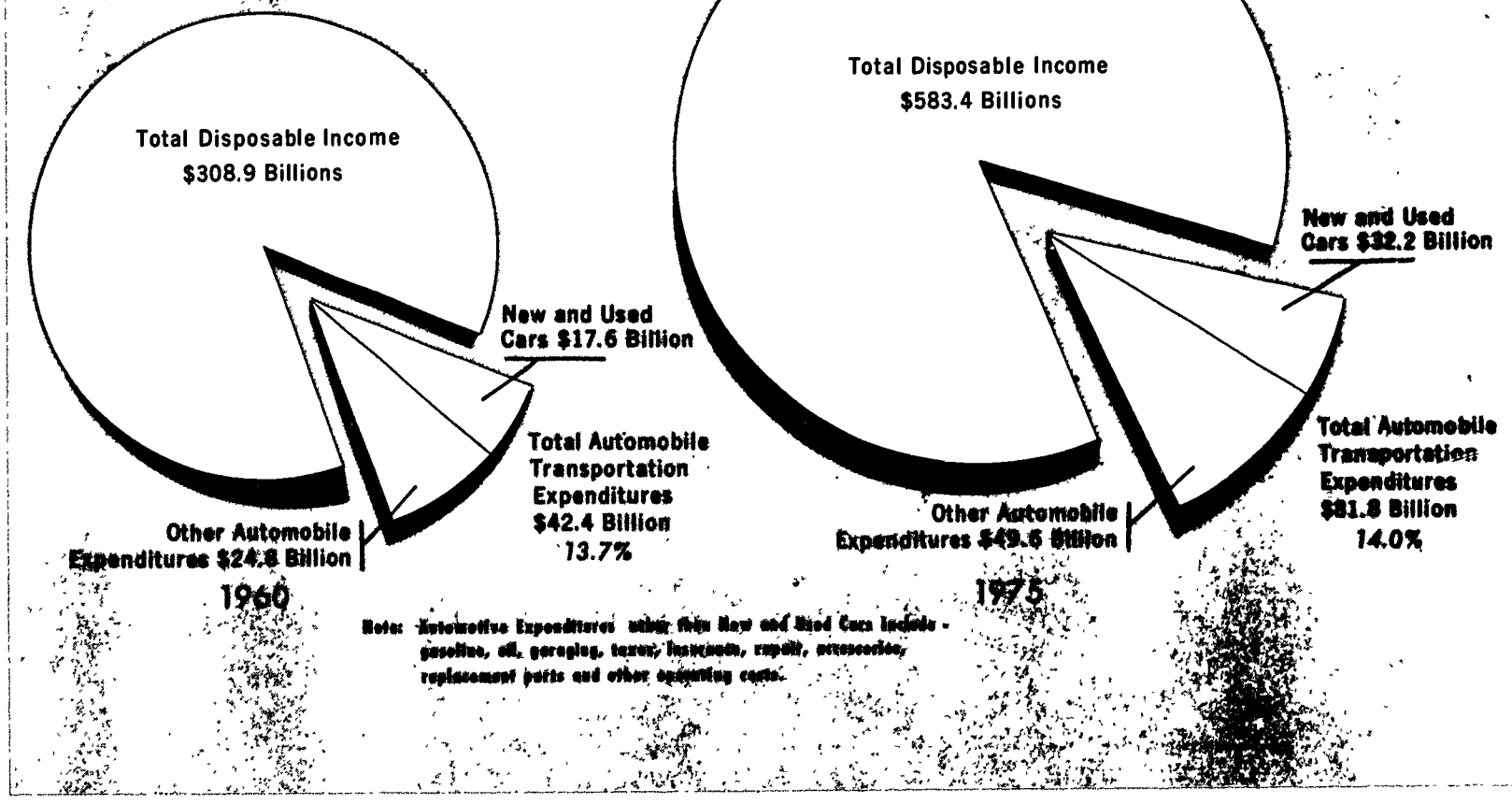
MICHIGAN'S LEADING INDUSTRY

MOTOR VEHICLES . . . WILL CONTINUE TO EXPAND

CHART 2

AUTOMOTIVE TRANSPORTATION EXPENDITURES AS A SHARE OF TOTAL DISPOSABLE INCOME 1960 ACTUAL -- 1975 PROJECTED

(IN TERMS OF 1960 DOLLARS)



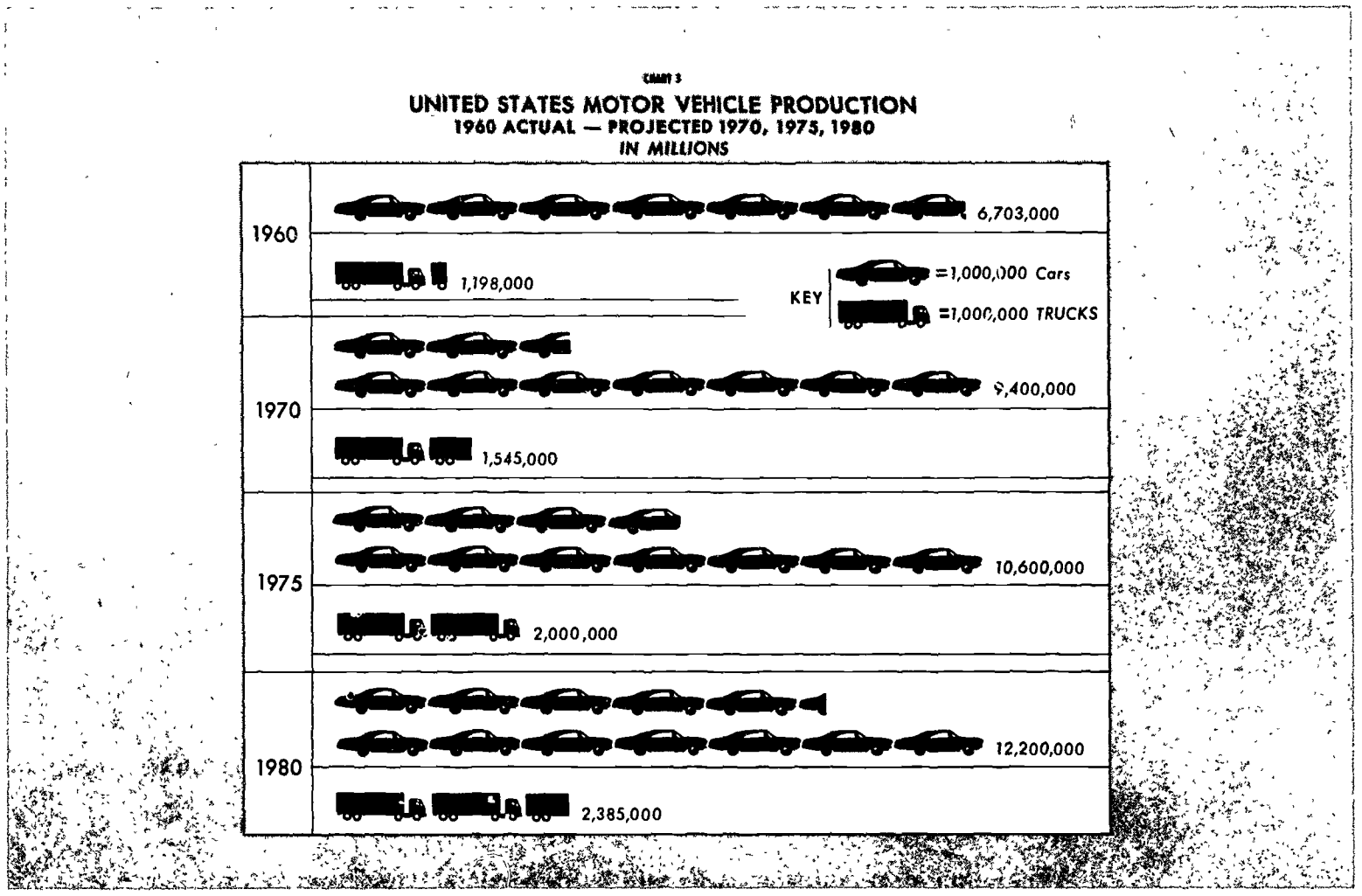
The manufacturing, servicing, and operation of motor vehicles is a major source of income to a significant portion of the working population of the U.S. These activities are especially important to Michigan which leads the nation in the manufacture of cars, trucks, and parts.

In 1960, one-seventh of total disposable income in the U.S., $42.4 billion, was devoted to the purchase and operation of cars, trucks, and buses. By 1975, such expenditures will about double, to around $82 billion, also about one-seventh of total disposable consumer income.

1980 AUTO AND TRUCK PRODUCTION WILL DOUBLE THE NUMBER PRODUCED IN 1960

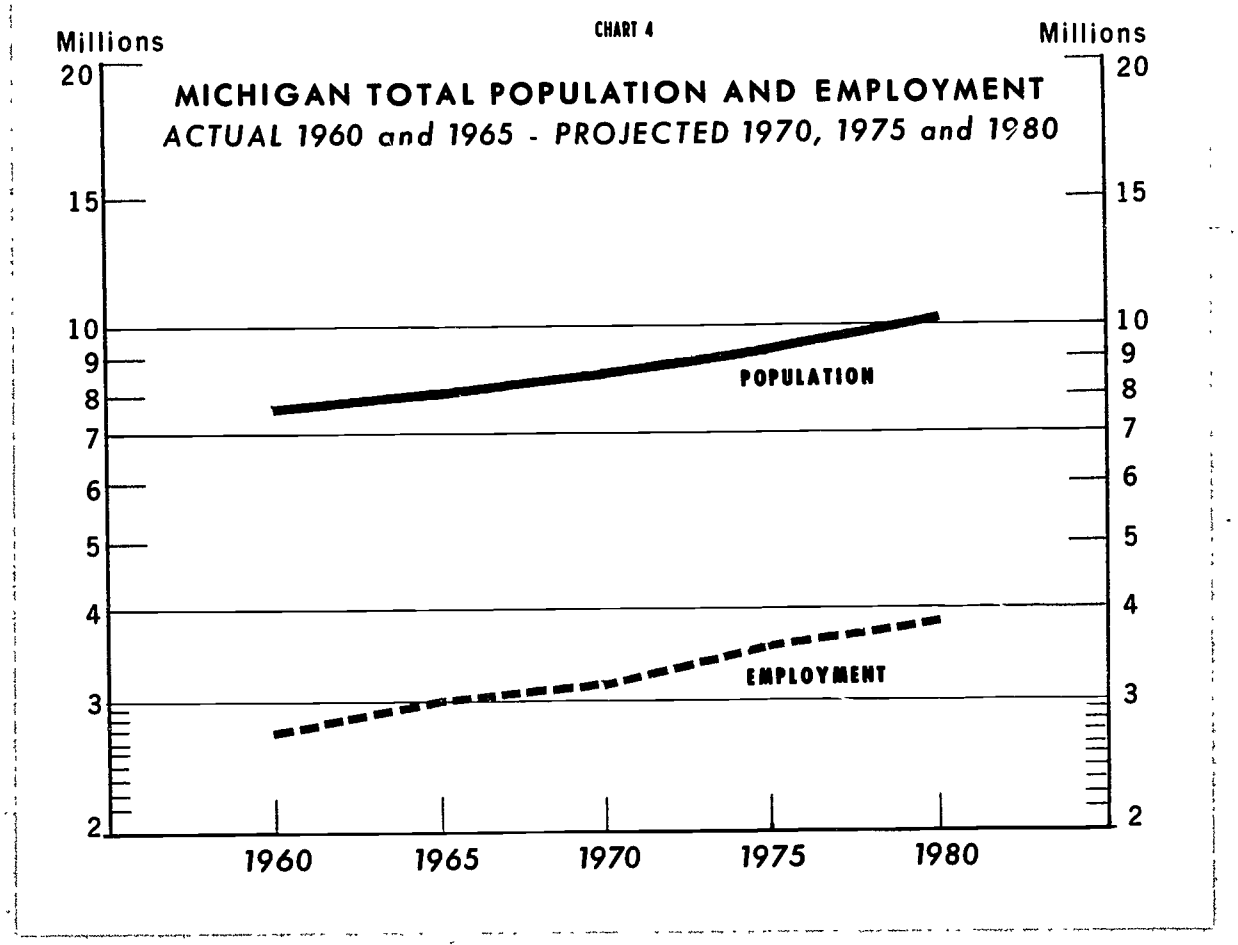
The number of motor vehicles (passenger cars and trucks) produced in the United States is expected to rise from the 7,901,000 manufactured in 1960 to 14,585,000 in 1980, consisting of 12,200,000 passenger cars and 2,385,000 trucks and buses.

Much of the growth of the automobile industry will be concentrated in Michigan, and the state will retain or slightly expand its current share, roughly 43%, of national motor vehicle employment. It is expected that automobile employment in Michigan will reach 440,000 in 1970, and 473,000 in 1980.[1]



[1]Automobile employment figures presented cover those activities included in the current Standard Industrial Classification Number 371—Motor Vehicles and Motor Vehicle Equipment. Establishments in this classification are engaged in the manufacture and/or assembly of complete passenger autos, trucks, commercial cars, and buses, as well as of motor vehicle parts and accessories.

MICHIGAN'S POPULATION WILL PASS TEN MILLION BY 1980



Michigan's population is expected to increase to 10,200,000 by 1980, about 30% above 1960.

Michigan's population growth will be dependent largely on natural increase—the excess of births over deaths, with no significant net migration anticipated.

The number of workers employed, with an anticipated growth of over 44% between 1960-1980 will climb at a faster rate than the total population.

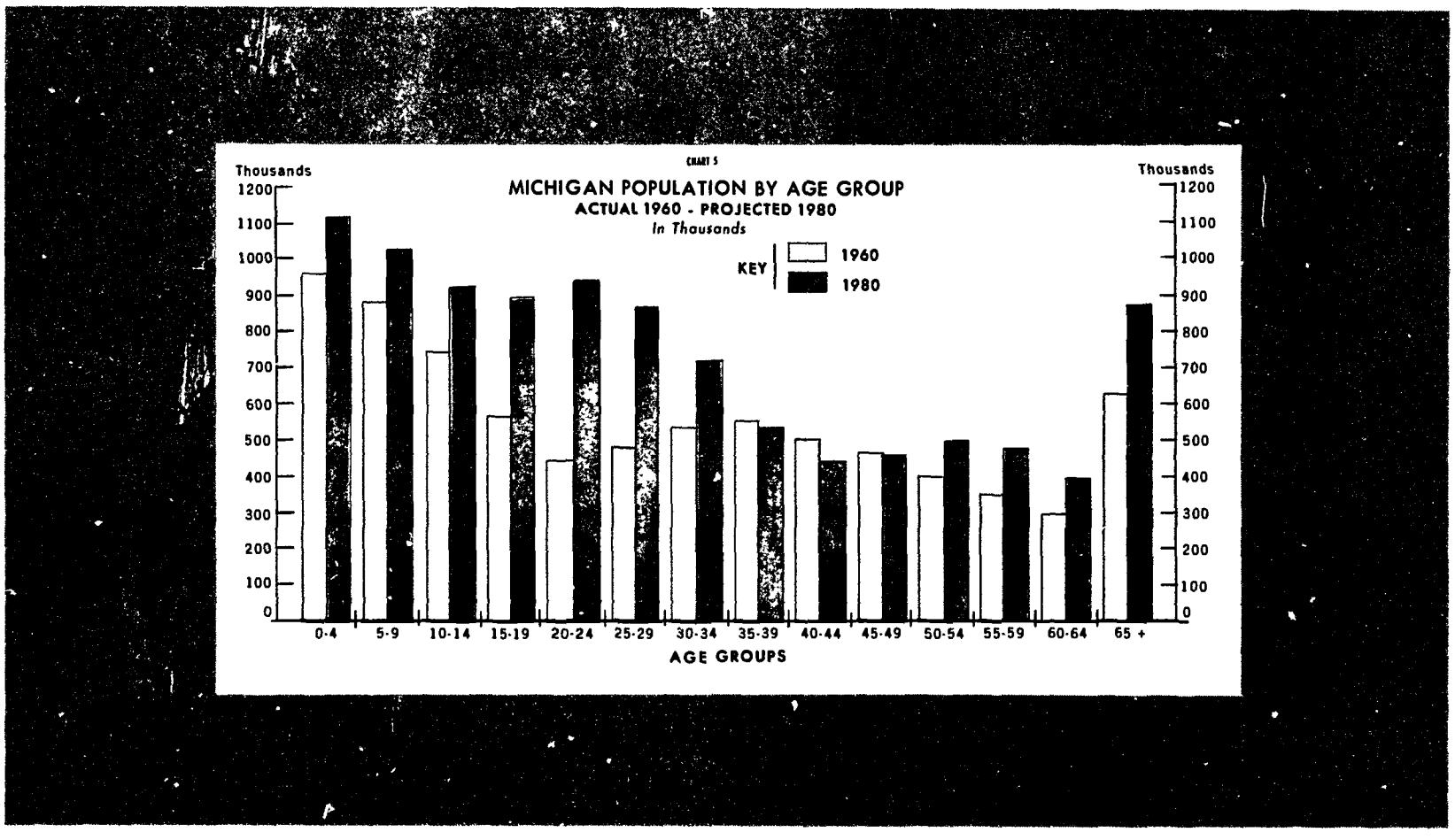
TABLE B

POPULATION

UNITED STATES and MICHIGAN ACTUAL 1960, ESTIMATED 1965, and PROJECTED 1970-1980

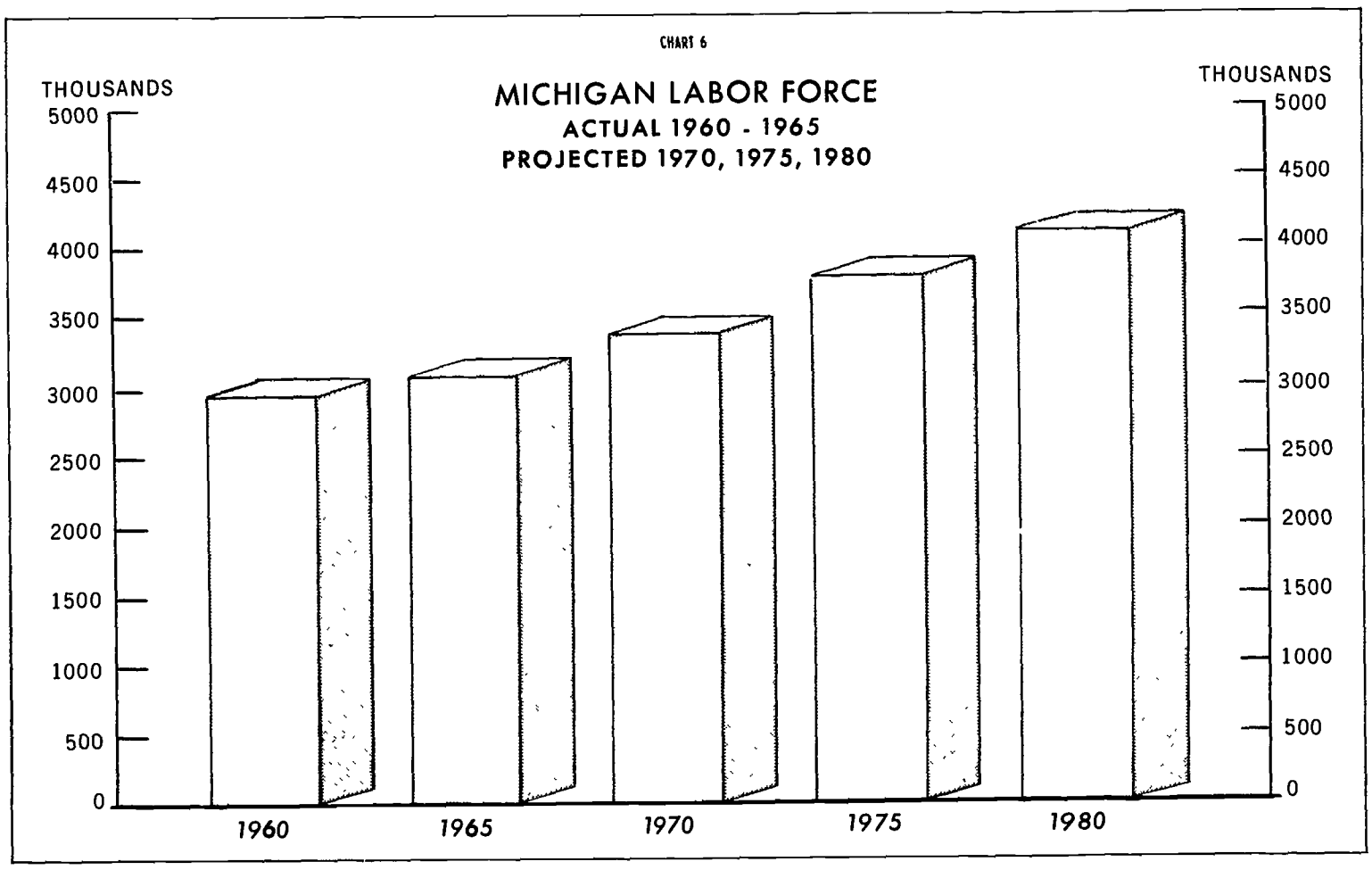
Year	U. S.	Michigan	Michigan as Percent of U. S.
1960	180,684,000	7,824,000	4.33
1965	194,583,000	8,200,000	4.21
1970	208,996,000	8,600,000	4.11
1975	225,870,000	9,360,000	4.14
1980	245,313,000	10,200,000	4.16
GROWTH 1960-1980, TOTAL PERCENT	35.77%	30.37%	—
ANNUAL RATE	1.54%	1.34%	—

Table B shows that the 1980 projected population for Michigan will represent 4.16% of the nation's total, down slightly from the 4.33% reported in 1960.



MICHIGAN'S LABOR FORCE WILL INCREASE NEARLY 40%

MICHIGAN'S LABOR FORCE SHOULD RISE FROM 2,944,000 IN 1960, TO AROUND 3,400,000 IN 1970, AND TO APPROXIMATELY 4,100,000 BY 1980.



THIS RISE AMOUNTS TO A TOTAL INCREASE OVER THE TWO DECADES OF ABOUT 1,150,000 PERSONS, NEARLY 40%.

THE "UNDER 25" AGE GROUP WILL DOUBLE BY 1980

DURING THE TWENTY-YEAR PERIOD, THERE WILL BE A NUMBER OF SIGNIFICANT CHANGES IN THE AGE COMPOSITION OF THE WORK FORCE. THE MOST STRIKING INCREASES ARE EXPECTED IN THE YOUNGER AGE GROUPS, WITH THE "UNDER 25" AGE GROUP INCREASING BY AROUND 480,000 PERSONS AND THE "25 TO 34" AGE GROUP BY APPROXIMATELY 400,000 PERSONS. THE IMPORTANT "35 TO 44" AGE GROUP, WHICH IS A PRIME SOURCE FOR MIDDLE MANAGEMENT POSITIONS, WILL HAVE AN ACTUAL NET LOSS DURING THE PERIOD. THE AGE GROUP "45 TO 64" WILL EXPAND MODERATELY, WHILE THE NUMBERS IN THE "OVER 65" CATEGORY WILL CHANGE VERY LITTLE.

CHART 7

CHANGES IN AGE DISTRIBUTION OF MICHIGAN'S LABOR FORCE
1960 - 1980 *(IN THOUSANDS)*

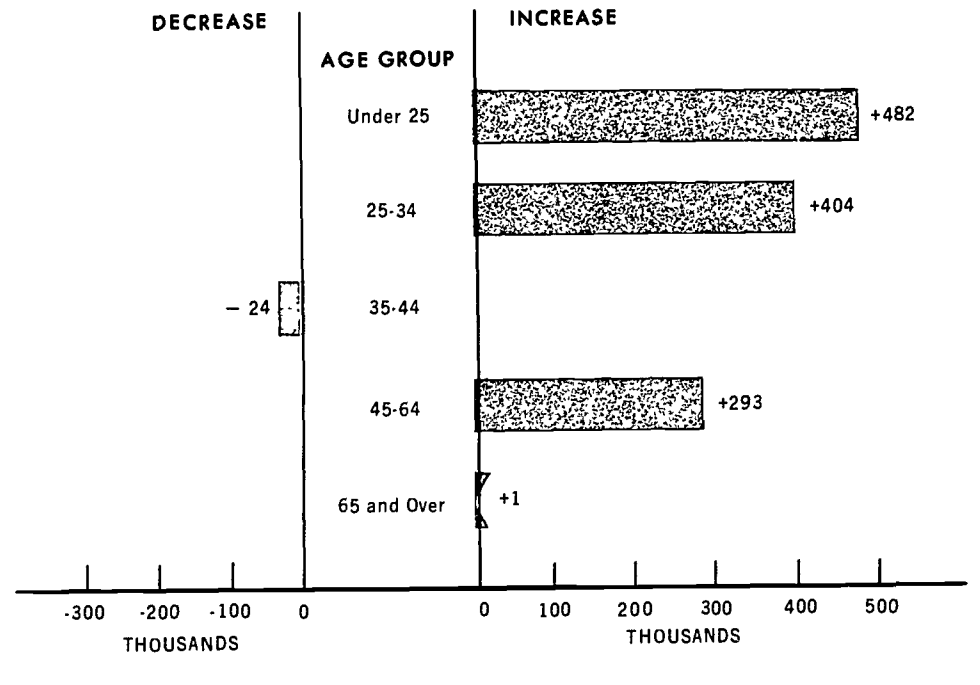
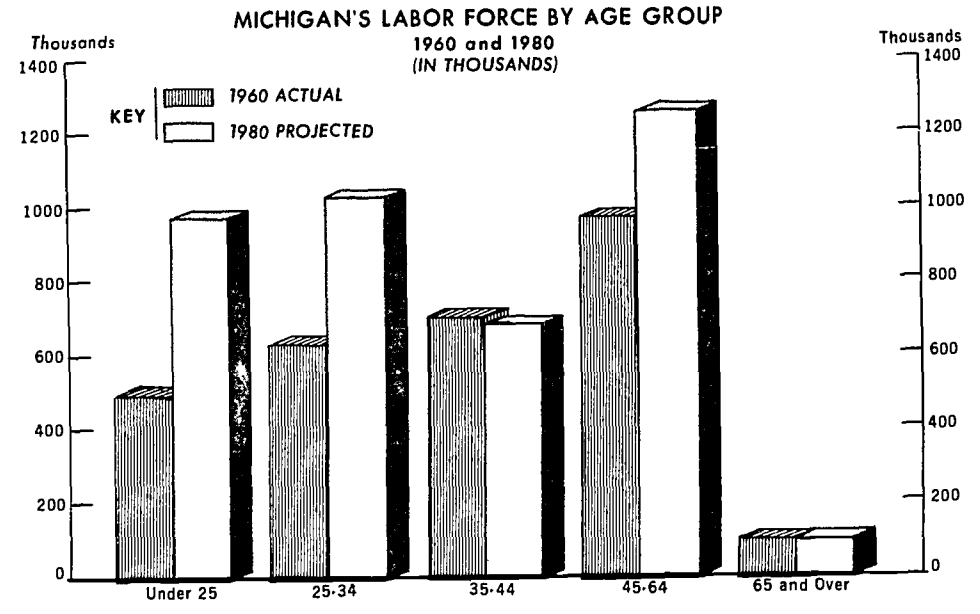


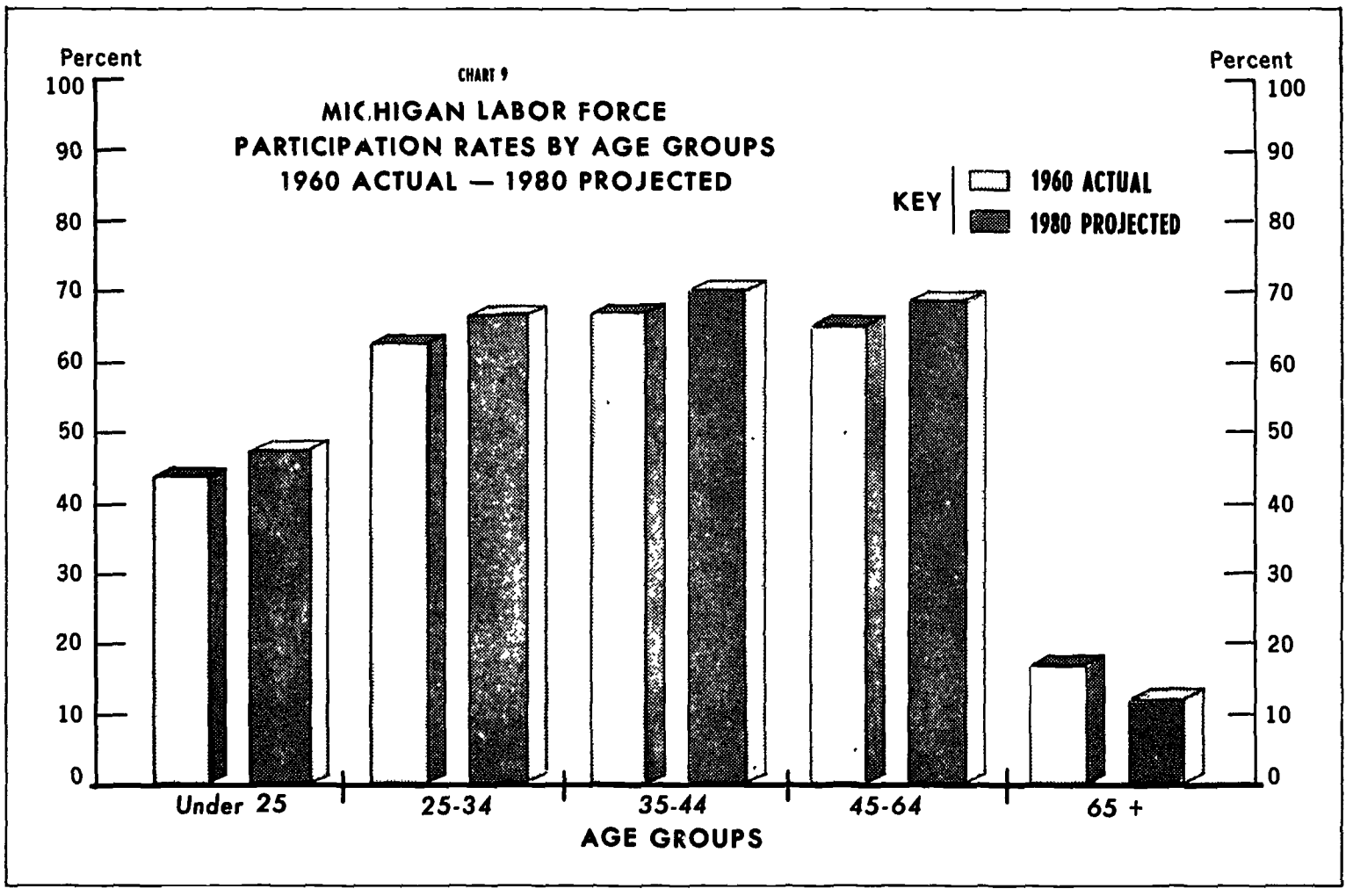
CHART 8

MICHIGAN'S LABOR FORCE BY AGE GROUP
1960 and 1980
(IN THOUSANDS)



LABOR FORCE PARTICIPATION RATES WILL INCREASE SLIGHTLY

Total labor force participation rate is likely to change only slightly in the 1970's.
By age category a very slight increase in the participation rate is expected for all male groups except men 65 and over, for whom the rate will decline significantly, and men in the 45-64 age group for whom the rate is not expected to change.



MORE WOMEN WILL WORK

IN CONTRAST WITH THE RELATIVE STABILITY OF MALE LABOR FORCE PARTICIPATION RATES, THE RATES FOR WOMEN WILL INCREASE SHARPLY.

THIS GROWTH WILL RESULT FROM SUCH FACTORS AS CHANGING ATTITUDES, AND EARLIER FAMILY COMPLETION.

BY 1980, IT IS ANTICIPATED THAT WOMEN WILL CONSTITUTE MORE THAN 35% OF MICHIGAN'S LABOR FORCE.

CHART 10

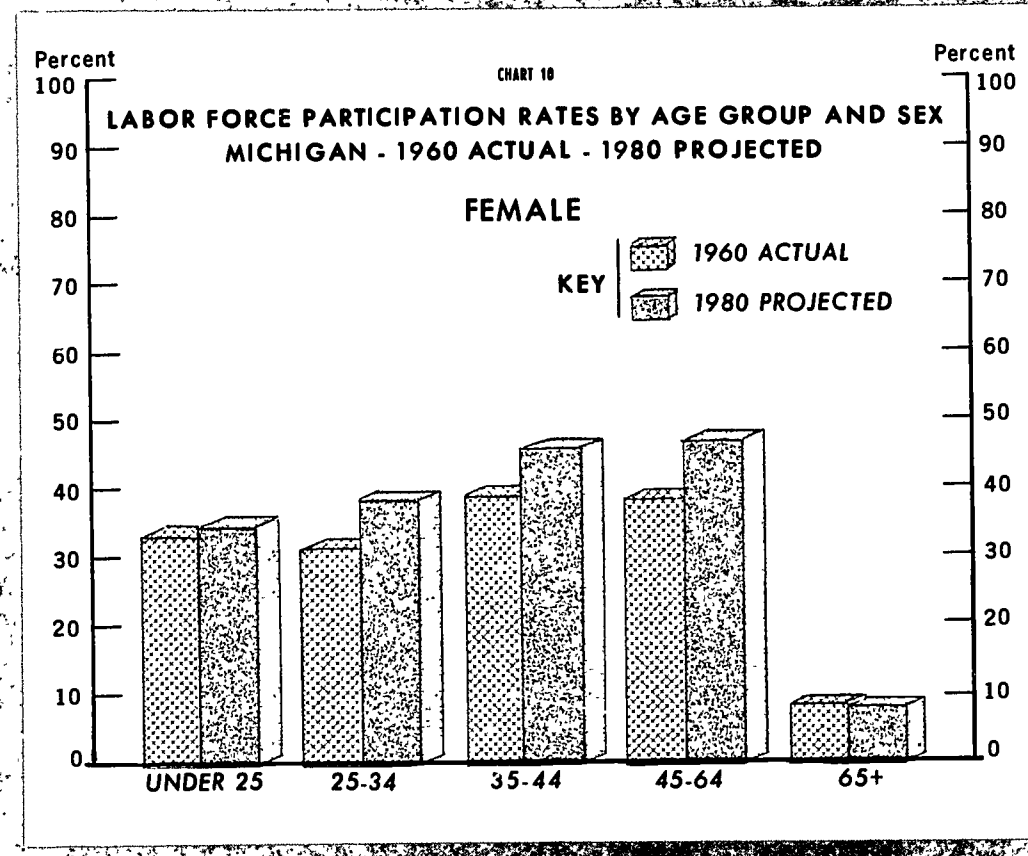
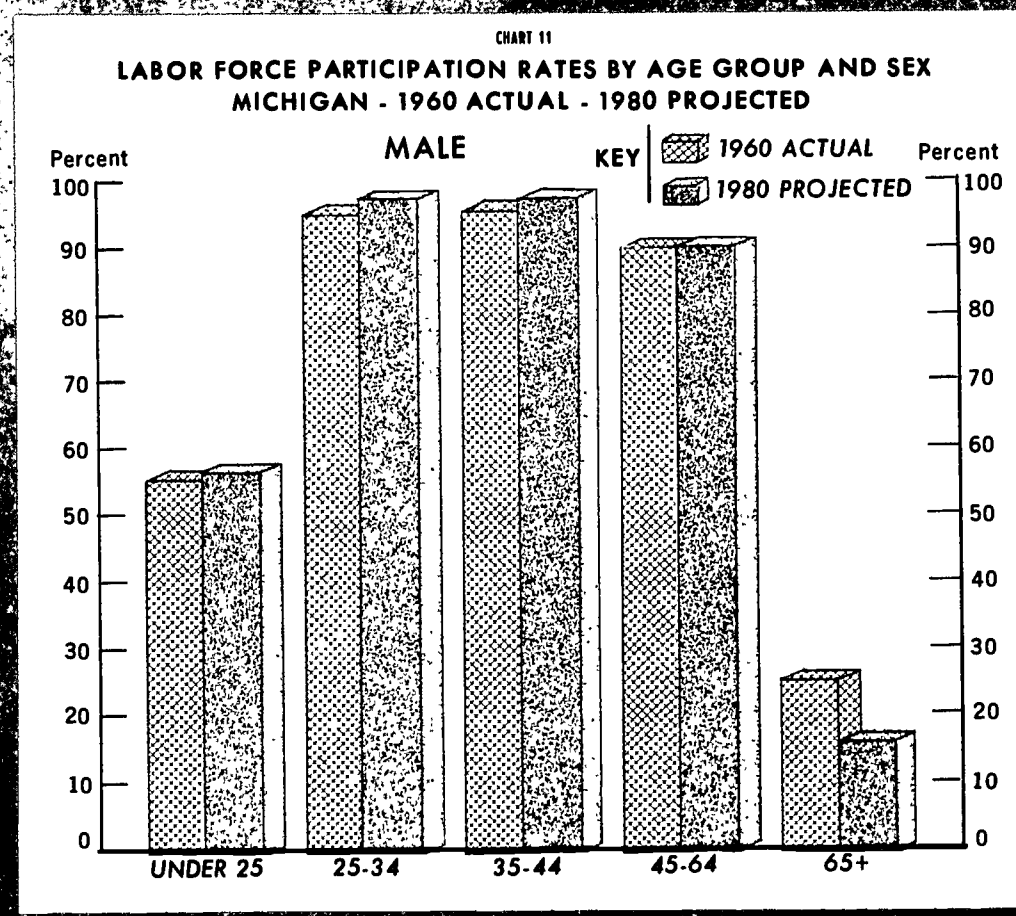
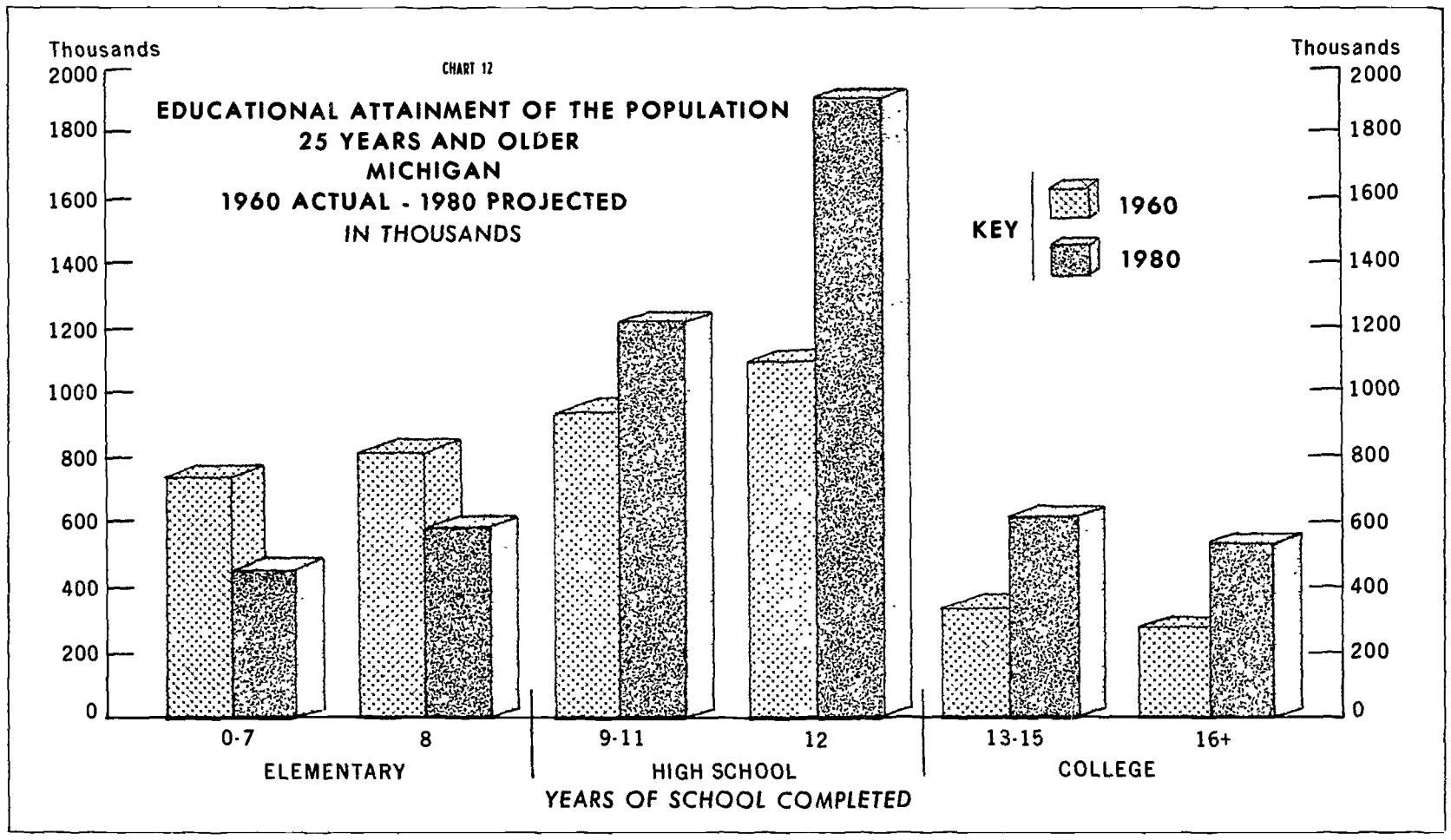


CHART 11

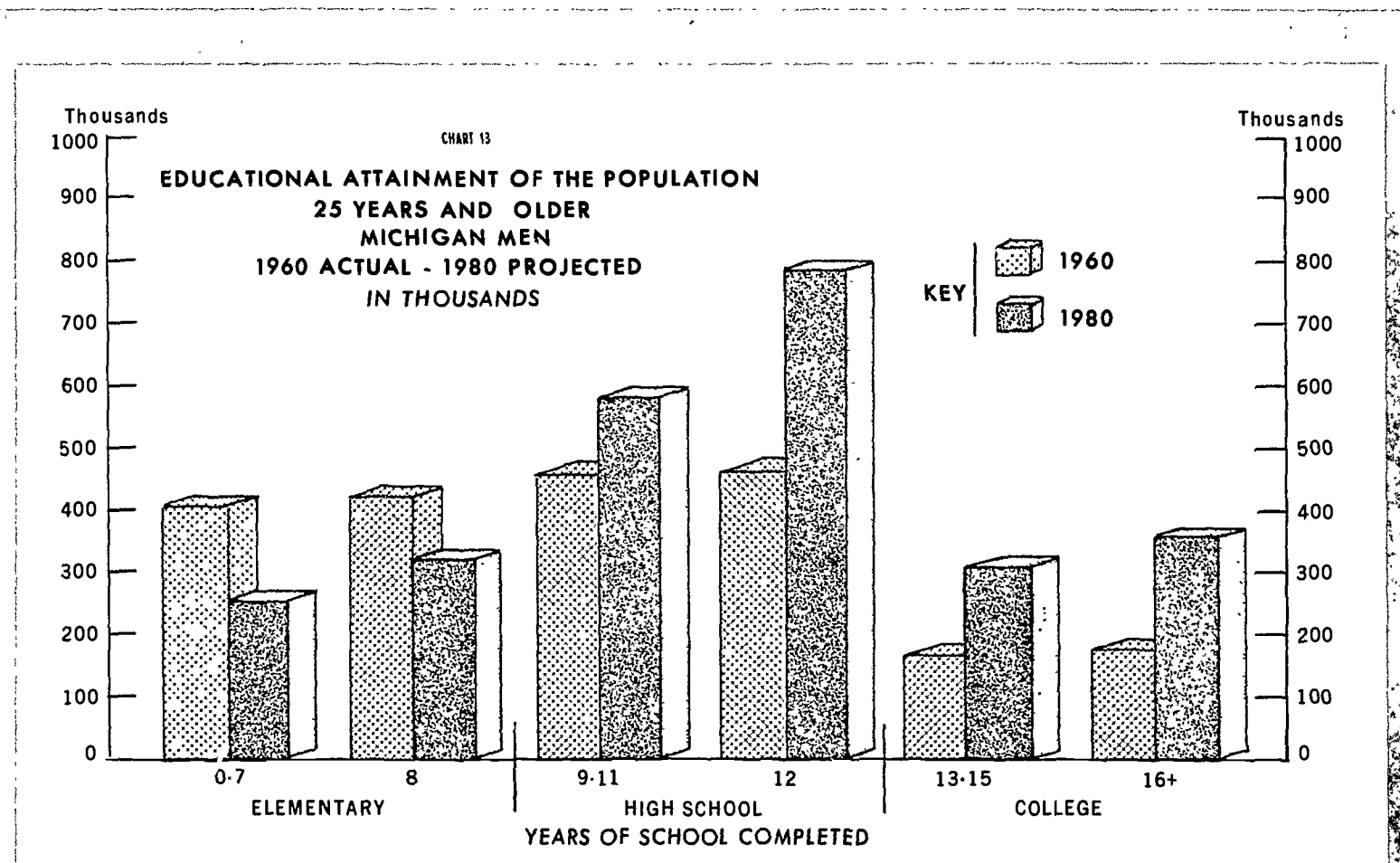


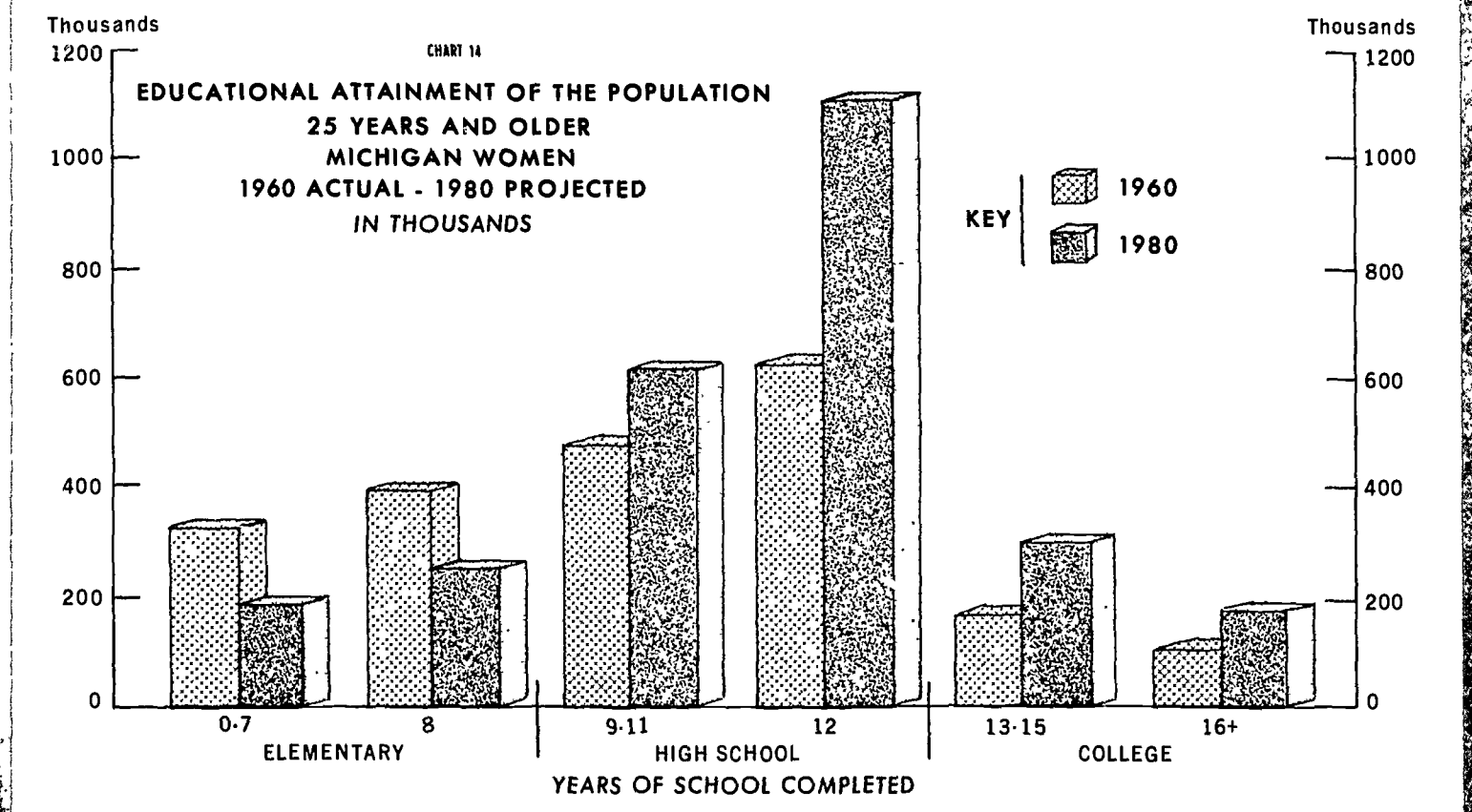
SHARP INCREASE IN THE NUMBER OF



TODAY, THE GENERAL LEVEL OF EDUCATION OF THE ADULT POPULATION IS HIGHER THAN IT WAS A DECADE AGO. BY 1980, IT WILL RISE TO EVEN HIGHER LEVELS. A SIGNIFICANT REDUCTION IS ANTICIPATED IN THE NUMBER OF PERSONS IN MICHIGAN WITH AN EIGHTH GRADE EDUCATION OR LESS. THE PROPORTION WHO CONTINUE THEIR EDUCATION BEYOND HIGH SCHOOL IS LIKELY TO DOUBLE. THE CHARTS COMPARE THE HIGHEST LEVEL OF SCHOOLING REACHED BY INDIVIDUALS THROUGH 1960 WITH THAT EXPECTED FOR 1980.

HIGH SCHOOL GRADUATES IS EXPECTED



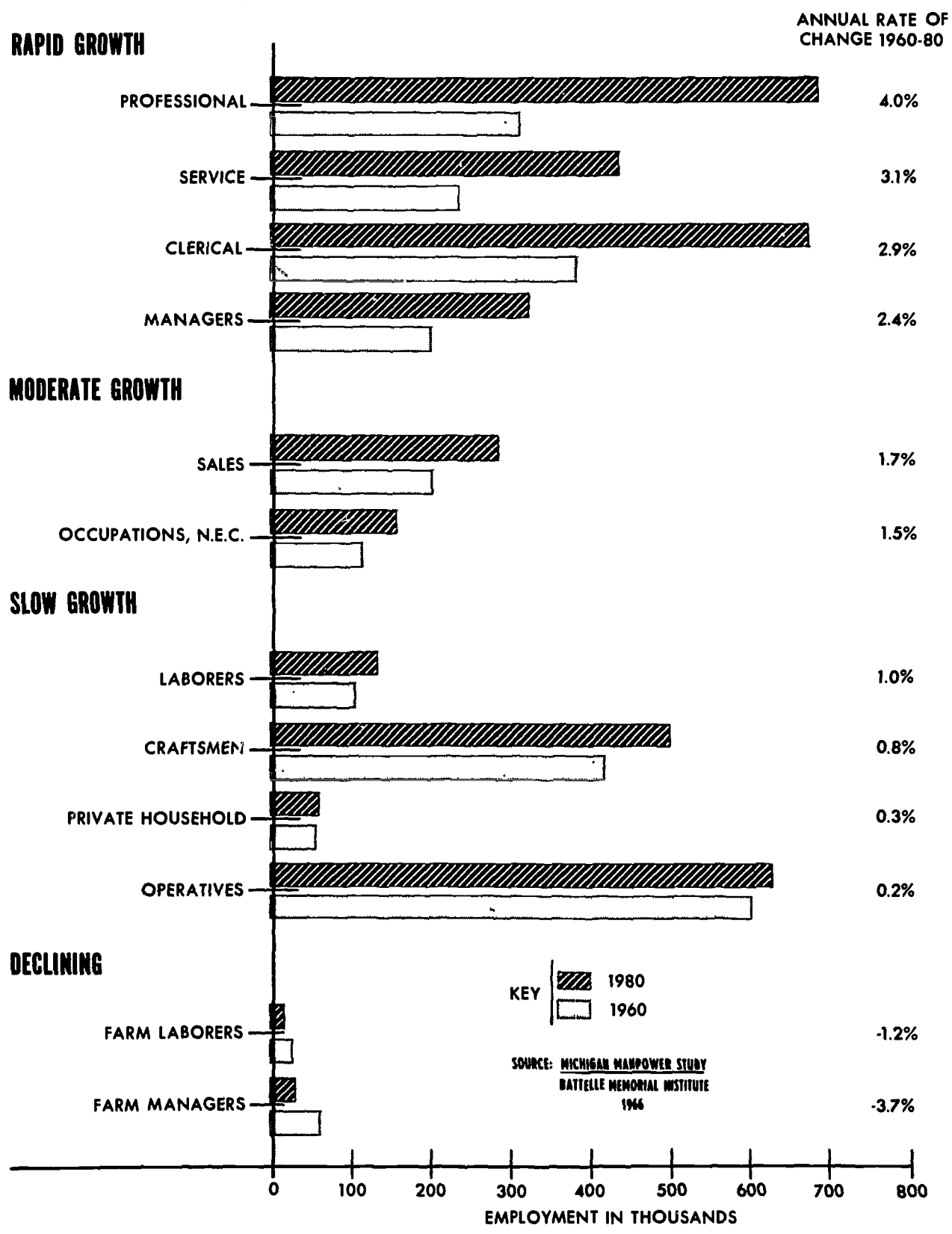


OCCUPATIONAL OUTLOOK

CHART 15

EMPLOYMENT BY MAJOR OCCUPATIONAL GROUP AND ANNUAL RATE OF CHANGE

MICHIGAN, 1960-1980



EMPLOYMENT OUTLOOK FOR SELECTED OCCUPATIONS

MEDICAL SERVICES

A very rapid rise in employment in medical-related services is expected. Key factors in the increase will be the greatly expanded proportion of individuals in the youngest and oldest age groups, the rapid spread of public and private medical insurance programs such as Medicare and Blue Cross-Blue Shield, the continuously rising affluence of our society, and the growing demand for medical and health services of all kinds.

In 1960, there were about 9,500 physicians and surgeons in Michigan. The 1980 projection is for 18,000, nearly twice as many. It is evident that there is now a shortage of physicians and surgeons, but in view of the long and expensive training period involved, it is doubtful that this shortage can be overcome for some time.

Nursing occupations are expected to increase approximately 110% between 1960 and 1980. The demand for professional nurses is expected to continue to be greater than the supply, a fact that is especially significant since nursing is second to teaching as the largest professional employment category for women.

Increased specialization in the medical field is an important underlying factor in the growth of medical and dental technicians. Over the 20-year period covered by the *Michigan Manpower Study,* an annual growth rate of 6% is expected for these groups. In 1960 there were 5,595 medical and dental technicians in Michigan. By 1980, employment of nearly 18,000 is expected.

EDUCATION

Spurred by rising family income and a greatly increased demand for college-trained personnel, post-secondary school enrollment will rise markedly. The number of professors and instructors in Michigan colleges, of whom there were about 8,300 in 1960, will rise to approximately 23,000 by 1980.

Primary and secondary school teaching positions are expected to increase at the rate of 3.4% annually, reaching 135,000 by 1980—almost double the 1960 figure. By 1980, only about 50% of the employment in primary and secondary public education should be professional workers. It is expected that various teacher substitutes—e.g. audio-visual aids and programmed learning devices, will be utilized more intensively. This will create a demand for workers other than teachers in the primary and secondary schools that will be even greater than that for teachers.

MECHANICS AND REPAIRMEN

Overall, employment in the mechanics and repairmen category, which includes automobile mechanics, radio and television repairmen, and miscellaneous repairmen, is expected to experience fairly rapid growth, averaging 1.7% a year. By 1980, employment in this field should be approximately 151,000, an increase of 43,000 persons over the 1960 level.

TOOLMAKERS AND DIEMAKERS

Employment of toolmakers and diemakers is expected to increase by 5,500, or about 15%, over the 20 years of the study period. The increase would probably be considerably greater if it were not for the fact that numerical control machines and chemical machining processes will take over some of the functions of the tool or diemaker.

TRUCK DRIVERS

General growth in economic activity, the continued decentralization of industry, and the improvements in trucking methods and highways are expected to contribute heavily to the growth of commercial motor vehicle operators.

An annual growth rate of 1.8% is expected in these occupations, creating approximately 29,000 new job openings in Michigan by 1980.

ASSEMBLERS

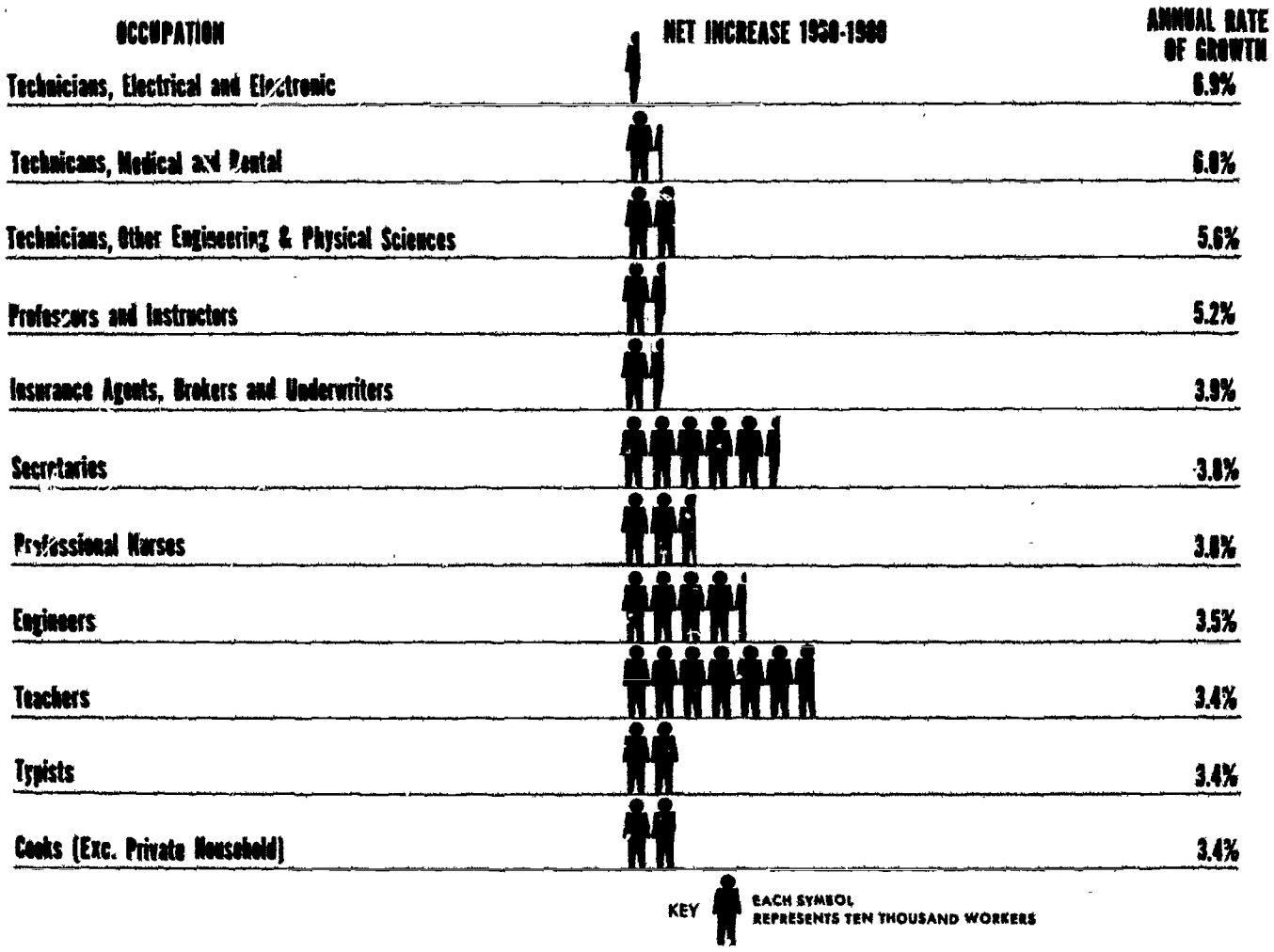
Greatly increased use of numerical control, molded plastics, and component packages, will reduce assembly operations. The major reduction in the number of assemblers will be in the automobile industry, where assembly jobs are expected to decrease from 36,000 in 1960 to approximately 32,000 in 1980.

CLERICAL OCCUPATIONS

A rapid increase in employment in the clerical area is expected. The employment opportunities which will result from the increasing complexity of business operations, population growth, and economic expansion, are expected to outpace the displacing effects of technical innovation. It is anticipated that employment in clerical occupations will grow at an annual rate of 2.9% between 1960 and 1980, meaning an additional 295,000 jobs by 1980.

CHART 16

RAPIDLY GROWING MICHIGAN OCCUPATIONS WITH ANNUAL RATE OF GROWTH



STENOGRAPHERS, SECRETARIES, AND TYPISTS

The clerical skills represented by these occupational categories are expected to be in great demand during the coming decades. The average annual growth for typists and stenographers is expected to be 3.4% and 2.6% respectively. By 1980, approximately 20,000 new openings for typists, and about 7,300 new positions for stenographers, are expected. Secretaries have the largest prospective growth rate, 3.8% yearly, over the 20-year period, thus more than doubling their number to about 114,400 by 1980.

CASHIERS

Because of the anticipated expansion in the number of retail establishments, the increased utilization of vending machines, change-making machines, and the introduction of merchandising techniques which rely on computerized credit records and optical character recognition, are not expected to have an immediate effect on the demand for cashiers. In 1960, there were 19,500 cashiers employed in Michigan. By 1980, 32,500 persons are expected to be employed in this field.

BOOKKEEPERS

By comparison with the remainder of the rapidly growing clerical field, bookkeepers will have a relatively low annual growth rate of 2.1%—expanding from 34,000 in 1960 to roughly 51,000 by 1980.

DRAFTSMEN

The projected demand for draftsmen is subject to a number of uncertainties resulting from changing technology. The development of electronic drafting equipment, photo-reproduction, and microfilm techniques, are eliminating many of the routine tasks of draftsmen. Conversely, the expansion in engineering and scientific occupations will necessitate larger supporting staffs.

The combination of the two factors should mean an approximate increase by 1980 of 6,000 people over the 1960 figure of 14,700. This represents a significant decline from the rate of increase experienced in the 1950's, when the annual rate of increase was 6.4%.

ELECTRONIC TECHNICIANS

In recent years, electronic technicians have been one of the fastest growing occupational groups, and it is anticipated that this growth will continue. Among the factors underlying the increase in demand for these highly skilled technicians are the expected expansion in the employment of scientists and engineers, and the continuing trend toward automation of industrial and commercial processes.

Electronic technicians will be employed in increasing number all across the industrial spectrum, particularly in manufacturing, transportation, research laboratories, education, and government.

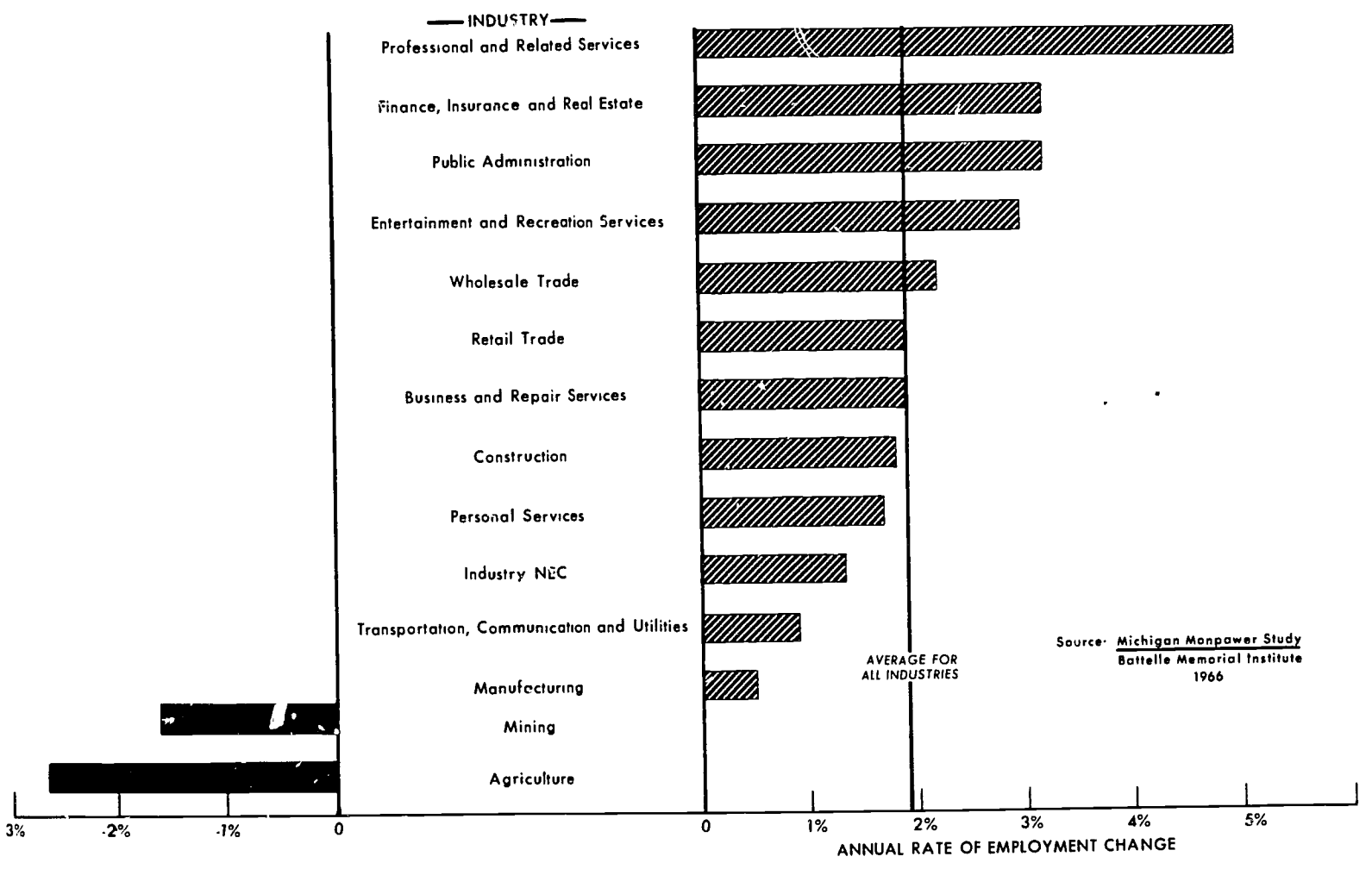
In 1960 there were approximately 600 electronic technicians in Michigan. It is anticipated that about 3,600 will be needed by 1980.

INDUSTRIAL OUTLOOK

CHART 17

ANNUAL RATE OF EMPLOYMENT CHANGE BY INDUSTRY

MICHIGAN 1960 - 1980



1960-1980 EMPLOYMENT GROWTH IN SERVICE INDUSTRIES WILL EXCEED GROWTH IN GOODS-PRODUCING SECTOR

During the period from 1960 to 1980, employment in industries that provide services will grow more rapidly than employment in goods-producing industries. In 1960, the service-producing industries employed slightly more people than the goods-producing group. By 1980, the service industries should employ a million more people than the goods sector.

PROFESSIONAL AND RELATED SERVICES

This industry will experience one of the fastest growth rates in Michigan through 1980. Although there will be great need for professionals in all areas, the most substantial rise should occur in the medical and educational fields. There will be about 542,000 *new* professional positions in the Michigan economy between 1960 and 1980—an increase of over 160%.

TRANSPORTATION, COMMUNICATIONS, UTILITIES, AND SANITATION SERVICES

Because a number of significant changes occurred in the structure and operation of these industries prior to 1960, the 1960 to 1980 shift in employment should be mainly caused by minor adjustments to the previous movements. The communications and utilities industries made a number of substantial technological improvements in the last decade, and, as a result, should experience only minor employment gains through 1980. Because of losses in the railroad segment, the transportation industry suffered an employment decline in the 1950 to 1960 period, but transportation as a whole should show a net employment gain during the 1960 to 1980 period. Employment in this sector should increase about 20%, moving from 156,000 in 1960 to 188,000 in 1980.

WHOLESALE AND RETAIL TRADE

The substantial increase in consumer purchasing power resulting from higher real income and greater availability of credit will offset the negative employment effect caused by technological change in this industry. The net result should show the industry increasing its employment at approximately the same rate as Michigan's employment. The total rise should be about 46% between 1960 and 1980, equal to an addition of 226,000 jobs.

BUSINESS AND REPAIR SERVICES, PERSONAL SERVICES, AND ENTERTAINMENT SERVICES

Most of these industries provide personal services usually in small establishments that cannot be readily automated. Personal services therefore tend to increase at about the same rate as the general population. Overall growth is projected at about 95,000 for 1960-1980, nearly 46% of 1960 employment.

FINANCE, INSURANCE, AND REAL ESTATE

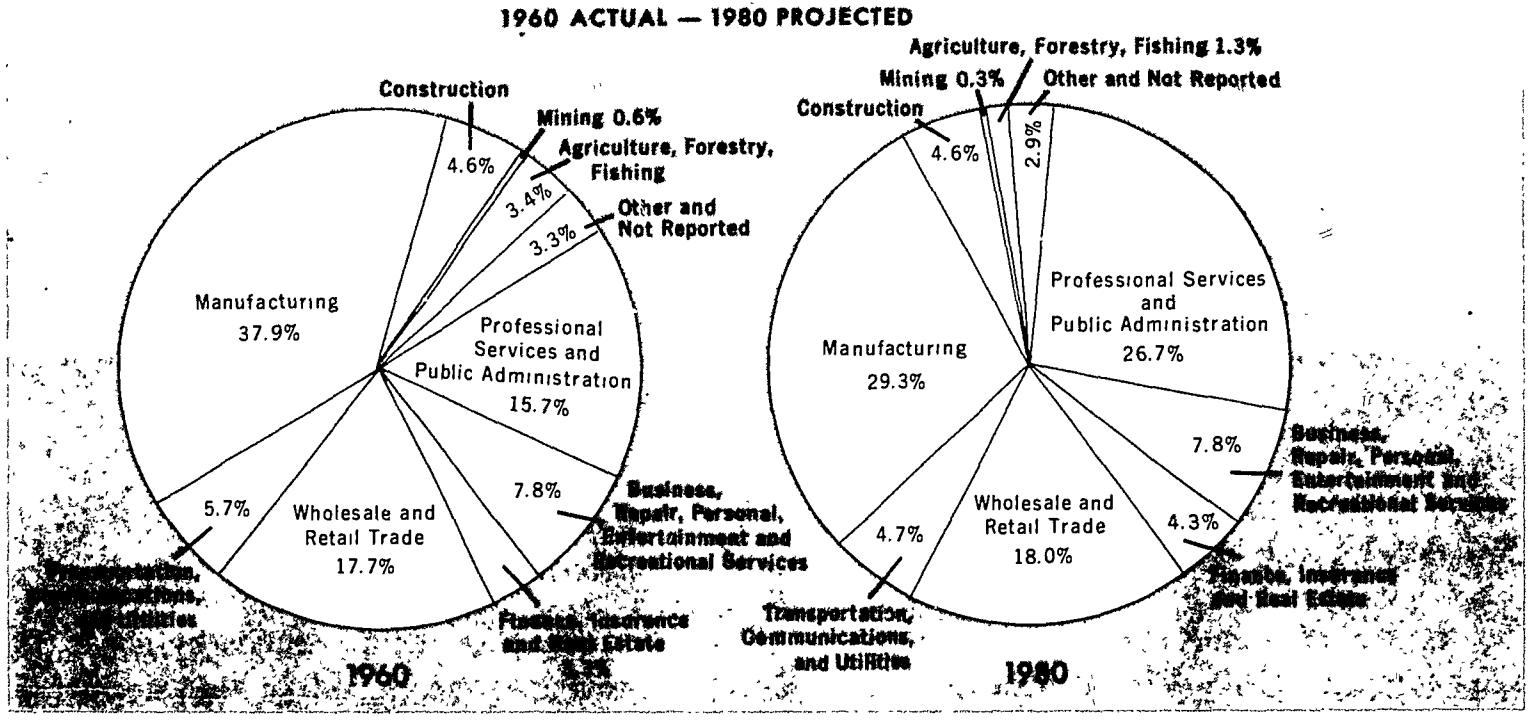
The use of electronic data processing equipment in this division will continue to increase. The improvements in efficiency will not equal the growth rate of these industries. Thus employment should remain on the rise, at an average annual rate of 3.2% between 1960 and 1980 for a 20-year job increase of 78,000.

PUBLIC ADMINISTRATION

The continuing need for public services will cause a major expansion of the public administration sector. Technology will diminish the demand for clerical and unskilled personnel and will, at the same time, increase the need for skilled and professional people. In the twenty years from 1960 to 1980 employment in government at all levels (federal, state, and local) should climb 88%—or by 83,000. Most of the growth will be in state and local government, with federal employment in Michigan increasing relatively slowly.

CHART 16.

MICHIGAN EMPLOYMENT BY INDUSTRY
PERCENT DISTRIBUTION
1960 ACTUAL — 1980 PROJECTED



GOODS-PRODUCING INDUSTRIES WILL EXHIBIT SLOW GROWTH

AGRICULTURE, FORESTRY, AND FISHERIES

Farm employment will continue its long-term decline through the 70's. The effective use of machinery and scientific agricultural techniques has increased the output of the farms, while lowering their manpower needs. Between 1960 and 1980 the decline in employment will average about 2.5% a year, for a 20-year loss of over 38,000 jobs, or 40% of 1960 employment.

MINING

Mining employment has not been a significant part of Michigan's economy for several decades. The minor resurgence that is presently occurring as some new mining operations are being initiated is not likely to balance the employment lost as a result of gradual depletion of the old mines and the introduction of labor-saving technology. With an average annual decrease of about 1.6%, the number of people employed in the industry in 1980 should be approximately 4,000 fewer than in 1960.

CONSTRUCTION

The housing boom expected in the late 60's and early 70's should result in a substantial rise in employment in the construction industry. By 1980 there will be about 55,000 more jobs in this industry than there were in 1960—a jump of more than 40%.

MANUFACTURING

DURABLE GOODS

The durable goods industries should experience an employment gain in the twenty-year period preceding 1980. The actual number of additional jobs is expected to be about 150,000, but the industry's total growth of 18% will be below Michigan's anticipated overall employment growth of 44%.

NON-DURABLE GOODS

The number of people employed in the non-durable goods industries should decline by about 35,000 between 1960 and 1980. The introduction of productivity-improving equipment will be the principal reason for the decline.

appendix

TABLE C
PERCENTAGE DISTRIBUTION BY AGE GROUP AND YEARS OF SCHOOL COMPLETED
ACTUAL 1960—PROJECTED 1980
MEN, 25 YEARS OF AGE AND OVER
PERCENTAGE OF AGE GROUP COMPLETING INDICATED NUMBER OF YEARS

Age	Elementary School		High School		College	
	0-7 Years	8 Years	1-3 Years	4 Years	1-3 Years	4+ Years
ACTUAL 1960						
25-29	7.2	9.4	23.8	34.7	12.0	13.0
30-34	9.3	12.5	26.3	28.9	10.0	13.0
35-39	10.0	14.2	24.8	30.2	9.4	11.4
40-44	11.8	17.4	25.3	29.0	8.3	8.1
45-49	16.0	20.8	25.0	23.4	7.8	7.1
50-54	19.8	25.2	23.8	16.4	7.5	7.2
55-59	26.7	29.7	18.8	12.5	6.2	6.1
60-64	32.2	31.1	16.1	10.4	5.4	4.8
65 and over	45.9	28.6	11.0	7.3	4.0	3.3
PROJECTED 1980						
25-29	4.3	4.6	20.2	36.0	16.9	18.0
30-34	4.4	4.9	21.4	35.5	15.2	18.6
35-39	4.7	5.7	22.2	35.4	14.0	18.0
40-44	5.2	6.7	23.0	35.3	13.2	16.6
45-49	7.1	9.4	23.3	34.7	11.8	13.7
50-54	9.3	12.5	26.3	28.9	10.0	13.0
55-59	10.0	14.2	24.8	30.2	9.4	11.4
60-64	11.8	17.4	25.3	29.0	8.3	8.1
65 and over	26.7	29.7	18.8	12.5	6.2	6.1

NOTE: Detail may not add to 100.0 percent because of rounding.

TABLE D
PERCENTAGE DISTRIBUTION BY AGE GROUP AND YEARS OF SCHOOL COMPLETED
ACTUAL 1960—PROJECTED 1980
WOMEN, 25 YEARS OF AGE AND OVER
PERCENTAGE OF AGE GROUP COMPLETING INDICATED NUMBER OF YEARS

Age	Elementary School		High School		College	
	0-7 Years	8 Years	1-3 Years	4 Years	1-3 Years	4+ Years
ACTUAL 1960						
25-29	4.4	6.6	24.6	47.4	10.3	6.8
30-34	5.8	9.3	25.6	43.9	9.2	6.2
35-39	6.7	12.1	24.8	42.4	8.9	5.2
40-44	8.6	15.6	26.6	36.2	7.9	5.1
45-49	12.2	19.4	27.0	27.7	8.3	5.5
50-54	16.2	23.2	24.8	20.5	9.0	6.2
55-59	22.3	27.2	20.1	16.3	8.5	5.5
60-64	28.4	30.1	16.7	13.7	7.2	4.0
65 and over	37.5	29.9	13.6	10.8	5.4	2.8
PROJECTED 1980						
25-29	2.3	3.2	22.5	48.5	14.6	8.9
30-34	2.4	3.4	22.6	49.1	14.2	8.3
35-39	2.5	3.6	23.2	50.4	13.1	7.2
40-44	3.2	4.5	23.8	48.2	13.1	7.2
45-49	4.4	6.6	24.6	47.4	10.3	6.8
50-54	5.8	9.3	25.6	43.9	9.2	6.2
55-59	6.7	12.1	24.8	42.4	8.9	5.2
60-64	8.6	15.6	26.6	36.2	7.9	5.1
65 and over	22.3	27.2	20.1	16.3	8.5	5.5

NOTE: Detail may not add to 100.0 percent because of rounding.

TABLE E

MICHIGAN
EMPLOYMENT BY OCCUPATION, 1960 and PROJECTED FOR 1980 and ANNUAL RATE OF CHANGE
Data in 1000's

Occupation	Employment		Projected Employment Increase or Decrease	Annual Rate of Change 1960-1980
	1960	1980		
TOTAL—All Occupations	**2,726.9**	**3,900.0**	**1,173.1**	**1.9%**
Professional and Technical	**312.6**	**685.1**	**372.5**	**4.0**
Draftsmen	14.7	20.5	5.8	1.6
Engineers, technical	43.8	86.9	43.1	3.5
Aeronautical	0.5	0.7	0.2	1.6
Civil	5.1	11.2	6.1	4.0
Electrical	5.6	14.6	9.0	4.9
Industrial	5.8	11.9	6.1	3.7
Mechanical	15.3	29.3	14.0	3.3
Engineers, technical, n.e.c.	11.5	19.1	7.6	2.6
Nurses, professional	23.5	49.0	25.5	3.8
Personnel and labor relations workers	4.9	7.5	2.6	2.2
Physicians and surgeons	9.6	18.0	8.4	3.2
Professors and instructors	8.3	22.8	14.5	5.2
Teachers	68.7	134.8	66.1	3.4
Technicians, medical and dental	5.6	18.0	12.4	6.0
Technicians, electrical and electronic	2.0	7.8	5.8	6.9
Electronic technicians	0.6	3.6	3.0	9.4
Technicians, other engineering and physical sciences	9.6	28.5	18.9	5.6
All other professional and kindred workers	121.9	291.3	169.4	4.4
Farm Managers	**60.1**	**28.6**	**—31.5**	**—3.7**
Managers, non-farm	**200.0**	**323.2**	**123.2**	**2.4**
Purchasing agents and buyers	5.2	6.0	0.8	0.7
Managers and others, n.e.c., salaried	96.6	182.3	85.7	3.2
Managers and others, n.e.c. self-employed	71.4	93.1	21.7	1.3
All others	26.8	41.8	15.0	2.3
Clerical	**379.6**	**675.0**	**295.4**	**2.9**
Bookkeepers	34.0	51.5	17.5	2.1
Cashiers	19.5	32.5	13.0	2.6
Secretaries	54.8	114.4	59.6	3.8
Stenographers	11.0	18.3	7.3	2.6
Stock clerks and storekeepers	17.4	18.7	1.3	0.4
Typists	21.2	41.1	19.9	3.4
Clerical and kindred workers, n.e.c.	221.8	398.5	176.7	3.0
Sales	**202.4**	**285.7**	**83.3**	**1.7**
Insurance agents, brokers, and underwriters	13.2	28.5	15.3	3.9
Salesmen and sales clerks	160.1	232.3	72.2	1.9
All other sales workers	29.1	24.9	—4.2	—0.8

TABLE E

MICHIGAN

EMPLOYMENT BY OCCUPATION, 1960 and PROJECTED FOR 1980 and ANNUAL RATE OF CHANGE

Data in 1000's

Continued

Occupation	Employment		Projected Employment Increase or Decrease	Annual Rate of Change 1960-1980
	1960	1980		
Craftsmen	**420.1**	**498.5**	**78.4**	**0.8%**
Carpenters	25.7	26.4	0.7	0.1
Electricians	16.0	20.5	4.5	1.3
Foremen, n.e.c.	60.2	70.6	10.4	0.8
Machinists	20.0	20.5	0.5	0.1
Machinists and repairmen	108.7	151.7	43.0	1.7
Plumbers and pipefitters	13.1	16.8	3.7	1.3
Toolmakers and die makers	35.6	41.2	5.6	0.7
Craftsmen, foremen, and kindred, n.e.c.	140.9	150.8	9.9	0.3
Operatives	**606.4**	**631.2**	**24.8**	**0.2**
Assemblers	63.4	56.8	—6.6	—0.6
Checkers, examiners, and inspectors, manufacturing	39.3	39.3	0.0	0.0
Delivery and routemen	18.6	20.8	2.2	0.6
Engine lathe operators	47.1	37.7	—9.4	—1.1
Filers, grinders, and polishers—metal	26.2	28.4	2.2	0.4
Numerical control machine—tool operators	0.3	5.1	4.8	15.2
Operators, fabricated metals	22.4	20.7	—1.7	—0.4
Truck and tractor drivers	65.3	93.9	28.6	1.8
Operatives and kindred workers, n.e.c.	324.0	328.5	4.5	0.1
Private Households	**58.7**	**61.8**	**3.1**	**0.3**
Service	**236.4**	**437.3**	**200.9**	**3.1**
Attendant, hospital and others	18.4	32.0	13.6	2.8
Cooks—except private household	20.3	39.5	19.2	3.4
Hairdressers and cosmetologists	12.0	19.2	7.2	2.4
Janitors and sextons	31.0	52.9	21.9	2.7
Protective service workers	30.7	53.6	22.9	2.8
Waiters and waitresses	37.3	59.9	22.6	2.4
Service workers, n.e.c.	86.8	180.3	93.5	3.7
Farm Labor	**25.3**	**19.8**	**—5.5**	**—1.2**
Labor	**109.3**	**134.0**	**24.7**	**1.0**
Occupation Not Reported	**116.0**	**119.8**	**3.8**	**0.1**

NOTE: Totals may not be exact because of rounding.

TABLE F

UNITED STATES
EDUCATIONAL ATTAINMENT PROFILE FOR MAJOR OCCUPATIONAL CLASSIFICATIONS
1960

Occupation	All Levels	Percentage Distribution of Occupations by Level of Educational Attainment					
		Elementary School		High School		College	
		0-7	8	1-3	4	1-3	4 or more
CIVILIAN LABOR FORCE							
Professional, technical, and kindred workers	100.0%	1.1%	1.9%	5.9%	16.9%	21.5%	52.6%
Farmers and farm managers	100.0	29.1	27.8	15.0	20.9	5.0	2.2
Managers, officials, and proprietors, except farm	100.0	7.7	10.7	17.9	30.8	17.5	15.5
Clerical and kindred workers	100.0	3.0	6.3	19.2	50.5	16.2	4.8
Sales workers	100.0	7.0	11.8	25.9	32.1	14.6	8.5
Craftsmen, foremen, and kindred workers	100.0	17.4	19.2	26.5	28.5	6.4	2.0
Operatives and kindred workers	100.0	23.7	21.0	28.6	22.6	3.6	0.6
Private household workers	100.0	37.5	21.0	25.6	12.8	2.7	0.5
Service workers, except private household	100.0	21.0	19.3	28.8	23.4	6.2	1.2
Farm laborers and farm foremen	100.0	45.9	18.3	20.9	11.7	2.5	0.6
Laborers, except farm and mine	100.0	36.2	19.2	25.6	15.3	3.0	0.6
Occupation not reported	100.0	20.5	15.3	23.3	25.5	9.2	6.3
Total, All Occupations	**100.0**	**16.4**	**14.8**	**22.3**	**27.3**	**10.1**	**9.1**
AGE 35-44 LABOR FORCE							
Professional, technical and kindred workers	100.0%	0.8%	1.2%	4.7%	18.5%	17.8%	57.0%
Farmers and farm managers	100.0	20.0	25.3	15.5	31.1	5.7	2.4
Managers, officials, and proprietors, except farm	100.0	4.0	6.0	16.3	37.0	18.8	17.8
Clerical and kindred workers	100.0	2.3	4.4	16.6	55.2	16.0	5.5
Sales workers	100.0	4.2	7.3	21.0	41.5	15.9	10.1
Craftsmen, foremen, and kindred workers	100.0	13.4	15.2	28.4	34.2	6.6	2.2
Operatives and kindred workers	100.0	21.7	20.4	30.0	24.2	3.0	0.6
Private household workers	100.0	40.8	18.5	23.9	14.4	2.0	0.4
Service workers, except private household	100.0	16.3	16.5	29.8	30.8	5.3	1.3
Farm laborers and farm foremen	100.0	53.0	17.9	12.8	13.1	2.4	0.9
Laborers, except farm and mine	100.0	38.5	20.2	23.0	15.5	2.1	0.6
Occupations not reported	100.0	17.8	13.9	22.5	30.0	8.7	7.1
Total, All Occupations	**100.0**	**13.5**	**12.5**	**21.7**	**31.9**	**9.8**	**10.5**

NOTE: Totals may not be exact because of rounding.

TABLE G

MICHIGAN
EMPLOYMENT BY INDUSTRY ACTUAL 1960—PROJECTED 1980 AND ANNUAL RATE OF CHANGE
Data in 1000's

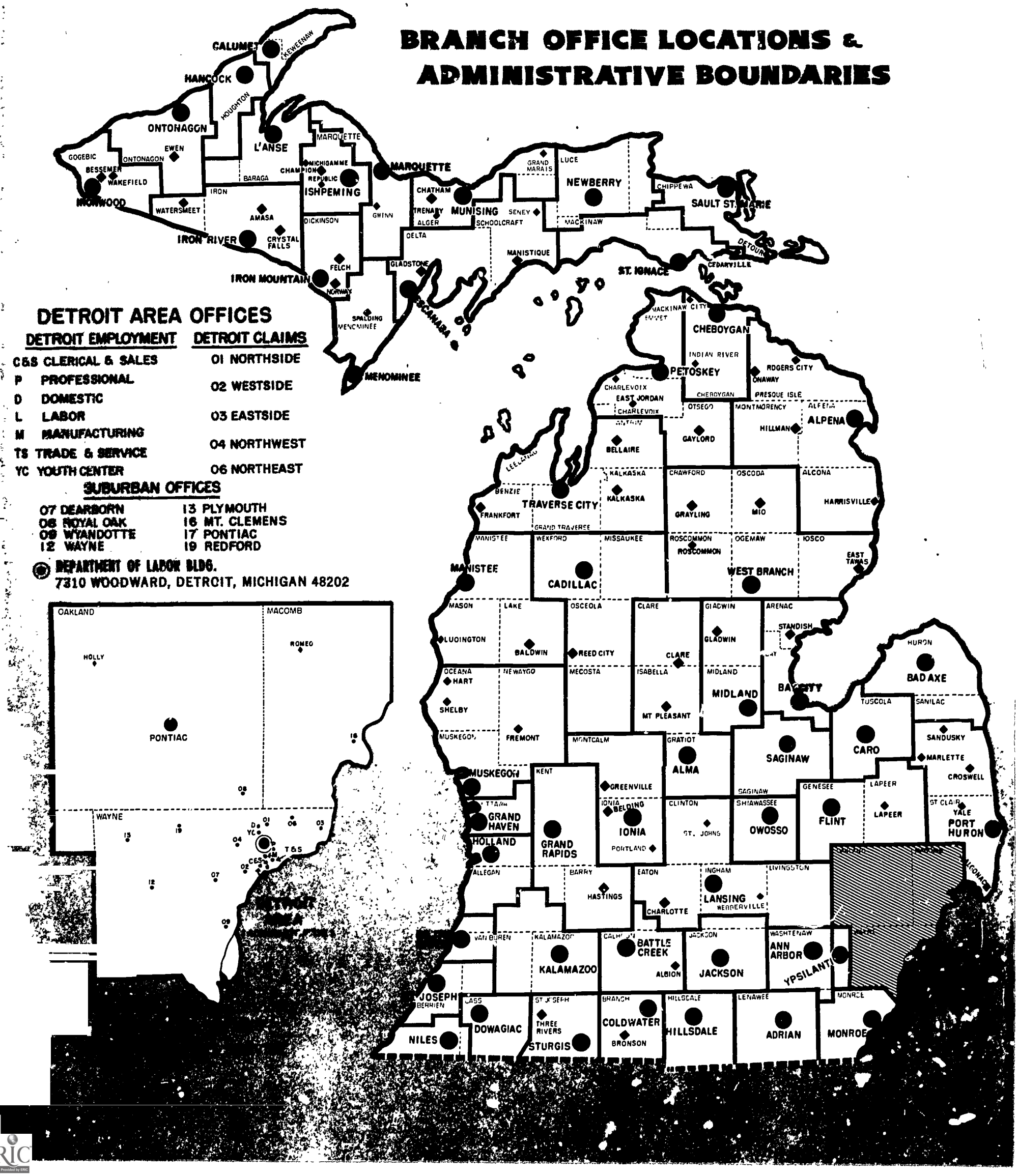
Industry	Employment		Projected	
	1960	1980	Employment Increase or Decrease	Annual Rate of Change 1960-1980
TOTAL—ALL INDUSTRIES	**2,726.9**	**3,900.0**	**1,173.1**	**1.9%**
Agriculture, forestry, and fisheries	**93.7**	**55.0**	**—38.7**	**—2.6**
Mining	**15.3**	**11.0**	**—4.3**	**—1.6**
Construction	**125.6**	**181.0**	**55.4**	**1.8**
Manufacturing	**1,035.9**	**1,150.0**	**114.1**	**0.5**
Durable goods	818.4	968.2	149.8	0.8
Primary metal industries	71.7	101.3	29.6	1.7
Fabricated metal industries (including not specified metals)	91.8	108.0	16.2	0.8
Machinery, excluding electrical	147.1	156.0	8.9	0.3
Electrical machinery and supplies	31.7	36.9	5.2	0.7
Motor vehicles and motor-vehicle equipment	377.2	473.5	96 3	1.1
Other durables	98.9	92.5	—6.4	—0.4
Non-durable goods (a)	217.5	181.8	—35.7	—0.9
Food and kindred products	62.4	53.5	—8.9	—0.8
Chemicals and allied products	40.9	33.5	—7.4	—1.0
Petroleum and coal products	3.5	2.4	—1.1	—1.9
Other non-durables (a)	110.7	92.4	—18.3	—0.9
Transportation, communications, and utilities and sanitation services	**155.6**	**188.0**	**32.4**	**0.9**
Wholesale trade	**80.7**	**124.0**	**43.3**	**2.2**
Retail trade	**403.3**	**586.0**	**182.7**	**1.9**
Food and dairy product stores	74.1	78.5	4.4	0.3
General merchandise retailing	54.0	90.0	36.0	2.6
Motor vehicle and accessory retailing	35.2	65.0	29.8	3.1
Gasoline service stations	28.3	44.0	15.7	2.2
Eating and drinking places	74.4	105.0	30.6	1.7
Other retail trade	137.3	203.5	66.2	2.0
Finance, insurance, and real estate	**89.6**	**168.0**	**78.4**	**3.2**
Banking and credit agencies	34.8	77.0	42.2	4.1
Insurance	34.2	65.0	30.8	3.2
Other finance, insurance and real estate	20.6	26.0	5.4	1.2
Business and repair services	**61.3**	**89.0**	**27.7**	**1.9**
Personal services	**134.0**	**187.0**	**53.0**	**1.7**
Entertainment and recreation service	**17.7**	**32.0**	**14.3**	**3.0**
Professional and related services	**329.9**	**872.0**	**542.1**	**5.0**
Medical and other health service (including hospitalization)	117.7	287.3	169.6	4.5
Educational services	152.0	406.4	254.4	5.0
Private	29.1	63.1	34.0	3.9
Government	122.9	343.3	220.4	5.3
Other professional and related services	60.2	178.3	118.1	5.6
Public administration	**94.8**	**178.0**	**83.2**	**3.2**
Industry not reported	**89.5**	**79.0**	**—10.6**	**—0.8**

(a) Includes not specified manufacturing.

NOTE: Totals may not be exact because of rounding.

MICHIGAN EMPLOYMENT SECURITY COMMISSION

BRANCH OFFICE LOCATIONS & ADMINISTRATIVE BOUNDARIES



DETROIT AREA OFFICES

DETROIT EMPLOYMENT	DETROIT CLAIMS
C&S CLERICAL & SALES	01 NORTHSIDE
P PROFESSIONAL	02 WESTSIDE
D DOMESTIC	03 EASTSIDE
L LABOR	04 NORTHWEST
M MANUFACTURING	06 NORTHEAST
TS TRADE & SERVICE	
YC YOUTH CENTER	

SUBURBAN OFFICES

07 DEARBORN	13 PLYMOUTH
08 ROYAL OAK	16 MT. CLEMENS
09 WYANDOTTE	17 PONTIAC
12 WAYNE	19 REDFORD

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MF AVAILABLE IN VT-ERIC SET.
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*RESOURCE GUIDES; *AGRICULTURAL EDUCATION; *TEACHER EDUCATION; *VOCATIONAL AGRICULTURE TEACHERS; *RESOURCE UNITS; REFERENCE MATERIALS; LESSON PLANS; RESOURCE MATERIALS

Centering around a problem area and providing ideas for objectives, planning-learning activities, materials, and evaluation techniques, a resource unit should be broad in scope and contain more suggestions than will be used by one teacher in a specific teaching situation. The resource unit contains some subject matter but also contains suggestions for teaching. For a resource unit to be most helpful the following sections are needed: (1) teacher objectives, (2) principles to be taught, (3) typical questions, (4) problems of students, (5) suggested learning activities, and (6) references. The procedure for constructing a resource unit includes: (1) selecting the subject, (2) listing goals, (3) constructing teacher objectives, (4) constructing key concepts, (5) planning activities for key concepts, (6) formulating statements of typical problems of students, (7) writing objectives on separate sheets of paper, (8) identifying learning activities for each objective, (9) constructing a set of references, (10) organizing the document, and (11) editing, duplicating, and printing. (DM)

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A GUIDE FOR THE PREPARATION OF RESOURCE UNITS FOR USE BY VOCATIONAL AGRICULTURE TEACHERS

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A GUIDE FOR THE PREPARATION OF RESOURCE UNITS FOR USE BY VOCATIONAL AGRICULTURE TEACHERS

I. INTRODUCTION

A. What is a Resource Unit?

A resource unit is an organized plan of suggestions for teaching. It centers around a problem area, which serves as a source of ideas for, (1) objectives, (2) planning learning activities and experiences, (3) identifying materials, and (4) evaluation techniques. A resource unit should be somewhat broad in scope and contain more suggestions than will likely be used by one teacher in a specific teaching situation. It is not intended to be a teaching unit, but rather a resource for a teacher when he constructs a teaching unit.

Teaching and learning do not occur in a vacuum. That is, the teacher teaches about something. Also, young people grow and mature in relation to something. This process of maturing proceeds at its most healthy rate when youth interact and develop a meaningful relationship with selected objects and events in their environment. A teaching task is to effectively relate subject matter to the growth and development of young people. The teacher is to make subject matter relevant to individuals as well as relevant to an educational process. Therefore, there must be some subject matter in a resource unit for teachers. The important thing to remember is that the emphasis in a resource unit is on suggestions for the teacher and not on the subject matter. It must be assumed that the teacher possesses the subject matter or has access to it through additional resources such as movies, bulletins, textbooks, etc. Certainly, subject matter from horticulture, dairy, soils, animal husbandry, economics, etc., can be used to teach young people much about themselves. The study of any subject is meaningless if it is not used to enhance the student's understanding of self in relation to the world around him.

B. Other Types of Units

A resource unit should not be confused with a subject matter outline. A subject matter outline presents technical subject matter much as does a textbook. A resource unit for teachers contains some subject matter, but subject matter is not the primary emphasis. Sometimes a unit is constructed with the subject matter listed first and then followed by suggestions for teaching. In order to construct this type of unit it is necessary to have a competent subject matter specialist and a competent instructor working as a team.

C. Content of a Resource Unit

It is difficult to suggest one outline which is appropriate for each and every resource unit. The unique nature of a particular topic may suggest modification. In general, though, a resource unit to be most helpful needs the following sections: (a) teacher objectives, (b) principles to be taught, (c) typical questions and problems of students, (d) suggested learning activities, (e) references. Each of these sections are discussed in detail in this resource unit.

II. OBJECTIVES

Education is a social process. A social process whereby individuals reconstruct or reorganize experiences in such a way that they enhance the meaning of new experiences and increase the individuals' ability to direct the course of subsequent experiences. Education is behavior resulting from such experiences.

The most fundamental task of an educator is that of determining and stating educational objectives. Without teacher objectives, there is not likely to be effective teaching. All learning experiences planned and directed by the teacher (i.e. every behavior, act, movement, meeting, field trip, and assignment) should be directed toward an objective.

Failure to identify a clear set of teacher objectives is to let the tail wag the dog. Teacher objectives in education should always be concerned with establishing experiences in the hope of achieving a behavioral change in students. "Means" can be likened to a kit of tools. The "means" or tools of Vocational Agriculture Teachers are experiences such as demonstrations, field trips, farming programs, other occupational experience programs, supervised study, readings, questions, class discussions, FFA, etc. These tools are the means to achieve an end which we specify by our teacher objectives.

A teacher objective is stated by the teacher and identifies what he intends to accomplish. It is a statement that specifies:

(1) who is to learn.

(2) what the teacher intends for the student to learn.

(3) under what conditions it is to be learned.

(4) the minimum level of performance to be accepted by the teacher.

An example of a teacher objective: Develop the ability

(a) in all ninth grade vocational agricultural students.

(b) to strike an arc and run a flat 2" bead on 1/4" steel.

(c) using an 180 amp arc welder.

(d) working as a team of two in a welding booth with a welding table and vice.

(e) to be performed until each student has a 2" bead completed in a single pass that is not cold, hot, undercut, overlapped, too fast, or too slow.

In contrast, a learning objective is student centered. It specifies what the student plans to learn and what he intends to do with the learnings. Examples: I want to learn arc welding so that I can maintain farm machinery. I want to learn arc welding to the extent that I can get a job as a welder in a garage. I want to learn arc welding just to the extent that I know the basic activities of a welder.

Experiences are unique to the individual. Both teaching and learning objectives should be stated in terms of the kinds of behaviors to be developed in the youth who are enrolled in the programs of vocational agriculture. Behavior can be categorized as being of three kinds--thinking (cognitive domain), emotional (affective domain), and action (psychomotor domain). These categories may be further defined as follows:

1. Thinking - a cognitive process leading to

   -- understanding
   -- knowledge

2. Feeling - a value laden convert emotion leading to the formation of

   -- attitudes
   -- appreciation
   -- interest
   -- belief

   } concerning something

3. Acting - an overt action which can lead to the acquisition of

   -- abilities
   -- skills
   -- habits

Each student must have experiences at each of the three levels. These levels of behavior do not exist as isolates. They help refine and compliment each other.

There is also a relationship between long-range and immediate objectives. Long-range objectives (goals) are those of ultimate desirability, things which are striven for over an extended period of time. Immediate objectives are those which describe the specific intent of a particular teaching plan and are worded in such a manner that one can evaluate for success or failure immediately after the experience. Both types of objectives are very important.

Long-range objective (goal) for a tenth grade agriculture class in soils might be: "To develop an understanding of the Seven Land Capability Classes." But what constitutes an "understanding"? In this case it appears that it could mean at least the following:

a. The ability to recognize the seven classes as being associated with soils.

b. The ability to spell the words correctly.

c. The ability to name and define each class.

d. The ability to distinguish one class from another.

e. The ability to use each class in context in a discussion.

f. The ability to list each class and its characteristics.

g. The ability to describe each class.

h. The ability to examine an area of a farm and classify it into a land capability.

Each of these abilities provides an operational definition of the long-range objective. In fact, one might use any, all or none of them in a particular lesson. The point is, however, that the decision concerning specific operational definitions must be made prior to instructional and evaluational planning. To do otherwise is to cheat both the student and the teacher. The student is cheated as he does not really know the teacher's intent, and the teachers are cheated as they cannot evaluate feedback from students. Both are frustrated. It is only through this process of "operationalizing" that we can construct learning experiences which can be evaluated.

Precision is obtained by operationalizing long-range objectives. The teacher specifies before his teaching of the class the behavior that he will accept as evidence of learning and the manner in which the student is to demonstrate his success. One way to obtain precision, but perhaps not the only way, is to use "action words" in our immediate objectives. The action words which seem to be appropriate here are:

a. Identifying - The student selects (by pointing to, touching, or picking up) the correct object. For example, to identify sand he will pick up the saucer containing the largest particle size when confronted with saucers containing sand, silt, and clay.,

b. Distinguishing
c. Constructing
d. Naming
e. Ordering
f. Describing
g. Stating a rule
h. Applying a rule
i. Demonstrating
j. Interpreting

(An operational definition is needed by the teacher for each of the other nine action words, but are not offered here)

In the soils unit, evidence of success to be accepted by the teacher and student may be the abilities of naming, describing, and distinguishing the seven land capability classes. By having the long-range objective of knowing the seven land capability classes and the three immediate objectives of naming, describing, and distinguishing each class and having decided what we will accept as evidence, we can evaluate for immediate success.

III. PRINCIPLES TO BE LEARNED (Key Concepts for Evaluation)

This section is a relatively new idea in a resource unit. It is an attempt to identify the concepts or generalizations that a student may attain. These are most useful to the teacher for purposes of evaluation. It is expected that as a result of the experiences, the student will have learned principles or key concepts related to the subject matter. The attainment of these principles or key concepts may constitute an approach to evaluation using whatever means the teacher deems appropriate. (These principles or key concepts are generally grounded in the subject matter being taught and not in the process of education. Since we do not teach in a vacuum and youth do not develop in a vacuum, the principles or key concepts do not constitute the sole means for evaluation.)

Example: A resource unit on Landscape Plant Identification might have the following principles or key concepts:

1. The value of an ornamental plant is the contribution that it makes toward beautifying the environment.

2. All of the diverse shapes of ornamental plants may be classified.

3. Plant foliage, shape and structure base, margins, venation and form, are distinctive for each ornamental plant.

4. Plant foliage, bark, physical shape, flower, and fruits are all important distinctive features to be considered when identifying an ornamental plant.

5. Referring to plants, plant parts, and plant features by their appropriate names is important.

IV. TYPICAL QUESTIONS AND PROBLEMS OF STUDENTS

The teacher developing a resource unit projects what he thinks will be some typical questions and problems of students who are of the age or stage of development identified in the objectives. These projections represent the teacher's insight into the needs of this age group.

Such questions, problems, or concerns should be worded in the language of the student. They will suggest starting points for motivation, areas of initial exploration, etc. In short, they provide initial insight as to how a teacher may proceed to make content relevant to students. Typical questions and problems of students concerning motors might include the following:

1. Why do we need rings in a piston?

2. Suppose you disconnect the breather.

3. We never change the oil in our tractor.

4. How do you keep the gas clean?

5. My dad says that you don't need an oil filter.

6. How do you adjust points and plugs?

A teacher uses such statements as a guide and then derives from his class their particular questions and problems. The objectives that the teacher selects from the resource unit should relate to these questions and problems. They should guide in the selection of learning activities. Statements number one and two above relate to behavior regarding understanding and knowledge or a lack of understanding and knowledge about engines. Numbers three and five have to do with an attitude, while four and six have to do with a series of specific skills.

V. SUGGESTED LEARNING ACTIVITIES AND EXPERIENCES

An objective may be attained through the use of a number of different activities. Local situations vary requiring the use of different objectives by each teacher. A resource unit contains many more activities and experiences than any one teacher is likely to use. It should provide the base from which a teacher may select activities. Some teachers may use a minimum of suggested activities and others may use a maximum number depending upon their objectives.

Suggested learning activities and experiences usually will relate to the following:

1. Field trips or tours

2. Discussion topics

3. Films

4. Demonstrations

5. Readings and study

6. Charts, graphs, illustrations, pictures, drawings

7. Specimens, objectives, models

8. Talks by resource persons

9. Projects to be completed by the students

Care should be taken in this section to make the list of suggestions as exhaustive as possible. Some of the suggestions may overlap.

VI. REFERENCES

It is important to identify here materials, devices, persons, etc., that may be utilized in teaching a unit. Examples to include are:

1. Student references -- Those materials which are appropriate for the teacher to have in quantity to make available to each student.

2. Teacher references -- Those materials that are needed by the teacher or are to be used by the teacher in such a way that only one or two copies are needed.

3. Visuals -- Films, filmstrips, charts, graphs, single-concept films, slides, etc.

4. Library References -- Bulletins, periodicals, pamphlets, etc.

5. Resource People -- Local, regional and state resource persons who may be available to help the teacher.

References listed should be carefully selected to help the teacher narrow his search for materials. Also, identify where and how such materials may be obtained (names, addresses, etc.).

ADDENDUM

Procedures That One May Follow In Constructing A Resource Unit

1. Select a subject matter area or topic. This should be an area that you like to teach and that you teach effectively. The topic should also be somewhat narrow. A topic such as "crop production" is probably much too broad.

2. Make a list of the goals that you think this unit should have. Goals are long-range objectives of ultimate desirability. They represent the total of what you wish to achieve. Example: The ability to establish a new lawn.

3. Construct a list of teacher objectives.

4. From the list of teacher objectives, construct a series of statements which comprise your key concepts. These are statements which specify the exact concepts that need to be learned by the students.

5. Ask yourself: Do the objectives listed in step 3 permit me to plan activities for each key concept? If not, keep working on these two areas until your teacher objectives cover all areas of your key concepts and vice versa.

6. Formulate a set of statements concerning the typical problems and concerns that students are likely to have about the subject being taught.

7. Write each objective at the top of a separate sheet of paper.

8. Identify an exhaustive list of learning activities for each objective. Do not be concerned about overlap.

9. Combine all of the learning activities into one section. This is an optional step. Some materials can be used best by teachers if the learning activities are left with each objective.

10. Construct a set of references. Identify those to be used by the teacher and individual students and those which are excellent group references.

11. Paste up the complete document.

12. Edit for completeness, duplication, etc., and print.

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Statutes Concerning Technical Institutes and Community Colleges.

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OHIO

In recent years, the state legislature's increased interest in technical education has resulted in considerable modification of and addition to existing legislation concerning technical and adult education in the technical institute and community college. In an effort to assist technical institutes and community colleges and their staffs in interpreting this legislation, abstracts of recent legislation are given under the headings of: (1) Technical Institutes, (2) Community Colleges, and (3) Standards for Associate Arts Degree Established by the Board of Regents. If additional information is needed concerning a specific piece of legislation, the administrator may consult the legislative bill designated by the section number listed with the abstract. (CH)

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STATUTES CONCERNING TECHNICAL INSTITUTES AND COMMUNITY COLLEGES

State of Ohio

April, 1968

Division of Vocational Education

State Department of Education

Columbus 15, Ohio

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STATUTES CONCERNING TECHNICAL INSTITUTES

AND COMMUNITY COLLEGES

April, 1968

Ohio State Board of Education

Martin W. Essex
State Superintendent of Public Instruction
State Department of Education

Byrl R. Shoemaker
Division of Vocational Education

PREFACE

In recent years the State Legislature has shown an increased interest in technical education. This has resulted in considerable modification of and addition to existing legislation concerning technical and adult education in the Technical Institute and the Community College.

The purpose of this publication is to assist the Technical Institutes and Community Colleges and their staffs in interpreting the legislation concerning establishment, change, and improvement of technical education programs.

The publication contains abstracts of state legislation concerning technical education. If additional information is needed concerning a specific piece of legislation, the administrator may consult the legislative bill. These have been designated by the section number listed by the abstract.

The Division of Vocational Education will be happy to assist schools and their staffs in interpreting statutes pertaining to technical and adult education.

Byrl R. Shoemaker, Director
Division of Vocational Education
State Department of Education

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STATUTES CONCERNING TECHNICAL INSTITUTES AND COMMUNITY COLLEGES

TECHNICAL INSTITUTES

3357.01 Definitions.

"Technical institute" means an institution of education beyond the high school, including an institution of higher learning to provide "technical institute" or "adult educational technical programs", normally not exceeding two years duration and not leading to a baccalaureate degree.

"Technical institute district" means a political subdivision of the state, comprised of a city school district or a county, or two contiguous school districts or counties, which meets the standards prescribed by the Ohio Board of Regents, which is organized for the purpose of establishing, owning, and operating one or more technical institutes within the territory of such district.

"Contiguous school districts or counties" means school districts or counties so located that each such school district or county shares at least one boundary.

"Technical-institute programs" means a post-high school curricular program, planned and intended to qualify students, after satisfactory completion of such a program normally two years in duration, to pursue careers in which they provide immediate technical assistance to professional or managerial persons generally required to hold baccalaureate or higher academic degrees in technical or professional fields.

"Adult education technical programs" means the dissemination of post-high school technical education service and knowledge, for occupational or general educational benefit of adult persons. (Effective 10-8-63)

3357.02 Creation of technical institute districts; submission of proposals.

A technical institute district may be created with the approval of the Ohio Board of Regents, providing consideration is given to such factors as the population of the proposed district, the present and potential pupil enrollment, present and potential higher education facilities in the district and such other factors as

pertain to the needs of the district.

A proposal to create a technical institute district may be presented to the Ohio Board of Regents by -

A. City school district board resolution including the entire district.

B. The boards of education of two or more contiguous county, city, exempted village, or local school districts resolution with a majority vote of each participating district of the whole territories of all the participating school districts.

C. The county board of education, consisting of the whole territory of such county.

D. The county boards of education of any two or more contiguous counties, approved by majority vote of each participating county board.

E. Qualified electors residing in a city school district, in a county, or two or more contiguous school districts, or in two or more contiguous counties may execute a petition proposing the creation of a technical institute. (Effective 10-8-63)

3357.03 Filing of certificate or resolution creating the district with the secretary of state.

Within thirty days after approval by the Ohio Board of Regents of a technical institute district, proposed pursuant to section 3357.02 of the Revised Code, such board shall file with the secretary of state a copy of its certification or resolution creating the district. Such copy shall be filed and recorded in the office of the secretary of state in the same manner as articles of incorporation are required to be filed and recorded under the general law concerning corporations. (Effective 10-8-63)

3357.04 Responsibilities of district; place of business.

A technical institute district organized pursuant to section 3357.02 of the Revised Code shall be a political subdivision of the state and a body corporate with all the powers of a corporation, and shall have perpetual existence, with power to sue and be sued, to incur debts, liabilities, and obligations, to exercise the right of eminent domain to do all acts necessary and proper for the carrying out of the purposes for which the district was created and for executing the powers with which it is invested.

A technical institute district established pursuant to section 3357.02 of the Revised Code, shall have as its temporary office or principal place of business the office of the board of education of the most populous school district in

such technical institute district until a permanent place of business is established pursuant to section 3357.06 of the Revised Code. (Effective 10-8-63)

3357.05 Appointment of trustees; term.

Increases from five to seven the number of members of a technical institute district board of trustees in districts embracing the territory of only one city or only one county; retains a requirement that two of the trustees in such district be appointed by the governor; requires that five, instead of three, trustees be appointed by the board of education of the city school district where the district embraces only the territory of one city; requires that where the district embraces only one county, two trustees (instead of three) shall be appointed by the county board of education, and three shall be appointed by the board of education of the city school district or city school districts, if more than one in the county, meeting jointly at the call of the president of the city board with the greatest number of pupils and selecting the three trustees by majority vote of those present; requires that two of the five initial appointments made by the board or boards of education be for one year terms, two for two year terms, and one for a three year term, instead of having one appointment for one year, one for two years, and one for three years. (Effective 11-5-65)

Requires that for technical institute districts embracing two or more contiguous school districts or two or more counties, six trustees of the total of nine (the governor is to appoint three) are to be appointed by only the county and city boards of education whose territories are included in the technical institute district, instead of by all the boards of education of included districts. (Effective 11-5-65)

3357.06 Powers and duties of boards of trustees.

The board shall meet upon call of the trustees first appointed by the governor who shall act as a temporary chairman. Members of the board then shall elect a president and other officers as they deem necessary. The board shall elect a secretary of the technical institute to serve at its pleasure. The board shall adopt a seal, and shall keep records of all proceedings, which records shall be open for public inspection. A majority of the board shall constitute a quorum, and the board may act on any matter by majority vote of its whole membership. Board may designate in its rules and regulations of administrative nature which may be acted upon by a vote of a majority of those present when a quorum is in session. The trustees shall serve without compensation, but shall be paid for their necessary expenses when engaged in the business of the board.

The board of trustees may adopt rules and regulations governing its own proceedings and shall designate the permanent principal place of business of the district. (Effective 10-8-63)

3357.07 Technical institute plan, consultants, filing with board of regents.

The board of trustees of a technical institute district shall prepare an official plan. It shall include a demonstration of need and prospective enrollment, a description and location of lands, buildings, facilities, and improvements proposed to be occupied by such institute; a proposed schedule for acquisition and cost of lands and improvements; a proposed budget for the first two years of operation of such institute.

Consultants in education, architecture, law, engineering or other fields of professional skill may be retained in the preparation of the plans for the institute, by the board. (Effective 10-8-63)

3357.08 Financing of plans.

For the purpose of preparing the official plan for a technical institute, pursuant to section 3357.07 of the Revised Code, the board of trustees of a technical institute district may receive and expend gifts, grants, bequests, or devises, or public funds appropriated for such purpose pursuant to law. (Effective 10-8-63)

3357.09 Power of board of trustees to own and operate a technical institute.

The board of trustees of a technical institute district may with the approval of the Ohio Board of Regents -

A. Own and operate a technical institute, pursuant to an official plan prepared and approved in accordance with section 3357.07 of the Revised Code.

B. Hold, encumber, control, acquire by donation, purchase, or condemnation, construct, own, lease, use, and sell, real and personal property as necessary for the conduct of the program of the technical institute on whatever terms and for whatever consideration may be appropriate for the purposes of the institution.

C. Accept gifts, grants, bequests, and devises absolutely or in trust for support of the technical institute.

D. Appoint the president, faculty, and such other employees as necessary and proper for such technical institute, and fix their compensation.

E. Provide for a technical institute necessary lands, buildings or other structures, equipment, means, and appliances.

F. Develop and adopt, pursuant to the official plan, any one or more of the curricular programs identified in section 3357.01 of the Revised Code as technical institute programs, or adult-education technical programs.

G. Establish schedules of fees and tuition for: students who are residents of the district; students who are residents of Ohio but not of the district; students who are non-residents of Ohio. The establishment of fees and tuition schedules and regulations governing the determination of residence shall be subject to approval of the Ohio Board of Regents. Students who are non-residents of Ohio shall be required to pay higher rates of fees and tuition than the rates required of students who are residents of Ohio, but not of the district, and students who are residents of the district shall pay smaller tuition and fee rates than the rates for either of the above categories of non-resident students.

H. Authorize, approve, ratify, or confirm, with approval of the Ohio Board of Regents, any agreement with the United States government, acting through any agency designated to aid in the financing of technical institute projects, or with any person organization, or agency offering grants-in-aid for technical institute facilities or operation.

I. Receive assistance for the cost of equipment and for the operation of such technical institutes from moneys appropriated for technical education or for matching of Title VIII of the "National Defense Education Act", Stat. 1597 (1957), 20 U.S.C. 15a-15e. Moneys shall be distributed by the Ohio Board of Regents in accordance with rules and regulations which the board shall establish governing its allocations to technical institutes chartered under section 3357.07 of the Revised Code.

J. Grant appropriate associate degrees to students successful completing the technical institute programs and certificates of achievement to those students who complete other programs.

K. Prescribe rules and regulations for the effective operation of a technical institute, and exercise such other powers as are necessary for the efficient management of such institute. (Effective 10-8-63)

3357.10 Treasurer to be custodian of district funds.

Requires the board of trustees of a technical institute to elect a treasurer as a fiscal officer of the district, with duties performed by county treasurers and auditors in prior law; requires a treasurer who ceases to hold office to deliver to the board or his successor all property of the district in his possession. (Effective 12-14-67)

3357.11 Issuance of bonds; adoption of tax levy.

For the purposes of purchasing site or enlargement, and for the erection and equipment of buildings or for the purposes of enlarging, improving or re-building existing facilities the board of trustees of a technical institute may request such funds by: requiring the levy to be placed on the ballot at an election to be held on

the first Tuesday after the first Monday in May, or the first Tuesday after the first Monday in November.

Authorizes university branch and technical institute districts to issue anticipating notes after securing voter approval of capital improvement levy; places limitation on yearly amount of notes which may be issued equal to 75 percent of the estimated proceeds of the levy over a period of five years after date of issuance less any amount previously obligated for such year by the issuance of notes; provides that the maximum amount of notes maturing in any one year may not exceed 75 percent of the anticipated proceeds of the levy that year.

Applies the law to levies voted and notes issued prior to the effective date of the Act. (Effective 3-27-67)

3357.112 Issuance of revenue bonds.

Authorizes community college and institute districts to issue revenue bonds for acquiring, constructing, equipping, furnishing, repairing, remodeling, renovating, enlarging and improving building, structures, and facilities for parking, dining, and food preparation, bookstores, health centers and infirmaries, student services and activities, athletic and recreational purposes, auditoriums, and any combination thereof, and acquiring real estate; limits security pledged for such bonds to the facility revenues and receipts of the school district, other than tax receipts, as the board designates; requires that the bonds not be general obligations of the district, specifies that the holders have no right to require the board to levy or collect taxes for the payment of principal or interest; specific details on other financial and procedural requirement of such issues. (Effective 8-16-67)

3357.113 Resolution of the board.

The bonds under sections 3357.112 and 3357.113 of the Revised Code are not bonded indebtedness of such technical institute districts, shall not constitute general obligations or pledge of full faith and credit of such technical institute district, and the holders or owners thereof shall have no right to require the board to levy or collect taxes for payment of the principal or interest of such bonds, but they shall have the right thereof solely from the funds pledged for such payments; such funds may be pledged from revenues, receipts, fees, charges as the board so designates for these purposes.

Any such bonds may be secured by a trust agreement entered into with a corporate trustee, the trust agreement may provide a method whereby the general administrative overhead expenses shall be allocated among such facilities for the purposes of determing the operating and maintenance expenses payable from the pledged revenues prior to the charges for debt service.

The board may provide by resolution for the issuance of refunding bonds, payable solely from the revenues and funds pledged to their payment.

3357.12 Institute ownership vested in board of trustees.

The ownership of a technical institute, created and established pursuant to section 3357.07 of the Revised Code, including all right, title, and interest in and to all property, both real and personal, pertaining thereto, shall be vested in the board of trustees of the technical institute districts in which such institute is situated. The board may acquire by appropriation any land, rights, rights-of-way, franchises, easements, or other property necessary or proper for the construction or the efficient operation of any facility of the technical institute district, pursuant to the procedure provided in section 5537.06 of the Revised Code, with respect to the Ohio turnpike commission, and insofar as such procedure is applicable. (Effective 10-8-63)

3357.13 District bonds are suitable investments.

Technical institute district bonds, issued pursuant to section 3357.11 of the Revised Code, shall be lawful investments of banks, savings banks, trustees companies, trustees, boards of trustees of sinking funds of municipal corporations, school districts, counties, the industrial commission, the state teachers retirement system, the public employees retirement system, and shall also be acceptable as security for the deposit of public moneys. (Effective 10-8-63)

3357.14 Tax exemption.

The exercise of powers granted by sections 3357.01 to 3357.10, inclusive, of the Revised Code, shall be in all respects for the benefit of the people and for the increase of their knowledge, prosperity, morals, and welfare. A technical institute district shall not be required to pay any taxes or assessments upon any real or personal property acquired, owned, or used by it pursuant to sections 3357.01 to 3357.19, inclusive, of the Revised Code, or upon the income therefrom, and the bonds issued pursuant to such sections and the transfer of the income therefrom, including any profit made on the sale thereof, shall at all times be free from taxation within the state.

3357.15 State financial aid.

Financial aid to a technical institute from the state, to be used for the payment of operating costs of such institute, shall be paid to the board of trustees of the technical institute district in which such institute is situated, only upon certification by the Ohio Board of Regents that such institute is in condition to receive students and is operable and upon approval of its official plan and the issuance of a charter to such institute as provided in section 3357.07 of the Revised Code. Financial aid for equipment may be paid to the board of trustees after approval of its official plan and issuance of a charter to such institute. (Effective 10-8-63)

3357.16 Improvements contracts.

When the board of trustees of a technical institute district has by resolution determined to let by contract the work of improvements pursuant to the official plan of such district, contracts in amounts exceeding ten thousand dollars shall be advertised after notice calling for bids has been published once a week for three consecutive weeks, in at least one newspaper of general circulation within the technical institute district where the work is to be done. The board of trustees of the technical institute district may let such contract to the lowest and best bidder who shall give a good and approved bond , conditioned on the carrying out of the contract and payment for all labor and material. Such contract shall be in writing and shall be accompanied by or shall refer to plans and specifications for the work to be done. Such contract shall be approved by the board of trustees and signed by the president of the board and by the contractor. (Effective 10-8-63)

3357.17 Intergovernmental relations.

The board of trustees of a technical institute district, and its agents, shall cooperate with boards of county commissioners of the county or counties comprising the district, with boards of education in the district, and with other public agencies representing the people of the district, in providing for educational, social, civic, and recreational activities, in buildings and upon grounds under control of the board of trustees, provided that such cooperation shall not interfere with the principal purpose of such district which is to provide technical educational service beyond the high school for the people of such district. The board of trustees shall prescribe such rules and regulations for occupancy of buildings and grounds as will secure fair, reasonable, and impartial use. (Effective 10-8-63)

3357.18 Approval of plans by Board of Regents.

The Board of Regents shall approve an official plan and issue a charter only upon the following finding; that the official plans are in conformity to the law, that the technical institute will not unreasonably duplicate existing educational services in the district, that there is reasonable prospect for adequate operating revenue; that the proposed land and facilities will be adequate and efficient, that the particular proposed curricular programs, being one or more of the programs defined in section 3357.01 of the Revised Code, as "technical institute", and "adult education technical programs", are the programs for which there is substantial need in the territory of the district.

The employment and separation of individual personnel in a technical institute and the establishment or abolition of individual courses of instruction shall not be subject to specific and individual approval or disapproval of the Board of Regents, but shall occur in the descretion of the local management of the institute within the limitations of the law, the official plan, and the charter of such institute. (Effective 10-8-63)

3357.19 Duties of Board of Regents.

The Ohio Board of Regents shall: Organize an advisory committee for each of the major technical programs. Each committee shall have a minimum of nine members who are identified with the technical field involved. At least members shall be selected from the faculties of accredited institutions of higher learning. The advisory committee shall advise and counsel the Ohio Board of Regents concerning organization and operation of technical institutes. The Board of Regents shall publish those rules, regulations, and standards concerning qualifications of teaching personnel to the quality and content of instructional content, relative to the awarding of certificates of achievement or associate degrees.

Conduct studies and examinations of the operations and facilities and require occasional reports.

Employ such professional, administrative, clerical or secretarial personnel to assist the board in performance of its duties.

Perform biennial examinations of budget requirements of the technical institutes, and present recommendations to the governor with respect to such budget requirements.

Perform research duties relative to technical institute education. (Effective 10-8-63)

3311.215 Use and construction of facilities.

Permits a joint vocational school district operating a vocational school to maintain and operate facilities for post-high school training, technical training, and retraining and permits such a school district to construct, operate, and maintain dormitories and other student facilities. (Effective 12-1-67)

3311.218 Sharing of facilities and funds.

Permits joint vocational school districts and technical institute districts with coterminous boundaries to enter into written agreements for sharing the use of physical facilities or equipment owned or used by either district; provides that such agreements may allow the contribution of school district funds for current operating expenses to the technical institute district. (Effective 11-21-67)

COMMUNITY COLLEGES

3333.05 Authority over community colleges

The Ohio Board of Regents shall approve or disapprove proposed official plans of community college districts, prepared and submitted pursuant to sections 3354.01 to 3354.18, inclusive, of the Revised Code, and issue or decline to issue charters for operation of community colleges, pursuant to section 3354.07 of the Revised Code.

The board shall approve an official plan, and issue a charter, only upon the following findings:

A. That the official plan and all past and proposed actions of the community college district are in conformity to law;

B. That the proposed community college will not unreasonably and wastefully duplicate existing educational services available to students and prospective students residing in the community college district;

C. That there is reasonable prospect of adequate current operating revenue for the proposed community college from its proposed opening date of operation;

D. That the proposed lands and facilities of the community college will be adequate and efficient for the purposes of the proposed community college;

E. That the proposed curricular programs defined in section 3354.01 of the Revised Code as "arts and sciences" and "technical", or either, are the programs for which there is substantial need in the territory of the district.

The employment and separation of individual personnel in a community college, and the establishing or abolishing of individual courses of instruction, shall not be subject to the specific and individual approval of the Ohio Board of Regents, but shall occur in the discretion of the local management of the college within the limits of the law, the official plan, and the charter of such college. (Effective 10-24-67)

3333.07 Degree Granting Authority.

Limits the authority of the Ohio Board of Regents to grant degree approval for technical education programs to programs offered by state assisted universities, university branches, technical institutes and community colleges; repeals provisions for awarding associate degrees in technology for post-high school programs offered pursuant to Title VIII of the "National Defense Education Act" or the Vocational Education Act of 1963. (Effective 11-21-67)

3351.05 Student Loans.

Changes the name of the Ohio Higher Education Assistance Commission to the Ohio Student Loan Commission; extends authority of the commission to guarantee loans for vocational and technical education; adds state and federal grants and advances to the commission's sources of funds and designates the commission as the state agency authorized to enter into contracts concerning specified federal student aid programs; applies the $1,000 maximum loan guarantee under prior law to undergraduates, permits a $1,500 guarantee for graduates, and raises from $5,000 to $9,000 the maximum of guaranteed loans to any person; revises interest limit on guaranteed loans from five and one-half percent per year to the rate permitted under the federal programs; authorizes commission employment of a private collection agency to collect defaulted loans; designates federal credit unions and insurance companies as approved leaders. (Emergency: Effective 7-1-67)

3354.01 Definitions.

A. 'Community college district" means a political subdivision of the state and a body corporate with all the powers of a corporation.

B. "Contiguous counties" means counties so located that each such county shares at least one boundary in common with at least one other such county.

C. "Community college" means a public institution of education beyond the high school organized for the principle purpose of providing for the people of the community college district, instructional programs in "arts and sciences" and "technical", or either, and may include the "adult education" program, not exceeding two years duration.

A municipal university having at least seventy-five thousand people in its district and having the same offerings as a community college shall receive the same state financial aid, but only as regards their first and second year of post-high school education.

D. "Adult education program" means the dissemination of post high school educational service and knowledge, by a community college, for occupational, cultural, or general educational benefit of adult persons, not being offered for the primary

purpose of enabling such persons to obtain academic credit.

E. "Charter amendment" means a change in the official plan of a community college for the purpose of acquiring or disposing of land or structures, or creating or abolishing of one or more academic departments.

F. 'Technical program" means post-high school curricular programs of two years or less, planned and intended to enable students to gain academic credit for courses designed to prepare students to meet occupational requirements.

G. "Operating cost" means all expenses for all purposes of the community college district except expenditures for permanent improvements having an estimated life of usefulness of five years or more. (Effective 9-15-65)

3354.02 Creation of a Community College.

Authorizes the Ohio Board of Regents to create community college districts pursuant to board standards based on population, enrollment, and the facilities and needs of the district, and to make studies relative to the establishment of such a district; removes the authority of a board of county commissioners, boards of county commissioners of two or more contiguous counties, and voters of such counties to establish such a district and substitute therefore the authority to propose creation of a district.

Modifies provisions for proposing the creation of a district on petition of electors by eliminating a limitation upon its use to areas having a population of 75,000 or more, lowering the requisite number of petition signatures, and requiring a demonstration that a district would be conducive to public convenience and welfare; authorizes the fixing of a special election to vote proposals as submitted if no primary or general election occurs within 90 days after filing of a petition. (Effective 10-13-67)

3354.03 District to be political subdivision.

A community college district shall be a political subdivision of the state and a body corporate with all the powers of a corporation, with the power to sue and be sued, to incur debts, liabilities, and obligations, to exercise the right of eminent domain and taxation and assessment; to issue bonds.

From the time of establishment of a community college district, its temporary office or principle place of business shall be the office of the board of county commissioners of the most populous county in such district, until a permanent place of business has been established. (Effective 10-20-61)

3354.04 Certification of approved district.

When a community college district has been approved by vote of the electors, the board of elections of such counties shall, within thirty days, certify the results to the secretary of state, who shall thereupon declare such district to be established.

Copies of election certificates, ordinances, or resolutions, shall be recorded and filed in the office of the secretary of state. (Effective 10-13-67)

3354.05 Appointment of board of trustees.

Within ninety days after the establishment of a community college district, the board of county commissioners shall appoint six trustees and three shall be appointed by the governor, with the advice and consent of the senate. (Effective 10-13-67)

3354.06 Organization and rules of board; selection of secretary and treasurer.

The board shall meet upon the call by the trustee first appointed. Members of such a board shall proceed immediately to elect among themselves a chairman of the board and such other officers as they deem necessary. The board shall elect a secretary and a treasurer of the community college district, to serve at its pleasure, who are not members of the board. The secretary and treasurer may, but need not be, the same person. The treasurer of the community college district shall be its fiscal officer and shall receive, and at the direction of the board of trustees, disburse all funds of the district. The board shall adopt a seal, and shall keep records of all its proceedings, which records shall be open for public inspection. A majority of the board shall constitute a quorum, and the board may act on any matter by majority vote of its whole membership. The board may designate in its rules and regulations matters of administrative nature which may be acted upon by a vote of a majority of those present when a quorum is in session. The trustees shall serve without compensation, but may be paid for their necessary expenses when engaged in the business of the board.

The board of trustees may adopt rules and regulations governing its own proceedings, and shall designate the permanent principle place of business of the district. (Effective 9-30-63)

3354.07 Community college plan; approval by Board of Regents.

Upon the qualification of its members, the board of trustees shall prepare an official plan for a community college within the district. Such official plan shall include but not be limited to, a demonstration of needs and prospective enrollment; a description and location of lands, buildings, facilities, and improvements proposed to be occupied by such college; a proposed schedule for acquisition of such lands or improvements, for construction of improvements, and for operation of the college;

proposed organization and program of such college; estimate of cost of lands and improvements, and a proposed budget for the first two years of the operation of such college.

The board of trustees may retain consultants in the fields of education, planning, architecture, law, engineering, or other professional skill which may be needed in the preparation of plans for a community college. Public hearings shall be conducted as to the needs for, feasible location of, desirable types and sizes of land, instructional facilities, and other improvements for a community college.

The official plan shall include a recommendation as to whether the community college should be operated directly by the board of trustees or should be operated in whole or in part by a generally accredited public university or college pursuant to a contract to be entered into by the board of trustees and the governing board of such college or university.

Upon completion of the official plan, the board of trustees shall file a copy of such a plan with the Ohio Board of Regents, which may approve or disapprove any provisions thereof. (Effective 9-20-63)

3354.08 Gifts and bequest.

For the purpose of preparing the official plan for a community college, the board of trustees of a community college may receive and expend gifts, grants, bequest or devises, or public funds appropriated for such purposes. (Effective 10-20-61)

3354.09 Powers of the board.

The board of trustees of a community college may:

A. Own and operate a community college or enter into a contract with a generally accredited public university or college for operation of such community college by such university or college.

B. Hold, encumber, control, acquire by donation, purchase or condemnation, construct, own, lease, use, and sell real and personal property as is necessary for the conduct of the program of the community college on whatever terms and for whatever consideration may be appropriate for the purpose of the college.

C. Accept gifts, grants, bequest and devises absolutely or in trust for support of the college during the existence of said college.

D. Appoint the administrative officers, faculty, and staff, necessary and proper for such community college, and fix their compensation except in instances

in which the board of trustees has delegated such powers to a college or university operating such community college.

E. Provide for a community college, necessary lands, buildings or other structures, equipment, means and appliances.

F. Develop and adopt curricular programs.

G. Establish schedules of fees and tuitions, for residents of district, residents of Ohio, but not the district, and non-residents of Ohio.

H. Authorize, approve, ratify, or confirm any agreement relating such community college with the United States government offering grants in aid for education facilities or the operation of facilities.

I. Grant appropriate certificates of achievement to students successfully completing the programs.

J. Prescribe rules and regulations for effective operation of a community college and exercise such other powers as are necessary for efficient management of such college.

K. Receive and expend gifts or grants from the state for the payment of operating cost, for acquisition, construction, and improvement of structure or for the acquisition of land. In no event shall state gifts or grants be expended for adult education programs. (Effective 10-13-67)

General Provisions

3354.10 Funds; state audit of community college district.

A. All funds under the control of the board of trustees of a community college district, regardless of source, may be deposited to its credit in banks or trust companies designated by it.

B. The board of trustees may by resolution provide that moneys of such district be invested in bonds or other obligations of the United States, of the state, and of any municipality. Such investments shall not be made at a price in excess of current market value of such bonds or other interest bearing obligations.

C. Any community college is subject to inspection and examination by the bureau of inspection and supervision of public offices. (Effective 9-30-63)

3354.11 Bonds.

A community college district may submit to the electors of the district for

the purpose of paying all or part of the cost of purchasing sites and for the erection, furnishing, and equipment of buildings and for the acquisition or construction of any property, which has an estimated life of usefulness of five years or more.

The bond issue may be submitted to the electors, by the trustees, by its placement on the ballot at an election to be held on the first Tuesday after the first Monday in May or the first Tuesday after the first Monday in November. (Effective 9-30-63)

3354.12 Levy to pay capital and operating expenses; sources of funds.

Upon the request by resolution approved by the board of trustees, shall place upon the ballot at an election to be held on the first Tuesday after the first Monday in May or the first Tuesday after the first Monday in November, the question of levying a tax on all taxable property in the community college district outside of the ten-mill limitation, to provide funds for site acquisition, the erection, furnishing and equipment of buildings, the acquisition, construction, or improvement or any property which is authorized by the board of trustees.

The board of trustees may issue anticipating notes up to 75 percent of the anticipated proceeds of the levy over a period of five years after date of issuance, less any amount previously obligated. (Effective 10-16-67)

3354.121 Issuance of revenue bonds.

Authorizes community colleges to issue revenue bonds for acquiring, constructing, equipping, furnishing, repairing, remodeling, renovating, enlarging, and improving buildings, structures, and facilities for vehicle parking, dining, and food preparation, bookstores, health centers and infirmaries, student services and activities, athletic and recreational purposes, auditoriums, and any combination thereof, and acquiring real estate; limits the security pledged for such bonds to the facility revenues and receipts as the board designates; requires that the bonds not be general obligations of the districts; specifies that the holders have no right to require the board to levy or collect taxes for the payment of principle or interest. (Effective 10-16-67)

3354.13 Ownership of community college; acquisition of property.

The ownership of a community college, including all right, title, and interest in and to all property, both real and personal, shall be vested in the trustees of such community college. The board may acquire by appropriation any land, rights of way, franchises, easements or other property necessary or proper for the construction or efficient operation of any facility of the district. (Effective 10-20-61)

3354.14 Bonds as investments.

Community college district bonds are lawful investments of banks, savings banks, trust companies, trustees, boards of trustees of sinking funds of municipal corporations, school districts, the state teachers' retirement system, public employees' retirement system, and are also acceptable as security for the deposit of public moneys. (Effective 10-20-61)

3354.15 Exemption from taxation.

A community college district shall not be required to pay any taxes or assessments upon real or personal property, or upon income, shall at all times be free from taxation within the state. (Effective 10-20-61)

3354.16 Bidding required on contracts.

When the board of trustees has by resolution determined to let by contract the work of improvements pursuant to the official plan of such district, contracts in the amounts exceeding five thousand dollars shall be advertised after notices calling for bids have been published once a week for three consecutive weeks, in at least one newspaper of general circulation within the community college district wherein the work is to be done. The board of trustees of the district may let such contract to the lowest and best bidder who shall give a good and approved bond. Such contract shall be in writing and shall be accompanied by plans and specifications for the work to be done. (Effective 10-20-61)

3354.17 Cooperation with other agencies; dissolution of district; disposition of assets.

The board of trustees of a community college district, and its agents, shall cooperate with the boards of county commissioners of the county or counties comprising the district, with boards of education in the district, and with other public agencies representing the people of the district, in providing for educational, social, civic, and recreational activities, in buildings and upon the grounds under the control of the trustees, provided that such cooperation does not interfere with the principle purpose of such district which is to provide educational service beyond the high school for the people of such district. The board of trustees shall prescribe such rules and regulations for occupancy of such buildings and grounds as will secure fair, reasonable, and impartial use of the same.

In the event the district ceases to exist, the board of trustees may, by two-thirds vote of its members, declare the district dissolved. Money obtained from any sale of land and facilities of the district, after dissolution, shall be apportioned and deposited forthwith in the treasury or treasuries of the county or counties that created the district. (Effective 9-30-63)

3354.18 State financial assistance.

Financial aid to a community college from the state shall be paid over to the board of trustees of the community college district in which such college is situated only upon certification by the Ohio Board of Regents that such college is in condition to receive students and is operable and upon approval of its official plan. (Effective 9-30-63)

STANDARDS FOR ASSOCIATE ARTS DEGREE ESTABLISHED BY THE BOARD OF REGENTS

I. Objectives

A. The standards proposed below for approval of associate degree programs speak to two distinct but inseparable factors concerning the growth of technical education in Ohio.

1. The quality of the teaching program proposed to be carried out under the title of technical education, and,
2. The viability of the institution which may be brought forward to support that teaching program.

B. Because neither has substance without the other, no priority need be set by which to gauge the relative importance of the two factors. The standards listed below deal first with one factor and then with the other, and no attempt is made to separate the two.

Throughout these suggestions, however, run several purposes, and all individual concerns in administering the standards should give way to these:

1. To encourage the building of faculties which are fully competent to teach college level subject matter.
2. To encourage the development of curricula which are of sufficient substance as to stand unchallenged alongside other programs of higher education.
3. To encourage the admission of students who are adequately prepared to benefit by this program of higher education.
4. To encourage the guarantee of minimum institutional resources in advance of the award of higher education degrees, such as will reassure prospective enrollees that a "going-concern" will continue in the future to validate the educational program.

II. Faculty

A. Faculty members should be competent in the field in which they teach, normally holding the baccalaureate or higher degrees in fields of concentration appropriate to their teaching assignments.

B. Department chairmen or persons responsible for curriculum planning and supervision must hold the Master's Degree or other advanced preparation and experience in an appropriate field of concentration.

C. In order that the faculty be familiar with and sympathetic toward the goals of technical education and of the institution itself, that continuity of programs presentation be strengthened, and that a continuing interchange of ideas and experience within the faculty be possible, a minimum of 60 percent of all units of credit in the curriculum should be taught by faculty members who devote their full time to teaching, and, or administrative responsibilities at the institution in question.

D. A significant proportion of all faculty members should have had recent experience in industrial or professional practice pertinent to the technologies which they teach, and such experience should be kept up-to-date through professional associations, consultative practice and individual reading and research.

E. Faculty members should be provided in numbers which will assure adequate attention to individual students.

III. Students and Student Services

A. Students accepted for unconditional entrance should be graduates of a high school and have completed specified units of instruction appropriate to the curriculum into which they are admitted. Such secondary units should be sufficient to make possible the maintenance of college level course content throughout the technical curriculum. An institution which admits students whose preparation is less than adequate should offer an appropriate remedial program on a non-credit basis or a pre-technical program which lengthens the over-all curriculum beyond two academic years. Recommended minimum secondary school units required for entrance into an engineering technology should include:

1. Three units of English.
2. Two units of mathematics, one of which is in algebra and the other in plane geometry (or the equivalent of these in integrated modern mathematics). Additional units in intermediate algebra and trigonometry are desirable.
3. One unit of physical science with laboratory. It is desirable that this unit be in physics or chemistry.

B. Student testing programs should be carried out to assist in the proper evaluation of students applying for admission and to support continuing programs of student guidance and counseling. Appropriate programs of student guidance and counseling should be provided.

C. Adequate placement services should be provided to assist graduates in finding suitable employment, and to maintain and expand the institution's contacts with prospective employers. An integral part of the placement process should be the systematic gathering and analysis of data concerning the types of employment into which graduates have gone, considering the appropriateness of education and training to employment.

IV. Curriculum

A. Academic credit for successful completion of courses should be expressed in conventional units of credit. One unit of credit should be awarded upon the basis of three hours of study per week, whether in classroom, laboratory, or outside assignments and study. Thus, one credit may be based upon one hour of classroom lecture or recitation per week, supplemented by two hours of assigned study outside the classroom. Similarly, one credit may be based upon one hour of classroom lecture, one hour of laboratory study, and one hour of assigned study outside the classroom each week.

B. Curriculum Breakdown.

1. Engineering Technologies: an engineering technology curriculum should be characterized by:
   a. at least the equivalent of fifteen semester hours of credit in basic sciences, about half of which is mathematics and of which the mathematics includes carefully selected topics suited to each curriculum from appropriate areas of mathematics beyond college algebra and trigonometry, and including basic concepts of calculus.
   b. at least the equivalent of fifteen semester hours of credit in non-technical subjects including oral and written communications and humanistic-social studies.
   c. at least the equivalent of thirty semester hours of credit in technical courses.
2. Other Technologies: curricula outlined for other technologies should be characterized by:
   a. at least the equivalent of fifteen semester hours of credit in carefully selected studies which are basic to the field of study within which the technology is proposed to be offered.
   b. at least the equivalent of fifteen semester hours of credit in non-technical subjects including oral and written communications, and humanistic-social studies.
   c. at least the equivalent of thirty semester hours of credit in technical courses.

   (Within the general category of technical courses should be found certain courses identifiable with the technical skills needed in the student's intended occupation, and other courses which relate to the core of knowledge upon which the occupation rests. A

preponderance of courses within the technical category - perhaps of the order of 4-1 - should deal with the core of knowledge required by the occupation rather than with the technical skills involved.)

C. Curriculum Length

1. Each curriculum should be designed to provide not less than two academic years of full-time resident academic work beyond the secondary school, and should include courses valued at no less than 60 semester hours or 90 quarter hours of credit exclusive of physical education.

D. Transferability of Credits

1. The primary objective of the associate degree technical education program is the preparation of students for immediate employment at the conclusion of two years' study. The desirability of providing for transferability of credits should not hinder the completion of all course sequences necessary to a sound two-year program. Appropriate attention should be given in the development of two-year curricula to the requirements of four year technology curricula into which a graduate may desire to transfer, and to the general requirements of baccalaureate programs.

V. Library

A. Adequate library facilities and holdings appropriate to the subject matter taught should be available, and adequate financial support should be dedicated to the continued updating of library sources.

VI. Institutional Requirements

A. The technical institution should provide a program which is sufficiently broad as to offer a reasonable choice of curricula to prospective students, and should possess a student body sufficiently well developed as to demonstrate the institution's public acceptance as a permanent establishment. As a general rule, an institution should offer a minimum of four distinctive curricula, each enrolling 50 full-time students in order to demonstrate the institutional viability envisaged by this standard.

B. The technical institution should demonstrate a clear promise of attaining an enrollment of 500 full-time equivalent students within three years after becoming a degree granting institution.

C. The technical institution should possess physical facilities including classrooms, laboratories, offices, and equipment adequate to the teaching program which it conducts, and which lend themselves to the establishment of an institutional identity apart from secondary programs.

D. The technical institution should be able to demonstrate the adequacy of its resources for supporting present and future operating budgets. (Effective 5-7-65)

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Highlights of the 1968 Manpower Report of the President.

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"Manpower Report of the President Including A Report on Manpower Requirements, Resources, Utilization, and Training," (1968) is summarized. See abstract of ED 020 299 or VT 001 025 (ARM Summer 1969) which is the full report. (EM)

VT 007 655

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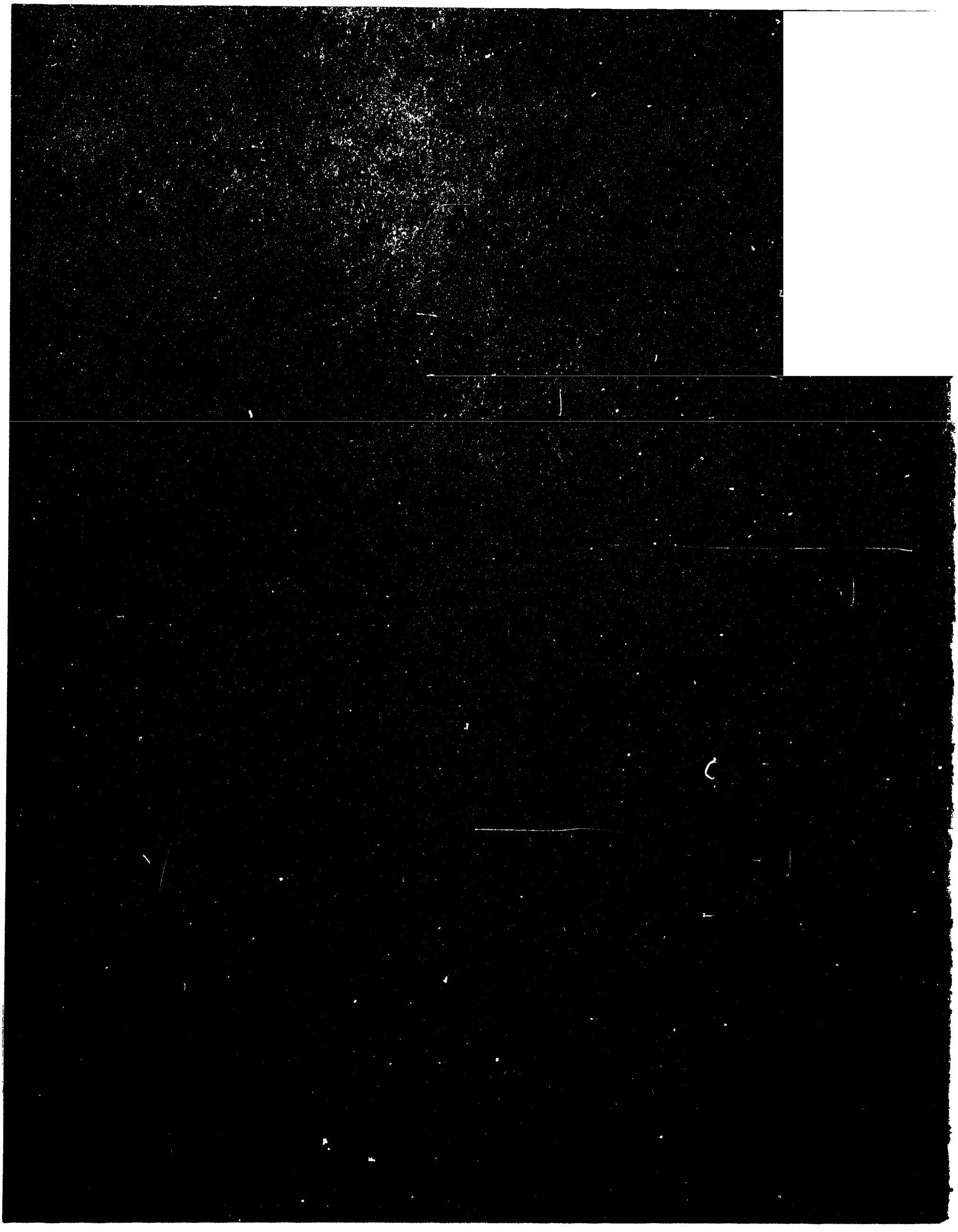

HIGHLIGHTS OF THE 1968 MANPOWER REPORT OF THE PRESIDENT

The 1968 Manpower Report of the President is the sixth annual report prepared pursuant to the Manpower Development and Training Act.

The report contains: (1) a letter to the Congress from the President transmitting the report and giving highlights of the progress already made in the Job Opportunities in Business Sector (JOBS) Program and other new and strengthened manpower programs announced in the President's special message to the Congress on January 23; (2) the text of this Manpower Message; and (3) a comprehensive report to the President by the Department of Labor on manpower requirements, resources, utilization, and training.

Following are the President's letter and some highlights from the Department's report, including a summary of the Introduction by the Secretary of Labor.

TO THE CONGRESS OF THE UNITED STATES

It is a traditional event for the President to submit to Congress an annual report on the progress of our manpower programs.

Although the custom is long-established, there is nothing routine about this report or its subject: jobs for our citizens: more useful, more satisfying jobs to give Americans a sense of full participation in their society.

Four months ago I told Congress that jobs are "the first essential."

In my first special legislative message this year, I proposed that Congress launch a new $2.1 billion manpower program--the most sweeping in our history.

At the same time I called on the leaders of American commerce and industry to form a National Alliance of Businessmen to provide jobs for hundreds of thousands of the hard-core unemployed.

On April 25, the Alliance reported to me on its progress so far:

-- More than 500 executives, whose talents command more than $15 million in salaries alone, have volunteered to work full time in fifty of our largest cities. They are assisted by 7,000 other volunteers.

-- By mid-April, the Alliance had received pledges of 111,000 jobs--66,000 permanent jobs for the hard-core unemployed, and 45,000 summer jobs for poor young people.

-- Labor unions, the Urban Coalition, Chambers of Commerce, churches, schools and many civic groups have joined this crusade to give the words "full employment" a new meaning in America.

Meanwhile, the Government's new Concentrated Employment Program has been active in more than 50 cities meshing its efforts with the National Alliance of Businessmen. And the administration of our job programs has been given new energy through reorganization and strong leadership.

These are hopeful beginnings. But certainly they are no grounds for complacency.

In every city, there are men who wake up each morning and have no place to go; men who want work--but cannot break the confining welfare chain or overcome the barriers of life-long discrimination, or make up for the lack of schooling and training.

When we talk about unemployment, we are talking about these citizens, who want and need personal dignity and a stake in America's progress.

When we talk about manpower programs, we are talking about hope for these Americans.

And every time we tabulate new statistics of success in these programs, we are recording a small personal triumph somewhere: a man trained; a youth given a sense of his value; a family freed at last from welfare.

That hope is what makes this great task so exciting--and so vital.

To every member of the Congress, upon whom our manpower programs depend, I commend this report.

I urge the Congress to support these programs by approving the $2.1 billion manpower budget request I recommended in January.

Lyndon B. Johnson

A REPORT ON MANPOWER REQUIREMENTS, RESOURCES, UTILIZATION, AND TRAINING BY THE U.S. DEPARTMENT OF LABOR

I. INTRODUCTION BY THE SECRETARY OF LABOR

This report surveys what has been done and what yet remains to be achieved by manpower policies and programs

-- to "assure every American who is willing to work the right to earn a living,"

-- to strengthen the economy's productive capacity and resist inflationary forces,

-- to insure satisfying working lives for our Nation's people.

High Employment and the Right to Earn a Living

1. The current economic expansion--the longest in this country--has demonstrated the capacity of our economy to sustain a high and rising level of employment:

-- We have substantially overcome the problem of serious cyclical unemployment.

-- We have begun to pull Appalachia out of its depressed condition, and we are launching similar efforts in other depressed regions of the Nation.

-- We have reduced the number of labor areas with substantial unemployment from 88 in early 1961 to only 11 in February 1968.

-- We are steadily zeroing in on the remaining targets of unemployment--the hard-core unemployed, the seasonally unemployed, the jobless youth, the unemployed older workers and members of minority groups, the jobless handicapped.

-- Where the Nation stands today in these matters is reviewed in the chapters on New Perspectives on Manpower Problems and Measures and Trends in Employment and Unemployment.

2. More than a million American workers spend a half or more of the year in idleness.

-- These workers need skill training, literacy training, and successful work experience to develop new motivation and become productive workers, as indicated in the chapter on Barriers to Employment of the Disadvantaged.

3. We now have the knowledge to help disadvantaged workers--knowledge acquired through a variety of programs, several of them added this year:

-- The Neighborhood Youth Corps and Job Corps, the New Careers and Operation Mainstream Programs for the adult poor, the New Work Incentive Program for people on welfare, the MDTA and other special training programs, the Concentrated Employment Programs which bring these and other manpower programs to bear on target slum areas, the new JOBS Program announced by the President in his Manpower Message.

-- Altogether, close to 1 million will be enrolled in fiscal 1968 in these and other special programs for the disadvantaged, as discussed in the chapter on New Developments in Manpower Programs.

4. The JOBS Program will guarantee what in the past has been too often missing or uncertain--real jobs for the disadvantaged who remain unemployed after 7 years of steady economic growth. It will do this through a new partnership between business and labor, on the one hand, and government on the other.

-- Industry will do the hiring and training. Government will pay the extra costs involved in special training and other services provided by employers to the hard-core unemployed.

5. Many actions by industry and by Government, especially in the last several years, give evidence that this new partnership will succeed. For example:

-- The arrangement under which the largest steel companies refer to the Employment Service, for training, applicants whom they initially rejected.

-- Training by management in the telephone industry of persons who fail entry tests.

-- The concerted action by automobile manufacturers and other large companies in Detroit to hire disadvantaged residents of the central city.

-- The training of thousands of unemployed workers sponsored by the United Automobile Workers, the International Union of Electrical Workers, the United Brotherhood of Carpenters, the International Union of Operating Engineers, the Bricklayers International Union, the International Association of Machinists, and others.

6. Seasonal unemployment of workers fully prepared to work all year represents one-fifth of all present unemployment and one-third of the unemployment in the construction industry.

-- The amount of seasonal variation in employment has not changed substantially in this country since the end of World War II, and no significant action has been taken to reduce it.

-- In contrast, other industrialized countries with rigorous winters have taken positive steps to diminish seasonality of construction employment.

7. A review of manpower, economic, and engineering facts by the Secretaries of Commerce and of Labor suggests that a program should be undertaken to diminish seasonal fluctuations in employment in this country also. Representatives of the interested Federal agencies are considering the development of the policy of positive action, including:

-- Arrangements for the scheduling of Federal construction programs so as to reduce seasonality.

-- Participation in the development of such a program by representatives of construction employers and workers.

-- Collection and dissemination of information about technology which can reduce seasonality.

8. Between 500,000 and 800,000 handicapped persons who could benefit from rehabilitation or employment services each year are not now served adequately.

-- Special attention is being given to the problems of the handicapped in slum areas. Steps are being taken throughout the Employment Service to meet their work and work-training needs.

-- Arrangements for medical screening examinations are being expanded for enrollees in manpower programs, in order to detect any sign of physical or mental barriers to their employment.

-- But reaching all handicapped people and making their right to earn a living a real one will require a much increased, unified effort and greater involvement of the private sector in their on-the-job training.

9. The rate of unemployment among youth remains unacceptably high, despite the sustained economic expansion and the special youth employment programs enacted in the last 4 years.

-- The proposed Partnership for Learning and Earning Act represents an important advance in bridging the gap between education and employment.

-- This and other approaches to solving the critical problem of youth unemployment are discussed in the chapter on Bridging the Gap From School to Work.

Manpower Action to Resist Inflationary Forces

1. Inefficiencies in the use of human resources in our Nation mean not only personal deprivation and tragedy, but staggering financial losses and costs:

-- $6.8 billion per year in direct and indirect costs of occupational injuries.

-- $5 billion in premium payments for overtime, resulting in large part from lack of personnel and poor planning.

-- $2.2 billion in unemployment benefits, which could be decreased if seasonal unemployment were reduced and laidoff workers more quickly reemployed.

2. These costs are today being reduced through MDTA and other training programs which return to society within 1 year more than their total cost to the Federal Government.

-- Every step taken to improve the utilization, efficiency, and productivity of manpower is a step to prevent inflationary increases in labor and other costs.

3. The critical shortages of health manpower are one of the reasons why the price of health care has risen faster in recent months than that of any other category of goods and services.

-- There is a need right now for one-half million more workers in health services. For the next 10 years, the need will be for 10,000 more each month, not counting replacements.

4. The Congress has enacted major legislation to improve and expand health manpower resources.

-- Furthermore, in response to the President's request for greater emphasis on training in the health occupations, the Government increased the output of such trainees by about 50 percent last year--to 200,000 persons.

5. But the need is not merely for new recruits. For example, we must:

-- Bring back into the health occupations inactive nurses and other professionals.

-- Redesign jobs or create new ones, so that professional workers can use their highest skills while supporting personnel take over the less demanding tasks.

-- Make pay, working conditions, and career opportunities more attractive to health workers.

6. The Task Force on Occupational Training in Industry will report to the Secretaries of Commerce and of Labor within a few months.

-- Their recommendations will permit the shaping of new efforts to promote and assist private training programs and thereby improve productive efficiency.

7. The Cabinet Committee on Price Stability is considering the steps that can be taken--in industries which are the source of persistent inflation--to improve efficiency, remove bottlenecks, and improve technology.

-- This will involve a review of how present manpower programs can provide better training, faster recruitment, upgrading, and identification of manpower bottlenecks.

8. Changes in the location of economic opportunity have led to many of the most serious urban and rural problems of joblessness and underemployment. Accordingly:

-- Possible measures to influence the location of jobs and workers, so that they will be mutually accessible, must be considered.

-- The chapter on Geographic Factors in Employment and Manpower Development examines these problems in detail and discusses some of the issues which must be confronted in arriving at a solution to them.

The Reality of Opportunity

1. "Full employment" is not just Everyman at work, laboring, to be fed and housed in return.

-- It is the use of all his talents--activity of a satisfying kind.

-- And it is opportunity to develop and use his talents on an equal basis with all Americans.

2. The report of the National Advisory Commission on Civil Disorders indicates the kinds of steps we must take to make equal opportunity a reality for all of the Nation's citizens.

3. The new and enlarged manpower programs already underway or soon to be launched--with Government leadership and financial support and cooperation from private industry--represent major forward steps in several directions recommended by the Commission.

-- Its other manpower recommendations are under active consideration.

4. However, the Commission's report will be effective only as there is public awareness that behind all the analyses, programs, and policies lies a much deeper question: What sort of society are we to be in America?

-- The report is, in form, a report to the President. It will achieve its purpose only as it is recognized as essentially a report to the American people--depending for its effectiveness on the response it evokes from people as individuals.

5. There is demanded of the majority--who to an overwhelming extent command the wealth, the opportunity, and the power in their communities--a more personal dedication to the achievement of civil rights and equality of opportunity. Without this, the statutes on these subjects may be in the books, but they will not be in the cities.

II. NEW PERSPECTIVES ON MANPOWER PROBLEMS AND MEASURES

This chapter has two chief aims:

-- To take a broad new look at the major problem areas of concern to manpower policy--not merely the continuing problems of joblessness and underemployment but also the adequacy of workers's earnings, the extent of "sub-employment," income maintenance for workers, the quality of employment, equality of opportunity, and the balance between manpower requirements and resources; and

-- To point the way toward more comprehensive and sensitive measures of progress and problems in these areas.

The concluding section of the chapter looks ahead toward the development of a systematic set of manpower indicators, which can be related to the indicators now being developed for other areas of social concern.

The chapter also breaks new ground through its review of the limitations of current information on all the manpower problem areas discussed. The suggestions made regarding needed informational improvements constitute a tentative agenda for government agencies and private organizations concerned with factfinding and research in the manpower field--an agenda upon which the Department of Labor will act.

Joblessness and Underemployment

1. Though great progress in reducing unemployment has been made during the past 7 years, the total number of workers who were jobless and looking for work at some time during 1966 was over 11 million.

-- This was almost four times the average number (2.9 million) unemployed in any one week of the year.

-- In 1961, however, the total number of workers with periods of unemployment was greatly higher--about 15 million.

2. The period without work was short (1 to 4 weeks) for over 45 percent of the workers unemployed in 1966. But:

-- 3.4 million workers had 5 to 14 weeks of unemployment.

-- 2.7 million were out of work for 15 or more weeks, or over a fourth of the year.

-- Over 1 million spent half or more of 1966 jobless and looking for work.

3. Extended unemployment is a significant problem even among men in the central age groups, who are generally the most employable and have the heaviest family responsibilities.

-- Close to 1.3 million men aged 25 to 44 had 5 or more weeks of unemployment during 1966, almost six times the average number (226,000) out of work continuously for 5 weeks or longer (according to the monthly labor force data most often quoted in the press).

-- Nearly 350,000 men of this age were out of work 15 to 26 weeks (as compared with a figure of only 48,000 from the monthly surveys).

4. The improvement in economic conditions, reinforced by manpower programs, has been very effective in reducing the number of workers continuously unemployed for long periods. But there has been less progress in reducing the number with repeated spells of joblessness--now the chief source of extended unemployment.

-- 7 out of every 10 men who were out of work 15 or more weeks of 1966 had 2 or more spells of unemployment during the year; many had 3 or more periods of joblessness.

-- These findings underline the need for enlarged efforts to enable the chronically unemployed to qualify for and obtain jobs that promise continuity of employment. There is also a need to explore ways of helping these workers to keep the jobs they get.

5. Unemployment is but one form--albeit the most extreme--of underutilization of workers. In addition, many workers are:

-- Employed only part time though they want full-time work.

-- Working in jobs below their education or skill.

-- Not looking for work even though they want and need jobs.

The limited evidence available as to the magnitude of these groups is reviewed in the report.

Adequacy of Workers' Earnings

1. The 1966 amendments to the Fair Labor Standards Act of 1938 have accomplished the most far-reaching improvements in Federal wage and hours standards since the act was passed in 1938, and represent a big step toward the act's goal of eliminating substandard labor conditions.

-- The specified minimum went to $1.60 on February 1, 1968, for the 33 million workers in employment covered by the FLSA minimum wage before the amendments ($1.25).

-- Over 9.7 million additional workers were given protection by the amendments, including some for whom this protection will not become effective until 1969.

2. Nevertheless, about 10 million workers in this country--or 1 out of every 5 nonsupervisory workers in private employment--received less than $1.60 in cash wages in February 1968.

-- Included are a good many workers newly covered by the FLSA (who must be paid at least $1.60 within 3 years, if they are in nonfarm jobs), as well as workers not covered by the act.

-- Most of these workers are in agriculture, retail trade, and the services, particularly domestic service.

-- More than 4 out of every 5 workers in domestic service, and nearly 1 out of every 5 in agriculture, have money wages of under $1 an hour (though wages in kind may compensate in part for their extremely low rates).

-- Information is not available, however, on these workers' age, other personal characteristics, or family responsibilities.

3. American workers made significant gains in real yearly earnings between 1961 and 1966--from $5,000 to $5,800 for men and from $1,900 to $2,250 for women (in constant 1966 dollars).

-- These figures include part-time and part-year workers, as well as those employed full time all of the year.

4. Men year-round full-time workers (nearly all of whom are household heads) had higher average earnings--$6,850 in 1966.

-- But 1 out of every 11 of these fully employed men (3.2 million) still earned under $3,000 in 1966.

-- Both the number and proportion of steadily employed men with earnings under $3,000 were substantially less than in 1961--a sign of continuing progress in eliminating substandard earnings as a factor in poverty.

5. A less satisfactory conclusion is indicated, however, if progress is measured in terms of the distribution of earnings.

-- In 1956, 1961, and also 1966, the highest paid 20 percent of all male year-round, full-time workers received 40 percent of the aggregate earnings received by such workers, whereas the lowest paid 20 percent received only about 7 percent.

-- Though earnings have risen in absolute terms for workers at both ends of the earnings scale, there has been no improvement in the relative share received by the lowest paid fifth of all male year-round, full-time workers. In fact, the disparity between the lowest and highest paid groups has grown in dollars, though not in relative terms.

6. One-fourth of the nonwhite men who worked the whole year were low earners, compared with 7 percent of the whites.

-- Almost universally--occupation by occupation and industry by industry--steadily employed nonwhite men experienced a higher incidence of low earnings than did whites.

The Concept of Sub-Employment

1. The concept of sub-employment represents an exploratory approach to measuring the total problem of unemployment and low earnings and its compounded impact on the same disadvantaged groups.

-- An initial effort to estimate sub-employment in urban slums was reported on in last year's Manpower Report.

-- This year a first step has been taken toward development of a sub-employment measure on a national basis.

2. The new sub employment measure includes two clearly defined groups--workers unemployed 15 or more weeks during the year and those who made less than $3,000 for year-round, full-time work.

-- This measure is a very conservative one, focused on the most serious problems of unemployment and low earnings.

-- It provides a base on which a still more comprehensive measure can be built, when more data become available--for example, on part-year workers with substandard earnings.

3. Sub-employment, as thus defined, has declined sharply--from 17 percent in 1961 to 10 percent in 1966.

4. Low earners are by far the larger of the two groups included in the index--6.7 million, as compared with 2.4 million with 15 or more weeks of unemployment in 1966.

-- Although the number of low earners declined substantially between 1961 and 1966 (by 16 percent), the improvement was not nearly as sharp as in the number with extended unemployment (which decreased by more than 50 percent).

-- Plainly, the problem of low earnings has been less responsive to the economic upturn than extended unemployment and, so far, has been less affected by manpower and antipoverty programs.

5. Slightly over half of the sub-employed were men; however, the sub-employment rate was considerably lower for men than women (9 percent, compared with 13 percent of all experienced workers of their sex).

-- Among both men and women, low earnings was a much more common problem than unemployment of 15 or more weeks; the disparity was greater for women.

6. The sub-employment rate for nonwhite men was 22 percent, compared with 8 percent for white men.

-- Coupled with a rate of extended unemployment almost three times as high as for white men was an equally disproportionate low-earnings rate.

Income Maintenance for Workers

1. The State-Federal unemployment insurance system and other public UI programs cover more than three-fourths of all wage and salary jobs.

-- But over 16 million wage and salary workers have no UI protection; these noncovered jobs are chiefly in State and local government, domestic service, nonprofit organizations, farms and the processing of agricultural products, and very small firms.

-- In addition, the UI programs exclude the self-employed, new workers, and certain other groups, who made up two-fifths of all the unemployed in 1967.

2. The generally accepted aim of unemployment insurance is to restore at least half of the gross weekly wages of most workers who would qualify for UI benefits.

-- But in 1967 the national average weekly benefit ($41.25) represented only 36 percent of the average weekly wage in covered employment, compared with 42 percent in 1939.

-- The growing inadequacy of average weekly benefits, relative to average wages, is explained by the legally established dollar ceilings on benefits, which have lagged further and further behind rising wages.

3. In addition, even in prosperous years, significant numbers of workers--especially those hit by technological change or shifts in the location of jobs--exhaust their benefit rights before finding new jobs.

-- Most of these workers have no further income protection, regardless of how long it takes them to find new jobs or to be recalled to their previous ones.

4. Income protection in the event of disabling accident or injury is another area of urgent concern to the well-being of workers and their dependents. Unless substantial progress is made in reducing work injuries:

-- 1 out of every 100 young people currently entering the work force at age 20 will die as the result of a work injury.

-- 6 more will suffer a permanent impairment and 68 will experience one or more disabling injuries.

-- Only 25 out of the 100 can expect to complete their working lives without a disabling work injury.

5. An estimated 53 to 54 million workers--more than 80 percent of all civilian wage and salary workers in the 50 States, the District of Columbia and the Federal Government--are covered by workmen's compensation (including both State and Federal programs).

-- But 1 out of every 5 wage and salary workers (some 12 million) and practically all those who are self-employed are without any public income protection in case of work injury.

6. Most workmen's compensation laws provide for replacement of from three-fifths to two-thirds of a disabled workers' lost wages.

-- However, because of the dollar ceilings on benefits, the proportion of wage loss actually compensated is much less; nationally, maximum weekly benefits averaged only 48 percent of average weekly wages in 1966.

-- Measured in 1965-66 dollars, maximum benefits in 15 States were lower in 1966 than they were in 1940, with declines ranging from 28 percent in Louisiana to 86 percent in Hawaii.

7. As the President emphasized in his message on Manpower: "The gap in worker protection is wide and glaring--and it must be closed by a strong and forceful new law."

-- Accordingly, the President submitted to the Congress the Occupational Safety and Health Act of 1968.

8. Although short-term nonoccupational disability is far more prevalent than work-connected disability, protection against income loss for this risk is much less widespread.

-- The present inadequate income maintenance provisions for workers suffering such disability are discussed in the report.

9. The major public provisions for maintenance of income after retirement is the OASDHI program.

-- This and other public and private programs of retirement pay are briefly described in the report.

10. Amendments to the Social Security Act which went into effect in February 1968 increased OASDHI benefits by at least 13 percent.

-- Minimum monthly payments increased 25 percent, from $44 to $55.

-- The average monthly benefit for a man and wife now on the rolls increased from $145 to $165.

-- Even with these increases, most retired (or disabled) workers with a wife and two children, who are totally dependent on OASDHI, are still at or below the poverty level. But fortunately, many retired workers have other resources, however limited.

<u>The Quality of Employment</u>

1. This first, preliminary effort to assess the quality of employment approaches the problem from two highly different points of view:

-- First, the psychological impact of work, as indicated chiefly by job satisfaction studies.

-- Second, progress in developing labor standards protections.

2. The two central findings regarding job satisfaction highlighted in the chapter are:

-- The much higher levels of job satisfaction among workers in high-level occupations than those in low-skilled, low-status jobs.

-- The close relationship between the job satisfaction of workers and their general well-being, particularly their mental health.

3. A Labor Standards Index, covering eight major areas in which States have adopted protective legislation, has been developed by the Department of Labor.

-- This experimental index measures the extent to which State laws in these areas approximate recommended standards.

-- Ratings on the index, as of 1965, were as follows:

Labor standards area	Number of States with laws in specified areas	Average rating of all States on index
Occupational safety and health.....	50	64
Child labor.....	50	59
Workmen's compensation..	50	54
Wage payment and wage collection.....	47	61
Private employment agencies.....	46	64
Fair employment practice.....	37	54
Minimum wage.....	35	40
Antiage discrimination..	22	26

-- Since the index was constructed in 1965, a number of States have amended or added to their labor standards legislation. However, relative differences in labor standards protection among the States remain much as they were 3 years ago.

Equality of Opportunity

1. The Negro population has made substantial gains in employment, education, and income during the 1960's, measured in absolute terms. The relative Negro-white gap has narrowed in some areas but broadened in others.

-- The number of employed nonwhite workers rose from 6.9 million to 8.0 million between 1960 and 1967, an increase of 16 percent. During the same period, employment of white workers rose by only 13 percent.

-- Unemployment rates have dropped for nonwhite workers, as for whites, since the early 1960's. Nevertheless, the average unemployment rate for nonwhites is still slightly more than twice that for whites (7.4 compared with 3.4 percent in 1967).

-- No inroads have been made into the extremely serious problem of nonwhite teenage joblessness. One out of every four nonwhite teenagers was unemployed in 1967, almost $2\frac{1}{2}$ times the proportion for white teenagers, whereas in 1960 the ratio was less than 2 to 1.

-- On the other hand, substantial gains have been recorded in the occupational distribution of adult nonwhite workers. In the high-skill, high-status, high-paying occupations, the percentage increase of nonwhite workers has exceeded that of white workers.

-- Most encouraging was the marked reduction in the percentage of nonwhite families living in poverty. The nonwhite proportion below the poverty level, however, was more than three times that for white families in 1966, just as it had been in 1960.

-- Substantial gains have been made also in the amount of schooling obtained by Negroes. For example, for young men 25 to 29 years of age the gap in years of school completed between nonwhites and whites has been reduced from 2 years in 1960 to a half year in 1966. These data do not indicate, however, whether differences in the quality of education, as measured by achievement tests, are being reduced.

2. A picture of both progress and retrogression for Negroes emerges from the report.

-- The growing proportion of Negro families with moderate incomes or better, the larger number of Negro men graduating from college, and the growing representation of Negroes in professional and other white-collar occupations augur well for the group able to take advantage of available opportunities.

-- At the other end of the scale are the rural poor and the slumdwellers. Some advance for them is evidenced by the reduction in the proportion of families with incomes of less than $3,000. But many slum residents appear to be in a deteriorating economic position.

3. The main ethnic minority groups in the United States, in addition to Negroes, are Mexican Americans, Puerto Ricans, and American Indians.

-- These groups suffer from limited education and language barriers, high unemployment and low incomes. Discrimination is a factor inhibiting their advancement.

-- The scanty evidence on these problems available for each of the three groups is reviewed in the report.

Manpower Requirements and Resources

1. In the manpower problem areas so far discussed, the central aim of manpower policy is to promote the welfare of workers and potential workers. In addition, manpower policy has a second broad objective--meeting the manpower requirements of our economy and society.

2. As the President said in his 1966 Manpower Report:

> "There is no overall labor shortage. But the unemployed and underemployed are not fully matched with the jobs available."

The President then outlined plans to head off manpower shortages through program action. Among the steps he called for was inclusion in the Department's employment reports of "the fullest possible information on existing or threatening labor shortage situations."

3. A new program for identifying labor shortages and reporting on the labor supply-and-demand situation was accordingly undertaken. This has utilized several kinds of evidence:

-- Experimental surveys of current job opportunities in a number of labor areas.

-- The numbers of unfilled job openings listed with Employment Service offices throughout the country.

-- The average weekly hours and quit rates of factory workers.

-- The unemployment rates for the work force generally and by occupation.

4. These indicators showed an easing of the job market during early 1967 (as discussed in detail in the report). They also give mutually confirming evidence that:

-- Manpower demand at the end of 1967 was still much above the levels of the early 1960's.

-- Labor scarcities are likely to be a continuing problem in a good many occupations and local areas.

Toward the Development of Manpower Indicators

1. The development of a comprehensive set of manpower indicators and their use in analyzing--or even ultimately in predicting--manpower problems and program needs should be the long-run goal (as suggested in the concluding section of the chapter).

2. The framework developed in the chapter will provide a basis for planning the conceptual analysis, factfinding, and research essential to these objectives.

   -- The Department of Labor will undertake leadership in this planning, in consultation with other governmental and private organizations concerned with manpower problems and their measurement.

   -- But continued, major contributions from many individuals and private research organizations as well as Government agencies will be essential to meet the needs and realize the potentials for increased knowledge of manpower problems here outlined.

III. BARRIERS TO EMPLOYMENT OF THE DISADVANTAGED

This chapter explores the sociological, cultural, psychological, and economic barriers to employment of the disadvantaged in big city slums.

-- The introductory section sketches the major statistical dimensions of joblessness and underemployment in urban poverty areas.

-- The chapter is concerned in the main, however, not with measurement and description of these problems but with exploration of their deep-rooted personal and environmental causes.

-- Suggestions are also made as to the strategies and program improvements that would strengthen present efforts to overcome these barriers and enable the hard-core unemployed and marginal workers to obtain and hold steady, decently paid jobs.

The Sub-Employed

1. The present measures of unemployment--limited, broadly, to persons who have no work at all and are actively seeking a job--are particularly inadequate for assessing the economic situation of disadvantaged workers in urban slums, and also rural areas.

-- The broader concept of sub-employment, discussed in the preceding chapter, is much more useful for analysis of the problems of this group.

-- This concept includes the employed poor--with earnings below the poverty line even for full-time work--who now represent a larger problem, at least in terms of numbers, than the unemployed.

2. Half a million persons were unemployed in the poverty areas of large Standard Metropolitan Statistical Areas in March 1967, representing 7.5 percent of the poverty area work force.

-- In contrast, a reasonable and probably minimal estimate of sub-employment (as defined in the preceding chapter) in these poverty areas would be 1.5 million.

3. Probably the most important generalization that can be made about ghettos and poverty areas is their heterogeneity.

-- White people outnumber nonwhites by 3 to 2 in urban poverty areas as a whole; it is only in the very worst slums that nonwhites predominate in total numbers.

-- Although the proportion of families headed by women is higher in poverty areas than elsewhere, nearly two-thirds of the families in such areas in 1966 were headed by men.

-- Although relatively more of the employed workers in poverty areas than of the country's work force as a whole are in service and laboring jobs, the proportion in such jobs was only 1 out of 3 in 1966; the number in somewhat higher level occupations was twice as large.

4. There is, thus, some strength and stability in poverty areas, as well as considerable social pathology and disorganization.

Barriers to Employment

1. The factors which produce sub-employment in big city poverty areas are as diverse as the characteristics of the people affected.

-- They include social-psychological factors, lack of education and training, ill health, discrimination, and other employer practices with respect to selection of employees, and distance from available jobs.

-- The chapter discusses at length three kinds of barriers to employment of the disadvantaged--social-psychological, access, and institutional.

2. With respect to social-psychological factors, it is emphasized that:

-- Social-psychological problems characteristic of the most disadvantaged individuals should not be regarded as generally applicable to all the sub-employed.

-- The dividing line between employability and the lack of it is not fixed. It reflects employers' judgments about individuals with respect to work attitudes and motivation as well as levels of education and skill made in the context of the general labor supply-and-demand situation.

3. Other barriers discussed include:

-- The special difficulties slum residents face in the job search;

-- The lack of adequate transportation from the slums to areas of growing employment opportunity in the city outskirts;

-- Educational and other hiring requirements, especially the prevalent requirement of a high school diploma, which operate to bar disadvantaged workers from jobs they could handle;

-- The existing rigid structure of jobs and occupations. (Here, the emphasis is on the possibility of modifying this structure, so as to open more, relatively well paid jobs to the sub-employed and, at the same time, help to relieve current shortages of professional and skilled workers.)

AFDC Mothers

1. Mothers receiving assistance through the Federal program of Aid to Families with Dependent Children (AFDC) provide an illustrative case study of one group of sub-employed--their problems and the way in which they react not only to their individual situations but also to the economic opportunities available to them.

2. Two national and several local studies of AFDC cases indicate that:

-- The generalization that welfare becomes a permanent style of life for all or most AFDC recipients is not supported by the available evidence, though some AFDC families do represent a second generation on welfare.

-- Many mothers continue working while on AFDC, contrary to the widely held idea that welfare is generally an alternative to work.

-- Much more information is needed, however, about the interrelationships between work and welfare and about why many AFDC mothers work (particularly since they have so far had very limited financial incentive for doing so).

3. Altogether, the findings suggest that programs of income incentives and work training may not reverse the upward trend in the welfare rolls, unless the training is designed to move clients to permanent employment at adequate wages.

-- The new Work Incentive Program established under the 1967 Social Security Act amendments is aimed at precisely this objective.

Needs and Strategies in Manpower Programs

This chapter concludes with a discussion of the social objectives to be emphasized in manpower programs to aid the disadvantaged and of the need for further progress in four broad directions:

-- Toward further integration of manpower programs and services.

-- Toward the opening of more jobs of different kinds, to meet the needs of different groups of the sub-employed.

-- Toward resources adequate for the complex of individualized services disadvantaged workers need to prepare for, obtain, and keep productive jobs.

-- Toward progressive improvement in manpower services, through strengthening of staff, development of more special approaches in working with the sub-employed, and other means.

IV. BRIDGING THE GAP FROM SCHOOL TO WORK

The Problem

1. The essence of the school-to-work problem emerges from the following two propositions:

   -- The United States keeps larger proportions of its children in school longer than does any other nation, to insure their preparation for lifetime activity.

   -- Yet the unemployment rate among youth is far higher here than in any other industrial country.

2. Unemployment rates among youth are highest for those in low-income minority group families.

   -- Thus, 14- to 19-year-old youth from families with incomes of less than $3,000 had an unemployment rate of 17 percent in early 1967.

   -- But even youth from families with incomes of $10,000 and over had an unemployment rate of nearly 8 percent.

   -- Though the unemployment rates for youth have been higher than the adult rates for decades, the gap has widened progressively.

3. The youth for whom bridges to work are now most adequate are those with professional training at the college level or beyond.

   -- For them, careers are virtually assured and unemployment at or very close to minimum levels.

   -- But other youth--high school dropouts, high school graduates, and college dropouts--face serious uncertainties in looking for work.

Ways of Improving the Transition Process

1. A strong case can be made for a variety of approaches to aiding the transition process:

-- Improvements in the educational system and great expansion of cooperative education programs to prepare young people better;

-- Special programs to take care of the approximately 6 million school dropouts expected to seek work over the next decade;

-- Improved communication of occupational information to young people while in school;

-- Improvements in early employment experience, by adding to this experience new opportunities to learn.

2. About 4 out of every 5 present school dropouts, and 4 out of 10 high school graduates, have never had vocational counseling.

-- Even smaller proportions have been exposed to supervised work experience while in school; among out-of-school youth in 1963, only 7 percent of high school graduates and 3 percent of dropouts had such work experience.

3. Yet various projects have demonstrated that intensive counseling and provision of more occupational information to students, starting at an early grade, can help to make inroads into youth unemployment rates.

-- Full cooperation and joint action by the schools and the local Employment Service offices are also extremely important, as indicated by European experience.

5. Additional questions bearing on the school-work transition which need intensive review include:

-- The extent to which the present youth unemployment situation results from an unusually high rate of youth entrance into the labor force.

-- The extent to which the present situation partially reflects the reduction of low-skilled, entry jobs in the United States, particularly when compared with the situation in Europe.

-- The degree, however slight, to which rising minimum wages may contribute to the youth unemployment problem.

-- The policies, practices, and attitudes of American employers toward the hiring of youth.

-- The kinds of preparation given to youth, in relation to the kinds of jobs they actually obtain.

-- The value of part-time employment of in-school youth in helping these young people adjust to full-time employment after leaving school.

Conclusions

1. A joint study by the Departments of Labor and Health, Education, and Welfare suggests a number of steps that can be taken to narrow the gap between school and work by:

-- Increasing young people's knowledge about the environment of work while they are in school.

-- Increasing opportunity for young people in school to gain actual work experience.

-- Increasing participation of business and other private groups in the education world.

-- Providing adequate training bridges and other manpower services for youth at the point of entry into the job market.

2. It was also concluded that:

-- Putting the Nation's secondary schools on a year-round basis, and having their graduates enter the job market in three or four groups rather than all at once, would make the process of absorption much easier.

-- The efforts undertaken should be directed at all of the Nation's youth--so that efforts to build better bridges for the youth of poverty families, for example, will be part of efforts that reach all youth who each year line up at the inadequate bridgeheads.

3. The proposed Partnership for Learning and Earning Act of 1968 recommended by the President would do much to streamline and strengthen our vocational education laws. It would also authorize special experimental programs to:

-- Bridge the gap between education and work;

-- Build alliances between schools, employment services, and private employers; and

-- Provide new summer training programs combining work and education.

The objective, as stated by the President, is to "...build stronger links between the schools and their students, and local industries and employment services, so that education will have a direct relationship to the world the graduating student enters."

IV. GEOGRAPHIC FACTORS IN EMPLOYMENT AND MANPOWER DEVELOPMENT

Introduction

1. Economic progress in this country--with all its vast geographic and economic diversity--almost inevitably leaves in its wake areas and even regions which not only fail to share in this progress but are adversely affected by the processes of change.

2. National economic and employment growth is the essential foundation for progress in both lagging and prospering areas. But direct efforts will also be required:

-- To speed the economic redevelopment of many distressed areas;

-- To provide improved education and occupational training, health and welfare services, and better living conditions for their people; and

-- Probably also to facilitate and guide migration of workers from depressed areas to centers of economic growth.

3. This chapter reviews some of the geographic dimensions which must be taken into account in planning and evaluating employment and manpower development policies and programs. It discusses:

-- The employment problems and potentialities of both urban and rural America, and the broad regions and smaller labor areas now recognized as in special need of development assistance.

-- The factors influencing migration and the choice of plant location.

-- The major Government programs now aimed at economic renovation of distressed and lagging regions and areas, and a number of other Federal Government activities which have important geographic effects on employment, unemployment, and other manpower problems.

-- The issues which must be confronted in working toward an equitable and effective geographic approach to employment and manpower development.

Some Geographic Dimensions of Employment and Economic Development

1. Urban areas are the site of most of the Nation's employment and industrial activity and the home of nearly three-fourths of the population.

-- They are the locale of the country's greatest affluence and some of its most critical problems of unemployment, poverty, and social and physical decay.

2. The major problems of unemployment and poverty in urban areas are inner-city problems.

-- By all the measures customarily used as indicators of economic well-being and potential for improvement--income, education, health, skills, unemployment, family cohesion, crime, housing conditions, and so forth--the people living in central cities are, on the average, substantially worse off than those living in the suburbs.

-- Of the 58 million persons in central cities, almost 10 million, or 16 percent, were poor in 1966. By comparison, there were only 4.5 million poor living in suburbs--not quite 9 percent of the suburban population.

3. Most of the metropolitan area population growth is taking place outside the central city. And so is most of the employment and business growth.

-- In 12 large metropolitan areas, wage and salary employment has been growing $2\frac{1}{2}$ times as fast in the rings as in the areas as a whole. And the differential between suburbs and their central city is even greater.

4. "Rural poverty is so widespread, and so acute, as to be a national disgrace, and its consequences have swept into our cities, violently."

-- The plight of rural people, so described by the President's National Advisory Commission on Rural Poverty, is the result in large part of the technological revolution in agriculture which has, for many decades, been forcing farm-workers either off the farm or into under-employment and poverty.

5. In March 1967 about 57 million persons resided in rural America, a figure only slightly higher than in 1950.

-- The rural nonfarm population, at 47 million, outnumbers the farm population by 4 to 1.

-- A very large decline in the white farm population has been more than offset by the increase in white rural nonfarm population.

-- The nonwhite farm population has also declined sharply, but the nonwhite out-migrants from farms have settled mostly in urban rather than rural nonfarm areas.

6. The pervasive problem for rural workers is underemployment in terms of irregular work and low earnings, rather than total lack of work.

-- The extent of rural underemployment is suggested by the following estimate: If the rural labor force had been utilized as efficiently as the country's labor force as a whole, the money income of the Nation in 1965 would have been increased by some $10 billion.

-- Altogether, about 11 million rural Americans (or one-fifth of the rural population) lived in poverty in 1966.

7. Six multistate regions with pervasive problems of joblessness, underemployment, and poverty have been identified. These regions--all but one of them predominantly rural--are:

-- Appalachia;

-- The Ozarks;

-- New England (the only one of the regions which is chiefly urban);

-- The Four Corners region (which includes desolate areas of Utah, Colorado, New Mexico, and Arizona);

-- The Coastal Plains region (of North and South Carolina, and Georgia); and

-- The Upper Great Lakes region.

8. In recognition of these regions' urgent need for development assistance, Regional Development Commissions have now been set up for each of them (as discussed in the chapter).

9. Both within and outside these broad development regions, there are a considerable number of local labor areas with substantial unemployment.

-- In December 1967, 9 out of the 150 major labor areas and 497 smaller ones were in the substantial or persistent unemployment categories.

-- The number of distressed areas has been very sharply reduced, however, since early 1961, when 88 major labor areas were classed as having substantial or persistent unemployment.

Federal Government Programs

1. A battery of Federal programs aims to speed economic and employment growth and social renovation in the country's distressed and lagging areas, both urban and rural. These programs are concerned with:

-- Providing the highways and access roads that will open rural areas to economic development and ease commuting problems;

-- Provision of the other public facilities and special incentives needed to attract business to depressed areas or new growth centers;

-- Rehabilitation of dilapidated housing and provision of needed health and social services;

-- Improvements in education and training to equip workers with needed skills; and

-- A variety of manpower services aimed at better matching of workers and jobs.

2. In addition, Federal Government operations affect industrial growth and employment opportunities in different localities in other highly important ways.

-- Defense and other Government purchasing, for example, has unintended effects on the geography of manpower problems that may well be greater than the purposive effects of economic development, manpower, and related programs.

3. Federal programs with important regional and area employment consequences (discussed in some length in the chapter) include:

-- The economic development programs of the Economic Development Administration and the six regional commissions;

-- The Model Cities and other programs of the Department of Housing and Urban Development;

-- Federal procurement activities, with special reference to employment effects of defense spending;

-- Federal aid to highways and other programs of the Department of Transportation; and

-- Programs to aid farmers, alleviate rural poverty, and stimulate rural economic development operated by the Department of Agriculture.

4. Training, job development, and other manpower and antipoverty programs of the Department of Labor and the Office of Economic Opportunity have also had significant effects on employment and manpower development in many areas.

-- Some of the major developments in these programs are discussed in the chapter on New Developments in Manpower Programs.

Conclusion

1. Present geographic patterns of affluence and poverty, of economic growth and decline, in the United States are the outcome of countless interacting developments.

-- To some extent, the economic development of particular regions of the country has been purposive.

-- But in the main, this country has drifted into new patterns of employment location--on the shifting currents of technological change, product demand, and job and profit seeking--and then has had to cope with the economic and social consequences.

2. A new national determination to meet the problems of people in depressed areas by cooperative governmental and private action is reflected in the economic development programs of the past 7 years.

-- These programs recognize that many depressed labor areas have the potential for regeneration; also that there are communities with promise as growth centers in all the development regions.

-- But it is also recognized that the processes of economic decline in particular areas are not likely to be reversed without outside help, and that even with such help, not all depressed areas will achieve future growth.

-- Hence, many workers will have to go on seeking jobs elsewhere.

-- A basic question which has to be evaluated is to what extent workers should move to jobs or jobs to workers--what combinations of program efforts in these two directions would be most beneficial in both economic and human terms.

3. Following are some of the issues which must be confronted in working toward a consistent geographic strategy for manpower and economic development policy which would link together the various geographic needs, objectives, and programs:

-- In factfinding and research, how and to what extent can the employment potential of different areas be better evaluated, and appraisals made of the relative costs and benefits of alternative action programs?

-- With private job creation as a prime objective in areas with potential for redevelopment, should present measures to stimulate business expansion be strengthened and supplemented?

-- The geographic impact of Government purchases of goods and services needs to be continuously reviewed. The magnitude of this procurement suggests that it could be a powerful tool for reducing interarea differences in unemployment.

-- In vocational education and training, a series of policy questions need to be explored--for example, whether to prepare youth chiefly for local employment opportunities or to plan their training mainly in the light of national occupational trends.

-- With respect to migration of workers, to what extent and how should Government attempt to stimulate and aid out-migration from declining areas, to influence migrants' choice of a destination, to assist them in the job and other adjustments they must make in the new environment?

-- In places unlikely to achieve economic viability through redevelopment programs, the paramount question is how and where to provide an adequate basis of living for the residents--either through out-migration or by income maintenance and work programs of various kinds.

-- A final set of issues relates to the policies that might be followed in working toward a balanced and integrated development of the country's different geographic areas--for example, between the inner city and its suburbs, between growth centers and the surrounding countryside, and between urban and rural areas generally.

Some of the most difficult policy and analytic questions relate to the development of an urban-rural balance. But programs to achieve such a balance can have profound effects on the future development and well-being of America.

VI. REVIEW OF MANPOWER DEVELOPMENTS IN 1967 --

TRENDS IN EMPLOYMENT AND UNEMPLOYMENT

The nature and extent of the Nation's manpower problems, and the progress in resolving these problems, reflect and are conditioned by developments in the economy. This chapter describes the economic developments of the past year--during which the Nation continued on the course of growth that has been the source of employment expansion for 7 successive years.

-- The chapter summarizes the principal economic factors which influenced the manpower situation in 1967. It describes the pattern of employment growth by industry and occupation, the employment effects of government expenditures particularly those for defense, and the continued strong growth of employment in service-type activities, including State, local and Federal governments.

-- Shifts in the population profile which have been influencing the changing composition of the labor force are noted, together with the implications these population changes have for the kinds and numbers of jobs which will be needed to employ the labor force.

-- The current extent and composition of unemployment is detailed, showing where progress has been made during the past 7 years and where the principal problems still remain.

Economic and Employment Developments

1. Growth in the Nation's output of goods and services, at 2.5 percent in 1967, was well below that of recent years.

-- The slower growth was attributable primarily to an inventory readjustment early in 1967, which resulted from a slowdown in consumption and also in construction and other investment. This slowdown may have been a consequence of over-rapid and unbalanced growth during the previous year.

2. Employment expanded by 1.5 million in 1967--an increase well above the average for the postwar period but somewhat below the large job gains between 1965 and 1966.

-- This reduced employment increase reflected the economic slowdown in early 1967. But by the latter part of the year, upward momentum had been regained in economic and employment growth.

-- Despite the weak start in 1967, the economic slowdown was of a temporary nature, and it passed without serious job dislocations. By yearend and in early 1968, all signs pointed to a renewal of rapid expansion.

3. Almost 9 out of 10 new jobs in 1967 were in the service-producing sector of the economy--mainly in State and local governments, the service industries proper, and trade, which together added over 1-1/2 million workers to their payrolls.

-- Employment growth was particularly strong in health services.

4. Gains in manufacturing industriies accounted for only about 10 percent of the total rise in employment.

-- These industries had accounted for one-third of the larger employment growth in 1966.

-- Branches of manufacturing experiencing significant increases in employment in 1967 were mainly defense oriented,but the total job gains in these defense industries was below that of 1966.

5. Agricultural employment continued its long-term decline in 1967, but at a somewhat slower pace than in previous years.

Labor Force Changes and Minority Group Problems

1. The civilian labor force increased by 1.6 million in 1967, the largest gain in 2 decades.

-- The exceptional size of this increase resulted from the greater numbers of adult men in the population (reflecting the high birthrates during and after World War II) as well as continued entry of large numbers of adult women into the labor force.

-- Entry of teenagers into the labor force was substantially smaller in 1967 than in the past, because of the shifting population profile. The increase in the numbers of adult men emphasized different problems--the need for full-time career jobs, for example--but also provided cadres of better educated and trained men to permit acceleration of economic activity with less threat of labor shortages than in the previous 2 years.

2. The unemployment situation in 1967 was about the same as in 1966, with the national unemployment rate averaging 3.8 percent, and generally no significant changes in unemployment rates for most groups of workers.

3. High unemployment continued to be a serious problem for:

-- Negroes, whose jobless rate continues to be more than twice the rate for white workers, with the greatest disparity among teenagers.

-- Teenagers in general, who had an unemployment rate of almost 13 percent.

-- Workers in the less-skilled manual occupations of laborer and operative who had unemployment rates of 7.6 and 5.0 percent in 1967. Largely because of the cutback in durable goods manufacturing in the early part of the year, operatives were one of the few groups whose unemployment rate rose in 1967.

4. Though the continued intolerably high rate of unemployment among Negroes remained a critical national problem, an encouraging development in their employment situation was a significant upgrading in their occupational status.

-- The number of Negro men employed as white-collar workers, craftsmen and operatives rose by about 100,000, while the number in the less skilled and generally lower paying occupations of service worker and farm and nonfarm laborers declined by about 50,000.

-- Employment of Negro women increased by more than 100,000 in clerical occupations and more than 50,000 in operative jobs, while the number employed in private households dropped by about 100,000.

5. Employment developments in 1967 emphasized the importance of high and sustained economic growth, as well as manpower programs, in achieving and maintaining progress towards full employment.

-- The economic slowdown earlier in the year pointed up the vulnerability of less-skilled and minority group workers to changes in the economic climate. Large numbers of these workers have only recently begun to benefit from the increased employment, occupational upgrading and rising incomes accompanying economic growth. Their particular vulnerability to economic changes, and the persistence of severe economic disadvantage among others in the face of general progress, emphasize the need for special programs to increase the employability and incomes of these workers.

NEW DEVELOPMENTS IN MANPOWER PROGRAMS

1. Manpower policy and programs had three major focuses in 1967:

-- On concentration and unification of manpower forces to help the Nation's most disadvantaged people achieve employability and decently paid jobs.

-- On greatly increased efforts to involve private industry in the training and job adjustment of the hard-core unemployed.

-- On new program developments aimed at greater flexibility in meeting the divergent needs of different individuals and groups.

2. Several new and strengthened programs aimed at speeding progress in these direction were called for by the President in his Manpower message in January:

-- First, he recommended expansion of the Concentrated Employment Program, established in 1967 to bring together all manpower program resources in a coordinated attack on hard-core unemployment in the particular local areas where people most need help.

-- The President also announced that he had "recently directed the Secretary of Labor to strengthen and streamline the Manpower Administration--the instrument within the Federal Government which manages almost 80 percent of our manpower programs."

-- He proposed that the Cooperative Area Manpower Planning System started last year be established on a long-term basis to link Federal, State, and local resources in a coordinated effort to reduce unemployment.

-- The President also announced a major new program--Job Opportunities in Business Sector (JOBS)--aimed at "...a new partnership between government and private industry to train and hire the hard-core unemployed...."

3. To support the national manpower program effort, a total budget of $2.1 billion for fiscal 1969--25 percent more than in fiscal 1968--has been recommended.

-- With this budget, the number of individuals served by manpower programs can be increased even more--to nearly 1.3 million in fiscal 1969 from not quite 1 million this year.

4. This chapter reviews the major new program developments in 1967 and also those already underway or anticipated during 1968, including the JOBS Program and also the comprehensive, special services being provided for returning veterans.

5. With the added resources and capacity for service anticipated, these new developments should make possible a major breakthrough in solving the problems of unemployment and poverty in the United States.

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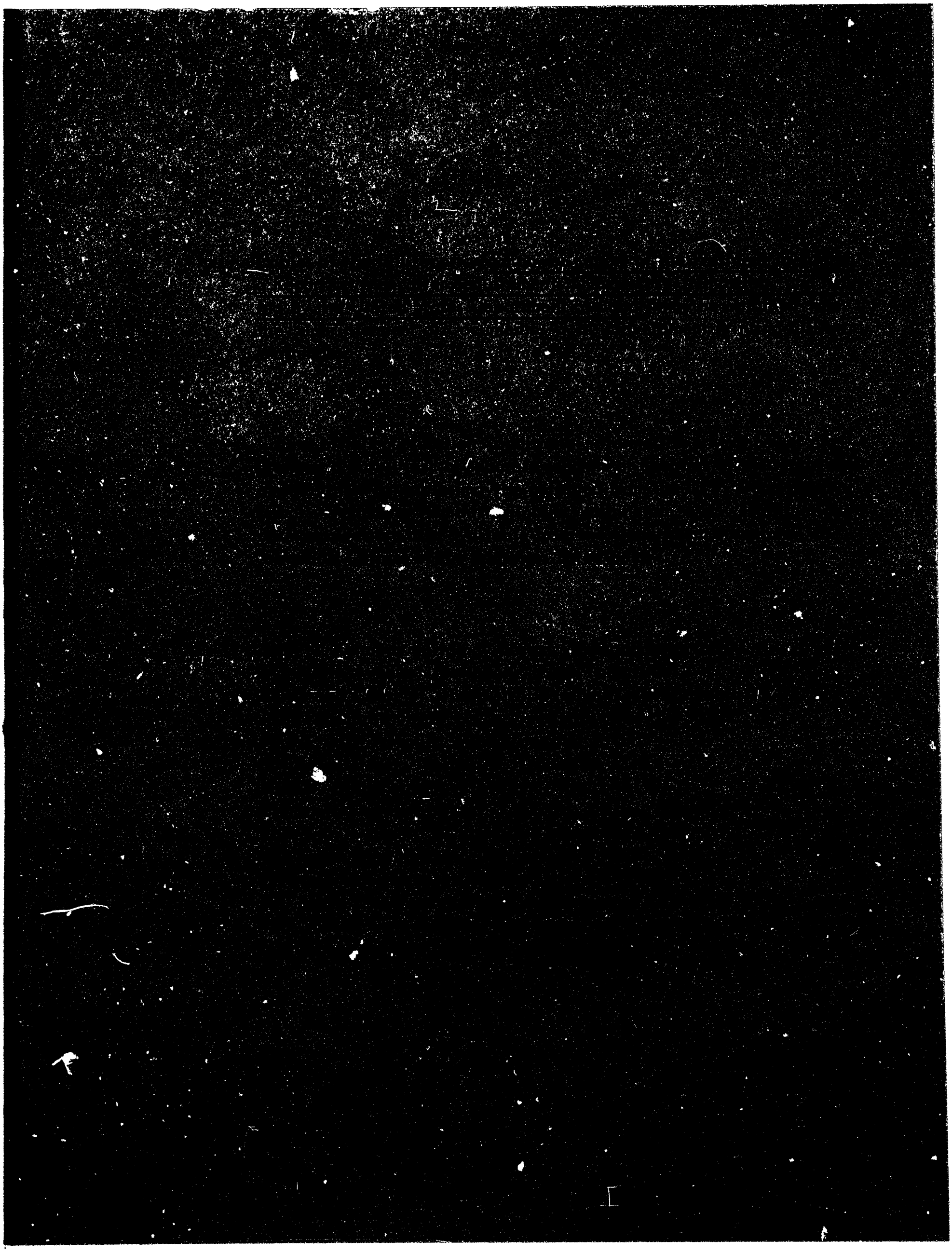

VT 007 659
Report and Recommendations of the State Advisory Committee for Development of Vocational Education in Idaho Public Secondary Schools.

State Advisory Committee for Development of Vocational Education in Idaho Public Secondary Schools, Idaho
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*VOCATIONAL EDUCATION; *STATE PROGRAMS; *ADVISORY COMMITTEES; *OCCUPATIONAL INFORMATION; TECHNICAL EDUCATION; CAREER OPPORTUNITIES; BASIC SKILLS; CURRICULUM; ELEMENTARY SCHOOLS; JUNIOR HIGH SCHOOLS; SENIOR HIGH SCHOOLS
IDAHO

The state advisory committee for development of vocational education in Idaho recommends that if public schools are to prepare students for the world of work, their offerings should include: (1) a sound base in educational and social skills meaningful to youth at all levels of ability, (2) information about and practical experience in occupations, preparing students to choose work in which they can be successful, (3) educational experience to prepare students for post-high school vocational-technical education, and (4) for some students, the skill and knowledge necessary for them to get a job and progress in it upon completion of high school. Position statements and recommendations relative to programs of occupational information and orientation, occupational exploration and experimentation, and vocational education are presented. (CH)

VT 007 659

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Report and Recommendations of the State Advisory Committee for Development of Vocational Education in Idaho Public Secondary Schools

VT007659

July 29, 1968

M E M O R A N D U M

TO MEMBERS OF SUPERINTENDENT'S ORGANIZATION:

Dear Superintendent:

The enclosed position statement was prepared by the 1967-68 Executive Committee of the Superintendent's Association acting by appointment as a State Advisory Committee for the Development of Vocational Education in Idaho Public Secondary Schools.

This position statement was developed at the request of the Idaho State Board for Vocational Education and S. R. Glenn, State Director of Vocational Education.

The paper was finalized at a meeting held in Boise on July 18, 1968. President Lowell Scott has indicated that a discussion will be held at our Sun Valley meeting concerning the position statement and related material. Your suggestions and support will be asked for at that time.

I am listing below the members of the above noted Committee:

Rulon Ellis, Pocatello
Lowell Scott, Meridian
Camden Meyer, Rupert
Sam Vopat, Grangeville
Richard Haworth, Bonners Ferry
A. J. Malcolm, Cottonwood
Tom Falash, Weiser
Bill Lipscomb, Jerome
Ellis Williams, Soda Springs
Onan Mecham, Sugar City

Sincerely,

/s/ Rulon M. Ellis
Immediate Past President
School Administrators Association

RME:am
Enc:

Meeting of
State Advisory Committee for Development
of
Vocational Education
in
Idaho Public Secondary Schools
Downtowner Motel

July 18, 1968

The meeting was called to order by Mr. S. R. Glenn at 9:10 a.m. He introduced two consultants to the committee who were not present at the last meeting; Mr. Lee Carter, Supervisor of Industrial Arts, and Mr. Harold Murray, Assistant Coordinator of Manpower Development Training. He also introduced Dr. Dwight Kindschy, Agriculture Education Teacher Trainer, University of Idaho, and Mr. Lowell Scott, President of the School Administrators Association.

The committee then divided into sub-committees to finalize and revise position papers. The sub-committees and their Chairman and Vice Chairman are as follows:

Vocational Education Sub-Committee
Rulon Ellis, Chairman
Jack Rucker, Vice Chairman

Occupational Exploration and Experimentation Sub-Committee
Onan Mecham, Chairman
Orville Bradley, Vice Chairman

Occupational Information and Orientation Sub-Committee
Sam Vopat, Chairman
Dr. Oscar Kjos, Vice Chairman

The meeting was recessed at 12:00 for lunch and resumed again at 1:15. Sub-committees then gave their reports.

The sub-committee on Occupational Information and Orientation reviewed their position paper. Revisions were made by the committee as a whole. The paper was approved as amended.

The sub-committee on Occupational Exploration and Experimentation reviewed their position paper. Revisions were made by the committee as a whole. The paper was approved as amended.

The Vocational Education sub-committee reviewed their position paper. Revisions were made by the committee as a whole. The paper was approved as amended.

A motion was made by Onan Mecham that Mr. Scott, Dr. Kjos and Mr. Glenn be charged with the responsibility of drawing together and finalizing the three papers into a form to be presented at the School Adminstrators meeting in Sun Valley. The motion was passed unanimously.

A motion was made by Mr. Lowell Scott that after the above committee completes the position paper it be sent out to committee members for final approval, the completed copy to be mailed to the school administrators prior to the meeting in Sun Valley. Mr. Scott will take the responsibility of getting this paper on the program at Sun Valley. The motion passed unanimously.

Mr. Glenn Thanked the committee members and consultants. The meeting was adjourned at 4:05 p.m.

Report and Recommendations
of the
State Advisory Committee for Development
of
Vocational Education
in
Idaho Public Secondary Schools

The major emphasis in our public schools has been on preparation for college level work. The educational needs of those students who do not plan professional careers have not been adequately met. One of the major purposes of the public schools should be to prepare students for the world of work. In order to accomplish this purpose, the schools must enlarge their offerings to include: (1) a sound base in educational and social skills meaningful to youth of all levels of ability, (2) information about and practical experience in occupations that will prepare them to choose fields of work in which they can be successful, (3) educational experience that will prepare students for post high school Vocational-Technical Education, and (4) for some students, the skills and knowledge necessary for them to get a job and progress in it upon completion of high school.

The State Advisory Committee for the Development of Vocational Education in Idaho Public Secondary Schools recommends that the public schools include and emphasize the following three areas of educational experience in their offerings:

1. A program of Occupational Information and Orientation. See Attachment "A" for the Committee's full report and recommendations.

2. A program of Occupational Exploration and Experimentation. See Attachment "B" for the Committee's full report and recommendations.

3. A program of Vocational Education. See Attachment "C" for the Committee's full report and recommendations.

Attachment "A"

OCCUPATIONAL INFORMATION AND ORIENTATION

It is a well accepted fact that the choice of a career is one of the most important decisions a person will make in his lifetime. Therefore, providing organized occupational information and orientation experiences for young people at various stages during their school years and assisting them to utilize this information in career planning, choices, and decisions should be regarded as one of the most important responsibilites of the school.

In the area of career development, the major objective of the school should be that of furthering the vocational maturity of each student. Research evidence suggests that career development is an ongoing, continuous process; that occupational choice is related to a number of factors and the ultimate choice of a career is not made at any one point in time. These findings indicate that occupational information and orientation should be viewed as a body of knowledge to be learned and points up the need for a planned developmental sequence of experiences that will bring about wise career choices.

Starting in the elementary school and continuing through the adolescent period, the young person will need information which will assist him to develop a basic understanding of self and of the world of work in general. Experiences at this stage of career development should provide an orientation to the importance and meaning of work in the life of man. The gneral objective should be that of providing the foundation for making wise career decisions and choices.

The two organized approaches to the study of occupational information and orientation are (1) curriculum units and (2) a course in occupations. The two approaches may be defined as follows:

CURRICULUM UNITS - organized learning experinences designed to facilitate the vocational maturity of children and youth. A curriculum unit is a part of a regular class such as social studies or English, and is usually 4 to 6 weeks in duration.

COURSE IN OCCUPATIONS - Organized learning experiences designed to further the vocational maturity of youth and, specifically, provide assistance with regard to planning their future education and career. The course in organized on an elective basis--credit toward high school graduation is offered--and it is usually one (1) semester in duration.

Emphasis should be place on the following objectives at the three school levels:

ELEMENTARY SCHOOL LEVEL

1. To build positive attitudes with regard to the dignity and worth of all types of work.

2. To develop understandings of why people work and how their work makes a contribution to others and to society in general.

3. To broaden knowledge and understanding of the scope of occupations from which to choose.

4. To develop realistic self-concepts and an understanidng of the relationships between self-image and occupational choice.

5. To increase the child's understanding of his abilities and limitations.

6. To provide the opportunity to learn about aptitudes, interests, and personality factors necessary for success in certain jobs.

JUNIOR HIGH SCHOOL LEVEL

1. To explore the broad field of occupations and to develop in students an awareness of the scope of opportunities available.

2. To re-emphasize and strengthen positive attitudes toward all types of work.

3. To help the student to understand his achievement, interests, aptitudes, and personal characteristics as they relate to career planning and job requirements.

4. To develop in students an appreciation of the relationship between present school work and their future educational and occupational goals.

5. To help students realize the significance of early planning; the need for an ultimate choice; and the importance of making a wise career choice.

6. To orient students to the kinds and sequences of choices which they will be required to make in the future.

7. To provide each student the opportunity to study and learn about a specific occupation in which he is most interested.

8. To assist the student in planning for his education (high school and post high school) with vocational goals in mind.

SENIOR HIGH SCHOOL LEVEL

1. To provide orientation to the steps involved in choosing a career, preparing for a career, entering and making progress in a career.

2. To develop effective techniques of obtaining and studying current career information.

3. To provide information about the educational and training opportunities available.

4. To provide the students with the opportunity to conduct an objective analysis of abilities and limitations in relation to specific career choices.

5. To help students gain an understanding and appreciation of the changing employment patterns and opportunities in the world of work.

6. To provide the opportunity to develop a definite plan leading to a smooth transition from high school to the post high school world. (Employment, Vocational-Technical Education, college or university, military service.)

METHODS AND TECHNIQUES WHICH CAN BE UTILIZED IN MAKING OCCUPATIONAL INFORMATION AND ORIENTATION EXPERIENCES AVAILABLE TO STUDENTS

- - - - - - - -

1. Occupational folder - A folder designed to hold various items collected during activities related to occupational information and orientation.

2. Provide a wide range of up-to-date occupational information in the form of briefs, abstracts, booklets and microfilm for student use. These materials should be organized in vertical files using an accepted occupational filing plan.

3. Supply information in the form of catalogs and other literature about colleges, universities, trade schools, correspondence schools, armed forces schools, apprenticeship programs and other training institutions.

4. Utilize charts and posters of various subject matter fields portraying occupational opportunities in those fields.

5. Encouraging teachers to devote time in their classes to the discussion of their subject field and related occupational opportunities.

6. The organization of a vocational club to discuss various occupations and other projects.

7. Encouraging the student to seek his own information through interviews with people successful in the field they are exploring.

8. Scheduling discussion groups to discuss various vocational concerns of interest to young people.

9. Assigned readings in various trade and professional journals and provide lists of books and novels which have a career emphasis.

10. Arrange for speakers to present information on their career field to students.

11. Supervised visits to institutions offering training programs in various occupational fields.

12. Supervised visits to business and industry to provide students the opportunity to observe people at work on numerous jobs.

13. Providing posters, film strips, motion pictures, and displays on a continuous basis throughout the school year to give students information about jobs and training opportunities available to them.

14. Arrange for interested students to take tests, in addition to the regular school testing program, which may give them more information about interests, skills, abilities and personality characteristics they possess.

15. Provide a special emphasis bulletin board where students can obtain current information on career opportunities.

16. Arrange "job analysis" assignments in particular fields of work and/or have students investigate a field of work and write a research paper on the findings.

17. Special instruction and demonstrations in classes and group guidance on how to secure a job, including an objective analysis of abilities and limitations.

18. A regular news letter service for students and parents which emphasize important vocational information.

19. Participation in career forums emphasizing steps in choosing a job, preparing for the job chosen, and making progress on the job.

20. Providing individual vocational counseling.

21. A supply of materials on occupational information be available in the library for student check out and use.

CHANGES RECOMMENDED IN THE FIELD OF EDUCATION TO INSURE AN EFFECTIVE PROGRAM OF CAREER DEVELOPMENT

1. Education should become more modular. Flexibility in educational programming is an important factor in the school's response to the career development needs of students.

2. Due to changing conditions in society, there is a need to develop a broader concept of the purpose of education. In addition to the basic skills, many students should be provided the opportunity to develop salable occupational skills. Occupational education should be an integral and essential part of the total educational system.

3. New approaches are needed in teacher preparation programs. Pre-service and in-service training for teachers, administrators, and counselors should emphasize a new philosophy with regard to the role of the school in preparing young people for employment in an automated society.

4. Strengthen preparation programs for guidance workers in the area of career development. This is essential if young people are to be offered experiences which lead to vocational maturity and wise career choices.

5. Educators and educational leaders need to recognize the importance of occupational education and give it proper attention, support and status.

RECOMMENDATIONS

1. Curriculum units on occupational information and orientation be offered at the elementary school level. Either Curriculum units or a course in occupations be offered at the junior and senior high school levels.

2. Occupational information and orientation training be offered for teachers and counselors at universities and/or college summer sessions. Qualified personnel should be designated by the school district to enroll in the training program. This training would prepare individuals to conduct in-service teacher education in their school districts as well as coordinate and/or teach the occupational orientation and information program.

3. School districts conduct an in-service education program on occupational information and orientation prior to the introduction of units or courses for students.

4. School districts plan additional staff positions for teachers and/or coordinators of occupational information and orientation programs.

5. Colleges of education and departments of education and/or Vocational Education assemble and provide new and additional materials and equipment necessary to implement an effective occupational information and orientation program.

Attachment "B"

OCCUPATIONAL EXPLORATION AND EXPERIMENTATION

The youth in our secondary schools have varied talents, aptitudes, interests and ambitions. Some are best served by programs preparing them for college others are best served by vocational programs. Students with abilities and interests in occupations in the general areas of agriculture, trades and industries, business, homemaking, nursing and distribution which do not require a four-year college education will gain much from such vocational programs.

The purposes of the occupational exploration and experimentation program are to provide youth an opportunity to (1) broaden their occupational aspirations and opportunities through actual occupational experience, (2) to test tentative occupational choices through practical laboratory experience, (3) to experience both the advantages and disadvantages of work in various fields, and (4) to develop basic habits and attitudes toward work. In short, it gives the student an opportunity to explore and experiment with the materials, processes and techniques within the several major occupational areas.

There are educational and occupational opportunities in the broad areas of agriculture, industry, business, health, homemaking and service. It is the recommendation of this committee that students at the secondary level have the opportunity to explore and experiment within these occupational areas on a broad and individualized basis. In order to accomplish this, it is recommended that public schools give consideration to:

1. Work Experience (cooperative program)
2. Utilization of time
   a. Evenings
   b. Weekends
   c. Summers
3. Utilization of existing facilities
4. Utilization of mobile units
5. Broad use of films and tapes
6. Planning and providing new facilities where needed

1. <u>Cooperative work experience programs for exploratory purposes</u>.

Consideration should be given to the possibility of rotating students on a two to six-weeks basis through previously designed training or observation stations so students can become familiar with the various occupational requirements. The objective of this program would not be to train the individual for occupational competence but rather to explore the general area involved.

In less populated areas where training and/or observation stations are limited, the school personnel could arrange for industrial representatives to serve as resource people during actual school time or in special sessions held on evenings or weekends. Industrial and service personnel have been very cooperative and willing to discuss qualifications required and opportunities available in their particular field. Audio tape and video tape can be used to an advantage when resource people are consulted.

2. <u>Utilization of time</u>

Programs in occupational exploration and experimentation can be offered outside as well as during the school day.

- Lengthening out the school day is one possibility.

- Evening classes are an excellent method of better utilizing existing time.
- Saturday programs can make further use of existing facilities.
- Summer programs offer another avenue.
- Existing programs can be revamped to better utilize existing time.

3. Utilization of existing facilities

The objective of the exploration and experimentation program can be accomplished through the utilization of existing post secondary area vocational-technical schools and better utilization of existing public school laboratory facilities.

The area schools have staff, facilities and equipment that could be made available to secondary schools during times not used for on-going area school programs. It is suggested that through proper scheduling, secondary students could be rotated into the existing area school programs thus providing opportunities for exploration and/or experimentation. The facilities and equipment at area schools are also available to secondary students on evenings, weekends and summers. Existing facilities such as science labs and shops at the high schools can be more fully utilized. This may require the use of selected consultants from business and industry as part-time teachers.

4. Mobile Units

The mobile unit could provide a definite strength to the schools of Idaho. These units would be manned, routed and serviced by the area vocational schools. For the most part, these units should be prepared to acquaint the students with the vocations of the region in which the student lives. The local high school staff should then be utilized to enrich the material presented by the staff of the mobile unit. These units should not be duplicated. They should be rotated amoung the various regions of the State.

5. Films and Tapes

The use of films and audio-video tape are especially adaptable to occupational exploration and experimentation programs. Secondary education could, with special assistance from the departments of education and Vocational Education, have a planned program of films and tapes available for all students.

6. New Facilities

In schools where the program of occupational exploration and experimentation cannot be implemented because of the limitations of present facilities, provisions should be made for new facilities designed for this purpose.

The effectiveness of the suggested methods or other possible methods is dependent upon such things as proper guidance, acceptance of credit toward graduation requirements, and that these programs be made available to all students. The intent is to enrich, supplement, broaden and enhance existing programs.

Attachment "C"

VOCATIONAL EDUCATION

One of the major purposes of the public secondary schools should be to prepare students for the world of work. This preparation should include a sound base in educational and social skills, pre-vocational and exploratory courses, and may include courses designed to provide the student with a salable skill upon graduation.

The depth of occupatonal preparation a secondary school student receives should be determined by the student's needs and by the occupation he intends to enter. Secondary schools should normally emphasize pre-vocational and exploratory courses, however, certain fields lend themselves to terminal training at the secondary level. The State Department of Vocational Education has prepared Guidelines to assist Administrators in making such decisions.

There is a great need for additional guidance and counseling services which emphasize factors related to the world of work. These services need to be provided early in the secondary program and some provisions should be made to provide Vocational counseling after high school graduation.

Graduation requirements for students should meet educational programs best suited to individual needs, abilities and asperations and would not necessarily meet present day requirements for graduation.

Earlier and more thorough orientation of parents to the many opportunities available to young people in preparing themselves to make a living is needed. More information must be gathered about student needs and desires, the needs of business and industry so that appropriate courses may be developed at the high school level. Student interest in the Vocational field must be expanded.

Inter-district cooperation in the Vocatioanl field should be encouraged. Area schools or area classes often solve the problem of providing for a variety of needs.

Close cooperation should be maintained between the public schools and the post secondary Area Vocational Schools. Cooperative efforts should exist in developing courses which dovetail with each other and which meet the needs of students. The post secondary Area Vocational School is the logical place for in-depth Vocational training.

An adequate supply of competent Vocational instructors is a major need in our State. The high turnover of teachers places program continuity in jeopardy. The preparation of Vocational teachers, working conditions and salaries of teachers need to be critically evaluated and improved.

One of the greatest deterrents to the expansion of Vocational Education is the lack of adequate funding and proper facilities. Greater financial emphasis will undoubtedly lead to the expansion of offerings in the total Vocational area. An adequate framework currently exists to handle the necessary Vocational Training and Vocational Education needed in the State. This framework is headed by the State Board for Vocational Education. All public funds for Vocational training purposes should be channeled through the State Board for Vocational Education.

VT 007 693
Survey to Assess the Needs of Post-Secondary Vocational Training in the Western Half of New York State.

New York State Agricultural and Technical Coll., Alfred
New York State Education Dept., Albany
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 128p.

*SCHOOL SURVEYS; *POST SECONDARY EDUCATION; *ENROLLMENT PROJECTIONS; PARENT ATTITUDES; STUDENT ATTITUDES; *ADMINISTRATOR ATTITUDES; EMPLOYER ATTITUDES; *VOCATIONAL EDUCATION; TECHNICAL EDUCATION; CASE RECORDS
WESTERN NEW YORK

The purposes of this study were to determine (1) the number of students who desire post secondary vocational education, (2) the needed vocational programs, (3) the source of post secondary students, (4) an assessment of the number of future programs, and (5) the employment opportunities in the target area. Data were collected from 141 high school administrators, 36 employers, 10 community presidents, and from parents and students from three randomly selected schools. The survey covered 21 counties. Findings included: (1) administrators indicated that 2,459 students planned to attend post secondary vocational programs in 1968 with an increase to 3,278 by 1973, (2) employers preferred post secondary graduates, (3) 21 out of 35 employers indicated that high school vocational programs did not meet their needs, (4) five of the community colleges planned vocational offerings, and (5) most employers indicated a growing need for well-trained workers. (EM)

VT 007 693

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& WELFARE
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A SURVEY OF THE NEEDS FOR POST-SECONDARY VOCATIONAL EDUCATION

VTC07693

THIS PROJECT TO ASSESS THE NEEDS OF POST-SECONDARY VOCATIONAL TRAINING IN THE WESTERN HALF OF NEW YORK STATE, A PROJECT SPONSORED BY FUNDS FROM THE VOCATIONAL EDUCATION ACT OF 1963 AND GRANTED BY THE UNIVERSITY OF THE STATE OF NEW YORK -- THE STATE EDUCATION DEPARTMENT, WAS CONDUCTED BY THE STATE UNIVERSITY OF NEW YORK AGRICULTURAL AND TECHNICAL COLLEGE AT ALFRED, MARCH 1 TO JUNE 30, 1968.

PROJECT DIRECTOR

JOSEPH FASANO

SURVEY TO ASSESS THE NEEDS OF POST-SECONDARY VOCATIONAL TRAINING IN THE WESTERN HALF OF NEW YORK STATE

JOSEPH FASANO

PROJECT DIRECTOR

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To my wife, Ann, who offered her talents as my secretary throughout this long and complicated survey without too many complaints about the pressure of stated deadlines, a most sincere thanks.

Joseph Fasano

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I. SURVEY ORGANIZATION

PURPOSE

The purpose of this survey is to determine the number of students who desire post-secondary vocational training, the areas of training needed, and the types of high school programs from which interested students will come. Secondly, the project will assess the opportunity for post-secondary vocational training that is being planned for in the future. Thirdly, the survey will determine the needs for vocational graduates from both secondary and post-secondary programs by the businesses and industries in the target area.

SCOPE

In preparation for this survey, many reports, similar studies and questionnaires were studied. Several interviews with the administrators at the Wellsville Vocational Division proved to be beneficial while laying the ground work for the study. Questionnaires were prepared and approved for use in the different categories. These include: high schools, businesses and industries, community colleges, student and parent interest studies.

The survey covers:

- 175 high schools were contacted out of approximately 280 in 5 geographic regions in the Western sector of New York State. This represents a 62% sampling. 100 were contacted by personal interview, 75 were contacted by mail of which 41 responded. 141 out of 175 represents an 80% response of those schools contacted.

- 35 businesses and industries were contacted in the target area.

- The presidents of the 10 Community Colleges were interviewed to determine their views and plans in the vocational education field.

- Parents and Students from random sample schools were given questionnaires for their comments and interest in vocational education on the post-secondary school level.

METHOD

The Project Director enlisted Staff Assistants in Buffalo, Elmira, Jamestown, Rochester and Syracuse. Each Staff Assistant conducted personal interviews with each of 20 to 30 high schools, 5 to 10 industries and a BOCES Program in some areas. Questionnaires for each category were provided by the Project Director. 75 high schools were contacted by mail.

Questionnaires specifically designed to survey parents and students were sent to one or two high schools in 3 regions for distribution.

Case studies of students and a placement report from the Wellsville Division were provided by Mr. Don Jones for inclusion in the survey.

The Project Director surveyed the Community Colleges personally with the assistance of Mr. Orville Johnston, Assistant to the President, State University of New York, Alfred State College.

DEFINITION OF VOCATIONAL EDUCATION

"Vocational education is designed to prepare individuals for useful and rewarding employment as highly skilled workers in recognized occupations.

Today's new technology has advanced many occupations on the skilled level to the point where they require levels of specialization and rela-

ted knowledge that are best learned and taught within educational frameworks.

The emphasis of vocational education is, therefore, concentrated on perfecting those skills required by craftsmen in today's technological society.

Because the emphasis is on educating for a job, a larger percentage of the student's time is spent in the laboratory or under actual working conditions on live projects than normally associated with educational institutions. Proficiency in skills as well as understanding of the subject matter are the keystones of vocational education."

II. LIST OF CHARTS AND TABLES

1. Map of Survey Area. Page 6

2. Percentage of Student Body enrolled in Vocationally Oriented Courses. Page 15.

3. Type of Courses in Which the High School Students are Enrolled. Page 16.

4. Percentage of Senior Class Normally Going on for Further Education - by Region. Pages 18-22.

5. Percentage of Senior Class Falling in Percentage Average Category - by Region and a Combined Profile of all Regions. Pages 40-45.

6. Percentage of High School Graduates Following A General Academic Program who Find Themselves Unable to Further Their Education for Academic Reasons or Lack of Prerequisite Courses. Page 46.

7. Number of Employees in Management and Supervision, Sales, Clerical, Skilled, Semi-Skilled, Unskilled in Training - by Region. Page 54.

8. Present and Projected Community College Enrollment Figures. Page 63.

9. Percentage of Community College Students Pursuing Baccalaureate Degrees. Page 65.

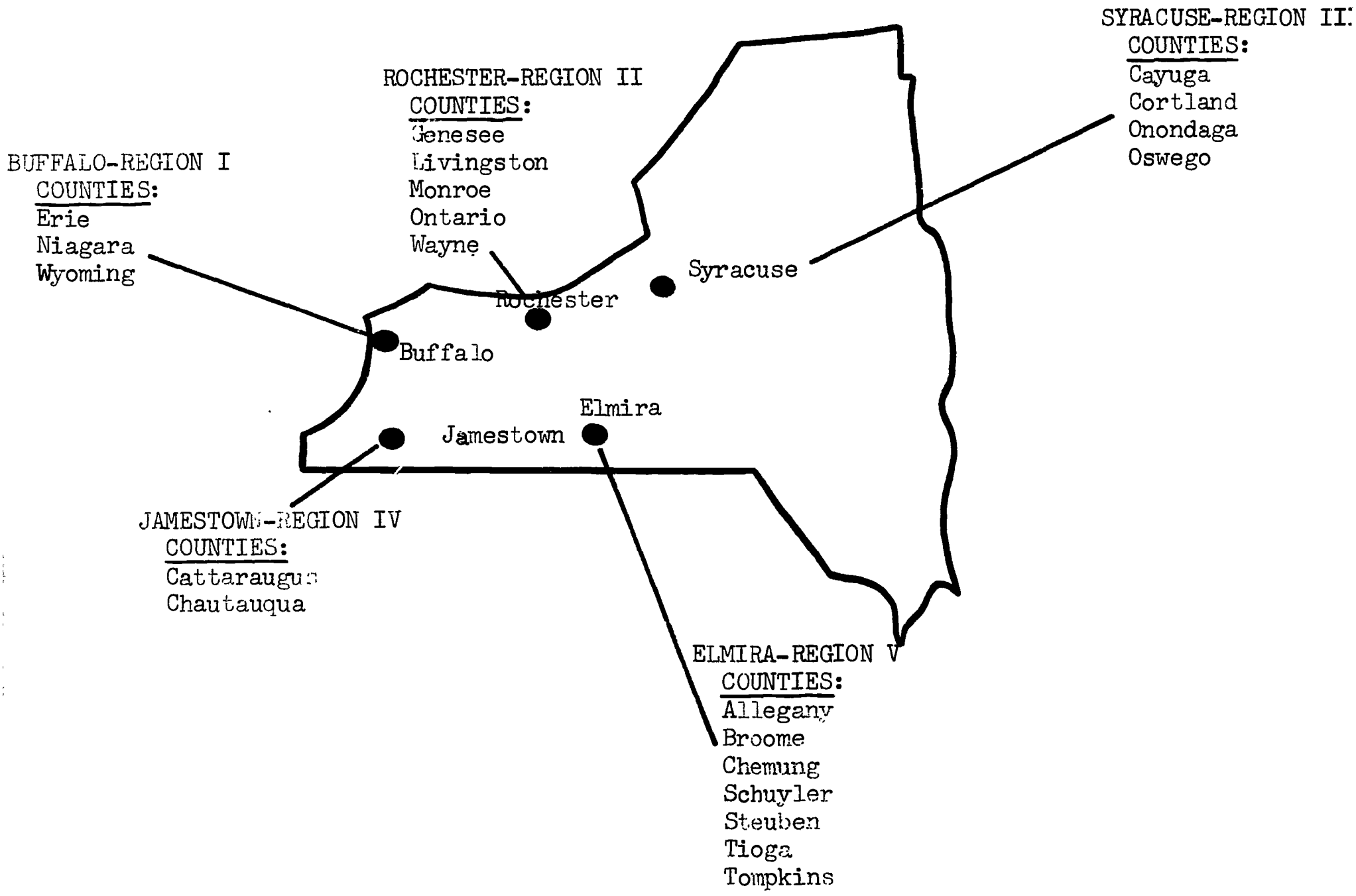
10. Composite of Answers to Questions Appearing on High School Questionnaire. Page 112.

III. THE SURVEY AREA

The survey area encompasses five major geographic centers in the western part of New York State, namely Buffalo (Region I), Rochester (Region II), Syracuse (Region III), Jamestown (Region IV), and Elmira (Region V). "While the area from Syracuse to Binghamton westward covers more than is traditionally thought of as 'Western New York', the expansion of the area would bring about more meaningful data."

The geographic regions include several counties as noted on the map of the survey area on the following page.

THE SURVEY AREA - FIVE GEOGRAPHIC REGIONS



COMPILATION OF ANSWERS
TO QUESTIONS ON HIGH SCHOOL QUESTIONNAIRES

Question no. 5. Present enrollment - projected enrollment?
(The enrollment figures have not been totalled because they are represented by different grade groupings: K-12, 7-12, 9-12, 10-12.)

REGION I BUFFALO

School	Present	1969	1970	1971	1972	1973
ERIE COUNTY						
Lancaster	1300	1400	1500	1600	1700	1800
Akron	830	850	-	-	-	-
Bishop Fallon	480	480	480	480	480	480
Hamburg	1080	1125	1155	1190	1230	1275
Grover Cleveland	1205	1250	1250	1250	1250	1250
Amherst	1460	1520	1500	1500	1500	1500
Alden	780	834	891	960	1030	1100
Bennett	2100	-	-	-	-	-
East Aurora	1010	1031	1061	1098	1116	1108
Griffith Institute	950	1000	1000	1000	1000	1000
Depew	680	775	875	990	1090	1200
West Seneca	2000	2350	2500	2800	2950	3300
NIAGARA COUNTY						
Trott Vocational	485	570	500	500	500	500
North Tonawanda	1978	1800	1850	1900	1950	1900
Niagara Wheatfield	1298	1425	1550	1625	1750	1875
Niagara Falls	1900	1850	1800	1800	1775	1775
Eden	1136	1193	1229	1261	1282	1289

School	Present	1969	1970	1971	1972	1973
WYOMING COUNTY						
Arcade	-	-	-	-	-	-
Wyoming	120	130	140	135	142	130
Warsaw	610	685	700	715	730	750

REGION II ROCHESTER

School	Present	1969	1970	1971	1972	1973
WAYNE COUNTY						
Marion	1250	1325	1375	1450	1550	1550
LIVINGSTON COUNTY						
Geneseo	580	600	-	-	-	660
GENESEE COUNTY						
LeRoy	770	790	815	840	870	890
Pembroke	780	835	875	935	945	1076
ONTARIO COUNTY						
Bloomfield	585	650	700	750	800	850
Naples	961	991	1000	1000	1050	1100
Red Jacket	483	525	550	575	600	625
MONROE COUNTY						
Penfield	1052	1052	1052	1200	1200	1200
Honeoye Falls	412	412	432	453	476	500
East High School	2800	2800	2800	2800	2800	
Pittsford	1200	1320	1450	1595	1755	1930
McQuaid	804	804	804	804	804	804
Monroe	2001	2100	2200	2300	2400	2500
Brighton	1409	1485	1550	1630	1710	1790

School	Present	1969	1970	1971	1972	1973
East Rochester	670	700	700	700	700	700
Minerva Deland	790	891	992	1110	1219	1333
Spencerport	931	1000	1060	1130	1210	1900
Jefferson	1205	1275	1300	1325	1350	1375
Webster	1600	1680	1760	1840	1930	2025
Benj. Franklin	2800	2800	2800	2800	2800	2800
Brockport	950	1050	1100	1150	1200	1250
West High	1380	1380	1380	1380	1380	1380
Rush Henrietta	1300	1500	1650	1800	1900	2000
Madison	1700	1785	1875	1965	2065	2170
Edison Tech	1160	1160	1160	1160	1160	1160
Wheatland Chili	600	625	-	-	-	-
Hilton	971	1103	1217	1345	1510	1620

REGION III SYRACUSE

School	Present	1969	1970	1971	1972	1973
CAYUGA COUNTY						
Auburn-West	800	850	900	-	-	-
Auburn Central	900	950	1000	1000	1000	1000
Auburn-East	900	950	1000	1000	1000	1000
Southern Cayuga	1655	1700	1725	1750	1800	1875
Moravia	654	670	679	685	690	690
Weedsport	325	350	375	400	425	450
CORTLAND COUNTY						
Homer	700	780	860	920	1000	1080

School	Present	1969	1970	1971	1972	1973
Cortland	875	-	-	-	-	-
ONONDAGA COUNTY						
West Genesee	2050	2250	2450	2750	3000	3000
Westhill	975	1000	1000	1025	1050	1050
Fayetteville-Manlius	1105	1210	1250	1290	1330	1370
North Syracuse	2160	3300	3500	3700	3900	4100
William Nottingham	1200	1250	1300	1400	1400	1400
Christian Brothers	770	800	800	800	815	815
Jamesville-DeWitt	1175	1275	1375	1475	1575	1675
Central Tech	1500	1450	1450	1500	1550	1700
Liverpool	2200	2400	2700	3000	-	-
Charles Baker	1400	1550	1650	1750	-	-
Solvay	650	700	750	800	800	800
Thomas J. Corcoran	1600	1700	1750	1750	1750	1750
East Syracuse-Minoa	1529	1600	1700	1900	2150	2450
Henninger	1485	1650	1700	1700	-	-
Lafayette	600	625	650	675	700	750
OSWEGO COUNTY						
Mexico Academy	964	1000	1030	-	-	-
Tully Central	507	560	600	630	660	700
Oswego	1407	1573	1661	1736	-	-
E. Ray Badley	1315	1365	1390	1381	1375	1375
John C. Birdlebough	520	650	575	570	650	700

REGION IV JAMESTOWN

School	Present	1969	1970	1971	1972	1973
CATTARAUGUS COUNTY						
Allegany	712	710	-	-	-	-
Portville	1560	-	-	-	-	-
Little Valley	660	680	685	690	695	700
Randolph	635	640	645	650	650	650
Cattaraugus	440	440	440	440	440	440
Franklinville	240	250	260	270	280	290
Hinsdale	284	300	325	350	400	425
Olean	1250	1270	1350	1500	1500	1500
Salamanca	1020	1040	1060	1080	1100	1120
CHAUTAUQUA COUNTY						
Sherman	525	525	525	525	525	525
Southwestern	918	930	940	950	960	970
Cassadaga	750	775	800	825	850	875
Falconer	950	980	1000	1000	1000	1000
Westfield Academy	1400	1410	1410	1420	1420	1430
Ripley	750	750	750	750	750	750
Clymer	830	830	830	830	830	830
Jamestown	1975	1975	1975	1975	1975	1975
Panama	1100	1150	1175	1200	1250	1325
Frewsburg	426	475	525	525	525	525
Chautauqua	300	310	320	330	340	350
Mayville	853	873	893	913	933	953
Dunkirk	1027	1150	1200	1200	1200	1200
Silver Creek	650	660	670	680	690	700
Fredonia	830	900	-	-	-	-

REGION V ELMIRA

School	Present	1969	1970	1971	1972	1973
SCHUYLER COUNTY						
Odessa	1500	1500	1500	1500	1500	1500
Watkins Glen	550	600	635	660	680	675
ALLEGANY COUNTY						
Whitesville	345	345	345	345	345	345
Belmont	634	655	685	703	708	720
Bolivar	930	960	990	1020	1050	1080
Caneseraga	526	539	559	559	550	555
Alfred-Almond	310	320	325	325	330	335
Andover	620	630	650	-	-	-
Cuba	301	312	332	289	306	267
Scio	600	600	600	600	600	600
STEUBEN COUNTY						
Canisteo	395	432	450	455	445	440
Wayland	1700	1750	1800	1850	1900	1900
Troupsburg	310	315	-	-	-	-
Greenwood	348	350	355	360	365	370
Avoca	1034	1054	1064	1070	1090	1100
Arkport	780	790	800	810	810	810
Cohocton	115	115	115	115	115	115
Savona	618	645	670	690	715	740
Campbell	300	-	-	-	-	-
Corning-Painted Post West	1101	1200	1214	1169	1210	1250
Haverling	1080	1150	1175	1175	1200	1225
Addison	753	-	-	-	-	-

School	Present	1969	1970	1971	1972	1973
Corning-Painted Post East	987	1021	1020	-	-	-
Hammondsport	324	335	346	360	374	390
TIOGA COUNTY						
Waverly	449	490	534	589	612	-
Candor	440	460	480	490	500	515
Newark Valley	775	820	830	850	-	-
Owego Free Academy	212	255	292	288	320	333
CHEMUNG COUNTY						
Spencer-Van Etten	600	615	655	675	667	728
Thomas Edison	650	660	670	680	690	700
Elmira Free Academy	1547	1550	1600	1650	1650	1650
Horseheads	1304	1448	1550	1650	1750	1850
Elmira Southside	1430	1430	1450	1450	1475	1500
TOMPKINS COUNTY						
Dryden	-	-	-	-	-	-
Groton	537	545	555	565	575	585
Trumansburg	450	475	500	525	550	575
BROOME COUNTY						
Union-Endicott	1300	1335	1400	1440	1500	1600
Maine Endwell	950	980	1020	1030	1050	1100
North Senior High	1300	-	-	-	-	-
Vestal	2090	2248	2389	2494	-	-
Chenango Valley	1800	-	-	-	-	-

IV. SUMMARY

There are six basic questions that should be answered in preparing a summary for this survey. In addition to the answers to these questions there will also be included in this summary other pertinent data, observations made by the project director and the Staff Assistants and comments made by the various constituents surveyed.

The basic questions are:

1. How many high school students are interested in vocational training?
2. How many high school students feel that their desire for vocational training can be met better at the high school level or at the post-high school level?
3. What types of program study do the students want?
4. What are the plans of the community colleges in this area as reflected by their administration?
5. What programs at the area vocational school overlap with those taught at the Wellsville Campus, and how can articulation be effected so that the optimum opportunity of training exists for the youth in this part of the state?
6. What is the job placement potential of the vocationally trained youth in the area?

The answers to these basic questions will be presented in the form of facts derived from the survey results.

Question 1. How many high school students are interested in vocational training?

Question 6. How many or what percentage of your student body is enrolled in vocationally oriented courses? List types of courses.

(These figures are based on the total number of schools surveyed.)

REGION	0-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-100% **
I	4	3	5	3	2	1	1	1
II	8	5	3	3	-	-	2	1
III	9	8*	4	1	1	-	-	-
IV	1	8	8	8	1	-	-	-
V	9	12	7	-	5	-	-	-
TOTAL ALL REGIONS	31	36	27	15	9	1	3	2

NOTE:
(1) The following example is to assist in reading the above chart. e.g. *There are 8 schools in Region III that have between 11 and 20% of their student body enrolled in vocationally oriented courses.

(2) It is to be noted that some of the high figures are reflected by the fact that some schools have double majors in academic and vocational.

(3) Some schools do not offer vocational courses as such.

(4) ** Two schools enroll 100% in vocationally oriented courses such as the vocational and technical high schools.

(5) In some cases vocationally oriented courses are offered in the 9th grade.

Question no. 6, part II. List types of courses.

Listed below are the courses in order of preference that the students are enrolled in as indicated by the high school administrators.

Course	Number of Schools Offering
Auto Mechanics	61
Cosmetology	54
Building Trades	44
Drafting-Mechanical Drawing	40
Clerical-Office Practice and Procedures	36
Machine Trades	36
Electrical Trades	34
Vocational Agriculture	25
Practical Nursing - Nurses Aid	23
Auto Body Repair	23
Woodworking	20
Child Care	19
Metal Shop	19
Conservation	16
Agricultural Mechanization	16
Food Service	16
Welding	15
Data-Processing	12
Printing	11
Commercial-Graphic Arts	9
Household Appliance Repair	7
Health Services	6

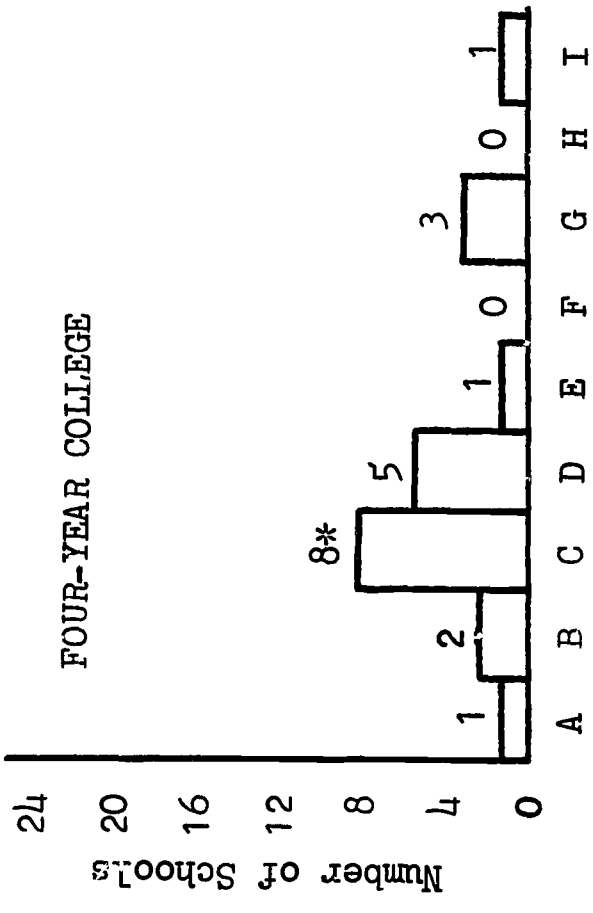
Course	Number of Schools Offering
Horticulture	4
Photography	3
Dental Hygiene	3
Building Maintenance	1

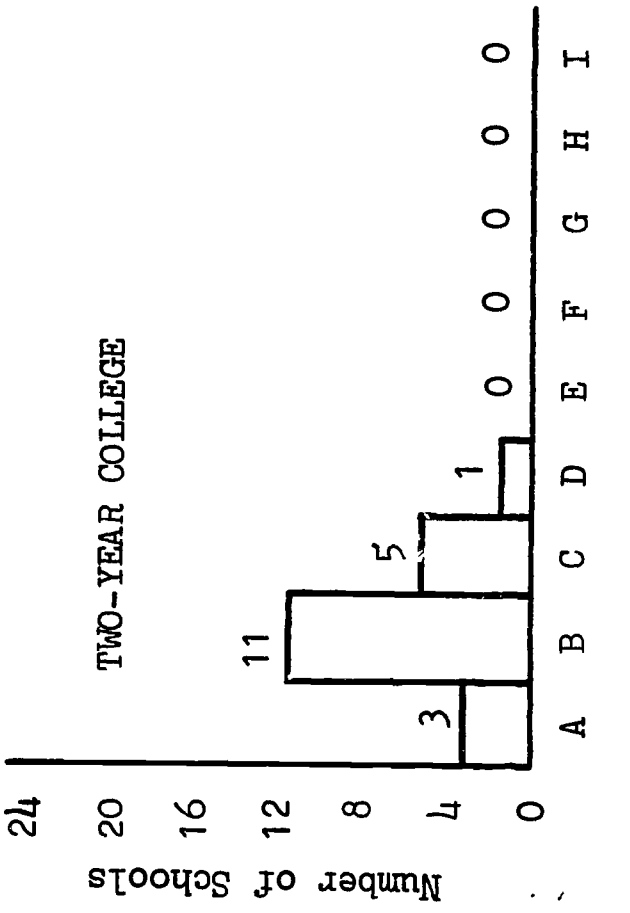
Question 7. What percentage of your senior class normally goes on to: Four-Year College, Two-Year College, Other?

REGION I BUFFALO

KEY: PERCENTAGES

A - 0 - 10%
B - 11 - 20
C - 21 - 30
D - 31 - 40
E - 41 - 50
F - 51 - 60
G - 61 - 70
H - 71 - 80
I - 81 - 100





These graphs indicate the percentage of senior classes going on for further education.

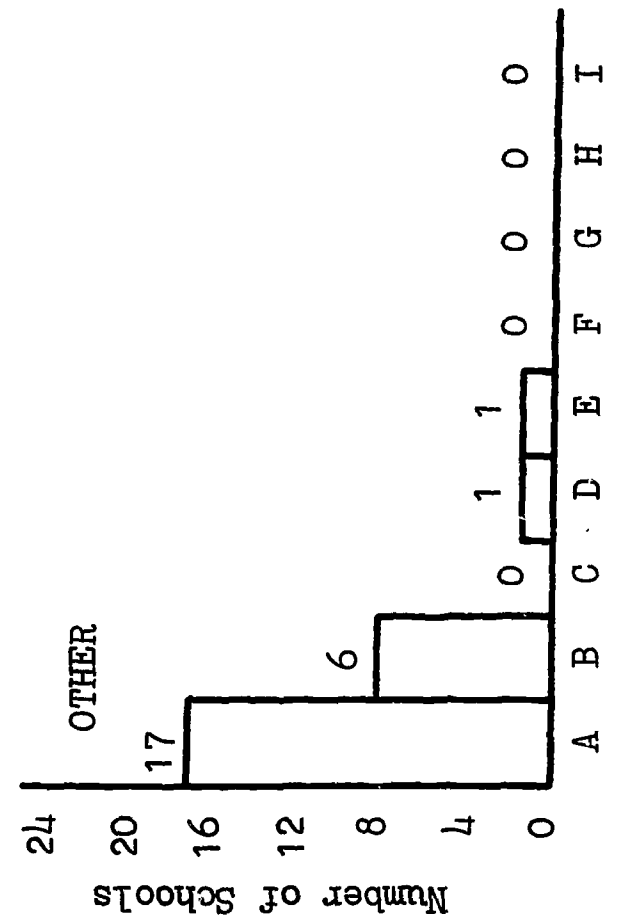
* Note: An example follows to assist in reading the above graph. Eight high schools in Region I indicated that 21 to 30 % of their senior class goes on to Four-Year Colleges.

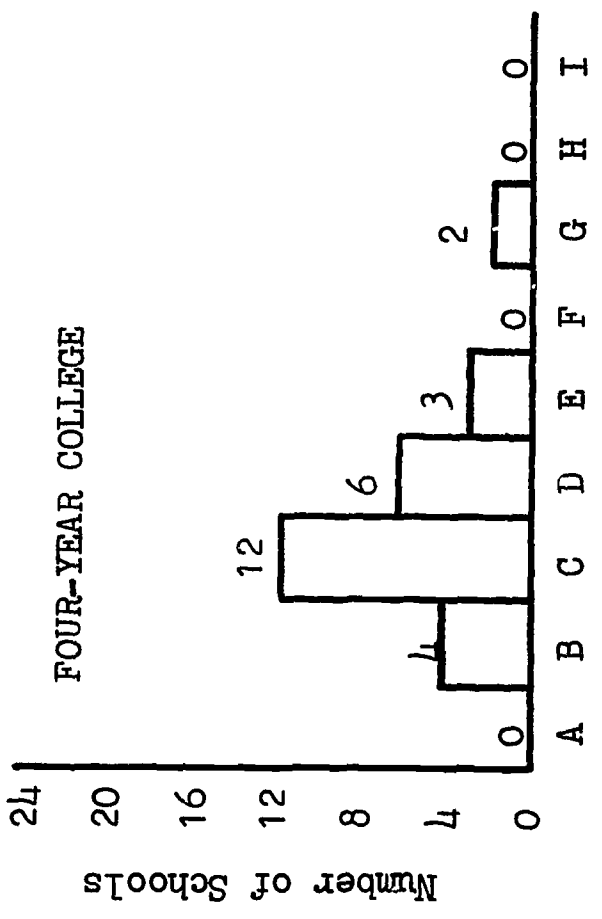
Question 7. (con't)

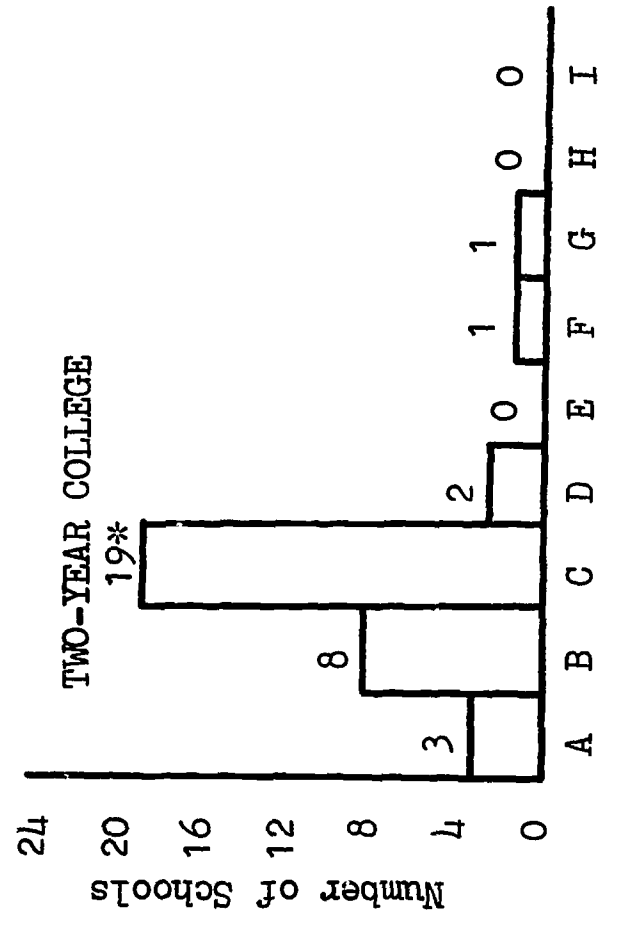
REGION II ROCHESTER

KEY: PERCENTAGES

A - 0 - 10%
B - 11 - 20
C - 21 - 30
D - 31 - 40
E - 41 - 50
F - 51 - 60
G - 61 - 70
H - 71 - 80
I - 81 - 100







These graphs indicate the percentage of senior classes going on for further education.

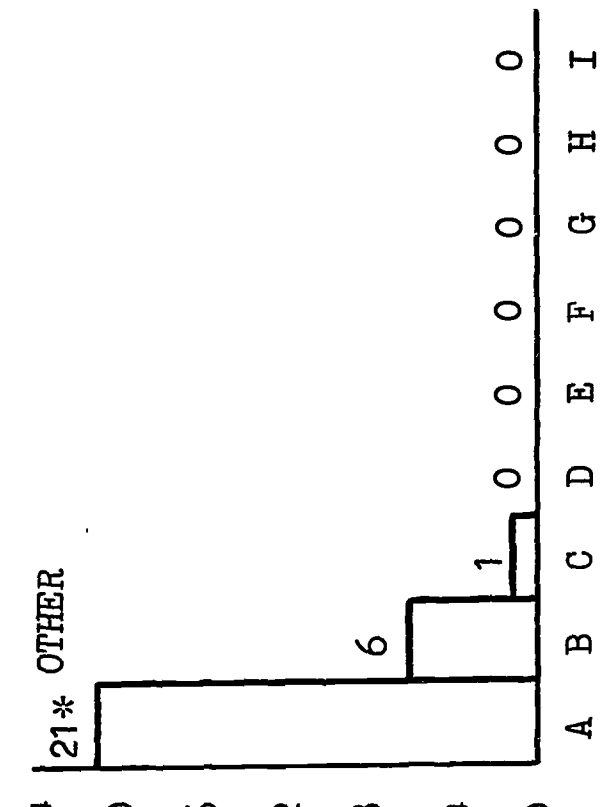
* Note: An example follows to assist in reading the above graph. Nineteen high schools in Region II indicated that 21 to 30% of their senior class goes on to Two-Year Colleges.

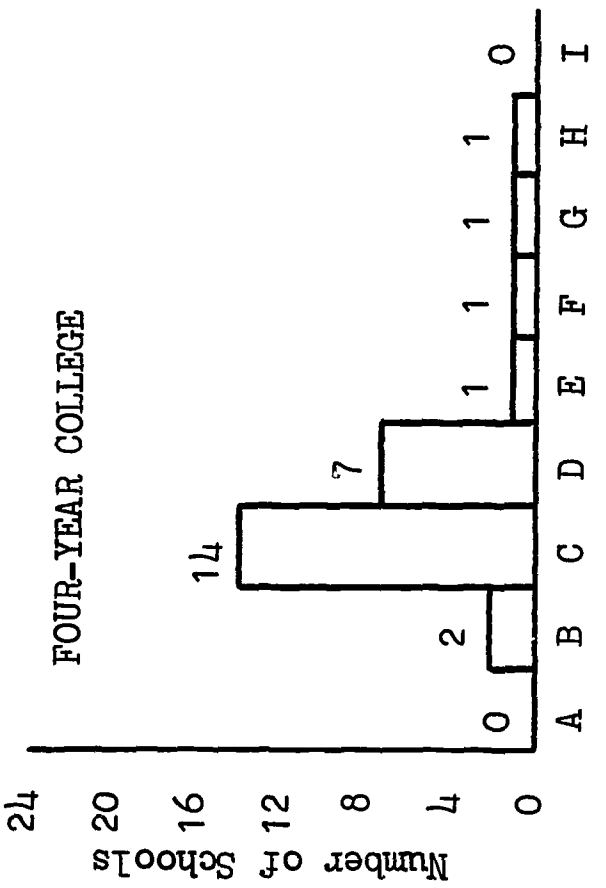
Question 7. (con't)

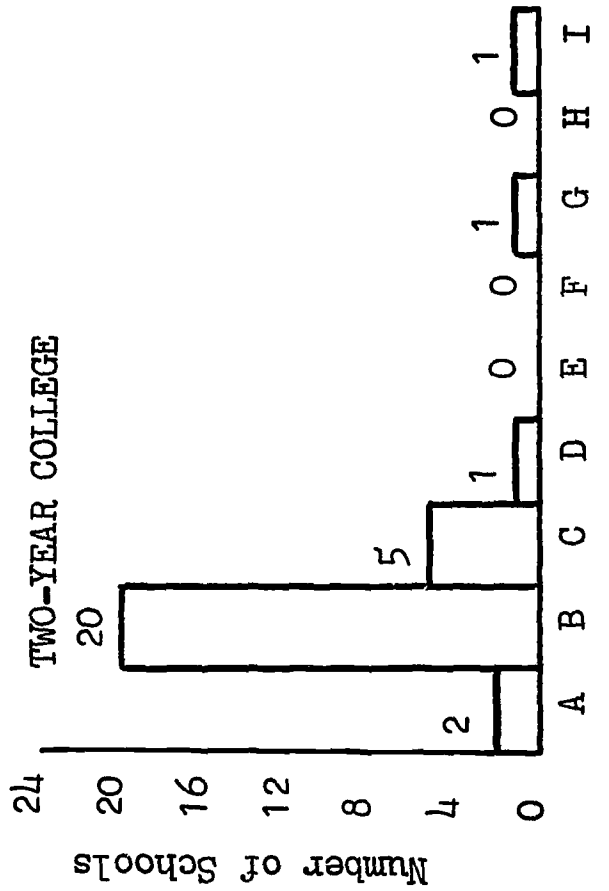
REGION III SYRACUSE

KEY: PERCENTAGES

A	0 - 10%
B	11 - 20
C	21 - 30
D	31 - 40
E	41 - 50
F	51 - 60
G	61 - 70
H	71 - 80
I	81 - 100







These graphs indicate the percentage of senior classes going on for further education.

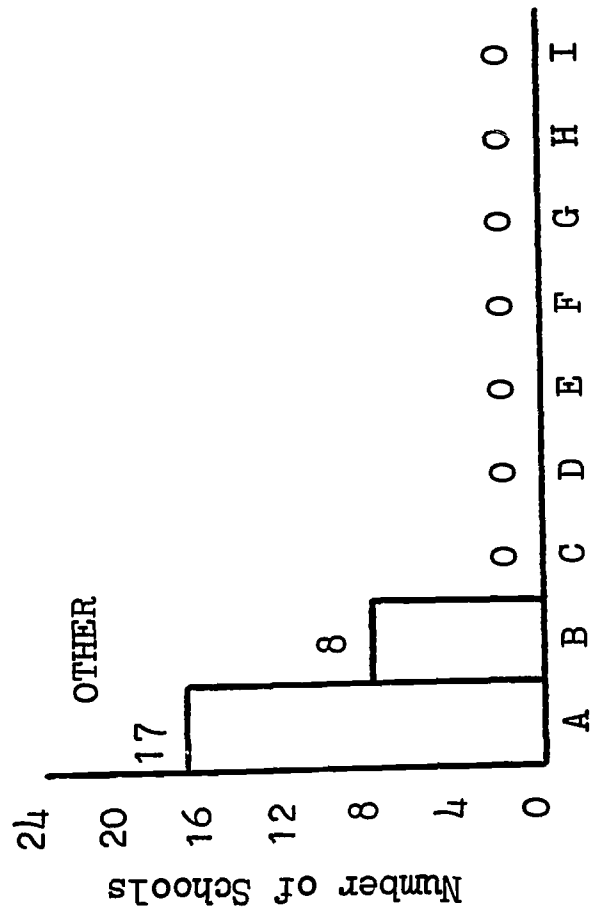
* Note: An example follows to assist in reading the above graph. Twenty-one high schools in Region III indicated that 0 to 10% of their senior class goes on to Other types of further education.

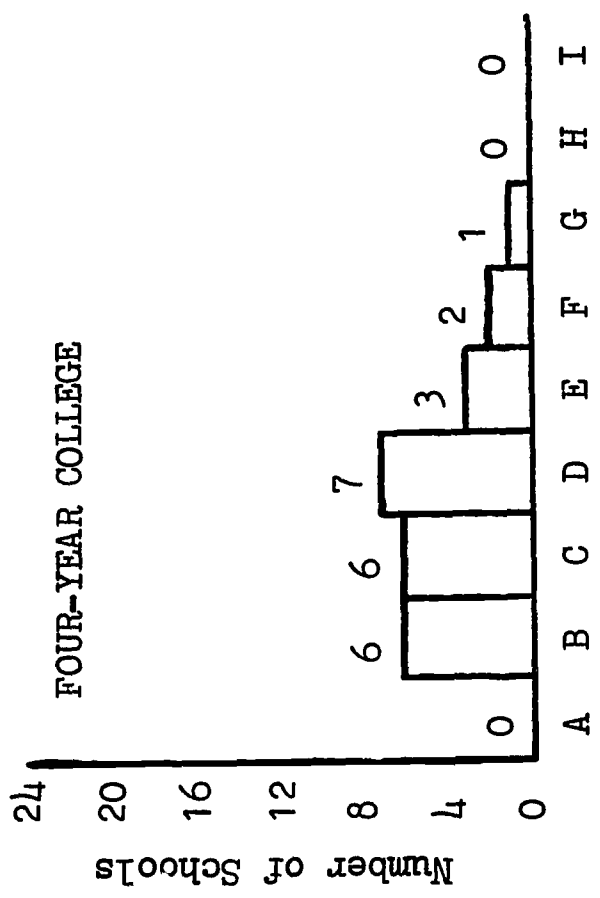
Question 7. (con't)

REGION IV JAMESTOWN

KEY: PERCENTAGES

A -	0 - 10%
B -	11 - 20
C -	21 - 30
D -	31 - 40
E -	41 - 50
F -	51 - 60
G -	61 - 70
H -	71 - 80
I -	81 - 100

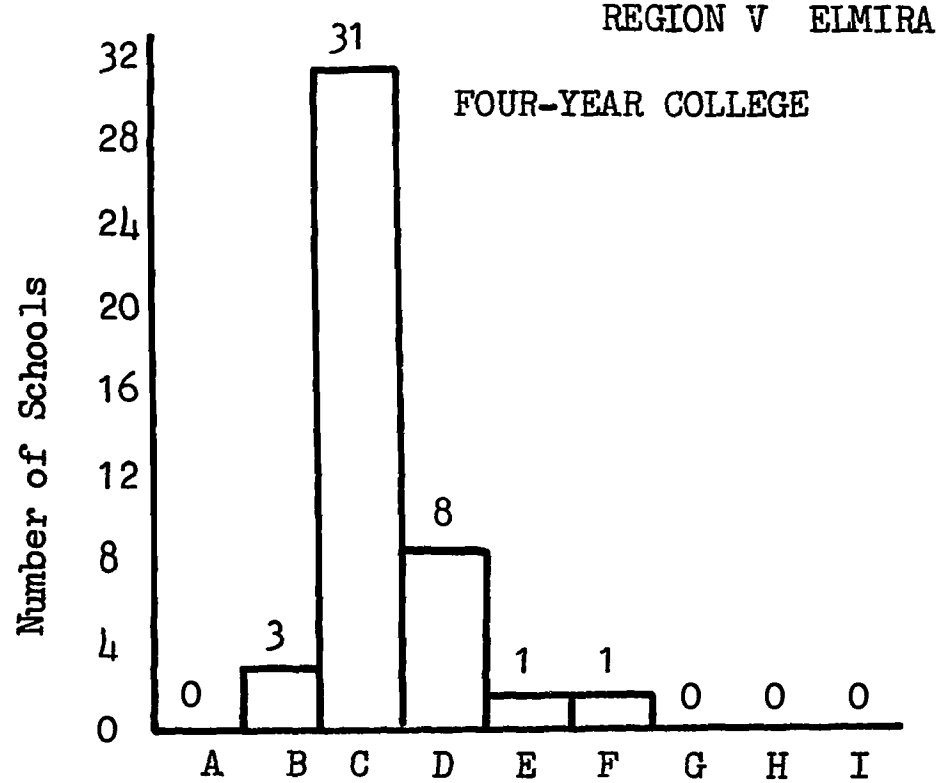




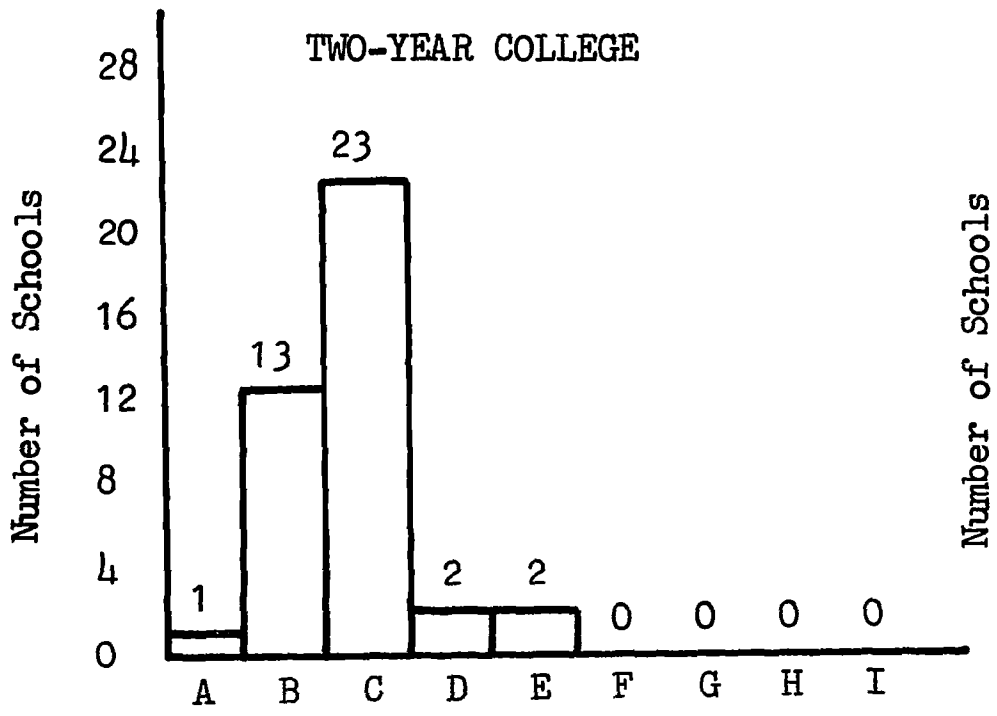
These graphs indicate the percentage of senior classes going on for further education.

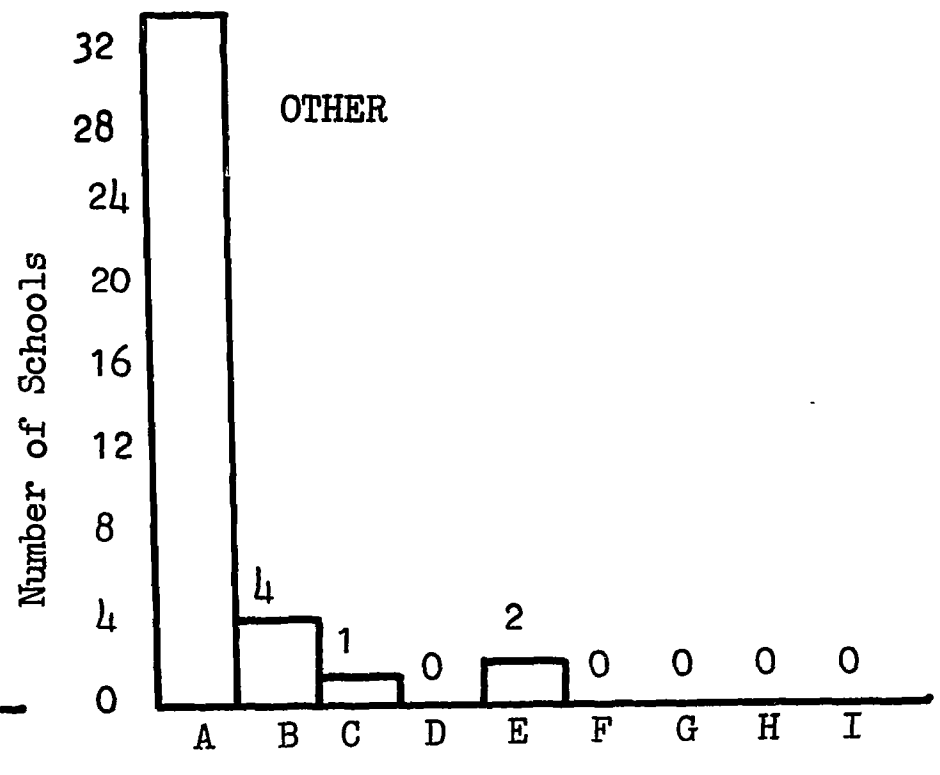
Question 7. (con't)

REGION V ELMIRA



KEY:	PERCENTAGE
A -	0 - 10%
B -	11 - 20
C -	21 - 30
D -	31 - 40
E -	41 - 50
F -	51 - 60
G -	61 - 70
H -	71 - 80
I -	81 - 100





These graphs indicate the percentage of senior classes going on for further education.

Question no. 8. What would be your estimate as to the number of students from your school who might enroll in a post-secondary vocational education program?

(The totals in some projections are reflected by no answers to the question. These figures are estimates and are not based on pure statistical fact.)

REGION I BUFFALO

School	Total in Sr. Class	1968	1969	1970	1971	1972	1973
ERIE COUNTY							
Lancaster	368	15	18	21	24	27	30
Akron	120	3	5	5	5	-	-
Bishop Fallon	107	-	-	-	-	-	-
Hamburg	320	5	6	9	12	15	18
Grover Cleveland	270	5	5	5	5	5	5
Amherst	460	35	40	40	40	40	40
Alden	165	40	45	50	60	65	70
Bennett	549	-	-	-	-	-	-
East Aurora	212	20	25	25	25	25	25
Griffith Institute	220	8	10	10	10	10	10
Depew	120	18	22	28	32	36	36
West Seneca	527	70	100	115	120	135	145
NIAGARA COUNTY							
Trott Vocational	124	13	18	18	18	18	18
North Tonawanda	505	10	15	15	20	20	20
Niagara Wheatfield	260	5	7	9	10	12	15
Niagara Falls	629	100	100	100	100	100	100
Eden	169	20	30	35	40	45	45

School	Total in Sr. Class	1968	1969	1970	1971	1972	1973
WYOMING COUNTY							
Arcade	105	20	30	-	-	-	-
Wyoming	36	3	4	4	4	4	5
Warsaw	85	10	15	15	15	20	25
TOTAL	5351	405	495	504	552	577	607

REGION II ROCHESTER

School	Total in Sr. Class	1968	1969	1970	1971	1972	1973
WAYNE COUNTY							
Marion	61	10	10	15	15	15	15
LIVINGSTON COUNTY							
Geneseo	77	2	3	4	4	4	4
GENESEE COUNTY							
LeRoy	119	18	18	22	22	26	26
Pembroke	90	12	14	18	25	27	35
ONTARIO COUNTY							
Bloomfield	67	16	20	20	20	25	30
Naples	35	15	15	20	20	25	25
Red Jacket	44	6	10	12	14	16	18
MONROE COUNTY							
Penfield	306	15	15	15	15	15	15
Honeoye Falls	92	70	75	75	75	75	75
East High School	441	44	44	44	44	44	44

School	Total of Sr. Class	1968	1969	1970	1971	1972	1973
Pittsford	284	28	31	35	40	44	48
McQuaid	165	3	4	4	5	5	5
Monroe	307	30	32	35	37	40	42
Brighton	365	18	21	25	29	30	33
East Rochester	168	2	5	7	9	10	10
Minerva Deland	234	2	3	7	10	15	18
Spencerport	200	7	8	8	9	10	10
Jefferson	200	25	30	35	40	45	50
Webster	450	40	43	46	49	52	56
Benj. Franklin	377	65	65	65	65	65	65
Brockport	200	10	20	22	25	28	30
West High	180	40	40	40	40	40	40
Rush Henrietta	372	55	60	65	70	75	75
Madison	158	8	10	12	14	16	18
Edison Tech	260	20	20	20	20	20	20
Wheatland-Chili	94	5	7	-	-	-	-
Hilton	240	2	2	2	2	2	2
TOTAL	5586	568	628	672	718	769	812

REGION III SYRACUSE

School	Total in Sr. Class	1968	1969	1970	1971	1972	1973
CAYUGA COUNTY							
Auburn-West	100	10	12	14	16	18	20

School	Total in Sr. Class	1968	1969	1970	1971	1972	1973
Auburn-Central	200	20	23	25	28	30	32
Auburn-East	200	20	23	25	28	30	32
Southern Cayuga	74	3	8	10	-	-	-
Moravia	88	20	22	25	28	30	35
Weedsport	77	2	3	5	-	-	-
CORTLAND COUNTY							
Homer	146	10	15	18	20	24	30
Cortland	270	15	-	-	-	-	-
ONONDAGA COUNTY							
West Genesee	410	30	33	37	40	45	45
Westhill	150	10	15	20	20	20	20
Fayetteville-Manlius	290	8	11	14	16	19	21
North Syracuse	623	45	50	50	-	-	-
William Nottingham	420	45	33	45	50	50	50
Christian Brothers	177	0	0	0	0	0	0
Jamesville DeWitt	234	23	26	29	32	35	38
Central Tech	375	42	48	52	56	60	65
Liverpool	480	60	65	70	70	80	80
Charles Baker	270	55	60	65	-	-	-
Solvay	155	13	15	18	20	20	25
Thomas J. Corcoran	530	50	60	65	65	65	70
East Syracuse Minoa	325	3	5	7	9	11	13
Henninger	506	25	30	35	40	-	-
Lafayette	77	7	10	13	16	19	22

School	Total in Sr. Class	1968	1969	1970	1971	1972	1973
OSWEGO COUNTY							
Mexico Academy	109	15	20	25	-	-	-
Tully Central	54	6	8	9	10	12	14
Oswego	315	5	5	5	-	-	-
E. Ray Badley	280	-	-	-	-	-	-
John C. Birdlebough	141	25	30	35	-	-	-
TOTAL	7076	567	630	716	563	568	612

REGION IV JAMESTOWN

School	Total in Sr. Class	1968	1969	1970	1971	1972	1973
CATTARAUGUS COUNTY							
Allegany	112	17	-	-	-	-	-
Portville	93	50	-	-	-	-	-
Little Valley	31	0	2	2	3	3	3
Randolph	85	4	4	4	5	5	5
Cattaraugus	49	6	6	6	7	7	7
Franklinville	55	5	6	7	8	8	9
Hinsdale	37	10	8	10	12	12	12
Olean	300	30	32	34	36	38	40
Salamanca	173	30	30	30	34	34	34
Gowanda	132	12	15	18	21	24	27
CHAUTAUQUA COUNTY							
Sherman	47	5	5	8	8	10	10

School	Total in Sr. Class	1968	1969	1970	1971	1972	1973
Southwestern	190	25	25	30	30	35	35
Cassadaga	92	5	10	15	20	25	30
Falconer	131	15	17	19	20	20	20
Westfield Academy	83	5	6	6	7	8	10
Ripley	46	2	2	2	5	5	5
Clymer	47	4	4	4	5	5	5
Jamestown	578	100	100	110	110	120	120
Panama	65	10	12	14	16	18	20
Frewsburg	56	9	13	15	16	18	20
Chautauqua	52	10	10	10	15	15	15
Mayville	53	4	4	4	4	5	5
Dunkirk	217	25	30	30	30	30	30
Silver Creek	101	20	22	24	26	28	30
Fredonia	173	5	7	9	11	13	15
TOTAL	2998	408	370	411	449	486	507

REGION V ELMIRA

School	Total in Sr. Class	1968	1969	1970	1971	1972	1973
SCHUYLER COUNTY							
Odessa	94	18	18	20	20	22	22
Watkins Glen	98	5	10	20	20	20	20

School	Total in Sr. Class	1968	1969	1970	1971	1972	1973
ALLEGANY COUNTY							
Whitesville	18	5	5	5	5	5	5
Belmont	37	13	18	20	20	18	22
Bolivar	63	-	-	-	-	-	-
Caneseraga	35	2	2	4	4	-	-
Alfred-Almond	73	15	20	20	22	23	25
Andover	44	5	7	7	-	-	-
Cuba	76	-	-	-	-	-	-
Scio	43	4	4	4	4	4	4
STEUBEN COUNTY							
Canisteo	77	5	6	7	8	9	10
Wayland	90	3	5	7	8	9	10
Troupsburg	13	2	-	-	-	-	-
Greenwood	25	1	2	3	3	3	3
Avoca	53	2	2	3	3	8	10
Arkport	47	5	7	7	8	8	10
Cohocton	25	4	4	5	5	5	6
Savona	26	3	5	5	6	7	8
Campbell	40	-	-	-	-	-	-
Corning-Painted Post West	319	65	75	80	75	80	85
Haverling	135	25	28	30	30	35	40
Addison	102	3	-	-	-	-	-
Corning-Painted Post East	302	45	45	45	-	-	-

School	Total in Sr. Class	1968	1969	1970	1971	1972	1973
Hammondsport	70	11	13	15	17	19	21
TIOGA COUNTY							
Waverly	134	-	-	-	-	-	-
Candor	61	5	7	7	10	12	12
Newark Valley	87	-	5	9	-	-	-
Owego Free Academy	212	9	15	18	22	30	35
CHEMUNG COUNTY							
Spencer-Van Etten	87	-	-	-	-	-	-
Thomas Edison	140	15	15	15	15	15	15
Elmira Free Academy	485	90	90	95	95	95	95
Horseheads	387	10	15	20	25	30	35
Elmira Southside	430	30	30	35	35	40	50
TOMPKINS COUNTY							
Dryden	102	8	10	20	25	30	30
Groton	62	10	15	20	20	20	20
Trumansburg	98	6	9	10	12	15	20
BROOME COUNTY							
Union-Endicott	400	-	-	-	-	-	-
Maine Endwell	300	15	20	20	25	30	30
Vestal	432	25	40	60	80	90	90
North Senior High	388	40	50	-	-	-	-
Chenango Valley	250	7	7	7	7	7	7
TOTAL	5960	511	604	641	629	689	740
GRAND TOTAL	26,971	2459	2727	2941	2911	3089	3278

Question 9. Do you feel that vocational education should be made available on a post-secondary level?

REGION	YES	NO	UNANSWERED
I Buffalo	19	1	0
II Rochester	27	0	0
III Syracuse	27	1	0
IV Jamestown	25	0	0
V Elmira	39	2	0
TOTAL	137	4	0

COMMENTS MADE BY SCHOOL ADMINISTRATORS:

- Students in many high schools, who plan to go to college or technical institutes, but are not strong enough academically, would do well at a Vocational College.
- Others who do not qualify for college to begin with might be more useful citizens with the maturity and growth that would take place in such a school.
- Students do not appear to be occupationally oriented - Little or no exploration is possible if they follow a college preparatory course.
- There are many students who are unable to formulate career or educational plans until late in their high school career.
- There is merit in the pursuit of a general education before the pursuit of any specialized education.
- There is a need from an academic viewpoint. Students are graduating without the "depth in skill" available at vocational high schools.
- Every student should have post-high school education available.
- The need for such a school has definitely increased.

- I feel strongly that students should get four years of general, basic education and/or college preparatory courses plus two years of vocational education for those not going on to college. Schools should coordinate their offerings to eliminate duplication and to provide variety.
- I believe that there will be an added need for greater specialization in this area.
- Students would be more mature. There would be a wiser choice of goals.
- I feel that by the time a student reaches the 12th year he seems to be more realistic in his vocational education selection.
- It gives a young person a much better opportunity to make more mature vocational decisions.
- We cannot do a job on our level for many of the pupils, and, also, many pupils are unsure of whay they want on our level.
- There is too little opportunity at present in advanced vocational training.
- It is often too late for students who have started in an academic program to change. Many times a student realizes that he does not like the type of program he selected when he was 14 years old - It is too late to change when he is in the 11th grade.
- I feel that there is a great need for more post-secondary vocational schools with a greater diversity of course offerings than is now available.
- Because of rapidly changing technology, constant upgrading will be essential in most areas.
- Vocational education in a secondary school does not develop the skills necessary for employment in skilled occupations. In high school pupils are merely experimenting to find their vocational interests and to define their goals.

- There should be more room for more students - We would have 30% enrolled if they could get into Wellsville Vocational Division.
- I feel high school students are not ready to choose vocations. More of our students would go on to post-secondary vocational schools if they were made available.
- Community colleges tend to be more oriented toward the Liberal Arts and Technical areas.
- There is a definite need in our area to complement B.O.C.E.S.
- Vocational education is very limited on a post-secondary level in New York State - it is very expensive out of state.
- Definitely and it should be located locally.
- Definitely - for the better paying jobs you need more training.
- The Vocational Division at Wellsville is a step in the right direction. I feel that the curricula offered there will provide students in rural high schools such as ours with post-high school education. These students are not prepared for conventional college programs but they obtain good training there and are able to do successful work on a post-high school level.
- I would like to see additional schools such as the Wellsville Vocational Division throughout the state.
- With the building of new BOCES vocational schools we will have many students who will want and demand further training.
- Especially if there is no technical vocational high school in the area.
- Definitely - There is need for basic foundation in high school and then go on to post-secondary vocational training.
- Our school (1020 enrollment) is made up of 1/5 of Indian students. There is a strong need for such a school as the Wellsville Vocational Division.

- High School vocational training is some times too early.
- We have 14 students presently enrolled in BOCES and I am very much in favor of post-secondary vocational education for these students who wish to go on for advanced training. We can now cater to the bottom 50% as well as the top 50% and offer them more specialized work.
- This is where it should be to begin with - I am not so sure it should be in secondary schools.
- Definitely yes - they should begin vocational training at the high school junior level through senior year plus two years of post-secondary making a total of four years.
- Wellsville Vocational Division needs a wider range to take care of the need.
- Definitely - I would rather, in most cases, see the training on the post-secondary level instead of secondary.
- We tend to start BOCES too soon - Vocational plans should be made on a post-secondary level.
- I think post-secondary education will better prepare the students for placement in the world of work. Many just out of high school will be working outside of what they are prepared for.
- The age and maturity of the post-high school student is likely to result in more effective learning and training for many students.
- Students quite often who cannot schedule vocational subjects in high school wish to go to post-secondary vocational education.
- It is <u>impossible</u> to schedule some students for BOCES Occupational center.
- The preparation of students in vocational areas would seem to be about as important as that in many academic and technical areas.
- In our locale there is an ever increasing need for vocational and skilled

training. The employment is almost nil and extra training is necessary for a livelihood.

- I feel that provision should be made for those students taking the academic subjects and change their minds about college. We tend to neglect the increasing numbers of this type.

- With the increasing number of students receiving one or two years of training in area occupational centers, I believe they should have access to one or two additional years of training in their chosen field - with a minimum of repetition.

- More of the type of the facilities now available at the Wellsville Vocational Division would be extremely helpful.

- Many students will not make a choice while in high school and the avenues must be kept open for immediately after high school and later on in life.

- Post-secondary vocational training would be extremely useful to students who do not make up their minds as to a goal during high school - therefore, they do poorly and cannot get into a two or a four year college.

- I believe that advanced courses in adjunct to the present BOCES program would be more beneficial.

- I feel that the emphasis in vocational education should be more toward post-high school training.

- Let us not overlook the fact that vocational education made available on the post-secondary level would give those students attending a status comparable to those students going on to college.

- By all means - this is the area most lacking in post-secondary education in New York State.

- I have noticed that each year there is a growing number of our students (enrollment 950) seeking further training.

Question 10. Do you feel that certain courses on a post-secondary level would overlap some of the courses now offered in high schools?

REGION	YES	NO	UNANSWERED
I	14	6	0
II	19	8	0
III	20	8	0
IV	16	8	1
V	35	6	0
TOTAL	104	36	1

Question 11. If yes to question #10, do you feel that this has any different effect than the overlap now experienced in many of the other courses offered in the regular curriculum and conventional college programs?

REGION	YES	NO	UNANSWERED
I	3	11	6
II	3	16	6
III	1	19	8
IV	5	12	8
V	10	28	5
TOTAL	22	86	33

COMMENTS:

- There should be correlation and not duplication between high school and post-secondary vocational training.
- There is a study now being done in this community to determine this. The response is favorable (Jamestown)

- More likely to be beneficial - achieved skills can stand more reinforcement.
- I think that the vocational student would benefit from some overlap.
- Some students need not expose themselves to repetitive courses - it would be providing opportunities for additional students.
- Repetition should be and could be avoided except where necessary. I view post-secondary vocational education as taking the individual where he is and going on. The overlap in college should be and is usually on a higher level.
- Courses can be structured or oriented so that there would be no overlap.
- In many cases I feel that it is a good idea - attitudes, responsibility etc. change as students get older.
- This could apply to any course a student takes be it academic or vocational.
- There is bound to be some overlap and this may be helpful as some students will have limited instruction in their high school.
- Many times this serves as a review. A good teacher in college realizes this and deals with it accordingly.
- For example - girls who pursue a business career in high school are often well prepared for employment but a year or two in business school tends to make them much more acceptable to employers.
- Other courses might well draw academic students.
- As long as the courses are an advanced form of those taught in BOCES.
- We in Western New York are very much limited in vocational areas. This situation should be corrected immediately.
- By way of review - this type of student needs repetition for better learning.
- I feel that continued growth and enrichment in any program makes a better future employee.

Question 12. Do you feel that articulation (high school to post-secondary level) will afford optimum or advanced training opportunities for students in your area?

REGION	YES	NO	UNANSWERED
I	17	2	1
II	21	6	0
III	25	3	0
IV	24	1	0
V	38	2	1
TOTAL	125	14	2

COMMENTS:

- It will at least give students one more opportunity for further training. Especially those who may have started in a college preparatory course and decide to change to a vocational program.
- This is something we have needed for a long time.
- It is always helpful for better adjustment.
- High school graduates generally do not have marketable skills.
- Yes, if the training is really on an advanced level - Please - no more cosmetology courses.
- This could pick up the student at present level of ability and carry him on from there.
- There is a real demand for post-high school vocational training, however, opportunities for obtaining this training are very limited.
- This articulation could be used very effectively in conjunction with the present BOCES program.

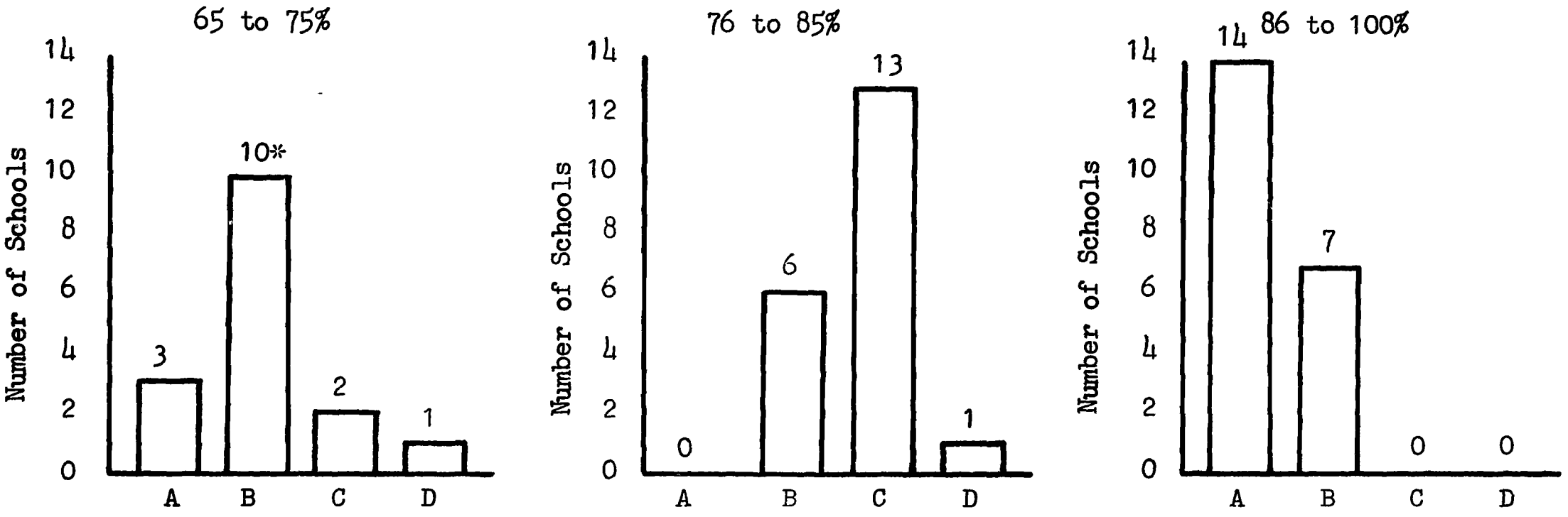
- I would very much like to see a post-secondary school vocational program in the Chautauqua county area.

Question 13. How many students are in your senior class? What percentage falls in the 65-75% average category? 76-85%? 86-100%? See graphs on following pages for results of part 2 of this question.

REGION	NO. OF SENIORS
I	5351
II	5586
III	7026
IV	2998
V	5960
TOTAL	26,921

Question 13. Part 2 (con't)

REGION I BUFFALO



These graphs indicate the percent of seniors in the class falling in the percentage category.

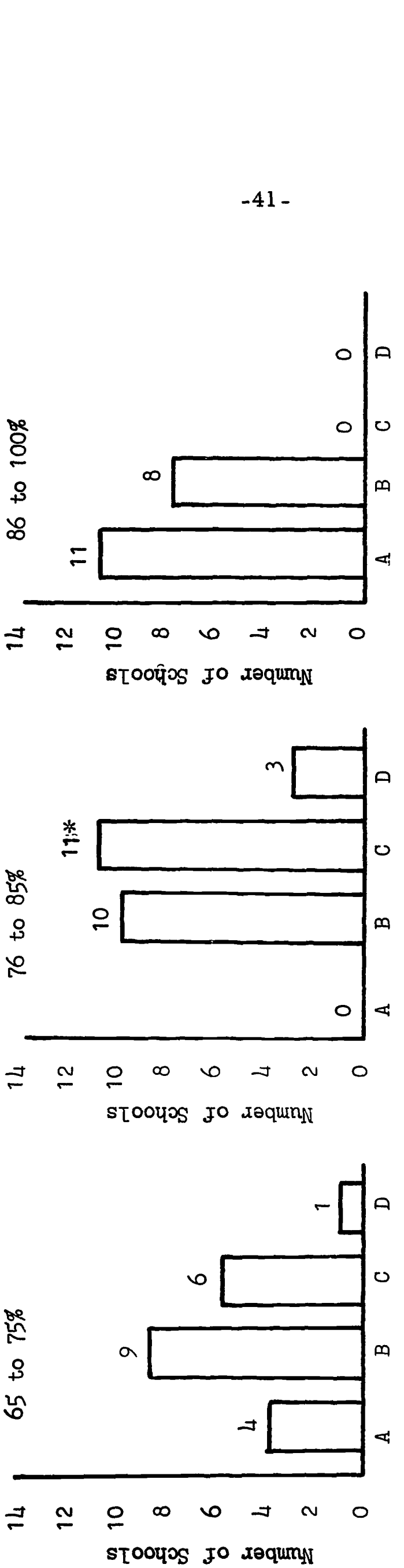
*An example follows to assist in reading the above graphs. Ten schools in Region I reported that between 21 and 40% of their senior class falls in the 65 to 75% category.

In Region I there are 5351 seniors in the schools reporting.

KEY: PERCENTAGE CATEGORY
A - 0 - 20%
B - 21 - 40
C - 41 - 60
D - 61 - 80

Question 13. Part 2 (con't)

REGION II ROCHESTER



These graphs indicate the percent of seniors in the class falling in the percentage category.

*An example follows to assist in reading the above graphs. Eleven schools in Region II reported that between 41 and 60% of their senior class falls in the 76 to 85% category.

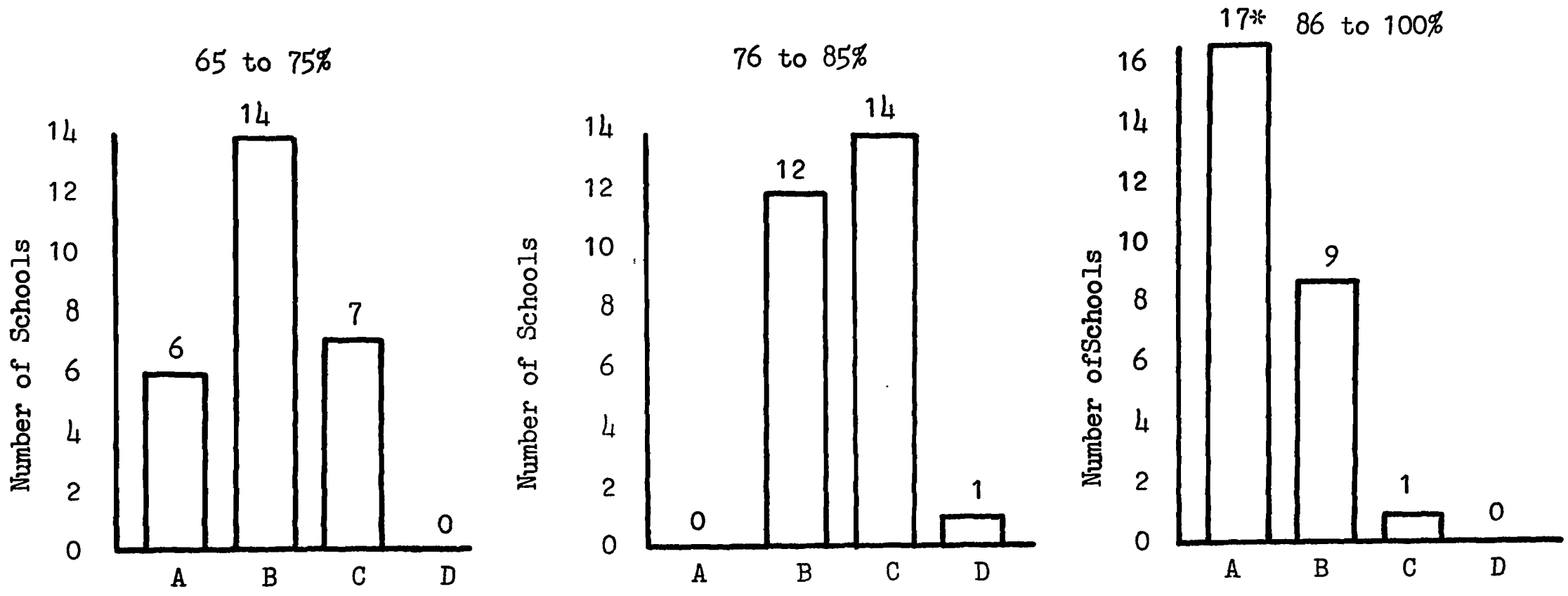
In Region II there are 5586 seniors in the schools reporting.

KEY: PERCENTAGE CATEGORY

A - 0 - 20%
B - 21 - 40
C - 41 - 60
D - 61 - 80

Question 13. Part 2 (con't)

REGION III SYRACUSE



These graphs indicate the percent of seniors in the class falling in the percentage category.

*An example follows to assist in reading the above graphs. Seventeen schools in Region III reported that between 0 and 20% of their senior class falls in the 86 to 100% category.

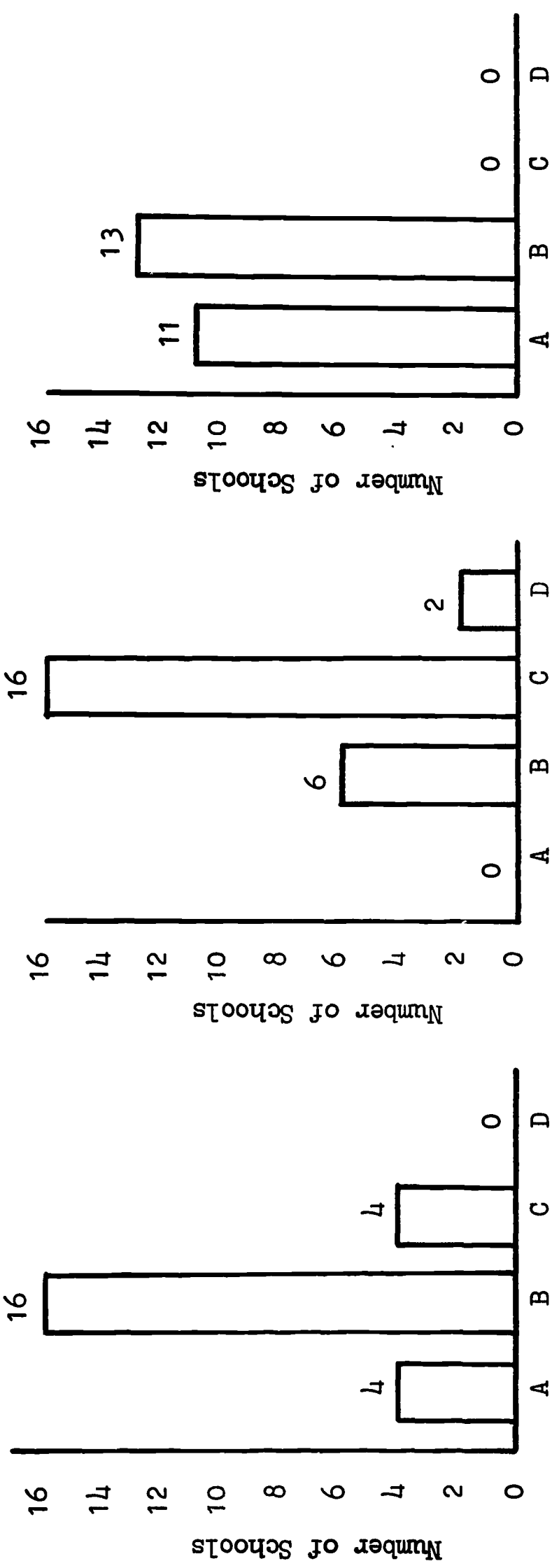
In Region III there are 7076 seniors in the schools reporting.

KEY: PERCENTAGE CATEGORY

A - 0 - 20%
B - 21 - 40
C - 41 - 60
D - 61 - 80

Question 13. Part 2 (con't)

REGION IV JAMESTOWN



These graphs indicate the percent of seniors in the class falling in the percentage category.

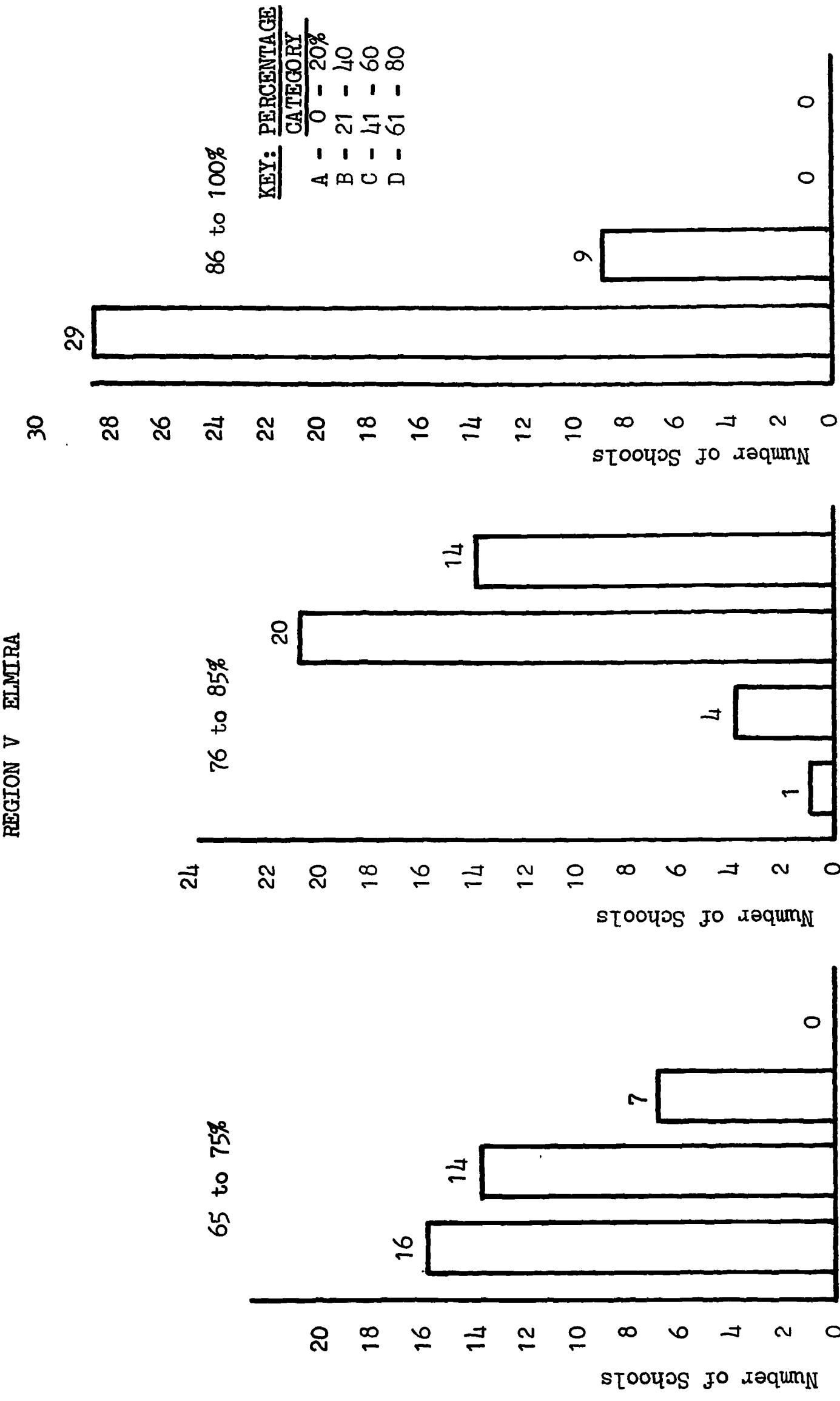
In Region IV there are 2998 seniors in the schools reporting.

KEY: PERCENTAGE CATEGORY

A - 0 - 20%
B - 21 - 40
C - 41 - 60
D - 61 - 80

Question 13. Part 2 (con't)

REGION V ELMIRA

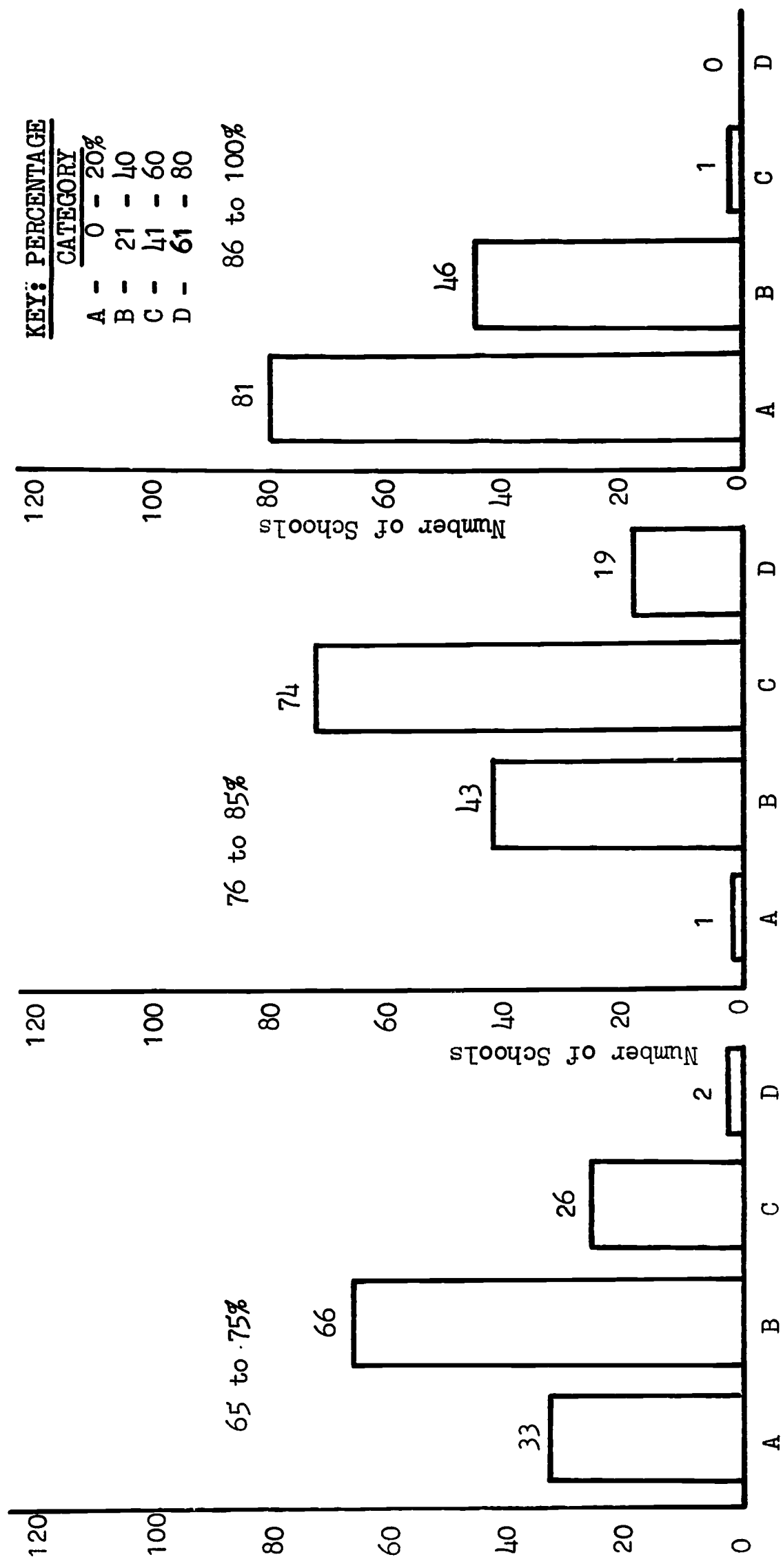


These graphs indicate the percent of seniors in the class falling in the percentage category.

In Region V there are 5960 seniors in the schools reporting.

Question 13. Part 2 (con't)

COMBINED PROFILE OF ALL REGIONS



These graphs indicate the percent of seniors in the class falling in the percentage category.

There are 26,971 seniors in the schools reporting in the entire survey area.

Question 14. What percentage of your graduates who follow a general academic program find themselves unable to enter Two-Year and Four-Year colleges for academic reasons or lack of pre-requisite courses?

REGION	PERCENTAGES 0		1 - 3		4 - 6		7 - 9		10 - 12		13 - 15		16 - 20		NO ANSWER	
I	3	4	2	3	7	5	0	1	4	2	1	1	0	0	3	4
II	11	14	8	5	1	0	1	0	1	5	4	1	0	1	0	2
III	3	6	13	13	4	2	0	0	1	0	0	0	2	0	4	6
IV	5	12	10	5	4	3	1	0	3	2	0	0	0	0	2	3
V	14	18	8	8	7	5	1	0	4	1	1	0	1	1	6	9
TOTAL	36*	54+	41	34	23	15	3	1	13	10	6	2	3	2	15	24

* Column 1 in each percentage category represents those schools that answered - for academic reasons.
\+ Column 2 in each percentage category represents those schools that answered - for lack of pre-requisite courses.

NOTES:

The results compiled for this question are unreliable because a large number of schools did not answer either one or the other part of the question. In some cases neither part was answered.

Further the question was answered in a variety of ways so that the answers had to be interpreted.

Therefore, the above results are offered for interest only.

COMMENTS:

"Because of the 'open door' policy in a large number of institutions of higher learning the number of students being denied admission is small."

"We can always find a place for our students."

Question 15. Do you favor a two-year college establishing a full-fledged division offering a complete course in vocational education to serve the needs of the non-degree students?

REGION	YES	NO	UNANSWERED
I	20	0	0
II	24	3	0
III	27	1	0
IV	24	1	0
V	39	2	0
TOTAL	134	7	0

Question 16. Do you believe the vocationally oriented students to be interested in the residence type college program with the type of college life it supports?

REGION	YES	NO	UNANSWERED
I	14	6	0
II	25	1	1
III	25	1	2
IV	18	5	2
V	33	6	2
TOTAL	115	19	7

Question 17. Do you feel that a two-year vocational education program on a post-secondary level might motivate an otherwise "non-college-bound" student to go on for further studies?

REGION	YES	NO	UNANSWERED
I	19	1	0
II	27	0	0

REGION	YES	NO	UNANSWERED
III	28	0	0
IV	23	2	0
V	41	0	0
TOTAL	138	3	0

Question 18. Do you feel that this type of program on a post-secondary level would raise the sights of a student who otherwise would not pursue education beyond high school?

REGION	YES	NO	UNANSWERED
I	18	2	0
II	26	1	0
III	28	0	0
IV	24	1	0
V	41	0	0
TOTAL	137	4	0

Question 19. Do you feel that specialization in a vocational field should be postponed until the post-secondary level if the cost of that education is within reach of the student?

REGION	YES	NO	UNANSWERED
I	12	6	2
II	15	12	0
III	15	13	0
IV	18	6	1
V	26	15	0
TOTAL	86	52	3

Question 20. Do you feel that the post-secondary vocational education program could complement the secondary school vocational education as an advanced education?

REGION	YES	NO	UNANSWERED
I	19	1	0
II	26	1	0
III	27	1	0
IV	25	0	0
V	39	1	1
TOTAL	136	4	1

Question 21. Do you feel that there are vocational education needs on a statewide or area level that cannot be met in the secondary school vocational program?

REGION	YES	NO	UNANSWERED
I	19	1	0
II	23	4	0
III	25	2	1
IV	23	2	0
V	36	5	0
TOTAL	126	14	1

Question 22. What do you envision as a need for vocational training in regard to returning veterans who had to postpone post-secondary education for military service?

COMMENTS:

- They should be trained in the service occupations.

- Vocational training and counseling will be a definite need.

- Many have learned skills in the service. Programs will be needed to adapt these skills to civilian uses. The vocational training on a post-secondary level can very well fill this need.
- The needs will be the same for any non-college bound student.
- They should be given the opportunity to continue to train on a post-secondary level in the skills they have developed in the service.
- There should be an emphasis on training in the technologies, mostly electronics and data processing.
- They will have a better idea of what they want and they should be able to follow up their in-service training.
- There should be federal support for programs on the post-secondary level.
- A strong guidance program, a wide variety of choices and a flexible program to serve individual needs.
- We will have to meet their needs on a post-secondary level of training because the service has provided an incentive for learning and a better idea of the training they would like.
- Some believed when entering the service that it might have become a career but found that they could not adapt to military demands. These people are definitely in need of vocational training.
- The course offerings at the Wellsville Vocational Division would be excellent for the returning, more mature serviceman.
- Let us remember that the G.I. bill now makes education possible for those who were unable to afford it previously.
- A great many of the returning veterans were potential drop-outs (academically) and were more adapted to vocationally oriented courses.
- Most military skills are not readily transferable to civilian life. Most veterans will need retraining or upgrading.

NOTE:

The vast majority of school administrators queried in this survey feel that there will be a strong demand for retraining in the skills previously learned in the service.

There is very strong feeling that the returning veteran is more mature and will have a more keen awareness of what he will want.

There is also a decided feeling that they will need a great deal of vocational counseling.

Question 23. Is there a need in your area for the availability of vocational education to serve the needs of mature physically handicapped persons?

REGION	YES	NO	UNANSWERED
I	10	7	3
II	18	6	4
III	20	7	1
IV	13	10	2
V	19	19	2
TOTAL	80	49	12

Question 24. Do you feel that post-secondary vocational programs can provide an opportunity for the disadvantaged student if financial assistance is available?

REGION	YES	NO	UNANSWERED
I	20	0	0
II	26	1	0
III	27	1	0
IV	25	0	0
V	40	1	0
TOTAL	138	3	0

COMMENTS:

- Too many of the disadvantaged have been misguided into academic programs when what they really wanted and needed was vocational training.
- A program such as this would be advantageous particularly for some of our students who come from the Indian Reservation.
- They must have motivation - money doesn't seem to be the problem.
- A great deal of students in this category would be more suited for vocational education rather than Liberal Arts or the technical fields.
- The lack of programs is more of a critical need than financial assistance.
- Low aspirations - low self motivation is more the problem than financial aid..
- We have ten students out of 190 who would like to go on to a post-secondary vocational training program but they have no funding.
- This type of indivual desires to get to work as quickly as possible to earn money. They can not visualize spending or borrowing for an education.
- The disadvantaged student, in my experience, has to be motivated toward this end or he ends up out of his element and quits.
- The problem is to reach the disadvantaged and persuade them to take advantage of what is already available. It is hard to fight values and environmental influences with money.
- This seems to be the area of greatest need in post-high school financing.

RESPONSES FROM BUSINESS AND INDUSTRY

Question 8. Number of employees?

(These figures were derived from a small representative random sampling of businesses and industries in the target area.)

REGION	NO. OF FIRMS	NO. OF EMPLOYEES
I	13	11,622
II	5	42,544
III	6	8,306
IV	5	3,692
V	5	8,255
TOTAL	34	74,419

NOTES:

- The smallest number of employees per firm represented in this survey is 8 and the largest is 40,000.
- The types of businesses and industries represented included a wide variety of services and products: The firms surveyed include the following fields: communications, automotive part and accessories, automobile sales and service, manufacturer of business forms, industrial heating devices, fabrication of custom homes, sales and service of trucks and trucking equipment, pipe fabrication, air pollution units, design and fabrication, manufacturer of air moving devices, engineering and construction, compression equipment manufacturing, turbine manufacturing, manufacturing of small business machines, production of electronic tubes - TV and Industrial, data process manufacturers, consulting

engineers, metal machining and fabrication, screw machine products, manufacturing of photographic equipment and supplies, metal office furniture fabrication, appliance, radiator and metal fabrication, gear reduction unit manufacturing, electric power equipment, air conditioning equipment, insulation contracting, automotive lighting equipment, savings and loan.

Question 9. Number of employees in the following areas:

REGION	MANAGEMENT & SUPERVISION	SALES	CLERICAL	SKILLED	SEMI-SKILLED	UNSKILLED	IN TRAINING
I	1363	1375	1032	1710	2013	544	612
II	248	121	245	1236	491	120	482
III	254	278	646	85	235	56	51
IV	557	24	1158	332	1005	489	65
V	858	120	1033	4114	1039	840	237
TOTAL	3270	1900	4084	7477	4783	2049	1447

NOTE: The total number of employees employed by the firms surveyed is 74,419. The total figure above is 25,010. The discrepancy is due to the fact that two large firms with a combined total of over 47,000 employees did not make the breakdown. This does, however, give you an idea of the breakdown in the different categories.

Question 10. Is there a growing need for well trained workers in your organization?

REGION	YES	NO
I	12	1
II	5	0
III	6	0
IV	4	0
V	5	0
TOTAL	32	1

Question 11. What skill level will show the greatest need?

REGION	PROFESSIONAL	SKILLED	SEMI SKILLED	UNSKILLED
I	--	X	--	--
II	--	X	--	--
III	--	X	--	--
IV	X	--	--	--
V	--	X	--	--

NOTE: Some firms show critical needs equally in two areas and they reported as such. The total number will be reflected by this fact.

Question 12. Do you feel there is a need in New York State for two-year vocational colleges to develop specific facilities and programs to train skilled personnel?

REGION	YES	NO
I	12	0
II	5	0
III	6	0
IV	5	0
V	5	0
TOTAL	34	0

Question 13. At what level would you prefer to hire a vocationally trained prospective employee?

REGION	HIGH SCHOOL GRADUATE	2 YEAR COLLEGE GRADUATE
I	2	7
II	2	3
III	2	4

REGION	HIGH SCHOOL GRADUATE	2 YEAR COLLEGE GRADUATE
IV	2	3
V	0	5
TOTAL	8	22

Question 14. What do you consider to be your greatest needs in skilled personnel?

Drafting, Machinists and Clerical in that order are the three most critical shortages for firms in the 5 Regions.

Question 15. Does your plant use an in-plant training program?

REGION	YES	NO
I	10	3
II	5	0
III	5	1
IV	2	3
V	3	2
TOTAL	25	9

Question 16. Does the minimum wage law affect your training program?

REGION	YES	NO
I	0	13
II	0	5
III	1	5

REGION	YES	NO
IV	0	5
V	0	3
TOTAL	1	31

Question 17. Would skilled personnel trained in a two-year college program eliminate - or greatly reduce - your in-plant training program?

REGION	ELIMINATE	GREATLY REDUCE
I	0	10
II	0	1
III	0	3
IV	0	3
V	0	3
TOTAL	0	20

Question 18. Do you hire employees from high school vocational training programs?

REGION	YES	NO
I	9	4
II	2	3
III	4	4
IV	3	2
V	3	1
TOTAL	21	14

Question 19. If yes to #18 from your experience do they perform below average, above average, or outstandingly?

REGION	BELOW AVERAGE	AVERAGE	ABOVE AVERAGE	OUTSTANDINGLY
I	--	6	3	--
II	--	2	1	1
III	--	2	2	--
IV	--	2	2	--
V	--	2	1	--
TOTAL		14	9	

Question 20. Do you feel there would be an advantage in hiring a skilled worker following the completion of a two-year college program?

REGION	YES	NO
I	13	0
II	4	1
III	5	0
IV	5	0
V	5	0
TOTAL	32	1

Question 21. Do you feel that high school vocational training programs meet the needs of Business and Industry when they look for skilled personnel in the field?

REGION	YES	NO
I	3	8
II	2	3

REGION	YES	NO
III	3	3
IV	2	3
V	0	4
TOTAL	10	21

Question 22. Do you find the maturity level of a beginning skilled worker an important factor?

REGION	YES	NO
I	12	0
II	5	0
III	6	0
IV	5	0
V	5	0
TOTAL	33	0

Question 23. What do you feel the job potential is for the post-secondary vocationally trained youth in your area?

REGION	NONE	AVERAGE	GREAT	EXCEEDINGLY GREAT
I	0	5	7	1
II	0	1	4	0
III	0	0	5	1
IV	0	1	4	0
V	0	3	2	0
TOTAL		10	22	2

COMMENTS RECEIVED FROM PERSONNEL DIRECTORS OF THE FIRMS SURVEYED:

- I feel that the graduate from a two-year post-secondary vocational school shows more interest by going on for advanced training. Therefore, making him a better employee.
- The high school level graduate is just a little too young - at the 2-year college level they have a more aggressive attitude toward learning.
- Historically, data shows that mature reliable high school graduates are able to perform at a satisfactory level in all of our job categories.
- In all honesty, it depends on the type position for which a person is being hired. Some jobs require a more highly trained person. On the other hand there are some jobs that the high school vocationally trained graduates can handle - and well.
- A two-year college graduate in a vocational program has a better foundation to make decisions.
- The present high school vocational training programs are not really approaching the modern day problems in industry. The present trend in manufacturing is to use the Tape Control equipment and the schools do not, and probably can not, train their students for this field. The skilled worker must be able to comprehend the sophisticated problems of Tape Control machines - he must make decisions on his knowledge of the automated equipment. In my judgement, "I feel that the high schools of today are failing to foresee the future and they are training students in obsolete manufacturing processes."
- Post-secondary vocational training can be most valuable in the skilled areas. High school graduates, however, with their attitudes and aptitudes are qualified to handle unskilled and semi-skilled positions in our industry.
- Our company cannot use craftsmen under 21 years of age.

- I have visited the Wellsville Vocational Division of Alfred Tech College and can safely say that their Drafting program is excellent. I highly recommend its continuance. We find that the A.A.S. graduates do not want to draw - and to us this is extremely important.
- I feel that the two-year college graduate has a distinct advantage over the high school graduate.
- Through our past experience, the two-year college graduate is much more adaptable to our situation.
- We are definitely interested in recruiting from such schools on the two-year post-secondary level - we have an ever increasing need for such graduates.
- From our standpoint we prefer to see the high school used for regents and the college advanced training for specialization.
- We feel that the need for qualified graduates consistently outruns the supply. We feel that the post-high school trained personnel will be in ever increasing demand as the complexity and technology of our operations continue to increase.
- We have students from the Wellsville Division and are very pleased with the results. We will always have this school placed very highly on our list of schools to recruit for prospective employees. Syracuse can use a division similar to Wellsville.
- Students directly out of high school usually are not aggressive enough - schooling after high school would help develop many of the good characteristics we look for in an individual.
- Syracuse, as an area, is very short of mature, well trained individuals to fill the great number of jobs which are far above the "clerk" level and yet below the "degree" level.
- We can teach employees our company's way of performing a specific task or

job but we can not spend the time teaching them the know-how which is only gained in a two-year school or at least additional schooling or training.

- Less training is required for the post-secondary graduate - they have better work habits and attitudes.

- We are forced to hire at the high school level but prefer to hire men with two years of college training.

- We would like to see a post-secondary vocational school in the Jamestown area - There is a lack of good young talent in this area for foremen and other supervisory categories - The 2 year college trained person could definitely fill this gap.

- Two year college graduates are more mature, more reliable, retain more knowledge and are more likely to know what they want.

- With the unskilled and semi-skilled jobs on the decline the skilled to technician class is growing at a rate exceeding the market - <u>This void must be filled rapidly.</u>

RESPONSES FROM THE COMMUNITY COLLEGES

The ten Community Colleges in the western sector of New York State are included in this survey and will be referred to with letters.

Questions 1 and 2. What is your present enrollment? What is your projected enrollment?

	PRESENT	1969	1970	1971	1972	1973
A	1,650	1,800	-	-	-	3,000
B	1,400	1,500	-	-	-	4,400
C	1,730	1,770	-	-	-	2,400
D	850	1,100	-	-	-	2,000
E	1,350	1,450	1,700	1,800	-	-
F	350	550	750	950	1,150	1,350
G	2,350	3,000	-	4,000	-	6,000
H	800	930	1,050	1,175	1,300	1,400
I	3,100	-	4,100	-	7,000	-
J	1,472	1,900	2,100	2,500	2,700	-

Note: These figures represent full-time day students. Present total enrollment is 15,052. Projected enrollments were not totalled because in some cases projections were not made for various reasons.

Question 3. What is the anticipated number in the graduating class?

	1969	1970	1971	1972	1973
A	520	-	-	-	865
B	625	-	-	-	-
C	550	-	-	-	-
D	100	200	200	200	200

	1969	1970	1971	1972	1973
E	435	-	-	-	600
F	125	-	-	-	-
G	700	-	1,200	-	1,800
H	200	240	260	300	340
I	-	-	-	-	-
J	560	750	1,000	1,080	-

Question 4. What percentage of your students are enrolled in what might be considered vocational programs?

	0-10	11-20	21-30	31-40	41-50
A	-	-	-	-	X*
B	-	-	X**	-	-
C	X+	-	-	-	-
D	X**	-	-	-	-
E	-	-	X	-	-
F	X+	-	-	-	-
G	X++	-	-	-	-
H	-	-	-	X	-
I	X++	-	-	-	-
J	X++	-	-	-	-

NOTES:
- * This is occupational and not vocational and the programs are offered in the evening division.
- ** The term used here is technical and not vocational.
- \+ This college has not had enough experience and is too new to consider this vocational area at present.
- ++ Non-degree type courses are offered in the evening extension only and are usually of short duration.

Question 5. List types of vocational courses and indicate whether they are degree or non-degree.

Five of the ten colleges offer no non-degree vocational programs except on an evening extension program. Another three of the ten prefer to use other terms such as "occupational" or "technical". The remaining two offer these courses:

Course	Degree	Non-Degree
Electronic Data Processing	X	--
Secretary Science	X	--
Police Science	X	--
Fire Science	X	--
Nursing	X	--

There seems to be a wide discrepancy as to the terminology used as to whether a course is vocational, technical, occupational or business oriented. In almost every case each individual (college president) interviewed had his own interpretation of the idea of "vocational" programs. A very definite clarification has to be made in order for a sensible conclusion to be made as to "who is" and "who is not" performing a service in the "vocational" area.

Question 6. What percentage of your students will transfer to pursue baccalaureate degrees?

	0-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	90-100
A	-	-	-	-	-	-	-	-	X
B	-	-	-	-	-	-	X	-	-
C	-	-	-	-	X	-	-	-	-
D	X*	-	-	-	-	-	-	-	-
E	-	-	-	-	-	X	-	-	-
F	X**	-	-	-	-	-	-	-	-

	0-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	90-100
G	-	X	-	-	-	-	-	-	-
H	-	-	-	-	-	X	-	-	-
I	-	-	-	X	-	-	-	-	-
J	-	-	-	-	X	-	-	-	-

* There is not enough conclusive evidence because the graduating class has been too recent.
** As yet there has not been a graduating class.

Question 7. What percentage of non-degree vocational programs are offered in evening and extension classes?

As indicated previously the majority of the colleges that do offer these non-degree courses offer them mainly in the evening.

Question 8. How many hours of General Education courses are required in the non-degree vocational programs?

This question could not be answered so that conclusive evidence could be portrayed. Comments will be made regarding this question in the Summary and Observations.

Question 9. What types of employment do these students in vocational programs enter upon graduation?

The great number of different types of employment mentioned in this survey makes it difficult to compile a list. A general comment, however, can be made - The students who do not transfer are entering the career, trade and technical areas of employment.

Question 10. In your opinion what has been the response to non-degree vocational curriculums offered in your college?

	RESPONSE				
	Not Offered	Limited	Moderate	Good	Excellent
A	-	-	-	X*	-
B	-	X*	-	-	-
C	-	-	-	-	X*
D	X	-	-	-	-
E	-	-	-	-	X
F	X	-	-	-	-
G	X	-	-	-	-
H	-	-	-	-	X
I	X	-	-	-	-
J	X	-	-	-	-

* Prefer to call the non-degree other than "vocational"
** This is not strictly vocational. It is more occupational and business in nature.

Question 11. What is your personal reaction to non-degree vocationally oriented programs in your college?

	Questionable	Passive	Interested	Enthusiastic
A	X	-	-	-
B	X	-	-	-
C	-	-	-	X
D	-	-	X	-
E	-	-	-	X
F	-	-	-	X

	Questionable	Passive	Interested	Enthusiastic
G	-	X	-	-
H	-	-	-	X
I	X	-	-	-
J	-	-	X	-

Question 12. Do you favor post-secondary non-degree vocational education as opposed to or in addition to secondary school vocational programs?

YES	NO
10	0

estions 13 and 14. What are the developmental plans for vocational riculums, if any, in your college?

College A -

There are no specific plans for vocational curriculums. They do, however, plan to begin a lower level type program - those who can not meet the regular standards for admission - for the technicians in the Industrial program that would include: Mechanical, Chemical and Electrical courses, Dental Hygiene, and Occupational Business courses such as: Marketing, Engineering and Executive Secretarial studies and Accounting.

College B -

There are no plans as such for "vocationally" oriented programs. They do, however, plan to become heavily involved in a para-medical program to include: X-Ray, Inhalation Technicians, etc.

College C-

Plans include programs in: Electronics-Electricity, Health Career

Fields, Social Science -(Teacher-Aid, Welfare and Psychological areas.) and Glass Engraving.

College D -

There are no plans at present. They would, nowever, be interested in looking into this area in the future when space and financial assistance become available.

College E -

Some plans are being formulated in the areas of Drafting, the Health Fields to include Practical Nursing and Conservation.

College F -

Plans are to include Electronics-Electricity and Construction Technology.

College G -

Their present plans do not include vocationally oriented programs. More emphasis is being place on a Liberal Arts program.

College H -

Plans include Health Careers, X-Ray Technicians program.

College I -

There are no present plans for this area.

College J.

Plans include programs in Drafting and Manpower Management.

Question 15. If you do not include vocational programs in your curriculum, are there educational or philosophical reasons for their omission?

College A -

The present administration quite frankly states that they have worked hard to erase the old Agricultural and Technical stigma and do not wish to revert. They feel they have developed a fine reputation with their present program.

College B -

The administration feels strongly toward a Comprehensive Community College with a strong Liberal Arts program.

College C -

"We are a college first." "We do not wish to compete with the BOCES program." The philosophy here includes the feeling that there should be as wide a spectrum as possible - with an open end policy. There seems to be a strong feeling that terms such as career and vocation should have little distinguishable difference.

College D -

There is a feeling here that there is a definite need for a separate post-secondary vocational program.

College E -

The chief administrator feels that there is a definite need for vocational training. He feels, however, that his main effort should be exerted toward the Transfer programs.

College F -

The philosophy expressed by the president of College F is self-explanatory - "Whether we are for it or not we have got to do it!"

College G -

College G's president is technically oriented. He feels that there is a need for vocational programs on the post-secondary level when it has been clearly demonstrated. Further, he feels that his community college could fill the void but thus far has shown interest to the student who is of a higher academic level and who desires to receive degree type technical training.

College H -

The president of College H definitely believes in non-degree post-secondary vocational training in addition to high school programs. He can not, however, convince his community nor his faculty that they should include such a program in their curriculum.

College I -

College I president feels that the vocational area should be carefully explored before demanding that the Community College meet this need. If it were clearly demonstrated then the Community College is ready to meet the need based on its capabilities. He strongly feels that the Community Colleges are already taxed to their limit and there is terrific pressure put upon them to meet the many and various kinds of education needs - particularly the technical fields and the liberal arts transfer programs.

College J -

The feeling here at College J is that there is definitely a place for post-secondary vocational education in addition to the secondary school program. "Primarily because the student is more mature at this point and he knows what he wants and is able to apply himself in a better way." The basic philosophy here is that any post-secondary or education beyond the twelfth grade should be supported by public higher education which would likely be conducted through a community college or some other college who may have the trained personnel and the know how.

Question 16. Do you see the cost of certain vocational programs as prohibitive in your college?

YES	NO
3	6

NOTE: One college president said yes and no because it depends on the type of program. Programs that require large space layouts and expensive equipment are definitely costly while on the other hand some vocationally oriented courses require very little.

Question 17. Do you see enrollment limitations from your drawing area as preventing the offering of certain specialized vocational programs?

YES	NO
2	8

Question 18. Do you see faculty or space limitations as a problem in offering certain vocational programs?

YES	NO
6	4

NOTE: All that indicated yes were specifically for space limitations rather than faculty. One case included both faculty and space.

Question 19. Do you see an advantage of specific vocational colleges set up on an area level to offer wider curriculum offerings or more specialized vocational education?

YES	NO
5	1

Question 20. Do you see area vocational colleges offering specialized programs as competitive with the two-year community colleges?

YES	NO	UNANSWERED
2	7	1

Question 21. Do you feel students in vocational programs are more likely to prefer:

Commuting	In Residence	No Answer
7	0	3

Question 22. If you include non-degree vocational programs in your curriculum offerings, do you feel that these students feel like "second class citizens" in any sense?

YES	NO	UNANSWERED
0	6	4

Question 23. Do you feel that post-secondary non-degree vocational programs can or should complement secondary vocational programs by giving articulation specialization or advancement?

YES	NO	UNANSWERED
8	6	4

Question 24. Do you feel all vocational programs should be worked into a degree program, such as Associate Degrees in Applied Science?

YES	NO	UNANSWERED
3	5	2

Qeustion 25. Do you feel that vocational education programs tend to be more concerned with manpower needs of their immediate locale, than the wider needs on a statewide level?

	YES	NO	UNANSWERED
Secondary School	7	0	3
Community College	7	1	2

Question 26. Do you think vocational education should be largely based on the vocational opportunities of the:

Immediate locale	Statewide or Larger	Unanswered
7	1	2

Question 27. Is the Community College able to include curriculums that meet the needs on the state level which may not be prevalent in this locale?

YES	NO	UNANSWERED
7	1	2

Question 28. Do you feel that with the changing occupational spectrum and a multiplicity of vocations in technological fields that much of this type of vocational education can still be offered at the secondary level as opposed to specific on the job training?

YES	NO	UNANSWERED
6	3	1

ERIC

RESPONSES FROM THE PARENT AND STUDENT INTEREST STUDY

It should be noted that the random sampling was taken from high schools in Three Regions. It should also be noted that these questionnaires were given to seniors who were not in academic programs and were, therefore, not supposedly making plans for going on to college.

We had hoped that the response would have been greater in numbers. We can, though, get some idea of what students and parents are thinking.

PARENT INTEREST STUDY

Question 1. In your opinion, should public education facilities be made available on the post-secondary school level for vocational education training to prepare students for:

Employment in agricultural pursuits	31
Employment in office occupations	30
Employment in store occupations	22
Employment in vocationally oriented pursuits	30

Question 2. In such a program what specific subjects would you suggest as possible course offerings?

Auto Mechanics	6	Welding	2
Clerical	6	Auto Body Repair	1
Drafting	4	Metals	1
Construction	3	Retailing	1
Data Processing	3	Conservation	1
Food Service	2	Heavy Equipment Operator	1

Electrical	2	Nursing	1
		Machinist	1

Question 3. What is the choice that your son or daughter has made as to his/her plans upon graduation from high school?

work full time	18	enter a college vocational program	0
part time work, part time education	6	enter private business school	0
enter two-year college	4	enter the armed forces	5
enter four-year college	3	undecided	3
enter a technical institute	4	other	0

Question 4. Are you in agreement with the plans of your child?

YES	NO
31	3

STUDENT SURVEY

Question 1. Will you graduate from high school this year?

YES	NO
154	2

Question 2. Do you plan to enter college?

YES	NO
36*	112

* This is an interesting point since these questionnaires were given to non-college bound students.

Question 3. Have you applied to any college?

YES	NO
30	109

Question 4. Would you be interested in a college vocational training program?

YES	NO
66	90

Question 5. Are you familiar with any college offering such vocational programs?

YES	NO
27	116

Wellsville Vocational Division	15
Williamsport	8
Others	4

Question 6. Did you take vocational courses in high school?

YES	NO
62	75

Question 7. What would be some of your vocational choices if you could get the training?

Auto Mechanics	19	Electrical	4
Building Construction	17	Machinists	3
Clerical	13	Business	3
Cosmetology	9	Conservation	2
Drafting	8	Carpentry	2

Data Processing	6	Teacher's Aid	2
Food Service	6	Metal Shop	1
Nursing	5	Welding	1

Question 8. What are your plans upon graduating from high school?

work full time	65	enter a technical institute	6
part time work part time education	11	enter private business school	8
enter two-year college	10	enter armed forces	24
enter four-year college	10	undecided	5
enter vocational training program	12	other (marriage)	5

Question 9. What do you expect to earn per week if you get a job upon graduation?

Less Than $75	$75-100	$100-125	$125-150	$150-over
33*	59	7	17	1

* 90% of these were female.

NOTE: 39 had no idea and did not predict.

OBSERVATIONS:

It is interesting to note that the idea of salary appears to be quite foreign to a high school senior.

RESPONSES ABOUT BOCES PROGRAMS

The following comments were offered by Community College presidents, high school principals and guidance counselors, and administrators at individual BOCES facilities.

Responses by Community College presidents.

- There is a definite need for post-secondary vocational training. It could well be fulfilled by an extra two years at the BOCES program.

- "We would like to articulate our program with our local BOCES program but we have faculty and space limitations."

- "I feel that there is a definite need for post-secondary vocational training for those who want it. The vocational training program begins too soon in high schools and it, therefore, precludes students from pursuing anything but a vocational program later in life."

- "I honestly feel that the BOCES program is a 'dumping ground' for some otherwise 'bad actors'. It is used as a convenience by some counselors. This has to cease or the entire BOCES program may be put in jeopardy."

- "We work very closely with the BOCES program but I feel there is a definite need for post-secondary vocational training."

Responses by the high school administrators.

- "I feel that vocational education should definitely be given at the post-secondary level."

- "It is more desirable to receive a general education on the high school level."

- "Our school district voted down the BOCES program and this does not sadden me."

- "The cost of $729 per student per year appears to be substantial."

- "Only special cases need vocational programs on the secondary level."

- "There is a definite need for post-secondary training in our area."

- "I feel that it could complement the existing BOCES program."

- "With the advent of increased facilities for BOCES programs more and more students will wish to seek further training."

- "BOCES is fine but there is too little opportunity in vocational advanced training."

- "I feel that the training students receive at our high school level does not prepare or develop the skills necessary for employment in the skilled occupations."

- "We really do not do an adequate job on our level, be it our own course or one offered by BOCES, for many pupils because many of the pupils are unsure of what they want."

- "I feel certain the Wellsville Division will be forced to expand because of the increase in the BOCES programs."

- "I feel that a large number of the BOCES students will want to earn money as quickly as possible."

- "The BOCES program only includes 23 of our students - what about the rest - those who will not go to a conventional college program but want to go on for advanced training - they'll have to go somewhere."

- "BOCES program lacks placement."

- "BOCES does not come close to taking care of the great number of students who should be in a vocational program."

- "Post-secondary vocational training is more effective. A secondary vocational course is possibly the only reason why some students remain interested in school."

- "We start BOCES too soon - vocational plans should be made on a post-secondary level."

- "We send the kids to the BOCES program to get them out of our plant. The type we send have no purpose to serve anyway."

- "Students who cannot schedule courses of a vocational nature at the high school level wish to go to post-secondary vocational education."

- "It is <u>impossible</u> to schedule some students for the BOCES center."

- "I believe that we ask students to commit themselves at too early a stage in our BOCES programs."

- "With the increasing number of students receiving one or two years of training at our Area Occupational Centers, I believe that they should have access to one or two years of advanced training - as long as there is no repetition."

- "Even if a student feels he gets enough training at a BOCES program he is still interested in avoiding the draft and, therefore, will seek more training on a post-secondary level."

- "Many students will not make their final choice in high school programs - the avenue must be kept open for post-secondary programs."

OBSERVATIONS:

- The BOCES program is working rather effectively for about 85% of the schools surveyed. That is for the number of students - small in number from each school - who can be scheduled for courses in this cooperative program.

- The BOCES administrators interviewed feel that when their students go on for advanced training they will be bored from duplication. If this duplication can be avoided these people feel a definite need for advanced training in some areas. They also feel that post-secondary programs could very well be geared to serving the communities by training the returning veterans, and the handicapped.

- Some of the BOCES programs are effectively operating 13th year courses, or post-graduate courses.

IV. SUMMARY

There are six basic questions that should be answered in preparing a summary for this survey. In addition to the answers to these questions, there will also be included in this summary other pertinent data, observations made by the Project Director and the Staff Assistants, and references to comments made by the various constituents surveyed.

The basic questions are:

- How many high school students are interested in vocational training?
- How many high school students feel that their desire for vocational training can be better met at the high school level or at the post-secondary level?
- What types of programs do the students want?
- What are the plans of the community college in the area surveyed as projected by the administration?
- What vocational programs on the secondary school level overlap with those taught at the Wellsville Campus of State University of New York Agricultural and Technical College at Alfred (a post-secondary vocational school within the survey area), and how can articulation be effected so that the opportunity of training exists for the youth in this part of the state?
- What is the job placement potential of vocationally trained youth in the survey area?

The answers to these basic questions will be presented in the form of facts derived from the survey results.

Question 1. How many high school students are interested in vocational training?

In order to answer this question it will be wise to present the facts collected from the interviews conducted with the high school administrators ... Principals and Guidance Directors. These administrators are involved daily with the students, their records and follow-up studies regarding what these students do upon graduation from high school. So, it is with this in mind that we attempt to answer this first question.

Refer to the chart on page 15. It indicates the number of schools by region in percentage categories of student bodies enrolled in vocationally oriented courses. The collective answers to question number 8 of the high school questionnaire points out the number of students who are potential enrolees in vocational courses, whether in their own high school curriculum or in BOCES. The figures are totals by Regions: Region I - 505 out of 5,351, Region II - 568 out of 5,586, Region *** - 567 out of 7,076, Region IV - 408 out of 2,998 and Region V - 511 out of 5,960. The grand total of all Regions is 2,459 out of 26,971. (See charts on pages 23-30 for projected figures.) This figure, although it appears to be low at 10%, can be a very significant figure in terms of the potential number of students who might possible go on for advanced vocational or technical training. In order to get a picture of future projections for any one year please refer to the charts on pages 23 - 30 . For example, in 1973 the projection (it must be remembered that these are only estimates based on the administrator's opinions of trends that appear to be headed in the direction of increased numbers in this category) of students who might enroll will be increased by approximately 40%

Further, it must be pointed out that from the 141 high schools in 5 different regions interviewed 137 indicated that there should be vocational education available on a post-secondary level. This is an overwhelming

majority as we can readily see.

The results of the Business and Industry survey also point out that: 22 out of 35 firms prefer to hire a post-secondary vocationally trained individual; 34 out of 35 indicate that there is a need for two-year vocational colleges to develop specific facilities and programs to train skilled personnel; 21 out of 35 firms indicated that high school vocational training programs do not meet the needs of business and industry when they look for skilled personnel.

Question 2. How many high school students feel that their desire for vocational training would be met better at the high school level or post-secondary level?

To present facts to support the answer to this question the results of the answers to three questions on the high school questionnaire are offered as evidence. 137 out of 141 high school administrators, based on their experience indealing with the placement and guidance of students, feel that a vocational training program offered on a post-high school level would raise the sights of a student who otherwise would not pursue education beyond high school.

86 High Schools out of 141 indicated that specialization in a vocational field should be postponed until the post-secondary level if the cost of the education is within reach of the student.

136 out of 141 indicated that the post-secondary educational program could complement the secondary vocational education as an advanced education.

Question 3. What types of programs of study do the students want?

The six most popular programs, as indicated on the chart on page 16 are in this order: Auto Mechanics, Cosmetology, Building Trades (Construction and Carpentry), Drafting (Mechanical Drawing), Clerical (office practice and procedures) and the Machine Trades.

From the student questionnaire results we note that the most popular courses of study in order are: Auto Mechanics, Building Construction, Clerical, Cosmetology and Drafting.

Question 4. What are the plans of the Community Colleges in this area as reflected by their administration.

There are no plans as such for vocationally oriented programs in five of the ten community colleges.

In the five remaining community colleges there are plans being formulated in the areas of Electronics-Electricity, Construction Technology, Health Careers, Drafting, Man-Power Management, Glass Engraving and Conservation.

For further support to answer this question please refer to Responses from the Community Colleges - results of answers to question #13 through 18.

Question 5. What programs at the area vocational school overlap with those taught at the Wellsville Campus and how can articulation be effected so that optimum opportunity of training exists for the youth in this part of the state?

The results of the answers to question 12 on the high school questionnaire indicate that the high school administrators feel that there would be some overlap. They do, however, agree that this overlap would not have any different effect than the overlap now experienced in many of the other courses offered in regular curriculum and conventional college programs.

For specific results regarding this question please refer to composite answers by regions to question #10 and #12 of the high school questionnaire.

See page

To further support the answer to this basic question please refer to questions #19 and 23 in the section: Responses from the Community Colleges.

Question 6. What is the job placement potential of the vocationally trained youth in the area?

There is a definite, growing need for well trained workers in the five regions. There were 32 industries out of 35 that emphatically stated yes to this question: "Is there a growing need for well trained workers in your organization?" Refer to page 36 question #10 in the section: Responses from Business and Industry. Also refer to questions #20, 21 and 23 of the same section.

OVER-ALL OBSERVATIONS

The following observations are made by those who worked with the survey. They are offered so that the multitude of data collected might be digested and presented in written form so that one may get a capsule picture of the survey.

1. There is a strong feeling that most high school graduates are too young to accept the responsibility of a permanent vocation.

2. There is a definite need for post-secondary vocational training - particularly for those students in the middle high school grade average level who do not want to pursue an academic course.

3. The overwhelming majority of high school administrators agree that a post-secondary vocational program is needed in all of the areas surveyed.

4. The businesses and industries surveyed indicated that they preferred to hire graduates with more specialized and advanced training.

5. Many of the people interviewed would like to see schools much like the Wellsville Vocational Division instituted in their locales. Many feel that this survey represents the beginning of such thinking.

6. There is a definite trend toward the skilled worker and a decline in the semi and unskilled areas.

7. Parents, Community College presidents, high school administrators and personnel directors from business and industry agree that vocational education can begin too early and that sometimes precludes advanced training on a post-secondary level.

8. More times than not an otherwise "non-college-bound" student received a second chance at a post-secondary level training program and either excelled or became highly motivated and did above average.

9. College administrators feel that our high schools are training their vocational students in obsolete manufacturing processes.

10. There is evidence that many feel that there should be a secondary school, four-year general education program for "every" student and that the vocational training be postponed until the post-secondary level.

11. Many feel that because of the rapidly changing technology, constant upgrading will be essential in most areas.

12. That there are wide discrepancies in the terms of technical, occupational and vocational education. Many use these terms interchangeably. I am afraid that in some cases the true "vocational programs" are not really being accomplished. Many even consider business courses as vocational.

13. There is evidence that vocational education in secondary schools does not develop the skills necessary for employment in skilled occupations.

14. Community Colleges tend to be more oriented toward Liberal Arts and Technical training rather than vocational. They will take on the task of instituting vocational programs if forced to do so.

15. With the increase in enrollment at the BOCES level there appears to be a definite trend toward students seeking advanced training in some areas - while some will want to go directly to work.

16. Many have stated quite clearly that - "This is the one area (vocational) in education in which New York State is definitely behind.

17. Articulation from the secondary programs and BOCES programs to the post-secondary level can be accomplished.

18. Judging from evidence from the business and industry survey - "high school graduates <u>generally</u> do not have marketable skills."

19. The returning veteran will need and demand post-secondary training in skills that he has come in contact with while in the service. Too, he will need much vocational counseling.

20. There are some developmental plans on the Community College level for vocational programs but not near enough. I get the feeling that they would "rather not" do the job if they did not have to.

21. There is a definite trend toward ever increasing numbers of high school graduates as evidenced by the enrollment and projection charts.

22. That a relatively small percentage of our high school students are enrolled in vocationally oriented courses.

23. The vocationally oriented student would rather commute than be in residence - cost factor being the main reason.

24. Most community college administrators would rather see degree courses in vocational, technical or occupational than non-degree programs.

V. CONCLUSIONS

After analyzing the multitude of data collected, it appears that there is a definite need for post-secondary vocational training programs.

This is supported by:

1. The desire of the students to attend.

2. The large number of high school administrators who supported this thesis.

3. The people from business and industry surveyed clearly state that they would rather hire the post-secondary graduate with advanced training.

4. The increasing number of students who might otherwise be non-college bound who would seek this type of training.

5. The relative coolness of the community colleges toward offering other than degree programs in their technical and Liberal Arts atmosphere.

6. The community colleges are not doing the job in the vocationally oriented programs.

VI. APPENDIX

The material on the following pages, identified as Appendix VI A and B, contains seventeen case studies from the post-secondary vocational division of State University of New York, Agricultural and Technical College at Alfred; and a placement report of the employment of 1968 graduates of the same school.

This material is presented in support of the third aspect of the purpose of this survey; that is, the need for vocational graduates and their employment opportunities in business and industry in the target area.

VI. APPENDIX A

CASE STUDIES - WELLSVILLE VOCATIONAL DIVISION

STUDENT A

Is a commuter enrolled in the Building Construction curriculum. He comes from a town of about 1000 in Allegany County. His father, a pumper in an oil field, has an eighth grade education. The student, age 19, has one older sister.

In high school, Student A majored in Industrial Arts and Math, but didn't participate in outside activities because of his after school chores. He had a high school average of 74, and graduated with a class of 35. On the Albany Test Scores, he had a total score of 102. While here at the Vocational Division the student earned a cumulative average of 3.8 out of 4.0. He was a member of the Student Board and was on the dean's List. His college expenses were provided through his own effort and family assistance.

Student A worked for a local lumber company during the summer between his freshman and senior year and is gaining work experience with a local contractor who will employ him full-time upon his graduation.

STUDENT B

This student, age 18, is from one of the larger cities in Erie County and is enrolled in the Automotive Specialist program. His father, an electrician, has a high school education.

In high school, Student B took the college entrance program and graduated with an 82 average. His RSE score was 150. While in high school he participated in varsity sports.

Here in the Vocational Division the student earned a cumulative

average of B. He did not participate in any formal activities.
Part of his college expenses were covered by loans.
Student B.has worked in gas stations and repair shops prior to his graduation from the Vocational Division of Alfred Agricultural and Technical College. He is working at a steel company in Buffalo, N.Y. as a mechanic for their in-plant vehicles at $3.13 an hour.

STUDENT C

Student C is a 21 year old commuter enrolled in the Electrical Service program. He comes from a town of about 6,000 in Allegany County. This boy came to this locality on his own when he was 15 from Philadelphia, Pa. He supported himself while he finished high school and also financed his vocational education in its entirety. His father is a supervisor of an instrument engineering department for a company in Philadelphia.
This student earned 74 average in high school, but did not participate in any extra curricular activities.
Here in the Vocational Division he has earned a C+ cumulative average.
He also got married in his senior year.
This student has done considerable electrical work around town and on campus while he has been here. He also has been on the Work Study program.
Upon graduation this student will start work as an electrical technician for an electrical component manufacturing firm for $2.85 an hour.

STUDENT D

Student D is a commuter enrolled in the Building Construction curriculum. He comes from a town of about 3,000 in Steuben County.

His father, a merchant with an eighth grade education, makes less than $10,000 per year. The student, age 19, has four brothers and sisters.

In high school, Student D majored in Industrial Arts and earned an 82 overall average. His RSE score was 88. While in high school he participated in football, swimming, baseball, stage work and church club.

While here at the Vocational Division the student earned a B cumulative average. His outside activity consisted of skiing. His college expenses were provided through family assistance and a government loan. Student D had worked as a janitor in his high school, one summer for a building supply firm and last summer worked on the Main Campus. He is now working for a large construction company out of Elmira at $4 an hour.

His parents would encourage other young people to attend this type of school, "Because it gives a boy a great opportunity to learn a trade that he likes to do, and maybe doesn't have the ability to go to college."

STUDENT E

Student E, age 20, from the Buffalo area, is enrolled in the Automotive Specialist program. He has seven brothers and sisters. His father is a pharmacist and has had six years of college.

In high school Student E majored in math and science and graduated with a 72 average. His RSE score was 106. While in high school he played football and basketball.

Here in the Vocational Division the student earned a C+ cumulative average. He did not participate in any formal activities as he was married and worked full time after school.

Student E has worked for a steel company, clerked in a drug store and has worked as a mechanic his senior year. He plans to stay in Wellsville where he will be employed at the same place where he worked while in school, but at a higher rate than the $2 an hour he was getting.

The student plans to continue his education through evening courses.

STUDENT F

Age 20, from a small town in central New York, is enrolled in the Electrical Service program.

In high school, Student F majored in Industrial Arts and graduated with a 77 high school average. There was no Regents Scholarship Exam score. While in high school this student did not particpate in any extra curricular activities.

Here in the Vocational Division the student earned a C+ cumulative average. Again, he did not participate in any formal activities. While here at the college though, he did work part time with another student wiring houses. This student, upon graduation, will enter the Air Force.

His parents would encourage other young people to attend this type of school, as they will be able to obtain a higher paying job and a more important position in our society.

STUDENT G

Is a 21 year old girl from a small town in Scoharie County, and is

enrolled in the Food Service program. Her father runs a farm, and her mother works as an operating room supervisor. Their gross income is in excess of $10,000. Along with the student there are five other children.

While in high school the student took a general education course and graduated with a 65 high school average. She participated in girl's sports and was a member of the girl's Athletic Association. Here in the Vocational Division, the student earned a B cumulative average. She also participated in many of the activities on campus. She was, for a time, secretary on the Student Board.

This girl's college expenses were paid by the Department of Vocational Rehabilitation.

This student will be working in a cafeteria in the Soldier's and Sailor's Hospital in Wellsboro, Pa. for $85. a week.

This girl had been denied application at Cobleskill Ag Tech College because of inadequate grades in English, and also had an application denied at the Albany Training School for Practical Nurses because of a history of epilepsy. The parents would encourage others to attend this type of school because, "There is a great need of trained technicians in the fields of food service and for those not qualified for another profession this is a most wonderful opportunity."

STUDENT H

Student H is a 20 year old commuter from a very small town in Allegany County enrolled in the Automotive Specialist program. His father, a guidance counselor in the area schools, has a gross income in excess

of $10,000.

In high school Student H majored in agriculture and science and graduated with a high school average of 73. While in high school he participated in sports and automobiles. His RSE score was 83.

Here in the Vocational Division the student earned a C+ cumulative average. He did not participate in any extra curricular activities. While here, he maintained a part time job working for one of the car dealerships near his home town.

The student has accepted a position as a mechanic with a car dealership in Buffalo, N.Y.

His parents comment that he would not have gone on to another college if he had been accepted. "It, (Vocational College), was the only place he was interested in attending." The parents feeling about the advantages and disadvantages of post high school education are expressed in the following: "Directing courses to the child's interest gives the student a chance to succeed. This outweighs any visible disadvantages."

STUDENT I

Is enrolled in the electrical service program. His father, a pressman with one year of high school, has a gross income of less than $10,000 a year. There are two other children in the family besides this student.

In high school the student majored in industrial arts with specialization in electricity. He graduated with a high school average of 70. His RSE score was 86. While in high school this student participated in the cafeteria committee and the assembly committee.

In the Vocational Division this student maintained a cumulative average of C+. He was a member of the Student Senate and class representative

to the Student Board. He was on the honor roll for three quarters. Prior to graduation this student has been a stock clerk in a grocery store, a junior helper for a printing company and worked in installing heating equipment in new homes.

Upon graduation this student will be working for a heating and air conditioning company in Buffalo, N.Y at $120 a week.

STUDENT J

Student J, age 20, is from a large city in western New York State. He is enrolled in the drafting program. His father, a sheet metal worker with a high school education, and his mother who is an executive secretary, have a gross income of over $10,000. There is one other child in the family.

While in high school, this student took a college entrance course and graduated with a high school average of 85%. His regents scholarship exams score was 190. While in high school this student participated in student government, drama and tennis.

Prior to coming to the Vocational Division of Alfred Ag Tech College, this student had had a semester of work at the U.S. Maritime Academy. Here in the Vocational Division this student earned a cumulative average of C, but he was very active in other areas. He was on the Student Government, Student Board, Student Life Committee, Narcotics Committee, Vice President of the Student Senate, Chairman of CISGA. This student, prior to graduation, had worked as a truck driver, draftsman, cook and bar tender.

Student J, who seems to have gotten himself straightened out here at this two-year program, has been accepted into the two-year associate degree program in Industrial Technology on the Main Campus.

STUDENT K

Is a 20 year old commuter from a very small town in Allegany County, who is enrolled in the drafting curriculum. His father, a welder with the Air Preheater Corp. has a high school education and has a gross income of approximately $7,000. There are four other children in the family.

While in high school the student majored in math and science, and graduated with an average of 84%. He participated in intramural sports and track. His regents scholarship exam score was 175. Here in the Vocational Division this student earned a cumulative average of B+, and was on the Dean's List.

Upon graduation this student will be going to work for one of the larger companies in Wellsville at $115 per week.

STUDENT L

Student L, age 19, is from one of the larger cities in Erie County, New York. He is enrolled in the drafting program. His father, with a high school education, owns and operates a gas station grossing between $5,000 and $10,000 a year. There are two other children in the family.

While in high school, the student majored in industrial arts and graduated with a high school average of 72. His regents scholarship exam score was 66.

Here at the Vocational Division this student earned a cumulative average of C. His college expenses were covered by his parents.

Upon graduating from the Vocational Division this student will go to work for Erie County at $120 per week.

The student's father feels that if his son had not gone to the Vocational Division of Alfred Agricultural and Technical College he would be working in a gas station for about $70 a week. The father says of the advantages of post-high school vocational education, "I feel that studying in one trade is important and not adding anything else to it."

STUDENT M

This student is from a middle-sized community in western New York, and is enrolled in the drafting program. His father, with a high school education, works as a die sinker. There are four other children in the family.

In high school this student majored in math, and graduated with an average of 70. His Regents Scholarship Exam Score was 100. While in high school he was on the Student Council, President of the Swimming Team and on the senior Activities Committee.

Here at the Vocational Division this student earned a C+ average. He participated in Student Board, Drama Club and CUBAT. He was Vice President of the Student Board. His college expenses were covered by his family.

Prior to working in the Vocational Division this student was a service station attendant and clerk. Upon graduation this student will work for a large air conditioning manufacturer in central New York as a draftsman at $115 a week.

STUDENT N

Is a 21 year old student and is from a small town in Genesee County. He is enrolled in our drafting program. His father, a factory worker

with a grade school education, has a gross income of $18,000. There are three other children in the family.

In high school this student majored in science and history and graduated with a high school average of 88.2. His Regents Scholarship Exam score was 144.

Here in the Vocational Division this student earned a C+ average. He was on the staff of the Tor Echo, on the bowling and softball leagues. Prior to graduation, this student worked two years for a fiberboard company and five years part-time on a farm. Upon graduation he will be a draftsman for a firm in Batavia, New York at $100 a week.

His parents would encourage other young people to attend this type of school. "It's the best college of its type. A very good educational program."

STUDENT O

Student O, age 24, from a larger town in Allegany County is enrolled in the Drafting program. His father, a college graduate, is a retired engineer.

In high school this student majored in Art and Drafting, but failed to graduate. He was active in wrestling, the school newspaper, year book and drama. Upon leaving high school prior to graduation, the student enlisted in the Navy and became an electronics technician. It was while he was in the Navy that he earned an Equivalency High School diploma.

Here in the Vocational Division he became one of the outstanding students. His cumulative average was 3.95 out of possible 4.00.

He was a director of the Faculty, Student Association, Student Judiciary Committee Chairman and Student Board Representative. The above was accomplished while he held a full-time second shift drafting job to support himself and his wife.

Upon graduation from the Vocational Division he will be going to work as a loss-control technician for a firm outside of Rochester at $610 per month. He plans to continue his education in the evening division of one of the colleges near Rochester.

STUDENT P

Is a 20 year old commuter enrolled in the Automotive Specialist program. His father, a machinist, is a high school graduate and his mother is an insurance director. Their gross income exceeds $15,000. There are three other children in the family besides this student.

In high school Student P majored in science and math and graduated with a high school average of 80. While in high school he participated in football and was manager of the basketball team. His RSE score was 140.

Here in the Vocational Division this student earned a cumulative average of B. He did not participate in any extra curricular activities because he was working full time in one of the local garages to support himself and his wife.

Upon graduation this student will go to work as a mechanic in a garage in Lockport, New York.

His parents would encourage other young people to attend this type of school because, "If they show no inclination to tackle liberal arts and will apply themselves to this type of education, they should

be encouraged to take this type of course."

STUDENT Q

Is a commuter enrolled in the drafting program. His father, a technician with a high school education, has a gross income of between $5,000 and $10,000 per year. This 20 year old student is one of three offsprings.

In high school, Student Q majored in math and science and graduated with a high school average of 81. His Regents Scholarship Exam score was 192.

While here in the Vocational Division the student earned a cumulative average of 3.0 out of 4.0.

The summer of 1967 found this student working as a draftsman for one of the local industries. He is returning to the company for full time employment at $100 per week upon graduation.

His father would encourage other young people to attend this type of school because, "It gives them enough training to obtain a good job and at the same time a chance to realistically evaluate themselves to decide whether or not they wish to stay at this level or further their education."

His feelings about the advantages of post-high school vocational education are expressed by, "This is a very practical type of education. It provides trained manpower where manpower is needed, insures young people with employment at a living wage and eliminates the job-securing problem by erasing the 'lack of experience' barrier."

OBSERVATIONS MADE FROM CASE STUDIES

- Student A had a high school average of 74 ... while at the Vocational Division he has earned a cumulative average of 3.8 out of 4.0.

- Parent of Student D states, "I would encourage other young people to attend a school such as the Wellsville Vocational Division, because it gives a boy a great opportunity to learn a trade that he likes to do, and maybe doesn't have the ability to go to college."

- Student G, who had an average of 65 in a small town high school, was denied application at two schools because of a history of epilepsy. She has earned a B cumulative average at the Vocational Division and upon graduation will work in a cafeteria in the Soldier's & Sailor's Hospital in Wellsboro, Pa. for $85.00 a week. Her parents state, "There is a great need for trained technicians in the fields of food service and for those not qualified for other professions, this is a most wonderful opportunity."

- Parents of Student H comment, "The Vocational College was the only place he was interested in attending. Directing courses to the child's interest gives the student a chance to succeed. This outweighs any visible disadvantages."

- Student I, who graduated from high school with an average of 70, earned a place on the honor roll for three quarters at the Vocational College. Upon graduation he will be working for a heating and air conditioning company in Buffalo for $120.00 per week.

- Student J was a drop out after one semester at the U.S. Maritime Academy. He attained an 85 average in high school. Upon graduation from the Vocational Division he will attend the two-year associate degree program in Industrial

Technology at the main campus at Alfred in the fall of 1968.

- Student L, from a larger city in Erie County, graduated from high school with a 72 average. His father says, "If my son had not gone to the Vocational Division of Alfred Agricultural and Technical College for the drafting program he would be working in a gas station for about $70.00 a week. I feel that studying in one trade is important and not adding anything else to it."

- Student N, age 21, from a small town in Genesee County, enrolled in the drafting program, graduated from high school with an 88.2 average.

- Student O, married, age 24, a high school drop out, earned his high school equivalency diploma while in the Navy. He has earned a 3.95 cumulative average out of a possible 4.00 while at the Wellsville Vocational Division and has accepted a job for $610 per month with a firm near Rochester, N.Y. He plans to continue his education in the evening division of one of the colleges near Rochester.

- Student P, 20 years old, graduated from high school with an average of 80. He has maintained a B average in the Automotive Specialist program. His parents would encourage young people to attend this type of school. They state that, "If they show no inclination to tackle liberal arts and will apply themselves to this type of education, they should be encourage to take this type of course."

- Student Q, enrolled in the drafting program, graduated from high school with an 81 average majoring in Math and Science. His father comments, "It gives them enough training to obtain a good job and at the same time a chance to realistically evaluate themselves to decide whether or not they wish to stay at this level or further their education. This is a very practical type

of education. It provides trained manpower where manpower is needed, insures young people with employment at a living wage and eliminates the job-securing problem by erasing the 'lack of experience' barrier."

APPENDIX B

PLACEMENT REPORT - 1968 GRADUATES

WELLSVILLE VOCATIONAL DIVISION

The placement of the first graduating class of any institution is of utmost importance. It seems to be doubly so in an educational endeavor of a pilot nature, such as is our Vocational Division.

Fifteen companies from central and western New York came on campus to interview the graduating seniors. The preponderance of emphasis was on the drafting students, but all curriculums had the opportunity to have students interviewed.

The following table illustrates the placement situation as of June 16, 1968.

PROGRAM	EMPLOYED		COLLEGE OR SERVICE		UNDECIDED	
	NO.	%	NO.	%	NO.	%
Auto. Service	20	77	4	15	2	8
Building Const.	15	88	1	6	1	6
Drafting	19	68	5	18	4	14
Electrical Serv.	11	65	3	17.5	3	17.5
Food Service	3	43	2	28.5	2	28.5
Overall for Div.	68	72	15	16	12	12

AVERAGE STARTING SALARIES OF THE 1968 GRADUATES

PROGRAM	PER ANNUM	PER WEEK
Automotive	5824.	112.00
Building Construction	6370.	122.50
Drafting	6240.	120.00
Food Service **	6656.	128.00

All studies based on at least 1/3 of class

** Insufficient Data

Some companies employing the Vocational Division graduates.

Carrier Corp. of Syracuse
Decker Construction Co.
Morrison Steel Products, Inc.
Air Preheater
Erie County
Soldiers and Sailors Hospital
Hutchinson's Boat Works
RCA Service Corp.
Penn Central Railroad
General Dynamics
Worthington Corp.
Borden and Robeson Corp.
New York State
Bethlehem Steel Corp.
Ibbotson-Ritchie Inc.
Sears and Roebuck Service Division

Outstanding positions accepted by seniors

1. Loss Control Technician at $610/month
2. Union Carpenter at $4.00/hour
3. Union Electrician at $6.05/hour
4. Draftsman at $600/month
5. Trouble Shooter for Prefab Home Mfg. at $600/month
6. Electronic Technician at $3.15/hour
7. Inplant vehicle mechanic at $3.13/hour
8. Students from Building Construction and Automotive Service have enlisted in the U. S. Navy (Seabees) with rank of E-4

APPENDIX C

HIGH SCHOOLS, COMMUNITY COLLEGES, BUSINESSES AND INDUSTRIES INCLUDED IN THIS SURVEY

BUFFALO - REGION I

High Schools

Alden
Bennett
Bishop Fallon
Grover Cleveland
East Aurora
Hamburg
Amherst
Depew
West Seneca
Griffith Institute
Niagara Wheatfield
Frott Vocational
Niagara Falls
North Tonawanda
Eden
Arcade
Warsaw
Wyoming
Akron
Lancaster

Businesses and Industries

Maday Body and Equipment Corporation
The Macander Corporation
Dustex Division, American Precision Industries
Carrow Chevrolet Corporation
Buffalo Forge Co.
A. E. Anderson Corp.
American Standard Inc.
J. C. Stephens Motor Corporation
Moore Business Forms
Brost Ford Inc.
Sears Roebuck
N.Y. Telephone Co.
The Barden & Robeson Corporation

Community Colleges

Erie
Niagara

ROCHESTER - REGION II

High Schools

Brockport
East Rochester
Rush Henrietta
Honeoye Falls
Penfield
Pittsford
Benjamin Franklin
East High
Edison Tech
Madison
McQuaid
Brighton
Spencerport
Minerva-Deland-Fairport
Monroe
Webster
Jefferson
West
LeRoy
Victor
Pembroke
Bloomfield
Naples
Red Jacket
Geneseo
Hilton
Wheatland-Chili

Businesses & Industries

Smith, Hershey, Malone, Norton
Friden Inc.
Parlec Corporation
Murphy Screw Products
Eastman Kodak Company

Community Colleges

Genesee
Monroe
Finger Lakes

SYRACUSE - REGION III

High Schools
Auburn East
Auburn West
Auburn Central
Weedsport
Cortland
Homer
G. Ray Bodley
Baldwinsville
Fayetteville-Manlius
Jamesville-DeWitt
Liverpool
Solvay
Central Tech
Nottingham
North
Christian Brothers
Oswego
Phoenix
Mexico
Fulton
Tully Central
Moravia
Southern Cayuga
Westhill
West Genesee
Lafayette
Henninger
East Syracuse Minoa
Thomas J. Corcoran

Businesses and Industries
Miner Construction Company
Sears Roebuck
R. E. Dietz Company
First Trust and Deposit Company
Fayetteville Chrysler-Plymouth
Carrier Corporation

Community Colleges
Auburn
Onondaga

JAMESTOWN - REGION IV

High Schools
Cattaraugus
Franklinville
Gowanda
Hinsdale
Little Valley
Olean
Randolph
Salamanca
Chautauqua
Clymer
Dunkirk
Falconer
Fredonia
Frewsburg
Jamestown
Southwestern
Mayville
Ripley
Silver Creek
Cassadaga
Westfield
Panama
Sherman
Portville
Allegany

Businesses and Industries
Winsmith, Division V.M.C. Industries, Inc.
Blackstone Corp.
Marlin Rockwell
Acme Electric Corporation
Art Metal Co.

Community Colleges
Jamestown

ELMIRA - REGION V

High Schools
Chenango Valley
Union-Endicott
Vestal
Maine Endwell
Elmira Free Academy
Southside
Thomas A. Edison
Horseheads
Van Etten
Odessa
Watkins Glen
Dryden
Addison
Haverling
Campbell
Corning West
Corning East
Hammondsport
Bradford
Savona
Candor
Owego Free Academy
Waverly
Newark Valley
Marion
Groton
Trumansburg
North, Binghamton
Scio
Cuba
Andover
Alfred-Almond
Canaseraga
Bolivar
Belmont
Whitesville
Arkport
Avoca
Greenwood
Troupsburg
Wayland
Canisteo

Businesses and Industries
Ingersoll Rand Company
Westinghouse
The National Cash Register Co.
Worthington Corporation
Guy Schmidt Cadillac Corporation

Community Colleges
Corning
Broome Tech

APPENDIX D

COMPOSITE OF ANSWERS, BY REGION, TO QUESTIONS APPEARING ON HIGH SCHOOL QUESTIONNAIRES

Region	9 Yes	9 No	10 Yes	10 No	11 Yes	11 No	12 Yes	12 No	13 No. of Seniors	15 Yes	15 No	16 Yes	16 No	17 Yes	17 No	18 Yes	18 No	19 Yes	19 No	20 Yes	20 No	21 Yes	21 No	23 Yes	23 No	24 Yes	24 No
I	19	1	14	6	3	11	17	2	5351	20	0	14	6	19	1	18	2	12	6	19	1	19	1	10	7	20	0
II	27	0	19	8	3	16	21	6	5586	24	3	25	1	27	0	26	1	15	12	25	1	23	4	18	6	26	1
III	27	1	20	8	1	19	25	3	7076	27	1	25	1	28	0	28	0	15	13	27	1	25	2	20	7	27	1
IV	25	0	16	8	5	12	24	1	4998	24	1	18	5	23	2	24	1	18	6	25	0	23	2	13	10	25	0
V	39	2	35	6	10	28	38	2	5960	39	2	33	6	41	0	41	0	26	15	39	1	36	5	19	19	40	1
Grand Total	137	4	104	36	22	86	125	14	26971	134	7	115	19	138	3	137	4	86	52	136	4	126	14	80	49	138	3

NOTE: Results for Questions #5, 6, 7, 8, 14 and 22 are of the nature that would not make it feasible to include in this chart. Results for those questions are found in other parts of this survey.

SURVEY OF SECONDARY SCHOOLS REGARDING VOCATIONAL EDUCATION IN WESTERN NEW YORK

NOTE: The following information will be used for survey purposes only. The name of your school will not be used in reporting results of the research project.

Date

1. Name of School

2. Address

3. Name of Principal

4. Name, Person Answering Questionnaire/Title

5. Present Enrollment Projected Enrollment 1969 1970 1971 1972

   1973

6. How many or what percentage of your student body is enrolled in vocationally oriented courses? List types of courses.

7. What percentage of your senior class normally goes on to:

   Four-year colleges

   Two-year colleges

   Other

8. What would be your estimate as to the number of students from your school who might enroll in a post-secondary vocational education program?

   1968 1969 1970 1971 1972 1973

9. Do you feel that vocational education should be made available on a post-secondary level?

   Yes No Comments

10. Do you feel that certain courses on a post-secondary level would overlap some of the courses now offered in high schools? Yes No

11. If yes, do you feel that this has any different effect than the overlap now experienced in many of the other courses offered in the regular curriculum and conventional college programs?

    Yes No Comments

12. Do you feel that articulation (high school vocational to post-secondary level) will afford optimum or advanced training opportunities for students in your area?

    Yes No Comments

13. How many students are in your senior class? What percentage falls in 65-75% average category? 76-85% 86-100%

14. What percentage of your graduates who follow a general academic program find themselves unable to enter two-year and four-year colleges for academic reasons or lack of prerequisite courses?

    Academic reasons Lack of prerequisite courses

15. Do you favor a two-year college establishing a full-fledged division offering a complete course in vocational education to serve the needs of the non-degree students?

    Yes No

16. Do you believe the vocationally oriented student to be interested in the residence type college program with the type college life it supports?

    Yes No

17. Do you feel that a two-year vocational education program on a post-secondary level might motivate an otherwise "non college bound" student to go on for further studies?

    Yes No

18. Do you feel that this type of program on a post-secondary level would raise the sights of a student who otherwise would not pursue education beyond high school?

    Yes No

19. Do you feel that <u>specialization</u> in a vocational field should be postponed until the post-secondary level if the cost of that education is within reach of the student?

    Yes No

20. Do you feel that the post-secondary vocational education program could complement the secondary school vocational education as an advanced education?

    Yes No

21. Do you feel that there are vocational education needs on a statewide or area level that cannot be met in the secondary school vocational program?

    Yes No

22. What do you envision as a need for vocational training in regard to returning veterans who had to postpone post-secondary education for military service?

23. Is there a need in your area for the availability of post-secondary vocational education to serve the needs of mature physically handicapped persons?

    Yes No

24. Do you feel that post-secondary vocational programs can provide an opportunity for the disadvantaged student if financial assistance was available?

    Yes No Comments

SURVEY OF BUSINESS AND INDUSTRY
TO DETERMINE EMPLOYMENT OPPORTUNITIES FOR THE GRADUATE
OF POST-SECONDARY VOCATIONAL PROGRAMS

NOTE: The following information will be used for survey purposes only. The name of your company will not be used in reporting results of the research project.

Date

1. Name of Firm

2. Address

3. Type of Industry

4. Service Product

5. Brief Description

6. Person Interviewed or Replying

7. Title

8. Number of Employees M F

9. Percentage of Employees in the following areas:

Management and Supervision	Skilled	
Sales	Semi-Skilled	
Clerical	Unskilled	In Training

10. Is there a growing need for well trained skilled workers in your organization?

Yes No

11. What skill level will show the greatest need:

Professional Degree Required

Skilled

Semi-Skilled

Unskilled

12. Do you feel there is a need in New York State for two-year vocational colleges to develop specific facilities and programs to train skilled personnel?

    Yes No

13. At what level would you prefer to hire a vocationally trained prospective employee?

    High School Graduate Two-Year College Graduate

    Brief Comment Supporting Choice

14. What do you consider to be your greatest immediate needs in skilled personnel? (e.g. Machinist, electrical, drafting, mechanic, clerical, food service)

    Give specific areas of specialization

15. Does your firm use an in-plant or job training program?

    Yes No

    Brief description if yes

16. Does the minimum wage law affect your training program?

    Yes No

    Comment

17. Would skilled personnel trained in a two-year college program eliminate or greatly reduce your in-plant training program?

18. Do you hire employees from high school vocational training programs?

    Yes No

19. If yes to #18, from your experience do they perform:

    Below Average Above Average Average Outstandingly

20. Do you feel there would be an advantage in hiring a skilled worker following the completion of a two-year college program?

    Yes No

21. Do you feel that high school vocational training programs meet the needs of Business and Industry when they look for skilled personnel in the field?

    Yes No

22. Do you find the maturity level of a beginning skilled worker is an important factor?

    Yes No

23. What do you feel the job potential is for the post-secondary vocationally trained youth in your area?

    None Average Great Exceedingly Great

ADDITIONAL COMMENTS ARE WELCOME:

SURVEY OF COMMUNITY COLLEGES IN WESTERN NEW YORK

VOCATIONAL EDUCATION SURVEY PROJECT

Date

Name of College

Address

Name of President

1. What is your present enrollment?

2. What is the projected enrollment for the fall of 1969 1970 1971 1972 1973

3. What is the anticipated number in the graduating class 1969 1970 1971 1972 1973

4. What percentage of your students are enrolled in what might be considered vocational programs?

5. List types and indicate whether degree or non-degree.

6. What percentage of your students will transfer to pursue baccalaureate degrees?

7. What percentage of non-degree vocational programs are offered in evening and extension classes? Daytime classes?

8. How many hours of General Education courses are required in the non-degree vocational programs? hrs. English Math Social Science.

9. What types of employment do the students in vocational programs enter upon graduation?

10. In your opinion what has been the response to non-degree vocational curriculums offered in your college? (Non-offered)

Student Numbers	Educational Effectiveness
Excellent	
Good	
Moderate	
Limited	

11. What is your personal reaction to non-degree vocationally oriented programs in your college? Enthusiastic Interested Passive Questionable Comment

12. Do you favor post-secondary non-degree vocational education as opposed to or in addition to secondary school vocational programs? Yes No Any comment

13. What are the developmental plans for vocational curriculums, if any, in your college?

14. What specific curriculums of a vocational or non-degree nature are now in the definite planning stage?

Curriculum	Year to be started	Degree	Non-Degree

15. If you do not include vocational programs in your curriculum, are there educational or philosophic reasons for their omission?

16. Do you see the cost of certain vocational programs as prohibitive for your college? If so, specify.

17. Do you see enrollment limitations from your drawing area as preventing the offering of certain specialized vocational programs? Yes No

18. Do you see faculty or space limitations as a problem in offering certain vocational programs? If so, comment.

19. Do you see an advantage of specific vocational colleges set up on an area level to offer wider curriculum offerings or more specialized vocational education? Yes No Comment

20. Do you see area vocational colleges offering specialized programs as competitive with the two-year community college? Yes No

21. Do you feel students in vocational programs are more likely to prefer: Commuting To be in Residence Why?

22. If you include non-degree vocational programs in your curriculum offerings, do you feel that these students feel like "second class citizens" in any sense? Yes No Comment

23. Do you feel that post-secondary non-degree vocational programs can or should complement secondary school vocational programs by giving articulation, specialization, or advancement? Yes No Comment

24. Do you feel <u>all</u> vocational programs should be worked into a degree program such as an Associate Degree in Applied Science? Yes No

25. Do you feel that vocational education programs tend to be more concerned with manpower needs of their immediate locale, than the wider needs on a statewide level?

Secondary school Yes No

Community college Yes No

26. Do you think vocational education should be largely based on the vocational opportunities of the immediate locale? Yes No

27. Is the community college able to include curriculums that meet needs on the state level which may not be prevelant in their locale? Yes No
Comment why

28. Do you feel that with the changing occupational spectrum and a multiplicity of vocations in technological fields that much of this type of vocational education can still be offered at the post-secondary level as opposed to specific on the job training? Yes No

SURVEY OF SECONDARY SCHOOLS REGARDING
VOCATIONAL EDUCATION IN WESTERN NEW YORK

Date

Parent Interest Study.

NOTE: The following information will be used for survey purposes only. Your name and the name of the school your child attends will not be used in reporting results of this research project.

This form has been brought home by your son/daughter so that you may give your viewpoints on another phase of a survey being conducted to determine the need and potential for post-secondary vocational education in Western New York.

1. In your opinion, should public education facilities be made available on the post-secondary school level for vocational education training to prepare students for:

- employment in agricultural pursuits	yes	no
- employment in office occupations	yes	no
- employment in store occupations	yes	no
- employment in vocationally oriented pursuits such as automobile mechanics, building construction, drafting, food service, machine clerical etc.	yes	no

2. In such a program what specific subjects would you suggest as possible course offerings?

List:

3. What is the choice that your son/daughter has made as to his/her plans upon graduation from high school?

work full-time	enter private business school
enter a technical institute	enther the Armed Forces
part-time work, part-time education	undecided
enter four-year college	other
enter two-year college	
enter college vocational training program	

4. Are you in agreement with the plans of your child? yes no

5. Father's occupation Mother's occupation

6. High School student attends Your name

PLEASE SEND THIS COMPLETED FORM TO THE HIGH SCHOOL HOME ROOM TEACHER WHEN YOUR CHILD RETURNS TO SCHOOL.

SURVEY OF SECONDARY SCHOOLS REGARDING
VOCATIONAL EDUCATION IN WESTERN NEW YORK

Student Survey. Date

NAME HIGH SCHOOL

AGE

1. Will you graduate from high school this year? Yes No

2. Do you plan to enter college? Yes No

3. Have you applied to any college? Yes No

4. Would you be interested in a college vocational training program leading toward a skilled vocation such as Automotive Mechanics, Food Service, Building Construction, Drafting, or Machine Clerical? Yes No

5. Are you familiar with any college offering such vocational programs? Yes No If yes, name

6. Did you take vocational courses in high school? Yes No

7. What would be some of your vocational choices if you could get the training?

8. What are your plans upon graduating from ghi school?
I plan to:

work full-time	enter a technical institute
part-time work, part-time education	enter a private business school
enter a two-year college	enter the Armed Forces
enter a four-year college	undecided
enter a college vocational training program	other

9. What do you expect to earn per week if you get a job upon graduation from high school?

VT 007 701
Schaefer, Carl J.; Kaufman, Jacob J.
Better Options, Better Lives. Summary Report on the Needed Reform in Occupational Education in Massachusetts.

Massachusetts Advisory Council on Education, Boston
MF AVAILABLE IN VT-ERIC SET.
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*VOCATIONAL EDUCATION; *EDUCATIONAL CHANGE; *EDUCATIONAL NEEDS, *PROGRAM PROPOSALS; *EDUCATIONAL PROBLEMS; POST SECONDARY EDUCATION; SECONDARY EDUCATION
MASSACHUSETTS

Efforts to allocate resources more effectively and to provide more equitable and more relevant educational opportunities within the State led to the first major study of the State's system of vocational and technical education and furnished the material for this summary report. In gathering information for the original report, the investigators engaged in consultations, seminars, special studies, questionnaires, and surveys. They visited schools and surveyed students, graduates, and parents. Their study revealed that the State and its school systems are not offering enough vocational education, that different types of vocational education should be available, and that the State needs to reorganize and expand its agencies for the administration of vocational education. The study developed 49 separate recommendations which cover the following eight areas: (1) organization, (2) curriculum, (3) administration, (4) financing, (5) legislation, (6) teacher education, (7) public support, and (8) community colleges. The complete study is available as ED 029 107 (VT 007 872, in ARM Spring 1970). (MU)

VT 007 701

ED042060
DEC 23 1969

Better Options, Better Lives.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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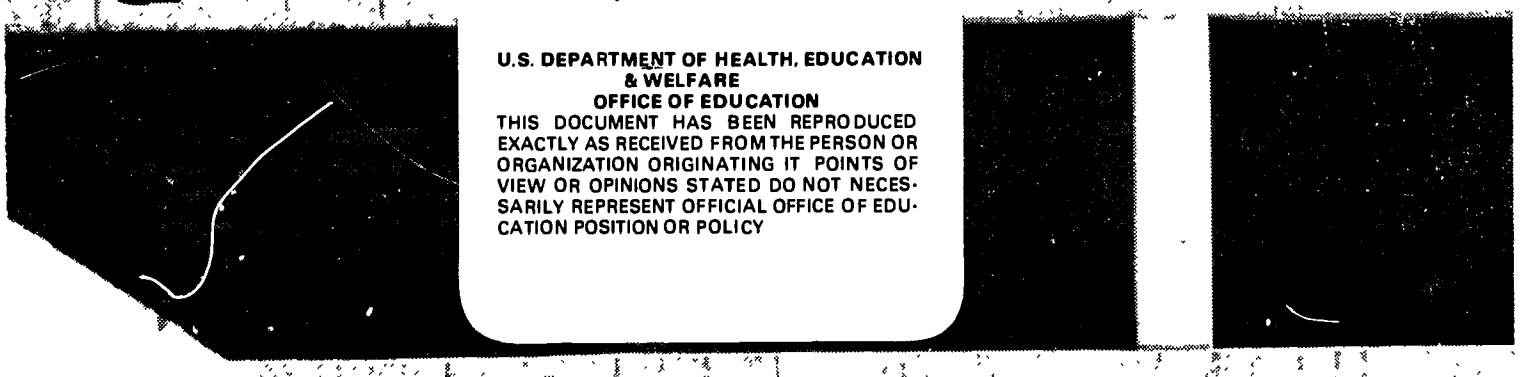

Summary Report on the Needed Reform in Occupational Education in Massachusetts

ADVISORY COUNCIL ON EDUCATION

VT007071

Publication No. 1090

PUBLICATION OF THIS DOCUMENT APPROVED
BY ALFRED C. HOLLAND, STATE PURCHASING AGENT

Cover Photo, Courtesy of Boston Globe

Better Options, Better Lives

This report, prepared by the Advisory Council on Education, attempts to highlight the most troublesome problems in occupational education. It also specifies proposals for change and improvement. The material presented in highlight form here is based on a year-long study completed in the summer of 1968.

This report summarizes important portions of the original study document of more than 200 pages. Its authors are Dr. Carl J. Schaefer, Chairman of the Department of Vocational-Technical Education, Rutgers—The State University and Dr. Jacob J. Kaufman, Director, The Institute for Research on Human Resources, Pennsylvania State University.

Copies of the original study document may be purchased from the Public Document Division, Secretary of State's Office, Room 116, The State House, Boston, Massachusetts 02133.

Foreword

The existence of a vocationally productive citizenry is a requirement of a healthy and prosperous society, and of healthy and prosperous individuals. While business and industry train large numbers of employees up to the technical levels, they are looking more toward secondary schools and community colleges to offer occupational training. They look to these same schools and colleges to bring all workers to a competent level of skills and understanding of science, technology, and communications.

When the Willis-Harrington Commission completed its studies in 1965, its report observed that many thousands of non-college bound secondary school students graduated without any preparation for jobs. The general program they had followed was often a watered-down duplicate of the college preparatory program which was irrelevant to their needs as terminal graduates. Not only did the general program fail to provide occupational education, but it was so irrelevant to the needs of students taking it, that in 1959 nearly a quarter of those entering ninth grade dropped out of high school before graduation. Good vocational education is not only needed by these youths to prepare them for work, but properly integrated into the high school curriculum, it would produce more relevant education and thus reduce the number of drop-outs.

A problem in coordination exists. The community colleges of the state are conceived of as compre-

hensive institutions. While the community colleges are developing their vocational programs as rapidly as available funds permit, a second system of post-secondary vocational education is developing on top of the commonwealth's rapidly expanding system of vocational high schools.

Thus, the Advisory Council on Education determined that the first of its two major studies would be concerned with the State's system of vocational and technical education. Its findings reveal the strengths one would expect in Massachusetts' educational history and distinction. But the study also reveals that the State and its school systems are not offering enough vocational education; that considerably different types of vocational education should be available, particularly in comprehensive high schools; and that the State needs to reorganize and to expand its agencies for the administration of occupational education.

The recommendations are many and complex, as are the problems. The efforts and the funds required are great, but so is the need. The funds spent on making vocational education relevant will return dividends to the State and its communities in the form of lowered costs in welfare and unemployment benefits and in increased industry and tax revenues and most important, in the form of thousands of improved lives.

WILLIAM C. GAIGE,
Director of Research
The Advisory Council on Education

What is involved?

The proposals in this study call for new commitments on the state and local levels.

Most students headed for the world of work would be served by a Careers Development Curriculum in their home high schools that would replace the present types of general curricula.

The highly-skilled, highly-motivated vocational student would be served by both his home high school and an Institute of Educational Development—state-operated and located within 30 miles of the student's home district—where demanding and intensive skills training would be conducted during the 11th and 12th grades.

The Careers Development Curriculum would be supervised by a new Bureau of Careers Development in the state Department of Education.

The Institutes for Educational Development would be supervised and operated by a new Division of Manpower, Research and Development under both the Department of Labor and the Department of Education. Existing regional and municipal vocational high schools will become Institutes under state aegis.

Why make these changes?

Educators have wrestled for decades with the challenge of making education relevant for their students. But in the occupational area, particularly, time and circumstances have combined to produce serious gaps between the needs of students and the services provided by their schools.

The general curricula that have developed as an alternative to college preparatory study attract increasing criticism from students, parents, educators and employers. Specialized vocational schools are available to some, but not others, because of the accident of geography. The public image of vocational-technical education is poor. Large scale efforts to coordinate manpower needs between business and industry and the schools have rarely been successful.

Drop-out rates continue to reflect the inability of public schools to hold and interest many students and direct them toward meaningful lives.

Teachers and administrators want schools to serve all students, but current practices clearly favor those whose inclinations are academic. The college bound student, however deserving, should have no special claim to the educational resources of his community.

The clearest message of the Massachusetts Education Commission's Willis-Harrington Report of 1965 was that educational inequity must be combatted. This report and its proposals heed that important and just principle.

During this century, public education in Massachusetts has evolved in a way that emphasizes academic training and only tolerates occupational training. By any standard, the student who prepares for higher education is favored over the student who prepares for work.

A serious mis-allocation of resources has resulted, accompanied by a loss of public confidence in the school's ability to educate and train adequately the large segment of youth whose secondary education is a prelude to employment. This unfortunate condition is accepted as normal. But if the commonwealth and its communities are to provide levels of services to youth that truly address their varied needs, these inequities must be erased.

In grades 7 through 12, more than three quarters of the school's resources are devoted to either college preparatory or watered-down general curricula despite the fact that a majority of these youngsters will eventually enter the world of work either as drop-outs or graduates.

How has this mis-allocation of resources been maintained?

First, through the stress on a "college" education fostered by parents, educators and society.

Second, through the reluctance of educators to accept research revealing the wide gap between standard school offerings and the needs and interests of youth.

Third, through the failure of educators to plan for the enormous group of secondary school students—estimated to be forty to sixty percent—whose needs are met by neither the academic nor the general curricula.

Fourth, through the failure of educational systems to evaluate effectively the relationship between resources committed—the input —and objectives achieved—the output—in terms of student staying power, performance, behavior and attitudes.

Fifth, because of reluctance to recognize the achievements of varied experimental programs that are designed to bring relevance to education for the world of work.

Stigmatizing Students

Under current educational practice, certain students are stigmatized by being placed in second and third class categories. These divisions tend to follow lines of social class.

In the vocational area, this trend was emphasized under the Vocational Education Act of 1963, which made more federal money

available for regional systems of vocational education that are entirely separated from local schools.

Middle-class children tend to go to local schools, to enroll in the academic curriculum and to move on to college or some form of post secondary education. Children of working-class families tend to be moved into the vocational track and later they move into the working class themselves with the schools contributing to their restricted upward mobility.

Class lines are also maintained by the tendency of white, lower-class suburban families to support development of area vocational schools as preferable to the inadequate, so-called comprehensive schools in most local communities. But in urban areas, working-class parents, white and Negro, lack the resources to support such specialized schools through taxes. The contrast between the vocational schools in Boston and the area vocational schools throughout the state is startling.

The Institutes

This report proposes elimination of strictly segregated vocational training through a plan that would allow the highly-skilled vocational student to divide his time between his home or "sending" high school and a "receiving" school called an Institute for Educational Development.

To assure that vocational-technical education is uniformly available to all students, there should be full state support for a network of about thirty Institutes for Educational Development. The Institutes would operate on a more selective basis than current vocational programs. They would replace or absorb the regional and municipal vocational schools that now operate. However, the students enrolled in the state-operated institutes during their 11th and 12th years would retain close relationships with their home high schools, and local communities would retain responsibility for the students.

The Institutes would probably serve no more than 10 percent of the secondary school students. All the rest should remain in local schools, but curriculum and organizational changes should be made so that the schools become comprehensive in substance as well as form.

Careers Development

The realignment within the state's high schools would revolve around establishment of a Careers Development Curriculum that would make schools truly comprehensive.

Too often, the debate over how to provide comprehensive secondary education centers on the schoolhouse rather than on the cur-

riculum. The advantages claimed for the comprehensive high school stem mainly from the opportunities for youngsters from all segments of the community to know and appreciate one another as individuals. It is questionable whether such individual interaction occurs under the present system.

The modified track system in most secondary schools tends to reflect class structure in the communities. Those who gravitate to neither college preparatory nor vocational curricula either end up in some type of general curriculum through default or they escape it by selecting vocational education as a lesser evil.

The Careers Development Curriculum would attempt to broaden, not narrow, the options open to students. Present general curricula limit exploration within school and opportunities beyond school. The Careers Development Curriculum would stress exploration and arrange classes so that a student could pursue interests as far as they lead him.

As discussed at length in the full report, students in general curricula and many in vocational programs constitute a large number who do not really benefit from their school experiences. The principle of "relevance" to the lives of students is at the heart of the Careers Development Curriculum that would serve these students. These "gray" area youngsters would have a chance to explore the nature of many occupations. Through team teaching and emphasis on overlapping clusters of subjects, students would learn more clearly the relationship between occupational goals and basic academic skills. The occupational orientation would embrace numerous fields and skills, thus widening post high school opportunities. The educational process would no longer be seen as teaching, but as providing the conditions for learning.

Teachers and Students

Teachers of traditional subjects in the Careers Development Curriculum would act as resource persons in their areas of expertise and would guide students along self-selected lines of interest. Students would proceed at their own pace towards goals they had chosen for themselves. The student's program would be project-oriented, producing the potential for a sense of accomplishment that is rare for many in the subject-oriented academic classroom.

A relaxed and informal learning environment would be critical to the success of the Careers Development Curriculum. It should operate in an environment where favorable reinforcements could emerge as the student completes difficult tasks and receives approval for his efforts.

The student for whom school is not relevant seldom receives any signals of reward for his activities. If he is not academically adept, approval tends to be withheld and he does not feel satisfied with his own work. The Careers Development Curriculum would spur internal reinforcement through self-selected interests that become a central part of school activity. The external reinforcement must come from the kind of teachers who can accept and approve of students on their own merits. The standard of evaluating youngsters on their ability to do college work is totally inappropriate to students who require an occupationally-oriented curriculum.

Teachers and administrators must see that the needs of students in this curriculum are better served if the school discards such traditional goals as teaching toward improved performance on standardized tests. Many teachers believe that if students would only try a little harder they would accomplish the goals the school administration has set for them. The students, in turn, are aware of the low regard in which teachers sometimes hold them. Often it is neither the teacher nor the student, but the inappropriate curriculum and rigid system that are at fault—maintaining this destructive cycle of negative reinforcements.

The proper teachers to guide the Careers Development Curriculum are not necessarily to be found in the ranks of the traditional vocational educators—where highly-skilled tradesmen assume much of the teaching burden. These teachers would be better employed in the Institutes for Educational Development where their specialized skill is needed.

In the Careers Development Curriculum, broader, less specialized teachers would be more suitable; teachers who could work together to capitalize on the opportunities for relevance offered by occupational orientation rather than skills training.

The New Framework

The changes recommended here cannot simply be legislated. An administrative framework must be established to provide support and encouragement on the local level and to assure that the mandated changes become reality.

A new Bureau of Careers Development should be established, administered by an Assistant Commissioner of Curriculum and Instruction. This bureau would serve that large percentage of students who attend local comprehensive high schools and who plan to work upon graduation.

In addition, a new Division of Manpower, Research and Development should replace the present Bureau of Vocational Educa-

tion. It would be charged with the training and retraining of youth and adults through its three bureaus: manpower, research and development.

The Manpower Bureau would be responsible for the Institutes for Educational Development and would control all phases of operation from staff selection to curriculum.

The Institutes for Educational Development should not in any way compete with the technical training function that should be developed on the community college level in Massachusetts. The Institutes should restrict programs to those for students, either young people or adults, who do not have the equivalent of a high school education. The community colleges are urged to continue development of two-year post high school technical programs. Thus far their development has been heavily academic.

The Image of Vocational Education

Vocational education in Massachusetts suffers from a poor image. Though this was the first state to pass a vocational education act (1913), vocational graduates seldom have had high acceptance from industry and labor.

A random sampling of the vocational education "public" was conducted in connection with this report. The results, discussed at length in the full report, reveal considerable dissatisfaction with today's vocational training structure.

Seven groups were questioned: teachers of vocational subjects, parents of vocational students, teachers of vocationally-related subjects, teachers of academic subjects, parents of college preparatory students, industry representatives and union officials.

Union officials and industry representatives were least favorable toward vocational education and trailed the other groups by a wide margin. With strong negative feelings existing in those two groups, it is easy to see why it has been difficult to find ways of matching vocational graduates with job opportunities.

Parents of college preparatory students, however, thought that vocational education should start earlier, so that all youngsters could profit from it at an earlier age.

The generally poor image of vocational education cannot be dismissed as simply a matter of opinion. It affects the lives and futures of thousands of young people who would be better served at the proposed state-operated Institutes for Educational Development where, after rigorous selection procedures, they would receive skills training that would ready them for the most challenging vocational opportunities.

And while the Institute program would develop a better-prepared, better-accepted, skilled vocational employee, the Careers Development Curriculum would broaden both the knowledge and prospects of those high school students who now postpone occupational considerations while languishing in the limbo of the general curriculum.

Study Methods

In gathering information for this report, the investigators engaged in consultations, seminars, special studies, questionnaires, and surveys. They visited schools and surveyed students, graduates, and parents. The methods and specific meetings are documented in the complete report, as are the historical background and statistical research supporting these findings. The full study is available through the Public Document Division, Secretary of State's Office, Room 116, The State House, Boston, Mass. 02133.

The purpose of this summary document is to present the general and specific conclusions of the investigation.

Proposals

This study developed 49 separate recommendations which, if fully implemented, would reshape the approach to secondary school education in the Commonwealth. The report rejects the lingering custom of isolating the undecided or academically weak student in an irrelevant general curriculum that directs him neither toward higher education nor a skilled occupation.

The recommendations cover eight areas. They are presented here with explanations of the major recommendations. Other important recommendations are listed briefly. Those interested in the complete proposals and the supporting data should refer to the complete study.

The Proposals Are Grouped In These Categories:

ORGANIZATION

CURRICULUM

ADMINISTRATION

FINANCING

LEGISLATION

TEACHER EDUCATION

PUBLIC SUPPORT

COMMUNITY COLLEGES

Organization

● The approximately thirty Regional Vocational-Technical schools currently being planned (including those now operating) should became state-operated Institutes for Educational Development. More of them should be located in the large metropolitan areas.

Conversion of the Institutes into state-operated schools is not intended to contradict the principle of a single education system with "home rule" for all school-age youngsters. This report advocates that students remain under the control of their local schools for all purposes except their vocational and technical course work.

The Institutes would provide the service, but the local communities retain responsibility for those who attend. Among the advantages of such an arrangement are these: cost of the Institutes is shared equally by all taxpayers, opportunity for occupational education becomes equalized, curricula can be developed through state-wide planning, educational leadership and teacher competency can be centrally regulated, a substantial program of adult, non-degree offerings can be more precisely planned.

● Steps should be taken immediately to reallocate a larger percentage of local school resources to meet the occupational needs of those students not going on to advanced formal education.

● Major emphasis must be provided by local schools and appropriate financial incentives must be made available for implementing a Careers Development Curriculum in grades 9 through 12 for that large portion of the student body—up to 40 to 60 percent in a given school—who need it.

Such organization would enroll at least 125,000 students in 1970 and would require the efforts of some 5000 teachers.

● A geographic plan for location of the regional vocational-technical schools (to be called Institutes for Educational Development) should be developed and should insure that there is a facility within 30 miles of every boy and girl in the Commonwealth.

The Curriculum

• All occupationally-oriented curricula should be classified in two broad categories: Careers Development and Vocational Preparation.

Careers Development Curriculum

The Careers Development Curriculum would serve the great mid-group of students, those held back by socio-economic background or who lack interest or talent in purely academic or purely vocational pursuits. This is the pool of students that produces the most drop-outs. They could be identified early and by ninth grade it is usually clear which students should be contained in this large grouping.

The Careers Development Curriculum should be non-graded, should involve an occupational cluster system and should be elected by students from grades 9 through 12. Some of these students will surely "spin-off" into the Institutes for Educational Development, which would train highly-skilled specialists.

The occupations to be considered in the Careers Development Curriculum should include:

Building Construction	Industrial and fabrications
Transportation and power	Foods and kindred
Business and office	Agricultural occupations
Distributions occupations	Communications, information
Health occupations	storage and retrieval

Team teaching should prevail throughout the curriculum.

Vocational Preparation

This curriculum would be directed toward the truly vocationally-talented student who possesses academic ability and manipulative dexterity and identifies with a particular occupational skill area. The program should be limited to the upper two years of high school, with students entering from either the college preparatory course or the Careers Development program.

The vocational preparatory curricula would be made more exclusive and selective than such programs have been in the past. The teaching setting would be the network of Institutes for Educational Development and the curricula would be designed and taught by technologically-oriented teachers. These graduates would form the

kind of highly-skilled pool of potential employees from which the future craftsmen and foremen could be recruited.

● The adult curricula of the Institutes for Educational Development should be limited to those of less than associate degree nature and to those not requiring post-secondary education as a basis for their mastery.

It should be the task of the community college program to serve post-secondary needs in a variety of technical and vocational areas.

● All high schools should offer the Careers Development Curriculum, and all high schools should have access to the services of a nearby Institute for Educational Development.

● The relevance of technology should be made significant to all students by introducing new materials and programs starting at elementary level. The "introductions to occupations" area should be explored in junior high school.

● Teachers entering the Careers Development Curriculum should be awarded a state stipend of $500 during their first year.

Institutes for Educational Development

● A network of thirty Institutes for Educational Development should be established throughout the Commonwealth, each within thirty miles of every school district and community.

There are now six Regional Vocational-Technical high schools, and twenty-five more are planned. Their development has been slow and burdensome. Presently the schools offer self-contained curricula to meet the needs of young people seeking vocational and technical education. The Institutes would be highly selective—only an estimated fifty percent of the current vocational school enrollment would qualify for the proposed new schools. The rest would be served by the Careers Development Curriculum in their comprehensive high school—still provided with an occupational orientation.

● The Institutes for Education Development should be established, financed and operated by the State Department of Education through a separate division.

The present regional vocational-technical high school structure functions as a quasi-state establishment. The state already exercises effective controls over building plans, curriculum and staff certification.

● The Institutes for Educational Development should offer

high-skill programs at the 11th and 12th grade levels and should admit only those who meet superior requirements.

This would reduce enrollments in purely vocational education but would produce a highly-skilled student group sought after by employers who require young people with special talent.

- High school students at the Institutes would remain affiliated with their local, "sending" high schools for purposes of graduation, athletics, extra-curricula activities and state required subjects.

Institute students would divide their days between their local schools and the Institute.

- Ancillary services of guidance counseling, diagnostic testing, placement, technical libraries and follow-up should be provided by the Institutes.

- Consideration should be given to providing other kinds of programs and services in the Institutes. Among these may be special classes for the severely mentally and physically handicapped, the academically precocious and in-service teacher education.

- The present Regional Vocational High Schools should assume this new role immediately and gradually return the responsibility for the marginal vocationally talented student to the local schools.

Administration

● The Careers Development Curriculum should be under the general supervision of the State's Associate Commissioner of Curriculum and Instruction and should be administered by a separate Bureau of Careers Development.

The Bureau's major challenge will be to promote change and reallocation of a major portion of the funds to implement the proposed program.

● The Bureau for Careers Development should be headed by an educational generalist.

● The present Bureau of Vocational Education should be reconstituted as a Division of Manpower, Research and Development administered jointly by the State Department of Education and the State Department of Labor.

The Bureau of Manpower would have as its responsibility operation of the Institutes of Educational Development.

The Bureau of Research would be responsible for collection of data and conduct of in-depth studies to assure accurate measures of the number and type of job vacancies throughout the state.

The Bureau of Development would be concerned with the short-range and long-range planning necessary to implement the research findings.

The Division of Manpower, Research and Development would report to the Commissioner of Education for operational and developmental activities and to the Commissioner of Labor for research activities.

● The Division of Manpower, Research and Development should have a legally designated advisory committee appointed by the Governor and representing industry, business, labor, education, the behavioral sciences, and the Federal government.

● The Director of the Division of Manpower, Research and Development would serve on the staffs of both the Commissioners of Education and Labor as Assistant Commissioner to each.

Financing

● The state should assume a greater financial responsibility in providing occupationally-oriented education.

Current estimated average cost is $584, compared to the estimated average cost of $850 per pupil in approved vocational programs. If a Careers Development Curriculum were established the per pupil cost would increase to a point somewhere between these figures to about $700. New formulas would have to be established for state reimbursement.

Extra costs for providing the programs recommended in this report can be estimated as follows:

VOCATIONAL PROGRAMS—GRADES 11 AND 12

By 1970, 9,240 talented vocational students enrolled in Institutes or 6 percent of total enrollment of 154,053 at an increased per pupil cost of $266	$2.5 million
By 1975, 10,716 students	$2.8 million
By 1980, 12,192 students	$3.2 million

CAREERS DEVELOPMENT—GRADES 9-12

By 1970, 123,240 Careers Development students, or 40 percent of total enrollment of 308,107 at increased per pupil cost of $116	$14 million
By 1975, 143,040 students	$16.5 million
By 1980, 162,560 students	$18.7 million

Estimates for both programs combined:
1970 — 16.5 million
1975 — 19.3 million
1980 — 21.9 million

NOTE: Estimates of future enrollment do not include part time adult students and cooperative use of facilities by other students.

● The state should assume the extra cost per pupil for the Careers Development Curriculum in local high schools on the basis of one hundred percent reimbursement.

● Extra costs per pupil for the vocational programs at the Institutes of Educational Development should be supported by the state. Local schools who send students to the Institutes should allocate a portion of the per pupil operating cost to the Institute on a "charge back" basis. If half the student's day is spent at the Intsitute, half

the local per pupil cost should go to the Institute. Transportation costs should be assumed by the sending school.

- Federal funds for vocational-technical education support construction of facilities on a matching basis with the state and should support operation programs at the Institutes for Educational Development. Community Colleges should receive similar support to construct facilities and operate post secondary programs.

- There should be an additional state reimbursement to those schools whose performance achieves the appropriate objectives of the programs.

- Capital costs for construction of Institutes for Educational Development should come totally from state and federal funds.

The thirty recommended Institutes would cost an estimated $90 million. They would be constructed on a timetable of three to four a year. Communities that have already constructed facilities and join this system should have their construction funds returned to them.

- Costs for providing physical facilities for the Careers Development Curriculum in local high schools should be borne locally.

Legislation

● Chapter 74 of the General Laws, as amended, should be rewritten to reflect the need for the redirection of occupationally-oriented education proposed in this report.

● When this legislation is rewritten and approved, a new bulletin should be prepared to replace Bulletin 326—the current handbook for interpretation of the plan to provide occupational education in the state.

Teacher Education

● Undergraduate programs of teacher preparation should be instituted to provide humanistically-oriented teachers to staff classrooms, shops and laboratories of the Careers Development Curriculum and technology-oriented teachers to staff the Institutes for Educational Development.

The new breed of teacher envisioned for the Careers Development Curriculum should be occupationally-oriented, but should also relate strongly to the sociological and psychological needs of students.

● A graduate program, offering up to the Ed.D. degree, with a major in vocational-technical education, should be established at a leading university in the state.

● The updating of teachers in both technology and pedagogy should become an integral part of the occupational teachers' professional development and a Technology-Resources Center should be established.

● A Center for Community College Teacher Preparation, Research and Development should be established at either Lowell Technological Institute or the University of Massachusetts.

● A course in "technology for children" should be added as a requirement in the preparation of all elementary school teachers.

● Preparation of teachers for industrial arts should be oriented towards "introduction to occupations" in junior high school and toward "understanding technology" in senior high school.

● A Director of Occupational Teacher Education should be given a joint appointment in the Division of Higher Education, the Division of Manpower, Research and Development and the Bureau of Careers Development of the State Department of Education.

Public Support

- A public relations program involving business, industry, labor and schools should be launched to improve the image of occupational education.

- At least one staff member in each Institute for Educational Development and a staff member in the Division of Manpower, Research and Development should be directly responsible for public relations.

Community Colleges

- The master plan for providing Community Colleges throughout the commonwealth should be implemented as soon as possible.

- Greater emphasis should be placed on high-level, technology-oriented Community College curricula.

- The Associate Degree should be awarded for satisfactory completion of the post-secondary program at the Community College and the Associate in Applied Science Degree should be awarded for semi-professional and para-professional programs as they are added to the college offerings.

MASSACHUSETTS ADVISORY
COUNCIL ON EDUCATION
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The Massachusetts Advisory Council on Education Advisory Committee to the Study of Vocational and Technical Education

NOVEMBER — 1968

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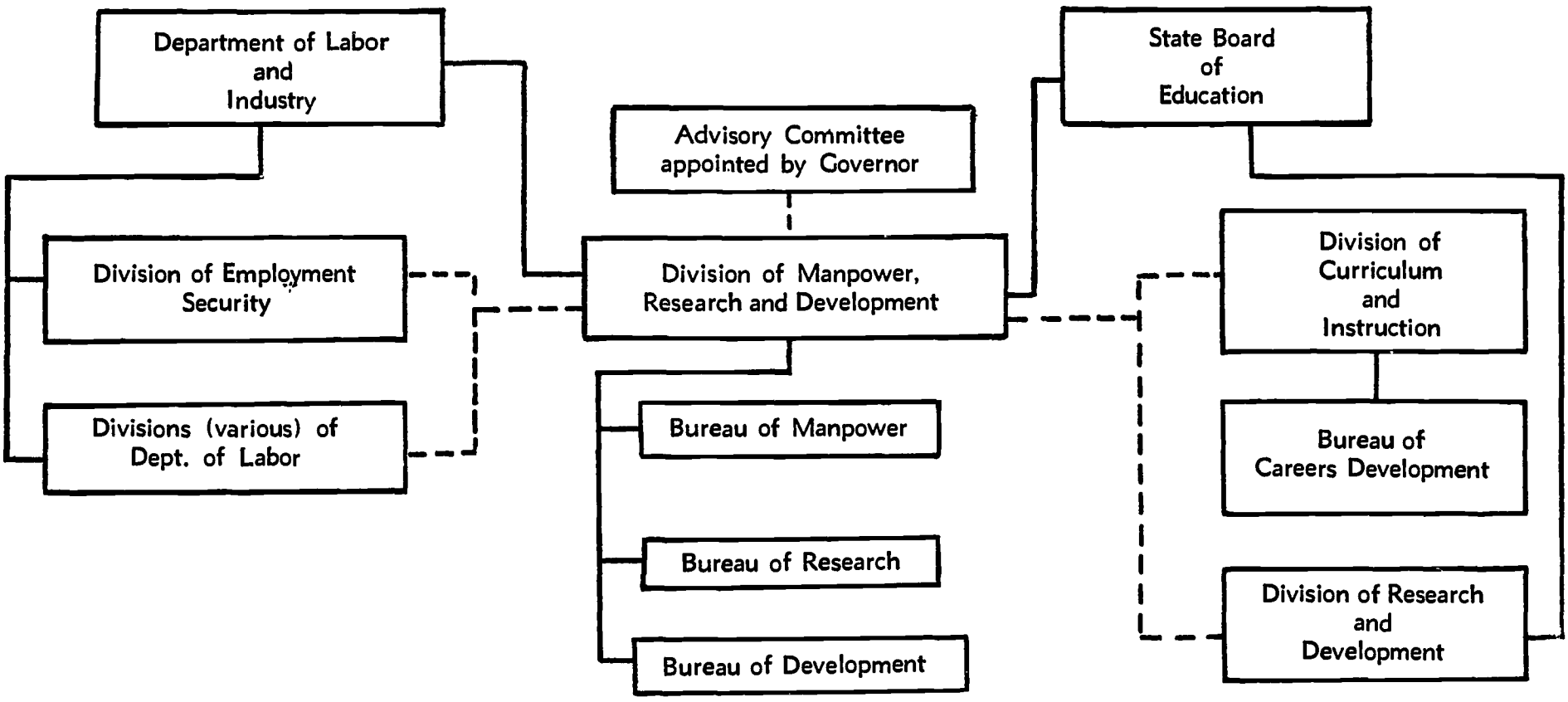

VT 007 743
Procedures for Developing Industrial Arts Education Project Proposals Under the Provisions of the National Defense Education Act Title III.

Delaware State Dept. of Public Instruction, Dover
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Mar68 20p.

*INDUSTRIAL ARTS; *GUIDELINES
*NATIONAL DEFENSE EDUCATION ACT; TITLE III; PROPOSAL GUIDELINES

Procedures are described for developing and submitting local school district proposals for funding assistance in Industrial Arts under Title III of the National Defense Education Act. Major topics covered are: (1) Objectives of the Industrial Arts Program, (2) Background Information about the School District, (3) The Current Program in Industrial Arts, (4) Industrial Arts Shop/Laboratory Facilities, (5) Student Guidance and Evaluation, (6) Planned Improvements in the Industrial Arts Program, (7) Tentative Schedule for Completing Various Phases of the Project, (8) Criteria Used to Evaluate the Proposed Program, (9) Teachers Involved in the Current Program, and (10) Participants Involved in This Project Proposal. Also included are proposal evaluation criteria and equipment selection criteria. (EM)

VT 007 743

ED042060

PROCEDURES FOR DEVELOPING
INDUSTRIAL ARTS EDUCATION PROJECT PROPOSALS
UNDER THE PROVISIONS OF THE
NATIONAL DEFENSE EDUCATION ACT TITLE III

U.S. DEPARTMENT OF HEALTH, EDUCATION
& WELFARE
OFFICE OF EDUCATION
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March 1968

AT007743

Office of the State Coordinator for N.D.E.A. Title III
State Department of Public Instruction
P. O. Box 697
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N.D.E.A. TITLE III

INDUSTRIAL ARTS PROJECT PROPOSALS

FORWARD:

Industrial Arts was added as the tenth critical subject area to the National Defense Education Act by the United States Congress on October 21, 1966. The Delaware State Plan for N.D.E.A. was amended to provide for the processing of special Industrial Arts projects; the first of these projects was approved January, 1968.

It is the intent of this guide to describe the procedures to be followed and support material necessary in submitting local school district proposals to the Department of Public Instruction for funding assistance in the critical area of Industrial Arts.

DEFINITION:

"Industrial Arts" means the study of technology, its history, growth, and development in terms of industrial organization, materials, occupations, products, processes, and problems, including related academic endeavors as well as laboratory experience. It is a curriculum area in general education in which students may create, experiment, design, and plan while dealing with issues related to technology.

(This definition appears in the Federal Register under the explanation of eligible subjects for N.D.E.A. Title III.)

OBJECTIVES OF INDUSTRIAL ARTS:

1. To develop in each student an insight and understanding of industry and its place in our culture.

2. To discover and develop talents of students in the technical fields and applied sciences.

3. To develop technical problem-solving skills related to materials and processes.

4. To develop in each student a measure of skill in the use of the common tools and machines.

(These are the objectives as stated in the N.D.E.A. Title III Guidelines, Revised April, 1967.)

PREPARATION OF THE

INDUSTRIAL ARTS EDUCATIONAL PROGRAM

The Industrial Arts Project Proposal:

The Educational Program format, designed with the assistance of local Industrial Arts teachers, is intended to present a comprehensive picture of local Industrial Arts program. It provides a description of the unique features, contributions, and objectives of Industrial Arts and an evaluation of the local program. It is the only document that will be used to answer the reviewer's questions: "What is the existing program?" "How many more students could be served through this improved program?" "What have the local teachers done to improve their program?" "What are the specific problems retarding progress?" "What are their specific recommendations?"

The comprehensiveness of the proposal will make it a useful device, not only in the application for NDEA funding, but in "telling" the needs, and "selling" expanded Industrial Arts programming to local school personnel and laymen in the community.

There are ten (10) subject areas in competition for NDEA Title III funding support, be sure that your proposal represents your best thinking in a brief and comprehensive fashion.

The Teachers' Role:

It is expected that the local Industrial Arts teacher(s) will assume the bulkwork of the responsibility in the preparation of the project proposal. These teachers are the local "experts" in the field and live daily with the problems they are trying to solve.

Project Priorities in Industrial Arts:

The initial implementation of N.D.E.A. Title III funds for Industrial Arts will require setting some priorities to insure best utilization of limited funds available. This will involve concentration on the basic "must haves" needed to open new program areas and saving "nice to haves" for a later time. The emphasis will be on weak areas in the overall statewide program offerings, as well as, in the weak spots in the individual local programs. Priority will be given to the districts which will be unable to implement needed program changes unless outside funding is available to them. A major concern at all times will be for the total program of Industrial Arts at the local school. Funding support should be used to improve weaker program offerings, rather than putting all efforts into the more "exotic" or "status" courses at the expense of the total program.

INDUSTRIAL ARTS EDUCATIONAL PROGRAM
Project Proposal Outline

N.D.E.A. TITLE III

Section I. Objectives of the Industrial Arts Program

List the specific goals/objectives that provide guidelines for the Industrial Arts program in the school district.

(Only Section I. information on the first page.)

Section II. Background Information About the School District

A. What organizational plan is followed by the district? Check the blank which applies.

Example: 6 - Grades 1 thru 6, Elementary

3 - Grades 7 thru 9, Junior High

3 - Grades 10 thru 12, Senior High

6-3-3 _____

6-2-4 _____

4-4-4 _____

Other _____

B. Note the number and type of school plant facilities in the school district.

C. What is the total student population of the school district?

(Only Section II. data on the second page.)

Section III. The Current Program in Industrial Arts

A. Give a brief description of the present program at the following levels.

Elementary

Junior High

Senior High

B. Describe the efforts being made to develop and maintain an on-going program in Industrial Arts in grades 1 thru 12. Include feeder schools in this description.

What is the relationship of the program to existing secondary and post-secondary vocational-technical school programs?

C. What specific modification and/or growth has taken place in the program during the last three (3) years in the following areas?

In this response give a general statement about the extent of local initiative in program/curriculum development at the district level.

Elementary

Junior High

Senior High

NOTE: If there is not an ongoing fulltime program in one of these three grade levels, mention experimental efforts which have involved that area or the district intention to expand program offerings to provide all grade levels with effective Industrial Arts program experiences.

D. List in chart form the Industrial Arts courses offered at the elementary, junior high, and senior high levels. Place the letter (R) next to those courses that are required of all students. Note: For each course list the time allotted per class session, the number of sessions per week, and the total length of the course.

TABLE I (Sec. III-E)

Profile of Student Participation in Industrial Arts

Grade	No. of Males Enrolled in School by Grade Level	Courses by Grade Level	No. of Males Enrolled in Each Course By Grade Level	Percent of Grade Level in Each Course	Estimated Percent of Each Grade Not Enrolled But Who Could Profit From Industrial Arts	Estimated Percent to Benefit From Expanded Programming

E. Supply the data to complete the table above.

The chart is designed to show:

a. the relative effectiveness of the present program,

b. the percentage of students not enrolled in Industrial Arts, but who could profit from these experiences, and

c. an estimate of this proposed project's effect on the overall program.

NOTE: Develop an additional chart to show the involvement of female students in the Industrial Arts program.

TABLE II (Sec. III-F)

Industrial Arts Teachers by Courses and Teaching Load

Grade	Course	Teacher	Number of Students

F. Complete the above table by using current data:

List teaching assignments by grade level, course, and number of students.

Section IV. Industrial Arts Shop/Laboratory Facilities

A. Briefly describe in chart form the degree of adequacy of each Industrial Arts shop/laboratory facility in the district in terms of the following categories:

1. Equipment - machinery, hand tools
2. Materials/supplies
3. Instruction materials/audio-visual aids
4. Furniture/benches
5. Storage facilities
6. List square footage for each shop/laboratory

NOTE: Provide any other additional information that will help describe your individual school situation.

B. Identify each of the areas evaluated above by selecting the term which best describes the physical or curriculum organization of that Industrial Arts facility(ies).

Identify by subject area and organizational term:

1. Comprehensive General Shop/Laboratory is organized and equipped to implement instruction in two or more fields of Industrial Arts such as metals, woods, electricity and graphic arts.

2. Limited General Shop/Labortory is organized and equipped to provide instruction in two or more areas of a single field of work, for example: sheet metal, foundry, welding, and machine shop.

3. Unit Shop/Laboratory is organized and equipped to accomodate instruction in a single sub-area of Industrial Arts such as cabinetmaking, drafting, sheet metal, or electricity.

Section V. Student Guidance and Evaluation

A. List and describe the criteria listed to group or track students in Industrial Arts at the following levels.

Elementary

Junior High

Senior High

What provisions are included to meet individual differences at these levels?

B. List the criteria employed to evaluate student performance and achievement in the Industrial Arts program at the following levels.

Elementary

Junior High

Senior High

Section VI. Planned Improvements in the Industrial Arts Program

A. Describe in general the planned improvements in the Industrial Arts program by grade level. Keep in mind that the statement of objectives in "Section I" should be reflected in the planned program expansion and development.

Elementary

Junior High

Senior High

NOTE: To assist in planning and developing program improvements local schools may want to make use of "Community Resource Committees". Effective use of such committees contributes much to the concern for the "Interpretation of Industry" as stated in the Industrial Arts objectives.

TABLE III (Sec. VI-B)

Specific Recommendations and Their Effects on the Program

Describe Proposal Requests in Order of Priority	What Needs Justify This Request?	How Will This Effect the Program?

B. For each shop/laboratory area to be effected in the proposal, supply backup material using the above format.

Section VII. Tentative Schedule for Completing Various Phases of the Project

Long-range planning (up to five years) is important in these projects. On this page include, in general statements, how you will execute your project by phases and the school years involved.

Section VIII. Criteria Used to Evaluate the Proposed Program

List and briefly describe the criteria your district will employ in evaluating the effectiveness of this new programming in Industrial Arts.

Section IX. Teachers Involved in the Current Program

TABLE IV (Sec. IX)

Professional Background of Project Staff

Name of Teacher	Degrees Held	Course Special Program	Type*	Year	Semester Hours Credit	Level**

* S= Summer, A= Academic Year, I= In-service, SI= Special Institute
** U= Undergraduate, G= Graduate

NOTE: Memberships in professional associations should also be included.

Section X. Participants Involved in This Project Proposal

TABLE V (Sec. X)

Participants Involved in Proposal Preparation

Name	Role	Position	Subject or Grade Taught

A project proposal requires the cooperation and effort of the many individuals. It cannot be stressed too strongly that the teachers who are to use the items acquired should participate fully in the planning and justification of project proposals. Provide data to complete the above table.

Section XI. Official Project Proposal Approval

A. Statement of Approval by Chief School Officer:

I have examined this project proposal in Industrial Arts and am in full accord with the plans that have been developed.

_____ _____

Chief School Officer — Date

B. Review and Approval by the Department of Public Instruction:

_____ _____

State Coordinator, NDEA — Date

_____ _____

State Supervisor Coordinating Development of NDEA Industrial Arts Projects — Date

C. Approval of Modification in Existing Educational Program:

_____ _____

Date

_____ _____

Date

NOTE: When filing the final project proposal for evaluation submit the certification forms with two (2) copies of the Educational Program and three (3) copies of the Equipment-Materials List for "official" office copies.

It is requested that the Educational Program be duplicated in sufficient quantity as to provide the members of the Department of Public Instruction Evaluation Committee with copies to preview prior to the actual evaluation session. Extra copies of the proposal may also prove useful in keeping personnel at the local level informed of the needs for expanded Industrial Arts programming.

EVALUATION OF INDUSTRIAL ARTS PROJECT PROPOSALS

The criteria for the evaluation on individual Industrial Arts projects will include a consideration of the following:

Is the Industrial Arts project:

1. identifiable as an Industrial Arts course or program and designed to meet the Industrial Arts objectives?

2. appropriate for the grade of instructional level, curriculum content, equipment (kinds, types and quantity), and time allotted for instruction?

3. for the purpose of enhancing the areas of instruction and/or the health and safety of the students?

The following points will also be considered in the evaluation of project proposals. These points will form the criteria used in determining the approval of local projects. (The points are not listed in order of importance.)

1. The degree to which the project relates to the priority listing of unmet needs and weaknesses as evaluated by the staff and described in the educational program.

2. The degree to which the project will actually improve instruction for students in the classroom, shop, or in the laboratory.

3. The degree to which the new equipment and materials will contribute to achieving the objectives stated in the educational program.

4. The degree to which the project will provide improvements in the basic purposes outlined for Title III projects.

5. The degree to which the objectives of the project relate to the basic purposes outlined for Title III projects.

6. The degree to which class size and time allotted per class session provides for maximum use of equipment and materials.

7. The provisions for inservice education related to the project, including supervisory or consultant services.

8. The cost of the project is reasonable in its relation to potential improvement of instruction and number of students and teachers affected.

9. Consider the competencies of local staff who will be assigned to carry out the project implementation.

10. The provisions for installation, care, and maintenance of equipment and materials provided through the project.

11. Consider provisions for evaluation of the project's effectiveness.

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EQUIPMENT AND MATERIALS STANDARDS

INDUSTRIAL ARTS EDUCATION - N.D.E.A. TITLE III

Section I. Determining Eligibility

There is nothing inherent in equipment which in and of itself determines eligibility. Rather it is the use to be made of the equipment and its direct relationship to instruction in the critical subjects which determines its eligibility for purchase under an approved project.

For specific examples illustrating eligibility regarding equipment and materials, refer to the N.D.E.A. Guidelines, Revised, 1967.

Section II. General Criteria for Determining Eligibility

The principal criteria to be used by the Department of Public Instruction in determining the eligibility of laboratory and other special equipment and materials are:

1. Items purchased must be in conformity with the State equipment standards.

2. They must be suitable for use in providing education in one or more of the critical subjects.

3. There must be reasonable expectation that their use will result in the improvement of instruction in one or more of the critical subjects.

4. The items must be of such nature that, with reasonable care and use, they may be expected to last for more than one year.

5. They must be items which are not normally provided in furnishing an ordinary classroom.

6. They must be adaptable to the space available or to be made available.

Section III. Criteria for Selection of Equipment and Materials

The use of equipment and materials to improve instruction means the actual and direct employment of such items in the development, presentation, and learning of the subject matter or content of the course of study in one or more of the critical subjects. The improvement of instruction can be achieved, for example, by:

1. Increasing understanding of content
2. Offering more content
3. Developing greater student skill
4. Evaluating student achievement
5. Enriching student experiences
6. Introducing new subjects and more advanced courses
7. Improving teaching methods
8. Increasing teacher competencies

The following are examples of criteria which may be used by schools and school systems in the selection of equipment and materials:

1. The equipment and materials relate directly to increased knowledge, understanding, or skill on the part of the student in Industrial Arts.
    a. The items contribute specifically to the objectives stated in the educational program.
    b. They reflect the school's effort to introduce improvements in the program -- longer sequences of study, increased offerings, continual sequential development, etc. in Industrial Arts program areas.
    c. They stimulate the students' interest and desirable attitudes toward the subject.
2. The usability and suitability of the equipment and materials are optimum in the subject concerned.
    a. The items indicate a proper balance between student participation in laboratory activities and teacher demonstrations and presentations.

b. They are appropriate for the grade level and type of activity in which they will be used.

c. They are compatible with the Industrial Arts educational program offered or planned by the school.

d. They provide a learning potential not otherwise available in the Industrial Arts program.

3. The quantity, quality, and up-to-dateness of the equipment and materials are appropriate for the school or school system which is acquiring them.

   a. The number of items requested is adequate for the number of students and teachers who will use the equipment or materials at one time.

   b. The quality and durability of the items are in keeping with the desired performance.

   c. The costs are compatible with the durability and performance needed for school use.

   d. Consideration has been given to the selection of recent models of equipment and up-to-date materials and to maintenance requirements.

4. The use of such equipment and materials in teaching, in preparation for teaching, and in evaluation of instruction will improve instruction in one or more of the subject fields.

   a. Teachers have the necessary understanding or competency to make effective use of the equipment and materials (or provision is made for inservice preparation).

   b. Supervisory services are available or are being provided for the continuing improvement and evaluation of the instructional use of the equipment and materials.

Section IV. Basic Limitations

Because of the categorical nature of the Act and the Regulations, general-purpose equipment is not eligible for purchase with Title III funds. Equipment such as seating, chalkboards, and desks normally found in general classrooms, is excluded. Maintenance equipment and replacement parts are ineligible for the same reason.

Section V. Limitations of Equipment for Industrial Arts

Approval of equipment to strengthen instruction in Industrial Arts poses special problems of two types.

1. Much of the equipment used in some Industrial Arts courses in secondary schools is highly complex and, therefore, very expensive.

2. The objectives of Industrial Arts are often identified though mistakenly with the function or role of vocational education.

To meet the objectives of Industrial Arts within the bounds of NDEA Title III and to make the most effective use of limited funds available, the State Department of Public Instruction will study proposed Industrial Arts projects carefully to make certain that the equipment requested is suitable for instruction in Industrial Arts and that it will be used primarily for instruction in such a course. To help determine the eligibility of equipment for an Industrial Arts project, the following limits should be applied.

1. The classes for which the equipment is intended should be specifically designated as offerings within the Industrial Arts department or program. Equipment should not be approved for use in courses designed to prepare individuals for employment as skilled or semi-skilled workers or as technicians in recognized occupations. Thus, equipment for courses eligible for support by such legislation as the Smith-Hughes Act, the George-Barden Act, and the Vocational Education Act of 1963, or those vocational courses supported by State and local agencies would not be eligible for support under NDEA Title III.

2. A single item of equipment should be limited in complexity to the needs for instructing students in the operation of equipment within that particular classification. For example, lathes, presses, and milling and stamping machines should be adequate to teach students the use of equipment of these types, but they should not be of a size or complexity required to manufacture highly sophisticated products. To illustrate this criterion, the Federal Guidelines recommend that the cost of a single item of equipment, exclusive of accessories, should not exceed $4,000.

Section VI. Preparing Equipment and Materials Lists

Local school districts should work closely with the State supervisor coordinating the development of the Industrial Arts projects in the preparation of final budget requests. Specific items should be evaluated carefully to insure that these purchases will bring the most benefit to the overall program for money to be invested in the project.

While the educational program is designed to long-range planning, the Equipment-Materials Lists should represent only the items being requested during one year's funding period. The project may be amended for consideration of additional requests at a later date.

NOTE: When filing the final project proposal for evaluation, submit two (2) copies of the Educational Program and three (3) copies of the Equipment-Materials List for official file copies.

Section VII. Coding Equipment-Materials Lists for Industrial Arts Projects

In preparation of Equipment-Materials Lists for special Industrial Arts projects, use the code initials below to identify each item number by relating it to a specific activity area:

IA-AV - Audio-Visual equipment and materials for general Industrial Arts department use

IA-CF - Crafts

IA-CR - Ceramics

IA-DR - Drafting/Mechanical Drawing (Also planning and design area)

IA-EL - Electricity/Electronics

IA-FP - Fluid Power

IA-GA - Graphic Arts

IA-MT - Metals Fabrication

IA-PH - Photography

IA-PL - Plastics

IA-PM - Power Mechanics/Auto

IA-TX - Textiles

IA-WD - Wood Fabrication

NOTE: Refer to page 6 of these "Standards" for a sample format and an illustration of the use of coding.

NDEA, TITLE III - EQUIPMENT AND MATERIALS LIST FIRST PAGE

DISTRICT _____ SCHOOL _____

SUBJECT:
(Check one)

___ SCIENCE (S)
___ MATHEMATICS (M)
___ FOREIGN LANGUAGE (L)
___ ENGLISH (E)
___ READING (R)
___ CIVICS (C)
___ HISTORY (H)
___ GEOGRAPHY (G)
___ ECONOMICS (EC)
___ ARTS AND HUMANITIES (AH)
X INDUSTRIAL ARTS (IA)

LEVEL:
(Check one)

___ ELEMENTARY
X SECONDARY

Number consecutively equipment and material items. If this is an initial Equipment and Materials List, begin with Number 1; should this be a supplement or continuation of your project, use the next consecutive number in the subject area. Indicate code letter of critical subject area after each number; code number and letter must be included on this form, purchase order and invoice. Separate Equipment and Materials Lists must be submitted for Elementary and Secondary levels.

ITEN NUMBER	CODE NUMBER	DESCRIPTION	QUANTITY	PRICE	AMOUNT
		BRODHEAD GARRETT 4560 East 71st Street Cleveland, Ohio 44105	(NOTE: Roundoff total amounts of budget estimates to the nearest dollar figure.)		
#1-IA	IA-DR #1	Vemco Drafting Machines 16" arm (Model 3300)	5	66.00	330.00
#2-IA	IA-DR #2	9-s-2 Standard Drafting Machine Scale Duraluminum 18"	5	6.75	34.00
		GRAVES HUMPHREYS, INC. P. O. Box 1240 Roanoke, Virginia			
#3-IA	IA-MT #1	Brugh & Spencer General Purpose Grinder, complete with ¼ HP, 110 V single Phase Motor	1	67.50	68.00
#4-IA	IA-MT #2	Majestic Dial Control Drill Sharpener	1	16.50	17.00
#5-IA	IA-MT #3	Stanley Bench Grinder #697 with attachment for grinding plane irons and chisels, with #600 Floodlight eyeshield 208/220 V 3 phase-induction	1	147.25	148.00
				TOTAL THIS PAGE	$597.00

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IA-NDEA-'68-S6

VT 007 809
Altman, Charles Dwayne; Smith, Larry Julian
Student Interest and Employment Opportunities in the Field of Ornamental Horticulture in Pickens County, South Carolina.

South Carolina Vocational Education Research Coordinating Unit, Clemson
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SOUTH CAROLINA; PICKENS COUNTY

To investigate student interest in ornamental horticulture and to determine employment opportunities for ornamental horticulture graduates, 14 employers and all eighth grade boys enrolled in public schools were surveyed following presentations by investigators. Some findings were: (1) 64.5 percent indicated that they would like to study plants "not for a job, but for pleasure," (2) 10.7 percent intended to use such knowledge in future employment, (3) 61 percent indicated an intention to enroll in ornamental horticulture in high school, (4) County firms employed a total of 63 full-time and 24 part-time helpers, (5) 12 full-time and 31 part-time employees were hired each year, (6) All firms would give preference to high school graduates who had taken a 2-year program in ornamental horticulture, and (7) 12 of the 14 firms reported that they would consider employing as part-time help high school students studying horticulture. The appendixes contain 18 tables of data. (DM)

VT 007 809

590

STUDENT INTEREST AND EMPLOYMENT OPPORTUNITIES IN THE FIELD OF ORNAMENTAL HORTICULTURE IN PICKENS COUNTY, SOUTH CAROLINA

ED042060

CHARLES DWAYNE ALTMAN

and

LARRY JULIAN SMITH

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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Department of Agricultural Education
and the
South Carolina Research Coordinating Unit
for
Vocational Education
Clemson University
Clemson

In cooperation with
Office of Vocational Education
State Department of Education
Columbia

July 1968

VT007809

FOREWORD

The study reported here was conducted by Charles Dwayne Altman and Larry Julian Smith who were enrolled in a research methods course under Dr. A. K. Jensen of the Department of Agricultural Education at Clemson University. There was a substantial amount of data in the original report including detailed tables for each school involved.

Mrs. Lia Kapelis, Research Assistant of the Research Coordinating Unit, has reworked the material to expose those facts likely to have general interest. Although the tables placed in the Appendixes do not seem to merit discussion for this report, many readers will find them to be of interest.

Earl T. Carpenter, Director
Research Coordinating Unit
for Vocational Education

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INTRODUCTION

School administrators and teachers of vocational agriculture are interested in developing programs which will contribute most to the vocational objectives of their students. This is true in Pickens County, the setting for this study, as in other areas of the State and Nation.

The number of students in a school interested in a particular course, as well as the career opportunities available in the school's area are of concern to vocational administrators in designing a curriculum. Student interest in a high school course in ornamental horticulture for a vocational or college preparatory curriculum, and local employment opportunities for a graduate must be investigated to determine if the cost for adding an ornamental horticulture course to the school's curriculum would be justifiable.

The horticultural needs of South Carolina vary from one area to another. Education in only one horticultural field may be needed in some areas; whereas, in others education maybe needed in two or three horticultural fields. The wide variation in horticultural educational needs for different areas of South Carolina means that each area must provide horticultural education according to its needs.

A study in 1965 by Johnson[1] indicated that a need for personnel trained in ornamental horticulture existed in South Carolina. Johnson's study divided the state into six districts. The greatest needs he found

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[1]Cecil H. Johnson, Jr., "Job Opportunities and Training Requirements in the Field of Ornamental Horticulture in South Carolina" (Clemson, South Carolina: Agricultural Education Department, Clemson University, Research Report, 1965).

were (1) salesmen of nursery products, (2) nursery workers, and (3) greenhouse workers. The district of the state needing the greatest number of personnel included Pickens County. Of the total anticipated increase in employment in ornamental horticulture by 1968, 40 percent was in the district that includes Pickens County. Thirty-six percent of the increase in employees that the firms would hire if employees were available was also in the same district.

Over two-thirds of the ornamental horticultural plants sold in the upper Piedmont section of South Carolina are shipped in from other areas. Due to its location, Pickens County is an ideal production area of ornamental horticulture plants for the Piedmont sections of North Carolina and South Carolina. Several large cities are located nearby providing an excellent market for ornamental plants.

PURPOSE OF THE STUDY

The purposes of the study were

1. To determine if Pickens County high school students were interested in a course in ornamental horticulture, and
2. To determine whether there were employment opportunities for graduates of a high school ornamental horticulture course in Pickens County, South Carolina.

An attempt was made to investigate student interest in various areas of horticulture to determine the areas most popular to students.

PROCEDURE

Eighth grade boys from all public schools in Pickens County were included in this study.

In each school the investigators gave a 30-minute presentation on ornamental horticulture. Following this, the students were asked to complete an inquiry form covering interests in certain after-school activities and some questions on their home backgrounds. They were asked to discuss with their parents the possibility of enrolling in a vocational horticulture course in high school.

Two to four weeks later, those students who, after discussion with their parents, desired to enroll in a horticulture course saw their guidance counselor and completed another form. This form covered reasons for desiring to study horticulture.

To discover employment opportunities, twenty-two horticultural firms were contacted by the investigators. As 8 did not employ help, data were obtained from the remaining 14, representing 3 golf courses, 5 florists, 3 nurseries, and 3 nursery florist combinations. These respondents answered a questionnaire covering employment opportunities and job competencies.

All data were tabulated and reported descriptively.

SUMMARY OF FINDINGS

A brief summary of findings is given below. More complete information is contained in the tables which follow.

1. Student Interest - In response to the first questionnaire, 38.3 percent of the eighth grade boys showed an interest in studying about plants in a one semester course in high school. About 15 percent of the boys were interested in studying about plants in a two-year vocational course in high school; 18.5 percent would like to study about plants in college.

Nearly two-thirds of the respondents (64.5 percent) indicated that they would like to study plants "not for a job, but for pleasure"; 18.1 percent hoped to use knowledge of plants as preparation for studying plants in college; 10.7 percent intended to use such knowledge in future employment.

Regarding out-of-school work activities, 83.2 percent of the boys indicated that they enjoyed outdoor work. The most common part-time work activity was mowing lawns for neighbors (55.3 percent) followed by trimming bushes and trees (45.9 percent) and vegetable gardening (13.5 percent).

There were no marked differences in interests and part-time work activities between boys who were planning to enter college and those who intended to seek employment. The only exception was concerning landscape design. Of those who were planning to go to college, 50 percent said that they would like to know more about landscape design, whereas only 29 percent of the noncollege bound checked landscape design.

Of the total group of boys who answered the initial questionnaire, 61 percent reported back to complete the second questionnaire, thereby indicating their intention to enroll in an ornamental horticulture course in high school.

It is apparent that some of the students did not fully understand items on the questionnaire. For example, as indicated in Table VIII, four of the students reported that they were interested in ornamental horticulture as a course of study in college, even though they did not plan to go to college. Such a lack of understanding may be due to the respondents level of maturity.

2. Employment Opportunities - The 14 horticultural firms surveyed were employing a total of 63 full-time and 24 part-time helpers.

The total number of employees hired each year was given as 12 full-time and 31 part-time persons.

In employee selection all 14 firms would give preference to high school graduates who had taken a two-year program in ornamental horticulture.

Twelve of the total fourteen firms reported that they would consider employing high school students studying horticulture as part-time help. They reported opportunities for seventeen male and seven female students to be employed in this way.

CONCLUSION

More than half of the eighth grade boys (61 percent) intended to take an ornamental horticulture course in high school.

The survey of Pickens County horticulture indicated that there were employment opportunities for graduates of ornamental horticulture programs in high school.

APPENDIX A

TABLES I - IX

The tables in Appendix A indicate the initial responses by students following a 30-minute presentation on ornamental horticulture.

APPENDIX A

TABLES I - IX

The tables in Appendix A indicate the initial responses by students following a 30-minute presentation on ornamental horticulture.

TABLE II

NUMBERS OF STUDENTS PREFERRING TO LEARN ABOUT PARTICULAR KINDS OF HORTICULTURAL ACTIVITIES BY PLACE OF RESIDENCE

ACTIVITY	RURAL No.	%	CITY No.	%	FARM No.	%	TOTAL No.	%
	N.=208		N.=175		N.=76		N.=459	
Landscape design	99	47.6	65	37.1	22	28.9	186	40.5
Care of grasses	59	28.4	53	30.3	23	30.2	135	29.4
Names and type of plants	37	17.8	21	12.0	14	18.4	72	15.7
Care of trees	32	15.4	10	5.7	16	3.5	58	12.6
Growing flowers	11	5.3	14	8.0	14	18.4	39	8.5
Care of shrubs	9	4.3	7	4.0	5	6.6	21	4.6
Flower arrangement	6	2.9	4	2.2	2	2.6	12	2.6
Totals*	253		174		96		523	

*Total exceeds N. because of multiple responses.

TABLE III

REASONS STUDENTS WOULD LIKE TO STUDY ABOUT PLANTS BY PLACE OF RESIDENCE

REASON	RURAL No.	%	CITY No.	%	FARM No.	%	TOTAL No.	%
	N.=208		N.=175		N.=76		N.=459	
For pleasure	143	68.7	107	61.1	46	60.1	296	64.5
To prepare for further study in college	32	15.4	38	21.7	13	17.1	83	18.1
For employment	23	11.1	12	6.9	14	18.4	49	10.7
Totals*	198		157		73		428	

*Total does not equal N. because students checked only those responses which they felt were applicable to themselves.

TABLE IV

REASONS CHECKED BY STUDENTS FOR STUDYING AGRICULTURE IN HIGH SCHOOL BY PLACE OF RESIDENCE

REASON	RURAL No.	RURAL %	CITY No.	CITY %	FARM No.	FARM %	TOTAL No.	TOTAL %
	N.=208		N.=175		N.=76		N.=459	
In order to take a horticultural course in high school	48	23.1	40	22.9	24	31.6	112	24.4
To prepare for studying agriculture in college	25	12.0	33	18.9	13	17.1	71	15.5
For employment	35	16.8	8	4.6	21	27.6	64	13.9
Totals*	108		81		58		247	

*Total does not equal N. because students checked only those responses which they felt were applicable to themselves.

TABLE V

TYPE OF WORK PERFORMED BY STUDENTS WHEN OUT OF SCHOOL BY PLACE OF RESIDENCE

TYPE OF WORK	RURAL No.	RURAL %	CITY No.	CITY %	FARM No.	FARM %	TOTAL No.	TOTAL %
	N.=208		N.=175		N.=76		N.=459	
Mowing lawns for neighbors	112	53.9	103	58.9	39	51.3	254	55.3
Trimming bushes and trees	36	17.3	25	14.2	12	15.8	73	15.9
Vegetable gardening	36	17.3	6	3.4	20	26.3	62	13.5
Delivery of newspapers	9	4.3	16	9.1	2	2.6	27	5.9
Caring for flower gardens	9	4.3	10	5.7	3	3.9	22	4.8
Farming	5	2.4	1	0.6	10	13.2	16	3.5
Grocery delivery	9	4.3	3	1.7	4	5.3	16	3.5
Restaurant work	8	3.8	5	2.9	1	1.3	14	3.1
Service station helper	3	1.4	6	3.4	1	1.3	10	2.2
Handyman	1	0.5	6	3.4	1	1.3	8	1.7
Carpentry	4	1.9	0	---	1	1.3	5	1.1
Other	9	4.3	2	1.1	3	3.9	14	3.1
Totals*	208		183		97		521	

*Total exceeds N. because of multiple responses.

TABLE VI

FARM VERSUS NONFARM OCCUPATION OF FATHERS BY PLACE OF RESIDENCE

FATHER'S OCCUPATION	RURAL No.	RURAL %	CITY No.	CITY %	FARM No.	FARM %	TOTAL No.	TOTAL %
Father, part-time farmer	36	17.3	10	5.7	48	63.2	94	20.5
Father, full-time farmer	1	0.5	2	1.1	2	2.6	5	1.1
Father does not farm	171	82.2	163	93.2	26	34.2	360	78.4
Totals	208	100%	175	100%	76	100%	459	100%

TABLE VII

REASONS GIVEN BY STUDENTS FOR DOING PART-TIME WORK BY PLACE OF RESIDENCE

REASON	RURAL No.	RURAL %	CITY No.	CITY %	FARM No.	FARM %	TOTAL No.	TOTAL %
Money	102	49.1	79	45.1	29	38.1	210	45.8
Money and enjoyment	60	28.9	56	32.0	24	31.6	140	30.5
Enjoyment of work	24	11.5	12	6.9	13	17.1	49	10.6
No response	22	10.5	28	16.0	10	13.2	60	13.1
Totals	208	100%	175	100%	76	100%	459	100%

TABLE VIII

REASONS GIVEN BY STUDENTS FOR TRIMMING THE HOME LAWN BY PLACE OF RESIDENCE

REASON	RURAL No.	%	CITY No.	%	FARM No.	%	TOTAL No.	%
	N.=208		N.=175		N.=76		N.=459	
Parents have assigned the task of keeping lawn trim	88	42.3	69	39.4	30	39.4	187	40.7
Like a neat yard although do not enjoy the work	77	37.0	65	37.1	24	31.5	166	36.2
Enjoy working with plants	45	21.6	41	23.4	26	34.2	112	40.7
Totals*	208		175		76		459	

*Total exceeds N. because of multiple responses.

TABLE IX

ACTIVITIES ENJOYED BY STUDENTS BY PLACE OF RESIDENCE

ACTIVITY	RURAL No.	%	CITY No.	%	FARM No.	%	TOTAL No.	%
	N.=208		N.=175		N.=76		N.=459	
Working outdoors	175	84.1	149	85.1	58	76.3	382	83.2
Working in a garden	28	13.5	11	6.3	17	22.3	56	12.2
Working with trees	14	6.7	7	4.0	5	6.6	26	5.7
Locating plants to beautify the home grounds	12	5.8	6	3.4	3	3.9	21	4.6
Planting flowers, shrubs, etc.	8	3.8	7	4.0	4	5.3	19	4.1
Growing flowers	5	2.4	4	2.2	5	6.6	14	3.1
Working with flowers	7	3.4	5	2.9	1	1.3	13	2.8
Working with shrubs	5	2.4	2	1.1	3	3.9	10	2.2
Arranging flowers	2	1.0	2	1.1	2	2.6	6	1.3
Totals*	256		193		98		547	

*Total exceeds N. because of multiple responses.

APPENDIX B

TABLES X - XIV

Appendix B includes responses by those students intending to enroll in a horticulture course. This information was obtained four weeks after the initial presentation on ornamental horticulture. Students made these responses in the presence of guidance counselors after discussing their plans with parents.

TABLE X

PREFERENCES FOR LEARNING ABOUT PARTICULAR KINDS OF HORTICULTURAL ACTIVITIES BY STUDENTS INTERESTED IN TAKING VOCATIONAL AGRICULTURE VERSUS THOSE NOT INTERESTED IN TAKING VOCATIONAL AGRICULTURE

ACTIVITY	INTERESTED IN VOCATIONAL AGRICULTURE		NOT INTERESTED IN VOCATIONAL AGRICULTURE		TOTAL
	No.	%	No.	%	No.
	N.=112		N.=170		N.=282
Care of grasses	53	47.4	69	40.6	122
Landscape design	48	43.0	69	40.6	117
Care of trees	55	49.1	48	28.2	103
Care of shrubs	32	28.6	33	19.4	65
Names of plants	26	23.2	31	18.3	57
Growing flowers	23	20.6	22	12.9	45
Flower arrangement	12	10.7	9	5.3	21
Totals*	249		272		530

*Total exceeds N. because of multiple responses.

TABLE XI

PREFERENCES FOR LEARNING ABOUT PARTICULAR KINDS OF HORTICULTURAL ACTIVITIES BY STUDENTS INTERESTED IN COLLEGE VERSUS EMPLOYMENT AFTER HIGH SCHOOL

ACTIVITY	PLANNING TO ATTEND COLLEGE		PLANNING TO TO ENTER EMPLOYMENT		TOTAL
	No.	%	No.	%	No.
	N.=147		N.=98		N.=245
Care of grasses	73	49.5	42	43.0	115
Landscape design	80	55.0	27	27.6	107
Care of trees	50	34.0	41	42.0	91
Care of shrubs	34	27.2	22	22.4	56
Names of plants	25	17.0	22	22.4	47
Growing flowers	24	16.3	13	13.3	37
Flower arrangement	11	7.5	4	4.1	15
Totals*	297		171		468

*Total exceeds N. because of multiple responses.

TABLE XII

REASONS FOR INTENDING TO TAKE VOCATIONAL AGRICULTURE IN HIGH SCHOOL BY STUDENTS INTERESTED IN COLLEGE VERSUS EMPLOYMENT AFTER HIGH SCHOOL

REASON	PLANNING TO ATTEND COLLEGE No.	%	PLANNING TO ENTER EMPLOYMENT No.	%	TOTAL No.
	N.=147		N.=98		N.=245
To prepare for ornamental horticulture	9	6.1	6	6.1	15
To prepare for some other agriculture	25	17.0	46	46.9	71
Other	3	2.0	5	5.1	8
Totals	37		57		94

TABLE XIII

REASONS CHECKED FOR TAKING ORNAMENTAL HORTICULTURE BY STUDENTS INTERESTED IN COLLEGE VERSUS EMPLOYMENT AFTER HIGH SCHOOL

REASON	PLANNING TO ATTEND COLLEGE No.	%	PLANNING TO ENTER EMPLOYMENT No.	%	TOTAL No.
	N.=147		N.=98		N.=245
In order to seek employment in horticulture	12	8.1	33	33.7	45
To prepare for studying horticulture in college	47	3.2	4	4.1	51
Totals	59		37		96

TABLE XIV

PREFERENCES FOR LEARNING ABOUT PARTICULAR KINDS OF HORTICULTURAL ACTIVITIES BY STUDENTS INTERESTED IN A COURSE DESIGNED TO TRAIN FOR A VOCATION IN ORNAMENTAL HORTICULTURE VERSUS THOSE STUDENTS NOT INTERESTED

ACTIVITY	INTERESTED IN VOCATIONAL ORNAMENTAL HORTICULTURE No.	%	NOT INTERESTED IN VOCATIONAL ORNAMENTAL HORTICULTURE No.	%	TOTAL
	N.=61		N.=207		N.=268
Care of grasses	36	58.0	76	36.7	112
Landscape design	30	49.0	77	37.2	107
Care of trees	30	49.0	64	30.8	94
Care of shrubs	17	28.0	41	19.8	58
Names of plants	17	28.0	35	16.9	52
Growing flowers	19	31.2	23	11.1	42
Flower arrangement	11	18.1	9	4.3	20
Totals*	160		325		485

*Totals exceed N. because of multiple responses.

APPENDIX C

TABLES XV - XVIII

Appendix C includes data on employment opportunities in ornamental horticulture in Pickens County. The data was secured by visiting 22 horticultural firms.

TABLE XV

SOME CHARACTERISTICS OF LABORERS UTILIZED IN THE PICKENS COUNTY HORTICULTURAL INDUSTRY

LABORERS	FULL TIME			PART TIME		
	Total	Male	Female	Total	Male	Female
Number employed at present	63	Not Asked		24	Not Asked	
Number of new employees hired each year	12	8	4	31	19	12
Number of high school graduates who have taken horticulture that could be employed	10	6	4	26	18	8

TABLE XVI

POSITIONS IN WHICH PROSPECTIVE EMPLOYEES COULD BE PLACED

POSITIONS	NUMBER OF FIRMS
General laborer	4
Designer	4
Salesman	3
Greens worker	3
General floral worker	2
Delivery	2
Landscape	2
Management	1

TABLE XVII

DIFFERENT EMPLOYEE COMPETENCIES AS RANKED ACCORDING TO IMPORTANCE BY HORTICULTURAL FIRMS

COMPETENCIES	RANK									Weighted Score*
	1	2	3	4	5	6	7	8	9	
Personality	4	0	1	2	1	0	2	1	3	69
Basic knowledge of greenhouse structures and care	1	1	0	1	4	2	2	2	0	69
Basic mechanical skills	3	2	1	2	0	0	1	3	0	49
Basic knowledge of the different phases of plant science	0	5	0	2	3	1	1	0	0	46
Basic knowledge of management and sales	1	1	0	0	2	1	1	0	2	44
Basic knowledge of soils and fertilization	1	2	5	2	0	1	0	1	0	42
Initiative	1	1	1	3	1	1	0	0	1	38
Able to do quality physical work	2	1	1	2	1	2	0	0	0	32
Honesty	1	1	5	0	0	1	0	0	0	24

*Lowest score indicates highest rank.

TABLE XVIII

FIRMS REPORTING YEAR-ROUND VERSUS SEASONAL LABOR NEEDS

TYPE OF LABOR	NUMBER OF FIRMS
Seasonal	7
Year-round	5
Combination	2
Total	14

VT 007 832
Midjaas, Ruth E., And Others
Young Women in Fort Collins, Colorado. A Study of the Characteristics and Homemaking Problems, Attitudes, and Practices of Women Aged 24 to 32 in Fort Collins, Colorado. Research Report.

Colorado State Univ., Fort Collins. Dept. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Dec68 52p.

*HOME ECONOMICS EDUCATION; *INDIVIDUAL CHARACTERISTICS; *FEMALES; *STUDENT NEEDS; SURVEYS; *WOMENS EDUCATION; WORKING WOMEN; OPINIONS; TABLES (DATA)
FORT COLLINS; COLORADO

A pilot survey of 96 women, 24-32 years of age, was conducted to ascertain whether educational needs of young women in Fort Collins, Colorado were significantly different from those of young women in Virginia (determined from the research study, "Young Women in Virginia." Specific topics are: (1) educational, employment, and family characteristics, (2) problems in homemaking and family living, (3) attitudes toward selected aspects of homemaking, (4) homemaking practices of young women, (5) educational needs as expressed by young women, (6) differences in characteristics, homemaking problems and practices of young married women who graduated and did not graduate from high school, and (7) differences in characteristics, homemaking problems and practices of young married women who did and did not enroll in home economics while in school. A comparison of the samples from both studies showed that more of the Fort Collins women completed high school, enrolled in college home economics, had children, and were in the 9-12 thousand dollar income group. The study also showed that a high percentage of the young women studied had been employed since high school, were married, lived in single-family dwelings, kept a budget and had a savings plan. Their prime concerns were an orderly house and money management. Money management practices were not related to amount of home economics education, but discipline of children was related. The document is illustrated with charts and tables. (FP)

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Department of Vocational Education

Research Report

Colorado State University

Fort Collins

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YOUNG WOMEN IN FORT COLLINS COLORADO

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DECEMBER 1968

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YOUNG WOMEN IN FORT COLLINS, COLORADO

A Study of the Characteristics and Homemaking Problems Attitudes, and Practices of Women Aged 24 to 32 In Fort Collins, Colorado.

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FOREWORD

This study was conducted at Colorado State University by Dr. Ruth Midjaas, Associate Professor and Chairman, Home Economics Education; Miss Jo Elen K. Zgut, research assistant and doctoral student in vocational education; and Charlene Foster, research assistant in vocational education. Funding for this study was secured from the Research Coordinating Unit for Vocational Education in Colorado.

The study reported in this publication was initiated to provide guidelines for high school home economics curriculum planning in Colorado. Assistance was obtained from a similar study, Young Women in Virginia by Beth Jordan of Virginia Polytechnic Institute and Rosa Loving, State Supervisor of Home Economics Education in Virginia. The data reported is limited to a pilot survey of young women in Fort Collins, Colorado; it was conducted to ascertain whether characteristics and educational needs of young women in Fort Collins were significantly different from those of young women in Virginia. Due to this limitation care should be taken in generalizing the results to other populations.

Specific topics included are (1) educational, employment, and family characteristics of young women in Fort Collins, Colorado; (2) problems in homemaking and family living; (3) attitudes toward selected aspects of homemaking; (4) homemaking practices of young women; (5) educational needs as expressed by young women; (6) differences in characteristics, homemaking problems and practices of young married women who graduated from high school and those who did not graduate from high school; (7) and differences in characteristics, homemaking problems and practices of young married women who did and did not enroll in home economics while in high school. The data concerning each of these topics is compared with the data presented in the Virginia study.

It is believed that this report will provide up-to-date information useful to home economics teachers, home economics teacher educators, school administrators, and others in providing for the educational needs of girls and women in Colorado.

PREFACE

Douglas Sjogren

The study reported in this publication provides much information that should be useful in thinking about present programs as well as potential programs. It must be emphasized, however, that there are very real limitations to the information that require that any conclusions be strictly qualified. This statement should not be interpreted as a criticism of the investigator. In fact the investigator should be commended for employing a design and analysis plan that permit a clear indication of the limits of the study. The use of an instrument that had been employed in a previous study permitted direct comparisons between two samples. As one reads the study it becomes obvious that the two groups differ in many respects. The fact that these differences occurred means that any generalizations of the results beyond the specific groups studied are risky.

The result of any empirical investigation is influenced by the compromises that had to be made in its conduct. The study reported in this paper involved a number of compromises due to the constraints of limited resources. The necessary compromises are evident, however, and the fact that the compromises affected the results is also evident from the comparisons.

The main point of this preface is to emphasize that the reader must accept responsibility for generalizing the results. The reader will have to judge whether the samples in the reported studies are enough like other specific groups that any generalizations would be reasonably accurate to those groups. This is true of most studies. A strength of the study reported in this paper is that the comparisons emphasize this point.

CHAPTER I

DESCRIPTION OF THE STUDY

Purpose of the Investigation.--- The study was conducted:

1. To determine the need for planning programs to prepare young women for the dual role of homemaker and wage earner.

2. To determine the needs for course modification in high school home economics to better prepare young women to meet the problems in the home.

3. To compare the characteristics of young women in the 24-26 age group who were enrolled in the tenth grade in Virginia High Schools in 1954-55 to those of women in the 24-32 age group in Fort Collins, Colorado in 1967.

Information was needed to answer the following questions:

1. If young women ages 24-32 in Fort Collins, Colorado enter the labor force in their late teens or early twenties do they need and want occupational training?

2. Do young women today believe that preparation for homemaking in addition to that provided in the parental home is needed?

3. To what extent should instruction in the knowledge and skills needed for these gainful occupations be included in home economics curriculum?

4. What are the differences in characteristics of young women who did and did not enroll for varying amounts of home economics while in high school?

Procedure.--- The study was initiated by the Home Economics Education Division of the Department of Vocational Education at Colorado State University. Upon consultation with the State Supervisors of Home Economics Education in Colorado, it was deemed desirable to assemble information pertaining to young women in Colorado to be used as a basis for curriculum planning in home economics education.

Available literature was reviewed in order to ascertain what studies of a similar nature had been conducted in other states. It was concluded that a great deal of assistance could be obtained from a study done in Virginia, entitled "Young Women in Virginia". This led to the decision to conduct a limited study in Fort Collins, Colorado in order to determine whether education needs expressed by young women in this area were the same as those of young women in Virginia.

Major responsibilities for the conduct of the study were under the leadership of Dr. Ruth Midjaas, Home Economics Education, Colorado State University. Funding of the study was secured through the cooperation of the Research Coordinating Unit for Vocational Education in Colorado.

The questionnaire used in the Virginia study served as a format for the questionnaire distributed in Fort Collins, Colorado. Revision of the Virginia questionnaire was necessary to provide the information needed and to answer the questions pertaining to young women in Fort Collins, Colorado.

The printed eleven-page questionnaire was constructed; and each questionnaire bore a code number. Each individual selected was assigned an identification number which corresponded to the code number on the questionnaire. The items on the questionnaire were coded for IBM processing. The average time required to complete the questionnaire was estimated to be approximately 15 minutes.

The tentative form of the instrument was tested on a pilot group of four classes of home economists enrolled in summer school at Colorado State University during the summer of 1967. The participants in these classes ranged in age from 19 to 65. Some revisions were made in the instrument to clarify the meaning of some of the questions and statements.

A letter was formulated soliciting the assistance of the participants answering the questionnaire. Procedure and directions for answering the questionnaire were also stated in the letter.

The questionnaires were mailed to the participants on September 15, 1967. A deadline of one month was set for the return of the questionnaires.

The Sample.--- Utilizing the 1966 city directory of Fort Collins, Colorado, a random sample of 1600 women were selected. The sample represented 16 percent of the 9,950 households in Fort Collins, Colorado. Since ages are not included in the city directory, the sample included women of all ages.

Returns were received from 34.3 percent, 549 women. Of the 549 respondents, only those 24 to 32 years of age were included in the final tabulation of the data. The aforementioned group consisted of 96 respondents, and will be referred to in this study as the young women in Fort Collins, Colorado.

CHAPTER II

CHARACTERISTICS OF YOUNG WOMEN IN FORT COLLINS, COLORADO

A chi square technique was utilized in order to compare the characteristics of respondents in the Virginia and Fort Collins, Colorado studies. The significance level was established at .05.

Educational Attainment

High School.--- A significantly larger proportion of the Fort Collins, Colorado women (95 percent) graduated from high school than in the Virginia study (88 percent).

Post High School.--- Of the women who participated in the Virginia study, over one-half (55 percent) who graduated from high school continued their schooling for lengths of time ranging from six months to four or more years. A significantly larger proprotion (77 percent) of the women who participated in the Fort Collins, Colorado, study attended school after graduating from high school. Of those who continued their education beyond high school, the proportions for each educational level in the two studies were not significantly different. See Table 1.

TABLE 1

Comparison of Educational Attainment Beyond High School

Education Beyond High School	Virginia N=742 Number	Virginia N=742 Percent	Fort Collins, Colo. N=64 Number	Fort Collins, Colo. N=64 Percent	Chi Square
6 months	90	12	5	8	1.097
1 year to 2 years	296	40	24	37	
3 years	73	10	7	11	
4 or more years	283	38	28	44	

Enrollment in Home Economics.---Seventy-eight percent of all girls in the Virginia study and 66 percent in the Fort Collins, Colorado study had enrolled in home economics in high school for one or more years. A significantly greater proportion of the respondents in the Virginia study had been enrolled in home economics in high school. However a larger proportion of the Fort Collins, Colorado girls (16 percent) as compared to the Virginia girls (10 percent) had enrolled in home economics in college.

Fifty-four percent of the girls in the Fort Collins, Colorado study who are now married had no home economics in high school or only one year of this subject. Thirty-six percent had two or three years of home economics and ten percent had four years. These proportions were not significantly different than those obtained in the Virginia study. (refer to Table 2)

TABLE 2

Number of Years That Married Girls Studied Home Economics While in High School

Home Economics in High School	Virginia Number	Virginia Percent	Fort Collins, Colorado Number	Fort Collins, Colorado Percent
None	297	22	33	34
1 year	405	30	19	20
2 years	267	19	19	20
3 years	243	18	15	16
4 years	147	11	10	10

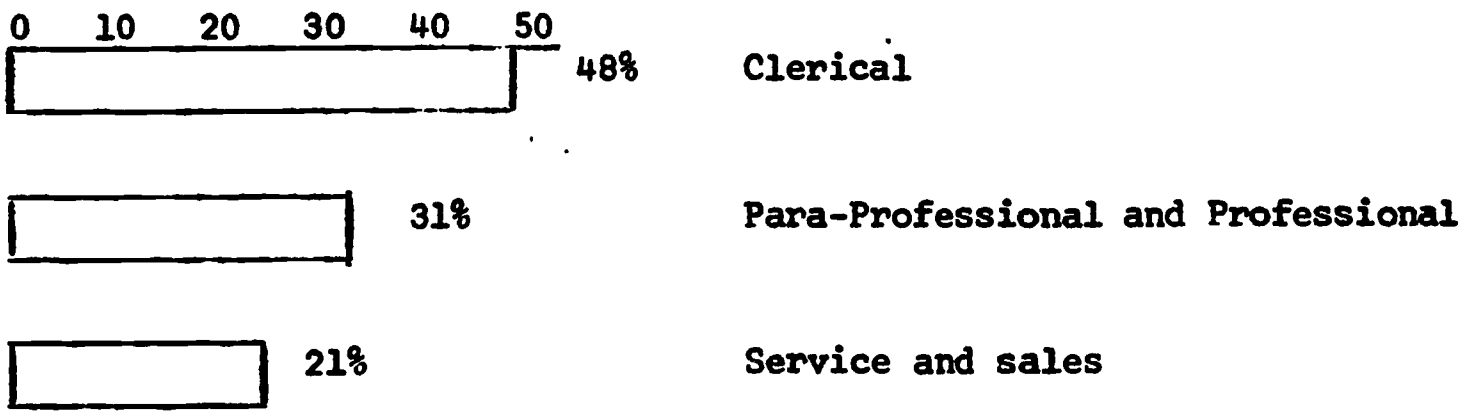
Employment

Prevalence of Young Women in Employment.--- Ninety-five of the young women studied in Fort Collins, Colorado had participated in paid employment at some time since leaving high school. Thirty-two percent were employed at the time of this study.

Work Load.--- The greatest percent of young women who were employed had full-time rather than part-time jobs at the time the study was conducted. Twenty-three women (70 percent) were employed full-time as compared to ten women (30 percent) who held part-time jobs.

Positions Held by Young Women Presently Employed.--- In the Fort Collins, Colorado study, 48 percent of the women were employed in clerical occupations. Thirty-one percent were in para-professional and professional positions. Twenty-one percent were in service occupations. (see Figure 1)

Figure 1.--- Occupations of Young Women in Fort Collins, Colorado



Family Characteristics

Marriage and Divorce.--- Marriage was the prevailing way of life for 98 percent of the young women in the Fort Collins, Colorado study. Of the 96

Teenage Marriages.--- Forty-four percent of the girls in the Fort Collins, Colorado study were married between the ages of 15 and 19. The greatest percent of young women in this age group (71 percent) became mothers prior to age 20. The study of young women in Virginia revealed that 27 percent of those studied who married in the 15-19 age group became mothers prior to the age of 20. A significantly greater proportion of those women who married as teenagers in Fort Collins also became mothers as teenagers as compared to the young women in Virginia who married as teenagers.

Children in the Family.--- Of the 96 young women who were married, 83 (86 percent) had one or more children and four were expecting in the Fort Collins, Colorado sample. In comparing this percentage with the 75 percent of married women in Virginia who had children, the chi square value indicated that a significantly larger proportion of married women in the Fort Collins sample had children. The highest proportion of children in the Fort Collins, Colorado study were in the four to six and the one to three age group --- 33 percent and 27 percent respectively. Significant chi square values shown in Table 3 indicate that a significantly larger proportion of the children of the women in the Virginia study were in the younger age groups whereas the children represented in the Colorado study were more likely to be in the later preschool years and the primary grades. This may be due to the fact that the respondents in the Colorado study included women to age 32. It should also be noted that a larger proportion of Colorado women married and became mothers as teenagers.

TABLE 3

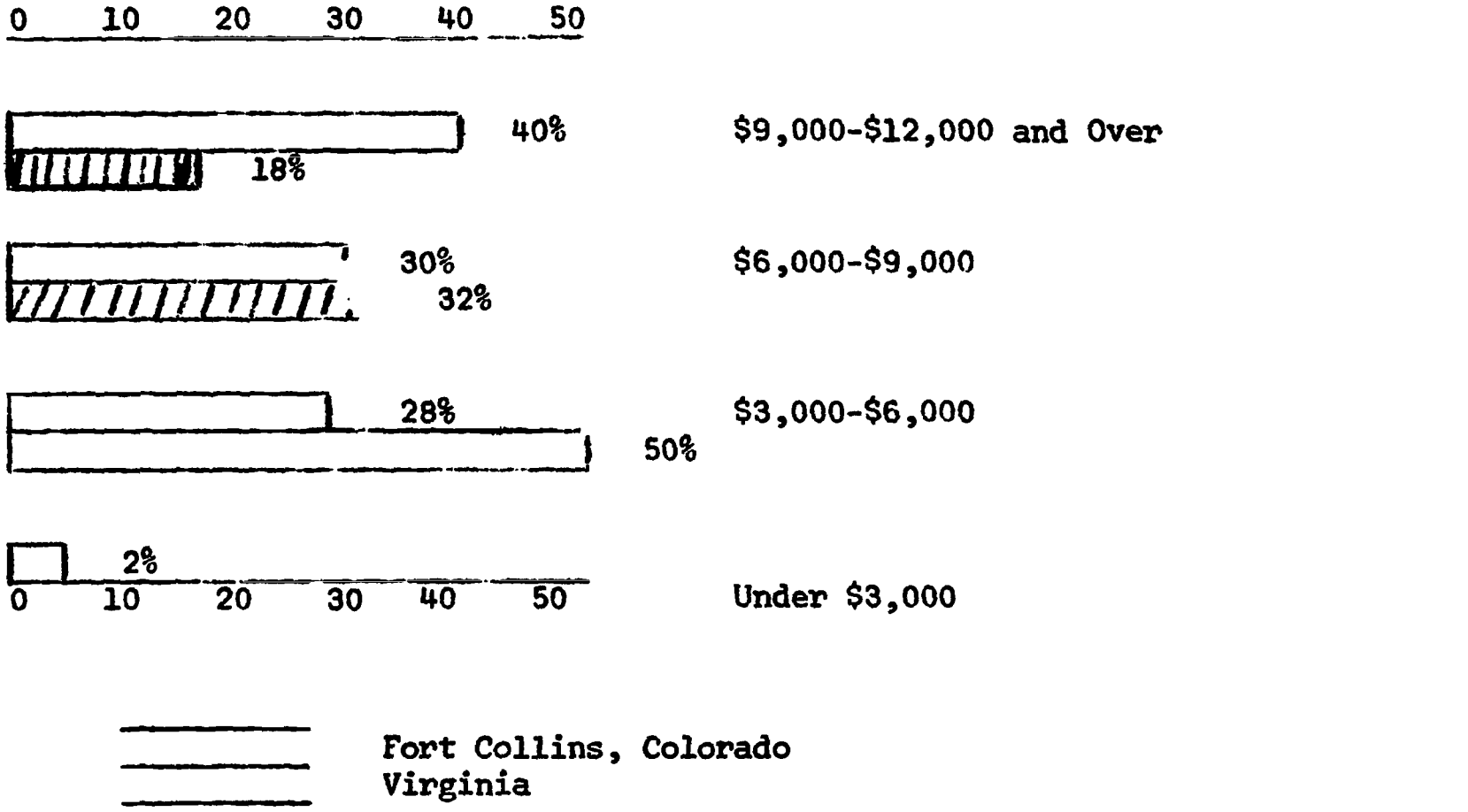
Number of Children of Young Women in the Study
By Age Groups

Age of Children	Virginia N=1753		Fort Collins, Colo. N=169		Chi Square
	Number	Percent	Number	Percent	
Less than 1 year	267	15	15	9	4.69*
1 - 3 years	730	42	46	27	15.18**
4 - 6 years	571	33	56	33	.00
7 - 9 years	175	10	38	23	5.56*
9 years and over	10	-	14	8	

* significant at .05 level.
** significant at .01 level.

Family Income Levels.--- Income in 40 percent of the families fell in the $9,000 to $12,000 and over income range and 30 percent had incomes of $6,000 to $9,000. Twenty-eight percent of the families in the study reported incomes in the $3,000 to $6,000 income bracket and two percent received an annual income of under $3,000. A statistical comparison of the above percentages obtained in the Fort Collins, Colorado study was made with the data reported in the Virginia study. A significantly greater proportion of families represented by Fort Collins women reported incomes in the $9,800 to $12,000 and over range than in the Virginia study; a significantly greater proportion of families in the Virginia study reported incomes in the $3,000 to $6,000 bracket.

Figure 2.--- Incomes of Young Families



Several variables may account for part of this significant difference. The U. S. Bureau of Census gives evidence to the fact that family incomes have increased over the years. Income levels also vary according to place of residence (see Appendix A and B, page __). Since the Virginia study was conducted in 1964 and the Fort Collins, Colorado study in 1967, it is reasonable to assume that this variable of time could possibly account for part of the significant difference in the income levels reported in the two studies. In addition, U. S. Bureau of Census statistics report a greater percentage of families in Virginia in the income brackets below $5,000 than in Colorado. Likewise, the median income level of families in Virginia is lower than that of those in Colorado. These variables therefore, could account for part of the difference

indicated by the significant chi square values obtained when comparing the proportion of families in the two studies who reported incomes in the $9,000 to $12,000 and over bracket and the $3,000 to $6,000 income bracket.

Housing for Married Women.--- Over one-half of the young women, 59 percent, were living in residences which the family owned or was buying. Thirty-six percent were living in rented property. Refer to Table 4 for a comparison of housing of married women in Fort Collins, Colorado and in Virginia. The chi square technique was utilized when warranted in comparing the statistics from the two studies. No statistically significant difference was indicated.

TABLE 4

Housing for Married Women

Type of Housing	Virginia Percent	Fort Collins, Colorado N=96 Percent
Residence owned or being bought	49	59
Room, Apartment, House, or trailer that is rented	42	41
Home of Parents	6	0
Other	3	0

Employment Status of Married Women.--- Eighty-eight percent of the young women in the Fort Collins, Colorado study as compared to 86 percent in Virginia had been employed since marriage. In 1967, when the Fort Collins, Colorado survey was conducted, 32 percent of the women who participated in the study were employed. In the Virginia study, conducted in 1964, 43 percent of the married women were employed at the time that survey was made. A chi square value of 4.27 was obtained when these two percentages were compared indicating that a significantly greater proportion of Virginia women were employed in 1964 than were women respondents in the Fort Collins, Colorado study in 1967.

Thirteen young women who participated in the Fort Collins, Colorado study did not have children. All of these young women were employed. Of the 83 young women who had children, 21 (25 percent) were employed as compared to 62 (75 percent) who were not employed. The data in Table 5 show that 33 percent of those women who had children in the Virginia study were employed as compared to 65 percent who were not. No statistically significant difference was found between the two groups concerning the proportion of mothers who were currently employed.

TABLE 5

Percent of Married Women Employed at the Time of the Study Who Had Children

Employment Status	Virginia Percent	Fort Collins, Colo. N=83 Percent
Currently Employed	33	25
Not currently employed	65	75
No response	2	0

Brief Statistical Summary

Fort Collins, Colorado	Virginia	
95%	89%	Graduated from high school
66%	55%	of those who graduated from high school had continued education beyond high school
29%	38%	of those who continued education had four or more years of schooling at the post-high school level
66%	78%	of the young women in the study enrolled in home economics in high school
95%	93%	of all the young women had been employed since leaving high school
88%	86%	of all the married women had been employed since marriage
32%	64%	of all the young women were employed at the time the study was made
100%	89%	are or have been married
44%	47%	of all the married women had married in the 15-19 age group
2%	7%	of the young women who married were divorced or separated from their husbands

Fort Collins, Colorado	Virginia	
71%	27%	of those who married in the 15-19 age group had children prior to age 20
32%	43%	of the married women were working at the time the study was made
28%	50%	had family incomes of $3,000 to $6,000
30%	32%	had family incomes of $6,000 to $9,000
40%	18%	had family incomes of $9,000 to $12,000 or over

CHAPTER III

PROBLEMS, ATTITUDES, AND PRACTICES IN HOMEMAKING AND FAMILY LIVING

Problems in Homemaking and Family Living

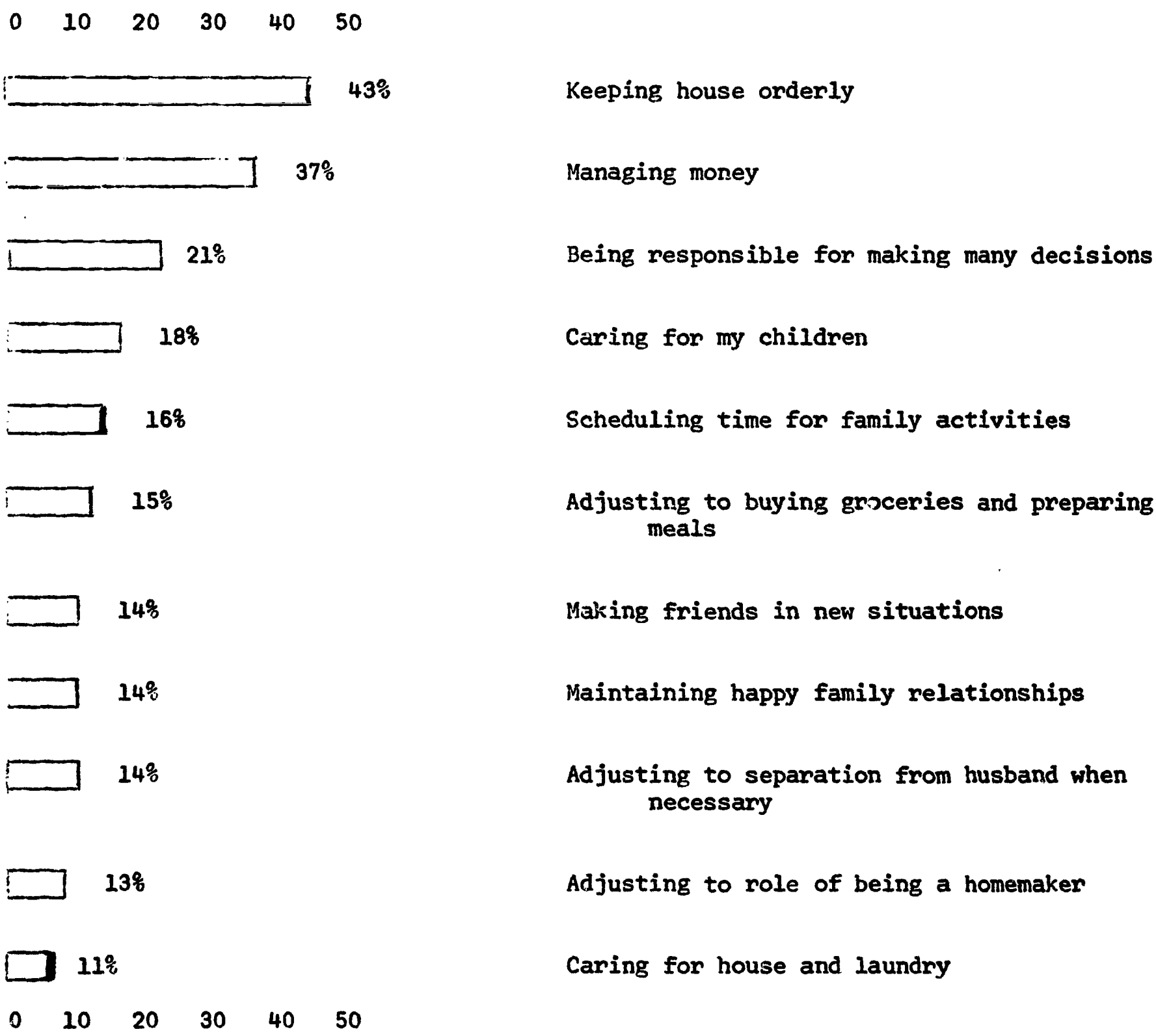
The young women in Fort Collins, Colorado who participated in the study were asked to indicate problems encountered in homemaking and family living. There were 20 problem items for the married women to check and 12 for single women. Since no single women were included in the final tabulations, only those items pertaining to married women will be considered in this report. Space was provided for writing in additional problems. The respondents were instructed to check any number of items on the list which pertained to them. Problems selected for inclusion were adopted from the questionnaire used in the Follow-up Study of Girls Who Were Enrolled in 1954-55 in the Tenth Grade in Virginia High Schools.

The number of times items were checked by the married women in Fort Collins, Colorado totaled 258. The mean number of items checked by the respondents was 2.677. The number of problems checked ranged from 0 to 9.

Most Difficult Problems.--- Out of 20 possible problems suggested in the questionnaire, the highest percent of married women (43 percent) checked keeping the house orderly as the most difficult single problem experienced during their years of marriage.

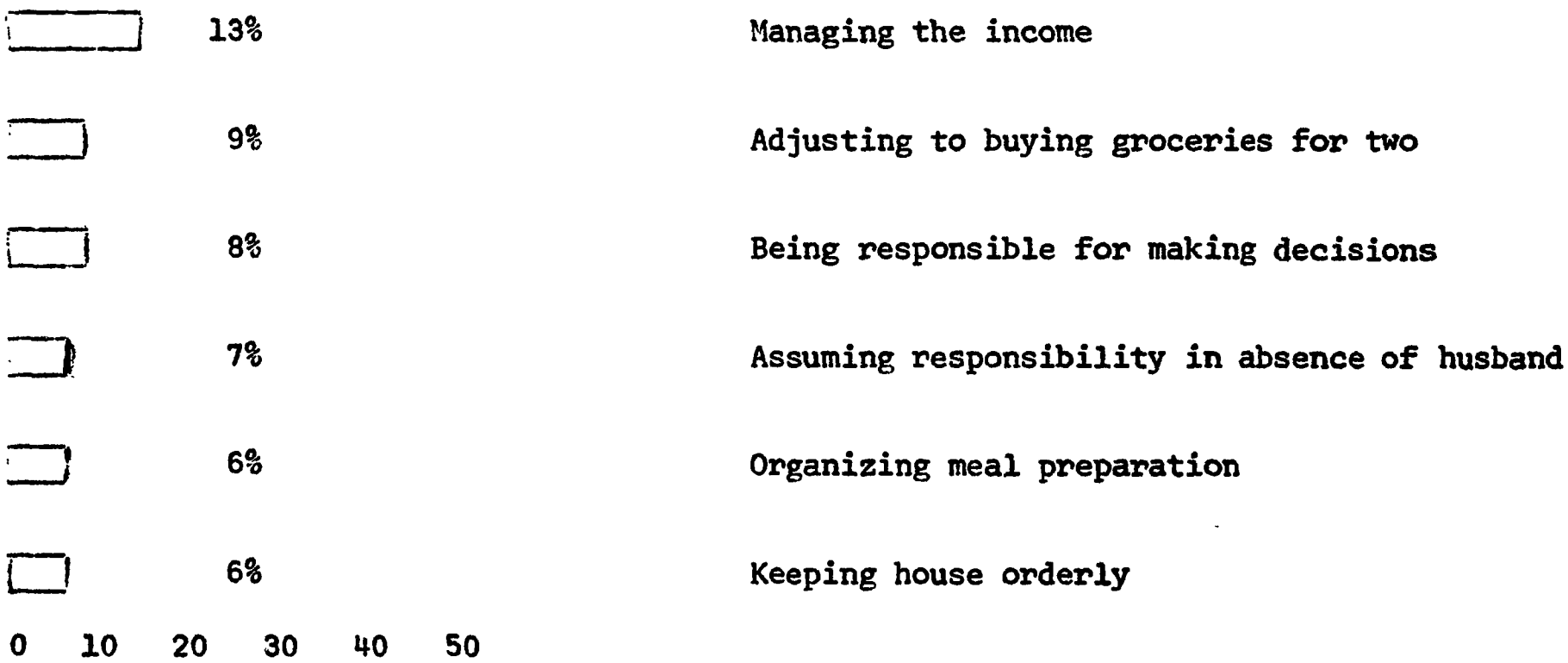
Over 10 percent of the respondents checked the following items as being problems which they found difficult to solve: managing money (37 percent); being responsible for making many decisions (21 percent); caring for my children (18 percent); scheduling time for family activities (16 percent); adjusting to buying groceries and preparing meals (15 percent); organizing meal preparation to have all foods ready to serve at the same time (15 percent); making friends in new situations (14 percent); maintaining happy family relationships (14 percent); adjusting to separation from husband when circumstances necessitate living separately for a period of time (14 percent); adjusting to the role of being a homemaker (13 percent); and caring for house and laundering (11 percent). (See Figure 3)

Figure 3.--- Most Difficult Homemaking Problems of Young Married Women in Fort Collins, Colorado



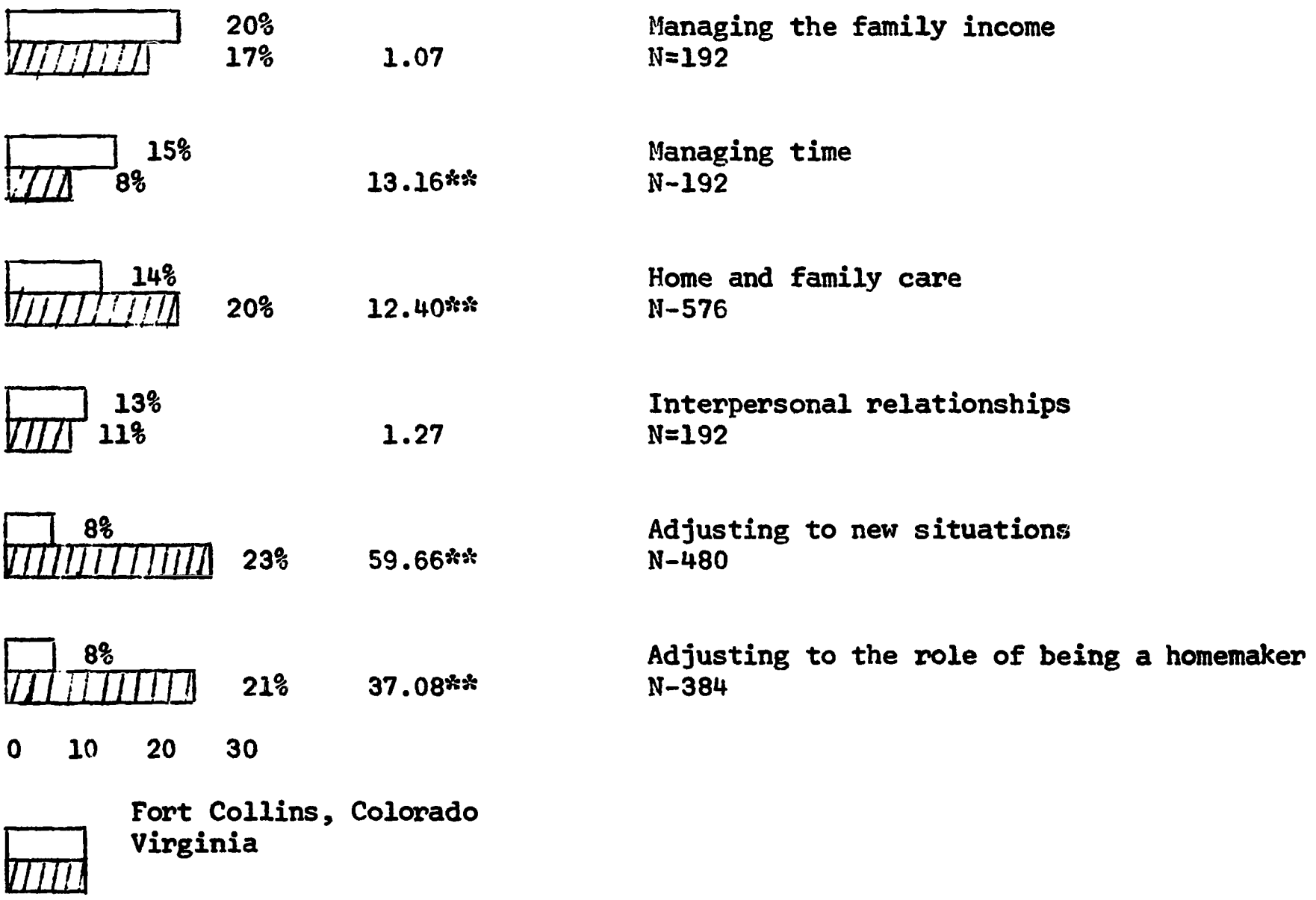
The respondents in the Virginia study were asked to limit the number of items they checked to five. Because of this and because some of the problems listed in the Fort Collins, Colorado study were reworded for clarification, the individual problems indicated by young women in the two studies were not compared statistically. A visual comparison can be made from Figures 3 and 4.

Figure 4.--- Most Difficult Homemaking Problems of Young Married Women in Virginia



Major problems were identified by grouping the 20 problem items into clusters. (See Appendix C, page __). The problem areas in rank order in the Fort Collins, Colorado study were found to be: managing the family income, managing time, home and family care, interpersonal relationships, adjusting to new situations and adjusting to the role of being a homemaker.

Figure 5.--- Family Living Problems Faced Most Often by Young Married Women



**significant at .05 level.

In the Virginia study it was reported that approximately 50 percent of the problems fell in the two problem areas pertaining to adjustments. This finding did not hold true for the Fort Collins, Colorado study. The greatest percentage (20 percent) of women in the Fort Collins, Colorado study indicated that managing the family income was their most prevalent family living problem area whereas adjusting to new situations was the problem area which had the highest percent (23 percent) of responses in the Virginia study. (See Figure 5).

Twenty-one percent of the young women in the Virginia study identified their second problem area as adjusting to the role of being a homemaker. The second problem area identified by Fort Collins, Colorado women was managing time (15 percent).

In the Virginia study problems pertaining to home and family care ranked in third place, 20 percent, and problems concerning managing the income in fourth place, 17 percent. Ranking in third and fourth places in the Fort Collins, Colorado study were problems pertaining to home and family care (14 percent) and interpersonal relationships (13 percent).

The responses reflect that the outstanding single problem of young married women in Virginia was managing the income.. Whereas, the outstanding single problem of women respondents in the Fort Collins, Colorado study was keeping the house orderly with managing the income ranking second.

The chi square technique was utilized in comparing the statistics from the two studies with respect to the family living problems faced most often by young married women. The chi square value was significant at the .05 level for problems in the areas of managing time, home and family care, adjusting to new situations, and adjusting to the role of being a homemaker. (See Figure 5) The most striking difference occurs in the areas pertaining to adjustments. Respondents in the Fort Collins, Colorado study indicated fewer problems in these areas than were reported in the Virginia study. The responses of women in the Fort Collins, Colorado study reflected that the problem areas as they see them are in management. This seems to indicate that the young women respondents in the Fort Collins, Colorado sample are no longer taking home management for granted. They are giving it the concern it deserves.

Opportunity in Parental Home for Developing Competencies in Home Economics Content Areas

Extent of Opportunity in Parental Home for Developing Competencies in Home Economics Content Areas.--- Each of the home economics content areas was included in the check list in the study and the young women responded as to whether they had "very much", "some", or "very little" opportunity in their parental homes to develop homemaking competencies.

The two home economics content areas which were checked most frequently under "very much" in both the Virginia and the Fort Collins, Colorado studies were contributing to family happiness, and caring for the home. "Some" opportunity for developing homemaking competencies in managing a home, feeding the family, caring for illiness in the family, and clothing the family was provided in the parental homes in both studies. The young women in the Virginia study also received "some" opportunity in the area of caring for children. Women in the Fort Collins, Colorado study indicated they received "very little" opportunity in this area in the parental home. "Very little" opportunity in the parental home was provided in the areas of managing the income and housing the family in both Virginia and Fort Collins, Colorado. (See Table 6)

TABLE 6

Extent of Opportunity in Parental Home for Developing Competencies in Home Economics Content Areas

Home Economics Content Areas	Extent of Opportunity in Parental Home for Developing Homemaking Competencies	
	Virginia	Fort Collins, Colorado
Contributing to family happiness	Very much	Very much
Caring for the home	Very much	Very much
Managing the home	Some	Some
Feeding the family	Some	Some
Caring for children	Some	Very little
Caring for illness in the family	Some	Some
Clothing the family	Some	Some
Managing the income	Very little	Very little
Housing the family	Very little	Very little

This information appears to indicate the specific areas in which the Home Economics Education programs need to place continuing and expanding emphasis for preparing girls to assume their roles as homemakers. Programs need to be planned with focus on increasing competencies in management of time, caring for children, and housing the family. Improving the homemaking courses through continuing and expanding emphasis on management of the home, feeding the family, caring for illness in the family, and clothing the family will help to supplement the limited amount of opportunity in the parental home for developing competencies in these home economics content areas.

Responses of young women in the Virginia study and the Fort Collins, Colorado study reflect that they did not have extensive or adequate opportunities as girls in their parental homes to acquire essential homemaking competencies. Ninty-four percent of those responding in the Virginia study indicated that in their opinion girls today need preparation for homemaking in addition to that received in their parental homes. This same question was answered affirmatively by 79 percent of the young women respondents in Fort Collins, Colorado. These two percentages were compared through the use of the chi square technique; a significant chi square value indicated that women in the Fort Collins, Colorado study were less likely to feel that girls today need preparation for homemaking in addition to that received in their parental homes.

Areas in Which Any Home Economics Received in School Helped Solve Homemaking Problems.--- A check list was also included in the questionnaire used in the Fort Collins, Colorado study which gave the respondents the opportunity to check whether they received "very much", "some:, or "very little" help in home economics classes to solve their homemaking problems. Only those respondents who had enrolled in home economics in school were included in the tabulation of the data.

In no content area did the majority of respondents indicate that they received "very much" help in solving their homemaking problems through home economics received in school. "Some" help was provided in the areas of feeding the family, clothing the family, and contributing to family happiness. "Very little" assistance was received in solving problems related to managing the income, managing a home, caring for illness in the family, caring for children, housing the family and caring for a home. (See Table 7)

TABLE 7

Areas in Which Home Economics Received in School Helped Solve Homemaking Problems of Young Women in Fort Collins, Colorado

Home Economics Content Areas	Areas in Which any Home Economics Received in School Helped Solve Homemaking Problems
	Fort Collins, Colorado
Feeding the family	Some
Clothing the family	Some
Contribution to family happiness	Some
Managing the income	Very little
Managing a home	Very little
Caring for illness in the family	Very little
Caring for children	Very little
Housing the family	Very little
Caring for a home	Very little

Attitudes Toward Homemaking

The way young women regard homemaking was reflected in the Fort Collins, Colorado study through items in the questionnaire to be checked to indicate the extent of belief about certain aspects of homemaking. Findings about attitudes toward homemaking are presented in this section as follows: attitudes toward the homemaker's role, feelings about the status of the homemaker's role, and the extent that homemaking provides opportunities for being creative.

The chi square technique was utilized in examining only the attitudes which warranted this treatment. The chi square values indicated that there was no statistically significant difference between the attitudes of the young women from Virginia and those from Fort Collins, Colorado in respect to their belief that the vocation of homemaking provides full-time employment for them and the belief that others consider their role as homemaker of comparable dignity and status to employment outside the home. A statistically significant difference was indicated when examining the attitude related to personal satisfaction from performing daily homemaking activities and the belief that homemaking provides opportunity for being creative. A greater percentage of women in the Virginia study (92 percent) than in the Fort Collins, Colorado study (86 percent) derived personal satisfaction from performing daily homemaking activities. Likewise, fewer women from Fort Collins, Colorado (91 percent) than from Virginia (96 percent) felt homemaking provides opportunities for being creative. (See Table 8)

TABLE 8

Attitudes of Young Women Toward Selected Aspects of Homemaking

Attitudes	Virginia Percent	Fort Collins, Colo. Percent
HOMEMAKER'S ROLE		
"I derive personal satisfaction from performing daily homemaking activities"..	92	86
"I feel that the vocation of homemaking provides full-time employment for me".....	78	80
CREATIVE ASPECT OF HOMEMAKING		
"I feel homemaking provides opportunities for being creative".....	96	91
STATUS OF HOMEMAKER'S ROLE		
"I feel that others consider my role as homemaker of comparable dignity and status to employment outside the home"...	76	78

In both studies, the employed and unemployed young women reacted similarly to the item concerning deriving personal satisfaction from performing daily homemaking activities. In the Virginia study, 81 percent of those not employed as compared to 81 percent of those employed in the Fort Collins, Colorado study expressed the same feeling.

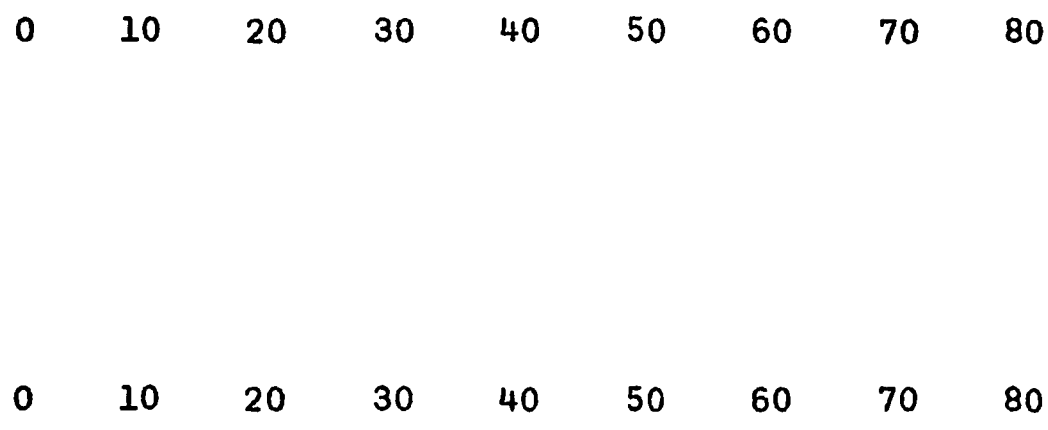
Practices Used in Homemaking

Feeding the Family.--- An effort was made to obtain some insight into whether or not the families of young women in Fort Collins, Colorado seemed to be including the minimum recommended amounts of citrus foods, green and yellow vegetables, and milk in a day's food supply. This inquiry was based on a one day's family food consumption practices. The practice of food selections made when choosing from among foods of comparable nutritive value but differing in cost was also studied.

In the Fort Collins, Colorado survey, 32 percent of the families of the young women did not have a serving of orange, grapefruit, or tomato on the day that the questionnaire was checked. Of those surveyed in the Follow-Up Study of Girls Who Were Enrolled in 1954-55 in the Tenth Grade in Virginia High Schools it was found that 28 percent of the families did not have a serving of these citrus foods. If the day the questionnaire was checked was typical of practices followed in feeding the family, it would seem that these families needed to increase the consumption of Vitamin C rich foods to meet the minimum requirement of one serving daily. In the Fort Collins, Colorado study, 71 percent of all the young women, 68 out of 96, had a serving of green or yellow vegetables. This seems to indicate that for the majority of families in both studies, the requirement of one serving of a green or yellow vegetable was met.

The families of the young women in the studies in Fort Collins, Colorado and Virginia reported the most glaring inadequacy in the consumption of milk. Seventy-one percent of the mothers and 51 percent of the fathers in the Virginia study consumed less than two classes of milk on the day the questionnaire was checked. The figures pertaining to milk consumption of mothers and fathers in Fort Collins, Colorado study were lower, 51 percent and 32 percent respectively. The chi square value indicated a statistically significant difference at the .01 level when the milk consumption of the mothers and fathers in the Virginia study were compared with that of the mothers and fathers in the Fort Collins, Colorado study. This seems to indicate that mothers and fathers in the Fort Collins, Colorado study were more likely to receive an adequate amount of milk on the day the questionnaire was checked. The reverse was true with respect to the consumption of milk by children in the study. A slightly higher percentage of children in the Fort Collins, Colorado study (42 percent) than in the Virginia study (37 percent) had less than three glasses of milk on the day the questionnaire was checked. (See Figure 6)

FIGURE 6
Family Members Having Less Than Recommended Amount of Milk

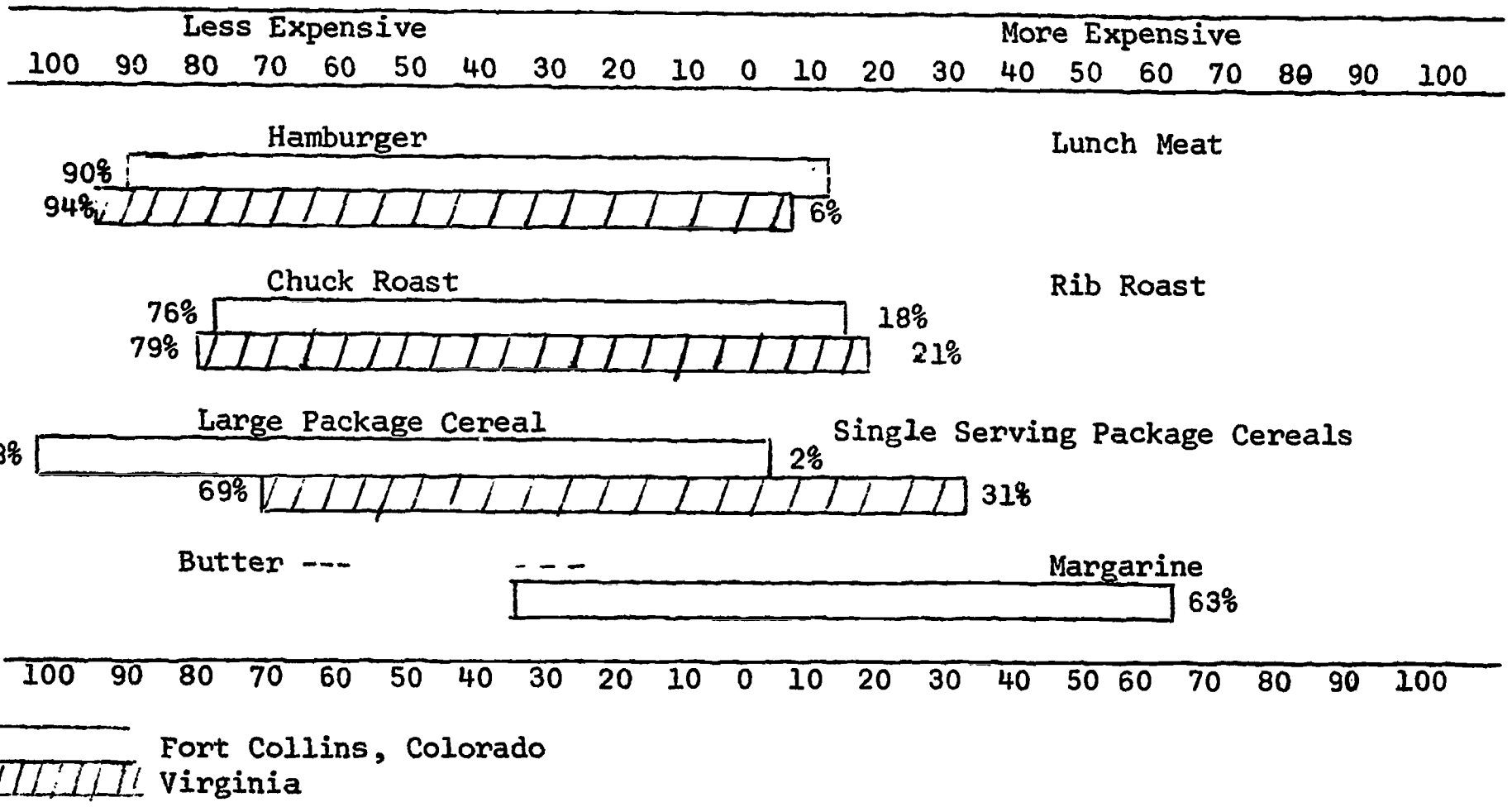


Fort Collins, Colorado
Virginia

One food shopping practice was selected for study in the Fort Collins, Colorado area. The item was designed so that the young women would indicate whether from pairs of foods of comparable nutritive value they usually selected the less expensive or the more expensive. Women in this study were asked to make eight choices. The data represented by Figure 7 shows that 77 percent of the young women in Fort Collins, Colorado and over 50 percent in Virginia indicated that they selected the less expensive foods of the choices provided in the questionnaire. The less expensive sources of protein such as hamburger and chuck roast were selected rather than the more expensive lunch meats and rib roast. Among the other less expensive foods, large size packages of cereal and margerine were selected rather than the more expensive small size packages of cereals and butter.

Not all the foods included in the Virginia study of food shopping practices were included in the Fort Collins, Colorado study. But, in comparing those foods included in both studies, a significant chi square value indicated that a larger proportion of the Fort Collins, Colorado women purchased the large package cereal than did the young women in Virginia.

Figure 7.---Young Women Indicated Preferences When Making Choices Among Foods of Comparable Nutritive Value at Different Levels of Cost



Managing the Income.--- Sixty-six percent of the young women in the Fort Collins, Colorado study indicated that they had a systematic method for keeping records of family expenditures and 67 percent had a regular plan for saving a certain portion of the income. This was not significantly different than the 58 percent and 63 percent indicated for the same items respectively in the Virginia study. In 71 percent of the cases in Fort Collins, Colorado and 75 percent of the cases in Virginia, the young families had a financial reserve for meeting unexpected expenditures. Life insurance coverage was provided for the chief support of 92 percent of the Fort Collins, Colorado families and 94 percent of the Virginia families. Seventy-nine percent of the Fort Collins, Colorado families and 95 percent of the Virginia families had health and accident insurance coverage for the chief support of the family. (See Table 9) Chi square value indicated that a significantly greater proportion of families in the Virginia study than in the Fort Collins, Colorado study had health and accident insurance coverage for the chief support of the family.

TABLE 9

Practices of Young Women in Managing the Family Income

Practices in Managing Income	Virginia Percent	Fort Collins, Colo. Percent
Uses a systematic method for keeping records	58	66
Has a regular plan for savings	63	67
Has financial reserve for emergencies	75	71
Chief support of family has life insurance coverage	94	92
Chief support of family has accident and health insurance ... coverage.....	95	79

The young married women were asked how decisions about the use of the family income were made. Eighty-three percent of those in the Fort Collins, Colorado study and over 90 percent in the Virginia study indicated that decisions were made jointly by the husband and wife. In the other 17 percent and 10 percent of the respective studies, either the husband or the wife made the decisions independently. A significantly larger proportion of the young women in the Virginia study indicated that decisions about the use of the family income were made jointly by the husband and wife than in the Fort Collins, Colorado study. The chi square value indicated a statistically significant difference at the .05 level.

Credit purchases did not differ significantly as reported in the Virginia and Fort Collins, Colorado study. Young women in both studies seemed to use credit conservatively except for major expenditures. The three major credit purchases in rank order for Fort Collins, Colorado women were automobile, home, and house furnishings and equipment. Cash was used exclusively for food and recreation. Credit was used to some extent for home improvements, medical costs, operating the automobile and purchasing clothing. Cash payments, however, greatly exceeded the use of credit for these expenditures. The data in Table 10 provide a comparison of Virginia and Fort Collins, Colorado young women in the use of cash or credit.

TABLE 10

Comparison of Fort Collins, Colorado and Virginia Young Women in Use of Cash or Credit

Item	Virginia		Fort Collins, Colo.	
	Cash	Credit	Cash	Credit
	Percent		Percent	
Food	99	1	100	0
Recreation	98	2	100	0
Vacation trips	96	4	95	1
Operation of Automobile	81	19	72	25
Medical costs	72	28	64	33
Clothing	69	31	74	23
Home improvement	58	42	63	36
Automobile	16	84	24	74
Home furnishings and equipment	31	69	55	42
Home	--	--	24	73

Caring for Children.--- The majority of the young families represented in both studies shared the responsibility for guidance of the growth and development of young children. In the Fort Collins, Colorado study, 63 percent indicated that the major responsibility for discipline was assumed jointly by both parents as did 59 percent in the Virginia study.

Parents in both studies consulted the family doctor most often when they needed help with problems pertaining to child growth and development. As a source of help, child development books ranked next, and parents and friends were consulted to a lesser extent. (See table 11). A larger proportion of the Virginia respondents consulted parents than Fort Collins, Colorado respondents.

TABLE 11

Resources Most Frequently Used When Help Is Needed With Problems in Child Growth and Development

Sources of Help	Virginia Number Using Source	Fort Collins, Colo. Number
Family doctor.....	745	77
Child development books...	429	50
Own parents.....	426	31
Friends.....	148	31

The two occasions young parents in Virginia and Fort Collins, Colorado usually had time to be with their children were for meals and for play. Dinner or supper was found to be the meal that parents and children in both studies usually had together, breakfast and lunch ranked in second and third places, respectively. A much higher proportion of families had dinner together than other meals togher. In the Fort Collins, Colorado study 90 percent of the parents had planned times to have fun with their children, 75 percent to talk with their children, 60 percent to read to them and 57 percent to do household chores with them.

Toys for active play, for social play and for creative play were provided for pre-school age children. The playthings were about equally divided and materials that contribute to the all-around development of small children seemed to be provided for young children in the families of the respondents in both studies.

Clothing the Family.--- Eighty-seven percent of the young women in the Fort Collins, Colorado study and 93 percent in the Virginia study purchased most of the clothing ready-made, for self and for the family. A significantly larger proportion of the women in the Virginia study purchased most of the clothing ready made.

The married women in the study responded as to whether they sewed for themselves and their family. In the Fort Collins, Colorado study, 29 percent responded "Yes", 19 percent responded "No", and 52 percent indicated "Sometimes". The young women in the Virginia study responded "yes" , in 40 percent of the cases, "No' , in 56 percent and "Sometimes", in 4 percent.

A 3 x 2 chi square table was used to compare the above statistics; the chi square value was statistically significant at the .01 level. A significantly greater proportion of young women in the Fort Collins, Colorado study sewed sometimes for themselves and their family. A larger proportion of young women in the Fort Collins, Colorado study sewed sometimes for themselves and their family. A larger proportion in the Virginia study did not sew.

Of the homemakers who sewed in both studies, the types of garments made most frequently were dresses for self, skirts and clothing for children; blouses, sleepwear, suits and shirts ranked next in order of frequency. A lesser number of young women made coats either for themselves or for members of their families.

Ninety-seven percent of the married women in the Fort Collins, Colorado study and 94 percent of the women in Virginia mended garments for the family. A significantly higher percentage (80 percent) of the women in Fort Collins, Colorado than in the Virginia study (55 percent) made alterations in clothing. The chi square value indicated that a significantly greater proportion of the respondents in the study, 45 percent, than in the Fort Collins, Colorado study, 29 percent, had someone else alter garments for themselves and/or family members.

The two practices that young women in both studies found most helpful as guides for making satisfactory purchases (Table 12) were: shopping for articles similar to those that previously had given satisfaction and shopping for brand or trade names that had given satisfaction. Next in helpfulness was information on labels and information obtained from friends or relatives. To a lesser extent, clerks in stores, home economics classes and ads in magazines had been helpful in enabling young women to make satisfactory purchases.

TABLE 12

Guides Young Women Used in Making Satisfactory Clothing Purchases

Guide to Satisfactory Purchases	Virginia Number	Fort Collins, Colo. Number
Satisfaction derived from previous purchases of similar type....	1061	77
Brand or trade names.....	1047	34
Information on labels.....	460	47
Information obtained from friends or relatives.....	226	22
Information from ads in magazines.	133	4
Information from clerks in stores.	121	8
Home economics classes.....	---	7

Brief Statistical Summary

Fort Collins, Colorado Percent	Virginia Percent	
		Attitudes Toward Homemaking
86	94	Derive personal satisfaction from homemaking
78	74	Homemaker's role has dignity and status in opinion of others
80	83	Homemaking provides full-time employment
91	96	Homemaking provides opportunities for being creative
79	95	of the married women feel that preparation for homemaking is needed in addition to that provided in the parental home

Fort Collins, Colorado Percent	Virginia Percent	
		Practices Used in Homemaking
66	53	Has a systematic method of keeping records
67	59	Has a regular plan for savings
75	72	Has a financial reserve for emergencies
92	94	Has life insurance coverage for chief support of family
79	92	Has health and accident insurance coverage for chief support of family

Purchases Usually Cash or Credit

Credit	Credit	
0	1	Food
0	2	Recreation
1	4	Vacation trips
25	19	Operation of automobile
33	28	Medical costs
23	31	Clothing
36	13	Home improvements
74	84	Automobile
42	69	Home furnishings and equipment
73	--	Home

Clothing Construction

Percent	Percent	
86	93	of the married respondents buy most of the family's clothing ready-made

Sew For Self and Family

29	40	Yes
19	56	No
52	4	Sometimes

Alter Garments for Family

80	55	of married respondents--yes

Mend Garments for Family

94	97	of the married respondents - yes

Pay to Have Alterations Done

29	45	of the married respondents - yes

CHAPTER IV

EDUCATIONAL NEEDS AS EXPRESSED BY YOUNG WOMEN

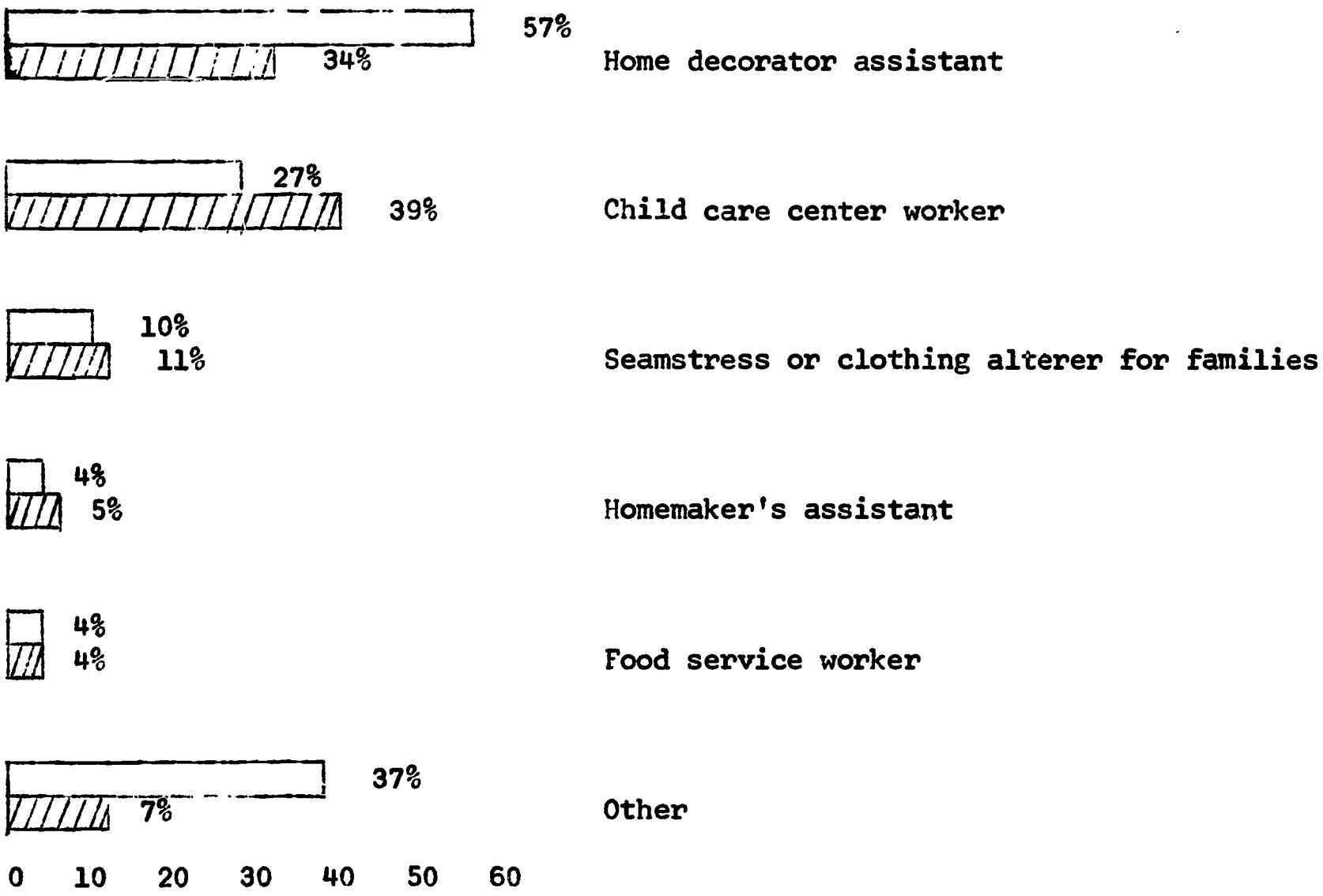
Education for Homemaking.--- Many of the young women in the two studies felt very strongly about the kind of education that is essential for girls. Seventy-nine percent of those who participated in the Fort Collins, Colorado study indicated that girls today definitely need preparation for homemaking in addition to that provided in their parental home. Ninety-four percent of those who participated in the Virginia study held the same belief. Chi square indicated a statistically significant difference at the .01 level. A significantly greater proportion of the young women in the Virginia study felt that girls need preparation for homemaking in addition to that provided in their parental home.

Ninety-nine percent of those who participated in the Fort Collins, Colorado study and 96 percent of the respondents in the Virginia study felt that young girls today need preparation for employment outside the home.

Education for Employment.--- Not only did the young women in the study affirm the need for education for homemaking, but 99 percent and 96 percent of those in the Fort Collins, Colorado and Virginia studies respectively felt that young women today need preparation for employment outside the home. These high percentages seem to indicate the value that young women place on preparation for the career aspect of their lives.

Education for Occupations Using Home Economics Knowledge and Skills. The surveys in Fort Collins, Colorado and Virginia revealed that young women were interested in training for employment. Of the 51 young women who responded in Fort Collins, Colorado, 57 percent of them indicated that they would be interested in training that would prepare them for employment outside the home. Fifty percent, 1,304 young women in the Virginia study expressed an interest in training that would prepare them for employment in occupations requiring home economics knowledge and skills. As shown in Figure 8, 57 percent of the young women respondents in Fort Collins, Colorado desired training for positions in home decoration as compared to 34 percent of the respondents in the Virginia study. A significantly greater proportion of the women in the Fort Collins, Colorado study desired training as a home decorator's assistant as compared to the women in the Virginia study.

Figure 8.--- Occupations Requiring Home Economics Knowledge and Skills In Which Young Women Were Interested



Twenty-seven percent of those who responded to the questionnaire in Fort Collins, Colorado and 39 percent in the Virginia study desired training for work in a child-care center. Several occupations which require home economics knowledge and skills were included in the Fort Collins, Colorado questionnaire which did not appear in the questionnaire used in Virginia. Of these items, 24 percent of the Fort Collins, Colorado women indicated an interest in the occupation of saleswoman and 18 percent, nurse's aide. While the major interest expressed in the Virginia study was in the two occupations of home decorator assistant and child care center worker, there was some interest in all of the wage-earning occupations which were listed. The same was true in the Fort Collins, Colorado study with the exception of the occupations of hotel or motel housekeeping aide, laundress, presser, electrical appliance saleswoman, home equipment demonstrator, factory sewing machine operator, food counter worker, waitress and restaurant cook in which little or no interest was indicated.

Of the 51 young women who checked that they were interested in training for employment, 94 percent were high school graduates and 16 percent had at least one full year of home economics in high school. Of the 616 young women in the Virginia study who checked an occupation requiring home economics knowledge and skills for which they would be most interested in training for employment, 80 percent were high school graduates and 84 percent had at least one full year of home economics while in high school.

Fifty-seven percent of the married women in the Fort Collins, Colorado, study as compared to 37 percent in the Virginia study denoted interest in occupational preparation. A significantly greater proportion of women in the Fort Collins, Colorado study indicated an interest in occupational preparation.

More of the unemployed (60 percent) than the employed (39 percent) of the young women in the Fort Collins, Colorado study were interested in home economics wage-earning occupational training. Likewise a higher percent of unemployed (57 percent) than employed (41 percent) young women in the Virginia study expressed the same interests.

The highest percent of young women in both studies (49 percent for Fort Collins, Colorado and 50 percent from Virginia) who responded to the item pertaining to the desire to prepare for employment were employed in clerical and sales occupations. (Table 13) The next highest percent in the Fort Collins, Colorado study (28 percent and 15 percent) were among those who were employed in service and professional occupations, respectively. The next highest percent in the Virginia study were in professional occupations (19 percent) and service occupations (17 percent).

TABLE 13

Interest In Occupational Training In Home Economics
According to Occupations In Which Employed

Occupation in Which Employed	Interest in Occupational Training	
	Virginia Percent	Fort Collins, Colo. Percent
Professional.....	19	15
Clerical and Sales.....	50	49
Services including household.	17	28
Other.....	14	8

CHAPTER V

DIFFERENCES IN CHARACTERISTICS OF YOUNG MARRIED WOMEN WHO GRADUATED AND DID NOT GRADUATE FROM HIGH SCHOOL

Extent of Withdrawal from School.--- Of the 96 young women who participated in the Fort Collins, Colorado study, five percent (5 women) dropped out of high school before graduation. Eleven percent of the girls who were in the Virginia study did not complete high school. A significantly greater proportion of women in the Virginia study than in the Fort Collins, Colorado study dropped out of high school before graduation.

Formal education terminated for 33 percent of the women in the Fort Collins, Colorado and 45 percent of the girls in the Virginia study when they graduated from high school. A significantly greater proportion of respondents in the Virginia study than in the Fort Collins, Colorado study terminated their formal education with high school graduation.

Preparation for Employment - A Need.--- A slightly higher percent (60 percent) of those who terminated their education prior to high school graduation than those who graduated from high school (53 percent) were interested in training for employment in the Fort Collins, Colorado, study. Seventy percent of the dropouts as compared to 48 percent of the high school graduates in Virginia were interested in training for employment.

Of the graduates and dropouts currently unemployed, the percent not employed was higher for the high school graduates (69 percent) than for the dropouts (40 percent) in the Fort Collins, Colorado study. More dropouts (67 percent) than high school graduates (54 percent) were unemployed in the Virginia study. The chi square value indicated that the proportions were significantly different at the .01 level.

Income Levels of Married Women Who Graduated and Did Not Graduate From High School.--- High school graduation seemed to be directly related to higher income during the early years of marriage. Twenty-six percent of those who graduated from high school indicated incomes in the $9,000-$12,000 bracket in the Fort Collins, Colorado study. No women in this study who dropped out of high school were in this income bracket. In the Virginia study, 22 percnet of the graduates and 7 percent and 7 percent of the dropouts were in this income bracket. Likewise in the $6,000-$9,000 bracket in both studies, more of the high school graduates were in this income range than were those who did not graduate. Fewer of the graduates in both studies than dropouts were in the 43,000-$6,000 level of income. (See Table 14)

Table 14

Level of Income of Married Women Who Graduated and Did Not Graduate From High School

Income	Virginia		Fort Collins, Colo.	
	Graduate Percent	Dropout Percent	Graduate Percent	Dropout Percent
$3,000-$6,000.....	42	66	29	60
$6,000-$9,000.....	36	27	30	20
$9,000-$12,000.....	22	7	26	0
$12,000 and over.....	--	--	15	0

Housing for High School Graduates and Dropouts.--- A slightly higher percent of graduates in both studies were living in a house that was owned or being bought than were dropouts. Sixty-four percent of the graduates and 60 percent of the dropouts in Fort Collins, Colorado as compared to 50 percent of the graduates and 45 percent of the dropouts in Virginia lived in this type of housing. In the Fort Collins, Colorado study, none of the respondents lived in their parental homes as compared to five percent of the graduates and 10 percent of the dropouts in the Virginia study. Thirty-six percent of the graduates and 40 percent of the dropouts in the Fort Collins, Colorado study were living in rented property. In the Virginia study 43 percent of the graduates and 45 of the dropouts were living in a house or apartment being rented. (See Table 15)

TABLE 15
Housing of Married Women Who Graduated and Did Not Graduate From High School

Type of Housing Used	Virginia		Fort Collins, Colo.	
	Graduate Percent	Dropout Percent	Graduate Percent	Dropout Percent
House owned or being bought....	50	45	64	60
House or apartment being rented	43	45	36	40
Parental home.....	5	10	0	0
Other.....	2	--	--	--

Area of Home Economics Content in Which Graduates and Dropouts Reported Having the Most Difficult Problems.--- In the Fort Collins, Colorado study, the graduates reported having the most difficult problems in managing the income (37 percent), and managing a home (8 percent), More dropouts than graduates reported their problem areas in home economics as feeding the family (20 percent), clothing the family (20 percent),caring for children (20 percent) and for a home (60 percent). Neither graduates nor dropouts indicated having problems caring for illness, housing the family or contributing to family happiness. (See Table 16)

TABLE 16

Area of Home Economics Content In Which Graduates Dropouts Reported Having the Most Difficult Problems

Area of Home Economics	Fort Collins, Colo. Graduate Percent	Dropout Percent
Managing the income.....	37	20
Managing a home.....	8	0
Feeding the family.....	15	20
Clothing the family.....	7	20
Caring for illness.....	0	0
Caring for children.....	12	20
Housing the family.....	0	0
Caring for a home.....	1	60
Contributing to family happiness.....	0	0

Homemaking Practices of Graduates and Dropouts.--- Consumption of less than recommended amounts of milk daily was somewhat high in the families of the dropouts. Sixty percent of the fathers and 86 percent of the children in the families of dropouts had less than the recommended amount of milk for a day, while 63 percent of the fathers and 36 percent of the children of the graduates had less than the recommended amount of milk per day in the Fort Collins, Colorado study. It was reported in the Virginia study that 62 percent of the fathers and 46 percent of the children in the families of dropouts had less than the recommended amount of milk for a day. Fifty-seven percent of the fathers and 40 percent of the children of the graduates had less than the recommended amount of milk per day. A signigicantly greater proportion of mothers in the Fort Collins, Colorado study (90 percent) had less than the recommended amount of milk per day than in the Virginia Study (72 percent).

In managing the income, more graduates than dropouts used practices that contributed to family financial security. More of the graduates than the dropouts had a systematic method of keeping financial records (68 percent as compared to 20 percent in Fort Collins, Colorado and 60 percent as compared to 47 percent in the Virginia study), had a regular plan for savings (69 percent as compared to 20 percent in the Fort Collins, Colorado study and 64 percent as compared to 54 percent in the Virginia study); had a financial reserve for emergencies (71 percent as compared to 60 percent in the Fort Collins, Colorado study and 76 percent as compared to 67 percent in the Virginia study); carried life insurance on the chief support of the family (95 percent as compared to 40 percent in the Fort Collins, Colorado study and 95 percent as compared to 93 percent in the Virginia study); and carried health and accident coverage on the chief support of the family (81 percent as compared to 40 percent in the Fort Collins, Colorado study and 95 percent as compared to 90 percent in the Virginia study).

CHAPTER VI

DIFFERENCES IN CHARACTERISTICS OF YOUNG MARRIED WOMEN WHO DID AND DID NOT ENROLL IN HOME ECONOMICS WHILE IN HIGH SCHOOL

Practices Used in Homemaking According to Years Enrolled in Home Economics

Managing the Income.--- Sixteen percent of the women in the Fort Collins, Colorado study and approximately two-thirds of the women in the Virginia study did not keep records of expenditures or have a regular plan for savings. A significantly greater proportion of women respondents in the Virginia study did not keep records of expenditures or have a regular plan for savings.

In the Fort Collins, Colorado study, the highest percent of young women with one year of home economics keep records of expenditures (95 percent) and had a regular plan for savings (89 percent). (See Table 17) Forty-seven percent of those with three years of home economics from Fort Collins, Colorado and 53 percent from Virginia followed these practices.

TABLE 17

Differences Of Young Married Women With Varying Amounts Of Home Economics And Their Practices Of Keeping Financial Records and Maintaining A Plan For Savings

Years of Home Economics In High School	Keeps Record Of Expenditure		Has A regular Plan For Savings	
	Number	Percent	Number	Percent
No Home economics.....	21	64	22	67
1 year of home economics.	18	95	17	89
2 years of home economics	12	63	12	63
3 years of home economics	7	47	8	53
4 years of home economics	5	50	5	50

Seventy-one percent of the Fort Collins, Colorado respondents and approximately 75 percent from Virginia Maintained a financial reserve for emergencies. Seventy-seven percent and 94 percent of the women in the respective studies had life, health, and accident insurance on the person who provided the chief support for the family. In comparing the 77 percent and the 94 percent, the chi square value indicated a statistically significant difference at the .01 level. A smaller proportion of women in the Fort Collins, Colorado study reported that they had life, health, and accident insurance coverage on the person who provided the chief support for the family.

Caring for Children.-- The number of years of home economics was related to the tendency for the mother and father to jointly assume the major responsibilit for the discipline of children. (See Table 18)

TABLE 18

Years Of Home Economics And The Practice Of Sharing The Responsibility For The Discipline of Children In Fort Collins, Colorado

Years of Home Economics In High School	Shared Responsibility Of Discipline Of children	
	Number	Percent
No home economics (N=33).....	16	49
1 year of home economics.....	12	63
2 years of home economics.....	9	47
3 years of home economics.....	8	53
4 years of home economics (N=10)....	7	70

Clothing the Family.--- More young women (100 percent) in the Fort Collins, Colorado study who studied four years of home economics purchased most of the family's clothing ready-made than had those who had not studied home economics (85 percent). The reverse was true in the Virginia study. Ninty-five percent of those who had not studied home economics and 93 percent of those who studied four years of home economics purchased most of the family's clothing ready-made.

Seventy-six percent of the respondents in the Fort Collins, Colorado study who had no home economics sewed for themselves or their families, whereas only 40 percent of those who had had four years of home economics did so. In the Virginia study 53 percent with four years of home economics and 32 percent with no home economics sewed for themselves and their families. The mending for the family was done by 100 percent of those having four years of home economics and 97 percent of those having no home economics in the Fort Collins, Colorado study.

Opportunity to Develop Homemaking Abilities in Parental Home According to Years of Home Economics.- - Opportunities for developing homemaking abilities in parental home were found to be very similar in both studies irrespective of the years of home economics. In both studies, those who had not studied home economics had very little experience in their parental home in caring for children and those who had no home economics or one year of home economics in the Fort Collins, Colorado study had some opportunity in parental home to develop abilities in caring for illness in the family. Respondents in the Virginia study reported that they had very little opportunity in their parental home to develop abilities in caring for illness in the family.

Feeding the family was the home economics content area in which those with three and four years of home economics in Fort Collins, Colorado and Virginia indicated that they had had "very much" opportunity in the parental home to develop abilities in the afore mentioned content area. In the Fort Collins, Colorado study, women with two years of home economics training reported that they were provided with "some" opportunity and those with one year of training in home economics indicated they were provided with "very much" opportunity in ththeir parental homes to develop abilities in feeding the family.

Eighty-six percent of the young women who had studied two or more years of home economics, 67 percent of those with no home economics and 68 percent of those with one year of home economics in the Fort Collins, Colorado study indicated that young girls today need preparation for homemaking in addition to that provided in parental home. In the Virginia study, a much higher percentage (97 percent) of the young women who had studied two or more years of home economics than those with no home economics (87 percent) or one year of home economics (65 percent) indicated that young girls today need preparation for homemaking in addition to that provided in parental home. A signigicantly greater proportion of women in the Virginia study than in the Fort Collins, Colorado study with no home economics indicated young girls need additional training in homemaking. Chi square was statistically signigicant at the .01 level when the 67 percent and the 87 percent were compared.

Attitudes Toward Homemaking According to Years Enrolled in Home Economics. -- A higher percent (56 percent), of those with three or four years of home economics than of those with less home economics (40 percent) derived personal satisfaction from homemaking in the Fort Collins, Colorado study. A slightly higher percent (79 percent) of those who studied home economics believe homemaking to be a full-time job than those who did not have any home economics (76 percent). Ninety-six percent of those who had two or more years of home economics and 90 percent of those with less than two years of home economics

believe that homemaking provides opportunities for being creative. This same trend is evident in the Virginia study. Ninety six percent of those with three or four years of home economics and 92 percent with less home economics derived personal satisfaction from homemaking. Homemaking was reported to be a full-time job by 83 percent of those who had studied home economics in Virginia and 72 percent who had not. Approximately 87 percent of those in the Virginia study having two or more years of home economics and 69 percent of those with less than two years of home economics found the subject intellectually stimulating.

Interest in Occupations Using Home Economics Knowledge and Skills According to Years of Home Economics in Which Enrolled.--- An increased interest in occupational training for employment was indicated as the years of enrollment in home economics increased. Eighty percent of those with four years of home economics in the Fort Collins, Colorado study and 61 percent in the Virginia study wanted occupational training. This is compared to 58 percent and 39 percent in the respective studies with no home economics who expressed an interest in occupational training for employment. An interest in the following occupational categories was indicated in both studies: child care worker, seamstress and home decorator's assistant. Women in the Virginia study expressed an interest in training as a food service worker. In the Fort Collins, Colorado study little or no interest was evident in this occupational category. In addition to the aforementioned occupational categories, women in the Fort Collins, Colorado study indicated an interest in training as saleswomen in dress shops, as fabric saleswomen, and as nurse's aides.

CHAPTER VII

SUMMARY AND CONCLUSIONS

The "Study of the Characteristics and Homemaking Problems, Attitudes, and Practices of Women Aged 24 to 32 in Fort Collins Colorado" was made to gain information from young women about their education, their family, their occupations, their employment, their preparation for homemaking, their homemaking practices, their problems and some of their feelings about homemaking.

The main purposes of the investigation were to gain information from young women which may reflect (a) a need for planning programs to prepare young women for the dual role of homemaker and wage earner (b) the need for course modification in the high school to better prepare young women to meet the problems in the home; and (c) to compare the characteristics of young women in the 24 to 26 age group who were enrolled in the tenth grade in Virginia High Schools in 1954 55 to those of women in the 24 to 32 age group in Fort Collins, Colorado in 1967.

The instrument used in the study was a questionnaire which was mailed to 1600 women selected at random from the 1966 city directory of Fort Collins, Colorado. Only those 24 to 32 years of age were included in the final tabulation of the data.

The young women who participated in the Fort Collins, Colorado study showed a high rate of graduation from high school. A large proportion of those who graduated from high school continued their education for varying lengths of time. Although a significantly larger proportion of young women in the Virginia study enrolled in home economics in high school, a significantly larger proportion of those in Fort Collins, Colorado enrolled in home economics in college.

A high percent of young women studied had been employed in gainful occupations since high school. A low rate of employment of young married women was observed at the time of the study. Of those employed, the greatest percent were employed in full-time rather than part-time jobs. Young women in Fort Collins, Colorado were employed predominately in clerical occupations.

Marriage was the prevailing way of life for almost all of the young women in the Fort Collins, Colorado study and the divorce rate was low. Less than 50 percent of those studied married in their teens but of those who did, a large proportion became mothers prior to age 20. A significantly larger proportionof women in Fort Collins, Colorado had children and their children were predominately in the late pre-school years and the primary grades. Women in the Virginia study had fewer children and the children were younger.

A higher income level was reported by a significantly greater proportion of families in the Fort Collins, Colorado study than in the Virginia study. Several variables discussed in chaper II may account for part of this significant difference.

Families in the Fort Collins, Colorado and Virginia studies for the most part were living in single family dwellings which they owned or were buying.

The single problem encountered most frequently by young married women in Fort Collins, Colorado was keeping the house orderly. The second most difficult problem experienced during the early years of marriage was money management. Women in the Virginia study ranked the problem of managing the income first and keeping the house orderly last.

Family living problems faced most often by young married women in Fort Collins, Colorado clustered in the areas of management -managing the income and managing time. Problems in the Virginia study seemed to cluster in two areas ---adjusting to new situations and adjusting to the role and responsibilities of being a homemaker.

Opportunities in parental homes for developing competencies in home economics content areas ranged from some to very little in seven of the nine home economics content areas. Areas in which any home economics received in school helped solve homemaking problems in home economics content areas ranged from some to very little in all of the nine home economics content areas. In the opinion of the young women in this sample, girls did not acquire adequate preparation for homemaking in either the parental home or in the home economics classes in which they had enrolled in school.

Positive attitudes toward homemaking were expressed by a high percent of the young women sampled. Ranking highest were the feelings that homemaking provides opportunities for being creative and that personal satisfaction was derived from performing daily homemaking activities. Approximately three fourths of the young women considered homemaking a full-time job of camparable dignity and status to employment outside the home.

Practices used in homemaking reflected that inadequacies existed in the consumption of Vitamin C rich foods and milk with the greatest inadequacy being in the consumption of milk, usually less expensive foods of comparable nutritive value to that of higher priced foods were chosen.

Over one half of the families studied had a systematic method of keeping records of family expenditures and had a regular plan for saving a certain portion of the family income. Almost three fourths of the women had a financial reserve for meeting unexpected expenditures. Life health and accicent insurance coverage was provided for the chief wage-earner in a large proportion of the families in both studies. The young women were conservative in the use of credit except for major expenditures.

Guidance of the growth and development of children appeared to be a shared responsibility between parents in both studies. The family doctor was the person most frequently consulted when child care problems occured. A variety of play materials seemed to be available in the homes of small children.

The young women in both studies indicated that most of the family clothing was bought ready made in a high percent of the cases. More of the women in the Fort Collins, Colorado study mended and altered garments than constructed them.

Young women in the two studies indicated very strongly that girls today need preparation for homemaking in addition to whatever preparation they may have acquired in their parental homes they also needed to prepare for employment in wage earning occupations according to the respondents.

Over one half of the young women from Fort Collins Colorado indicated a desire to prepare for employment in occupations requiring home economics knowledge and skills. The most desired training expressed by the young women was for positions in home decoration. Interest was also expressed in food service occupations and child care center work. Greatest interest was expressed by high school graduates and those currently unemployed. Of those presently employed, the highest percent who indicated a desire for training in home economics wage earning occupations were employed in clerical and sales occupations.

A comparison of the young married women who graduated and did not graduate from high school revealed that a greater proportion of young women in Fort Collins, Colorado completed high school than in Virginia that a slightly higher percent of those who terminated their education prior to high school graduation than those who graduated from high school were interested in training for employment, that more high school graduates were unemployed and had incomes in the higher income brackets. A higher percent of high school graduates in both studies were living in a house that was owned or being bought than were dropouts. Those women who did not graduate from high school expressed the need for help to a much greater degree than did graduates in the home economics content area of caring for the home. In the other content areas the need for help was expressed to about the same extent. The families of the young women who dropped out of school before graduation received the recommended amount of milk per day less frequently than did the families of high school graduates. In managing the income, more graduates than dropouts used practices that contributed to family financial security. Differences also appeared in keeping financial records, in savings, and in maintaining a financial reserve. Fewer families of dropouts carried life or health and accident insurance coverage on the chief support of the family.

The number of years the young women were enrolled in home economics did not make a difference in their practice of managing the income. The tendency for the mother and father jointly to assume the major responsibility for the discipline of children was related to the number of years of home economics.

The young married women who enrolled in home economics for the greatest number of years were more likely to share the responsibility for the discipline of children; purchase most of the family's clothing ready made; do the mending for the family; show a higher regard for preparation for the vocation of homemaking; have more positive attitudes toward the importance of the homemaker's role; and have more interest in preparing for employment in home economics wage earning occupations.

From the findings of this study, it may be concluded that in Fort Collins, Colorado:

1. The needs of girls for preparation for assuming their roles as homemakers and wage earners must receive increased attention in in the development of the secondary school program.

2. The home economics program at the high school level should be expanded to enroll more girls and opportunities should be provided for girls to be enrolled in this program in early secondary grades and for a sufficient length of time to acquire basic competendies essential in homemaking and in rearing a family.

3. There is strong justification for providing accessible opportunities at the post-high school level for young women in the 24-32 age group to further their preparation for employment, marriage, homemaking, rearing of families, reentry into employment, and personal development.

4. The home economics education program, which is an integral part of the secondary school program, may be strengthened by:
   A. Improving the Homemaking Courses through:
      --Continuing and expanding emphasis on helping girls to deal with problems involved in the total job of homemaking.
      -Placing emphasis on homemaking experiences of sufficient scope and challenge to aid girls in assuming major homemaking responsibilities.
      --Planning programs which focus on increasing competencies in management of income and management of time.
      - Continuing and expanding emphasis on application of basic nutrition knowledge to family nutritional practices.
      - Emphasizing that the care and training provided young children in the home has a marked bearing on their chances for happy, effective development.
      - Providing training to aid girls for the important responsibilities of guiding and nurturing the growth of young children.
      --Continuing emphasis on development of abilities to make decisions, to solve problems, and to adjust to new and different situations.
      - Developing managerial abilities that will enable young women to cope with problems of managing two vocations-- homemaking and wage-earning.
      --Increase program offerings in housing the family and caring for the house.
   B. Improving the courses which prepare for entering wage-earning occupations through:
      --Continuing and expanding emphasis on wage-earning courses which have been developed as a part of the home economics education program to some extent in the local high schools.
      --Incorporating wage earning courses into the home economics education program to a greater degree in the local high schools.

- Working with administrators, guidance counselors and others in local schools to find those students who may profit by enrolling in wage-earning courses.
- Expanding work with other agencies in the city to determine the employment opportunities for students with a background of training in wage-earning courses using home economics
- Increasing opportunities for young women to prepare for employment in wage-earning occupations at the post-high school level.
- Placing emphasis on wage-earning courses in those occupational areas in which young women in the study expressed greatest interest i.e. home decoration, child care, and food services.

YOUNG WOMEN IN FORT COLLINS COLORADO

What Are Their Characteristics?

Among young women in the 24-32 age group who participated in the Fort Collins, Colorado study·

...Almost three fourths of those who married between the ages of 15 and 19 became mothers before age 20.

...Almost ninety percent had at least one child.

...Almost one half had incomes in the $9,000 to $12,000 and over income bracket.

...Over one half lived in homes which they own or were buying.

...Almost all had been employed since leaving high school.

...Over three fourths had been employed since marriage and one third were currently employed.

...Almost one half reported an inadequate daily milk consumption by the family.

...Most were conservative in the use of credit except for major expenditures.

...Nearly one half of those who had been employed in clerical occupations.

...Over three fourths felt that young women today need preparation for homemaking in addition to that provided in the parental home.

...Ninety-nine percent felt that young women today need preparation for employment.

...Almost one half of those who graduated from high school had four or more years of education beyond high school.

...Slightly over one half had enrolled in home economics for one or more years.

...Over eighty-five percent bought most of the family's clothing ready made.

...Over one half were interested in training that would prepare them for employment outside the home.

VT 007 843
Baker, Richard A., Ed.
Research in Programs in Agricultural Education.

MF AVAILABLE IN VT-ERIC SET.
Pub Date - nd 2p.

*BIBLIOGRAPHIES; *AGRICULTURAL EDUCATION; *EDUCATIONAL RESEARCH; *RESEARCH PROJECTS

Fifteen research studies in progress in agricultural education in the Southern region of the American Vocational Association during the school year 1968-69 are cited in this mimeographed bibliography. Included are masters', doctoral, and staff studies compiled by the chairman of the Southern Regional Research Committee in Agricultural Education. (DM)

VT 007 843

ED042060

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VT007843

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*Compiled and edited by Richard A. Baker, Chairman, Southern Regional Research Committee in Agricultural Education Department.

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VT 007 869
Progress Report of the Governor's Committee on Vocational-Technical Education.

Governor's Committee on Vocational-Technical Education, Cheyenne, Wyo.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jun68 30p.

*VOCATIONAL EDUCATION; *ADVISORY COMMITTEES; AREA VOCATIONAL SCHOOLS; PREVOCATIONAL EDUCATION; GUIDANCE COUNSELORS; OCCUPATIONAL INFORMATION; COMMUNITY COLLEGES; *MASTER PLANS; *STATE PROGRAMS; *SCHOOL SURVEYS; EMPLOYMENT STATISTICS; EMPLOYMENT PROJECTIONS
WYOMING

The Committee's charge was to inventory existing vocational and technical training facilities, to devise a plan for vocational and technical education, and to report its findings and recommendations. A master plan encompassing high schools, community colleges, area vocational schools, and the teacher education program of the University of Wyoming was proposed. The plan stressed the following concepts: (1) development of area vocational-technical programs utilizing existing facilities, (2) development of curriculums providing for prevocational courses in the elementary grades, effective synthesis of vocational and general education courses, and flexibility of scheduling, (3) employment of additional guidance counselors knowledgeable about vocational education, (4) use of testing techniques for guidance and for assessment of curriculum needs, (5) preparation of a bulletin for distribution to school board members, administrators, supervisors, adult education teachers, industry, and other interested persons or organizations listing post-high school vocational programs, and (6) so that students' would have a wider choice of vocational programs, provision for students to attend, without increases in tuition, community colleges outside their districts, as well as a request that the Western Interstate Commission for Higher Education to develop an interstate agreement allowing students to attend out-of-state institutions of higher education at in-state tuition. (JK)

VT 007 869

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"he who hath a trade, hath an estate..."

Benjamin Franklin

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PROGRESS REPORT

of the GOVERNOR'S COMMITTEE

on VOCATIONAL-TECHNICAL EDUCATION

JUNE, 1968

VT007869

Governor Stanley K. Hathaway, recognizing the importance of vocational education, announced his intention of forming a committee to study this area of instruction in his message to the opening of the 39th State Legislature in January, 1967.

He said, "I believe it is incumbent upon us to offer young people not academically oriented the opportunity to acquire a skill, and to offer retraining to those whose skills have become obsolete in our technological society. At the present time, there is a variety of programs designed to provide vocational or technical training. Unfortunately, there is no cohesive plan of vocational education. I will soon establish a Governor's Committee on Vocational Education in cooperation with the Superintendent of Public Instruction to inventory our present vocational and technical training facilities, devise a plan with continuity and report its findings and recommendations."

The Governor appointed approximately 100 Wyoming citizens representative of many interests from throughout the state to serve on this committee. Eight subcommittees, each with its own chairman, were formed to study the various problems of vocational and technical education. Vern Vivion of Rawlins was appointed general chairman of the committee. Professional staff members of the State Department of Education and from the University of Wyoming served as resource consultants for the committee.

The Honorable Stanley K. Hathaway
Governor, State of Wyoming
Capitol Building
Cheyenne, Wyoming 82001

Dear Governor Hathaway:

On behalf of the General Committee which you appointed to study Wyoming's vocational and technical education, it is a distinct honor to submit this progress report which includes our recommendations.

The recommendations are realistic and yet far-reaching. We see vocational-technical education as part of the total educational program and not as a sideline or substitute for general education. Because of the rapid changes affecting vocational-technical education, imagination, vision and flexibility are necessary in the planning and execution of any future program. It is apparent that much can be accomplished immediately by the maximum use of existing facilities. Of course, the present Wyoming attitude towards vocational-technical education must be changed to reflect real opportunity for those individuals who have occupational objectives not requiring a college degree. Only if we believe this ourselves and show our willingness to move forward through the development of a dynamic master plan, can we overcome the stigma that has been attached to vocational-technical education.

It is the committee's recommendation that the State Department of Education develop a Master Plan which will reflect the guidelines set forth in this progress report. Upon completion of the Master Plan, we ask that it be submitted to the committee for final suggestions and recommendations.

The reward for all of our committee members will come in knowing that through a dynamic, flexible, and well-coordinated program of vocational-technical education, Wyoming may give hope and meaning to the dream of her many citizens who are anxious for personal achievement in our ever changing, complex society.

Governor Hathaway, it staggers the imagination to realize the potential that lies ahead.

Sincerely,

Vern Vivion, Chairman
Governor's Committee on
Vocational-Technical Education

FOREWORD

The primary purpose of vocational-technical education is to equip persons for useful employment. Programs are designed to prepare both youth and adults for employment...to retrain them for different jobs...or to help them upgrade themselves from their present positions.

Vocational-technical education can also be an effective weapon in the battle to save school dropouts.

Preparatory and retraining programs provide the skills, technical knowledge, safety judgments, work habits, and attitudes necessary for occupations requiring less than a four-year college degree. Upgrading programs provide instruction for whatever length of time is necessary for a group of employed people to maintain their present jobs, or to prepare them for advancement.

Opportunities and benefits of vocational-technical education are numerous. But something is amiss. Only four out of every 10 children in grade school in the U. S. today will continue their education beyond high school.

Yet, about 75 percent of the curricula in modern high schools is aimed, in effect, at preparation for college.

It is difficult for those not going on to college to go from a general education directly into employment. A marketable skill is needed. Although the federal government can stimulate vocational and technical programs with legislation and the offer of financial assistance, only local and area schools, locally directed and supervised, and operating with the continuous cooperation of business, industry, labor, and education, can develop such programs which provide training for marketable skills.

So that Wyoming citizens understand the full effects of vocational-technical education, the meaning and role of this type of education must be interpreted to them. This involves the first goal of the Governor's Committee, which is: "To relate and interpret the meaning and role of vocational-technical education to Wyoming's citizens." This goal will be partially met in the publication of this report. It is hoped that this report will influence groups interested in advancing vocational education in Wyoming. It is also hoped that this report will be distributed to school board members, school administrators, vocational education teachers, church leaders, labor organizations and their leaders, legislators, business leaders, community college boards, and others. The first goal of the Committee can also be met with the use of news releases, seminars, workshops, and by other means.

Before reaching any conclusions about what must be done in Wyoming concerning the role of vocational-technical education, an assessment of the current status and the future needs of the state is necessary. This relates to the second goal of the Governor's Committee, which is: "To realistically assess the vocational-technical needs in Wyoming (including assessing what we now have)". This assessment, to a large extent, is shown in the charts and graphs included with this report.

Studying these needs, the eight subcommittees recommended the formation of a Master Plan for Vocational-Technical Education. The Committee made recommendations in eight areas concerning the formation of the Master Plan. These recommendations are shown in the last section of this report. The Master Plan will fulfill the third goal of the Committee, which is: "To develop a workable plan for developing and implementing a comprehensive and efficient system of vocational-technical education."

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SUBCOMMITTEES

WORLD OF WORK -- Interpreted the relationships between the educational systems and the full range of national and state manpower needs.

ROBERT LARSON, Cheyenne, Chairman
Robert W. Day, Cheyenne, Recorder
Robert Clizbe, Casper, Liaison
Allan M. Hepworth, Afton
Kenneth Kennedy, Wheatland
Clyde Larson, Jackson
Fred McCabe, Cheyenne
Byron Parmaley, Casper
George Peverley, Laramie
Frank Supon, Pine Bluffs
G. Preston Williams, Elk Mountain
Elsie Yarter, Cheyenne

FINANCE -- Determined where and by what means financing is or could be made available for vocational-technical education, studying public schools, state institutions, and area vocational schools.

DEAN BORTHWICK, Cheyenne, Chairman
P. M. Cooper, Casper, Recorder
Herbert F. Manig, Laramie, Liaison
J. V. Bradley, Cheyenne
George Cox, Cheyenne
John Fornengo, Rock Springs
Ed Hunter, Basin
Peter Madsen, D. V. M., Sheridan
M. E. Nichols, Cheyenne
John W. Patton, Sheridan
Hewitt Youtz, Riverton

ANCILLARY SERVICES -- Studied vocational-technical education ancillary services, including state administration and leadership, teacher training and supervision, program evaluation, demonstration and experimental programs, instructional materials, research goals, and the use of guidance counselors and testing programs to implement vocational-technical education and training.

FREDERICK C. SCRIBNER, Saratoga, Chairman
Winifred Uhlinger, Cheyenne, Liaison
W. Andrew Bunten, Cheyenne
Barney K. Clausen, Casper
Jim Harris, Laramie
C. E. Hollon, Lusk
Jes R. Jessen, Gillette
Fred D. Legler, Cody
Dean T. Prosser, Cheyenne
Newell Sargent, Worland

NEEDS OF INDUSTRY -- Studied the employment needs of industry in Wyoming and surrounding areas, and the importance of vocational-technical education to the future industrial development of Wyoming.

ARTHUR W. ROBERTS, Casper, Chairman
Charles A. Nichols, Cheyenne, Recorder
Don Nagel, Laramie, Liaison
Dr. Leonard Gregory, Douglas (substitute)
Charles Irwin, Douglas
Ralph Johnson, Cheyenne
Jack Knott, Cheyenne
Elmer Lohse, Cheyenne
Sister Rita Louise, Cheyenne
Jim Martin, Kemmerer
L. E. Meredith, Casper
George Tresler, Cody
Horace J. Volentine, Cheyenne
Art Zeigler, Saratoga
Otto Bolln, Douglas
E. W. Davis, Riverton
J. Owen Evert, Worland
Barbara Goetz, Cheyenne (substitute)
Glenn Hill, Green River
R. P. Kumelos, Laramie
Joe A. Naramore, Newcastle
Roberta Scott, Cheyenne
Lloyd H. Snider, Powell
Estelle Stacy, Douglas (substitute)

SPECIAL NEEDS -- Identified problems that now exist and determined what can be done now and in the near future for the physically handicapped, educationally deprived, economically deprived, socially disadvantaged, and intellectually handicapped.

B. D. KUCHEL, Worland, Chairman
Mrs. John D'Amico, Cheyenne, Recorder
Max Osborn, Cheyenne, Liaison
C. Wilson Burnette, Newcastle
William Cross, Douglas
William Dinneen, Jr., Cheyenne
Dave Givens, Torrington
Don J. Livingston, Cody
Wallace R. "Mac" McBrayer, Torrington
Chencho Rodriguez, Cheyenne
Dr. Harry B. Tipton, Lander
Tom Towbridge, Saratoga
Robert V. Thompson, Big Piney
Mrs. Peggy Whitman, Newcastle (substitute)

ADULT -- Studied vocational-technical education programs on the adult level, particularly in the following areas: adult and continuing education programs sponsored by the State Department of Education, local high schools, the University of Wyoming, the community colleges, and by other agencies - welfare program, community action programs, Employment Security, Bureau of Apprenticeship and Training, and Office of Economic Opportunity.

PAUL DUDLEY, Cheyenne, Chairman
Dr. Ben R. Chesebro, Laramie, Co-chairman
Ernie Sones, Casper, Recorder
Ruth Knapp, Casper, Liaison
R. W. Beamer, Riverton

HIGH SCHOOLS -- Determined the role of vocational-technical education in the secondary schools of Wyoming.

PAUL COVELLO, Torrington, Chairman
W. E. Carter, Torrington, Recorder
M. Dale Ensign, Cody, Liaison
Barbara Bannister, Casper
W. B. Carroll, Sheridan
Vernon Delgado, Pinedale
B. Gitlitz, M. D., Thermopolis
Gaylord Hanson, Casper
Harold Hellbaum, Chugwater
Robert Novotny, Kinnear
Albert Schultz, Rawlins
R. E. Wilson, Cheyenne

POST-SECONDARY -- Studied vocational-technical education in community colleges, concentrating on the following areas: post-secondary institutions, curriculum, staff, (local, state, and university), facilities, and trends and emphasis.

FRANK A. BARRETT, M. D., Cheyenne, Chairman
Don R. Cook, Casper, Recorder
W. G. Ragley, Cheyenne, Liaison
Paul H. Bachman, Cheyenne
D. Orrel Geier, Banner
Donald E. Jones, Torrington
R. E. Lukens, Wheatland
Lawrence Materi, Upton
Delbert Northcutt, Cheyenne
Dr. Walter H. Palmberg, Riverton
Warren L. Smith, Powell

A VIEW OF VOCATIONAL-TECHNICAL EDUCATION IN WYOMING

Definition of Terms

ADULT VOCATIONAL EDUCATION -- Instruction offered day or evening to adults or out-of-school youth over 16 years of age who are engaged in or are preparing to enter an occupation. Vocational education for adults is chiefly of an upgrading nature, offered on a part time basis, or of a retraining nature for persons displaced by automation or technological changes.

AGRICULTURAL EDUCATION -- A systematic program of instruction for public school enrollees, out-of-school and post-high school youth, and established farmers, organized for the purpose of improving agricultural methods and rural living. Objectives are to develop abilities to: make a beginning and advance in farming; produce farm commodities efficiently; market commodities advantageously; conserve soil and other resources; manage a farm business; maintain a favorable environment and participate in rural leadership.

ANCILLARY SERVICES -- Those auxiliary activities which are conducted in support of vocational education programs, rather than as separate operations, and whose primary function is to expedite the performance of, and insure quality in, the programs. For example, teacher training, conduct of demonstration and experimental programs, development of instructional materials, program, evaluations, research and guidance activities.

APPRENTICE TRAINING -- An organized system for providing young people with the manipulative skills and technical or theoretical knowledge needed for competent performance in skilled occupations. The program usually involves cooperation among school, labor, and management, since apprentices learn the skills of the craftsman through on-the-job work experiences and the related information in the classroom. The minimum terms and conditions of apprenticeship are regulated by state and local statutes or agreements.

AREA VOCATIONAL SCHOOL or PROGRAM -- A school or program involving a large geographical territory usually including more than one local basic administrative unit. It offers specialized training to high school students who are preparing to enter the labor market. It also provides vocational or technical education to persons who have completed or left high

school and are available for full-time study. These schools are sponsored and operated by local communities or by the state.

BUSINESS EDUCATION -- A program of instruction which consists of two parts: (a) office education, a vocational education program for office careers through initial, refresher, and upgrading education leading to employability and advancement in office occupations; and (b) general business education, a program to provide students with information and competencies needed by all in managing personal business affairs and in using the services of the business world.

COMMUNITY COLLEGE -- A junior college operated by the board of education of a local basic administrative unit (including the independent local board for one or more community colleges). Instruction is adapted in content, level, and schedule to the needs of the local community.

COOPERATIVE EDUCATION -- A program for persons who are enrolled in a school and who, through a cooperative arrangement between the school and employers, receive part-time vocational instruction in the school and on-the-job training through part-time employment. It provides for alternation of study in school with a job in industry or business, the two experiences being planned and supervised by school and employer so that each contributes definitely to the student's development in his chosen occupation. Work periods and school attendance may be on alternate days, weeks, or other periods of time, but the hours at work are during the school day and equal or exceed the hours spent in school during the regular school year. This plan of training is used extensively in various phases of vocational education.

DAY TRADE CLASSES -- Courses conducted for persons regularly enrolled in a full-time school who have selected a trade or industrial pursuit and who wish to prepare for useful employment in that occupation. Training is comprehensive and includes instruction both in manipulative processes and also in those technical and other related subjects which are needed by the skilled and competent worker.

DISTRIBUTIVE EDUCATION -- A program of instruction in marketing, merchandising, and management. The program is concerned with training needed for purposes of updating, upgrading, career development, and operational management.

EXPLORATORY COURSES -- School subjects designed to provide the student with a broad, general view of the knowledges and skills involved in a field of learning or an occupation. Courses which provide students with exploratory and introductory experiences in a wide range of occupations serve as an aid in choosing a vocation.

HOME ECONOMICS EDUCATION -- A program of instruction which is planned for the purpose of assisting youths and adults to understand and solve problems in home and family living and/or to prepare for employment and upgrading in occupations involving

knowledge and skills in home economics subjects. Subject matter areas include: child development; family relationships; food and nutrition; clothing and textiles; family economics and home management; home furnishings and equipment; and family health.

INDUSTRIAL ARTS EDUCATION -- Instructional shopwork of a non-vocational type which provides general educational experiences centered around the industrial and technical aspects of life today and offers orientation in the areas of appreciation, production, consumption, and recreation through actual experiences with materials and goods. It also serves as exploratory experiences which are helpful in the choice of a vocation.

MANPOWER DEVELOPMENT AND TRAINING ACT -- A federal act administered by the Department of Health, Education, and Welfare. Its function is the training of the unemployed and underemployed and the retraining of persons who are displaced due to automation and technological changes.

OCCUPATIONAL INFORMATION -- Systematically organized data used by guidance personnel for the purpose of helping persons make a vocational choice. Material concerns the nature of the work, duties, responsibilities, and compensations involved in the several vocations, including information about employment outlook, promotional opportunities, and entrance requirements.

OPERATIVES -- This term, as used in the labor force charts in this section, refers to the occupations of apprentices; attendants (auto services and parking); railroad brakemen and switchmen; bus drivers; dressmakers and seamstresses (except factory); laundry and dry cleaning operatives; meat cutters (except slaughter and packing house); mine operatives and laborers; painters (except construction and maintenance); sawyers; taxi cab drivers; chauffeurs; truck drivers and deliverymen; and other kindred workers.

REIMBURSABLE VOCATIONAL PROGRAM -- A class or curriculum, offered through a public school, teacher-training institution or under contract, organized and conducted in accordance with the provisions of the state plan for vocational education approved by the U. S. Office of Education. Such programs are eligible to receive funds from the state (from state and federal vocational education appropriations) to cover in part certain costs already incurred.

SERVICE WORKERS -- This term, as used in the labor force charts in this section, refers to attendants at hospitals and other institutions, barbers, charwomen, janitors, porters, cooks, waiters, bartenders, counter workers, firemen, fire protection, hairdressers, cosmetologists, policemen, sheriffs, marshals, practical nurses, and others who give personal service to a customer.

STATE BOARD FOR VOCATIONAL EDUCATION -- The state agency having major responsibility for the administration and general supervision of vocational education in that state. It is responsible for maintaining certain minimum standards in the expend-

iture of federal funds allotted to the state for vocational education. In Wyoming, the State Board of Education serves in that capacity.

TEACHER-EDUCATION INSTITUTION -- An educational agency responsible for the proper preparation of teachers. Each state board for vocational education designates the institutions within the state responsible for the preparation of vocational teachers.

TECHNICAL EDUCATION -- Education designed to train persons for employment as highly skilled technicians in recognized occupations requiring scientific knowledge in fields necessary for the national defense.

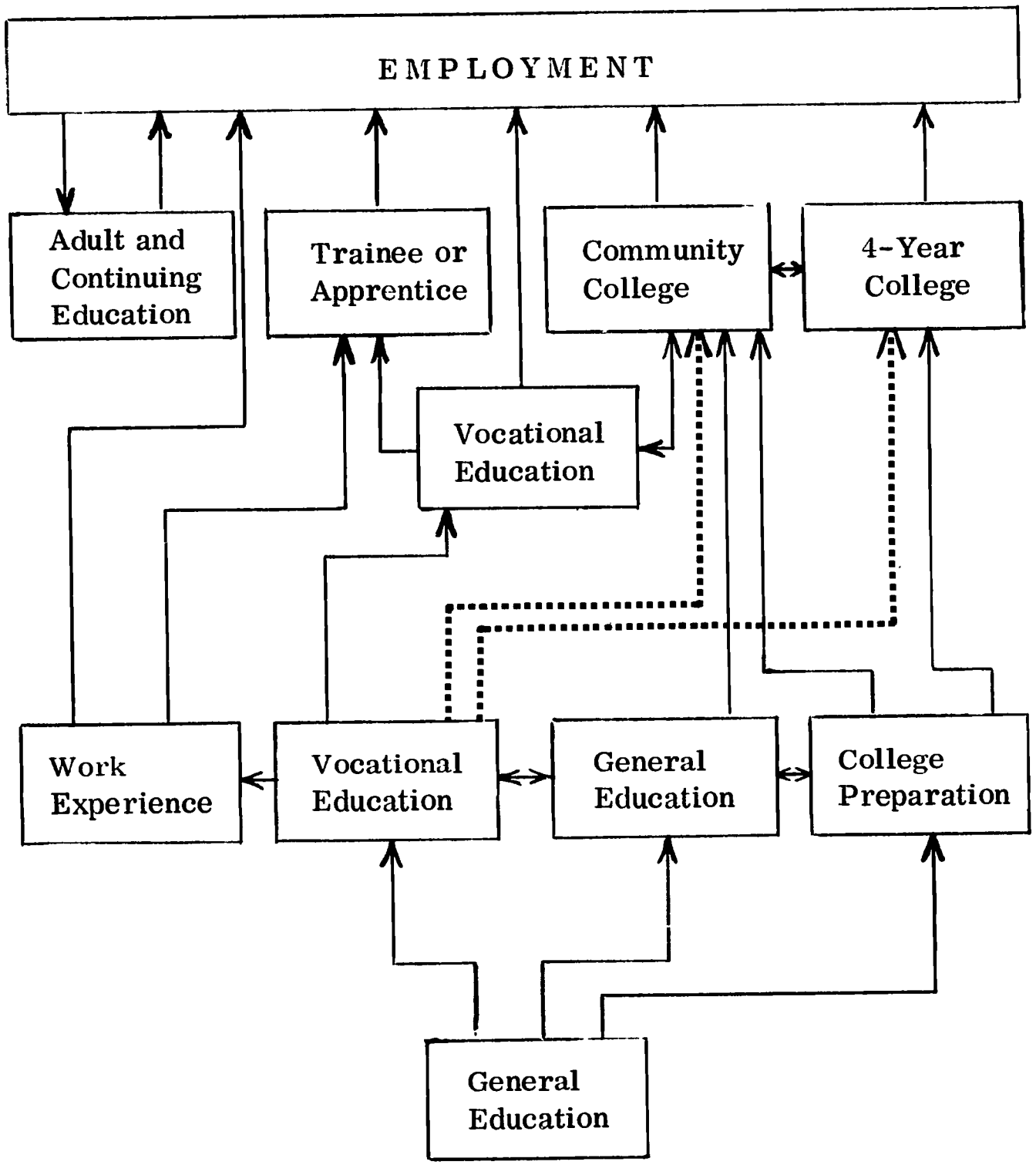
TRADE AND INDUSTRIAL EDUCATION -- Instruction which is planned to develop basic manipulative skills, safety judgment, technical knowledge, and related occupational information for the purpose of fitting persons for initial employment in industrial occupations and upgrading or retraining workers employed in industry.

VOCATIONAL-TECHNICAL EDUCATION -- Training intended to prepare the student to earn a living in an occupation in which success is dependent largely upon technical information and an understanding of the laws of science and technology as applied to modern design, production, distribution, and service.

WORK EXPERIENCE -- Employment undertaken by a student while attending school. The job may be designed to provide practical experience of a general character in the work a day world.

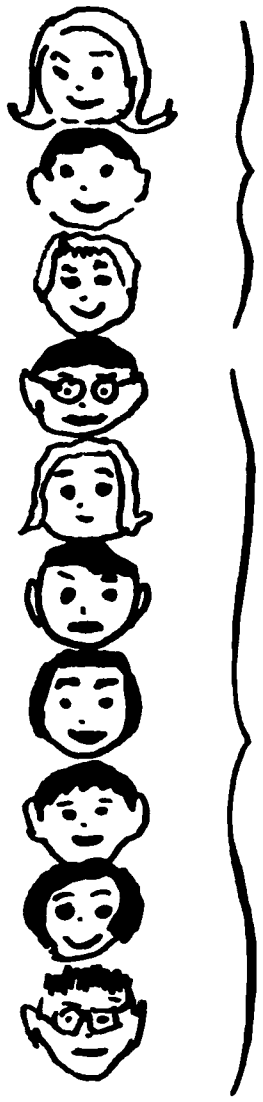
WORK STUDY PROGRAM -- Administered by the local educational agency and made reasonably available (to the extent of available funds) to all eligible youths in the area served by such agency. Employment under the program may be for the local educational agency or some other public agency or institution and will be furnished only to students who (a) have been accepted for enrollment as full-time students in an approved vocational education program, (b) need earnings to continue their vocational education, and are at least 15 and less than 21 years of age. No students shall be employed under the program more than 15 hours in any class week or paid more than $45 in any month or $350 in any academic year, except in special cases.

Paths To Employment



This flow chart shows the paths a person may take from general education to employment. Without also having had some type of occupational education, it is difficult for a person to go directly from general education into employment. Learning and/or training by means of vocational-technical education, or cooperative occupation programs (work experience. apprenticeships, or adult education) is very important for the majority of people who do not attend a community or four-year college.

Of Every Ten Youngsters Now In Grade Schools

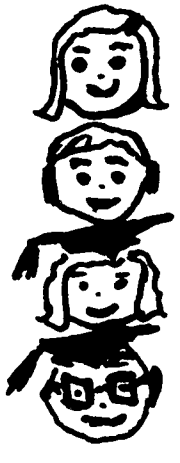


Three will not finish high school

Seven will earn a high-school diploma

Three will go to work, some as wives and mothers

Four will continue their education



ONLY TWO WILL FINISH FOUR YEARS OF COLLEGE

Source: Southern Education Report, June, 1967. (These figures represent a national average.)

Educational Attainment
Of Wyoming Citizens Over 25

.6%	have not attended school		
2.9%	have completed		1 to 4 years - elementary
3.9%	"	"	5 to 6 years - elementary
4.1%	"	"	7 years - elementary
17.3%	"	"	8 years - elementary
19.1%	"	"	1 to 3 years - high school
31.1%	"	"	4 years - high school
12.3%	"	"	1 to 3 years - college
8.7%	"	"	4 or more years college

Median school years completed by Wyomingites 12.1 years

Source: State of Wyoming, Cooperative Manpower Plan, Fiscal 1968

Vocational Education Units Earned
By School Districts Under The Provisions
of the
Wyoming School Foundation Program

School Year 1967 - 1968

Vocational units earned by schools conducting classes in the following subjects (this includes seventh and eighth grade enrollments in industrial arts and home economics):

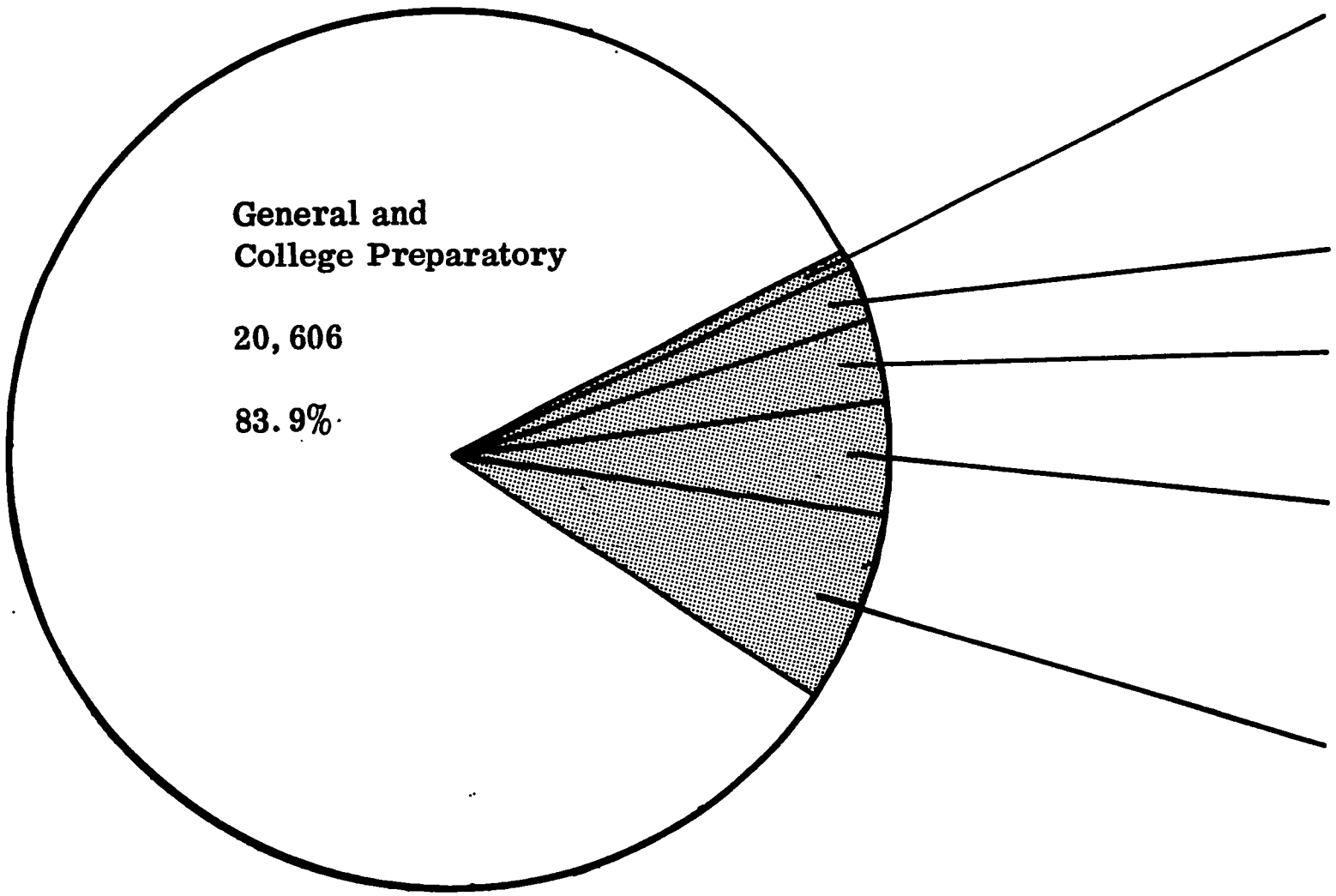
Subject	Grades	Units
Vocational Agriculture	9-12	45.350
Business and Office Education	9-12	135.100
Distributive Education	9-12	10.400
Home Economics Education	7-12	96.800
Industrial Arts	7-12	107.200
Trade and Industrial Education	9-12	9.600
Total		404.450

One vocational unit equals $8,200.

Wyoming High School Enrollment By Programs

1967 – 1968 School Year

(Total Enrollment -- 24, 553)



Home Economics -- 16 (.01%)

Distributive -- 520 (2.1%)

Trade and Industrial -- 754 (3.1%)

Office Education -- 902 (3.7%)

Agriculture -- 1,755 (7.2%)

TOTAL (Vocational)..... 16.1%

(3, 947)

Enrollment in True Vocational Programs

Source: Vocational Education Division, Wyoming State Department of Education

Wyoming School Enrollment

By Vocational Programs

Reimbursed under the
Wyoming School Foundation Program
(includes seventh and eighth grade enrollments in
industrial arts and home economics)

	Enrollment*
Vocational Agriculture	1,755
Business Education	13,450**
Distributive Education	520
Home Economics	7,221
Trade and Industrial	754
Industrial Arts	7,795
Total	31,495

*These figures are distorted because some students are enrolled in more than one vocational subject.

**Estimated

Source: Vocational Education Division, Wyoming State Department of Education, Vocational Enrollment, 1967-1968 School Year.

Enrollment In Vocational Classes Reimbursed

Under The Foundation Program

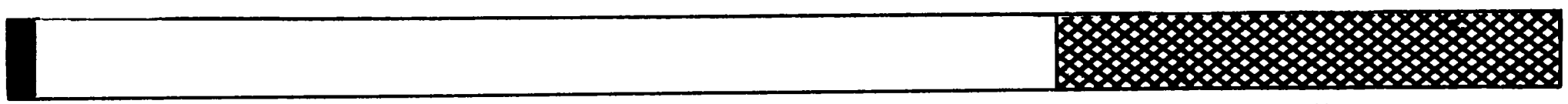
Total 1967-68 vocational enrollment of 31,495 includes 7th and 8th grade students in industrial arts and home economics classes.

The following includes students in this total figure who are taking a true vocational program leading to a salable skill upon high school graduation:

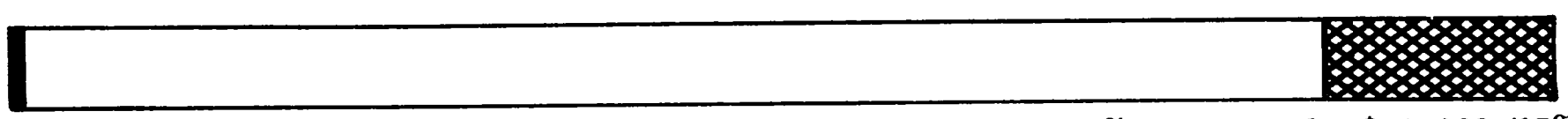
Program	Number of Students
Home Economics	16
Distributive Education	520
Trade and Industrial Education	754
Business and Office	902
Agriculture	1,755
Total	3,947

Expenditure Of Funds For Vocational Education By Program

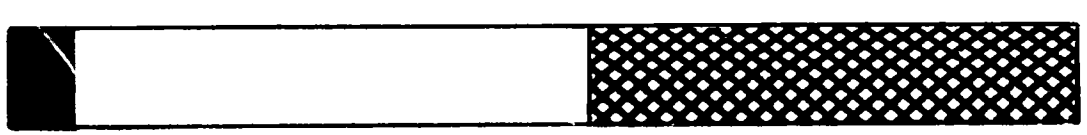
Fiscal Year Ended June 30, 1967



AGRICULTURE: State - $8,108 (2%); Local - $256,954 (64%); Federal - $134,491 (34%) $399,553

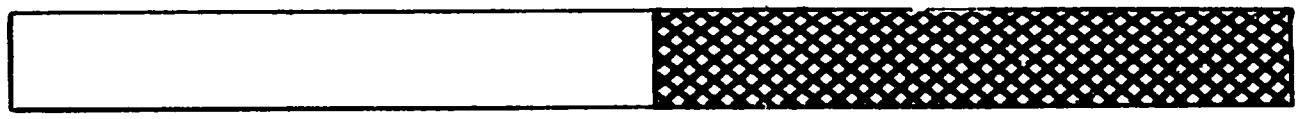


HOME ECONOMICS: State - $3,919 (1%); Local - $285,227 (84%); Federal - $50,089 (15%) $339,235

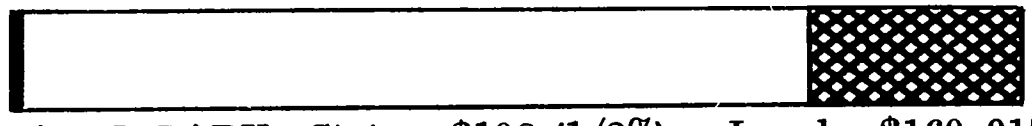


TRADE & INDUSTRY: State - $13,210 (6%); Local $102,863 (49%); Federal - $94,845 (45%)..... $210,918

OFFICE: State - $5,460 (2%); Local - $150,662 (62%); Federal - $88,257 (36%)..... $244,379



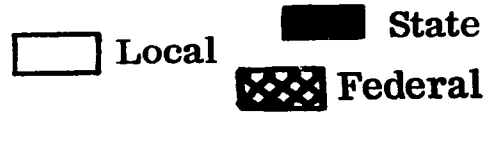
COMMUNITY COLLEGES (Construction of Voc-Tech facilities): Local - $124,143 (50%); Federal - $124,143 (50%)... ..... $248,286



ANCILLARY: State - $108 (1/2%); Local - $160,015 (80-1/2%); Federal - $38,126 (19%)..... $198,249

DISTRIBUTIVE EDUCATION:
State - $8,487 (9%); Local - $44,362 (45%); Federal - $44,574 (46%).....$97,423

TECHNICAL: Local - $11,335 (50%); Federal - $11,335 (50%)..... $22,670



HEALTH: Local – $12,896 (50%); Federal – $12,896 (50%)..... $25,792

WORK-STUDY: Local – $6,092 (25%); Federal – $17,979 (75%)..... $24,071

COOPERATIVE VOCATIONAL FUND EXPENDITURES

(for 1965 – 1967 biennium)

	FY 1966	FY 1967	TOTAL
State services.....	$117,677	$134,767	$252,444
Grant-in-aid payments to schools, community colleges and institutions .	$474,069	$481,970	$956,039
TOTALS.....	$591,746	$616,737	$1,208,483

SOURCE OF FEDERAL MONEY -- 1967

Act of '63 Regular Program, Section 3.....	$340,700
Act of '63 Work-Study, Section 13.....	$ 17,979
George-Barden Act, 1946.....	$228,058
Smith-Hughes Act, 1917	$ 30,000
TOTAL	$616,737

Note: Local district funds also include Foundation payments.

Wyoming Labor Force

				PERCENTAGES		
	Male	Female	Total	Male	Female	Total
Professional, Technical and Kindred Workers	9,298	5,455	14,753	7.3	4.3	11.6
Farm and Farm Managers	9,032	463	9,495	7.1	.4	7.5
Managers, Officials and Proprietors	10,987	2,064	13,051	8.7	1.6	10.3
Clerical and Kindred Workers	4,067	10,777	14,844	3.2	8.5	11.7
Sales Workers	3,933	3,291	7,224	3.1	2.6	5.7
Craftsmen, Foremen and Kindred Workers	18,478	247	18,725	14.5	.2	14.7
Private Household Workers	103	3,077	3,180	.1	2.4	2.5
Service Workers	4,615	8,045	12,660	3.6	6.4	10.0
Farm Laborers and Foremen	6,002	414	6,416	4.7	.3	5.0
Laborers, Except Farm and Mine	6,304	130	6,434	5.0	.1	5.1
Not Reported	2,159	1,325	3,484	1.7	1.0	2.7
Operatives and Kindred Workers	15,174	1,639	16,813	11.9	1.3	13.2
Total	90,152	36,927	127,079	70.9	29.1	100.0

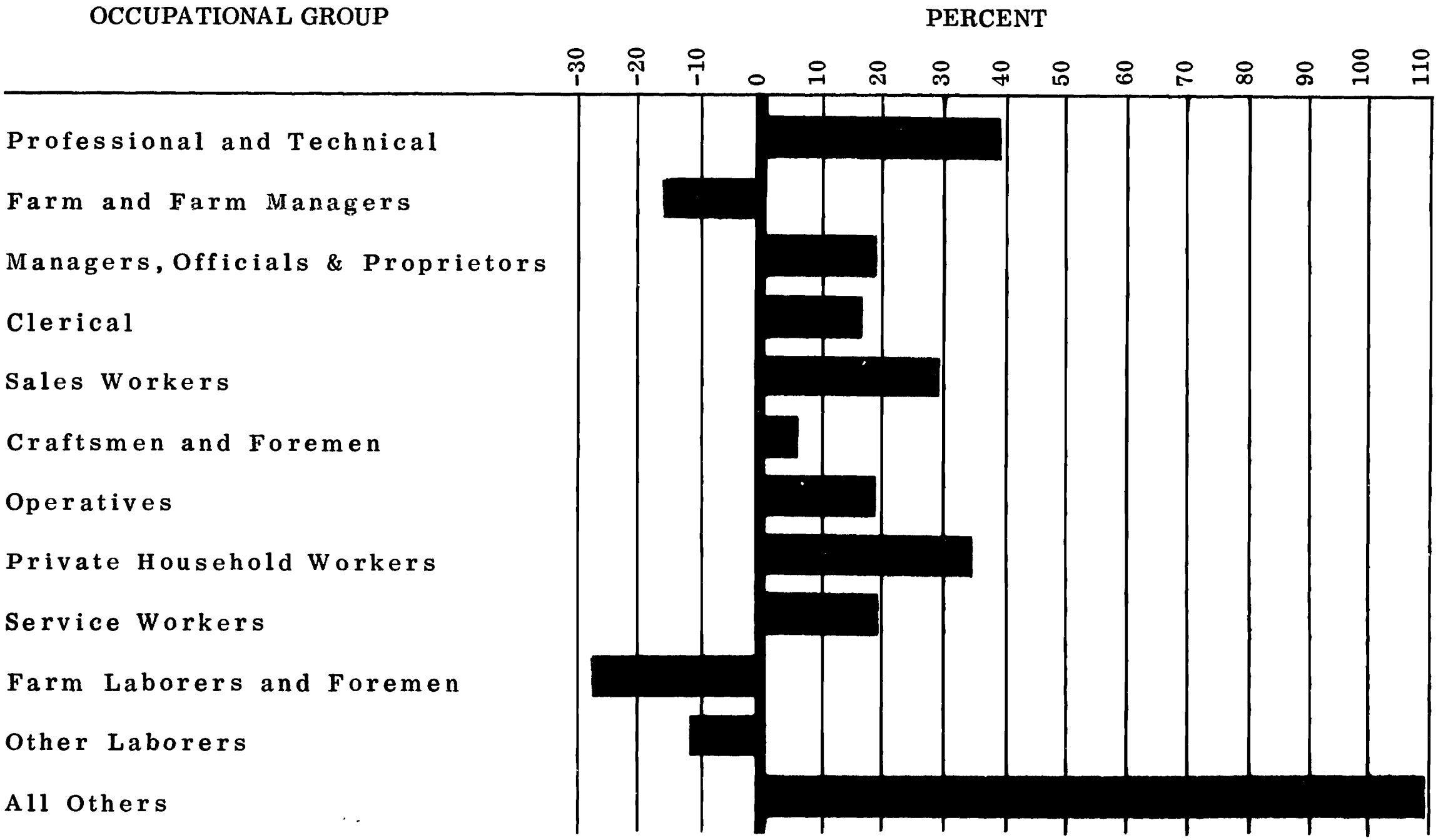
Source: PC (1) 52D Wyoming, Table 122, U. S. Census of the Population, 1960. (These are the latest figures available on the labor force.)

Wyoming Labor Force Projection 1960 – 1970

Occupational Group	1960	1970
Professional and Technical	14,753	20,460
Farm and Farm Managers	9,495	7,900
Managers, Officials and Proprietors	13,051	15,570
Clerical	14,844	17,435
Sales Workers	7,224	9,145
Craftsmen and Foremen	18,725	19,985
Operatives	16,813	19,820
Private Household Workers	3,180	4,300
Service Workers	12,660	15,015
Farm Laborers and Foremen	6,416	4,800
Other Laborers	6,434	5,650
All Others	3,484	7,220
Total	127,079	147,300

Source: Manpower Study, Wyoming Department of Labor and Statistics, prepared for Research Office, Adult Education Division, University of Wyoming.

Percent Change In Employment In Wyoming 1960 – 1970



Source: Manpower Study, Wyoming Department of Labor and Statistics, prepared for Research Office, Adult Education Division, University of Wyoming.

Recommendations of the Governor's Committee on Vocational Education

The development of a Master Plan for Vocational-Technical Education in Wyoming is strongly recommended. The Master Plan would encompass high schools, community colleges, and area vocational schools. Attention would be given to teacher education programs at the University of Wyoming. Areas to which the Governor's Committee on Vocational Education has given attention under the proposed Master Plan include the area vocational concept, curriculum and training, guidance, testing, occupational information, student transfer, the State Board for Vocational Education, the State Department of Education, and the University of Wyoming.

In addition to avoiding costly duplication, the Master Plan would provide for the coordination and correlation between high schools and the community colleges, and the community colleges themselves, for the development of quality programs. Duplications of subjects for high school students entering a community college would also be avoided.

Area Vocational Concept

The committee recommends the concept of developing area vocational-technical programs utilizing existing facilities. One or more schools within each designated area will have a major responsibility for vocational education in that area. The area school concept maintains that it can provide occupational training below professional level, for which a need exists and employment is available, within commuting distance of almost every resident of Wyoming. By adopting this area school concept, school districts agree to cooperate in providing specialized occupational programs for students from schools in the area. School districts would be encouraged to combine in a joint effort for vocational-technical education. A prime responsibility of the community colleges should be vocational-technical education.

To determine the establishment of specific vocational-technical programs, the Committee recommends a survey be made of Wyoming, concentrating on both the secondary and post-secondary levels. This survey should consider the following on an area basis:

A. Current vocational-technical program offerings, existing facilities and instructional personnel now available to students.

B. The student population, to determine their needs and interests.

C. The adult population, including those persons currently employed who need upgrading in current skills to remain competitive in their jobs, and unemployed individuals who need retraining to compete in the labor market.

D. The needs of the business community, to insure that programs fit the existing work opportunities. However, local programs should not be limited to local needs; in other words, vocational-technical education should be aimed at educating Wyoming people, not necessarily educating people for Wyoming.

Following the completion of the survey, legislation for financing and administration of the area vocational concept should be developed.

The Committee recommends the survey be made under the jurisdiction of the State Department of Education, which would compile the necessary information for an inventory. An evaluation team would study this information and recommend areas for the locations of the vocational-technical schools, taking into consideration the existing facilities and other factors such as population and needs. This evaluation team, composed of persons from both within and outside the state of Wyoming who are aware of these problems, would also work with local representatives in determining the vocational subject areas to be taught in the designated schools.

The Committee recommends the development of cooperative occupation 'education programs within the specific geographic areas. School districts, community colleges, business and industry would coordinate and share in the development and administration of these programs, which would allow vocationally oriented students the opportunity to attend school on a half-day basis and devote the rest of the day working for a cooperating employer. These on-the-job experiences would be closely correlated with the in-school experiences.

The Committee recommends that superintendents of schools, school boards, community college boards and the Community College Commission give more emphasis to programs of continuing and adult education to insure the full development of human resources in their areas. Wherever possible, existing facilities should be made available on a cooperative basis to all levels of education, i.e. secondary, post-secondary and adult. The maximum use of these facilities, particularly in the community colleges, should be encouraged on a twelve-month basis.

The Committee recommends the employment of area coordinators and/or local directors to develop and implement vocational-technical programs and to maintain communications between the school system and significant forces in the community. This person would coordinate the programs at secondary, post-secondary, and adult levels. Local directors of vocational-technical education should be designated wherever possible to give the leadership necessary for the development and expansion of these programs.

The Committee recommends the creation of area vocational advisory councils. These councils, in cooperation with school superintendents and local school boards, would have the following functions:

A. Interpreting job opportunities.

B. Helping to build curriculums.

C. Reviewing the adequacy of training facilities and equipment.

Curriculum and Training

As one of the first steps in developing occupational programs, courses providing information about occupations in terms that are accurate and meaningful should be introduced in the elementary grades. For more mature students, these courses need to be augmented by opportunities to experience, with an exploratory emphasis, some of the features of typical occupations.

As an example, seventh and eighth grade students would be taught the nature and educational requirements of a variety of occupations and professions by direct contact with persons in such jobs. Ninth and tenth grade students would receive specific instruction. Occupational programs, including on-the-job training, would begin in the eleventh and twelfth grades; emphasis would be on occupational education programs that will produce salable skills in the market place when the student graduates from school.

The Committee recommends that the general education subjects of reading, writing, mathematics, science and economics of a functional and applied nature, be recognized as pre-occupational and technical, and that continuous efforts be made to make these courses serve this purpose more effectively. The concept of industrial arts should be expanded to include orientation to a variety of industries and occupations. Schools would survey resources and professional personnel from local business, labor, and industry to orient students to new technologies and possible job opportunities. Students should be provided a wide variety of laboratory experiences to acquaint them with job opportunities in various areas. Basic science courses could also be expanded to include practical experiences. These experiences could be in the fields of radio, television, welding, industrial plastics, electronics, horticulture and others.

Work training exploratory experiences should be expanded in state institutions. Schools should also make provisions for students with special needs who cannot succeed in regular occupational school programs.

Periods and times of instruction and training should be made flexible according to the type of vocation for which the student is preparing, since this is necessary for the development of salable skills in occupational programs.

The Committee recommends that vocational-technical programs in such areas as keypunch and programming, welding, machine operation, secretarial science and others need to involve in-depth training.

The Committee recommends that a certificate of proficiency be given to occupational education students who have satisfactorily completed an occupational training program. This would not take the place of the regular high school diploma awarded to all students satisfactorily completing the academic program.

Existing and future occupational facilities and equipment should be kept up-to-date. The state should consider the possibility of utilizing mobile units to provide instruction in some occupational areas. These units might have equipment in such areas as electronics, data processing and computers, aviation, communications, data transmission and others. The possibility of utilizing equipment belonging to industry in the community for evening courses should be further explored.

Guidance

Additional guidance counselors should be employed in Wyoming schools. Financing the cost of these additional counselors could be provided by raising the administrative and special services unit allowed for these personnel under the Foundation Program, which is still at the 1955 ratio. The local school board would be responsible for the remainder of the cost.

Guidance counselors should be required to take courses in the philosophy of vocational education, a subject not now required in guidance counselor training at the University of Wyoming. Counselors could take such courses at summer school and/or workshops, and credit could also be given when counselors actually engage in work experience.

Employment of counselors by small school districts on a "shared" basis should be encouraged.

During the 1967-1968 school year, there were 87 full-time equivalent counselors, compared to the K-12 enrollment of 85,833. This is a ratio of one counselor for every 987 students.

The recommended ratio is one counselor for a maximum of 500 students.

If all districts employing part-time counselors would increase their guidance time to one hundred percent, and if all existing vacancies were filled for the 1968-1969 school year, there would be 104 full-time equivalent counselors in the state. With the projected 1968-1969 enrollment of 86,000 students, the ratio would then be one counselor for every 827 students.

Testing

In trying to identify as early as possible the occupational interests and abilities of students, schools should be encouraged to utilize one or more of the available testing techniques. These techniques would not be used to rate the achievement of students in school districts, but rather as a tool to assist guidance counselors in advising students and parents as to the likelihood of successful careers. These data could also help schools assess their curriculum needs.

Occupational Information

The Committee recommends that the Vocational-Technical Division of the State Department of Education periodically prepare a list of the vocational programs available at the post-high school adult level. This bulletin

should be distributed to all school board members, administrators, supervisors, adult education teachers, industry and other interested persons or organizations.

High schools and community colleges should elevate the status of vocational-technical education among the students. However, the community colleges are demonstrating their role as a comprehensive one which not only includes good college-preparatory instruction, but also involves offering vocational-technical education to the youth and adults of the area they serve.

The public should be informed of the advantages of expanded wide-area high school and community college occupational programs. Topics might include the number of non-college bound students, the employment needs of industry, possible means of providing occupational programs, combating school dropouts through occupational education, and others.

Student Transfer

A plan should be formulated to allow students from one community college district in Wyoming to attend another within the state which offers his choice of vocational program, without an increase in tuition.

Several states have been discussing the possibility of asking WICHE (Western Interstate Commission for Higher Education) to develop an interstate agreement between the states to allow students to move out-of-state and pay an in-state tuition. The Committee recommends Wyoming pursue this request so Wyoming students could move out-of-state to enter a highly technical program not available in Wyoming.

State Board for Vocational Education

One of the continuing responsibilities of the State Board for Vocational Education should be to evaluate programs of vocational-technical education in the public schools of Wyoming. The Board should also be prepared to assist in the development of additional programs as needed, assist in surveys, recommend possibilities of financing, and work with industrial groups and labor organizations. Such cooperation would assure school administrators that the programs they develop would be in the best interest of the people and industries in the community.

State Department of Education

The State Department of Education should be sufficiently funded by the state legislature so that it may supply the additional personnel necessary for an expanded vocational-technical program in Wyoming.

University of Wyoming

The importance of the University of Wyoming is recognized in developing the Master Plan because of its responsibility in vocational teacher education.

Since there is an increasing need for teachers in the vocational-technical field, additional staff members should be added to the education department of the University of Wyoming to increase course offerings and consequently the number of students enrolled in vocational teacher education. However, available qualified personnel not having a baccalaurate degree are being used as instructors in the area of technical, trade and industrial education in Wyoming.

Equipment should be purchased in an amount to insure a quality program at the University. It is likely that once the University of Wyoming, through the Board of Trustees, takes steps to equip these departments, private industry would be encouraged to donate useful equipment.

acknowledgments

This report is the result of the interest in the future of vocational-technical education in Wyoming displayed by Governor Stanley K. Hathaway. The Committee which he appointed was given professional assistance by Harry Roberts, State Superintendent of Public Instruction; Charles A. Kline, Director, Vocational-Technical Division, State Department of Education; and many of the professional staff members of the State Department. The secretarial staff of the State Department also provided assistance to the Committee.

Representing the University of Wyoming as professional consultants for the Committee were Dr. James Zancanella, Head, Vocational Education Division, College of Education, and Jack Ruch, Assistant Professor of Vocational Education.

The Committee heard four speakers aware of the problems in vocational-technical education. They were:

A. R. Bunger, former State Director of Vocational Education for the State of Colorado.

John E. Harmon, Executive Vice President of the National Employment Association, Washington D. C.

L. R. Mobley, Staff Associate in Public Affairs, Executive Development Department, International Business Machines Corporation, Port Washington, L. I., New York.

Dr. Urwin Rowntree, Director, Adult and Vocational Education, U. S. Office of Education, Region VIII, Denver, Colorado.

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Compiled and Edited by
David F. Shontz, Regional Chairman
North Atlantic Research Committee
University of Rhode Island
Kingston, Rhode Island

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WYOMING

The report is organized into three chapters. Chapter I details the background information necessary to determine public elementary and secondary school education needs and to establish priorities in developing a master plan. The following were reviewed: organization for elementary and secondary school education, enrollments, school programs and services, professional personnel, facilities, and costs and school finance. Primary problems identified were: (1) wide variation in educational opportunities across the state, and (2) relatively high and rising cost of public school education, partly due to sparse population. (Annual operating costs are expected to rise from $57 million in local and state funds to between $175 and $215 million by 1985; the cost for additional facilities can be expected to range from $43 million to $76 million.) Chapter II identifies priority needs as follows: (1) greater uniformity in scope and quality of educational opportunities, (2) better use of available resources, (3) closer relationships of public school education with post-high school education and the world of work, (4) refined system for maintaining statistical data, and (5) a master plan to guide the future of public school education. Chapter III recommends the next steps to be taken to improve public school education, emphasizing the coordination of master planning for community college vocational-technical education with master planning for public school education. (JK)

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VOLUME I

Public Elementary and Secondary School Education Needs

WYOMING STATE DEPARTMENT OF EDUCATION

Cheyenne, Wyoming

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December 1968

BOOZ • ALLEN & HAMILTON

Management Consultants

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December 31, 1968

Mr. Harry Roberts
Superintendent of Public Instruction
Department of Education
Cheyenne, Wyoming

Dear Mr. Roberts:

We are pleased to submit this final report which provides the background and identifies the needs related to public elementary and secondary school education in Wyoming.

Our proposal to you dated July 11, 1968 divided work required for the development of a master plan for improving the state's elementary and public school education into three distinct but closely related phases. They were:

Phase I	-	State-wide Elementary and Secondary School Education Needs
Phase II	-	Organization for Public Education
Phase III	-	A Master Plan for Public Elementary and Secondary School Education Programs and Services

Work required in Phases I and II were authorized. This report sets forth our findings, conclusions, and recommendations resulting from completion of Phase I.

Needed information was obtained through:

- Review of pertinent legislation, documents, reports, and records.
- Review of graduate theses.
- Interviews with Governor Hathaway, Mr. Roberts, and selected representatives of the following:
  - Wyoming State Legislature
  - State institutions
  - Wyoming State Board of Education
  - Members of the staff of the State Department of Education
  - Wyoming School Board Association
  - Wyoming Education Association
  - Wyoming Taxpayers Association
  - North Central Association of Colleges and Secondary Schools
  - University of Wyoming
  - Community colleges
  - Wyoming Education Council
  - Rocky Mountain Education Laboratory
  - Governor's Committee on Vocational-Technical Education
  - School administrators
  - Employer's major labor, industrial, and agricultural organizations
  - Classroom teachers
  - Students
- Preparation of special statistical and financial analyses.
- Data collection instruments used to ascertain:
  - Curriculum and program planning and development.
  - Attitudes of recent Wyoming high school graduates.

This report is organized into the following three chapters:

Chapter I - Wyoming in Perspective

Chapter II - Public Elementary and Secondary School Education Needs in Wyoming

Chapter III - Recommended Next Steps for Improving Public School Education in Wyoming

Material in each chapter is supplemented by appropriate tabular and graphic exhibits.

Chapter I sets forth in detail the background information necessary to determine public elementary and secondary school education needs and to establish priorities of steps in development of the master plan. Specifically reviewed in the chapter are the following:

- Organization for elementary and secondary school education
- Enrollments
- Student programs and services
- Professional personnel
- Facilities
- Costs and school finance

In summary, public school education in Wyoming has both many strengths and opportunities for improvement. Strengths exist in several school districts and individual school units. Of particular importance is the commitment and dedication to high quality education exhibited by the vast majority of persons with whom Wyoming education was reviewed.

The findings of this study indicate that public school officials and the general public of the state should be commended for their continuing efforts to upgrade public education in the state.

However, two primary problems continue to plague public school education in Wyoming:

(1) Educational opportunities for Wyoming youth vary widely across the state.

(2) The cost of public school education is relatively high and continues to increase.

Both problems can be attributed in part to the sparse population of the state, but a number of other factors are involved, as explained in the body of the report.

Of critical importance are projections of future requirements. Present student programs and services need to be improved and new programs and services added. In addition, future student enrollments will increase over the long term. To accommodate additional students in the future, many more teachers will be required, unless greater utilization is made of qualified personnel, who are already difficult to employ and retain. On the basis of recent trends of Wyoming's expenditures for education, annual operating costs can be expected to increase from nearly $57 million in local and state funds to between $175 million and

$215 million by 1985. This will be an increase of 175% to 260% in the annual operating cost of public education in the state during the 17-year period. Also, the cost for additional facilities can be expected to range from $43 million to $76 million by 1985.

After considering the present status and future requirements of Wyoming public school education in Chapter I, the second chapter summarizes the highest priority public elementary and secondary school needs in Wyoming. These needs are identified as follows:

- More state-wide uniformity in the scope and quality of educational opportunities available to each student.
- Better utilization of available resources for Wyoming public school education.
- Closer relationships of public school education with both post-high school education and the world of work.
- A refined information system for maintaining statistical data regarding Wyoming public schools.
- A master plan to guide the future of public school education for Wyoming youth.

Effecting needed improvements in the state's public education, giving first consideration to highest priority needs, will be difficult, complex, and challenging. There can be few significant effective and economic shortcuts to facilitating needed actions. Chapter III sets forth recommendations for systematically organizing and pursuing

the next steps which should be taken. As indicated, the first step should be to develop coordinated master plans for public elementary and secondary school education and community college vocational-technical education. Details of specific tasks which should be taken subsequently also are set forth in the chapter.

Working on this phase of the overall project with Wyoming school officials, the advisory committee, and the many other citizens has been a challenging and rewarding personal and professional experience for each member of the Booz, Allen & Hamilton team. We look forward to our subsequent work on this important project.

Very truly yours,

Booz, Allen & Hamilton Inc.

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I. WYOMING EDUCATION IN PERSPECTIVE

I. WYOMING EDUCATION IN PERSPECTIVE

One of Wyoming's major resources is its youth. Current 1968 state population figures indicate that of the estimated 315,000 persons living within the state, nearly one-third, or 98,000, are young people under 19 years of age. Of this number, 86,013 are enrolled in public educational programs at the elementary and secondary school levels

Providing an opportunity for the development of the individual to his highest potential has always been a bench mark for development in Wyoming. Since the first settlers' arrival in Wyoming in the late 1850's, it has been the individual effort of men and women in establishing and building farms, ranches, and businesses that has brought the state to its present economic and social level.

Education has developed in much the same manner as other resources. Schools were constructed and programs of education developed to meet the needs of the individual communities. As transportation facilities have improved over the years and economic and social interdependence has greatly increased, many changes have taken place in Wyoming education. Larger and more economic school districts have been established in many areas. Special enrichment programs

have been made available. The State Department of Education has become much more active in assuming its role of leadership as the agency charged by the Legislature with responsibility for elementary and secondary education in the state.

Yet education, historically, has been the function of local communities in Wyoming. Early territorial legislation gave to an ex-officio state superintendent responsibility for the collection of reports from school districts and the general supervision of the schools. County superintendents of schools were also established for the actual supervision of the local districts. In 1860, the position of state superintendent was abolished and the offices of county superintendents were the only administrative units for the schools within the state. In 1873, the state superintendent's position was re-established and all education was clearly made a state responsibility.

The challenge that faces Wyoming educators, legislators, and lay people is provision for continuing to develop maximum individual capacities for each tax dollar expended for education. Concerned citizens have recognized the need to examine carefully the methods of ensuring that the educational system accomplishes its goal of producing well-educated citizens.

The purpose of this first phase of the study is to identify the major needs that exist today and in the foreseeable future for educating Wyoming youth. This chapter provides an overview of the organization, administration, and content of public education in Wyoming. It outlines the programs and services being offered to youth and indicates the apparent influence of location and size of school upon the variety of course offerings and the cost of education. A number of factors are considered which, in total, may be considered indicative of the general quality of the educational programs being offered Wyoming youth. This chapter also includes projections of what Wyoming residents may expect over the next 15 years in terms of school enrollments, operating costs, and new facilities to house the increasing school population.

The identification of the major educational needs of youth, as set forth in Chapter II of this study, will be better understood from the perspective presented in this first chapter.

1. ELEMENTARY AND SECONDARY EDUCATION AT THE STATE LEVEL IS ORGANIZED INTO THREE DISTINCT ENTITIES

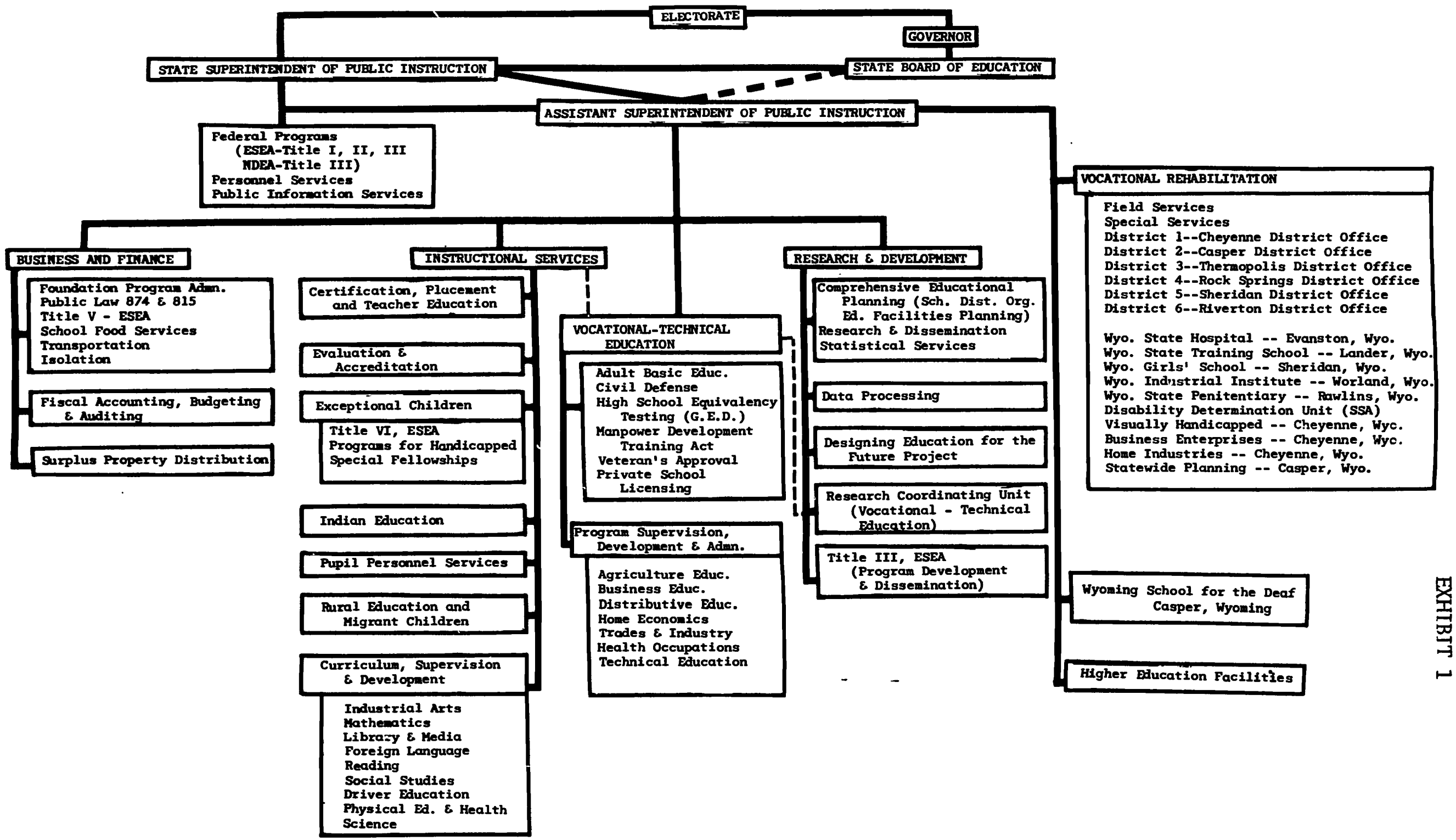
The organization structure of the overall state-wide administration of education in Wyoming has three distinct sections: the Office of the State Superintendent of Public Instruction, the State Board of Education, and the State Department of Education.

In response to current and future educational needs, the organization structure of the State Department of Education is in the process of change. Exhibit I, following this page, illustrates the most recent organization plan of the department. The composition and principal activities of each major component of the organization, at the state level, for the administration and supervision of elementary and secondary education are described in the remainder of this section.

(1) The State Superintendent of Public Instruction Derives His Authority Directly from the State Constitution and Legislature

In Wyoming, the state superintendent of public instruction holds a constitutional position and is elected directly by the people. He is one of five executive officers of the state and serves as chief administrative officer and ex-officio member of the State Board of Education. He provides general supervision of the public schools and interprets the school laws and the rules and regulations of the State Board of Education. He has the power to enforce all provisions of the Wyoming school law and the rules and regulations of the State Board of Education, but he does not derive his authority from the state board.

ORGANIZATIONAL CHART
WYOMING STATE DEPARTMENT OF EDUCATION



Effective Date: September 19, 1968

EXHIBIT 1

(2) The State Board of Education Is Composed of Seven Lay Citizens and Two Professional School Employees, with the State Superintendent as an Ex-Officio Member

The State Board of Education is composed of nine members, at least one of whom is from each of the seven judicial districts. Two members are appointed at large: one is a certificated classroom teacher and one is a certificated school administrator. Not more than five members are from one political party.

All members are appointed by the governor, with the approval of the Senate, for staggered terms of six years. Members generally are eligible for reappointment, although certain disqualifications are set forth in state statutes.* Vacancies for unexpired terms of office are filled by the governor.

The State Board of Education is responsible for prescribing the standards and regulating the general education program of all public elementary, secondary, and any other educational institutions of the state that receive state aid. Additionally, the State Board of Education must establish the minimum standards for the course of study, rules, and regulations for the health and safety of pupils housed in schools of the state and for the location and selection of school sites.

* Wyoming School Laws, Sections 21-1 to 21-32

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The licensing of all private schools through the State Department of Education is the responsibility of the State Board of Education.

State board meetings are held at regular intervals as often as the duties of the board require and at the call of the state superintendent of public instruction, the governor, or the chairman, whenever, in the opinion of one or all of these officials, the need for such meetings exist. The policy and procedures manual of the State Board of Education is in the process of revision, so that it will provide the basis for better meeting the current and future needs of Wyoming educational administration.

(3) The State Department of Education Functions Under the General Direction of the State Superintendent

The State Department of Education is the organization through which the state superintendent of public instruction carries out the programs established by the state for elementary and secondary education by the Constitution and the State Legislature. The department's activities also are guided by the standards and other regulations established by the State Board of Education.

The department is presently organized into five major operating areas under the assistant superintendent of public instruction, who in turn reports to the state superintendent. These five areas are instructional services, vocational-technical education, vocational rehabilitation,

ERIC

research and development, and business and finance activities. Reporting directly to the state superintendent are federal programs, personnel services, and public information services.

(4) The State Department of Education Has Had a Heavy Turnover in Key Personnel in the Past Four to Five Years

Efforts by state department personnel to develop minimum educational standards have been restricted by frequent changes in key state administrative personnel. Exhibit II, following this page, lists the administrative positions and the dates of significant personnel changes. Since 1962, five positions have had three incumbents and two positions have had four.

The present salary structure of the State Department of Education, including that of the state superintendent of public instruction, is dictated by legislative action. Ability to obtain and retain the services of quality personnel to provide effective leadership is directly related to the level of remuneration.

Exhibit III, which follows Exhibit II, compares the salaries of key personnel in the department with those for similar positions in ten other selected western states. For eight of the twelve positions listed, the Wyoming salaries ranked eighth or lower among this group of eleven states.

2. THE STATE DEPARTMENT OF EDUCATION IS PROVIDING EXPANDED SERVICES TO LOCAL SCHOOL DISTRICTS

The State Department of Education is now employing additional specialists for assistance in curriculum development and improvement in teaching techniques. From 1930 to the present, the level of staffing of all departments has increased from 11 full-time professional personnel to 58. The major portion of this expansion has taken place since 1965 and, more particularly, during the last two years, when services offered by the State Department of Education were broadened and diversified in almost all divisions. Exhibit IV, following this page, shows the distribution of the full-time professional and clerical staff within the State Department of Education, by major administrative unit, from 1930 through September 1968.

The principal reason for this growth in the State Department of Education has been the increasing recognition of the state's role in providing leadership and assistance to the public school system. It also has been stimulated by the requirements and funding provisions of federal programs. These programs have augmented the leadership role of the department by involving it in the evaluation and approval of projects and the distribution of federal monies to local school districts. The services and consultative capabilities of the department have expanded through application of federal grants, either 100% or

EXHIBIT I!

WYOMING STATE DEPARTMENT OF EDUCATION

DURATION OF SERVICE OF CERTAIN KEY STATE DEPARTMENT OF EDUCATION PERSONNEL

1967

Position	Dates New Person Took Office			
Assistant State Superintendent of Public Instruction	9/63	1/67	1/68	7/68
Chief, Instructional Services	9/65	9/66	7/67	2/68
Chief, Research and Development	8/66	7/68		
Chief, Business and Finance	12/58			
Director, Vocational-Technical Education	2/65	3/67		
Director, School District Evaluation	7/67	7/68		
Director, Research Coordinating Unit	6/66	9/67	7/68	
Director, Designing Education for the Future	9/65	5/67	8/68	
Director, Certification and Placement	6/65	7/67		
Director, Vocational Rehabilitation	7/65	5/66	7/67	
Director, Exceptional Children	8/63	7/67		
Director, Pupil Personnel Services (Guidance)	10/65	10/67		
Director, Adult Basic Education	1/66			
Director, Civil Defense Education	1/63	8/65	4/66	
Director, Business and Distributive Education	7/64	7/68		
Director, Manpower Development Training	9/65			
Director, Agriculture Education	2/47			
Director, Home Economics Education	9/51			
Director, Trade and Industrial Education	7/62	4/67	8/67	
Director, Data Processing	10/66			
Director, Title III, ESEA	7/68			
Director, Visually Handicapped	6/55			
Director, Wyoming School for the Deaf	8/62			
Director, Higher Education Facilities	8/67			

EXHIBIT III

WYOMING STATE DEPARTMENT OF EDUCATION

COMPARATIVE SALARIES FOR STATE EDUCATION DEPARTMENT POSITIONS IN 11 NEIGHBORING STATES

1968

Position	Colorado	Utah	Oregon	Nevada	New Mexico	Nebraska	Montana	Arizona	South Dakota	Idaho	Wyoming	Average Mean Salary	Wyoming Rank
State Superintendent	$25,000	$22,000	$20,000	$20,000	$21,000	$18,000	$13,500	$13,000	$15,000	$12,500	$15,000	$17,727	8
Assistant State Superintendent	19,860	16,236	18,500	16,000	15,960	15,100	18,000	14,000	13,860	13,440	14,940	15,990	8
Chief, Instructional Services	15,576	16,236	16,620	15,170	14,328	14,960	18,000	15,300	13,236	11,600	13,020	14,913	10
Chief, Business Administration	15,576	16,236	16,180	15,170	14,328	14,760	18,000	14,000	12,600	13,440	14,460	14,977	7
Director, Vocational Rehabilitation	16,464	15,420	15,960	14,805	14,339	14,000	18,000	13,388	12,336	12,060	13,020	14,526	9
Director, Vocational-Technical Education	22,475	13,368	15,960	15,549	15,056	14,760	15,000	13,338	12,336	13,500	13,500	14,990	8
Director, Certification and Placement	16,080	13,980	15,420	14,094	13,650	12,540	15,000	13,338	12,336	12,060	12,060	13,691	11
Director, MDTA	13,392	11,028	12,840	14,094	10,320	11,040	13,500	12,923	11,352	10,980	12,540	12,182	6
Director, Research	16,080	12,732	14,250	-	13,650	10,440	13,500	10,500	11,352	11,340	13,020	12,686	5
Consultant, Mathematics-Science	13,560	11,580	14,340	14,094	10,800	11,040	13,500	10,000	10,416	10,440	10,140	11,810	10
Rehabilitation Counseling III	9,420	8,400	8,760	9,500	7,920	8,565	8,800	9,000	8,700	7,320	8,880	8,660	4
Director, Public Information	11,112	10,560	8,580	-	9,840	8,700	10,500	8,500	8,400	9,360	8,340	9,389	10

EXHIBIT IV (1)

WYOMING STATE DEPARTMENT OF EDUCATION

FULL-TIME PROFESSIONAL AND CLERICAL STAFF IN CHEYENNE BY MAJOR ADMINISTRATIVE UNIT

1930-1968

Administrative Unit	November						September
	1930	1940	1950	1965	1966	1967	1968
State Superintendent of Public Instruction:							
Professional Staff	3	3	3	3	3	2	2
Nonprofessional Staff	2	2	n.a.	2	2	4	4
Instruction:							
Professional Staff	5	2	2	6	11	10	16
Nonprofessional Staff	1	1	n.a.	4	7	7	8
Vocational Education:							
Professional Staff	2	4	7	8	12	10	10
Nonprofessional Staff	1	2	n.a.	7	10	10	10
Vocational Rehabilitation:							
Professional Staff	1	1	6	6	9	12	14
Nonprofessional Staff	-	1	n.a.	14	14	14	14
Certification:							
Professional Staff	-	-	-	1	2	2	3
Nonprofessional Staff	-	2	-	2	2	2	3
Business and Finance:							
Professional Staff	-	-	3	1	6 2/3	5	5
Nonprofessional Staff	-	-	n.a.	3	5	7	8
Research and Development:							
Professional Staff	-	1	1	1	2	3	2
Nonprofessional Staff	-	1	n.a.	1	3	4	4
Personnel:							
Professional Staff	-	-	-	1	1/3	1	1
Nonprofessional Staff	-	-	-	1	-	1	1
Public Information:							
Professional Staff	-	-	-	2	2	1	1
Nonprofessional Staff	-	-	-	4	4	4	2

EXHIBIT IV (2)

Administrative Unit	November 1930	1940	1950	1965	1966	1967	September 1968
Federal Programs:							
Professional Staff	-	-	-	-	2	3	3
Nonprofessional Staff	-	-	-	-	1	2	2
Higher Education Facilities:							
Professional Staff	-	-	-	1	1	1	1
Nonprofessional Staff	-	-	-	1	1	1	1
Total Professional Staff	11	11	22	30	51	50	58
Total Nonprofessional Staff	4	9	n.a.	39	49	56	57
Total Staff	15	20	22+	69	100	106	115

n.a. - not available

matching funds, for the administration of the federal acts or for specific strengthening of selected service areas.

The principal areas in which the State Department of Education has expanded its services are described in the remainder of this section.

(1) Instructional Services and Educational Workshops Have Been Expanded Substantially

For personnel other than those concerned with vocational education, the State Department of Education, in cooperation with other school organizations, has held 47 in-service workshops during the past year. These were attended by 3,481 teachers and administrators. Another 41 are planned for the 1968-1969 school year. These workshops cover such topics as instructional subject areas, pupil personnel planning, and school finances.

In addition, during 1968, more than 330 teachers, directors, and administrators concerned with vocational education have participated in conferences, workshops, and meetings. During the past year, more than 300 individual contacts were made by state vocational education personnel in visits to local school districts.

(2) Six Regional Instructional Materials Demonstration Centers Were Recently Established

The department recently established six instructional materials demonstration centers to provide models for local school districts for the development of instructional media centers throughout the state. Criteria for the selection of the first six centers included the following:

- Full accreditation of school.
- Geographical location providing for wide coverage and with good road access.
- Building space with adequate seating capacity, good lighting, and functional arrangement.
- At least one full-time certificated and endorsed librarian and one adult clerk.
- Cooperation among the librarian, administration, and faculty to utilize media resources for improving instruction.
- Evidence of acceptance of the instructional materials concepts.

The first six centers chosen received minimum federal funds for augmenting already established programs, to further assist in the conversion of existing libraries and audio-visual centers to media centers. In addition, these centers also received materials from the State Department of Education. The following schools were the first in the state to qualify for this assistance.

Region	School
I	Powell High School
II	Sheridan High School
III	Fremont County Vocational High School
IV	Southridge Elementary School (Casper)
V	Kemmerer Junior-Senior High School
VI	Johnson Junior High School (Cheyenne)

In each of the future years that Title II is in effect, schools meeting the criteria will be able to apply for regional demonstration center grants. One school from each region will be selected. All schools operating as regional demonstration centers will receive continuing assistance from the state school library specialist in developing their programs.

(3) An Evaluation and Accreditation Division Was Established in 1967

The division assists in the improvement of the instructional programs of local schools and fosters and promotes high standards, ideals, and goals for the schools of the state. Since establishment of the division, 369 professional employees of various state school districts and the University of Wyoming, coordinated by the director of evaluation, have served on these evaluation teams.

During the 1967-1968 school year, the teams evaluated 93 schools in 44 school districts in six counties. These schools enrolled 8,754 pupils and employed 590 teachers and other professional personnel.

Levels of accreditation include: Level I, Level II, conditional accreditation, and nonaccredited status. Detailed descriptions of each level are presented in the evaluation manual, "Standards for Accreditation - Wyoming Elementary and Secondary Schools." Each district and school receives copies of this manual prior to the actual arrival of the team. At meetings with the district superintendent, his staff, and the director of evaluation preceding the team visit, questions are answered and the basis of evaluation established.

The program is designed to provide continuing evaluation, with each school being visited once every five years. The progress of those schools which do not achieve an acceptable level of accreditation is monitored by the State Department of Education. The program is one of continuing on-site team visitation and monitoring to ensure educational progress in all school functions.

(4) A Program for Systematic Collection and Reporting of Educational Data Is Being Undertaken

The research and development unit is moving ahead to expand and improve the reliability of data relating to the public school system in Wyoming. It is recognized by department officials that proper direction of the efforts of the State Department of Education will require accurate and complete information concerning all significant aspects of the school

system. Data available at the present time are fragmentary and inconsistent in many areas, and certain important information relating to school curriculum and facilities is almost completely lacking. Collection of these missing data components, improving the accuracy of source data, and systematizing the collection and reporting of all required information is a major goal of the state's educational improvement program.

3. LIMITED EDUCATIONAL PROGRAMS ARE PROVIDED FOR INSTITUTIONALIZED YOUTH

Institutionalized youth in Wyoming receive educational training through programs developed more or less independently at each institution, with little coordination or leadership being exercised by the State Department of Education.

(1) A Number of Institutions in the State of Wyoming Provide for the Special Needs of Its Youth

The following institutions in the state provide the services described:

- The Wyoming Girls' School at Sheridan and the Wyoming Industrial Institute at Worland assist teenage delinquents in readjusting to society.

- The Wyoming State Training School at Lander provides education and training for mentally retarded and cerebral palsied children and adults.

- The Wyoming State Children's Home at Casper provides shelter and training for children under court custody. These children receive education in the Casper public schools.

- The Wyoming State Hospital at Evanston provides educational programs for youth institutionalized there in conjunction with the Evanston public schools, under the Foundation Program.

  The Wyoming School for the Deaf at Casper provides education and training for individuals with defective hearing.

Educational programs within these institutions consist of instruction in residence, and, where feasible, in the local public school.

Each institution offers limited counseling services to its charges and is administered by its own director. The director of the School for the Deaf reports to the assistant superintendent of the State Department of Education. The directors of other institutions are responsible directly to the Board of Charities and Reform.

Exhibit V, following this page, shows the number of pupils and teachers at each institution.

EXHIBIT V

WYOMING STATE DEPARTMENT OF EDUCATION

NUMBER OF PUPILS AND TEACHERS, BY STATE INSTITUTION

September 1968

Institution*	Pupils	Teachers
Wyoming Girls' School	46	9**
Wyoming State Hospital	44	5
Wyoming Industrial Institute	58	8
Wyoming School for the Deaf	47	8
Wyoming State Training School	118	9
Total	313	39

* Pupils at the State Children's Home attend public schools in Casper.

** Four teachers are part-time.

(2) Opportunities for State Institutionalized Children To Be Involved in the Local Community Are Limited

There is little community involvement in the social and educational planning of institutional programs. Because they are institutional, it is frequently difficult for those returning to the mainstream of society to make satisfactory adjustments. Reportedly, the longer the term of commitment of youth to institutions, the more difficult is the return to noninstitutionalized society.

Generally, youths devote part of the day in the institution to educational activities. The average achievement of youth in these institutions is reported to be about two years below the grade level in which they are enrolled. It was reported by some directors of institutions that the majority of the youths have failed in their academic class studies prior to commitment, but that most do achieve degrees of success in the vocational training programs included in the institutional program. However, on-the-job training facilities at the institutions are limited mainly to those youth located in the Wyoming State Training School at Lander.

Of the 142 pupils nominally associated with grades 7 through 12 in the institutions in the fall of 1968, only two are enrolled in vocational training programs in the public schools of the community in which the institutions are located. A total of 13 youths were employed by local businesses in the neighborhood of these institutions during the 1968-1969 school year.

4. TWO PUBLIC SCHOOL ORGANIZATION ENTITIES EXIST AT THE COUNTY LEVEL

The two organizational entities at the county level are the office of the county superintendent of schools, which is responsible primarily for overseeing rural schools in each county, and the County Boundary Board which has authority to change school district boundaries.

(1) Twenty County School Superintendents Are Responsible for Education in the Rural and Smaller Schools in the State of Wyoming

Twenty county superintendents oversee 123 rural schools with approximately 2,100 students and 213 teachers. The annual expenses for the county superintendents' offices amounted to approximately $250,000 in 1967-1968. The health and educational testing programs in these rural schools are coordinated by the county superintendent. County superintendents are also responsible for financial matters and collect and report statistical data.

Essentially, the function of the county superintendent is liaison between schools and teachers and the State Department of Education. In some instances, responsibilities of county superintendent unnecessarily duplicate services provided by local districts.

Exhibit VI, following this page, shows the number of schools, enrollment and teachers in rural areas by county in 1967-1968.

(2) The County Boundary Board Is the Body That Is Legally Empowered To Modify School District Boundary Lines

County boundary boards consist of the three county commissioners, the county treasurer, and the county superintendent of schools.

Section 21-211 of the Wyoming school law specifies that the County Boundary Board shall lay out the county in convenient school districts and may alter and change the boundaries of any district. The board also is responsible for abolishing or combining with another school district any district in which no school has been actually or physically maintained and operated within the preceding six months of the previous year.

The code further specifies that, "in growing and developing communities, it will be necessary from time to time that changes must be made in school district boundaries in order to keep pace with modern needs.... The benefit to the overall educational demand

is entitled to reasonable consideration in the redesignation of district boundaries in order that the school tax burden may more equitably be distributed."

The only restriction on boundary alteration appears to be that the board must have sufficient information to determine that change is in the public interest. Wyoming school laws specify that county boards may establish joint districts, combining districts in two counties, if this is deemed to be in the best public interest and to benefit the over-all educational program of the pupils in both districts. However, historically, county boundary boards generally have been responsive to the desires of the people and have not taken the independent initiative in changing school district lines.

5. LOCAL SCHOOL DISTRICTS IN WYOMING VARY WIDELY IN TYPE, ENROLLMENT, NUMBER OF SCHOOLS, AND OTHER CHARACTERISTICS

Historically, local communities of Wyoming have established educational opportunities for pupils on the basis of local needs and financial ability to provide such programs.

EXHIBIT VI

WYOMING STATE DEPARTMENT OF EDUCATION

NUMBER OF SCHOOLS, ENROLLMENT, AND TEACHERS IN RURAL AREAS BY COUNTY AND GEOGRAPHIC AREA

1967-1968

County	Schools	Number of Teachers	Enrollment
Southeast			
Albany	12	18	139
Carbon	4	7	42
Goshen	1	2	28
Laramie	7	11	69
Platte	3	3	16
Central			
Converse	12	15	101
Natrona	10	19	213
Niobrara	-	-	-
Northeast			
Campbell	20	29	266
Crook	10	12	100
Johnson	8	22	247
Sheridan	11	16	177
Weston	-	-	-
Northwest			
Big Horn	4	9	83
Fremont	2	4	81
Hot Springs	5	13	118
Park	6	8	57
Washakie	-	-	-
Southwest			
Lincoln	-	-	-
Sublette	1	1	7
Sweetwater	2	11	105
Teton	4	12	203
Uinta	1	1	9
Total	123	213	2,061

Source: State Department of Education

The characteristics of local school districts reflect, to a considerable extent, the wide dispersion of population in the state. Historically, school district boundaries were determined by the distances that pupils could travel daily by foot or on horseback to reach the classroom. As roads improved and faster means of transportation were developed, some school districts reorganized into larger units to provide improved course offerings and to form more economical teaching and administrative units. Other district boundaries have remained unchanged, even though transportation constraints are no longer primary considerations.

Wyoming schools also have served a broader purpose than education of the youth. In many communities they are the focal point around which the social life of the community is centered. Thus, in considering the relative merits of reorganization, the educational opportunity of youth often is subordinated to concern with the future of the school as a community social center.

(1) There Are Five Types of School Districts

The independent development of school districts to meet varying educational and other needs has produced five distinct types of school districts in Wyoming. They are:

- Unified school districts, which provide full elementary and secondary school programs of kindergarten or grade 1 through grade 12.

- Special high school districts.

- Elementary supporting school districts, which operate independently of, but support, high school districts.

- Elementary nonsupporting school districts, which do not support a high school district and must pay tuition in order to send pupils to other districts to attend high school.

- Nonoperating school districts.

(2) Both the Number of School Districts and Schools in the State Have Decreased in Recent Years

Exhibit VII, following this page, shows the numbers of school districts and schools in the state between 1961 and the present. Significant changes taking place during the period are the following:

- In 1968, there are 41 fewer school districts than existed in 1961.

- There currently are fewer unified school districts than in 1961.

- The number of special high school districts has not changed significantly.

- The number of elementary districts supporting high schools has declined by 16.

- There are 23 fewer elementary districts which do not support a high school than there were in 1961.

This exhibit also shows that the number of schools in the state decreased significantly between 1961 and 1968. Almost the entire decline was in the number of elementary schools, which was reduced by 86.

EXHIBIT VII

WYOMING STATE DEPARTMENT OF EDUCATION

TREND IN NUMBER OF WYOMING SCHOOL DISTRICTS AND SCHOOLS

1961-1968

Year	School Districts						Schools				
			Elementary				High Schools				
	Unified	Special High	With HS	Without HS	Nonoperating	Total	Senior	Junior	Elementary	Special	Total
1961	61	13	67	63	2	206	77	49	396		522
1962	61	12	70	57	1	201	78	48	381		507
1963	59	13	68	55	2	197	75	46	369		490
1964	59	13	73	50	1	196	75	49	359		483
1965	59	13	70	48	1	191	78	54	362	6	500
1966	58	12	56	45	2	173	76	54	332	5	467
1967	57	13	63	44	3	180	76	56	319	6	457
1968	58	12	51	40	4	165	76	52	310	6	444

Source: Annual Wyoming education directories

(3) There Are Wide Variations in Enrollments of School Districts

Exhibit VIII, following this page, provides a comparison of 1967 enrollments and number of schools according to size of school district. Enrollments showed a wide variation from only one pupil in elementary nonsupporting District 27 in Park County to 14,600 in the Unified District 1 in Laramie County. About 80 districts had fewer than 50 pupils each and another 30 districts had fewer than 150 pupils.

The number of schools per district varies from 1 in many districts to 31 in Laramie County District 1.

(4) There Is a Wide Range in the Ratios of Pupils to Teachers Among School Districts

Review of the variation of pupils per classroom teacher shows an uneven distribution among the schools of Wyoming. Exhibit IX, following Exhibit VIII, illustrates the range of pupil-teacher ratios by size and type of school.

The overall average of 19.4 pupils per teacher has decreased slightly since 1961-1962, when it was 19.6 to 1. This ratio is substantially lower than the 1967 national average, which was 23 to 1, and is reported to be approximately 25 to 1 currently. The low pupil-teacher ratio in Wyoming is due partially to the large number of rural schools

EXHIBIT VIII

WYOMING STATE DEPARTMENT OF EDUCATION

RANGE IN NUMBER OF SCHOOLS AND ENROLLMENT BY SIZE OF DISTRICT

1967

Size of District	Number of Districts	Number of Schools in District			District Enrollment		
		Minimum	Average	Maximum	Minimum	Average	Maximum
Macro							
2,500 or More Pupils	7	4	18	31	2,700	8,650	14,600
Large							
500 to 2,499 Pupils	24	2	5	7	509	1,382	2,254
Medium							
150 to 499 Pupils	38	3	3	3	158	306	453
Small							
50 to 149 Pupils	30	2	3	4	52	98	144
Micro							
1 to 49 Pupils	81*	1	3	4	1	25	48

*Includes three nonoperating

EXHIBIT IX

WYOMING STATE DEPARTMENT OF EDUCATION

PUPIL-TEACHER RATIO BY SIZE AND TYPE OF SCHOOL IN WYOMING

1967

Type of School	Size of School Enrollment	Pupil-Teacher Ratio		
		Minimum	Maximum	Average
Senior High School	Over 1,000	18.3	24.0	21.3
	Over 200	14.7	21.7	17.4
	Under 200	5.3	17.2	9.8
				16.2
Junior High School	Over 700	18.4	21.9	20.3
	Over 150	16.6	31.5	20.4
	Under 150	4.0	31.0	17.2
				19.3
Elementary School	Over 400	19.0	29.4	25.3
	Over 100	14.4	37.4	23.2
	Under 100	5.8	25.0	17.4
	Under 20	1.0	16.0	7.2
				18.3

and small rural communities. This is a characteristic of most sparsely populated states. An indication of the wide range of pupil-teacher ratios encountered in Wyoming is shown below:

Lowest ratios in 1967:

- 1 to 1 in one elementary school
- 4 to 1 in one small junior high school
- 5. 3 to 1 in a small senior high school

Highest ratios in 1967:

- 37. 4 to 1 in a medium-size elementary school
- 31 to 1 in two junior high schools

These averages are for schools, but it is likely that similar variations exist in pupil-teacher ratios among classes within individual schools.

6. PREKINDERGARTEN AND KINDERGARTEN PROGRAMS ARE LIMITED

Provisions for teaching children before grade 1 vary considerably both at the prekindergarten and kindergarten levels, as indicated in the following two sections.

(1) Prekindergarten Education in Wyoming Consists of Privately Operated Programs and the Head Start Program Designed for Culturally Disadvantaged Children

All nursery schools and private kindergartens, except that at the University of Wyoming, are independently owned and operated. Each program is developed according to its owner's desires.

In 1967-1968, 1,458 preschool children were cared for in 75 privately operated centers, which were located in 28 communities located in 18 of the 23 counties.

The State Welfare Department functions as the licensing body for all such units. Individuals operating preschools and kindergartens have their credentials reviewed, but are not certificated, by the director of home economics in the vocational-technical division of the State Department of Education.

School facilities are to be inspected annually by a team composed of representatives of the state fire marshal's office, the health department, and the State Welfare Department. The first such inspection in several years was conducted in the fall of 1968 and qualified structural engineers do not appear to have been represented on the inspection teams.

At the present time in Wyoming, there are 13 Head Start centers operating full-year programs. These centers are located in Mill Creek, St. Stephens, Arapahoe, Guernsey, Lusk, Torrington, Hawk Springs, Wheatland, Thermopolis, Riverton, Worland, Lander, and Lovell. The Mill Creek, St. Stephens and Arapahoe programs are sponsored by the Shoshone and Arapahoe Joint Business Council under the direct supervision of the Wind River Community Action Agency. Guernsey, Lusk, Torrington, Hawk Springs, and Wheatland programs are under the direction of the Tri-County Community Action Agency. The Northwest Community Action Agency sponsors the programs in Thermopolis, Riverton, Worland, Lander, and Lovell.

In addition to these full-year programs, summer programs were conducted in Cheyenne, Laramie, Rawlins, Sheridan, Casper, Lingle, Torrington, Huntley, Riverton, Worland, and Powell. Many of these were sponsored jointly by public school districts and the community action agencies. In 1966, Rock Springs had a Head Start program and, although it did not operate during the summer of 1968, plans are being made to ensure that it will be available during the summer of 1969.

The community of Arapahoe has an innovative day care program for the training of mentally retarded and physically handicapped preschool children on the Arapahoe Indian reservation. Riverton is

operating a Follow-Through class for children who have previously participated in a Head Start program, and Laramie is developing plans for tutorial program for young children in need of additional and specialized learning opportunities.

Typically, these federally funded programs are provided for preschool children from economically depressed areas. However, federally funded programs are operated within the state for older youth in these same areas. At the present time, eight neighborhood youth corps programs have enrolled 141 youths in full-year programs. One Upward Bound program enrolling 69 pupils is in operation at the University of Wyoming. More than $1. 5 million was made available through the Office of Economic Opportunity for the development and operation of all such programs for the 1967 fiscal year and the same amount for the 1968 fiscal year. In addition, local school districts and communities have provided in-kind support represented by personnel services, bus transportation, and facilities amounting to in excess of $300, 000.

During 1968, 2, 666 children were involved in some type of economic opportunity program fund by OEO. Of this number, 1, 380 were enrolled in summer Head Start classes and 435 are now in full-year Head Start programs. The Follow-Through program in

Riverton-Lander is meeting special needs of 150 children, The Neighborhood Youth Corps enrolled a total of 491 young people in their centers during the fiscal year ending August 31, 1968.

Lack of funds from the federal government has made it difficult, in recent months, to expand programs to new areas of the state to meet the needs of all children who could benefit from them.

(2) Public Kindergarten Programs Serve 73% of the Eligible Children in the State of Wyoming

During the 1967-1968 school year, 106 kindergarten classes served 73% of all children identified in this age group. Last year, four counties (Campbell, Johnson, Platte, and Washakie) did not operate nor offer public kindergarten for their children. In addition, only a small percentage of the five-year-old children in Goshen and Park counties were offered public kindergarten classes. Exhibit X, following this page, lists the possible number of kindergarten children by county and those actually enrolled in classes during 1967-1968.

Currently, kindergarten units are counted for Foundation entitlement on a basis of 75 pupils in one-half day membership per kindergarten teacher.

EXHIBIT X

WYOMING STATE DEPARTMENT OF EDUCATION

WYOMING KINDERGARTEN ENROLLMENT

1967-1968

County	Number of Pupils	
	Possible	Actual
Albany	412	384
Big Horn	231	187
Campbell	157	0
Carbon	259	224
Converse	116	107
Crook	93	56
Fremont	617	333
Goshen	203	25
Hot Springs	98	80
Johnson	108	0
Laramie	1,408	1,368
Lincoln	220	220
Natrona	1,120	1,088
Niobrara	56	28
Park	371	11
Platte	100	0*
Sheridan	287	222
Sublette	89	43
Sweetwater	361	349
Teton	99	97
Uinta	164	74
Washakie	154	0
Weston	137	108
Totals	6,860	5,004

* Glendo (District 8) provided a six-week kindergarten orientation program during spring of 1967 and 1968.

Source: Wyoming State Department of Education

Certification, through the State Department of Education, is required for all public school kindergarten teachers on the same basis as certification of other public school teachers in Wyoming. However, such certification is not required for teachers in private kindergartens.

As shown in Exhibit XI, following this page, which shows enrollment as a percentage of first grade enrollment for the 1967-1968 school year in selected states, Wyoming ranked fifth highest of the group of states and seven percentage points above the United States average.

7. SCHOOL PROGRAMS, CURRICULUM, AND INSTRUCTION ARE GEARED PRIMARILY TO COLLEGE PREPARATION

The program and methods of instruction should serve as the basis for all organizational and functional plans at every level of education, whether local, state, or national. This section examines course offerings that are available to pupils in Wyoming schools and some of the techniques of instruction currently utilized.

(1) Curriculum Offerings Generally Are Limited to Traditional Subjects

Subject offerings were examined in a sample of 18 selected schools in Wyoming representing affluent and less wealthy geographic areas and urban and rural school districts. The analysis of this

EXHIBIT XI

WYOMING STATE DEPARTMENT OF EDUCATION

PUBLIC KINDERGARTEN ENROLLMENT AS A PERCENTAGE OF FIRST GRADE ENROLLMENT FOR TEN SELECTED WESTERN STATES

Fall 1967

State	Kindergarten Enrollment	First Grade Enrollment	Percentage
Nebraska	28,805	27,142	106.1%
Utah	23,971	24,549	97.6
Colorado	37,878	43,439	87.2
Nevada	9,168	10,618	86.3
Wyoming	5,004	7,321	68.4
South Dakota	9,497	14,235	66.7
United States	2,432,373	3,972,722	61.2
Montana	3,656	15,904	23.0
Arizona	9,500	42,000	22.6
New Mexico	2,098	28,733	7.3
Idaho	-	16,318	-

information indicates that curriculum is generally limited to subjects traditionally offered in basic college preparatory programs and vocational courses. For example:

- Special courses in the language arts, journalism, dramatics, and speech are limited.
- Smaller schools generally do not offer advanced and modern mathematics courses.
- The smaller schools tend to teach only elementary science courses.
- Three-quarters of the districts reporting did not offer courses in economics.
- Notable gaps in vocational offerings are prevocational training, metal shop, secretarial practice, business English, and business economics courses.

The development of modern curriculum varies from no planning in many districts to limited planning in a few. Again utilizing the sample districts, it is notable that only 5 of the 18 schools surveyed indicated a definite plan for curriculum improvement and these for only a small number of subjects. Exhibit XII, following this page, lists those subjects for which plans for evaluation and restructuring the program of a course are either under way or are being developed. Some districts indicate that articulation of instruction is achieved by the purchase and use of a single series of textbooks from a single publisher.

EXHIBIT XII

WYOMING STATE DEPARTMENT OF EDUCATION

NUMBER OF DISTRICTS WHICH HAVE CHANGED OR ARE CONTEMPLATING CHANGES IN CURRICULUM

1968-1969

Curriculum Areas	Districts Having Changed Their Curriculum Prior to 1968	Percentage	Districts Contemplating Changes	Percentage
Language Arts	14	87.0%	10	62.0%
Mathematics	12	75.0	6	37.0
Science	8	50.0	5	31.0
Music	4	25.0	3	18.0
Health and Physical Education	5	31.0	2	12.5
Art	2	12.5	5	31.0
Social Studies	5	31.0	5	31.0
Driver Training	2	12.5	2	12.5
Vocational Education	7	44.0	8	50.0

Source: Questionnaire sent in 1968 to sample of 23 school districts, of which 18 replied.

A publication by the State Department of Education's division of research and statistics released in March of 1967 lists 124 new programs that were being conducted by the 50 school districts reporting. The programs fall into 12 major classifications:

- Individualized instruction
- Team teaching
- Teacher aides
- Work-study
- Initial Teaching Alphabet
- Programmed learning
- Remedial reading
- Ungraded progress
- Victor Electro-Writer Remote Blackboard
- Instructional materials centers
- Tutorial instruction
- Manipulative devices for mathematics

It has been reported that professional educational personnel seeking information on innovative programs look to districts outside the state.

(2) High School Graduates Express the Need for a Broader Curriculum

A state-wide survey which was made by the State Department of Education in June 1968, covered 74 or 97% of all high schools in Wyoming. Results indicated that 52% of the 9,203 junior and senior high school class members were enrolled in college or university preparatory programs. Fifty-eight per cent of the seniors indicated that they planned to attend college.

In order to obtain the reactions of high school graduates concerning curriculum, a questionnaire was sent to the 1967 graduates of nine high schools. The following is a summary of the pertinent comments from the 168 who replied.

. High school preparation - 97% response

- 35% took a general program during their four years.
- 33% took a college preparatory program.
- 24% took a commercial or business education program.
- 4% took a vocational program.
- 1% took other combinations.

. Present activity - 98% response

- 28% are attending a four-year college.
- 27% are attending a two-year community college.
- 23% are employed; less than 1% unemployed.
- 5% are in the armed forces.
- 14% participate in other activities - part-time school and work, housework, mission field.

. Scholastic ranking - 100% response

- 54% estimated they were in the top third of their class.
- 43% in the middle third.
- 3% in the lower third.

. Opinions of the adequacy of their high school preparation for their post-high school plans - 97% response

- 61% indicated that they were reasonably well prepared.
- 25% indicated that they were well prepared.
- 9% indicated that they were poorly prepared.
- 2% indicated that they were not prepared at all.

- Judgment as to which aspect of their high school experiences had the greatest impact on them - 93% response

  - 52% reported that a teacher or teachers had the greatest impact.
  - 38% reported that a course or courses had the greatest impact.
  - 3% reported that individual attention had the greatest impact.

- Courses they considered most beneficial - 100% response

  - 32% reported English.
  - 19% reported business or commercial.
  - 11% reported mathematics.
  - 13% reported science.
  - 8% reported vocational subjects.
  - 14% reported foreign language, social studies, fine arts, physical education, speech, or bookkeeping.
  - 3% reported that no course was most beneficial.

- Courses they considered least beneficial - 97% response

  - 30% indicated none.
  - 14% indicated social studies.
  - 13% indicated physical education.
  - 10% indicated foreign language.
  - 7% indicated English.
  - 23% indicated vocational, science, mathematics, business, fine arts, or literature.

- What they would do if they had the opportunity to take their four years over again

  - 58% reported they would change majors.

- Curriculum suggestions

  - 50% felt that the curriculum should be broadened.
  - 30% considered that more contact with guidance counselors was needed.
  - 19% voiced the opinion that there should be more extracurricular activities.
  - 29% felt that classes should have smaller enrollments.

Courses they would have enrolled in had they been available - 92% response

- 17% indicated vocational classes.
- 17% indicated business or commercial classes.
- 11% indicated foreign language courses.
- 7% indicated fine arts subjects.
- 3% indicated mathematics courses.
- 4% indicated social studies.
- 5% indicated science.
- 8% indicated psychology, sociology, radio, and TV.
- 20% indicated that they were satisfied with course offerings.

The graduates of Wyoming high schools who were least satisfied with their high school preparation were from small schools where they had majored in a general course program. The major request of students from small schools was for a curriculum broadened to include more language, arts, and vocational classes.

(3) The Variety of Vocational-Technical Programs Is Limited in Wyoming Schools

Vocational-technical education is reportedly held in low esteem by many students, teachers, guidance counselors, parents, and the community at large. Students reportedly are frequently directed to a vocational-technical program only if they have difficulty in the college preparatory course, regardless of their postgraduation plans.

Although total course enrollment in vocational classes exceeded 19,810 during 1967-1968, the actual enrollment of vocational majors numbered only 3,947 pupils, which represents only about 16% of all pupils attending Wyoming high schools.

(3.1) Student Participation in Vocational-Technical Courses Has Increased During 1967-1968

During the past school year, there was some expansion of the vocational-technical programs in the following areas: agriculture, secretarial studies, distributive education, drafting, welding, and food services. In general, during the last five years, there has been an increase in enrollment in all vocational education courses. The greatest increases in enrollment occurred in business and office practices and distributive education courses from 1966-1967 to 1967-1968. Exhibit XIII, following this page, illustrates the comparative growth in enrollment by major categories of vocational education.

Of particular significance is the increase in enrollment in agricultural courses for the 1967-1968 school year. This is notable because potential employment opportunities in agriculture have steadily decreased during the past decade. Exhibit XIV, following Exhibit XIII, presents the projections for Wyoming labor force between 1960 and 1970 and the percentage of change in employment in Wyoming between 1960 and 1970.

EXHIBIT XIII

WYOMING STATE DEPARTMENT OF EDUCATION

ENROLLMENTS BY MAJOR CATEGORY OF VOCATIONAL-TECHNICAL EDUCATION IN WYOMING SECONDARY SCHOOLS

1963-1964 - 1967-1968

Course	Students Enrolled by Year (full year) 1963-1964	1964-1965	1965-1966	1966-1967	1967-1968
Trade and Industry					
9th - 12th Grades	-	773	685	509	574
Vocational Agriculture					
9th - 12th Grades	1,599	1,717	1,725	1,765	1,876
Home Economics					
7th - 8th Grades	2,837	3,534	3,376	3,450	3,500
9th - 12th Grades	4,302	3,926	4,099	4,259	4,488
Total	7,139	7,460	7,475	7,709	7,988
Business and Office Practices					
9th - 12th Grades	-	-	13,831	13,489	13,206
Distributive Education					
9th - 12th Grades	-	-	410	594	627

Source: Vocational-Technical Division, State Department of Education - September 1968.

EXHIBIT XIV

WYOMING STATE DEPARTMENT OF EDUCATION

WYOMING
LABOR FORCE PROJECTION
1960-1970

Occupational Group	1960	1970	Percentage of Change
Professional and Technical	14,753	20,460	+39%
Farm and Farm Managers	9,495	7,900	-17
Managers, Officials, and Proprietors	13,051	15,570	+19
Clerical	14,844	17,435	+17
Sales Workers	7,224	9,145	+27
Craftsmen and Foremen	18,725	19,985	+ 7
Operatives	16,813	19,820	+18
Private Household Workers	3,180	4,300	+35
Service Workers	12,660	15,015	+19
Farm Laborers and Foremen	6,416	4,800	-25
Other Laborers	6,434	5,650	-12
All Others	3,484	7,220	+107
Total	127,079	147,300	+16

Source: Manpower Study, Wyoming Department of Labor and Statistics, prepared for Research Office, Adult Education Division, University of Wyoming

(3.2) Public School Vocational-Technical Programs Have Limited Articulation with Wyoming Community College Programs

There is little coordinated planning for vocational-technical education on the part of community colleges and public high schools, since both levels of education plan programs independently. The community colleges presume that high school courses are preparatory to the college courses. There is limited evidence that joint meetings, workshops, or conferences for both secondary school and community college teachers of vocational classes are held.

(3.3) Community Colleges Are Designated as Area Vocational Centers

The six operating community colleges, plus the planned seventh in Cheyenne, have been designated as area vocational schools by the State Board of Vocational Education, and all offer some vocational-technical education. However, only two, Casper College and Northwest Community College, truly provide a minimum of five programs.

Exhibit XV, following this page, lists the vocational courses offered by each of the community colleges, and Exhibit XVI, following Exhibit XV, illustrates the major vocational programs offered, by occupational category and by age group.

EXHIBIT XV

WYOMING STATE DEPARTMENT OF EDUCATION

VOCATIONAL COURSE OFFERINGS IN COMMUNITY COLLEGES

1967-1968

CASPER COLLEGE - Casper

Day school, regular curriculum

- Petroleum technology
- Industrial electronics
- Practical nursing
- Vocational drafting
- Clerk-stenography
- Data processing
- Automotive mechanics
- Auto body and fender repair

Evening school

- Machine shop
- Beginning welding
- Industrial welding
- Beginning electronics and basic electricity
- Basic electronics
- Blueprint reading
- Map drafting
- Television
- Transistor programs
- Beginning clothing
- Advanced clothing
- Beginning tailoring
- Interior decorating

Apprenticeship-related training

- Electricity
- Plumbing and fitting

Other short-term courses, clinics, and workshops

- Business administration management
- Advanced cosmetology
- Advanced drilling practices
- Wyoming State Fire School
- Certified professional secretarial training
- Hot line maintenance program for linemen in REA Cooperatives in Wyoming
- Job Safety instruction and training program for REA Cooperatives

CENTRAL WYOMING COLLEGE - Riverton

Day school, regular curriculum

- Radio broadcasting
- Stenography
- Agri-business
- Data processing
- Vocational drafting
- Business and accounting fundamentals

EASTERN WYOMING COLLEGE - Torrington

Day school, regular curriculum

- Secretarial science and business
- Distributive education

NORTHWEST COMMUNITY COLLEGE - Powell

Day school, regular curriculum

- Business
- Secretarial science
- Graphic arts
- Meat processing (second semester)

Evening school

- Computer science
- Basic adult education

In the planning stage

- Welding
- Data processing
- Computer training

SHERIDAN COLLEGE - Sheridan

Evening school

- Agricultural welding
- Adult home economics courses

Special short-term course, clinic, or workshop

- Advanced cosmetology

WESTERN WYOMING COMMUNITY COLLEGE - Rock Springs

Day school, regular curriculum

- Secretarial science
- Data processing

Evening school

- Electronics

In the planning stages for evening school

- Blueprint reading
- Welding
- Low-speed data processing

EXHIBIT XVI

WYOMING STATE DEPARTMENT OF EDUCATION

VOCATIONAL PROGRAMS IN WYOMING COMMUNITY COLLEGES BY OCCUPATIONAL CATEGORIES

1967

Occupational Categories	Casper College	Central Wyoming College	Eastern Wyoming College	Northwest Community College	Sheridan College	Western Wyoming Community College
Agriculture	Adult	Adult			Adult	
Distributive Education	Adult		Post-secondary			
Health Occupations	Post-secondary					
Home Economics	Adult					
Office Education			Post-secondary	Adult Post-secondary	Post-secondary	Adult Post-secondary
Technical Education	Adult Post-secondary	Post-secondary	Post-secondary	Post-secondary		Post-secondary
Trades and Industry	Adult Post-secondary	Adult Post-secondary		Post-secondary	Adult	Adult

(4) Special Education Programs and Services Are Very Limited

The scope of special education programs and services available to students in the state is limited. Five Area Mental Health Councils are presently functioning in the state. However, programs for exceptional children are extremely limited, especially in school districts with small enrollment.

In 1967-1968, 73 classes for exceptional children were conducted in 20 Wyoming districts. Sixty-three of these were for the educable mentally retarded, six for trainable mentally retarded, and four for emotionally disturbed children. Only three speech therapists were employed.

Six counties (Converse, Johnson, Lincoln, Niobrara, Platte, and Sublette) have no classes for exceptional children. Only a few children in these counties have been identified as needing special attention and some of these are being sent out of the state for training.

(5) Guidance Counseling Is Concentrated in the Secondary Schools and Is Oriented Primarily to Academic Students

Reviewing the current 1968-1969 directory of guidance personnel employed in Wyoming schools, 93 are assigned to secondary schools, 11 to elementary schools, 6 in institutional schools, and 13 as directors or hold other administrative positions. In 1967, of the 26 psychologists in

the state, 3 were listed as school psychologists and 23 as psychological technicians.

In the secondary schools, the counselor-student ratio is approximately 1 to 400. This ratio generally is considered to be inadequate. Moreover, it is reported that many counselors are excessively oriented toward the college preparatory student.

8. TWENTY-THREE PRIVATE SCHOOLS PROVIDE PAROCHIAL EDUCATION IN WYOMING

In 1967-1968, approximately 4% of the youth of Wyoming age 5 through 17, were being educated in parochial schools. There is one secondary school - St. Mary's High School in Cheyenne; the other 22 are elementary schools. Of these, 8 are Seventh Day Adventist schools, 3 are Lutheran, and the remainder Catholic.

Parochial schools in the state are not under the governance of the State Department of Education. Reportedly, programs are traditional in scope and the curriculum limited to basic subjects and religious education. Some changes are being introduced in some private schools, as the result of grants of federal funds for education. St. Mary's High School has made use of instructional materials in the media center of the State Department of Education. In-service classes and workshops conducted by the Cheyenne Public Schools for its teachers are now also available to the parochial school teachers in the area.

Although supportive services and instructional materials are available to the parochial schools through various Title funds, many of the schools are not aware of their availability. However, public school teachers reportedly have visited St. Mary's High School on a number of occasions to observe demonstrations of foreign language instruction. There is a great need for expanding science laboratories and the use of modern mathematics methods and material in the parochial schools.

Reportedly, only limited extracurricular activities are available to students in most parochial schools. In addition, counseling and guidance services are quite restricted in most of these schools, although some of the pupils have utilized the services of the area mental health centers.

More lay teachers are being employed in the Catholic schools, replacing sisters. Wyoming parochial schools reportedly experience greater difficulty each year in employing and retaining qualified teachers who will work for salaries which are lower than those paid in the public schools.

9. A NUMBER OF FACTORS CAN BE USED FOR ASSESSING PUBLIC EDUCATION IN WYOMING

A number of factors, considered together, reflect to some degree the needs and effectiveness of Wyoming's school system. This portion of the chapter presents various indicators which, taken as a whole, provide general guidelines for assessing education in the state.

(1) The Dropout Rate in Wyoming Schools Is Substantial

Wyoming schools have a significant dropout problem, as indicated by data summarized by the research and statistics division of the State Department of Education for the three-year period 1965-1966 through 1967-1968. More than 12% of the pupils enrolled in grade ten in 1965-1966 left high school prior to graduation.

Earlier data, compiled by the National Education Association, show a substantially higher dropout rate for Wyoming during the four years of high school. Exhibit XVII, following this page, ranks the holding power of the public schools in Wyoming with that of the schools in ten selected western states. These data indicate that the dropout rate in Wyoming schools was considerably higher during the periods covered than in most other western states.

EXHIBIT XVII

WYOMING STATE DEPARTMENT OF EDUCATION

HOLDING POWER OF THE PUBLIC SCHOOLS IN TEN SELECTED WESTERN STATES

1962-1963-1965-1966

State	Four Years of High School Ending		
	1962-1963	1964-1965	1965-1966
Nebraska	84.8%	81.9%	84.8%
South Dakota	82.4	81.3	85.6
Utah	78.3	80.9	83.6
Colorado	75.2	78.2	84.2
Idaho	74.8	79.6	79.9
Montana	73.8	84.3	76.4
United States Average	72.7	74.9	77.3
Wyoming	72.0	74.7	79.4
Arizona	N. A.	68.1	67.5
New Mexico	N. A.	66.9	N. A.
Nevada	N. A.	77.0	81.1

Source: National Education Association

(2) Academic Achievement of Selected Wyoming High School Graduates Compares Favorably with National Results on Standardized Tests and Evaluations

One indication of scholastic achievement by Wyoming high school graduates is the scores attained in the American College Test, which is taken by students throughout the nation. Of the 1967 class of approximately 5,100 seniors, 3,100 or about 60% of eligible Wyoming youth took the ACT. Nationally, in 1967, more than 800,000 or about 36% of the approximately 2.3 million eligible high school students took the ACT examination. However, without knowledge of profiles of both Wyoming pupils and students nationally who took the ACT test, no interpretation should be made of the effect on average test scores of the higher percentage Wyoming pupils who took the test.

- Scores represent composite results of tests in English, mathematics, social studies and science:

Percentage of Students Scoring Above the Mean

Wyoming boys	58%
Wyoming girls	48
Nationally	49

- High school grades earned by pupils in subjects noted were compared, with the following results:

Percentage of Students Earning Grades Above the Mean

Wyoming boys	55%
Wyoming girls	69
Nationally	59

In the areas of art, writing, music, and dramatic arts, more Wyoming graduates had low achievement than did the national sample. However, in the areas of science and leadership, scores of Wyoming graduates were similar to those of students in the national sample.

(3) Results of Army Pre-induction Mental Tests Indicate That Wyoming Inductees Compare Favorably with the United States Average, but Not with Results in Ten Selected Western States

Traditionally, the results of army pre-induction mental tests have been used as indicators of the quality of the educational program of the states. Exhibit XVIII, following this page, compares percentages of inductees failing the examination in ten selected states.

In assessing the results, the following factors should be considered:

- The tests are administered to young men who are not necessarily educated in the state from which they are inducted.
- The sharp decrease in failures from 1965 to 1966 is largely due to the lowering of standards to provide a greater number of men for the needs in Viet Nam.

In 1966, 3.9% of Wyoming boys failed the Army pre-induction mental tests compared with an average failure of 10.9% for the entire United States. Wyoming ranked third lowest in failures in ten selected western states, behind only Montana and Utah.

EXHIBIT XVIII

WYOMING STATE DEPARTMENT OF EDUCATION

PERCENTAGE OF DRAFTEES FROM SELECTED STATES FAILING ARMY PREINDUCTION MENTAL TESTS

1965 and 1966

State	Percentage Failing Mental Requirements	
	1966	1965
Montana	3.1%	5.7%
Utah	3.4	6.0
Wyoming	3.9	8.5
Nebraska	3.9	8.2
South Dakota	4.9	8.1
Idaho	5.2	7.2
Colorado	7.1	12.6
Nevada	7.1	12.8
New Mexico	8.1	22.2
Arizona	9.0	18.0
U. S. Average	10.9	18.6

Source: United States Army

(4) Teachers in Wyoming Have Extensive Experience

Background characteristics of professional personnel in Wyoming schools indicate that they have had considerable experience, with much of it in their present positions.

According to 1967-1968 data, the average teaching experience of all elementary teachers in the state is 13 years in total and 7.3 years within the local district. Fourteen per cent of the elementary school teachers are graduates of the University of Wyoming.

The average teaching experience of all secondary teachers in the state is 8 years in total, with 5.4 years in the local district. Thirty-nine per cent of the secondary school teachers are graduates of the University of Wyoming.

(5) School Administrators in Wyoming Have Long Years of Experience, and a Significant Number of Them Have Been Trained at the University of Wyoming

The average experience of Wyoming school superintendents is 19.9 years in total and 8.7 years in their present positions. Forty-nine per cent of the superintendents are graduates of the University of Wyoming.

Current mobility data are not available; however, comparison of information on administrative turnover during the period 1947 through 1956 with 1967-1968 figures indicates that districts have increased their holding power.

	Average Length of Tenure of Wyoming District Superintendents of Schools		Average Length of Tenure of Superintendents of Schools of 12 Selected Western States	
	1947-1956	1967-1968	1947-1956	1967-1968
Years in Present Position, Present District	3.2	8.7	6	6.2

As expected, the greatest turnover of superintendents in Wyoming occurs in the smaller districts.

The average experience of Wyoming secondary school principals is 15.5 years in total and 9.4 years in their present positions. Sixty-three per cent are University of Wyoming graduates. Wyoming elementary principals average 19.4 years' total experience and 12.5 years in their present positions. Fifty-one per cent are graduates of the University of Wyoming.

The quality of administrative leaders in districts throughout the state is judged to range from a number of outstanding administrators to those who make minimal contributions to educational improvement.

(6) Professional Personnel of Wyoming Schools Maintain a High Level of Certification

Processing all applications for certification of professional personnel is the responsibility of the department of certification, placement, and teacher education in the State Department of Education. During the 1967-1968 school year, 2,570 certificates were issued.

Certification regulations require that all first-year, fully trained teachers and administrators be issued an initial certificate, which is valid for three years and is nonrenewable. Upon satisfactory completion of the three years of service in Wyoming schools, the teacher is issued a standard certificate, which is valid for five years and is renewable upon application to the department of certification and verification of five units of advanced work earned in an accredited college or university.

In 1964, 93.7% of Wyoming elementary and secondary teachers were fully certificated professionally, that is, they held initial, standard, professional, or life certificates. During the 1967-1968 school year, 94.8% of all professionals employed were certificated. Exhibit XIX, following this page, summarizes the percentage of certificates held by teachers, by size of district. Although only 5.2% of the certificates held are considered substandard, this represents more than 220 teachers.

EXHIBIT XIX

WYOMING STATE DEPARTMENT OF EDUCATION

TYPES OF TEACHER CERTIFICATION BY SIZE OF DISTRICT WYOMING PUBLIC ELEMENTARY AND SECONDARY SCHOOLS

1967-1968

	Standard	Initial	Professional	Life	Substitute	Limited Service	Total
Macro							
Number	1,025	454	217	148	3	50	1,897
Per Cent	54.00	23.96	11.44	7.80	.20	2.60	100
Large							
Number	711	318	81	97	6	50	1,263
Per Cent	56.20	25.10	6.40	7.70	.60	4.00	100
Medium							
Number	382	240	47	33	6	49	757
Per Cent	50.40	31.70	6.20	4.40	.80	6.50	100
Small							
Number	120	81	6	12	4	14	237
Per Cent	50.60	34.20	2.50	5.10	1.70	5.90	100
Micro							
Number	76	29	1	9	12	29	156
Per Cent	48.76	18.60	.60	5.80	7.70	18.00	100
Total							
Number	2,314	1,122	352	299	31	192	4,310
Per Cent	53.70	26.00	8.20	6.90	.70	4.50	100

Source: Wyoming State Department of Education

The greatest percentage of these teachers are in school districts of fewer than 50 pupils, where 26% taught with substitute or limited service certificates.

Endorsements are placed on the certificate to indicate the area or areas of instruction in which the teacher is qualified by virtue of training. A significant point to note is that during 1967-1968, 250 teachers were teaching subjects for which they did not have endorsement and 13 administrators were not endorsed as administrators. Exhibit XX, following this page, summarizes the number of teachers whose teaching assignments were not consistent with their endorsements.

In 1953-1954, only 47% of the elementary school teachers in Wyoming held four-year degrees. Ten years later, 94% held such degrees. In 1967-1968, 92% of all elementary school teachers and 86. 8% of all rural teachers held four-year degrees, and 7% of all elementary school teachers held a master's degree. In 1967-1968, 75% of Wyoming's secondary school teachers held bachelor's degrees and 25% held master's degrees.

Although the department of certification is responsible for issuing certificates, it is the department of evaluation and accreditation that determines whether teachers are properly endorsed to teach courses to which they are assigned.

EXHIBIT XX

WYOMING STATE DEPARTMENT OF EDUCATION

NUMBER OF TEACHERS TEACHING COURSES OUTSIDE ENDORSED SUBJECT AREA

1967-1968

Size of District	Partial Endorsement	Lack of Endorsement	Total Teachers	Per Cent Teaching Outside Endorsed Subject Area
Macro				
2,500 or More Pupils	37	19	1,897	3.0%
Large				
500-2,499 Pupils	67	12	1,263	6.3
Medium				
150-499 Pupils	81	9	757	11.9
Small				
50-149 Pupils	31	4	237	14.8
Micro				
Fewer than 49 Pupils	3	-	156	1.9
Total	219	44		

Source: State Department of Education

The standards for state department accreditation specify the intent of teacher certification and the extent of deviation from assignments that is permitted if a teacher is to remain qualified for accreditation. The standards of the State Department of Education in this matter are higher than the accreditation standards of the North Central Association of Colleges and Secondary Schools, and this makes for some degree of inconsistency among schools.

(7) The Average Salary of Wyoming Teachers Compares Favorably with That in Immediately Neighboring States, but Not with Five Other Western States

It is increasingly difficult for Wyoming public schools to attract teachers in competition with other states in the region and those on the West Coast. One significant factor may be salary differences. Exhibit XXI, following this page, shows comparative average salaries for 13 selected western states and the United States average.

More important than the state-wide average teacher salary are wide variations in teacher compensation throughout the state. For those who held a B. A. degree, teachers' pay in September 1968 ranged from beginning salaries of $5,000 to $6,250 to maximums of $6,600 to $9,765. The time required to reach the maximum salaries ranges from three to seventeen years of service among the districts.

EXHIBIT XXI

WYOMING STATE DEPARTMENT OF EDUCATION

COMPARATIVE AVERAGE SALARIES OF ALL TEACHERS IN PUBLIC SCHOOLS OF SELECTED STATES

1967-1968

State	National Rank	Average Salary
California	1	$8,900
Nevada	8	7,825
Washington	10	7,750
Arizona	13	7,610
Oregon	14	7,550
U.S. Average		7,296
Wyoming	25	7,052
New Mexico	26	6,981
Colorado	27	6,900
Utah	28	6,640
Montana	34	6,375
Nebraska	40	6,068
Idaho	41	6,045
South Dakota	49	5,100

Source: National Education Association

(8) Finding Well-Qualified Teachers To Replace Those Who Resign and Retire and Those Whose Contracts Are Not Renewed Is a Major Task and Is Becoming Increasingly Difficult

Wyoming has to recruit 400 to 500 teachers each year. The majority must come from outside the state, since the University of Wyoming provides only about one-third of the teachers needed to fill annual vacancies.

During the opening week of school in September 1967, 80 unfilled teaching positions were known to the Wyoming State Department of Education placement office and 88 during the opening week in September 1968.

The teacher turnover rate varies according to the size of the community and the school. It is particularly difficult to attract high-quality teachers in the smaller rural districts. The largest percentage of resignations and discharges occur in such districts. Turnover in districts having fewer than 50 pupils was 27%. Exhibit XXII, following this page, summarizes the number of resignations and discharges in Wyoming during 1967-1968 by size of school district.

EXHIBIT XXII

WYOMING STATE DEPARTMENT OF EDUCATION

ELEMENTARY AND SECONDARY SCHOOL TEACHER RESIGNATIONS AND DISCHARGES BY SIZE OF DISTRICT

1967-1968

Size of District	Number of Districts Reporting	Teachers	
		Total Number	Per Cent Resigned or Discharged
Macro			
2,500 or More Pupils	7	1,928	7.9%
Large			
500-2,499 Pupils	21	1,288	14.1
Medium			
150-499 Pupils	35	850	15.4
Small			
50-149 Pupils	22	226	26.0
Micro			
Fewer than 50 Pupils	43	111	27.7
Average			12.6%

Source: Wyoming State Department of Education

10. AVAILABLE DATA ON WYOMING SCHOOL FACILITIES ARE LIMITED

Little information on school facilities throughout the state is available. Although none has been collected in connection with the school evaluation program, complete data on the size, condition, or utilization of Wyoming's school facilities are not accumulated centrally.

The only state-wide survey of school facilities to be made since 1962 is presently under way as the basis of a doctoral dissertation for the University of Wyoming. Unfortunately, this study is limited to secondary schools, but upon completion, it should partially fill a significant gap in information on Wyoming school facilities.

A few schools in the state have been designed to meet modern educational specifications. The new Byron High School and the new Northwest Community College in Powell are two examples.

11. CITIZENS OF WYOMING COMMIT A RELATIVELY LARGE AMOUNT OF MONEY TO PUBLIC SCHOOLS

(1) Wyoming's per Capita Support of Elementary and Secondary Education Is High

Traditionally, school programs have been well supported by the citizens of Wyoming. In 1965-1966, elementary and secondary school expenditures in Wyoming represented the equivalent of $172

for every man, woman, and child in the state. The average school expenditure for the nation as a whole in that year was $128 per capita. Exhibit XXIII, following this page, lists per capita expenditures for Wyoming and selected states for 1965-1966.

In 1967-1968, Wyoming ranked sixth among the states in expenditure per student in average daily membership (ADM) for education, with $642 compared to the U. S. average of $581. Exhibit XXIV, following Exhibit XXIII, ranks Wyoming and nine selected western states on expenditure per ADM.

State-wide per pupil expenditures in ADM increased 25. 6% from 1963 to 1967. The average increase for the four states - Colorado, Montana, Utah, and Wyoming - was 28. 8%, and for the nation during the same period, it was 34. 5%. Between 1966-1967 and 1967-1968 expenditures for public schools increased 6% nationally and 8% in the state.

In 1963-1964, the most current date of national rankings, Wyoming ranked first among the 50 states in per-pupil cost of transportation. The increase since 1963-1964 has been slight - from $106 to $109.

EXHIBIT XXIII

WYOMING STATE DEPARTMENT OF EDUCATION

PER CAPITA STATE AND LOCAL EXPENDITURES FOR STATE AND LOCAL SCHOOLS IN SELECTED STATES

1965-1966

State	National Rank	Per Capita Expenditure
Wyoming	1	$172
Nevada	2	170
Utah	4	166
Colorado	6	160
New Mexico	7	157
Arizona	18	138
Montana	19	136
South Dakota	20	135
U. S. Average		128
Nebraska	29	118
Idaho	31	116

Source: National Education Association

EXHIBIT XXIV

WYOMING STATE DEPARTMENT OF EDUCATION

PUBLIC SCHOOL EXPENDITURES PER PUPIL IN AVERAGE DAILY MEMBERSHIP TEN WESTERN STATES AND UNITED STATES AVERAGE

1967-1968

State	Annual Expenditure per Pupil in ADM
Wyoming	$642
Montana	641
Nevada	600
United States Average	581
Colorado	545
South Dakota	521
New Mexico	520
Utah	489
Arizona	486
Nebraska	472
Idaho	Not available

Source: National Education Association

In terms of public school expenditures as a percentage of personal income, Wyoming also ranks high. In 1966-1967, Wyoming spent the equivalent of 6. 1% of personal income for its public elementary and secondary schools. This was fifth highest in the nation, and considerably above the national average of 4. 7%. These comparisons are shown in Exhibit XXV, following this page.

(2) Annual Expenditures for Education in Wyoming Have More than Doubled over the Past Ten Years

Total expenditures for elementary and secondary education in Wyoming more than doubled between 1957-1958 and 1967-1968, increasing from $28 million to nearly $57 million. On a per-capita basis, elementary and secondary school costs increased from $87 in 1957-1958 to $180 in 1967-1968.

(3) There Are Wide Variations in the Financial Capabilities of the School Districts

Extremely wide variations exist in assessed valuation from district to district and county to county. Overall, state school property has an assessed valuation of $1. 18 billion in 1968-1969. The enrollment of public elementary and secondary pupils is approximately 86, 000. Consequently, every pupil could be supported by a property tax base of $13, 732 if the valuation were equally distributed throughout the state.

EXHIBIT XXV

WYOMING STATE DEPARTMENT OF EDUCATION

PERCENTAGE OF PERSONAL INCOME EXPENDED FOR PUBLIC SCHOOLS RANKING OF SELECTED STATES

1966-1967

State	Percentage	National Rank
New Mexico	7.0%	1
Utah	6.6	2
Montana	6.3	4
Wyoming	6.1	5
Colorado	5.8	7
Arizona	5.7	9
South Dakota	5.6	11
Idaho	5.1	19
Nevada	5.0	23
U.S. Average	4.7	-
Nebraska	3.7	47

Source: National Education Association

At present, the assessed valuation per pupil varies from the low of $3,390 in District 14 in Fremont County to a high of $908,000 in District 13 in Natrona County. Exhibit XXVI, following this page, lists, by size of school district, the range of assessed valuation per pupil in average daily membership. On the average, assessed valuation varies inversely with the size of the district. The smallest average assessed valuation of the categories of school districts shown in Exhibit XXVI is $11,080 per pupil in ADM for the seven districts with 2,500 or more pupils. Average assessed valuations increase successively for each group of larger districts to $137,500 per pupil in ADM for the 80 districts with fewer than 50 pupils.

(4) Historically, Wyoming Education Has Been Supported Primarily by Local Tax Sources

Exhibit XXVII, following Exhibit XXVI, shows the trend of public elementary and secondary school revenues by major source from 1955-1956 to 1967-1968. Prior to 1955 and again in recent years, most elementary and secondary school revenues have come from local property taxes. In 1955, approximately 48% of the $25 million total revenue was generated by district and county taxes. In 1967-1968, this percentage of local tax support had increased to 56% of the total.

EXHIBIT XXVI

WYOMING STATE DEPARTMENT OF EDUCATION

RANGE OF ASSESSED VALUATION PER PUPIL IN AVERAGE DAILY MEMBERSHIP BY SIZE OF DISTRICT

1967-1968

District Category	Number Reporting	Average Daily Membership	Assessed Valuation per Pupil in Average Daily Membership		
			Minimum	Average	Maximum
Macro					
2,500 or More Pupils	7	40,611	$5,620	$ 11,080	$ 35,624
Large					
500 to 2,499 Pupils	24	28,303	3,772	18,100	74,889
Medium					
150 to 499 Pupils	38	11,743	3,390	32,800	146,200
Small					
50 to 149 Pupils	29	2,852	7,597	47,300	247,700
Micro					
Fewer than 50 Pupils	80	1,330	9,151	137,500	908,600

Source: Wyoming State Department of Education

EXHIBIT XXVII

WYOMING STATE DEPARTMENT OF EDUCATION

DISTRIBUTION OF WYOMING PUBLIC ELEMENTARY AND SECONDARY SCHOOL REVENUE BY SOURCE

1955-1956 - 1967-1968

Year	Total Revenue (Millions)	Revenue by Source ($ Millions) and Per Cent to Total									
		District		County		State		Federal		Other	
1955-1956	$25.0	$10.7	42.8%	$1.4	5.6%	$12.2	48.8%	$0.2	0.8%	$0.5	2.0%
1956-1957	25.7	11.6	45.1	1.5	5.8	11.8	45.9	0.3	1.2	0.5	2.0
1957-1958	27.6	12.9	46.7	1.5	5.4	12.5	45.3	0.4	1.5	0.3	1.1
1958-1959	29.0	14.1	48.6	1.5	5.2	12.4	42.7	0.4	1.4	0.6	2.1
1959-1960	35.6	15.6	43.8	1.6	4.5	16.7	46.9	0.7	2.0	1.0	2.8
1960-1961	37.2	17.6	47.3	1.7	4.6	16.6	44.6	0.7	1.9	0.6	1.6
1961-1962	38.3	18.3	47.8	1.7	4.4	16.6	43.3	0.9	2.4	0.8	2.1
1962-1963	41.6	21.7	52.2	1.7	4.1	16.7	40.1	1.0	2.4	0.5	1.2
1963-1964	44.5	22.8	51.2	1.8	4.1	18.3	41.1	1.1	2.5	0.5	1.1
1964-1965	46.6	22.8	48.9	3.8	8.2	18.6	39.9	1.4	3.0	-	-
1965-1966	51.2	24.8	48.5	4.0	7.8	20.9	40.8	1.5	2.9	-	-
1966-1967	54.3	25.9	47.7	4.1	7.6	20.1	37.0	4.2	7.7	-	-
1967-1968	58.5	15.4	26.3	17.7	30.3	21.7	37.1	3.7	6.3	-	-

Source: Wyoming State Department of Education

It was not until 1955 that the basic structure of the present state foundation financial program was established. In its first full year of operation, the Foundation fund provided $9.9 million. Such revenues have since grown substantially, and reached $16.8 million in fiscal year 1967-1968. The state also distributes land income funds to the school districts on the basis of the school census. This income source has increased from $2.2 million in 1958-1959 to $4.7 million in 1967-1968. As indicated in Exhibit XXVII, over the last ten years, the state revenue sources have provided between 37% and 47% of the total school revenue requirements. The percentage dropped off to 37.0% and 37.1% in 1966-1967 and 1967-1968, respectively.

Federal aid has only recently begun to be a significant source of Wyoming public school revenue. In 1967-1968, it represented approximately 6.3% of total elementary and secondary school revenues, but as recently as 1965-1966, it amounted to less than 3% of the total.

(5) There Are Wide Variations in the Sources of Revenue Available to Various Local School Districts

Extreme variations exist among Wyoming school districts in the relative amounts of revenue received from district, county, state and federal sources. The extremes of support received, by level of government, are identified by school district in Exhibit XXVIII, following this page.

(6) Districts Throughout the State Are Having Difficulty Financing Desired Educational Programs

The number of school districts in Wyoming levying the maximum mill rate under existing statutory limitations increased from 30 in 1967-1968 to 46 in 1968-1969. This represents 36% of the total number of districts. These schools enroll more than 57,000 students. It is likely that additional districts will reach this limit during the 1969-1970 school year unless legislative changes are made in the Foundation program during the 1969 session. Exhibit XXIX, following this page, lists the number of districts presently at the maximum mill levy by type of district.

Between 1966 and 1967, school operating taxes in Wyoming increased by 15.9%, while assessed valuation increased 0.2%. During the same period, there was no significant change in enrollment. Many school districts find it difficult to finance current programs and, with rising operating costs and relatively static assessed valuations, these financial problems will increase.

EXHIBIT XXVIII

WYOMING STATE DEPARTMENT OF EDUCATION

TYPICAL VARIATIONS IN REVENUE SOURCES IN SELECTED SCHOOL DISTRICTS

1967 - 1968

	HIGH PERCENTAGE			LOW PERCENTAGE			
DISTRICT FUNDS							
Big Horn	#63	-	60.00%	Big Horn	#65	-	12.00%
Campbell	# 5	-	53.00	Campbell	# 4	-	0.26
Carbon	#24	-	60.00	Campbell	#12	-	0.84
Crook	#18	-	57.00	Carbon	#22	-	1.45
				Crook	# 8	-	0.48
COUNTY FUNDS							
Big Horn	#19	-	34.00%	Campbell	# 5	-	13.00%
Campbell	#12	-	64.00				
Campbell	# 7	-	49.00				
Converse	# 6 and #14	-	65.00				
Converse	#22	-	82.00				
STATE FUNDS							
Fremont	#40	-	53.00%	Fremont	#38	-	9.60%
Big Horn	#65	-	56.00	Converse	#15	-	6.50
Campbell	#10	-	63.00				
Carbon	# 2	-	59.00				
Crook	#11	-	59.00				
FEDERAL FUNDS							
Fremont	#38	-	61.00	Fremont	#40	-	0%
				Big Horn	#65	-	0
				Campbell	# 7	-	0
				Converse	#22	-	0

Source: Wyoming State Department of Education

EXHIBIT XXIX
Wyoming State Department of Education
NUMBER OF WYOMING SCHOOL DISTRICTS
AT MAXIMUM TAX LEVY
1968-1969

County	Number of Districts at Maximum Levy			
	Elementary	High School	Unified	Total
Albany	-	-	1	1
Big Horn	5	3	1	9
Campbell	-	-	-	-
Carbon	-	-	2	2
Converse	-	-	-	-
Crook	1	1	-	2
Fremont	2	1	4	7
Goshen	1	-	2	3
Hot Springs	1	-	-	1
Johnson	-	-	-	-
Laramie	-	-	2	2
Lincoln	-	-	1	1
Natrona	3	1	-	4
Niobrara	-	-	-	-
Park	-	-	-	-
Platte	-	-	2	2
Sheridan	1	-	2	3
Sublette	-	-	1	1
Sweetwater	1	-	2	3
Teton	3	1	-	4
Uinta	-	-	-	-
Washakie	-	-	1	1
Weston	-	-	-	-
Total	18	7	21	46

Source: Wyoming Taxpayers Association

12. FUTURE SCHOOL SYSTEM COSTS WILL ACCELERATE MUCH MORE RAPIDLY THAN OTHER GROWTH FACTORS

Compared with other western states, Wyoming's population increase has been unspectacular. Between 1920 and 1960, the population increased slowly but steadily, as tabulated below.

Year	Wyoming Population	Ten-Year Percentage Increase
1910	146,000	
1920	194,000	32.8%
1930	226,000	16.5
1940	251,000	11.1
1950	291,000	16.0
1960	330,000	13.4

In 1964, Bureau of the Census estimates showed a total Wyoming population of 338,000 residents. Since that time, there has been a decline and in July 1968, the census estimate was 315,000 people. This decline is attributed primarily to an exodus of military personnel following completion of certain missile sites. This declining population trend has adversely affected the total economy of the state and is reflected in economic indexes and property values, as well as in school enrollments.

While Wyoming's per capita income is above that of most neighboring states, it has been growing at a slower rate than the average for the nation. In 1950, the figure for Wyoming was $1,669 compared to the United States average of $1,496. In 1967, the estimated Wyoming income was $3,002

compared to a U. S. average of $3,159. These represent increases since 1950 of 80% and 112%, respectively. The rate of per capita income increase in Wyoming has averaged approximately 4% per year.

The annual rate of growth in assessed valuation of Wyoming property has decreased sharply in the last few years, as indicated by the following tabulation.

Year	Total Assessed Valuation (Millions)	Percentage Increase Over Prior Year
1954	$ 728	
1955	768	5.5%
1956	801	4.3
1957	830	3.6
1958	881	6.1
1959	916	4.0
1960	964	5.2
1961	1,010	4.8
1962	1,046	3.6
1963	1,090	4.2
1964	1,123	3.0
1965	1,149	2.3
1966	1,168	1.7
1967	1,171	0.3
1968	1,181	0.9

Wyoming business leaders anticipate that favorable new mining and industrial developments will improve economic conditions. The state has vast reserves of coal, oil shale, uranium, trona, and other valuable materials, and it is expected that mining of such materials will be expanded substantially. New oil discoveries in several areas are considered particularly promising for the state's economy. Conditions

are favorable for the growth of light industry, particularly in the southeastern corner of the state. There also should be a continuing expansion of tourism.

Growth in these business sectors probably will not involve large numbers of people; however, it should contribute substantially to increased tax revenues. Consequently, it is anticipated that the recent outmigration will be reversed and that, by 1970, Wyoming's population and economic growth will be resumed. The extent of this forecast growth and its impact on the elementary and secondary school system is examined in the next three sections.

(1) The Total Population of the State Will Increase

At present, the Wyoming birth rate is approximately 17. 5 per 1, 000 and the death rate is about 8. 2 per 1, 000. It is projected that the decline in the birth rate will level off at about 16. 2 in 1971 and then will rise to approximately 20. 0 per 1, 000 in 1980. During the same period, the death rate is expected to decline gradually to 8. 1 per 1, 000 in 1980. The trend in in- and outmigration, which has been heavily outbound during the past four years, is expected to reverse by 1970-1972, reaching an inbound figure of about 1, 000 people per year in the early 1980's. Thus, the presently declining birth rate may offset some of the population growth projected for the early 1970's, but this will not affect the

long-term trend. The projections further reflect the assumption that holding power of Wyoming schools will be increased in the near term.

On the basis of the foregoing assumptions, the Wyoming population is estimated to approximate 335,000 in 1975, 352,000 in 1980, and 385,000 in 1985. This is a conservative projection. Other estimates, including those of the Bureau of the Census, range from 366,000 to 392,000 for 1980 and from 389,000 to 430,000 by 1985. These ranges are shown in Exhibit XXX, following this page.

(2) Public Elementary and Secondary School Enrollments Will Parallel Increases in Total State Population

Between 1964-1965 and 1967-1968, enrollment in Wyoming public schools dropped from 87,500 to 85,566 pupils. This reduction roughly parallels the population decline. The trend in enrollment from 1959 to 1968 is shown in Exhibit XXXI, following Exhibit XXX.

However, the ratio of pupil enrollment to population has increased steadily from 20.6% in 1950 to 27.3% in 1968, as shown in the following tabulation:

	Wyoming Enrollment - Population Ratio		
Year	Enrollment	Population	Per Cent of Enrollment
1950-1951	60,000	290,000	20.6%
1960-1961	79,400	330,000	24.1
1966-1967	85,700	319,000	26.8
1967-1968	85,600	315,000	27.2
1968-1969	86,000	315,000	27.3

EXHIBIT XXX

WYOMING STATE DEPARTMENT OF EDUCATION

PROJECTED STATE POPULATION 1968-1985

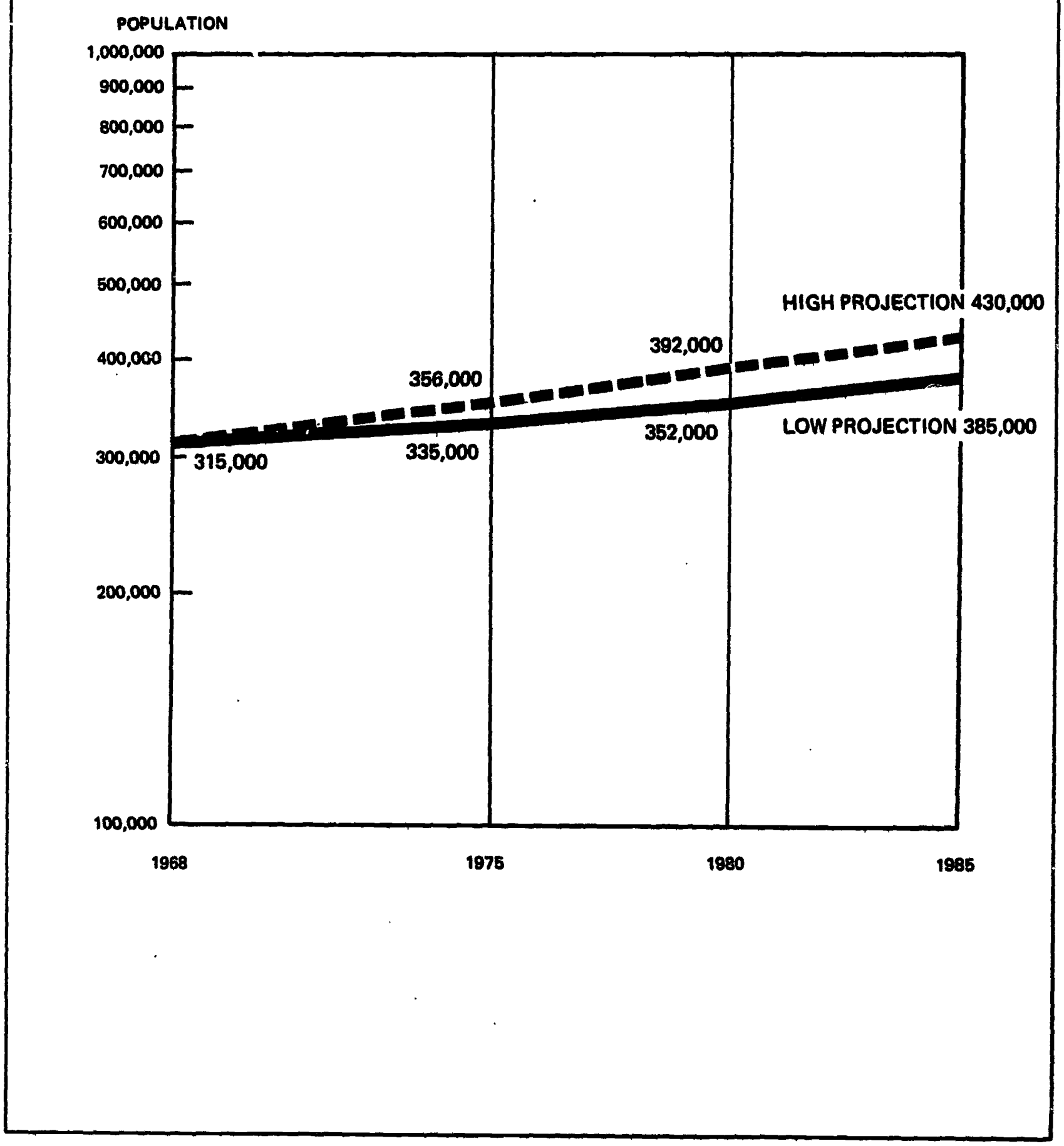


EXHIBIT XXXI

WYOMING STATE DEPARTMENT OF EDUCATION

ENROLLMENT TRENDS IN WYOMING PUBLIC ELEMENTARY AND SECONDARY SCHOOLS

1959-1960 - 1968-1969

Year	High School		Elementary	Special	Total
	Senior	Junior	(000)		
1959-1960	19.0	8.1	49.1	-	76.2
1960-1961	18.4	11.4	49.5	-	79.3
1961-1962	17.8	13.6	50.3	-	81.7
1962-1963	21.4	12.7	48.9	-	83.0
1963-1964	23.2	13.3	49.7	-	86.2
1964-1965	21.4	15.0	51.1	-	87.5
1965-1966	21.1	15.3	49.6	.3	86.3
1966-1967	21.3	15.5	48.5	.3	85.6
1967-1968	21.6	15.6	47.8	.5	85.5
1968-1969	22.4	16.1	47.0	.3	85.8

Source: Wyoming State Department of Education

Assuming this ratio will continue to increase slowly and reach 30. 0% by 1980, the projected ranges of enrollment in the Wyoming elementary and secondary schools are as follows:

1975 - 97, 000 to 103, 000
1980 - 107, 000 to 118, 000
1985 - 116, 000 to 129, 000

These projections are charted in Exhibit XXXII, following this page. The lower and upper trend lines are based on the population estimates described. The lower projection represents a 13% increase over present enrollment by 1975, a 24% increase by 1980, and a 35% increase by 1985.

(3) The Total Number of Teachers Will Increase Substantially Through 1985 Unless Professional Personnel Can Be Utilized More Effectively

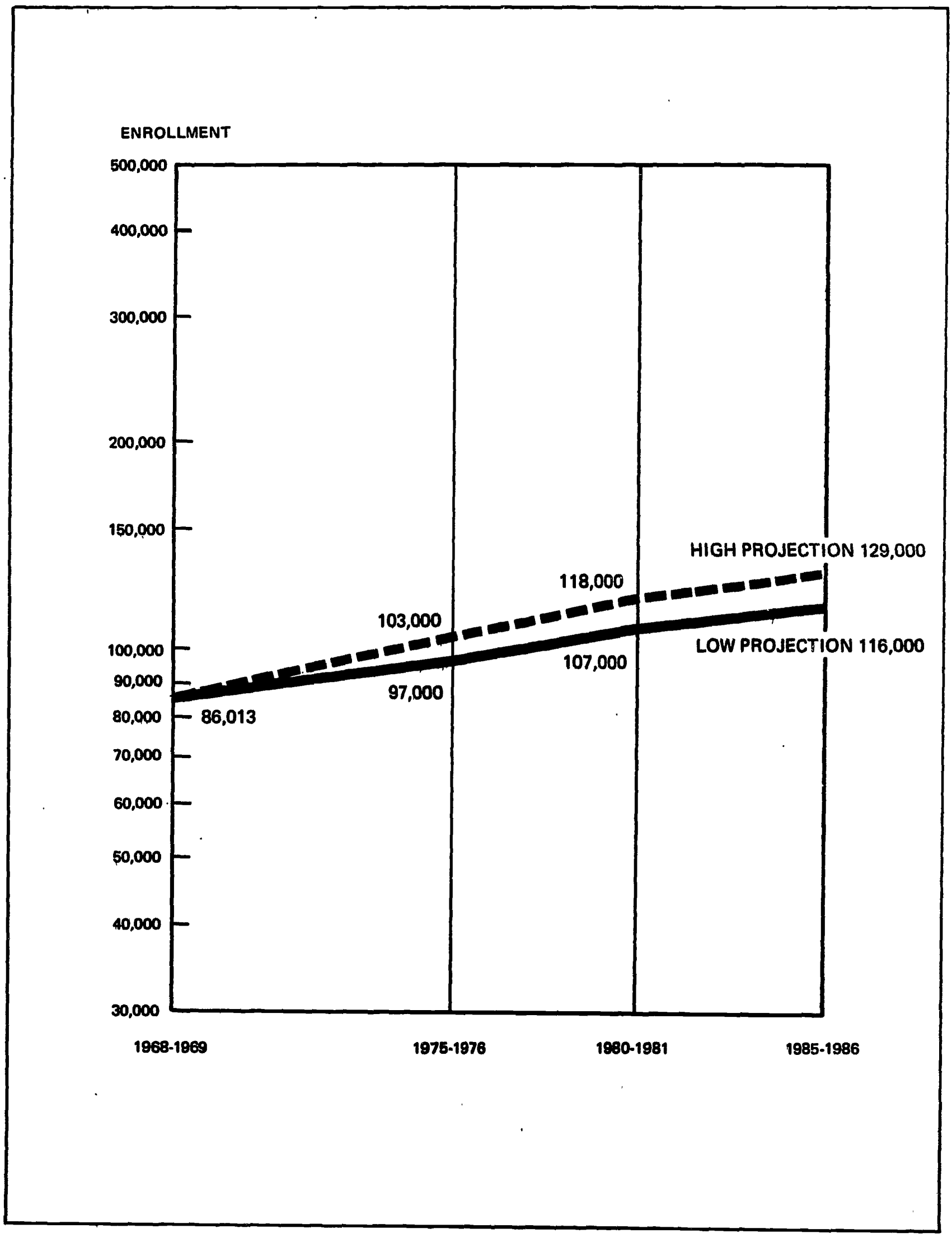
The number of elementary and secondary school teachers required to staff Wyoming's schools will depend upon the pupil-teacher ratio. If the present ratio of 19. 4 to 1 is maintained, the projected teaching staff requirements approximate the following:

Year	Number of Elementary and Secondary School Teachers
1967-1968	4, 339
1968-1969	4, 351
1975-1976	5, 000 to 5, 300
1980-1981	5, 510 to 6, 180
1985-1986	5, 950 to 6, 650

EXHIBIT XXXII

WYOMING STATE DEPARTMENT OF EDUCATION

PROJECTED ENROLLMENT
1968-1969–1985-1986



If, however, the pupil-teacher ratio is increased to an average of 23 to 1 by 1975 and to the national average of 25 to 1 by 1980, teaching staff requirements would be as follows:

Year	Pupil-Teacher Ratio	Number of Elementary and Secondary School Teachers
1975-1976	23:1	4, 220 to 4, 480
1980-1981	25:1	4, 280 to 4, 720
1985-1986	25:1	4, 640 to 5, 160

These projections are charted in Exhibit XXXIII, following this page.

(4) Additional Classrooms To Accommodate Increased Enrollments Will Require a Significant Cumulative Investment

As previously indicated, no conclusive evidence is available regarding the utilization and adequacy of present classroom facilities. If it is assumed that present facilities are operating close to capacity, additional school space requirements can be calculated roughly on the basis of the forecasted increase in enrollment.

Exhibit XXXIV, following Exhibit XXXIII, shows the projected range of capital investment required to meet the school space needs for the periods 1968-1975, 1975-1980, and 1980-1985. These estimate requirements to meet both the low and high enrollment projections for 1975, 1980, and 1985 assume a pupil-teacher ratio of 19. 4 to 1, as well as an increased ratio of 23 to 1 in 1975 and 25 to 1 in 1980 and 1985.

EXHIBIT XXXIII

WYOMING STATE DEPARTMENT OF EDUCATION

PROJECTED NUMBER OF CLASSROOM TEACHERS
1968-1985

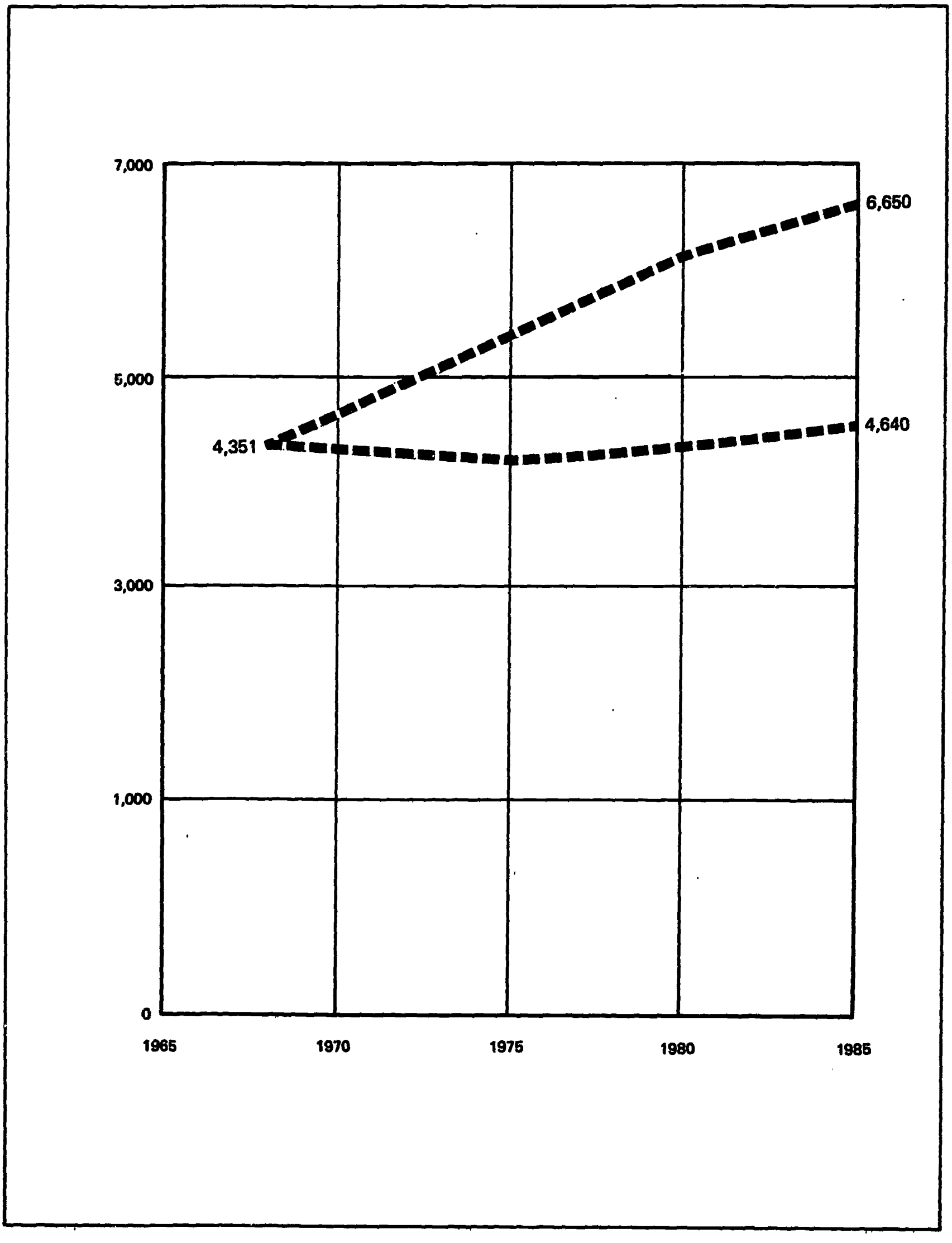
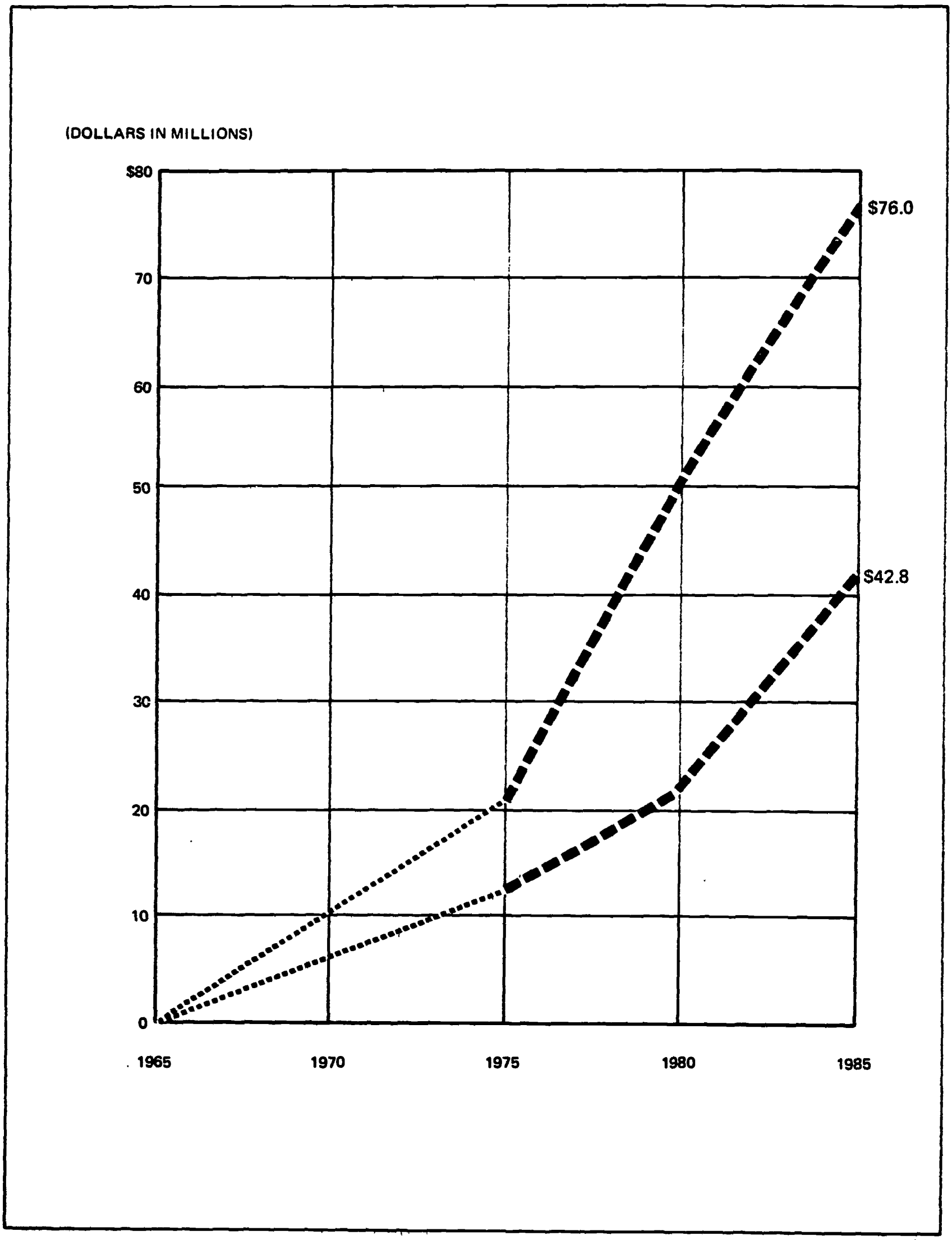


EXHIBIT XXXIV

WYOMING STATE DEPARTMENT OF EDUCATION

PROJECTED CUMULATIVE COST OF ADDITIONAL CLASSROOMS 1968-1985



The cumulative investment in additional classrooms through 1985 will range between $54 million and $76 million if the present 19. 4:1 ratio is continued. If a 23-25:1 ratio can be attained, this facilities investment can be reduced to the $43 million to $61 million range.

(5) Public Elementary and Secondary School Costs Will Continue To Increase on a Per-Unit Basis, if Present Trends Are Followed in the Future

The impact of rising costs is a primary factor in the future of Wyoming's educational system. In 1952, costs for the state's public elementary and secondary school system amounted to $18. 7 million. Fifteen years later, in 1967-1968, these costs totaled $56. 7 million - a 200% increase. If federal Title funds of approximately $2. 5 million are included, the total expenditure is about $59. 2 million. The trend has been steadily upward at an average growth rate of about 6% per year since 1960.

School expenditures have accelerated in recent years, however, as shown below:

Year	Total Primary and Secondary School Expenditures* (Millions)	Percentage of Increase
1966-1967	$54.9	
1967-1968	59.2	7.8%
1968-1969 (est.)	63.9	7.9

*Including federal Title fund allotments.

EXHIBIT XXXV

WYOMING STATE DEPARTMENT OF EDUCATION

PROJECTED ANNUAL OPERATING COSTS 1968-1985

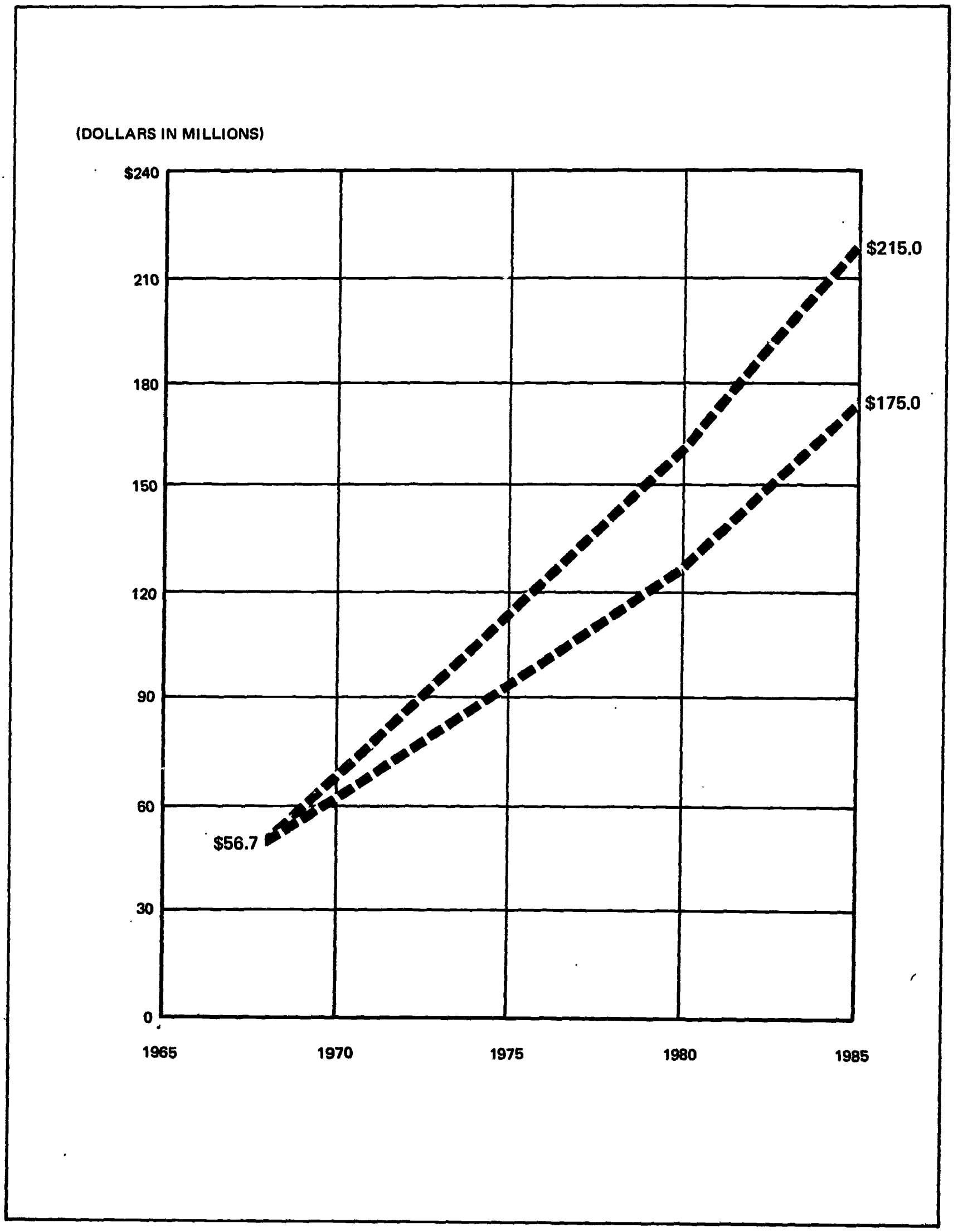
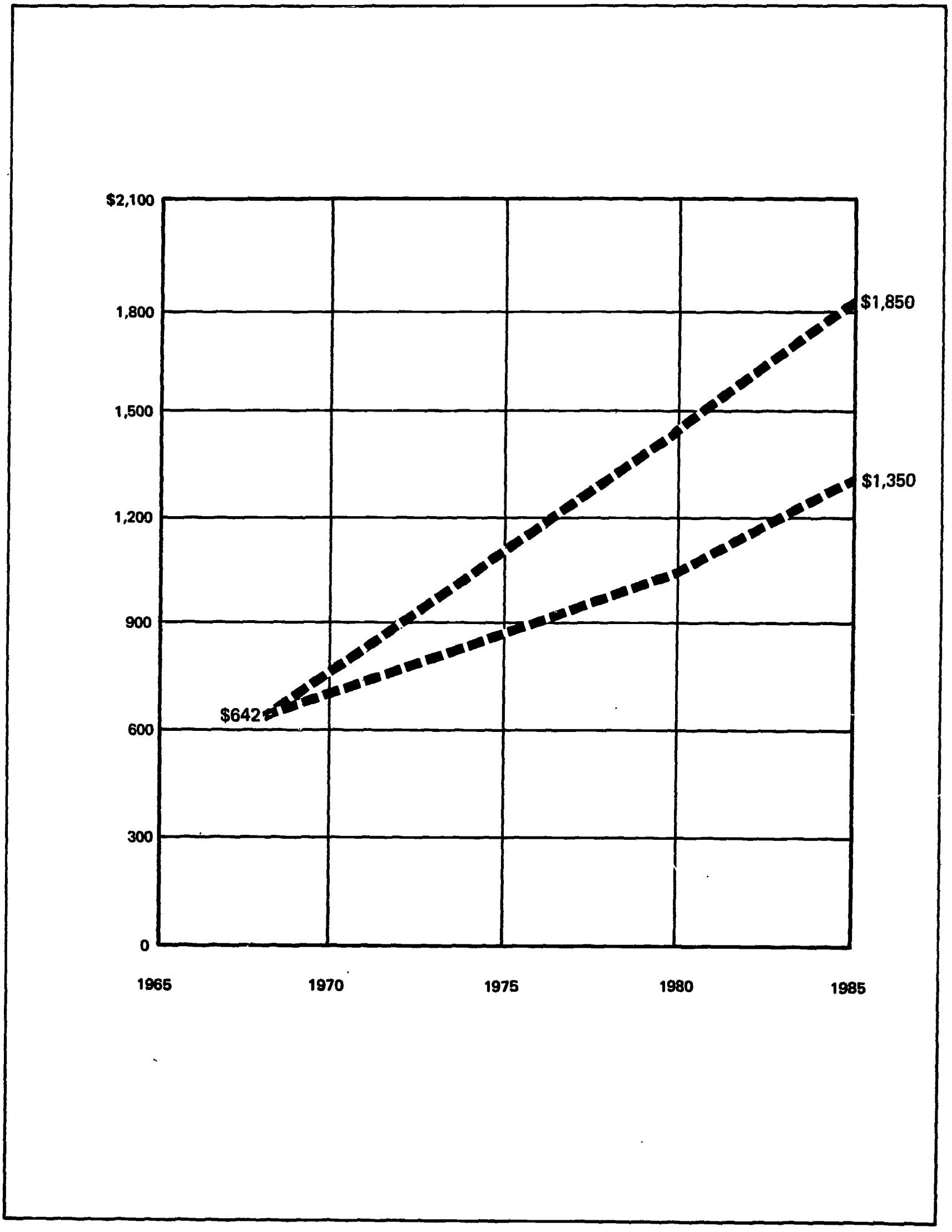


EXHIBIT XXXVI

WYOMING STATE DEPARTMENT OF EDUCATION

PROJECTED COST PER PUPIL IN AVERAGE DAILY MEMBERSHIP 1968-1985



These rising operating costs can be lessened somewhat if the pupil-teacher ratio can be brought up to the national average. At ratios of 23-25:1, the 1980-1985 operating costs would be between 10% and 15% lower than the comparable costs for a 19. 4:1 pupil-teacher ratio, as indicated by the solid line.

The combination of steadily increasing educational costs and the relatively slow increase in Wyoming's economic base focuses attention on two obvious problems with which the state's educators and legislators have struggled in the past and must continue to cope with in the future. These are:

- How to make more effective use of existing educational resources so as to minimize the need for additional funds.
- How to provide the required additional funds in the most equitable manner from the standpoint of the citizens.

* * * * *

This chapter has outlined the salient features of Wyoming's public elementary and secondary school system, as well as the principal patterns of its growth through 1985. The next chapter presents the most significant educational needs of the school system.

II. PUBLIC ELEMENTARY AND SECONDARY SCHOOL EDUCATION NEEDS IN WYOMING

II. PUBLIC ELEMENTARY AND SECONDARY SCHOOL EDUCATION NEEDS IN WYOMING

The previous chapter presented a detailed overall view of state-wide elementary and secondary school education. Although there are many strengths in the state's existing public school system, there are significant opportunities for improvement. Within the scope of this assignment and on the basis of available information set forth in the previous chapter, five major high priority needs have been identified for improving public school education in the state. In order of priority, the five needs are the following:

- Greater uniformity across the state in terms of the scope and quality of educational opportunities available to each student.
- Better utilization of resources available for Wyoming public school education.
- Increased continuity and cooperation with both post-high school education and the world of work.
- Refined information system for maintaining statistical data on Wyoming public schools.
- Development of a master plan to guide the future of public school education.

The following paragraphs set forth in detail the nature and scope of the five priority needs.

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1. THE HIGHEST PRIORITY ELEMENTARY AND SECONDARY SCHOOL NEED IS FOR MORE STATE-WIDE UNIFORMITY IN THE SCOPE AND QUALITY OF EDUCATIONAL OPPORTUNITIES AVAILABLE TO EACH STUDENT

Much of the future development of Wyoming depends upon the state's ability to retain present and future pupils enrolled in public elementary and secondary schools and upon their successfully meeting the complex and changing requirements of national, state, and local society. As is true of every other state in the nation among the many needs of Wyoming, is a well-informed, articulate, intellectually alert, and physically sound citizenry.

(1) Wyoming Public School Education Should Focus on the Educational Needs of Youth

Essential to long-range and short-term planning for education of Wyoming youth is the establishment of basic state-wide objectives for public elementary and secondary school education. These objectives should be:

- To provide the highest quality educational opportunities within the resources available for public school education to each individual, without regard to national origin, race, creed, religion, or place of residence in the state.

- To provide educational opportunities which develop the abilities of each individual.

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- To provide, for each public school student, opportunities for the development of the knowledge and skill that are necessary for a contributive member of a democratic society.

- To provide educational opportunities to meet the needs of Wyoming and the nation.

If Wyoming public schools are to attain these objectives, programs and services offered in the schools across the state should be directed toward providing the opportunity for each student to develop, to the maximum reasonable extent possible:

- A sense of purpose and personal worth.

- Intellectual curiosity to explore, examine, and learn to live and work as a responsible citizen.

- Basic intellectual and physical skills.

- Ability to adjust to changing and new circumstances.

- Capability to absorb and sort information in order to arrive at the best logical and sound decisions.

(2) Currently, Educational Opportunities Available to Many Youth in Wyoming Public Schools Are Limited

On the basis of findings of selected interviews, a sampling of present course offerings, a sampling of attitudes of 1967 graduates of nine selected high schools, and statistical data obtained from the Wyoming State Department of Education, there are gross variations in the nature and scope of public school educational opportunities

that are available to Wyoming youth. An analysis of these findings indicates that many youth enrolled in Wyoming public elementary and secondary schools throughout the state, particularly those enrolled in school districts with fewer than 150 students, have extremely limited educational opportunities. For example:

- Public kindergarten programs are not available to all of the state's eligible children.

- Curriculum offerings are limited and are largely traditional in nature.

- College preparatory and general education programs are limited in scope in such subject areas as:

  - Journalism, speech, and dramatics.
  - Mathematics beyond high school geometry.
  - Laboratory science courses in chemistry, physics, and geology or earth science.
  - Social studies, including history of peoples, government, and economics.
  - Music, including band, orchestra, and choral music.
  - Foreign languages.
  - Arts and crafts.

- Vocational programs are limited in scope in such areas as:

  - Computer sciences.
  - Food processing.
  - Agricultural and natural resources management.

- Extracurricular or cocurricular programs are limited, except for boys' athletics.

- Advanced and accelerated programs for gifted students are limited primarily to the larger schools.

- Remedial classes for students with learning disabilities are limited; however, individualized attention in small classes may help compensate for this lack in some schools.

- Educational programs for institutionalized youth are not adequately coordinated with other state educational programs.

- Educational services available to the state's public elementary and secondary school youth are inadequate in such areas as:

  - Counseling services for high school youth who are not preparing for college.

  - Junior high school and elementary school counseling services.

  - Health services.

  - Psychological services.

  - Library services.

- Few school districts have developed a systematic program for curriculum development or instructional improvement.

Currently, Wyoming youth residing in sparsely populated and/or less affluent geographical areas have less educational opportunity than their peers in more heavily populated and/or wealthy areas of the state. The advisability and desirability of these two socioeconomic characteristics serving as major criteria for the quality and scope of available educational opportunities need to be carefully assessed.

(3) Strengths in Terms of Educational Opportunities Are Found in Some Wyoming Schools, but They Are Not Widespread

A number of commendable programs and services are provided for Wyoming youth in the schools. For example, a review of educational programs and services available in the state indicates that, in at least some schools, courses are offered in:

- Creative writing
- Journalism
- Drama
- Trigonometry
- Calculus
- Physics
- Chemistry
- Geology
- Music, including band, orchestra, and choral music
- Arts and crafts
- Social studies, including geography, psychology, sociology, and economics
- Vocational and technical programs, including typing, shorthand, bookkeeping, mechanical drawing, industrial arts, and various technical programs

In general, it can be assumed that schools offering courses in these areas are attempting to meet individual needs of students. Conversely, schools which do not offer at least some of these courses can be categorized as unduly restrictive to individual students' educational opportunities.

In a few of the state's public schools, new and innovative means of instruction are being used or are planned for improving education. Reportedly, however, many if not most Wyoming teachers continue to look to out-of-state schools as models for determining the desirability of change. Educational leaders need to draw attention to new and creative approaches to education which are being examined and tried in Wyoming schools. However, of equal importance is the need for Wyoming educators to continue to be aware of new developments which are taking place elsewhere in the field. On the basis of these findings and the needs of their students, officials in each school should carefully assess the adequacy of their student programs and services.

(4) School Officials, Legislators, and Other Wyoming Residents Need To Assure Each Youth of the State at Least Minimal Educational Opportunities

Wyoming public education will improve only when the state's adult populace recognizes the need for improvement and takes appropriate action. The wide variations among educational opportunities reflect

the diversity in both attitudes and circumstances of Wyoming citizens.

The reasons for the wide variations among Wyoming schools are created by one or a combination of the following:

- Dissimilar objectives with regard to what public schools should be and what programs and services should be provided for students.
- The wide range of interests in and/or concern about public school education.
- Differences in the relative priority placed on public school education.
- Differences in monies available and expended for elementary and secondary school education.

Paramount to improving public school education is continued and increased dedication and leadership of members, both individually and collectively, of the education profession to improving education throughout the state. This commitment needs to be applied to the state-wide system of public school education as well as in individual classrooms.

Wyoming school officials are confronted, like their counterparts in other states, with a basic question of the role the state should assume in the state-wide public education system. If, as stated in Wyoming statutes, public elementary and secondary school education is a state function, state school officials need to assume responsibility for, as well as authority over, state-wide public school education. In so doing,

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these school officials should direct their efforts toward improving education by providing professional leadership and assistance to local school officials and by supplementing, not supplanting, local education programs and services.

Wyoming legislators, like legislators in other states, need to place high priority on meeting the educational needs of the state's youth. Bi-partisan efforts should be directed toward educational organization and financial issues which need to be resolved to make the scope and quality of educational opportunities more uniform throughout the state. Particular effort should be made by legislators to ensure improved quality and scope of educational opportunities to Indian and Mexican-American youth, students residing in isolated areas, and youth in need of specialized programs and services to accommodate the gifted and the physically and/or mentally limited.

There is little likelihood that needed changes in Wyoming public education will result until the general citizenry of the state becomes more actively interested and insists that educators and legislators resolve existing inequities. This will require that laymen place state-wide interests above local concerns. State and local officials leading action for needed reforms should conduct forums across the state to solicit understanding and assistance in their efforts.

2. THE SECOND HIGHEST PRIORITY NEED IS FOR BETTER UTILIZATION OF AVAILABLE RESOURCES FOR WYOMING PUBLIC SCHOOL EDUCATION

Public education in Wyoming, as elsewhere in the nation, is big business. In 1967-1968, more than 4, 300 full-time teachers were employed by school districts in the state, and approximately $56. 7 million in state and local funds was expended for operating purposes. As shown elsewhere in this report, costs for public school education in Wyoming are expected to double between 1967 and 1980 and may nearly triple by 1985.

It is imperative that school officials at both state and local levels make certain that maximum value is received for every dollar expended for public school education.

(1) A Number of Factors Contribute to Less than Full and Effective Utilization of Wyoming's Present Public School Resources

From the findings of this study, it is apparent that certain factors contribute to less-than-full utilization of present resources in the statewide Wyoming public school system. Among these factors are the:

. Wide variations in district enrollments, resulting in:

- Extremes in pupil-teacher ratios of 1 to 1 to 37 to 1 among districts.

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- A lower average pupil-teacher ratio (19 to 1) than the national average of 23 to 1.

- District enrollments that vary from 1 to nearly 15,000.

. Wide variations in assessed valuations, resulting in differences in assessed valuation from less than $3,500 per pupil to more than $900,000 per pupil.

. Wide variations in expenditures per pupil, resulting in:

- A range of $492 to $836, depending on the county.

- A district range from less than $400 to nearly $8,000.

(2) <u>The Sources of Revenue for Public Education in Wyoming Need To Be Thoroughly Analyzed</u>

The Foundation program, as developed in 1954 and implemented in 1955, utilized three different formulas to determine the actual current cost of education. Since 1955, this method has been abandoned and the value of the classroom unit was established by the Legislature on a negotiated basis in 1967.

The philosophy behind the Foundation program should be thoroughly reviewed at this time, to provide a realistic cost factor for classroom units. It seems unrealistic to provide funds for equalizing educational resources within the districts of the state on the basis of factors and costs that are at least five years old.

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(3) The Cost of Public School Education in Wyoming Is High in Comparison with Other States

The per-pupil cost of education in a sparsely populated state such as Wyoming can be expected to be higher than that in more densely populated states. However, high expenditures for education do not necessarily provide better educational programs for the individual pupil. In Wyoming, the highest per-pupil expenditures are found generally in districts and schools with the smallest number of pupils, and these are frequently the schools which offer the most limited programs and services.

To reduce the high costs of education in Wyoming, resources that can be used jointly by school districts should be determined.

Such resources include:

- Custodial and building equipment for which use can be scheduled in advance.
- Transportation equipment, as long as modified schedules do not seriously restrict educational programs.
- Textbooks and library materials which can be circulated without adversely affecting educational programs and services.
- Institutional equipment and materials, including projectors, video and audio tapes, maps, excess student desks, and other types of portable equipment and materials which can be made available to other schools.

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Public schools also should make maximum use of available resources of the University of Wyoming and community colleges. In addition, public schools need to explore thoroughly the feasibility and desirability of using facilities and equipment of Wyoming industries. Immediate attention needs to be directed to determining the availability of usable facilities and equipment required for expanding and improving vocational education programs at minimum costs.

(4) More Effective Use Should Be Made of School Personnel While Simultaneously Expanding and Improving Educational Opportunities Across the State

Two major challenges confront Wyoming school officials with reference to professional personnel: (1) employing and retaining the services of the best available personnel, and (2) making the best possible use of the skills of personnel. Specifically, the need exists to:

- Employ more teachers completing their academic preparation at the University of Wyoming.
- Reduce the number of resignations from Wyoming schools, particularly from more isolated areas where turnover is excessive.
- Encourage the University of Wyoming to increase maximum enrollments in teacher training programs.
- Encourage, as appropriate, officials of community colleges and the University of Wyoming to consider the feasibility and desirability of cooperative teacher training programs to increase the number of persons prepared to teach.

- Organize both state and local Future Teacher organizations to encourage more Wyoming youth to enter the teaching profession.

- Consider the desirability of reducing the number of teacher certification classifications to ascertain if, and how, this can be accomplished without adversely affecting the quality of instruction.

- Study the feasibility and advisability of employing highly skilled tradesmen who meet predetermined qualifications to teach vocational-technical classes requiring highly specialized skills.

- Explore the desirability and feasibility of extending the school year to make better use of professional personnel and facilities.

In addition, Wyoming school officials need to modify the existing extremes in pupil-teacher ratios. Ratios of 20 to 1 for elementary schools, 22 to 1 for junior high schools, and 24 to 1 for high schools are not unreasonable and should be considered for adoption as state-wide goals. Of course, enrollments in individual classes will vary. However, on a state-wide basis, an increase in one student per teacher at the state's 1967-1968 average teacher salary could reduce the cost of public education more than $1.4 million annually. With public school cost already high and still increasing, school officials need to work closely with leaders of the state teachers' organization to improve pupil-teacher ratios and assignments while continuing to improve and expand education throughout the state.

(5) There Is a Need for Restructuring the State's Local Administrative Units To Expand and Improve Educational Opportunities and Make Better Use of Available Resources

Regardless of local resources, students in smaller districts generally do not have the benefits of:

- A wide range of educational programs designed to meet student needs.
- Student services designed for both typical and exceptional children.
- Fully qualified staff for offering broader educational opportunities.

To improve and expand educational opportunities for the youth of the state, as well as to make better use of resources, the state's local schools need to be structured to provide educational programs and services more effectively and efficiently. To accomplish this, administrative units need to be large enough to:

- Group sufficient numbers of students who are in need of specific courses to provide economic justification for making such programs available.
- Provide a broad range of general education and vocational education programs.
- Ensure that every student in the state has the benefit of qualified instructors in every class and has access to all student services provided.

- Ensure that every exceptional and handicapped child can have the benefit of trained professional personnel to meet his specialized needs.

- Make sound counseling and guidance services available at all grade levels and to all students.

- Provide the necessary administrative services at the lowest cost practical, thus freeing additional monies for direct education of students.

- Increase the opportunity to make better use of equipment and supplies, and reduce costs through such auxiliary business services as bulk purchasing and centralized inventory storage.

- Enable instructors and staff specialists to concentrate in their areas of specialization.

- Make maximum use of existing and future facilities.

- Broaden and make more equal throughout the state the financial bases for support of education.

Restructuring of administrative units will not in itself improve education in Wyoming. However, improved utilization of resources which can result from such restructuring can be an important first step in improving and making the quality and scope of educational opportunities more uniform across the state.

(6) Restructuring Local School District Does Not Necessarily Require Eliminating Individual Schools

The establishment of larger administrative units, in addition to facilitating greater utilization of resources, can provide greater flexibility in the development of individual school attendance areas

to meet local conditions. In many sections of the state, the present sparsity of Wyoming's population militates against the formation of attendance areas which would provide for optimum or even recommended minimum enrollments without the necessity for transporting students unreasonable distances. However, this should not be the principal reason for not restructuring local school districts.

Wyoming residents need to distinguish carefully between the structuring of administrative units and consolidation of schools. They are not necessarily the same. Restructuring administrative units can result in reduction of administrative costs, improved utilization of personnel, more equal financial bases to support education, and improvement and expansion of educational opportunities without requiring school attendance areas to be modified. This does not suggest that consolidation of some existing schools may not be desirable on either educational or economic bases; however, this conclusion should not be drawn until after administrative units are restructured and alternative means of improving educational opportunities and/or reducing costs are investigated in detail.

3. THE THIRD HIGHEST PRIORITY NEED OF PUBLIC SCHOOL EDUCATION IS FOR INCREASED CONTINUITY AND COOPERATION WITH BOTH INSTITUTIONS OF POST-HIGH SCHOOL EDUCATION AND THE WORLD OF WORK

Educational requirements of elementary and secondary school pupils in 1968 and the future are quite different from those of today's adults. Life in the United States today is complex, technical, and highly competitive. It is difficult for most young people, completing formal education at any level, to find and expect to retain indefinitely, employment for which some type of continuing education and/or training is not required.

Educational planners need to direct attention toward the future, as well as the present needs of youth. Elementary and secondary school education in 1968 is the initial phase of preparation for life in the year 2000. First graders today will be 40 years of age at the turn of the century - an age that is generally regarded as that of a person's maximum productivity.

In an era of automation, it can be assumed that change in complexities of adult life and employment requirements will continue - quite possibly at an accelerated rate. The most significant of these is that basic intellectual requirements and the needs for reasoning abilities can be expected to increase.

(1) Close Working Relationships Between Public School Personnel and Staffs of Other Educational Institutions and Organizations Need To Be Established and Maintained

Reportedly, less than 20% of Wyoming high school students last year majored in a vocational subject. Yet, less than 60% of the state's 1968 seniors were planning to enter either two- or four-year college or university programs. Consequently, more than 20% of the state's youth were not pursuing high school courses directed toward preparation for either post-high school education or training or post-high school employment.

The advisability of students' completing high school requirements which are not specifically directed toward post-high school education or employment can be philosophically defended. However, each student and his parents need to know the advantages and disadvantages of such a decision.

The decision on the curriculum to be followed by each student should be the responsibility of the student and his parents. However, school officials are responsible for determining what programs are to be available and for ensuring that programs offered are directed toward post-high school education and employment requirements so as to meet, in fact as well as in theory, present and known future needs.

Doing this successfully requires a close working relationship between public school personnel and appropriate personnel from four-year colleges and universities, community colleges, and business and industry. Development and maintenance of the required working relationship should be the responsibility of appropriate public school personnel.

(2) There Is an Immediate Need To Upgrade and Expand Public School Vocational-Technical Education Through Closer Working Relationships with Business and Industry

Greater emphasis should be given to Wyoming high school vocational and technical education. In 1967-1968, fewer than 4,000 of the state's approximately 25,000 high school students were completing or were planning to complete three years of work in these programs, and this number was lower than it was in 1964-1965 and 1965-1966. A large and increasing number of students are enrolled in agriculture classes. Nationally, and reportedly in Wyoming, the number of persons engaged in agriculture is decreasing. The advisability of continuing to counsel more than 1,800 high school students to enter this field should be reviewed.

Increased coordination and cooperation among the public school personnel, community college staffs, and potential employers of trained youth are necessary. Such relationships should result in more meaningful and practical vocational-technical education following completion of high school and/or in a continuum of post-high school training programs designed to develop and refine skills.

(3) Districts Need To Develop Cooperative Programs To Provide Special Courses and Training

Accelerated courses or classes for handicapped children cannot always be justified on the basis of enrollments in single school districts. Costs prohibit many districts, at present, from offering a wide range of courses for even their regular pupils. Development of cooperative educational programs, supported jointly by two or more districts, is needed.

Action should be taken to schedule regular meetings of officials from all levels of education, both public and private. The primary purpose of these meetings should be to develop and implement cooperative plans for programs and services which serve the maximum number of Wyoming youth at the least required cost.

(4) A Master Plan Needs To Be Developed To Relate High School and Post-High School Vocational-Technical Education in Wyoming

Wyoming state and local officials responsible for education are confronted with the need and opportunity to develop a sound and effective state-wide vocational-technical education system extending from junior high school through collegiate degree programs in at least some career fields. In recent years, this "career ladder" concept has been broadly discussed nationally. However, to date, translation of the concept to reality has been infrequent.

A major deterrent to success in implementing multi-educational level vocational-technical education programs has been failure to overcome organizational conflicts. However, Wyoming youth, as young people elsewhere, need and desire vocational-technical education opportunities.

Present high school vocational education opportunities are limited in nature and scope. On the basis of the findings of this study of elementary and secondary school education, Wyoming residents should not be asked to expend additional monies for upgrading high school vocational-technical education or for a separate state-wide organization for post-high school vocational-technical education without assurance that educational opportunities are sound and are related to each other to the extent desirable. To do this effectively, a single, in-depth, comprehensive master vocational-technical education plan encompassing all levels of education participating in related programs and services should be prepared.

4. THE FOURTH PRIORITY NEED IS FOR A REFINED INFORMATION SYSTEM FOR MAINTAINING STATISTICAL DATA REGARDING WYOMING PUBLIC SCHOOLS

Systematic analysis of current and future educational programs and services in Wyoming is a difficult and, in some areas, currently an impossible task. Some data in major categories that have been collected thus far are in raw form and unsuitable for accurate analysis.

(1) If School Officials Are To Respond to Present and Future Educational Requirements, Accurate and Appropriate Information Must Be Available and Accessible

Wyoming data need to be systematically collected and developed on a state-wide basis to meet national, state, and local requirements. Data are required in the following five major categories:

- Personnel data concerning professional and supporting employees.
- Pupil statistics.
- Financial data to include revenues by sources, total expenditures and expenditures by program.
- Information on institutional programs, including programs offered and pupil enrollment in regular, special, and cocurricular vocational and rehabilitation programs, by program and level.
- School facilities inventory.

(2) A System for Meaningful Use of the Information Needs To Be Developed

Format and techniques for compiling information and the schedule and method of reporting data need to be determined before data are collected. Critical tasks to be completed, therefore, should be established during initial planning for collection and dissemination of information.

Decisions need to be made on the following:

- Number of personnel needed.
- Use of questionnaires or electronic data terminals.
- Cost of personnel.
- Cost of collecting and disseminating data.

Each decision must be further defined, beginning with estimates related to:

- Manpower requirements
- Conversion efforts
- Application priorities

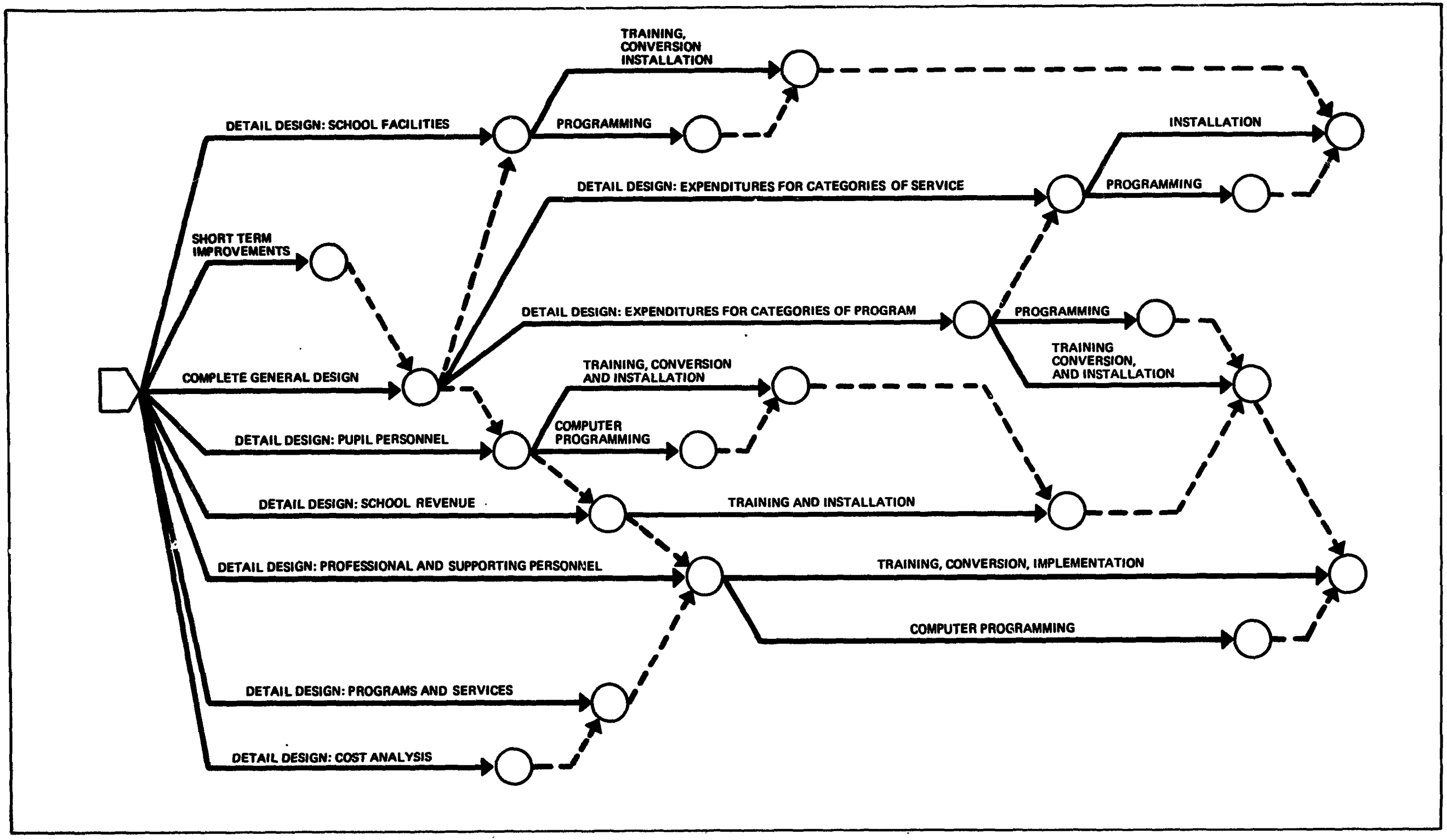
Following this definition, the personnel resources should be allocated and individual assignments made. Finally, time-phased intervals need to be determined and an implementation schedule prepared.

PERT (Planning and Evaluation Review Technique) or CPM (Critical Path Method) should be explored as possible methods of graphically portraying the relationships of one activity with another. Exhibit XXXVII, following this page, presents a typical PERT diagram for the implementation of a key system. Time relationships also can be indicated by providing a time scale or by merely indicating activity duration on each line.

EXHIBIT XXXVII

WYOMING STATE DEPARTMENT OF EDUCATION

FLOW DIAGRAM FOR THE IMPLEMENTATION OF KEY SYSTEMS



5. THE FIFTH PRIORITY NEED IS FOR A MASTER PLAN TO GUIDE THE FUTURE OF EDUCATION FOR WYOMING YOUTH

The preceding sections have identified those immediate and pressing needs for the long-range and short-term development of public school education for the youth of Wyoming. To ensure an orderly and economic fulfillment of these needs, a master plan should be developed. This plan should include the necessary tasks and the sequence in which tasks should be completed, necessary legislative action, responsibilities and required action of state and local school officials, the role and functions of study committees, deadlines, and specific personnel assignments.

The master plan should be flexible so that it can accommodate new and changing circumstances. New priorities, changes in long-range goals, and personnel commitments cannot be entirely anticipated. However, the master plan should provide the foundation for the overall planning of education in Wyoming. It should also provide guidelines for decisions related to public school education, to utilization of available resources, and, most important, to the improvement of education for the state's youth.

* * * * *

This chapter has set forth the highest priority needs for Wyoming public elementary and secondary school education. These limitations should be corrected by state and local school officials in a systematic manner at the earliest possible date.

III. RECOMMENDED NEXT STEPS FOR IMPROVING PUBLIC SCHOOL EDUCATION IN WYOMING

III. RECOMMENDED NEXT STEPS FOR IMPROVING PUBLIC SCHOOL EDUCATION IN WYOMING

Identification of the current status and establishment of priority needs for improving public elementary and secondary school education in the state will be of value only when they lead to action-oriented steps to bring about improvements.

The nature, scope, magnitude, and significance of findings and conclusions reached in Phase I of the proposed three-phase project to develop a master plan for improving public elementary and secondary school education in Wyoming substantiate the need for the subsequent phases of the proposed project. However, parallel and coordinated study of community college vocational-technical education is also needed.

Coordinating the development of a master plan for nonhigh school vocational-technical education and master planning for public school education is of utmost importance because:

(1) Vocational-technical education is a relatively new and rapidly evolving type of education in Wyoming.

(2) Public school vocational-technical education programs should be coordinated with community college vocational-technical education programs as well as with employment opportunities following completion of high school.

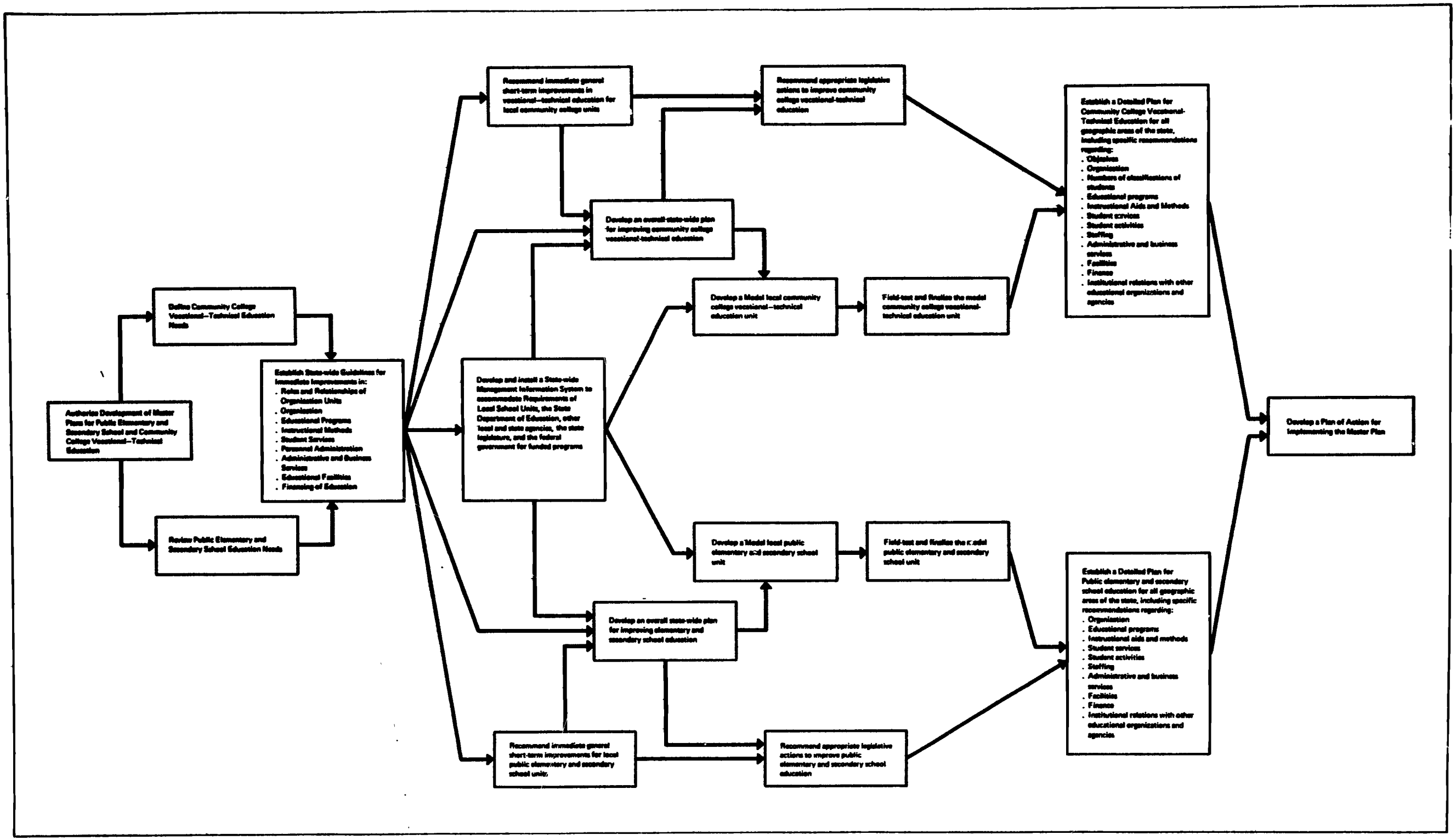
(3) Community college vocational-technical education competes with public elementary and secondary school education for local and state revenues.

(4) Community college vocational-technical education competes with public schools for qualified teachers, which are currently in short supply.

Consequently, improvement of public elementary and secondary school education throughout the state and better utilization of present and future resources available for education are, to a significant extent, dependent upon the development of dual coordinated master plans for community college vocational-technical education and public elementary and secondary school education. Although including baccalaureate degree and graduate degree education and community college nonvocational-technical education in a single total public education master plan is desirable, it is less critical, since liberal arts and professional post-high school education are more established and planning improvements for elementary and secondary school education are less dependent upon known changing programs and services.

Exhibit XXXVIII, following this page, presents a flow diagram of the first major steps for improving elementary and secondary school education. Proceeding with the needed actions will require a significant commitment to the task. However, failure to do this will continue the limitations and inequities in the state's present educational programs and the premium costs that are required.

EXHIBIT XXXVIII
WYOMING STATE DEPARTMENT OF EDUCATION
FLOW DIAGRAM OF NEXT STAGE



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Study of Nursing Education in Tennessee.

Tennessee Mid-South Regional Medical Program, Nashville. Nurse Section
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TENNESSEE

Information was collected from schools of nursing, the state board of nursing, state planning agencies, the state nurses' association and the health careers program. Three major sections of the report treat (1) the nurse crisis including source of nurse supply, nursing leadership in the state, and facilities for leadership preparation, (2) schools of nursing including faculty, students, entrance requirements, and scholarships, and (3) statewide planning to meet the crisis. The ratio of 158.5 registered nurses per 100,000 population in Tennessee for 1966 as compared with the national figure of 313 nurses represents an increasing deficit. Further information indicated a lack of academically qualified nurse faculty and a dearth of qualified applicants to schools of nursing. Conclusions were that the crisis will be met only through progressive implementation of a bold statewide plan requiring responsible support from an informed public. (JK)

VT 007 969

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Introduction

The purpose of this study was to inform health planners, educators, legislators, and other community leaders regarding the resources for nursing education in Tennessee, and the need for a bold plan to provide the nursing services needed now and for the future.

The Tennessee Mid-South Regional Medical Program Nurse Section is organized to assist with the development of cooperative arrangements among existing nursing organizations, educational institutions and health facilities for improvement in the quality and quantity of nursing services available to this region. Through such cooperative arrangements, the Regional Medical Program hopes to promote continuing education of nursing personnel for the prevention of disease and improvement of "patient care in the fields of heart disease, cancer, stroke, and related diseases," and, thereby, to improve generally the health manpower available to the region.

The Tennessee Mid-South region encompasses East and Middle Tennessee and several counties in southern Kentucky. However, regulations for licensure to practice and approval of educational programs preparing nursing personnel for licensure are functions of state government. This study of nursing education and the accompanying analysis of registered nurse date pertain to the state of Tennessee. *(The Memphis Regional Medical Program has been informed of this state wide survey.)*

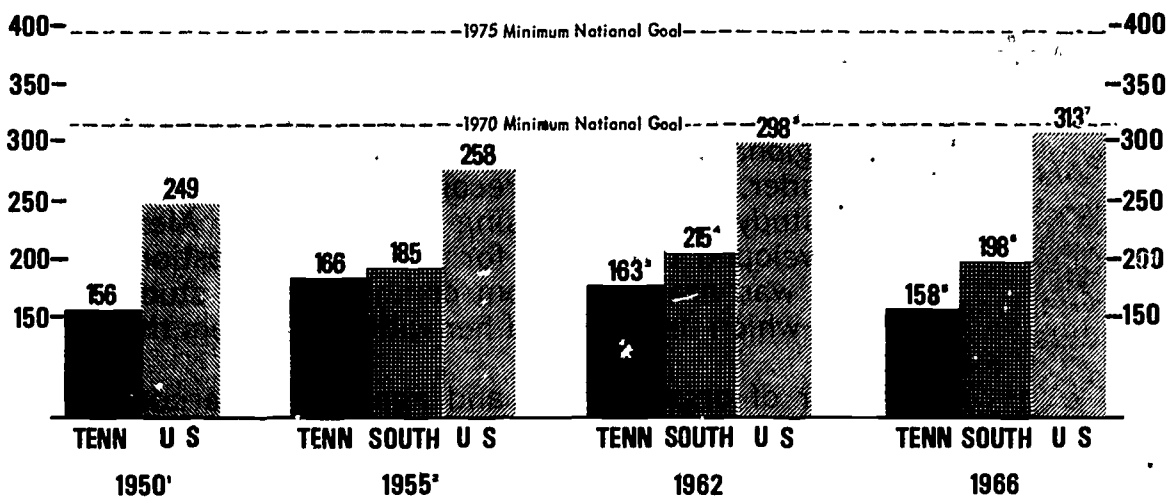
Section I

NURSE CRISIS IN TENNESSEE

The number of nurses in proportion to the state population ranks among the lowest in the nation. Regional and national comparisons with respect to nurse supply have become increasingly unfavorable (See Figure 1).

TENNESSEE REGISTERED NURSE SUPPLY PER 100,000 POPULATION 1950-1966

Regional and National Comparison



[1] American Nurses Association, Facts About Nursing, 1955-56, p. 15
[2] Tennessee: Action and Progress, A Statewide Survey of Nursing Resources, 1957, p. 2
[3] American Nurses Association, Facts About Nursing, 1967, p. 13
[4] Hessel H. Flitter, Nursing in the South, Southern Regional Board, January, 1968, p. 7
[5] Computed from American Nurses' Association, 1966 Inventory of Registered Nurses, 1968
[6] Flitter, p. 1
[7] American Nurses' Association, Facts about Nursing, 1968, p. 13

Source: Bureau of Business and Economic Research, University of Tennessee, March, 1967
To show active nurses for Tennessee civilian population, figures have been adjusted to exclude R. N. 's employed in Veterans Administration Hospitals

The ratio of 158.5 registered nurses per 100,000 population in Tennessee for 1966 was slightly more than half of the average employed in the entire nation and was well below the 1966 southern regional average of 198 per 100,000. Although the actual number of Tennessee nurses has increased slightly over the years, the figures indicate a relative decrease in the ratio of nurses to an increasing Tennessee population.

The United States Public Health Service set a minimum national goal for 1970 at 317 nurses per 100,000 population.[1] To provide nurses for expanding health facilities and services, this estimate has been increased by 25% to meet the projected nursing needs for 1975.[2]

Source of Nurse Supply. Tennessee schools of nursing provide most of the nurses in the state. Three types of educational programs prepare practitioners for licensure as registered nurses in Tennessee — hospital supported diploma programs, collegiate programs leading to a baccalaureate in nursing, and

two-year junior college level programs leading to an associate degree in nursing.

To assure the quality of nursing care, to attract nurse students to nursing, and to give the college credit previously denied to students whose nursing education has been in hospital schools of nursing, the American Nurses' Association recommended in 1965 that "education for all those who are licensed to practice nursing should take place in institutions of higher education."[3] In collegiate nursing programs, as in other departments of a college, practical experience is limited during the students' learning process. The newly graduated nurse is expected to be a beginning practitioner rather than an accomplished, experienced nurse.

In Tennessee during 1967, twelve (12) programs, ranging in length from twenty-seven to thirty-six months, in hospital schools of nursing awarded to graduates a diploma in nursing. One diploma program in Tennessee closed in 1968, three other schools will close in 1970, and eight (8) continued to admit beginning students in the fall of 1968.

Programs leading to a baccalaureate degree in nursing are offered by two state universities, a denominational college and a private university.

Recognizing the nurse shortage and the trend toward two-year college preparation for registered nurses, the Tennessee State Board of Education passed a resolution in 1965 urging that state supported colleges and universities under State Board of Education control establish programs leading to the associate degree in nursing.[4] Since 1966, seven (7) associate degree programs have been initiated in state supported institutions in addition to two (2) denominationally supported schools. Three additional associate degree nursing programs are being planned in other state supported colleges or universities.[5]

Efforts to recruit nurse faculty members for new academic programs in Tennessee have revealed the critical shortage of qualified nurses for such appointments.

Nursing Leadership in Tennessee. To ensure the quality of nursing education and care, nursing leaders are essential. Leadership positions and the levels of education recommended for nursing leaders are listed in Table 1.

Table 1

Recommended Educational Preparation for Nursing Leadership

Position	*Academic Degree*
Deans of collegiate programs	Doctorate
Faculty of graduate programs	Doctorate
Research investigators	Doctorate
Nursing service directors of large hospitals or health agency systems	Doctorate
Teachers in all nursing education programs	Master's
Directors and assistant directors of nursing service in hospitals, related institutions and health agencies	Master's
Inservice education directors	Master's
Supervisors	Master's
Clinical specialists	Master's
Consultants (all types of institutions and health agencies or services)	Master's
Head Nurses (with present responsibilities)	Baccalaureate
Team Leaders	Baccalaureate
Public Health and School Nurse	Baccalaureate
Occupational Health Nurses (staff level)	Baccalaureate
Directors of nursing service in nursing homes giving "skilled nursing care"	Baccalaureate

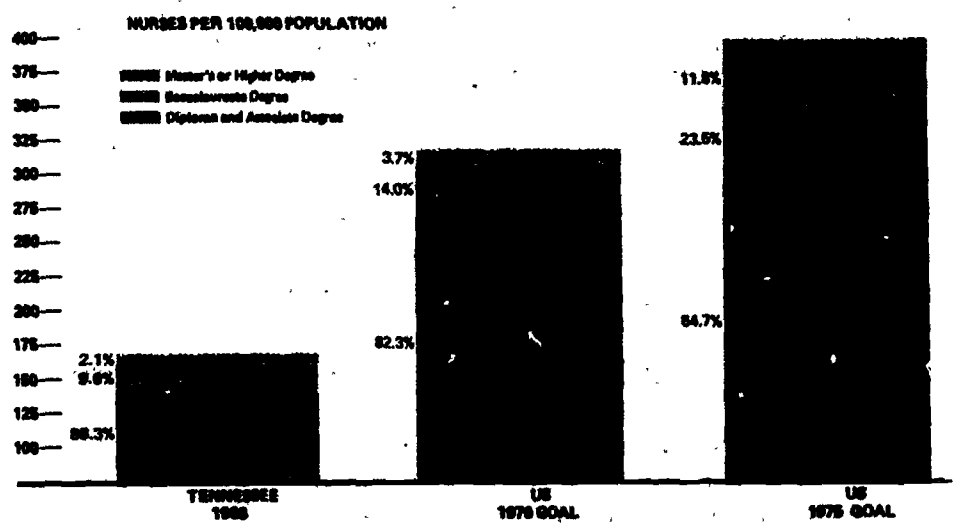
Source: U. S. Department of Health, Education, and Welfare, Public Health Service, *Toward Quality in Nursing — Needs and Goals,* Washington, D. C., Government Printing Office, 1963, p. 19.

A critical need exists in Tennessee for academically prepared nurse leaders. Adequate numbers of the nurse population must be educated as are other leaders, at baccalaureate and higher academic levels. (See Appendix for "Registered Nurses Active in Tennessee 1966 By Field of Employment and Educational Preparation," pp.25-27).

Figure 2 graphically reveals the problem by superimposing the percent of nurses at each level of preparation on the actual number in comparison with the minimal United States Public Health Service estimates of nurses needed.

Figure 2

PROPORTION OF PROFESSIONAL NURSES WITH BACCALAUREATE OR HIGHER DEGREES, TENNESSEE, 1966
Compared with National Goals for 1970 and 1975



Source: American Nurses' Association, 1966 Inventory of Registered Nurses, February, 1966.

U.S. Department of Health, Education, and Welfare, Public Health Service, Health Manpower Source Book, Section 2, Nursing Personnel, Revised January 1966, pp. 103-105.

U.S. Department of Health, Education, and Welfare, Public Health Service, Toward Quality in Nursing - Needs and Goals, Washington D.C. Government Printing Office, 1965, pp. 19, 21.

Although the proportion of active nurses at each level of preparation during 1966 does not appear far different from the national goal for 1970, the real discrepancy lies in the tremendous nurse deficit in Tennessee. In 1966, Tennessee had approximately 19 nurse leaders per 100,000 population as compared with the suggested goal of nearly 70 nurse leaders per 100,000 for 1970.[5] Since the total nurse supply in Tennessee is inadequate, a greater proportion of leaders is needed to prepare more nurses and to better utilize existing nursing personnel.

Without decisive action, the nurse leadership situation in Tennessee will become increasingly desperate as indicated, in Figure 2, by the disproportionately small number of active nurses prepared at the baccalaureate level. Only nurses who have acquired a baccalaureate degree are considered for graduate education and a part of this group must be encouraged to obtain master's or higher degrees to meet the demands for positions of leadership.

Facilities for Leadership Preparation. To promote an increased number of nurses with baccalaureate degrees in nursing, three schools in Tennessee admit graduates of diploma and associate degree nursing

programs for education at the baccalaureate level. These baccalaureate programs require an additional two to four years study following the diploma or associate degree in nursing.

One private university in Tennessee developed a master of science program in several nursing specialties to meet the need for leaders in education and service beyond the basic level. However, in compliance with increasing professional and university requirements for faculty teaching at the master's level, a part of this program has been discontinued until nurse faculty prepared with a doctorate can be brought to Tennessee. At the present time, this program offers only a master's degree in psychiatric nursing.

The necessity for leaving the state to obtain graduate education in nursing decreases the likelihood that Tennessee nurses will seek advanced nursing education. It also decreases the probability that those nurses who do leave the state for study will return to Tennessee upon completion of advanced education.

The lack of available graduate education in nursing in Tennessee increases the number of nurses seeking advanced non-nursing degrees.[7] Of those nurse faculty members whose highest level of preparation is a baccalaureate degree, 34% hold non-nursing degrees.[8] Forty-one percent of the total active nurses in Tennessee with a master's degree hold non-nursing graduate degrees.[9] While increased academic background is desirable, this kind of education cannot provide the clinically expert nurse so urgently needed today.

Cost of Leadership Preparation. Under the present system in which students may prepare for licensure in any of three programs of education, only one of which is acceptable for graduate study, the academic preparation of registered nurses for leadership positions is costly in time and money. A baccalaureate degree is prerequisite to graduate education. An additional two to four years of study for associate degree or diploma graduates is necessary to obtain the baccalaureate. Students with potential for leadership should be encouraged to enter baccalaureate programs.

To increase the number of potential nurse leaders with baccalaureate preparation in nursing as well as to ensure adequate nurse supply from associate degree and diploma programs, additional nursing scholarship funds are needed in Tennessee.

Financial need and demonstrated ability are criteria for granting assistance. Thus, students with motivation and the potential for advanced education who also need financial aid have frequently utilized avail-

able funds. Loans commit nurses either for repayment of money or for a specified period of employment before they can continue in education. After these obligations have been fulfilled, a preponderant number of the women in this group will have assumed other responsibilities which, in effect, diminish the number that will undertake higher education. Those who have utilized federal scholarships in their initial nursing education are limited in the use of further federal study grants for higher education.

Economic Factors and Nurse Supply. Economic factors have a significant influence on nurse supply in Tennessee. Were the career opportunities, working conditions, and salaries more favorable in Tennessee, the number of graduates from Tennessee schools of nursing that seek employment in the state might be increased; and the recruitment of nurses from other states might be exploited. Unfortunately for Tennessee, a trend of several years shows a greater number of both registered nurses and licensed practical nurses leave the state each year than move into the state to practice.[10] Even in metropolitan centers where Tennessee nurse supply is greatest, the number of active nurses is inadequate to provide needed nursing services. When the amount of nursing service to be provided exceeds either the number of budgeted positions or the number of nurses available to fill the position, the work load becomes overwhelming.

Nurse salaries in Tennessee have been increased, but these salaries, with few exceptions, are not competitive nationally and do not draw to Tennessee the qualified nurses that are now needed for nursing service and schools of nursing.[11]

To augment nursing personnel, the Division of Vocational Education, Tennessee State Department of Education, supports a program of practical nurse education throughout the state. Counties in which practical nurse programs were offered in 1967 can be found in the Appendix.

Inactive Registered Nurses. Inactive nurses are a potential source of nursing service. In 1966, inactive nurses under 60 years of age, licensed to practice in Tennessee and living in the state or within commuting distance constituted 2,580 nurses or 27.2% of the total nurse supply.[12] Pages 28-30 of the Appendix indicate the number, educational preparation, and age category of inactive nurses licensed in Tennessee in 1966 by region of the state in which they live. This group is composed predominantly of married women whose active practice is determined, in large

measure, by family responsibilities. As these demands change, inactive nurses interested in returning to work have expressed the need for review and orientation to current nursing practice.

During 1967-1968, the Tennessee Nurses' Association staff conducted a survey of inactive nurses to determine the number interested in returning to work and to identify their need for retraining courses. In cooperation with nursing organizations, local health and education agencies, the staffs of the Tennessee Departments of Education and Employment Security developed plans for presenting nursing refresher courses in the state. Nine courses in metropolitan centers have been offered during 1967-1968 in which 97 nurses were enrolled. Seven courses were financed by Manpower Development Training Act funds, and two were community sponsored.[13]

Similar needs for refresher courses have been identified in small cities of the state. The number of inactive nurses and available nurse instructors in smaller cities has been insufficient to warrant such programs during the past year. With continued planning and support, refresher courses represent a relatively rapid and economical means of increasing nurse supply and may provide the needed inducement for inactive nurses to seek active employment.

SUMMARY. Shortage of nurses in Tennessee is not a new development, but the deficit is increasing. Continuing efforts have been made toward improvement in the quality of preparation and in actual numbers of nursing personnel.

For at least twenty years, nursing organizations and nurse leaders in Tennessee have advocated the development of a sound program for the provision of nursing services. For this purpose, two detailed studies of nursing resources in the state, conducted in 1949 and 1955 by consultants from the United States Public Health Service, were supported by nursing, health, hospital, and allied agencies.[14,15] The recommendations from these studies might well have become the basis for community action. Despite efforts to publicize these conclusions and to implement the recommendations, nurse leaders were not able to mobilize sufficient support to alter appreciably the supply of registered nurses in Tennessee. In an effort to increase the total number of registered nurses in Tennessee, new programs have been established, others are being planned, and the expansion of existing programs is anticipated often without adequate nurse faculty. This development threatens the quality of nursing education and, thus, the caliber of nursing care needed in the state. Tennessee falls so far short of the recommended nurse goals as

to jeopardize the recruitment of nursing service personnel, school of nursing faculty, and qualified nurse students.

Section II

SCHOOLS OF NURSING IN TENNESSEE

Since Tennessee schools of nursing are the chief source of nurses in the state, factors that relate to the maintenance, improvement or expansion of these programs must be explored. Table 2 summarizes briefly the factors influencing expansion.

Table 2

Factors Influencing Expansion
Of
Schools of Nursing in Tennessee, June, 1968

Type of Program	Number of Schools Reporting								
	Lack of qualified students	Need more qualified faculty	Need office space	Need more clinical facilities	Need more laboratories & classrooms	New bldg. 1969 will accommodate present enrollment	New bldg. 1969-70 will accommodate increased enrollment	Plan to increase enrollment	Do not plan expansion
Associate (7 Programs)	1	6	2	3	3	0	4	4	3
Baccalaureate (4 Programs)	2	3	1	2	2	1	0	4	0
Diploma (8 Programs)	6	7	1	1	1	1	0	2	6

Source: Tennessee Mid-South Regional Medical Program Study of Nursing Education in Tennessee, Questionnaires and Interviews, 1968.

Overall facilities of the diploma programs are reported as adequate except in two schools. One school is currently building new facilities and the second has plans for future building improvement. The lack of physical facilities appears greatest in baccalaureate and new associate degree programs. Four associate degree programs will move into newly built or renovated accommodations between 1969 and 1970. At least one state supported and one private baccalaureate program have plans for additional facilities which would allow increased enrollment but have not secured the necessary appropriations.[14]
The lack of qualified faculty and student recruitment are problems familiar to established schools of nursing in Tennessee. Diploma schools have had increasing difficulty in attracting qualified students to their non-collegiate programs. New associate degree pro-

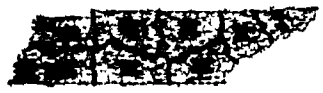
grams are encountering the problem of inadequate numbers of academically prepared faculty.[17] As new programs admit second classes and move into new facilities allowing increased enrollment, it is likely that the shortage of qualified faculty and students may become more apparent.

Each nursing education program must be approved by the Tennessee Board of Nursing before graduates of a school are allowed to write licensure examinations. Organized nursing has designated the National League for Nursing as the official accrediting agency. Application for review by the National League for Nursing for accreditation is voluntary, but approval by this agency is influential in the recruitment of students and faculty and has been a necessary requirement for the use of some federal funds. Table 3 indicates the location and accreditation of schools of nursing in Tennessee.

Table 3

Tennessee Schools of Nursing By Type of Program and Comprehensive Planning Region

TENNESSEE SCHOOLS OF NURSING BY TYPE OF PROGRAM and COMPREHENSIVE PLANNING REGION



Comprehensive Planning Regions	Population	Baccalaureate	Associate	Diploma	Master's
I. First Tennessee EDD	344,808	East Tenn. State Univ. Johnson City	East Tenn. State Univ. Bristol (New 1968)		
II. East Tennessee EDD	656,691			East Tenn. Bapt. (NLN) Ft. Sanders Presby. (NLN) St. Mary's Mem. (NLN) U. T. Mem. R. C. (NLN)	
III. Southeast	405,482	Southern Miss. Coll. (NLN)	Southern Miss. Coll. (NLN) Cleveland Com. Coll. (New 1967)	Baroness Erlanger (NLN)	
IV. Upper Cumberland	191,264				
V. Mid – Cumberland	770,536	Vanderbilt University (NLN)	Tenn. A. & I. Univ. Mid. Tenn. St. Univ. U. Tenn. Nashville (New 1968)	*Baptist Hospital (NLN) *Nash–Metro Gen. (NLN) *St. Thomas (NLN)	***Vanderbilt Univ.
VI. South Central	267,009		Columbia Com. Coll. (New 1967)		
VII. Northwest	217,137				
VIII. Southwest	976,416	U. T. Memphis (NLN)	Union University Memphis State (New 1967)	Baptist Memorial (NLN) **City of Memphis Methodist (NLN) St. Joseph (NLN)	
Schools graduating students 1968		4	4	12	1
Schools admitting students fall 1968		4	9	8	1

*Closing 1970
**Closed 1968
***Limited to Psychiatric Nursing 1967–69
NLN: Accredited by National League for Nursing

Source : 1 Tennessee Regions for Comprehensive Planning and Development, State Planning Division, Tennessee State Planning Commission, March, 1968
2 "Estimates of Tennessee Total Resident Population by County, As of July 1, 1960 – 1966", Bureau of Business and Economic Research, University of Tennessee, July, 1966

FACULTY

All schools of nursing must fill a minimum of the budgeted faculty positions before the school year begins. When the shortage of qualified nurses is acute, these positions tend to be filled, of necessity, by available nurses. The lack of academically qualified nurse faculty in Tennessee is evident in Table 4.

Table 4

Tennessee Schools of Nursing Faculty Academic Preparation

Type Program	No Degree		BS (Nsg.)		Other BS, BA		MA, MS (Nsg.)		Other MA, MS		Doctorate		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Diploma Continuing Programs (8)	37	31.9%	41	35.3%	21	18.1%	6	5.2%	11	9.5%	0	0.0%	116	42.0%
Phasing Out (4)	8	18.2%	22	50.0%	7	15.9%	5	11.4%	2	4.5%	0	0.0%	44	15.9%
Associate (7 Programs)	2	5.7%	10	28.6%	3	8.6%	14	40.0%	6	17.1%	0	0.0%	35	12.7%
Baccalaureate (4 Programs)	0	0.0%	17	21.0%	2	2.5%	53	65.4%	2	2.5%	7	8.6%	81	29.4%
TOTAL	47	17.0%	90	32.6%	33	12.0%	78	28.3%	21	7.6%	7	2.5%	276	100.0%

Source: Tennessee Board of Nursing, Schools of Nursing Annual Reports, 1967.

Seventeen percent of the nurse faculty members in Tennessee had less than a baccalaureate degree. Unless faculty qualifications are mandatorily high, greater numbers of nursing students will find the curriculum without challenge in comparison to increasingly higher standards in high school or other pre-nursing education. In Tennessee elementary and secondary schools as of February, 1968, more than 89% of the faculty held a baccalaureate or higher degree.[18] The master's degree is usually a minimum requirement for faculty appointment to colleges and universities.

In an open ended question regarding the reason for withdrawal of capable students from schools of nursing, nursing students ranked "boredom" and "lack of challenge" second cnly to marriage and family obligations. Faculty opinion indicated similar importance to lack of challenge, dissatisfaction with nursing, and transfer to another field of interest as reasons for capable students' withdrawal[19] (Table 5).

Table 5

Reasons Given For Capable Students' Withdrawal from Schools of Nursing By Rank Order*

	Classmates' Opinion	Faculty Opinion	Deans' and Directors' Opinion
Pregnancy, Marriage and Family Problems	1	1	1
Boredom and Program not challenging	2	3	6
Dissatisfied or Disillusioned with nursing	3	2	2
Transfer to anotner educational major	5	4	3
Finances	6	5	4
Health	4	6	5
Number of Respondents	509	175	17

Source: Tennessee Mid-South Regional Medical Program Study of Nursing Education in Tennessee, 1968.
*Responses indicating academic failure as the leading cause of student withdrawal were excluded from this table which pertains to capable students.

Unfilled positions in June, 1968, represented 19% of the total budgeted faculty positions in collegiate schools of nursing and 4% of the diploma school faculty (Table 6). The number and qualifications desired for 1968 unfilled faculty positions give some indication of future faculty requirements when an increase in the number of students is anticipated.

Table 6

Unfilled Budgeted School of Nursing Faculty Positions Tennessee, June, 1968

Clinical Specialty or Position	Master's Degree Desired	Master's Degree Mandatory	Doctorate Mandatory	Total
Assistant Dean or Director	2	1		3
Fundamentals of Nursing		2		2
Medical-Surgical Nursing	2	10	1	13
Maternal-Child Nursing		7	1	8
Psychiatric Nursing		2		2
Public Health Nursing		3		3
Specialty not indicated	1	1		2
Total	5	26	2	33

The geographic location of schools of nursing in Tennessee is an important consideration in regard to the probability of obtaining qualified faculty. Mobility and availability of nurses is affected by women comprising 98.9% of the nurses teaching in Tennessee during 1967-1968.[20] Sixty-three percent (63%) of Tennessee nurse faculty in 1966 were married, and the location of their employment was circumscribed by family obligations.[21] Unmarried nurses also may have family or financial commitments that restrict their mobility. Unless drawn by family ties, single women appear to prefer metropolitan centers for living and work. In smaller cities surrounded by rural areas, school of nursing directors report that it is difficult, if not impossible, to fill faculty positions unless the nurse is already living in that location. Home, family, or husband's location of employment was given by 75.7% of all nurse faculty as the main reason for accepting a position to work in Tennessee. Of twenty-eight associate degree program faculty members, only one reported moving any distance to accept her present position.[22] Of 219 respondents, only three reported that salary influenced their acceptance of a school of nursing faculty position in Tennessee. Pages 36-37 of the Appendix provide a summary of Tennessee schools of nursing faculty salaries.

School Policies for Encouraging Continuing Education of Faculty. All except one new school reported established policies to encourage faculty continuing education. These policies include such provisions as allowing educational leaves of absence — some with partial salary, and providing assistance in obtaining financial aid.

Nearly 50 percent of the faculty members responding to the survey plan to work for higher degrees. The majority will require financial assistance beyond that which is provided by their respective schools.

Several of the schools indicated, however, that upon completion of advanced education, nurses frequently prefer to teach in an academic setting or are attracted to greater career opportunities outside the state.

Family responsibilities and the lack of adequate financial aid were listed most frequently as the deterrants to faculty members furthering their education.[23]

STUDENTS

The demand for personnel in all categories of health service is great, and competition for students is keen. High school graduates with an interest in health services want to go to college. They not only

have a greater selection of opportunities than in the past but are more selective in their choice of careers. Health service occupations that have recently evolved due to technological changes have begun to compete actively with nursing schools for applicants.

In 1949, both nationally and in Tennessee, admissions to schools of nursing represented 7.8 students for every 100 female high school graduates; however, the shortage of nurses was so great in Tennessee that an immediate increase in recruitment equivalent to 15% of the female high school graduates in the state was recommended in 1950.[25] By 1954, the admissions to Tennessee schools of nursing had dropped to 6.5% and in the United States to 7.6%.[26]

In 1966, the average for Tennessee represented 3.6% of the female high school graduates while nationally the average was about 4%.[27] Thus, the proportion of high school graduates entering schools of nursing has decreased throughout the United States, but the decline in admissions has been greater in Tennessee. The total number of student admissions and graduations has increased, but these figures do not approach the number needed to provide nursing services in Tennessee.

The 1968 admission figures in Tennessee reflect the trend toward greater numbers of nursing students seeking collegiate education. In 1963, only 25% of the nursing student admissions were in associate degree and baccalaureate programs, whereas in 1968, the proportion had increased to 56%. Table 7 indicates a decline in the percentage of students

Table 7

Number of Admissions and Graduations, Tennessee Schools of Nursing 1963-1968

	Student Admissions				Graduates			
	A.D.	B.S.N.	DIP.	TOTAL	A.D.	B.S.N.	DIP.	TOTAL
1963	(1 School) 24 (3%)	153 (22%)	526 (75%)	703 (100%)	0 (0%)	68 (16%)	360 (84%)	428 (100%)
1964	(1 School) 31 (4%)	163 (21%)	570 (75%)	764 (100%)	(1 School) 16 (4%)	85 (19%)	338 (77%)	439 (100%)
1965	(2 Schools) 72 (8%)	191 (22%)	615 (70%)	878 (100%)	(1 School) 10 (2%)	76 (19%)	319 (79%)	405 (100%)
1966	(4 Schools) 152 (18%)	169 (20%)	538 (62%)	859 (100%)	(1 School) 19 (4%)	95 (22%)	321 (74%)	435 (100%)
1967	(7 Schools) 275 (29%)	198 (21%)	477 (50%)	950 (100%)	(2 Schools) 37 (8%)	85 (18%)	358 (74%)	480 (100%)
1968	(8 Schools) 326 (34%)	217 (23%)	(8 Schools) 402 (43%)	946 (100%)	(4 Schools) 57 (11%)	116 (22%)	346 (67%)	519 (100%)

Source: Tennessee Mid-South Regional Medical Program Study of Nursing Education in Tennessee, Questionnaires and Interviews, 1968.
September 1968 admissions obtained by telephone survey November 1968.
Figures for 1968 graduates are for those students expected to be graduated through December 1968.

enrolled in diploma programs and an increase in those now admitted to associate degree programs. Nonetheless, 1968 graduates of diploma programs represented 67% of the total.[28]

During 1967-1968, most schools of nursing in Tennessee reported student enrollment at less than capacity while three associate programs could not accept all qualified first year applicants because of limited classrooms or laboratory space. Table 8 shows the number of additional first year students that schools of nursing in Tennessee reported might have been accommodated had sufficient qualified students applied.

Table 8

Number of Students Admitted
To Tennessee Schools of Nursing in 1967 by Type of Program
and The Maximum Number Which Might Have Been
Accommodated

Type Program	Number Admitted	Maximum Number	Number Increase Possible	% Increase Possible
Diploma (8 Programs)*	356	681	+325	91.3%
Associate (7 Programs) (Schools admitting students 1967)	275	351	+ 76	27.6%
Baccalaureate (4 Programs)	198	269	+71	35.9%

Source: Tennessee Mid-South Regional Medical Program
Study of Nursing Education in Tennessee, 1968.
*Does not include 121 students admitted in 1967 to schools that are no longer accepting students.

With few exceptions, schools of nursing in Tennessee do not specify an established number of first year students to be admitted. The number of students admitted in any one year appears to depend upon the number of students withdrawing from the school during the previous year, thus, vacating dormitory and classroom space. This may seem an obvious solution for maximum utilization of space, but it does not necessarily indicate optimal utilization of faculty and other school facilities.

Student admissions to Tennessee schools of nursing include students who have not enrolled in nursing schools immediately following high school graduation. Among this group are a significant number of licensed practical nurses. During the 1967-1968 school year, five associate degree programs reported that 43 of 160 students were licensed practical nurses.[29]

In 1967, Negro nursing students constituted 7.8% of the nursing student enrollment in the state compared with the 1966 southern regional figure of 6.3%.[30, 31] However, 72% of Tennessee Negro nurs-

ing students were enrolled in two predominately Negro schools. One of these schools closed in 1968, while the second graduated its first class this year. When one examines the Negro enrollment in other Tennessee nursing schools, the percentage of Negro students enrolled was 2.3%. Nationally, this figure was 3% in 1965-1966.[32] Excluding the predominately Negro schools, of 18 schools admitting students in 1967, 13 reported having from one to ten Negro students.

A program for the recruitment of men students to schools of nursing in the state is being developed, and an increasing number of men have been enrolled. Forty-six (46) men were students in Tennessee schools of nursing in 1967.[33] This constitutes 2.2% of the total student enrollment in Tennessee schools of nursing as compared with the 1965-1966 national figure which was 1.5%.[34] In September 1967, men represented 7.1% of the enrollment in Tennessee associate degree programs and 1.2% of the enrollment in other nursing programs in the state.[35] Fifteen out of 23 schools of nursing reported from one to thirteen men enrolled.

While increased male enrollment in Tennessee schools of nursing is encouraging, the attrition rate is disproportionately higher for men than for women students. Out of six associate nursing programs with men enrolled in 1967, three schools reported that 45.8% of these men did not complete the school year.[36]

Completion Rate. Completion rates are based solely on the number of students admitted in one year and the number of graduates reported two, three or four years hence depending on the length of program in a given school. This does not accurately account for students who withdraw for a period of time and return later to complete the program. Nor does it account for others who transfer into schools of nursing as upperclass students. Thus, completion rates are useful only as approximations of the number of graduate nurses that might be expected based on the number of student admissions at any given time.

The overall average completion rate for students entering Tennessee schools of nursing since 1963 ranged from 42% to 60%.[37] This is a better average than the national non-nursing student completion rate for junior colleges, which is 35%; and for women in general baccalaureate education, the completion rate is 41%.[38, 39] Because of the difficulties in translating enrollment figures into potential nurse supply, the most recent national figures are for 1963-1964, when the overall school of nursing completion rate was 69.9%.[40] It is especially important in Tennessee at this time to recognize the effects

that transition and the development of new programs may have on student completion rates.
Student withdrawal rates from all nursing programs indicate a need for continued evaluation of admission standards, curricula, faculty attitudes and teaching methods, and regulations governing student behavior.

Entrance Requirements. Requirements for admission to baccalaureate schools of nursing in Tennessee are reported to be the same as admission standards for the general college or university of which these schools are a part. Four (4) of the eight diploma schools report higher entrance requirements than does the college or university with which each school has a contractual affiliation for instruction in basic sciences. Seven (7) of the nine associate degree nursing programs now have entrance requirements above the "open door" policies of the general college. Additional requirements are under consideration in the other two associate degree schools. In most of these schools, students eligible for the general college can be admitted for study in this department until such time as they can meet the nursing school admission requirements.[41]
Even with these additional requirements, six associate degree programs and one baccalaureate program reported admitting students in the lower half of their high school graduating class.[42]
The lack of qualified students applying to Tennessee schools of nursing was one reason given as a deterrent to the expansion of six (6) schools, as a factor in the closing of schools, and as a possible factor in the overall 17% failure rate on nurse licensure examinations during the past seven years.[43, 44]

Scholarships. The need for full scholarships ranged from 10% to 90% of the students admitted to Tennessee schools of nursing in 1967-1968. Of the twenty-three (23) schools admitting students last year, thirteen (13) reported that 20% to 50% of their beginning students needed full scholarships.[45]

Conclusion. The public apparently has not been made sufficiently aware (1) of the need and cost of adequate hospital and community nursing services; (2) of the amount of education necessary to acquire the knowledge upon which nursing judgment and skills are based; (3) of career opportunities in nursing for men and women in collegiate and graduate education as well as in diploma schools; and (4) of the cost of all types of nursing education.
In Tennessee, too many applicants to schools of nursing are unqualified. Of those who could qualify, too few apply to schools of nursing.

Section III

MEETING THE CRISIS

Need for Planning. Proposals for the opening of new nursing education programs and the closing of others continue in Tennessee without a state or regional plan for orderly change. Eighty percent of the nursing school directors and deans support the transition of responsibility for nurse education from hospitals to educational institutions. Others accept the necessity for this trend to continue because of the burdensome cost of education to hospitals and the need to attract qualified students and faculty. Among the directors and deans who have had administrative experience in Tennessee, there is unanimous concern about the uncoordinated proliferation of schools of nursing in the state.[46]

All deans and directors expressed support for statewide planning. Recommendations were made favoring the participation in planning by nurses, educators, those allied with community health facilities, and the public consumers of nursing services. With this reservation, the general opinion was that, to be effective and to gain support for action, statewide planning must be through an official agency.[47] The Tennessee Nurses' Association has recommended that the Tennessee Higher Education Commission be recognized as the agency responsible for statewide planning for nursing education in the State.[48] (See Appendix pages 31-35 for available educational facilities by region of the state.)

The consensus of nursing education administrators indicated such a plan should assure that the replacement of established programs will, in fact, provide a higher quality of education for greater numbers of students. Until this is a reality, established accredited hospital schools, which now admit students and graduate more than half of the present annual number, need to be supported.[49]

CONCLUSION

The nursing crisis in Tennessee will be met only through progressive implementation of a bold plan requiring responsible support by an informed public. Effective statewide planning should be a continuous process to bring about and maintain a balance between what is available and what is required to meet the nursing service needs in the provision of health services for the citizens of Tennessee.

FOOTNOTES

[1]U. S. Department of Health, Education, and Welfare, Public Health Service, *Toward Quality in Nursing — Needs and Goals,* February, 1963, p. 23.
[2]U. S. Department of Health, Education, and Welfare, *Health Manpower Source Book,* Section 2, Nursing Personnel, Revised, January, 1966, p. 108.
[3]American Nurses' Association, *A Position Paper,* New York, December, 1965, p. 5.
[4]Tennessee Board of Education, Minutes of Regular Quarterly Session, February 5, 1965.
[5]Tennessee Board of Nursing, *Annual Report to Governor for Fiscal Year 1967-1968,* p. 4.
[6]*Health Manpower Source Book,* p. 108-109.
[7]Tennessee Mid-South Regional Medical Program, "Study of Nursing Education in Tennessee," Interview, June, 1968.
[8]Tennessee Board of Nursing, "Schools of Nursing Annual Reports," 1967.
[9]American Nurses' Association, *1966 Inventory of Registered Nurses,* February, 1968.
[10]Tennessee Board of Nursing. Unpublished licensure data.
[11]Tennessee Nurses' Association, Telephone Surveys, October, 1966, and October, 1967.
[12]ANA, *1966 Inventory.*
[13]Tennessee Nurses' Association, Inactive Health Personnel Project, Interim Report, August, 1968; Final Report, October, 1968.
[14]Tennessee Council for Nursing, *Meeting the Needs For Nursing Services in Tennessee.* Edyth G. Barnes, Consultant, U. S. Public Health Service, August, 1949.
[15]*Tennessee: Action and Progress; A Statewide Survey of Nursing Resources,* Faye G. Abdellah, Consultant, U. S. Department of Health, Education, and Welfare, Public Health Service, July, 1956.
[16]Tennessee Mid-South Regional Medical Program Study.
[17]Tennessee Mid-South Regional Medical Program Study.
[18]Tennessee State Department of Education, February, 1968, Personal communication.
[19]Tennessee Mid-South Regional Medical Program Study.
[20]Tennessee Mid-South Regional Medical Program Study.
[21]ANA, *1966 Inventory.*
[22]Tennessee Mid-South Regional Medical Program Study.

[23]Tennessee Mid-South Regional Medical Program Study.
[24]Tennessee Mid-South Regional Medical Program Study.
[25]Tennessee Council For Nursing, "Is Nursing Service Available To You and Your Family?," 1950, p. 13.
[26]*Tennessee: Action and Progress,* p. 41.
[27]American Nurses Association, *Facts About Nursing,* 1968 edition, p. 86.
[28]Tennessee Mid-South Regional Medical Program Study.
[29]Tennessee Mid-South Regional Medical Program Interviews.
[30]Tennessee Hospital Education and Research Foundation, Inc., Health Careers For Tennessee, "School of Nursing Data Sheet," 1967.
[31]Hessel H. Flitter, *Nursing in the South,* Southern Regional Educational Board, January, 1968, p. 36.
[32]*Facts About Nursing,* 1968, p. 87.
[33]"Schools of Nursing Annual Report."
[34]*Facts About Nursing,* 1968, p. 87.
[35]"Schools of Nursing Annual Report."
[36]Tennessee Mid-South Regional Medical Program Study.
[37]Tennessee Mid-South Regional Medical Program Study.
[38]Robert E. Iffert, *Retention and Withdrawal of College Students,* U. S. Department of Health, Education, and Welfare, Office of Education — Bulletin 1958, No. 1, U. S. Government Printing Office, Washington, D. C., 1958, p. 91.
[39]John Summerskill, "Dropouts From College," *The American College,* Nevitt Sanford, ed. New York: John Wiley and Sons, Inc., 1964, p. 631.
[40]American Nurses' Association, *Facts About Nursing,* 1967 edition, p. 91.
[41]Tennessee Mid-South Regional Medical Program Study.
[42]Tennessee Mid-South Regional Medical Program Study.
[43]Tennessee Mid-South Regional Medical Program Study.
[44]Tennessee Mid-South Regional Medical Program Study.
[45]Tennessee Board of Nursing, Unpublished licensure data, 1962-1968.
[46]Tennessee Mid-South Regional Medical Program Study.
[47]Tennessee Mid-South Regional Medical Program Study.
[48]Tennessee Nurses' Association, "Statement to Legislative Council Committee," August 7, 1967, p. 4.
[49]Tennessee Mid-South Regional Medical Program Interviews.

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Appendix

Registered Nurses Active in Tennessee 1966
By Field of Employment and Educational Preparation

All Regions — Population 3,866,000

Field of Employment	Total	Diploma	Associate	Baccalaureate	Masters In Nursing	Masters In Other Field	Doctorate
Hospital or Other Institution	4267	3762	80	377	22	25	—
School of Nursing	278	110	1	102	47	17	2
Private Duty	612	590	3	18	—	1	—
Public Health	459	361	2	82	9	5	—
School Nurse	86	69	4	10	—	3	—
Industrial Nurse	305	286	5	12	—	2	—
Office Nurse	350	335	3	11	—	—	—
Other	14	8	1	3	—	2	1
Information Incomplete	256	228	5	21	1	1	—
Totals	6627	5749	104	636	79	56	3
Percent of Totals	100%	86.75%	1.57%	9.59%	1.19%	.85%	.05%

Region I First Tennessee Economic Development District — Population 344,808

Field of Employment	Total	Diploma	Associate	Baccalaureate	Masters In Nursing	Masters In Other Field	Doctorate
Hospital or Other Institution	443	360	16	63	2	2	—
School of Nursing	19	9	—	6	4	—	—
Private Duty	39	38	—	1	—	—	—
Public Health	30	21	—	9	—	—	—
School Nurse	13	10	—	3	—	—	—
Industrial Nurse	47	41	2	3	—	1	—
Office Nurse	23	22	—	1	—	—	—
Other	—	—	—	—	—	—	—
Information Incomplete	28	26	1	1	—	—	—
Totals	642	527	19	87	6	3	—

Region II East Tennessee Economic Development District — Population 692,978

Field of Employment	Total	Diploma	Associate	Baccalaureate	Masters In Nursing	Masters In Other Field	Doctorate
Hospital or Other Institution	833	790	4	35	2	2	—
School of Nursing	64	27	—	30	2	5	—
Private Duty	133	128	—	5	—	—	—
Public Health	81	62	1	16	1	1	—
School Nurse	23	20	—	3	—	—	—
Industrial Nurse	79	78	—	1	—	—	—
Office Nurse	90	88	—	2	—	—	—
Other	—	—	—	—	—	—	—
Information Incomplete	40	37	—	3	—	—	—
Totals	1343	1230	5	95		8	—

Source: American Nurses' Association, 1966 *Inventory of Registered Nurses*, February 1968.
Bureau of Business and Economic Research, University of Tennessee, "Estimates of Tennessee Total Resident Population by County, As of July 1, 1960-1966", Revised.
Baccalaureate figures include RN's responding to "Baccalaureate or Higher Degree" category.
Diploma figures include RN's responding to "No Degree" category.
School of Nursing figures include RN faculty teaching in practical nurse programs.
Figures have been adjusted when duplication or errors have been noted.

Appendix

Registered Nurses Active in Tennessee 1966
By Field of Employment and Educational Preparation

Region III Southeast — Population 405,482

Field of Employment	Total	Diploma	Associate	Baccalaureate	Masters In Nursing	Masters In Other Field	Doctorate
Hospital or Other Institution	408	377	5	20	1	5	—
School of Nursing	30	14	—	9	6	1	—
Private Duty	61	58	—	3	—	—	—
Public Health	51	40	1	7	2	1	—
School Nurse	11	11	—	—	—	—	—
Industrial Nurse	56	55	—	1	—	—	—
Office Nurse	45	44	—	1	—	—	—
Other	1	1	—	—	—	—	—
Information Incomplete	30	28	1	1	—	—	—
Totals	693	628	7	42	9	7	—

Region IV Upper Cumberland — Population 191,264

Field of Employment	Total	Diploma	Associate	Baccalaureate	Masters In Nursing	Masters In Other Field	Doctorate
Hospital or Other Institution	76	68	—	8	—	—	—
School of Nursing	—	—	—	—	—	—	—
Private Duty	3	3	—	—	—	—	—
Public Health	19	18	—	1	—	—	—
School Nurse	6	4	1	—	—	1	—
Industrial Nurse	—	—	—	—	—	—	—
Office Nurse	8	8	—	—	—	—	—
Other	—	—	—	—	—	—	—
Information Incomplete	4	2	—	2	—	—	—
Totals	116	103	1	11	—	1	—

Region V Mid-Cumberland — Population 770,536

Field of Employment	Total	Diploma	Associate	Baccalaureate	Masters In Nursing	Masters In Other Field	Doctorate
Hospital or Other Institution	1007	843	23	127	9	5	—
School of Nursing	70	19	1	25	19	5	1
Private Duty	111	105	1	4	—	1	—
Public Health	121	91	—	25	3	2	—
School Nurse	16	14	—	1	—	1	—
Industrial Nurse	56	54	—	2	—	—	—
Office Nurse	72	69	2	1	—	—	—
Other	7	2	—	3	—	2	—
Information Incomplete	68	58	1	8	1	—	—
Totals	1528	1255	28	195	32	16	1

Source: American Nurses' Association, 1966 *Inventory of Registered Nurses*, February 1968.
Bureau of Business and Economic Research, University of Tennessee, "Estimates of Tennessee Total Resident Population by County, As of July 1, 1960-1966", Revised.
Baccalaureate figures include RN's responding to "Baccalaureate or Higher Degree" category.
Diploma figures include RN's responding to "No Degree" category.
School of Nursing figures include RN faculty teaching in practical nurse programs.
Figures have been adjusted when duplication or errors have been noted.

Appendix

Registered Nurses Active in Tennessee 1966
By Field of Employment and Educational Preparation

Region VI South Central — Population 267,009

Field of Employment	Total	Diploma	Associate	Baccalaureate	Masters In Nursing	Masters In Other Field	Doctorate
Hospital or Other Institution	155	146	—	8	—	1	—
School of Nursing	4	4	—	—	—	—	—
Private Duty	12	12	—	—	—	—	—
Public Health	35	26	—	8	1	—	—
School Nurse	7	5	—	2	—	—	—
Industrial Nurse	12	10	2	—	—	—	—
Office Nurse	14	14	—	—	—	—	—
Other	1	1	—	—	—	—	—
Information Incomplete	11	10	—	1	—	—	—
Totals	251	228	2	19	1	1	—

Region VII Northwest — Population 217,137

Field of Employment	Total	Diploma	Associate	Baccalaureate	Masters In Nursing	Masters In Other Field	Doctorate
Hospital or Other Institution	89	80	5	4	—	—	—
School of Nursing	2	1	—	—	—	1	—
Private Duty	3	3	—	—	—	—	—
Public Health	22	21	—	1	—	—	—
School Nurse	3	2	—	1	—	—	—
Industrial Nurse	9	9	—	—	—	—	—
Office Nurse	7	6	1	—	—	—	—
Other	—	—	—	—	—	—	—
Information Incomplete	4	4	—	—	—	—	—
Totals	139	126	6	6	—	1	—

Region VII Southwest — Population 976,416

Field of Employment	Total	Diploma	Associate	Baccalaureate	Masters In Nursing	Masters In Other Field	Doctorate
Hospital or Other Institution	1256	1098	27	112	8	10	—
School of Nursing	89	36	—	32	16	5	1
Private Duty	250	243	2	5	—	—	—
Public Health	100	82	—	15	2	1	—
School Nurse	7	3	1	2	—	1	—
Industrial Nurse	46	39	1	5	—	1	—
Office Nurse	91	84	—	6	—	—	—
Other	5	4	1	—	—	—	1
Information Incomplete	71	63	2	5	—	1	—
Totals	1915	1652	34	182	26	19	2

Source: American Nurses' Association, 1966 *Inventory of Registered Nurses*, February 1968.
Bureau of Business and Economic Research, University of Tennessee, "Estimates of Tennessee Total Resident Population by County, As of July 1, 1960-1966", Revised.
Baccalaureate figures include RN's responding to "Baccalaureate or Higher Degree" category.
Diploma figures include RN's responding to "No Degree" category.
School of Nursing figures include RN faculty teaching in practical nurse programs.
Figures have been adjusted when duplication or errors have been noted.

Appendix

Inactive Nurses in Tennessee 1966
By Age, Educational Preparation, and
Comprehensive Planning Region of Tennesseee

All Regions

Age	Total	Diploma	Associate	Bacca-laureate	Masters In Nursing	Masters In Other Field	No Response
Under 30	308	229	7	37	1	—	34
30-39	930	588	11	125	5	2	199
40-49	677	411	3	57	3	7	196
50-59	329	185	2	14	1	5	122
60 +	292	112	3	11	—	4	162
No Response	44	15	—	8	—	—	21
Totals	2580	1540	26	252	10	18	734

Region I First Tennessee Economic Development District

Age	Total	Diploma	Associate	Bacca-laureate	Masters In Nursing	Masters In Other Field	No Response
Under 30	27	19	1	6	—	—	1
30-39	87	60	—	15	1	—	11
40-49	60	40	—	8	—	—	12
50-59	27	21	—	1	—	—	5
60 +	27	12	—	2	—	—	13
No Response	5	—	—	2	—	—	3
Totals	233	152	1	34	1	—	45

Region II East Tennessee Economic Development District

Age	Total	Diploma	Associate	Bacca-laureate	Masters In Nursing	Masters In Other Field	No Response
Under 30	70	49	1	10	—	—	10
30-39	201	132	2	23	1	—	43
40-49	147	94	—	11	1	2	39
50-59	69	42	—	—	—	2	25
60 +	56	21	1	3	—	—	31
No Response	9	4	—	1	—	—	4
Totals	552	342	4	48	2	4	152

Source: American Nurses' Association, 1966 *Inventory of Registered Nurses*, February 1968.

Note: Computations are based on initial 1966 Inventory figures for inactive nurses. Adjusted tables are being published which will show some differences not considered statistically significant. Figures have been adjusted when duplication or errors have been noted.

Tennessee State Planning Division, Tennessee State Planning Commission, *Tennessee Regions for Comprehensive Planning and Division*, March 1968.

Appendix

Inactive Nurses in Tennessee 1966 By Age, Educational Preparation, and Comprehensive Planning Region of Tennesseee

Region III Southeast

Age	Total	Diploma	Associate	Bacca-laureate	Masters In Nursing	Masters In Other Field	No Response
Under 30	37	30	—	4	—	—	3
30-39	90	60	2	8	—	—	20
40-49	74	41	—	4	1	1	27
50-59	51	31	—	2	—	—	18
60 +	26	13	—	1	—	1	11
No Response	5	3	—	1	—	—	1
Totals	283	178	2	20	1	2	80

Region IV Upper Cumberland

Age	Total	Diploma	Associate	Bacca-laureate	Masters In Nursing	Masters In Other Field	No Response
Under 30	6	5	—	—	—	—	1
30-39	24	16	—	1	—	—	7
40-49	12	5	—	2	—	—	5
50-59	4	2	—	—	—	—	2
60 +	8	5	—	—	—	—	3
No Response	3	1	—	1	—	—	1
Totals	57	34	—	4	—	—	19

Region V Mid Cumberland

Age	Total	Diploma	Associate	Bacca-laureate	Masters In Nursing	Masters In Other Field	No Response
Under 30	83	58	3	10	1	—	11
30-39	230	133	3	41	2	—	51
40-49	133	85	1	15	1	1	30
50-59	73	36	1	9	1	2	24
60 +	58	18	—	2	—	2	36
No Response	11	1	—	2	—	—	8
Totals	588	331	8	79	5	5	160

Source: American Nurses' Association, 1966 *Inventory of Registered Nurses*, February 1968.

Note: Computations are based on initial 1966 Inventory figures for inactive nurses. Adjusted tables are being published which will show some differences not considered statistically significant. Figures have been adjusted when duplication or errors have been noted.

Tennessee State Planning Division, Tennessee State Planning Commission, *Tennessee Regions for Comprehensive Planning and Division*, March 1968.

Appendix

Inactive Nurses in Tennessee 1966 By Age, Educational Preparation, and Comprehensive Planning Region of Tennesseee

Region VI South Central

Age	Total	Diploma	Associate	Bacca-laureate	Masters In Nursing	Masters In Other Field	No Response
Under 30	13	11	—	1	—	—	1
30-39	42	29	1	3	—	—	9
40-49	24	13	—	1	—	—	10
50-59	19	10	1	—	—	1	7
60 +	17	6	—	1	—	—	10
No Response	1	1	—	—	—	—	—
Totals	116	70	2	6	—	1	37

Region VII Northwest

Age	Total	Diploma	Associate	Bacca-laureate	Masters In Nursing	Masters In Other Field	No Response
Under 30	9	9	—	—	—	—	—
30-39	22	13	1	2	1	—	5
40-49	23	12	1	2	—	—	8
50-59	11	5	—	—	—	—	6
60 +	9	7	1	—	—	—	1
No Response	—	—	—	—	—	—	—
Totals	74	46	3	4	1	—	20

Region VIII Southwest

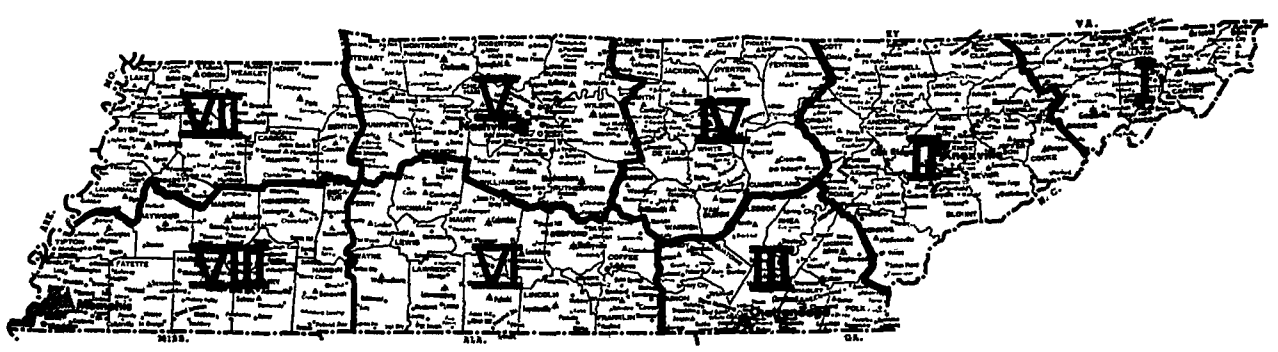
Age	Total	Diploma	Associate	Bacca-laureate	Masters In Nursing	Masters In Other Field	No Response
Under 30	63	48	2	6	—	—	7
30-39	234	145	2	32	—	2	53
40-49	204	121	1	14	—	3	65
50-59	75	38	—	2	—	—	35
60 +	91	30	1	2	—	1	57
No Response	10	5	—	1	—	—	4
Totals	677	387	6	57	—	6	221

Source: American Nurses' Association, 1966 *Inventory of Registered Nurses*, February 1968.

Note: Computations are based on initial 1966 Inventory figures for inactive nurses. Adjusted tables are being published which will show some differences not considered statistically significant. Figures have been adjusted when duplication or errors have been noted.

Tennessee State Planning Division, Tennessee State Planning Commission, *Tennessee Regions for Comprehensive Planning and Division*, March 1968.

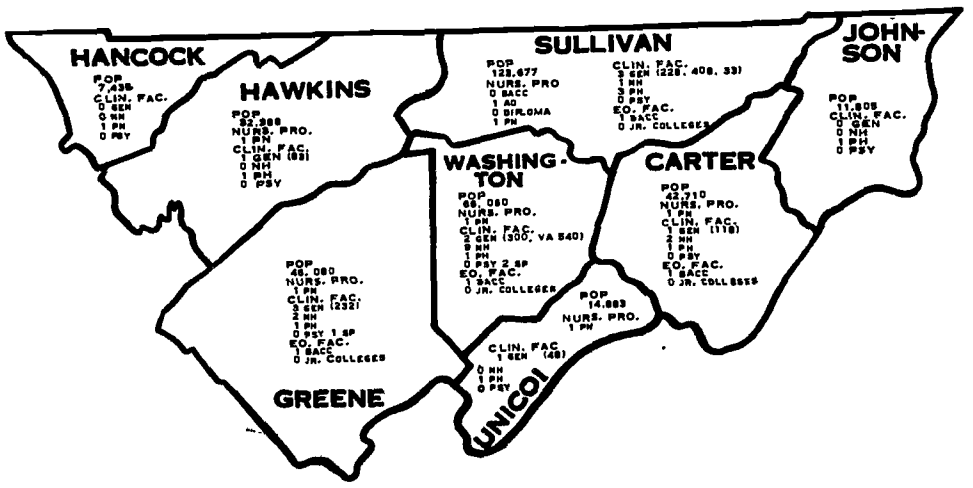
Tennessee facilities for Professional Nurse Education and Practical Nurse Programs by REGION and COUNTY



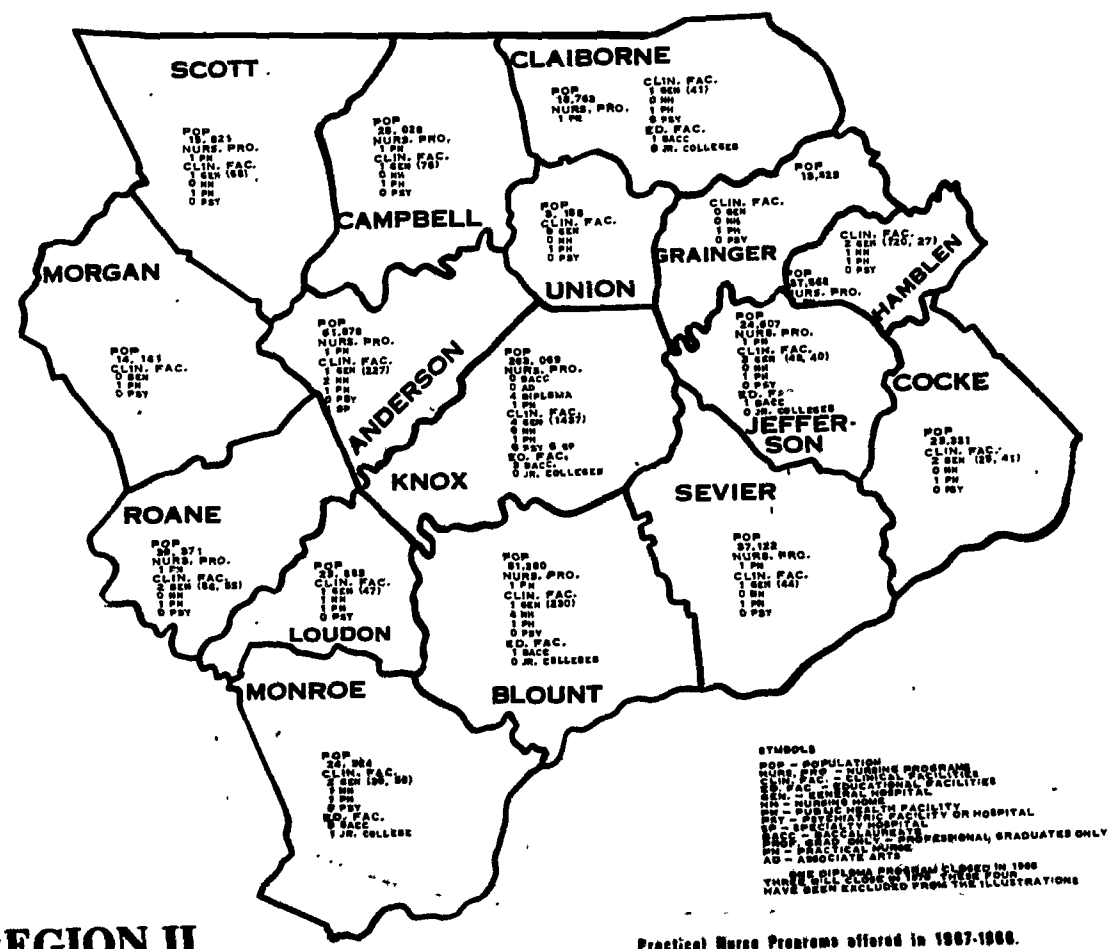
Practical Nurse Programs offered in 1967-1968.
These programs are offered as needed ...not necessarily every year.

Sources:

(1) Bureau of Business and Economic Research, University of Tennessee, Estimates of Tennessee Total Resident Population, By County, As of July 1, 1960-1966, March 1967. "The county estimates are shown in the detail as calculated without implication of specific accuracy. Aggregates may not add exactly to totals because of independent rounding."
(2) Hospitals, Guide Issue, Journal of the American Hospital Association, AHA, Part Two, August 1, 1968, pp. 196-201.
(3) Tennessee Hospital Education and Research Foundation, Inc., Long Term Care Program, Annual Report, 1967, pp. 151-251.
(4) Tennessee Department of Education, Division of Vocational Technical Education, Practical Nurse Programs, Fiscal Year 1967-1968, Personal Communication, September 27, 1968.

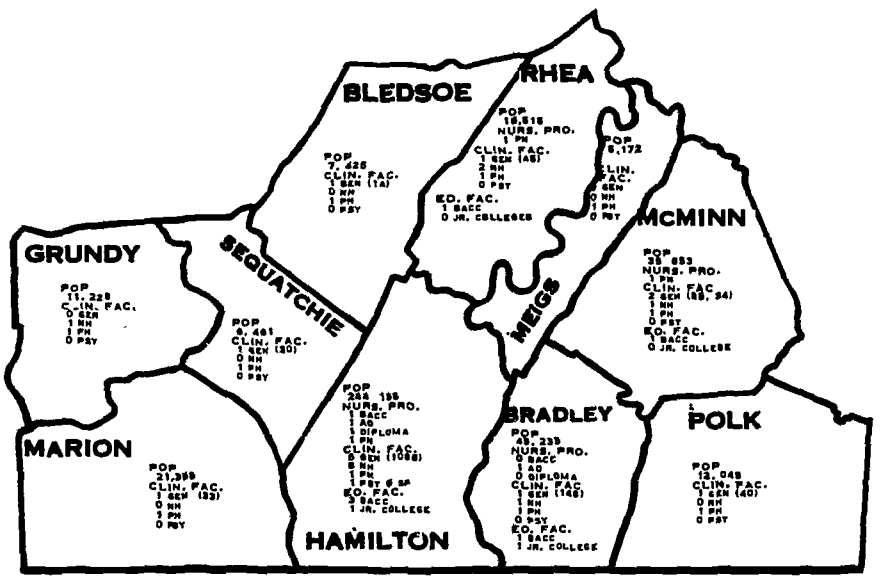


REGION I



REGION II

Practical Nurse Programs offered in 1967-1968.
These programs are offered as needed"...not necessarily every year.



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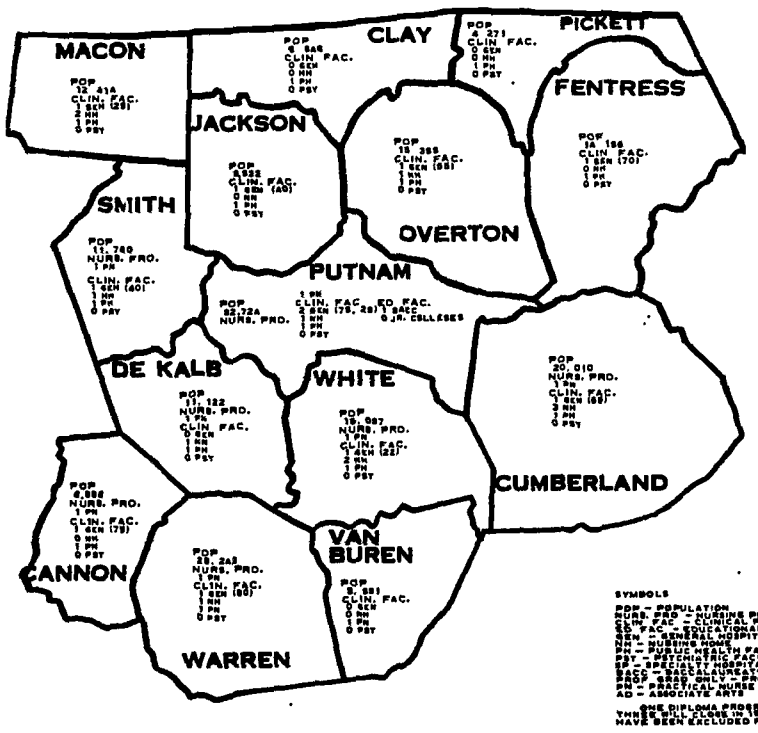
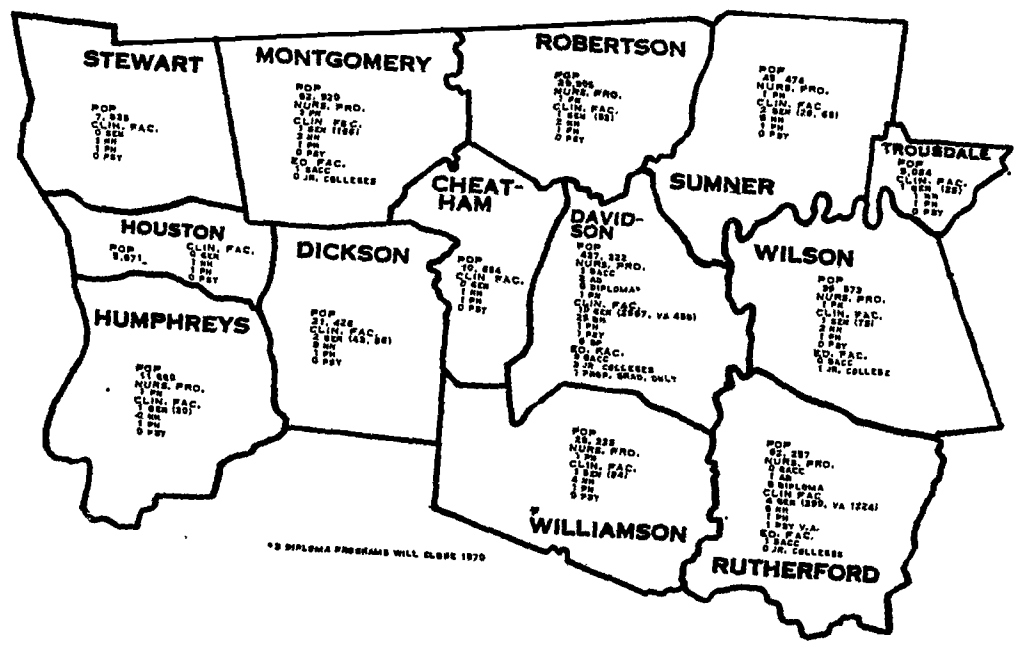
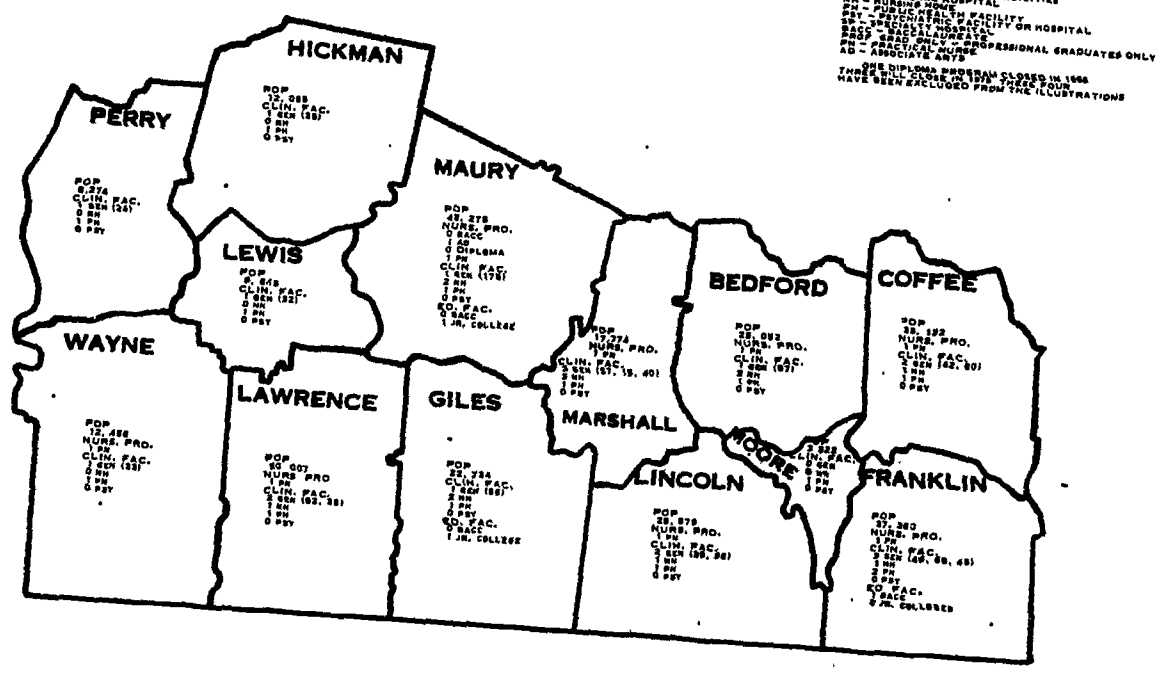


REGION IV

Practical Nurse Programs offered in 1987-1988.
These programs are offered as needed ...not necessarily every year.



REGION V

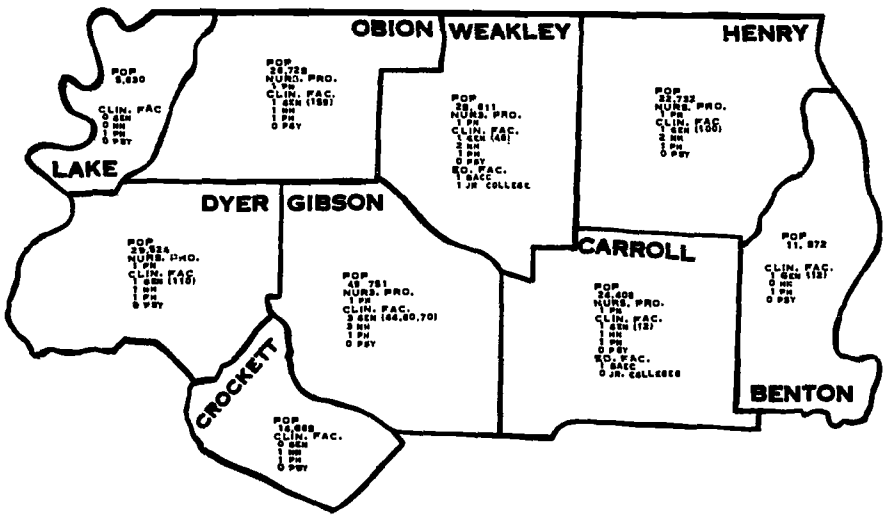


SYMBOLS
POP – POPULATION
NURS. PRO. – NURSING PROGRAMS
CLIN. FAC. – CLINICAL FACILITIES
EDU. FAC. – EDUCATIONAL FACILITIES
MH – MENTAL HOSPITAL
NH – NURSING HOME
PH – PUBLIC HEALTH
PHY – PHYSICIAN/HEALTH FACILITY
GEN – GENERAL HOSPITAL
BACC – BACCALAUREATE
GRAD – GRADUATES
PN – PRACTICAL NURSE
AD – ASSOCIATE DEGREE

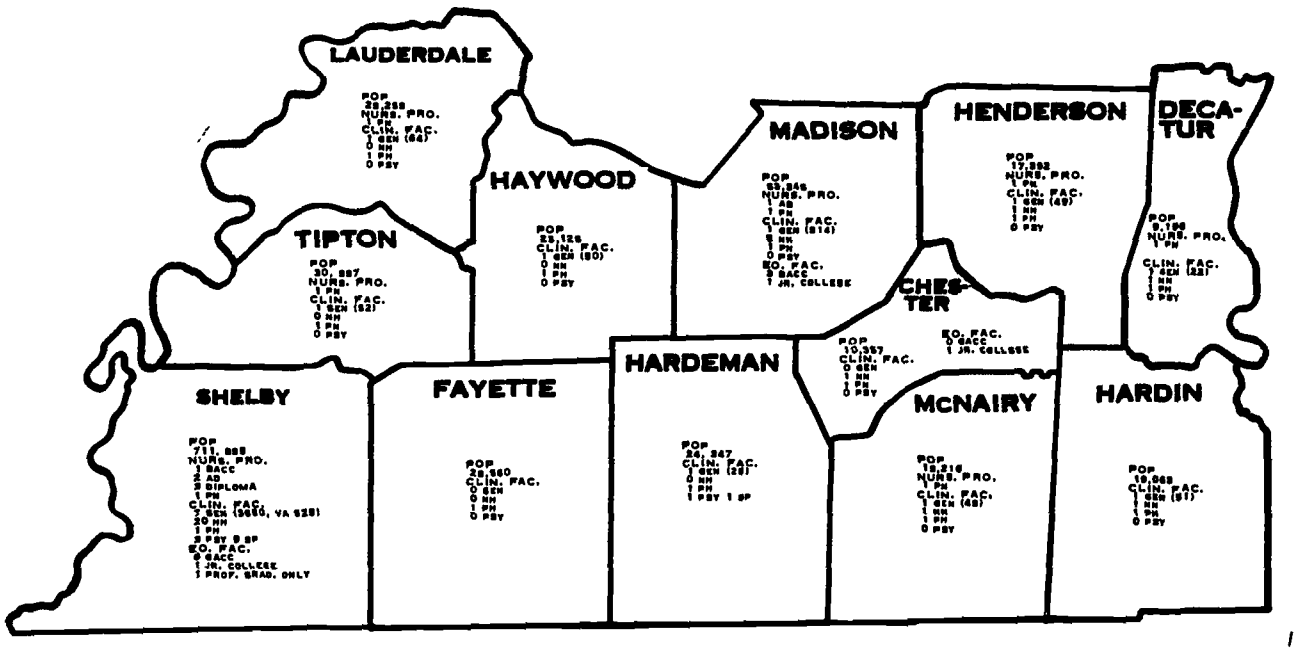
*ONE DIPLOMA PROGRAM CLOSED IN 1968
THREE WILL CLOSE IN 1970 – THESE FOUR
HAVE BEEN EXCLUDED FROM THE ILLUSTRATIONS

REGION VI

Practical Nurse Programs offered in 1967-1968.
These programs are offered as needed ...not necessarily every year.



REGION VII



SYMBOLS
POP – POPULATION
NURS PRO – NURSING PROGRAMS
CLIN. FAC – CLINICAL FACILITIES
ED. FAC – EDUCATIONAL FACILITIES
GEN. – GENERAL HOSPITAL
NH – NURSING HOME
PH – PUBLIC HEALTH FACILITY
PSY – PSYCHIATRIC FACILITY OR HOSPITAL
SP – SPECIALTY HOSPITAL
BACC – BACCALAUREATE
PROF. GRAD ONLY – PROFESSIONAL GRADUATES ONLY
PN – PRACTICAL NURSE
AD – ASSOCIATE ARTS

ONE DIPLOMA PROGRAM CLOSED IN 1986
THREE WILL CLOSE IN 1988. THESE FOUR
HAVE BEEN EXCLUDED FROM THE ILLUSTRATIONS

REGION VIII

Practical Nurse Programs offered in 1987-1988.
These programs are offered as needed ...not necessarily every year.

Appendix

Associate Degree Program Faculty (Chairmen, Deans Included) Salary and Highest Academic Preparation (State, Denominational and Private Support)

Type of Support	Diploma or Associate Degree	B.S.N. Nursing	B.S. or B.A. (Other)	M.S. or M.A. Nursing	M.S. or M.A. (Other)	Doctorate
State Modal Salary Range	—	$7000 - 8999	$5000 - 6999	$11,000 - 12,999	$9000 - 10.999	—
Overall Salary Range	—	$5000 - 10,999	$5000 - 6999	$7000 - 12,999	$7000 - 14.999	—
Total Respondents = 18						
Denominational Modal Salary Range	—	$5000 - 8999	$5000 - 6999	$9000 - 10,999	$5000 - 6999	—
Overall Salary Range	—	$5000 - 8999	$5000 - 6999	$9000 - 10,999	$5000 - 6999	—
Total Respondents = 8						
Private Modal Salary Range	—	—	—	$9000 - 10,999	—	—
Overall Salary Range	—	—	—	$9000 - 10,999	—	—
Total Respondents = 3						

Appendix

Baccalaureate Program Faculty (Chairmen, Deans Included) Salary and Highest Academic Preparation (State, Denominational and Private Support)

Type of Support	Diploma or Associate Degree	B.S.N. Nursing	B.S. or B.A. (Other)	M.S. or M.A. Nursing	M.S. or M.A. (Other)	Doctorate
State Modal Salary Range	—	$7000 - 8999	$9000 - 10,999	$7000 - 8999	$9000 - 10,999	$13,000 - 14,999
Overall Salary Range	—	$5000 - 10.999	$9000 - 10,999	$5000 - 12,999	$9000 - 12,999	$13,000 - 14,999
Total Respondents = 34						
Denominational Modal Salary Range	—	$5000 - 6999	—	$5000 - 6999	—	—
Overall Salary Range	—	$5000 - 6999	—	$5000 - 6999	—	—
Total Respondents = 8						
Private Modal Salary Range	—	—	—	$7000 - 8999	$11,000 - 12,999	$15,000 - 16,999
Overall Salary Range	—	—	—	$5000 - 16,999	$11,000 - 12,999	$11,000 - 19,000+
Total Respondents = 21						

Appendix

Diploma Program Faculty (Chairmen, Deans Included) Salary and Highest Academic Preparation

Type of Support	Diploma or Associate Degree	B.S.N. Nursing	B.S. or B.A. (Other)	M.S. or M.A. Nursing	M.S. or M.A. (Other)	Doctorate
Modal Salary Range	$5000 - 6999	$7000 - 8999	$7000 - 8999	$7000 - 8999	$7000 - 10,999	—
Overall Salary Range	$5000 - 8999	$5000 - 8999	$5000 - 10,999	$5000 - 12,999	$5000 - 12,999	—
Total Respondents = 127						

Appendix

Number and Distribution of Responses to Tennessee Mid-South Regional Medical Program Study of Nursing Education in Tennessee, 1968, By Type of Program and Questionnaire*

	Associate Degree Programs	Baccalaureate Programs	Diploma Programs	Total Response
Deans and Directors (All Questionnaire Sections)	(9) 100.0%	(4) 100.0%	(12) 100.0%	(25) 100.0%
Faculty (Nursing Preparation Section)	(27) 77.1%	(66) 82.3%	(128) 80.0%	(221) 80.1%
Faculty (Teaching Section)	(21) 60.0%	(40) 49.4%	(117) 73.1%	(178) 64.5%
Faculty (Salary, Benefits Increments Section)	(27) 77.1%	(67) 82.7%	(134) 83.4%	(228) 82.6%
Students (Most Advanced Class) (Student Section)	(131) 25.7%	(72) 14.1%	(306) 61.2%	(544)

*The Tennessee Board of Nursing, Schools of Nursing Annual Reports, showed that in 1967 there were 35 faculty employed in associate arts programs, 81 in baccalaureate programs and 160 in diploma programs.

VT 007 980
Albracht, James
Vocational Agriculture Course Objectives and Occupational Work Experience.

Kansas State Univ., Manhatten. Coll. of Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jun68 6p.

*GUIDELINES; *VOCATIONAL AGRICULTURE; *COOPERATIVE EDUCATION; *AGRICULTURAL OCCUPATIONS; *EDUCATIONAL OBJECTIVES
KANSAS; KANSAS STATE UNIVERSITY

Vocational agriculture course objectives and guidelines for occupational work experience are specified for use by local schools in planning programs. The content includes: (1) vocational agriculture course objectives, (2) occupational experience agreement, (3) supervised work experience evaluation, (4) guidelines for cooperative education programs in vocational education, and (5) ideas for related instruction for occupations. (DM)

VT 007 980

ED042060

1,1

(21)
6 p.

Vocational Agriculture Course Objectives and Occupational Work Experience

Purposes:

To identify the objectives of vocational agriculture

To identify the role of the student, parent, employer, and instructor during the occupational experience

To identify the knowledges, understandings, and abilities to be developed by the student during the occupational experience

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James Albracht
College of Education
Kansas State University
June 1968

VT007980

VOCATIONAL AGRICULTURE COURSE OBJECTIVES

Vocational Agriculture I

1. To develop a knowledge of the opportunities in agricultural occupations.
2. To develop the ability to keep farming program records.
3. To develop the ability to speak effectively.
4. To develop the ability to perform basic agricultural mechanics skills properly and safely.

Vocational Agriculture II

1. To develop an understanding of several agricultural occupations.
2. To develop the ability to produce livestock efficiently.
3. To develop the ability to balance livestock rations effectively.
4. To develop the ability to use parliamentary procedure effectively.
5. To develop the ability to apply the basic agricultural mechanics skills effectively.

Vocational Agriculture III

1. To develop a plan for the exploration of one or more agricultural occupations.
2. To develop the ability to produce crops efficiently.
3. To develop the ability to use land efficiently and effectively.
4. To develop the ability to analyze agricultural records.
5. To develop the ability to maintain and service electrical circuits and motors.

Vocational Agriculture IV

1. To develop the ability to advance in an agricultural occupation.
2. To develop the ability to plan and organize an agricultural business.
3. To develop the ability to market agricultural products effectively.
4. To develop the ability to maintain and adjust farm power and machinery.

The following program is suggested as a minimal involvement in agricultural occupations by vocational agriculture departments

1. 9th grade - explore opportunities in agricultural occupations

2. 10th grade - how to prepare for an occupation
   a. each boy selects three occupations
   b. does research on one occupation

3. 11th grade - explore occupational opportunities
   a. do research on two other occupations selected during the 10th grade
      (1) the reports are to be written
      (2) use two books for researching each report
   b. interview businesses involved in selected occupations

4. 12th grade - explore the job and observation
   a. select one of the businesses interviewed and observe at least 18 hrs. after school or Saturdays

JA:KSU:68

Occupational Experience Agreement

Responsibilities of the student, parent, employer, principal, and the instructor in occupational experience

Student

Keep the employer's interests in mind, be punctual, dependable, loyal, and keep the operations of the employer's business in strict confidence
Dress appropriately, accept adult responsibilities with maturity, and try to maintain favorable employee relationships
Keep records of the occupational experience, and make reports to the school as required

Parent

Cooperate with the student, employer, principal, and instructor in the occupational experience program
Be responsible for the transportation of the students to and from the occupational experience placement

Employer

Cooperate with the student, parent, principal, and instructor in the occupational experience program, and participate in the establishment of occupational experience policies
Offer the student the opportunity to observe or work with safety in an occupation, provide the student with the opportunity to acquire as many employment skills as possible, and make an appraisal of the student's efforts

Principal

Participate in the establishment of the policies for the occupational experience, and cooperate with and support the program

Instructor

Relate the class instruction with the occupational placement, and be responsible for efficient follow-up instruction
Visit with the student on the job so that the student receives the maximum benefit from the occupational experience, and counsel with the student as soon as problems arise

Student_____ Employer_____

Parent_____ Principal_____

Instructor_____

KSU:JA:68

Supervised Work Experience

Student _____ Employer _____

Parent _____ Instructor _____

If possible, the employer should provide the student with the opportunity to observe or perform the following knowledges, understandings, and abilities* which are involved in the operation of the business.

	Student Accomplishment		
	High	Medium	Low
1. Knowledge of the products sold by the business			
2. Knowledge of the services performed by the business			
3. Knowledge of the problems of the business			
4. Knowledge of the operational policies of the business			
5. Knowledge of the record keeping system used by the business			
6. Understanding of the personal traits which are necessary for employees of the business			
7. Understanding of promotional techniques which are used by the business			
8. Understanding of the sales techniques which are used by the business			
9. Ability to fill out a sales ticket			
10. Ability to fill out a work order			
11. Ability to perform as an entry level employee			

* knowledge - a familiarity with and recognition of certain information.
understanding - the comprehension of certain knowledge.
ability - skill in applying knowledge and understanding to actual situations.

KSU;JA:68

COOPERATIVE EDUCATION PROGRAMS

IN

VOCATIONAL EDUCATION

All cooperative programs in vocational education shall meet the following criteria:

1. Students enrolled in cooperative education programs must:

   (a) Be at least 16 years of age.
   (b) Possess the necessary physical qualifications for the job.
   (c) Have the necessary personal characteristics.
   (d) Have the scholastic ability necessary to meet job requirements, and
   (e) Have the ability to carry the school load along with the on-the-job training.

2. Each student-learner shall be employed for not less than 15 hours per week, the major portion of which shall be during the regular school day. Exceptions may be made upon approval by the appropriate State Supervisor.

3. A written agreement shall be made between the employer, school and the student-learner, detailing the terms of cooperation between these several agencies as assurance that the employment of the student-learner is in conformity with Federal, State and local laws and regulations covering employment.

4. The student-learner should receive a wage equal to that normally paid a beginning employee in a similar job.

5. An organized program of training on the job, developed cooperatively by the teacher-coordinator and employer, shall be provided in writing for each student.

6. The duration of the training program shall be of sufficient length to develop the occupational competencies necessary for employability.

7. Each student-learner shall receive one hour per day, or its equivalent, of supplemental vocational instruction in school.

8. The student-learner's course of study shall include:

   (a) General related information that is of value to any employed youth.
   (b) Specific information that is directly related to his vocational objective and is essential for success in terms of job knowledge and occupational competencies.

DP/DB

Ideas for Related Instruction for Occupations*

1. Getting and holding the job
2. Analyzing wants and needs
3. Budgeting income
4. Importance of saving
5. Savings programs
6. Substitutes for money
7. Credit and the customer
8. Installment credit
9. Planning before shopping
10. Using advertising intelligently
11. Improving advertising standards
12. Owning a business
13. How to start a business
14. Income-tax problems
15. Income-tax deductions
16. Accident and health insurance
17. Life insurance
18. Property insurance
19. Teamwork and progress
20. Self management
21. Satisfaction with one's work and occupation
22. Stick-to-it-iveness
23. Common sense and earning power
24. Verbal blunders
25. Telephone techniques
26. Shop talk
27. The public will be served
28. How to find a job
29. Office talk
30. Stepping-up

*On-the-Job Training for Over-Age Elementary-School Students, by Ralph O. Gallington and Helen J. Evans, School Shop, Vol. XXV, No. 8, April 1966, pp. 73-75

VT 008 013
Statements Regarding Practical Nursing and Practical Nursing Education.

National League for Nursing, New York, N.Y. Dept. of Practical Nursing Programs
MF AVAILABLE IN VT-ERIC SET.
National League for Nursing, 10 Columbus Circle, New York, New York 10019 ($1.00).
Pub Date - 68 18p.

*HEALTH OCCUPATIONS EDUCATION; *PRACTICAL NURSING; *TEACHER QUALIFICATIONS; PROFESSIONAL ASSOCIATIONS; INSERVICE COURSES; *STANDARDS
*NATIONAL LEAGUE FOR NURSING

The first of four sections in the document explains the National League for Nursing philosophy regarding practical nursing, including the belief that practical nursing, to develop properly, must be viewed as an integral part of nursing; as well as the belief that prospective students should be informed of all opportunities in nursing education so that they will choose programs appropriate to their abilities, interests, and goals. The second section presents characteristics of education for practical nursing including: (1) usual length of one year, (2) operation under diverse administrative controls, and (3) wide age range of students. The third section discusses the abilities needed by instructors of practical nursing concluding that these are similar to the abilities needed by teachers of professional nursing. Some of these are the ability to: (1) organize a curriculum with core content extracted from the broad general content in nursing, (2) make decisions about relevancy to the practical nurse role of facts and principles drawn from the social, biological, and physical sciences, and (3) teach a heterogeneous group. The final section encourages programs of inservice, refresher, and extension education that will not augment nursing services, but will be pertinent to patient needs and relevant to the practical nurse role, correlating theory with practice. (JK)

VT 008 013

ED042060

STATEMENTS REGARDING PRACTICAL NURSING
and
PRACTICAL NURSING EDUCATION

Revised Edition

- NLN Philosophy Relating to Practical Nursing
- Characteristics of Education for Practical Nursing
- Abilities Needed by Instructors of Practical Nursing
- Continuing Education for the Licensed Practical or Vocational Nurse

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VT008013

NATIONAL LEAGUE FOR NURSING
Department of Practical Nursing Programs

1968

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NLN PHILOSOPHY RELATING TO PRACTICAL NURSING

The statements were originally prepared by a committee of the National League for Nursing Board of Directors and approved by the NLN Board in 1958. The statements were revised by the Council of Practical Nursing Programs in 1968.

Beliefs

The National League for Nursing recognizes that there are basic health needs of people that are common to all age groups and to people with deviations from health in all settings. Within this broad scope, there are certain needs that the practical or vocational nurse* is meeting in assisting the patient in his return to and maintenance of optimum health and functioning.

Practical nursing is an integral part of nursing. Therefore, the service rendered by the practical nurse and the educational programs for the preparation of this practitioner can be developed properly only when viewed as an interrelated, coordinated part of all nursing service and nursing education.

NLN must continue to concern itself with practical nursing service and practical nursing education in order to fulfill its purpose of improving nursing services. This concern must be sustained in order to help meet the challenge of the ever increasing health needs of the people. The important aspects to be developed within NLN's program for practical nursing are those that pertain to recruitment of suitable candidates into practical nursing, those that pertain to education and utilization of the practical nurse, and those that have to do with interorganizational relationships.

Recruitment

The team relationship of practical nurses to professional nurses is an important concept to be interpreted in all recruitment materials.

Prospective students should be informed of all opportunities in nursing education, so that they may select the program appropriate to

* Hereafter, the phrase "practical or vocational nurse" will be shortened to "practical nurse."

their abilities, interests, and goals. To meet the challenge of recruitment of nurse manpower, those who counsel potential candidates should have knowledge of the present and future trends in nursing education.

Education

The educational program for practical nursing should be designed according to sound educational principles and should incorporate selected learning experiences appropriate to the role of the practical nurse on the health team.

The faculty should be responsible for developing and implementing a course of studies showing a realistic articulation of foundation knowledges and clinical learning experiences. The learning experiences should form a meaningful sequence that spans the entire program. Inherent in a soundly planned curriculum is the necessity to evaluate outcomes according to stated goals.

Practical nursing students may be prepared in the same clinical facilities in which professional nursing students are being taught, but each group should have its own faculty in order to ensure proper implementation of each program.

Teachers in practical nursing schools need preparation for the broad scope of nursing to which practical nursing must relate and, in addition, need preparation for teaching. NLN has the responsibility of helping teachers in practical nursing schools through curriculum conferences, workshops, and other means of implementing their programs.

Improvement on the Job

Licensed practical nurses come to the employing agency with varying backgrounds. Therefore, it is expected that employing agencies will make provision, through planned programs of inservice education, for meeting the needs of the licensed practical nurse as they relate to on-the-job improvement.

CHARACTERISTICS OF EDUCATION FOR PRACTICAL NURSING

Educational programs in practical nursing are designed to meet the need in nursing services for a nurse who will share in the giving of direct care to patients. They are intended for individuals who will find satisfaction in (1) performing nursing functions consistent with short-term preparation and (2) practicing nursing within a limited range of patient-care situations.

Educational experiences are focused on learning to nurse patients in carefully selected situations and are centered on direct patient care. Although there is a base common to all programs, there is flexibility in objectives and program planning. Appropriate basic concepts in the biological and behavioral sciences and in nursing are related to the care of selected patients of all age groups with common deviations from health.

The characteristics of practical nursing education are similar to those of other educational programs of less than college level that prepare students for various occupational fields. Practical nursing education is characterized by:

1. Organization in a program of correlated theory and practice, usually one year in length, approved by a state board of nursing.
2. Location in various settings and operation under diverse administrative controls, such as public vocational education, hospitals, and other community agencies.
3. Selection of students of widely ranging ages with the abilities necessary to complete the program of study and become competent practitioners of practical nursing.
4. Development, within the the scope of the program, of the potentials of the students as learners of practical nursing, as persons, and as members of society.
5. Instruction throughout the program by well-qualified faculty.
6. Theory and practice in the care of patients blended into a sequence of selected learning experiences, proceeding from the simple to the more complex, in such manner as to produce an effective practitioner within the defined scope.

7. Selection of opportunities for developing knowledge, skills, and attitudes within the agency and the community that are essential for the beginning practice of nursing and that lay the foundation for added learning.

Satisfactory completion of the described program qualifies the graduate to take the state examination for licensure as a practical nurse in the state in which the program is located.

Graduates are prepared to serve as members of the health team under the supervision of the registered nurse or the physician in giving nursing care consistent with individual education and abilities.

Newly graduated practical nurses are beginning practitioners who can give competent and safe care within the limits for which they have been prepared; expertness should develop through further experiences and practice.

ABILITIES NEEDED BY INSTRUCTORS OF PRACTICAL NURSING

The abilities needed by nurse teachers of practical nursing were identified by means of an analysis of the job of the practical nursing teacher. The abilities suggest content for incorporation in preservice programs for the preparation of such teachers as well as content for incorporation in continuing education programs.

Assumptions

The Council of Practical Nursing Programs believes that:

1. Direction and guidance for the development of programs to prepare nursing educators are the responsibilities of professional nursing within higher education.
2. The instructor of practical nursing is a professional registered nurse. In addition, she is a competent practitioner of nursing and is prepared for teaching.
3. The instructor of practical nursing should understand and accept the role of the practical nurse and practical nursing as an integral and essential part of nursing.
4. The approach to the teaching of practical nursing is from the standpoint of the components of nursing care. Therefore, the instructor of practical nursing should be prepared to function in a program organized, not in terms of clinical entities, but in broad areas of nursing, utilizing situations of varying degrees of complexity in relation to the practical nurse's role on the health team.
5. Practical nursing instructors are aware of the contributions to be made by other disciplines and will use resource persons from other disciplines when appropriate.

I. Abilities of the Instructor Related to Planning and Organization of the Program

Abilities	Knowledges
A. Ability to participate in developing the philosophy and objectives of the program.	1. Knowledge of the place of practical nursing as an integral part of all nursing. 2. Knowledge of the accepted roles of the practical nurse. 3. Understanding of the principles of education and the principles of a democracy.
B. Ability to participate in the organization of the program and the development of the curriculum. 1. Ability to assess the needs of patients. 2. Ability to select suitable learning experiences. 3. Ability to place the learning experiences in sequence, ranging from the simple to the more complex.	1. Knowledge of curriculum construction. 2. Knowledge of the method of analyzing nursing situations in order to determine their complexity as well as to determine content for the curriculum. 3. Knowledge of what constitutes learning experiences in nursing, how they are selected to fit the objectives for practical nursing education, and how they may be arranged in logical sequence. 4. Knowledge of the limitations in depth and breadth of the practical nursing program. 5. Understanding of basic needs of people and how they are modified or changed in illness.
C. Ability to function effectively within the administrative framework of the controlling agency.	1. Understanding of philosophy and objectives and administrative pattern of various controlling agencies.

Abilities	Knowledges
	2. Understanding of interpersonal relationships and effective methods of communication.
II. Abilities of the Instructor Related to Implementation of the Program	
A. Ability to select appropriate learning experiences in relation to objectives of the program and needs of students.	1. Knowledge of the learning process and the principles of learning. a. How learning takes place. b. Factors that facilitate or hinder learning.
	2. Understanding of the two roles of the LPN and the limitations in expectations of performance.
	3. Knowledge of analysis of specific nursing situations for their degree of complexity.
	4. Knowledge of how to use a single learning experience to its fullest potential for one student or for a group.
B. Ability to assess students' needs and readiness for specific learning.	1. Knowledge of methods of and tools for assessing differences among students in rate of learning.
C. Ability to recognize individual differences of students.	1. Knowledge of the significance and meaning of behavior.
	2. Knowledge of the various cultural patterns, religious practices, and customs in the social order.

Abilities	Knowledges
D. Ability to select, plan, and use appropriate method of teaching related to:	1. Knowledge of teaching methods, their effective use, and their limitations.*
1. Depth and breadth of content.	2. Knowledge of the teaching-learning process as it relates to different age groups.
2. Objectives of the program.	3. Knowledge of how to identify patterns of learning within the individual or class, and modify when necessary.
3. Characteristics of student.	4. Knowledge of test construction.
a. Varying age levels.	
b. Educational background and previous personal experience.	
E. Ability to evaluate educational tools for their usefulness in terms of objectives.	1. Knowledge of sources of educational tools.
F. Ability to teach the content of practical nursing, including theory and related practice in the clinical setting.	1. Broad knowledge of nursing content and basic needs of patients of different ages, different dependencies, and different disease entities.
	2. Knowledge of different patterns of nursing service used in giving care to patients.
G. Ability to apply selected facts and principles from the basic sciences to a specific nursing situation.	1. Knowledge of the scientific facts and principles upon which the practice of nursing is based.
	2. Knowledge of the changes in the social order that influence the practice of nursing.

* Examples of teaching methods appropriate for teaching practical nursing students include: (a) lecture with a purpose; (b) guided observation and field trips; (c) demonstration; (d) role playing; (e) skits; (f) audio-visual aids (movies, TV, slides, charts, overhead projector, posters and records); (g) discussion (panels, reports, pre- and post-clinical conferences); (h) projects; (i) laboratory practice in both the classroom and the clinical situation; (j) written assignment, including tests, developed with a purpose; (k) reading assignment and use of library; (l) proper use of textbook for teacher and student.

Abilities	Knowledges
H. Ability to evaluate and use available resources of school and community.	1. Knowledge of resources available and appropriate for use in the program in practical nursing.
I. Ability to continuously evaluate total program in relation to philosophy and objectives.	1. Knowledge of criteria appropriate to the evaluation of the program in practical nursing.

III. Other Abilities of the Instructor Related to Responsibilities as a Faculty Member

A. Ability to select or participate in the selection of students.	1. Knowledge of selection procedures. 2. Knowledge of available and reliable sources of selection tools for applicants to practical nursing programs. 3. Knowledge of means of evaluating total information gained about the applicant in relation to the prediction of success in the program. 4. Knowledge of technics of counseling the rejected applicant.
B. Ability to do educational counseling appropriate to students in practical nursing. This includes ability to recognize: 1. The need for counseling based on students' inability to meet expectations of the program. 2. The limits of educational counseling.	1. Understanding of the principle that the whole person must be involved in learning. 2. Knowledge of: a. Principles of mental hygiene. b. The principles of educational counseling. c. Normal and abnormal patterns of behavior as they relate to the learning process.

Abilities	Knowledges
3. That subtle behavior deviations indicate that there could be interfering factors in the student's ability to learn.	
C. Ability to do vocational counseling appropriate to the individual student.	1. Knowledge of employment opportunities in the occupation of practical nursing. 2. Knowledge of the relationship between individual capabilities and the available opportunities for employment.
D. Ability to keep appropriate records for students.	1. Knowledge of the uses of student records for: a. Licensing purposes. b. Employment references. c. Evaluation of student and school achievement.
E. Ability to keep and make use of appropriate records for faculty.	1. Knowledge of the uses of faculty records to: a. Comply with requirements of state boards of nursing and other administrative agencies. b. Promote the increasing effectiveness of the teacher.
F. Ability to interpret the role of the practical nurse and the place of practical nursing within the occupation of nursing to: 1. Prospective students. 2. Allied professional groups. 3. Nursing groups. 4. Lay public.	1. Broad knowledge of the occupation of nursing, including all levels of educational preparation and nursing practice. 2. Knowledge of communication technics. 3. Knowledge of group dynamics. 4. Knowledge of the media for public information.

Abilities	Knowledges
	5. Knowledge of community resources as they relate to objectives of the program.
	6. Knowledge of potential pool for recruitment of students of nursing for all programs.
G. Ability to carry out professional and civic responsibilities.	1. Knowledge of the significance, obligation, and benefits to be gained from membership and participation in professional organizations.
	2. Knowledge of the needs of the community and of the teacher's responsibility as a citizen in helping to meet the needs.
H. Ability to contribute to the thinking and the action in faculty meetings and committee activities.	1. Knowledge of the significance of cooperative efforts in moving toward a common goal.

Conclusions

After analyzing the tasks of the practical nursing instructor, the council has come to the conclusion that most of her functions are the same as those of the teacher of professional nursing and she therefore needs similar preparation. Only a few areas can be defined by this group as unique, and the uniqueness seems to lie in the coming together into one program of several factors, no one of which is necessarily unique in itself.

These factors have been identified by the council as follows:

1. In preparing a practical nurse who can function as a member of the health team, the practical nursing instructor must be able to organize a curriculum with core content extracted from the broad general content in nursing. The term *core content* in this instance refers to the essential facts and principles from the basic sciences as well as the skills and attitudes necessary to the practice of the practical nurse.
2. The practical nursing instructor makes decisions as to the relevancy of the needed facts and principles to be drawn from the biological, social, and physical sciences in relation to that which is applicable

and essential to the activities within the role of practical nurse, and she limits content to be taught accordingly.

3. The instructor of practical nursing instructs a heterogeneous group of wide age range and with widely varying backgrounds and abilities in a program with entrance qualifications that are less than those of other programs of nursing education.

4. The intensive nature of the program, condensed as it is into one year, has implications for student learning, faculty planning, continuing education of faculty, and evaluation of the product and the total program.

5. The fact that there is diversity of administrative controls of practical nursing programs, with the majority administered by the vocational schools, has implications for the preparation for teaching practical nursing.

6. After analyzing the scope of the knowledges and abilities needed by the nurse instructor in practical nursing programs, this council recognizes the value of preparation at the master's level for these positions.

7. The council recommends acceptance by employing institutions of the responsibility of maintaining inservice programs and acceptance by the individual nurse educators of their need for continued education.

The council does not assume that this work is complete or that it is conclusive, but it does feel that it constitutes a step in the right direction.

STATEMENTS ON CONTINUING EDUCATION FOR THE LICENSED PRACTICAL OR VOCATIONAL NURSE

1. The Council of Practical Nursing Programs recognizes the need for continuing education for licensed practical nurses. These nurses should be urged to broaden their education by taking courses in educational institutions. These courses are available to anyone who meets admission requirements.

2. Continuing education is carried on through a variety of means. Among those employed for the licensed practical nurse are the following:

   a. Inservice education: Most important and most to be encouraged is inservice education that is *continuing on-the-job training* and is the responsibility of employing agencies.

   b. Refresher and/or extension courses are set up under educational institutions and are designed to help employed or employable licensed practical nurses to improve their abilities so that they may better meet changing nursing care needs within the scope of practical nursing.

3. The following principles are common to sound extension courses:

   a. They should have specific, realistic, and attainable objectives pertinent to recognized needs in patient care and relevant to the role of licensed practical nurses.

   b. All courses dealing with nursing care of patients should provide clinical practice correlated with theory.

   c. The content and the methods used and the time allotted for the course should be consistent *with the abilities and needs of the licensed practical nurse to be enrolled.*

   d. Instruction and clinical supervision should be provided by well-qualified instructors who are familiar with practical nurse education.

   e. No programs should be set up to augment nursing services.

f. The courses may be offered through various administrative frameworks, provided that the principles of sound education are followed.

The Council of Practical Nursing Programs believes that all programs for continuing education are justified if they meet the general principles outlined above. It urges that in every way possible, prospective candidates for continuing education programs be reminded that completion of these extension or postgraduate courses will in no way affect their licensure status but will contribute to the licensed practical nurse's continuing competence in the practice of practical nursing.

VT 008 019
Let's Be Practical About a Nursing Career.

National League for Nursing, New York, N.Y. Dept. of Practical Nursing Programs
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Intended primarily as a guide to prospective nursing students, the booklet describes the role of the practical nurse and the nature of practical nursing programs. All state-approved programs are listed. Information includes an indication of whether or not the program admits men students and an indication of accreditation, where such exists, by the National League for Nursing. (JK)

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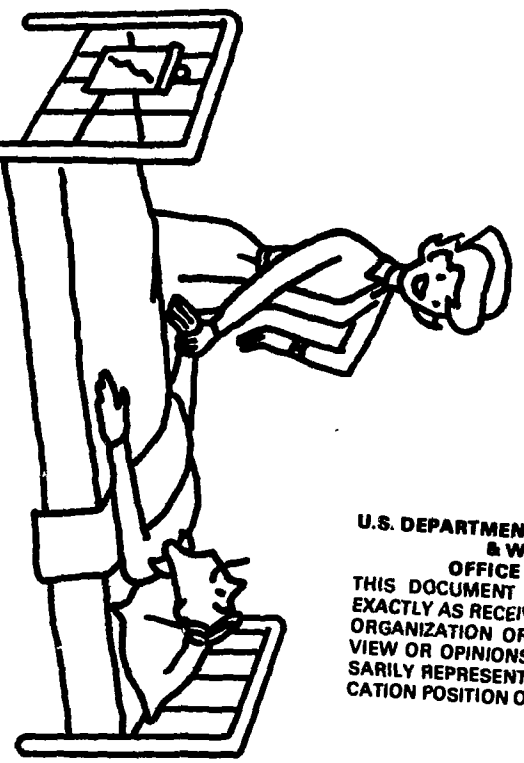
Let's Be Practical About a Nursing Career

WITH A LIST OF STATE-APPROVED SCHOOLS OF PRACTICAL NURSING-1968



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PRINTED IN THE UNITED STATES OF AMERICA

IDAHO

Jerome	School District No. 261, St. Benedict's Hosp., PN Prog.

ILLINOIS

Cairo	Cairo School of PN

INDIANA

Anderson	Anderson School of PN
Lafayette	Lafayette School of PN
Michigan City	Northwest Regional Inst., School of PN

KENTUCKY

Murray	Murray School af PN

MAINE

Auburn	Central Maine Voc.-Tech. Inst., PN Prog.

MARYLAND

Baltimore	Baltimore City Pub. Schools, PN Prog., HS, Section 6
Elkton	Cecil County Voc.-Tech. Ctr., PN Prog.
Timonium	Dulaney Valley Sr. HS, PN Prog.

MASSACHUSETTS

Waltham	Massachusetts Dept. of Mental Health, School of PN

MINNESOTA

Mankato	Mankato Area Voc.-Tech. Inst., School of PN

MISSISSIPPI

Hattiesburg	Methodist Hosp., School of PN
Moorhead	Mississippi Delta Jr. College, PN Prog.
Senatobia	Northwest Mississippi Jr. College, PN Prog.

MISSOURI

Marshall	Marshall Area Voc.-Tech. School of PN
Moberly	Moberly Jr. College, School of PN
Neosho	Crowder College, PN Prog.
Sedalia	State Fair Com. College, School of PN

NEBRASKA

Norfolk	Norfalk Voc. School of PN

NEVADA

Reno	Reno Voc. PN Prog.

NEW HAMPSHIRE

Berlin	New Hampshire Voc. Inst., PN Prog.
Claremont	New Hampshire Voc. Inst., Claremont PN Prog.

NEW JERSEY

Jersey City	Jersey City Job Corps Ctr. for Women, PN Prog.
Livingston	St. Barnabus Med. Ctr., School of PN

NEW YORK

Delhi	Delhi Agriculture & Tech. College, PN Prog.
Glens Falls	Glens Falls Hosp., School of PN
Malone	North County Com. College, PN Prog.
Middletown	Orange County BOCES, PN Prog.
New York	Columbia Presbyterian School of PN
Oneonta	Otsego Area School, PN Prog.
Valhalla	Mid-Westchester PN Prog.

NORTH CAROLINA

Rocky Mount	Nash Tech. Inst., Prog. of PN Educ.
Weldon	Halifax Tech. Inst., Prog. of PN Educ.

OHIO

Nelsonville	Southeastern Ohio School of PN
Willoughby	Willoughby-Eastlake HS Prog. of PN

OKLAHOMA

Clinton	Clinton Voc. School of PN
Enid	Enid Voc. School of PN

OREGON

Oregon City	Clackamas Com. College, PN Prog.

PENNSYLVANIA

Indiana	Indiana County Area Voc.-Tech. School
Lansdale	North Montco Area Voc.-Tech. School
Meadville	Crawford County Area Voc.-Tech. School
New Kensington	New Kensington-Arnold School District, PN Prog.
Philadelphia	Philadelphia College of Ortheopathic Medicine
Phoenixville	Valley Forge Gen. Hosp., School of PN
Sharon	Sharon School Dist., PN Prog.
Torrance	Torrance State Hosp., School of PN

PUERTO RICO

Caguas	Caguas Marta del Rio School, PN Prog.

SOUTH CAROLINA

Chester	Chester Area Voc. Ctr., PN Prog.
Greenwood	Greenwood School Dist. No. 50, PN Prog.
Orangeburg	Orangeburg School Dist. No. 5, PN Prog.
Sumter	Sumter School Dist. No. 17, PN Prog.

SOUTH DAKOTA

Watertown	Lake Area Voc.-Tech. School, PN Prog.

TEXAS

Clarksville	Red River County Hosp., School of VN
Conroe	Conroe School of VN
Cuero	Cuero Hosp. Foundation, School of VN
Denton	Denton School of VN
Eagle Pass	Maverick County Hosp. Dist. School of VN
El Paso	Wm. Beaumont Gen. Hosp., Clinical Specialist Course
Ennis	Ennis Municipal Hosp., School of VN
Fredericksburg	Hill County Mem. Hosp., School of VN
Jourdanton	Mercy Hosp., School of VN
Mineola	Mineola Gen. Hosp., School of VN
Plainview	Plainview School of VN
Robert Lee	Robert Lee School of VN
Snyder	Cogdell Mem. Hosp., School of VN
Vernon	Wilbarger School of VN
Wichita Falls	Wichita Falls I.S.D. VN Prog.

VIRGINIA

Galax	Carroll-Grayson School of PN
Newport News	New Careers School of PN
Norfolk	Norfolk Tech.-Voc. Ctr., PN Prog.
Pearisburg	Giles County Vac. School of PN

WISCONSIN

Sheboygan	Lakeshore Tech. Inst., PN Prog.

Closed Programs.—The following state-approved programs in practical nursing closed since the appearance of the 1968 edition of **Let's Be Practical.**

CALIFORNIA

Ukiah	Ukiah Dist. School of VN

GEORGIA

Atlanta	Fairlie Street Tng. Ctr., MDTA PN Prog.

Augusta	Richmond Area Voc.-Tech. School, MDTA PN Prog.
La Grange	Troup County School, MDTA PN Prog.

IDAHO

Blackfoot	School Dist. No. 55, Bingham Mem. Hosp., PN Prog.
Boise	Boise College, St. Alphonsus Hosp., PN Prog.
Bonners Ferry	School Dist. No. 101, Com. Hosp., PN Prog.
Grangeville	School Dist. Joint No. 241, Gen. Hosp., PN Prog.
Kellogg	School Dist. Joint No. 391, West Shoshone Gen. Hosp., PN Prog.

ILLINOIS

Dixon	Dixon State School of PN

INDIANA

Hobart	River Forest School, Hobart Tp. Schools, PN Prog.

KANSAS

Atchison	Atchison Pub. School of PN

MINNESOTA

Mankato	St. Joseph's Hosp., School of PN

MISSISSIPPI

Oxford	Oxford Pub. Schools, PN Prog.

MONTANA

Billings	Billings School of PN, MDTA
Butte	Butte School of PN, MDTA

NEW HAMPSHIRE

Hanover	Hanover School of PN

NEW YORK

Hornell	Steuben County BOCES, School of PN
Huntington	Huntington Adult School of PN
Lowville	Lewis County Area PN Prog.
Malone	Malone School of PN, MDTA

NORTH CAROLINA

Roanoke Rapids	Roanoke Rapids-Pitt Tech. Inst., Prog. of PN Educ.

TEXAS

Alvin	Alvin Mem. Hosp., School of VN

Beeville	Bee County College, VN Prog.
Crockett	Crockett Clinic and Hosp., School of VN
Cuero	Burns Hosp., School of VN
Denver City	Yoakum County Hosp., School of VN
Goldthwaite	Childress and Cruzcosa School of VN
Groom	Dr. John V. London School of VN
Hereford	Deaf Smith County Hosp., School of VN
McKinney	McKinney Job Corps, School of VN
Mount Pleasant	Mem. Hosp., School of VN
Muleshoe	West Plains Hosp. and Clinic, School of VN
Snyder	Snyder School of VN
Throckmorton	Throckmorton County Mem. Hosp., School of VN

VIRGINIA

Charlottesville	Jackson P. Burley HS, School of PN
Farmville	Southside School of PN

WASHINGTON

Bellevue	Bellevue Com. College, PN Prog.

WEST VIRGINIA

Bluefield	Mercer County Voc. School, PN Prog.
Charleston	Job Corps Ctr. for Women, PN Prog.
Huntington	Cabell County MDTA Prog. in PN

December, 1968 **Publication Number 38-1328S**

Supplement to the 1968 Edition of LET'S BE PRACTICAL ABOUT A NURSING CAREER

Additional NLN-Accredited Programs.—The following programs in practical nursing education received NLN accreditation in December, 1968.

MISSOURI

Kansas City	St. Mary's Hosp., School of PN
St. Louis	St. Mary's Hosp., School of PN

NEW YORK

Valhalla	Grasslands Hosp., School of PN

OHIO

Cleveland	Central School of PN

RHODE ISLAND

North Providence	Our Lady of Fatima Hosp., School of PN

New Programs.—The following state-approved programs in practical nursing opened since the appearance of the 1968 edition of **Let's Be Practical.**

ALABAMA

Phenix City	Phenix City PN School

CALIFORNIA

San Francisco	College of California Med. Affiliates, Letterman Gen. Hosp., Clinical Specialist Course
Santa Maria	Allan Hancock College, VN Prog.
Simi	Simi Valley Adult School, VN Prog.

FLORIDA

Eustis	Lake County PN Prog.
Fort Pierce	Indian River Jr. College, PN Prog.

GEORGIA

Cordele	Northern Heights School, MDTA PN Prog.
Douglas	Adult Educ. Ctr. of PN
Dublin	Laurens-Dublin MDTA Ctr., PN Prog.
Eastman	Eastman MDTA Ctr., PN Prog.
Eatonton	Dudley M. Hughes Voc. School of PN
Jesup	Adult Educ. Ctr., PN Prog.
Lawrenceville	Gwinnett MDTA PN Prog.
Sandersville	Dudley M. Hughes Voc. School of PN

Let's Be Practical About a Nursing Career

Practical nursing programs are one of four types of programs that prepare for nursing. Preparation for registration as a nurse—R.N.—is in the four-year baccalaureate degree program, the three-year diploma program, and the two-year associate degree program. Preparation for licensure as a practical nurse—L.P.N.—is usually in a one-year program. Be sure that you give careful consideration to the selection of the type of program that best meets *your* desired goal. Moving from one type of program to another is time-consuming, costly, and difficult.

PRACTICAL NURSING

As a career, practical nursing offers you the rewards and satisfactions that come only from helping others. Practical nursing education, too, is an excellent preparation for living —at home, at work, in the community.

Practical nursing programs prepare men and women to give nursing care, under the supervision of a registered nurse or physician, to patients in simple nursing situations. In more complex situations, the licensed practical nurse functions as an assistant to the registered professional nurse.

PRACTICAL NURSING EDUCATION

Practical nursing programs are approximately one year in length. In some states they are longer, and a few programs are shorter.

Each program establishes its own admission requirements. The majority of practical nursing programs accept both men and women between the ages of 18 and 50 who are high school graduates or have high school equivalency, have good health, and are interested in a service career.

Tuition and other fees vary from program to program. If you feel you should work at a part-time job while attending a practical nursing program, consult the counselor in the program of your choice. Scholarships are sometimes available for deserving students; the counselor can advise you regarding scholarships and loans in your geographical area.

Most practical nursing programs require full-time attendance. This will include classes, practice of nursing procedures, and supervised learning experiences with real patients in a hospital.

CHOOSING A SCHOOL

Start your selection of a program early by writing to several programs in your area to request their brochures. Be sure you choose a program that is approved by the state board of nursing of the state in which it is located.

NLN-accredited programs, which are shown in heavy type, have met high educational standards.

Satisfactory completion of a state-approved program in practical nursing is required before you are permitted to take the examination for licensure. The examination is given by the particular state board of nursing. When you have successfully passed the examination, that state board of nursing will license you as an L.P.N. or as an L.V.N.

THE FUTURE

Licensure as a practical or vocational nurse gives the person the legal right to practice as a licensed practical or vocational nurse in the state in which the license *was issued*. Each state, through its state board of nursing, sets the legal minimum requirements for licensure. A practical nurse who is licensed in one state but wishes to work in a second state must apply to the state board of nursing in the second state for licensure. The requirements vary slightly between states. Usually, licensure in another state is not difficult to obtain and does not require the writing of an examination. Upon licensure, the L.P.N. should become a member of her national organization, the National Federation of Licensed Practical Nurses.

The licensed practical nurse is employed in nursing homes, hospitals, clinics, and other health-care facilities. Her salary is usually about two-thirds of the salary of a registered nurse. L.P.N.s are in demand throughout the United States today.

TO UNDERSTAND THE LIST OF SCHOOLS

Symbols

The meaning of the symbols in the right-hand margin of the following list of schools are as follows:

M The school admits men students.

† The school has been accredited by the National League for Nursing and so meets high educational standards. Also the name of such a school is capitalized and printed in heavy type.

Abbreviations

BOCES	Board of Cooperative Educational Services
Com.	Community
C ıs.	Consolidated
Coop.	Cooperative
Corp.	Corporation
Ctr.	Center
Dept.	Department
Dist.	District
Div.	Division
Educ.	Education or educational
Gen.	General
Hosp.	Hospital
HS	High school
Inst.	Institute
Jr.	Junior
MDT	Manpower Development Training
MDTA	Manpower Development Training Act
Med.	Medical
Mem.	Memorial
Nsg.	Nursing
PN	Practical nursing or practical nurses
Prog.	Program
Pub.	Public
Sr.	Senior
Tech.	Technical or Technology
Tng.	Training
Tp.	Township
Univ.	University
VN	Vocational nursing or vocational nurses
Voc.	Vocational

State-Approved Schools Of Practical Nursing

ALABAMA

Academic Requirements: State law specifies graduation from a state-accredited high school or the equivalent.

Anniston	Harry M. Ayers State Trade School, PN Prog.	
Bessemer	Bessemer State Trade School, PN Prog.	M
Birmingham	Birmingham Pub. Schools, Dept. of Voc. Educ., PN Prog.	M
	Wenonah State Voc.-Tech. School, PN Prog.	
Childersburg	N. F. Nunnelley State Trade School, PN Prog.	
Decatur	John C. Calhoun State Voc.-Tech. School, PN Prog.	M
Dothan	George C. Wallace State Voc.-Tech. School, PN Prog.	
Eufaula	Chauncey Sparks State Trade School, PN Prog.	M
Evergreen	Ed E. Reid State Trade School, PN Prog.	M
Gadsden	Gadsden State Tech. Trade School, PN Prog.	
Greenville	Butler County School of PN	
Hamilton	Northwest Alabama State Trade School, PN Prog.	M
Honceville	George C. Wallace State Trade School of Cullman City, PN Prog.	
Huntsville	J. F. Drake State Tech. School, PN Prog.	M
Mobile	Carver State Voc.-Tech. School, PN Prog.	
	Southwest State Voc.-Tech. School, PN Prog.	
Montgomery	Council Trenholm State Trade School, PN Prog.	M
	John M. Patterson State Voc.-Tech. School, PN Prog.	M
	St. Jude's School of PN	M
Muscle Shools	Muscle Shoals Tech. Inst., PN Prog.	
Opelika	Opelika Voc.-Tech. School, PN Prog.	
Opp	MacArthur Tech. Inst., PN Prog.	
Selma	Good Samaritan Hosp., PN Prog.	M
	William R. King State Trade School, PN Prog.	
Sumiton	Walker County State Trade School, PN Prog.	
Thomasville	Richard P. Hobson State Trade School, PN Prog.	
Tuscaloosa	Shelton State Voc.-Tech. School, PN Prog.	
	Tuscaloosa State Trade School, PN Prog.	

ALASKA

Academic Requirements: State law specifies general education on tenth-grade level.

Anchorage	**ANCHORAGE COM. COLLEGE, PN PROG.**	**†-M**

AMERICAN SAMOA

Academic Requirements: Students must be high school graduates.

Pago Pago	Hosp. of American Samoa, School of PN	M

ARIZONA

Academic Requirements: State law specifies at least two years of high school study or equivalent as determined by the board with the advice of the State Board of Education if under 25 years of age. If over 25 years of age, completion of eighth grade or equivalent as determined by the board with the advice of the State Board of Education.

Douglas	Cochise College, School of PN	M
Florence	Florence Union HS, PN Prog.	M
Mesa	Mesa Com. College, PN Prog.	M
Phoenix	Phoenix Union HS, PN Dept.	M
Prescott	Prescott HS, PN Prog.	M
Tucson	S. H. Kress PN School, Pima County Gen. Hosp.	
	Tucson Pub. Schools, Educ. Ctr., PN Prog.	M
Yuma	Yuma Union HS, PN Prog.	M

ARKANSAS

Academic Requirements: State law specifies applicant must have completed a course of study in an approved high school or the equivalent thereof as determined by the appropriate educational agency.

Batesville	The Foothills School of PN, Batesville Div.	M
Camden	Camden PN School	M
El Dorado	Oil Belt PN School	M
Fayetteville	Sequoyah PN School	M
Forrest City	Forrest City PN School	M
Fort Smith	Fort Smith School No. 1, PN Prog.	M
	Fort Smith School No. 2, PN Prog.	M
Harrison	Twin Lakes Voc.-Tech. School of PN	M
Helena	Helena Hosp., School of PN	M
Hope	Red River Voc.-Tech. School of PN	M
Hot Springs	Hot Springs School of PN	M
Jonesboro	Jonesboro School of PN	M
Little Rock	Arkansas Baptist Hosp., PN Prog.	M
	Little Rock School of PN	M
	St. Vincent Infirmary, PN School	M
Morrilton	Petit Jean Voc. School, PN Prog.	

Ozark	Arkansas Valley Voc.-Tech. School, PN Prog.	M
Pine Bluff	Pines Voc.-Tech. School, PN Prog.	M
Searcy	Foot Hills Voc.-Tech. School, PN Prog.	M

CALIFORNIA

Academic Requirements: State law specifies completion of tenth grade or equivalent.

Alta Loma	Chaffey College, VN Prog.	
Aptos	Cabrillo College, VN Dept.	M
Azusa	Citrus College, VN Prog.	M
Bakersfield	Bakersfield College, Dept. of Nsg., VN Prog.	M
Barstow	Barstaw College, VN Prog.	M
Campbell	West Valley Jr. College, VN Prog.	M
Chula Vista	Southwestern College, VN Prog.	M
Compton	Compton College, VN Prog.	M
Costa Mesa	Orange Coast College, VN Prog.	M
Cupertino	De Anza College, VN Prog.	M
Eureka	Eureka Evening HS, VN Prog.	M
Fresno	Fresno City College, VN Prog.	M
Fullerton	Fullerton Jr. College, VN Prog.	
Gilman Hot Springs	Mt. San Jacinto College, VN Prog.	
Glendale	Glendale College, VN Prog.	M
Hanford	Hanford Adult School, VN Prog.	M
Hayward	Hayward Adult and Tech. School, VN Prog.	
Imperial	Imperial Valley College, VN Prog.	M
Kentfield	College of Marin, VN Prog.	M
La Mesa	Grossmont Adult School, VN Prog.	M
Lancaster	Antelope Valley College, VN Prog.	M
Long Beach	Long Beach City College, VN Prog.	M
Los Angeles	East Los Angeles College, Dept. of Nsg., VN Prog.	M
	Los Angeles Trade-Tech. College, VN Prog.	M
	Voc. Nsg. School of California	
	White Mem. Med. Ctr., School of VN	M
	YWCA Job Corps, VN Prog.	
Marysville	Yuba College, VN Prog.	M
Merced	Merced Jr. College, VN Prog.	M
Mission Hills	Holy Cross Hosp., School of VN	M
Modesto	Modesto Jr. College, VN Prog.	M
Napa	Napa Jr. College, VN Prog.	M
North Hollywood	Valley College of Med. Dental Assistants	
Norwalk	Cerritos College, Dept. of VN	M
Oakland	Peralta Colleges, Laney College, VN Prog.	M

Oceanside	Mira Costa College, VN Prog.	M
Oroville	Butte Jr. College Dist.	M
Palm Desert	College of the Desert, VN Prog.	M
Pasadena	Pasadena City College, VN Prog.	
Pleasant Hill	Diablo Valley College, VN Prog.	M
Porterville	Porterville College, VN Prog.	M
Redding	Shasta College, Nsg. Dept., VN Prog.	M
Riverside	Riverside City College, Dept. of VN	M
Rocklin	Sierra College, School of VN	M
Sacramento	Sacramento City College, Dept. of VN Educ.	M
Salinas	Hartnell College, VN Prog.	M
San Bernardino	San Bernardino Valley College, VN Prog.	
San Diego	San Diego Mesa College, VN Prog.	M
San Francisco	Galileo Adult School, VN Educ. Prog.	M
San Mateo	College of San Mateo, VN Prog.	M
San Pablo	Contra Costa College, VN Prog.	M
San Quentin	Neumiller Hosp., School of VN	M
Santa Barbara	Santa Barbara City College, VN Prog.	M
Santa Fe Springs	Rio Hondo Jr. College, VN Prog.	
Santa Monica	Santa Monica City College, VN Prog.	M
Santa Rosa	Santa Rosa Jr. College, VN Prog.	M
Stockton	San Joaquin Delta College, VN Dept.	M
Torrance	El Camino College, VN Prog.	M
Ukiah	Ukiah Dist. School of VN	M
Vallejo	Solano County College, VN Prog.	M
Van Nuys	Los Angeles Valley College, VN Prog.	M
Ventura	Ventura College, VN Prog.	M
Visalia	College of the Sequoias, VN Prog.	M
Walnut	Mount San Antonio College, VN Prog.	M
Wilmington	Los Angeles Harbor College, VN Prog.	M

COLORADO

Academic Requirements: Completion of at least twelfth grade of school or its equivalent.

Boulder	Boulder Valley School of PN	M
Colorado Springs	Colorado Springs School Dist. No. 11, School of PN	M
	Penrose Hosp., School for PN	M
Denver	Emily Griffith Opportunity School, PN Prog.	M
	Porter Mem. Hosp., Prog. of PN	M
	St. Anthony Hosp., School of PN	M
Durango	Durango Pub. School Dist. 9R, School of PN	
Fort Collins	Paudre School Dist. R1, School of PN	M
Grand Junction	Mesa College, PN Prog.	M

La Junta	La Junta Mennonite Hosp., School of PN	M
Pueblo	Southern Colorado State College, Dept. of PN	M
Sterling	Northeastern Jr. College, PN Prog.	M
Trinidad	Trinidad State Jr. College, School of PN	M

CONNECTICUT

Academic Requirements: The board requires a diploma from an accredited high school or a qualifying certificate on the twelfth-grade level from the State Department of Education if the applicant is under 20 years of age. Two years of high school (8 units) or the equivalent is required if the applicant is 20 years of age or over.

Bridgeport	Bullard Havens Regional Voc.-Tech. School, PN Prog.	M
Danbury	Henry Abbott Regional Voc.-Tech. School, PN Prog.	M
Hamden	Eli Whitney Regional Voc.-Tech. School, PN Prog.	M
Hartford	A. I. Prince Regional Voc.-Tech. School, PN Prog.	
Middletown	Vinal Regional Voc.-Tech. School, PN Prog.	M
New Britain	E. C. Goodwin Regional Voc.-Tech. School, PN Prog.	M
Stamford	J. M. Wright Regional Voc.-Tech. School, PN Prog.	M
Waterbury	Kaynor Regional Voc.-Tech. School, PN Prog.	M
Willimantic	Windham Regional Voc.-Tech. School, PN Prog.	M

DELAWARE

Academic Requirements: The board requires completion of two years of high school education.

Georgetown	Sussex County Voc.-Tech. Ctr., Dept. of PN	M
Wilmington	Brown Tech. HS, Dept. of PN	M
Woodside	Kent County Voc.-Tech. Ctr., Adult Prog., Dept. of PN	M

DISTRICT OF COLUMBIA

Academic Requirements: The board specifies completion of two years of high school or the equivalent thereof as determined by the Commissioners of the District of Columbia.

Washington	Anna Burdick Voc. HS, PN Prog.	M
	Hannah Harrison PN School	
	Margaret Murray Washington Voc. HS, PN Prog.	M

FLORIDA

Academic Requirements: State law specifies completion of two years of high school or equivalent.

Bartow	Polk Voc.-Tech. Ctr., PN Prog.	M
Bradenton	Manatee County School, PN Prog.	M
Daytona Beach	Daytona Beach Jr. College, PN Dept.	M

Fort Myers	Lee County School of PN	M
Gainesville	Santa Fe Jr. College, PN Prog.	M
Hollywood	Broward County PN Prog.	M
Jacksonville	Duval County PN Prog.	M
Madison	North Florida Jr. College, PN Div.	M
Marianna	Chipola Jr. College, School of PN	
Miami	Lindsey Hopkins Educ. Ctr., PN Prog.	M
Miami Beach	**MOUNT SINAI HOSP., SCHOOL OF PN**	†-M
Orlando	Florida Sanitarium and Hosp., School of PN	M
	Orange County Voc. School, PN Prog.	M
Panama City	Bay County Adult and Voc. School, PN Prog.	M
Pensacola	Pensacola Jr. College, Ctr. for Adult Studies, PN Prog.	M
Sanford	Seminole County PN Prog.	M
Sarasota	Sarasota County Voc.-Tech. School, PN Prog.	M
St. Augustine	St. John's County, PN Prog.	M
St. Petersburg	Pinellas County, School of PN	M
Tallahassee	Lincoln Voc. School, PN Prog.	M
	Lively Tech. School, PN Prog.	M
Tampa	Hillsborough County School of PN	M
West Palm Beach	Palm Beach County Voc. School, PN Prog.	M

GEORGIA

Academic Requirements: State law specifies two years of high school or equivalent.

Albany	Albany Area Voc.-Tech. School, PN Prog.	M
	Monroe Voc. School, PN Prog.	M
Americus	South Georgia Voc. School of PN	M
Athens	Athens Area Voc.-Tech. School, MDTA PN Prog.	M
	Athens Gen. Hosp., School of PN	M
Atlanta	Atlanta Area Tech. School, PN Prog.	M
	Atlanta School of PN	M
	Fairlie Street Tng. Ctr., MDTA PN Prog.	M
	Tillman School of PN	
Augusta	Augusta Area Tech. School of PN	M
	Augusta Voc. School, PN Prog.	M
	Richmond Area Voc.-Tech. School, MDTA PN Prog.	M
Brunswick	Brunswick Voc. School of PN	M
Calhoun	Gordon County Hosp., School of PN	M
Carrollton	Carroll County Voc. School of PN	M
Clarkesville	North Georgia Voc. School of PN	M
Clarkston	DeKalb Area Tech. School of PN	M

Columbus	Columbus MDTA School	M
	Medical Ctr. School of PN	M
Dallas	Paulding Mem. Hosp., School of PN	M
Dalton	Dalton Voc. School of PN	M
Elberton	Elbert County Voc. School of PN	M
Fitzgerald	Ben Hill County Hosp., School of PN	
Griffin	Griffin-Spalding County Area Voc. School, PN Prog.	M
La Grange	Troup County Area Voc.-Tech. School, PN Prog.	M
	Troup County School, MDTA PN Prog.	M
Macon	Dudley M. Hughes Voc. School, PN Prog.	M
Marietta	Marietta-Cobb Area Voc. School of PN	M
Milledgeville	Baldwin County Voc. School of PN	M
Rome	Coosa Valley Voc. School of PN	M
Savannah	Savannah Area Voc.-Tech. School, PN Prog.	M
Swainsboro	Swainsboro Voc. School of PN	M
Thomaston	Upson County Voc. School of PN	M
Thomasville	Thomas Area Voc. School of PN	M
Tifton	Tift County School of PN	M
Valdosta	Valdosta Voc. School of PN	M
Waycross	Waycross Voc. and Adult Educ., MDTA PN Prog.	M
	Waycross Voc. School of PN	M

HAWAII

Academic Requirements: Board regulations specify applicants must have completed high school or equivalent if under 25 years of age or must have completed eighth grade or equivalent if over 25 years of age.

Hilo	Hawaii Tech. School, PN Dept.	M
Honolulu	Kapiolani Com. College, PN Prog.	M
Kailua, Oahu	Castle Mem. Hosp., School of PN	M

IDAHO

Academic Requirements: All applicants must have graduated from high school or its equivalent, which is a standard score of 45 or above in the General Education Development Test.

Blackfoot	School Dist. No. 55, Bingham Mem. Hosp., PN Prog.	M
Boise	Boise College, St. Alphonsus Hosp., PN Prog.	M
	Boise Jr. College, St. Luke's Hosp., PN Prog.	M
Bonners Ferry	School Dist. No. 101, Com. Hosp., PN Prog.	M
Burley	School Dist. Joint No. 151, Cassia Mem. Hosp., PN Prog.	M
Caldwell	School Dist. No. 132, Caldwell Mem. Hosp., PN Prog.	M

Coeur d' Alene	North Idaho Jr. College, Kootenai Mem. Hosp., PN Prog.	M
Grangeville	School Dist. Joint No. 241, Gen. Hosp., PN Prog.	M
Idaho Falls	School Dist. No. 91, Idaho Falls Latter Day Saints Hosp., PN Prog.	M
	School Dist. No. 91, Sacred Heart Hosp., PN Prog.	M
Kellogg	School Dist. Joint No. 391, West Shoshone Gen. Hosp., PN Prog.	M
Lewiston	Lewis-Clark Normal School, St. Joseph Hosp., PN Prog.	M
Moscow	School Dist. No. 281, Gritman Mem. Hosp., PN Prog.	M
Nampa	School Dist. No. 131, Mercy Hosp., PN Prog.	M
Pocatello	Idaho State Univ., Bannock Mem. Hosp., PN Prog.	M
	School Dist. No. 25, St. Anthony Com. Hosp., PN Prog.	M
Sandpoint	School Dist. No. 82, Bonner Gen. Hosp., PN Prog.	M
Twin Falls	College of Southern Idaho, Magic Valley Mem. Hosp., PN Prog.	M

ILLINOIS

Academic Requirements: State law specifies completion of two years of high school or equivalent, or completion of eighth grade if over 25 years of age before July, 1951.

Alton	F. W. Olin Voc. School, Alton PN Prog.	M
Bloomington	Bloomington School of PN	M
Carbondale	Southern Illinois Univ., Voc.-Tech. Inst., School of PN	M
Champaign	Champaign School of PN	M
Chicago	Chicago Pub. Schools, MDTA PN Prog.	M
	CHICAGO PUB. SCHOOLS, PN CTR.	†-M
	St. Frances X. Cabrini School of PN	
Danville	Danville School of PN	M
Decatur	Decatur School of PN	M
Des Plaines	Niles Tp. School of PN	M
Dixon	Dixon State School of PN	M
	Sauk Valley College, PN Prog.	M
East St. Louis	East St. Louis School of PN	M
Galesburg	Galesburg Pub. School, PN Prog.	M
Harrisburg	Southeastern Illinois College, PN Prog.	M
Hinsdale	Hinsdale Hosp. and Sanitarium, PN Prog.	
Jacksonville	Jacksonville School of PN, Board of Educ., Dist. No. 117	M
Joliet	Joliet Tp. HS, Prog. in Nsg.	M
Kankakee	Kankakee School, PN Prog.	M
La Salle	St. Mary's Hosp., PN Prog.	
Mattoon	Lake Land College, PN Prog.	M
Moline	Black Hawk College, PN Prog.	M

Mt. Carmel	Wabash Valley College, School of PN	M
Mt. Vernon	Rend Lake College, PN Prog.	M
Northlake	Triton College, School of PN	M
Oak Forest	Oak Forest Hosp., PN Prog.	M
Pekin	Pekin School of PN	M
Peoria	Peoria School of PN	M
Quincy	Quincy School of PN	M
Rockford	Rockford School of PN	M
Springfield	Springfield School of PN	M
Streator	Streator Tp. HS, PN Prog.	M
Waukegan	Waukegan Tp. HS, PN Prog.	M

INDIANA

Academic Requirements: Board regulation specifies two years of high school or equivalent.

Bloomington	Bloomington PN School	M
Columbus	Bartholomew Cons. School Corp., School of PN	M
Evansville	Evansville School of PN, Div. of Adult Educ.	M
Fort Wayne	Fort Wayne Com. Schools, School of PN, Voc. and Adult Educ. Div.	M
Hammond	Purdue Univ., Calumet Campus, PN Tng. Prog.	
Hobart	River Forest School, Hobart Tp. Schools, PN Prog.	
Indianapolis	Indianapolis Pub. Schools, School of PN, Adult Educ. Div.	M
Kokomo	Kokomo School of PN, Kokomo Ctr. Tp. Cons. School Corp.	M
Marion	Grant School of PN, Marion Com. Schools	M
Muncie	Muncie School of PN	
New Albany	New Albany School of PN, New Albany–Floyd County Cons. School Corp.	M
Richmond	Richmond School of PN, Reid Mem. Hosp.	M
South Bend	South Bend School of PN, Adult Educ. Div.	M
Terre Haute	Vigo County School Corp., Voc. School of PN	M
Vincennes	Vincennes Univ., Dept. of PN	M

IOWA

Academic Requirements: Graduation from an accredited high school or equivalent as determined by the Board of Nursing.

Ames	Ames School of PN, Ames Com. Schools, Dept. of Voc. Educ.	M
Burlington	Div. of Southeastern Iowa College, PN Educ. Dept.	M
Calmar	Northeast Area One Voc. School, PN Prog.	
Carroll	St. Anthony's Hosp., Antonian School of PN	M

Cedar Rapids	Area Ten Com. College, Dept. of PN Educ.	M
	St. Luke's Methodist Hosp., PN Prog.	
Centerville	Centerville Com. College, School of PN	M
Cherokee	Cherokee School of PN, Cherokee Com. Schools	M
Clarinda	Iowa Western Com. College, School of PN, Clarinda Campus	M
Clinton	Eastern Iowa Com. College Dist., Clinton Com. College, Div. of Voc.-Tech. Educ.	M
Council Bluffs	Iowa Western Com. College, School of PN	M
Davenport	Eastern Iowa Com. College, Health Occupations, PN Educ. Div.	M
Des Moines	**DES MOINES PUB. SCHOOL, DES MOINES SCHOOL OF PN**	†-M
Dubuque	Dubuque School of PN, Dubuque Pub. Schools	M
Estherville	Estherville Jr. College, Div. of PN	M
Fort Dodge	Fort Dodge Com. College, PN Prog.	M
Harlan	Iowa Western Com. College, Dept. of PN Educ.	M
Marshalltown	Mercy Hosp., Mercedian School of PN	M
Mason City	North Iowa Area Com. College, Div. of PN	M
Ottumwa	Iowa Tech., Area XV School Dist., PN Div.	M
Sioux City	Western Iowa Tech., PN Prog.	M
Waterloo	Hawkeye Inst. of Tech., Dept. of PN Educ.	

KANSAS

Academic Requirements: State law specifies two years of high school or equivalent if under 25 years of age, at least eighth grade or equivalent if over 25.

Atchison	Atchison Pub. School of PN	M
Chanute	Chanute Pub. School of PN	M
Dodge City	Dodge City Com. Jr. College, Dept. of PN Educ.	
Emporia	Flint Hills Area Voc.-Tech. School, Dept. of PN	M
Kansas City	Univ. of Kansas Med. Ctr., Florence Cook Dept. of PN Educ.	M
Lawrence	Haskell Inst., PN Prog.	M
Manhattan	Manhattan Area Voc.-Tech. School, Dept. of PN Educ.	M
McPherson	McPherson School of PN	M
Topeka	Northeast Kansas Area Voc.-Tech. School, Dept. of PN Educ.	M
Wichita	Wichita PN School	M

KENTUCKY

Academic Requirements: State law specifies that the applicant must have completed at least three years, if 25 years of age or less, or at least two years if more than 25 years of age, of high school or its equivalent as determined by an appropriate educational agency.

Ashland	Ashland State Voc.-Tech. School, Dept. of PN	M

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Covington	Northern Kentucky Stote Voc. School of PN	M
	William Booth Mem. Hosp., School of PN Educ.	M
Danville	Danville School of PN	M
Glasgow	Glosgow School for PN	M
Greenville	Greenville School of PN	M
Hazard	Hazord School of PN	M
Jeffersontown	Jefferson County School of PN	M
Lexington	Appolachian School of PN	M
Madisonville	Modisonville School for PN, MDTA	M
Owensboro	Owensboro School for PN	M
Paducah	Western Baptist Hosp., School of PN	M
Paintsville	Mayo State Voc. School, Dept. of PN	
Pineville	Pineville School for PN	M

LOUISIANA

Academic Requirements: Stote law specifies grammor school education. Board regulation specifies two years of high school if under 25.

Abbeville	Gulf Area Voc.-Tech. School, PN Prog.	M
Alexandria	Alexondria Trade School, PN Prog.	
Baton Rouge	Baton Rouge Voc.-Tech. School, Dept. of PN Educ.	M
	Capitol Area Voc. School, Dept. of PN Educ.	M
Bogalusa	Sullivon Voc.-Tech. School, PN Prog.	
Crowley	Southwest Louisiana Voc.-Tech. School, Dept. of PN Educ.	
Farmerville	North Central Area Voc.-Tech. School, PN Prog.	M
Hammond	Hommond Area Voc. School, PN Prog.	M
Houma	South Louisiano Trade School, PN Prog.	M
Lake Charles	Sowelo Tech. Inst., Dept. of PN Educ.	M
Many	Sobine Valley Voc.-Tech. School, PN Prog.	M
Metairie	Jefferson Parish Voc.-Tech. School, PN Prog.	M
Monroe	Delto Area Trade School, PN Prog.	M
Morgan City	Young Mem. Voc.-Tech. School, PN Prog.	
Natchitoches	Centrol Area Trade School, PN Prog.	M
New Iberia	Teche Area Voc.-Tech. School, PN Prog.	
New Orleans	New Orleans Pub. Schools, Booker T. Woshington Sr. HS, PN Prog.	M
	New Orleans Pub. Schools, L. E. Robouin Voc. HS, PN Prog.	M
Opelousas	T. H. Horris Voc.-Tech. School, PN Prog.	
Plaquemine	Tri-Porish Area Trade School, PN Prog.	M
Shreveport	Shreveport Trade School, PN Prog.	

West Monroe	Ouachita Volley Voc.-Tech. School, Dept. of PN Educ.	M

MAINE

Academic Requirements: State law specifies one year of high school or equivalent, or, if over 30 years of age, completion of eighth grade or equivalent.

Bangor	**ST. JOSEPH HOSP., SCHOOL OF PN**	†
Portland	Maine School of PN	
Presque Isle	Northern Maine Voc.-Tech. Inst., Dept. of PN	
Waterville	Maine School of PN	M

MARYLAND

Academic Requirements: State law specifies that applicant must have completed at least two years of high school.

Annapolis	**ANNE ARUNDEL GEN. HOSP., SCHOOL OF PN**	†-M
Baltimore	Baltimore City Hosps., School of PN	M
	Baltimore City Pub. Schools, PN Prog., HS, Section 1	
	Baltimore City Pub. Schools, PN Prog., Adult, Section 2	M
	Baltimore City Pub. Schools, PN Prog., MDTA, Section 3	M
	Baltimore City Pub. Schools, PN Prog., MDTA, Section 4	M
	Baltimore City Pub. Schools, PN Prog., Calvert, Section 5	M
	Johnston School of PN, Union Mem. Hosp.	M
	South Baltimore Gen. Hosp., School of PN	M
	UNIV. OF MARYLAND, PN PROG.	†-M
Bethesda	Suburban Hosp., School of PN	M
Cambridge	Cambridge-Moryland Hosp., School of PN	M
	Eastern Shore State Hosp., School of PN	M
Centerville	Queen Anne's County HS, PN Prog.	M
Cheverly	Prince George's Gen. Hosp., MDTA PN Prog.	
	Prince George's Gen. Hosp., PN Prog.	M
Cumberland	Sacred Heort Hosp., School of PN	M
Frederick	Frederick County School of PN	M
Hagerstown	Washington County Voc.-Tech. Ctr., PN Prog.	M
Havre de Grace	Harford Mem. Hosp., School of PN	M
Salisbury	Wicomico County Voc.-Tech. Ctr., PN Prog.	M
Sykesville	Springfield State Hosp., School of PN	M
Takoma Park	Washington Sanitorium and Hosp., School of PN	M

Cedar Rapids	Area Ten Com. College, Dept. of PN Educ.	M
	St. Luke's Methodist Hosp., PN Prog.	
Centerville	Centerville Com. College, School of PN	M
Cherokee	Cherokee School of PN, Cherokee Com. Schools	M
Clarindo	Iowa Western Com. College, School of PN, Clarinda Campus	M
Clinton	Eastern Iowa Com. College Dist., Clinton Com. College, Div. of Voc.-Tech. Educ.	M
Council Bluffs	Iowa Western Com. College, School of PN	M
Dovenport	Eastern Iowa Com. College, Health Occupations, PN Educ. Div.	M
Des Moines	**DES MOINES PUB. SCHOOL, DES MOINES SCHOOL OF PN**	†-M
Dubuque	Dubuque School of PN, Dubuque Pub. Schools	M
Estherville	Estherville Jr. College, Div. of PN	M
Fort Dodge	Fort Dodge Com. College, PN Prog.	M
Horlan	Iowa Western Com. College, Dept. of PN Educ.	M
Marsholltown	Mercy Hosp., Mercedian School of PN	M
Moson City	North Iowa Area Com. College, Div. of PN	M
Ottumwo	Iowa Tech., Area XV School Dist., PN Div.	M
Sioux City	Western Iowa Tech., PN Prog.	M
Waterloo	Hawkeye Inst. of Tech., Dept. of PN Educ.	

KANSAS

Academic Requirements: State law specifies two years of high school or equivalent if under 25 years of age, at least eighth grade or equivalent if over 25.

Atchison	Atchison Pub. School of PN	M
Chanute	Chánute Pub. School of PN	M
Dodge City	Dodge City Com. Jr. College, Dept. of PN Educ.	
Emporio	Flint Hills Area Voc.-Tech. School, Dept. of PN	M
Konsas City	Univ. of Kansas Med. Ctr., Florence Cook Dept. of PN Educ.	M
Lowrence	Haskell Inst., PN Prog.	M
Monhatton	Manhattan Area Voc.-Tech. School, Dept. of PN Educ.	M
McPherson	McPherson School of PN	M
Topeka	Northeast Kansas Area Voc.-Tech. School, Dept. of PN Educ.	M
Wichito	Wichita PN School	M

KENTUCKY

Academic Requirements: State law specifies that the applicant must have completed at least three years, if 25 years of age or less, or at least two years if more than 25 years of age, of high school or its equivalent as determined by an appropriate educational agency.

Ashland	Ashland State Voc.-Tech. School, Dept. of PN	M

Covington	Northern Kentucky State Voc. School of PN	M
	William Booth Mem. Hosp., School of PN Educ.	M
Danville	Danville School of PN	M
Glasgow	Glasgow School for PN	M
Greenville	Greenville School of PN	M
Hazard	Hazard School of PN	M
Jeffersontown	Jefferson County School of PN	M
Lexington	Appalachian School of PN	M
Madisonville	Madisonville School for PN, MDTA	M
Owensboro	Owensboro School for PN	M
Paducah	Western Baptist Hosp., School of PN	M
Paintsville	Mayo State Voc. School, Dept. of PN	
Pineville	Pineville School for PN	M

LOUISIANA

Academic Requirements: State law specifies grammar school education. Board regulation specifies two years of high school if under 25.

Abbeville	Gulf Area Voc.-Tech. School, PN Prog.	M
Alexandria	Alexandria Trade School, PN Prog.	
Baton Rouge	Baton Rouge Voc.-Tech. School, Dept. of PN Educ.	M
	Capitol Area Voc. School, Dept. of PN Educ.	M
Bogalusa	Sullivan Voc.-Tech. School, PN Prog.	
Crowley	Southwest Louisiana Voc.-Tech. School, Dept. of PN Educ.	
Farmerville	North Central Area Voc.-Tech. School, PN Prog.	M
Hammond	Hammond Area Voc. School, PN Prog.	M
Houma	South Louisiana Trade School, PN Prog.	M
Lake Charles	Sowela Tech. Inst., Dept. of PN Educ.	M
Many	Sabine Valley Voc.-Tech. School, PN Prog.	M
Metairie	Jefferson Parish Voc.-Tech. School, PN Prog.	M
Monroe	Delta Area Trade School, PN Prog.	M
Morgan City	Young Mem. Voc.-Tech. School, PN Prog.	
Natchitoches	Central Area Trade School, PN Prog.	M
New Iberia	Teche Area Voc.-Tech. School, PN Prog.	
New Orleans	New Orleans Pub. Schools, Booker T. Washington Sr. HS, PN Prog.	M
	New Orleans Pub. Schools, L. E. Rabouin Voc. HS, PN Prog.	M
Opelousas	T. H. Harris Voc.-Tech. School, PN Prog.	
Plaquemine	Tri-Parish Area Trade School, PN Prog.	M
Shreveport	Shreveport Trade School, PN Prog.	

West Monroe	Ouachita Valley Voc.-Tech. School, Dept. of PN Educ.	M

MAINE

Academic Requirements: State law specifies one year of high school or equivalent, or, if over 30 years of age, completion of eighth grade or equivalent.

Bangor	**ST. JOSEPH HOSP., SCHOOL OF PN**	†
Portland	Maine School of PN	
Presque Isle	Northern Maine Voc.-Tech. Inst., Dept. of PN	
Waterville	Maine School of PN	M

MARYLAND

Academic Requirements: State law specifies that applicant must have completed at leost two years of high school.

Annopolis	**ANNE ARUNDEL GEN. HOSP., SCHOOL OF PN**	**†-M**
Baltimore	Baltimore City Hosps., School of PN	M
	Baltimore City Pub. Schools, PN Prog., HS, Section 1	
	Baltimore City Pub. Schools, PN Prog., Adult, Section 2	M
	Baltimore City Pub. Schools, PN Prog., MDTA, Section 3	M
	Baltimore City Pub. Schools, PN Prog., MDTA, Section 4	M
	Baltimore City Pub. Schools, PN Prog., Calvert, Section 5	M
	Johnston School of PN, Union Mem. Hosp.	M
	South Baltimore Gen. Hosp., School of PN	M
	UNIV. OF MARYLAND, PN PROG.	**†-M**
Bethesda	Suburban Hosp., School of PN	M
Cambridge	Cambridge-Maryland Hosp., School of PN	M
	Eastern Shore State Hosp., School of PN	M
Centerville	Queen Anne's County HS, PN Prog.	M
Cheverly	Prince George's Gen. Hosp., MDTA PN Prog.	
	Prince George's Gen. Hosp., PN Prog.	M
Cumberland	Sacred Heart Hosp., School of PN	M
Frederick	Frederick County School of PN	M
Hagerstown	Washington County Voc.-Tech. Ctr., PN Prog.	M
Havre de Grace	Harford Mem. Hosp., School of PN	M
Salisbury	Wicomico County Voc.-Tech. Ctr., PN Prog.	M
Sykesville	Springfield State Hosp., School of PN	M
Takoma Park	Washington Sanitarium and Hosp., School of PN	M

MASSACHUSETTS

Academic Requirements: Board of Registration in Nursing requires that candidates admitted to schools of practical nursing shall have completed tenth grade or its equivalent.

Beverly	Beverly Hosp., School of PN	
Boston	Boston Trade HS for Girls, PN Prog.	M
	City of Boston Dept. of Health and Hosps., PN Prog.	M
	Shepard-Gill School of PN	M
Cambridge	Holy Ghost Hosp., School of PN	M
Chelsea	Soldiers' Home, School of PN	M
Fall River	Diman Voc. School, PN Prog.	M
Fitchburg	Burbank Hosp., School of PN	M
Foxboro	Massachusetts Dept. of Mental Health, School of PN	M
Gardner	Gardner State Hosp., School of PN	M
Gloucester	Addison Gilbert Hosp., School of PN	
Hathorne	Essex Agricultural and Tech. Inst., PN Prog.	M
Haverhill	Haverhill Trade HS, PN Prog.	M
Holyoke	Holyoke Trade HS, PN Prog.	
Hyannis	Cape Cod Hosp., School of PN	M
Jamaica Plain	Lemuel Shattuck Hosp., School of PN	M
Lawrence	Lawrence Voc. School, PN Prog.	M
Leominster	Leominster Trade HS, PN Prog.	M
Lowell	Lowell Trade HS, PN Prog.	M
North Adams	Charles H. McCann Regional Voc. HS, PN Prog.	M
Northampton	Massachusetts Dept. of Mental Health, School of PN	M
	Smith's Voc. HS, PN Prog.	M
Norwood	Henry O. Peabody School for Girls, PN Prog.	
Pittsfield	Pittsfield Voc. HS, PN Prog.	M
Plymouth	Plymouth Voc. School, PN Prog.	M
Quincy	Quincy Voc.-Tech. School, PN Prog.	M
Salem	**NORTH SHORE CHILDREN'S HOSP., SCHOOL OF PN**	**†-M**
South Easton	Southeastern Regional School Dist., School of PN	M
Springfield	Springfield Tech. Inst., PN Prog.	M
Taunton	Taunton Voc. HS, PN Prog.	M
Tewksbury	Tewksbury Hosp., School of PN	M
Walpole	Pondville Hosp., School of PN	M
Waltham	Waltham Voc. HS, PN Prog.	M
Westborough	Westborough State Hosp., School of PN	M
Westfield	Western Massachusetts Hosp., School of PN	M
Winthrop	Winthrop Com. Hosp., School of PN	
Worcester	David Hale Fanning Trade HS, PN Prog.	M

MICHIGAN

Academic Requirements: State law requires high school graduation or its equivalent.

Alma	Alma-Mt. Pleasant PN Educ. Ctr.	M
Ann Arbor	Ann Arbor PN Educ. Ctr.	M
Battle Creek	Kellogg Com. College, PN Prog.	M
Benton Harbor	Lake Michigan College, PN Prog.	M
Bloomfield Hills	Oakland Com. College, PN Prog.	M
Cadillac	Mercy School of PN	M
Coldwater	South Central Michigan School of PN	M
Detroit	Detroit Board of Educ., MDTA School of PN	M
	Detroit PN Ctr.	M
	SHAPERO SCHOOL OF NSG.	†-M
Dowagiac	Southwestern Michigan College, PN Prog.	M
Escanaba	Bay de Noc Com. College, School of PN	M
Essexville	Bay City PN Ctr.	M
Flint	Flint Com. Jr. College, PN Prog.	M
Grand Rapids	Grand Rapids Jr. College, Div. of PN	M
	Pine Rest School of PN	M
Howell	McPherson Com. Health Ctr., School of PN	M
Jackson	Jackson Com. College, PN Prog.	M
Kalamazoo	Kalamazoo PN Ctr.	
Lansing	Lansing PN Educ. Ctr.	M
Livonia	Schoolcraft College, PN Prog.	M
Marquette	Northern Michigan Univ., PN Educ. Ctr.	M
Midland	Midland Hosp., School of PN	M
Mount Clemens	St. Joseph School of PN	M
Muskegon	Muskegon County Com. College, PN Prog.	M
Port Huron	St. Clair County Com. College, Dept. of PN	M
Saginaw	Saginaw PN School	M
Sault Ste. Marie	Lake Superior State College, PN Prog.	M
Sidney	Montcalm Com. College, PN Prog.	M
Traverse City	Northwestern Michigan College, PN Ctr.	M
White Pigeon	Glen Oaks Com. College, PN Prog.	M

MINNESOTA

Academic Requirements: State law specifies completion of eighth grade or equivalent.

Alexandria	Alexandria Prog. of PN	M
Anoka	Anoka-Hennepin PN Prog.	M
Austin	Austin School of PN	M
Bemidji	Bemidji Area Voc.-Tech. School, PN Prog.	M

Brainerd	Brainerd PN Prog.	M
Crookston	Crookston School of PN	M
	St. Francis Hosp., School of PN	M
Detroit Lakes	Detroit Lakes Voc.-Tech. School, PN Prog.	M
Duluth	Duluth School of PN	
Faribault	Faribault School of PN	M
Fergus Falls	Fergus Falls PN Prog.	M
Grand Rapids	Grand Rapids PN Prog.	M
Hastings	Hastings PN Prog.	M
Litchfield	Meeker County School of PN	M
Mankato	St. Joseph's Hosp., School of PN	
Minneapolis	Minneapolis Voc. School of PN	
New Ulm	New Ulm School of PN	
Red Wing	Red Wing School of PN	
Rochester	Rochester Area Voc. School, PN Prog.	M
	Rochester School of PN	
St. Cloud	St. Cloud PN Prog., Area Voc.-Tech. School	M
St. Paul	**BETHESDA LUTHERAN HOSP., SCHOOL OF PN**	†
	Miller Hosp., Voc. School of PN	
Thief River Falls	Thief River Falls School of PN	
Virginia	Virginia School of PN	M
Willmar	Willmar PN Prog., Area Voc.-Tech. School	
Winona	Winona Tech. School of PN	

MISSISSIPPI

Academic Requirements: The State Department of Education recommends tenth-grade education or equivalent. However, high school graduation is preferred.

Booneville	North East Mississippi Jr. College, VN Prog.	M
Clarksdale	Clarksdale Pub. Schools, Adult PN Progs.	M
Cleveland	Cleveland HS, PN Prog.	M
Columbia	Columbia City Schools, PN Prog.	M
Ellisville	Jones County Jr. College, PN Prog.	
Houston	Houston Pub. School, VN Prog.	M
Jackson	Mississippi Baptist Hosp., PN Prog.	M
Kosciusko	Holmes Jr. College, PN Prog.	M
Meridian	Meridian Jr. College, PN Prog.	M
Oxford	Oxford Pub. Schools, PN Prog.	M
Perkinston	Gulf Coast Jr. College Dist., PN Prog.	M
Poplarville	Pearl River Jr. College, VN Prog.	
Raymond	Hinds Jr. College Dist., PN Prog.	M
Tupelo	Ittawamba Jr. College, PN Prog.	M
Wesson	Copiah-Lincoln Jr. College, PN Prog.	M

MISSOURI

Academic Requirements: State law specifies two years of high school or equivalent as established by the State Board of Education.

Bonne Terre	Mineral Area College, PN Prog.	M
Brookfield	Brookfield School of Nsg.	M
Columbia	Columbia Pub. School of PN	M
Hannibal	Hannibal Pub. School of PN	M
Independence	Jennie Lund School of PN	M
Jefferson City	Jefferson City Pub. School, PN Prog.	M
Joplin	Joplin Board of Educ., School of PN	M
Kansas City	Kansas City Board of Educ., PN Prog.	M
	St. Mary's Hosp., PN Prog.	M
Kirksville	Kirksville Pub. School of PN	M
Mexico	Mexico Pub. School, PN Prog.	M
Nevada	Nevada Pub. School for PN	M
Poplar Bluff	Poplar Bluff School Dist., PN Prog.	M
Rolla	Rolla School of PN	M
St. Joseph	N. S. Hillyard Tech. School of PN	M
St. Louis	Board of Educ., PN Prog.	M
	St. Mary's Hosp., School of PN	
Sikeston	**SIKESTON PUB. SCHOOLS, PN TNG. PROG.**	†-M
Springfield	Springfield Board of Educ., PN Prog.	M
Trenton	Trenton Pub. School of PN	M

MONTANA

Academic Requirements: State law specifies high school graduation or its equivalent.

Billings	Billings School of PN, MDTA	
Bozeman	Bozeman School of PN	M
Butte	Butte School of PN, MDTA	M
Great Falls	Great Falls School of PN	M
Havre	Northern Montana College, School of PN	
Lewistown	St. Joseph's School of PN	M
Missoula	Missoula School of PN	M

NEBRASKA

Academic Requirements: State law specifies two years of high school or equivalent with exceptions for eighth-grade graduates over 40 years of age.

Alliance	Alliance Voc. School of PN	M
Kearney	Kearney Voc. School of PN	M
Lincoln	Lincoln Pub. School of PN	M
Omaha	Omaha Pub. School of PN	M

NEVADA

Academic Requirements: State law specifies two years of high school or equivalent.

Carson City	Sierra Nevada School of PN	M
Elko	Elko School of PN	M
Fallon	Lahontan School of PN	M
Las Vegas	Southern Nevada Mem. Hosp., School of PN	M
	Sunrise Hosp., School of PN	M
Reno	St. Mary's Hosp., School of PN	M
	Washoe Western School of PN, Washoe Med. Ctr.	M
Yerington	Lyon Health Ctr., School of PN	M

NEW HAMPSHIRE

Academic Requirements: State law specifies completion of one year of high school or equivalent and such other preliminary qualifications as board may prescribe.

Goffstown	Moore Gen. Hosp., School of PN	M
Hanover	Hanover School of PN	M
Nashua	St. Joseph's Hosp., School of PN	M
Portsmouth	New Hampshire Voc. Inst., PN Prog.	M

NEW JERSEY

Academic Requirements: State law specifies two years of high school or equivalent.

Atlantic City	Atlantic City HS Tech. Ctr., PN Prog.	M
Bayonne	Bayonne HS, PN Prog.	
Burlington	Burlington County Voc.-Tech. Schools, PN Prog.	M
Camden	Camden HS, PN Prog.	
Cape May	Cape May County Voc.-Tech. Inst., PN Prog.	M
Flemington	Hunterdon Central HS, PN Prog.	M
Freehold	Monmouth County Voc. School, PN Prog.	M
Jersey City	Jersey City Board of Educ., PN Prog.	
Mays Landing	Atlantic County Voc. School, PN Prog., MDTA	M
Merchantville	Camden County Voc.-Tech. HS, PN Prog.	
Millville	Millville Sr. HS, PN Prog.	M
Montclair	St. Vincent's Hosp., PN Prog.	
Morristown	Morristown HS, PN Prog.	M
Newark	Essex County Adult Tech. School, PN Prog.	M
	Newark Skills Ctr., PN Prog., MTDA	M
Newton	Sussex County Voc.-Tech. Schools, PN Prog.	M
Paramus	Bergen Pines County Hosp., PN Prog.	
Paterson	Passaic County Tech.-Voc. HS, PN Prog.	M
Penns Grove	Salem County Voc. Inst., PN Prog.	M

Princeton	Princeton Hasp., PN Prog.	M
Rariton	Somerset County Voc.-Tech. School No. 2 Annex, PN Prag.	M
Rockoway	Morris Hills HS, PN Prog.	M
Scotch Plains	Union County Tech. Inst., PN Prag.	M
Summit	Overlook Hosp., School of PN	M
Toms River	Ocean County Voc.-Tech. School, PN Prog.	M
Trenton	Voc.-Tech. School, Central HS, PN Prog.	M
Vinelond	Vineland HS, PN Prog.	M
Washington	Warren County Voc. School and Tech. Inst., PN Prog.	M
Woodbridge	Middlesex County Voc.-Tech. HS, PN Prog.	M

NEW MEXICO

Academic Requirements: The board recommends completion of high school.

Albuquerque	Indian School of PN	
	Presbyterian Hosp., School of PN	M
Hobbs	New Mexico Jr. College, PN Prog.	M
Los Cruces	Las Cruces School of PN	M
Roswell	Eastern New Mexico Univ., Roswell Campus, PN Prog.	M
Santa Fe	St. Vincent Hosp., School of PN	M

NEW YORK

Academic Requirements: Regulations of Commissioner of Education specify eighth-grade education or equivalent.

Albony	Albany Board of Educ., PN Prog., MDTA	M
	Albany School of PN	
Amsterdam	Amsterdam School of PN, MDTA	M
Auburn	Auburn School of PN, MDTA	M
	Cayuga County Prog. of PN	M
Batavia	Catherine McAuley PN Prog., St. Jerome Hosp.	
Binghomton	Binghamton School of PN	
Bronx, N. Y. C.	Grace H. Dodge Voc. HS, PN Prog.	
	Morris HS, School of PN	M
Brooklyn, N. Y. C.	Brooklyn YWCA School of PN	
	Caledonian Hosp., School of PN	
	Clara Bartan Voc. HS, PN Prog.	
	New York City Board of Educ., School of PN of the MDT	M
	Wyckoff Heights Hosp., School af PN	M
Buffalo	BOCES, Adult PN Prog.	M
	Buffalo Schaol of PN, Board of Educ., MDTA	M
	Edna G. Dyett School of PN, Millard Fillmore Hosp.	M

	Erie County BOCES, PN Prog.	M
	Fosdick-Masten Voc. HS, PN Prog.	
Cambridge	Mary McClellan Hosp., School of PN	M
Canisteo	Steuben County BOCES, PN Prog.	M
Carmel	Putnam County BOCES, School of PN	
Chatham	Columbia County BOCES, PN Prog.	
Dunkirk	Dunkirk School of PN, MDTA	
Geneva	Finger Lakes Occupational School, PN Prog.	M
	Geneva School of PN	
Glen Cove	Community Hosp. at Glen Cove, School of PN	M
Glens Falls	Glens Falls School of PN, MDTA	M
Hornell	Steuben County BOCES, School of PN	M
Huntington	Huntington Adult School of PN	M
	Huntington HS, PN Prog.	
Ithaca	Tompkins-Seneca County BOCES, School of PN	M
Jamestown	Jamestown School of PN	
Johnstown	Gloversville MDT School of PN, Tri-County Area Ctr. of Occupational Educ.	M
Kingston	Ulster County BOCES, School of PN	
Liberty	Sullivan County Prog. of PN	
Lindenhurst	Lewis A. Wilson Tech. Ctr., HS Prog.	M
	Lewis A. Wilson Tech. Ctr., MDTA PN Prog.	M
Long Island City	Queens Voc. HS, PN Prog.	
Lowville	Lewis County Area PN Prog.	M
Malone	Malone School of PN, MDTA	M
Manhattan, N. Y. C.	Central School for PN	M
	Helene Fuld School of PN., Hosp. for Joint Diseases	
	Hosp. for Special Surgery, PN Prog.	
	Jane Addams Voc. HS, PN Prog.	
	Julia Richman HS, PN Prog.	
	Washington Irving HS, PN Prog.	
	Yorkville Voc. HS, PN Prog.	
Massena	Massena School of PN	M
Middletown	Middletown School of PN, MDTA	M
Mineola	Voc. and Extension Board, Nassau County, School of PN, MDTA	M
	Voc. Educ. and Extension Board, Nassau County, School of PN, MDTA	M
Mohawk	Herkimer County BOCES, HS PN Prog.	M
	Herkimer School of PN, Board of Educ., MDTA	M
Morrisville	State Univ., Agricultural and Tech. College, PN Prog.	M

Newburgh	Newburgh Free Academy, PN Prog.	
	Newburgh School of PN, Board of Educ., MDTA	M
Niagara Falls	Trott Voc. HS, Adult PN Prog.	
	Trott Voc. HS, PN Prog.	
North Tarrytown	Phelps Mem. Hosp., School of PN	M
North Tonawanda	North Tonawanda HS, PN Prog.	M
	North Tonawanda School of PN, MDTA	M
Ogdensburg	Ogdensburg Prog. of PN, Board of Educ., MDTA	M
Olean	St. Francis Hosp., School of PN	M
Oneonta	PN School of Oneonta	M
Oswego	Oswego School of PN, MDT	M
Patchogue	Mid-Suffolk School for PN	M
Plattsburgh	Clinton County BOCES, School of PN	M
Poughkeepsie	Dutchess County BOCES, PN Prog.	
	Poughkeepsie School of PN, MDTA	M
Riverhead	Eastern Suffolk School of PN	M
	Riverhead Area Occupational Educ. Ctr., PN Prog.	M
Rochester	Isabella Graham Hart School of PN	M
	Rochester HS, PN Prog.	M
	Rochester School of PN	M
	Rochester School of PN, MDT, Youth Prog.	M
	Rochester School of PN, MDTA, Adult Prog.	M
Rome	Rome School of PN, MDTA	M
Saratoga Spa	Saratoga County Occupational Educ. Prog., PN Prog.	M
Schenectady	Schenectady Coop. Prog. for PN Educ.	M
Selden	Newfield HS, PN Prog.	
Staten Island, N. Y. C.	Curtis HS, PN Prog.	M
	School for PN at Willowbrook	M
Syracuse	Syracuse Central HS, School of PN, Adult Prog.	M
	Syracuse Central Tech. HS, PN Tng. Ctr., PN Prog.	M
	Syracuse School of PN, MDT No. 1	M
	Syracuse School of PN, MDT No. 2	M
Troy	Rensselaer County Area Occupational School, PN Prog.	
Utica	Utica Manpower Development School of PN	M
	Utica School for PN	
Valhalla	Grasslands Hosp., School of PN	M
Verona	West Oneida and Madison County BOCES, PN Prog.	M
Watertown	Jefferson County Area School of PN	M
	Watertown School of PN, MDTA	M

West Nyack	Rockland County PN School, HS Prog.	
	Rockland County PN School, MDTA	M
Westbury	East Meadow W. Tresper Clarke HS, PN Prog.	M
White Plains	White Plains School of PN, MDTA No. 2	M
Williamson	Wayne County BOCES, Secondary PN Prog.	M
Yonkers	St. Joseph's Hosp., School of PN	
	Yonkers Board of Educ., PN Prog., MDT	M
Yorktown Heights	Northern Westchester BOCES, PN Prog., MDTA	M
	Northern Westchester BOCES, HS PN Prog.	
Yorkville	Utica BOCES, PN Prog.	M

NORTH CAROLINA

Academic Requirements: State law specifies completion of ninth grade or equivalent.

Asheboro	Randolph Tech. Inst., Prog of PN Educ.	M
Asheville	Asheville–Buncombe Tech. Inst., Prog. of PN Educ.	M
Banner Elk	Banner Elk–Caldwell Tech. Inst., Prog. of PN Educ.	M
Burlington	Tech. Inst. of Alamance, Prog. of PN Educ.	M
Charlotte	Central Piedmont Com. College, Prog. of PN Educ.	M
Clinton	Sampson County Prog. of PN Educ.	M
Durhom	Durham Tech. Inst., Prog. of PN Educ.	M
	Watts Hosp., PN Prog.	
Elizabeth City	College of the Albemarle, Prog. of PN Educ.	
Foyetteville	Fayetteville Tech. Inst., Prog. of PN Educ.	
Fort Brogg	Womack Army Hosp., Prog. of PN Educ. (For Army personnel only)	M
Gostonio	Gaston Mem. Hosp., School of PN	M
Goldsboro	Wayne Tech. Inst., Prog. of PN Educ.	M
Hickory	Catawba Valley Tech. Inst., Prog. of PN Educ.	M
Jacksonville	Onslow Tech. Inst., Prog. of PN Educ.	M
Jamestown	Guilford Tech. Inst., Prog. of PN Educ.	M
Kenonsville	James Sprunt Inst., Prog. of PN Educ.	M
Lourinburg	Laurinburg–Richmond Tech. Inst., Prog. of PN Educ.	
Lenoir	Caldwell Tech. Inst., Prog. of PN Educ.	
Moreheod City	Carteret County Unit–Wayne Tech. Inst., Prog. of PN Educ.	
New Bern	New Bern–Lenoir County Com. College, Prog. of PN Educ.	M
Roleigh	W. W. Holding Tech. Inst., Prog. of PN Educ.	M
Roonoke Ropids	Roanoke Rapids–Pitt Tech. Inst., Prog of PN Educ.	

Roxboro	Roxboro–Durham Tech. Inst., Prog. of PN Educ.	
St. Pauls	Robeson County Prog. of PN Educ.	M
Salisbury	Rowan Tech. Inst., Prog. of PN Educ.	M
Sanford	Central Carolina Tech. Inst., Prog. of PN Educ.	M
Shelby	Cleveland County Tech. Inst., Prog. of PN Educ.	
Sylva	Southwestern Tech. Inst., Prog. of PN Educ.	M
Washington	Washington–Pitt Tech. Inst., Prog. of PN Educ.	
Waynesville	Haywood Tech. Inst., Prog. of PN Educ.	M
Whiteville	Southeastern Com. College, Prog. of PN Educ.	M
Wilkesboro	Wilkes Com. College, Prog. of PN Educ.	M
Wilmington	Cape Fear Tech. Inst., Prog. of PN Educ.	M
Wilson	Wilson Tech. Inst., Prog. of PN Educ.	M
Winston-Salem	Forsyth Tech. Inst., Prog. of PN Educ.	M

NORTH DAKOTA

Academic Requirements: State law specifies at least an eighth-grade education or equivalent. By board recommendation, schools are giving preference to high school graduates.

Devils Lake	Lake Region Jr. College, PN Prog.	M
Dickinson	St. Joseph's Hosp., School of PN	M
Wahpeton	North Dakota State School of Science, PN Prog.	M

OHIO

Academic Requirements: Board specifies completion of tenth grade or equivalent.

Akron	Akron School of PN	M
Bellaire	Bellaire School of PN	M
Bowling Green	Bowling Green Area School of PN	M
Canton	PN Prog. of Canton City Schools	M
	Timken Mercy Hosp., School of PN	M
Cincinnati	Claude V. Courter Tech. HS, School of PN	M
	St. Francis Central School of PN	M
Cleveland	Central School of PN	
	Jane Addams School of PN	M
Columbus	Columbus Pub. Schools, School of PN	M
Coshocton	Tri-County School of PN	M
Cuyahoga Falls	Cuyahoga Falls HS, PN Prog.	
Dayton	Dayton School of PN	M
Elyria	PN School of Elyria	
Euclid	Euclid School of PN	M
Garfield Heights	Marymount School of PN	

Hamilton	Hamilton Prog. of PN Educ.	M
Lakewood	Lakewood School of PN	M
Limo	Lima School of PN	M
Lorain	St. Joseph School of PN	
Monsfield	Mid-Ohio PN Prog.	M
Morietto	Marietta Area Tech. School, PN Prog.	M
Morion	Marion Gen. Hosp., School of PN	M
Pormo	Parma School of PN	M
Portsmouth	PN Prog. of Portsmouth City Schools	
Salem	Hannah E. Mullins School of PN	M
Sondusky	Sandusky School of PN	
Springfield	Springfield and Clark Counties, Joint Voc. School Dist., School of PN	M
Toledo	Northwestern Ohio PN Tng. Ctr.	M
Worren	Warren City Schools, School of PN	
Willoughby	Willoughby-Eastlake School of PN	M
Wooster	Wayne PN Prog.	M
Youngstown	Choffin School of PN	M
Zonesville	Muskingum Area Voc. School, PN Prog.	M

OKLAHOMA

Acodemic Requirements: State law specifies two years of high school or equivalent.

Ada	Ada Voc. School of PN, Valley View Hosp.	M
Ardmore	Southern Oklahoma Area Voc.-Tech. Ctr., PN Prog.	M
Bartlesville	Bartlesville Voc. School of PN, Jane Phillips Episcopal Hosp.	M
Blackwell	Blackwell Gen. Hosp., School of PN	
Lawton	Lawton Voc. School of PN	M
McAlester	McAlester Voc. School of PN	M
Miomi	Northeastern Oklahoma A and M College, Voc. School of PN	M
Midwest City	Midwest City Pub. Schools, Voc. School of PN	M
Muskogee	Muskogee Voc. School of PN	M
Norman	Norman Voc. School of PN	M
Oklohoma City	Oklahoma City Voc. School of PN	M
Shownee	Shawnee Voc. School of PN, Mission Hill Mem. Hosp.	M
Tulsa	Tulsa Voc. School of PN	M
Woodword	Woodward Voc. School of PN	M

OREGON

Academic Requirements: State law specifies high school graduation or its equivalent.

Bend	Central Oregon Com. College, PN Course	M

Coos Bay	Southwestern Oregon Com. College, PN School	M
Eugene	Lane Com. College, PN Prog.	M
Forest Grove	Forest Grove Pub. Schools, PN Prog.	M
Gresham	Mt. Hood Com. College, PN Prog.	M
Medford	Southern Oregon PN School of the Medford Pub. Schools	M
Ontario	Treasure Valley Com. College, PN Prog.	M
Pendleton	Blue Mountain Com. College, PN Prog.	M
Portland	Portland Com. College, Portland Pub. Schools, Div. of PN	M
	Portland Sanitarium and Hosp., PN School	M
Roseburg	Umpqua Com. College, PN Prog.	M
Salem	Salem Voc.-Tech. Educ. PN Prog., Salem Pub. Schools	M

PENNSYLVANIA

Academic Requirements: State law specifies a minimum of at least twelve years of education with diploma in a public, parochial, or private school, or its equivalent as evaluated by the Department of Public Instruction.

Allentown	Lehigh Com. College, PN Prog.	M
Altoona	Altoona Area Voc.-Tech. School, PN Prog.	M
Bellefonte	Centre County Area Voc.-Tech. School, PN Prog.	M
Bethlehem	Bethlehem Area Voc.-Tech. School, PN Prog.	M
Bradford	Bradford Area Schools, PN Prog.	M
Carlisle	Carlisle Hosp., School of PN	
Chambersburg	Chambersburg Area School Dist., PN Prog.	M
Chester	Chester School Dist., PN Prog.	M
Coatsville	Central Chester County Tech. School, PN Prog.	M
Donville	Danville Area School Dist., PN Prog.	M
Dorby	Camillus Catholic School of PN	M
Du Bois	Jefferson County–Du Bois Area Voc.-Tech. School, PN Prog.	M
Easton	Eastern Northampton County Area Voc.-Tech. School, PN Prog.	M
Elkins Park	Rolling Hill Hosp., School of PN	M
Erie	School Dist. of the City of Erie, PN Prog.	M
Foirless Hills	Bucks County Tech. School, PN Prog.	M
Freedom	Com. College of Beaver County, PN Prog.	M
Greensburg	Greensburg-Salem School Dist., PN Prog.	M
Hanover	Hanover Borough School Dist., PN Prog.	M
Harrisburg	Harrisburg Steelton-Highspire School, PN Prog.	M
Hopwood	Fayette County Area Tech. School, PN Prog.	M

Jim Thorpe	Carbon County Area Voc.-Tech. School, PN Prog.	M
Johnstown	Greater Johnstown School Dist., PN Prog.	M
Lancaster	Lancaster School Dist., PN Prog.	M
Lebanon	Lebanon School Dist., PN Prog.	M
New Castle	Lawrence County Area Voc.-Tech. School, PN Prog.	M
Norristown	**SACRED HEART HOSP., SCHOOL OF PN**	†-M
Oil City	Oil City Area School Dist., PN Prog.	M
Perkasie	Upper Bucks County Area Voc.-Tech. School, PN Prog.	M
Philadelphia	Jefferson Med. College Hosp., School of PN	M
	Lankenau Hosp., PN Prog.	M
	Misericordia Hosp., School of PN	M
	Presbyterian–Univ. of Pennsylvania Med. Ctr., PN Prog.	M
	St. Mary's Franciscan Hosp., School of PN	M
	School Dist. of Philadelphia, PN Prog.	M
Pittsburgh	Alvernia School of PN, St. Francis Gen. Hosp.	M
	Catherine McAuley School of PN, Mercy Hosp.	
	North Hills Passavant Hosp., School of PN	M
	Pittsburgh Pub. Schools, PN Prog.	M
Pottsville	Schuylkill County Area Voc.-Tech. School, PN Prog.	M
Reading	Reading School Dist., Southern Jr. HS, PN Prog.	M
Scranton	Mercedian School of PN, Mercy Heights Hosp.	M
	Scranton School Dist., PN Prog.	M
Somerset	Somerset Area Schools, PN Prog.	M
Wilkes-Barre	Wilkes-Barre City Schools, PN Prog.	M
Williamsport	Williamsport Area Com. College, PN Prog.	M
Willow Grove	Eastern Montgomery County Area Voc.-Tech. School, PN Prog.	M
York	York County Area Voc.-Tech. School, PN Prog.	M

PUERTO RICO

Academic Requirements: The law requires an eighth-grade or junior-high-school diploma or certificate issued by the Department of Education of Puerto Rico or by a school accredited thereby, or its equivalent in academic training, as shown through an ability test taken before competent personnel appointed by the Department of Education of Puerto Rico.

Aguadilla	Aguadilla Voc. HS, PN Prog.	M
Arecibo	Arecibo Area Voc. HS, PN Prog.	M
Bayamon	Bayamon Voc. HS, PN Prog.	

Caguas	Caguas Voc. HS, PN Prog.	
Fajarda	Fajardo Voc. HS, PN Prog.	M
Guayama	Guayama Voc. HS, PN Prog.	M
Humacao	Ryder Mem. Hosp., School of PN	M
Mayaguez	Mayaguez Voc. HS, PN Prog.	M
Ponce	Ponce Voc. HS, PN Prog.	M
Rio Piedras	Escuela Voc. Metropolitana Miguel Such, PN Prog.	M
San German	Hosp. de la Concepcion, School of PN	M
San Juan	Roman Baldorioty de Castro Voc. HS, PN Prog.	M
Utuado	Utuado Voc. HS, PN Prog.	M

RHODE ISLAND

Academic Requirements: Graduation from high school or its equivalent.

North Providence	Our Lady of Fatima Hosp., School of PN	
Providence	Rhode Island School of PN, Providence Div.	M
Warwick	Rhode Island School of PN, Warwick Div.	M

SOUTH CAROLINA

Academic Requirements: State law specifies two years of high school which is accredited in state where located, or the equivalent thereof, satisfactory evidence of which shall be furnished to the board.

Aiken	Aiken County School of PN	M
Anderson	Anderson School of PN	M
Bennettsville	Bennettsville School of PN	M
Camden	Kershaw County Hosp., School of PN	M
Charleston	Med. College of South Carolina, PN Prog.	M
	Roper Hosp., School of PN	
Clinton	Clinton PN Prog.	M
Columbia	Baptist Hosp., School of PN	M
	Columbia Schools, PN Prog.	M
Conway	Conway School of PN	M
Florence	Florence Prog. of PN, McClenaghan HS	
	Saunders Mem. Hosp., School of PN	M
Gaffney	Cherokee School of PN	M
Georgetown	Georgetown County School of PN	M
Greenville	Greenville County Schools, PN Prog.	M
Hartsville	Hartsville Area School of PN	M
Lancaster	Lancaster School, PN Prog.	M
Marion	Marion-Mullins PN Prog.	M
Spartanburg	Spartanburg County School of PN	M
Walhalla	Oconee County School Dist., PN Prog.	
Walterboro	Walterboro School of PN	M

SOUTH DAKOTA

Acodemic Requirements: The South Dakota Board of Nursing requires all applicants to state-approved schools of practical nursing to have completed four years of high school or to have successfully passed the General Education Development Test.

Mitchell	Mitchell School of PN	M
Pierre	Pierre School of PN	M
Sioux Falls	Sioux Falls School of PN	M

TENNESSEE

Acodemic Requirements: State law specifies completion of tenth grade or its equivalent and such other preliminary qualification requirements as the board may prescribe.

Chottonoogo	Chattanooga City Schools, Dept. of Voc. Educ., PN Prog.	M
Greeneville	Takoma Hosp., School of PN	M
Johnson City	Johnson City Voc. School, PN Prog.	M
Kingsport	Kingsport City Schools, Dept. of Voc. Educ., PN Prog.	M
Knoxville	Knoxville City Schools, Dept. of Voc. Educ., PN Prog.	M
Memphis	Memphis City Schools, Dept. of Voc. Educ., PN Prog.	M
Noshville	Metropolitan Nashville Schools, PN Trng. Prog.	M
	Riverside Sanitarium and Hosp., School of PN	M
	State Board of Voc. Educ., Tennessee PN Prog.	M

TEXAS

Acodemic Requirements: State law specifies two years of high school or its equivalent.

Abilene	Hendrick Mem. Hosp., School of VN	M
Alpine	Alpine Pub. Schools, School of VN	M
Alvin	Alvin Mem. Hosp., School of VN	
Amorillo	Amarillo College, School of VN	M
Andrews	Permian Gen. Hosp., School of VN	M
Anson	Jones County School of VN	M
Arlington	Arlington Mem. Hosp., School of VN	
Athens	Henderson County Jr. College, VN Prog.	M
Austin	Austin State Hosp., School of VN	M
	Brackenridge Hosp., School of VN	M
Bollinger	Ballinger Mem. Hosp., School of VN	M
Baytown	Lee College, VN Prog.	M
Beaumont	Lamar School of VN, Lamar State College of Tech.	
Beeville	Bee County College, VN Prog.	M
Big Spring	Howard County Jr. College, VN Prog.	M
	Med. Arts Clinic-Hosp., School of VN	
Bonham	S. B. Allen Mem. Hosp., School of VN	M

Borger	North Plains Hosp., School of VN	M
Brady	Brady Hosp., School of VN	M
Brenham	Blinn College, School of VN	M
Brownfield	Brownfield Gen. Hosp., School of VN	M
Brownsville	Texas Southmost College, Div. of VN	
Brownwood	Brownwood School of VN	
Bryan	Bryan School of VN	M
Burnet	Shepperd Mem. Hosp., School of VN	M
Cameron	St. Edward's Hosp., School of VN	
Carthage	Panola County School of VN, Panola Jr. College	
Cisco	Cisco Jr. College, Cisco Branch, VN Prog.	M
Clarendon	Adair Hosp., School of VN	M
Cleburne	Johnson County Mem. Hosp., School of VN	
Cleveland	Cleveland School of VN	M
Clifton	Goodall-Witcher Hosp. Foundation, School of VN	
Coleman	Overall-Morris Mem. Hosp., School of VN	M
Corpus Christi	Del Mar Tech. Inst., VN Prog.	M
Corsicana	Navarro Jr. College, VN Prog.	
Cotulla	La Salle School of VN	M
Crockett	Crockett Clinic and Hosp., School of VN	
Crowell	Greenbelt School of VN	M
Cuero	Burns Hosp., School of VN	M
Dallas	Dallas County Jr. College Dist., Paramedics Div., VN Prog., El Centro Campus	M
	Dallas Osteopathic Hosp., School of VN	M
	Dallas VN Prog.	M
	John Buist Chester Hosp., School of VN	M
Denison	Grayson County Jr. College, School of VN	M
Denver City	Yoakum County Hosp., School of VN	M
Dilley	Winter Garden School of VN	
Dimmitt	Plains Mem. Hosp., School of VN	
Dublin	Dublin Hosp., School of VN	M
Dumas	Mem. Hosp., School of VN	
El Paso	El Paso School of VN	M
Fort Sam Houston	Clinical Specialist Course, Brooke Gen. Hosp. (For Army personnel only)	M
Fort Worth	All Saints Episcopal Hosp., School of VN	M
	Fort Worth School of VN, Tech. Inst.	M
	Harris Hosp., School of VN	M
	St. Joseph's Hosp., School of VN	M
Gainesville	Gainesville Mem. Hosp., School of VN	
Galveston	Galveston Com. College, VN Prog.	M
Ganado	Mauritz Mem. Jackson County Hosp., School of VN	M

Gotesville	Coryell Mem. Hosp., School of VN	M
Georgetown	Georgetown Med. and Surgical Clinic, School of VN	M
Goldthwaite	Childress and Cruzcosa School of VN	
Gonzales	Holmes Mem. Hosp., School of VN	
Groham	Cisco Jr. College, Graham Branch, School of VN	M
Grond Saline	Cozby-Germany Hosp., School of VN	M
Greenville	Greenville School of VN	M
Groesbeck	Dr. Cox's Hosp., School of VN	
Groom	Dr. John V. London School of VN	M
Hale Center	Hi Plains Hosp., School of VN	M
Hallettsville	Renger Mem. Hosp., School of VN	M
Hamilton	Hamilton County Gen. Hosp., School of VN	
Harlingen	Valley Baptist Hosp., School of VN	M
Henderson	Henderson Mem. Hosp., School of VN	
Hereford	Deaf Smith County Hosp., School of VN	
Hico	Hico City Hosp., School of VN	M
Hillsboro	Grant and Buie Med. Ctr., School of VN	M
	Hillsboro Hosp., School of VN	
Houston	Bellaire Gen. Hosp., School of VN	M
	Hermann, Texas Med. Ctr., School of VN	M
	Houston Pub. Schools, VN Prog.	M
Huntsville	Huntsville Mem. Hosp., School of VN	M
Jacksonville	Nan Travis School of VN	M
Kenedy	Kenedy Clinic and Hosp., School of VN	
Kermit	Kermit School of VN	
Kerrville	Sid Peterson Mem. Hosp., School of VN	M
Kingsville	Kleberg County Hosp., School of VN	M
Klondike	Area Health Services, School of VN	
La Marque	Galveston County Mem. Hosp., School of VN	M
Lamesa	Med. Arts Hosp., School of VN	
Laredo	Mercy Hosp., School of VN	
Levelland	South Plains College, School of VN	M
Llano	Llano Mem. Hosp., School of VN	M
Lockhart	Lockhart Hosp., School of VN	M
Lockney	Lockney Gen. Hosp., School of VN	
Longview	Longview Pub. School of VN	M
Lubbock	Lubbock School of VN	M
Lufkin	Mem. Hosp., School of VN	
McAllen	McAllen Independent School Dist., School of VN	M
McKinney	Collin Mem. Hosp., School of VN	
	McKinney Job Corps, School of VN	
Marlin	Marlin School of VN	M
Marshall	Marshall School of VN	

Memphis	Hall County Hosp., School of VN	M
Mexia	Gen. Mexia Hosp., School of VN	
Midland	Midland Mem. Hosp., School of VN	M
Mission	Mission Municipal Hosp., School of VN	M
Mount Pleasant	Mem. Hosp., School of VN	M
Muleshoe	West Plains Hosp. and Clinic, School of VN	
Nacogdoches	City Mem. Hosp., School of VN	M
New Braunfels	New Braunfels School of VN	M
Odessa	Odessa College, School of VN	
Olney	George B. Hamilton School of VN	M
Orange	Orange Mem. Hosp., School of VN	
Ozona	Crockett County Hosp., School of VN	M
Palestine	Palestine School of VN	M
Pampa	Highland Gen. Hosp., School of VN	M
Paris	St. Joseph's Hosp., School of VN	M
Pasadena	Pasadena School of VN	
Port Arthur	Park Place Hosp., School of VN	M
Port Lavaca	Champ Traylor Mem. Hosp., School of VN	M
Richmond	Polly Ryon Mem. Hosp., School of VN	M
San Angelo	San Angelo School of VN	M
San Antonio	St. Philip's College, Dept. of VN	M
	San Antonio Voc.-Tech. School, VN Prog.	M
	Santa Rosa Med. Ctr., School of VN	M
San Marcos	Hays Mem. Hosp., School of VN	
	Texas Educ. Foundation, School of VN	M
San Saba	San Saba Mem. Hosp., School of VN	M
Seymour	Baylor County Hosp., School of VN	
Shiner	Frank Wagner School of VN	
Snyder	Synder School of VN	M
Sonora	Lillian M. Hudspeth Mem. Hosp., School of VN	M
Spearman	Hansford Hosp., School of VN	
Stamford	Stamford Mem. Hosp., School of VN	M
Stephenville	Stephenville Hosp., School of VN	
Sulphur Springs	Sulphur Springs School of VN	M
Sweetwater	Sweetwater School of VN	M
Taylor	Johns Hosp., School of VN	M
Temple	King's Daughters' Hosp., School of VN	
Terrell	Terrell School of VN	M
Texarkana	Texarkana College, School of VN	M
Three Rivers	Three Rivers Hosp., School of VN	M
Throckmorton	Throckmorton County Mem. Hosp., School of VN	M
Tomball	Tomball Med. Ctr., School of VN	M

Tyler	Med. Ctr. Hosp., School of VN	M
	Mother Frances Hosp., School of VN	M
Uvalde	Southwest Texas Jr. College, School of VN	M
Victoria	Victoria College, School of VN	
Waco	Hillcrest Baptist Mem. Hosp., School of VN	M
Waxahachie	W. C. Tenery Com. Hosp., School of VN	M
Weatherford	Campbell Mem. Hosp., School of VN	M
Wharton	Wharton County Jr. College, School of VN	M
Whitney	Whitney School of VN	M
Wichita Falls	Bethania Hosp., School of VN	M
Woodville	Tyler County Hosp., School of VN	M
Yoakum	Huth Mem. Hosp., School of VN	M

UTAH

Academic Requirements: Completion of at least two years of high school or its equivalent as determined by the board.

Cedar City	College of Southern Utah, PN Prog.	
Ogden	Weber State College, PN Prog., MDTA	M
Provo	Utah Tech. College at Provo, PN Prog.	M
Salt Lake City	Utah Tech. College at Salt Lake, PN Prog.	

VERMONT

Academic Requirements: State law specifies four years of high school or equivalent.

Bennington	Henry W. Putnam Mem. Hosp., School of PN	M
Brattleboro	Thompson School of PN	
Winooski	Fanny Allen Mem. School of PN	M

VIRGIN ISLANDS

Academic Requirements: Applicants under 25 years of age must have had two years of high school or its equivalent. Applicants over 25 years of age should have completed at least eighth grade or its equivalent.

St. Croix	St. Croix School of PN	M
St. Thomas	St. Thomas School of PN	M

VIRGINIA

Academic Requirements: State law specifies completion of elementary grades or equivalent. However, the majority of schools require from two to four years of high school.

Bedford	Bedford County Schools, PN Prog.	M

Charlottesville	Albemarle HS, School of PN	M
	Jackson P. Burley HS, School of PN	M
	Univ. of Virginia Hosp., PN Prog.	M
Chesapeake	Chesapeake Pub. Schools, PN Prog.	
Culpeper	Culpeper County School of PN	M
Danville	Danville City Schools, PN Prog.	
Emporia	Greensville County Schools, PN Prog.	M
Fairfax	Fairfax County Schools. PN Prog.	M
Farmville	Southside School of PN	M
Fort Belvoir	Clinical Specialist Course, DeWitt Army Hosp. (For Army personnel only)	M
Franklin	Southampton Mem. Hosp., School of PN	M
Fredericksburg	Fredericksburg City–Stafford County Schools, PN Prog.	M
Grundy	Buchanan County School of Nsg.	M
Hampton	Hampton City Schools, PN Prog.	M
Lexington	Rockbridge County Schools, PN Prog.	M
Lynchburg	Lynchburg Gen. Hosp., School of PN	
Marion	Smyth County School of PN	M
Martinsville	Martinsville City Schools, PN Prog.	M
Mount Jackson	Triplett Business and Tech. Inst., PN Prog.	
Nassawadox	Northampton-Accomack County Schools, PN Prog.	M
Newport News	Newport News Pub. Schools, PN Prog.	M
Norfolk	Norfolk City Schools, Leigh Mem. Hosp. PN Prog.	M
	Norfolk City Schools, Norfolk Gen. Hosp., PN Prog.	M
Petersburg	Petersburg City Schools, PN Prog.	M
Portsmouth	Portsmouth School of PN	M
Pulaski	New River Voc. School of PN, Pulaski Hosp.	
Radford	New River Voc. School of PN, Radford Com. Hosp.	M
Richlands	Tazewell County Schools, PN Prog.	M
Richmond	Henrico Pub. School, PN Prog.	M
	Richmond City Schools, PN Prog.	M
Roanoke	Roanoke City Schools, PN Prog.	M
	Lucy Addison HS, PN Prog.	M
Salem	Roanoke County Voc. School, PN Prog.	M
South Boston	Halifax County HS, PN Prog.	M
South Hill	Brunswick-Lunenburg-Mecklenburg County Schools, PN Prog.	M
Staunton	Wilson Mem. HS, PN Prog.	M
Suffolk	Suffolk Pub. Schools, PN Prog.	
Waynesboro	Waynesboro School of PN	M
Winchester	Clarke-Frederick-Warren County-Winchester City Schools, PN Prog.	M
Wise	Wise County Tech. School, PN Prog.	

WASHINGTON

Acodemic Requirements: State law specifies completion of tenth grade or equivalent.

Aberdeen	Grays Harbor College, PN Prog.	M
Auburn	Green River Com. College, PN Prog.	M
Bellevue	Bellevue Com. College, PN Prog.	M
Bellinghom	Bellingham Tech. School, PN Prog.	M
Bremerton	Olympic College, PN Prog.	M
Centrolio	Centralia College, PN Prog.	M
Clorkston	Clarkston Pub. Schools, PN Prog.	
Ellensburg	Ellensburg Pub. Schools, PN Prog.	M
Everett	Everett Jr. College, PN Prog.	M
Grondview	Grandview School Dist., PN Prog.	M
Lokewood Center	Clover Park Voc.-Tech. School, PN Prog.	M
Longview	Lower Columbia College, PN Prog.	M
Moses Lake	Big Bend Com. College, PN Prog., MDTA	M
Mount Vernon	Skagit Valley College, PN Prog.	M
Olympio	St. Peter Hosp., PN Prog.	
Posco	Columbia Basin College, PN Prog.	M
Port Angeles	Peninsula College, PN Prog.	M
Seottle	Seattle Com. College, Edison Branch, PN Prog.	M
Spokone	Spokane Com. College, PN Prog.	M
Tocomo	Madigan Gen. Hosp.-Clinical Specialist Advanced Course (For Army personnel only)	M
	Tacoma Voc.-Tech. Inst., PN Prog.	
Voncouver	Clark College, PN Prog.	M
Wollo Wolla	Walla Walla Com. School, PN Prog.	M
Wenotchee	Wenatchee Valley College, PN Prog.	M
Yokimo	Yakima Valley College, PN Prog.	M

WEST VIRGINIA

Acodemic Requirements: State law specifies completion of at least the tenth grade of school or equivalent.

Beckley	Raleigh County Voc.-Tech. Ctr., PN Prog.	M
Bluefield	Mercer County Voc. School, PN Prog.	
Chorleston	Job Corps Ctr. for Women, PN Prog.	
	Kanawha County Voc. School, PN Prog.	
Clorksburg	Harrison County MDTA Prog. in PN	M
Elkins	Davis Mem. Hosp., School of PN	M
Foyetteville	Fayette County MDTA Prog. in PN	
Glen Dale	B. M. Spurr School of PN	M
Huntington	Cabell County MDTA Prog. in PN	M
	Huntington East High Trades School, PN Prog.	M

Logan	Logan County Voc. School of PN	M
Martinsburg	Berkeley County Voc. School, PN Prog.	M
Morgantown	Monongalia County Voc. School, PN Prog.	M
Parkersburg	Wood County Voc. School, PN Prog.	M
South Charlestan	Central School, MDTA Prog. in PN	
Welch	McDowell County Tech.-Voc. School, PN Prog.	

WISCONSIN

Academic Requirements: State law specifies two years of high school (8 credits) or the equivalent. High school graduation is required of persons in their teens. There are no specified high school course requirements.

Fond du Lac	Fond du Lac Voc.-Tech. and Adult School, PN Prog.	M
Green Bay	Green Bay School of Voc.-Tech. and Adult Educ., PN Prog.	M
Kenosha	Kenosha Tech. Inst., PN Prog.	M
La Crosse	Coleman Tech. Inst., PN Prog.	M
Madison	Madison Voc.-Tech. and Adult Schools, PN Prog.	M
Milwaukee	Milwaukee Inst. of Tech., PN Prog.	M
	Sacred Heart School of PN	M
Neenah	Neenah-Menasha Voc.-Tech. and Adult Schools, PN Prog.	M
Stevens Point	Stevens Point Voc.-Tech. and Adult School, PN Prog.	M
Superior	Superior Voc.-Tech. and Adult School, PN Prog.	M
Waukesha	Waukesha Voc.-Tech. and Adult School, PN Prog.	M

WYOMING

Academic Requirements: State law specifies at least two years of high school or its equivalent and such other preliminary qualificotion requirements as the board may prescribe.

Casper	Casper College, PN Prog.	M
Laramie	Laramie Voc. School of PN	M

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NEW JERSEY, 1100 Raymond Boulevard, Room 104, Newark 07102

NEW MEXICO, 505 Marquette Avenue, N.W., Albuquerque 87101

NEW YORK, State Education Dept., Division of Professional Education, Albany 12224

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OREGON, 1400 S.W. Fifth Avenue, Room 778, Portland 97201

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PUERTO RICO, P.O. Box 3271, San Juan

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VIRGINIA, 1205 Central National Bank Building, Richmond 23219

WASHINGTON, Board of Practical Nurse Examination, Division of Professional Licensing, P.O. Box 649, Olympia 98502

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VT 008 028
Vocational Education in Utah.

Utah State Board for Vocational and Technical Education, Salt Lake City
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Dec68 29p.

*VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; *EDUCATIONAL NEEDS; *EDUCATIONAL RESOURCES; EMPLOYMENT STATISTICS; STUDENT ENROLLMENT; EXPENDITURES; FACULTY; STATE PROGRAMS; SCHOOL STATISTICS
UTAH

Statistical information regarding vocational education, primarily in graphic form, covers enrollment, expenditures, and faculty and other personnel in terms of program level, vocational area and specific program. The employment situation is analyzed in relation to the educational profiles of people entering the labor market, a comparison of the occupational structure with the aspirations of youth, and follow-up information on the 1967 graduates of vocational programs. Needs identified include: (1) recognition of the technician and skilled and semi-skilled workers, (2) guidance for the non-college bound, (3) replacement of outdated courses by quality programs attuned to the needs of business, industry, individuals, the state, and the nation, (4) allocation of educational resources to meet the needs of young people, (5) quality teachers in vocational and technical programs, and (6) closer collaboration with teacher training institutions for pre-service and inservice training. Recommendations include: (1) decentralized control to increase responsiveness to vocational technical education innovations, (2) regional offices to accompany population growth, (3) closer ties between schools and potential employers, and (4) better channels for orienting parents to the objectives of vocational/technical programs. (JK)

VT 008 028

EDO 42060

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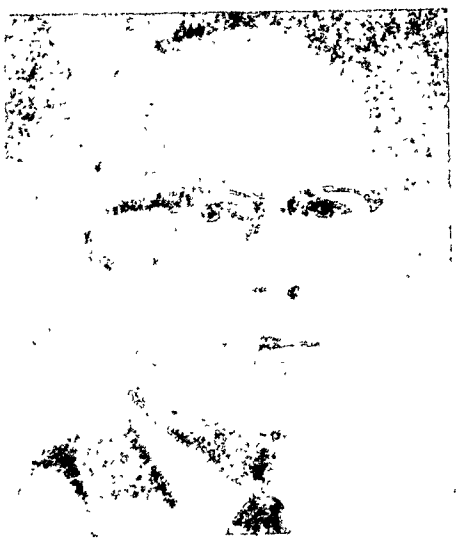
Vocational Education in Utah

VT008028



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L. LEON JENNINGS
St. George, Utah
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State Superintendent
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CHARLES S. WINN
Specialist, Distributive Education
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Research and Innovation Division, Special Project Director
JOHN F. STEPHENS
Research and Innovation Division, Director, Research Coordinating Unit for Vocational & Technical Education
RUSSELL WHITAKER
Special Educational Services Division, Specialist, Occupation and Career Guidance

PUBLICATION FACTS

UTAH STATE BOARD FOR VOCATIONAL AND TECHNICAL EDUCATION

T. H. BELL
Superintendent
WALTER E. ULRICH, JR.
State Administrator
146 University Club Building
Salt Lake City, Utah 84111

* . . . CONSERVE AND DEVELOP OUR HUMAN RESOURCES TO MEET THE NEEDS OF SOCIETY AND THE INDIVIDUAL.

* . . . **DEVELOP WITHIN THE INDIVIDUAL THE SKILLS NECESSARY TO PERFORM EFFECTIVELY IN ONE'S CHOSEN OCCUPATION.**

* . . . ASSIST THE INDIVIDUAL TO ACQUIRE THE KNOWLEDGE AND JUDGMENT NECESSARY FOR HIM TO USE THE SKILLS EFFECTIVELY AND EFFICIENTLY.

* . . . **PROMOTE THE STUDY OF THE WORLD OF WORK AS A VALID PART OF EDUCATION FOR ALL YOUTH.**

* . . . KEEP PUBLICS INFORMED ON THE SIGNIFICANT NEEDS AND IMPROVEMENTS IN VOCATIONAL AND TECHNICAL EDUCATION.

DECEMBER, 1968

JOBS

PEOPLE

KNOWLEDGE

VOCATIONAL EDUCATION IS A MOSAIC OF MANY THINGS

PRODUCTION

INVESTMENT

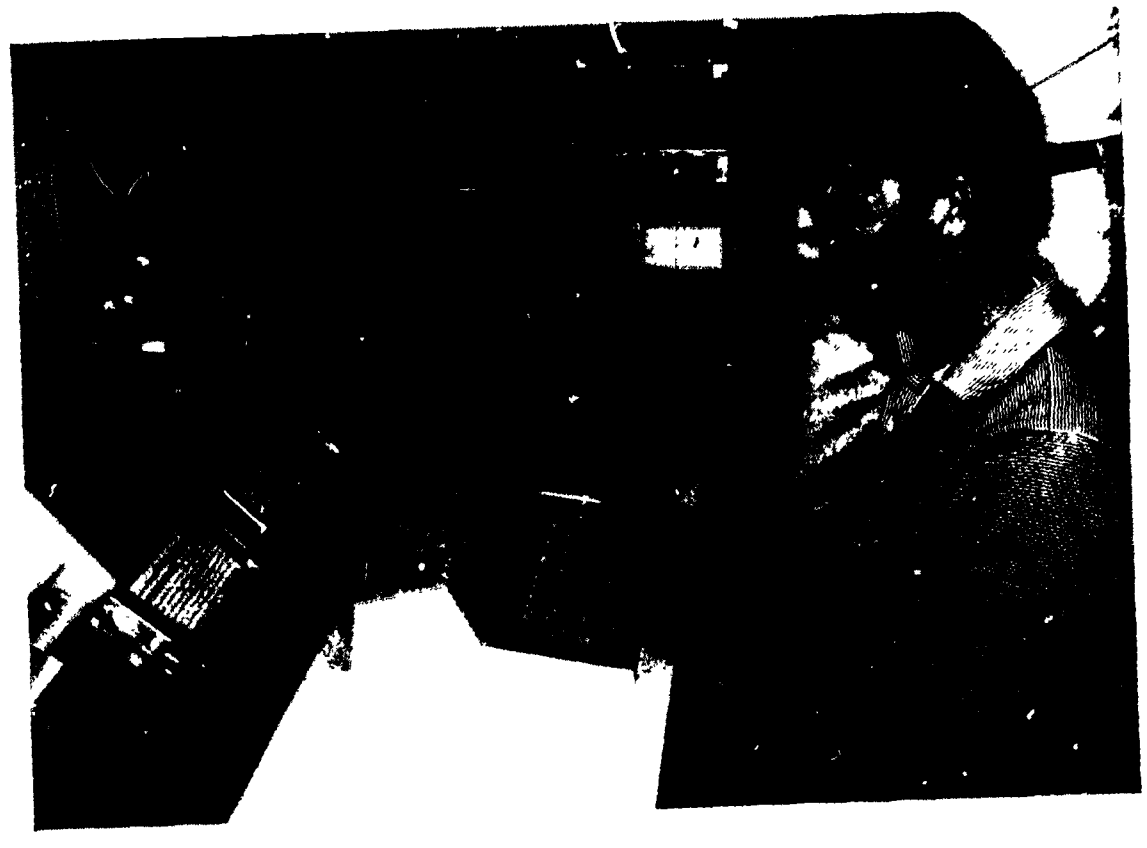
INCOME

VOCATIONAL EDUCATION PREPARES FOR OCCUPATIONS IN

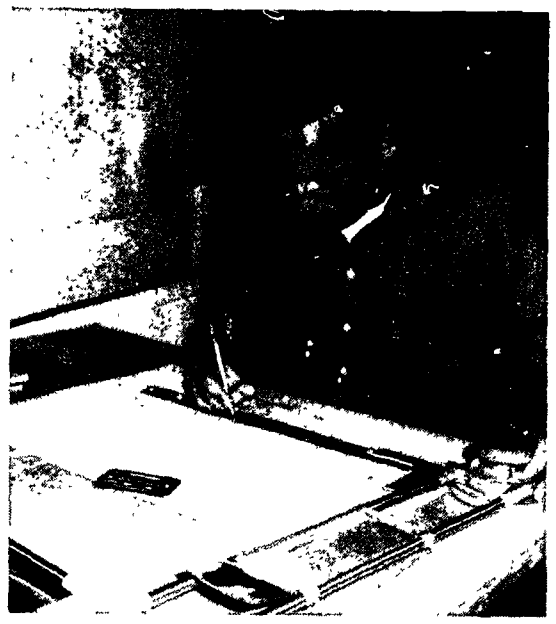
AGRICULTURE
- Dairyman
- Florist
- Greenskeeper
- Ornamental Horticulture
- Forest Ranger
- Farmer
- Farm Equipment Distributor

DISTRIBUTION AND MARKETING
- Deliveryman
- Salesman
- Real Estate Agent
- Insurance Broker
- Display Man
- Cashier Checker

HEALTH
- Licensed Practical Nurse
- Nurses Aide
- Laboratory Technician
- Surgical Technician
- X-Ray Technician
- Dental Technician



and Occupations in



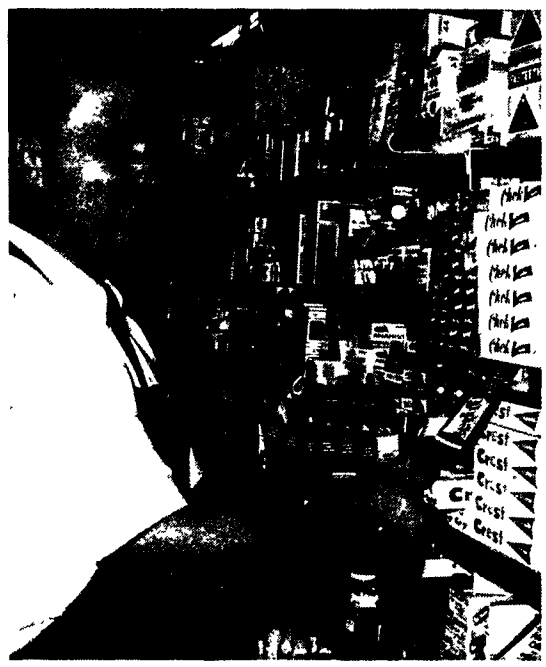
HOME ECONOMICS
- Waitress
- Chef
- Food Supervisor
- Dietary Assistant
- Home Decorator
- Child Care Assistant

OFFICE OCCUPATIONS
- Typist
- Secretary
- Business Machine Operator
- Bookkeeper
- Computer Programmer
- Duplicating Specialist

TECHNICAL OPERATIONS
- Data Processor
- Instrument Repairman
- Metallurgical Assistant
- Aeronautical Technician
- Architectural Technician
- Automotive Technician
- Chemical Technician
- Electrical Technician

TRADE AND INDUSTRY

- Machine Tool Operator
- Tool and Die Maker
- Welder
- Sewer and Stitcher
- Printer
- Carpenter
- Bricklayer
- Plasterer
- Policeman
- Auto Mechanic
- Barber



foundations of vocational education

SMITH-HUGHES ACT

vocational education programs, and (iii) the dissemination of information derived from the foregoing programs or from research and demonstrations in the field of vocational education, which programs and projects have been recommended by the State research coordination unit or by the State advisory council.

"USES OF FEDERAL FUNDS

"SEC. 132. The funds available for grants and contracts under section 131(a) may be used for—

"(1) research in vocational education;

"(2) training programs designed to familiarize persons involved in vocational education with research findings and successful pilot and demonstration projects in vocational education;

"(3) experimental, developmental, and pilot programs and projects designed to test the effectiveness of research findings;

"(4) dem[illegible]semination projects;

[illegible]ational education curricul[illegible]

GEORGE-DEEN ACT

"SEC. 133. (a) A grant or contract under section 131(a) may be made upon application to the Commissioner at such time or times, in such manner, and containing, or accompanied by, such information as the Commissioner deems necessary. Such application shall contain—

"(1) a description of the nature, duration, purpose, and plan of the project;

"(2) the qualifications of the principal staff who will be responsible for the project;

"(3) a justification of the amount of grant funds requested;

"(4) the portion of the cost to be borne by the applicant; and

"(5) such fiscal control and fund accounting procedures as may be necessary to assure proper disbursement of and accounting for Federal funds paid to the applicant.

"(b) The Commissioner may not approve an application until such [illegible] been reviewed by a panel of experts who are not [illegible] Government.

GEORGE-BARDEN ACT

"SEC. 134. From the amount available for grants or contracts under section 131(a), the Commissioner shall pay to each applicant part of the amount expended by such applicant in accordance with the application approved pursuant to section 133.

"PART D—EXEMPLARY PROGRAMS AND PROJECTS

"FINDINGS AND PURPOSE

"SEC. 141. The Congress finds that it is necessary to reduce the continuing seriously high level of youth unemployment by developing means for giving the same kind of attention as is now given to the college preparation needs of those young persons who go on to college to the job preparation needs of the two out of three young persons who end their education at or before completion of the secondary level, too many of whom face long and bitter months of job hunting or marginal [illegible]fter leaving school. The pur[illegible]ses of this part, therefore, are to [illegible] through Federal fi[illegible]pport, new [illegible] school an[illegible]g for [illegible] wh[illegible]

V.E. ACT OF 1963

[illegible] and manpower agencies.

"AUTHORIZATION OF GRANTS AND CONTRACTS

"SEC. 142. (a) There are hereby authorized to be appropriated $15,000,000 for the fiscal year ending June 30, 1969, $57,500,000 for the fiscal year ending June 30, 1970, and $75,000,000 for each of the two succeeding fiscal years to enable the Commissioner to carry out the provisions of this part.

"(b)(1) From the sums appropriated pursuant to this part the Commissioner shall reserve such amount, but not in excess of 3 per centum thereof, as he may [illegible]rmine and shall allot such amount among Puerto Rico, th[illegible]nds, Guam, American Samoa, and the Trust Te[illegible] Islands according

V.E. AMENDMENTS OF 1968

which bears the same ratio to any residue of such remainder as the population aged fifteen to nineteen, both inclusive, in the State bears to the population of such ages in all such States.

"(c) From 50 per centum of the sums allotted to each State for the purposes of this part, the Commissioner is authorized to make grants to or contracts with State boards or local educational agencies for the purpose of stimulating and assisting in the development, establishment, and operation of programs or projects designed to carry out the purposes of this part. The Commissioner also may make, in such State from such sums, grants to other public or nonprofit private agencies, organizations, or institutions, or contracts with public or private agencies, organizations, or institutions, when such grants or contracts will make an especially significant contribution to attaining the objectives of this part.

"(d) The State board may use the remaining 50 per centum of such sums for making grants to local educational agencies or other public or nonprofit private [illegible] organizations, or institutions, or contracts with [illegible] or institutions

FEDERAL SUPPORT TO AID UTAH IN DEVELOPING OCCUPATIONAL PROGRAMS IN . . .

1917

. . . Agricultural Occupations
. . . Trade and Industrial Occupations
. . . Home Economics Education

1936

. . . Agricultural Occupations
. . . Trade and Industrial Occupations
. . . Home Economics Education

1946

. . . Agricultural Occupations
. . . Trade and Industrial Occupations
. . . Home Economics Education
. . . Distributive Education

1963

. . . Occupational Training in any Field Below the Professional Level for . . .
- . . . Secondary Students
- . . . Post-Secondary Students
- . . . Adults
- . . . Persons with Special Needs

. . . Area Vocational Center Construction
. . . Ancillary Services
- . . . Vocational Guidance
- . . . Research and Experimentation
- . . . Work Study
- . . . Teacher Training

1968

. . . Research and Training
. . . Exemplary programs
. . . Residential Vocational Schools
. . . Consumer and Homemaking Education
. . . Cooperative Vocational Education
. . . Work Study Programs
. . . Curriculum Development
. . . Training of Vocational Personnel
. . . State Grant Programs

ACCOMPLISHMENTS
STATE OF UTAH
BOARD FOR VOCATIONAL EDUCATION
Statistical Report

SUMMARY OF ENROLLMENT IN VOCATIONAL CLASSES BY LEVEL OF PROGRAM, FOR FISCAL YEARS

Year	LEVEL OF PROGRAM				
	Secondary	Post Secondary	Adult	Persons With Special Needs	Total
1965	28,976	2,591	19,070	406	51,043
1966	29,305	3,629	17,919	540	51,393
1967	33,630	4,796	21,967	3,062	63,455
1968	41,528	5,112	18,040	4,189	68,869

EXPENDITURES OF FEDERAL, STATE AND LOCAL FUNDS FOR VOCATIONAL AND TECHNICAL EDUCATION

Fiscal Year	FEDERAL	STATE AND LOCAL			GRAND TOTAL	Notes
		State	Local	Total		
1965	962*	1,710*	2,632*	4,342*	5,304*	*All sums are in thousands of dollars
1966	1,426	179	4,385	4,564	5,990	
1967	1,519	2,222	2,710	4,932	6,451	
1968	1,450	2,206	4,303	6,509	7,959	

VOCATIONAL TEACHERS AND ENROLLEES

	FISCAL YEAR			
	1965	1966	1967	1968
State Personnel non-teaching professional	15	15	15	15
Local Personnel non-teaching professional	26	43	130	144
Total Enrollment in Vocational Programs	51,043	51,393	63,455	68,869
Total Teachers	605	1,108	1,071	1,155
Agriculture —				
Enrollees	4,291	4,482	4,820	5,270
Teachers	67	58	63	87
Distribution —				
Enrollees	2,400	3,406	3,649	2,488
Teachers	26	53	43	61
Health —				
Enrollees	422	445	538	625
Teachers	6	17	15	25
Home Economics —				
Enrollees	18,413	14,523	18,422	20,026
Teachers	281	258	259	236
Office Occupations —				
Enrollees	16,356	16,772	23,124	25,718
Teachers	151	299	271	304
Technical —				
Enrollees	1,398	1,519	1,244	1,812
Teachers	29	34	50	53
Trade and Industrial —				
Enrollees	7,763	9,138	11,658	12,930
Teachers	45	389	370	389

EDUCATION TRAINING PROGRAMS AND NUMBER OF PERSONS ENROLLED BY LEVEL FOR FISCAL YEAR 1968

	VOCATIONAL TECHNICAL ENROLLMENT				
Occupation	Secondary	Post Secondary	Adult	Special Needs	Total
01 Agriculture					
Agriculture Production	2373	51	169	266	2859
Agriculture Mechanics	1412	....	412	158	1982
Agricultural Products	95	....	....	27	122
Ornamental Horticulture	100	....	46	10	156
Agriculture Resources	72	....	36	6	114
Conversational Spanish	....	....	22	15	37

EDUCATION TRAINING PROGRAMS AND NUMBER OF PERSONS ENROLLED BY LEVEL FOR FISCAL YEAR 1968

VOCATIONAL TECHNICAL ENROLLMENT

Occupation	Secondary	Post Secondary	Adult	Special Needs	Total
04 Distribution					
Advertising Services	22	....	29	....	51
General Merchandise	80	27	108	56	271
Management	15	....	219	2	236
Marketing	931	54	10	157	1152
Retailing	188	....	24	345	557
Finance and Credit	....	....	69	....	69
Food Services	....	....	20	....	20
Hotel and Lodging	....	....	15	....	15
Real Estate	....	51	36	30	117

VOCATIONAL TECHNICAL ENROLLMENT

Occupation	Secondary	Post Secondary	Adult	Special Needs	Total
07 Health					
Nurses Aide	13	18	21	2	54
Health Overview	54	....	....	4	58
Dental Assistant	....	60	....	....	60
Practical Nurse	....	370	....	....	370
Pharmacology	....	....	5	....	5
Medical X-Ray Technician	....	28	....	....	28
Surgical Technician	....	23	....	....	23
Hospital Ward	....	7	....	....	7
Medical Terminology	....	25	....	....	25

VOCATIONAL TECHNICAL ENROLLMENT

Occupation	Secondary	Post Secondary	Adult	Special Needs	Total
09 Home Economics, Useful					
Comprehensive Homemaking	3279	....	61	251	3591

EDUCATION TRAINING PROGRAMS AND NUMBER OF PERSONS ENROLLED BY LEVEL FOR FISCAL YEAR 1968

09 Home Economics, Useful (con't)					
Child Development	91	....	876	28	995
Clothing, Textiles	1499	....	2415	276	4190
Family Relations	163	....	921	62	1149
Food and Nutrition	1428	....	340	52	1820
Home Living	2345	....	77	77	2499
Consumer Education	....	....	28	....	28
Home Management	25	....	22	4	51
Family Health	....	....	93	13	106
Housing, Home Furnishing	....	....	1427	93	1520
Home Economics, Gainful					
Clothing	27	....	64	16	107
Food Management	127	....	122	35	284
Furnishing	12	....	....	17	29
Institution and Home Management	....	....	52	80	132

VOCATIONAL TECHNICAL ENROLLMENT

Occupation	Secondary	Post Secondary	Adult	Special Needs	Total
14 Office Occupations					
Accounting and Computing	3,794	113	1981	212	4317
Business Data Processing	55	42	278	11	386
Filing, General Office, Clerical, Machines	1818	478	621	131	3048
Steno, Secretarial	5242	510	619	131	6689
Typing	8725	197	974	558	10454
Information Communication	....	....	132	25	157
Supervisory Admin. Management	....	95	19	1	115

VOCATIONAL TECHNICAL ENROLLMENT

Occupation	Secondary	Post Secondary	Adult	Special Needs	Total
16 Technical					
Engineering Related	....	48	....	....	48

EDUCATION TRAINING PROGRAMS AND NUMBER OF PERSONS ENROLLED BY LEVEL FOR FISCAL YEAR 1968

16 Technical (con't)

Architectural Technology	....	269	....	....	269
Civil Technology	....	20	....	....	20
Electrical Technology	....	47	73	....	120
Electronics Technology	....	777	155	....	932
Mechanical Technology	....	16	....	....	16
Scientific Data Processing	....	390	....	....	390
Instructional Media Tech	....	17	....	....	17
Custodial Service	....	....	146	21	167
Machine Shop	94	454	44	47	639
Metal Trades	216	79	31	36	362
Welding	70	482	245	29	826
Cosmetology	35	124	53	9	221
Millwork, Cabinet Builder	42	64	308	12	426
Small Engine Repair	....	....	12	2	14
Power Sewing	....	150	37	....	187
Multiple Trade Preparation	....	....	....	27	27
Aircraft Maintenance	....	148	....	....	148
Barbering	....	92	....	....	92
Fireman Training	....	506	....	....	506
Law Enforcement	....	33	....	....	33
Blue Print Reading	....	25	22	....	47
Baker	....	20	....	....	20
Public Works Inspection	....	....	24	....	24
Refrigeration	....	57	....	....	57
Boiler Fireman	....	....	14	....	14

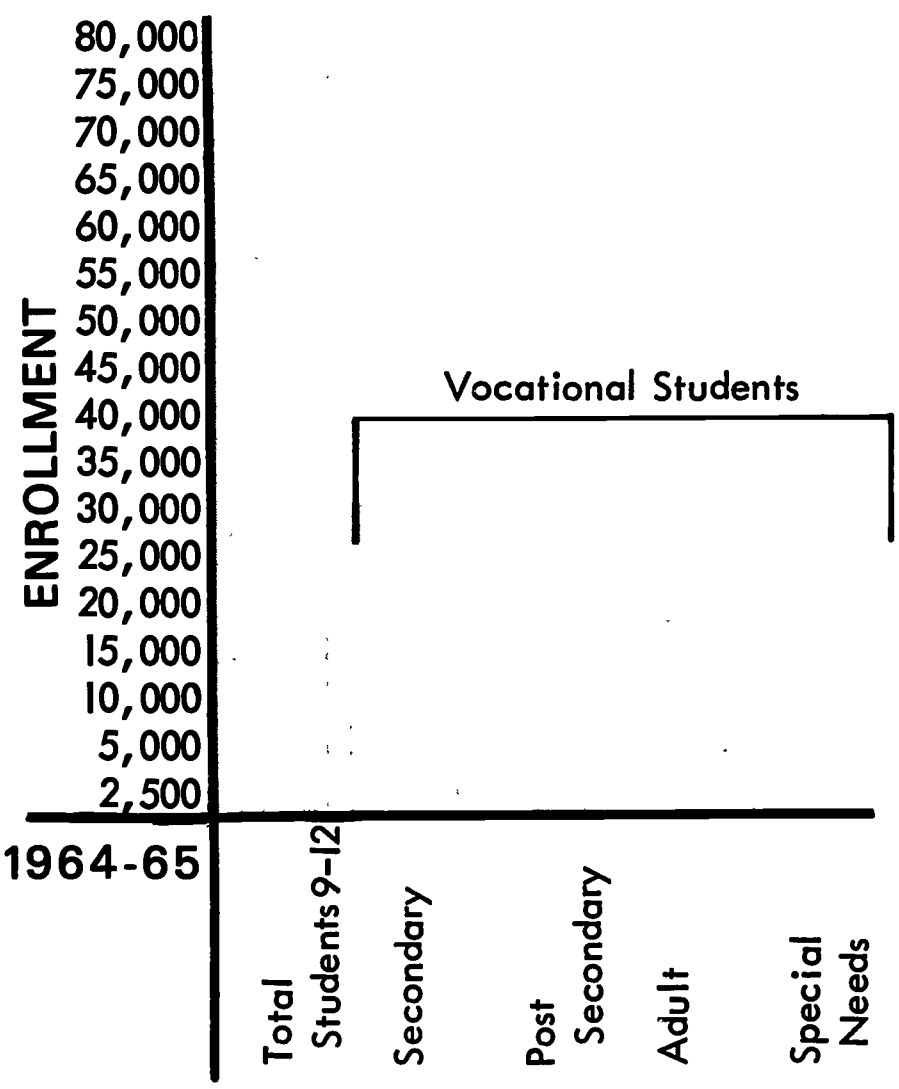
EDUCATION TRAINING PROGRAMS AND NUMBER OF PERSONS ENROLLED BY LEVEL FOR FISCAL YEAR 1968

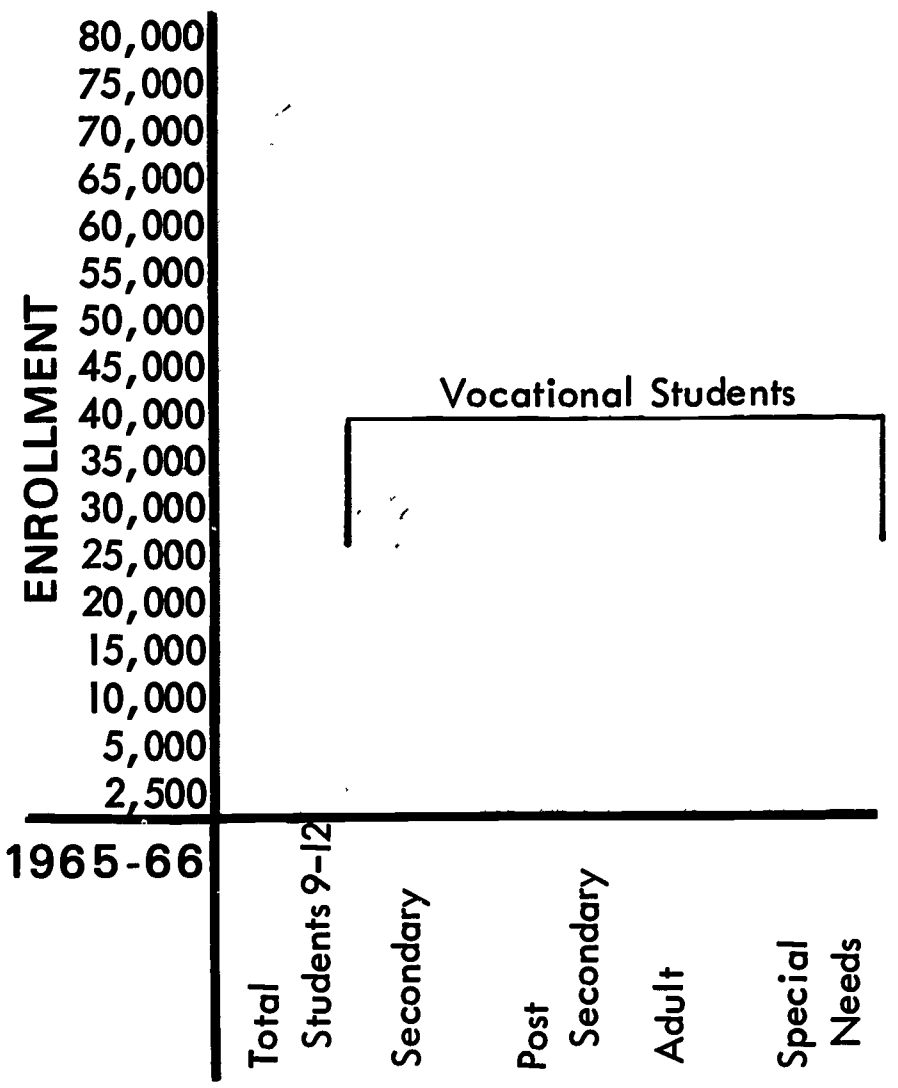
16 Technical (con't)					
Airline Stewardess	....	18	....	....	18
Paint, Decorating	....	27	....	....	27
Metallurgy	....	33	....	....	33
Masonry	....	10	....	....	10
Pipefitting, Plumbing	....	406	....	....	406
Automation	....	5	....	....	5
Diesel Mechanic	....	195	74	....	269
Dry Cleaning	....	12	....	....	12

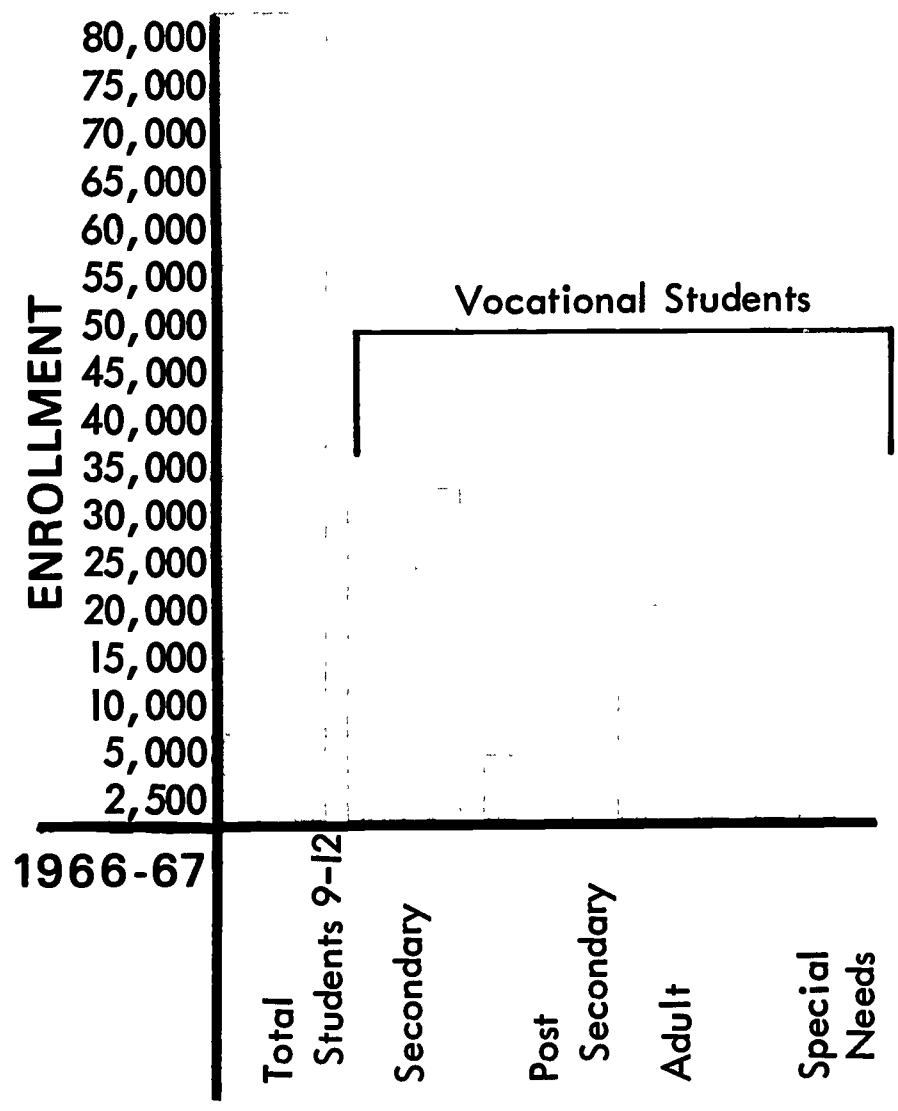
VOCATIONAL TECHNICAL ENROLLMENT

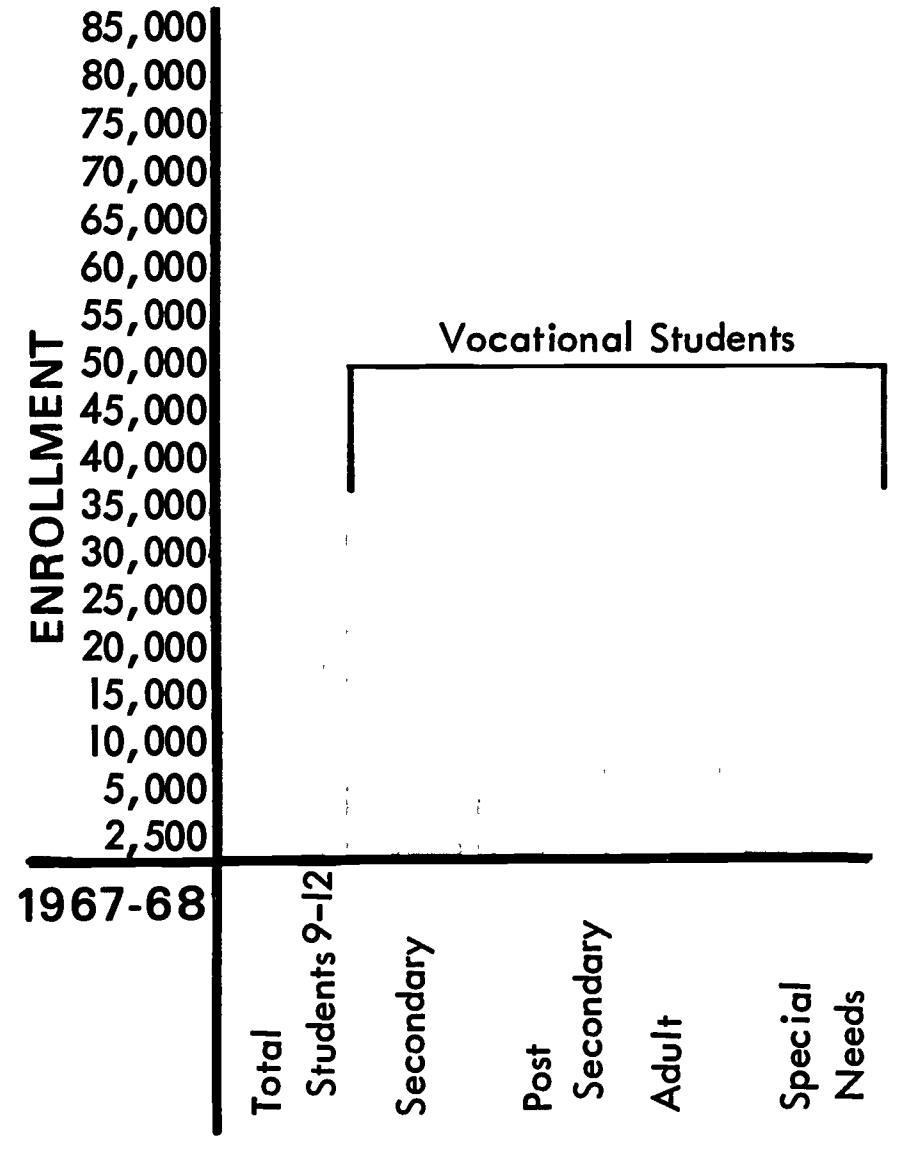
Occupation	Secondary	Post Secondary	Adult	Special Needs	Total
17 Trade/Industrial					
Body, Fender	20	333	10	3	366
Mechanics	1493	566	312	339	2710
Commercial Art	132	194	26	17	369
Carpentry	297	91	147	88	623
Electricity	71	228	41	53	393
Drafting	683	175	60	127	1045
Communications	85	....	140	1	226
Industry (electronics)	147	197	....	11	355
Radio/TV	62	....	37	11	110
Graphic Arts	20	142	21	8	191
Instrument Repair	17	316	167	3	503
Management Development	....	71	887	....	958
General Continuation	....	....	118	....	118
Machine Tool Operation	....	62	44	....	106
Sheet Metal	....	140	....	....	140
Quality Control	....	18	....	....	18
Industrial Chemistry	15	....	....	1	16
Bus Driver	....	....	93	....	93

ENROLLED IN VOCATIONAL PROGRAMS BY LEVEL OF PROGRAM

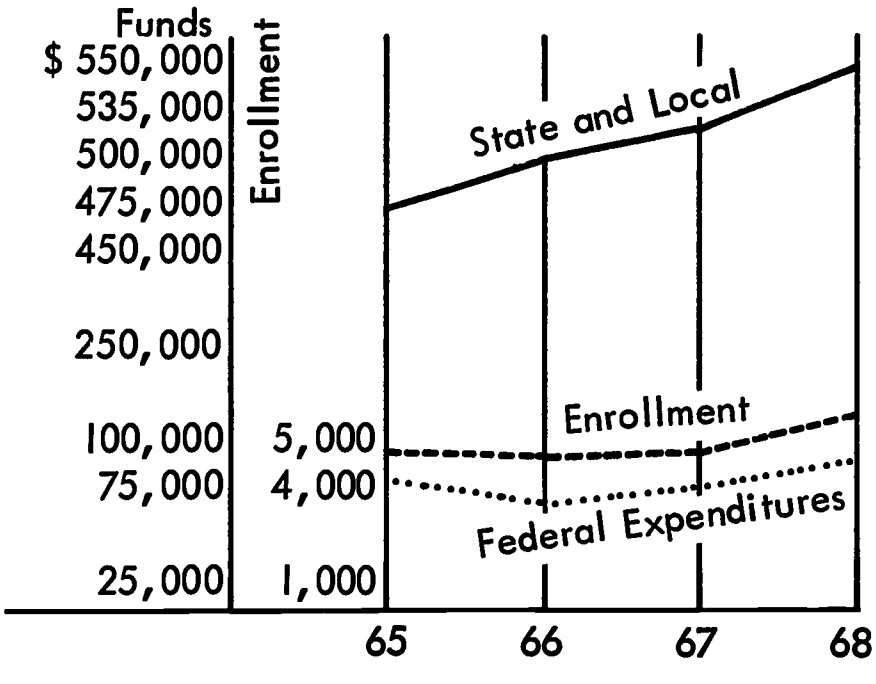




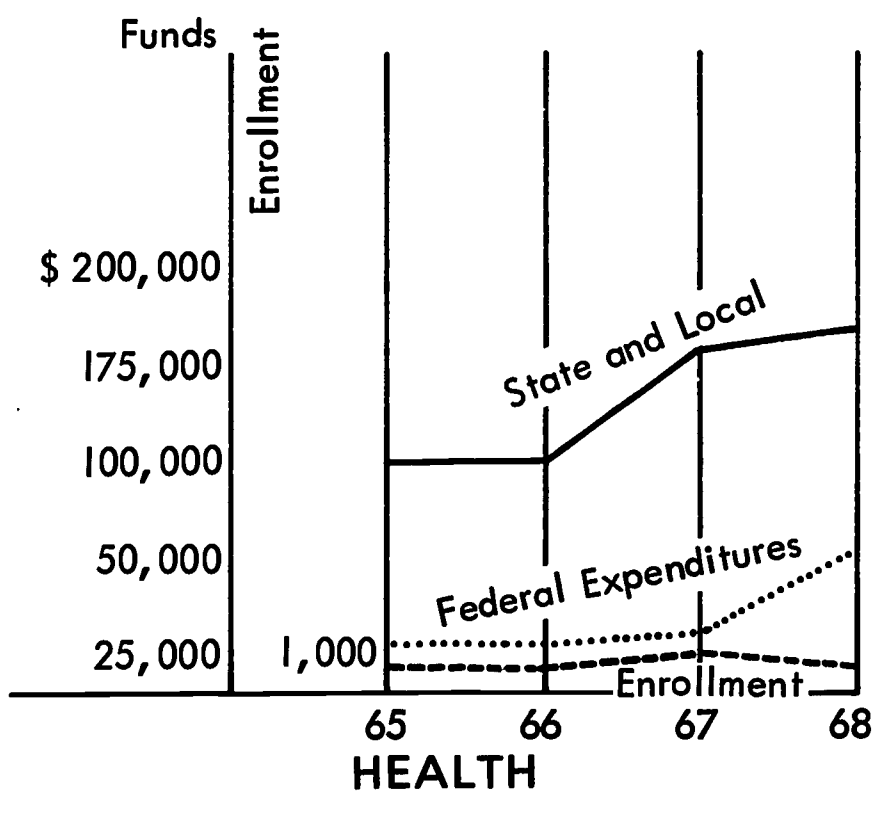




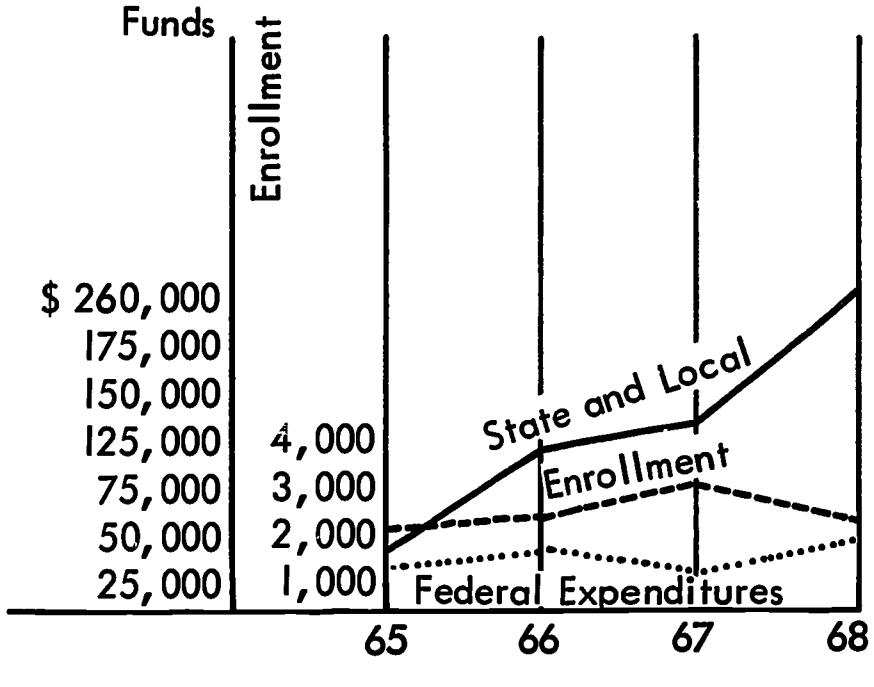
FEDERAL, STATE AND LOCAL EXPENDITURES BY OCCUPATIONAL AREA FOR FISCAL YEARS



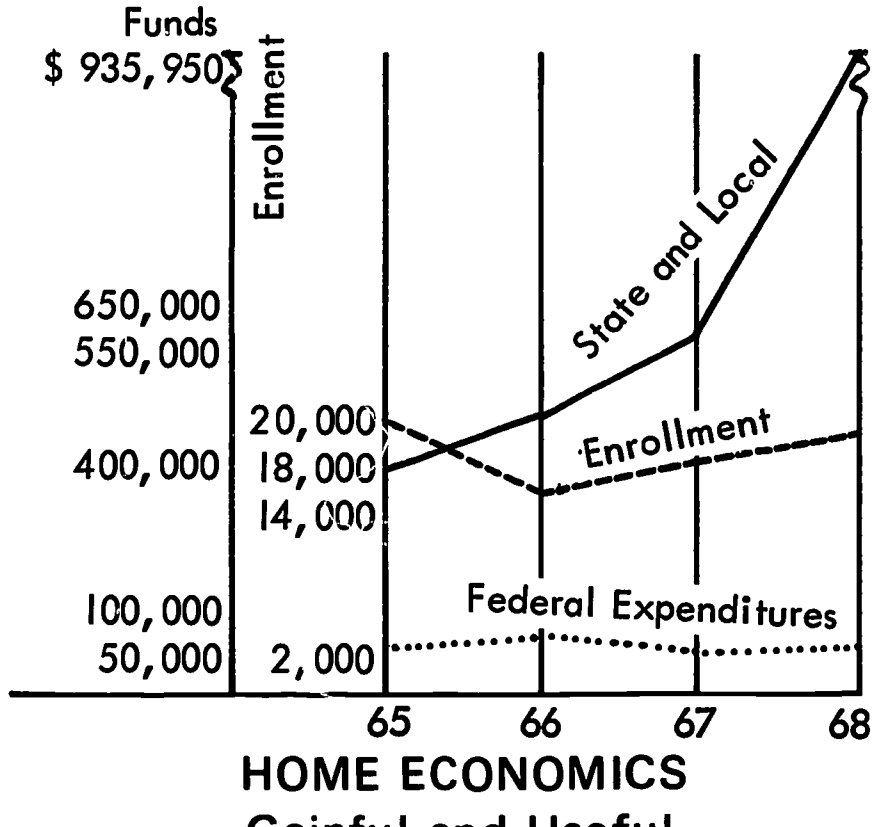
AGRICULTURE



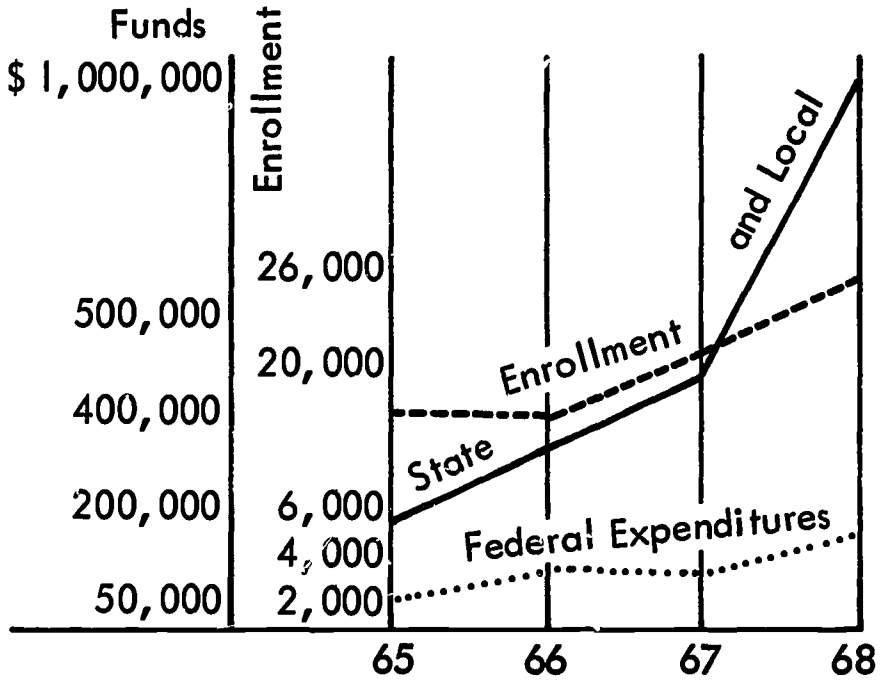
HEALTH



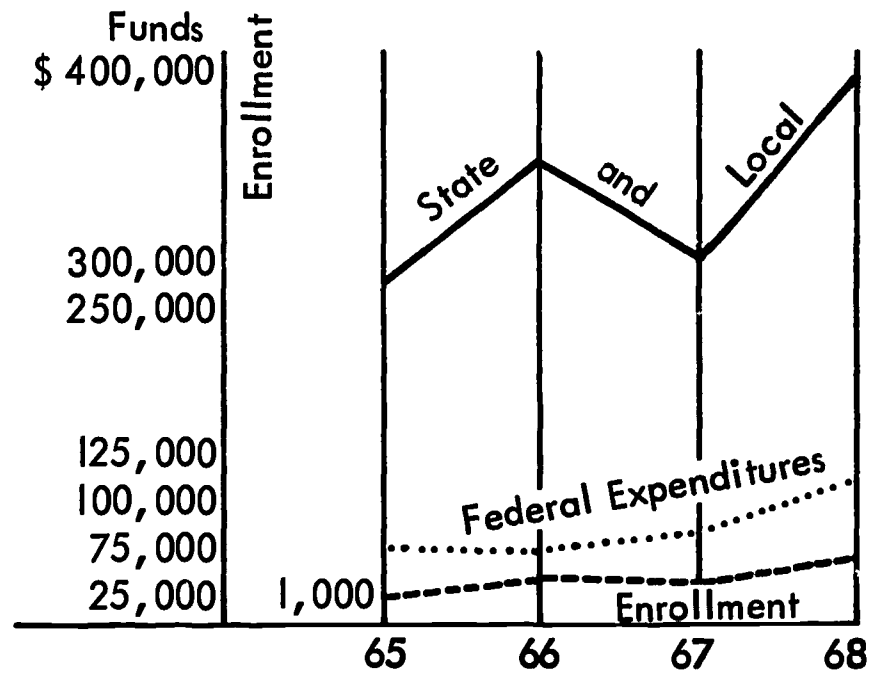
DISTRIBUTION



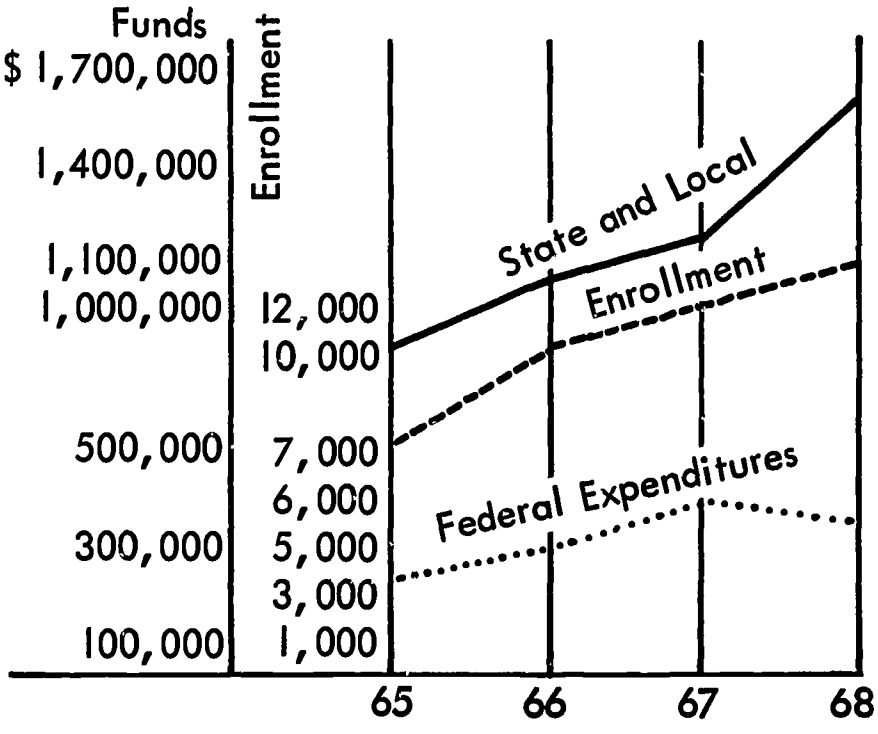
HOME ECONOMICS
Gainful and Useful



OFFICE OCCUPATIONS



TECHNICAL

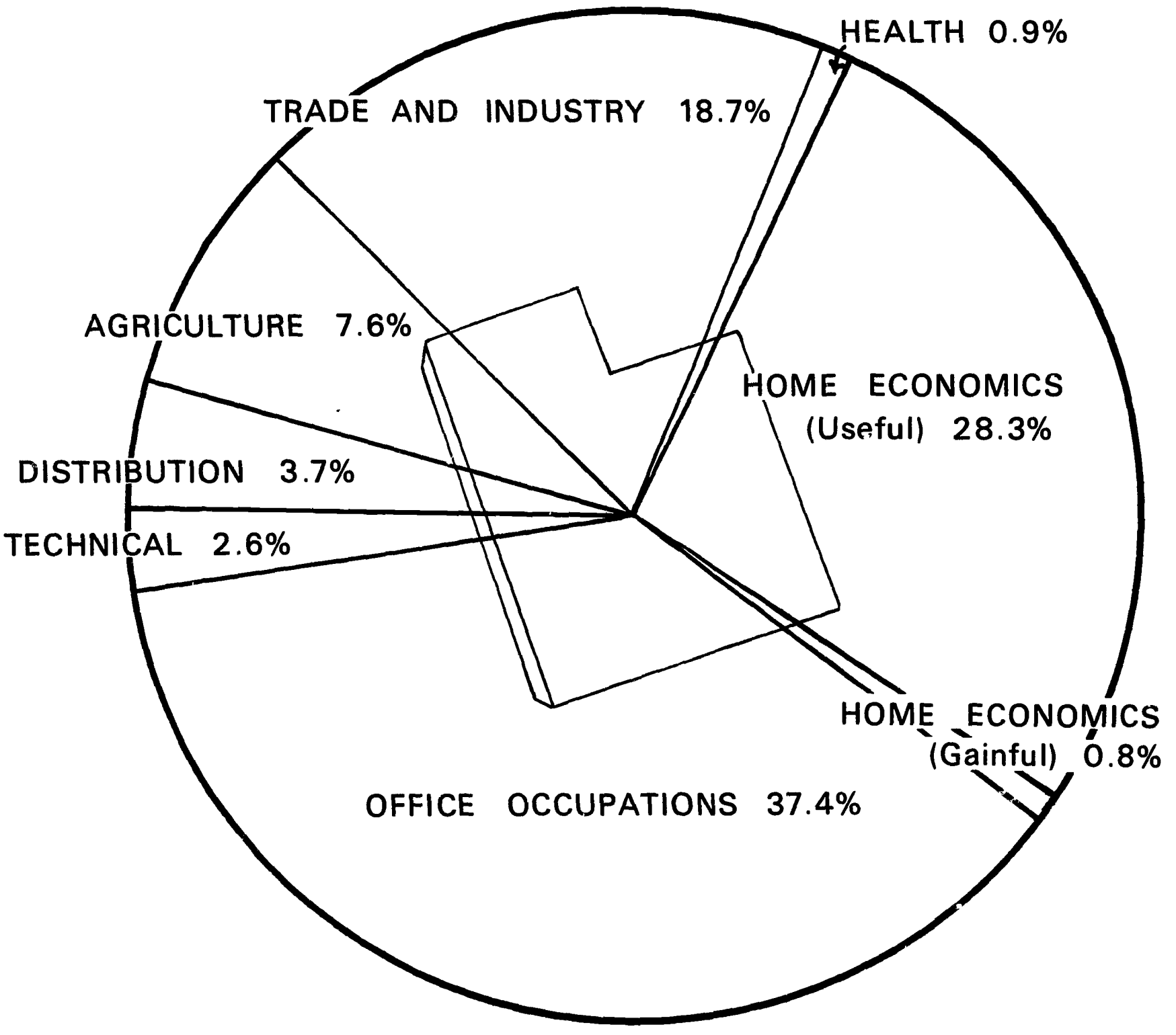


TRADE AND INDUSTRY

EXPENDITURES:
FEDERAL .....
STATE AND LOCAL ——
ENROLLMENT - - - -

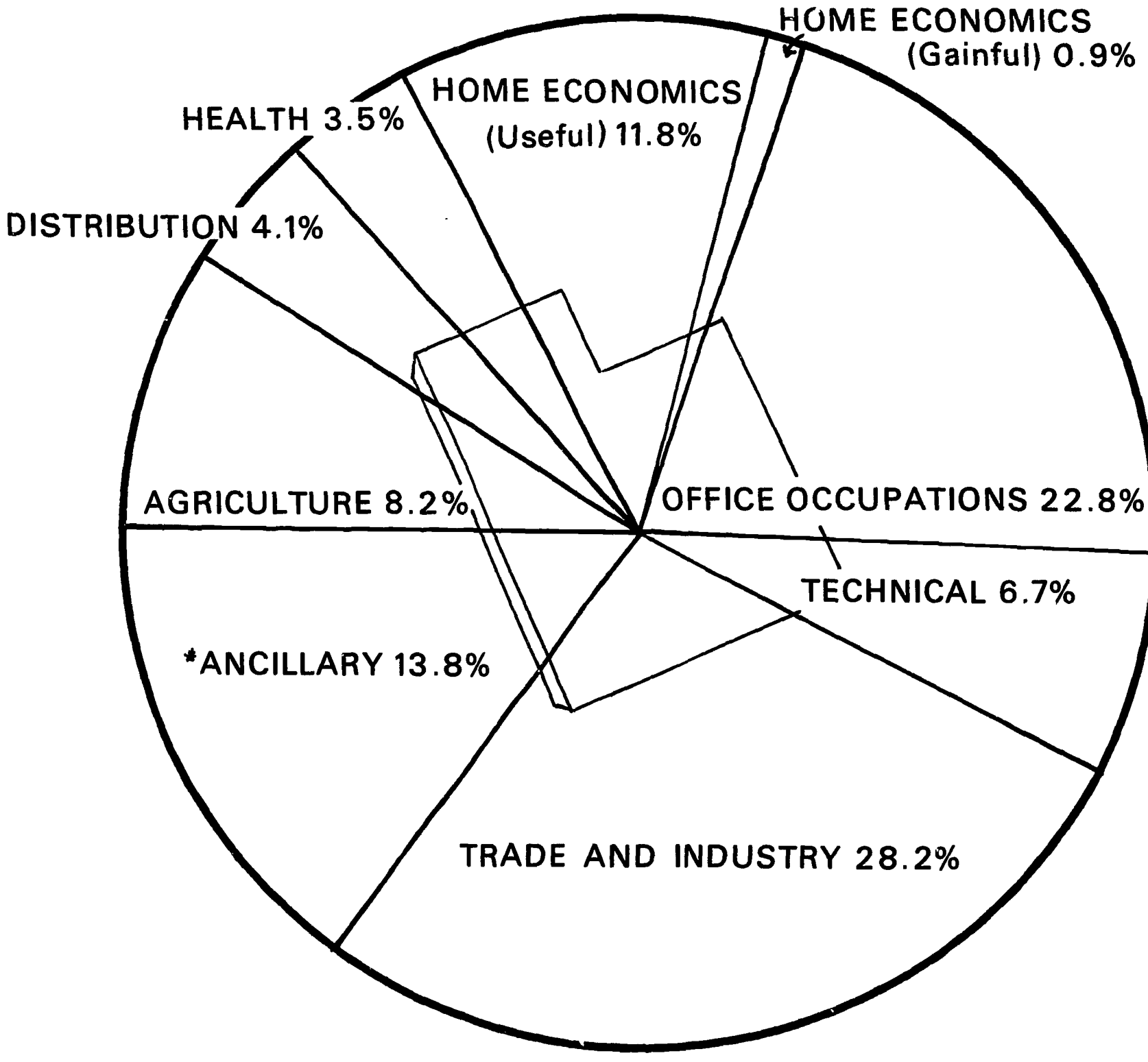
VOCATIONAL AND TECHNICAL ENROLLMENT BY OCCUPATIONAL AREA OF TRAINING FOR FISCAL YEAR 1968

TOTAL ENROLLMENT FOR 1968 68,869



TOTAL FUNDS EXPENDED BY INSTRUCTIONAL PROGRAM FOR FISCAL 1968

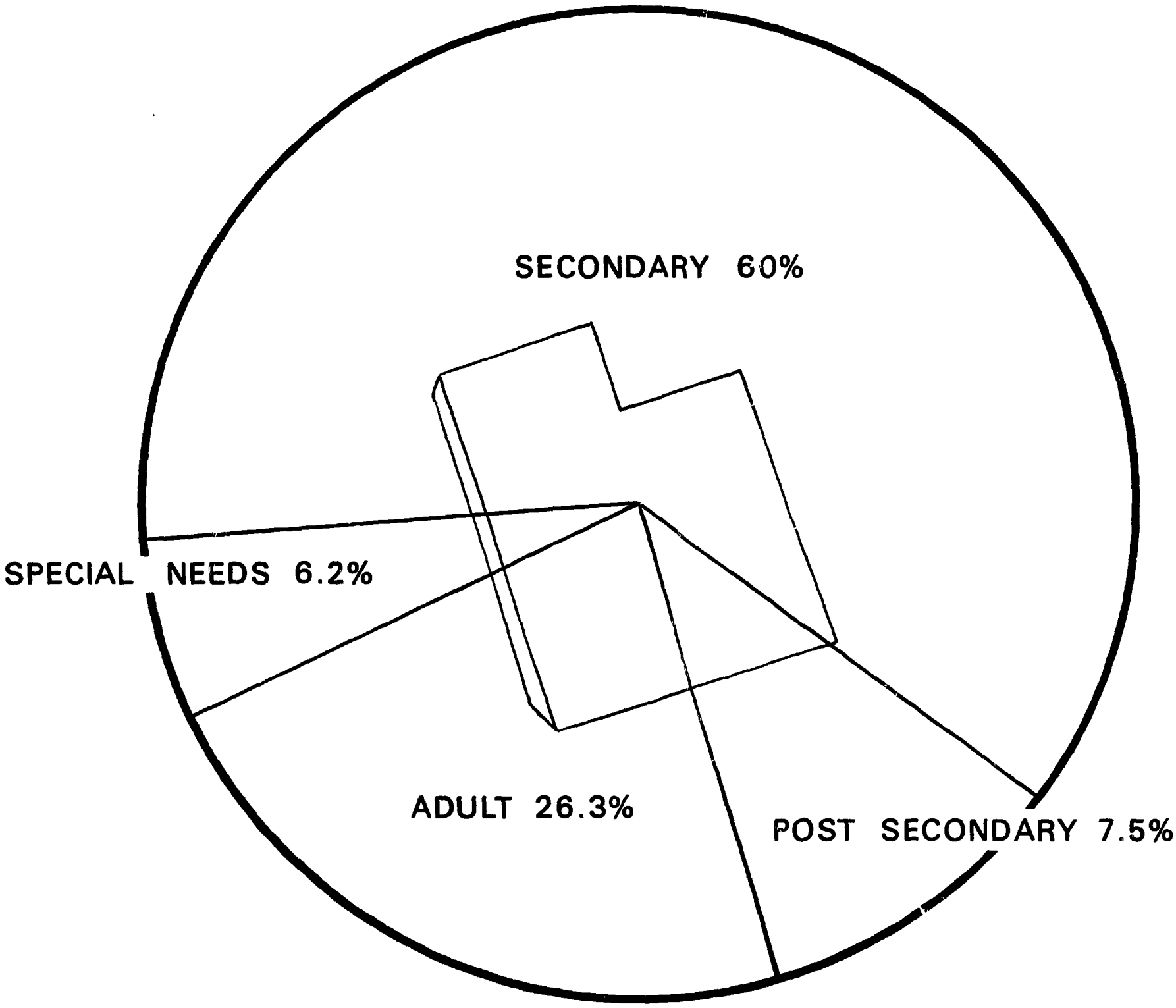
TOTAL DOLLARS SPENT FOR 1968 $7,958,904



* This includes state and local administration, supervision, and evaluation of vocational education programs and services; and development, dissemination, and evaluation of curricula and instructional materials.

VOCATIONAL AND TECHNICAL EDUCATION ENROLLMENT BY LEVEL OF OCCUPATIONAL TRAINING FISCAL YEAR 1968

TOTAL ENROLLMENT FOR 1968 68,869



Away From the Traditional

The demand of society for trained employees dictates that we recognize the need for a new unity and adhesiveness between academic and vocational education that can transmit to the student a "learning to earn" which is an inalienable right for all who are living in this technological society.

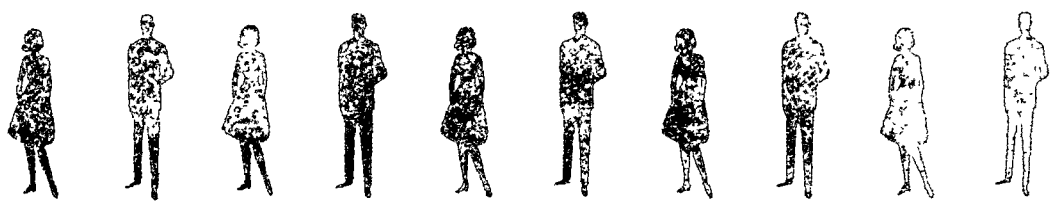
TOWARD OCCUPATIONAL EDUCATION PROGRAMS FOR ALL NEEDS

- FOR THE INDIVIDUAL
- FOR BUSINESS AND INDUSTRY
- FOR INSTITUTIONS AND AGENCIES
- FOR THE ECONOMIC GROWTH OF UTAH

Education for employment
. . . is for all young people

PROFILE OF PEOPLE ENTERING THE LABOR MARKET

FOR EVERY 10 PUPILS ENTERING THE 1ST GRADE IN 1950-51



76% ENTERED LABOR FORCE AT VOCATIONAL-TECHNICAL AND SUB-PROFESSIONAL LEVEL.

This is the time for students to be introduced to opportunities for future employment.

9.4 ENTERED THE 9TH GRADE IN 1958-59

7.6 GRADUATED FROM HIGH SCHOOL IN 1962

Post-secondary vocational-technical training is a passport for employment as a technician, in management, and other sub-professional jobs.

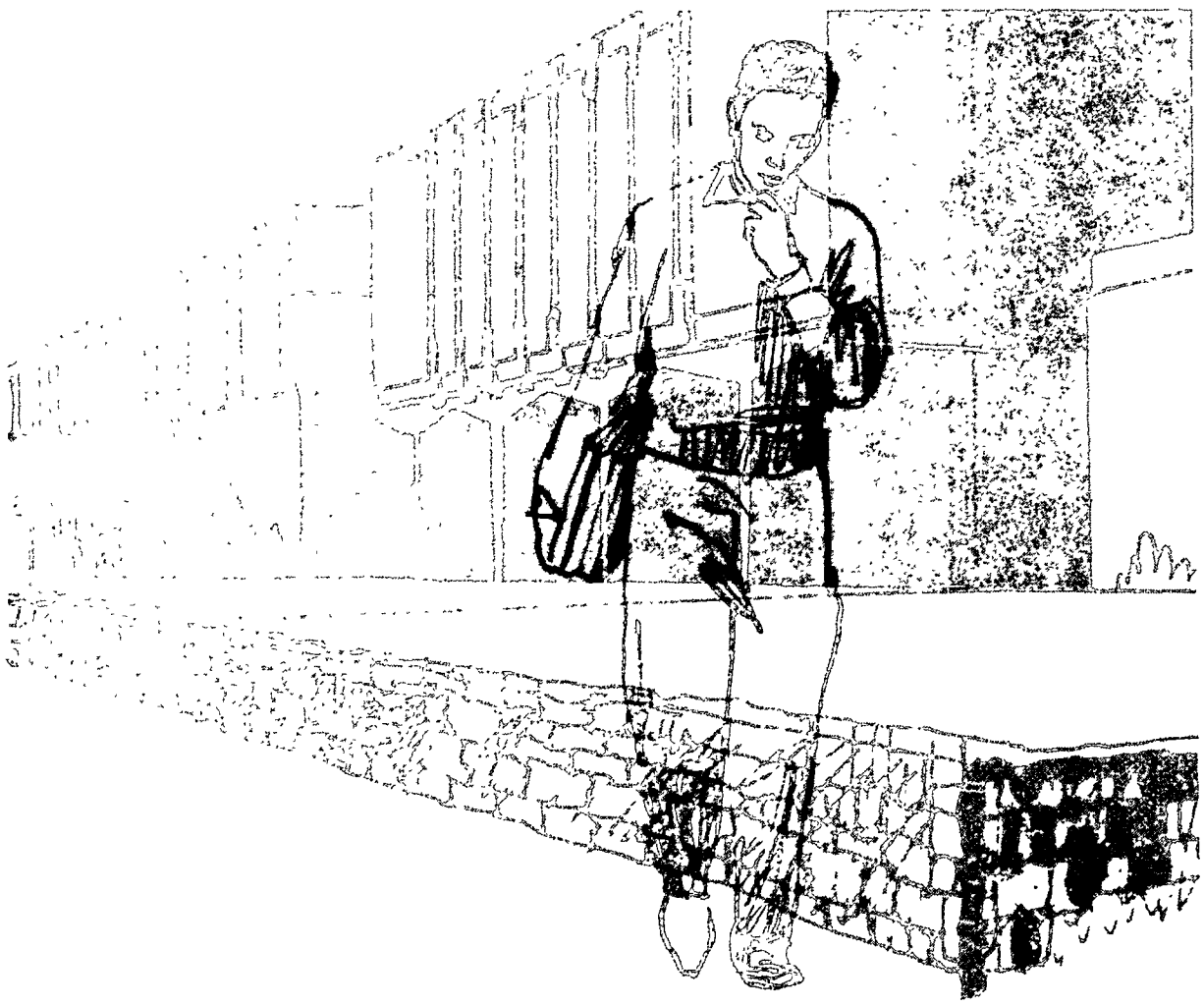
3.8 ENTERED COLLEGE IN 1962-63

24% EARNED A DEGREE IN 1966

2.4 GRADUATED FROM COLLEGE IN 1966

Degree is a passport for professional employment.

Source: Utah State Board of Education. "Persistence Rate in Utah's Education Program."



Vocational Education is a Youth Opportunity in Utah

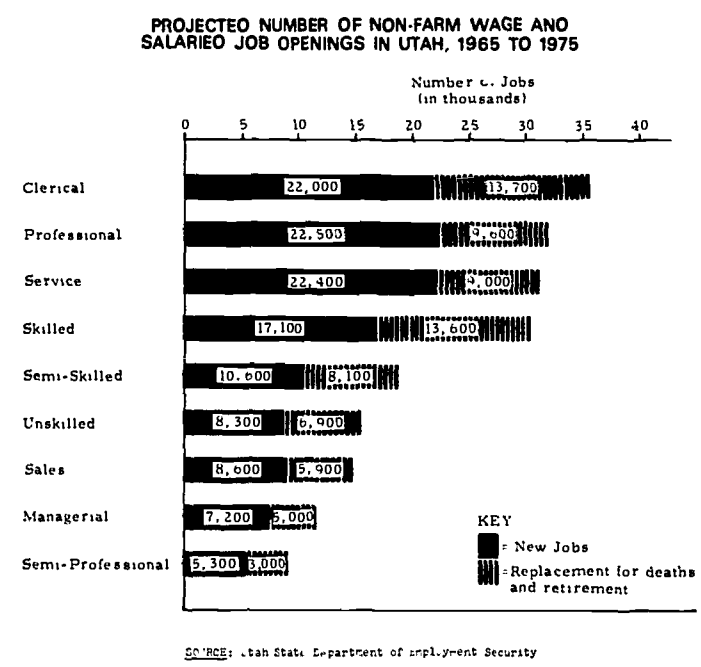
A COMPARISON OF THE OCCUPATIONAL STRUCTURE IN UTAH AND THE ASPIRATIONS OF YOUTH

	Average Annual Job Availability		Job Aspirations (Juniors & Seniors)
	No.	Per Cent	Per Cent
Professional	2,382	15.05	48.57
Technical	745	4.71	7.94
Managerial	1,082	6.84	8.50
Skilled	2,118	13.38	14.26
Semi-skilled	1,345	8.50	3.37
Clerical	3,036	19.18	7.05
Sales	1,482	9.36	.85
Service	2,319	14.65	7.38
Unskilled	1,236	7.81	.26
Other	82	.52	1.42
	15,827	100.00	100.00

SOURCE: Youth potential & youth opportunity in Utah 1967. Page 112

An examination of the above table shows a considerable imbalance between job availability and the aspirations of young people. This is especially true at the professional level. This situation is compounded by the fact that the present educational system is largely geared to preparing students to go to college without careful regard to individual capabilities and job qualification requirements. The solution to this problem is not an easy one; but the planners of education and those who guide young people, with appropriate legislative funding, can bring this picture into a balance for the best use of our human resources.

Utah Labor Market the Picture for the Future



SOURCE: Utah State Department of Employment Security

HOW CAN UTAH BEST MEET THESE NEEDS?

- BY PROVIDING THE FACILITIES
- BY PLANNING THE PROGRAMS
- BY FUNDING VOCATIONAL EDUCATION TO ADEQUATE LEVELS

After three years of intensified efforts to bring industry into the state, it has become apparent to me that a major factor in our future success will be our ability to provide the many trained workers in the skilled and semi-skilled job categories.
CALVIN L. RAMPTON
Governor of the State of Utah

It is clear that Utah's future is tied to development of it's natural resources. Such development requires unprecedented demand for vocational-technical training. — W. H. BURT
General Superintendent, Smelting and Refining
Kennecott Copper Corporation
Utah Copper Division

Vocational-Technical Education is a **must.** Our changing world places it on top priority list. Through forward, progressive planning and training, America will be in a position to meet the challenge of our expanding obligations as a nation at home and abroad.
C. E. BERGER
President, Utah State AFL-CIO

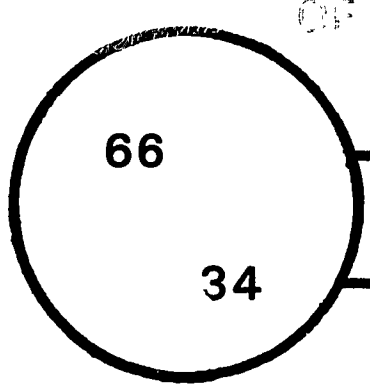
Vocational Education is Employability

BY PREPARING FOR THE JOB GETTING THE JOB ADVANCING IN THE JOB

PROFILE OF GRADUATES OF UTAH VOCATIONAL PROGRAMS

IN 1967, 11,992 STUDENTS COMPLETED VOCATIONAL PROGRAMS AND GRADUATED FROM UTAH'S HIGH SCHOOLS.

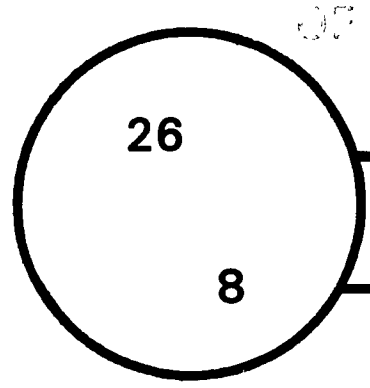
OF EACH 100 STUDENTS GRADUATING



66 Did continue Post High School

34 Did not continue Post High School

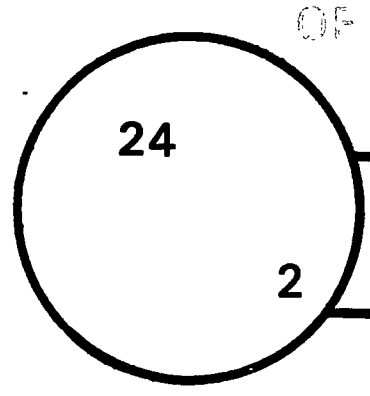
OF THE 34 WHO DID NOT CONTINUE SCHOOL



26 Did enter labor force

8 Did not enter labor force

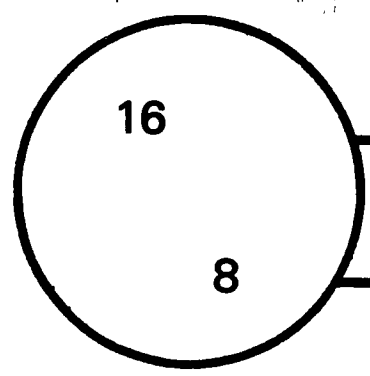
OF THE 26 WHO ENTERED THE LABOR FORCE



24 Were employed

2 Were unemployed seeking work

OF THE 24 EMPLOYED



16 Were employed in the same field for which trained or in a related field

8 Were employed in an unrelated field

The Task Ahead

PROBLEMS AND PROSPECTS

The need for a greater emphasis on vocational-technical education is just beginning to be realized, and there are still many problems to be solved. Vocational education will overcome these problems and achieve its goals when . . .

. . . the vital work of the technician, skilled craftsman, and the semi-skilled worker are given the dignity and accorded the importance due them.

. . . those who are responsible for the guidance of young people cease to oversell the value of college enrollment to the point where the youngster who cannot or should not go to college will view himself as a failure.

. . . outdated courses and inefficient methods have been replaced by quality occupational programs that are attuned to the needs of business, industry, individuals, the state and the nation.

. . . the educational resources of the state are allocated more equitably for the kinds of educational programs that are actually needed to prepare young people for what they will realistically do in the world of work.

. . . more high quality teachers are attracted into vocational technical education programs.

. . . society is concerned enough about placing all potential workers in the work force in the occupations suitable to their abilities and interests, and to society's needs.

. . . there is closer collaboration with the teacher training institutions to improve both pre-service and inservice upgrading of teachers.

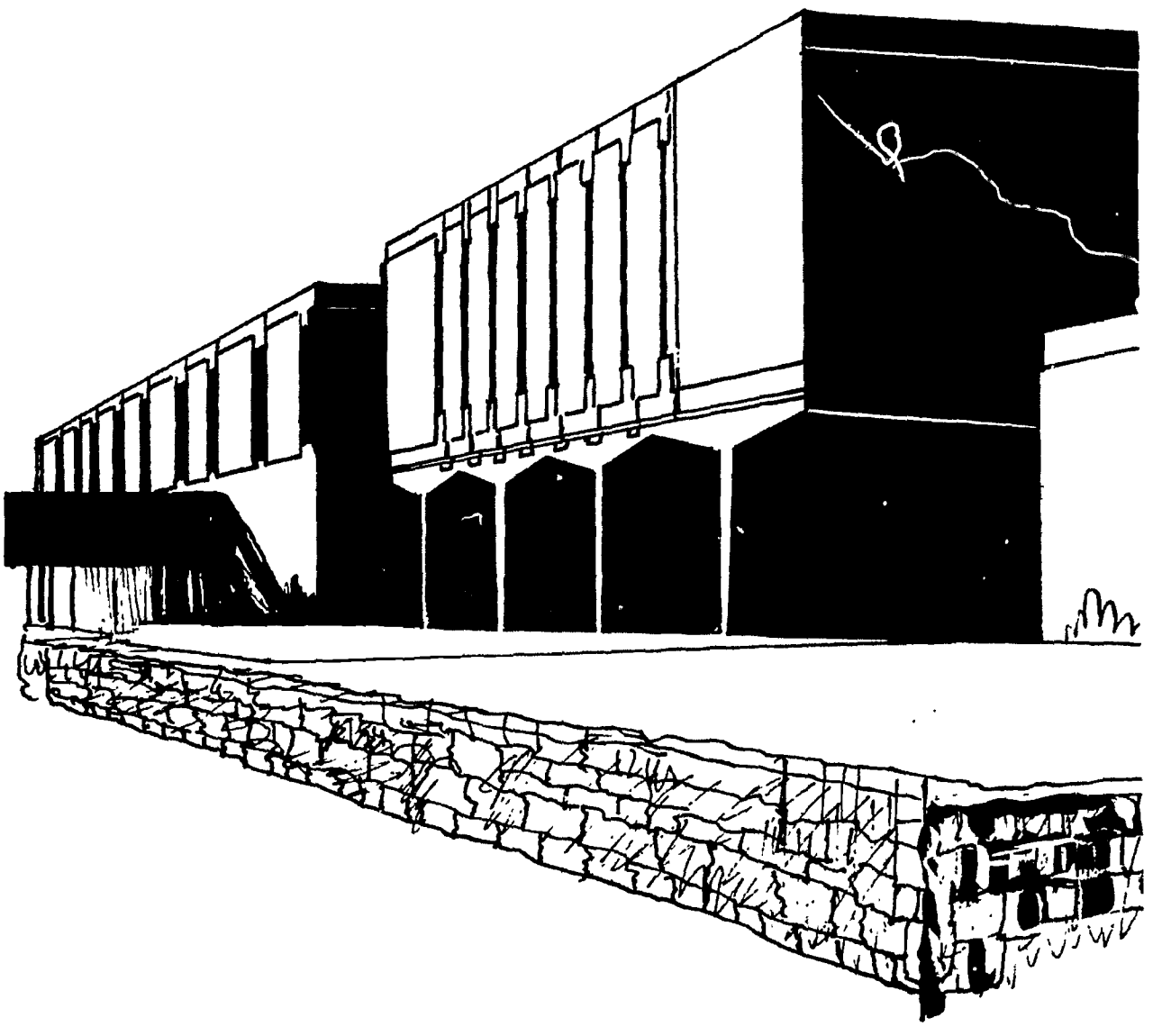
. . . there is sufficient funding by the State Legislature to provide facilities and teachers to meet the instructional needs of the 70 percent of youth and adults who are or will be engaged in work for which vocational training can and does make a significant contribution to their occupation.

Programs

Future programs will be tailored to more nearly meet the individual's needs and his potential employment. Although basics will not be overlooked, the technological developments that are changing the world of work will receive prime consideration in the development of quality programs designed to teach vocational "clusters." These programs will qualify students to secure jobs in broader occupational areas and improve opportunities for employment. For this, a more equitable distribution of educational resources must be allocated to vocational education.

Facilities

Future planning of facilities for vocational education should be designed to serve the needs of new programs and the shifting population centers. These new facilities must provide the type of environment which improves the image and adds to the success of vocational / technical programs. The facilities should be located at sites conducive to maximum student enrollment.



Plan

Coordinate

Direct

Legislate

Evaluate

Modify

ADMINISTRATION

Although the present channels radiating out from the state to the districts and to the schools are adequate, the administrative channels of the future must include. . . .

. . . . decentralized control in order to increase the responsiveness to innovations in vocational/technical education.

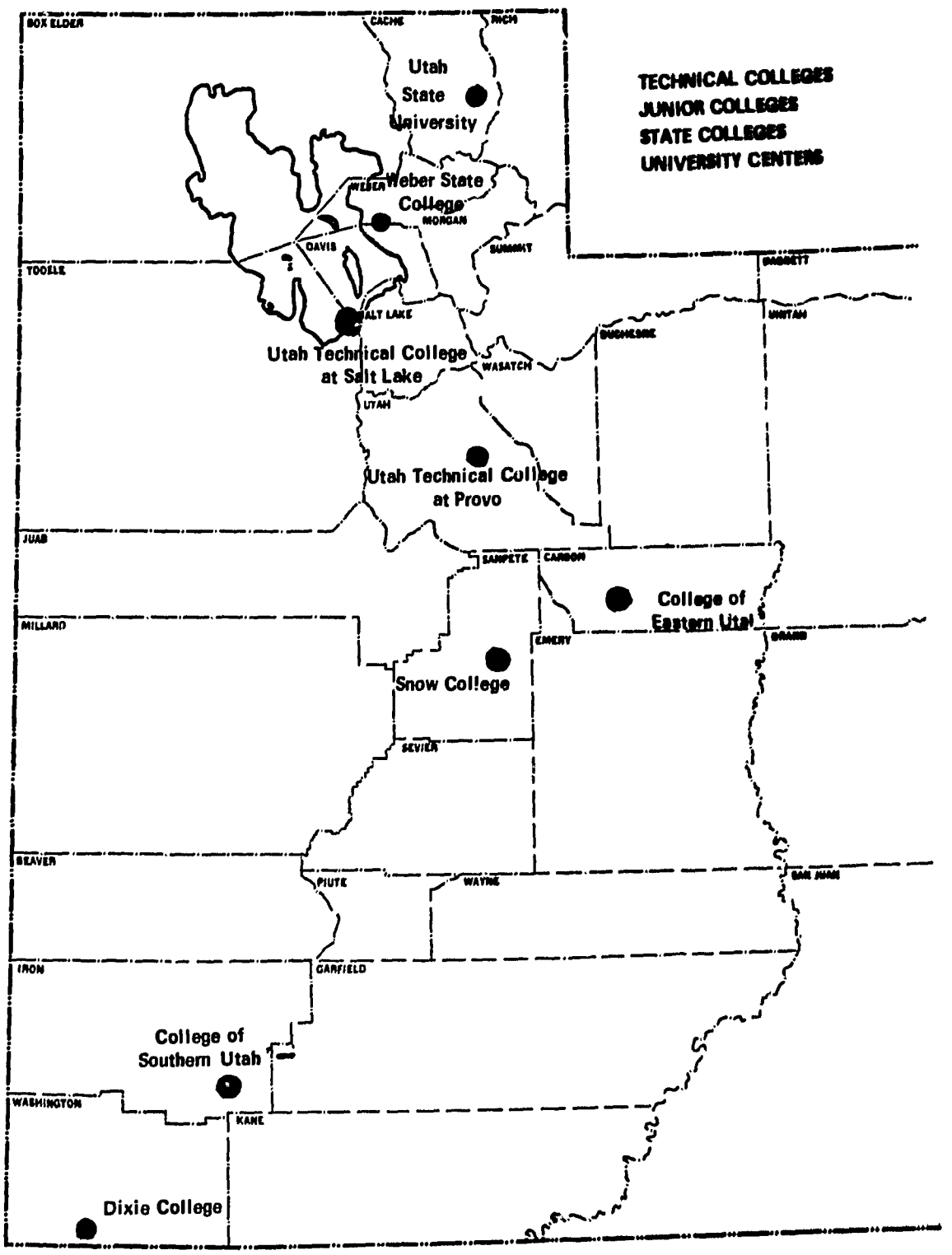
. . . . the establishment of regional offices to accompany the population growth of Utah.

. . . . closer ties between the individual schools and the potential employers in industry and business.

. . . . better channels for orienting the parents of students as to the objectives of vocational technical programs.

A Future Opportunity Within Reach of All

POST SECONDARY AREA VOCATIONAL SCHOOLS IN UTAH



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Lynton, Edith F.
New Careers Potentials in Health: In the Hospital.

National Committee on Employment of Youth, New York, N.Y.
New York Univ., N.Y. New Carrers Development Center
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Pub Date - Dec68 17p.

VOCATIONAL DEVELOPMENT; *OCCUPATIONAL MOBILITY; *SUBPROFESSIONALS; *HEALTH OCCUPATIONS EDUCATION; HEALTH SERVICES; PROFESSIONAL EDUCATION; HOSPITALS; *EMPLOYMENT OPPORTUNITIES; CAREERS; *HEALTH PERSONNEL *NEW CAREERS

Transforming the entry level job in hospital patient care services to a career entry has been limited, tentative, and fragmentary. Developing the potential of a large number of aids, orderlies, and attendants to enhance patient care services is a problem for which there are three possible solutions: (1) Increase the supply of nursing personnel through the established educational process, (2) Direct nursing services of the maximum of non-nursing functions by siphoning off managerial and technical functions and creating new subprofessional job categories, and (3) Create a new subprofessional career sequence by redesigning the aide functions and intensifying in-service on-the-job training. None of these answers emerges as the logical instrument for meeting manpower needs or for enlarging career opportunities, but these answers are a conceptual basis for devising and testing a diversity of models. Each individual model must be viewed in relationship to all others or the present discontinuity of health occupations will be further complicated by a myriad of new job titles. One must not limit potential subprofessional development by viewing it only in the context of a specific setting or by pursuing entirely different personnel policies among like organizations. Coordinated planning and action are possible under the Comprehensive Health Planning Act, regional medical programs, and professional associations. (JK)

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NEW CAREERS POTENTIALS IN HEALTH: IN THE HOSPITAL

by

Edith F. Lynton

National Committee on Employment of Youth

U.S. DEPARTMENT OF HEALTH, EDUCATION
& WELFARE
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Prepared for The New Careers Development Center
New York University
Washington Square
New York, N.Y. 10003

December, 1968

VT008053

NEW CAREER POTENTIALS IN HEALTH: IN THE HOSPITAL

The design of New Careers in health must proceed from an understanding of the fundamental goals of health service. These goals are undergoing dramatic changes at a continually accelerating pace, for it is generally conceded that current health care provisions fall far short of the current national commitment to comprehensive care for the total population. Not only do current levels and systems of service fail to provide equal care to those served, but a large part of the population is not served at all, or treated only in the event of emergency or critical illness. The crisis of urban hospitals, especially those under public auspices, is well known, but what is increasingly apparent is that the hospital is not the whole of the problem. As goals for health service have been enlarged beyond the treatment of acute illness to the more positive aspects of preventive and rehabilitative medicine, attention has been addressed to the gross inadequacies of facilities for ambulatory, extended, and home care, and community medicine.

The enlarging goals call for improving existing services and the development of new facilities and types of service. We are witnessing the early stages of what promises to be a prolonged search for the appropriate organization of health care. Future patterns of service delivery are today perceived only in general outlines. As a result, current manpower projections give only the most general indications of the types and numbers of workers that will be needed. All that is clear at present is that the manpower implications of expanding health goals probably go well beyond what is produced by conventional ways of estimating shortages. As stated by the National Advisory Commission on Health Manpower in its report to the President on November 20, 1967, "if additional personnel are employed within the present patterns and 'systems' of care, they will not avert, or even perhaps alleviate, the crisis."

To date, major concern has been focused on the manpower needs of hospitals and in particular on nursing or patient care needs, where the most acute shortages of personnel are thought to exist. But the horizons of patient care are extending beyond the hospital into new patterns of community service that may demand even greater numbers of additional workers than does hospital nursing. Also, in all areas of health service, not only additional personnel but more imaginative and efficient use of all categories of staff will be demanded if the national expectations are to be fulfilled. Sorely needed are new kinds of manpower to improve existing institutional functioning and to staff new facilities designed to fill the gaps in current service provisions.

As Federal legislation has expanded the resources available for the development of health facilities and manpower, activity has been increasing. An examination of New Career developments in New York City, while they do not completely mirror the national scene, is suggestive of both the potentials and the problems in developing careers in

health. As programs labeled "health careers" proliferate, it is important that they be critically appraised to see whether they do in fact provide meaningful career opportunities. There are two appropriate criteria - the quality of employment opportunity in these new health careers, and their promise for improving the reach and quality of health services. Expansion of employment opportunity alone is a desirable goal, especially if it creates not merely additional numbers of entry jobs but also increased numbers of upgrading opportunities. However, if alternate models are available, then those that at the same time enlarge and enrich the human services should be given a higher priority.

In The Hospital

Among leaders in voluntary and municipal hospitals there is considerable variation of opinion about how the hospital manpower crisis can be alleviated. Some even question whether any significant improvement in the conditions of hospital employment is possible. All recognize that the development of New Careers in hospitals is extremely difficult. They point to the more than 300 job titles, excluding the aides, orderlies and attendants, the various unions, the multiplicity of professional vested interest, the autonomy of hospital departments, and in municipal systems the additional barriers of budgetary and civil service restrictions. Irrespective of the degree of optimism or pessimism with which they view the current scene, there is apparent a significant shift in attitude toward the entry workers in in-patient care services among leaders in both voluntary and municipal hospitals. The conventional view - that hospital work is inherently discontinuous and that all occupations except for some unskilled jobs demand a particular form of pre-employment preparation - appears to be giving way. Hospital administrators and nursing directors are beginning to explore methods for providing some internal upgrading. Their changing attitudes are reflected in hiring practices that emphasize upgrading those already employed. Many are studying ways to build career ladders for all new recruits rather than create additional numbers of entry jobs at varying levels.

Particular attention is focused on the nurses aides, the largest single category of entry level workers in hospitals. The job of the nurses aide has become almost the prototype human service subprofessional job for those with limited education. As such, it has demonstrated the special disabilities of most current subprofessional jobs - their low pay, low status and characteristically terminal nature. Even so, the nurses aides have clearly filled a major need in hospitals, together with attendants and orderlies. They have grown in numbers, essentially since World War II, to some onemillion, or more than one-fourth of total health industry employment.

Until very recently aides were regarded as limited but necessary expedients, dictated by the insufficent numbers of nurses, and not as a significant manpower resource for patient care service. Recruiting aides never presented any difficulties nor was the high turnover rate among them considered to be a problem, for there was virtually no interest in developing the aide's capacity for enlarging service. Personnel policies were focused exclusively on intensive recruiting of nurses. No worthwhile returns, it was felt, could be obtained by upgrading the skills of auxiliary personnel. There was considerable concern over the dilution of quality of care attributed to the constant increase in the proportion of patient care given by aides. Until very recently, however, it was the general view that aides were untrainable and that discontinuity of the occupational structure was an essential characteristic of health work.

The concept of career ladders, although still an anathema to many in the nursing profession, has gained in popularity under the exigencies of a continuing nursing shortage. Competition for the available supply of nurses continues, and it is generally recognized that conventional recruiting and training methods are unlikely to increase the number of nurses sufficiently to fill service needs in the immediate or longer-term future. For although the number of registered and practical nurses has been increasing, the demand for health service continues to expand more rapidly and the gap between the demand and the supply widens. Additional factors stimulate a re-thinking of the organization of patient care personnel. There is widespread concern with the poor quality of patient care, especially but not exclusively in public systems. The mounting cost of hospitalization suggests an urgent need for more efficient management and for increased productivity of all categories of personnel. As organization of hospital workers into unions or associations succeeds in raising the wage level, not only of nurses but of aides as well, their output is being scrutinized more closely. The declining turnover that is an apparent by-product of wage increases gives additional stimulus to considering enlarged functioning by auxiliaries.

More effective use of professional personnel has long been a stated objective and, in fact, a rationale for employing large numbers of auxiliary personnel. There is question, however, whether under current job structures the subprofessionals do actually permit professionals to function in a more professional manner. Most important to the application of the New Careers concept is the emerging view that the aide - and other non-professional personnel - represents a vast undeveloped resource in and of itself, a view reinforced by experiences in demonstration projects in health and other human service fields. In the words of a key administrator in the New York City Department of Hospitals: "Among the 20,000 entry-level workers - nurses aides, orderlies, dietary aides and the like - some must have the resources for further development. Shifting from

a simple employment intent to a career intent is a complex process that calls for new techniques of recruiting, selecting and training entry workers." This is indisputable, but an essential question is whether a commitment to a career intent can be fulfilled without revisions in the basic job design or occupational structure in patient care.

Activity to transform the entry-level job in hospital patient care services to a career entry has thus far been limited, tentative and fragmentary. Much is deemed experimental and still more is only in the proposal stage. But the activity alone is indicative of the difficulties of creating new careers within existing service structures. How the potential represented by the large number of aides, orderlies and attendants can be developed to enhance patient care services is a question to which there are at present at least three answers:

1. Increase the supply of nursing personnel by facilitating the progress of aides through the established educational process.

2. Divest nursing services of the maximum of non-nursing functions by siphoning off managerial and technical functions and creating new sub-professional job categories.

3. Create a new subprofessional career sequence in patient care by redesigning the aide functions and intensifying in-service on-the-job training.

The three possible answers to the nursing problem are seldom articulated in this form, but are implicit in the current recommendations and activities concerning nurses aides. These answers are not mutually exclusive, nor is one alone likely to provide a total solution. They offer, however, a conceptual basis for comparing different models to determine which appears to offer the greatest promise for career development, for improving the quality of patient care in hospitals, or both.

Climbing the Professional Ladder

The simplest approach to alleviating the nursing crisis is to create more nurses by linking together the existing rungs on the nursing ladder and facilitating upward progress. This, at first blush, is utterly logical, but closer scrutiny shows it has been difficult to implement. Moreover, even if it were easier to accomplish, there is reason to doubt whether it can serve as the sole or most productive model for improving patient care. Implementation of this model has only recently begun and considerable efforts have been expended to build the necessary connections. The tactic employed is to open up vertical upgrading by providing subsidized work training arrangements for those among current employees who

qualify for standard educational programs, or to help them to qualify.

The essential contributions of such programs are threefold. First, they make the required formal education accessible to those who aspire to professional status and are unable to become full-time students. Second, they will provide employers with a larger number of better educated personnel. Third, they may stimulate the articulation of the various and discontinuous forms of nurse preparation. Such programs are important because they benefit the individuals who participate and their employers, and may possibly help to regularize nursing education. For example, there are today no standard policies for accrediting one level of nursing education as the basis for entry into the next.

Despite these positive attributes, there are some questions as to how effective such a model will be in meeting both health manpower and service needs. Practical considerations may limit its application and the numbers who participate but, in addition, if this were to be the sole career opportunity, all upgrading would be confined to one-track, professional development. Among those who have studied New Careers development, it is believed that a track to full professional standing is a desirable element but only one dimension of a New Careers approach. Limiting all subprofessional careers to professional recruitment carries the risk that subprofessionals will be considered solely as pre-professionals and thus result in increased hiring requirements. To maintain open hiring at entry and create opportunities for those who do not aspire to or qualify for full professional status, other career possibilities must be provided.

A second issue is that as currently devised, this model facilitates a progression through a hierarchy that depends entirely on academic credentials. The result is a long and demanding program; fourteen months to move from aide to licensed practical nurse, and more than two academic years to become a registered nurse. Appropriate questions are whether this much time is necessary and whether development must be totally dependent on academic credits. These are sensitive questions at a time when organized nursing is seeking to establish academic degrees for all nurses, with holders of baccalaureate degrees to be the only "professionals." The appropriate setting and curriculum for nurses' education is a subject of hot debate. Nevertheless, to fulfill the New Careers approach, it is not enough to make conventional credentials more accessible. It is important to reassess the basis for these credentials. Full professional status should be attainable by a variety of methods, and especially by methods that accredit individual capacity and skills acquired by work experience. Programs to upgrade nursing personnel along conventional lines have not as yet been able to secure significant modifications in either course or credit requirements or educational prerequisites even though many in the field recognize that the requirements are, to some extent, arbitrary. Some are convinced that some aides, at least, could be trained as LPNs in far shorter periods or could bypass the practical nurse stage, combining aide work with registered nursing education. Careful screening and evaluation of potential candidates would, they feel, indicate ways in which to accredit previously acquired skill, experience and demonstrated capacity. For example, a potentially fruitful study might be

made of those nurses aides who, in the absence of professional nurses, function in much more than an aide role. This may be even more appropriate in the case of a thoroughly experienced licensed practical nurse who frequently serves almost interchangeably with registered nurses under current shortages. The proposed work-study program to upgrade practical nurses to a registered nurse level will be open to high school graduates or those who are individually granted an equivalency. Candidates will be tested for proficiency, but according to present plans, prior experience will not be converted into credits but will be used to tailor individual curricula and enrich the content.

Resistance to the re-examination of credentials is a fact of life in all professional fields. In nursing the need to meet state licensing requirements is an added impediment, but unless these essential issues are dealt with, the potential of this model will be restricted. As other fields in hospital service, such as rehabilitation and social service, seek to emulate this educationally stratified hierarchy, the need to question the total reliance on academic education is highly pertinent.

Not only the mode of preparing nurses but also the effectiveness of the existing occupational structure in patient care needs to be assessed. It is generally agreed by all levels of personnel in the hospital system and by the consumers of hospital services that something is wrong with patient care. Nurses themselves are in the forefront of the critics. Typical criticisms are that patient care is inefficient, costly and dehumanized, and does not fulfill the rapidly increasing scientific and technological potential of the best modern medicine. Assessments of the problem run the gamut from opinions that it merely reflects the shortage of nurses to the view that nursing is a 19th Century occupation, utterly anachronistic in the mid-20th Century. A growing number suggests that quality of care depends more on the <u>way</u> nursing personnel are utilized than on the ratio of registered nurses to patients. Better utilization of nursing personnel is an agreed goal. While professional nurses have delegated many nursing tasks to practical nurses and aides, they have not, as yet, freed themselves of many non-nursing tasks. The nurse's job is still a "waste basket of tasks," unrelated to her training and skill. Therefore, it is believed, development of New Career models should aim not only to increase the number of nurses, but also help to relieve nursing of non-nursing functions.

Creating Specialties

In recent years, there has been considerable interest in siphoning off from nursing those tasks that could be constituted as administrative or technical specialties. New technology to reduce record keeping has been introduced, but relatively little middle-level managerial manpower has been developed. The unit manager system, a special type of personnel to handle the hotel aspects of patient care, has been tested with varying degrees of success. It has proven to be difficult to determine the appropriate boundary between managerial and nursing functions and to provide adequate training for new workers. Some hospitals, after a trial period, abandone the system as unworkable.

Currently, there is renewed interest in the use of unit manager systems and possibilities for several job levels within unit management are being studied and experimented with in municipal and voluntary hospitals. Subprofessional career building in these areas is especially attractive because it promises to open more doors for male careers in hospitals, offering a potential track for upgrading orderlies, attendants, and custodial personnel.

Increasing numbers of technical sub-specialities are being created to deliver services that have been or would likely become part of nursing responsibility, and it is these that many see as the most promising avenues for New Careers. The operating room technician is a growing specialty employing former medical corpsmen or training and upgrading aides and orderlies to function in roles long performed by registered nurses. Other specialties are being developed in emergency service, inhalation therapy, obstetrical work in labor and delivery rooms, etc.

Many of the hospital jobs developed under the Scheuer "New Careers" Amendment to the Economic Opportunity Act are being pointed toward this general type of specialty. Training offered to those in the programs adds to the standard hospital aide training a general education component, indicating that the aide level is intended as only a toehold on a ladder. The goal is that after a period of work as an aide, the precise duration to depend on individual capacity, trainees will move up to work as ambulance attendants, inhalation therapy assistants, operating room technicians or other types of specialists. Under current conditions, such jobs are only nominal promotions, carrying a pay increment of $240 per year. This may be a wage-scale inequity or it may indicate that, perhaps, these specialized skills are useful but not productive to any important degree. Much of current community college activity centers on the creation of one and two-year health curricula to provide the opportunity for higher levels of development in related specialties. Training as a surgical technician would, for example, be the next step for the operating room technician. A future goal is to extend the ladder still further by developing an assistant physician's role.

The possibility of building ladders in a multiplicity of technical specialties is appealing to many, for indeed specialization is the medical profession's model, but some experts are concerned that specialization at the aide level of skill may be premature. Creation of subprofessional, fractional occupations may freeze the worker into a narrow field before his capacity has been fully determined, and may limit his employability. For it must be remembered that most hospitals are small, with 100 beds or less, and cannot employ a multiplicity of low-level specialists. At the community college level, specialization may be more appropriate, but the rate of technological change strongly suggests the need to guard against overspecialization that may result in career obsolescence.

Upgrading the aide to a fractional specialty for which he can be quickly trained is an appealing simple operation, especially in new fields where there are no barriers of prescribed certification. It is often easier to create a new job than to modify or redesign existing occupations. Indications are that large numbers of operating room and inhalation technicians could be employed. But there are some fundamental questions to be raised when entrance into health occupations is rapidly becoming what some critics liken to a game of accumulating "academic green stamps." As a new specialty develops, a new academic curriculum is devised that quickly becomes the minimum credential for new hiring. A case in point is in inhalation therapy. Although the most proficient practitioners may be no more than high school graduates, the pressure is on to develop and make a prerequisite for employment a two-year college course. Then the most competent practitioners, who themselves hold no college credits, become the instructors of the college programs. Entry requirements are raised and narrowed simultaneously, as all training moves away from the job to pre-service credits.

There is no wish to minimize the obvious need for increased training in response to the immense scientific and technological gains in medicine, but rather to question the form of such training and the rigidities imposed by indiscriminate course offerings. Critics of the rapidly proliferating college programs claim that the minimum course offerings are often geared to the highest level of competence. For example, while only 700 hours may be necessary to train an X-ray technician to deal effectively with situations likely to be encountered in the typical setting, 3600 hours becomes the minimum collegiate course for licensing. The need for a flexible approach to health career development and training and one that does not require more than is actually necessitated by the job, is leading many experts to consider the possibility of core programs as a foundation for a cluster of related occupations and for interlacing collegiate curricula with on-the-job experience. Along these lines, a most promising curriculum is being developed at the Albert Einstein College of Medicine-Lincoln Hospital Health Careers Program, a core program leading to many levels and areas of work, with many different points of entry and exit.

On balance, both technical and administrative personnel are an obvious need in hospitals and these jobs could be constructed as promotional opportunities for entry-level workers. But nurses aides, just as nurses do, enter the field because they want to play a helping role. Promotions that take them away from the bedside are, to many, tantamount to taking them away from nursing. Moreover, many of those already employed or who will be hired as aides if open hiring policies are continued, will frequently be deficient in basic education needed for technical or administrative work. For them to develop much beyond an entry wage level, they will need substantial basic education or remediation before they can progress to college programs. Without college training, technical specialization does

not appear likely to return a satisfactory level of earnings. With careful selection, some hospital entry workers could develop in managerial or technical occupations. Real career opportunities are available and might well attract those not specifically interested in direct patient care activities, and perhaps a higher percentage of men. But for many, the basic question is, however, whether they can progress in direct patient care services.

Enlarging the Nurses Aides' Role

It is an apparent consensus that providing some measure of upgrading for nurses aides is a desirable personnel policy. Tentative steps are already in progress. In some of the larger voluntary hospitals, two nurses-aide levels have been established. Often the higher level is, in reality, only a pay increment for length of service and not a reflection of increased responsibility. In a few cases the senior aide is given an additional task, such as recording pulse rates, while the entry aides take only temperatures and respiration rates. But these are token advancements. They do not represent a larger role for aides or a contribution to improved patient care. One possibility is to augment the task assignments. Another is to assign the senior aide the same tasks in work with the more acutely ill. A third possibility, and one that already is being tested in some experimental programs in hospitals, is to create clinical nursing specialties for upgrading aides in obstetrics, pediatrics, and the like.

These conceptions of how to develop a next step for the nurses aide all have their limitations. Nurses find it difficult to consider assigning more tasks to aides because, they say, the aides already are called upon to perform beyond their capacity or preparation. Moreover, some say the task itself should not be the criterion, but the purpose of the task. As one said, "What good does it do if the person who takes a patient's blood pressure does not know what to do about it?" To assign senior aides to the sicker patients requires regrouping patients according to the severity of their illness. This type of grouping, at present, is limited in general to the intensive care unit for the critically ill. Moreover, nurses assert that it is not necessarily the medical needs that determine the skill of nursing care required, but often emotional state, age, or social pressures on the patient. The clinical specialty approach has the advantage of conforming more with the way in which hospital services are structured, but the problems of specialization at low-skill levels are again germane. The obstetrical assistant is unlikely to earn substantially more than at entry and points nowhere unless midwifery becomes, once again, an accepted practice.

Underlying the difficulties of formulating a developmental scheme for nurses aides in direct patient-care services, other than the standard professional upgrading track, is the lack of clarity as to what the role of the aide is to be. It has been assumed that auxiliary

nursing personnel do not have a distinct role, but are general helpers to the nurse, who would still be in close patient contact. But no one disputes that the professional nurse's role has been radically altered. The nurse has been transformed from the primary, direct and continuous contact with the patient to an administrator, a supervisor or, in lesser numbers a technological specialist. As the ratio of aides and practical nurses to registered nurses has increased, more and more of direct patient care functions have been transferred downward in the occupational hierarchy. The division of nursing work among the various levels has been totally task-oriented, using as the measure the degree of complexity of the task and its susceptibility to standardization. As more tasks are performed by persons trained only in the mechanics and not trained to understand the significance of their work, more controls are needed and the result is increasing routinization of functions. The professional supervisor has become a monitor of a system with little opportunity to plan or provide flexible or individualized service.

While once it was the doctor who sat at the bedside, then the nurse, now it is the aide who is the principal contact with the patient. Unlike the old-fashioned family physician and Florence Nightingale, who both saw themselves as human-service workers responsive to all patient's needs, the aide has been developed to handle only elementary physical aspects of care. Current conditions create a vacuum that leaves untended what most appear to consider the essence of nursing - the process of providing individualized attention in response to the totality of patient needs. More attention has been paid to the need to re-think the professional nurses' role as the result of changing function. There is a concomitant need to review the subprofessional role in the light of the vacuum such changes have created.

The inconsistencies between the proclaimed goals of nursing and actual function is recognized as a problem and a factor that may be contributing to the job dissatisfaction of many nurses. Those recruited to nursing in order to help the sick are, as their skills develop, moved farther away from the bedside. Although some consider administration or technological specialties to be the appropriate directions for professional nursing, the main thrust of nursing education is still towards developing a complex of general patient-care skills. Indeed, the infusion of the liberal arts content into nursing curriculum is considered essential as preparation for understanding and dealing with the social and psychological, as well as the physical aspects of illness.

If nursing is to be refocused upon its broad human-service role, there are changes indicated for both professional and subprofessional job design. Greater significance must be attached to the professional role as trainer, supervisor, and role model for auxiliary personnel. This requires first, that those professional nurses most skilled in bedside care be allowed to remain in that aspect of service by the creation of promotional opportunities within bedside care. Promotional avenues, to date, generally lead away from direct.

interpersonal relationships to administration or other specialties. As a step towards reorienting nursing, a new title, the nurse clinican, has been established in New York City hospitals. This is a promotional avenue for skilled nurses. Their function is to plan, direct and evaluate total patient care and to play a direct role in contact with the patients and families, thus serving as a role model and trainer of ward staff. The nurse clinican is a staff, not a line duty, with no managerial responsibilities, and not a specialist in a technological sense, but a specialist in creating a therapeutic environment. Nursing supervisors in leading voluntary hospitals also are seeking ways to reaffirm the professional role, as they see it, by creating a full-fledged team in clinical nursing.

Even if sufficient numbers of professional nurses were available, there are indications that it would be difficult to move them back to their pre-World War II role. Studies show that nurses when freed of other duties do not of their own accord return to bedside care, for they now consider this to be aides' work. It is reported also that in one hospital where aides were eliminated, and all service provided by professional nurses in the hope of upgrading patient care, although the care may have been technically more expert, there was a detectable decline in that quality of "caring." The implication is that the professional nurse, while viewing direct patient contact as the basic aspect of nursing, does not see it as her role. Conversely, while aides' jobs have been described in an inventory of physical tasks, the aides themselves very often have understood the importance of the human relations element of their work. As aides undoubtedly will continue to be the major primary patient contacts, efforts to enhance the quality of care by concentrating solely on professional job design and preparation are likely to yield only minor gains. At least equal attention must be paid to increasing the productivity and quality of the work of auxiliary personnel, and especially the aides.

This viewpoint suggests a need for major revisions in the conception of the aide's role. Assignment of tasks is not the primary issue. Of paramount concern in the job design is the nursing functions that aides are to perform. The specific tasks or activities should be delegated in the light of basic functions. Although the precise job design remains to be formulated, nursing experts are able to suggest its general outlines. The aides' role is to be the liaison between the patient and the hospital, to serve as the patient's representative and to interpret the hospital to the patients. To be an effective liaison between an individual and a large complex organization requires the basic interpersonal skills common to all human service workers - observation, gathering and recording information, communication, and problem-solving ability. Aides must understand hospital terminology and procedures and be familiar with available resources and all the basic conditions of hospital life in order to be able to provide information or services directly, or refer requests to the appropriate source. Aides must be able to observe, understand, and report basic physical and behavioral conditions. For this, they will need to know basic physiology and the common reactions of people under stress.

The overriding objective is to create a career sequence within the framework of essential patient care functions, adding specific technical skills to the job as they relate to or are a part of the ability to perform these functions. Thus, taking a temperature is a part of the process of gathering physical data. But the aide, as she develops, should be able to understand the significance of febricity, be able to confirm her finding by gross physical signs or by asking the patient how he feels, and then know what action to take, or to whom to report. Moreover, skilled nurses assert that such simple tasks can serve more than their particular performance. Even such physical routines as making a bed, or helping a patient eat, are basic to nursing not only in the obvious sense but because, in their performance, they often provide the best opportunity to transmit information, comfort or reassurance and, at the same time, to observe and assess the patient's physical and emotional state and respond to his needs. Nurses, because they do not have the continuous routine contact with patients, must rely on others to establish the rapport that is so essential to the patient's feeling of well-being.

Developing a major career sequence within direct patient care services is not limited to upgrading those who can become professionals under prevailing conditions. There is considerable room for developing a career in bedside care within subprofessional levels, emphasizing interpersonal skill development. A first need, before considering promotional possibilities, is a complete review of the design and training of entry workers if the entry job is to serve as a testing and training ground for further development. The quality of training is a crucial factor. Successful implementation of such a model requires a major investment in training and supervision far beyond the capacity of many hospitals to provide and may require a central training facility. Training would obviously need to be far more intensive than the perfunctory instruction now given, and reinforced by continuous in-service programs. The training could start with a core of knowledge concerning the problems of people who are hospitalized, basic biology, aimed at developing an understanding of causation, and the underlying reasons for hospital procedures. A logical sequence might focus first on normal appearance and behavior, how it can be observed and measured, and then consider specific abnormalities, their detection, and their impact on the patient. The hope is that the largest part of the training will be on the job supplemented by small-group consultation and discussion, but the extent of on-the-job training depends heavily on supervisory capacity. The essence of such a model is to provide as an alternative to the standard professional career opportunities, a subprofessional development based primarily on work experience. There are some who feel that not only would this model be of value to subprofessionals and to the hospitals, but, in addition, might have an impact on professional nursing education, allowing baccalaureate programs to concentrate more on administration, supervision and training skills and the highly technical fields of nursing specialization.

A pilot program is needed to design and test the career possibilities. Some envision three subprofessional gradations, beginning with information and referral functions, progressing to observation and reporting on patients' conditions, and then to the ability to respond directly to specific situations. Others see a sequence based on work with different types of patients, or different stages of hospital stay such as intake, acute illness, convalescence, etc. Some with Army experience suggest that more gradations are possible. The precise number of levels and the bases of differentiation are problems that probably will need experimentation. And the same is true for the specifics of each level's design. But the over-all effect would be, in the words of a leading nurse administrator: "Aides who are developed to the fullest capacity on the job would truly understand the intent and the process of nursing and need only brief formal instruction in techniques to become the equivalent of the practical nurse. The likelihood is that on the basis of increased cognitive development they would be able to perform many more tasks than they do now, with fewer mistakes, and less need for routine control and verification."

This model is both a most promising possibility and a most difficult one to implement. Undoubtedly there will be more resistence toward the development of this model than there has been to the work-study arrangements within the standard professional tracks, or to technical specialties. For upgrading aides in the nursing process challenges the prevailing distinction between the professional and the aide. There are some who doubt whether clinical nursing is divisible into levels of function. Moreover, there is no clear consensus on how far aides could be developed without recourse to considerable formal instruction. Identical questions have been raised in teaching, casework and other human-service professions. But, there is already sufficient evidence in the performance of many aides in hospitals and in demonstration programs, both in health and in other fields, to indicate that such a model is well worth testing. Hospital and nursing administrators are aware of the wide variations in aptitude and capacity of aides they now employ. They know that some, without conventional training, acquire considerable understanding of the realities of hospital life and of patients' needs and how to serve them. Moreover, the likelihood is that the theoretical resistance will dissipate when nurses themselves are involved in the design and development of such a career model, especially if it is clear that upgrading aides is to be based on their performance in training and on the job, and not an automatic promotion for length of service. There are already many leaders in nursing who recognize that if aides are developed to be more than practical adjuncts to the professional, but rather as distinct entities in patient care, the professional nurse will find herself more able to use the talents and skills that she possesses.

A model that enlarges the subprofessional role in bedside care has some distinct advantages over those that seek to upgrade aides to professionals, or create subprofessional specialties. First, this model promises to provide an entry job that is more likely to serve as an accurate screening of human service potential. Most people can be taught the simple tasks of physical care, but not all have the personal attributes or the ability to learn to develop successful relations with a wide range of people, or with the sick. Entry jobs in hospitals today are generally not good measures of intrinsic capacity or potential. Nor are they work that is preparation for enlarged responsibility. Reconstructing the aides job, and providing intensive training at the entry level, would result in a corps of potential human service workers.

Second, this model predicates upward movement on the development of interpersonal skills on the job. It therefore capitalizes on the ability or skills acquired in life experience and de-emphasizes academic attainment. Skills in human relations work have been found by many demonstration projects to have little direct correlation with years of schooling. More, or at least as many, of those now employed as aides are likely to progress in these skills and in on-the-job training, than those able to avail themselves of advanced technical or academic education.

Third, the reality is that aides are now used in different ways, some in city hospitals even taking charge of an entire ward during the night shift. The current method of circumventing budgeted posts, or adding tasks to the aides repertoire on an ad hoc basis, in effect, either denies the patient the care intended or exploits the worker by paying an aide's wage for a nurse's work. A much sounder practice would be to develop aides to their maximum potential, give official recognition to relative capacity, and then assign them on the basis of demonstrated ability.

Finally, augmenting the aide's role in nursing not only has considerable career potential, but appears likely to have the greatest impact on the quality of patient care. For even if nursing professionals increase in number, it will still be the aide who is the basic agent of service to hospitalized patients.

The ideal would be to allow for the coexistence of all three types of hospital career models. Providing a diversity of career tracks, in different types of work and with different forms of training, could result in substantial job mobility. Hospitals need almost every kind of work skill - work with things, with people, with paper and systems. This diversity has been a barrier to internal staff development, but it could become a major asset. However, this would require redesigning jobs into sets of related functions, and providing vertical and horizontal links. As one administrator of a voluntary hospital said, "All hospitals need to take inventory of their unused skills and reconstruct jobs so that skills can be used. Personnel departments tend to overhire for individual jobs and then forget this when they search for candidates for new or different jobs."

It is the hope that the effect of increasing interest in career development within hospitals will stimulate the creation of screening and evaluating techniques and tests for accrediting experience, to replace total dependence on academic credentials. If full-fledged subprofessional career lines are designed, hospitals may be able to broaden their recruitment to attract young people, male and female, and lessen the hospital's dependence, at least at the lower end of the occupational scale, on mature women.

The future for subprofessional career development in hospitals will depend on how hospitals interpret their service goals. A growing number of leaders in hospital administration forecast that the hospital of the future will serve only the acutely ill and become, in effect, one large intensive care unit. If this is true, then they will concern themselves primarily with medical service and all the social and psychological aspects of therapy and prevention will be removed from the hospital, where manpower needs will be for high level technical skills, limiting the scope of subprofessional function. According to the director of a leading voluntary hospital, "In the hospital of the future no patient will be admitted unless he is comatose or nearly so. Then, compassion will represent a failure of technology." Implicit in this viewpoint is the development of an array of institutions to carry on diagnostic processes and care for the convalescent or long-term illness, in which the subprofessional could play a larger role. In addition, restricting the hospital bed to the critically ill requires substantial development of facilities to care for people as out-patients or in their homes.

There are some who see the hospital role enlarging, with hospitals becoming pivotal organizations for developing comprehensive community health care. Some hospitals have instituted community service programs, employing students or volunteers to go out into the community to assess needs that relate to health in the broadest terms - traffic, housing, schools and other conditions. The objective is to make the hospital a force in community development, a prospect that would open up many new career possibilities for subprofessionals. The difference in the two viewpoints is essentially a question of the ultimate structure of health service organization. Some see hospitals as the central health organization and others see them as only one of a complex of institutions. In both, however, the potential for subprofessionals is larger in services other than the care for acute illness.

In Conclusion

No single New Career model emerges as the logical instrument for meeting the immense service and manpower needs or for enlarging the career opportunities. In fact, what is clear is that a diversity of models must be devised and tested. But each individual model must be viewed in relationship to all others or the essential discontinuity of health occupations will be further complicated by a myriad of new job titles. Potential subprofessional development is limited when seen only in the context of a specific setting and when even among like organizations entirely different personnel policies are pursued. Providing health entry workers with a variety of options for development in different work areas, and by different training methods, and to different levels, can only come out of joint planning efforts.

Not all service units can realistically set up independent training facilities, nor is it necessary to duplicate training in similar institutions within the same geographical area. Variations in practice among individual hospitals and between voluntary and public hospitals, and the boundaries that separate the many professions, are stumbling blocks in the path of New Career model development. Small individual programs may be valuable testing grounds but unless they have some built-in connections with other institutions the career options for their workers may be curtailed and the value of the demonstration lost.

Single institutions, irrespective of size, are unlikely to succeed in securing the necessary revisions in statutes and in insurance policies, or in changing the professional attitutdes tha. inhibit full utilization of subprofessional manpower. Possibilities for coordinated planning and action exist under the Comprehensive Health Planning Act, regional medical programs, and professional associations. Area-wide planning appears to be the key to developing subprofessional models with sufficient scope to test their value as careers and in providing a higher level of service.

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While three-fourths of all full-time salaried workers in the health occupations are currently employed by hospitals, growth in other health services is expected to exceed that of hospital services and therefore, manpower models should be developed in these other service areas because the aide in the nursing home may have to carry more responsibility than the hospital aide. Nursing homes offer potential for career development. Employment in nursing homes, after additional training in the needs of the long-term patient, could be considered a promotion from the entry level in hospital work. Other models might involve upgrading nurse aides through enlarging jobs, for example, combining occupational therapy, physical therapy, and practical nursing or combining social work, counseling, community organizations, and nursing. While out-patient and home care should provide potential for career development, strong deterrents are legislation limiting the functioning of subprofessionals in home situations and the current separations between professional disciplines. A combination of social work and nursing could create more flexible career patterns in which the home-health aide could move along in nursing, public health education, or social services. (JK)

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NEW CAREERS POTENTIALS IN HEALTH: BEYOND THE HOSPITAL

by

Edith F. Lynton

National Committee on Employment of Youth

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New Career Potentials in Health: Beyond The Hospital

Today, approximately three-fourths of all full-time, salaried workers in health occupations are employed by hospitals and, therefore, hospital manpower needs are receiving the major share of concern. It is the general view, however, that, although hospitals will continue to demand more personnel, still greater growth is likely in personnel to staff other types of health services. Therefore, new manpower models need to be developed in these other health service areas.

Extended Care Facilities

The inadequacy of nursing home facilities and staffing is receiving increasing attention under the impact of Medicare. All indications point to a substantial growth in the number of institutions designed to care for the chronically ill, handicapped or aged. In nursing homes, the proportion of care provided by aides or attendants is even higher than in general hospitals. Many donot even have one registered nurse on their full-time staff. For nursing homes, the model that upgrades bedside-care skills of subprofessionals has, therefore, particular relevance. Patients in these institutions have less need for high-level medical or technical services. Their primary needs are for supportive personal care. Moreover, the ostensible goals of nursing homes are shifting from mere provision of custodial care to an emphasis on psychological or physical rehabilitation, a shift that demands improving the interpersonal skill of the staff.

As these institutions are generally small, and it is desirable to keep them small so that long-term patients are not removed far from their accustomed environment, reassessment of both the professional and subprofessional roles needs special emphasis. In nursing homes, registered nurses and practical nurses are administrators, often in total charge of the entire institution. Aides and attendants are more important to the patients because few nursing homes have full-time, professional medical, social service, or rehabilitation personnel on their staff. Creating a satisfactory environment for those who are institutionalized over a longer-term is perhaps more demanding in terms of human relations than it is for short periods of illness. Nursing homes and smaller hospitals, as well, find it especially difficult to provide adequate on-the-job training or supervision. If these institutions are to provide the services needed to care for those who are now neglected, and also to provide care for those who burden unnecessarily the general hospital, then it is of considerable importance to improve their staffing capability. Although the aide in the nursing home has more impact on the patient's well being, he may have to carry more responsibility than in the hospital and with less professional support. Therefore, employment in nursing homes could be constituted as a

promotion from the entry level in hospital work, after additional training in the special requirements of the chronically ill or long-term patient. Clearly small institutions would benefit from some central or cooperative training facility.

Contrary to the large hospitals tendency to subdivide and specialize occupations, the nursing home and the smaller hospital appear to require the converse, or job enlargement. Facilities caring for long-term patients need physical and occupational therapy, social service and counseling, but seldom are these services available to them except on a part-time or consultant basis. The value of professional consultation is often nullified by the lack of permanent or full-time staff with the ability to implement professional recommendations. A pattern of upgrading nursing aides through job enlargement by creating a job combining the fundamentals of occupational therapy, physical therapy and practical nursing is one possibility. Another is to enlarge the nursing function by fusing elements of nursing with elements of social work, counseling, and even community organization. In the Army, there are Medical Corpsmen whose skills are a combination of rehabilitation work, nursing, and medical technological skills. Crossing professional boundaries could create an enlarged subprofessional role of specific application to nursing homes or small hospitals and, in addition, might have a feedback for the larger hospital. The characteristic separation of the various services is considered, by many, to be artificial and inimical to the development not only of enlarged subprofessional roles but also of more coordinated and comprehensive service. Recovery from an illness as well as longer-term rehabilitation is a process embracing social, economic, and psychological assistance as well as medical help.

New long-term care facilities are in the process of development, providing extended care to accommodate patients unready to be independent but no longer needing 24-hour nursing service. These institutions will have a full complement of medical and diagnostic services on the premises but, in lieu of a nursing service, hope to develop a whole set of non-professional jobs connected with administering and coordinating medical activities, providing rehabilitative, social, economic and practical services to smooth the transition for patients from the hospital to the home and connect in-patient services with out-patient or home care. As more specialized satellite centers are developed for diagnostic or specific therapeutic processes, there is an increasing possibility of developing career patterns by building on to the primary patient care skills a complex of nursing, social, and psychological skills. For irrespective of the precise pattern of organization, all services that deal with institutionalized patients are becoming aware that their responsibility for patients cannot end when the patient leaves the institution. Preparing patients for a return to the home, linking the institution with the community facilities is a most attractive area for future subprofessional careers. At present, however, careers can be planned, but not put into effect until more special institutions exist.

Out-Patient and Home Care

Out-patient and in-patient service cannot realistically be considered as separate entities. They are interrelated parts of the whole of health care and, to a large extent, are reciprocal factors. The existence and quality of preventive medicine and facilities for treatment of patients in the home or in ambulatory centers has an important impact on the need for in-patient service. Hospital and nursing home facilities are strained not only because of an actual shortage of beds but also because preventive and positive health care for a large part of the population is inadequate. However, for the purpose of discussing career possibilities, it seems desirable to give separate consideration to the two broad elements of health service. When they are commingled the tendency is to emphasize the service to the acutely ill or at least those who are institutionalized. Indeed, there are many who favor the physical removal of out-patient clinics from hospitals so that they will receive more attention and support. As separate facilities, moreover, the clear relationships between out-patient medical care and the social and economic environment is more apparent.

It is a general belief that not only are there more possibilities for career development in out-patient or home care, but also that there is a greater potential for affecting the total level of health care. In terms of the number of patients reached, this is indisputable. Expenditures are not a valid index because of the far higher cost of institutionalization. Nevertheless, the findings of a recent American Hospital Association study that less than 15 percent of municipal expenditures on the average in New York City for health go to ambulatory and home care reflects, at least in part, what many consider to be a significant imbalance. Hospital treatment varies in accordance with the ability to pay, but differences are narrowing under the impact of expanding health insurance programs. The service-quality gap between those who get their health care out of the hospital from private physicians and those for whom the treatment facility is an out-patient clinic is much greater. It is generally agreed that there is a pressing need for a more rapid rate of increase in facilities, staff, and the quality of service in clinics, public health stations, and medical-outreach programs.

Much of the work with non-institutionalized patients demands less in the way of technical or medical skills and more ability to coordinate medical services with community programs directed to educational, economic and social needs. Technological and scientific advances have contributed to this development by increasing the feasibility of out-patient and home care. Rapid recovery from surgery, the increased availability of self-administered drug therapy, and electronic devices for sophisticated diagnostic procedures in the home make it possible to eliminate hospitalization for some patients and to reduce the time in a hospital for others.

In heart disease, for example, it is now possible to transmit electrocardiogram signals from the home to a hospital over telephone

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lines. Moreover, once the critical stage of a heart attack or stroke is passed, such patients should be cared for at home, according to Dr. Vincent dePaul Larkin, Director of the Regional Medical Program. As quoted in the New York Times of March 13, Dr. Larkin said, "These patients need a minimum of medical care and extended care facilities and home care would be more efficient, less expensive and the patient would be happy."

Those who work within the elaborate and complex structure of the modern hospital regard the freedom from such structures as a major asset to the development of New Careers outside the hospital. The very lack of the facilities and structures may offer freedom of action but, at the same time, it is a deterrent to any large scale planned activity. Careers cannot be created in a structural vacuum. Job titles, budgeted positions must be created and subprofessionals cannot function alone but need connections with training facilities, professionals and institutional resources. Existing facilities are handicapped because they are not highly valued by professionals or by the general public. Clinics are, very often, hospital stepchildren, because doctors, nurses and other professionals consider out-patient work less interesting and less challenging. And as clinic facilities have deteriorated and become increasingly overcrowded, and public health nursing caseloads have increased, the quality of service has declined, diminishing further the possibility of attracting professional and public support. Establishing New Careers is further limited by the laws regulating nursing and medical practice and the insurance provisions that are addressed primarily to solo private practice and hospitalization. There is, for example, more latitude for the subprofessional to perform health related services in a hospital or in a doctor's office because of the assumption of responsibility and supervision by professionals or the institution than there is in the home. In a public health center, all injections to adults must be given by a physician, whereas in a hospital they are given by a nurse, and medical assistants give injections in a private physician's office. Public and private insurance often applies only to services performed in a hospital or by a professional physician or nurse outside the hospital. The practical services needed to permit the handicapped or the aged to remain at home are often not compensable.

Thus, despite the apparent vast potential and the development by some experimental programs of promising new approaches, as in the new OEO Comprehensive Health Centers, activity to date appears more likely to increase or improve services than to provide substantial new subprofessional career patterns. The most common job as an entry to health work outside the hospital is the home health aide, a job with many titles, but one whose common denominators are essentially housekeeping services and some simple physical aspects of care. Most often the job is designed as a part-time job for mature women and often is almost indistinguishable from a homemaker's job. Other functions performed by subprofessionals in a variety of out-patient and home care services are in clerical or administrative aspects of clinic management, as assistants in medical social work or family counseling functions, and in outreach activities to follow up on clinic patients or assess individual or community health need. In all, functions relating directly to health

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services are a relatively small element and the actual functions of most subprofessionals are more in practical or quasi-social services. And, for all types, the development of even a single track vertical ladder has proven extremely difficult. Subprofessional occupations outside the hospital have not yet attained even that measure of standardization of the nurses aide and are not integral to the service, as yet. Nevertheless, as in the case of nurses aides employed in hospitals, interest in providing avenues for upgrading and of job mobility for home-health aides and others is increasing.

Utilization of manpower in the conventional out-patient clinic appears in need of a thorough revision. The system of staffing clinics by volunteer physicians and registered nurses, abetted by an inadequate clerical staff, is inefficient and wasteful of professional talent. Doctors spend much time dealing with non-medical problems and the registered nurse, in the opinion of many, is largely wasted. The physicians and, even more so, the nurses are bogged down in clerical and administrative functions which could be handled by others. In the opinion of many, only a small number of registered nurses are actually needed in a clinic setting to give injections and perform other minor nursing tasks. But, it may be difficult to dislodge the registered nurse from the clinic table of organization because the job is one of the few in nursing that is a nine-to-five, five-day-week job and is less demanding than general hospital duty. Cited as evidence is the low turnover rate among nurses in clinics compared with the much higher rates in hospital staff duty. Not only are professionals under-utilized but the services they provide are rendered relatively ineffectual because there is little follow-up to insure that patients scheduled for further treatment return or that they adhere to the prescribed treatment. A grant to Planned Parenthood-World Population by the U.S. Department of Labor to develop non-professional roles in family planning, in cooperation with the New Careers Development Center at New York University should offer new patterns of service and new models of sub-professional occupations.

To staff clinics adequately requires personnel to handle the traffic flow, coordinate appointments and records, maintain and distribute supplies, and refer and expedite a host of practical and social problems that often prevent patients from following medical recommendations. Such common prescriptions, as avoidance of physical exertion or fatigue and a balanced or specific diet, may be difficult for patients without changing jobs, living conditions and habits. Language and educational barriers that limit the ability of patients to understand and communicate with the doctor could be overcome by the employment of sub-professionals to serve as two-way interpreters. In traditional clinic settings where care is fragmented by diseases and is not patient or family oriented, an important sub-professional role might be to serve as a case manager, becoming the one continuous coordinating contact with the patient and his family.

In New York City public health centers, some new jobs are being contemplated. Public health assistants, employed in Public Health Centers since 1948, are high school graduates with one year of health experience,

for example, as nurses aides. The job was designed to free nurses of the more routine nursing functions, but as clerical staff in these centers have gradually disappeared, the assistants have become mainly clerical workers Studies of school-nursing programs show that under current usage public health assistants contribute relatively little to the more effective use of the professional skills of registered nurses, public health nurses and doctors. A particular liability of the job of public health assistant is that it is a dead end, except for those who are able to pass the qualifying examination for senior clerks. Often the best assistants have been able to qualify and were promoted out of nursing service. Current thinking is directed at focussing the public health assistant's activity on health functions by creating three sub-professional levels, a health aide, the assistant, and a senior assistant. The aide level may be modeled on a recent experimental project with some 30 indigenous workers employed to follow up tuberculosis patients. The objective is to create a permanent aide level and expand the follow-up service to all types of cases. The senior assistant would serve as a clinic administrator, coordinator and supervisor. He would handle all non-nursing functions. This would, in effect, staff centers with a six-level hierarchy, three sub-professional levels in addition to licensed practical nurses, registered nurses and public health nurses. One difficulty with this model is that the numerous gradations each have a different focus, ranging from outreach, to nursing, to administration, to public health and, therefore, each level does not seem to be direct preparation for the next.

Clinic management, follow-up, and case finding are all needed activities and ones readily performed by those with limited education but, as yet, there are no clear avenues of career development in each of these fields. Around the country there are programs to develop clinic assistants, but because the centers in which they work are small and the connections with other facilities not well-defined the clinic assistant role that could be a step on a broad managerial track usually is not so constructed. There is a desire to connect out-patient service with home care, but except for some specially designed projects, this is seldom done. Sub-professionals in public health centers rarely make home visits. Home visits by non-professionals, it is reported, are opposed by nurses, unions and also limited by civil service regulations and the stringent rules for public health service.

Although not so circumscribed as public health services, voluntary community health organizations also find it difficult to enlarge the role of subprofessionals. Because aides who work in the home, function with considerable autonomy, their health related tasks, it is thought, must be limited to the most elementary activities, even more limited than aides who work in a hospital. Upgrading the aide, or providing wage increments on the basis of merit, are difficult policies to implement because of the inability to evaluate field-work performance.

In experimental out-patient and home care projects, such as the Gouverneur Health Services program and the Montefiore-Morrisania Neighborhood Medical Demonstration, some significant subprofessional roles have been developed. The objective at Gouverneur has been to create a

family-centered clinic of comprehensive care and to extend the care beyond the clinic into the community. Employed at Gouverneur are social-health technicians who assist either social workers or public health nurses. As social work assistants, they provide escort service, information and referral services and followup on welfare, housing and other social problems. As assistants to the public health nurse, they help to instruct patients in hygiene, nutrition, pre-natal care and the like. A new administrative role has recently been developed, the family coordinator, who oversees all appointments and helps to integrate all medical needs for each family. This job has been a promotional opportunity for clerks, elevator operators or, indeed, any personnel who demonstrate responsibility and the capacity to relate to patients. A desirable additional role would be an outreach worker who had combined health and social work functions, but, to date, this has not been developed because of regulations that restrict the health activities that can be performed by aides in the home.

In the Montefiore-Morrisannia project, medical assistants have been trained to take over almost all the usual functions performed by nurses in clinics. Only one registered nurse is employed to give injections and perform other tasks for which the assistants could be trained, but are prohibited from performing by Nurse Practice Acts and other regulations. The majority of center staff is neighborhood based. The key role here is the family health worker who gathers social and medical histories, assesses and reports family needs - both physical problems as well as housing and financial difficulties - and is a first-line public health educator. Family health workers are trained to observe and gather information. For example, if a child is not at school but does not appear to be sick, they will endeavor to find the cause and get the child back to school or refer the problem to the appropriate agency. Their role as health educators is to encourage regular examination, immunization and also teach the rudiments of infant care, sanitation, hygiene, and nutrition. Following six weeks of core training, given to all medical assistants, family health workers receive an additional ten weeks of training in health procedures and in legal and social issues. The family health worker's role is thus considerably expanded beyond the conventional home-health aide, and program experience has indicated that it could be expanded further if licensure requirements were modified. It has been suggested that well-trained subprofessionals could handle all nursing needs likely to be taken care of in the home. For example, the prohibition against administering drugs is unrealistic. Most drugs can be pre-set and pre-measured, and there is less danger of mix-up in the home than in a hospital. The trained aide would be more reliable than patients who now administer their own medication, even when they are unable to read the instructions on the label.

Upgrading or enlarging the job for outreach health workers is currently a major problem. Home-care programs have few connections with other health services or institutions and their workers are immobilized without opportunities even for jobs at the same level in other settings. Promotion within the programs themselves is limited by problems of securing accreditation. After intense efforts, it would be possible now to secure an Associate Degree for family health workers in a two-year collegiate course. Those with experience in training this group regard

six months as the maximum time needed to equip the worker for the job. The Associate Degree has value as a credential and because it enables the holder to take the entrance examination for registered nursing, but it is too long and much of the course content is irrelevant.

The family health worker is a prototype subprofessional job in community health work that could become the foundation for substantial career opportunities and for delivering not only home care to the sick but positive health services. But, to make it part of a career sequence and to fulfill its potential service value it is necessary to develop a public health career track bringing together the related disciplines of health and other social services and coordinating outreach health work with other aspects of health service.

At present, there are no public health occupations other than public health nurses and physicians. The public health nurse is usually a college graduate because public health curriculum is reserved for the senior year of four-year programs. Program operators see the need for some intervening levels other than standard practical and Associate-Degree nursing.

One possibility is to establish intervening levels of community or public health nursing as community college specialties, with field work in ambulatory or home-care settings. This is difficult at present because of the limited facilities for field training. Another is to give all practical and registered nurses, who comprise the bulk of public health personnel, some training in community nursing. The objective is two-fold, to augment the professional component available to outpatient or home-health services with some knowledge of the interrelation of medical and social problems, and to create some intervening levels towards which subprofessional experience might be accredited. Another possibility is the creation of subprofessional specialties in public health, such as nutrition, hygiene and sanitation, maternity, child care, and others.

The professional public health nurse is hindered by her incapacity to affect all the environmental conditions that are causally connected with individual and community health. If she were supported by a team of subprofessionals or semiprofessionals or semiprofessional specialists who could follow through on housing needs, on job needs, on diet and hygiene, her efforts might be confined to specific health functions and her activities might be more fruitful. The frustrations in public health nursing are assumed to be at least one important factor in the declining attraction of this professional field. Although it may be that under current conditions public health nurses are over-trained for their functions, if they had the support of a team they might need even more professional competence. The public health nurse does not have the control over the patient or his environment enjoyed by hospital nurses. Public health nurses need skills in establishing a relationship and understanding in the community, and in teaching both the public and staff.

What many see as basic to community health work is a coordination of social work and nursing to create more flexible career patterns. The home-health aide or family worker could then move along in nursing,

public health education or, alternatively, into social services. At present, some who are trained as family health workers are eager to extend their roles into social services but in their current jobs they do more responsible social work than they would as case aides in most casework settings. If all, or at least some, of the foregoing conditions were met, a model can be envisioned that would begin with a generalist trained in a core of basic social service and health skills who, depending on ability and interest, could move into one of a wide group of broad specialties either in social service or in public health and then on to a range of technical or semiprofessional areas and, for some, full professional status in one of several professions. The blending of health and social work functions and training would develop workers who understand the interrelation of health and social and environmental factors. Current separations between professional disciplines inhibit the development of both the policies and organizations to provide comprehensive care and the manpower with the necessary combination of skills. At the subprofessional level, at least, such a combination is imperative because subprofessionals are not likely to be allowed to perform highly sophisticated health-related tasks, but rather a mixture of the more elementary aspects of health and social service.

Career development in health is limited because each category of worker is developed for work in a specific setting. Health manpower can best be developed if all workers are considered part of an interrelated pool to serve a coordinated range of services. Home-care and out-patient-care jobs would benefit by the relationship with jobs in hospitals. For example, because it is difficult to provide satisfactory on-the-job training in clinics, and especially in outreach work, these jobs might be best planned as promotions for hospital aides. Aides can be trained in large hospitals under carefully controlled conditions. Once their capacity for health work, for the basic human relations and health skills, has been attested, they could be assigned to work in the field under less direct and constant supervision. Effective work in the community demands more initiative, more judgment, and a broader range of skills. Just as the public health nurse needs more training than the hospital nurse, so the home-health subprofessional worker requires more training than the entry worker in the hospital. Added to the core of hospital aide training, training for a home health worker should include the content and techniques of health education, knowledge of community resources and techniques for assessing individual and community needs, as well as procedures for securing the appropriate services. In effect, the home health worker must be a part social worker, teacher and community organizer. Casting the home health role as a promotion from the hospital entry aide could enlarge the functions of the outreach worker and help to change the image of home health work, an image that now is one of domestic service. The negative image is one reason why these jobs have so little attraction for men. Although public health work is supposed to have more potential masculine appeal because it is less identified with bedside care, there are even fewer men in outreach work than are employed in hospitals as orderlies.

Considering all health entry workers as an interrelated resource would make it possible to develop generic training for hospital, clinic

and home-care personnel, even including a planned rotation as part of the training. It would allow for realistic choices and screening of trainees. From a coordinated and cooperative approach, models that meet the needs of various institutions and settings and utilize the potential of personnel can best be developed.

VT 008 073
Spotlight on Job Opportunities; Manpower Needs in Selected Trade, Finance, Insurance and Service Industries, 1963-1966.

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NORTH CAROLINA

To obtain a measure of job opportunities in a cross-section of North Carolina's service and other non-manufacturing industries, a survey was conducted of 17 industry segments in selected trade, finance, insurance and service industries. A stratified random sample of firms insured by the North Carolina Employment Security Law in March of 1963 resulted in 2,000 firms representing approximately 60 percent of 14,040 usable returns representing just less than 40 percent of the statewide employment in the 17 industrial segments surveyed. Some major study highlights were: (1) Total employment in surveyed industries was expected to increase 16 percent in a 3-year period, (2) Employers estimated that by the fall of 1966 about 28,000 new job opportunities would develop, (3) On-the-job training was expected to provide less than 40 percent of workers needed, (4) The greatest anticipated rate of growth among major occupations studied was found in skilled occupations, and (5) Employers in surveyed industries expected a surplus of more than 60 bookkeeping machine operators by the fall of 1966. Conclusions were that the state should continue to promote and support expansion of programs providing vocational training facilities and continue to emphasize vocational guidance programs. (DM)

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EMPLOYMENT SECURITY COMMISSION OF NORTH CAROLINA

Henry E. Kendall, Chairman

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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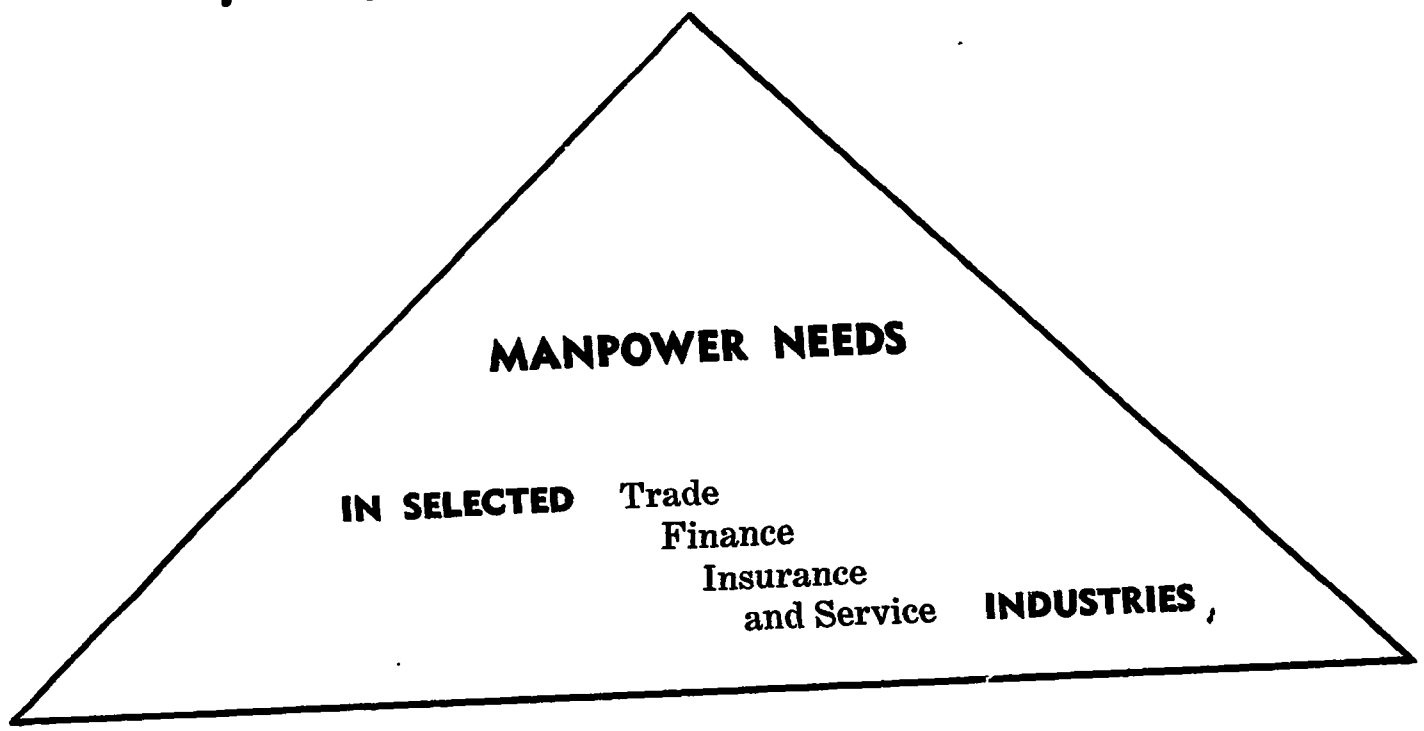
Spotlight On Job Opportunities



1963 - 1966

BUREAU OF EMPLOYMENT SECURITY RESEARCH
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June, 1964

VT 008073

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The development of this Study of future job opportunities and training needs for 54 selected occupations in 17 nonmanufacturing industry segments results from the contribution of time and composite thinking of more than 1,400 employers and their staffs, who responded to mail questionnaires. To each of these contributors, representative of many types of businesses, we are most grateful. Special thanks go to the following employers, who were personally interviewed by Labor Market Analysts, and who provided information and suggestions regarding Study design and methods for collecting the major portion of survey data by mail questionnaire.

Asheville

Asheville Federal Savings and Loan
Bank of Asheville
Battery Park Hotel
Beverly Apartments, Incorporated
Booth-Barfield, Incorporated
Bowers Stores, Incorporated
Carroll and Company
Deal Buick, Incorporated
Dunham's Music House
Field Clothes, Incorporated
Free Service Tire and Applicance Co.
Harry's Body and Fender Service
Ideal T. V., Incorporated
Ivey's, Incorporated
Life Ins. Company of Virginia
McCarley and Company, Incorporated
S. and W. Cafeteria
Sronce Automotive Supply
Webb, R. Stanford Company

Charlotte

Allstate Insurance Company
Anchor Mills
Authorized Appliance
Best Shops
Brodt Music Company
Commercial Automotive Corporation
Dickson, R. S. Company
Ford Motor Company
Franklin-Simon Company
Home Finance Company
Jones, J. O. Company
Jones and Presnell Company
North Carolina National Bank
S. and W. Cafeteria
Sears Roebuck and Company
Selwyn Hotel
Singer Sewing Machine Company
Thomas Cadillac-Oldsmobile
Vinson Realty Company
Westbrook-Norton Insurance Company

Greensboro

B. B. S. Studio (High Point)
Banks Clothing Company-H. & H. Clothing
Bessemer Improvement Company
Brown Realty Company
City Electric Machine Company
Davidson Supply Company
Ford Body Company
Home Federal Savings and Loan
Jones Fur Service
McDaniel Lewis Company
Montaldos
Moore Music Company
Myers Company
North Carolina National Bank
North State Chevrolet Company
O'Henry Hotel
Pilot Life Insurance Company
S. and W. Cafeteria
Schenck, Paul W. Agency
Southern Sales Incorporated
Vanstory Clothing Company

Winston-Salem

Ardmore Terrace, Incorporated
Cahill and Swain, Incorporated
Carolina Garage, Incorporated
Clinard Electric Company
Gay and Taylor, Incorporated
General Motors Acceptance Corporation
Hine-Bagby Company, Incorporated
Jones T.V. and Radio Sales and Service
Knight, Pete T.V. and Appliances, Inc.
Mann Film Laboratories, Incorporated
Modern Automotive Service, Incorporated
Modern Chevrolet Company
Mother & Daughter Stores, Incorporated
Nissen Building Corporation
Reynolds and Company
Sears Roebuck and Company
Security Life and Trust Company
Town Steak House #2
Wachovia Bank and Trust Company
White, Mrs. Viola Sewing Shop
Winston-Salem Hotel

Acknowledgment is also made to the Bureau of Employment Security of the United States Department of Labor for the funds necessary for completing this Study.

The Study was conducted by the Bureau of Employment Security Research under the direction of David A. Garrison, Assistant Director; and under the general supervision of James C. French, Supervisor of Research. Immediate responsibility for planning and supervising the Study and for drafting this report rested on James G. Mills, Jr., Labor Market Analyst II, assisted by Mrs. Natalie Crawford, Labor Market Analyst I.

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John M. Bennett, Asheville
James R. Gardner, Winston-Salem
Anne B. Knowles, Charlotte
Charles O. Forbis, Greensboro

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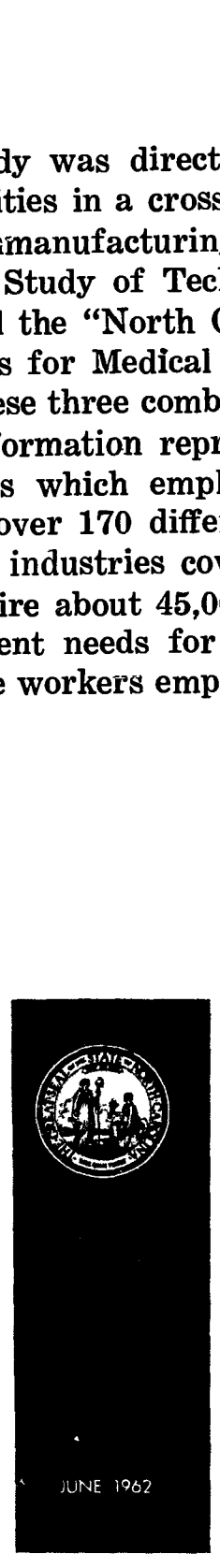
FOREWORD

This Study was directed toward obtaining a measure of job opportunities in a cross-section of North Carolina's service and other nonmanufacturing industries. It complements the "North Carolina Study of Technical and Skilled Manpower" of June, 1962, and the "North Carolina Study of Manpower and Training Needs for Medical and Health Occupations" of September, 1963. These three combined studies present labor supply and demand information representing more than 19,000 North Carolina firms which employ about 755,000 persons. These three studies cover 170 different occupations. By 1966, employers in surveyed industries covered by the three studies estimate they will require about 45,000 additional workers for expansion and replacement needs for these 170 occupations—needs over and above the workers employers expect to train on the job.

Merely establishing the fact that job opportunities and training needs exist will not solve the problem of labor supply and demand imbalances. Future planning and cooperative action will be required of employers, staffs of training facilities, educational administrators and personnel of agencies concerned with manpower development and utilization. In this way, a more ample supply of qualified workers can be provided for shortage occupations.

This Study includes an economic synopsis of North Carolina, highlights of survey results, and features a Statewide and area view of industrial and occupational employment findings. The Appendix contains information on methodology and scope, definitions, and additional tables.



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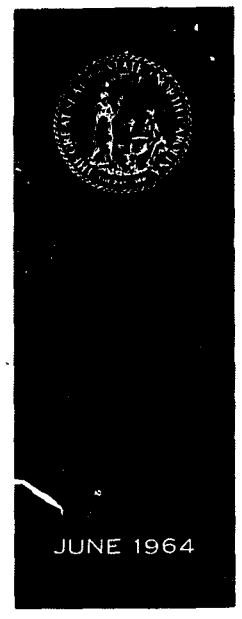

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STUDY HIGHLIGHTS

- During a three-year period ending in the fall of 1966, total employment in all surveyed industries is expected to increase by about 16 per cent, from 132,200 in 1963 to 153,650 in 1966. This anticipated growth is at a rate slightly greater than the growth rate experienced from September of 1960 to September of 1963 in the group of surveyed industries.

- The following industries are expected to grow at rates greater than 16 per cent by the end of 1966.

Industry	Anticipated Per Cent Growth, 1963-1966
Automobile Dealers & Gas Service Stations	21.3
Women's Ready to Wear Stores	17.2
Eating & Drinking Places	16.4
Credit Agencies Other Than Banking	17.4
Security Brokers & Dealers	20.6
Insurance Carriers	24.4
Insurance Agents, Brokers & Service	18.2
Automobile Repair Shops	18.1
Electrical Repair Shops	42.0

- Twelve of the seventeen industry groups expect greater percentage increases in employment during the 1963-1966 period than they experienced during the period from 1960 to 1963.

- The projected rate of employment growth in surveyed occupations, during the forecast period to 1966, is expected to be slightly higher than the total increase in employment in the industries studied. An expansion rate of nearly 18 per cent is indicated, as employment is expected to increase from 96,900 at survey time to about 114,300 by 1966.

- Employers estimate that by the fall of 1966 about 28,000 new job opportunities will develop in the occupations surveyed. More than 60 per cent of these new jobs will develop because of business expansion.

- On-the-job training programs are expected to provide less than 40 per cent of all workers needed in the occupations studied.

- By the fall of 1964, 7,700 more workers will be needed in the selected occupations for expansion and replacement, than are expected to be trained on-the-job. In the occupations studied, on-the-job training is expected to fall 17,000 workers short of the total demand by the fall of 1966.

- The greatest rate of growth among major occupations studied was found in skilled occupations. By late 1966, employment is expected to increase by about 28 per cent in the skilled category, compared to expected gains of less than 14 per cent in semiskilled jobs.

- Net additional-worker shortages of more than 500 are anticipated in each of 13 of the 54 surveyed occupations by the fall of 1966.

- Eleven other occupations will require more than 200 workers in addition to those trained by employers on-the-job by the 1966 forecast date.

- Employers in surveyed industries expect a surplus of more than 60 bookkeeping machine operators by the fall of 1966.

CONCLUSIONS AND RECOMMENDATIONS

The results of this study emphasize the increasing importance of nonmanufacturing industries in North Carolina's economy. The number of jobs available in these businesses will continue to increase with the over-all economic development of the State. The development of training programs for jobs found in nonmanufacturing industries should keep pace with vocational training which is provided for production workers. In so doing, a wider range of job opportunities will be made available to those individuals in need of work, and employers can be furnished with the types of trained workers which are needed to insure a prosperous economy.

Of equal importance is the fact that the trade, finance, insurance and service industries provide a variety of types of work for individuals having varying levels of ability and education. These businesses are sources of job opportunities for many workers who may lack either the suitability or desire for production-type work. Greater emphasis on the enlargement of the scope of training programs in North Carolina should enhance the chances of finding jobs for many unemployed workers.

Training programs geared specifically to the problem of reducing unemployment continue to be planned and carried out under such Federal legislation as the Manpower Development and Training Act, the Area Redevelopment Act, and the Vocational Education Act. The use of this Study as a guide in determining worker requirements in selected nonmanufacturing industries, will point up needs for additional training programs in various areas of the State, and will help identify shortage occupations for which training would be feasible. This Study was limited in scope, however, and it does not attempt to provide a full measure of all occupational training needs in all nonmanufacturing industries. In addition to an analysis of present and future employment situations, continued constructive action must be taken by those whose responsibility it is to train and utilize manpower.

The North Carolina Employment Security Commission recognizes its established basic responsibilities of job placement and worker recruitment. In recent years, with the passage of ARA and MDTA, these obligations have been deepened to reach into the area of efficient planning for job training programs that can best serve both workers and employers. The Economic Opportunity Act of 1964, if enacted, places still greater responsibility on the Commission to take the lead in planning comprehensive programs, which will put more and more people to work, following basic education programs as well as job training. Through the study of various types of occupations in diverse industries, careful planning can result in vocational training courses which will benefit workers, and at the same time bring about more efficient utilization of manpower.

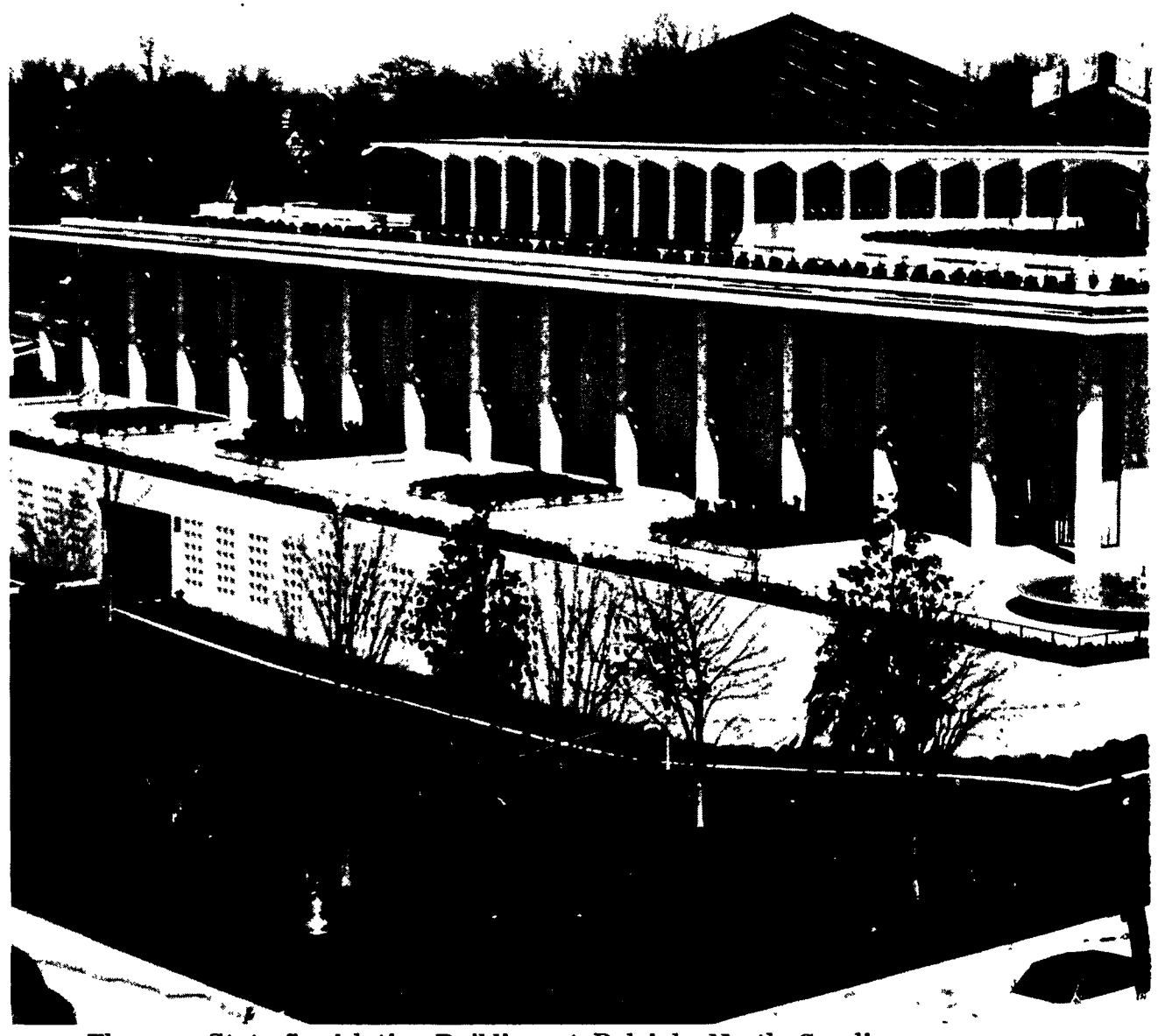
The State should continue to exercise diligent efforts to promote and support expansion of programs which provide vocational training facilities, and emphasize vocational guidance programs. Training programs must be up-dated whenever necessary to keep pace with changing occupational requirements, and individual employers should have an important part in planning special occupational training. Private industry should be encouraged to help conceive plans for the retraining of those employees whose jobs will be eliminated through automation or improved technology.

An important responsibility for reaching manpower goals rests upon the local community where specific employment problems are recognized and necessary action is planned and carried out. A major goal for each community should be a plan to encourage each individual to take advantage of every opportunity to develop and use his capabilities to the fullest extent possible. It is in a community that comprehensive programs on a person-to-person

basis may be carried out, and it is through this method that more people can be motivated to plan for improving their life's work.

The imbalance between labor supply and demand threatens to become more pronounced in the future, unless remedial actions are accelerated. The prime middle-age segment of the population will comprise a diminishing portion of the work force, with increasing numbers of both older and younger workers.

In order to approach the goal of full employment, the individual must be informed about the increasing demand for trained and educated workers so that he will be concerned with acquiring proper and sufficient training. Equally as important, community groups and government planners must continue to examine all possible sources of work for which training would provide suitable employment for many jobseekers. Fields of work which may supply jobs, both now and in the future, are presented within the scope of this survey. Constructive action continues to be initiated; and, in many areas, training programs have been completed which resulted in job placements of unemployed people completing such training. The unemployment problem, however, has by no means been solved. Further study, planning, and cooperative action by all concerned will be necessary to achieve the desired employment goals.



The new State Legislative Building at Raleigh, North Carolina

PART I

NORTH CAROLINA

An Economic Profile

- State's Population ..... 5.5 million by 1980
- Rural Population ..... shifting
- Work Force ..... around 2 million
- Employment ..... averaged more than 1.8 million in 1963
- Nonmanufacturing Employment ..... accelerated growth
- Female Employment ..... increasing
- Unemployment ..... one out of 25 in 1963
- Laboring Jobs ..... diminishing
- Trained Workers ..... strong demand

NORTH CAROLINA—AN ECONOMIC PROFILE

A more meaningful interpretation of survey findings may result after a brief look at North Carolina, its population, employment and industrial composition.

The industries included in this survey are primarily engaged in trade, service and financial activities. The growth rate of these industries is influenced by population distribution in the State and is also partially dependent upon the predominant type of employment in various areas.

Population

- In 1960, the total population of North Carolina stood at 4.5 million people.

- It has been estimated that the State's population will increase to 5.0 million individuals by 1970 and to 5.5 million by 1980.[1]

- Although predominantly rural, the population of North Carolina has followed the national trend toward urbanization. In 1950, about one-third of all residents lived in urban areas, but by 1960, the proportion had risen to almost 40 per cent of the State's total population. Nevertheless, the proportion of urban population in North Carolina is substantially lower than that for the United States as a whole, which had a 70 per cent urban population in 1960.

[1] North Carolina Department of Conservation and Development, Division of Community Planning

Labor Force

- By 1960, according to U. S. Census data, the total civilian labor force had increased to 1,680,442 in North Carolina, an 11 per cent gain over 1950.

- Despite the rising number of individuals in the work force, the increase in North Carolina has not kept pace with the Nation's growth. During the 1950-1960 period the Nation experienced a 15.4 per cent gain. The outmigration of farm workers from North Carolina has largely accounted for the disparity in growth rates.

- The total civilian labor force included more than 375,000 nonwhite workers in 1960, which represented 22 per cent of the total. The decline in this portion of the work force is shown by the fact that in 1950, a total of almost 387,000 nonwhite workers comprised more than one-fourth of the total civilian labor force in North Carolina.

- Women comprised 37.5 per cent of the labor force in 1960, and the number of females in the labor force has increased at a rate ten times greater than men during the 1950-1960 decade.

- Although rural population has shown declining trends, North Carolina has the largest farm population in the Nation and ranks second in the number of farms. The farm

labor force is also inflated each year by 10,000-12,000 migrant workers who enter the State for temporary work in farm jobs.

- In March, 1963, North Carolina's civilian labor force had risen to approximately 1.8 million workers. The large majority of workers were found in the Central Piedmont areas which experienced the lowest rate of unemployment in the State. The higher rate of joblessness in the Eastern and Western areas is partially due to fluctuations in seasonal job opportunities in those regions.

- North Carolina's labor force has continued to expand, reaching two million during the summer of 1963, with an average of 1.9 million workers for the year.

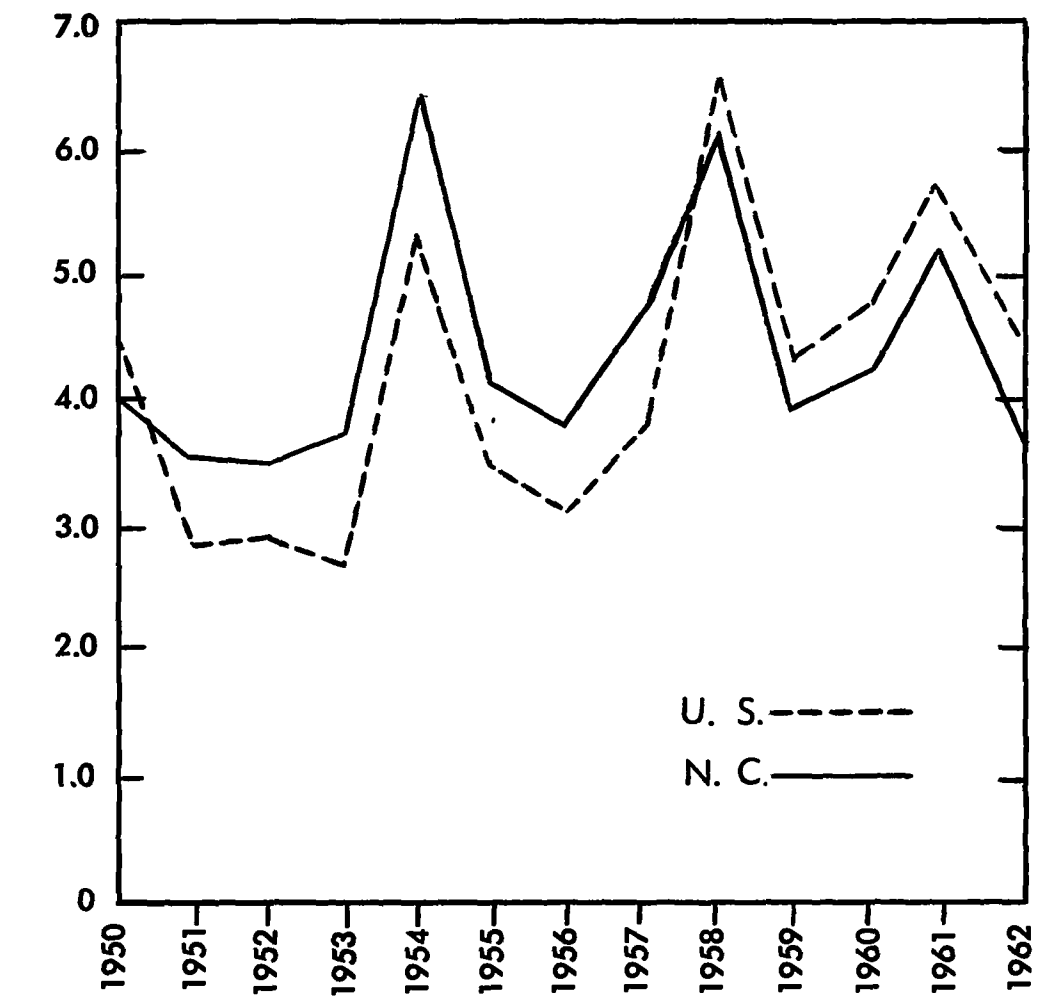
Employment and Trends in Unemployment

- According to census data, during the 1950-1960 period, total employment in North Carolina rose to 1.6 million workers, a gain of 9.8 per cent over 1950. This rate of increase, however, was not as great as the growth of the labor force.

- During 1963, an average of 1.8 million workers were employed in North Carolina, out of a total work force that had increased to approximately 1.9 million individuals. During the year an average of 44 workers out of every thousand were unemployed.

- Although North Carolina's rate of insured unemployment was consistently above that for the Nation from 1951-1957, it dropped below the national rate the following year; and from 1958-1962, continued to register a lower trend than that for the United States. These trends are illustrated below.

Chart A: Insured unemployment as per cent of insured employment, U. S. and N. C., years 1950-1962



- More than 1.7 million workers were employed in North Carolina in December, 1963. The unemployment rate had moved seasonally upward to 4.3 per cent of the labor force. Nevertheless, the proportion of jobless workers was lower than during the same month in 1960-1962.

- Employment in farm activities has declined sharply in North Carolina, as mechanization has replaced unskilled labor in many areas. In 1950, approximately 25 per cent of all workers were employed in farm jobs, but by 1960 only about 13 per cent of all workers were employed in agriculture.

- An average of 953,873 workers were covered by the North Carolina Employment Security Law during 1962. The following table shows distribution of insured employment by selected broad industry group for years 1950 and 1962.

DISTRIBUTION OF INSURED EMPLOYMENT—1950 AND 1962

	Per Cent 1962	Per Cent 1950
All Industries	100.0	100.0
Total Manufacturing	55.5	61.0
Total Nonmanufacturing	44.5	39.0
Trade, Whsle. and Retail	21.4	19.1
Fin., Ins., and R. Est.	4.2	2.5
Service	5.9	5.3
All Other	13.0	12.1

- An increasing proportion of workers covered by the North Carolina Employment Security Law are working in nonmanufacturing jobs.

- Rising family incomes have contributed to this uptrend, as service and sales activities increase with higher living standards.

- The proportion of workers in nonmanufacturing jobs in North Carolina is substantially lower than in the United States as a whole. In 1960, nonmanufacturing jobs comprised more than 60 per cent of the Nation's insured employment, compared with about 44 per cent in North Carolina. The lower rate in North Carolina is in line with the State's smaller family income compared with that for the Nation. In 1959, according to 1960 Census data, median family income in North Carolina was $3,956, significantly below median family income of $5,660 for the Nation.

- Occupational trends in North Carolina have shown a shifting pattern during the 1950-1960 period. Over the decade, the largest per cent increase in a single group occurred in clerical and kindred occupations. By 1960, the number of employed persons in this occupational group had increased 54.5 per cent over 1950. Workers in sales and service (excluding private household) also registered substantial gains over 1950.

- In 1960 the number of workers employed as laborers in nonfarm occupations had declined 4.4 per cent from 1950. Farm managers, foremen and laborers registered a significant 44.4 per cent drop. These decreases are in line with the current demand for trained workers as automation and mechanization continue to reduce the need for unskilled labor.

INTRODUCTION TO SURVEY FINDINGS

Economic trends of the recent past indicate increased growth for North Carolina; growth in population, in production, and in the consumption of goods and services. The increasing importance of nonmanufacturing industries is evident. This stimulated economy promotes a rising standard of living, with more people availing themselves of more services. The following presentation of survey findings attempts to point up the role that a significant portion of the North Carolina nonmanufacturing complex may play in future manpower utilization.

The Employment Security Commission engaged in this Study to develop additional factual data on present and future job opportunities in North Carolina—job opportunities which may provide work for the many youth entering the labor market and for unemployed persons seeking new jobs. It is hoped that the following immediate objectives set forth for this survey have been accomplished, at least in part:

- To determine a current estimate of the number of workers employed in the industries and occupations selected.

- To obtain a measure of future labor requirements for business expansion in the industries and occupations within the scope of the Study.

- To obtain estimates of future replacement needs by occupation—from death, retirement, promotion, and other withdrawals from the labor force.

- To ascertain the number of persons expected to be trained on-the-job for each of the 54 occupations studied, and to obtain employers' reaction to institutional training for these occupations.

- To determine the number of workers needed, in addition to those trained on-the-job, by late 1964 and by late 1966.

These survey findings provide a basis for the evaluation of training needs. If they help to make possible the development of additional vocational programs which will benefit both employers and jobseekers in North Carolina, the objective of the Employment Security Commission for this Study will be realized.

In addition to providing a foundation for planning vocational education programs, this report may serve as a useful guide for:

- Community groups in planning for manpower utilization, especially through the Manpower Development and Training Act, and the Area Redevelopment Act.

- Counseling youth in making informed career choices.

- Advising other unemployed persons in search of new job opportunities.

- Employers in planning to meet their own occupational training needs.

- Employment service personnel and others concerned with matching people and jobs more efficiently.

All nonmanufacturing industries and all occupations found in these industries could not be included in the survey. Although job needs studied represent only a portion of the needs in the State, it is believed that this report does provide a realistic measure of minimal job opportunities and worker requirements for 54 major occupations in 17 selected industry segments. Findings for this substantial cross-section of nonmanufacturing may well be representative of the growth which can be expected in all nonmanufacturing industries by late 1966.

Events may occur during the forecast periods which may affect the plans of employers. Forecasts have been made on the assumption that the economic and international situation will follow trends of the recent past through the fall of 1966. Forecasts have, of necessity, included only changes which could reasonably be planned or contemplated.

PART II

Employment Outlook, By Industry

- **Surveyed Employment** ..... up 16 per cent by 1966
- **Growth Rate** ..... faster than from 1960 to 1963
- **Business Expansion** ..... 21,000 new jobs in three years
  - — Trade 14,000
  - — Insurance 4,000
  - — Service and Finance 3,000
- **Employment** ..... major gains expected by:
  - — Automobile Dealers
  - — Credit Agencies and Banks
  - — Restaurants
  - — Insurance Companies
  - — Department Stores
- **Outlook in Hiring** ..... growing demand, short supply of trained workers

TABLE I: INDUSTRIAL SCOPE OF STUDY AND PER CENT COVERED BY SAMPLE—MARCH, 1963

Statewide Totals—March, 1963		Standard Industrial Classification		Statewide Sample Coverage—March, 1963		
Number of Establishments	Number of Workers Employed [1]	Code	Title	Sampled Establishments	Sampled Employment	Per Cent of Total Employment Sampled
8,476	125,003	—	All Surveyed Industries[2]	1,442	48,593	38.9
5,743	79,550	—	Surveyed Trade Industries	962	29,480	37.1
384	6,210	501	Motor Vehicles and Auto Equipment	62	2,378	38.3
192	15,577	531	Department Stores	32	5,947	38.2
2,210	26,533	55	Auto Dealers & Gas Service Stations	350	9,904	37.3
175	1,549	561	Men's & Boys' Clothing & Furnishings	50	719	46.4
388	4,656	562	Women's Ready To Wear Stores	57	1,674	36.0
178	1,892	565	Family Clothing Stores	34	693	36.6
178	1,345	572	Household Appliance Stores	49	606	45.1
84	638	573	Radio, TV, & Music Stores	35	380	59.6
1,954	21,150	581	Eating and Drinking Places	293	7,179	33.9
792	16,177	—	Surveyed Insurance Industries	116	6,724	41.6
472	13,274	63	Insurance Carriers	55	5,645	42.5
320	2,903	64	Insurance Agents, Brokers and Service	61	1,079	37.2
1,114	19,357	—	Surveyed Finance Industries	210	8,696	44.9
289	11,964	60	Banking	51	5,629	47.0
775	6,585	61	Credit Agencies Other Than Banking	144	2,705	41.1
50	808	62	Security Brokers, Dealers	15	362	44.8
827	9,919	—	Surveyed Service Industries	154	3,693	37.2
373	6,693	701	Hotels, Motels, Tourist Courts	46	2,559	38.2
402	2,900	753	Auto Repair Shops	86	967	33.3
52	326	762	Electrical Repair Shops	22	167	51.2

[1] Workers covered by the North Carolina Employment Security Law.

[2] Definitions of these industries found in Appendix A.

EMPLOYMENT SECURITY COMMISSION OF NORTH CAROLINA

INDUSTRIAL SCOPE OF SURVEY

Survey findings presented in this report do not represent estimates of total manpower requirements in the State for the occupations surveyed because not all industries could be included in the coverage. Survey findings apply only to the selected industries listed in Table I. Projected occupational needs are based on employment demands of employers active in the fall of 1963, and do not measure growth which will result from new firms being established in the State during the next three years.

Time and cost were factors which made it necessary to limit the industry coverage to a cross-section of nonmanufacturing and to use the mail-type survey approach. A discussion of this approach, along with information with respect to sample-firm selection, data collection and processing are included in the section on methodology found in the Appendix.

Table I shows a comparison of total employment and sampled employment. Actual employment in the 1,442 responding firms accounted for about 39 per cent of the total employment in surveyed industries in March of 1963. The data collected from the 1,442 responding firms were inflated to represent 8,476 establishments, employing more than 125,000 people in March of 1963.

The March, 1963 data, from which the survey sample was selected, were adjusted to September, 1963. Subsequent data in this Study show employment as of September, 1963, and is termed the survey period employment.

FIGURE 1: DISTRIBUTION OF SURVEY COVERAGE BY BROAD INDUSTRY GROUP[1]

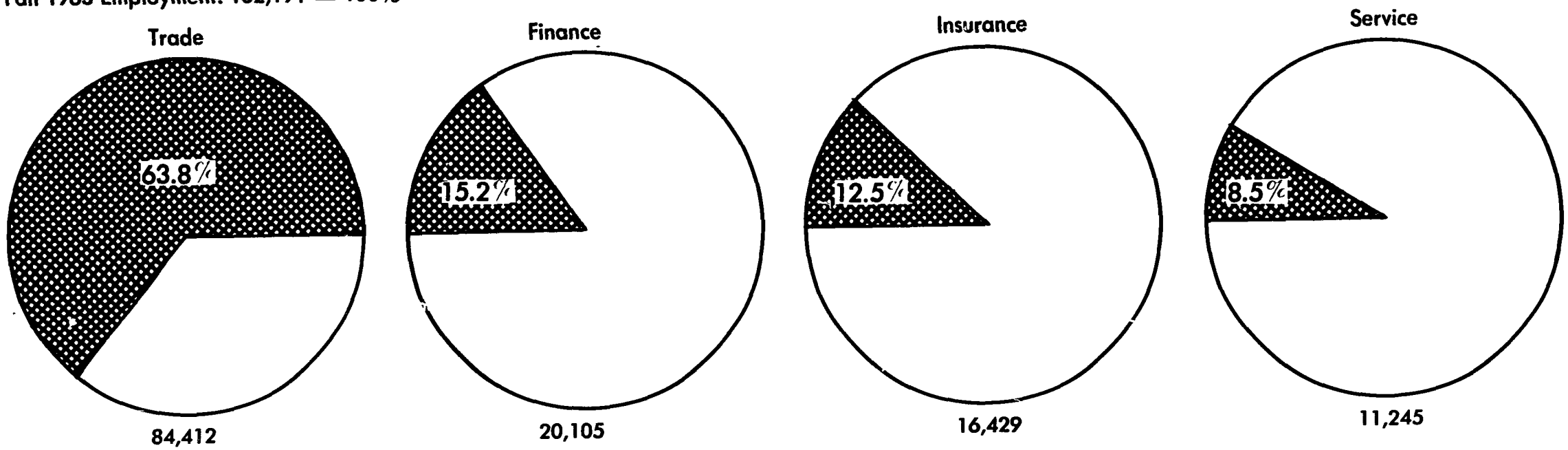
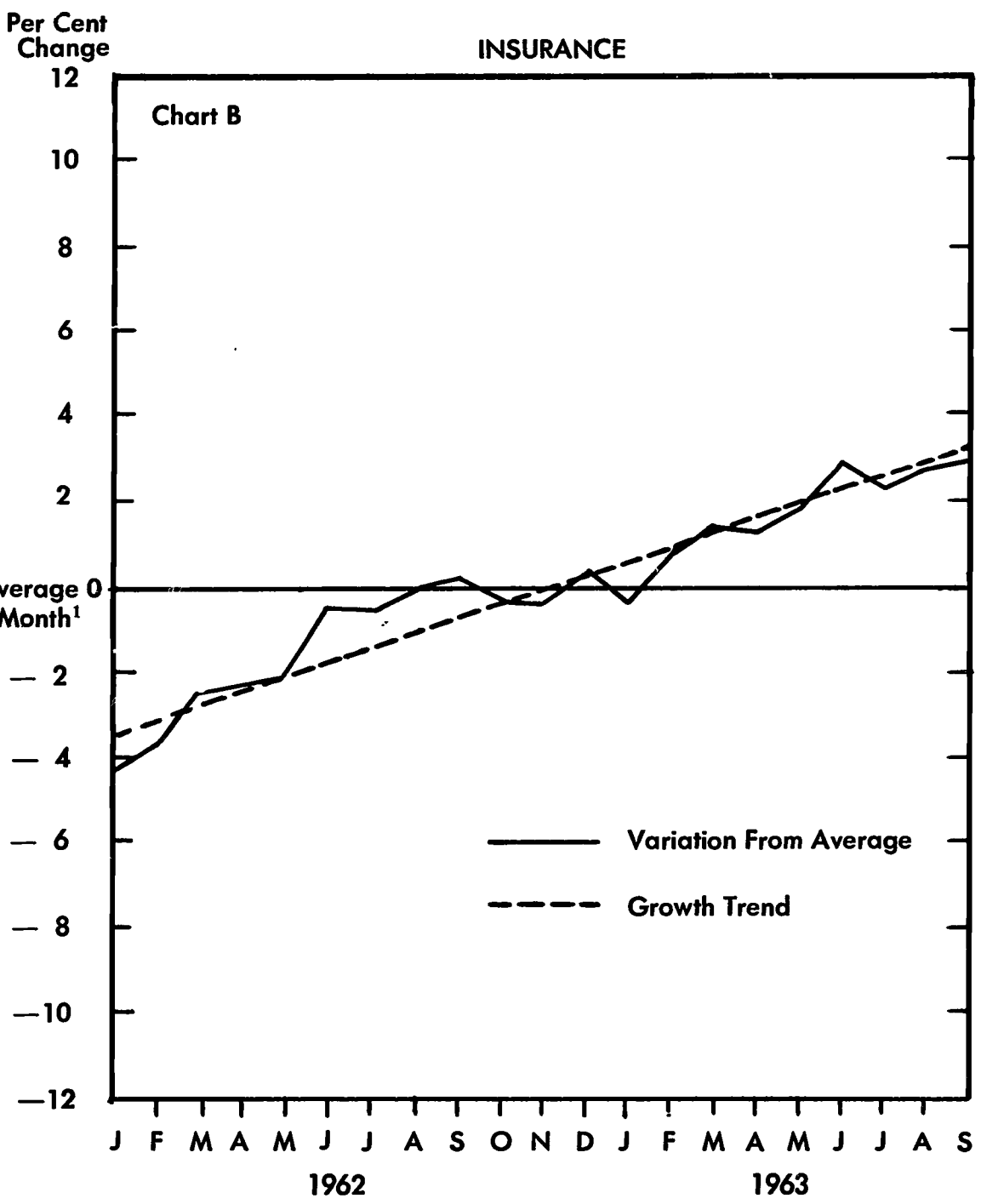


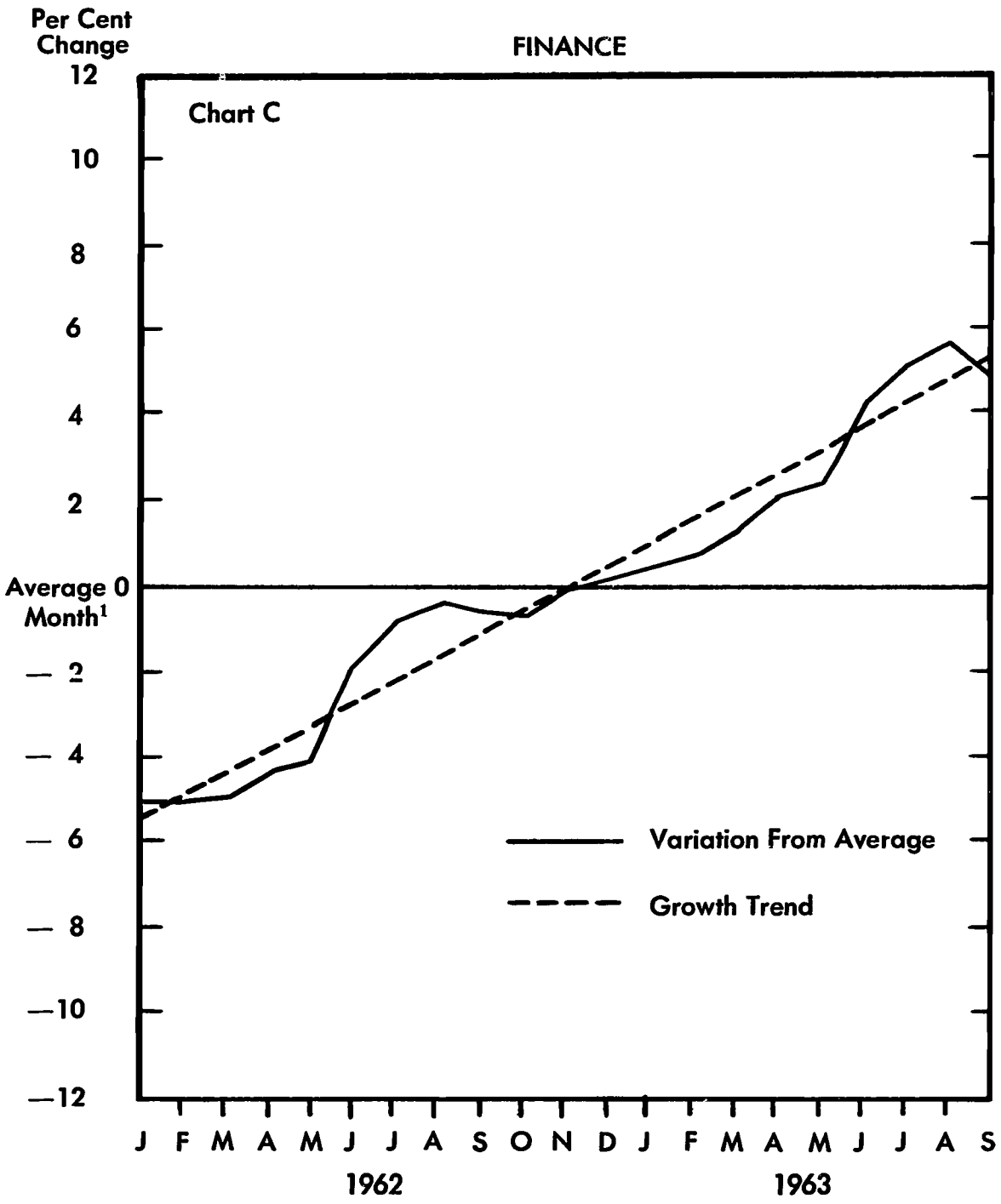
Figure 1 shows the distribution of employment in all surveyed groups in September, 1963.

A total of 132,191 workers were employed, with the largest percentage in the trade category. Workers in the service group comprised the smallest proportion of surveyed employment.

[1] Definitions of these groups are found in Appendix A.

SEASONALITY OF EMPLOYMENT IN SURVEYED INDUSTRIES



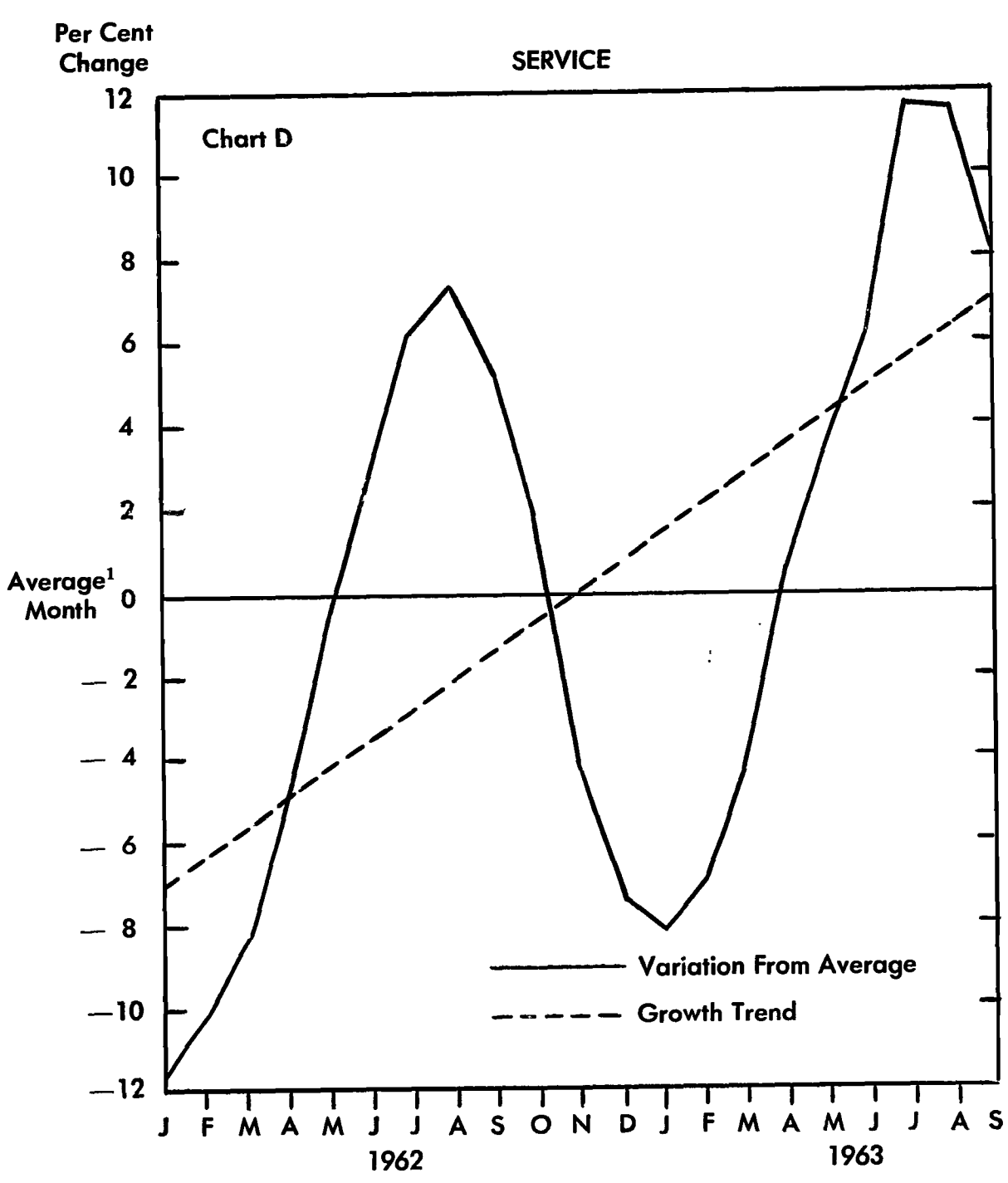


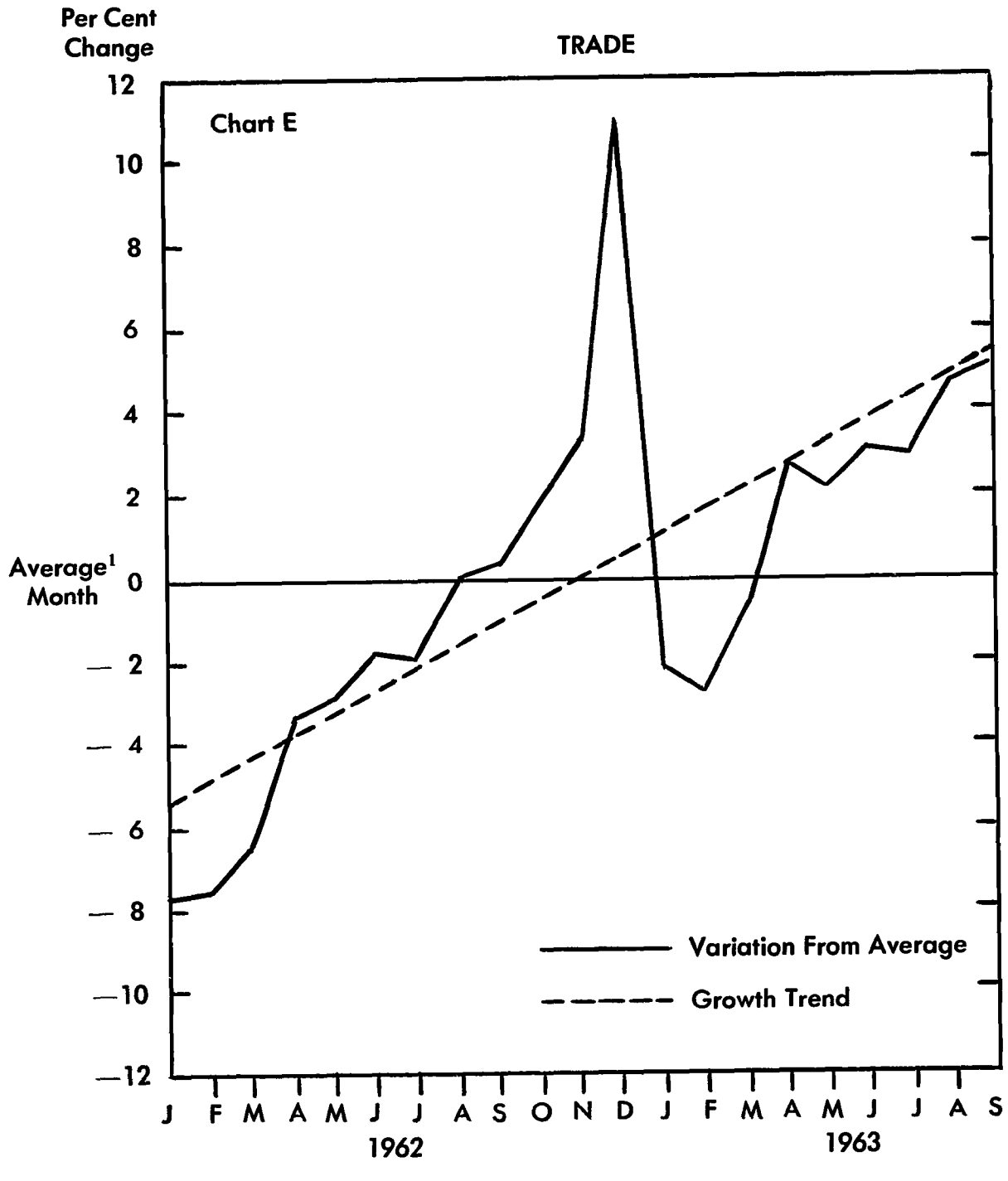
The accompanying charts depict the varying range of seasonal influence on employment in each surveyed industry group, from January 1962-September 1963. The actual employment for each month of the period is shown as a deviation from an average of employment over the 21-month period. The growth rate was also plotted to show the employment trend for each industry group, as unaffected by seasonal variations.

Employment growth in the insurance and finance industries shows little dependence on seasonal influences. As seen in Charts B and C, actual employment increases and declines in these industries closely parallel the indicated trends.

[1] Average based on period from January, 1962 through September, 1963.

SEASONALITY OF EMPLOYMENT IN SURVEYED INDUSTRIES





In the trade and service industries employment follows distinct seasonal patterns.

Employment in the surveyed service industries, heavily dependent on tourist business in the eastern and western sections of the State, rises to a seasonally high point during the summer months, and drops substantially below peak levels in the winter. This trend is heavily affected by hiring for the hotel, motel and tourist court industries in the resort areas. Chart D indicates the sharp seasonal increases and declines in employment in the surveyed service categories, compared with the normal growth rate.

As seen in Chart E, seasonal deviations also occur in the trade industries. The peak employment period is reversed, however, from the summertime high of the service businesses. Wholesale and retail trade activities climb to a seasonal peak in December, followed by steep declines during January and February.

[1] Average based on period from January, 1962 through September, 1963.

TABLE II: INSURED EMPLOYMENT GROWTH TRENDS IN SURVEYED INDUSTRIES

Surveyed Industry	Average Monthly Insured Employment 1960	Average Monthly Insured Employment 1961	September Employment 1963	Per Cent [1] Change 1960-1963	Level of Employment Fall of 1964	Level of Employment Fall of 1966	Per Cent [2] Change 1963-1966
All Surveyed Industries	115,906	118,300	132,191	14.1	141,847	153,657	16.2
Surveyed Trade Industries	75,916	75,989	84,412	11.2	90,682	98,251	16.4
Motor Vehicles and Auto Equipment	5,696	6,125	6,761	18.7	6,977	7,725	14.3
Department Stores	15,476	15,356	16,763	8.3	17,884	18,615	11.0
Auto Dealers and Gas Service Stations	25,869	25,036	26,748	3.4	29,445	32,452	21.3
Men's & Boys' Clothing & Furnishings	1,449	1,442	1,601	10.5	1,706	1,783	11.4
Women's Ready to Wear Stores	4,819	4,643	5,054	4.9	5,572	5,924	17.2
Family Clothing Stores	1,864	1,971	2,220	19.1	2,360	2,414	8.7
Household Appliance Stores	1,480	1,359	1,392	—5.9	1,435	1,565	12.4
Radio, T.V. and Music Stores	606	597	650	7.3	689	739	13.7
Eating and Drinking Places	18,657	19,460	23,223	24.5	24,614	27,034	16.4
Surveyed Finance Industries	15,795	17,337	20,105	27.3	20,842	22,589	12.4
Banking	9,987	10,721	12,612	26.3	12,904	13,765	9.1
Credit Agencies Other Than Banking	5,136	5,856	6,734	31.1	7,099	7,909	17.4
Security Brokers and Dealers, etc.	672	760	759	12.9	839	915	20.6
Surveyed Insurance Industries	14,364	15,076	16,429	14.4	18,174	20,249	23.3
Insurance Carriers	11,884	12,418	13,510	13.7	15,011	16,800	24.4
Insurance Agents, Brokers and Service	2,480	2,658	2,919	17.7	3,163	3,449	18.2
Surveyed Service Industries	9,831	9,898	11,245	14.4	12,149	12,568	11.8
Hotels, Motels, Tourist Courts	6,607	6,699	7,958	20.4	8,522	8,612	8.2
Auto Repair Shops	2,943	2,916	2,982	1.3	3,251	3,523	18.1
Electrical Repair Shops	281	283	305	8.5	376	433	42.0

[1] Includes new firms established during the period.

[2] Includes only establishments active during the fall of 1963.

EMPLOYMENT SECURITY COMMISSION OF NORTH CAROLINA

EMPLOYMENT TRENDS IN SURVEYED INDUSTRIES

Projections to late 1966 indicate that about 16 per cent more workers will be on the payrolls of the 8,476 firms within the scope of the Study than were employed in the fall of 1963.

The nonmanufacturing industry categories studied collectively employed more than 132,000 workers during late 1963. More than 84,000 of these workers were engaged in trade industries. Trade industries are expected to require the highest number of additional workers by the end of the 1966 forecast period. If trade employers' expectations are realized, almost 14,000 additional workers will be needed for expansion alone.

Chart F shows anticipated employment growth rates in surveyed broad industry groups, from late 1963 to late 1966.

Table II compares the rates of employment expansion in surveyed industries for the three-year period to 1963, and the projected three-year period to 1966. The growth rate for the earlier period was somewhat stymied by the 1961 recession, which saw seven surveyed industry segments slump to employment levels below 1960 averages. All industries recovered sharply in 1962 and 1963, and by late 1963 had gained an additional 16,000 workers, registering a significant 14 per cent increase for the three-year period. Employment growth rate during this period was led by credit agencies and banking, which showed decisive gains of 31 and 26 per cent, respectively. A slowing trend is indicated for these two industries from 1963 to 1966, as less marked employment gains of 17 and nine per cent are indicated. Employment in credit agencies, however, will continue to grow at a faster rate than the anticipated 16 per cent Statewide overall employment gain in surveyed industries by the fall of 1966.

Automobile dealers and gasoline service stations, which were hard-hit by the 1961 recession when employment decreased by more than 800 persons from 1960 and showed only a meager three per cent gain to 1963, are expected to forge ahead by late 1966, with a pointed 21 per cent increase, which is in line with automobile manufacturers' apparent optimism.

Electrical repair shops are expected to utilize an additional 130 workers by 1966, which is a noticeable 42 per cent increase over 1963. Household appliance stores, which did not fully recover from 1961, and which showed a six per cent decrease in employment from 1960 to 1963, are expected to grow employment-wise by more than 12 per cent by the end of 1966.

Even though employment in security brokerage firms declined from 1962 to 1963, an increase of more than 20 per cent is expected by late 1966.

CHART F: EMPLOYMENT GROWTH IN SURVEYED INDUSTRIES: 1963-1966

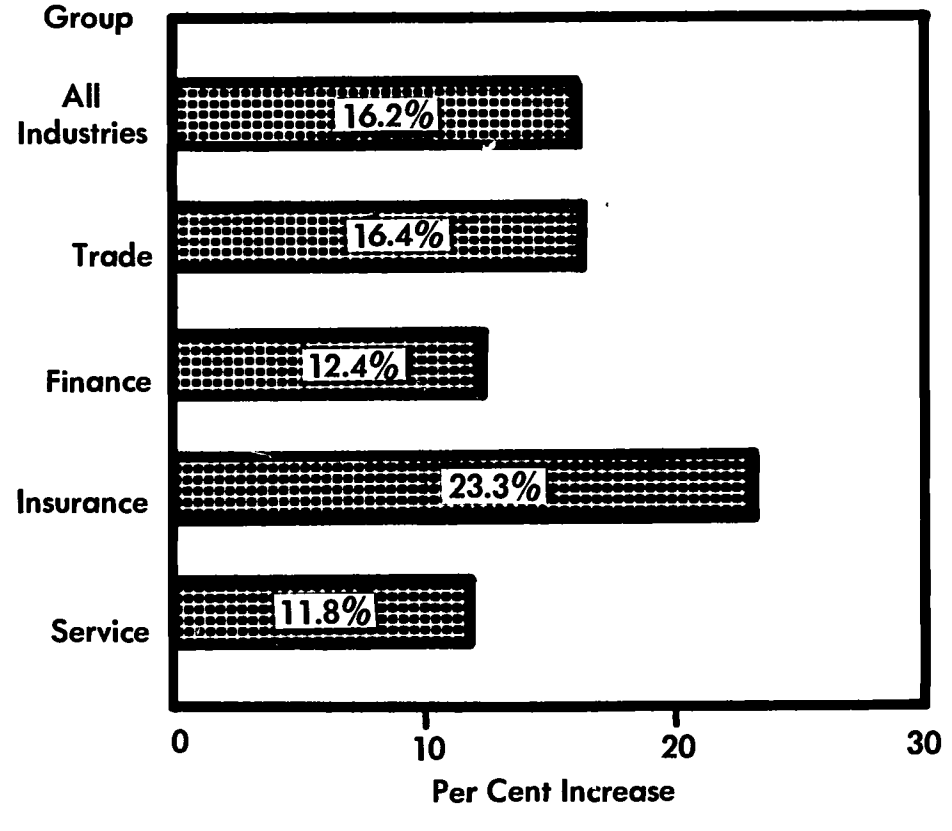


TABLE III: BROAD INDUSTRY EMPLOYMENT BY MAJOR OCCUPATIONAL GROUP, FALL 1963

Broad Industry Group	Total Employment	Employment In		Clerical Occupations	Sales Occupations	Service Occupations	Skilled Occupations	Semiskilled Occupations
		Nonsurveyed [1] Occupations	Surveyed Occupations					
All Industries Surveyed	132,191	35,269	96,922	27,230	31,382	21,515	12,449	4,346
Trade	84,412	19,119	65,293	9,352	24,883	16,429	10,474	4,155
Finance	20,105	8,206	11,899	10,449	374	1,076	0	0
Insurance	16,429	4,336	12,093	6,021	5,799	250	23	0
Service	11,245	3,608	7,637	1,408	326	3,760	1,952	191

EMPLOYMENT DISTRIBUTION

In September 1963, employment in surveyed industries totaled 132,191 workers. Surveyed occupations comprised 73 per cent of all employment in the industries studied, with occupational coverage ranging from a high of 77 per cent in the trade industries, to a low of 59 per cent in the finance category.

Table III shows the broad industry distribution at survey time of all surveyed employment, surveyed occupational employment by major occupational group, and nonsurveyed employment. The trade industries, comprising almost two-thirds of all surveyed employment, used workers in all occupational categories. Workers in sales and service occupations, however, predominated in this group. The trade industries also employed large numbers of clerical workers such as bookkeepers, cashiers, clerk-typists and stock clerks, along with many skilled workers in such varied occupations as automobile mechanics and seamstresses.

More than eight out of ten workers in finance businesses were engaged in clerical occupations. These jobs included bank tellers, bookkeeping machine operators, secretaries, cashiers, and clerk-typists. The only sales job represented in finance was that of securities salesman.

In the insurance industry, jobs were almost equally divided between clerical workers and insurance salesmen. More than half of the clerical workers were employed as secretary-stenographers and general clerk-typists.

Workers in the service category showed a wider variety of occupations than those in finance and insurance, with the heaviest proportions in service and skilled jobs.

[1] Professional and managerial occupations, and unskilled occupations were not surveyed.

TABLE IV: EMPLOYMENT BY BROAD INDUSTRY GROUP IN SURVEYED OCCUPATIONS IN FALL 1963, AND JOB OPPORTUNITIES BY 1966

Industry	Employment During Fall of 1963	Anticipated Employment By Fall of 1966		Worker Demand By Fall of 1966			Worker Supply By Fall of 1966 From On-The-Job Training	Net Additional Requirements By Fall of 1966
		Employment	Per Cent Increase	Expansion	Replacement	Total New Job Opportunities		
All Surveyed Industries	96,922	114,293	17.9	17,371	10,538	27,909	10,239	17,670
Trade	65,293	76,693	17.5	11,400	6,009	17,409	4,357	13,052
Finance	11,899	13,987	17.5	2,088	1,796	3,884	2,360	1,524
Insurance	12,093	14,978	23.9	2,885	1,635	4,520	2,990	1,530
Service	7,637	8,635	13.1	998	1,098	2,096	532	1,564

Almost 28,000 new workers will be required in all surveyed industries by late 1966. Approximately 38 per cent of the total will be needed for replacement, and about 37 per cent of all new workers will be trained by employers. This close parallel indicates that employer training will supply only replacement needs in most surveyed business categories.

A variation from this trend is seen in the insurance industry. In this category, replacement need is low—about 1,600 out of 4,500 new jobs—and company training is comparatively high. More than two-thirds of all new workers will receive on-the-job training. This high proportion is partially due to the fact that many employers in this business prefer to train employees according to individual company methods.

The greatest proportion of replacement, 52.4 per cent of all new jobs, will be required in the service industries. The trade industries will experience the lowest replacement rate over the three-year survey period and will provide on-the-job training for the smallest proportion of new workers. The large volume of more than 13,000 workers needed by 1966, over and above those who will receive company training, far outweighs worker requirements for all other surveyed business categories.

FIGURE 2: INDUSTRY EMPLOYMENT OF WOMEN

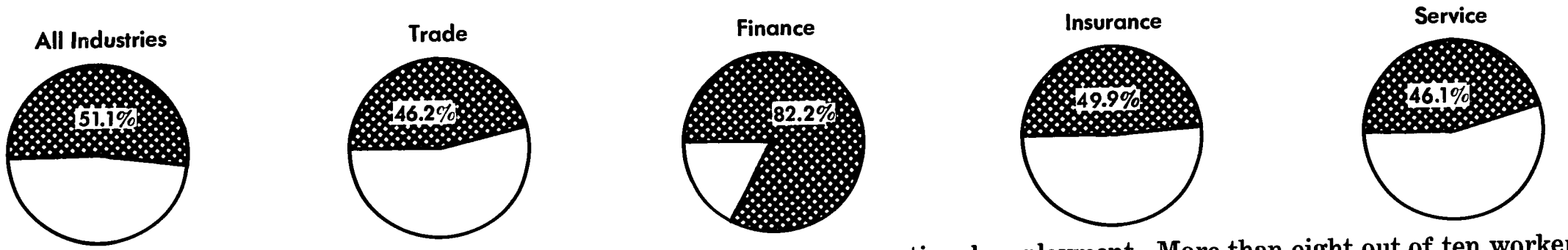


Figure 2 shows the proportion of women, in all surveyed occupations, employed in each industry category. The high proportion of female employment in the finance business raises the overall employment of women to more than half of all surveyed occupational employment. More than eight out of ten workers in this category, employing large numbers of clerical workers, are women. In each of the other groups, however, jobs are almost equally divided between men and women.

Part III

Employment Outlook, By Occupation

- Expansion in Studied Occupations .... up 17,400 by late 1966
- Growth in Major Groups ..... skilled jobs up 28 per cent
  ..... sales jobs up 18 per cent
- Net Additional Workers Needed ..... by 1966
  - — Sales 5,000
  - — Service 4,000
  - — Skilled 3,900
  - — Clerical 3,900
  - — Semiskilled 800
- Growth in Selected Occupations ..... by 1966
  Largest Numerical Increases Expected for:
  - — Automobile Mechanic
  - — Insurance Salesman
  - — Waitress
  - — General Salesman
  - — General Clerk-Typist
- Replacement Needs ..... 10,500 by 1966
- Women Workers ..... predominant in clerical and service occupations
- Institutional Training Needed? .... more than 63 per cent of employers say, "yes"

TABLE V: EMPLOYMENT IN 54 SELECTED OCCUPATIONS BY BROAD INDUSTRY GROUP

FALL OF 1963

Occupation	All Surveyed Industries	Industry Distribution							
		Trade		Finance		Insurance		Service	
		Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
ALL OCCUPATIONS	132,191	84,412	63.8	20,105	15.2	16,429	12.5	11,245	8.5
ALL OCCUPATIONS SURVEYED	96,922	65,293	67.4	11,899	12.3	12,093	12.5	7,637	7.8
CLERICAL—TOTAL	27,230	9,352	34.3	10,449	38.4	6,021	22.1	1,408	5.2
Accounting Clerk	1,524	573	37.6	637	41.8	264	17.3	50	3.3
Bank Teller	3,855	0	——	3,855	100.0	0	——	0	——
Bookkeeper	4,091	2,842	69.5	683	16.7	283	6.9	283	6.9
Bookkeeping Machine Operator	1,804	484	26.8	1,203	66.7	89	4.9	28	1.6
Calculating Machine Operator	133	20	15.0	35	26.3	78	58.7	0	——
Cashier	3,239	1,956	60.4	865	26.7	337	10.4	81	2.5
Desk-Room Clerk	788	0	——	0	——	0	——	788	100.0
Duplicating Machine Operator	100	0	——	36	36.0	64	64.0	0	——
General Clerk Typist	4,161	1,089	26.2	771	18.5	2,269	54.5	32	0.8
Key-Punch Operator	342	28	8.2	112	32.7	202	59.1	0	——
Policy Writer—Rater	918	0	——	0	——	918	100.0	0	——
Proof-Machine Operator	711	0	——	711	100.0	0	——	0	——
Secretary-Stenographer	3,607	844	23.4	1,446	40.1	1,194	33.1	123	3.4
Stock Clerk	1,521	1,498	98.5	0	——	0	——	23	1.5
Tabulating Machine Operator	183	13	7.1	63	34.4	107	58.5	0	——
Transcribing Machine Operator	253	5	2.0	32	12.6	216	85.4	0	——
SALES—TOTAL	31,382	24,883	79.3	374	1.2	5,799	18.5	326	1.0
Auto Parts Man	3,153	3,051	96.8	0	——	0	——	102	3.2
Salesman, General	6,476	6,252	96.5	0	——	0	——	224	3.5
Salesman, Insurance	5,799	0	——	0	——	5,799	100.0	0	——
Salesman, Motor Vehicles	1,082	1,082	100.0	0	——	0	——	0	——
Salesman, Securities	374	0	——	374	100.0	0	——	0	——
Salesperson and Sales Clerk	9,393	9,393	100.0	0	——	0	——	0	——
Salesperson, Clothing	5,105	5,105	100.0	0	——	0	——	0	——
SERVICE—TOTAL	21,515	16,429	76.4	1,076	5.0	250	1.2	3,760	17.4
Chambermaid	1,467	0	——	0	——	0	——	1,467	100.0
Chef	591	549	92.9	0	——	0	——	42	7.1
Cook	2,867	2,533	88.4	0	——	0	——	334	11.6

SEE NEXT PAGE

TABLE V: EMPLOYMENT IN 54 SELECTED OCCUPATIONS BY BROAD INDUSTRY GROUP—Continued

FALL OF 1963

Occupation	All Surveyed Industries	Industry Distribution							
		Trade		Finance		Insurance		Service	
		Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
SERVICE—Continued									
Cook—Short Order	2,076	2,005	96.6	0	——	0	——	71	3.4
Hostess	327	260	79.5	0	——	0	——	67	20.5
Hotel Houseboy	274	0	——	0	——	0	——	274	100.0
Hotel Housekeeper	294	0	——	0	——	0	——	294	100.0
Janitor—Porter	2,838	1,478	52.1	873	30.8	192	6.8	295	3.3
Kitchen Steward	591	541	91.5	0	——	0	——	50	8.5
Maid	733	472	64.4	203	27.7	58	7.9	0	——
Waitress-Waiter	9,457	8,591	90.8	0	——	0	——	866	9.2
SKILLED—TOTAL	12,449	10,474	84.1	0	——	23	0.2	1,952	15.7
Appliance Service & Repairman	474	399	84.2	0	——	0	——	75	15.8
Auto Body Man	1,635	1,281	78.3	0	——	0	——	354	21.7
Auto Truck Mechanic	5,639	5,052	89.6	0	——	0	——	587	10.4
Baker	307	282	91.9	0	——	0	——	25	8.1
Brakeman	334	267	79.9	0	——	0	——	67	20.1
Diesel Mechanic	166	109	65.7	0	——	0	——	57	34.3
Front-End Man	850	614	72.2	0	——	0	——	236	27.8
Machinist, Automobile	426	395	92.7	0	——	0	——	31	7.3
Maintenance Man, Building	294	0	——	0	——	23	7.8	271	92.2
Painter, Auto-Truck	378	292	77.2	0	——	0	——	86	22.8
Piano Tuner	31	31	100.0	0	——	0	——	0	——
Radio Repairman	59	37	62.7	0	——	0	——	22	37.3
Radio/TV Service & Repairman	267	200	74.9	0	——	0	——	67	25.1
Seamstress	1,299	1,299	100.0	0	——	0	——	0	——
Sewing Machine Repairman	68	68	100.0	0	——	0	——	0	——
TV Service and Repairman	84	46	54.8	0	——	0	——	38	45.2
Upholsterer—Trimmer	138	102	73.9	0	——	0	——	36	26.1
SEMISKILLED—TOTAL	4,346	4,155	95.6	0	——	0	——	191	4.4
Auto-Truck Mechanic Helper	1,333	1,145	85.9	0	——	0	——	188	14.1
Diesel Mechanic Helper	15	12	80.0	0	——	0	——	3	20.0
Service Station Attendant	2,998	2,998	100.0	0	——	0	——	0	——

EMPLOYMENT SECURITY COMMISSION OF NORTH CAROLINA

DISTRIBUTION OF SURVEYED EMPLOYMENT

Table V on the two preceding pages indicates broad industry employment at survey time. At that time 67 per cent of employment in all surveyed occupations was found in the trade group, compared to 7.8 per cent in service.

Clerical jobs were most prevalent in the finance business, but large numbers of clerical workers were also employed in the insurance and trade categories.

More than 4,100 general clerk-typists were employed in establishments in the survey scope during late 1963. Insurance companies employed 54 per cent of these.

Employment in the sales occupations studied was centered in trade and insurance. These two groups combined, employed 97 per cent of the surveyed sales employment in late 1963.

More than 14,000 salespersons and sales clerks, all in the trade industry, were included in the survey.

More than three-fourths of all service workers were employed in the trade category while about 17 per cent were working in jobs in the service industries. Janitor-porter and maid were the only service occupations in the finance and insurance businesses. More than 9,450 waitresses and waiters were included in the scope of the Study. Ninety per cent of these were found in trade. Eighty-four per cent of the skilled workers surveyed were employed in the trade industries, while 15.7 per cent were in service industry jobs.

Of the 5,600 automobile mechanics surveyed, nearly 90 per cent were employed in trade.

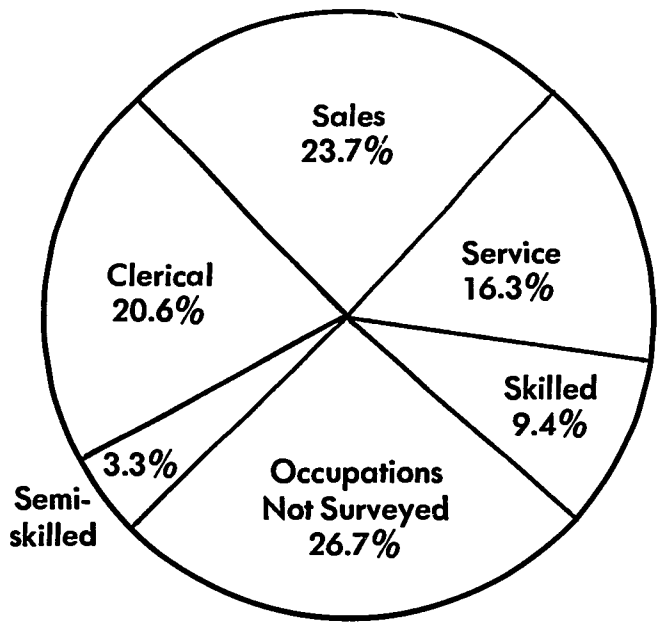
Surveyed semiskilled workers again were found predominantly in the trade industries which employed 95 per cent of all semiskilled workers.

The nearly 3,000 automobile service station attendants in surveyed establishments were employed in trade.

The accompanying chart shows the employment distribution in all surveyed establishments by major occupational group.

Clerical and sales workers made up more than 44 per cent of the employment in all industries surveyed in late 1963, while semiskilled workers comprised slightly more than three per cent of the workers within the scope of the study.

CHART G: DISTRIBUTION OF SURVEYED EMPLOYMENT
FALL 1963[1]



[1] Definitions of Occupational Groups are found in Appendix A.

EMPLOYMENT GROWTH

The accompanying charts H and I show anticipated employment growth for major occupational groups and selected occupations during the 1963-1966 period. Growth rates for all occupations are shown in Table VI.

Employment in all occupations will increase a substantial 18 per cent over the next three years. Skilled occupations, as shown in Chart H, have the fastest anticipated growth rate and will offer nearly 3,500 new jobs because of expansion by the fall of 1966. More than half of these new jobs will be for automobile-truck mechanics, as employers anticipate a strong demand for this type of worker, due to business expansion. Although sales jobs will not increase as rapidly, percentage-wise, the largest numerical increase by the fall of 1966 occurs in this occupational category. The bulk of the 5,600 new jobs for expansion in this group will be for insurance and general salesmen, along with sales clerks and sales persons. Semiskilled jobs are expected to increase more slowly than all others although a definite trend is difficult to establish, since only three occupations were studied in this category.

Also, the growth rate in one semiskilled job is atypical: e.g., the number of workers employed as diesel mechanic helpers is expected to be more than four times greater in 1966 than in 1963, but total volume is expected to increase by only 54 workers.

Service occupations will grow at a rate of more than 15 per cent during the three-year period and will require almost 3,300 workers for expansion. More than half of these workers, 1,676, will be employed as waitresses and waiters. By late 1966, employment of short order cooks is expected to be one-fourth greater than during the fall of 1963.

A total of more than 4,300 additional workers will be required for expansion in the clerical occupations by late 1966, a growth rate of 16 per cent. Key-punch operators are expected to have the greatest rate of gain in employment, increasing by nearly 50 per cent over 1963, but the largest numerical increase is anticipated for general clerk-typists, with a demand for 882 workers by the fall of 1966.

CHART H: EMPLOYMENT GROWTH IN MAJOR OCCUPATIONAL GROUPS: 1963-1966

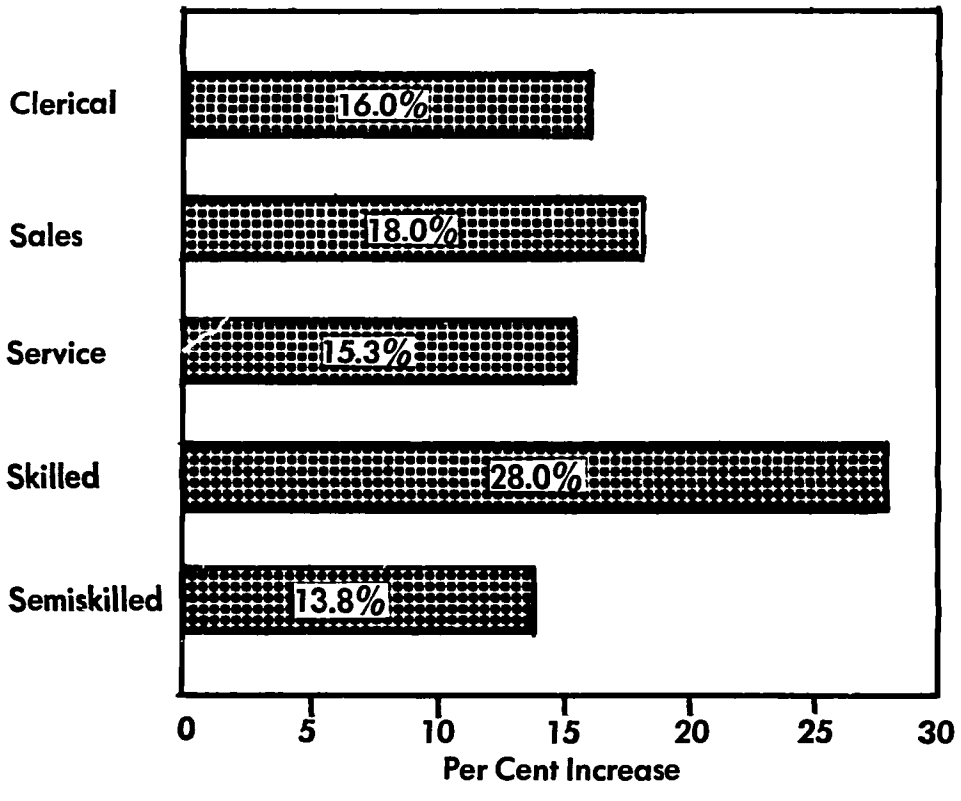


CHART I: EMPLOYMENT GROWTH IN SELECTED OCCUPATIONS: 1963-1966

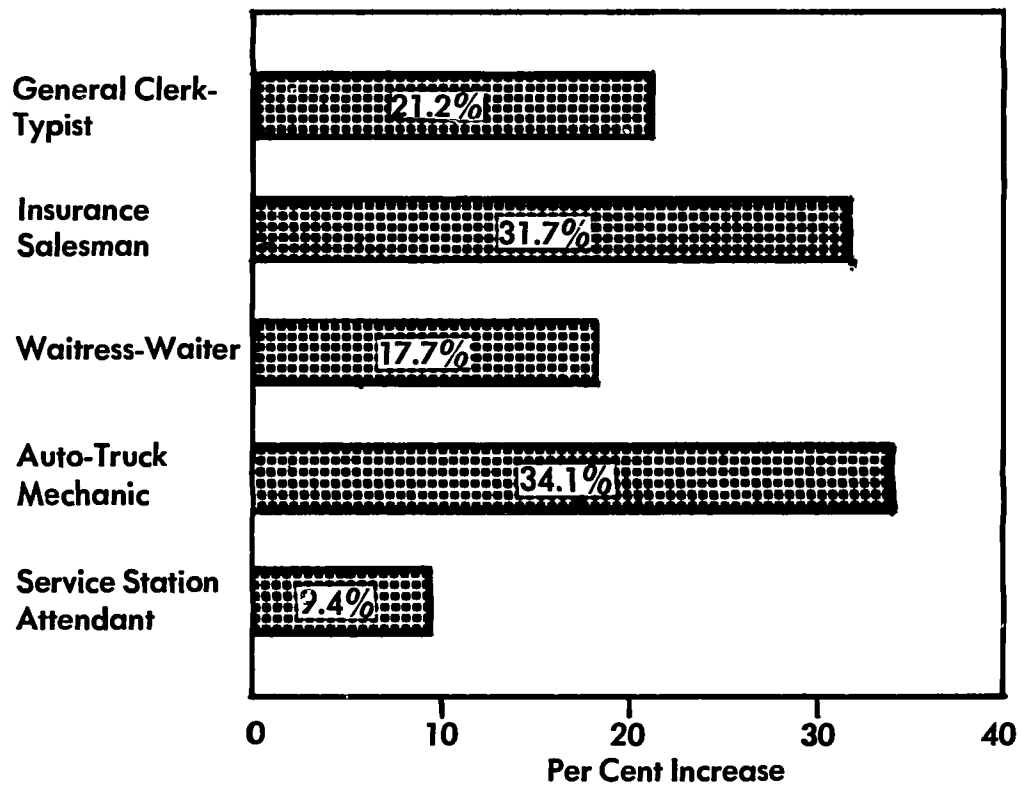


TABLE VI: JOB OPPORTUNITIES ANTICIPATED BY THE FALL OF 1966

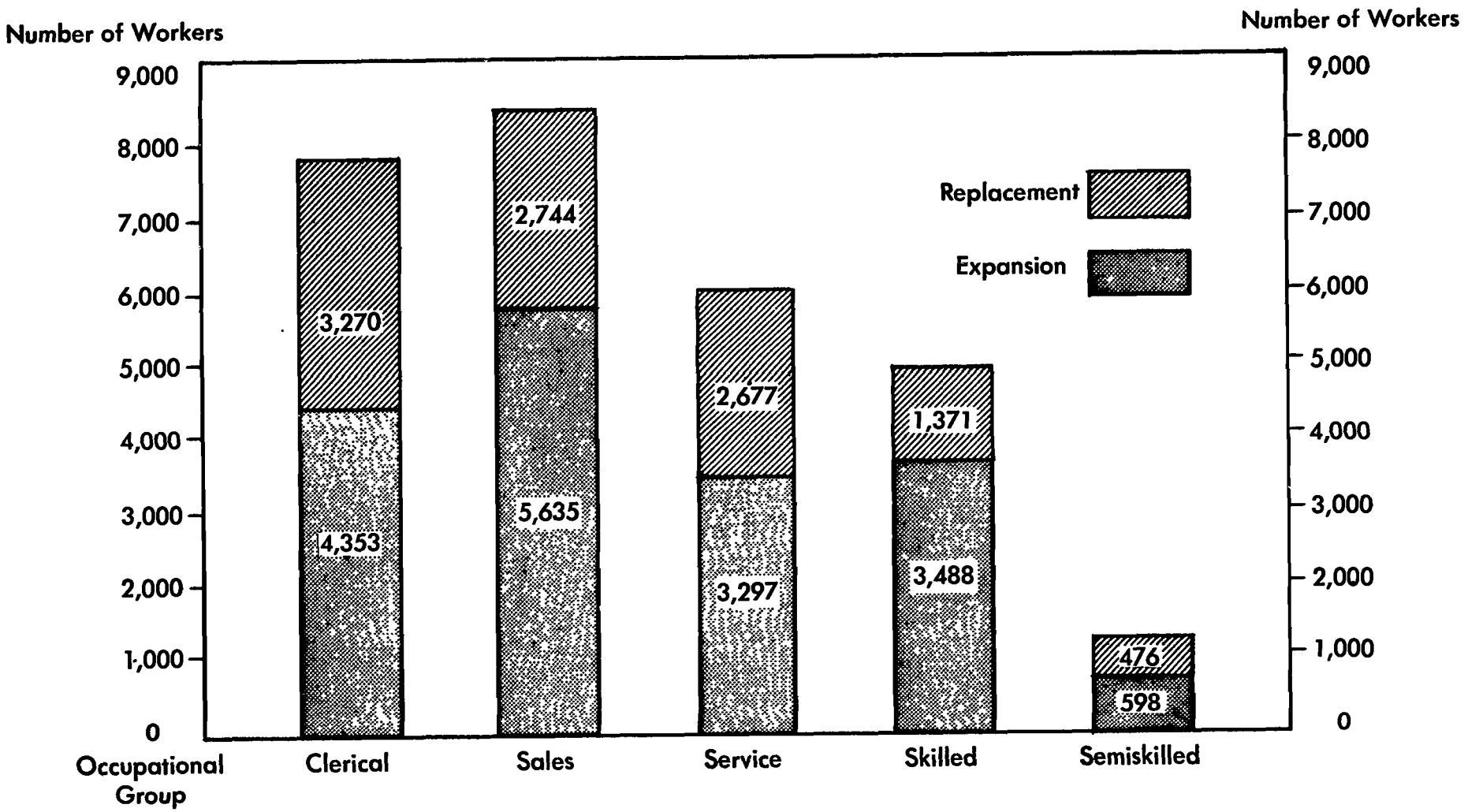
Occupational Title	Employment During Fall of 1963	Anticipated By Fall of 1966		Worker Demand By Fall of 1966			Worker Supply By Fall, 1966 From On-The-Job Training	Net Additional Requirements By Fall of 1966
		Employment	Per Cent Increase	Expansion	Replacement	Total New Job Opportunities		
ALL OCCUPATIONS	96,922	114,293	17.9	17,371	10,538	27,909	10,239	17,670
CLERICAL—TOTAL	27,230	31,583	16.0	4,353	3,270	7,623	3,691	3,932
Accounting Clerk	1,524	1,877	23.2	353	182	535	240	295
Bank Teller	3,855	4,561	18.3	706	805	1,511	901	610
Bookkeeper	4,091	4,450	8.8	359	342	701	182	519
Bookkeeping Machine Operator	1,804	1,876	4.0	72	198	270	338	—68
Calculating Machine Operator	133	157	18.0	24	30	54	37	17
Cashier	3,239	3,748	15.7	509	262	771	225	546
Desk-Room Clerk	788	828	5.1	40	118	158	64	94
Duplicating Machine Operator	100	120	20.0	20	12	32	22	10
General Clerk-Typist	4,161	5,043	21.2	882	475	1,357	708	649
Key-Punch Operator	342	512	49.7	170	62	232	116	116
Policy Writer—Rater	918	1,103	20.2	185	80	265	152	113
Proof-Machine Operator	711	807	13.5	96	90	186	165	21
Secretary—Stenographer	3,607	4,231	17.3	624	338	962	363	599
Stock Clerk	1,521	1,725	13.4	204	170	374	76	298
Tabulating Machine Operator	183	224	22.4	41	48	89	40	49
Transcribing Machine Operator	253	321	26.9	68	58	126	62	64
SALES—TOTAL	31,382	37,017	18.0	5,635	2,744	8,379	3,367	5,012
Auto Parts Man	3,153	3,779	19.9	626	230	856	160	696
Salesman, General	6,476	8,046	24.2	1,570	518	2,088	396	1.692
Salesman, Insurance	5,799	7,638	31.7	1,839	898	2,737	1,988	749
Salesman, Motor Vehicles	1,082	1,344	24.2	262	88	350	30	320
Salesman, Securities	374	461	23.3	87	50	137	51	86
Salesperson and Sales Clerk	9,393	10,055	7.0	662	580	1,242	484	758
Salesperson, Clothing	5,105	5,694	11.5	589	380	969	258	711
SERVICE—TOTAL	21,515	24,812	15.3	3,297	2,677	5,974	1,926	4,048
Chambermaid	1,467	1,599	9.0	132	200	332	97	235
Chef	591	647	9.5	56	65	121	33	88
Cook	2,867	3,315	15.6	448	302	750	130	620

SEE NEXT PAGE

TABLE VI: JOB OPPORTUNITIES ANTICIPATED BY THE FALL OF 1966—Continued

Occupational Title	Employment During Fall of 1963	Anticipated By Fall of 1966		Worker Demand By Fall of 1966			Worker Supply By Fall, 1966 From On-The-Job Training	Net Additional Requirements By Fall of 1966
		Employment	Per Cent Increase	Expansion	Replacement	Total New Job Opportunities		
SERVICE—Continued								
Cook—Short Order	2,076	2,584	24.5	508	260	768	291	477
Hostess	327	393	20.2	66	70	136	27	109
Hotel Houseboy	274	289	5.5	15	62	77	0	77
Hotel Housekeeper	294	328	11.6	34	8	42	25	17
Janitor-Porter	2,838	3,054	7.6	216	392	608	171	437
Kitchen Steward	591	671	13.5	80	58	138	22	116
Maid	733	799	9.0	66	30	96	14	82
Waitress-Waiter	9,457	11,133	17.7	1,676	1,230	2,906	1,116	1,790
SKILLED—TOTAL	12,449	15,937	28.0	3,488	1,371	4,859	959	3,900
Appliance Service & Repairman	474	548	15.6	74	48	122	61	61
Auto Body Man	1,635	2,112	29.2	477	130	607	145	462
Auto-Truck Mechanic	5,639	7,561	34.1	1,922	728	2,650	457	2,193
Baker	307	345	12.4	38	42	80	40	40
Brakeman	334	428	28.1	94	3	97	32	65
Diesel Mechanic	166	276	66.3	110	15	125	15	110
Front-End Man	850	1,038	22.1	188	58	246	23	223
Machinist, Automobile	426	545	27.9	119	30	149	48	101
Maintenance Man, Building	294	316	7.5	22	70	92	4	88
Painter, Automobile	378	485	28.3	107	18	125	28	97
Piano Tuner	31	44	41.9	13	5	18	0	18
Radio Repairman	59	86	45.8	27	15	42	10	32
Radio/TV Service & Repairman	267	344	28.8	77	18	95	36	59
Seamstress, Alteration Woman	1,299	1,451	11.7	152	188	340	44	296
Sewing Machine Repairman	68	82	20.6	14	0	14	0	14
TV Service and Repairman	84	126	50.0	42	0	42	12	30
Upholsterer—Trimmer	138	150	8.7	12	3	15	4	11
SEMISKILLED—TOTAL	4,346	4,944	13.8	598	476	1,074	296	778
Auto-Truck Mechanic Helper	1,333	1,596	19.7	263	143	406	118	288
Diesel Mechanic Helper	15	69	360.0	54	0	54	0	54
Service Station Attendant	2,998	3,279	9.4	281	333	614	178	436

CHART J: THREE-YEAR EXPANSION AND REPLACEMENT NEEDS, BY MAJOR OCCUPATIONAL GROUP 1963 TO 1966



The major source of job openings in surveyed occupations by the fall of 1966 will result from growth in expanding industries. The other source of job openings, often overlooked, but fully as important, will result from deaths, retirements, or other withdrawals from the labor force, excluding job shifting. Chart J compares projected expansion and replacement needs in major occupational groups by 1966.

Job opportunities resulting from expansion are expected to make up about 62 per cent of all additional workers who will be needed by 1966, in surveyed occupations.

Replacement needs for the clerical and service occupational groups, which are 75 per cent female, are expected to make up an impressive 43 per cent of the total job opportunities forecast for these two groups by 1966. By contrast, replacement needs for the skilled and sales occupational groups, which are 70 per cent male workers, will make up only 31 per cent of the total job openings in these groups by the 1966 forecast date.

EMPLOYMENT NEEDS IN SURVEYED OCCUPATIONS

By the fall of 1966, almost 28,000 new job opportunities will be available in the selected occupations. Expansion will account for 17,370 new jobs, resulting in an 18 per cent increase in employment over the fall of 1963. Replacement needs will compromise about 38 per cent of worker demand during the next three-year period, with high attrition rates in service and clerical jobs. These two occupational categories have the highest proportion of female workers. Although employers expect to train more than 10,000 workers by 1966, this training will fulfill replacement needs, for the most part. More than 63 per cent of surveyed employers think institutional training would be helpful to them in meeting employment needs.[1]

Table VI shows anticipated job opportunities and net worker requirements by the fall of 1966. The charts to the right show employment distribution of women workers in surveyed occupational groups. Charts K and L compare one-year and three-year net additional worker needs for major occupational groups, and for five selected occupations.

Clerical Occupations

Employment in the 16 selected clerical occupations totaled 27,230 workers, comprising about 28 per cent of all surveyed occupational employment in the fall of 1963. Business expansion is expected to add 4,350 workers in clerical jobs by late 1966, and an additional 3,270 workers will be needed for replacement.

Worker demands for clerk-typist, cashier, secretary-stenographer, bank teller, and bookkeeper are expected to comprise three-fourths of all clerical net additional needs, by late 1966. The need for 649 trained clerks and typists represents the heaviest future demand, since few businesses today can operate without the services of these basic clerical workers. Ninety-seven out of one hundred workers in this type of job are women, while about 84 per cent of all clerical workers studied are female. Bookkeeping machine operator is the only clerical occupation in which the supply of workers is expected to exceed the demand by the end of the three-year period. Technological development resulting in increased use of computer equipment is continually reducing the need for workers in this occupation.

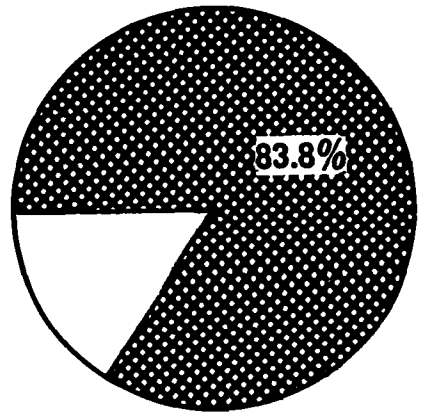
Sales Occupations

The need for salesmen will out-strip all other occupational shortages by the fall of 1966. The largest number of new job opportunities in this category will stem from the insurance industry as more than 2,700 openings are expected for salesmen over the next three years. At survey time employers

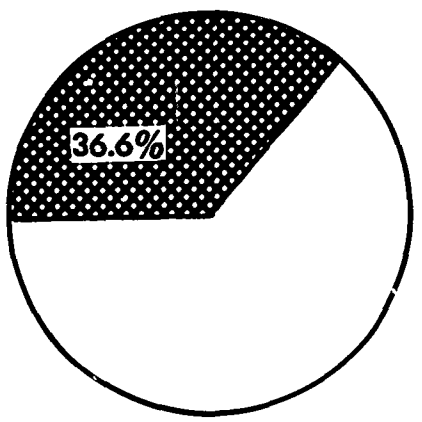
FIGURE 3: PROPORTION OF WOMEN IN MAJOR OCCUPATIONAL GROUPS[2] FALL, 1963

All Occupations

Clerical



Sales



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[1] Employers' reaction to the need for institutional training for specific occupations is shown in Appendix B.

[2] The proportion of women in each surveyed occupation is found in Appendix B.

listed 417 current vacancies for this job. Although employers expect to train almost three-fourths of the new workers required during the next three years, a net requirement for 749 workers is anticipated by the fall of 1966. A low proportion of on-the-job training is expected for other sales jobs. Less than one-fifth of the 2,000 general salesmen needed by late 1966 will receive job training by employers, leaving a significant need for almost 1,700 workers.

In the sales group as a whole, which comprised one-third of all employment in surveyed occupations, almost two out of three workers were men. Nevertheless, in the salesperson and sales clerk category, three-fourths of the workers were women. About 60 per cent of the contacted employers favored institutional sales training.

Service Occupations

Additional needs in service jobs run second only to those for sales occupations. The replacement rate, however, is much higher in service work. About 45 out of every 100 new service job opportunities will be for replacement purposes by the end of the three-year period.

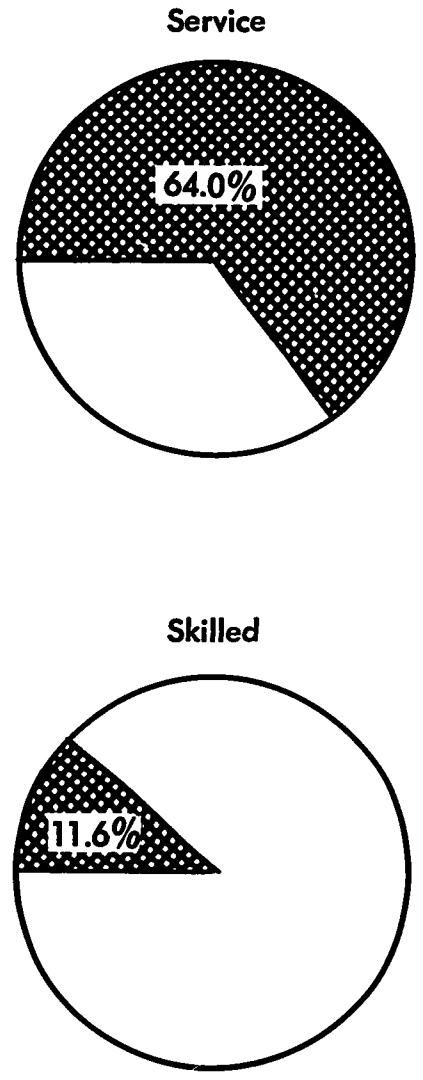
More than six out of every ten workers in service jobs are women. In the waitress-waiter category eight out of ten employees are female, and this group of workers registered the greatest net additional needs in service work, with an occupational shortage of almost 1,800 workers by the fall of 1966. Replacement needs will account for about four out of every ten new job openings in this occupation and in some service occupations, replacement needs outweigh expansion needs. Employers listed vacancies for 343 waitress-waiter jobs at survey time, accounting for more than one-half of the 631 vacancies listed in service occupations. In late 1963, chefs, cooks and short-order cooks comprised more than one-fourth of surveyed occupational employment in service jobs. They will comprise almost 30 per cent of the net additional workers needed for all service occupations, by 1966. Fifty-one per cent of employers recommended training through Industrial Education Centers for service occupations. More than 60 per cent thought IEC training for cooks, hostesses, kitchen stewards and waitresses would be helpful.

Skilled Occupations

Employment in skilled jobs made up only 13 per cent of all occupational employment but is expected to experience the fastest growth rate, 28 per cent, over the three-year period.

Except for seamstresses and bakers, jobs in the surveyed skilled occupations were filled exclusively by men. The replacement need in the skilled category is the lowest of all occupational groups. Employers expect to train less than one-fifth of the workers needed to fill about 5,000 new jobs by 1966.

FIGURE 3: PROPORTION OF WOMEN IN MAJOR OCCUPATIONAL GROUPS FALL, 1963



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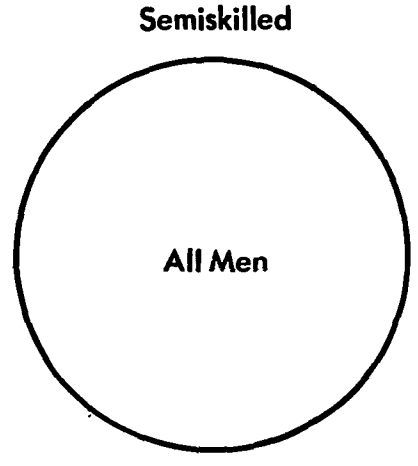
At survey time, employers listed 505 vacancies for automobile-truck mechanics and it is anticipated that workers in this occupation will continue to be in short supply, increasing to a net need for almost 2,200 workers by the fall of 1966. Only a small proportion of mechanics are expected to receive on-the-job training since many small businesses cannot afford the time and personnel necessary for formal job training programs. More than four out of five employers recommended vocational training for skilled occupations.

FIGURE 3: PROPORTION OF WOMEN IN MAJOR OCCUPATIONAL GROUPS FALL, 1963



Semiskilled Occupations

In semiskilled occupations studied, with 100 per cent male employment, a need for almost 800 trained workers is anticipated by 1966.

The demand for service station attendants will outweigh the available supply of trained workers, partially due to lack of advancement opportunities and long hours of work. Seventy-three per cent of the contacted employers expressed interest in institutional training for semiskilled jobs.

CHART K: NET WORKER REQUIREMENTS: 1964[1] AND 1966
COMPARISON OF MAJOR OCCUPATIONAL GROUPS

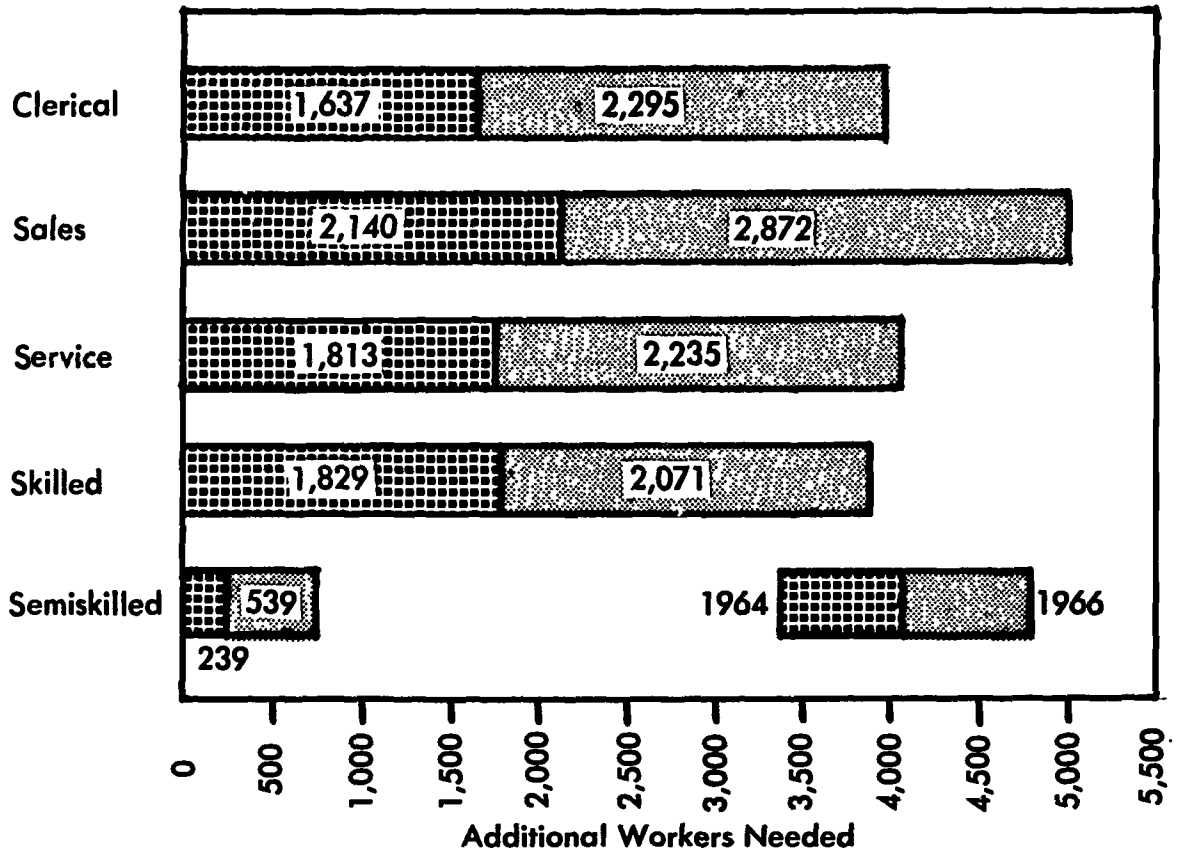
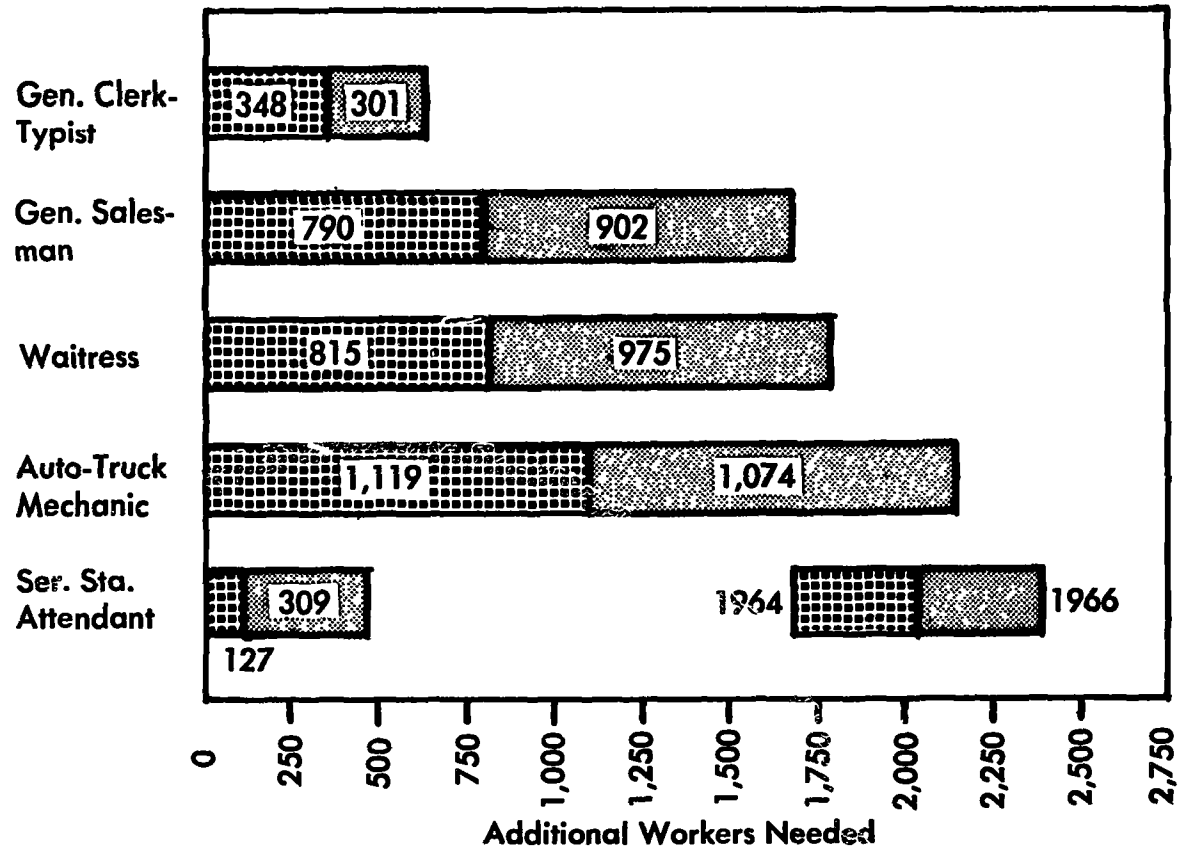


CHART L: NET WORKER REQUIREMENTS: 1964[1] AND 1966
COMPARISON OF SELECTED OCCUPATIONS



[1] Net worker needs, by occupation, by the fall of 1964 are found in Appendix B.

PART IV

Area Survey Findings

AREA 1

Manufacturing Employment Ranks High

- Ranks Third in Unemployment Rate

Leads all Areas in Need for Automobile Mechanics by 1966

AREA 2

Most Thickly Populated Area

- Highest Weekly Wage

Strong Demand for Sales Workers

AREA 3

Lowest Unemployment Rate

- Ranks Second in Average Weekly Wages

Tops all Areas in Net Additional Needs by 1966

AREA 4

Least Population

- Ranks Second in Net Worker Requirements

Clerical Worker Need Great

AREA 5

Fewest Covered Workers

- Lowest Weekly Wage

General Salesmen and Automobile Mechanics Needed

AREA 6

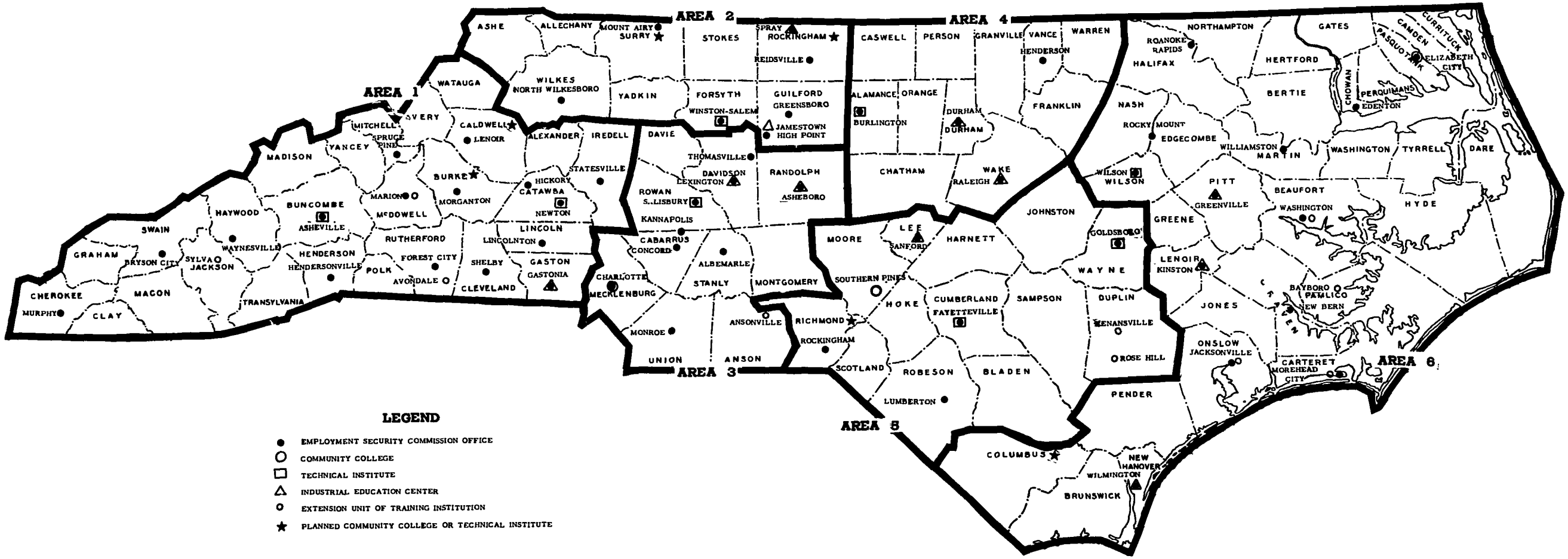
Largest Population and Land Area

- Highest Unemployment Rate

Salesmen Needed

AREAS DESIGNATED FOR DISTRIBUTION OF STATEWIDE SURVEY FINDINGS

LOCATIONS OF TRAINING INSTITUTIONS AND NORTH CAROLINA EMPLOYMENT SECURITY COMMISSION OFFICES



LEGEND

- ● EMPLOYMENT SECURITY COMMISSION OFFICE
- ○ COMMUNITY COLLEGE
- □ TECHNICAL INSTITUTE
- △ INDUSTRIAL EDUCATION CENTER
- o EXTENSION UNIT OF TRAINING INSTITUTION
- ★ PLANNED COMMUNITY COLLEGE OR TECHNICAL INSTITUTE

INTRODUCTION

Survey results were compiled for six designated areas of the State as shown on the above map. Area results were developed to identify the distribution of employment within specific regions of the State and to point-up local occupational needs.

Table VII on the following page, shows area distribution of employment by industry during the fall of 1963. The industrialized central areas of the State comprise the heaviest proportion of surveyed nonmanufacturing employment, especially in the retail trade, insurance and finance industries. The number of workers in the hotel, motel and tourist court business is slightly higher in the western part of the State than in other areas, largely because of the heavy volume of tourist and travel trade in that region.

Table VIII shows the anticipated growth rate in each selected industry by the end of 1966, along with the expected increase by area. Over the three-year period, all employment is expected to increase 16 per cent with significantly faster growth rates in the insurance, credit agency, automobile dealer and gasoline service station businesses.

A more detailed analysis of each area's industrial composition, labor force and occupational needs is presented in the succeeding section.

TABLE VII: AREA DISTRIBUTION OF EMPLOYMENT BY INDUSTRY—FALL, 1963

Numerical Distribution—Fall, 1963								Per Cent Distribution—Fall, 1963					
State Total	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Surveyed Industries	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6
132,191	20,549	26,395	28,974	22,524	13,554	20,195	All Industry Divisions Surveyed	15.5	20.2	21.9	17.0	10.2	15.2
6,761	770	941	2,942	838	464	806	Motor Vehicles and Auto Equipment	11.4	13.9	43.5	12.4	6.9	11.9
16,763	2,932	3,257	3,810	2,581	1,685	2,498	Department Stores	17.5	19.4	22.7	15.4	10.1	14.9
26,748	5,082	4,577	4,769	3,849	3,563	4,908	Auto Dealers and Gas Service Stations	19.0	17.1	17.8	14.4	13.3	18.4
1,601	168	432	214	384	155	248	Men's and Boys' Clothing & Furnishings	10.5	27.0	13.3	24.0	9.7	15.5
5,054	865	1,387	842	772	341	847	Women's Ready To Wear Stores	17.1	27.4	16.7	15.3	6.7	16.8
2,220	435	266	440	110	391	578	Family Clothing Stores	19.6	12.0	19.8	5.0	17.6	26.0
1,392	232	237	240	242	217	224	Household Appliance Stores	16.7	17.0	17.2	17.4	15.6	16.1
650	102	102	170	105	97	74	Radio, T.V., Music Stores	15.7	15.7	26.2	16.1	14.9	11.4
23,223	3,841	4,473	4,596	3,816	2,600	3,897	Eating and Drinking Places	16.5	19.3	19.8	16.4	11.2	16.8
12,612	1,825	2,398	3,010	1,886	1,377	2,116	Banking	14.5	19.0	23.8	15.0	10.9	16.8
6,734	1,091	1,337	1,771	994	633	908	Credit Agencies Other Than Banking	16.2	19.9	26.3	14.7	9.4	13.5
759	56	179	233	162	106	23	Security Brokers and Dealers, etc.	7.4	23.6	30.7	21.3	14.0	3.0
13,510	651	4,229	3,022	4,035	570	1,003	Insurance Carriers	4.8	31.3	22.4	29.9	4.2	7.4
2,919	361	545	569	920	212	312	Insurance Agents	12.4	18.7	19.5	31.5	7.2	10.7
7,958	1,556	1,495	1,421	1,405	842	1,239	Hotels, Motels, Tourist Courts	19.6	18.8	17.9	17.7	10.5	15.5
2,982	533	502	808	386	288	465	Auto Repair Shops	17.9	16.8	27.1	12.9	9.7	15.6
305	49	38	117	39	13	49	Electrical Repair Shops	16.1	12.5	38.3	12.8	4.2	16.1

TABLE VIII: AREA DISTRIBUTION OF EMPLOYMENT ANTICIPATED FOR FALL, 1966, BY INDUSTRY, WITH PER CENT CHANGES FROM FALL, 1963

Anticipated Employment—Fall, 1966								Per Cent Change Anticipated in Employment From Fall, 1963 to Fall, 1966						
State Total	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6	Surveyed Industries	For State	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6
153,657	23,348	31,696	34,972	25,949	14,957	22,735	All Industry Divisions Surveyed	16.2	13.6	20.1	20.7	15.2	10.4	12.6
7,725	864	1,178	3,248	957	563	915	Motor Vehicles & Auto Equipment	14.3	12.2	25.2	10.4	14.2	21.3	13.5
18,615	3,403	3,493	4,868	2,588	1,685	2,578	Department Stores	11.0	16.1	7.2	27.8	0.3	0	3.2
32,452	6,134	5,561	5,834	4,740	4,315	5,868	Auto Dealers and Gas Service Stations	21.3	20.7	21.5	22.3	23.1	21.1	19.6
1,783	195	470	230	457	164	267	Men's and Boys' Clothing & Furnishings	11.4	16.1	8.8	7.5	19.0	5.8	7.7
5,924	896	1,860	876	1,048	341	903	Women's Ready To Wear Stores	17.2	3.6	34.1	4.0	35.8	0	6.6
2,414	456	316	502	130	376	634	Family Clothing Stores	8.7	4.8	18.8	14.1	18.2	—3.8	9.7
1,565	286	263	250	252	259	255	Household Appliance Stores	12.4	23.3	11.0	4.2	4.1	19.4	13.8
739	119	121	191	128	106	74	Radio, T.V., Music Stores	13.7	16.7	18.6	12.5	21.9	9.3	0
27,034	4,120	5,442	6,283	4,262	2,813	4,114	Eating and Drinking Places	16.4	7.3	21.7	36.7	11.7	8.2	5.6
13,765	2,125	2,635	3,289	1,957	1,433	2,326	Banking	9.1	16.4	9.9	9.3	3.8	4.1	9.9
7,909	1,163	1,653	2,284	1,070	755	984	Credit Agencies Other Than Banking	17.4	6.6	23.6	29.0	7.6	19.3	8.4
915	79	240	290	177	106	23	Security Brokers and Dealers, etc.	20.6	41.1	34.1	24.5	9.3	0	0
16,800	709	5,534	3,413	5,142	590	1,412	Insurance Carriers	24.4	8.9	30.9	12.9	27.4	3.5	40.8
3,449	405	648	718	1,051	258	369	Insurance Agents	18.2	12.2	18.9	26.2	14.2	21.7	18.3
8,612	1,765	1,620	1,551	1,493	842	1,341	Hotels, Motels, Tourist Courts	8.2	13.4	8.4	9.1	6.3	0	8.2
3,523	575	580	988	446	331	603	Auto Repair Shops	18.1	7.9	15.5	22.3	15.5	14.9	29.7
433	54	82	157	51	20	69	Electrical Repair Shops	42.0	10.2	115.8	34.2	30.8	53.8	40.8

AREA 1

TABLE IX: JOB OPPORTUNITIES ANTICIPATED BY THE FALL OF 1966[1]

Occupational Title	Employment Fall, 1963	New Jobs By Fall 1966		Net Needs By Fall 1966 [3]
		Growth	Total [2]	
ALL OCCUPATIONS	14,776	2,503	4,023	2,754
CLERICAL—TOTAL	3,574	610	1,066	459
Accounting Clerk	180	50	70	26
Bank Teller	637	168	286	104
Bookkeeper	687	62	122	97
Bookkeeping Machine Operator	379	56	111	—42
Calculating Machine Operator	8	0	0	0
Cashier	463	29	69	39
Desk—Room Clerk	162	21	31	15
Duplicating Machine Operator	1	1	1	1
General Clerk-Typist	326	81	139	67
Key-Punch Operator	11	9	9	—2
Policy Writer—Rater	79	11	11	9
Proof-Machine Operator	69	26	48	23
Secretary—Stenographer	332	64	109	80
Stock Clerk	228	31	51	34
Tabulating Machine Operator	7	0	8	7
Transcribing Machine Operator	5	1	1	1
SALES—TOTAL	4,596	784	1,133	803
Auto Parts Man	572	120	130	86
Salesman, General	953	256	351	300
Salesman, Insurance	147	49	69	40
Salesman, Motor Vehicles	128	41	47	43
Salesman, Securities	59	6	11	6
Salesperson and Sales Clerk	1,865	258	375	212
Salesperson, Clothing	872	54	150	116
SERVICE—TOTAL	3,702	367	854	682
Chambermaid	225	37	62	39
Chef	80	8	18	18
Cook	660	54	134	116
Cook—Short Order	365	46	94	71
Hostess	43	3	10	8
Hotel Houseboy	43	1	11	11
Hotel Housekeeper	62	6	6	6
Janitor—Porter	410	31	86	57
Kitchen Steward	87	10	22	22
Maid	61	20	20	17
Waitress—Waiter	1,666	151	391	317
SKILLED—TOTAL	2,164	633	839	718
Appliance Service & Repairman	84	3	10	0
Auto Body Man	354	90	120	93
Auto-Truck Mechanic	925	361	471	423
Baker	62	3	13	13
Brakeman	43	12	12	7
Diesel Mechanic	16	14	14	10
Front End Man	127	36	44	39
Machinist, Automobile	91	33	40	32
Maintenance Man, Building	78	6	24	24
Painter, Automobile	68	15	15	15
Piano Tuner	6	3	3	3
Radio Repairman	14	6	6	6
Radio/TV Service & Repairman	55	19	24	24
Seamstress, Alteration Woman	208	23	34	20
Sewing Machine Repairman	0	0	0	0
TV Service and Repairman	22	9	9	9
Upholsterer—Trimmer	11	0	0	0
SEMISKILLED—TOTAL	740	109	131	92
Auto-Truck Mechanic Helper	181	44	44	29
Diesel Mechanic Helper	0	4	4	4
Service Station Attendant	559	61	83	59

[1] Area net additional needs for fall, 1964 are found in Appendix B.
[2] Growth plus replacement needs.
[3] Growth plus replacement needs minus anticipated on-the-job training.

EMPLOYMENT SECURITY COMMISSION OF NORTH CAROLINA

AREA 1

ECONOMIC AND GEOGRAPHIC PROFILE

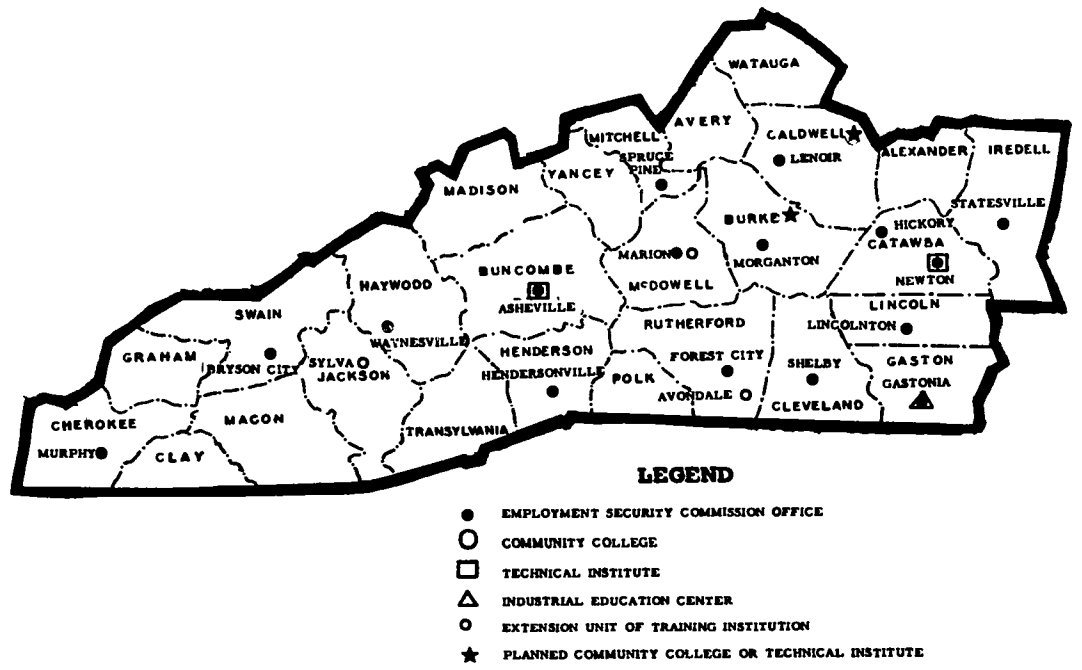
		Area Rank
Land Area	10,609 Square Miles	2
1960 Population	925,143	2
Population per Square Mile	87	4
	MARCH, 1963	
Civilian Labor Force	361,440	1
Civilian Employment	338,390	1
Rate of Unemployment	6.4 Per Cent	3
Average Weekly Wage[1]—1962	$70.75	4

Area 1 extends over 26 counties and comprises about one-fifth of North Carolina's land area and population.

In March, 1963, the unemployment rate of 6.4 per cent for *Area 1* was substantially above the ratio of 5.8 per cent for all areas. Seasonal influences on the tourist business and declines in agricultural employment contribute to the comparatively high rate of unemployment, and are partially responsible for the existence of pockets of substantial and persistent unemployment in *Area 1*. Eleven counties were classified as "labor surplus" by the United States Department of Labor in January, 1964. Twenty-one counties in this area are located in the Nation's Appalachia Poverty Belt, for which a long range economic development program is currently being considered by Congress.

In *Area 1*, during the second quarter of 1963, more than two-thirds of the 225,000 workers covered by the North Carolina Employment Security Law were employed in manufacturing jobs, compared with 55 per cent of all covered workers throughout the State. This high proportion of manufacturing jobs in *Area 1* partially results from the large volume of insured employment in the textile and furniture industries concentrated in the eastern part of the area.

[1] Wages paid in jobs covered by the North Carolina Employment Security Law.



Area Findings

Less than one-sixth of the State's employment which was surveyed was found in *Area 1*. The State's heaviest concentration of employment in hotels, motels, and tourist courts, and auto dealers and service stations, was found in this area. A heavy volume of tourist business largely accounts for the high rate of employment in these industry groups in *Area 1*.

Employment in all surveyed establishments in *Area 1*, is expected to increase from 20,500 at survey time to 23,350 by the latter part of 1966, an increase of about 14 per cent. By the end of the three-year period, employment in the occupations studied is expected to increase 17 per cent, which will closely parallel the estimated 18 per cent rise for North Carolina. This anticipated expansion plus expected replacement needs results in net additional needs for about 2,750 workers by late 1966, in the occupations studied.

Skilled occupations show the greatest proportion of employment increase, 29 per cent, over the three-year forecast period. Expanding demands for automobile mechanics in *Area 1* account for much of this rise, which follows the expected over-all employment uptrend in the automobile dealer and service station industries.

AREA 2

TABLE X: JOB OPPORTUNITIES ANTICIPATED BY THE FALL OF 1966[1]

Occupational Title	Employment Fall, 1963	New Jobs By Fall 1966		Net Needs By Fall 1966[3]
		Growth	Total[2]	
ALL OCCUPATIONS	21,148	4,170	6,396	3,325
CLERICAL—TOTAL	5,903	1,078	1,765	615
Accounting Clerk	234	45	60	28
Bank Teller	676	134	289	141
Bookkeeper	788	115	162	111
Bookkeeping Machine Operator	280	—17	—11	—26
Calculating Machine Operator	65	9	24	4
Cashier	658	108	163	98
Desk—Room Clerk	138	5	6	6
Duplicating Machine Operator	38	12	20	9
General Clerk-Typist	1,278	275	472	63
Key-Punch Operator	98	55	80	22
Policy Writer—Rater	222	71	88	—17
Proof-Machine Operator	96	20	20	7
Secretary—Stenographer	887	154	232	90
Stock Clerk	292	37	67	55
Tabulating Machine Operator	61	25	40	14
Transcribing Machine Operator	92	30	53	10
SALES—TOTAL	7,459	1,529	2,177	916
Auto Parts Man	508	97	132	112
Salesman, General	1,594	327	408	301
Salesman, Insurance	1,381	710	1,023	—19
Salesman, Motor Vehicles	252	60	85	85
Salesman, Securities	130	39	51	32
Salesperson and Sales Clerk	1,938	86	173	151
Salesperson, Clothing	1,656	210	305	254
SERVICE—TOTAL	4,419	761	1,347	856
Chambermaid	300	38	63	44
Chef	158	11	11	—7
Cook	579	163	250	184
Cook—Short Order	312	106	153	104
Hostess	82	7	17	4
Hotel Houseboy	53	3	13	13
Hotel Housekeeper	51	10	10	10
Janitor—Porter	642	32	159	113
Kitchen Steward	186	31	61	58
Maid	245	9	24	22
Waitress—Waiter	1,811	351	586	311
SKILLED—TOTAL	2,507	667	905	792
Appliance Service & Repairman	103	20	32	15
Auto Body Man	258	80	90	83
Auto-Truck Mechanic	1,064	353	469	418
Baker	83	12	24	6
Brakeman	87	17	17	17
Diesel Mechanic	45	23	23	23
Front End Man	127	33	41	39
Machinist, Automobile	55	14	14	11
Maintenance Man, Building	56	2	20	20
Painter, Automobile	84	28	28	25
Piano Tuner	6	2	2	2
Radio Repairman	9	5	5	5
Radio/TV Service & Repairman	50	16	16	13
Seamstress, Alteration Woman	415	45	107	98
Sewing Machine Repairman	11	1	1	1
TV Service and Repairman	16	15	15	15
Upholsterer—Trimmer	38	1	1	1
SEMISKILLED—TOTAL	860	135	202	146
Auto-Truck Mechanic Helper	198	59	59	56
Diesel Mechanic Helper	5	21	21	21
Service Station Attendant	657	55	122	69

[1] Area net additional needs for fall, 1964 are found in Appendix B.
[2] Growth plus replacement needs.
[3] Growth plus replacement needs minus anticipated on-the-job training.

EMPLOYMENT SECURITY COMMISSION OF NORTH CAROLINA

AREA 2

ECONOMIC AND GEOGRAPHIC PROFILE

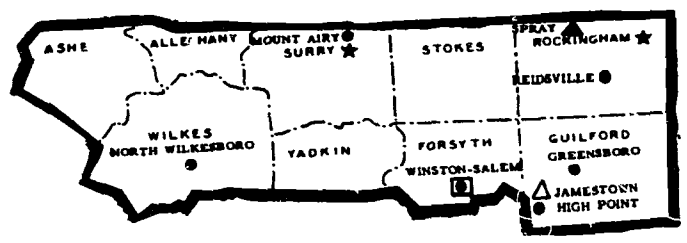
		Area Rank
Land Area	4,400 Square Miles	6
1960 Population	671,671	5
Population per Square Mile	153	1
	MARCH, 1963	
Civilian Labor Force	297,440	4
Civilian Employment	283,150	3
Rate of Unemployment	4.8	5
Average Weekly Wage—1962[1]	$79.96	1

Area 2, which is composed of only nine counties, is the most densely populated section of North Carolina. The population is heavily concentrated in the Greensboro-High Point-Winston-Salem "industrial triangle," located in the southeastern section of the area.

During March of 1963, the unemployment rate in *Area 2* was 4.8 per cent of the labor force, lower than four other areas in the State. Within the area, however, the proportion of unemployment showed wide variations. Seven counties in *Area 2* are included in the country's Appalachia Poverty Belt, recently recognized by Congress as having the most serious unemployment problem in the Nation.

During the second quarter of 1963, an average of almost 198,000 workers in this area were employed in jobs covered by the North Carolina Employment Security Law. More than 41 per cent of employment was in nonmanufacturing businesses, with employment in trade predominating. About 115,800 workers were employed in manufacturing industries, with a heavy concentration of almost 85,000 workers in Forsyth and Guilford counties.

[1] Wages paid in jobs covered by the North Carolina Employment Security Law.



LEGEND

- ● EMPLOYMENT SECURITY COMMISSION OFFICE
- ○ COMMUNITY COLLEGE
- □ TECHNICAL INSTITUTE
- △ INDUSTRIAL EDUCATION CENTER
- ○ EXTENSION UNIT OF TRAINING INSTITUTION
- ★ PLANNED COMMUNITY COLLEGE OR TECHNICAL INSTITUTE

Area Findings

Approximately one-fifth of the State's surveyed employment was in *Area 2*. More than 30 per cent of surveyed employment in insurance firms was in this section of the State. This large proportion is accounted for by the location in this area of the home offices of the largest insurance companies in North Carolina. In *Area 2*, employment in clothing stores was greater than it was in any one of the other defined areas of the State. Three major cities located in this section contributed to the large volume of employment in retail clothing stores.

By the fall of 1966, employment in all surveyed establishments in *Area 2* is expected to increase from about 26,400 to almost 31,700 workers. These additional workers would represent a 20 per cent gain above employment which existed during the fall of 1963, and would result in a substantially faster growth rate than the 16.2 per cent gain anticipated for the State as a whole.

Employment growth in the studied occupations will also rise about one-fifth during the three-year period. Although skilled occupations are expected to show the fastest growth rate—26.6 per cent—over the three-year yeriod, the greatest net number of workers will be required for sales occupations.

AREA 3

TABLE XI: JOB OPPORTUNITIES ANTICIPATED BY THE FALL OF 1966[1]

Occupational Title	Employment Fall, 1963	New Jobs By Fall 1966		Net Needs By Fall 1966 [3]
		Growth	Total [2]	
ALL OCCUPATIONS	22,389	4,233	6,844	4,180
CLERICAL—TOTAL	6,663	1,100	2,150	1,275
Accounting Clerk	462	93	200	126
Bank Teller	692	124	424	91
Bookkeeper	763	74	134	99
Bookkeeping Machine Operator	317	14	46	22
Calculating Machine Operator	22	10	25	15
Cashier	974	186	241	223
Desk—Room Clerk	134	10	52	28
Duplicating Machine Operator	13	1	1	—2
General Clerk-Typist	940	205	317	215
Key-Punch Operator	86	18	35	14
Policy Writer-Rater	257	45	92	71
Proof-Machine Operator	306	45	103	—9
Secretary—Stenographer	975	207	335	271
Stock Clerk	580	59	89	66
Tabulating Machine Operator	51	0	15	14
Transcribing Machine Operator	91	9	41	31
SALES—TOTAL	8,295	1,038	1,678	1,031
Auto Parts Man	645	95	145	125
Salesman, General	1,304	295	360	286
Salesman, Insurance	825	224	366	110
Salesman, Motor Vehicles	431	70	115	102
Salesman, Securities	103	34	67	48
Salesperson and Sales Clerk	4,206	247	502	311
Salesperson, Clothing	781	73	123	49
SERVICE—TOTAL	4,150	1,239	1,835	993
Chambermaid	341	31	86	50
Chef	92	32	67	58
Cook	319	65	102	89
SERVICE—CONTINUED				
Cook—Short Order	555	273	348	167
Hostess	61	42	60	53
Hotel Houseboy	63	7	13	13
Hotel Housekeeper	59	6	11	—2
Janitor—Porter	582	70	160	122
Kitchen Steward	95	15	28	21
Maid	185	7	17	14
Waitress—Waiter	1,798	691	943	408
SKILLED—TOTAL	2,695	801	1,073	817
Appliance Service & Repairman	63	19	24	15
Auto Body Man	361	131	146	96
Auto-Truck Mechanic	1,188	402	533	420
Baker	42	7	7	—3
Brakeman	87	35	35	22
Diesel Mechanic	51	28	33	24
Front End Man	178	16	33	26
Machinist, Automobile	110	31	38	28
Maintenance Man, Building	59	5	22	20
Painter, Automobile	72	25	28	20
Piano Tuner	4	6	6	6
Radio Repairman	9	0	5	5
Radio/TV Service & Repairman	76	24	29	17
Seamstress, Alteration Woman	287	45	107	101
Sewing Machine Repairman	30	13	13	13
TV Service and Repairman	20	7	7	1
Upholsterer—Trimmer	58	7	7	6
SEMISKILLED—TOTAL	586	55	108	64
Auto-Truck Mechanic Helper	255	43	73	29
Diesel Mechanic Helper	2	5	5	5
Service Station Attendant	329	7	30	30

[1] Area net additional needs for fall, 1964 are found in Appendix B.
[2] Growth plus replacement needs.
[3] Growth plus replacement needs minus anticipated on-the-job training.

EMPLOYMENT SECURITY COMMISSION OF NORTH CAROLINA

AREA 3

ECONOMIC AND GEOGRAPHIC PROFILE

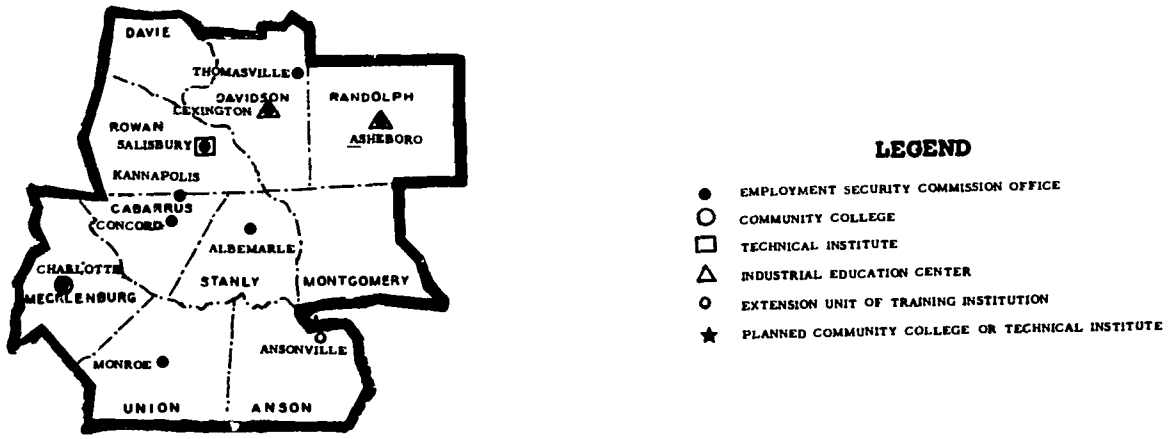
		Area Rank
Land Area	5,093 Square Miles	5
1960 Population	709,696	3
Population per Square Mile	139	2
	MARCH, 1963	
Civilian Labor Force	305,570	2
Civilian Employment	293,270	2
Rate of Unemployment	4.0 Per Cent	6
Average Weekly Wage[1]—1962	$77.81	2

Ten counties are included in *Area 3*, and although it is relatively small in land area, it includes heavily populated Mecklenburg County. The metropolitan city of Charlotte, the largest in North Carolina, is located in this county. This partially accounts for the density of population per square mile in *Area 3*.

In March of 1963, *Area 3* registered the lowest unemployment rate in North Carolina. The area, as a whole, is highly urbanized, so that business activities are relatively independent of seasonal influences. Unemployment rates for the various counties in this area were lower, for the most part, than the rate of unemployment for all areas in the State.

In *Area 3* during the second quarter of 1963, more than 211,000 workers were employed in jobs covered by the North Carolina Employment Security Law. Although the majority were working in manufacturing jobs, almost 48 per cent of the insured workers were engaged in nonmanufacturing activities. Approximately 45,000 workers were employed in the wholesale and retail trade industries, of whom 31,340 were in Mecklenburg County. Large numbers of workers were also employed in the finance, insurance and real estate businesses.

[1] Wages paid in jobs covered by the North Carolina Employment Security Law.



Area Findings

Area 3 had almost 22 per cent of surveyed employment, the largest proportion in the State. Workers in this section outnumbered those in other areas of North Carolina in ten out of 17 industries included in the study.

By the fall of 1966, it is anticipated that surveyed employment in *Area 3* will increase from almost 29,000 to about 35,000 workers. Eating and drinking places will experience the most rapid growth rate, with an expected employment rise of 37 per cent over the three-year forecast period.

Employment in the studied occupations is expected to increase at a slightly slower pace than all surveyed employment in *Area 3*, registering a gain of 19 per cent by late 1966. Of the 4,200 workers needed for business expansion over the next three years, the greatest number will be required in the service occupations studied. By the fall of 1966, it is estimated that an additional 700 waitresses and waiters will be needed for business expansion, showing a growth rate that parallels the expected over-all employment gain in eating and drinking places in this area.

The greatest expansion and replacement needs in this area will be for workers in clerical occupations. By the fall of 1966, an additional 200 workers each will be required as secretaries, cashiers, and general clerk typists.

AREA 4

TABLE XII: JOB OPPORTUNITIES ANTICIPATED BY THE FALL OF 1966[1]

Occupational Title	Employment Fall, 1963	New Jobs By Fall 1966		Net Needs By Fall 1966[3]
		Growth	Total[2]	
ALL OCCUPATIONS	16,106	2,927	4,585	3,355
CLERICAL—TOTAL	5,356	787	1,275	930
Accounting Clerk	370	83	103	74
Bank Teller	560	89	126	60
Bookkeeper	651	39	69	51
Bookkeeping Machine Operator	208	—5	38	29
Calculating Machine Operator	28	3	3	0
Cashier	510	86	136	101
Desk—Room Clerk	104	2	34	34
Duplicating Machine Operator	42	4	8	1
General Clerk-Typist	1,221	221	314	250
Key-Punch Operator	124	65	80	69
Policy Writer—Rater	307	34	50	36
Proof-Machine Operator	110	0	10	7
Secretary-Stenographer	794	97	154	92
Stock Clerk	214	40	110	98
Tabulating Machine Operator	59	9	17	8
Transcribing Machine Operator	54	20	23	20
SALES—TOTAL	4,816	1,029	1,388	884
Auto Parts Man	507	113	158	141
Salesman, General	1,107	266	356	309
Salesman, Insurance	1,757	405	497	156
Salesman, Motor Vehicles	64	20	25	21
Salesman, Securities	71	8	8	0
Salesperson and Sales Clerk	553	24	64	17
Salesperson, Clothing	757	193	280	240
SERVICE—TOTAL	3,206	483	953	782
Chambermaid	180	14	72	53
Chef	95	4	14	11
Cook	345	73	96	94
SERVICE—CONTINUED				
Cook—Short Order	361	33	75	45
Hostess	52	5	12	9
Hotel Houseboy	26	0	20	20
Hotel Housekeeper	29	3	3	3
Janitor—Porter	552	48	108	73
Kitchen Steward	71	9	12	12
Maid	98	21	26	21
Waitress—Waiter	1,397	273	515	441
SKILLED—TOTAL	1,852	509	751	628
Appliance Service & Repairman	82	5	11	6
Auto Body Man	227	62	87	70
Auto-Truck Mechanic	908	309	436	364
Baker	79	8	28	20
Brakeman	31	6	6	6
Diesel Mechanic	42	37	47	47
Front End Man	127	27	27	25
Machinist, Automobile	17	3	9	6
Maintenance Man, Building	31	1	11	10
Painter, Automobile	80	15	23	17
Piano Tuner	8	2	4	4
Radio Repairman	5	1	1	1
Radio/TV Service & Repairman	28	4	4	1
Seamstress, Alteration Woman	176	26	54	48
Sewing Machine Repairman	4	—4	—4	—4
TV Service and Repairman	4	5	5	5
Upholsterer—Trimmer	3	2	2	2
SEMISKILLED—TOTAL	876	119	218	131
Auto-Truck Mechanic Helper	261	52	82	60
Diesel Mechanic Helper	4	18	18	18
Service Station Attendant	611	49	118	53

[1] Area net additional needs for fall, 1964 are found in Appendix B.
[2] Growth plus replacement needs.
[3] Growth plus replacement needs minus anticipated on-the-job training.

AREA 4

ECONOMIC AND GEOGRAPHIC PROFILE

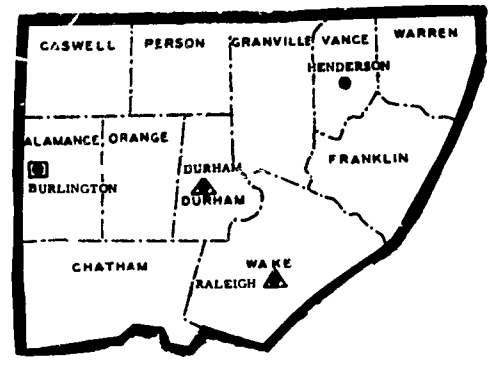
		Area Rank
Land Area	5,265 Square Miles	4
1960 Population	596,331	6
Population per Square Mile	113	3
	MARCH, 1963	
Civilian Labor Force	242,470	5
Civilian Employment	229,745	5
Rate of Unemployment	5.2 Per Cent	4
Average Weekly Wage[1]—1962	$74.60	3

Area 4, although small in land area, ranks third in density of population. The two counties of Durham and Wake, in which the large city of Durham and the State Capital at Raleigh are located, include almost half of the population in this 11-county area.

In March of 1963, unemployment in *Area 4* comprised 5.2 per cent of the civilian labor force. This proportion was lower than the rate in three other areas in the State. Nevertheless, in January, 1964, two counties in *Area 4* were classified by the United States Department of Labor as areas of "substantial and persistent unemployment," and designated as "redevelopment areas" under the Area Redevelopment Act.

During the second quarter of 1963, approximately 118,300 workers were employed in jobs covered by the North Carolina Employment Security Law. More than half of these workers were engaged in nonmanufacturing jobs. In Wake County more than three-fourths of all insured workers were employed in nonmanufacturing businesses. The greatest numbers of workers in manufacturing jobs were employed in Alamance and Durham counties.

[1] Wages paid in jobs covered by the North Carolina Employment Security Law.



Area Findings

Seventeen per cent of surveyed employment occurred in *Area 4*, but a considerably larger proportion of the Statewide employment included in this study was found in men's and boys' clothing stores, security brokers, and insurance carriers and agencies. More than 31 per cent of all insurance agents in the State were employed in *Area 4*.

By the fall of 1966, surveyed employment in *Area 4* is expected to increase 15 per cent, from 22,500 to 25,900 workers. Women's ready-to-wear shops will experience the fastest growth rate, and it is anticipated that surveyed employment in this business will increase one-third over the three-year period, from 772 workers in the fall of 1963, to more than 1,000 workers by late 1966.

Employment in the 54 surveyed occupations is expected to rise 18 per cent by late 1966, increasing from about 16,000 to 19,000 workers. In addition to this anticipated expansion, a need for more than 1,600 workers for replacement will offer further job opportunities to individuals seeking work.

Sales occupations will require the greatest number of workers because of expansion in business by 1966, but the greatest net need for additional workers will be in clerical occupations.

AREA 5

TABLE XIII: JOB OPPORTUNITIES ANTICIPATED BY THE FALL OF 1966[1]

Occupational Title	Employment Fall, 1963	New Jobs By Fall 1966		Net Needs By Fall 1966 [3]
		Growth	Total [2]	
ALL OCCUPATIONS	8,401	1,212	1,951	1,418
CLERICAL—TOTAL	2,119	333	508	331
Accounting Clerk	115	50	60	33
Bank Teller	450	84	174	128
Bookkeeper	425	23	46	36
Bookkeeping Machine Operator	203	−14	3	−9
Calculating Machine Operator	5	0	0	−2
Cashier	222	38	38	29
Desk—Room Clerk	118	0	23	23
Duplicating Machine Operator	0	2	2	1
General Clerk-Typist	158	50	50	26
Key-Punch Operator	5	4	4	0
Policy Writer—Rater	31	14	14	9
Proof-Machine Operator	55	3	3	−2
Secretary—Stenographer	249	62	72	48
Stock Clerk	77	14	14	6
Tabulating Machine Operator	3	3	5	5
Transcribing Machine Operator	3	0	0	0
SALES—TOTAL	1,741	314	450	334
Auto Parts Man	333	66	93	78
Salesman, General	556	163	233	200
Salesman, Insurance	334	42	48	−3
Salesman, Motor Vehicles	92	32	39	30
Salesman, Securities	11	0	0	0
Salesperson and Sales Clerk	169	7	18	18
Salesperson, Clothing	246	4	19	11
SERVICE—TOTAL	2,852	149	393	315
Chambermaid	233	0	25	25
Chef	76	1	11	8
Cook	397	52	67	53
SERVICE—CONTINUED				
Cook—Short Order	244	14	32	30
Hostess	48	1	19	17
Hotel Houseboy	53	0	6	6
Hotel Housekeeper	51	0	3	3
Janitor—Porter	270	6	29	23
Kitchen Steward	66	6	6	−1
Maid	29	1	1	1
Waitress—Waiter	1,385	68	194	150
SKILLED—TOTAL	1,238	336	488	354
Appliance Service & Repairman	54	18	23	12
Auto Body Man	150	45	75	58
Auto-Truck Mechanic	631	163	260	200
Baker	20	6	6	4
Brakeman	31	12	12	7
Diesel Mechanic	8	7	7	5
Front End Man	120	43	51	46
Machinist, Automobile	38	19	19	3
Maintenance Man, Building	50	2	9	9
Painter, Automobile	25	7	7	1
Piano Tuner	4	0	0	0
Radio Repairman	0	0	0	0
Radio/TV Service & Repairman	38	9	14	4
Seamstress, Alteration Woman	54	1	1	1
Sewing Machine Repairman	4	2	2	2
TV Service and Repairman	0	2	2	2
Upholsterer—Trimmer	11	0	0	0
SEMISKILLED—TOTAL	451	80	112	84
Auto-Truck Mechanic Helper	151	30	40	18
Diesel Mechanic Helper	2	4	4	4
Service Station Attendant	298	46	68	62

[1] Area net additional needs for fall, 1964 are found in Appendix B.
[2] Growth plus replacement needs.
[3] Growth plus replacement needs minus anticipated on-the-job training.

EMPLOYMENT SECURITY COMMISSION OF NORTH CAROLINA

AREA 5

ECONOMIC AND GEOGRAPHIC PROFILE

		Area Rank
Land Area	8,360 Square Miles	3
1960 Population	691,950	4
Population per Square Mile	83	5
	MARCH, 1963	
Civilian Labor Force	218,240	6
Civilian Employment	203,860	6
Rate of Unemployment	6.6 Per Cent	2
Average Weekly Wage[1]—1962	$62.21	6

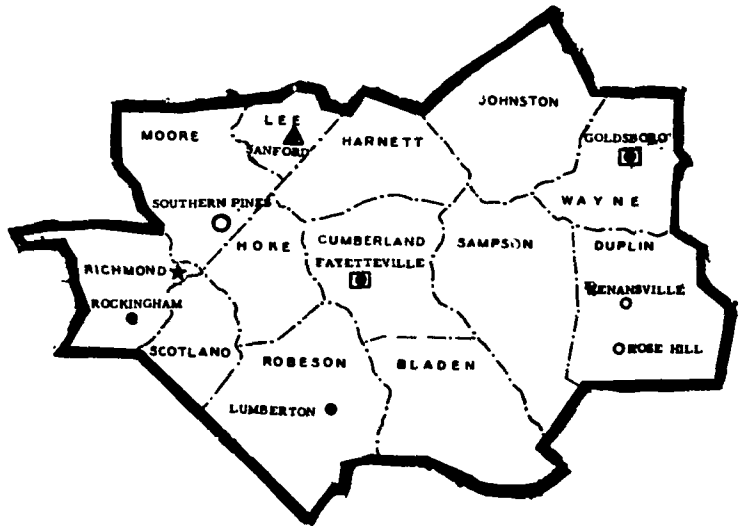
Most of the 13 counties in *Area 5* are sparsely populated. Although there are no metropolitan cities located here, two large military installations provide a more urbanized population in two counties. One of these counties, Cumberland, has almost 148,500 residents, or about one-fifth of the area's entire population.

In *Area 5* during 1962, lower average weekly wages were paid to workers covered by the North Carolina Employment Security Law than were paid in any other area of the State. Industrial development in this southeastern section has not been as rapid as in the central areas of North Carolina.

During March of 1963, unemployment of 6.6 per cent of the labor force was the second highest of the State's six areas. Seasonal factors in this primarily rural region contributed to the comparatively high rate of joblessness.

Workers in jobs covered by the North Carolina Employment Security Law totaled about 85,900 individuals during the second quarter of 1963, the smallest number of insured workers in the six areas of the State. About half of these individuals were employed in nonmanufacturing jobs, with approximately 34,000 workers engaged in such activities as trade, service, finance, insurance, and real estate. In Cumberland County alone, almost 11,000 individuals were employed in these activities. The distribution of manufacturing employment was relatively even in the thirteen counties, with the greatest proportion in Lee County.

[1] Wages paid in jobs covered by the North Carolina Employment Security Law.



Area Findings

Area 5 had ten per cent of all surveyed employment. The largest numbers of workers were employed by automobile dealers and in service stations, eating and drinking places, department stores, and banks.

By the fall of 1966, surveyed employment in *Area 5* is expected to increase from 13,550 to approximately 15,000 workers, an increase of about ten per cent. This is the slowest growth rate anticipated for any area in the State. Nevertheless, employment in seven of the 17 industries included in this study will increase at a substantially faster pace than the over-all employment rise in this area.

In this area, it is anticipated that employment in surveyed occupations will increase by about 14 per cent over the three-year forecast period. Business expansion will account for more than 300 new jobs in each of such categories as clerical, sales and skilled occupations. The greatest net expansion and replacement needs will be for sales and skilled workers, with requirements for 200 general salesmen and 200 automobile-truck mechanics by the fall of 1966.

AREA 6

TABLE XIV: JOB OPPORTUNITIES ANTICIPATED BY THE FALL OF 1966[1]

Occupational Title	Employment Fall, 1963	New Jobs By Fall 1966		Net Needs By Fall 1966 [3]
		Growth	Total [2]	
ALL OCCUPATIONS	14,102	2,326	4,110	2,638
CLERICAL—TOTAL	3,615	445	859	322
Accounting Clerk	163	32	42	8
Bank Teller	840	107	212	86
Bookkeeper	777	46	168	125
Bookkeeping Machine Operator	417	38	83	−42
Calculating Machine Operator	5	2	2	0
Cashier	412	62	124	56
Desk—Room Clerk	132	2	12	−12
Duplicating Machine Operator	6	0	0	0
General Clerk-Typist	238	50	65	28
Key-Punch Operator	18	19	24	13
Policy Writer—Rater	22	10	10	5
Proof-Machine Operator	75	2	2	−5
Secretary—Stenographer	370	40	60	18
Stock Clerk	130	23	43	39
Tabulating Machine Operator	2	4	4	1
Transcribing Machine Operator	8	8	8	2
SALES—TOTAL	4,475	941	1,553	1,044
Auto Parts Man	588	135	198	154
Salesman, General	962	263	380	296
Salesman, Insurance	1,355	409	734	465
Salesman, Motor Vehcles	115	39	39	39
Salesman, Securities	0	0	0	0
Salesperson and Sales Clerk	662	40	110	49
Salesperson, Clothing	793	55	92	41
SERVICE—TOTAL	3,186	298	592	420
Chambermaid	188	12	24	24
Chef	90	0	0	0
Cook	567	41	101	84
SERVICE—Continued				
Cook—Short Order	239	36	66	60
Hostess	41	8	18	18
Hotel Houseboy	36	4	14	14
Hotel Housekeeper	42	9	9	−3
Janitor—Porter	382	29	66	49
Kitchen Steward	86	9	9	4
Maid	115	8	8	7
Waitress—Waiter	1,400	142	277	163
SKILLED—TOTAL	1,993	542	803	591
Appliance Service & Repairman	88	9	22	13
Auto Body Man	285	69	89	62
Auto-Truck Mechanic	923	334	481	368
Baker	21	2	2	0
Brakeman	55	12	15	6
Diesel Mechanic	4	1	1	1
Front End Man	171	33	50	48
Machinist, Automobile	115	19	29	21
Maintenance Man, Building	20	6	6	5
Painter, Automobile	49	17	24	19
Piano Tuner	3	0	3	3
Radio Repairman	22	15	25	15
Radio/TV Service & Repairman	20	5	8	0
Seamstress, Alteration Woman	159	12	37	28
Sewing Machine Repairman	19	2	2	2
TV Service and Repairman	22	4	4	−2
Upholsterer—Trimmer	17	2	5	2
SEMISKILLED—TOTAL	833	100	303	261
Auto-Truck Mechanic Helper	287	35	108	96
Diesel Mechanic Helper	2	2	2	2
Service Station Attendant	544	63	193	163

[1] Area net additional needs for fall, 1964 are found in Appendix B.
[2] Growth plus replacement needs.
[3] Growth plus replacement needs minus anticipated on-the-job training.

EMPLOYMENT SECURITY COMMISSION OF NORTH CAROLINA

AREA 6

ECONOMIC AND GEOGRAPHIC PROFILE

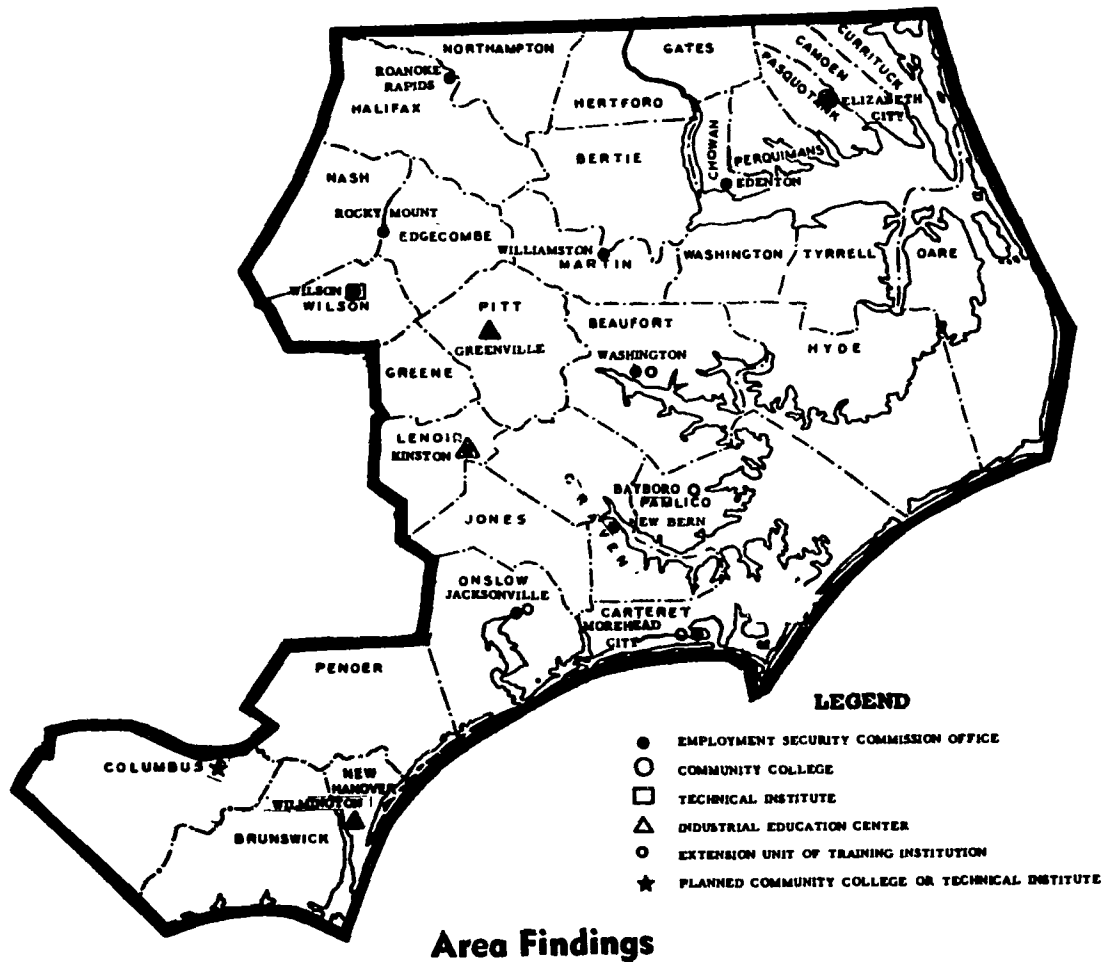
		Area Rank
Land Area	15,340 Square Miles	1
1960 Population	961,364	1
Population Per Square Mile	63	6
	MARCH, 1963	
Civilian Labor Force	304,690	3
Civilian Employment	281,380	4
Rate of Unemployment	7.7 Per Cent	1
Average Weekly Wage[1]—1962	$65.65	5

Area 6 is primarily a rural, agricultural sector and covers the easternmost part of North Carolina. As defined for this Study, it is the biggest geographical area in the State; it comprises 31 counties; and it has a greater portion of the State's population than any other area. The number of people per square mile, however, is the fewest of all areas.

During March of 1963, unemployment of 7.7 per cent of the labor force in *Area 6* was the highest among the defined areas of the State. This high rate results primarily from the seasonal nature of agriculture, fishing activities along the coastal areas, and tourist businesses during the summer months—all of which employ great numbers of workers.

During the second quarter of 1963, about 114,400 people in *Area 6* were working in jobs covered by the North Carolina Employment Security Law. Almost 55 per cent were employed in nonmanufacturing activities, and more than 33,500 individuals were working in wholesale and retail trade jobs. Manufacturing employment was spread throughout the area with the greatest concentration of about 6,500 workers in New Hanover County, wherein the port city of Wilmington is located.

[1] Wages paid in jobs covered by the North Carolina Employment Security Law.



Area Findings

About 15 per cent of the State's employment surveyed in this Study was in *Area 6*. By the fall of 1966, employment in the studied industries is expected to increase from 20,195 to 22,735 workers, a gain of 12.6 per cent. The most significant growth rate is expected in insurance firms, where forecasts indicate that employment may increase by nearly 41 per cent over the three-year survey period.

Employment in the occupations studied is expected to increase more than 16 per cent in *Area 6* by the fall of 1966, which would be a more substantial growth rate than that anticipated for total employment.

Sales occupations will require the greatest number of additional workers by the end of the forecast period. Job opportunities will be more numerous for trained automobile and truck mechanics by the fall of 1966, than for any of the 17 skilled occupations which were surveyed.

APPENDIX A

Definitions

48/49

INDUSTRY GROUPS[1]

Shown below is a brief description of each of the 17 surveyed nonmanufacturing industries, and industry segments.

Motor Vehicles and Automobile Equipment
Wholesale establishments primarily engaged in the distribution of new and used automobiles, automotive parts and accessories, service station and garage equipment, and tires and tubes for motor vehicles.

Department Stores
Retail stores carrying a general line of apparel, home furnishings, and housewares, normally arranged in separate sections. Establishments included in this industry generally employ 25 or more persons.

Automobile Dealers and Gasoline Service Stations
This major group includes retail dealers selling new and used automobiles and trucks, and new parts and accessories. Includes gasoline service stations.

Men's and Boys' Clothing and Furrishings
Establishments primarily engaged in the retail sales of men's and boys' suits, shirts, and other furnishings.

Women's Ready-to-Wear Stores
Establishments primarily engaged in the retail sale of women's coats, suits, and dresses.

Family Clothing Stores
Establishments primarily engaged in the retail sale of clothing, furnishings, and accessories for men, women, and children, without specializing in any one line.

Household Appliance Stores
Establishments primarily engaged in the retail sale of electric and gas refrigerators, stoves, and other household appliances. May sell radio and TV sets.

Radio, Television, and Music Stores
Establishments primarily engaged in the retail sale of radios, television sets, and record players. May sell household appliances and musical instruments.

[1] Based on "Standard Industrial Classification Manual." Broad Industry groupings are shown on page 12.

Eating and Drinking Places
Retail establishments selling prepared food and drinks; lunch counters, and refreshment stands. Subordinate food service facilities leased by outside operators are also included.

Banking
Institutions which are engaged in deposit banking or closely related functions, including fiduciary activities.

Credit Agencies Other Than Banks
Establishments engaged in extending credit in the form of loans, but not engaged in deposit banking. Includes savings and loan associations.

Security Brokers, Dealers and Exchanges
Establishments engaged in the underwriting, purchase, sale, or brokerage of securities and other financial contracts on their own account or for the account of others.

Insurance Carriers
This group comprises insurance carriers of all types.

Insurance Agents, Brokers and Service
Includes agents and brokers dealing in insurance, and organizations offering services to insurance companies and to policy holders.

Hotels, Motels and Tourist Courts
Commercial hotels, motels, and tourist courts, primarily engaged in providing lodging, or lodging and meals for the general public. Does not include apartments, rooming houses, and recreational camps.

Automobile Repair Shops
Establishments primarily engaged in furnishing automobile repair services to the general public.

Electrical Repair Shops
Establishments primarily engaged in the repair of electrical equipment except armature rewinding and electric motor repairs.

OCCUPATIONAL GROUPS[1]

For purposes of this Study, surveyed occupations were classified under the following major occupational groups. All surveyed occupations are sub-professional and none fall below the semiskilled level.

Clerical Occupations

For women, clerical work is a particularly important field of employment. About two-thirds of all clerical workers are women, and almost one-third of all women who have jobs of any kind do clerical work.

Workers in this group do a vast amount of record keeping and paper work required in modern business; they handle communication through mail, telephone, telegraph, and messenger services; and they attend to shipping and receiving of merchandise, ring up sales on cash registers of stores and restaurants and do related kinds of work. One out of four clerical workers in the United States in 1960 was a stenographer, secretary, or typist.

The expected rise in clerical employment in the next ten years would probably be much greater if it was not for the increasing use of mechanical equipment for many routine clerical tasks.

Sales Occupations

Sales workers are the link between the producers of goods and services and the consumer. The list of what sales workers sell would be practically endless.

Sales occupations afford many job opportunities for workers with widely different educational backgrounds, work experiences and personalities.

More than half the sales people work in retail trade, and another large group work for wholesalers and manufacturers. Another group is Insurance and Real Estate salesmen. In addition there are many small sales occupations such as peddlers and newsboys.

Service Occupations

Service workers help to protect people's lives and property and add to their comfort and conveniences in many other ways. These occupations are of many different kinds and afford opportunities for workers with different backgrounds and personal qualifications. Many service occupations require workers with considerable skill and training; others require comparatively little. Chefs and cooks in restaurants must be specially trained for their work, either in school or on the job. On the other hand, maids, charwomen, and janitors need little, if any, special training. A pleasant manner and nice appearance, and a special knack for dealing with people are particularly important for waitresses and hostesses. Turnover is high in these occupations for several reasons—the high proportion of women, many temporary and part-time jobs, and the relatively low rates of pay.

Skilled Occupations

Skilled workers help to transform ideas and plans of professional workers into goods and services, and are employed in almost every branch of industry. Skilled workers must have a thorough knowledge of the processes involved in their work. They exercise considerable independent judgment and often need a high degree of manual dexterity. In some instances they are responsible for valuable equipment or products. Workers in skilled occupations usually receive extensive training.

Semiskilled Occupations

Many semiskilled employees work as machine operators, as helpers or assistants to skilled workers. In general, semiskilled employees work with their hands. Many times, they have had only brief on-the-job training. The ability to learn new tasks is perhaps more important for the entry semiskilled workers than is educational attainment.

Semiskilled occupations are more likely to be affected by economic conditions and automation.

[1] Based on the "Dictionary of Occupational Titles" of the Bureau of Employment Security, United States Department of Labor.

ALL OCCUPATIONS SURVEYED

Survey titles and definitions with cross references to the "Dictionary of Occupational Titles" and DOT codes.

Clerical Occupations

ACCOUNTING CLERK: Performs routine calculating, typing, and posting duties in accounting. Checks items on reports, summarizing and posting data to designated records. Performs other duties such as making up invoices or monthly statements, preparing payrolls, verifying bank accounts, keeping record files, making up periodic reports of business activities, and listing and checking details as instructed. Includes Cost Clerk. (DOT Reference—ACCOUNTING CLERK: 1-01.31)

BANK TELLER: Performs a service for bank customers by receiving, paying out, and keeping accurate records of all money involved in banking transactions. Receives deposits and pays out withdrawals. Records the daily transactions and balances accounts. May supervise one or more clerks who record details of transactions. (DOT Reference—BANK TELLER: 1-06.02)

BOOKKEEPER: Keeps complete and systematic records of establishment's business transactions. Balances books and compiles reports at regular intervals to show receipts, expenditures, accounts payable, accounts receivable, profit or loss and other pertinent items. May calculate wages of employees and make up checks or draw cash from bank for payment of wages. (DOT Reference—BOOKKEEPER: 1-01.02)

BOOKKEEPING MACHINE OPERATOR: Keeps a set of records of business transactions, using a bookkeeping machine. Types on forms desired data such as: name, address, items purchased or sold, and services rendered. Determines totals, net amounts, and other items, recording final computations on the form. Performs related clerical duties. May make up bills, invoices, and statements on billing machine. In banking institutions, keeps record of individual customer-accounts by debiting withdrawals and crediting deposits. (DOT Reference —BOOKKEEPING MACHINE OPERATOR: 1-02.01)

CALCULATING-MACHINE OPERATOR: Operates a machine that automatically performs the basic arithmetic computations of adding, subtracting, multiplying, and dividing. May make other calculations. May use different types of calculators such as the Comptometer. (DOT Reference—CALCULATING-MACHINE OPERATOR: 1-25.13)

CASHIER: Keeps a record of cash transactions, receipts, and disbursements incident to the conduct of a business. Enters data to proper accounts and periodically balances cash books. Makes change and cashes checks. In hotels and lodging places records all charges against guests. Receives payment and issues receipts. (DOT Reference—CASHIER: 1-01.52)

DESK-ROOM CLERK: Registers and assigns rooms to incoming guests. Checks out departing guests and may receive payment of their account. Maintains records of their reservations, rooms occupied and guests' accounts. Gives information to guests. In large hotel, refers guests to cashier for payment of bills. (DOT Reference—ROOM CLERK: 1-07.60)

DUPLICATING-MACHINE OPERATOR: Makes duplicate copies of graphs, charts, schedules, bulletins, and similar material using a machine that prints from special metal plates onto a rubber blanket, the ink print then being transferred from the blanket onto the blank sheet of paper (offset principle). May be designated according to trade name of machine operated, such as Multilith operator. (DOT Reference—DUPLICATING-MACHINE OPERATOR: 1-25.23)

GENERAL CLERK-TYPIST: Performs any combination of the following or similar clerical duties: Types, makes up and files reports, tabulates and posts data, takes telephone orders, checks cash registers, gives information to callers, sends out bills, checks calculations, takes inventories, and operates various office machines. (DOT Reference—CLERK-TYPIST: 1-37.34)

KEY-PUNCH OPERATOR: Records statistical data on tabulating cards by punching a series of holes in the cards in a specified sequence, using a punch machine similar in operation and action to a typewriter. May operate verifier and sorter. (DOT Reference—KEY-PUNCH OPERATOR: 1-25.62)

POLICY WRITER-RATER: Transcribes from approved application forms information such as name, age, and address of insured, amount of policy, and premium rate, on blank policies for issue to applicants. Selects correct policy to suit kind of insurance requested. (DOT Reference—POLICY WRITER: 1-37.32)

PROOF-MACHINE OPERATOR: Sorts, records, proves and endorses bank transactions, such as checks, deposits, and withdrawals, using a proof machine. (DOT Reference—PROOF-MACHINE OPERATOR: 1-25.68)

SECRETARY-STENOGRAPHER: Performs general office work in relieving officials of minor executive and clerical duties. Takes and transcribes dictation and types. Makes appointments. Receives people coming into the office. Answers and makes phone calls. Handles personal and important mail, writing routine correspondence on own initiative. Performs other clerical duties as assigned. (DOT Reference—Developed from Job Descriptions of SECRETARY: 1-33.01 and STENOGRAPHER: 1-37.12)

STOCK CLERK: Receives incoming goods. Unpacks and verifies correctness of shipments against bills of lading, invoices and other records. Stores stock in a convenient position for removal when needed. Prepares merchandise for shipment or delivery. May perform part or all of duties required for shipping and receiving merchandise. (DOT Reference—STOCK CLERK: 1-38.01)

TABULATING-MACHINE OPERATOR: Sets up and operates a machine that automatically sorts, analyzes, translates and calculates information contained on punched cards, and prints data on form sheets, cards or accounting records. (DOT Reference—TABULATING-MACHINE OPERATOR: 1-25.64)

TRANSCRIBING-MACHINE OPERATOR: Transcribes the message, reproduced in sound, from the wax record on a transcribing machine, such as a Dictaphone. Types a message as heard in the earphones. (DOT Reference—TRANSCRIBING-MACHINE OPERATOR: 1-37.36)

Sales Occupations

AUTOMOBILE PARTS MAN: Sells automobile parts, and fills requisitions of service department for parts. Gives information concerning specific parts to customer, using catalogs as source of information. Examines defective parts returned by customers to determine cause for the purpose of making replacements or refund. Returns defective parts to factory. Marks and stores parts in stockroom according to prearranged plan. (DOT Reference—SALESPERSON, AUTOMOBILE PARTS: 1-75.22)

SALESMAN, GENERAL: Solicits customers, to demonstrate and sell merchandise such as automobiles, tires, refrigerators, and radios. Usually specializes in one commodity or related groups of commodities. (DOT Reference—SALESMAN, GENERAL (Retail Trade): 1-80.01)

SALESMAN, INSURANCE: Sells various types of insurance to new clients. May collect premiums. May be designated according to kind of insurance sold. (DOT Reference—SALESMAN, INSURANCE: 1-57.10)

SALESMAN, MOTOR VEHICLES AND SUPPLIES: Sells motor vehicles, such as automobiles, trucks, and tractors or supplies and accessories, such as tires, tubes, batteries and parts. Includes route salesmen. (DOT Reference—SALESMAN, MOTOR VEHICLES AND SUPPLIES: 1-85.11)

SALESMAN, SECURITIES: Gives information regarding stocks, bonds, market conditions, and history and prospects of various corporations to prospective customers. Transmits buy or sell orders to trading division in accordance with customers' wishes. (DOT Reference—SALESMAN, SECURITIES: 1-65.03)

SALESPERSON AND SALES CLERK: Displays, explains, and sells merchandise to customers on sales floor. Assists customer in making a selection by suggestions and explanations. May tell or show the customer how to use the article. Writes out sales slip. Receives payment. Cares for stock on sales floor and takes periodic inventories of stock. (DOT Reference—Developed from Job Descriptions of SALESPERSON, GENERAL (Retail Trade): 1-75.71 and SALES CLERK (Retail Trade): 1-70.10)

SALESPERSON, CLOTHING: Displays and sells clothing. Assists customers to make a selection by suggestions and explanations. Advises customer concerning prevailing styles and personal suitability of garments. Arranges for any necessary alterations. Receives payment or secures credit authorization. Takes periodic inventories of stock. (DOT Reference—SALESPERSON, GENERAL (Retail Trade): 1-75.71)

Service Occupations

CHAMBERMAID: Does all general cleaning in motel and hotel rooms. Collects and may count soiled linens. Makes beds. Empties trash from waste baskets. Dusts furniture and woodwork in guest rooms. Replenishes stationery and bathroom supplies. (DOT Reference—CHAMBERMAID: 2-24.11)

CHEF: Estimates consumption of, and orders foodstuffs, and plans menus. Usually supervises and assists several cooks. May decide size of portions. May portion orders and cut meats. In a large establishment the chef's duties are typically limited to supervising and buying food. (DOT Reference—CHEF: 2-26.31)

COOK: Prepares, seasons, and cooks food by appropriate methods. Frequently specializes in roasts and entrees. May be designated according to type of food prepared or meal served, as Cook, Dinner; Cook, Meat; Cook, Night; Cook, Roast. (DOT Reference—COOK: 2-26.32)

COOK, SHORT-ORDER: Prepares, cooks and serves to order all kinds of foods which require only a short time to prepare. (DOT Reference—COOK, SHORT-ORDER: 2-26.33)

HOSTESS: Supervises the activities of waiters and bus boys to insure courteous and rapid service for guests of establishments. Greets patrons and shows them to table. Adjusts complaints concerning food or service. Inspects dining room. May keep time records of employes. (DOT Reference—HOSTESS, RESTAURANT OR COFFEE SHOP: 2-27.14)

HOTEL HOUSEBOY: Performs routine cleaning and heavy lifting duties required in the housekeeping details of a hotel or motel, such as cleaning rugs, carpets and upholstered furniture. Arranges furniture, cleans rooms, lobby, lounges, and public lavatories. Hangs draperies, cleans ashtrays. Sets up sample rooms for salesmen, or decorations or apparatus for social functions. (DOT Reference—HOUSEBOY: 2-24.51)

HOTEL HOUSEKEEPER: Supervises the housekeeping personnel of a hotel or motel and is responsible for the cleanliness, orderliness, and perhaps the decoration of the establishment. May purchase supplies and equipment for housekeeping department. (DOT Reference—HOUSEKEEPER: 2-25.21)

JANITOR-PORTER: Keeps buildings in clean, orderly condition and good state of repair and operates furnaces and boilers to provide heat and hot water for tenants. Sweeps,

mops, and scrubs public halls and stairways. (DOT Reference —Developed from Job Descriptions of JANITOR: 2-84.10 and PORTER (2-86.10)

KITCHEN STEWARD: Assumes responsibility for the maintenance (purchase) of an adequate food supply, the proper storage and issuance of food, and the efficiency of dishwashers, pantry workers, store room help and all other kitchen employees except those actually engaged in cooking. (DOT Reference—STEWARD: 2-25.12)

MAID: Works in a department store, office building or other establishment performing lighter porter duties such as sweeping, running errands, assisting patrons with their wraps, or cleaning and dusting merchandise and furniture. (DOT Reference—MAID: 2-85.15)

WAITRESS-WAITER: Sets tables, serves meals and performs duties incidental to the furnishing of satisfactory service to guests. May remove dirty dishes and clean equipment. (DOT Reference—Developed from Job Descriptions of WAITRESS: 2-27.12 and WAITER, FORMAL: 2-27.02; WAITER, INFORMAL: 2-27.11)

Skilled Occupations

APPLIANCE SERVICE AND REPAIRMAN: Services and repairs more complex electrical appliances such as stoves and refrigerators, and/or repairs small electrical appliances such as irons and toasters. May sell appliances. (DOT Reference—Developed from Job Descriptions of ELECTRICAL APPLIANCE SERVICEMAN: 5-83.041 and SMALL APPLIANCE REPAIRMAN: 7-83.058)

AUTOMOBILE BODY MAN: Repairs dents in automobile and truck bodies and fenders. Hammers out dents. Smoothes hammered area by filing or grinding or sanding it with small electric grinding wheel. Fills badly dented areas with solder, lead or plastic. Welds breaks in metal body and files welds smooth to conform to adjacent areas. May install new fenders, bumpers and other parts of auto body. May paint autos and trucks. (DOT Reference—AUTOMOBILE BODY REPAIRMAN, METAL: 5-81.510)

AUTOMOBILE-TRUCK MECHANIC: Overhauls and repairs automobiles and trucks. Performs such tasks as overhauling and assembling engines, transmissions, clutches, and differentials. Replaces broken or worn parts. Checks and repairs fuel systems, electrical and ignition assemblies, steering mechanisms, cranking systems, generating systems, suspension and general power train components. (DOT Reference—AUTOMOBILE MECHANIC: 5-81.010)

BAKER: Produces finished baked goods, such as bread, pies, cakes and other pastries. Measures and mixes ingredients, forms dough, and bakes products in oven. (DOT Reference—BAKER: 4-01.100)

BRAKEMAN: Tests and adjusts brakes, and repairs and relines them. May aline wheels. May repair shock absorbers. (DOT Reference—BRAKEMAN: 5-81.120)

DIESEL MECHANIC: Maintains and repairs diesel engines used to power such equipment as trucks, busses, construction machinery and pumps. (DOT Reference—DIESEL MECHANIC: 5-83.931)

FRONT-END MAN: Tests for and corrects faulty alinement of automobile and truck frames, wheels, axles, and steering mechanisms. May adjust brakes. (DOT Reference—WHEEL-ALINEMENT MECHANIC: 5-81.210)

MACHINIST, AUTOMOBILE: Makes machines and repairs automobile engine parts by setting up and operating various kinds of special or general metalworking machines, such as lathes, piston grinding-and-turning machines and valve grinding machines. (DOT Reference—MACHINIST, AUTOMOBILE: 4-75.010)

MAINTENANCE MAN, BUILDING: Keeps the physical structure of an office building, apartment house, hotel, or similar structure in good repair, performing painting, carpentry and other maintenance duties. (DOT Reference—MAINTENANCE MAN, BUILDING: 5-83.611)

PAINTER, AUTOMOBILE-TRUCK: Repaints automobiles, busses, trucks, or damaged places on such vehicles. Removes old paint. Masks portions not to be painted. Sandpapers rough spots. Prepares paints. Paints automobile, insuring that all surfaces are evenly coated with paint. Touches up inaccessible spots with handbrush. May do some body repair work other than painting. (DOT Reference—PAINTER, AUTOMOBILE: 5-16.910)

PIANO TUNER: Tests and adjusts the strings in a piano so that they will conform with the accepted standards for pitch and will sound harmoniously when played. May replace broken strings or perform other piano repairs. (DOT Reference—PIANO TUNER: 5-12.100)

RADIO REPAIRMAN: Tests and repairs defective radios. Tests circuits, tubes, and other parts, using various testing meters and devices. Isolates defects, and either fixes them or replaces defective parts with new ones. Resolders loose connections. May install radios in automobiles. (DOT Reference—RADIO REPAIRMAN: 5-83.411)

RADIO/TV SERVICE AND REPAIRMAN: Tests and repairs defective radios and television sets. May install television sets. (DOT Reference—Developed from Job Descriptions of RADIO REPAIRMAN: 5-83.411 and TELEVISION SERVICE AND REPAIRMAN: 5-83.416)

SEAMSTRESS-ALTERATION WOMAN: Fits ready-to-wear clothing to customers by performing cutting and sewing operations such as cuffing, lengthening or shortening sleeves, taking in or letting out collars, and other alterations. Performs various fitting, measuring and sewing operations to repair garments. (DOT Reference—SEAMSTRESS: 4-25.020)

SEWING-MACHINE REPAIRMAN: Inspects, lubricates, adjusts and repairs sewing machines. May work in repair shop or provide home service. May sell sewing machines. (DOT Reference—SEWING-MACHINE REPAIRMAN: 5-83.641)

TV SERVICE AND REPAIRMAN: Repairs and adjusts television receivers. Tunes receiver over all channels noting audio and video characteristics to analyze source of defect. Adjusts controls. Inspects chassis. Repairs or replaces parts. Explains proper method of operating set to customer. May install sets. May sell sets. (DOT Reference—TELEVISION SERVICE AND REPAIRMAN: 5-83.416)

UPHOLSTERER-TRIMMER, AUTOMOBILE: Repairs or replaces upholstery and fabric tops of automobiles and trucks. May make other minor repairs tc doors, windows and other interior furnishings. (DOT Reference—AUTOMOBILE UPHOLSTERER: 4.35.610)

Semiskilled Occupations

AUTOMOBILE-TRUCK MECHANIC HELPER: Assists journeyman automobile mechanic in all phases of automobile repair and maintenance. Performs lesser skilled duties making minor repairs and adjustments under the close supervision of a skilled automobile mechanic. (DOT Reference—AUTOMOBILE MECHANIC HELPER: 7-81.010)

DIESEL MECHANIC HELPER: Assists journeyman diesel mechanic in all phases of diesel repair and service. (DOT reference—TRUCK-MECHANIC HELPER: 7-81.030)

SERVICE STATION ATTENDANT: Performs duties at automobile service station as requested by customer. Supplies car or truck with oil, water, air, and gasoline. Changes oil and lubricates automobile or truck. Sells and installs such accessories as windshield wipers, rear-view mirrors, and spark plugs. May make minor repairs. Changes and repairs tires. May wash cars. (DOT Reference—AUTOMOBILE-SERVICE STATION ATTENDANT: 7-60.500)

APPENDIX B

Additional Tables

TABLE XV: JOB OPPORTUNITIES ANTICIPATED BY THE FALL OF 1964

Occupational Title	Employment During Fall of 1963	Anticipated By Fall of 1964		Worker Demand By Fall of 1964			Worker Supply By Fall of 1964 From On-The-Job Training	Net Additional Requirements By Fall of 1964
		Employment	Per Cent Increase	Expansion	Replacement	Total New Job Opportunities		
ALL OCCUPATIONS	96,922	104,578	7.9	7,656	4,215	11,871	4,213	7,658
CLERICAL—TOTAL	27,230	28,945	6.3	1,715	1,308	3,023	1,386	1,637
Accounting Clerk	1,524	1,699	11.5	175	73	248	85	163
Bank Teller	3,855	4,088	6.0	233	322	555	345	210
Bookkeeper	4,091	4,163	1.8	72	137	209	75	134
Bookkeeping Machine Operator	1,804	1,821	0.9	17	79	96	153	—57
Calculating Machine Operator	133	137	3.0	4	12	16	10	6
Cashier	3,239	3,431	5.9	192	105	297	56	241
Desk—Room Clerk	788	805	2.2	17	47	64	38	26
Duplicating Machine Operator	100	105	5.0	5	5	10	11	—1
General Clerk-Typist	4,161	4,570	9.8	409	190	599	251	348
Key Punch Operator	342	437	27.8	95	25	120	52	68
Policy Writer—Rater	918	980	6.8	62	32	94	48	46
Proof-Machine Operator	711	726	2.1	15	36	51	60	—9
Secretary—Stenographer	3,607	3,877	7.5	270	135	405	134	271
Stock Clerk	1,521	1,631	7.2	110	68	178	38	140
Tabulating Machine Operator	183	204	11.5	21	19	40	13	27
Transcribing Machine Operator	253	271	7.1	18	23	41	17	24
SALES—TOTAL	31,382	33,925	8.1	2,543	1,097	3,640	1,500	2,140
Auto Parts Man	3,153	3,376	7.1	223	92	315	53	262
Salesman, General	6,476	7,282	12.4	806	207	1,013	223	790
Salesman, Insurance	5,799	6,487	11.9	688	359	1,047	779	268
Salesman, Motor Vehicles	1,082	1,210	11.8	128	35	163	6	157
Salesman, Securities	374	404	8.0	30	20	50	20	30
Salesperson and Sales Clerk	9,393	9,741	3.7	348	232	580	272	308
Salesperson, Clothing	5,105	5,425	6.3	320	152	472	147	325
SERVICE—TOTAL	21,515	23,016	7.0	1,501	1,071	2,572	759	1,813
Chambermaid	1,467	1,584	8.0	117	80	197	87	110
Chef	591	616	4.2	25	26	51	20	31
Cook	2,867	3,075	7.3	208	121	329	70	259

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TABLE XV: JOB OPPORTUNITIES ANTICIPATED BY THE FALL OF 1964—Continued

Occupational Title	Employment During Fall of 1963	Anticipated By Fall of 1964		Worker Demand By Fall of 1964			Worker Supply By Fall of 1964 From On-The-Job Training	Net Additional Requirements By Fall of 1964
		Employment	Per Cent Increase	Expansion	Replacement	Total New Job Opportunities		
SERVICE—Continued								
Cook, Short-Order	2,076	2,299	10.7	223	104	327	94	233
Hostess	327	351	7.3	24	28	52	13	39
Hotel Houseboy	274	288	5.1	14	25	39	0	39
Hotel Housekeeper	294	328	11.6	34	3	37	25	12
Janitor—Porter	2,838	2,942	3.7	104	157	261	79	182
Kitchen Steward	591	653	10.5	62	23	85	15	70
Maid	733	749	2.2	16	12	28	5	23
Waitress—Waiter	9,457	10,131	7.1	674	492	1,166	351	815
SKILLED—TOTAL	12,449	14,173	13.8	1,724	549	2,273	444	1,829
Appliance Service and Repairman	474	507	7.0	33	19	52	27	25
Auto Body Man	1,635	1,829	11.9	194	52	246	61	185
Auto-Truck Mechanic	5,639	6,675	18.4	1,036	291	1,327	208	1,119
Baker	307	327	6.5	20	17	37	22	15
Brakeman	334	379	13.5	45	1	46	29	17
Diesel Mechanic	166	201	21.1	35	6	41	1	40
Front End Man	850	973	14.5	123	23	146	11	135
Machinist, Automobile	426	482	13.1	56	12	68	22	46
Maintenance Man, Building	294	305	3.7	11	28	39	1	38
Painter, Automobile	378	397	5.0	19	7	26	15	11
Piano Tuner	31	42	35.5	11	2	13	0	13
Radio Repairman	59	70	18.6	11	6	17	4	13
Radio/TV Service and Repairman	267	301	12.7	34	7	41	15	26
Seamstress—Alteration Woman	1,299	1,354	4.2	55	75	130	18	112
Sewing Machine Repairman	68	80	17.6	12	0	12	0	12
TV Service and Repairman	84	108	28.6	24	0	24	7	17
Upholsterer—Trimmer	138	143	3.6	5	3	8	3	5
SEMISKILLED—TOTAL	4,346	4,519	4.0	173	190	363	124	239
Auto-Truck Mechanic Helper	1,333	1,407	5.6	74	57	131	60	71
Diesel Mechanic Helper	15	56	273.3	41	0	41	0	41
Service Station Attendant	2,998	3,056	1.9	58	133	191	64	127

EMPLOYMENT SECURITY COMMISSION OF NORTH CAROLINA

TABLE XVI: AREA NET ADDITIONAL WORKER REQUIREMENTS BY THE FALL OF 1964[1]

Occupations	Statewide	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6
ALL OCCUPATIONS	7,658	1,140	1,537	1,766	1,499	596	1,120
CLERICAL—TOTAL	1,637	124	285	538	413	112	165
Accounting Clerk	163	13	8	65	43	14	20
Bank Teller	210	32	51	40	14	44	29
Bookkeeper	134	23	34	32	12	4	29
Bookkeeping Machine Operator	−57	−55	9	0	2	−5	−8
Calculating Machine Operator	6	0	1	5	0	0	0
Cashier	241	13	49	68	48	11	52
Desk—Room Clerk	26	−4	5	12	15	9	−11
Duplicating Machine Operator	−1	1	0	−1	−1	0	0
General Clerk-Typist	348	35	48	104	136	12	13
Key-Punch Operator	68	1	10	12	41	−2	6
Policy Writer—Rater	46	1	2	22	21	0	0
Proof-Machine Operator	−9	6	0	−9	−3	−3	0
Secretary—Stenographer	271	39	31	116	46	22	17
Stock Clerk	140	17	22	41	38	4	18
Tabulating Machine Operator	27	2	11	6	6	2	0
Transcribing Machine Operator	24	0	4	11	9	0	0
SALES—TOTAL	2,140	355	360	463	419	160	392
Auto Parts Man	262	23	39	48	58	28	66
Salesman, General	790	141	138	141	120	95	155
Salesman, Insurance	268	8	−51	57	124	12	118
Salesman, Motor Vehicles	157	15	46	57	13	13	15
Salesman, Securities	30	2	9	19	0	0	0
Salesperson and Sales Clerk	308	106	54	127	−10	8	23
Salesperson, Clothing	325	60	125	14	105	4	17
SERVICE—TOTAL	1,813	277	488	384	364	106	194
Chambermaid	110	22	29	16	18	10	15
Chef	31	8	−6	22	5	2	0
Cook	259	41	107	17	44	22	28

[1] Expansion needs plus replacement needs minus on-the-job training.

SEE NEXT PAGE

TABLE XVI: AREA NET ADDITIONAL WORKER REQUIREMENTS BY THE FALL OF 1964—Continued[1]

Occupations	Statewide	Area 1	Area 2	Area 3	Area 4	Area 5	Area 6
SERVICE—Continued							
Cook—Short Order	233	36	65	61	21	16	34
Hostess	39	5	2	12	5	6	9
Hotel Houseboy	39	0	7	7	17	0	8
Hotel Housekeeper	12	6	10	—5	3	1	—3
Janitor—Porter	182	14	48	59	31	8	22
Kitchen Steward	70	13	33	17	6	—3	4
Maid	23	1	3	5	8	1	5
Waitress—Waiter	815	131	190	171	206	43	74
SKILLED—TOTAL	1,829	357	342	367	280	191	292
Appliance Service & Repairman	25	0	7	4	0	5	9
Auto Body Man	185	34	37	28	29	30	27
Auto-Truck Mechanic	1,119	219	205	222	170	114	189
Baker	15	7	0	—4	7	3	2
Brakeman	17	7	0	5	0	7	—2
Diesel Mechanic	40	4	9	3	23	1	0
Front End Man	135	27	18	15	20	23	32
Machinist, Automobile	46	16	5	11	3	0	11
Maintenance Man, Building	38	12	8	10	4	4	0
Painter, Automobile	11	4	1	3	0	—1	4
Piano Tuner	13	3	0	6	3	0	1
Radio Repairman	13	3	1	2	1	0	6
Radio/TV Service and Repairman	26	11	4	8	0	2	1
Seamstress, Alteration Woman	112	4	39	38	21	1	9
Sewing Machine Repairman	12	0	1	13	—4	0	2
TV Service and Repairman	17	6	7	1	2	2	—1
Upholsterer—Trimmer	5	0	0	2	1	0	2
SEMISKILLED—TOTAL	239	27	62	14	32	27	77
Auto-Truck Mechanic Helper	71	2	24	3	6	4	32
Diesel Mechanic Helper	41	4	18	2	13	2	2
Service Station Attendant	127	21	20	9	13	21	43

[1] Expansion needs plus replacement needs minus on-the-job training.

TABLE XVII: EMPLOYMENT DISTRIBUTION IN SURVEYED OCCUPATIONS, BY SEX
FALL OF 1963

Surveyed Occupation	Employment During Fall of 1963	Male		Female	
		Number Employed	Per Cent	Number Employed	Per Cent
ALL OCCUPATIONS	96,922	47,396	48.9	49,526	51.1
CLERICAL—TOTAL	27,230	4,400	16.2	22,830	83.8
Accounting Clerk	1,524	300	19.7	1,224	80.3
Bank Teller	3,855	653	16.9	3,202	83.1
Bookkeeper	4,091	1,009	24.7	3,082	75.3
Bookkeeping Machine Operator	1,804	145	8.0	1,659	92.0
Calculating Machine Operator	133	4	3.0	129	97.0
Cashier	3,239	325	10.0	2,914	90.0
Desk—Room Clerk	788	431	54.7	357	45.3
Duplicating Machine Operation	100	65	65.0	35	35.0
General Clerk-Typist	4,161	126	3.0	4,035	97.0
Key Punch Operator	342	22	6.4	320	93.6
Policy Writer—Rater	918	48	5.2	870	94.8
Proof Machine Operator	711	64	9.0	647	91.0
Secretary—Stenographer	3,607	0	——	3,607	100.0
Stock Clerk	1,521	1,136	74.7	385	25.3
Tabulating Machine Operator	183	72	39.3	111	60.7
Transcribing Machine Operator	253	0	——	253	100.0
SALES—TOTAL	31,382	19,893	63.4	11,489	36.6
Automobile Parts Man	3,153	3,141	99.6	12	0.4
Salesman, General	6,476	6,440	99.4	36	0.6
Salesman, Insurance	5,799	5,622	96.9	177	3.1
Salesman, Motor Vehicles and Supplies	1,082	1,082	100.0	0	——
Salesman, Securities	374	351	93.9	23	6.1
Salesperson and Sales Clerk	9,393	1,926	20.5	7,467	79.5
Salesperson, Clothing	5,105	1,331	26.1	3,774	73.9
SERVICE—TOTAL	21,515	7,755	36.0	13,760	64.0
Chambermaid	1,467	0	——	1,467	100.0
Chef	591	480	81.2	111	18.8
Cook	2,867	1,316	45.9	1,551	54.1

SEE NEXT PAGE

TABLE XVII: EMPLOYMENT DISTRIBUTION IN SURVEYED OCCUPATIONS, BY SEX—Continued
FALL OF 1963

Surveyed Occupation	Employment During Fall of 1963	Male		Female	
		Number Employed	Per Cent	Number Employed	Per Cent
SERVICE—Continued					
Cook, Short Order	2,076	1,390	67.0	686	33.0
Hostess	327	88	26.9	239	73.1
Hotel Houseboy	274	274	100.0	0	——
Hotel Housekeeper	294	11	3.7	283	96.3
Janitor—Porter	2,838	2,308	81.3	530	18.7
Kitchen Steward	591	302	51.1	289	48.9
Maid	733	0	——	733	100.0
Waitress—Waiter	9,457	1,586	16.8	7,871	83.2
SKILLED—TOTAL	12,449	11,002	88.4	1,447	11.6
Appliance Service and Repairman	474	474	100.0	0	——
Auto Body Man	1,635	1,635	100.0	0	——
Auto-Truck Mechanic	5,639	5,639	100.0	0	——
Baker	307	109	35.5	198	64.5
Brakeman	334	334	100.0	0	——
Diesel Mechanic	166	166	100.0	0	——
Front-End Man	850	850	100.0	0	——
Machinist, Automobile	426	426	100.0	0	——
Maintenance Man—Building	294	294	100.0	0	——
Painter, Automobile-Truck	378	378	100.0	0	——
Piano Tuner	31	31	100.0	0	——
Radio Repairman	59	59	100.0	0	——
Radio/TV Service and Repairman	267	267	100.0	0	——
Seamstress—Alteration Woman	1,299	50	3.8	1,249	96.2
Sewing Machine Repairman	68	68	100.0	0	——
TV Service and Repairman	84	84	100.0	0	——
Upholsterer—Trimmer	138	138	100.0	0	——
SEMISKILLED—TOTAL	4,346	4,346	100.0	0	——
Auto-Truck Mechanic Helper	1,333	1,333	100.0	0	——
Diesel Mechanic Helper	15	15	100.0	0	——
Service Station Attendant	2,998	2,998	100.0	0	——

TABLE XVIII: SAMPLE FIRM EMPLOYERS INDICATING INTEREST IN INSTITUTIONAL TRAINING

Do you think institutional training through an industrial education center would help you in meeting your employment needs for this occupation?[1]

Occupational Title	Per Cent of Employers Responding "Yes"	Per Cent of Employers Responding "No"
ALL OCCUPATIONS	63.7	36.3
CLERICAL—TOTAL	59.5	40.5
Accounting Clerk	51.5	48.5
Bank Teller	36.1	63.9
Bookkeeper	60.0	40.0
Bookkeeping Machine Operator	64.1	35.9
Calculating Machine Operator	40.0	60.0
Cashier	50.0	50.0
Desk—Room Clerk	64.6	35.4
Duplicating Machine Operator	73.7	26.3
General Clerk-Typist	56.0	44.0
Key-Punch Operator	74.4	25.6
Policy Writer—Rater	35.0	65.0
Proof-Machine Operator	48.8	51.2
Secretary—Stenographer	56.5	43.5
Stock Clerk	59.8	40.2
Tabulating Machine Operator	67.9	32.1
Transcribing Machine Operator	59.1	40.9
SALES—TOTAL	60.3	39.7
Auto Parts Man	70.2	29.8
Salesman, General	63.1	36.9
Salesman, Insurance	29.3	70.7
Salesman, Motor Vehicles	62.5	37.5
Salesman, Securities	20.0	80.0
Salesperson and Sales Clerk	57.7	42.3
Salesperson, Clothing	60.0	40.0
SERVICE—TOTAL	51.1	48.9
Chambermaid	42.1	57.9
Chef	44.4	55.6
Cook	50.0	50.0
Cook—Short Order	74.7	25.3
Hostess	62.7	37.3
Hotel Houseboy	33.0	67.0
Hotel Housekeeper	47.8	52.2
Janitor—Porter	34.6	65.4
Kitchen Steward	63.0	37.0
Maid	24.3	75.7
Waitress—Waiter	61.0	39.0
SKILLED—TOTAL	81.8	18.2
Appliance Service & Repairman	83.3	16.7
Auto Body Man	89.0	11.0
Auto-Truck Mechanic	91.3	8.7
Baker	75.9	24.1
Brakeman	72.2	27.8
Diesel Mechanic	67.2	32.8
Front End Man	83.5	16.5
Machinist, Automobile	85.3	14.7
Maintenance Man, Building	60.0	40.0
Painter, Automobile	75.4	24.6
Piano Tuner	77.8	22.2
Radio Repairman	92.3	7.7
Radio/TV Service & Repairman	93.3	6.7
Seamstress, Alteration Woman	65.5	34.5
Sewing Machine Repairman	50.0	50.0
TV Service and Repairman	88.9	11.1
Upholsterer—Trimmer	71.4	28.6
SEMISKILLED—TOTAL	73.0	27.0
Auto-Truck Mechanic Helper	80.2	19.8
Diesel Mechanic Helper	42.9	57.1
Service Station Attendant	64.0	36.0

[1] Item J of the survey questionnaire which is shown in Appendix C.

APPENDIX C

Survey Methodology and Scope

SURVEY METHODOLOGY AND SCOPE

The scope of the survey included 17 industry segments and was limited to those firms insured by the North Carolina Employment Security Law. A stratified random sampling technique was used in sample selection. Each industry segment was treated separately with respect to firm selection and inflation of data. The sample was selected from lists of insured firms in March, 1963, in the 17 segments studied. Samples were drawn from industry lists of firms arranged in descending employment size. The sample coverage included all the largest firms and a lesser random representation of smaller establishments. Industry sample selection ranged from 54 to 68 per cent of employment. Of the 2,000 covered establishments selected for the total sample, more than 1,440 returned usable survey questionnaires, accounting for about 48,500 workers or slightly less than 40 per cent of the Statewide total covered employment in the 17 surveyed segments. Sample data were inflated to provide estimates for all covered employment in surveyed industries.

Estimates of replacement requirements are based on prior employer experience and reflect only replacement needs resulting from death, retirement, promotion and other labor force withdrawals; but, do not include job shifting.

The initial survey package mailed to employers included an introductory letter, two copies of the survey questionnaire, a list of occupations with descriptions, and a pre-addressed return envelope. After a two-week period, if a response was lacking, a second request letter was mailed with one copy of the survey questionnaire and a return envelope. Copies of the questionnaire and letters are shown on pages 68 and 69.

Realizing that no employer can forecast precisely the number and types of workers his company will require on a given date in the future, forecasts were requested by the fall of 1964, and by the fall of 1966. If employers did not estimate future company or occupational employment, survey period employment figures were carried over to the two forecast periods, and it was assumed that the employment for that particular company would remain the same.

Included in the list of occupations surveyed were 13 occupations which generally crossed industry lines. These jobs were included in all industry segments surveyed. The remaining occupations were characteristic of a specific industry or industries and were surveyed from lists of occupations especially prepared for use in appropriate industries.

The 54 offices of the North Carolina Employment Security Commission were provided with instructions for completing survey questionnaires, and local office personnel assisted employers in completing the forms when called upon to do so.

Responding employers mailed questionnaires directly to the State Office. Each questionnaire was carefully edited. Questionnaires which could not be used were mailed to area Labor Market Analysts for follow-up. Data were tabulated by the Commission's Department of Data Processing. Stratified sample findings were inflated independently for each industry segment studied, to arrive at universe totals.

SURVEY PLANNING AND EMPLOYER REACTIONS

The following information was obtained by four Labor Market Analysts who personally contacted officials of 80 establishments representing 20 types of nonmanufacturing industries. These establishments are listed on the inside of the front cover. These contacts were made during August of 1963. The purpose of these visits was to validate the wisdom of industrial and occupational selection and the suitability of the proposed mail questionnaire, and to ascertain whether the survey could be conducted without benefit of personal interviews, job definitions, or further instructions.

Employers interviewed were very cooperative, furnished the information requested, and commented frequently on various aspects of the impending mail-type survey effort. As a result of this survey planning, three industries were excluded. A few occupations were combined and other occupations were added to the survey list. The survey questionnaire was revised and an effort was made to fit occupations more closely to specific industries by compiling a separate list of occupations for each industry surveyed. Employers suggested that a list of job descriptions be included with each initial survey questionnaire mailed.

Employers visited expressed interest in needs for basic vocational training to better prepare job applicants for meeting the requirements of business. Informal on-the-job training for new workers was the common practice. In the 80 establishments visited, formal training programs were provided for only 11 of the surveyed occupations. On the trial run, more than 60 per cent of the responses showed employers had difficulty in recruiting workers for surveyed occupations.

Employers expressed great needs for trained salesmen and sales clerks who have the necessary desire, aptitude and personal attributes. General training would be supplemented by specific training by employers.

Restaurant owners saw a need for short training periods for waitresses in table setting, serving, and speech and manner. They said that good cooks were always in demand, and that the quality of personnel now employed could be improved by courses sponsored by Industrial Education Centers.

According to these employers, institutional training for persons entering any type of occupation requiring mechanical skills would greatly benefit both the worker and the employer.

Sixty of the 80 employers contacted favored institutional training to help meet future employment needs. Major occupational groups were ranked by employers in the following order, according to the need for institutional training:

1. Skilled
2. Clerical
3. Sales
4. Service
5. Semiskilled

Employers who were interviewed recommended institutional training for from six to 24 months in the skilled occupations surveyed, two weeks to 12 months in service occupations, and from one to 12 months in clerical and sales occupations.

Major occupational groups were ranked by employers in the following order, according to difficulty in recruiting workers:

1. Skilled
2. Sales
3. Service
4. Clerical
5. Semiskilled

Employers believe that the future installation of data processing equipment will replace some clerical workers especially in the banking industry. The use of computer systems, however, is expected to bring into being new occupations.

EMPLOYMENT SECURITY COMMISSION OF NORTH CAROLINA

BUREAU OF EMPLOYMENT SECURITY RESEARCH - P. O. BOX 589, RALEIGH, NORTH CAROLINA

CENTRAL OFFICE USE

(1) INDEX 1603

(2) SIC 531

(3) SIZE 1

(4) COUNTY 60

(5) AREA 2

CONFIDENTIAL REPORT ON MANPOWER AND TRAINING NEEDS

PLEASE COMPLETE THE ITEMS TO THE RIGHT AND BELOW →

PLEASE MAKE AN ENTRY IN EACH COLUMN FOR EACH OCCUPATION LISTED BELOW IN WHICH YOU NOW EMPLOY WORKERS OR IN WHICH YOU EXPECT TO EMPLOY WORKERS BY THE FALL OF 1964 OR BY THE FALL OF 1966.

COMPANY EMPLOYMENT

(6)	TOTAL NUMBER OF PERSONS ON YOUR PAYROLL MARCH, 1963	530
(7)	TOTAL NUMBER OF PERSONS ON YOUR PAYROLL NOW	570
(8)	TOTAL NUMBER OF PERSONS YOU ESTIMATE WILL BE ON YOUR PAYROLL ONE YEAR FROM NOW *	595
(9)	TOTAL NUMBER OF PERSONS YOU ESTIMATE WILL BE ON YOUR PAYROLL 3 YEARS FROM NOW *	690

OCCUPATIONAL EMPLOYMENT

NO.	OCCUPATION	WE EMPLOY THIS MANY WORKERS IN THIS OCCUPATION NOW (EXCLUDE TRAINEES) MALE	FEMALE	WE ARE NOW RECRUITING THIS MANY ADDITIONAL WORKERS FOR THIS OCCUPATION (CURRENT JOB VACANCIES)	WE EXPECT TO HAVE THIS MANY WORKERS EMPLOYED IN THIS OCCUPATION ONE YEAR FROM NOW (FALL OF 1964 *)	WE EXPECT TO HAVE THIS MANY WORKERS EMPLOYED IN THIS OCCUPATION 3 YEARS FROM NOW (FALL OF 1966 *)	WE LOST THIS MANY WORKERS IN THIS OCCUPATION LAST YEAR DUE TO DEATH, RETIREMENT, AND PROMOTION. EXCLUDE ALL OTHERS (LAST COMPLETE YEAR)	WE HAVE OUR OWN TRAINING PROGRAM AND PLAN TO TRAIN THIS MANY NEW WORKERS IN THIS OCCUPATION BY: (ONE YEAR FROM NOW)	WE EXPECT TO TRAIN THIS MANY NEW WORKERS IN THIS OCCUPATION BY: (THREE YEARS FROM NOW)	DO YOU THINK INSTITUTIONAL TRAINING THROUGH AN INDUSTRIAL EDUCATION CENTER WOULD HELP YOU IN MEETING YOUR EMPLOYMENT NEEDS FOR THIS OCCUPATION?
	A	B	C	D	E	F	G	H	I	J
39	SALESMAN, GENERAL	40	0	2	42	45	1	1	5	Yes
42	SALESPERSON AND SALES CLERK	120	190	10	360	375	5	4	10	Yes
44	SEAMSTRESS - ALTERATION WOMAN	1	1	0	2	2	0	0	0	No
45	SECRETARY-STENOGRAPHER	0	1	0	1	1	0	0	0	Yes
23	GENERAL CLERK-TYPIST	0	15	0	15	16	2	0	0	No
13	CASHIER	0	11	0	12	13	1	0	0	No
09	BOOKKEEPER	0	12	0	13	14	2	0	0	Yes
10	BOOKKEEPING-MACHINE OPERATOR	0	3	0	3	3	1	0	0	Yes
01	ACCOUNTING CLERK	0	3	0	4	5	1	0	0	Yes
50	TRANSCRIBING-MACHINE OPERATOR									
12	CALCULATING-MACHINE OPERATOR	0	1	0	1	2	0	0	0	No
02	APPLIANCE SERVICE AND REPAIRMAN									
37	RADIO REPAIRMAN									
51	T.V. SERVICE AND REPAIRMAN									
38	RADIO/T.V. SERVICE AND REPAIRMAN									
48	STOCK CLERK	5	0	0	6	7	0	0	0	No
16	COOK	2	0	0	2	2	0	0	0	Yes
53	WAITRESS - WAITER	0	2	0	2	2	0	0	0	Yes
27	JANITOR - PORTER	10	0	0	10	10	1	0	0	No
31	MAID	0	2	0	2	2	0	0	0	No

* IN MAKING ESTIMATIONS OF FUTURE EMPLOYMENT REQUIREMENTS, IT SHOULD BE ASSUMED THAT CURRENT ECONOMIC CONDITIONS WILL CONTINUE WITHOUT SIGNIFICANT CHANGE THROUGH 1966.

PLEASE RETURN THIS FORM WITHIN 2 WEEKS USING THE ENCLOSED SELF-ADDRESSED, POSTPAID ENVELOPE

If there are questions, please contact the nearest Employment Security Commission office.

Signed John Employer (NAME OF PERSON COMPLETING FORM) — Manager (TITLE) — October 10, 1963 (DATE)

EMPLOYMENT SECURITY COMMISSION
OF
NORTH CAROLINA

P. O. BOX 589
RALEIGH, NORTH CAROLINA 27602

COMMISSIONERS
HENRY E. KENDALL, CHAIRMAN
BILLY EARL ANDREWS
R. DAVE HALL
THOMAS S. O'CONNOR
W. BENTON PIPKIN
J. W. SEABROOK
HORACE E. STACY, JR.

Mr. John Employer
North Carolina Services, Incorporated
1964 Trade Street
Statewide, North Carolina

Dear Sir:

In planning programs for providing training in shortage occupations, State agencies engaged in vocational education must have current information relative to occupations in which qualified workers are most needed. Furthermore, this type of occupational information is important to youth interested in making informed career choices, to unemployed persons seeking job opportunities and to employers in planning for their own future occupational needs.

In order to identify those occupational areas in which vocational training programs would be beneficial to you and other employers, and to individuals in need of training, the Employment Security Commission in cooperation with the State Board of Education is undertaking a statewide study of selected nonmanufacturing industries, of which your business is a part.

You, as a representative employer, can contribute to this study by completing the enclosed questionnaire and returning it, as soon as possible, in the post-paid, pre-addressed envelope provided. A duplicate of the survey form is enclosed for your use and your files.

The information which you furnish will be held strictly confidential - no individual employer will be identified. A copy of the survey results will be mailed to you when the study is completed in early 1964.

May we express our appreciation for your participation in this occupational survey.

Sincerely,

Henry E. Kendall
Chairman

Enclosure

EMPLOYMENT SECURITY COMMISSION
OF
NORTH CAROLINA

COMMISSIONERS
HENRY E. KENDALL, CHAIRMAN
BILLY EARL ANDREWS
R. DAVE HALL
THOMAS S. O'CONNOR
W. BENTON PIPKIN
J. W. SEABROOK
HORACE E. STACY, JR.

P. O. BOX 589
RALEIGH, NORTH CAROLINA 27602

Mr. John Employer
North Carolina Services, Incorporated
1964 Trade Street
Statewide, North Carolina

Dear Sir:

Recently we sent you a questionnaire seeking labor market information for selected occupations.

In case your form has been misplaced, we are enclosing another and request that you complete and mail it to us in the self-addressed envelope which requires no postage.

We assure you that all information furnished will be treated confidentially, and that all data will be combined in a composite study to be used by employers, school authorities, vocational counselors and others.

Your reply is most important because the accuracy of our findings depends on the response of each individual employer. If you have already returned your questionnaire, please disregard this letter.

Sincerely,

Henry E. Kendall
Chairman

closure

TRAINING INSTITUTION LOCATIONS

COMMUNITY COLLEGES

Charlotte
Elizabeth City
Southern Pines

TECHNICAL INSTITUTES

Asheville
Burlington
Fayetteville
Goldsboro
Newton
Salisbury
Wilson
Winston-Salem

PLANNED COMMUNITY COLLEGES AND TECHNICAL INSTITUTES

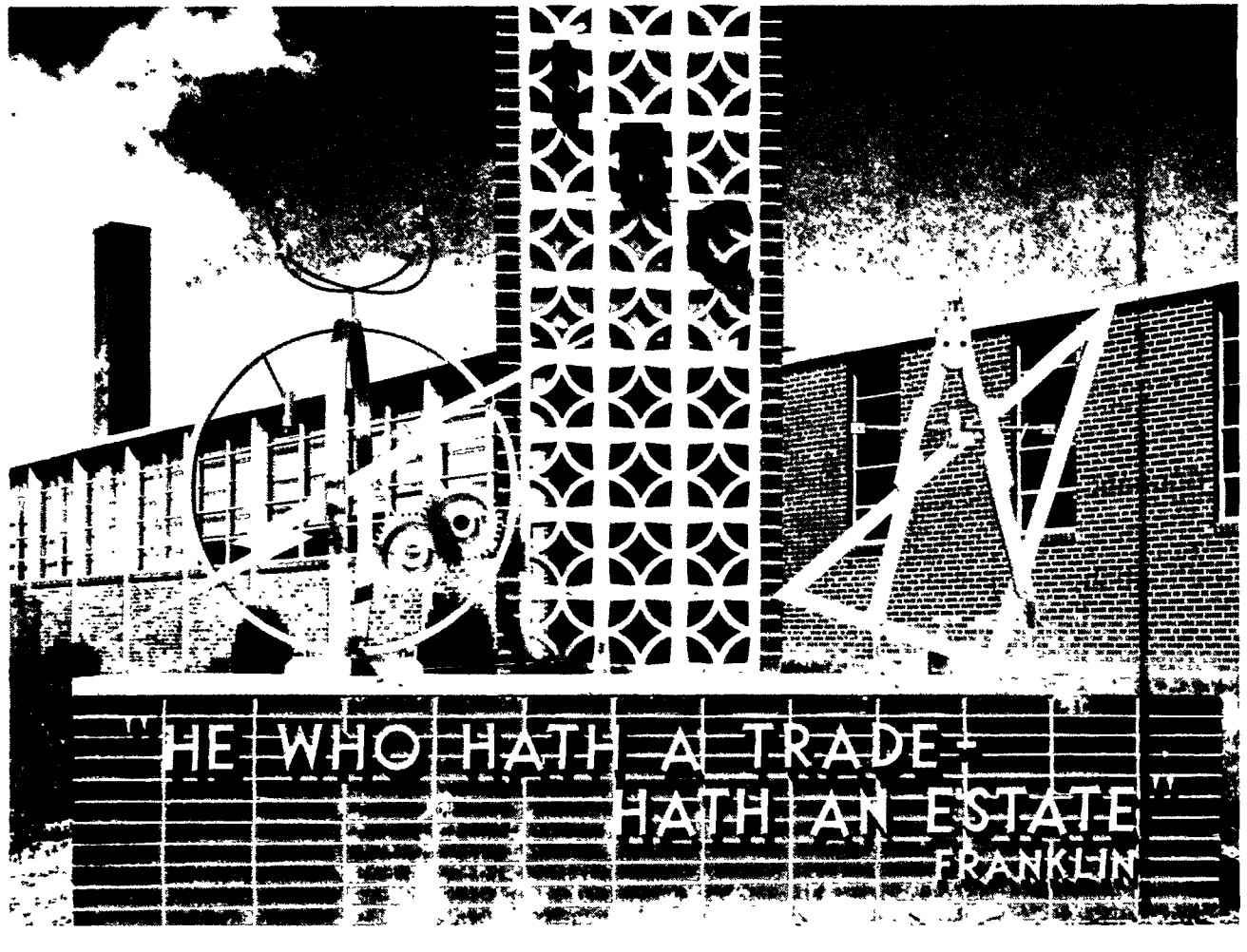
Burke County
Caldwell County
Columbus County
Richmond County
Rockingham County
Surry County

INDUSTRIAL EDUCATION CENTERS

Asheboro
Durham
Gastonia
Greenville
Jamestown
Kinston
Lexington
Raleigh
Sanford
Spray
Wilmington

UNITS

Ansonville
Avondale
Bayboro
Jacksonville
Kenansville
Marion
Morehead City
Rose Hill
Sylva
Washington



EMPLOYMENT SECURITY COMMISSION OFFICE LOCATIONS

Albemarle
Asheboro
Asheville
Bryson City
Burlington
Charlotte
Concord
Durham
Edenton
Elizabeth City
Fayetteville
Forest City
Gastonia
Goldsboro
Greensboro
Greenville
Henderson
Hendersonville
Hickory
High Point
Jacksonville
Kannapolis
Kinston
Lenoir
Lexington
Lincolnton
Lumberton
Marion
Monroe
Morehead City
Morganton
Mount Airy
Murphy
New Bern
Newton
North Wilkesboro
Raleigh
Reidsville
Roanoke Rapids
Rockingham
Rocky Mount
Salisbury
Sanford
Shelby
Spray
Spruce Pine
Statesville
Thomasville
Washington
Waynesville
Williamston
Wilmington
Wilson
Winston-Salem

VT 008 086
A Study of Inactive Professional Health Personnel in North Carolina.

North Carolina State Board of Education, Raleigh. Dept. of Community Coll.
Public Health Service (DHEW), Washington, D.C. Div. of Nursing
MF AVAILABLE IN VT-ERIC SET.
PH108-67-239
Pub Date - Jun68 103p.

*HEALTH PERSONNEL; *LABOR FORCE NONPARTICIPANTS; REFRESHER COURSES; RECRUITMENT; QUESTIONNAIRES; *MANPOWER NEEDS; *OCCUPATIONAL SURVEYS
NORTH CAROLINA

Goals of the study were to: (1) initiate a plan to locate and promote recruitment of inactive health personnel (2) promote training programs for inactive personnel, (3) develop a detailed profile of health personnel needs, and (4) assist in the return of as many health personnel as possible to active employment. Names of inactive personnel were secured through appropriate professional registries and associations as well as through women's organizations. Questionnaires were mailed to determine current employment status, reasons for unemployment, interest in a refresher course, and plans for return to practice. Of the professional nurse respondents, 1,207 were not employed and 163 additional were not employed in nursing. Seven hundred and forty-two were interested in refresher courses. (Ten courses had been offered since July, 1967 and a total of 119 nurses completed courses during fiscal 1968). Hospitals, surveyed to determine vacancies and to obtain information about personnel policies, identified 552 professional nurse vacancies. Some findings in other fields were: (1) 51 social workers, 22 physical therapists, and 191 medical technologists were not employed in their fields, (2) Inactive professionals in the three fields were interested in training courses, and (3) Vacancies identified included 11 in social work, 28 in physical therapy, 88 in medical technology, and 21 in dietetics. (JK)

VT 008 086

ED042060

A STUDY OF INACTIVE PROFESSIONAL HEALTH PERSONNEL IN NORTH CAROLINA

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS OOCUMENT HAS BEEN REPROOUCEO EXACTLY AS RECEIVEO FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATEO OO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EOUCATION POSITION OR POLICY

Report On Project
Conducted Under Contract With
Division of Nursing, Bureau of Health Manpower
United States Public Health Service
Department of Health, Education, and Welfare

Project Director: A. J. Bevacqua

State Coordinator: Rachel B. Westmoreland

June, 1968

State Board of Education
Department of Community Colleges
Raleigh, North Carolina

VT008086

PREFACE

The research upon which this report is based was performed pursuant to Contract No. PH 108-67-239 with the United States Public Health Service, Department of Health, Education and Welfare. In July, 1967, the North Carolina State Board of Education, Department of Community Colleges was awarded a one-year grant to initiate a plan to return inactive health professionals to employment.

The project was conducted in cooperation with many organizations and agencies. Members of the Advisory Committee, representing the professional organizations or agencies, were: Mr. Marion Foster and Mr. John Ketner, North Carolina Hospital Association; Miss Helen Peeler, North Carolina State Nurses' Association; Miss Mary McRee and Miss Mary V. Cheek, North Carolina Board of Nursing; Miss Margaret Moore, North Carolina Physical Therapy Association; Mrs. Lee Mayo, North Carolina Society of Medical Technologists; Miss Katherine Barrier, North Carolina Council of National Association of Social Work Chapters; Miss Elizabeth Jukes, North Carolina Dietetic Association; Miss Elizabeth Holley, North Carolina State Board of Health. Mrs. Elizabeth Wilson, North Carolina Home Economics Association, offered invaluable assistance in the contact of members of this association.

The interest and assistance of the community agencies and organizations made the implementation of plans possible. Personnel from technical institutes and hospitals assisted with follow-up of the professional nurses and, when it was considered feasible, made refresher courses available to them. In addition, hospital personnel and members of the professional organizations assisted with the identification of inactive health professionals.

This report is an attempt to communicate the nature of the project and the extent to which the project goals were attained, along with problems encountered and recommendations for future research or action.

The report is divided into six parts. Part One gives a summary of the objectives of the project, the methods used to attain the objectives, a summary of the major findings, a definition of problems involved in expanding the availability of health manpower, and recommendations for further study. The remainder of the report gives a more detailed account of the methodology and findings, discusses the possible implications, and offers recommendations for courses of action to help increase the supply of qualified health personnel in North Carolina. The methodology, findings, implications, and recommendations for the professions included in the project are presented in Part Two through Part Six, with each profession being presented separately.

Rachel B. Westmoreland
Coordinator

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PART ONE

THE INACTIVE HEALTH PROFESSIONALS PROJECT

INTRODUCTION

On May 3, 1967, the Regional Nurse Consultant, Department of Health, Education and Welfare, met with representatives from various professional groups and state agencies to inform them of funds available to the states and to discuss a proposed contract with the United States Public Health Service to initiate a plan to return inactive health professionals to active employment. The professional organizations and agencies represented were: North Carolina League for Nursing; North Carolina State Nurses' Association; North Carolina Board of Nursing; North Carolina Hospital Association; North Carolina Physical Therapy Association; North Carolina Licenced Practical Nurse's Association; North Carolina State Board of Health; and Department of Community Colleges. Following discussion, the recommendation was made by those present that the North Carolina State Board of Education, Department of Community Colleges be designated as the contractor for North Carolina.

Funds for a state coordinator, secretary, and administrative costs were available for a one-year period--July 1, 1967 through June 29, 1968. The coordinator for the project was appointed on August 14, 1967, and the secretary on September 18, 1967.

PURPOSE AND METHODOLOGY

The overall objective of the project was to increase the supply of health manpower by: (1) initiating a plan to locate and promote recruitment of inactive health personnel; (2) promoting new and/or expanding existing training programs for inactive personnel; (3) developing the details of health personnel needs, by category of personnel and geographical area; (4) assisting in the return of as many health personnel as possible to active employment.

The functions of the coordinator, as stated in the contract, were to: (1) work with community, area, and state organizations, agencies and groups to assist with the identification, contact and follow-up of inactive professional nurses and other health discipline personnel; (2) develop the details of employment opportunities by category of personnel and by geographical area; (3) promote new and/or existing training programs to provide refresher training courses in light of available trainees and employment opportunities; (4) provide consultation and assistance in the development of course content and teaching methods for retraining courses; (5) assist in the securing of funds for retraining programs; (6) assist in the scheduling of training programs in selected, regionally based facilities close to where trainees are available; (7) assist in the placement of skilled personnel in facilities and agencies; (8) evaluate the effectiveness of the program; (9) determine and define the problems and obstacles currently faced in expanding the availability of health manpower and offer recommendations for their solution.

Studies related to health professionals were reviewed and representatives from professional associations were contacted in an attempt to determine which health professions should be included in the project. The decision was to include, in addition to professional nurses: medical technologists; dietitians; social workers; and physical therapists. This decision was made on the basis of need for additional health personnel and the desire of members of the health professions to participate in the project.

Names of inactive health professionals were obtained through the appropriate association or registry when possible. In addition, in an attempt to identify persons who were not registered in North Carolina or who were not members of the professional association, members of the professional organizations, health agency personnel, and women's organizations were asked to assist with the identification of inactive health personnel. In some cases, it was necessary to survey the entire membership of an association in order to identify unemployed persons because no coded list was available.

Questionnaires were mailed to the health professionals to determine current employment status, reasons for unemployment, interest in a refresher course, and plans for return to practice in their profession. It was felt that if reasons for unemployment in the profession could be determined, efforts could possibly be directed toward reducing or removing some of the obstacles to increasing the supply of active health personnel.

The initial plans were to obtain data on vacancies for health personnel by area from a previous survey of health agencies in North Carolina by the North Carolina Employment Security Commission rather than to attempt another survey of health agencies. However, since these data were not obtained, a questionnaire survey of hospitals in North Carolina was made in an effort to determine vacancies and personnel policies in these agencies. Since time did not permit a survey of all health agencies, hospitals were chosen because it was expected that the majority of positions would be in hospitals. This survey was not made until later in the project; therefore, it was not possible to share the findings with persons who might be interested in enrolling in a refresher course or with personnel in educational institutions who might wish to consider the feasibility of offering a refresher course.

A preliminary report of the results of the questionnaire survey of health personnel was shared with professional associations, with the hospitals in North Carolina, and with the educational institutions which displayed some interest in offering a refresher course. Follow-up of persons who had indicated an interest in a refresher course was made on a local level. Refresher programs were publicized through the local news media. Promotional materials which were supplied by the American Nurses' Association were distributed to the District Nurses' Association or other interested persons on request.

SUMMARY OF FINDINGS

Professional Nurses

One thousand two hundred seven of the professional nurse questionnaire respondents residing in North Carolina were not employed; 163 were not employed in nursing.

Reasons checked most frequently as the primary reason for unemployment by the nurses were: (1) homemaker preference; (2) no suitable arrangements for care of child; (3) spouse prefers I not work; (4) salary not worthwhile; (5) cannot work hours required. "Hesitant--inactive too long" ranked seventh as a primary reason for unemployment in nursing, with approximately 5% giving this as a major reason.

Approximately one-third of the nurse respondents were uncertain about whether they would return to nursing; 49% planned to return. Approximately one-half were uncertain about when they would return and whether they would return part-time or full-time. Five hundred thirty checked that they planned to return in less than five years; the majority planned to work part-time and checked that they could not rotate shifts.

A total of 742 professional nurses checked that they were interested in a refresher course; 179 of these were employed either part-time or full-time. Approximately 40% of those interested planned to return to nursing within five years; approximately 40% were uncertain about when they would return to nursing. The majority of the nurses interested in a refresher course were either uncertain about the number of hours they could work or planned to work part-time, could not rotate shifts, and preferred to work in a beginning position in a hospital. The respondents who were interested in a refresher course were located in 88 counties in North Carolina. Nine counties had as many as 20 persons interested, but in many counties there were only one or two nurses interested in a course.

Ten refresher courses have been offered to nurses since July, 1967. These courses were sponsored by one hospital and four technical institutes located in the Piedmont and Eastern regions. A total of 119 nurses have completed a refresher course during fiscal year 1968. Approximately 67% of the nurses who completed a course returned to work either part-time or full-time (based on 49 students from which follow-up information was obtained; no data are available at present on 70 students who have completed a course).

A total of 552 vacancies for professional nurses were identified by a questionnaire survey of hospitals in North Carolina; most of these were staff level positions. These vacancies were located in 49 counties; the majority of the vacancies being located in 16 counties. Based on the number of positions given, almost 11% of the positions for professional nurses in North Carolina hospitals were not filled.

Social Workers

Forty-six unemployed social workers in North Carolina were identified by questionnaire survey. Five of the respondents were not employed as social workers.

The reason checked most frequently as the major reason for unemployment in social work was "homemaker preference".

Twenty-three of the respondents checked that they planned to return to work and nine were uncertain whether they would return to work in their profession. Fifteen planned to return within five years.

Fourteen of the respondents indicated an interest in a refresher course; ten of these planned to return to work part-time.

Eleven vacancies for social workers were identified by questionnaire survey of hospitals in North Carolina. Seventy-four of the 92 responding hospitals did not employ social workers. Based on the number of positions given by responding hospitals, approximately 8% of the positions for social workers were unfilled.

Physical Therapists

Nineteen unemployed physical therapists in North Carolina were identified by questionnaire survey; three of the respondents were not employed as physical therapists.

The reason checked most frequently as the primary reason for unemployment was "homemaker preference".

Ten of the respondents planned to return to work in their profession and four were uncertain about whether they would return. Seven planned to return within five years; all of these either planned to work part-time or were uncertain about how much they would work. The majority of the respondents preferred to work in a hospital in either a beginning or administrative position.

Eleven of the respondents checked that they were interested in a refresher course; six of these planned to return to physical therapy within five years.

Twenty-eight vacancies for physical therapists were identified by questionnaire survey of hospitals in North Carolina. Based on the numbers of positions in the responding hospitals, 26% of the positions for physical therapists were unfilled.

Medical Technologists

Questionnaire survey of medical technologists identified 168 unemployed medical technologists in North Carolina. Twenty-three of the respondents were not employed as medical technologists.

The reason given most frequently as the primary reason for unemployment in their profession by those who were not employed was "homemaker preference". Other reasons given frequently, in rank order were: (1) salary not worthwhile, (2) no suitable arrangements for care of child; (3) spouse prefers I not work. "Salary not worthwhile" ranked first as the primary reason for those employed in another profession.

Almost 30% of the respondents who were unemployed were uncertain whether they would return to their profession; 36% (61) planned to return, with approximately 30% (51) planning to return within five years. Approximately one-third planned to work part-time, with the majority giving the hospital as the preferred field of employment.

Sixty-five of the unemployed respondents checked that they were interested in a refresher course and 105 of the respondents who were employed full-time checked that they were interested. Only eight of these were employed in another profession.

Eighty-eight vacancies for medical technologists were identified by questionnaire survey of hospitals in North Carolina. Based on the number of positions in the responding hospitals, 13% of the positions for medical technologists were not filled.

Dietitians

Since unemployed members of the North Carolina Dietetic Association had been identified through a previous survey, questionnaires were mailed to members of the North Carolina Home Economics Association in an attempt to identify persons who might qualify for employment in the health field.

Twenty-five of the respondents were not employed; the majority had majored in areas other than Foods and Nutrition or Institutional Management.

Homemaker preference, retirement, or health were given most frequently as reasons for unemployment.

Ninety-seven of the respondents checked that they were interested in a course to qualify for a health position. Only ten of these were unemployed. The majority of those interested in a course were uncertain whether they planned to work in dietetics. Only seven had majored in Foods and Nutrition or had had a dietetic internship.

Twenty-one vacancies for dietitians were identified by questionnaire survey of hospitals in North Carolina. Based on the number of positions given by responding hospitals, approximately 13% of the positions for dietitians were unfilled.

EVALUATION OF THE PROJECT

Although few additional refresher courses have been offered to inactive professional nurses and none have been offered to other health discipline personnel during the year, it is felt that some progress has been made toward determining the possibilities of increasing the supply of health manpower through reactivation of inactive health personnel in North Carolina.

The numbers of personnel who had apparently returned to work since last contacted and the numbers of questionnaires returned from the post office would suggest that the name and address lists of inactive personnel will become out dated in a relatively short period of time. However, the original lists have been reduced to a size that would allow follow-up of these persons at considerable less expense in terms of time and money if further information is desired.

The finding that some of the health personnel now inactive planned to return to work at a later date, frequently on a part-time basis, and that the majority were interested in a refresher course before returning suggests that there may be a continuing need for refresher courses for health personnel. The finding that many of the employed personnel desired refresher courses suggests the need for continuing education for both the active and inactive personnel.

Although data on persons who completed courses are incomplete in terms of numbers who returned to work, preliminary data suggest that completion of a refresher course helps remove one of the reasons for inactivity on the part of health personnel. In addition, the updating of knowledge and skills prior to employment should reduce the cost to the employing agency which might otherwise incur considerable expense in provision of classes or supervised experience for persons who have been inactive for some time. Some of the persons who do not return to employment on a regular basis may be willing to offer their services in emergency situations; continuing education should enable them to make a greater contribution.

PROBLEMS IN EXPANDING THE AVAILABILITY OF HEALTH MANPOWER

The proportion of health personnel who leave their profession either on a permanent or a temporary basis cannot be determined from the surveys which have been made as a part of the project. It is suspected that a larger proportion of persons who maintain their registration or membership in their professional association would either remain active in their profession or would expect to be inactive only temporarily. The proportion of those who maintain their registration or membership might be related to the requirements for later registration or membership when this has not been maintained. However, based on the survey findings, it appears that the majority of professional health personnel in North Carolina are actively employed in their profession.

Since no demographic data were collected on the survey population, determination of obstacles to employment are based primarily on reasons for unemployment given by questionnaire respondents. The reasons given suggest that the primary reasons are related to family responsibilities which make full-time employment, or in some cases even part-time employment, difficult at best. The specific hours required, the heavy work load or responsibilities, frustrations involved in the work situation, or low salary would in many cases seem to be only additional problems, since many apparently planned to return to work when relieved of some of their family responsibilities. Without data on the reasons that health personnel do work, it is difficult to evaluate the importance of some of the comments. However, many of the latter reasons may be related more to job dissatisfaction or to failure to enter a health profession initially than to inactivity in the profession for which one has been educated, especially when the educational preparation is rather specific and would not qualify one for employment in another occupation.

In the interest of maintaining an adequate supply of health personnel, it might be well to consider exploring further to determine the degree to which the following are obstacles to expanding the availability of health personnel:

1. Lack of child care facilities, especially for children of personnel who work evenings.

2. The hours of work required for some personnel. For example, some of the nurses commented that no satisfactory arrangement for children could be made when they were expected to be at work at 6:30 or 7:00 a.m., whereas they could make arrangements to begin work at 8:00 a.m.

3. Rotation of shifts. This tends to add to problems in arrangements for care of children and/or interferes with other schedules.

4. Lack of opportunities or encouragement to keep knowledge and skills up-to-date or to participate in suitable courses prior to returning to employment.

5. The relatively small numbers of personnel who would be interested in enrolling in a course at a given time in a given area. This makes it difficult to offer courses which would be within commuting distance of the students. Other problems in offering refresher courses on a community basis are difficulties in finding instructors who are familiar enough with the clinical resources available to be able to plan the course in a short period of time.

6. Inability of health personnel to relocate to areas where desirable positions are available. The majority of professional health personnel included in the project are women and the majority are married.

7. Inadequate salary to offset the expenses involved when working or to maintain the desired standard of living when the salary is the sole source of income.

8. The gap between the level of performance for which professional personnel are educated and the job requirements.

9. The conflict between responsibility required and authority delegated to the employee.

RECOMMENDATIONS

With the realization that the obstacles to maintaining or increasing the supply of health personnel tend to vary according to the area and that the specific solutions to the problems also would vary, the following recommendations are offered as possible solutions to some of the problems:

1. Expansion of child care facilities. In some cases, the feasibility of locating a child care center at the hospital may be worth exploring.

2. Scheduling of shift hours that are more in keeping with work hours of other employees in the community or that would allow persons with family responsibilities to accept employment. This may require use of some personnel for less than eight hours a day.

3. Employment of persons to work a fixed shift and when days off must vary, scheduling these at least a month in advance.

4. Salary commensurate with education, experience, and job responsibility.

5. Assignment of personnel to positions in which they can make maximum use of their knowledge and skills. This might require analysis of the knowledge and skills needed for effective performance as well as analysis of knowledge and skills of employees.

6. Provision of continuing education for all levels of personnel. In some cases this may be provided on a local level; in others, provision of periodic leaves of absence for employees may be necessary.

7. Provision of refresher courses for personnel who have been inactive in their profession for some time. The courses should be scheduled in advance so that interested persons can plan for relocation when necessary.

8. Further study to determine factors which contribute to the success of refresher courses.

9. Study to determine the usefulness of televised programs, programmed material, or other home study methods for refresher courses or continuing education.

10. Survey of active health personnel to determine factors which would increase job satisfaction and effectiveness.

11. Encouragement of all personnel to assume responsibility for contributing to the growth or continued improvement of the health agency's services.

12. Establishment and maintenance of a central agency for collecting, analyzing, and disseminating information related to educational programs for health professions and innovations in the health field.

13. Provision of information by health agencies that could be distributed to potential employees. This should include the philosophy and objectives of the employing agency, job descriptions and salary grades for various positions, and policies for both full-time and part-time personnel.

14. Study to determine the feasibility of using health professional volunteers.

PART TWO

PROFESSIONAL NURSES

SURVEY OF PROFESSIONAL NURSES IN NORTH CAROLINA

Identification and Contact of Inactive Professional Nurses

Source of Name Lists

Names of professional nurses thought to be unemployed were obtained from several sources. A list of professional nurses residing in North Carolina who had checked "no" to employment on their 1966-67 or 1967-68 license renewal card was obtained from the North Carolina Board of Nursing. In an effort to identify professional nurses who might not be currently registered in North Carolina, but who might be eligible for licensure in North Carolina, requests for names of professional nurses thought to be unemployed were made to hospital personnel, North Carolina State Nurses' Association members, selected women's organizations (North Carolina Council of Women's Organizations, North Carolina Federation of Women's Clubs, North Carolina Association of University Women, the Auxiliary to the Medical Society of the State of North Carolina) and to recipients of the questionnaires sent to professional nurses thought to be unemployed. Later in the year the coordinators from eight other states sent to the Coordinator the names of professional nurses with North Carolina addresses who were registered as inactive in their state.

A total of 1,995 names were obtained from the North Carolina Board of Nursing and 1,980 names were obtained from other sources. The names received were checked with other lists for duplications. Table 1 shows the specific source of names and addresses of nurses sent questionnaires.

TABLE 1 SOURCE OF NAMES OF PROFESSIONAL NURSES IN NORTH CAROLINA TO WHOM QUESTIONNAIRES SENT

Source of Names	Received		Sent Questionnaires	
	Number	Percent of Total Rec'd	Number	Percent of Total Rec'd
State Board of Nursing	1995	50.2	1995	100.0
Total Other Sources	1980	49.8	1383	69.8
Hospital Personnel	725	18.2		
Inactive Nurse Respondents	290	7.3		
NCSNA Comm. on N. Care of Chronically Ill and Aging	215	5.4		
Nurse Coordinators	737	18.5		
President of RN Club	13	.3		
Totals	3975		3378	

Data Collection

A questionnaire was constructed to determine current employment status, reasons for unemployment, future work plans, and interest in a refresher course of the survey population. In order to facilitate data processing, a forced choice type question was used and an effort was made to use terms that would be suitable for all the professions included in the project. The questions were limited to current status and future plans, rather than to include background information, in the hope that this might insure a higher percent return from the recipients. The letter of explanation and request for cooperation was signed by the Executive Director, North Carolina State Nurses' Association, with the thought that the recipients may respond better to a representative of their professional organization. A stamped envelope addressed to the coordinator was enclosed. The questionnaire and cover letter were pretested with a sample of inactive nurses and other health personnel prior to sending to the survey population.

On October 20, 1967, 1,995 questionnaires were mailed; in November, 747 additional questionnaires were mailed, and 636 were mailed in January, making a total of 3,388 questionnaires mailed to professional nurses thought to be unemployed and residing in North Carolina.

Results of Questionnaire Survey of Professional Nurses

The findings presented are based on data from 1,842 questionnaires. A total of 196 (5.8%) were returned by the post office. (The return from the State Board of Nursing list was 0.8% compared to 12.9% return of those from other sources). One thousand two hundred forty or 36.7% of the nurses did not return the questionnaire. Of the 1,942 (57.5%) questionnaires that were returned, 66 were returned by persons who had moved to another state and 34 were not usable.

Employment Status

The findings indicated that 1,370 professional nurses in North Carolina who responded to the questionnaire were not employed in their profession. As indicated in Table 2, 32% of the respondents checked that they were employed. Some of the nurses who had checked unemployed checked the block for employment in the health profession; on occasion, this was explained as past employment.

TABLE 2 EMPLOYMENT STATUS OF 1,842 PROFESSIONAL NURSES IN NORTH CAROLINA

Employment	Number	Percent
Full time	290	15.7
Part time	301	16.3
Not employed	1207	65.5
No response	44	2.4
Employed in non-health profession	163	20.4
Employed in health and non-health prof.	34	4.3
Employed in health profession	602	75.3

Reasons for Unemployment in Nursing

It was thought that if reasons for unemployment in nursing could be determined, efforts could be directed toward removing or reducing some of the obstacles to increasing the supply of nurse-power. A list of 14 possible reasons for unemployment in nursing were provided on the questionnaire; in addition, a space for "other" reasons was provided, with the request that the respondents specify other reasons. Questionnaire recipients were asked to select three reasons most relevant to their position of unemployment in nursing and to rank these in order of importance. Some of the nurses who indicated that they were employed part time answered this question; some indicated that these were reasons for not working full time.

The reasons given most frequently as the main reason for unemployment, in rank order, were: (1) homemaker preference; (2) no suitable arrangements for care of child; (3) spouse prefers I not work; (4) salary not worthwhile; (5) cannot work hours required. One hundred fourteen respondents listed other reasons as being of most importance in relation to their position of unemployment in the profession. Other reasons mentioned frequently were: preference for being home with children or comments related to responsibilities of children, unsatisfactory working conditions in employing agency (heavy work load or responsibility, problems with personnel, no authority or voice in improving working conditions or patient care, inadequate fringe benefits, or shift hours) and care of family members. Table 3 shows the reasons checked by respondents.

TABLE 3 NUMBER OF PROFESSIONAL NURSES INDICATING FIRST, SECOND, AND THIRD REASONS FOR UNEMPLOYMENT IN PROFESSION

Reasons for Unemployment	Total	Order of Importance		
		First	Second	Third
No positions available	64	22	25	17
Cannot work hours required	477	128	182	167
Salary not worthwhile	458	137	155	166
Health	161	94	33	34
Lost interest in profession	40	7	21	12
Homemaker preference	666	411	139	116
No suitable arrangements for care of child	617	226	247	144
Prefer volunteer activities	94	13	23	58
Spouse prefers I not work	633	211	253	169
No suitable domestic help	239	25	101	113
No suitable transportation	47	5	21	21
Full-time students	18	13	3	2
Hesitant--inactive too long	328	87	94	147
Age	92	26	39	27
Other	236	114	33	89

Table 4 gives the major reason for unemployment in nursing by plans to return to the profession. As shown in this table, the largest number of nurses who planned to return to the profession, as well as those who did not plan to return, gave "homemaker preference" as the major reason for unemployment in nursing. However, a larger proportion of those who did not plan to return gave this as the major reason and a larger proportion of these checked "health" and "age" as a major reason; approximately three percent checked "no suitable arrangements for care of child" as the main reason for unemployment.

TABLE 4 NUMBER AND PERCENT OF PROFESSIONAL NURSES CONTACTED IN NORTH CAROLINA ACCORDING TO PRIMARY REASON FOR UNEMPLOYMENT IN NURSING AND INTENTION TO RETURN TO ACTIVE PRACTICE

Primary Reason For Unemployment	Total Nurses Responding		Intention					
			To Return		Not to Return		Uncertain or No Response	
	Number	Per-Cent	Number	Per-Cent	Number	Per-Cent	Number	Per Cent
No positions available	22	1.2	16	2.1	0	.0	6	.7
Cannot work hours required	128	6.9	87	11.6	6	2.1	35	4.4
Salary not worthwhile	137	7.4	72	9.6	13	4.5	52	6.5
Health	94	5.1	24	3.2	31	10.7	39	4.9
Lost interest in profession	7	.4	2	.3	3	1.0	2	.2
Homemaker preference	411	22.3	162	21.6	92	31.6	157	19.6
No suitable arrangements for care of child	226	12.3	153	20.4	10	3.4	63	7.9
Prefer volunteer activities	13	.7	0	.0	8	2.7	5	.6
Spouse prefers I not work	211	11.5	60	8.0	62	21.3	89	11.1
No suitable domestic help	25	1.4	19	2.5	2	.7	4	.5
No suitable transportation	5	.3	2	.3	1	.3	2	.2
Full-time student	13	.7	11	1.5	1	.3	1	.1
Hesitant--inactive too long	87	4.7	31	4.1	14	4.8	42	5.2
Age	26	1.4	0	.0	14	4.8	12	1.5
Other	114	6.2	52	6.9	20	6.9	42	5.2
No response	323	17.5	58	7.7	14	4.8	251	31.3
Totals	1842	100.0	749	100.0	291	100.0	802	100.0

Plans to Return to Nursing

Questions were asked about future work plans in order to determine whether some of the inactive nurses might be expected to reenter nursing. Some of the nurses who indicated that they were employed part time answered this question. As Table 5 indicates, approximately one-third of the nurses were uncertain about whether they would return to nursing. However, 749 (49% of those who answered) did plan to return to their profession.

TABLE 5 NUMBER AND PERCENT OF PROFESSIONAL NURSES IN NORTH CAROLINA WHO PLAN TO RETURN TO NURSING

Plan to Return	Number	Percent
Definitely yes	265	17.3
Probably yes	484	31.6
Uncertain	494	32.2
Probably no	228	14.9
Definitely no	63	4.1
Totals	1534	100.0

Thirty-eight percent or 529 of the respondents checked that they planned to return within five years. Approximately one-half of the respondents were uncertain about when they would return and whether they would return full time or part time. Table 6 gives a breakdown of when the nurses plan to return to the profession and plans for full- or part time employment.

The nurses were also asked if they could rotate shifts; 1,270 or 88% of the respondents indicated that they could not, with 167 or 12% answering yes.

TABLE 6 NUMBER AND PERCENT OF PROFESSIONAL NURSES CONTACTED IN NORTH CAROLINA WHO PLAN TO RETURN TO WORK ACCORDING TO WHEN THEY EXPECT TO RETURN AND THEIR INTENTION TO WORK ON A FULL- OR PART TIME BASIS

When Expect To Return (years)	Total Nurses		Intended Basis of Employment							
			Full time		Part time		Uncertain		No Response	
	Number	Per-Cent	Number	Per-Cent	Number	Per-Cent	Number	Per-Cent	Number	Per-Cent
Less than year	191	100.0	72	37.7	107	56.0	12	6.3	0	.0
1-5 years	338	100.0	73	21.6	166	49.1	99	29.3	0	.0
6-10 years	81	100.0	19	23.5	31	38.3	30	37.0	1	1.2
More than 10 yrs.	16	100.0	3	18.8	5	31.3	6	37.5	2	12.5
Uncertain	777	100.0	24	3.1	155	19.9	581	74.8	17	2.2
No response	439	100.0	45	10.3	65	14.8	12	2.7	317	72.2
Totals	1842		236		529		740		337	

Interest in a Refresher Course

One of the main objectives of the project was to promote refresher courses for inactive professional nurses in order to help them gain the knowledge, to develop the skills, and to develop the self-confidence necessary for return to practice in nursing. Therefore, a more complete analysis of the returns from those interested in a refresher course was made.

A total of 742 professional nurses checked that they were interested in a refresher course. Table 7 shows the findings in relation to employment status of these nurses. It should be noted that some of the nurses employed in nursing indicated that they were interested in a refresher course.

TABLE 7 EMPLOYMENT STATUS OF 742 PROFESSIONAL NURSES IN NORTH CAROLINA WHO EXPRESSED INTEREST IN REFRESHER COURSE

Employment	Number	Percent
Full time	70	9.4
Part time	109	14.7
Not employed	559	75.7
No response	4	.5
Non-health profession	74	25.0
Health and non-health prof.	17	5.9
Health profession	205	68.9

Tables 8, 9, and 10 indicate the work plans of the nurses who checked "interest in a refresher course". Although from 30 to 40% of those interested in a course were uncertain about future plans, approximately 56% planned to return to nursing, and 40% within five years. Approximately one-third of those that were more certain indicated that they could work full time. The majority indicated that they could not rotate shifts. No data were collected on what hours they could work.

TABLE 8 NUMBER AND PERCENT OF 742 PROFESSIONAL NURSES IN NORTH CAROLINA WHO CHECKED INTEREST IN REFRESHER COURSE WHO PLAN TO RETURN TO NURSING

Plan to Return	Number	Percent*
Definitely yes	136	18.3
Probably yes	279	37.6
Uncertain	224	30.2
Probably no	44	5.9
Definitely no	1	.1
No response	58	7.8
Totals	742	100.0

Table 9 PLANS TO RETURN TO NURSING OF 742 PROFESSIONAL NURSES IN NORTH CAROLINA WHO CHECKED INTEREST IN REFRESHER COURSE BY YEARS BEFORE RETURNING

Plan to Return	Number	Percent
Less than year	97	13.1
1-5 years	202	27.2
6-10 years	42	5.7
More than 10 years	9	1.2
Uncertain	306	41.2
No response	86	11.6
Totals	742	100.0

*Totals will not always equal 100 percent due to rounding.

PLANS FOR RETURN TO FULL- OR PART TIME WORK
AND ROTATION OF SHIFTS OF 742 PROFESSIONAL NURSES
TABLE 10 IN NORTH CAROLINA WHO CHECKED INTEREST IN A REFRESHER COURSE

No. Hours	Number	Percent	Could Rotate Shifts	Number	Percent
Full time	109	14.7	Yes	83	11.2
Part time	284	39.3	No	599	80.7
Uncertain	305	41.1	No response	60	8.1
No response	44	5.9			
Totals	742	100.0		742	100.0

The majority of the nurses interested in a refresher course preferred work in a hospital and the majority preferred a first level position. Some of the nurses who checked "other" gave general duty, bedside nursing or private duty as their preference. Table 11 gives a breakdown of preferences. On occasion, a respondent commented that this was a preference, but that she was not qualified for the position. No data on previous experience or education were collected.

PREFERRED FIELD AND PREFERRED POSITION OF 742 PROFESSIONAL
TABLE 11 NURSES IN NORTH CAROLINA WHO CHECKED INTEREST IN REFRESHER COURSE

Preferred Field	Number	Percent	Preferred Position	Number	Percent
Hospital	468	63.1	Beginning	308	41.5
Nursing Home	10	1.3	Administrative	48	6.5
Clinic/Office	117	15.8	Teaching	56	7.5
Public Health	52	7.0	Consultant	8	1.1
Self Employment	12	1.6	Other	207	27.9
Industrial	12	1.6	No Response	115	15.9
School	32	4.3			
No Response	39	5.3			
Totals	742	100.0	Totals	742	100.0

The majority (669 or 90%) of the nurses interested in a refresher course indicated that they were registered in North Carolina.

The professional nurses who checked "interest in a refresher course" resided in 88 counties in North Carolina. There were no respondents from six of the counties. However, in only nine counties were there as many as 20 persons interested in a refresher course. In the majority of the counties there were less than ten nurses interested; in many counties there were only one or two who expressed an interest in a course.

REFRESHER COURSES FOR INACTIVE PROFESSIONAL NURSES

In an effort to encourage interest and cooperation in the project, reports were shared with state and community agencies and organizations. A preliminary report on the results of the survey of nurses was shared with members of the professional associations and the hospitals in North Carolina in December, 1967. Quarterly progress reports were distributed routinely to technical institutes and community colleges, to members of the Advisory Committee and to other interested persons. In areas where adequate numbers of nurses had expressed interest in a course, the technical institute and/or hospital personnel were contacted by telephone or personal letter to ascertain the availability of funds and the local interest in a refresher course. Follow-up meetings were held according to the need.

"A Guide for the Development of Refresher Courses for Professional Nurses" was prepared and distributed to interested persons. This guide included recommended criteria for institutions sponsoring the course and for screening of applicants and it also included the services offered by the Coordinator. Guides for course content were distributed on request.

Although 27 institutions were contacted and, with one exception, all expressed willingness to explore the feasibility of offering a course, the refresher courses have been sponsored by five institutions. One hospital offered two courses and four technical institutes, in cooperation with the District Nurses' Association and/or the local hospital, offered eight courses. The courses have varied in length from 75 hours to 180 hours. Table 12 shows the number of courses and number of students completing a course by type of institution providing the course.

Table 13 shows the source of financial support of the refresher courses. The Coordinator was notified in February, 1968, that additional MDTA funds were available for refresher courses; however, personnel from only one institution had stated that a course could not be provided due to lack of funds. Further exploration, in this case, revealed that too few students were interested in a course to justify offering the course.

Three of the courses were underway before the survey of nurses was completed. The enrollees in all courses included nurses who had not participated in the questionnaire survey.

NUMBER OF REFRESHER COURSES PROVIDED FROM JULY, 1967 TO JULY, 1968, NUMBER OF STUDENTS ENROLLED, AND NUMBER OF STUDENTS COMPLETING COURSE BY TYPE OF INSTITUTION PROVIDING COURSE

TABLE 12

Type of Institution	Number of Courses	Number of Students Enrolled	Number of Students Completing Course
Hospital	2	37	32
Technical Institute	8	99	87
Junior College	0	0	0
University	0	0	0
Other (specify)	0	0	0
Total	10	136	119

NUMBER OF REFRESHER COURSES PROVIDED FROM JULY, 1967 TO JULY, 1968, NUMBER OF STUDENTS ENROLLED, AND NUMBER OF STUDENTS COMPLETING COURSE BY SOURCE OF FINANCIAL SUPPORT

TABLE 13

Source of Financial Support	Number of Courses	Number of Students Enrolled	Number of Students Completing Course
MDTA	0	0	0
Other government funds	8	99	87
Privately sponsored no tuition	2	37	32
Privately sponsored tuition charges	0	0	0
Totals	10	136	119

Plans for offering refresher courses during the year were delayed or cancelled for various reasons. Personnel from eight institutions explored further by contacting persons who had expressed an interest in a course and cancelled because the number that expressed interest in enrolling was too small to justify the course. Others felt that other programs assumed priority at the time; either existing clinical resources were not available for an additional educational program or personnel were not available to plan and/or teach the course. In some cases, it was felt that no positions would be available in the area for persons who completed a course.

Two persons who expressed interest in a course were referred to the coordinator in South Carolina, since no courses were available in the western area.

The students who were interested in a course in areas where a course was cancelled were referred to other areas when possible. In some cases the Coordinator was not notified of the cancellation in time for the students to be directed to other courses; on occasion, the coordinator was not informed of the beginning date of a course until a few days before the course was to begin.

Data collection on the number of nurses who returned to work after completing a refresher course has not been completed. Follow-up of 49 nurses who completed a course during the year revealed that 33 returned to work, eight were not employed, although three planned to return; no information was obtained from eight nurses.

The comments made by the students who completed courses during the year have indicated that the courses have been worthwhile. The main suggestion has been that more clinical experience be included.

Consultation with instructors of refresher courses suggests that more time for planning courses, careful screening of students, and a ratio of six to eight students per instructor during clinical practice may increase the effectiveness of the courses.

IDENTIFICATION OF EMPLOYMENT OPPORTUNITIES

Although a previous study[1] had indicated that there were over 900 vacancies for professional nurses in the spring of 1967, no data on vacancies by area were available. Since it was anticipated that most of the nurses would not be able to relocate, some data on where positions existed were needed. In order to determine whether there would be vacancies for health personnel who wished to participate in a refresher course and return to work, a questionnaire survey of vacancies and personnel policies in 175 hospitals in North Carolina was made.

Questionnaires were returned by 92 hospitals with a total bed capacity of 22,664. The total bed capacity of the hospitals from which the questionnaires were not returned was 10,789.

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[1] Employment Security Commission of North Carolina, Health Manpower Needs in North Carolina 1967-1973, The Commission, Raleigh, North Carolina, December, 1967, p. 11.

Vacancies for Professional Nurses

The employers were asked to provide data as of March 11, 1968. The number of budgeted and non-budgeted vacancies was requested. Table 14 shows the number and percent of vacancies for registered nurses in North Carolina that were identified. It will be noted that almost 14% of the positions for staff nurses were unfilled, but that less than 5% of the administrative and teaching positions were vacant.

TABLE 14 NUMBER AND PERCENT OF VACANCIES FOR REGISTERED NURSES IN NORTH CAROLINA ACCORDING TO TYPE POSITION

Position	Number Currently Employed	Number Vacancies	Number Positions	Percent Vacancies
Staff	2909	470	3379	13.9
Administrative	1345	69	1414	4.9
Teaching	221	11	232	4.7
Other	105	2	107	1.9
Totals	4580	552	5132	10.8

Although a total of 552 vacancies for registered nurses in North Carolina were identified, no vacancies were identified in 51 counties. Questionnaires were sent to hospitals in 87 counties; however, the questionnaires were not returned from personnel in 28 counties. The majority of the vacancies were found in a few counties. Table 15 shows the vacancies identified.

TABLE 15 NUMBER OF COUNTIES IN NORTH CAROLINA IN WHICH VACANCIES FOR REGISTERED NURSES WERE IDENTIFIED

Number Vacancies for RN's	Number Counties
None	51
1-9	33
10-19	9
20 or more	7

The counties were grouped into six areas. The counties included in each area are indicated on the map on the following page. Table 16 shows the vacancies for registered nurses and the number of nurses who expressed interest in a refresher course by area.

TABLE 16 NUMBER AND PERCENT OF VACANCIES IDENTIFIED FOR REGISTERED NURSES AND NUMBER OF NURSES INTERESTED IN REFRESHER COURSE BY AREA*

Area	Number Employed	Number Vacancies	Number Positions	Percent Vacancies	No. Interested in Refresher Course
Area I	491	72	563	12.8	78
Area II	714	74	788	9.4	161
Area III	1383	140	1523	9.2	148
Area IV	1006	142	1148	12.4	149
Area V	589	56	645	8.7	97
Area VI	397	68	465	14.6	109
Totals	4580	552	5132	10.8	742

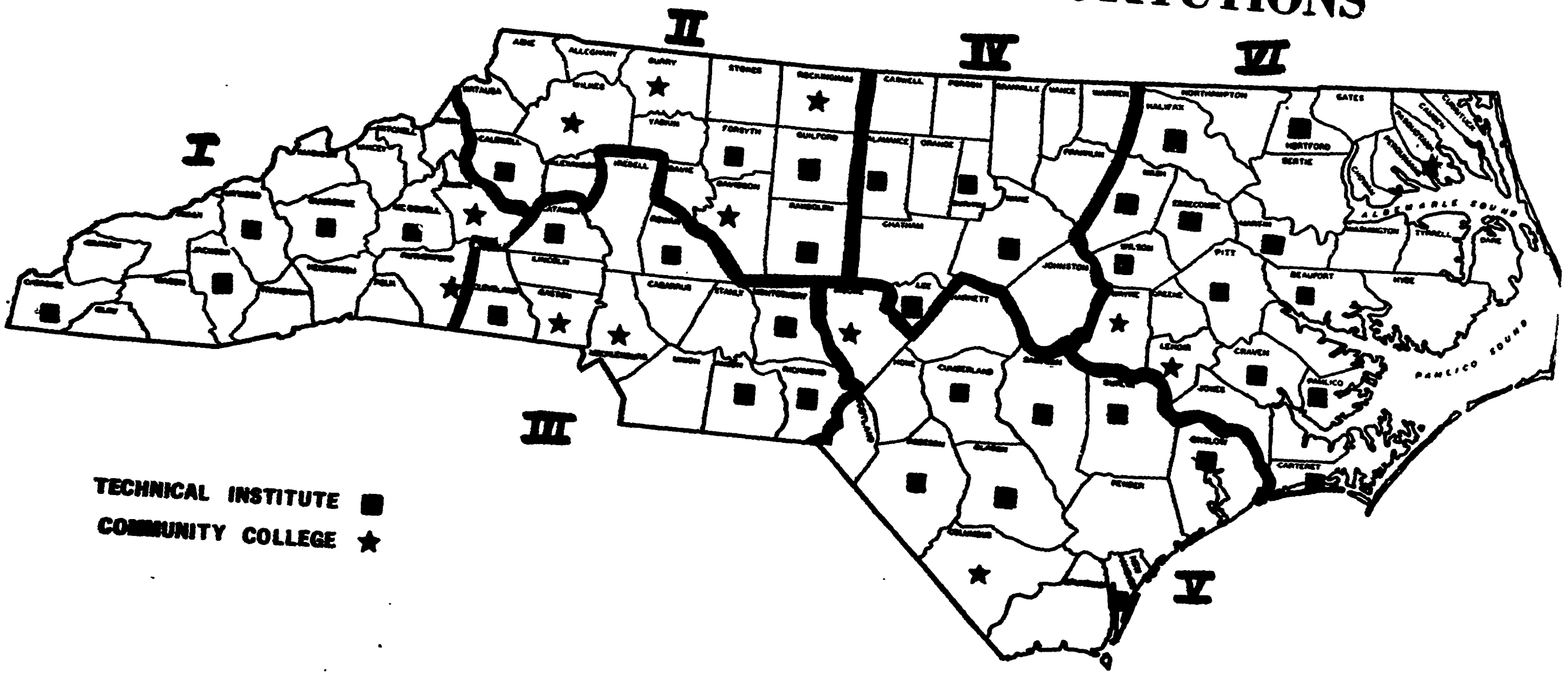
*The counties included in each area are shown on the map on the following page.

With one exception, in counties where there were no nurses interested in a refresher course, there were no vacancies. There were no vacancies identified in 40 counties in which nurses interested in a refresher course were identified. Table 17 shows these findings by area.

TABLE 17 NUMBER OF COUNTIES IN WHICH EITHER NO VACANCIES FOR REGISTERED NURSES OR NO NURSES INTERESTED IN A REFRESHER COURSE HAVE BEEN IDENTIFIED

Area	Counties In Area	Vacancies No Nurses Interested	Nurses Interested No Vacancies	No Nurses Interested	No Vacancies	No Hospital
Area I	18	0	6	3	9	3
Area II	15	0	6	1	7	0
Area III	13	0	7	0	7	0
Area IV	13	0	4	1	5	1
Area V	14	1	4	1	4	0
Area VI	27	0	13	6	19	9
Totals	100	1	40	12	51	13

NORTH CAROLINA SYSTEM OF INSTITUTIONS



TECHNICAL INSTITUTE ■
COMMUNITY COLLEGE ★

Personnel Policies

Questions about personnel policies were not completed by such a large proportion of the hospitals that returned the questionnaires that it cannot be assumed that the findings would be typical of the policies for all North Carolina hospitals nor for the hospitals that returned the questionnaires.

Analysis of the responses from the hospitals that did respond to the questions indicated that policies tended to vary according to type position. Some rotation of shifts was required for staff nurses in over one-half of the hospitals, while the majority indicated that no rotation was required for nurses in other positions. There was no salary differentiation for various educational levels for staff nurse, head nurse, and supervisory positions in over one-half of the hospitals, but there was for directors of nursing and assistants and for teaching positions in over two-thirds of the hospitals. The majority indicated that there was salary differentiation for new employees with experience at all levels.

The majority of the hospitals that answered questions related to the use of part time personnel indicated that they employed staff nurses on a part time basis; approximately one-third employed personnel part time for head nurse and teaching positions, and about half employed supervisors part time. Weekends were usually required for staff nurses, whereas approximately one-half required that head nurses and supervisors work weekends. Rotation of shifts by staff nurses was required by approximately one-half the hospitals who answered this question. Approximately one-fourth of the part time supervisors and head nurses were required to rotate shifts.

Some questions were not answered by over one-half the hospital personnel who returned the questionnaire. Therefore, it is emphasized that no generalizations could be made from the above statements.

DISCUSSION

The findings from the questionnaire survey of professional nurses in North Carolina would suggest that some of the nurses not now employed in nursing might be expected to return to nursing either when relieved of some of their family responsibilities or when more satisfactory employment is available. The reasons given most frequently as reasons for unemployment appear to be related. It would seem that the hours required, the heavy work load and responsibility, the frustrations involved in the work situation, and the low salary make it difficult for persons with other responsibilities to practice nursing. Some of the nurses who were employed in other professions (for example, teaching) indicated that they may return to nursing later, but that the hours required in the present occupation enabled them to be with their children.

The letter of explanation indicated that, collectively, comments of respondents would be used to determine problems faced in expanding health manpower. Categorization of the voluminous comments tends to reduce the contribution of the respondents. However, it is the impression of the Coordinator that most of the nurses who responded seemed to possess a sense of responsibility and could make a contribution toward the improvement of health services. Although the comments of the nurses who elaborated on the reasons for unemployment varied from expressions of "I love nursing--but" cannot work and assume family responsibilities to frustration with low standards of patient care which conflict with their ideals or with other working conditions, only 40 respondents gave "lost interest in profession" as one of the reasons for unemployment in nursing. One can only wonder about the 1,240 nurses who did not return the questionnaire. However, the fact that many that did return the questionnaire took the time to make additional comments and suggestions would suggest that there is much interest in contributing toward reduction of problems faced in expanding health manpower and better working conditions for health personnel among the inactive nurses. The contribution of names of other unemployed nurses would also suggest an interest in being of assistance.

The interest in enrolling in a refresher course by those employed as well as those unemployed would suggest the recognition of limitations and the wish to be able to give safe, effective nursing. Comments to the effect that, although they did not plan to return to work full time, they would like to be able to serve effectively in case of emergency or the expression of willingness to work part time at a reduced salary in order not to lose contact, would tend to reinforce the suspicion that many of the respondents were sincere in their wish to update their knowledge and skills.

The small percent of those who actually enrolled when a course was offered in their area might be explained in part by the fact that many of the nurses planned to return to work at a later date, therefore they might wish to wait for a course offered just prior to employment. Some of the courses were scheduled at a time of year which has not previously been found to be the best time for enrollment. In some cases, the nurses were given little advance notice of the beginning date; therfore, some may not have had adequate time to make the necessary adjustments in other schedules. On occasion, the potential enrollees may have felt that it would be necessary to state the intention of returning to work upon completion of the course, whereas, many of the students have stated that this could not be answered until they had completed the course. In areas where very few positions or no positions were available, it is possible that the unemployed nurses were aware that it would not be probable that they would find employment. In some cases it appeared that there was not enough motivation to travel a relatively short distance or to rearrange their existing schedules so that they could attend classes at the scheduled times. However, the statements made by those who have enrolled in a course would indicate that it takes a great deal of courage for a person who has been out of practice for a long period of time to enroll in a course. This might suggest that with more support and encouragement some may return to practice; some of the reasons given for not enrolling might have masked the fear of resuming nursing practice.

Due to the small numbers of nurses interested in a refresher course in some areas, it does not seem possible to offer a course to some of the nurses unless they would be willing to commute some distance or relocate for the length of the course.

The small number of refresher courses offered and especially the small number offered by different types of institutions makes it impossible to draw any conclusions regarding factors which contribute to success of refresher programs at this time. When an institution other than a hospital sponsors a course, a great deal of cooperative preplanning with the hospitals in the area becomes necessary. Although, hopefully, the pooling of the resources of several institutions may contribute to a more effective program in some cases, the planning of the course consumes a lot of time on the part of the personnel from the educational institution and hospital personnel. This may need to be considered when deciding which agency in a given community can offer an effective course at the least expense.

While generally there were at least some nurses which might be recruited back into nursing in areas where vacancies were identified, in some areas, it would appear, that since most of the nurses would not be able to relocate, some other solution to relieving the shortage of professional nurses may be necessary.

It is of interest that only 18 respondents gave "full-time student" as one of the three reasons for unemployment and all of these were not enrolled in nursing programs. In a profession which requires a high degree of knowledge and skill, it would appear that some further arrangement is needed whereby members of the profession would be able to enroll in programs which would enable them to increase their value to patients.

Although the salary for nurses is frequently considered too low to make it worthwhile for some nurses to work, the salary for nurses will possibly remain low as long as large numbers of nurses are needed. Some of the comments of the nurses related to lack of opportunity to use their skills would suggest that personnel may not always be used to their fullest potential due to inadequate definition of roles of various levels of personnel.

It is not possible to estimate the proportion of unemployed professional nurses residing in North Carolina that have been identified by the questionnaire survey. It is thought that there are additional nurses who have moved to North Carolina from other states that have not applied for licensure. In addition, no lists were obtained from the North Carolina Board of Nursing for nurses who have requested that they be placed on inactive status or for those who have failed to renew their license. Therefore, it is not known whether the findings from the questionnaire survey of nurses represent the population of unemployed nurses in North Carolina.

RECOMMENDATIONS

Based on the survey findings and the experiences of the Coordinator during the year, it is suggested that additional study of the following may prove fruitful:

1. Analysis of the knowledge and skills needed for effective performance in various types and in various levels of nursing positions.

2. Analysis of the knowledge and skills possessed by personnel presently employed in the health agency.

3. Establishment of educational programs, either on a local level or state level, which would help qualify employees or potential employees for existing positions.

4. Placement of personnel in the position in which they can make the maximum contribution.

5. Financial compensation according to the knowledge and skills possessed by the employee.

6. Distribution of information regarding institutional philosophy and objectives, job descriptions, and personnel policies to potential employees.

7. Encouragement of all personnel to assume the responsibility for contributing to the growth or continued improvement of the health agency's services.

8. Utilization of personnel on a part time or temporary basis.

9. Survey of active nursing personnel to determine factors which would increase job satisfaction and effectiveness.

10. Exploration of the need for additional child care facilities.

11. More careful screening of refresher course applicants and maintenance of a student-teacher ratio of no more than 8:1 in the clinical area.

12. Provision of workshops for teachers of refresher courses.

13. Further study to determine factors which contribute to success of refresher courses. Factors which might be considered are: selection of students; course content; teaching methods; pretest for refresher course applicants; and type institution offering the course.

14. Studies to determine the usefulness of televised programs, programmed material, or other home study methods for the theoretical content of refresher courses and/or continuing education.

15. Establishment of a central agency to collect, analyze, report and disseminate information related to refresher programs for nurses (or other educational programs) and employment opportunities.

16. Exploration of the use of professional nurse volunteers.

PART THREE

SOCIAL WORKERS

SURVEY OF INACTIVE SOCIAL WORKERS IN NORTH CAROLINA

Identification and Contact of Inactive Social Workers

Letters requesting employment status and that names and addresses of known unemployed social workers be provided were mailed September 27, 1967, to the membership (537) of the North Carolina Council of National Association of Social Workers Chapters. Replies were received from 396 of the members. The total number of unemployed social workers residing in North Carolina identified was 98. Responses to letters to 175 hospitals in North Carolina requesting names of social workers thought to be unemployed and residing in North Carolina yielded eight names.

The names were checked for duplications and on December 8, 1968, questionnaires were mailed to 100 social workers in North Carolina. A letter from the President of the North Carolina Council of National Association of Social Workers Chapters encouraging cooperation in completing the questionnaire was enclosed in addition to a letter of explanation signed by the Coordinator. A stamped envelope addressed to the Coordinator was enclosed. The purposes of the survey were to determine employment status, reasons for unemployment in the profession, and interest in a refresher course and return to employment.

Results of Questionnaire Survey of Social Workers

The findings reported are based on data from 59 questionnaires. Two of the questionnaires were returned by the post office and five of the respondents had moved out-of-state. Thirty-four of the social workers did not return the questionnaires.

Employment Status

As shown in Table 18, 13 of the respondents indicated that they were employed. Five of these specified that they were not employed as social workers.

TABLE 18 EMPLOYMENT STATUS OF 59 SOCIAL WORKERS IN NORTH CAROLINA

Employment	Totals		Number Employed In		
	Number	Percent	Non-health Prof.	Health Prof.	No Response
Full time	5	8.4	5	0	0
Part time	8	13.6	4	3	1
Not employed	46	78.0	0	0	0
Totals	59	100.0	9	3	1

Reasons for Unemployment in Profession

The reason given most frequently as the major reason for unemployment in the profession was "homemaker preference". Eleven checked "other" as the most important reason; however, the reasons mentioned tended to elaborate on the reasons provided on the questionnaire. Table 19 shows the findings.

TABLE 19 NUMBER OF SOCIAL WORKERS INDICATING FIRST, SECOND, AND THIRD REASONS FOR UNEMPLOYMENT IN PROFESSION

Reason for Unemployment	Total	Order of Importance		
		First	Second	Third
No positions available	9	4	3	2
Cannot work hours required	6	3	2	1
Salary not worthwhile	7	1	2	4
Health	5	4	0	1
Lost interest in profession	3	1	2	0
Homemaker preference	21	17	2	2
No suitable arrangements for care of child	9	3	3	3
Prefer volunteer activities	9	1	2	6
Spouse prefers I not work	13	5	6	2
No suitable domestic help	3	0	0	3
No suitable tranportation	1	0	0	1
Full-time student	0	0	0	0
Hesitant--inactive too long	7	1	4	2
Age	10	7	1	2
Other	15	11	2	2

Plans to Return to Social Work

Twenty-three of the respondents indicated that they planned to return to work in their profession. No data were collected on whether they had previously been employed in the health field. Table 20 shows the plans for return to social work.

TABLE 20 PLANS OF SOCIAL WORKERS IN NORTH CAROLINA TO RETURN TO THEIR PROFESSION

Plans to Return	Number	Percent
Definitely yes	12	22.6
Probably yes	11	20.8
Uncertain	9	17.0
Probably no	11	20.8
Definitely no	10	18.9
Totals	53	100.0

Six of the respondents planned to return to the profession in less than a year; nine planned to return in one to five years. The majority of those planning to return in less than five years, as well as later, indicated that they were uncertain about the number of hours they could work or planned to work part time when they returned to the profession. Table 21 shows the findings.

TABLE 21 PLANS FOR RETURN TO PROFESSION OF SOCIAL WORKERS IN NORTH CAROLINA BY PLANS TO WORK FULL TIME OR PART TIME

Return When	Totals		Number Full Time	Number Part Time	Number Uncertain
	Number	Percent			
Less than 5 yrs.	15	28.3	3	11	1
6-10 years	3	5.7	1	2	0
More than 10 yrs.	0	0.0	0	0	0
Uncertain	23	43.4	3	7	13
No response	12	22.6	0	0	0
Totals	53	100.0	7	20	14

The questionnaire recipients were asked to indicate their preferred field of employment and preferred position. Some gave more than one preference. Many of those who checked the block for "other" specified case work as their preference, some indicating that they would expect consideration for past experience. Table 22 shows the preferences checked.

TABLE 22 PREFERRED FIELD AND PREFERRED POSITION OF 59 SOCIAL WORKERS IN NORTH CAROLINA

Preferred Field	Number	Percent	Preferred Position	Number	Percent
Hospital	11	16.7	Beginning	3	4.6
Nursing Home	1	1.5	Administrative	5	7.7
Clinic	16	24.2	Teaching	5	7.7
Public Health	6	9.1	Consultant	13	20.0
Self-employment	2	3.0	Other	20	30.8
Industrial	0	0.0	No Response	19	29.2
School	10	15.2			
No Response	20	30.3			
Totals	66	100.0	Totals	65	100.0

Interest in a Refresher Course

Fourteen of the respondents indicated an interest in a refresher course. Two of these were employed part time.

Nine of those interested in a refresher course planned to return to social work; four were uncertain about whether they would return. Table 23 gives a breakdown of the future work plans of the social workers interested in a refresher course.

TABLE 23 WORK PLANS OF 14 SOCIAL WORKERS IN NORTH CAROLINA WHO EXPRESSED INTEREST IN A REFRESHER COURSE

Return When	Total Number	Number Full Time	Number Part Time	No Response
Less than 5 yrs.	7	0	7	0
Uncertain	5	2	3	0
No response	2	1	0	1
Totals	14	3	10	1

REFRESHER COURSES

It was felt that there were too few social workers interested in a refresher course to offer a special course for inactive social workers. Names and addresses of those who expressed an interest were shared with the representative from the North Carolina Council of the National Association of Social Workers Chapters. Plans were to inform the inactive persons of extension courses which are offered through the School of Social Work, University of North Carolina and to explore further to determine the content and duration of a course for persons who have not been employed in the health field or who have not been employed in a health agency recently. Members of the North Carolina Council planned to design a follow-up questionnaire to determine more specific interests and needs of the persons desiring a refresher course.

EMPLOYMENT OPPORTUNITIES

Questionnaires were mailed to administrators in 175 North Carolina hospitals for the purpose of determining vacancies for social workers. The employers were asked to provide data as of March 11, 1968, and were asked to give the number of non-budgeted and budgeted vacancies.

Questionnaires were returned by 92 of the hospitals; 74 of these indicated that they did not employ social workers or did not answer the question related to number employed. Only four employed part time personnel. Table 24 shows the findings. The three positions listed as "other" were graduate students.

TABLE 24 NUMBER AND PERCENT VACANCIES FOR SOCIAL WORKERS IN 92 NORTH CAROLINA HOSPITALS BY POSITION

Position	Number Currently Employed	No Response	Number Vacancies	No Response	Number Positions	Percent Vacancies
Staff	104	13	11	32	115	9.6
Administrative	15	22	0	46	15	0.0
Teaching	7	29	0	47	7	0.0
Other	3	46	0	57	3	0.0
Totals	129		11		140	7.9

DISCUSSION

It would appear that the majority of social workers who have been identified as unemployed can be expected to return to work on a part time basis only. It is difficult to assess the extent to which the inactive social workers identified represent the population of persons in North Carolina with some social work experience or education. It is possible that more publicity regarding courses to qualify for the health field combined with information about employment opportunities would result in identification of other inactive social workers.

Analysis of the data on agencies in which the National Association of Social Workers members are employed suggests that a small percent are employed in North Carolina hospitals. Therefore, it is felt that the number of social work positions identified by the survey of hospitals would not necessarily represent the positions available for social workers.

RECOMMENDATIONS

Further exploration in the following areas seems needed:

1. Determination of the theoretical content and supervised experience needed to qualify persons with basic education in the social work field to function in a health setting.

2. Analysis of the requirements of medical social workers to determine the extent to which persons with less education and/or experience could assume some of the functions of the social worker.

3. Surveys of other health agencies to determine employment opportunities of social workers.

4. Consideration of possible use of social workers on a part time basis.

5. Establishment of a central agency which could assume responsibility for collecting and disseminating information regarding programs for social workers and employment opportunities for social workers.

PART FOUR

PHYSICAL THERAPISTS

SURVEY OF INACTIVE PHYSICAL THERAPISTS IN NORTH CAROLINA

Identification and Contact of Inactive Physical Therapists

The names and addresses of 64 physical therapists who had been identified as unemployed in previous studies were shared with the State Coordinator by members of the North Carolina Physical Therapy Association. A request for names of unemployed physical therapists to the hospital personnel in North Carolina yielded 29 names; this list included nine persons not included in the other lists and three that were received after the questionnaire to physical therapists had been mailed.

Questionnaires were mailed on December 4, 1967, to 73 physical therapists thought to be residing in North Carolina and unemployed as physical therapists. A memorandum from the President of the North Carolina Physical Therapy Association encouraging cooperation in completing and returning the questionnaire was enclosed in addition to a letter of explanation signed by the Coordinator. A stamped envelope addressed to the Coordinator was enclosed.

Results of Questionnaire Survey of Physical Therapists

The findings reported are based on data from 29 questionnaires returned by physical therapists residing in North Carolina. Six of the questionnaires were returned by the post office and seven had moved out-of-state. One was not used since the professional category checked was "professional nurse", although the respondent indicated that practice was as a physical therapist. Thirty questionnaires were not returned.

Employment Status

Ten of the respondents indicated that they were employed; three of these specified that they were not employed as physical therapists. Table 25 shows the findings.

TABLE 25 EMPLOYMENT STATUS OF 29 PHYSICAL THERAPISTS IN NORTH CAROLINA

Employment	Totals		Number Employed In		
	No.	Per-Cent	Non-health Profession	Health Prof.	Health & Non-health prof.
Full time	4	13.8	1	3*	0
Part time	6	20.7	0	5	1
Not employed	19	65.5	0	0	0
Totals	29	100.0	1	8	1

*Two specified that they were not employed as physical therapists

Reasons for Unemployment in Profession

The reason checked most frequently as the major reason for unemployment in the profession was "homemaker preference". "Spouse prefers I not work" ranked second and "no suitable arrangements for care of child" ranked third as the major reason for unemployment as a physical therapist. Table 26 shows the findings.

TABLE 26 NUMBER OF PHYSICAL THERAPISTS INDICATING FIRST, SECOND, AND THIRD REASONS FOR UNEMPLOYMENT IN PROFESSION

Reason for Unemployment	Total	Order of Importance		
		First	Second	Third
No positions available	1	0	0	1
Cannot work hours required	3	0	3	0
Salary not worthwhile	3	1	1	1
Health	2	1	0	1
Lost interest in profession	2	1	0	1
Homemaker preference	13	9	4	0
No suitable arrangements for care of child	10	4	4	2
Prefer volunteer activities	2	0	1	1
Spouse prefers I not work	12	6	2	4
No suitable domestic help	2	0	0	2
No suitable transportation	0	0	0	0
Full-time student	0	0	0	0
Hesitant--inactive too long	4	1	2	1
Age	0	0	0	0
Other	5	4	0	1

Plans to Return to Physical Therapy

As shown in Table 27, ten of the respondents indicated that they planned to return to their profession, and 12 indicated that they did not plan to return. One specified that she definitely did not plan to return now.

TABLE 27 PLANS OF PHYSICAL THERAPISTS IN NORTH CAROLINA TO RETURN TO THEIR PROFESSION

Plans to Return	Number	Employment Status		
		Unemployed	Employed Full Time	Employed Part Time
Definitely yes	4	4	0	0
Probably yes	6	3	0	3
Uncertain	4	3	0	1
Probably no	9	6	2	1
Definitely no	3	2	1	0
No response	3	1	1	1
Totals	29	19	4	6

All of the 14 respondents who were either uncertain about whether they would return to the profession or who did plan to return either planned to return part time or were uncertain about number of hours they would work. Table 28 shows the specific plans of the respondents.

TABLE 28 PLANS TO RETURN TO PROFESSION OF PHYSICAL THERAPISTS IN NORTH CAROLINA BY PLANS TO WORK FULL TIME OR PART TIME

Return When	Total Number	Plan to Return		
		Number Full Time	Number Part Time	Number Uncertain
1-5 years	7	0	3	4
6-10 years	2	0	0	2
Uncertain	5	0	3	2
Totals	14	0	6	8

The questionnaire recipients were asked to indicate their preferred field of employment and preferred position. Some checked more than one preference. Table 29 shows the preferences checked.

TABLE 29 PREFERRED FIELD AND PREFERRED POSITION OF 29 PHYSICAL THERAPISTS IN NORTH CAROLINA

Preferred Field	Number	Preferred Position	Number
Hospital	18	Beginning	6
Nursing Home	0	Administrative	6
Clinic/Office	3	Teaching	1
Public Health	0	Consultant	0
Self-employment	3	Other	4
Industrial	1	No Response	12
School	0		
No Response	7		

Interest in a Refresher Course

A total of 11 respondents checked that they were interested in a refresher course; eight of these were not employed and three were employed part time.

Two of the respondents who indicated an interest in a course were uncertain about whether they would return to work and one did not answer this question. Eight did plan to return to the profession; six planned to return within five years. Five planned to work part time and six were uncertain about the number of hours they would work.

The majority of the respondents preferred employment in a hospital. Three preferred a beginning position and two an administrative position; five did not give a preferred position.

REFRESHER COURSES

The number of physical therapists interested in a refresher course was thought to be too small to justify a special course for these persons. The names of persons who expressed an interest in a course were shared with the representative from the North Carolina Physical Therapy Association so that they might be invited to attend workshops or courses being offered to the employed physical therapists. Plans previously had been formulated for programs to upgrade active and inactive personnel. Later in the year two grants were approved which will provide funds for continuing education for physical therapists in North Carolina.

EMPLOYMENT OPPORTUNITIES

In order to determine number and location of vacancies for physical therapists in North Carolina hospitals, questionnaires were mailed to administrators in 175 North Carolina hospitals. The employers were asked to provide data as of March 11, 1968. Questionnaires were returned by 92 hospitals with a total bed capacity of 22,664. The total bed capacity of the hospitals from which the questionnaires were not returned was 10,789.

The questionnaire recipients were asked to list budgeted and non-budgeted vacancies. Table 30 gives the number and percent of vacancies by position. It will be noted that the questions were not answered by all the hospitals returning the questionnaire. The positions listed under "other" were specified as part time positions or a master's in rehabilitation. Some of the hospitals listed aides or assistants in the "other" column; these are not included in the table. Sixteen of the respondents to the question about use of part time personnel indicated that they employed part time personnel.

TABLE 30 NUMBER AND PERCENT OF VACANCIES FOR PHYSICAL THERAPISTS IN 92 NORTH CAROLINA HOSPITALS BY POSITION

Position	Number Currently Employed	Number No Response	Number Vacancies	Number No Response	Number Positions	Percent Vacancies
Staff	45	15	18	32	63	28.6
Chief	32	23	8	45	40	20.0
Teaching	0	38	2	51	2	100.0
Other	3	44	0	63	3	0.0
Totals	80		28		108	26.0

Vacancies were located in 18 counties in North Carolina. Table 31 gives the number of vacancies by area and the number of physical therapists who expressed an interest in a refresher course, and the map on the following page shows the counties in each area. Two of the respondents from Area IV indicated that they would be interested in a course later.

TABLE 31 NUMBER OF VACANCIES IDENTIFIED FOR PHYSICAL THERAPISTS AND NUMBER OF PHYSICAL THERAPISTS INTERESTED IN A REFRESHER COURSE BY AREA

Area	Number Vacancies	Number Interested In Refresher Course
Area I	3	2
Area II	7	3
Area III	2	2
Area IV	10	4
Area V	6	0
Area VI	0	0
Totals	28	11

DISCUSSION

It would appear that the inactive physical therapists identified might fill some of the positions for part time personnel. However, unless some method for identifying other unemployed physical therapists can be found, it might be expected that vacancies for qualified physical therapists will continue unless the supply from the schools is sufficient to fill the positions.

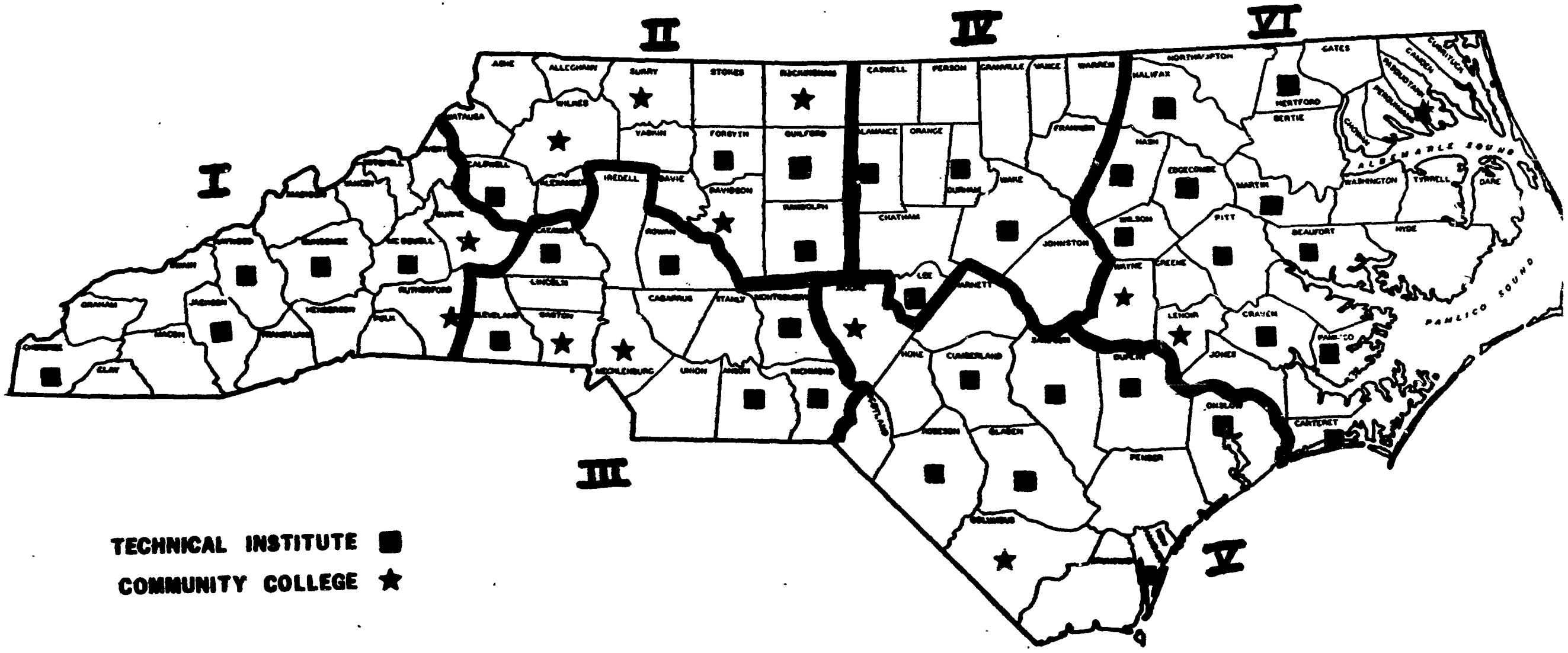
RECOMMENDATIONS

It appears that much thought has been and is being given to the problems involved in increasing the number of qualified physical therapists in North Carolina and to the possible ways of relieving the shortage of personnel. Therefore, recommendations are to continue exploration and implementation of present plans:

1. Continuing education for professional physical therapists to include both the active and inactive personnel.

2. Establishment of programs for physical therapy assistants and continued evaluation of the extent to which some of the functions of the professional personnel can be assumed by the non-professional person.

NORTH CAROLINA SYSTEM OF INSTITUTIONS



PART FIVE

MEDICAL TECHNOLOGISTS

SURVEY OF MEDICAL TECHNOLOGISTS IN NORTH CAROLINA

Identification and Contact of Inactive Medical Technologists

Questionnaires were mailed on February 13 and 15, 1968, to 747 medical technologists who were thought to be residing in North Carolina. Seven hundred twenty-two of the names and addresses were secured from the Registry of Medical Technologists in Muncie, Indiana. It was necessary to survey all those registered because no coded list was available. The remaining names (25) were supplied by personnel in hospitals in North Carolina in response to a request for names of medical technologists who were thought to be currently unemployed. The total number of names received from hospital personnel was 47. Recipients of the questionnaires were asked to supply names of unemployed medical technologists. Thirty-three names were supplied; on March 13, 1968, questionnaires were mailed to 18 medical technologists who had not previously been sent questionnaires.

The questionnaire and letter of explanation were pretested with a sample of unemployed medical technologists before sending to the survey population. A cover letter from the President-Elect of the North Carolina Society of Medical Technologists which encouraged cooperation and a stamped envelope addressed to the Coordinator were enclosed.

The findings reported are based on the analysis of data from 417 questionnaires. Three hundred eight (40%) of the medical technologists did not return the questionnaire. Twenty (2.6%) of the questionnaires were returned by the post office, returns from 16 of the respondents who had moved out-of-state were not processed, and four of the returns were not usable.

Employment Status

One hundred sixty-eight (40.3%) of the respondents indicated that they were not employed; 23 (5.5%) were employed in a non-health profession. Table 32 shows the findings.

TABLE 32 EMPLOYMENT STATUS OF 417 MEDICAL TECHNOLOGISTS IN NORTH CAROLINA

Employment Status	No.	Per-Cent	Profession					
			Non-Health		Health & Non-Health		Health	
			No.	Percent	No.	Percent	No.	Percent
Full time	201	48.2	16	8.0	13	6.5	172	85.6
Part time	48	11.5	7	14.6	3	6.3	38	79.2
Not employed	168	40.3	—		—		—	
Totals	417	100.0	23		16		210	

Reasons for Unemployment in Profession

Reasons given most frequently as the main reason for unemployment in the profession by medical technologists who were unemployed were, in rank order: (1) homemaker preference; (2) salary not worthwhile; (3) no suitable arrangements for care of child; (4) spouse prefers I not work. The reasons given most frequently by those employed in a non-health profession were: (1) salary not worthwhile; (2) cannot work hours required. Recipients were asked to specify reasons for unemployment other than those listed. Various other reasons were mentioned; many were related to responsibilities of pre-school children and some reinforced reasons listed--in particular, salary and hours. Table 33 shows the reasons given by those not employed in their profession.

TABLE 33 NUMBER OF MEDICAL TECHNOLOGISTS INDICATING FIRST, SECOND, AND THIRD REASONS FOR UNEMPLOYMENT IN PROFESSION

Reasons for Unemployment In Profession	Employed in Non-health Prof.				Unemployed			
	Total	Order of Importance			Total	Order of Importance		
		First	Second	Third		First	Second	Third
No positions available	2	0	2	0	16	9	4	3
Cannot work hours required	10	4	6	0	40	7	15	18
Salary not worthwhile	14	7	6	1	69	20	17	32
Health	0	0	0	0	8	4	3	1
Lost interest in profession	6	1	0	5	12	4	7	1
Homemaker preference	4	1	1	2	105	80	11	14
No suitable arrangements for care of child	1	0	1	0	70	13	47	10
Prefer volunteer activities	0	0	0	0	14	2	5	7
Spouse prefers I not work	0	0	0	0	55	11	28	16
No suitable domestic help	0	0	0	0	21	1	8	12
No suitable transportation	0	0	0	0	3	0	2	1
Full-time student	1	1	0	0	3	2	1	0
Hesitant--inactive too long	4	0	0	4	31	4	8	19
Age	0	0	0	0	2	1	1	0
Other	13	6	3	4	35	15	2	18

Plans to Return to Profession

Almost 30% of the respondents who were not employed were uncertain about whether they would return to their profession. Of those that were more certain, over one-half (61) planned to return and almost one-half (55) did not plan to return to their profession.

One hundred (60%) either were uncertain or did not answer when they planned to return; 51 (30%) planned to return in less than five years. More than one-half (95) were uncertain whether they would return full time or part time or did not answer this question. Of those that gave a definite answer, 22% (16) indicated that they planned to work full time and 78% (57) indicated that they planned to work part time. The majority indicated that they could not rotate shifts. Tables 34 and 35 show a breakdown of the findings.

TABLE 34 PLANS TO RETURN TO PROFESSION OF 168 MEDICAL TECHNOLOGISTS IN NORTH CAROLINA

Plan to Return	Number	Percent	Return When	Number	Percent
Definitely yes	14	8.3	Less than year	8	4.8
Probably yes	47	28.0	1-5 years	43	25.6
Uncertain	50	29.8	6-10 years	13	7.7
Probably no	46	27.4	More than 10 yrs.	4	2.4
Definitely no	9	5.4	Uncertain	90	53.6
No response	2	1.2	No response	10	6.0
Totals	168	100.0	Totals	168	100.0

TABLE 35 WORK PLANS OF 168 UNEMPLOYED MEDICAL TECHNOLOGISTS IN NORTH CAROLINA BY NUMBER OF HOURS AND ROTATION OF SHIFTS

Number Hours	Number	Percent	Could Rotate Shifts	Number	Percent
Full time	16	9.5	Yes	7	4.2
Part time	57	34.0	No	140	83.3
Uncertain	81	48.2	No response	21	12.5
No response	14	8.3			
Totals	168	100.0	Totals	168	100.0

The majority of the unemployed medical technologists gave the hospital as the preferred field of employment with approximately one-third of those who answered giving a beginning position as their preference. Preference listed under "other" were usually research or a specialty. Some respondents checked more than one preference. Table 36 shows the preferences checked.

TABLE 36 PREFERRED FIELD AND PREFERRED POSITION OF 168 UNEMPLOYED MEDICAL TECHNOLOGISTS IN NORTH CAROLINA

Preferred Field	Number	Percent	Preferred Position	Number	Percent
Hospital	111	61.3	Beginning	43	29.5
Nursing Home	0	0.0	Administrative	10	6.8
Clinic/Office	42	23.2	Teaching	32	21.9
Public Health	6	3.3	Consultant	8	5.5
Self-employment	3	1.7	Other	27	18.5
Industrial	4	2.2	No Response	26	17.8
School	7	3.9			
No Response	8	4.4			
Totals	181	100.0	Totals	146	100.0

Interest in a Refresher Course

A total of 170 respondents indicated an interest in a refresher course. More than one-half of these indicated that they were employed, either full time or part time, in a health profession. Table 37 shows the findings.

Those that were not employed were located in 25 counties; in most counties there were only one or two persons interested in a course. Eight of those unemployed specified that they would be interested in a refresher course later.

TABLE 37 EMPLOYMENT STATUS OF 170 MEDICAL TECHNOLOGISTS IN NORTH CAROLINA WHO EXPRESSED INTEREST IN A REFRESHER COURSE

Employment Status	Number	Percent	Employed In		
			Non-health Profession	Health & Non-Health Prof.	Health Prof.
Full time	84	49.4	4	3	77
Part time	21	12.4	4	0	17
Not employed	65	38.2			
Totals	170	100.0			

REFRESHER COURSES

The findings from the questionnaire survey were shared with the representative from the North Carolina Society of Medical Technologists. A curriculum guide for refresher courses was obtained from the National Committee for Careers in Medical Technology. Tentative plans were to enlist the support of a local technical institute in sponsoring one course to be used as a pilot study. However, the plans have not been implemented at this point.

EMPLOYMENT OPPORTUNITIES

Questionnaires were mailed to administrators in 175 North Carolina hospitals for the purpose of determining vacancies and policies for medical technologists in hospitals in North Carolina. The employers were asked to provide data as of March 11, 1968. Questionnaires were returned by 92 hospitals with a total bed capacity of 22,664. The total bed capacity of the hospitals from which the questionnaires were not returned was 10,789.

The questionnaire recipients were asked to list budgeted and non-budgeted vacancies. Table 38 gives the number and percent of vacancies by position. Some of the positions listed as "other" were unclear; it is possible that some of these were not medical technologists. In some cases it was specified that these were non-registered or not ASCP registered medical technologists. It will be noted that the questions were not answered by all the hospitals that returned the questionnaire.

TABLE 38 NUMBER AND PERCENT OF VACANCIES FOR MEDICAL TECHNOLOGISTS IN 92 NORTH CAROLINA HOSPITALS BY POSITION

Position	Number Currently Employed	No Response	Number Vacancies	No Response	Number Positions	Percent Vacancies
Staff	491	8	79	21	570	13.9
Administrative	56	37	4	52	60	6.7
Teaching	14	52	5	63	19	26.3
Other	22	66	0	77	22	0.0
Totals	583		88		671	13.1

Table 39 shows the number of vacancies and number of unemployed medical technologists who expressed interest in a refresher course by area; the counties included in each area are shown on the map on the following page.

TABLE 39 NUMBER OF VACANCIES IDENTIFIED AND NUMBER OF UNEMPLOYED MEDICAL TECHNOLOGISTS INTERESTED IN A REFRESHER COURSE BY AREA

Area	Number Vacancies	Number Interested In Refresher Course
Area I	7	4
Area II	12	14
Area III	16	14
Area IV	39	13
Area V	7	11
Area VI	7	9
Totals	88	65

Questions were asked about shift pattern, rotation, salary differentiation and use of part-time personnel for different positions. Tabulation of data shows that these questions were not answered for positions other than staff positions by the majority of the hospital personnel who returned the questionnaire. Some did not answer for staff positions. Of the 68 who answered the question about full time rotation for staff positions, 42 did not require rotation, six required weekly, seven required daily, one required monthly rotation, six required the employee to be on call, and six indicated that there was no pattern. Sixty-seven of the 71 respondents who answered the question answered "yes" to the question of "salary differentiation for advanced education" and 58 of the 72 answering, answered "yes" to "salary differential for experience" for staff positions. Part time personnel were employed by 63 hospitals; seven indicated that they did not employ part time personnel.

DISCUSSION

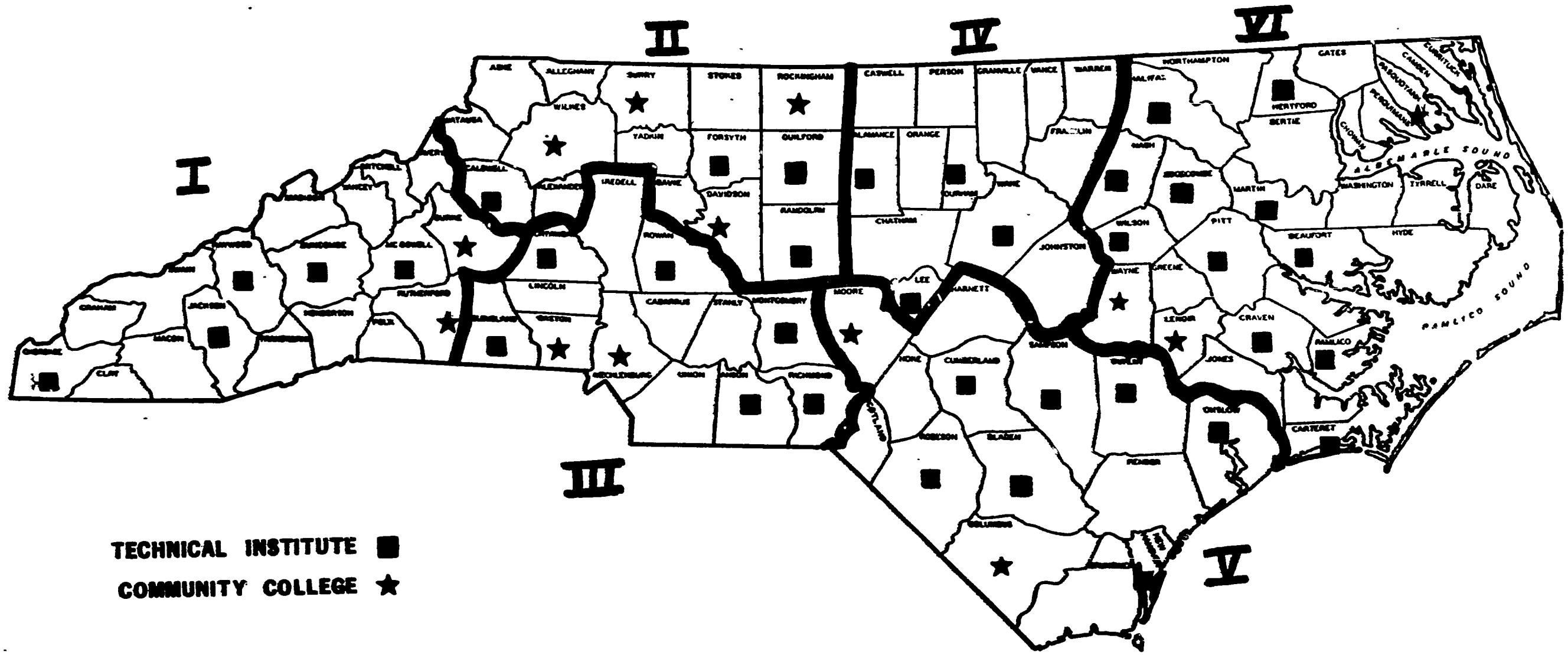
The numbers of employed medical technologists who expressed interest in a refresher course would suggest that there is a need for continuing educational programs for employed medical technologists in North Carolina.

The numbers of unemployed medical technologists interested in a refresher course in most areas would not appear to be large enough to justify courses on a community basis.

The Coordinator was impressed with the comments related to dissatisfaction with salary and hours of work. It would appear that this tends to encourage persons who are qualified for other positions to seek other employment and is a source of dissatisfaction among the employed.

The return of inactive medical technologists to the profession might, in most cases, be expected to fill the positions for part time personnel only unless some modification of employment conditions or facilities for child care could be arranged.

NORTH CAROLINA SYSTEM OF INSTITUTIONS



RECOMMENDATIONS

Based on the findings from the survey of medical technologists and employment opportunities, further exploration in the following areas is recommended:

1. Development of guidelines to include the course content and methods of learning suitable for persons who have been inactive in the profession.

2. Development of continuing education programs for medical technologists who are presently employed.

3. Consideration of expanded use of part time personnel.

4. Continued analysis of job requirements of the medical technologists and consideration to the possible delegation of some of the functions to persons with less knowledge and skill.

5. Consideration of whether the current salary for medical technologists is commensurate with the knowledge, skill, and responsibility required.

6. Survey of medical technologists to determine factors which contribute to job satisfaction and to job dissatisfaction.

PART SIX

DIETITIANS

SURVEY OF MEMBERS OF THE NORTH CAROLINA HOME ECONOMICS ASSOCIATION

Introduction

Since previous surveys of members of the North Carolina Dietetic Association had been made, the representative from this association felt that there would be more value to a survey of members of the North Carolina Home Economics Association to identify unemployed persons who may be qualified, or who perhaps could become qualified for employment in the health field.

A coded list of members was obtained. However, since it was thought that the data were not always accurate, questionnaires were mailed to the entire membership. The questionnaire which was used for other health personnel was considered unsuitable; therefore, another questionnaire was designed for use with this group. The questionnaire was pretested with members of the association and revisions were made before sending the questionnaire to the membership.

Questionnaires were mailed in March, 1968, to the 1,038 North Carolina Home Economics Association members. The accompanying memorandum from the Chairman, Social Welfare and Public Health Committee explained the purpose of the study and encouraged cooperation. A stamped envelope addressed to the Coordinator was enclosed.

Results of Survey

The findings presented are based on data from 526 questionnaires. Four were returned from the post office; ten had moved out-of-state. At the time the data were processed, 498 (48%) had not returned the questionnaire.

Employment Status and Educational Attainment

A major in Foods and Nutrition or Institutional Management and/or a dietetic internship was considered as appropriate educational background for employment in the health field. It was thought that a short refresher course would enable these persons to function as dietary consultants to hospitals and nursing homes.

As shown in Table 40; only 25 of the respondents were unemployed and the majority had majored in other areas.

TABLE 40

EMPLOYMENT STATUS OF 526 NCHEA MEMBERS BY FIELD OF EMPLOYMENT AND EDUCATIONAL ATTAINMENT

Employment Status	Total Number	Number Employed In					Highest Ed. Attainment (Number)*						
		Hosp.	Nurs. Home	Publ. Health	Other	No Resp.	B.S. F&N	B.S. I.M.	Diet. Intern Ship	M.S. F&N	M.S. I.M.	Other	No Resp.
Full time	477	6	0	4	461	6	17	6	5	16	2	415	20
Part time	17	1	0	0	15	1	0	1	0	2	0	12	2
Unemployed	25	-	-	-	-	-	1	0	1	1	1	18	3
No response	7	-	-	-	-	-	-	-	-	-	-	-	-
Totals	526	7	0	4	476	7	18	7	6	19	3	445	25

*Four respondents checked more than one major.

The reason checked most frequently as the primary reason for unemployment was "homemaker preference". However, as shown in Table 41, the number who were retired or not working for health reasons was almost equal to the number who preferred homemaking.

TABLE 41

NUMBER OF NCHEA MEMBERS INDICATING FIRST, SECOND, AND THIRD REASONS FOR UNEMPLOYMENT

Reason for Unemployment	Total	Order of Importance		
		First	Second	Third
No positions available	5	2	2	1
Cannot work hours required	3	0	1	2
Salary not worthwhile	2	0	2	0
Health	3	3	0	0
Lost interest in profession	0	0	0	0
Homemaker preference	9	5	1	3
No suitable arrangements for care of child	4	1	1	2
Prefer volunteer activities	1	1	0	0
Spouse prefers I not work	4	2	1	1
No suitable domestic help	0	0	0	0
No suitable transportation	1	0	0	1
Full-time student	0	0	0	0
Hesitant--inactive too long	1	0	0	1
Age	5	2	2	1
Other	12*	9	2	1
No response	2	2	-	-

*Four who checked "other" were retired.

Interest in a Refresher Course

Although only ten of the unemployed respondents checked that they were interested in a course to qualify for a health position, a total of 97 respondents checked that they would be interested in a course. The majority of those interested were uncertain about whether they would work in dietetics; however, although the majority did not answer the question about when they would return, 20 checked that they planned to work in dietetics and the majority who answered indicated that they planned to work full time. The preferred fields checked most frequently were "school system" and "public health", and "teaching" or "consultant" was checked most frequently as a preferred position. Tables 42, 43, and 44 show these findings.

TABLE 42 FUTURE WORK PLANS OF NCHEA MEMBERS INTERESTED IN COURSE TO QUALIFY FOR HEALTH POSITION

Plan to Work in Dietetics	Number	Number Years Before Returning						Extent of Employment			
		0-1	1-5	6-10	Over 10	Uncertain	No Resp.	Full time	Part time	Uncertain	No Resp.
Def. yes	4	0	0	0	1	0	3	2	0	0	2
Prob. yes	16	2	1	0	0	1	12	7	2	2	5
Uncertain	64	4	3	0	0	3	54	28	8	5	23
Prob. no	8	0	0	0	0	0	8	2	1	0	5
No resp.	5	0	0	0	0	1	4	0	0	1	4
Totals	97	6	4	0	1	5	81	39	11	8	39

TABLE 43 PREFERRED FIELD OF NCHEA MEMBERS INTERESTED IN A COURSE TO QUALIFY FOR HEALTH POSITION BY PLANS TO WORK IN DIETETICS

Plan to Work in Dietetics	Number	Preferred Field								
		Hosp.	Nursing Home	Clinic	Public Health	Self-empl.	Ind.	Sch.	Other	No Resp.
Def. yes	4	1	0	0	1	0	0	2	0	0
Prob. yes	16	4	1	2	4	0	2	8	0	1
Uncertain	64	10	2	4	19	1	9	23	4	6
Prob. no	8	0	0	0	0	0	0	5	0	3
No resp.	5	2	0	0	0	0	1	2	0	2
Totals	97	17	3	6	24	1	12	40	4	12

TABLE 44 PREFERRED POSITION OF NCHEA MEMBERS INTERESTED IN A COURSE TO QUALIFY FOR HEALTH POSITION BY PLANS TO WORK IN DIETETICS

Plan to Work in Dietetics	Number	Preferred Position					
		Beg.	Adm.	Teaching	Consult.	Other	No Resp.
Def. yes	4	0	2	2	0	0	1
Prob. yes	16	4	2	7	7	0	1
Uncertain	64	9	4	26	21	1	9
Prob. no	8	0	0	5	2	0	2
No resp.	5	2	0	1	1	0	2
Totals	97	13	8	41	31	1	15

No data were collected on previous work experience so that it is not known whether some may have previously been employed in a health agency. Table 45 shows the current employment status of those who indicated interest in a course to qualify for a health position. Only seven of those interested had majored in Foods and Nutrition or had had a dietetic internship. Seven were current members of the American Dietetic Association; three had formerly been a member. Table 46 shows these findings.

TABLE 45 PRESENT EMPLOYMENT OF NCHEA MEMBERS INTERESTED IN A COURSE TO QUALIFY FOR HEALTH POSITION BY PLANS TO WORK IN DIETETICS

Plan to Work in Dietetics	Number	Present Employment								
		Hosp.	Nursing Home	Public Health	Other	No Resp.	Full time	Part time	Un-empl.	No Resp.
Def. yes	4	1	0	0	3	0	4	0	0	0
Prob. yes	16	0	0	0	15	1	14	0	2	0
Uncertain	64	0	0	0	58	6	56	1	7	0
Prob. no	8	0	0	0	8	0	8	0	0	0
No resp.	5	0	0	0	4	1	4	0	1	0
Totals	97	1	0	0	88	8	86	1	10	0

HIGHEST EDUCATIONAL ATTAINMENT AND ADA MEMBERSHIP OF NCHEA MEMBERS INTERESTED IN A COURSE TO QUALIFY FOR HEALTH POSITION BY PLANS TO WORK IN DIETETICS

TABLE 46

Plan to Work in Dietetics	Number	Highest Ed. Attainment							Membership ADA		
		B.S. F&N	B.S. I.M.	Diet. Intern Ship	M.S. F&N	M.S. I.M.	Other	No Resp.	Current	Former	No Resp.
Def. yes	4	0	0	0	0	0	4	0	0	0	4
Prob. yes	16	1	0	0	0	0	15	0	1	1	14
Uncertain	64	2	0	2	2	0	58	0	6	1	57
Prob. no	8	0	0	0	0	0	8	0	0	1	7
No resp.	5	0	0	0	0	0	5	0	0	0	5
Totals	97	3	0	2	2	0	90	0	7	3	87

REFRESHER COURSES

The findings from the survey of members of the North Carolina Home Economics Association were shared with the Social Welfare and Public Health Committee, North Carolina Home Economics Association and with the representative of the North Carolina Dietetic Association and other selected dietitians. Suggestions were that representatives of the North Carolina Dietetic Association and/or the North Carolina Home Economics Association develop course content which would enable persons with a degree in Home Economics to qualify for employment in a health agency. It was felt that follow-up of the persons who expressed interest in a course to qualify for a health position should be made to determine more specific interests and needs.

One hundred sixty-six names of home economists who were not members of the North Carolina Home Economics Association were offered by the questionnaire respondents. (A total of 172 names was received.) Tentative plans are to contact these persons also; it is thought that a larger proportion of these persons may be unemployed.

Thirty-six dietitians were identified as unemployed by hospital personnel; these persons have not been sent questionnaires.

EMPLOYMENT OPPORTUNITIES: DIETITIANS

Questionnaires were mailed to administrators in 175 North Carolina hospitals for the purpose of determining number and location of vacancies for dietitians in hospitals. The employers were asked to provide data as of March 11, 1968, and were asked to give the number of budgeted and non-budgeted vacancies.

Questionnaires were returned by 92 hospitals with a total bed capacity of 22,664. The total bed capacity of the hospitals from which the questionnaires were not returned was 10,789.

Table 47 shows the vacancies identified. The responses from three of the hospitals are not included because the number listed as number currently employed would suggest that dietary personnel other than dietitians had been included. No definition was provided for dietitian and no data were collected on qualifications of personnel. Therefore, it would not be expected that the dietitians listed would necessarily be members of the American Dietetic Association. Fifteen of the 63 respondents to the question of whether part time personnel were employed answered "yes" for staff positions. The majority did not answer this question for administrative or teaching positions. Some of the positions included under "other" were listed as "training"; in some cases these were food service supervisors rather than dietitians.

TABLE 47 NUMBER AND PERCENT OF VACANCIES FOR DIETITIANS IN 89 NORTH CAROLINA HOSPITALS BY POSITION

Position	Number Currently Employed	No Response	Number Vacancies	No Response	Number Positions	Percent Vacancies
Staff	76	17	18	38	94	19.1
Administrative	45	28	3	56	48	6.3
Teaching	8	45	0	64	8	0.0
Other	10	55	0	74	10	0.0
Totals	139		21		160	13.1

DISCUSSION

It would appear that few of the North Carolina Home Economics Association members contacted would be able to qualify for health positions in which the salary would be equal to their present salary without several additional courses. This, coupled with the uncertainty displayed regarding plans to work in dietetics, would suggest that the supply of qualified dietitians is not likely to be increased to a great extent by offering refresher courses to persons presently unemployed as dietitians.

Further exploration would be necessary to determine whether some of the persons identified as unemployed dietitians by hospital personnel might be interested in reentering the labor force.

RECOMMENDATIONS

Further exploration of the following seems needed:

1. Surveys of the home economists identified by questionnaire respondents and of the dietitians which have been identified as possibly unemployed to determine interest in working in a health agency, interest in a refresher course, and reasons for unemployment.

2. Determination of courses needed to enable persons who have expressed interest in a health position to qualify for employment.

3. Provision of information by health agencies that could be distributed to potential employees. This should include the philosophy and objectives of the employing agency, job descriptions and requirements, salary grades of various positions and policies for part time as well as full time employees.

4. Consideration of whether continuing educational programs for currently employed personnel would enable them to assume additional responsibilities.

5. Survey of currently employed dietitians to determine factors which contribute to job satisfaction or dissatisfaction. This may help determine problems involved in increasing the supply of qualified dietitians in North Carolina.

APPENDICES

Dear Professional Nurse:

The Department of Community Colleges, in cooperation with the Division of Nursing, Bureau of Health Manpower, USPHS, is conducting a study to obtain information about health personnel in North Carolina who are currently registered, or who are eligible for registration, but who are not currently employed in their profession. We are especially interested in contacting all nurses who are not currently employed in nursing.

This study is being conducted to obtain information regarding reasons health personnel are not employed in their profession and to determine the extent to which they may be able to return to full or part-time employment. This information will help in planning to meet the needs for professional health personnel in North Carolina. Your comments and the comments of other participants will be used to determine problems faced in expanding health manpower. Definition of problems involved may result in plans for reduction of these problems and for better working conditions for health personnel.

Plans are for all replies to be processed at the end of a two-week period. We are interested in your comments. Would you please take the time now to complete the enclosed questionnaire and return it in the postage-paid, addressed envelope?

We would like to obtain information from all nurses who are not employed in nursing. If you are aware of other nurses who are not employed in their profession, please list their names and addresses on the back of the questionnaire or ask them to contact Miss Rachel Westmoreland, Department of Community Colleges, 112 W. Lane Street, Raleigh, North Carolina 27602.

We appreciate your assistance and your cooperation.

Sincerely,

Helen E. Peeler

Helen E. Peeler, R.N.
Executive Director
N. C. State Nurses' Association

Enclosure

DEPARTMENT OF COMMUNITY COLLEGES, RALEIGH, NORTH CAROLINA

Miss ☐
Mrs. ☐
Mr. ☐

LAST NAME | FIRST NAME | MIDDLE INITIAL | MAIDEN NAME | Certificate No. | Serial No. (if applicable)

STREET NO. | STREET NAME | APT. NO. | CITY | STATE | ZIP CODE | COUNTY

INSTRUCTIONS FOR 1-13: CHECK ONE

1. PROFESSIONAL CATEGORY

Professional Nurse	0
Medical Technologist	1
Dietitian	2
Social Worker	3
Physical Therapist	4

2. EMPLOYMENT STATUS

Full-time	0
Part-time	1
Not employed	2

3. EMPLOYED IN

Non-health profession	0
Health and non-health prof.	1
Health profession	2

4. INTEREST IN REFRESHER COURSE

Yes	0
No	1

5. PAST PARTICIPATION IN REFRESHER COURSE

Yes	0
No	1

6. PLAN TO RETURN TO WORK IN YOUR PROFESSION

Definitely yes	0
Probably yes	1
Uncertain	2
Probably no	3
Definitely no	4

7. PLAN TO RETURN IN HOW MANY YEARS

Less than 1 yr.	0
1-5 yrs.	1
6-10 yrs.	2
More than 10 yrs.	3
Uncertain	4

8. PLAN TO WORK

Full-time	0
Part-time	1
Uncertain	2

9. COULD ROTATE SHIFTS

Yes	0
No	1

10. PREFERRED FIELD

Hospital	0
Nursing Home	1
Clinic/Office	2
Public Health	3
Self-employment	4
Industrial	5
School System	6

11. PREFERRED POSITION

Beginning	0
Administrative	1
Teaching	2
Consultant	3
Other (specify)	4

12. REGISTRATION

North Carolina	0
National Registry	1
Not applicable	2

13. REGISTERED IN OTHER STATE

Yes (write in)	0
No	1

14. REASONS FOR UNEMPLOYMENT IN YOUR PROFESSION: Select 3 reasons most relevant to your position of unemployment. Place "1" by most important reason, "2" by second in importance, and "3" by third in importance.

No positions available	0	Prefer volunteer activities	7
Cannot work hrs. required	1	Spouse prefers I not work	8
Salary not worthwhile	2	No suitable domestic help	9
Health	3	No suitable transportation	10
Lost Interest in prof.	4	Full-time student	11
Homemaker preference	5	Hesitant - inactive too long	12
No suitable arrangements for care of child	6	Age	13
		Other (specify on back)	14

PLEASE BE SURE YOU HAVE CHECKED ONE ANSWER FOR QUESTIONS 1-13 AND HAVE RANKED QUESTION NO. 14.

DEPARTMENT OF COMMUNITY COLLEGES, RALEIGH, NORTH CAROLINA

QUESTIONNAIRE FOR APPLICANTS TO REFRESHER PROGRAMS FOR NURSES

Miss ☐
Mrs. ☐
Mr. ☐

LAST NAME | FIRST NAME | MIDDLE INITIAL | MAIDEN NAME | CERTIFICATE NO. | SERIAL NO.

STREET NO. | STREET NAME | CITY | STATE | ZIP CODE | COUNTY | TEL. NO.

INSTRUCTIONS: CHECK ONE UNLESS OTHER INSTRUCTIONS GIVEN

1. MARITAL STATUS
   - Single ☐
   - Married ☐
   - Divorced ☐
   - Separated ☐
   - Widow(er) ☐

2. AGE
   - 20-29 ☐
   - 30-39 ☐
   - 40-44 ☐
   - 45-49 ☐
   - 50-59 ☐
   - 60- ☐

3. NUMBER OF CHILDREN
   - 1 ☐
   - 2 ☐
   - 3 ☐
   - 4 ☐
   - 5 ☐
   - 6 ☐
   - 7 None ☐

4. AGES OF CHILDREN (WRITE IN NUMBER)
   - 0-2 ☐
   - 3-5 ☐
   - 6-8 ☐
   - 9-11 ☐
   - 12-14 ☐
   - 15-17 ☐
   - 18-20 ☐
   - 21- ☐

5. BASIC NURSE PREPARATION
   - Hospital (3 yr.) ☐
   - A.D. Jr. College (2 yrs.) ☐
   - B.S. (4 yrs.) ☐
   - Other ☐

6. YEAR GRADUATION FROM BASIC PROGRAM
   - 1960-1967 ☐
   - 1950-1959 ☐
   - 1940-1949 ☐
   - 1930-1939 ☐
   - 1920-1929 ☐
   - Before 1920 ☐

7. HIGHEST DEGREE HELD
   - No Degree ☐
   - A.D. ☐
   - Baccalaureate ☐
   - Masters ☐
   - Doctorate ☐

8. DEGREE IN NON-NURSING FIELD
   - None ☐
   - A.D. ☐
   - Bacc. ☐
   - Masters ☐
   - Doctorate ☐

9. IF DEGREE IN OTHER FIELD, WHAT MAJOR? ☐

10. TOTAL YEARS EMPLOYED AS NURSE (WRITE IN NO. YEARS)
    - Full-time ☐
    - Part-time ☐

11. FIELDS (WRITE IN NO. YEARS EMPLOYED)
    - Hospital ☐
    - Public Health ☐
    - Private Duty ☐
    - Industrial ☐
    - Office ☐
    - School ☐
    - School of Nursing ☐
    - Nursing Home ☐
    - Other (specify) ☐

12. POSITIONS (WRITE IN YEARS EMPLOYED)
    - General Duty ☐
    - Head Nurse or Assistant ☐
    - Supervisor ☐
    - Instructor ☐
    - Consultant ☐
    - Administrator or Assistant ☐
    - Other(specify) ☐

13. SERVICE (WRITE IN NO. YEARS)
    - Med/Surg. ☐
    - OB/Gyn. ☐
    - Psych/mental Health ☐
    - Pediatrics ☐
    - Other (specify) ☐

14. NUMBER YEARS SINCE EMPLOYED IN NURSING
    - Less than yr. ☐
    - 1-2 yrs. ☐
    - 3-5 yrs. ☐
    - 6-10 yrs. ☐
    - 11-20 yrs. ☐
    - 21 and over ☐

15. REGISTERED IN N. C.?
    - Yes ☐
    - No ☐

16. REGISTERED IN OTHER STATE?
    - Yes (write in) ☐
    - No

17. FUTURE WORK PLANS
    - Full-time ☐
    - Part-time (write in no. hrs.) ☐
    - Uncertain ☐

18. PREFERRED FIELD
    - Hospital ☐
    - Pub. Health ☐
    - Office ☐
    - Priv. Duty ☐
    - School ☐
    - Sch. of Nurs. ☐
    - Nurs. Home ☐
    - Industrial ☐
    - Other ☐

19. PREFERRED POSITION

- General Duty ☐
- Head Nurse or Assistant ☐
- Supervisor ☐
- Consultant ☐
- Instructor ☐
- Administrative or Assistant ☐
- Other (specify) ☐

20. PREFERRED SERVICE

- Med/Surg. ☐
- O.B./Gyn. ☐
- Psychiatry/ Mental Health ☐
- Pediatrics ☐
- Other (specify) ☐

21. PHYSICAL OR MENTAL HANDICAPS

Yes ☐
No ☐
If yes, specify.

22. REASONS FOR ENROLLING IN COURSE: Write "1" for main reason, "2" for second in importance, "3" for third in importance.

- Return to employment in nursing ☐
- Upgrading to change positions in nursing ☐
- Determine interest in returning to nursing ☐
- General interest in trends in nursing ☐
- Volunteer work in nursing ☐
- Upgrading for present position ☐
- Other (specify) ☐

Husband/wife's Name _____

Husband/wife's Occupation _____

	NAME	ADDRESS
SCHOOL OF NURSING:		

	NAME	ADDRESS	YEARS ATTENDED
COLLEGES ATTENDED:			

Enclosed you will find a questionnaire which we are sending to all professional nurses who have participated in a refresher course during the year. We are interested in determining whether refresher courses being offered in North Carolina are meeting the needs of participants. Your responses, and those of others who have completed a course, will help us in planning future refresher courses for nurses.

Would you please complete this questionnaire and return it in the enclosed addressed, postage-paid envelope at your earliest convenience?

Thank you for your prompt assistance and cooperation.

Sincerely,

Rachel B. Westmoreland

Rachel B. Westmoreland
Nurse Coordinator
Inactive Health Professionals Project

RBW:slb

Enclosure

DEPARTMENT OF COMMUNITY COLLEGES, RALEIGH, NORTH CAROLINA

EVALUATION OF REFRESHER COURSE IN NURSING

1. TOTAL HOURS OF COURSE (WRITE IN)

DATE COURSE COMPLETED

2. REASON FOR ENROLLMENT

- Return to employment in nursing — 0
- Upgrading to change positions in nursing — 1
- Upgrading for present position — 2
- Volunteer work in nursing — 3
- Determine interest in returning to nursing — 4
- General interest in trends in nursing — 5
- Other (specify — 6

EVALUATION OF COURSE

3. COURSE CONTENT: Write in:
"1" for much more emphasis needed
"2" for more emphasis needed
"3" for adequate
"4" for too much emphasis

- Leadership role of RN — 0
- Basic nursing skills — 1
- Nursing medical patient — 2
- Nursing surgical patient — 3
- Management of complications — 4
- Diagnostic tests — 5
- Medications — 6
- Procedures and equipment — 7
- Specialty areas — 8

4. TEACHING AIDS: Write in:
"1" for very valuable
"2" for valuable
"3" for of some value
"4" for of little value
"5" no value
"6" not used.

- Reference textbook(s) — 0
- Films — 1
- Field Trips — 2
- Pamphlets — 3
- Programmed material — 4
- Charts — 5
- Bibliography — 6
- Demonstrations by instructor — 7

5. LENGTH OF COURSE (CHECK ONE)

- Inadequate for comprehension of theory — 0
- Inadequate for development of skills needed — 1
- Theory adequate; need more clinical experience — 2
- Theory and clinical experience adequate for employment with average supervision — 3
- Theory and clinical experience adequate for employment with minimum supervision — 4
- Theory and clinical experience adequate for employment with close supervision — 5

6. PLANS FOR EMPLOYMENT IN NURSING

- Full time — 0
- Part time (write in hrs. per week) — 1
- None — 2
- Uncertain — 3

7. PREFERRED FIELD

- Hospital — 0
- Nursing home — 1
- Office — 2
- Private duty — 3
- Public health — 4
- Industrial — 5
- School — 6
- School of nursing — 7
- Other (specify) — 8

8. PREFERRED POSITION

- General duty
- Head nurse or Assistant
- Administrator or Assistant
- Teaching
- Consultant
- Supervisor
- Other (specify

9. PREFERRED SERVICE

- Med/Surg. — 0
- OB/Gyn. — 1
- Psych/Mental Health — 2
- Pediatrics — 3
- Other (specify) — 4

PREVIOUS NURSING EXPERIENCE

10. FIELD (WRITE IN YEARS)

- Hospital — 0
- Public health — 1
- Private duty — 2
- Industrial — 3
- Office — 4
- School — 5
- Nursing home — 6
- Other — 7

11. POSITION (WRITE IN YEARS)

- General duty — 0
- Head Nurse or Assistant — 1
- Supervisor — 2
- Teaching — 3
- Consultant — 4
- Administrator or Assistant — 5
- Other — 6

12. SERVICE (WRITE IN YEARS)

- Med/Surg. — 0
- OB/Gyn. — 1
- Psych/Mental Health — 2
- Pediatrics — 3
- Other — 4

13. YEARS SINCE EMPLOYED

- Less than year — 0
- 1-2 years — 1
- 3-5 years — 2
- 6-10 years — 3
- 11-20 years — 4
- 21 and over — 5

14. WHAT WERE YOUR OBJECTIVES FOR THE COURSE?

15. OBJECTIVES FULFILLED?

Yes ☐ 0
No ☐ 1

16. INTEREST IN FOLLOW-UP CLASSES

Yes ☐ 0
No ☐ 1

If yes, please list topics you would like included.

Please add any comments which might help us in planning future refresher courses for nurses.

Enclosed you will find a follow-up questionnaire which is being sent to professional nurses who have participated in a refresher course during the year. The responses to this questionnaire will help us evaluate the effectiveness of the refresher courses which have been conducted.

Would you please complete the enclosed questionnaire and return it to me within a two-week period? A postage-paid, addressed envelope is enclosed for your convenience.

Your prompt assistance and cooperation will be appreciated.

Sincerely,

Rachel B. Westmoreland

Rachel B. Westmoreland
Nurse Coordinator
Inactive Health Professionals Project

RBW:slb

Enclosure

DEPARTMENT OF COMMUNITY COLLEGES, RALEIGH, NORTH CAROLINA

FOLLOW-UP QUESTIONNAIRE TO PROFESSIONAL NURSE PARTICIPANTS IN REFRESHER COURSE

1. NO. MONTHS SINCE COURSE COMPLETED

2. TOTAL HRS. OF COURSE.

3. PRESENT EMPLOYMENT STATUS (CHECK ONE)

- Full time — 0
- Part time (write in no. hrs. per week) — 1
- Not employed — 2

4. EMPLOYED IN

- Nursing — 0
- Non-nursing occupation — 1
- Nursing and non-nursing occupation — 2

EMPLOYMENT SINCE COMPLETING COURSE
(WRITE IN NO. OF MONTHS)

5. FIELD

- Hospital — 0
- Nursing home — 1
- Office/clinic — 2
- Public health — 3
- Private duty — 4
- Industrial — 5
- School — 6
- Sch. of nursing — 7
- Other — 8

6. POSITION

- General duty — 0
- Head nurse or Assistant — 1
- Administrator or Assistant — 2
- Teaching — 3
- Consultant — 4
- Supervisor — 5
- Other — 6

7. SERVICE

- Med/Surg.
- OB/Gyn.
- Psych/Mental Health
- Pediatrics
- Other

8. YRS. NOT EMPLOYED PRIOR TO COURSE

- None — 0
- Less than yr. — 1
- 1-2 yrs. — 2
- 3-5 yrs. — 3
- 6-10 yrs. — 4
- 11-20 yrs. — 5
- 21 and over — 6

NURSING EXPERIENCE PRIOR TO REFRESHER COURSE
(WRITE IN NUMBER OF YEARS)

9. FIELD

- Hospital — 0
- Public health — 1
- Private duty — 2
- Industrial — 3
- Office — 4
- School — 5
- Sch. of nursing — 6
- Nursing home — 7
- Other — 8

10. POSITION

- General duty — 0
- Head nurse or Assistant — 1
- Supervisor — 2
- Teaching — 3
- Consultant — 4
- Administrator or Assistant — 5
- Other — 6

11. SERVICE

- Med/Surg. — 0
- OB/Gyn. — 1
- Psych — 2
- Pediatrics — 3
- Other — 4

12. UTILIZATION OF KNOWLEDGE AND SKILLS ACQUIRED IN REFRESHER COURSE (CHECK ONE)

- Have been able to use all knowledge and skills acquired — 0
- Have been able to use most of knowledge and skills acquired — 1
- Have been able to use some of knowledge and skills acquired — 2
- Have been able to use very little of knowledge and skills acquired — 3
- Have been able to use none of the knowledge and skills acquired — 4

13. EVALUATE DEGREE TO WHICH YOU FEEL THE KNOWLEDGE AND SKILL ACQUIRED IN REFRESHER COURS EQUIPPED YOU TO FUNCTION IN WORK SITUATION IN WHICH YOU ACCEPTED EMPLOYMENT (CHECK ONE

- Not sufficient in many situations (specify on back of sheet) — 0
- Not sufficient in some situations (specify on back of sheet) — 1
- Sufficient, with additional study after employment — 2
- Sufficient — 3

14. IF UNEMPLOYED IN NURSING SINCE COMPLETION OF REFRESHER COURSE, PLEASE PLACE "1" BY MOST IMPORTANT REASON FOR NOT BEING EMPLOYED, "2" BY SECOND IN IMPORTANCE, AND "3" BY THIRD IN IMPORTANCE.

No positions available	0
Cannot work hours required	1
Salary not worthwhile	2
Health	3
Not interested in nursing position	4
No suitable arrangements for care of child	5
Prefer volunteer activities	6
Spouse prefers I not work	7
No suitable domestic help	8
No suitable transportation	9
Feel insecure accepting responsibility required in available positions	10
Not interested in available positions	11
Other (specify)	12

15. INTEREST IN ADDITIONAL COURSES

Yes	0
No	1

16. Please list topics which you would lil included in additional courses.

NATIONAL ASSOCIATION OF SOCIAL WORKERS

North Carolina Council of NASW Chapters

September 27, 1967

Member Chapters

Eastern
Piedmont
South Piedmont
Western

Dear NASW Member:

We are interested in knowing in what agencies our members are employed, and since many of you use a home address, we do not have this information. We know also that some of you maintain your membership, even though you are not working, and we are interested in knowing who you are and where you are. To provide us with this data, we are asking that you complete the information requested below.

In addition to this information, we would like for you to provide us with names and addresses of persons who, to your knowledge, have held social work positions at one time but are now unemployed. These need not be NASW members, and we are not inquiring about training or qualifications. This is not idle curiosity, but is preliminary to a project in which NASW has been asked to participate with other organizations and of which you will hear more later.

We do urge your full and prompt cooperation in supplying this data. Let's set a record of 100 per cent return within two weeks. You will note that replies go to Katherine Barrier who is assisting in the project at my request.

Sincerely,

Carl E. Staley, Jr.

Carl Staley, Jr., ~~President~~
N. C. Council of NASW Chapters

Your name: _____

Agency: _____ Address: _____

☐ Not employed at present

Unemployed Social Workers (use back if necessary)

NAME	ADDRESS

NATIONAL ASSOCIATION OF SOCIAL WORKERS

North Carolina Council of NASW Chapters

December 7, 1967

Member Chapters

Eastern
Piedmont
South Piedmont
Western

Dear Social Worker:

This is to provide you with further information concerning the enclosed letter and questionnaire and to urge your cooperation in completing the questionnaire.

The project, funded by the Public Health Service and being carried out by the Department of Community Colleges, is seeking some answers to the manpower shortage in the health field. Many of you, of course, have not worked in the health field but may have interest or opportunity in doing so. Please rest assured that you will be subjected to no pressure to accept employment. Your answers will contribute information which will be of value in the study. Since five professional groups are receiving the same questionnaire, some of the items such as registration are not applicable to our field. The five groups are nurses, physical therapists, dieticians, medical technologists, and social workers.

Personally, I am pleased that social work was selected for inclusion in this study. I hope that each of you will complete and return the questionnaire promptly.

Sincerely yours,

Carl C. Staley, Jr., ACSW, President
N. C. Council of NASW Chapters
C/O United Day Care Services
1301 North Elm St.
Greensboro, N. C. 27401

Enclosures

December 6, 1967

Dear Social Worker:

The Department of Community Colleges, in cooperation with the Bureau of Health Manpower, USPHS, is conducting a study to obtain information about health personnel in North Carolina who are not currently employed in their profession.

This study is being conducted to obtain information regarding reasons health personnel are not employed in their profession and to determine the extent to which they may be able to return to full or part-time employment. This information will help in planning to meet the needs for professional health personnel in North Carolina. Collectively, the comments of participants will be used to determine problems faced in expanding the supply of health manpower. Definition of problems involved, hopefully, will result in plans for reduction of these problems and for better working conditions for health personnel.

Plans are for all replies to be processed at the end of a two-week period. We are interested in your comments. Would you please take the time now to complete the questionnaire and return it in the postage-paid, addressed envelope.

If you are aware of other social workers residing in North Carolina who are not employed, but who would be qualified for practice in the health field, would you please list their names and addresses on the back of the questionnaire or ask them to contact Miss Rachel Westmoreland, Coordinator, Department of Community Colleges, 112 W. Lane Street, Raleigh, North Carolina 27602.

We appreciate your assistance and your cooperation.

Sincerely,

Rachel B. Westmoreland

Rachel B. Westmoreland
Coordinator
Inactive Health Professionals Project

RBW:slb

Enclosure

December 4, 1967

MEMORANDUM

TO: Physical Therapists

FROM: Paul Roberts, President

In cooperation with the Department of Community Colleges, the Chapter would like to encourage all physical therapists in North Carolina to complete and return the enclosed questionnaire. Those of us who are active in our professional organization are interested in identifying all qualified physical therapists residing in North Carolina, regardless of their current interest or status.

If you wish to know more about our activities as a Chapter of the American Physical Therapy Association, please contact me.

PR:sjm

CONTACT:
Paul Roberts, President
North Carolina Physical Therapy Association, Inc.
205 East Annex, Doctors Building
Asheville, North Carolina 28801

Dear Physical Therapist:

The Department of Community Colleges, in cooperation with the Bureau of Health Manpower, USPHS, is conducting a study to obtain information about health personnel in North Carolina who are not currently employed in their profession.

This study is being conducted to obtain information regarding reasons health personnel are not employed in their profession and to determine the extent to which they may be able to return to full or part-time employment. This information will help in planning to meet the needs for professional health personnel in North Carolina. Collectively, the comments of participants will be used to determine problems faced in increasing the supply of health manpower. Definition of problems involved, hopefully, will result in plans for reduction of these problems and for better working conditions for health personnel.

Plans are for all replies to be processed at the end of a two-week period. We are interested in your comments. Would you please take the time now to complete the questionnaire and return it in the postage-paid, addressed envelope.

We would like to obtain information from all physical therapists who are not employed as physical therapists. If you are aware of other physical therapists residing in North Carolina who are not employed in their profession, would you please list their names and addresses on the back of the questionnaire or ask them to contact Miss Rachel B. Westmoreland, Coordinator, Department of Community Colleges, 112 W. Lane Street, Raleigh, North Carolina, 27602.

We appreciate your assistance and your cooperation.

Sincerely,

Rachel. B. Westmoreland
Coordinator
Inactive Health Professionals Project

RBW:slb

Enclosure

February 9, 1968

Dear Medical Technologist:

The North Carolina Society of Medical Technologists encourages you to participate in this survey by completing and returning the enclosed form. We believe that this is a worthwhile project and that the time it takes will be well spent.

Thank you for your cooperation.

Sincerely,

Edna Earle Maness

Edna Earle Maness, M. T. (A. S. C. P.)
President-Elect N. C. S. M. T.

Enclosure

February 9, 1968

Dear Medical Technologist:

The Department of Community Colleges, in cooperation with the Bureau of Health Manpower, United States Public Health Service, is conducting a study to obtain information about health personnel in North Carolina who are not currently employed in their profession.

This study is being conducted to obtain information regarding reasons health personnel are not employed in their profession and to determine the extent to which they may be able to return to full or part-time employment. This information will help in planning to meet the needs for professional health personnel in North Carolina. Collectively, the comments of participants will be used to determine problems faced in increasing the supply of health manpower. Definition of problems involved, hopefully, will result in plans for reduction of these problems and for better working conditions for health personnel.

Plans are for all replies to be processed at the end of a two-week period. We are interested in your comments. Would you please take the time now to complete the questionnaire and return it in the postage-paid, addressed envelope. Please return the questionnaire whether employed or unemployed.

We would like to obtain information from all medical technologists who are not employed as medical technologists. If you are aware of medical technologists who are not employed in their profession, would you please list their names and addresses on the back of the questionnaire or ask them to contact Miss Rachel B. Westmoreland, Coordinator, Department of Community Colleges, 112 W. Lane Street, Raleigh, North Carolina 27602.

We appreciate your assistance and your cooperation.

Sincerely,

Rachel B. Westmoreland

Rachel B. Westmoreland
Coordinator
Inactive Health Professionals Project

RBW:slb

Enclosure

March 21, 1968

TO: North Carolina Home Economics Association Members

FROM: Elizabeth Wilson, Chairman
Social Welfare and Public Health Committee

RE: Identification of qualified Health Persons

Your Social Welfare and Public Health Committee is cooperating with the Department of Community Colleges in conducting a study to obtain information about professional health personnel in North Carolina. The study is funded by the United States Public Health Service, Department of Health, Education, and Welfare.

Our interest in this study is to locate professional people qualified for employment as dietary consultants to hospitals and nursing homes; to identify those presently employed or desiring employment in this area; to determine the need for refresher courses and to develop such courses. This information will be used in attempting to meet the need for such professional health personnel in North Carolina.

This questionnaire is being addressed to the total membership. Please return the completed questionnaire in the enclosed, stamped, addressed envelope at your earliest convenience.

There may be home economists in your community who are not members of the NCHEA. It would be helpful if you would list their names and addresses on the back of the questionnaire. The committee will contact these people directly.

We appreciate your prompt assistance and cooperation.

slb

Enclosures

SURVEY OF HOME ECONOMISTS, DEPARTMENT OF COMMUNITY COLLEGES, RALEIGH, NORTH CAROLINA

Miss ☐
Mrs. ☐
Mr. ☐

LAST NAME | FIRST NAME | MIDDLE INITIAL | MAIDEN NAME

STREET NO. | STREET NAME | APT. NO. | CITY | STATE | ZIP CODE | COUNTY

INSTRUCTIONS FOR QUESTIONS 1-12: PLEASE CHECK OR COMPLETE ONE ITEM FOR EACH QUESTION THAT APPLIES TO YOU

1. PRESENT EMPLOYMENT STATUS

Full time	☐ 0
Part time	☐ 1
Unemployed	☐ 2

2. PRESENT EMPLOYMENT

Hospital Dietary Department	☐ 0
Nursing Home Dietary Depart.	☐ 1
Public Health Agency	☐ 2
Other	☐ 3

3. JOB TITLE _____

EMPLOYER & _____

ADDRESS _____

_____

4. HIGHEST EDUCATIONAL ATTAINMENT

B.S.-Major in Food & Nutr.	☐ 0
B.S.-Major in Inst. Mang.	☐ 1
Dietetic Internship	☐ 2
M.S.-Major in Food & Nutr.	☐ 3
M.S.-Major in Inst. Mang.	☐ 4
Other (specify)	☐ 5

5. NAME OF EDUCATIONAL INSTITUTION LAST GRADUATED

_____

DATE GRADUATED _____

6. MEMBERSHIP IN A.D.A.

Current ADA member	☐ 0
Former ADA member	☐ 1

7. IF UNEMPLOYED, select 3 reasons most relevant to your position of unemployment. Place "1" by most important reason, "2" by second in importance, and "3" by third in importance.

No positions available	☐ 0	Prefer volunteer activities	☐ 7
Cannot work hrs. required	☐ 1	Spouse prefers I not work	☐ 8
Salary not worthwhile	☐ 2	No suitable domestic help	☐ 9
Health	☐ 3	No suitable transportation	☐ 10
Lost interest in prof.	☐ 4	Full-time student	☐ 11
Homemaker preference	☐ 5	Hesitant - inactive too long	☐ 12
No suitable arrangements for care of child	☐ 6	Age	☐ 13
		Other (specify on back)	☐ 14

IF UNEMPLOYED OR IF EMPLOYED OUT OF DIETETICS

8. INTERESTED IN COURSES TO QUALIFY FOR HEALTH POSITION

Yes	☐ 0
No	☐ 1

9. PLAN TO WORK IN HEALTH FIELD (DIETETICS)?

Definitely yes	☐ 0
Probably yes	☐ 1
Uncertain	☐ 2
Probably no	☐ 3
Definitely no	☐ 4

10. PLAN TO RETURN TO WORK IN HOW MANY YEARS

Less than 1 yr.	☐ 0
1-5 years	☐ 1
6-10 years	☐ 2
More than 10 yrs.	☐ 3
Uncertain	☐ 4

11. PLAN TO WORK

Full time	☐ 0
Part time	☐ 1
Uncertain	☐ 2

12. PREFERRED FIELD

Hospital	☐ 0
Nursing home	☐ 1
Clinic/Office	☐ 2
Public Health	☐ 3
Self-employment	☐ 4
Industrial	☐ 5
School system	☐ 6
Other (specify)	☐ 7

13. PREFERRED POSITION

Beginning	☐ 0
Administrative	☐ 1
Teaching	☐ 2
Consultant	☐ 3
Other (specify)	☐ 4

Dear Administrator:

The North Carolina State Board of Education has been awarded a one year grant by the Bureau of Health Manpower, United States Public Health Service, to initiate a plan to assist in the return of inactive health personnel to active employment. The Hospital Association is working closely with the Board of Education in this plan.

Attempts are being made to contact these inactive personnel, to identify some of the reasons for inactivity, and to assist in the reduction of problems and obstacles in expanding the supply of personnel in North Carolina.

Your cooperation is needed to help identify these inactive persons in the state (nurses, medical technologists, dietitians, physical therapists, and social workers). Please request your appropriate department heads or other staff members to review their files and list the names and addresses of persons who have worked for you in the past who might now be recruited into either full-time or part-time employment. In passing on to each department head the applicable survey form, we would appreciate your explaining its purpose so that we can get as much information as possible.

It is anticipated that, in areas where there is a need, refresher courses will be offered to inactive personnel to help them become more qualified and more comfortable in returning to work. Therefore, we are also interested in determining the number and location of refresher courses in North Carolina.

The enclosed forms, when completed, are to be returned directly to Miss Rachel B. Westmoreland, Coordinator, Inactive Health Professionals Project, Department of Community Colleges, Raleigh. If you have not employed or do not have information on one or more of the categories of personnel for whom forms are enclosed, please so indicate on the form and return it. We appreciate your cooperation in what we think will be a worthwhile endeavor to help relieve our critical personnel shortage in the state.

Sincerely yours,

Marion J. Foster
Executive Director

MJF/bfj

Enclosures

SURVEY OF INACTIVE NURSES AND REFRESHER COURSES

1. Name of Responding Agency _____

2. Address of Agency _____
   No. Street City County

3. Please list below any nurses whom you think are presently unemployed and residing in North Carolina (use back if needed).

NAME			ADDRESS			
Last	First	Maiden	No.	Street	City	County

4. Please indicate refresher courses for nurses which have been/are being offered in your area or any that are being planned.

Name of Sponsoring Agency	Address of Sponsoring Agency	Dates of Course (if known)

Please return to: Miss Rachel B. Westmoreland
Nurse Coordinator
Department of Community Colleges
112 W. Lane Street
Raleigh, North Carolina 27602

SURVEY OF INACTIVE SOCIAL WORKERS AND REFRESHER COURSES

1. Name of Responding Agency _____

2. Address of Agency _____
   No. Street City County

3. Please list below any social workers whom you think are presently unemployed and residing in North Carolina (use back if needed).

NAME			ADDRESS			
Last	First	Maiden	No.	Street	City	County

4. Please indicate refresher courses for social workers which have been/are being offered in your area or any that are being planned.

Name of Sponsoring Agency	Address of Sponsoring Agency	Dates of Course (if known)

Please return to: Miss Rachel B. Westmoreland
Coordinator
Department of Community Colleges
112 W. Lane Street
Raleigh, North Carolina 27602

SURVEY OF INACTIVE PHYSICAL THERAPISTS AND REFRESHER COURSES

1. Name of Responding Agency _____

2. Address of Agency _____
   No. Street City County

3. Please list below any physical therapists whom you think are presently unemployed and residing in North Carolina (use back if needed).

NAME			ADDRESS			
Last	First	Maiden	No.	Street	City	County

4. Please indicate refresher courses for physical therapists which have been/are being offered in your area or any that are being planned.

Name of Sponsoring Agency	Address of Sponsoring Agency	Dates of Course (if known)

Please return to: Miss Rachel B. Westmoreland
Coordinator
Department of Community Colleges
112 W. Lane Street
Raleigh, North Carolina 27602

SURVEY OF INACTIVE MEDICAL TECHNOLOGISTS AND REFRESHER COURSES

1. Name of Responding Agency _____

2. Address of Agency _____
No. Street City County

3. Please list below any medical technologists whom you think are presently unemployed and residing in North Carolina (use back if needed).

NAME			ADDRESS			
Last	First	Maiden	No.	Street	City	County

4. Please indicate refresher courses for medical technologists which have been/are being offered in your area or any that are being planned.

Name of Sponsoring Agency	Address of Sponsoring Agency	Dates of Course (if known)

Please return to: Miss Rachel B. Westmoreland
Coordinator
Department of Community Colleges
112 W. Lane Street
Raleigh, North Carolina 27602

SURVEY OF INACTIVE DIETITIANS AND REFRESHER COURSES

1. Name of Responding Agency _____

2. Address of Agency _____
   No. Street City County

3. Please list below any dietitians whom you think are presently unemployed and residing in North Carolina (use back if needed).

NAME			ADDRESS			
Last	First	Maiden	No.	Street	City	County

4. Please indicate refresher courses for dietitians which have been/are being offered in your area or any that are being planned.

Name of Sponsoring Agency	Address of Sponsoring Agency	Dates of Course (if known)

Please return to: Miss Rachel B. Westmoreland
Coordinator
Department of Community Colleges
112 W. Lane Street
Raleigh, North Carolina 27602

March 7, 1968

TO: Administrators

As you know, the Association is working very closely with the Department of Community Colleges in a study of several categories of inactive health personnel in the State and the need for training programs to get some of these people back to work. We need to relate this to the shortage of personnel and the specific areas in which the shortages are most acute. To help us better assess the shortage, we need the information asked on the attached form. This will be valuable to us, also, in our new Health Careers activity in the Association.

Please give us this information as accurately as you can as of March 11, 1968. The form should be returned to this office.

Sincerely,

Marion J. Foster
Executive Director

Attachment

QUESTIONNAIRE TO EMPLOYERS OF HEALTH PERSONNEL

Name of Hospital _____

Address _____ County _____

INSTRUCTIONS: PLEASE PROVIDE DATA REQUESTED AS OF MARCH 11, 1968, IN APPROPRIATE COLUMN.

ITEMS	REGISTERED NURSES (R. N.)						
	Staff	Head Nurse	Supervisor	Asst. Dir. N. Serv.	Director N. Serv.	Teaching	Other (Specify)
1. Currently Employed (number)							
2. Vacancies (no. of each) a. Budgeted vacancies b. Not budgeted c. Total (a & b)							
3. Shift pattern (example: 7-3)							
4. Full time employee shift rotation required: (none, weekly, monthly, no pattern, etc.)							
5. Salary differentiation for beginning employee with A.D.; Diploma; B.S., M.S.? (yes - no)							
6. Salary differentiation for new employee with nursing experience? (yes - no)							
7. Part-time personnel employed? (yes - no)							
8. Week-ends required for part-time personnel? (yes - no)							
9. Shift rotation required for part-time personnel? (yes - no)							

ITEMS	PHYSICAL THERAPISTS			
	Staff	Chief	Teaching	Other (Specify)
1. Currently Employed (number)				
2. Vacancies a. Budgeted vacancies (no.) b. Not budgeted (no.) c. Total (a & b) (no.)				
3. Part-time personnel employed? (yes - no)				

Return to N. C. Hospital Association, Box 10937, Raleigh, North Carolina 27605

ITEMS	MEDICAL TECHNOLOGISTS			
	Staff	Administrative	Teaching	Other (Specify)
1. Currently Employed (number)				
2. Vacancies				
a. Budgeted vacancies (number)				
b. Not budgeted (number)				
c. Total (a & b) (number)				
3. Shift pattern (example: 7-3)				
4. Full-time employee shift rotation required: (none, daily, weekly, no pattern, etc.)				
5. Week-ends required? (yes - no)				
6. Salary differentiation for beginning employee with advanced education? (yes - no)				
7. Salary differentiation for new employee with experience? (yes - no)				
8. Part-time personnel employed? (yes - no)				

ITEMS	DIETITIANS			
	Staff	Administrative	Teaching	Other (Specify)
1. Currently Employed (number)				
2. Vacancies				
a. Budgeted vacancies (number)				
b. Not budgeted (number)				
c. Total (a & b) (number)				
3. Shift pattern (example: 8-5)				
4. Part-time personnel employed? (yes - no)				

ITEMS	SOCIAL WORKERS			
	Staff	Administrative	Teaching	Other (Specify)
1. Currently Employed (number)				
2. Vacancies				
a. Budgeted vacancies (number)				
b. Not budgeted (number)				
c. Total (a & b) (number)				
3. Part-time personnel employed? (yes - no)				

Return to N. C. Hospital Association, Box 10937, Raleigh, North Carolina 27605

VT 008 088
Glover, E. Elizabeth, And Others
New Approaches to Homemaker Service.

Child Welfare League of America, Inc., New York, N.Y.
MF AVAILABLE IN VT-ERIC SET.
Child Welfare League of America, 44 East 23rd Street, New York, New York 10010 ($.95).
Pub Date - 68 47p.; Ten papers reprinted from "Child Welfare."

*OCCUPATIONAL HOME ECONOMICS; *HOME MANAGEMENT; MAIDS; COMPANIONS (OCCUPATION); *PROGRAM DESCRIPTIONS; *PROGRAM ADMINISTRATION; *COMMUNITY SERVICE PROGRAMS; VISITING HOMEMAKERS

The compilation consists of reprints of 10 articles published in "Child Welfare" since 1962. An editorial by E. Elizabeth Glover depicts the urgent need for homemaker service programs. Titles and authors of other articles are: (1) A Formalized Homemaker Training Program--Elizabeth Burford, (2) Nine-to-Twenty-four-Hour Homemaker Service Project, Part I and Part II--Children's Aid Society, (3) The Team Approach in Protective Service--Louise Foresman and others, (4) A Public Agency's Homemaker Service Program--Ruth M. Snyder, (5) Homemaker Service Under Private Auspices--Elizabeth A. Stringer, (6) A Demonstration Homemaker Project--Bessie Mae Jones, (7) Administrative Aspects of 24-Hour Homemaker Service--Rose Brodsky, and (8) Emergency Parent--A Protective Service to Children in Crisis--Norman W. Paget. (FP)

VT 008 088

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Ten Papers Reprinted from

CHILD WELFARE

CHILD WELFARE LEAGUE OF AMERICA
44 EAST 23rd STREET • NEW YORK, NEW YORK 10010

NEW APPROACHES TO HOMEMAKER SERVICE

This revision includes the three papers that comprised the 1963 edition. Added are, as the first paper, an editorial by Dr. E. Elizabeth Glover, and five articles published in CHILD WELFARE since 1963.

Looking into the Face Reprinted from CHLD WELFARE June 1964	E. Elizabeth Glover	3
A Formalized Homemaker Training Program Reprinted from CHILD WELFARE September 1962	Elizabeth Burford	5
Nine- to Twenty-four-Hour Homemaker Service Project, Part I Reprinted from CHILD WELFARE March 1962	Children's Aid Society	10
Nine- to Twenty-four-Hour Homemaker Service Project, Part II Reprinted from CHILD WELFARE April 1962	Children's Aid Society	15
The Team Approach in Protective Service Reprinted from CHILD WELFARE March 1963	Louise Foresman, Nelle Martin, Ruth Safier, and Lorena Scherer	21
A Public Agency's Homemaker Service Program Reprinted from CHILD WELFARE March 1964	Ruth M. Snyder	25
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Emergency Parent — A Protective Service to Children in Crisis Reprinted from CHILD WELFARE July 1967	Norman W. Paget	44

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Revised 1968

CHILD WELFARE LEAGUE OF AMERICA, INC.
44 EAST 23rd STREET, NEW YORK, N.Y. 10010

Editor's Page

LOOKING INTO THE FACE

"We don't *look into the face* of what we see is happening to the homes in this country." This statement was made at the first national conference of the National Council for Homemaker Services held in Washington in April and May. It was made by a wise and knowledgeable lady—Margaret Hickey, former president of the National Conference on Social Welfare, chairman of the President's Advisory Council on the Status of Women, and Senior Editor of the *Ladies' Home Journal.*

For many years, we have known the values of homemaker services in child welfare, as in other fields; numerous studies have been made that have proved their effectiveness. Still, in 1963 only 303 agencies in the United States provided homemaker services for all groups needing them—families with children, the aged, and the chronically ill. Approximately five to six thousand homemakers are all we have to provide help for a population of 191 million. On the other hand, England, with a quarter of the population of the United States, has 55,000 homemakers, and reports that this number is insufficient. The Scandinavian countries provide 100,000 hours of homemaker services for every 100,000 people. Dr. Ellen Winston, U.S. Commissioner of Welfare, estimates that we need, today, more than 200,000 homemakers in this country.

These statistics support Mrs. Hickey's observation; they also are another confirmation of the low priority that our children and families have in city, state, and national social policy. Perhaps, too, they reflect social work's failure to grasp the significance and potentialities of these services for families and elderly people—services that can be provided by nonprofessional men and women who want a vocation of service.

Even though we have failed in the past, there is no reason for perpetuating this neglect. In our large communities, public and private agencies should begin now to provide homemaker services to augment and complement their other services. Child welfare agencies that provide foster family care, day care, services to children in their own homes, or protective service need to have homemaker programs, too, in order to give the most effective service. There are thousands of parents who cannot learn home management and child care skills unless they are taught in a practical, direct way by persons working by their side in the home.

To complement the caseworker's efforts with families receiving protective service, the homemaker can give children and parents immediate and concrete help. Through her observations and direct experience with a family, she can also provide important information that will assist the caseworker in evaluating the parents' capacity to change and to care for their children adequately. The day care agency needs homemakers who can go into homes when children are ill. Because of temporary illness or personal emergencies in foster homes, many children are needlessly replaced in foster family care; such placements might be prevented if agencies maintained homemakers on the staff.

Since the 1962 Public Welfare Amendments and with funds for special purposes having been appropriated recently by Congress, Federal funds are now available to the public agencies to the extent that states and municipalities can no longer use lack of funds to justify their failure to establish homemaker service programs. The Federal government will pay 75 percent of the cost of developing and expanding homemaker services in public welfare agencies. Persons with low incomes, as well as those receiving public assistance, would be eligible for these services. Federal funds are also available through the Children's Bureau grants program and through demonstration grants administered by the Children's Bureau and the Bureau of Family Services. Projects financed by demonstration grants may be developed and carried out cooperatively with voluntary agencies.

If we are willing to look into the face of American homes, we will comprehend the urgent need for homemakers in our cities, towns, and rural areas, and we will move now to establish more homemaker service programs.

E. E. G.

A Formalized Homemaker Training Program

After thirty-two years of providing homemaker service to families with children in the Chicago area, the Child and Family Services agency is expanding its homemaker service program in two ways. First, the geographic area is to be enlarged by establishing district offices in three widely separated suburban areas, from which locally provided services can be offered by homemakers living in the local areas, supervised by caseworkers operating from the district offices. Second, the homemaker service program in the suourban areas is to be extended to include services to aged and chronically ill clients, as well as to families with children.

A fundamental requirement for such a program is a staff of trained homemakers who differ markedly from domestics or housekeepers in terms of skill and knowledge. At the time of their employment our new homemakers are expected to have sufficient intelligence to learn, to be adequately trained in "the three r's," and to have demonstrated successfully their ability to give child care and household management in normal situations in their own homes or in domestic service. Agency homemakers, however, work in disrupted homes with people who are undergoing crisis and in other situations that are not normal. They must therefore learn how to understand these people, how to function under such circumstances, and how to work as staff members of an agency which is trying to help people in trouble. To accomplish the difficult tasks involved in being an agency homemaker, they need specialized training that will develop their knowledge, self-control, and objectivity.

In an effort to maintain a high standard, both in continuing the city-wide service and in meeting the new and increased demands of the expanded program, the agency has decided to examine its present homemaker service program in order to formalize, in writing, what we were doing to train homemakers, and to examine the content and methods of our training program in the light of what our particular homemakers need to know and do.

Method

Our formalized homemaker training program is divided into two parts: the orientation of new homemakers and the in-service training of experienced staff. Each of these parts is divided according to the method of training. Orientation is provided through a standard course of instruction given at the office by the homemaker supervisor and through observation of experienced homemakers on the job. In-service training is provided through individual supervision by the caseworker responsible for each assignment, through group training courses, and through the instruction of individual homemakers for special assignments.

Content

A standard "Orientation Course for Homemakers," in written form, was prepared and used with all homemakers employed since January, 1961. It includes information about the agency, its history, organization, personnel, and program. Homemaker Service Department procedures are presented in detail. A copy of homemaker personnel policies is given to each homemaker, and each has an opportunity for questions and explanations. A discussion of the homemaker's duties and responsibilities is based upon written material, "The Homemaker on the Job," which is given to the homemaker to keep for reference. Other topics of instruction and discussion are: the meaning of supervision, the relationship between the homemaker and the caseworker, and evaluations and classifications of homemakers. The climax of the course is a discussion of what professional behavior involves and what is expected of

a staff member of a professional agency in such areas as preserving confidentiality, maintaining self-control, avoiding a personalized relationship with families, and the need to grow in learning and in self-understanding.

In connection with this orientation course, written materials, including *Baby and Child Care* by Dr. Spock; various publications by the Department of Health, Education, and Welfare (Children's Bureau) on *Infant Care, Your Child from One to Six, Your Child from Six to Ten,* and *The Adolescent in Your Family;* certain pamphlets published by the agency for publicity purposes and for reports; and the pamphlet *Introducing Your Homemaker,* are given to the homemakers.

Field Work

Field work observation of experienced homemakers on the job was a challenging and experimental method of teaching new homemakers that helped solve some of the problems entailed in employing nonprofessional staff in a teaching capacity. In order to exercise as much control as possible, we selected five Class III homemakers[1] for instruction in demonstration. These five selected homemakers met in two seminar-type sessions with the homemaker supervisor. They were encouraged to regard this as a great responsibility and honor and to think of it as an opportunity to show the best performance possible. They were instructed in answering simple questions relating to the activities which were being demonstrated, and in referring more complex questions, usually questions concerning agency policies and procedures, back to the supervisor.

In implementing this field work observation, it was necessary to obtain consent and cooperation from the families where the demonstrating Class III homemakers were working. We tried to choose those situations which would teach the new homemaker something about the diversity of the agency's program. Before each day of field work observation, the new homemaker came into the office to learn from the caseworker such things about the family she was going to observe as the reason a homemaker was there, what a homemaker was trying to accomplish, and what special things she was to observe. During her day of observation the new homemaker worked with and under the direction of the experienced homemaker, helping her but keeping her own eyes and ears open. Immediately following this observation day, the new homemaker returned to the office to discuss with the caseworker or the homemaker supervisor what she had seen and heard, and to get answers to her questions. Every new homemaker had between two and five days of observation, with a new situation each day.

Evaluating this experience, we have concluded that field work observation, if used with discrimination and with as much control of the entire experience as possible, represents a quick and vivid teaching device. Reactions of new homemakers were usually around the theme: "I had not realized how hard," or "how demanding," or "how challenging," or "how interesting the job is." It provided for them a frame of reference within which the orientation course took on richer meaning. It gave new homemakers a much better conception of what they were expected to do. All of the families cooperated and all of the demonstrations appear to have been excellently carried out. The experienced homemakers felt challenged to do a good job and expressed pride in being allowed to share in helping the new homemakers. Some of the observations of the new homemakers were astute and valuable. Each Class III homemaker who demonstrated was asked to report her experience and gave observations regarding such things as the new homemaker's ability to care for an infant, her ease with children of different ages, her reaction to discipline problems, her competence in some household tasks, and the children's responses to the new homemaker. In one family an accident to one of the children required the experienced homemaker to take that child to a doctor, leaving the new homemaker at home with the other children. We learned much about the new homemaker from the report of how she met and managed this emergency.

[1] Our homemakers, like caseworkers, are classified according to their job performance. The most competent homemakers are in Class III.

In-service Training

The in-service training of experienced homemakers has traditionally been accomplished through individual supervision by caseworkers and group courses and discussions. These methods are not new. We tried, however, in our formalized teaching program, to enrich the content of each method. In order to help caseworkers give individual supervision in a way which would develop each homemaker's potential most effectively, the homemaker supervisor prepared a written diagnostic evaluation of each homemaker, concluding with a statement concerning the type of supervision needed by each. For example, some homemakers need support, some need control, some need to limit their involvement. Each homemaker has strengths and weaknesses which need to be known by the caseworker who is to help her function most effectively. Caseworkers were expected to read these evaluations and to use the knowledge thus gained in more effective individual supervision of each homemaker. Caseworkers were expected to keep the homemaker supervisor informed of the homemaker's response to supervision so that the supervisor could involve the homemaker in further training in areas where it was needed. This type of homemaker supervision—thoughtful, individualized, and positive in purpose—approached the professional supervision that caseworkers receive and played an important role in upgrading and professionalizing the position of the homemaker.

Group training courses will always depend, for their content, on what the agency wants its homemakers to know and what resources are available for training. We wanted our homemakers to know about child care, and so we provided a four-session course on "Child Development," given by our psychiatric consultant. Because our agency has many situations where the mother is emotionally ill, we provided a course on "Understanding the Emotionally Ill Mother," also presented by our agency's psychiatric consultant in two group sessions. Utilizing community resources outside the agency, we arranged for our homemakers to receive instruction in "Care of the Sick," the standard Red Cross home nursing course, as well as a course in the demonstration kitchen of a local cooperative, on the subject, "Well-Balanced, Low-Cost Meals." This course, particularly adapted to agency homemaker needs, was given by a home economist. All the group courses included in our formalized homemaker training program will be offered to the homemakers to be employed in our suburban district offices. Also, in order to train new staff for a program which will be expanded to include service to the older person, these homemakers will be given a new course, "The Older Person, His Physical and Emotional Needs."

Course at School of Social Work

Highlighting our agency's effort toward helping the homemaker provide the best possible service to her families was a homemaker training course given under the auspices of the University of Illinois School of Social Work. To our knowledge, this was the only such course in the country given at a school of social work.

The course was planned by a curriculum committee that included representatives from the Welfare Council of Metropolitan Chicago, the University's School of Social Work, and staff members of four welfare agencies which participated by sending their homemakers to the courses. The committee agreed that the course should be designed primarily to cover the "human relations" aspects of homemaker service, containing, according to the official course description, discussions leading to a fuller understanding of such things as "the meaning of family life, the various usual responsibilities of all the people in the family, how they get along with each other, what they expect of each other, what problems they face, and how they work with their problems." Proceeding from there, the description continues, the course will move to giving "more particular attention to the effects of strain on members of the family, and how they are to be understood and helped by the homemaker and the agency during periods of care. The focus will be on how homemakers use this information."

Presented four times in eight weekly two-hour sessions on the campus of the University of Illinois School of Social Work, the

course was offered to homemakers from four Chicago agencies, thus affording the homemakers an opportunity to exchange the views and teachings of their respective agencies and broaden their view of the field of homemaker service. A registration fee for each homemaker was paid by the agency, and the homemaker herself was paid at the regular rate for her time while taking the course. The instructors were Dr. Maria Piers, a lecturer on the faculty of the University of Illinois School of Social Work in the "Dynamics of Human Development," and Mrs. Frieda Engel, lecturer in social casework and agency consultant. The report by the University of Illinois School of Social Work, at the conclusion of these courses, listed the following topics discussed: What Does Family Life Mean? What Happens to a Family When Mother Is Gone? What Does the Father's Absence Do to a Family? The Effect on a Family of Diminished Income, Temporary Absence, Death, Desertion, Divorce, or Illness; What Does the Homemaker Do for the Family Concretely? How Much Can a Homemaker Do About Cleanliness and Order? What Can a Homemaker Do When Children Will Not Obey? Teenagers in the House; Explaining Things to Children—Talking About Difficult Subjects; Older People and Their Care; The Feelings of the Homemaker.

An evaluation of this course stated: "The prime value of the course lay in the homemakers' changing attitudes toward their own human relationships . . . the homemakers gave evidence of an increase in empathy even towards clients of whom they disapproved . . . additional perspectives on human behavior were gained through recognition that there were reasons and explanations for clients' actions . . . and that knowledgeable approaches were open to them. Homemakers demonstrated motivation and interest in deepening their understanding of their client group and a readiness to use resources of the agency caseworker and supervisor in fuller exploration of the significance of behavior in each particular case."

At the conclusion of the course a certificate was given to each homemaker in recognition of the significance of having been enrolled in a course under university auspices. This appeared most important to them.

Staff Meeting and Other Resources

In addition to all of the group courses, the formalized training program included single group meetings for the presentation of audio-visual materials. The film "Home Again" and the slide series "Anybody's Crisis" were presented to the homemakers.[2] Occasional staff meetings were included in the formalized training program because we considered it a part of in-service training for homemakers, as well as all other staff members, to be informed of certain agency administrative matters.

As part of the training program, the agency also arranged for instruction of individual homemakers for special assignments. One homemaker was sent to spend two days at a research hospital, learning how to adjust braces and use mechanical equipment to care for a totally paralyzed mother who was returning home; another was sent to an institute for parents of blind children, conducted by the Illinois State School for the Blind, in order that she might learn how to care for blind children. Several homemakers helping mothers on restricted activity were instructed in the use of labor-saving devices at the "Cardiac Kitchen" located at a Chicago hospital. In providing such specialized instruction, community resources outside of the agency were used, with any necessary financing provided by the agency. Homemakers thus trained became more valuable staff members because of their ability to meet the needs of an expanded field of service.

Summary

Thus, although homemaker training programs will differ with agency needs and training resources will vary from one community to another, our experience has shown that agencies, whatever the resources may be, can benefit from a formalized homemaker training program.

As a result of our experience in planning a comprehensive training program for home-

[2] Inquiries about the film may be made of the International Film Bureau, 332 South Michigan Avenue, Chicago; inquiries about the slide series may be made of the National Committee on Homemaker Service, Film Project, 25 S. Damen, Chicago, Attention Mrs. Laura Tartt.

makers we have been able to fill gaps in content and to develop the training with consistency and continuity. We believe that we are now able to present our program to the community, with confidence in the fact that our homemaker staff is equipped to give the service offered. We believe also that we have sharpened our concept of what homemakers must learn in order to meet the needs of our homemaker service program, and that having done so has helped us develop a sharper diagnostic for future recruitment of homemaker staffs. Communication and the teamwork relationship between homemakers and caseworkers have likewise improved as we clearly defined what could be expected of homemakers. Formalization is the first step toward standardization of homemaker training, which is another step toward creating a recognized professionalized position for agency homemakers.

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Nine- to Twenty-four-Hour Homemaker Service Project

This is the first part of a report of a project that demonstrated conclusively that homemaker service beyond the usual eight-hour day can prevent some children from being placed in temporary shelters and at approximately one-third of the cost. The second part of the report will appear in the April issue of CHILD WELFARE.

In August 1958, The Children's Aid Society, in cooperation with the New York City Department of Welfare, Bureau of Child Welfare, completed a study of 229 children in 100 families who were returned to their own homes from temporary care. The findings of this study indicated that 143 children in sixty-one families could have remained at home through a more flexible use of homemaker service. Many of these children were from one-parent families who appeared to be self-sustaining but did not have the resources to provide care for their children during crises. In 1959 a grant from the New York Fund for Children was matched by equal funds from The Children's Aid Society to test the validity of the 1958 findings.

Purpose

The purpose of the project was to prevent the placement of children in shelters by providing homemaker service for more than the usual eight-hour day. It was anticipated that having homemakers respond to emergencies at any time of day or night would (1) enable children to remain in the familiar surroundings of their own homes, schools, and neighborhoods, and thus prevent the emotional shock of abrupt removal from their own homes; (2) enable a father to retain responsibility for his family and remain on his job; (3) hasten the recovery of a mother by relieving her of worry over the care of her children; and (4) keep intact families who otherwise would be scattered. Experience has shown that once the members of a family are separated, it is difficult to bring them together again, and the children linger on in the shelters.

Procedure of Project Study

Three experienced homemakers were designated to meet emergencies at any time of day or night. In addition, funds for two days of casework time and one day of clerical help per week were included in the project budget.

When an emergency arose, the Bureau of Child Welfare, the police, or the shelter worker was to call The Children's Aid Society caseworker, who would immediately either accompany one of the homemakers to the home or send her there alone. If the caseworker was not able to go with the homemaker, she would visit the home as soon as possible.

The project began in January 1960. Clarification of administrative questions and procedures, however, delayed referrals from the Bureau of Child Welfare for several months. Meanwhile, the service was also opened to applicants from other agencies and to individuals.

During the course of the project 185 applications involving 781 children were received. Of these, forty families with 184

THIS REPORT *was prepared by the staff of the Homemaker Service of The Children's Aid Society, New York City.*

children received extended hours of homemaker service. One hundred forty-five families with 597 children had to be refused because no project homemaker was available.

Referral Sources, Amount and Length of Service

Of the forty families served, nine were referred by the Bureau of Child Welfare, eleven by the Department of Welfare Homemaking Center, five by hospitals, three by courts, two by neighbors, seven by mothers, and three by fathers. One hundred thirty-five children in thirty-one families required twenty-four hour service. Nine- to sixteen-hour service was provided for twenty-four children in six families, and twenty-five children in three families received eight-hour service prior to and following twenty-four-hour service. Length of service ranged from one to eighty-nine days.

Description of Forty Families

Twenty-one of the forty families were Protestant, eleven were Catholic, three were Jewish, and five were of mixed religions. Ethnically, the distribution was as follows: eighteen families were Negro, thirteen were white, eight were Puerto Rican, and one was mixed white and Oriental.

Thirteen families had adequate incomes according to their own standards and paid fees ranging from $2 to $20 a week. Seven families had inadequate incomes and paid no fee. Of the remaining twenty families that paid no fee, nine received supplementation beyond their own earnings from pensions, alimony, public assistance, or private resources, including putative fathers; and eleven were totally dependent upon public assistance.

With regard to the marital status of the heads of household, eighteen were married, fifteen were separated, two were divorced, two were widowed, and three were unmarried mothers.

Twenty-nine children were under two years of age, fifty-nine were between two and six years, eighty were between seven and twelve, and sixteen were thirteen years and over.

Reasons for Extended Hours of Service

The basic criterion for acceptance in all cases was that the children would have required shelter care had homemaker service not been available to them for more than the usual eight hours. Twenty-two of the forty families were maintained by one parent. The mothers were either unmarried, divorced, separated, or widowed. In one instance the mother was in a mental hospital and the father had been caring for the children. In three other families the fathers were in the hospital at the time of referral, and in one family the father was in prison.

Fifteen fathers were in the home when the need for extended hours of homemaker service occurred. One of the fathers suffered from severe epileptic seizures and consequently was unable to assume responsibility for his children. The other fathers worked at night or had such long and irregular hours that they could not care for the children while the mothers were absent. Many of them had marginal incomes, and the loss of even a few days' pay was crucial. Several of the fathers had histories of unemployment and were fearful of jeopardizing their present jobs; others had used more than their quota of absences, vacation, and sick leave and were also apprehensive about their jobs.

In fifteen of the forty families extended hours of homemaker service were needed because of childbirth. In ten other families the mothers had entered the hospital for emergency or planned operations—mastoid, gynecological, lung, heart, or other surgery. Twelve mothers were hospitalized for ulcers, hepatitis, Parkinson's disease, pneumonia, cerebral palsy, or infections. One mother had deserted her family, and another mother was at home but too incapacitated to care for her child during convalescence. In the family where the mother was in a mental hospital and the father had been caring for the children, the father suffered a stroke and had to be hospitalized. In eight families referral was a bona fide emergency, and a homemaker was placed on the day of request.

The three Lewis children, ranging in age from seven to eleven, were without care when

their mother had to leave suddenly for the hospital. Mrs. Lewis asked two neighbors to "keep an eye on" the children until the Department of Welfare could work out plans for their care; she did not want her children placed in a shelter, as she was certain that they would be upset and confused if they were separated from each other and from their home. The family lived in a rundown building in a deteriorated and desolate section of the city. When the caseworker and the homemaker arrived that evening, they found all three children huddled together on a bed, clinging to one another and obviously terrified. One neighbor, who lived in the next building, had told the girls to call out across the areaway if anything happened to them. There was no telephone in the apartment, and the lock on the front door was broken. When the children realized that the homemaker was going to stay, their relief was unmistakable and touching. Throughout the time their mother was in the hospital, they related warmly to the homemaker and made excellent use of the service.

The urgency of the request for extended hours of homemaker service was almost as great in thirteen other situations as it was for the eight families that required emergency service. In these cases a homemaker was placed within two days of the application. In the remaining nineteen families plans for extended hours of homemaker service were made in advance, and the homemaker was introduced to the parents and children before the service began.

Twenty-four-Hour Service

Around-the-clock service, five to seven days a week, was needed by 135 children in thirty-one families. Two of these families had eight children, two had seven children, four had six children, six had five children, six had four children, five had three children, and six had two children.

In only ten of these families were the parents married and living together; in the other twenty-one they were either separated, divorced, unmarried, or widowed. Thus, ninety-six children had only one parent, and when anything happened to the parent, the children were completely alone. In twenty-two of these situations the request for twenty-four-hour homemaker service was due to the hospitalization of the mother. Eight other mothers were going to the hospital for confinements. In one family both parents were in the hospital. Eight of the fathers worked at night or had work shifts that prevented their caring for their children. One father was in the hospital, and another was at home physically incapacitated.

The extent to which the majority of the families in this group appeared to be completely estranged from their own close relatives was striking. They also suffered isolation from friends, neighbors, churches, and other groups. Only seven of these thirty-one families had relatives or friends who indicated any willingness to help. The remaining twenty-four families had either lost touch with their own relatives or the interfamily relationships were destructive. In this latter group a number of mothers refused to allow their own relatives or friends to care for their children or to visit in the home during their absence. An equal number of relatives made it clear that they would not involve themselves in any way in the family's problems.

This kind of family alienation was illustrated by an urgent request for twenty-four-hour homemaker service for a mother of three children who was expecting her fourth child within a few days. The father had been on his way to meet the mother to buy a crib when he collapsed and died of a heart attack. Neighbors called the Children's Aid Society, and when the caseworker arrived, she found the mother in such a depressed and exhausted state that she was totally immobilized. She repeatedly expressed terror about going to the hospital and leaving her children without care. The mother's father and three sisters lived in the city, but relationships were so strained that they neither visited nor offered help in any way. The mother went to her husband's funeral by herself, and although various relatives were there, she also returned alone to her home.

Children's Responses to Twenty-four-Hour Homemaker Service

Twenty-two children in six families told the homemakers how upset and frightened they had been during previous placements.

In the Brown family the father had deserted. The mother kept postponing an urgently needed

operation because she dreaded having her seven children placed as they had been when she was previously hospitalized. When twenty-four-hour homemaker service began, however, she left calmly for the hospital. All of the children quickly became devoted to the homemaker and mentioned how nervous and lonely they had been when they were separated the year before. During the months that the homemaker was with them, the children taught her Spanish cooking so that everything would be "exactly like home."

At first all of the one hundred thirty-five children reacted with varying degrees of upset and fearfulness to the emergency that required the homemaker to stay with them on a twenty-four-hour basis. The majority of these children, however, adjusted surprisingly quickly to the changes in their lives and were reassured both by the homemaker's presence and by her efforts to maintain their daily patterns of living. In most of these situations the tears, sleeplessness, and occasional tantrums of the first few nights subsided quickly.

In the King family, with five children between three and eleven, the unmarried mother had to be hospitalized immediately for a breast tumor. The homemaker and caseworker arrived just as the mother was leaving for the hospital, and although the mother tried to reassure the children as best she could, they huddled together in a fearful and suspicious group across the room from the homemaker. The younger ones were crying and calling for their "mommy," and one of the older boys seemed almost mute with fear. The homemaker reported that she could scarcely get any of them to eat. Three days later, when the caseworker returned, all of the children were talking and laughing noisily. Two of them were helping the homemaker make pancakes, two others were busily constructing a zoo out of cardboard, and the three-year-old was happily bothering everybody. They spoke of missing their mother and continually expressed their relief that they had been able to stay at home together.

In one-third of the families the children were not as easily reassured and exhibited disturbed behavior that ranged from natural reactions to the immediate crises to behavior that was obviously a result of severe and longstanding pathology. The children who presented the severest problems were those whose relationships to their mothers were the most troubled. These children had the greatest difficulty accepting or relating constructively to a mother substitute and were upset and threatened by the separation experience.

The most serious signs of disturbance tended to occur during the late evening and nighttime hours. These included severe asthma attacks, aggressive outbursts, attempts at running away, and a variety of sleeping disturbances such as nightmares, sleepwalking and talking, head banging, constant rocking, enuresis, and soiling. In one family the homemaker, at the request of the four young children in the home, agreed to sleep with the brilliant lights of a large mechanical Santa Claus shining in her face. The children were accustomed to the light and became wakeful and frightened when the homemaker attempted to dim the glare. In another family the three small children woke up regularly at 3:00 a.m. and sang hymns until 5:00 a.m. The presence of a comforting, reassuring homemaker was of inestimable value to these frightened, confused, and lonely children.

When service was needed for more than a week, a second homemaker was usually sent to relieve for a day or two. Although these families, particularly the children, were always prepared in advance for the necessity of relieving the homemaker, the change was frequently distressing to the younger children and to those who were most disturbed. In one family the three-year-old daughter had shown almost no reaction to her mother's leaving for the hospital. A week later, when the homemaker was preparing to leave for the weekend, this little girl became hysterical, sobbed, and clung to her, begging her not to leave her "with the new lady and without my mommy." Homemakers went to considerable lengths to reassure and prove to the children that they were definitely returning to them after the weekend or after a few days off. Most of the children seemed to relate with greater intensity and warmth to their first homemaker, who had been with them from the time of separation from the absent parent. A few children, however, related better to the different personality of the relief homemaker.

Parents' Responses to Twenty-four-Hour Service

Approximately two-thirds of the thirty-one families who received twenty-four-hour homemaker service made constructive and appropriate use of it. The attitudes and behavior of the parents in this group ranged from passive, noninterfering acceptance of the homemaker and minimal involvement with the caseworker to families who actively and eagerly involved themselves in every step of planning and worked cooperatively with both the homemaker and the caseworker throughout the period of service.

Initially, many of the mothers, including the more adequate ones, evidenced great anxiety about their own displacement and fearfulness around the homemaker's role and functioning in their homes. Their uncertainty and fearfulness subsided in response to the steady reassurance and support of the caseworker and the homemaker.

In the remaining one-third of the families the combined efforts of the caseworker and the homemaker to help the parents use homemaker service appropriately were almost totally unavailing. This group included the most disturbed and deteriorated family situations. The parents tended to be suspicious and distrustful of the homemakers and frequently telephoned from the hospital or asked neighbors to drop in to "check on" the homemaker. Some of them were fearful that the homemaker would learn too much about some aspect of the family's life that they preferred to keep hidden, such as the whereabouts of the children's father, an illegal source of income, an extramarital affair, or the extent of disturbance in their children. Many of these parents were highly manipulative and demanding in their contacts with the homemaker and became upset and angry when all of their demands were not met. For example, one mother of three very disturbed children called the homemaker daily from the hospital to find out whether she had washed all the walls in the apartment, cleaned the venetian blinds, waxed the floors, and ironed all of the children's summer clothing, which was stored in the basement.

The adequacy of the homemakers seemed to threaten these mothers. Competition with the homemakers was increased by the positive reports they received from thoughtless or malicious relatives or from friends who told them how much calmer and better behaved their children were and how much better organized their households were now that a homemaker was in charge. Not infrequently these mothers attempted to alienate their children from the homemaker or managed to provoke a crisis of one kind or another that greatly added to the homemaker's difficulties in the home.

In some of these instances the problem was resolved by changing homemakers. In three situations the parent's inability to use the service constructively made it necessary to terminate the service following the mother's discharge from the hospital, although further help was obviously needed.

All but one of the eight fathers who were in the home when twenty-four-hour homemaker service was given were helpful and cooperated with the homemakers. These seven men made excellent use of the service.

In the Evans family, with four children, twenty-four-hour service was necessitated by the hospitalization of the mother and the long and irregular working hours of the father. Mr. Evans was overwhelmed and became agitated when the caseworker or the homemaker tried to enlist his help in planning for the family. He had been overly dependent on his wife and had never participated in the management of the household or the children. With encouragement from the homemaker and the caseworker during the two months his wife remained in the hospital, he gradually assumed a more positive and meaningful place in his family.

Nine- to Twenty-four-Hour Homemaker Service Project—Part II

This is the second part of the report on a project carried out by The Children's Aid Society of New York City. Significant factors contributing to the success of the project were the use of experienced caseworkers and homemakers; ability to respond promptly to requests; flexibility regarding hours, length of service, and condition of homes; and availability of the caseworker-homemaker team day or night.

The responsibility the agency assumed for these children, particularly those in one-parent families, required that the casework staff be available night and day. The usual scope of casework service had to be broadened and intensified, and immediate action had to be taken. The first home visit and the arrival of the homemaker often took place on the day the mother left for the hospital. In the first interview and under emergency circumstances, information had to be secured about the children, the household routines, the management of money, where and how rent and utility bills were to be paid, where food was to be purchased, and the locations of schools and churches. A form was used to secure the written consent of the parent for the agency to obtain any emergency medical or dental treatment the children needed during the parent's absence. In some homes immediate arrangements had to be made for installing a telephone during the period of service so that the homemaker could phone in an emergency without leaving the children. If there was no adequate bed and bedding for the homemaker, the caseworker had to purchase a cot and bed linens and arrange for their speedy delivery.

Arrangements were also made with the parents to enable the homemaker to cash relief checks. In these instances the homemaker assumed total accountability for the family income in addition to her regular duties. In a number of the more physically deteriorated homes the caseworker had to enlist the cooperation of the landlord or the health department or call in an exterminating firm to rid the home of roaches, rats, bedbugs, and mice. Occasionally the homemaker was unavoidably involved in arbitration with a landlord who tried to use the single parent's absence to evict the family. When electricity and gas were turned off, the homemaker had to improvise cooking and lighting facilities while the caseworker negotiated with the utility company.

While the mothers were in the hospital, increased casework time had to be spent in working with the homemakers and with the children. Problems that are a part of daily living and of every homemaker situation became magnified when the homemakers were with the children throughout the night. The homemakers felt more alone after office hours, and it was frequently necessary for the caseworkers to keep in touch with them during the evening hours and on weekends. Homemakers were sometimes obliged to protect the children from divorced or separated fathers who threatened to remove the children or who created unpleasant scenes dur-

ing unprecedented daily visits to the children while the mothers were in the hospital. One putative father picked up his six-month-old daughter and walked off with her.

Because of the children's increased need for support and reassurance, the caseworkers saw them frequently and served as the liaison between them and their mothers. They accompanied some of the children for medical and dental treatment, conferred with their teachers when school problems arose, and attended to unexpected happenings. One family had to move during the period of twenty-four-hour service, and the children in another family were being harassed by the landlady with threats of eviction.

On occasion older children were critical and became aggressively angry at the homemakers. When these children told the caseworkers about their problems and dissatisfactions, their conflicts subsided or were resolved. This was especially true of the more seriously disturbed children. The caseworkers spent considerable time in helping the homemakers understand and cope with the baffling and trying behavior of these children.

Many of the mothers felt isolated from their families and displaced by the homemakers. It was therefore important for the caseworkers to see absent mothers frequently and include them as much as possible in all of the planning. Continuous communication among the caseworker, the parent, and the homemaker enabled the mother to cooperate while she was in the hospital and after she returned home.

The caseworkers also worked closely with the other agencies involved in the welfare of these families. The combined observations of the caseworkers and the homemakers provided these agencies with information about the families' strengths and needs that otherwise might not have emerged. Because of the intensive involvement of the caseworkers and the homemakers in these families, excellent opportunities arose to encourage parents to seek further help for themselves and their children when this was indicated.

Nine- to Sixteen-Hour Service

Nine to sixteen hours of homemaker service was needed by twenty-four children in six families. In five of these families the parents were living together. In the other family the mother had moved out, and the father had phoned to ask for help. He worked in the post office from 4:00 p.m. until midnight and had no one with whom he could leave his two young children. Homemaker service was given for ten to fourteen hours a day. Meanwhile, the caseworker got in touch with the mother. Both parents and the family agency to which they were known believed that foster care was the best solution for the children. Homemaker service was terminated when the mother agreed to remain in the home until placement could be arranged.

In three of the remaining five families nine- to sixteen-hour service was needed because of the confinement of the mother. The fathers in two of these families worked long hours, and there were no relatives to care for the children. The father in one family had had a recent heart attack and had been discharged from the hospital the day before his wife's confinement. He was bedridden most of the time, and a homemaker was needed during the daytime and early evening hours to care for the family's four young children. A relative who worked during the day was able to stay with the family at night.

In another family, with eight children ranging in age from one to twelve years, the request for extended hours of homemaker service came while they were receiving regular eight-hour service. The mother was pregnant and had toxemia, and her doctor had recommended complete bedrest during the latter months of her pregnancy. One child was severely disturbed and had been discharged from a state hospital a few weeks before homemaker service began. The father worked ten hours a day and showed little interest in his family when he was home. When the mother entered the hospital for the birth of her ninth child, homemaker service was increased to twelve hours per day to avoid placing the eight children in temporary shelter care.

All six families in this group were enthusiastic about homemaker service. In addition to their expressed relief about the care of their children, there was noticeable improvement in their standards of housekeeping and in their relationships to their children when the service was discontinued.

Eight-Hour Service

The referrals for extended hours of homemaker service for twenty-three of the forty families were made sufficiently in advance to place a homemaker on an eight-hour basis for a day or two before the mother had to leave the home. This enabled the homemaker to become acquainted with the children and with the normal routines and habits of the family. It cushioned the impact of separation for the children and was reassuring to their parents. The physical condition of several mothers necessitated placing the homemaker on an eight-hour basis prior to the time extended hours of service were needed.

In three families referred for twenty-four-hour homemaker service, plans changed during the period the family was on eight-hour service. One mother, after being admitted to the hospital, told the caseworker she was opposed to twenty-four-hour homemaker service and preferred that her husband care for the children during her absence even if it meant that he would lose his job. In another family, where the mother was expecting her seventh child, the father was able to change his working hours and share the night care of the younger children with the twelve-year-old daughter during the six days that the mother was in the hospital. The social and psychological pathology in the third family was so extensive that the plan to give twenty-four-hour service was changed to a recommendation that the children go into long-term placement.

Following the period of extended hours of homemaker service, regular eight-hour service was given to twenty-eight of the forty families included in this study. In these families although the mother was again at home, she was physically unable to resume complete responsibility for her children and household.

Findings

Housing

In the forty families included in this study fifty-seven children in twelve families were adversely affected by inadequate housing. Many of these families lived in buildings and neighborhoods that fell far below minimal standards of health, decency, and safety.

Eight of the families, with forty-two children, were living in dangerously overcrowded quarters. In all of these situations the number of persons living in one, two, or three small rooms constituted a gross violation of the Board of Health's standards. One mother and her four children ranging in age from two months to four and a half years lived in an exceedingly small and incredibly crowded room. Every inch of space was occupied by beds, the baby's crib, and a bureau. Cockroaches were rampant, often completely covering the baby's hands and face. The older children played in a poorly ventilated and dimly lighted hallway. One bathroom was used by all the occupants of the floor. The entire building was decrepit and filthy.

In addition to these eight families who lived where space was desperately limited, four other families, with a total of fifteen children, lived in buildings that were in a state of extreme deterioration and neglect. One family with eight children ranging in age from three to seventeen years lived in a dangerously neglected and acutely decayed apartment house that was scheduled for demolition. They had lived in this building for five years and were one of three families still there. At first sight, the building appeared to be completely abandoned. It stood alone on several square blocks and was surrounded by more than a year's accumulation of rubbish, trash, wrecked cars, and the foundations of buildings that had already been torn down. Over half of the window panes were broken, the front door was off its hinges, and the staircases were rotted. The plumbing and heating systems worked sporadically. Large rats frequented the building in increasing numbers as the other buildings in the neighborhood were torn down; they clawed and chewed holes in the walls of the apartment almost as quickly as the homemaker and the children could board them up. All efforts to rid the apartment of rats were unavailing.

Wherever deficient housing and environmental conditions seriously affected the health and well-being of families, the casework staff in the homemaker service project took every possible step to improve or change housing conditions. They worked with relatives, the Housing Authority, the Health and Fire Departments, the Department of Wel-

fare, hospitals, landlords, other interested agencies, and individuals. One family was relocated, and conditions were improved for three others.

In addition to these twelve families, six families with thirty-nine children lived in fairly adequate housing, but the housekeeping standards of the mothers were so poor that they presented a health hazard to the children. In one home it was literally impossible to walk through the apartment because of the accumulation of torn and unwashed clothing, dirty sheets and bedding, old newspapers, scraps of food, and useless appliances that covered the floor and the furniture. Since this type of extreme neglect, dirt, and disorderliness appeared to be a reflection of severe and deep-seated problems in the personalities of the parents, the efforts of the homemakers and the caseworkers to help them improve their standards of housekeeping were only temporarily or partially successful.

In no instance was homemaker service refused because of inadequate housing. We operated on the principle that if children in our city are allowed to exist under such shocking circumstances, a homemaker could bear these conditions on a temporary basis. These hovels meant home to the children, and it was as important to avoid abrupt placement for them as it was for the children in better housing.

Severe Emotional Disturbance

In one-fourth of the families one or both parents showed signs of severe emotional disturbance. Most of them appeared to be functioning on a precarious level and had personal difficulties of such intensity that they were scarcely able to meet the minimal needs of their children and households. Without exception they had the most difficulty in making constructive use of the service. They were suspicious, critical, and often openly antagonistic toward the homemakers. At times they made obvious efforts to alienate their children from the homemakers and to sabotage the work of the caseworkers and the homemakers. They usually appeared unaware of their destructive and demoralizing behavior.

In almost all of the families where there was extensive social and emotional pathology, one or more of the children showed serious signs of disturbance. In addition to the wakefulness and temper tantrums described earlier, these children were also stealing, truanting, and fighting. Other children were acutely depressed and detached. Although they remained in a state of anxiety throughout separation from their mothers, all but one of the children continued to function and remained in contact with the world around them.

Health

Insofar as could be determined without individual medical examinations, the physical health of the children was good. Many of them attended neighborhood health centers and hospital clinics. Fifteen children had physical illnesses, of which ten were medically diagnosed as psychosomatic. Three children were physically handicapped and retarded in their development. A five-year-old boy in a family of six small children was blind. He was unable to walk and had to have the attention given to a young baby. A three-year-old girl in another family had epileptic seizures and was functioning on a year-old level. In a family of eight children the six-year-old girl had cerebral palsy. She had to be watched constantly to keep her from injuring herself. She screamed continuously unless she was held by one of her brothers or sisters or by the homemaker. This little girl was up most of the night crying disconsolately or wandering aimlessly around the apartment. Some mornings the homemaker would find her asleep on the floor huddled in a corner of the room. Twelve other children in good physical health were in special classes in school or were noticeably retarded.

Description of Families Not Served

Five hundred ninety-seven children in 145 families could not be served by the project. They were referred by the same sources, and for the same reasons, as families that were served. One hundred eleven families with 452 children were refused service because no homemaker was available. Thirty families with 134 children withdrew, and four families with eleven children were referred to other homemaker services.

Administration

The original project was designed for 8000 hours of homemaker service by three homemakers available for nine- to twenty-four-hour duty, two-fifths of a caseworker's time, and one-fifth of a secretary's time. Supervisory and administrative costs were to be absorbed by The Children's Aid Society. Shortly after the project began, however, it became apparent that we had underestimated the amount of casework time needed to handle the volume of applications, the assignment and supervision of homemakers, and the extensive help required by the children and their families. Consequently, the project ultimately absorbed the equivalent of one full-time caseworker. It was also necessary to adjust our estimate of three homemakers, as it required at least three additional homemakers for weekend relief, vacations, illnesses, and other absences of the project homemakers. The original estimate for secretarial service was adequate. The additional casework and homemaker time required was met by the diversion of some of our regular homemaker service staff to the project.

In September 1960, arrangements were completed for the New York City Department of Welfare to reimburse The Children's Aid Society for twenty-four-hour homemaker service on the basis of $2.50 an hour for twelve hours. These payments, plus additional Children's Aid Society funds, enabled the project to provide 13,097 hours of service instead of the 8000 hours originally planned.

Homemakers on twenty-four-hour duty were given full pay for twelve hours of active duty, half pay for four hours of inactive duty, and no pay for eight hours when they would presumably be sleeping.

The families who received extended hours of homemaker service relied heavily on the caseworkers and homemakers. The three caseworkers who carried project assignments were fully trained and experienced in family and child welfare. Our initial intention of hiring new homemakers for nine- to twenty-four-hour duty was abandoned in favor of using three of our most experienced homemakers. Even though these homemakers were well trained, they sought and insisted upon frequent consultations with their caseworkers. The extension and intensification of the caseworkers' function gave support to the homemakers and helped to maintain balance in these families.

If the 184 children in these forty families had been placed in city shelters, they would have required 8173 days of shelter care. At the rate of $13 per day, the cost of shelter care would have been $106,249, as compared with the project cost of $35,972.

Financial Statement

Expenses*			
Salaries			
Homemaker		$19,394.83	
Casework (part time)		5,182.03	
Secretarial (part time)		1,039.00	
		$25,615.86	$25,615.86
F.I.C.A., retirement, life insurance, extended medical and disability			2,946.00
Liability insurance and workmen's compensation			1,530.00
Transportation			119.81
Printing, postage, and telephone			179.90
Miscellaneous			
Food	$446.41		
Equipment replacements, cots, bedding, cooking utensils, shoes, glasses	111.06		
Toys, recreation	9.20		
Laundry and exterminators	43.80		
Medicals for children	8.00		
	$618.47		618.47
			$31,010.04
Income			
New York Fund for Children, Inc.			$7,500.00
The Children's Aid Society Special Grant			7,500.00
New York City Department of Welfare Purchase of Service			7,053.85
Fees from families			185.34
Diverted into project from The Children's Aid Society funds that had been allocated for regular homemaker service			8,770.85
			$31,010.04

* Does not include costs of supervision and general administration, which were absorbed by The Children's Aid Society. These costs amounted to $4,962, so that the entire cost of the project was $35,972.04.

Significant Factors in the Project

The following factors contributed to the success of the project:

1. The use of experienced casework and homemaker staff.
2. The ability to respond immediately to requests for homemaker service.
3. Flexibility in adapting hours and length of service to the changing needs of families.
4. The agency's assumption of full parental responsibility when the parent in a one-parent family was absent.
5. Giving service when there was only one child in a family.
6. Providing service to fathers who worked nights or irregular hours and whose jobs would be jeopardized by further absences.
7. Willingness to go into any home regardless of the state of its deterioration.
8. Availability of the caseworker-homemaker team at any hour of the day or night.

Conclusions

The results of this project confirm the findings of the 1958 Department of Welfare-Children's Aid Society Study of Children in 100 Families Who Were Returned Home from Temporary Care. These findings indicated that two-thirds of the 229 children involved could have remained with their own families had homemaker service been available for more than the usual eight-hour day. Therefore, when the present demonstration project was set up, the basic condition for providing nine- to twenty-four-hour homemaker service was that the only alternative plan for the children would be shelter placement. The project did not include children who could be given care, however sketchy or questionable, by neighbors, relatives, or older children. This latter group presented itself as also needing the protection of extended hours of homemaker service, but did not come within the project specification that no plan other than shelter care would be possible.

One hundred eighty-four children were kept at home by the project. Of the 597 seemingly eligible children who were refused because of lack of staff, some are known to have gone to shelters. Others stayed at home with fathers who remained away from their jobs or with mothers who postponed surgery or medical treatment. What happened to the majority of those children is, however, unknown to us.

The economy of extended hours of homemaker service in alleviating the overcrowding in shelters was shown. In addition to the financial saving, the lessening of human distress was immeasurable.

The results of this demonstration suggest expansion of nine- to twenty-four-hour homemaker service and realignment of programs to meet the varying needs of children and their families.

The Team Approach in Protective Service

Child welfare and homemaker service work as a team in providing protective service for children and families. This article shows the effectiveness of this approach.

LOUISE FORESMAN, NELLE MARTIN, RUTH SAFIER, AND LORENA SCHERER

Too few public child welfare agencies have sufficient funds to provide conventional homemaker service under the following circumstances:

- . . When a mother is absent from the home because of illness, confinement, desertion, divorce, or death.
- . . When a mother in the home is incapacitated by illness or mental retardation.
- . . When a mother is preoccupied with the care of another person in the home and cannot carry full responsibility for the home.
- . . When a working mother cannot find suitable day care for her children.

If, however, these agencies regard homemaker service as the last line of defense in maintaining family life for disorganized, multiproblem families who neglect their children, they may find that they cannot afford *not* to provide it. Here in St. Louis County, the suburban area surrounding the city of St. Louis, we are successfully using homemaker service to strengthen the protective services that we offer these families. The use of homemaker service is focused on supporting, supplementing, motivating, and teaching.

In the middle fifties, when the U. S. Children's Bureau began to emphasize homemaker service, Missouri counties were encouraged to invest in such a program although no identifiable state or Federal funds were available. A further encouragement came when the voluntary agencies of Metropolitan St. Louis, which had been partially meeting the need for homemaker service in St. Louis County, no longer made their resources available. Thus, in January 1957, through the leadership of the child welfare supervisory staff and the Child Welfare Advisory Committee, a homemaker program was approved in St. Louis County by the County Court (the county administrative body).

The tradition of child welfare services in St. Louis County is one of heavy and prudent investment of both interest and funds. We are well aware that a pioneer spirit is an essential factor to the development and expansion of kind and quality of program. In the absence of earmarked state and Federal funds to support homemaker service, we turn to local funds. If there are insufficient funds to use homemakers in the conventional sense, we use them to hold together families that would be separated except for the homemakers' contribution and to supplement the casework service provided. In a county highly

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populated with children under 18, we have developed a well-defined protective service program composed of a single-function unit of nine child welfare workers and one full-time and one half-time child welfare supervisor.

When we started our homemaker service, it seemed most practical to make it available primarily to those families receiving protective casework service. By doing so, placement of children in foster care between 1956 and 1960 increased by less than 1 percent, although referrals for service to neglected children in their own homes increased by 435 percent. Since we are the only public child placing agency in this county and since the child population in the county increased during this period, our low record of separating families through placement is impressive.

Our protective service unit staff is dedicated to the principle that, wherever practicable, children are best served in their own homes with their own parents. They know from experience that most parents want to fulfill their parental role and responsibility, and that they can get satisfaction from doing so. Thus, by supporting, encouraging, and building parental egos through the casework relationship, the staff has experienced a high degree of success. Relating to families with multiple problems enthusiastically and with conviction is contagious, and our homemakers emulate the child welfare workers and supervisors in this regard.

Maturity and Flexibility Required

No more than two homemakers have been employed at any one time although we have employed five since the inception of the program. All of them are married and live with their husbands; four have married children out of the home. The median age of the group was 47 years, and the amount of education varies from sixth grade to one year of college. All homemakers are under civil service; they have specific working hours, a five-step salary range, sick leave, and vacation time. They are guaranteed $45 every two weeks regardless of whether they are assigned.

Since homemakers are selected for their warmth, their acceptance of people, and their feeling for others and their problems, they are asked to talk of their own life experiences in the application interview. During orientation the purpose of the agency, especially the purpose of the protective service unit, is explained to them. Through case illustrations, they are shown how a child welfare worker helps maintain family life for a specific family. They are taught nutrition, what certain foods mean in terms of cultural patterns and individual taste, budgeting, social development of children, and first aid. This is supplemented by institutes and workshops on family life, child development, etc. Homemakers are prepared to accept any family no matter how deprived emotionally, any home no matter how bereft of modern conveniences and filled with dirt and disorder. Their social maturity and flexibility are tested and retested.

Since homemakers are often the day-by-day eyes and ears of services to neglected children in their own homes, they are taught what to look for and what is relevant and irrelevant to the movement of the situation. They identify and report symptoms of progress or regression between the child welfare worker's visits.

Homemakers also have their manual tasks in supplementing what is left undone. They teach what is to be done. At all times, they support and strengthen the weak ego of the neglectful parent. They are often the alarm clock that patiently rings, motivating the mother to prepare breakfast, get the children off to school on time, and change and feed the baby. Then, over a cup of coffee, they encourage the mother to reveal her feelings about her situation and her children, until, as happens in a large number of cases, she no longer needs the alarm clock and can help herself to plan with her child welfare worker. Eventually the parents may become self-motivating without the homemaker and casework service.

Team Approach Successful

The homemaker's ability to work with the depressed, the mentally ill, the mentally limited, the hostile, the indifferent, and the overwhelmed is sustained by a team approach —child welfare worker, homemaker, homemaker supervisor, and protective service su-

pervisor. She knows that she can depend on her homemaker supervisor and the rest of the team for revitalizing and reenergizing. Upon assignment, she gets original direction and help in understanding. Redirection and help are given to further understand the family as a particular assignment develops. Homemakers are an integral part of the child welfare staff and are encouraged to feel that this is so. The team keeps constantly in touch, either through conferences or by phone. Evaluation and re-evaluation of the homemakers' job is constant.

Turnover in situations where homemakers are used is high, as expectations and goals set between parents and worker are achieved more quickly with an all-out approach to the family by the child welfare worker and the homemaker. The child welfare worker and her supervisor are enabled to make more accurate and quicker diagnoses as the homemaker participates in the evaluation of individual family members' feelings, concepts of parental roles, interfamily relations, reaction to the casework interview, care of the children, etc.

A constructive use of the homemaker-child welfare worker team is illustrated by the following:

Voluntary ethnic societies withdrew all financial and service help from a family, newly emigrated from rural Europe, who had spent several years in a displaced persons camp. Help was withdrawn because the mother was begging on the streets and was becoming completely dependent. The Public Assistance Department complained of unrealistic use of funds. One month the rent went unpaid. There were not enough beds in the apartment, and there were no chairs, but good woolen clothes from an expensive shop had been purchased, and a television set and a phone had been installed.

The school referred this case through our Public Assistance Department because of their concern for the oldest boy, Nicky, who was in poor physical condition and experienced moods of depression. He was reported to have superior intellectual ability, but was unable to function academically; he had late after-school jobs and was usually exhausted at school. When the father deserted shortly after coming to this country, Nicky tried to assume the father's role; the mother was completely dependent on Nicky's control of the family purse. The situation was further complicated by the mother's inability to speak English; verbal communication had to be through an interpreter or through Nicky. The treatment plan was directed toward strengthening the mother's ability to function as a responsible adult so that Nicky and the other children could be free to make the difficult adjustment to American schools and peer groups.

A homemaker was placed in the situation and was able to communicate nonverbally her concern for and interest in the mother. The homemaker gleaned that the mother was fearful of leaving the security of her four walls and the blaring television; she had shut out any communication with life except through the moving figures on the screen. Slowly the homemaker encouraged the mother to turn off the set. One day she persuaded the mother to accompany her on a shopping trip. She discovered that the mother did not know how to cross a busy intersection with traffic signals. With gestures, she explained to the mother about traffic signals, and they practiced walking with the change of lights.

The child welfare worker used this information to better understand the specific extent and nature of the mother's dependency. Since the homemaker was spending eight hours a day once a week with the mother, she was eventually able to teach her some elementary English. When the mother was secure enough, the child welfare worker arranged for her to attend an English class for adults. Both the homemaker and the child welfare worker worked on the family's budget. This resulted in improved budgeting and initiation of some additional resources by the child welfare worker. Nicky was able to give up his late evening job, and his school work improved immeasurably. Both the child welfare worker and the homemaker interpreted the need of clinic attendance. First the homemaker accompanied the mother and the children to the pediatric clinic. Later the mother was motivated to attend the clinic without the homemaker and was praised when she did so.

A crisis arose when the mother was seeing the children off to summer camp. Although the child welfare worker had carefully interpreted camp experience to the mother and the mother approved of the children's going, the mother became hysterical when the camp bus started to leave. She feared her children were being taken to a concentration camp and that she would never see them again. With her understanding of what concentration camp meant to the mother, the homemaker was able to handle the situation.

This use of the service illustrates the supportive role of the homemaker, who at times

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supplemented the casework service. The members of the team focused on giving support until the mother could function alone, without fear that she would use them as a crutch forever. We were able very quickly to make an accurate diagnosis of the kind of dependency pattern and to treat in these terms. Goal setting and expectation were a conscious part of treatment. The enthusiasm and exuberance of the child welfare worker and the homemaker were invigorating for the family. They are now on the path to being socially self-sustaining, although they will get financial assistance until the mother takes the next big step—finding a job.

Homemaker Service as "Preventive Psychiatry"

Recently, a psychiatrist referred to our service as "preventive psychiatry." An example of what he meant is illustrated by the following case:

Mr. Clark, a handicapped World War II veteran, worked long hours. His wife had been confined to a mental hospital after months of serious neglect of the children. Their 4-month-old baby had never been taken out of the house. The neighbors reported the complaint to the Juvenile Court, which immediately communicated with us. Psychiatric treatment was impeded by the mother's concern over what was happening to the children and by her insistence that she be released to take care of them. We decided to use a homemaker at once *to do for* the father until the two oldest children, ages 14 and 12, could learn to help the father in managing the household.

Neighbors who had been quite concerned about this family welcomed the homemaker with open arms. The two oldest children were helped by the homemaker to take care of their fears about their mother's illness, which they confided first to the homemaker and then to the child welfare worker.

The wholesomeness with which the homemaker handled the children's questions about their mother's illness enabled them to tolerate the gibes from their playmates. The presence of a nurturing person stimulated the normal physical, social, and emotional development of the children, which had been interrupted by the mother's illness. All of this had a bearing on the mother's progress in the hospital, and eventually she was released. Homemaker service continued for a brief time until the family could manage on their own.

The homemaker made such a good impression on the neighbors that one family offered their services as foster parents. The homemaker was a good interpreter of child welfare services as well as a foster home recruiter, an unexpected by-product.

Summary

We have found that homemakers are most effectively used to support, supplement, motivate, and teach. They have been an effective aid when used as part of the agency team. Much of our success is in using the service flexibly in terms of the needs of a particular family situation. Success comes from evaluation and re-evaluation of the problem, the family, the goals in treatment, and the team's respective roles in helping the family to improve their situation for their children, whom the community asked us to serve.

There is little turnover in homemakers in St. Louis County; homemakers experience the same satisfactions as do child welfare workers in the protective service unit. They enjoy being a part of the process, and they like the challenge of trying to help make improvement possible in situations where improvement seems impossible.

A Public Agency's Homemaker Service Program

Designed essentially to prevent separation of children from their parents, when adapted imaginatively, homemaker service can and does meet families' special training and rehabilitation needs.

RUTH M. SNYDER

When homemaker service was first conceived of, its essential function was the care of children in their own homes, usually while their mother was absent or ill. Over the years, however, there have been many adaptations, and the concept of service has broadened and changed. Today, in addition to serving families with children, our homemakers serve the aged, the handicapped, and the chronically ill.

Although the homemaker service program of a public agency differs in some ways from services operated by voluntary social or health agencies, there are, I think, more similarities than differences—the differences being mainly in size, in supervision of staff, and perhaps in screening applications for service. No matter what the auspices, though, the purpose of homemaker service is to keep the family together in its own home whenever possible and to give service in such a way that the family is strengthened and unified in the process.

Agency Procedures

In the New York City Department of Welfare applications for homemaker service are prescreened by our child welfare and public assistance workers. They do the social and eligibility study and the casework appraisal that determine whether the children's needs can best be met through homemaker service, through some other service, or through the family's own resources. If homemaker service is the most appropriate under the circumstances, a referral is made to our Homemaking Center, where intake staff review the kind and extent of service needed, the family's individual needs, and the probable duration of service. This information helps us to select the homemaker best able to work with the particular family.

The responsibility of providing training and supervision to homemakers is centralized in our Homemaking Center. Social workers assigned to the center function as supervising field workers, and each has responsibility for the on-the-job training and supervision of a group of eight to ten homemakers. In conjunction with the family's social worker from our child welfare or public assistance staff, the supervising field worker works out a plan for service with the homemaker and the family, gives the homemaker specific instructions to help her carry out the plan, and observes her work in the home. The supervisor offers support and assurance to the homemaker in difficult situations and is available for consultation as needed. She is, of course, in close touch with the family's social worker so that they can exchange essential information. The Department has found that this method of super-

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vision makes it possible to maintain a high standard of service.

Because we are interested in reaching as many families as possible, the Department purchases service when no staff homemaker is available. Of particular help has been the 24-hour service provided by a number of voluntary agencies, which our agency does not offer at the present time.

Bringing Order to Troubled Households

Although we work with troubled families all the time, each situation presents a new and different challenge. To bring order to a troubled household, and warmth and comfort to unhappy youngsters, is in itself a rewarding experience, as illustrated by the following case:

Mrs. Barnes, the mother of six children from 3 to 11 years of age, was hospitalized briefly with what was at first thought to be a minor ailment but was later diagnosed as carcinoma. The children seemed to sense the serious situation and reacted by quarreling among themselves and displaying other symptoms of tension. Although Mr. Barnes, who was employed, was described as an affectionate father, he took his wife's illness very hard and was short-tempered and impatient with the children. A visiting nurse saw Mrs. Barnes regularly, and our job, in addition to caring for the children and the household, was to make Mrs. Barnes as comfortable as her condition would permit.

Because we were aware of the problems the children faced, we made plans for keeping the older ones away from home after school as much as possible. Arrrangements were made with a nearby "Y" for the older boys to learn to swim and to box, and these activities served as emotional outlets. The homemaker took the 3-year-old and the 5-year-old to the playground every day. Her presence lessened the children's fears to some extent, and they were better able to face the possibility of their mother's rehospitalization.

Knowing that we must anticipate Mrs. Barnes' death, we arranged to keep the same homemaker with the children so that they could secure as much comfort as possible from the presence of a familiar mother figure during their mother's illness and the unhappy period ahead. The family's social worker saw Mr. Barnes frequently to give him needed strength and support and to help him with some of his problems.

Training Mothers in Household Management

Although we see the care of children during periods when they are deprived of parental care as our primary function, the aspects of homemaker service that have as their objective the strengthening of families in which one or both parents are less than adequate are increasingly important to us. Under supervision, our increased staff of homemakers now provide training to mothers who are functioning inadequately but who show a potential for learning. Every effort is made to develop compentence and to reinforce latent ability through encouragement and training, thus helping the mother to have a better understanding of her role as a parent.

In recent years, there has been a marked increase in the number of referrals that come to us with multiple problems. Often the family is known to the court, to child guidance centers, to school authorities, and to clinics. In some cases, mothers with large families and limited ability are so overwhelmed that they are able to function adequately in very few areas. In other cases, families newly arrived in the city have been thrust into an urban setting that differs in the extreme from their former environment, customs, and way of life. They come to find employment, better housing, and better schooling for their children, but instead find that because of limited education, language barriers, and few marketable skills, the breadwinner is forced to accept marginal employment and is frustrated by his inability to provide even the minimum necessities for his family. More often than not, these families live in areas already teeming with health, sanitation, and delinquency problems. Subjected to pressures from all sides and with little or no outer supportive help, it is difficult for a family to remain cohesive, and, too often, apathy, impaired self-esteem, or antisocial behavior takes over.

For some mothers full-time service was needed; for others part-time help was sufficient, permitting a wider use of the homemakers' skills and affording the mothers an opportunity to test out for themselves the practical knowledge gained from their work with the homemaker. Mothers who had shown themselves unable to use funds eco-

nomically were given specific help in planning for the needs of the family. In the past year, 347 mothers with a total of 1388 children were given special training, either on a full- or part-time basis.

The adaptation of homemaker service to new and developing rehabilitation and prevention programs has also greatly increased the scope of our service. This is perhaps best exemplified in cooperative work with a project that has as its objective the restoration of deteriorated neighborhoods through the reconditioning and repair of substandard housing and the concurrent education of on-site families in improved living conditions. In June 1961, our work with the first group of seven mothers provided valuable experience in working on future projects of this type. In 1962, we applied this knowledge and experience to four separate groups in which there was a total of 47 mothers. For the most part, these families lived in single rooms or deteriorated apartments where housekeeping, conduct, and conditions—in many instances hazardous to their own as well as to the community health—made them undesirable neighbors.

Our job was to teach the mothers acceptable methods of child care and household management, including garbage disposal, vermin control, and sanitation. We planned intensively with settlement houses and neighborhood conservation staff on a program that combined individual and group training. The community agencies took responsibility for group meetings, and we provided homemakers to work closely with each of the mothers. We also provided ongoing consultation for the agency representatives as the differing needs of the client groups emerged and training developed.

Homemakers, with the help of their supervising field workers, met with small groups of mothers and children to offer instruction in such simple, everyday tasks as brushing teeth, using a facecloth, combing hair, washing hands before meals, etc. This came about when we discovered that none of the children in one of the projects had ever used a toothbrush or a facecloth. Cohesiveness of family living was almost nonexistent, and none of the families had ever availed themselves of community resources, such as public parks or playgrounds, even though these facilities were nearby.

Realistic Goals

In working with these mothers we learned not to set impossible goals, and we were pleased with even small achievements. The following case example is typical of the mothers in project situations:

Mrs. Mahew and her six children, ages 2 to 10, lived in a rundown building, one of several slated for major improvement and rehabilitation. Mrs. Mahew's husband had deserted. The small, three-room apartment was overcrowded, and defective plumbing presented a potential health hazard. The stove was encrusted with dirt, as were the kitchen shelves. Sleeping facilities were inadequate, beds were infested with vermin, and bed linens were dirty. Clothing was thrown on the floor and over chairs. Mrs. Mahew did the laundry so infrequently that the children were forced to wear dirty clothing, although we later found that they had an adequate supply. The kitchen table was broken, and there were not enough chairs. The children fed and dressed themselves as well as they could; they played mostly in the public hallways even though there was a playground only a block away. Once up in the morning, Mrs. Mahew sat on the stoop all day.

Following referral, Mrs. Mahew was persuaded to attend the group meetings at the settlement house. She accepted the training offered by the homemaker, learning to clean the stove, the icebox, and the closets, and to spray the shelves with insecticide.

Pressure was put on the landlord to repair the plumbing and to send an exterminator, and Mrs. Mahew was encouraged to wash the dishes after every meal instead of leaving them in the sink all day. The homemaker taught Mrs. Mahew to spray the beds as a preventive measure once they were free of vermin. Improved housekeeping methods were demonstrated, and the furniture was rearranged to permit the boys to sleep in the bedroom and Mrs. Mahew and the two little girls in the living room. Cartons were suggested for storing winter coats and snow suits, thus freeing the closet for clothing in current use. Mrs. Mahew was urged to use the laundromat regularly and once clothes were clean, to mend them.

The homemaker instructed Mrs. Mahew in meal planning and food purchase, accompanying her to the supermarket. Emphasis was placed on planning the work on an orderly basis. Funds were provided for a kitchen table

and chairs. Mrs. Mahew was thrilled and said that this was the first time all of them had ever been able to sit down together for meals. She was so pleased with her new skills as a "homemaker" that she tried out recipes for simple desserts and cookies, using surplus foods to advantage.

At the end of the first three weeks, real progress had been made. The household routines were so firmly established that Mrs. Mahew was up early each morning, tidied the apartment herself, and had ample time to take the children to the playground in the afternoon. For the next three weeks, part-time service was given, since Mrs. Mahew felt able to manage when the homemaker was not there. Although she never became a "shining light" as a housekeeper, she did make progress in organizing her work, in simple cooking, and in her use of money for meal planning. The regular scheduling of laundry and meals gave her more free time, and this led to a more orderly household and better meals, from which the children benefited. What also pleased us was her positive response to the social worker, since it was obvious she would need continued help and counseling.

The deprived background of these families lent impetus to an expanded summer recreational program for children of all ages in families served by homemakers. During the summer 1085 children participated in such activities as picnics, boat rides, visits to museums, and similar events. Particular emphasis was placed on the use of park picnic areas. This provided 256 children with fun and wholesome recreation and encouraged 46 families to participate as a group, thus stimulating family cohesiveness and common interests.

Potentials of the Service

These are some of the ways in which our Homemaker Service Program has been used to provide families with concrete help. Although homemaker service is by no means the solution for all problems facing families with children, it is a helping service of the first order. Designed essentially to prevent separation of children from their parents, when adapted imaginatively, it can and does meet families' special training and rehabilitation needs and replaces inadequacy and discouragement with a feeling of self-worth that comes with improved mothering and homemaking.

Homemaker Service Under Private Auspices

The private agency is able to venture quickly into new areas of service, since it can readily change its policies. The adaptability of homemaker service is limited only by the competence, creativity, and skill of those who are implementing it.

ELIZABETH A. STRINGER

The purpose of homemaker service in a voluntary social agency is twofold: to alleviate the immediate crisis and to restore and strengthen family functioning. The Children's Aid Society of New York City established its homemaker service in 1933, primarily for the purpose of keeping children in their own homes during the temporary illness or absence of the mother.

While this continues to be one of the primary bases for service, the agency has been alert to social and economic changes in our culture, as well as to advances in the fields of physical and mental health. This has resulted in flexible and imaginative adaptation of the service, both in terms of the nature of needs and the duration of service, to meet the ever-changing needs of families.

The voluntary agency has constantly had to define and redefine the aims and goals it wishes to achieve. The Children's Aid Society defines as its goal the restoration and strengthening of the total family unit. This necessitates handling the physical, social, and emotional consequences of the family disruption that precipitated the need for homemaker service. Achieving this goal requires homemaker personnel trained specifically to handle these aspects of family life.

All referrals for homemaker service are taken by the supervision of the service. If the situation seems to be one in which the service can be used, it is assigned to one of the three caseworkers, who completes the intake study. This study might require one hour, one month, or longer. It includes clarification of the problem and gathering information about the individual family members that will aid in making the service helpful and geared to their specific as well as general needs.

Voluntary Agency Flexibility

One of the distinctive aspects of any voluntary agency is the degree of flexibility that is possible in the nature and extent of its practical service. Hours of service may start at 6 a.m. and end at 2 p.m., they may begin at noon and end at midnight, or they may extend around the clock. Fees may vary from none at all to full cost of service, depending on the caseworker's knowledge of the family's finances and evaluation of its ability to pay. Service is also given to other voluntary and public agencies on a purchase-of-service basis.

Flexibility is also evident in the nature and length of service. Our current cases include a family that was given service for just one day and another family that is now in its third year with the agency. In the former situation, the family was referred by a desperate but persistent school guidance counselor who had called at least 20 other resources before thinking of homemaker

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service. After months of effort, he had been able to arrange for a full day's psychological and neurological examination of an 11-year-old boy who was presenting serious learning problems. A clinic evaluation was essential to determine the nature of his difficulty and to provide school personnel with information that would enable them to arrange suitable and realistic vocational planning for the boy, who was thought to be brain damaged. Transportation to the clinic had already been arranged for the boy and his partially disabled mother. The appointment would have had to be canceled, though, unless someone could be found to stay with the 2-year-old and supervise the three older children when they came home from school. There were no relatives to call upon, and the father had deserted his family. Had it not been possible for the agency to provide a homemaker for just the one day, it would have been another six months before the boy could have been rescheduled for testing.

Gearing the length of service to the needs of the family has made it possible to keep the five Holmes children at home ever since their mother's desertion three years ago.

At the time, the youngest child was barely toddling, and the oldest was an early adolescent, ill-equipped to assume the full burdens of family management and supervision of her brothers and sisters. Mr. Holmes' work enabled him to be readily available in case of emergency; moreover, his devotion to his children was combined with a dogged determination to keep his family together. To this family, the homemaker and caseworker have given invaluable assistance in supplementing but not usurping the parental role and responsibilities. The homemaker has performed housekeeping functions, including budgeting, meal-planning, and the usual laundry and housework. With the father's suggestions and backing she has assumed total responsibility during the working day for the care, supervision, and discipline of the children. She is gradually training the older children in home and family management in anticipation of the time when the baby will reach school age and homemaker service will no longer be the appropriate service for this family.

Concurrently, in addition to supervising the homemaker, the caseworker has been active in enrolling the children in health clinics, finding summer camps for them, visiting their schools, and giving casework counseling service to the father and the individual children. Services of the agency psychologist have been used for two of the children who had given indications of personality disturbance. Consultation with the agency psychiatrist clarified and supplemented the caseworker's diagnostic impressions, enabling her to work more effectively with the family.

Another advantage in the voluntary agency is the speed with which it can use its funds and staff to move into limited or full research. For example, during the summer of 1962, eight families scheduled for housing relocation were given service to enable mothers to go out and seek other housing, attend clinics for badly needed medical care, and learn improved methods of housekeeping and child care. These families lived in the most deplorable, wretchedly unhealthy situations imaginable. Many of them had almost given up all hope of better conditions because they were surrounded by financial barriers and a social structure that seemed designed to complete their defeat. One half day of homemaker service several times a week gave them new strength and impetus to better their conditions. The untiring support and practical help of the caseworker reawakened their self-respect and gave them courage to keep trying. Several of the families have since moved into better living conditions with bolstered determination and restored self-esteem. This fairly limited project indicates that there are no limits to the potentialities and the need for ongoing research in homemaker service.

Flexibility of the Service

The nature of homemaker service can encompass the greatest variety of situations, ranging from an uncomplicated confinement to a serious mental breakdown, or death. In all instances, the depth of casework service will depend on the family's need and ability to use it, the anticipated length of time the homemaker will be needed, and the extent of casework involvement of one or more agencies that are currently providing other services to the family. As in all social services, it is essential in homemaker service to decide at the outset which agency will carry the primary casework responsibility, so that

unnecessary and confusing duplication and fragmentation of service can be avoided.

Malleability in the nature of service was demonstrated by the Langdon and Brewster cases.

Miss Langdon, an unmarried mother of five children, was referred for 24-hour service when she required emergency hospitalization. Her sixth baby was expected in two weeks. The family received AFDC, and the referral was made through the Department of Welfare Homemaking Center. Our caseworker arranged for a homemaker to meet her at the home within an hour, and service began immediately. The children had only $2.00 when the mother was hurried to the hospital and were faced with an indefinite period without funds for food or other necessities. Our caseworker gave an immediate cash grant for the evening meal, and, shortly thereafter, the welfare worker arrived with additional cash and a check for the rent. The homemaker remained for two days and two nights at the end of which time the mother returned home as her labor pains had ceased and she felt well enough to assume her normal functions until her actual confinement later in the month. Service was terminated upon her return, since the homemaker had observed a closely knit, well-organized family group in which the 16-year-old daughter was highly capable and voluntarily assumed maternal responsibility during the mother's temporary incapacity.

The Brewster case is an example of a much more complex situation that demonstrates the value of the observational and evaluative aspects of homemaker service as an additional instrument in helping another agency evaluate and diagnose family problems. In this situation, service was requested primarily to make possible the mother's treatment in an outpatient medical and psychiatric clinic. Soon after service began, the homemaker and the caseworker observed that one of the children was also seriously in need of help.

Mrs. Brewster, a young mother with two children, Bobby, age 4, and Jean, age 20 months, sought the help of the "walk-in" psychiatric clinic in the hospital where she was also receiving dental care and treatment for a skin allergy. Her request for psychiatric help concerned her marital problem with her husband. Mrs. Brewster's own background was an unhappy one, with no father in the home and a mother who was mentally ill and was hospitalized during part of Mrs. Brewster's childhood. Homemaker service was requested so that the mother could keep her various clinic appointments.

On her first day in the home, the homemaker observed that both children slept until noon, and the mother was adamant that they not be roused as she feared that the homemaker would "have her hands full." On her second day with the family, the homemaker reported that she had been completely unable to control Bobby and, in her many years of experience, had never seen such a disturbed child. He was constantly in motion, broke everything he could reach that was breakable, cut the homemaker's arm with a glass, and had climbed halfway out the seventh-floor window before the homemaker could pull him back. When this was described to her, Mrs. Brewster declared that she had never witnessed this kind of behavior. Neighbors confided to the homemaker, however, that this was not at all unusual behavior for Bobby. With the caseworker's support, Mrs. Brewster was gradually able to overcome her resistance to acknowledging the problems she was having with her son. She discussed this with her psychiatrist, and Bobby was also referred for neurological and psychiatric evaluation. This was strongly supported by the school, in which he had been unable to remain for more than one week because of his hyperactive, destructive behavior.

Underlying Pathology

Frequently, a case that is originally referred to our Homemaker Service as a routine medical problem will actually have much more serious underlying pathology that requires the caseworker's most skilled diagnostic understanding and the homemaker's intensive support and supervision. Such was the case with the Howard family.

Mrs. Howard was referred to us by a research clinic that was interested in her physical complaint of muscular pain, tentatively diagnosed as rheumatoid arthritis. She also had a tumor on her leg, on which a biopsy had been done. She had just been discharged after a brief period of hospitalization, but her painful physical condition made it difficult for her to care for her home and her 2-year-old daughter, Diane. Homemaker service was requested for approximately one month pending the report of the biopsy and diagnosis of her physical problem and the limitations it would cause. Mrs. Howard was placed on medication by the

clinic and was also accustomed to calling a private doctor when the pain became so severe that she required sedation.

The caseworker's interviews with the mother revealed a family history filled with emotional upheaval and violence. Mrs. Howard was a highly intelligent woman who had received nurse's training in Europe and was familiar with the implications of her symptoms. She stated that she and her brother were born in Austria and that they had witnessed their mother being shot by the Nazis when the mother resisted turning her property over to the invaders. Eventually, Mrs. Howard was sent to Switzerland and then to Canada where she met and married Mr. Howard, who was devoted to her and admired her superior intelligence.

The mother was described by the caseworker as an emotional, volatile person with a childlike, dependent quality. The homemaker's reports revealed a serious problem in the relationship between Mrs. Howard and her 2-year-old child. She was accustomed to putting Diane in a playpen and neglecting her for hours. When the child would climb up on the side and fall out of the playpen, usually hitting her head, the mother would show no concern and would tell the homemaker it would not hurt the child because "she has no brains anyway." Although the little girl begged to be held and given affection, the mother was totally indifferent.

Soon after service began, Mrs. Howard reported that Diane had gone into a convulsion early one morning. This happened several times, but no one other than the mother ever witnessed the seizures. When the child was hospitalized briefly for neurological testing, Mrs. Howard told the caseworker that she would kill the child if she had a permanent disability. Upon her return from the hospital, the child developed an upper respiratory infection with high fever. Although aware of how sick she was, the mother urged the homemaker to take the child for a walk in the park on a bitterly cold day, and, on another occasion, the mother had to be prevented from putting the child into a tub of scalding hot water. Mr. Howard was much more affectionate with the child, but both parents were adamant in their refusal to consider foster family placement.

As service continued, Mrs. Howard's pain became more acute, and she called her private doctor constantly. She appeared at all times to be dazed and drugged and increasingly mentally disturbed. She expressed paranoid ideas regarding her medical care, and her dependency increased to the point of asking the homemaker to take her on her lap and cuddle her as if she were a baby. The caseworker passed these observations on to the clinic and expressed her increasing concern about the dangerous nature of Mrs. Howard's condition. Not infrequently, she would drop a lighted cigarette in her lap, and it was only the homemaker's constant attention that prevented a tragedy. Of equal concern was the mother's mounting hostility toward her child. Although the clinic acknowledged that Mrs. Howard had displayed bizarre symptoms when she was in the hospital, they had no facilities to evaluate her mental disturbance.

At this time, the situation was discussed with our consulting psychiatrist, who felt that Mrs. Howard was probably psychotic and that there was serious danger to the child in leaving her alone with the mother. Casework planning then took the direction of attempting to work with both parents toward placement for the child and of supporting Mr. Howard in his desire to obtain psychiatric help for his wife. Before this could be accomplished, however, Mrs. Howard twice tried to smother the child, and the homemaker had to forcibly remove the mother's hand from the child's mouth and nose. Although the mother denied that this was her intent, both she and her husband agreed that she ought to be hospitalized for observation.

In the event that the family had not sought help for Mrs. Howard, the Children's Aid Society would have had to take action to protect the child through court intervention.

Termination

It is the caseworker's responsibility to evaluate the family's ability to use homemaker service and to recommend termination of service when it is no longer needed or is not serving its purpose. Occasionally this may necessitate withdrawing service when it is being misused by a family, even though they may still want it and there may continue to be a valid medical reason for continued help. This has been done when there was evidence that homemaker service was perpetuating families who had so much pathology that children were being damaged by remaining in the home.

Concluding Comments

In the last few years, homemaker service throughout the country has burgeoned from a virtually undeveloped service to a recog-

nized and accepted means of keeping some individuals and families in their homes and preventing family breakdown. As yet, its potentialities are unlimited in scope and versatility.

The voluntary agency is in a position to venture more quickly into new areas of service than is the public agency, since it is less hampered by policies that cannot be readily altered. But this must be done with sound judgment, planning, and constant evaluation to ensure that it is not promoting dependency or supporting unhealthy and crippling family life and relationships. The practical, enabling, and educational help of the homemaker must be complemented by the observations, diagnostic understanding, and flexible treatment plan of the trained and skilled caseworker.

Homemaker service is a rehabilitative service that requires professional knowledge and supervision. The adaptability of homemaker service—the potential it has for extending and blending with the needs of the family—is limited only by the competence, creativity, and skill of those who are implementing it.

A Demonstration Homemaker Project

This project showed that using homemakers, sometimes on a 24-hour basis, prevented the placement of 142 out of 144 children in families referred for service. The homemakers provided education to parents in child caring and in household management.

BESSIE MAE JONES

Several years ago, the New Orleans Child Welfare Division of the Louisiana Department of Public Welfare became increasingly concerned about the growing numbers of children who were being removed from their homes because of emergencies. Subsequent evaluations in these placements consistently revealed that no true emergency existed but, rather, that the basic problems leading to placement were of long standing. In trying to curtail the emergencies, the agency had used a number of procedures without effect.

Then, the agency's Citizens Advisory Committee recommended a demonstration homemaker project. (The agency is fortunate in having an extremely knowledgeable, interested, and active citizens committee, who invest a great deal of their talents, time, and effort in our activities.) The recommendation was approved by the Commissioner of the State Department of Public Welfare, with the hope that the service would be extended to other areas of the state if the demonstration proved successful.

Outline of Plan

The primary purpose of the project was to enable children to remain in their own homes during periods of crisis when there were no relatives or friends to sustain the family. Using homemaker service, which we defined as "a social service—an integral part of a casework plan to help maintain children in their own homes and to strengthen family life," we felt we could thereby eliminate the trauma of separation, and reduce the anxiety of both the parents and the children. We also thought that, through the service, we could help families to work out their own problems and to develop improved methods of household management and child care.

The program was restricted to families who were in the basic program of the Division of Child Welfare—those with dependent and neglected children. Casework was used to determine the feasibility of the service and the goals to be pursued, and to evaluate its effectiveness. We expected that the success of the project would be contingent on two factors: our ability to locate and train competent homemakers, and the ability of the Department of Public Welfare to evolve flexible and adequate policies to provide essential maintenance promptly for families who lacked it.

Employment and Training of Homemakers

The recruitment, selection, and orientation of homemakers began in July 1961. Luckily, we found two homemakers who had previously been employed by the Family Service Society of New Orleans, a third who

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had once been employed by our agency before as a practical nurse for two severely handicapped children, and a fourth whom we recruited from our foster parent applicants. Other homemakers were also interviewed and evaluated, and, currently, we have a waiting list of six. Of these, two were referred by the homemakers in use, two had been employed in the nursery of a receiving care institution that has now been closed, and two were referred by people familiar with the project.

The orientation and training consisted of six two-hour sessions that the homemakers attended prior to assignment to families, and supplementary meetings were held as necessary through March 1962. The subject matter covered in the meetings comprised (1) agency structure, philosophy, and purpose; (2) policies and procedures; (3) health precautions and first aid; (4) general problems found in children in families served by the Division of Child Welfare; and (5) interpretation of families with multiple problems. Various staff members and persons from other community agencies, such as the Red Cross, the Health Department, etc., presented the material through lectures, discussions, and films. Individual conferences supplemented the group orientation program throughout the training period.

Ongoing individual supervision of the homemakers was given in half-hour weekly conferences, and the homemakers were encouraged to telephone the caseworker if any emergency developed. If indicated, time for extra conferences was made available. The individual supervision proved to be an important part of the program because it enabled the caseworker to offer help with individual problems that could not be dealt with appropriately in group discussion.

Placement in Families

The placement of homemakers began in November 1961. From that date until October 1962, services were given to 144 children in 29 families, 14 white and 15 Negro. In about 50 percent of the cases, an emergency precipitated the request, and, in a few cases, homemaker service was offered until the family could be approved for housekeeping service through a public assistance grant.

The project was set up to operate on a 24-hour basis, and every attempt was made to place the homemaker as quickly as possible, and, in some instances, a homemaker was placed within hours of the referral. So far, though, homemakers have not been used in response to emergency placement requests made by the Juvenile Police during the night.

A statistical breakdown of the reasons for placement indicates that:

- Two placements were educational. These families were known to have multiple problems, the main ones handled by the homemakers being irregular school attendance, inadequate child care, disorganized home management, and inadequate housekeeping. In order that other families referred for a similar purpose might also receive service, a homemaker worked with this kind of family for no more than three months.
- In 20 cases, the goal was to provide child care during the absence of the mother for medical reasons or to provide help to an incapacitated parent. Of the 20 mothers referred for medical reasons, 10 had to undergo surgery; three were having babies; two were suffering from tuberculosis; one each from cancer and pneumonitis, and three from mental illness.
- In four cases, the placement was effected to help us evaluate the parents' capacities to provide continued care for their children with our help.

Accomplishments

By using homemakers in these families, the separation of 142 out of 144 children was prevented, and the 2 children who were placed in foster care had had time to be prepared for the change. In the families in which the children were not placed, family ties were maintained, children attended school regularly, and family patterns of living were improved. In one family, the standards of care improved to the extent that two younger children who had been placed could return home. Since none of the families wanted placement of their children, it was important to them that the fear that this would happen be alleviated. For the sick

mothers, their recovery was probably aided by the knowledge that their families were being cared for at home.

More generally, the children's school attendance showed marked improvement, the families' organization of household management improved, housekeeping standards were improved, and children were helped to assume chores consistent with their age level. In a number of families, the homemaker had the secondary function of teaching homemaker skills.

Problems

As would happen in any program of this kind, various problems were encountered, which we had to handle as we progressed and gained experience. In early referrals, lack of medical information was a serious problem. We found that we had to have this information in order to determine goals and to assess the incapacitated parent's capacity to take on responsibilities. We found also that resistance to change, particularly concerning eating and cleanliness, was an area of difficulty.

There was an obstacle in the homemakers' need to see progress and change occur rapidly. It was difficult for these middle-class people to learn to tolerate and understand the low standards they found in most of these families. When progress was minimal and exceedingly slow, and when there were periods of regression, homemakers became frustrated. In addition, the homemakers had difficulty in focusing service in accordance with the casework plan; they sometimes wanted to select their own priorities. At times, a homemaker would compete with the mother and her role in the household, or would become involved with the family's personal problems rather than refer them to the caseworker.

When the program was initiated, the responsibility was divided between two caseworkers: one gave services to the family, and another supervised the homemaker. It was found, however, that the worker supervising the homemakers was spending an inappropriate amount of time in conference. This and other problems that were subsequently encountered were alleviated by having one caseworker carry the total service. Even though this was the better plan for us, it may not be practical to use one worker in both capacities in a large program.

In retrospect, it seems that some of the problems we ran into might have been mitigated if, during orientation and training, we had focused less on academic discussions and more on the concrete problems that the homemaker would be called upon to handle. For instance, we now believe that we should have anticipated some of the specific reactions the homemakers might have because of the conflict of standards, and that we should have offered some suggestions about how to handle these. We should have anticipated their identification with the family and the discomfort they would feel when they told the caseworker facts they had obtained about the family.

Comparative Costs

The comparative costs of homemaker service and of care of children away from their own home is also interesting: the homemaker service was less expensive. For example, in a family with eight children, in which the homemaker gave 72 hours of service in 14 days, the homemaker's salary was $86.40 and the ADC payments were $65.00; this makes a combined total cost of $151.40. Foster family care would have cost $265.44 and institutional care $432.32. In another case, homemaker service was given to a family with 12 children for 363 hours in 85 days. The homemaker's salary was $435.60 and the ADC payments were $388.60—a total of $824.20. Foster family care would have cost $2417.40, and care in an institution, $3937.20. Examination of the total cost for the time from November 1961 through October 1962 shows that the total paid in salary to the homemakers was $6726.60 and that the total cash outlay, including ADC payments to 14 families, was $10,339.30. Foster family care for these children would have cost $21,119.07—which is $10,779.77 more than the homemaker program; and institution care would have cost $34,396.46—which is $24,057.16 more than the program.

Results of the Program

During the past 15 years, public welfare

agencies have increasingly been called upon to give services to families variously described as "multi-problem," "hard-core," and "hard-to-reach." In the placement field, we recognize that foster family placement for all of these children is not necessarily the answer and that for some of the children it is certainly *not* the solution. But many of the children now being referred for services come from homes in which the standards of care do not even meet what we describe as minimum for decency and health. Removal of the children, however, does not motivate parents who have themselves known no existence other than emotional deprivation, neglect, and poverty.

A large percentage of the families known to our agency are limited in many areas of their total functioning. They are often suspicious of others, impulsive, use poor judgment, and are easily frustrated. In the project, although a specific crisis such as illness precipitated most of the requests for homemakers, in the course of the service we found many families with real economic need, social isolation, inadequate care of children, etc. Through the homemaker service, then, we were able to assess family strengths and weaknesses more carefully. In each case, the caseworker discussed with the parents the goals that both the agency and the parents hoped to accomplish by using the homemaker. The agency tried to define the expectations for change and to preserve family patterns that were of value and had importance.

The purpose of the service was, of course, to maintain and strengthen the families, but offering it reaffirmed our conviction that education of the parents is an important part of our casework job. The agency's aim was to improve the overall functioning of these families and to help them modify their behavior and attitudes. Since their basic problems were usually not neurotic in origin, the concrete help of providing a homemaker was an important service. It conveyed to them the agency's acceptance and concern in a way they could understand, and the tangible help it afforded with the daily problems of grocery shopping, cooking, and cleaning was perhaps what they needed most.

Services have been continued in 4 of the 27 families in which homemakers have been placed, because the problems in these families are such that continued casework help and support are necessary to consolidate the original gains. There have been no second referrals on any of the closed cases, and we assume and hope that the improvement they showed has carried over.

The Citizens Advisory Committee has now unanimously recommended to our State Commissioner of Public Welfare that a homemaker service be included as a continuing service in our program and that the service be expanded as the need arises in New Orleans and in other areas of the state.

Administrative Aspects of 24-Hour Homemaker Service

This article discusses financing, recruitment, and employment of personnel; personnel practices; and other areas of operation of an around-the-clock social service.

ROSE BRODSKY

In August 1958, the Children's Aid Society, in cooperation with the New York City Department of Welfare, did a study of 229 children returned to their own homes from temporary care. The findings were that 143 of these children could have remained in their own homes—if homemaker service had been offered on a more flexible basis.[1]

The primary motivation for the establishment of our agency (The Association for Homemaker Service) stemmed from the deep concern of the Federation of Protestant Welfare Agencies and its affiliated child welfare agencies about the child care crisis in New York City. There was particular reaction to the frightful overcrowding in the city's shelters for children.

Within the confines of this paper, I shall concentrate on the administrative aspects of the 24-hour homemaker service. My hope is that our experience might serve as a guide to other agencies, which may adapt some of the principles to their own settings and purposes.[2]

Our agency was incorporated as an independent, voluntary nonprofit family-centered social agency. Homemaker service was to be its sole function. Initially, the board of directors defined its policy in terms of a nonsectarian child-centered service to be offered on a citywide basis. Service was to be given only to accomplish health and welfare goals through the team approach of caseworker and homemaker, both staff members. Our child care service started in December 1960. A few months later, with the offer of a special grant, our service was extended to the elderly and chronically ill. Our staff is now composed of 110 homemakers.

From the outset, our board was determined to offer service on a flexible basis. As a newly established agency, we thought we had a wonderful opportunity to avoid the trappings of tradition. Aside from concern with stemming the flood of children being placed in the shelters, we wanted (within staff and budgetary realities) to evolve our services in keeping with expressed community needs.

We resolved to depart from the usual daytime service. Our service was to be offered on a seven-day, around-the-clock basis part-time or full-time. Thus, we could serve those families in which a single parent was hospitalized or in which a father—alone with children—had atypical working hours.

Although a number of other agencies in our city offer 24-hour homemaker service, the development of this service throughout the nation has lagged behind other services. Many communities have been concerned about costs, although alternatives, such as

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[1] Children's Aid Society, New York City, "Nine- to Twenty-four Hour Homemaker Service Project," CHILD WELFARE, XLI (1962), 99.

[2] When we started our program, the Children's Aid Society was just completing a special foundation-sponsored project on 24-hour homemaker service. We were fortunate, indeed, in being able to draw upon their experience with this limited project in depth and to apply and adapt their findings to our situation when it seemed that we might well be embarking on a sizable program of 24-hour service.

institution care, might well be more expensive from a humane standpoint as well as financially. There is also concern about the unusual demands on total staff—administrative, casework, and homemaker—that raises questions about recruiting and retaining competent staff.

As is true of many child welfare services in New York City, our agency was able to undertake this 24-hour homemaker program only because the public agency met the bulk of the cost and our voluntary agency supplemented the difference. There is question as to whether any voluntary agency acting alone could meet the full cost of a sizable program in this service. Certainly our *new* agency alone could not have supported such a program. We view this experience as one of partnership between the public and the voluntary agencies.

The New York City Department of Welfare has its own homemaker staff with civil service status for child care as well as care for the elderly. Its staff works days only, however. When atypical or 24-hour service is needed for a family with children or when it does not have a daytime homemaker available, the Department can purchase homemaker service from the voluntary agencies on an hourly basis.

Our Department of Welfare has shown real vision and a progressive approach in accepting responsibility to offer 24-hour homemaker service for children to prevent temporary placement. For budgetary reasons, however, the Department of Welfare can generally approve this service only when three or more children in a family are involved. The service is available not only to families that are receiving financial assistance, but also to those that are self-supporting on marginal incomes. The service is generally temporary, either for a realizable goal or for an interim period while other plans are being worked out. Cases range from two days to several months.

Our experience with 24-hour service has been confined to child care,[3] and we have given this service only to those cases in which there was reimbursement by the public agency. It is our hope, however, that in the future it may be possible for us to extend the 24-hour service on a sliding scale of fees to those families not eligible for public agency supplementation.

Working Within the Home

Since we serve families living on public assistance and on marginal incomes, we find that many are living in very deteriorated circumstances with a variety of health, social, and psychological problems. In deciding to give 24-hour homemaker service, we need to evaluate the home within its own context and meaning to the family itself. We cannot impose our own standards. (Yet we have to find the point at which it would seem more feasible to consider placement of children rather than homemaker service.) Wherever possible, we help a family in crisis to remain at home in familiar surroundings with one another. Where neither the father nor the mother is in the home, the brothers and sisters at least have one another. No matter how deteriorated a dwelling is, it is home to these children.

As is well known, our city has a serious problem in slum housing. But this blocks the use of homemaker service only in those most extreme situations that clearly constitute a serious hazard to the children. Our homemakers, responding to the children's need to remain together at home, often work under conditions that are truly difficult. It often requires courage, imagination, and a real feeling for people on the part of the homemaker to sustain her under such trying circumstances. At the same time, our agency, in cooperation with the Department of Welfare, makes every effort to help raise the family's standard of living. This has been done even to the point of refurnishing or rehousing a household.

When a homemaker has to be in the home around the clock, we need to ascertain that there is at least a bed and clean linens for her. Usually the Department of Welfare

[3] Twenty-four-hour homemaker service for the elderly is rarely offered. Since generally only one or two elderly persons constitute the family, the costs seem prohibitive. Yet, the alternatives need to be weighed. We are participating in a demonstration for the elderly undertaken by the Isabella Home for the Aged to offer services within a given neighborhood. Although the two agencies have been prepared to give 24-hour service, none has yet been requested.

worker, who is responsible for the family, and our caseworker meet together, sometimes with a homemaker present, in order to determine what is needed in the home so that a homemaker can keep the family and home going. For example, if there is no parent in the home, a medical release is needed so that a medical emergency can be met by the agency without having to wait for parental authorization.

Other Aspects of 24-Hour Service

Recruiting both professional and homemaker staff for 24-hour homemaker service poses special considerations. An agency offering a concrete service still has some problem competing for professional staff with agencies offering the seemingly more glamorous counseling and psychiatric services. But once we elicit some interest in our function, there are satisfactions in the tangible accomplishments that result from the direct impact of the homemaker's presence in the family. The subtle changes that take place in the family through the casework process that is an integral part of our agency's homemaker service, combined with concrete results, are so rewarding as to hold professional staff.

We have discovered that the 24-hour service is unusually demanding. Therefore, we have had to develop some structures to protect staff while meeting the unique demands of this service.

Originally, we began by having all caseworkers carry responsibility for new homemaker placements. Since we accept new referrals until 4:45 p.m., many emergency homemaker placements have to be made at night. These emergencies meant a continual disruption of the caseworkers' personal and family lives. One dramatic instance occurred when a young married caseworker—who had a houseful of dinner guests for Thanksgiving Eve—had to make an emergency homemaker placement that evening and did not arrive home until 10 p.m. The couple might have accepted this if they knew that it would not happen again and again.

Thus, we were finally moved to setting up a rotating system for these after-hours emergency homemaker placements. Each caseworker is given her choice of evening, Monday through Thursday, and is assigned an evening once in three weeks. Friday, the evening nobody would choose, rotates so that a worker is tied down on that evening only once every few months. Given a late emergency, the coverage worker makes the homemaker placement unless the homemaker's own caseworker chooses to do her own; she also holds herself in readiness to help with these placements during the day should any caseworker happen to have two homemaker placements in one day. If there is no emergency, the coverage worker does not have to work an evening until her next regularly scheduled assignment.

Because it has become dangerous in many parts of our city for a woman to travel alone late at night, we have hesitated to ask a homemaker to go out alone and unprotected to a new placement during the night. So far we have not worked this out. Usually the children can be left with a neighbor or in the care of an older child until we come first thing in the morning. If not, the children might go to the shelter—knowing that it is only for overnight and that they will return home the next morning to find a homemaker there. Although we do not make new, unplanned after-hours homemaker placements, we find there are many unexpected emergencies in our present cases, especially in those with around-the-clock service.

It has become patently clearly that, in effect, our agency can never be closed. We now have an answering service to cover the after-office hours. We assign our supervisory and experienced casework staff after-hours work on a rotating weekly basis, and they keep in touch with the answering service. Thus, the community, the client, the caseworker, and the homemaker can have access to a professional person for guidance in an emergency. Each caseworker is assigned to eight homemakers working regularly on cases, as well as those relief homemakers who cover cases when the regular homemaker is absent.

Because unexpected emergencies involving ongoing cases cannot be controlled, caseworkers and supervisors receive calls early in the morning, late at night, and on weekends—in effect, our professional staff take their caseloads home with them. But work at home is almost always on the telephone;

unplanned in-person activity after hours is rare.

In spite of emergency situations, the above-mentioned devices help to assure each worker her free time after hours. Although the agency credits evening work as overtime with equal time off when it is mutually convenient for the worker and the agency, it seems obvious that the demands require a great depth of identification with the needs of the families as crises arise. We have lost some staff unable to become so involved. We have been gratified to find many who remain and derive great satisfaction from being part of this service.

On the whole, daytime homemaker service for both children and the elderly has been offered only in those situations in which the individual and the family can take responsibility for those times not covered by either a full- or part-time homemaker. These situations inherently carry active involvement by one or more responsible family members. Thus, when a mother is in the hospital, there may be contact with her though she is not physically in the home. Even though the father is at work, generally there can be some contact between him and the homemaker at the beginning or end of the day, and because he is in the home part of the time, he can discuss the service with the caseworker in terms of his family's needs. In such cases, the homemaker serves as assistant to the parents; she must be sensitive to her role and careful never to usurp the parents' place in the family.

The roles of the agency, the caseworker, and the homemaker in the 24-hour homemaker service are much broader and all encompassing than in the daytime service, where there is always a family member who carries the major responsibility for planning. (I should say, however, that it would be most unusual to use even 24-hour homemaker service where neither a parent nor a responsible relative was somewhere in the picture.) In most instances, 24-hour service has been used when a mother was hospitalized and there was no father in the family, or the father's hours were so atypical as to require around-the-clock service. In some cases, both parents were hospitalized. In others, the mother was deceased and the father's hours were irregular; or the mother was in the home, but gravely ill, and the father not available to help during the night. These around-the-clock cases sometimes start on a daytime basis, but become 24-hour cases when the mother is in the hospital and during her early convalescence at home, and then taper off to daytime and even part-time service until termination.

Role of the Homemaker

A unique aspect of around-the-clock service is that the homemaker often has to function in a dual parental role—as both mother and father to a family of children who are strangers to her.

Where we have a parent without a partner, there is a natural tendency for the lone parent, mother or father, to lean heavily on an older child to share in parental responsibility; occasionally, this is at the expense of some of the child's rights to fulfill his own needs. The caseworker and the homemaker must be sensitive to this. They must try not to threaten such a child's role, but, at the same time, they need to introduce a shift in the balance so that such a child might be freed from excessive responsibility without a sense of loss or guilt. Such a change would also have its impact on the other children as well as on the parent.

Entrusting the care of any family to a homemaker is always a serious responsibility. Basically many of the qualities needed in homemakers are comparable to, though not necessarily identical with, those we seek in professional staff. A homemaker needs to be warmly responsive, sensitive, imaginative, flexible, mature, and tolerant of the rights of people to their own way of life. One wonders whether and where we can find such paragons. Actually, homemakers do have most of these qualities to a greater or lesser degree. Recruiting competent homemakers has been no problem. They do, however, need training and supervision to supplement their natural talents and the experience they bring.

Matching the Homemaker to the Case

Twenty-four-hour service requires a dual approach in terms of planning complete homemaker coverage. No homemaker could

survive working around-the-clock and caring for large families of children all by herself. When a case lasts more than five or six days, we have to think in terms of two homemakers—the regular homemaker and a relief homemaker. Generally, when a homemaker has been placed with a family on the first or second day of the week, we plan for her to have the weekend off. A second homemaker is then placed for the weekend. But, if the first homemaker was placed in the middle of the week or later, we feel that psychologically it would be too disruptive for the children to have a change in homemaker that soon. We would then expect the homemaker to see the family through to the following weekend.

In addition to the two homemakers, occasionally we have also had to plan on some part-time household assistance, for example, when a homemaker was alone with a large family of children (at times as many as 13, 4 of whom were still in diapers). The homemaker might be so tied down that she would be unable to get out to do necessary marketing or have the laundry done.

In placing a homemaker, the professional staff make an effort to match the homemaker to the needs of the family within the limits of reality factors, such as homemaker availability and travel time. In 24-hour service, we have the dual challenge of matching the homemaker to the family and of dovetailing the personality of the regular homemaker with that of the relief homemaker. It requires considerable supervisory and casework skill to coordinate the work of two homemakers within the scope of around-the-clock service. Obviously, if we want to have an integrated (not a splintered) service, it would not do to have one permissive homemaker along with a second whose approach was authoritative. Children who are already in a distressing, disturbed, or disrupted household need a unified approach from the agency.

The caseworker also needs to make sure that each of the two homemakers carries her appropriate share of the tasks, although there would naturally be a real difference in the tasks: during the week some of the children might be in school, whereas over the weekend the relief homemaker would have to plan for all the children on a full-day basis.

Salary

In recruiting homemakers for our 24-hour service, we have two groups. The homemakers who carry the basic responsibility for the family are regular staff members. Their salary is guaranteed for eight hours a day, with fringe benefits, and they are paid for each additional hour worked on a given day, up to a maximum of 14 hours for a 24-hour period. Many homemakers who undertake this 24-hour service respond not only to playing a significant role in preventing shelter care for children, but also to the possibility of increasing their earnings. Yet, realistically, we have found that we cannot guarantee a base pay beyond the eight-hour day. The 24-hour homemaker has to accept a work schedule on a flexible basis in keeping with the needs of the family, but she can bank only on the guaranteed salary. We are not, however, unrelated to the homemaker's financial needs. Should a 24-hour case turn into a daytime case of long duration, we would work out an appropriate change to a daytime homemaker and release the first homemaker for another 24-hour case.

Our relief homemakers in our total service work on an hourly rate, or what we term "on call." We have also developed a core of relief homemakers in our 24-hour service who receive special training as a group as well as individual supervision by the caseworker. Toward the end of the week they make regular visits to the agency to find out about special assignments. We cannot guarantee work to this group, but because we give them priority, they are fairly steadily employed each weekend from Friday evening to Monday morning. In addition to the 24-hour weekend work, we use these homemakers for other emergency coverage during the week if they are available.

We have found that it is this group of relief homemakers who become our primary source for recruitment when we are ready to employ 24-hour homemakers with a guaranteed salary. When such a homemaker is finally regularly employed, we credit her for past consistent employment with us, making her tenure retroactive and giving recognition to her experience and contribution to our service. (I might add that our best initial source of homemaker referrals is our exist-

ing staff, who have a good idea of what this job entails.)

Some of our homemakers had wanted to work seven days a week because of the income. Although at first we yielded to this, out of our desire for continuity of service as well as identification with the homemaker's possible financial problem, we soon discovered that this was not a good personnel practice: often the homemaker collapsed on the job and then had to use paid sick leave. Thus, the service to the family was disrupted, and the professional staff was under pressure to work out emergency coverage. All of this could have been avoided if we had protected the homemaker from an excessively taxing work schedule. We now allow weekend work to a regular staff member or an on-call worker *only* if she has not worked the entire week.

We are still amazed to find that we are able to recruit as many 24-hour homemakers as we have need, both for our regular staff and the relief staff. There has been turnover, but this is lessening as we become more experienced.

The Homemaker's Family

One of the things about which we have become much clearer is the necessity for making sure that an employment plan meets not only the needs of the agency, but those of the homemaker as well. Unless it is right and valid for her and her family, it cannot be right for the agency.

Since 24-hour service entails sleeping away from home for several consecutive nights at a time, we must make certain that the work does not jeopardize the life of the homemaker's family. Adequate plans must made for the care of her own children (though many of the homemakers are widows with grown children). Where young children are involved, close relatives sometimes share the living arrangements and assume responsibility for the care of the children, not only in the physical sense, but as adequate partial-parent substitutes. As a social agency, we certainly cannot provide care for one set of children at the expense of another, nor can we jeopardize a marital relationship. We always explore the role of the homemaker's husband and his feelings about a projected work plan for his wife that would keep her away from home overnight. In many instances, the husband's work pattern dovetails with that of his wife or is atypical enough so that her working does not disrupt the family's existing pattern of life.

Concluding Comments

As we thing back over our first three years of experience with this 24-hour service, we feel that we have come a long way in coping with some of the problems inherent in the service. We began with trepidation, not knowing how the service would evolve. Although we have learned a good deal out of our struggle and experience in facing the daily tasks, we know we still have much to learn.

It is only through listening with a third ear to the families we serve, as well as through the close relationships among the staff—administrative, professional, homemaker, and clerical—that we have been able to move forward and begin to meet the challenge of this most essential service, a service that helps to prevent unnecessary uprooting of children in crisis and helps to keep families intact.

RECEIVED APRIL 6, 1965

Emergency Parent—A Protective Service to Children in Crisis

NORMAN W. PAGET

The Children's Aid and Society for Prevention of Cruelty to Children has the responsibility of providing protective services for children under 16 years of age in Erie County, New York. The agency is given the legal authority under the statutes of the state of New York to investigate child-neglect complaints. During any year, a variety of complaints are received by the Child Protection Department, which operates a 24-hour service, 365 days a year. Many complaints are received at night, on weekends, and on holidays. A large number of these complaints involve crisis situations in which young children are left alone without adult supervision or even responsible teenage babysitters. The caseworker investigating such complaints in the past would try to find the parents, relatives, or even an adult known to the family to care for the children until the parents were found. Failing this, the worker would remove the children and place them in a foster home. Removal of children from familiar surroundings was often the only alternative available to the caseworker to protect the children.

Origins of the Program

The supervisor of our After-Hour Emergency Casework Service Program brought the problem of the number of emergency placements being made of such children to the attention of the Executive Director. The supervisor made the suggestion that the large number of children being removed from their own homes on an emergency basis warranted some kind of babysitting service to keep children in their own homes. In these situations the parents often turned up in a few hours, or they were located the next day, and the children who had been placed in foster care were returned to them. The caseworkers often remarked on the traumatic experience undergone by children who were removed in the middle of the night by strangers. A small staff committee was formed to consider this problem along with the "babysitter" suggestion.

The staff committee recommended that a demonstration research project be considered to test the use of an "Emergency Parent" as a means of preventing sudden foster home placements of children who were left alone. The staff committee recognized that, even in the event that foster home placement of children was the most appropriate plan, it was important to delay placement to allow time for a child to be prepared for the change, and, in some instances, to allow time for finding a suitable foster home.

The emergency parent service was considered as a kind of child protection program. The emergency parent could be placed in a home by a protective caseworker at any time during the day or night when the caseworker was of the opinion that the children were in need of responsible adult care. Although the agency has an emergency homemaker service available, the committee recognized the need for a totally different approach. Homemakers are usually placed in homes in which there is a responsible family member with whom to plan, and they are usually assigned to a family during a crisis

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involving the mother. Homemakers are not usually expected to go into homes to be exposed to potentially dangerous placements when there is no information about the parents' whereabouts. Men as well as women were considered as possible emergency parents, with husband and wife teams being given priority. The committee saw the need for the recruitment of men as well as women, since there was a possible danger inherent in each situation. It was considered necessary for an emergency kit containing blankets, food, and cooking equipment to be available for use in homes, since experience showed these items were often not to be found in homes in which children were left alone.

Attorneys on the board of directors were consulted about the legal problems involved in the placement of a staff member in a home without the family's permission. Since the agency is charged with the protection of children under the laws, the attorneys saw no legal reason why the project should not be attempted. The staff felt most definitely that, since they have the responsibility of removing children, society gives them consent to keep these children in their own homes through the use of emergency parents.

After the agency had made a number of unsuccessful attempts to locate funds for the pilot project, the Josephine Goodyear Foundation granted funds for a two-year experiment. The project began in January 1966.

Although recruitment of emergency parents was expected to be one of the primary problems, recruitment has been relatively easy. The chief technique has been advertising in suburban newspapers. A postman and his wife, a social agency employee and his wife, a truck driver, a management trainee, a caseworker of a social agency, and four housewives have served as emergency parents. In 11 months of operation the turnover of emergency parents has been considerable, but not because of the potential dangers involved in going into problem homes, strange neighborhoods, or the calls in the middle of the night. The turnover has not been for job-related reasons.

An emergency parent is on duty for one week at a time on an on-call basis. A small fee of 15 dollars per week is paid for the inconvenience of having to remain near a telephone and of possibly being called at any time. When the emergency parent is called for duty, he is paid an hourly rate plus milcage. In the event that a man who works days is on duty, there is another emergency parent available for daytime emergencies. In this way the service has been available on a 24-hour basis.

Operation of the Program

The plan for emergency parent service has worked out in practice much as anticipated. When a complaint is received about children being left alone, the caseworker investigates and tries to locate the parent or some responsible adult known to the family, or makes a decision about the use of an emergency parent. When called, the emergency parent drives to the home in his or her car (equipped with an emergency kit) and takes over the care of the children. The emergency parents have made various suggestions, based on their experience, as to what items the kit should contain. In addition to the blankets, food, and cooking equipment, a rechargeable flashlight, first-aid kit, light bulbs, candy, disposable diapers, insect spray and an aluminum folding cot have been added. The board committtee chairman, when consulted about means to protect emergency parents from possible physical harm, suggested that the emergency kit contain an aerosol spray that might be used to defend against an attacker. The spray was added, but fortunately it has not been needed.

The emergency parents have been carefully instructed individually and at group meetings regarding their role. Case situations have been discussed, and the original thinking concerning the various tasks to be performed has been clarified. Emergency parents are instructed that their primary function is to protect the children in their own homes. This protection service involves the normal supervisory functions of a parent, and may include preparing food, bathing and dressing the children, and settling disputes between children. They are urged to be alert for possible home accidents and fires. Emergency parents are instructed that if the natural father or mother returns to the home, the emergency parent is to identify himself as a staff member of the agency, show his identification card, and briefly explain his presence

and how he became involved in the situation. The emergency parent explains that he is not interested in why the parent was not in the home; he is concerned only about the protection of the children while the parent was absent. The parent is told that a caseworker will be discussing the whole situation with the parents as soon as feasible. The emergency parent leaves the home if the parent is able to assume his normal functions; otherwise he stays in the home until relieved or until he receives other instructions from the caseworker. At the end of each assignment the emergency parent makes a brief written report.

Reactions of the Parents

In 32 cases the typical reaction of the parents to the emergency parent was one of surprise, followed by hostility or resentment. In a few cases the parents expressed their appreciation for the service. Some parents asked, "Are you from the police?" and accepted without question the emergency parent's statement about being a staff member of the Society. No parent has challenged the right of the agency to provide this type of child protection service.

From the beginning of the experiment, the board and staff have been concerned about the protection of the emergency parents from physical harm by irate parents—perhaps under the influence of alcohol—returning to find an unknown person in their home. To lessen the dangers of physical harm the emergency parent is given all of the information possible about the family prior to the assignment. This includes the referral source, whether there are one or two parents, the names and ages of the children, and any information that might indicate the length of the assignment and the possible whereabouts of the parent. In the event that the family home does not have a telephone (as is true in the majority of cases) the emergency parent is instructed to use the staff car, which is available at an all-night garage and is equipped with a radio-telephone. This means of communication enables the emergency parent to call the police if there is any danger, to call the caseworker for instructions, to arrange for relief if necessary, to report to the caseworker when the parents return, or to make other necessary calls.

Emergency parents have been used in 32 cases in which children were left alone and the parents could not be readily located. A total of 128 children have been protected through this type of service. They have accepted the emergency parent without any marked reactions except in one case in which older children threatened to harm the emergency parent. The following case illustrations show how the emergency parents have been used.

Case Illustrations in Which the Parents Returned and No Placement Was Made

Case No. 1

At 6:30 in the evening the emergency parent was placed in a home in which a child of 4 months had been left alone for five hours in a locked apartment. A neighbor had called the police, and the police called the agency. The caseworker and the police broke into the apartment and found the baby in need of care. An emergency parent was called, who changed and fed the baby. He stayed a total of six hours in the home, after which time the parents returned. The parents had been "out on the town," but were capable of assuming their parental function. The emergency parent explained his only service was to provide care for the child, and although the parents were extremely annoyed at someone being in their home, they recognized, and verbalized their appreciation for, the service. The caseworker visited them the following day and offered continuing casework service regarding child care.

Case No. 2

A teenage babysitter, who had been placed in charge of a 6-month old baby and a child age 2½, telephoned at 8 p.m. to say that the baby was sick and she was frightened at what might happen. This was her first job with the family, and, although she tried to reach the parents, she could not locate them. The parents were not due back until approximately 2 a.m. When the caseworker talked with the babysitter, he recognized that she was extremely upset and he decided to make a home visit. When he saw the baby, he decided that a medical diagnosis was needed. He learned that the babysitter had not telephoned a person whose name was provided by the famliy for contact in the

event of an emergency. The caseworker called, but the "friend" did not know where the parents were and did not know the name of the family doctor, nor did she know that she was supposed to act in emergencies.

The caseworker took the child to the hospital, where a physician found that the child did not need to be hospitalized but should be given continuing medical attention. When the caseworker returned to the home, the babysitter had gone. An emergency parent was assigned, and after five hours the parents returned. The parents did not recognize that the emergency parent was not the babysitter they had employed. When the parents learned of what had happened, they were extremely angry. The parents did not accept the offer of casework services when the caseworker tried to discuss the situation with them the following day. Eventually an attorney was involved and acted on behalf of the parents. The parents continued to refuse any offer of help by the agency, but did follow through on the suggestion that the child receive medical attention.

This case illustrates the use of an emergency parent when inadequate child care arrangements break down.

Case No. 3

A neighbor called regarding three children left alone by their parent. The oldest child was a boy of 10, who appeared mentally retarded. The neighbor explained that the family was new in the neighborhood.

An emergency parent was placed in the home, and after four hours the parents returned from a bingo game. The parents did not show any emotion about the fact that a staff member of the Children's Aid Society was in their home. They said that the boy was capable of caring for the younger children.

The emergency parent explained that a caseworker would talk with them about the problem. The caseworker suggested that the boy was not able to carry the responsibility for two small children, and the parents accepted this. Additional contacts were made with the parents, who seemed to have understood the need for better care, and the case was closed.

Case Illustrations in Which Placement Was Delayed

Case No. 1

The police called the agency saying they had heard from a neighbor that four children, the oldest of whom was 9 years of age, were in a home alone. When the caseworker investigated he found that an unvented gas stove was filling the home with fumes. All of the children were asleep; one youngster was asleep at the very top of the stairs. The caseworker had to go into the home by a window. There was no doubt that a tragedy had been averted. An emergency parent was placed in the home and the sleeping children guarded from any possible accident. The emergency parent remained all night and part of the morning, when the single parent returned. She asked, "Are you from the police?" A decision was made by the caseworker to request a temporary order from the court giving the agency the right to remove the children because of neglect. Although the situation was not known to the agency prior to the call, there was a long history of chronic neglect. The court eventually declared that the children were neglected. The use of an emergency parent prevented the sudden removal of the children under very adverse conditions. Although the children were eventually removed, the placement was delayed while a foster home was selected, and the mother was able to participate in the placement process.

Case No. 2

On Sunday afternoon a neighbor complained that eight children, ages 12 to 1½, were left alone. The father had deserted some months previously, and now the mother had "just walked off." The caseworker visited the home and tried to locate the mother, without success. There was no clue as to where she had gone. The oldest child had set out to find relatives ten miles away. A husband-and-wife team of emergency parents was called into the home to look after the children. The children were fed from supplies in the emergency kit, since there was no food. The husband-and-wife team stayed on during the night and were relieved by another emergency parent in the morning. On Monday the caseworker learned that the mother had voluntarily had herself admitted to a psychiatric ward. The caseworker also learned that the family was on public assistance. She was able through the welfare department to locate an aged relative who accepted the responsibility of caring temporarily for the children. The family court found that the children needed proper guardianship, and eventually they were placed.

Concluding Comments

The use of an emergency parent service

has completely eliminated night-time emergency placements involving children left alone in their homes. In the past, 40 to 50 children every year were placed on an emergency basis after having been left alone. Not one child has been placed on this basis since the emergency parent program began. The emergency parent program has provided the protection caseworker with an additional service to keep the family unit intact. In the event that the most appropriate plan for the child is removal from the home, the emergency parent service allows time for preparation and provides the caseworker with additional information about the family that is useful in the placement process.

The direct cost of providing emergency parent services depends upon how often emergency parents are used. In the first year of operation the cost was approximately $2000 per year. This figure includes the weekly fee to the emergency parent, the supervisory costs, social security payments, transportation, car, telephone, and incidental expenses.

In our experience over an 11-month period, the emergency parent service has proved to be an essential part of the agency's protective services to children. We believe that this type of service should be available, because it keeps children safely in their own homes or delays foster care placement so that a more orderly, thoughtful placement process is possible. In this respect the service may be viewed as a significant mental health resource that reduces the trauma of children being left alone, or of being suddenly removed from familiar surroundings. The emergency parent service complements and supports the other child protective services, which now include round-the-clock casework services, emergency homemaker service, emergency foster care, a demonstration casework project on child abuse, and parent education services.

RECEIVED NOVEMBER 23, 1966

VT 008 092
Unemployed Out-of-School Youth Survey.

Cleveland Public Schools, Ohio. Bureau of Educational Research
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Dec66 46p.

*URBAN YOUTH; *OUT OF SCHOOL YOUTH; *UNEMPLOYED; *COMMUNITY SURVEYS; *YOUNG ADULTS; *INDIVIDUAL CHARACTERISTICS; EDUCATIONAL BACKGROUND; WORK ATTITUDES; WORK EXPERIENCE; JOB TRAINING
*CLEVELAND

This survey included the specific objectives of: (1) learning the extent of unemployment among out-of-school youth, 16 to 21 years of age; (2) formulating a description of unemployed youth in terms of level of education, duration of time out of school, attitude toward obtaining job training, duration of Cleveland residence, and past full-time employment; and (3) learning the extent of unemployment among persons 21 to 29 years of age. Over 20,000 separate households in 12 areas in which unemployment was thought to be most acute were contacted to obtain usable data on a sample of 2,157 youth, age 16 to 21 years and 1,431 individuals, age 21-29 years. Some findings are: (1) Approximately one out of two out-of-school youth is unemployed, (2) Two out of five of the individuals age 21-29 are unemployed, (3) Unemployment seems to be decreasing, and (4) Equal percentages of employed and unemployed had participated in job-training programs. (CH)

VT 008 092

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46p.

UNEMPLOYED OUT-OF-SCHOOL YOUTH SURVEY

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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INTRODUCTION

In the fall of 1961, the Cleveland Board of Education conducted a survey of unemployed out-of-school youth in Cleveland's inner city. The findings of this survey were a major factor in alerting and convincing community leaders that the dimensions of joblessness among youth within our own community carried the "social dynamite" about which Dr. James Conant had warned the country during the previous year.

The five-year period since the 1961 survey was marked by an increase in general employment, in training provided through the schools, and in special manpower-development programs.

The assessment of the current status of youth employment and of the changes, if any, that have occurred during the 1961-1966 interim became an urgent need. In response to this need, the Cleveland Public Schools, in cooperation with the Occupational Planning Committee of the Welfare Federation, conducted the Unemployed Out-of-School Youth Survey in November, 1966.

The survey was concerned with the degree of unemployment among two age groups:

- Youth 16 to 21 years of age
- Individuals 21 to 29 years of age.

Twelve social planning areas, in which the unemployment problem was thought to be most acute, were selected as survey areas:

1. Central-East
2. Central
3. Central-West
4. Glenville
5. Goodrich
6. Hough
7. Kinsman
8. Mount Pleasant
9. Near West Side
10. North Broadway
11. Norwood
12. Tremont

One hundred and sixty students, enrolled in the Schools' Neighborhood Youth Corps program, did the actual door-to-door interviewing. The student interviewers were supervised by seven S.N.Y.C. coordinators and 25 teacher supervisors.

Over 20,000 separate households were contacted to obtain useable data on a sample of 2,157 youth age 16-21 years and 1,431 individuals age 21-29 years.

The survey committee was composed of representatives from community agencies and business firms and was chaired by Mr. Alva R. Dittrick, Deputy Superintendent, Cleveland Public Schools. The Greater Cleveland Associated Foundation provided a grant which made the survey possible.

Objectives of the Survey

The general objective of the survey was to obtain information about out-of-school, unemployed youth. The survey was not intended to be a study of school drop-outs.

The specific objectives of the survey were:

1. To determine the extent of unemployment among out-of-school youth, 16 to 21 years of age.

2. To formulate a description of the unemployed youth in terms of:

   a. Level of education

   b. Duration of time out of school

   c. Attitude toward obtaining job training

   d. Duration of Cleveland residence

   e. Past full-time employment

3. To determine the extent of unemployment among persons 21-29 years of age.

The data found in this report do not provide a solid base from which to make generalizations about the unemployed, out-of-school youth of the entire city of Cleveland. The data are appropriate only in so far as they are applied to the twelve social planning areas involved in the survey.

General Organization of the Survey

The procedures employed in organizing and conducting the survey are summarized in the Appendix.

SUMMARY OF SURVEY FINDINGS

1. Approximately one out of two (47%) of the out-of-school youth, age 16-21, is unemployed in the twelve areas surveyed.

2. In the four planning areas surveyed in 1961, the extent of unemployment has decreased from 63% (1961) to 50% (1966). Each of the four areas reflects less unemployment in 1966 than was evident in 1961.

3. The unemployment problem is most severe in the Central-East (65%), Hough (60%), and Central (58%) areas.

4. Three out of four (73%) of the unemployed are non-graduates.

5. Of the employed youth, one out of two (47%) is a high-school graduate.

6. Of the unemployed, approximately one out of two (55%) indicated that he or she had not held a full-time job.

7. Seven out of ten (69%) of the unemployed are 18-20 years of age.

8. Eight of ten (78%) of the unemployed expressed willingness to enter a job-training program.

9. Three out of four (77%) of the unemployed have lived in Cleveland for more than five years.

10. One out of four (23%) of the employed and an equal percentage (23%) of the unemployed had participated in job-training programs since leaving high school.

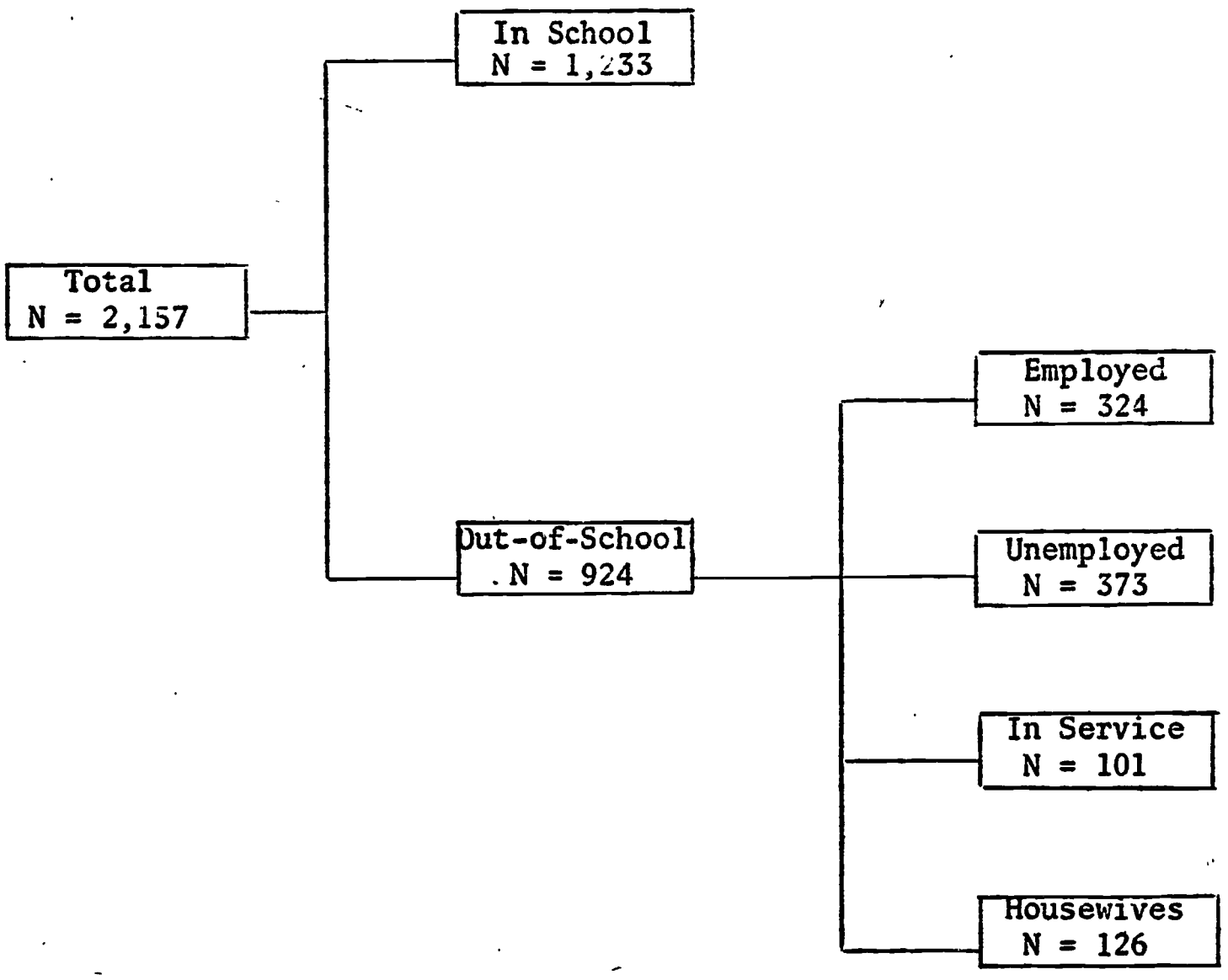
11. One out of two (54%) of the individuals who participated in job-training programs was unemployed. An equal percentage (54%) of those who had <u>not</u> participated in such programs was unemployed.

12. Two out of five (40%) of the individuals age 21-29 are unemployed.

PROFILE OF SAMPLE OF 2,157 YOUTH AGE 16 TO 21 YEARS IN TWELVE SOCIAL PLANNING AREAS OF CLEVELAND

Total Number of Youth Age 16 to 21 in Twelve Areas Surveyed:	28,247
Total Number of Youth Age 16 to 21 Represented in Sample:	2,157*

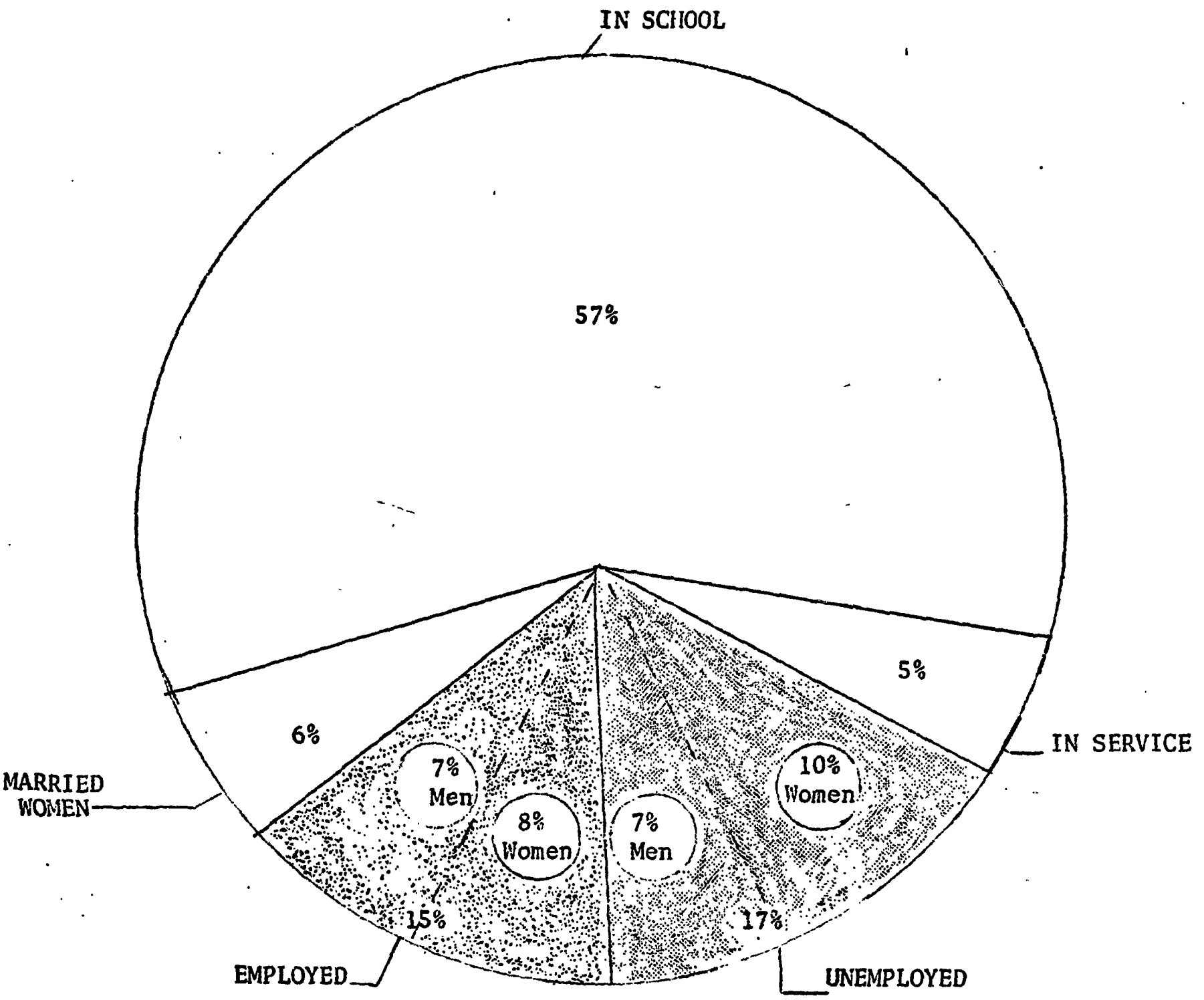
Distribution of Sample:



*Useable data were lacking for 100 of the total of 2,257 youth age 16-21 years. (2,257 - 100 = 2,157)

CHART I

OCCUPATIONAL DISTRIBUTION OF 2,157* YOUTH
AGE 16 TO 21 YEARS
IN TWELVE PLANNING AREAS OF CLEVELAND



* One hundred responses failed to provide necessary data (2,257 - 100 = 2,157)

TABLE I

Extent of Unemployment Among Youth
(Including Those in Service)
in Twelve Social Planning Areas of Cleveland

	EMPLOYED*		UNEMPLOYED		TOTAL	
	No.	%	No.	%	No.	%
Male	250	62	154	38	404	100
Female	175	44	219	56	394	100
Total	425	53	373	47	798	100

Table I indicates that:

1. Approximately one out of two (47%) of the individuals age 16-21 is unemployed in the 12 areas surveyed.

2. Unemployment is greater among women (56% unemployed) than among men (38% unemployed).

* The figures for the employed in Table I include 101 individuals who were in the armed services. This procedure was employed in order to permit comparison with results of 1961 survey, which included servicemen in employed totals.

CHART II

Extent of Unemployment Among Out-of-School Youth
1961 vs. 1966

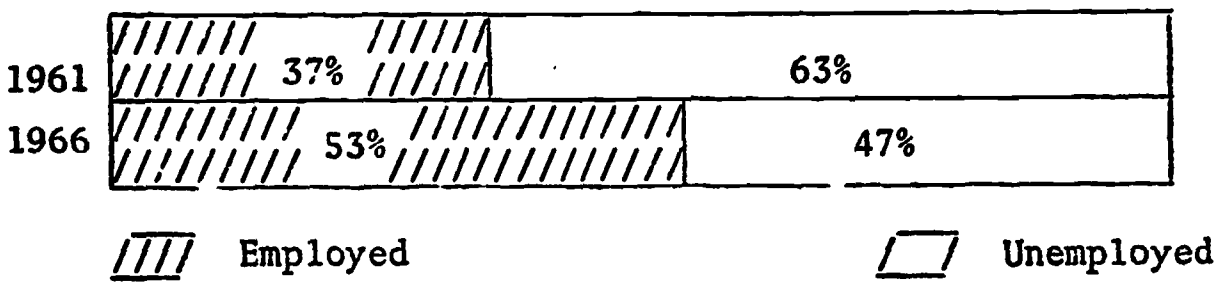


CHART III

Comparison of 1961 and 1966 Employment Patterns
For Four Planning Areas

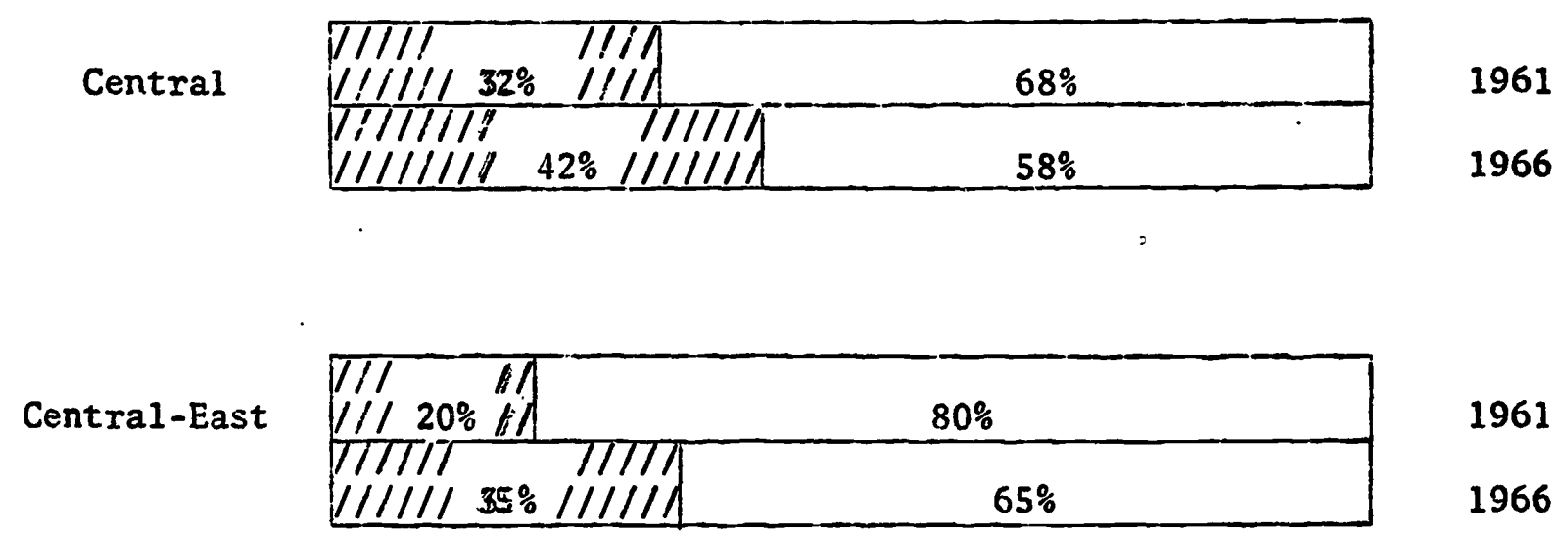


Chart III indicates that:

1. Each of the four areas reflects an increase in the percentage of youth who are employed.

2. The greatest increase in the percentage of youth who are employed occurred in the Hough area (17%).

CHART IV

Educational Background of Employed and Unemployed Youth

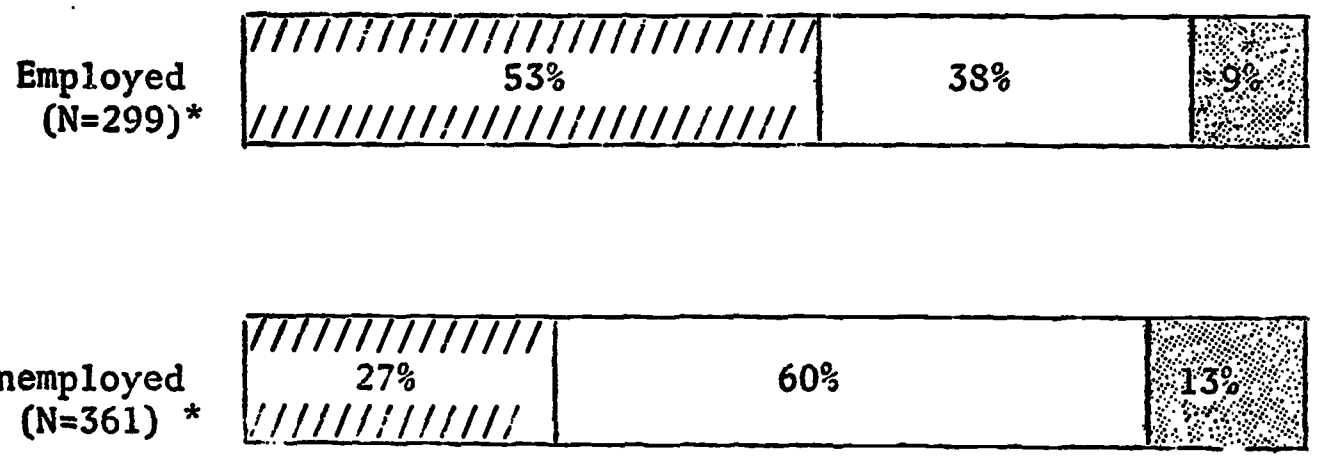


Chart IV indicates that:

1. Approximately three out of four (73%) of the unemployed youth are non-graduates.

2. Approximately one out of two (47%) of the employed youth is a non-graduate.

* Figures employed in Chart IV do not include 101 individuals in armed services. (798 - 101 = 697) Data on educational background was not provided for 25 of the employed individuals and 12 of the unemployed (697 - 37 = 660)

CHART V

Degree of Unemployment
Among Graduates and Non-Graduates
Age 16-21 Years

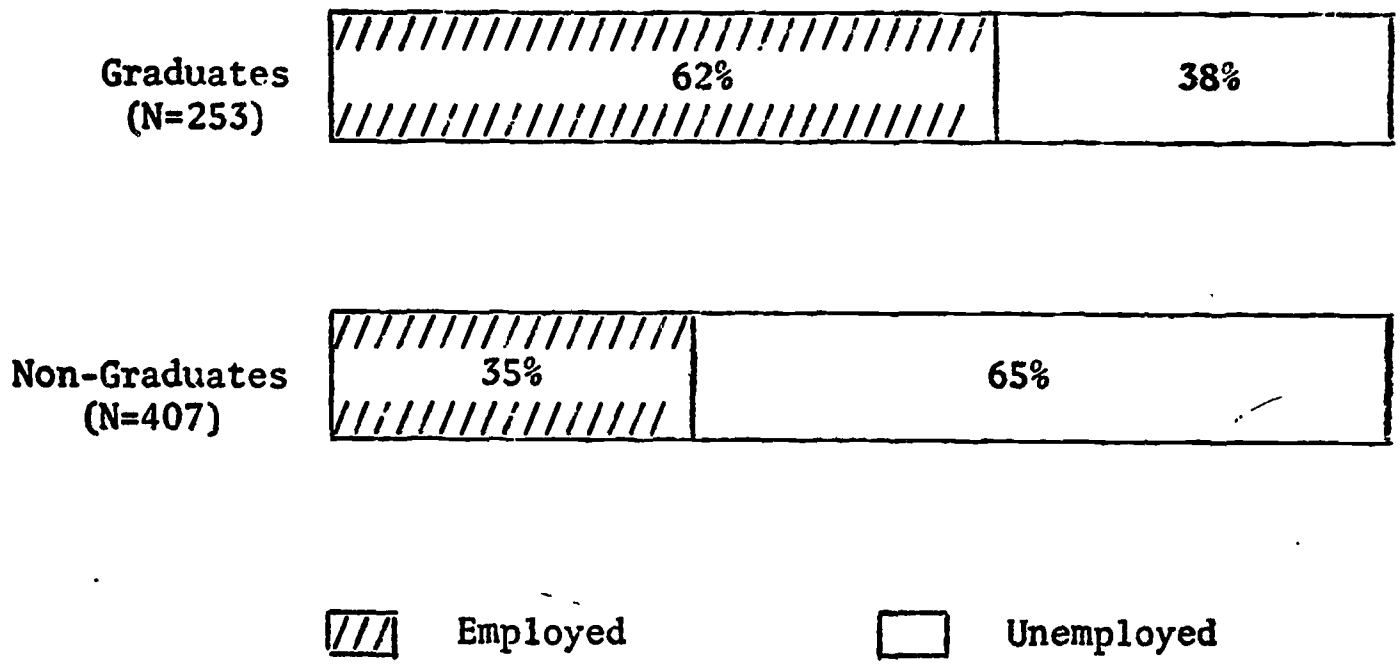


Chart V indicates that:

1. Approximately two out of three (62%)of the graduates are employed.

2. Approximately two out of three (65%) of the non-graduates are unemployed.

CHART VI

Extent of Unemployment
As Related to Age

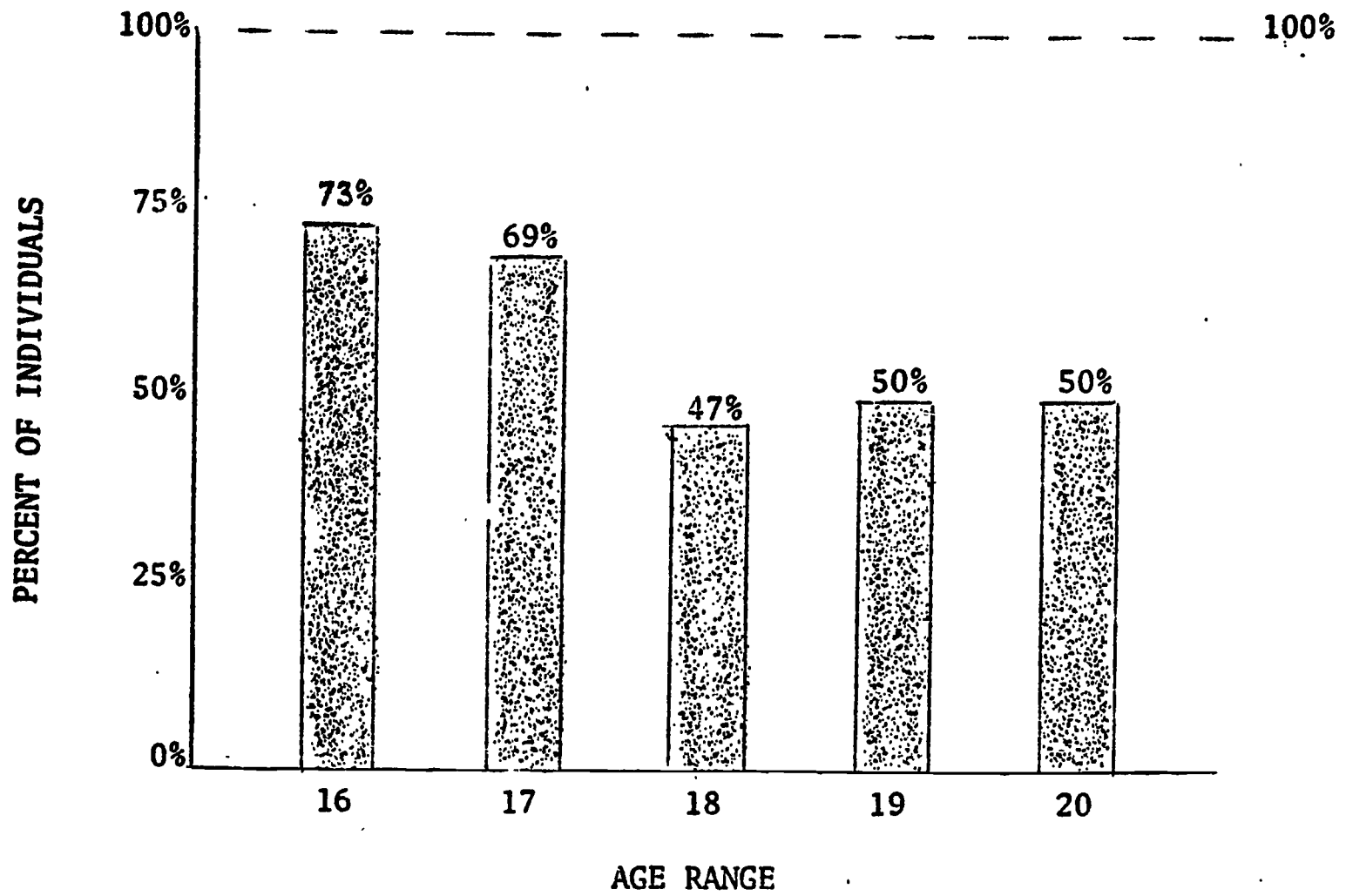


Chart VI indicates that:

1. Approximately seven out of ten out-of-school youth age 16-17 are unemployed.

2. Approximately one out of two individuals age 18-20 is unemployed.

CHART VII

Extent of Job-Training Experiences Among Employed and Unemployed Youth

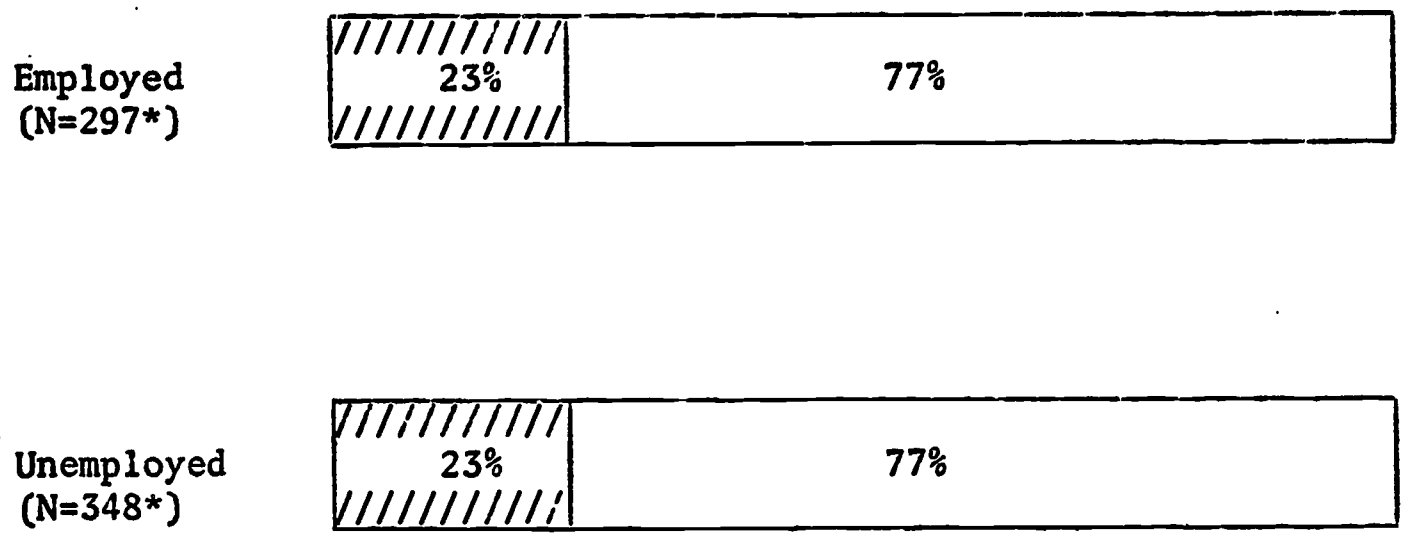


Chart VII indicates that:

- Approximately <u>one out of four</u> (23%) of the employed and an equal per cent (23%) of the unemployed had participated in job-training programs since leaving school.

* Job-training data were not provided for 27 employed individuals (324 - 27 = 297) and for 25 unemployed individuals (373 - 25 = 348).

CHART VIII

Extent of Unemployment Among Youth Who Had Job Training vs. Youth Who Did Not Have Job Training

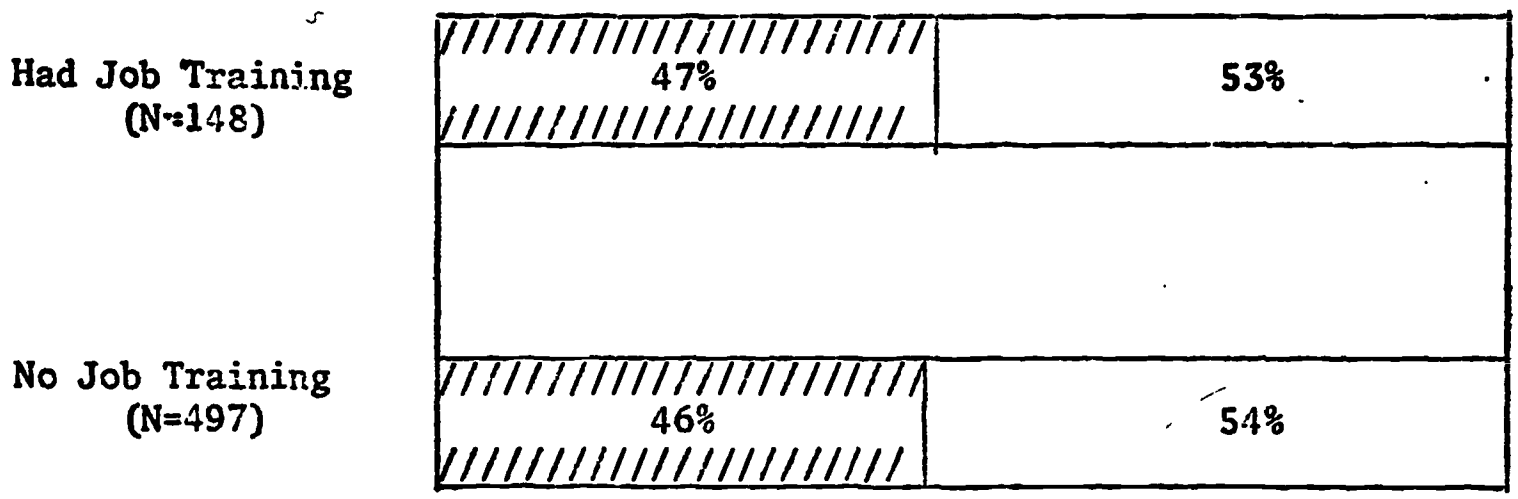


Chart VIII indicates that:

1. Approximately <u>one out of two</u> (53%) of those who had job-training experiences was unemployed.

2. Approximately <u>one out of two</u> (54%) of those who did <u>not</u> have job-training experiences was unemployed.

TABLE II

Attitude of Unemployed Toward
Job-Training Programs

Question 7: Do you feel that you could get a job if you could get training?

Total	Yes		No	
	Number	Per Cent	Number	Per Cent
325*	302	93%	23	7%

Question 8: Would you be willing to enter a training program now?

Total	Yes		No	
	Number	Per Cent	Number	Per Cent
325*	254	78%	71	22%

Table II indicates that:

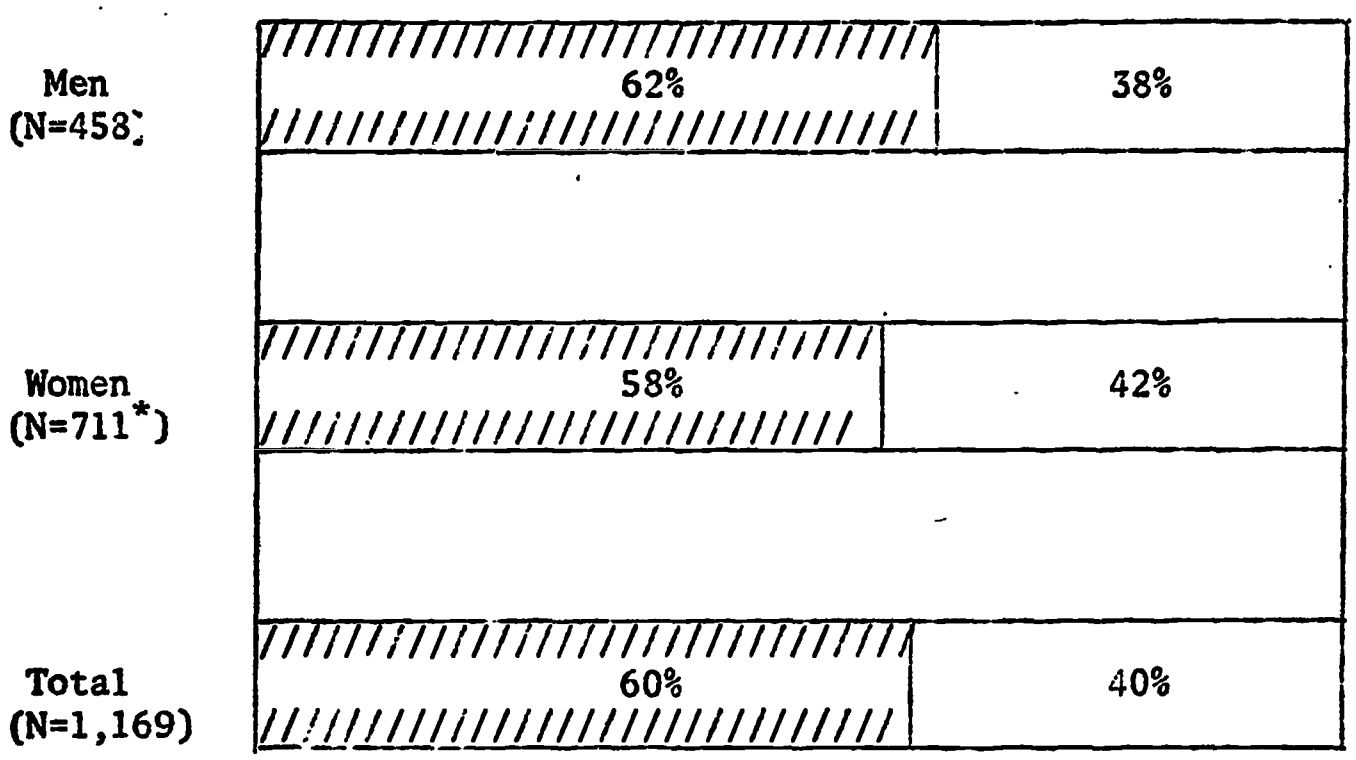
1. Approximately nine out of ten (93%) of the unemployed expressed the feeling that they could obtain employment if they could obtain training.

2. Approximately eight out of ten (78%) of the unemployed expressed willingness to enter a training program at the present time.

* Data were not provided for forty-eight unemployed individuals. (373 - 48 = 325)

CHART IX

Extent of Unemployment Among Persons Age 21 - 29 Years



▨ Employed ☐ Unemployed

Chart IX indicates that:

1. Approximately three out of five (60%) of the individuals age 21-29 are employed.

2. There is little difference between the extent of unemployment among men (38%) and among women (42%).

* One hundred forty-five women who did not want full-time jobs were deducted from total number of women. (856 - 145 = 711)

A P P E N D I X

THE FOLLOWING SECTION DESCRIBES THE METHODOLOGY OF THE SURVEY AND TABULATES THE RESULTS OF THE DATA-ANALYSIS PROCEDURES.

APPENDIX I

GENERAL ORGANIZATION OF SURVEY

The items in the following section are not a detailed description of the method used in planning and conducting the survey.

The purpose of the section is to provide brief answers to the following questions:

1. Why were the specific areas selected for survey?
2. How was the size of the sample determined?
3. How was the sample selected?
4. How was the questionnaire developed?
5. How was the community made ready for the survey?
6. How were the data compiled?

1. Selection of Areas to be Surveyed

The twelve social planning areas which were surveyed were selected because they conformed to the poverty-level criteria established by the Office of Economic Opportunity and the Elementary and Secondary Education Act.

The twelve areas are characterized by:

1. high rate of public assistance
2. high crime and delinquency rate
3. high drop-out rate
4. high rate of unemployment
5. deteriorating housing units

2. Determination of Sample Size

The 1965 census report indicated that 28,247 youths, age 16 to 21 years, lived in the twelve areas of Cleveland which were to be surveyed. The 28,247 figure includes youth who are in school and youth who are out of school.

Appendices I-A, I-B, I-C, and I-D summarize the data and procedures used in determining the sample size and the number of households to be contacted in each planning area.

3. Selection of Random Representative Sample

The following method was used to select a random representative sample of household units to be contacted:

(1) Maps of the twelve social planning areas were obtained.

(2) Graphing paper was used to prepare a grid. The vertical and horizontal lines were numbered. Each intersection on the grid was identified by the pair of numbers assigned to the lines which formed the intersection. The grid was superimposed on a given planning-area map. A table of random numbers was used to obtain numbers and corresponding intersection points on the grid. These points were transcribed to the map. The intersection of two streets which was closest to the given point was assigned as a survey site.

The intersection of two streets served as the center point of a cross. The streets north, south, east and west of a given intersection were surveyed. At least one intersection area was surveyed in each census tract of each social planning area.

(3) The city directory was used to determine the number of household units which were located in each of the assigned intersection areas. For each social planning area, the number of intersection areas was increased until the total number of household units was equal to the quota of household units assigned to the area.

4. Development of Questionnaire

The survey committee determined the areas of information which were to be obtained in the survey.

Questions were designed to obtain information about the following items:

1. extent of unemployment
2. level of education
3. attitude toward obtaining training
4. marital status
5. past employment
6. age
7. length of Cleveland residence

The committee decided that a closed-end questionnaire would be most suitable for gathering information because the interviewers had no previous experience in conducting a survey.

A pre-test of the questionnaire was conducted to determine appropriateness of questions and to locate obstacles which might arise during the survey.

5. Publicizing the Survey

Early in the planning of the survey, it was recognized that the success of the survey would be closely related to understanding and acceptance on the part of the residents of the areas which were to be surveyed.

The following techniques were used to publicize the survey:

1. City newspaper releases
2. Neighborhood newspaper releases
3. School newspaper releases
4. Television spotlights
5. Radio spotlights
6. Letters from school principals to parents
7. Letters from Superintendent to ministers in the community
8. Letters from principals to area ministers inviting them to a luncheon and discussion of the survey
9. Posters were made by schools involved in the survey and displayed in area stores
10. School radio station broadcasted a program dealing with unemployed, out-of-school youth to senior high social studies classes

APPENDIX I-A

	Expected	Obtained
Number of households contacted	24,000	22,600
Number of youth (16-21) represented in survey sample	6,000	2,257
Number of out-of-school youth (16-21) in survey sample	3,000	924

1. A major problem encountered was the absence of occupants in many of the households contacted by the interviewers. This problem was most prevalent in the Mount Pleasant and Near West Side areas. In the Mount Pleasant area, for example, 1,564 households were contacted; occupants responded in 330 households or 21% of the number contacted.

2. The obtained number of responses in the Hough area was reduced considerably by the number of unoccupied homes and apartment houses for which occupants had been listed in the city directory.

3. Questionnaires which failed to provide complete information reduced the amount of data available for analysis.
   E.g.: questionnaires representing 2,257 youth, ages 16 to 21, were returned. Of this number, 100 questionnaires failed to indicate the status (school, service, employment) of the individual and thus have to be removed from the sample.
   Subsequent steps in the data processing were accompanied by successive reductions in the amount of useable data.

APPENDIX I-B

Determination of Sample Size for Each Planning Area

		Number of Youth[1] (16-21) Per Area	Percent of Total[2] Youth Per Area	Expected[3] Sample Size
1.	Central-East	1,663	6%	180
2.	Central	936	3%	90
3.	Central-West	1,758	6%	180
4.	Glenville	6,075	22%	660
5.	Goodrich	798	3%	90
6.	Hough	4,236	15%	450
7.	Kinsman	1,218	4%	120
8.	Mount Pleasant	2,574	9%	270
9.	Near West Side	4,624	16%	480
10.	North Broadway	1,163	4%	120
11.	Norwood	1,617	6%	180
12.	Tremont	1,585	6%	180
	TOTAL	28,247	100%	3,000

[1]Based on 1965 Census Report

[2]Number of youth per area divided by total number of youth in twelve areas.

[3]Percentage of youth in area x 3,000 (expected size of sample out-of-school youth)

APPENDIX I-C

Estimation of Number of Households To Be Contacted

Number of households in twelve social planning areas	125,584 [1]
Number of youth age 16-21 years in twelve social planning areas	28,247 [2]
Ratio of youth (16-21) to housing units. (125,584 ÷ 28,247 = 4.4)	One youth per four households (1:4)
Estimated ratio of out-of-school youth (16-21) to household units	One youth per eight households (1:8)
Number of households to be contacted to obtain sample of 3,000 out-of-school youth (16-21)	
(3,000 x 8 = 24,000)	24,000

[1]Cleveland Welfare Federation Report based on Real Property Inventory Statistics

[2]Based on 1965 Census Report

APPENDIX I-D

Estimated and Actual Number of Household Units
To Be Surveyed in Each Planning Area

Area	Sample Size	Estimated No.[1] of Households To Be Contacted	Actual No.[2] of Households Contacted
Central-East	180	2,000	1,765
Central	90	1,100	961
Central-West	180	1,600	1,520
Glenville	660	4,300	4,500
Goodrich	90	650	495
Hough	450	4,100	3,603
Kinsman	120	800	1,000
Mt. Pleasant	270	2,000	1,564
Near West Side	480	3,700	3,485
North Broadway	120	800	1,098
Norwood	180	1,400	1,320
Tremont	180	1,000	1,289
TOTAL		23,450	22,600

[1] Estimates were determined by related desired sample size to the ratio of youth per household unit for each area.

[2] This total (22,600) represents the number of households which interviewers contacted. As was noted in Appendix I-A, however, many occupants were not at home or failed to answer the door.

APPENDIX II

Total Picture of Employed and Unemployed Youth in the Local Labor Market * in Twelve Social Planning Areas of Cleveland

	EMPLOYED*		UNEMPLOYED		TOTAL	
	No.	%	No.	%	No.	%
Male	149	49	154	51	303	100
Female	175	44	219	56	394	100
Total	324	46	373	54	697	100

Appendix II indicates that:

1. Approximately one out of two (54%) youths age 16-21 in the local labor market is unemployed.

2. When the individuals in the armed services (101) are excluded from the number employed, the pattern of one out of two unemployed remains unchanged, but the rate of unemployment rises from 47% to 54%.

* Figures for the employed exclude 101 individuals who were in the armed services. (425 - 101 = 324)

APPENDIX III

Total Picture -- Unemployed and Employed As Related to Level of Education

	EMPLOYED		UNEMPLOYED		TOTAL	
	No.	%	No.	%	No.	%
Graduates	157	62	96	38	253	100
Non-Graduates	142	35	265	65	407	100
Total	299*	45	361*	55	660*	100
% Who Are Graduates	53		27		38	

Appendix III indicates that:

1. Approximately two out of three (62%) of the graduates are employed.

2. Approximately two out of three (65%) of the non-graduates are unemployed.

* Figures employed in Table II do not include 101 individuals in armed services (798 - 101 = 697). Data on educational background was not provided for 25 of the employed individuals and 12 of the unemployed. (697 - 37 = 660).

APPENDIX IV

Employment and Unemployment Related to Age

	AGE					
	16	17	18	19	20	Total
Employed	14	32	100	89	68	303*
Unemployed	38	70	90	89	68	355**
Total	52	102	190	178	136	658
Per Cent of Unemployed In Age Group	73%	69%	47%	50%	50%	

Appendix IV indicates that:

1. Approximately seven out of ten out-of-school youth, age 16-17, are unemployed.

2. Approximately one out of two individuals, age 18-20, is unemployed.

* Twenty-one responses did not indicate age of employed individuals. (324 - 21 = 303)

** Eighteen responses did not indicate age of unemployed individuals. (373 - 18 = 355)

APPENDIX V

Percentage of Employed and Unemployed

in Each Age Group

	AGE					
	16	17	18	19	20	Total
Employed (N=303)	5%	11%	33%	29%	22%	100%
Unemployed (N=355)	11%	20%	25%	25%	19%	100%
Total	8%	15%	29%	27%	21%	100%

Appendix V indicates that:

1. Approximately one out of three (31%) of the unemployed is 16-17 years of age

2. The percentage of the unemployed under age 18 (31%) is approximately twice as great as the percentage of the employed in the same age categories (16%).

APPENDIX VI

Employment and Unemployment

Related to Length of Cleveland Residence

	Less Than One Year		From One to Five Years		Over Five Years		Total
	No.	%	No.	%	No.	%	No.
Employed	22	8	39	14	220	78	281*
Unemployed	29	9	48	14	252	77	329
Total	51	8	87	14	472	78	610

Appendix VI indicates that:

1. There is no appreciable difference between the length-of-residence patterns of the employed and the unemployed individuals.

2. Approximately three out of four (77%) of the unemployed have lived in Cleveland for more than five years.

* Forty-three responses for employed individuals did not indicate length of Cleveland residence (324 - 43 = 281). Forty-four responses for unemployed individuals did not indicate length of Cleveland residence (373 - 44 = 329).

APPENDIX VII

Unemployment as Related to Duration of Time Out of School

	Less Than One Year		More Than One Year		Total	
	No.	%	No.	%	No.	%
Employed	147	49	155	51	302	100
Unemployed	164	46	189	54	353	100
Total	311	47	344	53	655*	
% Unemployed	53		55			

Appendix VII indicates that:

1. There is little difference in the degree of unemployment of individuals who have been out of school less than one year (53% unemployed) and more than one year (55% unemployed).

2. Approximately one out of two (54%) unemployed individuals has been out of school more than one year

* Data were not provided for twenty-two employed and twenty unemployed individuals. (697 - 42 = 655)

APPENDIX VIII

Extent of Unemployment

Among Persons Age 21-29 Years

In Twelve Social Planning Areas

	EMPLOYED		UNEMPLOYED		TOTAL	
	No.	%	No.	%	No.	%
Men	286	62	172	38	458	100
Women	414	58	297	42	711*	100
Total	700	60	469	40	1,169	100

Appendix VIII indicates that:

1. Approximately three out of five (60%) of the individuals, age 21-29, are employed.

2. There is little difference between the extent of unemployment among men (38%) and among women (42%).

* One hundred forty-five women who did not want full-time jobs were deducted from total number of women. (856 - 145 = 711)

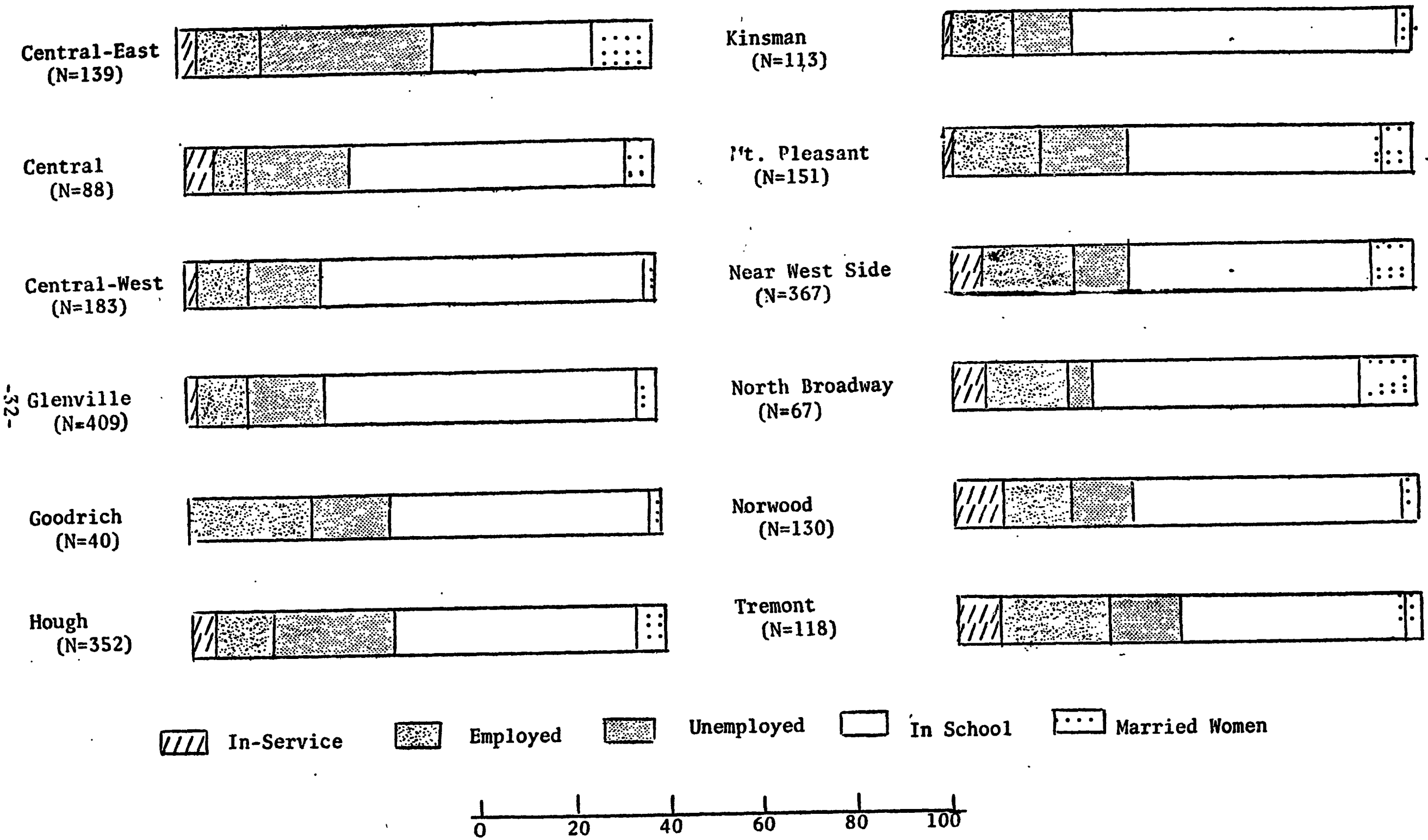
APPENDIX IX

DISTRIBUTION OF 2,157 YOUTH BY PLANNING AREA

PLANNING AREA	IN SERVICE		EMPLOYED		UNEMPLOYED		IN SCHOOL		MARRIED WOMEN		TOTAL NO.	PER CENT OF TOTAL SAMPLE
	No.	%	No.	%	No.	%	No.	%	No.	%		
Central-East	6	4.3	20	14.4	49	35.3	47	33.8	17	12.2	139	6.4
Central	5	5.7	8	9.1	18	20.4	52	59.1	5	5.7	88	4.1
Central-West	5	2.7	22	12.0	25	13.7	124	67.8	7	3.8	183	8.5
Glenville	10	2.4	46	11.3	61	14.9	275	67.2	17	4.2	409	19.0
Goodrich	0	--	10	25.0	7	17.5	22	55.0	1	2.5	40	1.9
Hough	14	4.0	46	13.0	91	25.9	182	51.7	19	5.4	352	16.3
Kinsman	3	2.6	14	12.4	14	12.4	76	67.3	6	5.3	113	5.2
Mt. Pleasant	2	1.3	30	19.9	26	17.2	83	55.0	10	6.6	151	7.0
Near West Side	28	7.6	70	19.1	43	11.7	200	54.5	26	7.1	367	17.0
North Broadway	5	7.5	11	16.4	4	6.0	40	59.7	7	10.4	67	3.1
Norwood	13	10.0	19	14.6	17	13.1	76	58.5	5	3.8	130	6.0
Tremont	10	8.5	28	23.7	18	15.3	56	47.4	6	5.1	118	5.5
TOTALS	101	4.7	324	15.0	373	17.3	1233	57.2	126	5.8	2157	100.0

APPENDIX IX-A

Distribution of 2,157* Youth by Planning Area



* Data were not provided for 100 individuals. (2,257 - 100 = 2,157)

APPENDIX X

DISTRIBUTION OF EMPLOYED, UNEMPLOYED, AND THOSE IN ARMED SERVICES IN EACH PLANNING AREA

Planning Area	ARMED SERVICES		FULL-TIME JOB		UNEMPLOYED		TOTAL
	No.	%	No.	%	No.	%	Number
Central-East	6	8	20	27	49	65	75
Central	5	16	8	26	18	58	31
Central-West	5	10	22	42	25	48	52
Glenville	10	9	46	39	61	52	117
Goodrich	0	--	10	59	7	41	17
Hough	14	9	46	31	91	60	151
Kinsman	3	10	14	45	14	45	31
Mt. Pleasant	2	3	30	52	26	45	58
Near West Side	28	20	70	50	43	30	141
North Broadway	5	25	11	55	4	20	20
Norwood	13	26	19	39	17	35	49
Tremont	10	18	28	50	18	32	56
TOTAL	101	12.7	324	40.6	373	46.7	798*

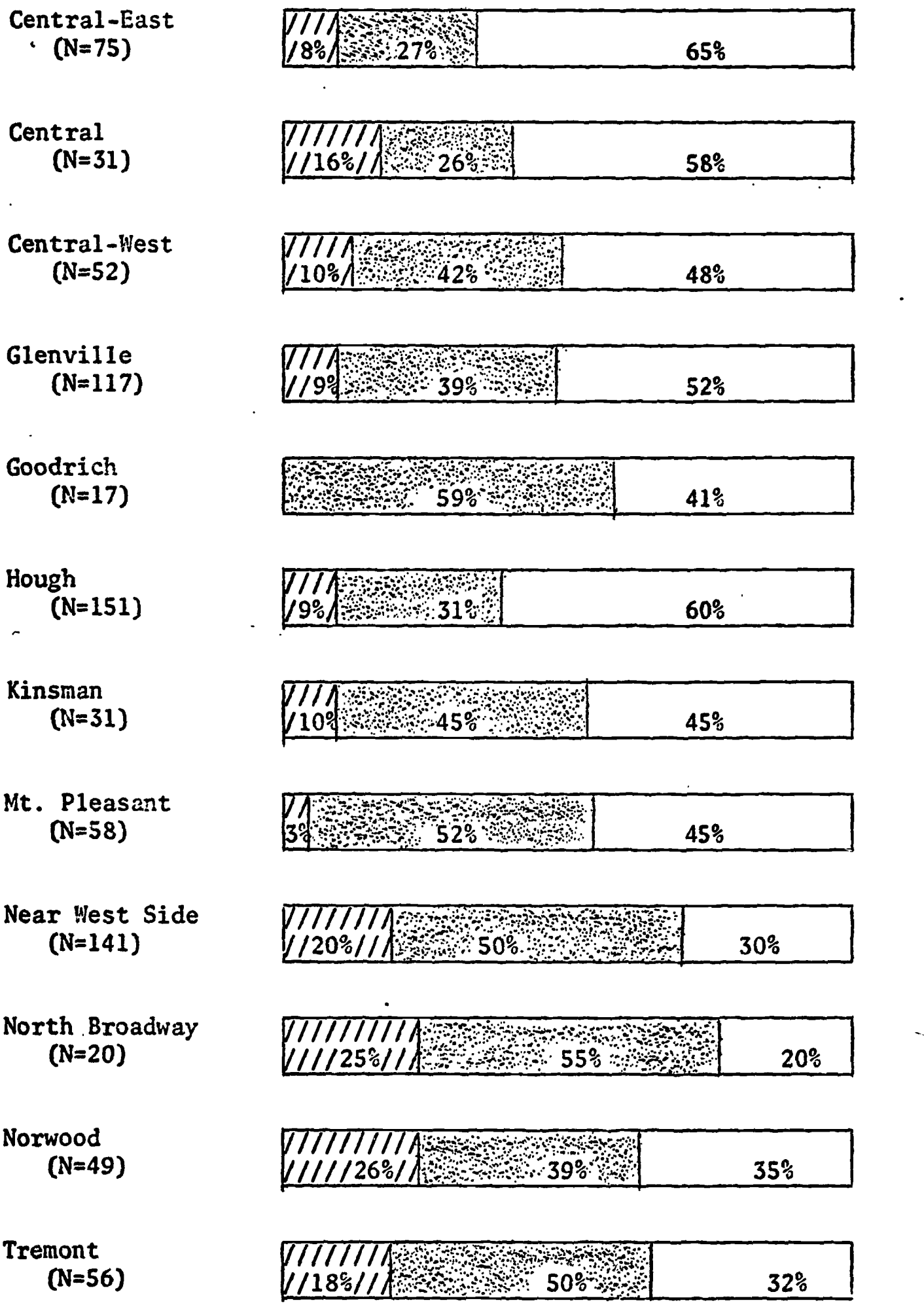
* 2,257 minus individuals in school (1,233) minus married women (126). (2,257 - 1,233 - 126 = 898)

Data not provided for 100 individuals (898 - 100 = 798)

APPENDIX X-A

Distribution of Employed, Unemployed, and Those in Armed Services In Each Planning Area

N = 798 *



* Data not provided for 100 individuals (898 - 100 = 798).

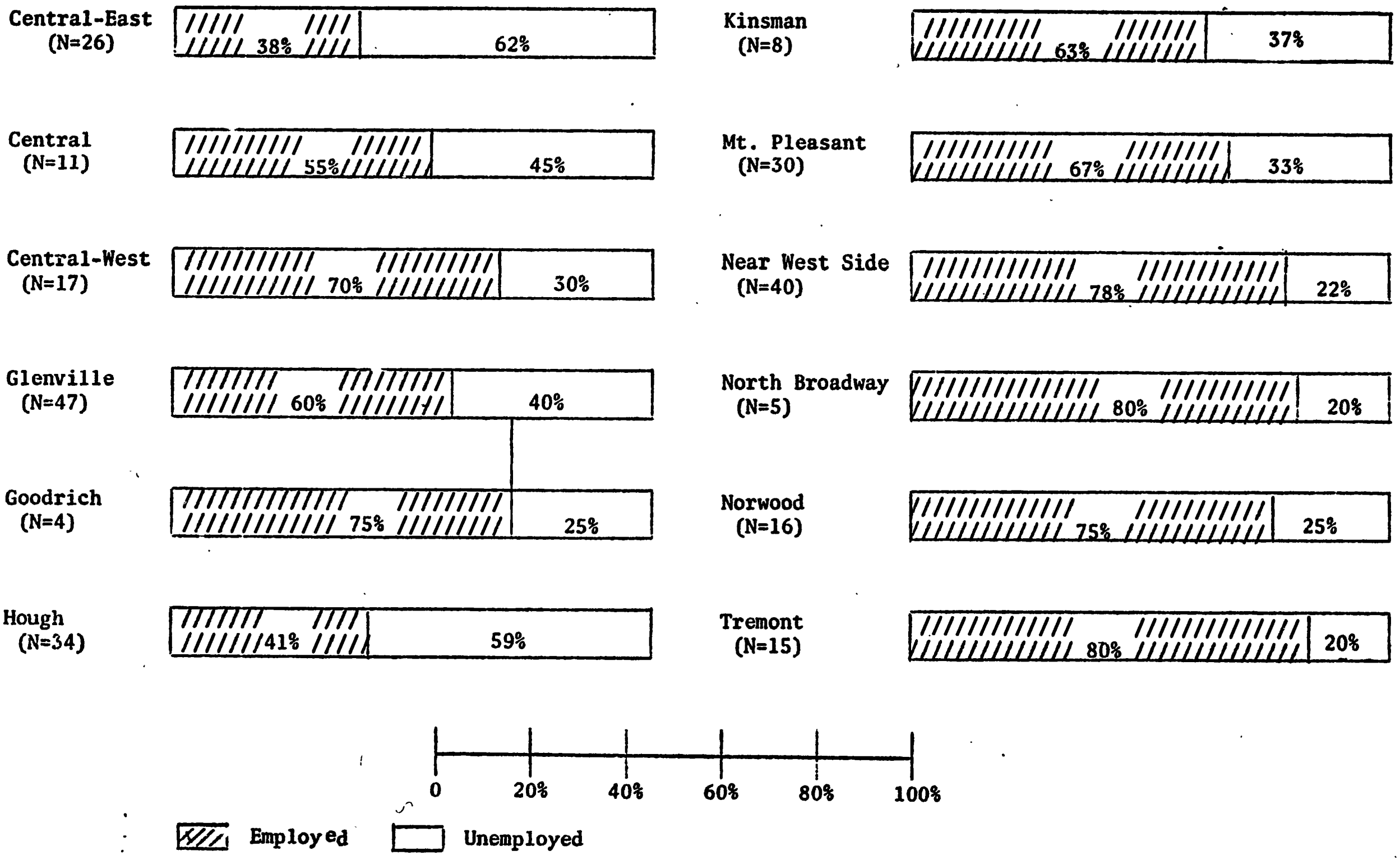
APPENDIX XI

UNEMPLOYED AND EMPLOYED GRADUATES BY AREA

AREA	EMPLOYED		UNEMPLOYED		TOTAL GRADUATES
	No.	%	No.	%	
Central-East	10	38	16	62	26
Central	6	55	5	45	11
Central-West	12	70	5	30	17
Glenville	28	60	19	40	47
Goodrich	3	75	1	25	4
Hough	14	41	20	59	34
Kinsman	5	63	3	37	8
Mt. Pleasant	20	67	10	33	30
Near West Side	31	78	9	22	40
North Broadway	4	80	1	20	5
Norwood	12	75	4	25	16
Tremont	12	80	3	20	15
TOTAL	157	62	96	38	253

APPENDIX XI-A

Employed and Unemployed Graduates By Planning Area



APPENDIX XII

LEVEL OF EDUCATION AS RELATED TO UNEMPLOYMENT BY PLANNING AREA

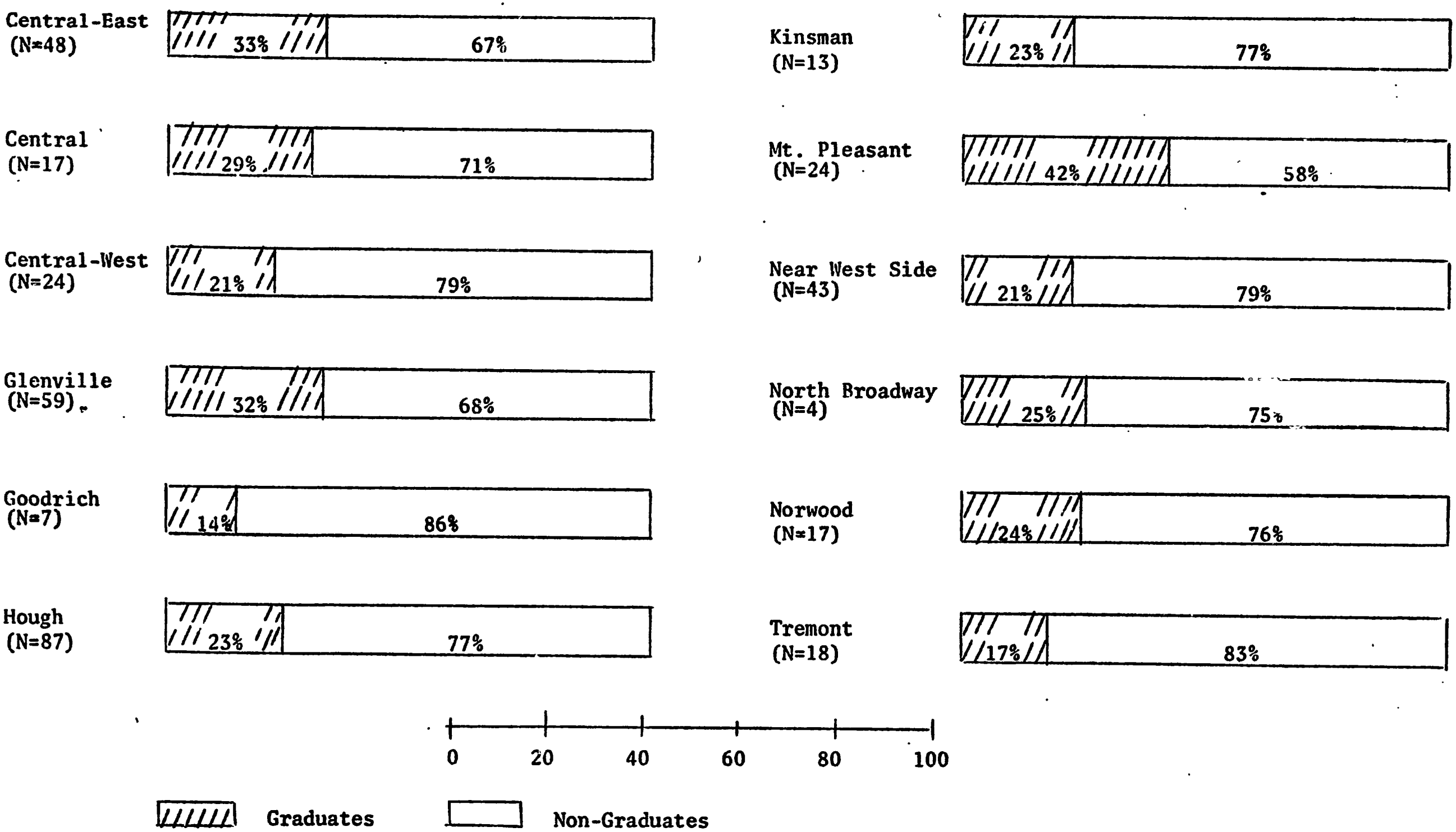
AREA	GRADUATES		NON-GRADUATES		TOTAL NO. UNEMPLOYED
	No.	%	No.	%	
Central-East	16	33	32	67	48
Central	5	29	12	71	17
Central-West	5	21	19	79	24
Glenville	19	32	40	68	59
Goodrich	1	14	6	86	7
Hough	20	23	67	77	87
Kinsman	3	23	10	77	13
Mt. Pleasant	10	42	14	58	24
Near West Side	9	21	34	79	43
North Broadway	1	25	3	75	4
Norwood	4	24	13	76	17
Tremont	3	17	15	83	18
TOTAL	96	27	265	73	361*

* Data on educational level were not provided for twelve unemployed individuals. (373 - 12 = 361)

APPENDIX XII-A

Level of Education As Related to Unemployment By Planning Area

N = 361



INSTRUCTIONS FOR AREA COORDINATORS

I. Before the Survey

(a) Become aware of the responsibilities of teacher team supervisors.

(b) Prepare and distribute letters of information to parents, PTA officers, school newspapers, churches, businesses, and community centers in the neighborhood.

(c) Prepare and request permission to display posters in the neighborhood schools, businesses, churches, and recreation centers.

(d) Establish a close working relationship with the principal relative to the plans and organization of the survey.

(e) Assist team supervisors and team members in fulfilling their responsibilities with the principal's knowledge and permission.

(f) Direct training sessions for teacher team supervisors:

- Explain survey rationale
- Explain the use of the questionnaire
- Demonstrate use of the questionnaire in a trial interview
- Define responsibilities

(g) Arrange a group meeting of all teacher team supervisors and student team members to present the overall plans of the survey.

(h) Obtain and distribute materials which teams will be required to use.

(i) Arrange to have the team supervisors and teams visit the designated intersections before November 15.

II. During the Survey

(a) Supervise the work of team supervisors and members as outlined in the instructions to teacher team supervisors.

(b) Remain at designated telephone in the school during the interview hours to accept calls from team supervisors.

(c) Use discretion in determining what course of action should be taken by individual teams when emergencies arise.

(d) Account for all team supervisors and team members at the end of each day.

(e) Receive and safeguard all questionnaire responses each day of the survey.

III. After the Survey

(a) Return questionnaires to the Bureau of Educational Research by 2:00 P.M. on Saturday, November 19th.

(b) Acknowledge the participation of all who helped make the survey a successful endeavor.

(c) Prepare a brief report on the following:

- Survey organization and preparation procedures followed in home school
- Suggestions for improving survey methods
- Teacher team supervisor reactions to conducting survey
- Student reactions to conducting survey

(d) Submit area coordinator's report and reports of team supervisors to Bureau of Educational Research by November 23, 1966.

(SAMPLE)

INSTRUCTIONS FOR TEACHER TEAM SUPERVISORS

I. Before the Survey

(a) Plan and organize your efforts under the direction of the Area Coordinator.

(b) Recruit and select student team members.

(c) Obtain parental permission for team members to conduct survey.

(d) Notify homeroom and classroom teachers of each student's participation in the survey.

(e) Assign students to teams.

(f) Recruit and select substitute team members for use in emergencies.

(g) Plan and direct training sessions for team members:

- Explain survey rationale
- Explain use of questionnaires
- Arrange trial interviews
- Review code of dress, behavior, and manners
- Tour assigned intersection.

(h) Prepare identification badges for each team member. Indicate name of student, school, and title of survey.

II. During the Survey

(a) Have each team member sign in at a designated area in the school and at a specific time.

(b) Provide each team member with questionnaires, pencils, large envelopes, and identification badges.

(c) Start from assigned intersection and proceed to survey as directed on boundary sheet.

(d) Divide team so that each side of the street is covered.

(e) Direct a six-member team to use the following pattern:

- Interviewer one surveys houses 1 - 4 - 7
- Interviewer two surveys houses 2 - 5 - 8
- Interviewer three surveys houses 3 - 6 - 9

(f) Accompany team members into multiple dwellings as a precautionary measure.

(g) Use discretion in determining whether or not a specific building should or should not be surveyed.

(h) Plan to complete interviews by 5:00 P.M. on Thursday, November 17th, and on Friday, November 18th.

(i) Return all questionnaires to the custodian's office in the home school each day.

(j) Account for all team members each day.

(k) Report to school on Saturday, November 19th. Plan to start at 9:00 A.M. and to complete the interviews on or before 1:00 P.M.

(l) Call Area Coordinator for on-the-spot instructions.

III. After the Survey

(a) Return questionnaire responses to Area Coordinator by 1:00 P.M. on Saturday, November 19.

(b) Prepare and send a brief report to Area Coordinator by November 23rd, on the following:

- Organization and preparation procedures in assigned area
- Students' reactions related to conducting the interview
- Suggestions for improving survey methods.

(c) Acknowledge the participation of all who helped make the survey a successful endeavor.

VT 008 096
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*TECHNICAL EDUCATION; *ENGINEERING TECHNICIANS; *PROGRAM IMPROVEMENT; PROGRAM DESCRIPTIONS; *OCCUPATIONAL SURVEYS; OCCUPATIONAL INFORMATION; EMPLOYMENT PATTERNS; *EDUCATIONAL PROGRAMS; COMPARATIVE EDUCATION; FOREIGN COUNTRIES
*INDIA

This paper examines the middle level technician in India and current patterns of technical education, seeking to suggest solutions for matching training programs with industrial requirements. Recommendations include: (1) identifying narrow branches of engineering and technology suitable for technician specialties, (2) planning of facilities based on industrial needs, (3) improving standards for technical-education, (4) arranging for cooperative training between industry and educationalinstitutions, (5) raising the status of technical programs, and (6) identifying the most appropriate setting for technician education. (EM)

VT 008 096

IAMR Working Paper No. 2/1967

ED042060

ENGINEERING MANPOWER

EDUCATIONAL AND TRAINING PREPARATION OF TECHNICIANS

—A MEMORANDUM—

U.S. DEPARTMENT OF HEALTH, EDUCATION
& WELFARE
OFFICE OF EDUCATION
THIS OOCUMENT HAS BEEN REPROOUCEO EXACTLY AS RECEIVEO FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATEO OO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EOUCATION POSITION OR POLICY

VT008094

INSTITUTE OF APPLIED MANPOWER RESEARCH
INDRAPRASTHA ESTATE, RING ROAD, NEW DELHI-1

The Institute of Applied Manpower Research was set up in 1962 by the Government of India to conduct research on problems of manpower planning. The main objects of the Institute are:

--To advance knowledge about the nature, characteristics and utilisation of the human resources in India.

--To provide a broad perspective of requirements of trained manpower for economic development in different fields with due regard to the probable impact of technological changes on the pattern of employment.

--To develop improved methods and techniques for dealing with:-

-training and development of the existing work force;

-educational preparation for employment;

-vocational guidance;

-identifying and developing highly talented persons;

-forecasting demand and supply of manpower and connected matters.

FOREWORD

The Institute of Applied Manpower Research, in its work relating to engineering manpower, was concerned with manpower categories at various levels in the employment hierarchy. The problem of technicians in industry was discussed in several of its reports and in one of the seminars organised by it in June 1964.

2. The Institute's first area of detailed work in the "technician" field was to study the question of technician/engineer ratio to find out whether such an approach could be used in the projection of manpower requirements at technician level, which could in turn provide some guide lines for action by educational planners. This study was taken up in the Institute in September 1966 with the help of Mr. Robert S. Queener, Training Associate in Manpower, in the office of the Ford Foundation, New Delhi. The study could not escape the problem of terminology or definition of the terms "technician" and "engineer", on which the accuracy of the study largely depended. The lower end of the spectrum of engineering manpower, i.e., the skilled craftsmen and the skilled process worker and an amorphous group of "practicals" without formal education or training, also entered the picture to some extent.

3. However, the study revealed that the technician/engineer ratio in the Indian context possibly concealed qualitative deficiencies in either or both categories. It is with a view to locating these qualitative differences, if any, that the study was enlarged to cover the comparative methods and standards of technician education and training in India and other countries. This part of the study was undertaken by Shri K. R. Sivaramakrishnan, Chief of the Manpower Resources Division, in the Institute, who also carried the integrated study to an advanced stage.

4. What this integrated study tries to present is the concept of a "technician" as required by Indian industry at its present stage of development. It would be a mistake to import wholesale the concepts of technician education which exist in other countries and to set up on that basis training facilities for technicians with the help of industrially advanced countries. Neither the narrow specialisation of technician courses nor the pre-employment experience of the type as required elsewhere for seeking entry into such courses, can be relevant to Indian conditions. Our aim should be to evolve an Indian concept of technician education based on an understanding of the functions of a middle level technician as required in Indian industry. It is understood that a few projects with foreign aid are under way for the development of technician education. If through these projects,

or even due to lack of a clear concept of technician education in existing institutions, a variety of products are thrown up in the employment market based on the experience of the country providing the aid or the ideas of the Boards of Management of each institution or even the State Boards of Technical Education, then industry is most likely to be confused and a rational pattern of employment of technicians will not be generated. Industry would continue to prefer the graduate engineers due to the lack of consistency in quality and concepts in the products of polytechnic institutions. It is for this reason that a clear concept of "technician" education be developed now so that all technician education facilities, whether they are being newly developed or have been in existence for some time, are geared to this concept. This will help the generation of a rational pattern of employment structure in industry.

5. The interest expressed by Dr. T. Sen, Union Minister for Education, who desired an early discussion on this subject, provided a stimulus to expediting the completion of the integrated study and submission of this paper.

6. The experience of, and problems faced by, industry were discussed extensively with Prof. A. S. Sen of Guest Keen Williams and Indian Engineering Association, and the Institute is grateful for his assistance in the formulation of the recommendations.

7. It is hoped that the report will generate the discussion necessary to bringing this problem to the fore and finding an early set of solutions.

P. K. DAS
Director

19.6.67

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CHAPTER I

CONCLUSIONS AND RECOMMENDATIONS

SUMMARY OF CONCLUSIONS

Objectives of the Memorandum:

1. This Memorandum attempts to:

   (a) study the place of the middle level technician in industry,

   (b) study the current pattern of technician education and training of diploma holders in engineering and technology, and

   (c) suggest a solution to the problem of qualitative matching of educational and training programmes for the middle level technicians with the requirements of industry.

The Problem:

2. In the Institute's study relating to engineering manpower, the question of engineering personnel just below the level of graduate or professional engineer has been discussed several times. In the "Seminar on Collaboration between Industry and Technical Institutions" held at Madras in June 1964, where polytechnic education and technician positions in industry were discussed in great detail, there was general agreement that the present courses were inadequate in so far as practical training is concerned. A special study undertaken by an officer of the IAMR in 1965 in countries of Western Europe, USA and Japan, on "Significant World Trends in Engineering Manpower Development", recommended the development of functional programmes at technician level in consultation with employing industries with a view to gradually replacing existing general engineering courses at the diploma level.

3. The need to effect a drastic change in the existing system of polytechnic education has been recognised by bodies such as the All India Council for Technical Education as well as by the Education Commission. The All India Council for Technical Education as early as in 1961, had come to the view that "a stage had been reached at which the entire question of the aims and objects of diploma courses,

their contents, standards of training and other aspects should be reconsidered in relation to the changing pattern of employment of technical personnel in industry and other sectors".* Recently, the Education Commission has referred to "the present weaknesses of the diploma training being insufficiently practical or industry-oriented" and recommended "immediate steps to carry out investigations in cooperation with industry aiming at job analysis and specifications in terms of levels and clusters of skills and responsibilities for technicians"** so that the diploma courses would be revised aiming not at producing a lower class engineer but a technician in real terms.

4. This problem is not peculiar to Indian conditions. A White Paper† of the Government of the United Kingdom presented to Parliament in January 1961 stated that the needs of the technician cannot be satisfactorily met by courses which are primarily designed for craftsmen on one hand or technologists on the other. There must be courses specifically adopted to his requirements and coordinated with his industrial training. Similar problems in respect of the education and training preparation of the technician for industry have been faced in other countries in Europe as well as in USA.

5. The lack of adequate and distinct educational preparation for the technician required by industry has had its repercussions on the employment pattern in the industry. In a number of industrial establishments, craftsmen have risen to technician positions over a period of years; but because of the inadequacy of their educational preparation, they have not been as effective as they should be to meet the challenge that the technician post normally calls for. Alternatively, the graduate engineer or professional engineer is placed in technician positions though he is neither meant nor prepared for these tasks. This underutilisation of an engineer results in frustration and lack of job satisfaction. In both cases, quite

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* Proceedings of the 14th meeting of the All India Council for Technical Education, held on July 7, 1961, Govt. of India, Ministry of Education, Para 32.

** Report of the Education Commission, 1964-66, Govt. of India, Ministry of Education, paras 15.21 - 15.23.

† "Better Opportunities in Technical Education", Cmnd 1254, HMSO, London, page 5.

often the actual functions of the technician remain unfulfilled. The Estimates Committee* and various Committees of Parliament in examining the employment structure in public undertakings have commented on the low level of utilisation of a number of graduate engineers on subordinate supervisory jobs, in public undertakings. The Education Commission has referred to this as "a wasteful use" of the skills of the engineers and "an unnecessary charge" on training costs. The lack of adequate preparation of technicians for employment in industry therefore results in higher investment in engineering colleges because of the higher rate of employment of professional engineers in technician positions. Further, it results in lack of specialisation in the technician function. This is an essential part of the technician job requirement and its inadequacy results in lower performance in the undertaking. In a number of cases, it also results in faster promotion of worker level personnel without adequate knowledge resulting in dilution in the quality of personnel required at the technician level. A vicious circle has thus developed where the educational system is not geared to produce sufficient number of technicians of the right calibre and quality for the employment market, and the employment structure in many industries has no specific place for the technician. All these problems are being faced by Indian industry and the sooner a set of solutions is found the better it would be for industrial development.

Who is a Technician:

6. As will be seen from Chapter II, where an attempt has been made to discuss the various definitions which are used in different countries and industries to identify the type of tasks and responsibilities shouldered by the technician, there is no single universally accepted description of the role of the middle level technician in industry. While the definitions described and discussed in Chapter II provide a detailed picture, the following general conclusions may be drawn from these definitions about the role, place and educational preparation of the technician:

(a) In a job hierarchy the technician's role falls between that of the skilled worker and the professional engineer (or technologist).

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* Report of the Estimates Committee (1963-64), Govt. of India, page 48.

(b) A technician is required to have adequate scientific and technological knowledge in a relatively narrower speciality compared to a professional engineer and at the same time have technical knowledge and skills in a broader number of trades or activities than those required of a skilled worker.

(c) His position requires that by virtue of his education he should understand the details of technical "know-how" laid down by the professional engineer and communicate the same as technical "do-how" to the skilled worker or use it in his work if he has to accomplish the tasks himself.

(d) His knowledge of science and technology must be such that it would be capable of adaptation for future advances in science and technology in that speciality.

(e) His educational and training preparation should enable him to have knowledge in a specified speciality of technology, acquaintance with a variety of manual skills required by workers in that branch of technology, and supervisory knowledge and skills.

(f) Finally, he is basically an "application-engineer" and not a development and research engineer and applies specific proven techniques associated with science and technology, though he might also be useful in research and development or design organisations to work under the guidance of professional engineers/technologists.

Employment Pattern:

7. Since the technician in terms of his status in an employment pyramid is between the skilled worker and the professional engineer/technologist, the total number of technicians required in any branch of activity would obviously fall somewhere between the numbers of skilled workers and the numbers of professional engineers or technologists.

8. The discussions in Chapter II indicate that there exists a major difficulty in obtaining and comparing employment patterns of the middle level technician in industry because of the variations in definitions and utilisation patterns. The overall ratios of employment of professional

engineer and technician which have been most frequently mentioned as desirable ratios vary between 1:2 to 1:5. It is also likely that in some industrial activities, the engineer to technician ratio may be in the reverse proportion. The Education Commission has recommended a target of an overall ratio of engineers to technicians of 1:2. 5 by 1975 and 1:3 or 1:4 by 1986.

9. It would seem to be a risky proposition to accept any of these ratios as applicable to the whole of the economy or even to different sectors of industries or technology because more detailed studies indicate that the ratio of technician to an engineer is a derived index of engineering employment in a country under existing conditions and pattern of industrial production and other forms of industrial activity, as well as on several other factors including the type and quality of technician and graduate engineering education. The ratio also depends on the manner in which the technician specialities are grouped, the level of industrial development of the country, and the stage of scientific development of the subject matter.

Educational Pattern:

10. As discussed in Chapter III, the pattern of educational preparation of the technician in India seems to be in a state of flux. There are three patterns in existence, viz. —the 3 yrs. diploma course, the 2 yrs. technicians course and the sandwich course. Out of this, the 3 yrs. course is most extensive being offered in 259 polytechnics with a total admission capacity of 47, 000 per year and an annual outturn of 17, 000 in 1965, which is expected to be doubled by 1975-76. The 2 yrs. technicians course is more specialised and is offered in 8 polytechnics— with an annual outturn of 660 in 1965, which is likely to increase to 1, 200 in 1975. The two sandwich courses are offered in 9 centres (6 mechanical, 3 chemical) with an annual admission capacity of 400 students (280 mechanical, 120 chemical).

11. The 3 yrs. and 2 yrs. courses are almost wholly institution based and generally academic and theoretical in content. Though a 2 yrs period of practical training in industry on completion of the institutional course is envisaged, in actual practice, since this training is neither planned, supervised nor controlled, most students do not go through it.

12. The facilities developed so far would give an out-turn of 35, 730 technicians annually by 1975-76 as against 24, 000 graduate engineers,

which gives a ratio of degree to diploma outturn of about 1:1.5.

13. Some of the major weaknesses of the existing pattern of diploma education are:

(a) Insufficient specialisation,

(b) Inadequate or almost no practical training other than the workshop practice or laboratory work included in the institutional course.

(c) Wherever the course is either of 2 yrs duration or heavily practical as in the case of the sandwich pattern (46 weeks institutional and 136 weeks practical), the technician is not prepared adequately for the 'theoretical' content of his job.

(d) Lack of involvement of industry in the design of the programme of pre-employment preparation of technicians and in its actual implementation.

14. Mention may also be made here of courses meant mostly for the development of technician level personnel organised by some large industrial undertakings particularly in specialities where technician courses have not developed adequately in polytechnics. The steel industry in particular, both in the public and private sectors, offer such courses for technicians in ferrous metallurgy by recruiting graduates in general science and training them over a period of 18 months to 3 years.

15. Looking at the educational pattern for technicians in industrially advanced countries, it would be found that there is no single pattern. It varies between wholly institution-based pattern and wholly industry-based pattern; from one type of diploma or certificate to two or more types; from wholly institutional courses to sandwich pattern of courses. But in all the patterns, there is consistency in respect of the following:

(a) the technician courses are narrower in speciality compared to the professional engineer/technologist courses.

(b) a balance between theory and practice is ingrained in the course either through a sandwich type of curricular pattern or by insisting on pre-participation industrial experience of 2-3 years duration.

(c) a balance in terms of time and subject allocation to technology (theory), practice (training) and humanities (supervision and administration, etc).

RECOMMENDATIONS

General:

16. To solve these problems, it is recommended that urgent steps be taken broadly in the following directions:

(a) Narrowing the major branches of engineering or technology into technician specialities for the pre-employment preparation of technicians.

(b) An overall normative approach to the development of facilities for technicians courses would be undesirable and impracticable. Therefore more detailed consultation with industry should be held for determining the volume of facilities required in each speciality and this can be done only after the specialities have been grouped.

(c) Improvement of the standards of educational preparation of technicians by:

(i) raising the minimum qualification for admission to technician courses to a pass in the Higher Secondary examination or its equivalent.

(ii) standardising the length of course—3 years (+ 1 year terminal training). Also introducing sandwich pattern of education and training within the 3 years.

(iii) improving the content of syllabus of the programme,

(iv) improving the calibre of teaching staff and facilities in polytechnics.

(d) Improvement of the standards of training by making more firm arrangements with industry, preferably by making the participants largely industry based and through more systematic supervision from the educational institutions. This would also require that polytechnics be located in the vicinity of those industries they serve.

(e) Giving a status to the technician courses so as to divert the heavy bias which exists among school-leavers for degree courses in engineering and technology.

(f) Similarly, giving consideration to the question of which type of institutions can offer these courses best, and what should be the identifying title given to these institutions.

17. The specific steps to be taken in these directions are discussed in the succeeding sections.

Speciality Grouping:

18. The study indicates that it is absolutely necessary to develop courses for technicians on narrower specialities than the broad branches of engineering/technology offered in degree level institutions. But it would not be desirable to transfer enbloc the speciality groupings for technician courses as they exist in any given industrially advanced country. As mentioned earlier, this grouping largely depends on various factors which are peculiar to the country or industry concerned. Moreover, because of our short industrial history, we cannot afford to create too narrow specialisations in technician courses which will result in problems of mobility for narrowly trained technicians.

19. It is therefore suggested that small Working Groups consisting of representatives of industry and educational institutions be constituted as soon as possible in the following major branches of engineering and technology, which will determine the manner of grouping of the technician specialities for their educational development:

(a) mechanical engineering
(b) civil engineering
(c) electrical engineering
(d) chemical and matallurgical engineering

Each of these would obviously cover more than one industry and therefore the Working Groups should have representatives from atleast the major industries concerned. Alternatively, these Groups could be set up with reference to major branches of industry, such as Fertilizers, Petroleum, Iron and Steel, Machine-tools, Textile, Electrical Machines and Power, etc., each Group, accordingly, covering more than one speciality of

technician study. When these Working Groups complete their work, more Working Groups in other major branches may be added, such as in

(a) Agriculture
(b) Mining
(c) Medicine and Public Health
(d) Other services

20. The main work of these Working Groups would be to identify the technician specialities for educational development, keeping in view:

(a) the stage of development of the major branch of engineering or technology and of the speciality in question.

(b) the need for specialised services in industry at the technician level on the one hand and the need to avoid problems of mobility if too narrow specialisation is attempted, considering the stage of development of Indian industry.

(c) the fact that the entry qualification for the course will be Higher Secondary pass, and the course will be of 3 years' duration, plus 1-year terminal training.

21. The issues to be considered by these Working Groups may be illustrated in the following examples:

Example 1

Within the broad branch of mechanical engineering there are a number of trades at one end as shown below:

Engineering Trades	Technician Speciality	Engineering Branch
Fitters Welders Turners Machinists Pattern Makers Moulders	(1) Machine shop technician (2) Foundry technician	Mechanical Engineer

It may be seen from the above, the technician who may be required to supervise workers in the above mentioned engineering trades, and translate the advice and instructions of the professional engineer may either be trained as a "machine shop technician" or as a "foundry technician" or as a "machine shop-cum-foundry technician". The Working Group will take into consideration the points mentioned in paragraph 20. above and recommended appropriate technician speciality or specialities to be developed.

Example 2.

In a metallurgical process industry where the skilled worker positions are filled by employees qualified not in the engineering trades, but in operational knowledge and skills, the major branch of engineering is "Metallurgical Engineering" as shown below.

Operative Occupations	Technicians Specialities	Branch of Engineering
Blower Operator Skip Operator Cast House Man O. H. Furnace Man	EITHER Ferrous Metallurgy Technician Non-Ferrous Metallurgy Technician	Metallurgical Engineering
	OR	
Rolling Mill Operator Reheating Furnace Operator, etc.	Extractive Metallurgy Technician Rolling and Shaping Metallurgy Technician Heating and Treatment Metallurgy Technician	
	OR	
	Blast Furnace Technician Melting Shop Technician Rolling Mill Technician.	

In the above branch of engineering/technology, it may be seen that there are atleast three ways in which the technician specialities can be arranged. It would be up to the Working Group to determine which of the three (or other) alternatives would be preferable.

Example 3

Similarly within the branch of Civil Engineering, the technician specialities may be determined as indicated below:

Trades	Technician Speciality	Branch of Engineering
Brick Layer	Building Construction Technician	Civil Engineering
Reinforcement binders	Roads and Highways construction Technician	
	Bridges and Dams Construction Technician	
Carpenter	Hydraulics Technician	
Painters	OR	
Plumbers	Construction Machinery Technician	
	Reinforcement and Shuttering Technician	
	Concrete Technician	
	Water Proofing Technicians, etc.	

22. It would also seem necessary that these speciality groupings be reviewed periodically, preferably every five years to determine whether a need has arisen to develop narrower specialisation and/or for revising standards. In addition, it would be necessary to assign to a suitable agency the task of locating the emergence of new specialities at the all-India (Govt. of India) level, and to examine the development plans of both the public and private sectors, with a view to advising the concerned authorities on the need for developing training facilities in new technician specialities or on enlarging or reducing facilities for existing specialities. It might also be necessary to set up permanent advisory bodies in these major branches of engineering/technology, similar to the Trade Committees set up for the implementation of the Apprenticeship Act, 1961, who will discuss these problems and suggest solutions.

Volume of Facilities:

23. As discussed earlier a simple overall engineer/technician ratio for the development of technician education/training facilities would be undesirable. This ratio will vary from industry to industry and on how the technician specialities are grouped. It may also vary over a period of time.

24. It is therefore recommended that each one of the Working Groups mentioned above also goes into the question of the criteria for assessment and volume of demand for technician training facilities in each speciality. For example, it would be fairly easy for the Metallurgy Group to say what would be the ratios of Blast Furnace Technicians to Steel Melting Technicians to Rolling Mill Technicians, in a total group of technicians for the Ferrous Metallurgy Industry. The same would apply to the Civil and other engineering branches.

25. Under the system of industry-education link being proposed in this memorandum (para 47) the possibility of over-production of technicians will be minimised.

Admission Qualifications:

26. At present, the minimum qualification for admission to the diploma courses in engineering is Matriculation or equivalent and for the 2-year technician course, it is Higher Secondary pass or equivalent. It is seen that the admission requirement for degree courses in engineering is a pass in Higher Secondary or equivalent, and for apprenticeship in various trades under the Apprenticeship Act the minimum requirement varies between Matriculation pass and two class below Matriculation depending on the trade. The question to be considered is whether the admission qualifications for technician courses should be nearer to those required for trade courses or those required for degree courses. The type of manual skilled workers required by industry are to come from the Apprenticeship programmes and industry-based operatives' training programmes. Some of these personnel, after years of experience and special employee-development programmes will grow to higher positions which may be at the "technician" levels. The development process may be assisted by the offer of "off-duty-hour" courses. But industry also requires persons who have a sound knowledge of the fundamentals of engineering or technology, who can organise and plan the work of skilled workers, and supervise their work. Also, industry requires technicians who can assist professional engineers or technologists in design, development and planning activities by taking over some of their simpler activities and performing them under their general guidance, with knowledge and understanding higher than those possessed by a draughtsman, tracer or skilled worker. Both these types of technicians require an educa-

tional preparation which is closer, in content and standards, to the degree courses. There has been a tendency throughout the world, as discussed in Chapter III, to give the technician a sound knowledge of fundamentals along with greater stress on practical work. Moreover, technologies involved in technician specialities are always in a state of transition, and unless a sound development of fundamentals is attempted in the technician education/training programmes, problems of adaptation to changing technology will arise during the working life of such personnel. Keeping these trends and requirements in view, it is proposed that the minimum admission qualification for the technician courses be laid down as a pass in Higher Secondary examination or its equivalent.

27. The Education Commission has recommended a ten-year pattern of schooling succeeded by a period of 2-years Higher Secondary education for the whole of India without any attempt to introduce specialisation during the first 10 years. This recommendation is at present under study in the Ministry of Education and by the State Governments and future structuring of technician courses—as also of professional degree courses in engineering and technology—will depend upon the decision taken on this recommendation. In case it is decided to introduce the 2-year Higher Secondary course, then the question arises whether to channel out the school-outturn after the 10 years into technician courses and impart the higher content of science, mathematics and applied science as a part of a long technician course, or to carry the school-outturn through a 2-year Higher Secondary education after which they may be channelled into the technician courses. It seems, that the 2-year Higher Secondary schooling will have atleast three streams, and provided the "technical" stream curriculum is properly designed, it would be preferable to draw students for the technician courses from the outturn of Higher Secondary schools. This will have some major advantages. A larger number of students completing 10 years of schooling can take terminal type courses in a variety of vocational and commercial trades. But for higher education, it would be preferable from the manpower angle, that the point of diversion from the general educational stream to specialised professional education is extended upwards or postponed thereby, inter alia, reducing the period of specialised educational preparation; this would facilitate a closer coordination between the outturn and the demands of the labour market as also make available the advantages of more precise manpower projections for a shorter period. Secondly, the continuation of the student-body through the 2-year Higher Secondary schooling would enable them to exercise a choice between the technological education channels depending on their attainments and vocational preferences that develop during this 2-year period, rather than be limited to a choice of the technician specialities only. This is quite important as this is the first

stage where the student is exercising a choice regarding the field of his higher education. Figure 1 gives the channelling process after the 10-year schooling as envisaged in this Memorandum.

28. A comment seems necessary regarding the specialisation process at the Higher Secondary stage. The 10-year school-outturn goes either into terminal types of courses or into higher education. The 2-year Higher Secondary courses are therefore not terminal in character. It is understood that the States which have introduced "technical education" at the Secondary stage, are facing difficulties in regard to the absorption of the outturn in industry. This problem will exist if these courses are treated to be terminal in character because the needs of industry at this level of educational preparation are quite different. The existing courses neither aimed at development of manual skill required of a craftsman nor provided the broad development of technical knowledge required of a technician. The 2-year Higher Secondary courses must therefore be treated as non-terminal courses.

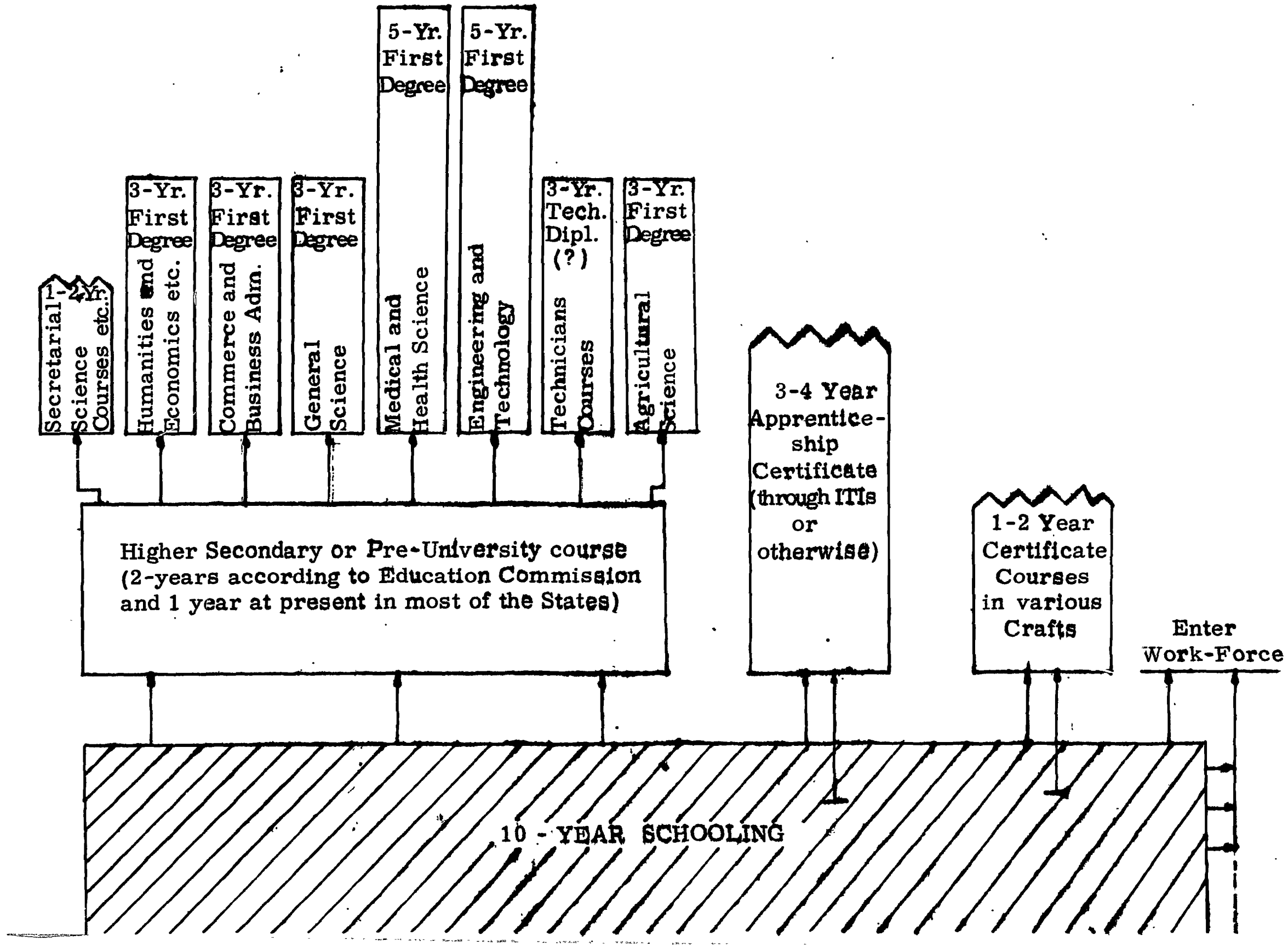
29. If this is accepted, then it is suggested that too many streams be not introduced at the Higher Secondary stage. The subjects of study may be grouped in such a way as to provide three major streams as follows:

(a) General Group
(b) Science Group
(c) Technical Group.

Moreover, just as choice of one elective subject decides the Science Group's channelling into the higher education stream (biology for medical education, physics or chemistry for engineering education, etc.), similarly choice of one elective subject in the Technical Group should determine the further channelling (workshop practice for degree and technician courses in engineering, cultivation and horticulture for degree and technician courses in agriculture, etc.). This leads to the advantage of narrowing down the choice considerably compared with as many as seven streams now offered in certain states so much so that Higher Secondary courses could also become part of institutions of higher or technician education.

30. The General Group would have the normal subjects in the humanities and commerce groups. The Science Group would have the normal general science subjects and mathematics. The Technical Group would also have general science and mathematics subjects, but there would be an element of manual work and introduction to applied science, engineering and technology. The outturn of the "technical" stream could go in for degree engineering/ technological courses provided they have attained a certain minimum proficiency in selected subjects, such as in mathematics and science for engineering degree courses.

FIG. 1: FLOW-CHART FROM 10-YEAR SCHOOLING UPWARDS



31. While suggesting that the entry qualifications for technician courses be Higher Secondary examination pass or equivalent (irrespective of whether it is going to be a 2-year period or less), it is to be remembered that the same qualifications apply to entrance into colleges of engineering and medicine, etc., for degree courses. The only distinction that is proposed to be made is that there should be no criteria for admission into technician courses which specifies a minimum "division" or "grade" in the higher secondary examination. In its place, it is recommended that a functional test by introduced as a qualifying test for entry into technician courses. This functional test should be specifically developed and tested over a period of time regarding its correlation with technician performance.

32. Whereas the pre-employment preparation of a technician through technician courses recommended in this document is meant for those who will enter industry as technicians, there would still be room within industry for the upgrading of skilled workers into technician ranks. Most of the skilled workers would have knowledge and skills in a specified trade or operative occupation. In these circumstances, it would be necessary to develop at a future date courses for such workers to enlarge their knowledge in the broader technician specialities so that they can fulfil their functions as technicians. For such skilled workers, the question of a minimum entrance level of general education, e.g., the Higher Secondary level, will not apply but their upgrading education and training would introduce the functional items of general education which are required for their proper performance as technician. This question is further dealt with in paragraph 54 below:

Length of Courses:

33. As discussed earlier, we have at present both the two-year and the three-year courses for technicians. It is recommended that the length of the technician pre-employment preparation after higher secondary be standardised. It is found that courses which are organised in technical institutions in India (excepting the 2-year technician course) have a total time requirement of 5,000-8,000 hours. (See Table X in Chapter III). The USSR technicum programme includes more than 6,000 hours. The 4-year sandwich course in mechanical engineering organised by some of the industrial enterprises in Calcutta is of more than 8,000 hours. If a proper balance is to be maintained between the study of fundamentals of science and technology and the intensive training in a selected technician speciality, then it seems desirable to aim at about 7,000 hours for both the institutional study as well as industrial training for future technician courses. This can only be obtained through a 4-year full time programme of training arranged on a sandwich pattern.

It is thus proposed that technician courses be organised as a 4-year programme after Higher Secondary or equivalent education for those who have taken technical and/or science subjects. Apart from the different objective of these courses and the emphasis in the programme of studies on applied technology, the technician courses will be distinguished from the engineering degree courses by the fact that, though both the courses take students at the post-higher secondary stage, the graduates of an engineering college would require 5 years of institutional work followed by training in industry for another one or two years, while a technician will require 4 years of education and training in industry, suitably integrated into the programme.

34. If it is assumed that during a 6-month period or blocks, the following number of hours will be available in institutional and industrial parts of the programme:

Institutional = 22 Weeks x 36 hours = 792 hours

Industrial = 24 Weeks x (40-48 hrs = 960 hours
(at 40 hours per week),

then the following alternative patterns of educational preparation may be considered:

PATTERN 1

Blocks 1 and 2: Institutional, with 1 day a week release to industry for general industrial exposure.

Block 3 : Industrial Training in Industry or related Institution for basic industrial skills acquaintance.

Point C : Exercises choice of speciality.

Block 4 : Institutional, with initiation on speciality.

Block 5 : Industrial Training, with initiation speciality.

Block 6 : Institutional, with emphasis on speciality.

Blocks 7 and 8: Industrial Training, may be coupled with employment; but 1 day a week release to Institution.

PATTERN 2

Blocks 1 and 3: Institutional, for general development in borad branch of engineering.

Blocks 2 and 4: Industrial, for general industrial exposure and for basic industrial skills acquaintance.

Point C : Expercises choice in the speciality.

Blocks 5 and 7: Institutional, with initiation and subsequently emphasis on the speciality.

Blocks 6 and 8: Industrial, with initiative and subsequently emphasis on the speciality.

35. In both these patterns it is seen that the total institutional and industrial hours are the same, amounting to a total of 7, 008 hours as follows:

		Hours
Institutional	=	3, 168
Industrial	=	3, 840
		7, 008

36. The basic points to be taken into consideration in making a selection between these and other alternatives are:

(a) Industry should be closely involved in the programme. In Pattern 1, industry is involved during the 1st year, to the extent of 1-day a week. In Pattern 2, industry's involvement starts at the end of the first 6-months.

(b) For the engineering degree courses, the first period is devoted to broad development in all branches of engineering (a mechanical engineer gets acquainted with civil and electrical engineering as well before he exercises a choice, if he has not done it initially). For technician courses, the first period has to be devoted to broad development in all specialities within the broad branch of engineering and technology (a machineshop technician gets acquainted with other specialities within the mechanical engineering speciality, e.g., I.C. Engines, foundry, tools and dies, etc. and to a minor extent with other branches of engineering which have a bearing on his work). The time made available in the course should be sufficient for this development.

(c) There should be adequate time made available both for instruction, drawing and design, and for practical work within the institutions and in industry so that detailed technological knowledge and skills in the speciality are developed in the students. This also means that the period when the choice of the speciality has to be exercised cannot be deferred too long towards the later half of the 3 or 4-year period.

(d) It would be preferable not to think of different lengths of courses for different technician specialities at present as shorter courses may result in narrower specialisation with possible resulting problems of mobility. In developing the curriculum, wherever a certain grouping of subjects leads to a shorter total length of course for the speciality, it would be preferable to enlarge the coverage of the speciality and retain a standard 4-year programme for all technician specialities.

37. It is therefore suggested that a few pilot syllabuses in completely unrelated fields be developed to find out whether four terms in the institution would enable the attainment of these objectives or could the period be reduced. In addition, further consultations be held with industry to find out which pattern would be more acceptable to them.

38. It may be noted that according to Pattern 1 the student/trainee leaves the institution by the end of the third year, whereas in Pattern 2, he leaves at the end of $3\frac{1}{2}$ years. The Board for examination of the student may be composed of experts drawn from both the institution and industry. Both these patterns would involve admissions at 6-monthly intervals.

Syllabus Content of the Programmes:

39. Since admission to technician courses would be from the level of the Higher Secondary students, the curricular content would be reduced to the extent science, mathematics and applied science subjects are covered in the Higher Secondary courses beyond the 10-year schooling period. The curriculum content of technicians courses should aim at the technician, on completion of his programme of education and training, going on to a job in industry with the least amount of further training in industry. For this purpose, he should have adequate knowledge of the chosen field of technology, an acquaintance with the manual skills involved in that particular speciality, and knowledge and skills in the supervisory responsibilities of a technician. The theory side of technological knowledge to be imparted in the programme should be broad based enough so that as and when technology changes in that speciality, he could adapt himself quickly either through "own-time" reading or through short specialised reorientation courses. On the other hand, his knowledge and understanding of technology in his speciality should be deep enough so that he can be really useful to industry and guide the skilled workers under him, in that area of speciality.

40. The course will, therefore, have to have a proper balance between theory and practice. This can be achieved by a sandwich pattern of education and training which would bring him close to practices in industry.

41. Table X in Chapter III gives a comparative picture of the curricula content of technician courses in India and in selected countries abroad. It will be seen from this comparison that the total number of hours utilised for technician programmes varies between 1,500 hours and 8,000 hours. This variation arises largely from the length of the courses. In the Indian pattern, the three-year diploma course has about 2,300 hours of instruction and 5,500 hours of training out of which about 4,400 hours are not actually taken up for training as commented upon earlier. On the other hand, the sandwich courses in India have about 2,000 hours of instruction and 6,000 hours of training which shows a very heavy bias of practical training and less attention to theoretical development. As against these patterns in India, it is seen that the technicums in the USSR provide for about 4,000 hours of instruction and 2,400 hours of training. In the Schools of Engineering in Germany, where the students are admitted after

an extensive period of apprenticeship in industry, there are 4, 500 instructional hours.

42. In Indian conditions, where most students have not been exposed to an industrial environment, it would be necessary to provide some time for this exposure before they are involved in practical work in their area of speciality. This means that industrial training will occupy an important place and consume more time than in most technician courses in advanced countries. It would also seem advisable to develop a curriculum pattern which provides for about 1, 000 hours of practical work in the selected speciality field within the institution. The distribution of total time among the various broad subject and activity areas may be as follows:

		% Time distribution
Institutional Work		45-55%
Consisting of:		
(a) Non-speciality Subjects	30- 35%	
(b) Speciality Subjects	10- 15%	
(c) Humanities and Supervision	10%	
Training		45-55%
Consisting of shop work in the Institution and training in industry depending on facilities developed in the institution.		100%

43. After the Working Groups suggested in paragraph 19 have determined the grouping of the technician specialities, it would be necessary to set up Syllabus Committees for each one of the specialities. These committees should develop:

(a) detailed syllabuses for each speciality,

(b) a list of equipment and physical facilities needed for institutions providing technician training in these specialities.

Teaching Staff:

44. Before a programme of revising the technician courses is introduced, it will be essential to initiate teacher training programmes for such technician courses. The teachers for these technician courses cannot be suitably drawn entirely from graduates in the broad fields of engineering firstly because the technicians specialities are narrow and therefore their understanding of these specialities would have to be deeper. Secondly, instructions in each one of the subjects will have to have a much greater practical orientation than those provided for in degree courses. It might, therefore, be necessary in the first place to make firm arrangements with industry for ensuring the services of a few practising engineers from the industrial establishments to undertake teaching assignments. Simultaneously steps may be taken to establish teacher training institutions or even summer courses for existing teachers in technician training institutions in cooperation with industry and other organisations.

45. It would also be necessary to review the remuneration system for teachers in these revised programmes so as to attract the best talent of the type needed for technician development.

Training Arrangements:

46. The practical bias to technician courses is to be imparted through a practical orientation in the instruction, as well as through more intensive, planned and supervised training programmes. As all physical facilities and equipment needed for imparting training cannot obviously be made available in the technician training institutions, arrangements will have to be made with industry for these training programmes. Therefore, the crux of the problem of training lies in the type of industry-institution collaboration that can be developed.

47. In order to develop this relationship the following arrangements are recommended:

(a) A major body of students in technician courses should be industry-sponsored, i.e., they should be recruited and placed by industry in the institutions or recruited by the institutions with the advice of representatives of industry. While a major body of students should be so placed by industry, there should also be an additional group not sponsored by industry, but selected by the institution, to meet the expanding requirements of new industrail establishments. The proportion between attached and unattached students may be determined on a 5-yearly basis for each technician speciality.

(b) The direct costs of developing and operating technician training programmes should be borne by Government so that industry does not feel that this is an additional burden being imposed on it. Till the period when the student exercises a choice in the technician speciality, no stipends may be paid (excepting merit scholarships arising from results of previous examinations, or stipends to scheduled caste students). Stipends at an agreed level may be paid by industry, after the selection of the technician speciality.

(c) Representatives from industry should be associated in the governing councils of each technician training institution. Moreover persons from industry should be drawn to the institutions for imparting instructions, and instructional staff from these institutions should have access to industry to get acquainted with practices and developments.

(d) Training programmes should be carefully planned jointly by industry and institution representatives, and closely supervised and controlled. No training period should be allotted to uncontrolled "training" of the observational type. Even in subjects where observational training is envisaged, it should involve a report writing by the student so that he takes an interest in his work and this should preferably be checked in the industry.

(e) Some shop facilities will have to be established within each technician training institution. These shops could take up work for industry wherever facilities can be spared. In a number of process types of technology, equipment and production facilities cannot be duplicated in these institutions, but testing and laboratory facilities could be developed in these institutions. Over and above training arrangements in industry, it is suggested that training arrangements could be made in other organisations and institutions such as:

Research laboratories
Proto-type factories
Training shops in industry, etc.

(f) The head of the institution should be selected, keeping in view that he has to play a key role in developing this contact

with industry. Thus he has to have a helpful attitude to industry, be able to develop confidence from industry and be sociable in nature.

(g) These institutions should be located in the vicinity of industries they serve.

(h) It should be possible to establish technician training institutions in localities which do not have manufacturing industry, by selecting technician specialities in agriculture, or agro-based industries, or construction industries (where training may be with P.W.D. or Rural Engineering Organisations).

Diploma or Degree:

48. At present there seems to be a heavy bias among school leavers for admission to degree courses in engineering and technology. Several recommendations have been made earlier by various bodies to improve the status given to the outturn of polytechnic institutions. Whereas the question of improving the status of the present type of products of polytechnic institutions may continue to receive attention, it is felt that with the proposed revision in the standards of admission and the curriculum content of the courses, it would seem desirable to consider a revision in the diploma which is given to these students.

49. Sir Willis Jackson had recommended in a Conference on Education and Training of Engineering Technicians in March 1963 that corporate members of professional engineering institutions should describe themselves as "chartered engineers" and the designation "engineer" might then be utilised for the highly qualified group, and "engineering technicians" serving as the title for the less well-qualified members of the technician body. Suggestions have been made in the United States to designate engineering technicians as "application engineers" or "liaison engineers" or "technologists". In a report of the IAMR, it had been suggested earlier that the award on completion of a technician course of an improved type should be given the status of an "Associate Degree". Other informal suggestions from time to time have referred to the award as a "Technician Degree", "Diploma in Technology", etc.

50. Since it is not being proposed that these courses be brought under the purview of universities, it would therefore be inappropriate to call these awards as fulfledged degrees. The alternatives seem to lie

between "Associate Degree" or "Higher Diploma" or "National Technician Diploma", or even "Diploma" with suitable endorsements about the period/ type of courses completed. Any of these terms if used should not be confusing in respect of other levels of technological qualifications. For example, the award given on completion of a period of apprenticeship under the Apprenticeship Act is termed National Apprenticeship Certificate.

Institutions for Technician Training:

51. Even though the revised programmes for technician training would provide for a higher technological content, it is not suggested that these programmes be taken up in engineering colleges alongside degree courses. The question of combining degree and diploma institutions has been discussed in the past, and it does not seem necessary to reopen this question again. The term "polytechnic" has been used in most cases for institutions engaged in technician education/training. It is suggested that this term be continued. However, since there would be a period of dual existence for polytechnics which may have changed over to the new system and those which may not have changed over, it is suggested that some form of nomenclature to distinguish between the two types during the transitional period be adopted. Consideration might also be given to introducing a conversion course for the products of existing polytechnics so that they can take advantage of the new technician courses, which would obviously be introduced at selected industrial centres.

52. It would be necessary to establish national standards in regard to the quality of education and training to be provided in this programme just as has been done in the apprenticeship programme. An inspection machinery as well as an examining body would also be necessary for this purpose.

53. In order to carefully work out the programme, it is necessary to try out the scheme in the field by selecting some States or some industries or some localities where there is an industrial concentration. The curriculum development, physical facilities required, assessment systems, nature of collaboration with industry and other matters can be worked out in detail, their implementation watched closely and modified in the light of experience before the programme is generally extended throughout the country.

54. Just as professional bodies, such as the Institution of Engineers, Institute of Chemical Engineers, Institute of Metals, etc., have been set up, which have the responsibility for conducting examinations for entry into associate membership and membership status of persons not having professional level qualifications in engineering and technology, it would be necessary to promote the establishment of technician associations either as independent corporate bodies or as subsidiary bodies to the professional institutions, which would cater to the technological interests of technician personnel. They would also be the promoting bodies for the development and standardisation of part-time courses for the advancement of craft and trade personnel into technician ranks, and conduct examinations for the same. Liaison of these corporate or sub-corporate bodies with the central organisation at government level will have to be maintained so that standards developed at national level are adopted for examinations conducted by these bodies for the promotion of technician personnel form craft levels.

55. After the programme of implementation gets into its stride, it would be necessary to review the requirements of engineers with degree qualifications as such as development at polytechnic level is likely to have a considerable impact on the employment pattern of degree holders in engineering in relation to the outturn of middle level technicians for industry.

CHAPTER II

THE MIDDLE LEVEL TECHNICIAN IN INDUSTRY

Definitions and Role of a Technician:

56. The object of this enquiry into technician manpower requirements in industry is to provide certain guide-lines for policy makers in regard to establishment of facilities for their education, training and development. The enquiry obviously covers the qualitative angle as well as the quantitative angle. In examining the qualitative aspects, one is drawn into such questions as the definition of a technician, the role that he plays in an industrial undertaking and the parameters of his tasks and responsibilities, and finally his educational and experience preparation. The last mentioned item will be examined and discussed in detail in Chapter III. In examining the quantitative aspects, it is to be recognised that there are two basic parameters along with other minor ones. The first is the technician/engineer ratio in industry and the second is the engineer/labour force ratio. The second parameter, obviously, has a strong influence on the technician/engineer ratio as a relatively high concentration of engineers in the labour force as a whole or in individual industries or undertakings, is likely to result in a relatively low technician/engineer ratio unless deliberate attempts have been made to keep the latter ratio high.

Who is a Technician:

57. Preliminary to examining other qualitative and quantitative criteria, it is necessary to examine "who is a technician" in industry. A detailed study of this subject reveals a wide variety of definitions: some have defined it in terms of job titles, some on the basis of job requirements, and duties, responsibilities and/or functions, some on the basis of place he occupies in the total job hierarchy, and others on the basis of educational levels.

58. A definition based on his status in the employment hierarchy is to be found in a part of a definition given in an UNESCO/ILO pamphlet on Technical and Vocational Education and Training:

> The term "technician" applies to persons working in occupations requiring knowledge of technology and relative sciences between that of a skilled worker and engineer/technologist.

59. A definition based on job-requirements, duties, responsibilities and functions may be found in the one adopted at a Conference of Representatives from the Engineering Societies of Western Europe and the United States (1953):

> An engineering technician is one who can apply in a responsible manner proven techniques which are commonly understood by those who are expert in a branch of engineering, or those techniques specially presented by professional engineers. Under general professional engineering direction, or following established engineering techniques, he is capable of carrying out duties which may be found among the list of examples set out below.
>
> In carrying out many of these duties, competent supervision of the work of skilled craftsman will be necessary. The techniques employed demand acquired experience and knowledge of a particular branch of engineering, combined with the ability to work out the details of a task in the light of well-established practice. An engineering technician requires an education and training sufficient to enable him to understand the reasons for and purposes of the operations for which he is responsible. The following duties are typical of those carried out by engineering technicians:
>
> Working on design and development of engineering plant and structures; erecting and commissioning of engineering equipment and structures; engineering drawing; estimating, inspecting, and testing engineering construction and equipment; use of surveying instruments; operating, maintaining and repairing engineering machinery, plant and engineering services and locating defects therein; activities connected with research and development, testing of materials and components, and sales engineering, servicing equipment, and advising consumers.

60. A definition which incorporates educational attainments may be found in the one adopted for U.K. in the Survey of Qualified Scientists, Engineers and Technologists and Technicians and other Technical Supporting Staff (1965)*:

> Technicians and other technical supporting staff occupy a position between that of the qualified scientist, engineer or techno-

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* Report on the 1965 Triennial Manpower Survey of Engineers, Technologists, Scientists and Technical Supporting Staff. Cmnd 3103. HMSO. London, page 48.

> logist on the one hand, and the skilled foreman or craftsman or operative on the other. Their education and specialised skills enable them to exercise technical judgement. By this is meant an understanding by reference to general principles, of the reasons for and the purposes of their work, rather than a reliance solely on established practices or accumulated skills.

61. A similar, but more descriptive of the level of attainment and curricula content may be found in Final Report of the Evaluation of Technical Institute Education conducted by the American Society for Engineering Education (1962)*.

> Engineering technology is concerned primarily with the application of established scientific and engineering knowledge and methods. Normally engineering technology is not concerned with the development of new principles and methods.
>
> Technical skills such as drafting are characteristic of engineering technology. Engineers graduated from scientifically oriented curricula, (See ASEE Report on the Evaluation of Engineering Education), may be expected to have acquired less of these skills than previously and the engineering technician will be expected to supply them.

The Engineers' Council for Professional Development (ECPD), adopting the recommendations in the above final Report revised their statement of objectives and Procedure for accreditation of engineering technology programmes. The following definition appears in that statement**:

> An engineering technician is one whose education and experience qualify him to work in those areas of engineering which require the application of established scientific and engineering knowledge and methods, combined with technical skills, in the support of engineering or scientific activities toward the accomplishment of engineering objectives.

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* Final Report of the Evaluation of Technical Institute Education, American Society of Engineering Education, 1962, page 12.

** 31st Annual Report, Engineers' Council for Professional Development, New York, 1964.

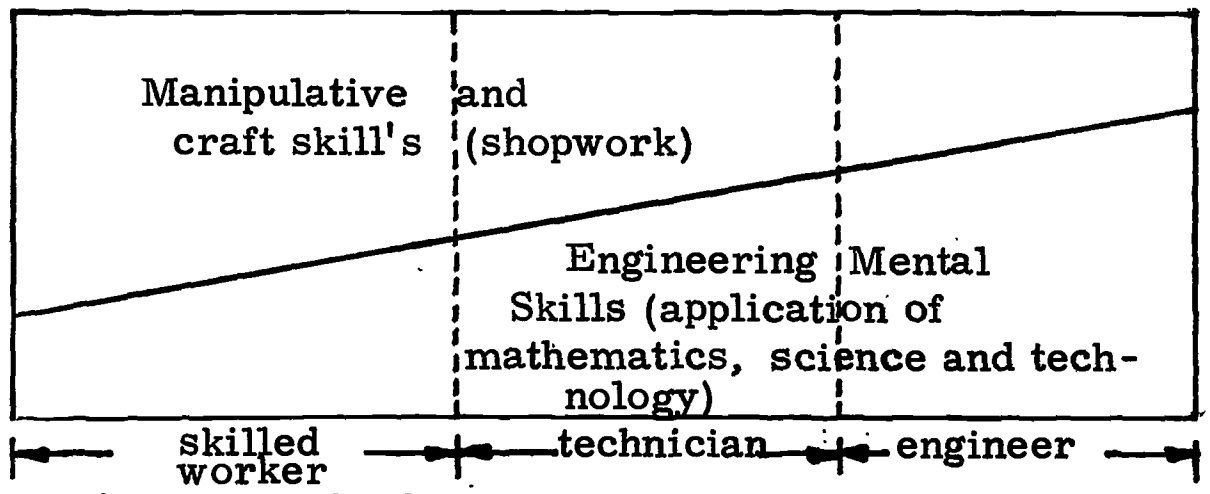
...If the term 'engineering technician' is restricted in its application to the upper portion of the range between the craftsman and the engineer, considerable future confusion can be avoided.

Diversity of Definitions:

62. It may be seen from the above that there is no single universally accepted description of the role of the middle level manpower at the technician level. One fact emerges, is that the differentiation of engineers (or technologists) on one hand with technicians on the other is not a simple matter. Secondly, the further study of quantitative requirements of technicians and particularly the engineer/technician ratio will depend largely on the definition or definitions used. If these persons are identified on the basis of educational levels— an engineer is a degree holder and a technician is a diploma holder in Indian conditions— the method flounders on those situations where a degree holder is under-utilised and fills the role of a technician or where a diploma holder actually performs the role of engineer. Further complication arises from the existence of engineering "practicals", who have neither degree or diploma qualifications, and where such personnel are classified as a separate category or in one of the two categories. The only rational answer can possibly be derived from a study of job descriptions. The Institute has designed a study on the Educational Content of Engineering Jobs to be taken up on a pilot basis, but such studies are time and resource consuming, and a solution to the existing problems of technician manpower in India cannot wait till the completion of such studies, though their results, when available, may help in refining the action taken or policies already determined.

Common Feature in Definitions:

63. Several conclusions however emerge from the above study of definitions. In the first place it is to be understood that the total content of engineering or technological tasks and responsibilities in an undertaking may be divided among different categories and levels of personnel in a variety of ways. If we distinguish between tasks requiring manipulative skills and those requiring engineering mental skills, then the graded spectrum may follow the pattern indicated at page 31 as between a skilled worker, a technician and an engineer.



This grouping can be further subdivided to distinguish between skilled and highly-skilled workers, between technician and laboratory assistants, between engineering specialists and professional engineers. But it will be evident that the contents of the tasks will vary depending on where the dividing lines are placed. The location of these demarcating lines depends on certain traditions in the country and industry concerned, the pattern of industrial production and other forms of industrial activity, the stage of scientific and technological development of the speciality, and several other factors.

64. Secondly, there are several common features in these definitions. They are as follows:

(a) A technician, in terms of knowledge and skills, is in between a skilled worker on the one hand and the engineer/technologist on the other. He is not however an extension of the skilled worker in terms of his skills, nor a diluted version of a professional engineer. He has a distinct place and role.

(b) The technicians position requires that by virtue of his education, training and experience, he understands the details of technological "knowhow" as laid down by the professional engineer, and translates the same into action as technological "do-how" and communicates to the skilled worker.

Characteristics of Technician Employment:

65. The purpose of studying employment characteristics, particularly the engineer/technician ratio and engineer/workforce ratio, is to facilitate the quantitative analysis of requirements of technicians. However, the main purpose for which the engineer/technician ratio is often discussed, is to assure that the engineer is not required by a

shortage of supporting personnel to divert his attention from duties requiring the full measure of his ability to tasks which could as easily be performed by persons with less education. This concern is expressed in order to avoid making engineering/technological education, top heavy.

Categories of Technicians;

66. As discussed earlier, the possibility of studying this pattern of employment is beset with many problems. The first of this is the definition as to his level. The second as to the categories to be included, for example should it include engineering technicians, research laboratory technicians, industrial laboratory technicians, draughtsmen, surveyors, and science technicians. Draftsmen and Surveyors could also be lumped with engineering technicians, but practices vary in this regard from country to country.

The Importance of the Technician/Engineer Ratio:

67. Studies of engineering and technician manpower in developed countries reveal that the ratio of technicians to engineers is an important issue for them as well. In his study of professional manpower in the USSR, Nicholas de Witt stated that in 1928 the Russians had used comparisons between Russia and German industries to decide that "a ratio of one professional engineer to two or three semi-professional technicians should be maintained in Soviet large-scale industry"*. Data presented in De Witt's study indicates that ratio of technicians to engineers now is between 2.5 and 3.0 in most of the broad industrial groups in USSR.

Country Variations:

68. The US Engineering Manpower Commission, in its report (1962) analysing the situation in the United States stated that "it is estimated that the desirable support for each professional technical person should be between one and four technical aides for one professional scientist or engineer engaged in scientific work. This variation depends to a large extent upon the type of work involved and the experience and status of the individual scientist, engineer, or technician. Yet recent evidence continues to show that the national ratio of technician to professional engineer remains approximately 0.7 to 1.0"** Figures compiled by the U.S. National Science Foundation# show that the ratio for U.S. industry

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* Education, Manpower and Economic Growth, Harbison and Myers, McGraw-Hill, New York, 1964, p. 86.

** Demand for Engineers, Engineering Manpower Commission, U.S.A., 1962.

Scientific and Technical Manpower Resources - 1962, National Science Foundation, 1964.

is 0.8 to 1.0, which is very close to the estimate of the Engineering Manpower Commission. In only a few industrial groups does the technician/engineer ratio exceed 1.0, and the highest ratio for any group is only 1.3.

Variations in Major Sectors of Industry:

69. The employment of engineers and technicians spreads over several sectors of the economy, depending upon, among other things, the level of economic development and the priorities assigned to the programmes of development in each of the sectors. Variations in the pattern of engineering manpower and in the technician/engineer ratio, by the major sectors of industry, are given in Table I. The data available for the USSR, India and United Kingdom have been adjusted to provide a comparison.

TABLE I

Technician/Engineer Ratio, by Sectors of Industry

(numbers in thousands)

Sectors of Industry	USSR (1959)			India (1961)			U.K. (1965)		
	Engineers	Technicians	Ratio of Col. (3) to Col (2)	Engineers	Technicians	Ratio of Col (6) to Col (5)	Engineers, Technologists and Scientists	Technicians	Ratio of Col (10) to Col. (9)
1	2	3	4	5	6	7	8	9	10
Mining and industry	443	1,025	2.4	19	19	1.0	101.6	404.1	4.0
Construction	82	166	2.0	10	9	0.9	7.2	46.4	6.4
Transport and communication	68	212	3.1	4	5	1.3	4.5	42.9	9.1
Others (teaching, research and services)	449	242	0.5	25	42	1.7	97.9	128.5	1.3
Total	1,042	1,645	1.6	58	75	1.3	211.2	621.9	2.9

Source: 1. Education and Professional Employment in the USSR, Nicholas de Witt, National Science Foundation, Washington, 1961, Tables VI-C-5. P at page 798 and VI-C-5-SP at page 802.

2. Stocktaking of Engineering Personnel, Institute of Applied Manpower Research, 1963, Table 44 at p. 75.

3. Report on the 1965 Triennial Manpower Survey of Engineers, Technologists, Scientists and Technical Supporting Staff, Cmnd. 3103, HMSO, London, 466, Table 4 at pages 56-57.

Variations within Manufacturing Industry:

70. That the ratio does vary from country to country and from one stage of economic development to another, is evident from the above data. But more interesting is data relating to variations from one manufacturing industry to another. Table II gives the density of employment of engineers, technologists, scientists, technicians and technical supporting staff in different manufacturing industries, as presented in the UK 1965 Triennial Manpower Survey*. The last two columns of the technician/engineer ratio and engineer/scientist ratio have been added for our purposes. It may be seen that there is a wide variation in the engineer/technician ratio as between industries. The average is 4.1 and the variations are between 1 to 6.

71. A further analysis of data from four countries to find out whether certain industrial groups consistently feature technician/engineer ratios significantly higher or lower than the national average is presented in Table III. The analysis indicates that the technician/engineer ratio is most often considerably higher than the average in textiles, machinery or engineering, vehicles, food and drinks and light manufacture. The most persuasive explanation for these patterns is that the industrial groups with the most complex technology would require a relatively high number of professional engineers and hence a low technician/engineer ratio, whereas groups with uncomplicated technology require a lower concentration of professional people and are characterised by a high technician/engineer ratio. The chemical industry and electrical equipment industry conform to the first pattern; textiles and light manufacturing to the second. Another possible explanation may be that process industries are now-a-days highly automated, thus requiring less technicians. But an attempt to establish a consistent theory is nullified by the fact that the wood and paper industries evidence a ratio only slightly higher than the average while heavy machinery industry, which suggests a more complex technology, has a ratio much higher than the average. Another way of examining the consistency of ratio

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* Report on the 1965 Triennial Manpower Survey of Engineers, Technologists, Scientists and Technical Supporting Staff, Committee on Manpower Resources for Science and Technology, HMSO, Cmnd. 3103, p. 60.

TABLE II

Density of employment of engineers, technologists and scientists, technicians and other technical supporting staff in U.K., by industry

Manufacturing industry

	1962		1965						
Industry of employer	Total employees (000's)	Engineers, technologists and Scientists (1) %	Total employees (000's)	Engineers and technologists (1) %	Scientists (1) %	Engineers, technologists and Scientists (1) %	Technicians (1) %	Technician / Engineer Ratio Col (8)÷(7) %	Engineer/ Scientist Ratio Col (7)÷(6) %
1	2	3	4	5	6	7	8	9	10
Food, drink and tobacco	724	0.4	714	0.2	0.4	0.6	1.8	3.0	0.5
Chemicals and allied industries	446	4.1	437	1.5	3.1	4.6	7.7	1.7	0.5
Excluding mineral oil refining	416	3.9	410	1.3	3.0	4.2	7.6	1.7	0.4
Mineral oil refining	30	6.4	27	4.8	4.5	9.2	10.1	1.1	1.0
Metal manufacture	595	1.0	602	1.0	0.2	1.2	4.5	3.8	5.0
Mechanical engineering	1,766	1.1	1,772	1.1	0.1	1.2	6.6	5.5	10.0
Electrical engineering & electronics	753	2.4	808	1.9	0.7	2.6	9.4	3.6	2.7
Electrical engineering	461	...	478	1.6	0.3	1.9	7.5	4.0	5.3
Electronics	292	...	330	2.4	1.2	3.6	12.2	3.4	2.0
Vehicles, etc.	953	1.2	948	1.1	0.1	1.2	7.1	5.9	10.1
of which-motor vehicles	431	0.5	504	0.5	...	0.6	3.6	6.0	...
Aircraft	287	2.5	254	2.2	0.5	2.7	16.2	6.0	4.4
Textiles clothing etc.	1,432	0.3	1,295	0.2	0.2	0.4	2.1	5.2	1.0
of which-cotton, flax and man-made fibres	273	0.8	233	0.5	0.5	1.1	3.8	3.5	1.0
Other manufacturers	1,463	0.4	1,493	0.3	0.2	0.5	2.4	4.8	1.5
Total	8,133	1.1	8,070	0.8	0.4	1.2	4.9	4.1	2.0

(1) As a percentage of total employees.

Note . As "technicians" cover all the technical staff supporting engineers, technologists and scientists, the ratio in Col. (9) of the Table is worked out between all technicians (Col. 8) and all qualified engineers, technologists and scientists (Col, 7).

TABLE III

Technician & Engineers in Broad Industrial Groups—4 Countries

INDUSTRIAL SECTOR	EMPLOYMENT FIGURES												RATIOS							
	Ireland (2)			U.K. (3)			U.S.A. (4)			USSR (5) (000's)			Technician/Engineer				Engineers/Labor Force			
	Engineers	Technicians	Labor force	Engineers	Technicians	Labor force	Engineers	Technicians	Labor force	Engineers	Technicians	Labor force	Ireland	U.K.	U.S.A.	USSR	Ireland	U.K.	U.S.A.	USSR
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Food, drink, tobacco	114	142	9776	3773	12724	714000	10400	13900		22.5	63.0	1713	1.3	3.4	1.3	2.8	.0117	.006	NA	.0131
Textiles	30	157	6228	4619	27741	1295000	4100	3700		NA	NA	NA	5.2	6.0	0.9	NA	.0048	.004	NA	NA
Chem., Paint	101	202	4743	17566	33749	437000	39200	43400		22.2	45.4	537	2.0	1.9	1.1	2.0	.0213	.046	NA	.0413
Electrical equip.	13	36	1961	18071	76107	808000	112000	84900		11.1	23.1	252	2.8	4.2	0.8	2.1	.0066	.026	NA	.0440
Machinery	NA	NA	NA	18275	117549	1772000	64000	63400		NA	NA	NA	NA	6.4	1.0	NA	NA	.012	NA	NA
Cement, bricks, glass pottery	28	98	3065	NA	NA	NA	7500	4700		14.7	41.4	1007	3.5	NA	0.6	2.8	.0091	NA	NA	.0145
Fabrication metal products	29	114	3388	6272	27138	602000	22700	24600		(Includes Machinery) 158.9	390.3	5055	3.9	4.3	1.1	2.5	.0086	.012	NA	.0314
Vehicles	6	20	1415	2254	18053	504000	20800	15900		NA	NA	NA	3.3	8.0	0.8	NA	.0042	.005	NA	NA
Wood, paper cork	21	52	2285	NA	NA	NA	8800	7600		15.4	44.4	2418	2.5	NA	0.9	2.9	.0092	NA	NA	.0064
Light manufacturing	NA	NA	NA	6565	35799	1493000	6600	7200		17.0	132.9	2804	NA	5.5	1.1	7.8	NA	.005	NA	.0061

Notes : A. See Appendix I Notes for definitions.

B. The figures for U.K. in this table are somewhat different from those in Table II, as adjustment has been made here for those engineers who are working in technician positions i.e. Table II is an analysis of engineers and technicians in employment by educational levels, and Table III is an analysis by positions in industry classified by fuctions.

N.A. — Not available.

variations by industrial sector is given in Table IV. It is likely that data of four countries constitute too small a sample, but unfortunately very few countries have undertaken surveys indicating the position industry by industry.

TABLE IV

Deviation of the Technician/Engineer Ratio in several Industrial Groups from the overall Industrial Ratio - Data from four Countries

Country	Ireland	U.K.	U.S.	U.S.S.R.	Mean Dev. of Industrial Group	% of Sample Deviations in Same Direction*
Ratio-Mfg. Industry	2.3	4.7	0.8	2.5		
Industrial Group	Deviation From Overall T/E Ratio					
Food, Drink, Tobacco	-1.0	-1.3	+0.5	+0.3	-0.4	50
Textiles	+2.9	+1.3	+0.1	-	+1.4	100
Chemicals Paint	-0.3	-2.8	+0.3	-0.5	-0.8	75
Electrical Equipment	+0.5	-0.5	0.0	-0.4	-0.1	67
Machinery		+1.7	+0.2		+1.0	100
Cement, Bricks Glass, Pottery	+1.2		-0.2	+0.3	+0.4	67
Fabrication, Metal Products	+1.6	-0.4	+0.3	0.0	+0.4	67
Vehicles	+1.0	+3.3	0.0		+1.4	100
Wood, Paper, Cork	+0.2		+0.1	+0.4	0.2	100
Light Manufact.		+0.8	+0.3	+5.3	+3.1	100

* * Zero Deviations are not included in the calculations of this column.

(See Notes in Appendix I).

72. In Table II, the engineer/scientist ratio does not show any relationship with the technician/engineer ratio according to the present pattern of employment in the United Kingdom. One would have assumed, that those industries which employ a large number of scientists compared to engineers, would employ a lesser number of technicians, but this trend is not discernible.

Size of Establishment Variations:

73. Another possible cause of variations in the technician/engineer ratio may be the size of establishments. Data on engineers and technicians, by size of establishment, obtained from the U.K. 1965 Survey*, are given in Table V. The last column on technician/engineer ratio has been added for our purposes. It is seen that though the technicians/workforce ratio consistently goes down with the reduction in size of establishment, the technician/engineer ratio consistently goes up with the reduction in size. This is more likely to be the global pattern and not confined to the United Kingdom only.

Variations due to Grouping of Specialities:

74. There also seem to exist considerable difference between countries in the manner in which a broad branch of engineering or technology is divided into technician specialities. A general examination of the pattern of division in USA and USSR of the broad branch of Mechanical Engineering seems to show the following:

U.S.A.**

(Includes Mechanical Engineering, Aeronautical Engineering and Textile Engineering)

Mechanical Engineering Technology
Mechanical Technology
Production and Machine Design
Tool Engineering Technology
Gas Engineering Technology
Diesel - Gas Turbine Technology
Internal Combustion Engineering
Automotive Technology

* Ibid., p. 61.

** Technician Diplomas: ASEE, Journal of Engineering Education, July - August, 1964.

TABLE V

Density of employment of engineers, technologists and scientists, technicians and other technical supporting staff in U.K. by size of establishment.

Size of establishment	Manufacturing Industry							
	1962		1965					
	Total employees (000's)	Engineers, technologists and scientists (1)	Total employees (000's)	Engineers and technologists (1)	Scientists (1)	Engineers technologists and scientists (1)	Technicians (1)	Technicians/Engineers etc. Ratio Col. (8)(÷7)
1	2	3	4	5	6	7	8	9
500 or more employees	3,964	1.58	4,059	1.17	0 55	1.72	6.28	2.7
200 — 499 employees	1,472	0.79	1,485	0.63	0 26	0.89	4.04	4.5
100 — 199 employees	809	0.54	777	0.48	0.22	0.70	3 54	5.1
50 — 99 employees	1,146	0.44	1,085	0.37	0.20	0.57	3.23	5.7
11 — 49 employees	741	0.42	663	0.40	0.19	0.59	3.16	5.4
Total establishments with 11 or more employees	8,133	1.07	8,070	0 83	0.39	1.22	4.94	4.0

(1) As a percentage of total employees.

(See notes under Table II)

Air-conditioning, heating and refrigeration
Airconditioning Design Technology
Aeronautical Technology
Aeronautical and Astronautical Engineering Technology
Aeronautical Drafting
Aircraft Maintenance
Textile Engineering Technology.

U.S.S.R.*

(Includes Speciality Group 5:
Machine Building and Instrument
Construction)

Technology of Machine Building, Metal-Cutting Tools and Instruments
Machinery and Technology of Casting Process
Machinery and Technology of Processing Metals under Pressure
Equipment and Technology of Welding Processes
Mechanical Equipment of Ferrous and Non-ferrous Plant
Mining Machinery
Peat Mining Machinery
Machinery and Equipment of Oil and Gas Fields
Agricultural Machinery
Lifting, Hoisting and Transportation Machinery and Equipment
Construction and Road Building Machinery
Machinery and Equipment
Railway Car Building
Automobiles and Tractors
Ship Building and Ship Repair
Printing Machinery
Machinery and Installations of Chemical Industry
Machinery and Installations of Food Industry
Machinery and Installations of Light and Textile Industries

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* Education and Professional Employment in the USSR, National Science Foundation, USA (Nicholas de Witt), pages 661-663 and 678.

Machinery and Equipment for Timber Industry and Forestry
Boiler Construction
Turbine Construction
Internal Combustion Engines
Ship Engines and Mechanisms
Ship Power Installations
Locomotive Building
Dynamics and Strength of Machine Design
Hydraulic Turbines and other Hydraulic Machinery
Refrigeration and Compressor Machinery and Installations
Optical Instruments
Instruments of Precision Mechanics
Geodesy Instruments
Cinematographic Equipment
Aircraft Construction
Aircraft Engines and Propulsion Devices
Aerodynamics and strength of air-crafts
Mechanical Equipment of Flight Devices
Tool and Die Engineering.

75. This comparison of the technician speciality subjects in one major branch of engineering in two different countries, indicates that a global study may reveal major differences. These differences in technician specialities do no doubt have their effect on the pattern of employment and on the technician/engineer ratio, but what this difference would be, is difficult to say without carrying the study much deeper. It seems that the U.S. pattern is based on technological subject divisions, but the USSR pattern is based on industry divisions.

76. The pattern of division will also have a bearing on the type and pattern of employment in the country or vice-versa. For example, in the field of Civil Engineering, the technician specialities could be grouped depending upon whether personnel is required for irrigation, highway and bridge construction, buildings and public works or public health and sanitation services. Alternatively, the grouping could be based on the activities of technicians such as surveying and estimating, supervision of construction, quality control or design and drawing. These groups would be different from the group of specialities based on technological subject divisions, viz., concrete technology, architectural design, technology of soils and foundations, etc.

Variation in Activity Groups:

77. Finally come the differences in the technician/engineer ratio arising out of differences in the type of activities or sectors of employment of technicians qualified in the same branch of engineering. For example, in Germany, it is stated that 42 per cent of technicians are employed in design work, 34 per cent in the planning and preparation of production and only 10 per cent in production. The occupational distribution of technicians is not available in any great detail for any country. However, an occupational survey* of the metallurgical technicians graduated from the Milwaukee School of Engineering (USA) revealed that as many as 36.7 per cent of the technicians were continuing education and 21.1 per cent were engaged in research work. Production occupations accounted for 21.1 per cent with another 9.6 per cent in testing and material evaluation. On the other hand, a study of the technician employment in an industry such as iron and steel industry in India gave an entirely different pattern**.

Departments	Per cent
Production and maintenance	24.7
Engineering services	20.3
Design	3.3
Construction	37.9
Others	13.8
	100.0

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* Evolution of a Mechanical Technology Programme, Edwin A. Meier, Technical Education News, McGraw-Hill Book Co., New York, Vol. XXII No. 1, 1962.

** Employment of engineers and diploma holders under Hindustan Steel Ltd., 1964.

Yet another pattern is indicated in the distribution of technicians in Denmark* by their broad occupational groups:

Occupational field	Percentage distribution of technicians, 1959
Laboratory technicians	45
Building construction technicians	14
Technical draughtsmen	18
Other technicians	23
	100

78. It would have been more than interesting if the above pattern could be compared with the employment of professional engineers and the variations in the ratio of technicians to engineer studied by these activity groups. But the data available for the purpose are extremely limited and incomplete. It may nevertheless be noted that there is a close relationship between the above pattern of technician employment and the corresponding educational preparation of the technicians, with particular reference to the inter se emphasis given in such preparation for the subject content and applied training in the technician speciality.

The Indian Structure:

79. Information is available relating to the employment of mechanical and electrical engineering personnel in India during 1964**. For the whole of the economy, the overall ratio of diploma holders to degree

* Ibid, page 145.

** Employment of Mechanical and Electrical Engineering Manpower in India, 1964, Institute of Applied Manpower Research, New Delhi, 1965.

holders in these two branches of engineering is 1.2 (See Table VI), while the ratio for different industrial groups varies between 0.73 and 1.71. The two problems mentioned earlier as constantly distorting the picture also obtain here. The first is that diploma holders may not be identical with technicians nor degree holders with professional engineers. The second is that although the Report identifies a large number of engineering "practicals", it does not count them as either engineers or technicians despite the fact that many are employed in higher grade positions where the duties are those of the engineer and not that of the technician. What is needed is a study of the engineer positions and technician positions in a given industry rather than the qualification of engineering/technological personnel in position. If all practicals are counted with diploma holders as technicians, then the technician/engineer ratio in different industrial sectors will range between 1.7 and 3.6 with the aggregate ratio at 2.2 as per calculations shown alongside. This method does not account for those degree holders working as technicians and those diploma holders working as engineers. This situation will exist in every country. The 1965 Manpower Survey of Engineers, Technicians, etc., in U.K.* showed that about 11% of all qualified engineers, technologists and scientists were employed in technician positions. The other alternative is to count all engineering personnel working in Grades V and VI as technicians. This gives an aggregate technician/engineer ratio of 1.1. The truth of the Indian situation in this field, assuredly must lie between the two aggregate ratios of 1.1 and 2.2, but because the second method is possibly closer to the real situation, the ratio is likely to lie between 1.3 and 1.6. Though the situation is not too discouraging, the difference with the average technician/engineer ratio as indicated for U.K. (for example, (See Table II), is quite large.

80. While Census data may be too general for this purpose, a sample drawn for two districts - Greater Bombay and Thana

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* Report on 1965 Triennial Manpower Survey of Engineers, Technologists, Scientists, and Technical Supporting Staff, Cmnd. 3103, HMSO, page 28.

TABLE VI

Adjustment of Data on Employment of Engineers and Technicians in India*

A. Calculation of Technician/Engineer Ratio from data as presented.

MEE degree holders - all grades:	24, 834
MEE diploma holders - all grades:	30, 668
Ratio diploma holders/degree holders:	30, 668/24, 834 = 1. 2

B. Calculation of Technician/Engineer Ratio, adjusted to include all Engineering Practicals as Technicians.

MEE practicals - all grades:	24, 167
MEE diploma holders - MEE practicals:	54, 835
Ratio diploma holders - practicals/ degree holders:	54, 835/24, 834 = 2. 2

C. Calculation of Technicians/Engineer Ratio, adjusted to classify all technical persons employed in Grades I to IV as engineers and all employed in Grades V and VI as technicians.

1. Employees, Grades I to IV

MEE degree holders:	20, 297
MEE diploma holders:	8, 674
MEE practicals:	9, 119
Total	38, 090

2. Employees, Grades V and VI

MEE degree holders:	4, 537
MEE diploma holders:	21, 994
MEE practicals:	15, 048
Total	41, 579

Ratio Technicians/Engineers: 41, 578/38, 090 = 1. 1

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* Data taken from "Demand and Supply of Engineering Manpower (1961-1975)", IAMR, New Delhi, 1965 and relate to mechanical and electrical engineering personnel.

(See Tables VII and VIII) shows rather a disturbing position in all sectors of economic activity, including "Manufacturing". For example in the manufacturing sector in Greater Bombay, there were 2,529 technical personnel below degree standard (Sr. No. 5) and 8,684 with technical degrees. (Sr. No. 8). The same ratio is seen in other sectors of economic activity and also in Thana district. What however this may mean, is that there are few courses at certificate and Diploma level in technological occupations and most personnel working in such posts are "practicals". On the other hand, degree courses in engineering and technology are more highly developed.

Recommended Ratios:

81. Several authorities from time to time have recommended the adoption of certain technician/engineer ratios as desirable. Professor Harbison of Princeton is representative of those who contend that in developing countries "engineers often outnumber technicians by as much as three to one although the desirable ratio may well be one to three"*. The Colombo Plan Bureau report on technician training stated that "a normal staffing pyramid for many kinds of engineering work (is) 5 technicians to each engineer"**. In addressing the USAID Seminar on Problem of Manpower Planning, Development, Utilisation, Distribution and Administration, F. Fletcher Wellemeyer stated that "in the U.S., at present there are only 7 technicians for every 10 engineers. Occupational analysts feel that the proper ratio should be between 2:1 and 5:1. Because of the increasing shortage of engineers, the demand for technicians will surely rise". Closer to home the Engineering Personnel Committee (1956) had suggested† that the ratio should be at least in the neighbourhood of 1:3 and that special efforts require to be made in order to fill the gap existing in India. According

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* Education, Manpower and Economic Growth, Harbison and Myers, McGraw-Hill, New York, 1964, p. 86.

** Report on Training Facilities at the Technician Level in South and South East Asia, Colombo Plan Bureau, Colombo, 1961, p. 19.

† Report of the Engineering Personnel Committee, Government of India, Planning Commission (1956), p. 25.

TABLE VII

(Education and Employment)

Employed persons according to level of education in non-agricultural industry - Greater Bombay (all urban)

Sl. No.	Persons	0 and 1 Agri. Live-stock, Fore-stry, Mining Quarrying, etc. (excluding cultivators and agricultural labourer)	2 and 3 Manufac-turing (including household industry)	4 Cons-truction	6 Trade and Comm-erce	7 Trans-port, Stor-age and Commu-nication	5, 8 and 9 Electri-city, Gas, Water supply, other services and Misc. activities
1.	Illiterate	16,747	224,829	25,491	67,768	61,479	148,103
2.	Literate	4,973	186,549	8,286	78,233	41,688	97,810
3.	Upto Matric	2,670	194,094	6,481	94,594	44,134	87,290
4.	Matric	541	62,128	2,998	48,664	34,521	54,264
5.	Technical and below degree	13	2,529	337	348	544	1,757
6.	Non-tech. and below degree	23	498	64	424	142	1,674
7.	University degree other than tech.	78	9,261	375	11,431	4,908	20,132
8.	Technical degree	86	8,684	874	2,345	1,844	15,163

Data from Census of India, 1961.

Table B. III in Census and Table-2 (h) in Bombay Labour Market Survey Report.

TABLE VIII

(Education and Employment)

Employed persons according to level of education in non-agricultural industry–Thana Labour Market Area*

Sl. No.	Persons	0 and 1 Agri. Live-stock, Fore-stry, Mining, Quarrying, etc. (exclu-ding cultiva-tors and agri-cultural labourer)	2 and 3 Manufac-turing (includ-ing hou-sehold industry)	4 Cons-truc-tion	6 Trade and Comm-erce	7 Trans-port, Stor-age and Comm-unica-tion	5, 8, and 9 Electricity, Gas, Water supply, other ser-vices and Misc. ac-tivities
1.	Illiterate	3,948	19,110	1,963	6,980	4,241	13,051
2.	Literate	1,182	14,886	586	6,789	2,268	5,699
3.	Upto Matric	1,290	23,391	699	6,816	5,077	10,989
4.	Matric	145	6,931	277	2,739	6,023	8,201
5.	Technical and below degree	1	213	38	16	74	253
6.	Non-tech. and below degree	-	22	-	9	7	514
7.	University degree other than tech.	10	587	13	378	594	1,699
8.	Technical degree	7	716	28	67	124	1,242

* These figures are for Urban areas in Thana District.

Data from Census of India Table B. III in Census and Table 2(i) in Bombay Labour Market Survey Report.

to Sir Willis Jackson, * the optimum number of technicians for every engineer in India could be larger and not smaller, than that in England or Germany, keeping in view the fact that, for some time to come, most of the development activities in India would be in the form of incorporating and applying the products of technology developed in other countries. L. S. Chandrakant, of the Ministry of Education, in a report** on technical education, more conservatively states that "it is generally agreed that the right proportion of engineers to technicians is 1:2..... To this end, readjustment should be made deliberately in the demand as well as the supply of graduates and diploma holders, and a proportion of 1 to 2 should be aimed at, by the end of the Fifth Plan". The Education Commission† has recommended the reaching of an overall ratio of engineers to technicians of 1:2. 5 by 1975 and 1:3 or 1:4 by 1986.

Engineer/Labour Force Ratio:

82. Similarly, looking at the engineer/labour force ratio, George Payne,‡ reported that "British industry has traditionally leaned heavily on technician and craftsman, of whom it has maintained a well-rounded corps, the product of an elaborate system of apprentice training rather than formal academic education". He illustrates this point with figures: "In Britain 0. 8% of total employment by industry in 1956 were scientists and engineers; in US in 1954, 2. 7% were". Correspondingly we expect the technician/engineer ratio to be higher in UK than in USA. The inverse relationship between the two ratios is supported by statistics in Sweden where there are 1. 3 engineers for every 100 members of the labour force and only 0. 8 technicians per engineer. In Ireland the lower engineer/labour force ratio of 0. 01 is paired with a technician/

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* "Development of Technical Education in India— a brief report on the discussions with Sir Willis Jackson, held in the Planning Commission on January 19, 1966," Govt. of India, Planning Commission, pp. 2-3.

** Fourth Five-Year Plan of Technical Education— A Draft Report, L. S. Chandrakant, Ministry of Education, New Delhi, Nov. 1965, p. 12.

† Report of the Education Commission, (1964-66), Govt. of India, Ministry of Education, p. 373.

‡ Britain's Scientific and Technological Manpower, George L. Payne, Stanford University Press, Stanford, 1960, p. 65.

engineer ratio of 2.5. These may be seen in Table IX. The case of USSR is not really an exception even though both ratios are high: 0.017 engineer per labour force and 2.5 technicians per engineer. The USSR directed its policy to making both ratios high. However, Denmark with an engineer/labour force ratio of only 0.008 and a technician/engineer ratio of only 0.7, suggests that generalisation is still difficult and that use of two parameters is no more scientific than the use of one. A serious reservation about generalising on the basis of the technician/engineer ratio and the engineer/labour force ratio used in tandem is that a low technician/engineer ratio coupled with a high engineer/labour force ratio probably indicates that engineers are not being utilised effectively and that many of them are actually serving as technicians.

Conclusions on Employment Pattern:

83. The study on these two ratios indicates the danger of using inter-country comparisons on technician/engineer ratio and engineer/work force ratio for Indian planning. Firstly there are wide variations in these ratios and the question arises which country's example to follow. The evidence becomes more confusing when we learn that the first ratio is 0.8 in Denmark and Sweden, 1.6 in Belgium and France and 2.3 in Ireland (See Table IX). The existence of values less than one, indicates that the reverse situation in regard to desirable or normative pattern of technicians to engineers ratio does exist. Secondly, these ratios not only vary between countries, industries, occupational activities and sizes of establishments, but these ratios are vitiated by differences in definitions and conditioned by tradition, stage of development of the economy, the stage of development of the technology and by the manner of grouping of the technician specialities. The wide variations in ratios render impossible the development planner's job of determining a statistical trend which could serve as a target for this country's manpower programmes. Where definitional parameters are consistent, the difference in these ratios for the economy as a whole and for each sector of industrial activity, might indicate the existence of a situation requiring corrective action, which it does in the case of India, but the use of such ratios have major limitations for educational planning. Each country has to develop its own pattern based on the variable conditions discussed above and this is what is needed in India now.

TABLE IX

Technicians and Engineers in Manufacturing Industry in various countries

Country	Univ. Trained Eng.	Other Trained Eng.	Total Trained Eng.	Tech.	Tech./Tot. Eng.	Labour Force	Tot. Eng./ Labour Force
Belgium (1) (1959)‡	48.4*	50.1*	98.5*	143.6*	1.5	1,566,000	.0098
Denmark (1) (1959)‡	46.9*	37.1*	84.0*	53.5*	0.7		.0084
France (1) (1959)‡	NA	NA	109.7*	176.2	1.6	6,300,000	.0110
Ireland (2) (1964)	NA	NA	378.0**	871**	2.3	35,601**	.0106
Sweden (1) (1960)‡	42*	89*	131.0*	105*	0.8	NA	.0131
Switzerland (1) (1955)‡	NA	NA	14,440.0	17,100	1.2	NA	NA
U.K. (1965) (3)	NA	NA	84,529.0	398,374	4.7	NA	NA
U.S.A. (1962) (4)	NA	NA	480,300.0	379,500	0.8	NA	NA
U.S.S.R. (1959) (5)	NA	NA	343,300.0	860,900	2.5	20,205,000	.0169

N.A. = Not Available.

* Number per 10,000 in the working force.

** Number from sample of 120 firms only.

‡ The data for these countries includes the number of engineers and technicians in non-manufacturing industry.

(See Notes in Appendix I).

This conclusion is also borne out by another recent study based on an analysis of Employment Exchange statistics*. It shows that though the ratios of diploma/degree outturn from engineering educational institutions ranged between 1.8 to 2.5, these ratios among job seekers in the live registers of Employment Exchanges ranged between 6.3 to 7.3 as follows:

Subject of Study	No. of applicants on the live register at the end of June, 1966			Outturn during the year 1965-66		
	Graduate	Diploma holders	Proportion of Col. 3 to Col. 2	Graduate	Diploma holders	Proportion of Col. 6 to Col. 5
1	2	3	4	5	6	7
1. Civil	761	5,323	7.0	2,515	6,219	2.5
2. Mechanical	749	5,432	7.3	3,136	5,931	1.9
3. Electrical	587	3,677	6.3	2,320	4,279	1.8

This shows that even though a desirable ratio in the output of diploma and degree institutions may be achieved as per recommendations of planning bodies, and in fact the ratio recommended for 1975 has already been achieved in the field of civil engineering, industry has not been able to use the higher outturn of diploma holders and therefore a larger volume of diploma holders are accumulating in the live registers of Employment Exchanges. The problem may therefore be located in any one or all of the following:

(a) There is some thing intrinsically wrong in the educational specialisation of diploma holders,

(b) The quality of the final product from polytechnic institutions is not acceptable to industry,

(c) The employment structure in industry is such that it is unable to absorb the larger outturn of diploma holders.

The probable causes listed in (a) and (b) above may result in cause (c) or the latter may be independently caused. Therefore, it is considered to be a risky proposition to accept any pre-determined overall ratios of techniques to engineers for development of education facilities without taking into account the other factors discussed in this paragraph.

* A study on the supply of and demand for engineering degree and diploma holders - An analysis of Employment Exchange statistics, Directorate General of Employment and Training, Govt. of India, 1967, table 4, page 9.

CHAPTER III

TECHNICIAN EDUCATION AND TRAINING

PRESENT PATTERN IN INDIA

Technician Education at the Diploma Level:

84. The main educational programme for engineering technicians in India is offered in the polytechnics which conduct three-year diploma courses in different branches of engineering and technology with matriculation as the minimum admission requirement. These courses are wholly institution-based and generally academic and theoretical in content and method. The first year of the course is common to all the branches of engineering and includes a study of civil, mechanical and electrical engineering subjects. There is no specialisation in any particular technician speciality within the concerned branch of engineering and the courses lead to a general diploma in civil/mechanical/electrical engineering, etc. The courses provide for about 35,000 hours of instruction and practical work in the institution. Even though a course of practical training in industry for a period of 2 years is envisaged in the scheme for these courses, in actual practice, this is not undertaken for various reasons including the limited facilities for such practical training. Facilities exist for these diploma courses in 259 polytechnics in all the States and most of the Union Territories with a provision for an annual admission of about 47,000 students. The annual outturn in 1965 was of the order of 17,000 which is expected to be doubled by 1975-76*.

Two-year Technician Course:

85. In addition, facilities are available for 1,710 annual admissions created under a special programme for two-year 'technician' courses in engineering. These courses require Higher Secondary education as the minimum qualification for admission and are designed to train specialists at the middle level in specified sub-branches of engineering such as machine-shop and tool room technology, electronics, electrical technology, mechanical design technology, automobile and diesel technology, and civil

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* Report of the Technical Manpower Assessment Committee, Govt. of India, Ministry of Education, December 1966, para 23.

construction technology, etc. The course includes about 270 hours of instruction in the technical speciality and 1,300 hours of training in workshops. The total duration of the course is two years with 3,040 contact hours. It was expected that technical institutions would use these courses as a guide and that "progressively all the polytechnics in the country should change over to courses with the new approach, namely, preparation of specialists"*. At present, however, only 8 polytechnics offer these technician speciality courses in civil, mechanical and electrical engineering branches. The annual outturn from these courses was 660 technicians in 1965 which is likely to increase to 1,200 in 1975**.

Sandwich Course in Mechanical Engineering:

86. Efforts have also been made to formulate sandwich courses at the diploma level for training supervisory personnel for specific industry. The scheme for training of foremen and supervisors for mechanical engineering industry was formulated by the Ministry of Education in 1957†. This scheme recognised that the products from the three-year diploma courses in engineering/technology lacked practical experience and were not therefore able to meet the specific needs of supervisory positions in industry. It was also noted that as the duties and responsibilities of these supervisors in industry were well-defined, it was not necessary to provide for the same broad-base in the institutional study as in the conventional diploma courses. The sandwich course was accordingly proposed to include institutional studies of 46 weeks and industrial apprenticeship for 138 weeks within a period of 4 years. The course includes a study of the basic principles of all branches of engineering, humanities and mathematics and laboratory work for 1,970 hours. No workshop training in the institution is envisaged. The inplant training provides for advanced training in any one particular shop of the industry for 12 weeks and training in foremanship and supervision for 320 hours on a part-time basis. No specialisation was

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* Minutes of the 34th (special) meeting of the Co-ordination Committee of the All India Council for Technical Education, held on January, 12, 1963. (Item No. 6).

** Report of the Technical Manpower Assessment Committee, Govt. of India, Ministry of Education, December, 1966.

† Training of Foremen and Supervisors for Mechanical Engineering Industry--Scheme for Sandwich Courses for National Certificate in Mechanical Engineering, Ministry of Education.

envisaged other than the advanced workshop training. This scheme has been implemented so far at 6 centres with an annual admission capacity of 280 students for mechanical engineering courses.

Chemical Operators' Training Scheme:

87. The other sandwich course is for the training of chemical operators and supervisors for chemical industry for which a scheme was formulated in 1959. The duration of the course is 4 years with factory training forming a major part of the third and fourth years of the course. The minimum admission requirement is general education up to the age of 14 years. For those who have completed Matriculation examination, the course is of 3 years' duration with 2,460 institutional hours and 50 weeks of factory training. The course includes a study of humanities and languages, science and mathematics, elementary electrical and mechanical engineering, workshop training and drawing. The speciality training in chemical operations and processes would include 540 hours of instruction in the Institute. The practical training is required to be as broad-based as possible and so designed that a student gains a complete working knowledge of chemical engineering operations, processes, instrumentation and control with emphasis on plant operation and maintenance. By the end of the Third Plan, there were only 3 centres offering these courses with an annual admission capacity for 120 students.

Multitude of patterns of diploma holders:

88. It would be observed that different experiments have been tried in the diploma courses to integrate theoretical instruction with industrial training, either during the course or after the institutional programme. The contents have been ranging between the general broadbased engineering courses for National Certificate - which has been described as diluted version of degree courses-and the specialised technician courses with a modicum of training in a technician speciality, or from the sandwich course covering the whole field of mechanical engineering to the specialised sandwich course for the chemical industry. The duration of the courses also varies from 4 years for the sandwich courses to 2 years for the "technician" courses. The minimum entrance qualifications range from general education upto the age of 14 years for the chemical operators' training to Higher Secondary education for the "technician" courses. This situation of flux with a multitude of diploma course in engineering and technology has, in no small measure, confused the industry about the qualitative level of the diploma holders, passing out of the polytechnics.

At the same time, it cannot be said that any of these courses has been sufficiently oriented towards the real needs of an expanding industry or towards developing technology.

Lack of Involvement by Industry:

89. This is partly because there has not been sufficient involvement of industry in the formulation or implementation of these programmes. The progress of the practical training of diploma holders and graduates is an instance in point. * There are at present only 3,000 places offered for such training as against a combined outturn of 15,000 graduates and diploma holders in mechanical and electrical engineering branches alone. Another probable reason is that all the technician training courses are institution-based, industry being associated as and when necessary for the inplant training. One of the consequences of this lack of mutual exchange between educational institutions and industry has been the imbalance between the real needs of an industry and the educational and training attainments of diploma holders. On the one hand, modern industrial units require specialists for their various departments with intensive knowledge and study in relatively narrow specialities under the major branches of engineering, for example, a machineshop technician. The educational courses, on the other hand, offer a broad-based course covering, for instance, for a mechanical engineering diploma holder, not only the various specialities of the chosen branch of study but also the theory and practice, including drawing exercises wherever necessary, of civil and electrical engineering branches as well. This imbalance together with limitations of organising practical training in industries had tended to minimise the utility of the present diploma courses from the point of view of the needs of the industry. Whatever may be said of the technician/engineer ratio in Indian industry, it conceals qualitative deficiencies in both categories and more so in the technician category.

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* In view of the unsatisfactory position, the All India Council for Technical Education recommended the setting up of an Expert Committee "to examine the entire question of practical training of graduates and diploma holders and formulate a detailed scheme for the organisation of apprenticeship in industry". The Committee is yet to submit its Report. (Proceedings of the 16th meeting held on December 8, 1963, para 60).

Training Programmes of Industry for Technician Jobs:

90. An emerging trend of the industries organising special training programmes for meeting their demand for technicians may be cited here. In the case of the iron and steel industry, a scheme for training operatives for production shops has been started under TISCO and the Hindustan Steel*. The objective of the schemes is to train science graduates for senior positions on the operation side of production departments. The course comprises of an initial period of general training followed by specialised training. The probationers are given specific position training and opportunities on-the-job "to develop proper attitude and to acquire skills and knowledge on the job by actual work experience and assisted by existing operation personnel". The TISCO scheme is of 3-year duration and the Hindustan Steel Scheme is of 18-month duration.

91. Similarly a few mechanical engineering industries in and around Calcutta have organised sandwich courses for mechanical engineering technicians in association with the Calcutta Technical School. The course provides for 3,800 institutional hours and 4,600 hours of training in industry. The minimum admission qualification is Higher Secondary examination pass with suitable subjects. The course provides for 400 hours of instruction and about 1,100 hours of industrial training pertaining to a technician speciality such as production engineering, steel melting, etc.

Need for a Comprehensive Review:

92. It would be relevant here to note that the Education Commission** in its recommendations relating to technician education, has suggested the following tasks:

- an immediate increase in technician training facilities so as to alter the existing "top heavy pyramid of trained manpower";

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* Technical Probationer Scheme for TISCO operation personnel and Senior Operatives Scheme of Hindustan Steel Ltd.

** Report of the Education Commission (1964-66), Govt. of India, Ministry of Education, pp.372-375.

- improvement of the overall ratio of engineers to technicians to 1:2.5 by 1975 and 1:3 or 1:4 by 1986;

- reducing student wastage in these courses which is estimated to range between 35.6 and 50 per cent;

- finding out the clusters of skills/responsibilities for technician specialities;

- making the diploma training more practical by including industrial experience particularly in the last year;

- location of polytechnic institutions near industrial centres rather than on an arbitrary rule of one per district;

- improving training of teachers of polytechnics;

- improving science and mathematics teaching in polytechnics and inclusion of subjects on supervision; and

- introducing sandwich type courses for existing workers in industry to grow to technician positions.

TECHNICIAN TRAINING IN OTHER COUNTRIES

93. An attempt is made here to indicate briefly the salient features of the education and training of engineering technicians in the United States, the USSR, Federal Republic of Germany and the United Kingdom. This is done in relation to the curricular patterns and specialisation of technician courses and the partnership between industry and technical institutions. Before proceeding further, it would be desirable to note the somewhat different historical background in these countries in the field of technical education in general and of technician training in particular. It is well-known that in the U.K., U.S.A. and Germany there has been an age-old tradition of industry being primarily responsible for the training of skilled workers and technicians. This has resulted in the predominance of industry-based as well as part-time programmes, even though the educational system subsequently recognised the need to include courses in technical subjects. Consequently, as many as 60-70 per cent of the technicians in UK and Germany did not go through technical schools meant for the training of technicians.

Further, children in these countries grow up in an atmosphere of science and technology with the use of electrical and electronic gadgets and appliances as a part of their general living. There is also a flexible educational system which gives a liberal choice of subject groups for the students to choose and which also enables the students to complete the courses at a pace determined by the capacity of the students. On the other hand, the USSR pattern, with state ownership of all industries and the highly centralised planning, presents a completely different picture. Most of their technicians have completed a programme of formal education and training in a semiprofessional school with orientation towards the specific needs of the local industry. Such differences have tended to influence the choice and details of a system for education and training of technical manpower in these and other countries*, and may be taken note of.

Programmes in USA:

94. There has recently been a clearer appreciation of the role and duties of an engineering technician in USA, as a result of the efforts of the American Society of Engineering Education. The Engineers' Council for Professional Development (ECPD) has also taken over the responsibility for accreditation of engineering technician programme. According to the ECPD, an engineering technology curriculum should include, in addition to a study of basic sciences and socio-humanistic subjects, at least the equivalent of one academic year of technical courses. A high degree of specialisation is favoured for these programmes with field-orientation rather than job-orientation. The foundation for and sufficient emphasis upon technical speciality courses are considered the essence of engineering technology programmes. Curricula of a vocational pattern or any job-oriented specialised pattern would not qualify for accreditation. An examination of the catalogues of a number of well-known technical institutes, offering accredited programmes in engineering technology, indicates that there are about 2,000-2,400 contact hours which are distributed among the subject content as follows:

Content	Per cent
Physical science	18
Mathematics	12

* For instance, according to an OECD survey (1961), 29 per cent of the French and 25 per cent of the Italian technicians were self-taught.

General studies	18
Technical speciality	52

These courses can be availed of as a cooperative educational project so that work experience is suitably combined with the engineering technology programme.

95. The technical institute programme is of two years in duration and the minimum entrance requirements are secondary school graduation, one year of algebra and, in certain States, passing an Engineering and Physical Science Aptitude Test. The technical institutes in Connecticut*, offers this programme on the basis of three 13-week terms per year. At the end of the second term of the first year, the student makes his final choice of curriculum and starts to specialise. Each term, the student receives 28 hours of class-room and laboratory instruction and spends a minimum of another 28-hours of special homework assignments. The curricula provide a thorough background in engineering fundamentals and specialisation in a major field. Among the 143 engineering technology programmes accredited by the ECPD are Civil Technology, Drafting and Design Technology, Fluid Power Engineering Technology, Internal Combustion Engineering Technology, Aeronautical and Space Engineering Technology, Electronic Technology, Mechanical Technology, Tool Technology and Chemical Technology.

Programmes in the USSR:

96. In the USSR** the majority of semi-professional jobs are reserved for persons with formal specialised training and such training is offered in secondary specialised educational establishments. These schools, called "technicums", admit students either after 7-8 years of general education for a 4-year 4 months programme or after the 10 years school for a 2-year 4 months programme. Admission is made

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* Engineering Technicians for Connecticut Industry, Carmelo S. Greco, a paper presented at the Fourth Annual Conference on Technical Education, West Palm Beach, 1962, as reported in the Technical Education News, Vol. XXII No. 2, November, 1962.

** Education and Professional Employment in the USSR, Nicholas de Witt, National Science Foundation, Washington, 1961.

after an entrance examination and 80% of places are reserved for those with employment experience. First priority is given to persons who are assigned to full time study by various enterprises. The aim of instruction in these schools is to train the students in skills and knowledge that will qualify them for employment on the intermediate levels of professional competence. Every semi-professional school graduate must have a skilled worker's qualification in addition to his semi-professional speciality. The training is, therefore, highly intensive in the speciality concerned and in its practical orientation.

97. According to a recent curricular reorganisation, the courses are being modified so as to incorporate employment experience with the programme. Thus, the second year of the 2-year programme or the third and part of the fourth year of the 4-year programme would be offered on a part-time basis. In terms of instructional hours, the technicums in engineering fields offer 42-46 weeks per year with 40 hours of instruction every week. In other words, there are 1500 instruction hours per year. A typical 4-year 4 months programme has thus 6,500 hours distributed among subjects as follows:

Content	Per cent
General academic subjects	25-30
General technical subjects	20-25
Specialised technical subjects	20-25
Applied training	25-30

If the employment experience is also counted, then the duration of a typical 4-year programme, such as, one in tool production, will include 7,330 hours of which 70 per cent are spent on applied specialised courses and the remaining 30 per cent on academic subjects and general technical courses, as shown below:

Structure of Curriculum in Tool Production

	Hours	Per cent
1. General academic (6 subjects)	1,487	20.3
2. General technical (5 subjects)	730	9.9
3. Specialised technical (10 subjects)	1,464	20.0
4. Physical education	245	3.3
5. Applied training	3,402	46.5
	7,328	100.0

98. The technicums in engineering and industrial fields offer as many as 289 technical specialities and each speciality relates to the occupational designation of the future specialist. The training is functionally oriented to suit employment requirements. This is facilitated by the general location of the technicums. Those in engineering and technology are located in cities and industrial centres and the type of industry influences the technical specialities offered in the institutes. Industrial centres with large machine-building plants have technicums for mechanical engineering of various specialisations and so on. The industrial complex provides the technicum with an essential base for applied training and, in return, a technicum trains substantial number of intermediate level specialists for that industrial complex. Teachers for technicums are also recruited from large industrial plants, either on a part-time basis or otherwise.

Programmes in Federal Republic of Germany:

99. The system of training technicians in Germany is essentially practical in nature and maintains close contact with industry*. Technicians are required not only for design but also for work programming and preparation and a host of other activities where these experienced specialists relieve the engineer of many tasks and moderate the acute shortage of engineers. The demand for technicians is increasing because of the increasing rationalisation of the industrial labour with the advent of mechanisation and automation. The following chief areas of employment for technicians in German industry may be noted so as to facilitate a better appreciation of their training programmes:

(a) in design, as designers of machine parts, tools and apparatus, standards technicians, swich-gear technicians, etc.;

(b) in procedure development;

(c) in planning and preparing operations (pre-calculation, time keeping, making time schedule, etc.);

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* The Training of Technicians and Engineers in the Federal Republic of Germany, Erwin Krause, International Labour Review, ILO, Geneva, Vol. LXXXIX, No. 2. Feb., 1964

(d) in production, as managerial assistants, process technicians;

(e) in production control and checking as control technicians, test shop technicians, etc.;

(f) in material testing services and laboratories, as material testing technician, chemical technician, etc.;

(g) in sales and servicing (making tenders, customer service, etc.).

100. The technician specialists in Germany are developed from the category of skilled workers who have broad workshop and plant experience. There is no equivalent of our polytechnic where students are diverted after the high school stage from the general education courses to another educational institution to be trained as a technician. With active interest taken by the Chambers of Industry and Commerce or the Chamber of Handicrafts, there is a variety of apprenticeship schemes leading to professional examinations of these chambers. The accent in all these programmes is on practical training in workshops and study in part-time vocational schools.

101. Vocational schools offer technician training programmes as either a one-year day course or a three-year evening course. The students should have previously done practical work as craftsmen for at least 2 years for the day course and 3 years for the evening course. This would be preceded by 3 to $3\frac{1}{2}$ years of apprenticeship in industry so that the student would have had 5-7 years of practical training before he is admitted to the technician courses. The curricula offered in these schools are specialised but include basic subjects such as mathematics and science and drawing. These basic subjects take up about 67 per cent of the whole programme, i. e. 1,000 hours. There are about 33 specialities offered under these programmes. Most of the vocational schools are linked to trade or engineering schools; there are a few schools under the auspices of the Chamber of Commerce and Industry or Committees of public authorities.

102. The Schools of Engineering* in West Germany are highly developed forms of advanced vocational schools for qualified young people, engaged in manual occupations, after completing their apprenticeship, obtaining the technical school leaving certificate** and having

* Ingeniurschulen.

** Fachschulreife.

the necessary practical experience. Alternatively, students who have taken the junior secondary school certificate*, i. e., corresponding to an age of 16+ years, can also join these courses after the period of apprenticeship or supervised practical training. The course offered in these schools are of 3 years' duration, in 6 semesters, for training as practical or non-graduate engineers. These studies are available in 26 technical specialities, such as, "overground and underground building; surveying; regulation of water supplies and irrigation techniques; machine construction; electrical engineering; manufacturing techniques and industrial engineering; precision techniques; heating and ventilation; ship building; chemistry and textiles"**. The instructional period, totalling 4, 500 hours, is distributed by subject content as follows:

Content	Per cent
Basic subjects	30
Technical Speciality	50
Labour and Social subjects and general education	20

The course does not aim at providing narrow specialisation in a given technical speciality, but is reasonably broad-based within the chosen field. This is considered necessary in view of the thorough practical training in industry which has preceded the training in the schools of engineering.†

Programmes in the United Kingdom:

103. Till recently, the pattern in the UK was for industries to recruit their craft apprentices to give them "releases" for attending technical colleges and for taking either the examinations of the City and Guilds of London Institute at the craft and technician levels or the

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* Mittlerereife.

** UNESCO World Survey of Education: III Secondary Education (1961).

† In the OECD Survey on Resources of Scientific and Technical Personnel in the OECD area, the graduates of these schools are taken as qualified engineer "though of less than university degree standard". (Annex. II, pp. 250-51).

examinations for the National Certificates at the ordinary or higher levels. Thus, most of the technician positions were filled by skilled craftsmen with supplementary educational courses. The White Paper on "Better Opportunities in Technical Education", 1961, recognised that the needs of the technician be met not by the courses designed for craftsmen or technologist but by courses designed specifically for technicians. With a view, inter alia, to adapt technical education more closely to the needs of industry, and in particular to meet the urgent need to make more and better provision for technicians, it was proposed to bring about a major reconstruction of system of courses for technicians, craftsmen and operatives. These proposals are being introduced at present in a phased manner. Nevertheless, the salient features of the proposed programmes are indicated in the following paragraphs.

104. There are two major educational programmes open to candidates for becoming technicians, viz., the National Certificate courses and the new technician/technological certificate courses. The former courses are meant for those who have an aptitude for mathematics and could proceed to take Higher National Certificates, recognised as a higher technician qualification. A majority of the students are however expected to take the latter courses which would be designed in relation to the real needs of the industries. Both these programmes would be offered at the technical colleges, mainly on a part-time or sandwich basis. The aptitude of the students for taking up either of the two courses—or in exceptional cases, the craft courses—is to be tested during one-year (part-time) general engineering course for the school leavers at the age of 16+. The duration will be two years for those who leave schools at the age of 15+. This course would comprise of a study of engineering sciences and mathematics, workshop processes and materials (including practical work) and engineering drawing, as examination subjects with the addition of English and General Studies. There would be 240 hours of study per year (part-time) ending with an external examination. Those students who pass in all the 3 subjects at one sitting and obtain 'credit' in mathematics and engineering science are eligible to join the Ist Year of the two-year part-time Ordinary National Certificate course. Those who pass in all the 3 subjects at one sitting can enter the second year of the technician courses while others are eligible to join the first year of the technician courses. In view of the "diagnostic" nature of the General Engineering course, no student is allowed to repeat the course.

105. Technician courses have been designed by the City and Guilds of London Institute in consultation with professional institutions leading to the award of the Institute's certificate. The courses are in three parts, each part forming a definite stage by itself, enabling the students to join technician labour force at a corresponding level. Parts I and II require attendance for not less than 500 hours on a part-time basis and 650 hours on a block release or sandwich basis over a period of two years each. 25 per cent of the time for technical studies is for practical work while in the case of science subjects, 50 per cent of the time is for experimental and demonstration work. Part I of a mechanical technology course, for instance, is intended to give a foundation to students in the principles and practice of engineering, including workshop processes. Provision is made for supplementary training for meeting special needs, if any, such as non-metallic materials, etc. Part II of the course, on the other hand, provides for specialisation in workshop technology or any other special technology such as press tool technology, plastics mould making, plant maintenance and works service, etc. The study of engineering construction and materials relates to the technician speciality selected by the student. In addition, instruction is given in Engineering Science and Mathematics. The C and G Institute examination regulations insist that a student should pass in all the three examination subjects in the same year. Part III of mechanical technology course is open to those who, after completing Part II certificate, have sufficient background of industrial experience so as to qualify for the full Technological Certificate. The course includes not less than 240 hours of advanced study (including appropriate laboratory or practical work) in a subject of choice* and 70 hours of study of a practical subject of applied technology. Similar courses have already been formulated for electrical technicians and telecommunication technicians. It is expected that courses would be prepared for other industries also.

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* The following courses of study have been specially designed by the City and Guilds of London Institute: Advanced production processes; Mechanical engineering design; Jig and tool design; Press tool design and utilisation; Plastics mould design and utilisation; Control systems technology; Plant maintenances and works service; Testing and development; and Mechanical and formal treatment of metals.

106. One of the consequences of the White Paper, 1961, already referred to, is the reorganisation of the traditional National Certificate courses at the Ordinary level. Under the revised pattern, the course will be offered as a common O. N. C. for Engineering* instead of the earlier specialisation into mechanical/electrical engineering, etc. The new course provides for broader courses with a greater range of alternative subjects than before. The holders of ONC/OND can pursue their education either by taking Part II certificate of the City and Guilds of London Institute, described in the earlier paragraph or take the Higher National Certificate. The latter certificate is being recognised more as a higher technician qualification and less as an enabling channel for membership of professional bodies, especially when there is a general increase in the number of full-time students for sandwich courses. Thus the holder of an ONC has two possible choices of either specialising intensively in a branch of technology through the City and Guilds Institute courses or qualifying for higher technician positions through the HNC.

107. The ONC courses are of a broad-based character including the study of mathematics, mechanical and electrical engineering sciences and drawing in the first year and mathematics and three more engineering subjects from a wide range of selection**. The choice is made keeping in view the requirements of the Higher National Certificate courses. The duration of the course will be 2 years part-time with 240 hours each year plus additional 90 hours of English and General Studies.

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* The course if taken on a full-time basis, leads to the Ordinary National Diploma (OND). These are awarded jointly by the Ministry of Education and the professional institutions.

** Applied Mechanics; Applied Heat; Workshop technology or instrument technology; electrical engineering A and B; Physics; Mechanics of fluids or aerodynamics; elementary surveying; and materials and structures.

108. The HNC courses are offered as part-time course for 2 years after ONC/OND. Unlike at the Ordinary level where the content of part-time and full-time courses is the same, the HND offers a higher standard of course and is organised on a sandwich pattern of 3 years' duration, as an alternate channel for becoming corporate members of the professional institutions.

CONCLUSIONS ON TECHNICIAN TRAINING PATTERNS ABROAD

109. It is observed that in all the countries studied there is an awareness of the specific role of a technician in the overall engineering employment and attempts are being made to design educational programmes for technicians keeping in view the needs of the industry. A comparison of the relative importance given to broad subject areas in Indian and other technician education/training programmes is given in Table X. In Germany and the U.K., the traditional courses had envisaged a technician as one who had risen from the level of craftsman. In modernising these courses, the trend is therefore to ensure that sufficient instruction is given in general education subjects as well as in engineering and technology. The development of craft skills is not considered necessary except to the extent of specialising in a chosen applied technology. This would explain the "broad-based" courses which are being introduced in the first phase of training technicians. They have also recognised the need for a higher technician or a practical engineer and appropriate courses are being continued at this level, the HNC courses in the UK and the Schools of Engineering in Germany. In contrast, the pattern in the USA reveals greater emphasis on the study of basic sciences and engineering. This is because of the identification of an engineering technician as an expert engaged in application of scientific and engineering knowledge and method and functioning in the range of occupational spectrum closest to the engineer. His education is therefore at the college level and oriented towards major fields of engineering. On the other hand, the semi-professional technician in the USSR is required to have the skills of a craftsman in addition to knowledge of technical speciality partly because his training is planned and organised in relation to the specific and anticipated job positions in an industry*.

* It is interesting to learn from Nicholas de Witt's "Soviet Education and Professional Employment in the USSR" (National Science Foundation, 1961) that many semi-professional graduates have in fact been employed in skilled worker occupations—as many as 60% in the case of petroleum industry in 1956—not because of higher skill requirements for advancing technology but "largely (due to) the saturation in semi-professional employment demand" (p. 171).

TABLE X

Distribution of Curricular Hours by Broad Subject or Activity Groups for different Technician Courses.

Subject—group	INDIA										U.S.A.		U.S.S.R.		GERMANY			
	3 years Diploma course (1)		2 years Technician course (2)		3 years Chemical Operators' course (3)		4 years Sandwich course (Mechanical) (a)		4 years Sandwich course (Mechanical) (b)		2 years Technical Institute programe (4)		4 yrs. 4 months Technicum course (5)		3 years School of Engineering course (6)		1-year (day) Vocational School course (6)	
	No. of hours	%	No of hours	%	No of hours	%	No. of hours	%	No. of hours	%	No of hours	%	No. of hours	%	No. of hours	%	No of hours	%
1. General academic subjects	576	16.7	...	...	280	10.3	360	18.3	322	10.4	1100	45.8	1990	40.1	900	20.0	} 1000	66.7
2. General technical subjects	1746	50.5	1469	48.3	840	31.1	1610	81.7	2047	66.0	200	8.4	820	16.5	1350	30.0		
3. Technician speciality subjects	...	...	268	8,9	540	20.0	...	...	414	13.2	1100	45.8	1250	25.2	} 2250	50.0	500	33.3
4. Applied Training (institutional)	1134	32.8	1304	42.8	1040	38.6	...	...	322	10.4	...		900	18.2			...	
Sub-Total	3456	100	3041	100	2700	100	1970	100	3105	100	2400	100	4960	100	4500	100	1500	100
Training in Industry	4400*	...	...		2200		6072*		4608		N A.		1500		...		N.A.	
Total	7856		3041		4900		8042		7713		N.A.		6460		4500		N.A.	

(a) Ministry of Education Scheme, "Sandwich course for National Certificate in Mechanical Engineering, Training of Foremen and Supervisors for mechanical engineering industry", 1957.

(b) Indian Engineering Association Sandwich course for mechanical engineering technicians

*Estimated at 44 hours per week and 50 weeks per year.

N.A. = Not Available.

P. T. O.

Source : (1) Ministry of Education, "National Certificate Course in Civil, Mechanical and Electrical Engineering", 1956.

(2) Ministry of Education, Scheme for "Training of Supervisory personnel : Mechanical Engineering Group : Machine shop and Tool room technician", 1963.

(3) Ministry of Education, Scheme for "Training of Chemical operators and supervisors for chemical industry". (1959).

(4) American Society for Engineering Education, Final Report of the Evaluation of Technical Institute Education (Technical Education News, Mc Graw Hill Book Co. Inc. New York, Vol. XXII No. 4 April, 1963).

(5) Nicholas De Witt, 'Education and Professional employment in the U.S.S.R.', National Science Foundation, Washington, 1961 (Table III-7 p, 174).

(6) Erwin Krause, "The training of Technicians and Engineers in the Federal Republic of Germany", Internationol Labour Review, Geneva Vol. LXXXIX No. 2 February, 1964.

110. While there are differences in the emphasis on the various aspects of the educational programmes particularly between the study of basic sciences and the need for practical training-which are the consequence of the existing patterns in these countries--there is a general consistency in the overall educational and training requirements of technicians in the acknowledgement that an engineering technician should possess; (a) a sound knowledge of the fundamentals of sciences and technology; (b) an adequate training and experience in industry in specific job positions; and (c) a specialised knowledge in one technician speciality within the chosen branch of engineering. The specific number of hours to be devoted to either (a) or (b) above depends upon whether the courses are industry-based or institution-based as well as on the general educational level from which the trainees are drawn and the comparative composition of subject content at that level. In regard to (c), i.e., the need to specialise in a technician speciality, about 1,000-1,200 hours of study and training are allocated uniformly in all these countries, irrespective of the total duration of the course of study.

111. Above all, the survey also supports the conclusion that it would not be desirable to base the planning of technical education programmes on an intra-country comparison and that each country should evolve its own pattern of training and employment of engineering manpower, keeping in view local requirements and conditions.

APPENDIX I

NOTES ON TABLES III, IV AND IX

DEFINITIONS USED IN INDIVIDUAL COUNTRIES FOR IDENTIFYING ENGINEERS AND TECHNICIANS

1. Belgium, Denmark, France, Sweden, Switzerland: data for these countries were taken from the OECD Survey. The survey questionnaire defined engineers by their educational qualification, i. e., holder of a degree or equivalent diploma, or possessing training nationally recognized as qualifying him as an engineer. Technicians were also defined by qualification, i. e., any qualification lower than those stated for engineer but including at least one year of formal technical education after leaving secondary school. The questionnaire asked for the number of engineers and technicians so defined, regardless of whether they were performing technical tasks. Therefore the employment data submitted by the various countries should include technical personnel engaged in management and administration, sales services and promotion, market research, etc. Variations were introduced by individual countries, such as:

(a) Denmark - the technician class includes lab technicians; the engineer class excludes scientists.

(b) France - the technician class includes all persons peforming the tasks of technicians, regardless of whether their educational qualifications satisfy the definition given in the survey questionnaire.

(c) Switzerland - the engineer class refers to those persons "performing the tasks of engineers or architects, not to the holders of university degrees or equivalent".

2. Ireland: technologists (engineers) and technicians were both defined by the qualifications most frequently possessed by the persons in Ireland, together with a brief description of competence. The figures reported will thus include many persons with the appropriate qualifications who are not performing technical tasks.

3. United Kingdom: engineers are defined as persons holding the qualification of degree holder, holder of diploma in Technology, associate of certain specified educational institutions, or member of

certain specified professional bodies, regardless of whether they are engaged in scientific, engineering, or technological work. One table in the study reports the number of engineers so defined who are actually working as technicians; this number has been deducted from the total number of engineers and scientists. Technicians are defined as those "persons working as technicians and other technical supporting staff; irrespective of the qualification held". The category technical supporting staff includes lab technicians, plant supervisors, research assistants, etc. To compensate for the fact that this category is much broader than engineering technician, scientists are included with engineers in calculations of technician/engineer ratios.

4. United States: both engineers and technicians are defined by qualification, engineers as degree holders or their equivalent, technicians as being schooled in a technical institute or junior college or having received the equivalent in in-service training. All persons of these qualifications are enumerated, whatever their employment situation, providing they are required to use their training in their work. The technician class includes physical science technicians and some biological, agricultural, and medical technicians.

5. Soviet Union: engineers are defined as professionals with higher education; technicians as semi-professionals with specialised secondary education. The definition disregards the job held and function performed. Although the Soviets have enumerated the number of practicals employed in technical positions on an aggregate basis, the industry-by-industry employment figures include only the professionals and semi-professionals.

VT 008 149
Vocational and Technical Education in Rhode Island--1969-1975, A Report.

Rhode Island State Dept. of Education, Providence. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Feb69 36p.

*STATE PROGRAMS; *VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; *PROGRAM IMPROVEMENT; *PROGRAM COSTS; STUDENT ENROLLMENT; ENROLLMENT PROJECTIONS; AREA VOCATIONAL SCHOOLS
*RHODE ISLAND

This report to the Administration and General Assembly of Rhode Island substantiates the continuing need to update vocational education planning in light of changing employment patterns and recent federal legislation (The Vocational Education Amendment of 1968). Specifically the report requests the financial support required to assure the continuous development of vocational and technical education. Referendums for bond issues to support vocational and technical education are based on data such as projected student capacity by occupational area in all secondary facilities by 1971, vocational and technical student enrollment by occupational area, and project number of graduates of all secondary vocational and technical programs in Rhode Island. (CH)

VT 008 149

ED042060

A REPORT

VOCATIONAL AND TECHNICAL EDUCATION IN RHODE ISLAND - 1969 - 1975

PREPARED BY

DIVISION OF VOCATIONAL AND TECHNICAL EDUCATION STAFF

FEBRUARY, 1969

VT008149

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
STATE BOARD OF EDUCATION
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HAYES STREET, PROVIDENCE R. I. 02908

March 1969

TO: The Honorable Frank Licht, Governor
The Honorable Members of the General Assembly

FROM: Richard F. Staples, Chairman
State Board of Education

In compliance with the provisions of Section 16-45-3 of the General Laws, the State Board of Education respectfully submits its annual report on the status of vocational and technical education in Rhode Island. This year's report summarizes activities to date and presents for your consideration a proposal for expanding and improving vocational and technical education opportunities through 1975. Recommendations pertaining to state-wide program development and a plan for financing this proposal are outlined.

The Board, in its desire to provide vocational and technical education for all in the State who need and desire it, urges favorable action by the Administration and the Legislature.

FOREWORD

The following report supplements a similar report prepared in the fall of 1967. It is submitted at this time because of the continuing need to update vocational education planning in light of changing employment patterns and recent federal legislation (the Vocational Education Amendments of 1968). The necessity for such planning is clearly and strongly suggested by reference to several recent major studies prepared by various sources, as indicated in references cited. The economic vitality of the State of Rhode Island, and its consequent ability to finance education and other needed public services, is dependent upon the character of its labor force.[1]

Five trends have converged to shape America's future: (1) There are many more young persons; (2) there are fewer and fewer vocations which can be entered without skill and technical training; (3) the sheer bulk of knowledge is exploding; (4) the average worker will have to be trained for multiple careers during his working lifetime; and (5) the costs of welfare for the unemployed are approaching a critical level. The combination of these factors constitutes an immediate challenge to vocational and technical education if society is to continue to function adequately. Therefore, state legislatures throughout the nation are being faced with major decisions regarding funding needs.

Data and information are provided in this report to the Administration and the General Assembly so that their overall legislative action for education in Rhode Island may continue to be carefully coordinated to achieve prosperity

[1] A Projection of the Costs of Public and Secondary Education in the State of Rhode Island for 1980, by Edward M. Kaitz, Consultant, Department of Education, 1968

for the State's economy in a rapidly changing society. Specifically, the report requests the financial support required to assure continuous vocational and technical education development as the State's population expands during a drastic change in the occupational structure within the nation.

Data for Rhode Island are provided on page 14 to assist in bringing these needs into practical focus. Referenda for bond issues totaling $24,641,532 are recommended as a means to meet the approaching needs of this State and its citizens for vocational and technical education that is equal to our times.

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CHAPTER I

RHODE ISLAND PROGRAM OF VOCATIONAL AND TECHNICAL EDUCATION

Statement of Belief

The Administrative Plan for Vocational and Technical Education in Rhode Island points the way to an overall philosophy for an effective program. It is the belief of the State Board of Education that schools should provide the kind of education which will produce students who are able to make a meaningful contribution to society, to sustain and to improve both the State's and the Nation's economy, to adapt to change as change is demanded of them, to support themselves and their families, and to lead full and rewarding personal lives.

Purposes and Aims

Very basically, the controlling purpose of Vocational Education is to fit persons for gainful employment. The vocational education program, however, cannot substitute for an adequate general academic education; rather, it supplements and enhances it to assist those students who want preparation for a chosen occupation. Vocational education is merely one part of a well-rounded program of studies aimed at developing persons who are not only competent workers, but also complete citizens. In short, vocational education is more inclusive than training for job skills; it also develops abilities, understandings, attitudes, work habits, and appreciations which contribute to a satisfying and productive life.

Area Vocational and Technical Programs

Outlined below are seven major occupational areas and some of the programs typical of those which are to be offered in Rhode Island's area vocational and technical schools.

AGRICULTURAL OCCUPATIONS: Agricultural Production, Agricultural Supplies, Agricultural Mechanics, Agricultural Products, Ornamental Horticulture, Forestry, Agricultural Resources.

DISTRIBUTIVE OCCUPATIONS: Automotive Parts and Service, Finance and Credit, Food Distribution, Food Services, General Merchandising, Hardware, Marketing, Mid-Management, Hotel and Lodging.

HEALTH OCCUPATIONS: Nursing Assistant, Medical Office Assistant, Practical Nurse, Medical Laboratory Assistant, X-ray Technician.

HOME ECONOMICS OCCUPATIONS: Dressmaking, Homemaking, Clothing, Millinery, Tailoring, Upholstery, Home Furnishing, Food Preparation.

INDUSTRIAL OCCUPATIONS: Automotive Mechanics, Carpentry, Drafting, Electricity, Electronics, Graphic Arts, Machine Processes, Sheet Metal, Cosmetology, Cook (Chef), Textile Machine Operation.

OFFICE OCCUPATIONS: Stenographic, Bookkeeping, General Clerical, Data Processing.

TECHNICAL OCCUPATIONS: Automotive, Industrial Chemistry, Electrical, Electronics, Mechanical Design, Machine Processes, Fire-Fighting, Instrumentation.

Forward-Looking Legislation

The Vocational Education Amendments of 1968 have given new strength to our programs. Key provisions include the following:

1. REGULAR PROGRAMS:

Funds are made available:

To provide vocational-education programs for high-school students, including programs which are designed to prepare them for highly skilled post-secondary vocational and technical education.

To provide vocational education for persons who have completed or left high school and need study and/or preparation before entering the labor market.

To provide vocational education for those persons who are presently employed and who need training or retraining to achieve advancement or stability in employment.

To provide for construction of area vocational education facilities.

To provide for vocational guidance and counseling in selection of, and preparation for, employment in all vocational areas--or for further education to those who desire it.

To provide for vocational training through arrangements with private vocational institutions.

To provide ancillary services and activities to assure quality in all vocational-education programs.

2. SPECIAL NEEDS:

This section of the Act:

Provides vocational education for persons who have academic, socio-economic, or other handicaps and who therefore could not succeed in a regular vocational-education program without special educational assistance.

Provides vocational education for handicapped persons who are mentally retarded, hard-of-hearing, deaf, speech-impaired, visually handicapped, seriously emotionally disturbed, or crippled, and for other health-impaired persons who require specialized vocational education and related services.

3. RESEARCH:

Provides for the paying of up to 75% of the cost of operating the State Research Coordinating Unit.

Provides grants up to 90% to colleges, universities, and other non-profit private agencies for projects and programs in research and training, developmental, experimental, or pilot programs designed to meet the special needs of youth--particularly those who have academic, socio-economic, or other handicaps which prevent them from succeeding in a regular vocational-education program.

4. EXEMPLARY PROGRAMS AND PROJECTS:

The purpose of this section is to create a "bridge" between school and

earning a living for young people who are still in school. It operates through provisions designed:

To promote cooperation between public education and manpower agencies.

To broaden occupational aspirations and opportunities, with special emphasis given to youth who have academic, socio-economic, and/or other handicaps.

To familiarize elementary and secondary students with the broad range of occupations which require special skills.

To provide educational growth through work experience during the school year.

To provide for intensive occupational guidance and counseling during the last years of school and for initial placement.

To provide special emphasis on programs for young workers released from their jobs on a part-time basis for the purpose of raising their educational aspirations.

This section also provides for the exchange of personnel between schools and other cooperating agencies, including industry and manpower agencies.

5. RESIDENTIAL SCHOOLS:

Funds are made available for construction, equipment, and operation of these demonstration schools to provide vocational education for youth who are at least 15 years of age and less than 21 who need full-time study on a residential basis.

Special consideration is to be given to youth who have dropped out of school and/or are unemployed.

6. CONSUMER AND HOMEMAKING EDUCATION:

In order to give greater consideration to social and cultural conditions and needs, funds are to be expended for educational programs which encourage

home economics education, especially in economically depressed areas. These programs will:

Encourage preparation for professional leadership.

Prepare youth and adults for the goal of homemaker.

Provide consumer-education programs and ancillary services to ensure quality in all homemaking education, such as teacher-training, supervision, economic development research, program evaluation, etc.

7. COOPERATIVE VOCATIONAL-EDUCATION PROGRAMS:

These are programs in vocational education established through a cooperative arrangement between schools and employers. The student alternately attends school and works at a mutually acceptable wage on a released-time basis for a cooperating employer within the community. The program must be planned and supervised by both the school and the employer.

8. WORK STUDY PROGRAMS:

These programs are available only to those who are enrolled as full-time students in vocational-education programs and have need of the earnings from such employment to continue their vocational education. To qualify under this section, a student must be at least 15 years of age and less than 21, and shall be employed by a public agency or institution for no more than 15 hours in any week during which the student attends classes--all of this time being outside of regular school hours. The work study arrangements are reimbursable; the local agency will be responsible for only 20% of the total cost.

Rhode Island Applications

The programs cited provide new tools for the implementation within this State of continuing improvements in vocational and technical education. In order to establish consistency with the requirements of this new Act--as well as to integrate its provisions with our state-wide vocational and technical

education program--fundamental steps must be taken now, as follows:

(1) Appointment by the Governor of a State Advisory Council prior to April 1, 1969. (Qualifications for membership on the council are stated in the new Act.)

(2) A new State Plan for Vocational and Technical Education must be written, approved by the Advisory Council and by the State Board of Education, reviewed at a public hearing, and submitted to the United States Office of Education--all prior to July 1, 1969.

(3) Strengthening the Vocational Division staff in relation to its several new and expanded responsibilities under the new law. For example, present occupational program offerings must be expanded to serve much greater numbers of both normal and handicapped youths and adults in such areas as consumer education, wage-earning home-economics education, cooperative education, and so on--in addition to the continuing expansion and development of programs already underway.

Design of the Rhode Island Program

A central concept underlying the design of the Rhode Island program is that appropriate vocational and technical educational opportunities of high quality should be readily accessible to both youth and adults in all communities of the State. Therefore, extensive vocational and technical program development is underway in Rhode Island at the adult level as well as at the secondary and the post-secondary levels.

(a) Secondary Level

Recognizing that not all schools can justify initiation of a full range of occupational programs, the Vocational Education Amendments Act of 1968 continues provision for area vocational schools which serve a number of communities. In order to make diversified occupational offerings of high quality available to all secondary-school

students in Rhode Island, the State Board of Education with local cooperation and assistance has designated certain comprehensive or vocational and technical high schools as area schools to serve the geographic regions in which they are located. Three such area schools are now operative; five others are in various stages of construction or advance planning. The local school committees will continue to be responsible for the operation of the program, while the State Board will continue to provide certain reimbursements for construction, renovation, equipment, administration, and guidance. The self-contained area vocational and technical school in the Blackstone Valley will be state-operated. The Rhode Island Vocational and Technical School at Corliss Park will also continue to function directly under state supervision and will gradually become a center for innovative and other special programs. The network of these area secondary schools is shown on Map I.

(b) Post-Secondary Level

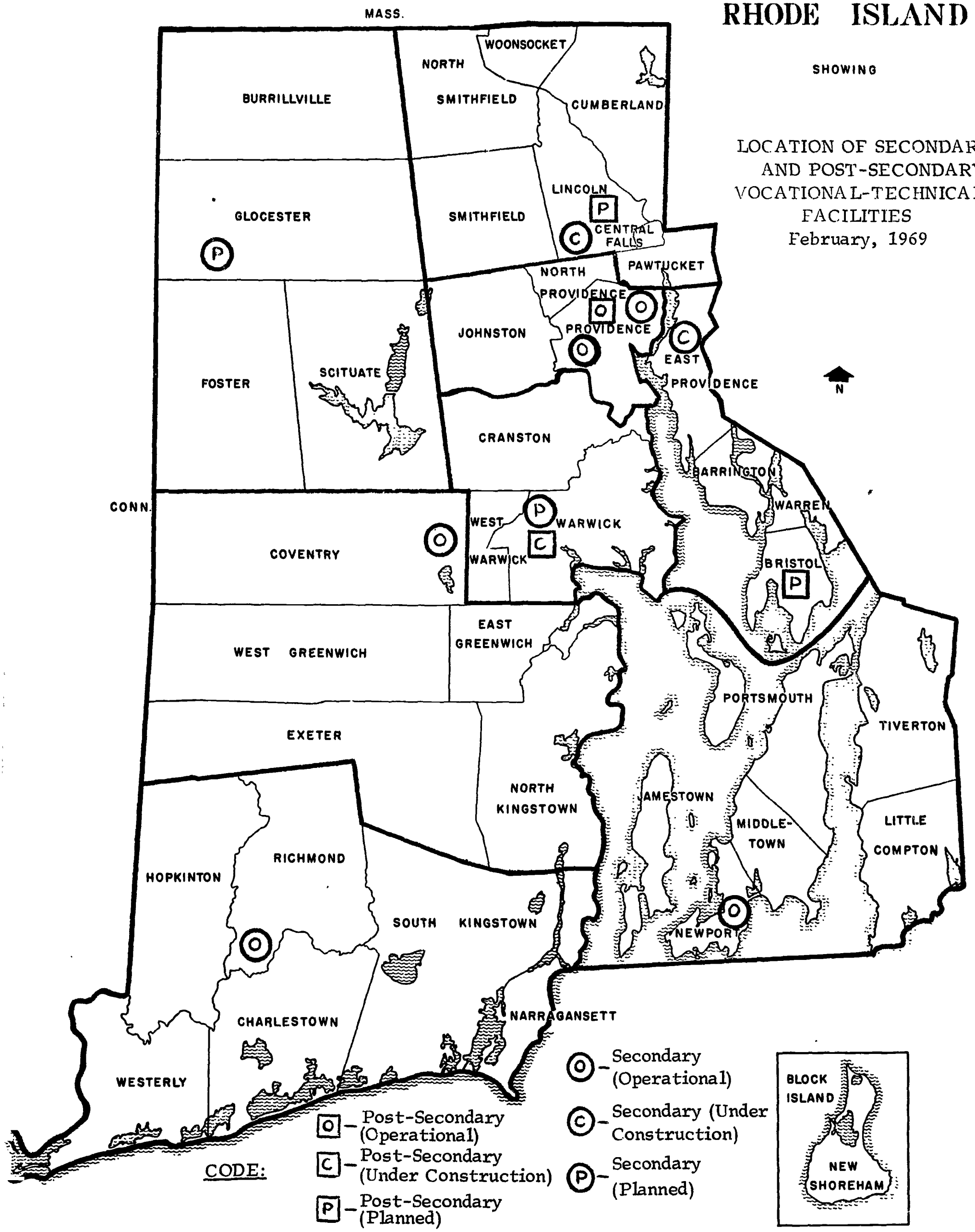
The Board of Trustees of State Colleges and the Board of Education are committed to the principle of jointly planned, constructed, and operated facilities for the junior college and post-secondary and technical programs. In the opinion of both Boards joint operation of the facilities will ensure the broadest and most effective educational programs for the youth and adults of Rhode Island, will provide maximal service to business and industrial establishments, and will be more economical than a separate development of facilities because the partnership will achieve maximal use of available funds and resources through the avoidance of duplicating essential facilities. Approximate location of the three junior-college vocational and technical facilities is also presented on Map I.

MAP I

MAP OF THE STATE OF RHODE ISLAND

SHOWING

LOCATION OF SECONDARY AND POST-SECONDARY VOCATIONAL-TECHNICAL FACILITIES
February, 1969



CODE:

- O – Post-Secondary (Operational)
- C – Post-Secondary (Under Construction)
- P – Post-Secondary (Planned)

- O – Secondary (Operational)
- C – Secondary (Under Construction)
- P – Secondary (Planned)

(c) Adult Level

Vocational education for adults plays an essential role in maintaining efficiency in production, distribution, and consumption, and thereby contributes directly to a high standard of living while indirectly adding great strength to the overall economy of the state. Adult workers in all occupational areas can, by acquiring additional training in skills and expanded knowledge of related information, adapt themselves to the technological advances in their field of employment. All of the vocational and technical facilities will conduct evening programs to aid adult workers in keeping abreast of changes and advancements in the various occupational areas. These programs will help Rhode Island employers and employees to stay competitive with the rest of the nation.

(d) Manpower Development and Training Act Programs

Since passage of the Manpower Development and Training Act by the Congress in 1962, Rhode Island MDTA Programs have provided job training and/or basic education for more than 2,500 of the State's unemployed or underemployed adults and out-of-school youth.

Ninety percent of the graduates of these programs have been placed in skilled or semi-skilled jobs at the completion of their training.

Since 1962, $3,514,250.00 of Federal money has been spent in funding MDTA programs in Rhode Island. It is estimated that, over the working lives of those persons trained, this money will be returned to the general economy many times through improved earning and purchasing power of the MDTA graduates.

Numerical Extent of the Program

The accompanying Tables I, II, and III summarize the progress which is being made in implementing the secondary and post-secondary programs described above.

TABLE I

PROJECTED STUDENT CAPACITY
BY OCCUPATIONAL AREA IN
ALL SECONDARY FACILITIES BY 1971

Air Conditioning & Heating	36
Aircraft Mechanics	36
Auto Body Repair	144
Auto Mechanics	308
Barbering	36
Cabinet Making	36
Carpentry	180
Commercial Art	184
Cosmetology	108
Data Processing	248
Distributive Education	924
Drafting, Architectural	180
Drafting, Mechanical	336
Electrical	144
Electro-Mechanical Maintenance	36
Electronics	180
Fashion Design	36
Food Service	108
Graphic Arts	108
Health Occupations	252
Home Economics (Wage-Earning)	348
Horticulture	318
Horticulture - Mechanics	36
Industrial Chemistry	40
Industrial Finishing	72
Instrumentation	36
Machine Process	324
Office Occupations (Cooperative)	818
Sheet Metal	108
TOTAL	5,720

TABLE II

VOCATIONAL AND TECHNICAL
STUDENT ENROLLMENT BY OCCUPATIONAL AREAS*

1968-1969

Occupational Area	Secondary	Post-Secondary	Adult
Agricultural Occupations	405	0	55
Distributive Occupations	271	54	0
Health Occupations	55	209	99
Home Economics (Wage-Earning)	25	0	0
Industrial Occupations	1,277	0	1,034
Office Occupations	188	76	35
Technical Occupations	120	157	157
TOTALS	2,341	496	1,380

* Figures do not include Home Economics (Homemaking) or regular Business Programs.

TABLE III

PROJECTED NUMBER OF GRADUATES OF ALL SECONDARY
VOCATIONAL AND TECHNICAL PROGRAMS IN RHODE ISLAND**

Occupational Areas	1969	1970	1971	1972-1975
Agricultural Occupations	112	124	124	512
Office Occupations (Cooperative)	112	252	418	1,864
Distributive Occupations	96	140	360	1,600
Health Occupations	18	18	54	576
Home Economics (Wage-Earning)	24	84	126	876
Industrial Occupations	258	510	919	3,072
Technical Occupations	104	209	446	826
TOTALS	724	1,337	2,447	9,326

**Figures do not include graduates of Home Economics (Homemaking) or regular Business Programs.

CHAPTER II

FINANCING RHODE ISLAND'S PROGRAM OF VOCATIONAL AND TECHNICAL EDUCATION

Employment Needs

Employment projections compiled by the Department of Employment Security indicate that Rhode Island can continue to anticipate a wide discrepancy between numbers of job openings and the size of the pool of trained workers available to fill them. Since it is estimated that in-plant training will provide preparation for workers to fill fewer than 10% of these anticipated openings, it can readily be seen that an increase in training possibilities must be provided. Expansion of vocational and technical educational opportunities is clearly needed in order that the economic climate of the state can continue to develop in a healthy manner. Implied in the total picture also is the philosophic necessity of providing a meaningful range of choices for youths and adults in need of education for success and a better way of life.

Capital Expenditures for Secondary and Post-Secondary Vocational and Technical Education

In view of the above statement, it is recommended that the state-wide vocational and technical building program be expanded to accommodate an additional 3,340 secondary students and 1,025 post-secondary students through bond issues in 1970 and 1972 totaling $24,641,532. Table IV, page 14, indicates projected capital expenditures necessary to implement this recommendation.

Stage II at the secondary level refers to providing facilities to serve 17% of the total enrollment (grades 10-12) by 1972, or 7,548 vocational and technical students. This is an increase of 1,828 students over the number to be supported by present and committed facilities (13%). Stage III will provide facilities for 20% of the enrollment, or 9,060 students. This is an increase of 1,512 students.

Stage II at the post-secondary level refers to accommodating an additional 625 students by 1973, while Stage III refers to serving another 400 students by 1975.

Projected Operation Expenditures by Fiscal Year and Source of Revenue

Table V, page 15, indicates projected operating costs by fiscal year and source of funding. Since there is no valid means to project amounts of Federal funding, the assumption is made that these funds will remain constant during the next several years. It should be noted that while projected expenditures increased to a total of $9,032,037 in 1975, almost 32% of that amount (or $2,865,178) represents debt service.

Facility Funding

Table VI, page 16, shows total funds already committed for construction and other funding of the Rhode Island Program through June 30, 1970. Of the $16,341,297 available for the building program, the State has provided $12,000,000; the Federal Government, $4,341,297. Table VII, page 17, indicates the distribution of Federal funds by fiscal year and construction project.

TABLE IV

PROJECTED CAPITAL EXPENDITURES
SECONDARY AND POST-SECONDARY VOCATIONAL AND TECHNICAL EDUCATION

Secondary		
Stage II	1972-1973 School Year 1,828 Additional Students	$ 7,854,188
Stage III	1974-1975 School Year 1,512 Additional Students	7,255,851
		$15,110,039
Post-Secondary		
Stage II	1973-1974 School Year 625 Additional Students	$ 5,433,133
Stage III	1975-1976 School Year 400 Additional Students	4,098,360
		$ 9,531,493
Total Projected Capital Expenditures		$24,641,532

The necessary monies could be made available as follows:

Bond Issue	1970	
	Secondary	$ 7,854,188
	Post-Secondary	5,433,133
		$13,287,321
Bond Issue	1972	
	Secondary	$ 7,255,851
	Post-Secondary	4,098,360
		$11,354,211

TABLE V

PROJECTED OPERATING EXPENDITURES
BY FISCAL YEAR AND SOURCE OF REVENUE

FISCAL YEAR	TOTAL	STATE FUNDS	FEDERAL FUNDS
1970	$3,388,788	$2,688,788	$ 700,000
1971	4,388,016	3,230,093	1,157,923
1972	5,146,059	3,988,136	1,157,923
1973	6,535,199	5,377,276	1,157,923
1974	7,680,927	6,523,004	1,157,923
1975	9,032,037	7,874,114	1,157,923

TABLE VI

FUNDING OF RHODE ISLAND'S COMMITTED
PROGRAM OF VOCATIONAL AND TECHNICAL FACILITIES
THROUGH JUNE 30, 1970

Source of Funds:	
Vocational Education Expansion and Development Program of 1963 (CH. 78, P.L. 1964)	$ 8,000,000
Appropriation - Regional Vocational Schools (CH. 8, P.L. 1964)	2,000,000
Act Authorizing Additional Funds for Blackstone Valley School	2,000,000
Vocational Education Act of 1963 Estimated Federal Funds (See Table VII)	4,341,297
Total Available to Fund the Committed Program	$16,341,297
Funding:	
Planning Studies	44,218
Corliss Park Vocational School	99,924
Post-Secondary Facility - Warwick	3,000,000
Post-Secondary Facility - Blackstone Valley	290,000
Providence Area School	2,425,000
Newport Area School	875,000
Chariho Area School	775,000
Coventry Area School	925,000
Warwick Area School	1,500,000
East Providence Area School	950,000
Ponaganset Area School	749,300
Blackstone Valley Area School	4,400,000
Contingency Fund	307,855
Total Cost of Committed Program	$16,341,297

TABLE VII

FEDERAL FUNDS ENCUMBERED FOR CONSTRUCTION THROUGH JUNE 30, 1970

1965	Rhode Island Junior College		$ 577,800
1966	Hanley Vocational-Technical Facility	$ 283,382	
	Rogers Area Vocational-Technical Facility	250,000	
	Chariho Regional Vocational-Technical Facility	250,000	
			$ 783,382
1967	Hanley Vocational-Technical Facility	$ 300,000	
	Coventry Area Vocational-Technical Facility	376,066	
	East Providence Area Vocational-Technical Facility	173,575	
			$ 849,641
1968	Rhode Island Junior College		$ 154,049
	Hanley Vocational-Technical Facility	$ 150,000	
	East Providence Area Vocational-Technical Facility	276,425	
	William M. Davies, Jr., Vocational-Technical Facility	150,000	
			$ 576,425
1969	Rhode Island Junior College		$ 450,000
	William M. Davies, Jr., Vocational-Technical Facility	$ 250,000	
			$ 250,000
1970	Warwick Area Vocational-Technical Facility	$ 350,700	
	Ponaganset Regional Vocational-Technical Facility	349,300	
			$ 700,000
	TOTAL FEDERAL FUNDS		$4,341,297

CHAPTER III

CONCLUSIONS AND RECOMMENDATIONS

The material presented in Chapters I and II leads to certain conclusions concerning the progress of vocational and technical education in Rhode Island. Some of the indicated directions for action are presented here.

Population and Enrollment

The overall population and the secondary-school enrollment in Rhode Island will continue to rise during at least the next several years in seven of the eight area vocational and technical school districts.[1] In fact, the number of persons in the 15-21 age group--the single most critical group for vocational education--will be the largest in history.[2] Indications are that an increasing percentage of these large numbers will be going into vocational-technical types of employment. Increasing numbers of these will enhance their marketable skills at the post-secondary level. Further, the state program must adapt to the training and education needs of all citizens, regardless of their current personal or employment status.

Specifically, at the completion of the present extensive building program in 1971, vocational and technical education programs will be capable of enrolling 5,720 students and of graduating 2,447 students annually. Despite this substantial contribution to the skilled labor market, existing and presently planned vocational and technical programs will continue to fall far short of meeting the needs of students and of industry.[3]

---

[1] A Report Vocational and Technical Education in Rhode Island 1967-1973
Rhode Island Department of Education - January, 1968

[2] Population Projections for the State of Rhode Island and its Municipalities
Rhode Island Statewide Comprehensive Transportation and Land Use Planning Program - December, 1966

[3] The Rhode Island Skill Survey 1968 and 1971
Rhode Island Department of Employment Security - October, 1967

It is therefore recommended that Rhode Island's program of vocational and technical education be expanded to serve 17% of the secondary enrollment by 1972 and 20% by 1975. Such an expansion is required by the State's projected economic and population growth, the diminishing need for unskilled workers, and the personal needs of individual citizens. These recommended percentages represent somewhat low figures when compared with those of other highly industrialized states, but constitute realistic and attainable objectives for Rhode Island for the near-term projection.

Aid to Local Communities

Rhode Island has traditionally aided vocational and technical education in local communities through the reimbursement of operating expenses incurred by the program. As the number of programs increases--along with other demands on the property tax base--it is becoming more and more apparent that individual local communities will find it increasingly difficult financially to sustain, the quality programs envisaged for Rhode Island's area vocational and technical facilities. It is therefore recommended that these programs be carefully evaluated periodically in order that their financial support will continue to be adequate for the maintenance of the high level of performance which has been established for them.

Post-Secondary Programs

While 4,689 secondary-school seniors (or 51.1% of the 1967 class) were enrolled in a college-preparatory curriculum, only 3,728 (or 35.7%) of these seniors actually entered a four-year college. Therefore, post-secondary education in its various forms must be prepared to take up the slack indicated. Further, these institutions, will also have to serve many of the four-year matriculants who subsequently leave college (about 50%), as well as those graduates of business, general, and vocational-technical curricula who desire further education.

It is therefore recommended that facilities be developed to serve an additional 625 post-secondary students in 1973 and a further 400 in 1975, and that the temporary campus in Providence be maintained until the proposed facility in the Blackstone Valley opens in 1973.

Adult Education Programs

Population data indicate that adults aged 23 to 44 (the state's most productive working group) and the experienced older working group, ages 45 to 64, will both increase substantially over the next few years.[4] In view of rapidly changing technologies, there will be a constant need for retraining and upgrading of the specialized skills and competencies of both of these groups if they are to remain competent and productive workers. It is therefore recommended that aid to local communities for the operation of adult programs in the area facilities be provided.

Priority Recommendations

As noted earlier, three recommendations have priority:

a. State Advisory Committee: must be appointed by the Governor prior to April 1, 1969.

b. Statewide Plan: must be drawn up and approved by July 1, 1969.

c. State Department of Education professional staff: assuming expansion of statewide vocational and technical programs as needed (see above), together with recently enacted Federal legislation, it has become essential that the professional staff of the vocational and technical division be augmented, as recommended by professional studies undertaken over the past several years.

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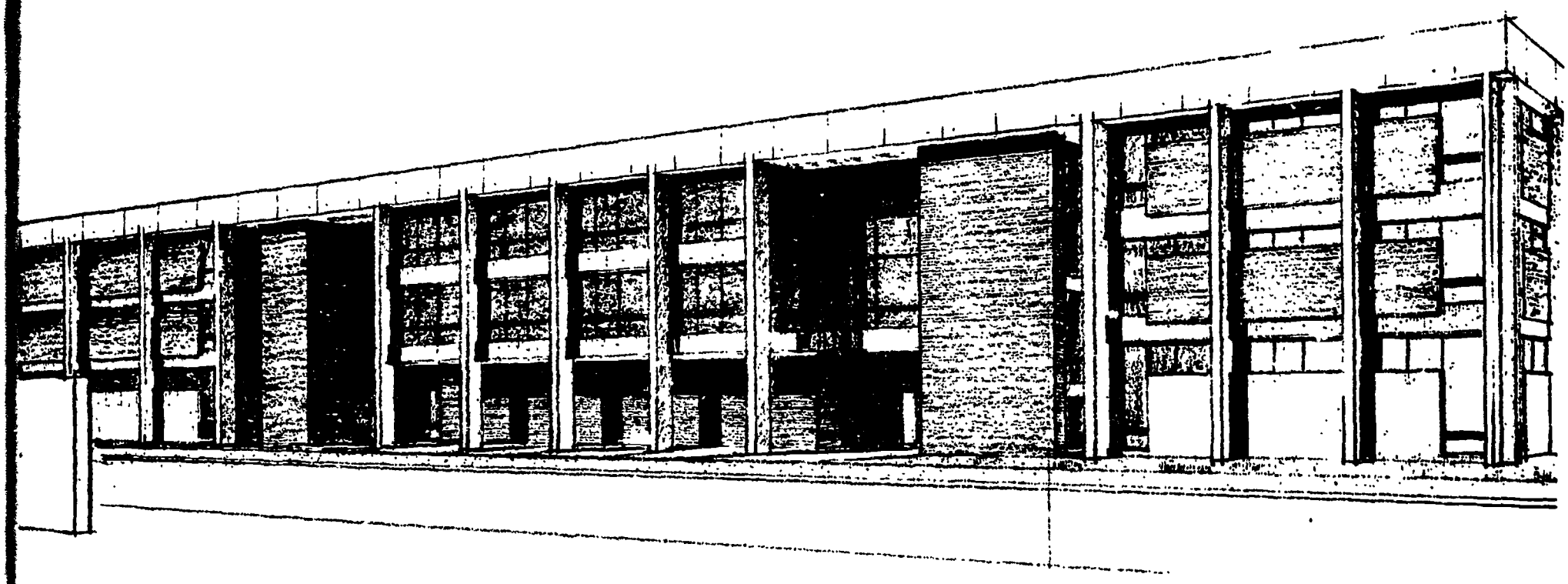
[4] Population Projections for the State of Rhode Island and its Municipalities Rhode Island Statewide Comprehensive Transportation and Land Use Planning Program - December, 1966

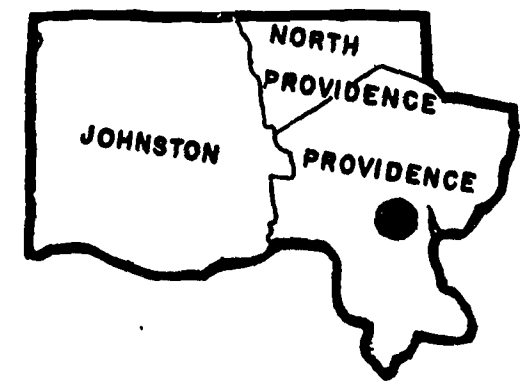
A P P E N D I X

Hanley Educational Center
Vocational–Technical Facility



William J. Sullivan, Principal, Central High School
Charles S. Matoian, Coordinator of Vocational-Technical Education Program

Area Served



Project Cost

2,425,000

Course Offerings

Automotive Mechanics
Painting & Wallpapering
Machine Shop
Distributive Education
Food Service
Woodworking
Barbering
Drafting
Graphic Arts
Metal Fabrication
Electrical
Electronics
Data Processing
Cosmetology
Fashion Design
Commercial Art

Opening Date

September, 1969

Area Advisory Committee

PROVIDENCE

Mr. Edmund A. Quinn
Mr. William J. Sullivan
Mr. Carl E. Fritz
Mr. Francis E. Doherty
Mr. Theodore M. Hathaway
Mr. William Jacques
Mr. Harry T. Brett
Mr. George R. Frankovich
Mr. John B. Lyte, Jr.
Mr. Clifford Shaw
Mr. E. A. Palmer

Johnston

Mr. John D. DiSanto

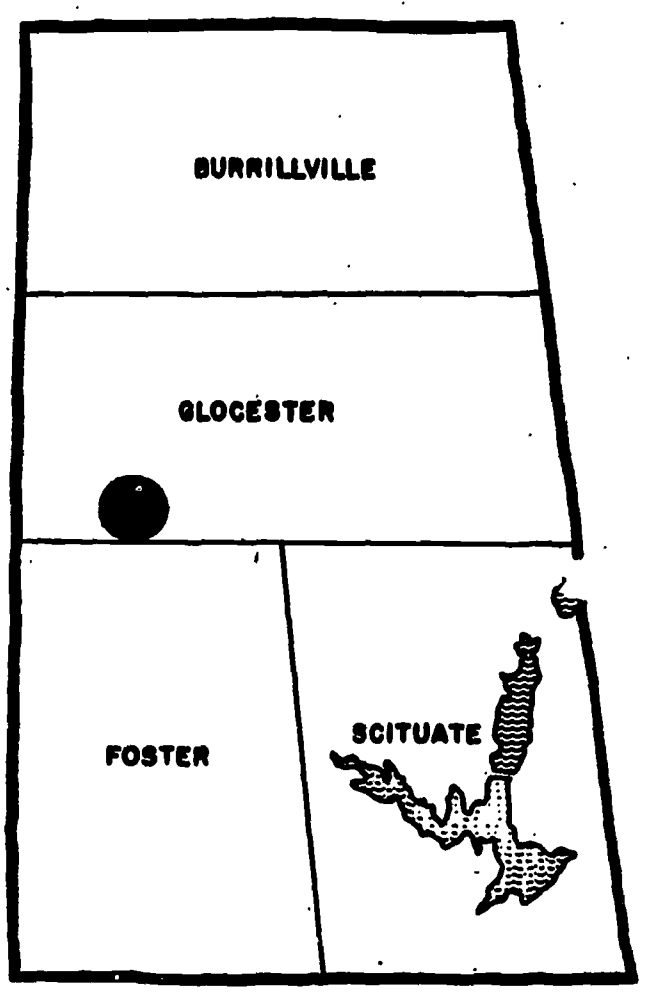
North Providence

Mr. John A. Maguire

Ponaganset Regional Vocational—Technical Facility

C. Harold Edwards, Superintendent, Ponaganset Regional School District
Gordon E. Bryant, Principal, Ponaganset Regional High School

Area Served



Opening Date

1970-1971

Project Cost

749,300

Course Offerings

Agriculture
Auto Body
Carpentry
Electrical-Electronics
Drafting
Health Occupations

Area Advisory Committee

Mr. Thomas H. Belcher, Chairman	Foster
Mr. Luke Binder	Pascoag
Mr. Tage Frid	Foster
Mr. M. Vernon Gardner	Hope
Mr. Cleo Menard	Harrisville
Mr. F. Kelvin Mowry	North Scituate
Mr. Joseph W. Prior	North Scituate
Mr. William G. Schanck	Chepachet
Mrs. Dorothy L. Smith	Oakland
Mr. Robert Westcott	Chepachet

Warwick Area Vocational—Technical Facility

R. Bowen Hardesty, Superintendent, Warwick

Opening Date

1970-1971

Project Cost

1,500,000

Course Offerings

Aircraft Mechanics
Automotive Mechanics
Data Processing
Metal Fabrication
Health Occupations
Drafting
Distributive Education
Instrumentation
Machine Processes
Electrical-Electronics
Carpentry
Commercial Art

Area Advisory Committee

WARWICK

Mr. Albert Tavani, Chairman
Mrs. Clyde North
Mr. William Lang
Mr. Martin Chase
Mr. Leo Holland
Mr. John Lynch
Mr. Peter Costantino
Mr. R. Mailland Coleman
Mr. William O'Brien

WEST WARWICK

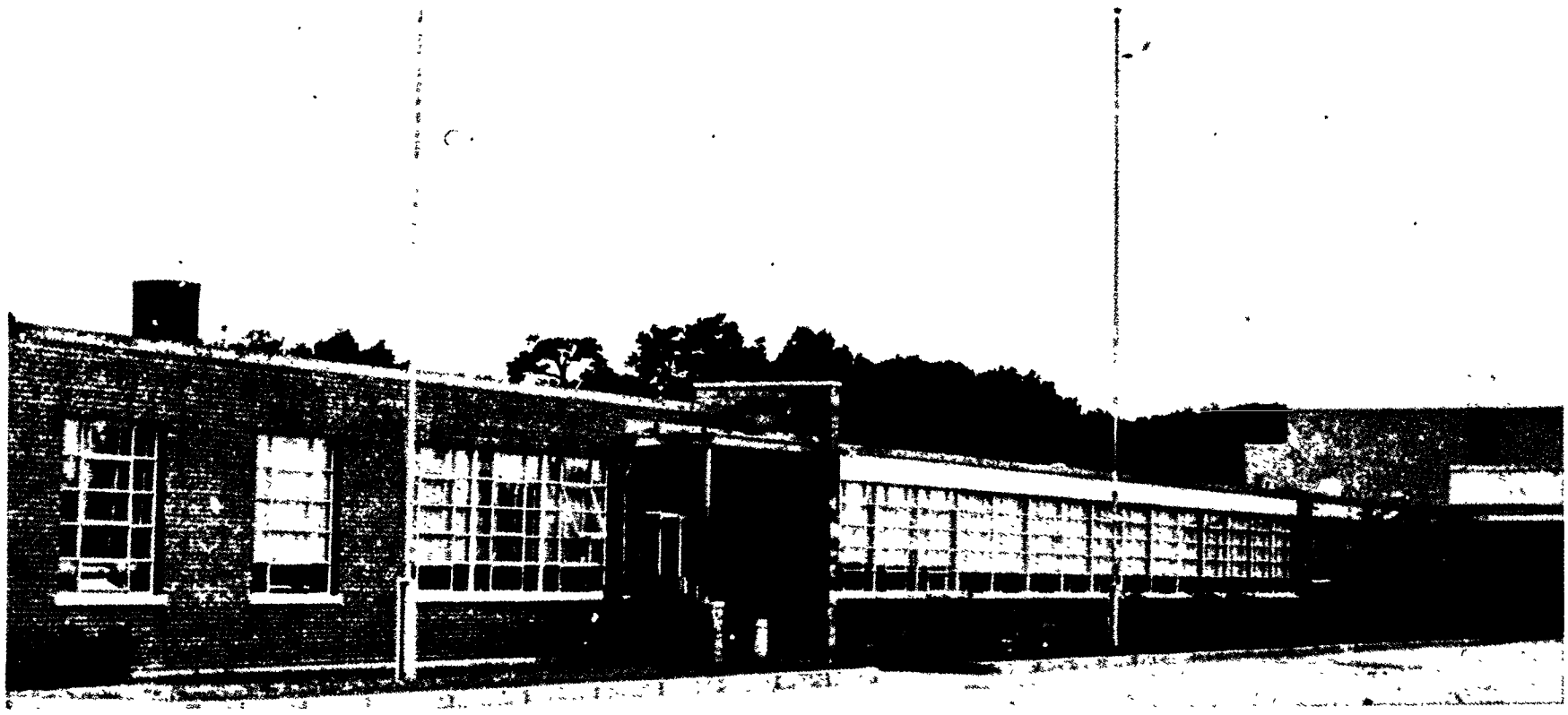
Mr. Louis Lombardi
Mr. Elliott Healy
Mr. Herbert Kreuter

CRANSTON

Mrs. Gala Jennings
Mr. Russell Bertwhistle
Mr. Arthur Hanoian

Area Served

Vocational–Technical School of Rhode Island



Joseph Rocchio, Principal
Brendan Gahan, Coordinator of Vocational Technical Education

Edward Duffy, Vocational Guidance

Since September, 1958 this State-operated vocational-technical high school which is located at Corliss Park in Providence has been providing job preparation and general education for those secondary students from throughout the State whose local school systems have no facilities for the teaching of vocational-technical education. Afternoon, evening and Saturday training programs for adults have been continuing at the school during this ten year period.

Extensive changes in the function and program of the Rhode Island Vocational-Technical School are anticipated as a result of the construction of eight new regional vocational-technical training centers currently being constructed or planned for construction at strategic locations throughout Rhode Island. By 1971, all of the State's vocational-technical students will be attending one of the eight new facilities, thus freeing the school at Corliss Park to offer programs for students with special needs and to conduct research, experimental and demonstrative programs.

At the present time, the following courses are being offered:

Automotive	Electronics
Carpentry	Graphic Arts
Cabinetmaking	Machine Processes
Electricity	Sheet Metal

VT 008 160
Reed, Ritchie H.
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*UNION OF SOVIET SOCIALIST REPUBLICS; USSR

This report is one of a series of Soviet manpower and employment being conducted by the Foreign Demographic Analysis Division of the Bureau of Census. It presents data for four different manpower measures: (1) two variants of the Labor Force for the period 1950-1965 and four variants for the period 1966-75, (2) a series of annual average employment for the period 1950-65, and two variants for the period 1966-75, (3) 2 series of man-day employment for the years 1950-65, and (4) 2 series of man-hour employment for the years 1950-65, and two variants for the years 1966-75. At least one series of each measure is given for both the nonagricultural and agricultural sectors. In the course of preparing the report, attempts were made to construct consistent employment series based on Soviet economic information. In developing estimates of employment in non-reported categories, heavy reliance was placed on analytic techniques using ancillary Soviet economic data. The report summarizes data available as of April 1, 1967. (CH)

VT 008 160

ED042060

ESTIMATES AND PROJECTIONS of the Labor Force and Civilian Employment in the U.S.S.R.: 1950-1975

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by

Ritchie H. Reed
Foreign Demographic
Analysis Division

BUREAU OF THE CENSUS

International Population Reports
SERIES P-91, No. 15

U.S. DEPARTMENT OF COMMERCE
Alexander B. Trowbridge, Secretary
William H. Shaw, Asst. Secy., Economic Affairs

BUREAU OF THE CENSUS
A. Ross Eckler, Director

VT008160

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Foreign Demographic Analysis Division
Paul F. Myers, Chief

June 1967

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Preface

This report is one of a series of studies of Soviet manpower and employment being conducted by the Foreign Demographic Analysis Division of the Bureau of the Census. It presents data for four different manpower measures: (1) Two variants of the labor force for the period 1950-65, and four variants for the period 1966-75; (2) a series of annual average employment for the period 1950-65, and two variants for the period 1966-75; (3) a series of man-day employment for the years 1950-65; and (4) a series of man-hour employment for the years 1950-65, and two variants for the years 1966-75. At least one series of each measure is given for both the nonagricultural and agricultural sectors. The different measures are defined, the prime determinants of labor force participation are assessed, and the methods used in deriving the detailed data are discussed.

In the course of preparing this report, attempts were made to construct consistent employment series based on Soviet economic information. Isolated and undocumented Soviet employment statistics for single years or other forms of statistical information reported by individual Soviet authors usually were avoided when it was found impossible to place these materials in determinable frames of reference. In developing estimates of employment in unreported categories, heavy reliance was placed on analytic techniques using ancillary Soviet economic data. This report summarizes data available as of April 1, 1967.

This study was prepared under the direction of Frederick A. Leedy, Chief, U.S.S.R. Branch, Foreign Demographic Analysis Division. Murray Feshbach, of this Branch, was responsible for the supervision of the study and his knowledge and experience were invaluable at all stages of the work. Thanks are due to Philip Grossman, David W. Bronson, Jerry W. Combs, Jr., James W. Brackett, Barney K. Schwalberg, and Norton T. Dodge, who were generous with their time in offering suggestions and advice.

Comments on and criticism of this report are invited and should be addressed to the Chief, Foreign Demographic Analysis Division, U.S. Bureau of the Census, Washington, D.C. 20233.

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I. Introduction

A. PURPOSE AND SCOPE

This report examines the determinants of labor supply in the Soviet Union since 1950 and presents estimates and projections of both the labor force and civilian employment during the years 1950-75. It is primarily quantitative and concerned almost exclusively with aggregates; such factors as labor conditions, wage levels, and skills and attitudes of the labor force are discussed only as they affect the total. No attempt has been made to project labor demand in terms of economic variables, such as national income, except insofar as Soviet plan goals have been used.

This chapter includes a brief summary of the report and a section on the concepts and definitions of the various Soviet manpower measures used here. Chapter II analyzes the important determinants of manpower supply and its utilization. Each factor is discussed in view of its effect on the manpower situation in the period 1950-65, and its possible effect in the future. Chapter III discusses the methods used in deriving the detailed data on the labor force, annual average employment, and man-year and man-hour inputs for the years 1950-75, and concludes with a brief comparison of the results. The appendix tables present the detailed data and include the explicit sources and methods used in making the estimates and projections.

B. SUMMARY

The five most widely used measures of Soviet manpower and its utilization are man-hours, man-days, man-year equivalents, annual average employment, and labor force. Man-hour employment is the least ambiguous measure of labor input, but unfortunately few man-hour data are collected and even fewer are published. Man-day employment is the next best measure of labor input and some data are collected and published. Man-days worked in the private sector can be estimated and converted to man-year equivalents, which roughly approximate the number of persons occupied in the activity on a year-round basis and which are used in combination with reported annual average employment data. Annual average employment represents the average number of persons employed during a year, but it is computed differently for workers and employees [1] and for collective farmers. It is the only series that is reported regularly in the statistical yearbooks and the one often used by Soviet economists to calculate labor productivity. The labor force, which is based on a "gainful worker" concept, is the best measure of the total number of persons engaged in economic activity during the year.

A number of demographic, economic, and educational variables influence the supply of labor. In the years for which projections are presented here (1966-75), most of these variables will operate to increase labor force participation. As the sex structure corrects itself from the imbalance resulting from World War II and a larger proportion of the working-age population is composed of men, a higher level of participation in any given age group may be expected. Another demographic factor, decreasing family size, has become and will remain an important element in determining female participation, for the numbers and ages of children at home are important factors in the considerations of a housewife as to whether or not she should enter the labor force. In connection with this, the Government's development of child-care institutions and the increased availability of part-time work should facilitate the choice by more women to work outside the household. Planned increases in the number of jobs available in the light industry and service sectors also will be favorable to higher levels of female participation. Increases in money wages are another form of stimulant to participation in the labor force and the increases currently planned should have this effect. Increased educational attainment of the population should also be an influence for increased participation. Finally, labor should be used more fully and effectively as the economy becomes more sophisticated and seasonality declines.

There are at least three factors, however, whose influence will be to lower the level of participation in the labor force. The age structure was severely distorted by the effects of World War II and as a result an increasing portion of persons 14 years of age and over will be in the older age groups where participation is lower. This distortion of the age structure is particularly true of women. The effects of this will be heightened by a continuation of rural to urban migration, for labor force participation is much lower for women—and particularly older women—in the cities. Finally, increased enrollment in full-time education will exclude more students from the labor force.

The statistical data presented in this report can be summarized for three periods, 1950-59, 1960-65, and 1966-75. During the first period, both the level of participation by the population in the labor force and the level of utilization of persons working were falling. That is, successively smaller propor-

[1] This is a major socioeconomic group comprising persons employed primarily in the state sector (including state farms). It embraces all classes of workers, i.e., wageworkers, salaried employees, engineering-technical personnel, minor service personnel, guards, and apprentices.

tions of each age group were participating in economic activity and those working were contributing less labor per person. The period 1960-65 was one of high labor demand, with a high rate of increase in annual average employment but a low rate of increase in the population of able-bodied ages.[2] Since there is no evidence that the intensiveness of utilization of persons working changed significantly during this period, labor force participation rates must have risen substantially. The fulfillment of the 5-year plan during the years 1966-70 will require the maintenance of high levels of labor force participation. Although eased somewhat during the 1970's, the supply of labor will still be limited by the relatively slow rate of growth projected for the able-bodied population.

According to the projections, the labor force will grow at a rate of 1.7 to 1.8 percent per year between 1965 and 1975, whereas annual average employment will grow at a rate of 2.0 to 2.1 percent per year. Thus, annual average employment (variant A) as a proportion of the labor force (variant I) is expected to rise from 89.9 percent in 1965 to 94.1 percent in 1975, and the absolute difference to decline from 12.1 million to 8.4 million during these 10 years—due largely to a decrease in seasonality and a shift in employment from agriculture to other sectors.

The labor force should consist of relatively more men and become somewhat older during the years ahead. Persons outside the able-bodied ages are projected to increase from an estimated 12.7 percent of the labor force in 1965 to 13.4 percent in 1975. This change is due to the projected increase in the overaged labor force, for the underaged will change little—from an estimated 1.1 percent of the labor force in 1965 to 0.9 percent in 1975. Within the able-bodied ages, the proportion of the labor force 40 years of age and over is projected to increase from 31.7 percent in 1965 to 36.7 percent in 1975. The proportion of men in the labor force is projected to increase from 49.2 percent in 1965 to 51.1 percent in 1975.

The projections of annual average employment by sector show no unusual changes. Agriculture is expected to continue to decline as a proportion of total annual average employment, from 53.7 percent in 1950 to 37.2 percent in 1965 and 27.7 percent in 1975. Industry's share will remain relatively constant—25.1 percent in 1965 and 25.5 percent in 1975. The three major "productive" sectors—industry, construction, and agriculture—as a whole form a declining portion of total employment, from 74.6 percent in 1950 to 67.5 percent in 1965 and 60.4 percent in 1975. On the other hand, the public health and education sectors should continue to represent an increasing proportion, from 6.7 percent in 1950 to 10.2 percent in 1965 and 12.9 percent in 1975.

[2] In Soviet terminology the "able-bodied ages" include males 16 to 59 years old and females 16 to 54 years old.

C. CONCEPTS AND DEFINITIONS

Soviet manpower is discussed in this report primarily in terms of labor force, annual average, man-hour, and man-day employment, and man-year equivalent employment. Several other measures are used, but they are only incidental to the main discussion.

The labor force consists of those persons who claim to have an occupation. This is the labor force concept used in the 1939 and 1959 Soviet censuses. It is different from the U.S. concept in that it does not measure both employment and unemployment at a particular point in time; instead, it measures only the number of persons who claim to have an occupation. No allowance is made for recording unemployment as defined in U.S. statistics. Unemployment was "abolished" in the U.S.S.R. in 1930, and since that time no unemployment data have been collected. If a person did not claim to have an occupation he was considered to be out of the labor force whether he was seeking work or not. If a person worked at more than one job he was recorded as belonging to what he considered as his primary occupation. The census is the only source of labor force data for the country as a whole.

The 1959 census schedule contained four questions on employment and occupation:[3]

12. Place of work (name of the enterprise, collective farm, institution) or working in one's own household *(khozyaystvo)*.

13. Occupation at the above place of work (duties or work done).

14. If a person is without an occupation from which income may be derived, show other sources of the person's means of subsistence.

15. Social group to which person belongs.

Each individual was recorded as being in the labor force if his answers to questions 12 and 13 were positive, and as not being in the labor force if his answers to the questions were "none." The instructions to the census were so worded that questions 12 and 13 were to be answered if the respondent replied that he had an occupation. Thus, a person might have been out of work for several months at the time of the census, but still be counted as in the labor force.

[3] U.S. Bureau of the Census, Materials, 1959, pp. 31-38.

All the labor force series in this report utilize the Soviet gainful worker concept.[4] A complication arises, however, from the fact that only the published results of the 1959 census are available as a basis for estimating and projecting the labor force in other years. Although a previous census was taken in 1939 the results were not published in as much detail as for the 1959 census, and the drastic manpower losses due to the war make it impossible to construct valid trends between the two censuses. Because of the lack of labor force data, the estimates and projections of the labor force were made on the basis of assumptions regarding how labor force participation rates (hereafter abbreviated as LFPR's) did and will change, or regarding some given relationship between labor force and regularly published employment statistics (annual average employment). Both procedures are somewhat arbitrary, but under the circumstances they are the most satisfactory.

Changes in the size of the labor force do not necessarily correspond to changes in labor inputs. For instance, if the collective farm population is aging, more people may be working a shorter workday and still be recorded in the labor force, although the total time worked may be falling. Or, if the length of the workday is changed, labor input will change for a constant labor force. Therefore, labor force figures have significant inadequacies for productivity analysis.

Annual average employment data for the Soviet economy are reported regularly in statistical yearbooks, but the figures are heterogenous in definition and coverage. All annual average employment figures for workers and employees (in both agricultural and nonagricultural enterprises) represent annual average registered numbers of persons *(srednyaya spisochnaya chislennost' rabotnikov)*. They are derived as the averages of 12 monthly averages which are, in turn, the average of the daily number of persons on the rolls. A person appears on the rolls of an enterprise if he is on that enterprise's payroll and he remains on the rolls during excused absences from work, holidays, etc. In general, this measure is computed the same way in the different sectors for workers and employees, although there are some differences in the method used to compute the monthly average.[5]

The annual average employment series for collective farmers is computed differently from that for workers and employees. The collective farm annual average is the average of the 12 monthly total participation figures. The monthly participation figure is, in turn, the number of different persons participating in socialized production on the farm in a given month. It follows from this that a person counts as one-twelfth of an annual average person if he works in socialized production on the collective farm during a month, regardless of the number of days. This method of computation overstates collective farm employment as compared with employment of other sectors.

Annual average measures are abstractions that do not accurately reflect changes in the number of persons working or in the amount of time they work. If the number of holidays is increased, the annual average number will remain the same, but the number of man-days per person will fall. Also, a change in the length of the workday is not reflected in the annual average. And however poor a measure the annual average is for workers and employees, it is much less satisfactory for collective farmers. Both Western and Soviet economists agree that the collective farm annual average figures leave much to be desired. The fact that a person who works 1 day in a month is counted the same as one who works 30 days clearly demonstrates the inadequacies of this measure. Although annual averages more accurately reflect labor inputs than do labor force figures, they are more ambiguous and heterogeneous than man-day and man-hour figures.

Man-hour, man-day, and man-year equivalent employment figures are the best measures of labor input, but their usefulness varies. A man-hour is easily defined as one person working 1 hour, and it is the least ambiguous measure of labor input. It is, however, the most difficult measure to obtain. A scheduled man-hour per day figure for adults is reported only for industry,[6] although the scheduled average hours worked per week are reported for industry and for all workers and employees (see table A-10). The actual hours worked per day may vary considerably from this scheduled amount because of overtime, part-time work, and the shortened workday for underaged workers. At present, man-hours are not reported by agricultural organizations except on some experimental farms. Thus, there are many problems involved in deriving man-hour data, but it is the only series that is consistent through time even when the length of the workday is changing.

Man-day employment data are more ambiguous than man-hour employment data but they are more easily obtained. The primary inadequacy of the

[4] In current discussions of the forthcoming 1970 census, mention has been made of possible questions on the seasonality of employment, that is, on the number of months worked during the year by each respondent. Pod''yachikh, "On the Forthcoming," 1966, pp. 38-47.

[5] Two alternative methods of calculating the monthly average number of registered personnel are given in Feshbach, Soviet, 1960, pp. 50, 54. See also Yeremina and Marshalova, Statistika, 1965, pp. 30-36.

[6] The Soviet concept of "industry" includes manufacturing, mining, logging, fishing, current repair of plant and installation, current and capital repair of equipment, and electric power generation.

man-day figures is that they do not reflect changes or differences in the length of the working day. In nonagricultural activities a person contributes a man-day regardless of how long he works during the day; overtime or part-time employment is not reflected in the man-day statistics. On collective farms, part-time work, at least, is reflected in the man-day statistics, for a person working only half a day will be credited with only one-half a man-day.[7] The nationwide changes in the length of the workday for workers and employees between 1956 and 1960 and planned changes during the present 5-year plan make the man-day series inconsistent through time as a measure of labor input.

The method used to derive the man-day series given in this report was based partially on the assumption that the number of man-days worked per annual average worker[8] in industry was the same for other nonagricultural branches. The number of man-days worked in socialized agriculture was reported for some years and was estimated for other years on the basis of the relationship between reported figures on annual average employment and man-days worked.

Both Soviet and Western economists estimate employment in the private subsidiary economy[9] in terms of man-days and man-year equivalents.[10] The method generally used is to apply reported estimates of input coefficients to reported data on private sector activity (i.e., hectares of land cultivated and head of livestock tended). This method was used in this report.[11] The man-year equivalent figures were derived from the total estimated numbers of man-days worked and the conversion factor of 280 man-days per man-year equivalent, which is often used by Western and Soviet analysts. This conversion factor, however, is not entirely consistent with data reported for other sectors, for during the early 1960's man-days worked per annual average worker in industry amounted to approximately 265, on state farms—285, and on collective farms—240.

To illustrate the differences between the numerous measures of employment, those pertaining to the socialized economy of collective farms during 1958/59 are as follows:[12]

Total participants (1958)	36,800,000
Labor force (census of January 1959).	32,279,727
Participants (July 1958).	31,916,000
Annual average employment (1958) . .	25,075,000
Participants (January 1959)	18,003,700

The 1959 census shows a labor force for the collective farms of 32,279,727 individuals,[13] although the annual average employment during 1958 was 25,075,000,[14] a difference of about 7.2 million. That is, 32.3 million people claimed that working in the socialized sector of collective farms was their primary occupation during 1958, but the average number actually working was only 25.1 million. And even though 32.3 million people claimed to be collective farmers by occupation, 36.8 million different collective farm members participated in farm work during the year.[15] Of these 36.8 million, only 18.0 million[16] participated in farm work in January 1959, the month of the census, although in the peak month of the preceding year, July 1958, 31.9 million participated.[17]

The difference between the figures for total participants and the labor force represents those farm members who worked on the farm at some time during the year but did not consider this as their primary occupation. The number includes members who were full-time students and who worked only in the summer, members who were usually factory workers but assisted with the harvest, and participating members who considered work in the private subsidiary economy or the household as their primary occupation. The difference between the labor force and annual average figures is primarily due to seasonality. Employment in the peak-level month was 177 percent of that in the lowest-level month and almost 14 million people who worked on collective farms in the summer did not work there in the winter.

One can draw the following conclusions concerning Soviet manpower statistics. The labor force figure is not conceptually comparable with the U.S. figure and is not a valid measure of labor input. The labor force numbers exceed the annual average numbers by substantial amounts and the two series represent quite different concepts. The labor force can be said to represent not only the steadily employed but also persons who move in and out of the labor force on the basis of particular

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[7] Boyarskiy, Statisticheskiy, 1965, p. 686.

[8] Includes wageworkers *(rabochiye)* only, and not employees *(sluzhashchiye)* or other categories of personnel.

[9] This term *(lichnoye podsobnoye khozyaystvo)* refers to agricultural activities of workers and employees and collective farmers (and their families), confined to small private plots.

[10] Man-year equivalents for the private subsidiary economy are regularly published in Soviet sources, but they are for persons working only in the private sector and do not include the labor input of persons working also in the socialized sector.

[11] Nimitz uses the same general method but employs different input coefficients through time and derives substantially higher man-day totals than are presented here. Nimitz, Farm, 1965, p. 7 ff.

[12] For a detailed discussion of these measures, see DePauw, Measures (forthcoming).

[13] Itogi, p. 96.

[14] See table A-11.

[15] See table A-11.

[16] Sel'. khoz., 1960, pp. 460-461.

[17] Ibid.

job opportunities. It would be a mistake, however, to subtract annual average employment from the labor force and call the difference unemployment as defined in the United States. This difference does not necessarily represent those who are looking for work but unable to find it; many are probably quite accustomed to working during certain seasons and do not look for work in other seasons. Presumably, if year-round employment were offered with attractive remuneration, most of the people denoted as being in the labor force would work a full year. This presumption is supported by the fact that the difference between the annual average number and the labor force total has decreased substantially during the years 1926-59, as the economy has become more complex and has offered more workers an alternative to seasonal employment. Whatever else the difference between the labor force and the annual average number represents, it can serve as an index of labor utilization.

The annual average number is the only regularly reported, comprehensive manpower statistic. It is a better measure for the calculation of labor productivity than the labor force number and, since it is reported annually, is the only one that does not require substantial estimation. The man-hour and man-day labor input figures are the most suitable for productivity measurement. Man-hours are the least ambiguous and generally mean the same thing in the different sectors of the economy. The availability of both types of figures is limited, however, and derivation of these series requires extensive estimation. Man-day data are reported more frequently than man-hour data and when necessary they can be derived on the basis of fewer assumptions.

II. The Determinants of Manpower Supply, 1950 to 1975

The analysis of all the factors that affect the supply and utilization of labor is a broad subject indeed, and one that cannot be covered in its entirety here. However, the most important factors determining the level of labor force participation, the level of employment, and the efficiency of the use of manpower will be discussed briefly.[18] The influence of each factor is assessed independently of the influence of other factors. For example, the inference is made that more low-cost child-care institutions will encourage increased labor force participation of women but the conclusion should not be drawn from this alone that female LFPR's will increase, for there are other factors acting in the opposite direction.

A. POPULATION

The peculiarities of the structure and rates of growth of the Soviet population have had important effects on the labor force. For example, the high mortality during World War I, the Civil War, the collectivization of agriculture, and World War II has had a heavy impact on the present size and structure of the Soviet population and consequently has given the Soviet labor force some peculiar characteristics. The very high mortality among men has resulted in the employment of women to an almost unprecedented extent, and the high mortality of certain age cohorts has given the labor force an unusual age structure.

Brackett and DePauw, in summarizing the growth of the Soviet population during the years 1950-75, divide the period into three parts: 1950-59, a period of sustained population growth; the early 1960's, a period of declining growth rates; and 1965-75, a period in which growth rates are likely to fall even more.[19] During the 1950's, the rates of growth varied only from a low of 1.6 percent per year to a high of 1.8 percent. In the early 1960's the growth rate declined to 1.1 percent, and if fertility continues to decline it may drop to 0.5 percent per year in the mid-1970's. The decline in fertility after 1961 will not directly affect the labor force during the years covered in this report since all those who will enter the labor force in the projection years (1966-75) were born before 1962. Thus, only changes in the age and sex structure which were initiated prior to that time will be of concern here in determining the size and structure of the labor force.

1. Age-Sex Structure

Table 1 shows the changes in the distribution of the population 14 years of age and over during the years 1950-75. The proportion of the population 60 years of age and over increases steadily, and more rapidly for females than for males. Since a relatively smaller proportion of persons in this older age group participate in productive activity, other things being equal, the proportion of the population 14 years of age and over which is in the labor force has decreased and will continue to do so.

Table 1.--Percent Distribution of the Population Aged 14 Years and Over, by Age and Sex: January 1, 1950 to 1975

Age	1950	1955	1960	1965	1970	1975
TOTAL						
14 and 15 years.	5.6	5.6	3.4	5.3	5.3	5.1
16 to 19 years..	11.3	12.1	7.3	8.5	9.9	9.9
20 to 29 years..	26.0	25.7	26.0	21.1	17.4	20.7
30 to 39 years..	17.6	16.6	21.8	22.3	21.6	17.5
40 to 49 years..	16.6	16.2	14.5	14.2	17.8	18.2
50 to 54 years..	6.2	6.5	7.3	7.0	5.4	6.6
55 to 59 years..	4.9	5.3	6.0	6.4	6.1	4.7
60 years and over.....	11.8	12.0	13.8	15.2	16.5	17.2
MALE						
14 and 15 years.	6.7	6.7	4.0	6.1	6.0	5.8
16 to 19 years..	13.5	14.1	8.5	9.9	11.3	11.1
20 to 29 years..	28.1	29.2	30.1	24.0	19.7	23.1
30 to 39 years..	16.5	15.7	22.5	24.3	23.8	19.0
40 to 49 years..	15.3	14.8	12.9	12.9	17.5	18.9
50 to 54 years..	5.5	5.5	6.5	6.0	4.5	5.8
55 to 59 years..	4.5	4.4	4.8	5.5	5.0	3.8
60 years and over.....	9.9	9.7	10.7	11.2	12.1	12.5
FEMALE						
14 and 15 years.	4.8	4.9	2.9	4.6	4.6	4.6
16 to 19 years..	9.7	10.6	6.3	7.5	8.8	8.9
20 to 29 years..	24.5	23.2	23.0	18.9	15.6	18.8
30 to 39 years..	18.4	17.3	21.2	20.7	19.8	16.2
40 to 49 years..	17.6	17.1	15.7	15.3	18.1	17.7
50 to 54 years..	6.8	7.4	7.8	7.7	6.1	7.2
55 to 59 years..	5.2	5.9	6.9	7.1	7.0	5.5
60 years and over.....	13.1	13.7	16.1	18.2	19.9	21.2

Source: Computed from Brackett and DePauw, "Population," 1966, pp. 662-674. Figures for 1970 and 1975 were based on the assumptions that mortality will decline in accordance with postwar international experience, and that there will be no international migration.

[18] For a more detailed discussion of the Soviet population and labor force, see Brackett and DePauw, "Population," 1966; Feshbach, "Manpower," 1966; and Brown, "Soviet," 1966.

[19] Brackett and DePauw, "Population," 1966, pp. 606-610.

The effects of low birth rates during and immediately after World War II are demonstrated in the table by the age groups 14 and 15 years and 16 to 19 years. In 1960, the proportion of both males and females in these age groups (births during the years 1941-46) is unusually small as compared with that 5 years earlier. By 1965 this deficit is felt in the age groups 16 to 19 and 20 to 29, in 1970 it affects primarily the 20 to 29 age group, and in 1975 the 30 to 39 age group. Thus, throughout the 1960's and 1970's the low birth rates of the war will cause an unusually low proportion of the population to be in the prime working ages of 20 to 40 years where labor force participation rates are the highest.

The effect of the changing internal distribution of the population 14 years of age and over may be illustrated by comparing the results of two projections of the labor force—one based on the assumption that the overall proportion of the population 14 years of age and over which is in the labor force will remain constant after 1959, the other based on the assumption that the 1959 LFPR's for specific age and sex groups will remain constant. These projections yield figures of 142.9 million and 137.7 million, respectively, in 1975. The difference of 5.2 million is due solely to the changing distribution of the population among the different age and sex groups.

The effect that a changing population structure can have on the level of employment is further indicated by the following sets of data. The rates of growth of the population of able-bodied ages during various periods of the years 1950-75 are:[20]

Years	Annual growth rate (percent)
1950-58	1.9
1959-65	0.5
1966-70	1.5
1971-75	1.8

During the same period, annual average employment is estimated to increase as follows: [21]

Years	Annual growth rate (percent)
1950-58	2.0
1959-65	2.1
1966-70	2.0
1971-75	2.2

[20] Calculated from ibid., pp. 663-669. Figures for January 1 reported in this source were adjusted to July 1 by linear interpolation to make them more comparable to annual averages.

[21] Calculated from data in table A-7.

Clearly, something drastic happened in the period 1959-65. The rate of growth of annual average employment was much higher than that of the population of able-bodied ages. This was possible only if more people were brought into the labor force from outside the able-bodied ages, if labor force participation rates of those in the prime working ages increased, or if people worked more steadily—thereby decreasing the difference between annual average employment and the labor force. Probably all three factors were operative, but it is difficult to see how a fairly substantial increase in LFPR's could have been avoided. The labor supply must have been extremely taut during the period. It is clear from the data, too, that a continued high level of labor force participation will be required to fullfill the present 5-year plan (1966-70) for labor.

Females account for a little less than half of the annual average number of workers and employees and for more than half of the able-bodied collective farmers working in socialized agriculture. In comparison with other countries these are unusually high proportions and are due to a conscientious effort on the part of the Soviet Government to attract women into the labor force—a policy initiated at the beginning of the industrialization drive and made more necessary by the loss of males during World War II. This is not to say that Soviet leaders would not have wanted more women in the labor force if the sex ratio were normal, but that the imbalance of the sex ratio became so great as to make female labor essential. The sex balance is gradually being corrected, but the population will not become normal in this respect until 2020.[22] The increasing proportion of males in the population, with their higher level of participation in the labor force, means that a larger labor force can be expected from a given age, or age group, in the future. Soviet leaders apparently plan to continue an explicit policy of drawing more women into the labor force, but this will be difficult because of the aging female population.

2. Family Size

The size of a woman's family and her labor force status are strongly interrelated. As the family size becomes larger, the disutility of leaving the household for outside employment increases, and vice versa. From another point of view, as better paying and more pleasant jobs become available, the disutility of having children becomes greater. The relationship between these factors is complex and it is difficult to determine any one line of causation. (That is, do increased levels of female labor force participation cause decreases in fertility, or do decreases in fertility allow more

[22] Brackett and DePauw, "Population," 1966, p. 612. In 1966, there were 84.9 males per 100 females, and only by 2020 will this ratio be 100.1 to 100.

women to enter the labor force?) Even so, it is clear that the level of labor force participation and family size are inversely related. Scattered data from the Soviet Union support this conclusion.[23] Thus, female participation would be expected to increase, *ceteris paribus*, as fertility declines. The means of controlling family size through contraceptives and abortion are generally available to urban women and apparently are being used. Rural women have less possibility for controlling family size. Nevertheless, overall marital fertility has been declining steadily since 1950.[24]

The Soviet Government can rely on three methods of inducing women with children to work—higher wages, free or low-cost child care, and part-time work. It has tried all three, but places the greatest emphasis on providing child-care facilities for working mothers. According to the current 5-year plan, the number of children in preschool state institutions is to increase by 60 percent—to a total enrollment of 12.2 million—during the years 1966-70.[25] If this effort is successful, an increase in labor participation of women can be expected.

Sonin has noted that party leaders are actively considering offering more part-time work opportunities.

> . . . .at the 22nd Congress it was pointed out that in the letters of workers there is the suggestion that for women with many children a shortened work day be established and that they receive pay accordingly. The Central Committee considers it necessary to direct our Government and trade union organs to consider this question and prepare their own proposals.[26]

This concern by the party in 1961 was followed by sample surveys investigating the question of introducing a shortened workweek for mothers but, outside of an authorization for textile plants to hire part-time labor,[27] little has actually been done. Presumably the effect of more part-time work would be to draw more women into the economy as well as to reduce the time worked by some of those already working. Sonin estimates that there are approximately 1.4 million women working full-time in the national economy (except agriculture and some nonproductive branches) who would like to work only a half day.[28] The planners must face the question, therefore, of whether more part-time work for women would actually increase the total labor supply. They may try to be selective in their policy—that is to encourage full-time work in areas where female employment is already high and to encourage part-time work in areas where female employment is low. Since the female labor supply is fairly immobile, this policy may prove to be successful.

In summary, as the disutility of entering the labor force decreases (more part-time work opportunities, smaller families, and more child-care facilities) and wages offered increase, more housewives should become part of the labor force, other things equal. This does not necessarily mean, however, that there will be a commensurate increase in the total labor input (man-days or man-hours).

3. Geographical Distribution

There are many paradoxes in the geographical distribution of labor in the Soviet Union. This is true of the distribution between different regions of the country, as well as between urban and rural areas. The rural population is very large for an industrialized country, yet there is concern about the rate of rural-to-urban migration. The eastern regions of the country are in need of labor resources, although the proportion of people in these regions not occupied in the socialized economy is relatively high. These problems of matching labor use to labor resources are so troublesome that at least one Soviet economist thinks that the establishment of territorial and regional balances of labor is the most important contemporary problem of labor resource planning.[29]

Soviet leaders are making an effort to industrialize the eastern regions of the country and to enlarge the population there. The Government has allocated a relatively large amount of capital to the area,[30] much of which is invested in heavy industry. Labor, however, cannot be so easily allocated. In the relatively free labor market that now exists in the Soviet Union, workers must be attracted by wages,

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[23] M. Ya. Sonin, Aktual'nyye, 1965, p. 204. Sonin shows data derived from sample surveys in Novosibirsk Oblast and Krasnoyarsk Kray which illustrate the opportunity costs of leaving the household and private sectors for employment in the socialized sector. The savings and income derived from household and private sector work increase as the family size increases. A. N. Gladyshev, "Reserves," 1962, p. 17, demonstrates that the proportion of women wanting to work part time or not at all increases as the family size increases. These data are probably from the same source as Sonin's. The fact that family size is inversely related to labor force participation is also supported in G. A. Slesarev, Metodologiya, 1965, p. 110. Here, data are given for Gorkiy City and Oblast showing that the number of births per woman employed in the socialized sector were fewer than for women not so occupied—1.3 and 1.9, respectively.

[24] As derived from maternal and paternal gross reproduction rates given in Brackett and DePauw, "Population," 1966, p. 649.

[25] Uchitel'skaya gazeta, March 1, 1966.

[26] Sonin, Aktual'nyye, 1965, p. 143.

[27] Feshbach, "Manpower," 1966, p. 757.

[28] Sonin, Aktual'nyye, 1965, p. 153.

[29] Ibid., p. 279.

[30] Two times the national per capita average during the 7-year plan period (1959-1965). Ibid., p. 125.

fringe benefits, and other incentives. Money wages are higher in the eastern regions and many workers have migrated for this reason, but a large number stay for only a short time. They leave because of the low level of social and cultural services, the lack of adequate housing, the lower real wages due to higher prices, and the severe climate. As a consequence, out-migration from these areas has been higher recently than in-migration. In addition, the transitory aspect of the labor supply makes it very difficult to establish a well-trained and efficient labor force. Some Soviet economists suggest that the problem is due in large part to lack of planning, for industry is distributed with no plan for how labor might be attracted and retained.

The shortage of labor in the eastern regions is not general, but one of certain types of labor. Skilled labor is in short supply and many factories are forced to hire more than the normal number of workers because the needed skills are not available:

> The lack of qualified workers is one of the reasons for maintenance at enterprises of above-norm numbers of workers, which in many cases permits fulfillment of the plan of output due solely to the number of workers. Thus, for machine-building factories of the Novosibirsk Sovnarkhoz, the number of workers was 4.4 percent above plan. [31]

There is also an acute shortage of agricultural workers. Budget survey data show that the collective farmers of Western Siberia work more and longer days than their counterparts in the western regions of the U.S.S.R. [32]

Another problem in the eastern regions (as well as elsewhere) is the less than full utilization of labor. Many Soviet economists look upon the household and private sectors as reserves of labor that can and should be attracted into the socialized sector. They see that in the small cities with a low level of industrialization a relatively low proportion of the able-bodied population is engaged in socialized production and they reason that industry should be placed in such areas to utilize the labor used only in household work and in the private sector. [33]

Soviet planners are also faced with other problems in utilizing labor efficiently in the eastern regions. Labor turnover in these regions is comparatively high, as is shown in table 2, with a resultant loss of worktime that would be reflected in both annual average employment and labor input data. There are also above-normal losses of worktime in the east due to sickness. A survey of the Scientific-Research Institute of Labor showed that the proportion of workers absent from work due to sickness was three times higher for enterprises in Siberia than in the Ukraine and southern parts of the country. [34]

Table 2.--Labor Turnover Rates in the R.S.F.S.R., by Region: 1963

Region	Turnover rate[1]	Index numbers (Center = 1.0)	
		Turnover rate	With adjustments for different branch structure
R.S.F.S.R....	18.1	1.4	
Center.....	13.0	1.0	1.0
Western Siberia..	22.3	1.7	1.8
Eastern Siberia..	30.3	2.3	2.0

[1]Number of persons who quit their employment voluntarily or were fired for infractions of labor discipline per 100 annual average wageworkers employed.

Source: Kalinovskiy, Rayonnyye, 1966, p. 85.

Both the difficulty of attracting and keeping workers and the "incomplete" utilization of labor resources are probably reflected in lower labor force participation rates, lower annual average employment, and fewer man-hours or man-days worked per worker in the eastern regions. However, the higher level of agricultural labor utilization counteracts these effects to some extent. If more attractive employment opportunities were available in the eastern regions, presumably more people would be economically active and those who were active would be more likely to remain on the job.

In contrast to the eastern regions, many western regions have a surplus of labor. Out-migration exceeds in-migration in the north and the east, but the opposite is true of the Ukraine and the southern areas of the R.S.F.S.R., especially in the North Caucasus region. These latter regions have long been labor surplus areas and the continuing in-migration is only adding to existing surpluses, causing poorer utilization of the able-bodied population.

> In 1959-62, for example, one-fifth of the R.S.F.S.R.'s population growth was accounted for by the Northern Caucasus, although this region contains only one-tenth of the republic's total population. This largely explains why at present about one-fifth of the able-bodied population of the Northern Caucasus is employed on private plots and does not participate in socialized production.[35]

[31]Perevedentsev, Sovremennaya, 1965, p. 18.

[32]Ibid., p. 19.

[33]Prudenskiy, Vremya, 1964, p. 137; Pokshishevskiy, "Geography," 1962, p. 10; Feshbach, "Manpower," 1966, p. 722.

[34]Prudenskiy, Vremya, 1964, p. 102.

[35]Manevich, "Universality," 1965, p. 26.

It is evident that the geographical distribution and migration of labor is sometimes in direct conflict with the allocation of capital. If this situation continues it could have a significant effect on the level of employment in the socialized sector.

Some Soviet economists recognize the problems involved in what they consider to be regional "imbalances" in the distribution of labor. Recommendations have been made for solving them by raising real wages and improving living conditions in the east. If these steps are successful, the utilization of labor according to all indices should increase. The problem is not new, however, and steps taken to solve it in the past years have been largely ineffective. On the whole, there appears to be little reason to think that the situation in the eastern regions will change significantly, if at all, and therefore the regional "maldistribution" of the population will probably continue to affect the manpower situation much as it has in the past.

The rate and composition of rural-to-urban migration is also a very important factor in the Soviet manpower situation. Generally, labor force participation rates in the urban areas are different from those in the rural areas. For instance, there are fewer opportunities for the elderly and the unskilled in the cities and these groups have a lower level of participation than in rural areas. This is particularly true for women.

Table 3 contains labor force participation rates by urban and rural residence calculated directly and partly estimated from 1959 census data. The difference between urban and rural residence does not affect overall male participation greatly, but there is a significant difference in female participation, both overall and by age group. It follows from the lower urban female rates that these rates must increase substantially if the rates for all females are to be maintained in the face of continued migration into urban areas. According to our estimates, the 1959 urban female LFPR's would have had to increase by about 11 percent to attain the numbers of females in the labor force in 1965 shown in variant I. On the basis of the assumption that the rural population will decline during the 1966-75 period at the same rate as between 1959 and 1965, the urban female LFPR's would have to increase by another 6 to 8 percent by 1975 just to maintain the 1965 levels of female participation.

Table 3.--Labor Force Participation Rates, by Age, Sex, and Urban-Rural Residence: 1959

(In percent)

Age	Male		Female	
	Urban	Rural	Urban	Rural
10 to 19 years.....	25.8	37.0	26.9	38.5
20 to 29 years.....	90.7	91.3	76.4	84.8
30 to 39 years.....	97.3	92.1	70.7	85.5
40 to 49 years.....	90.2	96.2	55.2	95.7
50 to 54 years.....	80.2	99.8	39.7	93.5
55 to 59 years.....	69.5	95.7	17.6	72.5
60 years and over.....	24.0	69.7	10.1	49.8
All ages.....	56.0	55.6	41.2	56.6

Source: The rates for "all ages" were derived by dividing the total labor force (given by sex and urban and rural residence in Itogi, p. 97) by the appropriate population total (given in ibid., p.51). The LFPR's by age group were estimated as follows. The agricultural portion of the rural labor force was derived, by age and sex, by using the age-sex distribution of the agricultural labor force given in ibid., pp. 119, 121. The nonagricultural portion of the rural labor force was derived, by age and sex, on the basis of the assumption that the distribution was the same as for the total labor force given in ibid., p. 117. The sum of these calculations was then divided by the appropriate rural population. The urban labor force, by age and sex, was derived by subtracting the rural labor force from the total. Urban participation rates were then computed. All of the computed rates include persons working only in the private subsidiary sector.

The influence of increasing urbanization will be toward lowering the level of participation, particularly of females. Accompanying this, however, will be a tendency to utilize labor more efficiently, as seasonality is much less severe in most types of urban employment. Thus, in terms of manpower statistics, increasing urbanization should cause annual average employment to approach the labor force total more closely.

B. ECONOMIC FACTORS

1. Wages and Employment

Labor in the Soviet Union is allocated by a comparatively free market. With certain exceptions, labor is free to move about and seek its highest reward, but the determination of the reward itself is largely out of its control. Norms of pay are decided upon by the planners, and the worker has little control over his wages. Individual

plants may offer a worker more pay by upgrading his job category and making him eligible for higher wages, but this is the only form of competitive money-wage bidding for labor.[36] In addition there is considerable nonmonetary competition for labor; housing, for instance, is used to attract workers.

Soviet economists accept implicitly, if not explicitly, that the level of employment is a function of wages. Discussions about the tradeoff between work in the household and private sector, on the one hand, and employment is the socialized sector, on the other, imply that the wage in the latter is a very important factor. Differential wages are also mentioned as a method of attracting workers to the eastern regions as well as the reason for movement between sectors of the economy or branches of industry. Both real and money wages have been rising since before 1950 and according to the 1966-70 plan they are to rise even faster in the future. Therefore, if the quantity of labor supplied is an increasing function of the level of wages (all other factors constant), the quantity of labor supplied can be expected to increase.[37]

There is another argument along these lines that suggests increased participation by the population, particularly by the groups more marginal to the labor force. With a greater availability of consumer goods, the real wage corresponding to any level of money wages would be higher. Or stated differently, the additional wage earned by a women is more valuable to her if there are goods available which she wants. In the Soviet Union, plans have been made for increases in the quantity and quality of consumer goods, and as these plans are carried out they should encourage labor force participation.

2. Sectoral Composition

Changes in the sectoral composition of the economy can affect employment opportunities for all persons and especially for women, the overaged, and the unskilled. As more attractive and less strenuous jobs become available, these latter groups are more likely to become active in the labor force. For this reason the relative expansion of services and light industry in the Soviet Union should result in a higher rate of participation, especially for women and the overaged.[38] On the other hand, a shift away from agriculture may cause some of the unskilled, particularly women, to drop out of the labor force. Therefore, expected sectoral shifts should affect labor participation in opposite directions. Probably the shift to the service sectors and light industry will be the more important factor, and sectoral shifts generally should bring increased labor participation among groups marginal to the labor force.[39]

C. SCHOOL ENROLLMENT AND ATTAINMENT

Several aspects of the educational system in the Soviet Union affect the level of labor force participation. The level of full-time school enrollment directly affects the labor force participation rates in certain age groups. In addition, the level of educational attainment indirectly affects the degree of labor force participation, for as the attainment of the population increases, the opportunity costs of remaining out of the labor force probably increase and the level of labor force participation increases.

Soviet planners take account of the impact of full-time enrollment on the level of labor force participation and they have changed their educational system several times during the past decade to facilitate the short-run labor supply.[40] Table 4 illustrates the problems of this type faced during the recent 7-year plan period (1959-65). The size of the age group 16 to 19 years declined rapidly, and as full-time enrollment increased the number of persons in this age group available for the labor force decreased even more rapidly. This resulted in a decrease in the LFPR's for this group by an estimated 28 percent between 1959 and 1963. Our projections of LFPR's for this group, which are based primarily on projections of full-time school enrollment, indicate that LFPR's will remain around 50 percent in the period 1966-75. Full-time enrollment in college is so small relative to the size of the age group concerned (20 to 29) that its effect on LFPR's is insignificant.

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[36] Under the reforms initiated in October 1965 there will be an additional source of wage competition as more successful enterprises are able to offer greater premiums to their personnel.

[37] During the 1930's the supply of labor increased as money wages rose and real wages fell. If the real wages were the determining factor and the inverse relationship between real wages and the labor supply still holds, increased real wages after 1950 should have decreased the supply of labor, *ceteris paribus*. This is not descriptive of what happened during the late 1950's and early 1960's, however, when increasing real wages were accompanied by an increased labor supply.

[38] Annual average employment in trade, education, and public health is expected to increase by approximately 30 percent each during the current 5-year plan, while industrial employment is expected to increase by only 12 percent. See Sonin, "Problems," 1966, p. 33.

[39] This tendency should be reinforced by the pension law of 1964 which allows older workers to receive their pensions while working.

[40] For more information on this subject, see DeWitt, "High-Level," 1966, especially pp. 792-795, and Rosen, "Changing," 1966, pp. 823-827.

Table 4.–Estimates and Projections of Labor Force Participation Rates for the Population Aged 16-19 Years: 1959 to 1975

(Figures are in thousands, except for LFPR's which are percentages)

Year	Population 16 to 19 years	Full-time enrollment[1]	Population not full-time students (col. 1-col. 2)	Not in labor force or enrolled in school (col. 3 x .1601)[2]	Labor force (col. 3-col. 4)	LFPR[3]
	(1)	(2)	(3)	(4)	(5)	(6)
1959.....	13,338	2,829	10,509	1,682	8,827	66.2
1960.....	11,003	2,717	8,286	1,362	6,961	63.3
1961.....	9,396	3,208	6,188	991	5,199	55.4
1962.....	9,153	3,675	5,478	877	4,601	50.3
1963.....	10,356	4,501	5,855	937	4,917	47.5
1964.....	12,196	5,101	7,095	1,135	5,956	48.8
1965.....	14,032	5,923	8,109	1,298	6,811	48.5
1970.....	17,870	6,364	11,506	1,842	9,664	54.1
1975.....	19,332	7,808	11,524	1,845	9,679	50.1

[1]Composed of day students in the 10th and 11th grades, specialized secondary, and vocational-technical schools. Enrollment in the 10th grade was projected for years after 1965 as a constant proportion of the 16 to 19 population. It was assumed that there were no 11th grade enrollments after 1965. For years after 1964 specialized secondary and vocational-technical school enrollment figures were taken from Central Intelligence Agency, School, 1966. It was assumed that 80 percent of vocational-technical school enrollment consisted of full-time students.

[2]The inactive group was assumed to be a constant proportion of the population not full-time students. The proportion used was derived from the 1959 census results (= 1,682/10,509).

[3]For 1959 the rates were computed directly from the census results and amounted to 65.9 percent for males and 66.5 percent for females. Because of the very close correspondence of these rates, those for other years were assumed to apply to both males and females.

Source:
Column 1: Brackett and DePauw, "Population," 1966, pp. 662-674.
Column 2: Nar. khoz. v 1962, pp. 551, 562; Nar. khoz. v 1963, pp. 555, 556, 558; Nar. khoz. v 1964, pp. 667, 668, 669, 678; Nar. khoz. v 1965, pp. 678, 679, 688; Central Intelligence Agency, School, 1966, pp. 15, 17.

Bowen and Finegan have investigated the relationship of educational attainment and labor force participation in the United States in 1960 by analyzing data from the U.S. Bureau of the Census' one-in-a-thousand sample.[41] The results show a significant relationship between increases in educational attainment and labor force participation for the different groups studied: Males 25 to 54, males 65 to 74, and married women 18 to 64 with husband present and no children under 6. The relationship is most clearly defined for the latter two groups, which are more marginal to the labor force. The authors expected the strong relationship for the following reasons:

(1) There are good reasons to think that educational attainment is positively related to intelligence, to ambition, and probably to physical and mental health as well and that these characteristics are in turn related to labor force participation.

(2) . . . education increases a person's expected market earnings and thus increases the differential return between market and non-market activity; that is, the opportunity cost of staying out of the labor market is greater for a person with considerable education than for a person with relatively little education.

(3) Educational attainment also increases access to the cleaner, more pleasant, more interesting jobs.

(4) Finally, it seems plausible that educational attainment affects the taste for work itself. Here we venture into unfamiliar terrain, but our brand of amateur psychology and sociology suggests that more education may well lead people to want the social contacts and social interchange that employment often affords.[42]

The dissimilarities between the U.S. and the Soviet labor force are surely not so great as to prevent a qualified application of this statistical

[41]Bowen and Finegan, "Educational," 1966, pp. 567-582.

[42]Ibid., p. 568.

study to the Soviet labor force.[43] If educational attainment is a prime determinant of labor force participation, particularly of marginal groups in the United States, it seems reasonable that the same would be true of the Soviet Union, where increased educational attainment does increase the wage earned and does allow for entrance to cleaner, more pleasant, and more interesting jobs.

The median level of educational attainment of the Soviet population has been rising and it is predicted that the level will continue to rise even faster. The U.S. Bureau of the Census has projected an increase in the median number of years of school completed by the population 10 years of age and older from 5.7 in 1959 to 7.1 in 1975.[44] If one accepts the hypothesis that increased attainment will lead to higher levels of labor force participation, labor force participation should increase, all other factors remaining constant.

D. UTILIZATION

The discussion above has been largely concerned with the level of participation by the population in the labor force. This section is concerned with the actual utilization of the persons in the labor force, that is, the amount of labor input in man-hours or man-days per worker.

The intensity of utilization of nonagricultural labor has generally declined since 1950. For example, the average wageworker in the productive sphere worked 2,475 hours per year in 1950, but only 2,128 in 1962.[45] This decline was due to the drop in both the number of hours worked per day and the number of days worked per year. In industry, the number of man-days worked per annual average wageworker dropped from 276.3 in 1950 to 263.4 in 1962. This is explained largely by the fact that between these dates the average vacation increased from 14.9 days to 17.0 days per year, the number of holidays and days off increased from 55.5 to 61.0, and absences for sickness and for official reasons also increased.[46] Similar changes occurred in the other nonagricultural sectors. The number of scheduled hours per workday for adults in industry and the other sectors also dropped from 7.00 in 1950 to 6.93 in 1962, because of the reduction in the length of the workday between 1956 and 1960. During the 1960's both the number of hours per day and days per year worked by industrial workers were stabilized (see table A-10). Recently Brezhnev announced that enterprises would be permitted to change to a 5-day workweek but with the qualification that the length of the workweek remain at 41 hours.[47] In view of this statement and the relative stability of labor input per worker in the 1960's, one can expect that the actual labor input per working person will be relatively stable in the future.

Soviet economists frequently express dissatisfaction with the rate of labor turnover and cite it as being economically harmful. At least at the national level, their concern does not seem to be warranted, for selected data do not indicate a trend of increased labor turnover and the rates are not unusually high by Western standards.[48] Furthermore, to the extent that labor turnover represents the movement of workers to more productive employment, there is a gain to the economy. Thus, labor turnover decreases the level of utilization in terms of labor derived per participant but it may increase productivity in the long run.

The efficient utilization of the agricultural labor force in the U.S.S.R. poses seemingly contradictory problems. According to Soviet economists, quite significant amounts of labor are lost due to poor utilization of the regular work force, particularly on collective farms. At the same time, the farms hire a large amount of outside labor during their months of peak activity. According to the data of Gosplan *(Gosudarstvennyy planovoy komitet* — the State Planning Committee), 86 percent of the available labor resources were utilized on state farms during the period 1958-60, but only 68 percent on collective farms. Also, according to Gosplan, 3.3 billion available man-days were not utilized by collective and state farms in socialized production during the 3-year period 1956-58.[49] Even with this pool of unutilized manpower, the farms rely heavily on workers from outside. During

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[43]The Bowen and Finegan study is a cross-section analysis and is not necessarily applicable in projections where the general level of attainment is increasing for all. That is, their findings may be due to relative differences in educational attainment, not the absolute level. They have also investigated the relationship of educational attainment and labor force participation through time. Higher educational attainment does appear to increase the level of participation for married women with husband present, but results for other groups were not statistically significant, with the exception of older males in 1940. See Bowen and Finegan, "Labor," 1965, pp. 127, 131, and 137.

[44]Goodman and Feshbach, Educational (forthcoming).

[45]Rozhneva, "Features," 1965, pp. 112-115; Zanin, Rabocheye, 1963, p. 110.

[46]Table A-10 and Nar. khoz. v 1962, p. 131.

[47]Komsomol'skaya pravda, March 30, 1966, p. 6.

[48]Feshbach, "Manpower," 1966, p. 732.

[49]Although the derivation of these figures is not given in the source, presumably the percentage of utilization is the average number of days worked per able-bodied member as a percentage of the maximum possible work-time *(maksimal'no vozmozhnyy fond rabochego vremeni)*, which is probably calculated as 290 days per year for agriculture. The figure giving the absolute loss is, accordingly, the total possible working time (290 times the numbers of farmers) minus the total time actually worked by all farmers. Karnaukhova, "Productivity," 1964, p. 48.

September 1961 hired and attached workers amounted to 7.8 percent of the total number of persons working on collective farms in the R.S.F.S.R. and 12.5 percent in the Kazakh S.S.R. In November 1961 this figure was 22.5 percent for the Uzbek S.S.R. [50] According to Karnaukhova:

> On state farms in 1940 there were on the average 42 seasonal and temporary wage-workers per 100 permanent workers and in July-August—68. In 1962 these figures changed respectively to 18 and 28.[51]

The main source of this problem is the seasonality of agriculture, which is particularly pronounced in the Soviet Union. During the period from 1950 to 1963, January employment on collective farms varied within the range of 56 to 59 percent of July employment (table A-11). And, in reference to state farms, Glukhov writes:

> It is true that seasonal fluctuation among permanent workers of the state farms is insignificant. In August 1961, their number was only 10 percent higher than in December. However, the proportion is quite different among seasonal and temporary workers. The fluctuation of these categories is quite wide in different periods of agricultural work. If one takes into consideration the fact that in 1961 the number of seasonal and temporary workers on state farms of the country was over 1 million persons [annual average employment was 7.3 million], it becomes apparent how important it is to utilize them more rationally.[52]

Because of seasonality, there are well over 10 million idle workers in socialized agriculture during the winter, yet agriculture still experiences a severe labor shortage during the harvest season.

It is expected that seasonality will decline in the future and therefore that annual average employment will more closely approach the labor force. In agriculture, the continuous introduction of technology and the expected expansion of employment on state farms, where labor is used more efficiently, should lead to a decline in seasonality. Also, there will be less seasonality in the economy as a whole as a larger proportion of the labor force is engaged in nonagricultural occupations.

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[50] Shmelev, Raspredeleniye, 1965, p. 94.

[51] Karnaukhova, "Utilization," 1964, p. 55.

[52] Glukhov, "Utilization," 1963, p. 26.

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III. Estimates and Projections of Labor Force and Employment

A. METHODS AND ASSUMPTIONS

Data on the population, labor force, annual average employment, and man-hour employment for the period 1950-75, and on man-day employment for the period 1950-65 are given in table 5. These series and alternative variants for labor force, annual average employment, and man-hour employment are given in the appendix tables in further detail.

Table 5.—Estimates and Projections of Population, Labor Force, and Civilian Employment: 1950 to 1975

(Labor force figures are the variant I series; annual average employment and man-hour figures are the variant A series. Population and labor force figures are as of July 1)

Item	1950	1953	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
POPULATION (thousands)												
Total population aged 14 years and over	129,708	139,578	145,192	147,049	147,944	148,663	149,711	151,234	153,272	155,747	158,506	161,424
Male	53,633	58,636	61,526	62,499	62,996	63,403	63,983	64,825	65,928	67,241	68,713	70,279
Female	76,075	80,942	83,666	84,550	84,948	85,260	85,728	86,409	87,344	88,506	89,793	91,145
LABOR FORCE (thousands)												
Total	97,005	99,995	105,211	106,924	106,920	108,961	109,181	108,621	109,804	111,731	113,623	115,676
Armed forces	4,600	6,100	5,800	4,600	3,900	3,800	3,600	3,300	3,000	3,000	3,000	3,000
Civilian labor force	92,405	93,895	99,411	102,324	103,020	105,161	105,581	105,321	106,804	108,731	110,623	112,676
Nonagricultural sectors	42,474	46,750	49,539	51,158	53,071	55,226	57,587	60,425	63,539	65,597	67,703	70,222
Agricultural sectors	49,931	47,145	49,872	51,166	49,949	49,935	47,994	44,896	43,265	43,134	42,920	42,454
Of which, private sector	9,824	8,969	10,104	10,924	10,296	10,416	9,497	7,960	7,681	8,100	8,520	8,100
CIVILIAN EMPLOYMENT												
Total (annual average, thousands)	79,894	81,724	87,218	89,942	91,119	93,421	93,912	95,228	97,834	99,597	100,793	103,364
Nonagricultural sectors	36,958	41,234	44,023	45,642	47,555	49,710	52,071	54,909	58,023	60,103	62,187	64,706
Agricultural sectors	42,936	40,490	43,195	44,300	43,564	43,711	41,841	40,319	39,811	39,494	38,606	38,658
Of which, private sector	11,899	10,864	12,238	12,505	12,471	12,616	11,503	10,896	11,273	11,297	10,867	10,906
Total (man-day, millions)	21,793	21,793	23,485	23,861	23,854	24,367	24,692	25,141	25,698	26,147	26,539	27,382
Nonagricultural sectors	10,212	11,333	12,031	12,420	12,716	13,323	13,877	14,655	15,329	15,832	16,448	17,244
Agricultural sectors	11,581	10,460	11,454	11,441	11,138	11,044	10,815	10,486	10,369	10,315	10,091	10,138
Of which, private sector	3,332	3,042	3,427	3,501	3,492	3,532	3,221	3,051	3,156	3,163	3,043	3,054
Total (man-hour, millions)	174,344	174,344	187,880	185,175	184,220	185,477	186,018	180,171	181,460	184,224	186,438	191,959
Nonagricultural sectors	81,696	90,664	96,248	93,647	95,116	97,125	99,498	96,283	100,712	104,016	108,063	113,293
Agricultural sectors	92,648	83,680	91,632	91,528	89,104	88,352	86,520	83,888	80,748	80,208	78,375	78,666
Of which, private sector	26,656	24,336	27,416	28,008	27,936	28,256	25,768	24,408	25,248	25,304	24,344	24,432

Item	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
POPULATION (thousands)											
Total population aged 14 years and over	164,441	167,459	170,394	173,420	176,586	179,706	182,868	186,117	189,398	192,708	195,947
Male	71,900	73,532	75,130	76,781	78,508	80,220	81,964	83,762	85,587	87,437	89,258
Female	92,541	93,927	95,264	96,639	98,078	99,486	100,904	102,355	103,811	105,271	106,689
LABOR FORCE (thousands)											
Total	119,906	121,411	123,152	125,114	127,220	129,422	131,741	134,099	136,455	138,898	141,418
Armed forces	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Civilian labor force	116,906	118,411	120,152	122,114	124,220	126,422	128,741	131,099	133,455	135,898	138,418
Nonagricultural sectors	73,386	75,352	77,550	79,971	82,535	85,196	87,973	90,790	93,603	96,505	99,484
Agricultural sectors	43,520	43,059	42,602	42,143	41,685	41,226	40,768	40,309	39,852	39,393	38,934
Of which, private sector	8,939	8,865	8,794	8,722	8,650	8,578	8,506	8,434	8,363	8,291	8,219
CIVILIAN EMPLOYMENT											
Total (annual average, thousands)	107,852	109,990	112,169	114,435	116,794	119,211	121,764	124,417	127,178	130,047	133,029
Nonagricultural sectors	67,751	70,211	72,711	75,300	77,981	80,721	83,595	86,571	89,653	92,845	96,150
Agricultural sectors	40,101	39,779	39,458	39,135	38,813	38,490	38,169	37,846	37,525	37,202	36,879
Of which, private sector	12,034	11,938	11,842	11,745	11,648	11,551	11,455	11,358	11,262	11,165	11,068
Total (man-day, millions)	28,611										
Nonagricultural sectors	18,055										
Agricultural sectors	10,556				(No projections made)						
Of which, private sector	3,370										
Total (man-hour, millions)	200,457	204,140	207,887	211,784	215,846	220,006	224,407	228,983	233,747	238,702	243,852
Nonagricultural sectors	118,621	122,939	127,317	131,850	136,545	141,342	146,375	151,586	156,982	162,572	168,359
Agricultural sectors	81,836	81,201	80,570	79,934	79,301	78,664	78,032	77,397	76,765	76,130	75,493
Of which, private sector	26,960	26,741	26,526	26,309	26,092	25,874	25,659	25,442	25,227	25,010	24,792

Source:
Population: Brackett and DePauw, "Population," 1966, pp. 662-674.
Labor force: Table A-1.
Employment: Annual average: Table A-7; Man-day: Table A-8; Man-hour: Table A-9.

1. Labor Force

The standard method of making labor force projections is to multiply participation rates for age-sex groups by projected population figures for comparable age-sex groups. The participation rates may be held constant or they may be projected as changing through time. The precision of this method is limited, however, by the amount of data available. If the population and labor force data are published in sufficient detail, LFPR's can be computed for small age groups; and, if the data are collected and published by yearly or monthly intervals, trends can be derived for the LFPR's.

These conditions are only partially fulfilled in the data available on the Soviet Union. The 1959 census results were published in sufficient detail that a fairly reliable distribution can be made of the labor force by age and sex for that year. However, one troublesome problem is that persons working only in the private sector are not reported in the same detail, by age, as persons working in socialized production. Therefore, the distribution of the private sector personnel must be partially estimated. Also, the published data permit LFPR's to be derived for only 10-year age groups within the range 20 to 49 years, although it would be preferable to have 5-year, or even 1-year, age groupings.

Another problem is that the only source for labor force participation rates is the 1959 census, for there are no data from other censuses or periodic surveys that allow one to derive LFPR's for other years. The 1926 census is too far removed in time to be of use, and there are subtle differences of definitions which make comparisons with later censuses difficult. The meager published results of the 1939 census do not permit calculation of detailed LFPR's by age and sex for that date. Thus, for all practical purposes there are no data on the trends of labor force participation rates by small age and sex groups. Therefore, for projections of the labor force we have LFPR's for eight age groups, by sex, for 1959; population projections by detailed age and sex groups; and scattered, aggregate data from past censuses or other sources.

The 1959 LFPR's for the U.S.S.R. were relatively low for males in the prime working ages but were unusually high for females at all ages. This can be seen by comparing these rates with the average rates for selected countries (table A-3). The female rates were so high that there is no effective basis for comparison; therefore estimates of probable changes in these rates are necessarily arbitrary. The female LFPR's may have approached a maximum consistent with then current levels of fertility, or there may have existed possibilities for further increases in female participation. We simply have no basis for comparison except the U.S.S.R. itself in 1926 and 1939, but even then we cannot compare small age and sex groups. The participation of males in the prime working ages does not differ greatly from one country to another. It is also less liable to confusion because of differences in statistical procedures or definitions, i.e., prime-age males are usually occupied in work that is counted as labor participation in most countries, whereas women in agricultural households are counted differently from one country to another.

The excess of the rate of increase of annual average employment over the rate of increase of the able-bodied population between 1959 and 1965 indicates that even with a substantial increase in male LFPR's the female rates also must have risen significantly. In our labor force variant I (the preferred alternative) it was deemed necessary to increase the male rates by approximately 5 percent and the female rates by approximately 7 percent between 1959 and 1965. This means that the female rates, already high in 1959, were even higher in 1965. To illustrate the effect of the high female rates, LFPR's for the United States in 1965 were applied to the Soviet population in 1965 and a labor force figure calculated. The results are compared with the variant I labor force for 1965, below.

	Total	Male	Female
Using U.S.S.R. rates (variant I, in thousands)[53]	119,906	58,718	61,188
Percent of those 14 years and older in labor force	72.9	81.7	66.1
Using U.S. rates[53] (in thousands)	91,029	56,795	34,234
Percent of those 14 years and older in labor force	55.4	79.0	37.0

Since the same population was used in each calculation, all differences are due to differences in LFPR's. The results show that the level of male participation was similar for the U.S. and U.S.S.R., but that the level of female participation was drastically different (U.S. LFPR's averaged 56 percent of the U.S.S.R. LFPR's). Since the female rates so far exceed the rates in the United States and other countries, one might reasonably expect them not to increase further. However, if within the context of the socioeconomic situation in the Soviet Union 66 percent of women 14 years of age and over participated in the labor force in 1965, it is difficult to say why the level could not rise to 70 or 75 percent or higher—even though such increases are difficult to accept on the basis of experiences in other countries.

Projections were made by assuming that the 1959 LFPR's will remain constant or by increasing

[53] See tables A-2 and A-3.

them arbitrarily. In the absence of labor force data for any period after 1959, various methods were used to estimate how LFPR's might have changed after the base year. First, the 1959 LFPR's were adjusted on the basis of the annual average employment data which are reported yearly. Second, the 1959 LFPR's were adjusted selectively using a combination of the average rates for selected countries in table A-3 and the rates for selected Eastern European countries. Where the U.S.S.R. rates were lower than the averages, they were adjusted to equal the averages, and in come cases even to exceed the averages; others were adjusted on the basis of Eastern European experience. Third, the 1959 LFPR's were adjusted arbitrarily by assuming given rates of increase in the 1959 rates. The first method was utilized in variant I (described below) and the third method was used to build alternative models (variants II and III described below). The second method was discarded for two reasons: (1) Conceptually, the selective adjustments do not constitute a consistent, explainable whole; and (2) because of the different structure of the U.S.S.R. rates and because of conceptual differences in manpower statistics from one country to another, the applicability of LFPR's of other countries to the U.S.S.R. is of questionable value. [54]

Four variants of the total labor force were prepared, plus two variants of the agricultural labor force (table A-1 and A-2). The population data used in preparing the total labor force series are from Brackett and DePauw.[55] The projections of the population were based on the assumptions that mortality will decline and that there will be no migration.

For the period 1950-65 variant I was derived on the basis of the relationship between annual average employment and the labor force in 1959 and reported annual average employment in other years. Estimates of the labor force for each of the component sectors (nonagricultural employment, agricultural workers and employees, collective farmers, and persons employed only in the private sector), as given in table A-1, were derived separately and summed to obtain estimates of the total labor force. For those sectors with increasing employment (nonagricultural employment and agricultural workers and employees), the difference between the labor force and annual average employment was held constant at an amount equal to the absolute difference between the two at the time of the census in January 1959. For those sectors with decreasing employment (collective farmers and the private sector), the ratio of the January 1959 labor force to annual average employment was held constant. Such a method of estimation allows the annual average total to approach the labor force total slowly.

For the period 1966-75 the total labor force was projected on the basis of estimated LFPR's for 1965 and the assumption that these remain constant through 1975 (table A-3). The 1965 LFPR's were derived by increasing the 1959 rates in an amount necessary to yield the 1965 labor force, which was estimated independently. The 1959 rates were increased proportionately except that account was taken of full-time educational enrollment, no LFPR for an age-sex group was allowed to exceed 98 percent, and female rates were allowed to increase slightly more than male rates.

The components of variant I were projected as follows. The Armed Forces were assumed to remain constant throughout the period at 3 million. The three agricultural sectors were projected by using the same methods as for the years 1950-65. The two variants of the agricultural labor force for the years 1966-75 (variants I and I-A, table A-1) were based on two variants of annual average employment projected for these years. The nonagricultural labor force in both variants I and I-A was derived as the difference between the total labor force and the agricultural labor force.

Variants II and III are presented as alternative models to show how the labor force changes under varying assumptions. Variant II is designed to demonstrate the general magnitude of LFPR changes that would be necessary if variant I results are to be exceeded by an appreciable amount. The LFPR's for all of the age groups over 19, for both sexes, were increased by 7 percent in the period 1959-65. The female LFPR's derived for 1965 were then increased by an additional 1 percent in 1970 and another 1 percent in 1975; the male LFPR's derived for 1965 were held constant to 1975. No rates were allowed to exceed 98 percent and the rates for 1960 were obtained by linear interpolation between the rates for 1959 and 1965. The increase of 7 percent between 1959 and 1965 was equal to the increase for female LFPR's in variant I, but exceeded the 5 percent increase for male LFPR's in variant I. By 1975, both male and female LFPR's in variant II exceed their counterparts in variant I by 2 percent. LFPR's for ages 16 to 19 were permitted to increase after 1965, in accordance with the trend in school enrollment (table 4) and not held constant at the 1965 level as in variant I. Variant III is designed to show the size of the labor force if male LFPR's are increased after 1959 as in variant II, but female LFPR's are held constant at the 1959 level. No estimates were made for variants II and III for the years before 1959.

Variant IV is presented as a control series and is based on the assumption that the 1959 LFPR's

[54] Two series were derived by this method. The results of one were very close to the variant IV presented here, and the results of the other were close to variant I.

[55] Brackett and DePauw, "Population," 1966, pp. 662-674.

will have remained constant for the 1950-75 period. Thus, differences in the size of the labor force according to this variant and the sizes according to the other three variants at any point in time are due to changes in LFPR's. This variant does not provide a realistic series for various reasons. As mentioned above, the male LFPR's in 1959 were unusually low and they probably have increased. If the reason for the low rates at the time of the census was disablement due to war, the situation should improve in the future with the aging of the labor force of the severely affected cohorts. Secondly, reported school enrollment data imply a decrease in the participation rates for the age group 16 to 19 years after 1959 (see table 4). Variants I, II, and III were adjusted to reflect this change, but variant IV was not. And finally, the total labor force in 1975 implied by variant IV is very low if the annual average employment projections are correct.

2. Annual Average Employment

The annual average employment series presented in this report are composed of reported and projected annual average employment figures for the state and collective sectors plus estimated man-year equivalents for the private sector. The annual average lends itself well to projection, for the current 5-year plan gives a plan figure for the annual average number of workers and employees in 1970. In addition, the plan has output and productivity goals for industry and agriculture which can be used to calculate changes in annual average employment within the respective sectors during the plan period.

Two variants of annual average employment after 1965 are presented here (table A-7). The difference between the two is in the projection of employment in agriculture. Variant B was projected according to planned (1966-70 plan) increases in output and productivity which imply a drop in annual average agricultural employment of 1.4 percent per year. These plan figures for agriculture imply a basic change in the agricultural situation which is difficult to foresee, however. The planned increase in productivity is 7 percent per year, although the increase experienced during the period 1958-64 was only 3.9 percent per year.[56] The planned increase in output is 5.5 percent per year, but the increase actually attained during the last plan period was only 1.9 percent per year.[57] Furthermore, the rate of decrease planned for annual average socialized agricultural employment of 1.4 percent per year exceeds the 0.8 percent which occurred in the years 1961-65 (table A-5). Given these relationships, it seemed essential to prepare an alternative projection of annual average agricultural employment based on the trend established during the period 1955-64. Thus variant A also projects annual average agricultural employment as dropping fairly rapidly, but not so drastically as in variant B.[58]

Both variants were projected to 1975 by using the average annual rates of change derived for the period 1966-70. In both variants it was assumed that annual average state farm employment will increase by 300,000 per year, or at roughly the level during recent years.

According to the 1966-70 plan, the annual average number of workers and employees will be between 91 and 92 million (assumed to be 91.5 million in our calculations) in 1970. Annual average nonagricultural employment was derived from this figure by subtracting the estimated annual average employment on state farms. Within the nonagricultural sector, employment in industry was projected on the basis of planned increases in output and productivity for the years 1966-70. Employment in the other nonagricultural branches was projected by assuming that changes in the distribution of employment among them would continue as in the 1950-65 period. Soviet planners expect the relative share of employment in the nonproductive sectors to rise much faster than in the past, but this is not specifically accounted for in projections which use past trends. Projections made on the above basis do, however, yield this result: The nonproductive sphere grows faster than the productive sphere. The rate of increase projected for total nonagricultural employment during the 1966-70 period was also used for the 1970-75 period. The methodology used to distribute the various elements in the earlier years was also used for the years after 1970.

3. Man-Day and Man-Year Equivalent Employment

Man-day employment data are reported only for some years in certain sectors and estimates were made to fill in missing figures for the years 1950-65. Nimitz' figures were used for man-day inputs to the socialized sector of agriculture,[59] and figures previously estimated by the Foreign Demographic

[56]Calculated from data in Nar. khoz. v 1964, p. 73, and Nar. khoz. v 1959, p. 89.

[57]Calculated from data in Tsifrakh v 1965, p. 70.

[58]Sonin calculates a 4 percent drop in agricultural employment during the 5-year plan period (Sonin, "Some Problems," 1966, p. 32). Sonin states that his projection was based on planned increases in output and productivity. The variant B projection of agricultural employment was also made on the basis of the 1966-70 plan increases in output and productivity, but the projected decrease of 6.8 percent is much larger than Sonin's. It is not known precisely what methods and data Sonin used. Variant A, however, projects a 4 percent decrease in agricultural employment during the plan period (1966-70). This result is identical to Sonin's, but is derived differently.

[59]Nimitz, Farm, 1965, p. 7.

Analysis Division were used for the private sector.[60] The man-day employment figures for the nonagricultural sector were derived on the basis of data for industrial wageworkers alone. (See table A-8 for the man-day series.)

Projections were not made for man-day employment because the length of the workweek is currently changing. Many enterprises are in the process of converting to the 5-day workweek and during the next 5-year plan period many more will do so. Since the timing of the conversion is not scheduled, there is no valid way of estimating how the change will affect man-day employment measures in any year.

The man-year equivalent employment series for the private sector, which is included with the annual average employment series, was calculated for the 1950-65 period as the quotient of the total number of man-days worked during a year in this sector divided by 280 man-days per man-year equivalent. This conversion factor has been used previously by the Foreign Demographic Analysis Division and by Nimitz, as well as by some Soviet economists (especially Gol'tsov). The two projected man-year equivalent series (variants A and B) were based on the assumption that the 1965 ratio of this measure to employment in socialized agriculture will remain constant.

4. Man-Hour Employment

Estimates of man-hour employment during the period 1950-65 were derived by multiplying man-day employment figures by estimates of the number of hours worked per day in the various sectors (table A-9). Hours per man-day in the nonagricultural sectors were estimated from data on the scheduled length of the workday for industrial wageworkers and the length of the workweek for all workers and employees. For the years before 1956, it was assumed that the scheduled length of the workday applied to all six workdays; that is, there were no shortened workdays before days-off and holidays. Hours per man-day in agriculture were derived by assuming that the 8-hour day applied to collective farmers in all years and to state farmers through 1960, after which state farmers were assumed to have worked a 7-hour day. Very limited data suggest that the assumptions for agriculture are reasonably accurate, but the constancy over time is surely an oversimplification.[61] Projections of man-hour employment for the years 1966-75 were based on the assumption that the number of man-hours worked per annual average employed person in each sector in 1965 will remain constant throughout the projection period.

As is evident from the above, the derivation of man-hour employment data requires extensive estimation and rests on several assumptions which must be considered as highly tenuous. Even considering the possible errors in the estimation procedure, however, this series is preferable to those of man-day employment or annual average employment when the most consistent measure of labor input is sought.

B. COMPARISON OF THE SERIES

The results of the alternative estimates and projections of the labor force and annual average employment for the period 1950 to 1975 are summarized in table 6. As these data show, the four labor force series differ in terms of the

[60]Feshbach, "Manpower," 1966, pp. 746-747. These estimates include individual peasants.

[61]See Nimitz, Farm, pp. 122-125 and 140. Nimitz gives a figure of 8.4 hours for collective farmers in 1958 which was a favorable year for agriculture. She believes that the workday may have been considerably shorter during unfavorable years. The data for state farms apply to the "standard workday" and these data are used by the Soviets in labor productivity calculations.

Table 6.—Alternative Estimates and Projections of the Labor Force and of Annual Average Employment, by Sector: 1950 to 1975
(In thousands)

Variant	1950	1955	1960	1965	1970	1975
LABOR FORCE						
Variant I	97,005	105,211	108,621	119,906	129,422	141,418
II	(X)	(X)	110,870	120,429	131,537	143,657
III	(X)	(X)	110,425	117,949	128,147	139,765
IV	92,664	103,321	110,118	116,292	126,112	137,723
EMPLOYMENT						
Variant A—						
Total	78,807	85,907	94,219	107,852	119,211	133,029
Nonagricultural	36,958	44,023	54,909	67,751	80,721	96,150
Agricultural	41,849	41,884	39,310	40,101	38,490	36,879
Variant B—						
Total	(Same as variant A)				118,091	130,978
Nonagricultural					80,721	96,150
Agricultural					37,370	34,828

X Not estimated.
Source: Tables A-1, A-2, and A-7.

projected size of the labor force in 1975, as well as in the path of attainment. They also vary in their relationship to the course of growth in annual average employment. The differences among all the variants can be seen in table 7, where comparative growth rates are presented.

Table 7.--Growth Rates of Selected Manpower Measures: 1950 to 1975

(In percent per year)

Measure	1950-60	1961-65	1966-70	1971-75	1950-65	1966-75
Population aged 14 years and over.	1.6	1.7	1.8	1.7	1.6	1.8
Population of able-bodied ages....	1.6	0.7	1.4	1.8	1.3	1.6
Labor force						
Variant I.....	1.1	2.0	1.5	1.8	1.4	1.7
Variant II.....	(X)	1.7	1.8	1.8	(X)	1.8
Variant III.....	(X)	1.3	1.7	1.8	(X)	1.7
Variant IV.....	1.7	1.1	1.6	1.8	1.5	1.7
Annual average employment						
Variant A.....	1.8	2.5	2.0	2.2	2.0	2.1
Variant B.....	(X)	(X)	1.9	2.1	(X)	2.0
Man-day employment.....	1.4	2.6	(X)	(X)	1.8	(X)
Man-hour employment.....	0.3	2.2	1.9	2.1	0.9	2.0

X Not estimated or projected.

Source: Tables 5, A-1, A-2, A-7, A-8, and A-9.

During the period 1950-60 variant IV exhibits a faster rate of growth than does variant I because it shows a much lower total in 1950 and a somewhat higher total in 1960. If variant I is correct, LFPR's must have fallen between 1950 and 1959, for projecting backward with constant rates (variant IV) gives a lower total labor force for 1950. It is reasonable that LFPR's might have fallen during this period, considering trends over the period 1926-59 (table 8) and the probability that LFPR's in 1950 were still high as a result of World War II.

In the period 1961-65 the labor force series tied to changes in annual average employment (variant I) exhibits the highest rate of growth. Annual average employment was growing much faster than all of the labor force variants, but so much faster than variants II, III, and IV that variant I seems to be the only reasonable alternative for this period.

Differences in the growth rates of the four variants during the periods 1966-70 and 1971-75 are small. Since the same age-sex distribution of the population is used for all variants, the differences that do occur are primarily due to the differences in patterns of LFPR's used in 1965 and the increase in female LFPR's in variant II for 1970 and 1975. The only other LFPR's that change after 1965 are those for the 16 to 19 age group—for both males and females in variant II and for males only in variant III—and these changes are slight. However, the difference between the labor force in this age group in variant IV (constant 1959 LFPR's) and the other variants (LFPR's lowered in accordance with estimated and projected full-time school enrollment) is quite large—approximately 3.2 million for both sexes in 1975. This difference is so large because the difference in the LFPR's is substantial (approximately 15 percentage points) and the number in the age group is very large (19.3 million in 1975).

During the period 1950-65 variant I is based directly on reported annual average employment data. During the two later periods, 1966-70 and 1971-75, its growth rate changes in the same direction as the growth rates of average annual employment (i.e., when the growth rate of annual average employment increases or decreases, so does the growth rate of variant I). Since the projections of annual average employment are based directly on past levels of employment and official Soviet plan data, they are considered the most reliable projections offered here—and the labor force series (variant I) which is most consistent with them is considered the most reasonable.

If variant I is accurate, it implies (1) that LFPR's for both sexes increased sharply in the period 1959-65; and (2) that the very high rates derived for 1965 will have to be maintained through 1975. In the face of continuing rural to urban migration which tends to lower participation rates, the maintenance of this level of participation—and especially the higher level of participation of variant II—will require considerable effort on the part of the Government in the following areas: (1) Pension laws that allow a pensioner to work and receive part of his pension at the same time will have to be continued beyond the present 5-year

Table 8.—Labor Force Participation Rates, by Age and Sex: 1926, 1939, and 1959

(In percent)

Age group	1926	1939	1959
BOTH SEXES			
10 to 15 years	58.7	23.4	[1]3.8
16 to 59 years	85.0	83.6	83.9
60 years and over	54.1	49.1	40.1
10 years and over	77.2	68.9	74.0
Total population	57.5	52.8	52.2
MALE			
10 to 15 years	61.0	24.2	[1]3.3
16 to 59 years	95.7	97.8	88.5
60 years and over	74.4	72.1	52.5
10 years and over	86.9	80.7	74.5
Total population	63.8	61.1	55.8
FEMALE			
10 to 15 years	56.3	22.7	[1]4.3
16 to 59 years	75.4	70.6	80.1
60 years and over	38.2	34.8	33.8
10 years and over	68.7	58.2	67.0
Total population	51.3	45.3	45.8

[1]Assumes that none of the labor force is less than 14 years old. The figure for this age group is not comparable to Eason's (1926 and 1939) for he does not make this assumption.

Source: 1926 and 1939: Eason, "Labor," 1963, p. 54.
1959: Derived from census data in the same manner as indicated in table A-3.

limit which is due to expire in 1968; (2) if more women are to be attracted to the labor force, more child-care facilities and part-time employment opportunities will have to be made available to them; (3) assuming that the supply of labor is an increasing function of wages, higher wages will have to be offered; and (4) employment opportunities will have to be matched to the numbers of employable people in different areas of the country.

The data for annual average employment through 1965 are reported, hence there is no difference between variants A and B. After 1965 the differences between the two are due to different rates of decline for employment in agriculture.[62] According to variant A, annual average agricultural employment will decline by 8.1 percent between 1965 and 1975; according to variant B, agricultural employment will decline by 13.1 percent (see tables 6 and A-7).

Annual average employment has been growing and is expected to continue to grow more rapidly than any of the labor force variants, which means that the difference between the two has been narrowing in the past and will be even narrower in the future. Past trends suggest that this might be expected, for annual average employment as a proportion of the total labor force was 77.9 percent in 1939 and 86.0 percent in 1959.[63] However, if either variant III or variant IV is correct for 1975, a very rapid decrease since 1959 in the difference between annual average employment and the labor force is implied. The difference would narrow so much that it would be more reasonable to expect that the projected annual average employment totals for 1975 will not be attained.

The projections of annual average employment imply two specific policies. First, in the absence of a figure in the 1966-70 plan as to the planned number of workers and employees in agriculture, it was assumed here that this category would increase at the rate of 300,000 per year. This is in line with past trends and implies that the Government will continue its policy of converting collective farms to state farms. Second, the attainment of either variant will require a significant improvement in agricultural labor productivity, which in turn will require heavy capital investment in agriculture, particularly if variant B is to be attained.

Man-day employment and annual average employment are estimated as growing at approximately the same rate in the early 1960's, but in prior years man-day employment grew more slowly. This variation in growth rates during the 1950's can be explained by the lower number of man-days contributed by an annual average worker in 1960 than in 1950 (see table A-10).

Man-hour employment grew very slowly in the 1950's because of the gradual reduction in the length of the workday which took place during the years 1956-60. After 1960 the length of the workday was stabilized and man-hour employment increased significantly, but more slowly than annual average employment. This differential in growth rates follows from the distribution between the agricultural and nonagricultural sectors of reported and projected annual average employment. This is to say that since the number of man-hours worked per annual average employed person on collective farms is higher than the comparable figure for the nonagricultural sectors, a shift from agricultural to nonagricultural employment will result in a lower rate of growth of man-hour employment than if the structure of employment remains unchanged.

[62]As has been noted, man-year equivalent employment is used for the private sector in the annual average employment variants. Man-year equivalent employment is identical for both variants A and B during the years 1950-65. After 1966 the figures differ, but only inasmuch as they are projected as a function of the two series of annual average employment in agriculture.

[63]Eason, "Labor Force," p. 46, and table 5.

Table A-1.—Estimates and Projections of the Labor Force of the U.S.S.R., by Sector: 1950 to 1975

(In thousands, as of July 1)

Line no.	Item	1950	1953	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
	VARIANT I												
1	Total.....	97,005	99,995	105,211	106,924	106,920	108,961	109,181	108,621	109,804	111,731	113,623	115,676
2	Armed Forces.....	4,600	6,100	5,800	4,600	3,900	3,800	3,600	3,300	3,000	3,000	3,000	3,000
3	Civilian labor force.....	92,405	93,895	99,411	102,324	103,020	105,161	105,581	105,321	106,804	108,731	110,623	112,676
4	Nonagricultural sectors.....	42,474	46,750	49,539	51,158	53,071	55,226	57,587	60,425	63,539	65,597	67,703	70,222
5	Agricultural sectors.....	49,931	47,145	49,872	51,166	49,949	49,935	47,994	44,896	43,265	43,134	42,920	42,454
6	Workers and employees.....	4,398	4,758	5,200	5,234	6,189	6,656	6,799	8,084	8,802	9,158	9,300	9,513
7	Collective farmers.....	35,709	33,418	34,568	35,608	33,464	32,863	31,698	28,852	26,782	25,876	25,100	24,841
8	Private sector.....	9,824	8,969	10,104	10,324	10,296	10,416	9,497	7,960	7,681	8,100	8,520	8,100

Line no.	Item	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
	VARIANT I											
1	Total.....	119,906	121,411	123,152	125,114	127,220	129,422	131,741	134,099	136,455	138,898	141,418
2	Armed Forces.....	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
3	Civilian labor force.....	116,906	118,411	120,152	122,114	124,220	126,422	128,741	131,099	133,455	135,898	138,418
4	Nonagricultural sectors.....	73,386	75,352	77,550	79,971	82,535	85,196	87,973	90,790	93,603	96,505	99,484
5	Agricultural sectors.....	43,520	43,059	42,602	42,143	41,685	41,226	40,768	40,309	39,852	39,393	38,934
6	Workers and employees.....	10,128	10,450	10,773	11,095	11,418	11,740	12,062	12,384	12,707	13,029	13,351
7	Collective farmers.....	24,453	23,744	23,035	22,326	21,617	20,908	20,200	19,491	18,782	18,073	17,364
8	Private sector.....	8,939	8,865	8,794	8,722	8,650	8,578	8,506	8,434	8,363	8,291	8,219
	VARIANT I-A											
1	Total.....		121,411	123,152	125,114	127,220	129,422	131,741	134,099	136,455	138,898	141,418
2	Armed Forces.....		3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
3	Civilian labor force.....		118,411	120,152	122,114	124,220	126,422	128,741	131,099	133,455	135,898	138,418
4	Nonagricultural sectors.....	(Same as	75,621	78,083	80,755	83,564	86,461	89,464	92,498	95,522	98,627	101,798
5	Agricultural sectors.....	variant	42,790	42,069	41,359	40,656	39,961	39,277	38,601	37,933	37,271	36,620
6	Workers and employees.....	I for	10,450	10,773	11,095	11,418	11,740	12,062	12,384	12,707	13,029	13,351
7	Collective farmers.....	1950-65)	23,528	22,608	21,697	20,791	19,893	19,003	18,120	17,242	16,370	15,507
8	Private sector.....		8,812	8,688	8,567	8,447	8,328	8,212	8,097	7,984	7,872	7,762

Table A-1.--Estimates and Projections of the Labor Force of the U.S.S.R., by Sector: 1950 to 1975--Continued

SOURCES AND METHODOLOGY

VARIANT I

Total--line (1)

1950-65: Sum of parts, (1) = (2) + (3).
1966-75: Table A-2.

Armed Forces--line (2)

1950-61: Reported in Central Intelligence Agency, Labor, 1964, p. 17.
1962-75: Assumed to remain constant at the 1961 level.

Civilian labor force--line (3)

1950-65: Sum of parts, (3) = (4) + (5).
1966-75: Total labor force minus Armed Forces, (3) = (1) - (2).

Nonagricultural sectors--line (4)

1950-65: Computed as the sum of annual average employment in the nonagricultural sectors (table A-4) and the difference between the 1959 census labor force (Itogi, pp. 96, and 104-105) and the average of 1958 and 1959 annual average employment in this category. The census figure was adjusted by subtracting the estimated number (117,000) of nonagricultural workers who were presumed to be attached to state agricultural activities. The labor force figure for collective farms used below includes 458,000 collective farmers attached to the farms but who were engaged in nonagricultural work. The number of workers and employees connected with state agricultural activities but doing nonagricultural work was estimated by assuming that the ratio of nonagricultural labor force to the total labor force in state agricultural activities was the same as for collective farms.
1966-75: Civilian labor force minus agricultural labor force, (4) = (3) - (5).

Agricultural sectors--line (5)

1950-75: Sum of parts, (5) = (6) + (7) + (8).

Workers and employees--line (6)

1950-75: Computed as the sum of annual average employment in this category (table A-5) and the difference between the 1959 census labor force and the average of 1958 and 1959 annual average employment of agricultural workers and employees. The census worker and employee labor force in agriculture equals the number of persons doing agricultural work (Itogi, p. 104) plus those doing nonagricultural work (117,000) as estimated for line (4) above.

Collective farmers--line (7)

1950-75: Computed as the product of annual average employment on collective farms (table A-5, variant A) and the ratio of the 1959 census labor force (Itogi, p. 96) to the average of 1958 and 1959 annual average employment in this category. The figures do not include persons working in the private sector only.

Private sector--line (8)

1950-59, 1966-75: Computed as the product of man-year equivalent employment figures for the private sector (table A-6) and the ratio of the 1959 census private sector labor force (Itogi, p. 96) to the average of 1958 and 1959 man-year equivalent employment in the private sector. The census figure includes individual peasants and those occupied only in the private sector.

1960-65: The 1959 figure was moved by an index of yearly employment of persons working only in the private subsidiary sector as derived from Sel'. khoz., p. 450; Nar. khoz. v 1960, p. 521; Nar. khoz. v 1961, p. 461; Nar. khoz. v 1962, p. 368; Nar. khoz. v 1963, p. 363; Nar. khoz. v 1964, p. 419; and Nar. khoz. v 1965, p. 435. These data were not available for years before 1959.

VARIANT I-A

This variant was derived in the same manner as variant I, with the exception that the annual average employment series used to derive the collective farm labor force was variant B of table A-5, rather than variant A.

Table A-2.—Estimates and Projections of the Labor Force of the U.S.S.R., by Age and Sex: 1950 to 1975

(In thousands, as of July 1)

Variant and year	Both sexes				Male				Female			
	Total	14 and 15 years	16 to 54/59 years	55/60 years and over	Total	14 and 15 years	16 to 59 years	60 years and over	Total	14 and 15 years	16 to 54 years	55 years and over
VARIANT I												
1966.....	121,411	1,344	105,612	14,455	59,725	594	54,517	4,614	61,686	750	51,095	9,841
1967.....	123,152	1,346	106,857	14,949	60,875	595	55,489	4,791	62,277	751	51,368	10,158
1968.....	125,114	1,354	108,360	15,400	62,147	599	56,571	4,977	62,967	755	51,789	10,423
1969.....	127,220	1,398	110,025	15,797	63,490	619	57,702	5,169	63,730	779	52,323	10,628
1970.....	129,422	1,421	111,853	16,148	64,879	630	58,879	5,370	64,543	791	52,974	10,778
1971.....	131,741	1,430	113,859	16,452	66,326	635	60,118	5,573	65,415	795	53,741	10,879
1972.....	134,099	1,457	115,921	16,721	67,787	648	61,377	5,762	66,312	809	54,544	10,959
1973.....	136,455	1,486	118,003	16,966	69,243	662	62,656	5,925	67,212	824	55,347	11,041
1974.....	138,898	1,506	120,199	17,193	70,754	672	64,025	6,057	68,144	834	56,174	11,136
1975.....	141,418	1,512	122,510	17,396	72,323	675	65,487	6,161	69,095	837	57,023	11,235
VARIANT II												
1959.....	109,346	636	97,834	10,876	52,749	280	48,938	3,531	56,597	356	48,896	7,345
1960.....	110,870	769	98,756	11,345	53,715	339	49,704	3,672	57,155	430	49,052	7,673
1965.....	120,429	1,311	105,076	14,042	59,299	580	54,181	4,538	61,130	731	50,895	9,504
1970.....	131,537	1,421	113,747	16,369	65,964	630	59,857	5,477	65,573	791	53,890	10,892
1975.....	143,057	1,512	124,386	17,759	73,190	675	66,231	6,284	70,467	837	58,155	11,475
VARIANT III												
1959.....	109,346	636	97,834	10,876	52,749	280	48,938	3,531	56,597	356	48,896	7,345
1960.....	110,425	769	98,402	11,254	53,715	339	49,704	3,672	56,710	430	48,698	7,582
1965.....	117,949	1,311	103,225	13,413	59,299	580	54,181	4,538	58,650	731	49,044	8,875
1970.....	128,147	1,421	111,184	15,542	65,964	630	59,857	5,477	62,183	791	51,327	10,065
1975.....	139,765	1,512	121,477	16,776	73,190	675	66,231	6,284	66,575	837	55,246	10,492
VARIANT IV												
1950.....	92,664	1,098	83,483	8,083	42,445	472	39,176	2,797	50,219	626	44,307	5,286
1951.....	94,432	1,237	84,908	8,287	43,473	533	40,090	2,850	50,959	704	44,818	5,437
1952.....	96,411	1,383	86,513	8,515	44,619	597	41,114	2,908	51,792	786	45,399	5,607
1953.....	98,696	1,420	88,504	8,772	45,939	615	42,350	2,974	52,757	805	46,154	5,798
1954.....	101,083	1,347	90,675	9,061	47,328	585	43,697	3,046	53,755	762	46,978	6,015
1955.....	103,321	1,234	92,701	9,386	48,657	538	44,993	3,126	54,664	696	47,708	6,260
1956.....	105,333	1,051	94,532	9,750	49,907	460	46,226	3,221	55,426	591	48,306	6,529
1957.....	107,089	784	96,177	10,128	51,059	344	47,393	3,322	56,030	440	48,784	6,806
1958.....	108,455	614	97,333	10,508	52,027	270	48,331	3,426	56,428	344	49,002	7,082
1959.....	109,346	636	97,834	10,876	52,749	280	48,938	3,531	56,597	356	48,896	7,345
1960.....	110,118	769	98,138	11,211	53,408	339	49,440	3,629	56,710	430	48,698	7,582
1961.....	111,057	927	98,591	11,539	54,139	409	50,002	3,728	56,918	518	48,589	7,811
1962.....	112,157	1,071	99,206	11,880	54,921	473	50,615	3,833	57,236	598	48,591	8,047
1963.....	113,334	1,190	99,895	12,249	55,724	526	51,246	3,952	57,610	664	48,649	8,297
1964.....	114,703	1,266	100,776	12,661	56,624	560	51,976	4,088	58,079	706	48,800	8,573
1965.....	116,292	1,311	101,870	13,111	57,642	580	52,826	4,236	58,650	731	49,044	8,875
1966.....	118,019	1,344	103,092	13,583	58,751	594	53,764	4,393	59,268	750	49,328	9,190
1967.....	119,893	1,346	104,498	14,049	59,960	595	54,803	4,562	59,933	751	49,695	9,487
1968.....	121,903	1,354	106,076	14,473	61,253	599	55,915	4,739	60,650	755	50,161	9,734
1969.....	123,970	1,398	107,724	14,848	62,573	619	57,032	4,922	61,397	779	50,692	9,926
1970.....	126,112	1,421	109,513	15,178	63,929	630	58,186	5,113	62,183	791	51,327	10,065
1971.....	128,373	1,430	111,477	15,466	65,345	635	59,404	5,306	63,028	795	52,073	10,160
1972.....	130,646	1,457	113,467	15,722	66,758	648	60,623	5,487	63,888	809	52,844	10,235
1973.....	132,934	1,486	115,494	15,954	68,171	662	61,867	5,642	64,763	824	53,627	10,312
1974.....	135,299	1,506	117,626	16,167	69,634	672	63,194	5,768	65,665	834	54,432	10,399
1975.....	137,723	1,512	119,852	16,359	71,148	675	64,606	5,867	66,575	837	55,246	10,492

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All estimates and projections were prepared by applying labor force participation rates to estimates and projections of the population by age and sex. The population figures are from Brackett and DePauw, "Population," 1966, pp. 662-674. The population projections were based on the assumptions that mortality will decline and that there will be no migration. The series of labor force participation rates used are given in table A-3, and are as follows:

Variant I: 1966-75 - col. (4).
Variant II: 1959 - col. (3); 1960 - interpolations of col. (3) and col. (5); 1965 - col. (5); 1970 - col. (6); 1975 - col. (7).
Variant III: Males - same as variant II; females - same as variant IV.
Variant IV: 1950-75 - col. (3).

Table A-3.—Comparative Labor Force Participation Rates, by Age and Sex: 1959 to 1975

(In percent)

Age and sex	Averages for selected countries	United States, January 1965	U.S.S.R., 1959 census	U.S.S.R., variant I, 1965	U.S.S.R., variant II		
					1965	1970	1975
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
MALES							
14 and 15 years.....	41.8	13.7	13.1	13.1	13.1	13.1	13.1
16 to 19 years.....	72.7	46.9	65.9	48.5	48.5	54.1	50.1
20 to 29 years.....	93.3	90.9	91.0	95.6	97.4	97.4	97.4
30 to 39 years.....	96.7	97.7	95.0	98.0	98.0	98.0	98.0
40 to 49 years.....	96.5	96.6	93.0	97.6	98.0	98.0	98.0
50 to 54 years.....	94.2	94.5	90.1	94.6	96.4	96.4	96.4
55 to 59 years.....	90.7	90.3	83.5	87.7	89.3	89.3	89.3
60 years and over...	66.6	43.0	52.5	55.1	56.2	56.2	56.2
FEMALES							
14 and 15 years.....	28.0	9.8	17.1	17.1	17.1	17.1	17.1
16 to 19 years.....	53.4	31.4	66.5	48.5	48.5	54.1	50.1
20 to 29 years.....	44.7	44.0	80.4	86.1	86.0	86.9	87.8
30 to 39 years.....	29.3	39.6	77.7	83.2	83.1	83.9	84.7
40 to 49 years.....	28.2	49.3	75.4	80.8	80.7	81.5	82.3
50 to 54 years.....	26.3	49.8	67.7	72.5	72.4	73.1	73.8
55 to 59 years.....	22.6	46.1	48.5	51.9	51.9	52.4	52.9
60 years and over...	9.8	16.7	33.8	36.2	36.2	36.6	37.0

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Averages for selected countries--col. (1)

United Nations, Demographic, 1962, pp. 12, 22. The LFPR's were linearly interpolated for applicability to the same age groupings as the LFPR's for the U.S.S.R. The male rates are averages for 30 countries having 35 to 39 percent of active males engaged in agriculture and related activities. These countries are designated as semi-industrialized. The female rates are averages for 14 countries having less than 35 percent of active males engaged in agriculture and related activities. These countries are designated as industrialized. There are no female rates for semi-industrialized countries in the source.

United States--col. (2)

U.S. Department of Labor, Employment, 1965, p. 9.

U.S.S.R., 1959 census--col. (3)

Labor force data are from Itogi, pp. 96, 98, 104, 119, 122, and 127. Population data used as the base for computing LFPR's are from Brackett and DePauw, "Population," 1966, pp. 662-674. The LFPR's were computed as follows:

(1) The census volume gives labor force totals, by sex, excluding persons working only in the private sector (p. 104). These totals were distributed among the age groups by means of a percentage distribution of the labor force by age and sex reported on pp. 119, 121.

(2) Persons working only in the private sector are reported by sex, for two broad age groups: The able-bodied ages (males 16-59 years; females 16-54 years) and the older ages (males 60 years and over; females 55 years and over) (pp. 96, 98). Males in the able-bodied ages were arbitrarily distributed equally between the two age groups 50-54 and 55-59. The females were allocated among the relevant age groups according to a percentage distribution reported for females in individual peasant farming (p. 122). This distribution was adjusted to reflect the known allocation of women in the private sector between the able-bodied and non-able-bodied ages (pp. 96, 98).

(3) LFPR's were then computed by adding the totals for each of the age-sex groups derived in steps (1) and (2) and dividing the results by the relevant population figures.

U.S.S.R., variant I, 1965--col. (4)

Estimated by adjusting 1959 census LFPR's [col. (3)] as follows:

Age group

14 and 15: The 1959 LFPR for each sex was held constant.

16 to 19: The 1959 LFPR for each sex was projected to 1965 on the basis of changes in full-time school enrollment (see table 4).

All other: The 1959 female LFPR's were first increased by 2 percent, thus allowing female participation to increase faster than male participation. The LFPR's for both sexes were then adjusted upward proportionately to yield the 1965 total labor force, which was derived independently as described in table A-1. No rate was allowed to exceed 98.0 percent.

U.S.S.R., variant II, 1965, 1970, 1975--cols. (5), (6), and (7)

Age group

14 and 15: The 1959 LFPR for each sex was held constant.

16 to 19: The 1959 LFPR for each sex was projected on the basis of full-time school enrollment (see table 4).

All other:

1965: All 1959 rates were increased by 7 percent except that no rate was allowed to exceed 98 percent.

1970 and 1975: Males--all 1965 rates were held constant. Females--all 1965 LFPR's were increased by 1 percent to 1970; the resultant 1970 LFPR's were increased by 1 percent to 1975.

Table A-4.—Reported and Projected Annual Average Employment in Nonagricultural Sectors, U.S.S.R.: 1950 to 1975

(In thousands)

Line no.	Sector	1950	1953	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
1	Total	36,958	41,234	44,023	45,642	47,555	49,710	52,071	54,909	58,023	60,103	62,187	64,706
2	Workers and employees	35,458	39,634	42,223	44,442	46,355	48,410	50,671	[1] 54,909	58,023	60,103	62,187	64,706
3	Industry	14,144	16,261	17,367	18,500	19,144	19,675	20,207	22,291	23,475	24,297	25,057	25,933
4	Construction	2,569	2,843	3,190	3,550	4,000	4,421	4,800	5,143	5,270	5,172	5,237	5,370
5	Forestry	444	416	389	390	377	367	352	359	378	389	399	404
6	Transport	4,082	4,770	5,039	5,216	5,355	5,668	5,972	6,279	6,518	6,677	6,841	7,054
7	Communications	542	582	611	624	641	664	691	738	790	832	877	928
8	Trade and public dining	3,325	3,463	3,725	3,826	4,017	4,190	4,389	4,675	5,010	5,253	5,487	5,752
9	Public health	2,051	2,308	2,627	2,736	2,892	3,059	3,245	3,461	3,677	3,818	3,933	4,082
10	Education	3,315	3,647	3,988	4,103	4,250	4,378	4,556	4,803	5,165	5,521	5,835	6,204
11	Science and scientific services	714	860	992	1,094	1,208	1,338	1,474	1,763	2,011	2,213	2,370	2,497
12	Government and administration	1,831	1,726	1,361	1,342	1,294	1,294	1,273	1,245	1,295	1,316	1,308	1,354
13	Housing-communal economy	1,210	1,345	1,400	1,503	1,579	1,632	1,713	1,920	2,030	2,096	2,182	2,282
14	Credit and insurance institutions	264	263	265	266	261	260	260	265	277	283	289	296
15	Other[2]	967	1,150	1,269	1,292	1,337	1,464	1,739	1,967	2,127	2,236	2,372	2,550
16	Members of producers' cooperatives	1,500	1,600	1,800	1,200	1,200	1,300	1,400	(1)	(1)	(1)	(1)	(1)
17	Industry	1,300	1,400	1,600	1,100	1,100	1,100	1,200	(1)	(1)	(1)	(1)	(1)
18	Services	200	200	200	100	100	200	200	(1)	(1)	(1)	(1)	(1)

Line no.	Sector	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
1	Total	67,751	70,211	72,711	75,300	77,981	80,721	83,595	86,571	89,653	92,845	96,150
2	Workers and employees	67,751	70,211	72,711	75,300	77,981	80,721	83,595	86,571	89,653	92,845	96,150
3	Industry	27,056	27,689	28,322	28,969	29,631	30,302	30,995	31,704	32,429	33,170	33,928
4	Construction	5,617	5,783	5,948	6,116	6,286	6,454	6,680	6,858	7,096	7,340	7,591
5	Forestry	402	411	400	417	435	454	473	494	515	537	498
6	Transport	7,252	7,484	7,768	8,015	8,316	8,571	8,889	9,218	9,499	9,846	10,204
7	Communications	1,007	1,063	1,110	1,158	1,209	1,260	1,368	1,427	1,488	1,552	1,618
8	Trade and public dining	6,009	6,293	6,614	6,903	7,204	7,563	7,890	8,230	8,584	9,011	9,396
9	Public health	4,277	4,465	4,661	4,865	5,077	5,294	5,470	5,706	5,951	6,206	6,471
10	Education	6,600	6,931	7,324	7,691	8,074	8,470	8,837	9,273	9,728	10,204	10,702
11	Science and scientific services	2,624	2,806	3,018	3,243	3,481	3,681	3,892	4,170	4,406	4,655	4,916
12	Government and administration	1,460	1,488	1,509	1,529	1,596	1,613	1,631	1,701	1,717	1,790	1,804
13	Housing-communal economy	2,386	2,509	2,619	2,734	2,853	3,025	3,156	3,292	3,433	3,581	3,733
14	Credit and insurance institutions	300	298	311	324	338	353	368	384	343	358	373
15	Other[1]	2,761	2,991	3,107	3,336	3,481	3,681	3,946	4,114	4,464	4,595	4,916

[1] The system of producers' cooperatives was abolished in October 1960. Employment formerly in this sector is now included in the workers and employees category, by sector as appropriate.

[2] Consists of capital repair of building and structures, drilling, project-survey organizations, literature and publishing, art, and other unidentified.

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Total--line (1)

1950-59: Sum of parts, (1) = (2) + (16).
1960-75: (1) = (2).

Workers and employees--line (2)

1950-65: Sum of parts, (2) = Σ[(3) through (15)].
1966-69, 1971-75: Projected at a rate of increase of 3.56 percent per year, compounded. This is the annual rate computed from the total in 1965 and that projected for 1970.
1970: The difference between 91.5 million workers and employees in 1970 (the average of the plan figures of 91-92 million reported in Izvestiya, February 20, 1966, p. 3) and the projected number of workers and employees in agriculture (line 4 of table A-5).

Workers and employees, by branch--lines (3) - (15)

1950, 1958, 1963: Nar. khoz. v 1964, pp. 546, 547.
1953: Nar. khoz. v 1958, p. 659.
1955: Nar. khoz. v 1960, pp. 636, 637.
1956-57: Nar. khoz. v 1959, pp. 588, 589.
1959, 1961: Nar. khoz. v 1962, pp. 453, 454.
1960, 1964-65: Nar. khoz. v 1965, pp. 558, 559.
1962: Nar. khoz. v 1963, pp. 475, 476.
1966-75: Line (3), industry was projected to 1970 on the basis of planned increases in output and productivity as reported in Izvestiya, February 20, 1966, p. 2. Other years were computed by applying the compounded rate computed for the period 1966-70.
Lines (4) through (15) were projected in three steps:
(a) a total for the nonindustrial sectors was obtained for each year by subtracting (3) from (2);
(b) each of the sectors was projected to 1975 on the basis of its own trend for the period 1958-65;
(c) a percentage distribution of the 12 projected totals for each year was then applied to the nonindustrial total derived in (a) above.

Members of producers' cooperatives--lines (16) - (18)

1950-59: Reported in U.S. Congress, Joint Economic Committee, Current, 1965, p. 67.

Table A-5.—Estimates and Projections of Annual Average Employment in Socialized Agriculture, U.S.S.R.: 1950 to 1975

(In thousands)

Line no.	Item	1950	1953	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
	VARIANT A												
1	Total	31,037	29,626	30,957	31,795	31,093	31,095	30,338	29,423	28,538	28,197	27,739	27,752
2	Nonagricultural work	2,834	2,705	2,818	3,327	3,333	2,958	3,056	2,909	2,603	2,568	2,408	2,105
3	Agricultural work	28,203	26,921	28,139	28,468	27,760	28,137	27,282	26,514	25,935	25,629	25,331	25,647
4	Workers and employees	3,437	3,797	4,239	4,273	5,228	5,695	5,838	7,123	7,838	8,197	8,339	8,552
5	State farms and subsidiary state agricultural enterprises	2,425	2,552	2,832	2,925	3,961	4,614	4,957	6,324	7,366	7,730	7,874	8,071
6	Nonagricultural work	225	252	232	225	261	314	357	524	566	630	574	571
7	Agricultural work	2,200	2,300	2,600	2,700	3,700	4,300	4,600	5,800	6,800	7,100	7,300	7,500
8	Other[1]	334	356	260	290	278	362	412	451	469	467	465	481
9	Nonagricultural work	31	35	21	22	18	25	30	37	36	38	34	34
10	Agricultural work	303	321	239	268	260	337	382	414	433	429	431	447
11	MTS's and RTS's[2]	678	889	1,147	1,058	989	719	469	348	3	0	0	0
12	Nonagricultural work	78	118	265	280	254	219	269	148	1	0	0	0
13	Agricultural work	600	771	882	778	735	500	200	200	2	0	0	0
14	Collective farmers	27,600	25,829	26,718	27,522	25,865	25,400	24,500	22,300	20,700	20,000	19,400	19,200
15	Nonagricultural work	2,500	2,300	2,300	2,800	2,800	2,400	2,400	2,200	2,000	1,900	1,800	1,500
16	Agricultural work	25,100	23,529	24,418	24,722	23,065	23,000	22,100	20,100	18,700	18,100	17,600	17,700

Line no.	Item	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
	VARIANT A											
1	Total	28,067	27,841	27,616	27,390	27,165	26,939	26,714	26,488	26,263	26,037	25,811
2	Nonagricultural work	1,934	1,918	1,903	1,887	1,872	1,856	1,841	1,825	1,810	1,794	1,778
3	Agricultural work	26,133	25,923	25,713	25,503	25,293	25,083	24,873	24,663	24,453	24,243	24,033
4	Workers and Employees	9,167	9,489	9,812	10,134	10,457	10,779	11,101	11,423	11,746	12,068	12,390
5	State farms and subsidiary state agricultural enterprises	8,594	8,916	9,239	9,561	9,884	10,206	10,528	10,850	11,173	11,495	11,817
6	Nonagricultural work	594	616	639	661	684	706	728	750	773	795	817
7	Agricultural work	8,000	8,300	8,600	8,900	9,200	9,500	9,800	10,100	10,400	10,700	11,000
8	Other[1]	573	573	573	573	573	573	573	573	573	573	573
9	Nonagricultural work	40	40	40	40	40	40	40	40	40	40	40
10	Agricultural work	533	533	533	533	533	533	533	533	533	533	533
11	MTS's and RTS's[2]	0	0	0	0	0	0	0	0	0	0	0
12	Nonagricultural work	0	0	0	0	0	0	0	0	0	0	0
13	Agricultural work	0	0	0	0	0	0	0	0	0	0	0
14	Collective farmers	18,900	18,352	17,804	17,256	16,708	16,160	15,613	15,065	14,517	13,969	13,421
15	Nonagricultural work	1,300	1,262	1,224	1,186	1,148	1,110	1,073	1,035	997	959	921
16	Agricultural work	17,600	17,090	16,580	16,070	15,560	15,050	14,540	14,030	13,520	13,010	12,500
	VARIANT B											
1	Total		27,674	27,286	26,904	26,527	26,155	25,789	25,428	25,073	24,721	24,376
2	Nonagricultural work		1,907	1,880	1,854	1,828	1,802	1,777	1,752	1,728	1,703	1,680
3	Agricultural work		25,767	25,406	25,050	24,699	24,353	24,012	23,676	23,345	23,018	22,696
4	Workers and employees		9,489	9,812	10,134	10,457	10,779	11,101	11,423	11,746	12,068	12,390
5	State farms and subsidiary state agricultural enterprises	(Same as variant A for 1950-65)	8,916	9,239	9,561	9,884	10,206	10,528	10,850	11,173	11,495	11,817
6	Nonagricultural work		616	639	661	684	706	728	750	773	795	817
7	Agricultural work		8,300	8,600	8,900	9,200	9,500	9,800	10,100	10,400	10,700	11,000
8	Other[1]		573	573	573	573	573	573	573	573	573	573
9	Nonagricultural work		40	40	40	40	40	40	40	40	40	40
10	Agricultural work		533	533	533	533	533	533	533	533	533	533
11	MTS's and RTS's[2]		0	0	0	0	0	0	0	0	0	0
12	Nonagricultural work		0	0	0	0	0	0	0	0	0	0
13	Agricultural work		0	0	0	0	0	0	0	0	0	0
14	Collective farmers		18,185	17,474	16,770	16,070	15,376	14,688	14,005	13,327	12,653	11,986
15	Nonagricultural work		1,251	1,201	1,153	1,104	1,056	1,009	962	915	868	823
16	Agricultural work		16,934	16,273	15,617	14,966	14,320	13,679	13,043	12,412	11,785	11,163

[1] Includes activities supporting agriculture, such as veterinary services.

[2] Machine-Tractor Stations (MRS's) and Repair Technical Stations (RTS's). The MTS's were abolished in 1958 and replaced by RTS's which were also subsequently abolished.

Table A-5.—Estimates and Projections of Annual Average Employment in Socialized Agriculture, U.S.S.R.: 1950 to 1975—Continued

SOURCES AND METHODOLOGY

VARIANT A

In this table, total employment in farm activities is separated into its agricultural and nonagricultural parts. Soviet statistical yearbooks give employment data for all branches of farm activity and, within this total, for agricultural work only. The difference between the two represents employment in administration, subsidiary industrial activities, transportation, construction, children's and cultural-service institutions, and, on collective farms, capital repair of buildings and structures. On state farms and MTS's, employment in capital repair of buildings and structures and housing-communal economy are not included.

Total--line (1)

1950-75: Sum of parts, (1) = (4) + (14).

Nonagricultural work--line (2)

1950-65: Sum of parts, (2) = (6) + (9) + (12) + (15).
1966-75: Projection based on the assumption that the ratio of nonagricultural employment to agricultural employment will remain at the same level as existed in 1965. Symbolically, $(2)_t = (3)_t \times \frac{(2)_{1965}}{(3)_{1965}}$.

Agricultural work--line (3)

1950-65: Sum of parts, (3) = (7) + (10) + (13) + (16).
1966-75: Projection based on a least squares linear regression expressing the trend of the size of agricultural employment during the period 1955-64. (Y = 438,210 - 210X, where Y is agricultural employment and X is the calendar year.) The average rate of change was applied to successive years. Symbolically, $(3)_t = (3)_{t-1} - 210$.

Workers and employees--line (4)

1950, 1960, 1963: Nar. khoz. v 1964, p. 546.
1953: Nar. khoz. v 1958, p. 659.
1955: Nar. khoz. v 1960, p. 636.
1956-57: Nar. khoz. v 1959, p. 588.
1958, 1964, 1965: Nar. khoz. v 1965, p. 558.
For purposes of consistency with pre-1953 and post 1958 data, the figures for 1953-58 were adjusted to remove collective farmers transferred to the employment rolls of machine-tractor stations from collective farms following the October 1953 resolutions of the Communist Party and the U.S.S.R. Government. These employment adjustments totalled 229,000 for 1953, 1,918,000 for 1955, 1,822,000 for 1956, 1,565,000 for 1957, and 500,000 for 1958. See Weitzman and Elias, Magnitude, 1961, p. 134.
1959, 1961: Nar. khoz. v 1962, p. 453.
1962: Nar. khoz. v 1963, p. 475.
1966-75: Sum of parts, (4) = (5) + (8).

State farms and subsidiary state agricultural enterprises--line (5)

1950, 1960, 1963: Nar. khoz. v 1964, p. 546.
1953, 1956-57: Sel'. khoz., p. 451.
1955: Nar. khoz. v 1960, p. 636.
1958, 1964-65: Nar. khoz. v 1965, p. 558.
1959, 1961: Nar. khoz. v 1962, p. 453.
1962: Nar. khoz. v 1963, p. 475.
1966-75: Projection based on the assumption that the ratio of its agricultural component in 1965 will remain constant. Symbolically, $(5)_t = (7)_t \times \frac{(5)_{1965}}{(7)_{1965}}$.

Nonagricultural work--line (6)

1950-75: (6) = (5) - (7).

Agricultural work--line (7)

1950, 1960, 1962: Nar. khoz. v 1964, p. 419.
1953, 1959, 1961: Nar. khoz. v 1962, p. 368.
1955: Nar. khoz. v 1960, p. 521.
1956-58: Sel'. khoz., p. 450.
1965: Nar. khoz. v 1965, p. 435.
1966-75: Projection based on the assumption that the annual increase for state farms will be 300,000.

Other--line (8)

1950-65: Residual, (8) = (4) - (5) - (11).
1966-75: Projection based on the assumption that the 1965 level of employment will remain constant.

Nonagricultural work--line (9)

1950-65: Estimates based on the assumption that the nonagricultural proportion was the same as for state farms in the same year. Symbolically, $(9) = (8) \times \frac{(6)}{(5)}$.

1966-75: Projection based on the assumption that the 1965 level of employment will remain constant.

Agricultural work--line (10)

1950-75: (10) = (8) - (9).

MTS's and RTS's--line (11)

1950: Nar. khoz. v 1958, p. 659.
1953, 1956-57: Sel'. khoz., p. 458.
1955, 1958: Nar. khoz. v 1960, p. 636.
Data for 1953-58 were adjusted in accordance with the note for workers and employees--line (4).
1959-61: Nar. khoz. v 1961, p. 567.

Nonagricultural work--line (12)

1950-61: (12) = (11) - (13).

Agricultural work--line (13)

1950, 1960: Nar. khoz. v 1963, p. 363.
1953, 1955, 1958-59: Nar. khoz. v 1960, p. 521.
1956-57: Sel'. khoz., p. 450.
Data for 1953-58 were adjusted in accordance with the note for workers and employees--line (4).
1961: Data on total employment were divided between agricultural and nonagricultural work as they were in 1960.

Collective farmers--line (14)

This category includes employment on nonagricultural collective farms.
1950, 1960, 1962-64: Nar. khoz. v 1964, p. 419
1953, 1959, 1961: Nar. khoz. v 1962, p. 368.
1955: Nar. khoz. v 1960, p. 521.
1956-58: Sel'. khoz., p. 450.
Data for 1953-58 were adjusted in accordance with the note for workers and employees--line (4).
1965: Nar. khoz. v 1965, p. 435.
1966-75: Sum of parts, (14) = (15) + (16).

Nonagricultural work--line (15)

1950-65: (15) = (14) - (16).
1966-75: (15) = (2) - (6) - (9).

Agricultural work--line (16)

1950, 1960, 1962-64: Nar. khoz. v 1964, p. 419.
1953, 1959, 1961: Nar. khoz. v 1962, p. 368.
1955, 1958: Nar. khoz. v 1960, p. 521.
1956-57: Sel'. khoz., p. 450.
Data for 1953-58 were adjusted in accordance with the note for workers and employees--line (4).
1965: Nar. khoz. v 1965, p. 435.
1966-75: (16) = (3) - (7) - (10).

VARIANT B

The methodology for variant B was the same as for variant A with the following exception:

Agricultural work--line (3)

1966-75: Projection based on planned increases in output and productivity, as reported in Izvestiya, February 20, 1966, p. 2. The planned increase in output is calculated as 5.5 percent per year and the planned increase in productivity as 7.0 percent per year. Symbolically, $(3)_t = (3)_{t-1} \times \frac{105.5}{107.0}$.

Table A-6.—Estimates and Projections of Man-Year Equivalent Employment in the Private Sector of Agriculture, U.S.S.R.: 1950 to 1975

(In thousands)

Year	Variant A	Variant B	Nimitz
1950	11,899	11,899	16,000
1953	10,864	10,864	15,200
1955	12,238	12,238	15,200
1956	12,505	12,505	13,900
1957	12,471	12,471	14,300
1958	12,616	12,616	14,700
1959	11,503	11,503	14,300
1960	10,896	10,896	16,100
1961	11,273	11,273	18,500
1962	11,297	11,297	18,400
1963	10,867	10,867	17,800
1964	10,906	10,906	(NA)
1965	12,034	12,034	(NA)
1966	11,938	11,867	(NA)
1967	11,842	11,700	(NA)
1968	11,745	11,536	(NA)
1969	11,648	11,375	(NA)
1970	11,551	11,215	(NA)
1971	11,455	11,058	(NA)
1972	11,358	10,904	(NA)
1973	11,262	10,751	(NA)
1974	11,165	10,600	(NA)
1975	11,068	10,452	(NA)

NA Not available.

SOURCES AND METHODOLOGY

Variant A

1950-64: Feshbach, "Manpower," 1966, pp. 746-747. The estimates were made on the basis of the labor input requirements to cultivate and care for the agricultural holdings in private ownership. Labor input coefficients for 1958, from Gol'tsov, "Utilization," 1961, pp. 46-47, were held constant. The estimates include employment of individual peasants.

1965: Ibid.; Nar. khoz. v 1965, pp. 288, 368-369.

1966-75: Projection based on the assumption that such employment would constitute a constant (1965) proportion of the variant A projection of socialized agricultural employment (see table A-5).

Variant B

1950-65: Same as variant A.

1966-75: Projection based on the assumption that such employment would constitute a constant (1965) proportion of the variant B projection of socialized agricultural employment (see table A-5).

Nimitz

1950-63: Nimitz, Farm, 1965, p. 7. These estimates were also made on the basis of labor input requirements to cultivate and care for agricultural holdings in private ownership. The input coefficients were derived for several "base years" on the basis of various Soviet sources and for interim years by interpolation.

Table A-7.--Estimates and Projections of Annual Average Civilian Employment in the U.S.S.R., by Sector and Class of Worker: 1950 to 1975

(In thousands)

Sector and class of worker	1950	1953	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
VARIANT A												
Total	79,894	81,724	87,218	89,942	91,119	93,421	93,912	95,228	97,834	99,597	100,793	103,364
Nonagricultural sectors	36,958	41,234	44,023	45,642	47,555	49,710	52,071	54,909	58,023	60,103	62,187	64,706
Agricultural sectors	42,936	40,490	43,195	44,300	43,564	43,711	41,841	40,319	39,811	39,494	38,606	38,658
Workers and employees	3,437	3,797	4,239	4,273	5,228	5,695	5,838	7,123	7,838	8,197	8,339	8,552
Collective farmers	27,600	25,829	26,718	27,522	25,865	25,400	24,500	22,300	20,700	20,000	19,400	19,200
Private sector	11,899	10,864	12,238	12,505	12,471	12,616	11,503	10,896	11,273	11,297	10,867	10,906
Class of Worker												
Workers and employees	40,395	45,031	48,262	49,915	52,783	55,405	57,909	62,032	65,861	68,278	70,526	73,258
Collective farmers	27,600	25,829	26,718	27,522	25,865	25,400	24,500	22,300	20,700	20,000	19,400	19,200
Private sector	11,899	10,864	12,238	12,505	12,471	12,616	11,503	10,896	11,273	11,297	10,867	10,906

Sector and class of worker	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
VARIANT A											
Total	107,852	109,990	112,169	114,435	116,794	119,211	121,764	124,417	127,178	130,047	133,029
Nonagricultural sectors	67,751	70,211	72,711	75,300	77,981	80,721	83,595	86,571	89,653	92,845	96,150
Agricultural sectors	40,101	39,779	39,458	39,135	38,813	38,490	38,169	37,846	37,525	37,202	36,879
Workers and employees	9,167	9,489	9,812	10,134	10,457	10,779	11,101	11,423	11,746	12,068	12,390
Collective farmers	18,900	18,352	17,804	17,256	16,708	16,160	15,613	15,065	14,517	13,969	13,421
Private sector	12,034	11,938	11,842	11,745	11,648	11,551	11,455	11,358	11,262	11,165	11,068
Class of Worker											
Workers and employees	76,918	79,700	82,523	85,434	88,438	91,500	94,696	97,994	101,399	104,913	108,540
Collective farmers	18,900	18,352	17,804	17,256	16,708	16,160	15,613	15,065	14,517	13,969	13,421
Private Sector	12,034	11,938	11,842	11,745	11,648	11,551	11,455	11,358	11,262	11,165	11,068
VARIANT B											
Total		109,752	111,697	113,740	115,883	118,091	120,442	122,903	125,477	128,166	130,978
Nonagricultural sectors		70,211	72,711	75,300	77,981	80,721	83,595	86,571	89,653	92,845	96,150
Agricultural sectors		39,541	38,986	38,440	37,902	37,370	36,847	36,332	35,824	35,321	34,828
Workers and employees		9,489	9,812	10,134	10,457	10,779	11,101	11,423	11,746	12,068	12,390
Collective farmers	(Same as	18,185	17,474	16,770	16,070	15,376	14,688	14,005	13,327	12,653	11,986
Private sector	veriant	11,867	11,700	11,536	11,375	11,215	11,058	10,904	10,751	10,600	10,452
Class of Worker	A for 1950-65)										
Workers and employees		79,700	82,523	85,434	88,438	91,500	94,696	97,994	101,399	104,913	108,540
Collective farmers		18,185	17,474	16,770	16,070	15,376	14,688	14,005	13,327	12,653	11,986
Private sector		11,867	11,700	11,536	11,375	11,215	11,058	10,904	10,751	10,600	10,452

Source: Tables A-4, A-5, and A-6.

Table A-8.—Estimates of Man-Day Employment in the U.S.S.R., by Sector: 1950 to 1965

(In millions)

Line no.	Sector	1950	1953	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
1	Total	21,793	21,793	23,485	23,861	23,854	24,367	24,692	25,141	25,698	26,147	26,539	27,382	28,611
2	Nonagricultural sectors	10,212	11,333	12,031	12,420	12,716	13,323	13,877	[1]14,655	15,329	15,832	16,448	17,244	18,055
3	Industry	3,908	4,469	4,746	5,034	5,119	5,273	5,385	5,949	6,202	6,400	6,628	6,911	7,210
4	Construction	710	781	872	966	1,070	1,185	1,279	1,373	1,392	1,362	1,385	1,431	1,497
5	Transport and communications	1,278	1,471	1,544	1,589	1,603	1,697	1,776	1,873	1,931	1,978	2,041	2,127	2,201
6	Trade and public dining	919	952	1,018	1,041	1,074	1,123	1,170	1,248	1,324	1,384	1,451	1,533	1,601
7	Public health and education	1,680	1,873	2,079	2,159	2,233	2,352	2,472	2,676	2,867	3,043	3,211	3,407	3,598
8	Other[2]	1,303	1,347	1,280	1,304	1,296	1,345	1,422	1,536	1,613	1,665	1,732	1,835	1,948
9	Producers' cooperatives	414	440	492	327	321	348	373	(1)	(1)	(1)	(1)	(1)	(1)
10	Agricultural sectors	11,581	10,460	11,454	11,441	11,138	11,044	10,815	10,486	10,369	10,315	10,091	10,138	10,556
11	Workers and employees	963	1,064	1,187	1,197	1,464	1,594	1,665	1,994	2,204	2,312	2,353	2,438	2,612
12	State farms[3]	679	715	793	819	1,109	1,292	1,413	1,771	2,070	2,180	2,221	2,301	2,449
13	Nonagricultural work	63	71	65	63	73	88	102	147	159	178	162	163	169
14	Agricultural work	616	644	728	756	1,036	1,204	1,311	1,624	1,911	2,002	2,059	2,138	2,280
15	Other[4]	94	86	73	61	58	101	118	126	133	132	132	137	163
16	Nonagricultural work	9	8	6	5	4	7	9	10	10	11	10	10	11
17	Agricultural work	85	78	67	56	54	94	109	116	123	121	122	127	152
18	MTS's and RTS's[5]	190	263	321	317	297	201	134	97	1	(X)	(X)	(X)	(X)
19	Nonagricultural work	22	47	74	99	91	61	77	41	(X)	(X)	(X)	(X)	(X)
20	Agricultural work	168	216	247	218	206	140	57	56	1	(X)	(X)	(X)	(X)
21	Collective farmers	7,286	6,354	6,840	6,743	6,182	5,918	5,929	5,441	5,009	4,840	4,695	4,646	4,574
22	Nonagricultural work	660	566	589	686	669	559	581	537	484	460	436	363	315
23	Agricultural work	6,626	5,788	6,251	6,057	5,513	5,359	5,348	4,904	4,525	4,380	4,259	4,283	4,259
24	Agricultural artels	7,197	6,257	6,708	6,619	6,031	5,835	5,827	5,311	4,915	4,787	4,645	4,597	4,525
25	Nonagricultural artels	89	97	132	124	151	83	102	130	94	53	50	49	49
26	Private sector	3,332	3,042	3,427	3,501	3,492	3,532	3,221	3,051	3,156	3,163	3,043	3,054	3,370

X Not applicable.

[1] The system of producers' cooperatives was abolished in October 1960. Employment formerly in this sector is now included in the workers and employees category, by sector as appropriate.

[2] Consists of the housing-communal economy, government and administration, credit and insurance institutions, forestry, and an undistributed residual.

[3] Includes subsidiary state agricultural enterprises.

[4] Includes activities supporting agriculture, such as veterinary services.

[5] Machine-Tractor Stations (MTS's) and Repair Technical Stations (RTS's). The MTS's were abolished in 1958 and replaced by RTS's which were also subsequently abolished.

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Total--line (1): Sum of parts, (1) = (2) + (10).

Nonagricultural sectors

Line (2): Sum of parts, (2) = Σ[(3) through (9)].

Lines (3) through (9): Computed by multiplying the annual average employment for each sector (table A-4) in each year by the average number of man-days per annual average industrial wageworker in the same year (table A-10).

Agricultural sectors--line (10): Sum of parts, (10) = (11) + (21) + (26).

Table A-8.--Estimates of Man-Day Employment in the U.S.S.R., by Sector: 1950 to 1965--Continued

Workers and employees--line (11): Sum of parts, (11) = (12) + (15) + (18).

State farms and subsidiary state agricultural enterprises--line (12): Sum of parts, (12) = (13) + (14).

Nonagricultural work--line (13): Computed by multiplying annual average employment in nonagricultural activities on state farms (table A-5) by the following estimated or reported man-days per annual average worker: 1950-58, 280; 1959, 285; 1960, 280; 1961, 281; 1962-63, 282; 1964-65, 285. The figures for 1950-58, 1963, and 1965 are estimated, the others are reported (table A-10).

Agricultural work--line (14): Computed in the same manner and using the same numbers of man-days per annual average worker as line (13).

Other--line (15): Sum of parts, (15) = (16) + (17).

Nonagricultural work--line (16); Agricultural work--line (17): Computed in the same manner and using the same numbers of man-days per annual average worker as line (13).

MTS's and RTS's--line (18): Sum of parts, (18) = (19) + (20).

Nonagricultural work--line (19); Agricultural work--line (20): Computed in the same manner and using the same number of man-days per annual average worker as line (13).

Collective farmers--line (21): Computed by multiplying annual average employment on collectives (table A-5) by the number of man-days worked per annual average collective farmer (table A-11). The average number of man-days for 1963, 1964, and 1965 was assumed to be 242.

Nonagricultural work--line (22): (22) = (21) - (23).

Agricultural work--line (23): Computed in the same manner and using the same average number of man-days as line (21), but using annual average employment in agricultural work on collective farms (table A-5).

Agricultural artels--line (24)

1950-62: Nimitz, Farm, 1965, p. 7.
1963-65: Computed by moving the 1962 man-day figure by an index of annual average employment in agricultural artels (table A-5).

Nonagricultural artels--line (25): (25) = (21) - (24).

Private sector--line (26): Computed by multiplying the man-year equivalent employment figures from table A-6 by 280 man-days per man-year equivalent.

Table A-9.—Estimates and Projections of Man-Hour Employment in the U.S.S.R., by Sector: 1950 to 1975

(In millions)

Line no.	Sector and class of worker	1950	1953	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964
	VARIANT A												
1	Total	174,344	174,344	187,880	185,175	184,220	185,477	186,018	180,171	181,460	184,224	186,438	191,959
2	Nonagricultural sectors[1]	81,696	90,664	96,248	93,647	95,116	97,125	99,498	96,283	100,712	104,016	108,063	113,293
3	Industry[2]	31,264	35,752	37,968	38,510	38,853	39,020	39,311	39,680	41,367	42,688	44,209	46,096
4	Agricultural sectors	92,648	83,680	91,632	91,528	89,104	88,352	86,520	83,888	80,748	80,208	78,375	78,666
5	Workers and employees	7,704	8,512	9,496	9,576	11,712	12,752	13,320	15,952	15,428	16,184	16,471	17,066
6	Collective farmers	58,288	50,832	54,720	53,944	49,456	47,344	47,432	43,528	40,072	38,720	37,560	37,168
7	Private sector	26,656	24,336	27,416	28,008	27,936	28,256	25,768	24,408	25,248	25,304	24,344	24,432

Line no.	Sector and class of worker	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
	VARIANT A											
1	Total	200,457	204,140	207,887	211,784	215,846	220,006	224,407	228,983	233,747	238,702	243,852
2	Nonagricultural sectors	118,621	122,939	127,317	131,850	136,545	141,342	146,375	151,586	156,982	162,572	168,359
3	Industry	48,091	49,203	50,328	51,478	52,654	53,847	55,078	56,338	57,626	58,943	60,290
4	Agricultural sectors	81,836	81,201	80,570	79,934	79,301	78,664	78,032	77,397	76,765	76,130	75,493
5	Workers and employees	18,284	18,931	19,575	20,217	20,862	21,504	22,146	22,789	23,433	24,076	24,718
6	Collective farmers	36,592	35,529	34,469	33,408	32,347	31,286	30,227	29,166	28,105	27,044	25,983
7	Private sector	26,960	26,741	26,526	26,309	26,092	25,874	25,659	25,442	25,227	25,010	24,792
	VARIANT B											
1	Total		203,658	206,930	210,375	213,999	217,736	221,727	225,914	230,298	234,888	239,694
2	Nonagricultural sectors	(Same as variant A for 1950-65)	122,939	127,317	131,850	136,545	141,342	146,375	151,586	156,982	162,572	168,359
3	Industry		49,203	50,328	51,478	52,654	53,847	55,078	56,338	57,626	58,943	60,290
4	Agricultural sectors		80,719	79,613	78,525	77,454	76,394	75,352	74,328	73,316	72,316	71,335
5	Workers and employees		18,931	19,575	20,217	20,862	21,504	22,146	22,789	23,433	24,076	24,718
6	Collective farmers		35,206	33,830	32,467	31,112	29,768	28,436	27,114	25,801	24,496	23,205
7	Private sector		26,582	26,208	25,841	25,480	25,122	24,770	24,425	24,082	23,744	23,412

[1] Includes employment in producers' cooperatives for the years 1950-59 (see table A-4).

[2] Beginning in 1960 this category includes employment previously enumerated in the category of industrial producers' cooperatives (see table A-4).

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VARIANT A

Total--line (1)

1950-75: Sum of parts, (1) = (2) + (4).

Nonagricultural sectors--line (2)

1950-65: Computed by multiplying total man-days worked in these sectors (table A-8) by the number of man-hours worked per day by workers and employees. Man-hours per day were estimated as follows: 1960-65, the average workweek for all workers and employees (39.4 hours, table A-10) was divided by 6 to yield 6.57 man-hours per man-day; 1956-59, the figure for 1960 (6.57) was moved by an index of the scheduled length of the workday for adult industrial wageworkers (table A-10); and 1950-55, the scheduled length of the workday for adult industrial wageworkers (8 hours) was assumed to apply to all nonagricultural employment.

1966-75: Projection based on the assumption that the number of man-hours per annual average person (table A-4) will remain constant at the 1965 level of 1,751 man-hours (man-hour employment in 1965 divided by annual average employment in 1965).

Table A-9.—Estimates and Projections of Man-Hour Employment in the U.S.S.R., by Sector: 1950 to 1975—Continued

Industry--line (3)

1950-55: Computed in the same manner and using the same numbers of man-hours per man-day as indicated for line (2).
1956-57: Computed in the same manner as line (2), but using different numbers of man-hours per man-day. The latter were estimated by moving the scheduled numbers of hours per man-day for industrial workers (including shortened working day before holidays) in 1958 (table A-10, line 3) by the scheduled number of hours per day worked per adult industrial wageworker (table A-10, line 2).
1958-65: Computed in the same manner as line (2), but substituting the scheduled number of hours per day worked by an industrial wageworker (including shortened working day before holidays).
1966-75: Projection based on the assumption that the number of man-hours per annual average person (table A-4) will remain constant at the 1965 level of 1,777 man-hours.

Agricultural sectors--line (4)

1950-75: Sum of parts, (4) = (5) + (6) + (7).

Workers and employees--line (5)

1950-65: Computed by multiplying man-day employment (table A-8) by the length of the "standard" workday, which was 8 hours until the third quarter of 1960 and 7 hours thereafter (table A-10).
1966-75: Projection based on the assumption that the number of man-hours per annual average person will remain constant at the 1965 level of 1,995 man-hours.

Collective farmers--line (6)

1950-65: Computed by multiplying man-day employment (table A-8) by the average length of the workday, which was assumed to be 8 hours in all years.
1966-75: Projection based on the assumption that the number of man-hours per annual average person will remain constant at the 1965 level of 1,936 man-hours.

Private sector--line (7)

1950-65: Computed in the same manner and using the same number of man-hours per man-day as indicated for line (6).
1966-75: Projection based on the assumption that the number of man-hours per man-year equivalent will remain constant at the 1965 level of 2,240 man-hours.

VARIANT B

Derived in the same manner as variant A, except for the substitution of variant B of annual average employment (table A-7).

Table A-10.—Time Worked by Industrial and State Farm Workers and Employees in the U.S.S.R.—Selected Measures: 1950 to 1965

Line no.	Measure	1950	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
	INDUSTRY												
1	Average number of days worked by wageworkers	276.3	273.3	272.1	267.4	268.0	266.5	266.9	264.2	263.4	264.5	266.5	266.4
2	Average scheduled number of hours per day per adult wageworker	8.00	8.00	7.96	7.90	7.70	7.56	6.94	6.93	6.93	6.93	6.93	6.93
3	Including shortened working day before holidays	(NA)	(NA)	(NA)	(NA)	7.40	7.30	6.67	6.67	6.67	6.67	6.67	6.67
4	Average length of scheduled workweek for wageworkers (hours)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	40.0	40.0	40.0	40.0	40.0	40.0
	STATE FARMS												
5	Average number of days worked by all personnel	(NA)	(NA)	(NA)	(NA)	(NA)	285	280	281	282	(NA)	285	(NA)
6	Average scheduled number of hours per day per worker	8	8	8	8	8	8	8	7	7	7	7	(NA)

NA Not available.

SOURCES AND METHODOLOGY

Average number of days worked by wageworker--line (1)

1950, 1958, 1960, 1963, 1964: Nar. khoz. v 1964, p. 138.
1955, 1962: Promyshlennost' SSSR, 1964, p. 87.
1956, 1957: Shishkin, Trudovyye, 1961, p. 69.
1959, 1961: Nar. khoz. v 1962, p. 131.
1965: Nar. khoz. v 1965, p. 142.

Average scheduled number of hours per day per adult wageworker--line (2)

1950, 1955, 1957: U.S. Congress, Joint Economic Committee, Current, 1965, p. 80.
1956, 1964: Nar. khoz. v 1964, p. 665.
1958: Nar. khoz. v 1958, p. 665.
1959: Nar. khoz. v 1959, p. 596.
1960: Nar. khoz. v 1960, p. 645.
1961: Nar. khoz. v 1961, p. 602.
1962: Nar. khoz. v 1962, p. 488.
1963: Nar. khoz. v 1963, p. 506.
1965: Nar. khoz. v 1965, p. 593.

Including shortened working day before holidays--line (3)

1958-65: Same sources as for line (2).

Average length of scheduled workweek for wageworker--line (4)

1960-65: Same sources as for line (2). The comparable figure for all workers and employees in all years, 1960-65, is 39.4 hours.

Average number of days worked by all personnel--line (5)

1959-62: Khlebnikov, "Labor," 1963, p. 68.
1964: Sinyukov, Ekonomika, 1966, p. 244.

Average scheduled number of hours per day per worker--line (6)

1950-65: Nimitz, Farm, 1965, p. 140. The change from an 8- to a 7-hour day occurred in the last quarter of 1960.

Table A-11.—Manpower and its Utilization on Agricultural Collective Farms in the U.S.S.R.: 1950 to 1965

Line no.	Item	1950	1953	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965
1	Collective farm members participating in socialized production (millions)	40.7	38.2	39.5	40.2	(NA)	36.8	35.6	32.3	30.4	29.6	(NA)	(NA)	(NA)
2	Of these, able-bodied (millions)	28.1	26.2	27.8	(NA)	(NA)	26.8	26.1	23.6	21.9	21.2	20.6	(NA)	(NA)
3	Households (end of year)(millions)	20.5	19.7	19.8	19.9	18.9	18.8	18.5	17.1	16.4	16.3	16.1	15.9	15.4
4	Participants per household	1.99	1.94	1.99	2.02	(NA)	1.96	1.92	1.89	1.85	1.82	(NA)	(NA)	(NA)
5	Of these, able-bodied	1.37	1.33	1.40	(NA)	(NA)	1.43	1.41	1.38	1.34	1.30	1.28	(NA)	(NA)
6	Man-days worked (millions)	7,197	6,257	6,708	6,619	6,031	5,835	5,827	5,311	4,915	4,787	(NA)	(NA)	(NA)
7	Annual average employment (thousands)	27,305	25,458	26,198	26,980	25,280	25,075	24,101	21,733	20,323	19,784	19,198	19,001	18,600
8	Man-days worked per annual average collective farmer	264	246	256	245	239	233	242	244	242	242	(NA)	(NA)	(NA)
9	Man-days worked per participant	177	164	170	165	(NA)	159	164	164	162	162	(NA)	(NA)	(NA)
10	Man-days worked per able-bodied participant	(NA)	209	220	205	214	214	205	197	198	199	(NA)	196	(NA)
11	Participants per annual average collective farmer	1.49	1.50	1.51	1.49	(NA)	1.47	1.48	1.49	1.50	1.50	(NA)	(NA)	(NA)
12	Lowest month participation as a percentage of highest month	(NA)	56	56	56	57	58	59	59	58	58	59	(NA)	(NA)

NA Not available.

SOURCES AND METHODOLOGY

Collective farm members participating in socialized production--line (1)

1950, 1955: Computed from indexes in Karnaukhova, "Methods," 1959, p. 35.
1953, 1958-62: Karnaukhova, "Utilization," 1964, p. 56.
1956: Vasilenko, "Labor," 1962, p. 191. Vasilenko states that the number of participants in 1953 was equal to 2.5 million less than in 1950, the number in 1956 was equal to 2 million more than in 1953, and the number in 1959 was equal to 4.6 million less than in 1956. These relationships are consistent with the other figures in this row which are derived from Karnaukhova. Man-day figures for 1956, 1958, and 1959 are also reported in Shishkin, Trudovyye, 1961, p. 99. They are lower than Karnaukhova's, and clearly are not of the same series. Presumably Karnaukhova's figures represent the same series through time, and her figures were used rather than Shishkin's for the years in question.

Able-bodied--line (2)

1950, 1955: Karnaukhova, "Methods," 1959, p. 35.
1953, 1958-62: Karnaukhova, "Utilization," 1964, p. 56.
1963: Calculated from Venzher, Ispol'zovaniye, 1965, p. 111; and Nar. khoz. v 1963, p. 226. Venzher gives the average number of able-bodied farmers per farm which was multiplied by the number of farms to yield the number of able-bodied participants.

Households--line (3)

1950-56: Nar. khoz. v 1956, p. 140.
1957: Nar. khoz. v 1958, p. 494.
1958, 1963: Nar. khoz. v 1963, p. 341.
1959, 1960-62: Nar. khoz. v 1962, p. 330.
1964: Nar. khoz. v 1964, p. 390.
1965: Tsifrakh v 1965, p. 90.

Participants per household--line (4)

1950-62: (4) = (1) ÷ (3).

Able-bodied participants per houshold--(5)

1950-63: (5) = (2) ÷ (3).

Man-days worked--line (6)

1950-63: Nimitz, Farm, 1965, p. 7. For the years 1950-57, Nimitz converts labor-days to man-days, and from the years 1958-62, uses data of Karnaukhova ("Utilization") and Khlebnikov ("Labor"), which refer to the same series. She adjusted the series to reflect the otherwise unrecorded labor input of hired (nayemnyye) and attached (privlechenyye) workers.

Annual average employment--line (7)

1950, 1958, 1960, 1962-64: Nar. khoz. v 1964, p. 420.
1953, 1959, 1961: Nar. khoz. v 1962, p. 368.
1955: Nar. khoz. v 1960, p. 522.
1956, 1957: Sel'. khoz., p. 459.
1965: Nar. khoz. v 1965, p. 436.
1953-58: Adjusted for MTS transfers (see table A-5).

Man-days worked per annual average collective farmer--line (8)

1950-62: (8) = (6) ÷ (7). A very slight exaggeration is involved due to the adjustment described in line (6).

Man-days worked per participant--line (9)

1950-62: (9) = (6) ÷ (1). See note to line (8).

Man-days worked per able-bodied participant--line (10)

1953-64: Feshbach, "Manpower," 1966, p. 785.

Participants per annual average collective farmer--line (11)

1950-62: (11) = (1) ÷ (7).

Lowest month participation as a percentage of highest month--line (12)

1953-63: Computed from Feshbach, "Manpower," 1966, p. 759. Except for 1955, this figure is equal to the number of participants in January as a percent of the number of participants in July (August in 1955).

Appendix

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*HEALTH SERVICES; *PROGRAM PLANNING; *PROGRAMED TEXTS; BUDGETING; INFORMATION SYSTEMS
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Intended as an introduction to the fundamental principles of personal health services planning, this programed text is based upon two articles in "Public Health Reports" by Jerrold M. Machael, George Spatafore, and Edward R. Williams: "An Approach to Health Planning" (December 1967) and "A Basic Information System" (January 1968). The user should have copies of these articles available as reference sources. The nine sections of the manual are: (1) The Planning-Programming-Budgeting System (PPB), (2) Defining Mission, Goal, and Objective, (3) The comprehensive Health Plan, (4) Steps in an Illustrative Scheme of Health Planning, (5) The PPB Health Planning Process, (6) The Information System, (7) The International Classification of Diseases, (8) Health Problem Index, and (9) Health Services Functional and Activity Areas. The total expected reader time requirement is 3 hours and the material should be completed in no more than two working sessions. (JK)

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HEALTH PLANNING.

A PROGRAMMED INSTRUCTION COURSE

VT008163

U. S. DEPARTMENT OF HEALTH EDUCATION, AND WELFARE
Public Health Service
Health Services and Mental Health Administration
Bureau of Health Services

FOREWORD

The rising costs of medical care and the increased efforts to make health care available to all as a matter of right have forced a search to improve the effectiveness and efficiency of medical care. Improved planning for personal health services is a promising development for the provision of services to all who need them.

Congress has recognized this potential by passing Public Law 89-749 (The Comprehensive Health Planning and Public Health Services Act of 1966) in which it declared that: "Comprehensive Health Planning for Health Services, Health Manpower, and Health Facilities is essential at every level of government..."

The President has established planning in the Executive Branch through a Planning, Programming and Budgeting System. Planning and analysis of health programs are a significant part of this system.

An earlier attempt at developing a programmed text for health planning was made by the Bureau's Division of Indian Health in January 1966. This current document represents another attempt to extend personal health services planning competency through this methodology. The material is based on two papers by Jerrold M. Michael, George Spatafore, and Edward R. Williams,

"An Approach to Health Planning," and "A Basic Information System" in the December 1967 and January 1968 Public Health Reports.

The student should realize that there are several approaches to personal health services planning. The methodology explained in this text is one which hopefully can improve health services. Other systems may be of equal value.

Carruth J. Wagner, M.D.
Assistant Surgeon General
Director, Bureau of Health Services

INTRODUCTION

This is a programmed instructor course based on articles published in the Public Health Reports of December 1967 and January 1968, entitled, "An Approach to Health Planning" and "A Basic Information System" by Jerrold M. Michael, George Spatafore, and Edward R. Williams of the Bureau of Health Services. The teaching frames were prepared in program form, under the direction of Dr. Carlton B. Downing, Trinity University, San Antonio, Texas.

This course is not intended to be a comprehensive review of the subject of personal health services planning, but merely an introduction to the fundamental principles involved. To gain the maximum benefit of the course, the reader should have available a copy of the above cited articles as a companion reference source, since the programmed frames are keyed to the articles throughout.

This Self Instruction Text in Health Planning was designed to accomplish three objectives:

1. To provide baseline information as a lead-in for didactic training in personal health services planning.

2. To provide insight into the data systems necessary for personal health services planning.

3. To provide insight into ways to quantify health status and program efforts.

GENERAL INSTRUCTIONS

This text is written in "programmed instruction" form. On each page (frame), a unit of instruction is presented. A series of "true - false" statements on each frame gives you an opportunity to review and test your knowledge of the frame.

Check each true statement. Every frame may not contain a true statement. After answering each frame, check for the correct responses on the following page. If you select the wrong responses, review the unit of instruction on the frame until you understand the correct answer.

GLOSSARY OF TERMS

ACTIONS

Efforts made to improve health.

AMELIORATE

To make better or more tolerable.

BASIC RESEARCH

Studies into physiology and bodily functions and responses not aimed at any particular disease or condition. Examples would be studies in cell structure and in blood chemistry.

COMPREHENSIVE HEALTH PLAN

A formal written commitment projecting the activities or plans of action for all agencies involved in mitigating the causes of death and illness as well as other factors relating to these causes.

CONCOMITANT

Accompanying, especially in a subordinate or incidental way.

CONTAINMENT

Medical care directed to the health problems of people who can't be cured completely of chronic disease, mental illness, or conditions of old age, but which will "contain" their illness or disability at a minimal level.

COST-BENEFIT

The scientific approach to determine from a series of alternates, which plan or combination of plans will produce the best results toward achievement of objectives concomitantly with the most prudent use of resources.

DIRECT OPERATIONS

All the activities under each of the four Health Service Areas that are involved in the direct provisions of health services.

DISPARITY

The state of being different in quality or character.

ETIOLOGY

Causative agent of disease.

FACILITIES

Includes activities directed toward providing facilities and equipment needed for the conduct of direct operations, research, and training under the four Health Service Areas.

GOAL

Specifies what is to be accomplished to succeed in the direction of the mission; a long-range state of accomplishment toward which programs are directed.

HEALTH GOAL

Usually stated in terms ot accomplishments to completely overcome a health problem or reduce it to a specified level.

HEALTH OBJECTIVE

Statement of a measured and specific kind of progress toward a goal during a stated time period.

HEALTH PROBLEM INDEX

A combination of known quantitative factors in a formula to arrive at an index, "Q" by which various health problems may be compared.

HEALTH SERVICE AREAS

Are divided into General Activity Areas which are further subdivided into Program Categories under which are listed specific activities as Program Elements.

Health Service Areas:
- General Activity Areas
  - Program Categories
    - Program Elements

ICDA

International Classification of Diseases, Adapted.

INFORMATION SYSTEM

A compilation of resources used in health program planning and reporting which permits the quantitative comparison of health problems and activities.

INPUT

The resources necessary to carry out a health care plan.

LEAD TIME

The time necessary to make plans, order materials, and train people to carry out a health program.

MATRIX

A graphically-arranged accounting ledger.

MISSION

A mission is imposed by legislation, regulation, charter, or other instrument and remains more or less fixed unless changed by law or some other official action.

NORMAL DEVELOPMENT

Efforts to protect the individual's health, prevent his illness, and insure that he develops normally.

OBJECTIVE

Specification of a measured amount of progress toward a particular goal and states the period of time needed or desired for this progress to be accomplished.

OPTIMUM

Best possible under the existing circumstances.

OUTPUT MEASURES

Quantifiable end product due to effort expended in each program element in the Classification system.

PERFORMANCE ACCOUNTING

Relates funds already spent to benefits accomplished.

PERFORMANCE BUDGETING

Estimating the effect of funds planned for future activities.

X

PLANNING-PROGRAMMING-BUDGETING SYSTEM (P-P-B)

The process by which objectives and resources and the interrelationships among them are taken into account to achieve a coherent and comprehensive program of action for the organization as a whole. It relates input to results and permits insight into the most efficient and effective methods of achievement.

PROGRAM OBJECTIVE

Defines the measured amount of progress to be accomplished toward a health objective during a given interval of time.

QUANTITATIVE

Scaleable in numerical terms.

REPAIR

Efforts expended in the cure of illness and the return of the individual to a normal state and function.

RESEARCH

The efforts toward exploring and developing new methods, facilities, and equipment for carrying out the activities under the four Health Service Areas.

SUB-OBJECTIVES

The secondary measured amount of progress toward a particular goal and the period of time needed or desired for this progress to be accomplished.

PROGRAM OUTLINE

This manual is divided in nine sections which are listed below. The time expected to cover this material, including reviews, is indicated on the right hand side. You should attempt to complete this material in no more than two separate working sessions.

		Expected Reader Time (Minutes)
I.	The Planning-Programming-Budgeting System	
	Review	
II.	Defining Mission, Goal, Objective	40
III.	The Comprehensive Health Plan	
	Review	
IV.	The Steps of an illustrative Health Planning Process	
	Review	45
V.	The P-P-B Health Planning Process	
VI.	The Information System	
	Review	
VII.	The International Classification of Diseases, Adapted	55
VIII.	A Health Problem Index	
	Review	
IX.	Health Services Functional and Activity Areas	
	Review	40

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THE PLANNING-PROGRAMMING-BUDGETING SYSTEM

Frames 1 through 9

Background

Definition

Deficiencies of traditional system

Benefits

FRAME 1

THE PLANNING-PROGRAMMING-BUDGETING SYSTEM

The President of the United States stimulated the Planning-Programming-Budgeting system (P-P-B) by requiring it to be used in the Federal establishment. P-P-B has been created to assure that the citizens of the United States receive a maximum return for their contribution to the operations of the Federal establishment.

The Presidential memorandum that directed the creation of the P-P-B system approach, placed requirements on the governmental health units to develop a health program system designed to meet health needs.

The tendency to select and justify programs on the basis of intuition or tradition is being countered by increased interest in comprehensive, community-wide, area-wide, state-wide, and nation-wide planning.

This broader concept has been given impetus by the Comprehensive Health Planning and Public Health Service Amendment of 1966, Public Law 89-749, which encourages the coordinated use of all health and health-related resources in reducing health problems.

Check the items which are true:

____A. Community, area, state, and national health planning should make coordinated use of all resources related to the health problem.

____B. The President stimulated the creation of P-P-B and indicated direct responsibilities for department and agency needs.

____C. Comprehensive planning will enable comparisons to be made between alternative programs developed at various levels.

____D. Personnel from outside the Governmental agencies as well as from within may work in the plan.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 1: A, B, C, D

FRAME 2

The Planning-Programming-Budgeting system is defined as:

> The Process by which objectives and resources and the interrelationships among them are taken into account to achieve a coherent and comprehensive program of action for the organization as a whole. It relates input to results and permits insight into the most efficient and effective methods of achievement.

Check the items which are true:

____A. P-P-B is designed to primarily assist the director of an agency or institution. Other plans will be inaugurated to furnish similar assistance to other segments of the agency.

____B. In an organization P-P-B is an action-process that considers objectives and resources in a comprehensive program for achievement of purposes.

____C. Effective achievement methods may be measured by relating output to results.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 2: B

FRAME 3

Major deficiencies have existed in the classical budgetary process that can now be corrected by application of the Planning-Programming-Budgeting system.

One deficiency of the present budget process is the inability to evaluate similar programs on a common base. Two or more Bureaus or Departments may be conducting activities that are complementary or even competitive yet these activities are often not considered together.

As a result, agencies may not have always been fully aware of the activities of similar organizations, and as a result have not made proper allowances in planning and operating related programs.

Check the items which are true:

____A. Competition and special situations may justify program duplication and overlapping spheres of activity.

____B. Similar or complementary programs cannot be adequately evaluated under our present budget system.

____C. Two agencies could possibly be conducting competitive programs mutually unaware of the others activities.

____D. P-P-B can correct major deficiencies that exist in the budgetary process.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 3: B, C, D

FRAME 4

Another deficiency of the present budget system which P-P-B will resolve is the limited ability to plan ahead or to project financial requirements to the completion of an activity.

The classical budgetary process projects needs for the coming year with consideration for actual expenditures for the year just completed and with an estimate of expenditures for the current year.

This practice gives little opportunity for evaluation in procurement planning for items requiring long lead-time or for construction projects.

Check the items which are true:

____A. Financial projections covering a number of years are virtually impossible under current budget planning procedures.

____B. In classical budgetary processes, the total financial need for a program is distributed over the period of time needed to complete the program.

____C. Construction projects continuing over several years and items that must be ordered well in advance of the time they are needed are difficult to plan for in the present budget process.

____D. Authorities who review budgets are often reluctant to project costs of an activity because income cannot always be accurately projected in advance.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 4: A, C

FRAME 5

P-P-B will make it possible to correct the deficiencies described in the two preceding frames by:

1. Considering major programs that cut across departmental lines, i.e., evaluating major program areas regardless of whether one or several departments are involved.

2. Evaluating needs in terms of the total program will allow financial projections covering a number of years.

Projections based on total program needs and longer periods of time will enable the planning of programs in terms of the best choice for meeting identified needs.

Check the items which are true:

____A. P-P-B will primarily benefit planners, and to a lesser extent aid operating agencies.

____B. More complete planning data will enable more effective choices to be made in terms of total needs and requirements.

____C. P-P-B will enable authorities to have more reliable information available in the budget planning process.

____D. Planners can cut across organizational lines to consider the total requirements of a major program.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 5: B,C,D

FRAME 6

The Nation's health cannot be secured by the fragmented efforts of separate agencies or communities, or by the efforts of a few segments of the population, planning and working alone.

The process of reviewing a health organization's activities in relation to Government-wide goals involves the following considerations:

1. Appraisal and comparison of health and various other activities in terms of their relative contributions to national health objectives.

2. Determination of how given objectives can be attained with minimum expenditure of resources.

3. Projection of health activities over a long enough time period to provide proper perspective.

4. Consideration of the relative contribution of private and public resources toward national health objectives.

5. Revision of objectives, programs, and budgets in the light of experience and changing circumstances.

6. Explicit recognition of the need to demonstrate results for effort expended.

7. Application of new analytical techniques as an aid to, but not replacement for, leadership and judgment at all levels.

Check the items which are true:

____A. A proper perspective for evaluation is possible if health activities are projected over a long period of time.

____B. National health objectives can be appraised meaningfully only if consideration is given to the contributions of private and public activities.

____C. Results should be weighed against effort expended.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 6: A, B, C

FRAME 7

Top-level management will realize the following advantages from the planning-programming-budgeting system approach:

1. Access to information concerning program effectiveness and alternative courses of action as a result of more complete data relating respective costs, benefits, and future implications;

2. The ability to make comparisons among various programs on the basis of cost-benefit analysis; and

3. The opportunity for continual review and evaluation of each program in terms of its objectives.

Check the items which are true:

____A. Top management of each organization will have available more specific data, though less accurate, with respect to what their programs are accomplishing.

____B. P-P-B is a major tool which will enable detailed evaluation of a program so that constant review will not be necessary.

____C. It will be possible to weigh factors of cost against realized benefits by analysis of data available through use of the P-P-B system.

____D. The review and evaluation of a program in terms of objectives is a continuous process.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 7: C, D

FRAME 8

Program operators will realize the following advantages from the P-P-B approach.

1. P-P-B provides data which will permit evaluation, analysis and research necessary to appraise and improve a program. It allows the program operator to provide higher level management with evidence of the effectiveness of the program.

2. The program operator can provide his staff with more specific instructions that will result in greater effectiveness and efficiency.

3. The program operator can be assured that his program will be given proper consideration in relation to other programs and he can plan for long range programs with a greater degree of flexibility.

Check the items which are true:

____A. The advantages of P-P-B can be passed on to the operator's staff in the form of more specific instructions.

____B. There is less need for long range planning since alternative courses of action may always be substituted.

____C. A program operator can direct an activity more effectively if he retains sufficient flexibility to meet new situations or unforeseen circumstances.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 8: A, C

FRAME 9

A systematic approach to program planning will make it possible for each agency and organization to consider its program in the light of overall community, state, and national health problems.

All organizational levels of government are charged with the requirement to develop plans for the creation of program and planning staffs. The provisions of planning-programming-budgeting are positive action processes for the improvement of all departments and agencies. The effective use of the provisions of P-P-B should provide the President with program proposals that will result in the improvement of the health of the nation.

Check the items which are true:

____A. Department and agency heads may monitor the P-P-B program but they are not required to become directly involved in most phases of the plan.

____B. The capabilities and contributions of agencies and organizations not totally or normally associated with health services, may be considered under this concept.

____C. Each agency and organization will have the opportunity to compare and evaluate their programs on the basis of other related programs.

____D. P-P-B will make agencies and organizations more independent of each other in the planning function.

____E. Contributions of private and public health activities are to be appraised as they relate to National health objectives.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 9: B, C, E

FRAME 10

IT'S TIME FOR REVIEW

____A. Program operators within each organization will have available more specific data, though less accurate, with respect to what their programs are accomplishing.

____B. P-P-B requirements place responsibilities on all levels of organization in the Federal Establishment except at the department level.

____C. In the past, overlapping projects of two departments have been considered separately. P-P-B will require that the project will be evaluated as a single unified project.

____D. Alternative programs can be evaluated with P-P-B as a major tool on the basis of respective costs, benefits, and future implications.

____E. Comparison and appraisal of private and public health activities will yield a more realistic view of the total effect on national health objectives.

____F. Program operators must remain relatively inflexible once a course of action is decided upon. New situations must be made to conform to the original concept of operation.

Correct responses to this frame will be found at the top of the following frame.

DEFINING MISSION, GOAL AND OBJECTIVE

Frames 11 through 16

Mission

Goal

Objective

Correct Responses to Frame 10: C, D, E

FRAME 11

MISSION

The justification for the existence of any organization can be found in its mission.

A mission is imposed by legislation, regulation, charter, or other instrument and remains more or less fixed unless changed by law or some other official action.

The mission statement will include:

1. a description of the general functions or services to be performed, and

2. specific limits of jurisdiction and authority.

Check the items which are true:

____A. The mission of an organization may change readily so that it may adapt to changing conditions.

____B. The statement of the mission describes what is to be done and the limits relative to jurisdiction and authority.

____C. The mission of a State Health Department might be "the protection and advancement of public health within that State within certain legally specified limitations."

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 11: B, C

FRAME 12

The mission of a health program is usually imposed by legislation or regulation. The importance of an organization's mission is that it serves to direct the attention of all employees of the organization to the task to be accomplished.

Example: 1. The mission of the Division of Indian Health of the U. S. Public Health Service is "To provide health services to the American Indian and the Alaska Native."

2. The mission of a State Department of Health might be the protection and advancement of the public health of the people of the State.

Check the items which are true:

___A. The mission of the Division of Indian Health is to provide health services to the American Indian and Alaska Native.

___B. The mission of the State Department of Health in the example would usually be established by legislation.

___C. The mission would usually remain fixed until changed by law.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 12: A, B, C

FRAME 13

GOAL

Unlike missions, goals are generally established by the leaders within an organization and may be changed from time to time to meet the needs of changing conditions.

A goal specifies what is to be accomplished toward the long-range success of the mission. A goal also provides the framework within which progress can be evaluated.

A health goal is usually stated in terms of completely overcoming a health problem or reducing it to a specified level.

Check the items which are true:

____A. Goals indicate the accomplishments necessary for progress toward the success of the mission.

____B. Goals are produced from within an organization whereas the mission is generally imposed from outside the organization.

____C. A goal is as firm and unchanging as the mission.

____D. Health goals are concerned generally with the accomplishments necessary to improve the health status of a population.

____E. Goals will be related to program evaluation needs.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 13: A, B, D, E

FRAME 14

While a goal is primarily a long-range statement of accomplishments desired, it may not fix a limitation of time for its achievement. Goals need not be limited by current availability of resources or even the current limitations of scientific knowledge.

Since goals are self-imposed, rather than directed from outside the organization, they may be as idealistic or ambitious as good judgment dictates.

Agencies that are responsible for comprehensive planning will necessarily establish the broadest goals, while individual agencies and organizations covered by these comprehensive plans will develop more specific goals consistent with the overall comprehensive planning goals.

Check the items which are true:

____A. Goals may not set a time period for accomplishment.

____B. Individual agencies and organizations working under relatively more comprehensive plans, will develop the broadest goals.

____C. A health objective of a county health department might be to reduce the local incidence of a disease to the same level as the national average.

____D. Leaders within an organization can exercise their judgment in the choice of goals.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 14: A, D

FRAME 15

OBJECTIVE

An objective is a detailed delineation of a particular goal; objectives are more time-bound and quantifiable than goals.

An objective might define a measured amount of improvement to be made against a health problem in a certain period of time. An objective might also indicate that a certain level of health be maintained during a stated time interval.

Objectives will be defined in keeping with the requirements of their corresponding health goals. Two types of objectives will be defined, the health objective and the program objective.

Check the items which are true:

____A. It is possible for an objective to indicate the maintaining of a stated condition of health rather than improving it.

____B. Objectives are stated in terms of the kind of progress desired, but not with the rate of progress anticipated.

____C. Objectives and goals are closely related. Objectives define the progress required to reach the goals.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 15: A, C

FRAME 16

A health objective is the broader term used to denote a measured and specific kind of progress toward a goal during a stated time period. The health objective does not define how this progress will be achieved.

For example, a health objective of a community comprehensive planning agency might be to decrease mortality from influenza to 49 per annum by the end of two years.

A program objective defines the measured amount of progress to be accomplished toward a health objective during a given interval of time.

The program objective also denotes the specific program activity to be used to reach this achievement. A program objective indicates progress toward a health objective whereas a health objective leads to a specific goal.

An example of a program objective might be to immunize 80% of high risk individuals against influenza during the next year, as one element of a health objective.

Check the items which are true:

____A. A health objective indicates "what" and "how much" is to be done toward a goal as well as "how long" it should take, but does not define how the achievement is to be done.

____B. A program objective establishes "what" and "how much" is to be done toward a health objective in a given time period, as well as an indication of the program activity to be followed to this end.

____C. Usually there is no particular relationship between a health objective and a health goal.

____D. Health objectives are apt to be stated in broader terms than program objectives

____E. From program objective to health goal to mission is the correct sequence that might occur in combating health problems.

Correct responses to this frame will be found at the top of the following frame.

THE COMPREHENSIVE HEALTH PLAN

Frames 17 through 19

Definition

Criteria

Correct Responses to Frame 16: A, B, D

FRAME 17

THE COMPREHENSIVE HEALTH PLAN

A Comprehensive Health Plan is a formal written commitment projecting the activities or plans of action for all agencies involved in mitigating the causes of death and illness, and other factors relating to these causes.

The plan is developed within the framework of stated goals and relates to future action aimed at elevating or maintaining the health status of all persons within the geographical bounds and the legal jurisdiction of the planning organization or agency.

Check the items which are true:

____A. A Comprehensive Health Plan is concerned with only the current activities in existence at the time of writing.

____B. The plan is intended to be comprehensive for persons within a certain geographical limitation and legal jurisdiction.

____C. A Comprehensive Health Plan is related to health goals, but should be considered separately from the goals.

____D. A Comprehensive Health Plan commits projected activities to elevating or maintaining a level of health status.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 17: B, D

FRAME 18

A Comprehensive Health Plan should contain:

1. a statement defining the health problem, based on statistical information,

2. a discussion of the causes and related factors pertaining to the problem,

3. health objectives quantified in terms of mortality and morbidity projected over a specified time period,

4. program objectives that will support the health objectives and quantified in terms of ameliorating causative factors over a similar time projection, and

5. program activities to be carried out by specific agencies or persons.

The program activities are designed to accomplish the program objectives which, in turn, support the health objectives and ultimately the health goal.

Check the items which are true:

____A. A Comprehensive Health Plan is a blueprint for action, building from specified activities to program objectives to health objectives to a health goal.

____B. Health objectives and program objectives are projected over a similar time period.

____C. A Comprehensive Health Plan is general rather than specific and the same general plan will fit all health goals.

____D. The plan should be specific and designed for a particular health problem.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 18: A, B, D

FRAME 19

A Comprehensive Health Plan should consider all important factors that can affect the health problem.

There are many factors that may have direct bearing on the health status but which are not within the direct purview of official health agencies. Factors of this type would include:

a. socio-economic conditions,

b. education,

c. condition of housing,

d. highway construction.

In planning a Comprehensive Health Plan, consideration must be given to plans of action carried out by others. Even though such activities are not precisely limited to classical health activities, they may have a very real effect on them.

Check the items which are true:

____A. A Comprehensive Health Plan is concerned only with actions initiated by established health agencies or organizations.

____B. Construction of a highway to a rural isolated community, slums replaced by low cost high-rise apartments, or the opening of a large factory in a labor surplus area could all be items considered in a Comprehensive Health Plan.

____C. All factors relating to a health problem will fit a typical or classical and predictable pattern.

____D. Assistance in building and staffing good schools in a deprived community should not be considered as a factor having a prolonged effect on that community's health status.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 19: B

FRAME 20

IT'S TIME FOR REVIEW

____A. The mission of an organization may change readily so that it may adapt to changing conditions.

____B. The justification for the existence of any organization can be found in its mission.

____C. Like missions, goals are generally established by the leaders within an organization.

____D. Goals may not set a time period for accomplishment.

____E. Two types of objectives have been defined; the health objective and the problem objective.

____F. A comprehensive health plan should be specific and designed for a particular health problem.

____G. A comprehensive health plan is intended to be complete for persons within a certain geographical confine.

Correct responses to this frame will be found at the top of the following frame.

STEPS IN AN ILLUSTRATIVE SCHEMA OF HEALTH PLANNING

Frames 21 through 36

Determining Community Status

Getting Community Goals

Determining Community Attitudes, Resources and Goals

Analyzing Health Problems

Determining Alternate Plans of Action

Conducting Cost Benefit Studies

Establishing Objectives and Plans of Action

Developing total Integrated Community Plan

Conducting Continuous Evaluation

Correct Responses to Frame 20: B, D, F, G

FRAME 21

STEPS IN AN ILLUSTRATIVE SCHEMA OF HEALTH PLANNING

Step 1. Community Status.

Health problems, without exception, involve people and must be considered in context with all other community problems that may also have a current or potential adverse effect on the community well being.

The identification of health problems as one of the several community problems reveals the broader community status and enables the placement of the health status in a logical perspective.

Check the items which are true:

____A. A social problem in a community should not be considered as a factor when identifying a health problem.

____B. A community that has a death rate from a particular disease 1.4 times that of the general U.S. population could well be considered to have a health problem.

____C. The identification of a community's health status as well as all of the major problems facing the community, is a logical starting point in developing a Comprehensive Health Plan.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 21: B

FRAME 22

Step 2. Setting Community Goals

The establishment of community goals, including a health goal, is a logical second step in the health planning process.

These goals must define what will have occurred when an identified need is fully met. While the goals must be measurable they need not be totally dependent on currently available resources or the present limit of scientific knowledge.

An example of a community health goal might be to raise the health status of a community to a level comparable to that of the general U.S. population as measured by statistical comparison of morbidity, mortality, and lost productive potential.

Check the items which are true:

____A. The setting of goals is the logical first step in health planning.

____B. Community goals should include health goals to raise community health status to a level comparable with that of the overall country.

____C. Goals must realistically stay within the bounds of what is currently known about the problem and what resources can be immediately used in combating the problem.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 22: B

FRAME 23

Step 3. Community Attitudes, Resources and Conditions

If a planner is to be assured that progress toward a chosen goal is possible, it is necessary that he know with a reasonable degree of accuracy:

a. what the conditions in the community are,
b. what resources will be available,
c. what may be encountered as to community attitudes.

Resources (including personnel, equipment, supplies, facilities, training capabilities) must be known to the planner before he can develop realistic objectives. The determination of resources must be a continuous consideration in planning since existing and potential resources of any community constantly change.

Indicators of attitudes such as the level of education and the effects of cultural and religious mores must be quantified where possible to determine the extent to which the community will understand and accept modern health practices.

Check the items which are true:

____A. Attitudes of a community are nebulous in nature, but can be easily quantified in order to consider their effect in developing the plan.

____B. By identifying existing resources, the developer of the plan may more accurately determine what additional resources are needed.

____C. Examples of resources to be considered in planning which are continuously changing, are: personnel, equipment, supplies, facilities, training capability, and research capability.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 23: B, C

FRAME 24

Step 4. Analysis of Health Problems

The analysis of health problems is basic to the purposes of developing a comprehensive health plan. The identification of causes and the factors related to those causes, will enable the program manager to plan activities which are designed to overcome the problem.

The causes of many health problems are relatively easy to determine. For example, influenza is a cause of respiratory health problems.

Factors relating to these causes are not as clearly defined since they may include such contributory factors as lack of health knowledge or social attitudes regarding alcohol or smoking.

Check the items which are true:

____A. Pneumonia would be classified as a factor relating to the cause of a health problem.

____B. Causes and related factors do not affect other problem areas in health planning, but should be considered concurrently with other problem areas.

____C. Overcrowded housing and poor nutrition might be considered factors relating to the causes of some health problems.

____D. The developing of program actions should be a more accurate process after the health problem has been accurately identified and the causes and factors related to those causes have been determined.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 24: C

FRAME 25

Step 5. Alternate Plans of Action

The fifth step in the planning schema is the development of alternate plans of action. These plans of action detail the kinds and amounts of activities required to cope with, ameliorate, or solve the health problem.

In the preceding steps, the problem areas were identified and analyzed as well as the resources that might be available or anticipated. With this organized data at hand, the program manager is ready to commit his resources by developing the plans of action.

The plans of action must clearly state in writing:

1. what is to be done, where, when and how often,
2. who it will be done for or to,
3. provide a means of measurement for evaluating the program,
4. and relate the entire program to a specified planning time period.

Check the items which are true:

____A. The first four steps of health planning dealt with identification and analysis. The fifth step develops the plans of action to be followed.

____B. Plans of action indicate "what" and "how much" activity is to be committed to solve the health problem.

____C. It is not within the scope of a plan of action to be concerned with the measurement of results.

____D. Any alternate plans must be considered in a specified time framework for planning purposes.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 25: A, B, D

FRAME 26

Step 5. Alternate Plans of Action - Continued

Program deficiencies are defined as the difference between the optimal level of program activity and the current existing level of program activity.

To discover the magnitude of program deficiencies, an effective method for translating the problem into needs for program action would consist of the following steps:

1. define a quantified optimum program designed to reduce or contain each problem,
2. determine the status of the current program as compared to the anticipated optimum program,
3. measure the deficiencies in the current program relative to the optimal program.

Check the items which are true:

____A. The comparison between a program designed for the optimal level of program activity and the current level of program activity determines any existing program deficiencies.

____B. The optimum program should offer a quantified means to reduce or contain each problem.

____C. The differences between the optimum program and the existing program translated into needs for program action indicates the size of program deficiencies.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 26: A, B, C

FRAME 27

Step 5. Alternate Plans of Action - Continued

Since program deficiencies are obtained by quantitative comparisons, they can effectively be expressed as simple fractions, ratios or percentages to indicate the disparity between what could and/or should be done and what is actually being done.

With the ability to establish program deficiencies, the planner has a valuable tool to assist him in decision-making.

The quantification of program deficiencies permits:

1. Translation of health problems into quantified needs for action.

2. Planning to be focused more precisely on these needs.

3. Choices for action to be made among identified needs on the basis of benefit versus cost.

4. Evaluation of program progress by providing a baseline for measurement.

Check the items which are true:

____A. The developing of comparisons by appraising program deficiencies is a desirable decision-making tool.

____B. The ratio between, or the percent or fraction expressing the disparity between the optimum and the existing plans describes the program deficiency.

____C. Defining program deficiencies permits the manager to focus on quantified activity needs.

____D. The enumeration of program deficiencies is done almost entirely on the basis of cost studies.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 27: A, B, C

FRAME 28

Step 6. Conduct of Cost-Benefit Studies

No program can be decided upon solely on the basis of benefits, costs, or the time element involved. The listing of program deficiencies leads to the necessity of performing cost-benefit studies of the possible alternate program actions.

Cost-benefit analysis, for purposes here, will be defined as the scientific approach to determine (from a series of alternates) which plan or combination of plans will optimize achievement of health objectives consistent with the most prudent use of resources.

The program manager, using the information obtained from defining program deficiencies and the results of the cost-benefit study, must ultimately determine which actions will produce the greatest reduction in deficiencies at the least cost and in the least possible time.

Check the items which are true:

____A. After program deficiencies have been listed, alternate program actions will probably be apparent.

____B. The most desirable program is that which reduces the most program deficiencies in the shortest time independent of cost factors.

____C. Alternate activities must be subjected to evaluation before deciding which will be most effective.

Correct responses to this frame will be found at the top of the following frame.

Correct Response to Frame 28: A, C

FRAME 29

Step 6. Conduct of Cost-Benefit Studies - Continued

If the precise cause and effect relationships are unknown or poorly defined, the program manager will have difficulty in applying the principles of cost-benefit analysis.

The choice between various alternatives calls for the intelligent use of professional judgment. Valid, accurate, and pertinent information, recognizing objective facts as well as external force factors relating to the action must be compiled and considered before this judgment is exercised.

Generally, when a wide array of program deficiencies are detected, there will be a corresponding wide choice of alternative programs for action.

Some of these alternatives may appear superior to others, however, all possible alternative program actions must be considered since resource limitations will rarely permit the "ideal" program to be carried out.

Check the items which are true:

____A. The most efficient method of choice from an array of alternate actions is to find one that works and use it.

____B. The more deficiencies listed for a program, the fewer alternatives of action there are apt to be.

____C. The choice between two plans of nearly equal effectiveness might be decided upon on the basis of which makes best use of available or obtainable resources.

____D. Judgment can best be applied toward an intelligent choice, when available information is accurate and complete.

Correct responses to this frame will be found at the top of the following frame.

Correct Response to Frame 29: C, D

FRAME 30

Step 7. Establishment of Objectives and Plans of Action

The next step in the systematic development of a health plan is to build specific community action program objectives and plans based on the analysis of action plan alternates.

A health objective is a statement denoting a measured amount of progress toward a goal and is given in terms of attaining or maintaining a situation or a condition of people or their health. Health objectives will specify the desired change in status of a health problem to be achieved in a prescribed period of time.

Check the items which are true:

____A. Objectives are inseparably intertwined parts of the processes of building a health plan and are dependent on preceding evaluation and analysis.

____B. Health objectives indicate what kind and how much progress is to be made toward a specific health goal in a prescribed amount of time.

____C. Objectives can be developed separately as an independent entity.

____D. Some objectives might call for maintaining rather than improving a situation if the condition is already at a desirable level. This could also be true if a problem appeared to be getting worse and an immediate objective might be to "contain" the problem at its present level temporarily.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 30: A, B, D

FRAME 31

Step 7. Establishment of Objectives and Plans of Action - Continued

Health objectives may be defined on either a short or a long-range basis.

Time-phasing (programming) of objectives aimed at the total elimination of a health problem is likely to be long-range. Objectives designed to reduce the magnitude of a problem are probably short-range objectives. Objectives over a protracted time period (5 years or longer) could provide a broad base for program development. Supporting short-range plans (possibly 1 year) might be more detailed and allow for unforeseen conditions that could be encountered in the longer period.

Health objectives must be supported by quantified program objectives projected over a similar time period and specified in terms of improving the health problem factors.

Check the items which are true:

____A. An objective to totally eliminate a health problem probably would be a long-range objective.

____B. Short range objectives are likely to be less realistic since there is a better chance of accomplishing them in the period of time prescribed.

____C. The reduction of smallpox cases in a given community by 15% in a three months period, would be a short-range objective.

____D. The somewhat more specific program objective support the broader health objectives over the same period of time

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 31: A, C, D

FRAME 32

Step 7. Establishment of Objectives and Plans of Action - Continued.

Objectives identify what is to be accomplished. Thus the degree of progress toward this specified outcome can be periodically measured and the results fed back to evaluate how well the objective is progressing toward the health goal.

This feedback of information allows program adjustments to be made within the time period of the program objective as well as providing a means for evaluating the effectiveness of the objective at the designated end point. This latter evaluation provides an effective baseline for future planning.

Check the items which are true:

____A. The only time to measure the effectiveness of an objective is at the end of the time period of accomplishment.

____B. Objectives must be quantitatively written to enable periodic measurement of their progress.

____C. Periodical measurement provides feedback for program adjustment while the program is in progress.

____D. Future planning should start with new objectives, free of any pre-conceived ideas based on previous evaluations.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 32: B, C

FRAME 33

Step 8. The Total Integrated Community Plan

Uniform Planning-Programming-Budgeting systems developed on a community-wide basis will allow the community to evaluate all its problem areas on a common base.

A community-wide P-P-B system would enable the community to have a choice of programs (based on cost-benefit) yet retain an integrated community program designed to meet needs through established community goals.

While integrated community planning is not a reality at present, there is promise for the future.

Check the items which are true:

____A. The total integrated community plan would restrict the choice of programs and, therefore, may be less effective.

____B. Integrated community planning is more difficult to manage since there would be no common basis for evaluation.

____C. Uniform planning to meet the problems of a community would probably eliminate areas of duplication in some present planning systems.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 33: C

FRAME 34

Step 9. Evaluation

Evaluation is defined as the process of determining the extent to which predetermined objectives and predetermined levels of operation are attained. It is a tool that management uses to insure that what is planned actually takes place, and that the desired effect is achieved. Evaluation is the appraisal of services or activities in terms of their impact on the problem.

Evaluation is not a function to be used solely at the end of a process but continuously at all stages of program planning and implementation.

The process of evaluation should to a great extent be predetermined and the methods selected will depend to a great extent on what is expected from the evaluation process.

Check the items which are true:

____A. Evaluation compares what is planned to what is taking place.

____B. Evaluation is most effective when applied at the end of a program.

____C. Poorly designed or ambiguously written objectives may not seriously affect the validity of carefully applied evaluation criteria.

____D. The application of evaluation early in a program could detect problem areas that could be rectified before they have any serious effect.

____E. Methods of evaluation are standardized for stability of application and seldom vary.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 34: A, D

FRAME 35

Step 9. Evaluation - Continued

As noted previously, a criterion for setting objectives and plans of action is that they be measurable. These units of measurement are required to determine the status of the program at any given time and represents a feedback mechanism that constantly provides the information necessary for the appraisal and the adjustment of the operation.

An in-depth evaluation may not be necessary or advisable in all phases of all programs but detailed evaluation is desirable if any phase appears not to be contributing to the accomplishment of an objective as expected.

The uniform development and use of an Information System (to be described later in this text) will facilitate evaluation of program progress at any time interval and help pinpoint the causes for any malfunction.

Check the items which are true:

____A. If time permits, it is advisable to have detailed evaluation of all phases of any program.

____B. Evaluation makes use of the requirement that objectives be quantified to measure the extent to which the objectives are being attained.

____C. Without evaluation, the validity of any action plan remains uncertain and expectations of success would be left more or less to chance.

____D. If a program is not contributing to a goal as anticipated, evaluation should be carried out as soon after the completion of the program as is possible.

____E. The Information System assists in the development of a comprehensive evaluation means.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 35: B, C, E

FRAME 36

Step 9. Evaluation - Continued

It must also be determined who will do the evaluating (internal and/or external evaluation) and the frequency of the evaluation process.

If the evaluation is to be a continuing process with current appraisals of effort made available, there should be emphasis placed on developing the "evaluation characteristic" in the line operator. Program operators will have the responsibility of achieving specified objectives and pinpointing accountability for specific and measurable evaluation.

Check the items which are true:

____A. Evaluation may be carried out by someone directly involved in the program and/or someone from outside the program.

____B. If evaluation is to be the responsibility of an operator within the program, the operator must develop awareness of the principles necessary for meaningful evaluation.

____C. The evaluation of one segment of planning might be applied to another segment or even to a portion of another program to permit adjustment of objectives based on past experience.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 36: A, B, C

FRAME 37

IT'S TIME FOR REVIEW

____A. Existing health plans are compared to a minimum program to identify program deficiencies as a tool in developing plans of action.

____B. Program objectives are established based on selected alternates which will provide measured amounts of progress toward the health objective they support.

____C. If the precise cause and effect relationships are unknown or poorly defined, the program manager will have difficulty in applying the principles of cost-benefit analysis.

____D. Several plans of action might be instigated simultaneously in support of program objectives and health objectives.

____E. Plans of action could be left out of program packages without seriously affecting program outcome.

____F. An example of an activity (initiated to accomplish a program objective) might be for a local health department to conduct immunization clinics to combat influenza.

____G. The first step in the health planning process is the establishing of community goals, including a health goal.

Correct responses to this frame will be found at the top of the following frame.

THE P-P-B HEALTH PLANNING PROCESS

Frames 38 through 43

The Program Package Concept

Characteristics of the Plan

Illustration

Correct Responses to Frame 37: B, C, D, F

FRAME 38

The P-P-B Health Planning Process

Using the information made available by the planning processes, the health manager is better equipped to make valid and objective decisions.

P-P-B health planning processes provide the manager with information related to:

1. the nature of the resources he needs and the extent to which they are available,
2. where, when and how to apply his resources,
3. who will apply these resources, and
4. why resources are applied.

Check the items which are true:

____A. Decisions based on incompletely considered and emotional criteria will be greatly reduced by PPBS.

____B. The P-P-B process should assist in making more effective use of subordinates' abilities by delineating responsibilities and measures of accountability.

____C. An inexperienced manager can rely on the systematized P-P-B based plan to fill gaps in knowledge and experience with a minimum loss of time.

____D. Personnel changes will cause a minimum of disruption within the defined guidelines of the planning process.

____E. The program package will be useful in relating an organization's program to programs of other organizations enabling joint planning and implementation.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 38: A, B, C, D, E

FRAME 39

To assure efficiency and effectiveness in efforts to carry out its mission, some health organizations have adopted the concept of Program Packaging.

The Program Packaging concept provides management a framework making it possible to:

a. define the health problem
b. assess the problem in terms of magnitude
c. determine causes and factors related to those causes
d. set objectives
e. plan and implement the program.

A Program Package contains all the essentials necessary to eliminate, improve, or stabilize a given health problem.

Check the items which are true:

____A. Setting objectives and determining a plan to implement the program are outside the framework of Program Packaging.

____B. Some health organizations have adopted the concept of Program Packaging as the means for carrying out its mission in the most efficient and effective manner.

____C. Defining the health problem and determining the size, causes, and factors related to the cause of the health problem are items of concern in the framework of Program Packaging.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 39: B, C

FRAME 40

A program package designed to have the greatest impact possible for the reduction of the health problem (limited only by present scientific knowledge), will normally be aimed at altering the causative factors and reducing the effects of the problem. The best possible or optimum program must include those activities which are known or generally accepted to be effective toward alleviating or containing health problems, as expressed in quantified, measurable terms.

Check the items which are true:

____A. In designing a program, an existing clinic facility would be of no concern in the planning since it is already in being.

____B. The optimum program should include what can be done to reduce the problem without primary regard to resource constraints.

____C. In evaluating "existing efforts," all activities involved, including self-help, private, community, county, state, and federal activities should be considered.

____D. The program planning should normally be directed to changing the factors which are related to the causes of the health problems.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 40: B, C, D

FRAME 41

The program plan combines the features of a road map, a time-table, and cast of characters. Basically, the program plan deals with changing the factors that cause health problems.

The program plan should define:

a. what is to be done and how to do it
b. who will do it (based on who can do it best)
c. and when it will be done.

When a program plan has been developed, actions to be taken may include direct health care actions such as immunizations, and multipurpose actions such as water pollution control or road building for easier access to medical facilities.

Actions defined in a program may be performed by individuals, volunteer groups, professional societies or local, state or federal agencies.

Check the items which are true:

____A. The program plan is concerned with changing aspects of a health problem.

____B. A program plan is primarily a method of diagnosing what the health problem is.

____C. A program plan gives guidance to the solution of a previously determined health problem.

____D. Who will act, what activities will be carried out, when activities will be accomplished, and how much is to be accomplished are all defined in the program plan.

____E. To immunize a given percent of individuals against influenza would be a direct health action.

____F. Draining or spraying likely mosquito breeding ponds would not be an example of multipurpose action.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 41: A, C, D, E, F

FRAME 42

The procedures used in developing a P-P-B based health plan provides the health profession with:

1. a scientific approach to determining health problems;
2. a better understanding of health problems and their causes;
3. a method of establishing priorities and actions based on cost-benefit analysis;
4. an understanding of the role of each member of the health team in the plan;
5. a coordinated approach to the solving of health problems;
6. a guide for determining research needs;
7. a system for evaluation and analysis; and
8. a framework for realistic budgeting.

Check the items which are true:

____A. A deeper understanding of the processes necessary to cope with a health problem leads to a clearer view of each individual role in that process.

____B. A comprehensive plan is in sufficient detail to permit the division of activities and establish more complete coordination of effort.

____C. Evaluation and analysis is made possible by the inclusion of quantitative units within the plan.

____D. Measurable benefits can be compared to cost thus enabling planners to choose alternate actions on a priority basis.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 42: A, B, C, D

FRAME 43

The planning process that results in program packaging integrates problem determination, resources determination, implementation and evaluation.

The Program Package is partially illustrated below. The total form would include items omitted here for the sake of brevity such as the description and organization of needed resources, assignments of responsibility, establishment of operational parameters, and assignment of accountability for operational activities.

Illustration: The P-P-B Health Planning Process for a State

1. Causes of Health Problems:

   Pneumonia (excluding pneumonia of the newborn) accounts for over half of the deaths due to respiratory diseases. Influenza accounts for one-fifth and emphysema another one-tenth of the deaths in this category. Other respiratory infections are responsible for 1175 days of restricted activity per 100,000 population annually, etc.

2. Factors Related to the Causes:

   Some important factors related to the causes of respiratory diseases are common to all populations where socio-economic levels prohibit an adequate standard of living to provide a suitable home environment. There is a direct relation to the incidence of these diseases and death and disability from factors such as: overcrowded home conditions; inadequate housing resulting in exposure to climatic extremes; poor nutrition; inadequate knowledge of modern health practices; inadequate medical care and low immunization levels. In at least two metropolitan areas of the State, air pollution has been shown to be a factor in contributing to, if not actually causing some respiratory problems. Weed pollen is also a factor in this health problem, especially with regard to the restricted activity days, etc.

3. Plans of Action: Selected from alternate plans)

   Fiscal Year 1970

   a. Conduct monthly immunization clinics at each local health department.
   b. Conduct TV and radio education program through a series of one spot announcements daily on each TV and radio station in the State.

FRAME 43 (continued)

c. All open burning of refuse will be eliminated in two metropolitan areas by the State Air Pollution Control Authority.

d. Weed control programs will be extended to cover 60% of the urban areas in the State by the State Department of Agriculture.

e. Self-help - long term - low interest mortgage home will replace 3% of the substandard homes in the State in a program conducted by the State housing authority.

f. Etc.

4. Program Objectives:

Fiscal Year 1970

a. Immunize 80% of high risk individuals against influenza.

b. Provide health education in modern health practice to 50% of family group.

c. Provide monthly Public Health Nurse visits to 80% of economically deprived homes.

d. Reduce air pollution in two metropolitan areas by 10%.

e. Reduce average pollen count by 15%.

f. Etc.

5. Health Objectives: (Based on program objectives)

Fiscal Year 1970

a. Decrease mortality to 49
b. Decrease days of hospitalization to 25
c. Decrease outpatient visits to 339
d. Decrease days of restricted activity to 1143
e. Etc.

Fiscal Year 1971

a. Decrease mortality to 45
b. Decrease days of hospitalization to 23
c. Decrease outpatient visits to 300
d. Decrease days of restricted activity to 1100
e. Etc.

Fiscal Year 1972 Etc.

FRAME 43 (continued)

With reference to the preceding program package illustration for a State, check the items which are true:

____A. The health problem being considered has to do with the high mortality, morbidity, and restricted activity from diseases of the respiratory system.

____B. There is a statistical breakdown of the major respiratory diseases under the heading "Causes of Health Problem."

____C. Emphysema is responsible for the greatest number of deaths caused by respiratory diseases.

____D. The community socio-economic level is considered a factor related to several causes of the Health Problem.

____E. A higher incidence of respiratory diseases appears to relate directly to a lower standard of living.

____F. The "Plans of Action" listed for Fiscal Year 1970 are selected actions from alternate plans considered.

____G. Possible alternative actions must be considered before choosing "Plans of Action" in keeping with cost-benefit analyses.

____H. Program Objectives are quantified Programs to be carried out during a specified period in support of the Health Objectives.

____I. The Program Objective to reduce the pollen count would likely support the Health Objective to increase days of restricted activity.

____J. Health Objectives have been projected beyond the time period designated for Plans of Action and Program Objectives.

Correct responses to this frame will be found at the top of the following frame.

THE INFORMATION SYSTEM

Frames 44 through 49

Need for Information

Assumptions for the Suggested System

Criteria for the System

Performance Budgeting and Accounting

Correct Responses to Frame 43: A,B,D,E,F,G,H,J

FRAME 44

The Information System

It has been recognized that an Information System is fundamental to program planning. The frames to follow are concerned with the broad concept of an Information System approach to health planning.

In the past there has been no way to truly correlate certain health activities with their resultant impact on health problems. Any comparisons between the activity and the result have previously been made without any real objective quantitative measures of the health problem.

Similar to the difficulty in measuring the dimensions of a house without some kind of a ruler, it is necessary to use some type of "yardstick" in measuring health problems and the pertinent health activities.

Check the items which are true:

____A. Opinion rather than quantitative comparison has been the basis of correlating health problems and health activities in the past.

____B. An Information System will aid in comparing efforts and achievement by offering quantified standards of measurement.

____C. An Information System should also allow more meaningful cost-benefit analyses as the result of standardizing measuring ability.

____D. The ability to measure health problems more effectively should enable the health agencies to determine areas of needed health services research.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 44: A,B,C,D

FRAME 45

An Information System includes a compilation of resources used in health program planning and reporting.

As the program plan develops, an evaluation must be made of all the actions required to implement the program plan. Each action is a quantity of input affecting the progress of the program and must be evaluated as to size and nature to determine what additional action inputs will be necessary.

The estimating of additional resources that may be needed must be done concurrently with the construction of the program plan, Resource requirements should include not only items necessary for the program activities, but project ahead to estimated future needs, i.e. specialized skills that require lead time for training.

Check the items which are true:

____A. Resources to the program plan can be termed as "inputs" of the program.

____B. Assessment of required inputs aids in the determination of what other resources are needed.

____C. Resource needs should attempt to stay within the time span of the program.

____D. Grants to communities or institutions to accomplish specialized skill training could be encouraged as a result of estimating resource needs.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 45: A, B, D

FRAME 46

In order for health agencies to be most effective, it has been determined that an Information System should be instituted that includes health program planning and reporting.

Each level of organization will be involved in planning and reporting, and this information is to be continuously consolidated at the next higher level in the organization.

Check the items which are true:

____A. An Information System includes a reporting system permitting each level in the organization to pass on information to the next higher level.

____B. It is desirable that each division of the organization act relatively independent of other divisions.

____C. Consolidation of information as it passes up through the organization's structure allows for analysis necessary to direct effective activities and to provide for unity of action.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 46: A, C

FRAME 47

As a starting point in constructing an Information System, some basic assumptions have been made.

Briefly these assumptions are:

1. It is possible to develop a quantitative index for all health problems on a common numerical base.

2. It is possible to relate all health activities to one or more health and environmental problems by means of a numerical index.

3. An Information System can be established which will provide the basis for cost-benefit analysis as an aid to professional judgment in the decision-making process.

4. A well designed Information System will accelerate the improvement of the health status of the nation.

Check the items which are true:

____A. Health Problems can be compared on a common quantitative index.

____B. Environmental problems are acknowledged to exist but must be studied separately since they do not relate to health activities.

____C. The evaluation of benefits obtained compared to costs of high activities is a key to effectiveness of health programs.

____D. Professional judgment will, for the most part, be replaced by analysis based on an Information System.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 47: A, C

FRAME 48

Based on the foregoing assumptions, eight criteria for the design of an Information System have been developed as follows:

1. It must provide for quantitative comparison of health or disease problems on a common numerical base.

2. It must relate ALL health activities to health problems and environmental problems.

3. It must utilize existing data systems to the best possible advantage but need not be bound by them.

4. It must provide the framework for cost-benefit analysis and selection of alternatives.

5. It must relate current and projected resources to specific health and environmental problems.

6. It must adapt to performance budgeting and accounting.

7. It must be flexible to permit use at all management levels.

8. It must satisfy existing administrative budgeting requirements.

Check the items which are true:

____A. Information Systems are bound by existing data systems but seldom utilized.

____B. Projected resources as well as current resources are recognized and related to health and environmental problems.

____C. An Information System must be usable with cost-benefit analyses and also with performance budgeting and accounting.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 48: B, C

FRAME 49

The continued need for evaluation in the development of the program package can be accomplished in a meaningful and uniform way by using the principle of performance accounting.

Performance accounting allows an evaluation to be made comparing dollars spent to results obtained. Performance accounting relates the total amount spent on health problem (for normal development, repair, containment, and basic research) to the change in magnitude of the health problem.

Performance accounting related funds already spent to benefits accomplished, whereas performance budgeting involves estimating the effect of funds planned for future activities. Careful performance accounting permits realistic performance budgeting and should assist in deciding future budget needs.

Check the items which are true:

____A. Regardless of any standard of evaluation, most managers would evaluate utilizing performance accounting criteria.

____B. Standard methods of evaluation will yield more nearly standard assessments of results.

____C. Measuring the overall achievement in reducing the health problem against all resources spent on the problem is the basis of performance accounting.

____D. Performance accounting is a reliable evaluation means because it relies on opinions and judgment and less on factual information.

____E. Performance accounting can assist in the evaluation of single activities but would be of little help in evaluating the total program.

____F. Performance budgeting can be done more realistically when it is based on the factual results of performance accounting.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 49: B, C, F

FRAME 50

IT'S TIME FOR REVIEW

____A. Priorities based on relative effectiveness is possible as a result of performance accounting.

____B. The matrix form of arranging data for evaluation is the only possible way the essentials of an Information System may be usefully grouped.

____C. Construction of a telephone service line into a remote health area would be an example of a multi-purpose action of a program plan.

____D. Care must be taken to assure the actions described in the program plan are limited to activities normally performed by health agencies.

____E. Program Packaging is the process of establishing objectives and plans of action.

____F. Since many programs are long range, the need for resources to achieve the desired end are also long-range needs.

____G. An Information System does not provide assistance to the program manager in the decision-making process.

____H. A stock of snow tread tires enabling vehicles to reach an isolated area that has a health problem is an item of "supply" and, therefore, not a consideration in Program Packaging.

Correct responses to this frame will be found at the top of the following frame.

INTERNATIONAL CLASSIFICATION OF DISEASES, ADAPTED

Frames 51 through 59

ICDA Defined

Normal Development, Repair, Containment

ICDA Grouping

Advantages of ICDA Grouping

Correct Responses to Frame 50: A, E, F

FRAME 51

The International Classification of Diseases, Adapted

The International Classification of Diseases,Adapted, (ICDA), divides the total health problem into major classes of diseases or conditions of similar etiology and related characteristics.

Each class is considered a health problem and is sufficiently defined as to characteristics and magnitude as to permit the development of a program package designed to combat this problem area.

Check the items which are true:

____A. The International Classification of Diseases, Adapted, is designed to classify each disease separately rather than group by related characteristics.

____B. Grouping of disease in ICDA is done by major classes of diseases or similar etiology.

____C. A program package may be designed for each class or division in the ICDA.

____D. Diseases of the respiratory system and diseases of the digestive system would likely be grouped in the same class in the ICDA.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 51: B, C

FRAME 52

The International Classification of Diseases, Adapted, enables health service management to establish a frame work for developing Program Packages and establishing program priorities.

Each class under the ICDA can be assessed in terms of impact on the population through death, illness and disability, and in terms of costs for normal development, repair and containment.

The International Classification of Diseases, Adapted, is a method of classifying health problems to make certain that all significant problems are considered without overlapping and duplication of effort.

Check the items which are true:

____A. By working within the classes of the ICDA, it is possible to develop a framework for specific Program Packages to combat the diseases in each class.

____B. Evaluation of each class in terms of magnitude and degree of impact on a population enables the assignment of a priority scale to program packages.

____C. Assessment in terms of impact on the population includes consideration of death, illness and disability.

____D. It is advantageous to segment the total health problem so that each segment may be systematically attacked.

____E. The segmenting of the total health problems would logically give greatest consideration to what is currently "most important."

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 52: A, B, C, D

FRAME 53

In the previous frame the terms normal development, repair and containment were used. These terms are defined as follows:

Normal development means not only efforts to protect the individual's health or to prevent his illness, but also efforts to insure that he develops normally.

Repair involves the efforts expended in the cure of illness and the return of the individual to a normal state.

Containment is that medical care directed to the health problems of people who can't be cured completely of chronic disease, mental illness, or conditions of old age that will "contain" their illness or disability at the most minimal level.

Check the items which are true:

____A. Preventive measures designed to assure normal healthy development of individuals would best be placed in the definition of normal development.

____B. A school athletic program would not be included in any of the above defined terms.

____C. The term repair refers to the ills of sick individuals and returning them to a normal status.

____D. The treatment of chronic difficulties and conditions for which there is no complete cure comes within the definition of containment.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 53: A, C, D

FRAME 54

Health problems are too numerous and varied to be considered singly and separately. Similarly individuals that have health problems are too numerous and varied to be considered singly and separately.

With the objective of reducing or containing health problems, health programs must have some means of grouping the health problems of individuals. The International Classification of Disease, Adapted, is a way of defining and measuring health problems on a uniform and comparable basis necessary to accomplish this grouping.

Check the items which are true:

____A. Health problems and individuals vary to a great degree and, therefore, must be considered in small groups.

____B. It would be impossible for a health agency to consider each disease or physical condition affecting an individual as a separate health problem, requiring separate health actions.

____C. An objective of every health program is to reduce or contain the health problem.

____D. The International Classification of Diseases, Adapted, is a method of grouping health problems.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 54: B, C, D

FRAME 55

The development of program packages that are precisely designed to combat specific health problems as defined by the classes of the ICDA system requires an intense and thorough investigation of each health problem.

The investigation of health problems must include causes and related factors of the problem as well as characteristics of the person affected - their ages, sexes, locations and socio-economic status.

As much information as possible about a health problem is needed to develop an effective program package.

Check the items which are true:

____A. A program package can be adequately developed if only the class of the health problem is known.

____B. Classes of diseases or conditions listed in the ICDA are used to define health problems.

____C. In the investigation of a health problem, the only real concern is in finding the cause of the problem.

____D. Characteristics of the persons affected as well as factors related to the condition are important elements in the investigation of the health problem.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 55: B, D

FRAME 56

Seventeen Major Health Problems and the General Health category of the ICDA, are presented below. Further consideration will be given these categories in later frames.

THE SEVENTEEN HEALTH PROBLEMS AND GENERAL HEALTH CATEGORY WITH RELATED NON-HEALTH ENVIRONMENTAL PROBLEMS

Major Health Problem Class	General Description	Inclusive ICDA CODES
I	Infective and Parasitic Diseases	002 - 138
II	Neoplasms	140 - 239
III	Allergic, Endocrine System, Metabolic and Nutritional Diseases	240 - 289
IV	Diseases of Blood and Blood-forming Organ	290 - 299
V	Mental, Psychoneurotic and Personality Disorders	300 - 329
VI	Diseases of the Nervous system and Sense Organs	330 - 398
VII	Diseases of the Circulatory System	400 - 468
VIII	Diseases of the Respiratory System	470 - 527
IX	Diseases of the Digestive System	530 - 587
X	Diseases of the Genitourinary System	590 - 637
XI	Deliveries and Complications of Pregnancy, Childbirth, and Puerperium	640 - 689
XII	Diseases of the Skin and Cellular Tissue	690 - 716
XIII	Diseases of the Bones and Organs of Movement	720 - 749
XIV	Congenital Malformations	750 - 759
XV	Certain Diseases of Early Infancy	760 - 776
XVI	Symptoms, Senility and Ill-defined Conditions	780 - 795
XVII	Injuries and Adverse Effects of Chemical and Other External Causes	800 - 999
XVIII	General Health	N. A.

Check the items which are true:

____A. Mental, Psychoneurotic and Personality Disorders have been grouped together in one major health problem class.

____B. An eczema skin condition would likely be classified as a health problem class XII.

____C. The column headed "Inclusive ICDA Codes" indicates potential for further segmentation within the major problem classes would be possible.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 56: A, B, C

FRAME 57

The International Classification of Diseases, Adapted, has many advantages in defining health problems.

Some of the important advantages are:

1. It is comprehensive - all diseases and conditions are included.

2. Diseases are grouped according to similar etiology or cause, thus diseases which are vulnerable to the same or similar methods of attack are considered under the same problem.

3. The current magnitude and changes in magnitude of the problem are for the most part measurable from available statistics because health records are kept, or are easily rendered consistent with the ICDA classification.

4. Performance budgeting and accounting are facilitated since expenditures for any disease are more readily assignable to a health problem.

5. Cost-benefit analysis can be made not only within health problems but between health problems to assist in determining relative changes in program emphasis.

Check the items which are true:

____A. By grouping diseases as to etiology, similar health activities can be expected to be effective against them.

____B. Changes in the magnitude of a health problem are usually discernible because records and statistics are normally available.

____C. ICDA will aid in all phases of program planning with the possible exception of cost-benefit analysis.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 57: A, B

FRAME 58

In assessing the relative importance of two diseases, the means of measurement must be in the same units or directly convertible to some common basis. Mortality and Morbidity, for example, might be transformed to a common unit such as "useful life lost" or "loss in productive time."

These measurements must reflect the relationship between the problem and the objective so that it will be possible to measure the amount of progress toward the objective.

If no problem currently exists, the potential magnitude of a projected problem can be estimated using the most pertinent data available.

Check the items which are true:

____A. If it is possible to reduce two unlike units of measurement to a common basis, a valid comparison may be made.

____B. Future health problem possibilities can be assessed as to priority using the same criteria as with current health problems.

____C. The system of attacking health problems on a priority basis alleviates the need for using professional judgment.

____D. The method used for comparing or measuring health problems should permit calculation of the amount of progress toward the health objective.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 58: A, B, D

FRAME 59

In determining which problem areas can be attacked with the greatest measurable progress toward the overall goal, health planners must consider:

1. the relative magnitude of the health problem,
2. the relative amenability of the health problems to modern health improvement practices,
3. the relative influence of the health problems to the community's well being, and
4. the costs of improving the health problems.

Applications of the above planning considerations will assist in making decisions as to priority choices and the application of resources.

Check the items which are true:

____A. The degree to which health problems are responsive to modern health improvement practices is a consideration in the choice of problem areas to attack.

____B. The extent to which a health problem affects community ability to perform may be directly related to the magnitude of the health problem.

____C. The application of resources in attacking problem areas should be done without regard to costs that may be involved.

Correct responses to this frame will be found at the top of the following frame.

HEALTH PROBLEM INDEX

Frames 60 through 66

Assessing the Seriousness and Priorities of Diseases

A Health Problem Index

Advantages and Uses of an Index

Correct Responses to Frame 59: A, B

FRAME 60

A Health Problem Index

A health problem index has been developed in an attempt to quantify the relative impact of disease entities. It should be noticed that in dealing with health problems and in attempting to determine their relative magnitudes it is not always possible to resolve all factors into neatly measurable quantitative units.

Factors such as impact on morale or sentimental appeal may someday be calculable as research continues in health related social science, but at this time they do not fit the normal concepts of measurement. It is acknowledged that such factors do have a very real affect on health problems and may even outweigh some of the measurable factors.

The presence of less measurable factors makes the use of the measurable factors even more important and the final decision will usually be a carefully considered combination of measurable and immeasurable factors.

Check the items which are true:

____A. As a chain's strength is dependent on its weakest link, a health program cannot be considered valid if some of the factors considered are immeasurable.

____B. If factors defy measurement, they are probably of little importance anyway.

____C. A health problem in a community could affect the morale of the community to the extent that productivity could be materially reduced.

____D. Measurable factors, even though not all-inclusive, makes the comparison of various health programs more meaningful and permits more valid planning decisions.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 60: C, D

FRAME 61

Greater quantification of factors relating to health problems will lead to greater accuracy in the decision-making process.

A Health Problem Index developed in the Public Health Service is one example of how several measurable factors may be combined to yield a wider quantitative basis for considering health problems.

A Health Problem Index is not the complete answer but it does represent a practical attempt to quantify health problems.

The formula for the index will be presented on the following frame.

Check the items which are true:

____A. The fewer immeasurable factors that must be considered in health planning the greater the accuracy in decision making.

____B. A Health Problem Index enables a planner to resolve all previously immeasurable factors.

____C. The index combines known measurable factors into a formula for application to a larger segment of the health problem.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses for Frame 61: A, C

FRAME 62

Health Problem Index

$$\text{Index Q} = \text{MDP} + \frac{A}{N}(274) + \frac{B}{N}(91) + \frac{C}{N}(274)$$

Where: M = Health Problem Ratio $\frac{\text{(Target Group Rate)}}{\text{(Reference Rate)}}$

D = Crude Target Group Mortality Rate per 100,000

P = Years of Life Lost Due to Death

A = Number of Inpatient Days

B = Number of Outpatient Visits

C = Days of Restricted Activity

N = Target Group Population

274 = Conversion Constant $\frac{100,000}{365}$

91 = Conversion Constant $\frac{100,000}{365} \times \frac{1}{3}$

Reference will be made to the above index in later frames.

Check the items which are true:

____A. MDP in the formula means we multiply numerical factors of each term together and include years of life lost due to death.

____B. $\frac{B}{N}$ means we divide the number of outpatient visits by the number N represents.

____C. $\frac{A}{N}$ (274) means we divide the number of inpatient days by the value of N and finally divide this result by the conversion constant 274.

____D. If number values are substituted for all the letters to the right of the equal sign (=), then there will be a numerical value derived for the Factor Q.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 62: A,B,D

FRAME 63

A Health Problem Index combines known quantitative factors in a formula to arrive at an index, "Q" by which various health problems may be compared.

The "target group" is the population group affected by the health problem.

The "reference group" represents the comparison group which might be the U.S. population or some other large group used as a reference to which the target group may be compared.

The index can be applied to health problems on a national basis or any reasonable segment of the nation.

Data for the calculation of "Q" are not generally available in a form directly applicable to the formula.

Check the items which are true:

____A. The target group would normally be a group affected by a health problem to a greater degree than the reference group.

____B. The reference group might be the national population or some other significant group as a political or geographical subdivision used as a comparison to the target group.

____C. Information needed for using the formula is normally available and readily applicable to its use.

____D. With respect to Table 1, diseases of the digestive system resulted in the lowest number of restricted activity days.

Correct responses to this frame will be found at the top of the following frame.

TABLE 1

MORTALITY RATES, NUMBER OF HOSPITAL DAYS, RESTRICTED-ACTIVITY DAYS, AND PHYSICIANS VISITS, BY SELECTED DISEASES IN THE U.S. 1963 - 1964
(Rates per 100,000 population)

International Classification of Diseases	Mortality rate by Cause	No. of Hospital Days (in thousands)	No. of physician visits (in thousands)	No. restricted-activity days (in thousands)
ALL CAUSES	939.7	207,977	844,000	1,607,304
Infective and parasitic diseases	9.7	4,174	73,428	201,263
Neoplasms	151.3	19,827	20,692	19,080
Diseases of the nervous system	111.3	13,100	76,804	34,545
Diseases of the circulatory system	365.8	34,613	119,358	24,392
Diseases of the respiratory system	49.1	17,338	231,256	764,128
Diseases of the digestive system	37.1	31,432	44,732	73,840
Diseases of the genitourinary system	16.4	17,634	23,632	43,668
Complications of pregnancy, etc.	0.7	17,886	24,476	52,229
Diseases of skin and cellular tissue	1.2	2,128	40,512	25,118
Diseases of bond and organs of movement	1.1	10,791	25,320	28,394
Accidents, poisoning, etc.	70.2	22,558	60,768	300,820
All other	125.8	16,496	103,022	39,827

FRAME 63 (continued)

Correct Responses to Frame 63: A, B,

FRAME 64

The application of the index for establishing relative disease rankings yields a "Q" index priority scale comparing health problems nationally. Table 2 on the following page is this type of priority scale comparing ICDA classification of diseases.

Notice that in this use the target group and the reference group are the same and factors within the formula consisting of a ratio of the target group to the reference group would reduce to $\frac{1}{1}$ or simply 1.

The higher the established "Q" value is, the relatively greater impact of the health problem experienced.

Check the items which are true:

____A. A Health Problem Index may compare a regional health problem to the same problem nationally.

____B. A Health Problem Index may arrange national health problems in a scale of relative priority.

____C. ICDA classification of diseases can be rated as to their national impact by comparing the "Q" value of each.

____D. By reference to Table 2 it is apparent that "Diseases of Respiratory System" has the greatest impact on the nations health of all the ICDA classified diseases.

Correct responses to this frame will be found at the top of the following frame.

FRAME 64 (continued)

TABLE 2

A HEALTH PROBLEM INDEX OF THE UNITED STATES FOR

SELECTION CLASSIFICATION OF DISEASES

1963 - 1964

ICDA Classification		M	X D X	P	A + N (274)	B + N (91.3)	C + N (274)	= Q Value
	ALL CAUSES	1	939.7	16.6	306.71	414.74	2,404.62	18,725
I	Infective and Parasitic Diseases	1	9.7	23.9	6.15	36.08	301.10	575
II	Neoplasms	1	151.3	15.2	29.12	10.12	28.02	2,367
VI	Diseases of Nervous System	1	111.3	11.1	19.32	37.74	51.68	1,344
VII	Diseases of Circulatory System	1	365.8	11.7	50.83	58.40	35.82	4,425
VIII	Diseases of Respiratory System	1	49.1	18.6	25.57	113.64	1,143.19	2,196
IX	Diseases of Digestive System	1	37.1	17.9	46.35	21.98	110.47	843
X	Diseases of Genito-urinary System	1	16.4	14.6	26.01	11.61	65.33	342
XI	Complications of Pregnancy, etc.	1	0.7	43.4	26.38	12.03	78.14	147
XII	Diseases of Skin and Cellular Tissue	1	1.2	17.9	3.14	19.91	37.58	82
XIII	Diseases of Bone and Organs of Movement	1	1.1	12.8	15.91	12.44	42.48	85
XVII	Accidents, Poisonings, Etc.	1	70.2	32.3	33.27	29.86	450.05	2,781
	All other	1	125.8	---	24.33	50.62	59.58	---

Correct Responses to Frame 64: A,B,C

FRAME 65

The attempt to quantify all factors of health problems can be a difficult situation defying solution in some item areas.

Some non-health environmental problems such as air pollution can be partially evaluated in terms of health but beyond this they extend into factors involving loss of property, vegetation, and livestock.

Control of some of these overlapping factors may contribute to reducing a health problem but the decrease in economic losses should also be considered in any accurate cost-benefit analysis. Many non-health aspects of the environment are materially affected by traditional health activities.

Check the items which are true:

____A. In a cost-benefit analysis the non-health environmental problems might be considered in terms of monetary loss since they involve damage to material things.

____B. Ridding a community of a rat infestation could have health implications but also might be evaluated in terms of lessening loss of property.

____C. Frequent flooding of a community creating costly loss of crops and livestock could also seriously affect health and is, therefore, partially a health problem factor.

____D. The Alaskan earthquake of March 27, 1964, a mosquito breeding swamp, water pollution problems, and roadside junkyards are all examples of factors having both health and non-health implications.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 65: A, B, C, D

FRAME 66

In summary, some advantages of a Health Problem Index are as follows:

1. It provides a common base for comparison among and within health problems.

2. Morbidity and mortality may be translated into a common base.

3. It indicates how susceptible health problems or diseases may be to modern health improvement practices.

4. Diseases which primarily produce morbidity may be compared with those which produce mortality and morbidity.

5. It provides a means of measuring program accomplishment.

One deficiency of the index exists in that days of restricted activity are difficult to determine since there is no means currently to obtain data on time lost at home.

Check the items which are true:

____A. An Index is usable in translating health problems to comparable numerical index values.

____B. The sensitivity of diseases to health improvement actions may be shown by changes in the "Q" index over a period of time.

____C. If there is relatively little or no change in the "Q" index of a particular disease, it would be an indication that the objective of eradicating the disease was being accomplished.

____D. The advantages would seem to outweigh the deficiencies in evaluating the Health Problem Index.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 66: A, B, D

FRAME 67

IT'S REVIEW TIME

Check the items which are true:

____A. The total health problem of the nation is best solved by dividing the problem into segments, each of which is most susceptible to a particular method of control.

____B. The International Classification of Diseases, Adapted (ICDA), divides diseases into groups by related characteristics.

____C. ICDA provides a basis for establishing program priorities and a framework for developing program packages.

____D. In establishing the Health Problem Index value, the "reference group" represents the population affected by the health problem.

____E. Optimum programs are created as guidelines to evaluate existing programs to identify deficiencies that should be overcome.

____F. Higher "Q" values indicate a relatively lower level of disease impact.

____G. Deficiencies detected by measuring existing efforts against the optimum program are the basis for formulating program actions.

____H. Actions considered in a program plan may include direct health care and also actions such as construction, road building, or improving communications.

____I. In the example presented in the text concerning the use of the "Q" value, M, the ratio of the "target" group to the "reference" group equals unity or one.

Correct responses to this frame will be found at the top of the following frame.

HEALTH SERVICES FUNCTIONAL AND ACTIVITY AREAS

Frames 68 through 80

Classification System for Health Activities

Examples

Output Measures

Activities Classification and ICDA

Benefits

Matrix Presentation

Use of Matrix System

Correct Responses to Frame 67: A,B,C,E,G,H,I

FRAME 68

HEALTH SERVICES FUNCTIONAL AND ACTIVITY AREAS

Systematic planning involves relating health activities to health and environmental problems. This necessitates the classifying and defining of activities in a logical and systematic way.

The classification and codification system required is an enormous job and thus far efforts are still in the building stage. As experience dictates, modifications are made.

To aid in the direct application of health activities to health problems, a classification system is being developed that allows the grouping of health services and health activities into definable categories.

Check the items which are true:

____A. Health services involve activities so numerous and varied as to require a systematic means of classification.

____B. Health services can be classified in a way that will relate activities to health problems.

____C. The process of classification and codification has been completed as the result of massive effort.

____D. A result of the classification system being developed will be the relating of health activities to health problems.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 68: A, B, D

FRAME 69

In developing a Classification System for Health Activities, four categories or "Health Service Areas" have been designed.

1. Normal Development: Efforts to insure normal development by protecting the individual's health and prevent his illness. This is a large area extending from prenatal care to care for the aged, and including such diverse activities as physical fitness, air pollution control, mental health, accident prevention, multiphasic screening, and social-cultural development.

2. Repair: Efforts to cure illnesses whether in hospitals, nursing homes, clinics or the patient's home and return the individual to a normal state and function.

3. Containment: The long-term maintenance care directed to people who cannot be completely cured. This includes efforts to "contain" at a minimal level, conditions associated with old age, mental illness, and chronic diseases.

4. Basic Research: Studies into physiology and bodily functions and responses not aimed at any particular disease or condition. Examples would be studies in cell structure and in blood chemistry.

Check the items which are true:

____A. The efforts to care for a senile person would likely fall in the Health Service Area of "Basic Research."

____B. A physical fitness program in an Indian elementary school would be an example of "Normal Development."

____C. An investigation of bone structure development is a likely form of "Basic Research."

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 69: B, C

FRAME 70

The Health Service Areas defined in the previous frame are broad areas that are further subdivided into four General Activity Areas as follows:

1. Direct Operations are all the activities under each of the four Health Service Areas that are involved in the direct provisions of health services.

2. Research consists of the efforts toward exploring and developing new methods, facilities, and equipment for carrying out the activities under the four Health Service Areas.

3. Facilities include activities directed toward providing facilities and equipment needed for the conduct of direct operations, research, and training under the four Health Service Areas.

4. Training covers activities designed to develop manpower with the specialized skills and knowledge necessary to accomplish the direct operations and research within each of the four Health Service Areas.

Check the items which are true:

____A. Health Service Areas are broader areas than the General Activity Areas.

____B. The building of a laboratory would be classed in the area of a Facility, while the work conducted in the completed laboratory could be termed Research and/or Training.

____C. Learning a new technique or method of providing a health service would be Training. Use of this skill after it has been mastered would be in the area of Direct Operations.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 70: A,B,C

FRAME 71

Health Service Areas are divided into General Activity Areas which are further subdivided into Program Categories under which Program Elements are listed as specific activities.

HEALTH SERVICE AREAS

General Activity Areas

Program Categories

Program Elements

Each Program Element is coded for use with an automatic data processing system.

Check the items which are true:

____A. Normal Development, Repair, Containment, and Basic Research are Health Service Areas.

____B. In the "Classification of Health Activities," activities are divided from broad areas to narrower more specific sub-areas.

____C. General Activity Areas are listed as divisions under Program Categories.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 71: A, B

FRAME 72

Example of Classification of Health Activities

Code Number	Activity	Related Output Codes
100000	A. NORMAL DEVELOPMENT (A Health Service Area)	
110000	1. Direct Operations (A General Activity Area)	
110100	a. Public Education in Health (A Program Category)	
110101	(1) Mass Communication (Program Element)	001-003; 107
110102	(2) Group Communications (Program Element)	004-010; 107
110103	(3) Individual Communications (Program Element)	012-014; 107
110104	(4) Public Information Services (Program Element)	125
110105	(5) Technical Information Services (Program Element)	125-126
110200	b. Physical Environment (A Program Category)	
110201	(1) Air Pollution Control (Program Element)	015-023; 107
110202	(2) Water Pollution Control (Program Element)	015-023; 107
110203	(3) Disease Water Control (Program Element)	024-025; 107
110204	(4) Noise Control (Program Element)	016-017-018-023; 107

Check the items which are true:

____A. Each Program Element is assigned a Related Output Code.

____B. The Health Service Area, General Activity Area, and Program Categories have Related Output Codes.

____C. Each entry has a Code Number (left hand column) for computer use.

____D. Water Pollution Control is a Program Element under the Category of Physical Environment.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 72: A, C, D

FRAME 73

Effort expended within each Program Element in the Classification System will have a resultant effect which may be quantified. These quantifiable end products are termed output measures.

Output measures express what has been done in a program and consist of such things as: number of persons treated, number of samples collected and analyzed, or number of pollution sources eliminated.

Output measures are also coded for automatic data processing use.

The following is a list of examples of output measures and applicable codes:

Code Number	Output Measures
041	Number of community sources inspected
042	Number of supplies fluoridated
043	Number of establishments licensed
044	Number of products licensed
045	Number of control tests performed
046	Number of standard preparations distributed
047	Number of NDA supplements issued
049	Number of insulin samples tested

-etc.-

The Health Activities together with Related Output Measures are fully presented in "Classifications of Health Activities and Output Measures (Tentative)," January 1967.

Check the items which are true:

____A. Output Measures are expressed in the "number" of activities accomplished.

____B. The code numbers assigned the Output Measures are for use with data processing systems.

____C. Output measures express what remains to be done in a program.

____D. The number of Program Elements completed under any given Program Category would, hopefully, have cumulative and calculable effect on the Health Problem.

____E. Output measures are the quantified effect of efforts within each Program Element.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 73: A, B, D, E

FRAME 74

An important area covered in the "Classification of Health Activities and Output Measures (Tentative)," is the section dealing with the International Classification of Diseases, Adapted, and the appropriate assigned code numbers.

Following is a short sample of this section.

Health Problem Classification

Major ICDA Class		Inclusive ICDA Codes
001	Infective and Parasitic Diseases	002-138
	Tuberculosis	002-019
	Syphilis	020-029
	Gonococcal Inf. and other VD	030-039
	Infectious Diseases Commonly Arising in Intestinal Tract	040-049
	. . .	
002	Neoplasms	
	Malignant Neoplasm of Buccal Cavity and Pharnyx	140-148
	Malignant Neoplasm of Digestive Organs and Peritoneum	150-159
	. . .	
	-etc.-	

Check the items which are true:

____A. ICDA classifications group diseases or conditions by similar characteristics, causes and origins.

____B. Tuberculosis, Syphilis, Malignant Neoplasm, and Infectious Diseases of the Intestinal Tract are all grouped as Infective Parasitic Diseases under the Major ICDA Class of 001.

____C. The range within the "Inclusive ICDA Codes" indicates further subdivisions of these diseases are possible.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 74: A, C

FRAME 75

In previous frames, several ways of listing, classifying, coding, and representing health problems and related factors have been presented.

A Health Problem Index, which makes it possible to quantify health problems, and the Classifcation of Health Activities and Output Measures are essentials of the Information System. They provide the means of relating:

1. what has been done,
2. what is being done, and
3. what is planned to be done

to the fundamental problems of death, illness and disability and related environmental problems.

Check the items which are true:

____A. The classifying, listing, and coding of factors pertaining to health has been designed as a form of qualification.

____B. Classifying, listing and coding make possible the use of the Health Problem Index by quantifying health problems.

____C. An Information System is an aid to management in decision making and reinforces their professional judgment.

____D. The Health Problem Index, and the Classification of Health Activities and Output Measures relates past and present activities and enables future planning.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 75: B, C, D

FRAME 76

A means has been sought that would meaningfully relate all health activities, past, current or contemplated, to health problems and yield some measurable quantity that would allow intelligent evaluation.

To this end a graphically arranged accounting ledger or "matrix" in which all health activities are shown in relation to all health and related environmental problems is presented.

An example of a matrix is on the following page.

Check the items which are true:

____A. The study of health activities and health problems as separate and unrelated factors is not as desirable as linking them in some meaningful way.

____B. The matrix system of accounting is a graphic method of correlating activities and problems.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 76: A, B

FRAME 77

The matrix presented in figure 3 (see the preceding page) is similar to a cross-word puzzle in which the "horizontals" are health activities and the "verticals" represent health problems.

The intersection of a horizontal activity with a vertical problem yields a number-measurement denoting the effectiveness of the activity with regard to the particular problem.

The matrix can be used either in a retrospective manner to reflect what did occur as a result of a set of collective activities or in a prospective sense to show predicted desirable outcomes (decreased health and environmental problems) as a result of planned future activities.

Check the items which are true:

____A. The matrix allows a measurable evaluation of the effectiveness of a health activity with regard to a health problem.

____B. The matrix is a method for the statistical accounting of what has been effective and should be used solely for retrospective analysis.

____C. The persistent outcomes as a result of specific activities allows the matrix to be used for projected planned activities with predictable results.

Correct responses to this frame will be found at the top of the following frame.

FIGURE 3

PARTIAL MATRIX RELATING COSTS OF ACTIVITIES WITH ASSOCIATED PROBLEMS (Illustrative)

PROGRAM STRUCTURE	Health Problem			Environmental Problem			TOTAL ACTIVITY COSTS
	I	II	III	XXII	XXIII	XXIV	
	Health Problem Index "Q"			Economic Loss Index - Dollars (thousands)			
	575	2361	469	126	120	29	
NORMAL DEVELOPMENT OPERATIONS							
Health Education							
Mass Communication							
Group Communication							
Indiv. Communication							
Physical Environment							
Air Pollution Control							
Water Poll. Control							
Vector Control							
etc.							
REPAIR							
DIRECT OPERATIONS							
Patient Services							
Hospital Care							
Nursing Home Care							
Other Long-Term							
Clinic Care							
Outpatient Care							
Home Care							
Oral Health							
RESEARCH							
Patient Services							
etc.							
TOTAL ACTIVITY COSTS BY PROBLEM							TOTAL HEALTH COSTS

Retrospective (Actual) Costs Associated with individual problems

or Prospective (Planned) Costs for each Activity together with units of Activity Output

FRAME 77 Continued

Correct Responses to Frame 77: A, C

FRAME 78

The greatest potential use of the matrix system of relating health activities to health problems will be the ability to predict outcomes of chosen actions against specific problems.

It will be possible to use the data from many operational programs as inputs in a computer system to analyze the effectiveness of any planned action program.

A retrospective study of outcomes measured against actions over an extended period of time will provide greater accuracy in selecting programs which will have the greatest impact on health and environmental problems for the lowest possible cost:

Check the items which are true:

____A. Fortunately, because of past record keeping habits, the data necessary for a thorough study of outcomes measured against actions will normally be available from former programs.

____B. Much of the statistical evaluation of actions to results can be handled by computer systems.

____C. The classification of health problems and the development of the Health Problem Index are an integral part of a matrix system.

____D. The matrix system of evaluation will assist the Health Services in choosing programs most effective for a given health problem.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 78: B,C,D

FRAME 79

The essentials of an Information System have been covered in previous frames. Reviews of these essentials would show that they include:

a. a numerical health index which helps define and measure health and environmental problems,

b. a classification system for health activities, and

c. a coded list of output measures of effort.

The matrix form of putting data together is one way of relating these essentials to assist the program manager in understanding changes in health problems relative to program effort.

Check the items which are true:

____A. The Information System relates health problems with health activities and output measures.

____B. The matrix form of arranging data for evaluation is the only possible way the essentials of the Information System may be usefully grouped.

____C. The Information System allows a computer to make decisions for the program manager.

____D. The Information System will make a program manager more fully aware of the implications of his decisions by furnishing a set of objective orderly data.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 79: A, D

FRAME 80

By following a systematic approach in the selection of health programs, the program manager is forced to make a more comprehensive review of the problem and possible actions when developing plans for the future.

The sets of activities directed toward the reduction of given health and environmental problems form the basis for the program packages designed to overcome those problems.

The individual activity or "program element" becomes the program of an organizational unit of government at Federal, State, or local levels.

Check the items which are true:

___A. Program packages include several or many activities while a program element is essentially a small number of activities.

___B. Program packages aim at the overcoming of the total problem. Individual activities or program elements are the actions undertaken by Health Services units as a segment of the program package.

___C. Using the Information System gives a program manager an opportunity to choose from possible actions by offering more comprehensive data relating the problem and activities.

Correct responses to this frame will be found at the top of the following frame.

Correct Responses to Frame 80: A, B, C

FRAME 81

THIS IS A FINAL REVIEW OF THE MATERIAL COVERED

____A. A Health Objective is the end result or the desired effect brought about by activities.

____B. The attack against a health problem is similar to a calculated attack in a military operation in that a unified team effort and the consideration of all forces at our disposal assist in the attack on health problems.

____C. The Information System relates activities to problems particularly by using the matrix method of arranging data.

____D. The Information System allows a more accurate computation of current resource needs for given health and environmental problems, but not future needs.

____E. The International Classification of Diseases, Adapted, is used as the point of reference for delineating health problems.

____F. The Health Index System is of great value as an alphabetical tabulation of all known health problems.

____G. Since many programs are long range, the need for resources to achieve the desired end are also long-range needs.

____H. Performance budgeting and accounting is facilitated by use of the Information System since costs of a set of activities (the program package) can be identified, thus permitting the manager to gauge his program for a projected outcome by varying the resource input.

____I. Performance accounting can assist in the evaluation of single activities but would be of little help in evaluating the total program.

____J. The identification of personnel evaluation by establishing program deficiencies is a desirable decision-making tool.

____K. Performance budgeting relates funds already spent to benefits accomplished, whereas performance accounting involves estimating the effect of funds planned for future activities.

____L. The Health Index System enables the manager to establish the magnitude of the health problem and thus assists in the decision-making process.

The major purposes of the planning system that produces Program Packaging are:

FRAME 81 (continued)

____M. to permit planning programs around health problems rather than categorical activities;

____N. to relate resource utilization to health benefits;

____O. to provide a capability for making benefit-cost studies on alternate plans of action;

____P. to establish long-range resources requirements;

____Q. to enable continuous evaluation of program activities; and

____R. to systematize program data collection, storage and utilization.

Correct responses to this frame will be found at the top of the following page.

VT 008 172
Control Totals of Employment in Major Industry by Major Occupation Matrix for Michigan--1960. Employment in Selected Occupations in the U.S., 1900-1960. Working Paper No. 3.

Battelle Memorial Inst., Columbus, Ohio
Michigan State Dept. of Labor, Detroit. Employment Security Commission
Michigan State Dept. of Education, Lansing. Div. of Vocational Education
Michigan State Dept. of Commerce, Lansing. State Resource Planning Div.
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Pub Date - Apr66 42p.

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MICHIGAN

This study provides detailed labor force information which will be useful in planning the educational system for the State of Michigan. This report is part of the Michigan Manpower Study which has as its central objective the projection of occupational demands and the prospective supply of trained workers to satisfy these demands during 15 years. Tables in this report show national patterns of employment by detailed occupation in order to compare employment trends in Michigan and the Detroit standard metropolitan area. Tables summarizing aggregate employment by occupation and aggregate employment by detailed industry are also presented. The occupation by industry matrix which serves as the framework for Battelle's socioeconomic model is available in limited detail in published census reports for individual states. (CH)

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EMPLOYMENT IN SELECTED OCCUPATIONS IN THE U.S.

1900 - 1960

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This is one of a continuing series of working papers prepared as a part of the State Resource Planning Program. This program is an interdepartmental planning function to assist the State of Michigan in taking advantage of the opportunities and meeting the needs arising from future growth.

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EMPLOYMENT IN SELECTED OCCUPATIONS IN THE U.S., 1900-1960; CONTROL TOTALS OF EMPLOYMENT IN MAJOR INDUSTRY BY MAJOR OCCUPATION MATRIX FOR MICHIGAN - 1960

Prepared
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PREFACE

Economic and population research as conducted by the State Resource Planning Division is designed to provide insights and information regarding both the present and potential growth and development of the Michigan economy. These studies of Michigan's future population and economic base constitute the rational basis for the development of a Comprehensive State Planning Program. This program will prepare recommendations that will result in state policies and actions to insure the maximum utilization of Michigan's human and natural resources. The ultimate objective of this endeavor will be to enable state government in Michigan to be better equipped to stimulate, develop, and guide the future growth of Michigan.

This working paper is a part of the Michigan Manpower Study which has as its central objective the projection of occupational demands and the prospective supply of trained workers to satisfy these demands during the next decade and a half. This study of Michigan's future manpower needs and requirements is sponsered by the Michigan Employment Security Commission, the Michigan Department of Education, and the Michigan Department of Commerce. These three agencies are jointly cooperating with the Battelle Memorial Institute in conducting this research project.

The findings and projections resulting from this research will be policy oriented. Policies and programs predicated upon these reports will enable public and private organizations to coordinate occupational needs with available human resources and thereby satisfy the employment desires of individuals as well as encourage orderly business development and growth.

EMPLOYMENT IN SELECTED OCCUPATIONS IN THE U.S., 1900-1960; CONTROL TOTALS OF EMPLOYMENT IN MAJOR INDUSTRY BY MAJOR OCCUPATION MATRIX FOR MICHIGAN--1960

Introduction

The Battelle study of employment in Michigan is concerned with estimates of expected employment levels through 1980 in approximately 90 occupations, especially as these occupations are distributed within a selected list of industry classifications.[1] The purpose of this study is to provide detailed labor force information which will be useful in planning the educational system for the state of Michigan. In its initial design, the study also focuses on employment trends in the Detroit Standard Metropolitan Statistical Area.

While the focus of the Battelle study is employment patterns from 1965 through 1980, it is useful to consider the long-term historical pattern which lies behind the future evolution of employment patterns by occupation. In order to contribute to this broader historical pattern, this paper focuses on employment trends in selected occupations in the United States from 1900 to 1960. It is recognized by the Advisory Committee to the Battelle study that the education system of the state of Michigan must consider national trends, even though its primary focus is on trends within the state of Michigan.

A second purpose of this working paper is to present the basic employment levels associated with the occupations and industries under study. The primary source of data is the U.S. Census of 1960. In preparation for a special tabulation of the 1960 Census which is the

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[1] Duncan, Joseph, "Characteristics of Michigan's Labor Force--the Next 15 Years", Working Paper Number One--Project Statement from Battelle Memorial Institute to The Michigan Employment Security Commission (July 12, 1965).

basic framework of the analysis, this paper presents control totals representing broad patterns of employment by occupations within selected industries as well as Michigan's total employment reported in the 1960 U.S. Census in the industries and the occupations under analysis.

U.S. Occupational Trends

The stimulus for this working paper is a Bureau of Census working paper entitled, "Occupational Trends in the United States 1900-1950"[2] by Kaplan and Casey. The census working paper was designed as a revision of a previous report by Alba M. Edwards, prepared in 1943.[3] The results reported in Battelle's working paper were prepared by adjusting the 1950 employment levels of Kaplan and Casey to conform with those reported in the 1960 census. Thus, the 1900-1940 numbers reported in the Bureau of Census Working Paper #5 are taken as given.

It must be emphasized that the historical data presented in this paper are only approximations of the basic trends occurring over six decades. Kaplan and Casey emphasized that, "The fact that the figures are presented to the units digit is a mere coincidence of convenience, not a measure of precision". The author of this paper wishes to emphasize that statement.

A succinct summary of the difficulties involved in decade-to-decade comparisons is provided in the census report. Their statement is

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[2] Kaplan, David L. and Casey, M. Clair, U.S. Bureau of Census, "Occupational Trends in the United States: 1900-1950", Working Paper No. 5, Washington, D.C., 1958.

[3] Edwards, Alba M., "Comparative Occupational Statistics in the United States 1870-1940", U.S. Government Printing Office, 1943.

as follows:

> Particularly prior to 1910, there is little information available on the exact definitions used for the several occupational categories. And, even for fairly recent years, there is often only meager statistical intelligence on which to base adjustments for comparability with the 1950 definitions. For instance, the 1900 Census did not present operatives and laborers separately. The separate figures given here are necessarily based on fairly crude estimates and arbitrary judgment. Another important illustration lies in the substantial number of instances where it was not possible to determine definitely whether the entry for a specific cell should be zero or some small number. The early history of most occupations is so clouded that it is impossible to establish the point in time at which the first person met the statistical requirements for being counted by the census as a worker in the particular occupation. Furthermore, in some cases, an estimate could not be prepared because it was impossible to determine where the particular occupation had been classified in the original census reports; this occurred most often in the 1900 material. As a result of these uncertainties, the designation "...", which normally means zero, has been used in table 6 to represent both zero and figure unknown.
>
> The universe covered in tables 1 to 6 is denoted as the "economically active civilian population." For the period prior to 1940, this refers to civilian gainful workers 10 years old and over; for 1940 and 1950, this refers to persons 14 years old and over in the experienced civilian labor force. Two incomparabilities should be noted. First, there are important differences between the gainful worker and labor force concepts; see, for example, Chapters III and IV in the Edwards report. In view of the paucity of information available on the impact of the conceptual differences on the individual occupations, the authors decided against any attempt to revise the 1900-1930 figures to a labor force basis. Second, there is the difference in age limitation. The inclusion of the 10-to-13-year group prior to 1940 and its exclusion in 1940 and 1950 follow the census practice in those years. Although this age group could have been subtracted out of the earlier figures quite readily, it was not done. In the authors' opinion, this approach provides a more accurate picture of the pre-1940 work force than would the limitation at age 14 which was adopted to reflect later conditions.

Methodology

The 1950 employment levels reported in Census Working Paper #5 differ slightly from those reported in the 1960 Census of the Population report.[4] Working Paper #5 reports a total economically active civilian population of 58,998,943 compared with 59,229,531 persons for the year 1950. Therefore the first step involved in preparing this report was a revision of the 1950 employment levels. This revision was achieved by distributing the occupation not reported group to the individual detailed occupational classifications. Occupation not reported was proportionately distributed on the basis of sex to account for the variations in male-female division found in the various detailed occupational categories.

The experienced labor force reported for the selective occupations for 1960 was also adjusted by the distribution of occupation not reported by sex. These adjusted totals for 1950 and 1960 were combined with historical patterns from 1900 to 1940 for 94 occupational classifications. As a result of changes in the detail reported in individual census reports, many of the occupational categories are not represented by a full set of data for the entire time period. For example, stenographers, typists, and secretaries were combined categories through 1940. In 1950 and 1960 these three categories were reported individually.

Tables 3 through 47 report patterns of employment for approximately half of the occupations of interest in the Battelle study of the Michigan labor force. These occupations represent those for which a reasonably consistent pattern of employment statistics can be obtained

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[4] 1960 Census of Population, Vol. 1, Characteristics of the Population, Part 1, U.S. Summary, Table 201, p. 522.

for the entire time period, representing a reduction of the 94 occupational classifications to 34 detailed occupations plus totals. In addition to reporting employment levels by decade, the tables show the decade-by-decade growth in absolute numbers as well as the percentage change occurring during each decade and the equivalent annual rate of growth for each decade.

For comparative purposes Tables 1 and 2 report the growth of total population and total experienced civilian labor force. The annual growth rates shown for the total experienced civilian labor force provides a useful reference point for identifying those occupational classifications which historically demonstrated exceptional growth.

TABLE 1. TOTAL RESIDENT POPULATION--United States, 1900-1960

Year	Number	Decade Amount	Change Per Cent	Annual Growth Rate
1900	76,212,168			
1910	92,228,496	16,016,328	21.01	1.9
1920	106,021,537	13,793,041	14.95	1.4
1930	123,202,624	17,181,087	16.20	1.5
1940	132,164,569	8,961,945	7.27	0.7
1950	151,325,798	19,161,229	14.50	1.4
1960	179,323,175	27,997,377	18.50	1.7

Source: 1960 Census of Population, Vol. 1, Characteristics of the Population, U.S. Summary, Table 1, p. 3.

TABLE 2. TOTAL EXPERIENCED CIVILIAN LABOR FORCE
1900-1940 Economically Active Civilian Population

Year	Remarks	Number	Decade Change Amount	Per Cent	Annual Growth Rate
1900	Persons 10 yrs. old and over	29,030,038			
1910	" " " " " "	37,291,483	8,261,445	28.46	2.5
1920	" " " " " "	42,205,745	4,914,262	13.18	1.2
1930	" " " " " "	48,685,590	6,479,845	15.35	1.4
1940	Persons 14 yrs. old and over	51,742,023	3,056,433	6.28	0.6
1950	" " " " " "	59,229,531	7,487,508	14.47	1.4
1960	" " " " " "	67,990,073	8,760,542	14.79	1.4

Source: 1960 Census of Population, Vol. 1, Characteristics of the Population, Part 1, U.S. Summary, Table 201, p. 522.

U.S. Department of Commerce, Bureau of the Census, Occupational Trends in the United States: 1900 to 1950 (Bureau of the Working Paper No. 5), Washington, D.C., 1958.

Control Totals

The occupation by industry matrix which serves as the framework for Battelle's socioeconomic model is available in limited detail in published census reports for individual states. The aggregate pattern of employment by major occupational groups by major industries may be found in Table 125 of the Detailed Characteristics Report of the U.S. Census.[5] The current study is concerned with both a higher level of detail on the occupational level and on the industry level.[6]

[5] 1960 Census of Population, Volume 1, Characteristics of the Population, Part 24, Michigan.

[6] See Tables 2 and 3, Battelle Working Paper #1, ibid.

On the basis of published reports of the U.S. Bureau of Census, the total 1960 employment in the detailed industry classifications and the detailed occupational classifications of concern in Battelle's socio-economic model have been summarized in Tables 48 and 49. The employment in detailed industry classifications and detailed occupational classifications for the Detroit Standard Metropolitan Statistical Area (Wayne, Oakland, and Macomb Counties) for 1960 are shown in Tables 50 and 51. A cross tabulation of major occupational groups for each of the major industrial groups is presented in Tables 52 and 53 for Michigan and Detroit, respectively. Tables 48 through 53 represent control totals for the basic 1960 data.

Summary

The tables in this report have been developed to numerically portray broad national patterns of employment by detailed occupation as a point of reference for evaluation of employment trends in Michigan and the Detroit Standard Metropolitan Area as part of Battelle's study of "Characteristics of Michigan's Labor Force--1980". Tables summarizing aggregate employment by occupation and aggregate employment by detailed industry are presented along with an aggregated view of employment by occupation by industry. The reported employment patterns represent control totals for the special tabulation of the 1960 census which is being prepared by the U.S. Bureau of Census especially for this study.

TABLE 3. PROFESSIONAL, TECHNICAL AND KINDRED WORKERS - TOTAL

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	1,234,362			
1910	1,757,535	523,173	42.38	3.6
1920	2,282,575	525,040	29.87	2.6
1930	3,310,706	1,028,131	45.04	3.8
1940	3,878,618	567,912	17.15	1.6
1950	5,123,022	1,244,404	32.08	2.8
1960	7,733,191	2,610,169	50.95	4.2

TABLE 4. PROFESSIONAL, TECHNICAL AND KINDRED WORKERS - ACCOUNTANTS AND AUDITORS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	22,916			
1910	39,239	16,323	71.23	5.5
1920	118,451	79,212	201.87	11.6
1930	191,571	73,120	61.73	4.9
1940	238,020	46,449	24.25	2.2
1950	394,071	156,051	65.56	5.2
1960	501,424	107,353	27.24	2.4

TABLE 5. PROFESSIONAL, TECHNICAL AND KINDRED WORKERS - DRAFTSMEN AND DESIGNERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	17,993			
1910	45,102	27,109	150.66	9.6
1920	66,875	21,773	43.27	4.0
1930	98,230	31,555	46.89	3.9
1940	113,910	15,680	15.96	1.5
1950	169,040	55,130	48.40	4.0
1960	301,058	132,018	78.10	5.9

TABLE 6. PROFESSIONAL, TECHNICAL AND KINDRED WORKERS - ENGINEERS, TECHNICAL

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	37,540			
1910	77,157	39,617	105.53	7.5
1920	134,121	56,964	73.83	5.7
1930	217,359	83,238	62.06	4.9
1940	297,488	80,129	36.86	3.2
1950	547,058	249,570	83.89	6.3
1960	914,832	367,774	67.23	5.3

TABLE 7. PROFESSIONAL, TECHNICAL AND KINDRED WORKERS - NURSES (PROFESSIONAL AND STUDENT PROFESSIONAL)

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	11,804			
1910	82,327	70,523	597.45	21.5
1920	149,128	66,801	81.14	6.1
1930	294,189	145,061	97.27	7.0
1940	376,809	82,620	28.08	2.5
1950	496,276	119,467	31.70	2.8
1960	689,304	193,028	38.89	3.3

TABLE 8. PROFESSIONAL, TECHNICAL AND KINDRED WORKERS - PHYSICIANS AND SURGEONS; CHIROPRACTORS; OSTEOPATHS; AND THERAPISTS AND HEALERS (N.E.C.)

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	131,477			
1910	157,256	25,779	19.61	1.8
1920	163,601	6,345	4.03	0.4
1930	188,276	24,675	15.08	1.4
1940	203,802	15,526	8.25	0.8
1950	241,533	37,731	18.51	1.7
1960	299,799	58,266	24.12	2.2

TABLE 9. PROFESSIONAL, TECHNICAL AND KINDRED WORKERS - PROFESSORS AND INSTRUCTORS (COLLEGE): INCLUDING COLLEGE PRESIDENTS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	7,272			
1910	15,668	8,396	115.46	8.0
1920	33,407	17,739	113.22	7.9
1930	61,905	28,498	85.30	6.4
1940	76,697	14,792	23.89	2.2
1950	128,810	52,113	67.95	5.3
1960	188,004	59,194	45.95	3.9

TABLE 10. PROFESSIONAL, TECHNICAL AND KINDRED WORKERS - SOCIAL AND WELFARE WORKERS, EXC. GROUP; CLERGYMEN; RELIGIOUS WORKERS; AND RECREATION AND GROUP WORKERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	113,578			
1910	137,031	23,453	20.65	1.9
1920	173,527	36,496	26.63	2.4
1930	219,649	46,122	26.58	2.4
1940	260,247	40,598	18.48	1.7
1950	312,051	51,804	19.91	1.8
1960	416,009	103,958	33.31	2.9

TABLE 11. MANAGERS, OFFICIALS AND PROPRIETORS EXCEPT FARM

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	1,696,849			
1910	2,461,861	765,012	45.08	3.8
1920	2,802,635	340,774	13.84	1.3
1930	3,613,679	811,044	28.94	2.6
1940	3,770,434	156,755	4.34	0.4
1950	5,211,632	1,441,198	38.22	3.3
1960	5,771,058	559,426	10.73	1.0

TABLE 12. MANAGERS, OFFICIALS AND PROPRIETORS EXCEPT FARM - BUYERS AND DEPARTMENT HEADS, STORE

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	N.A.			
1910	14,850			
1920	20,250	5,400	36.36	3.1
1930	35,040	14,790	73.04	5.6
1940	74,157	39,017	111.63	7.8
1950	148,328	74,171	100.02	7.2
1960	250,020	101,692	68.56	5.4

TABLE 13. MANAGERS, OFFICIALS AND PROPRIETORS EXCEPT FARM - ADMINISTRATORS (N.E.C.), PUBLIC ADMINISTRATION; AND INSPECTORS, PUBLIC ADMINISTRATION

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	57,611			
1910	71,781	14,170	24.60	2.2
1920	100,316	28,535	39.75	3.4
1930	124,477	24,161	24.08	2.2
1940	164,938	40,461	32.50	2.9
1950	219,269	54,331	32.94	2.9
1960	292,243	72,974	33.28	2.9

TABLE 14. MANAGERS, OFFICIALS AND PROPRIETORS EXCEPT FARM - PURCHASING AGENTS AND BUYERS (N.E.C.)

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	7,200			
1910	7,915	715	9.93	1.0
1920	18,026	10,111	127.74	8.6
1930	28,735	10,709	59.41	4.8
1940	33,844	5,109	17.78	1.6
1950	65,789	31,945	94.39	6.9
1960	110,315	44,526	67.68	5.3

TABLE 15. CLERICAL AND KINDRED WORKERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	877,024			
1910	1,987,314	1,110,290	126.60	8.5
1920	3,384,942	1,397,628	70.33	5.5
1930	4,336,300	951,358	28.10	2.5
1940	4,982,227	645,927	14.90	1.4
1950	7,317,635	2,335,408	46.87	3.9
1960	10,173,380	2,855,745	39.02	3.4

TABLE 16. CLERICAL AND KINDRED WORKERS - BOOKKEEPERS AND CASHIERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	231,964			
1910	446,839	214,875	92.63	6.8
1920	615,512	168,673	37.75	3.3
1930	738,236	122,724	19.94	1.8
1940	721,145	-17,091	-2.32	-0.2
1950	1,004,679	283,534	39.32	3.4
1960	1,513,242	508,563	50.62	4.2

TABLE 17. CLERICAL AND KINDRED WORKERS - STENOGRAPHERS, TYPISTS, AND SECRETARIES

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	134,000			
1910	387,000	253,000	188.81	11.2
1920	786,000	399,000	103.10	7.3
1930	1,097,000	311,000	39.57	3.4
1940	1,223,166	126,166	11.50	1.1
1950	1,675,532	452,366	36.98	3.2
1960	2,454,674	779,142	46.50	3.9

TABLE 18. CLERICAL AND KINDRED WORKERS - TICKET, STATION AND EXPRESS AGENTS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	26,915			
1910	34,773	7,858	29.20	2.6
1920	36,819	2,046	5.88	0.6
1930	38,499	1,680	4.56	0.4
1940	46,832	8,333	21.64	1.9
1950	69,630	22,798	43.18	3.7
1960	77,047	7,417	10.65	1.0

TABLE 19. SALES WORKERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	1,306,733			
1910	1,754,943	448,210	34.30	3.0
1920	2,058,497	303,554	17.30	1.6
1930	3,059,108	1,000,611	48.61	4.0
1940	3,450,290	391,182	12.79	1.2
1950	4,122,329	672,039	19.48	1.8
1960	5,060,505	938,176	22.76	2.1

TABLE 20. SALES WORKERS - ADVERTISING AGENTS AND SALESMEN

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	12,300			
1910	11,145	-1,155	-9.39	-1.0
1920	25,349	14,204	127.45	8.6
1930	40,330	14,981	59.10	4.8
1940	40,536	206	0.51	0.1
1950	34,587	-5,949	-14.68	-1.6
1960	36,543	1,956	5.65	0.6

TABLE 21. SALES WORKERS - INSURANCE AGENTS, BROKERS AND UNDERWRITERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	78,363			
1910	88,463	10,100	12.89	1.2
1920	119,918	31,455	35.56	3.1
1930	256,927	137,009	114.25	7.9
1940	252,973	-3,954	-1.54	-0.2
1950	282,254	29,281	11.57	1.1
1960	387,956	105,702	37.45	3.2

TABLE 22. SALES WORKERS - REAL ESTATE AGENTS AND BROKERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	33,585			
1910	77,662	44,077	131.24	8.7
1920	89,235	11,573	14.90	1.4
1930	150,427	61,192	68.57	5.4
1940	118,659	-31,768	-21.12	-2.4
1950	146,221	27,562	23.23	2.1
1960	206,008	59,787	40.89	3.5

TABLE 23. SALES WORKERS - SALESMEN AND SALES CLERKS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	1,088,916			
1910	1,453,650	364,734	33.49	2.9
1920	1,724,316	270,666	18.62	1.7
1930	2,481,622	757,306	43.92	3.7
1940	2,892,733	411,111	16.57	1.5
1950	3,501,801	609,068	21.05	1.9
1960	4,100,707	598,906	17.10	1.6

TABLE 24. SALES WORKERS - STOCK AND BOND SALESMEN

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	4,000			
1910	5,530	1,530	38.25	3.3
1920	11,445	5,915	106.96	7.5
1930	22,385	10,940	95.59	6.9
1940	18,438	-3,947	-17.63	-1.9
1950	11,542	-6,896	-37.40	-4.6
1960	30,478	18,936	164.06	10.2

TABLE 25. CRAFTSMEN, FOREMEN, AND KINDRED WORKERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	3,061,586			
1910	4,315,488	1,253,902	40.95	3.5
1920	5,481,837	1,166,349	27.03	2.4
1930	6,246,302	764,465	13.94	1.3
1940	6,203,389	-42,913	-.69	-0.1
1950	8,384,759	2,181,370	35.16	3.1
1960	9,701,873	1,317,114	15.71	1.5

TABLE 26. CRAFTSMEN, FOREMEN, AND KINDRED WORKERS - CARPENTERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	595,586			
1910	815,320	219,734	36.89	3.2
1920	885,429	70,109	8.60	0.8
1930	917,426	31,997	3.61	0.4
1940	776,447	-140,979	-15.37	-1.7
1950	1,014,139	237,692	30.61	2.7
1960	969,621	-44,518	-4.39	-0.5

TABLE 27. CRAFTSMEN, FOREMEN, AND KINDRED WORKERS - CRANEMEN, DERRICKMEN AND HOISTMEN; EXCAVATING, GRADING AND ROAD MACHINE OPERATORS; AND STATIONARY ENGINEERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	133,730			
1910	218,788	85,058	63.60	5.0
1920	258,062	39,274	17.95	1.7
1930	293,659	35,597	13.79	1.3
1940	323,205	29,546	10.06	1.0
1950	447,608	124,403	38.49	3.3
1960	664,632	217,024	48.48	4.0

TABLE 28. CRAFTSMEN, FOREMEN, AND KINDRED WORKERS - ELECTRICIANS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	50,717			
1910	108,241	57,524	21.34	2.0
1920	191,964	83,723	77.35	5.9
1930	252,817	60,853	31.70	2.8
1940	221,355	-31,462	-12.45	-1.3
1950	333,358	112,003	50.60	4.2
1960	373,160	39,802	11.94	1.1

TABLE 29. CRAFTSMEN, FOREMEN, AND KINDRED WORKERS - MACHINISTS; MECHANICS AND REPAIRMEN; JOBSETTERS, METAL; AND TOOLMAKERS AND DIEMAKERS AND SETTERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	304,060			
1910	520,308	216,248	71.12	5.5
1920	1,167,694	647,386	124.42	8.4
1930	1,387,236	219,542	18.80	1.7
1940	1,592,847	205,611	14.82	1.4
1950	2,563,688	970,741	60.95	4.9
1960	3,194,509	630,821	24.61	2.2

TABLE 30. CRAFTSMEN, FOREMEN AND KINDRED WORKERS - PLUMBERS AND PIPE FITTERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	92,216			
1910	148,304	56,088	60.82	4.9
1920	206,718	58,414	39.39	3.4
1930	237,814	31,096	15.04	1.4
1940	211,004	-26,810	-11.27	-1.2
1950	304,333	93,329	44.23	3.7
1960	347,416	43,083	14.16	1.3

TABLE 31. CRAFTSMEN, FOREMEN AND KINDRED WORKERS - TINSMITHS, COPPERSMITHS AND SHEET METAL WORKERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	49,188			
1910	59,833	10,645	21.64	2.0
1920	74,968	15,135	25.29	2.3
1930	83,427	8,459	11.28	1.1
1940	91,091	7,664	9.19	0.9
1950	132,935	41,844	45.94	3.8
1960	152,707	19,772	14.87	1.4

TABLE 32. OPERATIVES AND KINDRED WORKERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	3,719,728			
1910	5,441,306	1,721,578	46.28	3.9
1920	6,586,968	1,145,662	21.05	1.9
1930	7,691,368	1,104,400	16.77	1.6
1940	9,518,415	1,827,047	23.75	2.2
1950	12,032,054	3,513,639	26.41	2.4
1960	13,526,444	1,494,390	12.42	1.2

TABLE 33. OPERATIVES AND KINDRED WORKERS - APPRENTICES

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	65,096			
1910	116,979	51,883	79.70	6.0
1920	138,535	21,556	18.43	1.7
1930	88,083	-50,452	-36.42	-4.4
1940	91,109	3,026	3.43	0.3
1950	122,803	31,694	34.79	3.0
1960	91,982	-30,821	-25.10	-2.9

TABLE 34. OPERATIVES AND KINDRED WORKERS - ATTENDANTS, AUTO SERVICE AND PARKING

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	...			
1910	...			
1920	17,500			
1930	143,500	126,000	720.00	23.5
1940	245,358	101,858	70.98	5.5
1950	253,763	8,405	3.43	0.3
1960	396,627	142,864	56.30	4.6

TABLE 35. OPERATIVES AND KINDRED WORKERS - ATTENDANTS, TAXICAB DRIVERS AND CHAUFFEURS; AND TRUCK AND TRACTOR DRIVERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	...			
1910	45,785			
1920	285,045	239,260	522.57	20.1
1930	972,418	687,373	241.14	13.0
1940	1,514,995	542,577	55.80	4.5
1950	1,807,327	292,332	19.30	1.8
1960	2,118,799	311,472	17.23	1.6

TABLE 36. OPERATIVES AND KINDRED WORKERS - DELIVERYMEN AND ROUTEMEN

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	166,677			
1910	229,619	62,942	37.76	3.3
1920	170,235	-59,384	-25.86	-2.9
1930	187,217	16,982	9.98	1.0
1940	294,212	106,995	57.15	4.6
1950	253,982	-40,230	-13.67	-1.5
1960	459,833	205,851	81.05	6.1

TABLE 37. OPERATIVES AND KINDRED WORKERS - FILERS, GRINDERS AND POLISHERS, METAL

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	16,980			
1910	49,525	32,545	191.67	11.3
1920	59,785	10,260	20.72	1.9
1930	78,600	18,815	31.47	2.8
1940	117,341	38,741	49.29	4.1
1950	158,981	41,640	35.49	3.1
1960	166,693	7,712	4.85	0.5

TABLE 38. OPERATIVES AND KINDRED WORKERS - PAINTERS EXCEPT CONSTRUCTION AND MAINTENANCE

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	55,287			
1910	49,387	-5,900	-10.67	-1.1
1920	60,580	11,193	23.41	2.1
1930	83,083	22,503	37.15	3.2
1940	103,952	20,869	25.12	2.3
1950	125,878	21,926	21.09	1.9
1960	155,960	30,082	23.90	2.2

TABLE 39. OPERATIVES AND KINDRED WORKERS - WELDERS AND FLAME-CUTTERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	...			
1910	2,500			
1920	54,355	51,855	2,074.20	136.0
1930	36,725	-17,630	-32.43	-3.8
1940	137,427	100,702	274.21	14.1
1950	282,884	145,457	105.84	7.5
1960	405,990	123,106	43.52	3.7

TABLE 40. PRIVATE HOUSEHOLD WORKERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	1,579,044			
1910	1,851,255	272,211	17.24	1.6
1920	1,411,261	-439,994	-23.77	-2.7
1930	1,998,178	586,917	41.59	3.5
1940	2,411,735	413,557	20.70	1.9
1950	1,533,945	-877,790	-36.40	-4.4
1960	1,936,751	402,806	26.26	2.4

TABLE 41. SERVICE WORKERS, EXCEPT PRIVATE HOUSEHOLD

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	1,046,756			
1910	1,710,833	664,077	63.44	5.0
1920	1,901,396	190,563	11.14	1.1
1930	2,773,873	872,477	45.89	3.8
1940	3,657,311	883,438	31.85	2.8
1950	4,636,039	978,728	26.76	2.4
1960	6,088,003	1,451,964	31.32	2.8

TABLE 42. SERVICE WORKERS, EXCEPT PRIVATE HOUSEHOLD - ATTENDANTS, HOSPITAL AND OTHER INSTITUTIONS; MIDWIVES; AND PRACTICAL NURSES

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	109,152			
1910	133,043	23,891	21.89	2.0
1920	156,769	23,726	17.83	1.7
1930	197,618	40,849	26.06	2.3
1940	216,953	19,335	9.78	0.9
1950	368,061	151,108	69.65	5.4
1960	663,598	295,537	80.30	6.1

TABLE 43. SERVICE WORKERS, EXCEPT PRIVATE HOUSEHOLD - COOKS, EXCEPT PRIVATE HOUSEHOLD

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	116,690			
1910	173,863	57,173	49.00	4.1
1920	199,534	25,671	14.76	1.4
1930	291,791	92,257	46.24	3.9
1940	348,717	56,926	19.51	1.8
1950	477,587	128,870	36.95	3.2
1960	631,293	153,706	32.18	2.8

TABLE 44. SERVICE WORKERS, EXCEPT PRIVATE HOUSEHOLD - JANITORS AND SEXTONS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	56,577			
1910	113,081	56,504	99.87	7.2
1920	178,628	65,547	57.96	4.7
1930	309,625	130,997	73.33	5.7
1940	377,487	67,862	21.92	2.0
1950	485,638	108,151	28.65	2.5
1960	652,764	167,126	34.41	3.0

TABLE 45. LABORERS, EXCEPT FARM AND MINE

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	3,619,958			
1910	4,477,670	857,712	23.69	2.1
1920	4,905,398	427,728	9.55	0.9
1930	5,334,578	429,180	8.75	0.8
1940	4,875,028	-459,550	-8.62	-0.9
1950	3,857,093	-1,017,935	-20.88	-2.3
1960	3,706,357	-150,736	-3.91	-0.4

TABLE 46. FARMERS AND FARM MANAGERS

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	5,762,530			
1910	6,163,060	400,530	6.95	0.7
1920	6,442,086	279,026	4.53	0.4
1930	6,031,882	-410,204	-6.37	-0.7
1940	5,362,168	-669,714	-11.10	-1.2
1950	4,420,102	-942,066	-17.57	-1.9
1960	2,652,455	-1,767,647	-39.99	-4.9

TABLE 47. FARM LABORERS AND FOREMEN

Year	Number	Increase Over Previous Decade	Per Cent Change Over Previous Decade	Average Annual Growth During Past Decade
1900	5,125,468			
1910	5,370,218	244,750	4.77	0.5
1920	4,948,150	-422,068	-7.86	-0.8
1930	4,289,616	-658,534	-13.31	-1.4
1940	3,632,408	-657,208	-15.32	-1.7
1950	2,590,921	-1,041,487	-28.67	-3.3
1960	1,639,056	-951,865	-36.74	-4.5

TABLE 48. DETAILED INDUSTRY OF THE EMPLOYED, MICHIGAN, 1960

Industry	Number Employed
Agriculture, Forestry, and Fisheries	93,662
Mining	15,340
Construction	125,562
Manufacturing--Durable Goods	818,378
Lumber and Wood Products, Except Furniture	13,709
Furniture and Fixtures	20,719
Primary Metal Industries	71,670
Fabricated Metal Industries (Including Not Specified Metal)	91,780
Machinery, Except Electrical	147,059
Electrical Machinery, Equipment & Supplies	31,695
Transportation Equipment	396,444
Motor Vehicles & Motor Vehicle Equipment	377,163
Aircraft and Parts	7,776
Professional and Photographic Equipment and Watches	11,105
Miscellaneous Manufacturing Industries	16,096
Manufacturing--Nondurable Goods	215,149
Food and Kindred Products	62,382
Paper and Allied Products	29,264
Printing, Publishing & Applied Industries	45,742
Chemicals	40,909
Petroleum and Coal Products	3,526
Rubber and Miscellaneous Plastic Products	17,363
Manufacturing--Not Specified Manufacturing Industries	2,365
Transportation	86,678
Communications	32,032
Utilities	36,878
Wholesale Trade	80,675
Retail Trade	403,343
Food and Dairy Products Stores	74,052
General Merchandise Retailing	53,998
Furniture and Housefurnishings Stores	10,139
Household Appliances, TV & Radio Stores	8,417
Motor Vehicles & Accessories Retailing	35,211
Gasoline Service Stations	28,293
Eating and Drinking Places	74,369
Lumber and Building Material Retailing	17,185
Not Specified Retail Trade	3,397

Industry	Number Employed
Finance, Insurance, and Real Estate	89,556
Banking and Credit Agencies	31,898
Security & Commodity Brokerage & Investment Co.	2,871
Insurance	34,157
Real Estate (Including Real Estate-Insurance-Law Offices)	20,630
Business and Repair Services	61,268
Advertising	7,195
Miscellaneous Business Services	20,839
Automobile Repair Services & Garages	20,374
Miscellaneous Repair Services	12,860
Personal Services	133,958
Private Households	63,632
Hotels and Lodging Places	17,781
Laundering, Cleaning and Dyeing Services	24,279
Barber and Beauty Shops	20,032
Miscellaneous Personal Services	5,544
Entertainment and Recreation Services	17,681
Professional and Related Services	329,920
Medical and Other Health Services, except Hospitals	38,533
Hospitals	79,187
Legal Services	8,288
Educational Services--Government Workers	122,868
Educational Services--Other Workers	29,100
Welfare and Religious Services	22,839
Nonprofit Membership Organizations	10,132
Engineering and Architectural Services	9,966
Accounting, Auditing & Bookkeeping Services	6,358
Miscellaneous Professional & Related Services	2,649
Public Administration	94,837
Postal Service	19,365
Federal Public Administration	20,195
State Public Administration	14,220
Local Public Administration	41,057
Industry Not Reported	89,582
Total Industry Employment	2,726,864

Source: 1960 Census of Population, Volume 1, Characteristics of the Population, Part 24, Michigan, Table 127, pp 24-587 - 24-588.

TABLE 49. OCCUPATIONAL COVERAGE OF NONFARM WAGE AND SALARIED EMPLOYMENT, MICHIGAN, 1960

Occupation	Number Employed
Professional, Technical and Kindred Workers	312,590
Accountants and Auditors	18,948
Clergymen	7,308
Draftsmen	14,743
Engineers, Technical	43,803
Aeronautical	504
Civil	5,084
Electrical	5,623
Industrial	5,798
Mechanical	15,270
Not Elsewhere Classified	4,864
Natural Scientist	4,862
Nurses, Professional	23,483
Personnel and Labor Relation Workers	4,899
Physicians and Surgeons	9,561
Professors and Instructors (College)	8,308
Social & Welfare Workers, Except Group	4,286
Teachers	68,698
Technicians, Medical and Dental	5,595
Technicians, Electrical & Electronic	2,048
Electronic Technicians (D.O.T. 0-67-.110)	
Technicians, Other Eng. & Physical Sciences	9,556
Technicians (N.E.C.)	2,662
Professional, Technical & Kindred (N.E.C.)	14,105
Farmers and Farm Managers	60,074
Managers, Officials, & Proprietors, Except Farm	200,022
Buyers & Department Heads, Store	9,584
Officials & Adminis. (N.E.C.), Public Adminis.	6,671
Purchasing Agents & Buyers (N.E.C.)	5,198
Managers, Officials & Prop. (N.E.C.), Salaried	96,567
Managers, Officials & Prop. (N.E.C.), Self-Employed	71,441
All Other	10,561
Clerical & Kindred Workers	379,592
Bookkeepers	33,980
Cashiers	19,509
Secretaries	54,769
Shipping and Receiving Clerks	11,248
Stenographers	10,979
Stock Clerks & Storekeepers	17,410
Ticket, Station & Express Agents	2,105
Typists	21,182
Clerical & Kindred Workers (N.E.C.)	124,672

Occupation	Number Employed
Sales Workers	202,416
Advertising Agents and Salesmen	1,495
Insurance Agents, Brokers & Underwriters	13,171
Real Estate Agents & Brokers	7,754
Salesmen and Sales Clerks	160,097
Stock and Bond Salesmen	940
All Others (Auctioneers, Demonstrators, Hucksters & Peddlers, Newsboys)	18,959
Craftsmen, Foremen and Kindred Workers	420,094
Carpenters	25,713
Compositors and Typesetters	6,658
Cranemen, Derrickmen, and Hoistmen	7,787
Electricians	15,967
Excavating, Grading & Road Machine Operators	5,847
Foremen (N.E.C.)	60,179
Machinists	20,015
Mechanics and Repairmen	108,670
Automobile	37,488
Radio and Television	3,635
Not Elsewhere Classified	61,206
Painters, Construction & Maintenance	11,412
Plumbers and Pipe Fitters	13,051
Stationary Engineers	10,739
Tinsmiths, Coppersmiths & Sheet Metal Workers	6,082
Toolmakers and Die Makers & Setters	35,628
Craftsmen & Kindred Workers (N.E.C.)	4,338
Operatives and Kindred Workers	606,417
Apprentices	4,745
Assemblers	63,350
Attendants, Auto Service & Parking	15,506
Bus Drivers	6,184
Checkers, Examiners & Inspectors, Mfg.	39,250
Deliverymen and Routemen	18,642
Filers, Grinders & Polishers, Metal	26,162
Mine Operatives & Laborers (N.E.C.)	7,527
Operatives, Fabricated Metal Industries	22,358
Packers & Wrappers (N.E.C.)	16,721
Painters, Except Construction & Maintenance	10,985
Taxicab Drivers and Chauffeurs	6,533
Truck and Tractor Drivers	65,347
Welders and Flame-Cutters	29,422
Operatives & Kindred Workers (N.E.C.)	237,023
Private Household Workers	58,651

Occupation	Number Employed
Service Workers, Except Private Household	236,427
Attendants, Hospital & Other Institutions	18,395
Cooks, Except Private Household	20,301
Hairdressers and Cosmetologists	12,020
Janitors & Sextons	30,965
Protective Service Workers	30,700
Waiters and Waitresses	37,296
Service Workers, Except Private Household (N.E.C.)	6,806
Farm Laborers and Foremen	25,283
Laborers, Except Farm and Mine	109,273
Occupation Not Reported	116,025
Total Employed	2,726,864

Source: 1960 Census of Population, Volume 1, Characteristics of the Population, Part 24, Michigan, Table 120, p 474.

TABLE 50. DETAILED INDUSTRY OF THE EMPLOYED, DETROIT, 1960

Industry	Number Employed
Agriculture, Forestry, and Fisheries	7,453
Mining	957
Construction	53,588
Manufacturing--Durable Goods	447,892
Lumber and Wood Products, Except Furniture	1,529
Furniture and Fixtures	2,903
Primary Metal Industries	35,409
Fabricated Metal Industries (Including Not Specified Metal)	49,360
Machinery, Except Electrical	80,290
Electrical Machinery, Equipment & Supplies	10,278
Transportation Equipment	252,487
Motor Vehicles & Motor Vehicle Equipment	246,451
Aircraft and Parts	3,334
Professional and Photographic Equipment and Watches	2,639
Miscellaneous Manufacturing Industries	5,230
Manufacturing--Nondurable Goods	92,080
Food and Kindred Products	27,428
Paper and Allied Products	3,872
Printing, Publishing & Applied Industries	25,449
Chemicals and Applied Products	17,706
Petroleum and Coal Products	1,771
Rubber and Miscellaneous Plastic Products	9,982
Manufacturing--Not Specified Manufacturing Industries	1,446
Transportation	43,486
Communications	16,621
Utilities and Sanitary Services	19,085
Wholesale Trade	42,917
Retail Trade	195,638
Food and Dairy Products Stores	36,159
General Merchandise Retailing	32,763
Furniture and Housefurnishings Stores	4,927
Household Appliances, TV & Radio Stores	3,518
Motor Vehicles & Accessories Retailing	15,661
Gasoline Service Stations	11,731
Eating and Drinking Places	36,551
Lumber and Building Material Retailing	6,846
Not Specified Retail Trade	1,522

Industry	Number Employed
Finance, Insurance, and Real Estate	51,011
Banking and Credit Agencies	17,449
Security & Commodity Brokerage & Investment Co.	1,941
Insurance	19,194
Real Estate (Including Real Estate-Insurance-Law Offices)	12,427
Business and Repair Services	35,536
Advertising	5,750
Miscellaneous Business Services	13,284
Automobile Repair Services & Garages	9,980
Miscellaneous Repair Services	6,522
Personal Services	63,620
Private Households	28,890
Hotels and Lodging Places	6,697
Laundering, Cleaning and Dyeing Services	13,845
Barber and Beauty Shops	10,370
Miscellaneous Personal Services	2,476
Entertainment and Recreation Services	9,980
Professional and Related Services	146,347
Medical and Other Health Serv., Except Hospitals	17,863
Hospitals	35,643
Legal Services	4,719
Educational Services	60,701
Government Workers	47,775
Other Workers	12,926
Welfare and Religious Services	10,089
Nonprofit Membership Organizations	5,250
Engineering and Architectural Services	6,763
Accounting, Auditing & Bookkeeping Services	3,752
Miscellaneous Professional & Related Services	1,567
Public Administration	49,782
Postal Service	9,851
Federal Public Administration	12,417
State Public Administration	3,473
Local Public Administration	24,041
Industry Not Reported	51,296
Total Industry Employment	1,328,735

Source: 1960 Census of Population, Volume 1, Characteristics of the Population, Part 24, Michigan, Table 127, pp 24-587.

TABLE 51. OCCUPATIONAL COVERAGE OF NONFARM WAGE AND SALARIED EMPLOYMENT, DETROIT, 1960

Occupation	Number Employed
Professional, Technical and Kindred Workers	160,892
Accountants and Auditors	11,592
Clergymen	2,614
Draftsmen	9,831
Engineers, Technical	27,594
Aeronautical	286
Civil	2,454
Electrical	3,201
Industrial	3,509
Mechanical	11,149
Not Elsewhere Classified	2,834
Natural Scientists	1,913
Nurses, Professional	10,303
Personnel and Labor Relations Workers	2,995
Physicians and Surgeons	5,280
Professors and Instructors (College)	1,839
Social & Welfare Workers, Except Group	2,268
Teachers	33,012
Technicians, Medical and Dental	2,820
Technicians, Electrical & Electronic	1,273
Electronic Technicians (D.O.T. 0-67.110)	
Technicians, Other Eng. & Physical Sciences	5,291
Technicians (N.E.C.)	925
Professional, Technical & Kindred (N.E.C.)	7,231
Farmers and Farm Managers	2,810
Managers, Officials, & Proprietors, Except Farm	95,834
Buyers & Department Heads, Store	5,276
Officials & Adminis. (N.E.C.), Public Adminis.	2,552
Purchasing Agents & Buyers (N.E.C.)	3,060
Managers, Officials & Prop. (N.E.C.), Salaried	49,104
Managers, Officials & Prop. (N.E.C.), Self-Employed	30,357
All Other	5,485
Clerical and Kindred Workers	209,314
Bookkeepers	15,893
Cashiers	9,921
Secretaries	29,891
Shipping and Receiving Clerks	5,909
Stenographers	6,263
Stock Clerks & Storekeepers	9,312
Ticket, Station & Express Agents	1,096
Typists	13,338
Clerical & Kindred Workers (N.E.C.)	71,591

Occupation	Number Employed
Sales Workers	107,308
Advertising Agents and Salesmen	876
Insurance Agents, Brokers & Underwriters	7,092
Real Estate Agents & Brokers	4,266
Salesmen and Sales Clerks	83,538
Stock and Bond Salesmen	575
All Other (Auctioneers, Demonstrators, Hucksters & Peddlers, Newsboys)	10,961
Craftsmen, Foremen and Kindred Workers	210,103
Carpenters	9,050
Compositors and Typesetters	3,186
Cranemen, Derrickmen and Hoistmen	4,374
Electricians	8,157
Excavating, Grading & Road Machine Operators	1,985
Foremen (N.E.C.)	30,667
Machinists	8,116
Mechanics and Repairmen	53,730
Automobile	19,542
Radio and Television	1,686
Not Elsewhere Classified	29,497
Painters, Construction & Maintenance	5,515
Plumbers and Pipe Fitters	6,581
Stationary Engineers	5,951
Tinsmiths, Coppersmiths & Sheet Metal Workers	3,237
Toolmakers and Die Makers & Setters	22,584
Craftsmen & Kindred Workers (N.E.C.)	2,389
Operatives and Kindred Workers	284,141
Apprentices	2,675
Assemblers	31,303
Attendants, Auto Service & Parking	6,643
Bus Drivers	3,059
Checkers, Examiners & Inspectors, Mfg.	19,098
Deliverymen and Routemen	9,672
Filers, Grinders & Polishers, Metal	14,791
Mine Operatives & Laborers (N.E.C.)	193
Operatives, Fabricated Metal Industries	11,239
Packers & Wrappers (N.E.C.)	7,320
Painters, Except Construction & Maintenance	4,698
Taxicab Drivers and Chauffeurs	4,406
Truck and Tractor Drivers	29,024
Welders and Flame-Cutters	15,200
Operatives & Kindred Workers (N.E.C.)	107,981
Private Household Workers	27,111

Occupation	Number Employed
Service Workers, Except Private Household	114,937
Attendants, Hospital & Other Institutions	8,433
Cooks, Except Private Household	8,405
Hairdressers and Cosmetologists	6,303
Janitors and Sextons	15,206
Protective Service Workers	17,390
Waiters and Waitresses	17,119
Service Workers, Except Private Household (N.E.C.)	2,998
Farm Laborers and Foremen	2,040
Laborers, Except Farm and Mine	51,328
Occupation Not Reported	62,917
Total Employed	1,328,735

Source: 1960 Census of Population, Volume 1, Characteristics of the Population, Part 24, Michigan, Table 121, p 486.

TABLE 52. MAJOR OCCUPATION OF THE EMPLOYED, BY INDUSTRY, MICHIGAN, 1960

	Agriculture, Forestry & Fisheries	Mining	Construction	Manufacturing	Transportation	Communications	Utilities	Wholesale Trade	Retail Trade
Professional, Technical & Kindred Workers	1,314	711	6,383	81,471	1,469	3,223	3,600	2,285	7,078
Managers, Officials & Prop., Incl. Farm	60,698	652	13,392	41,496	7,003	2,435	1,504	14,270	69,451
Clerical & Kindred Workers	759	731	6,534	116,466	14,420	15,592	8,298	16,839	46,712
Sales Workers	319	77	635	35,480	689	716	513	19,801	116,831
Craftsmen, Foremen & Kindred Workers	550	3,807	67,838	233,110	12,245	8,587	12,857	5,370	32,484
Operatives & Kindred Workers	1,479	8,860	11,603	443,953	41,692	403	5,118	16,281	41,055
Service Workers, Incl. Private Household	209	251	675	21,640	2,552	518	714	688	68,458
Laborers, Incl. Farm	28,287	-0-	17,619	44,842	5,796	121	3,616	3,900	16,518
Occupation Not Reported	47	251	883	17,434	812	437	658	1,241	4,756
Total Employment	93,662	15,340	125,562	1,035,892	86,678	32,032	36,878	80.675	403,343

	Finance, Insurance & Real Estate	Business & Repair Services	Personal Services	Entertainment and Recreation Services	Professional and Related Services	Public Administration	Industry Not Reported	Total Industry Employment
Professional, Technical & Kindred Workers	2,402	4,403	3,368	2,949	179,904	11,202	828	312,590
Managers, Officials & Prop., Incl. Farm	13,768	7,073	7,036	2,745	7,923	9,966	684	260,096
Clerical & Kindred Workers	41,886	10,853	7,072	2,088	49,744	40,666	932	379,592
Sales Workers	22,098	2,256	764	516	948	146	627	202,416
Craftsmen, Foremen & Kindred Workers	1,608	20,589	3,495	1,355	9,855	5,423	921	420,094
Operatives & Kindred Workers	448	7,790	17,815	356	6,143	2,248	1,173	606,417
Service Workers, Incl. Private Household	5,026	4,111	90,425	6,545	71,087	21,492	687	295,078
Laborers, Incl. Farm	1,379	3,588	2,935	838	1,576	2,302	1,239	134,556
Occupation Not Reported	941	605	1,048	289	2,740	1,392	82,491	116,025
Total Employment	89,556	61,268	133,958	17,681	329,920	94,837	89,582	2,726,864

Source: 1960 Census of Population, Volume 1, Characteristics of the Population, Part 24, Michigan, Table 125, p 555.

TABLE 53. MAJOR OCCUPATION OF THE EMPLOYED, BY INDUSTRY, DETROIT, 1960

	Agriculture, Forestry & Fisheries	Mining	Construction	Manufacturing	Transportation	Communications	Utilities	Wholesale Trade	Retail Trade
Professional, Technical & Kindred Workers	292	51	2,815	52,039	894	1,885	1,998	1,575	3,977
Managers, Officials & Prop., Incl. Farm	3,045	157	6,391	22,288	3,500	1,164	614	7,145	30,210
Clerical & Kindred Workers	189	96	3,380	68,334	8,662	8,006	4,260	9,775	24,239
Sales Workers	114	29	341	21,766	458	450	255	11,179	57,810
Craftsmen, Foremen & Kindred Workers	143	343	27,959	126,425	5,488	4,301	6,649	2,843	14,759
Operatives & Kindred Workers	231	268	4,277	210,410	20,079	283	2,578	7,451	19,605
Service Workers, Incl. Private Household	80	8	314	12,003	1,336	284	382	384	34,684
Laborers, Incl. Farm	3,352	-0-	7,767	20,455	2,724	56	2,027	1,886	8,411
Occupation Not Reported	7	5	344	7,698	345	192	322	679	1,943
Total Employment	7,453	957	53,588	541,418	43,486	16,621	19,085	42,917	195,638

	Finance, Insurance & Real Estate	Business & Repair Services	Personal Services	Entertainment and Recreation Services	Professional and Related Services	Public Administration	Industry Not Reported	Total Industry Employment
Professional, Technical & Kindred Workers	1,476	3,084	1,425	1,817	81,141	6,069	354	160,892
Managers, Officials & Prop., Incl. Farm	7,725	4,199	2,961	1,329	3,600	4,049	267	98,644
Clerical & Kindred Workers	23,833	7,403	4,175	1,381	23,710	21,397	474	209,314
Sales Workers	12,067	1,338	418	267	479	69	268	107,308
Craftsmen, Foremen & Kindred Workers	1,120	9,656	1,663	793	4,591	2,981	389	210,103
Operatives & Kindred Workers	265	4,386	9,582	232	2,728	1,299	467	284,141
Service Workers, Incl. Private Household	3,477	2,819	42,032	3,632	28,355	11,932	326	142,048
Laborers, Incl. Farm	594	2,292	899	363	672	1,238	632	53,368
Occupation Not Reported	454	359	465	166	1,071	748	48,119	62,917
Total Employment	51,011	35,536	63,620	9,980	146,347	49,782	51,296	1,328,735

Source: 1960 Census of Population, Volume 1, Characteristics of the Population, Part 24, Michigan, Table 125, p 561.

Requests for copies of this paper should be addressed to:

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Michigan Department of Commerce
208 E. Michigan Avenue
Lansing, Michigan 48933

VT 008 176
Buckley, Edward P.
Feasibility Study for Aviation Programs at Hudson Valley Community College.

New York State Education Dept., Albany
New York State Univ., N.Y.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 17Jul68 27p.

*FEASIBILITY STUDIES; *AVIATION TECHNOLOGY; AVIATION MECHANICS; AIRCRAFT PILOTS; *ASSOCIATE DEGREES;
*EDUCATIONAL PROGRAMS; *COMMUNITY COLLEGES
*HUDSON VALLEY COMMUNITY COLLEGE; NEW YORK

This study considered the feasibility of establishing associate degree curriculums for commercial pilots, maintenance personnel, and airline stewardesses by assessing the employment needs for such personnel and student interest in such training. Data were collected by interview, questionnaires, phone calls, and conferences from fixed base operators, airline representatives, corporation officers, high school counselors and teachers, college personnel involved in current aviation programs, Federal Aviation Agency representatives, and members of the state department of transportation. Some general findings were: (1) The increased aviation employment demand will continue through 1980, (2) Numbers of students and job vacancies justify an associate degree pilot's program, (3) The demand far exceeds the supply of aviation mechanics, (4) Airline stewardess applications exceed the demand, and (5) No junior college program exists in the northeastern states for pilots or stewardesses. Recommendations are: (1) the creation of a department of aviation, (2) the offering of an associate degree for pilots, (3) the deferral of organizing a mechanics program until after the department is created, and (4) the offering of aviation courses on an elective basis for all students. (EM)

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FEASIBILITY STUDY

for

Establishment of Aviation Training Programs at

HUDSON VALLEY COMMUNITY COLLEGE

- Pilot Training
- Aircraft Mechanic
- Airline Stewardess

Sponsored by

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VT 008176

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FEASIBILITY STUDY FOR AVIATION PROGRAMS AT HUDSON VALLEY COMMUNITY COLLEGE

SUBJECT

A survey of present and future employment opportunities in the aviation industry and the feasibility of offering training programs for this type of employment at Hudson Valley Community College on the Associate Degree level.

PREPARED BY

Edward P. Buckley, Associate Professor of Air Conditioning Technology and Chairman, Pre-Technical Program. Hudson Valley Community College, Troy, New York.

DATE

July 17, 1968

Funds for this project were provided by Section 4 (a) of the Vocational Education Act of 1963. Administered by the New York State Education Department.

June 12, 1968

TO: MR. BUCKLEY

FROM: PRESIDENT FITZGIBBONS

Hudson Valley Community College is totally committed to the concept of its mission as a comprehensive community agency with a mandate for immediate response to developing and changing community needs. Consistent with this position it is ever alert to explore new areas of service to the supporting constituency; e.g., new curriculums, participation in area studies, coordination and implementation of regional developments.

Expected developments of airport facilities in Rensselaer County would certainly give thrust and impetus to critical review of the needs for an aviation curriculum at this college. Such a study, of course, would require adequate supporting documentation, and the involvement of the several appropriate sectors of education both at Hudson Valley Community College and to higher authority residing in State University of New York and the State Education Department.

PART I. INTRODUCTION

The aviation industry is the largest, non agrarian employer of people in the United States.[1] This includes manufacturing, transportation of freight and passengers, and all of the supporting industries. 1,400,000 persons were employed by this industry at the end of 1966 and it is estimated that employment will double in the next ten year period based on the present growth rate.[2] In view of this, it is appropriate that consideration be given to the establishment of aviation curricula at the community college level to provide training for young persons who desire to become associated with the aviation industry and to reap the social and economic benefits derived from association with this dynamic and rapidly expanding industry.

Scope and Delineation.

The purpose of this study is to consider the feasibility of establishing curricula on the associate degree level for commercial pilots, maintenance personnel and airline stewardesses. The justification for these curricula will be based on a statewide need for these persons rather than on a county-wide need. A second justification will be based on the desire of young people living in the area to obtain this training.

Methodology.

Information for this report was obtained from several sources, including fixed base operators, local representatives

of airlines operating in New York State, officers of corporations using aircraft in their operations, high school guidance counselors, high school vocational teachers, college personnel presently offering aviation training programs, local representatives of the Federal Aviation Agency (F.A.A.), and members of the New York State Department of Transportation. Contacts were made by personal interview, letters with questionnaires, telephone calls and conferences. This writer also attended the aviation briefing for community colleges held at Kansas City, Mo., on April 1, 2, 3, 1968. This conference was sponsored by the Metropolitan Junior College of that city and cosponsored by the Link Foundation. Two hundred fifty-eight persons attended this conference of which 150 were college faculty, and the remainder were aviation industry personnel, members of the Federal Aviation Agency, and members of various state aeronautics commissions. This conference provided an excellent source of material for this report and presented the opportunity to learn what leaders of other two-year colleges in this country are doing or contemplating.

Included in this report are the results of a survey conducted prior to the initiation of this study. This prior survey consisted of a questionnaire sent to twenty-five high school guidance counselors throughout New York State and is self explanatory.

PART II. BASIC STUDY

Sub part I. - COMMERCIAL PILOTS

A. Existing Sources of Trained Commercial Pilots.

At the present time, a person wishing to make piloting his career must have at least a commercial pilot license. This is required in any occupation where the person is paid for the service of flying and also in many occupations where flying is carried on as an adjunct to the occupation. To obtain the commercial license, there are three avenues open. The first possibility is for a person to do it on his own. This involves flying for a minimum of 200 hours; about 50 hours of this with a certified instructor, and the remainder by himself in solo practice. The student is also on his own to obtain sufficient information to pass the written examinations for both the private and commercial licenses. It is not necessary to obtain the private license before the commercial, but it is generally done in order to permit the person to legally carry passengers, without compensation, while working for the commercial license.

The second avenue is to obtain the training at an FAA approved flying school. These schools are usually operated by an airport fixed base operator. They are approved by, and under the supervision of, the FAA. The student using this avenue may qualify for a commercial license with 160 hours of dual and solo flight. In addition, a

ground school may be offered by the school making it easier for the student to obtain information necessary to pass the written tests.

The third avenue is to attend a junior or community college with a commercial pilot training program. Of the three avenues, the third is most preferable, the first is the least preferable, if any significant number of pilots are going to be trained. The first method would probably be the most expensive, and the least desirable from the standpoint of quality. Its only advantage is its universality, since anyone with access to an airplane and an instructor may embark on such a program. Lack of supervision on such a program tends to produce wide variations in the quality of the finished product, the pilot.

The second avenue, the approved flying school run by a fixed base operator or an airport flying school, has several advantages. The training is more organized, follows a syllabus published by the FAA, and because of the reduction in pilot hours required is usually less expensive than the first avenue. The disadvantage of these schools is that there are not enough of them to handle the anticipated demand for training, and most of them are located around large metropolitan airports already overcrowded with traffic. As of January 1967 there were 38 such schools in New York State, with only 15 of these offering the ground school for commercial pilots.[3] Another disadvantage of these schools is that

they are only marginally profitable for the operator, compared with other services being offered, hence the school function is frequently subordinated, or curtailed in favor of other more profitable services such as charter flights. Also, since the quality of instruction is a function of the integrity of the operator, there is a wide variation in the quality of the finished product, the pilot.

The third avenue is by far the most desirable for a number of reasons; the student is in a college atmosphere, which is conducive to academic success. Ground school courses necessary for passing written tests are offered by the college. In addition, the student is associated with other students and faculty who are aviation minded. This promotes esprit de corps which reinforces the learning process. While there are several ways for a college to arrange for the student flight training, all of them allow some degree of supervision, hence the quality of instruction is enhanced and the finished product is on the average, superior.

B. Present Need for Commercial Pilots.

A commercial pilot may find employment in the following areas: airlines, corporations owning aircraft, charter work, air taxi work, flight instruction, agricultural work, conservation department work, airplane sales and there are many openings for pilots with the FAA both in flying and non-flying categories.

At the present time, the supply is about equal to the demand. There is no shortage of commercial pilots,

but on the other hand, almost anyone with a commercial license can obtain some type of piloting work provided other qualifications are met. Commercial pilots with less than 1200 hours may find it difficult to obtain an adequate salary from their flying. The reason for this is that most insurance companies specify 1200 hours or more time for flight in twin engine retractable gear aircraft. As a result, most new pilots are restricted to jobs where they can fly single engine, fixed gear aircraft. The most common of these jobs are the flight instructor and passenger hopper. After the 1200 hour point is reached, the pilot is eligible for a better position.

The so called airline pilot shortage which received so much publicity in 1966 was in reality only a technical shortage. The policy of the airlines is to require high pilot time and many additional ratings over the commercial license. Their actual requirements vary from time to time, and are based on supply and demand. Some airlines require over 2000 hours, instrument, multi-engine ratings and some jet time. Naturally, there will always be a shortage of pilots with these qualifications. Other airlines are more liberal. TWA has a policy where they will consider anyone with a commercial license and an instrument rating.

C. Future Needs for Commercial Pilots.

If the size of the aviation industry is to double, as predicted, in the next ten years, the demand for com-

mercial pilots will far exceed the supply unless some organized effort is made to increase the supply. While the airlines expect to increase their pilot requirements by 75%, an increase of 30,000 new pilots, the opportunities for pilots employed in general aviation will increase by 300%. This general aviation increase represents an increase of 150,000 new commercial pilot jobs. Among the factors accounting for this increase is a major change by the post office of first class mail from railroads to airplanes. This work is being contracted out to fixed base operators and most of the deliveries are made at night. This requires no increase in the number of aircraft, but has substantially increased the number of pilots employed. Another reason for the increase in general aviation pilots is the large number of businesses and corporations that are changing their basic mode of transportation from automobiles and scheduled airlines to their own aircraft.

Another future employment area for pilots will be as aviation education teachers in primary and secondary schools. Just as driver education is now universally taught in our high schools, aviation education will be taught in the future. This is already being done in 181 high schools throughout the country. Kansas, California, Nebraska, Ohio and Washington are the leaders in this type of education at the high school level.[5] Aviation education is being introduced in the primary grades via science and math courses in Arizona, California, Montana, Ohio, Oklahoma and Tennessee.[5] Graduates of

the two-year colleges will require further education in order to be qualified as high school teachers; hence, transfer programs should be set up with the four year schools of the State University so that these students may continue their education beyond the associate degree level.

D. Justification for Implementation of Commercial Pilot Training Programs.

The implementation of a curriculum for training commercial pilots certainly cannot be justified on the basis of the job opportunities in this county, or even in the capital district. However, on a statewide basis there are many opportunities. The biggest justification for a program like this is to fill the requests of potential students. Telephone calls to high school guidance counselors indicate that most of them are getting serious inquiries from students who are interested in entering the aviation field as pilots. If there were only one person per year from each high school in the capital district who desired this training it would be more than enough to begin such a program. The statewide questionnaire, sent out in 1966, also indicates that there is sufficient demand statewide to implement such a program. Further justification for a program can be made by virtue of the fact that once a department is set up, it can offer various amounts of training to all students on the campus who desire it. A liberal arts student might elect to

take an aviation survey course, or a student planning on a sales career might take enough training to obtain a private license. Most schools now giving pilot training give credit for flying at the rate of one semester hour credit for each fifteen hours of flight time, either dual or solo.

E. Method of Implementation and Facilities Required.

A program for commercial pilot training could be implemented at this school with little or no increase in facilities. The flight instruction could be contracted out to a local fixed base operator who would be solely responsible for the flight training. Present classroom and laboratory space could be utilized for the non flying portions of the curriculum. Faculty could be recruited from high school and college teachers who hold pilots licenses.

A second approach would be for the college to own or lease the airplanes, hire instructors, and charge the students a lab fee for the flight instruction. State Education law would have to be checked to see if such a lab fee were legal. This would be the most desirable from the standpoint of education, since it would give the school complete control over the flight instruction. Administered properly, it would also result in the lowest cost to the student provided no profit were realized.

There is only one high expense item recommended for early purchase in the ground school, that is the flight

simulator. With this device, some of the required flight instruction time can be given on the ground. Originally intended to give a simulation of instrument flight conditions, it is now being used for training both in instrument conditions and ordinary conditions known as visual flight rules (VFR). Other items such as mock ups and working models of aircraft systems could be purchased or built at the school as the need for these items developed.

Subpart II. AVIATION MECHANICS

A. Existing Sources of Trained Aviation Mechanics.

At present, the majority of licensed air frame and power plant mechanics come from two sources.

1. Persons who receive their training through an apprentice program which gives them the necessary experience requirements and prepares them for the FAA examination.
2. Persons who receive their training through FAA approved A & P schools.

FAA approved schools can be found in the proprietary type school and in two-year colleges. Of the latter, some grant the associate degree while others give a certificate.

B. Present Needs for Licensed A & P Mechanics.

The present need for licensed A & P mechanics far exceeds the supply. While interviewing fixed base operators in this area, each one said he would hire more mechanics if they were available. The airlines also feel this shortage but since they are unionized and pay higher wages, they have less difficulty in finding personnel. Wherever an airline operates a maintenance base, the local fixed base operator has difficulty obtaining personnel unless he is competitive with the airlines, which pay a starting wage of about $4.00 per hour. In many of the airports in the middle sized cities, it is difficult to get maintenance work done because of the shortage of mechanics.

Fixed base operators believe this is due to the lack of glamour in the job. Parents are reluctant to encourage their sons to enter a "grease monkey" type of profession. What they are unaware of are the rewards involved in this work. It is interesting and challenging, is not overly dirty, since aircraft must be maintained on regular schedules mandated by the FAA, and can be very remunerative for a capable person. One fixed base operator in this area pays his foreman mechanic $20,000 per year.

C. Future Needs - A & P Mechanics.

It is estimated that the airlines will need 90,000 new mechanics in the next years and general aviation will need 120,000 new mechanics in the same period.

D. Justification for Programs - A & P Mechanics.

While there is no doubt that a shortage of trained personnel exists, there is some doubt as to the demand by students for this type of training. Demand could be increased with some publicity by the industry calling to the attention of the public the need for such trained personnel. Another problem in justifying an A & P mechanic program is the cost of setting it up and the amount of space required. A program of this type leans heavily on shop work and up-to-date aircraft components. As in all shop courses, the usual rules for floor area per student apply. At present there is no such space available at this school; hence the program could not be implemented until such space became available.

E. Implementation of Programs - A & P Mechanics.

As mentioned in the preceding section, such a program could be implemented but would require adequate shop space, modern aircraft components for the shop and qualified instructors. The instructors should be licensed A & P mechanics with additional training in education. Men with degrees would be desirable, but may be hard to find with the A & P license. Non-shop courses could be given in existing classrooms.

An alternate to this approach would be to run a cooperative plan where the student receives his shop training while working on the job for a fixed base operator or an airline. This would eliminate the need for shop space and components and would enable the students to get their training on the most modern types of aircraft. It is common knowledge that shop components in aviation become obsolete quickly because of rapid advances in the industry. There are problems involved in this cooperative approach. Unions oppose it because it would involve the introduction of non union men in their shops. Since most airline mechanics work in union shops, airline participation is doubtful. Fixed base operators are also reluctant to become involved. Page Airways of Albany expressed fear of adverse customer reaction and loss of business if unlicensed mechanics were used in their operation.

Much high level negotiation with both union and management will be necessary before any cooperative program can be implemented.

Subpart III. AIRLINE STEWARDESSES

A. Existing Sources of Trained Airline Stewardesses.

There are three sources of trained personnel for airline stewardesses.

1. Proprietary schools which offer this training. Courses generally run about six weeks and are quite expensive considering the amount of training received.
2. A few junior colleges and aeronautical institutes offer training in this field. The junior colleges usually include it in an associate degree program.
3. Each airline arranges for its own stewardess training. The extent of this training varies all the way from a complete college campus and multiple building complex operated by American Airlines on down to minimal facilities on some of the smaller airlines. Some arrange to have their girls trained by other airlines on a contract basis. Present airline policy does not encourage attendance at either proprietary schools or junior college stewardess schools. Each airline arranges for the training of all girls hired, regardless of prior training received.

B. Present Needs for Airline Stewardesses.

The present demand for stewardesses is far exceeded by the number of applicants. The reason for this is the image attached to the job. Mohawk airlines has fifty applicants for each girl hired. Most girls don't even ask how much they will be paid. American hires one out of forty applicants. Their stewardesses only stay on the job an average

of one and one-half years. TWA stewardesses stay on the job an average of two years. American is presently hiring 800 girls per year. Mohawk is presently hiring 200 girls per year. Nationally, 26,000 stewardesses are employed, and 10,000 are needed annually for replacements. The other large airlines, such as TWA, United, and Eastern, are hiring numbers similar to American, and the smaller airlines hiring patterns are similar to Mohawk. Mohawk pays $425 per month to start.

C. Future Needs -- Airline Stewardesses.

American expects its hiring rate to increase to a maximum of 1400 per year in ten years. After that the picture is cloudy. There is some doubt that stewardesses will be required on supersonic airplanes since the maximum stage length will only be two and one-half hours. Mohawk expects its hiring rate for stewardesses to increase at the rate of 20% per year into the forseeable future. Since this type of employment is peculiar to the airline industry, opportunities for employment are limited to this industry.

D. Justification for Programs - Airline Stewardesses.

Little justification exists for implementing an airline stewardess training program. None of the airlines contacted expressed any interest in graduates of such a program. The reaction being, "We have to train them anyway," and "your graduates would get no more consideration than any other applicant." In view of the 50 to 1 ratio of applicants to hirees given to Mohawk Airlines, placing graduates of such a program might present problems. What the airlines do recommend is a two-year liberal arts type program with

several courses in aviation. Mt. San Antonio College, Walnut, California has such a program and reports that it is successful with 90% of its graduates placed in airline stewardess jobs. No attempt is made to screen the entering students, but a continual effort to "bring them up to airline standards" is made during the two-year program. This accounts for the high acceptance rate. A case history was cited at the Aviation Briefing Conference of a girl who weighed 150 pounds and was quite unattractive. This girl was transformed during the two-year program to the extent that she was hired by an airline as a stewardess upon graduation. Rangely College in Colorado operates a two-year airline stewardess training program. The college policy is to screen the girls prior to their acceptance on the basis of what type of girl the airlines are interested in hiring. The program is basically liberal arts with special instruction in speech, a foreign language, psychology, poise, personality development and grooming.

PART III. CONCLUSIONS

1. The aviation industry is on the threshold of a "quantum leap" that began in 1965 and will continue to at least 1980.

2. Personal transportation in the future will be limited to the automobile and aircraft. Other forms of personal surface transportation will diminish, unless some means of obtaining higher surface speeds is obtained.

3. No organized attempt has been made to provide training for the coming generation of students who will fill the jobs created by the "quantum leap" of the aviation industry.

4. There is a sufficient number of students from the capital district area, and a sufficient number of jobs in New York State to justify a two-year associate degree pilot training program.

5. The demand for aviation A & P mechanics far exceeds the supply and the future outlook is for the situation to become worse. Several problems including adequate shop space, trained teaching personnel for shop courses and the question of whether to run such a program on the vocational level or the technical level in an associate degree program, would have to be worked out before implementing such a program.

6. The demand for airline stewardesses is exceeded by the number of girls applying for these jobs. While the number of these jobs will increase in the future because of airline growth, no shortage of applicants is expected. The community college can perform a service in this area by providing a general type of training for girls interested in this occupation.

7. There are approximately 20 junior colleges in the United States offering programs in commercial pilot training. There are a similar number that offer programs for training aviation mechanics. Five are known to offer some form of training for airline stewardesses. As of the time this report is written, there are no junior colleges in New York State or in the Northeastern section of the country that offer pilot training or any form of training for girls who desire to work for the airlines. Anyone from this area who desires junior college training in these fields is forced to attend school a considerable distance from home. The Academy of Aeronautics, located at La Guardia Field, does offer a program in aircraft maintenance technology, but the cost of attending this school is much higher than that of a junior college. A few technical institutes in New England also offer aircraft mechanics programs, but the cost of attending these schools is much higher than the cost of attending a junior college.

PART IV. RECOMMENDATIONS

1. It is recommended that a department of aviation be created at Hudson Valley Community College.

2. It is recommended that an associate degree program in commercial pilot training be offered by the department of aviation.

3. It is recommended that any mechanic training program be deferred until after the department of aviation is organized and until the problems mentioned in the conclusion are resolved.

4. It is recommended that the department of aviation offer aviation courses to all students of the college on an elective basis. In this way, programs for training students for positions in airline management, fixed base operation, airline stewardesses, and many other aviation occupations could be provided as required.

The following is a list of persons and organizations contacted by telephone, mail, or in person during the course of this study.

R. K. Alexander - Aviation Consultant, N.Y.S. Department of Transportation

Steward Angle - Head, Aviation Department, Mt. San Antonio College, California

Harold Buker - President, Buker Airways, Springfield, Vermont

Andrew Deas - Corporate Pilot, General Electric Company, White Plains, New York

Patricia Giles (Mr.) - Supervisor, Stewardess Training, TWA, Kansas City, Missouri

Walter Glass - President, Industrial Flight Service, Schenectady, New York

Gus Hamm - Manager, Cape Aircraft Company, Glens Falls, New York

John Heaton - Airport Manager and President, Yankee Airlines, Pittsfield, Massachusetts

Jack Hunt - President, Embry Riddle Aeronautical Institute, Florida

Harve L. Larch - Albany District Sales Manager, American Airlines

Walter J. Koladza - President, Berkshire Aviation Enterprises, Great Barrington, Massachusetts

George Mehalis - Director, Technical-Vocational Studies, Miami Dade Junior College, Florida

Allen J. Nogard - Manager, Albany FAA, General Aviation District Office

Charles O'Niel - Manager, Page Airways of Albany

J. F. Rhodes, Capt. - Senior Pilot and Supervisor of Pilot Training, TWA, Kansas City, Missouri

Lewis Roberts - Director of Training, Mohawk Air Lines, Utica, New York

John E. Roberts (Dr.) - President, Rangely College, Colorado

George West - President, Mohawk Valley Aviation Company, North Adams, Massachusetts

High School Guidance Counselors throughout New York State

High School Teachers throughout the Capital District

REFERENCES

. A study to determine the feasibility of establishing a national program for training skilled aviation personnel. Prepared by Arizona State University for the United States Department of Commerce, 1967.

2. Project Long Look. Federal Aviation Agency study of future trends in aviation, 1965.

3. Federal Aviation Agency Advisory Circular AC#140-2C. List of certificated pilot flight schools and ground schools, 1967.

4. Feasibility study for Cochise College, Douglas, Arizona. Prepared by Cessna Aircraft Company, 1966.

5. Aviation Distributors and Manufacturers Association Bulletin, June, 1967.

ADDENDUM

The following sheet shows the results of a mailed questionnaire survey made prior to the beginning of this study. Twenty-five guidance counselors throughout New York State were contacted for this survey. Twenty replies were received. Some comments received with the questionnaire are included here.

"I think the interest and demand would be greater if a program existed. Students haven't thought of this mainly because of the distance to go for training." (Troy, New York)

"Would assume that interest in these programs would increase as more information becomes available." (Poughkeepsie, New York)

"We had four students last year apply for aircraft mechanics apprenticeship at the United Air Apprenticeship school in California. This year we had two seniors apply at Oklahoma State for pilot training and two for aircraft mechanics. Facilities in this area would promote further encouragement." (Endicott, New York)

"The Glens Falls area is serviced by Mohawk Airlines There is considerable expansion this year in service with increased flights, personnel, and number of passengers. There

are indications that this expansion will continue in this area. There is considerable interest in private flying. Many own planes resulting in considerable maintenance work." (Glens Falls, New York)

"While the number of students that we could supply to these programs would be small, it would be well to have an institution of your type sponsor these programs." (Corning, New York)

"Students who are interested in aviation are intensely interested." (Batavia, New York)

"The cost of flight training would only be a minor deterrent if New York State Higher Education Assistance loans were available." (Syracuse, New York)

SURVEY FOR AIRCRAFT MAINTENANCE AND PILOT TRAINING PROGRAM

On the basis of my contacts with high school students seeking vocational and educational guidance, the following opinions are given:

(25 questionnaires sent out -- 20 replies received)

The demand for a commercial pilot training program by students in my area would be:

Small	12 - 60%
Moderate	8 - 40%
Large	0 - 0%

The demand for an aircraft maintenance training program in my area would be:

Small	10 - 50%
Moderate	9 - 45%
Large	1 - 5%

If a student were interested in the pilot training program, the payment of $2,000 to pay for flight instruction would be a:

Major deterrent	14 - 70%
Minor deterrent	5 - 25%
No deterrent	1 - 5%

The students of my high school show:

Considerable interest in aviation	5 - 25%
Small interest in aviation	14 - 70%
No interest in aviation	1 - 5%

In the area that my high school serves, the demand for trained aviation mechanics and pilots is:

Pilots	
Substantial	2 - 10%
Small	10 - 50%
Nil	5 - 25%
Don't know	3 - 15%
Mechanics	
Substantial	3 - 15%
Small	9 - 45%
Nil	5 - 25%
Don't know	3 - 15%

I believe that the best way to finance the flight training in a pilot training program would be:

Let the student pay for it	3 - 15%
Let the school and the student share the cost	7 - 35%
Let the school absorb the cost	0 - 0%
Try to get the prospective employers to pay for it	4 - 20%
A combination of the above	6 - 30%

VT 008 202
Assessment Guidelines for Programs Under the Vocational Education Act of 1963.

Connecticut State Dept. of Education, Hartford. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jan69 21p.

*PROGRAM EVALUATION; *VOCATIONAL EDUCATION; MANUALS; *EVALUATION CRITERIA; QUESTIONNAIRES; *SELF EVALUATION; EDUCATIONAL ADMINISTRATION; PROGRAM IMPROVEMENT; PERFORMANCE CRITERIA
CONNECTICUT

This manual is intended to provide an approach to evaluation of the effectiveness of vocational programs operating under the Vocational Education Act of 1963 and the state plan of Connecticut. It provides a basis for modification and improvement through program evaluation, not through teacher evaluation or the evaluation of specific techniques. The evaluation summarization form is presented along with instructions for using the form. Areas of evaluation for which guidelines are provided include program objectives, advisory committee, occupational objectives, course of study, related instruction, student selection, guidance, physical facilities, equipment, safety instruction, leadership and citizenship, resource materials, resource people, community visits, teacher certification, teacher schedule, student groups, and required reports. (CH)

VT 008 202

ED042060

ASSESSMENT GUIDELINES FOR PROGRAMS UNDER THE VOCATIONAL EDUCATION ACT OF 1963

DIVISION OF VOCATIONAL EDUCATION

CONNECTICUT STATE DEPARTMENT OF EDUCATION

HARTFORD, CONNECTICUT

VT008202

Rev. 1/69

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FOREWORD

Evaluation as a tool of education has been stressed continuously. There is no question in the minds of educators that objectives and techniques alone do not complete the educational process.

This manual is intended to provide an approach to some evaluation of the effectiveness of vocational programs operating under the Vocational Education Act of 1963 and the State Plan of Connecticut. This is not an attempt to evaluate the teacher or the specific techniques used by the teacher. It is felt that the administrative staff of the local school is quite capable of providing necessary evaluation and supervision of teachers.

This instrument seeks to help the local school measure the extent to which it is meeting the objectives of their approved program and the goals set forth in their program proposal.

This instrument is to provide a basis of modification and improvement of programs so that students may be better served. It is to be used as a working instrument rather than a report card; and, as a result of the findings, it is hoped that the quality of vocational education will continue to improve.

INSTRUCTIONS FOR USING THIS MANUAL

A. Evaluation Purpose

The evaluation of programs conducted under the Vocational Educational Act of 1963 is based upon stated goals as set down by local districts with the approval of the State Department of Education, Division of Vocational Education. Evaluation involves value judgements which are arrived at through the use of criteria which have been developed as free from individual subjectivity as possible.

The assessment criteria are not intended to compare one program with another. They enable the local district and the Division of Vocational Education staff members to determine whether the elements which constitute the local program are occupational in nature and do prepare students to gain entry into the labor market. Also, they will enable districts to recognize the strengths and weaknesses of programs, resulting in improved instruction. An evaluation may indicate that a reassessment may be made of the total program.

Therefore, the purposes of this manual for evaluating the VEA programs are to:

1. Assist teachers, teacher-coordinators, and administrators in self-assessment of their VEA program(s).

2. Enable districts to recognize strengths and weaknesses.

3. Identify techniques which have proven effective.

4. Aid in understanding concepts and redirecting objectives.

5. Upgrade instruction with relation to the stated occupational and educational objectives.

6. Assist the personnel of the Division of Vocational Education to identify areas which may need help or assistance toward meeting requirements of the Vocational Education Act of 1963.

7. Aid in establishing criteria for future evaluations.

B. Using the Evaluation Summarization Form

Method of Rating

The rating scale should be used to indicate the over-all quality desired for each item listed on the assessment sheet. All items lend themselves to a rating after the evaluator has observed the instruction and conferred with the students, teachers, and administrators.

[1]

The scale taken from the 1960 Edition of Evaluative Criteria has been chosen because of its familiarity to secondary school educators. Judgements should be based on the effort being exerted to attain the goals and meet the needs of the students enrolled in the specific occupational program.

C. Rating Scale

5 - EXCELLENT	-	the provisions or conditions are extensive and are functioning excellently.
4 - VERY GOOD	-	(a) the provisions or conditions are extensive and are functioning well, OR (b) the provisions or conditions are moderately extensive but are functioning excellently.
3 - GOOD	-	the provisions or conditions are moderately extensive and are functioning well.
2 - FAIR	-	(a) the provisions or conditions are moderately extensive but are functioning poorly OR (b) the provisions or conditions are limited in extent but are functioning well.
1 - POOR	-	the provisions or conditions are limited in extent and functioning poorly; or they are entirely missing but needed.
M - MISSING	-	the provisions or conditions are missing but their need is questioned. This question might arise in relation to the objectives of the course, the needs of the students, or because of differences of opinion of evaluators.
N - DOES NOT APPLY	-	the provisions or conditions are missing but do not apply, or they are not desirable for the student of this school or community, or they do not conform to the school's philosophy and objectives.

[1] National Study of Secondary School Evaluations. Manual for Evaluative Criteria, Washington, D.C., 1960

D. Program Ratings

The enrollment data and rating of program categories, A-R listed in the Evaluation Summarization Form on pages 4 to 7 will be completed by the teacher, consultant and others connected with the program. Ratings will be determined on a basis of adherence to program objectives and the goals set forth in the program proposal.

E. Strengths

List those elements which have been shown to be highly effective in fulfilling the objectives and meeting the needs of the students.

F. Weaknesses

List those weaknesses which are known to exist.

G. Recommendations

List the recommendations for improving not only programs which may have certain weaknesses, but also those programs which are very effective.

A recommendation as to whether or not the program should be continued will be included.

(Rating of items A-R can be elaborated on in the three categories listed on page 6).

CONNECTICUT STATE DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION
HARTFORD, CONNECTICUT

Evaluation Summarization Form

Date of Evaluation_____

Town_____

Program_____

School_____

Teacher_____

Consultant_____

Others Present_____

_____

Enrollment

Anticipated total enrollment Sept. 30, 19___ _____

Actual total enrollment Sept. 30, 19___ _____

Number of June 19___ grade 12 program graduates _____

a. Number of graduates available for employment _____

b. Number of graduates placed in occupations for which trained or in related occupations _____

Program Ratings

Rating Scale: (5) excellent, (4) very good, (3) good, (2) fair, (1) poor, (m) missing (n) does not apply

A. Objectives of the program were implemented. _____

B. Advisory Committee contributed to the development of the program. _____

C. Occupational objectives were flexible enough to permit students with different skills to attain salable skills. _____

D. Course of study was consistent with student level of ability. _____

E. Related instruction (cooperative work experience) was included in the program. _____

F. Student selection was based on qualification and interest. _____

G. Guidance was used effectively in operation of program. _____

H. Physical facilities were conducive to learning. _____

I. Equipment purchased was used effectively. _____

J. Safety instruction is an integral part of the program. _____

K. Leadership and Citizenship training is provided. _____

L. Resource materials were used in the program. _____

M. Resource people were used in the program. _____

N. Community visits were utilized. _____

O. Teacher certification and approval requirements were met. _____

P. Teacher schedule as assigned in proposal was adhered to. _____

Q. Student groups were organized and functioning. _____

R. Required reports were submitted accurately and on time. _____

S. Overall program rating. _____

T. What are your program plans for next year?

Consultant Comments

Strengths:

Weaknesses:

Recommendations:

Signature of Consultant -- Date

Next evaluation_____

UTILIZING PERFORMANCE GOALS IN THE EVALUATION

Included in this manual on pages 8 to 16 are Informational Guidelines for Program Evaluation. They are not to be considered as all-inclusive or final but are listed as some of the performance goals. The purpose of listing these performance goals is to orient the person who is responsible for making an assessment of a VEA program in the local school. It should be noted that the performance goals relate directly to the Evaluation Summarization Form on pages 4 to 6.

Local schools have submitted goals or objectives for their programs which were approved by the Division of Vocational Education. Program Development Under The Vocational Acts provided a basis for program development in the local schools. Therefore, evaluators in making an assessment of any VEA program are to give priority to goals or objectives of a local school as submitted in the original proposal. However, evaluators of local VEA programs will keep in mind some of the recommended performance goals pertinent to a particular instructional area.

Informational Guidelines for Program Evaluation

(It is expected that the following guidelines will be reviewed periodically by the teacher and others connected with the program to help determine if the program is functioning as planned. Some objectives are geared to the needs of cooperative work programs but may be utilized in other programs if applicable).

A. Objectives of the program were implemented. _____

B. Number of contacts made with Advisory Committee: _____
Briefly state how Advisory Committee contributed to the development of the program.

_____

_____

_____

Advisory Group Members (names and titles)

_____ _____

_____ _____

_____ _____

Advisory Groups

1. To engage an advisory committee to provide consultative services. _____

2. To provide occupational analysis with use of an advisory committee, including outline, and equipment needs. _____

C. The occupational objectives were flexible enough to permit students with different abilities to achieve training and attain salable skills. _____

Teacher Goals and Objectives
Employability Instruction

1. To present instruction to students based on an outline and plans developed from an analysis of the occupation. (cooperative work experience) _____

2. To provide an organized training program to include:
   a. Schedule of processes to be learned.
   b. Related instruction to be given.
   (cooperative work experience)

3. To provide an approved cooperative agreement by employer, school, student, and parent or guardian, in terms of wages, if any, employment and responsibility. (cooperative work experience) _____

4. To subscribe to enrollment standards that are realistic in relation to occupational demands. _____

5. To provide a training outline for each student. (cooperative work experience) _____

6. To provide graduation credit to the student. _____

7. To bring out the abilities of each pupil to the full extent of his capacity. _____

8. To provide for individual progress. _____

9. To offer occupational training for those planning full-time employment. (cooperative work experience) _____

10. To assist the pupil to develop his ability to follow directions. _____

General

1. To develop the student's powers of concentration. _____

2. To develop in the student those qualities of self-initiative, resourcefulness, and reliability. _____

3. To develop in the student the right attitude toward knowledge, skill and ideal aims. _____

4. To base training on an environment as near actual occupational conditions as possible. _____

5. To provide the cooperating employer with an understanding of his role. (cooperative work experience) _____

6. To provide organized training on the job. (cooperative work experience) _____

7. To ensure that the employer provides a variety of learning experiences. (cooperative work experience) _____

8. To provide cooperative education and on-the-job training programs geared to the needs of the community. (cooperative work experience) _____

9. To provide prescribed number of hours each day for on-the-job training. (cooperative work experience) _____

10. To disallow exploitation of the student. (cooperative work experience) _____

11. To turn out work that is qualitatively acceptable. _____

Student Goals and Objectives
Occupations

1. To master the basic abilities or skills and information according to the standards of the job. (cooperative work experience) _____

2. To achieve a degree of occupational efficiency. (cooperative work experience) _____

3. To analyze job requirements and opportunities. _____

4. To receive training based on proper and/or sufficient time allotted. _____

5. To understand work schedules and routines. _____

Socio-Economic

1. To recognize the social competencies as being "people-oriented" rather than "machine oriented." _____

2. To lay the foundation for sound economic education and for an understanding of the economic policies of federal, state and local government. _____

Personal

1. To demonstrate cooperation, friendliness, and an interest in activities and responsibilities. _____

2. To develop good personal relations in regard to courtesy, appearance, and work habits. _____

3. To communicate effectively with others. _____

D. The course of study was consistent with the levels of ability of the students enrolled. _____

Course of Study
Teacher

1. To provide education and training in an occupation under actual working conditions. (cooperative work experience) _____

2. To select quickly the form, method, or labor-saving device best adapted to the work. (cooperative work experience) _____

3. To provide the student with further knowledge about the occupational area. _____

4. To visit public school programs, for the purpose of possibly enhancing present offerings. _____

5. To visit vocational-technical school programs for the purpose of possibly enhancing present offerings. _____

Student

1. To understand the requirements of various occupations. _____

2. To develop some ability to make wise decisions on questions facing workers. _____

3. To understand and apply the principles of what he has learned. _____

4. To acquire a foundation for advanced study. _____

E. Appropriate related instruction was included in the course of study. _____

Related Instruction
Teacher

1. To contribute through a related program to occupational competency; - basic understanding required in the occupation, such as:
   Written and oral communication
   Mathematical and scientific principles
   Critical thinking
   Human relationship
   Citizenship
   (cooperative work experience) _____

2. To provide adequate in-school related instruction. (cooperative work experience) _____

3. To develop proper work habits. _____

4. To provide various teaching methods for both individual and group instructions. _____

Student

1. To understand the relationships between management and employees. (cooperative work experience) _____

2. To gain some understanding of how the occupational area is operated and financed. _____

3. To understand and interpret directions and manuals. _____

4. To understand the importance of human relationship. _____

5. To acquire a comprehensive job area vocabulary. _____

6. To learn basic principles of ethical conduct and legal implications. _____

F. Students were selected for the program on the basis of qualifications and needs. _____

Student Selection

1. To select students based on the awareness of the differences and requirements of semi-skill and skill-type training programs _____

2. To offer training to those who want it, need it and are able to profit by it. _____

3. To select students based on interests, aptitudes and abilities. _____

G. Provisions have been made for effective use of guidance both before and during the operation of the program. State how this was accomplished. _____

_____

_____

_____

Guidance (Teacher-Counselor)

1. To assist students to secure dependable and realistic information in advance of his decision. _____

2. To assist each student in formulating his own personality profile. _____

3. To contribute generally to the student's ability to have knowledge of careers. _____

4. To encourage students with higher abilities and aptitudes and who can profit from a higher-level trade-training program to enroll in such vocational programs offered elsewhere. (cooperative work experience) _____

6. To encourage each student to understand the need for continuous self-development. _____

7. To encourage students to determine their personal occupational interests. _____

8. To provide student incentive to complete high school. _____

9. To minimize student transfers, drop-outs, failures and occupational maladjustment. _____

10. To provide students with an opportunity to observe actual occupational procedures. _____

11. To build a background knowledge of occupational information. _____

12. To provide pre-employment orientation. _____

Surveys

1. To provide for occupational surveys to ascertain employment opportunities. _____

2. To meet the demands of the employment market. _____

Evaluation

1. To periodically evaluate enrolled students. _____

2. To provide periodic evaluations by coordinator of total program-in-school and on-the-job. (cooperative work experience) _____

3. To provide periodic evaluations of enrolled students who are not profiting from the program. _____

4. To provide for placement and follow-up of students. _____

5. To seek the opinions of graduates in evaluating the program. _____

6. To seek the opinions of parents in evaluating the program. _____

7. To seek the opinions of employers in evaluating the program. _____

8. To provide the public with program information. _____

9. To keep school abreast of developments in business and industrial areas. _____

Guidance (Student)

1. To analyze the occupational requirements and opportunities in relation to personal abilities and interest. _____

2. To understand how to get a job or otherwise to make a beginning in his chosen occupation. _____

3. To know how to utilize the public and private services available to him. _____

4. To be aware of educational opportunities to qualify him for advancement. _____

H. Physical facilities were conducive to learning. _____

I. The equipment purchased was used effectively and primarily for occupational goals set forth. _____

Equipment Utilization
Student

1. To use equipment that simulates occupational conditions. _____

2. To perform operative activities as directed. _____

3. To work carefully, quickly and efficiently with good standards. _____

4. To be trained in the care, safety and maintenance of equipment. _____

5. To select and use appropriate tools for tasks. _____

6. To identify common equipment and supplies and care for same. _____

J. Safety instruction is an integral part of the instructional program. _____

Safety Practices
Student

1. To develop the ability to practice safe operation, adjustment, and provide preventive maintenance on equipment. _____

2. To develop the ability to use the tools and materials of a specific occupation. _____

3. To incorporate the elements of job safety in on-the-job training. (cooperative work experience) _____

K. Training in Leadership and Citizenship is provided. _____

Leadership

1. To prepare students for participation in leadership of civic and fraternal organizations. _____

L. Resource materials were used in the program. _____

1. To familiarize students with library materials. _____

2. To acquaint students with industrial materials. _____

3. To include community resources as needed. _____

4. To utilize audio-visual equipment where necessary. _____

M. Resource people were used in the program. _____

1. To involve community leaders where appropriate. _____

2. To include educational specialists in planning and instruction. _____

3. To involve industrial personnel in planning and instruction. _____

4. To provide an opportunity to members of the school faculty to discuss the cooperative education program. (cooperative work experience) _____

N. Community visits were utilized. _____

1. To promote closer cooperation between school and community. _____

O. The teacher meets certification and approval requirements for the program. _____

YES NO

If not, what steps are being taken toward meeting these requirements. _____

_____

_____

P. The teacher was assigned to the instructional areas according to the schedule designated in the proposal. (This is indicated by percentage of time approved for program). _____

Q. Student groups were organized and functioning. _____

1. To insure that program goals were met. _____

2. To allow for expanded student participation. _____

R. Required reports were submitted accurately and on time. _____

VT 008 225
Pantagua, Lita; Jackson, Vivian Carter
Role Play in New Careers Training; A Technique for Developing Paraprofessional-Professional Teamwork in Human Service Agencies.

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*SUBPROFESSIONALS; *TEACHING METHODS; *ROLE PLAYING; *HUMAN SERVICES; TRAINING TECHNIQUES
*NEW CAREERS

Role play, a training technique in which trainees act out the problems they may encounter in their work, is presented as an aid to the implementation of New Careers programs in human service agencies. The techniques described are based upon methods developed by the New Careers Training Laboratory (NCTL) and may be used in conjunction with "Simulation I: Store Front Staff Meeting," a video tape developed by and available from NCTL. Section I, Functions of Role Play, defines role play and explains its functions in terms of providing a protected environment for interaction, aiding group process, increasing self-knowledge, efficiently conveying job knowledge and skills, and effecting behavioral changes. Section II, How to Conduct Role Play Sessions, (1) provides guidelines for the teacher related to establishing a conducive atmosphere, assisting the group to define problem situations, choosing participants, assigning tasks to observers, initiating and terminating the role playing incident, and guiding follow-up discussion, (2) describes specific techniques used in role playing, and (3) suggests approaches to stimulating interest. (JK)

VT 008 225

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ROLE PLAY IN NEW CAREERS TRAINING

A Technique for Developing Paraprofessional-Professional
Teamwork in Human Service Agencies

New Careers Training Laboratory
School of Education
New York University

1968

Lita Paniagua and
Vivian Carter Jackson

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INTRODUCTION

Role play is discussed here as an aid to the implementation of New Careers programs in human service agencies. The techniques described are based on methods developed by the New Careers Training Laboratory (NCTL),[1] and may be used in conjuction with "Simulation I: Store Front Staff Meeting," which is a video-tape produced by NCTL demonstrating the use of role play as a problem-solving technique.*

The goals of the New Careers concept include:

Expansion and improvement of the services offered by the helping institutions in the fields of health, education, and social welfare.

Meaningful productive jobs for the underemployed -- recruitment of personnel from the disadvantaged communities.

Promotional and career opportunities for all employees in the human service agencies via a structured program of advancement and the sharing of responsibilities among professionals and paraprofessionals with advanced training and education available on-the-job.

Development of new sources of skilled and professional manpower as the paraprofessional workers acquire training and education.

---

1. The New Careers Training Laboratory is funded by the United States Office of Economic Opportunity to provide a training capability for the staffs of agencies employing nonprofessionals. Utilizing its Training of Trainers model, the Laboratory works specifically with those who will be training nonprofessionals.

* The video tape is available from NCTL. For information please contact NCTL Audio Visual Department, 184 Fifth Avenue, New York, N.Y.10010

SECTION I

FUNCTIONS OF ROLE PLAY

What is Role Play?

Role playing is a training technique in which the trainees act out or "do" the kinds of situations and problems they encounter in their day to day world of work. As few as two people can role play, but most role playing is usually done in groups where two or more persons do a situation while the other members of the group observe, then all discuss it.

Example:

Problem: How does an employment service aide help an applicant fill out a form?

Role play: One aide-trainee assumes his job role; another plays the part of the applicant. The group observes while the role players enact the situation.

After the role play the group discusses and develops alternatives for helping the trainee help the client more effectively.

In the discussion following the role playing, the observers can learn as much as the role players themselves.

The technique can be of special value for training persons to work in the field of human services -- in a social welfare agency, a school, a hospital, a mental health clinic, a Day Care center, a family planning agency, a law enforcement agency, etc. In such agencies both the professional and paraprofessional workers can learn through role play effective ways of dealing with the public and with each other, because it gives them the opportunity for real practice in the kinds of situations which they will encounter in their daily work experience.

At first, the roles selected and the situation which is being simulated should be simple enough to allow for easy involvement by the group. It is therefore very important that the situation be a common one, i.e., one that is "true" for everyone. In general the situation chosen should be short in duration. To use it most profitably, it is best if the trainer picks up from what the group focuses on. That is, something that seems to strike the group as important, even crucial, no matter how simple it may seem to be.

Examples: Role play may help solve such common problems as:

1. "How should a receptionist in an agency greet a new client?" One of the trainees assumes the role of the receptionist and another that of the client, and together they act out the situation in their own words and gestures.

2. "How should a supervisor explain and demonstrate the use of the time clock to the new worker?" One of the supervisor-trainees assumes the role of the supervisor and another, that of the new employee, and again the situation is acted out.

After the incident is played, the players and the observers discuss their reactions to the behavior demonstrated gaining new ideas as to how it may be modified. The situation can be then re-played in the light of the suggestions proposed. Thus, the second time around the "receptionist" may decide that the client would feel more welcome if the greeting were less casual. Or, the "supervisor" might discover that in his explanation of the time clock he took for granted that the new employee was familiar with the device, whereas this was not the case at all.

In the same way that a picture is said to be "worth a thousand words," even such simple exercises as the above can very quickly clarify issues that hours of lecturing and discussion might not bring out. In the examples given, role play

> Created situations <u>familiar</u> to all the participants: in every agency clients have to be greeted; in agencies using a time clock the correct procedure must be understood by all the employees.
>
> Provided a <u>common concrete frame of reference</u> for discussion by all the participants since all the members of the training group witnessed the same event.
>
> Actively <u>illustrated</u> an abstract concept of behavior: The lecture or discussion about greeting a client may have emphasized the need to be friendly, hospitable, courteous. The role play showed how friendliness and courtesy can be demonstrated. The lecture about explaining the use of the clock may have stressed the need for clarity. The role play demonstrated how clarity can be achieved.

THE PROTECTED ENVIRONMENT OF ROLE PLAY

Role playing takes place in a protected setting. That is, because it occurs in the training classroom, and because of its very nature of being a training exercise, the participants are free from the tensions and consequences which might result in the actual work situation. The role players can behave in ways which on the job might cause disapproval; during the discussion, the participants can express opinions which they might not feel free, nor perhaps have the opportunity, to state in the work context.

This protection greatly helps to ease the natural anxiety of persons who are working in a new situation such as exists when an agency is implementing a career development program. The professionals may never before have shared their responsibilities with paraprofessionals; the paraprofessionals may never before have had any but unskilled, unsteady jobs.

Role play can help the employees adjust to this newness; familiarize themselves with their new roles, examine difficulties, and probe solutions in a laboratory work-shop atmosphere. They can be free of the fear that the behavior they are testing will have unpleasant outcomes.

Example:

Among a group of trainees working as educational auxiliaries, some may feel that the teachers whom they assist limit them only to custodial duties, such as helping the children put on their coats, or checking the classroom supplies. They may want to discuss this question with the teachers, but are fearful of broaching the subject.

By playing out the situation before the group, they can hold a "pretend" meeting with the teachers. With some of the trainees assuming the part of the auxiliaries, and the others that of the teachers, various approaches can be tested, observed, and analyzed.

Or, the problem may be that although they are assuming non-assigned roles, the auxiliaries feel resentment and hostility on the part of the teachers. In the role play situation, with a trainee playing the teacher, and another an auxiliary, the behavior can again be acted and analyzed, and approaches developed for dealing with the teacher.

In the role play described above, if one of the auxiliaries is too blunt in talking to the "teacher," for example, the results are very different from what might occur in a real situation where provoking the teacher's anger might only increase the auxiliary's difficulties.

The protected environment of role play is equally effective for professionals who are participating in a training program.

Example:

A teacher discovers that his educational auxiliary has told Johnny's mother that the teacher feels Johnny is not working hard enough in school. This has angered the mother who interprets the statement to mean that the teacher has classified the boy as "lazy," and she has come to the school to upbraid the teacher. The teacher would like to know how to discuss the problem with the auxiliary without damaging the working relationship.

During the role play session, one teacher may assume his own role, and another that of the auxiliary, and various ways of handling the case may be tried and discussed.

Here, too, the teachers are protected from the results which mishandling of the situation might have in the real world.

ROLE PLAY AS AN AID TO GROUP PROCESS

Every trainer must face such questions as how to "break the ice" -- establish rapport among members of a new group, and between the group and himself; how to present material for lively, pertinent discussion; how to illustrate concepts; how to involve all the participants. The following case study demonstrates how role play is a versatile resource for the trainer in working with these problems:

At the beginning of the 1968-69 school year the New Careers Training Laboratory conducted an intensive two-day workshop for the trainers of educational auxiliaries in the New York City School System. Sixty persons attended. The group included training supervisors, training coordinators (most of whom were former teachers in the public schools), and auxiliary trainers (some of whom were nonprofessionals who had

worked as educational auxiliaries, and who had no previous experience as trainers). Many of the persons in the group were strangers to each other.

During the pre-workshop coffee-time and the first orientation hour it was evident to the NCTL staff that with little time left before the school term began, the natural anxiety which accompanies the prospect of starting on a new job was heightened for many of the trainees in this group by the fact that a new program of school decentralization would also be going into effect. They came to the workshop asking to be equipped "over night" with a large battery of group skills.

During the orientation period the NCTL trainers made a census of the problems which seemed most urgent to the trainees. A majority wanted to know "What to do on the first day of training."

The NCTL trainers decided to approach the problem by involving the entire group in a role play of "What NOT To Do On the First Day of Training." It was hoped that on seeing an example of poor training techniques, the trainees would be stimulated to discover many rights ways of going about conducting a session.

Two NCTL trainers assumed the roles of a training coordinator and his assistant. The group of trainees as a whole was asked to assume the roles of educational auxiliaries who, anxious and confused, would overwhelm the trainers with questions.

The NCTL trainers did an excellent job of impersonating extraordinarily incompetent, ill-prepared trainers. They slumped in their seats, mumbled their names when they introduced themselves, did not identify their

positions nor the purpose of the meeting, they appeared to feel bored and superior. They did not welcome the "auxiliaries," but went directly into a brief and garbled explanation of how to fill out an employee identification form, merely holding the form up before the group, and pointing out "you sign your name here and here."

When the "educational auxiliaries" asked questions, the "trainers" shrugged off some, were evasive with others, and refused to answer still others. They ignored persons who asked for the floor, or gave unsatisfactory replies such as, "Well, that's not important" or "we'll get to that later." In general, the simulated training session became chaotic and frustrating for all the participants.

The discussion following this role play was lively and good humored, and the feeling tone of the group was much different from what it had been when the workshop

began, only two hours previously. The poor performance of the "trainers" and the fun of playing the part of educational auxilies and confusing the "trainers" with outlandish questions caused much laughter and created a feeling of camaraderie and relaxation.

The trainees were also able to feel more secure about how they would perform when they actually conducted their own first day of training -- surely nothing they would ever do could possibly be as dreadful as what they had seen! As the trainees suggested ways in which the trainers could have handled the session better, they discovered that they had learned much about appropriate methods for conducting a group meeting. Such learnings included:

- The need to establish a feeling of warmth and acceptance for all members by a friendly, interested attitude on the part of the trainers;
- The need to provide a sense of purpose, structure and direction by stating the objectives of the meeting and the topics that would be covered.

- The necessity for careful preparation so that they can answer questions clearly and give the educational auxiliaries practical information about their duties, where to collect paychecks, regulations on attendance, fringe benefits, sick leave, etc.

- The need for order and fairness, giving everyone a chance to speak, taking a census of problems.

Incidentally, they also learned that role play can be used immediately to reduce tension, because it is enjoyable, involves everyone, and is easy to do.

Immediately after this demonstration and discussion, two of the trainees from the Board of Education volunteered to show how an orientation session should be handled, and displaying great serenity, dignity, interest and courtesy, guided the group to a useful discussion of their problems.

The remainder of the two-day workshop was also based on role-play. Now comfortable with each other, the trainees were able to break up into smaller groups where they enacted and explored such complex questions as a confrontation between a group of teachers and a training

team over the problem of utilizing the skills of the educational auxiliary; a joint meeting of teachers and educational auxiliaries led by a training team to discuss the teachers' fear that because of the auxiliary's identification with the community they were in effect "spies" for the community

Role play not only placed them in a simulated work situation but also helped the trainees to assume the viewpoints of the persons with whom they would be working -- teachers, educational auxiliaries and supervisors. They also were able to practice techniques for guiding a group, and to understand better the need for objectivity on the part of the group leader, as well as for structure and a sense of conclusion or closure.

This is the essense of what is meant when we say that role play is <u>permissive</u>. The role is played in an atmosphere that is non-threatening. Mistakes can be made, discussed and corrected without there being any fear that an error is irreversible. To this degree it

is a technique which permits the player to try out in a protected setting what he might otherwise fear to do. It supports him in an attempt to try alternatives that might not be undertaken in the work situation; it increases his options for behavior. Activities and behavior which have proven difficult can be anticipated, exposed, then analyzed.

Equally, the behavior of others can be observed and assessed. In doing this assessment the group members may suggest alternative ways of behaving, thus increasing the role players' and their own repertoire of skills for dealing with human relations problems, confronting situations.

ROLE PLAY AS AN AID TO INCREASED SELF-KNOWLEDGE

A basic principle of the career development approach to employment is that paraprofessionals and professionals within an agency work together as a team, all contributing their special knowledge, skills and experience for enriching the services the community receives. In this way, for instance, the Family Planning Aide helps the professional explain to a group of house-wives in their own terms, the benefits of birth control.

Such cooperation is based on mutual acceptance among the team members, and implies that they support and learn from each other. This desired interaction does not always result solely from daily contact among the workers. For those who have never before related as colleagues to persons from another background, the new relationship may create uncertainties, anxieties, and conflict. A lawyer in a Legal Aide agency may never before have collaborated on a case with a person who does

not have a university degree. A psychotherapist may never before had to rely on the assistance of a Mental Health aide who belongs to a different race and who has not finished high school.

Positive behavor is essential if the professional-nonprofessional teams are to function well. However, neither may be aware that behavior which he takes for granted is not easily understood by others with different behavioral patterns. It may be, for example, that a person does not realize that he does not act "natural" when he meets on equal grounds someone whom he perceives as "different." Or, if he is aware of his lack of ease, he may never have explored that reasons for it.

Examples:

The manager of an urban relocation office may be mystified by the fact that although he makes a point of being "nice" to the relocation aide, the latter may show uncooperativeness through such actions as habitual tardiness, or failure to turn in reports.

The aide may not understand why when he

"only wants to help" he has difficulty in getting the professional to let him go out on home visits.

The root of these troubles may be that neither feels comfortable in freely talking and communicating with the other.

Such hidden attitudes may get in the way of the agency team's effectiveness. It may be necessary to bring them out into the open: to create the opportunity for increased self-knowledge as a pathway for greater sensitivity to how others react.

Thus, an agency's training program must provide some help for confronting these kinds of problems. It usually must involve an effort to bridge the differences in attitudes and behavior of the professional and paraprofessional staff members, to establish a current of mutual awareness, cross-learning and exchange.

Role play can be a useful vehicle for helping professionals and paraprofessionals to learn more about themselves and each other. The "let's pretend" freedom of

role play permits the participants to become involved and confront themselves in settings which in real life might prove uncomfortable, as when a supervisor has to tell an auxiliary that confidential information in the case-work files is not a subject for neighborhood gossip. In the discussion-analysis following the role play the players obtain immediate feedback as to how their behavior appears to others, with an opportunity for objectively exploring the effect of, and reasons for, their actions.

The techniques of Role Reversal (the role players switch roles) and Mirror Role Play (a member of a group imitates the behavior of another in a given situation)[1] can strengthen the participants' self-awareness and sensitivity to others, giving them an opportunity to react to themselves as others do, and to gain deeper insights into the behavior of others.

---

1. See Section II, Description of Techniques, p. 42 & 44

E *Examples:*

1. *The relocation agency manager assumes the role of the aide, and discovers the humiliation of being talked down to.*

2. *The case worker who may never have experienced poverty takes on the role of an unemployed parent with many mouths to feed, and comes to understand the parent's anxiety when faced with the formality and red tape of applying for welfare assistance.*

3. *The aide, by assuming the role of the manager or by watching another player "mirror" his actions, learns that saying "Hey, who do you think you are around here?" is not exactly the best way to start a discussion of his grievance.*

4. *The attendance counsellor auxiliary who cannot get Johnny's father to discuss the reasons for the boy's absence from school, finds by assuming the father's role that it is not easy for a man to say he cannot afford to buy shoes for his son, especially if he is questioned in an accusatory manner.*

By playing the opposite role, or seeing his actions imitated as in the examples above, the professional may learn about himself that he in fact resists accepting the paraprofessional as a colleague, although in theory he is committed to the principle of equality; or that he wants

results too quickly. Or, in the second incident, that in his desire to "get the facts" as efficiently as possible, he does not show the compassion he may feel.

The paraprofessional may learn that he is hostile toward the professional, or that he is punitive and rejecting of the poor who have not found the opportunity he has for meaningful employment. As each played the reverse role, he identified with the situation, his emotions became engaged, and he saw himself reacting in a manner that may have surprised him.

Such "moments of truth" may lay the basis for further analysis and understanding of the reasons for the behavior shown which in turn eventually may lead to the desired change.

It is beneficial for professionals and paraprofessionals to have joint role play and discussion sessions. However, it may be advisable to sometimes postpone such joint sessions until each group has had the opportunity

for exploring problem areas among themselves. Otherwise, tensions may be too great, and prevent the achievement of the desired exchange and understanding.

IMPLICATIONS FOR LEARNING

The work-training program of a human service agency oriented toward developing the potential of all its personnel, aims at rapidly improving its services to the community. The employee-trainees are thus required to learn quickly many human relations skills, and to apply what they learn in the training sessions to the real world of work in a continuous flow. The nature of such training programs and the demands of the trainees' jobs and personal lives necessitate that the skills taught them be relevant, practical and efficient.

Learning takes place more promptly, is more effective and long lasting when the student is interested and involved, and when the knowledge that he has acquired is reinforced in a stimulating and relevant manner. Role play is a dynamic means for providing these ingredients for successful learning of human relations skills.

INTEREST is stimulated because the role play deals with problems which the trainees encounter daily: E.G. an educational auxiliary acts out the problem of how to control a child's tantrum. A mental health aide acts out the problem of encouraging a patient to comb her hair.

INVOLVEMENT is direct because all members of the group participate both as players and observers in the enactment of situations common to all of them.

REINFORCEMENT, while continuous and repeated, is varied and stimulating since solutions to similar problems can be drawn from many different experiences, demonstrated by many different styles with a varied cast of role players, approached from several viewpoints -- the teacher's, the auxiliary's, the supervisor's, the agency client's,etc. The reinforcement is further strengthened by the discussion following each role play as the trainer

encourages free exchange of feelings and opinions.

Role play can serve the trainees in a variety of ways for:

1. Introducing New Ideas

The hiring of paraprofessionals may permit an agency to work more dynamically in the community. By utilizing the neighborhood know-how of its indigenous staff, a Family Planning agency may be able to present its services more efficiently to the local residents.

Role play exercises, such as having the family planning aide trainees assume the roles of an aide and a housewife during a home visit, can graphically teach the trainees many aspects of the effects of family planning on the lives of the clients. Also they can learn through role play how to gain entry for a house call; how to conduct a group meeting of neighborhood wives to explain the agency's services; how to interest a client's husband in the program;

how to spot problems, other than family planning, that may be troubling a client.

2. Teaching New Communications Skills

a. Verbal Skills

Despite their eagerness to work with people, many trainees (both professional and paraprofessional) lack the skills for effective communication. The professional may use professional jargon, or be self-conscious and stiff; the paraprofessional may be too direct or too intimate. Role play gives the trainees concrete experience in developing approaches for reaching out to others.

It appears that a lecture or a question and answer session alone are not sufficient stimuli to encourage verbal performance. People tend to express themselves more readily when reacting to things they can see and do. This is especially true for persons who are not accustomed to the traditional classroom

method of instruction. The participants in the role play exercise gain practice in speaking, listening, and detecting what lies behind what is being said. They may learn, for example, that certain habits of speech, or the use of pet expressions often have an effect beyond that anticipated. This feedback is provided to the participants in the discussion period following the role play.

Example:

One trainee who habitually used the phrase, "Do you understand?" learned that some persons took this as a questioning of their intelligence rather than as a desire on the part of the trainee to know whether he was explaining himself well. It was suggested that instead he ask, "Do I make myself clear?" Another trainee found that some persons object to the terms "Baby," "Honey,"

"Sweetheart" as inappropriate for addressing strangers in the work situation, as when answering the telephone, or greeting a client.

The observers of a role play, as well as the "actors," can improve their own communications skills as they contribute their comments. They can learn the value of brevity, of sticking to the point, of clarity, of listening, of "reading between the lines."

b. Non-Verbal Skills

Not only does role play teach verbal skills, the kinds of phrases that can make a client feel comfortable, for instance; it demonstrates too that communication involves not only words, but also gestures and expression.

Example:

> *In the role play situation, the trainee may use a gracious phrase but pull away nervously from the "client's" touch,*

which can be interpreted as disdain; or he may ask a question in a friendly interested manner, but doodle as the answer is given, which may be taken to mean that he is not really interested in what the "client" has to say.

4. Expansion of the Trainer's Repertoire

For the trainer, the role play session can provide a profitable learning experience in the area of communications. He too obtains immediate feedback as to whether he is communicating well with the group, whether he is making his points clearly.

The discussion period may also provide him with material for further discussion and exploration by the group.

Example:

In role playing a visit by an educational auxiliary to Johnny's home, the "mother" may say that Johnny is tired because the baby cries all night and keeps him awake.

The trainer might use this situation for a discussion of how an auxiliary can be alerted to signs of problems in a child's family, and this in turn lead to exploration by the group of community resources to which parents can be referred for help on health and other problems.

4. Developing Leadership Skills

Implicit in a career development program is training for leadership. The paraprofessional trainees are encouraged to identify and utilize themselves as a group which can exert pressure within the agency and the community for improved services, for real career advancement opportunities for all workers, for education that is more truly job-relevant, for closer participation by the community in agency activities, for enlisting the support of professionals.

Role play can be used as an instrument to teach trainees techniques of leadership; to feel

comfortable in group interaction, to analyze a problem and present it clearly to the group, to handle hostility, to represent a group viewpoint, to bring two divergent viewpoints closer to each other. Throughout the training sessions each trainee may have many opportunities to play a variety of group leader roles.

Examples:

> *A panel discussion may be simulated, with one trainee acting as the leader, while other members of the group pretend to be the panel participants talking about ways of setting up a neighborhood consumers' cooperative.*
>
> *Or, a tenants' organization meeting may be simulated by the total training group, with the trainer acting as the moderator, while some of the members act disruptively, voicing anger, asking difficult questions, making irrelevant comments, demanding immediate action, etc.*

5. Dealing with Ambiguity

All situations involving inter-personal relations

contain a broad area of ambiguity.

Agencies which are in the process of implementing a career development program operate within such ambiguity. Standard procedures are being changed, many problems are unsolved and may continue to be for a long time ahead. Such questions may include the delineation of duties for the new paraprofessional staff, their relationships with the professionals, changes in the professionals' responsibilities, and other areas of human interaction which imply readjustment and a certain amount of discomfort.

Role play can be an effective instrument for helping the staff deal with these new situations as problems are acted out, analyzed and re-oriented in the light of the insights attained.

Example:

An ambiguous definition of authority often

can produce conflict.

An educational auxiliary reported to her training group that the teacher whom she assisted had frequently countermanded the auxiliary's orders to the children. The group saw the need for a discussion of the question of authority between the auxiliary and the teacher, and the discussion was role played with the auxiliary doing her own role and another auxiliary that of the teacher. Of the several approaches tried, the most fruitful one was found to be that in which the auxiliary related the problem to a specific situation and offered her help in a friendly manner, such as:

"Mrs. Jones, since we're taking the children on a field trip next Tuesday, would you please go over the safety rules with me so that I may know exactly how I am to help the children observe them? Should I allow the children to kneel on their seats when the bus is in motion?"

Separately, in a training session with the teachers, the training team brought out the question of authority as a general problem, and the group expressed a need for a definition of authority for the teachers and the auxiliaries. Again a discussion was simulated with a teacher playing her own role, and another that of an educational auxiliary.

MODIFYING BEHAVIOR

Role playing can produce behavioral changes by placing persons in specific roles. It becomes apparent that a person's behavior is not only a function of his personality, but also of the situation and role in which he finds himself. Role playing becomes a good device for resolving problems arising out of distortion in communication and perception.

Example:

The situation of an aide who has limited interactions with supervisory agency line staff and who views them as unfriendly. Role playing can be used to illustrate, explain, and discuss the factors that lead to this "distance" between agency and workers.

In the same way, professionals who feel that the paraprofessionals hold themselves distant may role play different situations to explore possible sources for this feeling.

SECTION II

HOW TO CONDUCT ROLE PLAY SESSIONS

The Role of the Trainer

Role playing requires some structuring and some management. However, the Trainer should be primarily concerned with the aim of the role play. It is important that the Trainer clearly determine what it is he wants to accomplish during the role play session. When the training goal has been established, then follow the general guidelines set forth below:

1. ESTABLISH an atmosphere of ease and permissiveness among the group. This can be facilitated by engaging in light conversation with the group beforehand, or by discussing resolved issues which occurred during the recent past. Initially, role playing may be introduced to the group without any identifying labels. For example, during a problem discussion the

Trainer may casually ask a group member to "pretend that you're that person -- what would you say in that situation?"

2. Get the group to IDENTIFY and DEFINE the problem situation carefully and clearly. Begin with simple problems that are of common interest to the group The Trainer assists the group by making the problem specific. If the group indicates they want to discuss a "teacher-aide problem" the Trainer ask, "What kind of problem? Is the aide in an elementary school or junior high school, what is the supervisory teacher like?" The Trainer may begin to discover the things that interest and trouble various people within the group.

3. CHOOSE the persons to participate in the role play exercise and clearly define their

roles. It is sometimes good not to choose the first person who volunteers to participate during the initial role-play exercises. This person may be the group member who is adept verbally and particularly behaviorally. Thus, he may be capable of putting on convincing "acts" to gain attention or steer the course of the group. Also it is equally unwise to insist on participation initially from group members who are highly resistant. Encourage an easy, slow, informal atmosphere. The main goal is to get people involved in the role playing.

4. ASSIGN a <u>concrete</u> task to the observers. For example, the observers may be asked to note gestures and other physical movements that reveal what the players are feeling.

5. BEGIN actual role playing. Role playing requires the participants to act as though they were involved in a real life situation. Role playing differs from ordinary drama in that the participants are not required to memorize lines or to adhere to prepared scripts. Instead, they act out parts as though they were the real persons involved. The words and actions are provided by the role players according to their own interpretations of what they <u>should be</u>.

6. STOP the role playing when the appropriate point has been made or demonstrated. Role playing should be used sparingly. In role playing, once the drama begins, the Trainer must be especially alert to natural "breaks" occurring during the role play. A role play exercise that is allowed to drag out

to the point of inanity or ridiculousness becomes a futile exercise which may even be boring to the participants and observers. If the Trainer feels that the players are not clear in their understanding of the described situation, and appear to be fumbling, he should then stop the role play and discuss with the group the reasons for the miscommunication.

7. GUIDE the group discussion and evaluation after the session is finished. For example, if the session was intended to teach a skill, then the group may discuss the skill and evaluate its effectiveness. A careful analysis of actions and emotions should follow the role play exercise. The results may give insights not easily available in any other way.

The Trainer should avoid falling into the trap of "moralizing." Perhaps one of the most common abuses of the role playing method is the tendency by some Trainers to use role playing feedback as a method to inform individual trainees about what is wrong with their current behavior. Trainers often have been observed to make such remarks as the following:

"You seem to be very hostile."

"You are not a very sympathetic person."

There is substantial evidence which indicates that criticism of performance is an ineffective method of achieving attitude and behavior change. The Trainer should keep the post-role discussion focused on feelings, interpretations, alternative behaviors, and alternative solutions.

There are some routine skills which can also utilize role playing exercises for demonstration and drill. Such skills might include completion of agency forms, or answering the telephone properly. The role play practice follows the demonstration of the skill.

DESCRIPTIONS OF TECHNIQUES

In role play a situation is defined and players are assigned roles. The players are instructed to play the role as they <u>think</u> or <u>feel</u> the real life person would react or respond in the same situation. The various techniques which may be utilized in role plays are:

ROLE REVERSAL -- The two players switch roles -- i.e., getting into the other fellow's shoes. This technique allows the players to gain different perspectives and insight into the other person's behavior. For example a supervisor/worker conflict might be examined and discussed. The Trainer would switch the working roles; thus, the supervisor would assume the role of the worker and vice-versa. The two players would act-out the behavior and feelings of the other person based on their interpretations.

PROJECTION -- The person plays the situation as he would ideally like it to be. This technique differs from the description given above in that the player is encouraged to project in the role the responses and reactions that he feels are ideal. For example, in training urban aides to gather census data from community residents a role play situation might be developed in which one player is instructed to play himself, an urban aide, greeting and requesting information from a resident as he feels it should ideally be done. In the discussion that follows, the group members comment on their perception of the role which may vary from the depicted role. A trainee who has criticisms of the greeting demonstrated may be requested to act out his conception of the ideal role performance.

MIRROR ROLE PLAY -- Another person plays the same role, but exaggerating the main difficulty or weakness of the first role player, clarifying the errors being made. For example, in the conflict situation between supervisor and worker the supervisor may feel that the worker is deliberately resisting him in the role play situation by not "hearing" his explanation. The Trainer asks another group member to mirror role play the behavior of the Community Worker. This technique allows the first player to observe his behavior as perceived by others.

Other kinds of training may occur during the role play exercise. For example, the group members may learn to use more effectively non-verbal forms of communication to express feelings where words are limited. Also, the group helps the individual to evaluate the strong and weak points in his style to allow him to realize his full potential.

To facilitate this, the Trainer should focus some post role play discussion on <u>form</u> as well as <u>content</u>.

In addition, observational and perceptual skills are increased as the group members carry out assignments involving observation, such as reporting what they have seen and inferred from the role play exercise.

STIMULATING INTEREST

In introducing role playing to a new group it is sometimes helpful to warm the group up by employing the following techniques which tend to dispel the sense of uneasiness and hesitancy among the group members.

Multiple Role Playing

In getting started, multiple role playing may be used. In this process the entire group forms into role playing groups. Two people role playing in each group is preferred; however, the number of characters required for a particular situation determines the number of players. All groups role play simultaneously. Afterwards, each group discusses and evaluates its results. This method quickly dispels shyness and feelings of self-consciousness.

Trainer Participation

During the initial stage the distance between the Trainer and the group members is reduced when the Trainer participates as a role play group member. When the Trainer

participates in the role playing, someone else should direct the session temporarily. The Trainer is cautioned not to do too much role playing with the group. He should be free, most of the time, to monitor, observe and evaluate the role play exercises.

Task Assignment

The observers become directly involved in the role play if they are assigned specific tasks. One may be asked to listen for significant remarks. Another may be asked to note gestures that reveal feelings. The group may be asked to list all statements that seem to mask what the characters really think. Of course, the observers always have the assigned tasks of listening, observing, and evaluating.

Buzz Groups

For a large audience buzz groups provide an opportunity for all the observers to participate in the dis-

cussion and evaluation after role playing is finished. Buzz groups are formed when the large group is divided into smaller groups of four or six. Each of these groups is guided by an assigned "leader" who leads the post role play discussion around a task assigned by the Trainer, and makes a verbal report to the re-assembled large group.

INCIDENTAL LEARNINGS

Many incidental learnings occur during role play through "playing," "observing," and "discussing."

Because of the loose structure of a role play session, the Trainer cannot map out exactly the learning that will be accomplished. The insights that will develop from a role play cannot be entirely forecast, since there is no way of knowing beforehand what behavior and emotion will result, and as in any learning experience each member of the group will learn different things in accordance to his own reactions and frames of reference.

It is generally agreed, however, that certain identifiable learnings do occur in role playing. They are:

- role playing increases a person's repertoire and potential by helping him to explore his skills and possible ways of dealing with problems and doing things.

- the emotional dimension in role playing leads to more meaningful insight and better carrying through of changes in behavior.
- role playing increases verbal skills where these skills are limited.
- participants learn how to move and become more physical and do not merely sit and talk.
- role playing facilitates seeing a problem from various perspectives by placing the participants temporarily on someone else's shoes.

The learnings may not be immediately apparent to the Trainer but may show themselves in changed attitudes toward work or new ways of dealing with people in a situation other than the training situation.

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Hardy, M.I.
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*OCCUPATIONAL SURVEYS; *NURSES; *INDUSTRY; QUESTIONNAIRES; *EMPLOYMENT EXPERIENCE; *EDUCATIONAL BACKGROUND
ONTARIO; CANADA

The survey examines the educational background and work activities of the occupational health nurse in order to establish a sound curriculum for occupational health nursing. A 32-page questionnaire was sent to 742 occupational health nurses in the Province of Ontario in May 1962; the contents of 330 replies ranged from a few answers to answers to all the questions. Data in tabular form relate to (1) utilization of time on the job, (2) types of positions, (3) average work week, (4) correlation of salary and age range, (5) high school education, (6) professional preparation, (7) year of graduation, (8) university preparation, (9) clinical specialty, (10) size of employing agency, (11) average number of employee visits, (12) hazards of the organization served by the health centre, (13) agency policies and procedures, (14) number and size of health units, (15) number of shifts, (16) nature of supervision, (17) definition of duties of nurse and physician, (18) length of time health service has operated, (19) non-nursing functions performed by nurses, (20)

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ONTARIO

OCCUPATIONAL HEALTH NURSING IN ONTARIO

A REPORT ON

RESULTS FROM A QUESTIONNAIRE

VT008233

ONTARIO DEPARTMENT OF HEALTH
ENVIRONMENTAL HEALTH BRANCH
TORONTO 2, ONTARIO

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OCCUPATIONAL HEALTH NURSING IN ONTARIO

A Report on

Results from a Questionnaire

Prepared
by

M. I. HARDY, B.Sc.N.

Environmental Health Branch
Ontario Department of Health

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FOREWARD

This is a report of the basic data collected from a Questionnaire on Occupational Health Nursing, 1963, designed, executed and circulated by the staff of the School of Hygiene, University of Toronto. Mrs. Evlyn Dalman, Research Associate, prepared the questionnaire and was responsible for the initial development of the data. Further analysis was carried out by Dr. J. R. Brown, Director of the Project. Further assessment and the writing of this report was done by the staff of the Environmental Health Branch, Ontario Department of Health, at the request of Dr. Brown after Mrs. Dalman left the study.

The project was an ambitious undertaking designed to obtain comprehensive information. It proved impossible to prepare a report covering the total information originally sought. As the analysis progressed the number of blanks or "no" answers increased; many returns showing less than 25 per cent response or codable answers. This was particularly evident in the B Section of the questionnaire. Hence, only that data considered to be meaningful have been included in this report.

Many people assisted with the preparation and completion of this project. The Environmental Health Branch provided the names and addresses of the occupational health nurses in Ontario and encouraged all nurses to participate. Mr. C. Walker and Mr. A. McKenzie of the Research and Statistics Branch, Department of National Health and Welfare, processed and analyzed the data on the Summary Page. We are grateful to the occupational health nurses throughout the Province who answered the questionnaire. We wish to thank those who offered their comments and suggestions.

R. B. Sutherland,
Director.

M. I. Hardy,
Nursing Consultant.

Environmental Health Branch,
Ontario Department of Health,
Toronto, March, 1967.

INTRODUCTION

The development of modern technology has resulted in the adoption of new procedures and products. These new developments have created stresses and hazards which have necessitated continuing changes in the practice of occupational health. To meet these changes, new methods based on contemporary knowledge and skills are required to provide adequate service and health supervision to employed persons. Therefore, a reassessment of current employee health services is essential.

Occupational health nurses throughout Ontario have long recognized that there is a lack of factual data available to indicate what curriculum content, if any, prepares nurses to meet the demands of changing technology with its impact on occupational health programs. As a result of their concern two resolutions requesting research into the preparation of nurses for occupational health nursing were presented to the experts in the Occupational Health Division, Department of National Health and Welfare, and the Industrial Hygiene Branch of the Ontario Department of Health. The first of these resolutions was presented by a group attending a conference on leadership in Occupational Health Nursing sponsored by the Occupational Health Division, September, 1958. It was recommended that:

> "The Occupational Health Division, Department of National Health and Welfare, undertake a research study of the public health nursing certificate course at selected universities with a view to:
>
> a) analyzing the content and method of presentation of information relating to preparation for the field of occupational health nursing;
>
> b) strengthening these courses to meet the needs of nurses preparing to work in the occupational health field;
>
> c) suggesting that such strengthening be of equal value to nurses entering the other areas of public health;
>
> d) suggesting that agricultural occupational health and safety education be included in any preparation related to rural public health nursing, as a nurse visiting in farm homes is a logical person to give this health guidance."

The second resolution was presented February 1959, by the Registered Nurses' Association of Ontario. It stated:

> "That the following specialists be asked to consider ways and means of setting up a survey to find out what is actually being taught about occupational health nursing at all levels of nursing preparation: That when such a survey is instituted, a qualified person, preferably with broad experience in occupational health nursing, be given the responsibility of conducting and reporting on the survey.
>
> Dr. T. Patterson, Chief, Occupational Health Division, Department of National Health & Welfare.
>
> Miss M. Walker, Senior Nursing Consultant, Occupational Health Division, Department of National Health & Welfare.
>
> Dr. J. C. Cunningham, Director, Division of Industrial Hygiene, Ontario Department of Health.
>
> Miss S. Wallace, Consultant, Industrial Nursing, Division of Industrial Hygiene.
>
> Miss M. Hardy, Consultant, Industrial Nursing, Division of Industrial Hygiene."

In 1960 Dr. J. R. Brown, Professor and Head, Department of Physiological Hygiene, School of Hygiene, University of Toronto, became interested in the possibilities for research in the field of occupational health nursing. After consultation with various experts in occupational health and in nursing education, Dr. Brown and Miss N. Fidler, Director, School of Nursing, University of Toronto, jointly applied for, and received, a National Health Grant to initiate this study of Occupational Health Nursing. The objectives of the study were:

1. to determine the nature of the duties and the range of activities and responsibilities of the Occupational Health Nurses working in industry and those providing employee health services in hospitals, municipal governments, and other non-industrial situations;

2. to determine how much of the present curriculum for undergraduate and post-graduate, in basic and graduate courses, is concerned with occupational health.

On June 22nd, 1961, Dr. Brown called together representatives of the Schools of Hygiene and of Nursing, University of Toronto, and the Industrial Hygiene Branch, Ontario Department of Health. He announced

the appointment of Mrs. Evlyn Dalman as Research Associate for the Study, the setting up of a Nucleus Committee to work with Mrs. Dalman and an Advisory Committee to work with the Director and the Research Associate. At the same meeting Dr. Brown named himself as Director of the Project.

The terms of Reference for the two committees were set forth as follows:

A. The Nucleus Committee

1. To advise on the scope of survey.

2. To advise on the general method of procedure.

3. To recommend follow-up action, and the method and means of keeping basic data current.

4. To give information on the conduct, progress and results of survey to the Advisory Committee and to other groups.

5. To decide on a public relations policy and give general direction to a public relations activity.

B. The Advisory Committee

1. To consider recommendations from the nucleus committee and advise on action.

2. To inform nursing, medical and hospital groups of plans.

3. To facilitate the making of appointments for interviews and field visits for the director and the investigator.

4. To present the report to nursing groups, other allied groups, and the public.

COMMITTEE MEMBERSHIP

NUCLEUS COMMITTEE

Dr. J. R. Brown	- Professor and Head, Department of Physiological Hygiene, School of Hygiene, University of Toronto.
Dr. J. D. Firstbrook	- Associate Professor, Department of Physiological Hygiene, School of Hygiene, University of Toronto.

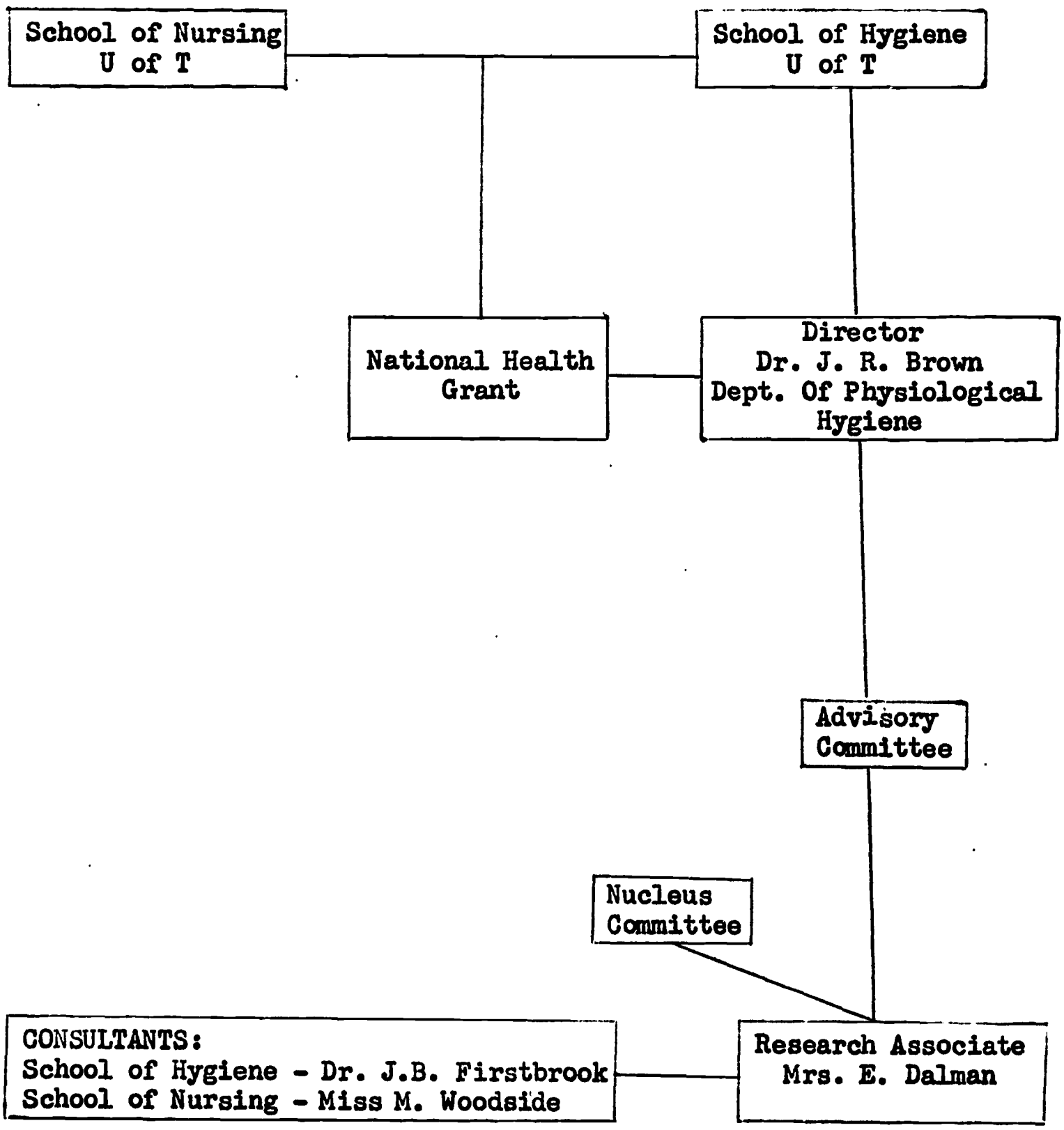
Miss M. I. Hardy	- Nursing Consultant, Industrial Hygiene Branch, Ontario Department of Health.
Miss M. B. Millman	- Professor of Public Health Nursing, School of Nursing, University of Toronto.
Dr. T. H. Patterson	- Chief, Occupational Health Division, Department of National Health and Welfare, (Corresponding Member).
Dr. R. B. Sutherland	- Medical Specialist, Industrial Hygiene Branch, Ontario Department of Health.
Miss Mildred Walker	- Senior Nursing Consultant, Division of Occupational Health, Department of National Health and Welfare.
Miss S. Wallace	- Senior Nursing Consultant, Industrial Hygiene Branch, Ontario Department of Health, Chairman.
Miss M. Woodside	- Assistant Professor of Public Health Nursing, School of Nursing, University of Toronto, Secretary.

ADVISORY COMMITTEE (This Committee held no meetings)

Dr. J. H. Baillie	- Regional Medical Director, Western Area, The Bell Telephone Company of Canada.
Dr. J. R. Brown	- Professor and Head, Department of Physiological Hygiene, School of Hygiene, University of Toronto.
Mrs. K. Colombo	- Occupational Health Nurses of Ontario, Dominion Electrohom Industries Limited, 283 Duke Street, West, Kitchener, Ontario.
Dr. J. B. Firstbrook	- Associate Professor, Department of Physiological Hygiene, School of Hygiene, University of Toronto.
Miss M. I. Hardy	- Nursing Consultant, Industrial Hygiene Branch, Ontario Department of Health.

Miss Ella Howard	- Director of Nursing, New Mount Sinai Hospital, Toronto.
Miss Christine MacArthur	- Educational Director, Victorian Order of Nurses, Ottawa.
Miss M. B. Millman	- Professor of Public Health Nursing, School of Nursing, University of Toronto.
Dr. R. B. Sutherland	- Medical Specialist, Industrial Hygiene Branch, Ontario Department of Health.
Miss Mildred Walker	- Senior Nursing Consultant, Division of Occupational Health, Department of National Health and Welfare.
Miss S. Wallace	- Senior Nursing Consultant, Industrial Hygiene Branch, Ontario Department of Health, Chairman.
Miss Margaret Wheeler	- Consultant in Industrial Nursing, Ministry of Health, Province of Quebec.
Mrs. Jean Woods	- Supervisor in Occupational Health Nursing, Department of Health, Saskatchewan. (Corresponding Member)
Miss M. Woodside	- Assistant Professor of Public Health Nursing, School of Nursing, University of Toronto, Secretary.

ORGANIZATIONAL CHART



P U B L I C I T Y

Announcements concerning the study were carried in the News Letter to Industrial Nurses in Ontario, a quarterly periodical issued by the Industrial Hygiene Branch of the Ontario Department of Health.

The study was registered with the following groups:

Canadian Nurses Association,
74 Stanley Avenue,
Ottawa, Ontario.

Miss Jenny Weir, Chairman,
Canadian Conference of University Schools of Nursing,
Director, School of Nursing,
Queen's University,
Kingston, Ontario.

Dr. Odin W. Anderson, Research Director,
Health Information Foundation,
420 Lexington Avenue,
New York 17.

SELF RECORDING ACTIVITIES AND EDUCATIONAL PHASE

In order to obtain factual information a self-recording activities study had been planned and partially developed before Mrs. Evlyn Dalman left the project on January 31st, 1963. The first draft of a planned inquiry into the basic and post-basic phase of nursing education had also been planned. Unfortunately, it was impossible to locate another research associate to complete any or all of the planned and partially planned investigations. Therefore Dr. Brown approached Dr. R. B. Sutherland, then Assistant Director, Industrial Hygiene Branch, Ontario Department of Health, for assistance by the Branch in completing the work on the questionnaire and in writing a report. It was finally agreed that the project would be taken over, with a report on the results from the questionnaire phase to be written by a member of the Branch and publication to be carried out by the Ontario Department of Health.

METHODOLOGY

In order to reach the objectives it had been decided to conduct the Study in two parts. The first part was designed to determine the functions, activities and roles of the occupational health nurse. The second was to study basic and post-basic nursing education to find out what is actually being taught to prepare the nurse for Occupational Health Nursing. Teaching areas were to be studied and an analysis of the data was to be compiled. This part was never completed.

DEFINITIONS WHICH WERE ESTABLISHED

1. Occupational Health

   Occupational Health is the application of public health principles and medical, nursing and engineering practice for the purpose of conserving, promoting and restoring the health and effectiveness of workers through their place of employment. (1)

2. Occupational Health Nursing

   Occupational Health Nursing is the application of nursing skills to the worker at, and through, his place of employment. As it is a social and preventive, as well as an emergency service, its objective is the promotion and maintenance of the highest degree of physical, mental, and social well-being of all employees. (2)

3. Occupational Health Services

   Occupational Health Services are designed to maintain and improve the health of employees, so that each individual may function as a productive self-respecting happy worker for a maximum period of time. The occupational health service should be considered as one aspect of an overall public health program in the community. (3)

4. Categories of Occupational Health Nursing

   a) Director of Nursing Services

      A professional registered nurse who plans, directs, guides, and co-ordinates the functions and programs of several nursing supervisors or charge nurses
      (i) in various geographical locations
      (ii) in one location

(1) Brown, Mary Louise: Occupational Health Nursing, Springer Publishing Company, New York 1956.
(2) Functions of the Occupational Health Nurse, Registered Nurses' Association.
(3) Guiding Principles for the Provision of Occupational Health Services, Canadian Medical Association.

b) Supervisor

A professional registered nurse who directs several staff nurses and is responsible for the organization, development and administration of the service.

c) Assistant Supervisor

A professional registered nurse who has an assigned area of responsibility for the supervision of, and planning for, nurses.

d) Senior Nurses (no definition established)

e) Charge Nurse

A professional registered nurse who works alone or with other personnel and carries responsibility for the nursing and administrative aspects of:
(i) in-plant service
(ii) full time home visiting

f) Staff Nurse

A professional registered nurse who works under the direction of a supervisor or a charge nurse.

QUESTIONNAIRE ON FUNCTIONS

The Questionnaire* was developed, tested and revised. It was prepared and printed in three sections.

Section A dealt with the level of the nurse's responsibility, length of her service, size of industry she served, her academic and professional preparation, the ranges of her responsibilities, the type of supervision she received, the type of person she supervised, to whom she is responsible, and the importance of various kinds of knowledge.

Section B was concerned with what the nurse did (activities carried by the nurse) her opinion regarding the adequacy of her formal education in preparation for her present position and where her knowledge was obtained.

The Summary consisted of a summary page with space for comments.

* Appendix I

The introduction to the Questionnaire contained statements on objectives, purpose, methods and aim as follows:

OBJECTIVE OF THE STUDY

To develop recommendations on how nursing education programs can best be adapted to prepare nurses to meet modern occupational health nursing service needs.

PURPOSE

To study what is actually happening in occupational health nursing practice to ascertain a realistic appreciation of the qualities and training needed by those who practice it.

The questionnaire (Method Page 1) was developed:

1) To obtain objective and factual information concerning the nature of duties and the range of activities of the occupational health nurse. To determine currently how occupational health nurses have adapted their functions to the growing and challenging demands of industry.

2) To ascertain what is actually being taught in current education programs to prepare nurses for occupational health nursing.

3) To analyze occupational health content of nursing education programs in terms of existing needs and functions of the occupational health nurse.

4) To suggest ways of integrating, reorienting or introducing educational material so the occupational health nurse shall

   (a) be well informed on the preventive approach to occupational medicine

   (b) have some guarantee of competence in principles and practices of occupational health nursing

   (c) have assurance and status in the specialized field of occupational health nursing.

AIM

The aim of this questionnaire is to establish the particular functions associated with occupational health nursing.

DISTRIBUTION

The final form of the 32 page self-administered questionnaire* was sent to 742 Occupational Health Nurses in the Province of Ontario

* Appendix 1, Appendix 2

during the last two weeks in May, 1962. A covering letter gave a return date of June 1st, 1962. Because of the slow return (90 by July 1st) the date of return was extended to December 10th, 1962. In the interim four follow-up efforts were used to encourage voluntary return of the questionnaire. These were:

1) Self-addressed return post card was sent to all nurses who had not responded by July 2nd, 1962.

2) A letter was also sent to all nurses not responding, plus a letter to the supervisor or head nurse, giving the code numbers of the questionnaires not yet received. This was done on August 9th, 1962.

3) A final letter was sent in October, 1962, to all supervisors.

4) A letter giving a closing date was sent to all those nurses who had indicated an interest in participating, but who had not returned their questionnaires.

THE RESPONSE

Of the total of 742 questionnaires sent out, 379 (51.1%) were returned including 48 (6.5%) which had not been used for various reasons, e.g. service discontinued, etc. There were 363 (48.9%) questionnaires not returned, i.e. no response obtained in this percentage. Many of the returned questionnaires had covering letters. While these letters were not tabulated or analyzed, 74 letters giving the reasons why the nurse was not participating were tabulated with results as follows:

1)	New Service or nurse	6
2)	Not sufficient time	30
3)	Difficult	11
4)	Questions considered not applicable	10
5)	Lost in transit	9
6)	Not interested in participating	8

DEVELOPMENT AND ANALYSIS OF DATA

The Summary Page was processed and analyzed by Mr. C. Walker and Mr. A. McKenzie, Research and Statistics Branch, Department of National Health and Welfare, Ottawa.

The staff of the School of Hygiene dealt with the data from selected questions in Section A and Section B. Mrs. Dalman was responsible for the initial development of the data; further analysis was done by Dr. Brown, after Mrs. Dalman left the study.

ASSESSMENT OF THE RESULTS AND THE WRITING OF THE REPORT

Analysis of the data, the redrawing of two questions*, the realigning of some tables and writing of the report were carried out by the author.

* Tables A - 11 (a), (b), A - 23.

It was recognized early in the assessment of the data from Sections A and B that several factors, e.g. the length of the questionnaire, the terminology, the phrasing and the repetition contained in these sections, were important in the acceptance and completion of the questionnaire and would influence the report. Moreover, some questions had less than 25 per cent respond rate, and the methods used to code and process data in some areas were open to question, e.g. in compiling the data on "Counselling", Section B, p. 9, all the questions (82 to 89 inclusive) were tabulated as one item. This made it impossible to differentiate between such activities as assisting, counselling, providing, etc., activities which were considered important when the questionnaire was prepared. Similarly, items under a single question, e.g. no. 111, Section B, p. 12, were drawn as a single reply. Therefore, it was the opinion of the author that much of the data available was not suitable for inclusion in this report.

THE DATA

Three hundred and thirty of the questionnaires returned contained replies varying from a few answers to answers for all questions. The data from Sections A and B were drawn by hand by the coding clerks and tabled, in part, by Dr. J. R. Brown and in part by members of the Industrial Hygiene Branch, Ontario Department of Health.

The Summary Pages* from 324 questionnaires were forwarded to the Research and Statistics Branch of the Department of National Health and Welfare, Ottawa, for data processing and analysis.

The data on the Summary Page 17 (Part B)* were processed and analyzed by Mr. C. Walker and Mr. A. McKenzie of the Research and Statistics Division of the Department of National Health and Welfare, Ottawa.

Of the 324 summary pages, 183 (56.20%) contained sufficient information for processing. From data drawn the following table was produced:

TABLE S-1

AVERAGE PERCENTAGE OF TIME IN DECREASING ORDER

Categories (summary page)	Percent of time
1. Nursing care - Occupational	18.80
2. Records and Reports	13.97
3. Nursing care - non Occupational	12.96
4. Counselling	7.90
5. Preventive Medicine	7.47
6. Maintenance	6.10
7. General Health Supervision	5.36
8. Interview and Guidance Conferences	4.78
9. Administration	3.48
10. Free time	3.48
11. Health Education	2.72
12. Health and Welfare Benefit Plan	2.40
13. Safety	1.84
14. Visits	1.45
15. Community	1.40
16. Travel	1.27
17. Inside and Outside Company Relationships	1.26
18. Environmental Hygiene	1.22
19. Staff education	0.74
20. Research	0.71
21. Dental Health	0.67 99.98

* Appendix I, Section B.

In perusing the data one must consider the instructions and definitions* on which the nurses compiled the data for the summary page. One recognizes immediately that the same term appears in more than one category, e.g. administer is used as a classification and is an item in Health and Welfare. Similarly different terms with the same connotation are used in one or more classifications, e.g. education appears under Dental Health, and teaching under Health Education. Therefore, similar functions, activities and responsibilities could be lumped together thus providing a slightly more definitive picture. One example of this grouping would present the following picture:

TABLE S-2

AVERAGE PERCENTAGE OF TIME
RECLASSIFIED TO PLACE COMPARABLE ITEMS IN SAME CATEGORY

Classification	PERCENTAGE	
1. Nursing Care		39.23
Occupational	18.80	
Non-occupational	12.96	
Preventive Medicine	7.47	
2. Administration		27.96
Records and reports	13.97	
Maintenance	6.10	
Administration	3.48	
Health and Welfare Benefit Plan	2.40	
Travel Time	1.27	
Staff education	0.74	
3. Counselling		12.68
Counselling	7.90	
Interviewing and Guidance Conferences	4.78	
4. Health Supervision		8.75
General Health Supervision	5.36	
Health Education	2.72	
Dental Care	0.67	
5. Free time		3.48
6. Safety and Environmental Hygiene		3.06
Safety	1.84	
Environmental Hygiene	1.22	
7. Community and Company Relationship		2.66
Community Relationships	1.40	
Inside and Outside Company Relationships	1.26	
8. Visits		1.45
9. Research		0.71

* Appendix 1, Section B.

Section A

Section A* was designed to elicit major information characteristic of the nurse and the industry. It was planned to collect data related to the academic and professional background of the respondent, the size and type of company or agency, the scope of the employee health program and the opinion of the nurse in relation to the adequacy of her preparation for occupational health nursing.

Three hundred and thirty nurses partially or fully completed this section. Data was drawn on selected items only. Therefore, the following tables were based on the replies to those items selected from the sixty-one questions and requests for information contained in Section A.

* Appendix I

TABLE A-1

CATEGORY OF NURSES

Question 1
What is the category of your current position?*
Please check:
1. Director of Nursing Services
2. Supervisor
3. Assistant Supervisor
4. Senior Nurse
5. Charge Nurse
6. Staff Nurse

Question 5
Are you employed full-time (e.g. ten full months or more per annum)?

Question 6
Are you employed part-time (fee or contract basis)?

Category	Number of Nurses Full Time	Percentage of F.T. Nurses	Number of Nurses Part Time	Percentage of P.T. Nurses
1. Director of Nursing Services	3	1.04	0	-
2. Supervisor	36	12.32	1	3.4
3. Assistant Supervisor	3	1.04	0	-
4. Senior Nurse	29	10.0	0	-
5. Charge Nurse	120	41.1	14	48.3
6. Staff Nurse	101	34.5	14	48.3
TOTAL	292	100.0	29	100.0

Total Replies	Number of Nurses	Percentage of Nurses
Full Time Nurses	292	88.4
Part Time Nurses	29	8.8
No reply	9	2.8
TOTAL	330	100.0

* Category definitions (p11) were not made available to respondents and question was not phrased to meet the defined responsibilities.

TABLE A-2

HOURS WORKED

Question 4

What is your average work week in hours?*

295	Full Time Nurses work an average of 39 hours and 17 minutes
32	Part Time Nurses work an average of 11 hours and 53 minutes
3	Did not reply

* It is not known whether part-time nurses gave total number of hours in nursing or number of hours in Employee Health Services.

TABLE A-3

CORRELATION OF SALARY AND AGE RANGES

Question 7
Prior to January 1962, what was the highest income you earned for any one year in occupational health nursing? Please check.

Question 8
Circle age: Under 25 25-34 35-44 45-54 55-64 65 and over.

FULL TIME NURSES

	No Reply	Under 35yrs. of age	35-44 yrs. of age	45-54 yrs. of age	55-64 yrs. of age	65 yrs. and over	Total	Percentage of Total
Under $3000		1	3	4	1	1	10	3.4
$3000-$3999		32	38	26	21	1	118	40.0
$4000-$4999		17	33	36	23	-	119	40.3
$5000-$6000		2	4	8	6	-	20	6.8
Over $6000		-	-	3	-	-	3	1.0
No reply	25	-	-	-	-	-	25	8.5
Total No. of Nurses	25	52	78	87	51	2	295	100.0
Percentage of Nurses	8.5	17.7	26.2	29.5	17.4	0.7		100.0

PART TIME NURSES

Under $3000		3	2	3	1	-	9	31.0
$3000-$3999		1	2	-	-	-	3	10.3
$4000-$4999		-	1	-	-	-	1	3.5
$5000-$6000		-	-	-	-	-	-	0
Over $6000		-	-	-	-	-	-	0
No reply	16	-	-	-	-	-	16	55.2
Total No. of Nurses	16	4	5	3	1	-	29	100.0
Percentage of Nurses	55.2	13.8	17.2	10.4	3.4	-		100.0

Note: Salaries for Part-Time Nurses are inconclusive. The amounts checked did not indicate whether salary was for the time spent in part time employee health service or for a combination of part-time industrial nursing plus part time in other nursing activities.

TABLE A-4

ACADEMIC PREPARATION

Question 9
How many years were completed in high school (Ontario Standard)?
(Nurses from other areas. Circle most appropriate grade.)

GRADE	NO. OF NURSES	PERCENTAGE
8	2	1
9	3	1
10	15	5
11	16	6
12	154	45
13	128	39
No Answer	12	3
Total	330	100

TABLE A-5

PROFESSIONAL PREPARATION

Question	Yes		No		No Answer		Total	
	No.	%	No.	%	No.	%	No.	%
10. Are you a graduate of a basic nursing school program?	318	96.6	6	1.7	6	1.7	330	100
15. Have you a specialist certificate?	89	27	220	67	21	6	330	100

TABLE A-6

UNIVERSITY PREPARATION

Question 11
Are you a graduate of a university nursing program?
Question 13
Have you a degree from a university?
Question 14
Have you a diploma from a university?

UNIVERSITY COURSE	Number		Percent	
	Yes	No	Yes	No
Graduate	27	297	8.3	91.7
Degree	14	310	4.3	95.7
Diploma	97	227	29.9	70.1

Note: no reply - 6

TABLE A-7

GRADUATION YEAR OF NURSE

Question 12
State year of graduation (RN).

Graduation Year Groupings	Number of Nurses	Percentage of Nurses
1922 and earlier	4	1.2
1923 to 1932	69	20.8
1933 to 1942	94	28.5
1943 to 1952	94	28.5
1953 to 1963	56	17.0
Not stated	13	4.0
	330	100.0

TABLE A-8

SPECIALTIES

Question 16
What is your specialty?

Specialty	No. of Replies	Per-centage
1. Operating Room	16	4
2. Psychiatric Nursing	17	4
3. Public Health Nursing	86	24
4. School Nursing	6	2
5. Surgical Nursing	10	3
6. Teaching	8	2
7. Obstetric Nursing	26	7
8. Occupational Health Nursing	142	39
9. Outpatient Nursing	6	2
10. Pediatric Nursing	11	3
11. Medical Nursing	10	3
12. Other Nursing	26	7
Total	364	100

Note: 260 respondents checked a total of 364 specialties.
70 did not indicate any specialty.
When considered in relation to Question 15, "Have you a Specialists Certificate?", question 16 was misunderstood or misinterpreted. This could be attributed to ambiguity in phrasing of the question. If a specialists certificate was not intended as the criteria for answering this question, one wonders why only 39% (142) of the replies indicated that the respondents considered occupational health nursing as their specialty.

TABLE A-9

NURSES IN RELATION TO SIZE OF ESTABLISHMENT

Question 19
Please check the size of the establishment which you serve:

No. of Employees	No. of Nurses	Percentage of Total
Under 200	36	11.0
200 - 499	77	23.3
500 - 999	66	20.0
1000 - 1999	61	18.5
2000 - 2999	38	11.5
3000 - 3999	12	3.6
4000 and over	29	8.8
Not stated	11	3.3
	330	100.0

TABLE A-10

AVERAGE NUMBER OF EMPLOYEE VISITS BY SIZE OF ESTABLISHMENT

Question 19
Please check the size of the establishment which you serve.
Question 26
What is the average number of employee visits to the health centre?

No. of Employees in Establishments	No. of Nurses Replying	Average No. of Employee visits per month to Health Centre
Under 200	28	177
200 - 499	68	401
500 - 749	36	614
750 - 949	24	602
1000 -1499	33	968
1500 -1999	16	671
2000 -2999	35	1252
3000 -3999	9	3228
4000 and over	23	2112
not stated	58	
	330	

TABLE A-11 (a)

HAZARDS

Question 21
Name the prominent hazard(s) of the establishment which is served by the centre in which you work.

CLASSIFICATION* (Injury Agencies)	No. of Replies	% of Replies
1. Hand Tools: Hand Motive Power, when in use as such	15	4.33
2. Hand Tools: Mechanical, Electrical, when in use as such	20	5.80
3. Machines, Working: Lathes, Saws, Presses, etc. in operation	52	15.00
4. Prime Movers: Transmission, Gears, Belting, etc. in motion	2	.57
5. Elevators, Hoists, Conveyors, Cranes, etc.	2	.57
6. Electrical Apparatus: Motors, Generators, Transformers, etc.	13	3.75
7. Autos, Power Trucks, Rail Rolling Stock, etc.	7	2.00
8. Trucks, hand operated: Wheelbarrows, Bicycles, etc.	4	1.12
9. Chemicals: Caustic Acids and Alkalis	29	8.40
10. Highly Inflammable, Hot Substances (temperature extremes)	26	7.52
11. Substances causing Industrial Diseases	46	13.70
12. Explosives, Boilers, Pressure Vessels, etc.	2	.57
13. Obstructions (striking against)	1	.28
14. Materials: Metals, Lumber, etc. (handled by victim)	35	10.13
15. Other Objects: Miscellaneous Equipment, etc. (handled by victim)	8	2.30
16. Containers: Boxes, Bales, Packages, etc. (handled by victim)	15	4.33
17. Materials, Other Objects, Containers (handled by other than victim)	0	-
18. Working Surfaces: Falls, Slips, etc. on the level	13	3.75
19. Working Surfaces: Falls to other levels (scaffolds, platforms, pits, ladders, etc.)	4	1.12
20. Objects: Flying, moving, falling (not handled)	18	5.21
21. Not elsewhere classified	33	9.55
TOTAL	345	100.00

* Employer's Master Record - Injury Frequency
Industrial Accident Prevention Association

TABLE A-11 (b)

HAZARDS

(Incorrect Replies)*

Question 21
Name the prominent hazard(s) of the establishment which is served by the health centre in which you work.

SHORT MORBIDITY CLASSIFICATION TITLE #	No. of Replies	% of Replies
1. Fractures	17	4.40
2. Dislocations without fractures	7	1.81
3. Sprains, strains of joints and adjacent muscles	51	13.21
4. Head injury (excluding fracture of skull)	1	.26
5. Internal injury of chest, abdomen and pelvis	5	1.29
6. Lacerations, open, and puncture wounds	83	21.50
7. Superficial injury, abrasions, contusions (slivers and splinters)	65	16.83
8. Foreign body entering natural orifice	51	13.21
9. Burns	62	16.10
10. Injury to nerves and spinal cord	9	2.33
11. Other and unspecified accidents, violence and early complications of trauma	35	9.06
TOTAL	386	100.00

* Although this table represents an incorrect interpretation of the question, it is the only data that can be linked to the injury experience of the company or agency served by the respondents.

Short morbidity classification for use in industry based on the International Statistical Classification of Diseases, Injuries and Causes of Death. N800-999, excluding effects of weather, etc., N960-989.

TABLE A-12

POLICIES AND PROCEDURES

Questions	Yes		No		No Answer		Total	
	No.	%	No.	%	No.	%	No.	%
20. Do you have an organizational chart for your health service which shows the relationship and other departments of the establishment?	147	44.5	162	49.09	21	6.36	330	100
29. Is there a written statement of objectives for your employees' health program?	143	43.33	146	44.24	41	12.43	330	100
43. Are your duties and responsibilities written?	180	54.85	101	30.61	49	14.54	330	100
45. Have you written standing orders concerning the treatment offered to employees?	240	72.7	78	23.7	12	3.6	330	100
47. Are these directives signed?	185	56.06	108	32.73	37	11.21	330	100
48. Have you a written policy and procedure manual?	223	67.58	90	27.27	17	5.15	330	100

TABLE A-13

HEALTH UNITS

Question 23	No. of Replies	%
(a) Do you serve in more than one health unit?		
Yes	60	18.2
No	255	77.3
No Answer	15	4.5
	330	100.0
(b) Do you serve in		
(1) A one-nurse unit?	135	40.90
(2) A multiple-nurse unit?	122	36.96
(3) A one-nurse service?	73	22.13
	330	100.00

TABLE A-14

NUMBER OF SHIFTS

Question 24
How many shifts in a 24-hour period has a nurse in charge of the operation of the Health Service?

	No. of Replies	%
One Shift	260	78.85
Two Shifts	18	5.4
Part Time	18	5.4
No Answer	34	10.35
	330	100.00

TABLE A-15

SUPERVISION

Question 33
Do you have direct supervision?
Question 34
Do you have indirect supervision?

	DIRECT		INDIRECT	
	No. of Replies	Percentage of replies	No. of Replies	Percentage of replies
1. Yes	150	45.4	190	57.5
2. No	124	37.6	58	17.5
3. No reply	56	17.0	82	25.0
TOTALS	330	100	324	100

TABLE A-16

RESPONSIBILITIES OF PHYSICIAN AND NURSE

Question	Yes		No		No reply		Total	
	No.	%	No.	%	No.	%	Total	%
39. Are duties and responsibilities of supervising physician clearly defined and written?	144	43.64	114	34.54	72	21.82	330	100
43. Are your duties and responsibilities written?	181	54.85	101	30.61	48	14.54	330	100

TABLE A-17

LENGTH OF TIME EMPLOYEE HEALTH SERVICE HAS BEEN OPERATING

Question 22
How many years has this health service been in operation?*

1 - 10 years	11 - 20 years	21 - 30 years	31 - 40 years	Over 40 years	No reply	No. of Replies	%
104						104	31.5
	127					127	38.6
		37				37	11.2
			23			23	7.0
				8		8	2.4
					31	31	9.4
						330	100.0

*This data related to number of nurses. Question did not permit drawing of data for number of services.

TABLE A-18

NON-NURSING FUNCTIONS

Question 44
Do you have any duties that normally are not considered nursing?*

Other Duties	No. of Replies	% of Replies
Typing	128	
Personnel	70	
Selling	11	73.15
Receptionist	30	
Other Misc. Duties	88	
	327	
No other duties than nursing	73	16.33
No Answer	47	10.52
	120	
	447	100.00

* Note majority of respondents did not estimate percentage of time as requested in method of reply.

TABLE A-19

COMMUNITY AGENCIES

	Yes		No		No reply		Total	
	No.	%	No.	%	No.	%	No.	%
49. Have you an up-to-date file on programs, services and policies of community health and welfare agencies?	212	64.2	95	28.8	23	7.0	330	100
52. Are you dependent on a hospital emergency service for major emergencies?	300	90.95	23	6.95	7	2.10	330	100

TABLE A-20

FURTHER EDUCATIONAL PREPARATION

Question 55
Do you wish further educational preparation?

	No. of Replies	%
Yes	183	55.45
No	102	31.00
No Reply	45	13.55
Total	330	100.00

Note: It is noteworthy that 44.55% did not see a need for further education.

TABLE A-21

ADJUSTMENT TO JOB

Question 58
What is the position of the person who has been most influential in helping you adjust to your present job?*

1. Personnel Director	14.28%
2. Medical Director	23.66%
3. Safety Director	5.15%
4. Nursing Consultant	9.15%
5. Nursing Supervisor	23.66%
6. No Orientation	5.35%
7. Others (please specify)#	14.29%
No Answer	4.46%
Total	100.00%

* Percentage based on multiple answer replies with no indication of gradation of assistance.

\# Other: e.g. other occupational health nurses, individuals, manager medical officer of health, etc.

TABLE A-22

STUDENT OBSERVATION

Question	Yes		No		No reply		Total	
	No.	%	No.	%	No.	%	No.	%
59. Do you provide opportunities for observation and experience for students and faculty of nursing education programs and for the staff of other occupational health programs?	144	43.64	170	51.51	16	4.85	330	100.00
60. Would you like to participate in the above type of program?	181	54.87	70	21.20	79	23.93	330	100.00

TABLE A-23

EDUCATIONAL PREPARATION

This question is designed to obtain a consensus of opinion regarding the adequate preparation of nursing students and registered nurses for the field of occupational health nursing. It appears to cover the area, or areas, adequately. However, there could be an area, or areas, omitted depending upon further specialization related to industrial classification of the companies or agencies.

In considering the following data, note that the information has been classified under TWO ratings only - NEGLIGIBLE, and SIGNIFICANT & IMPORTANT. Significant and important were combined because:

1. The rating scale, was not defined to show shading of meaning.
2. In some connotations, the terms, significant and important, can be, and are used, as synonyms. Some respondents did, in fact, check both columns; some appreared to ignore "significant".

Question 61
What formal education do you think should be required for successful performance in a position such as yours? Please rate the importance of each knowledge on-the-job; negligible, significant, important.

Item 1. PUBLIC AND OCCUPATIONAL HEALTH NURSING

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	No reply	%	Opinion	%
a. History, development and changing concepts	51	15.74	251	77.47	22	6.79	324	100.00
b. Functions of the public and occupational health nurse	3	.93	307	94.75	14	4.32	324	100.00
c. Principles and content of public and occupational health	6	1.85	286	88.27	32	9.88	324	100.00

Note: six respondents submitted no answers to any section of Question 61.

TABLE A-23 (cont'd)

EDUCATIONAL PREPARATION

Question 61 - cont'd.

Item 2. PUBLIC HEALTH AND MEDICAL CARE

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
a. National, provincial, municipal health legislation	26	8.02	251	77.47	47	14.51	324	100.00
b. Scope of public services	9	2.78	273	84.26	42	12.96	324	100.00
c. Medical care programmes	9	2.78	277	85.49	38	11.73	324	100.00

Item 3. NUTRITION

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Principles of communal feeding: cafeteria supervision	81	25.00	200	61.73	43	13.27	324	100.00
2. General principles of nutrition	15	4.63	283	87.35	26	8.02	324	100.00
3. Dietary requirements of various phases of life	21	6.48	269	83.02	34	10.50	324	100.00
4. Recognition of nutritional problems: diet therapy	18	5.5	273	84.26	33	10	324	100.00

TABLE A-23 (cont'd)

EDUCATIONAL PREPARATION

Question 61 - cont'd.

Item 4. ORGANIZATION AND ADMINISTRATION

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. General principles such as responsibility and accountability	12	3.70	272	83.95	40	12.35	324	100.00
2. Planning nursing services in industry	20	6.17	264	81.48	40	12.35	324	100.00
3. Administrative and economic problems in health services	33	10.19	247	76.23	44	13.58	324	100.00
4. Communications: Tools and processes	29	8.95	237	73.15	58	17.90	324	100.00
5. Personnel practices	20	6.17	257	79.32	47	14.51	324	100.00
6. Human relations	10	3.09	273	84.26	41	12.65	324	100.00
7. Budgeting and financial procedure	76	23.46	198	61.11	50	15.43	324	100.00
8. Problem solving and decision making	9	2.78	257	79.32	58	17.90	324	100.00
9. Structure and function of industry	32	9.88	237	73.15	55	16.97	324	100.00
x Industrial and labour policies and relations	30	9.26	240	74.07	54	16.67	324	100.00
y Staff education	31	9.57	176	54.32	117	36.11	324	100.00

TABLE A-23 (cont'd)

EDUCATIONAL PREPARATION

Question 61 - cont'd.

Item 5. PRINCIPLES OF OCCUPATIONAL MEDICINE

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Historical background	100	30.86	170	52.47	54	16.67	324	100.00
2. Scope and aims of occupational medicine	11	3.40	269	83.02	44	13.58	324	100.00
3. General resources for occupational medicine	16	4.94	259	79.94	49	15.12	324	100.00

Item 6. INDUSTRIAL PHYSIOLOGY

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Fatigue, monotony, rhythm of work and rest pauses	11	3.40	287	88.58	26	8.02	324	100.00
2. Relationship between man and his working environment	4	1.24	286	88.27	34	10.49	324	100.00
3. (Human factors in work, machine control and equipment design)	17	5.25	198	61.11	109	33.64	324	100.00

TABLE A-23 (cont'd)

EDUCATIONAL PREPARATION

Question 61 - cont'd.

Item 7. INDUSTRIAL HYGIENE

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Environmental hygiene: Temperature, humidity, ventilation, lighting, noise, air pollution	13	4.01	281	86.73	30	9.26	324	100.00
2. Occupational health hazards: types of exposure, gases, vapours, fumes, dusts and their control	18	5.56	277	85.49	29	8.95	324	100.00
3. Personal hygiene	6	1.85	275	84.88	43	13.27	324	100.00
4. Personal protective equipment	16	4.94	270	83.88	38	11.73	324	100.00

TABLE A-23 (cont'd)

EDUCATIONAL PREPARATION

Question 61 - cont'd.

Item 8. SOCIAL BEHAVIOUR, COMMUNITY SITUATIONS AND CULTURAL FACTORS

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Fundamental concepts in the social sciences	29	8.95	239	73.77	56	17.28	324	100.00
2. Role work plays in life	18	5.55	275	84.88	31	9.57	324	100.00
3. Community organizations: Agencies and their functions	12	3.70	279	86.11	33	10.19	324	100.00
4. Social disorganization: family problems, delinquency social problems such as: aged, race, vice	14	4.32	265	81.79	45	13.89	324	100.00
5. Narcotics and alcoholism (additions)	16	4.94	256	79.01	52	16.05	324	100.00

TABLE A-23 (cont'd)

EDUCATIONAL PREPARATION

Question 61 - cont'd

Item 9. THE DYNAMICS OF HUMAN BEHAVIOUR

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Personality development - its structure and development	20	6.17	263	81.17	41	12.66	324	100.00
2. Pathological deviations; Nature of mental disorders	12	3.70	268	82.72	44	13.58	324	100.00
3. Mental health: Social, community and epidemiological aspects	9	2.78	278	85.80	37	11.42	324	100.00
4. Interpersonal relations individual, group, community level	15	4.63	270	83.33	39	12.04	324	100.00

Item 10. APPLIED PSYCHOLOGY

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Vocational selection and guidance	53	16.36	223	68.83	48	14.81	324	100.00
2. Psychology of work	25	7.72	245	75.62	54	16.67	324	100.00
3. Social psychology	24	7.41	244	75.31	56	17.28	324	100.00
4. Physiological psychology	26	8.02	230	70.99	70	20.99	324	100.00

TABLE A-23 (cont'd)

EDUCATIONAL PREPARATION

Question 61 - cont'd

Item 11. ACCIDENTS AT WORK

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Causes of accidents psychological, physical, environmental	8	2.47	294	90.74	22	6.79	324	100.00
2. Principles of accident prevention	7	2.16	286	88.27	31	9.57	324	100.00
3. First aid and treatment	2	.62	306	94.44	16	4.94	324	100.00
4. Rehabilitation and resettlement of the injured worker	2	.62	292	90.12	30	9.26	324	100.00
5. Planning emergency medical activities	8	2.47	279	86.11	37	11.42	324	100.00
6. Training and supervision of first-aid personnel	22	6.79	265	81.79	37	11.42	324	100.00
7. Supervision and maintenance of first-aid equipment	13	4.01	290	89.51	21	6.48	324	100.00

TABLE A-23 (cont'd)

EDUCATIONAL PREPARATION

Question 61 - cont'd

Item 12. OCCUPATIONAL PATHOLOGY AND TOXICOLOGY

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Occupational: cancers, skin diseases, allergies	13	4.01	265	81.79	46	14.20	324	100.00
2. General principles of industrial toxicology	24	7.41	252	77.78	48	14.81	324	100.00
3. Diseases due to chemical agents, physical agents, dusts and biological agents	23	7.10	256	79.01	45	13.89	324	100.00

Item 13. MEDICAL PROBLEMS

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Relationships between employment and non-occupational diseases	10	3.09	287	88.58	27	8.33	324	100.00
2. Medical aspects of vocational rehabilitation	22	6.79	251	77.47	51	15.74	324	100.00
3. Rehabilitation programs for specific disabilities	21	6.48	254	78.40	49	15.12	324	100.00
4. Radiological health	55	16.98	197	60.80	72	22.22	324	100.00
5. Psychoneurosis related to work or injury	6	1.85	251	77.47	67	20.68	324	100.00

TABLE A-23 (cont'd)

EDUCATIONAL PREPARATION

Question 61 - cont'd

Item 14. PREVENTIVE MEDICINE

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Medical examination	6	1.85	287	88.58	31	9.57	324	100.00
2. Health counselling and interviewing	2	.62	292	90.12	30	9.26	324	100.00
3. Public Health principles in communicable disease: Prevention, control, epidemiological investigation, environmental sanitation	9	2.78	272	83.95	43	13.27	324	100.00
4. Care of the special working groups (young workers, old workers, women & handicapped workers)	24	7.40	260	80.25	40	12.35	324	100.00

Item 15. HEALTH EDUCATION

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Teaching principles and methods	18	5.56	269	83.02	37	11.42	324	100.00
2. Educational principles: Factors in learning	24	7.40	245	75.62	55	16.98	324	100.00
3. Group processes	43	13.27	219	67.59	62	19.14	324	100.00

TABLE A-23 (cont'd)

EDUCATIONAL PREPARATION

Question 61 - cont'd

Item 16. INDUSTRIAL TECHNOLOGY

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Work organization	39	12.04	215	66.36	70	21.60	324	100.00
2. Industrial processes with regard to hygienic, physiological and psychological considerations	28	8.64	234	72.22	62	19.14	324	100.00
3. Job analysis and evaluation	68	20.99	190	58.64	66	20.37	324	100.00
4. Supervision: General principles & processes	38	11.73	210	64.81	76	23.46	324	100.00

Item 17. MEDICO-LEGAL PROBLEMS, SOCIAL SECURITY

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. History and development of industrial legislation	80	24.69	191	58.95	53	16.36	324	100.00
2. Social legislation, e.g. workmen's compensation act, factory act, labour relations act	8	2.47	282	87.04	34	10.49	324	100.00
3. Acceptable legal and ethical nursing practice	4	1.24	277	85.49	43	13.27	324	100.00

TABLE A-23 (cont'd)

EDUCATIONAL PREPARATION

Question 61 - cont'd

Item 18. RESEARCH

	NEGLIGIBLE		SIGNIFICANT & IMPORTANT		NO REPLY		TOTAL	
	Replied	%	Replied	%	no reply	%	Opinion	%
1. Types, design and methodology	82	25.31	162	50.00	80	24.69	324	100.00
2. Methods of program evaluation	64	19.75	182	56.17	78	24.08	324	100.00

Section B

Section B of the questionnaire was designed to elicit the individual tasks that the nurse performs. It was planned to explore the scope of occupational health nursing activities, their similarities and differences in services and the contribution that may be expected from nurses functioning within various levels of responsibilities.

Although 324 nurses responded to the 129 items in the section, it was impossible to prepare an acceptable report covering the information sought in Section B. This was due to the number of "no" replies and blanks, to the many items showing less than 25 per cent response or codable answers, and to the method of coding and processing the data. Therefore, the following tables represent only the data considered to be meaningful.

TABLE B-1

NURSING CARE

Question 1
Give emergency care for occupational injuries or disease
Question 2
Treat occupational injuries or disease
Question 3
Give emergency care for non-occupational disabilities
Question 4
Give remedial care for non-occupational disabilities

Grades of Adequacy of Training and Knowledge of Activity	Occupational Conditions		Non-Occupational Conditions	
	Replies	Percent	Replies	Percent
1. Prepared	269	83.00	264	81.50
2. Poor and does the above-mentioned activity	18	5.5	20	6.17
3. Unprepared and does the above-mentioned activity	3	1.0	6	1.85
4. No training received and does the above-mentioned activity	16	4.9	12	3.70
5. Skill not stated but does the above-mentioned activity	2	.6	2	.6
6. No reply	16	5.0	20	6.17
	324	100.00	324	100.00

Note: Replies to Questions 1 and 2 were coded and drawn as one item.
Replies to Questions 3 and 4 were also coded and drawn together.

TABLE B-2

CHRONIC DISEASE

Question 19
Assist in planning rehabilitation of the employee to his job.

Grades of Adequacy of Training and Knowledge of Activity	Replied	Percent
1. Prepared	110	33.9
2. Poor and does the above-mentioned activity	21	6.5
3. Unprepared and does the above-mentioned activity	12	3.7
4. No training received and does the above-mentioned activity	37	11.4
5. Skill not stated but does the above-mentioned activity	2	.6
6. No reply	142	43.8
	324	99.9

TABLE B-3

SAFETY

Question 105
Participate in accident prevention program

Grades of Adequacy of Training and Knowledge of Activity	Replies	Percent
1. Prepared	55	16.97
2. Poor and does the above-mentioned activity	7	2.16
3. Unprepared and does the above-mentioned activity	4	1.20
4. No training received and does the above-mentioned activity	53	16.35
5. Skill not stated but does the above-mentioned activity	4	1.20
6. No reply	201	62.05
	324	99.93

TABLE B-4

ENVIRONMENTAL HYGIENE

Question 96
Survey and inquire about occupational health hazards
Question 97
Investigate job or area in which there are frequent complaints concerning the health of the workers

Grades of Adequacy of Training and Knowledge of Activity	Survey and Inquire		Investigate	
	Replies	Percent	Replies	Percent
1. Prepared	55	17.2	62	19.1
2. Poor and does the above-mentioned activity	15	4.6	16	4.9
3. Unprepared and does the above-mentioned activity	7	2.1	5	1.5
4. No training received and does the above-mentioned activity	53	16.3	52	16.0
5. Skill not stated but does the above-mentioned activity	10	3.1	8	2.7
6. No reply	184	56.7	181	55.8
	324	100.00	324	100.0

Note: Questions 96 and 97 were coded and drawn as one item.

COMMENTS

The Questionnaire on Occupational Health Nursing was, in essence, an opinion survey. It attempted to examine the scope of the activities of the nurse and her educational background with a view to establishing a basis for the education of present and future practitioners.

Unfortunately, the length of the questionnaire, the terminology, the phrasing and the repetition appeared to confuse some respondents and to discourage participation. However, the questionnaire did provide a basis for some respondents to evaluate their own activities.

The inclusion of replies from part-time nurses tended to distort the answers to certain questions. Future surveys should be designed to keep separate the returns from nurses providing full and part-time services.

This report could supply some guidance to educators and experts considering the educational needs of practicing and future occupational health nurses. It could assist, also, those persons reviewing or revising objectives and curricula for present and future public health and public health nursing courses.

APPENDIX I

UNIVERSITY OF TORONTO
SCHOOL OF HYGIENE
And
SCHOOL OF NURSING

Questionnaire on
OCCUPATIONAL HEALTH NURSING

OBJECTIVES OF THE STUDY

To develop recommendations on how nursing education programs can be best adapted to prepare nurses to meet modern occupational health nursing service needs.

PURPOSE

To study what is actually happening in occupational health nursing practice to ascertain a realistic appreciation of the qualities and training needed by those who practise it.

METHODS

1. To obtain objective and factual information concerning the nature of duties and the range of activities of the occupational health nurse. To determine currently how occupational health nurses have adapted their functions to the growing and challenging demands of industry.

2. To ascertain what is actually being taught in current education programs to prepare nurses for occupational health nursing.

3. To analyse occupational health content of nursing education programs in terms of existing needs and functions of the occupational health nurses.

4. To suggest ways of integrating, reorienting or introducing educational material so the occupational health nurse shall

   (a) be well informed on the preventive approach to occupational medicine
   (b) have some guarantee of competence in principles and practices of occupational health nursing
   (c) have assurance and status in the specialized field of occupational health nursing.

QUESTIONNAIRE

Aim

The aim of this questionnaire is to establish the particular functions associated with occupational health nursing.

Introduction

The questionnaire is made up of three distinct elements each with its own function. These elements are:

Section A – consists of major information – characteristics of the sample being studied for example; The Nurse and The Industry.

Section B – to define in unmistakeable language the individual tasks the nurse performs.

Summary Page – the analysis of the functions of the nurse by time makes the study more meaningful and valid. It is an effort to consolidate the activities of the occupational health nurse.
To demonstrate what functions take precedence in alleviating the needs of the employed group.
To allow the practising occupational health nurse to state the possible future importance of an activity in the practice of conserving, promoting and restoring the health and effectiveness of the employed group.

INSTRUCTIONS

1. The information you provide will be held in the STRICTEST CONFIDENCE. It will be tabulated and analysed showing correlations or relationship. Your name will not be associated with the responses during the analysis or write-up.

2. Since information of this kind has important implications for future planning of curricula in occupational health nursing it is important to do each of the following things:

   1. Answer each question as frankly and honestly as you can.
   2. Answer all questions which are applicable to your current job.
   3. The factual questions are simply answered and should present no problems. There are no correct answers for those which require a rank or grading.
   4. Refrain from discussing any part of this questionnaire with others until you have completed it and returned it to us in the enclosed, self-addressed envelope.
   5. Any questions regarding this research study should be directed to:

E. Dalman
Research Associate
Department of Physiological Hygiene
School of Hygiene, University of Toronto
150 College Street, Toronto 15, Ontario

Code number_____

Section A

1. What is the category of your current position?
Please check:

1. Director of Nursing Services	
2. Supervisor	
3. Assistant Supervisor	
4. Senior Nurse	
5. Charge Nurse	
6. Staff Nurse	

2. State the year of appointment to your current position. _____ 19__

3. How many months of experience in nursing have you had? _____

4. What is your average work week in hours (yours, not the company)? _____ hrs.

5. Are you employed full-time (eg. ten full months or more per annum)? Yes_____ No_____

6. Are you employed part-time (fee or contract basis)? Yes_____ No_____

7. Prior to January 1962, what was the highest income you earned for any one year in occupational health nursing? Please check: _____

1. Under 2500 _____	5. 4000 - 4499 _____
2. 2500 - 2999 _____	6. 4500 - 4999 _____
3. 3000 - 3499 _____	7. 5000 - 5499 _____
4. 3500 - 3999 _____	8. 5500 - 6000 _____
	9. 6000 and up _____

8. Circle age: Under 25 25-34 35-44 45-54 55-64 65 and over.

9. Circle the last year completed in high school (Ontario standard).
(Nurses from other areas circle most appropriate grade).

Grade 8 9 10 11 12 13

10. Are you graduate of a basic nursing school program? Yes_____ No_____

11. Are you graduate of a university nursing program? Yes_____ No_____

12. State year of graduation (RN) 19_____

13. Have you a degree from a university? Yes_____ No_____

14. Have you a diploma from a university? Yes_____ No_____

15. Have you a specialist certificate? Yes_____ No_____

16. What is your specialty?
Please check:

1. operating room nursing		7. obstetric nursing	
2. psychiatric nursing		8. occupational health nursing	
3. public health nursing		9. outpatient clinic nursing	
4. school nursing		10. pediatric nursing	
5. surgical nursing		11. medical nursing	
6. teaching		12. others	

17. List below, advanced professional courses (post RN) taken including those for which no credit was granted.
Use code number of the expression below which best describes your evaluation of the professional course taken by you to advance your professional growth.

1. Very worthwhile, it gave me something I did not get in any other part of my formal educational program.
2. Helpful, but I think I would have learned more by spending some time in seminars, group discussions, exchanging information and ideas regularly with other classmates and instructional staff.
3. Relatively little help to me, repetitious of previous work experiences and/or class work.

1. In area of: Occupational Health

Title of Course	Place of course	Year of course	Length of course	Evaluation Use code number

Please state your opinion of each course mentioned above.

2. In the area of: Public Health

Title of Course	Place of course	Year of course	Length of course	Evaluation Use code number

Please state your opinion of each course mentioned above.

3. In the area of: Clinical Post Graduate Course

Title of Course	Place of course	Year of course	Length of course	Evaluation Use code number

Please state your opinion of each course mentioned above.

4. In area of: Other, Special Courses, Please specify

Title of Course	Place of course	Year of course	Length of course	Evaluation Use code number

Please state your opinion of each course mentioned above.

18. Column A – State the type and length of experience you have had including your present position
Column B – State the type and length of experience you feel is essential for success in your present position
Column C – State the type and length of experience you feel is desirable for success in your present position

Type of activity:

1. Nursing service administration
   general duty
   head nurse
   supervisor
2. Medical nursing
3. Military nursing
4. Occupational health nursing
5. Office nursing
6. Outpatient clinic nursing
7. Private duty
8. Psychiatric nursing
9. Public health nursing
10. School nursing
11. Surgical nursing
12. Teaching
13. Others, please specify

	A. Months of experience you have had	B. Months of experience you feel is essential for your present job	C. Months of experience you feel is desirable for your present job
Total			

19. Please check the size of the establishment which you serve:

1. Under 200
2. 200 - 499
3. 500 - 749
4. 750 - 949
5. 1000 - 1499
6. 1500 - 1999
7. 2000 - 2999
8. 3000 - 3999
9. 4000 and over

20. Do you have an organizational chart for your health service which shows the relationship between the health service and other departments of the establishment?

Yes_____No_____

21. Name the prominent hazard(s) of the establishment which is served by the health centre in which you work.

1. _____
2. _____
3. _____

22. How many years has this health service been in operation? _____

23. (a) Do you serve in more than one health unit? Yes_____ No_____

23. (b) Do you serve in:

1. A one nurse unit Yes_____ No_____
2. A multiple nurse unit Yes_____ No_____
3. A one nurse service Yes_____ No_____

24. How many shifts in a 24 hour period has a nurse in charge of the operation of the Health Service? _____

25. State the yearly average of the employed group served by the health centre.

1. Male _____
2. Female _____
3. Total _____

26. What is the average number of employee visits to the health centre?

Average census	Monthly
1. Male	_____
2. Female	_____
3. Total	_____

27. Name the types of particular health services to employees which have been introduced within the past five years.

_____

_____

_____

28. Name the types of health services to employees which have been discontinued within the past five years.

_____

_____

_____

29. Is there a written statement of objectives for your employees' health program? Yes_____ No_____

30. What are the objectives of your employees' health program?

_____

_____

_____

31. Which of the following persons assume responsibility for formulating policies relative to the health service to employees? Please specify by checking the following:

1. Medical director ☐
2. Supervising physician ☐
3. Industrial relations director ☐
4. Personnel director ☐
5. Safety director ☐
6. Manager ☐
7. Plant superintendent ☐
8. Labour representative ☐
9. Other, please specify ☐

_____ ☐

_____ ☐

32. Are these policies written?

1. Administrative Yes_____ No_____
2. Professional Yes_____ No_____

33. Do you have direct supervision? Yes_____ No_____

34. Do you have indirect supervision? Yes_____ No_____

35. State the number of people under your direction (include all paid from your department whether professional or clerical). _____

36. How many practical nurses do you supervise? _____

37. How many first aid attendants do you supervise? _____

38. State the number of hours per week the supervising physician spends at the health centre. _____

39. Are the duties and responsibilities of your supervising physician clearly defined and written? Yes_____ No_____

40. Which type of physician supervises you?
Please check the following:

	Number
1. Full-time medical director	
2. Part-time medical director	
3. Physician on call	
	Check
4. Private physicians of employees	
5. Clinic	
6. No supervising physician	
7. Other, please specify	
_____	
_____	

41. To whom are you responsible?

	Administrative	Professional
1. Industrial relations officer		
2. Top executive other than personnel		
3. Personnel director		
4. Safety officer		
5. Supervising physician		
6. Nursing supervisor		

42. Are your duties and responsibilities clearly defined by:

1. Assigned duties Yes_____ No_____
2. Job description Yes_____ No_____
3. Custom Yes_____ No_____

43. Are your duties and responsibilities written?

44. Do you have any duties that normally are not considered nursing?
Type of activity:

	Percentage of time per week spent on activity
1. Typing	
2. Personnel	
3. Selling	
4. Receptionist	
5. Other, please specify	
_____	
_____	

45. Have you written standing orders concerning the treatment offered to employees? Yes_____ No_____

46. Have you written general directives which outline principles of treatment? Yes_____ No_____

47. Are these directives or standing orders signed? Yes_____ No_____

48. Have you a written policy and procedure manual? Yes_____ No_____

49. Have you an up-to-date file on programs, services and policies of community health and welfare agencies? Yes_____ No_____

50. Are the services of official or voluntary agencies used? Yes_____ No_____

51. What are the chief services given by these agencies to your referred employees or family?

_____

_____

52. Are you dependent on a hospital emergency service for major emergencies? Yes_____ No_____

53. What three activities would you consider your major unsolved problem in the conduct of your occupational health program?

_____

_____

54. What three environmental factors would you consider your major unsolved problems in the conduct of your occupational health program?

_____

_____

55. Do you wish further eductional preparation? Yes_____ No_____

56. Is a continuous in-service training program available to you in your establishment? Yes_____ No_____

a) Length of time Days ( ) Weeks ( ) Months ( )
b) Frequency
Circle type: Sporadic workshops, conferences, lectures, symposia.

57. What type of in-service training program would best meet your needs?

_____

_____

_____

58. What is the position of the person who has been most influential in helping you to adjust to your present job?

1. Personnel director
2. Medical director
3. Safety director
4. Nursing consultant
5. Nursing supervisor
6. No orientation
7. Other, please specify

_____

_____

59. Do you provide opportunities for observation and experience for students and faculty of nursing education programs and for staff of other occupational health programs? Yes_____ No_____

60. Would you like to participate in the above type of program? Yes_____ No_____

The aim of the following question is to help the Schools of Nursing adapt their courses of study, so there is full recognition of knowledge needed by professional nurses at work in the field of occupational health.

61. What formal education do you think should be required for successful performance in a position such as yours? Please rate the importance of each knowledge on-the-job.

	Importance of knowledge on-the-job		
	Negligible	Significant	Important
1. PUBLIC AND OCCUPATIONAL HEALTH NURSING			
1. History, development and changing concepts			
2. Functions of the public and the occupational health nurse			
3. Principles and content of public and occupational health			
2. PUBLIC HEALTH AND MEDICAL CARE			
1. National, provinical, municipal health legislation			
2. Scope of public services			
3. Medical care programs			
3. NUTRITION			
1. Principles of communal feeding; cafeteria supervision			
2. General principles of nutrition			
3. Dietary requirements of various phases of life			
4. Recognition of nutritional problems; diet therapy			
4. ORGANIZATION AND ADMINISTRATION			
1. General principles such as responsibility and accountability			
2. Planning nursing services in industry			
3. Administrative and economic problems in health services			
4. Communications: Tools and processes			
5. Personnel practices			
6. Human relations			
7. Budgeting and financial procedure			
8. Problem solving and decision making			
9. Structure and function of industry			
x. Industrial and labour policies and relations			
y. Staff education			
5. PRINCIPLES OF OCCUPATIONAL MEDICINE			
1. Historical background			
2. Scope and aims of occupational medicine			
3. General resources for occupational medicine			

		Importance of knowledge on-the-job		
		Negligible	Significant	Important
6.	**INDUSTRIAL PHYSIOLOGY**			
1.	Fatigue, monotony, rythm of work and rest pauses			
2.	Relationship between man and his working environment			
3.	(human factors in work, machine control and equipment design)			
7.	**INDUSTRIAL HYGIENE**			
1.	Environmental hygiene: Temperature, humidity, ventilation, lighting, noise, air pollution			
2.	Occupational health hazards: Types of exposure: Gases, vapours, fumes, dusts and their control			
3.	Personal hygiene			
4.	Personal protective equipment			
8.	**SOCIAL BEHAVIOUR, COMMUNITY SITUATIONS AND CULTURAL FACTORS**			
1.	Fundamental concepts in the social sciences			
2.	Role work plays in life			
3.	Community organization: Agencies and their functions			
4.	Social disorganization: Family problems, delinquency, social problems such as: Aged, race, vice			
5.	Narcotics and alcoholism (Addictions)			
9.	**THE DYNAMICS OF HUMAN BEHAVIOUR**			
1.	Personality development - its structure and development			
2.	Pathological deviations: Nature of mental disorders			
3.	Mental health: Social, community and epidemiological aspects			
4.	Interpersonal relations - individual, group, community level			
10.	**APPLIED PSYCHOLOGY**			
1.	Vocational selection and guidance			
2.	Psychology of work			
3.	Social psychology			
4.	Physiological psychology			
11.	**ACCIDENTS AT WORK**			
1.	Causes of accidents - psychological, physical, environmental			
2.	Principles of accident prevention			
3.	First aid and treatment			
4.	Rehabilitation and resettlement of the injured worker			
5.	Planning emergency medical activities			
6.	Training and supervision of first-aid personnel			
7.	Supervision and maintenance of first-aid equipment			

		Importance of knowledge on-the-job		
		Negligible	Significant	Important
12.	**OCCUPATIONAL PATHOLOGY AND TOXICOLOGY**			
1.	Occupational: Cancers, skin diseases, allergies			
2.	General principles of industrial toxicology			
3.	Diseases due to chemical agents, physical agents, dusts, and biological agents			
13.	**MEDICAL PROBLEMS**			
1.	Relationship between employment and non occupational diseases			
2.	Medical aspects of vocational rehabilitation			
3.	Rehabilitation programs for specific disabilities			
4.	Radiological health			
5.	Psychoneurosis related to work or injury			
14.	**PREVENTIVE MEDICINE**			
1.	Medical examination			
2.	Health counselling and interviewing			
3.	Public health principles in communicable disease: Prevention, control, epidemiological investigation, environmental sanitation			
4.	Care of the special working groups (young workers, old workers, women and handicapped workers)			
15.	**HEALTH EDUCATION**			
1.	Teaching principles and methods			
2.	Educational principles: Factors in learning			
3.	Group processes			
16.	**INDUSTRIAL TECHNOLOGY**			
1.	Work organization			
2.	Industrial processes with regard to hygienic, physiological and psychological considerations			
3.	Job analysis and evaluation			
4.	Supervision: General principles and processes			
17.	**MEDICO-LEGAL PROBLEMS, SOCIAL SECURITY**			
1.	History and development of industrial legislation			
2.	Social legislation, e.g. workmen's compensation act, factory act, labour relations act			
3.	Acceptable, legal and ethical nursing practice			
18.	**RESEARCH**			
1.	Types, design and methodology			
2.	Methods of program evaluation			

	Importance of knowledge on-the-job		
	Negligible	Significant	Important
19. STATISTICAL METHODS			
1. Biostatistics - general methodology			
2. Application to illness and accident			

62. Indicate any other information or subject matter which you believe should be included in educational programs for occupational health nursing.

What changes in nursing education would you suggest, considering your own experience as a nurse.

What is the title of your employee health service?

Section B

The following descriptive inventory is being used to determine:

a) The scope of occupational health nurses' activities
b) The commonalities and differences among occupational health nursing services
c) To establish the contributions which can be expected for the six categories of occupational health nurses.

Part B consists of the activities you only are presently participating in and is not concerned with the total functions of all nurses within the industry. For instance in your present job you may only do home visits and counselling, in this case only check duties and responsibilities which are inherent in and support these functions.

It is unlikely that one occupational health nurse would participate or function in all the activities described by this questionnaire. This questionnaire is not an evaluation of the work done but is an attempt to establish certain criteria and needs within the field of occupational health.

Also it is recognized that you may hesitate to answer some of the questions in this part of the questionnaire because you feel that the activity deals with a responsibility outside the scope of your present position. If you find any total class of activity in this category which you feel you cannot answer, put NAP (not applicable to program) and go on to the next question. Be sure to answer all the questions which are concerned with one or more aspects of your present position.

Question A 'Job relevance' (Check mark ✓ each activity you perform)

Check any of the following items which past experience in your current position authorizes you to infer as a recurrent duty or activity.

Question B 'Your opinion of adequacy of training you received for each activity'

This is the constructive criticism of the training you received and is being sought so that changes can be made in educational programs for future nurses in the field of occupational health.

This question does not include on-the-job experience but only refers to formal training, i.e. basic, post basic, on-the-job training.

Use grades of adequacy 1 - 5

1. Training completely prepared me for this activity
2. Training good but left gaps
3. Training poor but gave some familiarity
4. Training left me completely unprepared for this activity
5. No training received.

Question C 'Where was your knowledge of this activity obtained'

Use code

1. for basic nursing school
2. for post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

Self-education by reading related professional journals, attendance at relevant meetings and short term courses.

NOTE: More than one code number may be used in this section. This will denote continued education or the extension of formal professional education by the practical application of principles and practices in the area concerned.

B.
Grades of Adequacy of Training

1. prepared me
2. good but left gaps
3. poor but some familiarity
4. left me unprepared
5. no training received

C.
Knowledge of Activity

1. basic nursing school
2. post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

A. Check mark ✓ each activity you perform	B. Your opinion of adequacy of training you received for each activity	C. Where was your knowledge of this activity obtained

NURSING CARE

1.	Give emergency care for occupational injuries or disease.			
2.	Treat occupational injuries or illness.			
3.	Give emergency care for non-occupational disabilities.			
4.	Give remedial care for non-occupational disabilities.			
5.	Give palliative care for minor complaints.			
6.	Give treatment under the direction of the employee's own doctor.			

GENERAL HEALTH SUPERVISION

7.	Spot check absentee records.			
8.	Investigate and analyze the cause of absenteeism.			
9.	See and advise all employees before they are sent home on grounds of injury or illness.			
10.	Certify an employee for work after sickness or injury absenteeism to assure their fitness for work.			
11.	Obtain information about progress of a worker's illness at work or at home.			

PERSONAL HYGIENE

12.	Provide an opportunity for employees to discuss personal hygiene.			
13.	Assist in planning for medical supervision.			
14	Interpret company policies for pregnant women in the employed group.			
	1. continued employment			
	2. leave of absence.			

B.
Grades of Adequacy of Training

1. prepared me
2. good but left gaps
3. poor but some familiarity
4. left me unprepared
5. no training received

C.
Knowledge of Activity

1. basic nursing school
2. post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

A. Check mark ✓ each activity you perform	B. Your opinion of adequacy of training you received for each activity	C. Where was your knowledge of this activity obtained

B.
Grades of Adequacy of Training

1. prepared me
2. good but left gaps
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C.
Knowledge of Activity

1. basic nursing school
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3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

A. Check mark ✓ each activity you perform	B. Your opinion of adequacy of training you received for each activity	C. Where was your knowledge of this activity obtained

B.
Grades of Adequacy of Training

1. prepared me
2. good but left gaps
3. poor but some familiarity
4. left me unprepared
5. no training received

C.
Knowledge of Activity

1. basic nursing school
2. post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

Please check area of investigation:

1. accident proneness
2. use of tranquilizing drugs
3. smoking habits
4. alcoholism
5. others, please specify

_____

_____

33. Conduct immunization programs.
Check the program initiated:

1. influenza
2. tetanus toxoid
3. poliomyelitis
4. polio-tetanus
5. others, please specify

_____

_____

34. Utilize multiphasic screening and detection programs.

HEALTH EDUCATION

35. Give a course in home nursing.

36. Give a course in first aid.

37. Teach and interpret health, when possible, during each service to an employee.

38. Review and select education materials.

39. Keep employees informed by utilizing publicity methods for distribution of health and safety educational media such as:
Please check:

1. pay inserts
2. orientation booklet
3. bulletin board
4. pamphlet rack
5. preparation of articles for plant paper

A. Check mark ✓ each activity you perform	B. Your opinion of adequacy of training you received for each activity	C. Where was your knowledge of this activity obtained

B.
Grades of Adequacy of Training

1. prepared me
2. good but left gaps
3. poor but some familiarity
4. left me unprepared
5. no training received

C.
Knowledge of Activity

1. basic nursing school
2. post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

A.	B.	C.
Check mark ✓ each activity you perform	Your opinion of adequacy of training you received for each activity	Where was your knowledge of this activity obtained

6. open house
7. films
8. demonstrations
9. opinion poll
10. others, please specify

_____

_____

40. Utilize community resources and private institutions in dealing with questions of health, safety, retraining, rehabilitation, reassignment and the welfare of workers.

41. Analyze interest by means of employee selection of pamphlets and requests of employees.

42. Organize and participate in group teaching - safety, personal hygiene and special lectures.

43. Teach basic principles of nutrition utilizing generalizations from recent studies regarding the nutritional status of industrial workers.

44. Incidental teaching directed toward positive action in seeking early diagnosis and adequate treatment for an illness or injury.

ADMINISTRATION

45. Formulate and implement administrative policy.

46. Plan and promote special health programs.

47. Prepare and subsequently manage budget of health service.

48. Plan to improve health service.
Please check:

1. evaluate suggestions by which the total service may be improved.
2. hold conferences for the constructive discussion of each nurse's work.
3. arrange group discussion about common problems, nursing skills and techniques, interpersonal relationships, policies, communication, and so on.
4. set up standards to upgrade quality of nursing service.
5. plan extension of services to

   a) employed group
   b) new group.

B.
Grades of Adequacy of Training

1. prepared me
2. good but left gaps
3. poor but some familiarity
4. left me unprepared
5. no training received

C.
Knowledge of Activity

1. basic nursing school
2. post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

	A. Check mark ✓ each activity you perform	B. Your opinion of adequacy of training you received for each activity	C. Where was your knowledge of this activity obtained
49.	Act in advisory capacity and as an interpreter of nursing trends to own department and to other departments within the establishment.		
50.	Analyze each service or activity in relation to its meeting its planned objective, standard and new trends.		
51.	Plan time schedules for nurses.		
52.	Plan time schedules for auxiliary workers.		
53.	Plan and assign work for the above group (s).		
54.	Plan coverage and assignment of responsibility for the times when the workers do not have the services of a nurse.		
55.	Plan and initiate in-service training program for health service staff.		
56.	Promote and supervise initial and subsequent training of first aid personnel.		
57.	Supervise first aid station (s).		
58.	Preparation and periodic examinations of first aid kits.		
59.	Plan and supervise the plant's blood donor program.		
60.	Plan for industrial civil defence to deal with major catastrophies and emergencies.		
61.	Consult with managerial personnel on policy, problems relating to health and welfare of employee.		
62.	Enlist managerial co-operation in a preventive medical program.		
63.	Interpret services and change to management and supervisor.		
64.	Establish public relations within the establishment and community.		
65.	Represent the company health centre in community projects.		
66.	Enlist and maintain the understanding and co-operation of community medical groups and the private practitioners.		
67.	Assist in planning and participate in community mass survey and educational programs, e.g. civil defence, poliomyelitis programs.		

B.
Grades of Adequacy of Training

1. prepared me
2. good but left gaps
3. poor but some familiarity
4. left me unprepared
5. no training received

C.
Knowledge of Activity

1. basic nursing school
2. post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

	A. Check mark ✓ each activity you perform	B. Your opinion of adequacy of training you received for each activity	C. Where was your knowledge of this activity obtained
68.	Plan and work with paramedical group to secure completeness and continuity of service to individuals, families and groups.		
69.	Co-ordination of services of health centre with other departments and services.		
	1. Allocation of personnel to various health units.		
	2. Allocation of budget of various health units.		
	3. Allocation of duties to various health units.		
	4. Allocation of duties to various personnel.		
	5. Co-ordinating committee.		
	6. Spontaneous consultations.		
70.	Familiarize the new employee with the health service and health benefits available and limitations of the program through, Please check:		
	1. interview		
	2. lectures		
	3. preparation of articles for plant paper		
	4. preparation and distribution of a Health Centre pamphlet.		
71.	Participate in the recruitment and selection of occupational health personnel.		
72.	Orientation of new health centre staff.		
73.	Evaluate nurses' progress in the health service and prepare a summary statement of her progress and potential.		
74.	Discuss evaluation with the nurse concerned.		
75.	Arrange for relief nurse(s), vacations and time to attend professional meetings.		
76.	Arrange and plan field experience for students, faculty and staff of nursing education programs.		
77.	Plan and arrange social and recreational activities for staff. (committee member).		
78.	Assist in the development of recreational programs as indicated.		
79.	Select and order supplies and equipme[illegible]		

B.
Grades of Adequacy of Training

1. prepared me
2. good but left gaps
3. poor but some familiarity
4. left me unprepared
5. no training received

C.
Knowledge of Activity

1. basic nursing school
2. post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

	A. Check mark✓ each activity you perform	B. Your opinion of adequacy of training you received for each activity	C. Where was your knowledge of this activity obtained
80. Participate in professional nursing groups to promote an understanding of, and an interest in occupational health.			
81. Direct housekeeping and maintenance of health service facilities.			
COUNSELLING			
82. Assist the employee in understanding a program of basic health principles for healthful living.			
83. Assist the employee to adjust to a new situation.			
84. Counsel on transferral of work due to health of individual and hazards within the work situation.			
85. Counsel on sickness absenteeism.			
86. Provide incidental personal counselling as called for by exigencies of daily living.			
87. Assist the employee to develop proper habits in the use of leisure time which will influence the individual in later years.			
88. Provide reliable and interpreted information to help the employee in the solution of a problem.			
89. Provide incidental and planned counsel to employee's dietary needs and problems.			
ENVIRONMENTAL HYGIENE			
90. Inspect the hygiene of sanitary installations and all facilities for the welfare of the employee, e.g. rest, wash and change rooms.			
91. Inspect any dietetic arrangements made for the employees.			
92. Inspect and supervise food handlers or food servers.			

B.
Grades of Adequacy of Training

1. prepared me
2. good but left gaps
3. poor but some familiarity
4. left me unprepared
5. no training received

C.
Knowledge of Activity

1. basic nursing school
2. post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

A. Check mark ✓ each activity you perform	B. Your opinion of adequacy of training you received for each activity	C. Where was your knowledge of this activity obtained
93. Investigate complaints regarding 1. illumination 2. noise 3. pollution 4. noxious gases 5. ventilation 6. sanitation		
94. Investigate complaints concerned with hazards from installations and processes.		
95. Collaborate with industrial hygiene personnel and/or safety engineer to plan, initiate and secure appropriate action for correcting a hazardous situation.		
96. Survey and inquire about potential occupational health hazards.		
97. Investigate job or area in which there are frequent complaints concerning the health of the workers.		
98. Maintain a list of signs and symtoms of acute, chronic or subacute intoxication or poisoning which may occur.		
99. Correlate knowledge of the employee's physical condition with that of plant exposures to differentiate a toxic reaction due to medication from that of an environmental irritant.		
SAFETY		
100. Investigate accidents.		
101. Make a statistical analysis of the type of accidents and place of occurrence in the plant.		
102. Dispense and fit safety equipment or clothing.		
103. Participate in the selection of safety equipment.		
104. Training and retraining employees in the use of protective equipment.		
105. Participate in accident prevention program.		
106. Make scheduled plant tours to note working conditions and plant housekeeping.		

B.
Grades of Adequacy of Training

1. prepared me
2. good but left gaps
3. poor but some familiarity
4. left me unprepared
5. no training received

C.
Knowledge of Activity

1. basic nursing school
2. post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

A.	B.	C.
Check mark ✓ each activity you perform	Your opinion of adequacy of training you received for each activity	Where was your knowledge of this activity obtained

INTERVIEWING AND GUIDANCE

107. Interview regarding

1. physical defects
2. communicable disease
3. psychosomatic problems
4. rehabilitation progress and problems (psychological factors e.g. emotional stability and kind of motivation)
5. alcoholism

108. Assist in the rehabilitation of employees with physical handicaps.

109. Provide individual conferences in nutrition.
Please check:

1. meal planning
2. food costs - budgeting
3. special diets
4. nutritional problems
5. other, please specify

_____
_____

HEALTH PROBLEMS IN ADULT LIFE

110. Provide guidance and information on non-communicable and chronic diseases.
Please check:

1. reaction of patient to his physical illness
2. economical aspect (lack of sick leave, etc.)
3. reaction of family to employee's illness
4. reaction of management to employee's illness
5. possible medical care needed
6. cost of medical care
7. effects of working conditions (e.g. dermatitis)
8. employee's reaction regarding restricted employment
9. other, please specify

_____
_____

B.
Grades of Adequacy of Training

1. prepared me
2. good but left gaps
3. poor but some familiarity
4. left me unprepared
5. no training received

C.
Knowledge of Activity

1. basic nursing school
2. post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

A. Check mark ✓ each activity you perform	B. Your opinion of adequacy of training you received for each activity	C. Where was your knowledge of this activity obtained

B.
Grades of Adequacy of Training

1. prepared me
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5. no training received

C.
Knowledge of Activity

1. basic nursing school
2. post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

A. Check mark ✓ each activity you perform	B. Your opinion of adequacy of training you received for each activity	C. Where was your knowledge of this activity obtained

VISITING

117. Make home visits.
Please indicate reason:

1. to assess injuries which have occurred at place of work and have become disabling
2. to accompany or chaperon employees to hospital
3. to accompany or chaperon employees home
4. to obtain data to assist in determining the employees eligibility for illness or injury benefits under (1) Workmen's Compensation Act (2) Disability pension.
5. to assist the worker with social problems by coordination and cooperation with personnel department
6. to advise employee's family on nursing care, matters of nutrition and home sanitation.
7. to ascertain, insofar as practical, the nature and duration of illness or injury causing absence
8. to assist and aid in the promotion of physical, emotional welfare and early return to work of the employee
9. to control short term absenteeism by visiting employee who has been absent for longer than a given time.

118. Arrange with the local public health agency for visits to be made to sick employee (e.g. V.O.N., health unit).

RECORDS AND REPORTS

119. Maintain records to meet objectives of the health service.

1. a daily record of all visits to health centre
2. cumulative individual health record on each employee
3. monthly statistical report of occupational and non-occupational visits
4. monthly summarized narrative report of health service activities.

120. Maintain file of records in medical department.

121. Compile statistics and periodic review occupational mortality and morbidity.

122. Provide employee records which fulfil legal obligations.

B.
Grades of Adequacy of Training

1. prepared me
2. good but left gaps
3. poor but some familiarity
4. left me unprepared
5. no training received

C.
Knowledge of Activity

1. basic nursing school
2. post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

	A. Check mark ✓ each activity you perform	B. Your opinion of adequacy of training you received for each activity	C. Where was your knowledge of this activity obtained
123. Provide for employee records which may act as basis for epidemiological study for research purposes.			
124. Maintain absentee records on employees.			
125. Assist in obtaining data needed in the preparation of records and reports related to health and welfare benefit plans.			
126. Provide special reports to management - with suggestions for the improvement of all phases of industrial environment which affects the health and morale of workers.			
RESEARCH STUDIES			
127. Plan and execute research activities, problem solving. Please check:			
1. provide scientifically documented data about benefits and values of an occupational health and nursing service.			
2. provide information pertinent to the proper functions, standards and qualifications for nursing in industry.			
3. analyze the health service needs in planning the design and allocation of space when contemplating new services or extension of services to a new group of employees.			
4. measure the effectiveness of already existing facilities and tools employed by nurses in industry.			
5. other studies, please specify _____ _____			
MAINTENANCE			
128. Organize and maintain smooth-running and efficient health service unit.			
AUXILIARY HEALTH SERVICES			
A. Dental Health			
129. Assist with dental health program. Please check:			
1. palliative emergency dental treatment			
2. give education on the value of maintaining oral health			

B.
Grades of Adequacy of Training

1. prepared me
2. good but left gaps
3. poor but some familiarity
4. left me unprepared
5. no training recieved

C.
Knowledge of Activity

1. basic nursing school
2. post basic course
3. on-the-job training
4. on-the-job experience
5. self-education

(Multiple coding may be used)

A. Check mark ✓ each activity you perform	B. Your opinion of adequacy of training you received for each activity	C. Where was your knowledge of this activity obtained

3. examinations for evidence of oral disease due to industrial processes
4. X-ray and prophylactic services
5. render any dental service needed
6. counselling stressing good oral hygiene and adequate oral care.

B. Others, please specify

_____

_____

Section B, Comments:

SUMMARY PAGE

INSTRUCTIONS

QUESTION A. Importance of activity - state the time you spend in hours per week in an average week on each class of activity.
Computation:- Staff education 12 days per year

$$\frac{\text{Hours per year}}{\text{50 weeks per year}} \quad \frac{8 \times 12}{50} = \frac{96}{50} = 1.92 \text{ hrs/week.}$$

QUESTION B. Future importance of activity - changes in allocation of your time you would make to improve service if you had complete authority, training and facilities. Where you would increase time spent show the amount of time in hours per week of the increase and mark (+). Where you would decrease time spent show the amount of time of the decrease in the average work week and mark (-).

DEFINITIONS

ADMINISTRATION	- conferences, supervisory functions, management, planning, promotion, organizing.
DENTAL HEALTH	- education, care, assessment.
COMMUNITY RELATIONSHIPS	- public relations, liaison, referrals.
COMPANY RELATIONSHIPS	- co-ordinating, interpreting, initiating, supervising visits to regional units of same company.
COUNSELLING	- help the employee to understand himself in relation to his environment so he may be able to solve his own problems.
ENVIRONMENTAL HYGIENE	- plant inspections, investigations.
GENERAL HEALTH SUPERVISION	- absenteeism, personal hygiene, case finding techniques.
HEALTH EDUCATION	- teaching, publicity methods.
HEALTH AND WELFARE BENEFIT PLAN	- administer and interpret.
INTERVIEW AND GUIDANCE CONFERENCES	- exchange of information with employee.
MAINTENANCE	- housekeeping, sterilization, care of equipment.
NURSING CARE OCCUPATIONAL INJURIES AND ILLNESS NON OCCUPATIONAL DISABILITIES	
PREVENTIVE MEDICINE	- health examinations, immunization, follow-up.
RECORDS AND REPORTS	- filing, recording, analytical summeries, reports.
RESEARCH STUDIES	- documented studies, problem solving, evaluation.
SAFETY	- safety committee, accident investigation and follow-up, statistics.
STAFF EDUCATION	- educational activities.
TRAVELLING TIME	
VISITS	- home, hospital, other company units.

SUMMARY PAGE

	A	B	
	STATE HOURS PER WEEK YOU SPEND IN AVERAGE WORK WEEK ON EACH CLASS OF ACTIVITY	INCREASE (+) OR DECREASE (-) IN HOURS PER AVERAGE WEEK THAT WOULD IMPROVE SERVICE	
1. ADMINISTRATION			
2. DENTAL HEALTH			
3. COMMUNITY RELATIONSHIPS			
4. COUNSELLING			
5. ENVIRONMENTAL HYGIENE			
6. FREE TIME			
7. GENERAL HEALTH SUPERVISION			
8. HEALTH EDUCATION			
9. HEALTH AND WELFARE BENEFIT PLAN			
10. INTERVIEW AND GUIDANCE CONFERENCES			
11. INSIDE AND OUTSIDE COMPANY RELATIONSHIPS			
12. MAINTENANCE			
13. NURSING CARE OCCUPATIONAL INJURIES AND ILLNESS			
NON OCCUPATIONAL DISABILITIES			
14. PREVENTIVE MEDICINE			
15. RECORDS AND REPORTS			
16. RESEARCH STUDIES			
17. SAFETY			
18. STAFF EDUCATION			
19. TRAVELLING TIME			
20. VISITS			
TOTAL HOURS PER WEEK			

APPENDIX II

University of Toronto
SCHOOL OF HYGIENE
TORONTO 5, CANADA

DEPARTMENT OF
PHYSIOLOGICAL HYGIENE

The paucity of concrete evidence regarding nursing services in industry is a serious handicap to planning an educational program for occupational health nursing.

This questionnaire is one method for systematically securing specific information which will describe the activities inherent in nursing services to industry.

This questionnaire has attempted to meet the following criteria:

1. To be applicable to all categories of occupational health nurses.
2. To be broad enough to be applied readily to all types of occupational health programs.
3. Is intended to determine those areas in which the occupational health nurse has a major responsibility.

Will you, as a practising occupational health nurse, help this research study meet its objectives by answering questions about yourself, your industry, and the activities which are applicable to your current position? The information obtained from the returned questionnaire will be important in determining curriculum direction, method, and content.

Your contribution will substantiate the premise that nurses who function as workers in this specialty must have selected education and work experience.

I realize the effort this questionnaire represents and convey my sincere appreciation for your interest and co-operation.

Please return the questionnaire in the enclosed envelope at your earliest convenience, if at all possible by June 1st, 1962.

Yours sincerely,

J. Evlyn Dalman

J.Evlyn Dalman,
Research Associate

APPENDIX III

Typical Comments from Respondents

Education

A university course in occupational nursing required, with graduating certificate.

Occupational health nurses should have a year's university course in Public Health to prepare them adequately in dealing with management, the field of health teaching and education, group discussions, etc.

I would like to see a course established at a post-graduate level for nurses who have chosen occupational health.

A course in occupational health nursing would be very beneficial to many people. This should be available in the evening as well as during the day. If possible it would be better if it didn't overlap with the public health course.

Staff education takes place mostly on the job. Instructions given in certain techniques such as taking electro-cardiograms, urinalysis, etc. which are time consuming.

Nurse in this type of work should have a broad experience in the general field of nursing. Public Health course is an asset. Personality is important. She must be adaptable, mature and well poised, be ingenious and also develop her initiative.

I would like to say that several evening courses I have taken have been extremely helpful to me in understanding individual situations and the people working in industry. These were not taken as a professional course, but for my own interest. They included - Problems in Ethics in Modern Society and Social and Political Ideals of Today. I feel that courses in Sociology or psychology from time to time are very useful.

Here are a few suggestions in accordance to formal experience -
lectures in psychology and public relations;
emergency training - first-aid bandaging;
artificial respiration, oxygen;
some blood work and possibly E.K.G.'s;
the rudiments of physiotherapy and massage; and
all phases of public health course applicable to industry.

Think you would have been able to get a more accurate report if the various hospitals had been visited to see what is being taught.

There should be a much broader education for nurses. We still tend to be too confined by our own calling and need more contact with those in other fields.

Further education in:
1) Records and Reports
2) Preventive Medicine
3) Non-occupational disabilities
4) Administration

Education (cont'd)

Operating room nursing, surgery, out-patient department, public health and nursing experience equivalent to the three items mentioned are very important for working in industry.

Three years spent as nurse-in-training should be sufficient training to do occupational nursing in small plant.

Questionnaire

I think the questionnaire set up is excellent.

Many questions difficult to answer, but completed to the best of ability.

Difficult to assess the summary page in view of shift-work and fluctuating staff conditions. Owing to large periods of overtime in the plant demands vary greatly with an average working week.

Feel questionnaire too elaborate for most nurses working alone in industry, but points out the most important thing of all - lack of formal education for job.

Feel the objectives and purpose of this study are of great value to the occupational health nurse of the future.

Difficult to give accurate answers.

Congratulations on a very detailed and inclusive survey. Not enough time to complete the questionnaire.

It was almost impossible to give you an accurate percentage of time spent on each activity, as required on the summary page.

Functions so interrelated impossible to allocate time accurately.

Working conditions vary from year to year and even from month to month. A large turnover of employees. Difficult to answer summary page.

Much experience which I find useful in my particular position has been obtained from my business training and experience.

Almost impossible to tabulate different activities.

Impossible to complete summary page with reasonable accuracy.

Difficult to assess exact time spent on each activity, as discussions and interviews with employees and staff often entail several items of the summary in one interview. Several of the questions repeated throughout the questionnaire.

Questionnaire too complicated to complete.

Questionnaire too long. It took me 8¼ hours to complete.

Service

Would like to see a higher standard maintained in industrial nursing. Prestige among management not good enough.

Too much time us spent on non-nursing duties such as charting laboratory results, recalls for physical examination, filing etc.

Staff nurses have little or no opportunity to have their views considered. From time to time the nurses are encouraged to suggest ways and means of improving our program, but do not feel we are free to do this. The nurses are ridiculed and embarrassed to such an extent that they are only with us a short while or they learn to keep their own counsel.

Fortunate in having had excellent help from the nursing consultants in the province and an interested plant doctor who has given very sound advice.

Main problem irregular attendance of a physician.

Realizes how much should be done after completing questionnaire.

VT 008 240
Employer Hiring Practices and Attitudes about the Employment of Women. Summary.

Vermont State Dept. of Employment Security, Montpelier
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 26Apr65 13p.

*WORKING WOMEN; *EMPLOYMENT PRACTICES; FEMALES; LABOR TURNOVER; *EQUAL OPPORTUNITIES (JOBS); *EMPLOYER ATTITUDES; *PERSONNEL POLICY
VERMONT

A survey was conducted to determine: (1) current hiring practices, (2) criteria governing hiring practices, (3) employer attitudes, and (4) changes which have occurred in recent years and factors causing them. Vermont employers were found to be prejudiced toward the employment of women. Some employers' hiring policies were guided by adverse experience with a high turnover rate of women employees. The number of occupations in which women are preferred has increased in recent years. The major limitations to job opportunities are inadequate education and training. Statistics in Vermont show that in March 1965 women averaged 4.8 hours of sick leave and men averaged 4.6. Although women are shown to have less turnover in some industries, the average number of quits for men per 100 employees is 1.49, whereas the rate for women is 2.88. A summary of the demands for women workers as compared with the demand for men workers in local labor areas is included. The percent of job order the industries, and the occupations most frequently specifying sex of workers are presented in chart form. (FP)

VT 008 240

ED042060

R&S: 4/26/65
: D

C.I.

State of Vermont
Department of Employment Security
Montpelier

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Summary of Employer Hiring Practices and Attitudes about the Employment of Women

Investigations into the hiring practices and attitudes concerning the employment of women must be carried out within a framework of knowledge, understanding, and appreciation of the complex operation of the labor market. As everyone knows, the working force of this Nation has been undergoing a substantial upgrading in the past two decades. Jobs have been created which require more education and training and old jobs with little or no requirement for education and training are being discarded. At the same time, the requirements for old jobs have been raised. This process continues and is expected to continue in the years ahead.

Consequently, the employee and the employer have more at stake when embarking upon a lifetime vocation or filling a job vacancy, as the case may be. Both parties must be prepared to expend substantial time and money. Each must be assured that the education and training will be used sufficiently to balance the cost involved.

Thus, as it concerns women, considerable thought and foresight must be given to the alternatives. They must decide whether their term in the labor force will be of sufficient length to balance the cost of 16-18 years of formal education.

Employers must also attempt to determine if the women workers will remain with them long enough to warrant the expense of training for the more skilled jobs. As the machinery becomes more complicated, the training costs will undoubtedly increase.

As a result, women workers who are considering fields of work with high educational or training requirements may be faced with the employer resistance

VT008240

now encountered by young men who have unmet military obligations. Women whose years of marriage and child caring are ahead of them may be unable to convince employers to train them. There is another factor which is important, although decreasingly so, when we consider the expansion of fields of work for women. There continues to be many occupations which require physical capacities. In addition, there are jobs for which lifting is incidental but necessary. Until such time as this requirement can be overcome, the fields of work for women will be limited. With the continuous introduction of modern machinery and processes, the number of such jobs is decreasing.

Generally, the nonmanufacturing segment of our economy is increasing while manufacturing remains static or grows slowly. Experience has shown that opportunities for women in nonmanufacturing industries exist to a far greater extent than in manufacturing industries. As a result, the future for women workers appears bright. In such industries as government, trade, and services, the number of women is already large and can be expected to increase as these industries continue to grow.

This Department has conducted a survey of current hiring practices. The purpose of this study was to determine if these practices have changed in recent years. Additionally, attempts were made to determine the criteria governing hiring practices and the factors underlying the changes which occurred in recent years. The results of this survey are attached.

The attitudes of employers in terms of their effect upon the employment of women were also investigated. Where specific attitudes existed inquiries were made into the facts which might justify the attitudes. As pointed out in the attached paper, all attitudes about women workers are not prejudiced against women; some are discriminatory. The results of these investigations are also attached.

Attitudes about the Employment of Women

Summation of Survey Results - Vermont employers are not prejudiced against the employment of women.[v] This is the conclusion reached as a result of a survey of Employment Service representatives throughout the State. It is especially noteworthy and encouraging that representatives in the largest labor area feel there is no discrimination against women in the area.

There were two instances of employers' hiring policies being guided by adverse experience or attitudes concerning the employment of women. Excessive turnover was reported in both instances. A comparison of the turnover rates for men and women is presented below.

On the other hand, the number of occupations in which women are preferred has increased in recent years.[v] Women reportedly possess superior attention to detail as well as exceptional finger dexterity. Consequently, they have replaced men in many occupations requiring these capabilities.

Ambition and Reliability - Generally, employers do not display attitudes which would indicate that they believe there are differences between men and women as far as ambition and reliability are concerned. One source stated that there have been reports that women whose husbands are working are more independent. The implication was that this lowers productivity.[v] This comment is unsubstantiated but was made by a person who is familiar with all phases of labor market operations.

Education, Training, and Experience - In view of the general lack of biased discrimination among Vermont employers, it appears realistic to assume that factors limiting job opportunities for women are inadequate education and training.[v] This assumption is also partly based upon the observation that there are jobs, now expertly performed by women, which were formerly open only to men. Women have demonstrated their abilities and are now hired almost exclusively. One such field of work is product inspection; women have shown a superior attention to detail which is required for this work. As mentioned earlier,

women are now preferred in jobs requiring finger dexterity. Assemblers, and especially splicers in plywood manufacture, are predominantly women.

Absenteeism - There is convincing evidence that this is one area in which women compare unfavorably with men. Figures available on one group of state employees show women are absent on sick leave more than men. During the month of September 1964, women averaged 4.8 hours of sick leave compared with 4.0 hours for men. During March 1965, the average number of hours of sick leave taken were 4.8 for women and 4.6 for men. For another group of state employees studied over a period of one year, the men averaged 4.3 days of sick leave while the women took an average of 9.1 days.

Turnover - Some employers have very definite feelings that turnover among women is in excess of that for men. Although the overall rate is somewhat higher for women, it is not excessively so. The following table shows that in some industries the rate is less for women.

Industry	Number of quits per 100 employees	
	Men	Women
Food Products	1.17	1.00
Lumber & Wood Products	4.14	4.52
Furniture	1.05	.78
Paper Products	1.00	1.12
Printing & Publishing	1.57	2.38
Rubber & Misc. Plastics Products	2.26	3.98
Machinery, except electrical	.94	.92
Electrical Machinery	1.75	1.16
Professional Equipment & Instruments	2.28	2.17
TOTAL	1.49	2.28

The above figures are the number of voluntary quits during the month of March 1965 (termination of employment initiated by the employee) per 100 employees

on the payroll. For example, if there were 1,000 women employees on the payroll and 15 women quit during the month, the turnover rate is 1.50. The information was obtained from a sample of 147 Vermont manufacturers.

Employee Insurance - Employers who furnish sickness insurance to their employees must consider the higher costs of providing coverage for women workers. It is the policy of some insurance companies to request a breakdown of employment by age groups for both men and women. Since the rates are higher for women, there is a natural tendency for employers to hire men, all other considerations being equal. Obviously, there are factors, such as superior work performance, which may more than offset this additional insurance cost.

SURVEY OF EMPLOYER HIRING PRACTICES IN VERMONT

Five labor areas of the State report that the proportion of job orders specifying women only has increased, while two state that there has been a decrease in the demand for women. The remaining five labor areas state that the proportion specifying men only and the proportion specifying women only have remained the same.

In some areas, there is a large concentration of industries which employ primarily male labor, such as Springfield. In one area, however, women have been hired for work that has usually been done by men, due to a labor shortage. Employers found that women were better at some of these jobs, and thus the number of job orders for women has increased. Another area reports that there has been an increased demand for women because they are faster on the production line.

Decreases in job orders for women only in one area is due to employers' belief that the turnover rate for women employees is excessive. Because of this, some industries have been replacing women with men.

Following is a summary of demand for women as compared with the demand for men in each local labor area. They have been divided into three categories: Areas In Which The Proportion Of Job Orders Specifying Women Only Has Increased; Areas In Which The Proportion Of Job Orders For Women Only Has Decreased; and Areas In Which The Proportion Of Job Orders Specifying Men Or Specifying Women Only Has Remained The Same.

This summary and attached tables are based on information furnished by the local offices of the Vermont State Employment Service.

AREAS IN WHICH THE PROPORTION OF JOB ORDERS SPECIFYING WOMEN ONLY HAS INCREASED

Brattleboro - The proportion of job orders specifying men only has decreased to about 51%, due to the completion of thruway and flood control projects in the area. The opening of new ski areas and shops, as well as increased demand in the service category has resulted in an increase in job orders for women only. The turnover rate for women has also been somewhat higher in recent years. Manufacturing industries have a demand for both men and women; men for the heavier jobs, and women for lighter work, such as inspecting, stitching, banding, and packing.

Middlebury - Because of labor shortage, employers have been hiring women to perform work which has usually been done by men in the past. Women were found to be better at some jobs, so employers now specify women only on these jobs. However, job orders specifying men only still account for 50 - 74% of the total job orders. These are mainly in building construction, manufacture of lumber and wood products, and for dairy farm hands. Most job orders specifying women only are in apparel manufacturing.

Rutland - The proportion of job orders for men only has decreased, while that for women has increased, due primarily to a change in the industrial makeup of the community. Job orders for men were mainly in the fields of building construction, stone and woodworking operations, and in machine shops. Those for women only were mostly for workers in private households, general office clerks, and in the manufacture of paper products and apparel.

St. Albans - There has been an increase in the proportion of job orders for women only because the paper products industry has been hiring more women, as they have found women to be faster on the production line. There is also a demand for women in the apparel industry, and as housekeepers. Job orders specifying men only are mainly in the construction field, and account for 25 - 49% of the total job orders in the area.

Springfield - The number of job orders for men has increased due to interstate construction projects, and a rise in demand for machine tool industries. However, there has also been an increased demand for women due to shopping center expansion, and a greater demand for domestic and service labor. "Demand for women only is in a minority status due primarily to the structure of existing industry which provides a majority demand for males only in occupations that have been characteristically male for many years."

AREAS IN WHICH THE PROPORTION OF JOB ORDERS SPECIFYING WOMEN ONLY HAS DECREASED

Newport - The number of job orders specifying women only has decreased, largely due to the higher turnover rate for women employees. Over the last three years several concerns, including the area's largest industry, have been replacing women with men. Job orders specifying men only have been mainly for workers in construction, furniture manufacturing, and lumber and wood products. The greatest demand for women is in plastics, and for sales clerks, kitchen workers, and waitresses.

White River Junction - The increase in the proportion of job orders specifying men only is not due to any decisive change in hiring practices. These job orders were mainly for construction workers, and for workers in lumber and wood, as well as for workers in other industries that use primarily male labor. The decrease in the proportion of job orders for women only is due primarily to industry losses in the textile field.

AREAS IN WHICH THE PROPORTION OF JOB ORDERS SPECIFYING MEN OR SPECIFYING WOMEN ONLY HAS REMAINED THE SAME

Barre - The 50-74% of the job orders specifying men only consisted mainly of orders for construction labor, skilled workers, and workers in heavy manufacturing occupations. The 25-49% of job orders that specified women only were mainly in service and domestic occupations, light factory work, and clerical occupations.

Bennington - Job orders for construction workers, and for workers in paper manufacturing and in eating and lodging establishments accounted for most of the job orders specifying men only. These amounted to 50-74% of the total job orders. Job orders specifying women only were mainly for workers in textile manufacturing and printing, waitresses and maids, and for employment in private households.

Burlington - Most of the job orders specifying men only were for workers in the building trades and for heavy equipment operators. Secretaries and general office clerks, and waitresses and maids accounted for most of the job orders specifying women only. It should be noted that local office records "do not indicate any discrimination against women relative to job openings or hirings."

Montpelier - Job orders for workers in the building trades, for mechanics, and for truck drivers comprised most of the job orders for men. These accounted for 50-74% of total job orders. Job orders for women were mainly for secretaries, typists, waitresses, and housekeepers.

St. Johnsbury - Most job orders specifying men only were in the fields of building construction and lumber and wood manufacturing, while those specifying women were mainly for maids, waitresses, practical nurses, and workers in apparel manufacturing.

TABLE 1

EMPLOYMENT SERVICE EXPERIENCE WITH JOB ORDER SPECIFICATIONS

A. Percent Of Job Orders Specifying Sex

	Job Orders Specifying*	
	Men Only	Women Only
Under 25 percent	none	none
25 - 49 percent	2	9
50 - 74 percent	10	3
75 percent and over	none	none

B. Change In Percent Of Job Orders Specifying Sex

	Job Orders Specifying	
	Men Only	Women Only
Increased	3	5
Decreased	4	2
Remained the Same	5	5

*Numbers represent the number of local labor areas.

TABLE 2

EMPLOYMENT SERVICE EXPERIENCE WITH JOB ORDER SPECIFICATIONS

INDUSTRIES MOST FREQUENTLY SPECIFYING SEX

Industry	Job Orders Specifying* Men Only	Women Only
NONMANUFACTURING	27	33
Agriculture & Forestry	2	none
Construction	14	none
Utilities	3	1
Trade	4	10
Services	4	21
All other nonmanufacturing	none	1
MANUFACTURING	20	13
Food Products	2	none
Apparel	none	5
Lumber & Wood Products	8	none
Paper Products	1	2
Printing & Publishing	1	1
Stone, Clay & Glass	3	none
Nonelectrical Machinery	2	none
All Other Manufacturing	3	5

*Number of times these industries were mentioned as one of the four most frequent sources of job orders specifying women only or men only.

TABLE 3

EMPLOYMENT SERVICE EXPERIENCE WITH JOB ORDER SPECIFICATIONS

OCCUPATIONS FOR WHICH SEX IS MOST FREQUENTLY SPECIFIED

Occupation	Job Orders Specifying* Men Only	Women Only
Professional & Managerial	none	none
Clerical & Sales	1	11
Service	2	23
Domestic	none	8
Personal	2	15
Skilled	12	none
Manufacturing	8	none
Other	4	none
Semiskilled	12	6
Manufacturing	7	6
Other	5	none
Unskilled & Other	21	5
Manufacturing	7	5
Other	14	none

*Number of times these occupations were mentioned by local offices as specified for men only or for women only.

VT 008 244
McWherter, Jo Ann; Schmidt, Jo Ann
Vocational-Technical Education Brings Success to These Tennesseeans. Volumes I and II.

MF AVAILABLE IN VT-ERIC SET.
Pub Date - nd 85p.

*VOCATIONAL RETRAINING; *AREA VOCATIONAL SCHOOLS; *STUDENTS; INDIVIDUAL CHARACTERISTICS; *SUCCESS FACTORS
TENNESSEE

These two publications contain the success stories of 30 people enrolled in Tennessee's program of Vocational-Technical Education, attesting the importance of occupational education for employment. Donald McGuire's story is typical of those reported. Donald came out of the army with no trade or skill and began working in a factory. "I was just mule," he said seriously, "All I did was handle material--hard lifting, pushing, and straining. After 8 years I was making a top of $1.67 per hour and had no room for advancement." Then Donald enrolled in the Newberg Area Vocational-Technical School. In the machine shop, he learned to make parts and tools from metal and became interested in drafting. After graduation he found employment in a local plant as a machinist and later was promoted to draftsman. Donald is one of many who will be able to make a new life as a result of the knowledge and skills gained at one of Tennessee's area vocational-technical schools. (CH)

VT 008 244

Farm C.I.

VOCATIONAL-TECHNICAL EDUCATION

BRINGS SUCCESS

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TO THESE

TENNESSEANS

VT008244

VOLUME I

- Ruby Allen – Huntingdon
- Jerry Ross – Henderson
- Randall Brewer – Clarksburg
  Waymon Cates – Bradford
  Wesley Collins – Clarksburg
- T P S – Nashville
- Bobby Mitchell – Adamsville
- Farmers – Hardin County
- Janice Hicks – Paris
- Kenneth Work – Dickson
- Jerry Bush – Huntingdon
  Robert Simmons – Clarksburg
- Donald McGuire – Dyersburg
- Janice Barksdale – McKenzie
- Karen Gooch – Huntingdon
- Jean Shull – Fayetteville
- Donald Hodge – Boones Creek
- Abie Shipes, Jr. – Greeneville

VOCATIONAL-TECHNICAL EDUCATION BRINGS SUCCESS TO THESE TENNESSEANS.

VOLUME I

PREFACE

Tennessee's program of vocational-technical education is designed to serve the occupational needs of individuals. The success achieved by those who receive training is one measure of the effectiveness of the program.

This publication contains a collection of 15 success stories written or edited by Mrs. Jo Ann McWherter, Supervisor of Curriculum Development, Division of Vocational-Technical Education. While success may be different things to different people, no doubt the reader will be impressed with the results experiences in vocational education have brought to these Tennesseans.

Many other such stories of success gained by persons enrolled in courses of vocational education could be told. Additional collections are planned for future publication. They all document the fact that occupational education for employment is an important element of the educational system in today's complex world of science and technology.

Charlie M. Dunn, Assistant Commissioner
for Vocational-Technical Education

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A WHOLE NEW WORLD OPENED

In 1953 a young girl decided to drop out of high school after finishing the tenth grade at Huntingdon High School. No one, least of all the girl, would have believed that she would eventually gain knowledge and skills which would enable her to get a job working in a bank. Nevertheless, the opportunity became available and the young lady who had become a married woman with two children took full advantage of her good fortune.

Ruby Allen watched with a special curiosity as the McKenzie Area Vocational-Technical School was built. When the school opened, she asked questions which led to her enrollment September 7, 1965, in the office occupations course.

After being out of school, Ruby found that being a student again was far from easy. Her instructors, Mrs. Kathleen Mitchell and Miss Rhaelea Pankey, delighted in her hard work and the resulting progress. Ruby not only worked diligently while at school, but she also carried books home at night and studied after her family was asleep.

Mr. Joe McClure, guidance counselor, remarked about Ruby's achievements as he glanced over reports her instructors had prepared on her, "Ruby's progress reports show how she began her improvement and worked her way up to being an excellent student."

Ruby Allen is now working at the McKenzie Banking Company. She began her duties with the bank in February, 1967. She works in the bookkeeping department where she does posting and check filing.

The supervisor of the bookkeeping department, Mrs. Ethel Lynn Davis, obviously very pleased with her employee, said, "Ruby caught on to her work

very quickly and is a fine bookkeeper. She is charming and friendly in addition to being capable. I would take another girl like Ruby any day."

Ruby's appreciation for the McKenzie Area Vocational-Technical School can't be overstated. "It opened up a whole new world for me. You know I had been out of school a long time and didn't finish either, but everybody at the school helped me. I thoroughly enjoyed learning. Why, they (staff members) encouraged me so that I took and passed the GED test and now I have an equivalent high school diploma," Ruby related proudly.

"I met many new people and learned how to get along better. At school they don't teach only the business routines; but they also teach how things will be out in the world at work," she continued.

"My instructors were so capable and had good experience to back them up. I really had to dig - that course is tough, but not a bit too hard because after all the business world is tough, you know," Ruby commented.

Ruby's appreciation of the school, which she voices quite frequently, is expressed sincerely, "That school did so much for me and many others I know. I'm for the school 100%!"

Thus, Ruby Allen has come a long way since 1953. She is one of the many across the state who have taken advantage of the opportunity through training offered by Tennessee's Area Vocational-Technical Schools.

HAPPINESS IS SUCCESS

Upon graduating from Vincent High School, Henderson (Chester County), Tennessee, I found myself with a feeling of great accomplishment and well being. What I had not immediately realized was that I had only begun to prepare myself for the future that was before me.

The thing that I had not realized was that with all my twelve years of academic studies I was not even remotely prepared to enter a vocation that would qualify me as a wage earner. This realization was appalling as I had never given it serious thought before. I went to school, studied hard, and had better than average grades; but what now, I wondered.

I was sure that I did not want to remain on the farm that I grew up on; and

being from a family of meager means, it would be impossible for me to continue my education on the college level.

I had been reading and hearing of the new Area Vocational-Technical School soon to open at Jackson, Tennessee, and I investigated the possibility of entering with the first class. I chose the automotive mechanics trade course and immediately began to study in this field. Soon I realized that my future was beginning to take on some meaning.

Each student is evaluated on an individual basis and progresses on an accelerated program. This is of great value as it allows each student to become employable as his knowledge merits rather than receiving only group instruction as I had experienced throughout my grade school and high school years.

After eighteen months of training in the automotive mechanics trade, my course instructor has gotten me placed, along with six other students, with the automotive service section of the J. C. Penney Company chain. This is a rapidly growing company in the automotive service field, and I now feel that my future is secure - a far cry from that day when I started to think about what I might be qualified for after graduating from high school. I shall always be grateful for the entire vocational training program, the school which I attended, and my instructor for the great interest shown in me.

I am still attending school and will until the required 2880 hours of training are completed. You see, The Penney Company is also very much aware of the shortage of trained people in this field. They insist on our completing the training course to become still more adept in our trade. They very graciously adjusted their work program so as not to interfere with our regularly scheduled school hours. They have already begun to contact other Area Vocational-Technical Schools throughout the State to help fill their need in the staffing of other service centers now being opened.

As a word of encouragement to any young man wondering what he may do to become a self-sufficient person as a wage earner and a real credit to the society in which we live, I strongly urge that he contact the Area Vocational-Technical School in his community.

Jerry Ross

THERE WERE

THREE JOLLY HUNTSMEN

"There were three jolly huntsmen,
As I have heard them say,
And they would go a-huntin' . . ."

These lines, uttered long ago by some anonymous poet, may or may not have referred to three real hunters; but three jolly huntsmen have recently in truth gone "a-hunting." This trio of fast friends is composed of Randall Brewer, Waymon Cates, and Wesley Collins. The story of their hunt reveals determination, ambition, and perseverance. Most of what can be said of one young man can be said of all three.

These three lads, all young farmers, enrolled at the McKenzie Area Vocational-Technical School on the very first day the school opened, August 2, 1965. Randall had graduated from Clarksburg High School in 1965; Waymon from Bradford in 1965; and Wesley from Clarksburg in 1964. All three had worked on the farms where they lived with their families. Leisure time had been occupied with hunting and fishing, primarily, although Waymon also devoted some time to building carts and buggies. Family reaction to the decision of the boys to enroll in the Machine Shop at the McKenzie School was identical. They were all for it!

Randall learned of the school from Mr. Guy Kirk, the Superintendent, who had made a talk at Clarksburg High School. A friend told Waymon about the school at a Fourth of July celebration and he "came up to see what it was all about and liked it." The local paper carried an announcement about the school and a talk Mr. Kirk had scheduled at a PTA meeting. Wesley attended this PTA meeting - his first - to gain more information.

The trio worked well and learned quickly. Mr. T. B. Miller, Machine Shop Instructor said of the boys, "I can't discuss one without speaking of all three because they worked so much together and all did so well. They are dependable, honest, and hard working boys - just the type industry enjoys

getting. Each boy came a great distance every day to attend classes but seemed eager to learn and progress."

Progress they did! Mr. Miller and Mr. McClure smiled with pleasure as they told of the new job the boys now have. At better than minimum wages, they are now employed by Aladdin Industries as mold or tool and die apprentices. Mr. Miller said, "They wanted an apprenticeship program so they could continue learning, and that is just what they got. Without their training, they would probably have ended up making bare minimum wages."

"They don't mind putting in a day's work for a day's wage," added Mr. McClure, "With their attitude and their skill, they will have bright futures."

The responsibility the boys feel to succeed is easily detected. "After all", commented Wesley, "We are the first boys to receive certificates from this school and we can't let down those who have helped us."

The other two nodded in agreement as Randall seriously interjected, "I'll certainly give them my best!"

As the three talked about the school and the opportunity it has brought to them, their feelings could not be separated. Randall said, "This school gives a boy more opportunity to learn on his own." "Yes," inserted Waymon, "It's been a great big help in every way possible."

Wesley leaned forward, "And don't forget to tell that we have actually enjoyed this work and all the people who have helped us."

What these "three jolly huntsmen" will eventually bag on their hunt, can not be told for years to come. The McKenzie Area Vocational-Technical School has enabled them to launch out on a big game hunt where the trophies of their endeavors are unlimited promise and advancement.

OCCUPATIONAL HOME ECONOMICS COMES TO TPS

Tennessee Preparatory School, located on Foster Avenue in Nashville, Tennessee, is a unique and outstanding educational institution in many respects. One of the most unique facts is that TPS is the only school of its kind in the United States. The school campus becomes "home" to students who come from every county across Tennessee. Most of the students are sent to TPS not because they are "bad" or have made any social mistake but

because they lack a home and proper care.

Once enrolled at TPS, the students are given every educational and cultural advantage which the staff can provide. A primary concern involved in the total program is that each student becomes prepared to be a productive individual after leaving the school. For the boys, numerous courses in vocational education are tendered while the girls have had advantage of only one vocational course until 1966.

In January, 1966, an idea was conceived which burst forth into a full grown opportunity for girls in the eleventh and twelfth grades at TPS. Plans were made for adding an occupational home economics course to the curriculum.

Under the terms of the Vocational Education Act of 1963, vocational programs must be geared closely to labor market demands, inclusive of all types of occupations which are non-professional, designed for people of all levels of ability, and developed in all types of institutions.

After approval for an occupational class in home economics had been received from the Tennessee Department of Education, an extensive survey was made in the Metropolitan Nashville Area in the spring of 1966 to ascertain interest, need, and support for such a program. The results of this survey showed a specific need for food service workers.

Girls already enrolled in a regular homemaking class at TPS were screened to determine their aptitude and desire for participating in a food service program.

The program then began to crystallize with the selection of an advisory committee drawn from persons in the community who are involved in occupations related to food service. The committee includes managers and owners of restaurants and cafeterias; one member of the Tennessee State Board of Education; the superintendent of TPS, Mr. Charles Barham, and the principal of TPS, Mr. Charles Neighbors.

The advisory committee, serving in a consultant capacity, has many duties. They assist in establishing goals, keeping curriculum up to date, creating a good rapport between industry, business, and the vocational educational program, giving advice and encouragement, and in evaluating the program. Although these are their paramount functions, invaluable guidance and aid are given to the program through an assorted list of other services performed by committee members.

The instructor, Mrs. Mary Jo Work, met with the committee and then launched into developing a tenative program of work which was approved by the Tennessee Department of Education.

The objectives set for the program include the development of skills and

knowledge in food service, an understanding of responsibilities and rewards for food service employees, and the cultivation of personal qualities needed by each individual for job success.

In the fall of 1966 actual class work was begun. During the year a total of 22 girls had enrolled. Since the stay at TPS varies with each student, some girls left the school while other girls came to the school and entered the program. Each girl entered had at least one year of home economics to her credit. The course, which meets for three hours each school day, counts two credits toward high school graduation.

The program gained momentum and became fascinating in November when the girls actually started to serve school groups, campus employees, and staff members. Living on campus limits the outside social activities for most of the students, many of whom had never had the experience of "eating out." Thus, the class also had value for them by providing a situation which was both an educational experience and an opportunity for social growth.

Meals and menus were organized around the group to be served; special days such as Christmas and Easter saw ordinary food transformed into appropriate festive shapes and served in an attractive manner. The experience of dining in the class laboratory was as anticipated as any event on campus. One eleventh grade girl expressed her feelings about serving school groups, "I really enjoy making wonderful different kinds of foods and just sitting back and watching them eat their hearts out. Sometimes I wonder if anyone is going to be able to get up, but they look so comfy eating as they do!"

Another class member vocalized her opinion, "Vocational home economics is FHA-Fun, Humor, and Adventure."

She told of some humorous and trying situations which had confronted her during the year, but showed no sign wanting to shirk any responsibility which may come her way. The devotion she has for Mrs. Work plays no small part in her attitude. "Mrs. Work," she said, "is the most understanding person ever to be found."

Another student quickly stepped up to agree, "Occupational home economics is a very educational program. I have learned a lot I didn't know about cooking; but if it weren't for Mrs. Work, I wouldn't even try. The way she manages, it is fun to cook, serve, and learn."

Mrs. Work explained the program in simple terms, "The program developed for occupational home economics is to prepare girls for occupations as food service workers."

The curriculum, which includes orientation, terminology, sanitation, quantity equipment and cookery, food storage and handling, various types of service, menu planning, nutrition, and job responsibilities, is certainly

adequate to give the girls this opportunity.

Each week during the school term, Mrs. Work attempted to schedule a field trip for her students. They visited food service establishments in the community, possible places of employment, and other programs being conducted in food service. "We looked like a circus act," commented Mrs. Work who turned chauffeur for the trips.

The class traveled in a very old and large state owned ambulance which has been converted to a bus. Mrs. Work believes the benefits gained by taking the girls to see food service operations is well worth any second glances they receive as they jog about in their "limousine".

"The reception the class has had on these trips has been gratifying; but it only reflects the cooperation we have had from the entire community," averred Mrs. Work.

Some values of the program can already be clearly identified. Mrs. Work affirmed, "The program has been a delightful experience for the girls in the class and the classes they served. They developed good working relationships and the ability to function as a team while they learned time management. The program was certainly a challenge and a change for the school, the girls, and especially for me!"

When asked what she had learned, one girl replied, "Experience in quantity cooking, being a waitress, a hostess and meeting people. I learned how to act while serving and learned to work with others. I also learned how to cope with accidents that might happen while serving and learned how to be clean and neat while working with foods. We were able to go out to places and see how things are done and were able to experiment with foods. There are many advantages to this vocation and I could think of at least a dozen more things I have learned this year."

Another girl stated sincerely, "We have learned something and I mean that! We all work like one efficient team of experienced workers. We aren't professional, but with good supervision, we have learned. I am glad and proud to say I am a member of this class."

The real merit of the program may not be seen immediately. Mrs. Work commented, "I feel that our success as a program for gainful employment can not only be measured by the number of girls who are successfully employed and stay employed, but maybe mostly by those who gain confidence in themselves as to accomplishment whether employed or as individuals in their complicated world of challenge and change."

Follow-up and program evaluation will continue into the future to determine the success of the girls as food service workers.

During the summer twelve girls are involved in on-the-job training under

the supervision of Mrs. Work. These are girls who completed the first year program of organized class work and supervised serving at TPS.

In the fall, other girls who have completed the first year of the program will go into the on-the-job training phase. At the same time, new girls will be enrolled in the first year of occupational training.

Asked what enticed her to stay with a program which is so demanding of her time and talents, Mrs. Work smiled and said, "All of us involved in this program feel that we are salesmen of an 'intangible' at the moment - an idea - a positive approach to keep our Miss America in school and to provide skills for employment after graduation."

SUCCESS—BOBBY MITCHELL

Bobbie Mitchell was one of the first students who enrolled in the Savannah Area Vocational-Technical School in Crump, Tennessee on April 15, 1965. These first students had been out of school for several years, and some of them had not had the opportunity to finish high school. Bobbie was one of these. She was enthusiastic, intelligent, attractive, and cooperative - just the kind of girl a business teacher loves to teach.

She had married at the age of 16, had a daughter at 17 and a son at 20.

Although she had tried hard to care for her children and make a successful marriage, because of circumstances beyond her control, she was unable to do so; and the marriage ended in a divorce.

She had borrowed money, built a small house, and was working hard trying to support herself and her children, but it was very difficult. She worked as a waitress seven days a week on all kinds of shifts, sometimes from five in the morning until ten at night.

She had always wanted to be a secretary; but since it was impossible for her to go back to high school, she never expected to have an opportunity to acquire the training.

Then she heard of the Savannah Area Vocational-Technical School. She put in her application, was accepted, and began studying typing, shorthand, bookkeeping, and other subjects that she had always wanted to take. This was, as she said, "Almost like a dream."

She was a very good student and seemed to enjoy every minute of her school hours, but she felt that she needed to find a good job as soon as possible. On May 20, 1966, when Mr. Ray Blanton, who was running for U.S. Congressman from the 7th Congressional District, came to Crump School looking for a secretary, Mr. Davis, director, recommended Bobbie. She went to work for him as campaign secretary.

She worked hard; and six months later when he won the election, she was offered a job with him in Washington.

This would have been a wonderful opportunity, but after much consideration, she decided that the move would not be wise because of the children. As she said, "I knew I would have to live in a crowded area in Washington or live so far away that I would spend most of my time driving to and from work. Also, the long hours involved in this job would keep me away from my children." She left Mr. Blanton's office on Saturday and went to work the following Monday at the Bank of Adamsville, Adamsville, Tennessee.

Bobbie has this to say, "I thoroughly enjoy my work. I am 30 now and just now feel some accomplishment. I am still learning and know that I have lots to learn. It takes a lot of on-the-job experience, but I certainly could not have had this opportunity if it were not for the Vocational School. I am so grateful for the opportunity of attending the Savannah Area Vocational School."

RED GOLD DISCOVERED

IN HARDIN COUNTY

The "gold rush" in Hardin County is almost ten years old in 1967. Although the treasure is a brilliant red and is vegetable rather than mineral, the importance it has to Hardin County is as evident as the gold nuggets were to California and the Klondike.

The War on Poverty is certainly not new to Hardin County, Tennessee - particularly to the Walnut Grove Community. "War" was officially declared in 1951 when all the small one-teacher elementary schools in the community were consolidated into one large elementary school. The County Superintendent of Public Instruction sent J. I. Bell, then Vocational Agriculture Instructor at Central High School in Savannah, out on a new assignment.

"Go up there (Walnut Grove) and show those folks how to make a living," were the instructions given to Mr. Bell.

The Walnut Grove Community is 23 miles southeast of Savannah on Highway 69. This stretch of highway, which leads into Alabama, is better known as "Rabbit Jump" - so designated by the many truckers who use it.

A community survey conducted in 1951 showed that 250 farmers in the area averaged a gross cash income of $768 yearly. This low income region suffered from many handicaps.

One was the soil itself, which is largely a coastal plain type called silerton. Highly erodible and basically poor, this soil will not support just any crop. However, it will respond well to fertilizer and warms early in the spring, making it ideally suited to truck crops.

Another problem was that the farmers had little, if any, knowledge of farm management, fertilizers, or marketing. Mr. Bell set out to correct this complex problem first.

Evening classes were started for the farmers at Walnut Grove School. They were given detailed instructions on growing a crop - told what to plant, how much to plant, when to cultivate, when to fertilize, when to harvest, where to sell.

Strawberries were selected as the first crop to try. This venture proved a total failure due to the necessity for financing plants and fertilizers and then having to wait a year or two to receive profit. The farmers simply did not have the money needed to operate.

This failure did not dampen spirits or determination. Okra was selected as the crop to be grown in the area for the next year. About 15 farmers each agreed to try one acre of okra. The yield was good; the price high; and the crop a huge success. The following year, 150 acres of okra were produced with the same success.

"The okra almost seemed to turn to gold in their hands," commented Mr. Bell.

Mr. Bell always contracted the okra before it was planted and served as an intermediary between the farmer and buyer. Okra was grown successfully in Walnut Grove Community for three years.

During the fourth year, no canning or freezing company was interested in okra. A new money crop had to be found for which there would be a ready market. Pimento peppers were chosen.

The night classes, which often have as many as 100 in attendance, concentrated on producing pimento peppers to be sold to nearby canning factories. Since 1956, an average of $50,000 worth of peppers has been sent to market each year. This year the price per ton is the highest ever, and the annual crop income may more than double the average.

Mr. Bell led the farmers in organizing themselves into the Truck Growers Association, a cooperative which acts and sells as one body. No fees or dues are charged for membership. The only requirement is that the farmer grow peppers.

The Walnut Grove Community was formerly "rough and rugged" both in terrain and character. Sources of income were severely limited. Since the pepper crops have begun to bring additional money into the community, changes are evident in the social, educational and economic life. In fact, the entire community is changed.

Beautiful new small churches have been built; new stores prosper throughout the area; and more new houses have been built there than in any other part of the county. The houses which were simple rough dwellings with a goose-neck stovepipe protruding out the side in lieu of a chimney have been replaced by modern, attractive structures. Better than 66% of the houses in the community have been constructed within the past five years, and a new one is begun almost every day.

"There has been an increase in school attendance from Walnut Grove," said Hardin County Superintendent of Public Instruction Homer F. Snodgrass.

He continued, "The children are actually learning faster due to better home and health conditions. They are fed better and they feel better. The drop-out rate has decreased. These are just some of the evidences of the impact of increased income in this community."

The requests for free school lunches have dropped 70%. There have been other indications of change.

"This community (Walnut Grove) can no longer be counted an isolated one, largely due to the efforts of Mr. Bell," stated Winnie D. Range, Supervisor of Instruction for Hardin County.

"Many improvements may be noted - improved social well being, self-concept, and general appearance. A larger number is going on to high school. The children are more alert in school; the timid, listless type that were once here are disappearing. Parent co-operation with the school is excellent," she said.

The faculty of Walnut Grove School includes three members who grew up in the community.

In the last two years, basic education classes for adults have been taught at Walnut Grove. Last year this was one of the largest classes in the county and was a most responsive class. Those in attendance ranged in age from 20 to past 60.

The area used to have good standing timber. This was all cleared out during World War II and no good timber is left. There is little pasture land or feed for livestock. Thus, the importance of the pimento pepper crop.

Mr. Bell, who is now Director of Vocational Education for Hardin County, is still the literal Captain of the troops. The farmers rely completely on the "Captain", as they address him with affection and respect. They seek and follow his advice and instruction. Mr. Bell fights hard and long to secure the best contract for the crops, although he receives neither a commission nor extra salary for his trouble. The farmers all know they can count on him to serve their best interests and therein lies the strength and success of the entire operation.

The pepper crop has spread over into adjoining Wayne County. Farmers are allowed to market their peppers at either Collinwood or Walnut Grove. Loading is done two days a week at Walnut Grove and three days at Collinwood.

Mr. T. C. Story, Vocational Agriculture Instructor at Collinwood, supervises the marketing there. During the first three weeks of loading, 225 tons of peppers have been shipped at $90 per ton.

Approximately 125 farmers sell at Collinwood. At either location the peppers are weighed on the spot and the farmers receive their checks im-

mediately.

Walnut Grove has shipped 200 tons during the same period. The price is same at both points. Shipping will continue until October 10th, which means the harvest is only about one-third complete.

Most of the farmers get around four tons of pepper per acre. This is a high return on their investments in plants and fertilizers. Plants are $3.25 per thousand. Five thousand are set per acre. Four hundred pounds of 6-12-12 fertilizer are used per acre at a cost of $8 or $10. About sixty pounds of nitrogen are added for $6.

The plants are shipped in from Florida. All plants are set around May 10th, so the crop will "come off" at the same time for volume selling and shipping. Shipping is begun around August 4th.

Ten years ago the first pepper crop brought $60 per ton. The price has climbed steadily with Mr. Bell constantly searching for new and better markets. Next year the farmers hope to get $100 per ton.

All of this has been accomplished without federal financing or financial assistance from any source.

"The farmers just come to agriculture evening classes and set out to help themselves," explained Mr. Bell.

Ottie Pollard is fairly typical of the farmers who are growing pepper in the Walnut Grove Community. Beginning with one acre in 1956, he is harvesting ten acres this year. The additional income will be well used by the Pollard family which includes five children. Mr. Pollard intends to increase his acreage even more next year.

Another farmer, Clarence Stricklin, has been hauling peppers to Walnut Grove for ten years. Since he has no help, he grows one acre of peppers. This adds about $300 clear to his yearly income for his family. The Stricklins have six children.

"The money from the peppers comes in at a good time when nothing else is bringing in money," said Mr. Stricklin.

Change is even to be found in the lines which wait to unload their "red gold." More and more teenagers are seen hauling in their family's crop. This year many "moonlighters" are also growing peppers. These are small farmers who have found it essential to find work in a nearby town to support their families.

The Walnut Grove Community and all Hardin County have gained by this pepper project. Vocational agriculture has served the county well, and J. I. Bell has been and is the driving force behind such programs. Co-operation between related agencies and vocational education is excellent. Related agencies include the Soil Conservation Service, Agriculture Service, Conservation Service, Farmers Home Administration, and the county agent.

The soil Conservation Service has been responsible for a soil survey in

Hardin County to help farmers in planning the kind of management that will protect their soils and provide the best crop yields.

"This report of the survey has been used extensively in adult agriculture classes," said S. D. Young of the SCS Office.

"Our office provides a wide range of conservation practices on land in Walnut Grove. The people are responding well," continued Mr. Young.

Ray S. Johnson of the ASCS Office emphasized the results of team planning, "Improvement is obvious in the Walnut Grove Community. Most of it is due to the effort from the farmers, but they have had leadership which has had the benefit of good agency co-operation."

The Farmers Home Administration, established to help farmers who are unable to obtain a loan from other sources, has loans to six families in the Walnut Grove Community, according to FHA representative Harry Parks.

These loans involve planning sessions with the farmer and agriculture advisors in the community who assist in developing a farm operation plan calculated to make more money for the farmer.

The county agent, James Tracy, works with the farmers both individually on their farms and in group meetings.

Other agricultural expansion includes the Hardin County Farmers Co-op, which was organized under Mr. Bell's leadership. The movement began by buying one carload of fertilizer and has expanded into an organization which now serves over 4,000 patrons. It is interesting to note that the employees at the Co-op are all graduates of Central High School and were all vocational agriculture students. Even the secretaries are married to men who were vocational agriculture students at Central High School.

The Co-op is a part of "Ag Center." This compound includes the Co-op, the Production Credit Association, the Farm Bureau, the stockyard, and the soybean buying station. Wise planning has made for convenience for the farmers in Hardin County.

Many boys from the county have attained the State Farmer Degree while members of the Future Farmers of America. Three boys from one community, Big Ivy, have been awarded the coveted American Farmer Degree.

Five members of the Agriculture Department of the University of Tennessee are natives of Hardin County.

The emerging growth of agricultural activities in the county has been partially responsible for the population increase. Hardin County is the only rural county in West Tennessee showing a population gain.

More progress is ahead. "Our next project is going to be a feeder pig co-operative," stated Mr. Bell.

Future plans also include a broiler marketing complex. This will include producing baby chicks, feed-mixing, killing and chilling, and marketing.

The farmers may also have marketing and distribution added to their evening classes in crop production and farm management.

Much has been accomplished in Hardin County, but it is probably no more than could be done in any county in Tennessee. The secrets to the success here are few: a capable leader, hard-working farmers who want to help themselves, and agency co-operation.

Vocational agriculture, one of the instructional services provided by the Tennessee Division of Vocational-Technical Education, continues to furnish the means by which knowledge and skills required in agricultural enterprises may be learned - learned by doing.

OPPORTUNITY FOR THE FUTURE

What does the future hold for a young high school graduate who doesn't want to go to college, even if he or she is academically or financially capable of attending? In many cases, the future holds a never-ending search for a secure job or for a job that returns monetary benefits to maintain a fair standard of living. In other cases, such as Janice Hicks', the future holds promise for advancement and opportunity. The promise became a reality for Janice as a result of her decision to attend the McKenzie Area Vocational-Technical School.

Janice graduated from Grove High School in Paris, Tennessee, in 1966. She is the daughter of Mr. and Mrs. W. W. Hicks, Route 4, Paris, Tennessee. Her parents would have sent her to college; her high school records indicate she could have made the grade; but Janice did not choose to attend college. Her only brother is a college graduate, but her parents did not insist that she follow in his trail. Instead, they helped Janice investigate possibilities available to her for further education. Some friend recommended the McKenzie Area Vocational-Technical School to her mother. Mr. Joe McClure, guidance counselor at the school, made a visit to Paris and gave Janice more information.

Janice learned that she could pursue her studies in office occupations which had been one of her interests. Her initial tests at the school proved she was capable of becoming a highly skilled stenographer. So - with interest, ability, and family approval - Janice enrolled at the McKenzie Area Vocational-Technical School in July, 1966.

Janice says of her work at the school, "Everything I studied has already benefited me and will continue to help me in the future. I think secretarial procedures covered everything that might ever confront me. Why, I passed the Civil Service Test - something I certainly couldn't have done without this training."

On May 8, 1967, Janice began working with the Henry County Welfare Department as a general stenographer. She is pleased and excited over her new position which offers her opportunity for future advancement.

Miss Rhaelea Pankey, instructor in office occupations, believes Janice will do well. "She is an intelligent, good student, who is not afraid of work and I believe she will go places." Janice is determined to live up to this prediction.

"Janice is a leader who helped other students. She had no shorthand when she came to us, but she learned quickly and well," added Mrs. Kathleen Mitchell, who is also an instructor in office occupations. Neither instructor displayed surprise that Janice had passed the Civil Service examination. Mrs. Mitchell commented, "She gained self-confidence as well as knowledge and skills which she can apply."

Thus, opportunity through training provided by the McKenzie Area Vocational-Technical School has opened the door to the future for Janice Hicks. Janice is one of the many to benefit from this school and others like it located across Tennessee.

KENNETH WORK AWARDED

AMERICAN FARMER DEGREE

October 16, 1967 at the 40th Annual National Future Farmers of America Convention in Kansas City, Kenneth Work of Route One, Dickson, was awarded one of the highest honors which the organization can confer on a member - the American Farmer Degree.

Presentation of the degree took place at ceremonies in the Kansas City Municipal Auditorium during the convention afternoon session.

Kenneth received a certificate and gold key from the FFA plus a cash award from the Future Farmers of America Foundation.

To be eligible for an American Farmer Degree, a young man must be out of high school for at least one year and show substantial evidence of becoming successfully established in an agricultural occupation. Demonstration abilities in agriculture, leadership, and scholarship are required.

The theme of the convention is "50 Years of Vocational Agriculture" to commemorate the 50th Anniversary of the signing of the Smith-Hughes Act which established a national program of vocational agriculture education.

Attainment of this award is the results of years of work and study. Kenneth said, "I guess I have really been working for this all of my life."

Kenneth is engaged in farming on the same farm where both he and his father were born. Since his father's death two years ago, Kenneth has had full responsibility of the 200 acre farm.

Growing up on a farm and working with his father helped to develop in Kenneth an interest and a love for farming. His father taught him as he grew and always encouraged his endeavors.

As soon as he was old enough, Kenneth became a 4-H Club member and then enrolled in vocational agriculture as a freshman at Dickson High School

in 1960. As a vocational agriculture student, he then became a member of the Dickson Chapter of the Future Farmers of America.

Receiving the American Farmer Degree signals the end of his FFA days since membership may only be continued three years after high school graduation or until reaching the 21st birthday, whichever comes last. Kenneth graduated in 1964 and is now 21 years old. However, his special interest in the FFA will certainly continue.

Kenneth feels that vocational agriculture and the FFA have taught him many skills and helped him gain much knowledge about better farming methods.

His first agriculture teacher was Kenneth Mitchell who is now State Supervisor of Agriculture Education. Mr. Harold Lineberry was his teacher during his last 3 years in high school. Both of these man have continued to be interested in Kenneth and to give assistance, encouragement, and advice.

In fact, it was at Mr. Mitchell's suggestion and insistence that Kenneth filed his application to enter competition for the American Farmer Degree.

For judging purposes, he was required to have current all records on his farming operations since joining the FFA. Mr. Lineberry supervised his record books, and Mr. Gordon Chipukites, vocational agriculture teacher at Dickson High School, also helped Kenneth with the many other forms which all candidates must complete.

Asked if he did anything "special" or different from his ordinary operations for the degree, Kenneth replied, "I probably kept better record books; but otherwise not much else was different."

A review of Kenneth's record as a FFA member shows his involvement in chapter activities and his participation in numerous contests. He was a member of the lamb judging team, made rope halters in the skills contests, helped produce radio programs, attended State FFA conventions, and showed cattle and hogs at fairs. Once he even took a mule to the Tennessee State Fair Mule Pulling Contest.

"She pulled, but just not hard enough," Kenneth quipped.

He fared better at the cattle and hog shows. "I have won many ribbons. In fact, I never carried a cow to a fair without winning something on her," he stated.

The highlight of his high school FFA days came at the Tennessee FFA convention in Nashville in 1963. He won a State Farmer Degree, a prerequisite for all American Farmer Degree winners.

The number of these awards for each year is based on FFA membership. Two State Farmer Degrees may be given for each 100 FFA members, but only one American Farmer Degree per 1,000 FFA members is allowed.

The limitation of the American Farmer Degree makes for keen competition across the nation. Since 1931 when the Dickson FFA Chapter was chartered,

only two others from Dickson County have received this coveted honor. They are Rex Kimbro and Bobby Duke.

Kenneth, who has never thought of leaving the farm, has a special interest in Angus cattle. He now has 37 Angus in his herd and some feeder calves. The herd helps bring the net worth of his farm to over $33,000.

"I like the farm - rather be there than anywhere else," said Kenneth. "I think I always want to live on the farm."

Even his hobbies do not take him away. He enjoys riding his saddle horse and hunting with his beagle hounds.

Kenneth feels that his vocational agriculture classes in high school were highly beneficial. "Vo-ag gave me new ideas and information that would have taken years to learn just by experience. When I learned something new, my father always was willing to let me try out the new practice to see if it would work. Now my neighbors and I still exchange ideas, many based on what I learned in vo-ag. I think vo-ag really provides knowledge and skills necessary to a good farmer."

In addition to his Angus herd, Kenneth raises some pigs for market and grows hay and corn to feed. He has little leisure time. "I always have some work I need to do - mend fences, repair the barn, or make an improvement on the farm," he said.

Kenneth is not afraid of hard work. "I grew up working hard and it hasn't hurt me. Sure a farmer has a lot of hard work to do; but if you are satisfied with what you are and where you are, it is not hard on you. I am young and able, why should I mind a little work?"

That Kenneth is a personable young man with a healthy sense of humor was evident when he visited his Alma Mater recently. He was greeted by teachers and many of the students, and he spoke warmly and exchanged friendly jests.

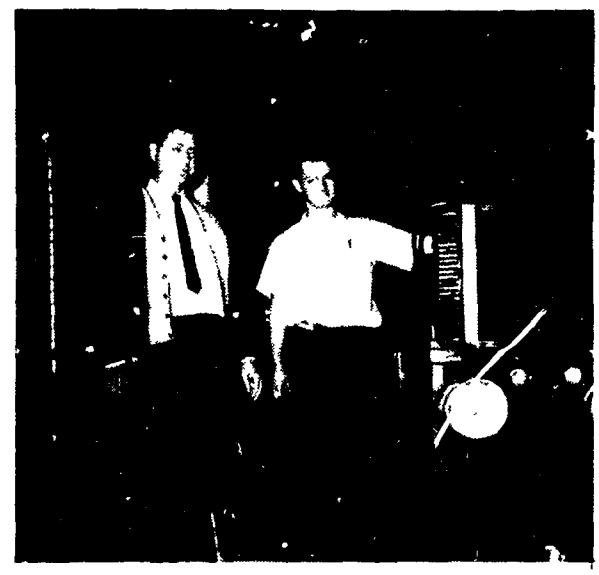
Upon entering the agriculture shop, he eagerly investigated the equipment and asked permission to try out a new machine that bores square holes. In observance of a new Tennessee Law which requires every person in a school shop area to wear eye protective devices, he put on safety glasses and enthusiastically followed operating instructions.

A sign in the agriculture shop proclaimed: A successful farmer knows what to do, how to do, when to do; and he does it! Kenneth Work typifies this maximum. He has learned and he puts his knowledge into daily use.

Vocational agriculture provided the opportunity for Kenneth to develop his individual resources and abilities. His accomplishments have been justly recognized and rewarded.

Congratulations, Mr. American Farmer - Kenneth Work!

DISCOVERIES CONTINUED



No one will dispute that when Columbus discovered America in 1492 he did a great thing. Neither will anyone argue with Mr. Warren Barksdale, auto mechanics instructor, when he says "The McKenzie Area Vocational-Technical School and the others across Tennessee are the greatest things that have happened since Columbus discovered America."

Mr. Barksdale has a very personal reason for his belief. He owned and operated a mechanics shop which he had to sell because he couldn't find qualified mechanics to hire. Now he is instructing a class in Auto Mechanics at the McKenzie Area Vocational-Technical School with a twofold purpose. He is guiding young men as they learn the knowledge and skills necessary for a good mechanic and he is producing qualified men sorely needed by mechanic shops in his area. Two such young men are Jerry Bush and Robert Simmons.

Robert and Jerry share many things in common. Since they are cousins, perhaps this isn't too unusual. Both have the same ambition to be a top-notch mechanic; both have extremely outstanding records at the McKenzie Area Vocational-Technical School in their shop work; both have discovered a new world of opportunities for the future. The most unique fact they share is that neither of them ever missed an hour of training while enrolled in the McKenzie School. This is quite a feat when considered in light of the fact that they drove 50 miles a day to school and worked about 30 hours a week while in school.

Jerry, who learned of the school from the director Mr. Guy Kirk, was one of the first students to enroll. He began his training July 12, 1965. He had graduated from Huntingdon High School in 1962 and worked at various jobs.

His last job before entering the auto mechanics course had been in a bag company. Although he worked hard, he could not provide for himself and his wife as he wanted to do. Now with 1657 hours in auto mechanics, he has a good job and sees a good future ahead of him.

Jerry is a full-time mechanic at the TriCounty Motor Company in McKenzie. That he likes his work is obvious to any one who might observe him. He goes about his work efficiently and capably, never wasting a minute. In fact, he works so intently that he really did not want to be interrupted to answer many questions. While balancing a wheel he told of his feeling about the auto mechanics course he has completed. "That school sure helped me. I am satisfied with myself and my job now and owe it all to what I learned at the school." Then he slid expertly under a car to adjust brake linings.

Mr. Willard Galloway, manager of the service department for TriCounty Motor Company, said of him, "Jerry is first class; he has knowledge and works well. I am very pleased with him and wish we could get another just like him. That school is really doing a service to the entire community. It has certainly provided us with a good worker and a well qualified mechanic."

Robert works at the TriCounty Motor Company while attending school as Jerry did and will be a full time employee when he completes his course. Robert, a high school graduate from Clarksburg, enrolled in the McKenzie Area Vocational-Technical School, September 1, 1965, after learning of the program from his agriculture teacher. He says of the school, "I think it is a real good opportunity for a young person coming out of high school. A person is mighty lucky to get into such a program. Mr. Barksdale is a mighty fine instructor who is interested in helping his students in every way."

Mr. Joe McClure, guidance counselor, helped Robert make arrangements to participate in the work study program while in school. This program helps the student earn money by working while attending school.

Mr. Barksdale, in discussing the young men, had nothing but praise for them. "Both are perfect students who are co-operative and never a problem. There is nothing bad about either of them. Their character is beyond reproach and they are well qualified as mechanics."

Columbus proved his dreams a reality. The magnitude of his reality is being re-discovered by students across Tennessee who are finding their new worlds with the assistance of Area Vocational-Technical Schools.

FROM MULE TO MACHINIST

Changing from a mule to a machinist seems quite an impossible metamorphosis. Even more remarkable is the fact that the metamorphosis will not be completed until the mule is a tool design engineer. This feat does not seem in the least impossible to Donald Dennis McGuire, a drafting student at the Newbern Area Vocational-Technical School.

Donald was forced by financial and family problems to drop out of Dyersburg High School in the beginning of the ninth grade. Before that he had attended grammar school at Cloverdale, Union Vale, and other schools. Just where he really doesn't remember since his family moved eleven times in thirteen years. His school attendance record was excellent just as was his attitude toward school. Donald says his favorite subjects were spelling and math. "I didn't just love it (school), but I did make good grades. If I do anything, I like to do a good job - not just half way." This attitude is still prevalent and seems to be the key to Donald's success.

After leaving school, Donald worked at all sorts of odd jobs including farming and timber work. At 18, he joined the Army. In the Army, he also had a good record. He was sent through NCO School and proudly tells of receiving a letter of achievement from a general commending his ability as a squad leader during manuevers. It was while in the Army, Donald relates, that he really got to thinking about his life and what he wanted to do with it.

"I was made fun of for not having a high school diploma. That hurt, so I decided to do something," Donald stated. Do something he did, and he is still doing. His first step was taking and passing the GED test which meant gaining an equivalent high school diploma which is accepted by schools and industry.

When Donald came out of the Army, he had no trade or skill and found work hard to find. He went to work in a factory. "I was just a mule," he said seriously, "All I did was handle material - hard lifting, pushing, and straining. After 8 years I was making a top of $1.67 per hour and had no room for advancement. I would have left two years before I did, but what else could a mule do?"

Then Donald heard about the Newbern Area Vocational-Technical School and enrolled on September 27, 1965. He had been out of school for ten years and the school was the opportunity he had been waiting for. "If they can teach, I can learn. I just set my head to do it," Donald affirmed.

Enrolling in school meant he had to give up a day job and work nights so that he could come to school. Donald didn't mind the sacrifice, but others were involved. On September 15, 1961, he had married May Angela; their

first child, Austin, had been born in 1965. How did the new school-work arrangement affect the family?

"Well," Donald said confidently, "My wife feels the same way I do. She has a lot to put up with and does a lot of extra work. But she wants me to come to school. She is behind me. I don't know how I could make it if she wasn't."

Upon entering the Newbern Area Vocational-Technical School, Donald talked with Russell Devore, the director, and Jack Thompson, Jr., the guidance counselor. Then he enrolled in the Machine Shop "because I had heard tool and die was good money." He stayed in this shop, taught by Richard Culbreath, for ten months before transferring to engineering drafting. "I saw how blueprints were related to machine shop and I wanted to do the drafting, too."

Mr. Culbreath said of Donald, "He always wanted to study. If the class got a little noisy, Donald would look up at me. I knew the noise bothered him. He wanted to learn and did. He tells me now that he hopes to come back to machine shop a while before he leaves the school to polish what he has learned. He always wants to get all he can. Why, he was offered a day shift job at good pay increase but refused it to stay in school until he feels really qualified. Even now his take-home pay is twice what it was in the factory."

Asked about what he thinks of Donald's chances in the future, Mr. Culbreath immediately replied, "His opportunities are unlimited."

In the Machine Shop Donald has learned to make parts and tools from metal. He wanted to go to the drafting class to learn to make the designs and blueprints from which a machinist works.

The Engineering Drafting class required a knowledge of math, machine processes, and materials. The instructor, Walter Kirchheim, said, "In Engineering Drafting my boys learn what machines and materials are used and how to make drawings and understand how the drawing will function."

How does a boy with less than a ninth grade math background master the math necessary for engineering drafting? "Well," answered Donald, "Mr. Kirchheim teaches us the trig and calculus we need to know in class. I take my book home and work out a lot on my own - sometimes just for fun." Then he displayed a seventeen step problem he had just completed to find one of the many exact measurements for a blueprint.

Over the board in the drafting room is a slogan, "The beginning of wisdom is to call things by their right name." In conversation with Donald, it quickly becomes evident that he is on the road to wisdom in engineering drafting. His discussion of his portfolio of drawings is in the technical language of his trade. These words are not thrown about casually; Donald understands

the words as well as his drawings. "I can draw a part and know how to make it," he said assuredly.

Mr. Kirchheim said of Donald, "He is an outstanding student and has made wonderful progress. He has spent approximately 800 hours in training. When he finishes the two year course, he will have unlimited opportunities. He will be a leader in his field. With a few years of experience behind him, he can move ahead by leaps and bounds. He is creative - an idea man - as well as a machinist and an engineering draftsman. Ultimately, he will be a tool designer of excellence."

Both Mr. Culbreath and Mr. Kirchheim were sincere in the interest and pride they evidence in Donald as well as in their other students. These men are skilled craftsmen who are respected and appreciated by Donald and his classmates.

Donald has only missed three days since he enrolled in the Newbern Area Vocational-Technical School. One day the roads were covered with ice, and two days he stayed home to tend his son when his daughter, Carla, was born. Donald says he is "healthy as a horse". He would have to be to withstand his rigorous schedule. He is usually up at 4:00 a.m. or 5:00 a.m. to do what he can around his farm. This means tending the livestock and doing some cultivating. What he doesn't have time to do then or on Saturday is done by his wife. The farm includes two acres of pecan trees, some fruit trees, and a family garden. Donald leaves for school at 7:00 a.m. and returns home about 1:30 a.m. The hours between are occupied by school from 7:30 a.m. to 3:00 p.m.; at 3:30 p.m. he goes to work at a local factory in Dyersburg where he is a machinist. He leaves work around 1:00 a.m. Plant officials already have their eyes on Donald for a design engineer.

He got the job at the local plant about six weeks ago. Before that, he was still working at night at the factory. "Mr. Devore called and set up the interview for the job," Donald said, carefully avoiding too much emphasis on his own ability, "However, they, (plant officials) wouldn't have looked at a man without training."

Of the job, he said, "It is a good job with good opportunities. The work is interesting and different every day. I make whatever the print calls for from a piece of metal. I may have to use 3 to 5 machines on one part. This is the best opportunity I have ever had to get some good experience. All the people I work with are friendly and nice and try to help in anyway they can."

Donald smiled often as we talked and when he smiled, his deep brown eyes lit up with the glow of self-reliance. He told of having a chance to go to Lockheed in Marietta, Georgia. "I hated to pull out of school until I get what I need. Too many people here have helped me for me to let them down and go out half trained to stay a mule."

Donald, his wife, and their two children own the six acre farm where they live. It is located about fourteen miles from the school in the Nauvoo Community north of Dyersburg. He commutes in a car pool.

"The farm," inserted Donald, "is only a beginning. I hope I can always live on a farm, but I'd like to have a bigger one when I can afford it and some help. I would like to have another Tennessee Walking horse. I used to have one, but I had to sell it when I came to school." This was not said with regret, for Donald believes anything he has had to do in order to come to school is well worth it.

Donald said of the school, "I think it's good. It helps a lot of people like me who didn't have a chance. I didn't quit school on my own - I had to. The instructors here really want to help. They have all had a lot of experience and know what a man has to learn. Without this school, I wouldn't have had a chance to be anything but a mule the rest of my life." Emotion showed in his voice and in his eyes as he spoke of the opportunities he knows are his in the future. The emotion is a mixture of appreciation, pride, and humility.

When asked what he wants for himself and his family, Donald displayed a deep understanding of the real values in life that far exceeds his 27 years. "First, I want to be with my family and make things easy for them as I can. That little boy likes livestock. I want to spend more time with him - take him fishing and work with him. I want my children to grow up close to nature. The air seems fresher and better. I just want my family to have everything I can give them. No, I don't want my wife to go on working like she has to do now. I want her to have time to spend with the children, too. I would like my children to get as much education as they can and want. I know what it is to try to work without an education of some kind. All I ever had a chance to do when I was growing up was to work all the time. I want my children to have things different. I never had much help when I was growing up; I want to give them help about everything I can."

Donald McGuire is one of the many who will make a new life for himself as a result of the knowledge and skills he has gained at one of Tennessee's Area Vocational-Technical Schools. He will use his newly acquired skills and he will not misplace the confidence and faith his instructors have placed in him. Neither will he ever forget, when he becomes a design engineer, that he was once a mule who was determined not to remain one!

Donald has received a promotion since this was written. He is now working in the same plant, but as a draftsman. He has finished his course here and is now working full time. He was a very happy person when he left and came by and thanked everyone personally for their help.

JANICE FOUND OPPORTUNITY

THROUGH TRAINING

Miss Janice Barksdale was issued a certificate of training which included 1055 hours in office occupations on April 21, 1967, from the State Area Vocational-Technical School, McKenzie, Tennessee. On April 24, 1967, she was employed as a senior stenographer by the State of Tennessee.

Janice, a graduate of McKenzie High School, is not only an efficient secretary, but also a very appreciative young lady. She feels very definitely that what she learned at the McKenzie School is directly responsible for the opportunity which is now hers.

In high school, she was an active student. She made good grades but found time to participate in numerous school activities and clubs, such as the Beta Club, the Science Club, the Pep Club, and the Future Homemakers of America.

Her father, Warren Barksdale, instructor in auto mechanics at the McKenzie Area Vocational-Technical School, knew that the school offered his daughter the training she desired in office occupations. Although her parents "thought the school would be a good opportunity," they left the decision up to Janice.

After investigating the school for herself, Janice enrolled June 24, 1966, in the office occupations course taught by Mrs. Kathleen Mitchell.

At the school, Janice participated in the work study program which makes jobs available to students while in school. Janice was night secretary for the school, a job which allowed her experience in her chosen field.

"I enjoyed the school and my job and got a lot out of both," stated Janice. "Mrs. Mitchell had the program set up so that we worked on our own and had individual instruction and help. I particularly liked this. We could do our best in a very business-like class situation. She made conditions as much

like real work situations as possible so we could gain as much varied experience as possible."

Janice did well as Mrs. Mitchell affirmed, "Her grades were above average. She spent extra time after school hours doing typing and work for the instructors in addition to serving as secretary to the Assistant Director during the night classes. From this, she gained valuable experience in secretarial training."

As her abilities increased, so did her self-confidence. "Janice progressed rapidly and did not require close supervision in her work," said Mrs. Mitchell.

Dr. Jack Mays, Director of Guidance and Pupil Testing for the Tennessee Department of Education, needed a capable secretary. He called Mrs. Mitchell and asked if she had a student to recommend. As a result, Janice was interviewed, tested, and offered the job.

The duties she accepted are many and varied. They include doing research into facts and figures which come into the office, taking shorthand, typing, and performing general secretarial functions.

"I really like my job!" Janice injected enthusiastically. "I like the working conditions, the people I work with, and the type of work I do."

Perhaps she is happy in her job because she was prepared for it. She gives credit to the school for this, "The training at the school had taught me to work under different conditions and helped me to adjust to the unfamiliar routine of the office."

Dr. Mays has found Janice to fulfill his expectations. "I am pleased with Janice and the work she has done. Her work and skill indicate that the training she had at the McKenzie Area Vocational-Technical School was quite valuable."

Janice has not quit learning and has no intention of ending her educational pursuits, "It never hurts to increase education and to improve ourselves. Trends change and we need to keep up."

She has received some IBM training as a part of her job and is also working on advancing to the position of principal stenographer.

"My job would have been impossible for me without the advanced training I had at the McKenzie Area Vocational-Technical School," answered Janice when asked if her training had helped her be able to get this job. "The area school was certainly the answer for me after I graduated from high school."

Janice is eager to tell others of the opportunities through training which are available, "I would encourage all students to decide what they want to do and then to look into what is offered in the area schools; if they don't do this, they may be overlooking their real chance at success. Once they find their goal and work for it, rewards will come in the long run. I've certainly found that out!"

With her education, attitude, and hard work to her credit, Janice Barksdale will undoubtedly find her rewards continuing and increasing.

AMBITION REALIZED

"Ever since I was a very little girl I wanted to come to Nashville and be a secretary," she reminisced.

Childhood ambitions often change many times and seldom envision the means to achieve what is desired.

For Karen Gooch, a childhood ambition is now a reality and she is well aware of how it came to be.

Karen graduated from Huntingdon High School in 1965 and began searching for a business school to attend. Before graduation her high school counselor had told her about a course in office occupations offered at the McKenzie Area Vocational-Technical School.

After looking into possibilities, Karen decided this would be the school to attend. "My parents," said Karen, "Were all for my choice."

On August 2, 1965, Karen became a student at the McKenzie Area Vocational-Technical School. She wanted to learn all she could about being a secretary and especially wanted to improve her shorthand and typing skill which she had begun to develop in high school.

"I am so glad I went," commented Karen. "I couldn't have gotten any more from any other school, and I would have had to pay to attend any other place. Not only did I get the best in instruction at the area school, but I got it free!"

Karen left the school on March 30, 1966, with a certificate of training which showed 959 hours in office occupations.

Her instructor, Mrs. Kathleen Mitchell, said, "Karen previously had some business subjects in high school. She became one of our highest ranking students and made such excellent progress that she completed the course in a little less time than is set up for it."

Karen, a poised and reserved young lady, demonstrated her ability to accept responsibility while still in school. Mrs. Mitchell was out of school for approximately three weeks due to illness. In her absence, Karen was asked to take over the class. Karen modestly gave her classmates credit for her success as a substitute teacher, "The girls were just wonderful! We were almost like sisters who enjoyed working together to improve our skills."

After finishing the course, Karen learned from her cousin of an opening for a secretary in Nashville. She made application, was interviewed, and took the Civil Service Examination. "I doubt that I could have passed that test without the knowledge I gained at the area school," said Karen.

But pass she did. In April, 1966, she went to work as a secretary in Nashville - a realization of her unchanging childhood ambition.

Karen, who has reached the position of principal stenographer, is secretary for Mr. Lionel L. Owen, Chief of Industrial Services for Tennessee Employment Security.

Mr. Owen explained, "Ours is a technical section with functional responsibility for the technical supervision of several Employment Service functions: employer relations, occupational analysis, industrial services, test research and testing operations. In addition, secondary and one-time responsibilities may be involved. Providing technical supervision of these functions toward the achievement of the mission of Employment Service in its expanded role as a job market intermediary with additional responsibilities for the development and utilization of manpower involves contact with local employment office personnel across Tennessee, unions, employers, and community leaders. These contacts involve visits, letters, and telephone calls. Visitors to our office must be received and given assistance. The comprehensiveness of the responsibilities assigned the section requires Karen's understanding of the organization and mission of the Department."

Karen finds her job a challenge which she enjoys, "I like my job because it is something different everyday. I constantly use what I learned at school.

Mrs. Mitchell gave me so much individual instruction that I can recall now when needed, and very often I use that as a foundation to learn more on the job."

"Karen is doing very well and has a pleasant disposition in addition to being efficient in her work. She has a good attitude toward her work and will work until a job is done properly," added Mr. Owen.

Karen Gooch is no longer a child, obviously. She is a nineteen year old who has achieved a goal set long ago, a goal which she believes was reached with knowledge and skills acquired at the McKenzie Area Vocational-Technical School.

Mr. Owen said, "She is reliable, competent, industrious, and exhibits a good sense of security due to her ability to perform her duties."

Certainly this evaluation of Karen shows that she has realized her ambition as well as developed her potential.

As childhood dreams implant hopes and plans which grow in the minds of youth across Tennessee, Vocational-Technical Education will continue to provide programs of instruction through which ambitions will be realized.

JEAN MADE A DECISION

Jean Shull has made a decision. The complexities involved in that decision encompass Jean's twenty-six years and reflect her determination to help herself rather than accept a monthly welfare check.

Jean dropped out of West End High School in Fayetteville, Tennessee, in the ninth grade. Although she had a good attendance record and passing grades, nothing particularly appealed to her at the time and she quit school simply because, "I just didn't want to go to school."

Life for the next few years was bleak. An uneducated young Negro girl could find little work. At fourteen she began doing domestic work and shifted from job to job. Her work record shows that she was never fired or asked to leave a job although she left jobs in hopes of finding another which would pay more. These hopes never became realities.

Jean married, had five children, and was divorced. This meant five added responsibilities which must be fed and clothed. She found work as a maid

in the dietary department of a hospital, as a cook in a restaurant, and as a cook in a convalescent home. Her highest salary of $170 per month simply couldn't be stretched to cover the needs of her family. In desperation, she turned to the Welfare Department for a monthly income supplement.

Jean's qualities of honesty and diligence have never been subdued by circumstances. Her desire to be better able to care for her family coupled with her patience led her to search out some way to become self-supporting.

Jean turned to a practical nurse training program offered by the Lincoln County Hospital in conjunction with the Tennessee Department of Vocational-Technical Education. This program offered her the opportunity for a career as a practical nurse.

Jean enrolled in the 13 month program in May, 1966. Although she has had a hard time finding a baby sitter and has had very little encouragement, she is doing well in the program.

Her instructor, Margaret Salter said of her, "Jean has been one of my better students in spite of having more obstacles than any other student I can remember. As a high school drop-out, she was admitted to the class after taking the GED exam. She is competing with others who have far more educational background than she; yet, she has remained in the upper grade limit of her class and always does her share of the work."

Going to school and being both father and mother to five children occupy most of Jean's life. Still, she has found time to work part-time as a short order cook to help the family income. It is indeed remarkable that she has been able to do all this and maintain good grades, a good attendance record, and an unbroken spirit.

Mrs. Salter remarked, "This girl has been such a good student that when a vacancy came about in the surgical department, she was asked to spend her elective period in there preparing for a possible position as a scrub nurse. She is now working in that department and is doing a good job. Her chances of having the job when she is graduated are excellent."

Jean has no other interests outside her children and her education. She has no time for any other interests, but she does have a brighter outlook on life now. She feels she is spending her time beneficially and is equipping herself to give her five children a much better chance than she ever had.

For her children, Jean wants some of the things that she has found meaningful - security, honesty, religion, respect, and common sense. They will have Jean's love and understanding to guide them toward these values.

Jean's life could have continued as it was going before she entered practical nurse training. She could have found odd jobs and made a few dollars a week. She could have continued to receive a monthly welfare

check; but Jean made a decision - a decision to help herself!

Jean is taking full advantage of opportunities offered by Vocational-Technical Education. The practical nurse training program is thus serving two purposes: Jean Shull is gaining knowledge and skills by which she can support her family and the Lincoln County Hospital is gaining a well-trained, dedicated practical nurse.

BEYOND WILDEST DREAMS

Donald Leroy Hodge is a very quiet, clean-cut, eighteen year old student at Boones Creek High School. His intent eyes miss little, and when he speaks, he has carefully calculated his thoughts and his listener. The Watauga Flats Community, a few miles outside Johnson City, Tennessee, has been his home; but soon he will venture to many parts of this country. The Northwestern Construction Company of Chamblee, Georgia, will be his employer and Donald will go where the company goes in its business.

"Never in my wildest dreams did I think I would have this opportunity," Donald stated. This opportunity has been made possible as a result of Donald's participation in the Co-op Program begun this year at Boones Creek High School. The program, a cooperative one between the school and the business or industrial establishments in the community, allows students in the program to attend the regular school part of the day and work on a job

ERIC

in the community part of the day under the supervision of the school. Thus, work experience is obtained on a real job for which the school gives high school credit on the same basis as if it had been obtained in a school shop. The school, in turn, gives related instruction to students in the program for which high school credit is also given. This related instruction is based specifically on the occupation in which the student is working. Other courses in high school, required or elective, are taken to complete the student's load in regard to high school units required for a high school diploma. The program is not designed to train mere mechanics, machine tenders or machine operators, the knowledge of which may be learned in a few hours; but it is designed to give work experience on all the machines, processes and departments of the occupations. Clifton L. Clark, Jr., Co-op Coordinator, is responsible for the related instruction and the supervision of working students at Boones Creek High School.

Before becoming a co-op student, Donald's only other work experience had been helping his father on the family farm where they raise dairy cattle and tobacco. "My parents always told me I was too lazy to farm," Donald quipped, but he has been anything but lazy on his construction jobs.

Donald has never really been a problem at school. In fact, he proudly related, "I have never been in the principal's office for doing anything wrong and I have never skipped a class when I have been at school." Donald continued, "I didn't used to like school, but I do now! When I was a freshman and didn't know any better I liked to lay out and didn't like to come to school."

His favorite subjects have been woodworking, biology, agriculture, and "of course, this co-op class." He learned about the co-op class last fall when Mr. Clark made a talk to one of his other classes. Asked if he had any problem enrolling, Donald replied, "No, Mr. Clark believed in me. All I had to do was get my parents to O.K. it. That was no problem; I just had to tell them the facts."

There was no hesitation when Donald told what he liked about the co-op program, "Being able to get a job and make a career and a future for myself! I've gained a job and a good employer. I'd tell another student to get in co-op if they really want to work in and out of class." The work involved in the co-op program doesn't bother Donald at all. "I enjoy it," he said. "I have been going through things I didn't know and learning something I can see a use in. I have done a course in blue print reading and carpentry that I know will help me in the future."

The past few years have given Donald a better understanding of himself and other young people that he was eager to divulge, "I should have worked harder three years ago. I try to help my younger brother now who is as hard-

headed as I was. I can listen now when I didn't used to. I used to think people couldn't tell me anything - thought I was smarter."

Since enrolling in the co-op program in October, Donald hasn't been without a job and has always made over the minimum wage. The job waiting for him when school is out is again, "Beyond my wildest dreams." In addition to an excellent beginning wage, he will enjoy numerous company benefits. This, however, was not the only offer he had. Mr. Clark said, "Four other companies wanted Donald to work for them."

"Donald will work directly as an assistant to the foreman of a construction job. He will take all complaints, see that the job is finished - be a jack-of-all-trades." Mr. Clark explained, "He will be the only man besides the foreman who can read a blue print. This and other job experience is why he got the job."

When asked if he could handle such a responsibility, Donald looked momentarily at Mr. Clark who nodded and answered confidently, "Yes. Thanks to this program, I can handle the job."

Mr. Clark went on to discuss Donald's past achievements in his class and his future, "He has a very good personality and his chances for the future are excellent because he will apply what he has learned. This program has equipped Donald to be able to have the chance to better himself. Opportunities presented for employment have opened all doors for him. He is qualified and wasn't before."

In speaking of the outstanding character of this boy, Mr. Clark detailed an occurrence when Donald could have easily collected from a company for a back injury. Donald, not fully convinced that his duties had caused the injury, would not take additional compensation even when his foreman insisted - neither did he miss a day's work. "If asked a question, he'd tell you the truth as he believed it, if it killed him," Mr. Clark added.

This fall, dreams Donald never dared to entertain will begin to take the shape of realities. The Co-op Program at Boones Creek High School has made this possible for him just as similar programs across Tennessee are making dreams come true for other young people.

FAITH AND DETERMINATION LEAD TO SUCCESS

An opportunity to study in the electronics field seemed impossible for Abie Shipes, Jr. That is until December, 1964, when he read in his local newspaper, *The Greeneville Daily Sun,* that the local employment security office was asking for persons interested in studying Radio-TV repair to make application at their office. Upon investigation, Abie found that a class was to be instigated at the Greeneville Technical-Vocational School to train people to become radio-television repairmen. The program was made possible by provisions of the Manpower Development Training Act. "This was for me," said Abie. "I had always wanted to enroll in an electronics course, but I was never able to afford it."

Abie has a remarkable desire and determination to succeed in whatever he undertakes. Being from a family of eleven brothers and sisters, he learned early, "money is not everything - one must have a desire to strengthen himself."

Although Abie's parents were always interested in their children, it was very difficult for his father to provide the necessary funds for educating his children from the wages he received from his work with the City of Greeneville. The parents did encourage their children to strive for success in whatever field of work they desired. "They wanted for me whatever I wanted," Abie remarked.

School was an enjoyable adventure for Abie and he particularly liked mathematics and science. The record he attained at George Clem High School was above average.

After high school graduation in 1951, Abie worked at various jobs trying to decide upon one that he really enjoyed and one that offered financial security. He wanted to study electronics; but due to his financial circumstances, he could not see how this could ever become a reality. Although he could see no way to pursue his education, his desire never dimmed. He had faith that someday his opportunity would come.

In January, 1953, Abie was married. Three months later he decided to enter the U.S. Army where he served honorably for two years. His wife, Shirley Ann, stayed home and worked as a health aide at a local hospital. During this period of duty with the Army, Abie came to realize the importance of each individual having a personal philosophy. "Every individual," he affirmed, "has the necessity to have an outlet to better himself; and once this outlet is provided, the individual has to prove to himself and to others that he can succeed. Regardless of a person's social standing, the ability to succeed and to work with others is a matter of individual concern. Anyone

can get along with others if he so desires. With faith and determination many seemingly impossible things can become possible."

After leaving the Army in 1955, Abie returned to Greeneville where he again worked at various jobs and continued to search for some way to be able to attend a school of electronics. Since Shirley Ann now had to care for their small child, it was more difficult for her to work in order to help finance more education for her husband. Things looked bleak; but Abie found it possible to enter a school of cosmetology in Louisville, Kentucky. He enrolled in the school and received his license to practice cosmetology in Kentucky. Not caring for the idea of being separated from his family, he returned to Greeneville still hoping to find some way to enter a school of electronics.

A few months after returning from Louisville, Abie was informed that he could enroll in an electronics course there. With only the price of a bus ticket, Abie returned to Louisville to enroll. To his disappointment, he found that the class was closed when he arrived. Even this did not cause Abie to lose his faith and determination.

He obtained a job as a kitchen helper in order to survive until he could find a better job. After several weeks, he obtained a position as an agent for an insurance company in Louisville. He worked with this company for five years but spent much of his time and money traveling from Louisville to Greeneville to be with his family. His family had increased to four children and Abie had grown tired of being away from home. In 1964 he returned to Greeneville with little but his desire to study electronics.

"The opportunity I had been seeking finally arrived in December, 1964, when I was enrolled in the MDT radio-television course," Abie said. Almost immediately his personal philosophy, faith, and determination became evident to his fellow students, instructors, and supervisors. Abie made every opportunity count and learned eagerly. Quite often he was the first and last student in school.

The way was not easy; however, for during part of the time he was in school, his wife was hospitalized. Rather than becoming discouraged, Abie worked even harder to excell in the electronics course and to meet his children's needs.

Abie's progress and attendance at the Greeneville Technical-Vocational School were both very satisfactory. Even though he insisted that he must have Wednesday nights off from class to attend church he made up for all lost class time by putting in extra time and effort on other days.

Mr. Harry Lewis, electronics instructor, set up a test session for all members of the graduating class with the Magnavox Company of Tennessee.

This test, which is now a custom of the school, is to determine whether or not the graduates are capable of meriting a job as a first class television repairman with the Magnavox Company. Abie's score on this test was one of the highest ever recorded.

The Magnavox Company called Abie for an interview. The company personnel were favorably impressed with Abie's appearance, attitude, and knowledge of electronics. After completing the nine months course and graduating in September, 1964, Abie immediately went to work with the Magnavox Company of Tennessee.

Abie has now moved from his job as a first class repairman to a better salaried position in quality control. His ambition is "to go as far as my talents will permit and to provide for my wife and six children as best I can."

As Abie reflected over the opportunity the Greeneville Technical-Vocational School, the Manpower Program, and the Magnavox Company of Tennessee brought to him, he commented, "I don't know where I'd be today if it were not for the school and the Magnavox Company. I cannot offer enough thanks for such an opportunity. I only hope that others will benefit as I have."

Everyone may not have the same steady faith and undying determination of Abie Shipes, Jr., but anyone who wishes may share his opportunity through training provided by the Tennessee Division of Vocational-Technical Education.

VOCATIONAL-TECHNICAL EDUCATION

BRINGS SUCCESS

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- Genell Hummel – Celina
  Charles Milton Thomas – Cookeville
  George E. Long – Pall Mall
- Alice Reynolds – McKenzie
- Elizabeth Jo Oliphant – Dickson
- Lovanna Spivey – Ripley
- Bobby Tarwater – Greenback
- Thomas Martin – Nashville
- Jesse Parrish – Nashville
- Ralph Milsap – Knoxville
- Marguarite Smith – Nashville
- Donald S. Orrell – Chattanooga
- Dorothy Fussell – Dickson
- Gary Brake – McEwen
- Eugene Sweatt – Rock Springs
- Virginia Wallace – Pikeville
- Jim Miller – Nashville

VOCATIONAL-TECHNICAL EDUCATION BRINGS SUCCESS TO THESE TENNESSEANS

VOLUME II

PREFACE

Vocational-Technical Education is a program for people. Providing people with the technical knowledge and precision skills which enable them to become productive citizens is a paramount and constant objective. The success achieved by those who have received vocational-technical education is one method to evaluate the effectiveness of the programs.

This second collection of success stories written or edited by Mrs. Jo Ann Schmidt, Supervisor of Vocational Curriculum Development, Division of Vocational-Technical Education, is offered as continued evidence that our programs are meaningful to individuals and to the entire economy of Tennessee.

Individual stories of success emerge almost daily in untold numbers as people complete some phase of vocational-technical education and enter into gainful employment. This is by no means a terminal evaluation. Further collections of success stories will be published to provide documentation that our programs are important and essential in Tennessee's educational system and that the programs do indeed provide our citizens with "the bridge between man and his work."

Charlie M. Dunn, Assistant Commissioner
for Vocational-Technical Education

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LIVINGSTON AVTS – AN ANSWER AND AN OPPORTUNITY

Genell Hummel, valedictorian of her high school graduating class; Charles Milton Thomas, high school football star; George E. Long, victim of an accident which confined him to a wheel chair - each has found a way to meet one of the most serious needs they will ever confront.

Each possesses youth, intelligence, and ambition - raw resources to refine for later rewards. What, then, could they need?

They need the knowledge, abilities, and skills which would enable them to function effectively in the world of work.

Where could they find a catalyst to change their raw resources into tempered competencies? They found that the Livingston Area Vocational-Technical School offered both an answer and an opportunity.

They could enroll as full-time students and prepare for an occupation selected in light of their individual interests and aptitudes. What then?

Genell has been efficiently pursuing her new career for about three months now. She is the secretary of the Livingston Area Vocational-Technical School.

Even before graduating as valedictorian of Celina High School in May, 1966, Genell had decided that office occupations would be a good field for her to enter. She found that this course was offered at the Livingston Area Vocational-Technical School and sent in her enrollment application.

After being accepted, she began the course which usually requires two years for completion. Ten months later she was offered the job of school secretary.

Maxine Frasier, office occupations instructor, stated, "Genell came to us with a head start. She had many skills and she learned new ones quickly.

I was immediately impressed with her unusually good grammar and her ability to profit by every educational opportunity extended to her."

Mrs. Frasier continued, "She did well in every assignment, but especially well in shorthand."

Genell uses her shorthand skill daily and is striving to increase her speed which is about 120 words per minute.

When asked about Genell's limitations, Mrs. Frasier responded, "She can do anything she wants - there is no limit. In addition to this, she has a good personality and good judgment."

Although she had no previous work experience, Genell is succeeding on her first job. Mr. Enloe Speck, superintendent of the Livingston Area Vocational-Technical School, reported, "She is very conscientious and does every job well. Her knowledge of grammar and math complement her secretarial skills and enable her to do any task in our office."

Genell is quick to express her opinion of the school, "I learned so much - to have more confidence in myself, to develop my skills and abilities, and to work on all kinds of business machines. I liked the way we worked on our own and had individual attention from Mrs. Frasier. This taught me to rely on myself and to accept responsibility for my own work."

Yes, the Livingston Area Vocational-Technical School offered an answer and an opportunity to Genell Hummel.

Milton Thomas, 19-year-old machine shop student from Cookeville, was a football star at Baxter High School where he also maintained a good scholastic record. He heard about the Livingston Area Vocational-Technical School from Mr. Sam Buttram, assistant superintendent of the school. Before coming to this position, Mr. Buttram had been Milt's shop instructor

in high school so he well knew the abilities and interests of his former student.

Milt said, "I took a trade and industrial class in high school and this started my interest in machine shop."

After graduation from high school, Milt had many choices, "My father offered to send me anywhere I wanted to go to school, but he was enthusiastic about my decision to come here. He is a plant superintendent for a large manufacturing firm in Cookeville and is in a position to see the importance of learning about machine work."

Milt's goal is to be a tool and die maker. To gain some work experience while attending school, he works nights at a company in Cookeville.

When the machine shop was opened in October, 1966, Milt was one of the first students to enroll. His action was based on self-evaluation as he explained, "I have ability to work with tools and machines and am more interested in this than anything else. I like to study and can do the shop math if I apply myself."

"I have found my class interesting and the time goes quickly," said Milt who has about eight more months in his course. "There is always something different to learn every minute and I like everything we do."

Ray Beatty, machine shop instructor, cited the potential of his student, "Milt is a fine boy with common sense and a good attitude. He has a great future in the mechanical line and has the ability to go as far as he wants."

Milt can already see a brighter future. "No doubt about it," he expressed, "my chances for the future have to be better because I have learned much here and I will continue to learn for eight more months."

Yes, the Livingston Area Vocational-Technical School offered an answer and an opportunity to Charles Milton Thomas.

A freak accident drastically effected the life of George E. Long. He was a prospective basketball star who enjoyed school and had no particular plans for his future.

Late one afternoon in October, 1962, George and two other boys were hitchhiking a ride into Jamestown. After being picked up by a stranger, the boys rode into town. George chose to go on farther than the other two boys.

Near the edge of town, a Tennessee Highway Patrol roadblock stopped the car for a routine check. The officers discovered that the driver was an escapee from an Indiana jail. This discovery sparked a gun battle.

During the melee and confusion, George somehow was struck in the spine by a bullet.

"It all happened so fast that I really don't remember just what happened or know where the bullet came from," he stated.

After spending three months in Fort Sanders Hospital in Knoxville and seven months in the East Tennessee Children's Hospital, George returned to his home near Pall Mall.

The bullet had so damaged his spine that he must spend his life in a wheel chair. With a remarkable attitude, George accepted his fate.

"A fellow has to take life as it comes - that's about all he can do." George went on, "No one wants to be in a wheel chair, but you just have to make the best of what you can."

With the help of a home-bound teacher, George completed his high school work and received his diploma.

"I can't get around every place and this has changed many things," said George. It certainly meant he must find a future other than working on the farm where he and his family lived.

The Livingston Area Vocational-Technical School came to his attention through a Vocational Rehabilitation counselor.

"Right away I was interested," George replied. "I had taken one year of mechanical drawing in high school and I liked it."

So on February 13, 1967, - the first day an instructor was hired for the drafting course - George enrolled.

Ignoring his handicap, George has done well. His instructor Wendell Ligon explained, "George is a good student who tries hard and has a lot of ability. He constantly works to improve and doesn't waste any time at all."

"His work is neat and he is particularily good in mechanical drawing," stated Mr. Ligon.

No special arrangements have been made for George who wheels around with amazing ease. Never complaining, he said, "I get along pretty good. The only difficulty is that big drawings are hard to reach, but I can manage. After all, I want to make my own way and don't want anyone waiting on me if I can help it."

Mr. Ligon responded, "George is an inspiration to his classmates and a real help to me. If I am asked a question while busy with another student, George will wheel across the room to help."

George has recently demonstrated his ability on two school projects. He drew plans for a storage room which will soon be constructed and drew a cover for a school catalog. The cover features seven gears which are drawn with such precision that they could be produced in a machine shop.

He has completed almost one thousand of the 1950 hours required in the drafting class and is quite optimistic about his future. He said, "I enjoy school and I am learning something to help me get a good job. After I finish here, I plan to get a good job as a draftsman."

Mr. Ligon is confident George will do just this. He stated, "George is well on his way toward being an excellent draftsman. His handicap will not prevent his getting a good job or doing well on the job."

Yes, the Livingston Area Vocational-Technical School offered an answer and an opportunity for George Long.

In a similar manner, answers and opportunities are available to every Tennessean. Other Area Vocational-Technical Schools, located across the State, place facilities within thirty miles of each citizen.

PRETTY IS AND PRETTY DOES

Pretty, indeed, is Alice Reynolds, 19-year-old drafting student at the McKenzie Area Vocational-Technical School. Alice, who has won several beauty contests, is well on her way to winning a secure future for herself in the drafting field.

Being the only girl in her class doesn't bother Alice at all. In fact, she feels right at home since her family includes seven brothers. "My brothers and my parents are happy that I came here and chose drafting," Alice said with her bright eyes sparkling. "They just want me to do whatever I can and whatever I am happiest doing. Of course, my brothers have teased me some. They have even asked when I plan to enlist in the Army, but deep down I know they are pleased."

After graduating from McKenzie High School in 1965, Alice related that

she spent some time "just roaming around trying to find what I wanted to do. I changed jobs many times, trying to find what I wanted. I never found a job that offered me much opportunity for a future. I decided that wasn't for me. I wanted and needed some specialized training."

How did such a vivacious young lady select drafting? "Well," Alice explained, "I liked math - geometry, especially. I had considered entering college and taking engineering. I came to the school two or three times to inquire before I decided to come. Some of my brothers came with me to investigate the possibilities here. Finally, I got on a waiting list and was called to come in."

Alice enrolled in the McKenzie Area Vocational-Technical School on October 24, 1966. She was encouraged by Mr. Guy Kirk, the Director; Mr. Joe McClure, the guidance counselor; and Mr. Lynn Russell, the drafting instructor.

In high school Alice enjoyed studying and being associated with friends. At the McKenzie Area Vocational-Technical School she has ample opportunity to pursue both studying and making friends. Some time is occupied after school with her hobbies: charcoal sketching, reading, and participating in various sports. She also helps her family on the farm. Reportedly, she can "drive a tractor like a man."

Her first reaction to entering the drafting class was one of hesitation, but this was quickly replaced with eager anticipation of the knowledge and skills she would learn. Another girl, Linda Foust from Hollow Rock, was enrolled in the class at that time.

Linda was the first girl to enter the drafting class. She had been a pre-engineering student at the University of Tennessee at Martin for two quarters before enrolling on October 25, 1965, at the McKenzie Area Vocational-Technical School. She first applied for the office occupations class, but Mr. McClure, in counseling with her, discovered her interest in mechanical drawing. She entered the drafting class experimentally and decided to remain there. After completing 1400 hours of training in drafting, Linda accepted a job with Dover Elevator Company in Memphis in January, 1967.

The contact which led to her job was made by Mr. McClure who saw an ad in the paper. His communication with the company ascertained that they had no objection to hiring a "lady draftsman". In fact, Linda was selected for the job from a field of three applicants - herself and two males.

Linda has been back once to visit since she began her new adventure. Alice related some of their discussion, "The attitude at the company is very good. Linda is quite happy with her work, and I am anxious to join her, if possible."

Alice is quite emphatic about her class and the school. "I love it! (drafting) I think this school is so good in so many ways. I don't feel too restricted and have learned a lot of self-discipline. The instructor, Mr.

Russell, is always willing to help me and is very patient."

It is apparent in the class that Alice's classmates not only admire her beauty but also respect her ability. A co-operative relationship among the class members is evident.

Mr. Russell, drafting instructor, spoke proudly about all of his students. Of the girls he said, "Linda was the first girl student I'd had. Both girls have made very good students. They have patience and do very fine lettering. Once they see the third dimension in drawing, they do extremely well."

Mr. Russell went on to discuss Alice and her future, "She hasn't made below an excellent grade since her first month or two. At her present rate, she will be one of our best."

Mr. Russell believes Linda and Alice have bright futures before them. "I believe being women will give them an even better opportunity in the future in industry."

He is anticipating having more girls enroll in his class. "These girls," he stated, "have created only one problem—everybody wants to stand by them and talk to them."

After all, who wouldn't want to have such pretty classmates as Alice Reynolds and Linda Foust who are also quite capable "lady draftsmen"?

FOR AGE IS

OPPORTUNITY NO LESS

Many years ago, the poet Henry W. Longfellow penned, "For age is opportunity no less that youth itself, though in another dress."

Elizabeth Jo Oliphant is living truth of these words. She graduated from Charlotte High School in May, 1934. The years between then and September 27, 1965, when she enrolled at the Frank G. Clement Area Vocational-Technical School were occupied with family cares and responsibilities.

"I had always thought I'd like to do office work. Since my family was about grown, I felt the area school offered a good opportunity for me to try and see what I could do," related Mrs. Oliphant.

Although she had never done any public work and had no previous training in office occupations, she had encouragement from her husband and four children, ranging in ages from 25 to 16. "My family encouraged me," she said, "I probably wouldn't have stayed if they hadn't. I'd think about my age and what little chance I might have for a good job and get discouraged; but they never did. They always encouraged me."

During the thirty-one years since her high school graduation, Mrs. Oliphant had often thought and dreamed of continuing her education but her reason for not doing so well was quite valid. She explained, "No other facility for receiving further training was near here until the area school was built."

The problems she expected to encounter on her new venture in education were surprisingly few as the grandmother of two averred, "I did take a good bit of kidding about going back to school at such an age, but it was all done in fun. What really worried me was the fact that I had no office occupations training of any kind when I enrolled in the class. However, it wasn't as hard to be back in school as I had expected. My biggest problem was keeping my mind on what I was doing rather than on what I needed to be doing at home."

From the first notices in the paper about the planning and constructing of the area school, she followed the progress eagerly. Finally, after years of waiting, she had her opportunity and took full advantage of it. Richard Davis, her office occupations instructor, confirmed this, "She was a good student. Her bookkeeping is excellent, done with extremely legible writing and careful accuracy. She has an unusually fine mind and is very alert in the classroom."

Studying and working diligently, she found bookkeeping her most interesting subject. She commented, "I enjoyed my school work and did find it hard at first because I had been out of school for so long. Typing was the hardest for me, but working individually gave me the opportunity to learn at my own speed."

She continued, "Everything was very good about the school. I know I couldn't have gotten better training than I got there. My son took about the same course at a commercial school in Nashville before this school was built. He got the same training, but he had to pay dearly for it. My opportunity was free."

After completing 12 months of the course, curiosity inspired Mrs. Oliphant to go to the employment office to see if a job might be available to a woman of her age. "I made application and in a couple of weeks, Mr. Brown called me. I was interviewed on October 2, 1966, and went to work the very next day," she told.

Now that she has been working well over a year at the same job, she is both pleased and optimistic. "Age is not the handicap I thought it would be. I like my work because my main responsibility deals with what I like best–accounts receivable. I have very little typing to do. I have an understanding person, Mrs. Brown, to help me. It was she who taught me their particular office routine."

Mr. J. C. Brown, owner of J. C. Brown Ready Mix Concrete Company and her employer, said, "I am pleased and could not ask for a better or more cooperative worker. Her age is certainly no handicap in our office. In fact, it is an asset since I have found her to be more mature and stable and not interested in changing jobs. She can definitely do the work and can handle well what is expected of her."

Mrs. Brown, who directs the office work, added, "She has been a great help to me. I have found her willing, pleasant, and quite efficient."

The Browns have other reasons for their interest in the area school. Their son, Sammy, is presently enrolled in the auto mechanics course. They agreed with sincerity, "Our interest in the school stems from several things–for what it means to our community, for what it means to our business by providing us with such a fine employee, and for what it means to our family by offering Sammy an opportunity to learn auto mechanics."

Mrs. Oliphant injected, "The school is certainly a big asset to this entire area. Several have asked me about the school since my enrollment, and I am pleased to be able to recommend it honestly."

Across Tennessee other communities, businesses, and families are being availed new and continued opportunities through the vocational-technical education offered by the statewide system of area vocational-technical schools.

DIRECTION: SUCCESS

"The direction in which education starts a man will determine his future life," Plato said.

Education and direction have been two vital factors in the life of Louanna Spivey. As she says, "I have always loved going to school."

Perhaps at times, life might have momentarily been easier for Louanna if she had not been so determined to get an education and if her mother had not encouraged her so. Being one of seven children, it might have been easier to just fade out of the education picture and lag behind–easier for Louanna and easier for her mother who gave the other children the same direction and desire for an education. But Louanna never entertained any thoughts about ceasing her education. Even now that she is successfully employed and on her way to future advancements, her plans include still more training.

Louanna, who has lived near Ripley, Tennessee, all of her 24 years, graduated from Lauderdale High School on May 22, 1961. As a result of an injury from a fall, she finished her last year of high school with the assistance of a homebound teacher.

When she became able, she pursued an interest to employment to become a florist's helper. "I have always liked to work with flowers," she relates, "and I thought this would be one way to learn more about my hobby as well as to have a job."

Part of her responsibility included keeping books. "Since I had to keep my own books in florist work, I had to learn to do this," she ccntinues. "Before long, I realized that I needed training in office occupations."

In search of a school which offered training in office occupations, Louanna went to Memphis to see what was available. While she was in Memphis, her mother heard an exciting announcement over her radio. The Newbern Area Vocational-Technical School would provide free vocational-technical education to any persons in the area who had a desire to come and learn!

Immediately Louanna's mother called Memphis and Louanna returned home. "Then I went to Newbern and filed my application to enter the office occupations course," she explains. Within a few days, I received my letter telling me when to come back to school to begin the course."

On June 21, 1965, she became one of the first students in the office occupations course, taught jointly by Evelyn Barnard and Ammie Newton. In order to be closer to school, she rented a room from a family in Newbern. "Mother promised I wouldn't have to work while in school so that I could spend all of my time on my studies and she kept the promise. She knew how badly I wanted to go and I knew how badly she wanted me to attend," Louanna relates.

Finding herself the only Negro girl in the office occupations class presented no problem either to Louanna or her classmates. Her instructors affirm, "Louanna always got along well with others. The encouragement her mother gave her, her willingness to learn and her determination made her an eager student. She often stayed after school for extra work or to spend more time

operating some of the office machines. Her work was always highly satisfactory."

The Agriculture Stabilization Conservation Service office in Ripley needed an administrative clerk. Mr. William Hall, office manager of ASCS in Ripley, called the Newbern Area Vocational-Technical School to inquire if there was a girl available for the position. Louanna was recommended. After being interviewed and tested, she was hired and placed on the job September 23, 1966.

Now that Louanna has been in the office well over a year, Mr. Hall praises both the quality of her work and her ability, "She has made a very good employee–does her job and does it well. Her duties as administrative clerk require her to handle funds and write checks along with general clerk duties."

Of her job Louanna comments, "I never dreamed I would have a job like this one. If I had not gotten the good basic background in office occupations at the school, this never would have been possible."

Her immediate plans for the future include taking more shorthand at the new area vocational-technical school which has just recently begun operation in Ripley.

"I liked everything about the Newbern Area Vocational-Technical School, especially bookkeeping. I find that people are always amazed at how much I learned there and how much is available at the school," says Louanna.

Several of the girls in the ASCS office have questioned Louanna concerning what is taught in the office occupations courses. Two of the girls, acting on her recommendation, are going to night classes at the Ripley Area Vocational-Technical School now.

Louanna also finds that many of the young people she deals with as advisor of the youth training union for Mount Pleasant Baptist Church in Ripley are also interested in learning of opportunities awaiting them. "All these young people are trying to better themselves and they know that learning a skill for a good job is so very important," muses Louanna who is also Assistant Sunday School Superintendent of her church.

Her sisters and brothers have become successful in their own right. The three sisters are all employed in Omaha, Nebraska. One brother is working in Detroit while attending a computer school; one is a subcontractor in Ripley and one is a Sgt. in the U. S. Air Force. The direction of Louanna's success points toward future advancement and continued job satisfaction.

Many directions in many occupations are opened daily to other youth and adults whose pathways lead them to one of the 24 area vocational-technical schools in Tennessee.

VO-AG BRINGS

PERSONAL DIVIDENDS

First impressions are usually the most lasting, if not the most correct, we have often been told. The first impression projected by Bobby Tarwater is one of an energetic, determined young man who knows where he is going and how he is going to get to his destination. This impression couldn't be more correct, even if it does overlook a serious handicap which Bobby himself has overlooked since he was eight years old.

At this early age, Bobby, son of Mr. and Mrs. John R. Tarwater of Greenback, Tennessee, was stricken with a severe case of chicken pox. Complications resulted in massive infection which necessitated the amputation of both his legs in order to save his life. Even after the surgery, his life hung in balance on the critical list at Vanderbilt Hospital for three months. A yearlong hospital stay followed, but nothing about this experience dampened the spirit or ambition of this young man.

From as far back as he can remember, Bobby has always been interested in farming. He has spent much time on the three farms owned by his grandfather. Even after leaving the hospital and returning to Greenback, Bobby still wanted to be engaged in some phase of agriculture.

Eagerly, he returned to school and to his friends and classmates who had kept in contact with him through many letters and cards. "I was so anxious to get back to school and see my friends," Bobby recalls. "I have always enjoyed my friends and really believe that if you haven't got friends, you haven't really got anything."

But Bobby has more than friends. He also has the rare blend of courage, integrity, character and purpose which we Americans have come to term "guts."

"When I entered Greenback High School, I knew I wasn't physically able to be a real farmer, but I wanted to take vocational agriculture. I felt I could get much out of the course just the same. After discussing this with my princi-

pal, agriculture teacher, and parents; I decided to go right ahead and plan to take four years of agriculture in high school," Bobby explains.

Bobby, who can obviously meet life's situations head-on without a second thought, has never allowed people to feel sorry for him, much less ask for any sympathy. In fact, he demands that he be known and judged on his merit and not his handicap.

Knowing his strong feeling but without his knowledge, his father also had a discussion with the agriculture teacher, Wilson Belcher. Mr. Tarwater requested that no special arrangements or concessions be made for his son.

With understanding and wisdom, Mr. Belcher agreed not to give Bobby any special consideration in his classes. The gratitude Bobby feels for the chance he received to meet the usual requirements for any agriculture student is acknowledged when he avers, "More than any one person, Mr. Belcher helped me get where I am now."

Having arrived at a point when he could really begin to learn about farming, Bobby was an avid student who learned knowledge and skills in all phases of agriculture and learned well. This is evidenced by the numerous honors and awards he won, strictly on his merit of achievement.

During his freshman year, he was Creed Contestant winner and Star Green Hand. He continued throughout high school to try out in all contests for the experience and the challenge involved.

He was a member of the Dairy Judging Team for three years; Parliamentary Procedure Team for two years; Livestock Judging Team for two years; and Land Judging Team for two years. As a junior, he was selected to represent his local FFA Chapter as public speaker and was recognized as the second high individual in East Tennessee on land judging. He also won the coveted DeKalb Agriculture Accomplishment Award which is given to the most outstanding boy in leadership, cooperative activities, supervised farming and citizenship. This year he won first place in Farm and Home Electrification in East Tennessee and is competing for the State award in this area.

More and more, Bobby came to know that agriculture in some way had to be his future occupation. Many agriculture related fields were suggested to him other than actual farming and he found almost unlimited choices for a career.

While a senior, he earned the coveted State Farmer Degree conferred by the Tennessee Association of the Future Farmers of America. Then he decided to run for state office in the organization. Having been president of the Greenback FFA for one year and district FFA treasurer for two years, he knew well the additional demands and responsibilities of being an FFA officer.

In his speech to the state FFA convention, Bobby quickly told the delegates that he wanted their vote but not their sympathy. "I ran on merit, and I don't honestly believe anyone voted for me merely because they thought I was handicapped," Bobby relays.

He was elected and is serving as State FFA Treasurer for 1967-68. The opportunity to be a state officer, Bobby feels, is one of the many meaningful experiences which have come to him through his vocational agriculture involvement.

"Without this year as a state officer, I wouldn't have had the chances to travel throughout the state and would not be as developed a person as I am now," he states.

He has attended the Tennessee FFA Convention for five years and attended the National FFA Convention in Kansas City, Missouri.

Reminiscing, he continues, "Rather than play football as every boy, including myself, would like to do in high school, I spent my time with my agriculture work and FFA activities and projects. It has really paid off in personal dividends."

He found time along with his other activities in high school, to manage both the basketball and football teams, however.

After graduation from Greenback High School in 1967, Bobby enrolled at the University of Tennessee to pursue agriculture engineering and agriculture education. He attended classes in the summer and fall quarters but did not enroll for the winter or spring quarters so that he could be free to devote his time and energies to being a state officer. "This way, when I return to school, I will be able to study as I want and need to do and will not slight my responsibilities as State FFA Treasurer," he explains.

Soon he plans to begin work toward winning his American Farmer Degree while he continues his studies and runs his own farming operation on twenty acres he has recently purchased. He already has a herd of 70 registered Yorkshire hogs which he has entered in many shows and with which he has won several Grand Champion Awards. From this undertaking, he is gaining practical experience and also making money to apply on his college education.

Although Bobby's circumstances may be rare, he prefers to represent, on her merit and achievement, one of the many boys across Tennessee who has a brighter and more secure future because of an opportunity he found in one of the many vocational-technical education programs conducted in Tennessee.

SECURITY IS

PREPARATION AND PLANNING

When Thomas Martin, bricklayer, fell from a scaffold and broke both heels, he could have also broken much of the security he wants for his family. But Thomas Martin doesn't give up and doesn't like to accept help to care for his family.

Thomas, born in Bedford County at Bell Buckle 36 years ago, has worked at several different places as a bricklayer. After the fall, his doctor told him he must find another occupation. With the results of his injury, Thomas was eligible for assistance through Vocational Rehabilitation, however, Thomas did not want this. "I wanted to make it on my own," he explains modestly.

With a wife and four children to care for, Thomas had to do some planning and preparation to enter a new occupation. The doctor told Thomas about the Nashville Area Vocational-Technical School. Thomas discussed the possibility of enrolling in the school with his former employer who helped him get more information and enroll.

When Thomas came to the school September 24, 1964, he chose to go into the drafting class because of his background in construction work. In addition to being a bricklayer, he has worked in concrete, as a carpenter, plumber, and electrician.

While enrolled in the drafting course, taught by G. W. Whiteside, Thomas attended class from 7:30 a.m. until 1 p.m. From school he went to his work with a construction company.

"Thomas was an outstanding student," reflects Mr. Whiteside. "He was very good in math and made almost 100% on all of his other work."

Thomas pursued his plan to prepare for a future as a draftsman. His former instructor recalls, "He was a very determined and consistent student. He had a goal before him and never forgot it. During the course Thomas was absent only one time and that was excused so he could go to the doctor."

Thomas moved to Nashville after high school graduation from Bedford County Training School in Shelbyville to search for better employment opportunities. In addition to his training at the area school, he has also taken extra courses at the Nashville UT Extension Center. "Math," inserts Thomas, "is really my favorite subject and it certainly helped me in the drafting class."

After Thomas left the drafting course September 26, 1965, with 1180 hours of training to his credit, he was quickly employed. Nashville Bridge Company contracted Mr. Whiteside to find a draftsman for their marine drafting department. Mr. Whiteside recommended Thomas who was hired immediately. In fact, he went to work the day after he finished his course.

For Thomas this was the beginning of a new occupation and a new experience in several ways. He did not know when he accepted the job that he would be the first Negro draftsman employed in his department. "This has really caused no problems whatever," Thomas says sincerely. "The fellows in the department are just great guys. They respect me and I respect them. How could that be better?"

The feeling of friendly cooperation in the drafting department shows quickly. In the department the men work side by side diligently and kid good-naturedly back and forth about politics, news events or any other recent topic. The mutual respect of which Thomas speaks is clearly obvious.

"I couldn't be working for a nicer company than Nashville Bridge Company. I have good raises every year and am paid on a monthly rate. This way I know what my income will be," he observes.

"There was no way of my knowing when I worked as a bricklayer or at various construction jobs. My future is more secure now, too. I would have passed my peak in construction work, even if I could stand on my feet all day, and I have retirement benefits now I wouldn't have switching back and forth with construction jobs. With drafting as my occupation, I can continue on for years and make progress," he states with pride and confidence.

Thomas still makes use of his other skills in his spare time. "I am in the process of completely remodeling my home and do most of the work myself," he relates.

In the marine drafting department at Nashville Bridge Company, Thomas does structural steel detail work and figures weights for barges. "There may be 100 or more drawings for one project," Thomas says.

"I have to use a calculator quite a lot and did not have an opportunity to learn that. I would like to see calculators added to the course at school but otherwise and basic principles I learned have all been used. I just took the basics and learned how to apply this knowledge to marine drafting problems," he remarks.

Mr. Whiteside who immediately agrees that calculators should be added to the course, continues, "Thomas, as all students, had to learn all types of

drafting because the student never knows what specialized job will be open for him. The course has to be basic and well-rounded to prepare the student."

Lewis Land, chief draftsman in charge of the department where Thomas works, notes, "Thomas is a conscientious worker. We are very pleased with him. He is prompt, reliable and accurate."

This evaluation doesn't surprise Mr. Whiteside who replies, "I think that part of his success is due to the fact that Thomas wanted security for his family and he knew that through planning and preparation he would provide this for them."

Mrs. Martin, a kindergarten teacher, and the four children, Eathie, 18; Thomas Jr., 17; Linda, 16; and Jerry, 13; are justly proud of Thomas and his achievements. The children attend schools in Nashville and all want to continue their education beyond high school in some field. "What they decide to do is mainly up to them," says Thomas. "I just want to be able to give them the help they will need to prepare for some good occupation."

With the knowledge and skills acquired in one of the many courses of Vocational-Technical Education offered across Tennessee, Thomas Martin has found security for himself and his family.

BE SEATED, PLEASE!

Chances are that if you enjoy a soft, comfortable seat in a theatre or auditorium which has installed seating facilities within the past year or so, Jesse Parrish may have been responsible. As chief draftsman for Massey Seating Company, a Nashville firm which is one of the nation's leading public seating specialists, Jesse draws the seating layout designs for some

of the most modern and elegantly appointed theatres and auditoriums in the country.

Or perhaps you have settled back for a cross-country jet flight on United, Delta or TWA Airlines. Again, Jesse Parrish's skill may have been involved in your comfort and safety. He also draws the cushion parts for the seats Massey manufactures and installs in these airliners. All of his layouts must be cleared through the Federal Aviation Agency to conform to certain regulations concerning both passenger safety and comfort.

One remarkable fact about Jesse and his proven skill is that he is only 19 years old. Dennis L. Carr, Vice-President of Massey Seating Company, remarks, "Jesse is quite young to have such interest and ability. He is excellent down the line in our opinion."

Jesse has been chief draftsman for Massey since December, 1967, when he completed a course in drafting at the Nashville Area Vocational-Technical School. He had worked with Massey while still in school for about 15 months prior to becoming a full time employee.

Another astonishing fact is that Jesse has only one good eye. He was born blind in his right eye, but he has never allowed his handicap to interfere with his plans. Neither Jesse, his instructor, or his employers see any way that his handicap has had an adverse effect on his work or his outlook.

After completing his elementary school education at Glenview Elementary School, Jesse enrolled at Glencliff High School where math, woodworking and drafting were his favorite subjects. Shortly before his graduation in June, 1966, his guidance counselor recommended that he investigate the Nashville Area Vocational-Technical School and the drafting class.

"I went down and looked it over and liked it, so I enrolled right after high school graduation," says Jesse.

Walter Whiteside, drafting instructor at the Nashville Area Vocational-Technical School, is not the least bit surprised at the success of his former student. "Jesse was an attentive student whose performance was always excellent," he states.

After Jesse had been in the drafting class about four months, Mr. Carr, a neighbor of Mr. Whiteside's, asked the school to send him a part time draftsman. Jesse got the job and worked for Massey half day while attending classes half day. During this time he managed to keep his class work average around 96 and was always rated A or A plus by Mr. Whiteside on the monthly analysis sheet he prepares on each student.

"He learned the theory and book work in class and then made practical application on the job," Mr. Whiteside comments. "His strongest points are perfection, determination and patience—all essential to a good draftsman. In addition to being very satisfactory in all departments of his work, Jesse is a very dependable boy. He missed very few days of class and those only of necessity."

He completed the drafting class on December 19, 1967, with 2072 hours of training to his credit. The drafting instruction he received at the Nashville Area Vocational-Technical School draws praise from Mr. Carr, "He couldn't have had this job or held it without that training. His instruction was quite thorough and enabled him to apply his knowledge to our particular problems."

Jesse is quick to reflect credit on his instructor, "I liked Mr. Whiteside. He really knew what he was doing and made us know what we were doing and why. I liked the way he taught. He made the course an experience course and does he have a world of experience to bring to a class! You know he was with the U. S. Corps of Engineers for 35 years before he began teaching."

Mr. and Mrs. Jesse Parrish, Sr. are justly proud of their son. "They have always encouraged me and want me to work in whatever field I enjoy," adds Jesse.

Jesse shoulders his responsibilities for Massey Seating Company very capably as evidenced by the remarks of John F. Dawsey, Manager of the Theatre Sales Division. "We here at Massey Seating Company feel very fortunate to have with our company a young man such as Jesse Parrish, who recently graduated from the Nashville Area Vocational-Technical School.

"Jesse is primarily occupied with design and layout of auditorium and theatre seating that we manufacture. His drafting duties in this connection require a great deal of accuracy and close attention to detail. Jesse has displayed these qualities, along with outstanding drafting technique.

"We think, however, that one of the most important things is Jesse's conscientious attitude and approach to his work. Jesse's ability to take charge of a project and see it through to a successful completion makes him a most valuable member of our organization," concludes Mr. Dawsey.

The future holds much promise for Jesse Parrish. His work has sparked an interest in architecture, and he hopes to obtain a college degree in architecture and math. Massey Seating Company officials are encouraging his ambition.

Both Jesse and his employers feel the training he received through the Tennessee Division of Vocational-Technical Education has been highly advantageous to Jesse and to the company. Mr. Dawsey avers, "We would like to thank everyone concerned with Jesse's training as we feel that the effort on his behalf has certainly been worthwhile."

CAREER EMERGING

As a two-year old, he would crawl under a car to hand his father a tool. At the age of four, he could tell the names of several automobiles. By eight, he was buying and building model cars. At ten, he was repairing his own go-cart. When he was twelve, he won a five dollar bet from his uncle by meeting his challenge to find the trouble with his uncle's car. With this background, no one is surprised that Ralph Milsap's career in auto mechanics is emerging with certainty.

Ralph, son of Mr. and Mrs. Robert Milsap, was born at East Tennessee Baptist Hospital in Knoxville, Tennessee, on August 16, 1951. He has been amazing his family and acquaintances with his mechanical aptitude ever since.

When he was fifteen, one of his neighbors asked him what was wrong with a car. Ralph looked it over and defined the problem, but the man did not believe the boy. The neighbor remarked, ''He is just a kid; he doesn't really know what he is talking about."

A few days later, the neighbor pulled into a car lot to trade cars and the very thing that Ralph had predicted would cause trouble broke on the spot! The neighbor, just as many other people, came to realize ''that kid" did indeed know what he is talking about when it comes to cars.

His parents have always encouraged Ralph with his interest. For instance, they helped him celebrate his 16th birthday by taking him to get his car insurance, driver's license and city tag. In this and in other endeavors, he has a good relationship with his parents. ''Ralph talks things over with us," say his parents, '' and we appreciate his attitude."

Until 1966, Ralph attended a Knox County school which did not have an auto mechanics program. His parents helped him make the necessary arrangements to transfer to Fulton High School in Knoxville so he could enroll in the auto mechanics course offered there.

Ralph was at that time having difficulty with some of his other subjects and was reading on a 6.0 level. At Fulton High School, he had the opportunity to enter the Special Needs class taught by Miss Mary Shipe. This class for students with special needs provides individual instruction in areas of difficulty and is aimed at raising the student's educational level enough so that he may find success in his regular classes.

Although he was performing well in his auto mechanics class, his actions in the Special Needs class left much to be desired. Miss Shipe recalls, "From September until January, his personality and attitude were not pleasing. He seemed to have the idea that he did not need educational instruction–he thought he already knew it all."

"However," she proceeds with a broad smile, "from February until the close of school, he changed. For some reason, he started studying and became kind both in and out of my class. He developed a very pleasing personality and became quite successful due to his hard work. He raised his reading level to 9.5–quite an accomplishment!"

Ralph Jackson Milsap did more than experience success in his Special Needs class. He was one of a two-man team from Fulton High School who won first place in the Plymouth Trouble Shooting contest in April, 1968. The contest was open to vocational students in East and Middle Tennessee.

The contest, sponsored by Chrysler's Plymouth Division, requires that the contestants, working as a two-man team, repair as quickly as possible a sabotaged 1968 Plymouth. The cars used in the contest had a variety of mechanical ailments. When ready for final judging, the car must be finely tuned. The champs from Fulton High had their car repaired and tuned almost to perfection in one hour and 47 minutes.

As a result of this divisional win, the boys went to the national competition at Indianapolis in June, 1968. Even though they didn't place in national competition, "The boys had the time of their lives," reports their instructor, Clifford Davis, who accompanied them to the national contest.

Working on a Plymouth Baracuda which had been "bugged" by 10 malfunctions, the team had their car running in one hour and 15 minutes. However, the winning team required only 42 minutes to complete the job. In the national competition were 99 other teams from all 50 states.

Ralph's ambition is to own a garage someday, and he is working steadily toward his goal. His parents have an extra garage on their property and they have given this to Ralph for use as his shop. Here he keeps his books, catalogs, tools, and car parts.

His time devoted to this project is limited by school and his job. He is employed at GMC Knoxville Truck Sales from 1:30 p.m. until 10 p.m. His instructor, Mr. Davis, helped him secure this job which he enjoys since it affords him opportunity to work on trucks and cars. Previously, he has worked

at service stations, but this job provides both more pay and more experience in mechanics. His employers report they are very pleased with Ralph's work.

Due to his interest in his auto mechanics and his increased ability gained through the Special Needs class, Ralph is looking forward to high school graduation. "Chances are," relates Miss Shipe, "Ralph would have dropped out of school if he had not been in the Special Needs program. He really doesn't discuss this possibility, but his prior grades had been rather low."

Mrs. Milsap, who married when she was 18 and did not complete high school, says, "Ralph does have a new interest in school. He even encouraged me to return to school and study for the GED test which I took and passed this spring."

Mr. LeRoy Steinhoff, Coordinator of Vocational Programs at Fulton High School, explains, "When Ralph first entered Fulton, auto mechanics was filled and there was just not an opening. Ralph was placed in machine shop; but every day for several weeks, he made his way to my office to see when he could be changed into auto mechanics. Finally, the day arrived and Ralph has smiled daily ever since!"

Ralph Milsap's career is emerging with the help he has found in his Special Needs class and his auto mechanics shop. Many other young Tennesseans are also finding their future looking more promising, thanks to assistance provided by similar programs of Vocational-Technical Education conducted across Tennessee.

HOW TO SUCCEED

BY REALLY TRYING

In January, 1964, Marguarite Smith enrolled in the office occupations class at the Nashville Area Vocational-Technical School. With a background of hardships, heartbreaks, and tremendous responsibilities, Marguarite's chances

of success appeared quite dim. But Marguarite's drive to find a better life for herself and her children gave her the will and optimism to overcome what would have been unsurmountable obstacles for a lesser individual.

"Life, it seems has been one constant upheaval," avers Marguarite, "But I always look for that better and brighter tomorrow and find it usually arrives in time."

Marguarite had been out of school for almost 20 years when she began her educational pursuits at the Nashville Area Vocational-Technical School. Although she had attended Howard High School and Hume Fogg High School, family difficulties caused her to leave school in the 10th grade at the age of 15. From school she went to work in a factory, got married, and in time had six children.

Life certainly would have been difficult enough at best, but many events brought sadness to her. Each tragedy, rather than bringing defeat, enforced her determination to provide her children with things she had been denied.

During the years, she was divorced and left to care for the six children on wages earned as a factory worker. Material things may have been missing but those values which give real meaning to human existence were present in abundance. Just keeping the children fed and clothed required the best of management and ingenuity. In addition to this, there was almost constant medical expense for one or more of the children. One child suffered from a heart condition which demanded exacting care until her death. In the same year two of the other children and Marguarite had operations and more medical expense. Still she somehow maintained faith in herself, her children, and their future.

After this tragic year, Marguarite called the children together to consider their plight. "I discussed going to school with the children, and they all agreed to help," relates Marguarite.

It was with their approval and encouragement that she enrolled to learn secretarial skills. The children went to a day care center before and after school and were cared for by the oldest brother, Donnie, until Marguarite could be home.

Her schedule would seem a physical impossibility. She left for work at 6 a.m.; went from work to school at 4 in the afternoon, returned home in the evenings when school was over at 10 p.m. Many of the late night hours were spent washing, ironing and cleaning their apartment.

But the shadows began to disappear. J. H. Sandlin, Acting Superintendent of the school, did much to ease her fears that she might not be able to go through with her plan. "Mr. Sandlin always knew just when I needed that extra pat on the back to keep going," says Marguarite.

"I was told at school there were only two grades—A or F—and I just could not have an F! I worked hard and strived to reach that A grade," she continues.

"I even went ahead to take and pass the GED examination to receive my high school diploma early in 1964. I feel it was a vital and necessary part of my being able to go to work."

Her compulsion to achieve came basically from her feeling for her children. "I want to see them grow up into decent, honest, respectable people. If I accomplish this, I feel I will have reached one of my dearest goals," she affirms.

While attending school she met and married Dwight Smith. With a husband's love and help, more shadows were dispelled. Even so, heartbreak came again when the oldest son, Donnie, was killed in a motorcycle wreck.

Still continuing in school, the physical exhaustion began to show. "Several times I went to sleep at my typewriter in class," recalls Marguarite. "The last two months at school I was so tired and my head hurt," she relates. I went to the doctor and he suggested more rest which was just impossible. Mr. Sandlin insisted I take some time off from school, but I really couldn't. As a compromise, the doctor gave me some tranquilizers and vitamins. I took a vitamin in the morning, during the day, and at night and a tranquilizer now and then and kept going full speed ahead." she explains.

The record she compiled while at school bears out her ambition but also her ability. Her grades were outstanding and her attendance record was near perfect. Once she had a small tumor removed and went from the doctor back to school. Only at Mr. Sandlin's urging did she finally consent to leave school a couple of hours early that night.

In September, 1964, Marguarite Smith reached a milestone. She completed the office occupations course with over 500 hours of training to her credit.

October, 1964, brought employment. She took and passed a state test to be employed as secretary for the Middle Tennessee District Director of paroles and probations.

"I told my boss, Mr. Mel Allen, that I had no prior experience but I have been allowed to learn and make my mistakes and correct my errors," says Marguarite.

"I do feel competent in this office and I haven't run into anything I hadn't been taught to handle," she inserts.

After four years on the job, she has attained the position of senior stenographer and more than doubled the money earned as a factory worker.

Yet, Marguarite is still forging ahead. "There is always something else I want to learn. I am now going to another night class taking income tax for my own information and in hopes that I can learn enough to bring in a few more dollars." she states.

With a chuckle of satisfaction, she recalls, "Family and friends and people at work thought I had lost my mind when I started to school–said I'd never do it–to hard on me. At work they even offered to hold my job open for

two weeks if I wanted to come back after I had finished my course and taken this job."

There will be no turning back for Marguarite Smith. She and her family are finally enjoying the life that for so many lean and sad years was a hazy dream. With the opportunity for training provided by one of Tennessee's programs of Vocational-Technical Education, Marguarite has found well-deserved success.

DONALD ORRELL

BOOTSTRAPS HIS WAY

AT STATE TECH

At a time when the variety of human endeavor has made education the topic of so many, the private world of a young man "homebound" and isolated can be despairing, empty of hope, and devoid of any real purpose in the limbo of forgotten time.

Such a world could have easily been the private domain of Donald S. Orrell, an honor student at the Chattanooga State Technical Institute. However, Donald's world is one of activity; full participation in student affairs; and beyond his own physical reach, exists the world of his mind. But Don's pleasures have not always been so exquisite. Crippling polio and the inevitable wheelchair have been his constant companions, since the age of three.

It is difficult to discern any anguish or indecision in this young man today. His curiousity and enthusiasm about a world of form and motion is contagious. Many of his colleagues are stimulated when they are confronted by his wit and wisdom.

In most circumstances, one tragedy in a family is a traumatic experience that can destroy a person's will to endure. However, in Donald's family, there have been not one, but three. His father, Frank W. Orrell, was blinded by a freak accident in childhood. His mother, Frances D. Orrell, almost lost her sight because of a severe cataract condition.

Instead of despair and hopelessness, these two people, still strangers to each other, enrolled in an institute for the blind. Here they met and fell in love and were married. Donald was their second child, and at the age of three the cruel march of polio struck with terrifying force. For the third time, fate had visited a major tragedy upon this family.

In the long years from a toddler to adulthood, Donald Orrell had mustered the courage and psychological attitude that sustains him today. From his earliest memory he has been interested in the science of mathematics and and physics. From this springboard, he has turned to the world of technology. "Who knows," he jokes, "I may be able to program an automated wheelchair someday; or build a better mouse trap, as they say." Don is enrolled in a two-year curriculum in electronic data processing. His ambition is to become a part of a corporation where his skills can alleviate the age old druggery of paper shuffling.

Donald finds the Chattanooga State Technical Institute the biggest break of his life. After spending thousands of dollars for medical bills, his family had completely exhausted their small savings. Now he can obtain his degree in a highly skilled profession for less than four hundred dollars. More than that, Donald can become a full-fledged member of the American Society. He can do the task of twenty healthy men by his knowledge and application of automated systems in data processing.

"I believe life of the mind is the true purpose of my being," Donald relates. Few students doubt this philosophy when they engage him in a game of chess or in a classroom discussion. He seems more concerned about people who never awaken their minds to the dynamics of life than he does about his own temporary misfortune.

Officials of the Technical Institute have made it possible for Don to move freely among the classrooms. Other students who are physically blessed, but who have a "financial" handicap, lend a helping hand as part of their work-study program.

As long as the American Education system cares about the Donald Orrells, it will not only lift one individual to new heights of endeavor; but, in the process, hundreds of students who witness his daily courage will also search for their own inner-meaning, and the process becomes endless in the creation of excellence in the American Society.

Technical education has been Donald Orrell's guardian angel. His spirit is now intently honed to the ever increasing world of science and its new horizons where an engaged mind is where the action is.

THE WISE LIVE AND LEARN

The David R. Fussell family of Dickson, Tennessee, could easily be described as a model American family. Dorothy Lee and David have three sons, 19, 18, and 15 years of age; they are all active in school, PTA, Boy Scouts, church work, and community affairs. David is Chairman of the Board of Education for the First Methodist Church, a member of the Official Board, and a Sunday School teacher. Dorothy is a substitute teacher in the primary department and they have served as MYF Adult Counselors.

David has been a Boy Scout Leader for 10 years and all three sons are Eagle Scouts. Two of the boys have been on a 50 mile canoe trip in Minnesota with their Scout Troop.

The boys have all done well in school and are active in sports. Dennis, 19, now a sophomore at Austin Peay State University, was Tennessee Top Scorer in football during his senior year at Dickson High School. Danny, 18, plays basketball and football and has lettered in both sports. John, 15, is just beginning his athletic career in both sports.

Only one thing about the family was incomplete. Dorothy, who had interrupted her education to be married, felt the need to continue her education. With the boys now all teenagers, their demands on her time and domestic talents were decreasing. With one son in college, extra income she could earn would certainly be put to good use.

Dorothy had watched with personal interest as the Frank G. Clement Area Vocational-Technical School was constructed. She read every article in the local papers and listened to all the announcements about the school on the radio. Then she made up her mind; for as Sophocles said long ago, "Though a man be wise, it is no shame for him to live and learn."

Dorothy enrolled in the office occupations class at the area school December 8, 1965, with the reluctant support of her family. Having left school almost twenty years before, she entertained serious doubts and uncertainties about returning to a classroom, which she voiced, "I thought I lacked the educational background and that I wouldn't be able to keep up with the class. I found out that I didn't have to keep up or hold a class back at the school for we could progress at our own individual rate. On some units I worked slowly; on others very quickly. I was really surprised that I could do the work."

Having no previous training or experience in office occupations, this individual instruction did not mean she was penalized but rather that she had ample opportunity to compensate for the years out of school. Her determination was also a large factor in her favor.

Richard Davis, her office occupations instructor, evaluated her, "She is bright and intelligent. Her attendance record was outstanding and she worked very hard. All phases of her class work were done quite well and she learned quickly."

The ease with which she learned and her success in her work created increased family support. She remarked, "At first the boys used to laugh at Mother bringing books home to study, but that didn't last long. Our second son is taking bookkeeping in high school this year, and I have to help him so he isn't laughing anymore!"

Support was also given her by school officials. She affirmed, "Mr. Clemmer, Superintendent of the school, and Mr. Davis always encouraged me and believed in me. If they hadn't, I suppose I might not have stayed."

After completing 351 hours of her training, she was offered a job as bookkeeper for the Dickson Radio Station WDKN. William A. Potts, president and general manager of the station, called Mr. Clemmer to inquire about a person who might fill the position. Dorothy was recommended, interviewed, and employed on April 18, 1966.

Mr. Potts said of her, "I am well pleased with her overall performance here at WDKN. She has performed all the duties assigned satisfactorily, including daily posting of the books, keeping accounts receivable ledger, and preparing monthly statements for mailing. She is always prompt, accurate, and regular with her work. I believe, however, that she could have only been employed at WDKN as a result of her enrollment and instruction at the area school."

Dorothy, who enjoys her new position as bookkeeper, is anxious to give credit to the area school, "The time I spent at the school gave me a great deal. I couldn't have gotten my job or been able to do it if I hadn't had the training in office occupations. The school is a fine addition to our county and the area it serves. When people ask my opinion of the school, I am always glad to tell them how it helped me!"

Mr. Potts joined her in praise of the school, "I feel the Frank G. Clement Area Vocational-Technical School is a wonderful asset to our area's education. To me it answers a need for those who desire to improve their income by learning better jobs and especially those who do not or cannot attend college or other schools of higher learning. Our area is far better by the existence of the school in our midst. I look forward to a continued long and cooperative association in working with school personnel for the betterment of our area."

Individuals and business firms across Tennessee are reaping the benefits from opportunities offered through vocational-technical education in the statewide system of area vocational-technical schools.

POSSIBILITIES BECOME OPPORTUNITIES

Gary Brake had given little thought to his future until after his graduation from McEwen High School in June, 1965. School had never appealed to Gary although he had an almost perfect attendance record.

"I just got by," stated Gary. "Really I didn't work too hard."

In spite of his lack of interest, he participated in school activities and probably worked harder on the football field than in any classroom.

Why, then, did a boy who had no favorite subject and a lackadaisical attitude about school in general put forth the effort required to stay in school and graduate?

"Well," mused Gary, "A man needs a high school diploma to do anything these days. Even with one, special training is a 'must' if you want to make a decent living."

Gary began to think of his future. Untrained in any salable skill, he could not find a job which held much promise for his future.

Gary's father, Dave Brake, suggested that his son investigate the Frank G. Clement Area Vocational-Technical School.

"I wanted to learn a trade," Gary explained, "so I went to check out the possibilities."

Gary found far more than possibilities at the school; he found opportunities. On September 27, 1965, he became one of the first two students to enroll in the auto mechanics class.

"After I found out about the school and the auto mechanics class, I was there waiting the day the school opened," recalled Gary.

As evident as the skills he began to develop was the change in his attitude toward "school." Although he had to drive 25 miles back and forth to school each day, he never missed a day and was tardy only four times, all for good cause. In addition, he worked a full night shift all the time he was attending school. This meant he left classes and went directly to work; left work and went home for a few hours sleep; returned to class by 7:30 the next morning.

"You see," inserted the now enthusiastic young man, "I enjoyed coming to school and I didn't want to miss. I didn't mind the extra effort to be here every day."

At the area school Gary, as are all students, was given individualized instruction and was allowed to set his own learning pace. Given this challenge, Gary set his own goals and diligently worked toward them. He demanded far more of himself than anyone else would have dared in view of his past lack of interest and determination.

A very quiet young man, Gary became a group leader in his class and was well liked by all his fellow students. Designated "lead man" by his shop instructor, he was responsible for assisting other students with problems. He thrived on the knowledge fed him and learned quickly and thoroughly.

Robert Booker, Assistant Superintendent of the Frank G. Clement Area Vocational-Technical School, stated, "Gary has ability to become an excellent shop foreman. He has diversified knowledge and can perform well on any job in a mechanic shop. He is cooperative, pleasant and he possesses a good disposition which makes him easy to get along with."

Quite modest about his progress and his developed ability, Gary freely praises the school, "I like the school and can't overestimate what it has done for me. I was given an opportunity to learn what I like to do. I actually enjoyed all the work in shop, but I especially liked to do motor tune-ups."

He continued, "My instructor was a motivation and an example. He encouraged me to think about my own shop. This is what I hope to have in the future after I have my service behind me. I am already collecting tools to use in my own shop."

Gary, who readily admits he had not been particularily motivated by anything until he came to the school, completed his training September 8, 1967, with a total of 2448 hours in auto mechanics to his credit.

Even his hobby, a 1957 Chevy hot rod which he drives for pleasure, reflects his knowledge and skill. Gary commented, "I did all the work myself and completely rebuilt it. I have had several offers for it, but I don't want to sell it."

He added, "My training at school was an all-round course that covered the auto mechanics field. The equipment we used was new and up-to-date and I feel well able to work in my chosen field."

George Burnette, night foreman of Scovill-Shrader Division where Gary is employed said, "Gary works on a night shift and does a wonderful job. His attitude and his production are outstanding. He is always on time and always at work–he's never missed a day. I would like to have more people like him–good in every way!"

The enthusiasm which bubbles quietly from Gary has been instrumental in helping other young people learn of opportunities awaiting them. Three other boys presently enrolled in the auto mechanics class talked to Gary and decided to come to the school on his recommendation.

Possibilities may become opportunities for many other Tennesseans through the statewide system of area vocational-technical schools now in operation.

FROM DEPENDENCE TO INDEPENDENCE

The life story of Eugene Sweatt, from the time he was born in the Rock Springs community of Dickson County on June 16, 1942, until his employment as a draftsman in the machine development department of Scovill-Schrader Division on July 31, 1967, provides inspiration sufficient to lend encouragement in abundance to those who, for one reason or another, feel they have not had their portion of a "chance" in life.

Eugene is the twelfth child of a family of thirteen children. This family lived on a 120-acre farm in the northern portion of Dickson County. Eugene helped with the work on the farm, even though he was, and still is, crippled. He was stricken with polio at age two. Several operations on his legs and the use of braces finally enabled him to walk, but with considerable difficulty, by the time he reached adulthood.

The Sweatt children attended Newport Elementary School. Eugene then attended Hampton High School in Dickson, where he studied housewiring, plumbing, and brick-laying, as well as the required academic subjects.

Soon after he started his junior year, another of his series of leg operations became necessary and forced him to drop out of school and lose that school year. The next fall, however, he reentered the junior year and two years later graduated from Hampton High with a four-year grade average of B-plus.

Hampton personnel recognized some of Eugene's potential and guided him to A. L. Poore, Counselor, Division of Vocational Rehabilitation, State Department of Education, who has worked continuously in helping Eugene accomplish his goals.

Eugene's ambition to become an Architectural Engineer prompted him to enter A & I University in the fall of 1964. This proved to be an impossible endeavor, because, having lost both of his parents while a senior at Hampton, he did not have sufficient financial support to remain at the University.

During the next year or so Eugene lived with his sister and her husband, Mr. & Mrs. Jenkins Talley, Jr. who lived on the Sweatt farm. He farmed some and helped his brother-in-law with his barbecue stand.

On February 7, 1966, upon the advice and assistance of Mr. Poore, Eugene enrolled in the Frank G. Clement State Area Vocational-Technical School located at Dickson. He had saved enough money the past year to buy an old car; the school was free, except for books, so, with the Rehabilitation program's help, and by hitchhiking and walking when his old car failed to run, he managed to attend the school with satisfactory regularity.

At the school he studied Drafting under the able direction of the school's full time Drafting teacher, Robert McMillan, until the day he started working for Schrader. He had not completed the course in Drafting at that time, so he immediately enrolled in Larry Lee's night class to complete his training in Drafting.

Following is an excerpt from a letter from Frank S. Irlinger, Machine Development Manager of Scovill-Schrader Division to J. H. Clemmer, Superintendent Dickson Area Vo-Tech. School.

"Eugene Sweatt was hired by us after a series of competitive interviews. His presentation of the work he performed at the Vocational School convinced me of his potential in quickly acquiring the more complex drafting techniques as demanded within the Machine Development Department. In his two (2) months

stay with us, he has fulfilled, if not exceeded, our expectations. Under the guidance of Mr. Scott Wells, machine designer, Eugene has since progressed from drawing simple machine parts to the interpretation of design layouts of some of our fairly complex mechanisms. He has shown a good comprehension of machine work and exhibits accurancy, good line work and neatness on his drawings. He is somewhat quiet, but very cooperative. We are very pleased with his performance so far.

He is certainly a fine credit to the Vocational School."

After reading this letter, Bob McMillan, Eugene's former daytime Drafting teacher, said "This sort of thing is my second pay check.

Observing Eugene learn and develop into a Draftsman has certainly been an inspiration to me. His dedication to the task of improving himself and taking advantage of the opportunities that existed has helped to further prove that those that apply themselves and do the best that they know how, will be justly rewarded."

CURIOSITY LEADS TO A CAREER

"Curiosity is one of the per manent and certain characteristics of a vigorous mind," wrote Samual Johnson over one hundred years ago. His observation is just as accurate in our twentieth century. For one young lady, her curiosity not only revealed her active and searching mind, but quite unexpectedly lead her to begin preparing for a rewarding career.

As a student at Bledsoe County High School, Virginia Wallace found her years in school quite an adventure. She pursued the required studies to earn her high school diploma, played forward on the basketball team, served as a cheerleader, and enjoyed life on the family farm.

Her parents, Mr. and Mrs. James L. Wallace, gave her encouragement and support in all of her endeavors. Although her mother is Superintendent of Schools for Bledsoe County and her sisters are home economics majors, Ginny, as she is known to her friends, did not particularily feel drawn to follow in their paths.

In fact, even at the beginning of her senior year in high school, Ginny had made no definite decision about her future after high school graduation. As she commented, "I had no favorite subject and did not really know where my future might lead."

Curious about a new course just added to the curriculum of Bledsoe County High School during her senior year, she enrolled in the class for nurse aides. She had never been exposed to any phase of nursing and had rarely been inside a hospital; yet, she was attracted to the new course.

Development of this course stemmed from a need which had been expressed by the community through a survey conducted in the spring of 1966. After preliminary planning, this pilot program was begun as a cooperative effort of Health Occupations and Occupational Home Economics.

"I thought hospital work might be interesting. Since I had a major in science, I also felt that anything I would learn wouldn't be a waste of time," explained Ginny.

As always before, her parents and sisters approved and encouraged her new undertaking.

The nurse aide class, taught by Carol Wood, R.N. and Betty Foust, Vocational Home Economics teacher, began with twenty-seven students. The nine month course consisted of class training from September until Christmas.

"After Christmas," Ginny added, "we worked one hour a day two days a week in the Crossville hospital. This is when I really began to know what I wanted to do."

Duties and responsibilities at the hospital intrigued the eager student. She avowed, "Everything was interesting! Every patient is so different. There were many amusing experiences resulting from our beginning blunders, but mostly there was the appreciation of the patients for our every task."

Gradually a decision began to form. The work in the hospital, under the supervision of her instructors, gave Ginny the chance she needed to satisfy her curiosity.

"If it hadn't been for the course, I would never have had the opportunity to go into a hospital and see for myself how it operates. I saw that nurses are very important people and that I, too, wanted to have a career as a nurse," she confirmed.

Her decision made, she discussed her future with her instructors and several other nurses. In September of 1967, she enrolled at the Baptist Hospital School of Nursing in Nashville. In this too, she had the backing of her family.

Her parents said, "We are very proud of the self-satisfaction Virginia has found for herself and the service she will render to others. We feel this course gave her the opportunity she needed in making her decision concerning her life's career."

After completing almost half of her first year of this three year program, Ginny is more convinced that her curiosity guided her in the right direction.

"Yes," she answered, "we do have quite a bit of routine work these first months, but there is so much satisfaction to be gained in working on the floor with patients that it more than makes up for the few unpleasant duties."

Reflecting back on the nurse aide course which was responsible for her decision to become a nurse, she mused. "The course couldn't have helped me more. Through it, I found out what I wanted to become. I have no idea where I would have been otherwise—probably somewhere without a definite aim in mind."

Her prospects for the future bring a smile of anticipation to her lips and a tone of excitement to her voice. "Now, I have such a thrilling future ahead of me," expressed Ginny. "I think surgical nursing will be my first choice. Why, I might even like to be an Air Force flight surgical nurse for a while. There are so many possibilities, thanks to that course I took out of curiosity!"

The course to train nurse aides is being offered again this year at Bledsoe County High School. Several girls who knew Ginny have asked her opinion of the course. "I talked to them" she proceeded, "and certainly recommended that they take it. They might want to work as a nurse aide after finishing the course; or, who knows? One of them, like myself, might find that this will lead them into more training."

Just as Ginny's curiosity lead her into one of the many courses offered through Vocational-Technical Education in Tennessee, so are others across the state coming to find a career. Anatole France once said, "The whole art of teaching is only the art of awakening the natural curiosity of young minds for the purpose of satisfying it afterwards."

Vocational-Technical Education in Tennessee, through programs offered in high schools, area vocational-technical schools, and technical institutes, is awakening this natural curiosity and providing the means whereby individuals may satisfy their purposes by becoming qualified and trained in their chosen careers.

A JOB BECOMES A CAREER

Mr. R. C. Hilton, president of Castner-Knott, is a very busy man. In his fifth floor office, surroundings indicate that his job is never-ending. Buyers, merchandisers, advertisers, and business people from far and wide discuss and plan retailing productions which involve many people and large sums of money. Such a man might be expected to be "too busy" to maintain a real interest in people and their individual progress. This is certainly not true with Mr. Hilton. He interrupted a conference with important visitors to discuss one of his employees simply because he is a man who has a genuine concern for youth and their education.

Mr. Hilton spoke with a deep, convincing voice, "I am very proud of Jim. He is going to move right along."

The Jim of whom he spoke is Jim Miller, a former Distributive Education student at East High School in Nashville, Tennessee. Jim is the assistant manager and the merchandising manager for ladies apparel at Castner-Knott's new store in Bowling Green, Kentucky. This is the firm's fifth branch store.

Jim began working for Castner-Knott as a stock boy while a freshman at Litton High School in 1957. As Jim worked, he became aware of the many things to learn about retail marketing. In 1958 he transferred to East High School so that he could enroll in Distributive Education taught there by Mr. Kenneth Anderson, who is now Supervisor of Distributive Education for Metropolitan Nashville Schools.

Distributive Education, one phase of Vocational Education offered in Tennessee, identifies a program of instruction in marketing and distribution. This program sparked Jim's already emerging interest in a career in retailing.

At East High School Jim was an eager and active student. His leadership abilities were recognized by his fellow students who elected him treasurer of the local chapter of Distributive Education Clubs of America (DECA). In

his second year at East, he was elected president of the local DECA chapter. During his term of office, the club won five out of six first places in regional meeting contests - the most East had ever won, according to Mr. Ted Petty, State Supervisor of Distributive Education. Jim was also selected to represent Middle Tennessee at the national DECA convention in Kansas City.

As a participant in the Junior Achievement program, Jim served as president and production manager of the student business organization while in his sophomore and junior years at East.

After graduation from East High School in 1960, Jim attended Belmont College for a quarter and took some courses at the University of Tennessee Nashville Center. His college work was only fair for as Jim explained, "I didn't really care much about it at that time."

He was continuing to work for Castner-Knott, and his job was his primary interest. Jim's parents encouraged his interest in Distributive Education because as Jim commented, "They saw value in it. They felt that my interest coupled with my job added up to a good thing."

It is interesting to note Jim's parents grew more and more interested in Distributive Education, and that Mr. Miller has hired D.E. students to work in his optical company after seeing the benefits of the program. Mrs. Miller has attended a number of the annual Award's Banquets in recent years when D.E. students and their employers are honored.

Castner-Knott opened a store in Donelson in the fall of 1961. Jim really came to the attention of Mr. Hilton during preliminary work prior to this opening.

"I remember sweating out the opening of the Donelson store," Mr. Hilton recalled. "Jim was a Jack-of-all-trades. One night when fixtures just didn't fit and we needed an electric drill, Jim came up with one in no time. We drilled holes and bolted frames and readied the fixtures. I still don't know where he found that drill. He was just invaluable in getting the store open and in handling the many emergency situations which came up."

When the store opened, Jim worked part time in various departments and in the receiving marking room. Two years later, in the fall of 1963, Jim decided to go back to school. His reasons were concrete, "I wanted a college education because I saw what others were doing and I recognizedmy potential in retailing if I had more education."

Thus, he enrolled at Middle Tennessee State University where he again was very active. Although he continued to work for Castner-Knott, Jim graduated with almost a B average in June, 1967. At MTSU he was a member of Pi Sigma Epsilon, a sales and marketing fraternity sponsored by Sales Marketing Executives International; member of American Market Association, college branch; member of Alpha Kappa Psi, professional business fraternity; vice-president of his senior class; member of Circle K, college branch of Kiwanis

International; president of his dormitory; and member of the inter-president's council.

Jim's opportunity for advancement at the Donelson store came when the buyer of the domestics department was drafted. "I had some experience in retailing and my D.E. behind me," Jim explained.

Jim, who was in his senior year of college, was given the job of buyer for the linens and drapery division. "His greatest accomplishment with us," continued Mr. Hilton, "has been in actually managing, merchandising, buying, and doing everything connected with linens, curtains, all beddings, and floor coverings for the Donelson store. The operation, which he completely managed, did close to a $400,000 volume. He did all this while going to school and making A's and B's. I think that is a great accomplishment! Everything he did about this operation was at the top of the list - very well done. Particularily his handling of people and his turnover and profit margin were excellent. We had thought the operation was good before he took it over, but he made it even better."

Kenneth Anderson, Jim's former teacher, is not the least surprised at the success of his student. "Jim has maintained an interest in Distributive Education all through the years and has kept in contact with me about his advances. I am certain he will continue to do well."

What lies ahead for Jim can only be predicted, but everything points to a rewarding career. Mr. Hilton is keeping a keen eye on Jim. "When a marketing class from Western Kentucky University visited our store recently, I had Jim conduct the orientation session with them. I felt that it would be good training for him and also that being a young man, he could speak more on their terms. I observed him doing this and was highly pleased at his ability. We are counting on him to help us train some new people for the Bowling Green store, particularily on the administrative part of the merchandising operation."

Jim speaks modestly but proudly of his new position. "I have some mixed emotions about going. It will be a new experience and a challenge, something I always look forward to. I hate leaving friends and my family; but don't feel like I'll be away from home really because I will be with the company I've been with for 10 years."

The job ahead is a big one, but one for which Jim has been educated. Jim recognizes this fact, "Distributive Education has helped me so much and has given me confidence in myself. When I got in D.E., I realized working was so much more than just having a job. I guess that is the biggest thing D.E. did for me - showed me my job could be made into a career. D.E. gave me the insight to merchandising."

He proceeded, "I have to think where I would be without D.E.! Now I am in a position where I can see my accomplishments. I couldn't be doing anything I would enjoy more."

"Sure I have put in extra hours, but when you are doing what you enjoy, you don't think about the hours - you think about accomplishing something," he reflected.

His willingness to work hasn't gone unnoticed. Mr. Hilton said, "with his education and attitude, Jim certainly has everything ahead of him. The Bowling Green store will be our largest branch store, and we wouldn't send anyone there we didn't believe in."

Jim is cognizant of the faith placed in him and of the responsibility he has to do well for himself as well as for other young people who may follow him. "Castner-Knott is all for youth. They have given me every opportunity to prove my ability and have always been 100% behind youth programs. Their interest in co-operative education programs has always been evident. D.E. students get preference in hiring because of class training and because the Castner-Knott organization believes they should have the chance to prove themselves. If I succeed, it will mean others will have the opportunity I have."

The gratitude Jim feels for the advantages which have come to him through his Distributive Education courses is something he is anxious to express. "I want other students to know that what D.E. has done for me, it can do for them. The possibilities are theirs if they only have the desire to work and learn."

Jim's future ambition is to stay with Castner-Knott and someday merit a top management position. There is every reason to believe this will become a reality.

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Day, Robert L.; Young, Mary R.
A Study to Determine the Adequacy of the Vocational Education Programs at the White Mountains Regional High School, Whitefield, New Hampshire.

New Hampshire Research Coordinating Unit for Vocational-Technical Education, Concord
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*VOCATIONAL EDUCATION; *PROGRAM EVALUATION; *PROGRAM IMPROVEMENT; *STUDENT ATTITUDES; OCCUPATIONS; MANPOWER NEEDS; EMPLOYMENT QUALIFICATIONS; PROGRAM DEVELOPMENT; QUESTIONNAIRES; *VOCATIONAL FOLLOWUP; EMPLOYMENT TRENDS
WHITE MOUNTAINS REGIONAL HIGH SCHOOL, WHITEFIELD, NEW HAMPSHIRE

In order to more realistically plan the vocational program of the White Mountains Regional High School, a study was conducted to determine the occupational trends of recent high school graduates; the occupations with manpower shortages; the jobs within an occupation where more training is needed, the specific training recommended by employers; and new areas in which occupational training is needed. Data were collected by survey instruments administered to area businesses, and by questionnaires developed for each of the vocational subject areas and administered to the graduates as well as the dropouts for the years 1963 through 1967. Responses were received from 53 percent of the graduates and 33 percent of the dropouts. Conclusions include: (1) a potential two-thirds of the students would benefit from high school occupational training programs, and (2) the most logical area of expansion in vocational training programs would be in the construction field, particularly carpentry and brick masonry, and in industrial woodworking. (CH)

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A STUDY TO DETERMINE THE ADEQUACY OF THE VOCATIONAL EDUCATION PROGRAMS AT THE WHITE MOUNTAINS REGIONAL HIGH SCHOOL, WHITEFIELD, NEW HAMPSHIRE

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CHAPTER I

Introduction

White Mountains Regional High School was in operation for the first time in September of 1967. It replaced the high schools in Lancaster and Whitefield, New Hampshire and serves the communities of Lancaster, Whitefield, Dalton, Jefferson and Carroll.

When planning the curriculum for the new high school, it was decided that vocational courses should be included as part of the new program. The courses decided upon were hotel/motel aide, industrial drafting, recreational management, business education and vocational electricity. It is around these courses that the White Mountains Regional High School is attempting to provide a solid vocational training program for the non-college bound student.

It is the belief of this writer that we need not take the time to justify the necessity for vocational training, but we must justify what type of training we are giving. Some of the questions that we must answer are the following: Are we providing the student with a skill that can be used when seeking suitable employment? Can business and industry fill some of their employment needs with graduates of our school? Are we cognizant of future employment trends so that we may provide skills needed by industry in a changing business world? With these basic questions in mind, and through the efforts of the administration and vocational departments of White Mountains Regional High School and the New Hampshire Research Coordinating Unit, this study came into being.

Objectives of Study

The objectives of this study were:

A. To determine the occupational trends of recent graduates and students of the former Lancaster and Whitefield High Schools.

B. To determine the occupations in which there are the greatest employment demands.

C. To determine the jobs within an occupation in which training is needed.

D. To determine job placement opportunities now available.

E. To determine which training programs should be expanded, altered, or cut back.

F. To determine any new areas in which occupational training is needed.

Basic Assumptions

The basic assumptions upon which this study is structured are as follow:

1. Recent high school graduates are vitally concerned with employment and job training. Much worthwhile information can be obtained from these graduates, provided an effective survey instrument could be developed and a sound sampling obtained.

2. Employers are vitally interested in obtaining people who can fit into company employment with a minimum of company training. They also need to fill positions within their companies for efficient operation. If a survey of business and industry is taken, worthwhile information will be provided from these prospective employers.

3. Combination of information from graduates and employers will provide information needed to run a proper vocational training program. A proper vocational program is one that provides up-to-date skill training beneficial to both worker and employer.

Methods of Investigation

1. Questionnaires were designed and sent to all graduates and drop-outs of the Lancaster and Whitefield High Schools for the years 1963 through 1967.
2. Follow-up work, including sending second questionnaires, personal contacts, and telephone contacts were used to insure a sound number of respondents.
3. Survey instruments were developed to obtain job-related information from businesses in the immediate area. These survey instruments were of different types. Each one was designed to seek pertinent information for the present and possible future vocational courses at the White Mountains Regional High School. These courses were separated and listed under Trade and Industry Education, Business Education, Recreational Management Education, and Hotel/Motel Education. The manufacturers and businesses employing over ten people were contacted by personal representatives of the survey team and the employers of less than ten were contacted by mail. The towns and cities of Whitefield, Lancaster, Carroll, Jefferson, Dalton, Berlin, Littleton, Lisbon, Franconia and Northumberland were surveyed for the purpose of this study.

The data was collected and compiled by the work study aides. Charts were prepared from the compiled information and presented to the vocational work/study advisory committee for an analysis of the accumulated data.

Limitations of the Study

The study was limited to the time period of July 1968 through February 1969.

The geographical area included the five towns comprising the White Mountains Regional School District, the Berlin-Gorham area, the Northumberland area and the Littleton-Lisbon area.

The businesses surveyed included manufacturers, construction companies, resort and recreation businesses and 25 percent of business enterprises employing less than ten people.

Definition of Terms

Recreational Management Education refers to a four-year vocational course at the White Mountains Regional High School that provides skill training to be used in the fast developing resort and recreational industries in the local area.

Hotel-Motel Education refers to a two-year vocational program at the high school that presently trains students for employment in the Hotel-Motel industry.

CHAPTER II

Review of Literature

A study of Coos County, completed in 1965, by the James W. Sewall Company had this to say in regard to education:

> "More significance should be given to vocational training in Coos County. In the future, it should be regarded as a tool to serve the county and its valuable human resources. Exporting young talent should not become an industry in Coos County because there are literally no returns. The development of vocational training programs geared to Coos County and its potentials should be a popular objective. This implies very close cooperation between educators and industry, and also those engaged in promoting the potentials of the county."

There was no vocational training provided in the former high schools of Whitefield and Lancaster. The adoption of the present vocational training courses in the White Mountains Regional High School can be partly attributed to the recommendations made by the James Sewall Company report and the efforts of the RAD Standing Committee on Coos County Planning. The Sewall report initiated a planning program for Coos County to assist and promote growth of the county. The research work in our Vocational Education Evaluation Survey can be looked upon as a continuation in one area of Coos County development. The findings of this research study should contribute significantly to the development and implementation of a solid vocational training program at the White Mountains Regional High School.

CHAPTER III

Methodology

Design

All survey instruments used in this study were developed after several consultations with the vocational staff at the White Mountains Regional High School. These meetings were held with one objective in mind. That objective was to determine what information was needed in each vocational area. The meetings helped to narrow our objectives and to develop specific questions that would be used in our survey instruments.

Population and Sample Graduates and Dropouts

Questionnaires were sent to all 408 graduates of Lancaster and Whitefield, New Hampshire High Schools for the years 1963-1967. The same questionnaire was sent to 71 dropouts of those years (1963-1967).

Data Collection and Instruments - Graduates and Dropouts

The purpose of using these groups was to determine employment trends, attitudes toward vocational training, specific vocational skills needed and education received beyond high school.

This questionnaire was developed and tried out on a small group of students and teachers before it became finalized.

A fifty-three percent response was received from graduates and a 33% response from dropouts.

Population and Sample - Business

A separate questionnaire was developed for each of the following areas: 1. Contractors 2. Manufacturers 3. Hotel-Motel-Restaurants 4. Recreation Industry 5. Companies employing office workers.

Questionnaires were mailed to 25% of those business employing less than ten people. A work-study aide was sent to each company employing more than ten people.

Data Collection and Instruments - Business

Responses were received from 30 manufacturers and contractors, 31 companies employing office workers and 30 Hotel-Motel and Recreation businesses.

These figures represent a 50% response from the selected small companies and a 100% response from all manufacturers in the area employing more than ten people.

The purpose of these questionnaires was to determine the numbers of people employed in specific areas, additional workers needed, skills most desirable in workers, personal qualities most desirable in workers and attitudes of businessmen toward cooperative education programs. In these questionnaires, particular attention was given to those areas that might be included in an expansion of the White Mountains Regional High School vocational program as well as the present vocational programs.

Note: Because the White Mountains Regional High School is an area-vocational school, an expansion of vocational programs could only include those programs not given at nearby schools. Therefore, certain occupations were largely ignored by the survey.

Analysis of Data

Answers to each question were tabulated. The results of each question is shown in graphical or tabular form.

Only statistics that were deemed consistent with the objectives of the study are included in the report.

A list of findings was made from the graphs and tables and is shown in Chapter IV under Summary of Findings. All conclusions and recommendations were drawn from the findings.

Time Schedule

July 22, 1968--August 2	Preparation of graduate follow-up instruments.
August 5--August 9	Distribution of graduate follow-up instrument.
August 12--August 23	Planning and preparation of industrial survey instruments.
August 26--October 4	Industrial survey and second follow-up of unreturned graduate questionnaires.
October 7--November 1	Compiling data from student follow-up.
November 4--November 22	Compiling data from industrial survey follow-up work.
November 25--January 6	Preparing graphs and tables from accumulated data.
January 6--January 10	Preparing preliminary report information.
January 13--January 17	Typing and revisions of report material.
January 20--January 31	Proofreading and preparation of major portion of final report, compiling appendix material.
February 3--February 14	Preparing graphs in finished form. Presentation of findings to vocational staff. Writing of conclusions and recommendations.
February 17--February 28	Typing and printing final report.

CHAPTER IV

The Data

The data in this chapter is compiled from information supplied by 53% of the graduates, 33% of the dropouts of former Lancaster and Whitefield High Schools during 1963-1967, and 81 business firms in the work-study area. The data is contained in three major groups: 1. graduate data; 2. dropout data; 3. business firm data.

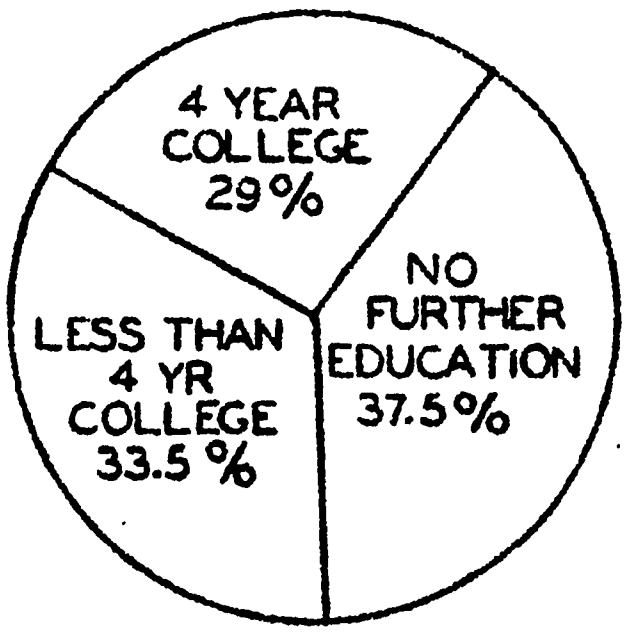
Graduate Data

Educational Training Beyond High School

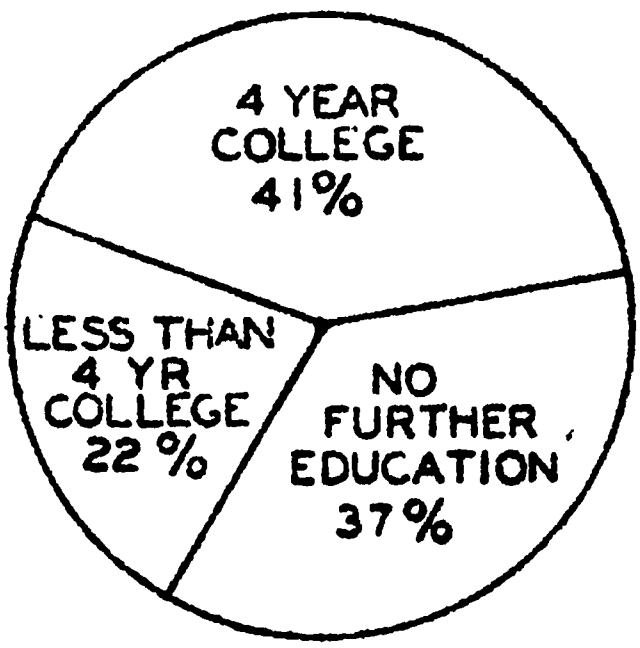
Graduates were asked what schools they attended after high school. In Figure 1 the information was lumped into three categories: those with no further training; those enrolled or completing a four-year college program; and those enrolled in or completing less than four years of college.

The figures are graphed separately for male and female. It is interesting to note that the same percentage of male and female graduates did not receive further education (37%) and that more females received less than a four-year college training than males. (40% versus 22%) The ratio of four-year college to less than four-year college was almost exactly reversed for males and females.

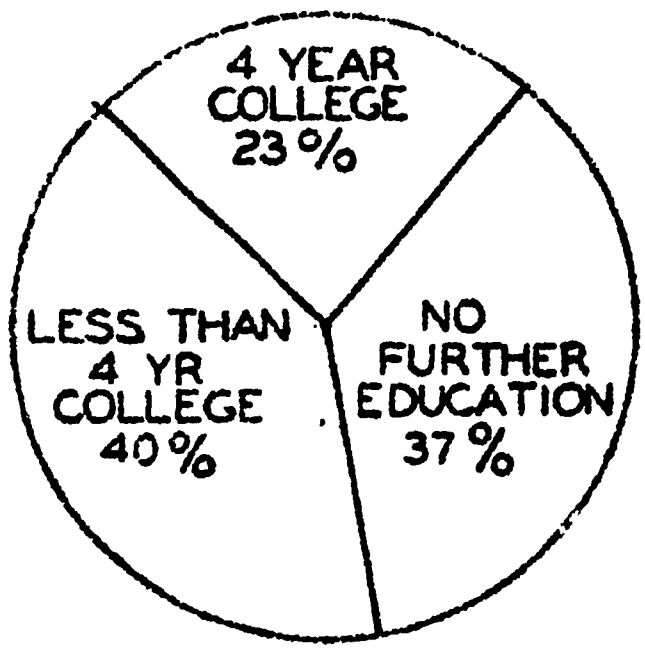
EDUCATION BEYOND HIGH SCHOOL



ALL GRADUATES



MALE GRADUATES



FEMALE GRADUATES

FIG. 1

Employment Percentages for Graduates

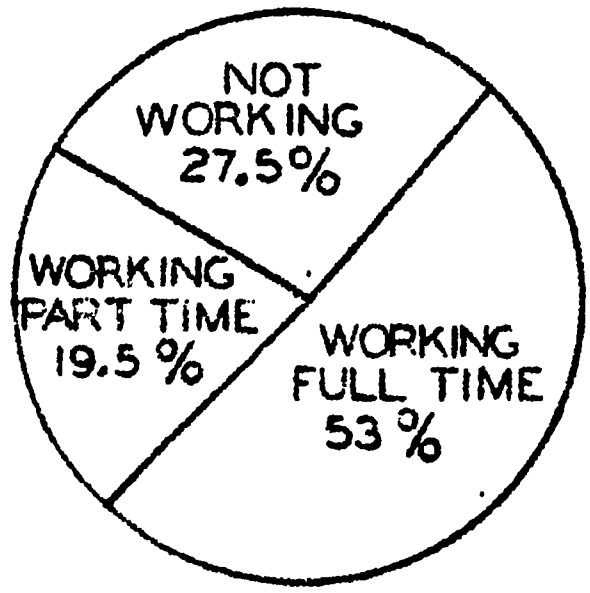
Figure 2 represents employment percentages of graduates. Represented are full-time and unemployed people. Fifty-three percent of the graduates were found to be working full time.

The figures show that the percent of males and females working full time is nearly the same. (52%-57%).

The high percentage of unemployed and part-time workers may be due to the large number of graduates still going to school. These graduates answered that they were not working or were working part-time. Twice as many female workers (32%) as male (16%) workers were not working.

A separate tabulation of graduates who had been out of high school five years showed that 57% were working full time; 35% part-time; 34% not working. Most of those not working were females.

GRADUATES EMPLOYMENT PERCENTAGES



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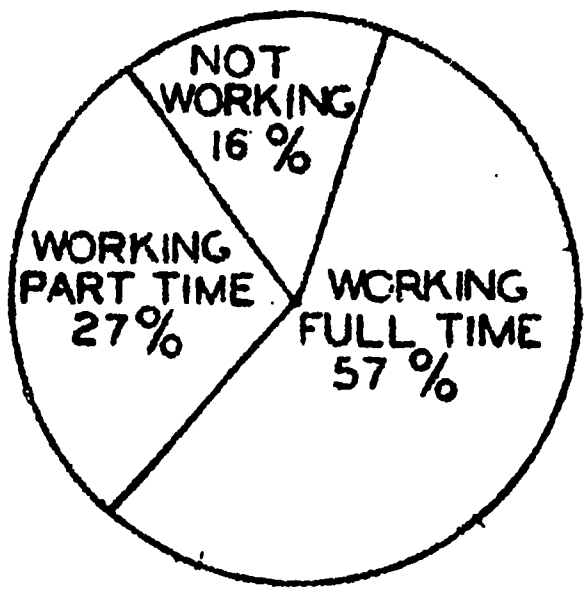
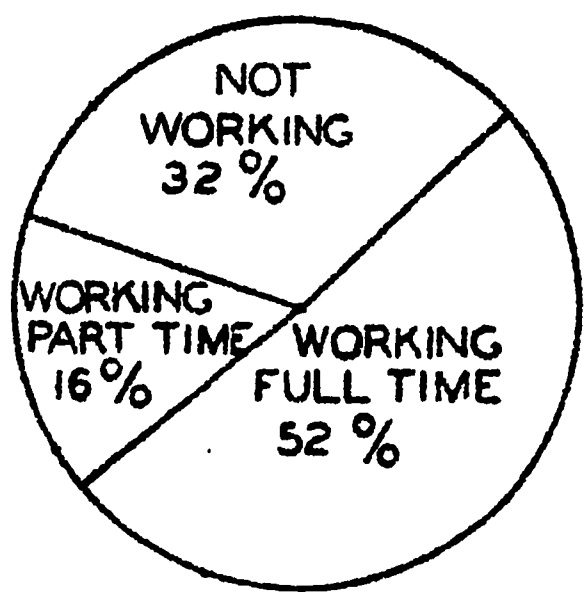




MALE GRADUATES

FEMALE GRADUATES

FIG. 2

Graduates' Areas of Employment

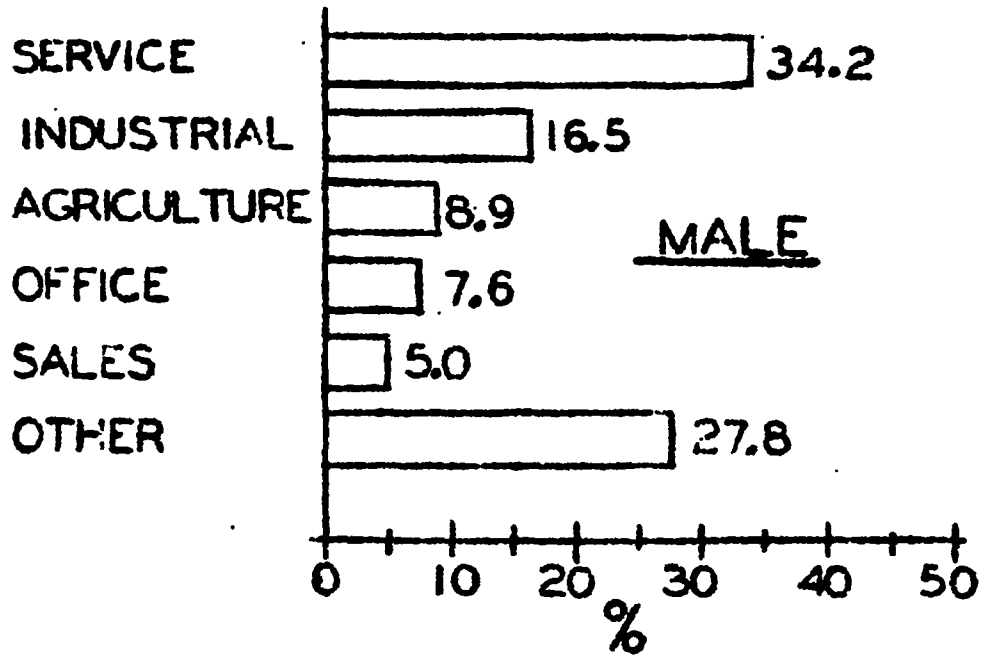
Figure 3 represents the area of employment for graduates. The category of "other" includes the unclassified students and those people in the armed forces. The service category includes hotel-motel, restaurant, recreation, construction, transportation, insurance, utilities, teachers, nurses, research and government. Agriculture includes farming or related to farming, forestry and conservation.

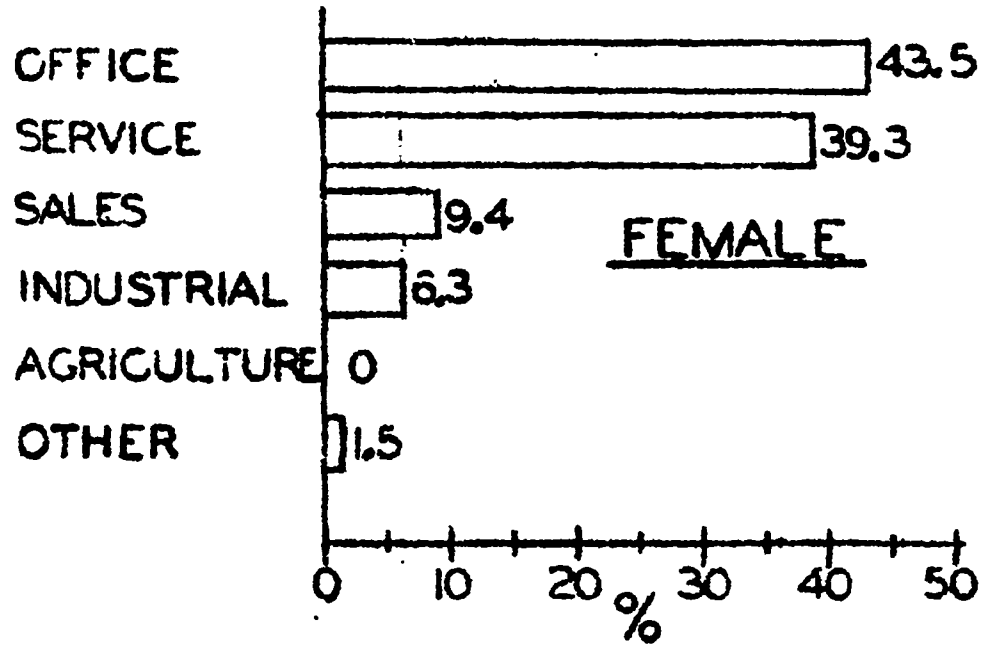
The lowest percentage of graduates are employed in agriculture; the highest in service.

Forty-four percent of all females were employed in office work but only eight percent of the males were employed in this category.

The largest percent of males were employed in the service and industrial categories. (34.2% and 16.5% respectively). Of those in the service category, the construction business claims the largest share. A significant number of females were employed in the medical field. They were all either RN's or LPN's. Sales accounted for about 8% of all graduates. In the service category for females, nursing, beauticians, cosmetologists and waitresses were the predominant classifications.

GRADUATES AREAS OF EMPLOYMENT





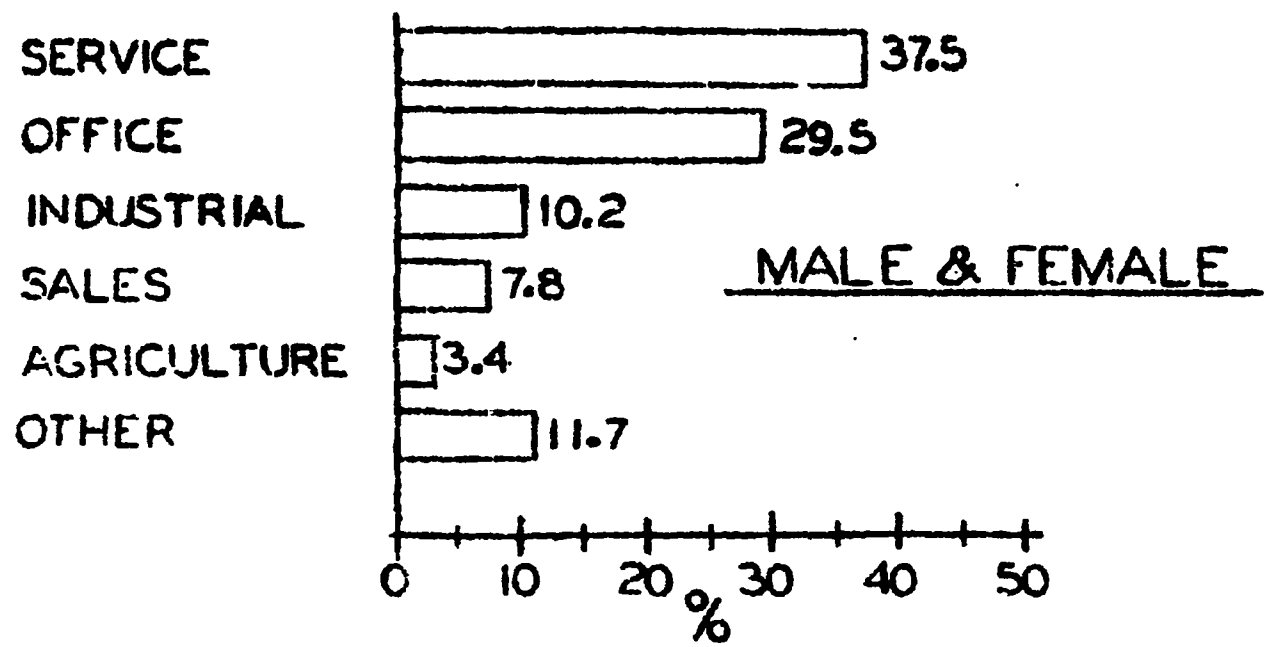


FIG 3

Vocational Skills Most Valuable to Graduates

Graduates were presented a list of vocational skills and subjects (see Appendix A) and were asked to rate each skill or subject according to its value to the graduate. Figures 4, 5, 6 and 7 represent responses in the areas of Trade and Industrial Education, Business Education, Recreation Education and Hotel-Motel Education respectively.

Note: Business Education-type courses were the only courses offered or taken by the respondents when in high school.

Trade and Industry

Figure 4 shows that under Trade and Industry, carpentry, drafting and electricity were rated equal as to their value and were by far the leading categories.

VOCATIONAL SKILLS MOST VALUABLE

TRADE & INDUSTRY

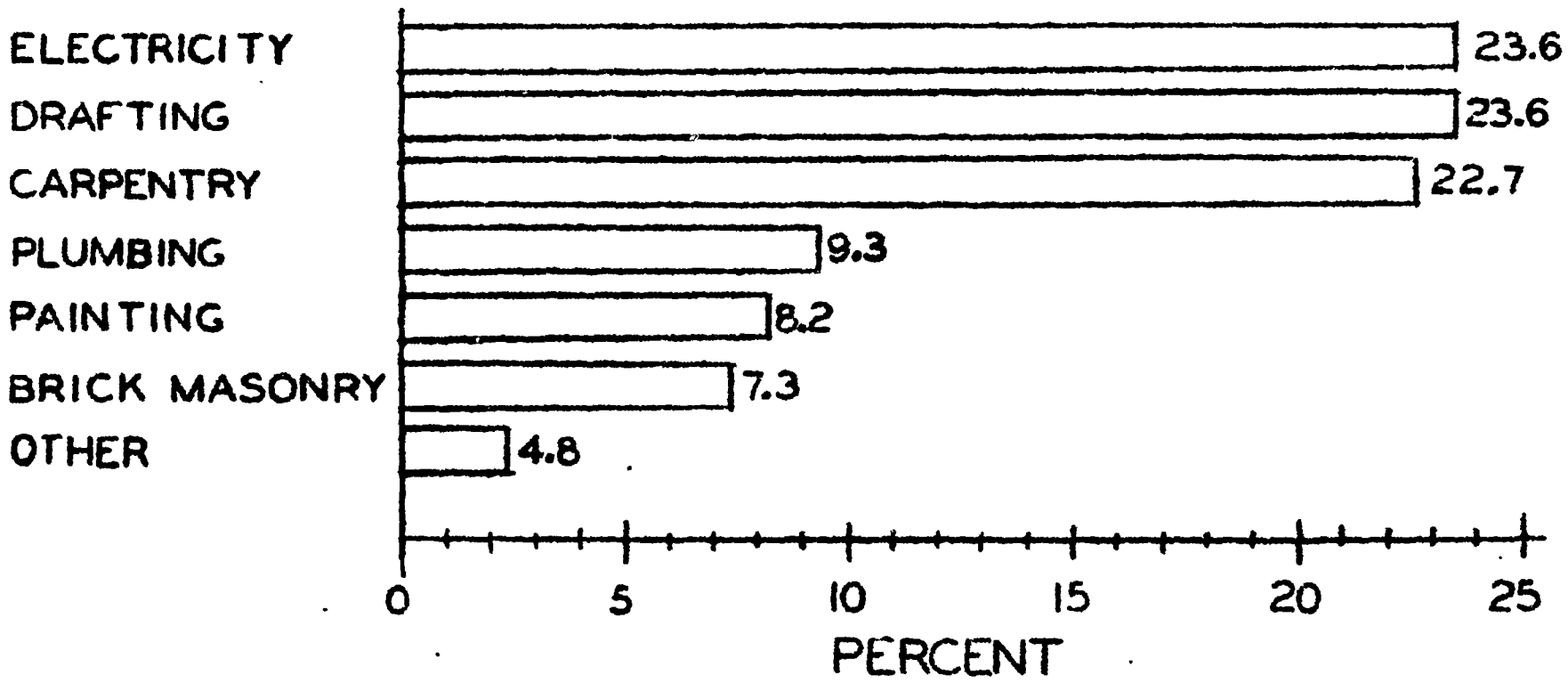


FIG 4

Business Education

Figure 5 shows that typing is considered the most valuable skill. Bookkeeping was the next highest rated category, followed by business English, business math, office practice, stenography, business law and retail merchandising.

Business English, business math and office practice were rated very close together and third behind bookkeeping.

VOCATIONAL SKILLS MOST VALUABLE
BUSINESS EDUCATION

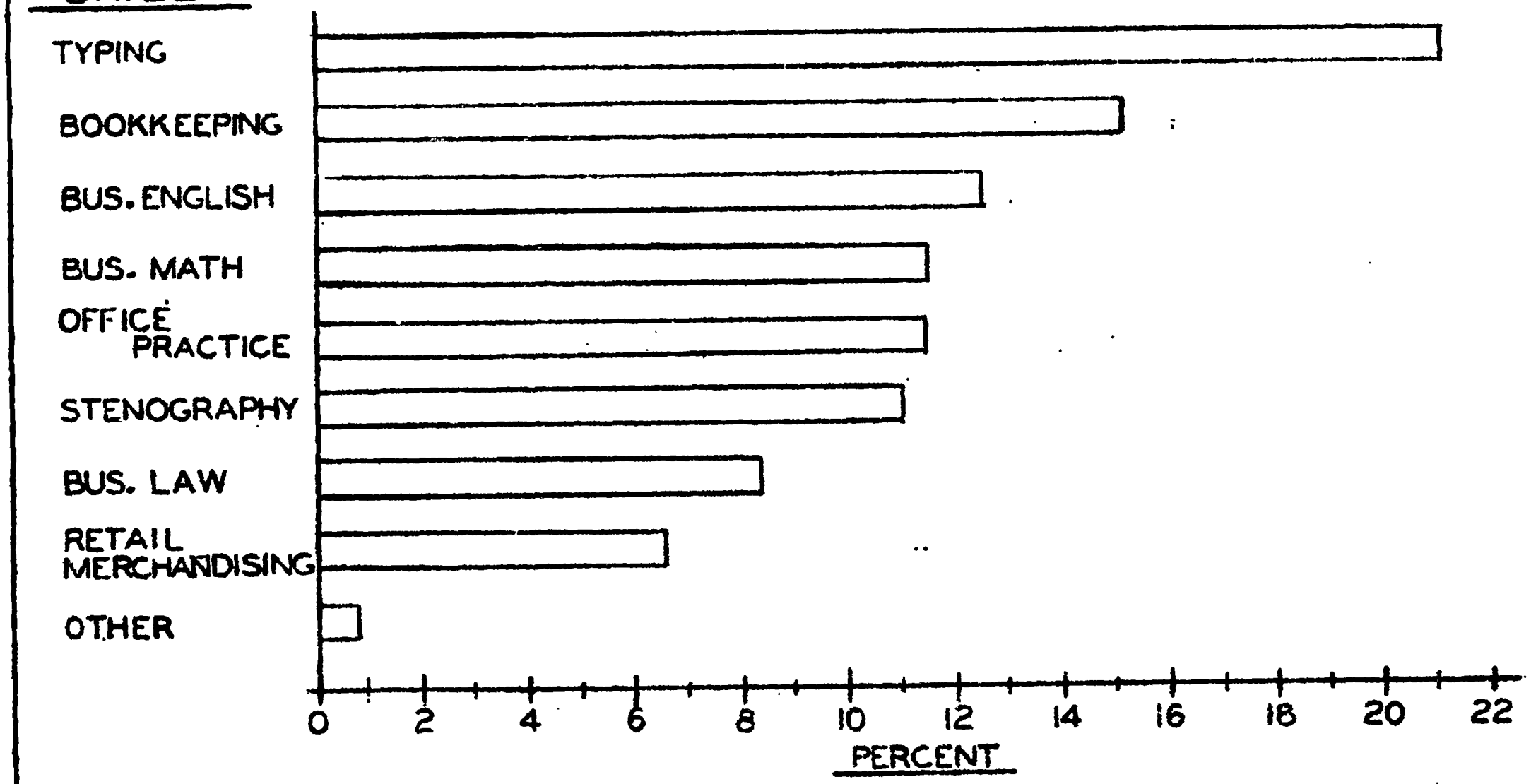


FIG 5

Recreational Management Education

As shown in Figure 6, conservation was considered to be the skill of greatest value followed by business development, equipment operation, and animal science. The category of animal science was considered valuable by those people who had gone into RN training or LPN training. This high rating may be due to the close relationship of animal science to the required courses taken by those people in the nursing field.

VOCATIONAL SKILLS MOST VALUABLE

RECREATIONAL MANAGEM'T EDUCATION

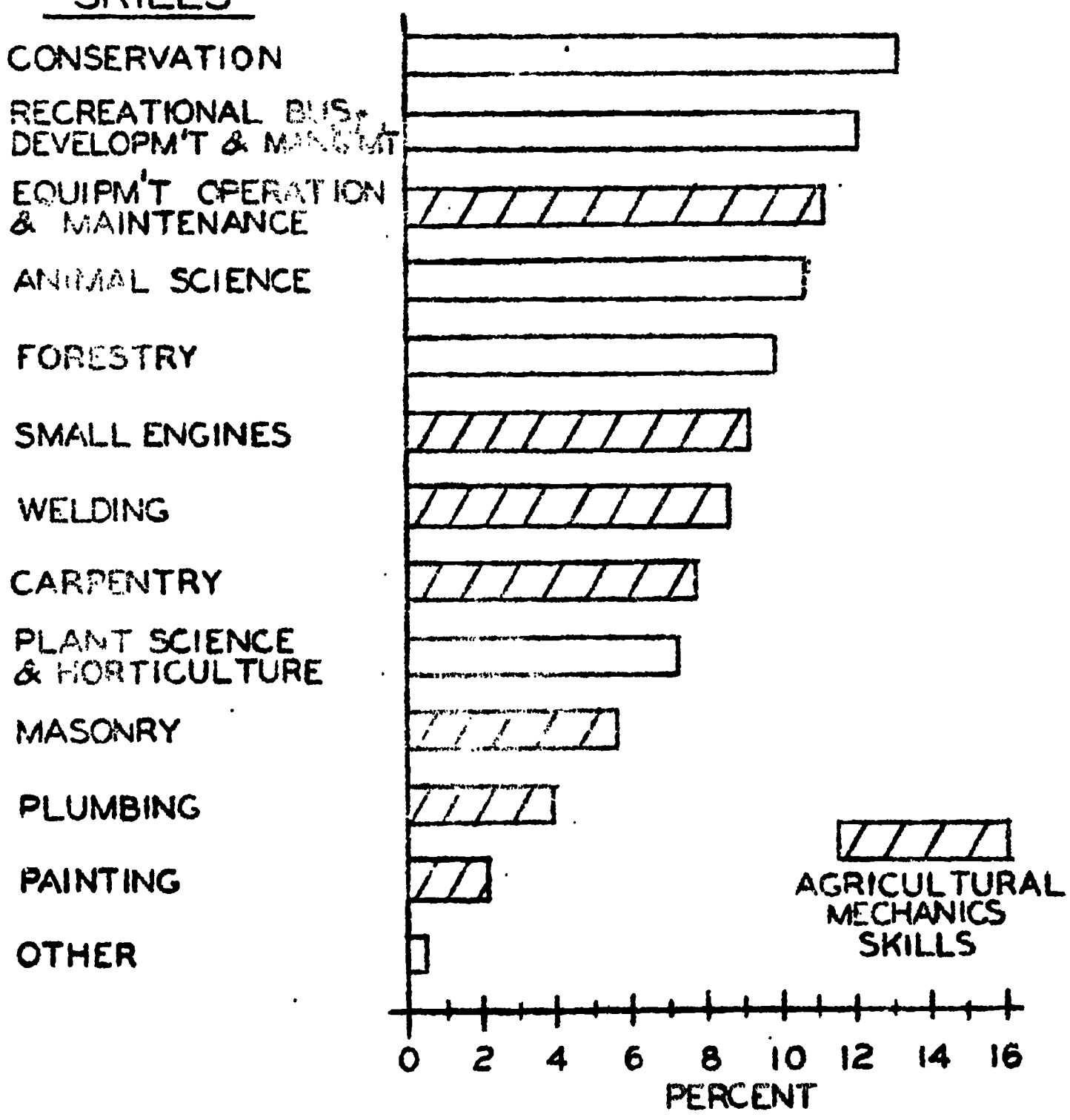


FIG 6

Hotel-Motel Education Value of Skills

In Figure 7, management was rated as the skill most valuable to graduates followed by salesmanship, planning and decorating skills, culinary arts, advertising and housekeeping skills.

The latter five are rated very close together. Desk clerk skills, waitress skills and cleaning equipment and maintenance were not rated high by graduates.

VOCATIONAL SKILLS
MOST VALUABLE
HOTEL-MOTEL EDUCATION

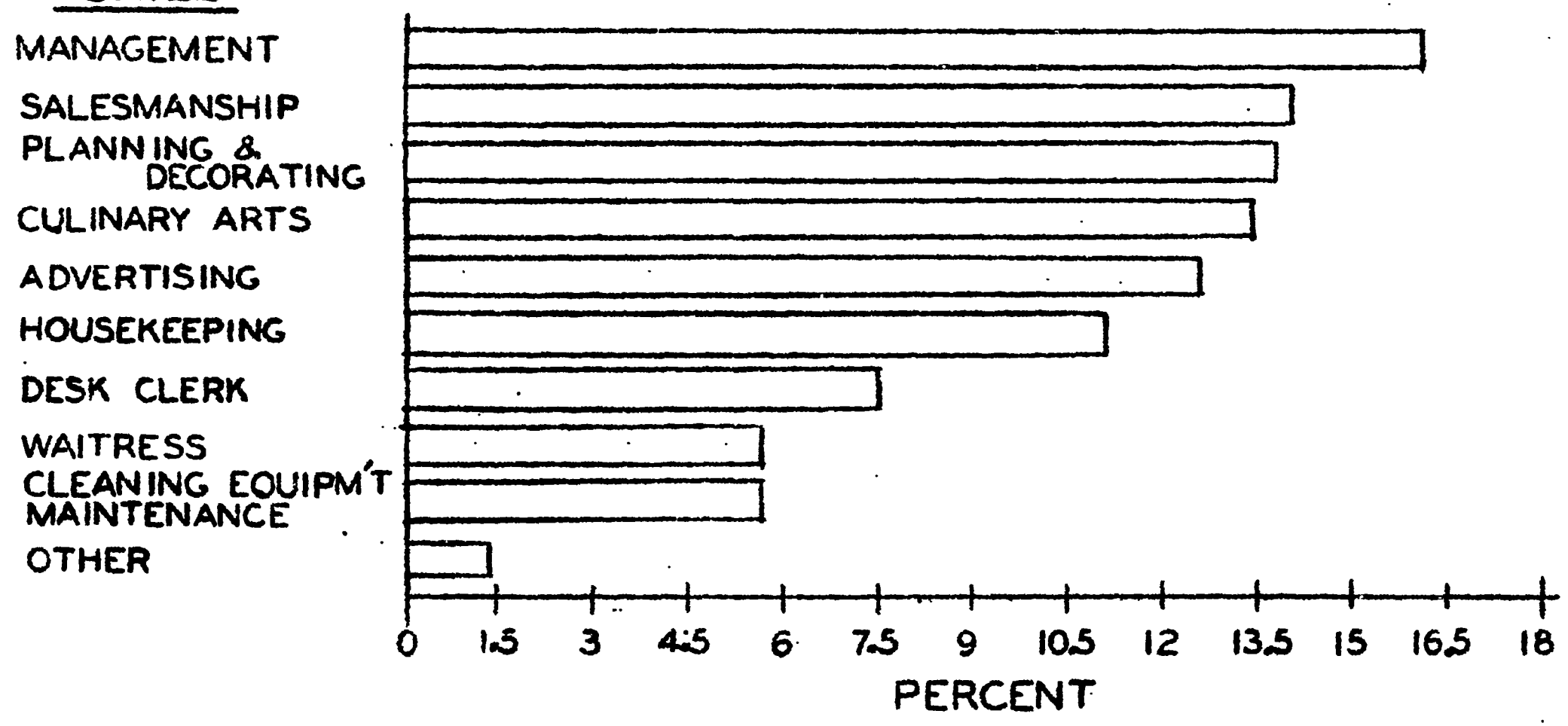


FIG. 7

Dropout Data

Vocational Skills Most Valuable to Dropouts

Dropouts were presented a list of vocational skills and subjects the same as graduates (see Appendix A) and were asked to rate each subject according to its value to the dropout. Figures 8, 9, 10 and 11 represent the responses in each area.

Trade and Industry

In Figure 8 drafting had the highest value rating followed closely by carpentry and electricity. Dropout and graduate graphs (Figure 4) show similar response patterns.

Figure 8

Vocational Skills Most Valuable to Dropouts

Trade & Industrial Education

Skill	No. of Responses	Percent
Drafting	4	21.0
Carpentry	3	15.8
Electricity	3	15.8
Brick Masonry	2	10.5
Plumbing	2	10.5
Painting	2	10.5
Other	3	15.8

Business Education

Figure 9 shows that typing had the most value for dropouts followed by business math and bookkeeping. Dropout and graduate charts (Figure 5) show similar response patterns.

Figure 9

Vocational Skills Most Valuable to Dropouts

Business Education

Skill	No. of Responses	Percent
Typing	7	19.5
Bookkeeping	5	13.8
Business Math	5	13.8
Office Practice	4	11.1
Business English	4	11.1
Retail Merchandising	4	11.1
Stenography	3	8.5
Business Law	3	8.5
Other	1	2.8

Recreation Education

In Figure 10, welding skills, small engines, equipment operation and maintenance skills have the greatest value. Those skills related to building construction were rated equally important and close in value to the previous four. The responses for dropouts were almost exactly opposite from that of graduates in regard to comparison of value of skills.

Figure 10

Vocational Skills Most Valuable to Dropouts

Recreational Management Education

Skill	No. of Responses	Percent
Equipment Operation & Maintenance	5	11.9
Small Engines	5	11.9
Welding	5	11.9
Carpentry	4	9.5
Masonry	4	9.5
Painting	3	7.2
Plumbing	3	7.2
Forestry	3	7.2
Plant Science & Horticulture	2	4.8
Animal Science	2	4.8
Conservation	2	4.8
Recreational Business Development & Management	2	4.8
Other	2	4.8

Hotel-Motel Education

Figure 11 shows that waitress skills and housekeeping skills have the most value for dropouts followed by cleaning equipment maintenance. Comparing the dropouts' responses with those of graduates, it is noted that waitress skills and cleaning equipment maintenance received a very low rating by graduates.

Figure 11

Vocational Skills Most Valuable to Dropouts

Hotel-Motel Education

Skill	No. of Responses	Percent
Waitress	5	16.5
Housekeeping	5	16.5
Cleaning Equipment Maintenance	4	13.3
Salesmanship	3	10.0
Management	3	10.0
Desk Clerk	2	6.5
Advertising	2	6.5
Culinary Arts	2	6.5
Planning & Decorating	2	6.5
Other	2	6.5

Business Firms Data

Skilled Trades

Responses from 30 companies representing 13 skilled trades and 617 workers are shown in Figures 12 and 13.

Distribution of Workers' Skilled Trades

Figure 12 shows that the largest single category among the skilled trades is carpenters and industrial woodworkers followed by millwrights, plumbers, electricians, machinists and welders. The lowest category is draftsmen.

SKILLED TRADES
BY OCCUPATION

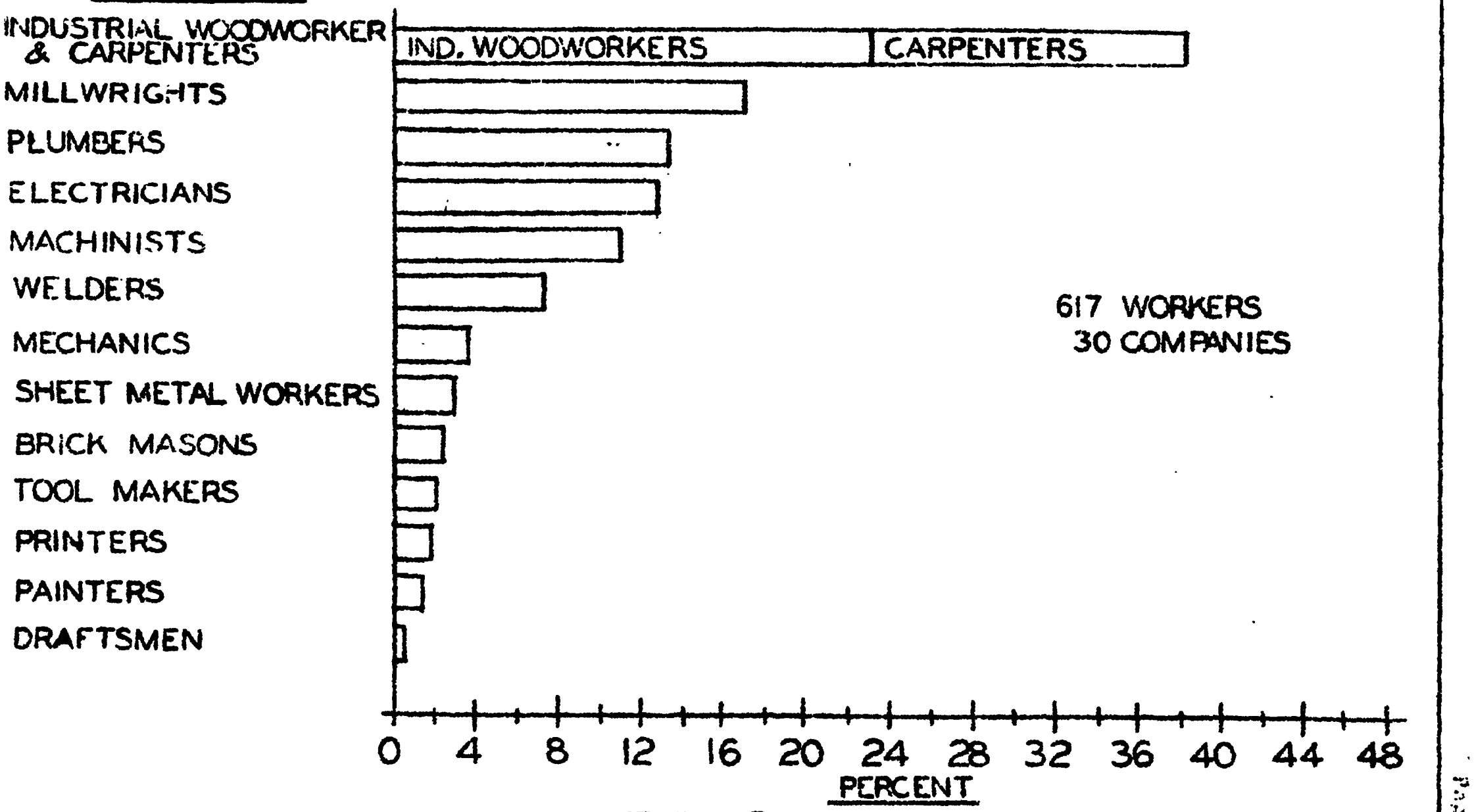


FIG 12

Skills Most Desirable in Tradesman

Employees were asked to check the skills most desirable in a tradesman. Figure 13 represents the percent response for each category (a one hundred percent response for any one category would mean that all 30 companies considered that category to be important).

Blueprint reading, use of tools and equipment, basic manual skills, safety and trade math, received the highest rating. Trade theory received the lowest rating.

SKILLED TRADES

ABILITIES MOST IMPORTANT IN TRADESMEN ACCORDING TO EMPLOYERS

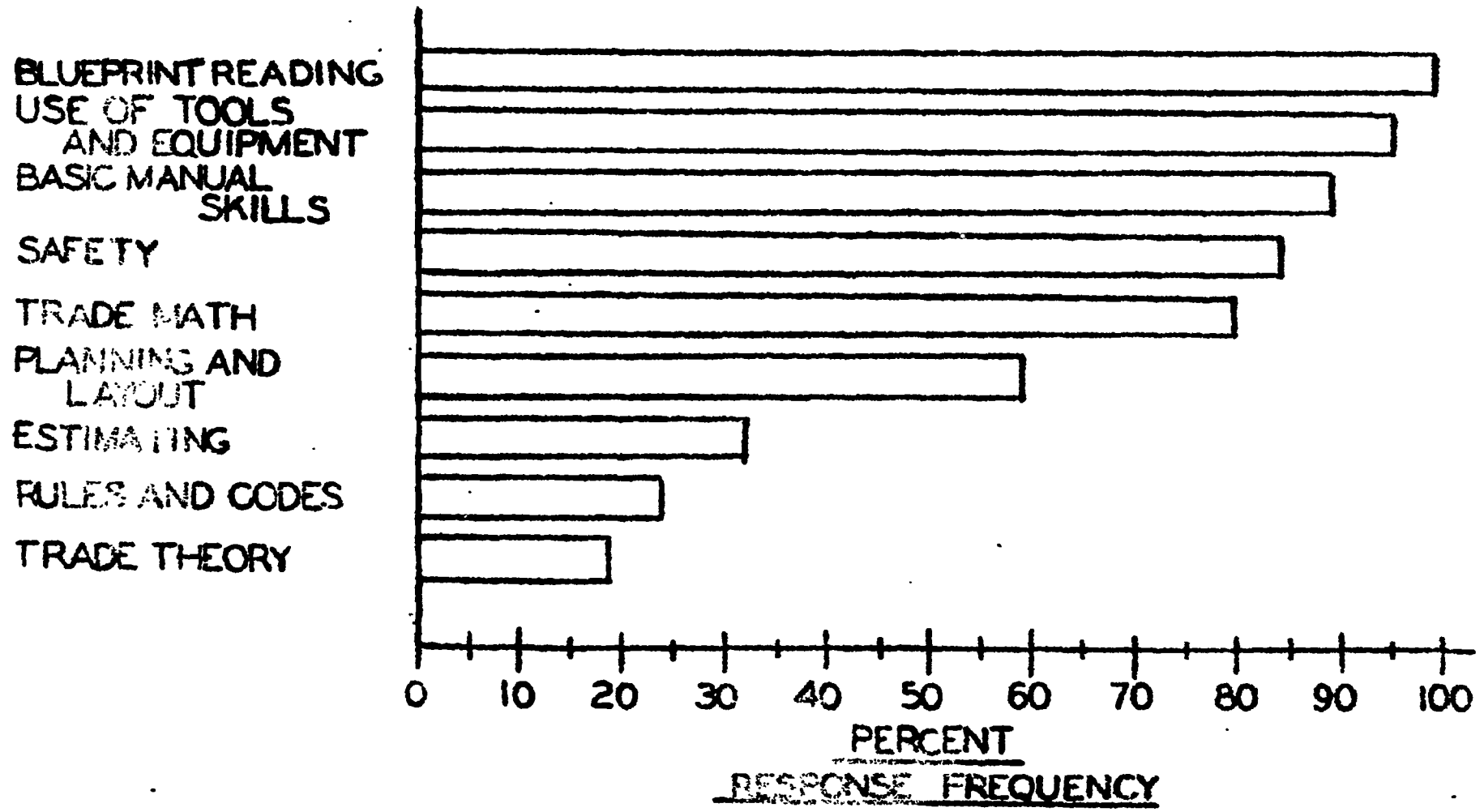


FIG. 13

Office Workers

Figures 14 through 21 represent responses from 31 companies employing a total of 300 office workers.

Office Worker Occupational Classifications

Figure 14 shows that office clerks are the single highest category among office workers. (This category includes general, payroll, production, billing and inventory clerks). The next highest categories were secretaries, bookkeepers, clerk-typists, office machine operators, management-supervisors, bookkeeping machine operators and stenographer-typists, respectively.

All the categories were predominately female workers with the exception of supervisory positions.

OFFICE WORKERS
BY OCCUPATION GROUP

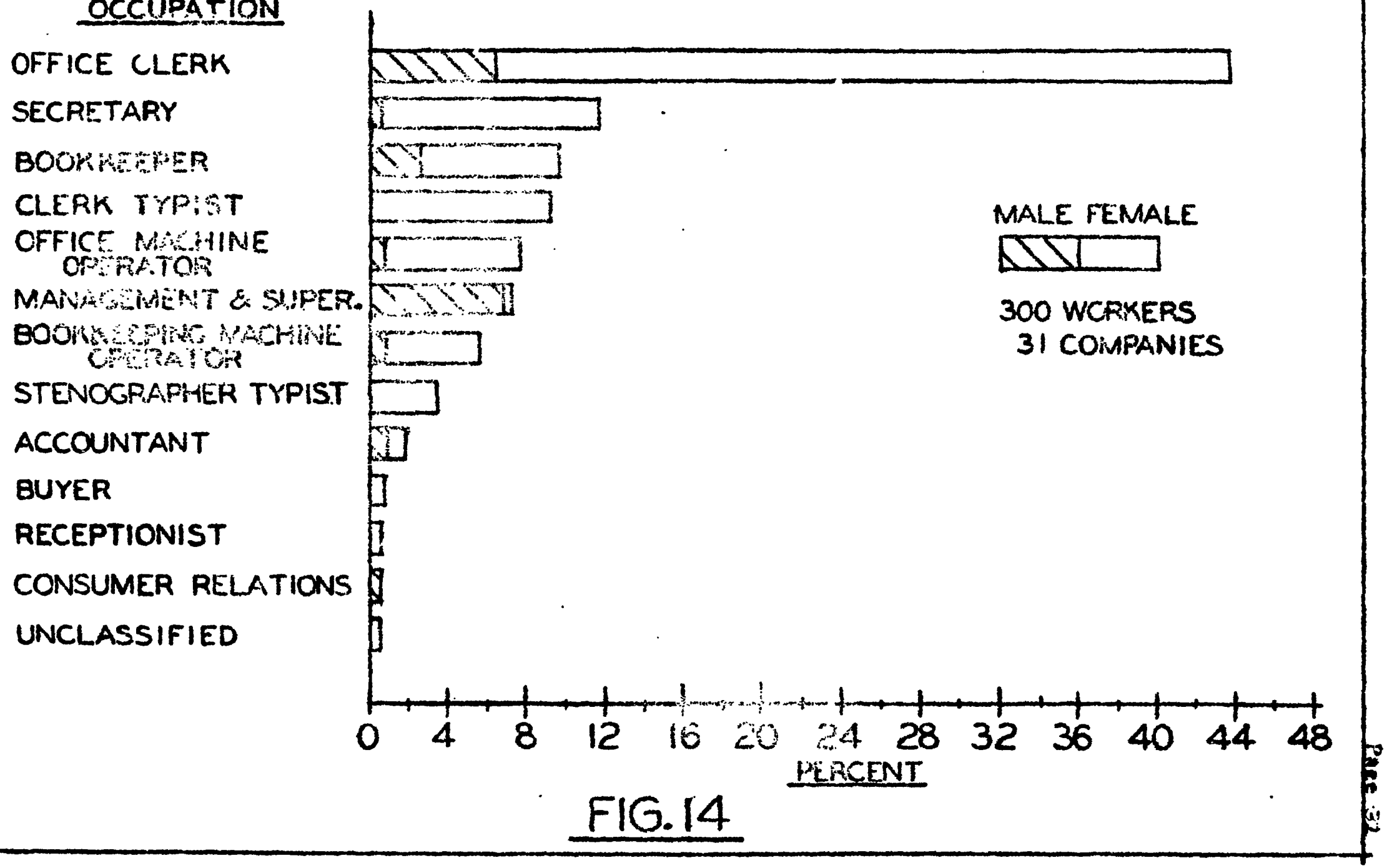


FIG. 14

Most Important Subjects for Office Workers

Business men were asked to rate 12 subjects in the order of their importance 1, 2, 3, etc. Figure 15 shows their relative importance according to the employer.

Typing, bookkeeping, business arithmetic are the three most important subjects.

Figure 15

Office Work Subjects Considered By
Business To Be Important
Rank 1-12

Rank	Subject	Average Rank	No. of Responses
1	Typing	2.15	26
2	Bookkeeping	2.72	21
3	Business Arithmetic	3.33	21
4	Office Machines	4.00	20
5	Introduction to Business	4.93	15
6	Shorthand	5.8	15
7	Business Management	5.85	15
8	Salesmanship	6.75	12
9	Merchandising	7.9	11
10	Data Processing	8.0	10
11	Retailing	8.33	9
12	Business Law	8.67	9

Personal Qualities Most Desired in Office Workers

Employers ere asked to rate ten personal qualities of office workers 1, 2, 3, etc., according to their importance.

Trustworthiness, attitude, dependability and initiative were the most important while appearance, punctuality and health were considered least important.

Figure 16

Employers Rating of Personal Qualities
Desirable in Office Workers

Rank	Personal Quality	Average Rating 1 to 10
1	Trustworthiness	2.62
2	Attitude	2.88
3	Dependability	3.39
4	Initiative	4.04
5	Cooperativeness	4.38
6	Loyalty	5.25
7	Courtesy	5.66
8	Appearance	6.24
9	Punctuality	6.95
10	Health	7.78

Employment Tests Office Workers

Figure 17 shows the statistics on companies requiring employment tests.

Figure 17

Businesses Requiring Employment Tests For New Office Workers

	Required	Not Required	No Answer	Total
No. of Businesses	11	18	2	31
%	35.5	58	6.5	100

Type Employment Tests Office Workers

Figure 18 shows the breakdown of type of tests given by employers of office workers:

Figure 18

Type Tests Used by Companies for New Office Workers

Type Test	No. of Companies Giving Test
Typing	7
General Aptitude	1
Key Punch	1
Proofreading	1
Handwriting	1
Arithmetic	1
Shorthand	1

Companies Willing to Provide on-the-job Office Training

Figure 19 shows the statistics on companies' attitudes toward cooperative office education. A significant number of employers were willing to consider cooperative education with the White Mountains Regional High School Business Education Department.

Figure 19

Companies Willing to Provide On-The-Job Office Training

	Willing to Provide	Unwilling	Possible	No Answer	Total
No. of Companies	13	12	3	3	31
%	41.8	38.6	9.8	9.8	100

Shorthand Speed Requirements

In Figure 20 the breakdown of shorthand speed requirements are given. Sixty to eighty words per minute was the requirement for those companies with speed requirements.

Figure 20

Shorthand Speeds Required for Initial Employment

Speed WPM	Number of Companies
60	6
80	5
100	1
120	0
No requirement	7
No answer	6

Typing Speed Requirements

In Figure 21 the breakdown of typing speed requirements are given. Forty to sixty words per minute was the general speed requirements with fifty as the average speed.

Figure 21

Typing Speed Required for Initial Employment

Speed WPM	Number of Companies
60	7
50	12
40	5
70	--
No requirement	1
No answer	5

Machines Used by Office Employees

Businessmen were asked to list the office machines (other than typewriters) used by their office employees. Figure 22 represents responses from 31 companies employing office workers. The largest single category was photocopying followed by adding machine, transcription machine, and duplicators.

Figure 22

Type Machine	No. Of Companies Using	Percent of Companies Using
Photocopying (including Xerox)	25	81.0%
Adding and Calculators		
Full keyboard	19	61.0%
Printing	8	26.0%
Key Driven	8	26.0%
Rotary	7	23.0%
Transcription	15	48.0%
Fluid Duplicators	12	39.0%
Stencil Duplicators	8	26.0%
Bookkeeping	7	23.0%
Billing	3	9.7%
Proof	3	9.7%
Posting	2	6.5%
Telex-teletype	1	3.2%
Tellers	1	3.2%
Cash Register	1	3.2%
Paper Shredder	1	3.2%
I.B.M. Computer 360-20	1	3.2%
Electric Canon Calculator	1	3.2%
Comptometer	1	3.2%
I.B.M. 1052 Teleprompter	1	3.2%
Electronic Accounting NCR	1	3.2%

Business Firms Willing to Hire High School Graduates Trained in Vocational Business Education

Business firms were asked if they considered high school vocational business education training adequate for employment in their offices. Figure 23 represents the responses from 31 companies. Seventy-eight percent of the companies considered the training adequate.

Figure 23

Adequacy of Vocational Business Education Training

	Training Adequate	Training Inadequate	No Answer
Number	24	5	2
Percent	78	16	6

Recreation & Agricultural Businesses

Worker Classifications

Figure 24 represents responses from 10 of 19 businesses contacted in the recreation and agricultural fields. The largest single grouping of workers was in the recreation-type work and was better than 50% seasonal in nature. The largest group of full time employees was in milk delivery and processing.

Figure 24

Worker Classifications

Area of Employment	No. of Workers		
	Full	Part	Seasonal
Horticulture	8	7	11
Floricultural	6	3	4
Animal Science	-	-	-
Recreation	46	-	50
Forestry	1	1	-
Milk Processing & Delivery	20	-	-

Hotel-Motel Restaurants

Questionnaires were sent to all the large motels and hotels in the work-study area. Figures 25, 26, and 27 represent responses from 19 businesses employing 309 full time and 195 part-time workers.

Hotel-Motel Workers by Occupation

Figure 25 shows that waitresses, kitchen help, bus boys, chamber - maids and desk clerks are the largest grouping of workers in the hotel-motel business. Much of the work was part-time.

HOTEL MOTEL RESTAURANT

WORKERS BY OCCUPATION

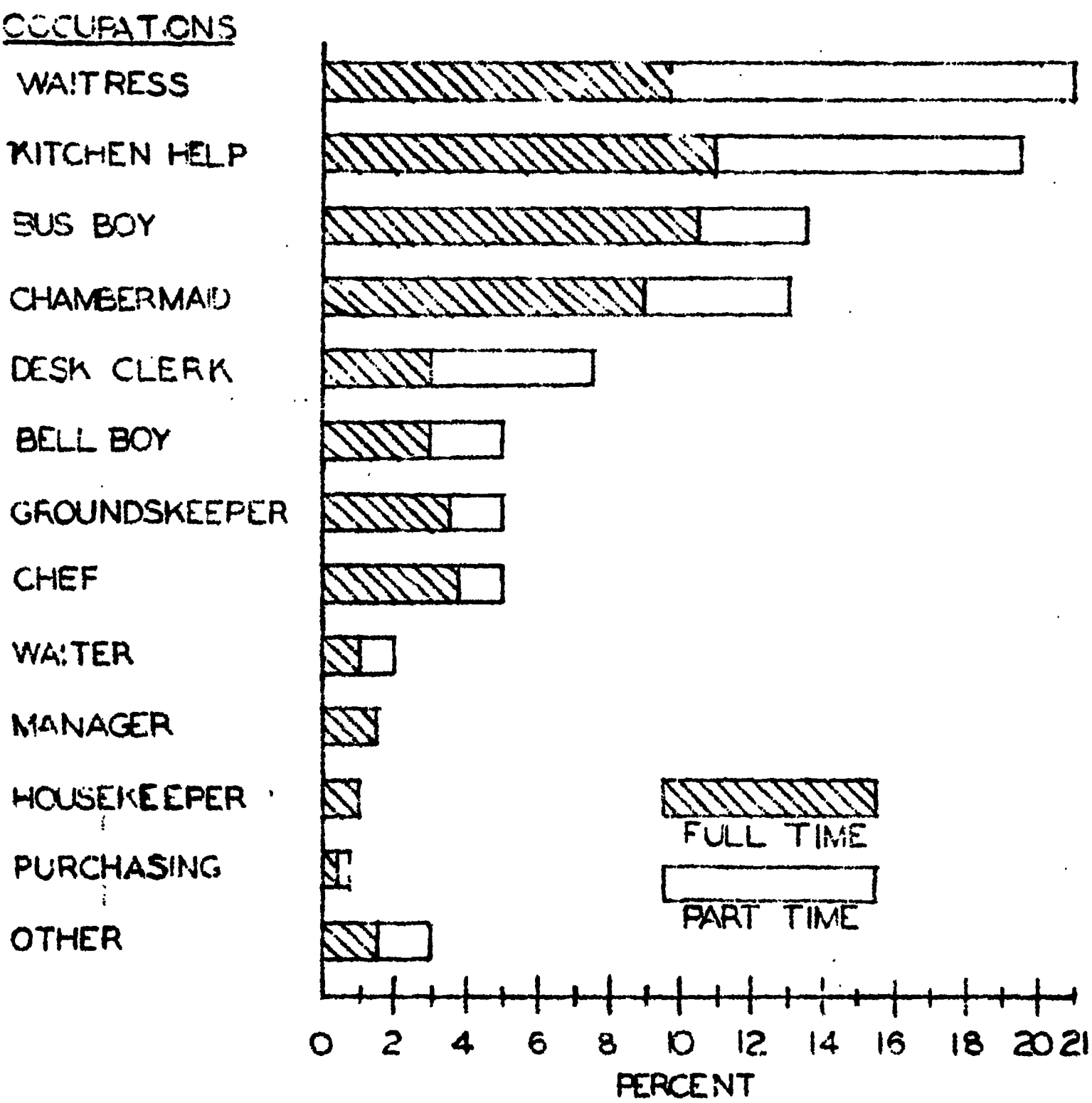


FIG 25

More Training Required

Employees of the hotel-motel and restaurant personnel were asked in what areas they felt more training was needed. Figure 26 indicates the greatest needs are for chambermaid, waitress and kitchen help training.

Figure 26

More Training Required

Area	No. of Responses	Percent of Responses
Chambermaid	6	31.5%
Waitress	4	21.0%
Kitchen Help	3	16.0%
Waiters	2	10.5%
Bus Boy	1	5.2%
Grounds Keeper	1	5.2%
Bell boy	1	5.2%
Desk Clerk	1	5.2%
Manager	-	--
Housekeeper	-	--
Purchasing	-	--
Chef	-	--
Total	19	

Work-Study Programs

Employers of Hotel-Motel personnel were asked if they would be interested in a work-study program with White Mountains Regional High School. Figure 27 shows that the largest interest is in chambermaid, waitress and kitchen help work-study programs.

Figure 27

Work-Study Programs

Area of Work-Study	No. of Businesses Interested	Percent of Businesses Interested
Chambermaid	4	21.0%
Waitress	3	16.0%
Kitchen help	3	16.0%
Manager	1	5.0%
Desk Clerk	1	5.2%
Bell boy	1	5.2%
Waiter	1	5.2%
Housekeeper	-	
Groundskeeper	-	
Purchasing	-	
Bus boy	-	
Chef	-	
Total	14	

Projected Needs of All Businesses

All of the businesses surveyed (with the exception of those contacted under the office worker category) were asked to estimate the additional personnel needed through 1970. For the purpose of the survey only those categories that were part of, or could be a part of, future Vocational Programs at White Mountains Regional High School were included. The business people, however, volunteered other information on employment needs; therefore all of these statistics are shown in Figure 28.

The office worker figure is an estimate based on the responses to the question that asked how many office workers businesses hired each year and is the total of all businesses for one year.

Figure 28 indicates that there will be a heavy demand for carpenters and brick masons in the construction businesses. In the manufacturing business the biggest demand will be for woodworkers and wood finishers and machinists. Among the semi-skilled and unskilled workers machine operators, stitchers and assemblers will be in demand.

Two large manufacturers did not list the figures for future needs among skilled tradesmen because they could not hire from outside their respective companies due to union regulations. One of these large companies, however, was interested in a possible cooperative training program in the mill repair, electrician, machinist, mechanic, tinsmith and welding trades, which could indicate a need for training in these areas.

In the office worker category, businesses contacted estimated that they would hire approximately 67 workers a year. It is the writer's opinion that most of these needed office workers would be in the office clerk category.

Among hotel-motel workers projected needs were very low and according to employers the largest need would be for waitresses and chambermaids.

Among recreation and agricultural workers only one business reported needing additional help and that was for part time horticultural workers.

Figure 28

Additional People Needed Through 1970

Skilled Trades Contracting and Construction	
Carpenters	46
Brick and Stone Masons	45
Concrete & Cement Finishers	11
Electricians	3
Plumbers	2
Heating	2
Draftsmen	1
Mechanics	1
Manufacturing	
Industrial Woodworkers	36
Wood Finishers	17
Foremen	5
Maintenance	1
Machinists	14
Draftsmen	3
Electricians	1
Welders	1
Tinsmiths	5
Mechanics	1
Printing	
Pressmen	2
Ludlow Handset	2
Logging Equipment	
Maintenance Mechanics	5
Electric Power	
Electricians	2
Mechanics	1
Office Work	
Office Workers	67
Recreational & Agricultural	
Horticultural (part-time)	3
Semi-Skilled & Unskilled Workers - Manufacturing	
Machine Operators	18
Stitchers & Lacers (shoe)	97
Braiders	1
Inspectors	10
Sweepers	1
Assemblers	12
Machine Operators Packers & Shippers	50

Figure 28 (con't)

Hotel-Motel	Additional Help Needed			
	Full	Part	Full Seasonal	Part Seasonal
Managers	2	--	--	--
Desk Clerk	1	--	--	--
Bell Boys				
Housekeepers / Chambermaids	5	--	2	2
Groundskeeper	--	1	3	--
Purchasing	--	--	--	--
Waiter / Waitress	9	--	--	2
Bus Boys	--	2	--	--
Kitchen Help	1	3	--	--
Chef	1	11	11	11
Maintenance				
Barmaid				
Bartender				
Hostess				
Cook				

Implications of Findings

The Implications of This Survey are Listed Below:

1. Graduates and employers are genuinely interested in vocational education at the high school level and not enough emphasis is placed on obtaining employment skills in the public schools.

2. There are two levels of vocational training necessary; the first is that of a skilled technical nature with the emphasis on the technical math and communication skills, and the second is that of manipulatory or mechanical-type skills where nothing is required other than the ability to perform certain manual jobs.

3. Better than half of all the high school graduates will be part of the local area labor market within five years after graduation and will not be sufficiently trained for employment.

4. Certain basic skills, as in all education, are necessary in vocational education. Employers have strong opinions in regard to these necessary skills. Cooperation between the employer and school authorities is a prerequisite for supplying students with the necessary skills for initial employment. Employees are willing to cooperate with school authorities in cooperative programs.

5. Successful vocational training programs at the White Mountains Regional High School should be a much larger part of the total school program than perhaps anticipated by the original planners of the school.

6. The present vocational programs at the White Mountains Regional High School only partially serve the demands of employers in the area.

Some of the present programs are nearly adequate, but others are more suited to the long-range plans of the area rather than serving the immediate needs of industry in the district.

7. For those students who will seek employment immediately from high school, occupational training will serve their needs far better than college or general-type courses.

8. The students receiving occupational training and who are planning to seek employment immediately from high school, should receive related mathematics and communications skill training as part of their occupational training.

9. A lack of communication exists between the vocational educators and the business community.

10. There are job openings in the area that cannot be filled because of a lack of skilled help.

CHAPTER V

Summary, Conclusions and Recommendations

Problem, Purposes and Objectives

This was a study to determine the adequacy of the vocational training programs at the White Mountains Regional High School. The high school was a new school and replaced former Lancaster and Whitefield, New Hampshire High Schools. As part of the curriculum for the new high school, certain vocational courses were included. These courses were business, industrial drafting, hotel-motel aide, recreational management and vocational electricity education.

No guidelines were available regarding skills needed by graduates for initial employment, areas of critical manpower shortages and other information vital to organizing a vocational training program.

The objectives of this study were to determine: the occupational trends of recent high school graduates; the occupations with manpower shortages; the occupations and jobs within an occupation where more training is needed; the specific training recommended by employers; the areas that exist where possible new occupational training could be provided; and information needed to expand, alter or cut back the present programs at White Mountains Regional High School.

Method of Investigation

Standard methods of investigation were used in which questionnaires were developed to obtain pertinent information required for the completion of the study.

A questionnaire was developed for graduates of former Lancaster and Whitefield High Schools for the years of 1963-1967. The same questionnaire used for graduates was used for dropouts of the same year. A separate questionnaire was developed for each of the vocational subject areas of White Mountains Regional High School and was sent to, or used by a study aide who visited the various businesses in the area.

Larger businesses were visited and smaller businesses were contacted by mail. All questionnaires were developed after consultation with the vocational staff of the White Mountains Regional High School. The findings were charted and graphed for evaluation purposes and were used to compile the summary of findings.

Summary of Findings --

Graduates

Based on responses from 53% of the graduates of Lancaster and Whitefield High Schools from 1963-1967.

1. 37% of all respondents received no further education beyond high school.

2. The same percentage of males and females received no further education beyond high school (37%).

3. 23% of females graduated from or are presently attending a 4 year-college.

4. 41% of the males graduated from or are presently attending a 4 year-college.

5. 29% of all graduates are presently attending or have graduated from a 4 year-college.

6. 40% of the females are presently attending or have received post-secondary school training in less than a 4 year-college.

7. 22% of the males are presently attending or have received post-secondary school training in less than a 4 year-college.

8. 53% of all respondents are known to be working full time.

9. Essentially, the same percentage of males and females are known to be working full time, 57% and 52% respectively.

10. Twice as many female workers (32%) as male workers (16%) are known to be not working.

11. 27% of the males are working part-time and 16% of the females are working part-time.

Summary of Findings (continued)

12. Of those respondents completing their post-secondary education, (1963 graduates) 57% are working full time.

13. The lowest percent of respondents are employed in Agriculture (farming, forestry and conservation). The highest percentage are employed in service-type work.

14. Most of the respondents employed in office-type work are females.

15. Most male respondents were employed either in industrial or service (construction, utilities, finance, trade).

16. A small, but noteworthy percentage of females, entered the nursing professions (10%).

17. A quarter of all female respondents worked in the service industry. They are mostly waitresses, beauticians, cosmetologists and nurses.

18. Under the classifications of Trade and Industry, the respondents felt that carpentry, drafting and electrical skills have the greatest value to them.

19. Typing was considered the most valuable business education subject; bookkeeping was second, business English, business math, office practice and stenography were rated next in order and were considered equal in value.

20. Graduates considered conservation skills to be of greatest value in the recreational education field followed by business development, equipment operation and maintenance, and animal science.

Summary of Findings (continued)

21. Management was considered by the majority to be the most valuable skill in the Hotel-Motel education field. Salesmanship, planning and decorating skills, culinary arts, advertising and housekeeping skills were rated high in value and very close together. Desk clerk skills, waitress skills, and cleaning equipment skills were considered by the majority to have little value.

Dropouts

Based on a 33% response from 71 dropouts of Lancaster and Whitefield, New Hampshire High Schools during the years 1963-1967.

22. The trade and industrial subjects of drafting, carpentry and electricity were considered by the majority to be the most valuable. Graduates and dropouts agreed on the value of these subjects.

23. In the business education field dropouts considered typing, business math and bookkeeping the most valuable of these subjects.

24. Under Recreation Education welding skills, small engines, equipment operation and maintenance skills were considered to be the most valuable. The responses from dropouts were almost exactly opposite from that of graduates. (see #20)

25. Waitress skills and housekeeping skills were considered the most valuable part of hotel-motel education followed by cleaning equipment maintenance. Note that waitress skills and cleaning equipment maintenance skills received a very low rating by graduates.

Summary of Findings (continued)

Business and Industry

The following finds are from 81 business respondents:

26. The largest single group of skilled tradesmen is industrial woodworkers and carpenters.

27. Millwrights, plumbers, electricians and machinists comprised a significant group of skilled tradesmen.

28. Draftsmen were the lowest group of skilled workers in the area. They were almost non-existent. Companies had their drafting done at plants outside of the area.

29. Employers of skilled tradesmen considered blueprint reading, use of tools and equipment, basic manual skills, safety, trade math, and planning and layout as the most important skills for a tradesman to possess.

30. Office clerks were the largest single grouping of office workers. They included general, payroll, production, billing and inventory clerks. There were about the same number of secretaries, bookkeepers, clerk-typists, office machine operators, office supervisors and they comprised the next leading categories in that order.

31. Employers of office workers considered typing, bookkeeping, business arithmetic and office machines the top four subjects for business education students to learn. Data processing, retailing, merchandising and business law were considered low in value.

32. Employers of office workers considered trustworthiness, attitude, and dependability as the three most important personal qualities for employees to possess. Appearance, punctuality and health were the least important.

Summary of Findings (continued)

33. About one-third of companies hiring office workers required employment tests. Most of the tests were for typing. Typing speeds required were 40 to 60 words per minute. Shorthand speeds were 60 to 80 words per minute. About half of the companies were willing to consider cooperative office training.

34. The most predominant office machines used by businesses (exclusive of typewriters) were photocopying, adding, transcription and duplicators.

35. A large majority of business firms considered high school vocational business education training adequate for employees.

36. The largest grouping of recreational and agricultural employees are employed in recreation which is largely seasonal. The second largest grouping is in milk-processing and delivery and is full-time work.

37. Waitresses, kitchen help, bus boys, chambermaids and desk clerks are the largest single grouping of hotel-motel workers. Employers of these workers favored more training in waiter-waitress skills, chamber-maid skills and kitchen help skills. The employers considered these skills as the most worthwhile for cooperative work-study programs.

38. The greatest need for skilled workers is among carpenters, industrial woodworkers, brick masons and office workers.

39. In the semi-skilled and unskilled categories of workers the greatest demands will be in the manufacturing businesses, machine operators, inspectors, assemblers and stitchers will be in demand.

Conclusions

In this writer's opinion, the following conclusions are indicated from the findings of this survey:

1. A potential two thirds of the students ar White Mountains Regional High School would benefit from high school occupational training programs.

2. The most logical area of expansion in vocational training programs at White Mountains Regional High School would be in the construction field, particularly carpentry and brick masonry and in industrial woodworking.

3. Occupational trends for recent graduates of Lancaster and Whitefield High Schools have been toward office and service work for females and toward service and industrial work for males.

4. For those females entering office work the greatest potential for employment lies in clerking, secretarial and bookkeeping work. In the service category, waitresses and chambermaids are in demand. In industry, stitching and light assembly workers are needed.

5. For males the potential for employment lies in service and industrial work. Construction workers (Particularly carpenters and brick masons) are needed. Industrial woodworkers and semi-skilled machine operators and paper mill workers are needed. The skilled trades among the larger manufacturers in the area are filled by personnel within the company due to union regulations.

6. Employers, for the most part, are anxious to obtain people who have high school vocational training provided the training is what is needed by the employer.

7. Employers of skilled tradesmen and semi-skilled industrial workers, such as machine operators and assemblers, considered blueprint-reading ability to be a most valuable asset for employees along with trade math, basic manual skills, use of tools and equipment, safety and layout abilities. They felt that their present employees were inadequately trained in these skills.

8. Employers of office workers considered typing, bookkeeping, business arithmetic and office machine abilities to be top priority for their workers. The trustworthiness, attitude and dependability of workers were a major concern. A majority of companies do not give employment tests to their office workers. The companies that do give tests require typing tests only occasionally. These employers considered vocational training adequate for office workers.

9. Recreational and hotel-motel work is largely seasonal. Waiter-waitress, kitchen help, and chambermaid skills were considered by employers to be areas in which more training is needed.

10. Need for liaison between employers and occupational educators is vital to the overall program. Employers wish to talk with vocational educators.

11. Graduates consider high school vocational training important and have definite opinions as to the value of certain vocational subject areas.

12. There is a question as to whether or not the present programs at the White Mountains Regional High School are meeting the needs of business in the area.

13. Agriculture is a small part of the business in the area.

14. A lack of basic skills on the part of workers in the area are hampering the expansion of industry. Many of these skills are ones that can be obtained in high school vocational training programs.

Recommendations

It is the belief of this writer that the findings of this survey dictate the following recommendations:

1. A general vocational course should be organized using the present facilities of the shops and drafting room at the White Mountains Regional High School. This program would be geared to meeting the needs of the semi-skilled industrial worker in the area. Subject areas to be included would be blueprint reading and drafting, welding, woodworking machines, plumbing, trade mathematics, masonry, electricity, machinery and sheet metal work.

2. A building construction program should be offered at the White Mountains Regional High School. There is a definite need for carpenters.

3. Industry in the local area should be contacted immediately for possible cooperative use of the vocational facilities at the White Mountains Regional High School for their apprentice training programs.

4. A method of developing curriculum according to the needs of business and industry should be devised.

5. A system for coordinating cooperative programs between the school and business community should be started.

6. Local industry and business leaders should be encouraged to visit the White Mountains Regional High School in order to become acquainted with the occupational training programs and should also be encouraged to participate in the organization and development of present and future vocational courses.

7. A more active participation and use of vocational advisory boards should be encouraged as an effective way of strengthening the present

vocational programs at the White Mountains Regional High School. The most important tasks of these boards would be to ietermine the objectives and philosophy of the vocational training programs and to establish contact between the industrial business community and the school.

8. A track system for vocational courses should be employed such as is used for college preparatory courses. This track system would be organized so that vocational students would receive occupation-related mathematics and communication training.

9. Students should be placed in the various vocational courses according to their ability levels. This could be done by pre-testing and through introductory or pre-vocational type programs in the lower grades. This would help satisfy the needs of industry for more technically competent employees in some jobs and for less specialized training in other jobs.

10. The greatest degree of emphasis in the business education department should be on typing, bookkeeping, business arithmetic and office machines courses.

11. A cooperative program in the business education department should be instituted as soon as possible.

12. The trade and industrial courses at White Mountains Regional High School should place their greatest degree of training emphasis on blueprint reading, use of tools and equipment, basic manual skills, trade mathematics and safety practices.

13. The major emphasis in the hotel-motel aide program should be on waiter-waitress skills, kitchen help skills, and chambermaid skills.

Management skills training should be offered on another level.

14. Because of the diverse nature and the complexity of the recreational and agricultural fields of employment, further research is indicated in order to establish specific guidelines for the recreational management program.

APPENDIX A

White Mountains Regional High School
Whitefield, New Hampshire 03598
August 8, 1968

White Mountains Regional High School has initiated several Vocational Education Programs as part of its curriculum. As a recent student/graduate of Whitefield High School, you can help us to evaluate this program by completing the enclosed form.

The information you give us will be used, along with that provided by other student/graduates, to help improve our vocational program. The information you give us will be held in strict confidence. Your promptness in returning your completed form in the enclosed envelope, addressed and stamped, will be very much appreciated.

Thank you.

Sincerely yours,

Robert L. Day
Research Director

Enclosures 2

(A similar letter has been sent to the Lancaster graduates.)

STUDENT FOLLOW-UP

Name _____ Address _____

1. Schools attended

Name	No. of Years	Degree or Diploma	Major Field

2. Are you employed? Full Time ____ Part Time ____ Not Working _____

3. Length of employment _____ Months. Previous employment, if any _____

4. Please check area of employment:

Office	____	Service	____
Industrial	____	Sales	____
Agricultural	____	Other (Specify)	____

5. Name and address of employer _____
6. Position held _____

7. Exact skills required in present position _____

_____

8. What are your chances for advancement in your present place of employment?
   Poor ____ Fair ____ Good____ Excellent ____

9. What high school subjects benefited you most in preparation for college and/or employment? _____

10. From your own experience, what vocational skills and subjects, if taught in high school, would have increased your employment potential?

11. If these courses or skills were offered at evening school, would you be interested in attending? Yes ____ No ____

12. If not now living in the Lancaster-Whitefield area, would you return if job opportunities were available? Yes ____ No ____

13. Suggestions or comments: _____

_____

14. The following is a list of vocational subjects and skills. For each subject check the appropriate column to indicate your reaction as to their value to you.

SKILL OR SUBJECT	GREAT VALUE	SOME VALUE	LITTLE VALUE	WOULD HAVE TAKEN IF HAD OPPORTUNITY
Trade & Industrial				
1. Brick Masonry	____	____	____	____
2. Drafting	____	____	____	____
3. Carpentry	____	____	____	____
4. Electricity	____	____	____	____
5. Painting	____	____	____	____
6. Plumbing	____	____	____	____
7. Other	____	____	____	____
Business Education				
1. Bookkeeping	____	____	____	____
2. Stenography	____	____	____	____
3. Business Law	____	____	____	____
4. Business English	____	____	____	____
5. Typing	____	____	____	____
6. Retail Merchandising	____	____	____	____
7. Office Practice	____	____	____	____
8. Business Math	____	____	____	____
9. Other	____	____	____	____
Recreation Education				
1. Plant Science & Horticulture	____	____	____	____
2. Animal Science	____	____	____	____
3. Forestry	____	____	____	____
4. Agricultural Mechanics				
(A) Welding Skills	____	____	____	____
(B) Plumbing Skills	____	____	____	____
(C) Small Engines	____	____	____	____
(D) Carpentry Skills	____	____	____	____
(E) Masonry Skills	____	____	____	____
(F) Equipment Operation & Maintenance	____	____	____	____
(G) Painting Skills	____	____	____	____
5. Conservation	____	____	____	____
6. Recreational Business Development & Management	____	____	____	____
7. Other	____	____	____	____
Hotel-Motel Education				
1. Desk Clerk Skills	____	____	____	____
2. Waitress Skills	____	____	____	____
3. Housekeeping Skills	____	____	____	____
4. Cleaning Equipment Maintenance	____	____	____	____
5. Advertising	____	____	____	____
6. Salesmanship	____	____	____	____
7. Management	____	____	____	____
8. Culinary Arts	____	____	____	____
9. Planning & Decorating Skills	____	____	____	____
10. Other	____	____	____	____

White Mountains Regional High School
Whitefield, New Hampshire 03598
August 13, 1968

Dear Sir:

White Mountains Regional High School is serving our area by including occupational training as part of its curriculum.

Our goal is to provide our students with the basic skills needed for initial employment in the various job classifications. You can help us accomplish this by providing us with information pertaining to required skills and employment potential.

Would you please complete the enclosed questionnaire and return it to us in the stamped, addressed envelope. Your cooperation is appreciated.

Sincerely yours,

Robert L. Day
Research Director

Enclosures 2

WHITE MOUNTAINS REGIONAL HIGH SCHOOL
Vocational Education Evaluation Survey
Trades and Industry Contractors

Name of Business _____ Date _____

Address _____ City _____ State _____

Phone _____ Type of Business _____

Approximately how many workers does your company employ in the following job classifications:

	Now Employed	Additional People Needed Now	Additional People Needed 1968	Additional People Needed 1970	Would you employ graduates of High School Occupational Training Programs? Yes	Would you employ graduates of High School Occupational Training Programs? No
Brick and Stone Masons						
Carpenters						
Concrete and Cement Finishers						
Electricians						
Plasterers						
Plumbers						
Painters						
Other (Write In)						
Other (Write In)						

In the categories that apply, please check the skills or abilities that you consider to be most important to you.

	Masonry	Carpentry	Electrical	Plumbing	Painting	Other
Planning and Layout						
Trade Math						
Trade Theory						
Blueprint Reading						
Drafting						
Estimating						
Maintenance						
Use of Tools						
Safety						
Basic Manual Skills						
Codes and Rules						
Other (Write In)						
Other (Write In)						

Suggestions/Comments: _____

Would you be willing to have a representative of our vocational department call on you at some future time? ____ Yes ____ No

Please return this questionnaire by August 23, 1968.

WHITE MOUNTAINS REGIONAL HIGH SCHOOL
Vocational Education Evaluation Survey
Trade & Industries--Manufacturing

Name of Business _____ Date _____

Address _____ City _____ State _____ Phone _____

Type of Business _____

Approximately how many workers does your company employ in or related to the following job classifications:					Would you consider hiring graduates of HS Vocational Training Programs?		In the categories that apply to you check the skills in which you feel more training is needed.												
Occupation	Now Employed	Additional People Needed			Yes	No	Estimating	Trade Math	Blueprint Reading	Trade Theory	Rules & Codes	Safety	Planning & Layout	Use of Tools & Equipment	Basic Manual Skills	Other (write in)	Other (write in)	
		Now	1969	1970														
Carpenters																		
Draftsmen																		
Electronic Tech.																		
Electricians																		
Machinists																		
Plumbers & Pipefitters																		
Painters																		
Sheet Metal																		
Tool & Die																		
Welders																		
Other (Name)																		

Suggestions/comments: _____

WHITE MOUNTAINS REGIONAL HIGH SCHOOL
Vocational Education Evaluation Survey
Motel/Hotel and Restaurant Questionnaire

Name of Business _____ Date _____

Address _____ City _____ State _____

Phone _____ Type of Business _____

Approximately how many workers does your business employ in or related to the following job classifications:								Please check the categories that apply to your business		
Occupations	Now Employed	Additional people needed						More training needed	We would consider a joint student workstudy training program with WMRHS	
		Now		1969		1970			Yes	No
	Full Part	Full	Part	Full	Part	Full	Part			
Manager										
Desk Clerk										
Bell Boy										
Housekeeper										
Chambermaid										
Groundskeeper										
Purchasing										
Waiter										
Waitress										
Bus Boy										
Chef										
Kitchen Help										
Other										

How many units in your hotel/motel? _____ What is the seating capacity of your restaurant? _____

Are uniforms required? _____ Yes _____ No. If so, do you furnish? _____ Yes _____ No

Through what source do you obtain the bulk of your employees? Advertising _____ Employment agencies _____ Present employees _____ Other _____.

The turnover rate of employees is high in the tourist industry. Do you feel this is a problem with your particular business? _____ Yes _____ No. If so, what do you feel is the major reason for this high rate? _____

In tourist business in general? _____

Suggestions/comments: _____

_____

WHITE MOUNTAINS REGIONAL HIGH SCHOOL
Vocational Education Evaluation Survey
Recreational Management

Name of Business _____ Date _____

Address _____ City _____ State _____

Type of business _____ Phone _____

Approximately how many workers do you employ in or related to the following classifications:

TYPE OF WORK	NOW EMPLOYED FULL	NOW EMPLOYED PART	SEASONAL SUM	SEASONAL FALL	SEASONAL WIN	SEASONAL SPR	ADDITIONAL PEOPLE NEEDED IF SEASONAL, PLEASE SPECIFY SEASON — NOW FULL	NOW PART	1969 FULL	1969 PART	1970 FULL	1970 PART
Horticulture												
Floriculture												
Animal Science												
Recreation												
Forestry												
Other												

Would you consider hiring graduates of High School Vocational Training Programs?
_____ Yes _____ No

Would you be interested in participating in the summer job placement program?
_____ Yes _____ No

If yes, in what areas? _____ How many boys? _____

Suggestions/comments: _____

_____

_____

_____

_____

Would you be willing to have a representative of our vocational department call on you at some future time? _____ Yes _____ No

In the categories that apply, please check the skills or abilities according to their relative value to you.

	GREAT VALUE	SOME VALUE	NO VALUE
I. Plant Science and Horticulture			
A. Plant propagation, care and production	____	____	____
B. Landscaping	____	____	____
C. Turf management	____	____	____
D. Nursery operation and production	____	____	____
E. Floral arrangement	____	____	____
F. Forage crop production	____	____	____
G. Other	____	____	____
II. Forestry and Recreation			
A. Christmas tree and forest management	____	____	____
B. Fire protection	____	____	____
C. Soil and water conservation	____	____	____
D. Marketing	____	____	____
E. Road development	____	____	____
F. Equipment selection (operation, maintenance, safety)	____	____	____
G. Trail development-riding, hiking, skiing	____	____	____
H. Campground development	____	____	____
I. Wildlife area management	____	____	____
J. Stream and pond management	____	____	____
K. Park management	____	____	____
L. Other	____	____	____
III. Recreational and Agricultural Mechanics			
A. Small engine repair and maintenance	____	____	____
B. Surveying	____	____	____
C. Welding	____	____	____
D. Building construction and maintenance (carpentry, masonry, plumbing, painting, electricity)	____	____	____
E. Equipment operation and maintenance	____	____	____
F. Tool use and maintenance	____	____	____
G. Safety	____	____	____
H. Other	____	____	____
IV. Animal Science			
A. Beef, dairy, sheep, swine, horses, poultry (circle those that apply)	____	____	____
B. Other (specify)			
C. Feeding and care	____	____	____
D. Production of animal products	____	____	____
E. Housing and equipment	____	____	____
F. Reproduction	____	____	____
G. Animal selection	____	____	____
H. Other	____	____	____

COMMUNITY INDUSTRIAL SURVEY
Vocational Business Education

Name of Business _____ Date _____

Address _____ City _____ State _____

Phone _____ Type of Business _____ From what geographical areas do you generally draw your employees? _____

Approximately how many office workers does your company employ in the following job classifications:

	Men	Women	Total
A. Clerical Typist	____	____	____
B. General Office Clerk	____	____	____
C. Office Machine Operator	____	____	____
D. Secretary	____	____	____
E. Stenographer-Typist	____	____	____
F. Bookkeeper	____	____	____
G. Bookkeeping Machine Operator	____	____	____
H. Other (specify)	____	____	____

Approximately how many office workers do you hire each year? _____

Do you consider high school vocational business education training adequate for employment in your office? Yes ____ No ____ If not, please elaborate _____

Please check the subjects below that you feel are most important to you. (Rank in order 1, 2, 3, etc.)

Introduction to Business	____	Office Machines	____	Retailing	____
Typewriting	____	Data Processing	____	Merchandising	____
Shorthand	____	Business Law	____	Business Arithmetic	____
Bookkeeping	____	Salesmanship	____	Business Management	____

Please number the following personal qualities in the order you feel is important:

Health	____	Cooperativeness	____	Initiative	____
Attitude	____	Courtesy and Manners	____	Punctuality	____
Appearance	____	Loyalty	____	Dependability	____
				Trustworthiness	____

Please check the machines that are used by your office employees:

A. Adding Machines and Calculators: ____ Rotary ____ Key Driven
____ Printing ____ Full Keyboard
____

B. Billing Machines ____
C. Fluid Duplicators ____
D. Stencil Duplicators ____
E. Photocopying Machines ____
F. Bookkeeping Machines ____
G. Transcription Machines ____
H. Others (specify) _____

What speed in Shorthand is required for initial employment in your company's office?

____ 60 WPM ____ 80 WPM ____ 100 WPM ____ 120 WPM

What speed in Typing is required for initial employment in your company's office?

____ 40 WPM ____ 50 WPM ____ 60 WPM ____ 70 WPM

Does your business require employment tests? ____ Yes ____ No

If in the affirmative, what type of test is required? _____

Would you be willing to provide on the job training opportunities for interested students? ____ Yes ____ No

Suggestions/Comments: _____

_____

_____

_____

_____

_____

Appendix B

List of Business Respondents

Name	Location
Berlin Foundry & Machine Company	Berlin, New Hampshire
Brown Company	Berlin
Campbell Envelope Company	Northumberland
Connors-Hoffman Footwear Company, Inc.	Littleton
Converse Company	Berlin
Coos County Democrat	Lancaster
Courier Printing Company, Inc.	Littleton
Groveton Paper Company	Groveton
Henschel Shoe Company, Inc.	Littleton
Manchester Knitted Fashions Division ECM Corp.	Whitefield
Modern Stitching Company	Lancaster
New England Electrical Wire Corp.	Lisbon
Norton Company, Div. Norton Corp.	Littleton
Nuroco Woodwork, Inc.	Whitefield
P.J. Noyes Company	Lancaster
Plymwood Furniture Corp. of Lisbon	Lisbon
Saranac Glove Company	Littleton
Thompson Manufacturing Company	Lancaster
Timberland Machine, Inc.	Lancaster

Name	Location
Beatrice D. Weeks Memorial Hospital	Lancaster
Littleton Hospital	Littleton
White Mountain Community Services, Inc.	Littleton
Littleton Stamp Company	Littleton
U.S. Social Security Administration	Littleton
Baker Brook Resort	Littleton
Boulder Motor Court	Twin Mountain
Coffee Break Restaurant	Twin Mountain
Continental 93	Littleton
Dutch Treat Restaurant	Franconia
Fahey's Motel	Twin Mountain
Four Dorr's Drive-In	Lancaster
Goodness Restaurant	Littleton
Mountain View House	Whitefield
Patio Motor Court	Twin Mountain
Perkins Motel	Littleton
Playhouse Motor Inn	Whitefield
Scandinavian Inn	Whitefield
Spalding Inn	Whitefield
Sunset Hill House	Sugar Hill
Thayers Hotel	Littleton
Town & Country Motor Inn	Shelburne
Waumbek Inn	Jefferson
Washington Arms Motel	Fabyan

Name	Location
Dan Boisvert General Contracting Company	Littleton
Clinton Clough, Contractor	Littleton
Paul A. Cloutier, Contractor	Berlin
Bradley M. Cooper- Plumbing, Heating & Electrical Contractor	Littleton
W. K. Glover & Son, Inc.	Franconia
Joseph Herbert Plumbing & Heating	Littleton
Lafayette Enterprises	Franconia
R. W. Rich, Inc.	Littleton
Tyrol, Inc.	Jackson-Berlin
Cannon Mountain State Park	Franconia
Christmas Tree Plantation	Whitefield
Connecticut Valley Dairy	Lancaster
Franconia Notch State Park	Franconia
High Meadows Sod Farm	Littleton
Kelley, the Florist, Inc.	Littleton
Riff Flower Shop & Greenhouses	Lancaster
Santa's Village	Jefferson
Six Gun City	Jefferson
Beneficial Finance Company	Littleton
Lancaster National Bank	Lancaster
Littleton National Bank	Littleton
Northern Business Service	Lancaster
Peoples National Bank	Littleton
Ssooganock Guaranty Savings Bank	Lancaster
Geo. M. Stevens & Son Co.	Lancaster
Whitefield Savings Bank & Trust Company	Whitefield

APPENDIX C

Office Workers' Breakdown Listed By Business Firms

Category	Male	Female	Total
Clerical Typist	-	27	27
General Office Clerk	3	88	91
Office Machine Operator	1	10	11
Secretary	1	33	34
Stenographer-Typist	-	10	10
Bookkeeper	8	20	28
Bookkeeping Machine Operator	1	16	17
Payroll Clerk	2	17	19
Supervision	12	-	12
Accountant	2	3	5
Buyer	-	1	1
Billing Clerk	-	2	2
Inventory Clerk	4	-	4
Key Punch Operator	-	12	12
Production Clerk	10	5	15
Assistant Manager	2	-	2
Consumer Relations	1	-	1
Receptionists	-	1	1
Office Manager	1	-	1
Technical and Administration	4	2	6
Miscellaneous	-	1	1
TOTALS	52	248	300

Schools Attended Beyond High School Listed By Graduates

Four Year College

Major Field Listed	No. Attended	Major Field Listed	No. Attended
Business	1	Physics	3
Biology	1	Psychology	1
Chemistry	1	Sociology	1
Engineering	3	Social Science	1
English	2	Social Service	1
Education	25	Zoology	1
Forestry	1		
Fine Arts	2		
History	3		
International Relations	1		
Liberal Arts	4		
Law	1		
Mathematics	3		
Medical Technology	1		
Political Science	2		
Pre-Dentistry	1		

Junior College

Major Field	No. Attended
Business	31
Liberal Arts	1
Medical Secretary	3
Forestry	3

Nursing Schools

Nursing	10

Vocational

Culinary Arts	3	Airline Stewardess	1
Automotive	3	Hairdressing	8
LPN	1	Broadcasting	1
		Insurance	1

Technical Institutes

Data Processing	2
Electronics	3

MDTA Vocational

Machinist	1

Armed Service

Fire Control	1
Nuclear Power	1

Other Schools

Bible College	2	Maritime	1
		Art	1

Position Held - Listed by Graduates

I Office

1 Commercial artist
1 Assistant manager
1 Teller
1 Acc. Analyst
19 Secretaries
1 Teletype Operator
2 Receptionist
1 Stenographer
8 Typist
2 Medical Secretary
3 Accountant
1 General Office
1 Programmer
1 Assistant Supervisor
1 Comptometer Operator
1 Assistant Computer Programmer
1 Assistant to Secretary
1 Filing Clerk
2 Legal Secretaries
3 Bookkeeper
2 Clerk
1 PBX Operator
1 Cashier
1 Jr. Accountant
1 Invoice Clerk
1 Clerk-typist

II Industrial

1 Packer
1 Slitter's helper
1 Laborer
1 Electrical Technician
1 Floorboy
1 Work on Paper Machine
1 Card Operator
1 Unifil Tender
3 Stitcher
1 Shoe Inspector
1 Maintenance
1 Student Engineer
1 Moulder Operator
1 Toolmaker & Machinist
1 Cutting pulp
1 Stainer
1 Proof reader
1 Print Processing

III Agriculture

1 Surveyor
1 Foreman
1 Farm Hand
2 Laborers

V Sales

10 Clerk
1 Buyer
1 Salesman
1 Insurance Agent
1 Drug Clerk

VI Other

14 Armed Service
5 Student

IV Service

1 Information Booth Attendant
1 Auto Body
11 Mechanic
12 Waitress
6 Beautician
1 Swimming Instructor
4 Second Cook
1 R.R. Station Operator
1 Handyman
1 Plumber's Helper
1 Waiter
1 Manager
1 Laundry Work
1 Bookkeeper
1 Cocktail Hostess
3 Teacher
2 Linemen
1 Peace Corps
3 Laborer
3 Truck Driver
4 LPN
5 Nurses Aide
1 Social Worker
1 Library Technician
4 RN
1 Computer Research
1 Teacher of Clothing Construction
1 Systems Analyst
1 County Agent Aide
1 Computer Program Analyst
1 Painter
1 Orderly
1 Dishwasher
1 Area Counselor (camp)
1 Tennis Instructor
1 Traffic Operator (telephone)
2 Telephone Operators

Positions Held Dropouts

Nurses Aide	2
Shoeworker	1
Shoe packer	1
Shoe stitcher	1
Shoe Assembler	1
Spicer feeder - Paper Mill	1
Shoe Cementer	1
Waitress	1
Hand Sander - furniture	1
Mechanic	2
Supply Clerk	1
Stacker - Paper Mill	1
Truck Driver - Construction	1
Laborer - Recreation Work	1
Laborer - Construction	1
Casket Maker	1
Finisher - Furniture	1
Assistant Engineer - Hotel	1

Trades & Industrial - Graduates' Responses

Question 14

	Great Value	Some Value	Would Have Taken If Had Opportunity
1. Brick Masonry	9	29	6
2. Carpentry	28	40	13
3. Drafting	29	32	22
4. Electricity	29	34	25
5. Painting	10	38	13
6. Plumbing	12	41	6
7. Other			
Auto Mech.	3	1	2
Mach. Shop	3	-	-

Business Education - Graduates Responses

Question 14

	Great Value	Some Value	Would Have Taken If Had Opportunity
1. Bookkeeping	106	54	18
2. Stenography	77	48	13
3. Business Law	60	61	48
4. Business English	90	47	39
5. Typing	147	40	21
6. Retail Merchandising	47	48	37
7. Office Practice	81	18	15
8. Business Math	82	53	25
9. Other			
A. Accounting	1	2	2
B. Machines	4	-	1

Recreation Education - Graduates Response

Question 14

	Great Value	Some Value	WOULD HAVE TAKEN IF HAD OPPORTUNITY
1. Plant Science & Horticulture	17	28	15
2. Animal Science	25	33	12
3. Forestry	22		
4. Agricultural Mechanics			
A. Welding Skills	19	33	12
B. Plumbing Skills	9	34	12
C. Small Engines	20	33	20
D. Carpentry Skills	18	30	11
E. Masonry Skills	13	23	6
F. Equipment Operation & Maintenance	26	28	20
G. Painting Skills	5	37	6
5. Conservation	31	25	21
6. Recreational Business Development & Management	28	30	20
7. Other			
Anatomy	-	1	1
Art	1	-	-

Hotel-Motel Education - Graduate Response

	Great Value	Some Value	Would Have Taken If Had Opportunity
1. Desk Clerk Skills	25	42	18
2. Waitress Skills	19	39	13
3. Housekeeping Skills	37	37	17
4. Cleaning Equipment Maintenance	19	40	16
5. Advertising	42	42	26
6. Salesmanship	47	40	36
7. Management	54	44	43
8. Culinary Arts	45	38	31
9. Planning & Decorating Skills	46	43	52
10. Other:			
Health Welfare	1	1	-
Meat Cutting	-	-	2
Serving	-	-	1
Psychology	3	-	2
Humanities	1	1	1

VT 008 281
A Report on a Summary and Recommendations Adapted from West Virginia Legislative Study of Vocational, Technical, and Adult Education Under House Concurrent Resolution Number 8 (1967).

Joint Committee on Government and Finance, Charleston, W.Va.
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WEST VIRGINIA

House Concurrent Resolution No. 8 (1967) directed the Joint Committee on Government and Finance to review the status of vocational, technical, and adult education; to study the needs for these programs, the ways and means for program development, and the kinds of programs most feasible; and to make recommendations to the legislature. Staff members from the Division of Vocational Education collected data from education, industry, business, state agencies, and professional associations. Some of the 11 major recommendations derived from this data are: (1) Meaningful comprehensive general education needs to be included with occupational education curriculums, (2) The Division of Vocational Education should continue to develop curriculum and instructional materials, (3) Occupational education is needed for secondary students, high school graduates and dropouts, and adults, (4) Student personnel services should be provided to assure placement, follow-up, and employment services, and (5) An extensive plan of research and development in occupational education must be developed. (EM)

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HIGHLIGHTS and RECOMMENDATIONS
for
VOCATIONAL, TECHNICAL, AND ADULT EDUCATION

ADAPTED FROM THE
WEST VIRGINIA LEGISLATIVE STUDY
OF
VOCATIONAL, TECHNICAL, AND ADULT EDUCATION
UNDER
HOUSE CONCURRENT RESOLUTION NUMBER 8 (1967)

VT008281

Charleston, West Virginia
1968

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From
W. VA. LEGISLATIVE SERVICES
State Capitol, Charleston

A REPORT ON SUMMARY AND RECOMMENDATIONS

ADAPTED FROM

WEST VIRGINIA LEGISLATIVE STUDY

OF

VOCATIONAL, TECHNICAL, AND ADULT EDUCATION

UNDER

HOUSE CONCURRENT RESOLUTION NUMBER 8 (1967)

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FOREWORD

The Study of Vocational, Technical, and Adult Education authorized through House Concurrent Resolution No. 8 (1967) has been completed and accepted by the Joint Committee on Government and Finance.

The information presented in the Legislative Study reflects the character, scope, and diversity of the work that is being provided in vocational, technical, and adult education programs by several educational agencies in West Virginia. It also reflects the concern of many people about the need for vocational education in the State.

In order to inform more interested persons, we have prepared a summary that was adapted from the report to present the major items of information, review of conclusions, and a digest of the thirty-one recommendations.

Fred W. Eberle, State Director

SUMMARY

LEGISLATIVE STUDY OF VOCATIONAL, TECHNICAL, AND ADULT EDUCATION

House Concurrent Resolution No. 8 (1967) directed the Joint Committee on Government and Finance to review, examine, and study the status of vocational, technical, and adult education; to study the needs for the development of these programs, the ways and means for such development, and the kinds of programs which are feasible and advisable; and to make recommendations to the Legislature.

On July 16, 1967, the Bureau of Vocational, Technical, and Adult Education submitted two proposals to the Subcommittee on Education. Mr. Fred W. Eberle was requested to conduct the Study and serve as a Co-Director. On September 12, 1967, Dr. Joseph T. Nerden, former State Director of Vocational Education, Connecticut, now Professor of the Department of Industrial Education, Raleigh, North Carolina, was appointed Co-Director of the Study.

To undertake this Study, a task force of six staff members from the Division of Vocational Education was organized to collect and analyze data. Procedures used to obtain data and information followed conventional research techniques for some of the important demographic information. Recent reports of national and/or State origin were studied and pertinent data abstracted. These reports included information provided by the Bureau of Labor Statistics of the United States Department of Labor, West Virginia Department of Employment Security documents, and West Virginia

Commission on Manpower, Technology, and Training. Information concerning agriculture was submitted by the West Virginia Department of Agriculture; economic information was obtained from the West Virginia Department of Commerce and the Federal Reserve Bank of Richmond; educational data came from the Superintendent's Report of the State Department of Education; the Bureau of Administration provided financial data relative to the public schools; and information about higher education came from the State Board of Education. Several county occupational surveys were reviewed to provide additional information relative to the need for vocational education within their areas.

Three consultants who had extensive and diverse experience in the field of vocational education visited one hundred sixty employers throughout the State to gain their perceptions with regard to the kind, amount, and quality of vocational education needed and the potentials for economic growth in the future when coupled with vocational education. The selected group of employers who were interviewed was estimated to represent approximately eighty percent or more of all the employed persons in West Virginia. Interviews attempted to define the present and projected needs as seen through the eyes and experiences of major employers, the competencies and overall quality of the vocational program graduates who have entered employment, and the changes and modifications needed in future vocational education programs to bring the educational content and training procedures into line with the desires of employers. In-depth interviews were conducted with the leaders in the several major departments of the State government that are concerned with the availability, quality, and quantity of vocational education conducted in or projected for West Virginia schools. The consensus of views obtained from each interviewee indicated that the Legislature of the State must

take initial steps in public information, appropriations, allocation of responsibilities, and leadership if the State is to move with assurance into the future.

Public meetings were held in Clarksburg, Beckley, and Huntington to obtain viewpoints, opinions, and comments from people in those areas of the State and to identify problems related to vocational, technical, and adult education. Participants discussed the strengths and weaknesses of existing programs.

Individuals and organizations were invited to make presentations or to submit prepared statements concerning the status and needs of vocational education at a public hearing before the Legislative Subcommittee which was held in Charleston on November 15, 1967. Invitations were sent to the major agencies that have some relationship or some identity with manpower development in the State.

An additional source of valuable data was obtained through the facilities of the Research Coordinating Unit of Marshall University, which designed specific questionnaires for use with school board members, school administrators, employers, and labor leaders in a variety of occupational areas. The questionnaires were administered early in the Study and were designed to elicit data concerning the quality and quantity of vocational education needed in West Virginia as well as similar data relevant to the current programs.

Persons in education, industry, business, State agencies, and professional associations provided information, judgments, and guidance in the interest of better vocational opportunities for youth and adults in West Virginia.

All of the data, information, attitudes, and preferences were studied carefully by the task force members before the information was organized. The methodology used in selecting statistical data relative to future manpower needs of West Virginia was based on the most current data available about occupational and labor market forecasts. Data were collected from a variety of sources in order to reflect every possible point of view.

A considerable number of available reports and other literature was studied. Interviews were held with staff members, comparative data were brought together from outside the State, and many hours were spent in discussion of the present statewide program and what it might become in the years ahead. It is evident that in every broad occupational category the requirement is for more education. New programs and new ideas are essential to meet the challenges of the future. Needed industry is not going to locate in areas where there is a lack of trained manpower or a lack of educational resources necessary to assure a continuing supply of manpower. Larger, more flexible comprehensive programs are needed to provide a total, balanced educational program which includes vocational, technical, and adult education.

Statement of Purposes. The fundamental purpose of vocational education or occupational education in West Virginia is to prepare individuals for employment by providing them access to quality of training and experiences necessary to develop skills, abilities, understandings, work habits, attitudes, appreciations, and moral values. Its function is to impart knowledge and skills needed by workers who are to enter into employment or to those persons already employed who wish to upgrade themselves.

Adult education provides a means of discovering and utilizing productively the human resources of the State. Among the uneducated and undereducated, there are many whose skills and talents are valuable; and, through additional education, they could be brought into the mainstream of economic life as productive workers and useful citizens.

There are several specific purposes of vocational and technical education or occupational education in serving youth and the community. The major purposes are to provide youth enrolling in vocational and technical programs with marketable skills. These needed skills are usually identified by educators working with the industrial, commercial, health, and manufacturing interests in the area; and, to some extent, they include the skills needed in occupations which are yet to come into the area. The second major purpose fulfills the requirement that the educational program contributes to the individual's citizenship. It is clearly evident that every craftsman who works in industry today is also a member of local community, state, and national groups; and as such, he must be equipped to use basic citizenship principles intelligently. Hence, in the actual planning of a complete program of vocational and technical education or occupational education, provisions for activities which contribute to the development of citizenship should be included. The third specific purpose recognizes the need for students in the several skill areas to acquire some of the necessary social competencies which make employment possible, permanent, and profitable. There are a great many ways in which individual social competencies may be developed; but chiefly because of the nature of instructional conditions in vocational and technical education or occupational education which necessitates individuals

working along with each other in groups or in teams, many of the favorable attributes of getting along with other people and respecting the property and contributions of other workers may be facilitated.

Basic Criteria and Policies. Occupational education is vital in modern living. Man's work life, psychologically speaking, is the most important aspect of his life; all other things revolve around it. It must be brought into proper perspective in the total education program, and the administration of the overall educational programs are the persons in best position to accomplish this.

Curriculum patterns in trade and industrial education programs are geared largely to the training needs of specific occupations. In the situation that exists today the requirements of the entry job need to be included by the curriculum needs to include the breadth of preparation that will help the person meet changes that lie ahead. Occupational trends demand a broader pattern, including the use of clusters of occupations as the basis for analysis rather than single specific occupations.

The occupational education program will require certain types of offerings in the high school, others in a regional vocational-technical facility, and still others in the post-high school institution. A proper balance among offerings should be achieved, and comprehensiveness in all these institutions must be provided.

Criteria should be developed for determining the length of time needed to develop entry job competency, the maturity and age demanded by the employer, the age to which the society holds youth in school, the wages that are to be paid for the services rendered, and the breadth of education needed and obtainable along with the specialized occupational education.

Policies need to be determined regarding the provision of services that are needed but not available in the public schools or in the area vocational-technical schools. If students desire training in occupational fields not offered in public schools, the only way they can secure it may be to pay high tuition charges.

Appropriate occupational curricula should be offered in the high school which will lead to continuing occupational education in the post-high school years. This curricula would provide basic or foundation content underlying the later specialized training, together with exploratory programs that would help the student make proper occupational career choices.

Occupational instruction has as its major function the preparation of individuals for immediate employment, plus the additional objectives of preparation for citizenship, accompanied by the required skills needed by individuals in order to demonstrate acceptable levels of social competencies. It is "open-end" in its philosophy and actual operation in that graduates of such programs must be able to submit their credentials to institutions of higher learning and to have them considered for admission and/or transfer credit on the basis of individual merit.

The program of occupational education should be broad enough to satisfy (a) the needs of individuals preparing for entrance into the world of work, (b) the needs of employed individuals who have the desire and competencies to upgrade themselves, as well as (c) the needs of employed personnel who with to update their skills and technical knowledge in order to perform at a higher level of efficiency.

The level of occupational instruction offered requires careful examination of the prerequisities submitted by the enrollees. These pre-requisites would tend to differ among the various curricula or offerings;

however, they would include a broad, basic-educational preparation (or its equivalent) as part of the background of the individual making application to enter an occupational curriculum.

The equipment and facilities used in the programs should represent as nearly as possible the environment and conditions normally found in the fields of employment for which enrollees are being prepared. Shops, laboratories, and equipment should be of such recency and quality as to compare favorably with that found in the world of work. Teaching of principles alone is insufficient for the preparation of individuals for today's occupations. Applications of these principles should be carefully identified, and opportunities to practice them in a controlled educational environment must be a functional part of the program of instruction.

In order to facilitate the teaching of the basic principles and concepts in connection with the respective occupations and to assure that appropriate applications will be provided for students as a means of helping them note the meaningfulness of the concepts, it is important that individuals selected as faculty members have not only a comprehensive background in the field of their major teaching area but also appropriate work experience in the field which provides them with the background from which applications may be drawn and used in the instructional process.

Problems and Issues Concerning Occupational Education in West Virginia.

There are some serious gaps in the statewide structure of occupational education for all youths. Offerings are not available for some students in the skilled crafts and technical occupations. Little is being done for the disadvantaged students--the potential dropouts, in many cases. There are few pre-employment programs for the distributive education field.

Occupational education programs for girls lack variety. Enrollments in evening courses in the technical field are meager. The small high schools have little choice in occupational education programs. The occupational curricula in the post-high school institutions make no provision for advanced level skilled crafts education and have relatively few offerings in the medical and health fields. Closing of these gaps is vital to the development of an effective statewide program.

As many of the present school districts in West Virginia are too small to support an adequate occupational education program on the high school and post-high school level, some type of an area or regional program is needed. Preferably, they should be an integral part of the total educational system, extending from kindergarten through the post-high school institution. In some cases, the base for a more effective vocational unit should include more than one county. Much has already been done in the consolidation of school districts. The large educational administrative district should become mandatory if the educational needs of tomorrow are to be fully met.

The increasing difficulty encountered by the county in financing capital outlay and the development of programs to serve areas larger than those now served as comprehensive high schools indicates the need for greater state participation in these costs.

High school principals and post-high school administrators will need to see the total program of education which provides for students with varied levels of ability and interests. There must be a place in the post-secondary institutions for school leavers as well as for high school graduates.

In order to avoid distinct overlapping of course offerings of semi-professional level in post-high school institutions, coordination with

authority is needed if the total program is to develop most economically and effectively. The overall occupational education program of West Virginia is under the direction of two distinct agencies, the State Board of Education and the Board of Governors of West Virginia University for programs in post-high school institutions.

Opportunity to obtain needed retraining should be available before technological change makes the worker's skills obsolete. Research activities in occupational education should include close contacts and working relationship with educators and those who are closely in touch with manpower and occupational change--economists, labor market analysts, and others who would be able to predict changes needed in the programs.

Enrollments. The total enrollment in vocational, technical, and adult education programs was 50,375 in 1966-67. Using current and expected enrollment trends and expected manpower needs in the State, the several vocational services of the Division of Vocational Education predicted that the vocational enrollments in day schools may be expected to increase to 68,000 by 1975. Enrollments in day schools may be expected to increase by over 11,000 students during this period of time. The need for continual upgrading and learning of new skills is illustrated by the more than 14,000 adults who were enrolled in vocational programs in 1967. It was estimated that the projected adult enrollment in vocational education should increase by more than 18,000 over the next eight years.

The 1975 enrollments were projected for approximately 2,200 students in post-secondary and approximately 42,000 in secondary vocational programs. It was further estimated that approximately thirty-two percent of the secondary public school students should be served by at least one of the

several services available in the field of vocational education; this will constitute an increase of seven percent over 1967. It was further estimated by the Bureau of Vocational, Technical, and Adult Education that approximately five percent of the day-school vocational enrollment will be on the post-secondary level.

In 1966-67 it was reported that 2,927 secondary students had dropped out of school because of lack of interest. Through the provision of a greater quantity and diversity of vocational offerings in the various school systems, it would seem that this lack of interest figure might be lessened.

Surveys. Twelve counties were surveyed to determine the needs and interests of parents and students in expanding vocational programs. The counties studied provided an excellent cross section of the total student body for the State.

Of 20,430 students surveyed, 7,791 or approximately forty percent indicated that they planned to attend college upon completion of high school. When asked if the opportunity to prepare for an occupation suited to their interests and abilities had been offered, approximately sixty percent indicated that they would have enrolled in such programs had they been accessible.

The results of parent surveys showed that of 11,645 parents responding, 5,364 indicated that they planned to provide a college education for their children while 4,023 parents did not plan any additional education beyond the high school. Approximately sixty-five percent favored enrollment in vocational-technical courses as a part of regular high school programs, while twenty-six percent preferred that their children receive additional vocational-technical education after high school graduation.

In determining the interest in adult education programs it was noted that 6,266 of the parents indicated a desire to participate in adult education programs for the purposes of training, retraining, or upgrading their vocational skills.

Questionnaires were sent to county superintendents, members of boards of education, secondary school principals, employers, and labor leaders. The majority of those responding felt that their county school systems should provide a wide variety of vocational programs to meet the needs and abilities of those students not going to college. They felt that if the present programs were diverse or extensive enough to serve these needs, many more students would be enrolled. It was suspected that the lack of depth and diversity in the present programs was the reason a sizable number of respondents in each group said the present programs were not effectively preparing students for today's world of work.

There was overwhelming support for offering vocational-technical education programs in the secondary schools, and the majority felt that the State should provide additional funds for financing vocational education in their counties. Most of the respondents in each group surveyed, with the exception of board members, were in favor of the use of Federal Aid for financing vocational education programs and felt that it was a necessity for the operation of these programs.

The great majority of the superintendents, principals, and board members felt that their county school systems placed more emphasis on college preparatory programs than on vocational programs even though less than two out of five of the high school graduates go on to college.

It was agreed that post-secondary education should be offered in area vocational schools and that technical education should be offered in the area vocational school of either the secondary or post-secondary variety.

Respondents felt that the importance of the need for vocational education in the secondary schools would increase in the future. Persons directly involved in education, namely superintendents, principals, and board members most often mentioned a preference for conducting vocational education in separate vocational schools while the employers and labor groups mentioned their preference in utilizing comprehensive high schools. All indicated that they felt vocational education is of great value and importance and a major answer to the problem of unemployment.

Recommendations and Implementation. Recommendations are offered in the belief that West Virginia should maintain and improve the services it now offers so long as they meet the occupational education needs of persons and employers, but sights should be lifted to the changing technological conditions which are rapidly approaching and program modifications should be made to meet these changes.

Implementation of the vocational, technical, and adult education program expansion as recommended in this report represents a forthright and logical approach to an important educational issue.

The scope of West Virginia's economic growth, increasing population and school enrollments, curriculum and career choices of high school students, projected job opportunities, and present training programs were analyzed. The comprehensive study of vocational, technical, and adult education in West Virginia proposes an expanded program designed

to provide career guidance and training for a greater proportion of our youth and adults at both the secondary and post-secondary levels. Recommendations are consistent with our objectives of developing increasingly broadened educational opportunities for the citizens of the State and a reasonable approach to financing the improvements is presented. Final sections of the report were prepared containing the summarization of findings, implications for education, society, and the economy in West Virginia, and suggestions to the Legislative committee concerning recommended actions to be taken, legislation to be considered, and approximate dollar costs for implementing a program of vocational education commensurate with the needs of the people of West Virginia.

Major findings and recommendations were adapted and summarized to show the trends and implications of the study.

MAJOR RECOMMENDATIONS

RECOMMENDATION NO. 1: A new approach to occupational education must be found.

Implementation:

Occupational education must be recognized as an essential part of all secondary and post-secondary educational programs. Equal educational opportunity and opportunities to pursue a career in the vocations are essential in the future plans of human resource development in the State.

Administrative units on all grade levels must include occupational education along with other areas of study, and credit must be given which is equal to that given to academic courses.

Each youth must have an opportunity for occupational education at varying levels in his own program of development.

Elementary, secondary, and college teachers must gain a greater understanding of and appreciation for the occupational structure of American economic society and must help youths to acquire this knowledge.

PROGRAM AREAS

RECOMMENDATION NO. 2: Meaningful comprehensive general education needs to be interwoven into the fabric of occupational education curricula.

Implementation:

Occupational education will loom large in the total education pattern of the years ahead. Vocational and technical education leaders need breadth of understanding of general education and its contributions to an overall or total education.

The task of the secondary school program in the years ahead should encompass the following:

a. It should provide college preparatory education for students continuing on to higher education institutions.

b. It should provide an expanded occupational education program involving a much greater proportion of the student body than is presently the case.

c. It should be responsible for the specific occupational education of those youths who do not continue beyond secondary school or who drop out before graduation.

d. It should have the responsibility of providing continuing education for adults in subject fields in which programs are normally offered in the high school if such education cannot be made available at a post-secondary institution.

e. When other facilities are not available, secondary school facilities as can be adequately provided, should be utilized for continuing education for adults.

The role of post-high school institutions in the years ahead should encompass the following types of occupational curricula in addition to general education and pre-professional education leading to the junior year of college:

a. Semi-professional non-engineering type curricula, such as in health fields.

b. Engineering technician and industrial technician curricula.

c. Curricula in highly technical craft occupations.

d. High level curricula in office and distributive occupations.

e. Partial responsibility, shared with the secondary occupational programs for skilled crafts and office occupations, related training for apprentices, and semi-skilled training for out-of-school youths and adults.

f. Agriculture-related occupational curricula in rural settings.

g. General adult education of all types.

Administrative provision should be made for coordinating the occupational education activities in the secondary schools and the post-secondary institutions of the State. The program offerings now overlap to some extent and this situation will tend to increase unless coordination is effected.

The program offerings in an area occupational program should be comprehensive in the nature of the general education content of the curricula and the range of occupations to be provided. The program should provide curricula in a minimum of five occupational fields appropriate for institutional offerings in either comprehensive high schools, technical institutes, post-secondary institutions, or other institutions in the community. It should include retraining and upgrading courses for adults.

Adult basic education and adult high school education should be made available to all persons at no cost and provided as an integral part of the public school program. Adult education programs should be eligible for State Aid under a formula that would provide for instructional and supervisory costs. Gaining public acceptance of these programs becomes the duty of all educators so as to make certain that every citizen will have knowledge of their educational opportunities.

STRUCTURE

RECOMMENDATION NO. 3: Occupational education for secondary school age youths should be made available in a high school and/or area vocational education school; occupational education for the post-high school youths and adults should be made available in appropriate institutions.

Implementation:

No single pattern of organization for occupational education will meet the needs of all areas of West Virginia. The following factors have bearing on decisions concerning whether the offerings should be in a secondary school or at a post-secondary institution:

a. Length of time student will remain in school.

b. Age at which interest or incentive to undertake the study arises for most students.

c. Prerequisites for admission, such as secondary school graduation or specific courses for continued education.

d. Maturity demanded by employers when graduates enter the labor market.

e. The presence of a specific type of school capable of offering the curriculum.

f. Image, prestige, or drawing power of the institution.

g. Licensing requirements of occupations.

h. Social level of the community.

i. Willingness of the political unit to pay the costs which are higher if education is provided through the fourteenth year.

j. Needs of the labor market.

The size of the educational administrative unit must be considerably larger than found presently if the occupational education program is to be comprehensive and efficient. Other than the larger counties, this calls for consolidation of districts, at least for secondary school occupational education programs.

Concepts of providing occupational education in sections of low population density through an area or regional center is necessary and desirable, and the manner in which local districts are brought together for such service deserves careful study. A school offering an occupational program to an area should take the form of an enlarged comprehensive high school with major emphasis on occupational offerings.

At the present time a larger share of the pre-employment occupational education for youths should be available on the secondary and post-secondary school levels. As occupational requirements rise and students remain longer in full-time schools, some of the programs presently in secondary schools will move into the technical institutes and post-secondary institutions, and a few may even move in the reverse direction. Immediate program additions should be patterned toward the structure that will be needed in the future.

CURRICULUM

RECOMMENDATION NO. 4: The Division of Vocational Education should continue its efforts in curriculum and instructional materials development for occupational education programs.

Implementation:

The general direction of curriculum location is upward. Many subjects now offered on the secondary level will increasingly be offered partly on the post-secondary or technical institute level. The primary role for post-secondary education rests with the post-secondary institutions and technical institutes in respect to both age and sequence.

The curricula serving the needs of youths and adults should provide the needed occupational skills and knowledge and also sufficient general education content to permit the graduate to continue in higher education institutions without undue loss of credit.

High school curriculum patterns should include curricula toward higher education, including general education, technical education, business education, and a curriculum leading to highly skilled occupations for which specialized education is provided in the post-secondary institutions. The patterns should provide for specialized education for those occupations which can be offered appropriately in a high school. Curricula may well include the total of three or four years in the high school. Specialized occupational curricula may well be limited to the eleventh and twelfth grades preceded by basic education preparatory to the occupational field in which the specialty lies.

Increased attention and emphasis must be given to provisions of specialized instruction for middle and top management. Preparation of people for these two categories is urgently needed. In far too many cases the highly efficient individuals employed in such categories eventually out-migrate.

FACILITIES

RECOMMENDATION NO. 5: Expansion of facilities may be necessary to provide curricula and materials for the enlarged scope of occupational education envisioned under the Vocational Education Act of 1963.

Implementation:

Because West Virginia has such a small percentage of its total secondary school population being served by adequate vocational education programs, it is recommended that provisions be made to accommodate additional thousands of students at the earliest possible moment. Plans have already been produced by the Division of Vocational Education in connection with this matter and it would appear reasonable to presume that several additional institutions strategically located in West Virginia can serve the needs of these additional thousands.

Based upon an average cost of approximately $3,500 per student, it will be possible to build the facilities to serve the needs of additional thousands of students, equip the facilities, and have them ready for students. These costs include acquisition of site, preparation of site, and the complete building and equipping process.

Flexibility and efficient use of equipment and facilities will require different provisions in different localities.

STUDENTS

RECOMMENDATION NO. 6: Occupational education programs are needed for secondary school students, for high school graduates, for high school dropouts, and for adults who need occupational updating, upgrading, or retraining.

Implementation:

Estimates supplied by the Division of Vocational Education and concerned with the individuals to be served by fiscal year 1977 indicate that 16,280 additional persons must be served in vocational facilities, thus requiring a statewide building program.

The need for continual upgrading by some persons and learning of new skills is illustrated by the more than 14,000 adult vocational enrollments in 1967. It was estimated that the projected adult enrollment will increase by more than 18,000 over the next eight years.

TEACHER EDUCATION

RECOMMENDATION NO. 7: Professional education should be designed to discover and develop the educational competencies necessary for a good teacher.

Implementation:

The program of teacher education must, in all of its phases, be cognizant of the changing system which characterizes the contemporary world scene. Curricula needs and processes must stand ready for revision in line with new developments since preparation and training of teachers is a continuing process.

Steps should be taken immediately to establish an organized system for the preparation of all teachers in vocational areas of instruction. The involvement of the Division of Vocational Education and the institutions of higher education in the State in teacher preparation is essential. Particular attention should be placed upon the fields of trade, industrial, and technical education. While other vocational areas have adequate professional education arrangements for their

specific vocational areas of instruction, the need to coordinate the total program and to combine similar functions in many of the separate programs will produce substantial savings in the total State program.

The teacher education program must include information regarding occupational education for all pre-service teachers.

Certification requirements should be established for adult education instructors. These requirements should be broad enough to utilize persons who have demonstrated abilities and experiences or mastery in a particular field.

Occupational programs should be under the direction and supervision of qualified persons prepared to provide high quality programs. The grants-in-aid provided by the State for the development of occupational programs should be available only to colleges or secondary schools that satisfy certain criteria which assure effective programs.

SERVICES

RECOMMENDATION NO. 8: Specialized student personnel services need to be provided in each institution offering occupational education to assure placement, follow-up, and other employment services.

Implementation:

Effort needs to be made in the improvement of guidance services for youths in secondary schools and post-secondary institutions. Occupational education will not be effective unless it is emphasized and understood by the counselors. Guidance and counseling services should be offered to students enrolled in Adult Basic Education or

adult high school courses. A considerable investment may be necessary to bring the counseling services of the State in line with the needs, but this investment must be made.

State Board of Education should take a firm stand toward developing comprehensive understanding of all aspects of education on the part of educational leaders and administrators throughout the State.

Vocational education will require a coordinating council for the entire State. This council should have responsibility for all levels and all segments of the total vocational education program. This includes those parts conducted in public high schools, in separate vocational institutions which serve the sending high schools, and those institutions which are post-secondary and operated under the aegis of a four-year institution. The coordinating council should be advisory to West Virginia Board of Education and the State Director of Vocational Education should be its executive secretary. Purpose of the council would be to effect economy and efficiency by reviewing periodically the progress being made in the field of vocational education and to make recommendations through its executive secretary to the West Virginia State Board of Education for further program expansions, improvement of operational procedures, deletion of services, or advice concerning any other facet requiring State Board and/or Legislative action. The coordinating council should make every effort to have all segments of the total State vocational education programs keyed closely to the manpower and employment facts of the State since this is the major procedural factor out of which will come improved efficiency and economy.

It is recommended that each county assemble an advisory or coordinating committee. The purposes would be similar to State Advisory Committee for Vocational Education having specific responsibilities when working with a county board of education to recommend the quantity and quality of vocational education needed for the present and future. With fifty-five separate advisory committees at work in the counties and with an advisory committee at the State level, many more people will be involved in vocational education promotion and activities and this would conceivably assist in the program of public information.

FINANCE

RECOMMENDATION NO. 9: Funds for vocational education should and must come from the State Legislature in order to provide for the quantity and quality of programs needed now in West Virginia and for the future.

Implementation:

Vocational education and the future of West Virginia are closely allied. In the future, vocational education should be looked upon as a State function of major proportions with specific responsibilities delegated to the fifty-five counties. As it cannot be assumed that the counties have the resources to take care of their own requirements, this must be a State involvement and a State commitment.

The major part of the support for vocational education in West Virginia should come from the State, and the legislation appropriate to these needs should be formulated and entered in the Legislature at the earliest possible session.

The State Department of Education's consistent effort to decrease the numbers of schools implemented by financial inducements in State Aid has seen some progress. But for best results in the field of occupational education, it must go much farther, even to changing the laws of the State, in order to make it possible for all counties to engage with neighboring counties in cooperative planning, joint use of funds for construction and equipping of area vocational school facilities, and for the expenses involved in annual recurring costs of operation.

Based upon estimates and calculations, approximately $42,000,000 will be required by 1976-1977 to carry through the program of secondary and post-secondary level vocational education construction and equipping for West Virginia. When all of the facilities are in service, there is every likelihood that there will be an abundance of skilled craftsmen, skilled mechanics, skilled operators, and skilled technicians available for industries in the State and those industries that it is hoped will be attracted to the State in the future.

Approximately $500 per student per year is needed to provide effective instruction for individuals enrolled in industrial and technical education on the secondary level. This amount varies considerably within programs of vocational home economics, vocational agriculture, distributive education, and other fields.

With additional thousands of youths and adults to be provided for in the future, Legislative action will be required in the near future for the necessary funds (approximately $10,000,000 per year by 1976-1977) to provide the annual recurring allotments to the counties for

the conduct of training, modernization of facilities, new teaching devices, automated teaching-learning equipment, closed circuit TV, innovative methods, etc.

A flat five percent of all funds for annual recurring costs of instruction should be earmarked for supporting clerical, secretarial, supervisory, and administrative personnel and services in view of the expanded program anticipated for the next decade.

Large percentages of the expenditures may be reimbursed through many of the Federal education acts. Thus, from the Vocational Education Act of 1963, the Higher Education Acts, the Appalachian Act, and the Elementary and Secondary Education Act, funds for construction, equipment, teachers' salaries, innovative procedures, and devices may be obtained. Fifty percent of teachers' and supervisors' salaries are possible from some acts, while one-third or more of the costs of construction and equipment may be obtained from other acts. The projects, their objectives, and the allotments available to states would, of course, have a bearing upon the actual percentage of reimbursement.

RESEARCH

RECOMMENDATION NO. 10: West Virginia should undertake an extensive plan of research and development in the field of occupational education.

Implementation:

Vocational education studies to help determine the specific curricula and courses needed to serve the needs of youths and adults should be continued until every student in the State has had an opportunity to express his or her wishes and preferences for vocational

education offerings. The necessary funds for the conduct of these county-wide studies should receive careful consideration and, where necessary, provided from State sources. This is a responsibility that cannot be appropriately expected of each county without some help from a State agency.

The State, in addition to its excellent Research Coordinating Unit, might well sponsor under a contractural arrangement with a university respected for its research a program of operations which would deal with occupational education problems. The staff of such an agency would include economists, labor market analysts, sociologists, and the like, in addition to research-minded occupational and general educators. The agency should concentrate its efforts on research and should not have responsibility for teaching graduate students.

Research might well be stimulated at local levels by appropriate grants-in-aid to schools that develop promising innovations in methods, techniques, and other improvements. There should be a special appropriation each year for this purpose.

Numerous educational studies concerned with vocational education and preparation of youths and adults for the world of work have been conducted. Action must be taken to facilitate the recommendations of some of these reports.

Industry and business spend billions of dollars on research and development programs. Occupational education in an automated age cannot be expected to accomplish its tasks without such aid.

Program planning for area vocational facilities should be based upon reliable data obtained through local surveys of occupational

needs and availability of students. Program planners must keep in mind the breadth of the placement market for graduates and the needs of employed workers for upgrading and other areas of education. The recent surveys in various communities of West Virginia will provide much valuable data for the program planning.

PUBLIC INFORMATION

RECOMMENDATION NO. 11: A strong program of public information is needed immediately which will acquaint all persons in the State with the place and value of vocational education to the State's economy and its society.

Implementation:

The sharing of public information is a joint responsibility of education, State government, and the news media. Steps must be taken immediately to effect a working arrangement with the press in order to encourage a higher level of constructive criticism in the future.

In order to provide for the widest possible dissemination of public information concerning vocational education, its objectives and plans for the future, it is recommended that the county school administrators and the county vocational supervisory personnel be used to facilitate the activity. The success of the county programs are of such importance that the public information programs should be tied to these offices, with the expected resultant effect that the total population of West Virginia will have a ready source and an available agency from which to obtain up-to-date and accurate information concerning the vocational education plans for the future.

VT 008 283
Re-Employment Factors of Inactive Nurses in Wisconsin.

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WISCONSIN

A survey to find and recruit inactive professional nurses was conducted between June 12 and July 7, 1967. Sources for the survey were a listing of inactive nurses supplied by the State Department of Nurses, a mailing to 20,000 currently licensed nurses urging them to encourage the participation of inactive nurses, and a television, radio, and newspaper publicity campaign. Questionnaires sent to 2,279 nurses garnered 1,399 useable replies of which 1,160 represented were from inactive nurses. Some findings were: (1) 45 percent of the 1,160 replies came from three densely populated counties with no responses from seven counties, (2) 53 percent had been out of practice for 5 years or less, (3) 72 percent intended to return to nursing practice--34 percent in 1967 and 1968 and 39 percent after 1970, and (4) 745 nurses were interested in refresher courses, and, of these, 82 percent wanted part-time classes. (JK)

VT 008 283

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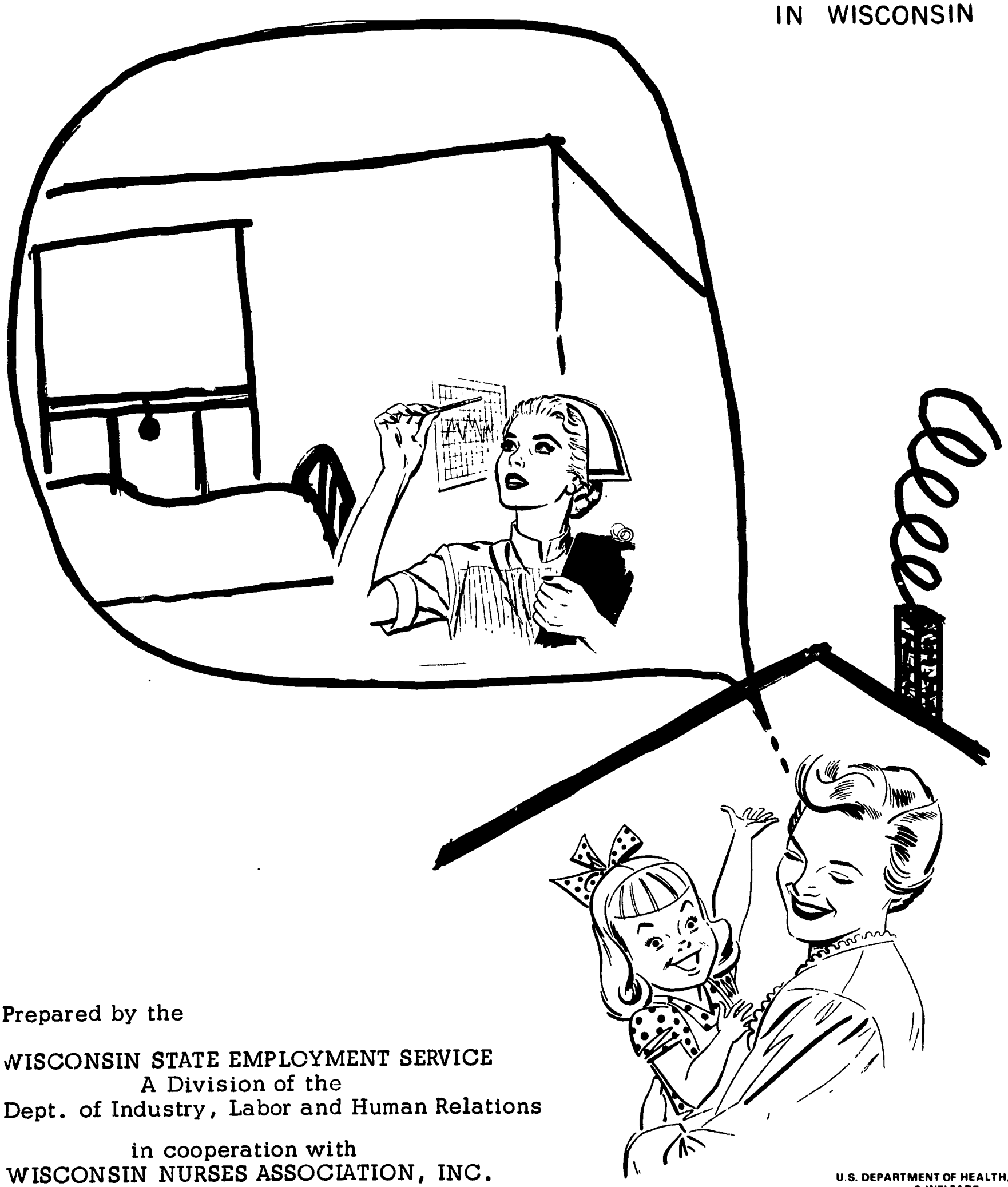
RE-EMPLOYMENT FACTORS OF INACTIVE NURSES

IN WISCONSIN



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WISCONSIN STATE EMPLOYMENT SERVICE
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Dept. of Industry, Labor and Human Relations

in cooperation with
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I

Introduction

In order to measure and reactivate the reserve of nursing skill available throughout the State, the Wisconsin Nurses Association requested the aid of the Wisconsin State Employment Service in conducting a survey of inactive professional nurses in the State and certain communities adjacent to the Wisconsin line. A critical shortage of nurses exists at the present time, and this situation will probably continue without improvement, especially with the inauguration of the Health Insurance for the Aged Program (Medicare). The anticipated demands of this plan, along with an already existing personnel shortage, has created a more dire and critical need for qualified nurses.

An advisory committee was formed for the purpose of planning this survey. The Employment Service designed the questionnaire and survey letter used in the survey, and with the cooperative efforts of the W.N.A. and its 18 district associations, mailed them throughout the State. The W.N.A. and the district associations prepared and released all television, radio and newspaper publicity. The Bureau of Research and Statistics of the Employment Service processed and analyzed the data from the returned questionnaires.

The survey started June 12, 1967, and ended July 7, 1967. A questionnaire and letter were sent to 2279 professional nurses throughout Wisconsin and certain cities of bordering states. Useable replies were received from 1399 nurses, of which 1160 were inactive nurses, and 239 active, for a rate of reply of 61 percent.

The WSES sent out approximately 1319 questionnaires to the list of inactive nurses whose names and addresses were supplied by the State Department of Nurses. An additional mailing by the W.N.A. to 20,000 nurses currently licensed to practice in Wisconsin announcing the survey and encouraging them to urge inactive nurses to participate. The other sources of contact were through the responses to the television, radio, and newspaper media, and in addition, referrals by active and inactive nurses.

The survey proved that names and addresses furnished in advance to the WSES for their mail out, produced by far, the most effective results in the number of questionnaires returned. For the benefit of the readers some totals of tables will not add up to 1160 respondents because of multiple answers to some questions and because some nurses neglected to answer all parts of questions correctly.

The survey was intended to identify and locate inactive nurses throughout the state, and to determine the number who would be interested in refresher courses in order to get them actively back into the profession in the shortest time possible. The survey was intended not only to estimate the current need of nurses for refresher programs, but also to provide data for future planning and training in Wisconsin.

Under the Federal Manpower Development and Training Act, refresher courses can be made available providing sufficient numbers of RN's are found who would be interested and qualified. The Federal government pays the full cost of refresher courses, and in addition, individual trainees may receive subsistence for refresher courses and/or transportation allowances.

It must be borne in mind that at least 98 percent of those in the nursing profession are women. While the status of women is changing, their fundamental responsibility is to the home and family. The participation rates for women in the work force therefore, by necessity, are far below those for men. Even under the best of conditions, a significant proportion of professionally trained and experienced nurses, especially those under 35 years of age, will be unavailable for work outside the home. More young people, including men, will have to be encouraged to enter the field because, while training and retraining, and consistent and forceful recruitment may provide some additional nursing personnel, the supply will continue to fall far short of the demand unless more direct, new, and far reaching steps are taken in recruitment and retention.

II

Highlights of the Survey

Forty-five percent of the 1160 inactive nurses responding to the survey came from the densely populated Dane, Milwaukee and Waukesha Counties, while no responses were received from Forest, Marinette, Buffalo, Iowa, Adams, Calumet and Waushara Counties.

The survey revealed that 841, or 72 percent, of the 1160 total respondents intend to return to nursing practice. Of these, 34 percent will return in 1967 and 1968; 39 percent will return after 1970.

The survey revealed a total of 744 nurses indicating an interest in refresher courses.

Six hundred and fifteen, or 82 percent, of the respondents interested in refresher courses, indicated a desire for part-time classes, with 355 preferring daytime schedules.

Fifty-three percent, or 618 nurses, have been out of practice 5 years or less.

Of the total inactive nurses who expressed a willingness to commute (569), 276 would not commute over 10 miles for refresher courses.

III

What Do the Nurses Say?

Some nurses chose to go beyond the mere checking of boxes on the simple questionnaire sent to them. In the comments section of their questionnaires, these women stated the causes of the shortage of nurses as they appeared to them. In so doing they gave interesting but not entirely surprising glimpses into a profession which still calls forth the utmost dedication from nurses in all age groups, while it arouses bitterness, regret, and criticism in others.

The status of the profession, in a world where status is often measured by renumeration, is an irritating concern to most registered nurses, and the many complaints of low pay showed the relationship in the nurses' mind between low pay and low status. Inflexible hours, unsatisfactory working conditions, unsympathetic hospital administrators, and too heavy workloads were frequently reported.

While some nurses were writing that Florence Nightingale is dead and that nurses should organize to lift their status, others were writing encouragingly of their dedication to a profession they love. Some of the nurses expressed a deep devotion to their profession, as they write of plans to return to nursing after they recover from broken bones, cardiac attacks, or major surgery. Some apologized for their physical inability to practice their profession, while others asked forgiveness for being able to work only part-time due to physical disabilities.

Younger women were most often kept from work by family responsibilities and their inability to fit into hospital schedules. According to what a good number of nurses say, it might pay the larger hospitals or Federal Government to sponsor day-care nurseries to free these women from extra incurred "baby sitting" costs; to enable them to bring home a larger net salary; and to ease the nursing situation.

Many registered nurses were interested to some degree in refresher courses now and in the near future, and believed these refresher courses would be a great step for-

ward. However, many of them suggested that the time schedule of these courses be flexible enough to accommodate those who are working or have family responsibilities. Many also indicated that hospitals would have to relax their work schedule or this source would go untapped.

The findings of this survey are not surprising as the critical shortage of nurses has been one of the most publicized of occupation shortages. There can hardly be a nurse not working, and physically able to work, who is unaware of the need for her services.

The voices of the women in white may be heard loud and clear in their comments from which the following excerpts were taken:

"I attended a refresher course given by an area hospital but I feel that I need more training in Medical Nursing, Obstetrics, and care of cardiac and cancer patients. The mentioned course was more or less orientation to the hospital procedures."

x x x x x

"I hope to return to college and get my degree in nursing after my children are enrolled in school. As of now, I am just beginning to raise a family. I am interested in progress in nursing in Wisconsin."

x x x x x

"I do miss nursing terribly. I would work now if the pay would make it worth while."

x x x x x

"I am in favor of this possible course and hope it becomes available. I've only been inactive 2 years but feel I've lost a lot in that span. I hope to go back to work and hope wages etc. are going to improve. In spite of

wages, I for one can not help but long for my daily contacts of my profession and hope to return soon."

x x x x x

"There have been so many changes in equipment, procedures, drugs, care, etc. in the 10 years since I did general duty, that frankly, I'm scared stiff to go back."

x x x x x

"Many hospitals have their own refresher courses to train their nurses the way they want them. I think this is the best rule. If the government would help support this, the hospitals would be happiest and it would cost less."

x x x x x

"I feel that the greatest impetus to getting inactives back to work is for employers of nurses to allow for greater flexibility in work schedules to meet individual nurses needs, and to update salaries in line with other professions, and commensurate with experience and education."

x x x x x

"I really believe hospitals could get more RN's back to work if they provided free nursery care for their children in a hospital nursery area."

x x x x x

"Either raise standards and wages or don't bother me."

x x x x x

"One of the reasons I have been reluctant to return to active nursing is that so many hospitals require their part-time help to spend a disproportionate amount of their time working weekends. My husband and family come first, and therefore, I remain inactive even though I miss working in my profession."

"I worked only a short time in Wisconsin. The salary and working conditions are inferior to that of Minneapolis hospitals. I have to maintain 2 homes to live where I'm happiest in Wisconsin, and work where I get paid for it in Minnesota."

x x x x x

"I am employed in our own business, but I would always help the medical profession in a National emergency."

x x x x x

"I am undecided about returning to nursing, but am very much interested in refresher training. One never knows this may be all I need to help me decide."

x x x x x

"I took an "in-service" refresher course. It was most adequate and I found no difficulty in adjusting to present day nursing."

x x x x x

"I went back to nursing 15 years ago part-time. When nursing and hospitals become "Big Business" it becomes too much to handle, and many old nurses were made to feel un-wanted and called "dead wood". Am out for good after 40 years."

x x x x x

"I think the critical shortage of nurses is due partly to the reluctance of many nurses to resume their profession without a period of training to meet current requirement."

x x x x x

"My objection would be to commuting to any of the cities listed. Why can't we have such a refresher program more localized and therefore, more available to the inactive nurses whom you are trying to interest."

"I think it would be helpful to be notified about short conventions and local seminars even if not a member of WNA. Perhaps the local districts could provide this service and help create incentive."

x x x x x

"It would be difficult for me to return to work part-time, unless hospitals either pay weekend and holiday time and a half or some other compensation. Even people in cheese factories get more than that. Then maybe there would be enough help on weekends that an RN could be hired that could not work weekends! My husband says "no"!"

x x x x x

"I feel that the reason for many RN's being inactive presently is that many of us have small children whose many needs keep us at home. This very same reason perhaps would keep these nurses from participating in a refresher course. Would it be possible, therefore, to use WHA-TV to reach these nurses? It would be a very efficient use of the teaching materials and personnel available."

x x x x x

"I like nursing but I am tired of living among carpenters, plumbers, etc. and always being lowest on the salary scale though highest in skilled professional talents, and having to work typical irregular hospital hours, holidays, etc. It's just not worth it."

x x x x x

"I understand that there is very little pay differential for the degree nurse as opposed to the 3 year program RN. After seven years of school, this seems very unfair to me, and makes the incentive for working very poor."

x x x x x

Part One

A Composite Picture

The inactive nurse in the State of Wisconsin, as represented by survey respondents, is a woman who has found satisfaction in nursing, as attested by the large number returning to practice. She has been out of nursing for five years or less, is interested in a refresher program, and has vital experience in various levels of nursing. She is willing to be contacted for further information regarding her nursing career, and will probably return to practice when the needs of her family are fulfilled.

Characteristics of the Inactive Nurse

Work Experience

In Nursing

The inactive nurses were asked about their levels of experience. As was expected, nurses indicating General Duty or Staff experience far outnumbered those having experience in all other levels. This is not surprising since this is the entry level for most individuals in the nursing field regardless of what higher level of attainment they may have achieved. Eighty-seven percent of the 841 nurses intending to return to nursing had General Duty or Staff experience. Only 10 percent of the responding nurses intending to return to the nursing profession had supervisory experience and less than 7 percent were experienced as Instructors. This would indicate that there is a good supply of nurses in the entry level of nursing intending to return to practice, a level in which the most critical shortage exists, and immediate help is needed. However, outside of the entry field of nursing, the levels of experience reported by responding nurses are relatively limited as can be seen in Table 1 that follows. The demand for qualified nursing personnel is not limited to General Duty positions. The concerning thought arises, as to whether or not the inactive nurse's potential is limited in terms of the present demand. This is a question only the nursing educator or professional evaluator can answer.

TABLE 1

Level of Experience by Intent to Return
and
Percent Returning for Each Level

Intent to Return	Total Responses	General Duty or Staff	Super-visor	Administrator	Instructor	Consul-tant	Other
Total	1160	956	132	23	71	9	171
Yes	841	734	89	10	57	5	114
% of Intent	72.5	76.8	67.4	43.4	80.3	55.5	66.7
No	210	141	30	7	8	2	44
No Response	109	81	13	6	6	2	13

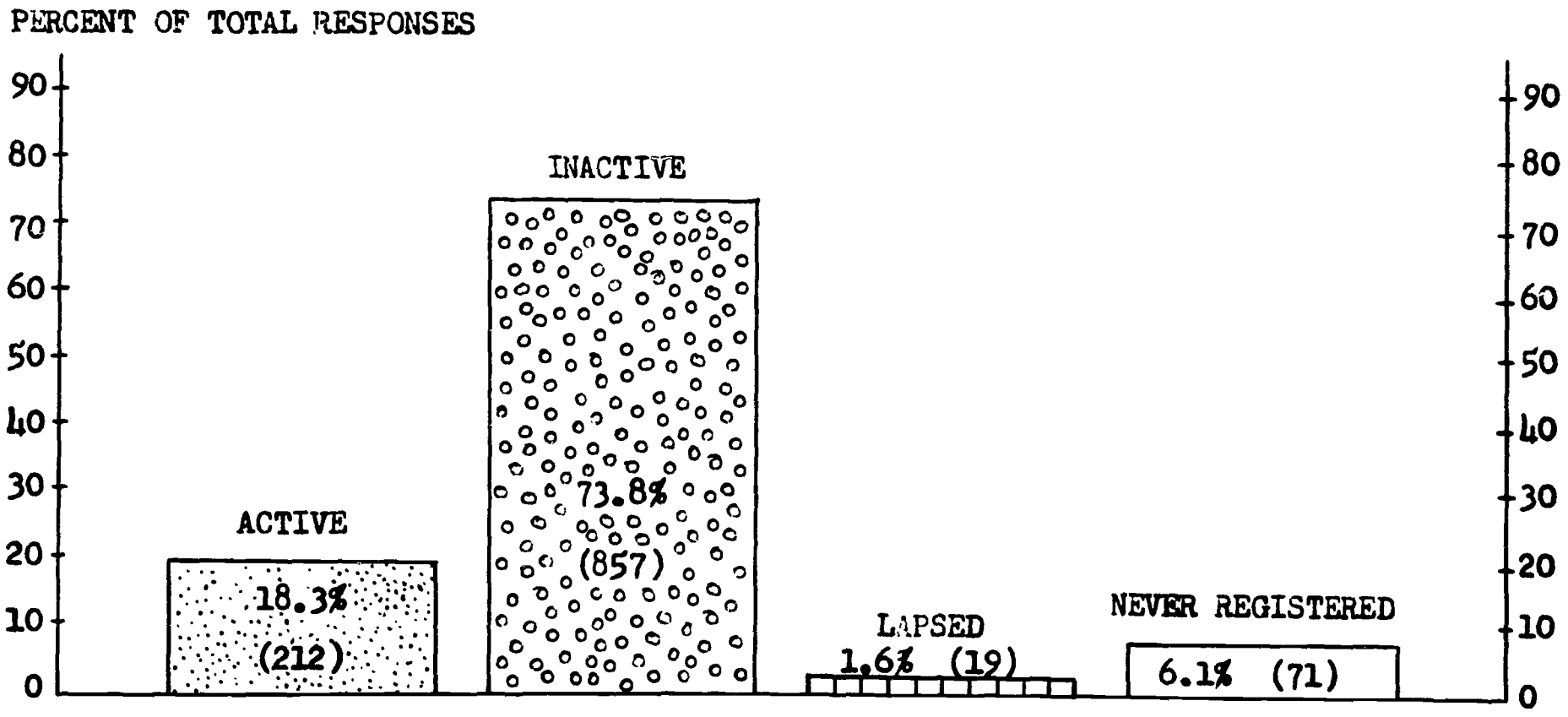
Rows will not total due to multiple answers in level of experience.

Registration Status

Nurses in all levels of experience were asked what their current registration status is and whether they are employed in occupations outside the field of nursing. It was hoped that the responses to these two questions would reveal a continued interest in nursing on the part of the inactive nurses as well as how many are working in other occupations.

CHART 1

Registration Status



Responding nurses who continued to maintain either active or inactive registration status totalled 1069. The significance here is that while the RN may be inactive professionally, she still maintains her registration possibly looking forward to the time when she might resume working as a nurse. Six hundred and ninety-three, of the 857 nurses with an inactive registration status, had General Duty experience. As will be shown later on in the report, a large number of nurses having an inactive or active registration status, are interested in refresher courses.

The survey also revealed that only 60 inactive nurses were employed outside the field of nursing. Of these, 26 are interested in refresher courses and 27 intend to return to practice; nearly half of them before 1970. (See Tables 2, 5 and 11)

TABLE 2

Level of Experience by Registration Status and Employment Status

Registration Status	Total Responses	General Duty or Staff	Super-visor	Adminis-trator	Instruc-tor	Consul-tant	Other
Total	1160	956	132	23	71	9	171
Percent	100.0	82.4	11.4	2.0	6.1	0.8	14.0
Active	212	185	21	3	14	1	29
Inactive	857	693	99	18	51	8	128
Lapsed	19	16	2	1	0	0	1
Never Registered	71	62	9	1	6	0	13
No Response	1	0	1	0	0	0	0
Employment Status							
Non-Nursing Employment	60	46	9	2	4	2	13
Not Working	1093	907	121	21	65	7	158
Not Indicated	7	3	2	0	2	0	0

Rows will not total due to multiple answers in level of experience.

Recency

Inactive nurses were requested to state how long it had been since they practiced nursing; in relation to their intent to return and the year they intend to return to practice.

As indicated in Table 3 that follows, the majority of inactive nurses responding to the survey have been out of practice 5 years or less. Five hundred and forty of these nurses intend to return to practice, with 45 percent returning to duty by 1970. Four hundred forty-one inactive nurses will return by 1971, while another 334 will return to practice sometime after 1970. Nursing officials and educators should be pleased with the number of nurses with this relative short span since practicing, because these returnees should be able to grasp quickly and easily, all material covered in a refresher program. A great void would be filled if a good percentage of these nurses could be brought back into the labor force.

TABLE 3

Intent to Return and Year of Return by Years Since Practice

Years Since Practice	Total Responses	Intend to Return	Year of Return					
			1967	1968	1969	1970	Later Date	No Response
Total	1160	841	135	154	77	75	334	66
0 years	107	90	26	18	9	2	28	7
1-5 years	618	450	50	60	35	45	224	36
6-10 years	174	133	19	27	17	14	47	9
Over 10 yrs.	240	161	38	49	16	14	34	10
No Response	21	7	2	0	0	0	1	4

CHART 2

Years Since Practice of Nurses Intending to Return

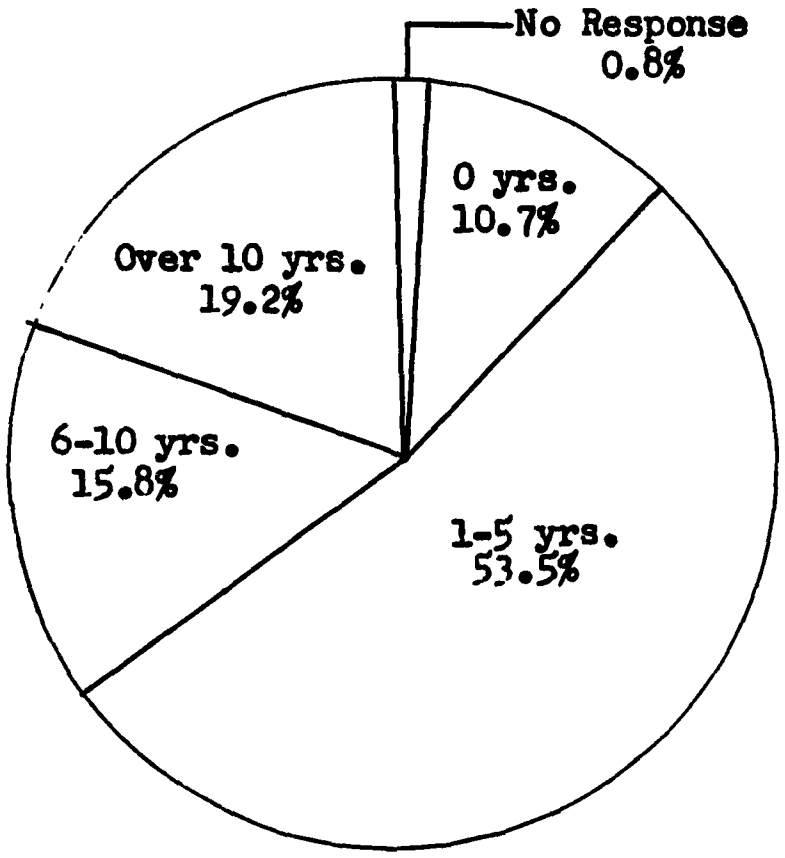
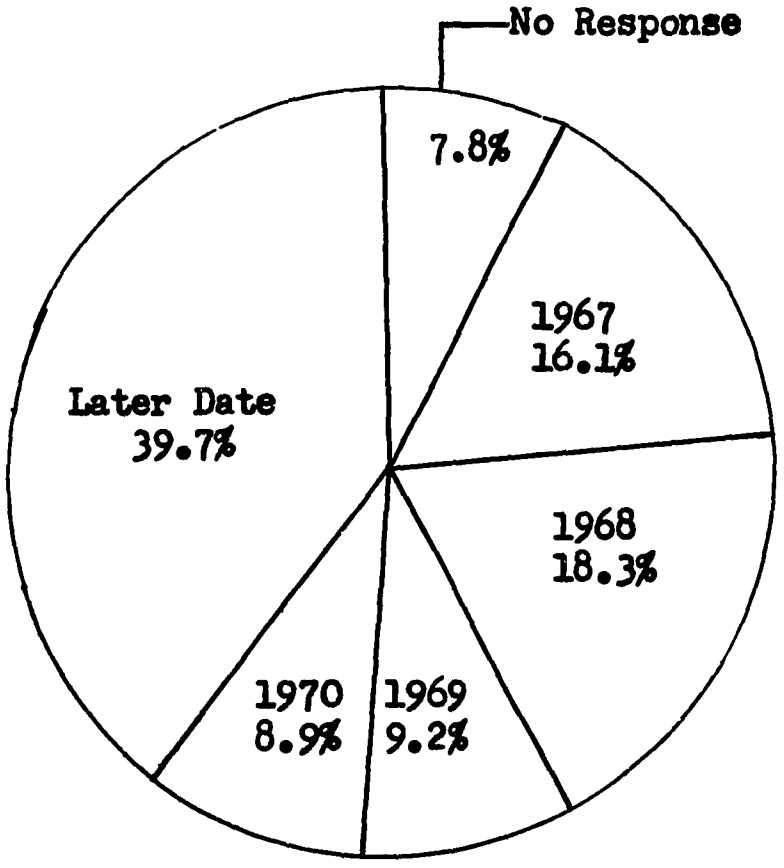


CHART 3

Year of Return of Those Intending to Return



The nurses were also grouped by levels of experience and related to the years out of practice.

In each of the various levels of experience, nurses who had been out of practice 5 years or less were dominant by fairly large majorities. This could be of prime importance in designing the curriculum for refresher courses since the depth of training would be directly related to the recency of work experience. Of course consideration must be given to the specific needs of individuals and the curriculum tailored to these needs.

Since the demand for General Duty nurses is the most critical, it is encouraging to note that substantial numbers on this level of experience who intend to return to practice have been out of nursing for 5 years or less.

Of importance also is the fact that at least 39 of the 71 responding instructors have been out of practice 5 years or less and intend to return to practice.

These instructors, with up-dated skills, could be utilized in teaching nurses at other levels of experience.

From what has been said here it is apparent that there are sizable numbers as far as nursing potential is concerned. However, this potential will go untapped unless an aggressive recruitment program is developed, and unless these inactive nurses are provided the refresher courses needed to up-date their skills. The subject of refresher classes will be treated later on in this report.

TABLE 4

Level of Experience by Years Since Practice

Years Since Practice	Total Responses	Level of Experience					
		General Duty	Super-visor	Adminis-trator	Instructor	Consultant	Other
Total	1160	956	132	23	71	9	171
Percent	100.0	82.4	11.4	2.0	6.1	0.8	14.0
0 years	107	90	11	0	11	1	15
1-5 years	618	511	64	16	42	5	82
6-10 years	174	147	19	1	7	1	17
Over 10 years	240	198	35	6	11	1	53
No Response	21	10	3	0	0	1	4

Rows will not total due to multiple answers in level of experience.

Availability and Willingness to Return

Return to Practice

As was shown in the work experience section of this report, inactive nurses having experience at the General Duty, Supervisory or Instructor levels accounted for the major portion of those intending to return to practice. Of course some of the respondents may have had experience at more than one level and therefore would have indicated this on the questionnaire. In taking this into account there still would be a substantial number of General Duty nurses returning to the field.

Nurses with supervisory experience ranked second highest in numbers returning to the field. The significance here is that many of these nurses having reached a high level of attainment in nursing could, if provided with special training in teaching skills, be pressed into service as instructors. The offer of these courses could prove to be all the inducement needed.

In Table 5 below, still another significant and interesting fact revealed by the survey is that present employment of the inactive nurse is at a minimum, representing only 5 percent of all respondents. A total of 1093 inactive nurses were not employed at the time of the survey. Within these two groups over 72 percent indicated an intent to return to nursing. While the majority of these nurses are returning sometime after 1970, there is a good distribution intending to return in the years before 1970, which assures a continued and supporting back-log of nurses ready to step into practice, providing of course those nurses who expressed an intent to return actually do. In either type of employment status, the number of nurses intending to return surely indicates their pride in or devotion to the profession regardless of the various reasons given in the comments section of the questionnaire for presently not practicing. Chart 4 that follows, shows the percentage distribution of year of return of nurses by those intending to return to practice based on employment status.

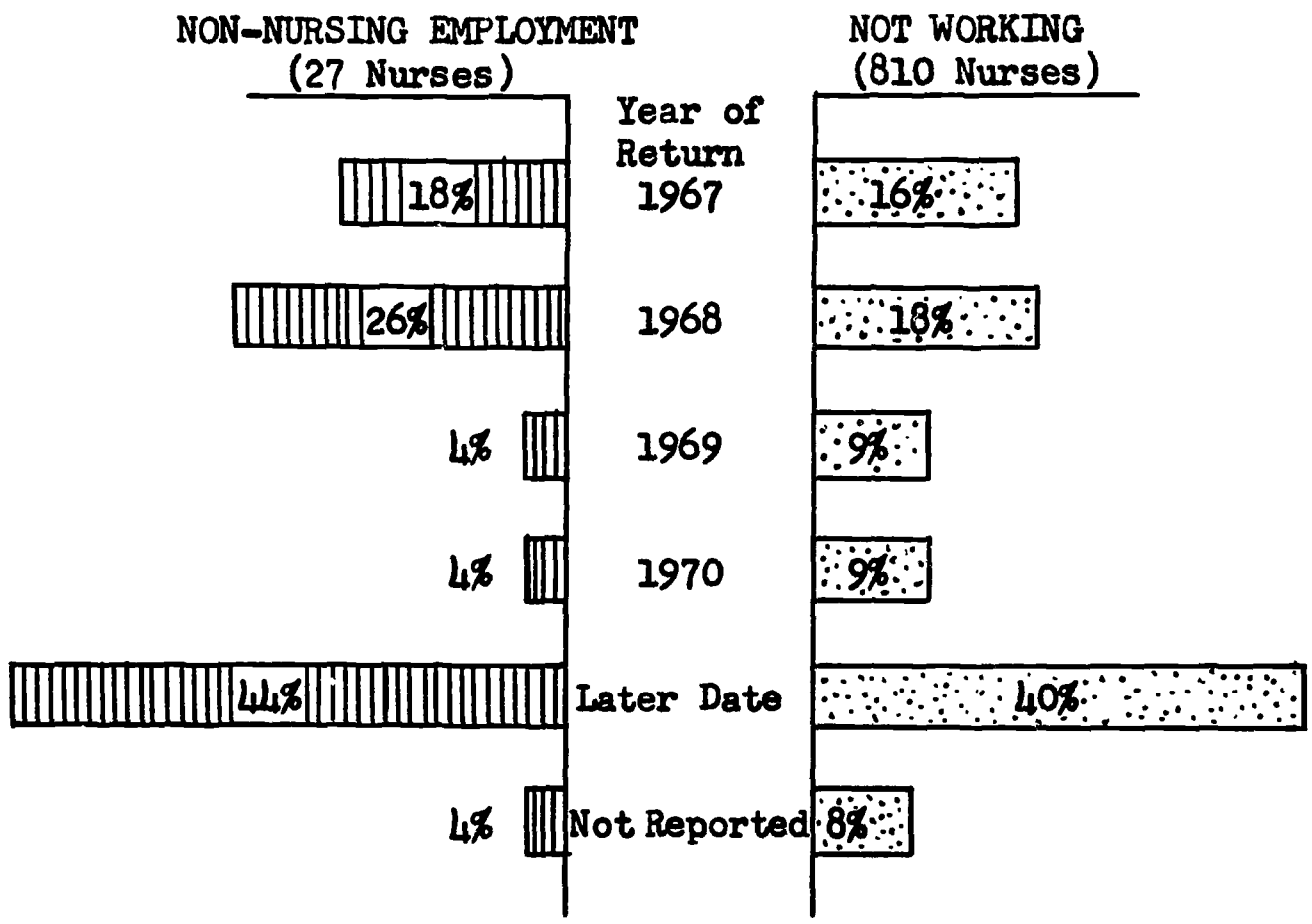
TABLE 5

Intent to Return and Year of Return by Current Employment

Current Employment Status	Total Responses	Intent to Return			Year of Return					
		Yes	No	No Response	1967	1968	1969	1970	Later Date	Not Reported
Total	1160	841	210	109	135	154	77	75	334	66
Non-Nursing Employment	60	27	22	11	5	7	1	1	12	1
Not Working	1093	810	186	97	130	147	76	74	321	62
Not Indicated	7	4	2	1	0	0	0	0	1	3

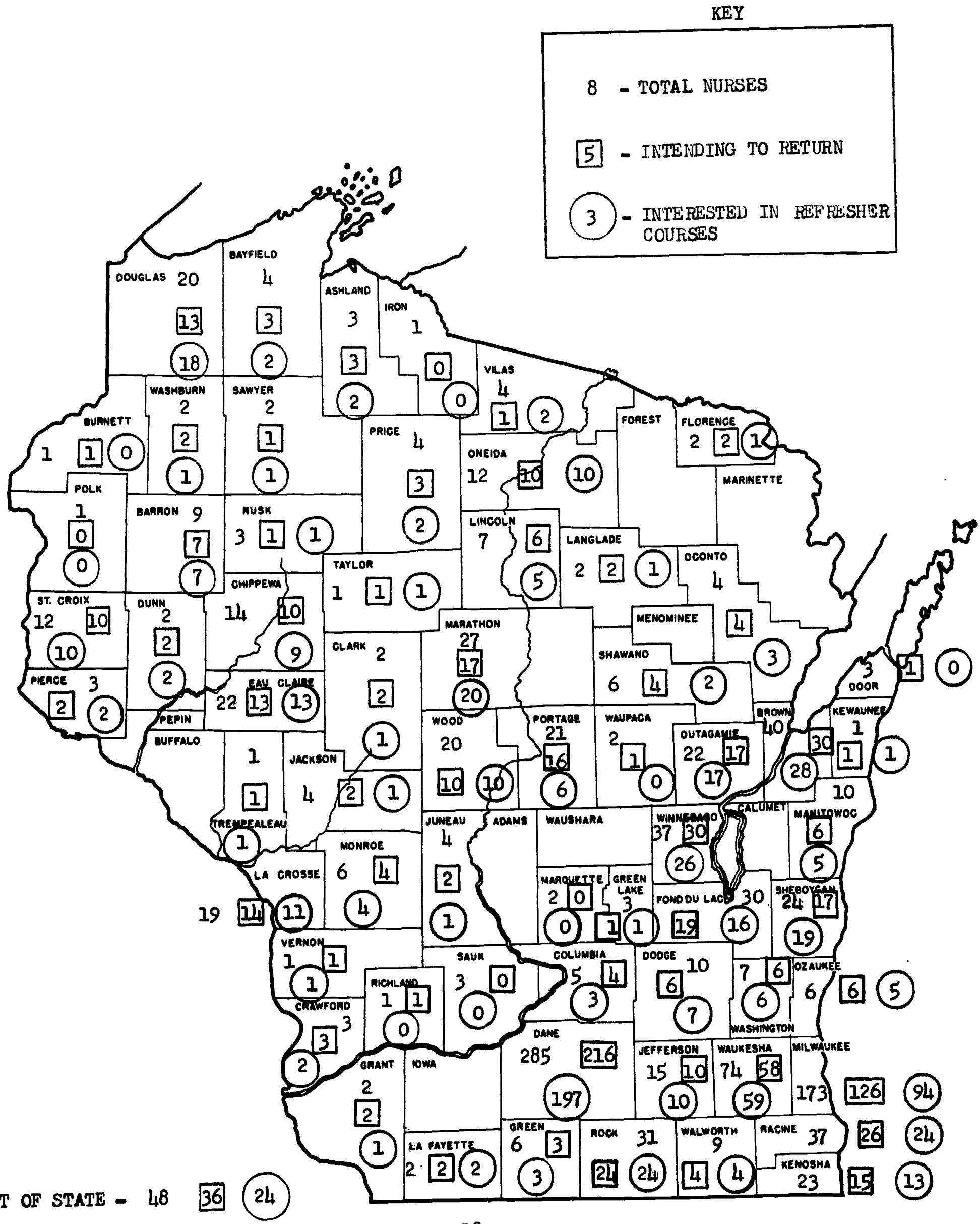
CHART 4

Year of Return by Employment Status
of Nurses Intending to Return



Readers should bear in mind that questionnaires were sent to out of state nurses in cities bordering the State of Wisconsin. Four percent (48) of total responses (1160) came from those nurses. Thirty-six of these nurses indicated an intent to return to practice, with 24 expressing an interest in a refresher program. Almost 50 percent of these nurses will return to duty by 1971, with another 25 percent returning sometime after 1970. (See Table 5 in Appendix). The map on the following page indicates the total number of respondents for each county, their intent to return, and interest in a refresher program.

TOTAL NUMBER OF NURSES INTENDING TO RETURN AND INTERESTED IN TRAINING BY COUNTY OF RESIDENCE



Responding nurses with inactive registration status were grouped according to the year they intend to return to practice. Over one-third in this category said they will return to nursing by 1971. An additional 297 nurses evidently do not intend to return or were undecided and did not respond to the question.

Two hundred and twelve nurses with active registration responded; nearly half of them indicating a return by 1970 with an additional 75 who will return sometime after 1970.

Those nurses with either lapsed or never registered status, while comprising only a small percentage of total respondents, also indicated a fairly large percentage of intent to return to practice.

TABLE 6

Registration Status by Year of Return

Year of Return	Total Responses	Registration Status				
		Active	Inactive	Lapsed	Never Registered	No Response
Total	1160	212	857	19	71	1
1967	142	40	87	1	14	0
1968	159	44	93	4	18	0
1969	79	17	51	3	8	0
1970	75	9	60	0	6	0
Later Date	366	75	269	5	17	0
No Response	339	27	297	6	8	1

Mobility for Refresher Courses

Inactive nurses were asked to indicate their willingness to commute to refresher classes.

Of those nurses who indicated they would return to nursing practice, 488 said

they would commute up to 10 miles one way in order to attend refresher courses. In addition, in looking at the nurses' willingness to commute by year of return, it will be noted that a fairly large percentage of those returning each year will not travel over ten miles for classes. The sizeable number willing to commute this short distance should be a prime concern to those selecting the sites for a refresher program if the nursing labor force is to be increased. The availability of public transportation should also be considered.

Another 40 percent, or 397 nurses, expressed a willingness to travel 11-30 miles one way for classes.

These two groups of nurses should provide nursing educators with sufficient leeway in commuting milage to make the selection of refresher sites quite flexible. (See Table 7 below).

TABLE 7

Number of Miles Willing to Commute One Way for Refresher Program and Willing to Commute by Year of Return

Year of Return	Intent to Return	Miles Willing to Commute 1 Way					Willing to Commute			
		1-10	11-20	21-30	31-40	40+	Daily	Weekly	Either	No
Total	1160	488	261	136	45	58	276	548	287	48
1967	142	56	31	18	13	12	52	61	18	11
1968	159	63	40	22	10	10	50	73	29	7
1969	79	39	19	9	1	1	26	32	17	4
1970	75	34	21	9	3	2	22	34	12	7
Later Date	366	188	68	30	17	17	82	175	90	19
No Response	339	108	82	48	1	16	44	173	121	0

When questioned regarding the frequency of travel, it was rather surprising to learn that 49 percent, or 548 of those nurses willing to commute to refresher classes, preferred to travel on a weekly basis. Apparently these nurses, if they have young families, have some means for providing for their care to enable the nurse, and mother, to remain away from home for such a period of time. It may be that the greater number of these nurses do not have family obligations which would require their presence in the home each day of the week. If the questionnaire had included a question on number and age of children as well as the age of the nurse this situation might be clarified.

Willingness to Register

The inactive nurses who listed their registration status as "lapsed" or "never registered" were asked if they were willing to register in the State of Wisconsin. Eighty-one of the 90 in this group responded, with 76 (84%) who indicated a desire to do so. (See Table 8 on the following page.) Of greater significance and importance to the nursing educators is the fact that, as shown in Table 8, 65 of the 76 nurses willing to register expressed an interest to return to practice. Seventy-two percent of these nurses will return to duty by 1970, with another 26 percent returning at a later date. Its significant to note here, that more nurses in this group are interested in refresher courses than are willing to return. This differentiation of numbers, as mentioned earlier in the report, is due to some nurses failing to answer all parts of the questionnaire, or some wanting to be kept up to date, but not yet ready to return. Table 8 also shows that of those 76 nurses willing to register, 67 had General Duty experience, while only 16 had experience as Supervisors and Instructors. Again, the pattern of limited nursing potential in the higher levels of nursing prevails here as mentioned earlier in the report.

TABLE 8

Willingness to Register, Intent to Return, Year of Return, Interest in Refresher Course by Those Not Registered

Willingness to Register	Total Responses	Number Willing to Return	Year of Return						Interested in Refresher Course
			1967	1968	1969	1970	Later Date	No Response	
Total	81	67	13	18	9	8	18	1	69
Yes	76	65	12	18	9	8	17	1	68
No	5	2	1	0	0	0	1	0	1

TABLE 9

Level of Experience by Willingness to Register of Those Not Registered

Willingness to Register	Total Responses	General Duty	Super-visor	Administrator	Instructor	Consultant	Other
Total	81	71	10	1	7	0	18
Yes	76	67	9	1	7	0	15
No	5	4	1	0	0	0	3

Rows will not add due to multiple answers in level of experience.

Refresher Programs

Interest in Refresher Programs

A partial solution, to the acute shortage of nurses throughout the state, is encouraging the inactive nurses to return to practice and up-dating their skills through refresher courses which can be offered under the Manpower Development and Training Act. In order to determine the feasibility of establishing such a program, the inactive nurses were asked to state their interest in attending refresher classes.

Of the 1160 inactive nurses who responded to the survey, 744 said they were interested in receiving refresher courses.

Table 10 below shows the breakout of nurses interested in refresher courses by their current registration status. Nurses having inactive status represent over 68 percent of all nurses interested in refresher courses. Almost 60 percent of the responding nurses with inactive status expressed an interest in refresher courses. On the surface this percentage seems large, however, in comparison over 74 percent of responding nurses with active status say they want refresher courses; 84 percent of respondents with lapsed status want refresher programs; and 87 percent of respondents who have never registered in Wisconsin are also interested.

TABLE 10

RN's Interested in Refresher Courses by Present Nursing Registration Status in Wisconsin

Present Nursing Registration Status	Total Responses	Interested in Refresher Courses		
		Yes	No	No Response
Total	1160	744	336	80
Active	212	157	50	5
Inactive	857	509	273	75
Lapsed	19	16	3	0
Never Registered	71	62	9	0
Did Not Indicate Registration Status	1	0	1	0

Table 11 on the following page, presents an interesting breakout of the 744 inactive nurses, who expressed an interest in training, by their current employment status. Of this number an overwhelming 717, or over 96 percent were not currently employed. This figure also represents 66 percent of total respondents not employed. Since a large number of the nurses not currently employed also stated their intent to return to practice, this group presents a valuable potential for enrollment in a refresher program.

TABLE 11

Interested in Refresher Program, Kind of Program and Time of Program by Employment Status

Current Employment Status	Total Responses	Interested in Refresher Program	Kind of Program			Time of Program			
			F.T.	P.T.	Either	Day-time	Evening	Either	No Response
Total	1160	744	93	615	10	355	328	29	32
Non-Nursing Employment	60	26	2	24	0	11	14	1	0
Not Working	1093	717	91	590	10	343	314	28	32
Not Indicated	7	1	0	1	0	1	0	0	0

Carrying the above a step further, we note that 590 of the 717 unemployed nurses interested in refresher courses stated they preferred part-time classes and that there was an almost equal separation between those preferring a daytime schedule as opposed to evening classes.

Interest in refresher courses was also expressed in terms of length of time since nurses had been out of practice. Table 12 that follows, provides a breakout, by years since practice, of the 744 inactive nurses who said they were interested in refresher programs.

Over half of the nurses interested in refresher classes (418) had been out of practice 5 years or less. This should be an important factor in determining the length and pace of any refresher course offered.

An additional 25 percent of nurses interested in refresher courses had been out of the nursing field for 10 years or more. This may influence the depth to which refresher courses must go in order to indoctrinate this specific group with the most recent nursing techniques.

Considering the differences in time since practice of the inactive nurses interested in refresher courses, perhaps an open end type of refresher program might be designed which could serve the needs of all. The inactive nurse could be enrolled for a period of time based on the length of time out of practice and her individual refresher needs.

TABLE 12

Interest in Refresher Program, Kind and Time of Program by Years Since Practice

Years Since Practice	Total Responses	Interest in Refresher Program	Kind of Program			Time of Program			
			F.T.	P.T.	Either	Day-time	Evening	Either	No Response
Total	1160	744	93	615	10	355	328	29	32
0 yrs.	107	50	44	44	1	16	30	2	2
1-5 yrs.	618	368	44	306	2	145	191	10	22
6-10 yrs.	174	138	18	114	3	62	64	9	3
Over 10 yrs.	240	184	27	147	4	130	42	7	5
No Response	21	4	0	4	0	2	1	1	0

Consideration in the survey was also given to the interest of the inactive nurses in refresher programs as it related to their various levels of experience. Six hundred and fifty-three of the 956 General Duty or Staff nurses who responded to the survey, expressed an interest in refresher courses. This same number is 88 percent of the 744 nurses interested in refresher courses. (See Table 13 that follows.)

In addition, over half of the nurses with supervisory or instructor experience expressed an interest in refresher classes. These inactive supervisors and instructors must be provided refresher courses before being utilized in instructing other nurses.

TABLE 13

Level of Experience by Interest in Refresher Program

Interest in Refresher Program	Total Responses	General Duty or Staff	Super-visor	Adminis-trator	Instructor	Consul-tant	Other
Total	1160	956	132	23	71	9	171
Percent	100.0	82.4	11.4	2.0	6.1	0.8	14.0
Yes	744	653	77	11	41	4	103
No	336	252	41	7	25	4	55
No Response	80	51	14	5	5	1	13

Rows will not total due to multiple answers in level of experience.

Kind (Full-time, Part-time)

Interest in refresher courses was also expressed by inactive nurses in terms of the various levels of experience they had at the time of the survey, and their preference for full-time or part-time classes. The majority of nurses in all levels of experience preferred part-time refresher courses. Interestingly enough this group was almost evenly split between daytime and evening classes. (See Table 14 below.)

On the General Duty level, 539 of the 626 total indicated an interest in part-time courses, with the majority of this group desiring evening classes. Supervisors and Instructors also indicated a preference for part-time refresher courses, but preferred daytime classes.

TABLE 14

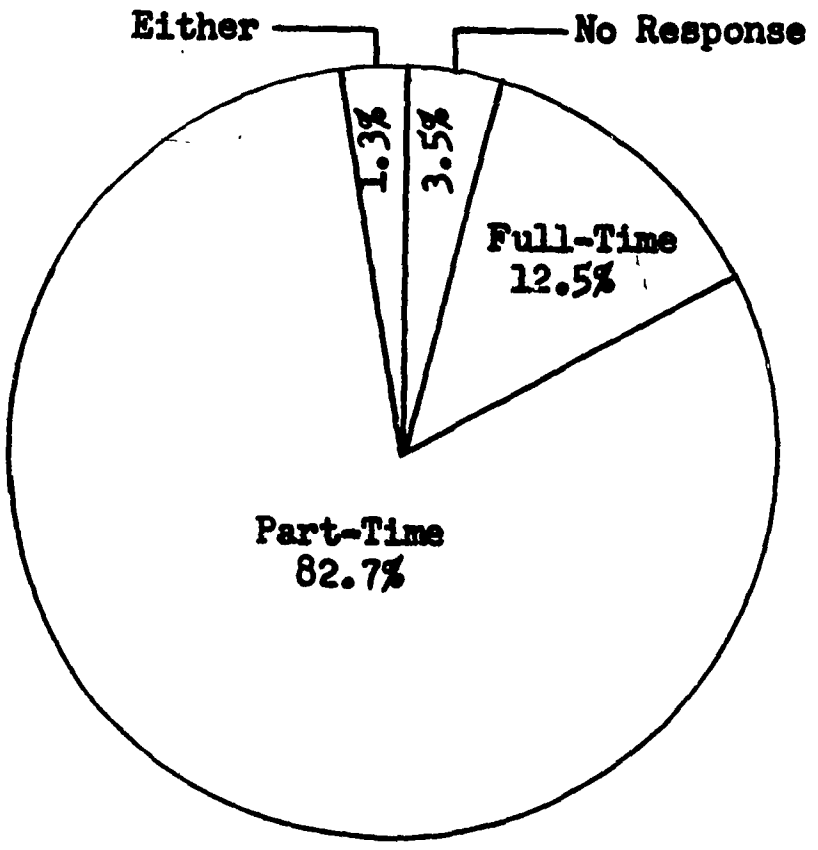
Level of Experience by Desire for Kind and Time of Refresher Program

Desire for Program			Level of Experience					
Kind of Program	Time	Total	General Duty	Super-visor	Administrator	Instructor	Consultant	Other
Full-Time	Daytime	79	65	9	2	7	1	19
	Evening	15	15	1	0	0	0	2
	Either	0	0	0	0	0	0	0
Part-Time	Daytime	278	230	34	7	16	2	45
	Evening	313	289	28	2	15	1	27
	Either	25	20	4	0	2	0	6
Both Full-Time and Part-Time	Daytime	4	3	1	0	0	0	1
	Evening	0	0	0	0	0	0	0
	Either	4	4	0	0	0	0	1

Inactive nurses interested in refresher courses who stated their preference for full-time or part-time courses, were tabulated by the number of years since practice. This is shown in Table 12. The majority of these nurses preferred part-time classes, and of these, over 56 percent had been out of practice 5 years or less. Chart 5 below illustrates the percentage preference for a full-time or part-time program.

CHART 5

Kind of Refresher Program Preferred



Time (Evening-Daytime)

The inactive nurses were asked for their preference as to the time of day that refresher courses should be given.

In Tables 12 and 15, where this question is related to years since practice and year of return to practice, responding nurses preferring evening classes held a slight majority over those preferring daytime classes; a small number indicated a willingness to attend at either time.

Interestingly enough, over two-thirds of the nurses indicating a preference for evening classes had been out of practice for 5 years or less. In comparison,

less than half of the nurses preferring daytime classes had been out of practice for the same length of time. Also of interest, nurses out of practice over ten years preferred daytime classes by a 3 to 1 majority over evening courses.

In considering daytime-evening preferences by year of return some interesting facts will be noted. Table 15 shows concentrations of evening class preference in the 1967, 1968 and Later Date categories. For daytime classes the concentration is in the 1968 and Later Date categories. These also were the categories where the most total responses were received.

From the above information, individuals responsible for setting up refresher classes can anticipate the heaviest demand in the near future to be for evening classes which should perhaps be geared largely to the needs of individuals who have been out of practice 5 years or less. This last would of course be influenced by the specific needs of individual nurses in the particular area of the state where classes are to be given.

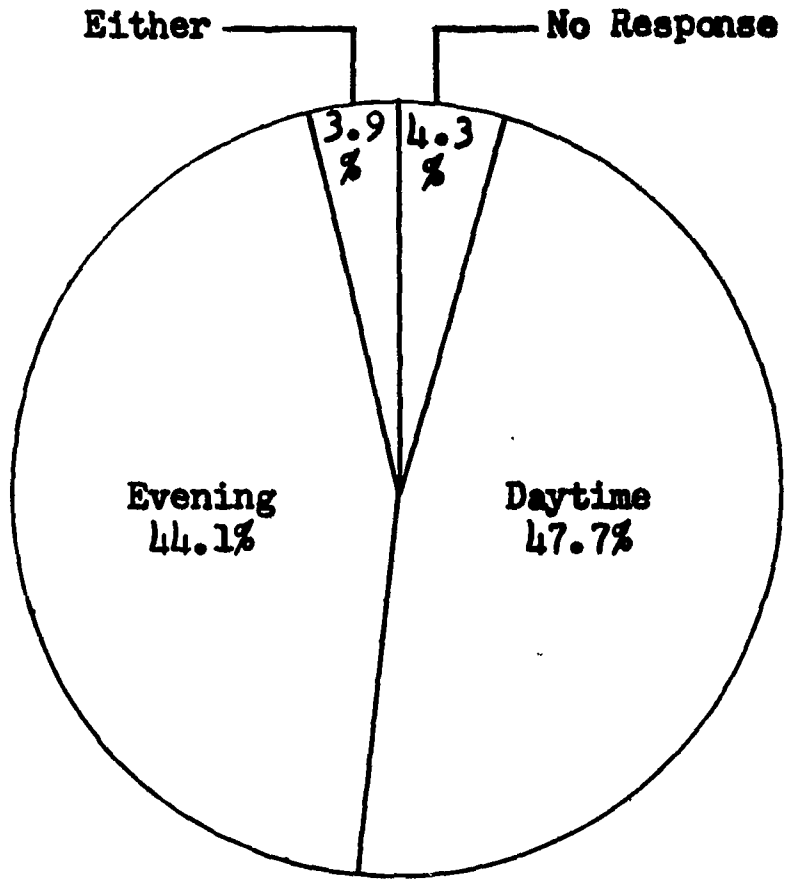
TABLE 15

Kind and Time of Refresher Program by Year of Return

Year of Return	Total Responses	Kind of Program				Time of Program			
		F.T.	P.T.	Either	No Response	Evening	Daytime	Either	No Response
Total	1160	95	630	11	424	370	334	29	427
1967	142	26	76	6	34	70	29	8	35
1968	159	16	123	1	19	74	60	5	20
1969	79	10	56	0	13	32	31	2	14
1970	75	10	56	0	9	28	36	1	10
Later Date	366	25	229	2	110	99	144	11	112
No Response	339	8	90	2	239	67	34	2	236

CHART 6

Time of Refresher Program Preferred



Willing to be Contacted

All inactive nurses were asked if they could be contacted in the future regarding other nursing information. Survey results indicate that the currently inactive status of the professional RN does not necessarily mean a complete loss of contact or interest in their nursing career. Instead they seem to retain a dedicated interest in the field of nursing. The number of nurses giving their consent to this question was tremendous, and should be encouraging to all in the profession that such an interest in nursing exists. Eighty-nine percent, or 1033 of total respondents, indicated a willingness to be contacted in the future regarding nursing information. Only 7 percent of the responding nurses did not complete this questionnaire item thus leaving open a possibility that the number willing to be contacted could be even higher.

Part Two

APPENDIX

This section consists of various tables which give additional detailed data concerning:

Table I - Registration Status and Willingness to Register by County of Residence

Table II - Employment Status and Years since Practice by County of Residence

Table III - Level of Experience and Interest in Refresher Programs by County of Residence

Table IV - Willingness to Commute to Refresher Classes and Number of Miles Willing to Commute by County of Residence

Table V - Intent to Return and Year of Return by County of Residence

Table VI - Interest in Refresher Programs, Kind of Program and Time of Program by County of Residence

Information from the above named Tables was used in Part One of this study, along with correlations derived from Tables in both parts.

TABLE I

Registration Status and Willingness to Register by County of Residence

County of Residence	Total Responses	Registration Status					Willingness to Register		
		Active	In-active	Lapsed	Never Registered	No Response	Yes	No	No Response
Total	1160	212	857	19	71	1	67	5	0
Ashland	3	2	1	0	0	0	0	0	0
Barron	9	3	5	0	1	0	0	0	0
Bayfield	4	0	3	0	1	0	1	0	0
Brown	40	6	29	0	5	0	5	0	0
Burnett	1	0	1	0	0	0	0	0	0
Chippewa	14	4	9	0	1	0	1	0	0
Clark	2	1	1	0	0	0	0	0	0
Columbia	5	1	4	0	0	0	0	0	0
Crawford	3	2	1	0	0	0	0	0	0
Dane	285	75	185	5	20	0	18	3	0
Dodge	10	1	8	0	1	0	1	0	0
Door	3	1	2	0	0	0	0	0	0
Douglas	20	4	9	0	7	0	7	0	0
Dunn	2	2	0	0	0	0	0	0	0
Eau Claire	22	5	16	0	1	0	1	0	0
Florence	2	0	2	0	0	0	0	0	0
Fond du Lac	30	0	27	0	3	0	3	0	0
Grant	2	1	1	0	0	0	0	0	0
Green	6	3	3	0	0	0	0	0	0
Green Lake	3	0	3	0	0	0	0	0	0
Iron	1	0	1	0	0	0	0	0	0
Jackson	4	1	3	0	0	0	0	0	0
Jefferson	15	3	12	0	0	0	0	0	0
Juneau	4	0	4	0	0	0	0	0	0
Kenosha	23	5	15	0	3	0	3	0	0
Kewaunee	1	0	1	0	0	0	0	0	0
La Crosse	19	3	14	0	2	0	2	0	0
Lafayette	2	0	2	0	0	0	0	0	0
Langlade	2	0	2	0	0	0	0	0	0
Lincoln	7	0	6	1	0	0	0	0	0
Manitowoc	10	2	8	0	0	0	0	0	0
Marathon	27	2	24	0	1	0	1	0	0
Marquette	2	1	1	0	0	0	0	0	0
Milwaukee	173	12	161	0	0	0	0	0	0
Monroe	6	0	6	0	0	0	0	0	0
Oconto	4	1	3	0	0	0	0	0	0
Oneida	12	1	8	0	3	0	3	0	0
Outagamie	22	3	17	1	1	0	1	0	0
Ozaukee	6	0	6	0	0	0	0	0	0
Pierce	3	1	1	0	1	0	1	0	0
Polk	1	0	1	0	0	0	0	0	0
Portage	21	8	11	0	2	0	2	0	0

TABLE I (cont'd)

County of Residence	Total Responses	Registration Status					Willingness to Register		
		Active	In-active	Lapsed	Never Registered	No Response	Yes	No	No Response
Price	4	1	2	0	1	0	1	0	0
Racine	37	8	27	2	0	0	0	0	0
Richland	1	0	1	0	0	0	0	0	0
Rock	31	7	22	2	0	0	0	0	0
Rusk	3	0	3	0	0	0	0	0	0
St. Croix	12	6	5	0	1	0	1	0	0
Sauk	3	0	3	0	0	0	0	0	0
Sawyer	2	0	2	0	0	0	0	0	0
Shawano	6	0	5	0	0	1	0	0	0
Sheboygan	24	5	13	4	2	0	2	0	0
Taylor	1	0	1	0	0	0	0	0	0
Trempealeau	1	0	1	0	0	0	0	0	0
Vernon	1	1	0	0	0	0	0	0	0
Vilas	4	0	4	0	0	0	0	0	0
Walworth	9	0	9	0	0	0	0	0	0
Washburn	2	1	1	0	0	0	0	0	0
Washington	7	0	7	0	0	0	0	0	0
Waukesha	74	12	51	2	9	0	8	0	0
Waupaca	2	0	2	0	0	0	0	0	0
Winnebago	37	7	27	1	2	0	2	0	0
Wood	20	5	13	0	2	0	2	0	0
Out of State	48	5	41	1	1	0	1	0	0

TABLE II

Employment Status and Years Since Practice by County of Residence

County of Residence	Total Responses	Employment Status			Years Since Practice				
		Not in Nursing	Not Working	No Response	0 years	1-5 years	6-10 years	Over 10 years	No Response
Total	1160	60	1093	7	107	618	174	240	21
Ashland	3	0	3	0	1	2	0	0	0
Barron	9	0	9	0	1	5	1	2	0
Bayfield	4	0	4	0	1	2	0	1	0
Brown	40	3	37	0	4	19	6	11	0
Burnett	1	0	1	0	0	1	0	0	0
Chippewa	14	0	13	1	1	7	2	4	0
Clark	2	0	2	0	0	1	0	1	0
Columbia	5	0	5	0	1	3	1	0	0
Crawford	3	1	2	0	0	2	0	1	0
Dane	285	16	267	2	26	119	66	71	3
Dodge	10	1	9	0	0	4	3	3	0
Door	3	0	3	0	0	1	0	2	0
Douglas	20	1	19	0	0	4	6	10	0
Dunn	2	0	2	0	0	1	0	1	0
Eau Claire	22	2	20	0	2	13	5	1	1
Florence	2	0	2	0	0	2	0	0	0
Fond du Lac	30	0	30	0	3	16	3	6	2
Grant	2	0	2	0	1	1	0	0	0
Green	6	1	5	0	1	2	0	2	1
Green Lake	3	0	3	0	1	1	1	0	0
Iron	1	0	1	0	0	1	0	0	0
Jackson	4	0	4	0	1	3	0	0	0
Jefferson	15	1	14	0	2	7	4	1	1
Juneau	4	1	3	0	0	3	0	0	1
Kenosha	23	1	22	0	3	11	0	7	2
Kewaunee	1	0	1	0	0	1	0	0	0
La Crosse	19	0	19	0	1	12	3	3	0
Lafayette	2	0	2	0	0	2	0	0	0
Langlade	2	0	2	0	0	1	1	0	0
Lincoln	7	0	7	0	0	3	2	2	0
Manitowoc	10	0	10	0	0	8	0	1	1
Marathon	27	2	25	0	1	15	4	7	0
Marquette	2	0	2	0	0	1	0	0	1
Milwaukee	173	7	165	1	19	123	16	10	5
Monroe	6	1	4	1	0	5	0	1	0
Oconto	4	0	4	0	1	1	2	0	0
Oneida	12	1	11	0	1	9	1	1	0
Outagamie	22	1	20	1	1	10	4	6	1
Ozaukee	6	0	6	0	0	5	0	1	0
Pierce	3	0	3	0	0	1	2	0	0
Polk	1	0	1	0	0	1	0	0	0
Portage	21	3	18	0	3	11	6	1	0

TABLE II (cont'd)

County of Residence	Total Responses	Employment Status			Years Since Practice				
		Not in Nursing	Not Working	No Response	0 years	1-5 years	6-10 years	Over 10 years	No Response
Price	4	0	4	0	1	2	0	1	0
Racine	37	2	34	1	1	18	3	14	1
Richland	1	0	1	0	0	1	0	0	0
Rock	31	1	30	0	3	18	2	8	0
Rusk	3	0	3	0	0	0	0	3	0
St. Croix	12	2	10	0	1	4	5	2	0
Sauk	3	1	2	0	0	3	0	0	0
Sawyer	2	0	2	0	0	2	0	0	0
Shawano	6	1	5	0	1	3	1	1	0
Sheboygan	24	1	23	0	3	8	5	8	0
Taylor	1	0	1	0	0	1	0	0	0
Trempealeau	1	0	1	0	0	0	0	1	0
Vernon	1	0	1	0	0	1	0	0	0
Vilas	4	2	2	0	1	2	0	1	0
Walworth	9	1	8	0	0	8	1	0	0
Washburn	2	0	2	0	1	1	0	0	0
Washington	7	1	6	0	1	5	1	0	0
Waukesha	74	1	73	0	6	30	9	28	1
Waupaca	2	0	2	0	0	1	0	1	0
Winnebago	37	0	37	0	4	20	4	9	0
Wood	20	0	20	0	1	13	1	5	0
Out of State	48	4	44	0	7	37	3	1	0

TABLE III

Level of Experience and Interest in Refresher Courses by County of Residence

County of Residence	Total Resp.	Level of Experience							Interest in Refresher Courses		
		Gen. Duty Staff	Super-visor	Admin-istrator	Inst.	Consul-tant	Other	No Resp.	Yes	No	No Resp.
Total	1160	956	132	23	71	9	171	0	744	336	0
Ashland	3	3	0	0	0	0	0	0	2	0	0
Barron	9	9	1	0	0	0	2	0	7	2	0
Bayfield	4	4	0	0	0	0	1	0	2	0	0
Brown	40	35	2	1	1	0	11	0	28	10	0
Burnett	1	1	0	0	0	0	0	0	0	1	0
Chippewa	14	10	3	0	0	0	2	0	9	4	0
Clark	2	2	0	0	0	0	1	0	1	1	0
Columbia	5	4	0	0	0	0	0	0	3	2	0
Crawford	3	3	0	0	0	0	0	0	2	1	0
Dane	285	249	28	5	22	2	32	0	197	80	0
Dodge	10	9	1	0	0	0	1	0	7	3	0
Door	3	2	1	0	0	0	1	0	0	3	0
Douglas	20	16	2	1	1	0	2	0	18	1	0
Dunn	2	1	0	0	1	0	0	0	2	0	0
Eau Claire	22	15	3	0	5	0	5	0	13	6	0
Florence	2	2	0	0	0	0	0	0	1	1	0
Fond du Lac	30	25	3	1	0	0	3	0	16	9	0
Grant	2	2	0	0	0	0	0	0	1	1	0
Green	6	5	1	0	0	0	1	0	3	3	0
Green Lake	3	2	0	0	0	0	1	0	1	2	0
Iron	1	1	0	0	0	0	1	0	0	1	0
Jackson	4	3	1	1	0	0	0	0	1	3	0
Jefferson	15	12	2	2	1	0	2	0	11	3	0
Juneau	4	2	0	0	1	0	1	0	1	3	0
Kenosha	23	17	5	1	0	0	4	0	13	7	0
Kewaunee	1	1	0	0	0	0	0	0	1	0	0
La Crosse	19	17	1	0	1	0	1	0	11	7	0
Lafayette	2	2	0	0	0	0	0	0	2	0	0
Langlade	2	1	0	0	0	0	1	0	1	1	0
Lincoln	7	5	1	0	1	0	0	0	5	2	0
Manitowoc	10	8	1	0	0	1	0	0	5	3	0
Marathon	27	25	1	0	1	1	4	0	20	6	0
Marquette	2	1	2	0	0	0	0	0	0	2	0
Milwaukee	173	130	23	7	14	2	28	0	94	59	0
Monroe	6	2	3	0	2	1	1	0	4	1	0
Oconto	4	4	0	0	0	0	0	0	3	1	0
Oneida	12	11	2	0	1	0	2	0	10	2	0
Outagamie	22	18	2	0	0	0	3	0	17	4	0
Ozaukee	6	5	1	0	0	0	0	0	5	1	0
Pierce	3	3	0	0	1	0	0	0	2	1	0
Polk	1	1	1	1	0	0	1	0	0	0	0
Portage	21	18	4	0	0	0	4	0	6	13	0

TABLE III (cont'd)

County of Residence	Total Resp.	Level of Experience							Interest in Refresher Courses		
		Gen. Duty Staff	Super-visor	Admin-istrator	Inst.	Consul-tant	Other	No Resp.	Yes	No	No Resp.
Price	4	4	0	0	0	0	1	0	2	2	0
Racine	37	31	2	0	1	0	8	0	24	9	0
Richland	1	1	0	0	0	0	0	0	0	1	0
Rock	31	25	5	0	2	0	5	0	24	5	0
Rusk	3	3	0	0	0	0	0	0	1	2	0
St. Croix	12	11	2	0	0	0	0	0	10	1	0
Sauk	3	2	2	0	1	0	0	0	0	1	0
Sawyer	2	1	0	0	0	0	2	0	1	1	0
Shawano	6	5	1	0	0	0	0	0	2	4	0
Sheboygan	24	21	4	0	1	0	5	0	19	4	0
Taylor	1	1	0	0	0	0	0	0	1	0	0
Trempealeau	1	1	0	0	0	0	0	0	1	0	0
Vernon	1	1	0	0	0	0	0	0	1	0	0
Vilas	4	2	0	0	0	0	1	0	2	2	0
Walworth	9	5	2	0	1	0	2	0	4	4	0
Washburn	2	2	0	0	0	0	0	0	1	1	0
Washington	7	5	0	0	0	0	2	0	6	1	0
Waukesha	74	60	7	1	5	2	18	0	59	12	0
Waupaca	2	1	1	0	0	0	0	0	0	2	0
Winnebago	37	33	4	0	1	0	4	0	26	9	0
Wood	20	15	2	1	0	0	3	0	11	6	0
Out of State	48	40	5	1	6	0	5	0	24	19	0

TABLE IV

Willingness to Commute for Refresher Program and Number of Miles Willing to Commute by County of Residence

County of Residence	Total Resp.	Interested in Refresher Courses	Willing to Commute				Miles Willing to Commute					
			Daily	Weekly	Either	No Resp.	1 - 10	11 - 20	21 - 30	31 - 40	40+	None Specified
Total	1160	744	227	334	24	46	276	157	73	35	28	16
Ashland	3	2	1	1	0	0	2	0	0	0	0	0
Barron	9	7	2	4	0	0	1	2	2	0	1	0
Bayfield	4	2	1	1	0	0	1	0	1	0	0	0
Brown	40	28	12	11	0	0	14	7	2	0	0	0
Burnett	1	0	0	0	0	0	0	0	0	0	0	0
Chippewa	14	9	2	5	1	1	5	3	0	0	0	0
Clark	2	1	0	1	0	0	0	0	0	1	0	0
Columbia	5	3	1	2	0	0	0	1	1	1	0	0
Crawford	3	2	0	1	1	0	1	0	1	0	0	0
Dane	285	197	74	73	6	14	103	42	3	2	0	3
Dodge	10	7	0	5	0	1	0	1	3	1	0	0
Door	3	0	0	0	0	0	0	0	0	0	0	0
Douglas	20	18	4	2	2	1	5	1	0	1	1	0
Dunn	2	2	2	0	0	0	1	1	0	0	0	0
Eau Claire	22	13	4	6	1	0	5	5	0	0	0	1
Florence	2	1	0	1	0	0	0	0	1	0	0	0
Fond du Lac	30	16	4	7	1	0	3	3	3	0	1	2
Grant	2	1	0	1	0	0	1	0	0	0	0	0
Green	6	3	1	1	0	0	0	0	0	0	1	1
Green Lake	3	1	0	0	1	0	0	0	1	0	0	0
Iron	1	0	0	0	0	0	0	0	0	0	0	0
Jackson	4	1	0	1	0	0	0	1	0	0	0	0
Jefferson	15	11	2	6	1	1	0	5	0	3	1	0
Juneau	4	1	0	1	0	0	0	1	0	0	0	0
Kenosha	23	13	4	7	0	0	4	4	1	2	0	0
Kewaunee	1	1	0	1	0	0	0	0	1	0	0	0
La Crosse	19	11	4	4	0	0	6	1	0	1	0	0
Lafayette	2	2	0	1	1	0	0	1	0	0	1	0
Langlade	2	1	1	0	0	0	0	0	1	0	0	0
Lincoln	7	5	2	2	0	0	0	0	1	3	0	0
Manitowoc	10	5	1	3	0	0	0	3	0	1	0	0
Marathon	27	20	2	10	1	3	3	4	4	0	1	1
Marquette	2	0	0	0	0	0	0	0	0	0	0	0
Milwaukee	173	94	30	42	2	4	57	13	3	0	0	1
Monroe	6	4	2	1	1	0	1	0	2	0	0	1
Oconto	4	3	1	2	0	0	0	0	3	0	0	0
Oneida	12	10	1	7	0	1	1	0	1	1	5	0
Outagamie	22	17	4	11	0	1	9	2	4	0	0	0
Ozaukee	6	5	1	3	0	0	2	2	0	0	0	0
Pierce	3	2	0	2	0	0	1	0	0	0	1	0
Polk	1	0	0	0	0	0	0	0	0	0	0	0
Portage	21	6	0	6	0	0	1	1	1	1	1	1

TABLE IV (cont'd)

County of Residence	Total Resp.	Interested in Refresher Courses	Willing to Commute				Miles Willing to Commute					
			Daily	Weekly	Either	No Resp.	1 - 10	11 - 20	21 - 30	31 - 40	40+	None Specified
Price	4	2	0	2	0	0	0	0	0	1	1	0
Racine	37	24	6	10	0	3	5	6	4	0	0	1
Richland	1	0	0	0	0	1	0	0	0	0	0	0
Rock	31	24	7	14	0	0	3	5	1	8	2	2
Rusk	3	1	0	1	0	0	0	0	1	0	0	0
St. Croix	12	10	3	5	0	1	1	1	2	1	3	0
Sauk	3	0	0	0	0	0	0	0	0	0	0	0
Sawyer	2	1	0	1	0	0	0	0	0	0	1	0
Shawano	6	2	0	1	1	0	0	0	2	0	0	0
Sheboygan	24	19	3	5	0	3	4	0	1	0	2	1
Taylor	1	1	1	0	0	0	0	1	0	0	0	0
Trempealeau	1	1	1	0	0	0	0	0	1	0	0	0
Vernon	1	1	1	0	0	0	0	1	0	0	0	0
Vilas	4	2	0	0	0	1	0	0	0	0	0	0
Walworth	9	4	0	3	0	1	0	1	1	0	1	0
Washburn	2	1	0	1	0	0	1	0	0	0	0	0
Washington	7	6	1	5	0	0	0	2	3	1	0	0
Waukesha	74	59	23	26	3	5	18	25	5	2	1	1
Waupaca	2	0	0	0	0	0	0	0	0	0	0	0
Winnebago	37	26	9	13	1	0	14	7	1	1	0	0
Wood	20	11	3	6	0	0	1	2	4	2	0	0
Out of State	48	24	6	9	0	4	5	6	2	0	2	0

TABLE V

Intent to Return and Year of Return by County of Residence

County of Residence	Total Responses	Intent to Return			Year of Return					
		Yes	No	No Response	1967	1968	1969	1970	Later	No Response
Total	1160	841	210	109	135	154	77	75	334	66
Ashland	3	3	0	0	0	0	0	0	3	0
Barron	9	7	2	0	1	1	2	0	3	0
Bayfield	4	3	1	0	1	0	1	0	1	0
Brown	40	30	8	2	7	7	4	2	8	2
Burnett	1	1	0	0	0	0	1	0	0	0
Chippewa	14	10	3	1	1	2	2	0	4	1
Clark	2	2	0	0	1	0	0	1	0	0
Columbia	5	4	1	0	1	0	0	1	2	0
Crawford	3	3	0	0	1	0	1	1	0	0
Dane	285	216	45	24	23	40	16	22	98	17
Dodge	10	6	1	3	2	2	0	0	2	0
Door	3	1	1	1	0	0	0	0	1	0
Douglas	20	13	3	4	4	2	2	1	1	3
Dunn	2	2	0	0	0	0	0	0	2	0
Eau Claire	22	13	5	4	2	3	1	3	3	1
Florence	2	2	0	0	0	0	0	0	2	0
Fond du Lac	30	19	5	6	5	3	1	1	7	2
Grant	2	2	0	0	0	1	0	0	1	0
Green	6	3	3	0	2	0	0	1	0	0
Green Lake	3	1	2	0	0	0	0	1	0	0
Iron	1	0	1	0	0	0	0	0	0	0
Jackson	4	2	2	0	1	0	1	0	0	0
Jefferson	15	10	2	3	1	3	1	1	3	1
Juneau	4	2	2	0	0	0	1	0	0	1
Kenosha	23	15	4	4	4	2	2	1	4	2
Kewaunee	1	1	0	0	0	1	0	0	0	0
La Crosse	19	14	5	0	4	3	0	3	4	0
Lafayette	2	2	0	0	0	0	0	0	2	0
Langlade	2	2	0	0	0	0	1	0	1	0
Lincoln	7	6	1	0	0	3	0	0	2	1
Manitowoc	10	6	2	2	0	0	1	2	3	0
Marathon	27	17	9	1	2	5	0	4	5	1
Marquette	2	0	1	1	0	0	0	0	0	0
Milwaukee	173	126	34	13	12	19	12	9	63	11
Monroe	6	4	2	0	2	0	0	0	2	0
Oconto	4	4	0	0	1	2	0	0	1	0
Oneida	12	10	2	0	1	3	2	1	3	0
Outagamie	22	17	2	3	0	2	3	2	8	2
Ozaukee	6	6	0	0	0	1	0	1	3	1
Pierce	3	2	1	0	0	1	0	0	1	0
Polk	1	0	1	0	0	0	0	0	0	0
Portage	21	16	3	2	4	2	2	1	7	0

TABLE V (cont'd)

County of Residence	Total Responses	Intent to Return			Year of Return					
		Yes	No	No Response	1967	1968	1969	1970	Later	No Response
Price	4	3	0	1	2	0	0	0	1	0
Racine	37	26	7	4	6	7	0	3	5	5
Richland	1	1	0	0	0	0	0	0	1	0
Rock	31	24	4	3	7	6	2	1	6	2
Rusk	3	1	2	0	0	0	0	0	1	0
St. Croix	12	10	1	1	1	1	0	1	7	0
Sauk	3	0	1	2	0	0	0	0	0	0
Sawyer	2	1	1	0	1	0	0	0	0	0
Shawano	6	4	2	0	1	1	0	0	2	0
Sheboygan	24	17	5	2	3	1	1	2	7	3
Taylor	1	1	0	0	0	0	0	0	1	0
Trempealeau	1	1	0	0	0	1	0	0	0	0
Vernon	1	1	0	0	0	1	0	0	0	0
Vilas	4	1	2	1	1	0	0	0	0	0
Walworth	9	4	3	2	1	1	0	0	2	0
Washburn	2	2	0	0	0	1	0	0	1	0
Washington	7	6	0	1	2	0	0	0	4	0
Waukesha	74	58	8	8	14	14	5	3	16	6
Waupaca	2	1	1	0	0	0	0	0	1	0
Winnebago	37	30	4	3	6	4	5	2	11	2
Wood	20	10	7	3	1	1	0	1	6	1
Out of State	48	36	8	4	6	7	7	3	12	1

TABLE VI

Interest in Refresher Program, Kind of Program and Time of Program
by County of Residence

County of Residence	Total Resp.	Interest in Refresher Program		Kind of Program				Time of Program			
		Yes	No	F.T.	P.T.	Either	No Resp.	Day-time	Evening	Either	No Resp.
Total	1160	744	336	93	615	10	26	355	328	29	32
Ashland	3	2	0	0	2	0	0	1	1	0	0
Barron	9	7	2	1	6	0	0	3	4	0	0
Bayfield	4	2	0	1	1	0	0	1	1	0	0
Brown	40	28	10	5	22	1	0	16	10	0	2
Burnett	1	0	1	0	0	0	0	0	0	0	0
Chippewa	14	9	4	1	8	0	0	5	3	1	0
Clark	2	1	1	1	0	0	0	1	0	0	0
Columbia	5	3	2	0	2	1	0	1	1	1	0
Crawford	3	2	1	1	1	0	0	1	1	0	0
Dane	285	197	80	18	170	1	8	80	92	12	13
Dodge	10	7	3	0	7	0	0	4	2	0	1
Door	3	0	3	0	0	0	0	0	0	0	0
Douglas	20	18	1	7	10	1	0	13	4	0	1
Dunn	2	2	0	0	2	0	0	0	1	1	0
Eau Claire	22	13	6	2	11	0	0	7	6	0	0
Florence	2	1	1	1	0	0	0	1	0	0	0
Fond du Lac	30	16	9	3	13	0	0	7	9	0	0
Grant	2	1	1	0	1	0	0	0	0	0	1
Green	6	3	3	0	3	0	0	1	0	1	1
Green Lake	3	1	2	0	1	0	0	0	1	0	0
Iron	1	0	1	0	0	0	0	0	0	0	0
Jackson	4	1	3	0	1	0	0	0	1	0	0
Jefferson	15	11	3	3	8	0	0	7	4	0	0
Juneau	4	1	3	0	1	0	0	1	0	0	0
Kenosha	23	13	7	1	12	0	0	7	6	0	0
Kewaunee	1	1	0	0	1	0	0	0	1	0	0
La Crosse	19	11	7	1	9	1	0	2	8	1	0
Lafayette	2	2	0	1	1	0	0	1	0	1	0
Langlade	2	1	1	0	1	0	0	1	0	0	0
Lincoln	7	5	2	2	3	0	0	4	1	0	0
Manitowoc	10	5	3	1	4	0	0	3	2	0	0
Marathon	27	20	6	1	16	2	1	7	12	1	0
Marquette	2	0	2	0	0	0	0	0	0	0	0
Milwaukee	173	94	59	10	80	0	4	37	51	3	3
Monroe	6	4	1	2	2	0	0	4	0	0	0
Oconto	4	3	1	0	3	0	0	1	2	0	0
Oneida	12	10	2	2	8	0	0	4	4	0	2
Outagamie	22	17	4	1	16	0	0	8	9	0	0
Ozaukee	6	5	1	0	5	0	0	2	3	0	0
Pierce	3	2	1	0	1	0	1	0	0	1	1
Polk	1	0	0	0	0	0	0	0	0	0	0
Portage	21	6	13	0	5	0	1	4	2	0	0

TABLE VI (cont'd)

County of Residence	Total Resp.	Interest in Refresher Program		Kind of Program				Time of Program			
		Yes	No	F.T.	P.T.	Either	No Resp.	Day-time	Evening	Either	No Resp.
Price	4	2	2	0	1	0	1	2	0	0	0
Racine	37	24	9	4	18	0	2	13	9	0	2
Richland	1	0	1	0	0	0	0	0	0	0	0
Rock	31	24	5	2	21	0	1	16	7	1	0
Rusk	3	1	2	0	1	0	0	1	0	0	0
St. Croix	12	10	1	0	9	0	1	5	4	0	1
Sauk	3	0	1	1	0	0	0	0	0	0	1
Sawyer	2	1	1	0	0	0	1	0	0	0	1
Shawano	6	2	4	1	1	0	0	1	1	0	0
Sheboygan	24	19	4	2	16	0	1	12	5	1	1
Taylor	1	1	0	0	1	0	0	0	1	0	0
Trempealeau	1	1	0	0	1	0	0	1	0	0	0
Vernon	1	1	0	1	0	0	0	1	0	0	0
Vilas	4	2	2	0	1	1	0	2	0	0	0
Walworth	9	4	4	0	3	0	1	2	1	0	1
Washburn	2	1	1	0	1	0	0	1	0	0	0
Washington	7	6	1	0	6	0	0	2	3	1	0
Waukesha	74	59	12	7	51	0	1	35	23	0	1
Waupaca	2	0	2	0	0	0	0	0	0	0	0
Winnebago	37	26	9	4	19	2	1	12	12	2	0
Wood	20	11	6	2	9	0	0	4	7	0	0
Out of State	48	24	19	4	19	0	1	9	14	1	0

COOPERATIVE INACTIVE NURSE SURVEY

Wisconsin Nurses Association
and
Wisconsin State Employment Service

May 1967

Dear Inactive R.N.:

The Wisconsin Nurses Association and the Wisconsin State Employment Service are conducting a survey in an effort to determine how many inactive nurses there are who intend to return to nursing practice. We would also like to know how many inactive R.N.'s are interested in obtaining refresher training prior to returning to work.

Under the Manpower Development and Training Act, refresher training can be made available provided sufficient numbers of R.N.'s are found who would be interested and qualified. The Federal government pays the full cost of training. In addition, individual trainees may receive training, subsistence, and/or transportation allowances.

In order to provide this training to you and others in your profession, we urge you to complete the enclosed questionnaire and return it in the postpaid envelope as soon as possible.

Thank you for your cooperation.

Sincerely,

Margaret Dykeman R.N.

Wisconsin Nurses Association
161 W. Wisconsin Avenue
Milwaukee, Wisconsin 53203

F. J. Walsh

Wisconsin State Employment Service
P.O. Box 1607
Madison, Wisconsin 53701

WISCONSIN STATE EMPLOYMENT SERVICE
P.O. BOX 1607
MADISON, WISCONSIN

INACTIVE R.N. SURVEY QUESTIONNAIRE

3804

NAME _____ ADDRESS _____
(NUMBER AND STREET) (CITY) (ZIP CODE)

COUNTY OF RESIDENCE _____ TELEPHONE NUMBER _____

1. WHAT IS YOUR PRESENT NURSING REGISTRATION STATUS IN WISCONSIN?
   1 ☐ ACTIVE
   2 ☐ INACTIVE
   3 ☐ LAPSED
   4 ☐ NEVER REGISTERED

2. IF YOU HAVE NEVER BEEN REGISTERED AS AN R.N. IN WISCONSIN, WOULD YOU BE WILLING TO DO SO?
   1 ☐ YES
   2 ☐ NO

3. ARE YOU CURRENTLY EMPLOYED?
   1 ☐ IN NURSING
   2 ☐ OTHER
   3 ☐ NO

4. DO YOU INTEND TO RETURN TO NURSING PRACTICE?
   1 ☐ YES
   2 ☐ NO

5. IF YES, WHEN WILL YOU RETURN?
   1 ☐ 1967
   2 ☐ 1968
   3 ☐ 1969
   4 ☐ 1970
   5 ☐ LATER DATE

6. HOW LONG HAS IT BEEN SINCE YOU PRACTICED NURSING?
   1 ☐ 0 YEARS
   2 ☐ 1–5 YEARS
   3 ☐ 6–10 YEARS
   4 ☐ OVER 10 YEARS

7. ON WHAT LEVEL WAS YOUR NURSING EXPERIENCE?
   1 ☐ CONSULTANT
   2 ☐ INSTRUCTOR
   3 ☐ GEN'L. DUTY OR STAFF
   4 ☐ ADMINISTRATOR
   5 ☐ SUPERVISOR
   6 ☐ OTHER

8. WOULD YOU BE INTERESTED IN RECEIVING [illegible] ING UNDER MDTA?
   1 ☐ YES

9. IF YES, WHAT KIND OF TRAINING DO YOU PREFER?
   1 ☐ FULL-TIME
   2 ☐ PART-TIME

10. WHEN DO YOU PREFER THAT TRAINING BE HELD?
   1 ☐ DAYTIME
   2 ☐ EVENING

11. WOULD YOU BE WILLING TO COMMUTE TO TRAINING?
   1 ☐ DAILY
   2 ☐ WEEKLY
   3 ☐ NO

12. HOW MANY MILES WOULD YOU COMMUTE ONE-WAY?
   1 ☐ 1–10
   2 ☐ 11–20
   3 ☐ 21–30
   4 ☐ 31–40
   5 ☐ OVER 40

13. WHICH OF THE CITIES LISTED IS NEAREST YOUR HOME?
   1 ☐ APPLETON
   2 ☐ EAU CLAIRE
   3 ☐ GREEN BAY
   4 ☐ LA CROSSE
   5 ☐ MADISON
   6 ☐ MARSHFIELD
   7 ☐ MILWAUKEE
   8 ☐ WAUSAU

14. MAY WE CONTACT YOU IN THE FUTURE REGARDING OTHER NURSING INFORMATION?
   1 ☐ YES
   2 ☐ NO

15. ANY COMMENTS YOU WISH TO MAKE:

VT 008 299
Bristol, Benton K.
Directory of College and University Professional Personnel Who Teach Shop, Mechanics, or Related Courses to Agricultural Education Students.

Illinois State Univ., Normal. Dept. of Agriculture
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Feb69 26p.

*AGRICULTURAL EDUCATION; *AGRICULTURAL ENGINEERING; *DIRECTORIES; *COLLEGE TEACHERS; *TEACHER EDUCATORS; AGRICULTURAL COLLEGES

This directory, resulting from a survey of agricultural education and agricultural engineering departments of colleges and universities in the United States and Puerto Rico, includes the names of 241 individuals representing 65 institutions teaching at least one course in agricultural mechanics in 1967-68. Information is given for the individual's academic rank, highest degree attained and institution granting, department or departments in which the appointment is held, courses taught to undergraduate students, courses taught to graduate students, and in-service teacher education courses. A copy of the survey form and the accompanying instructions is included. (DM)

VT 008 299

ED042060

DIRECTORY OF COLLEGE AND UNIVERSITY PROFESSIONAL PERSONNEL WHO TEACH SHOP, MECHANICS, OR RELATED COURSES TO AGRICULTURAL EDUCATION STUDENTS

Dr. Benton K. Bristol

DEPARTMENT OF AGRICULTURE
COLLEGE OF APPLIED SCIENCE AND TECHNOLOGY
ILLINOIS STATE UNIVERSITY
NORMAL, ILLINOIS

VT008299

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The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

FROM: (Person) Benton K. Bristol (Agency) ERIC Only

(Address) Department of Agriculture, Illinois State University, Normal, Ill. 61761

DATE: March 20, 1969

RE: (Author, Title, Publisher, Date) Benton K. Bristol: Directory of College and University Professional Personnel Who Teach Shop, Mechanics, or Related Courses to Agricultural Education Students: Department of Agriculture, Illinois State University, Normal, Illinois 61761; February 1969.

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Geographic Adaptability -- the limitations of the material related to geographical regions. (e.g., Southeastern United States, Western United States, Minnesota, etc.)
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Users of Material -- the person for whom the material was designed. (e.g., teacher, student)

(4) Requirement information should include:

Teacher Competency -- the subject matter specialization, level of training and experience required of the teacher in order to use the material.
Student Selection Criteria -- the age, sex, grade level, aptitude, prerequisite training, and employment goals of the students.
Time Allotment -- the amount of time required for use of the material in total clock hours.
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(5) Please list other information on a separate sheet. This might include unique aspects of the material not provided for in other categories on the form.

FOREWORD

On February 20, 1967, the Special Interest Group - Agricultural Mechanics, Central States Seminar in Agricultural Education, Chicago, Illinois, asked that an effort be made to determine the feasibility of publishing an agricultural mechanics newsletter for personnel teaching skills courses at colleges and universities in the United States. Responses from those receiving the first issue of the newsletter indicated that many readers would be willing to furnish information for a directory of agricultural mechanics instructors.

Survey forms were sent to all agricultural education and agricultural engineering departments in the United States and Puerto Rico the last two weeks in March and the first week in April 1968. The survey form and the instructions which accompanied it are included in the appendices of this directory. It will be noted that the title of the directory is different from the one appearing at the top of the survey form. This change was the result of suggestions from department heads and others who returned the forms.

Some forms were returned as early as March 1968, while others were returned months later. Appreciation is expressed to all who completed and returned the survey forms, or who reported they would not be able to contribute to the directory.

Almost all respondents requested a copy of the directory. Only one department head expressed opposition to such a publication.

Directory information is presented in the following order: name of individual teaching at least one course in agricultural mechanics, academic rank of individual teaching agricultural mechanics, highest degree attained and institution granting, department or departments in which appointment(s) is (are) held, course or courses taught to undergraduate students, course or courses taught to graduate students, and inservice teacher education course or courses taught.

Feb. 1969 Benton K. Bristol, Associate Professor, Department of Agriculture
Illinois State University, Normal, Illinois 61761

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Institutions included in directory in the order in which they appear: Alabama A & M College, Auburn University, University of Arizona, University of Arkansas, University of California, Colorado State University, University of Delaware, Florida A & M University, University of Florida, Fort Valley State College, University of Georgia, University of Hawaii, University of Idaho, Illinois State University, Southern Illinois University, University of Illinois, Western Illinois University, Iowa State University, Kansas State University, University of Kentucky, Louisiana State University, Southern University, University of Southwestern Louisiana, University of Maine, Maryland State College, University of Maryland, Michigan State University, University of Minnesota, Mississippi State University, University of Missouri, Montana State University, The University of Nebraska, University of Nevada, University of New Hampshire, Rutgers-The State University, Cornell University, Agricultural and Technical State University, North Carolina State University, North Dakota State University, The Ohio State University, Oregon State University, The Pennsylvania State University, University of Puerto Rico, University of Rhode Island, Clemson University, South Carolina State College, South Dakota State University, Tennessee A. and I. State University, The University of Tennessee, East Texas State University, Sam Houston State College, Southwest Texas State College, Stephen F. Austin State College, Texas A and M University, Texas Technological College, Utah State University, The University of Vermont, Virginia Polytechnic Institute, Washington State University, West Virginia University, The University of Wisconsin, Wisconsin State University, The University of Wyoming, Central Missouri State College

Two hundred and forty one professional personnel who teach shop, mechanics, or related courses to agricultural education students are listed in the directory. Only courses in agricultural mechanics, courses related to agricultural mechanics, or courses with one or more sections on agricultural mechanics are listed. Many of the instructors have responsibilities for other courses which are not included in this directory.

Alabama A & M College, Normal, Alabama 35762

Lionel L. Crump, Ass't. Prof.; Master's - Tuskegee Institute; Ag. Ed.; 1622 Farm Shop, 1631 Farm Buildings, 1632 Farm Power and Machinery, 1633 Soil and Water Management; None; None

Auburn University, Auburn, Alabama 36830

R. A. Baker, Assoc. Prof.; Ed. D. - Okla. State Univ.; Voc. Technical; V. Ed. 404 Practicum in Gen. Metals, V. Ed. 405 The School Shop, Practicum in Building Construction; V. Ed. 408 Teaching Farm Mechanics (also taught for credit as in-service teacher education course)

D. N. Bottoms, Assoc. Prof.; M. S. - Auburn Univ. - Additional work at Iowa State and Colo. State; Vocational, Technical, and Practical Arts Education, School of Education; V. Ed. 404 Practicum in Gen. Metals, V. Ed. 405 The School Shop, V. Ed. 406 Practicum in Bldg. Construction and Maintenance, V. Ed. 407 Practicum in Electricity; V. Ed. 408 Teaching Farm Mechanics (also taught for credit as in-service teacher education course)

University of Arizona, Tucson, Arizona 85721

Clinton C. Jacobs, Ass't. Prof.; Ed. D. - Univ. of Arizona; Ag. Ed.; Ag. Eng. 1 Ag. Mechanics, Ag. Ed. 195 Problems in Teaching Agricultural Mechanics; None; None

University of Arkansas, Fayeteville, Arkansas 72701

Russell Benedict, Prof.; MSAE - Iowa State Univ.; Ag. Eng.; Ag. E. 2073 Ag. Mechanics III, Ag. E. 2083 Ag. Mechanics IV, Ag. E. 2614 Fund. of Ag. Engineering, Ag. E. 3172 Electricity on the Farm, Ag. E. 4073 Farm Shop Practices; Ag. E. 400V Special Problem; None

Warren Harris, Ass't. Prof.; M. Ag. Engr. - North Carolina State Univ.; Ag. Eng.; Ag. E. 2973 Drainage and Erosion Control; None; None

Xzin McNeal, Prof.; MA - Univ. of Missouri; Ag. Eng.; 1072 Ag. Mechanics I, 1082 Ag. Mechanics II; 400V Special Problem; None

Ewin J. Matthews, Assoc. Prof.; M. Ag. Engr. - North Carolina State Univ.; Ag. Eng.; Ag. E. 2083 Ag. Mechanization IV, Ag. Eng. 3272 Farm Power and Machinery; 400 and 500 level Special Problems; None

James A. Scanlon, Ass't. Prof.; Ph. D. - Cornell Univ.; Dept. of Voc. Teacher Education; Ag. Ed. 4012 Teaching Agricultural Mechanics; Ag. Ed. 4033 Advanced Methods in Agricultural Mechanics; None

University of California, Davis, California 95616

Norman B. Akesson, Prof.; M.S. - Univ. of California; Ag. Eng.; A.E. 110 Principles of Application of Agricultural Chemicals; None; None

Roger Garrett, Assoc. Prof.; M.S. - Univ. of Missouri; Ag. Eng.; 314B Ag. Eng. Problems and Techniques for Teaching; None; None

Joe Gentry, Assoc. Prof.; M.S. - Univ. of Missouri; Ag. Eng.; 314A Ag. Eng. Problems and Techniques for Teachers; None; None

Coby Lorenzen, Prof.; M.S. - Univ. of California; Ag. Eng.; Ag. Eng. 103 Agricultural Power; None; None

Loren W. Neubauer, Prof.; Ph. D. - Univ. of Minnesota; Ag. Eng.; Ag. Eng. 105 Farm Structures; None; None

Michael O'Brien, Prof.; Ph. D. - Iowa State Univ.; Ag. Eng.; Ag. Eng. 314A,B Ag. Eng. Problems and Techniques for Teachers; Ag. Eng. 317 Problems in Teaching Farm Mechanics; None; None

Wesley E. Yates, Prof.; M.S. - Univ. of Calif.; Ag. Eng.; Ag. Eng. 104 Agricultural Machinery; None; None

Colorado State University, Fort Collins, Colorado 80521

Edward C. Hein, Ass't. Prof.; M. Ed. - Colo. State Univ.; Industrial Arts; FM 103 Farm Power, FM 210 Tractors and Gasoline Engines; FM 536 Farm Tractor Repair and Overhauling; None

Russell A. Johnson, Ass't Prof.; M. Ed. - Colo. State Univ.; Industrial Arts; FM 202 Small Bldg. Construction; None; None

Lloyd L. Moody, Assoc. Prof.; M. Ed. - Colo. State Univ.; Industrial Arts; FM 103 Farm Power, FM 105 Welding and Forging, FM 201 Basic Farm Carpentry, FM 210 Tractors and Gas Engines, FM 312 Farm Machinery, FM 415 Rural Electrification and Sanitation, FM 208 Farm Shop Skills; FM 415 Rural Electrification and Sanitation, FM 536 Farm Tractor Repair and Overhauling, FM 537 Machinery Repair and Overhauling; None

Erwin E. Nielsen, Ass't. Prof.; D. Ed. - Colo. State Univ.; Industrial Arts; FM 103 Farm Power, FM 105 Welding and Forging, FM 312 Farm Machinery Repair and Overhauling, I.E. 429 Teaching Fluid Power; None; None

University of Delaware, Newark, Delaware 19711

Oscar R. Harman, Ass't. Prof.; M. S. - West Virginia Univ.; Ag. Eng.; Ag. Eng. 405 Design of Machinery, Ag. Eng. 601 Engineering Aspects of Agr. Processes; Ag. Eng. 602 Instrumentation; None

E. N. Scarborough, Assoc. Prof.; M. S. - Iowa State Univ.; 202 Farm Shop, 303 Soil and Water Conservation Engineering; None; None

Ernest W. Walpole, Ass't. Prof.; M. S. - Iowa State Univ.; Ag. Eng.; Ag. Eng. 204 Utilities, Ag. Eng. 404 Farm Structures; None; None

Thomas H. Williams, Instructor; B. S. - Univ. of Delaware; Ag. Eng.; Ag. Eng. 205 and 206 Power and Machinery Management; None; None

Florida A and M University, Tallahassee, Florida 32307

B. B. Archer, Ass't. Prof.; M. S. - Iowa State Univ.; Agriculture Science; A.M. 200 Mechanical Drawing, A. M. 201 Farm Shop Practices, A.M. 202 Farm Engines, Tractors and Machinery, A.M. 400 Bldgs. and Equipment; None; Ag. Ed. 400 Methods of Teaching Ag. Mechanics

W. O. Mack, Ass't. Prof.; M. S.; Earth and Plant Science; Agronomy 306 Soil Conservation, Agronomy 402 Soil Management; Education 513 Materials and Equipment for Voc. Teachers, FM 410 Farm Buildings; None

University of Florida, Gainesville, Florida 32601

C. J. Rogers, Assoc. Prof.; Masters - Univ. of Florida; Ag. Eng.; MCA 303 Agricultural Mechanics I, MCA 407 Agricultural Mechanics II; Courses are being planned for coming; Non-credit workshops only in various areas of mechanized agriculture (welding, irrigation, etc.)

Fort Valley State College, Fort Valley, Georgia 31030

M. E. Singleton, Ass't. Prof.; M. S. - A & T College; Agriculture; Ag. Eng. 102 Intro. to Agr. Engineering, Ag. Eng. 301 Farm Structures, Ag. Eng. 203 Soil and Water Conservation, Ag. Eng. 202 Farm Power and Mechanics; None; None

University of Georgia, Athens, Georgia 30601

James M. Allison, Instructor; M. S. - Clemson Univ.; Ag. Eng.; AEN 280 Farm Electrification; None; Non-credit short course

Carlisle Cobb, Jr., Assoc. Prof.; MSAE - Univ. of Georgia; Ag. Eng.; AEN 220 Drainage, Irrigation and Erosion Control; AEN 505 Soil and Water Conservation; None

R. R. Harris, Assoc. Prof.; Ph. D. - Michigan State Univ.; Ag. Eng.; AEN 203 Wood and Masonry Technology, AEN 207 Metal Technology, AEN 260 Farm Power and Machinery, AEN 265 Farm Bldgs. and Conveniences, AEN 701 Engineering Applications, AEN 708 Special Problems in Ag. Eng. Technology; AEN 701 Engineering Applications, AEN 708 Special Problems in Ag. Eng. Technology; Non-credit courses

B. Derrell McClendon, Instructor; MSAE - Univ. of Georgia; Ag. Eng.; AEN 260 Farm Power and Machinery; None; None

University of Hawaii, Honolulu, Hawaii 96822

Donald M. Kinch, Prof.; Ph. D. - Michigan State Univ.; Ag. Eng.; AE 431 Production and Utilization of Energy in Agriculture; None; None

F. A. Shellenberger, Instructor; M. S. - Univ. of Hawaii; Ag. Eng.; Ag. Eng. 331 Mechanizing Agricultural Production, Ag.Eng. 431 Agricultural Power and Equipment; None; None

University of Idaho, Moscow, Idaho 83843

R. C. Haynes, Assoc. Prof.; M. S. - Univ. of Idaho; Ag. Ed.; Ag. E. 35 Oxy-acetylene Welding, Ag. E. 37 Arc Welding, Ag. E. 103 Farm Shop, Ag. E. 138 Farm Equipment Repair; Ag. Ed. 260 Advanced Methods in Farm Mechanics; Courses for vocational agriculture teachers

Norman C. Young, Instructor; M. S. - Univ. of Idaho; Ag. Eng.; Ag. E. 114 Agricultural Shelter and Storage; None; None

Illinois State University, Normal, Illinois 61761

Benton K. Bristol, Assoc. Prof.; Ed. D. - The Penn State Univ.; Agriculture; 135 Farm Shop Work; None; None

George W. Forgey, Instructor; M. Ed. - Univ. of Illinois; Agriculture; 135 Farm Shop Work, 232 Farm Machinery and Tractors, 234 Soil and Water Conservation and Farm Structures; None; Non-credit workshops

Southern Illinois University, Carbondale, Illinois 62901

J. J. Paterson, Assoc. Prof.; M. S. - Univ. of Saskatchewan; Agricultural Industries; Ag. I. 373 Farm Power, Ag. I. 375 Farm Shop; Ag. I. 473 Advanced Farm Power, Ag. I. 478 Advanced Farm Machinery; None

Thomas R. Stitt, Ass't. Prof.; Ph. D. - Ohio State Univ.; Agricultural Industries; Ag. I. 215 Farm Structures and Electrification; Ag. I. 512 Ag. Occupations Internship; None

University of Illinois, Urbana, Illinois 61801

Harold H. Beaty, Prof.; MSAE - Iowa State Univ.; Ag. Eng.; Agr. Mech. 281 Farmstead Mechanization; Agr. Mech. 300 Special Problems; None

Gary D. Bubenzer, Instructor; M. S. - Purdue Univ. (Candidate for Ph. D.); Ag. Eng.; Agr. Mech 252 Mechanics of Soil and Water Conservation; None; None

B. Jack Butler, Assoc. Prof.; MSAE - Univ. of Illinois; Ag. Eng.; Agr. Mech. 112 Tractors and Field Machinery, Agr. Mech 221 Farm Power and Machinery Management; Agr. Mech. 331 Farm Machinery Technology; None

James O. Curtis, Assoc. Prof.; Ph. D. - Purdue Univ.; Ag. Eng.; Agr. Mech 272 Farm Buildings; None; None

R. F. Espenschied, Ass't. Prof.; Ed. D. - Univ. of Illinois; Ag. Eng., Vocational Agriculture Service; Agr. Mech. 200 Agri. Mechanics Shop - Construction Technology, Agr. Mech. 201 Agri. Mechanics Shop - Electrical and Metalwork; Agr. Mech. 300 Special Problems; Non-credit courses in any area of agricultural mechanics requested by teachers - also workshops

Paul Hemp, Prof.; Ed. D. - Univ. of Illinois; Education; VOTEC 277 Methods in Agricultural Education (including methods in agri. mechanics); None; None

Donnell R. Hunt, Assoc. Prof.; Ph. D. - Iowa State Univ.; Ag. Eng.; Agr. Mech. 221 Farm Power and Machinery Management, Agr. Mech. 231 Farm Machinery Mechanisms; Agr. Mech. 300 Special Problems, Agr. Mech 331 Farm Machinery Technology; Non-credit courses in tractor tune-up

J. Kent Mitchell, Research Associate; MSAE - Iowa State University - Ph. D. Candidate; Ag. Eng.; Agr. Mech. 100 Engineering Applications in Agri.; None; None

Elwood F. Olver, Prof.; Ph. D. - Iowa State Univ.; Ag. Eng.; Agr. Mech. 100 Eng. Applications in Agri.; Agr. Mech. 381 Electro-Mechanical Agri. Systems; None (Presently on leave, AID Program at univ. Jabalpur, India)

Lloyd J. Phipps, Prof.; Ed. D. - Univ. of Illinois; Education; None; VOTEC 475 Organizing and Teaching Agricultural Mechanics; None

J. Arthur Weber, Prof.; MSAE - Univ. of Illinois; Ag. Eng.; Agr. Mech. 241 Farm Tractor Power; Agr. Mech. 300 Special Problems; None

Western Illinois University, Macomb, Illinois 61455

H. Edward Breece, Instructor; M. S. - Univ. of Illinois; Agriculture; Agr. Mech. 250 Engineering Principles Applied to Agriculture, Agr. Mech. 358 Agricultural Mechanics Shopwork, Agr. Mech. 461 Mechanics of Soil and Water Conservation; None; None

Safwat Moustafa, Ass't. Prof.; Ph. D. - Michigan State Univ.; Agriculture; Surveying 206 Surveying, A.E. 351 Farm Engines and Tractors, A.E. 352 Power Driven Machinery, A.E. 354 Rural Electrification, A.E. 458 Farm Bldgs., A.E. 464 Agricultural Processing; None; None

Iowa State University, Ames, Iowa 50010

Donald L. Ahrens, Instructor; M. S. - Iowa State Univ.; Ag. Eng.; A.E. 154 Agricultural Maintenance Welding, A. E. 254 Metal Construction and Maintenance, A. E. 255 Agri. Construction Materials and Procedures; None; None

Willard R. Anderson, Ass't. Prof.; M. S.; Ag. Eng.; A. E. 154 Agri. Maintenance Welding, A. E. 254 Metal Construction and Maintenance, A. E. 255 Agri. Construction Materials and Procedures, A. E. 259 Materials and Processes, A. E. 354 Advanced Metal Construction and Maintenance, A. E. 359 Machine Construction; A. E. 428T Special Problems; None

Herbert E. Hansen, Instructor; B. S. - Iowa State Univ.; Ag. Eng.; A. E. 154 Agri. Maintenance Welding, A. E. 254 Metal Construction and Maintenance, A. E. 255 Agri. Construction Materials and Procedures, A. E. 354 Advanced Metal Construction and Maintenance, A. E. 359 Machine Construction; None; None

Thomas A. Hoerner, Assoc. Prof.; Ph. D. - Iowa State Univ.; Ag. Eng. and Ag. Ed.; A. E. 415 Methods of Teaching Agricultural Mechanics; A. E. 412 Electricity in Mechanized Agriculture, A. E. 528 Special Problems in Ag. Engineering; A. E. 416 Advanced Methods of Teaching Agricultural Mechanics for credit, A. E. 418 Developments in Agricultural Mechanics for credit

Gary C. McVey, Instructor; B. S. - Iowa State Univ.; Ag. Eng.; A. E. 254 Metal Construction and Maintenance, A. E. 255 Agri. Construction Materials and Procedures, A. E. 428 Small Power Equipment; None; None

V. J. Morford, Prof.; M. S. - Univ. of Nebraska; Ag. Eng. and Ag. Ed.; A. E. 254 Metal Construction and Maintenance; A. E. 528 Special Topics in Ag. Engineering; None

Kansas State University, Manhattan, Kansas 66502

Earl E. Baugher, Ass't. Prof.; M. S. - Kansas State Univ.; Ag. Eng.; 506-151 Ag. Mechanics Practices, 506-251 Farm Power, 506-452 Farm Bldg. Construction; 506-603 Advanced Farm Power; None

Paul N. Stevenson, Assoc. Prof.; M. S. - Iowa State Univ.; Ag. Eng.; 506-151 Ag. Mechanics Practices, 506-351 Ag. Machinery Operation and Maint. 506-352 Ag. Machinery Construction, 506-456 Ag. Mechanics Methods; 506-600 Advanced Farm Mechanics, 506-615 Problems in Ag. Mechanization; 405-705 Organization Problems in Teaching Farm Mechanics for credit, 405-836 Field Studies in Agricultural Education for credit

University of Kentucky, Lexington, Kentucky 40506

Jesse B. Brooks, Assoc. Prof.; M. S. - Auburn Univ.; Ag. Eng.; AEN 430 Farm Water Management; AEN 430 Farm Water Management; None

Floyd Cox, Assoc. Prof.; M. S. - Univ. of Kentucky; Vocational Education; None; 681 Teaching Agricultural Mechanics; Either conducts or arranges for all non-credit workshops in agricultural mechanics for teachers

John N. Walker, Prof.; Ph. D. - Purdue Univ.; Ag. Eng.; AEN 400 Farmstead Planning and Mechanization (co-instructor with Gerald M. White), AEN 506 Greenhouse Des. Mgt. & Env. Cont. (co-instructor with Donald Cotter); AEN 400 Farmstead Planning and Mechanization (co-instructor with G. M. White), AEN 506 Greenhouse Des. Mgt. & Env. Cont. (co-instructor with D. Cotter); None

Gerald M. White, Ass't.Prof.; Ph. D. - Purdue Univ.; Ag. Eng.; AEN 442 Farmstead Electrification, AEN 400 Farmstead Planning and Mechanization (co-instructor with J. N. Walker); AEN 442 Farm Electrification, AEN 400 Farmstead Planning and Mechanization (co-instructor with J. N. Walker); None

Earl R. Young, Assoc. Prof.; M. S. - Univ. of Minnesota; Ag. Eng.; AEN 212 Tractors and Field Machinery, AEN 252 Farm Shop; AEN 410 Farm Power and Machinery; None

Louisiana State University, Baton Rouge, Louisiana 70803

W. H. Carter, Prof.; M. S. - Iowa State Univ.; Ag. Eng.; Ag. Eng. 65 Farm Tractors; None; None

Jerry L. Chessness, Assoc. Prof.; Ph. D. - Michigan State Univ.; Ag. Eng.; Ag. Eng. 61 Mapping and Surveying; None; None

Billy J. Cochran, Ass't. Prof.; M. S. - Texas A & M Univ.; Ag. Eng.; Ag. Eng. 59 Farm and Shop Mechanics; None; None

F. T. Wratten, Prof.; M. S. - Louisiana State Univ.; Ag. Eng.; Ag. Eng. 82 Farm Electrification; Ag. Eng. 210 Agricultural Engineering Special Topics; Ag. Eng. 210 Agricultural Engineering Special Topics for credit

Southern University, Baton Rouge, Louisiana 70803

Edward C. Wright, Ass't. Prof.; M. S. - Michigan State Univ.; Ag. Eng.; 315 Farm Shop and Agri. Engineering Procedures, 321 Farm Mechanics, 384 Farmstead Wiring, 422 Farm Structures; 500 Farm Tractors, Equipment and Implement Maintenance Clinics, 512 Advanced Farm Structures; None

University of Southwestern Louisiana, Lafayette, Louisiana 70501

Gordon Dugae, Prof.; M. S. - Louisiana State Univ.; Ag. Eng.; Agr.E. 100 Fundamental Agricultural Engineering, Agr.E. 210 Farm Machinery, Agr.E.211 Farm Machinery Lab.; Agr.E. 230 Metalworking; Agr.E. 231 Metalworking Lab. Agr.E. 330 Drainage and Terracing, Agr.E. 331 Drainage and Terracing Lab.; None; None

Thomas F. Maher, Prof.; Ph. D. - Oklahoma State Univ.; Ag. Eng.; Agr.E. 100 Fundamental Agricultural Engineering, Agr.E. 210 Farm Machinery, Agr.E. 211 Farm Machinery Lab., Agr.E. 230 Metalworking, Agr.E. 231 Metalworking Lab., Agr.E. 330 Drainage and Terracing, Agr.E. 331 Drainage and Terracing Lab.; None; None

University of Maine, Orono, Maine 04473

Edward R. Huff, Ass't. Prof.; M. S. - Univ. of Maine; Ag. Eng.; AE36 Farm Power; None; None

Albert F. Klinge, Prof.; Ph. D. - U.C.L.A.; Ag. Eng.; AE35 Soil and Water Control; None; None

Hayden M. Soule, Jr., Assoc. Prof.; B. S. - Univ. of Maine; Ag. Eng.; AE31 Field Machinery Management; None; None

Robert B. Williams, Assoc. Prof.; M. S. - Univ. of Maine; Ag. Eng.; AE32 Farm Structures and Equipment; None; None

Maryland State College, Princess Anne, Maryland 21853

Harrell Smith, Prof.; Ed. D. - The Penn State Univ.; Agriculture; Ag. Eng. 102 Farm Shop, Ag. Eng. 202 Farm Electrification and Welding, Ag. Eng. 301 Farm Machinery and Power, Ag. Eng. 401 Advanced Problems, Ag. Eng. 402 Advanced Engineering Problems; None; Rural electrification and welding - non-credit

University of Maryland, College Park, Maryland 20742

Guy W. Gienger, Assoc.Prof.; M. S. - Univ. of Maryland; Ag. Eng.; 56 Introduction to Farm Mechanics, 104 Farm Mechanics (Ag. Ed. Seniors), 198 Special Problems in Farm Mechanics; None; No college credit - Special subject areas, such as: Plow Adjustment Demonstration, Corn Planter Clinic, Tractor Clinic

Michigan State University, East Lansing, Michigan 48823

Carl F. Albrecht, Assoc. Prof.; M. A. - Michigan State Univ.; Ag. Eng.; AE 202 Physical Principles of Mechanical Processes, AE 402 Teaching Agri. Mechanics, AE 459 Special Problems; AE 811 Technical Problems; None

F. W. Bakker-Arkema, Assoc. Prof.; Ph. D. - Michigan State Univ.; Ag. Eng.; AE 423 Processing Equipment; AE 812 Processing of Biological Products; None

W. G. Bickert, Ass't. Prof.; Ph. D. - Michigan State Univ.; Ag. Eng.; AE 421 Electric Power; None; None

James S. Boyd, Prof.; Ph. D. - Iowa State College; Ag. Eng.; AE 416 Farm Building Design; Only research credits; AE 305 taught off campus two times for college credit

M. L. Esmay, Prof.; Ph. D. - Iowa State Univ.; Ag. Eng.; AE 416 Agri. Structures; AE 811 Special Problems; None

D. R. Heldman, Ass't. Prof.; Ph. D. - Michigan State Univ.; Ag. Eng. and Food Science; AE 437 Principles of Food Engineering; AE 805 Environmental Measurements; None

E. H. Kidder, Prof.; M. S. - Univ. of Illinois; Ag. Eng.; AE 431 Principles of Irrigation, Drainage and Erosion Control; AE 431 Principles of Irrigation, Drainage and Erosion Control; None

Howard F. McColly, Prof.; M. S. - Iowa State Univ.; Ag. Eng.; AE 444 Agricultural Production Machinery, AE 459 Special Problems; AE 804 Principles of Agricultural Mechanization in Developing Countries, AE 811 Technical Problems (Research); None

Chester J. Mackson, Assoc. Prof.; Ph. D. - Cornell Univ.; Ag. Eng.; AE 220 Engineering Principles Applied to Agriculture, AE 443 Internal Combustion Engines, AE 459 Special Problems; AE 811 Technical Problems, AE 820 Research Methods in Agri. Engineering; Power Mechanics Workshop for teachers of vocational agriculture taught for college credit

Robert L. Maddex, Prof.; M.S. - Michigan State Univ.; Ag. Eng.; AE 425 Farm Material Handling; None; None

Guy E. Timmons, Prof.; Ed. D. - Wayne State Univ.; Secondary Education and Curriculum; None; Ed. 830G Methods of Teaching Agricultural Mechanics; Ed. 830G Methods of Teaching Agricultural Mechanics (graduate credit), Non-credit Workshops in Agricultural Mechanics

University of Minnesota, St. Paul, Minnesota 55101

E. R. Allred, Prof.; M. S. - Univ. of Minnesota; Ag. Eng.; Me.Ag. 64 Rural Sanitation and Water Supply; None; None

W. Forrest Bear, Assoc. Prof.; Ph. D. - Iowa State Univ.; Ag. Ed. and Ag. Eng.; Me.Ag. 4 Agricultural Shop - Metal Work, Me.Ag. 130 Instructional Methods in Farm Mechanics; Me.Ag. 131 Problems and Field Studies in Advanced Farm Mechanics (this course has about 6 legs with different subject matter for each 3 hour offering); Me.Ag. 131 Problems and Field Studies in Advanced Farm Mechanics for credit, Workshop and Professional Improvement Seminars in and out of State - no credit

Arnold Flikke, Assoc. Prof.; M. S. - Univ. of Minnesota; Ag. Eng.; Me.Ag.55 Electricity in Agriculture, None; None

Phillip Manson, Prof.; M. S. - Univ. of Minnesota; Ag. Eng.; Me.Ag. 42 Elementary Surveying, Me.Ag. 84 Hydrology and Erosion Control; None: None

Jesse Pomroy, Assoc. Prof.; M. S. - Univ. of Minnesota; Ag. Eng.; Me.Ag. 3 Technical Drawing, Me.Ag.7 Farm Bldg. Construction, Me.Ag.14 Farm Bldgs., Me.Ag. 65 Materials Handling on the Farm, Me.Ag.114 Special Problems in Farm Structures; None; None

C. E. Shertz, Assoc. Prof.; Ph. D. - Iowa State Univ.; Ag. Eng.; Me.Ag. 12 Agricultural Machinery; None; None

John Strait, Prof.; M. S. - Univ. of Minnesota; Ag. Eng.; Me.Ag. 45 Engines and Tractors; None; None

Mississippi State University, State College, Mississippi 39762

Lynne E. Cook, Jr., Instructor; B. S. - Mississippi State Univ.; Agri. and Biological Engineering; ABE 1063 Shop Mechanics; None; None

William R. Crumpton, Instructor; M. S. - Mississippi State Univ.; Agri. and Biological Engineering; ABE 2163 Gas Engines and Tractors, ABE 4161 Agricultural Machinery Management Lab., ABE 4163 Agricultural Machinery Management, ABE 4473 Electrical Application in Agriculture; ABE 6161 Agri. Machinery Management Lab., ABE 6163 Agri. Machinery Management, ABE 6473 Electrical Application in Agriculture; None

F. E. Edwards, Prof.; M. S.; Agri. and Biological Engineering; ABE 3063 Crop Production Machinery; Special Problems (related to desalination of soils; None

Fred L. Shuman, Jr., Assoc. Prof.; Ph. D. - Iowa State University; Agri. and Biological Engineering; ABE 1063 Shop Mechanics, ABE 1861 Technical Computations, ABE 2113 Agri. Tractors and Power Units, ABE 2163 Farm Gas Engines and Tractors; ABE 8113 Agricultural Machinery Analysis and Design; None

George M. Walker, Assoc. Prof.; Master's; Ag. Ed.; Agricultural Mechanics, Special Methods in Teaching Ag. Mechanics; Agri. Shop Management in Secondary School; Special three-week course in Advanced Ag. Mechanics Shop

G. Burns Welch, Assoc. Prof.; Ph. D. - Oklahoma State Univ.; Agri. and Biological Engineering; ABE 4863 Seed Processing Machinery; ABE 8363 Rural Housing and Home Equipment; None

University of Missouri, Columbia, Missouri 65201

Robert P. Beasley, Prof.; M. A. - Univ. of Missouri; Ag. Eng.; 201 Farm Water Management; None; None

C. LeRoy Day, Prof.; Ph. D. - Iowa State Univ.; Ag. Eng.; 215 Electricity on the Farm; None; None

James C. Frisby, Ass't. Prof.; Ph. D. - Iowa State Univ.; Ag. Eng.; 1 Farm Power and Machinery; None; None

Richard E. Linhardt, Instructor; M. S. - University of Missouri; Ag. Eng.; 60 Shop Tools and Processes, 210 Advanced Shopwork; None; None

James S. McKibben, Assoc. Prof.; M. S. - University of Missouri; Ag. Eng.; 20 Welding

Neil F. Meador, Ass't. Prof.; Ph. D. - Michigan State Univ.; Ag. Eng.; 103 Elementary Farm Buildings; None; None

Curtis R. Weston, Assoc. Prof.; Ed. D. - University of Missouri; Ag. Ed. and Ag. Eng.; F120 Programs and Issues in Vocational Education , F130 Teaching Agricultural Mechanics in Vocational Agriculture; F420 Problems in Teaching Agricultural Mechanics; F420 Problems in Teaching Agricultural Mechanics, 310 In-service Course in Agricultural Mechanization

Montana State University, Bozeman, Montana 59715

Charles C. Bowman, Assoc. Prof.; M. S. - Utah State Univ.; Ag. Eng.; Ag.M. 325 Irrigation Practices; None; None

Thomas L. Hanson, Ass't. Prof.; Ph. D. - Iowa State Univ.; Ag. Eng.; Ag. Eng. 329 Conservation Engineering; None; None

Don G. Lee, Assoc. Prof.; M. S. - Montana State Univ.; Ag. Eng.; Ag. Eng. 202 Arc and Acetylene Welding, Ag.M. 324 Arc, Acetylene and Forge Welding, Ag. Eng. 304 Advanced Welding; None on continuing basis; Ag.M. 414 Farm Mechanics in Agriculture, Ag.M. 418 Advanced Farm Mechanics for Teachers, Ag.M. 470 Individual Problems (maximum of 12 credits)

Halver M. Skinner, Assoc. Prof.; M. S. - Utah State Univ.; Ag. Eng. (66%) Industrial Arts (34%); Ag. Mech. 314 Engines and Tractors, Ag. Mech. 319 Farm Machinery Maintenance and Repair, Ag. Mech. 326 Shop Practices for Teachers, Ag. Mech. 327 Farm Mechanics for Teachers; None on continuing basis, those listed under in-service teacher education may be taken as Agricultural Mechanics Option or Minor in Agricultural Education Master's Program; Ag. Mech. 414 Farm Mechanics in Agriculture, Ag. Mech. 418 Adv. Farm Mechanics for Teachers, Ag. Mech. 470 Individual Problems - taught on demand

The University of Nebraska, Lincoln, Nebraska 68503

Otis E. Cross, Assoc. Prof.; Ph. D. - Michigan State Univ.; Ag. Eng.; M.A. 141 Farm Buildings (alternate on this course with James A. DeShazer), M.A. 142 Facilities for Livestock Production (alternate on this course with James A. DeShazer), M.A. 146 Handling and Processing Plant Materials; Possibly M.A. 299 Principles and Problems in Mechanized Agri.; None

James A. DeShazer, Assoc. Prof.; Ph. D. - North Carolina State Univ.; Ag. Eng.; M.A. 141 Farm Bldgs., M.A. 142 Facilities for Livestock Prod., (alternates on these two courses with Otis E. Cross); None; None

Donald M. Edwards, Assoc. Prof.; Ph. D. - Purdue Univ.; Ag. Eng.; M.A. 152 Farm Water Management (alternates with Howard D. Wittmuss); Possibly M.A. 299 Principles and Problems in Mechanized Agri.; None

Milo L. Mumgaard, Ass't. Prof.; B. S. - Iowa State Univ.; Ag. Eng.; M.A. 145 Farmstead Electricity; None; None

George M. Petersen, Assoc. Prof.; M. S. - University of Nebraska; Ag. Eng.; M.A. 1 Intriduction to Mechanized Agriculture, M.A. 116 Mechanized Feed Handling; Possibly M.A. 299 Prin. and Probs. in Mech. Agri.; None

George W. Steinbruegge, Prof.; M. S. - University of Missouri; Ag. Eng.; M.A. 133 Field Machines II (alternates with John J. Sulek); M.A. 221S Farm Machinery and Power, M.A. 299 Prin. and Probs. in Mech. Ag.; None

John J. Sulek, Assoc. Prof.; M. S. - Univ. of Nebraska; Ag. Eng.; M.A. 115 Farm Engines, M.A. 155 Farm Tractors, M.A. 133 Field Machines II (alternates with G. W. Steinbruegge); Possibly M.A. 299 Prin. and Probs. in Mechanized Agriculture; None

Stanley A. Weeks, Instructor; M. S. - Univ. of Massachusetts; Ag. Eng.; M.A. 33 Field Machines I; None; None

U. E. Wendorff, Assoc. Prof.; M. S. - Univ. of Nebraska; Ag. Eng. (1/2 time), Ag. Ed. (1/2 time); M.A. 5 Woodworking, M.A. 17 Metal Working, M.A. 106 (also Ag. Ed. 106) Farm Shop Management, Ag. Ed. 102 Methods of Classroom Teaching, Ag. Ed. 112 Methods of Instruction; None except special problems and possibly M. S. thesis studies; None

Howard D. Wittmuss, Assoc. Prof.; Ph. D. - Univ. of Nebraska; Ag. Eng.; M.A. 152 Farm Water Management (alternates with Donald M. Edwards); Possibly M.A. 299 Prin. and Probs. in Mech. Ag.; None

University of Nevada, Reno, Nevada 89507

T. A. Butler, Assoc. Prof.; M. A. - University of Wyoming; Agricultural Economics and Education; 142 Irrigation Equipment and Structures, 253 Gas Engines and Tractors, 332 Farm Machinery, 333 Machine Design and Construction, 341 Farm Structures, 357 Farm Power, 417 Pumps and Motors; 981-982 Individual Study in Agricultural Mechanics; 950 Workshop in Ag. Ed. (Mechanics). Prof. Butler & Dr. Herndon may change some semesters depending on the work load at the time

L. P. Herndon, Assoc. Prof.; Ed. D. - Cornell Univ.; Agricultural Economics and Education; 121 Fundamentals of metal work, 212 Welding, 256 Rural Electrification, 412 Advanced Welding; None; None

University of New Hampshire, Durham, New Hampshire 03824

Paul A. Gilman, Assoc. Prof.; M. S. - The Penn State Univ.; Thompson Sch. of Applied Science, Soil and Water Science - Ag. Ed.; 404 Fabrication Technology, 651-652 Methods of Teaching Mechanics in Voc. Agr.; 801 Adv. Methods in Ag. Ed. Instruction, 802 Meth.inTeaching the Operation and Maintenance of Farm Tractors, 803 Methods in Teaching the Care and Maint. of Agricultural Machinery; In-service workshops held but generally not for credit

Rutgers - The State University, New Brunswick, New Jersey 08903

Charles C. Drawbaugh, Assoc. Prof.; Ed. D. - The Penn State Univ.; Voc.-Tech. Education; 288:417 Materials and Methods of Welding in the Voc. Tech. School; 288:511 Organizing Instruction for the High School Farm Shop; 288:410 Recent Developments in Agricultural Education (2 weeks for 2 credits each summer). The workshop is on Agricultural Mechanics about every 4 years

Milo Moore, Ass't. Prof.; M. S. - The Penn State Univ.; Ag. Eng.; 040:304 Rural Electrification, 040:361 Farm Machinery and Power; None; None

Kurt Nathan, Assoc. Prof.; M. S. - Cornell Univ.; Ag. Eng.; 040:222 Ag. Surveying and Mapping, 040:224 Field Practice in Ag. Surveying and Mapping; None; None

Charles H. Reed, Prof.; M. S. - Cornell Univ.; Ag. Eng.; 040:362 Farm Buildings and Utilities; 040:501 Advanced Agricultural Mechanics; None

Cornell University, Ithaca, New York 14850

R. D. Black, Assoc. Prof.; Ph. D. - University of Illinois; Ag. Eng.; 222 Farm Surveying; None; None

F. G. Lechner, Assoc. Prof.; Ed. D. - Michigan State Univ.; Ag. Eng.; 204 Woodworking and Carpentry, 205 Farm Metal Work, 305 Adv. Farm Metal Work; Courses indicated can be taken for graduate credit by teachers of agriculture; 405u Fundamentals of Welding (summer term)

Gilbert Levine, Prof.; Ph. D. - Cornell Univ.; Ag. Eng.; 321 Soil and Water Conservation (must be taken concurrently with 321 Agronomy Soil and Water Conservation); Courses indicated can be taken for graduate credit; None

H. A. Longhouse, Lecturer; M. S. - West Virginia Univ.; Ag. Eng.; 106 Mechanical Drawing, 107 Advanced Mechanical Drawing; None; None

R. T. Lorenzen, Assoc. Prof.; M. S. - Univ. of California; Ag. Eng.; 233 Farm Structures, 234 Farm Structures Lab.; Courses indicated can be taken for graduate credit; None

David C. Ludington, Assoc. Prof.; Ph. D. - Purdue Univ.; Ag. Eng.; 104 Elements of Ag. Engineering; None; None

W. F. Millier, Prof.; Ph. D. - Cornell Univ.; Ag. Eng.; 311 Farm Machinery, 314 Farm Machinery Lab.; Courses indicated can be taken for graduate credit; None

E. S. Shepardson, Prof.; M. S. - Cornell Univ.; Ag. Eng.; 313 Electricity on the Farm; Course indicated can be taken for graduate credit; None

Agricultural and Technical State University, Greensboro, North Carolina 27411

E.S. Carr, Ass't. Prof.; B. S - Ohio State Univ.; Ag. Eng. (Plant Science and Technology); 1403 Agri. Drawing, 1424 Farm Bldgs.; 1441 Surveying, Drainage and Soil Conservation, 1462 Dairy Engineering; 1475 Conservation, Drainage and Irrigation, 1477 Special Problems in Agri. Engineering; None

L. A. Yates, Instructor; M. S. - Agricultural and Technical State Univ.; Plant Science and Technology; 1404 Farm Shop, 1423 Field Machinery, 1442 Farm Power, 1465 Farm Shop Organization and Management; 1476 Advanced Farm Shop; None

North Carolina State University, Raleigh, North Carolina 27607

George B. Blum, Jr., Assoc. Prof.; MSAE - North Carolina State Univ.; Biological and Agricultural Engineering; BAE 332 Farm Structures; BAE 590 Special Problems (limited basis); BAE 332 Farm Structures, Workshops in Arc Welding and Machinery Maintenance (non-credit)

Julian M. Fore, Prof.; M. S. - Purdue Univ.; Biological and Agricultural Engineering; BAE 411 Farm Power and Machinery; None; Non-credit Workshops in Small Engines, Farm Machinery and Machinery Maintenance

Ezra L. Howell, Assoc. Prof.; M. Ed. - North Carolina State Univ.; Biological and Agricultural Engineering; BAE 211 Farm Machinery; BAE 590 Special Problems (limited basis); No-credit Workshops in Arc Welding, Oxy acetylene Welding, Small Engines, Farm Machinery and Machinery Maintenance

John W. Weaver, Jr., Prof.; B. S. - Virginia Polytechnic Institute; Bio. and Agr. Engineering; BAE 341 Farm Electrification and Utilities; None; None

North Dakota State University, Fargo, North Dakota 58102

Eric Arntson, Ass't. Prof.; B. S. - North Dakota State Univ.; Ag. Ed.; Ag. Ed. 402 Methods in Farm Mechanics; None; None

A. F. Butchbaker, Assoc. Prof.; Ph. D. - University of Missouri; Ag. Eng.; Ag. Eng. 310 Farm Structures and Utilities, Ag. Eng. 321 Farmstead Conveniences; None; None

Harold Holmen, Ass't. Prof.; M. S. - South Dakota State Univ.; Ag. Eng.; Ag. Eng. 214 Conservation Engineering, Ag. Eng. 334 Irrigation Methods; None; None

H. L. Kucera, Assoc. Prof.; M. S. - North Dakota State Univ.; Ag. Eng.; Ag. Eng. 322 Farm Machinery, Ag. Eng. 328 Farm Power; Ag. Eng. 599 Thesis; None

Charles W. Moilanen, Ass't. Prof.; M. S. - North Dakota State Univ.; Ag. Eng.; Ag. Eng. 112 Farm Mechanics, Ag. Eng. 312 Advanced Farm Mechanics; Ag. Eng. 512 Advanced Farm Mechanics Problems; None

S. D. Owen, Prof.; Master's Degree; Ag. Ed.; None; 502 Organizing and Teaching Farm Mechanics; None

George L. Pratt, Prof.; Ph. D. - Oklahoma State Univ.; Ag. Eng.; Ag. Eng. 310 Farm Structures and Utilities; Ag. Eng. 599 Thesis; None

W. J. Promersberger, Prof.; M. S. - Kansas State Univ.; Ag. Eng.; Ag. Eng. 328 Farm Power; Ag. Eng. 512 Advanced Farm Mechanics Problems, Ag. Eng. 599 Thesis; None

Richard L. Witz, Prof.; M. S. - Purdue University; Ag. Eng.; Ag. Eng. 320 Farm Electricity, Ag. Eng. 321 Farmstead Conveniences; Ag. Eng. 512 Advanced Farm Mechanics Problems; None

The Ohio State University, Columbus, Ohio 43210

Henry J. Barre, Prof.; Ph. D. - Iowa State Univ.; Ag. Eng.; Agr. Engr.220 and 221; None; None

Kenneth A. Harkness, Instructor; M. S. - Kansas State Univ.; Ag. Eng.; Agr. Engr. 250 Machines for Agricultural Operations, Agr. Engr. 231 Power for Agricultural Operations II; None; None

Floyd Herum, Assoc. Prof.; Ph. D. - Purdue Univ.; Agr. Engr. 220 Bldgs. and Equipment for Farmstead Operations, Agr. Engr. 221 Ag. Materials Handling Systems; None; Assisted with Agr. Engr. 799-2 How to Teach the Use of Electricity in Agriculture

Samuel G. Huber, Assoc. Prof.; M. S. - The Ohio State Univ.; Ag. Eng.; Agr. Engr. 230 Power for Agricultural Operations I, Agr. Engr. 551 Advanced Farm Power and Field Machinery; Agr. Engr. 551 Adv. Farm Power and Field Machinery; None

Carlton E. Johnson, Prof.; Ph. D. - Iowa State Univ.; Ag. Eng. and Ag. Ed. - Graduate Faculty; Agr. Engr. 140 Methods of Teaching Agricultural Construction and Maintenance, Agr. Engr. 593 Individual Studies; Agr. Engr. 593 Individual Studies, Agr. Engr. 591 Workshop (Advanced Ag. Construction and Maintenance), Ag. Ed. 743 Practicum in Teaching Agricultural Mechanics; None

G. O. Schwab, Prof.; Ph. D. - Iowa State Univ.; Ag. Eng.; Agr. Engr. 270 Agricultural Drainage and Erosion Control; None; None

W. E. Stuckey, Prof.; Master's Degree - The Ohio State Univ.; Extension Service; Agr. Engr. 500 Farm and Home Safety; Agr. Engr. Farm and Home Safety; None

E. Paul Taiganides, Assoc. Prof.; Ph. D. - Iowa State Univ.; Ag. Eng.; Agr. Engr. 270 Agricultural Darinage and Erosion Control; None; None

Oregon State University, Corvallis, Oregon 97331

Leno V. Christensen, Assoc. Prof.; M. S. - Stout State; Ag. Eng.; A.E. 222 Farm Mechanics; None; None

M. G. Cropsey, Prof.; Ph. D. - Michigan State Univ.; Ag. Eng.; A.E. 331 Rural Electrification; None; None

D. E. Kirk, Prof.; M. S. - Michigan State University; Ag. Eng.; A.E. 221 Farm Mechanics; None; None

J. B. Rodgers, Prof.; M. S. and A. E. - University of Idaho; Ag. Eng.; A. E. 391 Farm Implements; None; None

The Pennsylvania State University, University Park, Pennsylvania 16802

Robert A. Aldrich, Prof.; Ph. D. - Michigan State Univ. - also P. E.; Ag. Eng.; Ag. E. 4 Farm Bldgs.; Ag. E. 401 E Farm Mechanics for Teachers of Vocational Agriculture - Farm Buildings; None

Paul M. Anderson, Assoc. Prof.; M. S. - The Penn State Univ. - P. E. also; Ag. Eng.; Ag. E. 1 Farm Utilities; Ag. E. 401 A Farm Mechanics for Teachers of Vocational Agriculture - Farm Utilities; None

Frank Anthony, Assoc. Prof.; Ph. D. - The Penn State University; Ag. Ed.; Ag. Ed. 22v Methods of Teaching Agricultural Mechanics; Ag. Ed. 422v Supervision of Vocational Education in Agriculture (includes ag. mechanics); Ag. Ed. 422v Supervision of Vocational Education in Agriculture, Ag. Ed. 434v Agricultural Developments (includes ag. mechanics)

David C. Beppler, Ass't. Prof.; M. S. - The Penn State Univ.; Ag. Eng.; Ag. E. 14 Farm Machinery and Tractors; Ag. E. 401 C Farm Mechanics for Teachers of Vocational Agriculture - Farm Engines, Ag. E. 401 D Farm Mechanics for Teachers of Vocational Agriculture - Farm Machinery (Any one of the three courses listed may be taught by William L. Kjelgaard); None

C. A. Ellsworth, Ass't. Prof.; M. Ed. - Colorado State College; Industrial Engineering; Ind. Arts. 310 Metal Forming; None; None

Oscar A. Kimmel, Assoc. Prof.; B. S. - The Penn State Univ.; Ag. Eng.; Ag. E. 5 Farm Shop Processes, Ag. E. 8 Farm Shop Practices; Ag. E. 401 B Farm Mechanics for Teachers of Vocational Agriculture, Ag. E. 508 Advanced Problems in Farm Mechanics; None

William L. Kjelgaard, Assoc. Prof.; M. S. - The Penn State Univ. - also P. E.; Ag. Eng.; Ag. E. 14 Farm Machinery and Tractors; Ag. E. 401 C Farm Mechanics for Teachers of Vocational Agriculture - Farm Engines, Ag. E. 401 D Farm Mechanics for Teachers of Vocational Agriculture - Farm Machinery (Any one of the three courses listed may be taught by David C. Beppler); None

Earl A. Myers, Assoc. Prof.; Ph. D. - Michigan State Univ. - also P. E.; Ag. Eng.; Ag. E. 12 Land Structures; Ag. E. 401 F Farm Mechanics for Teachers of Vocational Agriculture - Soil and Water Structures; None

University of Puerto Rico, Mayaguez, Puerto Rico 00708

William F. Allison, Assoc. Prof.; M. S. - Texas A & M Univ.; Ag. Eng.; Ag. Eg. 304 Farm Electrification, Ag. Eg. 415 Soil and Water Management, Ag. Eg. 401 Farm Drainage and Irrigation, Ag. Eg. 555 Advanced Soil and Water Management, Ag. Eg. 419 Agricultural Hydrology; 550 series courses are open to advanced undergraduate and graduate students; None

Jorge H. Rodríguez-Arias, Prof.; Ph. D. - Michigan State Univ.; Ag. Eng.; Ag. Eg. 301 Elements of Agricultural Engineering, Ag. Eg. 409 Agricultural Engineering Applications, Ag. Eg. 310 Summer Field Practice (in Mechanical Technology in Agriculture), Ag. Eg. 417-418 Seminar in Mechanized Agri., Ag. Eg. 552 Problems in Mechanical Technology in Agriculture; 550 series courses are open to advanced undergraduate and graduate students; None

D. S. Boyce, Assoc. Prof.; Ph. D. - University of Newcastle-Upon-Tyne, England; Ag. Eng.; Ag. Eg. 315 Agricultural Power, Ag. Eg. 316 Agri. Machinery I, Ag. Eg. 407 Agricultural Machinery II, Ag. Eg. 554 Planning and Management for Power Farming; 550 series courses are open to advanced undergraduate and graduate students; None

Alberto C. Febre, Instructor; Ingeniero Agrónomo, Universidad de la Habana, Cuba (Equivalent to a B. S. degree); Ag. Eng.; Ag. Eg. 305 Farm Shop I, Ag. Eg. 306 Farm Shop II, Ag. Eg. 319 Safety in Agriculture, Ag. Eg. 551 Advanced Farm Shop; 550 series courses are open to advanced undergrad. and graduate students; None

University of Rhode Island, Kingston, Rhode Island 02881

Robert S. Bell, Prof.; Ph. D. - Cornell University; Agronomy and Mechanized Agriculture; 151 Soil and Water Conservation; None; None

Charles G. McKiel, Ass't. Prof.; M. S. - University of Maine; Agronomy and Mechanized Agriculture; 21 Power Units, 42 Power Equipment, 84 Structures; None; None

Philip H. Wilson, Assoc. Prof.; M. S. - Cornell Univ.; Agronomy and Mechanized Agri.; 1 Shop Methods, 2 Shop Methods; None; None

Clemson University, Clemson, South Carolina 29631

J. T. Craig, Ass't. Prof.; M. S. - University of Georgia; Ag. Eng.; Ag. E. 205 Farm Shop, Ag. E. 206 Agricultural Mechanization, Ag. E. 352 Farm Power; Ag. E. 652 Farm Power; None

E. B. Rogers, Jr., Assoc. Professor; M. S. - Texas A & M University; Ag. Eng.; Ag. E. 360 Farm and Home Utilities; Ag. E. 660 Farm and Home Utilities; None

T. V. Wilson, Prof.; M. S. - Purdue University; Ag. Eng.; Ag. E. 301 Soil and Water Conservation; None; None

South Carolina State College, Orangeburg, South Carolina 29115

Gabe Buckman, Prof.; Ed. D. - The Penn State Univ.; Agriculture; Ag. Eng. 200, Ag. Eng. 201, Ag. Eng. 401; Ag. Eng. 500, Ag. Eng. 507; None

B. F. Murvin, Jr., Teacher Educator; M. Ed. - South Carolina State College; Ag. Ed.; Ag. Ed. 301 Methods of Teaching Farm Mechanics: None; None

South Dakota State University, Brookings, South Dakota 57006

Shu Tung Chu, Ass't. Prof.; Ph. D. - University of Minnesota; Ag. Eng.; MA 452 Soil and Water Mechanics II; None; None

Henry DeLong, Prof.; M. S. - South Dakota State Univ.; Ag. Eng.; MA 222 Electricity for Farm and Home; MA 652 Advanced Rural Electrification; None

Marvin E. Larson, Assoc. Prof.; M. S. - South Dakota State Univ.; Ag. Eng.; MA 202 Farm Mechanics, MA 213 Farm Power and Machinery, MA 342 Soil and Water Mechanics I; MA 612 Advanced Farm Machinery, MA 632 Advanced Farm Motors, MA 672 Advanced Farm Structures; Non-credit Masonry Workshop and Electricity Workshop

Milton Shute, Assoc. Prof.; Ph. D. - University of Missouri; Ag. Eng.; MA 423 Farm Building Mechanization; MA 672 Advanced Farm Structures; None

Harvey G. Young, Ass't. Prof.; M. S. - North Dakota State Univ.; Ag. Eng.; MA 213 Farm Power and Machinery; None; None

Tennessee A. and I. State University, Nashville, Tennessee 37203

Robert H. Derden, Instructor; M. S. - Tennessee A. & I. State University; Ag. Ed.; 202 Farm Mechanics, 302 Farm Building and Rural Electrification, 303 Farm Power and Machinery; None; 302 Farm Building and Rural Electrification, 303 Farm Power and Machinery

The University of Tennessee, Knoxville, Tennessee 37916

Denver O. Baxter, Ass't. Prof.; M. S. A. E. - University of Missouri; Ag. Eng.; Ag. Mech. 3220 Agricultural Structures, Ag. Mech. 2110 Agricultural Drawing and Mapping; None; None

Erwin K. Boyce, Assoc. Prof.; M.S.A.E. - The University of Tennessee; Ag. Eng.; Ag. Mech. 2110 Agricultural Drawing and Mapping, Ag. Mech. 3510 Agricultural Utilities and Processing Equipment, Ag. Mech. 4210 Agricultural Machinery and Tractors, Ag. Mech. 4270 Forest Structures and Utilities, Ag. Mech. 4280 Field and Forest Access Roads; Ag. Mech. 5210 Electro-Mechanical Systems in Agriculture, Ag. Mech. 5410 Agricultural Machinery Systems Analysis; None

Curtis H. Shelton, Ass't. Prof.; M.S.A.E. - Virginia Polytechnic Institute; Ag. Eng.; Ag. 1120 Introduction to Agricultural Engineering, Ag. Mech. 2130 Agricultural and Forest Surveying, Ag. Mech. 3110 Agricultural Mechanics, Ag. Mech. 3210 Soil and Water Conservation Facilities, Ag. Mech. 4220 Special Problems in Agricultural Mechanization; Ag. Mech. 5010-20-30 Thesis, Ag. Mech. 5110-20-30 Research Problems in Agricultural Mechanization, Ag. Mech. 5510 Development and Management of Small Watersheds; Non-credit Tractor Maintenance Short Course

East Texas State University, Commerce, Texas 75428

Lon Shell, Instructor; M. S.; Agriculture; Ag. 215 Farm Shop, Ag. 315 Farm Engineering, Ag. 424 Use and Care of Farm Machinery, I.E. 355 Power Mechanics; None; No-credit Small Gasoline Engines

Sam Houston State College, Huntsville, Texas 77340

Eddie L. Dye, Prof.; Ed. D. - Oklahoma State Univ.; Agriculture; Ag. 380 Agricultural Machinery, Ag. 381 Agricultural Surveying, Ag. 382 Irrigation Engineering, Ag. 487 Agricultural Engines and Tractors; Ag. 530 Techniques for Joining Metallic and Mon-Metallic Materials, Ag. 532 Advanced Farm Power and Machinery, Ag. 531 Soil Conservation Engineering, Ag. 533 Adv. Rural Utilities; Graduate courses previously listed for credit

L. Ray Epps, Assoc, Prof.; M. S. - Texas A & M Univ.; Agriculture; Ag. 330 Rural Electrification; None; None

Thomas J. Honeycutt, Ass't. Prof.; M. A. - Sam Houston State College; Agriculture; Ag. 474 Farm Shop Methods; None; None

L. N. Sikes, Jr., Instructor; M. Ed. - Sam Houston State College; Agriculture; Ag. 162 Principles of Ag. Mechanics and Engineering; None;None

Southwest Texas State College, San Marcos, Texas 78666

James Elliott, Prof.; Ph. D. - Cornell Univ.; Agriculture; 2473 Farm Mechanics, 3311 Farm Power and Machinery, 4361 Farm Electrification, 4373 Farm Welding, 3454 Soil and Water Conservation; None; Non-credit short courses

Stephen F. Austin State College, Nacogdoches, Texas 75961

Oran Standley, Ass't. Prof.; Agriculture; Ag. 235 Farm Mechanics, Ag. 236 Farm Mechanics, Ag. 313 Farm Machinery, Ag. 315 Farm Electricity, Ag. 345 Farm Surveying; None; Non-credit courses in Farm Electricity, Small Gas Engines, and Skills in Farm Mechanics

Texas A and M University, College Station, Texas 77843

William H. Aldred, Ass't. Prof.; M. S. - Texas A & M Univ.; Ag. Eng.; Ag. Eng. 201 Farm Power and Machinery, Ag. Eng. 221 Farm Shop, Ag. Eng. 222 Farm Shop, Ag. Eng. 485 Problems; None; Non-credit Two 15-day Workshops in Farm Tractor Reconditioning for Vo-Ag Teachers, Non-credit 15-day Workshop in Farm Machinery Reconditioning for Vo-Ag Teachers

Paul R. Chilen, Assoc. Prof.; M. S. - Kansas State University; Ag. Eng. and Ag. Ed.; Ag. Eng. 221 Farm Shop, Ag. Eng. 222 Farm Shop, Ag. Eng. 485 Problems; Ag. Eng. 685 Problems; Non-credit Workshops -- Farm Shop Skills (2 1/2 days), Farm Tractor Reconditioning (15 days), Farm Machinery, Operation and Service (15 days)

L. Joe Glass, Instructor; M. S. - Texas A & M University; Ag. Eng.; Ag. Eng. 335 Water Control and Utilization; None; None

Otto R. Kunze, Assoc. Prof.; Ph. D. - Michigan State University; Ag. Eng.; Ag. Eng. 325 Farm Electricity; None; None

Texas Technological College, Lubbock, Texas 79400

Marvin J. Dvoracek, Assoc. Prof.; M. S. - University of California; Ag. Eng.; Ag. Engr. 222 Agricultural Surveying and Land Conservation, Ag. Engr. 335 Irrigation and Erosion Control, Ag. Engr. 435 Farm Mechanics Problems; Ag. Engr. 435 Farm Mechanics Problems; None

Lewis Eggenberger, Assoc. Prof.; Ph. D. - Iowa State University; Ag. Ed.; Ag. Engr. 4311 Advanced Agricultural Mechanics (includes Methods of Teaching Ag. Mechanics); Ag. Engr. 531 Investigations in Advanced Agricultural Mechanics (individual Problems Course), Ag. Ed. 536 Advanced Methods of Teaching Farm Mechanics; Non-credit Small Gasoline Engines (taught each summer)

Walter Grub, Assoc. Prof.; M. S. - Cornell University; Ag. Eng.; Ag. Engr. 112 Principles of Agricultural Mechanization, Ag. Engr. 332 Farm Electrification and Processing, Ag. Engr. 432 Farm Buildings and Environmental Control, Ag. Engr. 435 Farm Mechanics Problems; None; None

Joseph C. Newell, Ass't. Prof.; M. S. - University of Arkansas; Ag. Eng.; Ag. Engr. 220 Agricultural Mechanics I - Woodwork and Concrete, Ag. Engr. 221 Agricultural Mechanics II - Metalwork, Ag. Engr. Farm Power and Machinery; Ag. Engr. 435 Farm Mechanics Problems; None

Willie L. Ulich, Prof.; Ph. D. - Harvard University; Ag. Eng.; Ag. Engr. 333 Farm Power and Machinery, Ag. Engr. 435 Farm Mechanics Problems, Ag. Engr. 531 Investigations in Advanced Agricultural Mechanics; Ag. Engr. 531 Investigations in Adv. Ag. Mechanics; None - recently

Rolland Z. Wheaton, Assoc. Prof.; Doctor of Engineering - University of California; Ag. Eng.; Ag. Engr. 222 Agricultural Surveying, Ag. Engr. 335 Irrigation and Erosion Control; Ag. Engr. 537 Advanced Theory of Water Utilization; None

Ira L. Williams, Prof.; M. S. - Iowa State University; Ag. Eng.; Ag. Engr. 220 Agricultural Mechanics I - Woodwork and Concrete, Ag. Engr. 221 Agri. Mechanics II - Metalwork; Ag. Engr. 435 Farm Mech. Problems; None

Utah State University, Logan, Utah 84321

Von H. Jarrett, Assoc. Prof.; Ed. D. - University of Missouri; Ag. Ed.; AE 1 Agricultural Mechanics, AE 101 Agricultural Buildings, AE 102 Agri. Power, AE 103 Agricultural Machinery, AE 104 Senior Projects; AE 225 Special Problems in Agricultural Education, AE 230 Research and Thesis, AE 290 Special Problems, AE 291 Special Problems for Agricultural Teachers; All Credit Courses -- AE 291 Special Problems for Agricultural Teachers -- Farm Machinery, Farm Power, Small Engines, Electric Motors, Agri. Drawing, Adv. Welding, Hydraulics, Tractor Electronics, Paints and Painting, Fuels Oils, etc.

The University of Vermont, Burlington, Vermont 05401

Earl L. Arnold, Assoc. Prof.; Ph. D. - Cornell University; Ag. Eng.; 115 Dairy Production Engineering, 116 Dairy Plant Engineering; None; None

E. C. Schneider, Prof.; M. S. - Cornell University; Ag. Eng.; AE 1 Farm Power, Machinery and Electricity, AE 2 Farm Structures and Utilities and Soil and Water Engineering, AE 102 Farm Shop; None; None

Virginia Polytechnic Institute, Blacksburg, Virginia 24061

James Lawrence Calhoun, Prof.; M. S. - Virginia Polytechnic Institute; Ag. Eng.; 304 Farm Electrification; None; None

Donald D. Hamann, Ass't. Prof.; Ph. D. - Virginia Polytechnic Institute; Ag. Eng.; 2013 Farm Power and Machinery; None; None

Glen H. Hetzel, Instructor; M. S. - West Virginia University; Ag. Eng.; 3111-3211-3311 Agricultural Mechanics Education (Teaching Farm Shop), 209 Agricultural Engineering Shop; None; 4111-4211 Teaching Farm Power and Machinery - for graduate credit

Bernard L. Parsons, Assoc. Prof.; M. S. - Virginia Polytechnic Institute; Ag. Eng.; 202 Farm Buildings, 2014 Farm Power and Machinery Lab.; None; None

T. J. Wakeman, Prof.; M. S. - Virginia Polytechnic Institute (plus 60 hours post-master's credit); Ag. Eng.; 3111, 3211,3311 Agricultural Mechanics Education (Teaching Farm Shop); 504 Teaching Farm Mechanics; For graduate credit -- 4111, 4211 Teaching Farm Power and Machinery, 419 Farm Shop Management

Robert A. Wall, Ass't. Prof.; M. S. - Virginia Polytechnic Institute; Ag. Ed. and Ag. Eng.; 3111, 3211, 3311 Agricultural Mechanics Education (Teaching Farm Shop); None; For graduate credit - 419 Teaching Farm Power and Machinery - also Small Engines, Teaching Electricity (non-credit)

Washington State University, Pullman, Washington 99163

J. E. George, Assoc. Prof.; M.S - University of Idaho; Ag. Eng.; Ag.M. 201 Metals Shop Practice; None; None

Charles L. Peterson, Ass't. Prof.; M. S. - University of Idaho; Ag. Eng.; Ag.M. 211 Agri. Machinery, Ag.M. 331 Agri. Electrification; None; None

Albert E. Powell, Assoc. Prof.; Ph. D. - Iowa State University; Ag. Eng.; Ag.M. 203 Agricultural Bldg. Construction, Ag.M. 221 Agricultural Buildings; None; None

West Virginia University, Morgantown, West Virginia 26506

Roy E. Emerson, Assoc. Prof.; M. S. - Cornell University; Ag. Eng.; Ag. Mech. 152 Shop Theory and Methods, Ag. Mech. 252 Advanced Farm Shop, Ag. Mech. 259 Farm Structures; Ag. Mech. 252 Advanced Farm Shop, Ag. Mech. 259 Farm Structures; None

Mylo A. Hellickson, Instructor; M. S. - North Dakota; Ag. Eng.; Ag. Mech. 270 Electricity in Agriculture; Ag. Mech. 270 Electricity in Agriculture; None

Randall C. Reeder, Instructor; B. S. - West Virginia University; Ag. Eng.; Ag. E. 10 Principles of Agricultural Engineering, Ag. Mech. 253 Advanced Farm Machinery, Ag. Mech. 275 Agricultural Engines; Ag. Mech. 253 Adv. Farm Machinery, Ag. Mech. 275 Agricultural Engines; None

The University of Wisconsin, Madison, Wisconsin 53706

G. P. Barrington, Assoc. Prof.; M. S. - University of Wisconsin; Ag. Eng.; AE 142 Farm Electrification, AE 144 Farm Mechanics; None; None

H. D. Bruhn, Prof.; M. S. - Massachusetts Institute of Technology; Ag. Eng.; AE 322 Farm Tractors and Power Equipment; AE 322 open to graduate students; Vo-Ag Teachers Conference Course - Farm Power (Small Engines)

Marshall F. Finner, Assoc. Prof.; M. S. - University of Wisconsin; Ag. Eng.; AE 140 Farm Machinery; None; Vo-Ag Teachers Conference Course - Farm Machinery

L. R. Massie, Instructor; M. S. - University of Wisconsin; Ag. Eng.; AE 100 Agricultural Computations, AE 372 Soil and Water Conservation; None; None

Wisconsin State University, River Falls, Wisconsin 54022

G. H. Bohn, Prof.; Ph. D. - University of Minnesota; Ag. Eng. and Industrial Arts; Ag. Eng. 275 Welding, Ag. Eng. 320 Internal Combustion Engines, Ag. Eng. 360 Farm Machinery and Fluid Power; Ag. Eng. 522 Internal Combustion Engine Analysis, None

Russell L. Gerber, Prof.; Ed. D. - University of Missouri, Ag. Eng. and Ind. Arts; Ag. Eng. 121 Engineering Drawing, Ag. Eng. 151 Construction Materials and Processes, Ag. Eng. 111 and 260 Wood Technology, Ag. Eng. 270 General Metals, Ag. Eng. 310 Machine Tool Operation, Ag. Eng. 478 Shop Organization; None; None

Lee H. Snyder, Ass't. Prof.; M. S. - The Penn State University; Ag. Eng. and Ind. Arts; Gen. Eng. 121 Engineering Drawing, Ag. Eng. 151 Construction Materials and Procedures, Ag. Eng. 290 Farm Buildings, Ag. Eng. 470 Agri. Products Processing; Ag. Eng. 542 Engineering Problems in Light Structures; None

Marvin D. Thompson, Prof.; Ph. D. - Iowa State University; Ag. Ed. and Ag. Eng.; Ag. Ed. (Ag. Eng.) 478 Shop Organization; None; None

T. E. Thoreson, Prof.; M. S. - University of Minnesota; Ag. Eng. and Ind. Arts; Gen. Eng. 121 Engineering Drawing, Gen.Eng. 235-236 Surveying, Gen. Eng. 265 Engineering Graphics, Ag. Eng. 275 Welding, Ag. Eng. 350 Applied Electricity, Ag. Eng. 470 Agricultural Processing and Mat. Handling; Ag. Eng. 542 Engineering Problems in Light Structures, Ag. Eng. 543 Farm Utilities, Ag. Eng. 550 Electrical Controls and Instrumentation in Agr. Production, Ag. Eng. 665 Independent Research in Agricultural Mechanics; None

The University of Wyoming, Laramie, Wyoming 82070

Robert D. Burman, Ass't. Prof.; Ph. D. - Cornell University; Ag. Eng. - Plant Science; Ag. Eng. 544 D Conservation and Surveying, Ag. Eng. 645 D Irrigation and Drainage; None; None

James R. Durkee, Instructor; M. S.; Vocational Education; 557 F and G Farm Mechanics, 657 D Project Development in Agricultural Mechanics; 657 D Project Development in Farm Mechanics, 758 Advanced Methods in Skills in Farm Mechanics; 757 M Workshop in Vocational Education (includes farm mechanics)

Larry O. Pochop, Ass't. Prof.; Ph. D. - University of Missouri; Plant Science; 542 D Farm Structures, 550 D Farm Electrification and Utilities; None; None

Addendum

Central Missouri State College, Warrensburg, Missouri 64093

Harold Van Cleave, Ass't. Prof.; M. S. - Kansas State University; Agriculture; 12-10 Farm Power and Machinery, 12-20 Agriculture Mechanics, 12-30 Farm Buildings and Equipment, 22-10 Farm Water Management, 22-20 Advanced Agricultural Mechanics, 22-30 Mechanized Feed Handling; None; None

APPENDICES

(Last two pages)

Instructions for Completing the Survey Form - A Survey for the Purpose of Collecting Information To Be Published in a Directory for Agricultural Mechanics Personnel in Colleges and Universities

Survey Form

DEPARTMENT OF AGRICULTURE
College of Applied Science and Technology
Illinois State University
Normal, Illinois

Survey Form -- April 1968

A SURVEY FOR THE PURPOSE OF COLLECTING INFORMATION TO BE PUBLISHED IN A DIRECTORY FOR AGRICULTURAL MECHANICS PERSONNEL IN COLLEGES AND UNIVERSITIES

Instructions for completing the survey form

The person replying and the individual teaching at least one course in agricultural mechanics need not necessarily be the same,since the survey form is being sent to department heads -- agricultural education and agricultural engineering.

The term "agricultural mechanics" is to be interpreted broadly. Anyone teaching courses such as the following to agricultural education undergraduate students, graduate students, or teachers of vocational agriculture should be included in the directory: farm shop, farm power, farm machinery, soil and water conservation, rural electrification, methods of teaching agricultural mechanics, agricultural buildings and structures, special problems in agricultural mechanics, and farm utilities.

One survey form is to be filled out for each individual to be included in the directory. For this reason, four forms have been sent to each department head. If additional forms are needed, they will be supplied upon request.

Examples of titles for men teaching agricultural mechanics courses are: Subject-Matter Specialist in Agricultural Mechanics, Specialist in Agricultural Mechanics, Farm Shop Instructor, and Teacher Educator - Agricultural Mechanics.

Academic ranks generally are considered to be: Instructor, Assistant Professor, Associate Professor, and Professor.

Please do not include persons who are employed on a temporary basis. Only those employed on a continuing basis should be listed.

The promptness and completeness of responses will determine whether or not additional directories will be compiled.

Please send completed forms to Dr. Benton K. Bristol, Department of Agriculture, Illinois State University, Normal, Illinois 61761. It is hoped that forms will be returned no later than May 31, 1968. Of course, it would be most helpful if the majority could be received before then.

Note: Two trial issues of a newsletter, Agricultural Mechanization - Ideas - Information - Suggestions have been published. A number of those receiving the newsletter have suggested that a directory for agricultural mechanics personnel in colleges and universities be published. This can be accomplished only with your assistance.

A SURVEY FOR THE PURPOSE OF COLLECTING INFORMATION TO BE PUBLISHED
IN A DIRECTORY FOR AGRICULTURAL MECHANICS PERSONNEL
IN COLLEGES AND UNIVERSITIES

Person replying_____Title_____Date_____

Department_____Institution_____

Do you wish to receive a free copy of the directory? Yes_____No_____

---

1. Name of individual teaching at least one course in agricultural mechanics:

2. Title or academic rank of individual teaching agricultural mechanics:

3. Highest degree attained and institution granting:

4. Department or departments in which appointment is (are) held:

5. Course or courses taught to undergraduate students (please specify by title and catalog number):

6. Course or courses taught to graduate students (please specify by title and catalog number):

7. In-service teacher education courses taught (please specify by title and whether or not taught for college credit)

Please complete and return to Dr. Benton K. Bristol, Department of Agriculture, Illinois State University, Normal, Illinois 61761.

VT 008 323
California Womanpower.

California State Dept. of Industrial Relations, San Francisco. Div. of Labor Statistics and Research
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Jul66 27p.

WORKING WOMEN; *FEMALES; *EMPLOYMENT STATISTICS; LABOR SUPPLY; *LABOR FORCE; SOCIOECONOMIC STATUS; *HUMAN CAPITAL; *INDIVIDUAL CHARACTERISTICS
CALIFORNIA

In 1965, 34 out of every 100 workers in California were women. One-half worked in trade or service, one-fifth in government, one-sixth in manufacturing, and the remaining in construction, mineral extraction, and insurance, real estate and finance. Proportions of male and female workers within industries differ sharply. For example 5 percent of the employment in construction are female while 53 percent of workers in the finance-insurance-real estate complex are female. Women comprise about one-quarter of the manufacturing work force with concentrations in electrical equipment, apparel and food products. Charted seasonal employment patterns show a low in February and a peak in December for women, while the seasonal high for men normally occurs in September. Thirty-seven percent of the unemployed in California (1965) were women. Approximately 18 percent of all women nonfarm and salary workers and 40 percent of the male nonfarm workers were union members. The number of women earning college degrees in California has increased 56 percent since 1960 as compared with a 31 percent gain for men, but regardless of the level of school completed, incomes of women were consistently below those of a comparable group of men. Statistics from the 1960 census are for: (1) jobs, (2) earnings and responsibilities, and (3) educational achievement. (FP)

VT 008 323

ED042060

STATE OF CALIFORNIA
Edmund G. Brown, *Governor*

DEPARTMENT OF INDUSTRIAL RELATIONS
Ernest B. Webb, *Director*

CALIFORNIA WOMANPOWER

VT008323

DIVISION OF LABOR STATISTICS AND RESEARCH
Maurice I Gershenson *Chief*
Ruth H. Krause, *Assistant Chief*

San Francisco
July 1966

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CALIFORNIA WOMANPOWER

Women have written a major chapter in the socio-economic history of the 20th Century. From 19th Century domesticity, women have moved in the present century into the world of work outside the home. They have become an increasingly important source of labor for 20th Century commerce and industry. The impact and the present status of this trend away from the hearth is the subject of this report, which reviews some of the statistical measures of women in the economy of California.

The Job She Holds

Perhaps the single most dramatic measure of the impact of women on the California economy is employment. In 1965, 34 of every 100 workers in California were women; in 1900, by comparison, women held 14 of every 100 jobs. Their number has mushroomed over the years, to a current level of about 2 1/3 million from fewer than 100,000 at the beginning of this century. (See table 1.)

In nonagricultural wage and salary worker employment alone, 2,019,900 California women were working in 1965. By this measurement--which excludes the self-employed and domestics as well as farm workers--35 of every 100 nonfarm jobs were held by women.

Industries In what nonfarm industries do these women work? One-half hold jobs in trade or services, with almost equal numbers in each category. Next is government, where more than one-fifth of the women workers are found; a large share of these jobs are in public education, a field women traditionally dominate. Manufacturing provides jobs for another one-sixth. The remaining women workers--less than one-sixth of the total--are distributed among the four other major categories, two of which--construction and mineral extraction--account for a mere fraction of the total.

The industry distribution of women workers differs from that of men, for whom manufacturing is the leading employer with well over one-fourth of the jobs. Manufacturing is followed at some distance by trade, with one-fifth of the male workers; by government, a little more than one-sixth; and by services, about one-eighth. The other four major industry divisions provide jobs for the one-fifth remaining men on payrolls.

Although 35 of every 100 workers in all nonfarm industries combined are women, the proportions within industries differ sharply. For example, women constitute 53 percent of the employment in finance-insurance-real estate, and at the other end of the scale they make up about 5 percent of the employment within the man's world of the construction industry. In addition to the finance complex, women hold a relatively large share of the jobs in services, government, and trade.

In manufacturing, women constitute about a quarter of the workforce. Individual manufacturing industries where the share of women workers exceeds this proportion include apparel, leather products, textiles, instruments, electrical equipment, rubber and plastics, food products, and printing-publishing.

About 55 of every 100 women factory workers in 1965 earned their livelihoods in durable goods industries, compared with 71 of every 100 males. These proportions have changed little from 1960.

Among individual manufacturing industries, the female factory force is heavily concentrated in three groups--electrical equipment, apparel, and food products. Together, these industries account for 47 percent of all women workers in manufacturing. The three largest employers of male factory workers--aircraft, electrical equipment, and food products--represent 37 percent of the men working in manufacturing.

An almost equal proportion--a trifle more than one-third--of the female and of the male workers in manufacturing were employed in the aerospace complex in 1965:

	Women		Men	
	Number	As a percent of all women factory workers	Number	As a percent of all men factory workers
Total aerospace	114,900	33.8	366,400	34.3
Electrical equipment	61,600	18.1	133,300	12.5
Aircraft and parts	26,300	7.7	139,900	13.1
Ordnance	16,800	5.0	75,100	7.0
Instruments	10,200	3.0	18,100	1.7

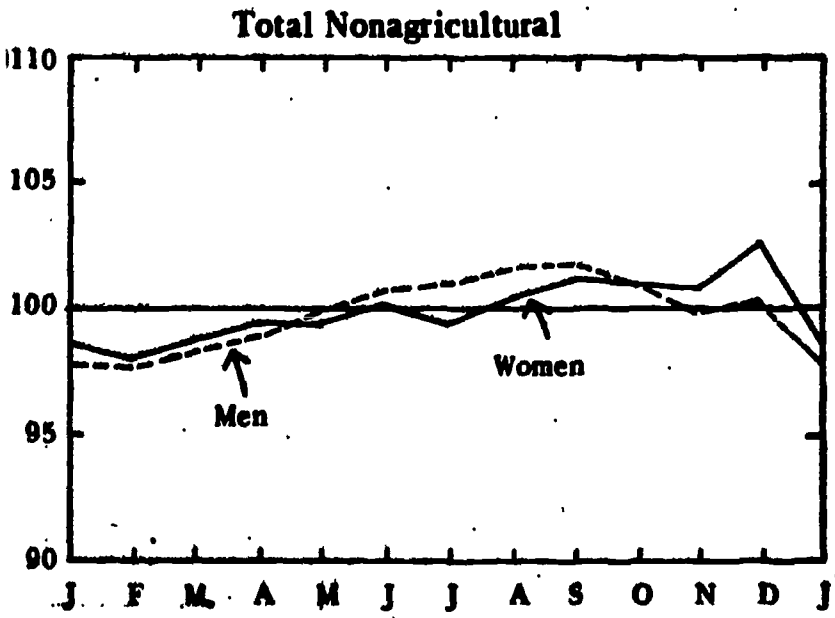
Seasonal patterns The accompanying charts provide profiles of the employment of women and of men during the year in all nonfarm activities and in manufacturing alone.

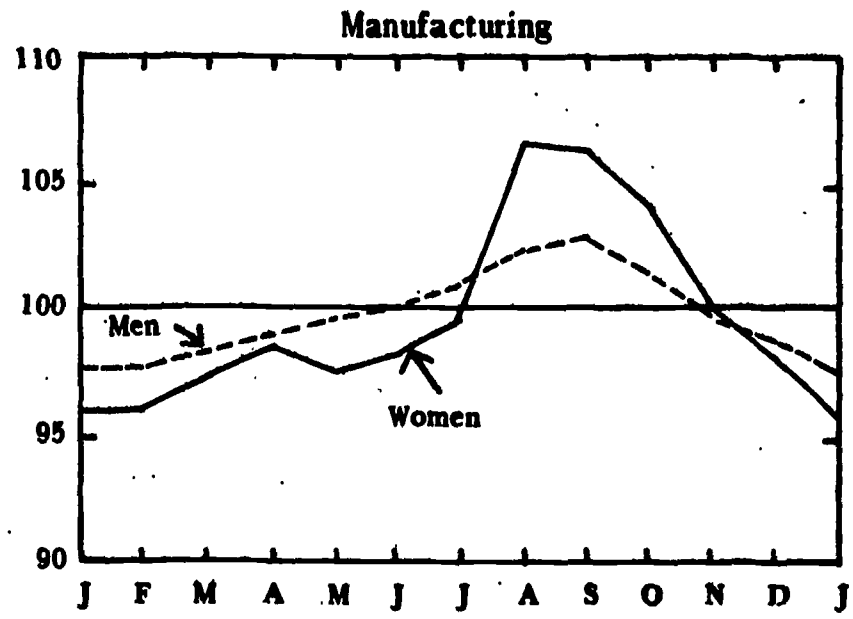
From a low point that usually occurs in February, the pattern for women nonfarm workers as a whole turns upward. After a slight lull in July, employment gains fresh impetus from the canning season and from the opening of the fall school term. Thereafter, the number of women workers remains relatively stable until swinging up to its peak in December, when retail stores hire temporary workers for the holidays.

In manufacturing, the pattern is different and the fluctuations stronger. From a low in January, employment of women in manufacturing moves up to a peak in August, when the canning season is in full swing.

For men, the pattern of employment, both in total nonfarm industries and in manufacturing, is subject to less violent seasonal swings than for women. For men the seasonal high normally occurs in September, when outdoor activities such as construction and lumbering reach a peak.

SEASONAL EMPLOYMENT PATTERNS IN CALIFORNIA
(AVERAGE FOR YEAR=100)





Occupations The decennial censuses remain the only source for certain economic statistics significant to a review of California womanpower. Occupational statistics is one such field.

In 1960, more than one-third of all women workers in California held clerical jobs (not including sales work), and between 1950 and 1960 this occupational group was the fastest growing for women. The next largest field was that of professional, technical, and kindred workers, in which were classified 14 percent of the women, many of them as teachers or nurses.

As might be expected, the occupational distribution of men differed. The largest group in 1960 was craftsmen, which accounted for about one-fifth of the male workers, followed rather closely by the operative group--primarily semi-skilled trades--with about one-sixth. The most rapidly expanding field for men between 1950 and 1960, however, was that of professional, technical, and kindred workers. (See table 4.)

Statistics on occupational distribution of employed persons reveal some sharp differences among the races. Private household work, for example, represented the major occupational category in 1960 for Negro women, 27 percent of whom were so classified. An additional 21 percent were service workers other than in private households. Among Negro men, the leading occupational groups were the semi-skilled operatives, 22 percent, and laborers, 18 percent. (See table 5.)

Unemployment Current information on characteristics of the unemployed in California is limited to claimants covered under the California Unemployment Insurance Code. According to a monthly sampling of claimants by the Department of Employment, an average of about 37 percent of the insured unemployed in 1965 were women. The proportion of women claimants varied during the year, from 31 percent in January to 43 percent in October. Data needed for computing insured unemployment rates, by sex, are not available.

For complete State data on unemployment, by sex and by other characteristics, it is necessary to turn to the 1960 Census. At that time the unemployment rate for women was 6.6 percent of the labor force compared with 5.8 percent for men. Comparable rates for the nonwhite segment were higher, although the rate for nonwhite women--9.8 percent--was slightly under the 10.1 percent rate for nonwhite men.

Highest unemployment rates were among the young, regardless of color, but most severe among the nonwhite young. More than one-fifth of the nonwhite men in the labor force under 20 years of age were without jobs. For nonwhite women in this age group, the rates were almost as high. (See table 6.)

In terms of age distribution of the unemployed in California, women and men in the early age groups had a similar pattern: about one-fourth of the unemployed of either sex was under 25 years of age. (See table 7.) The middle years--ages 25 through 54--claimed a larger share of unemployed women than of unemployed men, 62 percent compared with 55 percent, and in the age groups 55 and over the pattern was reversed.

Union membership Women workers in California are not as highly unionized as are men, in part because of differences in the occupational and industrial structure of the workforce.

The 359,200 women union members in 1965 represented about 18 percent of all women nonfarm wage and salary workers; approximately 40 percent of the male nonfarm workers were union members. The number of women members increased a bit faster than men since 1960; both female and male membership as a share of total nonfarm employment, however, has slipped slightly since the beginning of this decade.

Work injuries Because women are found in occupations and industries generally less hazardous than those of men, they have lower disabling work injury rates. In 1960, 13.8 of every 1,000 women workers sustained a disabling work injury; the rate among men was 42.0 per 1,000 workers. The rates in 1965 were fractionally lower: 13.6 per 1,000 for women and 41.5 per 1,000 for men.

The Money She Makes and the "Hats" She Wears

All measures of earnings or income reveal a consistent pattern: a sizable dollar gap exists between women and men workers.

The median earnings in 1959, for example, of California women in the civilian labor force were just about half that of men--$2,812 compared with $5,495--and in every major occupational group the earnings of women trailed those of men. (See table 10.)

By another measure--level of school completed--median incomes of women also differed substantially from those of men. Among persons over 25 years old with income in 1959, women had a median income of $1,943 and men, $5,526, and regardless of the level of school completed the incomes of women were consistently below the comparable group of men. The median income of women with 4 or more years of college, for example, was half that of men of the same educational level. In fact, the median income of the woman college graduate lagged behind that of the man with less than a high school education.

The above measures reflect the effect of part-year work, an influence especially significant in the case of women, many of whom by choice or necessity work only part of the year. A more meaningful comparison can be made by data that relate only to those workers on the job at least 50 weeks of the year. Such data, however, do not alter the basic picture. Women who worked full-time in 1959, for example, had a median income of $3,848 and men, $6,140. About 28 percent of these women had incomes under $3,000; 11 percent of the men were so classified. At the other end of the scale, a little over 1 percent of the women had incomes of $10,000 or over; 14 percent of the men were in this group. (See table 12.)

In comparison with the United States as a whole, incomes of full-time workers in California were higher, a smaller share of California women and men were in the lower income groups, and a larger share were in the higher income classifications.

Family income

Family income statistics from the Census provide further evidence of the disparity between incomes of women and men. Close to 1 of every 10 families in California was headed by a women in 1959. More than 40 percent of these families headed by a female had an annual income under $3,000, compared with about 11 percent of the husband-wife families or those headed by a male. Children under 18 were present in more than two-thirds of the woman-headed families with incomes under $3,000 and in about one-third of the other families in this income group.

Among nonwhite families, 17 percent had women as their heads; 62 percent of these woman-headed families had incomes below the $3,000 level; and more than three-fourths of these low-income families headed by women had children present under age 18.

Marital status

In 1960, 36 percent of all California women 14 years old and over were in the labor force, up from 31 percent in 1950. Among married women living with their husbands, one-third held or sought jobs outside the home in 1960; a decade earlier, one-fourth of the married women were in the labor force.

Participation in the labor force of nonwhite women varied considerably from that of other women. A higher percentage--44 percent--of the nonwhite women held or sought jobs in 1960. For the married nonwhite woman living with her husband, the 1960 participation rate was almost the same as that for all nonwhite women.

Of all women in the California labor force in 1960, more than half were married and living with their husbands. This was also true of nonwhite women, but the proportion of nonwhite single women was smaller and of nonwhite married women with an absent spouse was greater than among other women.

Of the more than 2 million women in the California labor force at the beginning of this decade, 280,000--14 percent--had children under 6 years old. While many of these women were living with their husbands, some 50,000 were raising their children in fatherless homes. (See table 16.)

The socio-economic problems that these statistics suggest were more pronounced among the nonwhite segment. Nineteen percent of the nonwhite women in the California labor force in 1960 had preschool-age children, and a proportionately larger share of these women were bringing up their children in homes where the husband was absent.

Her Pursuit of Knowledge

Among the California population 25 years old and over in 1960, about 21 percent of the women and 26 percent of the men had completed one or more years of college. Of the women, 1 in 3 of those who attended college had gone on at least to a baccalaureate degree. The share of men who had completed college was higher--almost one-half of those who had finished 1 year continued to complete 4 or more years.

Of persons 25 years and over whose education fell short of a high school diploma, the percentages differed little between the sexes: 47 percent of the women had failed to complete high school compared with 50 percent of the men.

Of California's nonwhite population 25 years and over in 1960, 15 percent of the women and 17 percent of the men had completed at least one year of college. The proportion of nonwhite women and men with less than a high school education was 58 and 62 percent, respectively.

While the educational attainment of California's nonwhite population was lower in general than that of the State's population as a whole, both the total population and the nonwhite population in California topped by a considerable margin the educational achievements of their respective counterparts throughout the Nation. For example, 26 of every 100 nonwhite women 25 years old and over in this State were high school graduates and an additional 15 of every 100 had completed 1 or more years of college. Nationally, 15 of every 100 nonwhite women had finished high school and an additional 8 of every 100 had attended college for at least 1 year. (See table 17.)

College degrees

A total of 49,405 degrees were granted by California colleges and universities in the academic year 1963-64, more than 18,000 of them going to women. The number of women earning degrees has increased by 56 percent since 1960, compared with a 31 percent gain in degrees conferred on men. (See table 19.)

Because women have outpaced men in rate of increase in degrees received, they have claimed an increasing proportion of the degrees granted, particularly at the bachelor's and first professional degree level. In 1964, they received about 40 percent of the baccalaureate degrees, compared with 35 percent in 1960. Only at the doctorate level are men increasing more rapidly than women. The share of women receiving doctor's degrees--never very high--dipped fractionally in 1964 from the 1960 proportion.

Her Road Ahead

These measures of past performance leave no doubt that women will in the future continue to play a significant role in California's economy. For example, current labor force projections indicate that the number of women in the labor force of this State by 1970 will be approaching 3 million; by 1975, 3½ million; and by 1980, will be nearing 4 million.

Information on earnings makes apparent that women have yet to marshal their resources to overcome economic disparities that have accompanied their mass movement into the workforce in this century. If knowledge is indeed power, however, the speed with which women are pursuing a college education suggests that they may in time find a solution to the problem of economic discrimination.

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TABLE 1--TOTAL CIVILIAN EMPLOYMENT,[a] BY SEX
CALIFORNIA, SELECTED YEARS, 1900-66

Year	Number			Percent of total	
	Total	Women	Men	Women	Men
1900	642,446	87,546	554,900	13.6	86.4
1910	1,105,731	174,625	931,106	15.8	84.2
1920	1,510,590	286,341	1,224,249	19.0	81.0
1930	2,498,936	557,145	1,941,791	22.3	77.7
. . . . .					
1940	2,475,581	634,264	1,841,317	25.6	74.4
. . . . .					
1950	4,154,000	1,221,000	2,933,000	29.4	70.6
1960	5,933,000	1,929,000	4,004,000	32.5	67.5
1961	6,036,000	1,984,000	4,052,000	32.9	67.1
1962	6,262,000	2,079,000	4,183,000	33.2	66.8
1963	6,449,000	2,158,000	4,291,000	33.5	66.5
1964	6,640,000	2,239,000	4,401,000	33.7	66.3
1965	6,833,000	2,331,000	4,502,000	34.1	65.9
1965: Jan.	6,565,000	2,251,000	4,314,000	34.3	65.7
Feb.	6,587,000	2,256,000	4,331,000	34.2	65.8
Mar.	6,634,000	2,274,000	4,360,000	34.3	65.7
Apr.	6,682,000	2,288,000	4,394,000	34.2	65.8
1966: Jan.	6,873,000	2,361,000	4,512,000	34.4	65.6
Feb.	6,888,000	2,368,000	4,520,000	34.4	65.6
Mar.	6,939,000	2,388,000	4,551,000	34.4	65.6
Apr.	7,020,000	2,416,000	4,604,000	34.4	65.6

[a]Includes wage and salary workers, employers, own-account workers, and unpaid family workers. Data in this table do not constitute a strictly comparable series because of changes over the years in definitions: data for 1900-30 are Census statistics of gainful workers; for 1940 are Census statistics of the employed (not including those on public emergency work); and for 1950 forward are State estimates.

Source: California Department of Industrial Relations, California Department of Employment, and U. S. Bureau of the Census.

TABLE 2--WAGE AND SALARY WORKERS IN NONAGRICULTURAL ESTABLISHMENTS,[a] BY INDUSTRY AND SEX
CALIFORNIA, 1960, 1964, AND 1965

Industry	1960			1964			1965		
	Total	Women	Men	Total	Women	Men	Total	Women	Men
				Number (in thousands)					
Total	4,896.0	1,640.0	3,256.0	5,584.6	1,933.8	3,650.8	5,774.5	2,019.9	3,754.6
Manufacturing	1,317.2	316.9	1,000.3	1,389.1	333.2	1,055.9	1,408.3	339.7	1,068.6
Transportation-communication-utilities	356.9	76.7	280.2	371.5	83.1	288.4	386.9	87.7	299.2
Trade	1,067.6	417.5	650.1	1,224.5	483.8	740.7	1,274.3	501.9	772.4
Services	711.7	350.2	361.5	887.5	442.8	444.7	932.0	464.6	467.4
Government[b]	874.0	330.3	543.7	1,043.5	413.2	630.3	1,104.8	441.6	663.2	
Mineral extraction	30.6	(	(	30.9	2.1	28.8	31.8	2.2	29.6
Construction[c]	294.8	(148.4	(420.2	340.4	17.8	322.6	325.9	17.7	308.2
Finance-insurance-real estate[d]	243.2	(	(	297.2	157.8	139.4	310.5	164.5	146.0
				Distribution by sex (percent)					
Total	100.0	33.5	66.5	100.0	34.6	65.4	100.0	35.0	65.0
Manufacturing	100.0	24.1	75.9	100.0	24.0	76.0	100.0	24.1	75.9
Transportation-communication-utilities	100.0	21.5	78.5	100.0	22.4	77.6	100.0	22.7	77.3
Trade	100.0	39.1	60.9	100.0	39.5	60.5	100.0	39.4	60.6
Services	100.0	49.2	50.8	100.0	49.9	50.1	100.0	49.8	50.2
Government[b]	100.0	37.8	62.2	100.0	39.6	60.4	100.0	40.0	60.0
Mineral extraction	100.0	(	(	100.0	6.8	93.2	100.0	6.9	93.1
Construction[c]	100.0	(26.1	(73.9	100.0	5.2	94.8	100.0	5.4	94.6
Finance-insurance-real estate[d]	100.0	(	(	100.0	53.1	46.9	100.0	53.0	47.0
				Distribution by industry (percent)					
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Manufacturing	26.9	19.3	30.7	24.9	17.2	28.9	24.4	16.8	28.4
Transportation-communication-utilities	7.3	4.7	8.6	6.6	4.3	7.9	6.7	4.3	8.0
Trade	21.8	25.5	20.0	21.9	25.0	20.3	22.1	24.9	20.6
Services	14.5	21.4	11.1	15.9	22.9	12.2	16.1	23.0	12.4
Government[b]	17.9	20.1	16.7	18.7	21.4	17.3	19.1	21.9	17.7
Mineral extraction	0.6	(	(	0.6	0.1	0.8	0.6	0.1	0.8
Construction[c]	6.0	(9.0	(12.9	6.1	0.9	8.8	5.6	0.9	8.2
Finance-insurance-real estate[d]	5.0	(	(	5.3	8.2	3.8	5.4	8.1	3.9

[a] Does not include employers, own-account workers, unpaid family workers, domestic servants, and agricultural workers.
[b] Includes all civilian employees of Federal, State, and local governments regardless of the activity in which the employee is engaged.
[c] Includes employees of construction contractors and operative builders; does not include force-account and government construction workers.
[d] Excludes employees of operative builders.

Source: California Department of Industrial Relations.

TABLE 3--WAGE AND SALARY WORKERS IN MANUFACTURING, BY INDUSTRY AND SEX
CALIFORNIA, 1960, 1964, and 1965[a]

Industry	Number (in thousands)								
	1960			1964			1965		
	Total	Women	Men	Total	Women	Men	Total	Women	Men
Total manufacturing	1,317.2	316.9	1,000.3	1,389.1	333.2	1,055.9	1,408.3	339.7	1,068.6
Nondurable goods	432.1	141.0	291.1	454.2	149.3	304.9	462.3	152.6	309.7
Durable goods	885.1	175.9	709.2	934.9	183.9	751.0	946.0	187.1	758.9
Food and kindred products	165.4	45.5	119.9	167.8	45.4	122.4	167.6	45.6	122.0
Fish canning and preserving	6.8	4.0	2.8	6.4	3.6	2.8	5.8	3.3	2.5
Fruit and vegetable canning and preserving	46.3	19.9	26.4	49.8	20.6	29.2	49.2	20.2	29.0
Other food and kindred products	112.3	21.6	90.7	111.6	21.2	90.4	112.6	22.1	90.5
Textile mill products	6.1	2.2	3.9	7.1	2.6	4.5	7.6	2.8	4.8
Apparel and other fabricated textile products	59.5	46.8	12.7	64.6	51.4	13.2	67.1	53.1	14.0
Paper and allied products	27.2	6.7	20.5	30.1	6.9	23.2	30.6	7.0	23.6
Printing, publishing, and allied industries	71.3	18.2	53.1	77.6	20.0	57.6	80.4	20.9	59.5
Chemicals and allied products	40.6	7.8	32.8	45.5	9.6	35.9	47.2	9.7	37.5
Petroleum refining and related industries	31.3	4.1	27.2	29.2	3.6	25.6	28.6	3.6	25.0
Rubber and miscellaneous plastics products	25.2	7.3	17.9	26.7	7.5	19.2	27.4	7.5	19.9
Leather and leather products	5.5	2.4	3.1	5.6	2.3	3.3	5.8	2.4	3.4
Ordnance and accessories	68.9	13.9	55.0	98.9	18.5	80.4	91.9	16.8	75.1
Lumber and wood products, except furniture	54.9	3.3	51.6	52.9	2.8	50.1	51.1	2.8	48.3
Furniture and fixtures	31.2	5.1	26.1	32.5	6.0	26.5	32.4	6.0	26.4
Stone, clay, and glass products	43.6	7.5	36.1	49.9	8.5	41.4	51.2	8.8	42.4
Primary metal industries	51.2	4.6	46.6	52.1	4.2	47.9	53.8	4.2	49.6
Fabricated metal products, except ordnance, machinery, and transportation equipment	91.3	14.9	76.4	96.3	15.7	80.6	98.5	15.7	82.8
Machinery, except electrical	85.4	15.3	70.1	96.0	17.9	78.1	99.9	18.5	81.4
Electrical machinery, equipment, and supplies	174.1	56.5	117.6	192.3	59.9	132.4	194.9	61.6	133.3
Transportation equipment	241.3	38.3	203.0	213.9	29.4	184.5	219.4	29.9	189.5
Motor vehicles and equipment	30.5	2.1	28.4	30.8	2.3	28.5	34.2	2.5	31.7
Aircraft and parts	194.0	35.4	158.6	164.5	26.0	138.5	166.2	26.3	139.9
Ship and boat building and repairing	12.5	.4	12.1	10.0	.3	9.7	10.4	.3	10.1
Other transportation equipment	4.3	.4	3.9	8.6	.8	7.8	8.6	.8	7.8
Instruments and related products	23.8	8.2	15.6	27.0	9.7	17.3	28.3	10.2	18.1
Miscellaneous manufacturing industries	19.4	8.3	11.1	23.1	11.3	11.8	24.6	12.6	12.0

[a]Includes administrative, supervisory, sales, technical, and office personnel, and force-account construction workers as well as production and related workers. Does not include employers, own-account workers, and unpaid family workers.

Source: California Department of Industrial Relations.

TABLE 4--EMPLOYED PERSONS 14 YEARS OLD AND OVER, BY OCCUPATION AND SEX
CALIFORNIA, 1950 AND 1960

Occupation	Number				Percent[a]				Percent change	
	1960		1950		1960		1950		1950 - 60	
	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men
All occupations[b]	1,902,61	1,858,815	1,148,047	2,753,965	100.0	100.0	100.0	100.0	65.7	40.1
Professional, technical, and kindred workers	265,44	522,473	162,162	268,230	14.0	13.5	14.1	9.7	63.7	94.8
Farmers and farm managers	5,327	77,813	6,421	104,331	0.3	2.0	0.6	3.8	-17.0	-25.4
Managers, officials, and proprietors, except farm	92,742	458,081	72,176	369,667	4.9	11.9	6.3	13.4	28.5	23.9
Clerical and kindred workers	666,432	270,845	368,322	184,610	35.0	7.0	32.1	6.7	80.9	46.7
Sales workers	152,835	296,018	105,203	226,088	8.0	7.7	9.2	8.2	45.3	30.9
Craftsmen, foremen, and kindred workers	23,109	780,461	16,395	578,540	1.2	20.2	1.4	21.0	41.0	34.9
Operatives and kindred workers	221,029	634,824	151,022	448,684	11.6	16.5	13.2	16.3	46.4	41.5
Private household workers	115,965	5,739	76,697	6,485	6.1	0.1	6.7	0.2	51.2	-11.5
Service workers, except private household	228,665	248,659	152,342	192,084	12.0	6.4	13.3	7.0	50.1	29.5
Farm laborers and foremen	13,185	125,872	15,097	137,973	0.7	3.3	1.3	5.0	-12.7	- 8.8
Laborers, except farm and mine	7,982	238,544	6,940	212,781	0.4	6.2	0.6	7.7	15.0	12.1
Occupation not reported	109,902	199,486	15,270	24,492	5.8	5.2	1.3	0.9	-	-

[a]Detail may not add to total because of rounding.
[b]Totals differ from those in table 1 because of differences in techniques of collection and compilation.

Source: U. S. Bureau of the Census.

TABLE 5--EMPLOYED PERSONS 14 YEARS OLD AND OVER, BY OCCUPATION, RACE, AND SEX
CALIFORNIA, 1960

Occupation	All races		White		Negro		Other	
	Women	Men	Women	Men	Women	Men	Women	Men
				Number				
All occupations[a]	1,902,618	3,858,815	1,740,489	3,580,537	115,694	173,311	46,435	104,967
Professional, technical, and kindred workers	265,445	522,473	251,848	501,684	8,762	7,629	4,835	13,160
Farmers and farm managers	5,327	77,813	4,410	66,390	33	844	884	10,579
Managers, officials, and proprietors, except farm	92,742	458,081	89,786	445,788	1,517	3,973	1,439	8,320
Clerical and kindred workers	666,432	270,845	635,552	250,305	16,370	13,500	14,510	7,040
Sales workers	152,835	296,018	148,383	287,408	2,014	3,096	2,438	5,514
Craftsmen, foremen, and kindred workers	23,109	780,461	21,588	747,825	1,146	23,090	375	9,546
Operatives and kindred workers	221,029	634,824	195,533	584,747	16,865	38,038	8,631	12,039
Private household workers	115,965	5,739	80,559	3,554	31,503	1,026	3,903	1,159
Service workers, except private household	228,665	248,659	200,725	206,478	23,938	28,359	4,002	13,822
Farm laborers and foremen	13,185	125,872	10,568	111,174	440	3,347	2,177	11,351
Laborers, except farm and mine	7,982	238,544	6,433	201,928	1,247	30,907	302	5,709
Occupation not reported	109,902	199,486	95,104	173,256	11,859	19,502	2,939	6,728
				Percent				
All occupations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Professional, technical, and kindred workers	14.0	13.5	14.5	14.0	7.6	4.4	10.4	12.5
Farmers and farm managers	0.3	2.0	0.3	1.9	b	0.5	1.9	10.1
Managers, officials, and proprietors, except farm	4.9	11.9	5.2	12.5	1.3	2.3	3.1	7.9
Clerical and kindred workers	35.0	7.0	36.5	7.0	14.1	7.8	31.2	6.7
Sales workers	8.0	7.7	8.5	8.0	1.7	1.8	5.3	5.3
Craftsmen, foremen, and kindred workers	1.2	20.2	1.2	20.9	1.0	13.3	0.8	9.1
Operatives and kindred workers	11.6	16.5	11.2	16.3	14.6	21.9	18.6	11.5
Private household workers	6.1	0.1	4.6	0.1	27.2	0.6	8.4	1.1
Service workers, except private household	12.0	6.4	11.5	5.8	20.7	16.4	8.6	13.2
Farm laborers and foremen	0.7	3.3	0.6	3.1	0.4	1.9	4.7	10.8
Laborers, except farm and mine	0.4	6.2	0.4	5.6	1.1	17.8	0.7	5.4
Occupation not reported	5.8	5.2	5.5	4.8	10.3	11.3	6.3	6.4

[a]Totals differ from those in table 1 because of differences in techniques of collection and compilation.
[b]Less than .05 of 1 percent.

Source: U. S. Bureau of the Census.

TABLE 6--UNEMPLOYMENT RATES, BY AGE, COLOR, AND SEX
CALIFORNIA, 1960

(Unemployment as a percent of civilian labor force, 14 years old and over)

Age	Total		White		Nonwhite	
	Women	Men	Women	Men	Women	Men
14 years old and over	6.6	5.8	6.3	5.5	9.8	10.1
14 to 17 years	11.6	12.1	11.3	11.6	18.9	22.0
18 to 19 years	10.7	13.6	10.1	13.0	19.7	22.3
20 to 24 years	8.3	8.8	7.6	8.1	15.1	16.1
25 to 34 years	6.9	4.8	6.4	4.3	10.1	9.4
35 to 44 years	5.9	4.1	5.7	3.8	8.4	7.9
45 to 54 years	5.6	5.2	5.5	4.9	7.3	8.7
55 to 64 years	5.5	6.6	5.3	6.3	7.5	9.7
65 years and over	5.4	8.0	5.4	7.9	6.9	10.8

Source: U. S. Bureau of the Census.

TABLE 7--AGE DISTRIBUTION OF UNEMPLOYED PERSONS, BY COLOR AND SEX
CALIFORNIA AND UNITED STATES, 1960

Age	California				United States			
	Total		Nonwhite		Total		Nonwhite	
	Women	Men	Women	Men	Women	Men	Women	Men
14 years old and over	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
14 to 17 years	5.1	6.3	2.7	3.9	7.0	6.7	5.5	5.5
18 to 19 years	6.8	6.1	6.1	5.0	8.0	6.6	7.8	6.3
20 to 24 years	13.2	12.8	18.0	15.1	13.9	13.8	17.1	14.8
25 to 34 years	20.0	18.8	26.9	24.0	19.9	19.0	25.6	22.8
35 to 44 years	23.0	17.9	24.4	20.7	21.3	18.0	21.4	20.5
45 to 54 years	18.6	18.2	13.7	17.1	17.1	17.2	13.8	16.0
55 to 64 years	10.2	14.3	6.8	11.0	9.5	13.4	6.8	10.6
65 years and over	3.1	5.6	1.4	3.2	3.3	5.3	2.0	3.5

Source: U. S. Bureau of the Census.

TABLE 8--UNION MEMBERS IN CALIFORNIA, BY INDUSTRY AND SEX
JULY 1960 AND JULY 1965[a]

(Amounts in thousands)

Industry	1960					1965				
	Total	Women		Men		Total	Women		Men	
		Number	Percent	Number	Percent		Number	Percent	Number	Percent
Total	1,755.7	333.2	19	1,422.5	81	1,871.7	359.2	19	1,512.5	81
Manufacturing	568.8	119.0	21	449.8	79	556.6	114.9	21	441.7	79
Food and kindred products	133.3	43.0	32	90.3	68	129.5	36.1	28	93.4	72
Textiles and apparel	21.1	15.8	75	5.3	25	18.4	14.2	77	4.2	23
Lumber and furniture	43.2	3.4	8	39.8	92	40.5	2.3	6	38.2	94
Paper and allied products	17.0	4.8	28	12.2	72	21.2	5.3	25	15.9	75
Printing, publishing, and allied industries	31.8	4.6	14	27.2	86	33.0	5.3	15	27.7	85
Petroleum, chemicals, and rubber	32.8	3.3	10	29.5	90	27.4	2.4	9	25.0	91
Stone, clay, and glass products	16.8	2.7	16	14.1	84	19.3	3.7	19	15.6	81
Metals and machinery except transportation equipment and ordnance	136.9	21.5	16	115.4	84	138.4	22.0	16	116.4	84
Transportation equipment and ordnance	125.7	15.2	12	110.5	88	119.2	17.5	15	101.7	85
Other manufacturing industries[b]	10.2	4.7	46	5.5	54	9.7	6.1	62	3.6	38
Nonmanufacturing	1,186.9	214.2	18	972.7	82	1,315.1	244.3	19	1,070.8	81
Construction	342.6	.5	c	342.1	100	376.7	.7	c	376.0	100
Transportation and warehousing	192.7	12.2	6	180.5	94	185.6	16.2	9	169.4	91
Public utilities	69.7	25.1	36	44.6	64	74.2	24.4	33	49.8	67
Wholesale and retail trade	211.3	53.7	25	157.6	75	236.9	60.3	25	176.6	75
Eating and drinking places, hotels and other lodging places	106.0	51.2	48	54.8	52	114.7	54.7	47	60.0	53
Motion picture production, theaters, and other entertainment	77.0	14.0	18	63.0	82	80.1	16.5	21	63.6	79
Miscellaneous service industries[d]	81.2	42.4	52	38.8	48	92.2	44.2	48	48.0	52
Government	96.4	15.1	16	81.3	84	141.0	27.2	19	113.8	81
Agriculture, fishing, and mineral extraction[e]	10.0	-	c	10.0	100	13.7	.1	1	13.6	99

[a]Estimated from the replies of locals reporting membership by sex. These locals accounted for 98 percent of total membership in 1960 and 1965.

[b]Includes leather and leather products, instruments and related products, and miscellaneous manufacturing industries.

[c]Less than $\frac{1}{2}$ of 1 percent.

[d]Includes finance, insurance, and real estate; personal services such as laundering, cleaning and dyeing, barber and beauty shops, etc.; business services; and professional, educational, and related services.

[e]Does not include membership of the Agricultural Workers Organizing Committee.

Source: California Department of Industrial Relations.

TABLE 9--DISABLING WORK INJURIES[a], BY SEX
CALIFORNIA, 1960-65

Year	Number		Rate per 1,000 workers	
	Women	Men	Women	Men
1960	23,597	135,066	13.8	42.0
1961	24,404	137,651	13.8	42.1
1962	24,686	141,322	13.3	41.7
1963	25,630	147,845	13.2	42.2
1964	27,082	155,091	13.4	43.0
1965	28,514	153,532	13.6	41.5

[a]Disability causing absence from work for a full day or shift beyond the day of the injury. Excludes injuries to employees not covered by the California Workmen's Compensation Act such as maritime workers, Federal employees, and railroad employees in interstate commerce.

Source: California Department of Industrial Relations.

TABLE 10--MEDIAN EARNINGS IN 1959 OF PERSONS IN THE EXPERIENCED CIVILIAN LABOR FORCE, BY OCCUPATION, COLOR, AND SEX
CALIFORNIA, 1960

Occupation	Total		Nonwhite	
	Women	Men	Women	Men
Persons, 14 years old and over	$2,812	$5,495	$2,082	$4,035
Professional, technical, and kindred workers	4,276	7,403	3,967	5,993
Farmers and farm managers	1,468	3,991	2,312	4,063
Managers, officials, and proprietors, except farm	3,827	7,606	3,068	5,102
Clerical and kindred workers	3,410	5,141	3,317	4,415
Sales workers	2,016	5,669	1,710	4,136
Craftsmen, foremen, and kindred workers	3,444	6,033	2,802	4,837
Operatives and kindred workers	2,436	5,062	2,122	4,259
Private household workers	784	1,230	990	2,006
Service workers, except private household	1,858	3,981	2,129	3,410
Farm laborers and foremen	767	1,932	981	1,844
Laborers, except farm and mine	1,813	3,826	2,396	3,867

Source: U. S. Bureau of the Census.

TABLE 11--MEDIAN INCOME IN 1959 OF PERSONS 25 YEARS OLD AND OVER WITH INCOME BY YEARS OF SCHOOL COMPLETED, COLOR, AND SEX
CALIFORNIA AND UNITED STATES, 1960

School level	California				United States			
	Total		Nonwhite		Total		Nonwhite	
	Women	Men	Women	Men	Women	Men	Women	Men
Persons, 25 years old and over with income	$1,943	$5,526	$1,762	$3,951	$1,533	$4,617	$ 959	$2,610
None	991	1,857	1,287	2,049	687	1,439	622	1,042
Elementary								
1 to 4 years	1,141	2,607	1,203	2,784	734	1,844	668	1,565
5 to 7 years	1,263	3,813	1,372	3,470	898	3,062	796	2,353
8 years	1,370	4,474	1,415	3,670	1,111	3,885	967	2,900
High School								
1 to 3 years	1,829	5,436	1,686	4,026	1,616	4,847	1,199	3,253
4 years	2,557	6,039	2,173	4,372	2,186	5,437	1,707	3,735
College								
1 to 3 years	2,800	6,399	2,709	4,698	2,402	5,980	2,119	4,029
4 or more years	4,151	8,108	3,860	5,820	3,751	7,646	3,708	4,840

Source: U. S. Bureau of the Census.

TABLE 12--INCOME IN 1959 OF PERSONS, BY WEEKS WORKED AND SEX
CALIFORNIA AND UNITED STATES, 1960

Income group	California				United States			
	Worked during year		Worked full time (50 to 52 weeks)		Worked during year		Worked full time (50 to 52 weeks)	
	Women	Men	Women	Men	Women	Men	Women	Men
All persons with income[a]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
$1 to $999 or loss	27.8	9.1	4.4	1.9	32.6	11.6	8.4	3.4
$1,000 to $1,999	16.6	8.3	7.8	4.8	18.7	9.6	13.9	5.9
$2,000 to $2,999	15.3	7.6	15.4	4.7	17.6	10.3	24.0	8.3
$3,000 to $3,999	15.9	9.3	26.4	7.7	14.7	12.1	25.3	11.9
$4,000 to $4,999	12.5	11.7	24.7	12.0	8.8	13.7	16.0	15.3
$5,000 to $5,999	6.1	14.1	11.8	16.8	4.0	13.9	6.8	17.1
$6,000 to $6,999	2.6	12.4	4.6	15.7	1.7	9.6	2.6	12.3
$7,000 to $9,999	2.3	17.3	3.5	22.7	1.4	12.0	2.1	16.0
$10,000 and over	0.9	10.2	1.4	13.7	0.5	7.2	0.8	9.8
Median income	$2,366	$5,283	$3,848	$6,140	$1,928	$4,464	$3,145	$5,306

[a]Detail may not add to total because of rounding.

Source: U. S. Bureau of the Census.

TABLE 13--INCOME IN 1959 OF FAMILIES, BY PRESENCE OF CHILDREN UNDER 18 YEARS OLD AND BY COLOR AND SEX OF FAMILY HEAD
CALIFORNIA, 1960

Income group and presence of children	All families				Nonwhite families			
	Female head		Husband-wife families or other male head		Female head		Husband-wife families or other male head	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total families	367,490	100.0	3,624,019	100.0	46,572	100.0	229,904	100.0
Families with income under $3,000	155,437	42.3	407,273	11.2	28,684	61.6	39,921	17.4
With own children under 18	(109,406)	(29.8)	(130,808)	(3.6)	(22,075)	(47.4)	(19,406)	(8.4)
Families with income $3,000 and over	212,053	57.7	3,216,746	88.8	17,888	38.4	189,983	82.6
With own children under 18	(96,299)	(26.2)	(1,959,971)	(54.1)	(9,032)	(19.4)	(117,604)	(51.2)

Source: U. S. Bureau of the Census.

TABLE 14--LABOR FORCE PARTICIPATION RATES OF WOMEN, BY MARITAL STATUS AND COLOR CALIFORNIA, 1950 AND 1960

(Women in the labor force as a percent of female population, 14 years old and over)

Marital status	1960		1950	
	Total	Nonwhite	Total	Nonwhite
All women, 14 years old and over	36.1	44.1	31.0	41.4
Single	42.2	39.0	45.3	39.3
Married, husband present	32.5	42.6	24.8	37.9
With own children under 6	19.8	29.0	n.a.	n.a.
Married, husband absent	47.3	51.8	(	(
Widowed	27.6	37.2	39.1	50.4
Divorced	70.9	69.7	(	(

n.a.--Not available.

Source: U. S. Bureau of the Census.

TABLE 15--MARITAL STATUS OF PERSONS IN THE LABOR FORCE, BY COLOR AND SEX
CALIFORNIA, 1960

Marital status	Number				Percent			
	Total		Nonwhite		Total		Nonwhite	
	Women	Men	Women	Men	Women	Men	Women	Men
All persons in labor force	2,041,120	4,394,536	180,171	334,683	100.0	100.0	100.0	100.0
Single	391,933	830,105	28,873	78,706	19.2	18.9	16.0	23.5
Married, spouse present	1,156,478	3,177,188	96,394	205,503	56.7	72.3	53.5	61.4
With own children under 6	(229,812)	--	(26,234)	--	(11.3)	--	(14.6)	--
Married, spouse absent	106,793	175,741	21,521	30,726	5.2	4.0	12.0	9.2
Widowed	181,394	55,617	14,824	6,339	8.9	1.3	8.2	1.9
Divorced	204,522	155,885	18,559	13,409	10.0	3.5	10.3	4.0

Source: U. S. Bureau of the Census.

TABLE 16--WOMEN IN THE LABOR FORCE, BY MARITAL STATUS, PRESENCE OF CHILDREN, AND COLOR
CALIFORNIA AND UNITED STATES, 1960

Presence of children	All women			Married, husband present			Other		
	Total	White	Nonwhite	Total	White	Nonwhite	Total	White	Nonwhite
				California					
All women in labor force	2,041,120	1,860,949	180,171	1,156,478	1,060,084	96,394	884,642	800,865	83,777
With own children under 6	279,913	245,679	34,234	229,812	203,578	26,234	50,101	42,101	8,000
Percent	13.7	13.2	19.0	19.9	19.2	27.2	5.7	5.3	9.5
Without own children under 6	1,761,207	1,615,270	145,937	926,666	856,506	70,160	834,541	758,764	75,777
Percent	86.3	86.8	81.0	80.1	80.8	72.8	94.3	94.7	90.5
				United States					
All women in labor force	22,409,760	19,538,250	2,871,510	12,365,354	11,004,124	1,361,230	10,044,406	8,534,126	1,510,280
With own children under 6	3,049,872	2,490,275	559,597	2,575,300	2,181,922	393,378	474,572	308,353	166,219
Percent	13.6	12.7	19.5	20.8	19.8	28.9	4.7	3.6	11.0
Without own children under 6	19,359,888	17,047,975	2,311,913	9,790,054	8,822,202	967,852	9,569,834	8,225,773	1,344,061
Percent	86.4	87.3	80.5	79.2	80.2	71.1	95.3	96.4	89.0

Source: U. S. Bureau of the Census.

TABLE 17--YEARS OF SCHOOL COMPLETED BY PERSONS 25 YEARS OLD AND OVER, BY COLOR AND SEX
CALIFORNIA AND UNITED STATES, 1960

(Percent of population 25 years old and over)

School level	California				United States			
	Total		Nonwhite		Total		Nonwhite	
	Women	Men	Women	Men	Women	Men	Women	Men
All persons, 25 years old and over[a]	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
None	1.7	2.1	3.5	4.6	2.2	2.4	4.6	6.8
Elementary	25.0	28.0	33.0	37.0	35.7	39.3	52.1	56.2
High School								
1 to 3 years	20.6	19.7	21.9	20.4	19.8	18.7	20.2	17.0
4 years	32.0	24.4	26.1	20.8	27.8	21.2	15.2	12.1
College								
1 to 3 years	13.2	13.5	10.5	10.6	9.0	8.6	4.4	4.4
4 or more years	7.5	12.3	4.9	6.5	5.8	9.6	3.6	3.5

[a]Detail may not add to total because of rounding.

Source: U. S. Bureau of the Census.

TABLE 18--MEDIAN SCHOOL YEARS COMPLETED BY PERSONS 14 YEARS OLD AND OVER, BY AGE, COLOR, AND SEX
CALIFORNIA AND UNITED STATES, 1960

Age	California				United States			
	Total		Nonwhite		Total		Nonwhite	
	Women	Men	Women	Men	Women	Men	Women	Men
All persons, 14 years old and over	12.0	11.7	11.0	10.6	10.8	10.4	8.9	8.4
14 to 24 years	11.3	11.1	11.4	11.2	11.0	10.6	10.2	9.6
25 years and over	12.1	12.0	10.9	10.3	10.7	10.3	8.5	7.9
25 to 29 years	12.4	12.5	12.3	12.3	12.3	12.3	11.1	10.5
30 to 34 years	12.3	12.4	12.1	12.1	12.2	12.1	10.5	9.7
35 to 39 years	12.4	12.4	12.0	11.7	12.2	12.1	9.7	8.9
40 to 44 years	12.3	12.3	11.0	10.7	12.0	11.6	8.7	8.3
45 to 49 years	12.1	12.1	9.6	8.9	10.8	10.3	8.1	7.4
50 to 54 years	11.7	11.0	8.7	8.4	10.1	9.4	7.6	6.8
55 to 59 years	10.6	9.7	8.3	7.7	9.0	8.7	6.9	6.0
60 to 64 years	9.8	9.0	8.1	7.2	8.7	8.5	6.4	5.5
65 to 69 years	9.0	8.7	7.3	6.3	8.5	8.3	5.6	4.7
70 to 74 years	8.9	8.5	7.2	6.7	8.4	8.1	5.2	4.4
75 years and over	8.8	8.4	6.1	5.7	8.3	8.0	4.5	3.9

Source: U. S. Bureau of the Census.

TABLE 19--EARNED DEGREES CONFERRED, BY LEVEL AND SEX
CALIFORNIA AND UNITED STATES
1959-60 AND 1963-64

Degree level and sex	California			United States		
	1959-60	1963-64	Percent increase	1959-60	1963-64	Percent increase
All degrees						
Women	11,551	18,062	56.4	163,973	235,936	43.9
Men	23,917	31,343	31.0	315,242	381,780	21.1
Bachelor's and first professional						
Women	9,976	15,574	56.1	139,385	202,291	45.1
Men	18,530	23,501	26.8	255,504	299,813	17.3
Master's (except first professional)						
Women	1,481	2,348	58.5	23,560	32,110	36.3
Men	4,532	6,479	43.0	50,937	69,012	35.5
Doctor's						
Women	94	140	48.9	1,028	1,535	49.3
Men	855	1,363	59.4	8,801	12,955	47.2

Source: U. S. Department of Health, Education, and Welfare, Office of Education.

VT 008 325
Changing Patterns in California Manufacturing Employment.

California State Dept. of Industrial Relations, San Francisco. Div. of Labor Statistics and Research
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Aug67 8p.

*EMPLOYMENT TRENDS; BLUE COLLAR OCCUPATIONS; WHITE COLLAR OCCUPATIONS; *OCCUPATIONAL SURVEYS; *EMPLOYMENT PATTERNS; *MANUFACTURING INDUSTRY; STATE SURVEYS; COMPARATIVE ANALYSIS
CALIFORNIA

A steady post war trend in manufacturing employment both in California and the rest of the nation of more white-collar workers as compared with blue-collar workers has come to a halt. The ratio of blue-collar or production workers has begun to climb and conversely has declined for white-collar workers. Since World War II most of California's manufacturing expansion has occurred in new industries such as electronics and ordnance, which hire the highest share of white-collar workers. The reversal in this trend, most apparent between 1963 and 1966, is attributed to the increased production of goods for the Vietnam War and recent industry efforts to weed out inefficiency and excess staff among white-collar workers. The aircraft industry, which recorded the most dramatic increase from 51 blue-collar workers per 100 employees in 1963 to 59 in 1966, is evidence of this movement. While 65 out of every 100 employees in manufacturing as a whole were in production work during 1966 in California, this proportion covered a wide range of blue collar participation in the work force. In that

VT 008 325

STATE OF CALIFORNIA
Ronald Reagan, *Governor*

DEPARTMENT OF INDUSTRIAL RELATIONS
Albert C. Beeson, *Director*

CHANGING PATTERNS IN CALIFORNIA MANUFACTURING EMPLOYMENT

DIVISION OF LABOR STATISTICS AND RESEARCH
Maurice I. Gershenson, *Chief*
Ruth H. Krause, *Assistant Chief*

San Francisco
August 1967

VT 008 325

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CHANGING PATTERNS IN CALIFORNIA MANUFACTURING EMPLOYMENT*

SUMMARY

One of the steadiest of postwar trends in manufacturing employment has come to a halt, both in California and in the rest of the Nation, and with this interruption, the manufacturing spotlight has shifted from the white-collar worker to the blue-collar worker.

During the 2 decades since World War II, white-collar--or nonproduction--workers in manufacturing were the center of attention because they claimed an ever-increasing proportion of the manufacturing workforce. Recently, however, this pattern has changed, largely because the semi-wartime footing of the economy has placed emphasis on production activities. The ratio of blue-collar--or production--workers in the factory force has begun to climb and, conversely, that of white-collar workers has declined.

Despite the publicity that accompanied the 2 decades of increasing importance of white-collar workers in manufacturing, production workers remained a mainstay in terms of actual numbers of jobs created. Since World War II, the total number of workers on payrolls of California manufacturing firms more than doubled. From 700,000 workers in 1946, employment in this industry climbed to more than 1½ million in 1966--and over half of the jobs added in this period went to production workers.

POSTWAR SHIFTS IN PRODUCTION-WORKER RATIO

Immediately after World War II, 78 of every 100 workers in California manufacturing industries were engaged in activities directly related to the production of goods. In subsequent years, the share of blue-collar workers decreased, until, by 1960, 66 of every 100 in manufacturing were production workers. The trend continued into the Sixties, with the ratio of blue-collar workers declining to 63 of every 100 by 1963.

Virtually no change took place in 1964, however, but in the next 2 years the trend reversed itself. By 1966, the proportion of production workers was up to 65 of every 100 manufacturing employees. (See chart 1.) Whether or not this reversal in trend is to be short-lived is open to speculation. The pattern so far in 1967 suggests the possibility of a return to the long-term downtrend in the blue-collar proportion, although at mid-year this is by no means certain. The final ratio for the year still is subject to the vagaries of international events, of the awarding of defense and aerospace contracts, and of related factors.

In general, the trend in the rest of the United States has paralleled that in California, except that in this State the ratio of production workers to all manufacturing employees historically has been somewhat lower, its decline sharper, and its leveling off in the Sixties somewhat later than nationally. At the close of World War II, blue-collar workers comprised 84 percent of the manufacturing workforce in the rest of the Nation, and by 1960 the share had declined to 76 percent. In 1961, the proportion edged down to 75 of every 100 workers, where it remained through 1966.

PATTERNS OF JOB GROWTH

In terms of percentage gain over two decades, the blue-collar segment grew at a slower pace than its white-collar counterpart, as the decrease in the blue-collar proportion indicates. Between 1946 and 1966, the production force in California factories increased by close to 80 percent compared with a gain of more than 240 percent in the nonproduction category.

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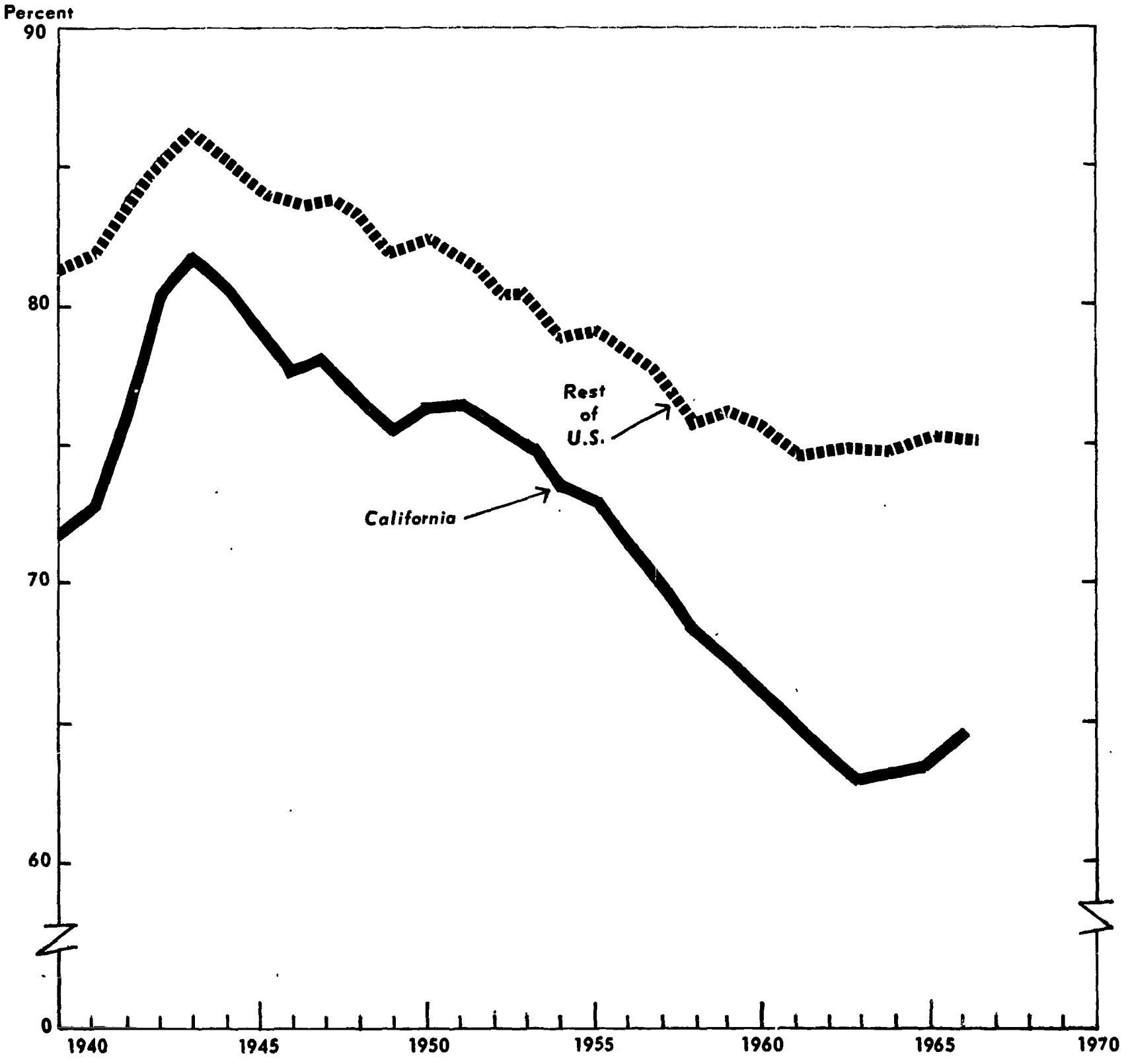
*Prepared by Dorothy Fowler of the Employment and Payroll Statistics Section.

CHART I
PROPORTION OF PRODUCTION WORKERS EMPLOYED IN MANUFACTURING INDUSTRIES
CALIFORNIA AND REST OF UNITED STATES
1939-1966



Nevertheless, production work remained the backbone of manufacturing, and by far the larger number of manufacturing employees continued to be engaged in production activities. Job seekers found it an important source of employment--more than half of the jobs created in California manufacturing during the 20-year span were blue-collar jobs.

A similar pattern prevailed in the rest of the United States. Rates of percentage gain, however, were considerably smaller. A sizable number of new jobs went to blue-collar workers, although the number was less than half of the total created over this period.

The following table presents a summary of these trends in manufacturing wage and salary worker employment during the postwar period:

				Increase			
				1946-66		1963-66	
	1946	1963	1966	Amount	Percent	Amount	Percent
California							
Total	706,700	1,394,300	1,520,700	814,000	115.2	126,400	9.1
Production workers	549,400	878,500	981,700	432,300	78.7	103,200	11.7
Nonproduction workers	157,300	515,800	539,000	381,700	242.7	23,200	4.5
Rest of United States							
Total	13,996,300	15,600,700	17,560,300	3,564,000	25.5	1,959,600	12.6
Production workers	11,724,600	11,676,500	13,217,300	1,492,700	12.7	1,540,800	13.2
Nonproduction workers	2,271,700	3,924,200	4,343,000	2,071,300	91.2	418,800	10.7

The table indicates that much of the growth in California production worker employment over the 20-year span occurred since 1963; in the rest of the United States, all of the expansion was of recent origin. Over the short term, the growth in the blue-collar segment has outdistanced the white-collar both in absolute and in percentage growth.

The period between 1963 and 1966 saw the addition of more than 4 times as many production jobs as nonproduction jobs in California. In the rest of the Nation, too, the increase in production-worker employment was well over 3 times that of white-collar jobs.

So far in 1967, the statistics indicate--perhaps significantly--that the general slowdown characterizing manufacturing employment this year is being felt more severely among blue-collar than among white-collar workers. Nevertheless, new jobs for production workers in California continued to outnumber those for nonproduction workers in the first half of the year.

BEHIND THE TRENDS

Over the years, many factors have affected the growth and the mix of white-collar and blue-collar workers in manufacturing.

A considerable share of California's expansion in manufacturing during the past 2 decades occurred in such "new" industries as electronics and ordnance (missiles)--industries that have been among the fastest growing and among those with the highest share of white-collar workers. In ordnance, for example, 65 percent are in this classification, a reflection of the heavy concentration of scientific and technical personnel in industries closely allied with aerospace activities.

In this connection, differences between California and the rest of the United States in growth rates and in relative proportions of blue- and white-collar workers can be attributed in part to differences both in industry composition of the respective economies and in the composition of the industries themselves.

About half of California's manufacturing employment is found in industries with relatively heavy concentrations of production workers--60 or more of every 100 employees--but in the rest of the Nation more than nine-tenths of the manufacturing employment can be so classified.

A number of major industry groups have a somewhat lower production-worker ratio in California than they do nationally, a fact stemming in large measure from differences in the employment distribution within the industries. For example, in electrical equipment about half of California's employment is concentrated in the communications equipment segment, which has a considerably lower production-worker ratio than electrical equipment as a whole; nationally, only one-fourth of electrical equipment employment is in the communications equipment segment.

Other influences that have contributed to the long-term downtrend in the proportion of production workers in California and elsewhere include the development of managerial techniques and personnel practices that have expanded white-collar staffs of manufacturing firms; the application of various aspects of automation to production and nonproduction activities; and, notably in California, the availability of training facilities that attract firms requiring a supply of highly-trained professional, administrative, and technical personnel.

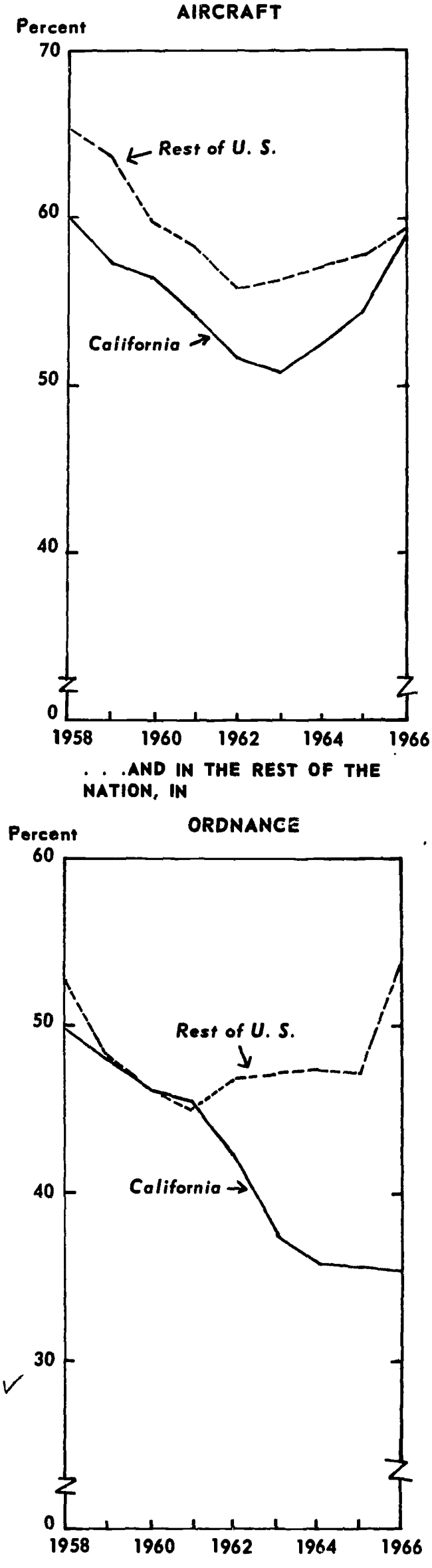
As chart I indicates, however, wars tend to offset these influences and, instead, serve to put greater emphasis on the production force and less on the white-collar worker. The sharp upturn in the production-worker ratio during the early 1940's, the fluctuation at the time of the Korean conflict, and the present reversal in the trend all testify to the intensive effort that goes into the production of goods at time of war.

While the current shift toward a higher proportion of production workers seems tied primarily to the Vietnam situation, cost-cutting programs may also be exerting some influence. In recent years, industry has made some concerted efforts to weed out inefficiencies and excess staff among its white-collar workers. The actual effect of such efforts on industry-wide trends is not measurable, but the possibility exists that such paring of white-collar payrolls may be a contributing factor in the current trend reversal.

WHERE THE BLUE-COLLAR SHARE IS ON THE INCREASE In what specific industries in California has the reversal in the production-worker ratio trend been particularly notable? Aircraft--the second largest manufacturing industry in the State--recorded the most dramatic increase, from 51 blue-collar workers per 100 employees in 1963 to 59 in 1966. (See chart II.) Recent contracts both for commercial jetliners and for

CHART II
RECENT SHIFTS IN BLUE-COLLAR PROPORTION OF MANUFACTURING EMPLOYMENT IN CALIFORNIA HAVE BEEN SHARPEST IN

AIRCRAFT



. . .AND IN THE REST OF THE NATION, IN

ORDNANCE

military aircraft have boosted employment in the industry and have placed special urgency on production efforts.

Other hard goods groups where the proportion of blue-collar workers in California manufacturing activities increased significantly between 1963 and 1966 were fabricated metals, shipbuilding, and the miscellaneous manufacturing category.

During this time, production-worker ratios in most of the nondurable goods industries continued to decline. In only 3--paper, printing-publishing, and rubber--did the proportion of blue-collar workers to total manufacturing employment increase and in these, only by a percentage point.

In the rest of the Nation, the hard goods industries also were the main ones to post an upturn in recent years in the production-worker share of the manufacturing workforce. Largest changes upward since 1963 occurred in ordnance, aircraft, and electrical equipment. Interestingly, the behavior of ordnance in the rest of the United States has differed from that in California. In this State, where ordnance is dominated by the manufacture of such technically-sophisticated products as missiles and spacecraft, the ratio of blue-collar workers has consistently decreased even during the recent reversal in trend in manufacturing as a whole. In the rest of the Nation, the manufacture of munitions comprises a sizable segment of the ordnance industry--a segment where the Vietnam war has placed heavy demands on production. As depicted in chart II, the result has been a greater relative increase in blue-collar workers than in white-collar employees.

HOW THE INDUSTRIES RANK

While 65 of every 100 employees in manufacturing as a whole were in production work during 1966 in California, this proportion cloaks the wide range of blue-collar participation in the workforce. In that year, the spread was from 35 production workers per 100 employees in ordnance to 90 per 100 in shipbuilding. In the rest of the Nation, the range extended from 54 per 100 in ordnance to 89 per 100 in textiles, fish canning, and apparel.

Following is the 1966 grouping of California manufacturing industries according to the percentage of blue-collar workers among all employees in each industry:

80 or more

Shipbuilding and repairing
Lumber
Leather
Apparel
Fish canning
Furniture and fixtures
Motor vehicles
Paper

70 through 79

Fruit and vegetable canning
Primary metals
Stone-clay-glass
Textiles
Rubber
Miscellaneous manufacturing
Fabricated metals

60 through 69

Instruments
Food products (excluding canning)
Machinery

50 through 59

Aircraft and parts
Printing-publishing
Chemicals
Electrical equipment

Under 50

Petroleum refining
Ordnance

* * *

PRODUCTION WORKERS AND NONPRODUCTION WORKERS IN MANUFACTURING
CALIFORNIA AND REST OF UNITED STATES
1939-67

(In thousands)

Year and month	California			Rest of United States		
	Total	Production workers	Non-production workers	Total	Production workers	Non-production workers
1939	384.4	276.2	108.2	9,893.6	8,041.8	1,851.8
1940	440.2	320.1	120.1	10,544.8	8,619.9	1,924.9
1941	593.6	451.3	142.3	12,598.4	10,564.7	2,033.7
1942	876.0	704.8	171.2	14,404.0	12,291.2	2,112.8
1943	1,165.5	952.2	213.3	16,436.5	14,194.8	2,241.7
1944	1,109.7	897.8	211.9	16,218.3	13,842.2	2,376.1
1945	860.8	679.7	181.1	14,663.2	12,329.3	2,333.9
1946	706.7	549.4	157.3	13,996.3	11,724.6	2,271.7
1947	721.8	563.2	158.6	14,823.2	12,426.8	2,396.4
1948	734.2	562.5	171.7	14,847.8	12,347.5	2,500.3
1949	701.5	530.6	170.9	13,739.5	11,259.4	2,480.1
1950	759.7	580.6	179.1	14,481.3	11,942.4	2,538.9
1951	892.5	682.6	209.9	15,500.5	12,685.4	2,815.1
1952	994.6	752.9	241.7	15,637.4	12,606.1	3,031.3
1953	1,060.8	796.8	264.0	16,488.2	13,258.2	3,230.0
1954	1,048.6	771.0	277.6	15,265.4	12,046.0	3,219.4
1955	1,121.1	818.7	302.4	15,760.9	12,469.3	3,291.6
1956	1,218.0	868.3	349.7	16,025.0	12,567.7	3,457.3
1957	1,283.8	896.8	387.0	15,890.2	12,292.2	3,598.0
1958	1,217.4	829.9	387.5	14,727.6	11,167.1	3,560.5
1959	1,312.6	884.8	427.8	15,362.4	11,718.2	3,644.2
1960	1,317.2	871.7	445.5	15,478.8	11,714.3	3,764.5
1961	1,318.0	855.6	462.4	15,008.0	11,227.4	3,780.6
1962	1,382.5	883.1	499.4	15,470.5	11,604.9	3,865.6
1963	1,394.3	878.5	515.8	15,600.7	11,676.5	3,924.2
1964	1,389.4	877.5	511.9	15,884.6	11,903.5	3,981.1
1965	1,411.0	898.1	512.9	16,621.0	12,514.9	4,106.1
1966	1,520.7	981.7	539.0	17,560.3	13,217.3	4,343.0
1966: Jan.	1,426.5	905.2	521.3	16,906.5	12,711.8	4,194.7
Feb.	1,444.8	918.8	526.0	17,073.2	12,856.2	4,217.0
Mar.	1,471.4	940.5	530.9	17,179.6	12,937.5	4,242.1
Apr.	1,496.1	960.3	535.8	17,277.9	13,008.7	4,269.2
May	1,505.0	968.9	536.1	17,401.0	13,105.1	4,295.9
June	1,522.5	983.4	539.1	17,735.5	13,367.6	4,367.9
1967: Jan.	1,524.7	978.0	546.7	17,708.3	13,255.0	4,453.3
Feb.	1,526.4	973.5	552.9	17,669.6	13,206.5	4,463.1
Mar.	1,546.8	989.5	557.3	17,614.2	13,138.5	4,475.7
Apr.	1,550.8	991.9	558.9	17,526.2	13,038.1	4,488.1
May	1,551.3	991.6	559.7	17,477.7	12,992.4	4,485.3
June	1,556.4	996.6	559.8	17,717.6*	13,187.4*	4,530.2*

* Preliminary

VT 008 434
The Hospital Employees Technological Training Program: Final Report and Evaluation.

New York City Community Coll., N.Y. Div. of Continuing Education and Extension Services
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Mar69 46p.

QUESTIONNAIRES; *NURSES AIDES; *INSERVICE COURSES; OCCUPATIONAL MOBILITY; COMMUNITY COLLEGES; LABOR UNIONS; *HOSPITALS; *PROGRAM EVALUATION

This study attempted a short-term evaluation of the effectiveness of a training program which evolved from a need for improvement in patient services and a concurrent need for career mobility for nurse aides employed by the New York City Department of Hospitals. Twelve 4-week courses in ambulance, inhalation, obstetrical, and operating room technology were offered between January and December 1968. Evaluation was by: (1) questionnaires sent to 465 of the 751 employees completing the program, from which 124 useable replies were received, (2) interviews held with supervisory personnel program graduates, and (3) weekly reports by instructors. Although the graduates felt courses were too short, general response was favorable. Ninety-seven percent of the questionnaire respondents indicated they were considering furthering their education and, of this group, 27 percent had actually taken steps to do so. Responses from supervisors were inconclusive. (JK)

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THE HOSPITAL EMPLOYEES TECHNOLOGICAL TRAINING PROGRAM: FINAL REPORT AND EVALUATION

DIVISION OF CONTINUING EDUCATION
AND EXTENSION SERVICES

NEW YORK CITY COMMUNITY COLLEGE

MARCH 1969

VT008434

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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PROGRAM OVERVIEW

The Hospital Employees Technological Training Program was a cooperative venture between the New York City Department of Hospitals, District Council #37 of the American Federation of State, County and Municipal Employees AFL-CIO, the Social Development Corporation and the New York City Community College's Division of Continuing Education and Extension Services.

The program evolved out of a need for improvement in patient services throughout the municipal hospital system, and a concurrent need to provide career mobility for the many nurses-aides employed by the New York City Department of Hospitals.

Courses were offered in Ambulance, Inhalation, Obstetrical and Operating Room Technology. It was originally planned that there would be eleven (11) four (4) week cycles starting January 2, 1968 and ending November 8, 1968. However, in order to accommodate a number of employees who had not been able to attend the classes earlier in the year, an extra cycle commenced November 18, 1968 and terminated December 13, 1968.

Upon completion of the program a total of seven hundred and fifty one (751) employees had completed one of the four courses.

The curricula was designed to meet the needs of both the Department of Hospitals and the employees. General Education was made a component of the course in each area of instruction. The course content consisted of not only pertinent technological material, but also human relations, labor-management relations, and basic skills remediation.

The courses were to be made available to those nurse-aides in the municipal hospital system who were working in the areas of Ambulance, Inhalation, Obstetrics or the Operating Room. (See Appendix G). Since completion of the program would provide the employees with a higher step on a career ladder, the course was limited to those who had received their basic orientation and who were presently working in any one of the aforementioned areas.

The course consisted of sixty (60) hours of classroom instruction over a four (4) week period. The employee attended a three (3) hour class each weekday for four (4) weeks.

Attendance was on a released time basis. Class size was held to an average of ten (10) students, in order to permit the instructor to give each student an adequate amount of attention and support.

The training program was developed with the clear understanding that the student was expected to demonstrate growth and meet the requirements for successful completion of the program. No student was to be

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passed automatically. Upon successful completion of the course the trainee was to be awarded an increment of $240 per annum, a change of title from nurse-aide to technician and would be permitted to wear a white uniform in place of the blue nurse-aide uniform (interestingly enough, an important morale factor).

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PURPOSE OF THE STUDY

Concern as to the effectiveness of the recently completed Hospital Employees Technological Training Program led to this study

Both the New York City Department of Hospitals and the New York City Community College were particularly interested in determining the effectiveness of the program, identifying the problems encountered in the operation of the program, and ascertaining what was learned from the experience in order to design more effective future programs.

From the outset it was apparent that in an eight (8) week period of time we could not conduct as extensive a study into the above areas as might be desired. However, it was felt that through cooperation and concerted effort on the parts of both agencies, valuable data could be gleaned from even a short-term evaluation study.

METHODS OF EVALUATION

It was the decision of the evaluation staff that the goals of the study could best be accomplished through the use of 1) a mail questionnaire, 2) interviews with the Directors of Staff Education, Service Supervisors, and employees at selected hospitals, and 3) instructors' reports.

1. Mail Questionnaire (see Appendix A1).

The evaluation team constructed a questionnaire which was sent to a random sampling of employees who had completed one of the courses. The questionnaire was concerned with gathering data on the effectiveness of the instructional program e.g., the staff, curricula, texts, audio-visual aids and classroom facilities. It also investigated the influence of the course on the employees' desire to continue their education. The respondents were not asked to sign their names. In order to determine if recency in taking the course resulted in any pattern of responses, the mailing list was divided into two groups. In the first group, the questionnaires (identified by the color white) were sent to those employees who had attended class in the first half of the program. In the second group, the questionnaires (identified by the color pink) were sent to those employees who attended class in the last half of the program.

Sampling: The name of every other employee was selected

from the class registration cards. These selected names were then divided into the two groups mentioned above.

Mailing. On January 21, 1969 a total of three hundred and sixty-five (365) questionnaires were mailed.

146	Group I
219	Group II
365	

The first mailing resulted in a return of one hundred and three (103) useable replies. Despite the pressures of time, the evaluation staff decided to undertake a second mailing. The respondents in the first mailing were selected anonymously. Therefore, one hundred (100) names were chosen from the group which were not included in the first mailing. (Fifty (50) names from the first half of the program and fifty (50) names from the last half of the program).

In the course of both mailings, seventeen (17) questionnaires were returned for insufficient address, etc., resulting in a net of four hundred forty-eight (448) deliverable questionnaires. Of this, one hundred and twenty-four (124) useable replies were received, representing a percentage return of 27.6%. (See Appendix B).

In a limited number of cases some questions were not answered, but in the opinion of the evaluation staff this did not negate the use of the particular questionnaire.

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2. Interviews with Hospital Personnel.

Interviews were handled on a structured basis, with a format developed specifically for supervisory personnel, and a separate format developed for program graduates. (See Appendices AII and AIII). The following section contains a compilation of the comments derived through the utilization of this technique. The hospitals for this phase of the study were selected primarily on the basis of the number of student participants from the respective hospital.

3. Instructors' Reports

Weekly reports submitted by the instructional staff during the course of the program, as well as post-program observations comprised this aspect of the study. (See section on Instructional Staff Reports, Page 19).

GENERAL FINDINGS

Forty (40) percent of those students responding to the mail questionnaire and/or interviewed have been with the Department of Hospitals for over fifteen (15) years. Less than one (1) percent were employed by the Department of Hospitals under two (2) years, and the remainder have been employed by the Department for three (3) to fourteen (14) years. (See Appendix C). On the basis of the information obtained from the mail questionnaire, the following general findings are offered. Data to support these statements will be found in Appendix D .

An overwhelming number of the students found the course material understandable, meaningful and appropriate to their job. Most of the students thought that insufficient time was allotted for the course.

A significant percentage of the students felt that the medical aspects of the course helped them to understand their jobs better. The majority of the students stated that they found the material presented in the General Education area (Human Relations, Mathematics, Reading Comprehension) to be very valuable. Of the remaining students, most of them stated that the non-medical aspects of the course were of some value; only a few respondents stated that these aspects of the course were of little value.

Eighty-one (81) percent of the respondents found the texts used

in class to be very helpful. (See Appendix D for breakdown for each area). The quantity of instructional material that was distributed in class was thought to be sufficient by seventy-nine (79) percent of the respondents. Ninety-five (95) percent of the students stated that the room used for class was quiet with few distracting noises.

Of the replies received there was a strikingly favorable response on the part of the respondents to the instructor who taught their course.

The course has encouraged ninety-seven (97) percent of the respondents to consider furthering their education. Of this number, thirty-three (33) or twenty-seven (27) percent have actually taken a positive step toward this goal.

The steps taken are varied and include self study — eleven (11), study for high school equivalency - nine (9), two (2) are awaiting admission to college, three (3) are presently students of New York City Community College and three (3) have applied for admission to Nursing School, Practical Nursing, Broadcasting School and a Manpower Inhalation Therapy program.

In addition to the above, one hundred and twenty-one (121) individuals, or ninety-seven (97) percent, have indicated that they were interested in attending other courses similar to the one they attended.

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The subjective nature of some of the questions dealing with likes and dislikes made statistical reporting difficult.

Most of the respondents indicated that what they liked best about the course was its content, while many stated they liked "everything" about the course and a substantial number indicated that "the method of teaching" was what they liked best. In response to what was liked least about the course the majority indicated that it was "too short." Many stated that there was "nothing" about the course that they did not like. A significant number of respondents thought the course could be improved if it were longer and the content had more depth. Some felt that showing more films, including practical work with the course, better classrooms, more discussions, and more doctors' lectures would be improvements.

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Interviews

In addition to the findings reported above (mail questionnaire) personal interviews were conducted with supervisory personnel and staff at selected hospitals. (See Appendices AII and AIII). The following comments were obtained about the four (4) specific programs:

Ambulance Supervisors

The Ambulance Service supervisors were interviewed at several hospitals. When asked if any changes were observed in the employee's job performance or attitude toward his/her job, co-workers and supervisors generally reported that the nature of their relationship with the employees precluded evaluation. One supervisor remarked, however, that since taking the course, the ambulance technicians seemed more independent and more vocal.

The course content evoked no significant comments. For the most part, the class schedule that was utilized did not pose a serious problem at these hospitals. In one situation, some staffing problems arose because the supervisor was not made aware of the program until August; in another, lack of replacements while the employees were in class was a problem. The following suggestions were offered by the supervising personnel of the Ambulance Service:

1. train ambulance drivers so that they may administer first aid

2. conduct class after 6 P.M.

During an interview, one (1) supervisor commented upon the association of his hospital with the New York City Community College. He remarked that the employees need identification with the College, that generally speaking, the association was "good" for the hospital, and in the long run it was more efficient for the hospital to have the College conduct the training program.

Supervisors interviewed generally indicated that program graduates were utilized as previously.

Interviews with the Ambulance Staff

Almost all of the employees who were interviewed felt that as a result of taking the course their knowledge of the job had increased, they felt more competent and could perform more effectively. When questioned as to whether they had received a change in their job responsibility, the unanimous response was negative. The majority of the Ambulance Service employees have had a change of title from "Nurse-Aide" to "Technician."

INHALATION

Interviews with Inhalation Therapy Service Supervisors

These supervisors observed that since taking the course the employees did in fact perform their job more competently, asked more questions, and seemed to be aware of the importance of their jobs and roles. The course content was thought to be relevant and adequate. One supervisor indicated that in addition to the Inhalation Technology course that was given, a more advanced course was needed. This advanced course would include more on the dangers of humidification, technical details, Physiology and Physics. The schedule of classes seemed to be satisfactory. The suggestion was made that staffing and coverage would be less a problem if classes were given all day for a given period of time rather than having classes one-half of the day and work the remainder of the day. There was no indicated that any changes in the utilization of the inhalation service employees had occurred.

Interviews with Inhalation Staff

All of the employees who were interviewed were pleased with the course, generally, and felt more comfortable and knowledgeable about their jobs since their theoretical background had been increased. Some have had a change of title from "Nurse-Aide" to "Technician." Most thought the course could be improved by making it longer.

OBSTETRICS

Interviews with Obstetrical Supervisors

The supervisory personnel who were interviewed did not have the opportunity to observe the employees closely and, therefore, could not evaluate changes in the employees' job competence and performance.

The course content was satisfactory and the class schedule did not present any problems. Generally, the technology program seemed to be appreciated. As one supervisor commented, "the hospital could not have trained as effectively as the college program."

Interviews with Obstetrical Staff

Most of the employees felt that the Obstetrical Technology course had helped them in their jobs. They have better rapport with fellow workers, "understand nurses better," and feel that now they have "opened eyes" to educational opportunities.

It appears that employees in the Obstetrical Service have not had any change of title from "Nurse-Aide" to "Technician" as they all responded negatively to this question. However, as a result of taking the course, they do wear white uniforms in place of blue uniforms. Many of the OB employees felt that the nurses took advantage of them since they completed the course.

OPERATING ROOM

Interviews with Operating Room Supervisors and Directors of Staff Education

For the most part, the above personnel commented that they had not noticed any change in the employees' job competence or performance. They did comment, however, that judging from the feedback from the employees, the course served as a "refresher" and the reinforcement it provided was "excellent."

The subject matter covered in class was acceptable to those interviewed. Some thought more Anatomy should be added and one supervisor felt that more stress should be placed on Operating Room Organization and the technician's role.

On the whole, the class schedule was satisfactory. At one hospital, the initial implementation of the class schedule was very difficult but by revising the time schedule most of the problems were resolved.

One director of Staff Education expressed the opinion that the program not only brought out the employee's need for continuing education, but it also strengthened the hospital's training program.

Interviews with the Operating Room Staff

The employees who were interviewed all felt that the course had helped them in their jobs. Several commented that they now understood their role better, know "why things are done" and observe the professional staff more than previously.

Several stated that their title had been changed from "Nurse-Aide" to "Technician", one was not sure, and one said his title was still the same.

As in other areas, most thought that the course was "too short" and would be improved if it were a longer course.

INSTRUCTIONAL STAFF REPORTS

The following is a summary of comments from the instructors in each specific area:

Ambulance Program

Because there were more students in the Ambulance Area than other areas, it was necessary to conduct, simultaneously, two (2) classes in Ambulance Technology throughout the entire program.

Educational Background

The educational background in each class varied from two (2) years of primary school to three (3) years of college.

> The Nelson Reading Test revealed that approximately 20% of the students were reading below the third grade level and 60% of the students were reading at levels between the third and sixth grade, while the remaining 20% were reading at levels up to and above the ninth grade. This educational gamut presented a challenging and sometimes frustrating situation in regard to the quantity and spped at which material could be presented and absorbed.[1]

Age

The range of ages in both classes was twenty (20) to seventy (70) years.

Student Attitudes

Initially, some of the students came to the course with pre-conceived ideas and attitudes.

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[1] Ambulance Instructor's Report - A

> Many of the students were told...if they did not attend they would lose their jobs. As a result, the initial attitudes of many students varied from hostility to extreme apprehension. After the purpose of the program was explained this problem was resolved.[2]

"Some of the students started off very belligerently because they felt inadequate, but after a few days their attitudes changed."[3]

Curriculum

The curriculum was designed to provide the student with a course that was a well rounded educational experience, rather than a course concerned only with technical matters. Classes were offered in reading and mathematics-in addition, specific lectures such as the Legal Aspects of Ambulance Technology were included.

> Material presented in the technical area of instruction was concentrated in Anatomy and Physiology, and then correlated with the functions the students were expected to perform on the job. The bulk of the material presented in class was taken from college and professional nursing books. The background information led to greater interest and more conscientious attitudes in their work. Most importantly, this type of instruction motivated many students to seek additional schooling. Several students have since enrolled in nursing programs at various colleges, many are now working to acquire a high school diploma and many others have expressed a keen desire to do so.

Many students became more interested in self improvement and about ten (10) percent of the students filed papers to take the High School Equivalency Test. As they discovered they could study and learn they became more self-assured.

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2 Ibid, p. 2

3 Ambulance Instructor"s Report - B

Both instructors pointed out that at many hospitals there was virtually no reinforcement of what was taught in class.

Achievement Standards

> An examination was given on the first day of each cycle. The main purpse of this test was to let the students know I expected a great deal from them. I did. This exam also enabled me to determine early in the cycle the areas of weakness, and therefore arrange my material accordingly. During the course all of the students were expected to pass three (3) tests. The examinations were both objective and essay type, and they were designed to be difficult. Most of the questions were taken from college and nursing texts. I did not give the test, however, until I was sure that everyone would pass. This meant repeating important material day after day for the students who learned at a slower pace, and at the same time enlarging on the material to keep the interest of the brighter students. After achieving well on the first test, as all of them did, their self-confidence was built up to a satisfactory level. Most of the students looked forward to taking tests after this. The exams proved to be a real morale booster. Each student was given a numerical grade, and consequently a healthy competitive spirit was born. This, too, proved to be a motivating factor. Two students had difficulty taking written examinations because of deficient educational backgrounds. They were given oral examinations, and performed well.[4]

The following is an excerpt from one (ambulance) instructor's report:

> The attitude of the students can best be summed up by a remark made by one of the students, 'I can't believe it. I thought I was retarded. A teacher told my mother that I was retarded. Now I'm going to go on and complete my education.' Although no other student expressed such

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4 Ibid, p. 5

thoughts verbally, it was evident that almost all of them believed themselves to be intellectually inferior and incapable of any meaningful learning. The number of students who have since gone on to further their education indicates that some progress in combatting these negative attitudes did take place. The change of attitudes was most noticeable in the 20-30 year old age group. The instructors taught two (2) three (3) hour classes each day. This proved to be a tremendous work load for them, especially in view of the complex problems previously mentioned. My experience with the program has been rewarding, but it has left me physically, mentally and emotionally drained. I can only hope that now that we have completed our part the students will see some tangible evidence of their upgrading. [5]

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[5] Ibid, p. 6

INHALATION TECHNOLOGY PROGRAM

Demographic Data

The group of trainees in this area are representative of various backgrounds, education, length of service and age. It is also interesting that, although all were classified as nurses' aides, they performed completely different duties. The duties performed depend on the specific hospital involved. The one thing that all had in common was great eagerness to grasp the materials presented. The length of service ranged from nine (9) months to twenty (20) years. It became very obvious early in the program that length of service of just being a Nurses' Aide had very little meaning. The duties and technical knowledge of the trainees varied from one hospital to another.[1]

"The ages ranged from twenty (20) years to sixty (60) years. This age difference proved no problem because of their eagerness to learn."[2]

"The character of the program was one of warm cooperation. Those responsible for assigning classrooms and equipment were always willing to help."[3]

Curriculum

The curriculum included lectures in Inhalation Therapy, Cardio-Pulmonary Resuscitation, a lecture on Instrumentation (equipment), arithmetic and reading remediation, Human Relations, and talks by hospital administrators and union

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1 Inhalation Instructor's Report
2 Ibid, p. 3
3 Ibid, p.2

representatives. The search for a manual or textbook that was adequate for the course and for the trainees proved fruitless. An attempt was made to overcome this with supplementary notes given to each student, the use of visual aids, movies, etc. Cardio-Pulmonary Resuscitation lectures and demonstrations were given by an anesthesiologist. The lecturers in this area always extended themselves, time wise, which proved very beneficial to the trainees. Human Relations was also included in the program. This was an effort which proved stimulating and informative. Since most of the trainees were not aware of many union benefits the labor relations portion of the program usually proved enlightening.[4]

Achievement Standards

Some difficulty did arise in evaluation of the trainees' ability to comprehend the material presented. Written tests proved inadequate, since the terminology used often presented a spelling problem. On the other hand, verbal quizzes proved a more realistic guide for evaluating ability. As a result, a vocabulary drill was a vital part of the program.[5]

4 Ibid, p. 2
5 Ibid, p. 3

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OBSTETRICS

The number of students who attended the Obstetrical Technology course was relatively low, forty-six (46) to be exact. Because of this, the course was taught for only five (5) cycles.

Demographic Data

Educational background ranged from the eighth grade to some college work.

The Obstetrical class was composed totally of females.

The age range was from the middle twenties to the early sixties.

Implementation

Generally speaking, the classroom facilities were adequate. Equipment and other accommodations were usually available.

Curriculum

The subject matter included Anatomy and Physiology, conception and development of the fetus, care of the patient in labor and delivery, and immediate post-partum care. In addition to this, classes in mathematics, human relations and labor-management relationships were given.

Achievement Standards

Oral and written tests were given, usually on a weekly basis. In addition to this, homework assignments were given, graded and returned to the student.

OPERATING ROOM

In order to accommodate the expected number of students in the Operating Room course it was necessary to conduct two (2) classes simultaneously for several cycles. During cycles 9, 10 and 11, two (2) classes in Operating Room Technology were held.

Demographic Data

The range of educational background was from five (5) years of elementary school to two (2) years of college. The age range was from twenty (20) to sixty (60) years.

Selected Problems

Generally speaking, the classroom facilities for the Operating Room Technology course were adequate. However, one instructor did report that:

> The lack of well ventilated classrooms during the summer (hot) months made it difficult for students who worked all morning and traveled in hot trains and buses to give their full attention in class for three (3) hours.[1]

Curriculum

> The program of study and material was adjusted to the student's ability to read, write and spell, as well as the amount he could comprehend in a given time. Materials used in addition to the manual given each student were typed sheets on specific subjects of

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[1] Operating room Instructor's Report, p.3 - A

> interest such as Anatomy and Physiology, Microbiology and Operating Room techniques. Visual aids were acquired from various sources and included models of the heart, lungs and bone-joints. These proved to be of great interest to the students. Films on varied subjects related to Operating Room techniques and procedures were found to be most informative. Projectors at most hospitals were easily obtained. The guest lecturer in human relations was of great interest to the class. Demonstrations and lectures in Cardiac Resuscitation and Artificial Respiration were most instructive. The majority of the students were appreciative of the remedial classes but felt that three (3) to six (6) hours of instruction were insufficient.[2]

Various teaching techniques, such as role playing, the "buddy" system and tutoring were employed in the implementation of the curriculum.

Achievement Standards

"Oral and written tests were given on a weekly basis, in order to evaluate the level of accomplishment and to determine a guide for passing."[3]

The instructor also included oral and written tests. Her written tests included the use of essays, true and false, associations and completion of diagrams. These tests proved satisfactory to the students and the instructor as well.

The following are excerpts from the instructor's evaluation of the program:

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[2] Operating Room Instructor's Report, - B

[3] Ibid, p. 2

On the whole, the students were extremely inspired. In many the desire to continue learning was rekindled... many ventured into areas of study. The consensus was that the course was too short, but beneficial, necessary, and interesting. The students received a deeper understanding of their specialties and reasons for many of the actions they performed in the past. Now, with the final results, they feel as if enlightenment is their armor, and they return to their jobs in a better position to determine when and how to apply the 'technical' skills...Personally speaking, I too, thought that the program was an absolute necessity for people functioning in intricate areas...these students were in dire need of the material presented them. Many realizing this, worked diligently with me in order to grasp all that was available. In this perspective, the program was a tremendous success. Frustration was at a peak due to the limited sixty (60) hours for teaching, and the vast amount of material to be taught. The students were encouraged to take notes and visual aids were frequently used. The strenuous weight of a six (6) hour teaching day was practically unbearable for instructors. Many of the days could be depicted as overtaxing. Programs had to be changed quickly to accommodate the type of student attending classes, since this information was not available beforehand. New material had to be acquired and checked out for preparation and presentation on the instructor's own time, since six (6) hours of class and time taken for travel to and from various hospitals left only weekends after five (5) days of the week were used for classes...The majority of the students seemed most interested in their work and truly appreciated the chance to attend this class. They stated that the material proved interesting and informative as well as instructive. All would like to attend more classes of this nature and hoped it could be arranged at the hospital. A number of the students are planning to acquire their high school certificate and a few signed up for the Practical Nurse Course.[4]

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4 Ibid, p. 3

CONCLUSIONS

As mentioned earlier in this report, the Hospital Employees Technological Training Program was born out of a need for better patient services in the municipal hospital system and a need to provide career mobility for the many nurses' aides in the system who render patient services. The program was designed to meet these needs. The ultimate goal of the study was to determine the degree to which the program fulfilled those needs.

It was felt that relevant conclusions could be made through a study of student responses to the instructional course, of supervisors' observations of the student-employee and an investigation of the impact of the program on the employees' performance.

The results of the mail questionnaire and the personal interviews with the student employee show a strikingly favorable response to the instructional program.

Recency in taking the course did not produce any special pattern of responses.

From the students' point of view, the general consensus seemed to be that they now feel more knowledgeable about their jobs, are able to perform better and thus provide better services to the patient. Exposure to

the program apparently has stimulated many to consider furthering their education and some have actually begun to do this.

The most outstanding criticism by the students was that the program was too short. In view of the diversified background of the employees and the nature of the course content, a longer course would seem to be indicated. It is also indicated that in order to obtain maximum educational benefits from the course the student-employee should not be involved in activities for more than eight hours per day, including work and classroom activities.

We were unable to fully ascertain whether there were changes in the employees' job performance from the supervisors' point of view. In one area the supervisor thought there was a definite improvement, while in another area the supervisor did not think there was any difference in the employee who had attended the course.

In other areas, the supervisors could not offer any comment regarding job performance, as they did not have the opportunity to supervise employees closely.

RECOMMENDATIONS

1. Students should attend class on a released-time basis, with the combination of work and school not to exceed a total of eight (8) hours per day.

2. Effective liaison must be established and maintained between training and employing agencies in order to avoid scheduling, job coverage, facilities and other related problems, and to maximize reinforcement of learning.

3. Upgrading in responsibility, as well as in job title and salary, must be an outcome of training programs, and these changes should be applied uniformly throughout the system.

4. Employees should be provided with more on-the-job supervision and guidance.

5. Job descriptions should be devised and used. This would help to clarify any confusion about what the technician can and cannot do.

6. Maximum class-contact time for instructors should not exceed twenty (20) hours per week, in order to permit adequate time for lesson preparation, materials development, supervisory conferences, etc.

7. Basic education, including mathematics, speech and reading remediation should constitute a significant component of any future upgrading efforts.

8. Greater emphasis should be placed on the collection of data regarding student readiness and achievement, individual instructor and total program effectiveness, in order to provide a sound base for meaningful evaluation.

9. Funds for training programs designed to upgrade employees should be provided on a continuing basis through the pertinent agency's budget. Excessive reliance should not be placed on the acquisition of funds from outside sources e.g. government grants, private foundations, etc.

10. There is an important role for Higher Education to play in the education and training of government employees who lack the necessary credentials for entrance into traditional college programs.

APPENDICES

New York City Community College
OF THE CITY UNIVERSITY OF NEW YORK • 300 JAY STREET, BROOKLYN, N.Y. 1120

DIVISION OF CONTINUING EDUCATION
AND EXTENSION SERVICES

January 20, 1969

Dear Student:

During the past year you attended a course in a particular Health Technology, which was conducted by the New York City Community College for the Department of Hospitals. It is the desire of the College to continuously improve its instructional programs. To accomplish this, we have found a poll of student opinion to be very helpful. Would you please fill out the enclosed questionnaire? It is not necessary that you sign your name. Please return the questionnaire in the stamped, self addressed envelope as soon as possible.

Thank you for your cooperation.

Frederick Klanit
Chairman, Division of Science

1) Please check the appropriate space
Male ___ Female

2) I have been employed by the Department of Hospitals for:
0 - 2 years
3 - 8 years
9 - 14 years
15 years or more

3) Indicate which technology course you attended
Ambulance technology
Inhalation technology
Obstretical technology
Operating Room technology

Administered by the ... Education ... the State of New York under ... program of the State University of New ...

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4) What did you like best about the course?

5) What did you like least about the course?

6) In your opinion, how might the course be improved?

7) Has the course encouraged you to consider furthering your education?
_____Yes
_____No

8) To date have you taken any positive steps to further your education?
_____Yes
_____No

8a) If yes, explain what you have done.

Please place an X before the statement that best describes the course you attended.

9) The subject matter (medical aspects) of the course was
_____too elementary
_____understandable
_____too complicated

10) Most of the subject matter (medical aspects) covered in class was:
_____meaningful and appropriate to my job.
_____Not meaningful nor appropriate to my job.

11) The amount of time allotted to cover the course material was:
_____Insufficient
_____Adequate
_____More than necessary

12) The medical aspects of the course have:
_____ helped me to understand my job better.
_____ not helped me to understand my job better

13) The non-medical aspects of the course (Human Relations) proved to be:
_____ of little value to me
_____ of some value to me
_____ very valuable to me

14) The review of Mathematics proved to be:
_____ of little value to me
_____ of some value to me
_____ very valuable to me

15) The review of reading comprehension proved to be:
_____ of little value to me
_____ of some value to me
_____ very valuable to me

16) The textbook used in the course was:
_____ of little value to me
_____ of some value to me
_____ very valuable to me

17) The quantity of instructional materials distributed in class was:
_____ sufficient
_____ insufficient

18) The room used for class was:
_____ quiet with few distracting noises
_____ occasionally noisy
_____ frequently noisy

Please check (✓) the box that best describes the physical conditions in your classroom:

	Good	Fair	Poor
19) Ventilation			
20) Lighting			
21) Size of Room			
22) Seating facilities			
23) Blackboard facilities			

The following are statements concerning your instructor. If you agree with the statement please circle "Agree," if you disagree, circle "Disagree."

24) The instructor demonstrated a sincere interest in the student.
Agree Disagree

25) The instructor was sympathetic to the goals of the training program.
Agree Disagree

26) The instructor generally presented well-prepared lessons.
Agree Disagree

27) The instructor made clear and meaningful homework assignments.
Agree Disagree

28) The instructor was fair in grading the students.
Agree Disagree

We are interested in how you rate your instructor in the following characteristics. Please check (√) the box that best describes your instructor.

	Good	Fair	Poor
29) Ability to present the subject matter in a clear, logical way.			
30) Knowledge of the subject matter			
31) Ability to understand the student			
32) Willingness to help the student			
33) Ability to stimulate the student to extra effort			

34) Are you interested in attending other courses similar to the one you attended? _____Yes _____No

35) If yes, please check the types of courses which you would like to attend.
_____General Education (English, Mathematics, etc.)
_____Health technology
_____Other - please specify

STUDENT-EMPLOYEE IN-PERSON INTERVIEW GUIDE

APPENDIX A II

1. What do you think of the technology course you attended?

   Understanding of role

   Feel more competent

   Perform more effectively

2. What do you think about the teaching techniques used in class?

   Subject matter presented clearly

   Level of understanding

   Material added

   Material omitted

3. What course activity was most helpful to you? (lecture, demonstration field trips, etc.)

4. What do you think about the remediation classes which were part of the course?

   Content helpful

   Remediation materials

   Teacher effectiveness

5. Since taking the course have there been any changes in the tasks you perform?

6. Have any other changes occurred?

   Change of title

   Change of salary

   Change of uniform

7. In your opinion how might the course be improved?

SUPERVISORY PERSONNEL IN-PERSON INTERVIEW GUIDE

APPENDIX A III

Length of time in present Supervisory position:

1. What have you observed in the employees who have attended the technology course?

   Job competence

   Theoretical knowledge

   Initiative

   General attitude toward job

   Ability to work with co-workers

   Ability to relate to supervisors

2. What do you think about the subject matter covered in class?

3. In what areas do you think more stress should be placed?

4 What do you think of the class schedule that was utilized?

Planning time

Coverage when employee was in class

Hours class was offered

Suggestions

5. Have there been any changes in the utilization of the employees who attended the course?

6. (For Directors of Staff Education only). Has the technology program had any effect on your over-all in-service teaching plan?

APPENDIX B

RESPONSES TO STUDENT QUESTIONNAIRE GROUPED BY PROGRAM

	Ambulance	Inhalation	Obstetrics	Operating Room	Total
Number of Graduates	319	172	46	212	749
Number of Questionnaires Mailed	206	117	23	102	448
Number of Replies	52	18	9	45	124
Percent returned	25.2	15.3	39.1	44.1	27.6

APPENDIX C

EMPLOYEES LENGTH OF SERVICE

Number of Years Employed by the Department	Number of Employees
0 - 2 years	13
3 - 8 years	31
9 - 14 years	39
15 years and over	56
Total	139

N.B. the above information was obtained from the Mail Questionnaire and from personal interviews

APPENDIX D

TABULATION OF MAIL QUESTIONNAIRE RESPONSES

QUESTION	Number Answered	Per Cent
The subject matter (medical aspects):		
too elementary	7	6%
understandable	116	94%
too complicated	0	--
The subject matter (medical aspects) was:		
meaningful and appropriate to my job	122	98%
not meaningful and appropriate to my job	2	2%
The amount of time allotted to cover the course was		
insufficient	81	68%
Adequate	37	32%
The medical aspects of the course have:		
helped me to understand my job better	120	98%
not helped me understand my job better	3	2%
The non medical aspects of the course Human Relations proved to be :		
of little value to me	7	6%
of some value to me	48	44%
very valuable to me	53	50%
The review of Mathematics was:		
of little value to me	9	9%
of some value to me	42	40%
very valuable to me	53	51%
The review of reading comprehension proved to be:		
of little value to me	8	7%
of some value to me	32	29%
very valuable to me	69	64%
The textbook used was:		
of little value to me	0	--
of some value to me	20	19%
very valuable to me	87	81%
The text for the Ambulance Technician course was:		
of little value to me	0	--
of some value to me	8	19%
very valuable to me	35	81%

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QUESTIONS	Number Answered	Per Cent
The Operating Room text was:		
of little value to me	0	---
of some value to me	4	10%
very valuable to me	33	90%
The Inhalation Therapy text was:		
of little value to me	0	--
of some value to me	7	37%
very valuable to me	12	63%
The Obstetrical Technician text used was:		
of little value to me	0	
of some value to me	1	12.5%
very valuable to me	7	87.5%
The quantity of instructional material distributed in class was:		
Sufficient	79	79%
Insufficient	21	21%
The quantity of material distributed in the Ambulance Technician course was :		
Sufficient	35	73%
Insufficient	13	27%
The quantity of material distributed in the Operating Room Technician course was :		
Sufficient	30	90%
Insufficient	3	10%
The quantity of material distributed in the Inhalation Therapy Technician course was :		
Sufficient	8	73%
Insufficient	3	27%
The quantity of material distributed in the Obstetrical Technician course was :		
Sufficient	6	75%
Insufficient	2	25%
The room used for class was quiet with few distracting noises :	107	95.5%
occasionally noisy	4	3.5%
frequently noisy	1	1%
Concerning the physical condition of the classroom the ventilation was :		
Good	79	74%
Fair	23	22%
Poor	4	4%

QUESTIONS	Number Answered	Per Cent
The lighting was:		
Good	91	87%
Fair	14	13%
Poor	0	--
The size of the room was		
Good	71	70%
Fair	24	23%
Poor	7	7%
Seating facilities were:		
Good	77	75%
Fair	17	16%
Poor	9	9%
Blackboard facilities were		
Good	80	76.1%
Fair	12	11.4%
Poor	13	12.5%
Characteristics of Instructors		
Ability to present class material in a clear logical way		
Good	118	96%
Fair	4	3%
Poor	1	1%
Knowledge of the subject matter		
Good	111	90%
Fair	11	9%
Poor	1	1%
Ability to understand the student		
Good	115	96%
Fair	5	
Poor	0	--
Willingness to help the student		
Good	119	99%
Fair	1	1%
Poor	0	
Ability to stimulate the stuent to extra effort		
Good	114	96%
Fair	5	4%
Poor	0	

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	Number Answered	Per Cent
Statements concerning the Instructors		
"Demonstrated a sincere interest in the student"		
Agree	110	100%
"Was sympathetic to the goals of the training program."		
Agree	104	95%
Disagree	6	5%
"Made clear and meaningful homework assignments."		
"Was fair in grading the students."		
Agree	117	99%
Disagree	1	1%
Has the course encouraged you to consider furthering your education?		
Yes	118	97%
No	4	3%
Have you taken any positive steps to further your education?		
Yes	33	27%
No	89	73%
Interest in attending other courses		
Yes	121	97%
No	4	--
Type of courses		
General Education	63	52%
Health Technology	58	48%

APPENDIX E

Number of Participants in the Training Program

Grouped by Hospital and Specialty

	Ambulance	Inhalation	Obstetrics	Operating Room	Total
Bellevue	23	35	5	13	76
Bronx Municipal	17	14	4	31	66
City Hosp. at Elmhurst	18	3		20	41
R. S. Coler	--	10		4	14
Coney Island	21	8		18	47
Cumberland	24	7	8	11	50
Delafield	11	8		4	23
Ewing	--	2		4	6
Fordham	16	4	10	15	45
Goldwater Memorial	--	-		--	--
Greenpoint	16	1	3	2	22
Harlem	30	8		18	56
Kings County	49	33	6	21	109
Lincoln	25	4		3	32
Metropolitan	26	10	2	13	51
Morrisania	17	2		5	24
Queens Hosp. Ctr.	15	16	8	27	66
Sea View	11			--	11
Sydenham	--	7		5	12
Total	319	172	46	214	751

VT 008 514
Kingston, R.D.
Allied Health Education. Continuum and Consortium.

California Univ., Los Angeles. Allied Health Professions Project
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Established educational institutions are being encouraged to develop health worker training programs formerly administered by hospitals. However, the problems are numerous: (1) Universities are dedicated to programs of at least baccalaureate level, (2) Community colleges often lack the financial support and expertise required, (3) Adequately trained faculty are in short supply, (4) High school students are not attracted to health occupations because many offer only a dead end with little opportunity for advancement from one skill level to another, (5) High school counselors find it difficult to keep abreast of developments, (6) Institutional segregation of programs (for example: associate degree programs in community colleges and baccalaureate programs in senior institutions) complicate upgrading, (7) Traditionally, each professional area has developed its own accreditation standards so that efforts involving core curriculum frequently run into roadblocks. A continuum is recommended which would begin with occupational information in the junior high school, continue with further exploration and training for entry level positions at the high school level, move to higher level training using core curriculum at the associate degree level, and provide for progression to the baccalureate and higher degrees. The continuum should be supported by a consortium including the public schools, community colleges, senior educational institutions, medical schools and hospitals. (JK)

VT 008 514

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ALLIED HEALTH EDUCATION - CONTINUUM AND CONSORTIUM

BY

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APRIL 1969

VT008514

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ALLIED HEALTH EDUCATION - CONTINUUM AND CONSORTIUM

R. D. Kingston

Near the turn of the century, as techniques in medical care and hospital services began to improve with increasing momentum, it became obvious that the doctor need not be the only individual involved in the delivery of health care. By the year 1900, there was one auxiliary medical worker for every physician. Most were nurses, trained on the job in hospitals and professional offices, and reflecting an ever increasing variety of duties and responsibilities.

As medical practice gained in sophistication, and specialities emerged, ancillary personnel also diversified, and new skills were conceptualized. In the last sixty-nine years we have come a long way from the "one man" unassisted practice. At present, in addition to an increasing number of physicians and dentists, there are over one hundred and twenty different occupational classifications within the allied health fields.[1] It is estimated that the ratio has increased to fourteen auxiliary workers for every doctor, and it is projected that by the year 1975, the ratio will near thirty to one.

This ever expanding demand for more and better trained health workers provides an immediate challenge for the educational institutions charged with the responsibilities of developing and improving training programs for these fields. Hospitals have traditionally been involved in these educational projects; but as the cost of hospital care continues to increase

owing to more sophisticated methods and technologies, a hospital can no longer charge the total cost of education to patient care. As a result, established educational institutions are being encouraged to develop these badly-needed training programs. Unfortunately, however, this encouragement frequently falls on uninterested ears. Universities that assume roles in medical training are influenced by an "ivory tower" dedication to doctorate level, or at the very least, baccalaureate curricula. On the other hand, the community and junior colleges all too often lack the financial support and expertise to develop in the more esoteric of the allied health training philosophies. The faculty and facilities involved in a single educational pursuit in the health fields are usually not indigenous to the traditional liberal arts campus. The difficulties in recruiting adequately trained faculty, the costs of providing highly specialized physical facilities, and scarcity or unavailability of required clinical affiliations frequently are deterrents to the creation of new teaching programs or the improvement of existing ones.

These problems seem to outline the challenge for those concerned with supplying the manpower necessary for the delivery of optimum health care in the future. In addition to these general difficulties, a few specific problems are obvious to even the casual observer.

1. Adequately Trained Faculty is in Short Supply. Educational programs in the health field require highly specialized faculty. Instructional staff must have not only the knowledge and skill necessary to perform as competent practitioners, but also an orientation towards modern educational and evaluation methods. The programs that are established for the preparation of such teachers are too few in number.

2. Recruitment of Students. The high school student of today is much more occupationally motivated than in past decades; he is very sensitive, however, to future opportunities within his selected field. A job as such is no longer adequate for a perspective student. He has every right to look into the future with a long-term career in mind. In many cases in the health fields, the educational process provides only a dead end, with few possibilities for advancement from one skill level to the next without costly and unnecessary repetition of instructional or clinical experience or both.

As a result, highly skilled people, often with years of hospital experience, are frequently lost to the health work force altogether, because higher salaries in industry or business may be more tempting than the prospects of having to "start over" in order to move to higher levels of responsibility within their fields.

High school counselors, while adequate to the task of general counseling, are unable to keep up with the rapid advances in allied health education. With well over one hundred and twenty different

allied health job classifications, it seems impossible for a counselor to guide or advise a student regarding an occupational field about which he himself may never have even heard.

3. Educational Limitations. While many educators are looking towards the cluster concept of allied health education, i.e., forming organizational units which contain several compatible programs, which can share facilities, faculty, and laboratory and clinical space, institutional or legislative restrictions often obviate total unification of allied health programs. In many states, as an example, it is contrary to legislative decisions for a senior institution to offer programs which lead to an Associate Degree. At the same time, no junior college is permitted to offer the Baccalaureate Degree. While this segregation of program levels may be justifiable in some educational areas, it creates an unfortunate situation for educators in the allied health fields. It would theoretically be possible to establish effective training programs involving many allied health curricula which could cross these "jurisdictional" boundaries. A properly functioning career ladder in nursing, medical technology, physical therapy, etc., could be effected by the establishment, on one campus, of curricula at 2, 3, or more different levels, with provision for the transfer of credits from one level to the next as the student moves upward in his occupational studies.

4. Accreditation Standards. The history of allied health education has taken almost as many directions as there are

allied health fields. Traditionally, each area of endeavor has established its own national association, professional publications, accreditation standards, and educational goals. In many cases, these establishments have been organized and developed and upgraded with little regard for other allied disciplines or for the total needs of the medical hospital communities. As a result, many attempts to provide effective training methods for more than one training program, involving a core curriculum, have run into accreditation roadblocks.

The problems that confront the educator in the fields of allied health training point up a number of goals and objectives which seem indicated for the future. Clearly, a new approach is necessary, one that will overcome as much as possible the traditional resistance to efficient coordinated training within the health fields.

ORGANIZATIONAL STRUCTURE

The first and perhaps most logical approach to organizational unity began some ten years ago at the University of Florida when a "College of Health Related Professions" was organized. This unique administrative structure provided a viable educational unit, whose prime objective was the training of allied health professionals in many different, though compatible and allied disciplines. Since that time, other educational institutions have observed the benefits derived from this approach and established their own comprehensive programs. Within the last two years a national association has been formed[2] "to provide

leadership in education for schools, colleges, divisions and departments of allied health professions and to serve as a representative and spokesman."[3] Thirteen institutions formed the charter membership, and in the short span of approximately two years, some fifty or sixty more institutions have adopted this concept.

TRAINING CONTINUUM

Further observation of the problems inherent in specialized training within the health occupations and professions has indicated a need to expand our considerations to include "a continuum of education" beginning with early exposure of students to the health fields during their formative and vocationally inquisitive years, and providing for progression through various levels to the baccalaureate and post-graduate degrees.

JUNIOR HIGH SCHOOL

Junior high school students may be introduced to the allied health fields if their counselors are adequately informed and interested. A great deal of benefit has also been derived in many areas of the country from the allied health professions "career days", held either in the junior high school or (preferably) at a central location, to bring interested junior high school students into direct contact with practicing professionals in many different health fields. The junior high school student should also be encouraged to plan his high school curriculum to include as much basic science and allied health information as possible.

HIGH SCHOOL

In the high school curriculum, it is suggested that administrators and counselors consider the possibility of including a special orientation course designed for the student who is interested in pursuing professional goals within the health fields. Experimental programs have indicated that this kind of course can be designed to accomplish two goals. The first, which would take approximately one-third of the time of a three-hundred hour course during the junior and/or senior years in the high school, would deal with basic hospital skills and basic sciences. This approach has proven effective in preparing a student with a skill at the aide or orderly level in a hospital with a minimum of on-the-job hospital training. This early skill approach to the allied health training accomplishes the following:

1. For the student who is perhaps not in an academic or financial position to attend college immediately after graduation, a skill is provided which would qualify the student for employment.
2. For the person who is interested in the health fields generally, but is not committed to a specific area of interest, early exposure to actual hospital experience would be invaluable in assisting the student to select an occupation or profession which meets his emotional and intellectual needs.
3. For the student who has committed himself to a given area which requires advanced training, the early skill

provided would allow him to secure hospital experience and employment which would assist with the financial obligations encountered during a more sophisticated training program.

The remaining two-thirds of the time spent in this course of instruction should include a survey of all the major and many of the minor allied health fields available to the student. This survey should include information regarding the educational requirements, job opportunities, and occupational responsibilities of the day-to-day practitioner within the field. This can be done by personal contact between student and acting professionals utilizing guest lecturers and field trips to hospitals, laboratories, and clinics within the area of the high school. When adequate facilities or specialists are unavailable, it is possible to utilize vicarious teaching methods involving television, radio, and other visual aids.

Student attrition in college-level programs is frequently associated with improper or inadequate placement of students into curricula for which they are emotionally or academically unsuited. Waste of resources expended on students who fail to complete a course of instruction and/or never utilize their skills and knowledge by entering the work force, contributes significantly to the high costs of training in the medically related fields.

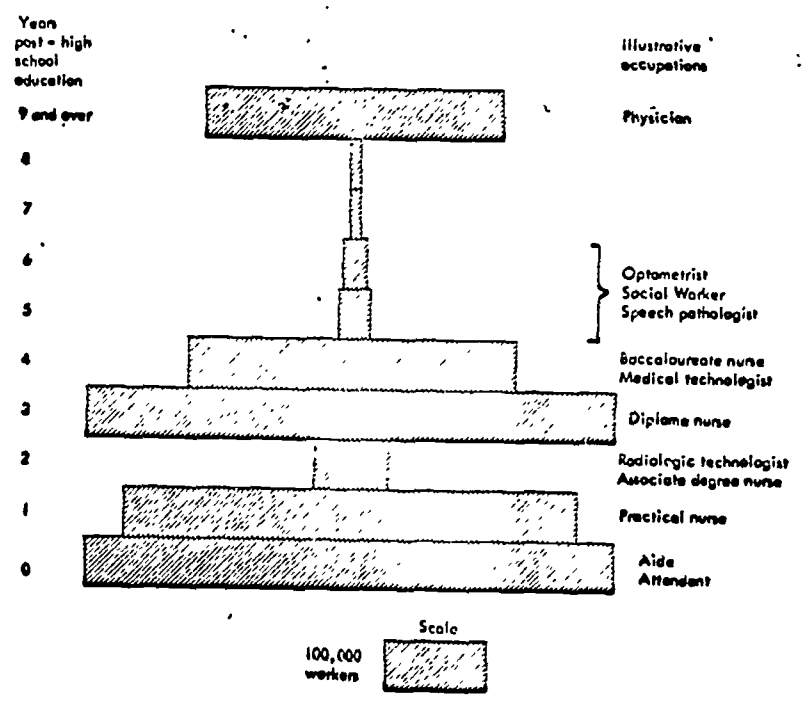
Attrition rates in college programs apparently are in inverse proportion to the quantity and quality of pre-college orientation. If a student is to have opportunity to become disenchanted with his first selection and choose another health

field (or leave the field entirely), he should make commitment as early as possible.

If this approach to counseling in the high schools is to be truly effective, the next step in the continuum also must be effective. Administrator within the allied health fields of college and university level institutions need to provide the leadership for the high schools in developing the allied health orientation programs within the high school. This can be done by establishing summer teacher institutions to provide the high schools with adequately trained and motivated teachers. The senior institution can be of great service in providing the high schools with properly produced film and television experiences, which can if necessary substitute for the field trips, guest lectures, and special demonstrations.

TABLE 1

The Medical Services Pyramid



JUNIOR COLLEGE

In terms of numbers of allied health workers, a manpower pyramid can be drawn showing that the largest numbers of ancillary people require the least amount of education. As a higher degree of specialization is required, fewer persons are needed (Table 1).[4] Generally speaking, the personnel at the baccalaureate level and

higher are finding that their contributions tend toward the supervisory levels. Training responsibilities, therefore, fall very heavily upon the institutions which offer associate degree and certificate level programs. These programs should be devised to articulate with recruitment programs in the high schools, to provide interested students with educational opportunities in the community college. Cooperation on the other end of the academic ladder, with the senior institutions also is desirable to allow for transfer of credits for students who are motivated and interested enough to pursue higher levels within a job classification.

The greatest opportunity for curriculum experimentation can be found in the Associate Degree programs. It is here that the core curriculum studies can be carried out to effect a higher degree of teaching efficienty and instructional economy. There are some aspects of training within any of the allied health fields that can be considered common to all--as examples, medical terminology and vocabulary, basic human anatomy, medical ethics, medical history, and interpersonal relationships involving those areas of human relations which are unique to the health fields. There are indeed unique problems encountered in the treatment of the sick, and an allied health student should be introduced as early as possible to the relationships between members of the health team if this approach is ultimately to suceed in the delivery of health care.

Further attempts at core development could involve nursing core material, hospital technologies core material, and dental core material. This approach, could allow for utilization of faculty, laboratory facilities and classrooms to a maximum degree of efficiency.

It also has been observed that modern teaching techniques have not been adequately applied to the training of health professionals, even though a vocational, skill-oriented training program lends itself well to such autotutorial teaching methods as dial access and instant retrievable audio and television systems. Closed circuit television teaching is also a desirable approach to teaching the health fields.

The major disadvantages that most junior colleges find in the above approach to training involve the paucity of adequately trained instructors in these fields and the relative unavailability of softwares applicable for use with the modern teaching instrumentation. A further disadvantage found on the junior college campus is the inability of the student to progress beyond the Associate Degree without unnecessary duplication of credits and instruction.

These disadvantages can be significantly reduced by active cooperation and coordination between these junior institutions and the senior institutions, which leads us to the next step in the educational continuum.

THE UNIVERSITY

The university responsibility in this overall plan would involve adequate recognition of transfer of credits from the junior colleges, to allow a motivated and academically competent student to transfer into a higher level of skill within a given professional area without the necessity of repeating classes or duplicating clinical experiences already obtained.

The senior institution could further assist in the overall planning phases by producing educational software, i.e., video tapes and other audiovisual teaching aids for use at the junior college level and in high school orientation course work.

A further service that could be provided by the university would be the training of prospective faculty members in speciality health programs for the junior institutions. In addition to supplying needed faculty, this approach would also provide another career ladder potential for junior college student and allow him to progress into a teaching or administrative position.

IN-SERVICE TRAINING

The final step in the educational continuum would be in-service training to upgrade technician skills, which is perhaps more necessary in the health fields than in many other professional or vocational areas. Medical science is progressing at such a rapid rate that it is difficult for individuals to keep up with new technologies and skills. Each medical advance creates a new set of treatment and rehabilitation problems.

With cooperation and coordination between educational institutions and hospitals, the junior and senior institutions can provide the community with adequate in-service training to help upgrade practicing members of the health team.

HOSPITAL INVOLVEMENT

No discussion of the allied health training field would be complete without including the hospital's (clinical) involvement in the continuum. While the hospital of today finds it necessary to limit educational expenditures of resourses, there is no way to avoid the reality that allied health students must have clinical experience. Here is where the adage applies; "Theory without practice is futile, practice without theory is fatal." But what is the proper balance between theory and practice and between hospital and college involvement? Should allied health programs be hospital-based with college affiliations, or college based with hospital affiliations? Inherent within these relationships are both hazards and benefits.

Since many national accrediting agencies in the health fields suggest or require college degrees, the college, as the degree-granting institution, has the obligation to maintain its standards of credit. The departmental units within the hospital often desire complete control of the educational programs within their clinical areas.

Peace is not always attained or maintained by the simple expedient of agreeing that it must be a fifty-fifty proposition. Responsibilities must be more clearly defined and assigned by

a break-down of the educational process into its component parts. For purposes of discussion, the educational process can be broken down in the following manner:

1. Identification of need for training (potential labor market, available training programs).
2. Establishing objectives
3. Developing methods
4. Evaluation

Another approach to sub-division recognizes knowledge and skills as distinct areas of training.

In order to assess the degree of participation of the hospital and/or college, these factors can be approached separately.

IDENTIFICATION OF NEED

The hospital and medical community may be in the best position to identify and document the need for a specific training program within the health field. Laws of supply and demand are very effective in pointing out to employers where shortages are most critical.

OBJECTIVES

Discussions regarding objectives require a great deal of time and thought and the needs of the prospective employer should be of prime concern. Therefore, objectives for a proposed or existing training program involving the education of hospital workers must be identified by the hospital with the assistance of the college. There should be clearly defined

statements which outline the extent of knowledge and skills necessary to perform, not only within accreditation limits, but within the needs of the hospital community as well. Of almost equal importance are the interests of the students to be recruited--training to the level necessary to meet employer requirements, and in the areas where job opportunities exist.

METHODS

While the objectives are basically the responsibility of the prospective employers and practicing professionals in the field in question, developing the training methods is largely within the expertise of educators. This responsibility should, therefore, be born largely by the college with the aid of specialists in the specific health area and in general educational methods.

EVALUATION

Evaluation, on the other hand, may very well be a fifty-fifty effort, with the college playing the role of the evaluator of knowledge and the hospital measuring achievement of skills.

CONSORTIUM

If training in the health fields is to be truly successful in providing the desired quality and quantity of personnel for hospital, medical and dental community with the most efficient use of resources, not only is a continuum indicated, but also a consortium. Total community involvement is essential, using the facilities of the public schools, junior colleges, senior institutions, medical schools and hospitals.

CONCLUSION

The methods of allied health education suggested in this article are presented only in general terms and it is understood that the final educational pattern will vary according to local needs and resources. But one thing is clear: a cooperative and coordinated educational system is essential. The source of this coordination may vary with the size, character, and location of the community; generally, the larger medical education centers are in the best position to provide the existing resources that are necessary to serve as the unifying factor in the regional allied health continuum and consortium.

To achieve this end, many of the more traditional attitudes and practices of major university medical education centers will have to be re-examined if the senior institution is to be truly effective in its supportive and coordinative role.

University administrators are beginning to realize their responsibilities to medical education in a much broader sense than the doctorate level alone. Allowing transfer of junior college credit to baccalaureate or graduate programs not only is desirable in the health fields; but is much easier to justify if the university has been involved in an advisory capacity in the early development of the junior college programs.

A final benefit which accrues as part of a planned and coordinated continuum is found when larger numbers of allied health trainees are brought into contact with the medical and

dental student. If the doctor of today is expected to assume his leadership role in the health team, his exposure to the other members of the team should be as early and as complete as possible.

It is hoped that, as the team approach to the delivery of medical care is emphasized in a community, a medical center, regional medical program or comprehenseive health planning unit will seize the opportunity to make a significant contribution to team care by assuming a position of leadership in that regional allied health training continuum and consortium.

---

[1]"Health Resources Statistics 1968"

U. S. Public Health Service Publication No. 150
Pg. 248

[2]"Association of Schools of Allied Health Professions"

[3]"By-laws of Association of Schools of Allied Health Professions"

[4]"Health Manpower, Perspective 1967"

U. S. Public Health Service Publications No. 1667
Pg. 17

VT 008 545
Procedures for Establishing Area Vocational Schools in Indiana.

Indiana State Dept. of Public Instruction, Terre Haute
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INDIANA

This document provides guidelines and procedures to assist prespective area school district officials in determining the steps required and in preparation of necessary documents for implementing the establishment of area vocational school districts in Indiana. Indiana's philosophy is that area vocational centers should be initiated, organized, and operated to strive toward fitting graduates for gainful employment and improving skills of employed workers. Continuity between the area vocational center and the home high school can be achieved through a shared-time arrangement with the student taking vocational subjects at the area school and academic subjects at his home school. Included in this document is a step-by-step procedure for approval of area vocational schools. (CH)

VT 008 545

ED042060

PROCEDURE

for Establishing

AREA VOCATIONAL SCHOOLS

VT008545

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DATE: April 28, 1969

RE: (Author, Title, Publisher, Date) Procedure for Establishing Area Vocational Schools (Indiana) December 1967

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PROCEDURES FOR ESTABLISHING AREA VOCATIONAL SCHOOLS IN INDIANA

Foreword

The passage of the Vocational Education Act of 1963 provides for the use of Federal funds to establish area vocational centers to train people for a marketable skill. Minute no. 179 of the State Board of Vocational and Technical Education establishes the guidelines for which the State Department of Public Instruction and the Division of Vocational Education may receive Federal funds for construction.

Guidelines and procedures outlined in this document constitute the instructions for implementing the establishment of area vocational school districts. These should assist prospective area vocational school district officials in determining the steps required and in the preparation of documents for seeking approval.

I. INTRODUCTION

A. Philosophy:

The preparation of young people for productive citizenship in the complex society of today and tomorrow is a tremendous task. Education for living and education for earning a living must both be considered in the educational program development of Indiana.

Foremost among the problems of education in Indiana is the fact that many schools lack both sufficient students and sufficient money to offer all the kinds of programs which are needed. Consequently, students who drop out of school or graduate without a marketable skill, the disadvantaged, and adults without marketable skill, or whose skills are obsolescent are severely handicapped both in living and in earning a living. The development of area vocational centers produces a means of overcoming these barriers.

Although area vocational centers are designed primarily to provide students with marketable skills, the additional responsibility for helping students to reach an acceptable level of basic understandings cannot be evaded.

Many educational services and programs can only be provided by cooperative action between multi-school districts. Secondary schools of an area by pooling their resources can best provide occupational and special programs to meet the needs of all students.

If the above approach can be put into effect, the "shared-time" concept can be established where the student spends part-time at the vocational facility for his vocational program and the rest of his time at his home high school for the regular academic subjects.

This "shared-time" arrangement will more nearly insure that the area vocational center is considered a part of the home high school, rather than a part from, and all citizens within the area will become a part of this vocational center.

The philosophy in Indiana is that area vocational centers can and should be initiated, organized, and operated to strive toward this two-dimensional goal. In all cases, the controlling purpose of the area vocational center is to fit graduates for gainful employment and to increase the knowledge and skill of employed workers.

B. Definitions:

"Area vocational school" is defined as a school which:

1. Has been designated as an area vocational school by the General Commission of the State Board of Education.

2. Usually includes more than one public school district.

3. Includes curriculum in at least four or more of the seven general disciplines of vocational and technical training. The general disciplines would include:

   a. Agriculture Education

   b. Business and Office Education

   c. Distributive Education

   d. Health Occupations Education

   e. Home Economics and Occupational Education

   f. Trade and Industrial Education

   g. Technical Education

   See Appendix B, Suggested Programs in Each Discipline for Vocational Education.

4. Must offer at least five or more distinct occupational areas of training.

5. Offers short-term and long-term courses ranging up to two years in length, designed as terminal training, and available to high school students; but is also for persons of post-high school age, including persons who are employed, under employed, unemployed or changing occupations, that are in need of training or retraining.

6. Emphasizing both an understanding and an application of scientific as well as manual skills.

7. Complies with requirements of Federal Acts and State Laws and regulations for area vocational schools.

"State Board" refers to the State Board of Vocational and Technical Education.

"General Commission" refers to the Commission of the Indiana State Board of Education.

8. For greatest utilization of the area vocational center, programs should be organized and made available on a 12 month basis for both day and evening classes.

The success of these programs will be determined by an effective community public relations effort.

II. AUTHORITY

A. The State Board of Vocational Education may allocate funds for equipment and construction of area vocational schools upon the authority granted to it by the following:

Indiana Vocational Education Act of 1913

George-Barden Act of 1946 - Titles III and VIII

Vocational Education Act of 1963 - Subpart A 104.1 - Definitions Acts of 1965 - Indiana - Chapter 292 (H 1241 - Approved March 11, 1965)

State Plan - Section 4.0 - Construction of Area Vocational Education Schools

Minute No. 179 of the State Board of Vocational and Technical Education, February 22, 1967

Civil Rights Resolutions - Executive Order 11246

(These Statutes are included in this publication under Appendix A.)

III. STEP BY STEP PROCEDURE FOR APPROVAL AS AN AREA VOCATIONAL SCHOOL

The completion and submission of the feasibility study, presented as the first step in gaining approval as an area vocational school district, along with a letter of intent, constitute the official applications for approval as an area vocational school district. The feasibility study will be reviewed and approved by the State staff of the Division of Vocational Education, and then along with the recommendations of the Director will be presented to the State Superintendent of Public Instruction for consideration.

The step by step procedure for securing approval as an area vocational school district is outlined below:

A. Step I. - Prepare and Submit a Feasibility Study

1. Responsibility - A steering committee or other appropriate representative of the proposed area vocational school district shall be responsible for the requirements of Step 1.

It is suggested that the steering committee be composed of a representative from each of the school districts in the proposed area.

To be acceptable, the feasibility study and signed agreement must be representative of school districts in the area that accommodate at least 75% of the student population and a minimum of $150,000,000 of assessed evaluation.

2. Boundaries - The State shall be divided into geographic districts by the State staff of a nature that all area vocational schools will be within reach of all citizens. Consideration will be given to population, tax evaluation, etc. (See map, Appendix A.)

a. A formal resolution or formal resolutions of the legal body or bodies of the district or districts must accompany the feasibility study.

b. A signed agreement form must accompany the application (see AVS-I, Appendix B).

3. Location - Designate the proposed location of the area vocational school within the district. Attach a map showing the location and population centers within the district. Outline the rationale for this location including a statement regarding the availability and cost of the site. The description of the proposed location should include a statement about population distribution within the district and how the chosen location can best accommodate the greatest number of people.

4. Justification - Complete justification must be submitted including the following minimum information. Additional information may be submitted if the applicant feels it helps justify the establishment of an area vocational school district.

a. Area Vocational School Input Potential (Summarize on AVS-II, Appendix B)

(1) Population Characteristics (cite source of information)

(a) Present total population within the proposed area vocational school district.

(b) Annual population during each year of the past ten years within the proposed area vocational school district.

(c) Projected total population within the proposed area vocational school district five years from the date of application. (Cite method for collecting this data on reverse of AVS-II, Appendix B.)

(2) School enrollment characteristics (cite method for collecting data on reverse of appropriate AVS form in Appendix B).

(a) Grades nine through twelve enrollment in public and private schools within the proposed area vocational school district at the present and during the past ten years (AVS-III, Appendix B).

(b) Projected grades nine through twelve enrollment in public and private schools within the proposed area vocational school district (AVS-III, Appendix B).

(c) Grades one through eight enrollment in public and private schools in the proposed area vocational school district (AVS-IV, Appendix B).

(d) Enrollment in other vocational and pre-vocational education programs available within the proposed area vocational school district and adjacent districts. Include breakdown of private schools, public and private secondary schools and higher education courses (AVS-IV, Appendix B).

(e) Number and percent of high school graduating seniors who have entered college during the past five years (AVS-V, Appendix B).

(f) Number and percent of high school graduating seniors who have entered college during the past five years and then dropped out (AVS-VI, Appendix B).

(g) Number and percent of students who have dropped out of public and private schools during the past five years (AVS-VII, Appendix B).

(3) Area vocational school enrollment characteristics. Anticipated first year enrollment in the area vocational school. (Cite methods for collecting this data on reverse of AVS-VIII, Appendix B.)

(4) Other characteristics of the proposed area vocational school district which affect input.

(a) Distance to another area-type vocational school (AVS-IX, Appendix B).

(b) Number of adults who indicated a need and desire for initial skill training and re-training. (Cite method for obtaining this data, AVS-X, Appendix B.)

b. Placement of Graduate of Area Vocational School Programs

(1) Number and scope of probable job opportunities within the proposed area vocational school district and adjacent population centers. (Include present needs, replacement and expansion needs, AVS-XI, Appendix B.)

c. Financial Support Available for the Area Vocational School

(1) Local Support Potential

(a) Assessed valuation of taxable property within the proposed area vocational school district during each of the past five years. Include the latest valuation available.

(b) Breakdown of tax levies presently in effect within the proposed area vocational school district (AVS-XII, Appendix B).

(c) Tuition charges for in-district and out-of-district students.

(2) State Funds Available

(a) Establish the level of state support which will be required for the first year and the next five years' operation with the Director of Vocational Education.

(3) Federal Funds Available

(a) Establish the level of support from Federal sources which will be required for the first year and the next five years' operations for both capital outlay and operations with the Director of Vocational Education.

d. Miscellaneous Consideration

(1) Submit a summary of attitudes within the area vocational school district regarding vocational education and area vocational schools. (Include letters from school officials, Chamber of Commerce, service clubs, major employers and other deemed beneficial.)

(2) Possible number and qualifications of staff members available from present staff.

(3) Project possible number of additional staff members needed in next five years.

5. Operation - While it is realized by the General Commission and State Board that most operational planning and decisions will occur after the district is established, the feasibility study should include tentative plans for the following:

   a. Composition and terms of office of the proposed governing board of the area vocational school district.

   b. Proposed administrative relationship and structure.

   c. Suggested length of school term, will school operate on 12 month basis. Outline length of instructional day, including night courses.

   d. Provision for transportation of in-district students.

   e. Provision for transportation of out-of-district students, if anticipated.

   f. Outline the type of vocational guidance services proposed including testing, counselling, and placement activities.

   g. Admission requirements for in-district students.

   h. Admission requirements for out-of-district students.

   i. Suggested initial curriculum of the area vocational school, should show divisions of program offerings so that all people could be included.

   j. Suggested five year plan for program development consistent with the state plan for vocational education.

   k. Statement regarding tuition. Outline a suggested policy outlining who will be charged tuition, if any, how much will be charged, and basis for charge, i.e., per course, per hour of instruction, per year, etc.

   l. Statement regarding out-of-district students. Include plans for admission, tuition, transportation, etc.

6. Budget - The proposed first year budget should be completely outlined. Include source of income and anticipated amount from each source.

7. Capital Outlay - Detail the extent and cost of capital outlay requirements. Include:

   a. Description and estimated cost of buildings, sites and site improvement considered in short and long-term plans.

   b. Estimated expenditures required for legal fees, architects and engineers fees, consultants, bond election, and other incidental costs.

   c. Plans for construction, remodeling, or additions to existing school facilities with an estimate of cost and use of facilities under consideration.

   d. Number and estimated cost of non-instructional items such as desks, chairs, tables, vehicles, etc.

   e. Description and estimated cost of instructional items such as typewriters, lathes, saws, sewing machines, overhead projectors, visual-aids, preparation materials, initial supplies, etc.

   f. Detail of other anticipated expenditures for capital outlay.

   g. Tax levy required to repay bonded indebtedness for capital outlay.

8. Existing Building and Equipment - The General Commission will accept use of existing buildings and equipment for the newly established area vocational school when:

   a. The facilities can be made available on terms mutually agreeable to the participating districts.

   b. The quality of facilities is such that they are appropriate to be used in a high standard training program.

   c. The facilities are so located as to be accessible to the students of the area to be served.

d. The buildings are of such design and on sufficient land to provide for expansion as needed without excessive expenditures.

e. This can be one building at a single location, or it may be multiple buildings in two or more locations within the proposed area.

f. Existing programs at the option of the participating schools could remain in the present school or be relocated to the area school.

g. It will be the responsibility of local school officials to make the decision on maintaining or relocating an existing program far enough in advance so that all instructors in vocational education will have an opportunity to make the necessary adjustments.

h. The area school officials should always keep in mind that the basic premise of their program should be the vocational training needs of the students and not the importance of maintaining existing programs. The main objective of the area vocational school is that it should meet the needs of all people in the area that they are responsible for serving.

B. Step II - Tentative Designation as an Area Vocational School District

1. Time Schedule - The feasibility study should be completed and reviewed by the Vocational Director and staff by July of the year that funds are to be allotted. This would give the local schools time to revise their feasibility study so that the Superintendent of Public Instruction would be able to present and recommend approval to the General Commission at the December meeting. This would allow the area school officials ample time to engage an attorney, secure an option on a site, commission an architect, review preliminary drawings, prepare working drawings and specifications, clear all proper State agencies, and receive bids for the construction proposal. The bid receiving date should be some time in January so that the plan could then be presented to the State Board

for the allocation of Federal funds. This would allow the area school officials ample time to sell bonds and enter into a lease agreement prior to construction starting in the spring or early summer.

2. Responsiblity - The General Commission will give tentative approval of the district as an area vocational school district. The Commission's approval will be based upon:

   a. Review of the feasibility study.

   b. Recommendations of the State Supervisors and Director of the Division of Vocational Education.

   c. Recommendation of the Superintendent of Public Instruction.

Final approval as an Area Vocational School will be given by the State Board of Vocational and Technical Education upon the recommendations made by the General Commission.

APPENDIX A

INDIANA VOCATIONAL EDUCATION ACT OF 1913

AN ACT to provide for the encouragement, maintenance and supervision of vocational education in industries, agriculture and domestic science.

H. 101. Approved February 22, 1913

VOCATIONAL EDUCATION.

Section 1. Be it enacted by the general assembly of the State of Indiana, the following words and phrases as used in this act shall, unless a different meaning is plainly required by the context, have the following meanings:

1. "Vocational education" shall mean any education the controlling purpose of which is to fit for profitable employment.

2. "Industrial education" shall mean that form of vocational education which fits for the trades, crafts and wage-earning pursuits, including the occupation of girls and women carried on in stores, workshops, and other establishments.

3. "Agricultural education" shall mean that form of vocational education which fits for the occupations connected with the tillage of the soil, the care of domestic animals, forestry and other wage-earning or productive work on the farm.

4. "Domestic science education" shall mean that form of vocational education which fits for occupations connected with the household.

5. "Industrial, agricultural or domestic science school or department" shall mean an organization of courses, pupils and teachers designed to give either industrial, agricultural or domestic science education as herein defined, under a separate director or head.

6. "Approved industrial, agricultural or domestic science school or department" shall mean an organization under a separate director or head, of courses, pupils and teachers approved by the State Board of Education designed to give either industrial, agricultural or domestic science education as herein defined.

7. "Evening class" in an industrial, agricultural or domestic science school or department shall mean a class giving such training as can be taken by persons already employed during the working day, and which in order to be called vocational must in its instruction deal with the subject matter of the day employment, and be so carried on as to related to the day employment; but evening classes in domestic science relating to the home shall be open to all women over seventeen who are employed in any capacity during the day.

8. "Part-time classes" in an industrial, agricultural or domestic science school or department, shall mean a vocational class for persons giving a part of their working time to profitable employment and receiving in the part-time school or department, instruction complimentary to the practical work carried on in such employment. To give a part of their working time such persons must give a part of each day, week or longer period to such part-time class during the period in which it is in session.

ESTABLISHMENT OF SCHOOLS

Sec. 2. Any school city, town or township may through its Board of School Trustees or School Commissioners or Township Trustee, establish vocational schools or departments for industrial, agricultural and domestic science education in the same manner as other schools and departments are established and may maintain the same from the common school funds or from a special tax levy not to exceed 10 cents on each $100 of taxable property, or partly from the common school funds and partly from such tax. School cities, towns and townships are authorized to maintain and carry on instruction in elementary domestic science, industrial and agricultural subjects as a part of the regular course of instruction.

Classes --- HOW DIVIDED

Sec. 3. In order that instruction in the principles and practice of the arts may go on together, vocational schools and departments for industrial, agricultural and domestic science education may offer instruction in day part-time and evening classes. Such instruction shall be of less than college grade and be designed to meet the vocational needs of persons over 14 years of age who are able to profit by the instruction offered. Attendance upon such day or part-time classes shall be restricted to persons over 14 and under 25 years of age; and upon such evening classes to persons over 17 years of age.

CO-OPERATIVE SCHOOLS

Sec. 4. Two or more school cities, towns or townships or combinations thereof, may cooperate to establish and maintain vocational schools or departments for industrial, agricultural or domestic science education or in supervising the same, whenever the school board or township trustees of such school cities, towns or townships shall so determine and apportion the cost thereof among the cities, towns and townships cooperating. Whenever such cooperative schools or departments have been determined upon by any school cities, towns or townships, or combination thereof, the presidents of the school boards of the cities or towns and the township trustees of the townships cooperating shall constitute a board for the management of such school or department, such board may adopt for a period of one year or more, a plan of organization, administration and support for such school or department and the plan, if approved by the State Board of Education, shall constitute a binding contract between cities, towns, and townships entering into a cooperation to support such schools and courses which shall be cancelled or annulled only by the vote of a majority of the school boards or township trustees of such school cities, towns or townships and the approval of the State Board of Education.

Studies --- HOW OUTLINED

Sec. 5. Elementary agriculture shall be taught in the grades in all town and township schools; elementary industrial work shall be taught in the grades in all city, town and township schools. The State Board of Education shall outline a course of study for each of such grades as they may determine which shall be followed as a minimum requirement. The board shall also outline a course of study in agriculture, domestic science and industrial work, which they may require city, town and township high schools to offer as regular courses. After September 1, 1915, all teachers

required to teach elementary agriculture, industrial work or domestic science shall have passed an examination in such subjects prepared by the State Board of Education.

STATE BOARD OF EDUCATION --- DUTIES

Sec. 6. The State Board of Education is hereby authorized and directed to investigate and to aid in the introduction of industrial, agricultural and domestic science education, to aid cities, towns and townships to initiate and superintend the establishment and maintenance of schools and departments for the aforesaid forms of education; and to supervise and approve such schools and departments, as hereinafter provided. The Board of Education shall make a report annually to the General Assembly describing the condition and progress of industrial, agricultural and domestic science education during the year and making such recommendations as they may deem advisable.

STATE BOARD COMPRISED OF

Sec. 7. The State Board of Education shall consist of the Superintendent of Public Instruction, the presidents of Purdue University, the State University and the State Normal School, the superintendents of schools of the three cities having the largest enumeration of children for school purposes annually reported to the State Superintendent of Public Instruction, as provided by law, three citizens actively engaged in educational work in the state, at least one of whom shall be a county superintendent of schools, and three persons actively interested in, and of known sympathy with, vocational education, one of whom shall be a representative of employees and one of employers.

The Governor shall appoint the members of the board, except the ex-officio members, for a term of four years.

In the first instance one member shall be appointed for two years, one for three years and one for four years. The present appointive members shall serve until the expiration of the time for which they were appointed. The governor shall fill all vacancies occurring in the board for the unexpired term, and each member shall serve until his successor shall have been appointed and qualified.

The Superintendent of Public Instruction shall, ex-officio, be President of the Board, and in his absence the members present shall elect a president pro tempore. The board shall elect one of its members secretary and treasurer, who shall have the custody of its records, papers and effects, and minutes shall be kept at the office of the superintendent, and shall be open for inspection. The board shall meet upon the call of the president, or a majority of its members, at such place in the state as may be designated in the call. They shall adopt and use a seal, on the face of which shall be the words "Indiana State Board of Education", or such other device or motto as the board may direct, an impression and written description of which shall be recorded on the minutes of the board and filed in the office of the Secretary of State, which seal shall be used for the authentication of the Acts of the Board and the important Acts of the Superintendent of Public Instruction.

The Board shall have all the powers and perform all the duties now imposed by law on the State Board of Education.

Appointment --- HOW MADE

Sec. 8. The State Superintendent of Public Instruction, with the advice and approval of the State Board of Education, shall appoint a deputy superintendent in charge of industrial and domestic science education who shall act under the direction of the State Superintendent of Public Instruction in carrying out the provisions of this Act. The salary and term of office of such deputy shall be fixed by the board and he shall be removable by the board only for cause.

The State Superintendent, with the approval of the State Board of Education, is authorized to cooperate with Purdue University in the appointment of some person actively connected with the agricultural extension work at Purdue as an agent in supervising agricultural education, who shall serve in a dual capacity as an agent of the State Superintendent and an assistant at Purdue University. The Board and the authorities of Purdue University may fix the proportion of the salary of such agent to be borne by the state and by the university. Such person shall be subject to removal for cause by the State Board of Education.

All expenses incurred in discharge of their duties by deputies and agents shall be paid by the state from funds provided for in this Act.

ADVISORY COMMITTEE

Sec. 9. Boards of education or township trustees administering approved vocational schools and departments for industrial, agricultural or domestic science education, shall, under a scheme to be approved by the State Board of Education, appoint an advisory committee composed of members representing local trades, industries and occupations. It shall be the duty of the advisory committee to counsel with and advise the board and other school officials having the management and supervision of such schools or departments.

Admission to Schools --- TO WHOM MADE

Sec. 10. Any resident of any city, town or township in Indiana, which does not maintain an approved vocational school or department for industrial, agricultural or domestic science education offering the type of training which he desires, may make application for admission to such school or department maintained by another city, town or township or any school or secondary grade maintaining an approved industrial, agricultural or domestic science school or department. The State Board of Education, whose decision shall be final, may approve or disapprove such application. In making such decision the Board shall take into consideration the opportunities for free vocational training in the community in which the applicant resides; the financial status of the community; the age, sex, preparation, aptitude and previous record of the applicant, and all other relevant circumstances.

The school city or town or township in which the person resides, who has been admitted as above provided, to an approved vocational school or department for industrial, agricultural or domestic science education, maintained by another city, town or township or other school, shall pay such tuition fee as may be fixed by the State Board of Education; and the state shall reimburse such school city or town or

township as provided for in this Act. If any school city or town or township neglects or refuses to pay for such tuition, it shall be liable therefore in an action of contract to the school city or town or township or cities and towns and townships or other school maintaining the school which the pupil with the approval of the said board attended.

COMPULSORY ATTENDANCE

Sec. 11. In case the Board of Education or township trustee of any city, town or township have established approved vocational schools for the instruction of youths over fourteen years of age who are engaged in regular employment, in part-time classes, and have formally accepted the provisions of this section such board or trustee are authorized to require all youths between the ages of 14 and 16 years who are regularly employed, to attend school not less than five hours per week between the hours of 8 A. M. and 5 P. M. during school term.

COUNTY AGENT --- PETITION

Sec. 12. Whenever twenty or more residents of a county, who are actively interested in agriculture, shall file a petition with the County Board of Education for a county agent, together with a deposit of $500 to be used in defraying expenses of such agent, the County Board of Education shall file said petition, within thirty days of its receipt, with the County Council, which body shall, upon receipt of such petition, appropriate annually the sum of $1,500 to be used in paying the salary and other expenses of said county agent. When the county appropriation has been made the County Board of Education shall apply to Purdue University for the appointment of county agent whose appointment shall be made annually and be subject to the approval of the County Board of Education, and the State Board of Education. When such appointment has been made, there shall be paid annually from the state fund provided for in this Act, to Purdue University, to be paid to the county providing for a county agent, an amount sufficient to pay one-half the annual salary of the county agent appointed as herein provided: Provided, that not more than $1,000 shall be appropriated to any one county: Provided, further, that not more than thirty (30) counties during the year ending September 30, 1914; and sixty (60) counties during the year ending September 30, 1915, shall be entitled to state aid. It shall be the duty of such agent, under the supervision of Purdue University, to cooperate with farmers' institutes, farmers' clubs and other organizations, conduct practical farm demonstrations, boys' and girls' clubs and contest work and other movements for the advancement of agriculture and country life and to give advice to farmers on practical farm problems and aid the County Superintendent of Schools and the teachers in giving practical education in agriculture and domestic science. The County Board of Education is hereby authorized to file monthly bills covering salary and expenses of county agent, the same to be approved by Purdue University, with the county auditor who shall draw his warrant or warrants on the county treasurer for the payment of same.

CITIES AND TOWNS --- REIMBURSED

Sec. 13. Vocational schools or departments for industrial, agricultural and domestic science education shall so long as they are approved by the State Board of Education as to organization, location, equipment, courses of study, qualifica-

tions of teachers, methods of instruction, conditions of admission, employment of pupils and expenditures of money, constitute approved vocational schools or departments. School cities and towns and townships maintaining such approved vocational schools shall receive reimbursement as provided in this Act.

STATE MAINTENANCE

Sec. 14. The State, in order to aid in the maintenance of approved vocational schools or departments for industrial, agricultural and domestic science education, shall, as provided in this Act, pay annually to school cities and towns and townships maintaining such schools and departments an amount equal to two-thirds of the sum expended for instruction in vocational and technical subjects authorized and approved by the State Board of Education. Such cost of instruction shall consist of the total amount raised by local taxation and expended for the teachers of approved vocational and technical subjects. School cities and towns and townships that have paid claims for tuition in approved vocational schools shall be reimbursed by the State as provided in this Act, to the extent of one-half of the sums expended by such school cities and towns and townships in payment of such claims.

CLAIMS FOR REIMBURSEMENT

Sec. 15. Any school city, town or township having claims for reimbursement against the state under the provisions of this act shall present the same to the State Board of Education on or before July 1st of each year immediately following the completion of the work for which they are entitled to reimbursement from the State. The Board shall if they approve the claim authorize its payment by the auditor of State who shall thereupon draw his warrant on the treasurer of State for the payment of the amount due such school city, town or township, from the fund provided in this Act.

ANNUAL LEVY

Sec. 16. To provide a State fund to carry out the provisions of this Act, there shall be levied annually as a part of the State Common School Levy an additional levy of one cent on each one hundred dollars of taxable property in the State, which shall constitute a fund for the purposes of this Act. Any part of the fund remaining at the close of any fiscal year shall be placed by the treasurer of State in a permanent fund for vocational education, the proceeds of which shall be used to aid in carrying out the provisions of this Act.

SALARIES AND EXPENSES

Sec. 17. A sum sufficient to pay the salaries and expenses of the deputies, agents and employees in carrying out the provisions of this Act, and an amount sufficient to carry out the provisions of Section 12 is hereby appropriated annually for two years, to be available on and after April 1, 1913. Thereafter all salaries and expenses shall be paid from the fund provided for in this Act.

WHEN EFFECTIVE

Sec. 18. This Act shall take effect as to the provisions for State aid to approved vocational schools at the beginning of the school year 1914-1915. All other provisions

of this Act, including the provisions for a county agent, as provided in Section 12, shall be in force from and after its publication.

REPEAL

Sec. 19. All laws and parts of laws in conflict herewith are hereby repealed.

TITLE VIII --- AREA VOCATIONAL EDUCATION PROGRAMS

STATEMENT OF FINDINGS AND PURPOSE

SEC. 801. The Congress hereby finds that the excellent programs of vocational education, which States have established and are carrying on with the assistance provided by the Federal Government under the Smith-Hughes Vocational Education Act and the Vocational Education Act of 1946 (the George-Barden Act), need extension to provide vocational education to residents of areas inadequately served and also to meet national defense requirements for personnel equipped to render skilled assistance in fields particularly affected by scientific and technological developments. It is therefore the purpose of this title to provide assistance to the States so that they may improve their vocational education programs through area vocational education programs approved by State boards of vocational education as providing vocational and related technical training and retraining for youths, adults, and older persons, including related instruction for apprentices, designed to fit them for useful employment as technicians or skilled workers in scientific or technical fields.

AMENDMENT TO VOCATIONAL EDUCATION ACT OF 1946

SEC. 802. The Vocational Education Act of 1946 (20 U.S.C. 15i-15m, 15o-15q, 15aa-15jj) is amended by adding after title II the following new title:

THE NATIONAL DEFENSE EDUCATION ACT OF 1958

TITLE III --- AREA VOCATIONAL EDUCATION PROGRAMS

AUTHORIZATION OF APPROPRIATIONS

SEC. 301. There is authorized to be appropriated for the fiscal year ending June 30, 1959, and for each of the three succeeding fiscal years the sum of $15,000,000 for area vocational education programs, to be apportioned for expenditure in the States as provided in section 302.

ALLOTMENTS TO STATES

SEC. 302. (a) From the sums appropriated for any fiscal year pursuant to section 301, each State shall be entitled to an allotment of an amount bearing the same ratio to such sums as the total of the amounts apportioned under title I of this Act, the Act of March 18, 1950 (20 U.S.C. 31-33), and section 9 of the Act of August 1, 1956 (20 U.S.C. 34), to such State for such year bears to the total of the amounts so apportioned to all the States for such year.

(b) The amount of any allotment to a State under subsection (a) for any fiscal year which the State certifies to the Commissioner will not be required for carrying out area vocational education programs (under the part of the State plan meeting the requirements of section 305) shall be available for reallotment from time to time, on such dates as the Commissioner may fix, to other States in proportion to the original allotments to such States under subsection (a) for such year. Any amount so reallotted to a State shall be deemed part of its allotment under subsection (a).

PAYMENT TO STATES

SEC. 303. (a) Any amount paid to a State from its allotment under section 302 for any fiscal year shall be paid on condition:

(1) that there shall be spent for such year an equal amount in State or local funds, or both, for area vocational education programs operated under the provisions of this title;

(2) that funds appropriated under this title will not be used to reduce the amount of State or local funds, or both, being spent for vocational education programs operated under provisions of the Smith-Hughes Vocational Education Act and titles I and II of this Act and reported to the Commissioner, but such State or local funds, or both, in excess of the amount necessary for dollar for dollar matching of funds allotted to a State under provisions of the Smith-Hughes Vocational Education Act and titles I and II of this Act may be used to match funds appropriated under this title;

(3) that funds appropriated under section 301 of this title shall be used exclusively for the training of individuals designed to fit them for useful employment as hightly skilled technicians in recognized occupations requiring scientific knowledge, as determined by the State Board for such State, in fields necessary for the national defense.

(b) The Commissioner shall, prior to the beginning of each calendar quarter or other period prescribed by him, estimate the amount to be paid to each State for area vocational education programs under this title for such period; and shall pay to the State, from the allotment available therefor, the amount so estimated by him for such period, reduced or increased, as the case may be, by any sum (not previously adjusted under this subsection) by which he finds that his estimate of the amount to be paid to the State for any prior period for such purpose under this title was greater or less than the amount which should have been paid to the State for such prior period under this title for such purpose. Such payments shall be made in such installments as the Commissioner may determine.

USE OF FUNDS

SEC. 304. (a) Funds paid to a State under this title for area vocational education programs may be used, in carrying out such programs (under the part of the State plan meeting the requirements of section 305), for ---

(1) maintenance of adequate programs of administration, supervision, and teacher training;

(2) salaries and necessary travel expenses of State or local school personnel, including teachers, coordinators, supervisors, vocational guidance counselors, teacher-trainers, directors, administrators, and others;

(3) travel expenses of members of advisory committees or State boards;

(4) purchase, rental, or other acquisition, and maintenance and repair, of instructional equipment;

(5) purchase of instructional supplies and teaching aids;

(6) necessary costs of transportation of students;

(7) securing necessary educational information and data as a basis for the proper development of area vocational education programs and programs of vocational guidance;

(8) training and work-experience training programs for out-of-school youths;

(9) related instruction for apprentices; and

(10) determining the need for, and planning and developing, area vocational education programs.

(b) Any equipment and teaching aids purchased with funds appropriated to carry out the provisions of this title shall become the property of the State.

ADDITIONAL STATE PLAN REQUIREMENTS

SEC. 305. (a) To be eligible to participate in this title the State plan must be amended to include a new part which ---

(1) designates the State board as the sole agency for administration of such part of the plan (or for the supervision of the administration thereof by State or local educational agencies);

(2) provides minimum qualifications for teachers, teacher-trainers, supervisors, directors and others having responsibilities under the plan;

(3) shows the plans, policies, and methods to be followed in carrying out such part of the State plan;

(4) provides such accounting, budgeting, and other fiscal methods and procedures as are necessary for the proper and efficient administration of such part of the State plan; and

(5) provides that the State board will make such reports to the Commissioner, in such form and containing such information, as are reasonably necessary to enable the Commissioner to perform his functions under this title.

(b) The Commissioner shall approve a part of any plan for purposes of this title if he finds that it fulfills the conditions specified in subsection (a) of this section.

(c) Whenever the Commissioner after reasonable notice and opportunity for hearing to the State board finds that ---

VOCATIONAL ACT OF 1963
SUBPART A 104.1 - DEFINITIONS

CONSTRUCTION OF AREA SECONDARY VOCATIONAL EDUCATION

The opportunity for a majority of the American people to contribute to the welfare of this country lies in the quality of the vocational and technical education program provided them. The programs under the Vocational Education Act of 1963 are to be readily accessible, of the highest quality, and geared realistically to meet the challenge of our changing technology.

The Congress recognized that a massive country-wide movement must be initiated to provide these programs and consequently, for the first time, Federal funds have been authorized for construction of area vocational technical school facilities. The kinds of facilities planned and constructed to accommodate needed programs will play an extremely important part in creating the proper environment conducive to the type of education and training needed.

TYPES OF AREA SCHOOLS

By definition, an "Area Vocational Education School" may be any public school or public institution the facilities of which can be constructed or renovated and equipped with Federal funds under the provision of the 1963 Act.

These may include only:

(a) A specialized high school used exclusively or principally for the provision of vocational education to persons who are available for full-time study in preparation for entering the labor market, or

(b) the department of a high school exclusively or principally used for providing vocational education in no less than five different occupational fields to persons who are are avilable for full-time study in preparation for entering the labor market, or

(c) a technical or vocational school used exclusively or principally for the provision of vocational education to persons who have completed or left high school and who are available for full-time study in preparation for entering the labor market, or

(d) the department or division of a junior college or community college or university which provides vocational education in no less than five (5) different occupational fields under the supervision of the State Board for Vocational Education leading to immediate employment, but not leading to a baccalaureate degree.

DEFINITIONS IN TERMS OF THE ACT OF 1963

"Construction" includes construction of new buildings and expansion, remodeling and alteration of existing buildings, and includes site grading an improvement. It also encompasses architect, engineering, and inspection expenses incurred for approved projects. To cover situations where an expenditure is only partly attribut-

able to an eligible purpose a justifiable basis must be developed to substantiate the proration of construction for eligible and non-eligible sections of a school plant.

"School facilities" mean the facilities of an area vocational education school which may be constructed with Federal funds including:

Instructional and auxiliary rooms and space necessary to operate a program of vocational instruction at normal capacity (in accordance with the State Plan and the laws and customs of the State), such as classrooms, libraries, workshops, laboratories, cafeterias, office space, and utility space. This would not include facilities intended primarily for events for which admission is to be charged to the public such as single purpose auditoriums, indoor arenas, or outdoor stadiums.

"Equipment" means a fixed or movable article or set of articles which meet all the following conditions:

(a) The article retains its original shape and general appearance with reasonable care and use over a period of at least one year; (2) it is nonexpendable; that is, if the article is damaged or some of its parts are lost or worn out, it is usually more feasible to repair it than to replace it with an entirely new unit; and (3) it does not lose its identity through incorporation into a different or more complex unit or substance.

(b) Initial equipment of the school facilities includes all necessary building fixtures and utilities and instructional equipment.

(c) In connection with the erection of new or the expansions of existing facilities, initial equipment shall include only that equipment which must be placed in the proposed facility to accommodate the type of instruction or other vocational education purpose for which the facilities are designed.

(d) In connection with the remodeling and alteration of existing facilities, initial equipment also may include equipment installed to replace obsolete or worn out equipment. Any reimbursement for a salvage or trade-in value of any such equipment shall be deducted in computing the cost of such replacement equipment to be included in the construction costs of a proposed project.

"Occupational field" means a group of recognized occupations having substantial similarities common to all occupations in the group, e.g., similarity in the work performed; similarity in the abilities and knowledge required of the worker for successful job performance; similarity in the tools, machines, instruments and other equipment used; and similarity in the basic materials worked on or with. The term is applied, in the case of Federal participation in the construction of an area vocational school, to determine whether a department of a certain type of high school, or a department or division of a junior college, community college, or university provides "vocational education in no less than five (5) different occupational fields". The purpose is to assure that such schools will have offerings that will afford prospective students of varying interests a reasonable broad choice of the type of occupations for which they are to be trained. Determinations of what is an "occupational field" will be made in the light of this purpose.

Chapter 292. (H. 1241. Approved March 11, 1965).

AN ACT authorizing two or more local school corporations to engage in joint programs for joint purchases and/or for the joint employment of personnel.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF INDIANA:

SECTION 1. (a) "School corporation" shall be any local public school corporation established by and under the laws of the State of Indiana except a township school corporation governed by a township trustee. The term shall include, but not be limited to, any school city, school town, consolidated school corporation, metropolitan school district, county school corporation, community school corporation or any united school corporation.

(b) "Governing body" shall be any board of school commissioners, any metropolitan board of education, any board of trustees, or any other board or commission charged by law with the responsibility of administering the affairs of a school corporation.

(c) "Joint program" shall be the joint employment of personnel, joint purchase of supplies or other material, and/or joint purchase or lease of equipment, by two or more school corporations, for a particular program or purpose. Such joint actions shall include, but not be limited to, data processing operations, vocational education, psychological services, audio-visual services, guidance services, and special education, but shall exclude any joint purchasing related solely to the acquisition of supplies or equipment which are not to be used jointly.

(d) "Participating school corporations" shall be all school corporations engaging in a joint program.

SECTION 2. Any two or more school corporations acting through their respective governing bodies are authorized to engage in joint programs under a written agreement executed by all participating school corporations. Such agreement shall designate the type of purchases or leases to be made and prescribe the manner of approving persons employed under the joint program and shall also provide for the organization, administration, support, funding and termination of such program, subject to the provisions of this act.

SECTION 3. Such agreement shall designate one of the participating school corporations to administer and supervise the joint program, including but not limited to receiving and disbursing funds, executing documents, and maintaining records, in accordance with the provisions of this act and the agreement between the participating school corporations.

SECTION 4. (a) The governing bodies of the participating school corporations are authorized to pay into a joint fund, to be known as the "Joint Services and Supply Fund," an amount set forth in the written agreement. Such governing body shall budget and appropriate funds for the joint program from the special school fund or tuition fund of their respective school corporation, in accordance with law governing

the use of such funds.

(b) The Joint Services and Supply Fund shall be held by the governing body of the school corporation designated in the written agreement to administer and supervise the joint program, and such governing body shall receive, disburse, maintain and account for such fund in the same manner as prescribed for other funds of such body and in accordance with the provisions of the written agreement. Such governing body shall make a complete disbursement within thirty (30) days following the end of each school year, and shall furnish copies of such report to the governing bodies of all other participating school corporations. Provided, however, that the provisions of this Act relating to reports required of such governing body shall be supplementary to and shall not supersede or repeal the requirements for publication of annual reports of certain school corporations as provided by Section 3 of Chapter 96, Acts of 1927, as amended.

SECTION 5. Whereas an emergency exists for the more immediate taking effect of this act, the same shall be in full force and effect from and after July 1, 1965.

INDIANA STATE PLAN FOR CONSTRUCTION OF AREA VOCATIONAL SCHOOLS

4.0 Construction of Area Vocational Education Schools and/or Regional Technical Institutes

4.1 Procedures for taking action on area vocational education school and/or regional technical institute facility projects.

An application shall be filed with the State Director of Vocational Education which shall include information regarding financing, equipment and local involvement in each.

If construction is anticipated, the plans shall be referred to the proper state agencies for consideration. (Sec. 4.13).

The plans upon recommendation of the State Director, shall be reviewed by the State Board of Vocational and Technical Education for either approval or disapproval.

Upon approval of the projects, the State Department of Vocational Education shall provide adequate supervision of the project regarding expenditures and shall maintain necessary records as set-forth in the Vocational Act of 1963 and in accordance with this State Plan.

4.11 Projects undertaken by the State Board

Proposals for the State Board sponsored area vocational education and/or regional technical institute facility projects may be initiated through the State Department of Vocational Education which will submit such proposals together with recommendations for approval or disapproval to the State Board for final action.

4.12 Projects undertaken by local education agency

4.12-1 Application by local educational agency

Where new school houses are proposed, and old ones are to be remodeled, school officials shall submit their separate projects to the Director of the Division of Schoolhouse Planning for review and approval, before proceeding with such plans. All applications by local education agencies for construction grants under the provisions of P.L. 88-210 shall be similarly prepared and channeled for action with the additional provision that both preliminary and final plan, and instructional equipment, be submitted for review to the designated representative of the State Department of Vocational Education.

4.12-2 Action by State Board

The State Board shall review and approve or disapprove,

taking into full consideration recommendations of the Division of Schoolhouse Planning and the State Department of Vocational Education, all applications by local education agencies for the construction of area vocational education schools and/or regional technical institutes.

4.13 Clearance with other state agencies

State Board Staff will assist the local educational agency in processing their project application through the Administrative Building Council, State Board of Health, the State Fire Marshall's Office and any other State agency that might become involved. Complete clearance with all agencies is a request for project approval.

4.2 Criteria in determining relative priority of projects

The relative priority of proposed projects submitted to the State Board will be established through the application of the following criteria:

(1) Significance of the indicated ultimate contribution the completed project will make in providing more adequate vocational education programs to serve the needs of all people of all ages in the patronage area involved, substantiated by a need study by the state Employment Service and/or other agencies and institutions.

(2) Date of receipt of the project proposed in a substantially approvable form.

(3) Availability, current or planned, of other similar vocational education facilities.

(4) Total number of people to be served, current and projected enrollments considered.

(5) Assurance that sufficient funds from designated sources are available to complete the project and place it in operation on a sound and participating basis.

4.3 Terms and conditions of approved projects

Any construction projects undertaken by the State Board under the provision of P.L. 88-210, shall meet all the laws, regulations and rules cited in (4.1) and the following additional conditions to qualify for Federal financial participation.

(1) The proposed facility will be functional and will meet the need of those persons and communities to be served.

(2) The proposed facility will be undertaken in an economic manner and will not be elaborate or extravagant in design materials.

(3) Sufficient funds shall be available to meet the State and/or local share of the cost of constructing the facility.

(4) Sufficient State and/or local funds shall be available when construction is completed for effective use of the facility for the purposes for which it is being

constructed.

(5) The interest in the land on which the facility is located is sufficient to assure undistrubed use and possession for the purpose of construction and operation of the school facility covered in the project during the expected usable life of such facility.

(6) Representatives of the U.S. Office of Education, and such other persons as the Commissioner may designate, shall have access at all reasonable times to the project wherever it is in preparation of progress, and the contractor shall provide proper facilities for such access and inspection.

(7) All laborers and mechanics employed by contractors and subcontractors on all construction projects assisted under the provisions of this State Plan shall be paid wages at the rate not less than those prevailing as determined by the Secretary of Labor in accordance with the Davis-Bacon Act as amended (Act of March 3, 1931, P.L 798 Ch, 411, 46 Stat., 1494, 40 U.S.C. 276-a276a-5) and 29 C.F.R. Part I (see 29 F. R. 95) and shall receive overtime compensation in accordance with and subject to the provisions of the Contract Work Hours Standards Act (P.L. 87-581, 76 Stat. 357, 40 U.S.C. 327-330) as provided for in section 203 (a) (4) of such Act, and that such contractor and sub-contractors shall comply with the provisions of 29 C.F.R. Part 3 (See 29 F.R. 97) and abide by the contract clauses required by 29 C.F.R. 5.5 (a) and (c) (see 29 F.R.100, 101).

(8) In addition to the Federal and State Law, rules and regulations cited in 4.1 and items 1 to 7 immediately above, any and all building codes, rules and regulations shall be met and if less than Federal and State regulations the higher shall apply in all instances.

(9) The State Board shall have documented evidence of the compliance with all laws, rules, regulations and criteria listed in items 1 to 7 immediately above, prior to final approval of allocation of any State and/or Federal funds to the projects. The State professional staff in vocational education, working with local educational agencies, cooperating state agencies, contractors and representatives of the Federal Agency shall be responsible for seeing and presenting the necessary evidence both prior to and once the project is approved and underway until its completion.

MINUTE NO. 179 OF THE STATE BOARD OF VOCATIONAL AND TECHNICAL EDUCATION, FEBRUARY 22, 1967

The Board proceeded to Item 4 on the agenda. The Board had requested Mr. Donica to refer to the past minutes and sort out conflicting actions taken by the Board concerning area schools and their funding. He referred to the minutes of February 22, 1966, November 30, 1966 and January 25, 1967. Mr. Donica presented a proposed resolution, Document 67-9, which clarifies the definition and funding of area schools and/or regional institutes, and combines some of the past actions of the State Board to make one resolution. Mrs. Lain made the statement that it would seem that it would be impossible to carry out the resolution, but Mr. Sample explained that he felt that it is the only action possible at this time. Dr. Lawshe made a suggestion to clarify this resolution. He proposed that the resolution read as follows: (Revision underlined)

> Federal law and regulations permit the funding of the construction of both (a) vocational departments of local public schools for secondary programs, and (b) the regional technical institutes for post-high school vocational and technical education programs which the Indiana Vocational Technical College has been authorized by the General Assembly to create. Certain conditions, specified by Federal statute, must be met.
>
> The Board considers the terms "regional vocational institutes," "regional vocational schools" and "area vocational schools" as referring to one and the same concept. The Indiana State Board for Vocational and Technical Education hereby assigns responsibility for area and/or regional schools, to the Indiana Vocational Technical College and the General Education Commission. It further believes that the area school concept provided for in the School Reorganization Act has been superseded by the 1963-65 State Legislation creating Regional Technical Institutes. However, the State Board for Vocational and Technical Education does not abrogate the legal responsibilites for the conduct of programs and for the proper use of Federal funds. Determination as to the priority of construction projects will be made by the Indiana Vocational Technical College <u>for post-high school facilities</u> and <u>by the Commission on General Education for secondary vocational education facilities</u>. The State Board, exercising its function as set forth in Federal legislation will review such plans on a project basis and upon approval, will allocate funds for this purpose to the Indiana Vocational Technical College and the General Education Commission.

Mr. Rowen moved that this amended resolution be accepted and Mr. Sample seconded the motion. ACTION: Unanimously carried and accepted as revised.

EXECUTIVE ORDER 11246
EQUAL EMPLOYMENT OPPORTUNITY

Under and by virtue of the authority vested in me as President of the United States by the Constitution and statutes of the United States, it is ordered as follows:

PART I - Nondiscrimination in Government Employment

SECTION 101. It is the policy of the Government of the United States to provide equal opportunity in Federal employment for all qualified persons, to prohibit, discrimination in employment because of race, creed, color, or national origin, and to promote the full realization of equal employment opportunity through a positive, continuing program in each executive department and agency. The policy of equal opportunity applies to every aspect of Federal employment policy and practice.

SEC. 102. The head of each executive department and agency shall establish and maintain a positive program of equal employment opportunity programs for all civilian employees and applicants for employment within his jurisdiction in accordance with the policy set forth in Section 101.

SEC. 103. The Civil Service Commission shall supervise and provide leadership and guidance in the conduct of equal employment opportunity programs for the civilian employees of and applications for employment within the executive departments and agencies and shall review agency program accomplishments periodically. In order to facilitate the achievement of a model program for equal employment in the Federal service, the Commission may consult from time to time with such individuals, groups, or organizations as may be of assistance in improving the Federal program and realizing the objectives of this Part.

SEC. 104. The Civil Service Commission shall provide for the prompt, fair, and impartial consideration of all complaints of discrimination in Federal employment on the basis of race, creed, color, or national origin. Procedures for the consideration of complaints shall include at least one impartial review within the executive department or agency and shall provide for appeal to the Civil Service Commission.

SEC. 105. The Civil Service Commission shall issue such regulations, orders, and instructions as it deems necessary and appropriate to carry out its responsibilities under this Part, and the head of each executive department and agency shall comply with the regulations, orders, and instructions issued by the Commission under this Part.

PART II - Nondiscrimination in Employment by Government Contractors and Subcontractors

Subpart A - Duties of the Secretary of Labor

SEC. 201. The Secretary of Labor shall be responsible for the administration of Parts II and III of this Order and shall adopt such rules and regulations and issue such orders as he deems necessary and appropriate to achieve the purposes thereof.

Subpart B - Contractors' Agreements

SEC. 202. Except in contracts exempted in accordance with Section 204 of this Order, all Government contracting agencies shall include in every Government contract hereafter entered into the following provisions:

"During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of reace, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses

of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of Paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the contracting agency may direct as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, That in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the contracting agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

SEC. 203. (a) Each contractor having a contract containing the provisions prescribed in Section 202 shall file, and shall cause each of his subcontractors to file, Compliance Reports with the contracting agency or the Secretary of Labor as may be directed. Compliance Reports shall be filed within such times and shall contain such information as to the practices, policies, programs, and employment policies, programs, and employment statistics of the contractor and each subcontractor, and shall be in such form, as the Secretary of Labor may prescribe.

(b) Bidders or prospective contractors or subcontractors may be required to state whether they have participated in any previous contract subject to the provisions of this Order, or any preceding similar Executive order, and in that event to submit, on behalf of themselves and their proposed subcontractors, Compliance Reports prior to or as an initial part of their bid or negotiation of a contract.

(c) Whenever the contractor or subcontractor has a collective bargaining agreement or other contract or understanding with a labor union or an agency referring workers or providing or supervising apprenticeship or training for such workers, the Compliance Report shall include such information as to such labor union's or agency's practices and policies affecting compliance as the Secretary of Labor may prescribe: Provided, That to the extent such information is within the exclusive possession of a labor union or an agency referring workers or providing or supervising apprenticeship or training and such labor union or agency shall refuse to furnish such information to the contractor, the contractor shall so certify to the contracting agency as part of its Compliance Report and shall set forth what efforts he has made to obtain such information.

(d) The contracting agency or the Secretary of Labor may direct that any bidder or prospective contractor or subcontractor shall submit, as part of his Compliance Report, a statement in writing, signed by an authorized officer or

agent on behalf of any labor union or any agency referring workers or providing or supervising apprenticeship or other training, with which the bidder or prospective contractor deals, with supporting information, to the effect that the signer's practices and policies do not discriminate on the grounds of race, color, creed, or national origin, and that the signer either will affirmatively cooperate in the implementation of the policy and provisions of this Order or that it consents and agrees that recruitment, employment, and the terms and conditions of employment under the proposed contract shall be in accordance with the purposes and provisions of the Order. In the event that the union, or the agency shall refuse to execute such a statement, the Compliance Report shall so certify and set forth what efforts have been made to secure such a statement and such additional factual material as the contracting agency or the Secretary of Labor may require.

SEC. 204. The Secretary of Labor may, when he deems that special circumstances in the national interest so require, exempt a contracting agency from the requirement of including any or all of the provisions of Section 202 of this Order in any specific contract, subcontract, or purchase order. The Secretary of Labor may, by rule or regulation, also exempt certain classes of contracts, subcontracts, or purchase orders (1) whenever work is to be or has been performed outside the United States and no recruitment of workers within the limits of the United States is involved; (2) for standard commercial supplies or raw materials; (3) involving less than specified amounts of money or specified numbers of workers; or (4) to the extent that they involve subcontracts below a specified tier. The Secretary of Labor may also provide, by rule, regulation, or order, for the exemption of facilities of a contractor which are in all respects separate and distinct from activities of the contractor related to the performance of the contract: Provided, That such an exemption will not interfere with or impede the effectuation of the purposes of this order: And provide further, That in the absence of such an exemption all facilities shall be covered by the provisions of this Order.

Subpart C - Powers and Duties of the Secretary of Labor and the Contracting Agencies

SEC. 205. Each contracting agency shall be primarily responsible for obtaining compliance with the rules, regulations, and orders of the Secretary of Labor with respect to contracts entered into by such agency or its contractors. All contracting agencies shall comply with the rules of the Secretary of Labor in discharging their primary responsibility for securing compliance with the provisions of contracts and otherwise with the terms of this Order and of the rules, regulations, and orders of the Secretary of Labor issued pursuant to this Order. They are directed to cooperate with the Secretary of Labor and to furnish the Secretary of Labor such information and assistance as he may require in the performance of his functions under this Order. They are further directed to appoint or designate, from among the agency's personnel, compliance officers. It shall be the duty of such officers to seek compliance with the objectives of this Order by conference, conciliation, mediation, or persuasion.

SEC. 206. (a) The Secretary of Labor may investigate the employment practices of any Government contractor or subcontractor, or initiate such investigation by the appropriate contracting agency, to determine whether or not the contractual provisions specified in Section 202 of this Order have been violated. Such investigation shall be conducted in accordance with the procedures established by the Secretary of Labor and the investigating agency shall report to the Secretary of Labor any action taken or recommended.

(b) The Secretary of Labor may receive and investigate or cause to be investigated complaints by employees or prospective employees of a Government contractor or subcontractor which allege discrimination contrary to the contractual provisions specified in Section 202 of this Order. If this investigation is conducted for the Secretary of Labor by a contracting agency, that agency shall report to the Secretary what action has been taken or is recommended with regard to such complaints.

SEC. 207. The Secretary of Labor shall use his best efforts, directly and through contracting agencies, other interested Federal, State, and local agencies, contractors, and all other available instrumentalities to cause any labor union engaged in work under Government contracts or any agency referring workers or providing or supervising apprenticeship or training for or in the course of such work to cooperate in the implementation of the purposes of this Order. The Secretary of Labor shall, in appropriate cases, notify the Equal Employment Opportunity Commission, the Department of Justice, or other appropriate Federal agencies whenever it has reason to believe that the practices of any such labor organization or agency violate Title VI or Title VII of the Civil Rights Act of 1964 or other provision of Federal law.

SEC. 208. (a) The Secretary of Labor, or any agency, officer, or employee in the executive branch of the Government designated by rule, regulation, or order of the Secretary, may hold such hearings, public or private, as the Secretary may deem advisable for compliance, enforcement, or educational purposes.

(b) The Secretary of Labor may hold, or cause to be held, hearings in accordance with Subsection (a) of this Section prior to imposing, ordering, or recommending the imposition of penalties and sanctions under this Order. No order for debarment of any contractor from further Government contracts under Section 209 (a) (6) shall be made without affording the contractor an opportunity for a hearing.

Subpart D - Sanctions and Penalties

SEC. 209. (a) In accordance with such rules, regulations, or orders as the Secretary of Labor may issue or adopt, the Secretary or the appropriate contracting agency may:

(1) Publish, or cause to be published, the names of contractors or unions which it has concluded have complied or have failed to comply with the provisions of this Order or of the rules, regulations, and orders of the Secretary of Labor.

(2) Recommend to the Department of Justice that, in cases in which there is substantial or material violation or the threat of substantial or material violation of the contractual provisions set forth in Section 202 of this Order, appropriate proceedings be brought to enforce those provisions, including the enjoining, within the limitations of applicable law, of organizations, individuals, or groups who prevent directly or indirectly, or seek to prevent directly or indirectly, compliance with the provisions of this Order.

(3) Recommend to the Equal Employment Opportunity Commission or the Department of Justice that appropriate proceedings be instituted under Title VII of the Civil Rights Acts of 1964.

(4) Recommend to the Department of Justice that criminal proceedings be brought for the furnishing of false information to any contracting agency or to the Secretary of Labor as the case may be.

(5) Cancel, terminate, suspend, or cause to be cancelled, terminated, or suspended, any contract, or any portion or portions thereof, for failure of the contractor or subcontractor to comply with the nondiscrimination provisions of the contract. Contracts may be cancelled, terminated, or suspended absolutely or continuance of contracts may be conditioned upon a program for future compliance approved by the contracting agency.

(6) Provide that any contracting agency shall refrain from entering into further contracts, or extensions or other modifications of existing contracts, with any noncomplying contractor, until such contractor has satisfied the Secretary of Labor that such contractor has established and will carry out personnel and employment policies in compliance with the provisions of this Order.

(b) Under rules and regulations prescribed by the Secretary of Labor, each contracting agency shall make reasonable efforts within a reasonable time limitation to secure compliance with the contract provisions of this Order by methods of conference, conciliation, mediation, and persuasion before proceedings shall be instituted under Subsection (a) (2) of this Section, or before a contract shall be cancelled or terminated in whole or in part under Subsection (a) (5) of this Section for failure of a contractor or subcontractor to comply with the contract provisions of this Order.

SEC. 210. Any contracting agency taking any action authorized by this Subpart, whether on its own motion, or as directed by the Secretary of Labor, or under the rules and regulations of the Secretary, shall promptly notify the Secretary of such action. Whenever the Secretary of Labor makes a determination under this Section, he shall promptly notify the appropriate contracting agency of the action recommended. The agency shall take such action and shall report the results thereof to the Secretary of Labor within such time as the Secretary shall specify.

SEC. 211. If the Secretary shall so direct, contracting agencies shall not enter into contracts with any bidder or prospective contractor unless the bidder of prospective contractor has satisfactorily complied with the provisions of this Order or submits a program for compliance acceptable to the Secretary of Labor or, if the Secretary so authorizes, to the contracting agency.

SEC. 212. Whenever a contracting agency cancels or terminates a contract, or whenever a contractor has been debarred from further Government contracts, under Section 209 (a) (6) because of noncompliance with the contract provisions with regard to nondiscrimination, the Secretary of Labor, or the contracting agency involved, shall promptly notify the Comptroller General of the United States. Any such debarment may be rescinded by the Secretary of Labor or by the contracting agency which imposed the sanction.

Subpart E - Certificates of Merit

SEC. 213. The Secretary of Labor may provide for issuance of a United States Government Certificate of Merit to employers of labor unions, or other agencies which are or may hereafter be engaged in work under Government contracts, if the Secretary is satisfied that the personnel and employment practices of the employer,

or that the personnel, training, apprenticeship, membership, grievance and representation, upgrading, and other practices and policies of the labor union or other agency conform to the purposes and provisions of this Order.

SEC. 214. Any Certificate of Merit may at any time be suspended or revoked by the Secretary of Labor if the holder thereof, in the judgment of the Secretary, has failed to comply with the provisions of this Order.

SEC. 215. The Secretary of Labor may provide for the exemption of any employer, labor union, or other agency from any reporting requirements imposed under or pursuant to this Order if such employer, labor union, or other agency has been awarded a Certificate of Merit which has not been suspended or revoked.

PART III - Nondiscrimination Provisions in Federally Assisted Construction Contracts

SEC. 301. Each executive department and agency which administers a program involving Federal financial assistance shall require as a condition for the approval of any grant, contract, loan, insurance, or guarantee thereunder, which may involve a construction contract, that the applicant for Federal assistance undertake and agree to incorporate, or cause to be incorporated, into all construction contracts paid for in whole or in part with funds obtained from the Federal Government or borrowed on the credit of the Federal Government pursuant to such grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, the provisions prescribed for Government contracts by Section 203 of this Order or such modification thereof, preserving in substance the contractor's obligations thereunder, as may be approved by the Secretary of Labor, together with such additional provisions as the Secretary deems appropriate to establish and protect the interest of the United States in the enforcement of those obligations. Each such applicant shall also undertake and agree (1) to assist and cooperate actively with the administering department or agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with those contract provisions and with the rules, regulations, and relevant orders of the Secretary, (2) to obtain and to furnish to the administering department or agency and to the Secretary of Labor such information as they may require for the supervision of such compliance, (3) to carry out sanctions and penalties for violation of such obligations imposed upon contractors and subcontractors by the Secretary of Labor or the administering department or agency pursuant to Part II, Subpart D, of this Order, and (4) to refrain from entering into any contract subject to this Order, or extension or other modification of such a contract with a contractor debarred from Government contracts under Part II, Subpart D, of this Order.

SEC. 302. (a) "Construction contract" as used in this Order means any contract for the construction, rehabilitation, alteration, conversion, extension, or repair of buildings, highways, or other improvements to real property.

(b) The provisions of Part II of this Order shall apply to such construction contracts, and for purposes of such application the administering department or agency shall be considered the contracting agency referred to therein.

(c) The Term "applicant" as used in this Order means an applicant for Federal assistance or, as determined by agency regulation, other program participant, with respect to whom an application for any grant, contract, loan, insurance, or guarantee is not finally acted upon prior to the effective date of this Part, and it includes such an applicant after he becomes a recipient of such Federal assistance.

SEC. 303. (a) Each administering department and agency shall be responsible for obtaining the compliance of such applicants with their undertakings under this Order. Each administering department and agency is directed to cooperate with the Secretary of Labor, and to furnish the Secretary such information and assistance as he may require in the performance of his functions under this Order.

(b) In the event an applicant fails and refuses to comply with his undertakings, the administering department or agency may take any or all of the following actions: (1) cancel, terminate, or suspend in whole or in part the agreement, contract, or other arrangement with such applicant with respect to which the failure and refusal occurred; (2) refrain from extending any further assistance to the applicant under the program with respect to which the failure or refusal occurred until satisfactory assurance of future compliance has been received from such applicant; and (3) refer the case to the Department of Justice for appropriate legal proceedings.

(c) Any action with respect to an applicant pursuant to Subsection (b) shall be taken in conformity with Section 602 of the Civil Rights Act of 1964 (and the regulations of the administering department or agency issued thereunder), to the extent applicable. In no case shall action be taken with respect to an applicant pursuant to Clause (1) or (2) of Subsection (b) without notice and opportunity for hearing before the administering department or agency.

SEC. 304. Any executive department or agency which imposes by rule, regulation, or order requirements of nondiscrimination in employment, other than requirements imposed pursuant to this Order, may delegate to the Secretary of Labor by agreement such responsibilities with respect to compliance standards, reports, and procedures as would tend to bring the administration of such requirements into conformity with the administration of requirements imposed under this Order: Provided, That actions to effect compliance by recipients of Federal financial assistance with requirements imposed pursuant to Title VI of the Civil Rights Act of 1964 shall be taken in conformity with the procedures and limitations prescribed in Section 602 thereof and the regulations of the administering department or agency issued thereunder.

PART IV - Miscellaneous

SEC. 401. The Secretary of Labor may delegate to any officer, agency, or employee in the Executive branch of the Government, any function or duty of the Secretary under Parts II and III of this Order, except authority to promulgate rules and regulations of a general nature.

SEC. 402. The Secretary of Labor shall provide administrative support for the execution of the program known as the "Plans for Progress"

SEC. 403. (a) Executive Orders Nos. 10590 (January 19, 1955), 10722 (August 5, 1957), 10925 (March 6, 1961), 11114 (June 22, 1963), and 11162 (July 28, 1964), are hereby superseded and the President's Committee on Equal Employment Opportunity established by Executive Order No. 10925 is hereby abolished. All records and property in the custody of the Committee shall be transferred to the Civil Service Commission and the Secretary of Labor, as appropriate.

(b) Nothing in this Order shall be deemed to relieve any person of any obligation assumed or imposed under or pursuant to any Executive Order superseded by this Order. All rules, regulations, orders, instructions, designations, and other directives issued by the President's Committee on Equal Employment Opportunity and those issued by the heads of various departments or agencies under or pursuant to any of the Executive orders superseded by this Order, shall, to the extent that they are not inconsistent with this Order, remain in full force and effect unless and until revoked or superseded by appropriate authority. References in such directives to provisions of the superseded orders shall be deemed to be references to the comparable provisions of this Order.

SEC. 404. The General Services Administration shall take appropriate action to revise the standard Government contract forms to accord with the provisions of this Order and of the rules and regulations of the Secretary of Labor.

SEC. 405. This Order shall become effective thirty days after the date of this Order.

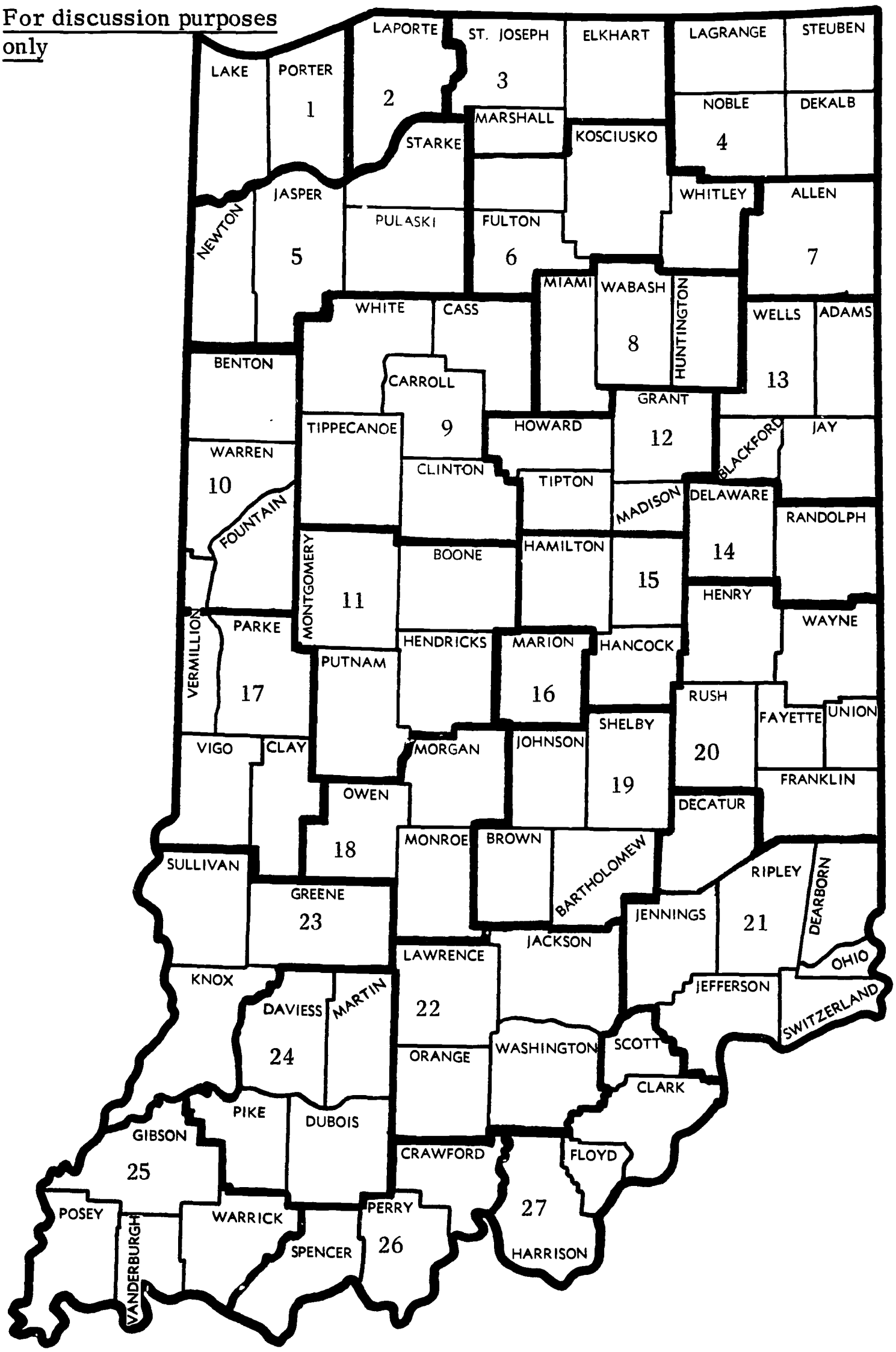
LYNDON B. JOHNSON

THE WHITE HOUSE

September 24, 1965

TENTATIVE DISTRICTS FOR AREA VOCATIONAL SCHOOLS

For discussion purposes only



The list of suggested programs in each discipline for Vocational Education should not be considered complete or restrictive in any way. The local area school officials have the freedom to designate alternate occupational areas of identified needs other than those listed. The location of each area vocational center will determine the occupational needs and the program should be flexible to make vocational training person centered.

Suggested Programs in Each Discipline for Vocational Education

Vocational Agriculture
- A-1 Production Agriculture
- A-2 Sales and Service
- A-3 Horticulture, Floriculture and Beautification
- A-4 Agricultural Mechanics
- A-5 Forestry and Conservation
- A-6 Farm Management
- A-7 Agriculture Processing
- A-8 Other

Vocational Distributive Education
- DE-1 General Merchandising
- DE-2 Food Distribution
- DE-3 Petroleum Distribution
- DE-4 Business Services
- DE-5 Personal Services
- DE-6 Home Furnishing
- DE-7 Other

Vocational Home Economics
- HE-1 Supervised Food Service
- HE-2 Clothing
- HE-3 Child Day-Care Worker
- HE-4 Homemaker's Assistant
- HE-5 Companion to Elderly Persons
- HE-6 Visiting Homemaker
- HE-7 Hotel and Motel Housekeeping Aid
- HE-8 Other

Vocational Business and Office Education
- B-1 Stenographic, Secretarial and Related Occupations
- B-2 General Office Clerical Occupations
- B-3 Business Data Processing Systems and Occupations
- B-4 Office Machines and Filing Occupations
- B-5 Accounting and Computing Occupations
- B-6 Other

Vocational Health Occupations
- HO-1 Dental Assistant
- HO-2 Nurse's Aid
- HO-3 Health Aid
- HO-4 Practical Nursing
- HO-5 Other

Vocational Trade and Industrial Education
- TI-1 Machinist
- TI-2 Auto Mechanic

TI-3 Drafting
TI-4 Printing
TI-5 Appliance Service and Repair
TI-6 Carpenter
TI-7 Sheet Metal
TI-8 Other

APPENDIX B

State of Indiana
Department of Public Instruction
Division of Vocational Education

AVS-1

Date _____

Agreement

In consideration of approval of such Area Vocational Technical School, we, the applicants, agree to participate cooperatively with the aforementioned districts as prescribed in this application.

_____ _____

Title _____ Title _____

_____ _____

Title _____ Title _____

_____ _____

Title _____ Title _____

_____ _____

Title _____ Title _____

NOTE: COPIES OF THESE FORMS ARE AVAILABLE UPON REQUEST FROM THE VOCATIONAL DIVISION

State of Indiana
Department of Public Instruction
Division of Vocational Education

AVS-II

Date _____

FORM FOR SUMMARIZING POPULATION CHARACTERISTICS FOR ESTABLISHMENT OF AN AREA VOCATIONAL SCHOOL DISTRICT

Name of Proposed Area Vocational School District _____

Total population 10-year history.

Present	_____		
19__	_____	19__	_____
19__	_____	19__	_____
19__	_____	19__	_____
19__	_____	19__	_____
19__	_____	19__	_____

Total population 5-year projection.

19__	_____
19__	_____
19__	_____
19__	_____
19__	_____

State of Indiana
Department of Public Instruction
Division of Vocational Education

AVS-III

Date_____

FORM FOR SUMMARIZING STUDENT ENROLLMENT
FOR ESTABLISHMENT OF AREA VOCATIONAL SCHOOL DISTRICT
(use additional forms if more than 3 schools are involved)

Name of Proposed Area Vocational School District _____

Ten-year history of grades 9 - 12 enrollment in public and private schools within the Proposed Area Vocational School District.

	(School name)	(School name)	(School name)	Totals
Present				
19__				
19__				
19__				
19__				
19__				
19__				
19__				
19__				
19__				
19__				
19__				

Projected five-year enrollment, grades 9 - 12, in public and private schools within the Proposed Area Vocational School District. (Cite sources of projections.)

	(School name)	(School name)	(School name)	Totals
19__				
19__				
19__				
19__				
19__				

State of Indiana
Department of Public Instruction
Division of Vocational Education

AVS-IV

Date _____

FORM FOR SUMMARIZING ENROLLMENT IN GRADES ONE THROUGH EIGHT IN PUBLIC AND PRIVATE SCHOOLS WITHIN THE PROPOSED AREA VOCATIONAL SCHOOL DISTRICT

Name of School	Enrollment 19___

State of Indiana
Department of Public Instruction
Division of Vocational Education

AVS-V

Date _____

FORM FOR SUMMARIZING HIGH SCHOOL GRADUATES WITHIN THE PROPOSED AREA VOCATIONAL SCHOOL DISTRICT WHO GO TO COLLEGE

High School Graduates who have entered college the past 5 years

Name of School	Number	Percent

State of Indiana
Department of Public Instruction
Division of Vocational Education

AVS-VI

Date_____

FORM FOR SUMMARIZING HIGH SCHOOL GRADUATES WITHIN THE PROPOSED AREA VOCATIONAL SCHOOL DISTRICT WHO GO TO COLLEGE AND THEN DROP-OUT

High School Graduates who have entered college the past 5 years and then dropped out

Name of School	Number		Percentage of Drop-Outs			Present Status
	Entered	Dropped out	1 yr.	2 yrs.	3 yrs.	

State of Indiana
Department of Public Instruction
Division of Vocational Education

AVS-VII

Date _____

FORM FOR SUMMARIZING DROP-OUT RATE OF SCHOOLS WITHIN THE PROPOSED AREA VOCATIONAL SCHOOL DISTRICT

Students in grades 9 - 12 who have dropped out of school in the past 5 years

Name of School	Number	Percent

State of Indiana
Department of Public Instruction
Division of Vocational Education

AVS-VIII

Date _____

FORM FOR SUMMARIZING ENROLLMENT IN OTHER VOCATIONAL AND PRE-VOCATIONAL PROGRAMS WITHIN THE PROPOSED AREA VOCATIONAL SCHOOL DISTRICT AND ADJACENT DISTRICT

Anticipated first year enrollment _____

Name of School	Location of School	Grade Level	Number Enrolled	Type of Instruction Presented

State of Indiana
Department of Public Instruction
Division of Vocational Education

AVS -IX

Date_____

FORM FOR SUMMARIZING DISTANCE TO AREA VOCATIONAL SCHOOL

Name of School	Location	Miles to School

State of Indiana
Department of Public Instruction
Division of Vocational Education

AVS-X

Date _____

FORM FOR SUMMARIZING ADULTS WHO DESIRE VOCATIONAL EDUCATION

Skill Desired	Number of Adults Desiring Training
1. Agriculture Education	
2. Business & Office Education	
3. Distributive Education	
4. Health Occupations Education	
5. Home Economics Education	
6. Technical Education	
7. Trade & Industrial Education	

State of Indiana
Department of Public Instruction
Division of Vocational Education

AVS-XI

Date _____

OPPORTUNITIES FOR PLACEMENT OF GRADUATES OF AN AREA VOCATIONAL SCHOOL WITHIN THE GEOGRAPHIC PROXIMITY

Skill for which training is desired	Location (s) of employment	Number of jobs presently available	Number of new* jobs available in next 5 years	Number of jobs available due to replacements	
				2 yrs	5 yrs.
1. Agriculture Education					
2. Business & Office Education					
3. Distributive Education					
4. Health Occupations Education					
5. Home Economics Education					
6. Technical Education					
7. Trade & Industrial Education					

* Give source of information

State of Indiana
Department of Public Instruction
Division of Vocational Education

AVS-XII

Date _____

SUMMARY OF FINANCIAL CHARACTERISTICS OF PROPOSED AREA VOCATIONAL SCHOOL DISTRICT
Current Year

Assessed Valuations

School District	Assessed Valuation
Total	

Breakdown of Tax Presently in Effect

Levy	Amount of Levy
State Proposed	_____ tax
County Proposed	_____ tax
Local Proposed	_____ tax
_____	_____ tax
_____	_____ tax
_____	_____ tax
TOTAL	_____ tax

VT 008 568
Kokaska, Charles J., And Others
Annotated Bibliography of Literature Related to Industrial Arts for the Mentally Retarded.

Eastern Michigan Univ., Ypsilanti. Dept. of Industrial Education
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 69 7p.

*ANNOTATED BIBLIOGRAPHIES; *INDUSTRIAL ARTS; *MENTALLY HANDICAPPED; SLOW LEARNERS; RETARDED CHILDREN; EXCEPTIONAL CHILDREN

This annotated bibliography cites 20 publications on industrial arts for the mentally retarded ranging in date from 1955 to 1968. Entries come from journal articles and are arranged alphabetically according to author. (GR)

VT 008 568

ED042060

ANNOTATED BIBLIOGRAPHY OF LITERATURE RELATED TO INDUSTRIAL ARTS FOR THE MENTALLY RETARDED

by

Charles J. Kokaska, Ed.D.

James H. Kubaiko, M.A.

Herbert H. Wilson, M.A.

Eastern Michigan University

Department of Industrial Education

Ypsilanti, Michigan 48197

1969

VT008568

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Birkland, Halvor, & Cochran, William A. "Why shouldn't they learn?" THE JOURNAL OF INDUSTRIAL ARTS EDUCATION, March-April, 1968, Vol. 27, 21-23.

The authors list guidelines which should be considered when teaching the educable retarded. Includes a discussion concerning the role of industrial arts in teaching the mentally handicapped and various methods which can be utilized.

Boner, George. "Industrial arts for the slow learner." INDUSTRIAL ARTS AND VOCATIONAL EDUCATION, Nov., 1968, Vol. 57, 58.

The author emphasizes twelve most frequently used teaching techniques for those students who may be classified as slow learners or educable mentally retarded.

Devilbiss, Joseph M. "The mentally retarded: Old problem or new challenge?" THE JOURNAL OF INDUSTRIAL ARTS EDUCATION, Sept.-Oct., 1964, Vol. 24, 50+.

An outline is provided which lists objectives to be stressed and examples of activities which are suitable at primary, intermediate, and advanced levels.

Dick, Arthur A. "What can we do for slow learners in industrial education?" INDUSTRIAL ARTS AND VOCATIONAL EDUCATION, April, 1957, Vol. 46, 117-118.

The author uses the term "slow learners" to describe students with an IQ between 75-85. There is a detailed summary listing suggestions and ideas offered by industrial education teachers for the slow learner in drafting, woodwork, and metalwork at the junior and senior high levels. A list of "key solutions" in teaching slow learners and a discussion of vocational offerings is also included.

Ferrerio, Anthony J. "Try industrial arts for retarded readers." INDUSTRIAL ARTS AND VOCATIONAL EDUCATION, Feb., 1960,

Vol. 49, 19-20.

The author suggests that children have an intrinsic interest in industrial arts. Such an interest provides the necessary motivation for successful reading. Motivation is also fostered through industrial arts due to the real and concrete context of the experiences. A discussion of various reading methods and a list of twenty-five techniques for improving word recognition and comprehension skills is included.

Kafka, Francis J. "Teaching industrial arts to children of retarded mental development." HIGH POINTS, Jan., 1955, Vol. 37, 20-28.

The mentally retarded must be viewed by the industrial arts teacher as a different "type" of child and the program should be adjusted accordingly by taking into account the special needs of the child. The author discusses some general and specific teaching techniques to be used when teaching industrial arts. A list of subject areas to be covered in industrial arts is also included.

Keller, James E. & Downs, Walter M. "The use of insightful learning to promote self-sufficiency in a woodwork shop for mentally handicapped boys." AMERICAN JOURNAL OF MENTAL DEFICIENCY, July, 1955, Vol. 60, 77-82.

A study was undertaken to determine the ability of twelve mentally retarded boys with an IQ between 71-83 to plan and carry out woodworking projects with a minimum of guidance by the teacher. It was found that the effort was of value for at least half of the group.

Lough, Ronald E., Rembolt, R.R. & Brown, Louis F. "Industrial arts for handicapped children in a hospital school." EXCEPTIONAL CHILDREN, Jan., 1968, Vol. 34, 357-359.

The authors list some main objectives and teaching aids for the physically handicapped and the mentally retarded. Emphasis is placed on providing projects which move from simple to

complex. An example is given of four project levels in wood-working.

Moeller, C.A. "The slow learner: Meeting the challenge." THE HIGH SCHOOL JOURNAL, May, 1963, Vol. 46, 285-290.

The author uses the term "slow learner" to describe those children with IQ's between 50 and 70. Industrial arts should be an integral part of the education of the exceptional child. It helps develop the child through concrete, meaningful experiences. To insure adequate programming, the instructor should be trained in both industrial arts and special education. A discussion of program content is included as a reference for the teacher.

Nelson, Hilding E. "Slow learners: A challenge for industrial arts education." AMERICAN VOCATIONAL JOURNAL, Oct., 1964, Vol. 39, 30-31.

The author uses the term "slow learner" to describe all subgroups in mental retardation and also the emotionally disturbed. He states that the "non-educable" mentally retarded and the emotionally disturbed should be eliminated from industrial arts programs. There is a discussion of a core program in industrial arts for the educable student. For the "slow-normal" student, the author suggests a high degree of integration between industrial arts and other school subjects.

Neslo, O. "Ground for salvage, not for dumping." THE JOURNAL OF INDUSTRIAL ARTS EDUCATION, March-April, 1965, Vol. 24, 20+.

Inevitably, the educable mentally retarded, the slow learner, and other students who present a problem in high school classes find their way into industrial arts classes. Those in industrial arts must stop objecting to their presence and take on the responsibility of educating these students, who, in many cases, can profit more from industrial arts than from other high school classes.

Reppe, Mrs. Palmer & Wrobel, Charles F. "An industrial arts program for the slow learner." INDUSTRIAL ARTS AND VOCATIONAL EDUCATION, Sept., 1960, Vol. 49, 49-50.

The authors describe various arts and crafts activities in a school program for slow learners.

Sharkey, Jr. Frank E. "Industrial education for the mentally retarded." DIGEST OF THE MENTALLY RETARDED, 1964, Vol. 1 no. 2, 75-79+.

The author provides a detailed description of the industrial arts program for the educable mentally retarded at Illinois State University. A list of seventeen "specific adaptations" which should be made in a program of industrial arts for educable mentally retarded students is also included.

Sharkey, Frank E. & Porter, C.B. "Industrial arts for the mental retardate." AMERICAN VOCATIONAL JOURNAL, May, 1964, Vol. 39, 22-23.

The authors refer to Kirk and Johnson in describing the three educational divisions in mental retardation. They conclude that an industrial arts program could equally serve the educable student and the slow learner. There is a detailed description of the characteristics of the mentally retarded and the educational program for such a student.

Smith, Robert M. "Industrial arts activities for children with individual differences." THE JOURNAL OF INDUSTRIAL ARTS EDUCATION, May, 1964, Vol. 23, 21-24.

The author discusses the characteristics of the above average student (IQ above 120) and the mentally retarded student (IQ between 60 and 80). The objectives in industrial arts for each group are different. In formulating such objectives, instructors must take into account the child's unique characteristics and the predicted job situation in which the student may be employed. The socio-drama and individual and small group research activities are of benefit to both the above average and the retarded student. The author lists problem areas to be used with both groups.

Smith, Robert M. & Tisdall, William J. "Working with the retarded pupil in industrial arts and vocational education." SCHOOL SHOP, April, 1965, Vol. 24, 58-59+.

The authors suggest that the industrial arts class can provide a setting in which more can be done for the mentally retarded than in any other setting. There is a discussion of guidelines for programs in industrial arts and vocational education for those who work with the mentally retarded.

Tisdall, William J. "Industrial education and the mentally retarded pupil." SCHOOL SHOP, Jan., 1964, Vol. 23, 11+.

The author suggests that a high school industrial arts program is unrealistic for educable mentally retarded students on the following grounds:

1. The program fails to meet the academic and vocational needs of the retarded.
2. The program fails to consider the high intellectual demands of the skilled trade.
3. Shop and home economics teachers are not trained in the education of the retarded.

There is a discussion related to each point. It is suggested that the retarded present special problems which require special education. Shop teachers should act in the capacity of a consultant to the special education teacher.

Todd, Thomas W. "Woodworking for the retarded." THE INSTRUCTOR, Feb., 1968, Vol 77, 62-63.

The author presents the organization of a woodworking area in the special education classroom. The following points are discussed:

1. physical facilities
2. needed tools and materials
3. preliminary and finishing procedures in woodworking
4. suggestions for evaluation

Todd, Thomas W. "Woodworking for the retarded" THE INSTRUCTOR, June-July, 1968, Vol. 77, 40.

There is a discussion of directions and materials needed for four woodworking projects which are of functional value for the retarded.

Viggiani, James C. "Industrial arts for exceptional children." SCHOOL SHOP, Mar., 1965, Vol 24, 21+.

Industrial arts for exceptional children should center around activities for daily living and correlate other academic areas through "learning by doing". Teaching suggestions are given in the following areas:

1. woodworking
2. metalworking
3. home mechanics
4. automechanics
5. general shop

Essential aspects of a work-training program and a sheltered workshop are also mentioned. While the major discussion concerns the mentally retarded, the author suggests that industrial arts can be taught to all exceptional children.

VT 008 595
Research for Career Education: The Arizona Cooperative Program for Vocational-Technical Research.

Arizona Occupational Research Coordinating Unit, Phoenix
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 66 16p.

*EDUCATIONAL RESEARCH; *STATE PROGRAMS; *PROGRAM DESCRIPTIONS; *VOCATIONAL EDUCATION; *TECHNICAL EDUCATION; RESEARCH COMMITTEES; GUIDELINES; RESEARCH OPPORTUNITIES; RESEARCH COORDINATING UNITS; RESEARCH NEEDS
ARIZONA

The immediate goal of the statewide cooperative program of research for vocational-technical education is to establish an effective research system capable of serving vocational-technical education in Arizona in much the same way that industrial research serves manufacturing, and marketing research serves business. The ultimate goal is to provide Arizona students and employers with a vocational-technical information system capable of meeting the educational demands in the context of continuing scientific and technical progress. The institutional role and programmatic guidelines are discussed relative to the following resources for statewide cooperative research: State Department of Vocational Education, universities, junior colleges, high schools, Arizona State Employment Service, business and industry, the Arizona Vocational Research Council, and Research Coordinating Unit (RCU). Also discussed is the RCU's role in the areas of research design and development, coordination and dissemination, and financing. (CH)

VT 008 595

ED042060

RESEARCH FOR CAREER EDUCATION

The Arizona Cooperative Program
for Vocational - Technical Research

Developed by the
Arizona Research Coordinating Unit
A Project of Northern Arizona University

Adopted by the
RCU Advisory Committee
Phoenix, Arizona
1966

VT 008 595

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Bill Wesley Brown ..... Chairman, Research Council

The Problem Is Change

Vocational education for today and tomorrow requires the best instruction, the strongest motivation, the most effective methods, and the highest standards which can be achieved in our schools. Students of all levels of ability are engaged in programs ranging from basic skills to highly technical knowledge. It is a segment of American education facing major expansion.

In Arizona 83 per cent of the working force are employed in occupations requiring vocational or technical education, yet only 21 per cent of Arizona high school students are enrolled in courses developing basic occupational skills.

Scientific and technical progress is forcing changes in the patterns of vocational education, and these changes will increase. Educators must anticipate and prepare for new needs of the future; must develop new curricula; must search for new and better ways to train more students for the world of work. They can be assisted by research. Colleges and universities, as well as the schools themselves, have the important supporting and back-up role of research in preparing the worker for his changing job in a changing working world. Many public agencies and private organizations also contribute to this effort.

Vocational-technical education has two major objectives: to furnish industrial, agricultural, business and other employers with trained manpower; and to provide students with marketable skills and knowledge. In both cases success or lack of success can be measured through research that eliminates and reduces the costly trial-and-error method of matching a worker to a more demanding task. In both cases changing occupational requirements call for updating existing educational programs, developing new programs, and phasing out obsolete programs. Research makes it possible to do this effectively, so educators may better serve the needs of students, of employers, and of the public.

A STATEWIDE RESEARCH EFFORT

The Arizona Research Coordinating Unit was organized to aid in this endeavor. It is a special project of Northern Arizona University, established in cooperation with the State Department of Vocational Education under a grant from the U.S. Office of Education. RCU staff members work closely with each of the three State universities and with all schools and agencies in the State of Arizona and with similar agencies in other states.

The RCU Advisory Committee contains a cross section of leadership in the educational institutions and economic groups of the State directly concerned with vocational-technical needs. From this representation has come the plan for a statewide research effort to help meet the eductaional demands of today's scientific and technical progress.

Resources for Research

The expansion of American technology is so rapid that providing skilled manpower calls for an open end program, reaching up into the universities and down into the elementary schools. Research participation is varied and diverse. The role of each institution is not limited to a particular kind of research, but guidelines are suggested which encompass a complete program of coordinated effort.

State Department of Vocational Education.

This agency, staffed with experienced personnel representing all areas of vocational education, is in an excellent position to identify research needs and communicate research activities throughout Arizona. Staff personnel are encouraged to participate in research projects for which their training and experience are especially valuable. Such participation is limited by the demands of other responsibilities, but is of major importance in at lease three areas:

1. The initiation of research proposals.

2. Liaison between researchers, educators, administrators, and employers in the development of research projects and the dissemination of research results.

3. Working with educational institutions in establishing experimental, demonstration, and field testing research programs.

The Universities

Highly competent faculty with professional training and experience in research methods are available in many departments at each of the State's three universities. Vocational-technical research will draw particularly upon specialists in industrial education, engineering, business administration, agriculture, and health occupations. Others will be enlisted from departments of psychology, sociology, economics, secondary and higher education, and testing.

In the overall research effort, the universities will contribute particularly in four major areas:

1. *Curriculum analysis and development.* Under this category are skills and knowledge studies; operational definitions of skilled occupations related to curricula; and curriculum review, analysis, experimentation, design and development.

2. *Attitudinal and motivational research.* This includes psychological studies, guidance and counseling development, and behaviorial research.

3. *Basic or pure research.* This is the exploration of new knowledge, the search for new ideas, through which vocational-technical education may be advanced in ways not yet conceived.

4. *Applied research.* Assistance will be provided by the universities on projects in program evaluation, fact finding, experimentation and demonstration.

Within each university, individual departments have extensive responsibility for research in their own areas of specialization. Faculty members will initiate and conduct individual research projects, and they will participate in joint projects with other faculty members in other departments and institutions, both as consultants and as part-time staff personnel.

The Junior Colleges

Arizona's community colleges have made a significant impact in technical education since the State junior college system was established several years ago. Their participation in curriculum and experimental research involving two-year college programs is essential, and will be developed at each campus to the full extent that staff and other resources are available. Demonstration programs and field testing at the technical level are major research responsibilities to be assumed by the junior colleges, with assistance provided as needed by other cooperating institutions.

High Schools

Vocational education at the secondary level is faced with broad expansion and fundamental changes in program organization. The same responsibility for research will be assumed by the high schools as by the junior colleges. Opportunities to engage in research are available to vocational educators individually and in joint research projects with specialists from other institutions. Experimentation, demonstration, field testing, and pilot programs will be organized in cooperation with the State Department of Vocational Education, the RCU, and the universities.

The close association of vocational and technical educators with the situations for which research is to be designed makes their assistance especially valuable. Junior college and high school teachers working with university and other personnel in this way achieve a high degree of professional concentration with which to solve the problems created by rapid expansion and changing demands.

Arizona State Employment Service

One of the persistent problems in developing vocational-technical education programs and a critical factor in vocational research is valid and up-to-date manpower information. Reliable and current data on job task content and educational and training requirements for emerging occupations is especially vital to the success of high school and community college programs.

As the recognized authority in Arizona in this field, the Arizona State Employment Service is highly capable by both experience and the professional qualifications of its staff to conduct the full range of manpower research, including occupational, job market, and training needs studies.

The Arizona State Employment Service will develop research methodologies, conduct manpower studies, and furnish manpower information to fulfill the specific uses and needs for

this information, limited only by staff and budget resources. This information will be provided in such manner as will be of maximum benefit to vocational-technical education. The agency will conduct research projects and portions of research projects, and will participate jointly with other institutions in cooperative research programs.

Business and Industry

Close associations must be maintained between vocational research personnel in the educational institutions and management personnel in all the major industries of Arizona. Direct participation by industry in the cooperative research program is possible in three ways:

1. Major employers develop for their own use information on job requirements. Arrangements may be made with individual employers to gather and use this information on parallel research projects dealing with curriculum and program development.

2. Business, industrial firms and trade associations may provide assistance on specific research projects by assigning their own staff members to work with educators and research personnel. On some research projects the use of space and access to employees for interviewing and observation represent valuable contributions from industry.

3. The benefits of vocational research to an industry justify grant support from individual firms or foundations within that industry. This is a vital role in research participation, especially on projects of direct concern to local schools.

The Arizona Vocational Research Council

This is a new agency created for the specific purpose of identifying and evaluating research needs in Arizona. It is a staff-level, working group of vocational-technical educators and research specialists.

The Research Council meets periodically to review all research ideas, suggestions, and needs originating in the schools and elsewhere. Between meetings its members review research suggestions forwarded to them by the RCU through the Chairman of the Council who is a member of the RCU staff.

The Research Council represents every major source of information about vocational-technical education in the State. Membership on the Council consists of:

—Four supervisors in the State Department of Vocational Education, designated by the State Director.

—Four counterpart teacher educators and counselors, at least one from each of the three State universities, selected jointly by the universities and the State Director of Vocational Education.

—One additional research specialist from each of the three universities who administer university research funds or coordinate university research activity.

—The head of the research department in the State Employment Service, or a designated member of his staff.

—One research director from a secondary school system.

—The Director of the Research Coordinating Unit, or a designated member of his staff.

—The vocational research specialist from the Arizona AFL-CIO, or a member of the staff designated by the State Secretary.

—Seven representatives of major business and industry groups in Arizona, selected jointly by the State Employment Service, the State Department of Vocational Education, the Research Coordinating Unit, and the business and industry members of the RCU Advisory Committee.

Research Coordinating Unit

The RCU provides nine principle services to the other institutions in the development and coordination of vocational research:

1. Performs the services of research consultant for the State Department of Vocational Education.

2. Serves as a central clearing house of information on vocational research needs, literature, projects and results.

3. Assesses the vocational research resources of State institutions.

4. Assists in the design of research and demonstration proposals for which a need has been determined.

5. Locates and arranges for professional personnel to conduct specific research projects.

6. Provides assistance to educators and researchers in drafting research proposals for submission to funding agencies.

7. Coordinates and disseminates the results of vocational-technical research for the benefit of educators and research personnel.

8. Trains researchers in vocational-technical research.

9. Maintains special collections of vocational-technical research materials and reports in each of the State university libraries and in the RCU offices in Phoenix.

The RCU is not intended as a research agency, yet there are projects which because of convenience or the administrative and technical capabilities of the RCU staff can be carried out effectively under its direction. Such research will be possible through contracting arrangements with Northern Arizona University. Specialists will be employed by the RCU under such contract arrangements to write proposals and conduct the research on a self-supporting basis. Only those research undertakings will be contracted for in this way which other institutions cannot accept, or which the initiating institutions specifically request should be assigned to this organization.

Research Moves Ahead

Ideas and suggestions for research may come from teachers, counselors, graduate students, university faculty, administrators, State Department personnel and employers. Specific needs for research are particularly evident to teachers, administrators and State supervisors.

The RCU will accept ideas and suggestions for initial processing, requiring in each case a statement of the problem, and a list of the objectives to be achieved by the research. The RCU may assist in identifying the problems and objectives, and will assist the initiator further in providing four additional items:

1. *A preliminary review of related literature.*
2. *An indication of the procedures to be followed.*
3. *A description of the output.*
4. *A statement of the uses to be made of the output.*

The RCU will also provide research initiators with consultation on form and content, and arrange for professional assistance in designing and writing the proposal if funds are available for this service.

Research Design and Development

Proposals must be written in the form and style required by the agencies providing funds for such research. Even local projects supported by local funds should be carefully designed so the researcher states exactly what he plans to do.

In most cases, the design will be prepared and written by the person who is to do the research or direct the project. The RCU will provide direct assistance in three ways:

1. *Suggesting what should go into the proposal.*
2. *Reviewing completed drafts and suggesting additions and modifications to improve the proposal.*
3. *Arranging for additional review by other consultants and with project officers in the Division of Vocational Research in Washington.*

Proposals developed by the RCU, or for which substantial assistance is provided, will go through the following eight steps.

1. A thorough review of related research to determine exactly how the project will fill a need that has not been similarly researched or for which additional repeat research is required.

2. Development of a set of procedures worked out in considerable detail and logical sequence that lead directly to the stated objectives and produce the intended output.

3. Selection of a research staff with the professional qualifications to carry out the procedures.

4. A review of the problem which calls for this particular research, and the rationale for doing it in the manner proposed.

5. A careful delineation of the costs involved and preparation of a detailed budget.

6. Review of the draft by those who will use the results; by the personnel and consultants who will be involved in doing the research; by staff and administrative personnel in the agency or agencies from which financial support will be sought; and by additional professional consultants if advisable.

7. A complete rewrite on the basis of the best professional judgment in step 6.

8. Preparation and duplication of the final document for submission to the funding agency.

Coordination and Dissemination

Information about research in progress and the results of completed research will be made available to schools and educators throughout the State under five procedures:

1. *A review of related research for each proposal being developed.*

2. *Access to the central clearing house of research materials and reports in the RCU Phoenix Office.*

3. *Duplications of all significant materials and reports for deposit in special vocational-technical research collections at each of the three State university libraries.*

4. *Direct liaison with vocational-technical educators in the State regarding research in progress and research reports of particular significance to them individually.*

5. *Periodic distribution of a vocational-technical research bulletin listing research in progress and complete research reports available. This bulletin will be published by the RCU.*

Financing

Funds must be available for writing research proposals, conducting the research, field testing and disseminating the results. Federal funds are available for research that has broad, general application. Research for the specific benefit of the State or local school districts must be supported by State and local funds.

Under the Vocational Act of 1963 ten per cent of the Federal appropriations for vocational-technical education must be used for research. Arizona should receive its full share of these Federal research funds. This is possible if enough proposals submitted to the Office of Education by Arizona institutions are sufficiently well designed to receive approval. It is possible, although unreasonable, to expect a greater amount of Federal support than this.

The State Board for Vocational Education will review requests to match the Federal research effort of ten per cent of vocational-technical appropriations. The State Board for Junior Colleges, the individual junior college districts, and the secondary school districts throughout the State may allocate similar percentages of their vocational education budgets for research.

The State Boards and individual school districts will establish procedures for reviewing research proposals to be supported in part or in full from their respective funds. Individual projects may be supported entirely from one or another of these funds, or may be designed for joint support from more than one, including Federal. Major employers in Arizona will be asked to supplement the research efforts of the schools by providing funds for specific research projects. These funds may be credited to the local school district, thus providing schools a source of research money for their participation which would not have to come from regular local budgets.

The Ultimate Goal

This state-wide cooperative program of research for vocational-technical education is based upon the willingness of those involved to work closely together for a common goal. The immediate goal is to establish an effective research system capable of serving vocational-technical education in Arizona in much the same way that industrial research serves manufacturing and marketing research serves business. The ultimate goal is to provide Arizona students and Arizona employers with a vocational-technical education system second to none—one capable of meeting the needs that exist today, and able to meet the constantly changing needs of the future.

For additional information address:

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VT 008 603
Annual Central Regional Research Conference in Agricultural Education (21st, August 1-3, 1967).

Ohio State Univ., Columbus. Dept. of Agricultural Education
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*CENTRAL REGIONAL RESEARCH CONFERENCE IN AGRICULTURAL EDUCATION, COLUMBUS, OHIO, AUGUST 1-3, 1967

Major presentations at an annual central regional research conference in agricultural education attended by 46 participants from 11 states were: (1) "Curriculum Research and Development in Education," by J.R. Frymier, (2) "Curriculum Research in Agricultural Education," by J.R. Warmbrod, (3) "Using PERT Technique in Curriculum Development," by D.L. Cook, (4) "A Research Effort in Curriculum Development for Industrial Education," by W.E. Ray, (5) "Improving Curriculum Planning: An Approach," by J. Coffy, (6) "Research Development in Agricultural Education in the North Atlantic Region," by G.Z. Stevens, (7) "Developments in Curriculum Research for Agricultural Education at the Center," by J.W. Hensel, (8) "Dimensions in Leadership and Response to Supervision," by R.M. Stogdill, (9) "ERIC's Potential as a Research Tool," by R.H. White, (1D) "Directions We Should Take in Curriculum Development in Agricultural Education," by G.M. Love, and (11) "A Basic Need in the Preparation of Teaching Materials to Help Vocational Teachers Prepare to Teach," by G. Luster. Some included committee reports are: (1) Curriculum for High School Production Agriculture, (2) Curriculum for High School Off-Farm Agricultural Occupations, (3) Curriculum for Continuing Education in Agriculture, (4) Curriculum for Technical Education, and (5) Curriculum for Teacher Education in Agriculture. (DM)

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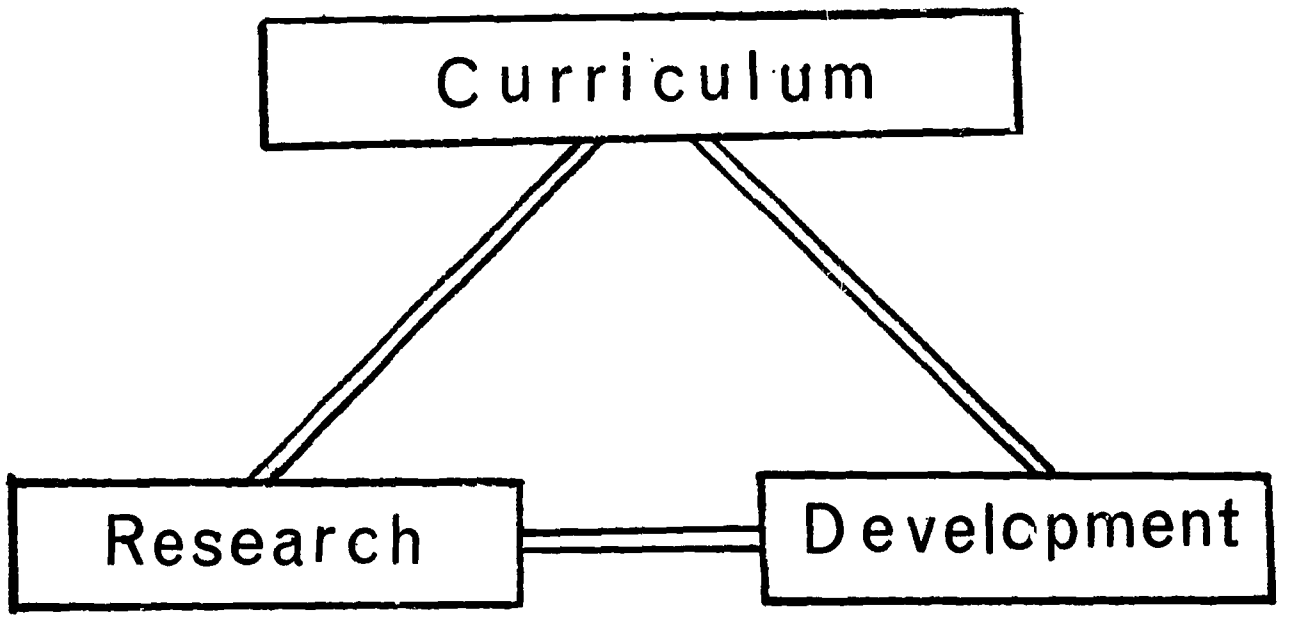
TWENTY-FIRST ANNUAL CENTRAL REGIONAL RESEARCH CONFERENCE IN AGRICULTURAL EDUCATION



AUGUST 1-2-3
1967

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VT009603

The Department of Agricultural Education
The Ohio State University
Columbus, Ohio

TWENTY-FIRST ANNUAL CENTRAL REGIONAL RESEARCH CONFERENCE IN AGRICULTURAL EDUCATION

Indiana
Illinois
Iowa
Kansas
Kentucky
Michigan
Minnesota
Missouri
Ohio
Nebraska
North Dakota
South Dakota
Wisconsin

Richard H. Wilson, Chairman
Willard H. Wolf, Secretary
Ralph J. Woodin, Local Committee
Virgil E. Christensen, Local Committee
James Hensel, Local Committee

The Ohio State University
Columbus, Ohio

August 1, 2, 3, 1967

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CENTRAL REGIONAL RESEARCH CONFERENCE
IN
AGRICULTURAL EDUCATION

August 1, 2, 3, 1967

The Ohio State University
Columbus, Ohio

"Curriculum Research and Development for Vocational and Technical Education in Agriculture"

Conference Chairman: Richard H. Wilson, Associate Professor, Department of Agricultural Education, The Ohio State University

Conference Secretary: Willard H. Wolf, Professor, Department of Agricultural Education, The Ohio State University

Tuesday, August 1

8:30 Registration: Auditorium Lobby, Agricultural Administration Building

9:15 General Session
Presiding Chairman: Ralph E. Bender, Chairman, Department of Agricultural Education, The Ohio State University

Open Conference - Introductions

Welcome: Richard Bohning, Associate Dean, College of Agriculture and Home Economics, The Ohio State University

9:50 Organization of the Conference: Richard H. Wilson, Associate Professor, Department of Agricultural Education, The Ohio State University

10:00 Coffee Break

10:30 "Curriculum Research and Development in Education" Jack R. Frymier, Professor, College of Education, The Ohio State University

Discussion and Questions

11:30 Lunch

- -

1:00 General Session
Presiding Chairman: Gilbert S. Guiler, Associate Professor, Department of Agricultural Education, The Ohio State University

"Where We Are in Curriculum Developments" J. Robert Warmbrod, Associate Professor, Division of Agricultural Education, University of Illinois

Discussion and Questions

Tuesday Program continued

2:00 Reports of Curriculum Development by States - Research Underway and Projected

3:00 Organization of Conference Committee: Ralph J. Woodin, Professor, Department of Agricultural Education, The Ohio State University

Committees:

A - Curriculum for High School Production Agriculture
Chairman: Forest Bear, Room 246

B - Curriculum for High School Off-Farm Agricultural Occupations
Chairman: Donald Meaders, Tuesday-Room 115; Wednesday and Thursday-Room 253

C - Curriculum for Continuing Education in Agriculture (Adult and Young Farmer)
Chairman: Curtis Weston, Room 114

D - Curriculum for Technical Education in Agriculture
Chairman: Paul Hemp, Room 113

E - Curriculum for Teacher Education in Agriculture
Chairman: William R. Bingham, Room 112

3:10 Coffee Break

3:30 Committee Sessions - Topic: "What Research is Needed in Given Curricular Areas?"

Wednesday, August 2

8:30 General Session
Presiding Chairman: Willard H. Wolf, Professor, Department of Agricultural Education, The Ohio State University

Committee Reports of Progress: Ralph J. Woodin, Professor, Department of Agricultural Education, The Ohio State University

Discussion and Questions

9:15 "Using PERT Technique in Curriculum Development" Desmond L. Cook, Professor, College of Education, The Ohio State University

Discussion and Questions

10:15 Coffee Break

10:30 "A Research Effort in Curriculum Development for Industrial Education" Willis E. Ray, Professor, College of Education, The Ohio State University

Discussion and Questions

11:30 Lunch

- -

Wednesday Program continued

1:00 General Session
Presiding Chairman: Virgil E. Christensen, Research and Development Specialist, The Center for Vocational and Technical Education, and Associate Professor, Department of Agricultural Education, The Ohio State University

"Improving Curriculum Planning: An Approach" Dr. John Coffee, Associate Chief, Behavioral Science Division, Battelle Memorial Institute, Columbus, Ohio

Discussion and Questions

2:00 "Research Development in Agricultural Education in the North Atlantic Region": Glenn Z. Stevens, Professor of Agricultural Education, Pennsylvania State University

2:20 Coffee Break

2:40 Committee Sessions - Topic: "What Are Promising Models or Designs for Curriculum Research and Development?"

- -

6:30 Banquet: South Terrace Room, Ground Floor, Ohio Union, The Ohio State University

Toastmaster: Robert E. Taylor, Director, Center for Vocational and Technical Education

"The New Conservation," Charles A Dambaugh, Director, Natural Resources Institute, The Ohio State University

Thursday, August 3

8:30 General Session
Presiding Chairman: Clarence J. Cunningham, Associate Professor, Department of Agricultural Education, The Ohio State University

"Developments in Curriculum Research for Agricultural Education at The Center for Vocational and Technical Education" Professor James Hensel, Research and Development Specialist, Center for Vocational and Technical Education, and Associate Professor, Department of Agricultural Education, The Ohio State University; and Warren Noland, Research Associate, Department of Agricultural Education, The Ohio State University

9:00 "Dimensions in Leadership and Response to Supervision" Ralph M. Stogdill, Professor of Business Research, Bureau of Business Research, College of Commerce and Administration, The Ohio State University

Discussion and Questions

9:45 Coffee Break

Thursday Program continued

10:00 "ERIC Potential as a Research Tool" Robert H. White, Retrieval Specialist, ERIC Clearinghouse, The Center for Vocational and Technical Education, The Ohio State University

10:30 General Session
Presiding Chairman: Leon Boucher, Associate Professor, Department of Agricultural Education, The Ohio State University

"Directions We Should Take in Curriculum Development in Agricultural Education": Gene M. Love, Chairman, Department of Agricultural Education, University of Missouri

11:51 Listening Panel: George Luster, Associate Professor, Department of Agricultural Education, University of Kentucky;
Ray Agan, Chairman, Department of Agricultural Education, Kansas State University;
Alan Kahler, Assistant Professor, Department of Agricultural Education, University of Nebraska

11:30 Plans for The Regional Conference - 1968

12:00 Adjournment

THE REGIONAL RESEARCH CONFERENCE REPORT FOR THE CENTRAL REGION

The Challenge

Ralph E. Bender, Chairman of the Department of Agricultural Education, The Ohio State University.

We need curriculum research to develop an increasingly effective program of vocational agriculture. Our concern is first to know where we are; and secondly, to devise means on how we can get to where we want to go.

The Welcome

Dr. Richard Bohning, Associate Dean in the College of Agriculture and Home Economics.

The Ohio State University and particularly the College of Agriculture and Home Economics extend greetings to the participants in the Central Regional Research Conference. Improving curricula should be a continuous process. Changing times and changing needs demand a changing curriculum. On our pursuit to become competent in the subject and in curriculum development, important as these may be, we should not overlook the importance of the art of teaching. Really the heart of teaching is the good teacher. The proper balance between content and method is essential.

The growth of vocational agriculture is assured when its leaders give attention to dedicated study and research. The program developed for this conference bears testimony of the quality of its leadership. Self analysis and concern for continuous improvement are the ingredients of success. Keep up the good work!

CURRICULUM RESEARCH AND DEVELOPMENT IN EDUCATION

Jack R. Frymier, Professor, College of Education, The Ohio State University

Curriculum consists of three basic elements: (1) actors, (2) artifacts, and (3) operations. Elements have parts but operationally they are generally viewed as units. Actors refers to those people who are directly involved, students, teachers. materials producers, and supervisors or administrators. Artifacts applies to what we normally think of as subject matter or content. They represent ideas.

If we study curriculum over an extended period of time, three fairly distinct stages seem to be involved. They are: (1) the developmental stage, (2) the precipitating state, and (3) the assessment stage. These giving intense concern to curriculum change are often referred to as "curriculum heros." They possess charismatic qualities, they are committed, they operate on the basis of an explicit rational, they are opportunistic and they are egotists working for a selfish cause.

When we consider curriculum research, we must recognize that education is a part of a social system. It involves human beings working together toward human purposes. Government is a part of the social system as is science. Every social system has three phases. One of these is conceptualizing. We recognize this as making law. In science it is the hypothesis; in business and industry, it is the establishing of policy. The second phase is that of implementing or effecting or executing. In government this activity may be carried on by the Executive Branch; in science, after the hypothesis has been formulated, it is the testing; in industry, after the policy has been made to build a new product, it is the building-making the product. In the social system, it is the implementing or the doing phase. The third phase is the evaluating, the assessing, the reflecting, the considering or the judging phase. In government this is accomplished by the Judicial Branch; in industry this is represented by the decisions made by the people to buy or not to buy the product or service; in science it is reflected in terms of the references that are made and the replications of scientific study.

Operationally, every social system with integrity accomplishes these functions by separate groups. That is the planning, doing, and evaluating phases in every social system are all accomplished by different groups and each of these groups has power. Furthermore, every social system which has integrity also has a way of working which is characterized by the fact that when feedback data become evident, the social system has to pay attention to the feedback. It dare not ignore the data which have been generated. If we ask the questions--does education have all of these three components? Is education complete? Is education as a social system one in which we recognize completeness and unity and integrity. I get a kind of funny answer. Someone plans and conceptualizes--the school board; someone carries the policy out--the professionals; and someone evaluates. But in education that evaluation is typically accomplished by someone inside the profession or inside the school board. That is, we have policy makers basing judgment upon their own policy and we have professionals basing judgment upon their own operations. Because of this, we get a kind of static inserted into the educational social system. There is no separate group which evaluates or assesses the effectiveness of the educational operation. We need another

group in education. An evaluating, assessing, inferring, judging group to make determinations upon the effectiveness of the operation.

Policy making usually occurs in terms of general aid to education. The laws make funds available and so set up the policies and standards. Either you follow them as they are written or you do not get the funds. Categorically, aid, particularly federal aid, inevitably leads to uniformity in the program. Uniformity of standards means that we move toward a national curriculum. It means that the control is based on national policy. The program on a national basis is designed to serve national purposes rather than explicitly to serve young people. Schools then exist to serve the nation's needs. Some one has to guarantee that education is not diverting from educational needs to national needs. Educators are the only ones that can attempt to draw the line.

You may ask--are we getting our money's worth in education? This is an economic question but education does not fit the economic model. We cannot equate education with finances like we equate business with money.

Considering research in education, we need to recognize that the human element is the overwhelming power in education. In conducting educational research we are too frequently involved with external variables, and with the wrong variables. Manipulating the human elements will likely prove more fruitful. The task of curriculum research is not particularly easy yet it must be done even though progress so far has been slow. Good luck to you in your effort.

CURRICULUM RESEARCH IN AGRICULTURAL EDUCATION

J. Robert Warmbrod, Professor, Division of Agricultural Industries, University of Illinois, Urbana, Illinois

My task is to describe and perhaps appraise the present status of curriculum research in agricultural education. First, consideration is given to the techniques employed in determining curriculum content; second, to the methods of clustering occupations; and third, to the summarizing of major findings.

The analytical approach has been used most successfully by researchers in agricultural education in determining curriculum content. It involves occupational analysis by identifying understandings, abilities, and skills needed by workers in agricultural occupations. An evaluation of the analytical approach can be based on the following:

1. The instruments used by collecting data.
2. The selection of respondents
3. The means used for collecting data by interviews vs. mailed questionnaires.

The methods of clustering competencies and occupations. Several techniques have been used. One being the analysis of various techniques and

the other is commonly described as descriptive statistics. The most sophisticated of all techniques of clustering activities, competencies, or occupations is factor analysis.

Findings of Curriculum Research. Many studies are available to point out the needs of farmers. More recently research has been conducted on the needs of non-farm agricultural occupations. The essential rudiments of curriculum content have been identified for programs of curriculum instruction. The basic subject matter areas include animal, plant and soil science; agricultural business management; agricultural mechanics and construction; business management including salesmanship and business procedures; human relations; communications; and basic mechanics, mathematics, and physical sciences. More detailed research is needed to ascertain the specific and specializing knowledge and skill required for particular groups of workers. It is evident from the findings that different occupations require different knowledge and skill and that different levels of occupations within a type of business require different as well as common competencies.

Conclusions. Much of the subject matter needed by persons preparing for work in production agriculture is also appropriate for persons preparing for agricultural occupations other than farming. The major areas of instruction are quite clearly identified for non-farm agricultural occupations. Researchers in agricultural education have done a commendable job in identifying the content of an up-to-date curriculum which is responsive to manpower needs and employment opportunities in agricultural occupations. Generally, the research has been well designed, competently conducted and the data analyzed appropriately. In some cases the research has also been systemically tried and evaluated. One of the most evident conclusions is that curriculum research has been limited almost entirely to determining the content. Other questions need to be answered such as what should be the organizational structure, what should be the sequence in teaching the subject matter, at what level should the subject matter be taught, and how should the curriculum be evaluated.

USING PERT TECHNIQUE IN CURRICULUM DEVELOPMENT

Desmond L. Cook Professor, College of Education, The Ohio State University

PERT (Program Evaluation Review Techniques) is a system devised to plan and control a detailed operation. It can be applied effectively to research activities with single or multiple objectives. It provides a sequential order of tasks and a scheduled completion date. It points out difficulties ahead and allows for proper scheduling and involvement of the essential units. It considers the integration of money and materials as needed to facilitate the objective. It permits the persuance of a logical cycle for the conduct of the undertaking. It includes evaluating processes along the way so that improvements and changes can be made to increase the efficiency and to maximize the efforts of the operations.

When well planned, PERT will establish a logical sequence of all in-puts and out-puts and will present a graphic plan of action. It will identify problems that need to be met and will show where the various forces at work need to integrate to properly conduct the project.

A RESEARCH EFFORT IN CURRICULUM DEVELOPMENT FOR INDUSTRIAL EDUCATION

Willis E. Ray, Professor, College of Education, The Ohio State University

The Industrial Arts Curriculum Project (IACP), a joint venture of The Ohio State University and the University of Illinois, is funded by the Bureau of Research of the United States Office of Education. Funding began in June, 1965, and it is expected to extend through the summer of 1971.

The IACP is committed to the design, engineering, field test and evaluation of curriculum materials for a two-year sequence for junior high school industrial arts. The first year of the sequence involves the area of "Construction" and the second year involves "Manufacture."

Materials are being developed at Project headquarters in Columbus, Ohio. Based upon a rationale for and a structure of a body of knowledge termed "industrial technology," a textbook, text workbook, laboratory manual, teachers' guide, and supplementary instructional materials are being developed to form a "package" for the industrial arts teacher.

In September of 1967, approximately 1,200 students in three field centers will be using the materials. This will increase to approximately 7,200 students by 1969-70 in nine field centers. Each field center involves four associated schools with two teachers in each school.

The project was initially planned using PERT, (Program Evaluation and Review Technique). Subsequent phases have been planned using this technique. PERT has greatly assisted in the management (planning, organizing, and controlling) of this complex curriculum venture. (See Page 10 for a Gross Work Breakdown of the total project after completion of Phase I.)

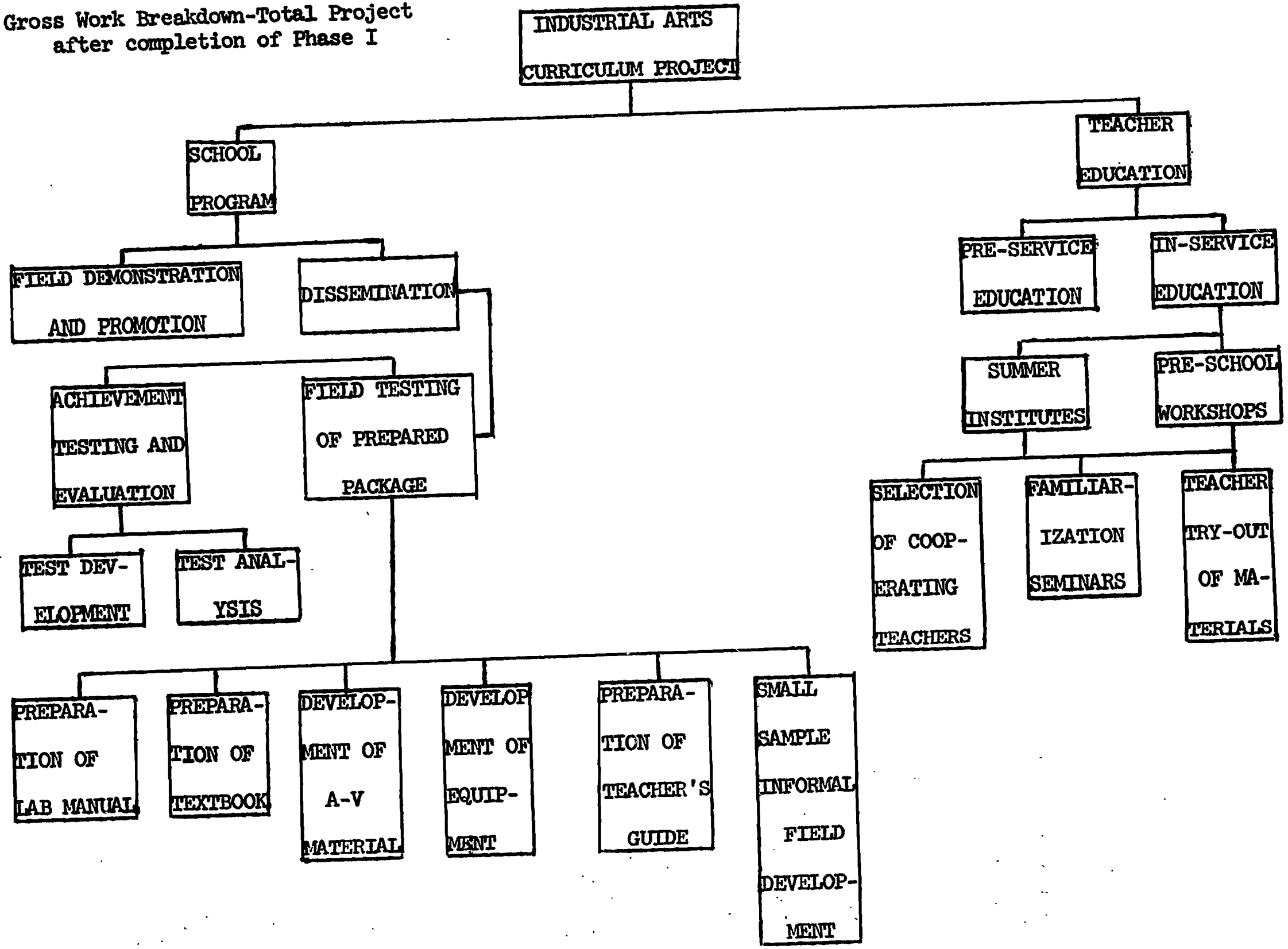
IMPROVING CURRICULUM PLANNING: AN APPROACH

Dr. John Coffy, Associate Chief, Behavioral Science Division, Battelle Memorial Institute, Columbus, Ohio

My presentation will consist of a resume' of research conducted in Michigan by the Battelle Memorial Institute.

A proposed research project is to specify skill requirements for vocational-education curriculum planning which will take into account major technological trends effecting major employment categories in Michigan's labor force. The study will involve specification of major occupational categories in Michigan's labor force that are responsive to vocational education. It will examine the technological trends effecting the types of skills required in these occupations and, of greatest significance, it will develop curriculum-planning information assuring that the skills resulting from the vocational education programs will be suitable for both short term (immediate) and longer term (1970-1980) labor-force needs.

Gross Work Breakdown-Total Project
after completion of Phase I



While this study will focus upon the labor force in the state of Michigan, it will be relevant to educational planning throughout the nation, since the research program is designed to develop methodologies that can be generally applied. The focus upon skill definition in relation to technological requirements is designed to assure that the vocational product of the educational system is functionally meaningful.

The study is designed to incorporate labor-force projections with technological forecasting and skill definition in behavioral terms. The labor-force projections will be related to Battelle's Socio-Economic Model (which has already been applied to the Michigan labor force for purposes of developing manpower-requirements projections).

Technological forecasting will be accomplished by applying a variety of methods to specifically defined skill areas. Skill definition in behavioral terms will be accomplished in terms of the specification of "behaviors" required in various job functions. The definition of occupations and skills will be designed to permit more effective planning of relevant curriculum components.

This study is a second to be conducted by Battelle relating to vocational education in Michigan. The first study, completed in 1966 was entitled the Michigan Manpower Study. It is an analysis of the characteristic of the labor force of Michigan as projected to 1980. The objectives of the study were:

1. To develop an improved methodology for analysis of projected characteristics of the labor force.
2. To provide estimates of the characteristics of the labor force in 1970, 1975, and 1980.
3. To serve as manpower guidelines for educational planning in the state.

RESEARCH DEVELOPMENT IN AGRICULTURAL EDUCATION IN THE NORTH ATLANTIC REGION

Glenn Z. Stevens, Professor, Department of Agricultural Education, Pennsylvania State University, University Park, Pennsylvania

Programs of research are being conducted in the North Atlantic States. Since some of the states are relatively small, much of the research is conducted cooperatively, ignoring somewhat, state lines. The North Atlantic Region has an organized research conference copied after the pattern followed by the Central Region. However, unlike the Central Region, the Research Conference is held in conjunction with a General Conference for the region and from one to two days are devoted to aspects of research in agricultural education.

The conference programs and projects completed and underway are included in the regional report.

DEVELOPMENTS IN CURRICULUM RESEARCH FOR AGRICULTURAL EDUCATION AT THE CENTER

James W. Hensel, Research and Development Specialist, Center for Vocational and Technical Education; and Associate Professor, Department of Agricultural Education, The Ohio State University, Columbus, Ohio

The Center currently has 101 persons employed, among these are eleven specialists in the area of Occupational Sociology, Occupational Psychology, Research Management, Research Design, Agricultural Education, Business and Office Education, Home Economics Education, Distributive Education, Trade and Industrial Education, Technical Education, and International Education. The Center has been actively concerned with the areas of vocational agriculture and materials are or will be available as they pertain to (1) evaluation of modules concerning off-farm agricultural occupations, (2) individualizing instructional materials, (3) articulating high school curricula in agricultural mechanics with post high school work in cooperation with industry, (4) "Review and Synthesis of Research in Vocational Agriculture," (5) instructional materials for off-farm agricultural occupations, and (6) planning ahead.

Twelve projects are now in progress. They are:

1. A module for evaluation of state programs.
2. Leadership in vocational education.
3. Perceptions of disadvantaged youth toward office work.
4. Adjustment of vocational trainees to supervision on the job.
5. Facility planning guides.
6. Evaluation of the application in micro-teaching.
7. Women's work patterns.
8. Common and unique elements of vocational and technical programs.
9. Transition from school to work.
10. Curriculum project in business and office education.
11. Career development and aspirations of post high school students.
12. Individualizing instructional materials in vocational education.

DIMENSIONS IN LEADERSHIP AND RESPONSE TO SUPERVISION

Ralph M. Stogdill, Professor of Business Research, Bureau of Business Research College of Commerce and Administration, The Ohio State University, Columbus, Ohio.

Research by the Ohio State Leadership Studies group has identified several patterns of leader (supervisory) behavior. Each pattern or dimension of behavior is supposedly different from the other. Among these are the following: Considerateness, Structuring Expectations, Tolerance of Freedom of Action, Pushing for Production, and Representation.

Five motion pictures have been produced--one for each of the above roles or patterns of behavior. An attempt was made to reduce role overlap between movies in so far as possible.

The motion pictures will be used in a research project with vocational trainees. Small groups of students will view a movie and then discuss the behavior of the supervisor. The hypothesis to be tested in the research is that poorly adjusted students will be rated by their supervisors and instructors as responding more favorably to supervision after training than before.

ERIC'S POTENTIAL AS A RESEARCH TOOL

Robert H. White, Retrieval Specialist, ERIC Clearinghouse, The Center for Vocational and Technical Education, The Ohio State University, Columbus, Ohio.

The Center for Research and Leadership Development in Vocational and Technical Education is one of 18 ERIC Clearinghouses established within the ERIC system. The acronym ERIC represents Educational Resources Information Center.

The first publications from the Clearinghouse on Vocational and Technical Education will be available during the fall of 1967. Two publications are planned. "Abstracts of Instructional Materials in Vocational and Technical Education," and "Abstracts of Research and Related Materials in Vocational and Technical Education." These documents will offer you the capability of conducting searches of relevant curriculum materials for any instructional topic regardless of your location. The scope of the materials reported in these two documents will encompass all of the states and all of the vocational service areas.

DIRECTIONS WE SHOULD TAKE IN CURRICULUM DEVELOPMENT IN AGRICULTURAL EDUCATION

Gene M. Love, Chairman, Department of Agricultural Education, University of Missouri, Columbia, Missouri.

The philosophy of orientation to the learner should be stressed to teachers or prospective teachers rather than to courses or curriculum. Emphasis should be given to knowing the learner, directing personal interviews, and human visitation. Teachers need to learn how to teach students to analyze themselves so as to meet problems in life situations. Since we are moving the recommended date for occupational choice of a student from 14 years to 16 years of age, does this indicate a need for two years of vocational agriculture before a student makes a definite occupational choice? If so, what kind of teachers are needed? What kind of curriculum should be used? Can we make realistic occupational choices without occupational experience? What is the place of supervision programs as they relate to occupational choice? Where do we use simulated experience? How can we evaluate the teacher's work with students of vocational agriculture?

Is the man who successfully changes jobs unsuccessful? Are we establishing means to evaluate programs of vocational agriculture so as to enhance the program and to make it more meaningful or are we encouraging a narrowly conceived program of vocational agriculture?

As teacher educators, we do a rather poor job in keeping our graduates in the profession. This is particularly true if we only count those graduates in agricultural education who make lifetime careers of teaching. As leaders in teacher education, we need to be concerned with teaching aids in keeping with a change brought about by the 1963 Act. Curricular materials are sorely needed for individual student study and self-analysis. So far we have not determined what is needed let alone meeting teachers' needs.

In-service education for teachers of vocational agriculture is also lacking. More support is needed on the state level to facilitate teacher requirements for a modernized program of vocational agriculture.

A BASIC NEED IN THE PREPARATION OF TEACHING MATERIALS TO HELP VOCATIONAL TEACHERS PREPARE TO TEACH

George Luster, Associate Professor, Department of Agricultural Education, University of Kentucky, Lexington, Kentucky.

In the preparation of teaching materials to help the vocational teacher prepare to teach, we have had much diversity from state to state, and even from vocational service to vocational service. This has, no doubt, added some strength to the teaching materials. But I feel that this diversity has been one of the biggest drawbacks to the most effective use of teaching materials. First, let me illustrate the diversity by listing some of the terms that have been used at this research conference in reference to teaching materials: (1) subject-matter knowledge, (2) courses of study, (3) curriculum guides, (4) content, (5) source units, (6) instructional units, (7) study guides, (8) resource units (9) content of Agriculture I and II, (10) curricular content, (11) instructional materials, (12) curricular materials, (13) units, (14) curriculum writers, (15) teaching-learning materials, (16) syllabus for manufacturing, (17) workbooks, (18) teaching units, (19) learning activities. . .not to mention "modules" (with apologies to Dr. Scarborough), which is number 20. In addition, I added these this morning: (21) assignment sheets, (22) job sheets, (23) information sheets, (24) supplementary materials, (25) operation sheets, and (26) competencies.

I feel the biggest single need in the preparation of teaching materials in vocational education today is a common, accepted, and educationally-sound format for teaching materials which are <u>to help the teacher prepare to teach</u>. Such a format probably includes:

A. The purpose of the course--what it is to do
B. The major teaching objectives needed to attain the purpose of the course.

C. Minor teaching objectives needed to attain each major objective (these may be known as competencies; effective abilities; attitudes, understandings, and skills necessary to teach, and the like). For each minor objective we should have:

(1) Selected, relevant content
(2) Suggested teaching-learning activities
(3) References (teacher and student)

D. Other supplementary items as needed (time needed to deal with the unit, suggestions for introducing the unit, evaluating the unit, place of the unit in course of study, and the like).

Acceptance of a common format does not result in a loss of states' rights. It is not a first step toward a state or national course of study. (I do not believe that either a state or national course of study in vocational education is sound.) It is a move toward the cooperation and understanding that are necessary before the effective use of teaching materials can go beyond state lines and from vocational service to vocational service.

We can avoid unnecessary duplication in the preparation of teaching materials and instead, we can have cooperation. When appropriate, these materials may be readily exchanged among states. All teachers can use them because the format is the same, and it is understood by teachers. Some special materials will need to be developed for specific conditions while other materials can be exchanged across both state lines and vocational services. The main limitation to this effective exchange of teaching materials today is the diversity in formats and in the educational terminology used for the formats.

COMMITTEE REPORTS

Committee A - Curriculum for High School Production Agriculture, W. Forrest Bear, Chairman

Suggested Studies:

1. Determine production agriculture subject matter areas, and the allocation and sequence of time in the four-year program for these subject matter areas with emphasis on plant science, soil science, animal and poultry science, economics and management, agricultural mechanics, leadership in business and social organizations.

2. Identify and determine the principles and abilities essential to each agricultural production subject matter area.

3. Develop and evaluate instructional materials including books and manuals; films, slides, TV; and demonstration forms.

4. Develop and evaluate instructional materials considering length of period; field trips and on-job instruction; types of projects, size, and scope; and team teaching.

5. Develop and evaluate instructional facilities and equipment such as building size, shape, and space allocation; and equipment for subject matter areas.

6. Evaluate the graduate's progress in production agriculture.

7. Evaluate graduate's progress in occupational areas other than production agriculture.

8. Determine the changes which occur on the home farms as the result of the student's participation in a four-year high school production agriculture program.

9. Determine the amount of time to be donated to teaching production agriculture in high schools including years in high school and number and length of periods.

10. Determine how much can be taught at high school level regarding production agriculture and how much should be taught regarding all agricultural occupations during the first two years.

11. Survey and evaluate the success of boys in production agriculture who have had good farming programs and those with no projects, only some work experience or placement.

12. Study occupational training needs in production agriculture other than in farm operation and maintenance (e.g. farm employee, production of flowers, trees, ornamentals, turf).

13. Identify the needs for principles and skills in non-farm production agriculture.

Committee B - Curriculum for High School Off-farm Agricultural Occupations, Donald Meaders, Chairman

Suggested Studies:

1. What instruction should be offered at various age-grade levels?

2. How can the instruction at the high school level be articulated with post high school instruction?

3. What instruction can be most effectively taught through group situations and what can be most effectively taught through individual instruction? (or classroom presentations, simulated work experiences, group projects, individual projects, on-the-job training, utilization of youth organizations, etc.)

4. How can the teacher resources available in a given school situation be effectively used for instruction?

5. How can the content of instruction be organized into courses which focus on the needs of students?

6. What principles and practices should be used as guidelines for effective supervision of students in on-the-job training?

7. What vocational competencies should be taught as integral parts of general courses?

8. How should evaluation of these programs be conducted? (who, what, and when--)

9. How much individualized instruction can be done and still reach occupational competency in objective?

10. What is the place of farming programs for a boy entering off-farm agricultural occupations.

11. What kinds of projects (not on-job training) aid in instructional process.

12. What are the behavioral objectives for graduates of various phases of O.F.A.O. (expected outcomes). Identify a method for determining the entry behaviors for students entering O.F.A.O. programs.

13. What are the ways for providing individualized instruction on competencies not needed for a majority of students in classes for high school off-farm agricultural occupations.

14. Is production agriculture necessary as a pre-requisite in agricultural occupations other than farming. How much teacher time is needed for teaching off-farm agricultural occupations?

Committee C - Curriculum for Continuing Education in Agriculture (Adult and Young Farmer), Curtis Weston, Chairman

Suggested Studies:

1. What are the needs of young farmers and what kind of curriculum should be developed to meet the need?

2. What are some of the common elements in the educational needs of adult workers in off-farm occupations.

3. Are there benefits from adult education, other than economic benefits? If there are, what are they and how can they be measured?

4. How widespread are the benefits of instruction? In programs with limited enrollments such as farm business management, do the effects of this instruction influence those not enrolled?

5. What can be done to more effectively coordinate the efforts of vo-ag and the co-op Agriculture Extension Service in planning and conducting programs for adults and young farmers?

6. What role can the vo-ag program play for the part-time farmer? How many of the part-time farmers are also part-time employees in off-farm agricultural occupations?

7. Does vo-ag have a responsibility to serve non-farm rural residents? If if does, what are the needs of the rural resident that might be met by the vo-ag program?

8. How can the many emerging systems of farm business records and analysis be coordinated into an effective educational program in systems of farm management education for adults and young farmers?

9. How can programs of Computer Science be used in programming farm business operations?

10. What are the needs of farm workers other than farm operators-managers?

11. What are the guidelines and criteria for operation of a Y.F. program directed toward: (a) Agricultural Occupations, (b) Non-farm group, (c) Course content, (d) Seasonal peaks, (e) Group interests, (f) Wife involvement in program, (g) Reimbursement-visits to employment follow-up.

Committee D - Curriculum for Technical Education, Paul Hemp, Chairman

Suggested Studies:

1. How do you program courses or develop effective sequences of learning activities atthe post secondary level?

2. What kinds and amounts of employment experiences are necessary

and to what extent should these experiences parallel classroom instruction? What teaching should be left to the employer?

3. How many technical jobs are filled by four-year graduates?

4. What is needed in an English or communications class for teaching students with emphasis on report writing.

5. What should be a student's employment experience while enrolled in technical education? How can alternate periods of work and study be used?

6. What are sources of teachers for programs in technical education?

7. What can be taught "across the board" regarding safety in area vocational schools and/or junior colleges? Can educators produce a safety manual useful to area school directors and teachers? What should be our role in this?

Committee E - Curriculum for Teacher Education in Agriculture, William Bingham, Chairman

Suggested Studies:

1. Why the decline in number of students enrolled in Agricultural Education while enrollment in our College of Agriculture is increasing?

2. How much subject matter is needed in our Agricultural Education Curriculums.

3. In contrast to Problem 1, what can we do to keep the teachers we have?

4. How to identify the potential vocational agriculture teacher?

5. To what extent should we have specialization in vocational agriculture (two-man department)?

6. How should a teacher education program be evaluated?

7. By what process are changes made in a college curriculum?

8. Should there be joint appointments between (college) departments, so that instructors will teach more around the agricultural education student's needs?

9. What kind of program (specific requirements) are needed for a Master's degree?

10. How can staff load be measured?

11. To what extent should the curriculum be made flexible to allow for specialization to meet the individualized needs of students?

12. We have a new area to train for--the 13 and 14 year programs. In which course do we put methods for this? Why not have all post-high school (part-time and full-time) covered in the name course?

13. To what extent should emphasis be given to training specialists vs. training generalists in agricultural education?

14. How many "college hours" are needed to prepare teachers to teach--education courses?

15. Should a Ph.D. (Ag. Ed. major) include in his course of study one minor or supporting area in technical agriculture?

16. What should be the student teaching requirement for graduation in agricultural education?

17. What should be the minimum requirements for technical agriculture in a pre-service program?

LADIES PROGRAM

Tuesday, August 1

8:00 p.m. Fellowship and get-acquainted
Agricultural Administration Building Auditorium

Wednesday, August 2

9:15 a.m. Meet at parking lot, Agricultural Administration Building

9:30 Leave for tour

10:00 The Electric Company, 215 North Front Street at Spring Street **** Coffee & Rolls **** Program - "Food For Entertaining"

12:00 Lindenhof Restaurant in German Village, Beck & Mohawk Streets **** Lunch
Program: "The Story of German Village Restoration"
A walking tour of the Village by Mr. Sherer, guide
(Note: plan to wear shoes suitable for cobble stone and brick)

3:00 Franklin Art Glass Company
A brief tour to see stained glass church windows being made

6:30 Banquet, South Terrace Room, The Ohio Union, The Ohio State University
"The New Conservation," Charles A. Dambaugh, Director Natural Resources Institute, The Ohio State University

VT 008 640
What Is Vocational Education? Alaska Looks at Vocational Education to See How It Is Needed in This State.

Alaska State Dept. of Education, Juneau. Div. of Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Alaska State Department of Education, Division of Vocational Education, Pouch F, Juneau, Alaska 99801 (no charge).
Pub Date - 66 27p.

*VOCATIONAL EDUCATION; *PROGRAM DESCRIPTIONS; COURSE DESCRIPTIONS; TEACHER QUALIFICATIONS; *PROGRAM ADMINISTRATION; COMMUNITY COLLEGES; EDUCATIONAL PLANNING; EDUCATIONAL SUPPLY; *EDUCATIONAL NEEDS; HIGH SCHOOLS
ALASKA

The potential contributions of vocational education to the citizens of Alaska are briefly described. Vocational education for adults, pertinent legislation, program operation details, and the planning of a vocational education program are discussed. Brief sections describe the occupations to be served and course and instructor requirements for each occupation. (FP)

VT 008 640

ED042060

WHAT IS Vocational Education?

Alaska looks at Vocational Education to see how it is needed in this State

VOCATIONAL EDUCATION

Revised, 1966

WM. T. ZAHRADNICEK, *Commissioner* ..... Department of Education

Alaska Office Building

Pouch F

Juneau, Alaska 99801

VT008040

U.S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

The first Governor of the state of Alaska tells how vocational education can contribute to progress.

As Alaska continues to grow and develop industrially, it is apparent that the need for highly trained citizens to meet the challenges is ever increasing. Only through the development of a well-trained and educated work force will Alaska be able to meet the challenges and cope with the problems resulting from increased industrialization.

Vocational education is the key in developing the most important item in Alaska's industrial development: its work force. As the complexion of the work force changes, as new jobs are developed, and as old jobs become obsolete, vocational education has, and will continue to asssume, the responsibility for training and retraining workers, both youth and adults, for employment.

Through the development of high school vocational educational programs, community colleges, and State vocational schools, such as the William E. Beltz Vocational School at Nome, I am sure that vocational education will soon be available to all the citizens of Alaska. The diversity and nature of Alaska's industry, business, and agriculture emphasize the need and importance of a well developed program of vocational and technical education, which not only provides both youth and adults with a wide variety of choices of training, but which also prepares them for the privileges and responsibilities of citizenship.

Sincerely,

William A. Egan

Governor

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WHY VOCATIONAL EDUCATION?

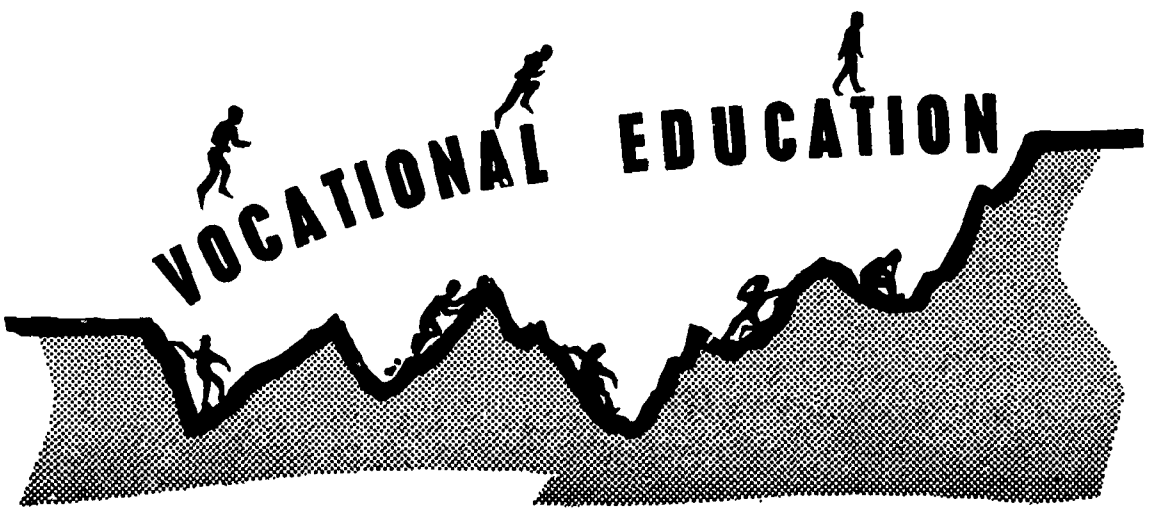
"Education is a companion which no misfortune can depress, no crime can destroy, no enemy can alienate, no despotism can enslave."* Yet one out of three young people entering first grade will not graduate from high school and only two out of ten persons will graduate from college. Even though college education has seemed to be the goal of all education, then eight out of ten do not achieve the goal.

A perplexing inconsistency of our society exists when our national economy is at an all-time high; yet there are thousands of unfilled, or inadequately filled jobs, and there are thousands of unemployed persons who are available to fill these jobs. Therefore, the need exists for vocational education programs and training opportunities to meet the increasing demands of today and tomorrow.

Vocational education has a philosophy that insists programs be geared to the demands of the labor market and be flexible enough to adjust to rapidly changing needs. Vocational education is educating the people of today for their employment today as well as the work force of tomorrow.

There is no short cut in solving the complex need for providing adequate education for living. It is to be resolved through education for the working world.

*Joseph Addison said this more than two centuries ago.



WHO CAN BE EDUCATED UNDER THE VOCATIONAL EDUCATION PROGRAM

The needs of two distinct groups of people are served as a result of provisions of vocational education legislation:

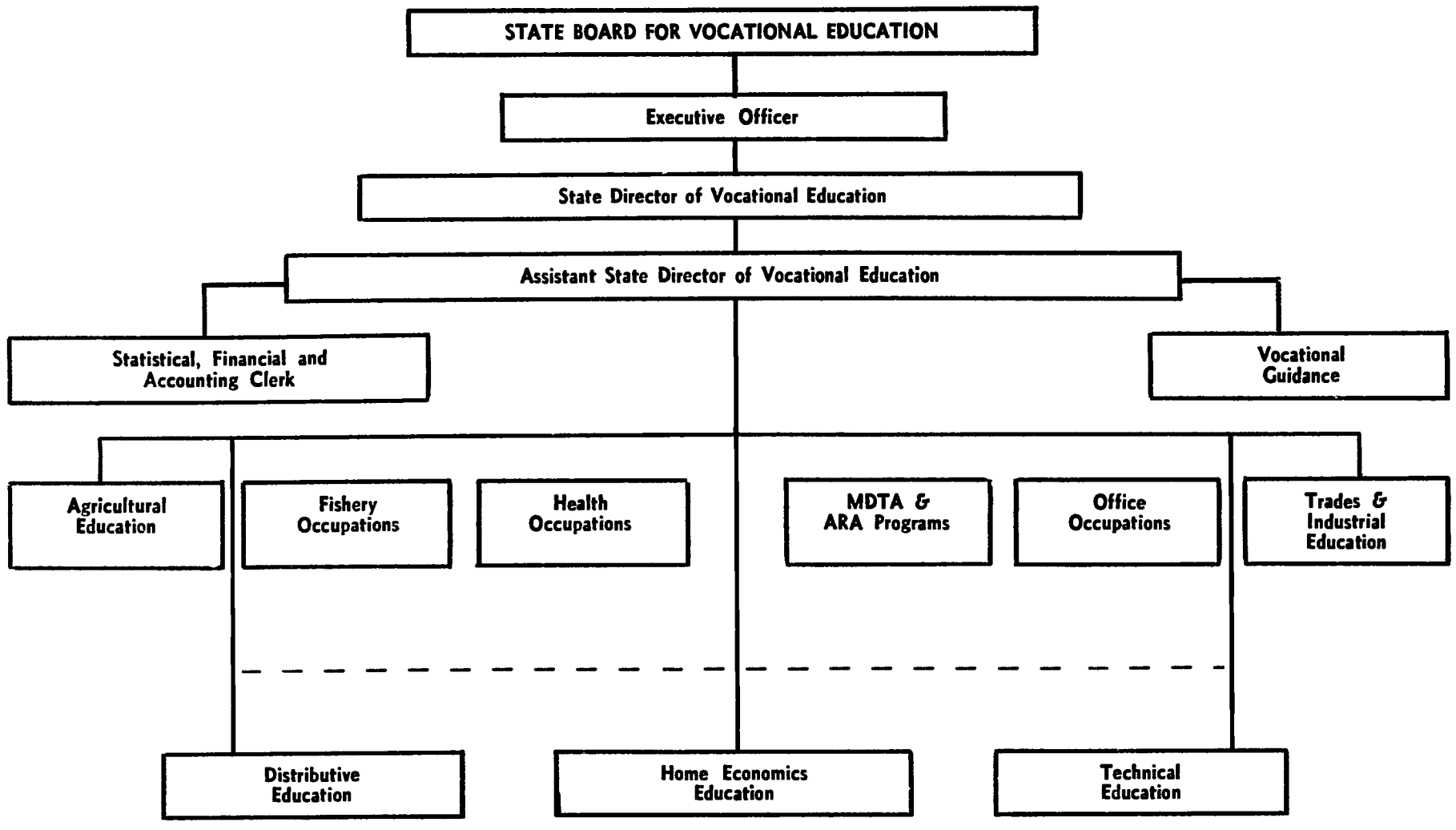
1. Those who have entered upon the work of various occupations but need up-grading, in-service training, modernizing, or further development in their occupation.
2. Those who are preparing to enter the work force

PEOPLE SERVED by vocational education programs are:

1. Young persons in regular day schools
2. Out-of-school youth
3. Adults
   a. Those employed
   b. Those unemployed
4. Highly skilled technicians in recognized occupations requiring scientific knowledge

FUNDS ARE LIMITED to programs that are:

1. Under public supervision and control
2. Of less than college-graduate level
   (Community colleges are vital to vocational education.)
3. For persons over fourteen years of age


STATE BOARD FOR VOCATIONAL EDUCATION
Executive Officer
State Director of Vocational Education
Assistant State Director of Vocational Education
Statistical, Financial and Accounting Clerk
Vocational Guidance
Agricultural Education
Fishery Occupations
Health Occupations
MDTA & ARA Programs
Office Occupations
Trades & Industrial Education
Distributive Education
Home Economics Education
Technical Education

A DESCRIPTION OF VOCATIONAL EDUCATION

ITS AIM

"The controlling purpose of vocational education is to fit persons for useful employment."*

INTEGRAL TO EDUCATION

The vocational education program does not take the place of general academic education. It supplements and enhances education as it educates specifically for a chosen occupation.

Both vocational and academic education are administered by legally constituted state and local school authorities; but since vocational education is specific, federal legislation and rules and regulations of educational programs have stipulated that this be a separate division of each state's Department of Education. Every state in the United States has a director of a Division of Vocational Education, and every state has a State Board for Vocational Education. (Many State Boards of Education function as State Boards for Vocational Education, as does ours in Alaska.)

Vocational education is part of well-balanced school programs. Vocational education is not a single subject; it is a well-rounded program of studies aimed at developing competent workers . . . competent

Economically
Socially
Emotionally
Physically
Intellectually

In skills
In a civic sense

*Public Vocational Education, U. S. Office of Education

VOCATIONAL EDUCATION FOR ADULTS

Adult vocational education plays an essential role in maintaining America's efficiency in production
distribution
consumption.

Vocational education for adults leads to a higher standard of living.
Adult workers in any field, through training in skills and knowledge related to their occupations, can adapt themselves to technological advances and other developments in their occupation. So . . . . .

1. They become more productive
2. They prepare themselves for advancement
3. They increase their earning capacity

Adult workers who are unemployed or underemployed who enter vocational classes:

1. Learn a new occupation
2. Gain self-respect through employability
3. Are given the "self tools" of a trade which provide the skills and knowledge needed by society

Technological advances will continue to increase the demand for highly skilled technical workers.

Distributive services calls for an increasing emphasis on specific training, knowledge of marketing and mastery of sales skills.

Homemaking and farming are rapidly becoming more mechanized. They require more training in mechanical skills along with education for careful, scientific management in which more judgments are involved than formerly. Homemaking classes will relate to family living areas.

As the number one occupation in Alaska is fishing, the vocational program is reflecting the need for modern techniques and up-grade courses for the fishing industry.

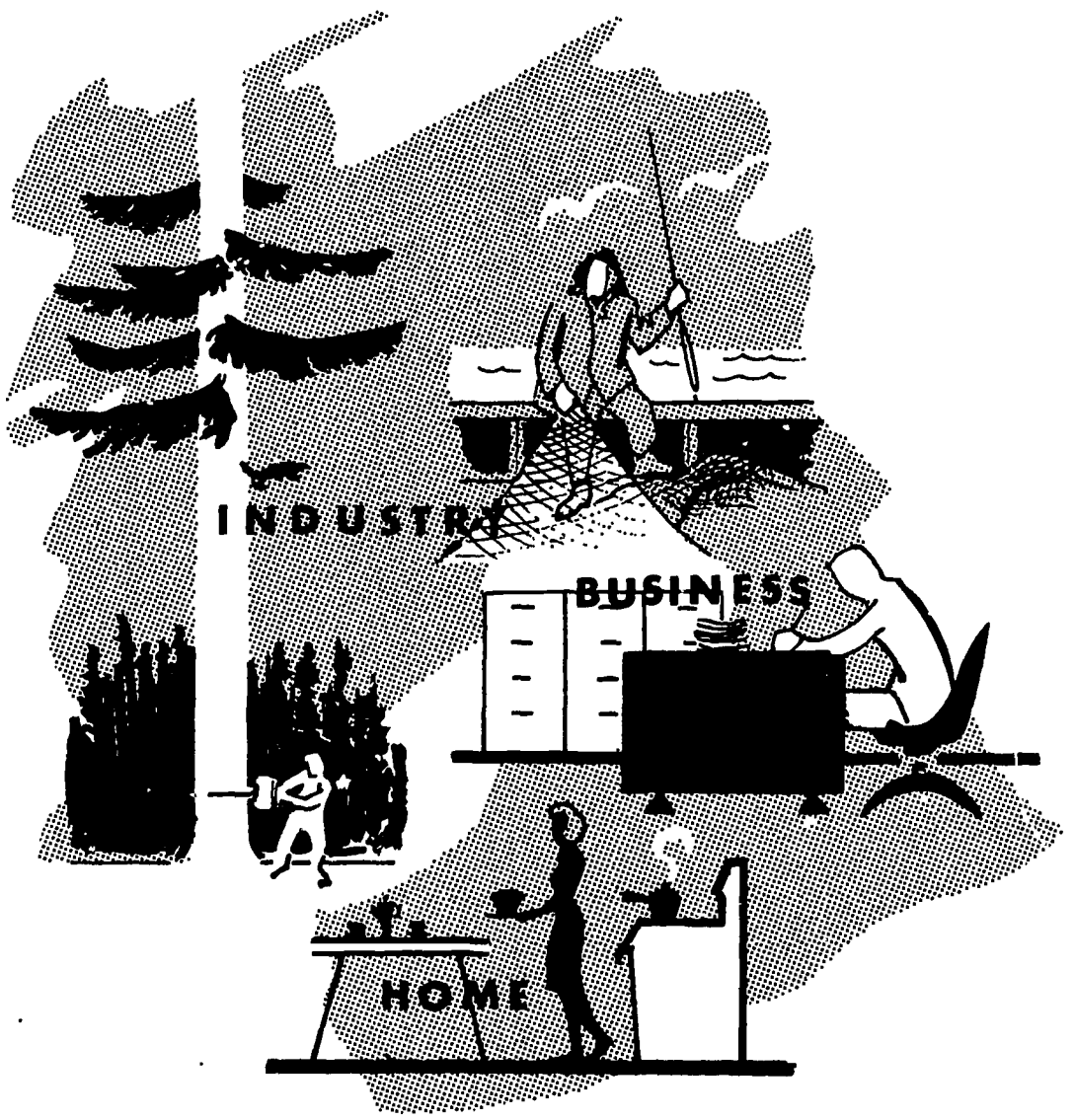
INDUSTRY

BUSINESS

AGRICULTURE

THE HOME

all require men and women with a high degree of manipulative skill, technical knowledge and adaptability.



LEGISLATION RELATING TO VOCATIONAL EDUCATION

The original need of vocational education programs was expressed by the Congress of the United States with the Sixty-fourth Congress, which approved the Smith-Hughes Act, Public Law 347, on February 23, 1917.

The George-Barden Act followed, and these two Acts provided the initial program areas of vocational education functioning. Teacher training was also incorporated and is developed through the University of Alaska in this State. The National Defense Education Act in 1958 extended vocational education in technical and practical nursing areas.

The Manpower Development and Training Act (MDTA), Public Law 87-415 approved in 1962, provides for cooperative functioning between each state's Division of Vocational Education and the Employment Security (ES) Division of each state's Department of Labor.

This Act is for the purpose of giving specific occupational skills to the unemployed (and underemployed to some extent) which relate to the local job market. The functioning of the Department of Labor is to find the trainees for courses planned through the Department of Education's Division of Vocational Education which places the class in an appropriate school setting with instruction related to job standards. Employment Security also provides placement for the trainee graduates.

The so-called "Manpower" Act varies in several respects from the rules and regulations of other vocational instruction through initial funding with one hundred per cent federal monies, providing "trainees" with necessary cost-of-living allowances and a time limitation for each course.

"The Electronics Program at the University of Alaska is a Technical Manpower Program."

The Rural Area Redevelopment Act (RAR), Public Law 89-15, is similar in functioning to "87-415." The difference between this law and the "Manpower" Act is that RAR is only for "depressed areas" and is now incorporated in the Manpower Act.

In December of 1963, President Johnson signed into law the Vocational Education Act of 1963 which is the most liberal of all the vocational education acts, and which, through the established rules and regulations, removes many of the restrictions of the Smith-Hughes and George-Barden legislation. This Act includes office occupations as a new area of functioning in vocational education.

OPERATION OF PROGRAMS UNDER THE VOCATIONAL EDUCATION ACTS

CUSTODY OF FEDERAL FUNDS

As monies (to put into being the programs of vocational education) are appropriated to the individual states of the Union, the acts require that the state, through its legislative authority, appoints its state treasurer to receive the funds and provide for their proper custody and disbursement.

STATE PLAN

As a condition of the receipt of federal grants, the State Board for Vocational Education is required to adopt and submit a state plan meeting the provisions and purposes of the acts. The plan basically is a description of state operations, including state laws, standards and procedures. It establishes a basic assurance of reasonable efficiency in the operation of vocational education.

STATE BOARD

A State Board for Vocational Education is the official governing body of vocational education. This Board is required by federal law, and the State Director administers vocational education on behalf of the State Board for Vocational Education.

STATE DIRECTOR

According to rules and regulations of the acts, a State Director of Vocational Education is the person responsible for the administration of the total state program of vocational education under the plan and the coordination of all vocational education of the state through state supervisors.

The Director works with persons throughout the state in interpreting vocational education and with individual schools to discuss personnel, equipment, etc., required. It is possible to assist in establishing a local director of vocational education as needed.

STATE SUPERVISORS

The supervisors of program areas (agriculture, distribution, health occupations, home economics, fisheries, manpower, office occupations, technical and trades and industries) are happy to work with local schools in the development of curricula, course outlines, in-service training and other program developments.

MATCHING FUNDS

In order for a state to receive federal monies for vocational education, it is necessary for state and/or local funds to match those established by federal action. The federal money is placed in the state treasury to be spent by the individual state for its programs. The matched money can come only from public funds.

No federal funds may be used to reimburse schools except on the basis of claims submitted for expenditures already incurred (MDTA and RAR excepted). In the expenditure of federal funds in federally aided programs of vocational education, there shall be no discrimination because of race, creed or color.

HOW TO PLAN A VOCATIONAL PROGRAM

Any local school may plan a vocational program(s) to meet the needs of that community. The program may be a day school program in which the young people in the classes are "headed toward" a certain occupation and need to learn the knowledge and skills involved in that occupation, or it may be an adult program providing new learning or upgrading a present occupation of that community.

General Requirements for a Vocational Program

For adult and secondary programs:

1. The program be reviewed by a local vocational advisory committee
2. An application be made to the state Director of Vocational Education including:
   a. Course outline
   b. Curriculum outline
   c. Who the teacher will be
   d. When the class will be taught
   e. What educational equipment or supplies will be needed
3. The teacher must obtain (or hold) a current vocational certificate

For secondary programs:

1. The teacher must spend fifty per cent of his/her employed time in vocational education
2. The teacher must obtain (or hold) a secondary teaching certificate

For adult programs:

1. A program has a minimum of ten (10) clock hours (no maximum)
2. Provides new training or skills or an upgrading of old skills

If the Director of Vocational Education has evidence that this course is planned to meet the needs of the community, he approves the program and "obligates" funds. A legal contract or "agreement" is established between the school and the state.

Through supervisors, assistance is given to the local programs as they need it. A report of classes and attendance is forwarded to the state office at the completion of instruction, and a check is sent to the local school.

Vocational education is not federally controlled. It is planned for local situations, with financial assistance provided through the state treasury (some of which may have come as a result of federal legislation). All monies in vocational education are to make it possible for as many people as possible to have a chance to "learn" in relation to what they are, or will be, doing as an occupation.

Alaska's State Board for Vocational Education in action on November 19, 1965, stipulated that:

> "Local vocational advisory committees (will) be established throughout the state in communities having reimbursed vocational education programs, and no programs (will) be reimbursed without review by the local vocational advisory committee. Each advisory committee must include representatives of management and labor familiar with the area concerned." A homemaker should also be a member of this group.

ADVISORY COMMITTEES

Probably no one person is wise enough to interpret the needs of a community or capable of establishing a "need - fulfilling" vocational program alone. Leaders must take initial steps, but a group of varying community citizens will more adequately see where occupational instruction will serve best. A diverse group with a goal of "finding" the most adequate programs will also establish good public relations.

The advisory committee:

1. Tries to discover community interest and needs
2. Works to develop programs of continuing need
3. Cements relationships between and among community groups and thus wins the support of the entire community
4. Aids in enrolling class members
5. Assists in selection of teachers who are capable in this occupation
6. Lets everyone know of the plans for vocational instruction
7. Aids and guides the instruction and program developments to progress toward community objectives
8. Listens to suggestions
9. Helps evaluate this program to build better ones next time
10. Assures equipment adequate to conduct program.

An advisory council will be authorized by the school administrator and local board of education, working to strengthen the school program for in-school youth and out-of-school adults.

THE ROLE OF THE COMMUNITY COLLEGE IN VOCATIONAL EDUCATION

Vocational education, as all formal education, is related to schools of one kind or another—usually public.

Alaska is fortunate to have community colleges placed in our more populated areas, and it is through these community colleges that many of the adult classes are held.

A vocational class may or may not provide the class participants with "credit" such as that necessary to "graduate" from a school. Many of Alaska's community college vocational classes are non-credit classes, but do provide a course of study to teach knowledge and functioning of specific occupational areas. A vocational course may or may not have a laboratory or workshop experience in conjunction with class participation.

A community college vocational class may be a semester or more in length, may be limited to ten sessions, or may be full-day classes for a week or more.

Instruction in the community colleges may be an apprenticeship program in cooperation with unions, such as an electrician's union or the carpenter's union. The union establishes the standards the class members must develop; the community college might then use a master craftsman of that union as an instructor. Adult programs in home economics can be "geared" by the community college to provide instruction in home and family life or could be planned for any employment need of the area. Technical programs often are included in community college curricula.

The community college administration plans the program, obtains an instructor, then makes "application" to the Division of Vocational Education for approval. If approved, a memorandum of agreement is drawn to cover program costs, and the class is taught as scheduled.

OCCUPATIONS TO BE SERVED BY VOCATIONAL EDUCATION

AGRICULTURAL EDUCATION

Farming and agriculture (one of our oldest types of employment) with modern living and the changes of the new Vocational Education Act of 1963, is subject matter for living today rather than as farming was done in the early days of America.

Vocational education includes services related to producing, processing and distributing agricultural products—such as plant science, farm management, feed stores and soil science, which might include care of lawns, golf grounds, etc. The organization "Future Farmers of America" (FFA) is the youth association of vocational agricultural programs.

Requirements for Course and Instructor

Minimum of two years of class instruction with one hour period of instruction daily for ninth grade, and two consecutive one-hour periods of instruction daily for tenth, eleventh and twelfth grades (or see State Plan for alternates).

The teacher shall be employed on a ten- or eleven-month basis. He shall have a degree in technical agriculture and meet vocational requirements of eighteen semester hours in Education, including "Principles and Philosophy of Vocational Agriculture," "Methods of Teaching Vocational Agriculture," with observation and practice teaching in the subject area. The teacher must have a minimum of sixty semester hours in technical agriculture, including Animal Production (12), Plant Production and Soils (12), Agricultural Engineering (10), and Economics and Rural Sociology (8). He must also have at least two calendar years of farm experience after age fourteen.

DISTRIBUTIVE EDUCATION

(DISTRIBUTIVE OCCUPATIONS)

Distributive Education is a program of instruction in marketing, merchandising and management. It is carried on under the supervision of the school board and the school administration with the help and cooperation of the local business community. It offers vocational training in marketing and merchandising goods and services leading to occupations in: retailing, risk bearing, advertising, financing, wholesaling, storing, transportation, manufacturing and data processing programmers and analyzers.

One out of every two employed Americans work in distributive occupations. Marketing and distributive occupations account for over half of the Gross National Product. New business methods, advancing technology and increasing competition require more specialized training for employees and managers of distributive and marketing businesses. Distribution is the vital link between production and consumption which enables the consumer to enjoy the benefits of our free enterprise system.

Distributive education, for which funds may be expended, includes subjects which contribute directly to increasing the knowledge, skill and ability of persons employed in a distributive occupation or include subjects designed to train persons employed in such an occupation for changing to a related kind of work or for promotions to positions of higher levels.

Pre-employment classes are classes during school hours in which the student receives group instruction and individual instruction in specific areas which relate directly to his obtaining employment. This class is usually offered during the junior year in preparation for the student's entry into the world of work and before taking cooperative distributive education.

Cooperative classes are classes during the school hours in which the student receives group instruction in general marketing and distribution and individual instruction in specific areas which relate directly to his job. Usually one class is used in instruction of basic business behavior, such as: selling, pricing, buying, advertising, visual merchandising, customer services, personnel, capital, credit, records, economics and preparation for job assignments. The other class period is usually spent in individual projects relating to his job, such as: product knowledge, business procedures, social skills, etc.

Mid-management classes are classes in the community colleges specializing in all phases of merchandising and marketing management leading to a two-year associate arts degree or a one-year technical certificate.

DECA (Distributive Education Clubs of America) is a national youth organization of distributive education students. DECA's program is designed to develop future leaders for marketing and distribution, provide incentives and recognition for DE students and build status in public schools for careers in marketing and distribution.

Requirements for Course and Instructor

Vocational education in distribution requires that the student be fourteen years of age enrolled in high school who has entered or is preparing to enter employment in a distributive occupation or an occupation in which a distributive function appears. It is recommended that the student outline his career objective as soon as possible using courses in business education as indicators of

(On-the-job training in Food Service)

his intent. This is usually accomplished with the student working with the school counselor and DE coordinator in planning the student's high school career.

Teachers of distribution must hold an appropriate bachelor's degree, including fifteen quarter credits in Education and twelve quarter credits in technical preparation for distribution. The teacher must have had one year's work experience relating directly toward his teaching objective for a provisional vocational certificate. After one year of successful experience as a coordinator, one year of occupational experience and nine additional quarter credits in distribution, a five-year certificate may be issued.

HOME ECONOMICS EDUCATION

Home Economics Education provides instruction which will enable families to improve the quality of their family life through the more effective development and utilization of human and material resources.

The curriculum for both youth and adults is concerned with fundamental values and problems in the several aspects of home living and homemaking and deals with these in such a way as to develop skills, understanding, attitudes and appreciations needed as a homemaker or as a wage earner in an occupation requiring home economics skills and knowledge.

The homemaking program includes a sufficient variety of activities to give students actual learning experiences in all the major phases of homemaking, including directed home and community experiences. Wage-earning home economics courses provide training in techniques necessary for occupational success.

The organization "Future Homemakers of America" (FHA) is the youth association of junior and senior high school home economics.

Requirements for Course and Instructor

The homemaking instruction shall be available for not less than two years in planned sequence with instruction in the two years including personal and family housing and management, food management, clothing management, child development, family health, personal and family relationships and management of resources—human, material and money. Wage-earning home economics instruction shall be of a duration sufficient to teach the skills and knowledge outlined in the objectives of the course.

Individual classes should not have more than twenty-four students enrolled and be further limited by facilities available (recommended: four to a unit kitchen; two per sewing machine). Students shall have directed home and community experiences. Future Homemakers of America (FHA) shall tie the class work into the community. Courses in "gainful employment areas," using skills and knowledge of home economics, are recommended for semesters or full year's schedule.

Time in the teacher's schedule shall be provided to (a) counsel students, (b) develop curriculum and (c) coordinate class instruction with out-of-class learnings through home visiting, working with FHA and contacting community groups. The time allowed in the teacher's schedule for these activities shall not be less than that provided for one unit of credit.

Contracted extended employment is recommended after school closes in the spring and before school opens in the fall.

The vocational homemaking teacher shall have had college credit courses, including a home management house experience, observation and participation in a nursery school or child development laboratory, directed teaching, and subject matter courses in family economics, housing, equipment, foods and nutrition, clothing and textiles and family relationships. Teachers of wage-earning home economics courses shall have been gainfully employed in the field of instructions in addition to meeting the academic requirements.

OFFICE OCCUPATIONS

Office Occupations Education has been included in vocational education for the first time as a result of the Vocational Education Act of 1963.

Office occupations is that field of vocational education concerned with individuals in public and/or private enterprise which relate to the facilitating function of the office. They include such activities as recording and retrieval of data, supervision and coordination of office activities, internal and external communication and the reporting of information. Also in this field of vocational education comes the responsibility of training a labor force for computer and data processing operation.

Forty-six per cent of America's women are now in the labor working force, with sixty-eight per cent of these employed in office occupations. Since the end of World War II, the machines used in business have been completely revised; and it is important that our high school students have a working knowledge of all the machines used in business. It was with these facts that the Vocational Education Act of 1963 recognized that business education had to be changed to a vocational training program leading up to office machines or office occupations.

Office occupations, for which funds may be expended, include subjects which contribute directly to increasing the knowledge, skill and ability of persons employed in an office occupation or include subjects designed to train persons employed in such an occupation for changing to a related kind of work or for promotions to positions of higher levels.

Pre-employment classes are classes during school hours in which the student receives group instruction and individual instruction in specific areas which relate directly to his obtaining employment. This class is usually offered during the junior year in preparation for the student's entry into the world of work and before taking cooperative office occupations.

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Cooperative classes are classes during school hours in which the student receives group instruction in office machines and office occupations and individual instruction in specific areas which relate directly to the student's job. Usually one period is used to increase the proficiency of using the office machines, such as: typewriter, electric typewriter, electric typewriter with key punch keyboard attached, duplicators, adding machines, calculators, billing machines, verifax, etc. The other class period being devoted to projects relating directly to the job, such as: how to make business forms, personal relationship on the job, data process simulation, transcribing actual dictation, preparation for job assignments, etc.

Secretarial science classes are classes in the community colleges specializing in all phases of secretarial science and office management leading to a two-year associate arts degree or a one-year technical certificate.

Requirements for Course and Instructor

Vocational education in office occupations requires that the student be fourteen years of age enrolled in high school who has entered or is preparing to enter employment in an office occupation. It is recommended that the student outline his career objective as soon as possible using courses in business education as indicators of his intent. This is usually accomplished with the student working with the school counselor and the office occupations coordinator in planning the student's high school career.

Teachers of office occupations must hold a bachelor's degree from a college of recognized standing. The teacher must have had one year of work experience in preparation in office occupations education of fifteen quarter credits and have eight quarter credits in technical office occupations subjects in the subjects to be taught for a provisional certificate. After one year of successful experience as a coordinator, one year of occupational experience and nine additional quarter credits in office occupations, a five-year certificate may be issued.

TRADE AND INDUSTRIAL EDUCATION

Trade and Industrial Education means education which includes any subject which is necessary to develop the manipulative skills, technical knowledge and related information—such as job attitudes, safety practices and trade judgement necessary for employment in a trade or industrial occupation.

Such occupational areas include any craft, skilled trade or semi-skilled occupation which directly functions in the designing, producing, processing, fabricating, assembling, constructing, installing, testing, modifying, maintaining, servicing or repairing any product, commodity or structure.

Many community college courses involve trade and industrial education.

Requirements for Course and Instructor

Vocational education in trades and industries shall be designed for persons over fourteen years of age who have entered or are entering the work of a trade or industrial occupation.

Special classes may be for single-skilled or semi-skilled occupations or may be any one of three preparatory day-class types (see State Plan) providing training necessary to develop the manipulative skills, technical knowledge and related information necessary for employment.

The vocational instructor for an occupation must have had three years of gainful employment in the occupation or be recommended as competent by a representative advisory committee. For further information on certification requirements, see State Plan.

Fishery Occupations have separate provisions and funds, although they are governed by the conditions applicable to other trade and industrial programs. Occupations served will include those specifically applicable to the fishing industry. In Alaska, where fishing is the number one occupation, there are progressively more developments.

HEALTH OCCUPATIONS

Health Occupations shall provide instruction in programs designed for persons who are preparing to enter one of the health occupations and for persons who are or have been employed in such occupations in hospitals or other health agencies.

Health occupations are those which render supportive services to the health professions—such as nursing, medical and dental practice, all of which are concerned with providing diagnostic, therapeutic, preventive, restorative and rehabilitation services.

A major part of the supervised practice required in the curriculum for health occupations for which a course is designed may be spent on activities directly related to patient needs.

Requirements for Course and Instructor

Course content in a health occupation must be in accord with the job analysis of the occupation developed, planned in consultation with persons who have substantive knowledge of the occupation, and developed as with trades and industrial programs.

Anchorage Community College's Practical Nurse Program

TECHNICAL EDUCATION

Technical Education shall be designed to train persons for employment as highly skilled technicians in recognized occupations requiring scientific knowledge in fields necessary for the national defense.

The occupation will have a significant number employed or an over-all shortage exists or is developing in the design, development, testing, manufacturing, processing, construction, installation, operation, maintenance, repair or servicing of plant facilities, equipment or products (or parts or accessories thereof) which are of importance for military or other defense activity.

Suitable facilities, including instructional equipment and supplies for effective instruction, will be available.

Instructor and course requirements provide instruction concerned primarily with the application of technical knowledge. Trades and industrial education requirements are met, although additional experiences and/or education may be deemed appropriate.

VOCATIONAL
VE
EDUCATION

THE CHALLENGE OF JOBLESS YOUTH AND ADULTS

It is harder today for a boy or a girl with limited education to get a job. The kinds of jobs they used to be able to fill are disappearing, and many of the jobs that are available demand much more skill and training than they now have. "One out of nine who are out of school and in the labor force is jobless."*

Their families usually occupy most inadequate housing. They are surrounded by other disadvantaged people, many of whom are unemployed or intermittently employed at low wages. **Without successful examples to guide them, the youth of such families are unlikely to succeed.**

Girls' problems of job finding are most acute, not at school-leaving age but much later when they are adults with families and finances which may require their entry or re-entry into the labor force. Girls content with acquiring only relatively low skills are likely to be handicapped later in life when employment may be so important to them.

Dwindling job opportunities for persons over age forty-five leave large numbers of middle-aged and older persons with little to fill their time.

"Automation is wiping out jobs at an estimated rate of 40,000 a week. It is estimated that by 1970 half the people living in large cities will be under educated, incompetent, or maladjusted charges of the community."§

Adult education statistics show that adults respond most readily to programs offering vocational skills.

The schools now, and in the future, must develop constructive work programs and education for occupation—the knowledge in skills and vocational functioning for productive employment.

*President's Committee on Youth Employment, April 1963.
§Compact, Department of Commerce, Washington, D. C.

VT 008 659
Support for Research and Development of Innovative Approaches to Vocational Education.

Illinois Research and Development Coordinating Unit, Springfield
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Research Coordinating Unit, State Board of Vocational Education and Rehabilitation, 405 Centennial Building, Springfield, Illinois 62706.
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ILLINOIS

This booklet describes the range of activities which receive support administered by the State Board of Vocational Education and Rehabilitation through the Research Coordinating Unit (RCU) and the procedures to be used by those who seek the services and support offered by the Unit. The RCU's general objectives are: (1) to identify vocational education issues and problems, (2) to encourage, stimulate, and assist with research, developmental, demonstration and experimental activities, (3) to coordinate, design, and initiate vocational education research efforts, (4) to survey contemporary data on emerging occupational trends and employment opportunities, (5) to disseminate information, and (6) to aid in the development of resource materials. Topics discussed include preliminary proposal development, application procedures for RCU funding, renewal and/or extension of proposals, and information dissemination services. (CH)

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VOCATIONAL IMAGINEERING

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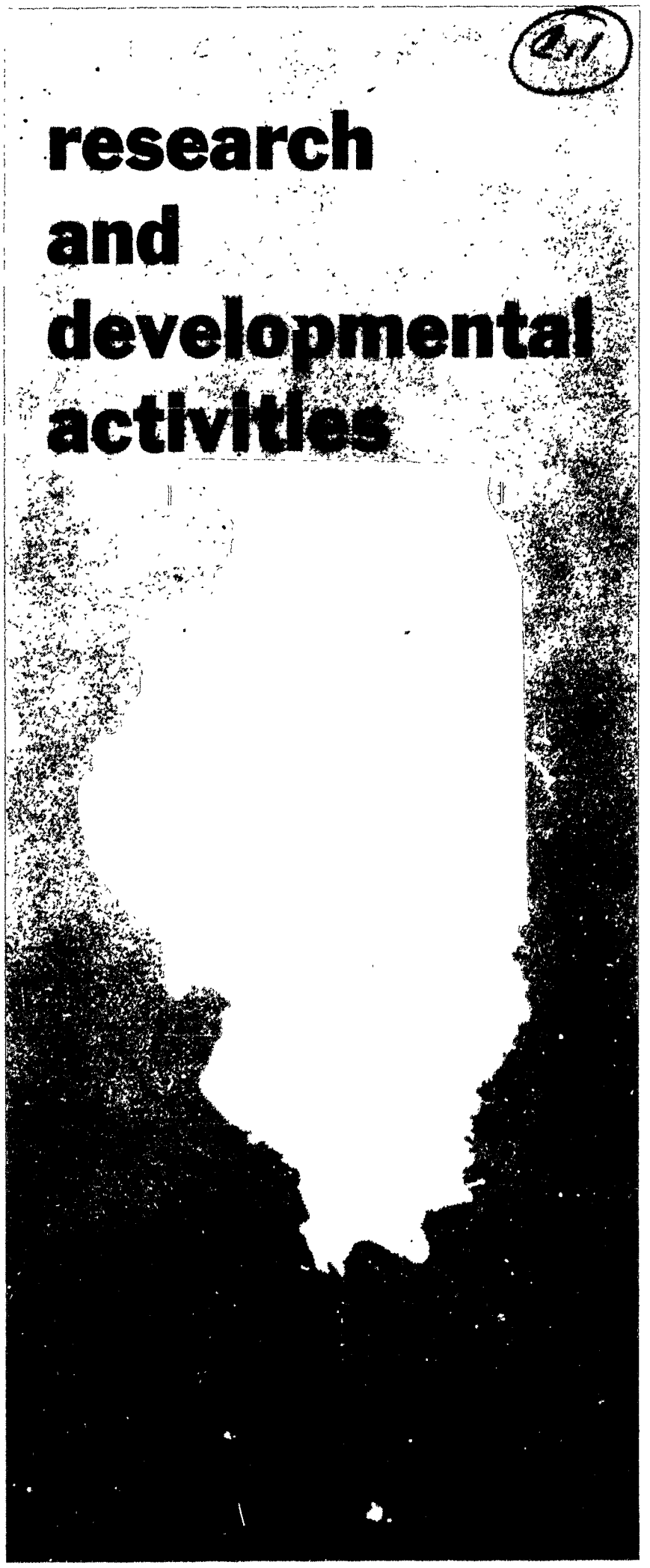

SUPPORT FOR RESEARCH AND DEVELOPMENT OF INNOVATIVE APPROACHES TO VOCATIONAL EDUCATION

BOARD OF VOCATIONAL EDUCATION AND REHABILITATION,
DIVISION OF VOCATIONAL AND TECHNICAL EDUCATION

RAY PAGE, EXECUTIVE OFFICER
SUPERINTENDENT OF PUBLIC INSTRUCTION

SHERWOOD DEES, DIRECTOR

ILLINOIS RESEARCH COORDINATING UNIT,
V. E. BURGENER, COORDINATOR

Misc. Pub. 402
October 1968

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The Illinois Research Coordinating Unit was established by Project No. OE 5-85-126, U. S. Office of Education, Bureau of Research on June 12, 1965. It was extended by Grant No. OEG-3-7-063030-2687 on March 1, 1967, and has been approved for further extension as of October 1, 1968. These projects were funded under the provisions of Section 4(c) PL 88-210.

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A STATEMENT OF PHILOSOPHY

The design and systematic inquiry of action research; the development and evaluation of experimental, demonstration and research projects; and the dissemination of information are indispensable to the future of vocational education.

Educational enterprises must assess their strengths and weaknesses, structure new and innovative programs to meet changing needs, and provide objective data and example for further improvement of vocational education.

Through support of research and developmental activities, the RCU encourages the development of contemporary programs in vocational education. We believe this is a schema for measured change, and that you are an agent of that process.

This booklet describes the range of activities which receive support administered by the State Board of Vocational Education and Rehabilitation through the Research Coordinating Unit and the procedures to be used by those who seek the services and support offered by the unit.

V. E. Burgener
Coordinator of Research
Illinois RCU

INTRODUCTION TO THE RCU

In 1965, the Research and Statistics Section of the Vocational and Technical Education Division of the Illinois Board of Vocational Education and Rehabilitation received approval and funding of a project to offer research and new program development services to vocational education. The Illinois RESEARCH COORDINATING UNIT (RCU) was established to provide these services.

Supportive funds and staff assistance are available to interested agencies and individuals to investigate and field test new ideas and techniques which are designed to broaden and enrich vocational education for youth and adults.

The RCU's general objectives are to (1) identify vocational education issues and problems, (2) encourage, stimulate, and assist with research, developmental, demonstration and experimental activities, (3) coordinate, design, and initiate vocational education research efforts, (4) survey contemporary data on emerging occupational trends and employment opportunities, (5) disseminate information, and (6) aid in the development of resource materials.

For further information call or write any staff member of the Illinois RCU.

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PRELIMINARY PROPOSAL DEVELOPMENT

When a person questions today's answers for tomorrow's educational problems, he has taken the first step in research. If he plans to seek solutions with the assistance of the RCU, we suggest he conduct a preliminary investigation of related materials and activities, trends, need, applicability, etc. He should then contact a member of the RCU who will assist him in structuring what the RCU identifies as a "PRELIMINARY STATEMENT."

Basically, the STATEMENT is a brief description of proposed activities. Upon its completion, three copies would be sent to the RCU to determine whether the statement is appropriate for RCU authorization, other sources of funding, modification and/or adjustment for the development of a formal proposal. Suggested format would include a rationale, program activities, procedures, means of evaluation and an estimated budget. Within the rationale, there should be an indication of the significance of the proposed activity beyond the setting in which it would be carried out.

The first page should be clearly marked "PRELIMINARY STATEMENT" and provide the applicant's full name, his professional title, the organization with which he is affiliated, and his telephone number.

This procedure is intended to help the potential investigator avoid spending time on a formal proposal which would be ineligible or inappropriate. However, suggestions from the RCU should not be interpreted either as denying the proposer the right to submit a formal proposal or as guaranteeing approval. The potential applicant is encouraged to forward this prospectus well in advance of the time he plans to submit a formal proposal.

PROPOSALS FOR SUBMISSION TO THE
ILLINOIS RESEARCH COORDINATING UNIT

RESEARCH PROJECTS

Funds are available from State and/or Federal Vocational Education appropriations to encourage and support basic and applied research projects. These funds, referred to as ancillary funds, are administered under the direction and control of the Illinois State Board of Vocational Education and Rehabilitation through the Research Coordinating Unit. Vocational education research is encouraged in the areas of occupational needs and trends, problems and issues of existing practices, policies and procedures, curriculum development, methods of instruction, evaluation techniques, developmental and longitudinal studies, follow-up studies and other appropriate areas.

Educational agencies are encouraged to bring to the attention of the Illinois RCU ideas and proposals for research projects. Investigative activity is needed in many problem areas both for youth and for adult workers. Imagination, vision, and creativity is necessary, even mandatory, for progress to be made in vocational education research.

Successful research projects, supported on a matching basis, may lead to the development of projects of greater scope funded either through ancillary funds or from Section 4(c) funds of the Vocational Education Act of 1963. Programs that have primarily local significance are usually funded from ancillary funds.

PROPOSALS FOR SUBMISSION TO THE
ILLINOIS RESEARCH COORDINATING UNIT

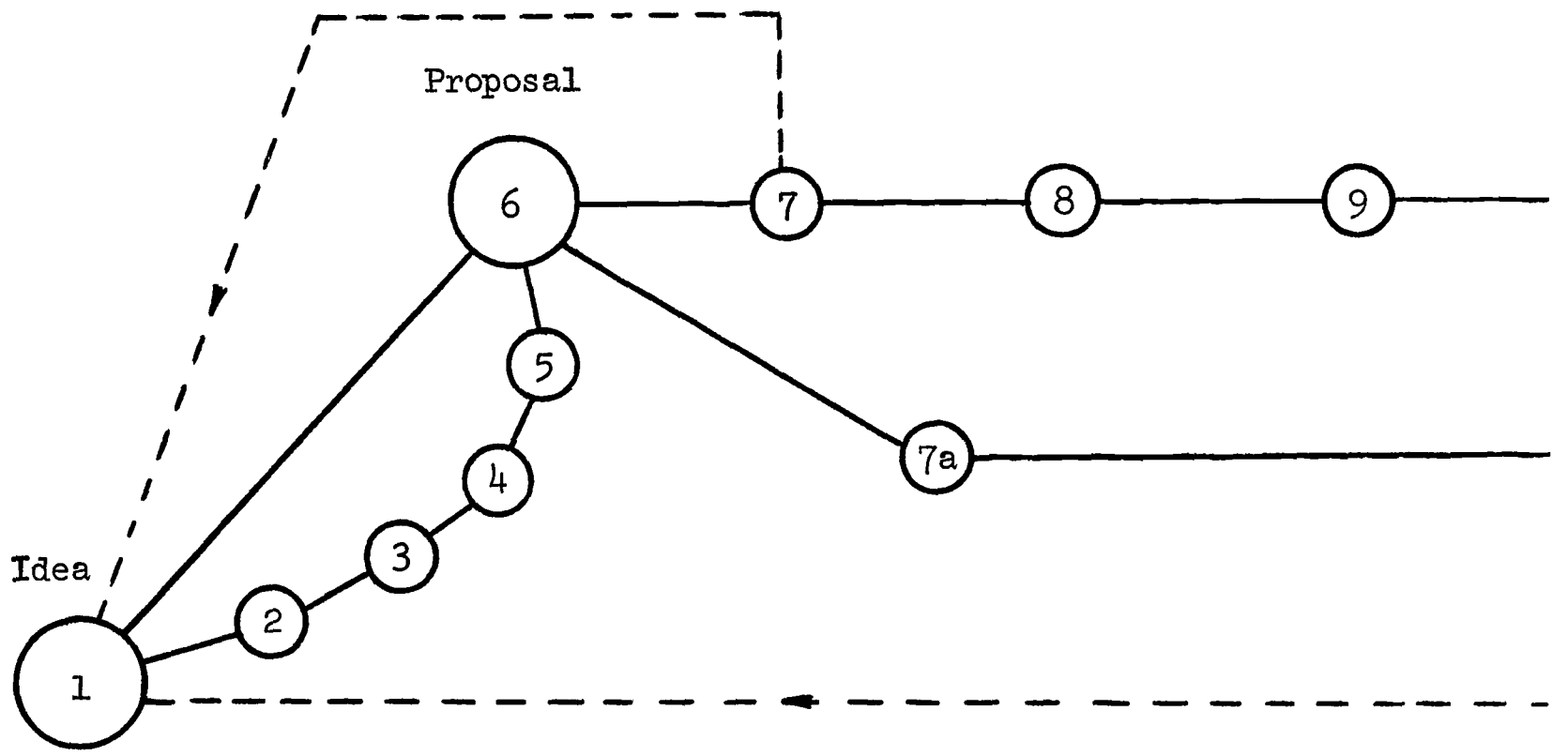
DEVELOPMENTAL PROGRAMS

Ancillary funds provide a means to encourage the promotion and development of experimental and demonstration programs of vocational education. It is assumed most programs will be conceived and conducted in local public schools in order to field test new ideas, concepts, and approaches to vocational instruction for youth and adults commensurate with current and projected needs and opportunities.

Rules are relaxed and standards are minimized in order to provide as great a degree of creativity and initiative as possible under Federal and State laws and the general policies of the State Board. Proposals from local communities are encouraged and solicited. Every assistance will be given in developing innovative plans and proposals.

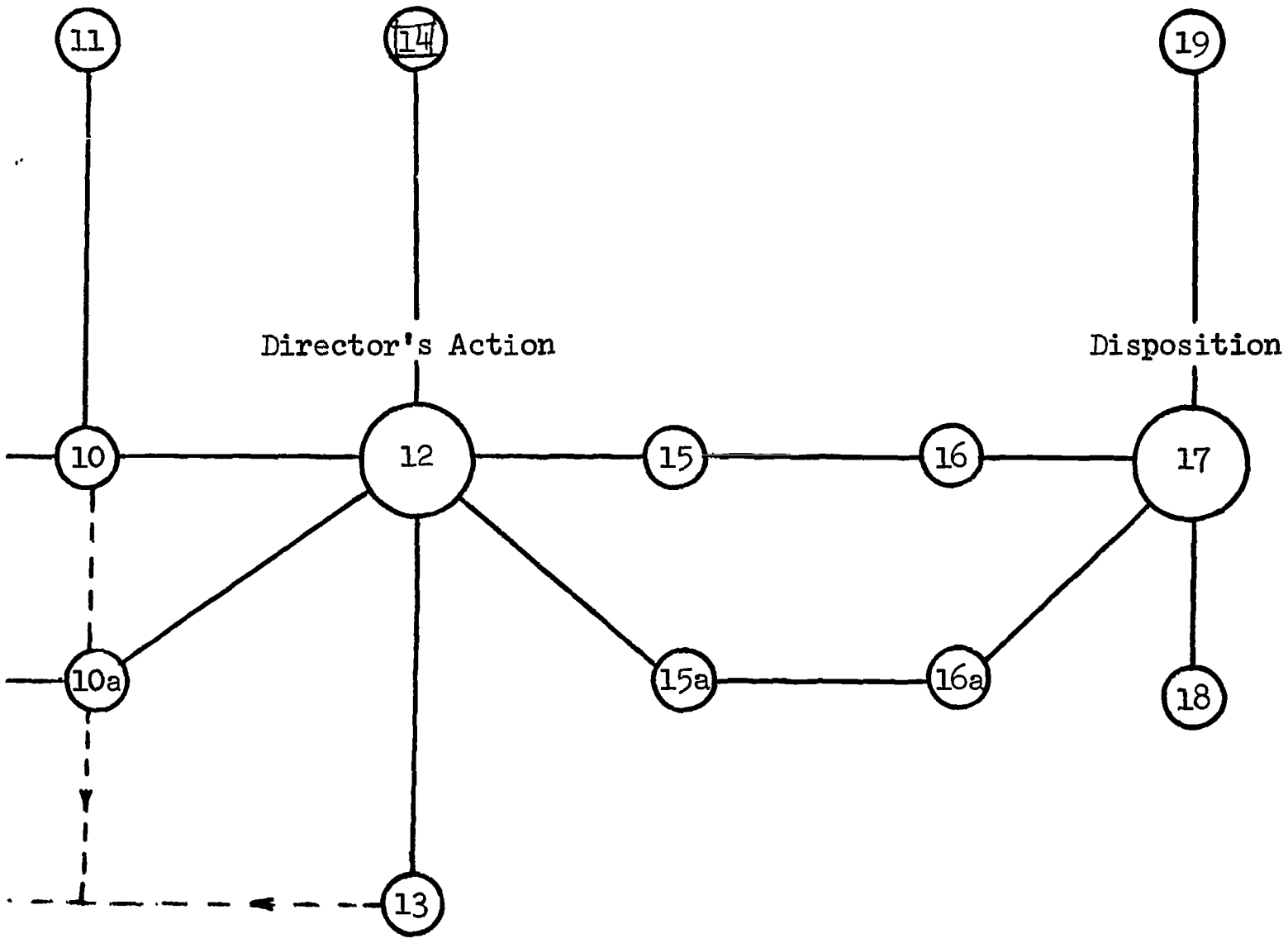
A maximum impact can result if proposals are based on imaginative new ideas rather than on slight variations of existing programs or practices. It is hoped that a wide range of experimentation will be undertaken to meet varied needs, for diverse groups and age levels, and in wide ranges of new occupational areas.

An Administrative Flow-Chart For Research And Developmental Proposals



EVENT IDENTIFICATION

1 - Idea generated by local researcher or project director.
2 - Completion of a brief summary of Idea.
3 - RCU consultant reviews Idea.
4 - RCU Coordinator approves continuing work to develop Idea.
5 - Amplification of details for use in preparing Proposal.
6 - Proposal developed; approved by local board; signed by chief administrator; and submitted.
7 - Proposal checked for validity, completeness, acceptability, allowable expenditures by RCU consultant.
7a- Status report reviewed and evaluated.
8 - Research or experimental committee reviews Proposal.
9 - Review committee obtains pertinent information from substantive speciality and other experts.
10 - Proposal signed by coordinator and prepared for submission to Director or return to originator.



10a- Request for revision, adjustment or continuation prepared for further action.
11 - Submit to other funding agency.
12 - Director receives proposal for consideration and action including revisions and technical adjustments.
13 - Disapproval and return to originator.
14 - Director informs Board of Vocational Education and Rehabilitation of projects approved and continued.
15 - Letter for original project approval from Director with specifics of the authorization.
15a- Letter from RCU consultant transmitting extension, continuation, or amendment as approved by State Director.
16 - Reimbursement based on claim of expenditures.
16a- Reimbursement based on amendment, adjustment, or continuation.
17 - Disposition through continuation, regularization or termination.
18 - Audit of reimbursed expenditures (State and Federal).
19 - Final report (at conclusion of project only).

APPLICATION PROCEDURES FOR RCU FUNDING

THE OFFICIAL APPLICATION

Application for support is made by submitting a proposal accompanied by an official application form which would be furnished by the RCU consultant who assisted in the development of the proposal. This proposal is evaluated for its merit by the staff of the Research Coordinating Unit, Research or Experimental Committee, selected consultants and supervisors with specialized experience or general knowledge in the field.

It is suggested that the initiator ask persons who are not close to the problem to read the proposal to make certain that it communicates clearly. Many potentially acceptable proposals fall short of recommendation for negotiation because the procedures are not clearly written or the author has omitted essential details.

ACTIVITIES APPROPRIATE FOR SUPPORT

To be eligible for support administered by the Research Coordinating Unit, an activity must (1) be research or research-related, (2) show promise of improving vocational education, (3) have general (not purely local) applicability, and (4) be directed toward communicable results.

The term "research related" is broadly interpreted to include such activities as the development of materials and improvement of instructional practices in general and specific areas, and dissemination and implementation of the results of research. Local projects must lead to findings significant for other settings if they are to be considered eligible for support under research authorizations. This applicability, or transferability to other settings is the factor which, in many instances, determines whether a given proposal is given consideration by the RCU.

THE PROPOSAL DOCUMENT: DESCRIPTION AND DEFINITION

Application for support is made by submitting the properly executed application form (R1, Revised) and the formal proposal in triplicate. If the request for support is approved, the application form will serve as the agreed contractual agreement between the identified school or agency and the State Board of Vocational Education.

The principal investigator should address himself to the vocational education significance and economic efficiency of the proposed project. The design, purpose, content, and procedures should reflect his awareness of such criteria.

The following guidelines are generally applicable, regardless of the magnitude of the proposed project, the area of investigation, or the authorization under which the project may be funded. The applicant is expected to make judicious adaptations of this format to accommodate the kind of research or related activity he proposes to undertake.

I The Cover Page. Use the standard application form found on pages 12 and 13.

II The Abstract occupies a single page, identifies the proposal, and concisely and simply summarizes the contents. The summary portion of the abstract has three parts: A statement of the purposes, objectives, or nature of the project; an indication of the expected contribution to education; and a compendium of procedures or description of what is to be done.

III The Rationale will include the identification, relationship to vocational education, background, definition, objectives, delimitation, and need of the problem to be studied.

IV The Body of the proposal communicates the Project Director's plan and its probable effectiveness. This will include the activities and curricula content to be used in the classroom or field experiences. The procedures will include the plan of action envisioned to investigate, coordinate, and implement the proposed activities. The population to be sampled and studied as well as facilities should be given attention.

V Personnel will include the name, title, and a brief statement of the pertinent experience and unique qualifications of the principal investigator(s). Include information on key personnel and consultants when possible. State percent of time on the project and per annum salary.

VI The Evaluation will include the techniques to be used in treatment of data. Expected findings may be included.

VII Dissemination. Indicate what techniques should be employed to disseminate important findings and the audience that should receive this information.

VIII The Budget, where appropriate, will follow the guidelines established for fiscal management of Educational Fund-I* and will be identified as the 520 Series (Special Vocational Programs). The code numbered items shall be considered as line items in the project. Estimated expenditures should be itemized under each line item. The applicant should show reasonable estimates but be detailed enough to suggest careful analysis of expected costs and understanding of fiscal responsibilities in connection with conducting the proposed activity.

520.1	Salaries	_____
520.2	Contractual Services	_____
520.3	Materials and Supplies	_____
520.7	Travel	_____
520.9	Other	_____

*Illinois Financial Accounting Manual for Local School Systems, Circular Series A, No. 164, the Office of the Superintendent of Public Instruction, Springfield, Illinois.

RENEWAL AND/OR EXTENSION OF PROPOSALS

Approval of a demonstration, experimental or research proposal is for a one-year duration. The projects are subject to continuous review and evaluation and an annual progress report is required. Usually the report is submitted as part of a request for renewal.

Consequently, the rationale for renewal should be based on the reported findings in the progress report. Request for renewal requires the project director or coordinator to follow the same procedures used in the development of the initial proposal. This necessitates a new set of application forms, a review by the Research Coordinating Unit and approval by the State Director.

Any requests for extension, modifications, or adjustments must be submitted to the Research Coordinating Unit for review subject to the approval of the State Director.

Submit in Triplicate
to
Research Coordinating Unit
BOARD OF VOCATIONAL EDUCATION AND REHABILITATION
405 Centennial Building
Springfield, Illinois 62706

APPLICATION FOR SUPPORT OF RESEARCH AND DEVELOPMENTAL ACTIVITIES IN VOCATIONAL EDUCATION

I. School or Agency _____

Superintendent or Responsible Administrator _____

Address _____ Telephone _____

Project Director or Principal Investigator _____

Address _____ Telephone _____

Project Title _____

_____

_____

Estimated Budget _____ Duration _____ to _____

II. Abstract.

III. Problem and Objectives. Outline the rationale which initiates and supports this proposal.

IV. Procedures and Activities. Includes the plan of action and outline of methodology. Attention should be given to population and facilities.

V. Personnel and Qualifications. Experience, skills, training, and time allotted.

VI. Evaluative Procedure to be followed.

VII. Method and Scope of dissemination of pertinent data and results.

VIII. Estimated budget requested for this proposal itemized by major headings.

Project Classification by RCU _____

IX. Agreement

Approval for reimbursement from vocational funds is requested as described in Sections I and II of this application. This project is designed to advance existing vocational and technical programs and/or to develop new concepts of vocational education. Teaching personnel involved in the project will meet State of Illinois certification standards.

Superintendent or Responsible Administrator

Title

Date

X. Approval

Approval is hereby recommended for the foregoing proposal based on review, discussions, and/or on site investigation.

RCU Consultant | Date

Reimbursement will be made from State and/or Federal vocational education funds at the rate of ___% for expenditures within the limits of the $_____ estimated in Sections VIII. Reimbursement will be made upon receipt of claim showing expenditure. Transfer of funds between line items in the budget is allowable (not to exceed 10% of any line item) providing this does not change the intent of the proposal nor increase the total budgeted figure. Money can not be transferred for purchase of equipment. Other adjustments and/or modifications are subject to review by the RCU and approval by the State Director.

Coordinator Research Coordinating Unit	Director Vocational and Technical Education
Date	Date

Form R1 (Revised)

PROPOSALS FOR SUBMISSION TO THE BUREAU OF RESEARCH UNDER THE VOCATIONAL EDUCATION ACT OF 1963

The Vocational Education Act of 1963 designated that ten per cent of the Federal funds appropriated each fiscal year be used for grants to pay part of the cost of research and experimental programs to meet special vocational education needs. Such proposals are commonly referred to as 4(c) proposals. The RCU encourages local education agencies, colleges, and universities to develop and submit original ideas for research and experimentation that have potential for enhancing vocational education revision and expansion. Staff members of the Unit are available for consultation and assistance in the development of such proposals.

All 4(c) proposals from local education agencies must be submitted for review and evaluation by the Illinois State Board of Vocational Education and Rehabilitation prior to transmittal to the U. S. Commissioner. Other proposals may also be submitted for review and assistance. Review is being done by RCU. This procedure is for information and coordination and is in no way intended to restrict or minimize research activity or initiative.

SMALL GRANTS

Small Project Research refers to those activities which are funded for no more than $10,000 from the Office of Education and take no longer than 18 months for completion. This special classification has been provided to give adequate consideration to inexpensive yet worthwhile projects; to encourage personnel of small colleges to gain experience in research and related activities; and to support significant small scale educational research projects by doctoral and post-doctoral students and fellows, particularly those at developing institutions.

Support for these activities has been decentralized to the OE Regional Offices. This method of administration should facilitate prompt consideration of proposals and bring evaluation, negotiation, monitoring, and other assistance closer to those carrying out the projects. The instructions in Appendix A are generally applicable to small projects but separate instructions are available by writing to the Regional Office in Chicago, 433 W. Van Buren St., Room 712, or from the office of the Illinois RCU.

INFORMATION DISSEMINATION SERVICES

The Illinois RCU keeps a library of all reports and abstracts on vocational education research and developmental projects in Illinois. These reports and abstracts are available to teachers, administrators, research specialists, others in the educational community, and the public.

Several publications are now available which provide up-to-date information pertaining to research and developmental projects. These publications are distributed throughout the year in various forms such as indexes, bibliographies, abstracts, brochures, and a RCU publication, Newsbriefs. The service upon request, also provides educators with vocational education information not in the RCU library.

ERIC

The Educational Resources Information Center (ERIC), U. S. Office of Education, is designed as the first nationwide comprehensive information system to serve American education. ERIC provides information on reliable, current educational research and research-related materials inexpensively to a wide variety of audiences. ERIC informs the educational community of its acquisitions in the form of resumes and indexes through its monthly catalogue, RESEARCH IN EDUCATION.

In addition to research materials received from the U. S. Office of Education, ERIC Central collects reports from 19 clearinghouses located in various cities throughout the United States. Vocational education research information, besides that contained in RIE, can be also obtained from the ERIC Clearinghouse, the Center for Vocational and Technical Education, Ohio State University, 980 Kinnear Road, Columbus, Ohio, 43212. The Center's collections are published quarterly in ABSTRACTS OF INSTRUCTIONAL MATERIALS (AIM) and ABSTRACTS OF RESEARCH AND RELATED MATERIALS (ARM). The Illinois Research Coordinating Unit also makes available to interested persons its files containing all the collections from AIM and ARM and those from RIE related to vocational education.

Additional copies of this publication may be requested from the Research Coordinating Unit, State Board of Vocational Education and Rehabilitation by writing or telephoning the following offices:

405 Centennial Building
Springfield, Illinois 62706
Phone . . . Area 217—525-4620

Room 1807—160 N. LaSalle Street
Chicago, Illinois 60601
Phone . . . Area 312—346-2000
Ext. 2338

VT 008 662
Source Book of Research Titles and Related Materials in Vocational-Technical Education, 1968-69. A Compilation of Acquisitions

New Jersey Occupational Research and Development Branch, Trenton
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 112p.

*INFORMATION SOURCES; *BIBLIOGRAPHIES; *VOCATIONAL EDUCATION; MICROFICHE; INDUSTRIAL INNOVATION; EDUCATIONAL INNOVATION; REFERENCE MATERIALS; EDUCATIONAL RESEARCH; RESEARCH COORDINATING UNITS; *RESOURCE MATERIALS; INFORMATION DISSEMINATION; INDEXES (LOCATERS); *LIBRARY COLLECTIONS
*NEW JERSEY OCCUPATIONAL RESEARCH AND DEVELOPMENT RESOURCE CENTER

This reference tool for vocational educator use lists professional information available on microfiche, hard copy and in "Pacesetters in Innovation" for general vocational education and the individual service areas. Content is organized according to Agricultural Education, Business and Office Education, Cooperative Education, Distributive Education, Health Occupations Education, Home Economics Education, and Industrial Education, and Manpower Training, Special Needs, Technical Education, Trade and Industrial Education, and Vocational Guidance. The document contains an author index, and appended are lists of books of special educational interest, vocational information, and urban and ghetto education, and a list of films and filmstrips. (FP)

VT 008 662

ED042060

SOURCE BOOK OF RESEARCH TITLES AND RELATED MATERIALS IN VOCATIONAL-TECHNICAL EDUCATION, 1968-69

A COMPILATION OF ACQUISITIONS OF THE NEW JERSEY OCCUPATIONAL RESEARCH AND DEVELOPMENT CENTER

Occupational Research & Development Branch
Division of Vocational Education
225 West State Street
Trenton, New Jersey 08625

VT008662

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

FOREWORD

The information explosion that has staggered this generation of knowledge seekers has no less affected those of us in Vocational Education who are seeking new ways and new ideas to better educate our youth.

The support the Division of Vocational Education has given to the development of the New Jersey Occupational Research and Development Resource Center is indication enough that we are concerned about providing our state with informed vocational-technical educators. The Center already has become an important part of the total services of the Occupational Research and Development Branch. Within a year hundreds of vocational-technical education personnel have been served by the Resource Center.

We hope that this source book will serve in a dual capacity: first, provide the user with quick reference to his special information needs and, second, become our invitation to utilize the professional information services of the Occupational Research and Development Resource Center.

Robert M. Worthington
Assistant Commissioner of Education

PREFACE

This source book project is a compilation of resource materials available to Vocational-Technical Education personnel at the New Jersey Occupational Research and Development Resource Center. The Center, which is an extension of the services provided by the Occupational Research and Development Branch of the Division of Vocational Education, has been created to serve the professional information needs of personnel interested in individual professional development of Vocational Education in general.

The source book is unique in that it attempts to give the vocational educator a quick reference to available information in his particular field. This project has been funded by the New Jersey Division of Vocational Education through its Vocational-Technical Curriculum Laboratory at Rutgers - The State University. Bibliographer for the project was Mrs. Aldora A. Jackson, Librarian of Junior High School No. 3, Trenton. Editor of the project was Rudolph J. Girandola, Coordinator of Vocational Research Information Services.

Morton Margules, Director
Occupational Research and
Development Branch

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S49D What Does Spring Do To Plants?
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S48B What Does Summer Do To People?
S48C What Does Summer Do To Animals?
S48D What Does Summer Do To Plants?
S47A What is Autumn?
S47B What Does Autumn Do To People?
S47C What Does Autumn Do To Animals?
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S53B Planning for Efficiency
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*SAN JOAQUIN VALLEY; CALIFORNIA

A survey of 11 community colleges offering vocational programs in Central California is presented in the form of program descriptions, evaluative statements, and program directory. Addresses, enrollment data, and educational programs are given for each college. (EM)

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Putting The Pieces Together

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AN INVENTORY OF OCCUPATIONAL TRAINING AVAILABLE THROUGH THE COMMUNITY COLLEGES OF THE SAN JOAQUIN VALLEY

M E M O R A N D U M

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DATE: February 5, 1969

RE: (Author, Title, Publisher, Date) "Putting The Pieces Together": San Joaquin Valley Community Colleges, 1968

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I N T R O D U C T I O N

This publication represents an attempt to inventory and, wherever possible, assess every occupational program presently offered by the eleven California Community Colleges of Central California. These institutions constitute the San Joaquin Valley Community College Council for Occupational Education and include:

Bakersfield College, Bakersfield

Coalinga College, Coalinga

Columbia Junior College, Sonora

Fresno City College, Fresno

Merced College, Merced

Modesto Junior College

Porterville College, Porterville

Reedley College, Reedley

San Joaquin Delta College, Stockton

College of the Sequoias

Taft College, Taft

Wherever possible, occupational programs offered by private or commercial schools or other agencies in the San Joaquin Valley have been included in this inventory. However, only programs related to the "usual" occupational programs of Community Colleges were included; (i.e., Cosmetology, Business, and Aeronautics, but not Bartending or Barber Science).

Programs presently offered are listed in Section IX as a combined listing by cluster areas, followed by a listing of anticipated program offerings, and finally by an individual college display of all occupational programs at a given institution.

An additional goal of this paper is to provide an assessment of the occupational areas of each of the eleven member colleges.

To this end, the Project Coordinator has visited each campus, to examine facilities, staffing, equipment, and supervision of occupational programs. As a result of these visits, a number of outstanding individual programs have been identified and are discussed in Section II.

Anticipated outcomes of Year I, Council Operation, include, in addition to this inventory, a manpower needs study which is scheduled for publication in late Spring or early Summer, 1969. These two publications should allow for a more intelligent and economically sound occupational program-planning by member colleges. The inventory will indicate the present level of program operation, while the manpower needs study should indicate the absorption capabilities of the San Joaquin Valley and California employers. With both student output and employee input identified, a firmer basis for future occupational program-planning will exist.

The desired level of inter-college cooperation will be the closest possible horizontal articulation of occupational program-planning, initiation and operation. A major step in reaching this level includes free interchange of students between member colleges. When this point is

reached, any student residing in any district which is part of the Council area would have direct access to any occupational program at any of the eleven member colleges.

With free interchange, then, as a distinct possibility and of nigh priority, a listing of interdistrict agreements, which existed as of October, 1968, between member colleges is included. To further illustrate these agreements, California maps with each college location indicated and the agreements existing between it and the other ten colleges are provided. Using this as background information, it is hoped that an early attempt at free student interchange can be implemented.

A point of departure from the above is provided in the form of a possible master occupational education schedule which includes the total occupational offerings of all eleven colleges, and simulates the appearance of a brochure which might be given future students interested in a career and fortunate enough to live in the San Joaquin Valley.

AN ASSESSMENT OF OCCUPATIONAL PROGRAMS

AT EACH OF THE MEMBER COLLEGE

OF THE

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL

EDUCATION

An assessment of occupational programs at each of the member colleges is an integral part of and a logical extension to this inventory.

No claim is made of an extensive study of each campus. However, the Project Coordinator feels that with the limited time available, he has gathered some useful reflections on each campus. These comments should provide starting points on which to begin Area Planning and, perhaps, be of some value to the individual institution.

The method of gathering information involved two personal visits to each of the eleven campuses. The initial visit discussed numerous general aspects of the occupational programs on a particular campus. The follow-up visit was preceded with a letter indicating areas to be discussed and examined on the second visit. The specific areas examined included, but were not limited to, the following:

1. How do you perceive your total occupational education offerings at your institution (adequate, deficient in some areas, etc.)?
2. Which of your occupational programs would you consider to be very strong?
3. What occupational programs do you offer that are considered unique?

4. Which occupational programs presently offered at your college might be adaptable to Area Planning or cooperation with other member colleges?

5. How do you see the development of occupational education at your college?

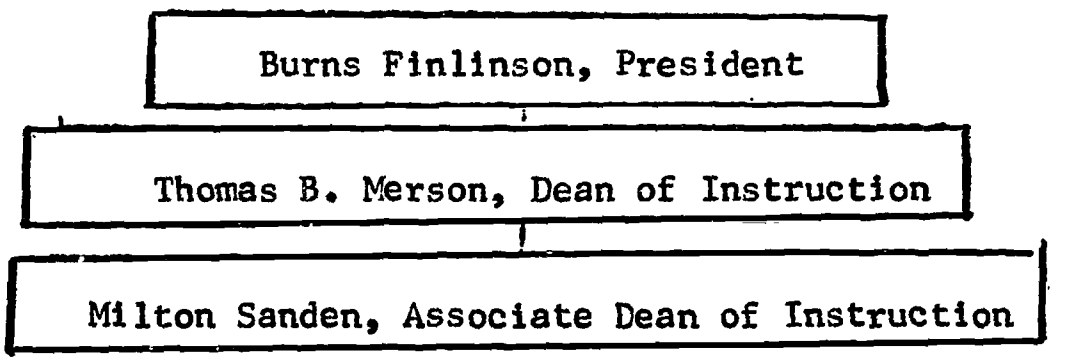
   a. Over the next five years?
   b. Over the next ten years?

In addition to conversation and discussions with Administrators, Division and Department Chairmen as well as faculty and students were interviewed. The facilities and equipment on each campus were also examined.

An outcome of the above collection procedure is the following capsuled comments on the relative strengths and weaknesses of the occupational programs at each of the eleven member colleges.

BAKERSFIELD COLLEGE

OCCUPATIONAL EDUCATION - ADMINISTRATIVE RESPONSIBILITY CHART



BAKERSFIELD COLLEGE:

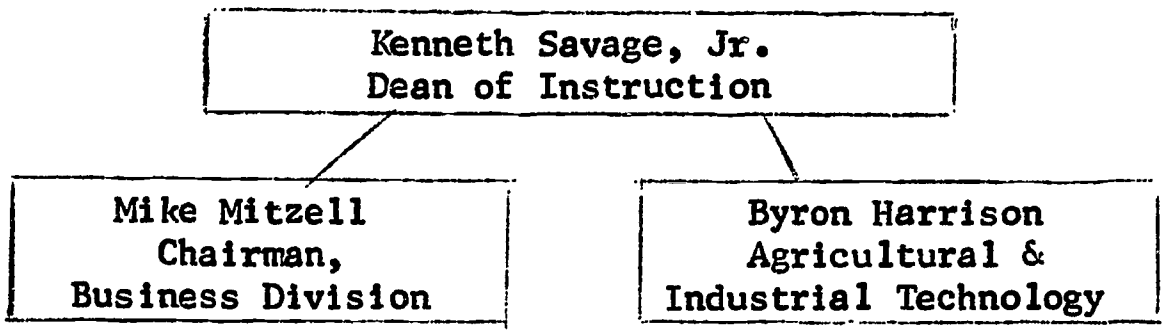
A wide range of occupational programs is offered including thirty-seven programs in five major groupings. In addition, four occupational programs are offered at a satellite campus facility (Naval Weapons Test Center). Anticipated programs include eleven new areas slated for Fall, 1969. In view of the enrollment (5,440 day and 4,529 evening students), the program offerings are not extensive and appear to leave ample room for expansion. In general, facilities are adequate with the exception of Law Enforcement, which should be enlarged to accomodate a presently large and growing program. Short term planning anticipates growth in the Allied Health and Social Service Aides fields, as well as some proliferation of programs in other fields. Two important aspects of future occupational planning at Bakersfield include the possible opening (1972) of a third district college in the desert area, as well as the new California State College at Bakersfield. Long term planning must await the impact of water on the west side of the valley and the changes in operation that will result subsequent to the separation of the Junior College and High School Districts.

(Bakersfield College, Continued)

SUMMARY: LOTS OF ROOM TO GROW . . . FUTURE GROWTH WILL BE SUPPORTED AND ENHANCED BY PRESENTLY STRONG PROGRAMS . . . FACILITIES MOSTLY ADEQUATE . . . EXCELLENT IN HOME ECONOMICS AND NURSERY SCHOOL . . . CROWDED IN POLICE SCIENCE . . . A POSSIBLE CENTER FOR COUNCIL AREA PLANNING IN DATA PROCESSING, ALLIED HEALTH, PUBLIC SERVICE AIDES, AND LAW ENFORCEMENT. . . . FURTHER CENTRALIZATION OF OCCUPATIONAL PROGRAM ADMINISTRATION SEEMS ADVISABLE.

COALINGA COLLEGE

OCCUPATIONAL EDUCATION - ADMINISTRATIVE RESPONSIBILITY CHART



COALINGA COLLEGE:

Eighteen programs in three major groupings constitute Coalinga's occupational offerings. A Fall, 1968, day enrollment of 703 students is a definite limiting factor as far as an increase in numbers of occupational programs is concerned. Even if the State average of 78% non-transfer students were assumed, this would still leave only 550 students available to participate in the present 18 programs (average of 30, or 15 Freshmen and 15 Sophomores). With this in mind, further expansion of occupational programs should be weighed carefully. Area Planning could be extremely valuable to Coalinga and would provide its students with increased career training opportunities at a minimum of additional district money.

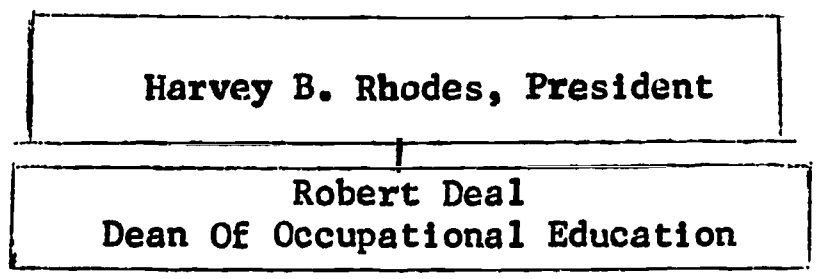
Facilities are adequate in most areas with some expansion of business lab facilities indicated. Class loads are moderate in most programs.

(Coalinga College, Continued)

SUMMARY: COALINGA STUDENTS IN OCCUPATIONAL EDUCATION ARE OFFERED AN ACCEPTABLE NUMBER OF CAREER ALTERNATIVES CONSIDERING THE SIZE OF THE INSTITUTION. . . AREA PLANNING WOULD SEEM TO BE THE KEY TO AN INCREASE IN OFFERINGS WITHOUT FINANCIAL HARDSHIP TO THE DISTRICT . . . STUDENTS BENEFIT FROM THE INDIVIDUAL ATTENTION THAT ACCOMPANIES A SMALLER COLLEGE AND FAVORABLE PUPIL-TEACHER RATIOS. . . LIMITED PROGRAM PROLIFERATION WOULD SEEM ADVISABLE UNDER PRESENT CONDITIONS.

COLUMBIA JUNIOR COLLEGE

OCCUPATIONAL EDUCATION - ADMINISTRATIVE RESPONSIBILITY CHART



COLUMBIA JUNIOR COLLEGE:

Any assessment of the occupational programs of Columbia Junior College at this time is probably premature due to its embryonic stage of development. However, certain patterns seem to be emerging and are worth recording at this time. Columbia has an advantage with the opportunity to build a new curriculum without any ties to traditional approaches. There is evidence of a strong and growing commitment to occupational education as witnessed by the only Dean of Occupational Education among our eleven colleges. The Dean has completed the only long range master plan of occupational education known to me among our Council membership.

This college is presently operating out of temporary quarters in Sonora and the restored ghost town of Columbia. A new campus incorporating excellent facilities for occupational education is now under construction adjacent to Columbia and should be partially operational for the 1969-70 school year.

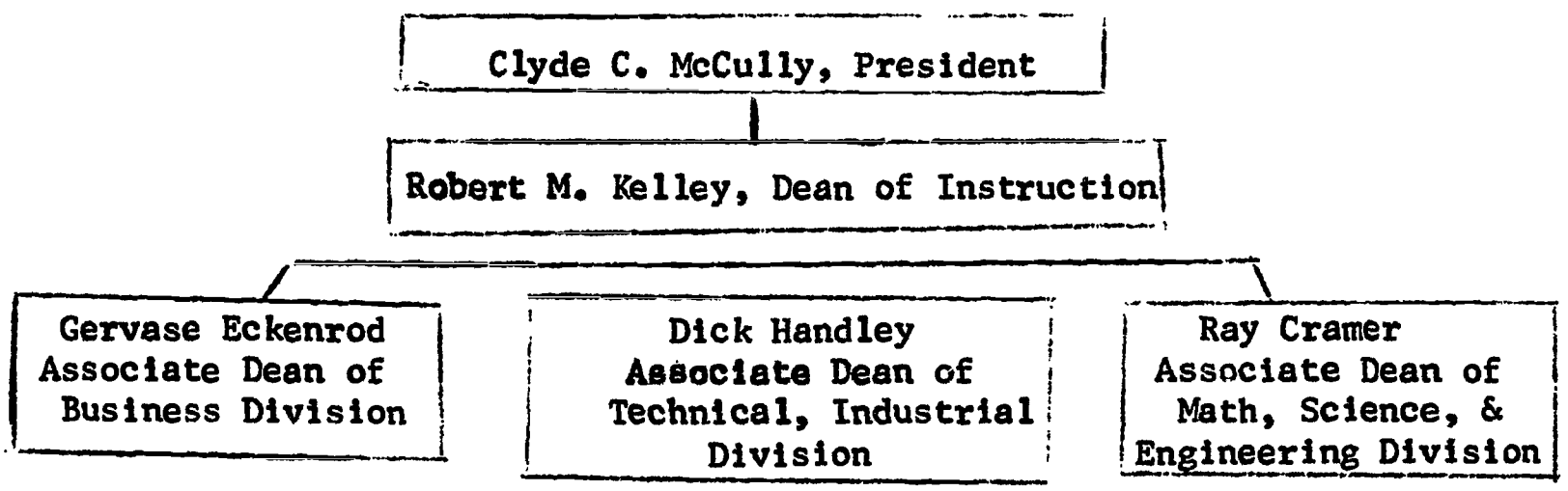
As of October, 1968, only two occupational programs were fully underway with some courses being offered in ten career areas. Plans for 1969-70 call for an expansion in all areas and also the implementation of several new programs.

The relative strengths and weaknesses, and success in student placement in the present occupational programs are impossible to assess at this time.

SUMMARY: COLUMBIA IS A NEW AND PROMISING COMMUNITY COLLEGE . . . ITS DEDICATION TO OCCUPATIONAL EDUCATION SHOULD BE WATCHED CLOSELY BY ALL OF OUR MEMBERS . . . OPPORTUNITIES EXIST FOR THE DEVELOPMENT OF SOME NEW AND UNIQUE PROGRAMS, AND MANY OF THESE ARE NOW BEING EXPLORED. . . STRONG CENTRAL CONTROL AND A PUBLISHED, APPROVED, MASTER PLAN FOR OCCUPATIONAL EDUCATION SHOULD ADD STRENGTH TO ALL FUTURE OCCUPATIONAL PROGRAMS AT COLUBIA.

FRESNO CITY COLLEGE

OCCUPATIONAL EDUCATION - ADMINISTRATIVE RESPONSIBILITY CHART



FRESNO CITY COLLEGE:

Fresno City College has one of the longest histories of any California Community College and over the years has developed a broad offering of occupational programs. Forty-one programs are offered under the supervision of three area Deans (Business; Technical and Industrial; and Mathematics, Science and Engineering).

Present offerings are strong in all areas. Facilities are excellent in the Technical and Industrial area, but at capacity in the Business area. Some expansion of facilities in Business is indicated. Placement of graduates in most areas is excellent. Fresno seems to be meeting the occupational training requirements of its 10,689 students (6,409 day and 4,280 evening).

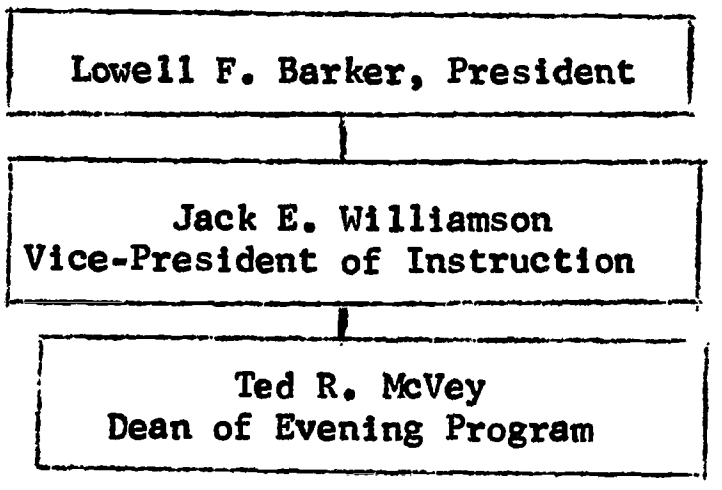
The Dean of the Technical and Industrial Division is now developing a long range master plan which should result in increased space utilization and aid in determing the need for and implementation of new program offerings. Long range plans call for 50% of the student body to be enrolled in occupational education versus the present 30%.

The Business Division anticipates some change in approach to instruction in the form of numerous single purpose short courses. There is also some sentiment towards defining core courses for all business programs. Data Processing may become a required course in most business programs. College staff indicated student pressure on the limited facilities may require some type of utilization on a seven-day-week basis.

SUMMARY: BROAD PROGRAM OFFERINGS, ADEQUATE FACILITIES IN MOST AREAS, EXCELLENT IN SOME), AND A LARGE STAFF ARE REAL ASSETS . . . STUDENTS HAVE A WIDE PROGRAM CHOICE AND GRADUATES ARE WELL TRAINED AND READILY PLACED. . . DEVELOPMENT OF A SECOND CAMPUS (REEDLEY) AND A THIRD CAMPUS (IN PLANNING STAGE) MAKE THE FUTURE EXPANSION OF SPECIFIC PROGRAMS AT FRESNO CITY COLLEGE HAZY AT THIS TIME . . . FRESNO CONSTITUTES A LOGICAL CORE AREA AROUND WHICH FUTURE AREA PLANNING MAY OCCUR.

MERCED COLLEGE

OCCUPATIONAL EDUCATION - ADMINISTRATIVE RESPONSIBILITY CHART



MERCED COLLEGE:

Merced College is now in its sixth year of operation. Initial enrollment in 1963 was just over 200 (FTD) students; Fall, 1968, enrollment exceeds 1500 (FTD) with another 1500 evening students. Eighteen occupational programs are offered. All programs are co-

ordinated through a single division Dean with most administrative functions being carried out by the Dean of Instruction.

New facilities are nearing completion for Agriculture, Auto-Mechanics and several other technical and business programs. Upon completion of these facilities, all programs should be adequately housed with only selected programs requiring additional building.

There is a need for increased emphasis on recruitment of students in some areas, and development of more sophisticated follow-up methods and placement activities.

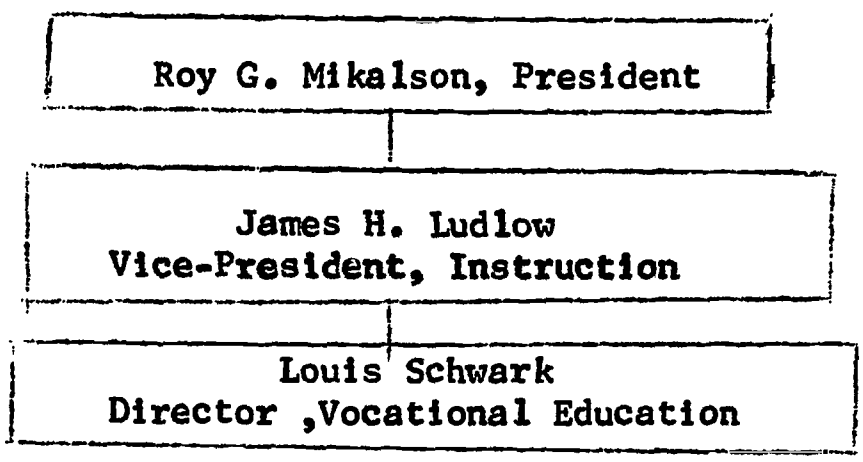
As on each of the eleven campuses, there is need for more general education requirements that are relevant to the occupational program a student may be pursuing, rather than being included in all of the standard general education classes.

Some programs which are now only partial offerings, such as Police and Fire Science, might easily be expanded into complete programs. Some means of more direct coordination and administration of occupational programs seems advisable.

SUMMARY: MERCED COLLEGE IS YOUNG AND GROWING RAPIDLY . . . IT ENJOYS A STRONG AND HEALTHY COLLEGE-COMMUNITY RELATIONSHIP . . . FACILITIES, STAFF, AND EQUIPMENT WILL SOON BE ADEQUATE IN ALL AREAS: (EXCELLENT IN AUTO, AGRICULTURE, AND ELECTRONICS) . . . SINCE THE COLLEGE POPULATION APPEARS TO BE LEVELING, FUTURE PROGRAM OFFERINGS SHOULD BE CAREFULLY CONSIDERED . . . AREA PLANNING COULD OFFER MUCH TO MERCED STUDENTS INTERESTED IN OCCUPATIONAL EDUCATION.

MODESTO JUNIOR COLLEGE

OCCUPATIONAL EDUCATION - ADMINISTRATIVE RESPONSIBILITY CHART



MODESTO JUNIOR COLLEGE:

Modesto Junior College is one of the oldest colleges in the State, as well as the Council. In addition to a long history, it can also claim what is probably the broadest spectrum of occupational program offerings of any Council member: Fifty-seven (57) programs in eleven (11) areas. Some programs could use additional enrollment, and, as on most campuses, some occupational programs need some updating and modernization of facilities and curriculum. In home economics and business, facility expansion is indicated. The only area of the overall offering that might support new programs is in the Allied Health area, and further expansion here is limited by a lack of required clinical facilities.

Good follow-up activity is evident; both in the past and in the present. Future follow-up studies are being planned with the assistance of VEA funding, and will take the form of a Data card which can be processed, stored, and retrieved on demand. Standardization of requested information is a goal of this project.

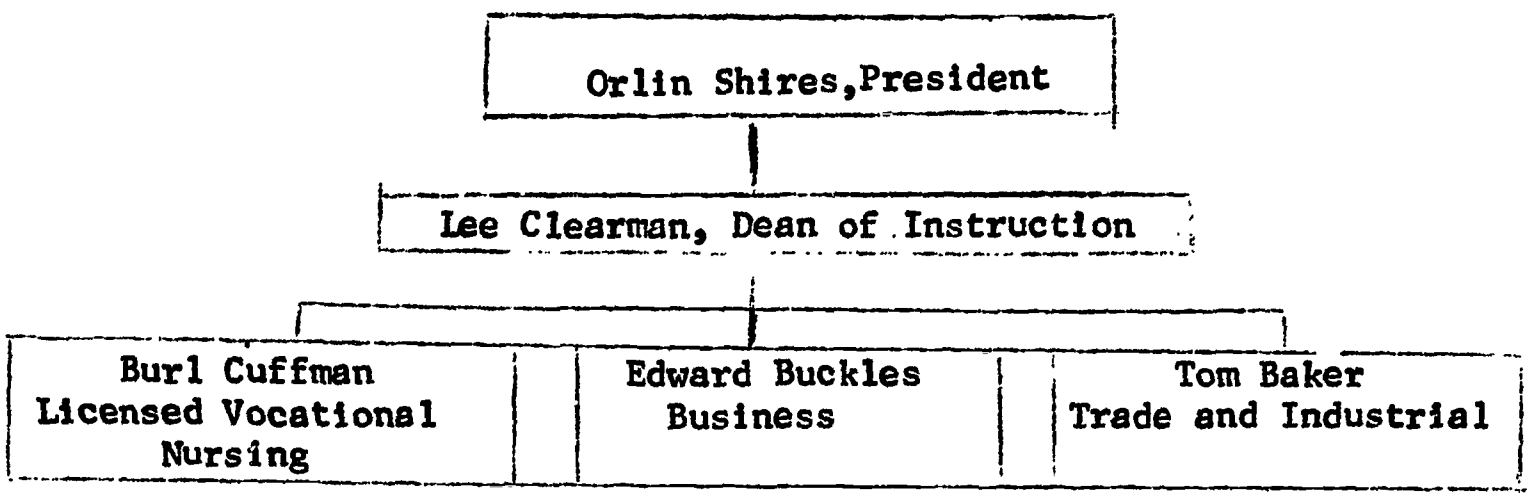
Some room for improvement of techniques used in reaching high school drop-outs is a target area of the present administration. The ten-year plan of the District includes a third campus, in addition to Modesto and Columbia, at an as-yet-undetermined site. The new facility will be primarily a Technical and Industrial operation, and much of Modesto's program will move to the new facility.

Placement of most graduates is excellent, and the fine college-community relationship built up over the years is no doubt partially responsible for this ready acceptance of Modesto Junior College graduates.

SUMMARY: MODESTO JUNIOR COLLEGE IS A WELL ESTABLISHED COMMUNITY COLLEGE WITH AN EXTREMELY VARIED AND BROAD OCCUPATIONAL CURRICULUM . . . ITS COMBINED STUDENT BODY OF OVER 14,000 MAKES IT THE LARGEST IN THE COUNCIL . . . PRESENT PROGRAMS ARE STRONG . . . ADDITIONAL PROGRAMS WILL PROBABLY NOT BE DEVELOPED UNTIL PLANS FOR THE THIRD CAMPUS ARE COMPLETED. . . FACILITIES IN AGRICULTURE AND ELECTRONICS ARE OUTSTANDING . . . OTHER FACILITIES RUN FROM CROWDED IN HOME ECONOMICS AND BUSINESS TO ADEQUATE IN MOST AREAS. . . INDUSTRIAL AND POPULATION GROWTH IN AND AROUND MODESTO WILL BE IMPORTANT TO ANY FUTURE OCCUPATIONAL PROGRAM PLANNING.

PORTERVILLE COLLEGE

OCCUPATIONAL EDUCATION - ADMINISTRATIVE RESPONSIBILITY CHART



PORTERVILLE COLLEGE:

Some training is offered in most of the occupational areas. The total offering is limited due to the relatively small student enrollment. Extended offerings are being planned for the 1969-70 school year.

Auto Mechanics and Carpentry programs appear strong and are well-accepted by students. The only operational Diesel Mechanics program within the Council is offered at Porterville. Secretarial and Business programs are well received, and are among the oldest occupational programs.

The college administration indicates a need for enlarged occupational facilities to accomodate programs in Machine Shop, Sheet Metal, Refrigeration and Farm Machinery. Supplemental facilities include the Uniroyal Experimental Farm, used by Agriculture classes, and the Porterville State Hospital, used by Psychiatric Technology students.

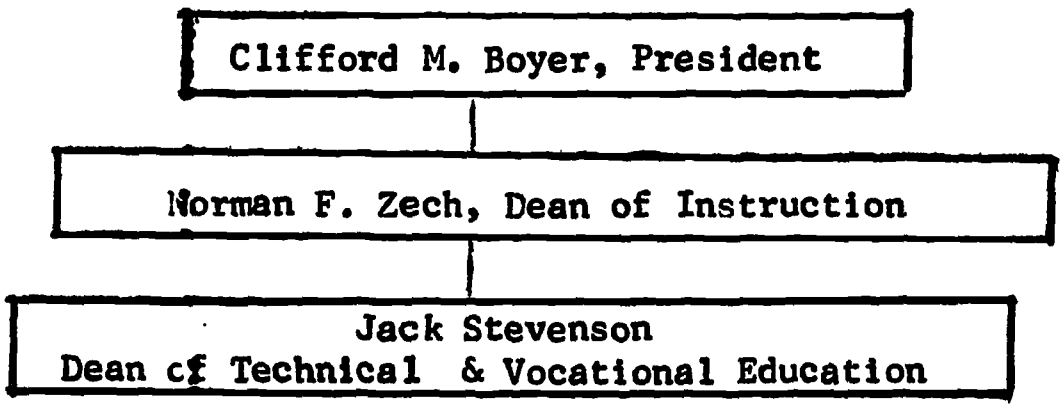
The ten-year plan of Porterville College projects a doubling of students in ten years. Along with a larger student body, plans call for the following changes in occupational education:

1. Broader spectrum of occupational programs.
2. Increased specialization in some areas.
3. Increasing emphasis on in-service training.

SUMMARY: PORTERVILLE COLLEGE HAS A RELATIVELY SMALL STUDENT BODY . . . OCCUPATIONAL PROGRAMS ARE IN LINE WITH THE SIZE OF THE INSTITUTION, AND WILL GROW ALONG WITH THE COLLEGE . . . SEVERAL PROGRAMS ARE UNIQUE WITHIN THE COUNCIL, AND WOULD BE AN ASSET TO IT WHEN AREA PLANNING IS ACCOMPLISHED.

REEDLEY COLLEGE

OCCUPATIONAL EDUCATION - ADMINISTRATIVE RESPONSIBILITY CHART



REEDLEY COLLEGE:

Only one college in addition to Reedley College, among the eleven members of our Council, is directed by a single individual with overall responsibility for all occupational education. This type of organization appears to be functioning well in terms of a coordinated across-the-board effort on behalf of occupational education.

Reedley students may select from a large and expanding number of programs in all the major occupational fields.

(Reedley College, Continued)

Facilities are among the best in the Valley in most areas and unsurpassed in the Airframe and Engine program, as well as Auto Mechanic, Body & Fender, and Dental Assisting. An entirely new occupational building complex has just been completed and represents the most vigorous occupational building program of any Council member. Future facility expansion will be aimed at the Business and Agriculture programs.

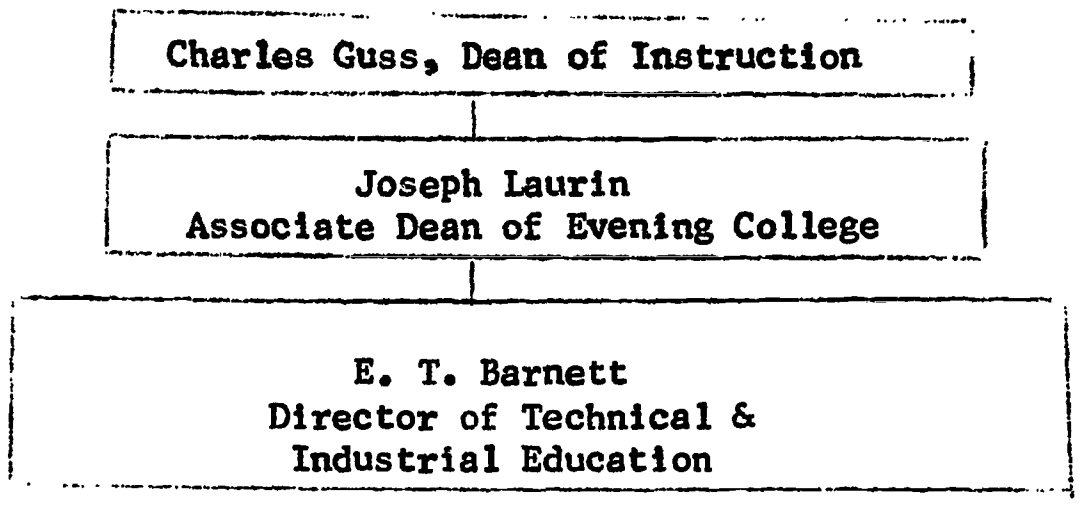
Follow-up activities are excellent and will soon be coordinated by a technician. Constant teacher and curriculum evaluation are mentioned by the Administration as strong points of occupational education at Reedley College.

Future changes include additional offerings in the Para-medical and Agriculture fields, as well as a shift in student emphasis to pre-employment training.

SUMMARY: REEDLEY COLLEGE HAS SOME OF THE FINEST OCCUPATIONAL FACILITIES IN THE SAN JOAQUIN VALLEY, AS WELL AS A UNIQUE AND FUNCTIONAL ADMINISTRATIVE STRUCTURE . . . PROGRAMS APPEAR STRONG, VIGOROUS, AND GROWING . . . FOLLOW-UP ACTIVITIES ARE EXCELLENT, AS IS STUDENT PLACEMENT.

SAN JOAQUIN DELTA COLLEGE

OCCUPATIONAL EDUCATION - ADMINISTRATIVE RESPONSIBILITY CHART



SAN JOAQUIN DELTA COLLEGE:

Occupational education at San Joaquin Delta College is organized under several major categories with a Chairman or Director responsible for each. The Director of the Vocational and Technical Education Division is responsible for all Trade and Industrial programs. The Chairman of the Business Division is responsible for all Business, Secretarial, Data Processing, and Distributive Education programs. The Chairman of the Agriculture Division is responsible for all Agriculture and Natural Resources programs.

All programs presently offered are adequate. However, some expansion is indicated considering the large enrollment. Planned expansion includes new programs in Public Administration and several public service aides. Some specialized para-medical fields are also possibilities.

(San Joaquin Delta College, Continued)

The present campus facilities are, for the most part, temporary. A new campus site is now being readied and should be fully operational by 1970. An additional campus site has been purchased for further growth which is sure to come quickly to the Stockton area. A recently added facility is an 80 acre parcel of land in the foothills to be used by Agriculture and Forestry students.

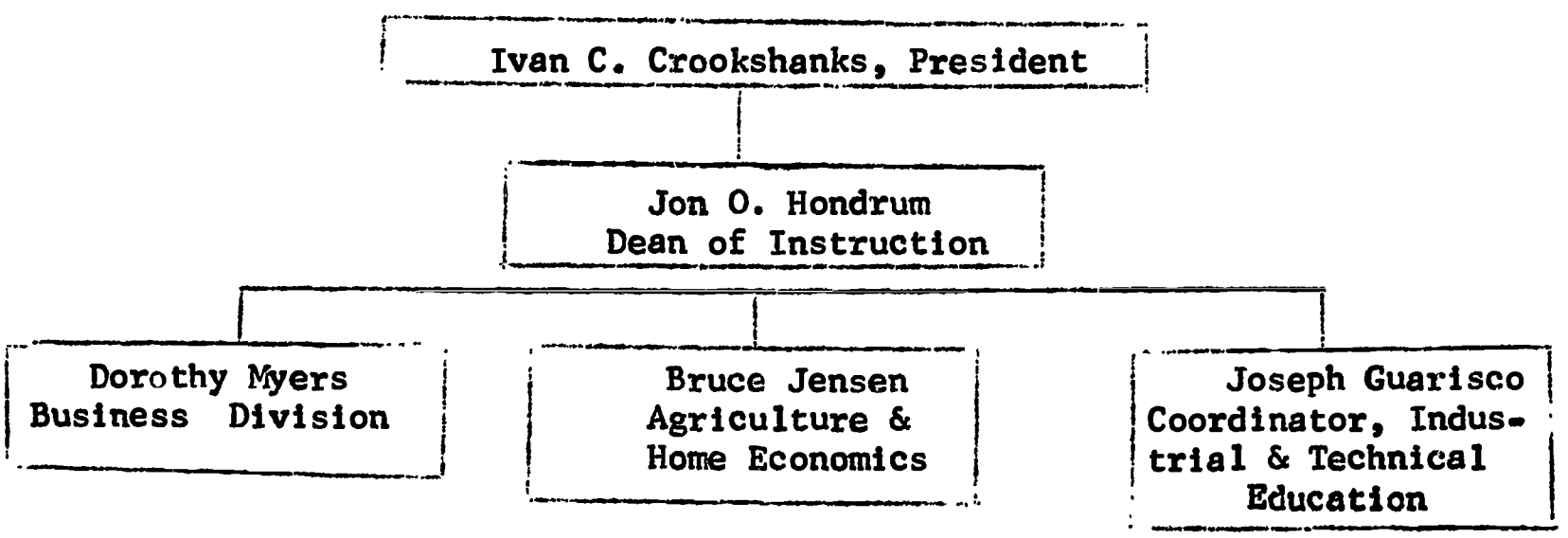
Excellent articulation exists between Delta College and its feeder high schools. This aids in a student's continuity of training, as well as serving a recruiting function for the college.

A strong apprenticeship program is operating in a number of the trades and is well-received by the Union membership.

SUMMARY: SAN JOAQUIN DELTA COLLEGE IS A LARGE COMMUNITY COLLEGE EXPERIENCING RAPID GROWTH . . . OCCUPATIONAL PROGRAMS ARE STRONG AND VARIED . . . EQUIPMENT IS GENERALLY EXCELLENT WITH FACILITIES BEING A LIMITING FACTOR IN SEVERAL PROGRAMS . . . FOLLOW-UP ACTIVITIES VARY SOMEWHAT WITH THE DIVISIONS . . . THOSE PROGRAMS NOT NOW OFFERED, BUT WHERE A NEED HAS BEEN DEMONSTRATED, WILL BE IMPLEMENTED AS THE MOVE TO THE NEW CAMPUS TAKES PLACE.

COLLEGE OF THE SEQUOIAS

OCCUPATIONAL EDUCATION - ADMINISTRATIVE RESPONSIBILITY CHART



COLLEGE OF THE SEQUOIAS:

All presently offered programs are strong with the possible exception of Electronics, which has just been re-organized and re-staffed. The future of Electronics at College of the Sequoias appears bright, however. Present indications are that future program growth should include Air Conditioning and Heating, and Farm Equipment Maintenance.

Twenty-five occupational programs are now operating under the broad areas of Technical and Industrial, Agriculture and Business.

Business course offerings have been revised recently and include a change in the accounting program to tie it in with Data Processing. No new business courses are presently contemplated. However, six new programs are now in the planning stages for the Technical and Industrial division.

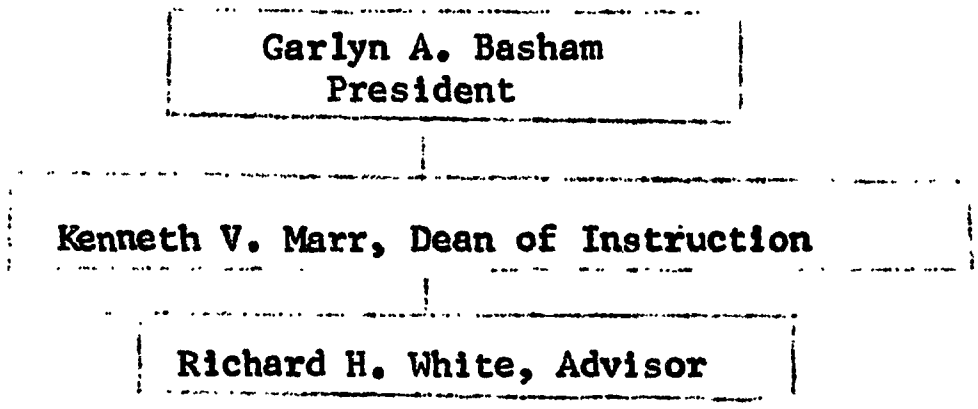
An outstanding follow-up study has been accomplished with graduates of the carpentry program. The location of class members of 31 years ago is still obtainable. Follow-up studies are available in other areas as well, including Automotive Technology.

Equipment is adequate in all areas; facilities range from older, sometimes crowded (Technical & Industrial) to brand new and excellent in the Business area.

SUMMARY: THE COLLEGE OF THE SEQUOIAS IS ONE OF THE OLDER COMMUNITY COLLEGES IN CENTRAL CALIFORNIA. . . ITS OCCUPATIONAL PROGRAM OFFERINGS ARE ABOVE AVERAGE IN TOTAL NUMBER, CONSIDERING THE STUDENT ENROLLMENT (631 AS OF FEBRUARY, 1968, IN ALL OCCUPATIONAL PROGRAMS) . . . FACILITIES AND EQUIPMENT ARE ADEQUATE. . . . THE PREDICTED GROWTH IN STUDENT ENROLLMENT IS SEVEN TO TEN PER CENT PER YEAR. AN UNKNOWN FACTOR AT THIS TIME IS THE EFFECT THAT RECREATIONAL DEVELOPMENT IN THE SIERRAS WILL HAVE, SUCH AS THE DISNEY FACILITY AT MINERAL KING . . .SUCH ACTIVITY MAY CALL FOR DEVELOPMENT OF PROGRAMS IN RECREATION MANAGEMENT, DINNER CHEF, AND SIMILAR PROGRAMS.

TAFT COLLEGE

OCCUPATIONAL EDUCATION - ADMINISTRATIVE RESPONSIBILITY CHART



TAFT COLLEGE:

One of the smaller colleges in the Council in terms of enrollment (484 day students). Occupational offerings, however, are in line with

need at the present time. Occupational programs are offered mainly in the areas of Technical & Industrial and Business. Several occupational curricula in special fields are offered, including Library Technology and Homemaking.

Facilities in Business are very good, while Trade and Industry has both new and very adequate (Drafting) as well as older shop facilities (Welding) now shared with the high school.

A new building is scheduled for construction in the Spring of 1969. When completed, it will house the Auto Shop classes as well as a planned program in Refrigeration.

Excellent orientation of and articulation with the incoming high school students has been accomplished.

Future growth will probably be slow due to continuing automation in the oil fields. The water project could reverse the downward population trend by bringing new agriculture, light industry, recreation, and service industries to the area.

SUMMARY: THE OCCUPATIONAL PROGRAM AT TAFT COLLEGE HAS CONSIDERABLE BREADTH FOR THE SIZE OF THE STUDENT BODY . . . FACILITIES ARE GOOD AND IMPROVING . . . EQUIPMENT IS ADEQUATE AND STUDENTS OBVIOUSLY BENEFIT FROM A FAVORABLE STUDENT-TEACHER RATIO . . . FUTURE PROGRAM GROWTH WILL BE IN PROPORTION TO POPULATION GROWTH . . . AREA PLANNING WILL BE OF DEFINITE VALUE TO STUDENTS AT TAFT COLLEGE.

IDENTIFICATION OF STRONG PROGRAMS

In visits to each member college campus, certain programs tended to stand out as especially strong. The reason for this strength often includes facilities, equipment, staff, student recruitment, and counselling, as well as follow-up activities. No two programs are strong for exactly the same reasons. However, the items listed are usually determining factors. Strong programs are briefly described below. They are arranged alphabetically under each college.

BAKERSFIELD COLLEGE

Data Processing:	Facilities equal to best in Council . . . extremely innovative staff . . . combines instructional and service capabilities.
Law Enforcement:	Strong staff . . .wide breadth of course offerings . . . excellent placement . . . fine college community cooperation.
Nursery School Training:	Well qualified staff . . . unique community outreach aspect, which fills a training need of disadvantaged parents, as well as their children . . . in addition, trains nursery staff.

COALINGA COLLEGE

Agriculture:	Strong staff . . . good articulation (High School-College) . . . great growth potential, with Westside water . . . facilities include: 153 acre school farm and office building, as well as classrooms . . . good equipment . . . excellent student acceptance.

COALINGA COLLEGE (Continued)

Business:	Extensive offering for size of college . . . dedicated staff . . . very adequate facilities . . . excellent pupil-teacher ratio.

COLUMBIA JUNIOR COLLEGE

Identification of strong programs at Columbia Junior College is not possible at this time as the college is in its initial full year of operation.

FRESNO CITY COLLEGE

Auto Mechanics:	Large enrollment . . . well staffed . . . excellent facilities and equipment . . . good placement.
Data Processing:	One of the few active day programs . . . strong enrollment . . . enthusiastic staff . . . meets a valid local need.
Electronics:	Good facilities and staff . . . excellent placement.
Police Science:	Largest enrollment of any occupational program at Fresno . . . good facilities and staff . . . utilized in campus patrol.

MERCED COLLEGE

Auto Mechanics:	New facilities with innovative modifications . . . strong staff . . . excellent equipment . . . good placement.
Licensed Vocational Nursing:	Continuous demand for graduates . . . good clinical and new campus facilities . . . dedicated staff.

MODESTO JUNIOR COLLEGE

Agriculture:	Largest agriculture program in Council and California, 600 students (Majors) . . . faculty of 18 . . . elaborate facilities and equipment.
Electronics:	Extensive equipment . . . housed in new facilities. . . strong staff . . . thirty course offerings . . . large enrollment.
Printing:	Complete facilities and equipment . . . serves a training and service function . . . experienced staff.

PORTERVILLE COLLEGE

Business:	Mature program . . . adequate facilities . . . good equipment and instruction.
Welding:	Popular program . . . well-designed shop facilities . . . good staff . . . also a mature program.

REEDLEY COLLEGE

Airframe and Engine Repair:	Excellent staff . . . large new, well-planned facilities . . . fine student placement record . . . only fly-in capability of Council colleges . . . college owns three (3) fixed-wing and three (3) rotary-wing aircraft . . . adequate taxi area and apron in addition to runway . . . FAA approved.

REEDLEY COLLEGE (Continued)

Auto Mechanics:	Good equipment and new facilities . . . experienced staff . . . won National Tune-up Championship in 1967 . . . close relationship with advisory committee.
Dental Assisting	New facilities (well-planned and constructed). . . excellent staff . . . dedicated advisory committee . . . low attrition . . . good placement.

SAN JOAQUIN DELTA COLLEGE

Agriculture:	One of the stronger agriculture programs in the Council . . . 280 Agriculture Majors . . . six or seven full-time experienced staff . . . owns 40 acre farm plus 80 acres just acquired in Sierra foothills . . . facilities crowded, but adequate . . . excellent equipment . . . approximately 50 different courses . . . good student recruitment . . . annual and five-year follow-up.
Business:	Sixteen full-time staff . . . good facilities . . . broad course spectrum . . . good student recruitment and follow-up.
Machine Shop:	Fine staff . . . good facilities . . . excellent equipment . . . graduates easily placed.

COLLEGE OF THE SEQUOIAS

Auto Mechanics:	Small (one-man) but efficient shop . . . good instruction, equipment and facilities . . . excellent follow-up and placement.

COLLEGE OF THE SEQUOIAS (Continued)

Carpentry:	Strong instruction . . . good student liaison and recruitment . . . continuous follow-up studies . . . home constructed and sold annually . . . fine college and Union relationship.

TAFT COLLEGE

Drafting:	Excellent instruction . . . new facilities and equipment . . . steady demand for graduates . . . favorable class size.

IDENTIFICATION OF UNIQUE

AND/OR

INNOVATIVE PROGRAMS

A number of occupational programs offered by member colleges might be described as unique or innovative. The term unique, as used here, refers to those courses not offered on another campus or, by virtue of the course content or approach, differ from the usual program offering.

BAKERSFIELD COLLEGE

Home Economics:	Large new facilities . . . wide breadth of offerings.
Management for Public Agencies:	Pioneer program . . . Funded under VEA . . . State study established need for upgrading of 5,000 managers.
Nursery School:	Unique outreach aspect (three centers) serves parent as well as child-education function . . . also trains nursery school personnel.
Public Service Aides:	A new program, now unique at Bakersfield but will be added to many colleges' curriculums soon . . . includes teacher, social worker, psychiatric, and librarian aides, as well as others.

COALINGA COLLEGE

Flight Training:	The only "hands on" flying classes in the Council . . . utilizes a leased plane . . . student fees are $11.00 per hour . . . cost of program defrayed through civic center funds . . . students receive credit by examination at completion of the program.

COLUMBIA JUNIOR COLLEGE

Several unique programs are planned at Columbia. Since they will not be implemented until Fall, 1969, they are merely listed below without comment. They are as follows:

Aquatic Law Enforcement

Lumber Technology

Heavy Equipment

Resort Management

FRESNO CITY COLLEGE

Building Technology:	Students completing program are highly skilled lead men, able to accomplish estimating as well as possessing a knowledge of carpentry and building codes.
Court Reporter:	A popular program offering graduates high-paying careers.
Transportation:	A program to train personnel to assume duties in offices of trucking, railroad, and airline companies.

MERCED COLLEGE

Metal Fabrication:	Offers training in the manipulation of metal working and fabricating equipment, in addition to the usual welding activities.

MODESTO JUNIOR COLLEGE

Agriculture:	Mentioned here because of its size and the scope of its course offerings.
Radio and Television Broadcasting:	Offers opportunity to work in a complete broadcasting studio, as well as a remote (mobile) unit.

PORTERVILLE COLLEGE

Psychiatric Technology:	Provides training both on campus and at Porterville State Hospital . . . graduates find ample employment opportunities.
Vocational Forestry:	Offers both field and classroom experience. . . utilizes instructors from the regular Agriculture program.

REEDLEY COLLEGE

Air Frame and Engine Repair:	One of the largest and best equipped Air Frame and Engine facilities to be found in any community college. . . . fly-in capability (on campus) will accomodate all aircraft up to the corporate jet class . . . demand for graduates is continuous.

SAN JOAQUIN DELTA COLLEGE

Readiness Program:	Attempts to bring poorly-prepared entering students up to a minimum level of competence.
Technical Illustration:	A program to train students to prepare technical information and specifications in a readily usable and understandable form.

COLLEGE OF THE SEQUOIAS

Carpentry:	Completes an ambitious building project each year . . . gives students an opportunity to plan and construct . . . program has been under way for 31 years.

TAFT COLLEGE

Petroleum Technology:	Provides training for oil field personnel, including specialized courses in new techniques, such as steam stimulation.

EXISTING INTERDISTRICT AGREEMENTS
OF THE
COMMUNITY COLLEGES OF THE SAN JOAQUIN VALLEY

The following questionnaire was completed by member colleges and indicates the status of interdistrict agreements among and between the eleven member colleges of the San Joaquin Valley Community College Council for Occupational Education, as of Fall, 1968.

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

Q U E S T I O N N A I R E

October 3, 1968

TO: All Delegate Members of SJVCCCOE

FROM: John L. Mehrens, Project Coordinator

SUBJECT: Enrollment Survey Sheet

Name of School: Bakersfield College

Name of Person Completing Report: Dr. Milton R. Sanden, Associate Dean of Instruction

Date: October 11, 1968

Please complete the following report at your earliest convenience and forward it to the Council Office so that this information may be included in our occupational program inventory.

1. What type of agreement now exists between your institution and each of the other ten member colleges in the SJVCCCOE?

		FREE INTER-CHANGE	OTHER
A.	COALINGA		Apport.-permit required
B.	COLUMBIA		Apport.-with blanket permit
C.	FRESNO	X	
D.	MERCED		Apport.-permit required
E.	MODESTO		Apport.-with blanket permit
F.	PORTERVILLE	X Same district	
G.	REEDLEY	X	
H.	SAN JOAQUIN DELTA		Apport.-permit required
I.	COLLEGE OF THE SEQUOIAS	X	
J.	TAFT		Apport.-permit required

2. What programs not presently offered at your institution result in students being sent to other colleges? (Statewide)

Dental Hygiene

3. What occupational programs do you presently offer that would have had space available during this semester for students coming from other college districts?

Food Services	Management
Data Processing	Police Science
Agriculture	Correctional Administration
Wood	Photography
Secretarial-Gen. Bus.	All Business
Nursing, R.N. and V.N.	

4. Which of your occupational programs are generally filled to capacity and seldom if ever have room for out of district students?

Auto Mechanics
Dental Assisting
Nursery School Teaching
Drafting

5. What was your total enrollment, Fall, 1968-69?

Total student enrollment?	9,969
Day Students?	5,440
Evening Students?	4,529

6. What restriction(s) does your institution place on the release of your students to attend other colleges?

None except when tuition is involved. Tuition permit may be issued if student wishes to take a program we do not offer.

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

Q U E S T I O N N A I R E

October 3, 1968

TO: All Delegate Members of SJVCCCOE

FROM: John L. Mehrens, Project Coordinator

SUBJECT: Enrollment Survey Sheet

Name of School: COALINGA

Name of Person Completing Report: Kenneth M. Savage, Jr.

Date: 11/5/68

Please complete the following report at your earliest convenience and forward it to the Council Office so that this information may be included in our occupational program inventory.

1. What type of agreement now exists between your institution and each of the other ten member colleges in the SJVCCCOE?

		FREE INTER-CHANGE	OTHER
A.	BAKERSFIELD	X	
B.	COLUMBIA	X	
C.	FRESNO	X	
D.	MERCED		Full Cost
E.	MODESTO	X	
F.	PORTERVILLE	X	
G.	REEDLEY	X	
H.	SAN JOAQUIN DELTA	X	
I.	COLLEGE OF THE SEQUOIAS	X	
J.	TAFT	X	

2. What programs not presently offered at your institution result in students being sent to other colleges?

Home Economics	RN
Police Science	Data Processing
Ornamental Horticulture	Airframe Maintenance
LVN	

3. What occupational programs do you presently offer that would have had space available during this semester for students coming from other college districts?

All business
Agriculture
Auto
Electronics
Drafting

4. Which of your occupational programs are generally filled to capacity and seldom if ever have room for out of district students?

NONE

5. What was your total enrollment, Fall, 1968-69?

Total student enrollment?	1,242
Day Students?	703
Evening Students?	539

6. What restriction(s) does your institution place on the release of your students to attend other colleges?

We will release students for programs which are not offered at Coalinga.

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

Q U E S T I O N N A I R E

October 3, 1968

TO: All Delegate Members of SJVCCCOE

FROM: John L. Mehrens, Project Coordinator

SUBJECT: Enrollment Survey Sheet

Name of School: COLUMBIA JUNIOR COLLEGE

Name of Person Completing Report: Robert W. Deal

Date: October 12, 1968

Please complete the following report at your earliest convenience and forward it to the Council Office so that this information may be included in our occupational program inventory.

1. What type of agreement now exists between your institution and each of the other ten member colleges in the SJVCCCOE?

		FREE INTER-CHANGE	OTHER
A.	BAKERSFIELD	X	
B.	COALINGA	X	
C.	COLUMBIA	X	
D.	FRESNO	X	
E.	MERCED		Cost
F.	PORTERVILLE	X	
G.	REEDLEY	X	
H.	SAN JOAQUIN DELTA		Cost
I.	COLLEGE OF THE SEQUOIAS	X	
J.	TAFT	X	

2. What programs not presently offered at your institution result in students being sent to other colleges?

Being new and small, it is difficult for me to

3. What occupational programs do you presently offer that would have had space available during this semester for students coming from other college districts?

Business
Drafting
Fire Science
Commercial Ground School (Pilot)
Supervision
Correctional Science
Police Science

4. Which of your occupational programs are generally filled to capacity and seldom if ever have room for out of district students?

NONE

5. What was your enrollment, Fall, 1968-69?

Total Student Enrollment? 806

Day Students? _____ We combine day and evening students and do not distinquish

Evening Students? _____

6. What restriction(s) does your institution place on the release of your students to attend other colleges?

NONE

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

Q U E S T I O N N A I R E

October 3,1968

TO: All Delegate Members of SJVCCCOE

FROM: John L. Mehrens, Project Coordinator

SUBJECT: Enrollment Survey Sheet

Name of School: FRESNO CITY COLLEGE

Name of Person Completing Report: G. A. Eckenrod

Date: October 16, 1968

Please complete the following report at your earliest convenience and forward it to the Council Office so that this information may be included in our occupational program inventory.

1. What type of agreement now exists between your institution and each of the other ten member colleges in the SJVCCCOE?

		FREE INTER-CHANGE	OTHER
A.	BAKERSFIELD	X	
B.	COALINGA		X
C.	COLUMBIA	X	
D.	MERCED		X
E.	MODESTO	X	
F.	PORTERVILLE	X	
G.	REEDLEY	X	
H.	SAN JOAQUIN DELTA		X
I.	COLLEGE OF THE SEQUOIAS		X
J.			X

2. What programs not presently offered at your institution result in students being sent to other colleges?

Dental Hygiene — Dental Assisting

Diesel Mechanics — Agriculture

3. What occupational programs do you presently offer that would have had space available during this semester for students coming from other college districts?

Body & Fender	Medical Assisting
Building Technology	Medical Records Technician
Carpentry	Merchandising
Court Reporting	Mill Cabinet
Electronics	Sheet Metal
Legal Secretaryship	Technical Secretary

4. Which of your occupational programs are generally filled to capacity and seldom if ever have room for out of district students?

Auto Shop	Machine Shop
Computer Programming	Radio & Television
Drafting	X-Ray Technician
Inhalation Therapy	

5. What was your total enrollment, Fall, 1968-69?

Total students enrollment?	10,689
Day Students?	6,409
Evening Students?	4,280

6. What restriction (s) does your institution place on the release of your students to attend other colleges?

They must get written release from District Superintendent's Office. He makes decision on merit of the application and the inter-district cost agreement.

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

Q U E S T I O N N A I R E

October 3, 1968

TO: All Delegate Members of SJVCCCOE

FROM: John L. Mehrens, Project Coordinator

SUBJECT: Enrollment Survey Sheet

Name of School: MERCED COLLEGE

Name of Person Completing Report: J. Williamson

Date: 11/7/68

Please complete the following report at your earliest convenience and forward it to the Council Office so that this information may be included in our occupational program inventory.

1. What type of agreement now exists between your institution and each of the other ten member colleges in the SJVCCCOE?

		FREE INTER-CHANGE	OTHER
A.	BAKERSFIELD	X	
B.	COALINGA		X
C.	FRESNO		X
D.	MODESTO		X
E.	PORTERVILLE	X	
F.	REEDLEY		X
G.	SAN JOAQUIN DELTA	X	
H.	COLUMBIA		X
I.	COLLEGE OF THE SEQUOIAS	X	
J.	TAFT	X	

2. What programs not presently offered at your institution result in students being sent to other colleges?

R.N. Cosmetology

Forestry Ag Specialties

Police Specialties

3. What occupational programs do you presently offer that would have had space available during this semester for students coming from other college districts?

Auto Mechanics, Dental Assisting, Business, Electronics, Aeronautics, Agriculture, Drafting

4. Which of your occupational programs are generally filled to capacity and seldom if ever have room for out of district students?

Welding, Vocational Nursing

5. What was your total enrollment, Fall, 1968-69?

Total student enrollment?	3622
Day Students?	1814
Evening Students?	1808

6. What restriction(s) does your institution place on the release of your students to attend other colleges?

Free exchange (by permit only) except for adjacent districts; we release for students to take programs we do not have.

SAN JOAQUIN VALLEY COMMUNITY COUNCIL FOR OCCUPATIONAL EDUCATION

Q U E S T I O N N A I R E

October 3, 1968

TO: All Delegate Members of SJVCCCOE

FROM: John L. Mehrens, Project Coordinator

SUBJECT: Enrollment Survey Sheet

Name of School: MODESTO JUNIOR COLLEGE

Name of Person Completing Report: Louis A. Schwark, Director
Vocational & Technical Education

Date: October 23, 1968

Please complete the following report at your earliest convenience and forward it to the Council Office so that this information may be included in our occupational program inventory.

1. What type of agreement now exists between your institution and each of the other ten member colleges in the SJVCCCOE?

	FREE INTER-CHANGE	OTHER
A. BAKERSFIELD	Yes	
B. COALINGA		No-cost agreement *
C. COLUMBIA	Yes	
D. FRESNO	Yes	
E. MERCED		Cost agreement, individual permits
F. PORTERVILLE	Yes	
G. REEDLEY	Yes	
H. SAN JOAQUIN DELTA		Cost agreement, Individual permits
I. COLLEGE OF THE SEQUOIAS	Yes	
J. TAFT	Yes	

2. What programs not presently offered at your institution result in students being sent to other colleges?

Operating Engineers	X-Ray Technician
Hotel & Restaurant	Meatcutting Apprenticeship
Management	X-Ray
Dental Hygienist	

* they prefer individual permits

3. What occupational programs do you presently offer that would have had space available during this semester for students coming from other college districts?

Agriculture, Several areas
Auto Mechanics
Electronic Technology
Printing
Radio & Television
Broadcasting
Medical Office Procedures
Fashion Merchandising
Nutrition
Child Care
Nursing
Accounting
Shorthand
(Openings vary from semester to semester, but in all areas there are openings for selected students)

4. Which of your occupational programs are generally filled to capacity and seldom if ever have room for out of district students?

Data Processing
Nursery School Assistants
Clerical Training
(Most programs will have some available space in them--additional students could be enrolled)

5. What was your total enrollment, Fall, 1968-69?

Total student enrollment?	14,563
Day Students?	4,584
Evening Students?	9,979

6. What restriction(s) does your institution place on the release of your students to attend other colleges?

If we have a cost agreement with a district, we grant permits for students to attend only if the course they desire is not offered in this district. If we have a no-cost agreement, we have issued blanket permits for any student to attend that district with no further permission from us.

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

Q U E S T I O N N A I R E

October 3, 1968

TO: All Delegate Members of SJVCCCOE

FROM: John L. Mehrens, Project Coordinator

SUBJECT: Enrollment Survey Sheet

Name of School: PORTERVILLE JUNIOR COLLEGE

Name of Person Completing Report: E. M. Buckles

Date: 10-24-68

Please complete the following report at your earliest convenience and forward it to the Council Office so that this information may be included in our occupational program inventory.

1. What type of agreement now exists between your institution and each of the other ten member colleges in the SJVCCCOE?

		FREE INTER-CHANGE	OTHER
A.	BAKERSFIELD	x	
B.	COALINGA		x *
C.	COLUMBIA	x	
D.	FRESNO	x	
E.	MERCED		x *
F.	MODESTO		x *
G.	REEDLEY	x	
H.	SAN JOAQUIN DELTA		x *
I.	COLLEGE OF THE SEQUOIAS	x	
J.	TAFT		x-Full cost

* Inter-district written permit needed--no extra cost

2. What programs not presently offered at your institution result in students being sent to other colleges?

Registered Nurse

Dental Technician

3. What occupational programs do you presently offer that would have had space available during this semester for students coming from other college districts?

NONE

4. Which of your occupational programs are generally filled to capacity and seldom if ever have room for out of district students?

Licensed Vocational Nursing

5. What was your total enrollment, Fall, 1968-69?

Total student enrollment?	1285
Day Students?	883
Evening Students?	402

6. What restriction(s) does your institution place on the release of your students to attend other colleges?

Practically none unless the "reciprocating" college will not reciprocate.

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

Q U E S T I O N N A I R E

October 3, 1968

TO: All Delegate Members of SJVCCCOE

FROM: John L. Mehrens, Project Coordinator

SUBJECT: Enrollment Survey Sheet

Name of School: REEDLEY COLLEGE

Name of Person Completing Report: Jack L. Stevenson

Date: 10/14/68

Please complete the following report at your earliest convenience and forward it to the Council Office so that this information may be included in our occupational program inventory.

1. What type of agreement now exists between your institution and each of the other ten member colleges of SJVCCCOE?

		FREE INTER-CHANGE	OTHER
A.	BAKERSFIELD	X	
B.	COALINGA		X
C.	COLUMBIA	X	
D.	FRESNO	X	
E.	MERCED		X
F.	MODESTO	X	
G.	PORTERVILLE	X	
H.	SAN JOAQUIN DELTA		X
I.	COLLEGE OF THE SEQUOIAS		X
J.	TAFT		X

2. What programs not presently offered at your institution result in students being sent to other colleges?

Dental Hygienist	Fire Science
Dental Technician	Food Management
Police Science	Other highly specialized courses

3. What occupational programs do you presently offer that would have had space available during this semester for students coming from other college districts?

Ag. Mechanics	Secretarial Science
Electronics	Certain Ag. Majors
Retailing	

4. Which of your occupational programs are generally filled to capacity and seldom if ever have room for out of district students?

Aeronautics	Dental Assisting
Automotive	Accounting
Some General Ag.	

5. What was your total enrollment, Fall, 1968-69?

Total student enrollment?	1972
Day Students?	1517
Evening Students?	455

6. What restriction(s) does your institution place on the release of your students to attend other colleges?

Based on reciprocity. Would like all to be open.

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

Q U E S T I O N N A I R E

October 3, 1968

TO: All Delegate Members of SJVCCCOE

FROM: John L. Mehrens, Project Coordinator

SUBJECT: Enrollment Survey Sheet

Name of School: SAN JOAQUIN DELTA COLLEGE

Name of Person Completing Report: Joseph Laurin

Date: 10/16/68

Please complete the following report at your earliest convenience and forward it to the Council Office so that this information may be included in our occupational program inventory.

1. What type of agreement now exists between your institution and each of the other ten member colleges in the SJVCCCOE?

		FREE INTER-CHANGE	OTHER
A.	BAKERSFIELD		
B.	COALINGA	X	
C.	COLUMBIA		X
D.	FRESNO	X	
E.	MERCED	X	
F.	MODESTO		X
G.	PORTERVILLE	X	
H.	REEDLEY	X	
I.	COLLEGE OF THE SEQUOIAS	X	
J.	TAFT	X	

2. What programs not presently offered at your institution result in students being sent to other colleges?

Dental Assisting — Dry Cleaning

Aviation — Some Engineering Courses

3. What occupational programs do you presently offer that would have had space available during this semester for students coming from other college districts?

Several technical and industrial areas, such as:

Carpentry — Cabinet Making

Machine Shop — Printing

Welding — Engineering

4. Which of your occupational programs are generally filled to capacity and seldom if ever have room for out of district students?

Auto Shop — Electronics

Beginning Data Processing

5. What was your total enrollment, Fall, 1968-69?

Total student enrollment? 8724

Day Students? 5182

Evening Students? 3542

6. What restriction(s) does your institution place on the release of your students to attend other colleges?

Legitimate request for a course not offered here and needed by the student.

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

Q U E S T I O N N A I R E

October 3, 1968

TO: All Delegate Members of SJVCCCOE

FROM: John L. Mehrens, Project Coordinator

SUBJECT: Enrollment Survey Sheet

Name of School: COLLEGE OF THE SEQUOIAS

Name of Person Completing Report: Joseph A. Guarisco

Date: January 6, 1969

Please complete the following report at your earliest convenience and forward it to the Council Office so that this information may be included in our occupational program inventory.

1. What type of agreement now exists between your institution and each of the other ten member colleges in the SJVCCCOE?

		FREE INTER-CHANGE	OTHER *
A.	BAKERSFIELD	x	
B.	COALINGA		x
C.	COLUMBIA		x
D.	FRESNO		x
E.	MERCED		x
F.	MODESTO		x
G.	PORTERVILLE	x	
H.	REEDLEY		x
I.	SAN JOAQUIN DELTA		x
J.	TAFT		x

* Individual permits only

2. What programs not presently offered at your institution result in students being sent to other colleges?

Registered Nursing	Plumbing
Dental Hygiene	Dental Assisting
Engineering Aide	Sheet Metal
Aircraft Mechanic	Body & Fender Repair

3. What occupational programs do you presently offer that would have had space available during this semester for students coming from other college districts?

NONE

4. Which of your occupational programs are generally filled to capacity and seldom if ever have room for out of district students?

ALL

5. What was your total enrollment, Fall, 1968-69?

Total student enrollment?	5077
Day students?	2777
Evening Students?	2300

6. What restriction(s) does your institution place on the release of your students to attend other colleges?

NONE

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

Q U E S T I O N N A I R E

October 3, 1968

TO: All Delegate Members of SJVCCCOE

FROM: John L. Mehrens, Project Coordinator

SUBJECT: Enrollment Survey Sheet

Name of School: TAFT COLLEGE

Name of Person Completing Report: Kenneth Marr

Date: 10/10/68

Please complete the following report at your earliest convenience and forward it to the Council Office so that this information may be included in our occupational program inventory.

1. What type of agreement now exists between your institution and each of the other ten member colleges in the SJVCCCOE?

		FREE INTER-CHANGE	OTHER
A.	BAKERSFIELD		Permit
B.	COALINGA		Restricted
C.	COLUMBIA	Blanket Permit	
D.	FRESNO		Permit
E.	MERCED		Restricted
F.	MODESTO	Blanket Permit	
G.	PORTERVILLE		Permit
H.	REEDLEY		Permit
I.	SAN JOAQUIN DELTA		Restricted
J.	COLLEGE OF THE SEQUOIAS	Free	

2. What programs not presently offered at your institution result in students being sent to other colleges?

Nursing — Data Processing

Dental Assisting — Agriculture

Police Science

3. What occupational programs do you presently offer that would have had space available during this semester for students coming from other college districts?

Machine	Welding
Electronics	Construction Technology
Home Health Aides	Drafting Technology

4. Which of your occupational programs are generally filled to capacity and seldom if ever have room for out of district students?

Business	Auto Mechanics
Teacher Aides	

5. What was your total enrollment, Fall, 1968-69?

Total students enrollment?	1048
Day Students?	484
Evening Students?	564

6. What restriction(s) does your institution place on the release of your students to attend other colleges?

1. Curriculum desired by student not offered at our college.
2. No "extra" costs to district.

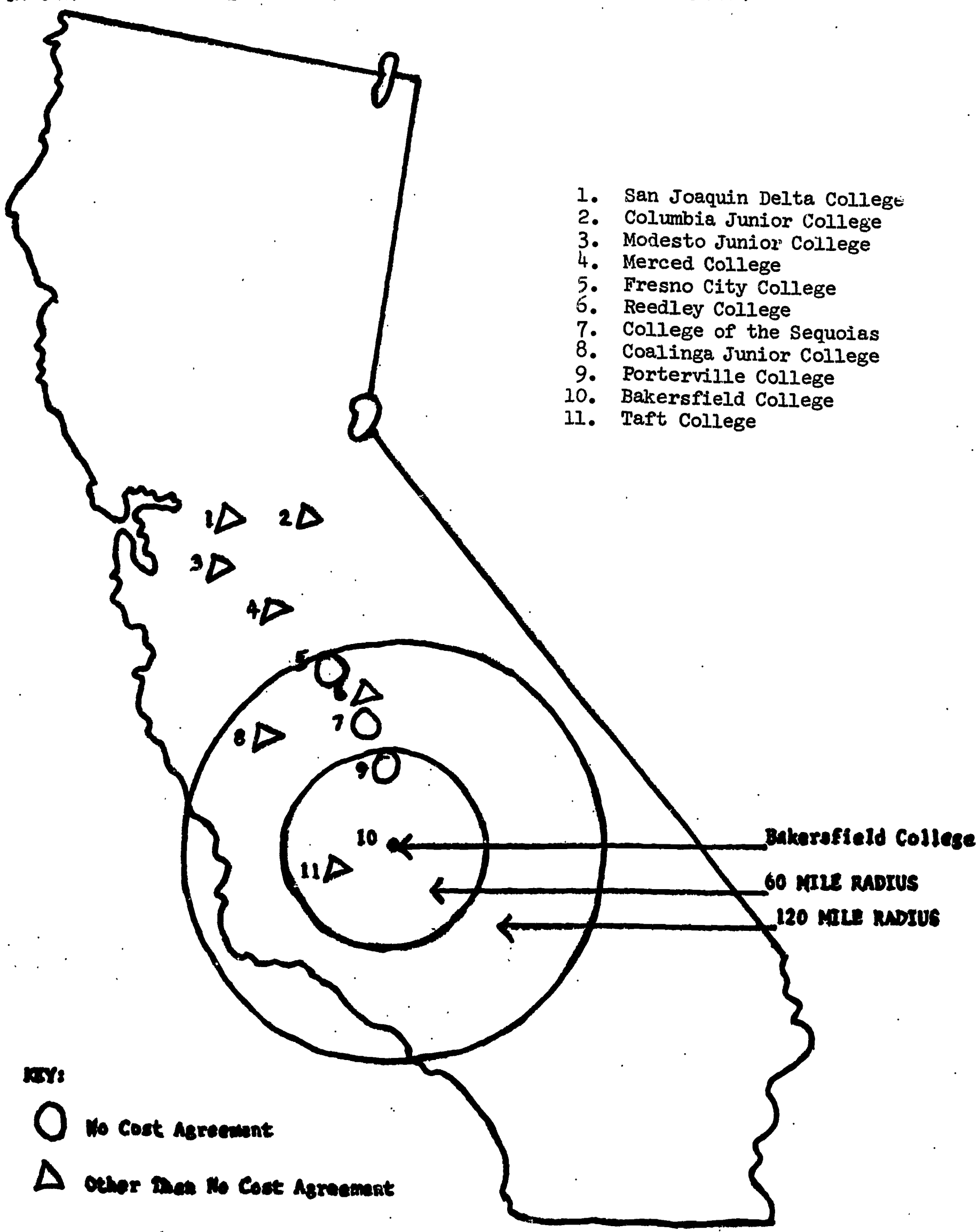
PROXIMITY AND ITS RELATIONSHIP TO INTERDISTRICT AGREEMENTS

The relationship of distance between member colleges and the agreements controlling the interdistrict transfer of students is here displayed graphically.

A map of California is provided for each member college. Symbols on the maps indicate cost (triangles) or no cost (circles). The concentric circles indicate one hour and two hour commuting times from the indicated college.

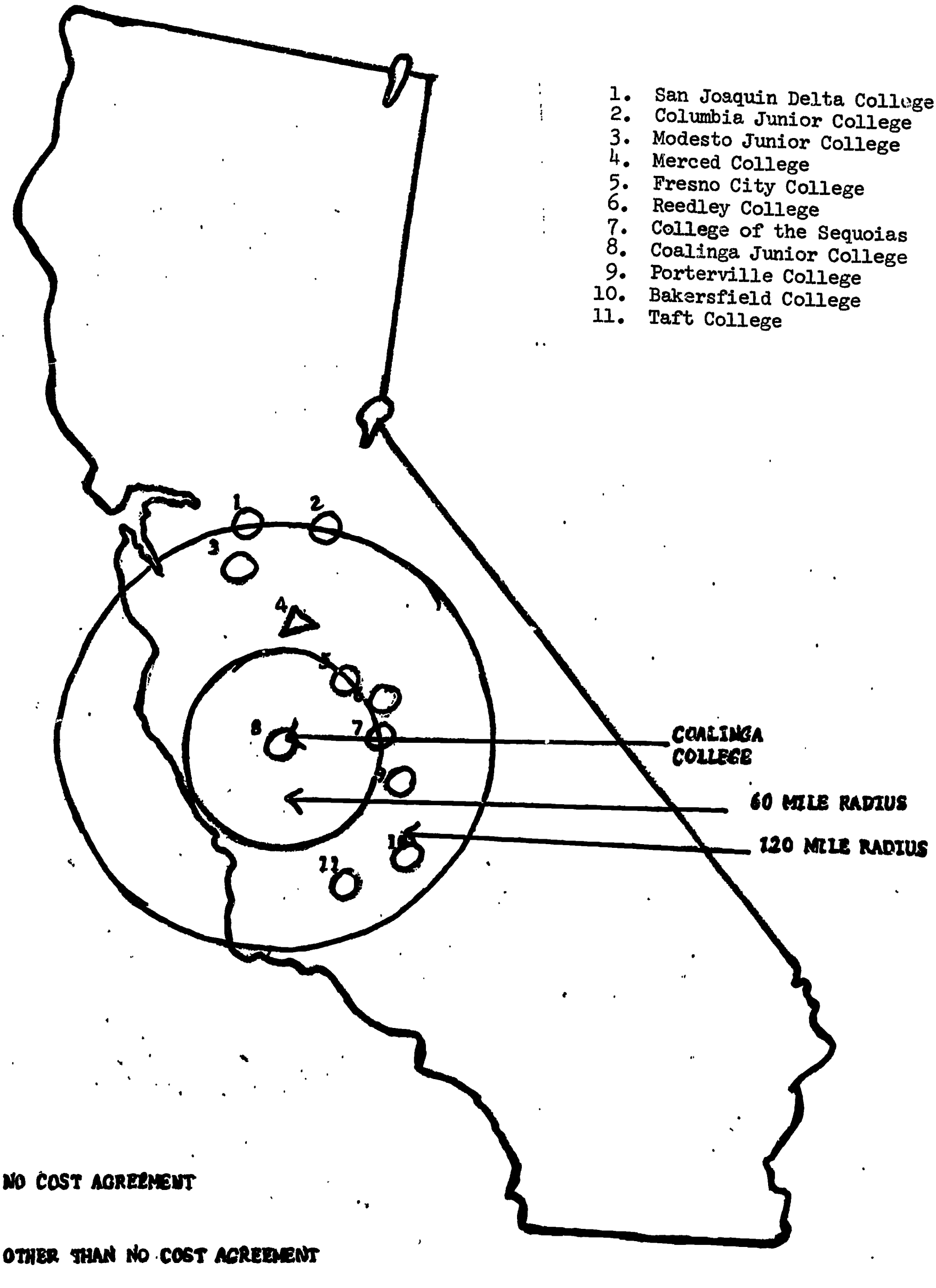
SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

BAKERSFIELD COLLEGE EXISTING AGREEMENTS FOR OUT-OF-DISTRICT STUDENTS



1. San Joaquin Delta College
2. Columbia Junior College
3. Modesto Junior College
4. Merced College
5. Fresno City College
6. Reedley College
7. College of the Sequoias
8. Coalinga Junior College
9. Porterville College
10. Bakersfield College
11. Taft College

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION
COALINGA COLLEGE EXISTING AGREEMENTS FOR OUT-OF-DISTRICT STUDENTS



1. San Joaquin Delta College
2. Columbia Junior College
3. Modesto Junior College
4. Merced College
5. Fresno City College
6. Reedley College
7. College of the Sequoias
8. Coalinga Junior College
9. Porterville College
10. Bakersfield College
11. Taft College

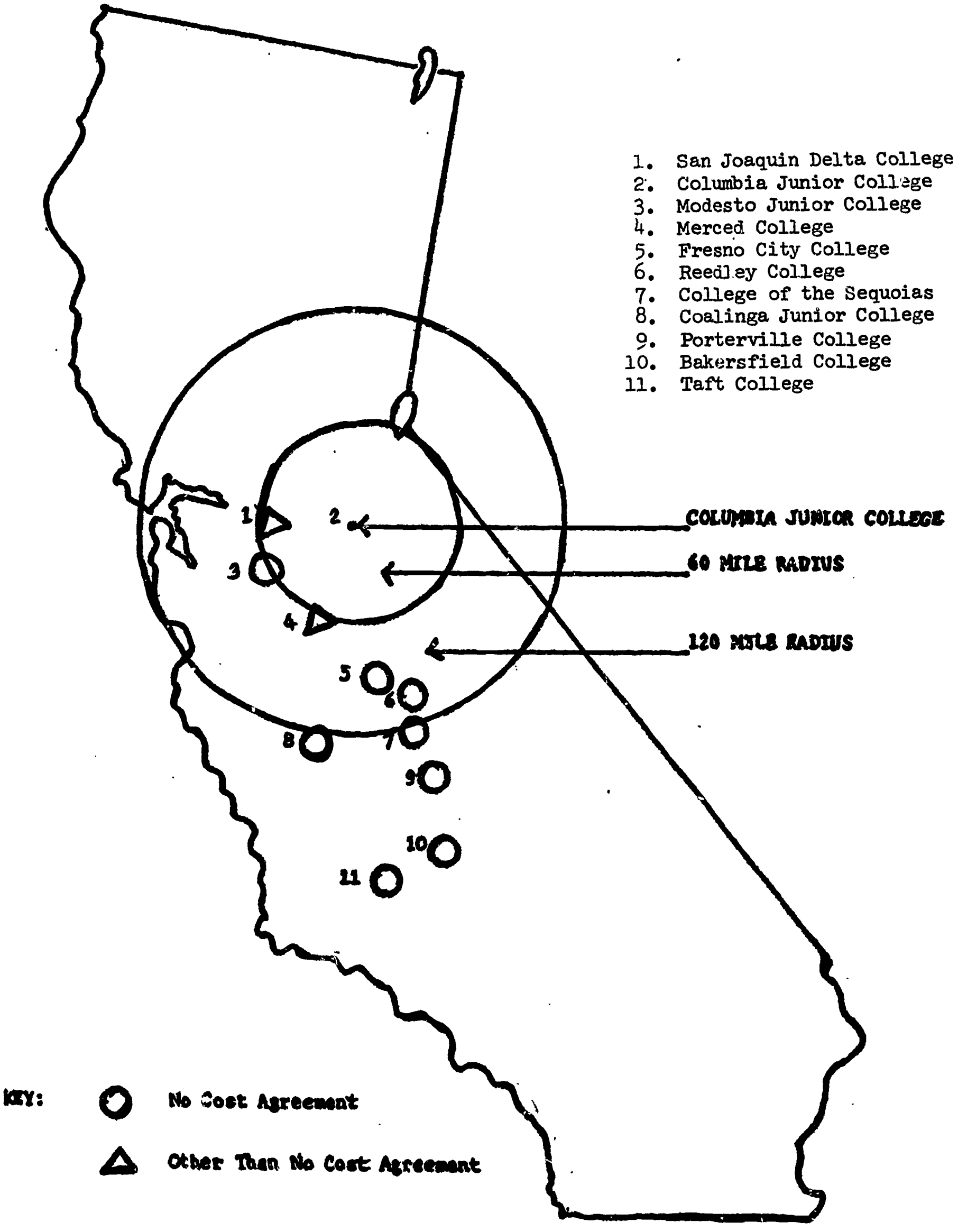
KEY:

○ NO COST AGREEMENT

△ OTHER THAN NO COST AGREEMENT

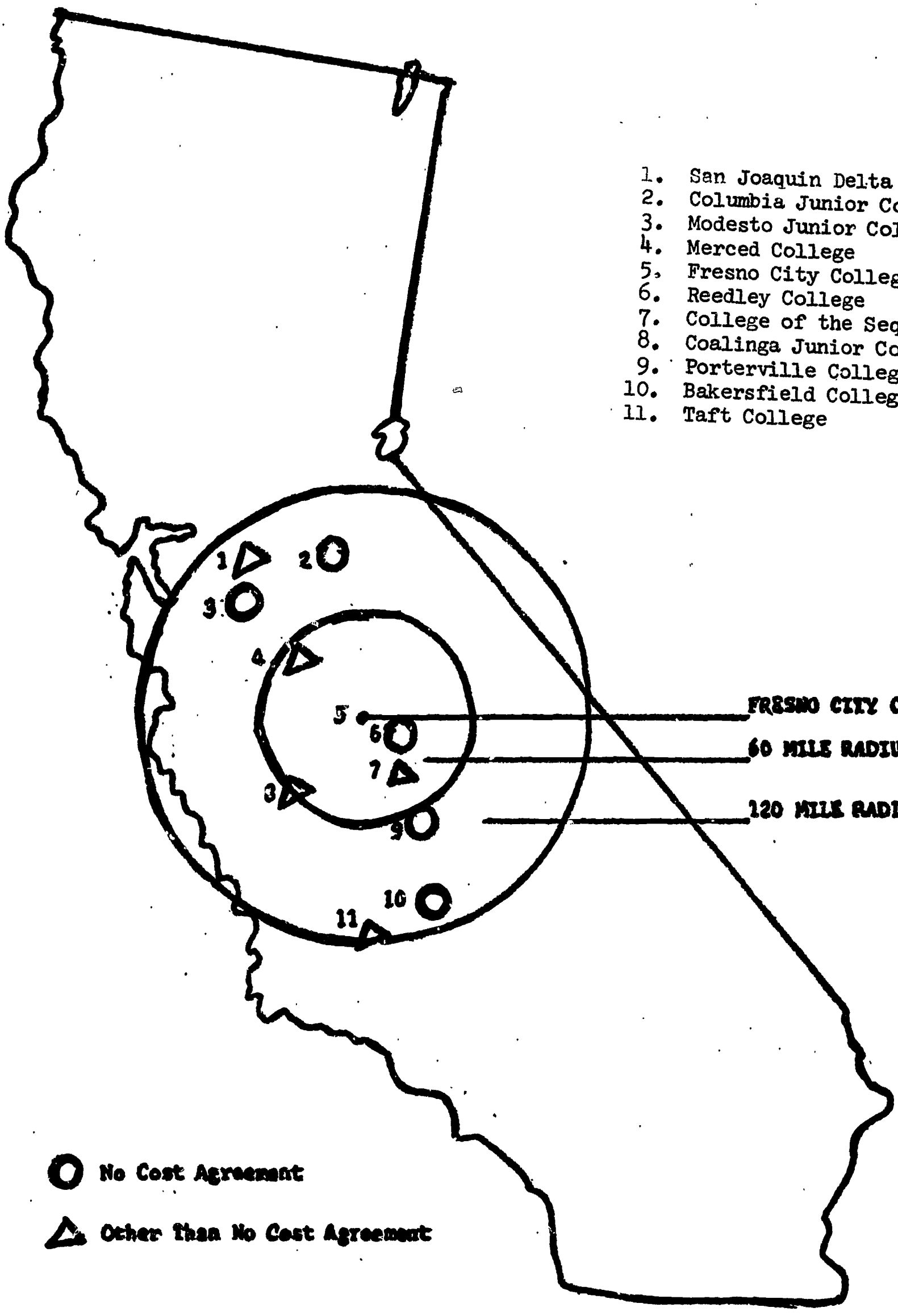
SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

COLUMBIA JUNIOR COLLEGE EXISTING AGREEMENTS FOR OUT-OF-DISTRICT STUDENTS



SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

FRESNO CITY COLLEGE EXISTING AGREEMENTS FOR OUT-OF-DISTRICT STUDENTS



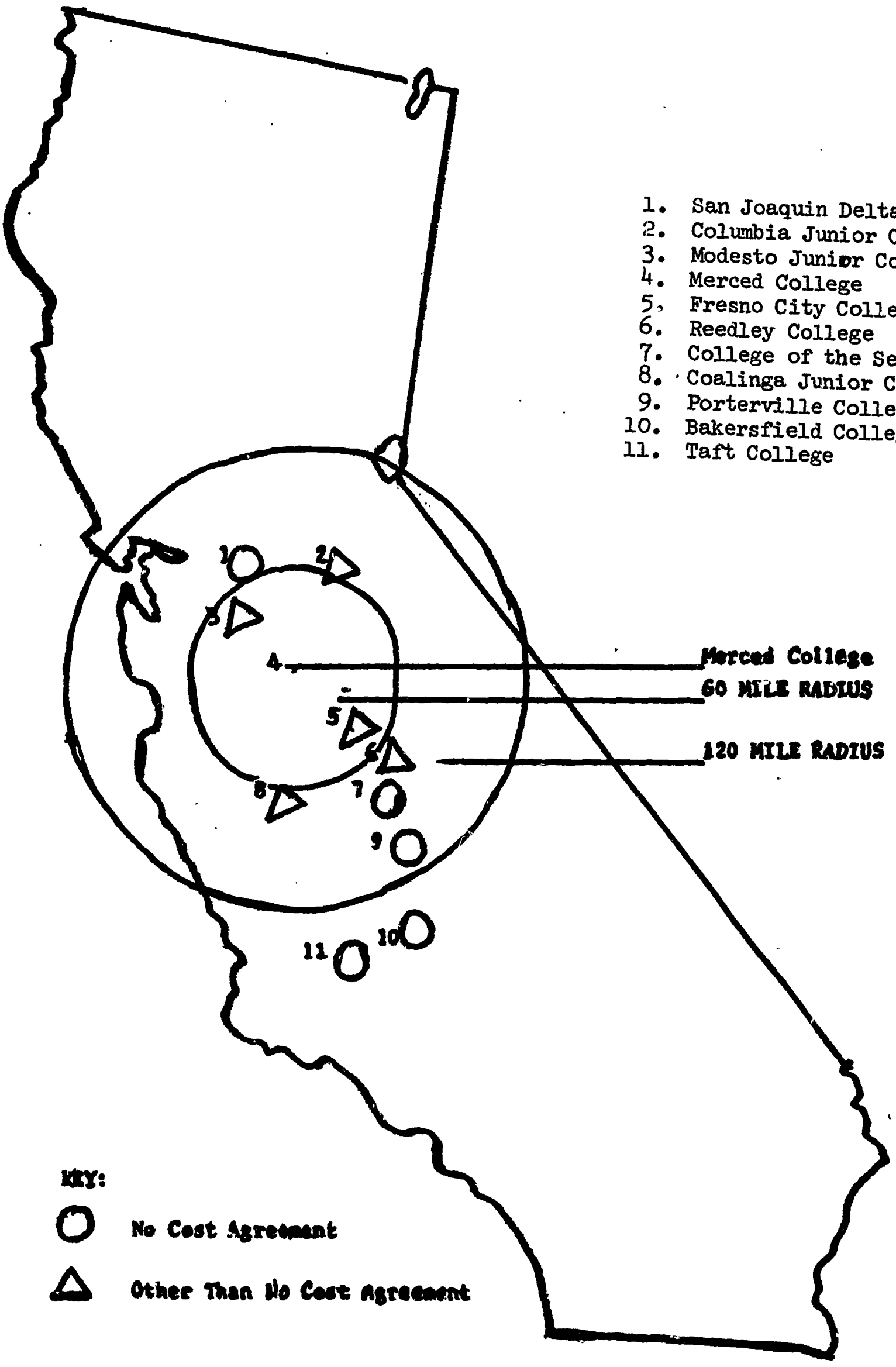
1. San Joaquin Delta College
2. Columbia Junior College
3. Modesto Junior College
4. Merced College
5. Fresno City College
6. Reedley College
7. College of the Sequoias
8. Coalinga Junior College
9. Porterville College
10. Bakersfield College
11. Taft College

KEY: ○ No Cost Agreement

△ Other Than No Cost Agreement

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

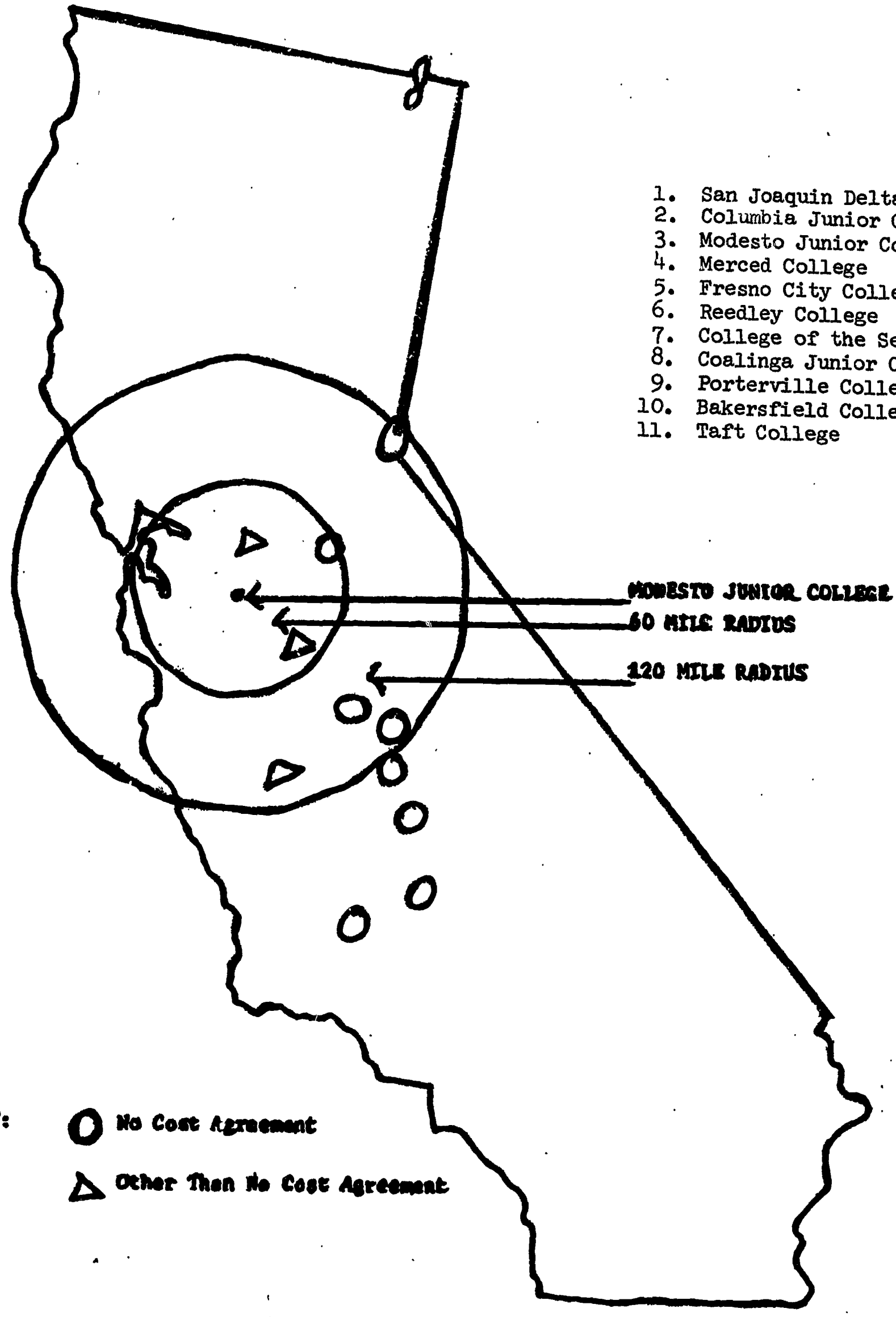
MERCED COLLEGE EXISTING AGREEMENTS FOR OUT-OF-DISTRICT STUDENTS



1. San Joaquin Delta College
2. Columbia Junior College
3. Modesto Junior College
4. Merced College
5. Fresno City College.
6. Reedley College
7. College of the Sequoias
8. Coalinga Junior College
9. Porterville College
10. Bakersfield College
11. Taft College

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

MODESTO JUNIOR COLLEGE EXISTING AGREEMENTS FOR OUT-OF-DISTRICT STUDENTS



1. San Joaquin Delta College
2. Columbia Junior College
3. Modesto Junior College
4. Merced College
5. Fresno City College
6. Reedley College
7. College of the Sequoias
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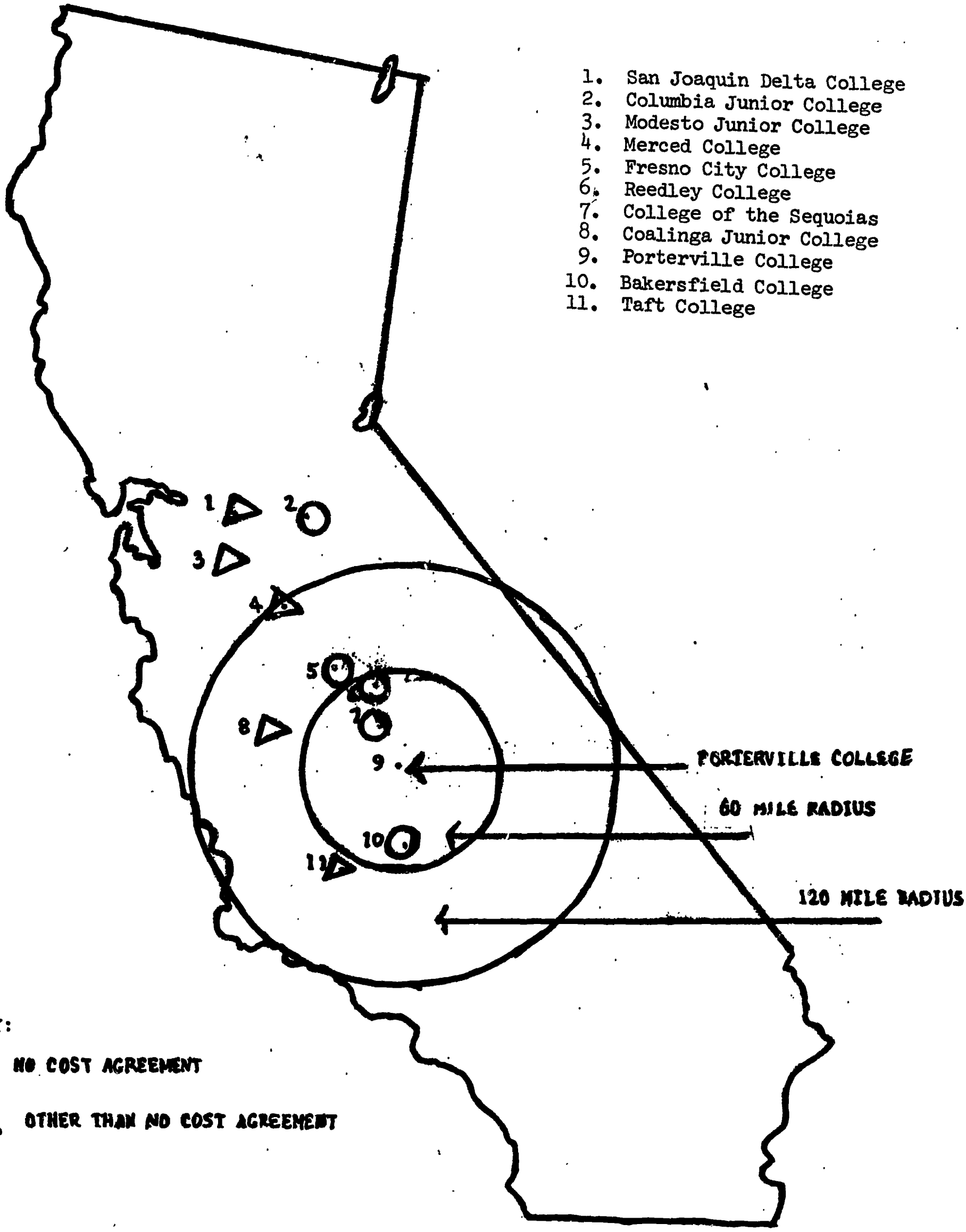
9. Porterville College
10. Bakersfield College
11. Taft College

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

PORTERVILLE JUNIOR COLLEGE EXISTING AGREEMENTS FOR OUT-OF-DISTRICT STUDENTS



1. San Joaquin Delta College
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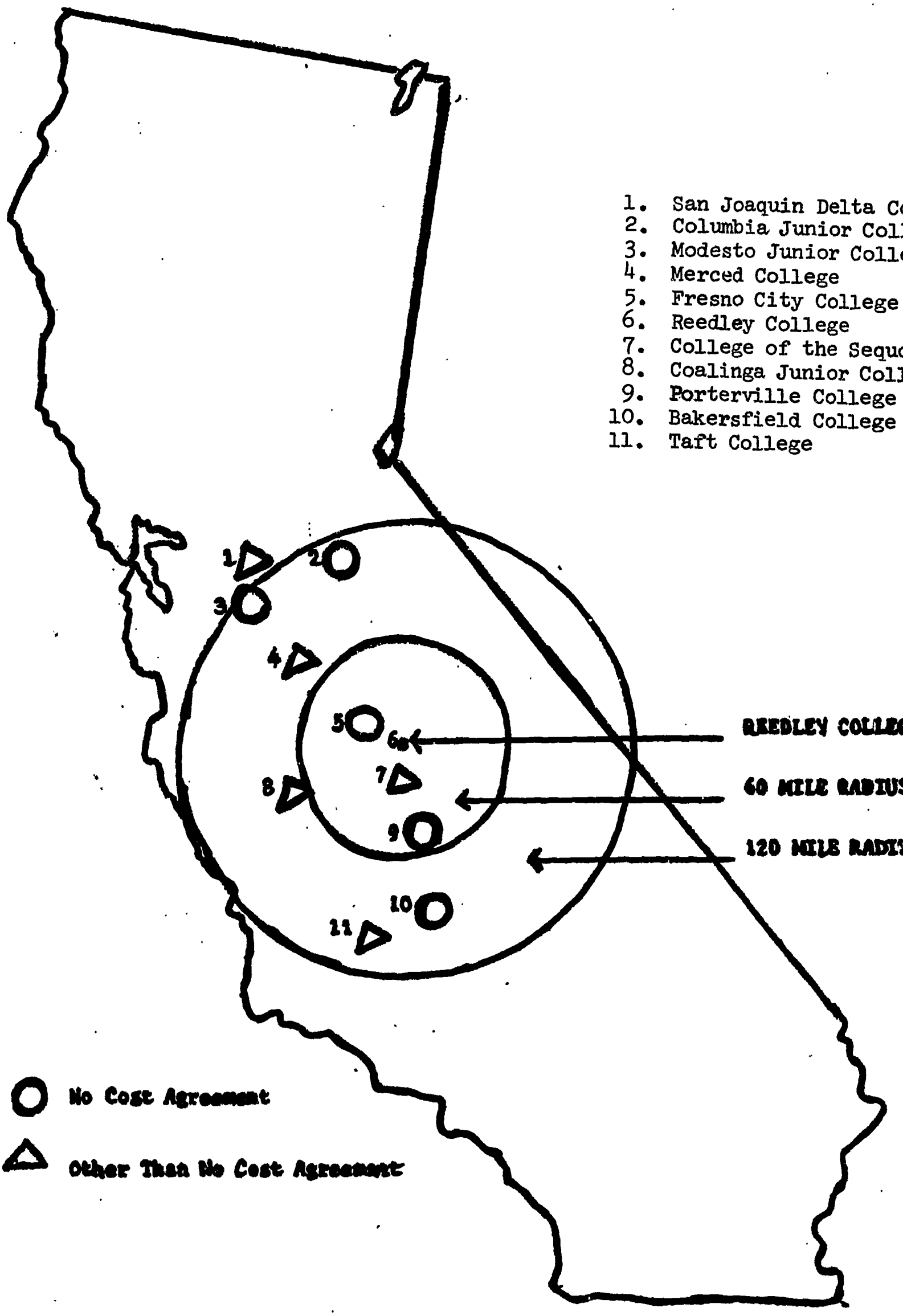
4. Merced College
5. Fresno City College
6. Reedley College
7. College of the Sequoias
8. Coalinga Junior College
9. Porterville College
10. Bakersfield College
11. Taft College

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

REEDLEY COLLEGE EXISTING AGREEMENTS FOR OUT-OF-DISTRICT STUDENTS



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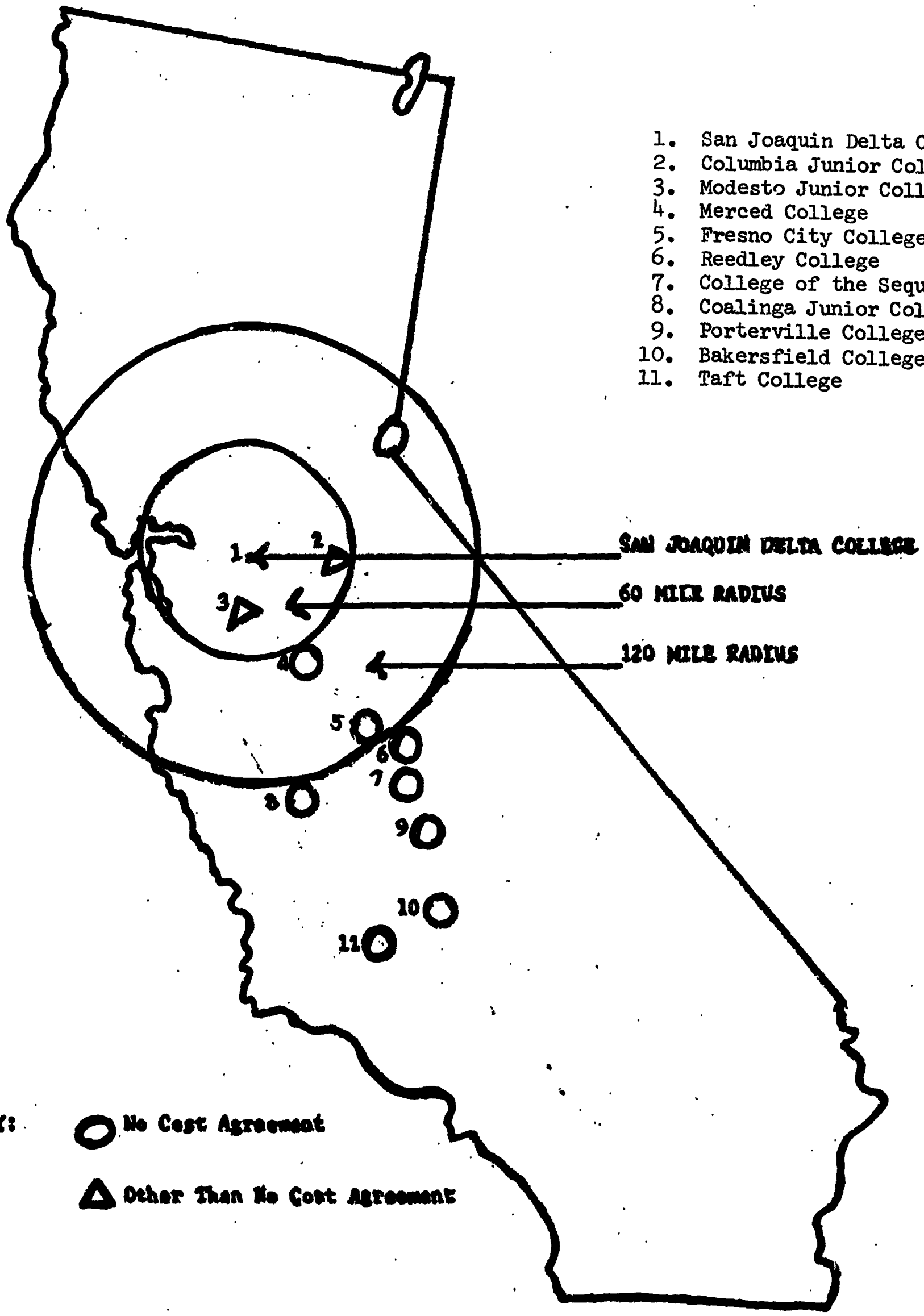
2. Columbia Junior College
3. Modesto Junior College
4. Merced College
5. Fresno City College
6. Reedley College
7. College of the Sequoias
8. Coalinga Junior College
9. Porterville College
10. Bakersfield College
11. Taft College

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

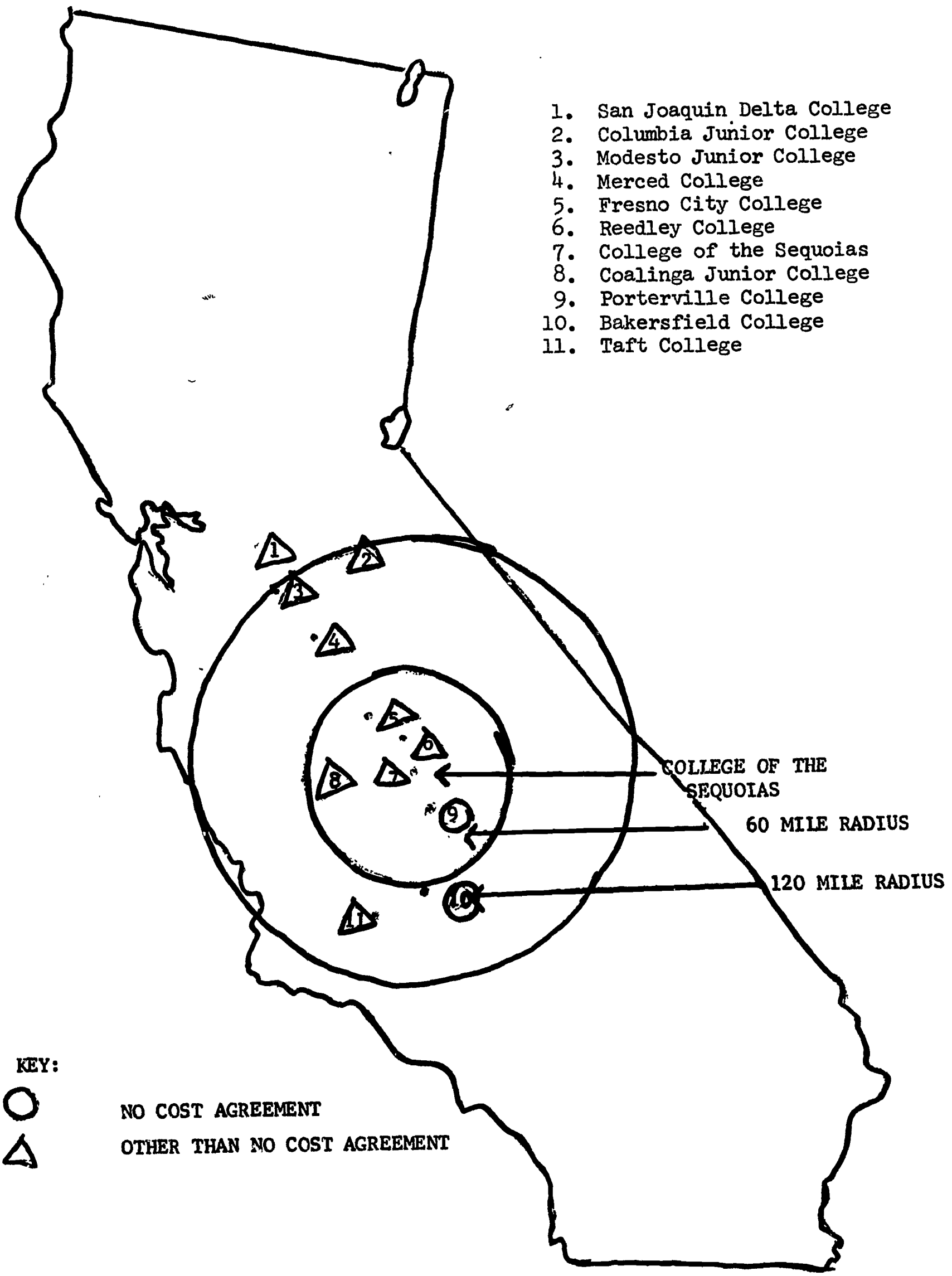
SAN JOAQUIN DELTA COLLEGE EXISTING AGREEMENTS FOR OUT-OF-DISTRICT STUDENTS



1. San Joaquin Delta College
2. Columbia Junior College
3. Modesto Junior College
4. Merced College
5. Fresno City College
6. Reedley College
7. College of the Sequoias
8. Coalinga Junior College
9. Porterville College
10. Bakersfield College
11. Taft College

SAN JOAQUIN VALLEY COMMUNITY COLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

COLLEGE OF THE SEQUOIAS' EXISTING AGREEMENTS FOR OUT-OF-DISTRICT STUDENTS



1. San Joaquin Delta College
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4. Merced College
5. Fresno City College
6. Reedley College
7. College of the Sequoias
8. Coalinga Junior College
9. Porterville College
10. Bakersfield College
11. Taft College

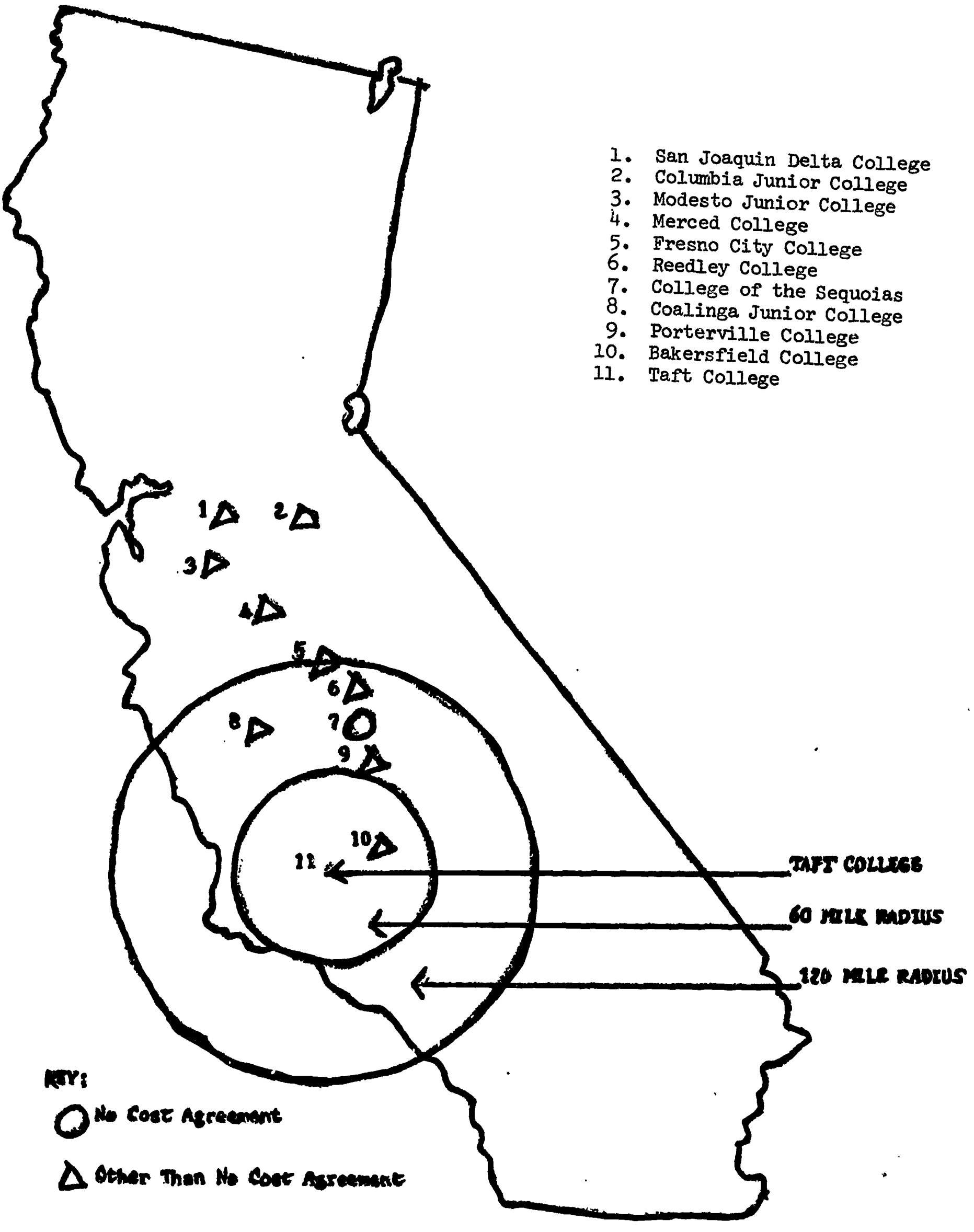
KEY:

○ NO COST AGREEMENT

△ OTHER THAN NO COST AGREEMENT

SAN JOAQUIN VALLEY COMMUNITYCOLLEGE COUNCIL FOR OCCUPATIONAL EDUCATION

TAFT COLLEGE EXISTING AGREEMENTS FOR OUT-OF-DISTRICT STUDENTS



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7. College of the Sequoias
8. Coalinga Junior College
9. Porterville College
10. Bakersfield College
11. Taft College

1969-1970

CAREER PROGRAMS

OFFERED BY THE SAN JOAQUIN VALLEY COMMUNITY COLLEGES

BAKERSFIELD COLLEGE
COALINGA COLLEGE
COLUMBIA JUNIOR COLLEGE
FRESNO CITY COLLEGE
MERCED COLLEGE
MODESTO JUNIOR COLLEGE
PORTERVILLE COLLEGE
REEDLEY COLLEGE
SAN JOAQUIN DELTA COLLEGE
CCLLEGE OF THE SEQUOIAS
TAFT COLLEGE

SUGGESTED TOPICS FOR THE INTRODUCTORY PAGE

1. WHICH CAREER?

2. WHAT TRAINING IS AVAILABLE?

3. WHY TRAIN AT A COMMUNITY COLLEGE?

4. WHERE DO I BEGIN?

SAN JOAQUIN VALLEY COMMUNITY

COLLEGE CAREER PROGRAMS

1968-69

PROGRAMS	Bakersfield College	Coalinga College	Columbia JR. College	Fresno City College	Merced College	Modesto JR. College	Porterville College	Reedley College	San Joaquin Delta	College of the Sequoias	Taft College
Agriculture Courses											
Agri-Business	x	x		x			x	x		x	
Agriculture					x			x	x		
Agriculture Laboratory						x					
Agricultural (Chemicals)								x			
Agricultural (Inspector)								x			
Agri-Engineering	x	x				x	x				
Agri. Engineering Technician										x	
Agricultural (Power Mechanics)								x			
Agricultural Technology						x					
Animal Husbandry	x	x				x	x	x			
Animal Science						x					
Artificial In-Semination Tech.						x					
Crop Production	x	x				x	x				
Dairy Husbandry		x				x					
Dairy Industry						x					
Fluid Power						x					
Forestry (Voc.)						x	x				
Forestry (Tech.)						x					
Forestry-Nat'l Resources									x		

SAN JOAQUIN VALLEY COMMUNITY
COLLEGE CAREER PROGRAMS
1968-69
(Continued)

PROGRAMS	Bakersfield College	Coalinga College	Columbia Jr. College	Fresno City College	Merced College	Modesto Jr. College	Porterville College	Reedley College	San Joaquin Delta	College of the Sequoias	TAFT College
Horticulture						x					
Horticulture Ornamental						x				x	
Horticulture Landscape								x			
Landscape, Design & Nursery Practice	x										
Nursery Production Technician						x					
Landscape Park & Forest Main. Tech.						x					
Plant Science Tech.										x	
Poultry Husbandry						x					
Quality Control In-Spection Technician						x					
Land Management						x					
Sales Service						x					
Viticulture								x			
Dental Assisting	x				x	x		x			
Home Health Aides											x
Inhalation Therapy				x							
Medical Assistant						x	x				
Nursing Aide		x									
Nursing, Registered				x					x		
Nursing, L.V.N.	x					x				x	
Nursing, Vocational				x	x						
Psychiatric Technology							x				

SAN JOAQUIN VALLEY COMMUNITY
COLLEGE CAREER PROGRAMS

1968-69

(Continued)

PROGRAMS	Bakersfield College	Coalinga College	Columbia Jr. College	Fresno City College	Merced College	Modesto Jr. College	Porterville College	Reedley College	San Joaquin Delta College	College of the Sequoias	Taft College	
X-ray Technology				x								
Architecture						x				x		
Art Courses		x				x		x			x	
Drafting			x									
Journalism		x										
Photography	x								x			
Printing						x			x			
Radio & Television				x		x						
Accounting Courses	x	x		x	x	x	x			x	x	
Bookkeeping								x				
Business Courses	x			x	x			x		x	x	
Clerical Courses		x		x	x	x	x	x			x	
Computer Programming (Bus.)		N	O	N	E							
Court Reporting				x								
Data Processing				x		x			x			
Management Service Training									x			
Insurance				x								
Marketing	x							x				
Medical Assistant-Secretary				x								
Merchandising						x	x		x	x		

SAN JOAQUIN VALLEY COMMUNITY
COLLEGE CAREER PROGRAMS

1968-69

(Continued)

PROGRAMS	Bakersfield College	Coalinga College	Columbia Jr. College	Fresno City College	Merced College	Modesto Jr. College	Porterville College	Reedley College	San Joaquin Delta	College of the Sequoias	Taft College
Office Administration		x									
Office Assistant (Medical)										x	
Office Machines				x							
Office Management										x	
Office Occupations			x								
Office Practice	x										
Real Estate	x		x	x	x	x	x		x	x	
Records Tech., Medical				x							
Resort Management			x								
Secretarial	x	x		x	x	x	x	x	x	x	x
HOME ECONOMICS				x		x		x	x	x	x
Airline Stewardess							x				
Child Study Center	x										
Fashion Merchandising						x					
Food Service	x					x					
Furniture & Home Furnishings	x										
Homemaking						x					x
Modern Living							x				
Nursery School Teaching		x				x					

SAN JOAQUIN VALLEY COMMUNITY
COLLEGE CAREER PROGRAMS

1968-69

(Continued)

PROGRAMS	Bakersfield College	Coalinga College	Columbia JR. College	Fresno City College	Merced College	Modesto JR College	Porterville College	Reedley College	San Joaquin Delta	College of the Sequoias	Taft College
Early Childhood Educ.								x			
School Lunch Management					x						
TRADE AND TECHNICAL OCCUPATIONS											
Aeronautics				x	x			x			
Appliance Repair	x										
Automotive Trades	x	x		x	x	x	x	x		x	
Aviation			x								
Body & Fender				x							
Building Trades				x			x			x	x
Cabinet work											x
Carpentry				x							
Civil Technology		x									
Civil Engineering Tech.						x			x		
Communications Technician									x		
Construction Technology									x		
Cosmetology	P R I V A T E S C H O O L S										
Diesel Mechanic							x				
Drafting	x	x		x	x	x	x	x	x	x	x
Electronics Technician	x										

SAN JOAQUIN VALLEY COMMUNITY
COLLEGE CAREER PROGRAMS

1968-69

PROGRAMS	Bakersfield College	Coalinga College	Columbia Jr. College	Fresno City College	Merced College	Modesto Jr. College	Porterville College	Reedley College	San Joaquin Delta College	College of the Sequoias	Taft College	
Electronics	x	x		x	x	x		x	x	x	x	
Engineering Aide	x	x		x	x			x		x		
Flight Training		x										
Heavy Duty Mechanics & Diesel			x	x								
Industrial Education				x		x		x				
Laboratory Technician	x						x					
Letter Press Printing						x						
Machine Trades	x			x		x			x		x	
Mechanical Technology				x					x		x	
Medical Record Librarian						x						
Metal Trades	x			x	x		x			x		
Mill Cabinet				x								
Petroleum Tech.											x	
Printing Tech.									x			
Refrigeration, Air Conditioning	P R I V A T E S C H O O L S											
Technical Illus. Technology									x			
Welding	x			x						x	x	
Correctional Science	x		x			x			x			
Criminology						x						

SAN JOAQUIN VALLEY COMMUNITY
COLLEGE CAREER PROGRAMS

1968-69

PROGRAMS	Bakersfield College	Coalinga College	Columbia Jr. College	Fresno City College	Merced College	Modesto Jr. College	Porterville College	Reedley College	San Joaquin Delta	College of the Sequoias	Taft College
Fire Science	x		x	x	x	x			x			
Law Enforcement			x		x							
Library Assistant					x						x	
Police Science	x			x		x			x	x		
Public Administrator									x			
Teacher Aide	x											
Transportation				x								

IDENTIFICATION OF OCCUPATIONAL AREAS
FOR POSSIBLE INITIAL AREA PLANNING

While serving as Project Coordinator of the San Joaquin Valley Community College Council for Occupational Education, numerous suggestions of occupational areas which might be readily adaptable to Area Planning have been brought to my attention.

A number of these programs are listed below for possible Area Planning consideration by the Council members. No attempt has been made to establish a priority for them. However, if the Council should decide to accomplish Area Planning for any of the programs, priority establishment would seem essential before undertaking any action to implement, expand, or consolidate a program.

Agriculture
Airframe & Engine
Allied Health Fields
Banking
Cosmetology
Data Processing
Dental Assisting
Diesel Mechanic
Flight Training
Home Economics
Law Enforcement and Corrections
Public Service Aides
Recreation Management
Registered Nursing
Traffic Management

REFLECTIONS, CONCLUSIONS, AND SUMMARY

OF THE PROJECT COORDINATOR

Occupational education is being looked at by many as one way to aid in curing this nation's ills. An individual with a worthwhile job, earning a comfortable wage, and feeling some reason for living, will tend to be a community asset rather than a community problem. Certainly, most employment requires some salable skill. However, less than ten per cent of all jobs in California require a B. A. Degree. Therefore, the Community College can and must fill this large training need. Are the Community Colleges doing as much as they could? A glance at two sets of statistics yields a partial answer.

1. Eighty per cent (80%) of entering Community College freshmen indicate a four-year degree as their goal.

2. Only thirty per cent (30%) (approximately) of Council college students actually do go on to a four-year institution.

With these figures in mind, it is not difficult to see that much needs to be done, for few, if any, California Community Colleges aim 70% of their curriculum at non-transfer students. The figures are almost reversed, with nearly 70% of the curriculum designed for the 30% who will transfer to a four-year institution.

The vast majority of our population will end up working in some field related to occupational education. The importance of this observation is clear to the student who needs to master a skill; the employer who desperately needs trained help; Community College educators who

realize that seven out of ten students they work with will not earn a Bachelor's Degree; and finally, all facets of local, State, and National Government, as evidenced by the massive legislative commitments of the past year or two.

The facts are clear!

1. A tremendous need exists for trained employees.
2. A large pool of individuals remains unemployed through lack of skills.
3. The unemployed and untrained need training.
4. The Community Colleges are the logical agency to accomplish this training.
5. If Community Colleges and/or other agencies through local initiative do not meet this challenge, the Federal and State Governments must and will.
6. The question is really not whether to train, but who will train?

To some extent, the Federal Government has already moved into some areas where they felt little was being done. Examples include the Job Corps, Vista, and Manpower Development and Training Act programs, and numerous other specialized programs. Unless progress is forthcoming at the local level, we may be faced with an actual removal of the instructional program or parts of it, to Federal-or-State-operated schools or contract programs.

What can be done?

The old or traditional methods just have not done the job. More of the same, then, is not a very exciting thought.

Some entirely new approach to occupational training may be necessary. I feel these must include, but are not limited to, the following:

1. Early occupational exposure (Junior High or Elementary).

2. Improved occupational counselling (at all age levels).

3. More meaningful course content (relevant to industry)

4. Innovations in instructional techniques (apply more of the methods and hardware now in use in academic areas).

5. Area Planning (to avoid duplication, cut costs, increase number and types of programs, add depth and specialization to existing programs, and make better use of instructional staff.

6. Sell the value of and build the prestige of occupational education. (Many of the salaries and working conditions are to be envied.)

7. Stress training where needed and not in "surplus" areas.

8. Improve articulation--both vertical and horizontal.

9. An active placement office on each campus--not just a job, but the correct one.

10. Coordinated follow-up activities--with the same data collected on all the campuses with the same form or format.

If each of the areas mentioned were studied and directed by a task force from within, or associated with the Council, a large step could be taken towards improving occupational education in the San Joaquin Valley.

This publication contains an overall view of the occupational training programs which are now available at one or more of the member colleges of the San Joaquin Valley Community College Council for Occupational Education, or at private institutions in the San Joaquin Valley.

Under the present structure, however, many of the programs are not available to all of the potential students due to the distance between the student and the college offering the program, or for some other procedural or financial reason.

The master schedule or brochure listing all the occupational programs of all eleven colleges is similar to one presently in use by several colleges in the Bay Area.

In order for such a schedule to become a reality, agreement between the member colleges to allow either free or partially controlled movement, would need to be reached. This agreement would probably take the form of a written document similar to the one executed annually by the Bay Area colleges.

This document would spell out the conditions under which students might move from one district to another to pursue the program of his choice.

The annual renewal of the contract allows each district to periodically assess the effect of student interchange on the instructional and financial program of their district. In other words, the student interchange concept would be bought one year at a time.

The data has now been gathered and presented. To the Council falls the task of making specific recommendations to district administrators of each member college, regarding initial student interchange and Area Planning of occupational programs.

The San Joaquin Valley Community College Council for Occupational Education represents one of the first and most active attempts at Area Planning through local initiative. Newly enacted legislation makes such planning virtually an absolute necessity. Whether through local initiative or by legislative edict, Area Planning will involve nearly all Community Colleges.

The excellent cooperation and enthusiasm of Council delegates and district administrators have brought Council activity and accomplishments to their present high level. Continued cooperation will allow the Council to achieve goals that would have been virtually unheard of a few short years ago.

This most uncommon striving for cooperation and solutions to common problems is a tribute to the Community Colleges of the San Joaquin Valley. The effort expended will be rewarded by stronger occupational programs at all member colleges; a greater selection of program offerings; avoidance of expensive program duplication; and the realistic planning and controlled implementation of future programs.

AN INVENTORY OF OCCUPATIONAL PROGRAMS

IN THE SAN JOAQUIN VALLEY

This section provides a listing of all occupational programs presently offered in the following California Community Colleges:

Bakersfield College
Coalinga College
Columbia Junior College
Fresno City College
Merced College
Modesto Junior Colleges
Porterville College
Reedley College
San Joaquin Delta College
College of the Sequoias
Taft College

In addition, those programs applicable to this inventory and offered at the following private or commercial schools and other agencies are included:

Atkinson Business College, Fresno
Bakersfield Medical & Dental Assistant College, Bakersfield
Blair College of Medical & Dental Assistants, Fresno
Fresno Technical College, Fresno
Golden Rule Real Estate School, Fresno
Gottschalk Flight Center, Modesto
Heald Business Colleges, Fresno; Bakersfield
Lufkins Beauty College, Bakersfield
Merced Beauty College, Merced
MTI Business Schools, Fresno
Sweet Flying Service, Visalia
Valley Commercial College, Modesto
Visalia College of Beauty, Visalia

PROGRAMS ARE LISTED ALPHABETICALLY WITHIN THE FOLLOWING CLUSTER AREAS:

1. Agriculture
   Horticulture
   Forestry
2. Allied Health
3. Applied and Graphic Arts
4. Business and Office Occupations
5. Home Economics
6. Trade and Technical Occupations
7. Public and Personal Services

INFORMATION PERTAINING TO EACH PROGRAM INCLUDE THE FOLLOWING:

1. Name of Program
2. Length of Program
3. Degree, Diploma or Certificate Granted
4. Institution offering program
5. Contact person

AGRICULTURE, HORTICULTURE, FORESTRY

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Agri-business (Acct'g)	2	A.A.	Bakersfield College	Merson, Thomas
Agri-business	2	A.S.	Fresno City College	Handley, Dick
Agricultural Business	2	A.A.	Coalinga College	Harrison, Byron
Agri-business (Acct'g)	2	A.A.	Porterville College	Clearman, Lee
Agri-business	2	A.S.	Reedley College	Stevenson, Jack
Agri-business	2	A.A.	College of the Sequoias	Jensen, Bruce
Agri-Business (Crop Production)	2	A.A.	Bakersfield College	Merson, Thomas
Agri-Business (Crop Production)	2	A.A.	Porterville College	Clearman, Lee
Agriculture	2	A.A.	Merced College	Williamson, Jack
Agriculture (General)	2	A.S.	Reedley College	Stevenson, Jack
Agriculture	2	A.A.	S.J. Delta College	Barnett, E. T.
Agriculture Laboratory	2	A.A.	Modesto Jr. College	Schwark, Louis
Agricultural (Chemicals)	2	A.S.	Reedley College	Stevenson, Jack
Agricultural (Inspector)	2	A.S.	Reedley College	Stevenson, Jack
Agricultural Engineering	2	A.A.	Bakersfield College	Merson, Thomas
Agri. Engineering (Applied)	2	Ctf.	Coalinga College	Harrison, Byron
Agri. Engineering	2	A.A.	Coalinga College	Harrison, Byron
Agri. Engineering	2	A.A.	Modesto Jr. College	Schwark, Louis
Agri. Engineering	2	A.A.	Porterville College	Clearman, Lee
Agri. Engineering Tech.	2.	A.A.	College of the Sequoias	Jensen, Bruce
Agricultural (Power Mechanics)	2	A.S.	Reedley College	Stevenson, Jack
Agricultural Tech.	2	A.A.	Modesto Jr. College	Schwark, Louis
Animal Husbandry	2	A.A.	Bakersfield College	Merson, Thomas
Animal Husbandry(Major)	2	A.A.	Coalinga College	Harrison, Byron
Animal Husbandry	2	A.A.	Modesto Jr. College	Schwark, Louis
Animal Husbandry	2	A.A.	Porterville College	Clearman, Lee
Animal Husbandry	2	A.S.	Reedley College	Stevenson, Jack
Animal Science	2	A.A.	Modesto Jr. College	Schwark, Louis

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Animal Science Tech.	2	A.A.	College of the Sequoias	Jensen, Bruce
Artificial Insemination Technician	2	A.A.	Modesto Jr. College	Schwark, Louis
Crop Production	2	A.A.	Bakersfield College	Merson, Thomas
Crop Production (Major)	2	A.A.	Coalinga College	Harrison, Byron
Crop Production	2	A.A.	Modesto Jr. College	Schwark, Louis
Crop Production	1	Ctf.	Coalinga College	Harrison, Byron
Crop Production	2	A.A.	Porterville College	Clearman, Lee
Dairy Husbandry (Major)	2	A.A.	Coalinga College	Harrison, Byron
Dairy Husbandry	2	A.A.	Modesto Jr. College	Schwark, Louis
Dairy Industry	2	A.A.	Modesto Jr. College	Schwark, Louis
Fluid Power	2	A.A.	Modesto Jr. College	Schwark, Louis
Forestry (Vocational)	2	A.A.	Modesto Jr. College	Schwark, Louis
Forestry Technician	2	A.A.	Modesto Jr. College	Schwark, Louis
Forestry (Vocational)	2	A.A.	Porterville College	Clearman, Lee
Forestry, Natural Resources	2	A.A.	S.J. Delta College	Barnett, E. T.
Horticulture	2	A.A.	Modesto Jr. College	Schwark, Louis
Horticulture, Ornamental	2	A.A.	Modesto Jr. College	Schwark, Louis
Horticulture, Landscape	2	A.S.	Reedley College	Stevenson, Jack
Horticulture, Ornamental	2	A.A.	College of the Sequoias	Jensen, Bruce

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Landscape Design & Nursery Practice	2	A.A.	Bakersfield College	Merson, Thomas
Nursery Production Tech.	2	A.A.	Modesto Jr. College	Schwark, Louis
Landscape Park & Forest Maintenance Tech.	2	A.A.	Modesto Jr. College	Schwark, Louis
Plant Science Tech.	2	A.A.	College of the Sequoias	Jensen, Bruce
Poultry Husbandry	2	A.A.	Modesto Jr. College	Schwark, Louis
Quality Control Inspection Technician	2	A.A.	Modesto Jr. College	Schwark, Louis
Land Management	2	A.A.	Modesto Jr. College	Schwark, Louis
Sales Service	2	A.A.	Modesto Jr. College	Schwark, Louis
Viticulture	2	A.A.	Reedley College	Stevenson, Jack

ALLIED HEALTH OCCUPATIONS

Dental Assisting	2	A.A.	Bakersfield College	Merson, Thomas
Dental Assisting	5 months	Dipl.	Blair College of Medical/Dental Assistants, Fresno	
Dental Assisting	2	A.A.	Merced College	Williamson, Jack
Dental Assisting	2	A.A.	Modesto Jr. College	Schwark, Louis
Dental Assisting	6 months	Dipl.	Bakersfield Medical & Dental Assistant College	
Home Health Aides	2	A.A.	Taft College	Marr, Kenneth V.
Inhalation Therapy	2	A.S.	Fresno City College	Handley, Dick
Medical Assistant	6 months	Dipl.	Bakersfield Medical & Dental Assistants, Fresno	
Medical Assistant	7 months	Dipl.	Blair College of Medical & Dental Assistants, Fresno	

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Medical Assisting	2	A.A.	Modesto Jr. College	Schwark, Louis
Medical Assistant	2	A.A.	S.J. Delta College	Barnett, E.T.
Nursing Aide	2	A.A.	Coalinga College	Savage, Kenneth
Nursing, Registered	2	A.A.	Bakersfield College	Merson, Thomas
Nursing, Registered	2	A.S.	Fresno City College	Handley, Dick
Nursing, Registered	2	A.A.	Modesto Jr. College	Schwark, Louis
Nursing, Registered	2	A.A.	S.J.Delta College	Barnett, E.T.
Nursing, L.V.N.	19 months	Ctf.	Bakersfield College	Merson, Thomas
L.V.N. (Health Occup.)	2	A.A.	Columbia College	Deal, Robert
Nursing, Vocational	2	A.S.	Fresno City College	Handley, Dick
Nursing, Vocational	1½/2 yrs.	Ctf./ A.A.	Merced College	Williamson, Jack
Nursing, L.V.N.	1	Ctf.	Modesto Jr. College	Schwark, Louis
Nursing, Vocational	2	A.A.	S.J. Delta College	Barnett, E. T.
Nursing, Vocational L.V.N.	2	A.A.	College of the Sequoias	Jensen, Bruce
Psychiatric Technology	1½+*	A.A.	Porterville College	Cuffman, Burl
X-Ray Technology	2	A.S.	Fresno City College	Handley, Dick

* Plus credit for work experience at Porterville State Hospital

APPLIED AND GRAPHIC ARTS

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Architecture	2	A.A.	Modesto Jr. College	Schwark, Louis
Architecture & Architectural Engineering	2	A.A.	College of the Sequoias	Guarisco,Joseph
Art	2	A.A.	Coalinga College	Savage, Kenneth
Art, Commercial	2	A.A.	Modesto Jr. College	Schwark, Louis
Art, General	2	A.A.	Taft College	Marr, Kenneth
Art, General	2	A.A.	Modesto Jr. College	Schwark, Louis
Art	2	A.A.	Reedley College	Stevenson,Jack
Drafting	2	Ctf./ A.A.	Columbia Jr. College	Deal, Bob
Journalism (Major)	2	A.A.	Coalinga College	Savage, Kenneth
Photography, Commercial	2	A.A.	Bakersfield College	Merson, Thomas
Photography	2	A.A.	S. J. Delta College	Barnett, E. T.
Printing	2	A.A.	S. J. Delta College	Barnett, E. T.
Printing	2	A.A.	Modesto Jr. College	Schwark, Louis
Radio & Television	2	A.S.	Fresno City College	Handley, Dick
Radio & T. V. Broad-Casting	2	A.A.	Modesto Jr. College	Schwark, Louis

BUSINESS AND OFFICE OCCUPATIONS

Accounting	48/60 weeks	Ctf.	Atkinson Business College, Fresno	
Accounting	2	A.A.	Bakersfield College	Merson, Thomas
Accounting	2	A.A.	Fresno City College	Eckenrod, G.
Accounting	1200/1800 hrs.	Ctf.	Heald Business College/Fresno-Bakersfield	
Accounting	2	A.A.	Merced College	Williamson, Jack
Accounting, Vocational	2	A.A.	Modesto Jr.College	Schwark, Louis

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Accounting	420 hrs.	Ctf.	MTI Business Schools, Fresno	
Accounting (Occupational)	2	A.A.	Porterville College	Buckles,Edward
Accounting	2	A.A.	College of the Sequoias	Myers, Dorothy
Accounting	2	A.A.	Taft College	Marr, Kenneth
Accounting	9 months	Ctf.	Valley Commercial College, Modesto	
Accounts Clerk	2	A.A.	Coalinga College	Mitzell,Mike
Bookkeeping	600 hrs.	Ctf.	MTI Business Schools, Fresno	
Bookkeeping-Accounting	2	Ctf.	Reedley College	Stevenson,Jack
Bookkeeping	6 months	Ctf.	Valley Commercial College, Modesto	
Business Administration	72 weeks	Ctf.	Atkinson Business College, Fresno	
Business Administration	2	A.A.	Columbia College	Deal, Robert
Business Administration	1800 hrs.	Dipl.	Heald Business College, Bakersfield	
Business Administration	12 months	Ctf.	Valley Commercial College, Modesto	
Business Data Processing	2	A.A.	Bakersfield College	Merson, Thomas
Business Data Processing	2	A.A.	College of the Sequoias	Myers,Dorothy
Business, General	2	A.A.	Fresno City College	Eckenrod, G.

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Business, General	2	A.A.	Merced College	Williamson, Jack
Business, General	2	A.S.	College of the Sequoias	Myers, Dorothy
Business, General	2	A.S.	Reedley College	Stevenson, Jack
Business Management	2	A.A.	Bakersfield College	Merson, Thomas
Business Management	2	A.A.	Merced College	Williamson, Jack
Business Management	2	A.A.	Taft College	Marr, Kenneth
Clerical, General Office	48 wks.	Ctf.	Atkinson Business College, Fresno	
Clerical	2	A.A.	Fresno City College	Eckenrod, G.
Clerical	2	A.A.	Merced College	Williamson, Jack
Clerical, General	2	A.A.	Modesto Jr. College	Schwark, Louis
Clerical	2	A.A.	Porterville College	Buckles, Edward
Clerical	2	A.A.	Taft College	Marr, Kenneth
Clerk, Basic	1	Ctf.	Coalinga College	Mitzell, Mike
Clerk, Steno	1	Ctf.	Coalinga College	Mitzell, Mike
Clerk, Steno	24 wks.	Ctf.	Atkinson Business College, Fresno	
Clerk, Transcription (No Shorthand)	2	Ctf./ A.A.	Coalinga College	Mitzell, Mike
Clerk, Typist	1	Ctf.	Coalinga College	Mitzell, Mike
Clerk, Typist	2	A.S.	Reedley College	Stevenson, Jack
Computer Programming	60 wks.	Ctf.	Atkinson Business College, Fresno	
Court Reporting	2	A.A.	Fresno City College	Eckenrod, G.
Court Reporting	1800 hrs.	Ctf.	Heald Business Colleges, Fresno-Bakersfield	
Data Processing	2	A.A.	Fresno City College	Eckenrod, G.

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Data Processing	1800 hrs.	Ctf.	Heald Business Colleges, Fresno-Bakersfield	
Data Processing	2	A.A.	Modesto Jr. College	Schwark, Louis
Data Processing (Automation)	Varies	Ctf.	MTI Business Schools, Fresno	
Data Processing	2	A.A.	S.J. Delta College	Barnett, E. T.
Management Service Training	2	A.A.	S.J. Delta College	Barnett, E. T.
Insurance	2	A.S.	Fresno City College	Eckenrod, G.
Marketing, (Advertising, Retailing, Sales)	2	A.A.	Bakersfield College	Merson, Thomas
Marketing, Retailing	2	Ctf.	Reedley College	Stevenson,Jack
Medical Assistant-Secretary	2	A.A.	Fresno City College	Eckenrod, G.
Merchandising Management	2	A.A.	Bakersfield College	Merson, Thomas
Merchandising Management	2	A.S.	Fresno City College	Eckenrod, G.
Merchandising	2	A.A.	Porterville College	Buckles, Edward
Merchandising	2	A.A.	Modesto Jr. College	Schwark, Louis
Merchandising	2	A.A.	S. J. Delta College	Barnett, E.T.
Merchandising	2	A.A.	College of the Sequoias	Myers, Dorothy
Office Administration	1	Ctf.	Coalinga College	Mitzell, Mike
Office Assistant, Medical	2	A.A.	College of the Sequoias	Myers, Dorothy
Office Machines	2	A.A.	Fresno City College	Eckenrod, G.
Office Management	2	A.A.	College of the Sequoias	Myers, Dorothy
Office Occupations	2	Ctf./ A.A.	Columbia Jr. College	Deal, Robert
Office Practice	2	A.A.	Bakersfield College	Merson, Thomas
Real Estate	2	A.A.	Bakersfield College	Merson, Thomas
Real Estate	2	A.A./ Ctf.	Columbia Jr. College	Deal, Robert

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Real Estate	2	A.S.	Fresno City College	Eckenrod, G.
Real Estate	2½ months		Golden Rule Real Estate School, Fresno	
Real Estate	2	A.A.	Merced College	Williamson, Jack
Real Estate	2	A.A.	Porterville College	Buckles, Edward
Real Estate	2	A.A.	Modesto Jr. College	Schwark, Louis
Real Estate	2	Ctf.	S.J. Delta College	Barnett, E. T.
Real Estate	2	A.A.	College of the Sequoias	Myers, Dorothy
Records Technician, Medical	2	A.A.	Fresno City College	Eckenrod, G.
Resort Management			Columbia Jr. College	Deal, Robert
Secretary, Various	48/60 wk.	Ctf.	Atkinson Business College, Fresno	
Secretarial	2	A.A.	Fresno City College	Eckenrod, G.
Secretary	9/1500 hrs.	Ctf.	Atkinson Business College, Fresno	
Secretary	100 hrs.	Ctf.	MTI Business College, Fresno	
Secretary	40 wks.	Dipl.	Lufkins Business College, Bakersfield	
Secretarial Science	2	A.A.	Merced College	Williamson, Jack
Secretarial, General	2	A.A.	Modesto Jr. College	Schwark, Louis
Secretary, Basic	6 months	Ctf.	Valley Commercial College, Modesto	
Secretary, Executive	9 months	Ctf.	Valley Commercial College, Modesto	
Secretarial, Legal	2	A.A.	Coalinga College	Mitzell, Mike
Secretarial, Legal	2	A.A.	Modesto Jr. College	Schwark, Louis
Secretarial, Legal	2	A.A.	College of the Sequoias	Myers, Dorothy
Secretary, Legal	12 months	Ctf.	Valley Commercial College, Modesto	
Secretarial, Medical	2	A.A.	Coalinga College	Mitzell, Mike

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Secretarial, Medical	2	A.A.	Reedley College	Stevenson, Jack
Secretary, Medical	12 mo.	Ctf.	Valley Commercial College, Modesto	
Secretary, Legal-Medical	2	A.A.	Porterville College	Buckles, Edward
Secretarial, Medical	2	A.A.	College of the Sequoias	Myers, Dorothy
Secretarial/Stenographic	2	A.A.	Taft College	Marr, Kenneth
Secretarial Practice	2	A.A.	Bakersfield College	Merson, Thomas
Secretarial, Technical	2	A.A.	Fresno City College	Eckenrod, G.
Secretarial Training	2	A.A.	S.J. Delta College	Barnett, E.T.
Secretaryship, Legal	2	A.A.	Fresno City College	Eckenrod, G.
Secretarial, Technical	2	A.A.	Coalinga College	Mitzell, Mike
Supervisory Training	2	Ctf./ A.A.	Columbia Jr. College	Deal, Robert
Supervisory Training	2	A.A.	Modesto Jr. College	Schwark, Louis
Typist/Receptionist, Medical	2	A.A.	Modesto Jr. College	Schwark, Louis

HOME ECONOMICS

Airline Stewardess	2	A.A.	Porterville College	Clearman, Lee
Child Study Center			Bakersfield College	Merson, Thomas
Fashion Merchandising	2	A.A.	Modesto Jr. College	Schwark, Louis
Food Service Management	2	A.A.	Bakersfield College	Merson, Thomas
Food Service	2	A.A.	Modesto Jr. College	Schwark, Louis
Food Service Technician	1	Ctf.	Bakersfield College	Merson, Thomas
Furniture & Home Furnishings	2	A.A.	Bakersfield College	Merson, Thomas
Home Economics	2	A.S.	Fresno City College	Handley, Dick
Home Economics	2	A.A.	Reedley College	Stevenson, Jack
Home Economics	2	A.A.	S.J. Delta College	Barnett, E. T.
Home Economics	2	A.A.	College of the Sequoias	Jensen, Bruce
Homemaking	2	A.A.	Modesto Jr. College	Schwark, Louis
Homemaking	2	A.A.	Taft College	Marr, Kenneth

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Modern Living	2	A.A.	Porterville College	Clearman, Lee
Nursery School Assistant Tech.	2	A.A.	Modesto Jr. College	Schwark, Louis
Nursery School Teaching	2	A.A.	Bakersfield College	Merson, Thomas
Early Childhood Education	2	A.A.	S. J. Delta College	Barnett, E. T.
School Lunch Management **			Modesto Jr. College	Schwark, Louis

TRADE AND TECHNICAL OCCUPATIONS

Aeronautics	2	A.S.	Fresno City College	Handley, Dick
Aeronautics	2	A.A.	Merced College	Williamson, Jack
Aeronautics			Reedley College	Stevenson, Jack
Aero-Technology	2	A.S.	Reedley College	Stevenson, Jack
Appliance Repair	2	A.A.	Bakersfield College	Merson, Thomas
Automotive Trades	2	A.A.	Bakersfield College	Merson, Thomas
Automotive Technology	2	A.A.	Coalinga College	Harrison, Byron
Automotive Mechanics	26 weeks	Dipl.	Fresno Technical College	
Automotive Mechanics	2	A.A.	Merced College	Williamson, Jack
Automotive Body	2	A.A.	Modesto Jr. College	Schwark, Louis
Automotive Mechanics	2	A.A.	Modesto Jr. College	Schwark, Louis
Automotive	2	A.A.	Porterville College	Baker, Tom
Automotive Technology	2	A.A.	College of the Sequoias	Guarisco, Joseph
Automotive Technology	2	A.S.	Reedley College	Stevenson, Jack
Aviation		Ctf./ A.S.	Columbia Jr. College	Deal, Robert
Body & Fender	2	Ctf./ A.S.	Fresno City College	Handley, Dick
Building Construction & Contr.	2	A.A.	Taft College	Marr, Kenneth

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**Summers, evenings for regularly employed persons

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Building Technology			Fresno City College	Handley, Dick
Building Trades	2	A.A.	Porterville College	Baker, Tom
Building Trades	2	A.A.	College of the Sequoias	Guarisco,Joseph
Cabinet Work	2	A.A.	Taft College	Marr, Kenneth
Carpentry	2	Ctf./ A.A.	Fresno City College	Handley, Dick
Civil Technology (Surveying & Drafting)	2	A.A.	Coalinga College	Harrison,Byron
Civil Engineering Tech.	2	A.A.	Modesto Jr. College	Schwark,Louis
Civil Engineering Tech.	2	A.A.	S.J. Delta College	Barnett, E. T.
Communications Technician	26 wks.	Dipl.	Fresno Technical College	
Construction Technology	2	A.A.	S.J. Delta College	Barnett, E.T.
Cosmetology	9 months	Ctf./ Lic.	Merced Beauty College	
Cosmetology	9 months	Ctf./ Lic.	Visalia College of Beauty	
Diesel Mechanic	2	A.A.	Porterville College	Baker, Tom
Draftsman,(Industrial, Architectural, Petroleum)	2	A.A.	Bakersfield College	Merson,Thomas
Drafting, Architectural	2	A.A.	Coalinga College	Harrison,Byron
Drafting, Mechanical	2	A.A.	Coalinga College	Harrison,Byron
Drafting			Fresno City College	Handley, Dick
Drafting Technology	2	A.A.	Merced College	Williamson,Jack
Drafting Technology	2	A.A.	Modesto Jr. College	Schwark,Louis
Draftsman	2	A.A.	Porterville College	Baker, Tom
Draftsman	2	A.S.	Reedley College	Stevenson,Jack
Machine Drafting Technology	2	A.A.	S.J. Delta College	Barnett, E.T.
Drafting	2	A.A.	Taft College	Marr,Kenneth
Drafting	2	A.A.	College of the Sequoias	Guarisco,Joseph
Electronics Technician	2	A.A.	Bakersfield College	Merson,Thomas

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Electrical Technology	2	A.A.	S. J. Delta College	Barnett, E.T.
Electronics	4	A.A.	Bakersfield College	Merson, Thomas
Electronics Major	2	A.A.	Coalinga College	Harrison,Byron
Electronics	2	Ctf./ A.A./ A.S./	Fresno City College	Handley,Dick
Electronics	1	Dipl.	Fresno Technical College	
Electronics	2	A.A.	Merced College	Williamson,Jack
Electronics Technician	2	A.A.	Modesto Jr. College	Schwark, Louis
Electronics Technology	2	A.S.	Reedley College	Stevenson,Jack
Electronic Engineer Tech.	2	A.A.	Taft College	Marr, Kenneth
Electronics Technology	2	A.A.	College of the Sequoias	Guarisco,Joseph
Engineering Aide (Surveyor)	2	A.A.	Bakersfield College	Merson, Thomas
Engineering Technician & Surveyor	2	A.A.	Coalinga College	Harrison, Byron
Engineering Technician	2	A.S./ Ctf.	Fresno City College	Handley, Dick
Engineering, Drafting & Surveying	52 wks.	Dipl.	Fresno Technical College	
Engineering Technician	2	A.A.	Merced College	Williamson,Jack
Engineering Aide	2	A.S.	Reedley College	Stevenson,Jack
Engineering Technician	2	A.A.	College of the Sequoias	Guarisco,Joseph
Flight Training	2	A.A.	Coalinga College	Vance, Al
Flight Training		Ctf./ Lic.	Gottschalk Flight Center, Modesto	
Flight Training		Ctf./ Lic.	Sweet Flying Service, Visalia	
Heavy Duty Mechanics & Diesel	4	Ctf/ A.A.	Fresno City College	Handley, Dick
Heavy Equipment Maintenance		Ctf./ A.A.	Columbia Jr. College	Deal, Robert

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Industrial Education	2	A.S.	Fresno City College	Handley, Dick
Industrial Technology	2	A.S.	Reedley College	Stevenson,Jack
Industrial Technician	2	A.A.	Modesto Jr. College	Schwark, Louis
Laboratory Technician	2	A.A.	Bakersfield College	Merson, Thomas
Laboratory Technician (Industrial)	2	A.A.	Porterville College	Baker, Tom
Letter Press Printing			Modesto Jr. College	Schwark,Louis
Machine Trades	2	A.A.	Bakersfield College	Merson, Thomas
Machinist	4	A.A.	Bakersfield College	Merson, Thomas
Machine Design	2	A.A.	S.J. Delta College	Barnett, E. T.
Machine Shop	2	A.S.	Fresno City College	Handley, Dick
Machine Shop	2	A.A.	Modesto Jr. College	Schwark,Louis
Machinist	2	A.A.	Taft College	Marr,Kenneth
Mechanical Technology	2	A.S.	Fresno City College	Handley,Dick
Mechanical Technology	2	A.A.	S.J. Delta College	Barnett, E. T.
Mechanic (Auto)	2	A.A.	Taft College	Marr, Kenneth
Mechanical Technology	2	A.A.	Taft College	Marr, Kenneth
Medical Record Librarian			Modesto Jr. College	Schwark,Louis
Sheet Metal	4	A.A.	Bakersfield College	Merson,Thomas
Metal Trades	2	A.A.	Bakersfield College	Merson,Thomas
Sheet Metal	2	A.S.	Fresno City College	Handley,Dick
Metal Fabrication	2	A.A.	Merced College	Williamson,Jack
Metals & Welding	2	A.A.	Porterville College	Baker, Tom
Metal Technology	2	A.A.	College of the Sequoias	Guarisco,Joseph
Mill Cabinet	2	A.S.	Fresno City College	Handley, Dick

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Petroleum Technology	2		Taft College	Marr, Kenneth
Printing Technology	2	A.A.	S.J. Delta College	Barnett, E. T.
Radio-T.V. Repairman	2	A.A.	Modesto Jr. College	Schwark,Louis
Refrigeration, Air Conditioning Repair	26 wks.	Dipl.	Fresno Technical College	
Technical Illustration Technology	2	A.S.	S.J. Delta College	Barnett, E. T.
Welding	2	A.A.	Bakersfield College	Merson, Thomas
Welding	2	A.S.	Fresno City College	Handley,Dick
Welding	2	A.S.	Taft College	Marr,Kenneth
Welding Technology	2	A.A.	College of the Sequoias	Guarisco,Joseph

PUBLIC AND PERSONAL SERVICES

Correctional Administration	2	A.A.	Modesto Jr. College	Schwark,Louis
Correctional Science			Bakersfield College	Merson,Thomas
Correctional Science		Ctf./ A.A.	Columbia Jr. College	Deal, Robert
Criminology	2	A.A.	Modesto Jr. College	Schwark,Louis
Fire Science		Ctf./ A.A.	Columbia Jr. College	Deal, Robert
Fire Science		A.S.	Fresno City College	Handley,Dick
Fire Science ***			Merced College	Williamson,Jack
Fire Science	2	A.A.	Modesto Jr. College	Schwark,Louis

***Evenings concurrent with employment

Name of Program	Length	Degree Dipl./ Ctf.	Location	Person to Contact
Fire Science	2	A.A.	S. J. Delta College	Barnett, E. T.
Law Enforcement	2	A.A.	Merced College	Williamson,Jack
Library Assistant	2	Ctf./ A.A.	Columbia Jr. College	Deal, Robert
Library Technician	2	A.A.	Merced College	Williamson,Jack
Police Science	2	A.A.	Bakersfield College	Merson, Thomas
Police Science	2	A.A.	Fresno City College	Handley, Dick
Police Science	2	A.A.	Modesto Jr. College	Schwark, Louis
Police Science	2	A.A.	S. J. Delta College	Barnett, E. T.
Police Science	2	A.A.	College of the Sequoias	Guarisco,Joseph
Public Administrator		Ctf.	S.J. Delta College	Barnett, E. T.
Teacher Aide	2	A.A.	Bakersfield College	Merson, Thomas
Transportation	1/2	Ctf./ A.S.	Fresno City College	Handley, Dick

AN INVENTORY OF ANTICIPATED OCCUPATIONAL PROGRAMS IN THE SAN JOAQUIN VALLEY

Programs listed in this section indicate anticipated offerings of those institutions identified in the previous section.

The same arrangement, i.e., format and cluster areas, is utilized. However, Date of Implementation, an additional item is included for each listed program.

Those programs planned by the eleven member colleges may in some instances be affected by future activities of the San Joaquin Valley Community College Council for Occupational Education. A specific program might be implemented more rapidly, modified, or conceivably even abandoned, as a result of future Area Planning by the Council.

AGRICULTURE, HORTICULTURE AND FORESTRY

Name of Program	No. of Years	Degr./ Dipl./ Cff.	Location	Implementation Date
Aerial Applicator (Insecticides)	2	A.S.	Reedley College	Feb., 1969
Forestry Technician	2	A.S.	Reedley College	Sept.,1968/9
Lumber Technician	2	A.A.	Columbia College	Fall, 1969

ALLIED HEALTH OCCUPATIONS

X-ray Technology	2	A.A.	Bakersfield College	Fall,1969
Dental Assisting	2	A.A.	San Joaquin Delta College	Fall,1970
Dental Hygiene	2	A.A.	San Joaquin Delta College	Fall,1970
Dental Technician	2	A.A.	Bakersfield College	Fall,1970
Hospital Aids	2	A.A.	Columbia College	Fall,1969
Medical Office Assistant	2	A.A.	Bakersfield College	Fall,1969
Mental Health	2	A.A.	Bakersfield College	Fall,1969
X-ray Technician	2	A.A.	Modesto Junior College	------

APPLIED AND GRAPHIC ARTS

Architectural Drafting	2	A.A.	Bakersfield College	Fall,1969
Commercial Art	2	A.A	College of the Sequoias	1970
Graphic Arts	2	A.A.	Porterville College	Spring of 1969

Name of Program	No. Of Years	Degr./ Dipl./ Ctf.	Location	Implementation Date
Graphics	2	A.A.	Bakersfield College	Fall,1969
Reprographics	2	A.A.	Fresno City College	1969
Telecommunications	2	A.A.	Bakersfield College	Fall,1969
BUSINESS AND OFFICE OCCUPATIONS				
Banking Intern	2	A.A.	Reedley College	Sept.,1968
Data Processing	2	A.A.	Coalinga College	-----
Distributive Education	2	A.A.	Coalinga College	-----
Elements of Supervision	2	A.A.	Columbia College	Fall,1969
Marketing and Retailing	2	A.S.	Reedley College	Fall,1968
Medical Records Technician	2	A.A.	Porterville College	-----
Public Relations	2	A.A.	Columbia College	Fall,1969
HOME ECONOMICS				
Culinary Arts	2	A.S.	Fresno City College	1969
Food Services	2	A.A.	Porterville College	-----
Foods Service Management	2	A.S.	Fresno City College	1969
Restaurant Dinner Chef	2	A.A.	Merced College	Fall,1970
TRADE AND TECHNICAL OCCUPATIONS				
Architectural Drafting	2	A.A.	Bakersfield College	Fall,1969
Aviation	2	A.A.	Columbia College	Fall,1969

Name of Program	NO. Of Years	Degr./ Dipl./ Ctf.	Location	Implementation Date
Air Conditioning	2	A.A.	College of the Sequoias	1970
Construction	2	A.A.	Merced College	Fall,1970
Diesel	2	A.A.	College of the Sequoias	1970
Heavy Equipment Maintenance	2	A.A.	Columbia College	Fall,1969
Heavy Equipment Mechanic		Ctf.	Taft College	Fall,1969
Industrial Illustration	2	A.A.	Columbia College	Fall,1969
Refrigeration		Ctf.	Taft College	Fall,1969
Sheet Metal	2	A.A.	College of the Sequoias	1970

PUBLIC AND PERSONAL SERVICES

Child Care Aides	2	A.A.	Porterville College	-----
Aquatic Law Enforcement	2	A.A.	Columbia College	Fall,1969
Library Technician	2	A.A.	Bakersfield College	Fall,1969
Management for Public Service	2	A.A.	Bakersfield College	Fall,1969
Nursery School Aides	2	A.S.	Fresno City College	Fall,1969
Poverty Program Assistant	2	A.A.	Bakersfield College	Fall,1969
Pre-Employment Fire Service	2	A.A.	College of the Sequoias	1970
Public Administration	2	A.S.	Fresno City College	1969
Social Service Technician	2	A.A.	Bakersfield College	Fall,1969
Teacher's Aide	2	A.A.	Bakersfield College	Fall,1969
Teacher's Aide	2	A.A.	Porterville College	-----

A LISTING OF OCCUPATIONAL PROGRAMS

BY INDIVIDUAL COLLEGES

The total occupational program of each member college follows. Programs are listed by cluster area, although in many instances, a particular program at a given college may not operate under a division or department of a similar name in another college.

A second chart indicates those occupational programs which are in the planning stages and have a probable implementation date.

Both the operational and planned programs were checked for accuracy with college officials and were essentially correct and current as of November, 1968.

BAKERSFIELD COLLEGE

PRESENT OCCUPATIONAL PROGRAMS

AGRICULTURE

Agri-Business (Accounting)

Agri-Business (Crop Production)

Agricultural Engineering

Animal Husbandry

Crop Production

Landscape Design & Nursery Practice

BUSINESS EDUCATION

Accounting

Business Data Processing

Business Management

Marketing (Advertising, Retailing, Salesmanship)

Merchandising Management Trainee Program

Office Practice

Real Estate

Secretarial Practice

HOME ECONOMICS EDUCATION

Child Study Center

Food Service Management

Food Service Technician

Furniture & Home Furnishings

Nursery School Teaching

TECHNICAL EDUCATION

Correctional Science

Dental Assisting

Draftsman (Industrial, Architectural, Petroleum)

Electronics Technician

Engineering Aide (Surveyor)

Fire Science

Junior Sales Engineer

Laboratory Technician

Nursing (L.V.N.--1 yr.)

Nursing (R.N.--2 yr.)

Photography, Commercial

Police Science

Recreation Management

Teacher Aide

TRADES AND INDUSTRIAL TECHNOLOGY

Appliance Repair

Automotive Trades

Machine Trades

Metal Trades

Welding

NAVAL WEAPONS CENTER (DESERT DIVISION)

Electronics

Electricity

Machinist

Sheet Metal

COALINGA COLLEGE

PRESENT OCCUPATIONAL PROGRAMS

AGRICULTURE

Agriculture Business

Animal Husbandry Major

Applied Agricultural Engineering

Crop Production Major

Dairy Husbandry Major

Agricultural Engineering

BUSINESS EDUCATION

Accounts Clerk

Clerk, Basic

Clerical, General Office

Clerk, Stenographer

Clerk Typist

Journalism Major

Office Administration

Secretarial, General

Secretarial, Legal

Secretarial, Medical

Secretarial, Technical

Transcription Clerk, (Non-Shorthand)

GRAPHICS

Art

TECHNICAL & INDUSTRIAL EDUCATION

Automotive Technology

Architectural Drafting

Civil Technology

Electronic Major

Engineering Technician and Surveyor

Flight Training

Mechanical Drafting

Nursing Aide

COLUMBIA JUNIOR COLLEGE

PRESENT OCCUPATIONAL PROGRAMS

Apprentice Carpentry

Aviation

Business Administration

Correctional Science

Drafting Technology

Fire Science

Health Occupations

Home Occupations

Law Enforcement

Office Occupations

Real Estate

Supervisory Training

Industrial Arts

Resort Management

Trade Extension

Trade & Industry

FRESNO CITY COLLEGE

PRESENT OCCUPATIONAL PROGRAMS

AGRICULTURE, FORESTRY, & HORTICULTURE

Horticulture

Agri-Business

ALLIED HEALTH OCCUPATIONS

Inhalation Therapy

Nursing, Registered

Nursing, Vocational

X-ray Technology

BUSINESS & OFFICE OCCUPATIONS

Accounting

Clerical

Data Processing

Court Reporting

General Business

Insurance

Legal Secretaryship

Medical Records Technician

Medical Assistant Secretary

Merchandising Management

Office Machines

Real Estate

Secretarial

TECHNICAL & INDUSTRIAL EDUCATION

Aeronautics

Automotive Mechanics

Body & Fender

Building Technology

Carpentry

Diesel & Heavy Duty Mechanics

Drafting

Electricity

Electronics

Engineering Technician

Fire Science (EVes.)

Industrial Education

Machine Shop

Mechanical

Mill Cabinet

Police Science

Radio & Television

Sheet Metal

Transportation

Welding

MERCED COLLEGE

PRESENT OCCUPATIONAL PROGRAMS

BUSINESS OCCUPATIONS

Accounting

Business Management

Clerical

General Business

Real Estate

Secretarial Science

TRADE & TECHNICAL OCCUPATIONS

Aeronautics

Agriculture

Art

Automobile Mechanics

Dental Assisting

Drafting Technology

Electronics

Engineering Technician

Fire Science

Law Enforcement

Library Technology

Metal Fabrication

Vocational Nursing

MODESTO JUNIOR COLLEGE

PRESENT OCCUPATIONAL PROGRAMS

AGRICULTURE

Agricultural Engineering
Animal Husbandry
Animal Science
Crop Production
Dairy Husbandry
Dairy Industry
Horticulture
Ornamental Horticulture
Poultry Husbandry
Recreational Land Management
Vocational Forestry
Agricultural Technology
Agricultural Laboratory
Artificial Insemination
Fluid Power
Forestry
Landscape, Forest,Parks Maintenance
Nursery Production
Quality Control Inspection
Sales Service

ART

Commercial Art
Fine Art
General Art

ALLIED HEALTH OCCUPATIONS

Dental Assisting
Licensed Vocational Nursing
Medical Assisting
Registered Nursing

BUSINESS AND OFFICE OCCUPATIONS

Accounting
Clerical
Data Processing
Legal Secretarial
Medical Typist-Receptionist
Merchandising
Real Estate
Secretarial
Supervisory Training

HOME ECONOMICS

Fashion Merchandising
Food Service
Homemaking
Nursery School Assistant
School Lunch Management

MODESTO JUNIOR COLLEGE --PRESENT OCCUPATIONAL PROGRAMS, CONTINUED

TRADE AND TECHNICAL OCCUPATIONS

Apprenticeship Training

Automotive Body

Automotive Mechanics

Civil Engineering Technology

Drafting Technology

Electonics Technician

Fire Science

Industrial Electrician

Letter Press Printing

Machine Shop

Medical Record Librarian

Police Science

Correctional Administration

Criminology

Radio-Television Broadcasting

Radio-Television Repairman

PORTERVILLE COLLEGE

PRESENT OCCUPATIONAL PROGRAMS

AGRICULTURE, HORTICULTURE & FORESTRY

Agri-Business (Accounting)

Agri-Business (Crop Production)

Agricultural Engineering

Animal Husbandry

Crop Production

Vocational Forestry

ALLIED HEALTH

Psychiatric Technology

BUSINESS AND OFFICE OCCUPATIONS

Accounting (Occupational)

Clerical

Legal or Medical Secretary

Merchandising

Real Estate

HOME ECONOMICS

Airlines Stewardess

Modern Living

TRADE AND TECHNICAL OCCUPATIONS

Automotive--Diesel Mechanic

Building Trades

Draftsman

Laboratory Technician (Industrial)

Metals and Welding

REEDLEY COLLEGE

PRESENT OCCUPATIONAL PROGRAMS

AGRICULTURE

Agri-Business

Agriculture Power Mechanics

Agriculture Chemicals

Agriculture Inspector

Animal Husbandry

General Agriculture

Landscape Horticulture

Viticulture

ALLIED HEALTH

Dental Assisting

BUSINESS AND OFFICE OCCUPATIONS

Bookkeeping--Accounting

Clerk-Typist

General Business

Medical Secretary

Retailing, Marketing

Secretarial

HOME ECONOMICS

TRADE AND TECHNICAL OCCUPATIONS

Aeronautics

Automotive Technology

Electronics Technology

Engineering

Engineering Aide

Draftsman

Industrial Technology

SAN JOAQUIN DELTA COLLEGE

PRESENT OCCUPATIONAL PROGRAMS

AGRICULTURE, HORTICULTURE, & FORESTRY

Agri-Business

Agriculture Mechanics

Agriculture Field & Vegetable Crops

Forestry

Horticulture & Viticulture

Livestock Production

Natural Resources--Forestry

Ornamental Horticulture

ALLIED HEALTH

Medical Assistant

Nursing, Registered

Nursing, Vocational

Pharmacy

APPLIED AND GRAPHIC ARTS

Drama

Painting & Decorating

Photography

BUSINESS AND OFFICE OCCUPATIONS

Management Service Training

Data Processing Machine Operator

Merchandising

Public Administration

Real Estate

Secretarial Training

HOME ECONOMICS

TECHNICAL AND INDUSTRIAL OCCUPATIONS

Civil Engineering Technology

Automotive Technology

Construction Technology

Correctional Science

Journalism

Electrical Technology

Electronics

Mechanical Technology

Law Enforcement

Machine Design

Machine Drafting

Police Science

Printing Technology

Technical Illustration

COLLEGE OF THE SEQUOIAS

PRESENT OCCUPATIONAL PROGRAMS

AGRICULTURE, HORTICULTURE & FORESTRY

Agriculture Engineering Technician

Agri-Business

Animal Science Technician

Plant Science Technician

Ornamental Horticulture

ALLIED HEALTH

Licensed Vocational Nursing

BUSINESS AND OFFICE OCCUPATIONS

Accounting

Business Data Processing

General Business (Clerical)

Legal Secretarial

Medical Office Assistant (Clerical)

Medical Secretarial

Office Management

Real Estate

Secretarial

HOME ECONOMICS

TECHNICAL AND INDUSTRIAL OCCUPATIONS

Architecture & Architectural Engineers

Engineering Technician

Drafting

Police Science

Automotive Technician

Building Trades

Electronics Technology

Metal Technology

Welding Technology

TAFT COLLEGE

PRESENT OCCUPATIONAL PROGRAMS

BUSINESS AND OFFICE OCCUPATIONS

Accounting

Business Management

Clerical

Secretarial & Stenographic

HOME ECONOMICS

Homemaking

TECHNICAL AND INDUSTRIAL OCCUPATIONS

Building Construction & Contracting

Cabinet Work

Drafting

Engineer Technician (Electronic)

Machinist

Mechanic

Mechanical Technology

Welding

PUBLIC AND PERSONAL SERVICES

Library Assisting

ANTICIPATED OCCUPATIONAL PROGRAMS

BAKERSFIELD COLLEGE

Architectural Drafting	Fall, 1969
Dental Technician	Possibly 1970
Graphics	Possibly Fall, 1970
Library Technician	Fall, 1969
Management for Public Service	
Medical Office Assistant	Fall, 1969
Mental Health	Fall, 1969
Poverty Program Assistant	Fall, 1969
Social Service Technician	Fall, 1969
Telecommunications	Possibly Fall, 1969
X-Ray Technology	Fall, 1969

COLUMBIA JUNIOR COLLEGE

Aquatic Law Enforcement	Fall, 1970
Hospital Aides	1969-1970
Lumber Technology	Fall, 1970
Heavy Equipment Maintenance	Fall, 1970

FRESNO CITY COLLEGE

Culinary Arts	1969
Foods Service Management	1969
Nursery School Aide	Fall, 1969
Public Administration	1969
Reprographics	1969

ANTICIPATED OCCUPATIONAL PROGRAMS-(CONTINUED)

MERCED COLLEGE

Construction	Fall, 1970
Restaurant Dinner Chef	Fall, 1970

MODESTO JUNIOR COLLEGE

X-Ray Technician

PORTERVILLE COLLEGE

Child Care Aides

Food Services

Graphic Arts

Medical Records Technician

Teacher's Aide

REEDLEY COLLEGE

Aerial Applicator (Insecticides)	February, 1969
Banking Intern	September, 1968
Forestry Technician	1968-1969
Marketing & Retailing	Fall, 1968

SAN JOAQUIN DELTA COLLEGE

Dental Assisting	Fall, 1970
Dental Hygiene	Fall, 1970

ANTICIPATED OCCUPATIONAL PROGRAMS-(CONTINUED)

COLLEGE OF THE SEQUOIAS

Air Conditioning	1970
Commercial Art	1970
Diesel	
New Process Printing	1970
Pre-Employment Fire Science	1970
Sheet Metal	1970

TAFT COLLEGE

Heavy Equipment Mechanic	Fall,1969
Refrigeration	Fall,1969

A LISTING OF OCCUPATIONAL PROGRAMS AVAILABLE AT PRIVATE AND COMMERCIAL SCHOOLS IN THE SAN JOAQUIN VALLEY

The occupational programs listed on the following pages represent the offerings of numerous private and commercial schools located throughout the San Joaquin Valley. The metropolitan areas of Bakersfield, Fresno, Stockton, and Modesto account for the majority of those schools listed.

Approximately 125 schools were contacted by letter and requested to forward a list of their occupational programs. Therefore, this list should be regarded as only a partial and incomplete inventory. However, the percentage of returns on our mail request was high enough to allow for a close approximation of those private and commercial program offerings actually available to students in the eleven college area.

ATKINSON BUSINESS COLLEGE, FRESNO

Business Administration

Clerk, General Office

Clerk, Steno

Computer Programming

Secretary

BAKERSFIELD MEDICAL & DENTAL ASSISTANT COLLEGE, BAKERSFIELD

Dental Assistant

Medical Assistant

BLAIR COLLEGE OF MEDICAL & DENTAL ASSISTANTS, FRESNO

Dental Assistant

Medical Assistant

FRESNO TECHNICAL COLLEGE, FRESNO

Auto Mechanic

Communications Technician (Two-Way)

Electronics

Engineering, Drafting, & Surveying

Refrigeration, Air Conditioning Repair

GOLDEN RULE REAL ESTATE SCHOOL, FRESNO

Real Estate

GOTTSCHALK FLIGHT CENTER, MODESTO

Flight Training

HEALD BUSINESS COLLEGES, BAKERSFIELD/FRESNO

Accounting

Business Administration

Court Reporting

Data Processing

Secretarial

LUFKINS BUSINESS COLLEGE, BAKERSFIELD

Secretarial

MERCED BEAUTY COLLEGE, MERCED

Cosmetology

MTI BUSINESS SCHOOLS, FRESNO

Accounting

Bookkeeping

Data Processing (Automation)

Secretarial

SWEET FLYING SERVICE, VISALIA

Flight Training

VALLEY COMMERCIAL COLLEGE, MODESTO

Accounting

Bookkeeping

Business Administration

Secretary, Basic

Secretary, Executive

Secretary, Legal

Secretary, Medical

VISALIA COLLEGE OF BEAUTY, VISALIA

Cosmetology

APPRENTICESHIP PROGRAMS

Several of the eleven member colleges of the San Joaquin Valley offer or assist in offering some form of apprenticeship training. Following is a total listing of all apprenticeship training available through member colleges. A second listing provides a college-by-college presentation identifying every apprenticeship program offered at a particular college.

APPRENTICESHIP PROGRAMS IN THE SAN JOAQUIN VALLEY

AS OF OCTOBER 31, 1968

Area	Number of Classes	Number Enrolled
Bakersfield College	11	143
Columbia Junior College	1	24
Fresno City College	26	475
Merced College	1	14
Modesto Junior College	8	116
San Joaquin Delta College	21	351
College of the Sequoias	1	7
TOTALS	69	1130

SUBJECT	LOCATION	NUMBER OF CLASSES	NUMBER ENROLLED
Auto Body & Fender	Fresno	1	9
	Stockton	1	11
Auto & Truck Mechanic	Fresno	2	45
	Merced	1	14
	Stockton	2	36
Brick Laying	Modesto	1	5
	Stockton	1	3
Carpentry	Bakersfield	2	39
	Columbia	1	24
	Fresno	2	45
	Modesto	2	37
	Stockton	3	17
	Visalia	1	7
Carpet & Linoleum	Stockton	1	9

SUBJECT	LOCATION	NUMBER OF CLASSES	NUMBER ENROLLED
Cement Finishing & Cement Masons	Stockton	1	15
Diesel Engine Mechanic	Fresno	1	33
Electricity	Bakersfield	2	25
	Fresno	2	35
	Modesto	2	16
	Stockton	3	38
	Visalia	1	4
Horticulture	Fresno	1	17
Lathing	Stockton	1	4
Machine Shop; Tool & Die	Fresno	1	21
	Modesto	1	17
	Stockton	1	26
Meatcutting	Fresno	1	23
	Stockton	1	28
Mill & Cabinet	Fresno	1	8
	Stockton	1	16
Operating Engineers	Bakersfield	2	32
	Fresno	2	54
	Modesto	1	10
	Stockton	1	19
Painting & Decorating	Bakersfield	1	6
	Fresno	1	24
	Stockton	1	19
Plastering	Fresno	1	9
	Stockton	1	3
Plumbing & Pipe-fitting	Bakersfield	3	31
	Fresno	3	44
	Modesto	2	23
	Stockton	2	25

SUBJECT	LOCATION	NUMBER OF CLASSES	NUMBER ENROLLED
Roofing	Fresno	1	20
	Stockton	1	7
Sheet Metal	Bakersfield	1	10
	Fresno	3	48
	Modesto	1	22
	Stockton	2	30
Signs, Neon	Stockton	1	7
Stationary Engineers	Fresno	2	31
Steel, Structural, & Ornamental Ironworkers	Fresno	1	9

JUNIOR COLLEGE APPRENTICESHIP PROGRAMS IN THE SAN JOAQUIN VALLEY

BAKERSFIELD COLLEGE

Title	Number of Classes	Number of Apprentices Enrolled
Carpentry	2	76
Operating Engineers	3	71
Painting & Decorating	1	7
Electricity	2	27
Surveying	1	25
Plumbing & Pipefitting	3	37
Sheet Metal	1	11
Acetylene & Arc Welding	3	10
	TOTAL	264

FRESNO CITY COLLEGE

Auto Mechanics	2	43
Body & Fender	1	8
Carpentry	3	41
Diesel-Heavy Duty	1	36
Electricity	2	25
Horticulture	1	6
Iron Working	1	16
Machine Shop	1	15
Meat Cutting	1	26

JUNIOR COLLEGE APPRENTICESHIP PROGRAMS IN THE SAN JOAQUIN VALLEY (Continued)

Title	Number of Classes	Number of Apprentices Enrolled
Mill Cabinet	1	6
Operating Engineers	2	16
Painting & Decorating	1	15
Plastering	1	9
Plumbing	3	31
Roofing	1	21
Sheet Metal	3	44
Stationary Engineer	3	45
	TOTAL	411

MERCED COLLEGE

Auto Mechanics	1	14
	TOTAL	14

SAN JOAQUIN DELTA COLLEGE

Auto Mechanics	1	36
Body & Fender	1	26
Brick	1	3
Tile	1	2
Carpentry	3	39
Carpet, Linoleum, Soft Tile	1	12
Cement	1	8
Electrical	3	43

JUNIOR COLLEGE APPRENTICESHIP PROGRAMS IN THE SAN JOAQUIN VALLEY (Continued)

Title	Number of Classes	Number of Apprentices Enrolled
Lathing	1	1
Machinist	2	36
Meat Cutting	1	28
Mill Cabinet	1	13
Operating Engineers	1	18
Painting	1	10
Plastering	1	2
Plumbing	2	29
Roofing	1	9
Sheet Metal	2	26
Truck Mechanic	1	9
	TOTAL	350

MODESTO JUNIOR COLLEGE

Automotive Mechanics	1	19
Carpentry	1	20
Electrician	2	16
Machinist	1	19
Plumbing	2	17
Sheet Metal	1	25
	TOTAL	116

JUNIOR COLLEGE APPRENTICESHIP PROGRAMS IN THE SAN JOAQUIN VALLEY (Continued)

Title	Number of Classes		Number of Apprentices Enrolled
COLLEGE OF THE SEQUOIAS			
Carpentry	1		7
		TOTAL	7
COLUMBIA JUNIOR COLLEGE			
Carpentry	1	TOTAL	24

VT 008 673
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FLORIDA

The occupational information presented in this publication is focused primarily on occupational trends and occupational information on Florida. Concerning occupational trends, the following are discussed: industrial employment changes, occupational shifts, trends in the employment of women, mobility of the labor force, changes in composition of the labor force, and technological change. It is emphasized that each one of these trends poses a challenge to those who provide vocational guidance and to those who prepare youngsters for work. Concerning occupational information on Florida, the indications are that for those who join the labor force in 1970, one person out of two will work in a blue collar job, one out of four women will work in a clerical or kindred occupation, and one person out of eight will work in a professional, technical or kindred occupation. (CH)

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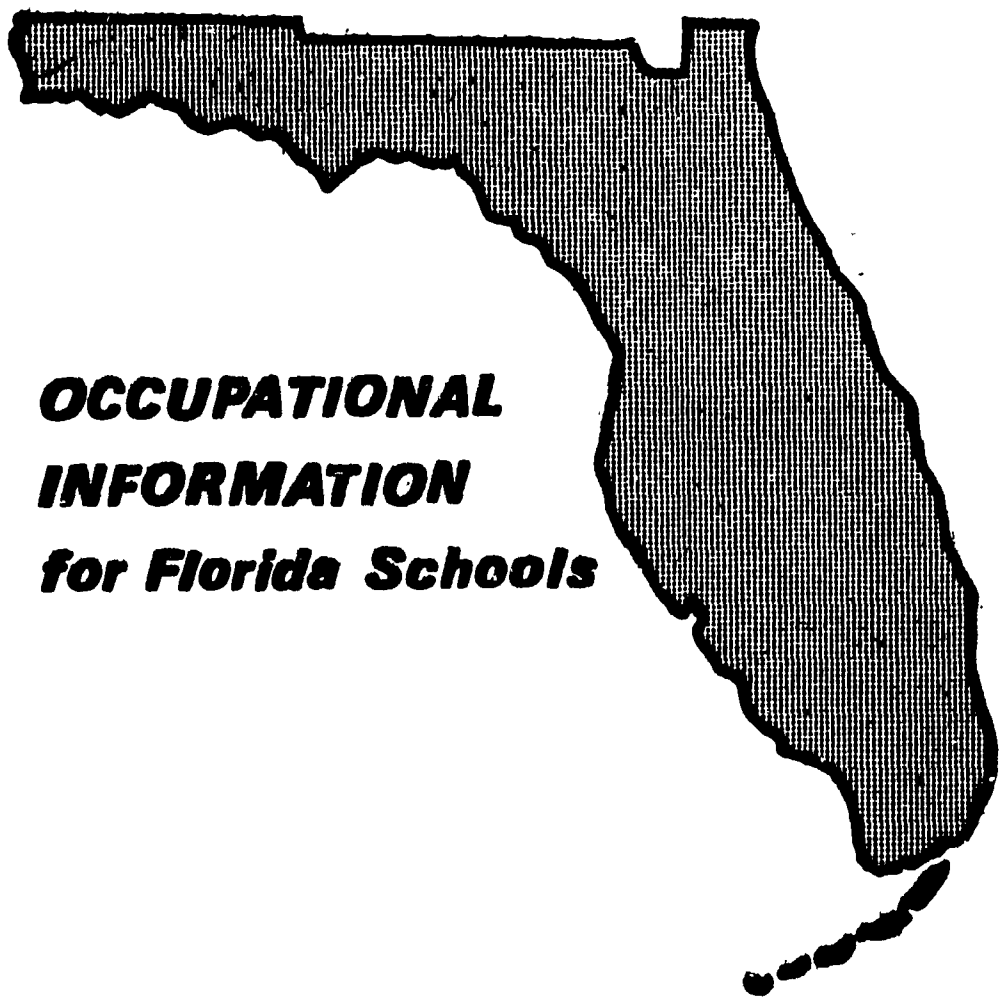

OCCUPATIONAL INFORMATION for Florida Schools

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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VT 008 673

DIVISION OF VOCATIONAL, TECHNICAL, AND ADULT EDUCATION

CARL W. PROEHL, Assistant Superintendent

PROGRAM SERVICES SECTION

G.W. Neubauer, Director

FOREWORD

The position of Occupational Information Specialist has been established in the Vocational, Technical and Adult Division of the State Department of Education.

One of the functions of this position is to assist vocational educators and guidance counselors in securing current, pertinent, and usable occupational information about manpower availability and needs, and job trends and opportunities as it applies to the local, state and national situation.

The plans here are to send to you information of this type as it becomes available. For this reason the material is not bound in book form. This first enclosure includes the first three sections of the proposed material in an expandable type binder. We hope that you will keep this bulletin in a handy place for quick reference; and as supplemental or updated material is forwarded to you, you will add it to, or use it to replace the material already in the binder.

Since this office wants to be of maximum assistance to you, as you work with youth and programs of study, we would appreciate any suggestions you might have, and we invite your requests for further materials. Your correspondence should be addressed to Rod R. Dugger, Occupational Information Specialist, Vocational, Technical and Adult Education, State Department of Education, Tallahassee, Florida.

Carl W. Proehl
Assistant Superintendent
Vocational, Technical and
Adult Education

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INTRODUCTION

A Panel of Consultants on Vocational Education was convened at President Kennedy's request to review and evaluate past vocational education legislation and to make recommendations for its improvement and redirection. This panel's report in November, 1962 stressed that, "Education for occupational compentency should be carefully correlated with the possibility of employment."[1] The Panel recommended that local, state and Federal employment service reports and projections be made available to all schools so that this objective could be achieved.[2]

These recommendations of the panel were eventually incorporated into the Vocational Education Act of 1963 signed into law by President Johnson on December 18, 1963. In order for a state to receive its allotment of Federal funds, it must, under the new Act, submit to the Commissioner of Education a plan containing policies and procedures which insure that due consideration will be given to the results of periodic evaluations of state and local vocational education programs and services in light of "....information regarding current and projected manpower needs and job opportunities...." (Sec. 5 (a) (2), Public Law 88-210).

The plan must also provide for a cooperative arrangement with the system of public employment offices in the state so that the employment offices will make available to the State Board administering vocational education and local educational agencies, occupational information regarding reasonable prospects of employment in the community and elsewhere. This information will be used to assist vocational guidance and counseling for students and to determine the occcupations for which persons are to be trained.

In turn the schools are to make available to public employment offices, for use in occupational guidance and placement, information about the occupational qualifications of those who leave or complete vocational courses and schools.

By the end of 1965, cooperative agreements had been signed in forty states by the State Employment Services and the State Boards of Vocational Education. Negotiations for similar agreements were under way in nearly all other states.

---

[1] Education for a Changing World of Work, Report of the Panel of Consultants on Vocational Education (Washington: U. S. Department of Health, Education and Welfare, Office of Education, 1963), OE-80021, p. 222.

[2] Howard Rosen, Vocational Education and Manpower Needs, (Washington: U. S. Department of Labor, Manpower Administration, Office of Manpower, Automation and Training, December 1964), Reprint No. 5.

Administration, has been given the responsibility for providing leadership and direction to the Department of Labor's manpower research program. In recognition of the needs of the vocational educators under the new Act, OMAT, through its contractual research program, is already sponsoring research projects designed to improve the occupational classification system and provide new methods and techniques for state and local occupational projections. Specialists from the academic world and the Department's own experts are launching a searching review of the Department's occupational work.[3]

The Division of Vocational, Technical and Adult Education, State Department of Education has included the position for an Occupational Information Specialist in its State Plan. This position was established to assist in meeting some of these needs pointed out in the Vocational Education Act of 1963.

The Occupational Information Specialist will work with the directors of the respective vocational-technical sections, with local directors and junior college deans of vocational-technical education, and with guidance personnel in maintaining close working relationships between state and local offices of the public employment service and local programs of vocational and technical education. He will maintain liaison between the vocational and technical education division, and the pupil personnel services section of the State Department of Education. He will assist counties in making periodic assessments of local manpower and training needs to aid in continuing program evaluation, and will also help to prepare and interpret occupational information. In short, he will help to weld closer ties between vocational educators, guidance personnel, and the public employment service; and will assist in developing and distributing occupational information reflecting the needs of the local, statewide and national labor markets.

The success of the country's expanded vocational education program in preparing students for work will depend, in part, on how effectively the manpower specialists of the employment service system, vocational educators, and guidance personnel work together in carrying out these agreements..

In the words of the Act, the total objective is that all individuals should "have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interest, and ability to benefit from such training."[4]

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[3]Howard Rosen, Assistant Director for Manpower and Automation Research, Office of Manpower, Automation and Training. Reprinted from the Occupational Outlook Quarterly, December, 1964. (Vol. 8, No. 4), published by the Bureau of Labor Statistics.

[4]Manpower Report to the President. Transmitted to the Congress March, 1965. p. 109.

Before the new Act, how many of the Nation's young people were leaving school without significant occupational preparation? Although a precise answer to this question is not possible on the basis of the available information, rough estimates can be made of the educational status in 1964 of the boys and girls who entered fifth grade in 1956 and should therefore have graduated from high school in 1964.

These estimates show that for every 100 who were in the fifth grade in 1956, 36 entered college- 4 entered occupational programs of junior colleges or other- 4 completed high school vocational courses- 7 completed high school commercial courses and 49 either dropped out of school before graduation or didn't go on to further training and had no vocational preparation while in high school, and therefore entered the labor market with no vocational training.[5]

Secretary of Labor W. Willard Wirtz, in an address delivered in February of 1967 made comments about the students who were born in the U. S. A. during the same year and should have completed high school in 1964. He said that 8 percent of this group are now unemployed and that many of those who are working are in unskilled, dead-end jobs, which machines in all likelihood will take over. Secretary Wirtz pointed out that only one of every six of these students will get a college education, and that the education the others get gives them no familiarity with what lies ahead in the world of work. "Nor is it any exaggeration to suggest that every serious concern about the human conditions in America today -- must center on the building of new bridges between American learning and American doing, bridges that everyone can cross."[6]

Our labor force of approximately 72.2 million people is employed in 21,741 different job classifications. According to the Bureau of the Census, in 1940 and projected to 1975 the labor force is distributed as follows:

Distribution of Labor Force
in Various Major Occupational
Groups

(United States 1940-1975)

Major Occupational Groups	Percent 1940	Percent Projected 1975
Professional, Technical and Kindred Workers	8.0	14.2
Managers, Officials and Propr., except farm	8.1	9.6
Clerical and Sales Workers	16.7	22.9
Skilled and Semiskilled Workers	29.7	29.3

[5]Manpower Report to the President. Transmitted to the Congress March, 1965. p. 100.

[6]Commencement Address by Secretary of Labor W. Williard Wirtz - Roosevelt University, Chicago, Illinois, February 6, 1967.

Major Occupational Groups	Percent 1940	Percent Projected 1975
Farmers, Farm Managers, Foremen and Laborers	18.5	4.6
Service Workers	11.9	14.4
Unskilled Workers, Except Farm and Mine	7.0	4.4

Note: Because of rounding, column sums do not total 100 percent.

Regardless of what youth think that they are going to do, or what their parents or counselors think they should do; today's high school youth- the next generation of workers- will be distributed among the different occupational groups in approximately the manner shown above. If the schools, among other things, are to prepare youth for socially useful employment in the occupations in which they will work as adults, and which are essential to the economic life of the nation, it follows that this distribution should serve as a point of departure in planning educational programs, especially those relating to vocational education of all kinds. Programs must be planned for youth with different interests and levels of ability, and with consideration for the number and type of workers needed. Moreover, in the operation of such programs it is of utmost importance that vocational educators, principals and counselors be realistic in their advisement of students with respect to the opportunities and requirements in the various occupations.

The kind of job that we do, will affect the lives of millions of our youngsters- their earnings, their employment, their job satisfactions, their personal happiness, and their contribution to the Nation's advancement.

As President Johnson said, "Our future depends, not on our wealth or our military strength, but on the training and talent of our people."

OCCUPATIONAL TRENDS

To state that the world of work is changing rapidly would mean little, but to say that the work world of today is more different from that of our grandparents than their world of work was different from that known by Moses and the Pharaohs, brings into focus the extent of this latter change.

The days are gone when there were only a few types of jobs to choose from or to be prepared for. The 1965 Dictionary of Occupational Titles lists 21,741 different job descriptions and new ones are evolved daily.

Today one has the opportunity to study his interests and abilities and choose and prepare for an occupation that will fit his particular needs. With this opportunity available, one must learn as much as possible about himself, and then learn as much as necessary about the world of work. He can then prepare for and enter into an occupation in which he should be able to make satisfactory progress, and at the same time be happy and content with his chosen means of livelihood.

Until the middle of 1965, unemployment has been a national problem. The Department of Labor, Bureau of Labor Statistics, tells us that by the year 2000 the work force of the United States will double the 1965 number, and in the same period of time automation will make it possible for one man to do the work that is now done by two men. In the highly skilled, technological society of today and the future, one can see how necessary it is for each individual to choose an appropriate vocation and become skilled and proficient in it.

Vocational education is preparation for work life and at the same time enables individuals to become responsible citizens who can participate in the civic, economic and social life of the community. It is concerned with meeting the needs of employers and meeting the needs of persons who are present and potential workers.

The setting in which occupational education operates is complicated by industrial employment changes, occupational shifts, trends in the employment of women, mobility of the labor force, changes in composition of the labor force and technological change. The past trends of these areas must be analyzed and projections must be made if proper guidance is to be given that will fit the needs of the future.

In looking at Occupational Information in 1967, it is important to remember that there were some 72.2 million Americans employed in January of this year.

Industrial Employment Changes and Projections

Industrial employment is divided into two groups, the Goods Producing Industries and the Service Producing Industries. The Goods Producing Industries are: Agriculture, Mining, Manufacturing and Construction. The Service Producing Industries are: Wholesale and Retail Trade, Government, Service, Finance, Insurance and Real Estate, and Transportation and Public Utilities.

There has been a significant move away from the goods-producing industries and to service-producing industries. Between 1947 and 1964 the number of workers employed in service industries rose by 11,744,000 as compared with a decrease of 933,000 employees in goods-producing industries. The goods-producing industries employed the larger number of people until the year 1949. In 1964 there were some 37 million employed in service-producing industries as compared with 25.8 million working in goods-producing industries.

The Department of Labor's Bureau of Labor Statistics has estimated that job growth in the economy will continue to be faster in the service-producing industries. Over the 1964-75 period, manpower requirements in the service-producing industries are expected to increase by 36 percent, reaching 50.6 million by 1975. Between 1964 and 1975 manpower requirements in goods-producing industries (excluding agriculture) are expected to increase by about 15 percent to above 24 million. Production agriculture is expected to fall by about 22 percent during this period from nearly 4.8 million in 1964 to 3.7 million in 1975, despite an anticipated rise of about one-fifth in agricultural output.[1]

Occupational Changes and Projections

Because of these shifts occuring in industry employment, we have also had some sharp changes in the kind of jobs our workers perform. In 1910 about 20 percent of the workers had white-collar (professional, technical, proprietary, managerial, clerical, and sales) jobs; around 35 percent were blue-collar workers (skilled, semi-skilled, and unskilled); approximately 35 percent were farm workers, and 10 percent had a service job.

One of the important changes of the post-World War II period has been the much greater growth in the number of workers in white-collar and service occupations as compared with blue-collar workers.

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[1] Manpower Requirements in 1975, (Washington: U. S. Department of Labor, Bureau of Labor Statistics, Division of Manpower and Occupational Outlook, October, 1965) pp. 6-14.

This growth has been especially large both in the number and proportion of professional and high-level managerial workers. Employment of white-collar workers rose by more than 50 percent between 1947 and 1964 so that 40 percent of the workers were in the white-collar jobs as compared to the 20 percent in 1910.

A 33 and one-third percent increase is anticipated for white-collar jobs by 1975. Among the white-collar occupations, the most rapid increase in requirements will be for professional and technical workers, which may grow twice as rapidly as the average for all workers. The employment of clerical and kindred workers rose almost steadily between 1950 and 1960 with a growth of over 34 percent. Additional recordkeeping and paperwork and the growth in size and complexity of modern business organizations and government have contributed to the rise in the employment of clerical workers. Employment requirements for clerical and kindred workers are expected to increase by about 45 percent during the 1960-75 period.

The requirements for blue-collar workers are expected to rise by approximately 17 percent between 1964 and 1975. Among the blue-collar workers, the most rapid growth in requirements will be for craftsmen. Requirements for operatives will increase more slowly, and little change is expected in the demand for laborers. Employment requirements for craftsmen, foremen, and kindred workers are expected to rise by about 25 percent between 1964 and 1975. Industrial growth and increasing business activity are the major factors expected to increase the need for skilled workers. Employment of mechanics and repairmen should continue to grow more rapidly than the skilled workforce as a whole. The requirements for airplane and automobile mechanics are expected to increase significantly during the 1964-75 period. At the same time, employment requirements for machinists are expected to decline slightly during this period because of new processes and automation.

In 1964, employment of semi-skilled workers (operatives) had reached 12.9 million. Large numbers are employed as assemblers, checkers, examiners, inspectors, drivers and packers. The employment requirements for operatives are expected to rise by only 18 percent between 1964 and 1975.

In the overall picture the number of white-collar workers will grow more than twice as fast as the blue-collar workers between 1964 and 1975.

The rate of employment growth during the 1947-64 period for service workers was exceeded only by that for professional, technical, and kindred workers. The service worker occupational groups represented about 13 percent of all employed persons in 1964, and included such diverse groups as private household workers, protective service workers, and waiters and waitresses.

Employment requirements in service occupations are expected to increase by about 40 percent between 1964 and 1975. The greatest growth in requirements during the 1964-75 period is expected to be for; policemen and other protective service workers; attendants in hospitals and in business rendering other professional and personal services; nurses' aides; beauty operators; cooks and waiters and others who prepare and serve meals outside private homes.

Chart I shows the employment in major occupational groups in 1964. Chart II indicates the percent change in employment in major occupational groups from 1950-1960 and estimated percent change from 1960 to 1975.

Employment of Women

One great change in the employment structure of the country since World War II has been the rapid growth in the employment of women. Since 1945 the employment of women has increased almost 50 percent. This is four times more rapidly than the percentage increase in employment for men during the same period. Between 1965 and 1970 more women than men will join the labor force.

In 1965, 50 percent of all American women between the ages of 45-54 were in the labor force. This is a dramatic contrast with the situation at the beginning of the century. Over 25 percent of the women employed were in the clerical and kindred occupations.

Mobility of the Labor Force

Persons concerned with education need to realize that many of the young people that they educate and train will leave their home communities.

As an indication of this, half of the over 3,000 counties in the United States lost population due to outmigration between 1950 and 1960.

A study of the mobility of the population showed that about 15 percent of the 20 and 21 year olds had moved across a county line. The migration rate for the 22 to 24 year olds was 17 percent.[2] The peak migration rate apparently occurs among persons in their early twenties.

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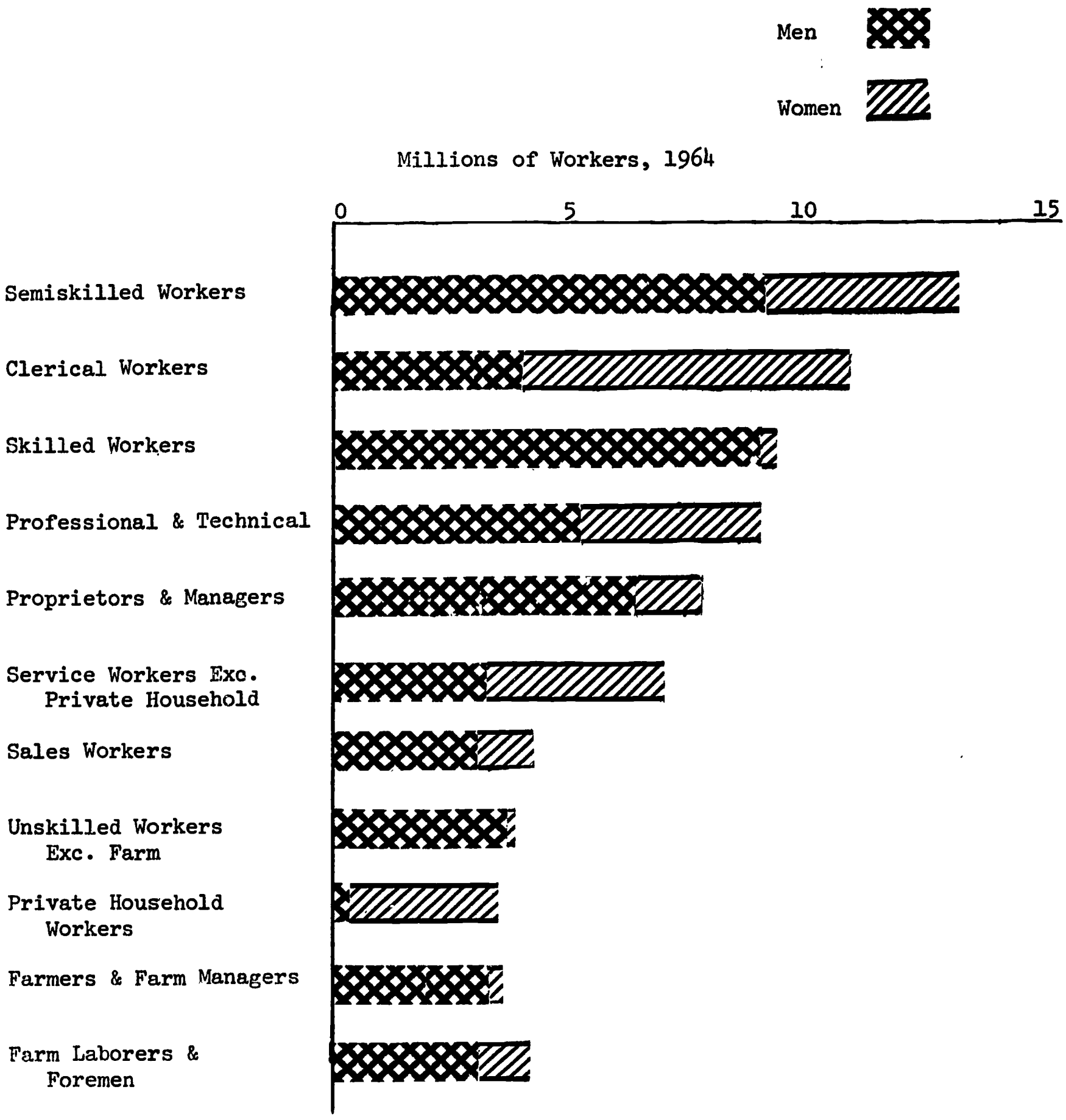
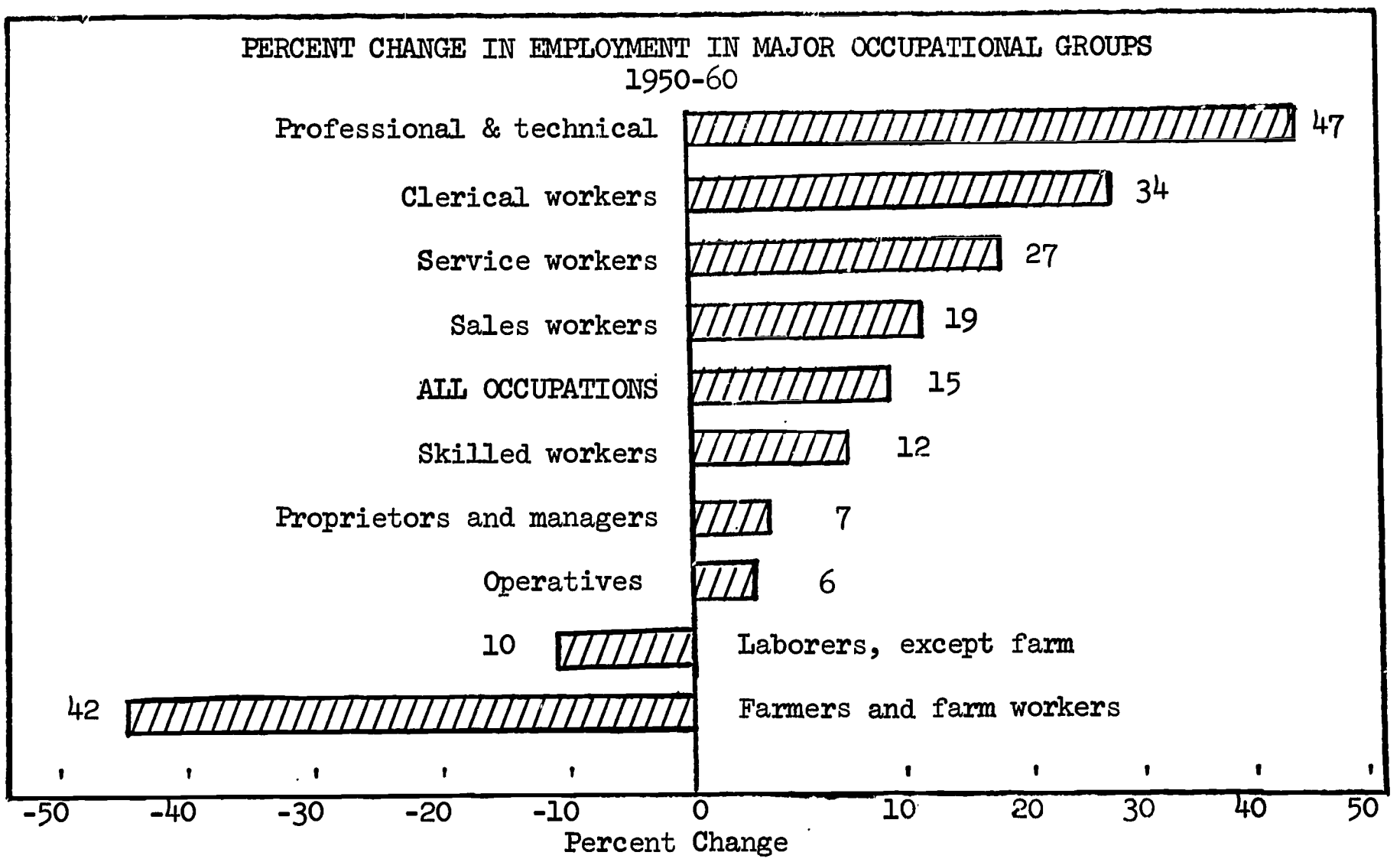
[2]Mobility of the Population of the United States; March 1963 to March 1964. (Washington: U. S. Department of Commerce, Bureau of the Census, September 7, 1965), Current Population Reports, Series P. 20, No. 141.

EMPLOYMENT IN MAJOR OCCUPATIONAL GROUPS

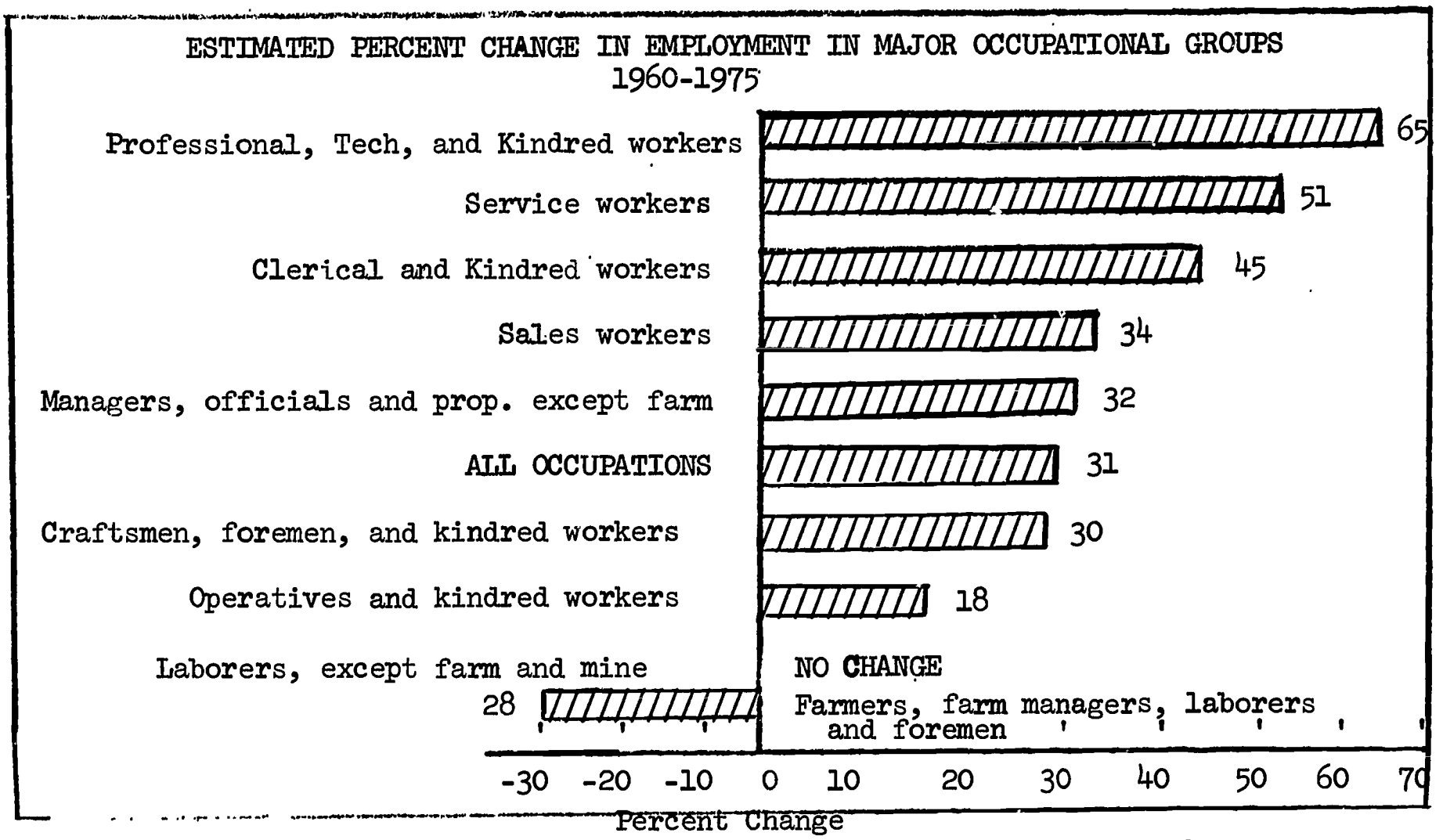


Source: Occupational Outlook Handbook. 1966-67 Edition.

CHART II



Source: U. S. Department of Commerce. Taken from "Manpower Report of the President and A Report on Manpower Requirements, Resources, Utilization, and Training by the United States Department of Labor." Transmitted to the Congress March 1963. Washington: Government Printing Office. p. 28.



Source: Adapted from "Manpower Report of the President and A Report on Manpower Requirements, Resources, Utilization, and Training by the United States Department of Labor" Transmitted to the Congress March 1964. Wash.: Government Printing Office. Table E-5, p. 244.

Technological Change

Within the past decade technological change has progressed at an unprecedented rate. The developments in the years ahead will far exceed those of the past and will make an impact upon employment and job content.

Some idea of the dimensions of change in our times, and its acceleration, can be found in such facts as:

1. Half of all the energy consumed by man in the past two-thousand years has been consumed within the last one-hundred years.

2. Ninety percent of all the scientists who ever lived are alive today.

3. The amount of technical information available has doubled in the last ten years and will continue to double every ten years for the foreseeable future.

4. By the year 2,000 automation will have doubled the output capability of each individual.

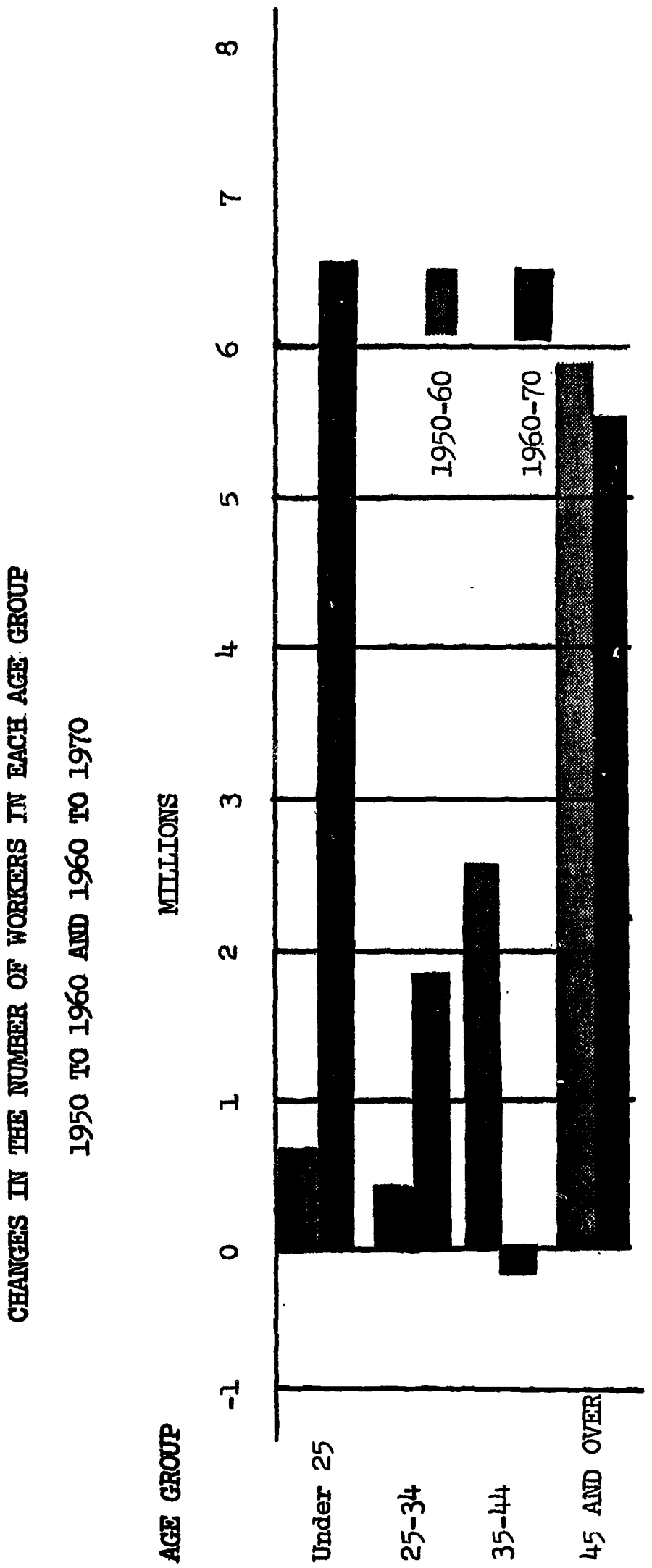
Changes in Composition of Labor Force

The total labor force is expected to increase from 72.2 million in January 1967 to around 86 million by 1970. The age composition will be distinctly different, with young workers (under 25 years) making up 23 percent of the total. These young workers will account for nearly half of the labor force growth during the 1960's. More individuals reached this labor force age of 18 in 1965 than in the entire 14 years added together. This was the bumper crop of the post-war babies. From 1960-1970 the percent of change in the number of workers by age group will be as follows:

Age Group	Percent of Change
14-24 years old	+45.0%
25-34 years old	+10.7%
35-44 years old	- 1.5%
45 years old and over	+18.5%

CHART III

CHANGES IN THE NUMBER OF WORKERS IN EACH AGE GROUP
1950 TO 1960 AND 1960 TO 1970



Source: Manpower, Challenge of the 1960's. U.S. Department of Labor, James P. Mitchell, Secretary. U.S. Government Printing Office: 1960 O - 542270. Page 6.

SUMMARY

The short review of some economic and social changes which have been discussed raises vital questions for those concerned with vocational guidance as well as those who prepare youngsters for the world of work through our vocational education system.

The changes can be quickly summarized. We have had a massive shift in employment away from production agriculture to other economic activities. Jobs in trade, government, service, finance, insurance and real estate have grown faster than in other activities. White-collar and service jobs have had the most rapid growth since the end of World War II and will apparently expand more rapidly than other kinds of jobs in the near future.

Women have become a mainstay in our labor force. There is little likelihood that any basic change will occur in the pattern of their work careers.

We have a mobile labor force. Many of the young persons will not remain in the same community after they complete training.

Technological development constantly creates change and calls for the ability to adapt to new jobs and new skills. Workers who make, on the average, six job changes during 40 years of working life must be able to meet job requirements if they are to continue to be productive.

The continuing increase in the educational attainment of American workers reflects both the growing supply of better educated entrants into the labor force and the rising demand for workers with high levels of technical skill and training.

> "The strands of evidence suggest that an individual's job prospects, assuming he posses some basic minimum of formal education, depend more upon his relative educational attainment than upon his absolute level of schooling. The high school dropout may encounter difficulty, however, in finding a job, not because the job required the training implied by the completion of high school, but because a growing proportion of his fellow job seekers will have their diplomas."[3]

The dropout rate is being reduced dramatically. In 1910, 17 percent of American youth ages 25-29 had graduated from high school. In 1950 the percent had risen to 53 and in 1964, 69 percent of the youth in this age group had graduated from high school. Between 1965 and 1975 there will be some 30 million young men and women looking for their first jobs. Of these, it is estimated that 22 million (73 1/3 percent) will have their high school diplomas.

Each one of the changes referred to above poses a challenge to those who provide vocational guidance and those who prepare youngsters for work. The youngsters must be alerted to the kind of world they will face, and the kind of courses offered by educators must be in tune with current reality.

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[3]Monthly Labor Review, May 1965. "Educational Attainment of Workers" March, 1964.

IF YOU JOIN THE LABOR FORCE IN 1970

CHANCES ARE ....

.... You will have completed more years of formal education than your parents completed.

.... A higher educational level will be required of you than was required of your parents.

.... You will have SIX different jobs during your working career.

.... ONE out of THREE that you came to the state of Florida after the year of 1960.

.... FIFTY-FIFTY that you will work in a blue-collar job.

.... ONE in SIX that you will work in a semi-skilled occupation.

.... ONE in EIGHT that you will work in a skilled occupation.

.... ONE in TEN that you will work in a service occupation.

.... You will be working with TWICE as many women as you would have been if you had been working in 1945.

.... ONE in FOUR that if you are a woman you will work in a clerical and kindred occupation.

.... ONE in EIGHT that you will work in a professional, technical or kindred occupation.

TOTAL EMPLOYED IN 1964 AND PROJECTED REQUIREMENTS IN 1975, BY MAJOR OCCUPATIONAL GROUP (NUMBERS IN THOUSANDS)

OCCUPATIONAL GROUPS	1964 (Actual) NUMBER	1964 (Actual) PERCENT	1975 (Projected) NUMBER	1975 (Projected) PERCENT	Percent Change, 1964-75
Total, all groups	70,357	100.0	87,300	100.0	24
White-collar workers	31,125	44.2	41,300	47.3	33
Professional, technical, and kindred workers	8,550	12.2	12,400	14.2	45
Managers, officials, and proprietors, except farm	7,452	10.6	9,300	10.7	25
Clerical and kindred workers	10,667	15.2	14,200	16.3	33
Sales workers	4,456	6.3	5,400	6.2	21
Blue-collar workers	25,534	36.3	29,700	34.0	16
Craftsmen, foremen, and kindred workers	8,986	12.8	11,200	12.8	25
Operatives and kindred workers	12,924	18.4	14,700	16.8	14
Laborers, except farm and mine	3,624	5.2	3,800	4.4	5
Service workers	9,256	13.2	13,000	14.9	40
Farmers and farm workers	4,444	6.3	3,400	3.9	-23

Note: Percents assume a 4 percent level of unemployment in 1975. Individual items may not add to totals due to rounding.

Source: U. S. Department of Labor, Bureau of Labor Statistics, October 1965.

EMPLOYMENT IN NON-AGRICULTURAL ESTABLISHMENTS BY INDUSTRY DIVISION, SELECTED YEARS 1929-1963

(Annual Averages*)

Industry Division	Number (000 omitted)				Percent Distribution			
	1929	1940	1948	1963	1929	1940	1948	1963
Total	31,041	32,058	44,448	57,175	100.00	100.00	100.00	100.00
Manufacturing	10,534	10,780	15,321	17,035	33.9	33.6	34.5	29.8
Trade	6,401	6,940	9,519	11,864	20.6	21.7	21.4	20.8
Government	3,066	4,202	5,650	9,535	9.9	13.1	12.7	16.7
Service	3,127	3,477	4,925	8,297	10.1	10.8	11.1	14.5
Transportation and Public Utilities	3,907	3,013	4,141	3,913	12.6	9.4	9.3	6.8
Contract Construction	1,497	1,294	2,169	3,030	4.8	4.0	4.9	5.3
Finance, Insurance and Real Estate	1,431	1,436	1,741	2,866	4.6	4.5	3.9	5.0
Mining	1,078	916	982	634	3.5	2.9	2.2	1.1

*Preliminary annual averages for 1963.

Source: U. S. Department of Labor, Bureau of Labor Statistics, Division of Manpower and Employment Statistics.

EMPLOYMENT BY MAJOR OCCUPATIONAL GROUPS

1940 AND 1963

Major Occupational Groups	Number (000 omitted)		Percent Distribution	
	1940	1963	1940	1963
Total Employed	45,166	68,809	100.00	100.00
Professional Workers	3,345	8,263	7.4	12.0
Farmers and Farm Managers	5,144	2,396	11.4	3.5
Proprietors, Managers and Officials (except farm)	3,749	7,293	8.3	10.6
Clerical and Kindred Workers	4,612	10,270	10.2	14.9
Salesworkers	2,905	4,356	6.5	6.3
Craftsmen, Foremen and Kindred Workers	5,056	8,925	11.2	12.9
Operatives and Kindred Workers	8,631	12,506	19.1	18.3
Service Workers	5,570	9,031	12.3	13.1
Farm Laborers and Foremen (4848)	3,090	2,219	6.8	3.2
Laborers (except farm and mine)	3,064	3,551	6.8	5.2

Source: Estimates for 1940 are derived from decennial data of the U. S. Bureau of the Census. Data for 1963 was obtained from Table A-19 of the February 1964 issue of Employment and Earnings.

WHILE TOTAL EMPLOYMENT WILL GO UP BY ONE-FOURTH BY 1975. . . .

Industry Growth Rates Will Vary Widely

Decline	Industry	Projected Employment Growth			
		No Change	Less than Average	Average	More than Average
	Government				
	Services				
	Contract Construction				
	Wholesale and Retail Trade				
	Finance, Insurance and Real Estate				
	Manufacturing				
	Transportation and Public Utilities				
	Mining				
	Agriculture				

Source: Occupational Outlook Handbook, Career Information for Use in Guidance, 1966-67 Edition, Bulletin No. 1450. Bureau of Labor Statistics, U. S. Department of Labor.

JOB OPPORTUNITIES GENERALLY WILL INCREASE FASTEST IN OCCUPATIONS REQUIRING THE MOST EDUCATION AND TRAINING. . . .

1965 - 1975

Decline	Major Occupational Group	Projected Employment Growth			
		No change	Less than average	Average	More than average
	Professional, technical and kindred workers				
	Service workers				
	Clerical workers				
	Skilled workers				
	Managers, officials, and proprietors				
	Sales workers				
	Semiskilled workers				
	Laborers (nonfarm)				
	Farm workers				

Source: Occupational Outlook Handbook, Career Information for Use in Guidance, 1966-67 Edition, Bulletin No. 1450. Bureau of Labor Statistics, U. S. Department of Labor. Chart 7, page 16.

TABLE 4

EMPLOYMENT BY MAJOR OCCUPATIONAL GROUPS AND IN SELECTED OCCUPATIONS, 1964 AND PROJECTED REQUIREMENTS, 1975 1/

(In thousands)

Occupation	1964	1975	Percent Change, 1964-75
Total	70,357	88,700	26
White-collar workers	31,125	42,800	38
Professional, technical and kindred workers	8,550	13,200	54
Draftsmen	260	375	44
Engineering and science technicians	620	1,000	61
Registered professional nurses	582	830	43
Managers, officials, and proprietors, except farm	7,452	9,200	23
Clerical and kindred workers	10,667	12,600	37
Bookkeeping workers	1,100	1,400	27
Office machine operators	420	900	114
Stenographers, secretaries, and typists	2,700	3,700	37
Sales Workers	4,456	5,800	30
Blue-collar workers	25,534	29,900	17
Craftsmen, foremen, and kindred workers	8,968	11,400	27
Airplane mechanics	95	115	21
Automotive mechanics	760	880	16
Bakers	105	95	-10
Business machine servicemen	70	105	50
Carpenters 2/	640	670	5
Cement and concrete finishers and terrazzo workers 2/	54	75	39
Compositors and typesetters	180	155	-14
Electricians 2/	162	200	23
Excavating, grading, and road machinery operators 2/	185	265	43
Machinists	480	500	4
Painters 2/	285	305	77
Plumbers and pipefitters 2/	212	265	25
Stationary engineers	255	275	8
TV and radio service technicians	110	140	27

TABLE 4
(Continued)

Occupation	1964	1975	Percent Change, 1964-75
Operatives and kindred workers	12,924	14,800	15
Assemblers	620	675	9
Inspectors	540	615	14
Machine tool operators	500	480	- 4
Laborers, except farm and mine	3,624	3,700	3/
Service workers	9,256	12,500	35
Farm workers	4,444	3,500	-21

1/ Projections assume an unemployment rate of 3 percent in 1975.
2/ In construction industry only.
3/ Less than 3 percent

Note: Because of rounding, sums of individual items may not equal totals.

Source: News From U. S. Department of Labor -- USDL -- 7349, Sunday Editions, September 18, 1966.

PROJECTED GROWTH OF THE UNITED STATES

1960 TO 2000

	1960	Projected 2000	Percentage Increase
Population	180 million	300 million	83%
Labor Force	73 million	140 million	92%
Gross National Product	$500 billion	$2200 billion	340%
Per Capita Purchases	$1800	$4000	122%
Government Expenditures	$100 billion	$500 billion	400%
Industrial Products Base years 1947-49 = 100	150 index	800 index	433%
Services	$170 billion	$800 billion	371%
Automobiles	58 million	230 million	297%
Textile Fibers	10 billion lbs.	22 billion lbs.	120%
Agriculture Products	$24 billion	43 billion	79%

Source: Richard G. Ford, Extension Economist, U. S. Department of Agriculture

SELECTED OCCUPATIONS IN DEMAND IN THE UNITED STATES IN 1965

0-X6.25	Patrolman
0-X7.02	Dental Hygienist
	Nurse Registered
	X-Ray Technician
0-X7.03	Medical Technologist
0-X7.7	Draftsman
1-X2.0	Clerk, General Office
1-X2.2	Clerk-Typist
	Typist
1-X2.3	Secretary
	Stenographer
1-X5.7	Central-Office Operator
2-X5.6	Nurse, Licensed Practical
	Ward Attendant
4-X2.010	Machinist
	Tool-and-Die Maker
4-X2.011	Engine-Lathe Operator I
	Turret-Lathe Operator
4-X2.012	Milling-Machine Operator
4-X2.100	Millwright
4-X2.103	Airplane Mechanic
	Automobile Mechanic
4-X6.181	Electrician
4-X6.183	Electrical Repairman
4-X6.185	Electronics Mechanic
4-X6.217	Pipe Fitter
	Plumber
4-X6.220	Carpenter
4-X6.23	Bricklayer
4-X6.28	Welder
4-X6.310	Instrument Repairman I
4-X6.313	Sheet-Metal Worker
4-X6.348	Dental Technician
4-X6.352	Tailor
4-X6.675	Baker
6-X4.213	Automobile-Body, Repairman, Metal

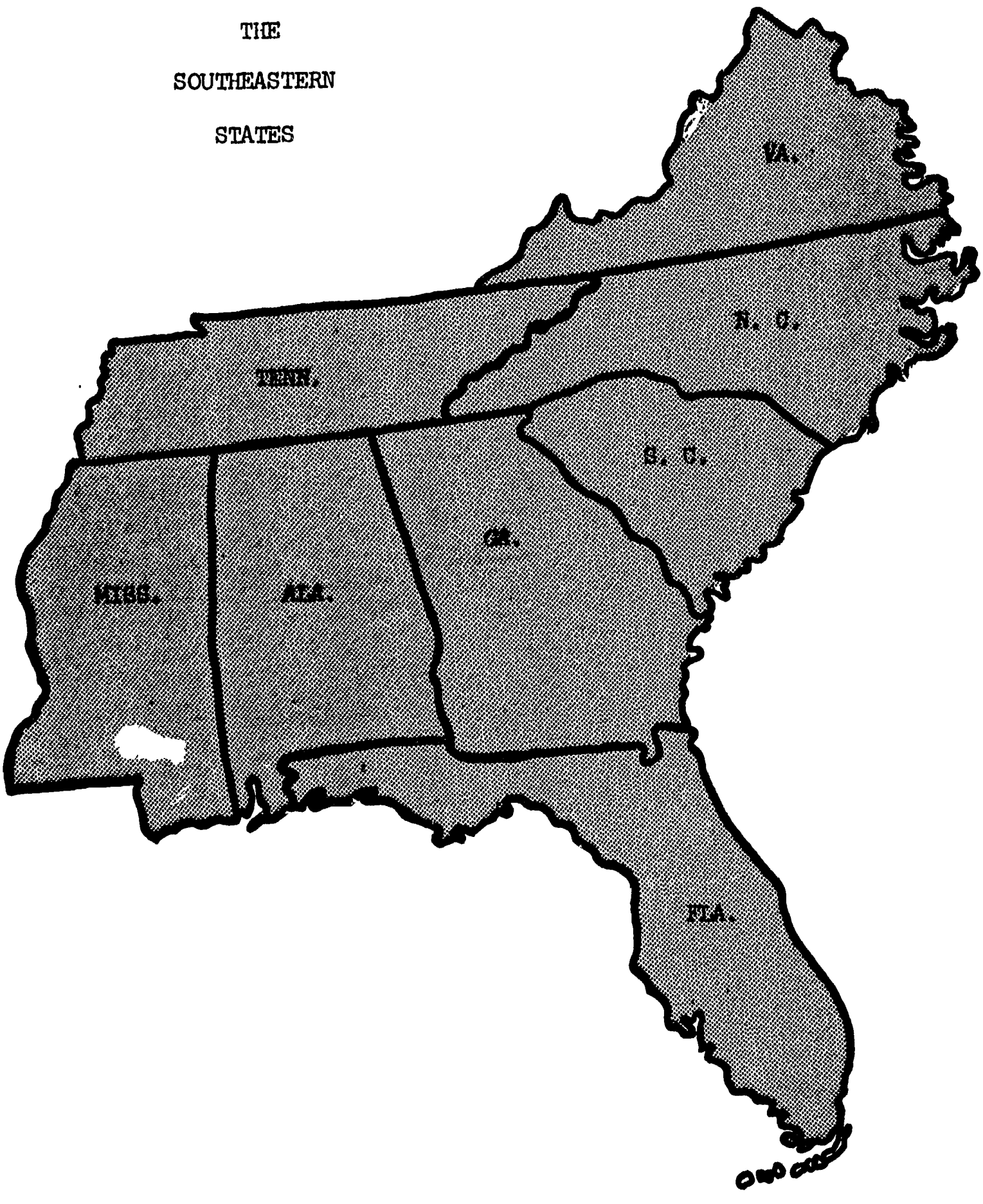
Source: United States Department of Labor

TABLE 6

THE

SOUTHEASTERN

STATES



THE SOUTHEAST*

- A FAST GROWING REGION -

Trends in non-agricultural employment, available by broad industrial classification beginning with 1939 and in greater detail beginning in 1947, indicate that the Southeastern region is indeed growing and at a rate substantially faster than that of the United States. From an average of 3,473,300 wage and salary workers in 1939, the regional total rose, almost without interruption, to 8,205,300 in 1964. This relative increase of 135.2 percent is half again as great as the national rate for the same period. Finally, the average annual rate of growth of employment over the 25 year period is 3.5 percent for the Southeast, as compared to 2.6 percent for the country as a whole. The significance of these measures may be better gauged if one other general statistic is established -- population growth. Here relative changes in the Southeast much more closely approximate those for the Nation.[4]

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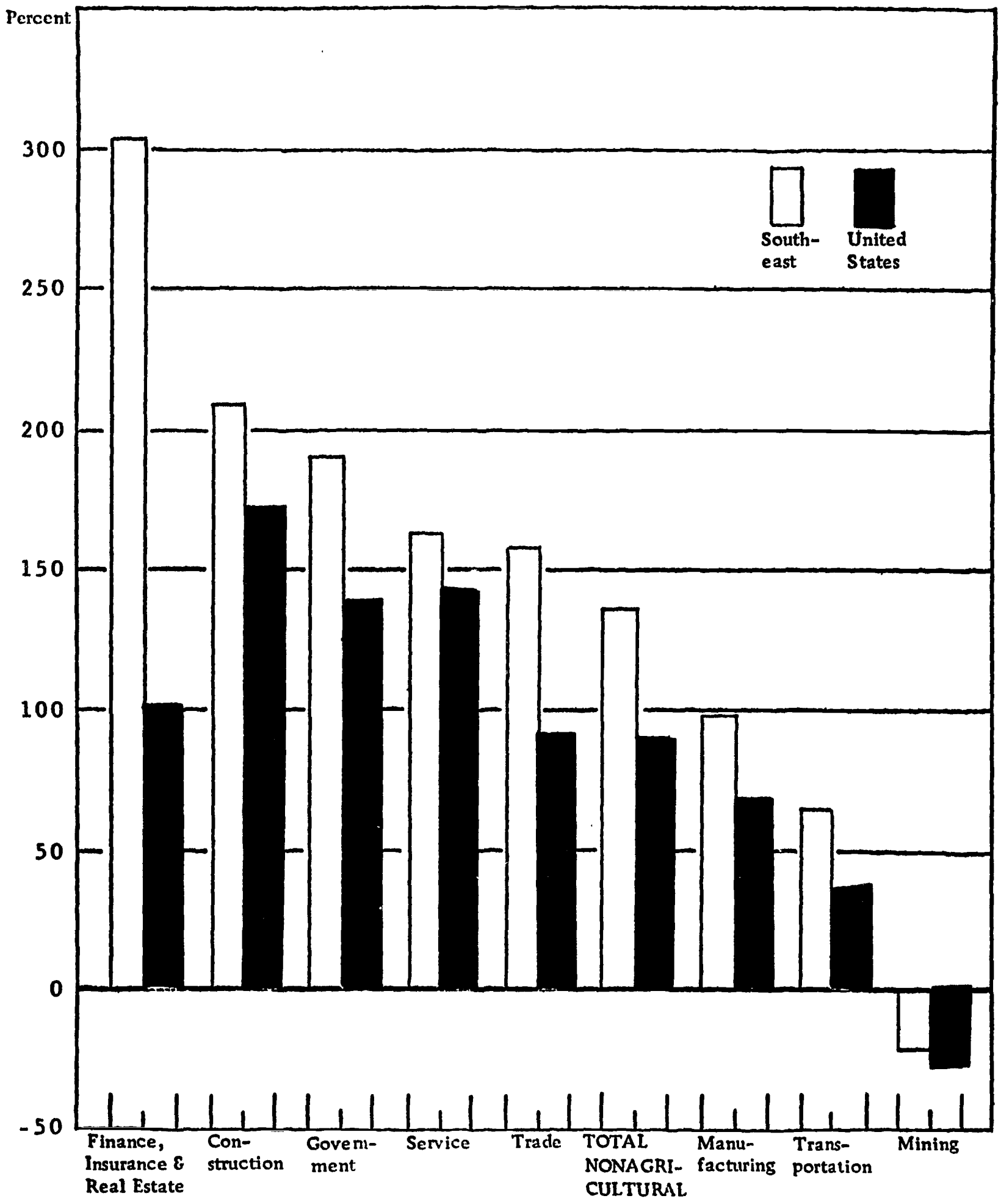
[4]"The Southeast -- A Fast Growing Region." Special Regional Report, December 1965. U. S. Department of Labor, Bureau of Labor Statistics.

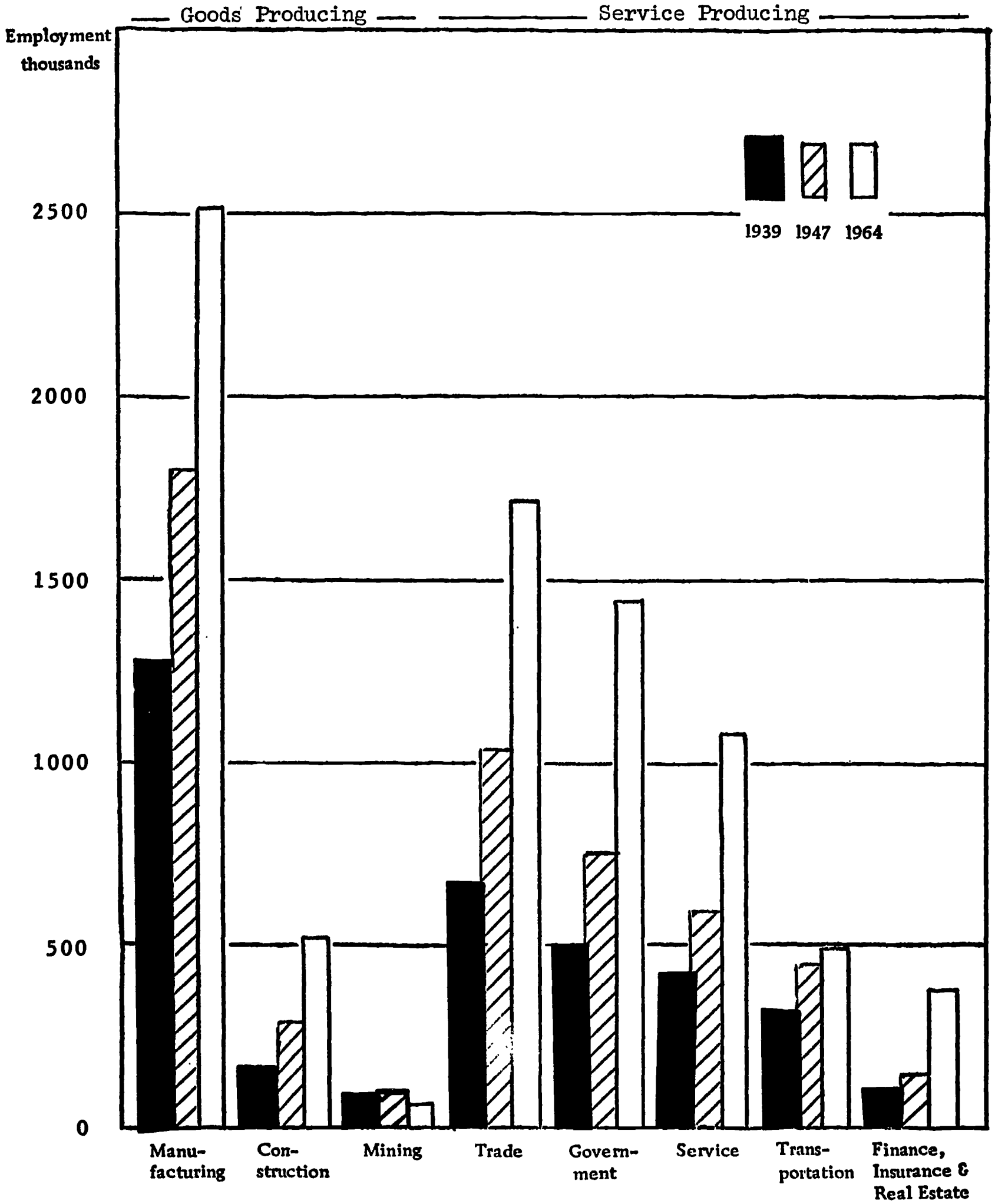
*Defined here as Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee and Virginia.

Percent Change in Total Nonagricultural and Industry Division Employment in the Southeast and the United States, 1939 to 1964



[5] Ibid.

Southeastern Employment Classified by Industry Division
1939, 1947 and 1964



[6] Ibid.

RANKING OF FLORIDA AND THE SOUTHEASTERN STATES*

This briefly gives the national ranking of Florida and the Southeastern States on a number of factors of interest to school personnel. Information for the tables included here is derived from "Rankings of the States, 1967," Research Report 1967-R1, Research Division, National Education Association, Washington, D. C. (Copyright 1967 by the NEA)

State by state comparisons should be made with extreme caution since there is not absolute uniformity in definition of terms and statistical procedures from state to state.

POPULATION

1. Provisional Estimates of Total Resident Population, July 1, 1966

Southeastern States Rank	State	Population	National Rank
1	Florida	5,941,000	9
2	North Carolina	5,000,000	11
3	Virginia	4,507,000	14
4	Georgia	4,459,000	15
5	Tennessee	3,883,000	17
6	Louisiana	3,603,000	19
7	Alabama	3,517,000	21
8	Kentucky	3,183,000	22
9	South Carolina	2,586,000	26
10	Mississippi	2,327,000	28
11	Arkansas	1,955,000	31
12	West Virginia	1,794,000	33
	United States	195,857,000	

2. Percent Change in Total Resident Population, April 1, 1960, to July 1, 1966

Southeastern States Rank	State	Percent	National Rank
1	Florida	19.9%	5
2	Virginia	13.0	12
3	Georgia	12.4	15
4	Louisiana	10.1	18
5	Arkansas	9.5	19
6	North Carolina	9.1	20
7	Tennessee	8.8	22
8	South Carolina	7.7	24
9	Alabama	7.4	25
10	Mississippi	6.7	27
11	Kentucky	4.8	33
12	West Virginia	-3.5	50
	United States	9.1	

*Considered here as including Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia and West Virginia.

3. Net Total Migration Rate (per 100 Midperiod Population), 1960 to 1964

Southeastern States Rank	State	Rate	National Rank
1	Florida	+8.1	3
2	Virginia	+3.3	11
3	Arkansas	+2.4	12
4	Georgia	+1.6	15
5	Tennessee	+0.8	18
6	North Carolina	-0.2	20
7	Louisiana	-0.6	22
8	South Carolina	-1.4	26
9	Alabama	-1.5	28
10	Mississippi	-1.6	31
11	Kentucky	-1.7	33
12	West Virginia	-6.6	50
	United States	+0.8	

4. Estimated School-Age Population (5-17), July 1, 1966

Southeastern States Rank	State	Population	National Rank
1	Florida	1,460,000	9
2	North Carolina	1,331,000	10
3	Georgia	1,208,000	13
4	Virginia	1,172,000	14
5	Louisiana	1,035,000	17
6	Tennessee	1,000,000	18
7	Alabama	995,000	19
8	Kentucky	851,000	22
9	South Carolina	736,000	24
10	Mississippi	674,000	27
11	Arkansas	510,000	31
12	West Virginia	469,000	33
	United States	50,814,000	

5. Estimated School-Age Population (5-17) as Percent of Total Resident Population, 1966

Southeastern States Rank	State	Percent	National Rank
1	Mississippi	29.0%	3
2	Louisiana	28.7	5
3	South Carolina	28.5	7
4	Alabama	28.3	9
5	Georgia	27.1	20
6	Kentucky	26.7	25
7	North Carolina	26.6	28
8	Arkansas	26.1	32
8	West Virginia	26.1	32
10	Virginia	26.0	34
11	Tennessee	25.8	37
12	Florida	24.6	46
	United States	25.9	

6. Percent of Population Aged 65 or Older, 1966

Southeastern States Rank	State	Percent	National Rank
1	Florida	12.5%	2
2	Arkansas	10.8	12
3	West Virginia	10.2	19
4	Kentucky	9.9	21
5	Mississippi	8.8	30
5	Tennessee	8.8	30
7	Alabama	8.2	36
8	Louisiana	7.5	40
9	Georgia	7.3	41
10	North Carolina	7.2	42
10	Virginia	7.2	42
12	South Carolina	6.7	46
	United States	9.4	

7. Percent of Population that is Urban, December 31, 1965

Southeastern States Rank	State	Percent	National Rank
1	Florida	74.1%	12
2	Louisiana	64.1	25
3	Virginia	58.2	31
4	Alabama	57.6	33
5	Georgia	56.5	35
6	Tennessee	54.4	37
7	Arkansas	46.0	41
8	Kentucky	45.9	42
9	South Carolina	41.6	43
10	North Carolina	41.0	44
11	Mississippi	39.9	46
12	West Virginia	39.7	47
	United States	70.6	

EDUCATIONAL ATTAINMENT

8. Median School Years Completed by Persons 25 Years Old and Older, 1960

Southeastern States Rank	State	Years	National Rank
1	Florida	10.9	21
2	Virginia	9.9	38
3	Alabama	9.1	41
4	Georgia	9.0	42
5	Arkansas	8.9	43
5	Mississippi	8.9	43
5	North Carolina	8.9	43
8	Louisiana	8.8	46
8	Tennessee	8.8	46
8	West Virginia	8.8	46
11	Kentucky	8.7	49
11	South Carolina	8.7	49
	United States	10.6	

9. Percent of Pupulation 14 Years Old and Older Illiterate in 1960

Southeastern States Rank	State	Percent	National Rank
1	Florida	2.6%	33
2	West Virginia	2.7	34
3	Kentucky	3.3	37
4	Virginia	3.4	38
5	Tennessee	3.5	39
6	Arkansas	3.6	40
7	North Carolina	4.0	42
8	Alabama	4.2	45
9	Georgia	4.5	46
10	Mississippi	4.9	47
11	South Carolina	5.5	49
12	Louisiana	6.3	50
	United States	2.4	

10. Public High-School Graduates in 1965-66 as Percent of Ninth-Graders in Fall 1962

Southeastern States Rank	State	Percent	National Rank
1	Virginia	74.8%	32
2	Florida	71.7	35
3	South Carolina	70.0	38
4	West Virginia	69.0	39
5	Arkansas	68.7	40
6	Tennessee	68.0	41
7	Louisiana	67.9	42
8	North Carolina	67.3	44
9	Georgia	65.1	45
9	Kentucky	65.1	45
9	Mississippi	65.1	45
12	Alabama	64.7	48
	United States	77.3	

11. Percent of Selective Service Draftees Failing Preinduction and Induction Mental Tests, 1965

Southeastern States Rank	State	Percent	National Rank
1	Arkansas	25.5%	39
2	Florida	26.4	40
3	Kentucky	26.5	41
4	West Virginia	27.9	42
5	Tennessee	32.3	43
6	Virginia	34.0	44
7	Louisiana	36.2	45
8	Mississippi	37.2	46
9	Alabama	38.8	47
10	North Carolina	41.8	48
11	Georgia	41.9	49
12	South Carolina	48.2	50
	United States	21.4	

FINANCIAL RESOURCES

12. Per-Capita Personal Income, 1965

Southeastern States Rank	State	Income	National Rank
1	Florida	$2,423	29
2	Virginia	2,419	30
3	Georgia	2,159	41
4	Louisiana	2,067	42
5	Kentucky	2,045	43
6	North Carolina	2,041	44
7	West Virginia	2,027	45
8	Tennessee	2,013	46
9	Alabama	1,910	47
10	South Carolina	1,846	48
11	Arkansas	1,845	49
12	Mississippi	1,608	50
	United States	2,746	

Source: Research Brief -- 23 Division of Research State Department of Education, Tallahassee, Florida

FLORIDA

The State of Florida has experienced an almost unbelievable growth. The population has more than doubled in the last 15 years. Among the 12 Southeastern states, Florida was the smallest in population in 1940, but ranks first in 1966. The steady growth has brought the state from twenty-seventh place among the states in 1940 to ninth place in total population. The state is gaining permanent residents at the rate of 19,000 a month - 630 a day. In 1965 the estimated population of Florida stood at 5,805,000.

The Florida economy, which moved from the soil to outer space in 100 years, has entered a new phase. This new phase adds a truly exciting chapter to the history of economic and industrial development. The state has a very slow beginning, and in 1860 the Federal census placed the total investment in Florida manufacturing at $1,874,125. Of this, $886,000 was invested in Santa Rosa County, mostly in saw mills. The same census put total manufacturing employment in Florida at 2,454. In the year 1963, total new plant investment in Florida was $185,666,000. The investment in that one year was exactly 100 times what the total had been 103 years before. In the same period manufacturing employment increased from 2,454 to 229,200.

Diversification, especially in the sixties brought a great change. Combined employment in food and kindred products, and lumber and wood products dropped from 31.1 percent of the total in 1954 to 22.9 percent in 1964.

An industry that is a good illustration of the growing independence from raw materials is electronics. This industry, where labor skills are often more important than closeness to raw materials, has shown fantastic growth. Measured by employment, electronics in Florida multiplied by 18 in a single 10-year period.[1]

According to the Bureau of Labor Statistics non-farm employment in the U. S. jumped by 11.5 percent between 1960-65 and, during this same period, Florida jumped by 23 percent or twice the national average. There is every reason to believe that this phenomenal growth will continue.

The fastest rate of production increase in the United States lies ahead for Florida. The Department of Labor projections show Florida Producing $29,810,000,000 worth of goods and services in 1976 compared with $9,490,000,000 in 1957 and $4,360,000,000 in 1947. That would be an increase of 214 percent in 20 years.

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[1] Florida Business Profile, Allen Morris, Tallahassee, Florida, 1965.

Goods Producing Industries

Manufacturing

In ten years between 1955 and 1965 manufacturing employment jumped 705 percent to over 250,500 workers and in 1963 the value added to products by manufacturing was $2,326,000,000 an increase of 65 percent from 1958. An output of $3,700,000,000 in manfactured goods is predicted for 1970.

Agriculture

Agriculture, which employed approximately 125,000 persons in 1965, is not expected to increase in number of employees even though the value of the agricultural products continue to climb. The value of the farm gate was $935,000,000 in 1960 and $1,000,000,000 in 1965. It is expected to reach $1,500,000,000 by 1975. The value of citrus alone is over $350,000,000 a year.

Contract Construction

Contract Construction is an activity in which employment fluctuates widely with changes in general business conditions. In Florida it gained more than 52 percent in the period 1954-64 as compared to 19 percent for the national average. A conservative estimate of a 50 percent increase is predicted for the 1960-75 period.

Service Producing Industries

The service producing industries such as wholesale-retail trade; finance; insurance; real estate, tranportation, and public utilities; and government service increased 42 percent in the 1954-64 period. In Florida the service industries can do no less than keep step with the population growth and when the additional emphasis is given by the increasing flow of tourists in the period, from 15,000,000 in 1965 to 20,000,000 in 1975, this area is projected to increase at least 50 percent in the 1960-75 period.

Wholesale and Retail Trade

Wholesale and retail trade contributed a larger proportional amount to personal income in Florida than in any other state in the Southeast. The workers in these related industries constitute between 27 and 29 percent of the non-agricultural employment in the state.[2] Retail sales at the end of 1963 were estimated to be $7,721,508,000.[3] In 1965 there were over 434,900 workers employed in this industry.

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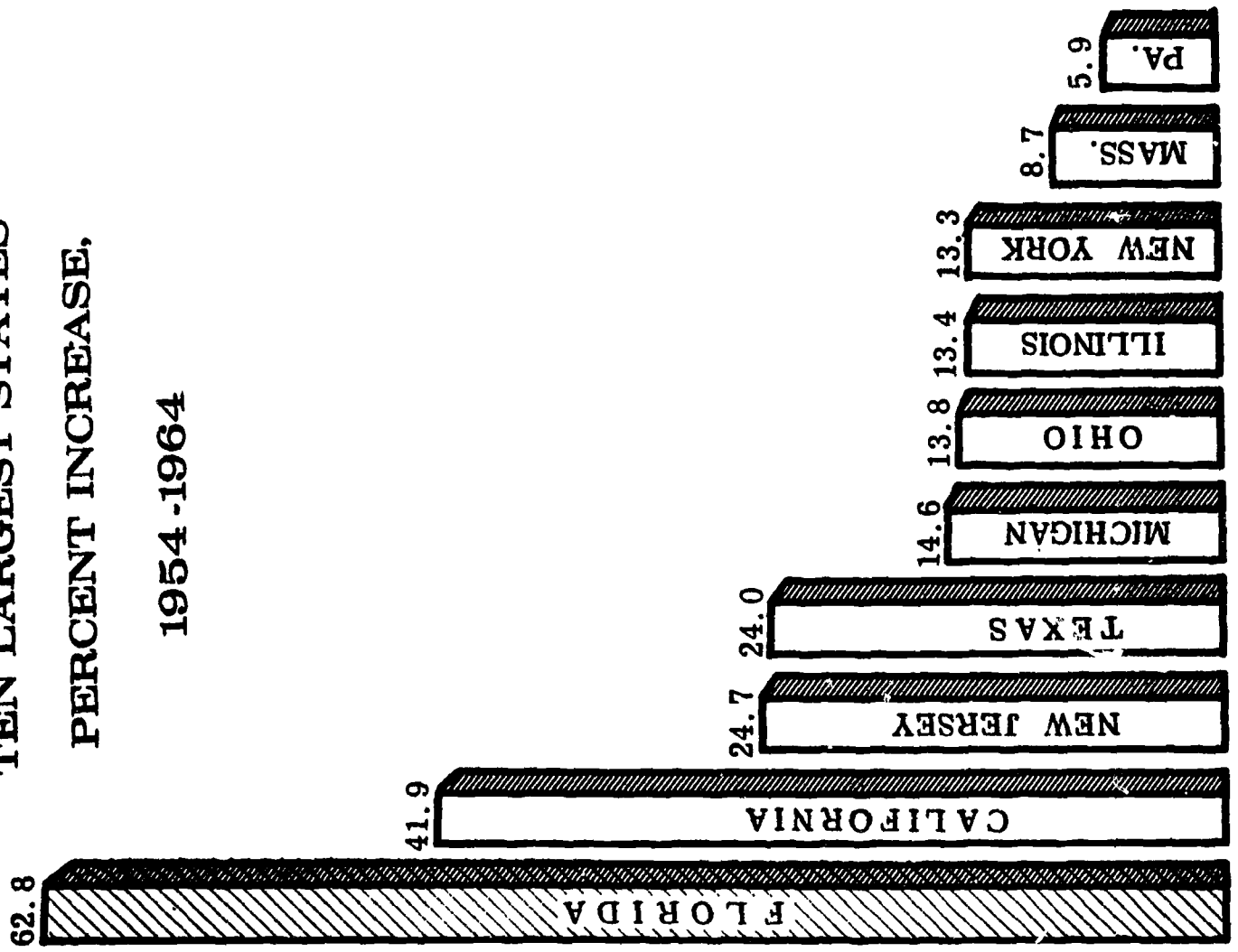
[2]Florida Trends, Trend Publications, Inc. Tampa, Florida, April 1966.

[3]Florida, Florida Development Commission, Tallahassee, Florida

POPULATION GROWTH

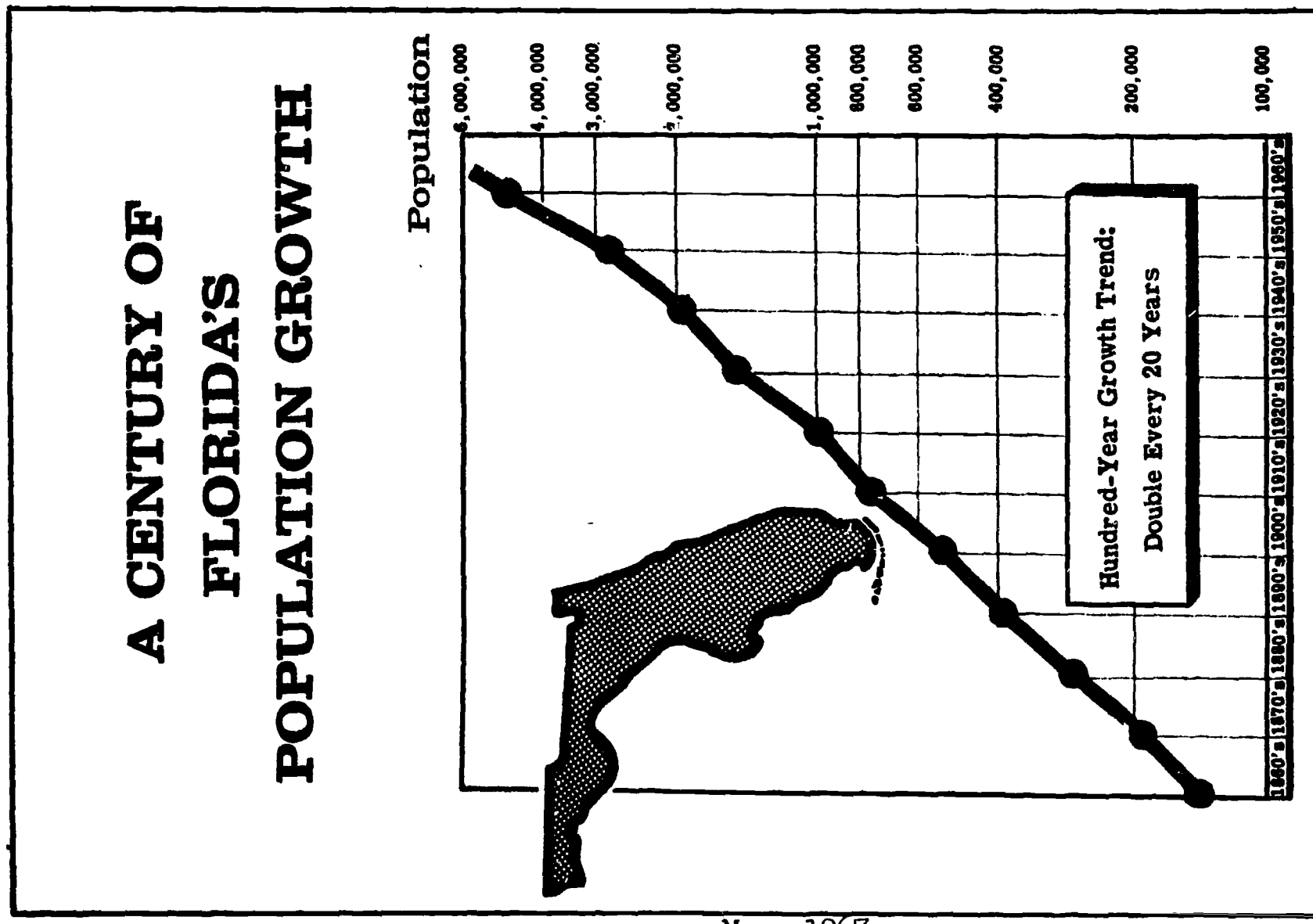
TEN LARGEST STATES

PERCENT INCREASE, 1954-1964



Source: U.S. Bureau of the Census

A CENTURY OF FLORIDA'S POPULATION GROWTH

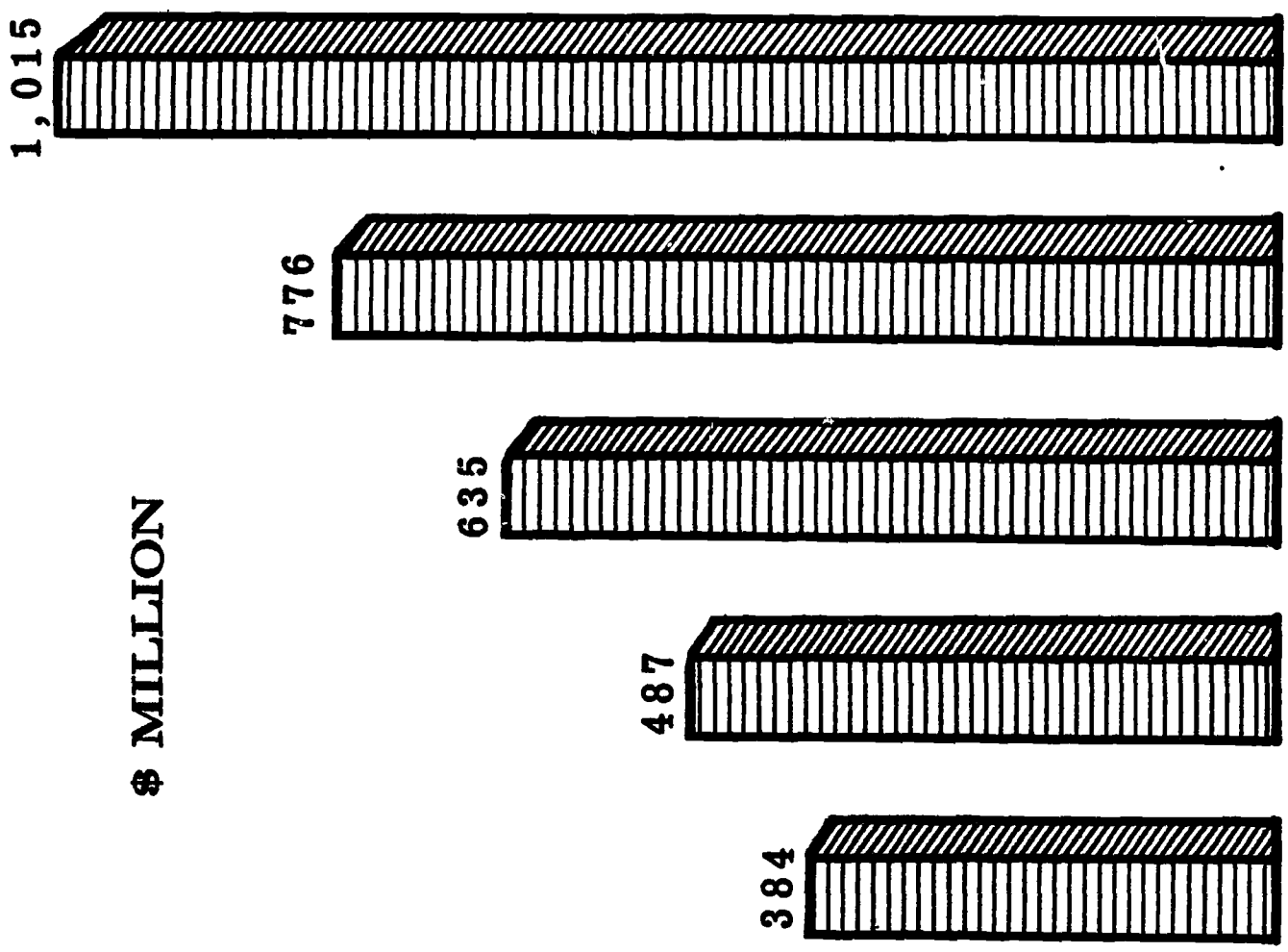


Source: U.S. Bureau of the Census

CASH RECEIPTS FROM FARM MARKETING

FLORIDA

$ MILLION

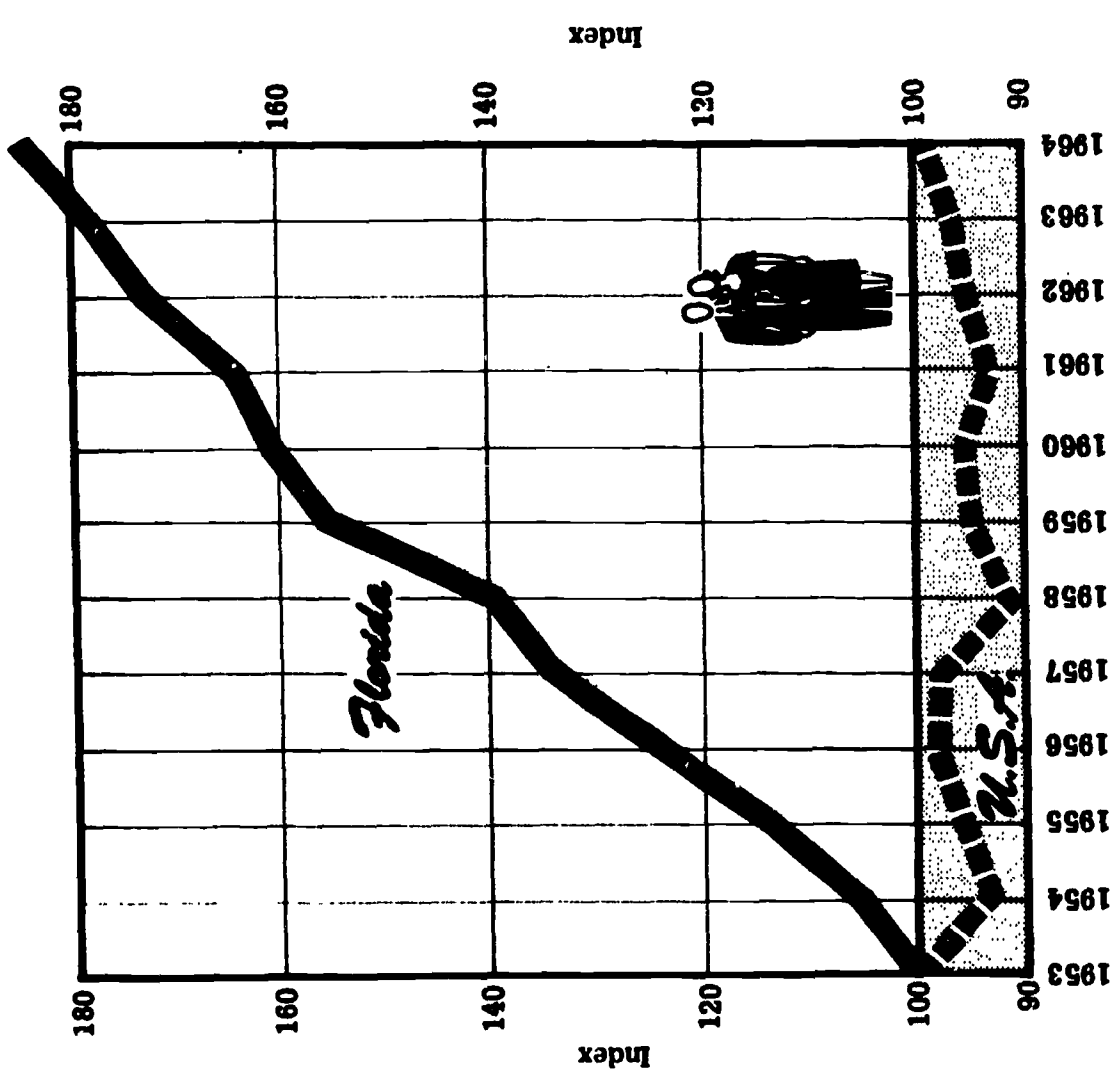


Source: Florida Department of Agriculture

MANUFACTURING EMPLOYMENT

FLORIDA AND THE UNITED STATES

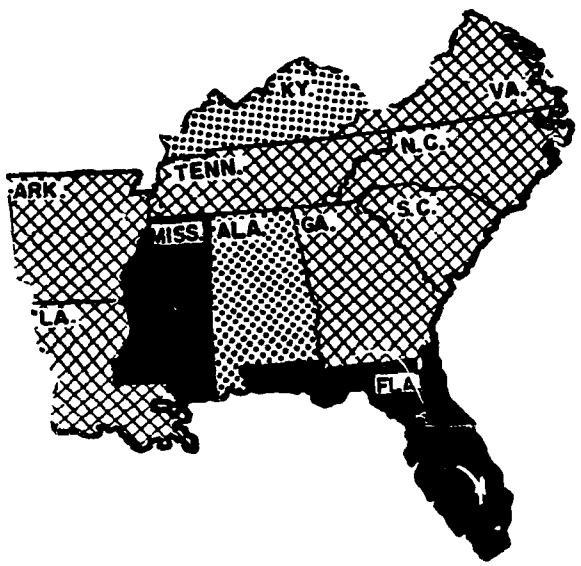
Index: 1953=100



Source: U.S. Department of Labor and Florida Industrial Commission

Section III

PERCENT CHANGE IN NONAGRICULTURAL EMPLOYMENT FOR THE SOUTHEASTERN UNITED STATES BY STATE -- 1947-62



DECREASE

PERCENT INCREASE

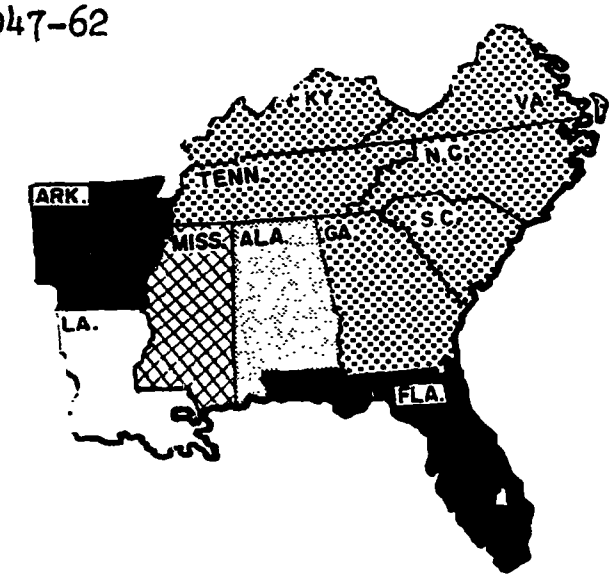
0-14.9 | 30.0-44.9

15.0-29.9 | 45 and over

National Average – 26 percent increase

Source: State agencies cooperating with U.S. Department of Labor.

PERCENT CHANGE IN MANUFACTURING EMPLOYMENT FOR THE SOUTHEASTERN UNITED STATES BY STATE -- 1947-62



DECREASE

PERCENT INCREASE

0 – 14.9 | 30.0 – 44.9

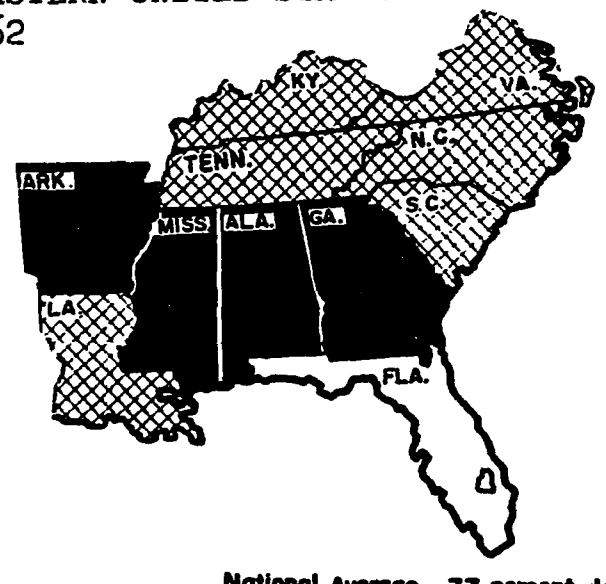
15.0 – 29.9 | 45 and over

National Average – 8 percent increase

Source: State agencies cooperating with U.S. Department of Labor.

May, 1967

PERCENT CHANGE IN AGRICULTURAL EMPLOYMENT FOR THE SOUTHEASTERN UNITED STATES BY STATE -- 1950-62



INCREASE OR NO CHANGE

PERCENT DECREASE

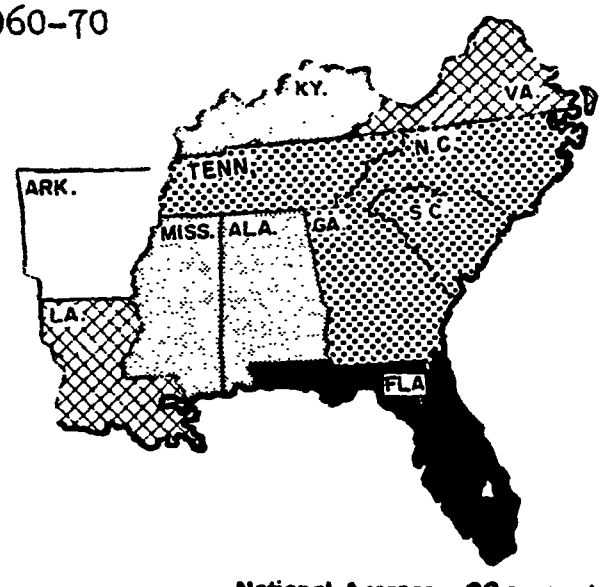
Less than -20 | -30.0 to -39.9

-20.0 to -29.9 | -40 and over

National Average – 33 percent decrease

Source: U.S. Department of Agriculture.

ESTIMATED PERCENT CHANGE IN TOTAL LABOR FORCE FOR THE SOUTHEASTERN UNITED STATES BY STATE -- 1960-70



DECREASE

PERCENT INCREASE

0 – 9.9 | 20.0 – 29.9

10 – 19.9 | 30 and over

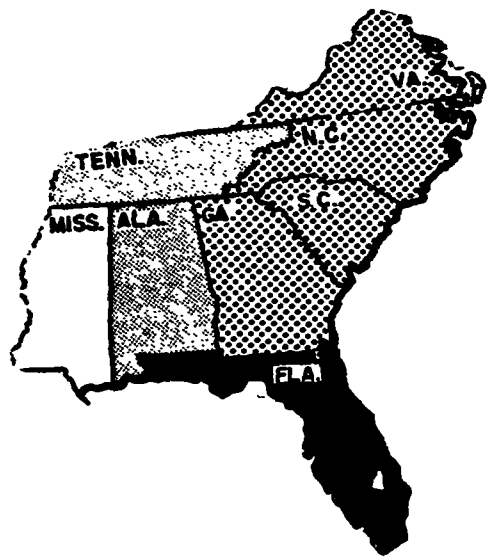
National Average – 22 percent increase

Source: U.S. Department of Labor, Bureau of Labor Statistics.
Underlying population projections by the U.S. Department of Commerce, Bureau of the Census.

CHART III

Section III

ESTIMATED PERCENT CHANGE IN POPULATION 14 YEARS AND OLDER FOR THE SOUTHEASTERN UNITED STATES - BY STATE 1960-70



National Average – 19 percent increase

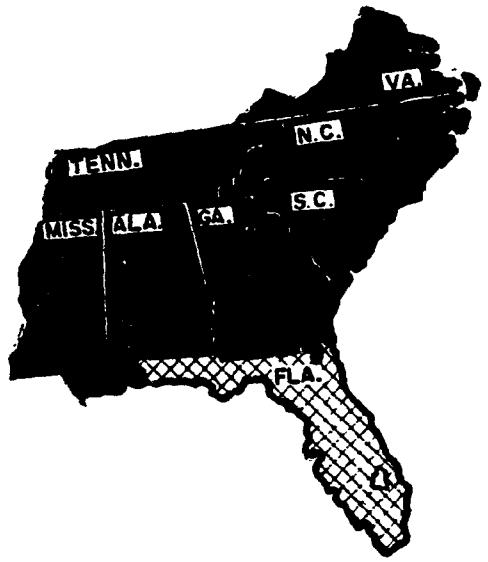
DECREASE

PERCENT INCREASE

- 0 – 9.9
- 10.0 – 19.9
- 20.0 – 29.9
- 30 and over

Source: U.S. Department of Commerce, Bureau of the Census.

PERCENT OF POPULATION 25 YEARS AND OLDER WITH LESS THAN 4 YEARS OF HIGH SCHOOL FOR THE SOUTHEASTERN UNITED STATES - BY STATE 1960



National Average – 59 percent

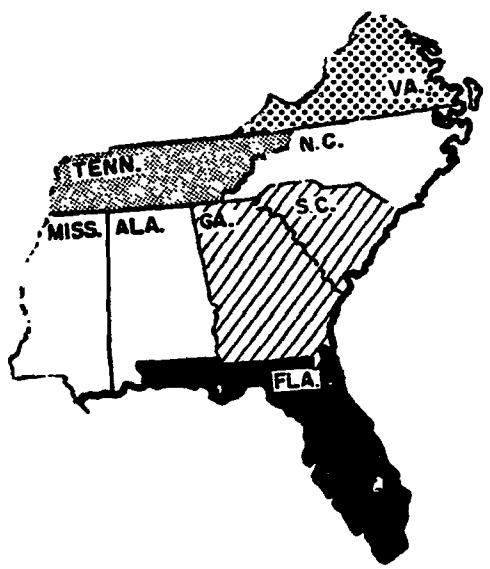
PERCENT

- Less than 50
- 50.0 – 54.9
- 55.0 – 59.9
- 60 and over

Source: U.S. Department of Commerce, Bureau of the Census.

May, 1967

PERCENT OF STATE'S POPULATION IN 1960 BORN IN ANOTHER STATE



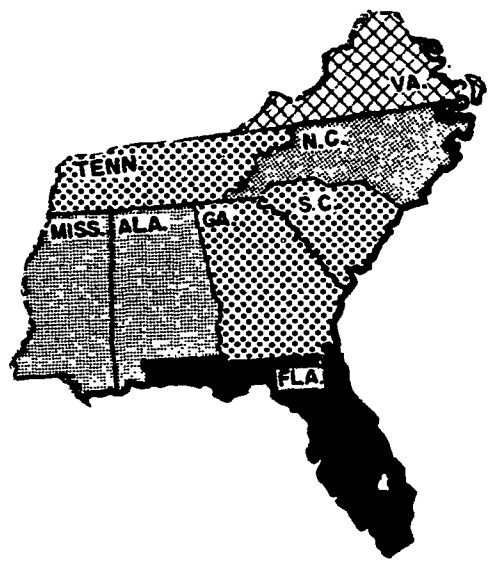
National Average – 26 percent

PERCENT

- Less than 15
- 15.0 – 19.9
- 20.0 – 24.9
- 25.0 – 29.9
- 30.0 – 39.9
- 40 and over

Source: U.S. Department of Commerce, Bureau of the Census.

PERCENT OF STATE'S POPULATION IN 1960 LIVING IN ANOTHER STATE IN 1955



National Average – 9 percent

PERCENT

- Less than 5
- 5 – 7.4
- 7.5 – 9.9
- 10.0 – 14.9
- 15 and over

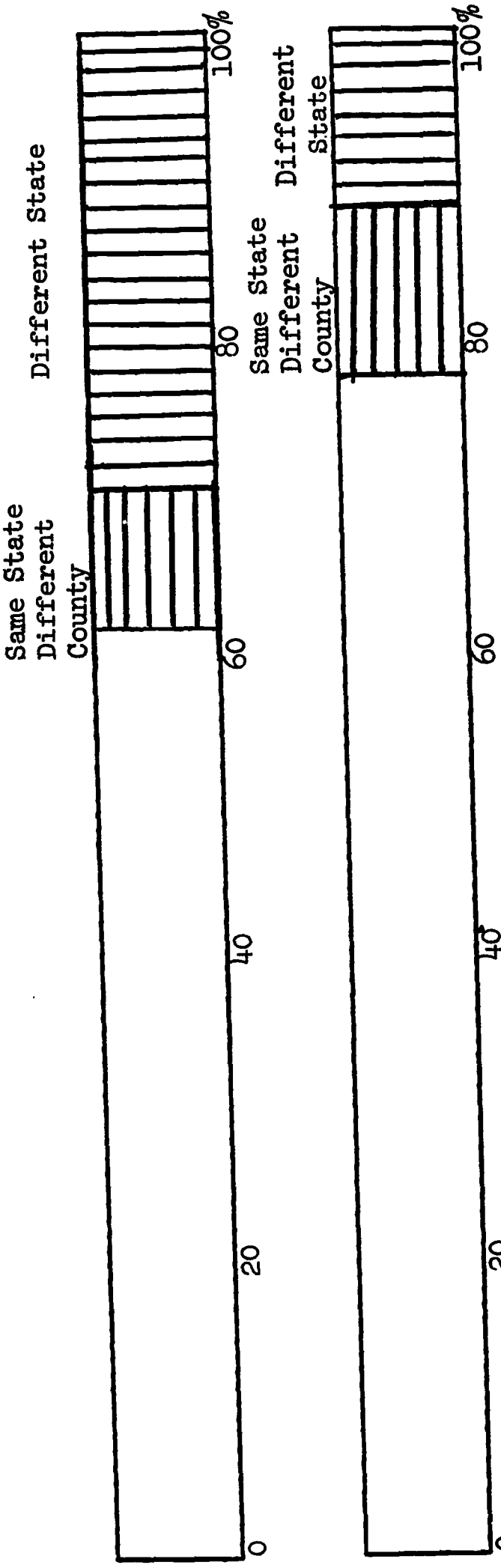
Source: U.S. Department of Commerce, Bureau of the Census.

CHART IV

MOBILITY OF POPULATION FOR FLORIDA AND THE UNITED STATES

Approximately 30 percent of Florida's 1960 Population lived outside of the State in 1955.

Approximately 37 percent of Florida's 1960 Population lived outside of the County in 1955.



Source: 1960 Census

EMPLOYMENT IN FLORIDA NON-AGRICULTURAL ESTABLISHMENTS

BY INDUSTRY GROUP

	1955	1962	1963	1964	1965
			(in thousands)		
Nonagricultural Employment	965.9	1,387.8	1,447.4	1,526.5	1,625.4
Manufacturing	146.9	222.2	228.5	237.1	250.5
Lumber and Wood Products	17.7	13.9	13.6	13.1	13.0
Furniture and Fixtures	5.3	7.3	7.2	7.4	7.7
Stone, Clay and Glass Products	9.2	12.4	12.7	13.5	13.7
Primary Metals	N.A.	2.2	2.3	2.5	2.8
Fabricated Metals	9.9	14.4	14.5	15.1	16.1
Machinery, Except Electrical	3.5	7.4	8.2	9.2	10.1
Electrical Machinery	1.7	13.6	17.5	18.8	18.8
Transportation Equipment	8.8	23.2	23.2	24.8	28.5
Instruments and Related Products	N.A.	2.3	2.4	2.6	3.2
Ordance and Misc. Durable Goods	3.9	16.2	15.9	15.7	14.9
Food and Kindred Products	34.7	40.5	40.3	40.6	43.2
Tobacco Manufactures	8.9	5.3	5.2	5.6	5.2
Apparel	6.7	10.7	11.3	12.0	13.6
Paper and Allied Products	12.6	14.3	14.0	14.3	15.3
Printing and Publishing	11.4	16.1	16.8	17.4	18.1
Chemicals and Allied Products	10.2	17.7	18.1	18.4	18.9
Other Non-Durable Goods	2.4	4.7	5.3	6.1	7.4
Mining	6.6	8.5	8.8	9.5	10.0
Contract Construction	97.3	110.1	117.5	127.2	138.8
Transportation, Communication, Utilities	82.6	100.3	101.7	107.0	111.9
Wholesale and Retail Trade	278.4	376.5	387.1	407.6	434.9
Finance, Insurance and Real Estate	52.1	87.9	91.3	94.3	98.1
Service and Miscellaneous	144.6	234.9	250.0	265.1	283.8
Government	157.4	247.4	262.5	278.7	297.4

Leading manufacturing industries in order of employment size in 1965 are: (1) food and kindred products, (2) transportation equipment, (3) chemical and allied products, (4) electrical machinery and equipment, (5) printing and publishing, (6) fabricated metal products, and (7) paper and allied products.

Source: Florida Industrial Commission, May, 1966.

EMPLOYMENT IN FLORIDA BY OCCUPATIONAL GROUP

1960 AND 1965

	1960 Employed Labor Force				1965 Projected Employed Labor Force	
	Male	Female	Total	Percent of Total	Total	Percent of Total
Total Employed, 14 years of age and over	1,118,681	600,910	1,719,591	100%	2,098,921	100%
Professional, Technical, and Kindred Workers	106,907	69,603	176,510	10%	252,762	12%
Managers, Officials and Proprietors, exc. farmers	159,361	32,251	191,612	11%	232,232	11%
Clerical and Kindred Workers	65,712	157,778	223,490	13%	290,536	14%
Sales Workers	90,367	48,342	138,709	8%	170,057	8%
Craftsmen, Foremen, and Kindred Workers	225,914	5,953	231,867	13%	278,239	13%
Operatives and Kindred Workers	157,742	56,409	214,151	12%	239,849	11%
Private Household Workers	2,762	74,737	77,499	4%	93,463	4%
Service Workers, exc. private household	76,433	94,531	170,964	10%	229,090	11%
Farm Laborers and Farm Foremen, Farmers and Farm Managers	69,065	19,694	88,759	5%	84,631	4%
Laborers, exc. farm and mine	95,820	3,249	99,069	6%	99,069	5%
Occupations not reported	68,598	38,363	106,961	6%	128,993	6%

These computations assume that the occupational groups will change at approximately the same rate in Florida as is predicted for the nation, and that Florida's Labor Force will continue to grow at a rate that is twice the rate for the nation. Information on the 1960 Employed Labor Force was secured from the 1960 U. S. Census.

WORK FORCE IN FLORIDA

BY OCCUPATIONAL GROUP

	No. Employed 1960	Rank Order in No. of Employees	Percent of Change 1950-1960	Rank Order in Percent of Change 1950-6
Professional, Technical and Kindred	176,510	5	116%	1
Managerial and Proprietors	191,612	4	65%	6
Clerical and Kindred Workers	223,490	2	116%	2
Sales Workers	138,709	7	73%	5
Skilled Workers	231,867	1	75%	4
Semi-Skilled Workers	214,151	3	60%	7
Service Workers	170,964	6	75%	3
Farmers and Farm Managers	22,349	8	-44%	8

Source: 1950 Census and the 1960 Census.

TABLE 3

WORK FORCE ESTIMATES -- STATEWIDE

(in thousands)

	1950	1955	1960	1965
Total Civilian Work Force	1,080.9	1,426.4	1,874.4	2,197.7
Employed	1,025.3	1,363.2	1,779.9	2,126.0
In Agriculture	106.0	128.9	127.5	139.8
In Non-Agricultural Establishments	704.4	965.9	1,320.6	1,625.4
Other /1	214.9	268.4	331.8	360.8
Unemployed	55.6	63.2	94.5	68.5
Unemployment Rate	5.1	4.4	5.0	3.1

/1 "Other" includes self-employed, unpaid family workers and domestic workers.

Source: Research and Statistics Department of the Florida Industrial Commission

PROJECTED GROWTH OF FLORIDA'S POPULATION

(Shown by Age Groups)

AGE GROUP	1960 CENSUS APRIL 1	1965 PROJECTION JULY 1	1970 PROJECTION JULY 1	ESTIMATED DIFFERENCE 1960-1970
Under 5	541,101	593,090	741,835	200,734
5-19	1,263,200	1,651,154	1,978,677	715,477
20-49	1,868,428	2,138,219	2,618,780	750,352
50-64	725,702	852,559	1,033,037	307,335
65 and Over	553,129	701,861	877,574	334,445
Total Population	4,951,560	5,936,883	7,259,903	2,308,343

Source: Bureau of Economic and Business Research, University of Florida.

POPULATION AND LABOR FORCE FOR FLORIDA AND PROJECTIONS

(14 years and over)

	MALE		FEMALE		TOTAL	
Year	Population	Labor Force	Population	Labor Force	Population	Labor Force
1950	1,356,225	757,620	1,406,640	334,975	2,762,865	1,092,600
1960	2,437,000	1,251,000	2,515,000	636,000	4,952,000	1,887,000
1965	2,829,000	1,665,000	2,976,000	844,000	5,805,000	2,508,000
1970	3,369,000	2,127,000	3,542,000	1,031,000	6,911,000	3,158,000
1975	3,986,000	2,517,000	4,221,000	1,266,000	8,208,000	3,783,000
1980	4,640,000	2,940,000	4,942,000	1,532,000	9,598,000	4,472,000

Population and labor force figures for 1950 and 1960 are from the Bureau of the Census. Estimated population for future years was made by the Bureau of the Census and recognized many components of population change such as births, deaths and net migration. It assumed a moderate decline in fertility and that migration patterns of the 1955-60 period will persist.

Labor force projections for 1965 and 1970 were prepared by the Bureau of Labor Statistics. Labor force projections for 1975 and 1980 were made by first determining the percentage of the total population that was in the labor force in the years 1950 and 1960, and projected to be in the labor force, by the Bureau of Labor Statistics, in 1965 and 1970. The rate of change in the percentages for these years was determined and an adjustment factor was applied to determine the percentages to use with the total population figures as projected by the U. S. Department of Labor for the years 1975 and 1980. The adjusted percentage for the projected years was then multiplied by the projected population for that year. The product was then added to the projected population, to determine the projected labor force.

TABLE 6

FLORIDA

EMPLOYMENT IN SELECTED OCCUPATIONS, BY SEX AND TOTAL

FOR 1960 AND PROJECTED FOR 1970 AND 1980

OCCUPATIONS	Employed 1960			Projected Employment 1970			Projected Employment 1980		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
PROFESSIONAL, TECHNICAL AND KINDRED									
Draftsman	3,489	214	3,703	5,841	358	6,199	8,269	507	8,776
Funeral Directors and Embalmers	951	37	988	1,592	62	1,654	2,254	88	2,342
Nurses, Professional	395	15,735	16,130	661	26,340	27,001	936	37,292	38,228
Photographers and Photo Finishers	1,345	217	1,562	2,252	363	2,615	3,188	514	3,702
Radio Operators	1,281	175	1,456	2,144	293	2,437	3,036	415	3,451
Surveyors	1,997	80	2,077	3,343	134	3,477	4,733	190	4,923
Technicians, Medical and Dental	1,479	2,172	3,651	2,476	3,636	6,112	3,505	5,148	8,653
Technicians, Electrical and Electronic	3,734	113	3,847	6,251	189	6,440	8,850	268	9,118
Technicians, Other Engineering and Physical Sciences	2,641	355	2,996	4,421	594	5,015	6,259	841	7,100
Technicians	1,212	288	1,500	2,029	482	2,511	2,872	683	3,555
MANAGERS, OFFICIALS AND PROPRIETORS									
Banking and Finance	5,362	1,033	6,395	8,976	1,729	10,705	12,708	2,448	15,156
Building Managers and Superintendents	1,636	1,327	2,963	2,739	2,221	4,960	3,877	3,145	7,022
Managers, Salaried									
Construction	6,999	229	7,228	11,716	383	12,099	16,588	543	17,131
Manufacturing	11,280	841	12,121	18,883	1,408	20,291	26,734	1,993	28,727
Store Buyers and Department Heads	5,196	1,503	6,699	8,698	2,516	11,214	12,315	3,562	15,877
CLERICAL AND KINDRED WORKERS									
Attendants, Physicians and Dentists Office	32	2,005	2,037	54	3,356	3,410	76	4,752	4,828
Bank Tellers	957	2,588	3,545	1,602	4,332	5,934	2,268	6,134	8,402
Bookkeepers	4,410	23,185	27,595	7,382	38,812	46,194	10,452	54,948	65,400
Cashiers	2,298	14,152	16,450	3,847	23,690	27,537	5,446	33,540	38,986
Collectors, Bill and Account	889	244	1,133	1,488	408	1,896	2,107	578	2,685

OCCUPATIONS	Employed 1960			Projected Employment 1970			Projected Employment 1980		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Dispatchers and Starters, Vehicle	1,312	246	1,558	2,196	412	2,608	3,109	583	3,692
File Clerks	256	1,861	2,117	429	3,115	3,544	607	4,411	5,018
Insurance Adjusters, Examiners & Investigators	1,235	138	1,373	2,067	231	2,298	2,927	327	3,254
Mail Carriers	4,820	153	4,973	8,069	256	8,325	11,423	363	11,786
Office Machine Operators	1,112	3,459	4,571	1,861	5,790	7,651	2,635	8,198	10,833
Payroll & Timekeeping Clerks	684	940	1,624	1,145	1,574	2,719	1,621	2,228	3,849
Postal Clerks	4,056	986	5,042	6,790	1,651	8,441	9,613	2,337	11,950
Receptionists	79	3,519	3,598	132	5,891	6,023	187	8,340	8,527
Secretaries	961	40,959	41,920	1,609	68,565	70,174	2,278	97,073	99,351
Shipping and Receiving Clerks	4,050	511	4,561	6,780	855	7,635	9,599	1,211	10,810
Stenographers	289	4,607	4,896	484	7,712	8,196	685	10,919	11,604
Stockclerks and Storekeepers	6,953	1,296	8,249	11,639	2,170	13,809	16,479	3,072	19,551
Telephone Operators	467	9,161	9,628	782	15,336	16,118	1,107	21,712	22,819
Ticket, Station & Express Agents	2,260	938	3,198	3,783	1,570	5,353	5,356	2,223	7,579
Typists	429	9,067	9,496	718	15,178	15,896	1,017	21,489	22,506
SALES WORKERS									
Advertising Agents & Salesmen	911	226	1,137	1,525	378	1,903	2,159	536	2,695
Auctioneers	90	4	94	151	7	158	213	9	222
Demonstrators	48	488	536	80	817	897	114	1,157	1,271
Hucksters & Peddlers	591	716	1,307	989	1,199	2,188	1,401	1,697	3,098
Insurance Agents, Brokers & Underwriters	11,590	1,620	13,210	19,402	2,712	22,114	27,468	3,839	31,307
Real Estate Agents & Brokers	9,394	3,074	12,468	15,726	5,146	20,872	22,264	7,285	29,549
Stock and Bond Salesmen	868	84	952	1,453	141	1,594	2,057	199	2,256
Salesmen and Sales Clerks	63,838	41,697	105,535	106,865	69,801	176,666	151,296	98,822	250,118
Wholesale Trade	12,785	650	13,435	21,402	1,088	22,490	30,300	1,541	31,841
Retail Trade	35,346	38,530	73,876	59,169	64,499	123,668	83,770	91,316	175,086
CRAFTSMEN, FOREMEN & KINDRED WORKERS									
Airconditioning, Heating & Refrigeration Mechanic	2,343	9	2,352	3,922	15	3,937	5,553	21	5,574
Airplane Mechanic	8,901	77	8,978	14,900	129	15,029	21,095	182	21,277
Automobile Mechanic & Repairmen	19,550	53	19,603	32,727	89	32,816	46,334	126	46,460
Baker	2,020	675	2,695	3,381	1,130	4,511	4,787	1,600	6,387
Brickmasons, Stonemasons & Tile Setters	7,325	35	7,360	12,262	59	12,321	17,360	83	17,443

OCCUPATIONS	Employed 1960			Projected Employment 1970			Projected Employment 1980		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Cabinetmakers	2,640	28	2,668	4,419	47	4,466	6,257	66	6,323
Carpenters	30,138	113	30,251	50,451	189	50,640	71,427	268	71,695
Cement and Concrete Finishers	1,971	3	1,974	3,299	5	3,304	4,671	7	4,678
Compositors & Type Setters	3,030	315	3,345	5,072	527	5,599	7,181	747	7,928
Decorators and Window Dressers	924	1,009	1,933	1,547	1,689	3,236	2,190	2,391	4,581
Electricians	9,643	41	9,684	16,142	69	16,211	22,854	97	22,951
Electrotypers & Sterotypers	161	5	166	270	8	278	382	12	394
Engravers, Except Photoengravers	153	48	201	256	80	336	363	114	477
Excavating, Grading and Road Machinery Operators	8,352	21	8,373	13,981	35	14,016	19,794	50	19,844
Glaziers	656	11	667	1,098	18	1,116	1,555	26	1,581
Jewelers, Watchmakers, Goldsmiths & Silversmiths	870	28	898	1,456	47	1,503	2,062	66	2,128
Linemen & Servicemen, Telegraph, Telephone & Power	8,497	282	8,779	14,224	472	14,696	20,138	668	20,806
Machinists	5,070	84	5,154	8,487	141	8,628	12,016	199	12,215
Millwrights	651	---	651	1,090	---	1,090	1,543	---	1,543
Motion Picture Projectionists	487	4	491	815	7	822	1,154	9	1,163
Office Machine Repairmen	650	4	654	1,088	7	1,095	1,541	9	1,550
Opticians, & Lens Grinders & Polishers	477	33	510	798	55	853	1,130	78	1,208
Painters, Construction & Maintenance	15,182	285	15,467	25,415	477	25,892	35,981	675	36,656
Photoengravers & Lithographers	464	9	476	777	15	792	1,100	21	1,121
Plasterers	3,003	11	4,004	6,684	18	6,702	9,463	26	9,489
Plumbers & Pipe Fitters	7,518	38	7,556	12,585	64	12,649	17,818	90	17,908
Pressman & Plate Printers, Printing	976	32	1,008	1,634	54	1,688	2,313	76	2,389
Radio & Tlelvision Repairman	4,023	47	4,070	6,735	79	6,814	9,535	111	9,646
Roofers & Slaters	2,726	4	2,730	4,563	7	4,570	6,461	9	6,470
Shoemakers and Repairers, Except Factory	773	49	822	1,294	82	1,376	1,832	116	1,984
Structural Metal Workers	1,122	---	1,122	1,878	---	1,878	1,659	---	2,659
Tailors	570	128	698	954	214	1,168	1,351	303	1,654
Tinsmiths, Coppersmiths & Sheetmetal Workers	3,639	45	3,684	6,092	75	6,167	8,624	107	8,731
Toolmakers and Diemakers and Setters	1,073	8	1,081	1,796	13	1,809	2,543	19	2,562
Upholsterers	1,300	156	1,456	2,176	261	2,437	3,081	370	3,451
OPERATIVES & KINDRED WORKERS									
Assemblers	2,011	1,728	3,739	3,366	2,893	6,259	4,766	4,095	8,861

OCCUPATIONS	Employed 1960			Projected Employment 1970			Projected Employment 1980		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Attendants, Auto Service & Parking	10,616	317	10,933	17,771	531	18,302	25,160	751	25,911
Bus Drivers	3,061	1,375	4,436	5,124	2,302	7,426	7,255	3,259	10,514
Checkers, Examiners & Inspectors, Mfg.	1,706	1,489	3,195	2,856	2,493	5,349	4,043	3,529	7,572
Deliverymen and Routemen	11,186	529	11,715	18,725	886	19,611	26,511	1,254	27,765
Dressmakers & Seamstresses, exc. Factory	95	4,038	4,133	159	6,760	6,919	225	9,570	9,795
Manufacturing									
Paper and Allied Products	4,005	803	4,808	6,704	1,344	8,048	9,492	1,903	11,395
Ship and Boatbuilding & Repairing	554	57	611	927	95	1,022	1,313	135	1,448
Meat Cutters, exc. Slaughter and Packing House	4,389	210	4,599	7,347	352	7,699	10,402	498	10,900
Oilers & Greasers, exc. Auto	1,346	---	1,346	2,253	---	2,253	3,190	---	3,190
Packers & Wrappers, (N.E.C.)	2,956	5,748	8,704	4,948	9,622	14,570	7,006	13,623	20,628
Painters, exc. Construction and Maintenance	2,466	198	2,664	4,128	331	4,459	5,844	469	6,314
Sailors and Deck Hands	1,124	8	1,132	1,882	13	1,895	2,664	19	2,683
Sewers & Stitchers, mfg.	269	4,982	5,251	450	8,340	8,790	638	11,807	12,445
Stationary Firemen	1,361	4	1,365	2,278	7	2,885	3,226	9	3,235
Taxicab Drivers & Chauffers	4,207	136	4,343	7,043	228	7,271	9,971	322	10,293
Truck & Tractor Drivers	45,923	358	46,281	76,875	599	77,474	108,838	848	109,686
Welders and Flame Cutters	5,392	87	5,479	9,026	146	9,172	12,779	206	12,985
PRIVATE HOUSEHOLD WORKERS									
Babysitters, Private Household	145	6,873	7,018	243	1,505	1,748	344	16,289	16,633
Housekeepers, Private Household	84	4,379	4,463	141	7,330	7,471	199	10,378	10,577
Private Household Workers	2,483	61,607	64,090	4,157	103,130	107,287	5,885	146,008	151,893
SERVICE WORKERS, EXC. PRIVATE HOUSEHOLD									
Attendants, Hospital & Other Instit.	2,707	6,824	9,531	4,532	11,423	15,955	6,416	16,173	22,589
Attendants, Recreation & Amusement	1,495	221	1,716	2,503	370	2,873	3,543	524	4,067
Barbers	5,136	277	5,413	8,598	464	9,062	12,172	656	12,828
Bartenders	3,315	619	3,934	5,49	1,036	6,585	7,857	1,467	9,324
Chambermaids & Maids, exc. Private Household	235	12,481	12,716	393	20,893	21,286	557	29,580	30,137
Charwomen & Cleaners	1,008	2,175	3,183	1,687	3.641	5,328	2,389	5,155	7,544
Cooks, exc. Private Household	7,841	9,585	17,426	13,126	16,045	29,171	18,583	22,716	41,299
Counter & Fountain Workers	793	3,016	1,327	5,049	6,376	1,879	7,148	9,027	
Hairdressers and Cosmetologists	1,169	9,343	10,512	1,957	15,640	17,597	2,771	22,143	24,913

OCCUPATIONS	Employed 1960			Projected Employment 1970			Projected Employment 1980		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Janitors and Sextons	11,082	926	12,008	18,551	1,550	20,101	26,264	2,195	28,459
Kitchen Workers, (N.E.C.) exc. Private Household	4,287	5,732	10,019	7,176	9,595	16,771	10,160	13,585	23,745
Nurses, Practical	---	5,046	5,046	---	8,440	8,440	---	20,003	20,003
Porters	6,189	79	6,268	10,360	132	10,492	14,668	187	14,855
Firemen, Fire Protection	3,726	12	3,774	6,298	20	6,318	8,916	28	8,944
Guards, Watchmen and Doorkeepers	5,956	189	6,145	9,970	316	10,287	14,116	448	14,564
Policemen and Detectives	6,617	154	6,771	11,077	258	11,335	15,682	365	16,047
Waiters and Watiresses	4,622	27,095	31,717	7,737	45,357	53,094	10,954	64,215	75,169
FARM LABORERS AND FOREMEN									
Farm Foremen	2,488	32	2,520	4,165	54	4,219	5,897	76	5,973
Farm Laborers, Wage Workers	45,094	16,762	61,856	75,487	28,060	103,547	106,873	39,726	146,599
LABORERS, EXC, FARM AND MINE									
Carpenters, Helpers, exc. Logging and Mining	1,715	28	1,743	2,871	47	2,918	4,065	66	4,131
Gardeners, exc. Farm and Groundskeepers	10,828	135	10,963	18,126	226	18,352	25,662	320	25,982

As projected by the U. S. Department of Labor, these figures indicate that between 1960 and 1970 the number of employees in the Florida Labor Force will increase by approximately 6.74 percent each year from growth. Approximately 3.5 percent of the 1960 labor force will leave the labor force annually due to death and retirement. If these projections are correct, between 1960 and 1970 a number of workers equal to the number employed in 1960 must have been trained and prepared to enter the labor market.

The employment statistics for 1960 were taken from the 1960 United States Census of the population. The total labor force for 1970 and 1980 was determined as stated on the previous table of, "Population and Labor Force for Florida and Projections." The projected number of workers employed in each occupation in 1970 and 1980 was determined by first calculating the percent of growth of the total employed labor force for the period 1960-70 and 1960-80. The percent of growth for the interval was multiplied by the number employed in the occupation in 1960 and the sum was added to the number employed in the occupation in 1960.

FLORIDA'S

DEMAND FOR ADDITIONAL TRAINED WORKERS, IN SELECTED OCCUPATIONS

AS DETERMINED IN A SURVEY CONDUCTED BY THE FLORIDA STATE EMPLOYMENT SERVICE

Many individuals, organizations, and institutions realized that it was imperative that we have more recent information on our labor force, than could be secured from the 1960 census, if vocational training programs were to be realistically planned.

To answer this need the Florida State Employment Service conducted a statewide survey in the summer of 1965. The purpose of the survey was to determine the number of additional trained workers that would be required by 1967 for replacement and expansion needs in selected occupations. The employment service selected, for inclusion in the survey, the occupations that it felt would require training for a considerable number of personnel.

The statistics gathered through the survey were secured either by personal contact made with the employer or by mailing a questionnaire to the employer.

Most of the information contained in the tables on the following six pages was compiled from the findings of this survey. Although the findings are already becoming out of date, they are more recent than the statistics given in the 1960 census and should be helpful both in planning vocational education training programs and for vocational guidance.

DEMAND FOR OCCUPATIONS IN FLORIDA BY COUNTY

OR SURVEY AREA AND BY SUPERVISORY AREA

CHART VI

Employment Demand Code Projected 1965-67°

W - Under 15 additional employees needed for replacement and expansion
X - 15-44 additional employees needed for replacement and expansion
Y - 45-75 additional employees needed for replacement and expansion
Z - Over 75 additional employees needed for replacement and expansion

Employment Demand Code Projected November-May 1967+

A - Strong demand for workers
B - Good job opportunities
C - Local supply adequate but occupation is important in area

Counties as grouped for Area Survey and by Supervisory Area	SUPERVISORY AREAS	Clerk Typist	Bookkeeper	Salesman	Mechanic, Auto	Draftsman	Bookkeeping-Mach Operator	Secretary	Stenographer	Cook	Waitress	Clerk, Gen Office	Auto-Body Repairman	Machinist	Nurses Aid	Carpenter	Cashier	Welder	Bankteller	Clerk, Stock	Nurse, LP	Electrical Applia Serviceman	Janitor	Mech, Air Cond & Refrigeration	Service-Station Attendant	Mach Operator, Gen Business	Routeman	Sewing-Mach Oper	Mechanic, Truck	Telephone Oper
Escambia	SUPERVISORY AREA I	Z	X	Z	Z	X	X	Z	Z	Y			Z	X			Y	W			X			W		Z				
Santa Rosa																														
Okaloosa		Z	X	Z		X	X	Y	X	X	Z																			
Walton																														
Bay			B	C	A	C	B	B	B	A	A		B	C	C	B	C	B	B	C	C	B	B	B	B			A	B	
Franklin																														
Gulf																														
Jackson		Z	Y	Z	Y	X	Y						Y		Z	Z	Z	Y												
Calhoun																														
Holmes																														
Liberty																														
Washington																														
Leon		C	B	B	B		C	A	B	C	A	C	C	C	C	B	C	B	B	C	C	C	C	C	B		B	C	C	C
Gadsden																														
Jefferson																														
Wakulla																														
Taylor		W	X	Y	X	W	X	X	X			X	X			Y		Z		X		W					W	W		
Madison																														
Lafayette																														
Dixie																														
Columbia		Y	Y		W			*	X	X	Y				Z	X					X	X								
Hamilton																														
Suwannee																														
Alachua		Z	W	X		Y	X		Y	Y	Z	Z					W			X			X				W	W		X
Bradford																														
Gilchrist																														
Union																														
Duval		Z	Z	Z	Z	Z	Y	Z	Z	Y	Z	Z	X	Z	X	Z	Z	Z	Y	Z	Y	X		Z	Z	X	Z	Z	X	Z
Baker																														
Nassau																														
*Clay																														
Putnam	SUPERVISORY AREA II	X	X	X	W			W	X		X	Y			X	W		W		X	X		X		X					X
St. Johns																														
Flagler																														
Marion		Z	X	Z		Y	Y	Y	X	X	Y								X			X	Y							
Citrus																														
Levy																														
Volusia		B	C	B	B	C	C	A	A	B	A	B	B	B	C	C	C	C	C	C	B	B	C	B	B	C	C		C	C
Lake		X	X		X	W	W	Y	X	W			W		X		X				X	W		X					X	
Sumter																														
Seminole										X	Y			X	Z													Z		
Hillsborough		Z	Z	Z	Z	Z	Z	Z		Z	Z	Z							Z		Z			Z	Z	Z	Z			
Hernando																														
Pasco																														
Orange		Z	Z	Z	Z	Z		Z	Z	Z		Z	Z	Y	Z			Z	Z	Z	Z	Y		Y	Z					Z
Osceola																														
Brevard		A	C	B	A	C		B	A	B	A	B	C	B	C	C		B	C	C	C	B	C	A	A	C	B		C	C
Pinellas		C	C	B	A	C	C	A	A	A	A	C	A	A	A	A	B	C	C	C	B	B	C	B	B		C	B	B	
Polk		Z	Y	Z	Y	X	W	Z	X	Z	Z	Z	X	X			Z	Z		Z	X		Z	X	Z				W	
*Hardee																														
*Highlands																														
Manatee	SUPERVISORY AREA III	A	C	B	B		C	A	A	B	C	B	B	B	C	B	C	A		B	A	B		B	A	B	B		C	C
St. Lucie		A	C	A	A	C		A	A	C	B	A		B	B	B	B		C		B	B	C	B			C		A	C
Indian River																														
Martin																														
Okeechobee																														
Sarasota		Y	X	Z	X	X	X	X	X																					
Lee		Y	Y	Z			W	X	W	Z	Z											Z					Y			
DeSoto																														
Charlotte																														
Collier																														
Palm Beach		B	C	C	A	C	B	B	B	C	B	C	B	A	B	B	C	C	B	C	B	B	C	B	B	C	B	C	A	C
Glades																														
Hendry																														
Dade		Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	Z	X	Z	Z	Z	Y	X		Y		Z	X		Z	X	Z	Z		Z
Monroe		B	B	B	B	C	B	A	A	B	B	B	B	C	B	B	C	C	B			C	C	C	B		C	B	B	C
Broward		Z	Z		Z	Z	Z	Z	Z	Z	Z		X	Z	Z		Z	Z	X				Z	Z	Z		Y	Z		Y

°Based upon a survey by the Florida Employment Service in the summer of 1965.
+"Opportunities For Work in Principal Areas of Florida" November-May 1967. Compiled by the Florida State Employment Service.
*Clay County is in Area II, however, it was combined with Duval, Baker and Nassau Counties by the Employment Service for this survey. Hardee and Highlands Counties are in Area III, but were included in with Polk County for the survey.

CHART VI
(Continued)

COUNTIES	AREAS	OCCUPATIONS																												
Counties as grouped for Area Survey and by Supervisory Area	SUPERVISORY AREAS	Baker	Brick Mason	Key-Punch Oper	Meat Cutter	Painter	Cabinet Maker	Cook, Short Order	Sheet-Metal Wkr	Truck Driver	Clerk, Sales	Electrician, Const	Maintenance Super.	Transcribing-Mach Operator	Upholsterer	Beauty Operator	Electronics Tech	Nurse, Registered	Painter, Spray	Presser	Mechanic, Diesel	Plumber	Repairman, Radio-&-TV	Dental Assistant	Pipe fitter	Programer, Detail	Repairman, Elec Motors	Medical Tech	Roofer	Maintenance Mech
Escambia	SUPERVISORY AREA I	W	Y	W		Z			W							X		Z				W	Y		W					X
Santa Rosa																														
Okaloosa			X										W				X									W				
Walton																														
Bay		B	B	B	B	C	C	A	C	B		B	C		B	B	C	A	C	C	C	C	B	C	C		B		B	C
Franklin																														
Gulf																														
Jackson																														
Calhoun																														
Holmes																														
Liberty			Y											Y		X														
Washington																														
Leon																														
Gadsden																														
Jefferson																														
Wakulla		C	C	C	C	C	C	C	B	C	B	C		C	B	C		B		C	C	C	B		C	B		C	B	
Taylor																														
Madison																														
Lafayette																														
Dixie		W			W		W	X				W				W			X		W		W	W	W		W			
Columbia																														
Hamilton																	W													
Suwannee																														
Alachua																														
Bradford																														
Gilchrist																														
Union								Z			Z																			
Duval																														
Baker																														
Nassau																														
*Clay		Z		Z	Z	Z		Y	Y	Z	Z	Z	X	Y	X	X		Y	X	X	W	X		W	Y	X		X	W	
Putnam	SUPERVISORY AREA II																													
St. Johns																														
Flagler		X	W		W	W				Y	Y	X																		W
Marion																														
Citrus																														
Levy				W																										
Volusia		C	C	B	B	C	C	B	C	C	B	C		C	C	C	B	B	C	B	C	C	C	C		C	C		C	C
Lake																														
Sumter			X									X					W												
Seminole									X						X	X				X			X							
Hillsborough																														
Hernando																														
Pasco			Z						Z				Z			Z		Z												
Orange																														
Osceola				X	Y		Z	Z					Z				Y			Z			Y							
Brevard			C	A	C	C		A	B	C		B			C	C	B	B	C	C	C	B	B	C	C	B	C		C	C
Pinellas		B	C		B	C	B	A	B	C	C	C	C	C	B	C	C	B	C		C	C	B	C				B	B	
Polk																														
*Hardee																														
*Highlands							X	Z	Y		Z			W						X							X	X	Y	Z
Manatee	SUPERVISORY AREA III	C	C		B	B	C	C	B	A		C	B	B				A	C		B	C	B	B		B	B	B	A	B
St. Lucie																														
Indian River																														
Martin																														
Okeechobee		C	C		C	C	C	C	B	C			C	B		C		A	C	B	C	C	B	C	C	C	C	C	C	C
Sarasota			B																											
Lee																														
DeSoto																														
Charlotte										W	Z																			
Collier																														
Palm Beach																														
Glades																														
Hendry		B	B	C	B		B	B	B	C	C	C	C	B	A	C	B	A	C	B	C	B	A	C	C	B	C	C	C	C
Dade				Z	Z	X	Z		Z	Z		Z	X		W					Z		Z								
Monroe		C	B	C	C	C		B	C	B	C	B	C	C	C					C	C	B	C	C	C	C	C	C	B	C
Broward				Z			X		Z				X		W		Z		Y	Y						W		X		

CHART VI
(Continued)

COUNTIES	AREAS	OCCUPATIONS																											
Counties as grouped for Area Survey and by Supervisory Area	SUPERVISORY AREAS	Alteration Tailor	Counterman, Cafeteria	Office-Machine Serviceman	Chambermaid	Chef	Offset Pressman	Tractor Mechanic	Bulldozer Oper	Cement Finisher	Dragline Operator	Gas-Appliance Serviceman	Instrument Mech	Tool-&-Die Maker	Fork-Lift-Truck Operator	Lineman	Medical Assistant	Dry Cleaner	Mechanic, Constr Equipment	Sheet-Metal Wkr, Aircraft	Tile Setter	Tire Recapper	Trailer-Truck Driver	Waiter	X-Ray Technician	Laboratory Tech	Chemist, Assist	Compositor	Farm-Equipment Mech
Escambia	SUPERVISORY AREA I												W												Y		Y		
Santa Rosa														-		X													
Okaloosa																													
Walton																													
Bay																													
Franklin																													
Gulf		B	B	C	A	A	C		C	B	C							B	C		C	C		A	B				
Jackson																													
Calhoun																													
Holmes																													
Liberty																													
Washington								Y																					X
Leon																													
Gadsden																													
Jefferson																													
Wakulla		C	C	C	C	C	B		C	C	C	C		C		C		C	C		C			C	C		C		
Taylor																													
Madison																													
Lafayette																													
Dixie				W				X				W	W	W	W		W												
Columbia																													
Hamilton																													
Suwannee																				Y									
Alachua																													
Bradford																													
Gilchrist																													
Union																													
Duval																													
Baker																													
Nassau																													
*Clay				Y			W		Y		X				Z		X						Z					W	
Putnam	SUPERVISORY AREA II																												
St. Johns																													
Flagler																													
Marion																													
Citrus																													
Levy																													
Volusia		C	C		A	C				C		C		A		C		C	C		C			C					
Lake																													
Sumter								X																					
Seminole																					X								
Hillsborough																													
Hernando																													
Pasco																													
Orange																							Z						
Osceola		Y																		Y									
Brevard		C			B	C	C		C	C	C	C		C		C		C		D	C								
Pinellas		B	C	C	C	C	C			C	C	C		B				C	C	B				B	C				
Polk																													
*Hardee																						X							
*Highlands		W	X					W					X													Y			
Manatee		B	C		C	C			C	C	C													C	D				
St. Lucie	SUPERVISORY AREA III																												
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Hendry		B	C	C	B	C	C		C	B	C	B		C					D	C	C				C	C			
Dade							Y		Z				X	Y					Z				Z					Z	
Monroe		B	B	C	B	B	C		B	B	B	C				B			B		C	C		B	C				
Broward													X	X															

OCCUPATIONS IN PRINCIPAL AREAS OF FLORIDA

RANKED IN ORDER OF DEMAND

The local offices of the Florida State Employment Service, in the larger cities, gather statistics on occupations that are in their area of the state. Twice a year this information is compiled into one publication on a state level. The publication "Opportunities For Work in Principal Areas of The State," covering a six month period. The following information was compiled from the state release covering the period May 1966-November 1966.

Occupation	Rank Order of Demand	Occupation	Rank Order of Demand
Waitress	1	Bookkeeping-Machine Operator	31
Mechanic, Automobile	2	Electrician	32
Stenographer	3	Roofer	33
Secretary	4	Bookkeeper	34
Nurse, Registered	5	Diesel Mechanic	35
Draftsman	6	Salesperson	36
Auto Body Repairman	7	Clerk, General Office	37
Steno-Bookkeeper	8	Clerk, Store	38
Service Station Attendant	9	Block Mason	39
Mechanic, Refrigeration and Air-Conditioning	10	Routeman	40
Machinist	11	Cashier	41
Cook, Shortorder	12	Transcribing-Machine Operator	42
Nurse, L. P.	13	Truck Driver	43
Upholsterer	14	Sales Clerk	44
Salesman, Commissioned	15	Beauty Operator	45
Mechanic, Truck	16	Bricklayer	46
Cook	17	Parts Clerk	47
Sheet-metal Worker	18	Sewing Machine Operator	48
Clerk Typist	19	Machine Operator, Key Punch	49
Electrical Appliance Serviceman	20	Chef	50
Welder	21	Baker	51
TV Service and Repairman	22	Dragline Operator	52
Typist	23	Electric-Motor Repairman	53
Carpenter	24	Gas Appliance Service and Repair	54
Cabinetmaker	25	Meat Cutter	55
Mechanic, Construction Equipment	26	Painter	56
Alterationist	27	Offset-Press Man	57
Bank Teller	28	Tool and Die Maker	58
Plumber	29		
Medical Technologist	30		

TECHNICIANS FOR FLORIDA

INDUSTRIES

The Technical Education Section of the Vocational, Technical and Adult Division, State Department of Education, Tallahassee, Florida conducted a survey in January, 1967 to determine the demand for Technicians in Florida.

The following pages present the highlights of the survey and summarize the number of technicians employed in 1964 and 1967 and projects the anticipated need for technicians in major technologies over the next twelve months.

CLAUDE R. KIRK, JR.
Governor

FLORIDA INDUSTRIAL COMMISSION
FLORIDA STATE EMPLOYMENT SERVICE
TALLAHASSEE

T. W. JOHNSTON
Chairman
L. F. SHEBEL
Director

"OPPORTUNITIES FOR WORK IN PRINCIPAL AREAS OF FLORIDA," MAY 1969 - NOVEMBER 1969

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ACCOUNTANT, CERTIFIED PUBLIC	C	D	C	B	D	E	D	B	C	E	D	B	B	B	C	D	B	B	C	C
ACCOUNTANT, COST	C	D	E	C	D	E	C	C	C	E	D	C	B	C	C	D	C	B	C	C
ACCOUNTANT, GENERAL	C	D	C	C	D	D	C	C	B	E	C	B	B	B	C	C	C	B	C	C
BIOLOGIST	E	E	E	E	E	E	E	E	E	E	E	D	E	E	D	E	D	C	E	E
BUSINESS EXECUTIVE	D	E	E	D	D	E	E	E	D	E	E	E	E	E	D	D	D	D	D	D
CHEMIST	E	E	E	E	E	D	E	E	C	C	E	E	E	C	E	E	C	C	E	D
CHEMIST ASSISTANT	E	D	E	E	E	E	D	E	C	C	E	E	E	C	E	E	C	D	E	D
CONTROLLER	D	D	E	C	E	E	E	C	D	E	D	D	E	E	D	D	C	C	D	D
DENTAL LAB TECHNICIAN	C	D	C	B	C	E	C	D	D	E	E	C	B	D	D	C	C	D	C	C
DENTIST'S ASSISTANT	C	D	C	B	C	E	C	B	C	E	C	B	B	C	C	D	C	C	C	C
DIETITIAN	B	E	E	C	D	E	D	C	C	E	E	C	C	B	C	E	D	C	D	C
DRAFTSMAN, ARCHITECTURAL	B	E	C	A	B	B	C	B	B	E	E	B	D	C	C	C	B	C	B	C
DRAFTSMAN, ELECTRICAL	C	D	C	A	E	B	C	C	B	C	C	C	D	C	C	D	E	C	C	C
DRAFTSMAN, MECHANICAL	C	D	C	A	E	B	C	C	B	C	B	B	D	C	C	C	E	B	C	C
DRAFTSMAN, STRUCTURAL	C	D	E	A	E	C	C	C	B	C	D	B	D	D	C	D	C	B	C	C
ENGINEER, AERONAUTICAL	E	C	E	E	E	E	E	E	D	E	D	E	E	E	D	E	E	E	D	D
ENGINEER, CHEMICAL	E	E	E	E	E	D	E	E	C	C	E	E	D	C	E	E	E	E	D	D
ENGINEER, CIVIL	C	E	E	A	D	E	D	D	B	E	D	B	D	C	C	C	C	C	B	C

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ENGINEER, ELECTRICAL	C	C	E	B	E	C	E	E	B	B	C	C	D	C	D	E	E	C	C	C
ENGINEER, ELECTRONICS	C	C	E	B	E	C	E	C	C	E	A	D	D	D	C	C	D	C	B	C
ENGINEER, INDUSTRIAL	C	D	E	D	E	E	E	E	B	E	D	D	E	C	D	E	E	C	C	D
ENGINEER, MECHANICAL	C	C	C	C	E	D	E	D	B	B	B	B	C	C	D	D	E	B	C	C
ENGINEER, SALES	D	E	E	E	E	E	E	E	D	E	E	E	E	E	E	E	E	E	E	E
ENGINEER, STRUCTURAL	D	E	E	C	E	E	E	D	C	E	D	B	E	E	D	D	D	C	D	C
LIBRARIAN	D	E	C	C	E	E	D	D	D	E	E	C	C	C	D	E	B	A	C	C
MANAGER, HOTEL	E	E	E	D	D	E	E	D	D	E	E	C	D	E	D	D	E	E	C	E
MANAGER, MOTEL	D	E	C	D	D	E	D	D	D	E	E	C	D	D	D	D	D	E	C	D
MANAGER, OFFICE	D	E	E	D	D	E	D	D	D	E	E	E	D	D	D	D	D	D	D	D
MANAGER, PERSONNEL	E	E	E	D	D	E	E	E	D	E	D	E	D	E	D	D	C	C	D	D
MANAGER, PRODUCTION	D	E	E	D	E	E	E	D	D	E	E	C	D	E	E	E	E	E	E	D
MANAGER, RESTAURANT	D	E	C	C	D	E	D	D	C	E	D	C	D	E	C	C	D	E	D	C
MANAGER, RETAIL	D	E	C	C	C	D	C	D	C	E	E	C	D	E	D	D	D	E	C	C
MANAGER, TRAFFIC	E	E	E	E	E	E	E	E	D	E	E	E	D	E	E	E	E	E	E	D
MANAGER, TRAINEE	C	D	B	B	B	D	D	C	C	D	B	D	B	C	C	C	B	D	B	C
MATHEMATICIAN	E	C	E	E	E	B	E	E	C	E	E	E	E	E	E	E	D	E	D	D
MEDICAL TECHNOLOGIST	B	D	E	A	C	D	B	B	B	B	E	B	E	B	D	C	B	B	C	B
NURSE, LICENSED PRACTICAL	A	C	C	A	B	E	B	B	C	C	C	B	B	C	A	A	C	A	A	A
NURSE, REGISTERED	A	C	B	A	B	D	A	B	C	C	C	A	B	C	A	A	B	A	A	A
PHARMACIST, REGISTERED	B	D	C	C	C	E	E	C	C	E	C	C	E	C	C	C	C	A	C	C
PHOTOGRAPHER	D	E	E	E	E	E	D	E	E	E	E	E	E	E	D	E	D	E	D	D
PHYSICAL THERAPIST	C	E	E	C	E	E	E	C	C	E	C	C	E	B	D	C	C	B	C	B
PHYSICIST	E	D	E	E	E	D	E	E	E	E	D	E	E	E	E	E	C	E	E	D
PILOT, AIRPLANE	E	E	E	D	E	E	E	E	D	E	E	E	E	E	E	E	E	E	E	E
PR[illegible]MMER	D	C	C	C	C	C	C	D	B	E	C	C	E	C	D	D	B	A	C	C

PSYCHOLOGIST, CLINICAL	D	E	E	D	E	E	E	E	D	E	D	D	E	E	E	E	C	E	D
PUBLIC RELATIONS MAN	D	E	E	D	E	E	E	E	D	E	E	E	E	E	D	D	C	D	D	D
PURCHASING AGENT	D	E	E	C	D	E	E	E	D	E	E	C	E	E	D	C	C	D	D	D
RADIO ANNOUNCER	E	E	E	D	D	E	D	E	D	E	D	E	C	C	D	D	C	E	D	C
RADIO OPERATOR	E	E	E	D	D	E	D	E	D	E	C	E	C	E	D	D	C	E	D	C
SOCIAL/WELFARE WORK	B	E	C	B	C	C	C	C	C	C	E	B	B	D	D	C	C	C	B	B
SUPERINTENDENT, CONSTRUCTION	D	E	E	B	C	E	E	C	D	E	E	C	C	D	D	C	C	E	C	C
SURVEYOR	B	E	E	B	C	C	C	C	C	E	E	B	D	C	C	C	C	A	B	C
TEACHER, COLL. OR UNIV.	D	E	C	C	D	E	C	E	D	C	E	C	B	C	D	D	D	C	C	C
TEACHER, GRAMMAR SCHOOL	C	D	C	B	C	D	C	C	C	C	C	C	B	D	C	C	D	C	B	C
TEACHER, HIGH SCHOOL	C	D	C	B	C	D	E	C	C	C	C	C	B	D	C	C	D	C	B	C
TEACHER, VOCATIONAL SCHOOL	C	D	C	B	C	E	E	D	C	C	E	C	B	C	C	D	D	C	C	C
TECHNICIAN, AERONAUTICAL	E	E	E	D	E	E	E	E	E	E	E	C	E	E	D	E	E	E	C	E
TECH.A/C, HEAT & REFRIG.	C	C	C	C	C	C	D	C	E	E	C	A	D	D	C	B	C	B	A	C
TECHNICIAN, CHEMICAL	E	E	E	D	E	E	E	E	E	E	E	E	E	C	D	E	C	C	C	D
TECHNICIAN, CIVIC & BLDG. CONSTRUCTION	E	E	E	C	C	E	E	D	E	E	D	C	E	E	D	D	E	C	C	D
TECHNICIAN, DATA PROCESSING	E	D	E	C	C	C	D	E	C	E	D	C	E	C	E	D	B	C	C	C
TECHNICIAN DRAFT & DESIGN	D	D	E	B	C	C	E	C	B	D	C	B	E	C	C	C	B	C	C	C
TECHNICIAN, ELECTRICAL	E	D	E	C	E	C	D	D	E	D	D	C	E	D	C	D	C	D	C	C
TECHNICIAN, ELECTROMECH.	D	C	E	C	E	E	E	C	E	E	C	C	E	D	C	C	D	D	B	C
TECHNICIAN, ELECTRONICS	C	C	E	B	C	C	C	C	E	E	C	C	C	D	B	C	C	D	B	C
TECHNICIAN, GRAPHICS ART	E	E	E	D	D	E	E	E	E	E	E	E	E	E	C	E	E	E	E	E
TECHNICIAN, INDUSTRIAL ENG.	E	E	E	C	E	E	E	E	E	E	E	D	E	D	C	E	C	E	E	E
TECHNICIAN, INSTRUMENTATION	E	C	E	C	E	C	E	E	E	E	D	E	E	C	C	E	E	E	C	E
TECHNICIAN, MECHANICAL	D	D	E	C	D	E	E	E	E	E	D	D	D	C	C	D	C	C	C	C
TECH. TOOL & DIE DESIGN	C	E	E	C	E	D	E	E	E	E	C	C	A	B	C	D	C	C	C	C
TECHNICIAN, X-RAY	B	D	E	B	C	E	E	B	D	E	E	B	B	C	C	D	C	C	B	C

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ADDRESSOGRAPH, MULTILITH, MULTIGRAPH	C	E	E	C	D	E	E	C	D	E	E	C	E	D	D	E	C	D	C	D
BANK TELLER	C	D	C	C	C	E	C	B	C	E	C	A	D	C	C	B	C	D	B	C
BOOKKEEPER	C	C	B	A	C	C	C	B	C	C	C	A	B	C	C	A	B	C	B	B
BOOKKEEPER, MACHINE OPERATOR	C	D	C	B	C	C	C	B	C	E	D	A	B	D	C	C	C	C	B	C
CASHIER	C	D	C	C	C	D	C	C	C	D	D	C	B	D	C	C	C	D	D	C
CLAIM ADJUSTER	D	E	D	D	D	E	E	E	D	E	E	D	D	C	C	D	C	C	C	C
CLERK, ACCOUNTING	C	D	C	B	C	D	C	C	C	E	D	D	D	C	D	C	C	C	C	C
CLERK, CREDIT	C	E	C	C	D	D	C	B	C	D	D	D	D	C	C	D	B	C	C	C
CLERK, FILE	E	E	E	C	D	E	D	D	D	E	E	D	E	D	D	E	D	D	D	D
CLERK, GENERAL	D	C	C	D	D	E	C	D	D	D	C	C	D	D	C	C	D	D	D	D
CLERK, GENERAL OFFICE	C	C	B	B	C	E	C	B	C	C	C	A	D	C	C	B	B	C	B	C
CLERK, HOTEL	C	D	C	C	D	E	D	C	C	E	D	B	D	C	D	C	C	D	D	C
CLERK, PAYROLL	D	D	D	C	D	D	D	C	D	E	D	D	D	C	C	D	D	D	C	C
CLERK, RECEIVING & SHIPPING	C	C	C	A	D	D	C	B	D	C	E	A	D	C	C	C	C	C	B	C
CLERK, STOCK	C	C	D	A	C	D	C	B	C	C	C	B	D	C	C	B	C	D	B	C
CLERK-TYPIST	B	C	C	A	C	C	C	B	B	C	C	A	C	C	C	C	B	B	B	C
COLLECTOR	D	D	B	C	C	D	C	C	B	B	D	A	D	D	C	E	B	B	C	C
DISPATCHER	E	D	E	D	D	E	E	D	C	E	E	D	E	E	E	D	C	D	D	D

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FOOD & BEVERAGE CHECKER	C	D	C	C	E	D	C	D	D	E	D	C	D	E	E	C	C	D	D	C
GROCERY CLERK	C	C	C	B	C	D	C	C	C	D	C	C	C	C	C	C	C	D	C	C
MACHINE OPERATOR, ADDING	E	E	D	C	D	E	E	D	C	E	D	C	E	E	E	D	D	D	D	C
MACHINE OPERATOR, BILLING	D	E	D	C	D	D	D	C	C	D	D	B	E	D	E	C	D	D	C	C
MACHINE OPERATOR, CALCULATING	D	E	D	C	D	D	D	C	C	E	D	B	E	E	C	D	D	D	D	C
MACHINE OPERATOR, KEY-PUNCH	D	C	C	B	D	D	C	C	C	D	E	D	E	C	D	D	B	C	C	C
MACHINE OPERATOR, TABULATING	D	E	C	D	D	D	D	D	C	E	E	C	E	C	D	E	B	D	C	C
PARTS CLERK	C	C	C	B	C	D	C	C	C	C	C	A	C	C	C	B	C	D	B	C
RECEPTIONIST	D	D	C	C	C	E	D	D	D	D	D	C	E	D	C	C	D	D	C	D
SALES CLERK	C	C	B	C	C	E	C	D	C	C	D	D	B	C	C	C	C	D	C	D
SALESMAN (OTHER THAN STRAIGHT COMMISSION)	C	C	C	D	D	E	D	D	C	E	D	C	C	C	C	D	C	D	C	C
SALESMAN, COMMISSION	C	B	B	A	B	C	B	B	B	B	C	A	B	C	C	B	B	C	C	B
SALESMAN - DRIVER	B	C	C	A	B	E	B	C	B	C	C	A	C	C	B	B	B	C	B	C
SALESPERSON	C	C	B	B	C	E	C	C	D	C	C	C	C	C	C	C	C	D	C	C
SECRETARY	A	C	B	A	B	B	B	A	A	A	B	A	B	B	B	A	A	A	A	A
STENOGRAPHER	A	C	B	A	B	B	B	A	B	B	B	A	A	B	B	B	B	A	A	A
STENO-BOOKKEEPER	A	C	C	A	B	C	C	A	B	B	C	A	A	B	B	B	C	A	A	A
SUPERVISOR, MACH-REC. UNIT	E	C	E	C	E	E	E	E	E	E	E	C	E	E	D	E	D	C	D	D
TELEPHONE OPERATOR	C	D	C	C	C	E	C	C	D	E	D	C	D	C	D	D	B	D	C	C
TELEPHONE SOLICITOR	C	C	D	A	D	E	C	B	C	E	E	B	E	D	D	E	C	D	C	C
TRANSCRIBING-MACHINE OPER.	C	D	C	C	C	D	D	C	C	C	D	A	B	C	D	B	C	B	B	C
TYPIST	B	C	C	B	C	E	C	B	B	C	C	A	C	C	C	C	C	A	B	C
UNDERWRITER	E	C	C	A	D	E	D	C	C	E	E	B	E	E	E	C	D	C	C	D

MIAMI - CLERK, BILLING - B
CLAIMS EXAMINER - B

ERIC

CLAUDE R. KIRK, JR.
Governor

FLORIDA INDUSTRIAL COMMISSION
FLORIDA STATE EMPLOYMENT SERVICE
TALLAHASSEE

T. W. JOHNSTON
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"OPPORTUNITIES FOR WORK IN PRINCIPAL AREAS OF FLORIDA," MAY 1969 - NOVEMBER 1969

THIS CHART INDICATES THE ESTIMATED NEED FOR WORKERS FOR THE PERIOD SHOWN. THE 20 CITIES LISTED ARE REPRESENTATIVE OF THE VARIOUS LABOR MARKET AREAS OF THE STATE. ALL OCCUPATIONS COULD NOT BE LISTED, THEREFORE, OCCUPATIONS NOT LISTED MAY BE ASSUMED TO BE NEITHER SHORTAGE NOR SURPLUS OCCUPATIONS.

SHORTAGES ARE FOR WELL QUALIFIED PERSONS, BUT NO ONE CAN BE ASSURED OF A JOB REGARDLESS OF HOW WELL QUALIFIED BECAUSE OF FLORIDA'S EVER EXPANDING ECONOMY AND THE NATURE OF SOME JOBS, THERE IS A POSSIBILITY THAT A FEW OF THESE ESTIMATES WILL CHANGE DURING THE 6-MONTHS PERIOD

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ALTERATION MAN/WOMAN	B	D	C	B	B	C	C	C	B	D	C	C	D	B	B	B	C	C	A	B
AUTO-BODY REPAIRMAN	B	C	B	A	B	B	B	B	B	B	B	B	C	B	B	A	C	A	A	A
BAKER	C	E	C	B	C	C	D	C	C	C	D	C	C	E	B	B	C	C	A	C
BLOCK MASON	B	C	C	A	C	D	C	C	C	C	D	C	B	B	A	D	C	B	B	B
BRICKLAYER	C	C	C	A	E	D	C	C	C	C	D	C	B	B	D	D	C	C	B	B
BULLDOZER OPERATOR	C	C	D	B	C	D	C	C	C	D	D	C	E	C	C	D	C	C	C	C
CABINETMAKER	B	C	C	A	D	C	C	B	B	C	E	B	B	B	A	B	C	B	A	B
CARPENTER	B	C	C	A	C	B	C	B	B	D	D	B	B	B	A	A	B	B	B	B
CEMENT FINISHER	B	D	C	A	C	C	C	C	C	D	D	C	B	B	B	D	C	C	B	B
CITRUS PICKER	D	E	D	E	D	E	E	E	E	C	D	E	E	E	D	E	E	C	E	C
CONSTRUCTION WORKER	A	C	C	A	B	C	B	B	C	C	D	B	C	C	A	A	B	D	C	A
DIE MAKER	C	E	C	C	E	E	E	C	B	E	C	A	A	E	B	E	E	B	B	D
DRAGLINE OPERATOR	C	C	D	B	C	C	C	C	E	D	C	C	E	C	C	D	C	C	C	B
DRY CLEANER	B	C	C	B	D	B	C	C	C	C	D	B	C	B	C	D	C	C	C	B
DRYWALL FINISHER	C	C	C	A	B	C	B	D	D	E	D	C	B	C	E	C	C	C	D	B
ELECTRIC-MOTOR REPAIRMAN	C	C	C	B	D	D	C	D	C	E	C	B	D	B	D	B	D	B	C	A
ELECT. APPLIANCE SERVICEMAN	B	C	C	B	C	C	C	C	B	D	C	A	D	B	B	B	D	C	B	B
ELECTRICIAN	B	C	C	A	B	C	B	C	C	C	C	C	C	B	C	B	C	A	B	B

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ELECTRICIAN, AIRCRAFT	E	E	E	E	E	A	E	E	C	E	D	A	E	C	B	E	E	E	D	E
ELECTRONICS ASSEMBLER	C	D	C	B	E	D	D	C	E	E	C	D	B	E	D	D	E	E	B	C
ELECTRONICS MECHANIC	C	C	E	B	D	B	D	E	E	E	D	D	E	B	D	E	B	C	A	D
ELECTRONICS SOLDERER	C	D	C	B	E	C	E	B	E	E	D	D	E	E	D	D	E	E	C	C
FACTORY WORKER	C	E	E	B	D	E	E	C	C	D	E	A	B	C	D	D	D	C	D	B
GARMENT CUTTER	C	E	E	E	E	D	E	D	E	E	E	B	A	E	D	E	E	C	D	D
GAS APPLIANCE SERVICE & REPAIRMAN	D	C	C	B	C	C	D	D	B	D	D	C	C	B	C	C	C	C	B	C
GLAZIER	E	D	C	B	B	D	E	C	C	E	D	A	C	C	E	B	C	D	C	C
LABORER	A	E	D	B	B	C	B	A	B	C	C	C	B	C	A	B	C	C	B	B
LATHE OPERATOR	C	D	D	C	E	E	E	C	B	E	D	B	D	B	B	C	C	C	B	C
LINEMAN	D	C	C	B	C	D	C	E	C	D	D	E	D	C	D	E	C	C	D	E
MACHINIST	B	B	B	A	D	D	C	C	A	B	B	A	A	A	A	B	C	C	A	C
MAINTENANCE MAN, BLDG.	D	C	D	B	D	C	C	C	C	C	E	B	D	C	B	C	C	D	B	C
MAINTENANCE MECHANIC	C	C	C	B	E	C	D	C	B	C	E	B	C	B	E	D	C	D	B	C
MEAT CUTTER	B	C	B	A	C	D	C	C	B	B	D	C	B	B	B	B	C	B	B	B
MECHANIC, AIRCRAFT ENGINE	E	E	E	D	E	B	E	E	D	E	E	A	E	C	E	E	E	E	D	E
MECHANIC, AIRCRAFT JET	E	E	E	E	E	B	E	E	E	E	E	A	E	C	E	E	E	E	E	E
MECHANIC, AIRCRAFT-RADIO	E	D	E	E	E	C	E	E	E	E	E	B	C	C	E	E	E	E	E	E
MECHANIC, AUTOMOBILE	A	C	B	A	B	B	B	B	A	C	C	A	B	A	A	A	B	A	A	A
MECHANIC, CONST. EQUIP.	C	C	C	B	B	D	C	C	A	C	D	A	D	B	C	C	C	A	B	B
MECHANIC, DIESEL	E	C	C	C	B	D	C	C	A	B	D	B	B	B	D	E	C	B	B	B
MECHANIC, REFRIG. & A/C	B	B	B	A	B	B	D	B	A	D	C	B	A	B	C	B	B	C	A	B
MECHANIC, TRUCK	B	B	C	A	B	D	C	C	A	B	D	B	B	B	B	B	C	A	A	B
MILLWRIGHT	E	E	E	D	E	E	E	E	C	E	E	E	D	C	D	E	E	D	B	E
MOTOR-GRADER OPERATOR	D	E	D	B	B	D	E	C	C	E	D	C	E	C	D	D	E	D	C	C
OF E-MACHINE SERVICEMAN	E	C	E	A	C	C	E	E	C	E	C	C	C	B	C	C	C	C	A	C

Offset-Press Man	C	C	E	B	C	E	C	C	C	D	D	B	C	B	C	C	C	C	C	C
Painter	B	C	C	A	C	C	C	C	C	D	D	D	B	B	B	B	B	C	B	B
Painter, Spray	C	C	C	A	D	C	E	C	C	D	D	C	B	B	C	C	D	B	B	B
Photolithographer	C	C	E	C	E	E	E	D	E	E	D	D	E	E	D	F	C	D	E	C
Pipe Fitter	C	C	E	A	E	D	C	E	C	E	E	D	C	C	D	D	C	C	C	E
Plasterer	B	C	C	A	B	E	C	C	E	E	D	C	E	C	B	C	C	B	C	C
Plumber	A	C	C	A	B	C	C	C	C	E	C	C	C	C	C	C	B	B	B	B
Presser, Silk & Wool	A	C	B	A	B	B	C	C	B	C	D	B	C	C	C	B	B	C	B	B
Printer	D	E	E	B	D	E	E	C	C	E	D	B	E	E	D	C	C	C	C	C
Punch & Drill Press Operator	D	E	E	C	E	D	E	C	C	E	E	B	C	C	C	C	C	C	B	C
Radio Repairman	C	E	D	D	D	D	C	E	C	E	E	C	C	B	D	D	E	E	B	D
Roofer	C	C	C	C	B	D	C	C	B	C	D	A	B	B	A	B	C	C	A	B
Service Station Attendant	C	B	B	B	B	C	C	A	A	C	D	B	B	A	A	B	B	A	B	A
Sewing Machine Operator	B	E	B	B	B	E	D	A	C	E	E	A	C	B	B	B	C	C	A	C
Sewing Machine Repairman	D	E	E	C	C	E	E	D	D	E	E	C	B	E	D	D	B	C	D	E
Sheet-Metal Worker	C	B	C	A	C	B	C	C	A	C	C	B	C	B	B	B	C	C	B	C
Sheet-Metal Worker Aircraft	D	D	E	D	E	C	E	E	C	E	E	B	E	B	B	E	E	E	E	E
Shoe Repairman	C	E	E	A	C	E	E	D	C	E	E	E	E	E	C	C	C	D	D	E
Stationery Engineer	E	D	E	E	E	E	E	E	B	E	E	E	E	C	E	D	C	B	C	E
Terrazzo Worker	C	C	C	A	C	E	C	C	E	E	D	C	C	E	D	C	C	C	C	B
Tile Setter	C	C	C	A	C	E	C	C	D	C	C	C	C	B	D	D	C	C	B	B
Tire Recapper	E	D	C	C	C	C	D	C	D	C	C	C	D	A	E	D	C	B	C	C
Tool Maker	B	E	C	C	E	D	D	C	B	E	C	A	A	E	C	D	C	D	B	C
Tool & Die Maker	B	D	B	B	E	D	E	C	B	E	C	A	A	E	C	D	C	D	B	C
Truck Driver	A	C	C	A	C	C	C	B	B	C	E	C	C	C	A	C	B	B	C	C
Turret-Lathe Operator	C	D	E	C	E	E	E	C	C	E	D	B	D	B	C	D	C	D	A	C
TV Service & Repairman	C	C	B	A	B	B	B	B	A	B	C	B	B	A	A	A	B	C	A	B
Upholsterer	B	C	C	A	C	C	E	B	A	E	C	A	B	B	B	B	B	C	A	B
Watchmaker	C	D	E	C	D	E	E	C	E	E	E	C	E	E	C	D	C	D	B	D
Welder	C	C	C	B	C	C	C	C	C	D	E	C	C	B	B	B	C	C	A	C

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BARMAID	C	B	C	C	D	C	C	C	A	B	C	B	A	C	C	C	C	C	C	B
BARTENDER	C	B	C	D	C	C	C	D	B	C	C	C	A	C	D	C	C	E	D	C
BEAUTY OPERATOR	C	C	C	C	C	B	C	C	C	B	C	C	B	C	B	C	C	D	C	C
BELLMAN	C	C	D	C	D	D	D	C	C	E	C	B	B	D	D	C	C	D	C	D
BUS BOY	C	B	C	B	B	C	B	C	C	C	C	B	A	C	B	B	C	C	C	B
CAR HOP	C	A	C	E	B	C	B	C	B	B	C	E	A	B	B	E	C	D	D	C
CHAMBERMAID (HOTEL & MOTEL)	B	B	A	A	B	C	C	C	D	D	C	B	A	C	A	A	C	C	B	B
CHEF	C	C	C	B	C	B	C	D	B	D	C	C	A	C	B	C	C	C	C	C
CHEF, PASTRY	C	E	C	D	D	C	C	D	B	E	E	C	B	E	C	E	D	E	C	D
COOK	B	B	B	B	B	B	B	C	B	B	C	B	A	B	A	C	B	C	B	B
COOK, SHORT ORDER	B	A	B	B	B	A	B	B	C	B	C	B	A	B	B	B	C	C	C	B
COUNTERGIRL	C	B	C	B	C	C	C	C	A	C	C	A	A	C	B	B	C	C	C	B
COUNTERMAN	C	D	C	B	C	D	C	B	A	B	C	B	B	C	C	C	C	C	C	B
DISHWASHER	B	B	B	A	B	B	B	B	C	A	C	B	A	C	B	B	C	C	C	B
FIREMAN	D	D	C	C	D	D	C	E	E	A	E	C	E	E	D	E	D	D	C	B
HOSTESS	C	D	C	D	D	D	D	C	C	E	D	C	A	C	C	C	C	D	C	C
HOUSEKEEPER (HOTEL & MOTEL)	B	D	C	C	D	D	C	D	B	E	D	C	B	C	D	D	D	D	D	C
HOUSEMAN (HOTEL & MOTEL)	C	D	D	B	D	E	E	B	C	E	E	B	B	E	C	C	E	D	B	B

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E. FEW OR NO JOB OPPORTUNITIES IN THE AREA.

SERVICE OCCUPATIONS	CLEARWATER	COCOA (CAPE KENNEDY)	DAYTONA BEACH	FT. LAUDERDALE	FT. MYERS	FT. WALTON BEACH	GAINESVILLE	HOLLYWOOD	JACKSONVILLE	LAKELAND	MELBOURNE	MIAMI	PANAMA CITY	PENSACOLA	ST. PETERSBURG	SARASOTA	TALLAHASSEE	TAMPA	WEST PALM BEACH	WINTER PARK (ORLANDO)
JANITOR	B	D	B	A	B	C	B	A	C	B	C	B	B	C	A	B	C	D	C	B
KITCHEN HELPER	B	C	B	B	C	C	B	B	C	B	C	B	B	C	B	B	C	B	C	B
LIFEGUARD	E	D	C	C	E	D	E	C	C	E	D	C	B	D	C	B	E	D	C	E
MAID GENERAL	A	C	A	C	C	E	B	C	A	B	C	A	A	C	C	B	B	D	B	B
NURSE AID	C	D	C	A	C	E	C	D	D	D	C	C	B	D	B	B	D	D	C	D
ORDERLY	C	C	C	B	C	D	C	A	D	A	C	B	B	C	B	C	D	C	B	C
POLICEMAN	A	E	A	B	C	D	D	B	B	A	D	B	C	B	A	E	C	D	A	B
PORTER	C	D	C	A	B	D	D	A	C	C	C	A	A	C	B	B	C	B	C	B
SALAD GIRL/MAN	C	D	B	B	C	C	D	C	B	C	D	C	B	C	B	B	C	C	B	B
SANDWICH MAN	C	E	E	E	E	D	D	B	B	C	D	B	B	E	C	E	E	D	C	C
SODA DISPENSER	D	E	C	C	C	D	C	A	B	E	D	C	A	C	B	B	C	E	E	C
STEWARD	E	E	E	D	E	E	E	D	E	E	D	D	B	E	D	E	E	E	E	C
WAITRESS/WAITER	B	A	A	B	B	A	B	B	A	A	C	A	A	B	A	A	A	A	B	A
WATCHMAN AND/OR GUARD	E	D	C	B	D	D	C	D	D	B	C	B	D	D	C	D	D	D	C	C

HIGHLIGHTS OF THE SURVEY

1. The Technical Education Survey of 1967 reports over 29,000 technicians employed in fourteen technical fields.

This represents an increase of over 100 percent during the last three years. Rank order of the top six fields and the number of technicians employed were:

Electronics	7300
Mechanical	4000
Civil and Construction	3400
Drafting and Design	3300
Graphic Arts	2400
Data Processing	2000

2. Firms report substantial increases anticipated in the need for technicians during 1967.

The number of technicians in Florida will need to be increased by more than 25 percent to meet the needs for present vacancies, replacements, and filling of new positions during the next twelve months. The greatest need appears to be:

Electronics	2400
Drafting and Design	1500
Mechanical	1100
Civil and Construction	1000
Data Processing	900

3. The survey identifies eleven counties as having the highest anticipated demand for additional technicians.

In order these are: Dade, Brevard, Hillsborough, Pinellas, Orange, Polk, Duval, Palm Beach, Broward, Okaloosa, and Escambia.

TABLE 8III

DEMAND FOR TECHNICIANS

IN

FLORIDA'S INDUSTRIES

Technician	Number Employed 1964	Number Employed Jan., 1967	Percent Increase 1964-1967	Additional Technicians Needed** 1967	Percent Increase Anticipated During 1967
Aeronautical	139	477	243%	243	51%
A/C, Heating, and Refrigeration	*	464	*	171	37%
Chemical	757	1,043	37%	293	28%
Civil and Construction	2,269	3,407	50%	980	28%
Data Processing	594	2,029	241%	908	44%
Drafting and Design	2,836	3,371	19%	1,512	45%
Electrical	815	1,866	129%	389	21%
Electromechanical	*	1,082	*	332	30%
Electronics	2,709	7,322	170%	2,387	32%
Graphic Arts	1,146	2,446	113%	616	25%
Industrial Engineering	*	523	*	269	51%
Instrumentation	*	426	*	196	46%
Mechanical	1,414	4,065	187%	1,110	27%
Tool and Die Design	244	508	109%	286	56%
TOTAL	12,923	29,029	124%	9,692	33%

*Not surveyed in 1964
**Includes present vacancies, replacements, and anticipated expansion.

Source: Technicians for Florida Industries. A survey conducted by the Technical Education Section of the Vocational, Technical and Adult Division, State Department of Education, Tallahassee, Florida in January, 1967 to determine the demand for Technicians in Florida. The survey included 3,210 selected industries, hiring ten or more employees.

THE MAJOR TECHNICAL FIELDS

Aeronautical

Aeronautical Technology appears to be increasing rapidly in Florida. Employment is up 243 percent since 1964 with an increase from 139 to 477 technicians employed. This growth is expected to continue. Major employment opportunities appear to be in Brevard, Dade, Orange, and Palm Beach counties.

A/C, Heating, and Refrigeration

Air Conditioning, Heating, and Refrigeration Technology ranked as one of the smallest areas of employment among the technologies surveyed. The need was sparsely spread over a number of counties, but the greatest opportunity for employment appears to be in Brevard, Broward, Dade, Duval and Polk counties.

Chemical

The employment of Chemical technicians increased by 37 percent since 1964 and is expected to show a 28 percent increase during the next twelve months. Counties showing the greatest need are Brevard, Dade, Duval, Escambia, Hillsborough and Polk.

Civil and Construction

Half of the counties in Florida showed some need for Civil and Construction technicians during 1967. Those requiring 15 or more during the next twelve months are: Brevard, Broward, Dade, Duval, Hillsborough, Lake, Leon, Marion, Orange, Palm Beach, Pinellas, Polk and Volusia.

Data Processing

Data Processing Technology (Computer Programming) is one of the most rapidly expanding fields in the state with a 240 percent gain since 1964. Another 900 employees are needed this year. Major areas of employment are in the following counties: Brevard, Dade, Duval, Hillsborough, Orange, Palm Beach, Pinellas and Polk.

Drafting and Design

Employment of Drafting and Design technicians is expected to increase by about 1500 during 1967, if the supply is available. This should bring the employment level to about 5000 in the state.

The greatest need appears to be in Bradford, Brevard, Broward, Dade, Duval, Hillsborough, Indian River, Marion, Okaloosa, Orange, Palm Beach, Pinellas, Polk, and Sarasota counties.

Electrical

As expected, this technology has shown considerable growth since 1964. At that time approximately 815 technicians were employed; this has increased to over 1800. A continued demand is expected in Brevard, Dade, Duval, Orange, Pinellas, and Polk counties. Opportunities also exist in Bradford, Hillsborough, Marion, and Volusia counties, but to a lesser degree.

Electromechanical

Electromechanical technology was surveyed for the first time and appears to be a field of some importance in Florida, having over 1000 technicians presently employed and a need for 400 anticipated. At the present time there are no programs to prepare these individuals.

Greatest opportunity for employment will be in Bradford, Brevard, Broward, Dade, Hillsborough, Okaloosa and Pinellas counties.

Electronics

The electronics field in Florida continues to need technicians as new industries move to the state and existing companies are undergoing major expansions. According to survey projections, about 200 job vacancies will occur each month.

Major areas of employment will be in the following counties: Brevard, Broward, Dade, Duval, Hillsborough, Okaloosa, Orange, Palm Beach, Pinellas, Sarasota and Seminole.

Graphic Arts

This technology showed impressive gains in employment (over 100 percent) during the last three years and shows considerable employment increase for the future. Most of this increase is expected to take place in seven counties - Brevard, Dade, Duval, Escambia, Leon, Orange and Pinellas.

Industrial Engineering

Industrial Engineering technicians are being utilized more by industry as evidenced by more than 500 presently employed in the state, and a need for an additional 269 projected for the end of 1967.

At the present time substantial employment opportunity exists in several counties - Brevard, Broward, Dade, Orange, and Polk.

Instrumentation

Instrumentation is the smallest of the technologies with less than 500 employed in the industries surveyed. A need for an additional 200, and increase of 46 percent, is projected. Greatest demand is in Brevard, Broward, Dade, and Polk counties.

Mechanical

In terms of percent growth, this technical field shows a dramatic increase of almost 200 percent. A number of counties will need additional mechanical technicians during 1967. Those counties which project 30 or more new job openings during the next twelve months are: Bradford, Brevard, Broward, Dade, Duval, Hillsborough, Orange, Palm Beach, Pinellas, Polk, and Sarasota.

Tool and Die Design

Although still a relatively minor technology in Florida, Tool and Die Design has shown an increase of 109 percent since 1964. Present indications are that it will continue to be one of the faster growing fields. Employment will be highest in five counties - Broward, Dade, Orange, Palm Beach, and Pinellas.

IN WHAT OCCUPATIONS ARE OUR WORKERS EMPLOYED?

The largest occupational group of workers in Florida is the Craftsmen, Foremen, and Kindred Workers (skilled workers). In 1960 there were 231,867 skilled workers employed in the state. This represented over 13 percent of the total employed labor force and was a 75 percent increase over the number of skilled workers in the labor force in 1950.

The next largest occupational group in the state is that of Clerical and Kindred Workers. There were 223,490 workers in 1960 and the group experienced the largest percent growth rate of all the occupational groups. Clerical and Kindred Workers had a 116 percent growth during the 1950-60 decade.

Operative and Kindred Workers (semi-skilled) is the third largest group of workers in Florida. In 1960 there were 214,151 workers employed in the semi-skilled occupations. This group increased by 60 percent between 1950 and 1960.

The employees in the Service Workers group totaled 170,964 in 1960. This group had a 75 percent increase in the decade between 1950-60.

Information from the 1960 Census of Population showed the five occupations with the greatest number of male employees in Florida as:

OCCUPATIONS	PERCENT GROWTH 1950--1960	1960 EMPLOYEES
Truck and Tractor Drivers	73%	45,923
Sales-Retail Trade	40%	35,346
Carpenters	24%	30,138
Construction Laborers	47%	24,571
Auto Mechanics and Repairman	47%	19,550

The five occupations which had the greatest proportionate growth for male workers during the 1950-60 period were:

OCCUPATIONS	PERCENT GROWTH 1950--1960	1960 EMPLOYEES
Draftsmen	272 %	3,489
Banking and other Finance Managers (Salaried)	223 %	5,362
Managers (const., salaried)	216 %	6,999
Foremen (Manufacturing)	211 %	8,597
Excavating, Grading and Road Machine Operators	210 %	8,352

The 1960 Census listed 34 occupations in Florida that employ the majority of working women. It was found that in 1950 there were 130,339 female employees in these occupations and in 1960 there were 269,035. The growth over the decade was over 100 percent, which indicates a doubling of the work force of women in these occupations during this period.

Of the occupations listed, the five which employed the largest number of women are:

OCCUPATIONS	PERCENT GROWTH 1950--1960	1960 EMPLOYEES
Secretaries	252%	40,050
Sales-Retail Trade	61%	38,530
Waitresses	76%	27,095
Bookkeepers	127%	23,185
Cashiers	147%	14,152

These five occupations account for 53 percent of all females who were employed in all occupations that were listed.

The work force in five of the female occupational catagories grew at a rate more than double the mean rate for all female occupations which were listed. These are:[4]

OCCUPATIONS	PERCENT GROWTH 1950--1960	1960 EMPLOYEES
Receptionist	383%	3,519
Bank Tellers	366%	2,588
Hospital and Institutional Attendant	360%	6,824
Stock Clerks and Storekeepers	319%	1,296
Office Machine Operatives	314%	3,459

Occupations that experienced the greatest percentage loss of workers during the 1950-60 period were:

OCCUPATIONS	PERCENT CHANGE 1950--1960	1960 EMPLOYEES
Farm Laborers (unpaid family workers)	-78%	1,941
Laundry and Dry Cleaning Operators	-68%	3,761
Farmers (owners and tenants)	-46%	21,193
Sawyers	-45%	1,271

[4] The Florida Study of Vocational-Technical Education, Florida State Department of Education, Tallahassee, Florida.

OCCUPATIONS	PERCENT GROWTH 1950--1960	1960 EMPLOYEES
Blacksmiths	-42%	7,360
Fisherman and Oystermen	-41%	3,675
Telegraph Operators	-30%	473
Lumbermen, Raftsmen and Woodcutters	-25%	3,572

IN FLORIDA'S LABOR FORCE IN 1970

CHANCES ARE ....

.... ONE person in EIGHT will be employed in a clerical or kindred occupation.

.... ONE in FOUR working women will be employed in a clerical or kindred occupation.

.... ONE worker of every TEN will be in a service occupation.

.... ONE out of every SEVEN male workers will be working in a semi-skilled (operative) occupation.

.... ONE out of every TWELVE workers will be working in a sales occupation.

FLORIDA'S NEW AND EXPANDED INDUSTRIAL PLANTS, 1965, BY INDUSTRY
(4 employees or more)

Industry (SIC Code)	Number of New Plants		Number of Major Expansions	Number of New Plants and Expansions	Expected Number of Employees	Employment in Existing Plants, December, 1964*	Number of Employees as a % of Existing Employment
	Less than 25 Employees	More than 25 Employees					
Ordnance (19)	....	1	1	1	400	11,606	3.4
Food and kindred products (20)	28	9	12	49	1,460	46,429	3.1
Tobacco manufactures (21)	5	....	....	5	39	5,524	.7
Textile mill products (22)	3	....	....	3	26	1,190	2.2
Apparel and related products (23)	50	14	4	68	1,799	12,821	14.1
Lumber and wood products, except furniture (24)	36	1	4	41	1,058	12,445	8.5
Furniture and fixtures (25)	26	4	4	34	531	7,497	7.1
Paper and allied products (26)	3	5	3	11	668	14,383	4.6
Printing, publishing and allied products (27)	27	3	5	35	743	17,198	4.3
Chemicals and allied products (28)	15	3	7	25	918	18,788	4.9
Products of petroleum and coal (29)	3	....	....	3	29	698	4.1
Rubber products (30)	13	3	2	18	204	2,531	8.1
Leather and leather goods (31)	4	4	1	9	505	1,811	27.9
Stone, clay and glass products (32)	38	4	7	49	980	13,206	7.4
Primary metal industries (33)	2	2	4	8	253	2,534	10.0
Fabricated metal products (34)	32	13	9	54	2,463	15,257	16.1
Machinery, except electrical (35)	30	10	9	49	1,640	9,066	18.1
Electrical machinery, equipment and supplies (36)	18	7	10	35	1,815	18,390	9.9
Transportation equipment (37)	25	12	14	51	4,477	25,364	17.6
Instruments, photographic goods, watches and clocks (38)	5	....	3	8	151	2,574	5.9
Miscellaneous manufacturing industries (39)	29	6	1	36	694	3,271	21.2
All Manufacturing (19-39)	391	100	101	592	20,853	242,583	8.6
Mining (10-14)	4	5	4	13	743	8,753	8.5
Industrial engineering and research	8	2	3	13	448	....	....
Other industries related to manufacturing and mining	16	9	17	42	1,607	....	....
TOTAL	420	116	124	660	23,651	....	....

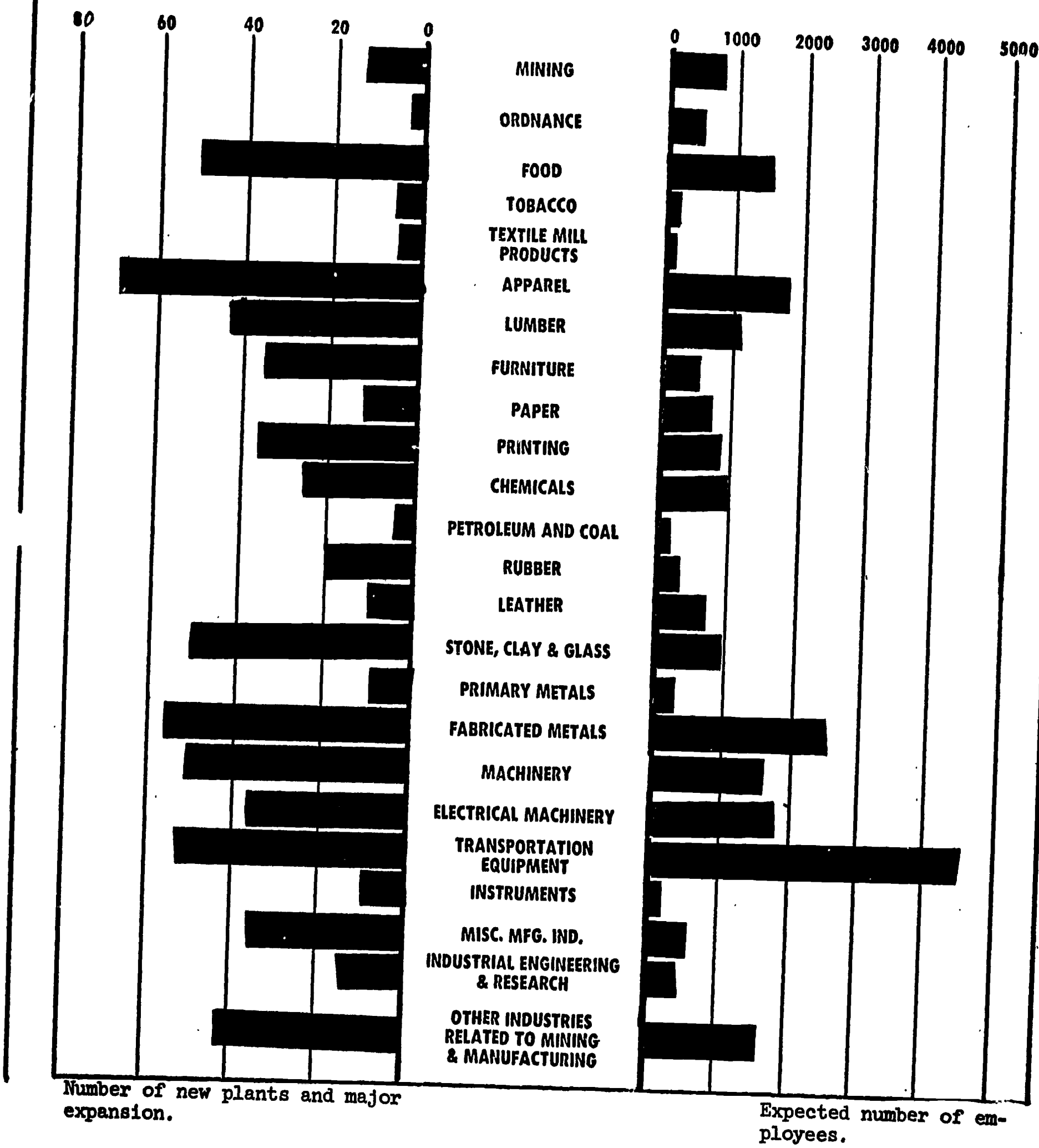
*Employment as reported to the Florida Industrial Commission for establishments covered by the Florida Unemployment Compensation Law.

LARGEST NEW INDUSTRIAL PLANTS AND EXPANSIONS IN FLORIDA, 1965
(in order of expected number of employees)

Name of Company	City	New Plant or Expansion	Principal Product	Expected Number of Employees
Aerodex	Miami	expansion	industrial plating & parts, jet & reciprocating engine overhaul, mfg.	1,000
Frank M. Murphy Div. of Dorr-Oliver	Bartow	expansion	pipe fabrication	900
Tampa Ship Repair & Drydock	Tampa	expansion	ship repair	600
Piper Aircraft Corp.	Vero Beach	expansion	small aircraft	600
Radio Corp. of America	Palm Beach Gardens	expansion	data processing systems	600
General Bronze Corp.	Medley	new	windows, curtain walls & architectural bldg. components	500
Fairchild Hiller Corp.	St. Augustine	expansion	overhaul & modification of Navy flying boats	500
The Martin Company	Orlando	expansion	missiles & electronic devices	400
Republic Aviation Corp.	Crestview	new	modification & repair of Republic F-105 jet fighter-bombers	350-400
Georgia-Pacific Corp.	Chiefland	new	hardwood lumber mill & southern pine plywood plant	300-400
Radiation Incorporated	Palm Bay	expansion	telecommunications engaged in development, production & service of information managenient equipment & systems encompassing data collection, processing, transmission, reception, storage, display, command & control	350
Celotex Corporation	Tampa	new	building board composition; hdqtrs. office	300
Lee Tydewater Cypress Div. of J. C. Turner Lumber Co.	Perry	expansion	lumber	300
Rover Shoe Co.	Bushnell	new	canvas & vinyl shoes	285

Source: Florida Development Commission, Tallahassee, Florida

FLORIDA'S NEW INDUSTRIAL PLANTS AND EXPECTED EMPLOYMENT, 1965, BY INDUSTRY



Source: Florida Development Commission, Tallahassee, Florida

5-YEAR SUMMARY

FLORIDA'S NEW AND EXPANDED INDUSTRIAL PLANTS, 1961-1965, BY COUNTY

County	Number of New Plants and Expansions						Expected Number of Employees					
	1961	1962	1963	1964	1965	5-Year Summary 1961-1965	1961	1962	1963	1964	1965	5-Year Summary 1961-1965
Alachua	5	9	5	5	4	28	110	368	76	65	173	792
Baker	....	....	....	1	3	4	....	....	....	6	17	23
Bay	6	4	5	2	4	21	105	107	125	27	24	388
Bradford	2	1	1	....	1	25	13	2	4	....	18	37
Brevard	14	26	31	25	18	114	866	833	2,067	1,506	617	5,889
Broward	40	64	62	47	48	261	1,199	1,420	989	1,496	1,439	6,543
Calhoun	1	....	2	....	1	4	15	....	190	....	6	211
Charlotte	3	1	2	2	....	8	96	25	10	28	....	159
Citrus	1	1	2	1	2	7	25	25	44	23	35	152
Clay	1	1	2	3	1	8	30	30	341	605	73	1,079
Collier	....	1	1	1	9	12	....	5	18	18	82	123
Columbia	4	....	1	3	....	8	268	....	670	241	....	1,179
Dade	205	221	260	98	209	993	4,691	5,263	4,850	2,532	6,376	23,712
DeSoto	....	....	....	....	2	2	....	....	....	....	9	9
Dixie	....	1	2	5	7	15	....	20	20	70	37	147
Duval	35	19	34	26	22	136	1,482	342	1,713	597	356	4,490
Escambia	5	7	1	2	1	16	163	234	5	39	15	456
Flagler	....	....	....	....	....	....	....	....	....	....	....	....
Franklin	1	4	1	....	4	10	15	92	30	....	70	207
Gadsden	....	2	2	4	2	10	....	17	40	289	60	406
Gilchrist	....	1	....	....	1	2	....	5	....	....	10	15
Glades	1	....	2	....	....	3	250	....	40	....	....	290
Gulf	2	....	....	1	2	5	40	....	....	25	14	79
Hamilton	1	1	1	1	4	8	4	14	35	150	270	473
Hardee	2	....	....	....	2	4	60	....	....	....	11	71
Hendry	1	....	2	2	2	7	110	....	111	19	69	309
Hernando	1	1	1	....	1	4	80	5	25	....	4	114
Highlands	2	2	....	4	....	8	56	15	....	129	....	200
Hillsborough	27	33	33	54	58	205	814	725	1,106	4,141	2,107	8,893
Holmes	1	1	....	1	2	5	5	4	....	50	140	199
Indian River	2	1	2	2	2	9	25	6	35	127	625	818
Jackson	5	6	4	2	2	19	95	532	69	111	160	967
Jefferson	2	....	3	1	1	7	88	....	33	200	4	325
Lafayette	....	....	2	....	....	2	....	....	20	....	....	20
Lake	5	6	4	4	5	24	202	119	59	153	138	671
Lee	3	3	9	9	7	31	28	21	67	98	86	300
Leon	3	4	5	5	6	23	16	23	39	71	181	330
Levy	....	....	....	2	2	4	....	....	....	12	354	366
Liberty	....	....	....	....	....	....	....	....	....	....	....	....
Madison	....	7	2	3	1	13	....	45	34	133	4	216
Manatee	8	13	7	5	7	40	139	826	385	195	439	1,984
Marion	3	7	5	8	8	31	25	137	142	127	248	679
Martin	....	15	1	3	1	20	....	375	150	60	100	685
Monroe	....	2	....	....	3	5	....	27	....	....	27	54
Nassau	2	1	2	2	1	8	60	15	18	10	100	203
Okaloosa	4	2	3	3	3	15	64	37	290	86	605	1,082
Okeechobee	....	....	....	....	....	....	....	....	....	....	....	....
Orange	22	26	20	22	25	115	681	1,240	284	607	736	3,548
Osceola	3	3	1	....	1	8	111	62	8	....	4	185
Palm Beach	34	30	26	8	35	133	2,557	627	1,697	107	1,260	6,248
Pasco	1	....	1	....	3	5	5	....	7	....	24	36
Pinellas	45	43	32	34	47	201	2,571	1,828	1,613	984	1,534	8,530
Polk	28	26	19	28	34	135	1,091	2,925	563	1,439	2,676	8,694
Putnam	6	....	5	7	5	23	96	....	87	251	55	489
St. Johns	1	5	1	1	4	12	350	236	27	4	637	1,254
St. Lucie	2	2	1	4	6	15	61	150	35	67	72	385
Santa Rosa	3	3	1	1	1	9	81	109	4	320	130	644
Sarasota	7	12	10	14	14	57	179	267	182	237	147	1,012
Seminole	6	7	10	12	5	40	334	518	143	219	142	1,356
Sumter	2	5	5	3	2	17	29	103	100	156	355	743
Suwannee	2	2	2	2	2	10	14	90	37	60	10	211
Taylor	....	1	2	1	2	6	....	8	16	35	315	374
Union	....	2	3	1	....	6	....	19	27	50	....	96
Volusia	13	11	14	9	13	60	479	1,771	267	1,126	417	4,060
Wakulla	....	....	1	1	1	3	....	....	17	60	9	86
Walton	....	1	2	....	1	4	....	20	17	....	25	62
Washington	1	3	....	....	....	4	9	34	....	....	....	43
Total	574	650	658	485	660	3,027	19,887	21,721	18,981	19,161	23,651	103,401

*Data appearing in this report have been adjusted to reflect only those plants employing four or more persons and are therefore not comparable with reports for 1961 through 1963.

Source: Florida Development Commission, Tallahassee, Florida

FLORIDA HIGH SCHOOL GRADUATES - 1965

	Number	Percent
High School Reporting	345	---
Total Number of Graduates Reported	62,079	---
Entered Public Junior Colleges	15,858	25.54
Entered Private Junior Colleges	930	1.50
Entered Public Universities in Florida	7,076	11.40
Entered Private Colleges in Florida	2,271	3.66
Entered Out-of-State Colleges	5,825	9.38
Entered Technical, Trade, or other	3,371	5.43
Did not go on to further education or training immediately	26,751	43.09

Source: Research Report - 45, Division of Research of the Florida State Department of Education, Tallahassee, Florida.

TABLE 11

	Provisional Mid-Year Population Estimate 1965		Estimated Percent of Population Change from April 1960 to July 1, 1965		Percent of Estimated Population Classified as Non-white 1964		Land Area (Square Miles)		Average Population 1964 Per Square Mile	
	Number	Rank	Percent	Rank	Percent	Rank	Number	Rank	Number	Rank
Alachua	88,300	(13)	19.2%	(21)	23.35%	(20)	892	(22)	98.4	(16)
Baker	8,000	(56)	8.1	(48)	22.79	(25)	585	(48)	13.5	(53)
Bay	68,400	(19)	1.9	(62)	15.12	(45)	753	(29)	90.4	(17)
Bradford	12,800	(47)	3.2	(58)	23.26	(21)	293	(65)	44.0	(27)
Brevard	192,200	(10)	72.5	(1)	9.98	(60)	1,031	(15)	166.2	(10)
Broward	423,800	(5)	26.9	(10)	16.83	(39)	1,218	(7)	333.7	(5)
Calhoun	7,700	(58)	4.1	(55)	16.00	(41)	557	(52)	13.5	(53)
Charlotte	19,700	(37)	56.3	(3)	4.17	(67)	705	(33)	27.2	(36)
Citrus	11,800	(49)	26.9	(10)	14.16	(51)	570	(49)	19.8	(46)
Clay	20,700	(36)	6.2	(52)	13.47	(53)	598	(44)	32.3	(33)
Collier	25,200	(31)	59.5	(2)	12.78	(55)	2,032	(2)	11.2	(57)
Columbia	23,400	(33)	16.4	(26)	31.00	(11)	786	(25)	29.1	(35)
Dade	1,089,200	(1)	16.5	(25)	15.59	(43)	2,054	(1)	533.1	(3)
De Soto	13,600	(44)	16.2	(27)	21.05	(32)	718	(32)	18.5	(47)
Dixie	4,900	(63)	8.9	(46)	14.58	(48)	688	(35)	7.0	(64)
Duval	511,500	(2)	12.3	(34)	22.92	(24)	777	(28)	657.4	(2)
Escambia	192,400	(9)	10.7	(40)	21.34	(29)	657	(39)	291.0	(7)
Flagler	5,700	(61)	23.9	(15)	30.19	(13)	483	(61)	11.0	(58)
Franklin	7,500	(59)	13.6	(30)	20.55	(34)	544	(54)	13.4	(55)
Gadsden	44,000	(24)	4.8	(54)	60.32	(1)	508	(59)	86.8	(19)
Gilchrist	3,200	(65)	10.3	(42)	12.50	(56)	339	(63)	9.4	(61)
Glades	3,600	(64)	20.0	(20)	42.42	(5)	746	(31)	4.4	(66)
Gulf	9,500	(54)	- 4.0	(66)	23.16	(22)	557	(52)	17.1	(48)
Hamilton	8,000	(56)	3.9	(56)	45.57	(4)	514	(57)	15.4	(51)
Hardee	13,400	(45)	8.1	(48)	9.92	(61)	630	(41)	20.8	(44)
Hendry	11,300	(52)	39.5	(5)	27.27	(17)	1,187	(8)	9.3	(62)
Hernando	12,900	(46)	15.2	(28)	21.77	(28)	488	(60)	25.4	(39)
Highlands	25,000	(32)	17.4	(23)	20.82	(33)	1,041	(12)	23.5	(38)
Hillsborough	441,900	(3)	11.1	(38)	14.27	(50)	1,040	(13)	416.4	(4)
Holmes	11,400	(51)	5.6	(53)	4.46	(66)	483	(61)	23.2	(42)
Indian River	31,800	(30)	25.7	(13)	21.15	(31)	512	(58)	60.9	(23)
Jackson	36,400	(26)	0.6	(64)	30.81	(12)	932	(20)	39.7	(30)
Jefferson	9,700	(53)	2.1	(61)	59.79	(2)	598	(44)	16.2	(49)
Lafayette	2,900	(66)	0	(65)	13.33	(54)	543	(55)	5.5	(65)
Lake	62,600	(20)	9.1	(44)	19.81	(36)	996	(17)	62.3	(22)
Lee	71,800	(17)	31.7	(7)	15.37	(44)	786	(25)	86.9	(18)
Leon	83,000	(14)	11.9	(37)	31.72	(8)	685	(37)	120.6	(13)
Levy	11,500	(50)	10.6	(41)	31.03	(10)	1,103	(10)	10.5	(60)
Liberty	2,900	(66)	- 6.5	(67)	14.29	(49)	838	(23)	3.3	(67)
Madison	14,600	(41)	2.8	(59)	48.30	(3)	702	(34)	20.9	(43)
Manatee	78,100	(16)	12.9	(33)	14.91	(47)	688	(35)	113.1	(15)
Marion	62,200	(21)	20.5	(19)	32.18	(7)	1,617	(5)	37.5	(31)
Martin	22,900	(34)	35.5	(6)	18.30	(38)	559	(51)	40.1	(29)
Monroe	59,500	(22)	24.2	(14)	10.37	(59)	994	(18)	57.2	(24)
Nassau	19,300	(38)	12.2	(35)	23.16	(22)	650	(40)	29.2	(34)
Okaloosa	78,500	(15)	28.3	(8)	7.06	(65)	944	(19)	78.1	(20)
Okeechobee	9,000	(55)	40.6	(4)	16.28	(40)	780	(27)	11.0	(58)
Orange	302,200	(6)	14.7	(29)	15.04	(46)	916	(21)	326.6	(6)
Osceola	21,300	(35)	12.1	(36)	10.43	(58)	1,325	(6)	15.9	(50)
Palm Beach	279,900	(7)	22.7	(16)	22.03	(27)	1,978	(3)	138.6	(11)
Pasco	40,800	(25)	10.9	(39)	11.39	(57)	751	(33)	52.6	(26)
Pinellas	425,500	(4)	13.6	(30)	9.25	(63)	264	(66)	1,589.0	(1)
Polk	214,300	(8)	9.8	(43)	18.75	(37)	1,861	(4)	114.9	(13)
Putnam	32,800	(28)	1.9	(62)	31.69	(9)	803	(24)	40.5	(28)
St. Johns	32,700	(29)	9.0	(45)	24.84	(19)	609	(43)	52.9	(25)
St. Lucie	46,700	(23)	18.8	(22)	33.33	(6)	588	(47)	76.5	(21)
Santa Rosa	35,800	(27)	21.4	(17)	7.21	(64)	1,024	(16)	32.5	(32)
Sarasota	92,800	(12)	20.7	(18)	9.38	(62)	529	(56)	175.4	(9)
Seminole	69,800	(18)	27.1	(9)	21.31	(30)	321	(64)	209.0	(8)
Sumter	13,900	(42)	16.8	(24)	27.14	(18)	561	(50)	25.0	(41)
Suwannee	17,000	(39)	13.3	(32)	27.49	(16)	677	(38)	25.3	(40)
Taylor	13,700	(43)	3.8	(57)	22.46	(26)	1,032	(14)	13.4	(55)
Union	6,500	(60)	8.3	(47)	28.13	(14)	240	(67)	26.7	(37)
Volusia	157,900	(11)	26.0	(12)	15.75	(42)	1,115	(9)	134.3	(12)
Wakulla	5,700	(61)	7.5	(50)	27.78	(15)	614	(42)	8.8	(63)
Walton	16,000	(40)	2.6	(60)	13.84	(52)	1,046	(11)	15.2	(52)
Washington	12,000	(48)	7.1	(51)	20.17	(35)	597	(46)	19.9	(45)
TOTAL	5,805,000		17.2%		17.71%		54,252		105.2	

Source: Research Report -- 46 Division of Research, State Department of Education

TABLE 11
(Continued)

Counties	Enrollment Grades 1-12 1964-65		Number of High School Graduates 1965		Percent of 1965 Graduates Who Entered College in 1965-66		Percent of 1965 Graduates Who Entered Trade & Vocational Training 1965-66		Percent of 1965 Graduates Who Did Not Continue Formal Education in 1965-66	
	Number	Rank	Number	Rank	Percent	Rank	Percent	Rank	Percent	Rank
Alachua	19,971	(13)	952	(14)	51.79%	(21)	1.79%	(60)	46.42%	(37)
Baker	2,257	(57)	109	(55)	32.11	(61)	2.75	(53)	65.14	(4)
Bay	17,581	(15)	937	(15)	58.59	(5)	4.48	(43)	36.93	(58)
Bradford	3,858	(42)	176	(41)	42.61	(43)	-	(65)	57.39	(10)
Brevard	50,924	(9)	2,282	(9)	49.52	(26)	6.49	(22)	43.99	(46)
Broward	88,548	(4)	4,373	(5)	54.93	(11)	5.49	(34)	39.58	(54)
Calhoun	2,102	(58)	97	(57)	41.24	(46)	3.09	(49)	55.67	(18)
Charlotte	2,953	(51)	148	(47)	43.92	(40)	13.51	(3)	42.57	(48)
Citrus	2,803	(53)	134	(51)	41.79	(45)	5.97	(30)	52.24	(27)
Clay	6,282	(32)	270	(33)	48.15	(31)	6.30	(24)	45.55	(43)
Collier	5,889	(34)	243	(35)	47.74	(32)	4.53	(42)	47.73	(33)
Columbia	6,432	(31)	337	(29)	54.60	(14)	4.75	(39)	40.65	(51)
Dade	210,760	(1)	10,651	(1)	57.07	(8)	6.30	(24)	36.63	(59)
De Soto	2,793	(54)	132	(52)	37.12	(54)	6.06	(28)	56.82	(12)
Dixie	1,465	(61)	64	(59)	40.63	(49)	6.25	(26)	53.12	(26)
Duval	123,702	(2)	5,767	(2)	42.43	(44)	3.47	(47)	54.10	(19)
Escambia	47,890	(10)	1,980	(10)	49.29	(27)	2.98	(52)	47.73	(33)
Flagler	1,386	(62)	34	(66)	73.53	(1)	5.88	(31)	20.59	(67)
Franklin	1,743	(59)	48	(63)	35.42	(58)	8.33	(13)	56.25	(14)
Gadsden	11,213	(22)	492	(23)	35.57	(57)	5.49	(34)	58.94	(9)
Gilchrist	881	(66)	52	(62)	38.46	(52)	1.92	(59)	59.62	(8)
Glades	900	(64)	37	(65)	27.03	(65)	18.92	(1)	54.05	(20)
Gulf	3,008	(48)	162	(44)	43.83	(41)	9.88	(6)	46.29	(40)
Hamilton	2,340	(56)	131	(53)	42.74	(42)	1.53	(61)	55.73	(17)
Hardee	3,408	(44)	141	(49)	45.39	(34)	8.51	(12)	46.10	(42)
Hendry	2,959	(50)	107	(56)	33.64	(59)	9.35	(8)	57.01	(11)
Hernando	3,209	(46)	112	(54)	50.00	(25)	13.39	(4)	36.61	(60)
Highlands	6,082	(33)	283	(32)	36.40	(56)	7.42	(15)	56.18	(15)
Hillsborough	98,687	(3)	4,810	(3)	44.89	(36)	5.07	(37)	50.04	(30)
Holmes	3,064	(47)	175	(42)	41.14	(48)	5.14	(36)	53.72	(24)
Indian River	7,347	(29)	336	(30)	52.98	(17)	9.52	(7)	37.50	(56)
Jackson	9,288	(26)	513	(22)	44.06	(39)	4.48	(43)	51.46	(29)
Jefferson	2,896	(52)	135	(50)	45.19	(35)	1.48	(62)	53.33	(25)
Lafayette	732	(67)	42	(64)	23.81	(67)	7.14	(18)	69.05	(3)
Lake	14,495	(21)	648	(21)	55.56	(10)	7.41	(16)	37.03	(57)
Lee	15,883	(18)	779	(19)	52.37	(18)	1.03	(63)	46.60	(36)
Leon	19,718	(14)	987	(13)	63.02	(3)	2.74	(55)	34.24	(65)
Levy	3,004	(49)	161	(45)	31.68	(62)	14.28	(2)	54.04	(21)
Liberty	884	(65)	34	(66)	29.41	(64)	-	(65)	70.59	(1)
Madison	4,197	(40)	182	(40)	48.35	(30)	2.75	(53)	48.90	(32)
Manatee	15,385	(20)	876	(16)	52.17	(19)	4.57	(41)	43.26	(47)
Marion	15,602	(19)	798	(17)	54.01	(16)	.50	(64)	45.49	(44)
Martin	4,975	(36)	183	(39)	51.91	(20)	6.01	(29)	42.08	(49)
Monroe	10,052	(24)	364	(27)	50.27	(24)	4.67	(40)	45.06	(45)
Nassau	5,447	(35)	265	(34)	38.11	(53)	7.93	(14)	53.96	(22)
Okaloosa	20,715	(12)	795	(18)	68.93	(2)	5.79	(32)	25.28	(66)
Okeechobee	2,661	(55)	97	(57)	29.90	(63)	6.18	(27)	63.92	(5)
Orange	73,375	(5)	3,860	(6)	50.80	(22)	7.20	(17)	42.00	(50)
Osceola	4,728	(37)	209	(38)	39.23	(51)	9.09	(9)	51.68	(28)
Palm Beach	58,846	(7)	2,546	(7)	61.51	(4)	3.85	(45)	34.64	(63)
Pasco	8,761	(27)	405	(25)	32.84	(60)	10.37	(5)	56.79	(13)
Pinellas	70,842	(6)	4,420	(4)	58.03	(7)	6.88	(20)	35.09	(61)
Polk	52,085	(8)	2,432	(8)	47.08	(33)	6.58	(21)	46.34	(39)
Putnam	9,340	(25)	367	(26)	48.77	(29)	2.18	(57)	49.05	(31)
St. Johns	6,942	(30)	314	(31)	56.69	(9)	8.92	(11)	34.39	(64)
St. Lucie	11,067	(23)	477	(24)	48.85	(28)	3.77	(46)	47.38	(35)
Santa Rosa	8,308	(28)	358	(28)	36.87	(55)	2.51	(56)	60.62	(6)
Sarasota	16,690	(17)	1,024	(12)	58.20	(6)	7.03	(19)	34.77	(62)
Seminole	17,133	(16)	674	(20)	44.81	(37)	9.05	(10)	46.14	(41)
Sumter	3,684	(43)	154	(46)	44.16	(38)	1.95	(58)	53.89	(23)
Suwannee	4,416	(39)	233	(36)	41.20	(47)	3.01	(50)	55.79	(16)
Taylor	4,110	(41)	170	(43)	54.71	(13)	6.47	(23)	38.82	(55)
Union	1,303	(63)	62	(60)	40.32	(50)	-	(65)	59.68	(7)
Volusia	31,279	(11)	1,523	(11)	54.17	(15)	5.52	(33)	40.31	(52)
Wakulla	1,537	(60)	61	(61)	26.23	(66)	3.28	(48)	70.49	(2)
Walton	4,506	(38)	233	(36)	50.64	(23)	3.01	(50)	46.35	(38)
Washington	3,352	(45)	142	(48)	54.93	(11)	4.93	(38)	40.14	(53)
TOTAL	1,280,675		62,095		51.48%		5.43%		43.09%	

Source:
Research Report-46, Division of Research, State Department of Education, Tallahassee, Florida.

TABLE 11
(Continued)

Counties	Percent of Population 14-17 Years of Age Enrolled in School				Percent of Population 25 Years and Older with Less Than 5 Years of Schooling				Median School Years Completed, Persons 25 Years Old and Over	
	1950		1960		1950		1960		1960	
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Years	Rank
Alachua	82.8%	(24)	84.8%	(46)	19.00%	(35)	13.61%	(32)	11.5	(7)
Baker	79.5	(46)	84.7	(49)	32.39	(7)	22.89	(11)	8.3	(56)
Bay	83.1	(21)	83.2	(55)	15.28	(45)	10.16	(47)	11.1	(11)
Bradford	80.8	(40)	88.4	(25)	24.49	(22)	15.73	(29)	8.8	(44)
Brevard	89.5	(1)	87.2	(35)	12.57	(57)	5.23	(65)	12.1	(1)
Broward	83.3	(16)	89.4	(18)	11.54	(59)	6.04	(63)	11.9	(3)
Calhoun	81.7	(34)	86.6	(38)	25.16	(20)	22.23	(12)	8.2	(60)
Charlotte	84.3	(12)	84.6	(52)	16.51	(39)	5.00	(66)	10.8	(16)
Citrus	78.2	(51)	91.1	(8)	15.90	(41)	9.74	(49)	9.3	(35)
Clay	79.8	(45)	80.5	(59)	13.29	(54)	11.70	(41)	10.2	(24)
Collier	63.8	(67)	76.3	(63)	28.16	(16)	11.31	(42)	10.7	(19)
Columbia	79.4	(47)	87.7	(29)	23.88	(25)	19.23	(20)	8.8	(44)
Dade	86.9	(5)	88.6	(24)	8.02	(66)	7.49	(58)	11.5	(7)
De Soto	83.2	(17)	78.4	(62)	14.44	(49)	11.23	(43)	9.2	(36)
Dixie	78.3	(50)	79.9	(60)	31.12	(11)	24.01	(7)	8.3	(56)
Duval	82.8	(24)	85.4	(43)	12.56	(58)	9.55	(51)	10.8	(16)
Escambia	83.2	(17)	89.1	(20)	14.84	(48)	9.63	(50)	10.7	(19)
Flagler	64.7	(66)	72.8	(65)	31.75	(10)	22.10	(13)	8.9	(40)
Franklin	79.3	(48)	81.3	(57)	32.03	(9)	17.87	(22)	8.6	(47)
Gadsden	65.5	(65)	84.0	(54)	30.69	(13)	31.05	(3)	7.5	(67)
Gilchrist	81.4	(36)	91.5	(6)	22.29	(27)	16.42	(25)	8.6	(47)
Glades	84.4	(11)	*		27.73	(17)	27.56	(5)	7.8	(65)
Gulf	88.3	(3)	92.0	(3)	26.00	(19)	17.13	(24)	9.6	(30)
Hamilton	78.0	(52)	89.7	(16)	43.12	(2)	31.14	(1)	7.7	(66)
Hardee	72.7	(61)	75.7	(64)	10.37	(62)	14.11	(31)	8.8	(44)
Hendry	74.3	(60)	78.9	(61)	19.59	(32)	19.12	(21)	8.9	(40)
Hernando	80.5	(42)	85.9	(42)	16.19	(40)	13.07	(34)	8.9	(40)
Highlands	83.2	(17)	90.6	(11)	15.56	(43)	11.77	(40)	9.5	(32)
Hillsborough	83.1	(21)	85.2	(44)	13.22	(55)	10.26	(46)	10.1	(27)
Holmes	75.3	(58)	87.8	(28)	31.12	(11)	21.45	(15)	8.0	(63)
Indian River	79.9	(44)	85.2	(44)	16.54	(38)	8.75	(54)	10.9	(14)
Jackson	81.0	(39)	86.1	(40)	32.80	(8)	23.55	(8)	8.5	(50)
Jefferson	76.8	(56)	86.7	(37)	44.27	(1)	31.08	(2)	8.1	(62)
Lafayette	75.0	(59)	91.1	(8)	24.58	(21)	17.22	(23)	8.4	(53)
Lake	82.6	(27)	84.8	(46)	15.00	(47)	9.40	(52)	10.3	(23)
Lee	84.6	(10)	82.4	(56)	13.65	(51)	9.78	(48)	10.8	(16)
Leon	85.0	(9)	88.7	(23)	20.56	(30)	12.79	(35)	11.9	(3)
Levy	81.8	(32)	90.6	(11)	29.78	(14)	19.37	(19)	8.5	(50)
Liberty	82.5	(29)	80.9	(58)	27.56	(18)	21.53	(14)	8.5	(50)
Madison	72.2	(63)	89.8	(15)	36.27	(3)	30.59	(4)	8.0	(63)
Manatee	83.0	(23)	87.3	(32)	12.95	(56)	7.23	(59)	10.2	(24)
Marion	86.6	(7)	90.8	(10)	19.31	(33)	16.33	(26)	9.5	(32)
Martin	80.2	(43)	87.3	(32)	15.75	(42)	8.16	(56)	10.6	(21)
Monroe	77.3	(55)	72.5	(66)	8.56	(64)	7.63	(57)	10.9	(14)
Nassau	83.5	(13)	90.0	(14)	20.89	(29)	16.00	(27)	9.0	(38)
Okaloosa	77.4	(54)	86.6	(38)	13.97	(50)	6.52	(61)	12.1	(1)
Okeechobee	76.7	(57)	91.8	(4)	20.28	(31)	13.47	(33)	9.2	(36)
Orange	82.8	(24)	87.4	(31)	10.27	(63)	7.00	(60)	11.8	(5)
Osceola	83.2	(17)	88.9	(22)	11.52	(60)	8.29	(55)	9.6	(30)
Palm Beach	81.1	(38)	87.2	(35)	13.39	(53)	9.40	(52)	11.3	(10)
Pasco	82.2	(30)	89.6	(17)	13.51	(52)	10.56	(45)	8.9	(40)
Pinellas	88.5	(2)	87.3	(32)	7.29	(67)	4.55	(67)	11.1	(11)
Polk	81.8	(32)	84.8	(46)	15.43	(44)	12.30	(38)	9.7	(29)
Putnam	80.6	(41)	86.0	(41)	21.43	(28)	15.64	(30)	9.4	(34)
St. Johns	81.4	(36)	90.2	(13)	16.75	(37)	12.54	(36)	10.5	(22)
St. Lucie	72.5	(62)	89.2	(19)	15.08	(46)	12.34	(37)	10.0	(28)
Santa Rosa	83.5	(13)	84.7	(49)	19.07	(34)	11.81	(39)	10.2	(24)
Sarasota	86.8	(6)	87.6	(30)	8.29	(65)	5.87	(64)	11.6	(6)
Seminole	81.7	(34)	88.0	(27)	23.47	(26)	10.84	(44)	11.0	(13)
Sumter	83.4	(15)	95.5	(1)	18.00	(36)	15.82	(28)	9.0	(38)
Suwannee	78.4	(49)	88.3	(26)	24.35	(23)	23.20	(10)	8.3	(56)
Taylor	82.6	(27)	84.2	(53)	34.77	(5)	25.66	(6)	8.4	(53)
Union	69.4	(64)	84.7	(49)	35.97	(4)	20.92	(17)	8.3	(56)
Volusia	86.4	(8)	89.0	(21)	10.69	(61)	6.42	(62)	11.5	(7)
Wakulla	87.7	(4)	91.7	(5)	33.71	(6)	23.49	(9)	8.2	(60)
Walton	77.6	(53)	91.3	(7)	24.20	(24)	19.50	(18)	8.6	(47)
Washington	82.1	(31)	94.0	(2)	29.05	(15)	21.45	(15)	8.4	(53)
TOTAL	82.7%		87.0%		13.70%		9.19%		10.9	

* Not Reported

Source:

Research Report-46, Division of Research, State Department of Education
Tallahassee, Florida

TABLE 11
(Continued)

Counties	Median Family Income 1960		Percent of Families with an Annual Income of $10,000 and Over, 1960		Percent of Families with an Annual Income of Less Than $3,000, 1960		Personal Income, 1963, Per Pupil (K-12) in ADA 1963-64		Public School Revenue from Local Sources 1963-64, as a Percent of Personal Income For 1963	
	Amount	Rank	Percent	Rank	Percent	Rank	Amount	Rank	Percent	Rank
Alachua	$4,471	(17)	11.2%	(11)	31.4%	(46)	$ 9,013	(25)	1.28%	(45)
Baker	3,227	(50)	6.3	(38)	45.9	(19)	5,105	(57)	1.24	(46)
Bay	4,413	(20)	9.1	(20)	28.8	(54)	8,002	(33)	1.08	(55)
Bradford	3,797	(35)	5.7	(44)	37.7	(34)	4,789	(59)	1.66	(30)
Brevard	6,123	(1)	18.6	(1)	17.6	(67)	12,519	(8)	1.23	(48)
Broward	4,996	(7)	12.8	(6)	24.8	(60)	10,459	(14)	2.31	(11)
Calhoun	2,673	(63)	5.2	(49)	54.9	(7)	4,107	(65)	.88	(61)
Charlotte	3,918	(32)	7.6	(29)	33.2	(39)	10,082	(15)	5.80	(1)
Citrus	3,217	(51)	4.2	(56)	45.7	(20)	5,939	(53)	3.21	(4)
Clay	4,202	(26)	7.5	(31)	30.6	(49)	4,233	(64)	2.21	(15)
Collier	4,673	(13)	13.8	(4)	29.9	(52)	12,389	(9)	2.74	(6)
Columbia	3,607	(39)	6.1	(41)	41.5	(27)	6,443	(50)	1.36	(39)
Dade	5,348	(2)	14.0	(2)	22.8	(63)	14,179	(6)	1.91	(23)
De Soto	3,542	(42)	5.6	(45)	40.8	(29)	8,125	(32)	1.10	(52)
Dixie	3,210	(52)	2.5	(64)	46.0	(18)	5,805	(54)	2.23	(14)
Duval	5,345	(3)	12.4	(7)	22.4	(64)	11,616	(10)	1.02	(57)
Escambia	5,174	(5)	10.4	(12)	23.9	(62)	9,262	(23)	1.68	(29)
Flagler	3,375	(44)	5.5	(46)	46.2	(16)	8,251	(31)	2.69	(7)
Franklin	2,699	(61)	1.5	(66)	56.7	(4)	7,397	(40)	1.57	(34)
Gadsden	2,866	(56)	6.0	(42)	52.5	(11)	4,847	(58)	1.36	(39)
Gilchrist	2,563	(66)	4.5	(54)	60.0	(2)	7,038	(43)	1.48	(36)
Glades	3,625	(38)	5.5	(46)	39.6	(32)	14,765	(4)	1.35	(41)
Gulf	4,858	(9)	6.4	(37)	30.0	(50)	7,694	(36)	1.66	(30)
Hamilton	2,687	(62)	4.2	(56)	56.0	(5)	7,401	(39)	.57	(65)
Hardee	3,602	(40)	6.9	(34)	41.0	(28)	9,190	(24)	1.23	(48)
Hendry	4,127	(28)	6.9	(34)	33.2	(39)	20,730	(1)	.78	(62)
Hernando	3,338	(47)	6.3	(38)	45.3	(22)	6,700	(48)	4.94	(2)
Highlands	3,735	(36)	6.3	(38)	37.6	(35)	8,292	(30)	2.18	(17)
Hillsborough	4,616	(15)	9.1	(20)	28.4	(55)	11,109	(13)	1.32	(43)
Holmes	2,137	(67)	2.5	(64)	66.4	(1)	4,543	(60)	1.10	(52)
Indian River	4,218	(24)	9.9	(15)	32.5	(41)	9,666	(17)	2.50	(10)
Jackson	2,865	(57)	4.3	(55)	52.3	(12)	6,296	(51)	.65	(64)
Jefferson	2,741	(60)	4.9	(51)	54.4	(8)	4,438	(61)	1.24	(46)
Lafayette	3,342	(46)	5.9	(43)	45.7	(21)	11,272	(12)	.53	(66)
Lake	3,680	(37)	7.9	(27)	40.2	(30)	9,577	(18)	2.20	(16)
Lee	4,286	(23)	9.9	(15)	32.2	(43)	9,383	(22)	2.17	(18)
Leon	5,173	(6)	13.6	(5)	27.3	(59)	9,462	(19)	1.11	(51)
Levy	2,886	(55)	4.1	(59)	52.2	(13)	6,775	(46)	1.33	(42)
Liberty	3,277	(49)	.5	(67)	46.2	(16)	5,356	(56)	1.09	(54)
Madison	2,614	(65)	3.0	(62)	57.1	(3)	5,691	(55)	.96	(58)
Manatee	3,814	(34)	7.6	(29)	37.2	(36)	8,430	(29)	2.66	(8)
Marion	3,572	(41)	6.6	(36)	42.0	(26)	6,967	(44)	1.95	(22)
Martin	4,295	(22)	9.5	(18)	30.7	(48)	8,672	(27)	3.94	(3)
Monroe	4,660	(14)	8.3	(26)	24.6	(61)	15,588	(2)	1.39	(38)
Nassau	4,465	(18)	9.5	(18)	32.3	(42)	7,147	(42)	1.58	(33)
Okaloosa	4,901	(8)	12.1	(9)	22.0	(66)	8,885	(26)	.49	(67)
Okeechobee	4,096	(30)	7.7	(28)	28.2	(56)	4,024	(66)	2.65	(9)
Orange	5,222	(4)	14.0	(2)	22.3	(65)	11,377	(11)	1.57	(34)
Osceola	3,368	(45)	5.1	(50)	44.1	(24)	7,755	(35)	2.94	(5)
Palm Beach	4,784	(10)	12.1	(9)	28.2	(56)	14,571	(5)	2.25	(13)
Pasco	3,307	(48)	5.4	(48)	45.3	(22)	6,769	(47)	2.27	(12)
Pinellas	4,359	(21)	10.2	(13)	31.4	(46)	13,991	(7)	2.09	(19)
Polk	4,476	(16)	10.1	(14)	29.2	(53)	9,346	(21)	2.05	(20)
Putnam	3,559	(31)	7.1	(32)	38.4	(33)	6,925	(45)	1.83	(25)
St. Johns	4,149	(27)	9.9	(15)	35.0	(37)	9,462	(19)	1.59	(32)
St. Lucie	4,211	(25)	8.9	(22)	32.1	(44)	8,578	(28)	1.99	(21)
Santa Rosa	4,692	(11)	7.1	(32)	30.0	(50)	7,401	(38)	.90	(60)
Sarasota	4,688	(12)	12.2	(8)	27.6	(58)	14,794	(3)	1.77	(26)
Seminole	4,446	(19)	8.7	(23)	31.9	(45)	6,597	(49)	1.77	(26)
Sumter	3,023	(54)	4.6	(52)	49.7	(14)	6,080	(52)	1.40	(37)
Suwannee	2,767	(59)	3.7	(60)	54.0	(10)	7,911	(34)	1.07	(56)
Taylor	3,844	(33)	8.5	(25)	39.9	(31)	7,254	(41)	1.73	(28)
Union	3,379	(43)	4.6	(52)	42.8	(25)	7,640	(37)	.77	(63)
Volusia	4,114	(29)	8.7	(23)	34.4	(38)	9,972	(16)	1.86	(24)
Wakulla	2,783	(58)	3.3	(61)	54.3	(9)	4,355	(63)	1.31	(44)
Walton	3,138	(53)	4.2	(56)	48.2	(15)	3,960	(67)	1.21	(50)
Washington	2,662	(64)	2.7	(63)	55.4	(6)	4,358	(62)	.92	(59)
TOTAL	$4,722		11.1%		28.4%		$11,033		1.73%	

Source:
Research Report -- 46 Division of Research, State Department of Education

FLORIDA'S COMMUTING WORKERS IN 1960 SHOWN BY COUNTIES

COUNTY	Total Workers 1960	Number Working Outside County of Residence	Percent Working Outside County of Residence 1960
Alachua	25,790	716	2.78
Baker	2,163	414	18,68
Bay	23,572	528	2.24
Bradford	4,001	1,171	29.27
Brevard	41,321	685	1.66
Broward	114,111	13,849	12.14
Calhoun	1,972	341	17.29
Charlotte	3,511	251	7.15
Citrus	2,968	276	0.30
Clay	6,566	1,741	26.52
Collier	5,857	146	2.49
Columbia	7,056	372	5.27
Dade	356,364	9,228	2.59
DeSoto	3,676	330	8.98
Dixie	1,457	166	11.39
Duval	171,867	4,116	2.39
Escambia	60,090	2,569	4.28
Flagler	1,646	200	12.15
Franklin	2,065	128	6.20
Gadsden	13,212	930	7.04
Gilchrist	987	167	17.12
Glades	1,228	99	8.06
Gulf	3,130	149	4.76
Hamilton	2,616	278	10.63
Hardee	4,370	508	11.62
Hendry	3,120	393	12.60
Hernando	3,374	309	9.16
Highlands	6,937	349	5.03
Hillsborough	142,500	7,141	5.01
Holmes	2,795	666	23,83
Indian River	8,359	528	6.29
Jackson	11,295	528	0.29
Jefferson	2,984	248	8.31
Lafayette	1,070	145	13.55
Lake	18,442	1,258	6.82
Lee	18,735	824	4.40
Leon	27,927	706	2.53
Levy	3,585	367	10.24
Liberty	930	235	25.27
Madison	4,791	433	9.04
Manatee	21,214	2,303	10.86
Marion	17,630	969	5.50

TABLE 12
(Continued)

Martin	5,648	551	9.76
Monroe	20,335	224	1.10
Nassau	5,415	676	12.47
Okaloosa	21,754	627	2.88
Okeechobee	2,153	209	9.71
Orange	96,761	3,591	3.71
Osceola	5,649	987	17.47
Palm Beach	85,243	2,117	2.48
Pasco	10,939	1,535	14.04
Pinellas	112,790	4,021	3.57
Polk	68,018	2,120	3.12
Putnam	10,474	587	5.60
St. Johns	10,198	995	9.76
St. Lucie	14,306	1,335	9.33
Santa Rosa	10,401	2,432	23.38
Sarasota	25,383	1,328	5.23
Seminole	18,828	5,349	28.41
Sumter	3,487	537	15.00
Suwannee	4,947	341	6.89
Taylor	4,087	102	2.50
Union	1,383	419	50.30
Volusia	40,549	1,997	4.92
Wakulla	1,498	453	30.24
Walton	4,584	1,329	28.99
Washington	2,890	562	19.45

Source: 1960 Census of Population, Volumn I, Part II, Florida - U. S. Bureau of the Census.

HEALTH OCCUPATION NEEDS OF FLORIDA

The 1967 survey of the Health Occupation Needs of Florida was an initial effort by the State Department of Education to determine the employment needs of the health services industry of the State. The survey was planned and developed by the Technical and Health Occupations Education Section of the Division of Vocational, Technical, and Adult Education in cooperation with a committee of representatives of professional medical organizations.

This report presents the highlights of the survey and summarizes the number of health occupations personnel employed in April of 1967 and projects the need for these persons over the next two years.

Highlights of the Survey

1. The Health Occupations Survey of 1967 reports over 29,000 health employees in the twenty-two occupations surveyed.

Rank order of the top six occupations and the number of employees in each were:

Nurse Aide-Orderly	10,300
Registered Nurse	9,100
Practical Nurse	4,200
Hospital Ward Clerk	1,200
Medical Secretary	1,200
Radiological Technician	800

2. The Health services reporting indicated substantial increases anticipated in the need for health occupation employees during 1967-1969.

The number of health service employees in Florida will need to be increased by more than 47% to meet the needs for present vacancies, replacements, and filling new positions during the next two years. The greatest need appears to be:

Registered Nurses	5,000
Nurse Aide-Orderly	4,200
Licensed Practical Nurse	2,700
Hospital Ward Clerk	800
Certified Laboratory Assistant	300

3. Although much of the need is spread throughout the state, the survey identifies nine counties as having the highest anticipated demand for additional employees.

In rank order these are: Dade, Broward, Palm Beach, Orange, Pinellas, Escambia, Hillsborough, Sarasota, and Duval.

TABLE 13

Summary of Health Occupation Survey

Occupation	Number Employed 1967	Number of Present Vacancies	*Total Anticipated Number Needed 1967-1969	Percent Change by End of 1969
Certified Lab Assistant	705	87	363	52%
Cytotechnologist	66	11	51	77%
Home Attendant	167	21	120	72%
Food Service Supervisor	341	45	197	58%
Hospital Ward Clerk	1,222	157	758	62%
Inhalation Therapist	268	52	211	78%
Medical Assistant	446	28	101	22%
Medical Record Technician	321	42	158	49%
Medical Secretary	1,194	87	346	29%
Nurse Aide-Orderly	10,306	790	4,196	41%
Nurse, L. P.	4,241	769	2,726	64%
Nurse, R. N.	9,076	1,208	4,948	54%
Occupational Therapy Aide	59	33	96	162%
Optometric Assistant	30	1	13	43%
Physical Therapy Attendant	205	54	192	93%
Psychiatric Aide	207	24	151	73%
Radiological Technician	769	78	340	44%
Surgical Technician	397	58	314	80%
Tissue Technologist	104	15	55	53%
Unit Ward Manager	58	19	133	229%
	30,182	3,579	15,469	48%

* Includes present vacancies, replacement, and new positions.

Projected Need and Approximate Program Capacity

Occupation	Projected Need 1967-69	Approximate Program Capacity (graduates per year)
Registered Nurse	4,948	*1,050
Nurse Aide-Orderly	4,196	2,200
Practical Nurse	2,726	1,000
Certified Laboratory Assistant	363	100
Medical Secretary	346	**
Radiological (X-ray) Technician	340	22
Surgical Technician	314	150
Home Attendant	120	**
Medical Assistant	101	125
Optometric Assistant	13	30

* Includes ADN, Diploma, and Baccalaureate Degree programs.

** There are public and private schools offering training in this field but information on capacities was not available.

The Major Health Occupations Fields

Certified Laboratory Assistant

The need for certified laboratory assistants appears to be spread across the state with most counties reporting a need for ten or less employees. Reports indicate that this occupation should continue to grow with about 350 trained persons needed during the next two years.

Major employment opportunities appear to be in the following counties: Alachua, Broward, Dade, and Hillsborough. A fair demand exists in Pinellas and Sarasota counties.

Cytotechnologist

About one-fourth of the counties reported some need for cytotechnologists. However, the only county to report an appreciable demand was Dade county.

Home Attendant

The home attendant is a relative newcomer to the health occupations family and shows a projected increase in employment of 72% over the next two years. The projection of 120 new positions will probably be conservative as medicare increased the number of patients receiving care in nursing homes. The greatest opportunity for home attendants appears to be in Dade, Hillsborough, Indian River, and Pinellas counties.

Hospital Food Service Supervisor (Technician)

Forty-five of the sixty-seven counties reported some opportunity for the hospital food service supervisory (technician). Those counties requiring 15 or more additional employees in this field during the next 24 months are: Alachua, Broward, Dade, Duval, Hillsborough, Lee, Orange, and Pinellas.

Hospital Ward Clerk

The need for hospital ward clerks was the fourth highest in the state. The greatest opportunity for employment seems to exist in the following counties: Alachua, Broward, Dade, Duval, Escambia, Manatee, Marion, Orange, Palm Beach, Pinellas, and Polk.

Inhalation Therapist

Approximately 78% more inhalation therapists will be needed over the next two years with over 200 additional persons needed. Areas of greatest need are Broward, Dade, Duval, Lee, Orange, Palm Beach, and Pinellas counties.

Medical Assistant

The need for medical assistants was spread sparsely over a number of counties, but the greatest opportunity for employment exists in Dade and Polk counties.

Medical Record Technician

Although medical record technicians are needed in a number of counties, only Duval and Orange counties projected a need for fifteen or more.

Medical Secretary

The greatest opportunities for medical secretaries are in seven counties- Broward, Dade, Duval, Escambia, Hillsborough, Orange, Pinellas, and Polk.

Nurse Aide-Orderly

The need for nurse aide-orderlies ranked second in the state. The demand was widespread and in most counties in substantial numbers. Those counties needing more than 100 persons were Broward, Dade, Duval, Escambia, Hillsborough, Lee, Leon, Manatee, Orange, Palm Beach, Pinellas, Polk, and Sarasota.

Nurse, Licensed Practical

In addition to the nearly 800 current vacancies for licensed practical nurses, approximately 2,000 will be needed for replacements and expansion over the 2 year period (1967-69). Opportunities for employment are available in almost all counties.

Nurse, Registered

Florida will need nearly 5,000 additional registered nurses to fill present vacancies, replacements, and new job openings during the next two years. The need is widespread throughout the state with some nurses needed in almost all counties.

Occupational Therapy Aide

The survey indicated that the occupational therapy assistant is not being utilized in Florida. Indications are that about 100 additional persons will be needed in this field during the next two years. Only Dade county showed an appreciable need for these persons.

Optometric Assistant

The optometric assistant is the smallest employed health occupation group in Florida and projected only 13 additional persons needed throughout the state.

Physical Therapy Attendant

Approximately 192 additional physical therapy assistants will be needed by 1969. A continued demand for competently trained persons is expected in Broward, Dade, Pinellas, and Polk counties. There should also be a number of job openings in Orange and Hillsborough counties.

Psychiatric Aide

Although not a major field of employment, psychiatric aides will be in demand in a number of counties. Hillsborough, Orange, and Pinellas counties project the greates need.

Radiological (X-ray) Technician

The survey shows over 700 technicians currently employed, 78 vacancies, and a projected need for 340 additional trained workers by 1969. These persons will be in demand across the state with the greatest increase expected in Broward, Dade, Hillsborough, Lee, Orange, Palm Beach, Pinellas, and Polk counties.

Surgical Technician

The employment of surgical technicians is expected to increase by 78% during the next 24 months with approximately 300 openings being forecast. Although there is some demand in half of the counties there will be substantial job opportunities in the following counties: Dade, Duval, Hillsborough, Orange, and Pinellas.

Tissue Technologist (Histopathology Technician)

The anticipated demand for the tissue technologist ranked as one of the smallest among the occupations surveyed. The need was sparsely spread over several counties with the greatest demand (15) being in Dade county.

Unit Ward Manager

In terms of per cent growth, this health field will show a dramatic increase of over 200% during the next two years. The unit ward manager is a relative newcomer to the medical field and an increasing utilization of these persons is expected. Those counties projecting the greatest opportunity are Dade, Lee, Monroe, Polk, and Sarasota.

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Pub Date - Apr69 14p.

*OCCUPATIONAL INFORMATION; *HEALTH OCCUPATIONS; *ENTRY WORKERS; EMPLOYMENT QUALIFICATIONS; ON THE JOB TRAINING; CAREER OPPORTUNITIES

This information about hospital jobs was developed in response to expressed needs of hospitals, schools, students, and the general community in the five county United Appeal area of Greater Cincinnati and Northern Kentucky. Thirty-six jobs, most of which can be filled by high school graduates without further training before beginning work, are described briefly in terms of the nature of the job, high school courses desirable or required, on-the-job training, and advancement possibilities. (JK)

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A HOSPITAL JOB

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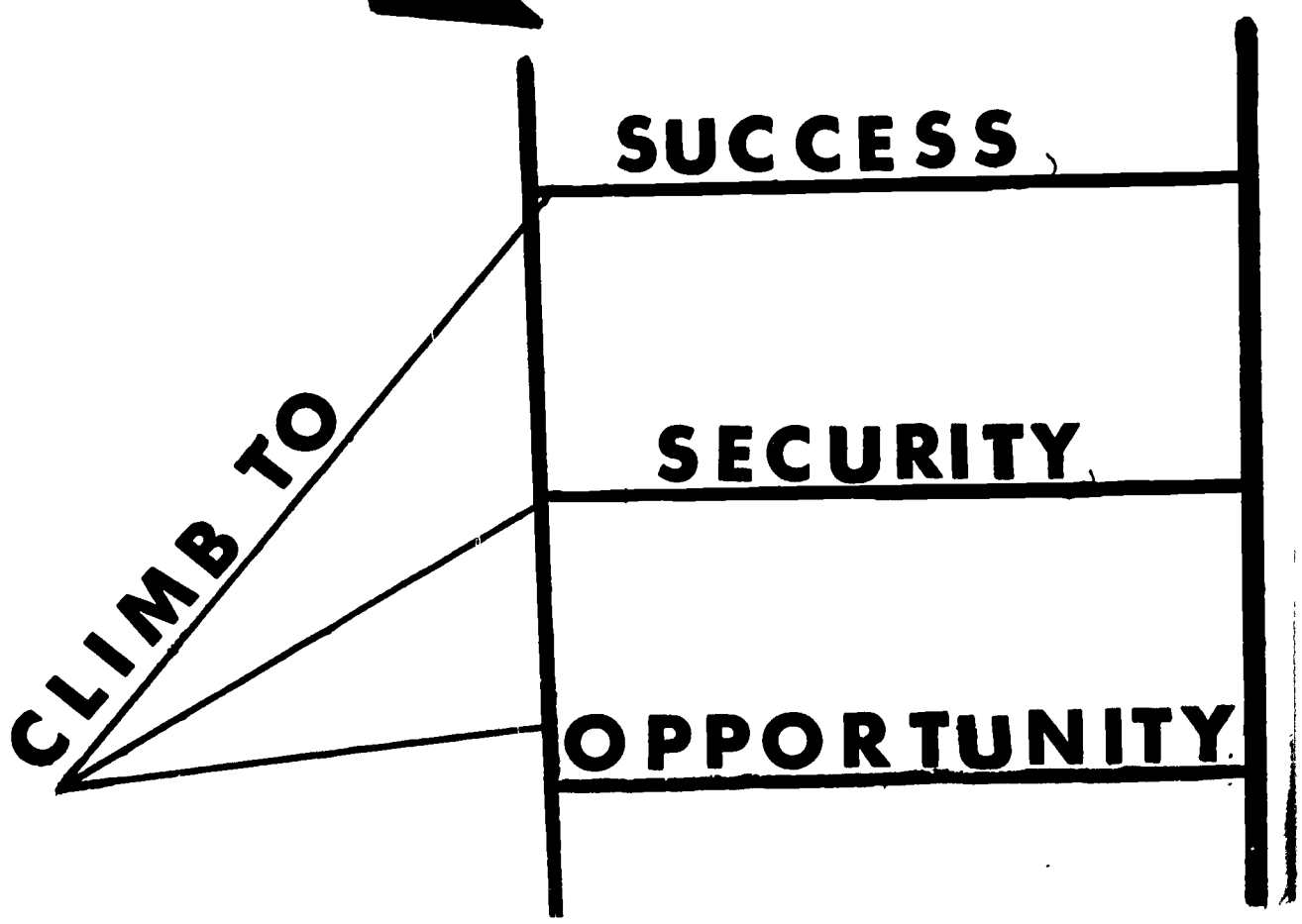

VT006701

I N T R O D U C T I O N

This information about Hospital Jobs was developed in response to expressed needs of the hospitals, schools, students and the general community in the Five County United Appeal Area of Greater Cincinnati and Northern Kentucky. It was compiled by Health Careers Association of Greater Cincinnati, a United Appeal Agency, under the direction of Monica V. Brown, Executive Director. The cooperation and assistance of the Administrators, Personnel and Public Relations Directors of the Hospitals of the Greater Cincinnati Hospital Council is gratefully acknowledged.

HOSPITAL JOBS

Almost all of the thirty six jobs described can be filled by High School Graduates entering the world of work without further training before starting on the job. However, in many instances, there will be some on-the-job or specialized training given by the employer after hiring. The job descriptions are arranged in Work Category Order for easy identification of interest areas. The Dictionary of Occupational Titles Classification Number is included for reference. These jobs represent only a small sample of the more than two hundred job categories found in the average hospital.

SALARIES

Hospital salaries are equivalent to salaries in general industry for positions requiring similar skills and responsibilities.

FOR BETTER JOB POSSIBILITIES, students are URGED to continue their education after High School Graduation by attending college or vocational education training programs.

HEALTH PROFESSIONAL, ADMINISTRATIVE AND EXECUTIVE CAREER INFORMATION may be obtained by writing or telephoning:

Health Careers Association of Greater Cincinnati
2400 Reading Road, Cincinnati, Ohio 45202
Phone: Area code 513 - 721-3160 - Ext. 240

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BUSINESS, SECRETARIAL & ADMINISTRATIVE

BOOKKEEPER ... D.O.T. 210.388

Helps to maintain a complete and systematic set of records of financial transactions of a hospital. Balances books and prepares reports to show income, expenses and other items related to accounting of hospital activities. Works under direct supervision of Administrative Executive. Performs related duties.

MUST have taken commercial courses in high school.

Advancement Opportunities available in the same field dependent upon education, experience and demonstrated ability.

.....

BUSINESS OFFICE CLERK ... D.O.T. 219.388

Performs any combination of the following duties and responsibilities: accounts payable, accounts receivable, preparation of insurance forms, credit data, statistical data and payrolls. Works under direct supervision of Administrative Executives.

MUST have taken commercial courses in high school.

Advancement Opportunities available in the same field dependent upon education, experience and demonstrated ability.

.....

CASHIER-ACCOUNTING ... D.O.T. 210.388

Handles payments on admission of patients and completes financial settlement at the time of discharge. Posts and totals all hospital receipts in cash receipt records; balances cash against receipts. Makes change and cashes checks. May prepare bank deposits. Performs related duties. Works under supervision.

MUST have taken commercial courses in high school.

Advancement Opportunities available in the same field dependent upon education, experience and demonstrated ability.

.....

CASH REGISTER OPERATOR ... D.O.T. 211.468

Receives payment for items handled on a cash basis and returns proper amount of change to people; may assist in keeping records of number of items purchased and in doing related clerical work. Performs other assigned duties. Works under supervision.

General Advancement opportunities available.

.....

COMPUTER OPERATOR ... D.O.T. 213.382

Operates computer console; feeds the proper programs and raw data for key punch cards. May change units. Checks print-out device for performance.

MUST have taken commercial courses in high school.

Advancement requires further education in the electronic data processing field.

.....

FILING CLERK ... D.O.T. 206.388

Stores material according to an established system. Retrieves the material as requested. Performs other related duties, as assigned by supervisor.

General Advancement opportunities available.

.....

KEY PUNCH OPERATOR ... D.O.T. 213.582

Operates a key punch machine to produce data processing cards to be used in computers. Transcribes alphabetical or numerical data to produce the finished card.

MUST have taken commercial courses in high school.

Advancement requires further education in the electronic data processing field.

.....

MAIL CLERK ... D.O.T. 231.588

Performs duties in connection with receiving and delivery of mail. Includes sorting and operating postage meter machine and other related duties.

General Advancement opportunities available.

.....

MEDICAL TRANSCRIPTION STENOGRAPHER ... D.O.T. 202.388

Performs advanced stenographic duties which require experience and exercise of judgment. Records and transcribes shorthand or recorded dictation of more than average difficulty which regularly includes technical or specialized vocabulary or frequently supplements transcription with the drafting of finished work from indicated sources, records, general instructions, etc. Performs such other related duties as may be directed.

MUST have taken commercial courses in high school.

Post-High School Education Preferred - Good Secretarial Training and Prior Experience Necessary - Good Knowledge of Medical Terms and English required.

Note: Medical Secretarial Training is available at the University level and is usually two years in duration with graduation awarding an Associate in Science Degree.

Advancement Opportunities available in the same field.

.....

SECRETARY ... D.O.T. 201.368

Performs the complete secretarial job for a hospital or health executive. Requires initiative, judgment, knowledge of hospital and health practices, policy and organization. Performs such other related duties as may be directed.

MUST have taken commercial courses in high school.

MUST have had secretarial training, business courses and prior experience.

Advancement opportunities available in the same field.

.....

TELEPHONE OPERATOR ... D.O.T. 235.862

Operates switchboard handling incoming and outgoing calls. Keeps a record of long distance calls; may be responsible for taking messages; may act as receptionist. Works paging system and intra-hospital communications systems.

Prior PBX training desirable.

General advancement opportunities available.

.....

TYPIST CLERK ... D.O.T. 203.588

Types letters, reports, stencils, forms, addresses, or other straight-copy material from rough draft or corrected copy. May verify totals on report forms, requisitions, or bills. May operate duplicating machines to reproduce copy. Files material according to a standardized system. May act as receptionist. Performs such other related duties as may be directed.

MUST have taken commercial courses in high school.

Advancement opportunities available in the same field dependent upon further education, experience and demonstrated ability.

.....

WARD OR FLOOR CLERK ... D.O.T. 219.388

Performs clerical duties in a Nursing unit; answers telephone and relays messages. Receives and directs visitors. Receives ambulatory patients. May assist with patients charts under direction. Checks records for completeness. Makes up requisitions. May act as receptionist.

On-the-job Training given.

High school commercial courses helpful.

General Advancement opportunities available dependent upon ability.

.....

P A T I E N T C A R E

NURSE AIDE ... D.O.T. 079.378

Assists the nursing staff by performing routine services in the care of hospital patients. Performs several of the following patient care services: Bathes bed patients or assists them in bathing. Cares for patients' hair and nails. Feeds or assists patients in eating and brings them between-meal nourishment. Assists patients with bedpans and urinals. Keeps records of patients' food intake and output when ordered. Assists patients in undressing and provides hospital clothing, and stores patients' clothing and valuables. Assists patients in walking, and transports patients to various hospital rooms by means of wheelchair or stretcher. Cleans and sterilizes instruments and equipment. May clean rooms or equipment upon discharge of patients. Makes occupied beds. May take and record temperature, pulse, and respiration rate. May escort newly admitted patients from admitting office to hospital room or ward. Performs such other related duties as may be directed.

On-the-job Training - Between four and ten weeks.

General Advancement opportunities available.

Advancement to Professional Positions requires additional formal education.
Practical Nurse - One year after high school graduation.
Professional Nurse - Two to four years after high school graduation.

.....

ORDERLY ... D.O.T. 355.878

Performs any combination of following duties, as directed by nursing and medical staff, to care for hospitalized male patients: Bathes patients and gives alcohol rubs. Cleans and shaves hair from skin area of operative cases. Measures and records intake and output of liquids, and takes and records temperature, and pulse and respiration rate. Gives enemas. Carries meal trays to patients. Lifts patients onto and from bed, and transports patients by rolling bed or wheelchair. Helps set up equipment. Maintains supply of hospital clothing for attending Physicians. Makes beds and collects soiled linen. Cleans rooms and corridors. Helps with handling of deceased patients. May accompany discharged mental patients home, or those transferred to other institutions. Performs such other related duties as may be directed.

On-the-job Training - Between four and ten weeks.

General Advancement opportunities available.

Advancement to Professional Positions requires additional formal education.
Practical Nurse - One year after high school graduation.
Professional Nurse - Two to four years after high school graduation.

.....

THERAPY ATTENDANT ... D.O.T. 355.878

Assist the health professional in the preparation of patients for treatment; performs routine tasks to free the health professional. Performs related duties under supervision.

General Advancement Available.

Professional Positions require a minimum of a Baccalaureate College Degree.

.....

F O O D S E R V I C E

BAKER AND COOK ASSISTANT ... D.O.T. 317.887

Assists Baker and Cook in the preparation of food. Helps measure and mix ingredients as instructed. Prepares utensils for cooking. Cleans machinery and other utensils and maintains working area in neat and orderly condition. May store food. May assist in apportioning orders.

Advancement Opportunities available in same field.

.....

DIETARY AND FOOD SERVICE WORKER ... D.O.T. 318.887

Performs any combination of the following duties to maintain Dietary work areas, food equipment and utensils in clean and orderly condition: Sweeps and mops floors. Washes worktables, walls, refrigerators, and meat blocks. Segregates and removes trash and garbage and places it in designated containers. Steam-cleans or hoses-out garbage cans. Sorts bottles and breaks disposable ones in bottle-crushing machine. Washes pots, pans, and trays by hand. Scrapes food from dirty dishes and washes them by hand or places them in racks or on conveyor to dishwashing machine. Responsible for special cleaning of silver and glassware. Transfers supplies and equipment between storage and work areas. Sets up patient trays and helps to serve. Washes and peels vegetables. May be known according to task performed as Dishwasher, Hand; Dishwasher, Machine; Garbageman; Potwasher; Silverman. Performs such other related duties as may be directed.

General Advancement opportunities available.

Professional Positions require Baccalaureate College Degree.

.....

FOOD SERVICE CLERK ... D.O.T. 219.388

Types food orders, menus, orders for food preparation, and directions for special diets. Works under supervision of therapeutic dietician. Also helps with telephoning. Performs other related duties.

MUST have taken commercial courses in high school.

General Advancement opportunities available.

.....

MAINTENANCE AND SERVICE

GROUNDS KEEPER ... D.O.T. 407.884

Maintains and cares for hospital grounds; mows lawns, trims hedges, rakes and burns leaves and refuse, trims driveway and sidewalk edges. May plant and maintain flower beds. Performs related duties.

General Advancement Opportunities available.

.....

HOUSEKEEPING AIDE ... D.O.T. 323.887

Cleans and services hospital premises. Performs one or more of the following duties: Cleans, mops, and waxes floors. Dusts furniture and equipment. Cleans window sills, empties trash baskets, and arranges furniture and equipment in an orderly fashion. Scours and polishes bathtubs, sinks, mirrors, and similar equipment, and replenishes supplies of soap and towels. Polishes brass and cleans and polishes glass panels in doors and partitions. Keeps utility storage rooms in good order by cleaning lockers and equipment, arranging supplies, and sweeping and mopping floor. Performs a variety of related duties. May be assigned to specific areas, such as wards, offices, or surgery. Performs such other related duties as may be directed.

General Advancement Opportunities available.

.....

JANITOR-CUSTODIAN ... D.O.T. 381.887

Cleans and services hospital premises. Performs one or more of the following duties: Cleans, mops, and waxes floors. Cleans window sills, empties trash baskets, and arranges furniture and equipment in an orderly fashion. Polishes brass and cleans and polishes glass panels in doors and partitions. Keeps utility storage rooms in good order by cleaning lockers and equipment, arranging supplies, and sweeping and mopping floor. Performs a variety of related duties. May be assigned to specific areas, such as wards, offices, or surgery. May be assigned to heavy and cumbersome tasks such as operating floor-scrubbing equipment, snow shoveling, wall washing, etc. Performs such other related duties as may be directed.

General Advancement Opportunities available.

.....

LAUNDRYWORKER ... D.O.T. 369.884

Receives, marks, washes, finishes, checks, and wraps articles in a small laundry performing any combination of the following tasks: Classifies and marks incoming laundry with identifying code number, by hand or by use of machine. Tends washing machine, extractor, and tumbler to clean and dry pressing machine, or by feeding and folding flatwork on flatwork ironing machine. Sorts laundry and verifies count on laundry ticket (Assembler; Checker). May perform related tasks, such as mending torn articles. May wrap articles. May specialize in receiving and washing, or in finishing and checking, and be designated according to unit in which work is performed as Laundry Operator, Finishing; Laundry Operator, Wash Room. Performs such other related duties as may be directed.

Advancement Opportunities available in the same field.

.....

MAINTENANCE ASSISTANT ... D.O.T. 899.381

Performs a variety of tasks, including minor installations and repairs in the maintenance of the buildings, grounds, power and utility systems of the institution, involving one or more of the following: Plumbing, masonry, carpentry, painting, electrical work, refrigeration, and elevator repair. May have responsible helpers and laborers on specific jobs. Responsible that all workmanship meets standards and that safety and building regulations are not violated. Performs such other related duties as may be directed under supervision.

Specific vocational training preferred.

Advancement Opportunities available in the same field.

.....

PARKING LOT ATTENDANT ... D.O.T. 915.878

Attendant in charge of a hospital parking facility. May collect parking fees; direct traffic; act as security guard for the parked vehicles; controls use of the facility.

General Advancement Opportunities available.

.....

SEAMSTRESS ... D.O.T. 785.381

Makes and/or repairs uniforms, caps, gowns, rappers, aprons, surgical leggings, bedding, draperies and other articles used in a hospital. Converts worn sheets into smaller articles. Performs other related duties.

Some textile and sewing training preferred.

General Advancement Opportunities available.

.....

SECURITY GUARD ... D.O.T. 372.868

Polices hospital to prevent fire, theft, vandalism, and illegal entry; periodically tours buildings and grounds, examining doors, windows and gates to see that they are properly secured and have not been tampered with. Reports any unusual conditions or malfunctioning of heating, plumbing and electrical systems. Escorts nurses between buildings at night.

General Advancement Opportunities available.

.....

STOREKEEPER'S HELPER ... D.O.T. 223.387
(Warehousing, Receiving and Shipping)

Helps storekeeper receive and pack, verify, store and issue supplies and equipment. Unloads and unpacks shipments received and assists in varifying contents against purchase orders and invoices. Carries or trucks supplies to proper storage areas. Folds requisitions by collecting desired items and delivering them. Assists in inventories and performs other related duties. Maintains storeroom in clean and orderly condition.

Advancement Opportunities available in the same field.

.....

T E C H N I C A L

ANIMAL CARETAKER ... D.O.T. 356.874

Assists in research laboratories in the maintenance and care and feeding of the animals under the supervision of the laboratory and research directors. Performs related duties.

General Advancement Opportunities available.

Professional Positions require college degrees.

.....

DARK ROOM ASSISTANT ... D.O.T. 976.381
(X-Ray Film Processor)

Develops exposed X-Ray film in accordance with standard procedure. Loads cassettes and other film containers. Mixes and tests chemicals used in the dark room. May operate and be responsible for maintenance of an automatic development machine. Performs other related duties.

General Advancement Opportunities available.

Professional Positions require two to three years formal education after high school in a Hospital School or a University.

.....

ELECTROCARDIOGRAPH (EKC or ECG) TECHNICIAN ... D.O.T. 078.368

Operates an electronic instrument that records heart beats for use in diagnosis of heart ailments. This is done by attaching electrodes to various parts of a person's body. May develop and mount photographic tracings; works under the supervision of the physician. May be responsible for minor maintenance of equipment.

On-the-job Training: Two to three months.

General Advancement Opportunities available.

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ELECTROENCEPHALOGRAPH TECHNICIAN (EEG) ... D.O.T. 078.368

Operates an electronic instrument that records brain waves. Equipment is attached to a person's head in specified areas. Observes and notes patient's behavior during examination. Works under direct supervision of the physician. May be responsible for minor adjustment of equipment.

On-the-job Training: Two to three months.

General Advancement Opportunities available.

.....

LABORATORY HELPER ... D.O.T. 381.887

Responsible for cleaning and maintenance of equipment used in medical laboratories. May mix standard solutions and operate cleaning equipment. Other related duties as assigned.

General Advancement Opportunities available.

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LABORATORY TECHNICIAN (Non-Registered) ... D.O.T. 078.381

Assists physicians medical technologists and certified laboratory assistants by performing one or more routine laboratory tasks and related duties in a clinical laboratory. May make color determination of sugar in urine by adding prescribed reagents to specimens and noting change of color or appearance of precipitate, blood cell counts by comparing standard color scales or making color comparisons in a colorimeter, or separate plasma from whole blood using a centrifuge machine, and store and label it. Prepares sterile media for use in growing bacteriological cultures. May collect specimens from patients.

In addition, this worker may be trained for more advanced technical tasks. Performs such other related duties as may be directed.

Laboratory Technician: High School Graduation.

Certified Laboratory Assistant: High School Graduation and Graduation from an American Medical Association approved course given in a hospital school or university.

General Advancement Opportunities available.

Professional Positions require two to eight years additional formal education after high school graduation in a college or university.

.....

PHARMACY AIDE ... D.O.T. 074.387

Performs routine duties in pharmacy. Receives, unpacks and stores supplies. Delivers drug orders. Maintains equipment. Assists in maintaining working area in clean and orderly condition. Under supervision of the pharmacist, may help prepare standard preparations. Files orders. May operate packaging equipment.

General Advancement Opportunities available.

Professional Positions require a college degree.

.....

STERILE SUPPLY AIDE ... D.O.T. 223.887

Cleans instruments and equipment. Assembles and prepares sterile treatment packs for general medical use in various parts of the hospital. May operate sterilizing equipment of various types. May assemble and deliver supply requisitions for medical areas.

General Advancement Opportunities available.

.....

SURGICAL TECHNICIAN ... D.O.T. 079.378

Specially trained to work as part of the operating room team in surgery. Under supervision of physicians and nurses; helps create and maintain a sterile operating field and assists during surgery by handing around instruments and equipment. Helps to ensure and maintain the cleanliness and sterility of the operating room in order that it be ready at all times for surgical procedures. May transport patients.

On-the-job Training: six months to one year.

Some colleges and universities offer special courses in this field.

General Advancement Opportunities available.

.....

HOSPITALS IN THE GREATER CINCINNATI AREA

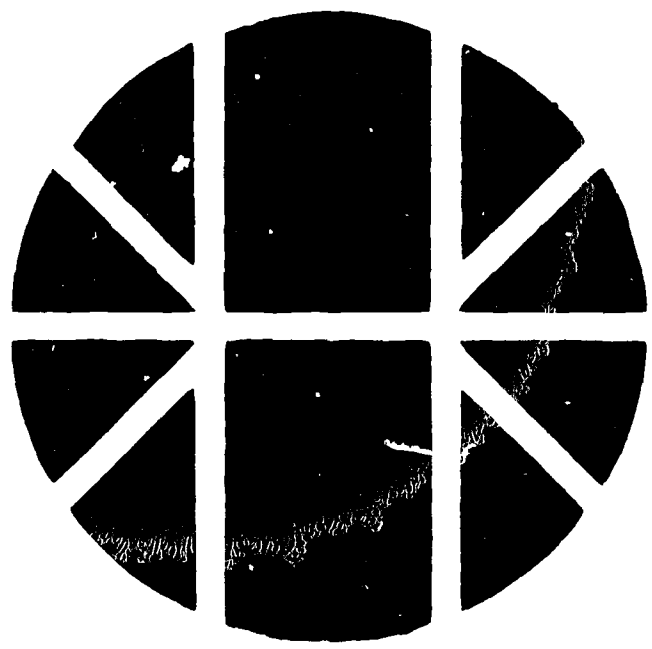
HAMILTON COUNTY, OHIO	Phone No.
Bethesda	961-0966
Catherine Booth	751-6900
Children's	281-6161
Christ	421-9600
Christian R. Holmes	872-7611
Cincinnati General	872-3100
Convalescent for Children	621-4415
Deaconess	861-6600
Drake Memorial	761-3440
Good Samaritan	872-1400
Jewish	861-3220
Longview	821-7500
Our Lady of Mercy	271-8800
Providence (Will Not be open until late 1970)	541-1625
Rollman Psychiatric	751-3700
St. Francis	921-6800
St. George	662-2880
St. Mary	421-3640
Shriners Burns Institute	872-7203
Veterans Administration	221-2325

BUTLER COUNTY, OHIO	
Hamilton	
Eugene H. Hughes Memorial	893-6141
Fort Hamilton	895-4311
Mercy	895-7431
Middletown	
Middletown Hospital	422-5411
Oxford	
McCullough-Hyde Memorial	523-4111

BROWN COUNTY	
Brown County Hospital	378-6121

NORTHERN KENTUCKY	
St. Elizabeth	581-1322
St. Luke	441-6100
Speers Memorial	261-0025
William Booth Memorial	431-3990

DEARBORN COUNTY, INDIANA	
Dearborn County, Lawrenceburg	Lawrenceburg 1010



For Educational Information about Professional Health Careers and Other Jobs in Health
Write or Telephone:

Health Careers Association of Greater Cincinnati

2400 Reading Road
Cincinnati, Ohio 45202
Phone 721-3160

A United Appeal Agency

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NEW JERSEY

Characteristics or attitudes of vocational education contributing to peaceful conditions in public secondary vocational educational schools are studied. Data consisted of (1) demographic profiles of students, teachers and principals, and (2) responses from students, teachers and principals to questions concerning characteristics of vocational education and whether these characteristics contributed to peaceful conditions in schools. Conclusions were that principle practices of vocational education discussed in this study are valid and do contribute to peaceful conditions. (CH)

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31 p.

Determining Group Perceptions of Vocational School Characteristics That Contribute To Peaceful Conditions

By

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VT008739

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Determining Group Perceptions of Vocational School Characteristics That Contribute To Peaceful Conditions

Problem

Turmoil contemporarily exists in our urban public, secondary schools.

Time magazine (February 23, 1968; p. 48) reported that: "A rash of violence, most of it racial, is spreading among high schools from California to Maine." The report highlighted incidents in:

> New Haven, Conn., where the police patrolled the high schools to prevent a revival of fist-swinging, china shattering riots that had erupted in the cafeterias of two schools - disrupting classes and causing 30 arrests;

Philadelphia, Penna., where 3,500 high students cut classes one day for a rally at the board of education that turned into a melee - causing 22 injuries and leading to 57 arrests;

Chicago, Ill., where 500 youths of Proviso East High hurled bottles at police during a rally protesting the failure of a student selection committee to nominate a single Negro girl for homecoming queen;

Newark, N.J., where two Negro girls fought over a cafeteria seat at Barringer High School - touching off two days of sporadic tray hurling and fights between Negro and white youths;

Trenton, N.J., where mass street fighting erupted among youths from Trenton's Central High School;

Springfield, Mass., where 30 white students from Technical High School brawled with ten Negroes from rival Classical High School; and, also in

Chicago, Ill., where most of the 2,372 students of the windy city's predominantly Negro Dunbar Vocational High School abandoned classes,

rallied in the streets, stopped traffic, and threw rocks at cars.

The violence exhibited in the urban, public, secondary schools is not being confined to just the upper division high schools or is it restricted just to students.

The Evening Times of Trenton, N.J., (February 14, 1968; p. 1) reported that: ". . . for several days . . . minor fighting was reported in the halls of Trenton Junior (High School No.) Three, and some students complained of being kicked, beaten, or threatened in and around the school building."

The Associated Press (AP) reported from Washington, D.C., on February 25, 1968, that: "A fresh outbreak of teacher strikes, including the nation's first statewide school walkout, marks a new surge of militancy which union leaders claim could sweep over 300 communities in 1968." In the same syndicated article - major teacher walkouts were predicted in Newark, Pittsburgh, and San Francisco.

To defuse emotions, school administrators, school superintendents, and school boards have:

- offered courses in Negro history
- stressed Negro cultural contributions in standard courses

- permitted Negroes to wear African dress to class

- paid Negro youngsters to attend suburban retreats to sound off grievances

- involved elected students and teachers in a dialogue about school problems and curriculum

- assigned trouble shooters from the State Department of Community Affairs to the schools

- appointed guidance interns to assist guidance counselors

- introduced security guards in the schools to patrol the halls

- cancelled traditional extra curricular activities within the schools

- arrested, suspended, and expelled troublemakers

- increased teachers' salaries

- included "no reprisal" clauses in teachers' contracts; and,

- met student-teacher demands to replace, fire, transfer, or cause to resign those faculty members considered incompatible to the pressure groups.

The existing turmoil and the measures utilized to respond to the turmoil are in sharp contrast to the heretofore assumption that there always would be in the high schools ". . . a strong emphasis upon unity of purpose and harmony and consistency in all its activities." (Espy, p. 494)

It is indeed contradictory to the epitaph in Elmtown's Youth (Hollingshead, p. 163):

> It's sure grand to be part of Elmtown High, because the kids greet you with smiles, and not frowns . . . . Our school isn't perfect . . ., but it is our school and we'll defend it and assist it . . . .

The turmoil is more in line with the observation made in The American High School Today (Conant, p. 85) that:

> Public education in the large cities presents certain problems which are not to be found in smaller communities.

Many reasons - all unsupported - are offered as the causes of existing turmoil. Time magazine suggests that racism is the undercurrent of the problem; but, United Press International (UPI) reports that the majority of the school populations are non-white with Philadelphia having

a 60% Negro majority; Chicago having a 52% Negro majority; and, Newark having a 71% Negro majority.

New Haven's school superintendent - John A. Santini, opines that the schools are irrelevant to the lives of the students; and, Trenton's school board president - John Tesauro - believes the schools are overcrowded. If the assertions are true that racism is prevalent in over-crowded schools offering unrealistic education, then a system of education built up formally over a period of a hundred years is in for dramatic changes, if not destruction. Racial imbalance, increased school construction, and curriculum change cannot be brought about quickly. Too many long held attitudes about integration, taxation, and the purpose of public schools need to be changed sharply and concommitantly before the needed change can be brought about.

Hypothesis

The fact that student and teacher disturbances have occurred in at least one big city New Jersey public secondary school district (Newark) coupled with the fact that student and teacher disturbances have <u>not</u> occurred within public, secondary, vocational schools - such as occurred in

Massachusetts and Illinois - located in Newark and nearly adjacent to Barringer High School causes the following question to be raised: "Why haven't extreme disturbances occurred in the vocational schools?" No doubt the answer - if there is an answer - is inevitably complex and perhaps irrational.

Vocational educators with considerable experience in the general and the vocational schools are willing to hazard a guess that certain principles and practices of vocational education combine to prohibit disturbances from occurring or - if they do occur - prohibit them from getting out of hand in the public, secondary, vocational schools.

The principles and practices are:

1. Education and training should prepare for work.
2. Courses and subjects taught should be related to a major field of study.
3. The teacher of a subject should have work and trade experience.
4. Education and training should be organized into a substantial block of time.

5. Teachers and administrators must exercise classroom and school control.
6. Students must be kept busy in realistic work.
7. Directions to students must be explicit.
8. Classes and schools must be kept small.
9. All persons are respected.
10. Supervisory experience and trade experience are more valuable than baccalaureate education.
11. A wide separation between teachers' ages and students' ages contributes to teacher respect.
12. Peer relationships between teachers and students are important.

To determine the characteristics of public, secondary, vocational schools in New Jersey - as perceived by students, teachers, and principals in the schools - and to determine if the samples (drawn randomly from the public, secondary, vocational schools in New Jersey) agree in their perceptions that these same characteristics contribute to peaceful conditions in the schools, the following questions (which are implied principles and practices of vocational education) will be tested:

1. Are students interested in the courses and subjects being taught?
2. Are students involved in work?
3. Do teachers have work and trade experience?
4. Are students being prepared for work?
5. Is supervision apparent?
6. Is respect given to all persons?
7. Are the schools well attended and orderly?

And, the following hypotheses will be tested:

1. The sample groups (combinations of students, teachers, and principals) will agree in their perceptions on the characteristics of public, secondary, vocational schools in New Jersey
2. The sample groups (combinations of students, teachers, and principals) will agree in their perceptions that the characteristics . . . contribute to peaceful conditions in the public, secondary, vocational schools in New Jersey; and,

3. The individual sample groups (students, teachers, and principals) each will confirm that the characteristics . . . are relevant to peaceful conditions . . . .

Method of Investigation

To determine the acceptance or rejection of the stated hypotheses, the opinion survey research technique was utilized. (Research Guidelines . . ., p. 88)

In this method, the collective perceptions of students, teachers, and principals (of vocational schools) was quantified by responses (yes - no) to opinions or verbalized attitudes.

A final, opinion questionnaire (See: Appendix A) was developed by initially eliciting opinions (See: Appendix B) from public, secondary, vocational school personnel and served as the test instrument because of its practical and relatively simple technique.

The value of initially eliciting opinions before the development of a final, opinion questionnaire was defended in The Academic Marketplace (Caplow, p. 35), wherein it stated:

> The merits of open-ended, or narrative, questions are that they do not force the responses into an irrelevant frame

of reference to be reported just as thoroughly as those which are anticipated by the interviewer.

Certain demographic data was collected for students, teachers, and principals (See: Appendices C, D, and E) of public, secondary, vocational schools to aid in the testing of the hypotheses.

Crossbreaks, or descriptive comparisons, were built into the instrument to isolate responses in terms of different variables, i.e., to discover if the opinions of students, teachers, and principals differed in identifying characteristics and determining if the characteristics contribute to peaceful conditions in the public, secondary, vocational schools.

Response data was treated by percentages to describe surveyed opinions of the 60 students, 20 teachers, and 10 principals. Therefore, the correlation coefficient statistic was utilized to provide a measure of relationship.

Findings

Since this study has primarily a sociological interest or an interest in human groups, the findings are discussed first in terms of demographic information or that information

defined (Freedman, p. 115) as an:

> . . . analysis of socially significant . . . variation.

for the three groups: students, teachers, and principals in the vocational school population.

Secondly, the findings are discussed in terms of statistical analysis or that information concerned with the numerical properties of populations and defined (Ferguson, p. 6) as:

> . . . the study of variation.

Thirdly, the findings are discussed in terms of observed analysis.

Demographic Information
Students

Of the 60 students surveyed (See: Appendix F for raw data), it was found that they were studying and training in the following six occupational areas:

1. Air-conditioning, Heating and Refrigeration (10)
2. Auto-mechanics (10)
3. Carpentry (3)
4. Dental Assisting (10)

5. Electronics; and,	(17)
6. Machine Shop	(10)
	(60)

Of the 60, there were 50 males (83%) and 10 females (17%). Twelve (12) of the total sample were enrolled in the twelfth grade; 22 were enrolled in the eleventh grade; 15 were enrolled in the tenth grade; and, one (1) was enrolled in the ninth grade.

Their ages ranged from 15 to 19, of which the median was 17, the mode was 17, and the mean was 16.6 years of age.

Forty-two (42) or 70% were white while 18 or 30% were Negro.

Eleven (11) of the sample studied four years in the vocational school while 19 studied three years, 23 studied two years; and, seven (7) studied one year. The range was 1 to 4, of which the median was two (2), the mode was two (2), and the mean was 2.3 years spent in study in the vocational school.

Thirty-three (33) or 55% of the sample do not work part time away from the school while 27 or 45% do work part time.

Characteristics of the Student Population

The student in the selected, public, secondary, vocational schools of New Jersey is:

> a white, non-working, occupation seeking, male, 16.6 years of age, enrolled in the eleventh grade, with 2.3 years of longevity in the vocational school.

Comment

Considering the number of years spent in the vocational school and the grade attained, there is a similarity between the public, secondary, vocational school and the high school described in Elmtown's Youth (p. 149) wherein the school functioned ". . . to prolong dependency on the family rather than as a training ground for adult life." The one difference is:

1. The typical New Jersey public, secondary vocational school is a training ground for adult life.

Demographic Information
Teachers

Of the 20 teachers surveyed (See: Appendix G for raw data), it was found that they were teaching and providing training in the following nine (9) major subject areas:

1.	Air-conditioning, Heating and Refrigeration	(1)
2.	Auto-mechanics	(2)
3.	Cosmetology	(4)
4.	Dental Assisting	(2)
5.	Electronics	(4)
6.	Machine Shop	(3)
7.	Printing	(2)
8.	Related Mathematics	(1)
9.	Stationary Engineering	(1)
		(20)

Of the 20, there were 14 males (70%) and six (6) females (30%).

Their ages ranged from 24 to 50, of which the median was 40, the modes were 39, 44, 45, and 46, and the mean was 38.9 years of age.

Nineteen (19) or 95% were white while one (1) or 5% was Negro.

The teachers' numbers of years in teaching ranged from one (1) to four (4). The median was 2.0, the modes were 1 and 2, and the mean was 1.9 years in teaching.

The number of years the teachers fulfilled in their trades, exclusive of teaching, ranged from five (5) to 20.

The median was 17, the modes were 12, 21, and 30, and the mean was 17.1 years.

Of the 20 teachers surveyed, nine (9) or 45% served in the armed forces while 11 or 55% did not.

Eleven (11) or 55% of the teachers formerly employed in industry had served in a supervisory position. The range was one (1) to 28, the median was one (1), the mode was one (1), and the mean was 4.05 years of service as an industrial supervisor.

The age at which the teachers entered teaching ranged from 23 to 49. The median was 38, the mode was 35, and the mean was 37.2 years of age when the teachers entered the teaching profession.

Of the 20 teachers, 16 or 79% had completed four full years of high school and had graduated from high school while four (4) or 21% passed the high school equivalency examination.

Of the 20 teachers, three (3) or 15% presently hold a bachelor's degree, one (1) or 5% are presently doing college work beyond state certification requirements, 12 or 60% are presently doing college work as required for state certification to teach, and four (4) or 20% had done some college work before entering teaching.

Characteristics of the Teacher Population

The teacher in the selected, public, secondary, vocational schools of New Jersey is:

> a white, non-veteran, male, 38.9 years of age, a former craftsman, with 17.1 years in industry, with four (4) years of supervisory experience, who entered the teaching field at 37.2 years of age, has served 1.9 years in teaching, a high school graduate presently doing college work as required for state certification to teach.

Comment

Conant, in his book The Education of American Teachers, makes no reference to the preparation of vocational education teachers and in his visit to New Jersey he completely by-passed Rutgers - The State University and its teacher training program. Had he visited The State University, he would have found that the "in-service" vocational education teachers mentioned in the sample are presently doing college work as required for state certification to teach and are earning 24 credit hours in required methodology which is considerably more than required by the 27 institutions he investigated where the range (p. 268) was from:

> . . . 3 semester hours to 11 semester hours, with 5 institutions at the lower extreme and 3 at the upper.

Demographic Information
Principals

Of the 10 principals surveyed (See: Appendix H for raw data), it was found that they had performed in the following six (6) occupations:

1.	Electrical Engineering	(1)
2.	Electronic Engineering	(1)
3.	Layout Draftsman	(1)
4.	Machinist	(2)
5.	Mechanical Engineer; and,	(1)
6.	Tool and Die Maker	(2)
		(8)

originally

Two (2) of the principals were trained as teachers.

The ten (10) principals surveyed were male; and, all were white.

Their ages ranged from 42 to 65. The median was 49, the modes were 49 and 55, and the mean was 51.2 years of age.

The number of years the principals spent in actual classroom or shop teaching ranged from five (5) to 22. The median was 13, the modes were 13 and 18, and the mean was 13.6 years in teaching.

The number of years the principals fulfilled in their trades, exclusive of teaching, ranged from four (4) to 19 years. The median was ten (10), the mode was four (4), and the mean was 9.6 years in the trades.

The number of years the principals spent in educational administration ranged from two (2) to 27 years. The median was seven (7), the modes were two (2) and nine (9), and the mean was 9.6 years in educational administration.

Of the ten (10) principals surveyed, five (5) or 50% served in the armed forces. The number of years in the armed forces for the five (5) principals ranged from one (1) to four (4) years. The median was one (1), the mode was one (1), and the mean was 1.2 years of service in the armed forces. Of the principals who had served in the armed forces, three (3) or 60% had been commissioned or non-commissioned officers. The range in years served as officers was one (1) to three (3), the mode was three (3), and the mean was 2.3 years of service as an officer.

Seven (7) or 70% of the principals formerly employed in industry had served in a supervisory position. The range was two (2) to six (6) years. The median was three (3), the mode was three (3), and the mean was four (4) years as an industrial supervisor.

The age at which the principals entered teaching ranged from 21 to 33. The median was 27, the modes were 27, 29, and 32, and the mean was 27.6 years.

The age at which the principals entered educational administration ranged from 36 to 54. The median was 45, the mode was 45, and the mean was 43.1 years.

Of the ten (10) principals surveyed, eight (8) or 80% held bachelor's degrees before they entered the field of education.

Of the ten (10) principals, six (6) or 60% have master's degrees plus 30 semester credit hours as their highest educational credentials, while three (3) or 30% have master's degrees, and one (1) or 10% has/have bachelor's degree plus 30 semester credit hours.

Characteristics of the Principal Population

The principal in the selected, public, secondary, vocational school of New Jersey is:

> a white, male veteran - 2.3 years as an officer, 51.2 years of age, a former craftsman, with 9.6 years of industrial experience - four (4) years as an industrial supervisor, a former teacher with 13.6 years of teaching experience, who entered teaching at 27.6 years of

age and educational administration at 43.1 years of age, with 8.2 years in educational administration, who held a bachelor's degree before entering teaching, and has since earned the master's degree plus 30 semester credit hours.

Statistical Analysis

The major hypothesis that students and teachers will agree in their perceptions of the characteristics of public, secondary, vocational schools in New Jersey is accepted. There is a correlation of .63 between students and teachers at the .01 level of significance. See Table 1.

Table 1. Means of "Yes" Responses for 30 Statements re: "Characteristics of Vocational Schools" by 60 Students, 20 Teachers, and 10 Principals in Selected, Public, Secondary, Vocational Schools in New Jersey

Groups	Number in Sample	Means ($\bar{x}$) of "Characteristics"	Correlation Coefficient (r)
Students	60	20.83	.63**
Teachers	20	23.00	
Students	60	20.83	.38*
Principals	10	27.30	
Teachers	20	23.00	.71**
Principals	10	27.30	

** Significant at .01 level by coefficient of correlation
* Significant at .05 level by coefficient of correlation

The major hypothesis that students and principals will agree in their perceptions of the characteristics of public, secondary, vocational schools in New Jersey is rejected. There is a correlation of .38 between students and principals at .05 level of significance. See Table 1.

The major hypothesis that teachers and principals will agree in their perceptions of the characteristics of public, secondary, vocational schools in New Jersey is accepted. There is a correlation of .71 between teachers and principals at the .01 level of significance. See Table 1.

The second hypothesis that students and teachers will agree in their perceptions that the characteristics . . . contribute to peaceful conditions in the public, secondary, vocational schools in New Jersey is accepted. There is a correlation of .54 between students and teachers at the .01 level of significance. See Table 2.

Table 2. Means of "Yes" Responses for 30 Statements re: "Contributes to Peaceful Conditions in Vocational Schools" by 60 Students, 20 Teachers, and 10 Principals in Selected, Public, Secondary, Vocational Schools in New Jersey

Groups	Numbers in Sample	Means ($\bar{x}$) "Contributions"	Correlation Coefficient (r)
Students	60	19.27	.54**
Teachers	20	23.60	
Students	60	19.27	.27*
Principals	10	27.50	
Teachers	20	23.60	.68**
Principals	10	27.50	

** Significant at .01 level by coefficient of correlation
* Significant at .05 level by coefficient of correlation

The second hypothesis that students and principals will agree in their perceptions that the characteristics . . . contribute to peaceful conditions in the public, secondary, vocational schools in New Jersey is rejected. There is a correlation of .27 between students and principals significant at the .05 level of significance. See Table 2.

The second hypothesis that teachers and principals will agree in their perceptions that the characteristics . . . contribute to peaceful conditions in the public, secondary, vocational schools in New Jersey is accepted. There is a correlation of .68 between teachers and principals at the .01 level of significance. See Table 2.

The third hypothesis that the individual sample groups (students, teachers, and principals) each will confirm that the characteristics . . . are relevant to peaceful conditions . . . is accepted for the three groups. There is a correlation of .83 between the students' responses at the .01 level of significance. There is a correlation of .85 between the teachers' responses at the .01 level of significance; and, there is a correlation of .83 between the principals' responses at the .01 level of significance. See Table 3.

Table 3. Means of "Yes" Responses for 30 Statements re: "Characteristics . . ." contrasted to means of "Yes" Responses for 30 Statements re: "Contributes to . . ." by 60 Students, 20 Teachers, and 10 Principals in Selected, Public, Secondary, Vocational Schools in New Jersey

Group	Number	Means ($\bar{x}$) "Characteristics"	Means ($\bar{x}$) "Contributes"	Correlation Coefficient (r)
Students	60	20.83	19.27	.83**
Teachers	20	23.00	23.60	.85**
Principals	10	27.30	27.50	.83**

** Significant at .01 level by coefficient of correlation

Observed Analysis

The assumptions outlined on Page 9 of this study and built into the instrument (See: Appendix I) are accepted

with the exception of the first part of #7 (. . . the schools are well attended . . .). The students and teachers believed the schools were not well attended while the principals believed they were.

To the second part of #7 and the previous six (6) assumptions - students, teachers, and principals overwhelmingly identified the stated assumptions as characteristics of the public, secondary, vocational schools in New Jersey.

Conclusions

From the demographic information, it is concluded that:

1. Students will remain in school for the full, four years and without prolonging their stay if the education and training is realistic.
2. A substantial number of individuals in the minority groups are not receiving education and training in the vocational schools.
3. Part-time work for students in the vocational schools is not a way of life.

4. Minority groups are not represented proportionately on the staffs of the vocational schools.
5. Teachers in the vocational schools are non-tenured teachers.
6. Teachers in the vocational schools have considerable trade experience and industrial supervisory experience.
7. Vocational teachers are not veterans. They probably were deferred during the time of war because of their trade specialities.
8. Vocational teachers enter teaching during middle age.
9. Vocational teachers are high school graduates; but, they are not degree oriented or degree seeking.
10. Principals in the vocational schools entered teaching from the upper division trades.
11. Principals in the vocational schools spent more than a decade in the classroom,

shop, or laboratory; and, nearly a decade in educational administration.

12. Principals served in the armed forces as officers; and,
13. Principals are degree oriented and degree seeking.

From the statistical analysis, it is concluded that:

1. Students and teachers perceive the vocational schools identically.
2. Students and principals do not perceive the vocational schools identically.
3. Teachers and principals perceive the vocational schools identically.
4. Teachers have the ability to perceive the vocational schools from three frames of reference: the students', the teachers', and, the principals'.
5. The three groups (students, teachers, and principals) are consistent in their identification of the characteristics of vocational schools that contribute to peaceful conditions.

From the observed analysis, it is concluded that:

1. The principles and practices of vocational education heretofore enumerated (Pages 7 and 8 of this study) are valid.

Recommendations

To alleviate the problem - as previously enumerated in this study - in our urban, public, secondary schools it is recommended that:

1. Education for college preparation should be de-emphasized, but not delimited or diminished.
2. Education for work should be expanded and broadened.
3. General education or that education that leads nowhere should be abolished.
4. Education should be decentralized; and, smaller educational facilities should be utilized.
5. Greater communications and control should be augmented.

6. The school year and day should be extended; and,
7. The community should be totally involved in the education and socialization processes of the society.

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VT 008 743
Administration and Effectiveness of Work Experience and Training Project in Kent County, Michigan under Title V of the Economic Opportunity Act of 1964. Report to the Congress.

Comptroller General (GAO), Washington, D.C.
Department of Health, Education, and Welfare, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 3Apr69 79p.

*FEDERAL PROGRAMS; *POVERTY PROGRAMS; *ADULT VOCATIONAL EDUCATION; *PROGRAM EFFECTIVENESS; *PROGRAM EVALUATION; EMPLOYMENT PROGRAMS; EMPLOYMENT SERVICES; WORK EXPERIENCE; DISADVANTAGED GROUPS
*ECONOMIC OPPORTUNITY ACT OF 1964 AS AMENDED

The Kent County work experience and training project is reviewed in compliance with legislation requiring reviews of programs authorized by the Economic Opportunity Act of 1964 as amended. The review is concerned with the efficiency of program administration and the extent which these programs achieve the objectives set forth in the Act. An examination of related legislative history and of administrative policies and procedures affecting the objectives of the work experience and training program is included. Also reviewed were project proposals, reports, correspondence, and other pertinent records of project operations in Kent County as well as case records for 70 randomly selected trainees, including their assignments, attendance, and assistance payments. Sixty of the 70 selected trainees were interviewed to obtain views and comments of those directly affected. Although, because of intangible factors, the total effect of this project could not be evaluated conclusions were that the project served a useful purpose consistent with the objectives of the Act. (CH)

VT 008 743

ED042060

REPORT TO THE CONGRESS

Administration And Effectiveness Of Work Experience And Training Project In Kent County, Michigan Under Title V Of The Economic Opportunity Act Of 1964

B-164031 (3)

Department of Health, Education, and Welfare

U.S OEPARTMENT OF HEALTH, EOUCATION & WELFARE
OFFICE OF EOUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

BY THE COMPTROLLER GENERAL OF THE UNITED STATES

VT008743

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-164031(3)

To the President of the Senate and the
Speaker of the House of Representatives

This is our report on the administration and effectiveness of the work experience and training project in Kent County, Michigan, under title V of the Economic Opportunity Act of 1964. This report supplements our summary report to the Congress on the "Review of Economic Opportunity Programs" (B-130515, March 18, 1969). Our review was made pursuant to title II of the Economic Opportunity Amendments of 1967 (81 Stat. 727).

Copies of this report are being sent to the Director, Bureau of the Budget; the Secretary of Health, Education, and Welfare; the Secretary of Labor; and the Acting Director, Office of Economic Opportunity.

Elmer B. Staats

Comptroller General
of the United States

COMPTROLLER GENERAL'S REPORT TO THE CONGRESS

ADMINISTRATION AND EFFECTIVENESS OF WORK EXPERIENCE AND TRAINING PROJECT IN KENT COUNTY, MICHIGAN Department of Health, Education, and Welfare B-164031(3)

D I G E S T

WHY THE REVIEW WAS MADE

A 1967 law directed the Comptroller General to review programs authorized by the Economic Opportunity Act of 1964, as amended, to determine:

--the efficiency of the administration of the programs and

--the extent to which these programs achieve the objectives set forth in the act. (See p. 3.)

The overall conclusions and recommendations of the General Accounting Office (GAO) in response to the above directive are contained in its summary report to the Congress on the "Review of Economic Opportunity Programs" (B-130515, March 18, 1969).

This report, which supplements the summary report, pertains to the work experience and training project in Kent County, Michigan--one of the projects conducted under the work experience and training program administered by the Department of Health, Education, and Welfare (HEW), pursuant to delegation of authority by the Director, Office of Economic Opportunity.

FINDINGS AND CONCLUSIONS

The Kent County project provided work experience and training to needy persons, many of whom subsequently

--obtained gainful employment,

--no longer depended on welfare payments, and

--assumed more economically gainful roles in society. (See p. 54.)

GAO believes that the expenditure of Federal funds for this project--about $432,000 from August 1965 through March 1968--served a useful purpose consistent with the objectives of the act. GAO is unable, however, to evaluate the total effectiveness of this project because of various factors which were not readily measurable. (See p. 53.)

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Tear Sheet APRIL 3,1969

In GAO's opinion, more efficient administration in several areas of operation would have resulted in increased benefits to some participants in the project. (See p. 13.)

The Social Security Amendments of 1967 established the work incentive (WIN) program to replace the work experience and training program. Administration of the WIN program is vested in the Department of Labor (DOL). GAO believes that the provisions of the law establishing the WIN program and the procedures set forth in the DOL guidelines, if effectively implemented, should serve to eliminate many of the problem areas that hindered the achievement of the objectives of the work experience and training program. (See pp. 14, 19, 26, 29, and 51.)

RECOMMENDATIONS AND SUGGESTIONS

DOL and HEW should provide procedures for establishing an inventory of characteristics and training needs of prospective enrollees for the WIN program, for use in planning training projects. (See p. 21.)

DOL guidelines for the WIN program should clearly set forth whether college-level training may be approved and, if so, the conditions governing such approval, in order to encourage consistent application of policy decisions pertaining to the college-level training segments of the WIN program's education component. (See p. 45.)

DOL should revise its guidelines to specifically provide for the feedback to WIN officials at all program levels of the results of DOL's analyses of local project data and of statewide and nationwide program information. (See p. 49.)

AGENCY ACTIONS AND UNRESOLVED ISSUES

DOL and HEW agreed to take action aimed at establishing an inventory of characteristics and training needs of prospective enrollees for the WIN program. (See p. 21.)

DOL revised its guidelines to specifically provide for appropriate feedback of operational and fiscal data to project sponsors and to provide them with interpretations of such data. DOL also plans to clarify its policy concerning WIN program utilization of college-level training. (See p. 45.)

MATTERS FOR CONSIDERATION BY THE CONGRESS

The matters presented in this report are for primary consideration by the congressional committees having oversight responsibilities for federally assisted antipoverty programs. In view of the interest shown by Members of the Congress in antipoverty programs generally, GAO is bringing its findings and observations to the attention of the Congress for general information purposes.

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ABBREVIATIONS

AFDC	Aid to families with dependent children
CWT	Community work and training (program)
DOL	Department of Labor
GAO	General Accounting Office
HEW	Department of Health, Education, and Welfare
MDTA	Manpower Development and Training Act
OEO	Office of Economic Opportunity
WIN	Work incentive (program)

COMPTROLLER GENERAL'S REPORT TO THE CONGRESS

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Department of Health, Education, and Welfare B-164031(3)

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INTRODUCTION

The General Accounting Office has reviewed the administration of the work experience and training project established in Kent County, Michigan, under title V of the Economic Opportunity Act of 1964, as amended (42 U.S.C. 2921). The 1967 amendments to the act directed the Comptroller General of the United States to make an investigation of programs and activities authorized by the act in order to determine:

-- the efficiency of the administration of such programs and activities by the Office of Economic Opportunity and by local public and private agencies carrying out such programs and activities, and

-- the extent to which such programs and activities are achieving the objectives set forth in the relevant part or title of the Economic Opportunity Act of 1964 authorizing such programs or activities.

The Kent County project is one of a number of such projects which we have included in our investigation of the work experience and training program authorized under title V of the act. Our work, which was performed during the period January to June 1968, covered project activities from the inception of the project in August 1965 to March 1968. The scope of our review is described more fully on page 61.

Pursuant to delegation of authority by the Director, Office of Economic Opportunity (OEO), administration of the title V program was vested in the Secretary of HEW.

The principal Federal officials having responsibility for the matters discussed in this report are shown in appendix I. The comments of HEW, DOL, and OEO, which concur in general with our findings and observations, are also included as appendixes to this report.

BACKGROUND

PURPOSE OF WORK EXPERIENCE AND TRAINING PROGRAM

The Economic Opportunity Act of 1964, as amended (42 U.S.C. 2701), commonly referred to as the "war on poverty act," was enacted by the Congress to strengthen, supplement, and coordinate efforts to eliminate poverty in the United States. The act authorized the establishment of various programs intended to open to everyone the opportunity for education and training, the opportunity to work, and the opportunity to live in decency and dignity. Title V of the act provided for an expansion of the Federal assistance then being offered under the community work and training (CWT) program which was authorized by the 1962 amendments to the Social Security Act (42 U.S.C. 609).

Under the CWT program, limited Federal financial participation was provided to assist the States in encouraging the conservation and development of work skills of individuals receiving assistance under the program of aid to families with dependent children (AFDC). Only 13 States, including Michigan, participated in the CWT program which ended on June 30, 1968, in accordance with the Social Security Amendments of 1967 (81 Stat. 884), enacted January 2, 1968.

The purpose of the title V work experience and training program, as set forth in section 501 of the Economic Opportunity Act of 1964, was to expand the opportunities for constructive work experience and other needed training available to persons who were unable to support themselves or their families.

In furtherance of the objectives of title V, guidelines were prescribed jointly by OEO and HEW, aimed at improving the employability of unemployed fathers and other needy persons by conserving good work habits and skills, by developing new skills through work experience and training of a constructive nature, and by helping them to secure and retain employment or to attain or retain capability for self-support or personal independence.

In recognition of the diverse needs and abilities of the hard-core unemployed, title V projects were established to provide for education, constructive work experience, and training. In addition, the necessary social services were made available to help families with problems of life and health that make it difficult for some persons to get and hold jobs.

Under the title V program, through June 30, 1968, up to 100 percent in Federal funds could be used for any expense reasonably attributable to participation in a work experience or training project, including such expenses as transportation, special work clothing, and certain medical care and other items necessary for a comprehensive program. Thereafter, Federal financial participation was limited to 80 percent of such expenses. The Federal funds under title V were made available to State public welfare agencies for State and local work experience and training projects.

Effective upon passage of the Economic Opportunity Amendments of 1966 (80 Stat. 1451), the Secretary of HEW was authorized to delegate jurisdiction over certain manpower activities under title V to the Secretary of Labor. Such manpower-oriented activities were to be carried on pursuant to part E of title II of the Manpower Development and Training Act (MDTA) (42 U.S.C. 2610c).

Starting July 1, 1967, the Secretary of HEW was required to obtain concurrence from the Secretary of Labor before making a decision to renew an existing title V project. These decisions were generally facilitated through joint evaluation visits by representatives of DOL and HEW to projects prior to the time the projects were due for renewal. Interim policies and procedures for joint HEW and DOL operations of title V projects were published in June 1967.

The 1966 Economic Opportunity Amendments added a limitation that any individual's participation in a project would not ordinarily exceed 36 months. However, an individual could obtain needed follow-up services for a reasonable period after he completed work experience and training.

Federal financing from the inception of the program in late 1964 through the 1968 program year amounted to about

$353 million. In addition, HEW guidelines provided that services, such as education, vocational training, and medical aid offered under existing programs in the project community, be obtained for title V trainees without charge to the title V program, whenever such services were available.

Every State except one had title V work experience and training projects. An analysis made by HEW showed that, as of June 30, 1968, about 31,200 trainees were enrolled in title V projects and about 185,500 additional trainees had previously completed their assignments in the projects or their participation in the projects was otherwise terminated.

TERMINATION OF WORK EXPERIENCE AND TRAINING PROGRAM

The title V program and the CWT program will both be replaced by a new work training program authorized under the Social Security Amendments of 1967. This new program, known as the work incentive (WIN) program, was designed especially for AFDC recipients. Its purpose, as stated in the Social Security Amendments of 1967, is to:

> "*** require the establishment of a program utilizing all available manpower services, including those authorized under other provisions of law, under which individuals receiving aid to families with dependent children will be furnished incentives, opportunities, and necessary services in order for (1) the employment of such individuals in the regular economy, (2) the training of such individuals for work in the regular economy, and (3) the participation of such individuals in special work projects, thus restoring the families of such individuals to independence and useful roles in their communities."

The DOL will have principal administrative responsibility for the WIN program, with the cooperation of HEW. The law requires that the Secretary of Labor use the three approaches mentioned above to assist persons referred to him by the welfare agencies to become self-sufficient. These persons are to be pointed toward regular employment regardless of their present level of skill. Because of the

establishment of the WIN program, title V projects were ended in Michigan and in a number of other States by December 31, 1968. For many States the title V program has been extended beyond December 31, 1968, but it will end by June 30, 1969.

STATE OF MICHIGAN TITLE V PROJECTS

The Michigan Department of Social Services was designated as the State agency to cooperate with the Federal Government in handling welfare problems and in administering the provisions of the Social Security Act. The Michigan Department of Social Services was also responsible for the administration of title V projects. The objectives of the Michigan State title V program were to be accomplished by providing experimental, pilot, or demonstration projects in public assistance programs which would permit the State to extend the work and training approach to public assistance recipients and other needy persons.

Six projects, including one for the State's title V administrative staff, were established in Michigan under the title V program. Through March 31, 1968, grants amounting to about $14.2 million had been approved by HEW for these projects and total expenditures amounted to about $9.6 million. An analysis made by HEW of information reported by the State showed that, as of May 31, 1968, about 1,750 trainees were enrolled and about 7,200 trainees had previously completed their assignments in the projects or their participation in the projects was otherwise terminated. The Michigan Department of Social Services operated title V projects through county or regional units composed of caseworkers and work and training specialists. The units had responsibility for developing the plan of training and work experience, for carrying out the plan, and for providing special social services to augment the plan.

The State of Michigan, prior to January 1967, had ceilings for financial assistance which did not always provide for the full needs of AFDC recipients, as determined by public assistance standards. For such recipients who participated in the title V program, title V funds were used to make up the difference between the financial assistance provided by the State and their full needs. Beginning in

January 1967, the State has paid AFDC recipients, including those participating in the title V program, for their full needs, and title V funds were no longer used for this purpose. However, trainees continued to receive $36 monthly from title V funds to cover the additional expenses incident to their participation in the title V project. If child care was required, they received up to $86 monthly to cover the cost of this care. In some cases, title V funds were used to pay for medical assistance to trainees.

KENT COUNTY TITLE V PROJECT

Kent County is located in the west-central section of the lower peninsula of Michigan and is about 150 miles northwest of Detroit. The population of Kent County is about 400,000, most of which is in metropolitan Grand Rapids.

Grand Rapids has been nationally known as a furniture manufacturing area for many years, but expansion of heavy industry during the war period, 1942 to 1945, raised employment in the metal industries to first place in the area and in the machinery industries to second place. The furniture industry now ranks third as an employer in the area. Area firms produce a large variety of manufactured goods, including automotive stampings and interior soft trim, office and household furniture, shoes, electrical appliances, metal-working machinery of all types, builders' hardware, aircraft instruments, and electronic components.

During most of the past decade, the number of workers seeking employment in the Grand Rapids area somewhat exceeded available job opportunities and unemployment ranged between 3 and 5.9 percent of the labor force.

The title V project for Kent County was initially approved by HEW effective August 15, 1965, for a 1-year period. Approval for two additional periods extended the project through July 31, 1968. Early in 1968 it was anticipated that the project would be replaced by the WIN program.

The purpose of the Kent County title V project was to provide constructive work experience and training, primarily to AFDC recipients or applicants for AFDC assistance, to enable them to become self-supporting. A separate project staff, called the Economic Opportunity Section, was established by the State to administer the project in Kent County as part of the Kent County Department of Social Services, which is a State office under the Michigan Department of Social Services. The project staff, throughout most of the project life, consisted of the project supervisor, project trainer, project developer, employment counselor, and three caseworkers.

The project proposals approved by HEW provided for 300 work experience and training spaces annually, with about 180 persons participating at any given time. From inception through March 31, 1968, 635 people had been enrolled in the project, of which 157 had completed their assignments and 307 had terminated their participation in the project prior to completion. The remaining 171 were still enrolled in the project. Of the 464 who either had completed their assignments or otherwise terminated their participation, 143 obtained employment upon termination.

Grants amounting to about $750,000 had been approved by HEW for the project through March 31, 1968. As summarized below, total expenditures through that date amounted to about $432,000.

	Amount	Percent
Payments to participants:		
Subsistence	$ 73,000	16.9%
Training allowances	133,000	30.8
Child-care allowances	93,000	21.5
Subtotal	299,000	69.2
Other expenditures:		
Personal services (salaries)	82,000	19.0
Academic training	11,000	2.6
Vocational training	14,000	3.2
Materials, equipment, and supplies	6,000	1.4
Other, including overhead	23,000	5.3
Subtotal	136,000	31.5
Total expenditures	435,000	100.7
Less adjustments not allocated to specific expenditure categories	3,000	.7
Total expenditures after adjustments	$432,000	100.0%

With the approval of the Kent County title V project effective August 1965, CWT program activities in Kent County were discontinued and were transferred to the title V project. Under the title V project, a wider range of work experience and training than that offered under the CWT program was provided to trainees. Some trainees were placed on academic assignments, such as adult basic, high school, and college education, or on vocational training assignments, such as nurse's aide, clerk-typist, and cosmetologist. In addition, some trainees received work experience at county and State offices or at such nonprofit organizations as the Chamber of Commerce and the American Red Cross.

The Kent County project staff frequently used the facilities of the local boards of education to train project participants at minimal cost to the project. In some instances, participants received training under other federally sponsored programs such as the MDTA or vocational rehabilitation programs. However, when these programs or facilities were not available, title V funds were used to establish courses specifically for trainees or to pay tuition at private institutions such as cosmetology schools.

Title V payments to trainees varied widely depending on the duration of their participation, training, and child-care allowances; tuition payments; and public assistance payments. Because some trainees terminated shortly after enrolling in the project, they received no payments. Others who were in the project for as long as 16 months received up to $2,400. The total title V payments made to 43 former trainees included in our tests averaged about $460 per trainee. Payments for training, medical, and project administrative expenses from inception of the Kent County project through March 31, 1968, averaged about an additional $210 for each trainee who participated in the project. In addition, trainees participated in certain manpower and training activities financed under other Federal programs without charge to the title V project.

Although the Economic Opportunity Amendments of 1966 called for a major role to be played by DOL in the title V

program, it was decided, as a result of a joint HEW/DOL survey of the Kent County project in August 1967, that DOL would not participate in the project because it was scheduled for termination in the near future.

PROJECT ADMINISTRATION

The manner in which a work experience and training project is administered can significantly affect the extent to which the project achieves the objectives of the authorizing legislation. The efficient administration of such a project is, therefore, an important aid in accomplishing these objectives.

We found that the Kent County project provided work experience and training to many needy persons and thereby helped them obtain employment, get off the welfare rolls, and assume more economically gainful roles in society. We noted, however, several areas of operation where, in our opinion, more efficient administration by project officials would have raised the level of project effectiveness through increased benefits to some of the needy persons intended to be served. These areas, discussed in the following sections of this report, relate to:

--project planning and selection of project participants (p. 14),

--employment counseling and employability plans (p. 22)

--work experience and training assignments (p. 31), and

--analyses and evaluations by program officials (p. 46).

We recognize that the title V program is being phased out and replaced by the WIN program administered by DOL. In view of the similar nature of the programs, we believe that our findings pertaining to the Kent County project should prove helpful to DOL in its efforts to efficiently administer the WIN program and to achieve a high level of effectiveness.

As HEW will be responsible for referring AFDC recipients to WIN program officials and for providing certain supportive services, such as child-care arrangements, our findings should also prove helpful to HEW. Comments on this report were obtained by HEW from responsible State and local title V project officials who were in general agreement with the positions taken.

PROJECT PLANNING AND SELECTION OF PROJECT PARTICIPANTS

We noted that the Kent County title V staff enrolled eligible persons who apparently could benefit from the project. We believe, however, that experience gained from the project has pointed out an opportunity for improvement in procedures which should be of substantial assistance in the planning as well as in the overall management of future programs.

The Kent County project staff depended upon State AFDC caseworkers to refer prospective trainees to fill available openings in approved training programs. However, project officials lacked statistics and other basic information on all AFDC recipients in the county, to enable them to establish programs tailored to the individual needs of those who would be referred.

We also noted that many of the persons referred to the Kent County project were AFDC mothers with children for whom child-care arrangements must be made. Because project officials were not prepared to cope with the resulting child-care problems, many of these mothers were unable to continue their participation in the project. In addition, child-care problems prevented some of the mothers from gaining employment after completing their project assignments.

DOL guidelines for the WIN program provide for various improvements in selection procedures. For example, priorities have been established as to which persons should be referred to the program by the AFDC caseworkers. In addition, the Congress, in recognition of the need to provide for suitable child-care arrangements, included in the Social Security Amendments of 1967 a provision which should assist in resolving this particular problem.

Since the eventual success or failure of the WIN program is in large measure dependent upon the establishment of specific training programs geared to meet the needs of the individual trainees, it appears to us that WIN program officials will need to receive information on the characteristics, needs, goals, and self-support potential for all AFDC recipients in the target community. Such information is not

provided for under the guidelines for the WIN program. In our opinion, this type of information would be of substantial value to program officials in managing and improving the effectiveness of their programs.

Selection procedures followed

HEW guidelines provided that persons selected to participate in title V projects be needy, have potential for self-support, and be able to benefit from the project. Participants were to include persons eligible for Federal assistance, such as AFDC recipients, or other persons who were considered needy on the basis of the criteria of the individual States. The Michigan title V manual provided that AFDC or other caseworkers were to identify prospective enrollees on the basis of their analyses of the individuals' potential for self-support and to refer them to the title V project staff for a final determination as to their acceptability.

The initial proposal for the Kent County project provided for 300 trainees annually, to consist of about 200 men and 100 women. Of the 300, about two thirds were to come from the AFDC rolls and the balance were to come from the county's general relief rolls. However, during the first project year, practically all the trainees were women from the AFDC rolls. This was attributed by project officials to a general increase in employment in the area which resulted in a reduction in the number of men on the AFDC rolls. The project proposal was therefore revised for the second project period to provide for 200 women and 100 men who were to be primarily AFDC recipients. The third and final project proposal provided that only AFDC recipients were to be enrolled in the project.

In our review we noted that practically all the trainees in the Kent County project had been referred to the project staff by State AFDC caseworkers. Trainees had been referred by the caseworkers on the basis of requests from the project staff for persons to participate in planned training courses or as a result of the caseworkers' routine reviews of AFDC case files. AFDC officials told us that they normally did not refer anyone to the project staff unless they knew that openings were available.

During the first project year, the Kent County project staff encountered difficulties in filling available trainee spaces. A former project supervisor stated that the staff accepted almost everyone referred because of the emphasis by HEW and the State office that all authorized spaces be filled. He stated also that AFDC caseworkers were sometimes reluctant to refer AFDC recipients to the project staff because the caseworkers were concerned that such recipients might be replaced in their case loads by recipients with greater problems to be resolved.

For example, in one instance the Kent County project staff asked AFDC caseworkers to refer persons for five training classes. After a week only two persons had been referred, one of whom had six children and was already working full time. Only after the project staff had complained to an AFDC supervisor were sufficient persons referred to the staff to fill the training spaces available at that time.

We noted that efforts had been made at various times by the Kent County project staff to improve the planning by obtaining information as to the characteristics of all AFDC recipients. For example, in September 1966 the project staff, in cooperation with the AFDC staff, began a study to consider the feasibility of establishing an inventory of the vocational goals and training needs of all AFDC recipients in Kent County. However, at the time of our field review, such an inventory had not been prepared. The current project supervisor told us that the inventory would have been useful for planning purposes but that the study was terminated in November 1966 because of the demands of other work.

Child-care problems

Our review showed that many persons referred by the AFDC caseworkers and accepted into the project were mothers with young children. Because suitable arrangements could not be made for their children, many of these mothers terminated their participation or did not gain employment after completing their project assignments.

HEW criteria provided that AFDC mothers might participate in title V projects only when adequate provision had been made for the care of their children. The criteria provided also that, in selecting trainees, priority be given to AFDC mothers whose children were approaching the cut-off date for AFDC assistance, which in Michigan is normally the 18th birthday. Also, women with children under 3 years of age generally were not to be expected or encouraged to undertake training.

The initial proposal for the Kent County project stated that, because day-care resources in the county were inadequate, both quantitatively and qualitatively, child care would be a problem area. It was also recognized in the second proposal that, because of the large number of women in the project, child-care planning would continue to require special attention. Therefore, the proposal contemplated that first priority would be given to women with children over 14 years of age and second priority to women with children over 10. The proposal for the final project period also gave recognition to this problem, which was accentuated by the continued lack of adequate day-care facilities in Kent County. A Michigan State title V project official reviewed the Kent County project in May 1966 and reported that, to reduce the dropout rate, greater emphasis would be placed on solving child-care problems. Still, a high percentage of mothers with young children were later referred to the project.

We examined the case files of 59 women, selected on a random sample basis, who had participated in the project, and we found that 90 percent of them had at least one child under 10 years of age at the time of enrollment, as shown below:

Age of youngest child	Number of mothers	Percent
2 years or under	20	34%
3 to 5 years	22	37
6 to 9 years	11	19
Over 10 years	6	10
Total	59	100%

Our review of the case files for the 59 women indicated that the children were usually left with baby-sitters or relatives while the mothers were participating in the project. In some cases, the oldest child took care of the younger children in the family. The case files contained no evidence that any of the 59 women had placed their children in day-care facilities.

The State's title V manual provided that a child-care allowance would be paid on the basis of the actual costs up to $86 a month for trainees participating 40 hours a week and $44 a month for trainees participating up to 20 hours a week. Of the 59 women, only 38 received child-care allowances.

To determine the extent to which child-care problems either caused persons to terminate their participation in the project or prevented them from obtaining employment, we interviewed 31 women who were no longer participating in the project. Of 16 women who had completed their assignments, three told us they did not seek employment because of the need to be at home with their children. Of the remaining 15 women who had not completed their training, four told us that they were unable to continue their participation in the project because suitable child-care arrangements could not be made.

For example, one was an AFDC mother who at the time of enrolling in the project had four preschool children,

including twins only 20 days old. She started training in September 1967 but, because of inadequate child-care arrangements, left the project in November 1967 after attending only 33 of 72 scheduled classroom hours. A project official told us that he had been aware of her potential child-care problem but stated that, because of her desire to participate, she had been permitted to enroll.

In addition, Kent County records show that, of 125 persons who left the project in 1967, 19 persons, or 15 percent, left because of inadequate child-care arrangements.

Action taken by the Congress to resolve child-care problems

The need to provide for suitable child-care arrangements was recognized by the Congress when authorizing the WIN program. The Social Security Amendments of 1967 provide that suitable arrangements be made for the children before individuals are referred to the program. The child-care arrangements contemplated include full-time day-care centers with strong educational components, neighborhood family day-care services, and reimbursements to relatives and friends for child-care services. The Federal share of the costs of providing these arrangements is 85 percent through June 30, 1969, and 75 percent thereafter.

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In commenting on a draft of this report, the Department of Labor informed us in a letter dated October 4, 1968 (app. III), that it was working closely with HEW's Children's Bureau to be sure that adequate child care would be available under the WIN program.

Opportunity to improve program management

DOL guidelines for the WIN program provide that the State welfare agency send to the local employment service responsible for administering the program, a summary of pertinent data relating to each AFDC recipient, at the time of his referral. This summary, which is to be provided on

a form to be furnished by HEW, is to contain data concerning age, race, welfare history, prior work experience and training, amount of AFDC payments, factors which may limit employment or training, and personality characteristics.

We believe that these summaries will assist WIN program officials in providing a basis for assessing the employment potential and training needs of referred persons. However, we believe that similar information in the files, including pertinent data as to the nature of child-care arrangements made by the State welfare agency, for all AFDC recipients, would be of considerable additional assistance to WIN program officials in their efforts to achieve effective management of the program. It seems to us that AFDC caseworkers, in routine reviews of their case files, could readily compile and update this data for WIN officials.

We believe that WIN officials would then be better able to plan training projects to meet the specific vocational goals of prospective enrollees rather than to routinely fill spaces in approved projects as was done in the Kent County title V project. In addition, such information would assist program managers to identify those individuals having common vocational goals and would enable maximum utilization of existing training facilities. Also, the data would show the extent to which child-care arrangements were a problem for certain AFDC recipients and would enable program officials to develop courses of action in light of such information.

Moreover, WIN program managers would be able to readily identify those AFDC recipients already having sufficient training and work experience to enable them to fill existing employment opportunities. Also, in the event that budgetary or other limitations should affect the level of planned training or that more people should desire training than could be accommodated, this data could be used to establish priorities for training.

Recommendation to the
Secretary of Labor and the
Secretary of Health, Education, and Welfare

We therefore recommend that the Secretary of Labor and the Secretary of Health, Education, and Welfare include in the guidelines for the WIN program appropriate procedures for establishing an inventory of the personal, educational, and occupational characteristics and training needs, and other pertinent data relative to AFDC recipients in the areas served by the WIN program.

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In commenting on a draft of this report HEW advised us in a letter dated September 30, 1968 (app. II), that it would work with the Department of Labor in an effort to formulate procedures aimed at improving the administration and effectiveness of the WIN program as it relates to AFDC recipients.

The Department of Labor expressed its complete agreement with the above recommendation and stated that it would do everything possible to ensure that proper action is taken.

EMPLOYMENT COUNSELING AND EMPLOYABILITY PLANS

Since the ultimate objective of the title V project was to assist needy individuals in obtaining gainful employment, employment counseling was crucial to the success of the project. The role of the employment counselor was a challenging one and included (1) preparing an employability plan to identify the trainee's employment handicaps and to serve as a blueprint for a specific course of action to overcome such handicaps, (2) channeling trainees into appropriate training courses, assessing their progress, and adjusting their plans, as appropriate, and (3) motivating and otherwise assisting trainees in obtaining gainful employment.

On the basis of our review, we believe that Kent County project trainees did not receive maximum benefits from employment counseling services because the project was not adequately staffed with experienced employment counselors. We found that, although employability plans were prepared for most trainees, they usually were quite general and frequently did not include specific vocational goals or time frames for completing the training or provide for the elimination of individual handicaps which tended to impede employability. In addition, we were unable to fully evaluate the extent or adequacy of employment counseling actually provided because few counseling contacts, together with pertinent details, were recorded in project files.

Under the WIN program, responsibility for employment counseling, including the development of employability plans, has been assigned to the State employment service which has had considerable experience with such activities under other DOL manpower programs. The Congress, recognizing the importance of employability plans, included in the act authorizing the WIN program a specific requirement that such a plan be prepared for each trainee.

HEW guidelines for the title V program provided that, since persons on welfare were generally apathetic about their chances to improve themselves, special efforts were necessary to increase their motivation through skillful and appropriate counseling.

The Kent County project employment counselor was responsible for assisting trainees in developing employability plans and for making assignments of trainees to training courses, assessing their progress, and making appropriate reassignments. He was to visit project sites and consult with teachers, foremen, and family caseworkers. This counseling relationship was to be maintained until the trainees were placed in jobs. Under the regular Michigan State AFDC program, all men recipients and those women recipients believed to have potential for employment were required to be registered with the State employment service as a condition of eligibility, which would also give them access to employment counselors of that service.

Project not adequately staffed with experienced employment counselors

We noted that, from the inception of the project in August 1965 until October 1967, the Kent County project staff included only one employment counselor who was responsible for counseling as many as 180 trainees. In contrast, in Wayne County, Michigan, the title V project staff included 30 employment counselors who were responsible generally for 30 to 80 trainees each.

We also noted that, from August 1965 to October 1967, three different persons were assigned to this position in Kent County. Moreover, we were told that, from October 1967 through the time of our review in early 1968, funding limitations prevented the employment of a counselor. After October 1967, various members of the project staff were assigned responsibility for employment counseling, which was to be performed in conjunction with their regular duties. We noted that the employment counselors, as well as the other staff members responsible for counseling after October 1967, had social welfare backgrounds and did not have prior experience or training as employment counselors.

We noted certain instances where it appeared that experienced employment counselors could have played a more direct and effective role in channeling trainees into employment. As indicated by the following examples, the trainees, although apparently employable when they entered the project, were not channeled into employment by the

employment counselor but, instead, were placed in training assignments from which they subsequently dropped out to obtain jobs gained through their own efforts.

--An 18-year-old father, an applicant for AFDC assistance who had had 2 years of work experience on various jobs, entered the project in March 1967. He was unemployed because of a back injury suffered in his prior job. His employability plan showed that, because he had an eighth grade education, he should take an adult basic education course. He informed us that he did not like the course, which he quit after a few weeks and, on his own initiative, obtained a job in a bakery, the first of three jobs he held after leaving the project. At the time of our interview in May 1968, he had been working for a year in a factory as a punch press operator, receiving $3 an hour.

--A 34-year-old woman with an 11th grade education and prior experience as a nurse's aide, who had been an AFDC recipient for about 6 years, entered the project in June 1967. After attending high school for a short time in accordance with her employability plan, she dropped out in August 1967 and, on her own, obtained a factory job paying $2.45 an hour. She was still employed there at the time of our interview in May 1968. She told us that she wanted to obtain a high school diploma to enable her to go to art school, but felt that she should accept the factory job to meet her family's immediate needs.

The Michigan State title V project coordinator acknowledged to us that some trainees may have been employable when they entered the Kent County project and that better evaluations by qualified employment counselors may have resulted in direct job placement rather than placement on training assignments.

The need for qualified employment counselors in title V projects was recognized in the Economic Opportunity Amendments of 1966 which provided that HEW coordinate the title V program with DOL on such matters as job development and employment testing and counseling. A joint HEW/DOL

survey of the Kent County project during August 1967 indicated that the project could have been more effective if skilled job development and occupational technicians of the State employment service had counseled trainees. However, it was decided not to change the counseling procedure because the project was to be terminated in the near future.

The Director, Kent County Department of Social Services, told us that the State employment service could have provided better employability plans and employment counseling than those provided by his title V staff. However, he said that the State employment service was unable to furnish this assistance because of its limited resources.

Counseling contacts not always recorded

In our review we looked for evidence on the extent of employment counseling actually provided to trainees, particularly in evaluating their progress in eliminating employment handicaps. We reviewed the documentation of counseling contacts recorded by the employment counselor in the case files of 59 trainees from the beginning of the project in August 1965 to October 1967. We found that, except for 12 cases, the files did not contain pertinent information as to the factors underlying the problems being encountered by the trainees or the steps being taken by the counselor to resolve the problems. Project officials told us that employment counseling was provided more frequently than shown in the files but that the employment counselor did not always have sufficient time to record all the contacts.

Skillful and appropriate counseling, being a vital element of the project, requires a close working relationship with individual trainees, knowledge of their progress, and an awareness of problems that hinder their progress. It follows, therefore, that the recording of such factors would be an aid in effectively counseling and following up with trainees, particularly where a turnover of employment counselors occurs.

Employment counseling under the WIN program

Employment counseling under the WIN program is the responsibility of the State employment service, which has had considerable experience with such activities under other DOL manpower programs. In addition, the DOL guidelines provide that a record of counseling sessions shall be maintained and shall include concise statements of enrollees' problems, progress, and other pertinent information. In our opinion, the DOL guidelines provide sufficient emphasis and guidance for employment counseling and, if properly implemented, should assist in the effective accomplishment of this vital part of the program.

Development of employability plans

HEW guidelines for the title V program provided that employment counselors work with trainees in developing employability plans to disclose their employment handicaps, such as lack of education or vocational skills or limited work experience, and in establishing action plans to remove these handicaps in order to improve the trainees' employability. The guidelines provided also that, in devising a plan, the counselor evaluate a trainee's existing skills, education, work history, family problems, and other factors.

The guidelines provided further that the employability plan include specific vocational goals, outline services and training essential for the trainee to achieve these goals, and recommend specific actions in terms of content, schedule, and duration of training.

We reviewed the case files for 70 trainees, selected on a random sample basis, to determine the adequacy of the employability plans developed for them by the employment counselors. We found no plans for 15 trainees, most of whom had enrolled during the first project year. We noted, however, that employability plans were usually prepared for trainees during the second and third project years.

Of the employability plans prepared for the 55 trainees, 14 included as a vocational goal the completion of a

specified work experience or training assignment without identifying the vocation for which the trainees were to be prepared. As examples, goals included "enroll in summer school," "continue studies at junior college," and "send to adult basic education." We noted that, although specific vocational goals were not established for the 14 trainees, they were placed in training programs designed to correct one or more of their identified employment handicaps.

In addition, the employability plans usually did not include time frames or target dates for completing work experience or training assignments. We believe that such time frames are important because they provide a means for measuring a trainee's progress in relation to his plan and for making necessary adjustments to the plan.

Trainees with limited education and work skills not always given opportunities to derive maximum benefits under the project

In our review of the case files for the 70 trainees, we also noted that, for seven men with limited education or work skills, employability plans either had not been prepared or, if prepared, were very general and did not provide specific courses of action to remove the handicaps to employment identified in the plans. Instead, these men were placed in the county's surplus food store on work experience assignments which, according to the supervisor of the store, would not prepare them for employment. Furthermore, he stated that it would take a person no more than 2 days to learn the assigned duties; yet we found that the seven men remained on these assignments for periods ranging from several months to 2 years. An OEO representative, in his review of the Kent County project in March 1966, classified this type of work experience as "dead-end."

Details on two of the seven men assigned to the county surplus food store follow.

--A 36-year-old man with a seventh grade education and several years of experience in a factory entered the project in November 1965. His employability plan showed that he lacked education and was hampered in securing employment because of garnishments and back

trouble. The goal established for him was to obtain work experience as a mover. He was assigned to the county surplus food store where he worked as a mover, counterman, and warehouseman until August 1967. He then attended an employment orientation program for about a month. In September 1967 he was reassigned to the surplus food store where he worked until December 1967 when he was assigned to an adult basic education class--2 years after the need for such education was established.

--A 28-year-old man with a seventh grade education and prior experience as a logger and factory laborer entered the project in November 1965. The case file contained no employability plan. He was assigned to the surplus food store as a storekeeper until July 1966 when he was expelled from the project because of lack of participation and progress in the assignment. He told us that he was dissatisfied with his assignment because it was not in a training area which would benefit him. In our opinion, had an employability plan been established for him, there would have been a greater likelihood that he would receive an assignment more in line with his vocational interests.

The Director of the Kent County Department of Social Services told us that most of the men assigned to the type of work described in the above examples were considered to have little or no employment potential and that was why they were given this type of assignment.

HEW guidelines stated that under the title V program it was important to recognize the needs and abilities of the hard-core unemployed and to provide the work experience and training needed to help them leave the poverty sector of the economy. In an April 1968 report to the Secretary of HEW, the Committee on Administration of Training Programs stated that training provided should have the promise of advancement for trainees. The committee stated also that training should not prepare workers for jobs which are not only low-wage, but dead-end as well.

We recognize that the men discussed above probably would have difficulty obtaining self-supporting employment because of their educational level, lack of specific skills, and other problems. However, they appear to be the type of hard-core unemployed individuals who were specifically intended to be helped under the title V program. Therefore, we believe that a greater effort should have been made to provide these men with the opportunity for appropriate training to enhance their employability.

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Because of the numerous factors that affect the success of any underprivileged individual in achieving the employment goals set for him under the title V project, we cannot predict how many more participants might have succeeded had their employability plans been more specific and had their assignments been more closely related to their needs.

The Director of the Michigan Department of Social Services, in commenting on our draft report, acknowledged the shortcomings in the counseling and employability planning areas of the Kent County project but pointed out that, because the title V projects in Michigan were demonstrative by design, different methods were used to help achieve appropriate administration of the projects through comparison of the various methods. He stated that improvements in the Kent County project would have been made through reorganization of the administrative structure if the project had been made part of the ongoing State program when the title V program was terminated.

Action taken by the Congress on employability plans

The importance of employability plans was recognized by the Congress when authorizing the WIN program. The Social Security Amendments of 1967 direct the Secretary of Labor to develop, for each suitable person referred to him, an employability plan describing the education, training, work experience, and orientation which the person needs to enable him to become self-supporting.

The DOL guidelines for the WIN program provide that the development of an employability plan is a continuous process and should be based on an evaluation of enrollee needs and on a knowledge of labor force needs and the resources available for education and training. The guidelines provide also for continuous reevaluation of the plan, determination of the program activities in which the enrollee shall be involved, and documentation of all determinations made.

We believe that proper administration of these guidelines should assist in the development of sound employability plans which could lead to increased benefits to the program participants.

WORK EXPERIENCE AND TRAINING ASSIGNMENTS

The underlying purpose of the title V program was to assist needy individuals to secure and retain employment in a competitive labor market. To accomplish this purpose, project officials were given the flexibility to devise academic or vocational training courses, work experience assignments, or a combination of these, to meet local needs.

Our review showed that Kent County project officials placed principal emphasis on providing academic and vocational training rather than on work experience. As most of the trainees had less than a high school education and lacked vocational skills, we believe that this emphasis was basically sound, although in some instances the training did not appear necessary for the trainees to gain employment. In addition, since most trainees had limited prior work experience, mostly in low-paying or unskilled jobs, we believe that additional emphasis on meaningful work experience assignments would have been appropriate.

We noted that only a limited number of work experience assignments were made, many of which were within the welfare organization itself and did not always appear to enhance the trainees' employability. We believe that greater efforts to establish work experience assignments in private industry may have offered additional opportunities to trainees; however, project officials stated that HEW policy discouraged such assignments if sufficient work sites were available at public and nonprofit agencies and that such work sites were available in Kent County.

The DOL guidelines for the WIN program require the immediate placement of employable individuals in available jobs and provide for only that training and work experience necessary to make other individuals employable. The DOL guidelines also provide for use of private industry for on-the-job training.

Following is an analysis of the characteristics and employment handicaps of trainees in the project, the training provided, and posttraining developments.

Characteristics of trainees

The 635 trainees in the Kent County project through March 1968 included many who, for various reasons had been unable to obtain regular employment. These reasons included lack of education, vocational skills, and work experience.

To determine the characteristics of project trainees, we reviewed the case files of 70 trainees, selected on a random sample basis, including 27 who were in the project at the time of our review in early 1968 and 43 who were previously in the project. We also interviewed 60 of the 70 trainees, including 25 who were in the project at the time of our review and 35 who were previously in the project.

These 70 trainees appeared to be representative of all trainees in the project because (1) the sample included trainees who were in the project at various times throughout its history, (2) the ratio of men and women in the sample was about the same as for all trainees who participated in the project, (3) the percentage of trainees in the sample who obtained employment at the time they left the project was close to the percentage of all trainees who obtained employment at the time they left the project, and (4) the trainees in the sample participated in the principal work experience and training assignments offered by the project.

Each of the 70 trainees was the head of a household. Fifty-nine were women, the majority of whom had separated from their husbands or were divorced, and 11 were married men. The trainees had from one to 10 dependent children, averaging more than three for each trainee.

As shown below the educational level of the 70 trainees at the time they entered the project varied widely:

Educational level	Women	Men	Total
Eighth grade or less	11	6	17
Ninth to 11th grade	33	3	36
Completed high school	12	2	14
Some college education	3	-	3
Total	59	11	70

Of the 70 trainees, 65, including all 11 men, had some prior work experience, mostly in low-paying or unskilled jobs. Some of the trainees had just started to receive AFDC assistance shortly before enrollment in the project, while others had been receiving such assistance for as long as 12 years. Fifty-eight of the trainees lived in Grand Rapids and 12 were from smaller communities in Kent County.

The ages of the 70 trainees also varied widely, as shown below.

Age	Women	Men	Total
Under 20 years	4	1	5
20 to 29 "	22	3	25
30 to 39 "	28	3	31
40 to 49 "	4	2	6
Over 50 "	1	2	3
Total	59	11	70

Types of assignments

The type of work experience and training given to trainees depended to a great extent on their level of education and skills and prior work experience. Accordingly, the Kent County title V project provided trainees with a wide range of academic and vocational training as well as some work experience.

Our analysis of the case files for the 70 trainees showed that some were given academic or vocational training only; some, work experience only; and others, a combination of training and work experience. Many of the trainees participated in two or more different assignments. A summary of the various individual assignments of the 70 trainees follows.

Assignment	Women	Men	Total
Academic training:			
Adult basic education	6	3	9
High school	21	-	21
College	7	-	7
Total	34	3	37
Vocational training:			
Clerk-typist and other clerical	32	-	32
Cosmetologist	7	-	7
Nurse's aide	3	-	3
Other	8	2	10
Total	50	2	52
Work experience	9	7	16
Combined work experience and training	13	2	15

Posttraining developments

One measure of the value of work experience and training is the extent to which the trainees obtained employment after leaving the project. Our review indicated that almost one third of the trainees obtained jobs at the time they completed their assignments, or otherwise terminated their participation in the project and that others subsequently obtained employment. Our review also indicated that many former trainees did not obtain employment because of personal or family problems unrelated to the work experience or training received.

As summarized below, project records show that, of the 464 trainees who either completed their assignments, or otherwise terminated their participation in the project through March 31, 1968, 31 percent obtained employment upon completion or termination. This summary also shows that a significantly higher percentage of those who completed their assignments in the project obtained employment than those who otherwise terminated their participation in the project.

Through March 31, 1968	Number leaving project	Number employed	Percent employed
Completed project assignment	157	81	52%
Otherwise terminated	307	62	20
Total	464	143	31

Not all the trainees who obtained employment were removed from the AFDC rolls. For example, a special analysis made by the State office as of June 1967 showed that, of the 115 trainees who left the Kent County project for employment from the start of the project in August 1965 up to June 1967, 24 continued to receive some AFDC assistance at the time they became employed, since their employment income did not meet their full needs. The analysis showed also that, of the employed 115 trainees, 33 either were still receiving AFDC assistance or were back on the AFDC rolls at June 1967.

Our review indicated that, in addition to the trainees who obtained employment at the time they left the project, others later obtained employment. For example, the project records of the 35 former trainees we interviewed indicated that only 13 had obtained employment at the time they completed their assignments, or otherwise terminated their

participation in the project. Our interviews at a later date, however, disclosed that 19 of the trainees were employed. Of the 22 former trainees who, according to the project records, were unemployed when they left the project, seven subsequently obtained employment. Of the 13 former trainees shown as employed at the time of leaving the project, only one was unemployed at the time of our interview.

About two thirds of the trainees did not complete their assignments in the project; however, Kent County project records indicate that most of the trainees left the project either to accept employment or because of personal or family problems rather than because of project-related problems. This is illustrated in the following analysis of the reasons shown for the 125 trainees who left the project prior to completion during 1967.

Reasons for termination	Total	Percent
Employment	19	15%
Personal or family problems:		
Inadequate child-care arrangements	19	
Medical problems (including pregnancies)	18	
Marriages and reconciliations	13	
Moved or unable to locate	12	
Ineligible because of additional income	8	
Other family problems	6	
Transfers to other programs	4	
Subtotal	80	64
Project-related problems:		
Poor attendance	8	
Dissatisfied with assignment	6	
Refused assignment	4	
Misconduct or lack of progress	4	
Other reasons	4	
Subtotal	26	21
Total	125	100%

Our interviews with former trainees who were still unemployed disclosed that most of them were not working because of similar personal or family problems.

Of the 19 former trainees we interviewed who were employed, eight had received, primarily, academic training; seven, primarily, vocational training; and three, work experience while in the project. The remaining trainee was employed at the time of leaving the project and before receiving any work experience or training. Four of these trainees were continuing to receive some AFDC assistance although they were employed.

Following is a discussion of the work experience and training given to trainees and the posttraining developments for the 18 trainees in our sample who were employed at the time of our interviews.

Academic training

HEW guidelines stated that, since a person's educational level has a direct relationship to his occupation and his earnings, it is essential to provide him with the necessary education. The guidelines stated also that academic training could include adult basic, high school, or college education. If college training was provided, such training was to have been included in the project agreement or approved by HEW. In addition, college-level training leading to a degree was not to exceed two semesters.

Of the 70 trainees included in our random sample, 37 had been assigned to academic training ranging from adult basic education to college-level training. The length of the assigned training courses varied from a few months to over 2 years, depending on the nature of the training and the trainee's prior education. Almost all the persons we interviewed, including those still in the project, told us they were satisfied with the academic training received.

Of the 18 employed trainees we interviewed, eight received academic training under the project. Of these eight trainees, three received a high school diploma while in the project and later obtained employment--one as a secretary, one as a sewing-machine operator in a factory, and the

third as a laundry worker. The trainee employed as a sewing-machine operator said she did not need the diploma to get her job but that the additional education gave her confidence to go out and seek employment. Following are further details on the three trainees, who were still employed at the time of our interviews.

Job obtained	Length of time from initial AFDC entry to enrollment in project	Length of time in training	Wage rate at time of interview	Length of time in job
Secretary	1-1/2 years	16 months	$ 1.60 per hour	4 months
Sewing-maching operator	13 "	2 years	17.00 " day	3 "
Laundry worker	7 "	11 months	2.00 " hour	6 "

The other five of the eight trainees who had received academic training attended either adult basic education or high school classes but left the project prior to completion to accept employment, four having participated in the project up to only a few months. Further details on these five trainees, who were still employed at the time of our interviews, are shown below:

Job obtained	Length of time from initial AFDC entry to enrollment in project	Length of training	Wage rate at time of interview	Length of time in job
Cleaning lady	8 years	5 months	$80.00 per week	4 months[a]
Factory worker	6 "	6 weeks	2.60 " hour	9 "
Do.	5 "	5 months	2.50 " "	8 "
Do.	none[b]	6 weeks	3.00 " "	1 year
Do.	2 years	10 months	1.80 " "	5 months

[a]Continuing to receive some AFDC assistance.

[b]Applicant for AFDC assistance.

Three of the five trainees indicated that they were satisfied with and had benefited from the training. All of the five trainees stated that they left the project because they were more interested in obtaining immediate employment to support their families. One, a 26-year-old mother of five children, indicated that the high school training was too difficult for her and that she was not interested in attending school. Another was dissatisfied with the adult basic education and wanted a job. Still another believed an available job opportunity was too enticing to continue in high school.

These five individuals were employable, as indicated by their ability to obtain a job without completing their training. We believe that their limited participation in the project probably benefited them to some degree and may have motivated or encouraged them in seeking employment. However, these cases indicate that, while additional academic training may be desirable, such training may not be essential for certain individuals to obtain immediate employment.

Vocational training

Our review showed that considerable emphasis was placed by the Kent County project officials on vocational training for participants. For example, of the 70 trainees in our sample, 52 received some vocational training and several others received a combination of work experience and vocational training. Many trainees received vocational training as cosmetologists, clerk-typists, or nurse's aides. Others received training as welders, key-punch operators, and licensed practical nurses. The length of vocational training assignments varied from a few months to over a year. Almost all the persons we interviewed who received vocational training said that they were satisfied with their training.

Of the 18 employed trainees we interviewed, seven received, primarily, vocational training. Pertinent details follow concerning the seven trainees, who were still employed at the time of our interviews.

Job obtained	Length of time from initial AFDC entry to enrollment in project	Length of training	Wage rate at time of interview	Length of time in job
Nurse's aide	5 years	2 months	$1.50 per hour	18 months
Clerk typist	6 "	6 "	2.02 " "	3 "
Bartender	1-1/2 "	7 "	1.25 " "	3 weeks (note a)
Factory worker	9 "	3 "	1.35 " "	21 months
Teacher's aide	5 "	10 "	2.00 " "	21 months (note a)
Factory worker	9 "	15 "	1.80 " "	2 months
Drugstore cashier	9 months	6 "	2.03 " "	16 "

[a]Continuing to receive some AFDC assistance.

Two of the trainees we interviewed obtained employment in the vocation in which they were trained, one as a clerk-typist and the other as a nurse's aide. However, we noted that five of the trainees did not obtain employment in the vocation in which they received training, as shown below.

Training received	Job obtained
Clerk-typist	Bartender
Do.	Factory worker
Do.	Teacher's aide
Cosmetologist	Factory worker
Comptometer and key-punch operator	Drugstore cashier

Although all five former trainees said they benefited to some extent from the project, two indicated that they were not interested in the vocations in which they received training, one having no intention of using the training in later employment. In addition, three indicated that the training had not adequately prepared them for employment in the vocations in which they were trained. One of the five entered the project because she believed her prior jobs, including a job in a furniture factory, did not provide enough money to support her family. After completing over a year of cosmetology training, she passed the State examination and obtained employment as a cosmetologist. However, she quit

after only 1 day and again obtained a job in a furniture factory, stating she could not make enough money in cosmetology.

Although the five trainees did not obtain employment in the field in which they were trained, their participation in the project probably benefited them and may have motivated them in seeking other employment. Since four of the five trainees completed their vocational training, their training may be helpful in obtaining future employment in these vocations. However, we believe that the situations described above point out the importance of effective and frequent employment counseling during the training period so that project officials may become aware of changes in trainees' attitudes and interests, to enable timely adjustments in employability plans and to avoid expenditures for the type of training which is not likely to lead to employment in the vocation for which trained.

As stated on page 26, in our opinion, the DOL guidelines for the WIN program provide sufficient emphasis and guidance for employment counseling and, if properly implemented, should assist in the effective accomplishment of this vital part of the program.

Work experience

HEW guidelines provided that work experience might be given to trainees to (1) develop or retain good work habits, attitudes, and morale, (2) improve or conserve existing skills, or (3) develop new or improved skills and that the work experience could be provided by public agencies, nonprofit organizations, or private employers. However, in a 1965 policy decision, HEW stated that training by private employers could be approved only when it was primarily for the purpose of training and the work performed was incidental to the training. In the decision, HEW stated that it was not the purpose of title V projects to subsidize private industry and that, if private industry was used, provision was to be made to ensure that there was adequate on-the-job training and no exploitation of participants.

The Kent County proposals indicated that a wide range of project sponsors would be required, including public and

private agencies, union and employer associations, and private business. However, our review showed that work experience was provided only by public agencies and nonprofit organizations, mostly at county welfare agency sites. Kent County officials told us that they did not obtain private industry participation because of the HEW policy and because they had sufficient other work experience sites available in the county.

Our review showed that, of the 70 trainees included in our random sample, 31 received some work experience while in the project; however, most of the 31 were also engaged in academic and vocational training and therefore received only a limited amount of actual work experience.

Three of the 18 former trainees we interviewed, who had obtained employment, received work experience primarily while in the project. Pertinent details on the three trainees follow.

Job obtained	Length of time from initial AFDC entry to enrollment in project	Length of training	Wage rate at time of interview	Length of time in job
Clerk-typist	5 years	6 months	$2.00 per hour	8 months (note a)
Secretary	6 "	2-1/2 "	2.25 " "	4 months
Railroad worker	1 week	20 "	2.58 " " (note b)	9 "

[a]Works only 20 hours a week. Continuing to receive some AFDC assistance.

[b]Wage rate at time of leaving project.

Of the three former trainees, two had had experience or training as clerk-typists prior to entering the project and, after enrolling, received similar work experience in assignments at the county welfare office to update their skills. Both obtained employment in a similar vocation and expressed

satisfaction with their work experience assignments. The third trainee, who had had several years of prior experience as a freight dock checker, received work experience in an assignment at the county's surplus food store for about 20 months. He was expelled because of misconduct, and he later obtained a job with a railroad. He told us that he did not consider the work experience to be helpful.

Of the 31 trainees who received some work experience, we interviewed 25. Twelve of these expressed dissatisfaction with their assignments, many stating that the work did not prepare them for employment. As discussed earlier in this report (p. 27), we found that seven of the 70 trainees in our sample were assigned to the county's surplus food store for extended periods and were given work experience considered to be of little value in enhancing their employability.

We noted that, in addition to those trainees included in our sample, a few other trainees were placed for extended periods at the county welfare office on work experience assignments such as parking lot attendant or furniture mover. An OEO representative classified these as "dead-end" assignments.

Many of the trainees, in addition to having limited education and skills, lacked meaningful work experience. We believe that such individuals require the type of work experience assignments or other training that will enhance their employability and enable them to compete in the labor market for available jobs. We believe that, to the extent that such work assignments are not otherwise available, efforts should be made to establish such assignments, utilizing the services of private industry where authorized and deemed appropriate.

Other observations

We noted that seven of the 70 trainees included in our sample attended college while enrolled in the Kent County project. In these cases, their tuition was financed through loans or scholarships rather than through the project. Although title V funds were used to pay the trainees a monthly training allowance and, in some cases, a child-care allowance, project officials did not obtain the required HEW approval for their participation in the college training assignments.

Each of the seven trainees had had prior work experience and it appeared that two had quit their jobs to enter college. Of the seven trainees, five were attending college when they entered the project. Some of these indicated that the services provided by the project assisted them in continuing their college training. Several of the trainees attended college up to 1-1/2 years while in the project and still had one or more years to go before obtaining their degrees.

OEO commented, in correspondence to HEW, that the two semesters permitted under the HEW guidelines seemed liberal in view of the tremendous universe of need among those not fortunate enough to have completed junior or senior high school. OEO also stated that administration of college-level training should be tightly applied with adequate justification in each case to preclude misuse of the authority.

State project officials acknowledged that they had failed to obtain the required HEW approval but stated that they had permitted these and other college students to participate in the project since they were usually attending college under loans or scholarships. HEW central office officials informed us that they would not have approved this training because it exceeded the two-semester limitation in the HEW guidelines.

Consideration for future application to WIN program

The DOL guidelines for the WIN program provide that, if an enrollee is considered to be immediately employable, he be referred to a job placement unit for employment or for on-the-job training which includes the use of private industry. They also state that work experience at private nonprofit and public agencies and education and vocational training will be provided if considered necessary to make an enrollee employable. The guidelines provide that, when it is determined that an enrollee is not employable and cannot benefit from either training or work experience because of such factors as local job conditions, marginal potential, physical impairment, and mental incapacity, he will be assigned to a federally subsidized special work project for a useful public purpose.

We noted that neither the Social Security Amendments of 1967, which authorize the WIN program, nor DOL's guidelines

specifically provide for college-level training. We believe the DOL guidelines should clearly set forth whether college-level training may be approved and, if so, the conditions governing such approval, in order to encourage consistent application by WIN program administrators of policy decisions pertaining to the college-training segment of the educational component of the program.

In commenting on a draft of this report, the Assistant Secretary for Administration, DOL, advised us on October 4, 1968, that DOL planned to clarify its policy concerning the utilization of college-level training in the WIN program.

ANALYSES AND EVALUATIONS BY PROGRAM OFFICIALS

Although title V projects were administered by officials at the State and local levels, reviews and evaluations of the projects were the responsibility of HEW as well as of State and local project officials. To assist in performing such reviews and evaluations and to identify needed improvements, HEW provided for the accumulation and reporting of project data by State and local project officials.

Our review of the Kent County project showed, however, that, although State and local project officials accumulated the required data and reported it to HEW, they made only limited analyses and use of the information themselves. Moreover, although HEW program officials made some analyses of the information submitted, they generally did not feed back the results of such analyses to project officials, initially because they questioned the validity of the data reported and later because the title V program was being phased out. In addition, State and HEW regional officials told us that evaluations of the overall effectiveness of the project in achieving its goals were not made because of lack of staff.

Analyses of project information

HEW guidelines provided that State and local project officials accumulate information on new trainees and those whose participation had terminated (terminated trainees) and prepare statistical and financial reports relating to individual projects. Such information for the Kent County project was periodically reported to the HEW central office as required. Much of the data was sent in the form of punched cards directly to the OEO Data Support Branch to enable analyses through the use of computers, and the resulting printouts were forwarded to the HEW central office. The basic data accumulated and reported is described below.

--New trainees--Information prepared by the project staff for each trainee as he entered the project included date of birth, race, sex, marital status,

number of children, employment history, income, medical status, and training assignment. The data was placed on punch cards by the State office and copies were retained.

--Terminated trainees--Information prepared by the project staff, when trainees terminated their participation in the project, included the reason for termination, type of employment obtained, wages, education and training received, and any reduction in public assistance. The data was placed on punch cards by the State office and copies were retained.

--Monthly statistical report--This report, prepared by the State office, included data on the number of new, active, and terminated trainees; man-hours of work experience and training; employment status of terminees; and any reduction in AFDC payments.

--Quarterly financial report--This report, prepared by the State, included data on the approved project budget, expenditures incurred, and amounts advanced by the Government.

The type of information described above, when compiled and analyzed by management officials, can be useful in evaluating project operations. Although, as shown above, considerable basic data was available in punch card form, a State official told us that only once, from the inception of the project in August 1965 to the time of our review in March 1968, did the State convert any of the punch card data to report form and analyze the data. State officials told us that the reason for this was limited machine time.

The one analysis made by the State was of all trainees who were no longer participating in the project as of June 1967--those still receiving AFDC payments and those no longer receiving AFDC payments. The purpose of the report was to show the effect of the Kent County and other title V projects in the State in reducing AFDC payments. Near the completion of our review, we noted that the State had assigned a staff member to make such analyses of all available data pertaining to the results of project operations.

Another source of information which would appear useful to management officials was an HEW follow-up questionnaire which selected terminees were requested to complete several months after they left the project. The questionnaire, initiated in March 1967, was intended to show the trainees' success in securing and holding jobs, in advancing their economic status, in freeing themselves from public assistance, and in relating their employment to the work experience or training received from the project. The questionnaires were sent out and returned through State and local offices to the HEW central office, but copies of the completed questionnaires were not retained nor were any analyses made of the data by State and local officials.

We discussed with HEW central office officials their use of the reporting system and the lack of feedback to State and local project officials of HEW analyses of reported information. We were informed that HEW used the information (1) in the preparation of program summaries and statements on program achievements, (2) for budgetary and cost allocation purposes, (3) to identify such matters as the causes for terminations and the employment status of terminated trainees, and (4) to compare the results achieved by the various projects.

An HEW central office official having responsibility for administering the title V program told us that, to correct the reporting problems, HEW had communicated with State officials to identify the reasons for incomplete or inaccurate reporting. He stated that, as a result, corrective action had been taken by HEW to resolve the reporting problems being encountered by reprogramming data processing operations and to obtain more timely submission by State officials of data to be used in the data processing operations.

Because HEW officials generally did not feed back to the State and local project officials the results of their analyses and evaluations of the data submitted, State and local project officials did not have the benefit of HEW's overall experience and judgment for application at the project level where it might have been useful in pointing out problem areas warranting further study or immediate action. The Director, Kent County Department of Social Services, told us that feedback to his department of the results

of HEW analyses would have been of benefit because the project staff did not have time to make their own analyses.

The State title V coordinator told us that, since the title V projects in Michigan were intended to be demonstration projects to test the application of various approaches in project operations, HEW's analyses of pertinent project data would have helped the State to determine the relative success of the different approaches used.

Consideration for future application to WIN program

The DOL guidelines for the WIN program show that the information to be generated will be similar to that generated under the title V program. These guidelines also indicated that this data will be prepared at the local employment service office and sent simultaneously to the central records unit of the sponsoring agency, to the local welfare agency, and to DOL in Washington, D.C., and that summary reports will be prepared by the sponsoring agency and sent to DOL at the district, regional, and national levels. We believe that State and local project officials would materially benefit from analyses of their own data coupled with DOL's overall analyses of program data on a nationwide basis.

In order that all program officials may have the opportunity to benefit from DOL's analyses, we suggested in our draft report that DOL guidelines be revised to specifically provide for such feedback to officials at all program levels.

The Assistant Secretary for Administration, DOL, informed us in a letter dated October 8, 1968, commenting on a draft of our report on administration and effectiveness of work experience and training project in Maricopa County, Arizona, that the WIN guidelines had been revised in line with our suggestion. He informed us also that DOL planned to go beyond a mechanical feedback of data to provide meaningful interpretations as well.

Reviews and evaluations

The HEW central office had overall responsibility for planning and directing reviews and evaluations of approved projects. The reviews were to include determinations as to whether the project operations were being carried out in accordance with the project agreements and HEW guidelines and the evaluations were to be concerned with the overall effectiveness of the projects in achieving the goals of the program.

Primary responsibility for making such reviews and evaluations, including those on site, was vested in HEW regional staffs. In determining when to make reviews and evaluations of specific projects, the HEW staff was to give consideration to the results of similar reviews and evaluations which the State was required to make under its project agreement. HEW guidelines provided that the extent of its reviews and evaluations would relate to the quality of those made by the State but that a limited number of on-site visits were to be made.

The Michigan State title V staff made on-site reviews of Kent County project operations in November 1965, May and November 1966, and April 1967. The first two reviews pointed out the need for improvements in certain areas, including employability plans and child-care arrangements. Reports on both reviews disclosed that the State had not made evaluations of project accomplishments although this was required in the State project agreement with HEW. The reports on the latter two reviews generally included favorable comments and indicated that problems with employability plans were being gradually resolved.

In May 1966 and May 1967, an HEW regional official prepared reports on the Kent County project on the basis of the State's reviews. He did not visit the project site but restated certain problem areas pointed out by the State. In August 1967, the regional official made his only on-site visit when he assisted in a joint review of the project with DOL and State and local officials to determine whether State employment service participation in the project was warranted on such matters as job development and counseling.

The HEW regional official advised us that, as there were only one or two HEW title V representatives in the region (covering five States), adequate reviews and evaluations of all 26 title V projects could not be made. In commenting on our draft report, HEW stated that it was the practice of the regional office staff to spend time in the field on projects on which the State title V staffs requested assistance or when the need was implied from analyses of reports. HEW stated also that all indications from the State were that the Kent County project was being reasonably administered and was achieving favorable results.

HEW expressed the view that the State's title V staff members in each of the States in the region were of exceptionally high caliber and were fair in pointing out projects which were experiencing difficulties. Therefore, HEW considered that there was no need for continual on-site reviews by the regional staff.

The title V coordinator for the State of Michigan told us that the State had not carried out its required program evaluations because a staff position for an evaluator had not been filled. In addition, he said that pressures of other duties prevented program evaluations by other title V officials of the State.

Action taken by the Congress on program evaluations

The need for continuing program evaluations was recognized by the Congress when enacting the WIN program. The Social Security Amendments of 1967 require the continuing evaluation by DOL of the program, including its effectiveness in achieving stated goals and its impact on other related programs. The DOL guidelines show that DOL, in accordance with the act, has established a comprehensive monitoring and evaluation system for the program.

These guidelines provide that the WIN program evaluation system shall consist of (1) evaluation studies, (2) operations reviews, and (3) program monitoring. The frequency and nature of these basic factors of the system, as set forth in the guidelines, together with the required

reporting thereon which is directed to all appropriate levels, should, in our opinion, provide a sound basis for developing, maintaining, and strengthening program effectiveness if the guidelines are properly implemented.

OBSERVATIONS ON PROJECT EFFECTIVENESS

The effectiveness of a title V work experience and training project should, in our opinion, be judged on the basis of the extent to which it has achieved the objectives established by the law for such a project. The ultimate goal of a title V project was to assist needy individuals in obtaining gainful employment. Therefore, an obvious and tangible factor that can be evaluated in measuring the success of a title V project is the extent to which former trainees obtained employment.

Mere employment statistics, however, may be misleading without the added perspective of other factors. Although on the surface a direct correlation seems to exist between an individual's participation in a project and his later employment, we recognize that there are numerous factors that should be considered before reaching this conclusion. Such factors include (1) the caliber of individual enrolled and the possibility that he may have obtained employment without participating in the project, (2) the demands for labor and the availability of jobs in the particular area, which may have changed during the life of the project, and (3) the extent to which jobs obtained by trainees were related to their project training.

In addition, although employment is the most obvious and tangible factor for consideration in measuring project effectiveness, other less tangible factors--while not readily susceptible of measurement--should not be overlooked. For example, although some trainees may not have obtained employment at the time they left the project, they may have increased their employability, which could bring about their employment in later years. Trainees also received the benefits of education, medical assistance, and/or financial aid. The degree to which such factors may have benefited society, is benefiting it today, or will benefit it in the future does not seem determinable at this point in time.

Prior to September 1967 neither HEW, the State of Michigan, nor Kent County project officials had established any quantitative standards for determining whether the achievements under a particular project were satisfactory in the light of the objectives of the Economic Opportunity Act.

At that time, in an attempt to identify the most successful of projects faced with essentially the same exogenous factors and the elements of success which could be duplicated in similar projects, HEW initiated a project rating system. This system provided for the classification of projects according to various measures of success, including the proportion of trainees employed immediately upon termination of their participation in the project. The Kent County project was one of the projects rated under this system.

HEW's rating showed that about 37 percent of the Kent County project trainees whose participation was terminated during fiscal year 1967 obtained employment and that the project ranked 27th among 61 projects operating under similar conditions. This rating compares with the results of our analysis of project records showing that about 31 percent of the trainees who terminated their participation in the project from its inception in August 1965 through March 1968 had obtained employment.

We noted that HEW, under contract with the University of New Mexico, was supporting a study in connection with cost-benefit evaluation of the Bernalillo County, New Mexico, title V work experience and training project. The study was initiated in August 1966 and is scheduled for completion in early 1969. One of the purposes of the study is to design and test means of quantifying the social and psychological costs and benefits attributable to work experience and training programs.

Because of the factors described on page 53, which were not readily susceptible of any measurable assessment, we could not evaluate the total effectiveness of the Kent County project. Therefore, in considering the effectiveness of this project, we could draw only on an analysis of available project statistics, the results of interviews with selected participants, and the manner in which the project was administered.

On the basis of our analysis, we believe that, since the Kent County project provided work experience and training to many needy persons and thereby helped them obtain employment, get off the welfare rolls, and assume more economically gainful roles in society, the expenditure of title V

funds for the project--which, from August 1965 through March 1968, amounted to about $432,000--served a useful purpose consistent with the objectives of the Economic Opportunity Act. However, we believe also that more efficient administration by project officials would have raised the level of project effectiveness through increased benefits to project trainees. Our observations on matters affecting project effectiveness follow.

IMPACT OF PROJECT ON EMPLOYMENT OF TRAINEES

Available employment statistics prepared by Kent County project officials as of March 31, 1968, showed that, of the 464 former project trainees, 143, or 31 percent, obtained employment. These statistics, which showed the employment status of individuals only at the time they left the project, may be understated since our tests indicated that many trainees not shown as employed at the time of termination subsequently obtained employment.

Furthermore, our analysis of the Kent County project records indicated that the percentage of trainees who obtained employment when they completed or otherwise terminated their participation in the project increased steadily during the life of the project. Also, these statistics should be viewed in light of the fact that most trainees were AFDC mothers with children, who had no high school diplomas or vocational skills and had only limited prior work experience.

We recognize that the project did help some persons obtain employment; however, we are unable to determine the extent to which the work experience and training they received under the project, as well as factors outside the project, contributed to their employment.

Trainees may have obtained employment without project assistance

As discussed herein, our review indicated that certain trainees were employable before entering the project and that many of them may have obtained employment without participation in the project. For example, several trainees who received academic training left the project a short time after their enrollment to obtain employment on their own, which indicated that they were already employable. In these cases, it appears that an experienced employment counselor could have played a more direct and effective role in channeling these people into employment. As pointed out in this report, the project was not adequately staffed with experienced employment counselors.

To determine the extent to which AFDC recipients were able to obtain employment without title V assistance, we randomly selected 100 recipients who were on the AFDC rolls at August 1, 1966, and who did not participate in the project and compared their employment status as of March 31, 1968, with that of 81 AFDC recipients who had been trainees in the project on August 1, 1966. We found that, of the 100 recipients who did not participate in the project, 20 had their cases closed because of employment; whereas, of the 81 title V trainees, 33, or 41 percent, had their cases closed because of employment. While this indicates that the project helped many trainees to obtain employment, it also indicates that many AFDC recipients are employable and obtain employment without the assistance of federally sponsored work experience and training programs.

Trainees not employed in training-related occupations

Our review indicated that many of the Kent County project trainees obtained employment in occupations unrelated to the training they received while in the project. We found that only a few of the trainees included in our tests obtained later employment that could be considered directly related to the work experience or training received in the project. Some who had received training in a specific vocation and were employed in an occupation unrelated to that training indicated to us that they were not interested in the vocations in which they received training, and some stated that the training had not adequately prepared them for employment in the vocations for which trained. We have expressed the view in this report that more effective and frequent employment counseling may have enabled project officials to become aware of changes in trainees' attitudes and interests and enabled timely adjustment in employability plans to avoid expenditures for training which was not likely to lead to employment in the vocation for which trained.

Termination of participation prior to completion of training

The Kent County project records showed that, through March 31, 1968, of the 464 former trainees in the Kent

County project, 307, or about 66 percent, left the project prior to completing their training. Many left shortly after entering the project. Also, a significantly higher percentage of those who completed project training were successful in gaining employment than those who terminated their participation prior to completion. The project records also showed that, of the 157 former trainees who completed their training, 81, or 52 percent, obtained employment; whereas, of the 307 former trainees who terminated their participation prior to completion, only 62, or 20 percent, obtained employment. It follows, therefore, that efforts by project officials to minimize the number of trainees who leave the project prior to completion of their training could have a favorable impact on the rate of employment of project trainees.

While the 66-percent rate of termination prior to completion appears quite high, a closer analysis of the reasons for the terminations indicates that the rate does not detract as much from the project achievements as it first appears. For example, as shown on page 36, of the 125 trainees who left prior to completion during 1967, 19 left to accept employment, 80 left because of personal or family problems, and only 26 left because of project-related problems.

IMPACT OF PROJECT ON REDUCING WELFARE ROLLS

Another indicator of the effectiveness of a title V project is the extent to which the welfare rolls have been reduced as the result of the project. The Kent County project supervisor advised us that 209 trainees had their AFDC cases closed through February 29, 1968, because of employment, marriage, or reconciliation or for other reasons. He estimated that, since the total assistance for this group was about $40,000 monthly, the elimination of the assistance would result in annual AFDC savings of about $480,000.

Our review indicated, however, that a large number of recipients eventually got off the AFDC rolls without the

assistance of the project. For example, in our comparison of 100 nonproject AFDC recipients and 81 project AFDC recipients, we found that 43 of the 100 (43 percent) and 51 of the 81 (63 percent) had their cases closed between August 1, 1966, and March 31, 1968, because of employment, marriage, reconciliation, or moving outside the county. Thus, it appears that, although the title V project contributed to the reduction in welfare rolls, the cases of many individuals would have been closed and AFDC assistance eliminated regardless of the individuals' participation in the project.

OTHER ADMINISTRATIVE PROBLEMS RELATING TO PROJECT EFFECTIVENESS

In addition to those matters already discussed in this section of the report, we noted a number of areas of operation where, in our opinion, more efficient administration by project officials would have raised the level of project effectiveness. These areas are summarized below.

--Project officials lacked statistics and other basic information on all AFDC recipients in the county to enable them to establish programs tailored to the individual needs of those to be referred. Instead, they routinely filled spaces in approved projects. (See p. 14.)

--Although employability plans were prepared for most trainees, they usually were quite general and did not always include specific vocational goals or time frames for completing the training or providing for the elimination of individual handicaps which tended to impede employability. (See p. 22.)

--Participants with limited education and work skills were not always given opportunities to derive maximum benefits under the project. (See p. 27.)

--Work experience assignments did not always appear to enhance the trainees' employability. It seems that greater efforts to establish work experience assignments in private industry may have offered additional opportunities to trainees. (See p. 31.)

--State project officials did not analyze basic data on project operations which was available to them, and HEW did not feed back the results of its analyses to State and local project officials where it may have been useful in pointing out problems warranting further study or immediate action. (See p. 46.)

--HEW regional and State project officials did not make evaluations of the overall effectiveness of the project in achieving its goals. (See p. 46.)

SCOPE OF REVIEW

Our review of the work experience and training project in Kent County, Michigan, was directed toward a determination as to the efficiency of the project administration and the extent to which the project achieved the objectives of title V of the Economic Opportunity Act of 1964.

Our review included an examination of the related legislative history and a review of the policies and procedures of HEW and of the Michigan Department of Social Services in promoting the objectives of the work experience and training program. We also reviewed project proposals, reports, correspondence, and other pertinent records of project operations in Kent County and the case records for 70 randomly selected trainees, including their assignments, attendance, and assistance payments. In addition, we interviewed 60 of the 70 selected trainees to obtain the views and comments of some of those directly affected by the project.

We also interviewed officials of Kent County, the State of Michigan, and HEW regional and central offices who had responsibility for the administration of the project. Our review was performed at the project office in Grand Rapids, Michigan; the Michigan Department of Social Services in Lansing, Michigan; the HEW regional office in Chicago, Illinois; and the HEW, DOL, and OEO central offices in Washington, D.C.

APPENDIXES

APPENDIX I

PRINCIPAL FEDERAL OFFICIALS HAVING RESPONSIBILITY FOR THE MATTERS DISCUSSED IN THIS REPORT

	Tenure of office	
	From	To
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE:		
Secretary:		
Wilbur J. Cohen	Mar. 1968	Jan. 1969
John W. Gardner	Aug. 1965	Mar. 1968
Anthony J. Celebrezze	July 1962	Aug. 1965
Administrator, Social and Rehabilitation Service (note a):		
Mary E. Switzer	Aug. 1967	Present
OFFICE OF ECONOMIC OPPORTUNITY:		
Director:		
Bertrand M. Harding (acting)	Mar. 1968	Present
R. Sargent Shriver	Oct. 1964	Mar. 1968

[a]Effective August 15, 1967, the newly established Social and Rehabilitation Service assumed the functions of the Welfare Administration and the Bureau of Family Services which previously had responsibility for the title V program.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
WASHINGTON, D.C. 20201

OFFICE OF THE SECRETARY

SEP 30 1968

Dear Mr. Charam:

Reference is made to your draft report on administration and effectiveness of work experience and training project in Kent County, Michigan.

Enclosed is a statement setting forth the Department's comments with respect to the findings and recommendations cited in the report.

Sincerely yours,

James F. Kelly
Assistant Secretary,
Comptroller

Mr. Philip Charam
Associate Director
Civil Division
U.S. General Accounting Office
Washington, D. C. 20458

Enclosure

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Social and Rehabilitation Service

COMMENTS ON GAO DRAFT REPORT

ADMINISTRATION AND EFFECTIVENESS OF
WORK EXPERIENCE AND TRAINING PROJECT IN
KENT COUNTY, MICHIGAN

GENERAL

We were pleased to note that the General Accounting Office found that the Kent County Project provided work experience and training to many needy individuals, thereby giving them an opportunity to obtain employment, get off the welfare rolls, and assume a more useful role in society. Department, State, and county officials all agree that the review was quite comprehensive and represents a fair and accurate evaluation of the project. We were especially pleased with the determination that the Kent County Project served a useful purpose consistent with the objectives of the Economic Opportunity Act. The report mentions that Kent County placed an emphasis on basic education and high school equivalency training and that this emphasis was in response to the need of the trainees. We are pleased that this flexibility was recognized and commented on and that it will be expanded so that future Federal programs would provide for the same flexibility in response to local conditions and needs. We were impressed with the approach made by GAO in making observations on how the new Work Incentive (WIN) Program could benefit from the experiences gained in the Title V demonstration project. Of special significance was the importance placed upon use of the Title V designed individual employability plan which is now required by the WIN legislation. Another area of special interest was the emphasis placed on the need for the WIN program to provide employment counseling in depth.

Specific comments on those several areas of operations, where in your opinion, more efficient administration and effectiveness could be accomplished, are outlined below.

COMMENTS ON FINDINGS AND RECOMMENDATIONS

Project Evaluation

[See GAO note.]

GAO note: Comments pertaining to draft report material revised in or not pertinent to the final report have been omitted.

[See GAO note on page 67.]

The rating data for 146 Title V terminees in fiscal year 1967 for selected categories show that Kent County had a rating of percent employed of 37.1 percent, and was ranked 27th among 61 projects in the category VI group of projects. The 37.1 percent compares with 31 percent employed in the GAO sample. The Kent County project according to our rating system had 14.4 percent advanced training and ranked 19 among 61 projects and was 27th among this category on wages earned at an average of $237 a month. These data indicate that the Kent County project is above average and support the observations made in the GAO report from its sampling of Title V terminees and are in general in line with our evaluation based on the Bateman rating system. The system developed by Dr. Bateman has provided a valuable method of identifying the most successful of projects faced with essentially the same exogenous factors and the ingredients of success which can be duplicated in similar projects. The system has been found very helpful in a number of ways; for example, in making determinations of Department of Labor manpower inputs into Title V projects.

[See GAO note on page 67.]

Regional Office Review Responsibilities

Our Chicago Regional Office states that the comments on page 49 of the draft might be interpreted as critical of the Regional Title V staff in carrying out their review responsibilities. We believe that their activity regarding Kent County should be explained more fully. The Regional Title V

staff consisted of three persons; Associate, Specialist, and Secretary. With such a limited staff it was impossible to review all Title V projects as often as they should have been. Therefore, their position was to spend time in the field on projects that, when indicated by the State Title V staff, were "in trouble." All indications from the State were that the Kent County project was being reasonably administered and achieving results. While the staff was aware that in all projects better results could have been obtained by more frequent visits and consultations, regional staff thought it best to render assistance when requested by the State or the need was implied from analysis of reports. Further, the State staff in each of the Title V States in Region V were of exceptionally high caliber and dedicated to the goals of this demonstration. They were more than candid in informing us when a project was not achieving results or experiencing other difficulties. It was our position that where the State administration was doing a job there was no need for continuous on-site reviews by the regional staff.

[See GAO note on page 67.]

WIN Program Guidelines

The Department, through the Social and Rehabilitation Service, will coordinate with the Department of Labor in an effort to formulate procedures aimed at improving the administration and effectiveness of the WIN Program as it relates to AFDC recipients.

[See GAO note on page 67.]

9/24/68

U.S. DEPARTMENT OF LABOR
OFFICE OF THE ASSISTANT SECRETARY FOR ADMINISTRATION
WASHINGTON

OCT 4 1968

Mr. Henry Eschwege
Associate Director
Civil Division
United States General
Accounting Office
Washington, D. C. 20548

Dear Mr. Eschwege:

We have reviewed your draft report on "Administration and Effectiveness of Work Experience and Training Project in Kent County, Michigan." Our comments relative to this report are as follows:

(1) The overall report correctly recognizes the Department of Labor's position in Title V. Although the 1966 EOA amendments called for a major role to be played by the Department of Labor, before this provision became effective, it was apparent that Title V would phase out and be replaced by the WIN activity. HEW and Labor, therefore, agreed to joint on-site project reviews with DOL capability concentrating on strengthening manpower components in the most needy projects but with limitation to minimize project disruption. Therefore, many Title V projects do not receive DOL input whereas had the projects been programmed for longer periods, a full takeover of this activity would have been justified.

(2) The problem of trainee characteristics is discussed on Page 13. We certainly agree that as much advance notice as possible on training needs would be helpful in structuring programs. DOL is working with welfare at State and local level and the HEW-WIN guidelines which will soon be released make this provision. However, we are drafting a short joint HEW-DOL release highlighting this need.

One of the early joint HEW-DOL activities should concentrate on how well caseworkers are screening their caseload for potential WIN eligibles. On Page 15, you indicate a problem of unfilled training slots during the first year of the program. DOL does not anticipate problems of this type because of the large backlog of trainees. We should begin immediately to correct caseworker actions. This

screening activity is crucial if we are to get any decent appraisal of the total appropriate referrals in the AFDC caseload. DOL is also concerned about child care and support of the WIN program. Your indication on Page 17 that this was a problem in Title V is important to the WIN program. We are working closely with the Children's Bureau to be sure that adequate child care is available.

The Department of Labor agrees completely with your recommendation on Page 20 and will do every thing possible to assure that proper action is taken. However, the initiative should be taken in the HEW guidelines now being prepared. We concur with your comments on Page 25 relative to the importance of employment counseling. WIN guidelines and program approvals require that a team of trained individuals handle a caseload of 200 clients. The counselor will play the lead role in this team. Your comments relative to college level training on Page 42 are appropriate and we plan to issue an administrative policy relative to this.

The WIN program has been developed with feedback data coming from various sources. This will be a key part of our program monitoring system now being developed. The WIN Division staff will analyze operational data, fiscal data and evaluation reports and provide appropriate feedback to project sponsors. DOL is developing the evaluation system which you suggest on Page 50. It is intended that the evaluation results will be primarily utilized in feedback to individuals involved in program operations to strengthen the total activity.

Sincerely,

Leo R. Werts

Leo R. Werts
Assistant Secretary for Administration

APPENDIX IV

OFFICE OF ECONOMIC
OPPORTUNITY

EXECUTIVE OFFICE OF THE PRESIDENT
WASHINGTON, D.C. 20506

OCT 9 1968

Mr. Henry Eschwege
Associate Director
Civil Division
United States General
Accounting Office
Washington, D. C. 20548

Dear Mr. Eschwege:

Bertrand Harding has asked me to reply to your letters of August 21, 1968, and September 9, 1968, which transmitted draft reports and solicited OEO comments on the Kent County, Michigan, and the Maricopa County, Arizona, Title V Work Experience and Training projects administered by the Department of Health, Education, and Welfare.

In accordance with our agency policy concerning the submission of OEO comments, our comments, if any, on GAO draft reports on delegated programs will not be furnished to you separately, but will be incorporated in the delegated agency's response to the report.

We appreciate your soliciting comments on these two draft reports and we would like for you to continue to forward delegate agency draft reports to OEO for our information and action, as appropriate.

Sincerely,

Robert Perrin

Robert Perrin
Acting Deputy Director

U.S. GAO Wash., D.C.

VT 008 758
Densley, Kenneth G.
Priority Research and Development Needs in Vocational Education in California.

California Coordinating Unit for Occupational Research and Development, Sacramento
MF AVAILABLE IN VT-ERIC SET.
California State Department of Education, 721 Capitol Mall, Sacramento, California 95814.
Pub Date - 68 7p.

*VOCATIONAL EDUCATION; *EDUCATIONAL RESEARCH; *OPINIONS; *VOCATIONAL DIRECTORS; *STATE DEPARTMENTS OF EDUCATION; STATE SURVEYS
CALIFORNIA

Problem areas deserving research and development attention are identified by leaders in vocational education in California. Information was obtained through a 37-item questionnaire sent to 89 local directors of vocational education and 89 members of the Vocational Education Section, State Department of Education, from which 133 replies were received. Data are presented in tabular form showing rank order of the items and percentages of those responding to each item. Nearly two-thirds of the respondents identified vocational guidance in grades 9 through 12 as a high priority area and over one-half supported inservice programs for keeping vocational-technical education personnel current in their knowledge of changing technology. These two statements were considered priorities by substantially larger numbers of the respondents than were the other statements. (CH)

VT 008 758

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RESEARCH COORDINATING UNIT
VOCATIONAL EDUCATION SECTION
CALIFORNIA STATE DEPARTMENT OF EDUCATION

PRIORITY RESEARCH AND DEVELOPMENT NEEDS IN VOCATIONAL EDUCATION IN CALIFORNIA

The various laws and acts pertaining to vocational education which have been passed over the years since 1917 and culminating with the Vocational Education Act of 1963 attest to the interest of the people of this nation in Vocational Education. This interest reflects the awareness of the American public to their responsibility for the economic and social well being of all the people, however, personnel and funds are always inadequate to provide a means of meeting all the needs that are identified.

Because needs exceed resources, priorities must be established. To determine priorities wisely, thorough consideration must be given to all facets of the problem.

The California Research Coordinating Unit developed a survey instrument consisting of 37 statements pertaining to areas in vocational education which may be considered problems deserving research development attention. The 37 statements covered a wide range of problems, and a space was provided for "other" statements to be written in an "open end" manner.

The instruments were mailed to local directors of vocational education in California. Eighty-nine were mailed to local directors of vocational education and 89 were sent to members of the Vocational Education Section, State Department of Education. There were 133 replies. No attempt was made to identify respondents and no followup was made to increase response. The return represented 75 percent of the total number of instruments that were mailed.

VT008758

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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M E M O R A N D U M

TO: The ERIC Clearinghouse on Vocational and Technical Education
The Ohio State University
980 Kinnear Road
Columbus, Ohio 43212

FROM: (Person) Kenneth G. Densley (Agency) Research Coordinating Unit, Vocational Education Section, California State Department of Education
(Address) 721 Capitol Mall, Sacramento, California 95814

DATE: June 6, 1969

RE: (Author, Title, Publisher, Date) Densley, Kenneth G.; "Priority Research and Development Needs in Vocational Education in California"; California State Department of Education; 1968

Supplementary Information on Instructional Material

Provide information below which is not included in the publication. Mark N/A in each blank for which information is not available or not applicable. Mark P when information is included in the publication. See reverse side for further instructions.

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Address 721 Capitol Mall, Sacramento, California 95814
Limitation on Available Copies 100 Price/Unit N/A
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Development Group P
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Appropriate School Setting NA
Type of Program NA
Occupational Focus NA
Geographic Adaptability NA
Uses of Material P
Users of Material P

(4) Requirements for Using Material:
Teacher Competency NA
Student Selection Criteria NA
Time Allotment NA

Supplemental Media --
Necessary NA
Desirable NA
(Check Which)

Describe

Source (agency)
(address)

Considering the fact that this was a single mailing the 75 percent response was good. It is assumed, therefore, that a considerable interest exists in the field in determining activities which should receive priority attention.

Respondents were asked to be selective and put a checkmark in front of only the statements concerning educational activities that they believed were currently the most important and as such should be accorded priority research and development consideration.

Table one has been provided to show the response of the group. The statements have been arranged in rank order with the statement checked most frequently at the top of the list. Following the rank is the percent of the total group who checked the statement as a priority area.

Table I Priority to be accorded problem areas deserving research and development attention as identified by leaders in vocational education in California

Rank	Percent Responding	Statement of Priority
1	61	Vocational Guidance in Grades 9 through 12
2	56	In-Service programs to keep personnel in vocational technical education current in their knowledge of rapidly changing technology
3	45	Maintaining adequate current information on employment needs, educational needs, job requirement, occupational trends, and entry level skill requirements
4	44	Developing more adequate methods of evaluation of vocational education programs
5	43	Vocational orientation and exploratory vocational experiences in grades 9 through 12
6	42	Developing public understanding and acceptance of vocational education and the occupational opportunities available to vocational graduates

Rank	Percent Responding	Statement of Priority
7	38	Articulation between grade, subject and school levels; i.e. prevocational and vocational and high school and junior college
8	38	Determining the value and use of job cluster training
10	36	Evaluation of vocational education programs for quality, quantity and applicability including the ramifications of funds availability and usage
10	36	Maintaining an adequate supply of qualified instructional personnel in vocational education
10	36	Student follow-up and the relationship of the findings to vocational education, i.e. appropriateness and quality of programs and the degree and affect of student mobility
12	31	Vocational Guidance in Grades 13 and 14
13	29	Determining the role of the comprehensive high school
14	26	Determining the role of the vocational-technical education center
15	24	Determining the roles of "academic" and "vocational" course offerings in the public educational system
16.5	23	Vocational orientation and exploratory vocational experience in grades 1 through 8
16.5	23	Determining the role of work experience education
18	22	Maintaining an adequate supply of qualified administrative personnel in vocational education
19.5	21	An evaluation of MDTA programs and their role in the total field of vocational education
19.5	21	Student selection practices
21	21	Studies pertaining to the dropout
22.5	20	The use of teacher aides and other paraprofessionals in education
22.5	20	Interaction between vocational and academic subject areas such as the interdisciplinary approach of the "Richmond Plan"

Rank	Percent Responding	Statement of Priority
24	19	Cost-benefit studies in vocational education programs for junior college day school students
25	18	Vocational Guidance in Grades 1 through 8
26	18	Determining the value and use of flexible scheduling
27	16	Cost-benefit studies in vocational education at the adult level
28	15	Determining the value and use of computer assisted instruction
29	13	Determining the value and use of individualized instruction
30	12	Determining the value and use of team teaching
31	11	Cost-benefit studies in vocational education at the high school level
32.5	8	Studies in manpower utilization
32.5	8	Determining the value and use of the internship program in teacher education
34.5	7	Vocational education opportunities in rural areas
34.5	7	Vocational education opportunities in urban areas
36	6	A determination of the role of youth organizations in vocational education
37	3	Determining the value and use of field trips

It should be noted by the reader that nearly two-thirds of the respondents identified "Vocational Guidance in Grades 9 through 12" as a high priority area and over one-half checked "In-service programs to keep personnel in vocational technical education current in their knowledge of rapidly changing technology. These two statements were considered priorities by a substantially larger number of the respondents than were the other statements. Table number two has been provided to show the distribution of the responses.

Table II Frequency distribution of responses

Number of Responses	Percent Responding	Rank	Number of Statements in Frequency Range
1-10	1-8	37-31	6
11-20	9-15	30-28	4
21-30	16-23	27-15	12
31-40	24-30	14-13	3
41-50	31-38	12-7	7
51-60	39-45	6-3	3
61-70	46-53	-	0
71-80	54-61	2	1
81-90	62-68	1	1

Table two is divided into nine frequency ranges. The first column contains the number of responses grouped in ranges of ten responses per group. The second and third columns provide the corresponding percentage and rank range, while the last column contains the number of statements that received the indicated response.

By observing the first three frequency ranges (indicating least response) the reader will note that 22 of the 37 statements were in this category of low selection as a priority area, while in the last three frequency ranges (frequency ranges with the highest number of respondents selecting the statement as a priority area) there were only two statements.

Greatest consideration should be given to the statements ranked number one and two. Note the large gap in the number of respondents listing these statements as priority and the next high statement.

There were 31 statements provided by respondents in the "other" or write in space. Twenty-four of these statements were "singles" or statements that were not duplicated by other respondents, while seven statements dealt with credentialing of vocational personnel. These seven "other" statements represent five percent of the group. This percentage would likely have been much higher had a statement on credentialing been provided as an item to be checked.

The information received from this survey should only be accepted as opinions of the leadership in vocational education in California pertaining to priorities and not necessarily as actual priorities.

March 8, 1968

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Labor Force Experience of the Puerto Rican Worker. Regional Reports Number 9.

Bureau of Labor Statistics (DOL), Washington, D.C.
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NEW YORK CITY

The statistics in this paper were gathered to provide some basic parameters on the characteristics of Puerto Ricans in the labor market. For the most part, data availability ends in 1960 with the Census Population; this lack of current time series information is a major barrier to current evaluation of the situation. Available data are presented in chart and narrative form, covering population trends and distribution, occupational and industrial patterns, public sector employment, educational attainment, income levels, and skill gaps. A detailed section on data deficiencies is included. Findings included: (1) The median age of Puerto Ricans in New York City in 1964 was only 21.7 years, (2) In 1960, families of seven or more persons accounted for 11 percent of all Puerto Rican families in New York, and (3) 34 percent of Puerto Rican families in New York City in 1960 had incomes of less than $3,000. (JK)

VT 008 774

REGIONAL REPORTS

number 9

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This report is the Ninth in a series of Regional Reports presenting and analyzing data on various aspects of labor and the economy in the Middle Atlantic Region. Earlier reports in this series are:

Regional Report No. 1

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Regional Report No. 3

Jobs in the New York - Northeastern New Jersey Area December 1964

Regional Report No. 4

Employment Statistics for the New York - Northeastern New Jersey Metropolitan Area, 1949-64. July 1965

Regional Report No. 5

Seasonally Adjusted Employment Statistics for the New York - Northeastern New Jersey Metropolitan Area, 1949- 64 August 1965

Regional Report No. 6

1966 Major Collective Bargaining in the Middle Atlantic States. February 1966'

Regional Report No. 7

Post World War II Price Trends in Rent and Housing in the New York Metropolitan Area. June 1967

Regional Report No. 8

Employment Statistics 1958-1966 - A Compilation of Employment Statistics for the Middle Atlantic Region. May 1968

L.27

LABOR FORCE EXPERIENCE

OF THE PUERTO RICAN WORKER

U. S. DEPARTMENT OF LABOR
Bureau of Labor Statistics

Herbert Bienstock, Regional Director
Middle Atlantic Region

LABOR FORCE EXPERIENCE OF THE PUERTO RICAN WORKER *

In statistical terms, the image of the Puerto Rican has been fading since 1960. The Census of 1960, despite certain technical problems to be discussed later, provided the last available comprehensive overview of the demographic profile of the Puerto Rican in the United States and also the last time that the dimensions of his participation and the character of his attainments and achievements in the labor force were measured.

For the country as a whole, the Puerto Rican population, however defined, makes up a relatively small part of total, about one-half of one percent. Since Puerto Ricans by birth or parentage are substantially clustered in New York City, they account for a very substantial proportion of the City's total population -- about 8 percent.

It is a paradox that their low relative importance in the U. S. totals is probably a significant factor in inhibiting the development of statistics on Puerto Ricans separately. At the same time, within their major area of concentration -- New York -- their relative dispersal throughout the City works against the development of separate data on a neighborhood basis and for that matter probably presents a barrier to the development of policy and programs since the lack of availability of data may prevent the focusing of attention on problems that are unique to the Puerto Rican community.

The statistics included in this paper were gathered to provide some basic parameters on the characteristics of the Puerto Ricans in the

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* Based on a presentation by Herbert Bienstock, Regional Director, U.S. Department of Labor's Bureau of Labor Statistics, before the workshop on "Puerto Rican Employment Problems," sponsored by the Center for the Study of the Unemployed, New York University, May 20, 1968.

labor market. They are perhaps more enlightening in terms of the gaps in current information that they reveal than they are helpful in providing insights to current problems, since for the most part they come to a standstill in 1960.

Population Trends

Our prime source of data on the Puerto Rican population continues to be the 1960 Census of Population. This included, based on a 25 percent sample, considerable data on the social and economic characteristics of the population of Puerto Rican birth and parentage for the United States, in States with a Puerto Rican population of 25,000 or more, and in SMSA's of 250,000 or more with a Puerto Rican population of 25,000 or more. Statistics for 1960 are represented separately for: (1) persons of Puerto Rican birth and (2) those of Puerto Rican parentage. Taken together these might be defined in a combined way as persons of Puerto Rican origin.

The historical data are available as far back as 1910. In that Census about 1,500 persons of Puerto Rican birth were found in the United States. In each decade since that time there has been a significant growth in this population. By 1960 the number of persons of Puerto Rican birth in the United States reached 617,000. A total of nearly 900,000 were either born in Puerto Rico or in the United States of Puerto Rican parentage. In 1950 about 80 percent of this population was in New York City; by 1960 this percentage dropped to about 70 percent indicating a gradual diffusion of this population in the United States.

The data in Table 1 provide a summary of population growth for the country as a whole and for New York City during the period 1910-60. It is clear that in the decade between 1950 and 1960 there was a larger increase,

Table 1.

PERSONS OF PUERTO RICAN ORIGIN IN CONTERMINOUS UNITED STATES AND NEW YORK CITY: 1910 TO 1960

Nativity and year	United States		New York City	
	Number	Percent increase	Number	Percent of total
Puerto Rican birth:				
1960	615,384	172.2	429,710	69.8
1950	226,110	223.2	187,420	82.9
1940	69,967	32.6	61,463	87.8
1930	52,774	346.8	(1)	...
1920	11,811	680.6	7,364	62.3
1910	1,513	...	554	36.6
Puerto Rican parentage: [2]				
1960	272,278	261.8	182,864	67.2
1950	75,265	...	58,460	77.7

[1] Not available.
[2] Born in the United States.

within the Puerto Rican population, of persons born of Puerto Rican parentage than of migrants born in Puerto Rico. In 1950, persons of Puerto Rican parentage accounted for about one-fourth of the total population, but by 1960, the proportion was closer to one-third. Later discussion will focus on some of the substantial problems of measurement faced in the Census-taking of the Puerto Rican population. In New York City, persons of Puerto Rican birth and parentage account for about two-thirds of the total United States population in both groups.

We see, too, in Table 2 that the net increase of 367,000 Puerto Ricans in New York City during the period 1950-60 contributed quite substantially to the change in ethnic distribution within the City. During the same decade, the nonwhite population grew by 360,000, or at a somewhat slower pace than the Puerto Rican, while the white population was declining by

Chart A.

POPULATION CHANGE IN NEW YORK CITY
BY ETHNIC GROUP, 1950-60

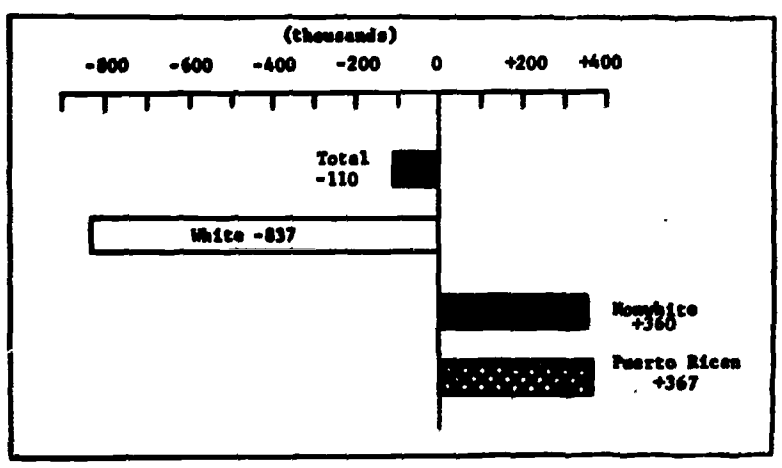


Table 2.

Population of New York City by ethnic group, 1960 and 1950

(numbers in thousands)

Group	1960		1950		Change 1950-60	
	Number	Percent	Number	Percent	Number	Percent
Total	7,782	100	7,892	100	-110	- 1.4
White 1/.....	6,053	78	6,890	87	-837	- 12.1
Nonwhite 1/	1,116	14	756	10	+360	+ 47.6
Puerto Rican	613	8	246	3	+367	+149.2

Note: Detail may not add to totals due to rounding.
1/ Other than Puerto Rican.

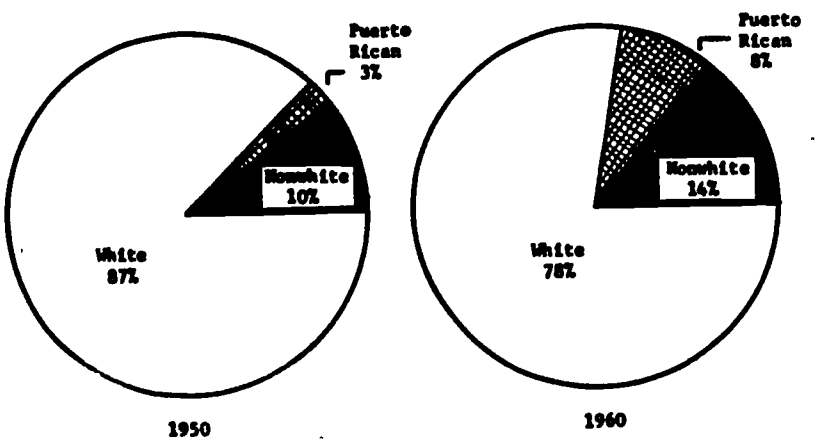
837,000. As a result, while in 1950 Puerto Ricans in New York City accounted for 3 percent of the total population, by 1960 they accounted for 8 percent of the City's total population. In terms of rate of growth for the decade, the Puerto Rican group by far outstripped both of the other categories. While the white population was declining by 12 percent and the nonwhite population was registering a 48 percent increase, the Puerto Rican component jumped by 149 percent.

Age Patterns

The degree to which the Puerto Rican population is a much younger population is evident in Table 3, where it is noted that the median age of Puerto Ricans in New York City in 1964 was found to be 21.7 years in the Population Health Survey, one of the few studies which provides demographic information of a current nature with a separate breakout for Puerto Ricans.

Chart B.

ETHNIC COMPOSITION OF NEW YORK CITY'S POPULATION
1950 AND 1960



In 1960, the Federal Census reported the median age of Puerto Ricans in New York at 21.9 years -- about the same figure as reported in the 1964 Population Health Survey. Nonwhites were reported in 1964 with a median age of 26.5 years. In contrast, whites are shown to have a median age of 38.4 both in the 1964 survey and in the 1960 Census. Thus, in addition to language and skill barriers there is the barrier of age. Typically in this country unemployment rates vary inversely with age through the years of working life.

Family Size

In Table 4 we also note that the Puerto Rican family living in New York City tends to be significantly larger in size than families among the white non-Puerto Ricans. Families of 7 or more persons account for about 11 percent of all Puerto Rican families as against only 2 percent of all white

Table 3.

MEDIAN AGE OF NEW YORK CITY'S POPULATION
BY SEX AND ETHNIC GROUP, 1960 AND 1964

Sex and Ethnic Group	1964 Population Health Survey	1960 U. S. Census
Total Population	**33.9**	**35.1**
Male	32.5	34.1
Female	35.2	36.0
White	**38.4**	**38.4**
Male	37.0	37.2
Female	39.7	39.5
Non-White	**26.5**	**29.0**
Male	24.4	28.3
Female	28.0	29.6
Puerto Rican	**21.7**	**21.9**
Male	20.3	21.3
Female	22.7	22.4

non-Puerto Rican families. On the other hand, among white non-Puerto Ricans close to 40 percent are two-person families, while among Puerto Rican families, this category accounts for less than one out of every five.

Population Shifts in the New York Area

The data shown in Table 5 and Table 6, provide some insights into the movements of the Puerto Rican population within New York City since the 1960 Census. Again, these data from the Population Health Survey provide the only guide to Puerto Rican population trends in this country since the 1960 Census. The degree to which the Puerto Rican population within the City of New York has tended to become decentralized is shown in Table 5. In 1960, Manhattan was the place of residence of more Puerto Ricans than any other borough. Between 1960 and 1964, however, the Borough of Manhattan actually

Table 4.

Percent distribution of families by number of family members, by ethnic group, for New York City: 1960

Number of family members	White families	Non-white families	Puerto Rican families
All families....	100.0	100.0	100.0
Two.....	39.5	34.1	18.4
Three.....	24.8	22.7	22.4
Four.....	20.7	17.0	22.5
Five.....	9.3	11.2	16.0
Six.....	3.6	7.0	9.8
Seven or more.....	2.1	8.0	10.9

reported a loss of 24,600 in Puerto Rican population while the Bronx increased by 58,000 and Brooklyn by 54,000. Queens registered a gain of 11,400. By 1964, the Bronx with a reported 242,000 Puerto Rican population was the number one borough of residence, followed by Brooklyn with 231,500, while Manhattan with a reported population of 197,500 had fallen to third place.

Table 6 provides some interesting sidelights in terms of age distribution. As might be expected, older persons of Puerto Rican birth or parentage have tended to stay in Manhattan while the younger population has moved outward. In examining the age groupings shown in Table 6 in each of the categories above age 50, Manhattan leads in terms of Puerto Rican population. In the age groups between 10 and 49 years, the Bronx is the home of the largest number of Puerto Ricans. But among those under 10 years of age, there are more Puerto Rican youngsters living in Brooklyn -- 78,500 -- than in any of the other boroughs.

Table 5.

NEW YORK CITY POPULATION
BY BOROUGH AND ETHNIC GROUP
1964 and 1960

BOROUGH AND ETHNIC GROUP	1964 POPULATION HEALTH SURVEY*		1960 U.S. CENSUS		1964 - 1960 CHANGE	
	NUMBER	PER-CENT	NUMBER	PER-CENT	NUMBER	PERCENT
NEW YORK CITY	7,558,500	100.0	7,706,300	100.0	-147,800	- 1.9
White	5,461,500	72.2	6,000,500	77.9	-539,000	- 9.0
Non-white	1,388,500	18.4	1,102,900	14.3	+285,600	+25.9
Puerto Rican	701,500	9.3	602,900	7.8	+ 98,600	+16.4
MANHATTAN	1,545,000	100.0	1,681,400	100.0	-136,400	- 8.1
White	934,500	60.5	1,048,900	62.4	-114,400	-10.9
Non-white	411,000	26.6	410,300	24.4	+ 700	+ 0.2
Puerto Rican	197,500	12.8	222,100	13.2	- 24,600	-11.1
BRONX	1,306,000	100.0	1,410,300	100.0	-104,300	- 7.4
White	872,000	66.8	1,067,600	75.7	-195,600	-18.3
Non-white	192,000	14.7	158,700	11.3	+ 33,300	+21.0
Puerto Rican	242,000	18.5	184,000	13.0	+ 58,000	+31.6
BROOKLYN	2,605,500	100.0	2,605,000	100.0	+ 500	+ 0.0
White	1,845,000	70.8	2,054,200	78.9	-209,700	-10.2
Non-white	529,000	20.3	373,100	14.3	+155,900	+41.8
Puerto Rican	231,500	8.9	177,300	6.8	+ 54,200	+30.6
QUEENS	1,872,000	100.1	1,797,700	100.0	+ 74,300	+ 4.1
White	1,603,500	85.7	1,628,400	90.6	- 24,900	- 1.5
Non-white	235,000	12.6	152,200	8.5	+ 82,800	+54.4
Puerto Rican	28,500	1.5	17,100	0.9	+ 11,400	+66.5
RICHMOND	230,000	100.0	211,900	100.0	+ 18,100	+ 8.5
White	206,500	89.8	200,900	94.8	+ 5,600	+ 2.8
Non-white	21,500	9.3	8,600	4.1	+ 12,900	+150.2
Puerto Rican	2,000	0.9	2,400	1.1	- 400	**

* The 1964 population includes an estimated 7,000 persons of unknown ethnic origin, 2,000 of whom live in Manhattan and 5,000 in Queens. Figures otherwise may not add because of independent rounding.

** Figures are not shown because sample base is too small for reliable estimates.

Table 6.

NEW YORK CITY POPULATION BY AGE, BOROUGH AND ETHNIC GROUP 1964 (All Numbers in Thousands)

BOROUGH & ETHNIC GROUP	AGE									
	TOTAL	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70+	UNKNOWN
NEW YORK CITY	7,558.5	1,264.0	1,096.5	1,049.0	944.0	986.5	1,032.0	715.0	447.0	24.5
White	5,461.5	749.5	721.5	702.0	651.5	740.0	847.0	633.5	398.5	18.0
Non-white	1,388.5	320.5	241.0	207.5	211.0	175.0	137.5	60.0	32.0	4.0
Puerto Rican	701.5	193.5	133.5	139.5	81.5	69.5	47.5	20.5	15.5	0.5
MANHATTAN	1,545.0	184.5	158.5	251.5	231.0	197.5	224.0	165.5	111.5	21.0
White	934.5	64.0	63.0	156.5	139.5	122.0	148.5	136.5	89.0	15.5
Non-white	411.0	72.5	60.5	58.5	71.0	54.0	57.0	19.0	15.0	3.5
Puerto Rican	197.5	48.0	35.0	36.5	20.5	21.5	18.5	10.0	7.5	-
BRONX	1,306.0	228.5	194.5	190.0	156.5	164.0	175.0	116.0	80.0	1.5
White	872.0	123.5	112.0	106.0	94.0	115.5	148.0	103.0	69.0	1.0
Non-white	192.0	43.5	34.0	30.5	30.5	24.0	14.5	8.5	6.0	0.5
Puerto Rican	242.0	61.5	48.5	53.5	32.0	24.5	12.5	4.5	5.0	-
BROOKLYN	2,605.5	496.5	430.5	338.5	293.5	324.0	347.5	236.5	137.5	1.0
White	1,845.0	267.0	281.5	214.0	201.5	242.0	292.5	218.0	128.0	0.5
Non-white	529.0	151.0	102.5	80.5	65.5	62.5	43.5	15.5	8.0	-
Puerto Rican	231.5	78.5	46.5	44.0	26.5	19.5	11.5	3.0	1.5	0.5
QUEENS	1,872.0	301.5	279.5	239.0	234.5	268.5	262.5	177.0	108.5	1.0
White	1,603.5	249.0	235.5	199.0	192.0	232.5	235.5	156.0	103.0	1.0
Non-white	235.0	47.5	40.5	34.5	40.0	30.5	22.0	17.0	3.0	-
Puerto Rican	28.5	4.5	3.0	5.5	2.5	3.5	5.0	3.0	1.5	-
RICHMOND	230.0	53.0	33.5	30.0	28.5	32.5	23.0	20.0	9.5	-
White	206.5	46.0	29.5	26.5	24.5	28.0	22.5	20.0	9.5	-
Non-white	21.5	6.0	3.5	3.5	4.0	4.0	0.5	-	-	-
Puerto Rican	2.0	1.0	0.5	-	-	0.5	-	-	-	-

The 1964 population includes an estimated 7,000 persons of unknown ethnic origin, 2,000 of whom live in Manhattan and 5,000 in Queens.

SOURCE: NEW YORK CITY POPULATION HEALTH SURVEY, 1964

Migration Trends

Since two-thirds of the Puerto Ricans in the United States live in New York City, the population health data for New York City provides, almost as a byproduct, some insight to overall Puerto Rican demographic patterns. The other major guide to what is happening in Puerto Rican population trends since 1960 is the information on Puerto Rican migration to the United States mainland. Table 7 shows data on arrivals, departures and net migration from 1955 to 1967. In only two years of this period, 1961 and 1963, was there a net out-migration. In 1964, the net in-migration was relatively moderate, but in 1966 and 1967 net migration totals had moved up to the 1958-59 level.

Table 7.

PUERTO RICAN MIGRATION TO THE UNITED STATES

CALENDAR YEARS 1955 TO 1967

YEAR	ARRIVALS	DEPARTURES	NET MIGRATION
1955	343,720	297,706	45,464
1956	413,784	361,469	52,315
1957	460,016	422,312	37,704
1958	489,354	461,664	27,690
1959	636,700	606,711	29,989
1960	677,607	661,309	16,298
1961	715,656	717,410	-1,754*
1962	869,219	858,419	10,800
1963	998,562	1,004,041	-5,479*
1964	1,162,364	1,160,994	1,370
1965	1,367,853	1,384,531	16,678
1966	1,498,837	1,527,590	28,753
1967	1,715,184	1,741,737	26,553

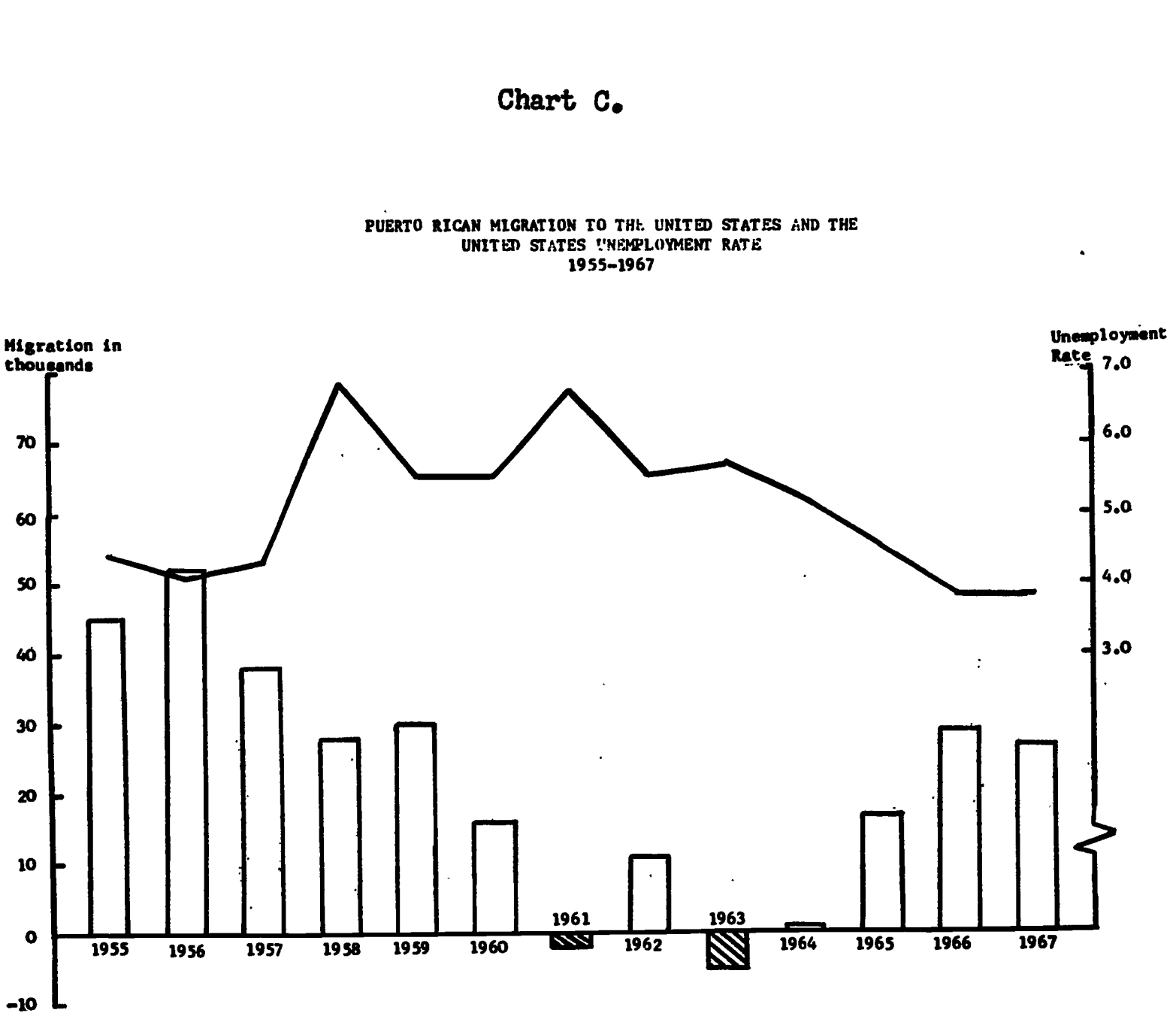
(*) The minus sign is used to indicate a net outflow from the continental U. S. to Puerto Rico.

SOURCE: San Juan Office, Immigration and Naturalization Service, U. S. Department of Justice, and Puerto Rico Planning Board.

Chart C, which plots net migration of Puerto Ricans to the United States with the unemployment rate for the country as a whole, shows a degree of sensitivity between migration levels and the climate of the labor market with high unemployment stateside reflected in a slowdown in migration.

Chart C.

PUERTO RICAN MIGRATION TO THE UNITED STATES AND THE
UNITED STATES UNEMPLOYMENT RATE
1955-1967



Occupational and Industrial Patterns

To begin to understand the experience of the Puerto Rican in the American labor market, it is useful to examine his economic circumstances prior to arrival on the mainland. Table 8 presents data developed by the Puerto Rican Department of Labor on characteristics of passengers who traveled between Puerto Rico and the United States during 1957-61. The youthfulness of migrants is clearly observed; we note that a full two-thirds of the migrants were under age 24 at time of arrival. More than half of them reported no previous work experience and more than one out of every four had previously worked as either a farm laborer or a semi-skilled worker. Only about one out of every ten had worked as a professional or clerical worker.

This pattern differs not too sharply from the occupational distribution of Puerto Ricans living in New York City in 1960. Sixty-five percent of all Puerto Rican workers in New York City in 1960 were blue-collar workers, with more than half in the semi-skilled category, primarily factory production workers in relatively low wage jobs. This compares with about 40 percent blue-collar jobs among nonwhite workers, and 32 percent for whites other than Puerto Ricans. Less than one out of every five -- 19 percent of the Puerto Rican labor force in 1960 -- consisted of white-collar workers in contrast with 30 percent for nonwhites and 58 percent for white non-Puerto Ricans.

Some encouragement is found in the data presented in Table 10. The occupational distribution of persons living in New York City but born in Puerto Rico deteriorated somewhat between 1950 and 1960, reflecting the influx of workers at the lower end of the skill range during the decade of the

Table 8.

OCCUPATIONAL DISTRIBUTION OF PUERTO RICAN MIGRANTS AT THE TIME OF ARRIVAL

(% of Net "Resident" Migration to Continental United States)*

Professional, Managers, and Proprietors	6
Clerical and Sales	5
Foremen and Craftsmen	4
Operatives	10
Service Workers	3
Farm Laborers	18
Laborers (other)	1
No Work Experience Reported	53

Industry of Last Employment

Agriculture	18
Construction	2
Manufacturing	9
Commerce and Finance	6
Utilities, Transport, and Communication	1
Services	7
Government	4
No Work Experience Reported	53

Age Distribution

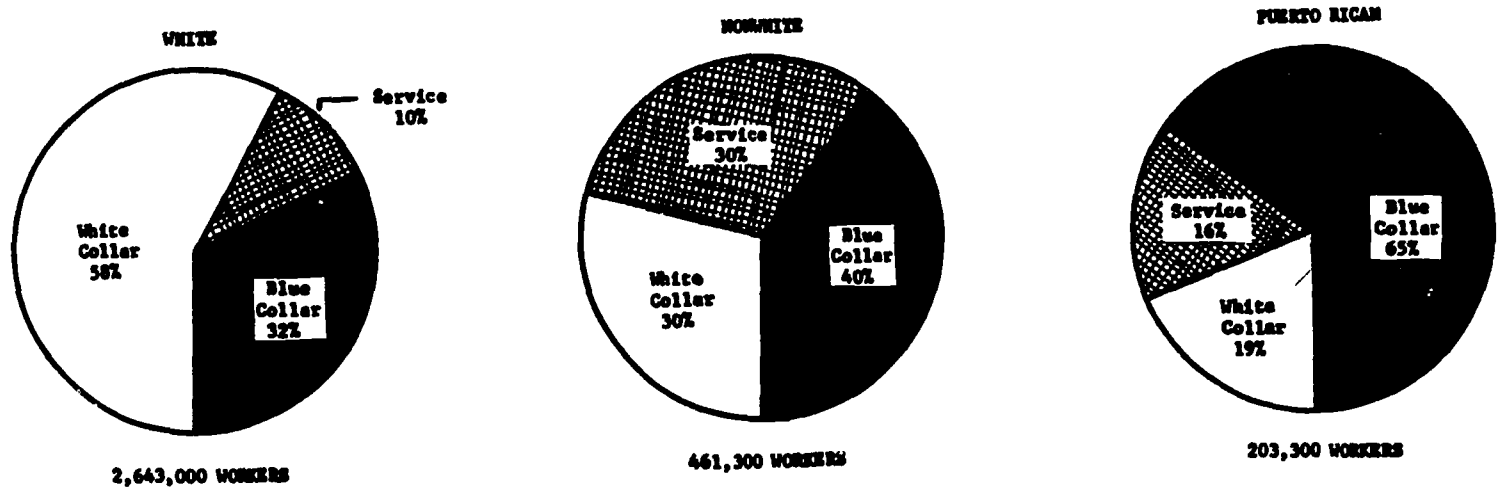
Under 15	20
15 - 24	46
25 - 34	19
35 - 55	12
55 or over	3

Source: Commonwealth of Puerto Rico, Department of Labor, Bureau of Labor Statistics, Characteristics of Passengers who Travelled Between Puerto Rico and the United States, quarterly reports, 1957 - 1961.

CHART D.

OCCUPATIONAL GROUPING OF EMPLOYED PERSONS BY ETHNIC GROUP

NEW YORK CITY - 1960*



* Based on New York City residents only

Table 9.

Occupational distribution of employed residents, by ethnic group, New York City, 1960 and 1950

Occupation group	White 1/		Nonwhite 1/		Puerto Rican	
	1960	1950	1960	1950	1960	1950
Total employed						
Number (thousands)	2,643.0	2,871.0	461.3	320.0	203.3	85.4
Percent	100.0	100.0	100.0	100.0	100.0	100.0
White-collar workers	58.0	53.7	29.5	19.9	19.0	15.6
Professional and technical	13.6	11.3	6.9	4.3	2.4	2.3
Managers, officials, and proprietors	10.9	12.9	3.5	3.7	2.9	3.6
Clerical and sales workers	33.5	29.5	19.1	11.9	13.7	9.7
Blue-collar workers	32.1	36.2	40.4	42.4	65.0	64.5
Craftsmen and foremen	12.1	13.1	7.0	6.2	8.0	7.3
Operatives	16.9	19.5	26.9	27.9	53.0	53.9
Laborers	3.1	3.6	6.5	8.3	4.0	3.3
Service workers	10.0	10.1	30.2	37.7	16.0	19.9
Private household	1.0	0.9	10.0	17.3	0.3	0.7
Other service workers	9.0	9.2	20.2	20.4	15.7	19.2

1/ Other than Puerto Rican.

fifties. On the other hand, when we look at the distribution of persons of Puerto Rican parentage there was some moderate improvement between 1950 and 1960. How useful it would be to have current labor force statistics for both of these groupings for the large Puerto Rican population in New York so that we could assess the degree to which labor force position has improved or deteriorated.

Table 10.

OCCUPATIONAL STATUS OF PERSONS BORN IN PUERTO RICO AND OF PUERTO RICAN PARENTAGE, BY SEX NEW YORK CITY, 1950 & 1960

	Born in Puerto Rico		Puerto Rican Parents	
Occupation	1950	1960	1950	1960
Males Employed and occupation reported	46,275	118,288	3,585	9,096
Percent	100.0	100.0	100.0	100.0
Prof. Tech. & kndrd. wrkrs.	2.4	1.8	5.4	7.4
Mgrs. Offic. & Propr.	5.5	3.7	4.4	4.0
Clerical,Sales & Kndrd. wrkrs.	9.2	11.4	20.5	23.8
Oftsman,Foremen & kndrd wrkrs.	11.0	10.8	11.9	16.3
Operatives & Kindred Workers	37.4	45.2	35.4	29.&
Non-household service workers	29.3	21.1	16.3	12.5
Household Service	0.1	0.1	0.0	0.2
Laborers except Farm & mine	5.0	5.7	6.0	6.0
Farm Laborers & Foremen	0.1	0.3	0.0	0.0
Females Employed and occupation reported	31,730	61,225	2,955	5,893
Percent	100.0	100.0	100.0	100.0
Prof. Tech. & kndrd. wrkers.	1.7	2.6	5.6	6.3
Mgrs., Offic. & Prop.	1.0	1.1	1.2	1.7
Clerical,Sales & kndrd.wrkers.	6.4	12.1	39.4	56.0
Oftsman,Foremen & kndrd. wrkrs.	1.7	1.9	2.0	1.7
Operative & kindred workers	80.8	74.0	40.9	24.4
Non-household service workers	5.7	6.7	8.6	8.7
Household service	1.6	0.8	1.7	0.5
Laborers except Farm & mine	1.0	0.8	0.5	0.6
Farm Laborers & Foremen	0.0	0.0	0.0	0.0

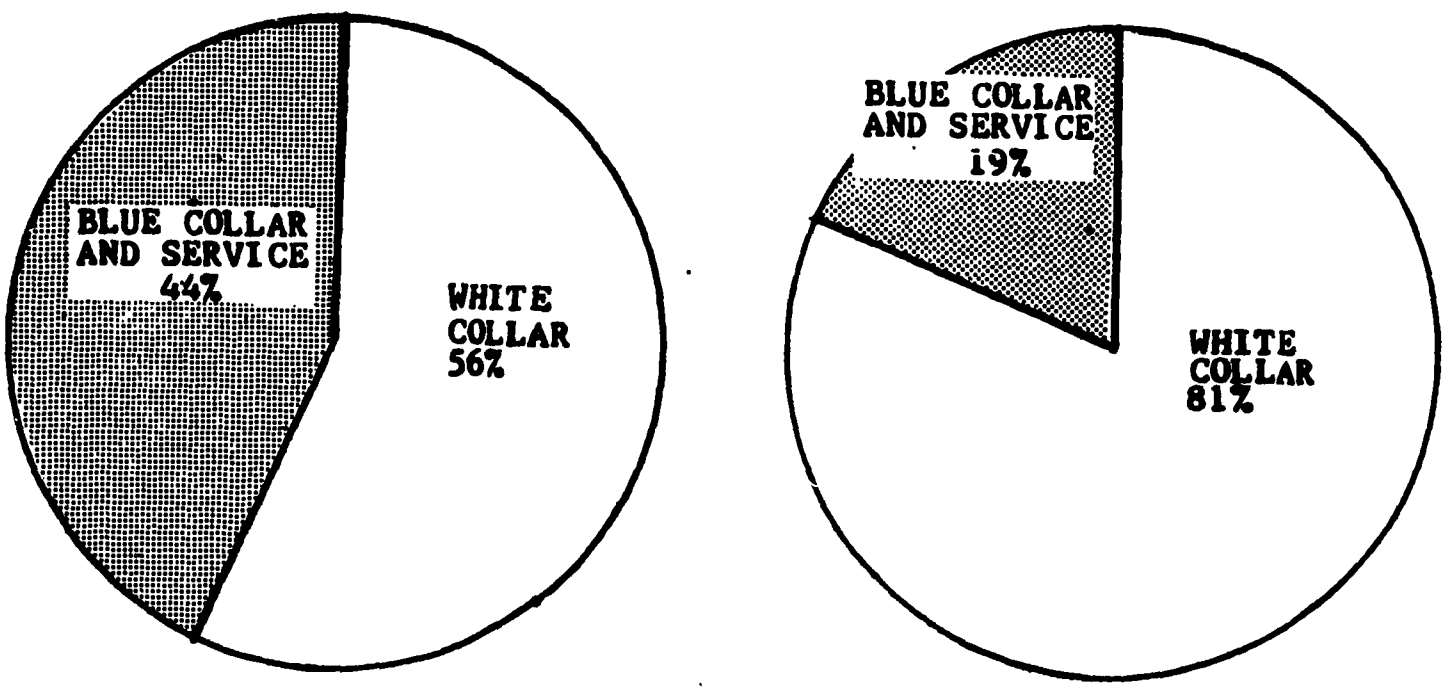
Source: U.S. Bureau of the Census. U.S. Census of Population, 1960. Subject Reports. Puerto Ricans in the United States. Final Report. PC (2) - 1D. U.S. Government Printing Office, Washington, D.C. 1963. Table 11.

Relevant Mainland Trends

We can only guess at the current situation. Some of the general information on job trends in New York City points up the difficulties faced by Puerto Rican workers in making their way in the New York labor market. Chart E presents data showing that in New York City, more than four out of every five net increase in jobs during the past 3 years, 1964-67, were in the white-collar categories in which Puerto Ricans were so under-represented the last time there was measurement.

Chart E.

INCREASE IN NONAGRICULTURAL EMPLOYMENT 1/
1964-1967



1/ Excludes private household workers

Table 11 shows the industrial distribution of Puerto Ricans in the New York labor force in 1960. Reflecting the occupational patterns just examined, we note here that more than 50 percent of all Puerto Ricans were employed in the City's manufacturing industries.

Table 11.

OCCUPATIONAL DISTRIBUTION OF PUERTO RICANS IN METROPOLITAN NEW YORK, 1960

(% of Employed Persons Classified by Sex)

	Male	Female
Professional and Technical	2.0	2.7
Managers, Officials, and Proprietors	3.5	1.1
Clerical	8.6	12.6
Sales	2.9	2.4
Craftsmen and Foremen	10.5	1.8
Operatives	41.3	65.2
Service	19.3	7.1
Laborers	5.6	.7

Industrial Distribution

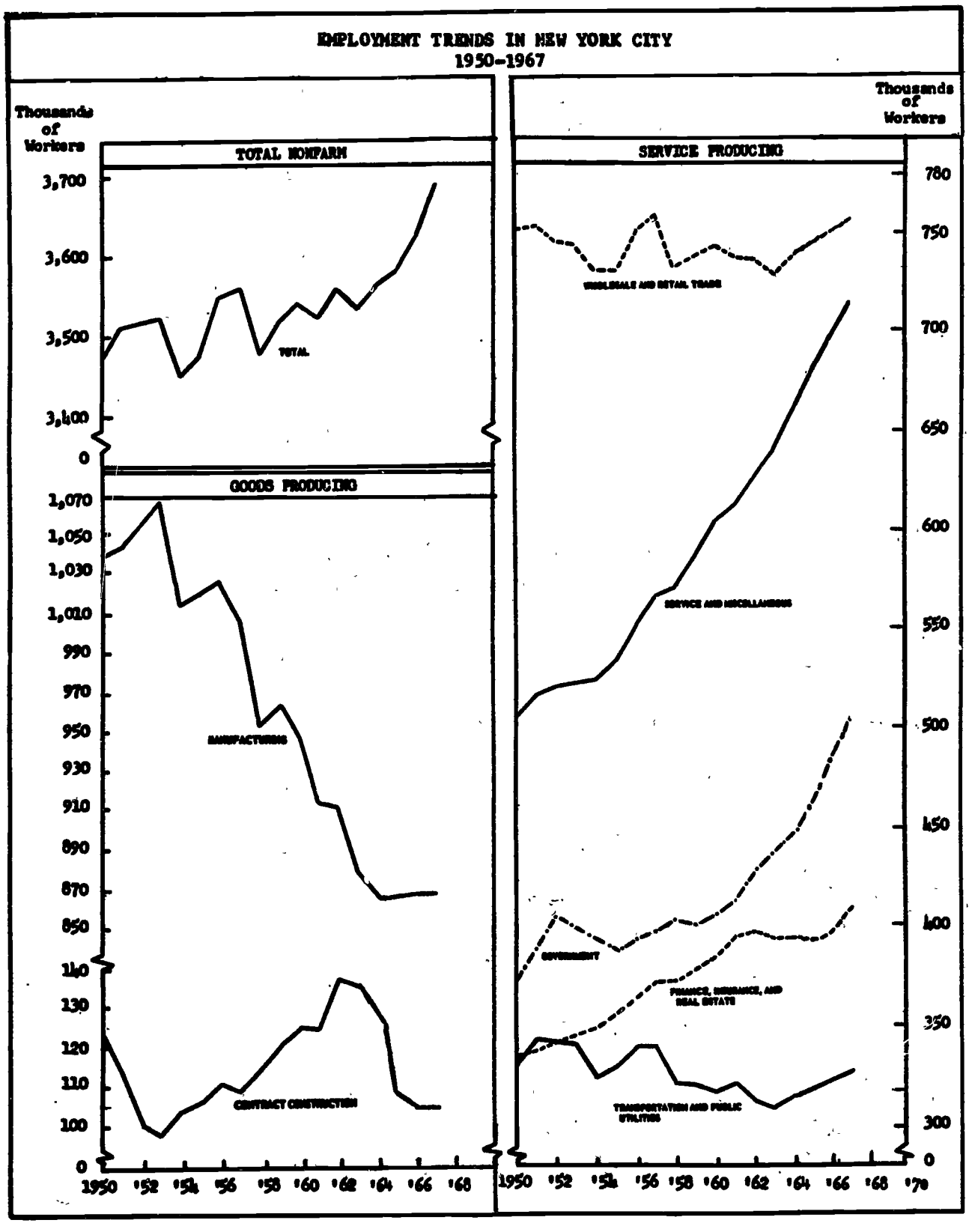
(% of all Employed Persons, Male and Female)

Construction	1.7
Durable Goods Manufacturing	19.9
Non-Durable Goods Manufacturing	33.2
Transportation, Communication, and Public Utilities	4.1
Wholesale and Retail Trade	15.7
Finance, Insurance, and Real Estate	3.4
Business and Repair Services	2.3
Personal Services	6.0
Entertainment and Recreation Services	.5
Professional and Related Services	5.7
Public Administration	1.8

Source: United States Department of Commerce, Bureau of the Census, United States Census of Population, 1960, Special Report PC(2)1D, Puerto Ricans in the United States.

In Chart F data are provided which plot recent patterns and trends of employment in New York City by major industry division. Even a casual inspection will reveal the substantial loss of factory jobs in New York City in recent decades -- the very industrial area in which Puerto Ricans were so heavily concentrated.

Chart F.



Public Sector Employment

We note too in Chart F the rapid growth in government as a source of employment. Table 12 provides information from an ethnic survey made by the New York City Commission on Human Rights on employment in New York City municipal government. The data related to 1963 and no later data are available. Note that the 5,404 Puerto Rican employees of the City of New York accounted for less than 3 percent of the 177,000 city government jobs in contrast with 9 percent of total population. In terms of skill distribution, just about 7 out of every 10 Puerto Rican workers in New York City government agencies in 1963 were employed as either service workers or unskilled laborers.

Table 12.

OCCUPATIONS OF NEW YORK CITY EMPLOYEES, BY ETHNIC BACKGROUND, 1963[a]

Occupations	Puerto Rican	Negro	Other
Total: Number	5,404	40,946	130,848
Per cent	100.0	100.0	100.0
Officials	0.8	2.0	5.7
Professional, Technical and kindred workers	14.6	22.4	42.4
Clerical and kindred workers	8.6	14.1	8.6
Craftsman, Foremen and kindred workers	1.4	1.1	9.4
Operatives and kindred workers	5.3	3.8	4.4
Service workers	54.8	49.7	17.4
Laborers	14.5	6.9	12.1
Officials	0.5	9.9	89.6
Professional, Technical and kindred workers	1.2	14.0	84.8
Clerical and kindred workers	2.5	31.3	66.2
Craftsman, Foremen and kindred workers	0.6	3.7	95.7
Operatives and kindred workers	3.7	20.5	75.8
Service workers	6.4	44.2	49.4
Laborers	4.0	14.6	81.4

a. Figures do not include all City Departments. See source publication, Table 3.

Source:
New York City Commission on Human Rights, The Ethnic Survey. (New York City Commission on Human Rights, 1964) Tables 1.1 thru 1.6.

Educational Attainment

In view of what is generally known about the growth patterns of occupations and their relationship to educational requirements, the data presented in Table 13 on educational attainment cannot be considered to be encouraging. In 1960 less than 1 percent of the total Puerto Rican population had completed four or more years of college. Just about 87 percent of all Puerto Ricans over the age of 25 residing in New York City in 1960 had completed their education without finishing high school.

There is, of course, substantial variation within the Puerto Rican

Table 13.

Educational attainment of persons 25 years of age and over by ethnic group, New York City, 1960

Years of school completed	Percent distribution			Cumulative percent		
	White 1/	Nonwhite 1/	Puerto Rican	White 1/	Nonwhite 1/	Puerto Rican
Total	100.0	100.0	100.0	-	-	-
No school years completed	5.3	3.1	8.2	5.3	3.1	8.2
Elementary: 1-7 years	14.2	25.9	44.7	19.5	29.0	52.9
8 years	21.0	16.3	17.2	40.5	45.3	70.1
High School: 1-3 years	19.6	23.1	16.9	60.1	68.4	87.0
4 years	23.0	21.6	9.9	83.1	90.0	96.9
College: 1-3 years	7.6	5.8	2.2	90.7	95.8	99.1
4 years or more	9.3	4.2	0.9	100.0	100.0	100.0

1/ Other than Puerto Rican.

Table 14.

Years of School Completed by the Puerto Rican Population 14 Years Old and Over in the United States, by Place of Birth and Sex, 1960

[Percent distribution]

Years of school completed	Total		Born in Puerto Rico		U.S. born, Puerto Rican parentage	
	Male	Female	Male	Female	Male	Female
Total: Number	289,089	283,974	228,098	225,868	28,991	27,871
Percent	100.0	100.0	100.0	100.0	100.0	100.0
No school years completed	4.8	7.2	4.8	7.8	2.1	1.8
Elementary school:						
1 to 4 years	15.4	17.8	16.8	18.4	4.8	4.4
5 to 6 years	14.7	14.7	15.7	15.7	5.7	4.8
7 years	8.7	7.7	8.8	8.0	7.1	4.9
8 years	17.3	15.8	17.5	15.5	14.4	13.0
High school:						
1 to 3 years	28.0	21.8	22.3	20.4	24.0	24.4
4 years	11.1	12.0	10.2	10.2	19.1	22.3
College:						
1 to 3 years	3.1	2.8	2.7	2.8	6.5	6.2
4 years or more	1.7	1.8	1.0	1.3	5.8	2.8
Median school years completed	8.4	8.2	8.2	8.0	10.8	10.8

Source: U.S. Department of Commerce.

population between those born in Puerto Rico and those born in the United States of Puerto Rican parentage. The data shown in Table 14 for the country as a whole reveal some of these differences. For example, for males born in the United States of Puerto Rican parentage the median school years completed was 10.3 years in 1960 compared with 8.2 years for persons born in Puerto Rico. In fact, almost 4 percent of all males born in the United States of Puerto Rican parentage have completed college.

Income Levels

Given the occupational patterns and the educational attainment data just examined, the income data shown in Table 15 is hardly surprising. A full third (34 percent) of all Puerto Rican families living in the City of New York in 1960 had incomes of less than $3,000, compared with 27 percent of nonwhites, and 12 percent of whites other than Puerto Rican. More than half of all Puerto Rican families (54 percent) had incomes of less than $4,000, in contrast with 19 percent for white families other than Puerto Rican.

Table 15.

Family income during 1959 of families in New York City

Income class	Percent of all families in group in specified income class			
	All groups	White	Non-white	Puerto Rican
Under $2,000.....	8.4	6.8	14.5	16.1
Under $3,000.....	15.2	11.8	27.1	33.8
Under $4,000.....	24.6	19.2	43.6	53.7
$4,000 to $6,999.....	35.5	35.5	36.3	34.0
$7,000 to $9,999.....	21.4	23.6	13.8	9.2
$10,000 and over.....	18.5	21.7	6.3	3.1

Table 16.

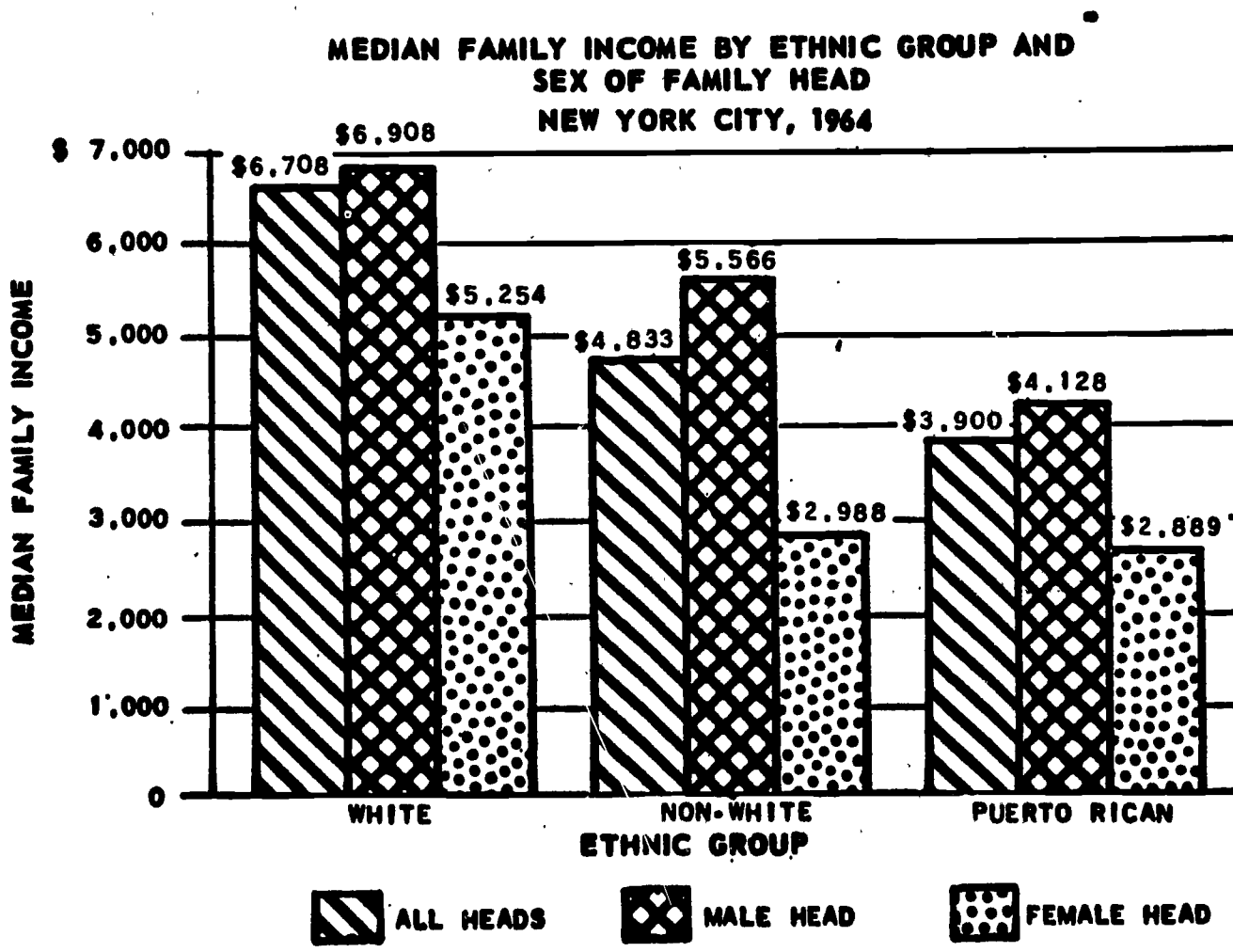
FAMILY INCOME BY ETHNIC GROUP, NEW YORK CITY, 1959

INCOME	PERCENTAGES OF FAMILIES WITH INCOME		
	Puerto Ricans	Nonwhites	Other Whites
Total	140,389	263,963	1,675,480
Under $3,000	33.8%	27.1%	11.8%
Under $4,000	53.7%	43.6%	19.2%
$4,000 and over	46.3%	56.4%	80.8%

Source: U.S. Bureau of the Census. U.S. Censuses of Population and Housing: 1960. Census Tracts. Final Report PHC (1) - 104 Part I.

In terms of information beyond 1960, the Population Health Survey of New York City provides some insights, too. In 1964, white non-Puerto Rican families in New York City were reported in the Population Health Survey as having an average income of $6,708, in contrast with $4,833 for nonwhite families and $3,900 for Puerto Rican families. In terms of income, the Puerto Rican group in New York appears to be at the bottom of the heap. (See Table 16).

Chart G.



SOURCE: NEW YORK CITY POPULATION HEALTH SURVEY, 1964

Poverty Incidence

In Table 17, a special tabulation of Census tracts in New York City was made for 1960 by the U.S. Bureau of Labor Statistics. In this special tabulation, the 400 lowest income neighborhoods were compared in terms of their socio-economic characteristics with the rest of the City. In all, the City has about 2,000 Census tracts. In the 400 lowest income neighborhoods, 21 percent of the population was Puerto Rican, but comprised only 2 percent of the population in the rest of the City. The substantial concentration of Puerto Ricans in the low income neighborhoods of New York is revealed by the fact that 85 percent of the Puerto Rican population of the City lived in these neighborhoods, compared with 78 percent of the Negro population and 17 percent of whites other than Puerto Rican.

Unemployment and Underemployment

The unemployment situation for Puerto Ricans in contrast with others is examined in Table 19, where data from the 1960 Census is presented. In New York City, Puerto Rican males had an unemployment rate of 9.7 percent in 1960 in contrast with a 6.8 percent for nonwhites and 4.4 percent for all races combined.

The data presented in Table 20, presented here for the first time, show unemployment rates for Puerto Ricans living in three New York City poverty areas in November 1966. These data were developed from the sub-employment survey conducted by the U.S. Department of Labor in the fall of 1966. Data shown include unemployment rates and rates for a relatively new concept -- "sub-employment." The sub-employment rate, which is in a sense an index of labor market maladjustment, provides an insight into the dimension of difficulty which the Puerto Rican experiences in the mainland labor market. To start with,

Table 17.

Incidence of poverty by color
New York City, 1960

(Numbers in thousands)

Color of family	Total	Families with incomes under $3,000		
		Number	Percent of all families	Distribution of low-income families
All families	2,080	317	15	100
White	1,816	246	14	78
Other than Puerto Rican	1,681	200	12	63
Puerto Rican	135	46	34	14
Nonwhite 1/	264	71	27	23

Note: Detail may not add to totals due to rounding.
1/ Includes a small number of nonwhite families of Puerto Rican origin.

Table 18.

Comparison of selected characteristics
New York City and 400 low-income neighborhoods, 1960

(population in thousands)

Characteristics	New York City		400 low-income neighborhoods 1/		Rest of City	
	Number	Percent	Number	Percent	Number	Percent
Population						
Total	7,782	100	2,384	100	5,398	100
White	6,641	85	1,512	63	5,129	95
Other than Puerto Rican	6,053	78	1,012	42	5,041	93
Puerto Rican	588	8	500	21	88	2
Nonwhite	1,141	15	872	37	269	5
Negro	1,088	14	847	36	241	4
Other than Negro	53	1	26	1	27	1

Note: Detail may not add to totals due to rounding.
1/ Represents the lowest fifth of New York City's neighborhoods in terms of median family income.

Table 19.

Unemployment Rates for Puerto Ricans Compared with Total Labor Force and Nonwhites, for the United States and New York City, 1960

Age group	Total, all races		Puerto Ricans		Nonwhite	
	Male	Female	Male	Female	Male	Female
	Total United States					
Total, 14 and over	5.0	5.4	9.5	11.0	8.8	8.5
14 to 19 years	11.0	9.6	19.2	16.8	15.6	19.1
20 to 24 years	8.0	8.2	10.1	13.2	12.3	13.2
25 to 34 years	4.3	5.8	8.4	10.7	8.4	9.0
35 to 44 years	3.8	4.9	8.6	9.3	7.5	7.1
45 to 64 years	4.5	4.2	8.9	9.5	7.5	5.9
65 years and over	5.5	4.4	8.8	11.8	7.8	5.6
	New York City[1]					
Total, 14 and over	4.4	5.1	9.7	10.6	6.8	6.5
14 to 19 years	11.2	7.1	19.7	15.0	19.0	14.7
20 to 24 years	7.0	5.3	10.7	12.4	9.7	9.2
25 to 34 years	3.9	5.1	8.5	9.5	6.6	6.7
35 to 44 years	3.1	4.8	8.5	9.3	5.3	5.8
45 to 64 years	3.8	4.8	8.8	9.5	5.6	4.7
65 years and over	7.7	6.6	7.7	12.3	7.9	4.6

[1] Includes New York City, Nassau, Suffolk, Rockland, and Westchester Counties.

SOURCE: U.S. Department of Commerce.

the Puerto Rican living in these slum areas of New York averaged an unemployment rate of 9.8 percent in November 1966. In Harlem it was 11.8 percent, in East Harlem 9.7 percent, and Bedford-Stuyvesant, 7.8 percent.

But increasingly it is clear that the unemployment rate which counts those unemployed in the sense that they are actively looking for work and unable to find it, gives only a relatively superficial index of the degree of labor market maladjustment that exists in a community. The sub-employment rate also includes those working only part-time when they are trying to get full-time work; those heads of households under 65 years of age who earn less than $60 per week working full-time and those individuals under 65 who are not heads of households and earn less than $56 per week in a full-time job; half the

Table 20.

Unemployment and subemployment rates in three New York City poverty areas 1/
November 1966

	Unemployment rates		Subemployment rates	
	Total	Puerto Rican	Total	Puerto Rican
Total	7.5	9.8	29.1	33.3
Harlem	8.1	11.8	28.6	28.1
East Harlem.....	9.0	9.7	33.1	36.9
Bedford-Stuyvesant..	6.2	7.8	27.6	29.7

1/ Harlem, East Harlem, and Bedford-Stuyvesant

number of "nonparticipants" in the male 20-64 age group; and an estimate of the male "undercount" group which is of very real concern in ghetto areas.

When these four components are added to the traditional unemployment rate, the dimensions of the problem begin to take shape. We find that the sub-employment rate for Puerto Ricans in slum areas in New York is 33.1 percent in contrast with the 10 percent unemployment rate. Indeed, in the area of major Puerto Rican concentration -- East Harlem -- it rises to 37 percent. In other words, for every officially counted unemployed Puerto Rican worker, there are at least two others who have a very real problem in terms of labor force maladjustment.

Chart H.

Skill Gaps

Some insights to the barriers are provided by the contrast between job vacancies known in the New York area in April 1966, and the characteristics of all unemployed in the three slum areas shown in Table 21. Approximately 44 percent of the job vacancies were for white-collar workers while fewer than 14 percent of the unemployed had previous experience in this occupational category. On the other hand, more than half of all the unemployed workers had previously been employed as semi-skilled workers, unskilled laborers or service workers. Even among persons living in poverty areas, it seems clear from the meager data available from the slum area survey of 1966, that Puerto Ricans find themselves pretty close to the bottom. Of the 34,000 Puerto Rican workers living in the three poverty areas, 57 percent were blue-collar

workers in contrast with 44 percent for the total employed living in these slum areas.

Table 21.

COMPARISON OF UNEMPLOYMENT RATES IN POVERTY AREAS OF CITIES WITH CITY-WIDE JOB VACANCIES NEW YORK CITY

Occupations	Job Vacancies in New York (April 1966)	The Unemployed in the Three Areas (November 1966)
White Collar	43.7%	13.6%
Craftsmen	12.6	2.8
Operatives	24.1	14.7
Laborers	7.6	21.5
Service	11.9	16.6
Farm	0.1	0
Never worked	-	13.5
Not reported	-	17.3
TOTAL	100.0	100.0

Table 22.

Occupational distribution of employed residents by ethnic group
New York City, 1950 and 1960, and three poverty areas 1/, November 1966

Occupational Group	3 poverty areas 1/ November 1966		White 2/		Nonwhite 2/		Puerto Rican	
	Total	Puerto Rican	1960	1950	1960	1950	1960	1950
Total employed								
Number (000's)	190	34	2,643	2,871	461	320	203	85
Percent	100	100	100	100	100	100	100	100
White collar	28	21	58	54	30	20	19	16
Blue collar	44	57	32	36	40	42	65	64
Service	29	22	10	10	30	38	16	20

1/ Harlem, East Harlem, and Bedford-Stuyvesant
2/ Other than Puerto Rican

Data Deficiencies

While the data presented in the statistical tables and reviewed in this paper reveal some of the pertinent characteristics of socio-economic status, they also point to some of the technical difficulties in data-gathering that should be noted here.

No current data on the Puerto Rican population or Puerto Rican employment are available from the regular current population household sample which yields employment and unemployment data by age, sex, marital status and other demographic characteristics for the United States as a whole. During the past year, as a result of an expansion of data output made possible by the expansion of the national sample to 52,000 households, and to meet local data needs, the Bureau of Labor Statistics has begun to publish data on a cumulative annual basis for the largest 20 metropolitan areas in the United States and their central cities. The major contribution of these data is to provide current unemployment levels and rates, in this case on an annual average basis for the year 1967. While data cover the total population, and provide breakouts separately for white and nonwhite, no data are available on the Puerto Rican population of New York as the necessary identifying information is not collected as part of the current population survey.

The basis for the data on the Puerto Rican population are the questions in 1960 on place of birth. The household questionnaire asks specifically "Where was this person born?" Where the person was born outside the United States the name of the country, U.S. possession, and so forth was to be written in. Another question in this series asked: "What country was his father born in?" And the question following requested the same information for the mother. Data on persons of Puerto Rican parentage were first available

for 1950 and refer to persons born in the United States where one or both parents were born in Puerto Rico.

In sum, the data on persons of Puerto Rican origin therefore comprise migrants from Puerto Rico and their children, that is one or both parents were born in Puerto Rico. This points up one of the real problems in terms of tracing the population growth of this group over time. No Census data are available and there is at the moment no way to get at the third and later generation of Puerto Rican origin. In other words the third generation, that is, the grandchildren of persons who were born in Puerto Rico will not be identifiable as being of Puerto Rican origin.

The relationship between Puerto Rican origin and color is another item that represents something of a data issue primarily in terms of cross-classification. For the basic Census distinction based on color, the term "color" refers basically to the classification of the population into two groups, white and nonwhite. The group designated as "nonwhite" includes Negroes, American Indians, Japanese, Chinese, Filipinos, Koreans, and so on. Persons of Mexican birth and ancestry and all other persons who are not definitely of Indian or other nonwhite race are classified as white. In 1960, about 95 percent of all persons of Puerto Rican origin were classified as white. It may be noted that for 1940 and 1950 the two Censuses for which we can make this comparison, the proportion of persons classified as white was somewhat higher among persons of Puerto Rican birth in the United States than in Puerto Rico, and this percentage increased in the United States between 1940 and 1950. And again the proportion classified as white continued to increase during the decade from 1950 to 1960. It is considered likely, according to the Census, that "the commonly held conception of race among

Puerto Ricans in Puerto Rico, among Puerto Ricans in the United States, and among other persons in the United States is somewhat different, and there was a considerable variation in the classification. Thus, differences between successive censuses in the proportion of nonwhite persons among Puerto Ricans may reflect changes in attitudes about racial classification as well as selective migration and differential fertility."

A major barrier to current evaluation of the situation is simply the almost complete lack of current time series information on labor force status, employment, unemployment, earnings, and other significant labor force characteristics which would permit a continuing assessment of changes in status and, for that matter, measurement of the degree to which manpower policies and programs are making significant impact on the Puerto Rican population.

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DeSpain, Don; Webb, Grover
Manpower in Oklahoma: Northwest Region.

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*MANPOWER NEEDS; *EMPLOYMENT PROJECTIONS; *OCCUPATIONS; *LABOR FORCE; *TABLES (DATA); INDUSTRY; SURVEYS; WAGES; ECONOMIC FACTORS

The purpose of this study was to determine current and future manpower needs for Oklahoma's northwest region by industry division, by major occupational group, and by selective occupations. Data were obtained from information provided by respondents in a sample of 154 firms, with usable information from 111 establishments (72.1 percent). By 1972, non-farm wage and salary employment in northwest Oklahoma is forecast to read 16,740 an advance of 15.2 percent. According to employer reports, manufacturing will lead all other industry divisions in proportionate growth; factory worker gains of 69.6 percent are anticipated by 1972. The most new jobs are forecast to occur in the sales category with the largest proportionate growth expected in the processing group. The survey data are presented in tabular form. A related document is VT 005 572 (ARM, Summer 1969). (CH)

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Manpower in Oklahoma

NORTH-WEST REGION

APRIL 1969

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PREFACE

The most important resource of an area is its people. Therefore, information and data concerning composition of that part of the population in the labor force is of vital importance. This study was conducted by the Oklahoma Employment Security Commission under a grant from the State Department of Vocational-Technical Education. The project was designed to determine current and future manpower needs by industry division, major occupational group and selected occupations.

The State Department of Vocational-Technical Education was particularly concerned with the compilation of such information for use in curriculum development for new area vocational schools as prescribed under the Vocational Education Act of 1963. Prospective employers, existing business establishments and educational institutions, as well as numerous agencies and other organizations, are also interested in the skills and overall characteristics of the labor force. This is especially true in Oklahoma, a state which has experienced accelerated growth in the past few years and where manifold opportunities for further development exist.

Through an effort to provide information to local leaders, data were compiled for the metropolitan areas of Oklahoma City and Tulsa, as well as nine other geographic regions. This detailed release, pertaining to the Northwest Oklahoma Region, is the eleventh of a series being prepared from the survey.

We are indebted to employers for their consideration and cooperation in supplying the necessary information. In addition, various private and governmental agencies and organizations, such as chambers of commerce, provided assistance. Finally, we wish to express our gratitude to Dr. Francis Tuttle, Director of the State Department of Vocational-Technical Education and to members of his staff for their assistance and suggestions throughout the course of the study.

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HIGHLIGHTS

Nonfarm wage and salary employment in Northwest Oklahoma is forecast to reach 15,490 in June 1969, an 8.3 percent increase over the 14,300 reported in June 1967. Moreover, by 1972, projected growth would bring the number of such jobs to 16,470, an advance of 15.2 percent. These data were obtained from information provided by respondents in a sample of 154 firms. Usable information was received from 111 establishments, or 72.1 percent. The projections are thought to be conservative as they fail to provide for requirements of the various new firms that may be established in the region during the forecast period, but do reflect scheduled cutbacks in some existing plants. Information for the survey was also gathered from firms which, by mid-1967, had announced plans to locate in the region but had not yet begun operations.

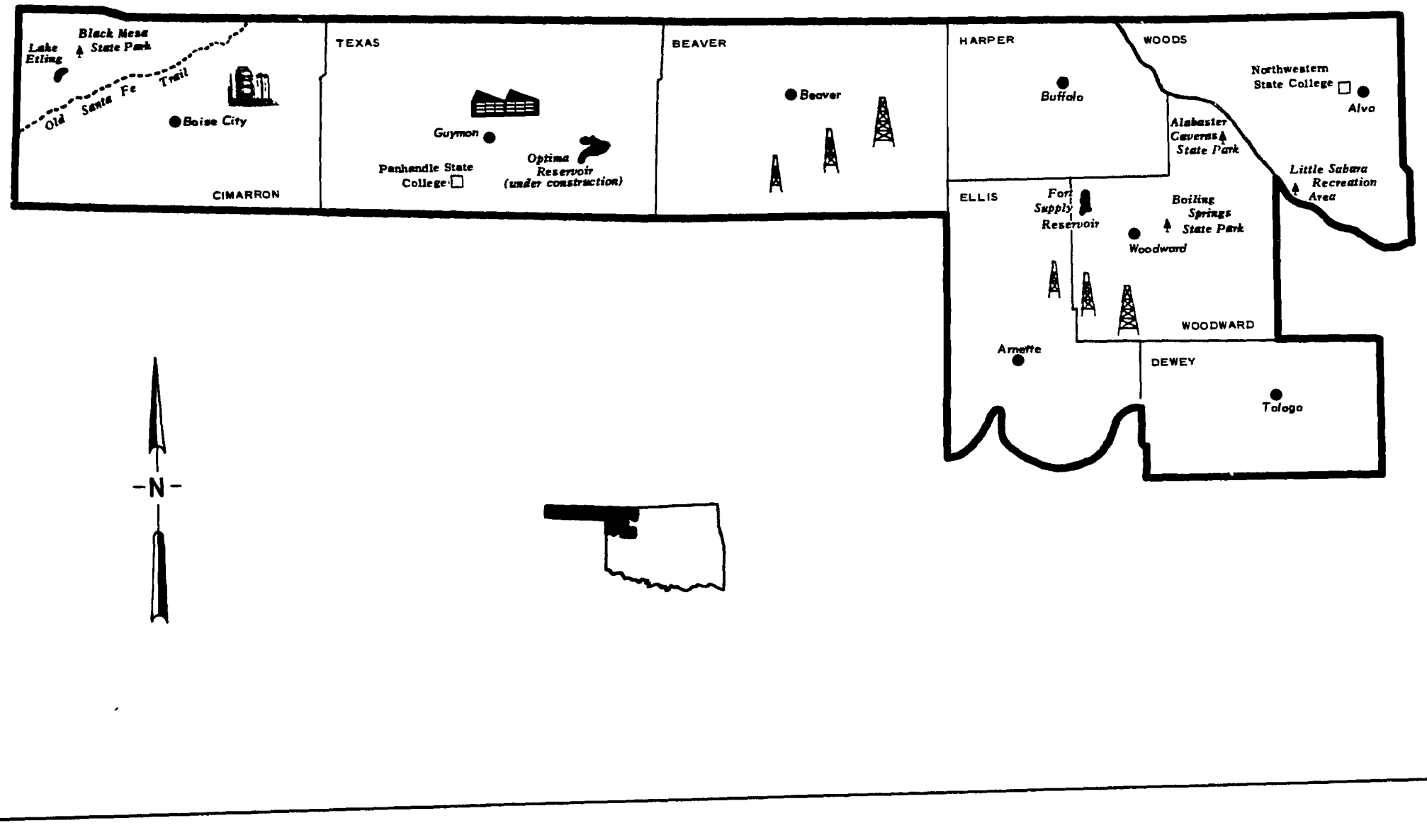
According to employer reports, manufacturing will lead all other industry divisions in proportionate growth in both the two- and five-year periods. Specifically, factory worker gains of 48.2 and 69.6 percent are anticipated by 1969 and 1972, respectively. The expected advances would provide the region with 270 new manufacturing jobs by 1969 and 390 additional positions by 1972. Trade establishments are forecast to record the largest absolute growth with increases of 12.7 and 20.0 percent, resulting in 470 new jobs by June 1969 and 740 positions by 1972. Notable worker increases are also forecast in construction. By 1969, a total of 80 new job opportunities are expected in construction, while by 1972 some 190 positions would result from a 23.2 percent growth.

When applied to occupational groups, the most new jobs are forecast to occur in the sales category. Reports call for additions of 300 and 475 such jobholders by 1969 and 1972, respectively. Largest proportionate growth during the forecast period is expected in the processing group. Gains of 27.1 percent by 1969 and 40.6 percent by 1972 would provide 204 and 306 new jobs in the two- and five-year periods, respectively. Marked increases are also anticipated in the bench work and machine trades groups. However, due to their small employment base, absolute gains in these classifications would be relatively moderate.

Most surveyed regional occupations should present needs for additional workers in the two forecast periods. Pronounced demand is expected mainly in jobs where many persons are presently employed. Examples are teacher, general office clerk, sales clerk, and occupations associated with the medical field. For complete information, Table 6 in the Appendix lists the net additional needs of all occupations surveyed in Northwest Oklahoma.

FIGURE 1

THE NORTHWEST REGION



ECONOMIC CHARACTERISTICS OF THE NORTHWEST REGION

The Northwest Region of Oklahoma, for the purpose of this study, consists of 11,417 square miles including Beaver, Cimarron, Dewey, Ellis, Harper, Texas, Woods and Woodward Counties. These particular counties were designated as this region due to geographic and economic similarities. This region includes the Oklahoma Panhandle, consisting of Beaver, Cimarron and Texas Counties.

The Northwest Region is located within the Great Plains, while the Panhandle is often referred to as the High Plains. It is a vast, rolling land broken only by gullies and ravines. Much of the area is covered with native grasses and various plants which thrive in semi-arid climates. Tree growth is mainly restricted to streams and rivers crossing the region. The elevation of the area ranges from 1,351 feet at Alva, increasing westward to the highest point in Oklahoma, the Black Mesa, nearly 5,000 feet above sea level.

Precipitation in the Northwest Region varies from an annual average of about 16 inches in western Cimarron County, upward to more than 24 inches in Woods, Woodward and Dewey Counties. Most rainfall in the area occurs from April to October. Summers are usually hot and winters generally mild, although sleet and snow are not rare in the region.

The Northwest Region is characterized by large ranches and farms. Fine beef cattle feed on much of the native grasses, while wheat and many other grains are grown on thousands of acres of land, many of which are irrigated. Some of the natural beauty of the region has been protected in state parks and recreation areas. Examples are Boiling Springs and Alabaster State Parks in Woodward County and Black Mesa State Park in Cimarron County. In addition to these is the Little Sahara Recreation Area in Woods County. Lakes in the region include Fort Supply Reservoir in Woodward County, Lake Etling in Cimarron County and Canton Lake, partially located in Dewey County. Under construction at this time is Optima Reservoir in Texas County.

Probably more than 10,000 years ago, a prehistoric people lived or hunted in the Cimarron Valley of the Panhandle. They apparently hunted, thus followed, animals that were forced to move by a changing climate. Also, they harvested crops from wild grasses and seeds. A whole commentary on the life of these ancient people has been found inscribed in a cliff face of the Black Mesa. Although this group seems to be the first human inhabitants of the area, thousands of fossilized dinosaur bones depicting life some 150 million years ago have been found in the same area of Cimarron County.

Near the middle of the 16th century, it is believed that Coronado, with Spanish horsemen and footmen, crossed the Panhandle. Other conquistadors followed Coronado to explore every part of the Southern Plains. By the middle of the 18th century, French traders near the Great Lakes had learned of Spanish enterprises in New Mexico and were crossing the Panhandle to barter with the Spaniards and nomadic Indians. This group of traders pioneered the Santa Fe Trail which crosses diagonally through Cimarron County.

The Panhandle was controlled by Spain until 1821, when it became a part of Mexico, upon her independence. In 1826, the Mexican government conveyed title to all of present Cimarron County and part of Texas County to a North Carolinian, Stephen J. Wilson. This was the first non-Indian conveyance of land within the present boundaries of Oklahoma. No settlements were made at that time and few people crossed the Panhandle, except those traveling the Santa Fe Trail which, after 1832, was the main artery of travel from east to west.

When Texas won her independence in 1836, this area, "No-Man's Land", came under its control. The Panhandle remained the property of Texas for fourteen years until, in 1850, the area was relinquished to the United States. Primarily, the only occupants were the Comanche and Kiowa Indians who had drifted north to hunt and trade with the Comancheros. However, with the end of the Civil War, these tribes were placed on reservations in the southern part of present Oklahoma.

The existence of the Panhandle, or No-Man's Land, was the result of economic and political events that transpired in the development of the United States. When the Territory of Kansas was created in 1854, its southern boundary was set at the 37th parallel. Since Texas was a slave state, it relinquished territory north of 36° 30', because such land would be in the area designated as free by the Missouri Compromise. The Compromise of 1850 set the western boundary at 103° to settle a land dispute between Texas and the New Mexico Territory. Colorado refused to accept this strip of land, and its southern boundary was also set at the 37th parallel. The Cherokee Strip was at the eastern end. The result was a narrow strip of land, thirty-six miles wide and one hundred sixty-eight miles in length that was unassigned to any state or territory.

Settlers were reluctant to locate in No-Man's Land since no state or local government existed, and because of its isolated position, little attention was paid by the federal government. It soon became a rendezvous for many outlaws seeking immunity from law enforcement officers. In the 1880's, farmers, many leaving heavily mortgaged land in western Kansas, moved to the Panhandle to become "squatters". These settlers soon realized the need for law and order. Thus, a provisional territorial government was formed in 1887 known as the Territory of Cimarron, with the capital at Beaver City (presently known as Beaver). The territorial government was never recognized by the United States Congress and in 1890, it attached the land to the Oklahoma Territory as Beaver County. Not until statehood was the Panhandle divided into the three counties of Beaver, Cimarron and Texas.

The remaining five counties of the Northwest Region have also had an interesting history in the development of Oklahoma. Earliest exposure of these counties to European influence was possibly by Coronado, or more probably, by Juan de Oñate in the early 1600's. Other early explorers may have visited the area but few are known. These counties were in the land claimed at times by France and Spain. The five counties were included in the Louisiana Purchase with present Ellis and Harper Counties forming part of the western boundary of this purchase at the 100th parallel.

Harper, Woods and Woodward Counties and the northern half of Ellis County were included in the Cherokee Outlet in December 1835. This was done by the New Echota Treaty, signed at that time to provide for removal of all remaining eastern Cherokees to lands west of Arkansas and Missouri. The Outlet was assurance to the Cherokee Nation of a perpetual opening to the west.

During the years that followed the creation of the Outlet, several tribes were assigned or sold land for reservations in this area. The Cheyenne and Arapaho were furnished a home bounded by the Cimarron and Arkansas Rivers. These tribesmen, however, settled south of this reservation on the North Canadian River. In 1869, an executive order established a new Cheyenne-Arapaho reservation south of the Cherokee Outlet. Dewey County and the southern part of Ellis County were included in this five-million-acre reservation.

Before this new reservation was created, however, the Cheyenne and Arapaho, along with the Kiowa and Comanche, left their lands during the spring of 1868 and resumed plundering ways. The Indian warriors claimed that failure by the United States to deliver promised gifts and rations excused the tribes from the treaties with the federal government. Small war parties raided areas of Kansas, Nebraska, Colorado and Texas. Troops found it particularly difficult to locate the small, fast-moving bands of Indians. The War Department finally decided to establish a military post where the raiding Indians could be watched and protection afforded to surrounding areas.

From this decision came Fort Supply (originally Camp Supply) at a point now located in northwest Woodward County. Fort Supply was to be the base of operations in a new tactic to be used against the Indians -- a winter campaign. The tribes participated in raiding only in warmer months. During the winter, they would concentrate in large villages, expecting no trouble from U.S. military forces who usually left them alone during colder weather. It was from Fort Supply that General George Custer led his troops to the famous Battle of the Washita in November 1868, killing over 100 Cheyenne warriors and many women and children.

The most extensive ranching enterprise in Oklahoma during this period was the Cherokee Outlet. In the late 1870's, cattlemen began occupying portions of the Outlet not used by the government for re-locating tribes. Grazing fees were paid to Cherokee officials, up to 45 cents per head of stock. To gain exclusive use of the Outlet and to protect their herds from rustlers, the cattlemen met in 1883 and formed the Cherokee Strip Livestock Association, consisting of over 100 ranchers owning over 300,000 head of cattle. A lease was negotiated with the Cherokee Nation for exclusive use of the Outlet, rules and roundup schedules were adopted and brand inspectors to police the range were hired. This grassland, between the Arkansas River and No-Man's Land, soon became one of the most famous ranges in the West.

As the Indian lands were used more and more by the white man, increased pressures were brought to open the reservations for public settlement. Finally, the Cheyenne-Arapaho surplus lands were opened by a run on April 19, 1892. This brought the first settlers into present Dewey and southern Ellis Counties. Although the eastern half of the area filled promptly, much of the western

part was used as grazing land by cattlemen for several years. Harper, Woods and Woodward Counties, along with the northern part of Ellis County, were released to inhabitants on September 16, 1896, when the Cherokee Outlet was opened. That famous run found some 100,000 persons on the starting line for the opening. Again, however, much of the land in the western half was unoccupied for as long as several years after the run.

By 1900, the Northwest Region had not yet been assigned the county boundaries known today. As was noted earlier, the entire Panhandle was Beaver County with Beaver City as the county seat. Woodward County bounded the eastern edge of the Panhandle and was approximately a 65-mile square, including all of present Harper and Woodward Counties and portions of Ellis, Major and Woods Counties. Woods County was the same length north-south as Woodward County, which it bounded on the east, and extended to the western lines of Grant and Garfield Counties. This included part of present Woods and Major Counties and all of Alfalfa County. The area then designated as Day County extended nearly 30 miles south of Woodward County and about the same distance east of the Texas line where it touched Dewey County, which remains the same today as in 1906. It was not until statehood in 1907 that the present eight counties of the Northwest Region were created.

According to a special statehood census, the Northwest Region had 101,247 inhabitants in 1907. The largest county was Texas, with 16,448 persons, while Cimarron was the smallest with but 5,927. From that 1907 census to the 1960 census, the population of the region has continually declined. In fact, not one of the eight counties had as large a population in 1960 as it did at statehood.

TABLE I

REGIONAL POPULATION BY COUNTY

COUNTY	POPULATION July 1967[1/]	POPULATION April 1960[2/]	PERCENT CHANGE April 1960 to July 1967	PERCENT DISTRIBUTION July 1967
Total	**70,100**	**68,921**	**1.7**	**100.0**
Beaver	6,800	6,965	– 2.4	9.7
Cimarron	4,300	4,496	– 4.4	6.1
Dewey	6,000	6,051	– 0.8	8.6
Ellis	5,200	5,457	– 4.7	7.4
Harper	5,300	5,956	–11.0	7.6
Texas	15,100	14,162	6.6	21.5
Woods	12,200	11,932	2.2	17.4
Woodward	15,200	13,902	9.3	21.7

1/ *Oklahoma Population Estimates, Oklahoma Employment Security Commission, November 1968.*
2/ *U. S. Census of Population 1960, Oklahoma PC (1) - 38A.*

In the years following statehood, there was a conglomerate of large ranches and smaller farms in the Northwest Region. During World War I, demand for wheat caused the development of great wheat farms in the Panhandle. For several years, Texas County was the banner wheat-producing county of the nation. Prosperity was not to be long enjoyed, however. The Great Depression, coupled with continued drought during the early part of the 1930's, caused many of the area inhabitants to leave their homes and seek jobs elsewhere. By 1940, the census revealed that the eight-county region had lost nearly 21,000 of the population reported at statehood. The only region county to show a gain was Woodward, an 11.5 percent increase in 33 years.

As time continued, population in the Northwest Region maintained its decreasing trend. During the Second World War, numerous area inhabitants left to take jobs in war plants while others joined the Armed Forces. After the war, many of these did not return to their native area. This loss was augmented by a continual and even greater rural-to-urban shift. By 1960, the Census reported some 68,921 persons in the Northwest Region. This represented a decrease of 32,326, or nearly 32 percent from statehood.

The trend of decreasing population may be reversing itself, however. In the seven years to 1967, the number of inhabitants in the Northwest Region reached an estimated 70,100, an increase of 1.7 percent, or 1,179 over the 1960 level. 1/ However, only three counties, Texas, Woods and Woodward, reflected growth, while the remaining five counties again displayed losses in population.

Woodward was the largest county in the region with a July 1967 estimated population of 15,200. Woodward, the county seat, was also the largest city in the region, with 7,747 inhabitants according to the 1960 census.

Woodward County has become a trade center of the Northwest Region, with nearly one-third of all trade employment in the eight-county area centered here. Also important to the county is government employment, enlarged by the location of the Western State Hospital at Fort Supply. Woodward County also has a sizable share of the region's mining, manufacturing and construction employment.

Texas County, with an estimated 15,100 residents, ranked a close second in population in the Northwest Region. Guymon, the county seat, was the third largest city in the region with 5,768 inhabitants reported by the 1960 census. Adjacent to Guymon are large feed lots where cattle are fattened for slaughtering. New industry to the Guymon area includes meat packing and dog food processing, making Texas County one of the important manufacturing centers in the region. Already vital to the county economy was the manufacture of farm machinery. Goodwell, located southwest of Guymon, is the home of Oklahoma Panhandle State College of Agriculture and Applied Sciences. Partly because

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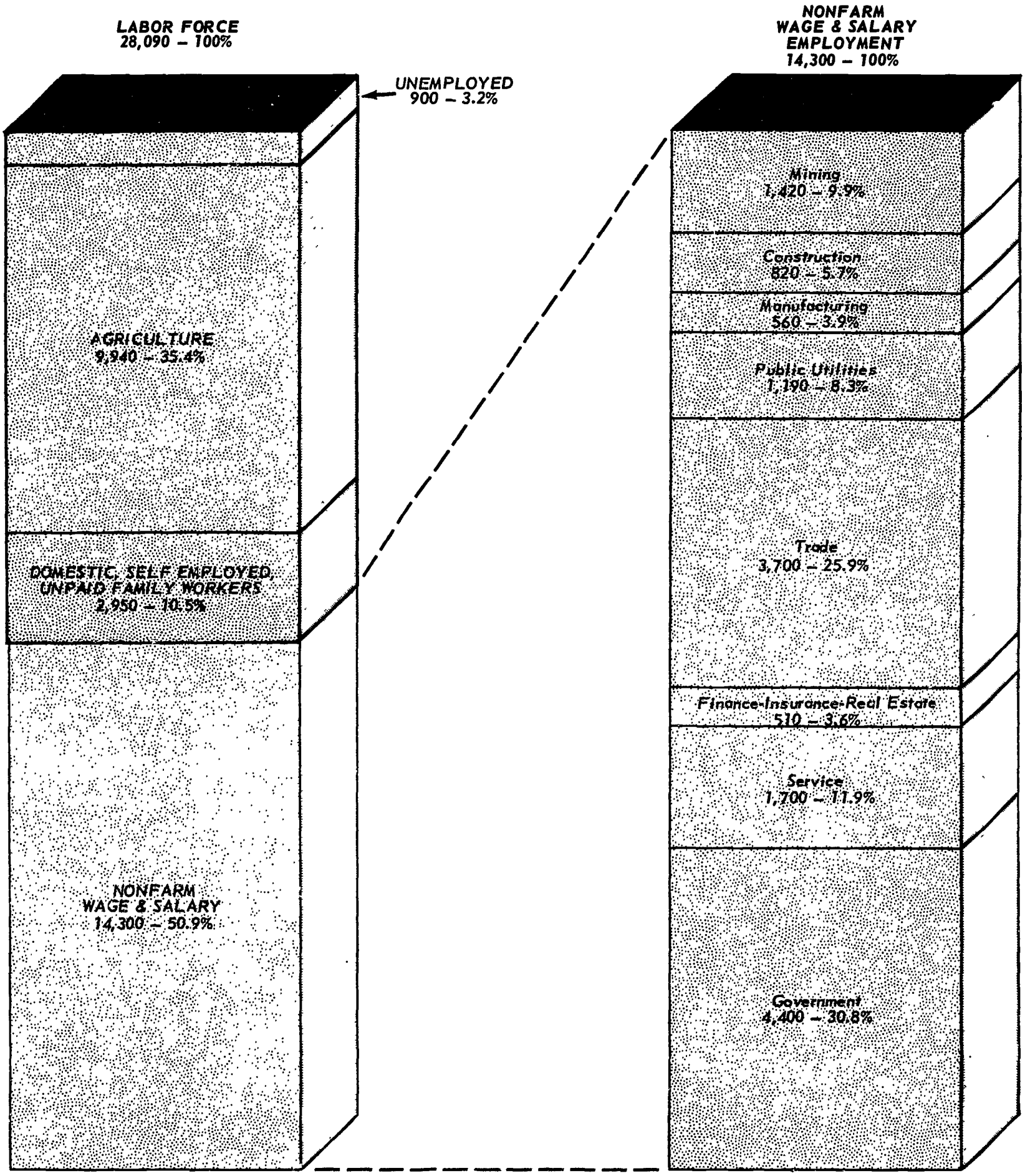
1/ Oklahoma Population Estimates, Oklahoma Employment Security Commission, November 1968.

FIGURE II

LABOR FORCE AND EMPLOYMENT BY INDUSTRY DIVISION
NORTHWEST REGION

JUNE 1967



of the location of this college, Texas County had the largest number of government workers in the Northwest Region during June 1967. Several public utilities firms also based operations in Texas County to serve much of this region, causing employment in this sector to be fairly large.

Woods County was the third largest county in the Northwest Region with an estimated July 1967 population of 12,200. The county seat, Alva, had a 1960 count of 6,258 residents to rank second in the region. Employment in the county was distributed fairly proportionately among the various industry divisions, except that government accounted for a sizable share. This was primarily due to the location of Northwestern State College at Alva.

The three counties of Woodward, Texas and Woods accounted for 60 percent of the region's population in July 1967 and nearly two-thirds of total nonfarm wage and salary employment. The remaining five counties are more agriculturally oriented. In Beaver, Cimarron, Dewey, Ellis and Harper Counties, considerably more persons work in agriculture than in nonfarm wage and salary occupations.

During June 1967, the civilian labor force of the Northwest Region numbered 28,090. Of this figure, some 900 persons, or 3.2 percent, were unemployed. Of the 27,190 employed, an estimated 9,940 were engaged in agricultural jobs and 2,950 persons were in the domestic service-self employed-unpaid family worker group. The remaining category, nonfarm wage and salary, stood at 14,300 with considerable employment in government, trade and service. Projections made in this study include only nonfarm wage and salary workers.

Much of the Northwest Region has had to face the problem of transition from a rural, agriculture-based economy to one of more job-producing activities of nonfarm industry. Economic growth has been slow and losses in population notable. The trend may be changing, however. New industry is moving into the eight-county area. During the first seven years of this decade, a population increase was shown for the region. Furthermore, surveyed employers predict steady advances in employment during the next few years. Placing much emphasis on new industry and the expansion of that already present, with added importance on human resources, the Northwest Region should experience increases in both population and employment.

CURRENT EMPLOYMENT AND FORECAST FOR MAJOR INDUSTRY DIVISIONS

Nonfarm wage and salary employment in Northwest Oklahoma is expected to reach 15,490 by June 1969, an increase of 1,190, or 8.3 percent from the June 1967 figure. Furthermore, five years from the date of the survey, such employment should be 16,470, a gain of 2,170, or 15.2 percent. These figures are thought to be conservative as they fail to provide for employment of new firms that might be established in the region over the next five years. However, information was gathered from firms which, at the time of the survey, had announced plans to establish new businesses but had not initiated operations. The projections do reflect reported scheduled cutbacks.

Mining

Mining, as used here, covers the extraction of all types of minerals occurring naturally: solids, such as coal and ores; liquids, including crude petroleum; and gases, encompassing natural gases. In June 1967, the mining industry, with 1,420 jobholders, accounted for 9.9 percent of the total nonfarm wage and salary workers in Northwest Oklahoma. According to surveyed employers, mining employment should remain steady over the next two years and then increase 20 by 1972, or 1.4 percent over the 1967 estimate. Within the region, mining activities are concentrated for the most part in Beaver, Woodward, Texas, and Dewey Counties. Specifically, these areas accounted for about 85 percent of total mining employment in the Northwest Region during June 1967, the survey date.

Although manpower needs in mining are not expected to increase noticeably in the Northwest Region there should be continued exploration and recovery of minerals in coming years. However, demand for workers will be limited, due mainly to increasing use of new and improved labor-saving devices and techniques such as more efficient exploration and recovery of crude oil and natural gas.

Construction

Jobs in the construction industry stood at 820, or 5.7 percent of total nonfarm wage and salary employment during June 1967. Indications from surveyed firms point to a growth of 80 workers by 1969, reaching a total of 900 in the Northwest Region. Over the five-year span, such employment is expected to expand by 190 new jobs to reach a total of 1,010 workers.

Factors that should contribute to anticipated gains in construction employment for this region include: (1) increased government expenditures on highways and schools, (2) the development of new industrial and commercial facilities, and (3) building of additional private residences that must be provided as the population advances, new job opportunities are created, and income rises.

Manufacturing

Historically, manufacturing has played a minor role in the economy of Northwest Oklahoma. For example, in June 1967, this industry division provided only 3.9 percent of all nonfarm wage and salary jobs. With projected growth rates of 48.2 and 69.6 percent by 1969 and 1972, respectively, expansion in the factory group is forecast to be several times greater than the aggregate of the other nonfarm industry divisions. However, by 1972, manufacturing jobs in the region will equal only 5.8 percent of the nonfarm wage and salary total, considerably below the statewide projection of 17.8 percent. During the time of the survey, over 90 percent of all manufacturing jobs in the Northwest Region were in Texas, Woods or Woodward Counties.

Numerically, there should be 830 jobholders in manufacturing by 1969, a 270 gain over the 1967 level of 560 workers. In the longer period, 950 are expected to be employed in manufacturing firms, 390 above the five-year earlier estimate. Growth should be particularly pronounced in those firms engaged in food processing and the production of farm equipment and machinery.

Public Utilities

During June 1967, an estimated 1,190 workers were employed in public utilities firms. This group includes establishments engaged in transportation or services related to transportation, including pipeline facilities, telephone and telegraph communication services, radio and television broadcasting, and enterprises engaged in the supplying of electricity and gas. Texas and Woods Counties accounted for over 50 percent of the Northwest Region's employment in the division during June 1967.

Employment in the public utilities division should reach 1,250 by June 1969, an increase of 60 over the figure posted two years earlier. The 1972 total is expected to be 1,350, a gain of 160 workers from the 1967 estimate. This limited growth projection is not unusual as employment in public utilities does not usually expand in proportion to other industry divisions. There are several reasons for this employment stability. For example, technological advances, particularly within the communication field, have allowed the public utilities industry to increase its services to keep pace with an expanding population and economy while maintaining a relatively steady level of employment. Further, actual job losses have occurred in other components of public utilities such as interstate railroads.

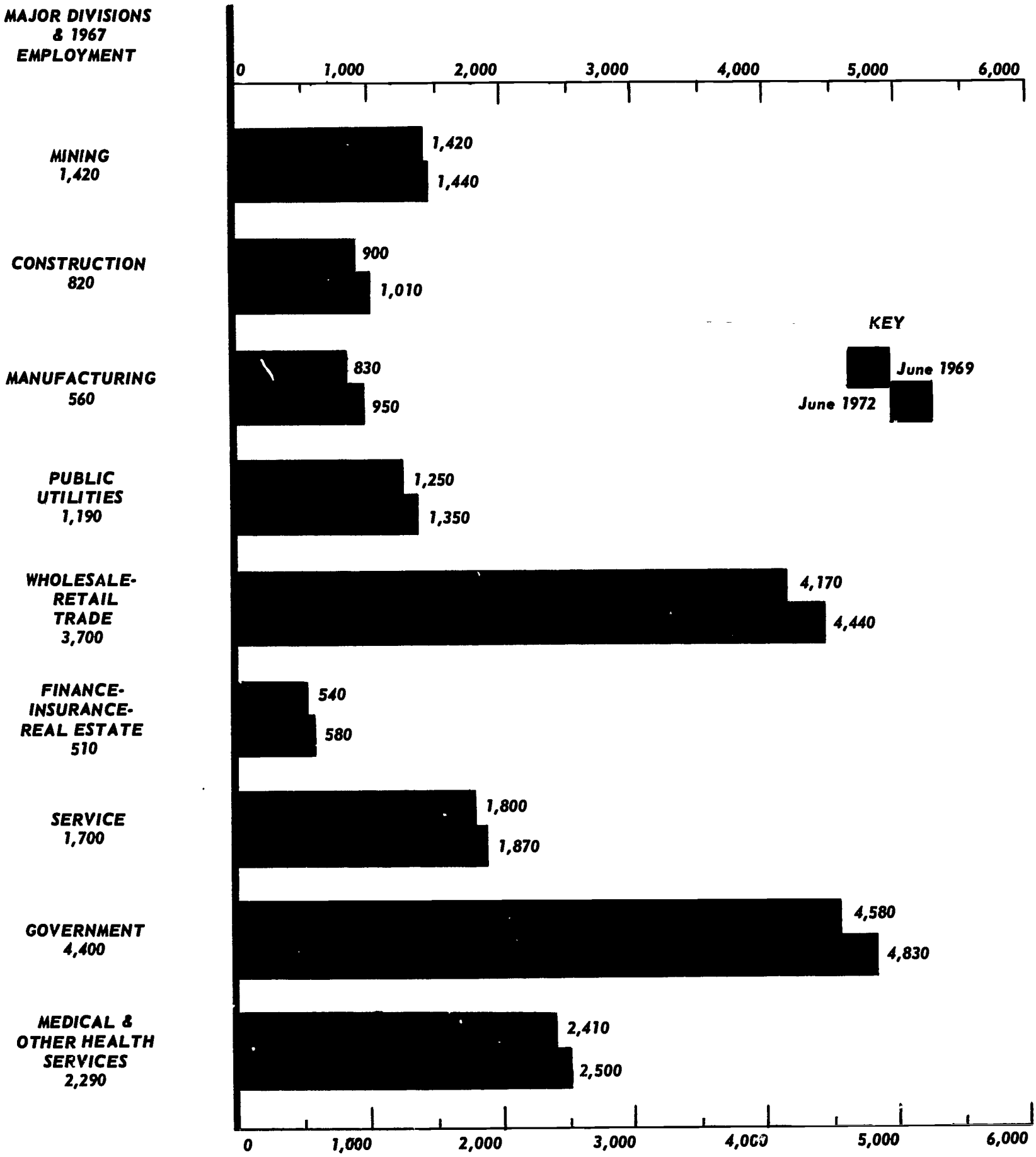
Wholesale-Retail Trade

Employment in wholesale-retail trade during June 1967 was estimated at 3,700, ranking second among Northwest Oklahoma nonfarm wage and salary divisions. Woodward, Texas and Woods Counties accounted for 70 percent of all trade positions. More specifically, Woodward County alone had slightly over 30 percent of such jobs.

Trade employment is expected to gain 470 workers by 1969, bringing the total of 4,170 jobs. By 1972, it is anticipated that 4,440 will be employed,

FIGURE III

PROJECTED EMPLOYMENT BY NONFARM WAGE AND SALARY INDUSTRY DIVISION
NORTHWEST REGION



a 740 increase over the 1967 figure. These job gains are stimulated by increases in population and consumer expenditures.

Finance-Insurance-Real Estate

During June 1967, employment in the finance-insurance-real estate division accounted for 3.6 percent of the regional nonfarm wage and salary total. The 510 employed made it the smallest of all Northwest Oklahoma industry groups. Woodward County had over 25 percent of the workers in this category; however, Texas and Woods Counties showed significant numbers in this division.

By 1969, finance-insurance-real estate employment should number 540, a gain of 30, or 5.9 percent, over the June 1967 level. In the five-year period, 580 people should be working in this category, a 13.7 percent increase from the 1967 figure.

Service

Service employment is expected to gain workers in the two- and five-year forecast periods. This can be partially attributed to more and better health care facilities, especially for the aged and handicapped, together with increased use of various other services by families and individuals as income levels and leisure time rise. In general, all this will help boost the service industry employment in coming years.

Employment in the region's service establishments totaled 1,700 during June 1967. By 1969, such employment should reach 1,800, a 5.9 percent increase. Five years from the survey date, there should be 1,870 jobholders in the service division, an advance of 10.0 percent.

Government

The number of government jobholders in Northwest Oklahoma is expected to advance from a June 1967 level of 4,400 to 4,580 by June 1969 and to 4,830 by June 1972. Texas and Woodward Counties provided over 45 percent of government employment during June 1967. Also, Woods County reported a significant number of government workers for the same period. This is traced primarily to the location of colleges and at least one large state institution.

Although growth is not expected as fast as the regional average, government employment will continue to require the largest number of workers in the Northwest Region during the two forecast periods. This need should partially stem from the additional demand in classifications such as teachers, policemen, and firemen.

Medical and Other Health Services

Employment figures discussed here for medical and other health services were included in the previously covered categories of service and government. For example, all private and religious-related medical facilities are included

TABLE II

EMPLOYMENT BY NONFARM WAGE AND SALARY INDUSTRY DIVISION

INDUSTRY DIVISION	EMPLOYMENT			ABSOLUTE CHANGE		PERCENT CHANGE	
	June 1967	June 1969	June 1972	June 1967 to - June 1969	June 1967 to - June 1972	June 1967 to - June 1969	June 1967 to - June 1972
Total Wage & Salary Employment	**14,300**	**15,490**	**16,470**	**1,190**	**2,170**	**8.3**	**15.2**
Mining	1,420	1,420	1,440	0	20	0.0	1.4
Construction	820	900	1,010	80	190	9.8	23.2
Manufacturing	560	830	950	270	390	48.2	69.6
Public Utilities	1,190	1,250	1,350	60	160	5.0	13.4
Wholesale-Retail Trade	3,700	4,170	4,440	470	740	12.7	20.0
Finance-Insurance-Real Estate	510	540	580	30	70	5.9	13.7
Service	1,700	1,800	1,870	100	170	5.9	10.0
Government	4,400	4,580	4,830	180	430	4.1	9.8
Medical & Other Health Services *	2,290	2,410	2,500	120	210	5.2	9.2

* *Data shown as Medical and other Health Services are also included in the overall categories of Service and Government.*

in the service division while public health institutions are a part of government. Although not generally considered an industry division unto itself, employment in medical and other health services represents a large enough percentage of service and government employment to warrant separate analysis.

During June 1967, there were 2,290 persons employed in the medical and other health services group in Northwest Oklahoma. This figure amounted to slightly over 16 percent of all nonfarm wage and salary jobs. By 1969, a growth rate of 5.2 percent should be recorded, bringing the total to 2,410, or 120 more than two years earlier. Over the five-year period, a gain of 210 is expected, pushing the medical and other health services job total to 2,500, some 9.2 percent above the 1967 estimate.

The expansion of employment in this component is due partially to the needs of the growing and more aged population. There will be significant demand for more highly skilled personnel, particularly in the professional-technical-managerial, clerical, and service occupational groups.

MANPOWER NEEDS FOR SELECTED OCCUPATIONS

Discussion of industry divisions and major occupational groups is limited to anticipated employment growth. Total demand, however, consists not only of expansion but also includes replacement needs due to persons who will withdraw from the labor force for various reasons, such as retirement, disability or death. In addition, many women will leave the labor market to assume the role of housewife and mother. For the individual occupations, replacements available, or supply, are subtracted from total demand in order to reveal net needs. Supply figures utilized in this study include unemployed persons, in-plant trainees as reported by surveyed employers, and school output.

TABLE III

EMPLOYMENT OF NONFARM ESTABLISHMENTS BY MAJOR OCCUPATIONAL GROUP

OCCUPATIONAL GROUP	EMPLOYMENT			ABSOLUTE CHANGE		PERCENT CHANGE	
	June 1967	June 1969	June 1972	June 1967 to – June 1969	June 1967 to – June 1972	June 1967 to – June 1969	June 1967 to – June 1972
Total Wage and Salary Employment	**14,300**	**15,490**	**16,470**	**1,190**	**2,170**	**8.3**	**15.2**
Professional-Technical-Managerial	3,588	3,737	3,922	149	334	4.2	9.3
Clerical	2,376	2,564	2,675	188	299	7.9	12.6
Sales	1,580	1,880	2,055	300	475	19.0	30.1
Service	2,327	2,411	2,475	84	148	3.6	6.4
Processing	753	957	1,059	204	306	27.1	40.6
Machine Trades	440	512	566	72	126	16.4	28.6
Bench Work	125	150	169	25	44	20.0	35.2
Structural Work	1,430	1,538	1,715	108	285	7.6	19.9
Miscellaneous	1,681	1,741	1,834	60	153	3.6	9.1

Professional-Technical-Managerial

Professional-technical-managerial occupations include those jobs concerned primarily with the theoretical and practical aspects of such fields as art, science, engineering, education, medicine, law, business relations as well as administrative, managerial and technical work. Most of these occupations require substantial educational preparation, usually at the university, junior college, technical institute or post-high school level.

During June 1967, one of every four Northwest Oklahoma nonfarm wage and salary workers was engaged in a professional, technical, or managerial job. This was the largest occupational group in the eight-county area, with 3,588 jobholders. Government was the principal employing division, with more than 50 percent of the professional-technical-managerial total.

Employment in the professional-technical-managerial ranks is forecast to expand by 4.2 percent to 3,737 by 1969. Moreover, such employment should reach

3,922 by 1972, a 9.3 percent gain over the 1967 level. Most of the new jobs are expected to occur in government facilities.

Demand for additional workers should be significant in several professional-technical-managerial occupations. In the medical field, need for added head or supervisor nurses, general duty or office nurses and licensed practical nurses is expected to be notable. Combined, these three occupations are anticipated to present opportunities for 69 more workers by 1969 and increase to 159 five years from the date of the study.

In Northwest Oklahoma educational institutions, teaching personnel should be in great demand. Unmet worker requirements for secondary school teachers may stand at 74 and 183 in the two periods, while the need for those in elementary schools is expected to number 76 and 192 in 1969 and 1972, respectively. At the college level, opportunities for an additional 24 faculty members are expected by 1969, with the figure expanding to 61 by 1972. Two other professional-technical-managerial jobs, civil engineering technician and loan officer, should also record a significant need for added workers.

SELECTED OCCUPATIONS

OCCUPATION	Employment June 1967	JUNE 1969			JUNE 1972		
		Additional Requirements	Replacements Available	Net Additional Needs	Additional Requirements	Replacements Available	Net Additional Needs
Civil Engineering Technician	93	9	0	9	20	0	20
Nurse, Head or Supervisor	46	13	0	13	24	0	24
Nurse, General Duty or Office	161	23	2	21	57	6	51
Nurse, Licensed Practical	97	35	0	35	84	0	84
Faculty Member, College or University	148	30	6	24	76	15	61
Teacher, Secondary School	643	84	10	74	208	25	183
Teacher, Elementary School	657	101	25	76	252	60	192
Loan Officer	80	8	0	8	36	0	36

Clerical

The clerical category was the second largest occupational group in the Northwest Region during June 1967, with an estimated 2,376 workers. Government accounted for the largest share of clerical jobs; however, trade also counted a sizable portion.

By June 1969, the clerical group is forecast to increase by 7.9 percent to 2,564. In the five-year span, a 12.6 percent growth rate is expected, thereby raising such employment to 2,675. Largest numbers of new jobs should occur in government and trade facilities.

Most reported clerical occupations should reflect needs for additional workers in the two forecast periods. Net demand for secretaries is anticipated to reach 15 by 1969 and advance to 54 by 1972. Unmet worker requirements for general office clerks are expected to stand at 29 and 113 in the two- and five-year spans. Need for additional jobholders should also be notable in the occupations of bank teller, bookkeeping machine operator and post office clerk.

SELECTED OCCUPATIONS

OCCUPATION	Employment June 1967	JUNE 1969			JUNE 1972		
		Additional Requirements	Replacements Available	Net Additional Needs	Additional Requirements	Replacements Available	Net Additional Needs
Secretary	201	31	16	15	73	19	54
Teller, Bank	70	18	0	18	38	0	38
Bookkeeping-Machine Operator	143	24	2	22	61	2	59
Clerk, General Office	446	72	43	29	156	43	113
Post Office Clerk	269	39	0	39	96	0	96

Sales

In June 1967, approximately one of every nine Northwest Oklahoma nonfarm wage and salary jobholders was engaged in a sales occupation. More than 90 percent of the 1,580 sales workers were found in regional wholesale or retail trade establishments.

Growth in the sales group should be quite pronounced during the next few years. Specifically, forecasts call for an advance of 19.0 percent by 1969, rising to 30.1 percent in the five-year period. These increases would provide the area with 300 and 475 new work positions in the two spans, to record the largest aggregate gain of any regional occupational group. Employment in the sales category would then reach 1,880 by June 1969 and 2,055 five years from the survey date.

The five Northwest Region sales occupations reported by the survey should all present needs for additional workers. Largest demand for all surveyed occupations in the area is expected to be for sales clerks. By 1969, an added 234 sales clerks may be needed, while the figure should reach 606 by 1972. Unmet worker requirements for commodities salesmen are expected to number 33 and 73 in the two- and five-year periods, respectively.

SELECTED OCCUPATIONS

OCCUPATION	Employment June 1967	JUNE 1969			JUNE 1972		
		Additional Requirements	Replacements Available	Net Additional Needs	Additional Requirements	Replacements Available	Net Additional Needs
Salesman and Salesperson, Commodities	341	44	11	33	84	11	73
Sales Clerk	969	266	32	234	641	35	606

Service

This group includes persons concerned primarily with the performance of personal services for people which require either contact or close association such as: jobholders concerned with the cleaning and upkeep of building interiors; workers who prepare and serve food or drink; those who provide lodging and travel accomodations to patrons; persons who operate or tend amusement facilities. Also included are workers concerned with routine attendance to hospital or nursing home patients.

Service occupations contributed 16.3 percent of the region's nonfarm wage and salary total in June 1967, with 2,327 workers. A majority were in the government, service or trade divisions, with many of the jobs in medical facilities.

The service occupational group is forecast to expand by a moderate 3.6 percent by 1969 and 6.4 percent by 1972. These two increases represented the smallest proportionate gains for all regional occupational groups and would raise such employment to 2,411 in two years and 2,475 over the five-year span.

All service occupations surveyed in the Northwest Region can be expected to record worker needs in the forecast periods. Net demand for cooks (and institutional cooks) should reach 59 by 1969 and increase to 156 by 1972. Meanwhile, unmet requirements for nurse aides or orderlies are forecast to number 89 and 211 in the two survey years. Need for additional policemen or detectives is anticipated to stand at 10 by 1969 and 19 three years later.

SELECTED OCCUPATIONS

OCCUPATION	Employment June 1967	JUNE 1969			JUNE 1972		
		Additional Requirements	Replacements Available	Net Additional Needs	Additional Requirements	Replacements Available	Net Additional Needs
Cook (and Institutional Cook)	404	66	7	59	163	7	156
Nurse Aide-Orderly	646	125	36	89	270	59	211
Policeman or Detective	60	10	0	10	19	0	19

Processing

This category includes occupations concerned with refining, mixing, compounding, chemically treating, heat treating, or similarly working materials and products. In June 1967, some 753 Northwest Oklahomans were engaged in processing occupations. Nearly 50 percent of these jobs were in trade establishments, while mining and public utilities counted lesser numbers.

Growth in the processing group is anticipated to be the fastest for all Northwest Region occupational categories. Specifically, forecasts call for increases of 27.1 and 40.6 percent by 1969 and 1972, respectively. These advances would provide 204 and 306 new jobs in the two periods and raise such employment to 957 in 1969 and 1,059 five years from the date of the survey.

Primarily, these increases should result from the location of a new food processing facility in the Guymon area; however, advances are also anticipated in many regional trade firms.

All of the processing occupations reflected by the survey were small employment-wise and in amount of net needs. However, one which could not be published, butcher, should show rapid growth in employment.

Machine Trades

During June 1967, an estimated 440 Northwest Oklahomans were engaged in machine trades occupations. Nearly 45 percent of the workers were in manufacturing plants, while trade and government facilities accounted for lesser amounts.

Employers predict notable growth of 16.4 and 28.6 percent in machine trades occupations for 1969 and 1972, respectively. As a result, such employment would reach 512 by 1969 and 566 three years later.

All of the region's machine trades jobs revealed by the survey should reflect nominal needs for additional workers in the five-year span. Largest demand is expected to be for automobile mechanic and maintenance mechanic. Specifically, unmet worker requirements for auto mechanics are expected to number 9 by 1969 and expand to 26 by 1972. Likewise, there should be opportunities for 8 additional maintenance mechanics by 1969, increasing to 26 five years from the study date.

SELECTED OCCUPATIONS

OCCUPATION	Employment June 1967	JUNE 1969			JUNE 1972		
		Additional Requirements	Replacements Available	Net Additional Needs	Additional Requirements	Replacements Available	Net Additional Needs
Mechanic, Automobile	108	14	5	9	34	8	26
Mechanic, Maintenance	109	17	9	8	35	9	26

Bench Work

This category includes jobs concerned with the use of hand tools and bench machines to carve, paint, sew, assemble and similarly work relatively small objects and materials. The bench work category was the smallest Northwest occupational group during June 1967, with 125 workers in such jobs. This accounted for less than one percent of the region's nonfarm wage and salary total. Practically all of these jobs were in manufacturing plants.

By 1969, the bench work group is expected to expand by 20.0 percent. Furthermore, a 35.2 percent advance is forecast by 1972, thus raising such employment to 169. Although these are large proportionate increases, absolute growth will be nominal because of such a small employment base.

Structural Work

Structural work occupations are concerned primarily with fabricating, erecting, installing, paving, and similarly working structures or structural parts, such as bridges, buildings and roads. In June 1967, one of every ten nonfarm wage and salary workers in the Northwest Region was engaged in structural work. Nearly 45 percent of the 1,430 structural jobholders were in construction, with government and public utilities employing significant numbers of such workers.

Forecasts call for steady increases of 7.6 and 19.9 percent in the structural group in the two periods. Employment would then reach 1,538 in 1969 and expand to 1,715 three years later.

Several structural work occupations will present significant needs during the forecast spans. The occupation of lineman may prssent opportunities for 10 additional workers by 1969 and increase to 25 by 1972. Largest need in this group should be for electricians. Specifically, unmet requirements for this occupation are expected to total 21 and 66 in the two- and five-year spans, respectively. Similarly, the need for more heavy equipment operators may reach 22 by 1969 and advance to 63 by 1972. Demand should also be significant for plumbers or pipefitters and cement masons or concrete finishers in both the two- and five-year periods.

SELECTED OCCUPATIONS

OCCUPATION	Employment June 1967	JUNE 1969			JUNE 1972		
		Additional Requirements	Replacements Available	Net Additional Needs	Additional Requirements	Replacements Available	Net Additional Needs
Lineman	124	13	3	10	32	7	25
Electrician	98	23	2	21	68	2	66
Cement Mason or Concrete Finisher	77	13	1	12	32	1	31
Heavy Equipment Operator	323	30	8	22	71	8	63
Plumber or Pipefitter	60	14	1	13	29	1	28

Miscellaneous

There were an estimated 1,681 Northwest Region nonfarm wage and salary workers engaged in miscellaneous jobs in June 1967. This group includes persons concerned primarily with transportation services; packaging and warehousing; technical production of amusement services, such as radio and motion pictures; and various other non-classifiable activities. Mining was the principal employing industry division with one-half of the region's miscellaneous worker total. Sizable numbers of persons in such occupations were also in the trade and public utilities categories.

Jobs in the miscellaneous group are expected to increase by 3.6 and 9.1 percent by 1969 and 1972, respectively. Employment in the category would then stand at 1,741 in 1969 and 1,834 three years later.

Two miscellaneous occupations, stationary engineer and power plant operator, were revealed by the study. Each should record nominal net needs for both forecast years. Some miscellaneous jobs which were not surveyed should require some additional workers. Examples of these are truck drivers, roustabouts and other jobholders engaged in oilfield activities.

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SCOPE AND METHODOLOGY

This study was initiated in cooperation with the State Department of Vocational-Technical Education in an effort to develop current and future occupational data. Such information is needed to assist in curriculum development for the State's area vocational-technical schools. Furthermore, the material should be an invaluable counseling tool for high schools, colleges and the employment service. Finally, this type of data is often useful to private industry, government agencies and civic organizations in planning for the future.

The specific occupations in the survey were selected by a joint committee of personnel from the Department of Vocational-Technical Education and the Oklahoma State Employment Service. The final list consisted of some 299 occupations with either numerical or specific industrial significance within the area. Following this, the occupations were defined according to the U.S. Department of Labor's "Dictionary of Occupational Titles", Third Edition, 1965.

Firms included in the study were drawn from a list of concerns covered by unemployment insurance laws and augmented by a register of the larger non-covered establishments such as government agencies, hospitals and other nonprofit organizations. These firms were listed by industry division in descending order by employment size. Establishments comprising the upper 50 percent of the area's employment total as shown on the register were included in the survey. Next, twenty-percent and four-percent samples were selected from the third and fourth quartiles, respectively.

During the second week of June 1967, questionnaires, job descriptions and instructions were mailed to approximately two-thirds of the surveyed firms. Over the next several weeks personal visits were made to the area's larger employers to solicit their cooperation. An analysis of the response from surveyed employers in this region is shown in Table 1.

As returned, the forms were checked for accuracy and completeness. Following this, the information for each sample size group was tabulated and inflated to represent the universe. Thereupon, an adjustment was made so the data would agree with published industry employment totals. These adjustment factors, in turn, were applied to data for each occupation in the survey. Expansion needs were then determined from these figures while replacement requirements were computed by use of factors and methodology provided by the Bureau of Employment Security, U.S. Department of Labor.

Training conducted by employers in their plants was determined by the survey questionnaire. However, the total supply of workers was derived from three sources: school output, in-plant training, and the unemployed. Graduates from the area's high schools, technical-vocational schools, business schools, and colleges, both public and private, were surveyed to obtain the supply of workers expected to enter the labor force. The unemployed count was derived from the active files of the local employment service offices in the area.

Estimates of supply are difficult to obtain on a regional basis, especially for some occupations such as those in the professional classifications. For example, students from all over Oklahoma as well as other states may be attending a college or university located within the region. Upon graduation, however, many such persons will return to their native areas or accept jobs in more industrialized locations outside of Oklahoma. Therefore, shortages may appear in some occupations in spite of extensive training programs in Oklahoma.

Finally, it should be noted that the estimates of future employment are based on the intentions of surveyed employers and do not include the requirements for new firms which may be established within the forecast period. The figures are presented in precise form to establish the size of the training need; however, they should be regarded as an indication of magnitude rather than as a refined estimate.

In an effort to conserve space, facsimiles of the questionnaires, employer letters, along with detailed descriptions of the major occupational groups and jobs surveyed have been omitted from this report. Copies of these materials may be obtained by writing the Research and Planning Division of the Oklahoma State Employment Service.

TABLE 1
RESPONSE ANALYSIS
SAMPLE SIZE, NUMBER RESPONDING AND PERCENT RETURN

Industry Division	ESTABLISHMENT DATA			EMPLOYMENT DATA		
	Number of Firms in Sample	Number Responding	Percent Return	Total Employment of Sample	Employment of Responding Firms	Percent Return
TOTAL	154	111	72.1	7,211	5,883	81.6
Mining	17	13	76.4	490	364	74.3
Construction	8	6	75.0	289	199	68.9
Manufacturing	9	7	77.8	251	224	89.2
Public Utilities	18	14	77.8	698	568	81.4
Wholesale-Retail Trade	50	32	64.0	938	672	71.6
Finance-Insurance-Real Estate	7	6	85.7	136	123	90.4
Service	14	8	57.1	505	367	72.7
Government	31	25	80.6	3,904	3,366	86.2

TABLE 2
REGIONAL LABOR FORCE DISTRIBUTION
PRELIMINARY ESTIMATES FOR JUNE 1967

County	Total Civilian Labor Force	UNEMPLOYMENT		EMPLOYMENT				Wage & Salary as Percent of Total Employment
		Number	Rate	Total	Agri-culture	Dom. Serv. Self-Emp. Unpaid Family Workers	Wage & Salary	
TOTAL	28,090	900	3.2	27,190	9,940	2,950	14,300	52.6
Beaver	3,090	110	3.6	2,980	1,390	210	1,380	46.3
Cimarron	1,720	80	4.7	1,640	720	120	800	48.8
Dewey	2,970	120	4.0	2,850	1,590	330	930	32.6
Ellis	2,420	80	3.3	2,340	1,130	280	930	39.7
Harper	2,000	80	4.0	1,920	860	80	980	51.0
Texas	5,390	240	4.5	5,150	1,250	650	3,250	63.1
Woods	4,860	80	1.6	4,780	1,640	720	2,420	50.6
Woodward	5,640	110	2.0	5,530	1,360	560	3,610	65.3

TABLE 3
DISTRIBUTION OF EMPLOYMENT BY MAJOR OCCUPATIONAL GROUP WITHIN INDUSTRY DIVISION
JUNE 1967 AND FORECAST PERIODS

Industry	Total	Prof. Tech Mgr.	Clerical	Sales	Service	Processing	Machine Trades	Bench Work	Struc. Work	Misc.
1967										
Total	14,300	3,588	2,376	1,580	2,327	753	440	125	1,430	1,681
Mining	1,420	247	57	21	11	218	27	--	2	837
Construction	820	31	40	15	5	2	29	--	636	62
Manufacturing	560	55	67	49	--	53	191	121	1	23
Public Utilities	1,190	159	253	10	21	104	55	3	292	293
Trade	3,700	376	469	1,475	594	352	75	--	61	298
Finance-Insurance-Real Estate	510	184	305	--	21	--	--	--	--	--
Service	1,700	570	328	5	770	--	--	--	24	3
Government	4,400	1,966	857	5	905	24	63	1	414	165
Medical & Other Health Services *	2,290	686	354	5	1,160	--	--	--	63	22
1969										
Total	15,490	3,737	2,564	1,880	2,411	957	512	150	1,538	1,741
Mining	1,420	249	60	21	11	220	27	--	2	830
Construction	900	31	40	15	5	2	29	--	716	62
Manufacturing	830	75	75	71	--	172	240	146	1	50
Public Utilities	1,250	162	264	16	21	104	62	3	302	316
Trade	4,170	377	548	1,747	594	439	94	--	61	310
Finance-Insurance-Real Estate	540	188	331	--	21	--	--	--	--	--
Service	1,800	603	339	5	823	--	--	--	27	3
Government	4,580	2,052	907	5	936	20	60	1	429	170
Medical & Other Health Services *	2,410	727	366	5	1,224	--	--	--	66	22
1972										
Total	16,470	3,922	2,675	2,055	2,475	1,059	566	169	1,715	1,834
Mining	1,440	251	60	21	11	227	27	--	2	841
Construction	1,010	31	42	15	5	2	29	--	821	65
Manufacturing	950	80	93	75	--	189	287	165	1	60
Public Utilities	1,350	162	266	16	21	104	69	3	351	358
Trade	4,440	378	548	1,918	594	517	94	--	61	330
Finance-Insurance-Real Estate	580	208	351	--	21	--	--	--	--	--
Service	1,870	634	354	5	847	--	--	--	27	3
Government	4,830	2,178	961	5	976	20	60	1	452	177
Medical & Other Health Services *	2,500	765	384	5	1,258	--	--	--	66	22

* Data shown as Medical and Other Health Services are also included in the overall categories of Service and Government.

TABLE 4
EMPLOYMENT IN SURVEYED OCCUPATIONS

Occupation	June 1967 Employment Total	Female	Projected Employment June 1969	Projected Employment June 1972	Percent Change June 67 to- June 1969	Percent Change June 67 to- June 1972
PROFESSIONAL, TECHNICAL AND MANAGERIAL						
Electrical Engineer	7	--	7	7	0.0	0.0
Instrumentation Technician	11	--	13	13	18.2	18.2
Civil Engineer	30	--	30	31	0.0	3.3
Civil Engineering Technician	93	--	96	99	3.2	6.5
Mechanical Engineer	33	--	33	33	0.0	0.0
Petroleum Engineer	59	--	62	62	5.1	5.1
Director, Nursing Service	23	20	23	23	0.0	0.0
Nurse, Head or Supervisor	46	46	53	56	15.2	21.7
Nurse, General Duty or Office	161	161	164	169	1.9	5.0
Dietitian	18	17	18	18	0.0	0.0
Medical Technologist, Chief	8	3	8	8	0.0	0.0
Medical Technologist or Biochemistry Technologist	21	14	21	24	0.0	14.3
Radiologic Technologist	9	5	9	9	0.0	0.0
Medical Laboratory Assistant	7	6	12	14	71.4	100.0
Medical Assistant	17	17	17	17	0.0	0.0
Occupational Therapy Aide	8	8	8	8	0.0	0.0
Nurse, Licensed Practical	97	93	121	152	24.7	56.7
Surgical Technician	25	25	25	27	0.0	8.0
Faculty Member, College or University	148	26	168	198	13.5	33.8
Teacher, Secondary School	643	310	669	707	4.0	10.0
Teacher, Elementary School	657	571	683	722	4.0	9.9
Medical-Record Librarian	9	9	11	14	22.2	55.6
Reporter	23	10	23	23	0.0	0.0
Lay-Out Man (Printing & Publishing)	10	--	10	10	0.0	0.0
Accountant	28	9	31	33	10.7	17.9
Cost Estimator	14	--	14	14	0.0	0.0
Buyer	30	10	30	30	0.0	0.0
Commission Man, Livestock	10	--	10	10	0.0	0.0
Purchasing Agent	10	--	10	11	0.0	10.0

TABLE 4 - Continued
EMPLOYMENT IN SURVEYED OCCUPATIONS

Occupation	June 1967 Employment Total	Female	Projected Employment June 1969	Projected Employment June 1972	Percent Change June 67 to- June 1969	Percent Change June 67 to- June 1972
PROFESSIONAL, TECHNICAL AND MANAGERIAL (Continued)						
Manager, Credit & Collection	37	3	37	37	0.0	0.0
Manager, Parts	13	--	13	13	0.0	0.0
Bank Cashier	20	2	20	20	0.0	0.0
Loan Officer	80	--	83	104	3.8	30.0
Superintendent, Hospital (Administrator)	11	--	11	11	0.0	0.0
Social Worker or Case Worker	20	12	23	26	15.0	30.0
CLERICAL						
Secretary	201	201	207	213	3.0	6.0
Stenographer	41	41	46	53	12.2	29.3
Personnel Clerk	5	4	5	5	0.0	0.0
Clerk-Typist	243	224	254	267	4.5	9.9
Statement Clerk	5	5	5	5	0.0	0.0
Bookkeeper (Hand)	156	130	160	163	2.6	4.5
Cashier	100	87	110	120	10.0	20.0
Teller, Bank	70	65	80	87	14.3	24.3
Bookkeeping-Machine Operator	143	141	150	161	4.9	12.6
Pay-Roll Clerk	13	7	15	16	15.4	23.1
Clerk, General Office	446	350	469	481	5.2	7.8
Sorting Clerk	8	8	11	13	37.5	62.5
Accounting Clerk	49	33	51	54	4.1	10.2
Parts Clerk, Automotive	33	--	33	33	0.0	0.0
Post Office Clerk	269	136	283	303	5.2	12.6
Mail Carrier	235	2	261	281	11.1	19.6
Telephone Operator (PBX Operator)	109	109	109	109	0.0	0.0
Room Clerk	40	26	40	40	0.0	0.0
Medical Record Clerk	9	9	11	14	22.2	55.6

TABLE 4 - Continued
EMPLOYMENT IN SURVEYED OCCUPATIONS

Occupation	June 1967 Employment Total	Fe-male	Projected Employment June 1969	June 1972	Percent Change June 67 to- June 1969	June 1972
SALES						
Salesman, Services	14	3	15	17	7.1	21.4
Salesman and Salesperson, Commodities	341	19	364	371	6.7	8.8
Sales Clerk	969	410	1,151	1,402	18.8	44.7
Routeman	61	--	61	61	0.0	0.0
Manager, Department (Retail)	95	--	98	105	3.2	10.5
SERVICE						
Waitress or Waiter	212	212	212	212	0.0	0.0
Cook (and Institutional Cook)	404	376	422	448	4.5	10.9
Meat Cutter or Butcher	51	9	51	51	0.0	0.0
Food Service Supervisor	22	20	22	22	0.0	0.0
Housekeeper	103	95	106	108	2.9	4.9
Nurse Aide - Orderly	646	600	695	726	7.6	12.4
Psychiatric Aide	110	77	110	110	0.0	0.0
Fireman (Fire Department)	50	--	52	55	4.0	10.0
Policeman or Detective	60	--	66	70	10.0	16.7
Sheriff or Baliff	23	--	23	23	0.0	0.0
Grounds Keeper	74	2	75	76	1.4	2.7
PROCESSING						
Baker	31	2	44	62	41.9	100.0
Stillman (Petroleum Refining)	10	--	10	10	0.0	0.0
MACHINE TRADES						
Machinist (All Around)	22	--	26	30	18.2	36.4
Machine Tool Operator, Production	14	--	16	18	14.3	28.6
Forging-Press Operator	6	--	8	11	33.3	83.3
Mechanic, Automobile	108	--	116	126	7.4	16.7

TABLE 4 - Continued
EMPLOYMENT IN SURVEYED OCCUPATIONS

Occupation	June 1967 Employment Total	June 1967 Employment Female	Projected Employment June 1969	Projected Employment June 1972	Percent Change June 67 to- June 1969	Percent Change June 67 to- June 1972
MACHINE TRADES (Continued)						
Mechanic, Diesel	49	--	49	49	0.0	0.0
Mechanic, Maintenance	109	--	119	128	9.2	17.4
Linotype Operator	17	--	17	17	0.0	0.0
Offset Press Man	29	--	29	38	0.0	31.0
STRUCTURAL						
Structural Steel Worker	35	--	35	35	0.0	0.0
Sheet Metal Worker	15	--	17	20	13.3	33.3
Automobile Body Repairman	42	--	42	42	0.0	0.0
Welder	69	--	73	78	5.8	13.0
Flame Cutter, Hand	8	--	8	8	0.0	0.0
Lineman	124	--	130	138	4.8	11.3
Electrician	98	--	115	152	17.3	55.1
Cement Mason or Concrete Finisher	77	--	85	98	10.4	27.3
Painter, Automobile	22	--	22	22	0.0	0.0
Heavy Equipment Operator	323	--	334	346	3.4	7.1
Carpenter	118	--	118	138	0.0	16.9
Bricklayer	40	--	40	50	0.0	25.0
Plumber or Pipefitter	60	--	70	80	16.7	33.3
Maintenance Man	9	--	13	13	44.4	44.4
Maintenance Man, Building	155	--	158	163	1.9	5.2
MISCELLANEOUS						
Stationary Engineer	65	--	65	65	0.0	0.0
Power Plant Operator	25	--	25	25	0.0	0.0

TABLE 5
ADDITIONAL MANPOWER REQUIREMENTS

Occupation	June 1969 Total Requirements	June 1969 Expansion	June 1969 Replacements	June 1972 Total Requirements	June 1972 Expansion	June 1972 Replacements
PROFESSIONAL, TECHNICAL AND MANAGERIAL						
Electrical Engineer	0	--	--	1	--	1
Instrumentation Technician	3	2	1	4	2	2
Civil Engineer	2	--	2	5	1	4
Civil Engineering Technician	9	3	6	20	6	14
Mechanical Engineer	2	--	2	5	--	5
Petroleum Engineer	7	3	4	12	3	9
Director, Nursing Service	2	--	2	6	--	6
Nurse, Head or Supervisor	13	7	6	24	10	14
Nurse, General Duty or Office	23	3	20	57	8	49
Dietitian	2	--	2	5	--	5
Medical Technologist, Chief	1	--	1	2	--	2
Medical Technologist or Biochemistry Technologist	2	--	2	8	3	5
Radiologic Technologist	1	--	1	3	--	3
Medical Laboratory Assistant	6	5	1	9	7	2
Medical Assistant	2	--	2	5	--	5
Occupational Therapy Aide	1	--	1	2	--	2
Nurse, Licensed Practical	35	24	11	84	55	29
Surgical Technician	3	--	3	10	2	8
Faculty Member, College or University	30	20	10	76	50	26
Teacher, Secondary School	84	26	58	208	64	144
Teacher, Elementary School	101	26	75	252	65	187
Medical-Record Librarian	3	2	1	8	5	3
Reporter	2	--	2	5	--	5
Lay-Out Man (Printing & Publishing)	1	--	1	1	--	1

TABLE 5 - Continued
ADDITIONAL MANPOWER REQUIREMENTS

Occupation	June 1969 Total Requirements	June 1969 Expansion	June 1969 Replacements	June 1972 Total Requirements	June 1972 Expansion	June 1972 Replacements
PROFESSIONAL, TECHNICAL AND MANAGERIAL (Continued)						
Accountant	5	3	2	11	5	6
Cost Estimator	1	--	1	2	--	2
Buyer	2	--	2	6	--	6
Commission Man, Livestock	1	--	1	1	--	1
Purchasing Agent	1	--	1	2	1	1
Manager, Credit and Collection	2	--	2	6	--	6
Manager, Parts	1	--	1	2	--	2
Bank Cashier	1	--	1	4	--	4
Loan Officer	8	3	5	36	24	12
Superintendent, Hospital (Administrator)	1	--	1	2	--	2
Social Worker or Case Worker	4	3	1	11	6	5
CLERICAL						
Secretary	31	6	25	73	12	61
Stenographer	10	5	5	25	12	13
Personnel Clerk	0	--	--	1	--	1
Clerk-Typist	40	11	29	95	24	71
Statement Clerk	1	--	1	2	--	2
Bookkeeper, Hand	22	4	18	51	7	44
Cashier	22	10	12	49	20	29
Teller, Bank	18	10	8	38	17	21
Pay-Roll Clerk	3	2	1	6	3	3
Clerk, General Office	72	23	49	156	35	121
Bookkeeping Machine Operator	24	7	17	61	18	43

TABLE 5 - Continued
ADDITIONAL MANPOWER REQUIREMENTS

Occupation	June 1969 Total Requirements	June 1969 Expansion	June 1969 Replacements	June 1972 Total Requirements	June 1972 Expansion	June 1972 Replacements
CLERICAL (Continued)						
Sorting Clerk	4	3	1	7	5	2
Accounting Clerk	7	2	5	17	5	12
Parts Clerk, Automotive	2	--	2	5	--	5
Post Office Clerk	39	14	25	96	34	62
Mail Carrier	40	26	14	81	46	35
Telephone Operator (PBX Operator)	13	--	13	33	--	33
Room Clerk	4	--	4	10	--	10
Medical Record Clerk	3	2	1	8	5	3
SALES						
Salesman, Services	2	1	1	6	3	3
Salesman and Salesperson, Commodities	44	23	21	84	30	54
Sales Clerk	266	182	84	641	433	208
Routeman	4	--	4	9	--	9
Manager, Department (Retail)	9	3	6	24	10	14
SERVICE						
Waitress or Waiter	26	--	26	65	--	65
Cook (and Institutional Cook)	66	18	48	163	44	119
Meat Cutter or Butcher	4	--	4	9	--	9
Food Service Supervisor	2	--	2	6	--	6
Housekeeper	15	3	12	35	5	30
Nurse Aide - Orderly	125	49	76	270	80	190

TABLE 5 - Continued
ADDITIONAL MANPOWER REQUIREMENTS

Occupation	June 1969 Total Requirements	June 1969 Expansion	June 1969 Replacements	June 1972 Total Requirements	June 1972 Expansion	June 1972 Replacements
SERVICE (Continued)						
Psychiatric Aide	11	--	11	28	--	28
Fireman (Fire Department)	5	2	3	12	5	7
Policeman or Detective	10	6	4	19	10	9
Sheriff or Baliff	1	--	1	3	--	3
Grounds Keeper	5	1	4	14	2	12
PROCESSING						
Baker	15	13	2	36	31	5
Stillman (Petroleum Refining)	1	--	1	1	--	1
MACHINE TRADES						
Machinist (All-around)	5	4	1	11	8	3
Machine Tool Operator, Production	3	2	1	6	4	2
Forging-Press Operator	2	2	--	6	5	1
Mechanic, Automobile	14	8	6	34	18	16
Mechanic, Diesel	3	--	3	7	--	7
Mechanic, Maintenance	17	10	7	35	19	16
Linotype Operator	1	--	1	3	--	3
Offset-Press Man	2	--	2	13	9	4

TABLE 5 - Continued
ADDITIONAL MANPOWER REQUIREMENTS

Occupation	June 1969			June 1972		
	Total Requirements	Expansion	Replacements	Total Requirements	Expansion	Replacements
STRUCTURAL						
Structural Steel Worker	2	--	2	5	--	5
Sheet Metal Worker	3	2	1	7	5	2
Automobile Body Repairman	3	--	3	6	--	6
Welder	8	4	4	19	9	10
Flame Cutter, Hand	0	--	--	1	--	1
Lineman	13	6	7	32	14	18
Electrician	23	17	6	68	54	14
Cement Mason or Concrete Finisher	13	8	5	32	21	11
Painter, Automobile	1	--	1	3	--	3
Heavy Equipment Operator	30	11	19	71	23	48
Carpenter	7	--	7	37	20	17
Bricklayer	2	--	2	16	10	6
Plumber or Pipefitter	14	10	4	29	20	9
Maintenance Man	5	4	1	5	4	1
Maintenance Man, Building	12	3	9	31	8	23
MISCELLANEOUS						
Stationary Engineer	4	--	4	10	--	10
Power Plant Operator	2	--	2	4	--	4

TABLE 6
NET ADDITIONAL MANPOWER REQUIREMENTS

Occupation	June 1969 Additional Requirements	June 1969 Replacements Available	June 1969 Net Additional Needs	June 1972 Additional Requirements	June 1972 Replacements Available	June 1972 Net Additional Needs
PROFESSIONAL, TECHNICAL AND MANAGERIAL						
Electrical Engineer	0	0	0	1	0	1
Instrumentation Technician	3	1	2	4	1	3
Civil Engineer	2	0	2	5	0	5
Civil Engineering Technician	9	0	9	20	0	20
Mechanical Engineer	2	0	2	5	0	5
Petroleum Engineer	7	0	7	12	0	12
Director, Nursing Service	2	0	2	6	0	6
Nurse, Head or Supervisor	13	0	13	24	0	24
Nurse, General Duty or Office	23	2	21	57	6	51
Dietitian	2	0	2	5	0	5
Medical Technologist, Chief	1	0	1	2	0	2
Medical Technologist or Biochemistry Technologist	2	1	1	8	3	5
Radiologic Technologist	1	0	1	3	0	3
Medical Laboratory Assistant	6	0	6	9	0	9
Medical Assistant	2	0	2	5	0	5
Occupational Therapy Aide	1	0	1	2	0	2
Nurse, Licensed Practical	35	0	35	84	0	84
Surgical Technician	3	0	3	10	0	10
Faculty Member, College or University	30	6	24	76	15	61
Teacher, Secondary School	84	10	74	208	25	183
Teacher, Elementary School	101	25	76	252	60	192
Medical-Record Librarian	3	0	3	8	0	8
Reporter	2	0	2	5	0	5

TABLE 6 - Continued
NET ADDITIONAL MANPOWER REQUIREMENTS

Occupation	June 1969 Additional Requirements	June 1969 Replacements Available	June 1969 Net Additional Needs	June 1972 Additional Requirements	June 1972 Replacements Available	June 1972 Net Additional Needs
PROFESSIONAL, TECHNICAL AND MANAGERIAL (Continued)						
Lay-Out Man (Printing & Publishing)	1	0	1	1	0	1
Accountant	5	0	5	11	0	11
Cost Estimator	1	0	1	2	0	2
Buyer	2	0	2	6	0	6
Commission Man, Livestock	1	0	1	1	0	1
Purchasing Agent	1	1	0	2	1	1
Manager, Credit and Collection	2	0	2	6	0	6
Manager, Parts	1	0	1	2	0	2
Bank Cashier	1	0	1	4	0	4
Loan Officer	8	0	8	36	0	36
Superintendent, Hospital (Administrator)	1	0	1	2	0	2
Social Worker or Case Worker	4	0	4	11	0	11
CLERICAL						
Secretary	31	16	15	73	19	54
Stenographer	10	0	10	25	0	25
Personnel Clerk	0	0	0	1	0	1
Clerk-Typist	40	12	28	95	25	70
Statement Clerk	1	0	1	2	0	2
Bookkeeper, Hand	22	10	12	51	10	41
Cashier	22	1	21	49	1	48
Teller, Bank	18	0	18	38	0	38

TABLE 6 - Continued
NET ADDITIONAL MANPOWER REQUIREMENTS

Occupation	June 1969 Additional Requirements	June 1969 Replacements Available	June 1969 Net Additional Needs	June 1972 Additional Requirements	June 1972 Replacements Available	June 1972 Net Additional Needs
CLERICAL (Continued)						
Bookkeeping-Machine Operator	24	2	22	61	2	59
Pay-Roll Clerk	3	0	3	6	0	6
Clerk, General Office	72	43	29	156	43	113
Sorting Clerk	4	0	4	7	0	7
Accounting Clerk	7	2	5	17	2	15
Parts Clerk, Automotive	2	0	2	5	0	5
Post Office Clerk	39	0	39	96	0	96
Mail Carrier	40	0	40	81	0	81
Telephone Operator (PBX Operator)	13	7	6	33	14	19
Room Clerk	4	0	4	10	0	10
Medical Record Clerk	3	0	3	8	0	8
SALES						
Salesman, Services	2	0	2	6	0	6
Salesman and Salesperson, Commodities	44	11	33	84	11	73
Sales Clerk	266	32	234	641	35	606
Routeman	4	1	3	9	1	8
Manager, Department (Retail)	9	1	8	24	2	22
SERVICE						
Waitress or Waiter	26	13	13	65	13	52
Cook (and Institutional Cook)	66	7	59	163	7	156
Meat Cutter or Butcher	4	0	4	9	0	9

TABLE 6 - Continued
NET ADDITIONAL MANPOWER REQUIREMENTS

Occupation	June 1969 Additional Requirements	June 1969 Replacements Available	June 1969 Net Additional Needs	June 1972 Additional Requirements	June 1972 Replacements Available	June 1972 Net Additional Needs
SERVICE (Continued)						
Food Service Supervisor	2	0	2	6	0	6
Housekeeper	15	0	15	35	0	35
Nurse Aide-Orderly	125	36	89	270	59	211
Psychiatric Aide	11	10	1	28	25	3
Fireman (Fire Department)	5	1	4	12	1	11
Policeman or Detective	10	0	10	19	0	19
Sheriff or Baliff	1	0	1	3	0	3
Grounds Keeper	5	1	4	14	1	13
PROCESSING						
Baker	15	5	10	36	9	27
Stillman (Petroleum Refining)	1	0	1	1	0	1
MACHINE TRADES						
Machinist (All Around)	5	1	4	11	1	10
Machine Tool Operator, Production	3	0	3	6	0	6
Forging-Press Operator	2	0	2	6	0	6
Mechanic, Automobile	14	5	9	34	8	26
Mechanic, Diesel	3	2	1	7	2	5
Mechanic, Maintenance	17	9	8	35	9	26
Linotype Operator	1	0	1	3	0	3
Offset-Press Man	2	0	2	13	0	13

TABLE 6 - Continued
NET ADDITIONAL MANPOWER REQUIREMENTS

Occupation	June 1969 Additional Requirements	June 1969 Replacements Available	June 1969 Net Additional Needs	June 1972 Additional Requirements	June 1972 Replacements Available	June 1972 Net Additional Needs
STRUCTURAL						
Structural Steel Worker	2	0	2	5	0	5
Sheet Metal Worker	3	0	3	7	0	7
Automobile Body Repairman	3	0	3	6	0	6
Welder	8	3	5	19	3	16
Flame Cutter, Hand	0	0	0	1	0	1
Lineman	13	3	10	32	7	25
Electrician	23	2	21	68	2	66
Cement Mason or Concrete Finisher	13	1	12	32	1	31
Painter, Automobile	1	0	1	3	0	3
Heavy Equipment Operator	30	8	22	71	8	63
Carpenter	7	9	- 2	37	11	26
Bricklayer	2	0	2	16	0	16
Plumber or Pipefitter	14	1	13	29	1	28
Maintenance Man	5	0	5	5	0	5
Maintenance Man, Building	12	2	10	31	2	29
MISCELLANEOUS						
Stationary Engineer	4	0	4	10	0	10
Power Plant Operator	2	0	2	4	0	4

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Women are the principal resource for augmentation of the Israeli labor force. In order to arrive at basic measures for utilizing the resource, the study sought to analyze the participation of women in the labor force and the correlation between this participation and such factors as education, family structure, birth rates, and ethnic and age group structures. Some findings were: (1) The number of women in the labor force in 1963 was 226,000 or almost 27 percent of the total labor force and the level is increasing, (2) Rates were low for minorities and Jewish women born in Asia and Africa, (3) Among women in the labor force, the proportion lacking all formal education was approximately 14 percent and the proportion of those with more than 13 years of schooling was 58 percent. One conclusion was that raising the educational levels of some groups is basic to increasing labor force participation. (JK)

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STATE OF ISRAEL

MINISTRY OF LABOUR

MANPOWER PLANNING AUTHORITY

MANPOWER RESEARCH

WOMEN IN THE LABOUR FORCE

VT008813

March 1965

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Foreword

The Israel market, has, during recent years, undergone a process of change. While at one time there was an excess of labour, the economy is now beset with an ever-increasing shortage of manpower. Because most men either already belong to the labour force or are studying, it is obvious that the reserves from which the labour force can be augmented are composed in the main of women.

Despite the increase in the participation rates of women in the labour force, international comparisons reveal that the participation rates of Israeli women are still relatively low. This finding demands careful analysis before reaching far-reaching political decisions to develop incentives designed to increase the participation of women in the labour force.

The purpose of the present report is to analyse the participation of women in the labour force of Israel, and the correlation between this participation and certain other factors, i.e., education, family structure, birth rates, ethnic and age group structures. This analysis will clarify the characteristics of women in the labour force, and indicate basic measures for increasing their participation rates and improving their future efficiency. Certain

central problems have not been tackled such as wage problems, and the geographical breakdown of working women in relation to jobs available. These factors, in the short run, exert a considerable influence on the behaviour of manpower. In the present report, the emphasis has been placed on those basic factors which in the long run, are likely to exert a positive influence on the future participation of women in the labour force.

The Manpower Planning Authority is carrying out research in a number of areas presenting specific problems related to working women, and in particular, in those occupations likely to cause bottle-necks occupations in which there is already a manpower shortage, or where shortages are anticipated in the near future, e.g. teaching and nursing.

In the analysis of the data of this report, it will be necessary to express an opinion concerning the function of women in society, in its broadest sense. The primary function of men to support the family is culturally established but the large-scale absorption of women in the labour force is a recent phenomenon which has not yet met with universal acceptance.

The degree to which a women is prepared, or needs to work depends on a series of factors, the first being the primary function of the woman as a housewife and mother, a fact which reduces the time which she is able to devote to work outside the home, and which, in the majority of cases makes her a secondary family supporter. This means that the size and structure of the family, and the number

of children and their ages, determine, to a very large extent, the ability of the woman to undertake additional responsibilities outside the home.

A second series of factors is socio-economic in nature; on the one hand the income of the spouse and other family assets, and on the other, the level of socio-economic aspiration. Both these factors are closely associated with another which is even more important - the educational and cultural level of the woman, and her degree of absorption in the country from the aspect of familiarity with the language, work habits, etc. All these factors affect the willingness of the woman to enter the labour market, as do the demand for her labour and the job possibilities open to her. The degree of willingness to work results from the demand for workers in general, and for women in particular and the type of employment proposed and its conditions (i.e. number of working hours, the particular hours, place of work, emolument, etc.) It is also worth noting that additional statutory benefits are likely to discourage prospective employers from employing women.

CHAPTER ONE

MAIN FINDINGS

The number of women in the Israel labour force reached 226,000 in 1963, and represented almost 27.0% of the total labour force. The level of participation of women in the labour force is increasing, albeit with fluctuations.

The participation rate of Israel-born Jewish women in the labour force is the highest, while the rate among the minorities is the lowest. Among Jewish women, the low rate of participation of those born in Asia or Africa is particularly evident.

The relatively low rate of participation of the latter two groups (the minorities and Jewish women born in Asia and Africa) by comparison with the other two groups, (Jewish women born in Israel and in Europe and America) may be explained by several factors:

a. The educational level (as measured by the rate of women attending schools, and the median number of years of schooling) is considerably higher among those born in Israel and Europe and America than among those born in Asia and Africa and the minorities,

b. The marriage age of girls in the latter two groups is lower than that of the former.

c. Birth rates among the former groups are higher than among those born in Israel and Western countries, and consequently families tend to be larger.

d. Cultural attitudes and social patterns of families originating in Asia and Africa do not encourage the entry of women into the labour market.

Participation rates of women increase in direct relationship to a higher educational level. Among women in the labour force in 1963, the proportion of those lacking all formal education was approximately 14.0%, as opposed to approximately 58.0% among those with more than 13 years of schooling.

In addition, the higher the educational level of those willing to work, the greater their degree of absorption in the labour market. That is to say, the likelihood of absorption of those lacking education is relatively less than that of those with a higher level of education.

The inference to be drawn from the above, is that in order to raise the level of participation of women in the labour force, it will be necessary to raise the educational level of those groups where this level is inadequate.

In order to advance the educational level of the female population in general, and of the more backward group, in particular, it is necessary to examine the part played by the educational networks.

This reveals several major facts:

a. The continuity of studies of girls at the elementary school level is more pronounced than that of boys. At the post-elementary level, however, the proportion of girls among the total number of pupils falls with each higher class.

b. The proportion of girls born in Asia and Africa studying in all educational networks is lower than that of those born in Israel, Europe and America.

This is the result of the lower level and also certain social and economic factors.

c. In the total number of girls continuing post-elementary education the proportion of those born in Asia and Africa entering vocational and agricultural schools is higher than among those born in Israel or in Western countries. The dropout rate from vocational and agricultural schools is higher than secondary schools.

d. The dropout rates from post-elementary educational networks of girls whose fathers were born in Asia and Africa is higher than that of girls, whose fathers were born in Israel, Europe and America. The proportion of the former sitting for the matriculation examination is approximately half that of the latter.

e. Among the minorities, the rate of girls studying is considerably lower than among boys, and both rates are very much below the equivalent rates in the Jewish population.

The disparity between women born in Asia and Africa and those born in Europe and America has left its mark on the educational network. The unfortunate inference which must be drawn from the above indicates, for example, that because of the vicious circle arising from the low educational level of their parents, the level of girls born in Asia and Africa is already comparatively lower in the first year of schooling. Consequently, the rate of those failing the "Seker" examination is higher, and the dropout rate is concomitantly higher. There is

no doubt that despite the efforts that have been made in this field, much still remains to be done.

CHAPTER TWO

LAWS RELATING TO THE EMPLOYMENT OF WOMEN

The existing legislation in Israel concerning the protection of working women is often likely to act as a deterrent to their employment. The basic law dealing with this matter is the Labour Law, 1954". This law is composed of two sections; the first concerns the prohibition of night work and certain types of work likely to be injurious to women, and the second, privileges and rights during pregnancy and the post-natal period.

1. Prohibition of Night Work

In accordance with the Female Labour Law, the employment of women is prohibited between midnight and 6.00 a.m., but in accordance with regulatory amendments to both the Female Labour Law and Hours of Work and Rest Law (1951)special partial and total exemptions were established for women working in a number of services, viz.,specific national services, hospitals, etc. The Minister of Labour is empowered to sanction night-work for women, in places where three shifts operate, on condition that this does not involve hazards to health. Exemptions of this nature require the approval of the Labour Committee of the Knesset.

Similarly, the Law empowers the Minister of Labour to sanction night work in times of emergency.

2. Prohibition of Certain Trades

Regulations amending the Female Labour Law prohibit the employment of women in certain activities, e.g. work involving the manufacture of lead and brass.

3. Rights of the Working Woman

The law entitles the working woman to 12 weeks maternity leave, six weeks of which may be taken prior to the delivery and the remainder subsequently. In cases where a woman is forbidden to work during pregnancy (on medical grounds), she is entitled to leave without pay; in addition, the law establishes that should her health prevent her from returning to work at the termination of her 12 weeks leave, she is entitled to a further six months leave without pay.

Furthermore, even if she is in good health the working woman is entitled to a period of leave not exceeding one quarter of the period she has worked for one employer, but not exceeding one year. This is on condition that she does not give birth in two consecutive years.

4. Dismissal

The law prohibits the dismissal of a pregnant woman, unless the reasons are not the result of her pregnancy, or if the fact of pregnancy was not known to the employer. Under these latter circumstances, the law permits the dismissal of a woman who has been employed less than six months.

5. Wages

The Knesset recently approved a law enforcing the payment to women of a wage equal to that earned by men workers, employed in

the same place and in the same job.[1]

CHAPTER THREE

FEMALE POPULATION OF ISRAEL

Because of the unique composition of the Israel population, it is necessary to consider each ethnic group separately: Jews, non-Jews, and each section of the Jewish population according to countries of origin. Such distinctions are imperative if the problems relating to women as part of the labour force of Israel are to be understood because of the considerable differences existing between one ethnic group and another in most of the factors influencing the participation of women.

1. Total Female Population

The female population of Israel in 1963 numbered 1,174,600 of which 88% were Jews and 12% the minorities. The population growth rate among the minorities is greater than among the Jewish population, as a consequence of a higher national rate of increase.

Concomitantly with the growth of the non-Jewish sector, similar far-reaching changes occurred in the Jewish population. The proportion of Israel born in the total female population of Israel increased from approximately 31.0% in 1956 to more than 38.0% in 1962, in contrast to an equivalent fall among those born in Western countries. The proportion of those born in oriental countries remains virtually unchanged, being some 27% of all Jewish women.

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[1] Equal Wages for Female and Male Workers Law 1964 Book of Statutes 433, 1964.

2. The Population of Working Age

The section of the population pertaining to the labour force, is that part over the age of 14; at this age, generally speaking, elementary schooling (which is, in effect, usually compulsory education) ends and a proportion of youth commence work. The female population of working age numbered 790,000 in 1963 (on annual average), and accounted, therefore, for 65.9% of the total female population of Israel.

While the non-Jewish proportion of the total female population of Israel was 12.0% in 1963, the proportion of women of working age reached only 9.0%. This may be explained by the age structure - a structure which is typical of a population with an exceptionally high birth-rate and in which the proportion of youth is relatively high.

The ethnic structure of the Jewish population of working age is completely different to that of the total Jewish population.

Table C.1 Jewish Women of Working Age by Continent of Origin 1963[1] (thousands and percentage)

	Total Women		Women of Working Age	
	thousands	percentage	thousands	percentage
Total women	1,065,3	100.0	718,7	100.0
Israel-born	408,3	38.3	133,4	18,5
Born in Asia and Africa	305,9	28.7	255,0	35.5
Born in Europe and America	351,1	33.0	330,3	46.0

[1] Source: Central Bureau of Statistics - Manpower Surveys

while those born in Israel account for 38.3% of total 28.7% Jewish women, girls aged 14 and over account for only 18.5%. Conversely, while those born in Asia and Africa represent of the total Jewish women, they represent 35.5% of the total potential labour force. This is because of the large proportion of girls under the age of 13 born in Israel. Furthermore, all girls born in Israel belong to this category regardless of the country of origin of their parents. Considerable changes in the ethnic structure of Jewish women in the labour force occurred during the period 1955 - 1963.

The proportion of those born in Europe and America fell by some 8.0% in the period under consideration, reaching 46.0% of the total number of Jewish women of working age, in comparison with a rise of some 4.0% in each of the other two ethnic groups.

3. Educational Level

In any analysis of the labour force of Israel, the educational level of the female Jewish population represents the most important factor. Educational level affects the willingness of the women to work, their participation rates in the labour force, and the job opportunities open to them in the labour market.

The educational level of the female population of Israel is determined by the aggregate influence of two central factors:

a. The educational level of women arriving in successive waves of immigration.

b. The educational and vocational training networks which chiefly affect the younger generation.

When the proportion of those attending schools is used as a yardstick of educational level, it appears that in the adult

population, (aged 14 and over), considerable differences exist both between men and women, and between women from various countries.

The educational level of women in Israel may be summarized as follows:

a. The educational level of the population of Israel, including women, reveals an upward trend.

b. The educational level of women in both the Jewish population and the minorities is lower than that of men. The disparity between men and women in the minorities is particularly great, the educational level of these women being the lowest of all groups.

c. The effect of the educational networks on the younger age groups in all sections of the population is expressed by differences in the educational level of each age group. The differences between the sexes are least in the youngest age groups and steadily increase with increase in age.

d. Among Jewish women, the educational level of Israel-born is the highest, followed by those born in Europe and America, while that of those born in Asia and Africa is the lowest. The educational level of women born in Asia and Africa is lower than that of men in the minorities.

e. Within the group born in Israel, pronounced differences in educational level are noted when the country of origin of the father is considered. The educational level of

women, whose fathers were born in Europe or America, is the highest, followed by second generation Israelis, while that of those whose fathers were born in Asia or Africa is the lowest.

The sources of data on the educational level of women are: The 1954 Survey of the educational level of the population; The Census of Population and Housing, 1961; and data from the Manpower Survey of 1963. An analysis of the educational level of the population at these three periods permits comparison between them and the delineation of a dynamic picture of the development of educational levels up to 1963.

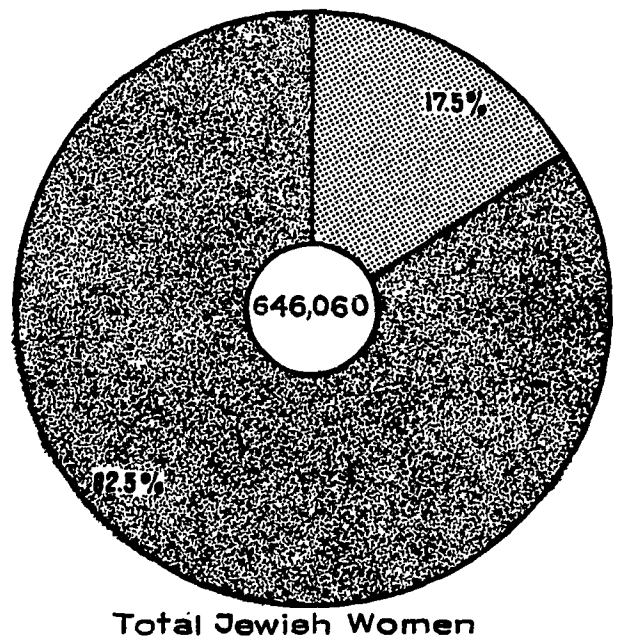
The proportion of men (aged 14 and over) who have at some time attended school, is higher than that of women, in both the Jewish population and the minorities: in 1961, 82.5% of Jewish women had attended school and 92.3% of men.

Table C.2 Proportion of those who have Attended Schools by Sex and Race

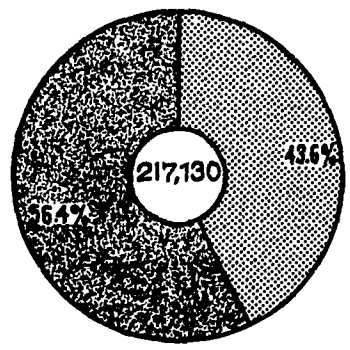
Year	Jews		Minorities	
	Men	Women	Men	Woman
1954 [1]	91.8	78.3	64.0	21.0
1961 [2]	92.3	82.5	69.9	31.0
1963 [3]	92.7	82.8	-	-

Sources:
1. Central Bureau of Statistics - "Educational level of the Population", June 1954.
2. Data of the Census of Population and Housing, 1961
3. Manpower Survey, April - June, 1963.

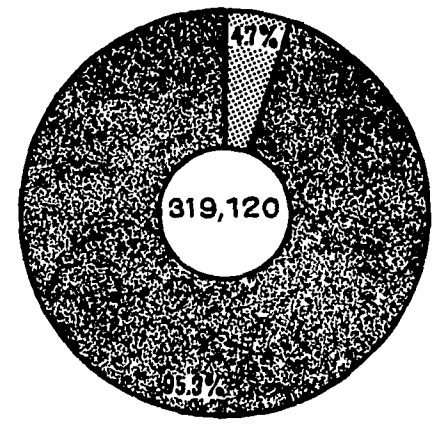
PROPORTION OF WOMEN WHO HAVE NOT ATTENDED SCHOOL, BY RACE AND ETHNIC GROUP (1961)



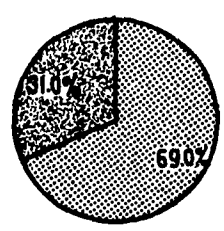
Total Jewish Women



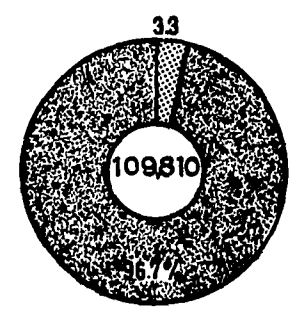
Born in Asia and Africa



Born in Europe and America



Non-Jews
67,695



Israel born

Attended school

Did not attend school

The equivalent data regarding the minorities during the same year are: 31% of women and 69.9% of men. From Table C.2 it can be seen that the proportion of those who do not attend school is dropping constantly. This phenomenon is common to all nations undergoing economic and social development. The rise in the educational level is actually a consequence of the continuation of two factors; the effect on the younger age groups of the compulsory education network; and the death rate of the higher age groups in which the proportion of those without any formal education is relatively high.

The proportion of women aged 14 and over that attended school was in 1954, 78.3% among Jews, and 21.0% among the minorities. This rate had risen to 82.5% and 31.0% respectively, by 1961.

Table C.3 Proportion of those who Never Attended School, by Race, Sex and Age Group [1]

	14-29		30-44		45-59		60 & above		Total	
	1954	1961	1954	1961	1954	1961	1954	1961	1954	1961
Jews										
men	5.8	4.0	6.1	7.9	9.3	8.6	19.0	16.7	8.2	7.7
women	14.3	9.1	17.9	17.3	25.9	20.4	45.6	37.9	21.7	17.5
Minorities										
men	14.0	17.0	38.9	30.7	56.1	52.8	68.0	67.1	35.9	30.1
women	68.5	58.1	83.2	76.5	88.2	82.0	93.5	86.0	79.0	69.0

[1] Data of the Central Bureau of Statistics - "Educational Level of the Population" (The Census of Population, 1961).

Differences between the sexes in the proportion of those attending school become less apparent in the lower age groups. Within the Jewish population aged 14 - 29 in 1961, 96% of men and 90% of women had attended school in comparison with 84% of men and only 62.0% of women aged 60 and over.

Half the population of Israel studies for more than 8 years in some educational institution. The number of years' schooling is lower for women than men. Half the men studied for more than 8.5 years while the equivalent period for women was less than 7.4 years.

The educational level as determined by the number of years' schooling is considerably lower among the minorities than among Jewish women. While half the latter studied for less than 7.9 years, more than half the former did not even finish one complete year at school (median - 0.7 years schooling).

Analysis of the female Jewish population reveals differences in the educational level of women originating from different countries.

The educational level of the Israel-born is the highest. While half the Israel-born attended school for more than 10 years (median - 10.4 years), the equivalent rate among those born in Europe and America was 8.8, and that of those born in Asia and Africa only 3.7 years. The rate of those who never attended school was 43.6% among those born in Asia and Africa, 4.7% among those born in Europe and America, and only 3.3% among the Israel-born. From these data, it is apparent that the educational level of women born in Asia and Africa is considerably lower than that of men of the minority groups.

As has been noted the educational level of the Israel-born is the highest; nevertheless, considerable differences occur in the

various groups according to country of origin of the father. The median years' schooling of the Israel-born, whose fathers were born in Asia or Africa is 7.0, among second-generation women 8.9, and among those whose fathers were born in Europe or America, it reaches 11.4.

4. The Age Structure

As a consequence of the considerable differences between the participation rates of women of different ages, any change in the age structure of the population is likely to result in far-reaching changes in the manpower potential.

Since 1955, the relative proportion of the age group 18-54 has fallen in contrast to a rise among both girls aged 14-17, and the elderly, aged 55 and over. This structural change is likely to reduce the overall size of the labour force, since the participation rates of women aged 18-54 remain the highest.

Table C.4 Age Structure of Women of Working Age [1] (percentage)

	1955	1963
Total women of working age	100.0	100.0
14 - 17	8.7	12.0
18 - 34	38.7	33.8
35 - 54	35.5	34.5
55 - 64	9.4	11.2
65 +	7.7	8.5

1. Source: Data of the Manpower Survey, Central Bureau of Statistics.

Family Situation

More than 78.0% of women of working age are married [1], and some 22.0% are unmarried. Among Jews, the proportion of married women reaches some 79%, and among non-Jews, only 73.0%. This despite the fact that the median age of marriage among Jewish women is considerably higher than among the minorities (the average Jewish woman is married by the age of 21.5 as opposed to 19.4 among the minorities). This may be explained by differences in the age structure of the two sectors of the population. As previously noted, the non-Jewish population is characterized by its higher rate of natural increase, and, consequently, the considerably greater relative preponderance of youth.

Among the Jewish population itself, considerable differences exist in the median marriage age: the median is lowest among those born in Asia and Africa, (20), and is highest among those born in Europe and America, (22).

6. Birth Rate

Birth rates indirectly affect the degree of participation in the labour force; it is obvious that the greater the number of children in the family, the less the possibility of the woman working outside the home. Here too, considerable differences exist between the various ethnic groups.

Between 1960 and 1962 the average birth rate (births per thousand women), among Jews was 98.4; among non-Jews, the rate was about

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[1] Including divorcees and widows.

two and a half times greater, reaching 238.4. The birth rate for Jews during the same years was 48.1 for those born in Europe and America, 160.6 for those born in Asia and Africa, and 91.8 for the Israel born. Part of these differences may be accounted for by differneces in the age structure of the various ethnic groups:-

Place of Birth	Median Age [2]
Israel	10.1
Africa	26.1
Asia	33.2
Europe and America	46.5

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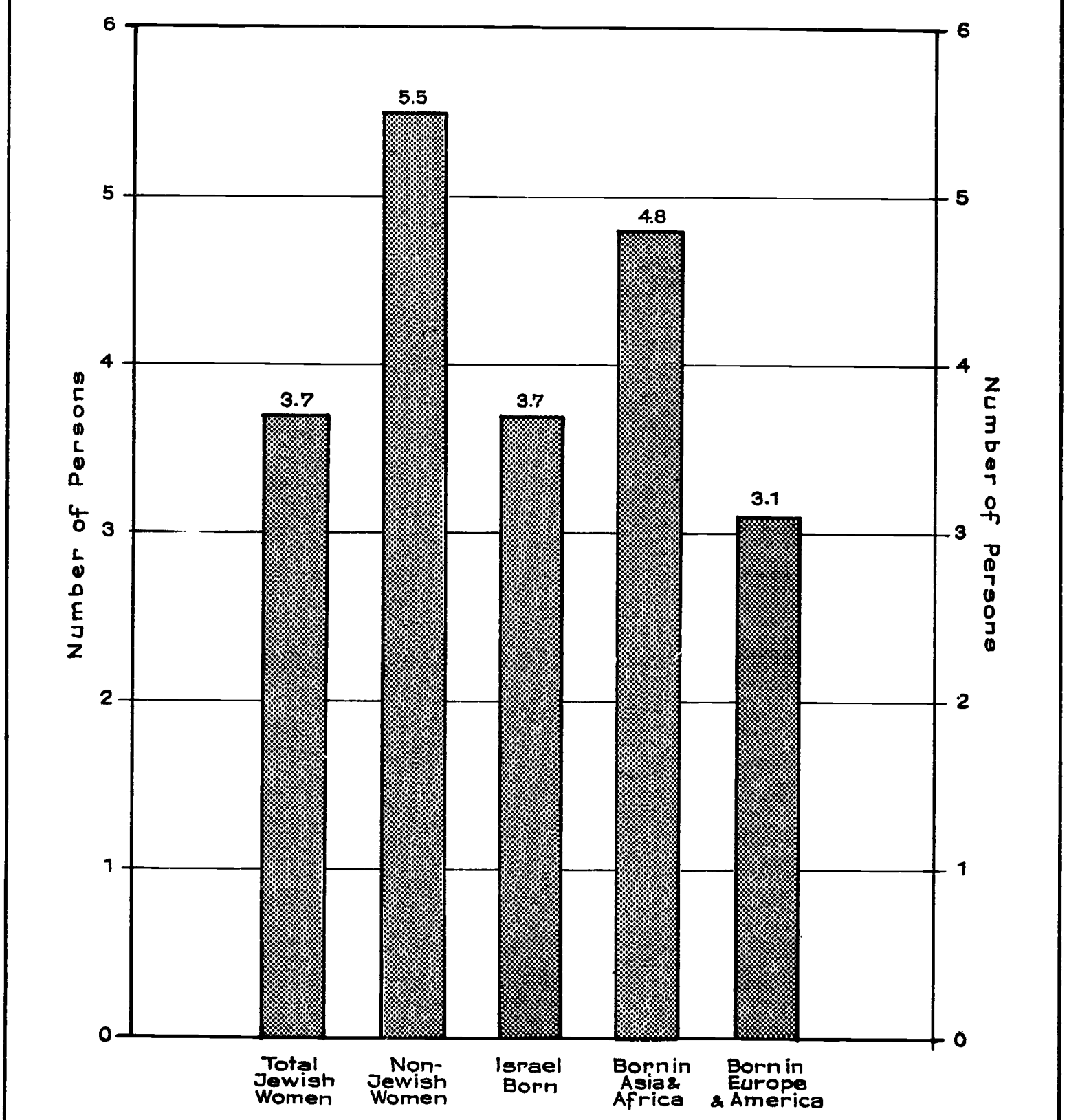
2 Data of the Central Bureau of Statistics - Yearbook 1964

Table B.15

AVERAGE SIZE OF THE ISRAEL FAMILY, BY RACE AND ETHNIC GROUP - (1963)



7. Size of the Family

It is apparent, therefore, that the size of the Jewish family (3.7 persons in 1963)[1] is smaller than the non-Jewish family (5.5 persons). The size of the Jewish family originating from Europe and America[2] (3.1 persons) is the smallest; that of families from Asia and Africa is largest (4.8 persons), while the second-generation family lies between the two, (3.7 persons).

8. Economic Situation of Families

Research concerning differences of income in Israel[3], reveal a constantly increasing disparity between the income levels of families of European and American origin, and those from Asia and Africa. The disparity between family incomes has grown; e.g. in 1951, the income of families from oriental countries was 88% that of European families and by 1959-1960 had dropped to only 68%. The disparity is very much greater if the number of persons in the family is taken into consideration; the individual income of a member of oriental family was, in 1951, 61% of that of a member of a European family, and by 1959-1960 had fallen to only 45%.

A part of this difference may be accounted for by the length of time that the family head has been in Israel. The salary level

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1 Including single persons.

2 According to continent of origin of the head of the family.

3 "Income Differences in Israel" by G. Chanoch, Folk Project for Economic Research in Israel, Fifth Edition, July 1961.

rises in direct proportion to the length of time in Israel, and because the proportion of new immigrants born in Asia and Africa is greater, their income level is correspondingly lower. This factor is closely connected with differences in the nature of education and training received by immigrants in their countries of origin.

However, the income disparity is becoming constantly less as far as different ethnic groups among the Israel born are concerned. The income of those whose fathers were born in Asia and Africa is higher than those of the same community who are well established in Israel, while the income of those whose fathers were born in Europe is virtually identical to those of European origin who are long established in Israel.

CHAPTER FOUR

WOMEN IN THE EDUCATIONAL NETWORK

This chapter deals with the educational networks, and concentrates in particular on educational networks for women, commencing with the elementary school and concluding with academic education.

1. Elementary Education

The elementary educational network of Israel is divided into a number of major divisions. For the first stages of elementary education there are elementary schools providing a basic education and training for the majority of those of the appropriate age and special schools providing an elementary education for retarded and disturbed children.

At later stages, (commencing with the eighth grade), schools for working youth enter the picture. These schools provide completion of elementary education for the older child who has already entered the labour market.

It should be noted that as far as the Jewish population is concerned, all children in the younger age groups pass through the educational network and dropout is virtually non-existent. In Jewish elementary schools, dropout only begins in the higher classes, i.e. at the conclusion of the fifth, sixth and seventh grades.

Table D.1 Percentage of Girls among all Pupils in Jewish and Arab Educational Networks by Grade, in 1962-1963[1]

Grade	Jewish Girls	Arab Girls
1st Grade	48.6	44.9
4th Grade	49.4	41.3
7th Grade	49.5	29.9
8th Grade	48.8	26.8

1

Source: Central Bureau of Statistics - "Information from Educational Statistics "

Tables D.1 and D.2 show that there are no significant differences in the dropout rates of girls and boys in the elementary school. The proportion of girls in the total number of pupils is always about 45%

and the dropout rate of girls is no greater than that of boys. In fact, data in Table B indicate that the degree of consistency of studies of Jewish girls is, to a certain extent, greater than that of boys. The proportion of girls concluding the eighth grade of elementary school among all girls aged 13, is generally higher than both that of boys, and that of the average for both boys and girls.

The situation in the Arab population is totally different. In order to present an accurate picture of Arab education, it is necessary to include non-official institutions who fulfil an important function, but data concerning which are not generally reliable.

Table D.2 Percentage of the 13 [1] Year old Age Group Concluding Elementary School by Sex and Race

	1956	1959	1961	1962
Jews				
Total	59.6	68.5	90.6	90.4
Boys	54.1	66.1	94.7	88.5
Girls	52.7	70.2	92.9	92.5
Minorities				
Total	20.8	31.0	40.4	46.3
Boys	34.1	46.8	56.0	63.6
Girls	5.6	13.5	22.7	26.3

1

Source: Central Bureau of Statistics - "Information from Educational Statistics"

Note: The percentage of school leavers is calculated as the proportion of those concluding eighth grade within the relevant age group. We are unable to take into consideration the fact that as a result of backwardness, a proportion of school leavers are somewhat older. As this factor has not been considered, the figures arrived at are somewhat lower than actuality.

Dropout rates among the Arab population are greater than among the Jewish population, and among Arab girls they are especially high.

Even in the first years of elementary school, the compulsory education law does not fulfil its function as far as Arab girls are concerned. In the first grade of elementary school, the numerical proportion of girls to boys is only 75%, that is to say, even in this grade, rate of attendance of girls is lower than that of boys. This proportion continues to fall because of the higher dropout rates of girls, and by the eighth grade in Arab schools, girls represent only some 25% of pupils. The percentage of girls concluding the eighth grade in the total number of Arab girls aged 13 is approximately 20% as opposed to 90% among Jewish girls, and 50% among Arab boys. These rates are a clear indication of the low school attendance level among girls of the minorities, even though some progress has been made in the percentage of Arab girls concluding elementary education, which rose from 6.6% in 1955, to some 20% in 1962. These rates, which are an indication of the considerable disparity between Arabs and Jewish women (a disparity which can only be overcome by increasing the effectiveness of the educational framework) cannot, by any means be considered as representing a satisfactory state of affairs.

2. <u>The Transfer to Post-elementary Education</u>

Two basic phenomena are of interest in an analysis of the stage of transfer from elementary to secondary education:

a. The tendency prevalent among both boys and girls to continue studying. This tendency may be measured by means of the rates of those continuing studies.

b. The types of post-elementary educational networks entered by those leaving elementary schools, and the direction to which they lead.

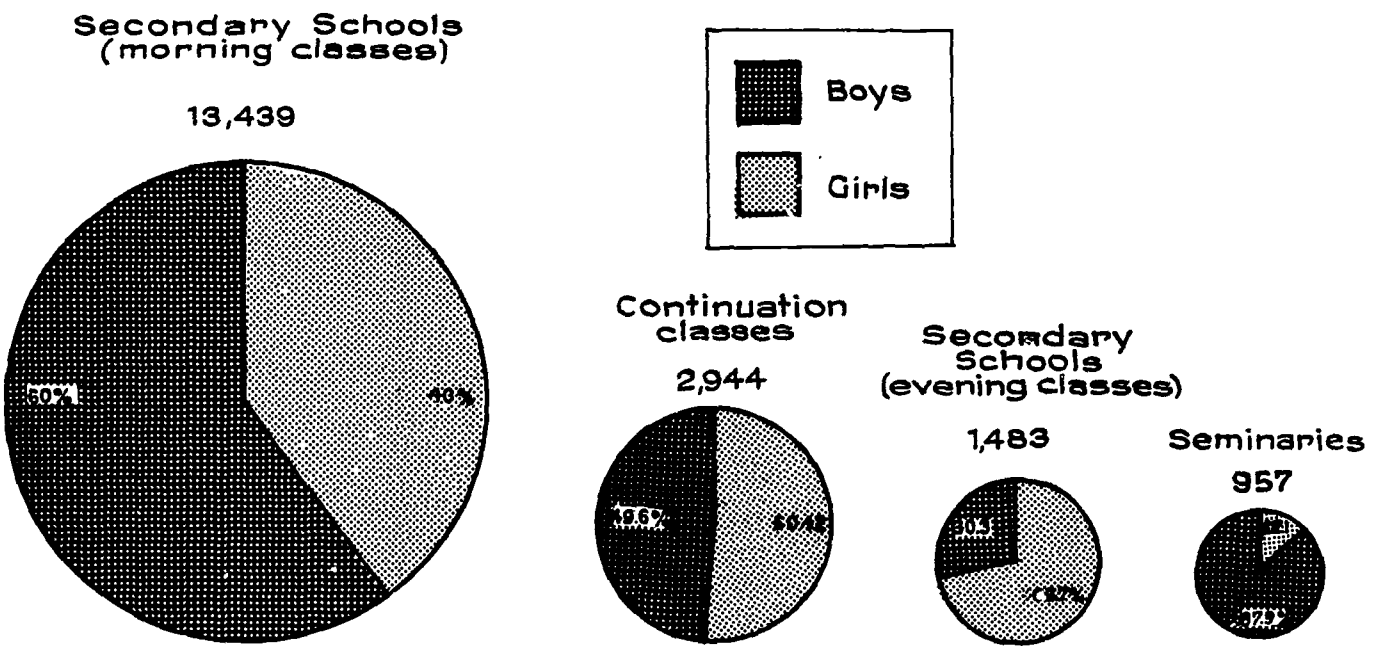
Table D.3 Rate of those Commencing Post-Elementary Education among those Concluding Elementary Schools, by Race and Sex [1]

Percentage of those continuing in the whole group

		1959	1961	1962
Jews	Boys	95.6	91.1	80.0
	Girls	92.9	91.1	75.5
Minorities	Boys	34.3	30.1	41.8
	Girls	28.4	20.8	26.4

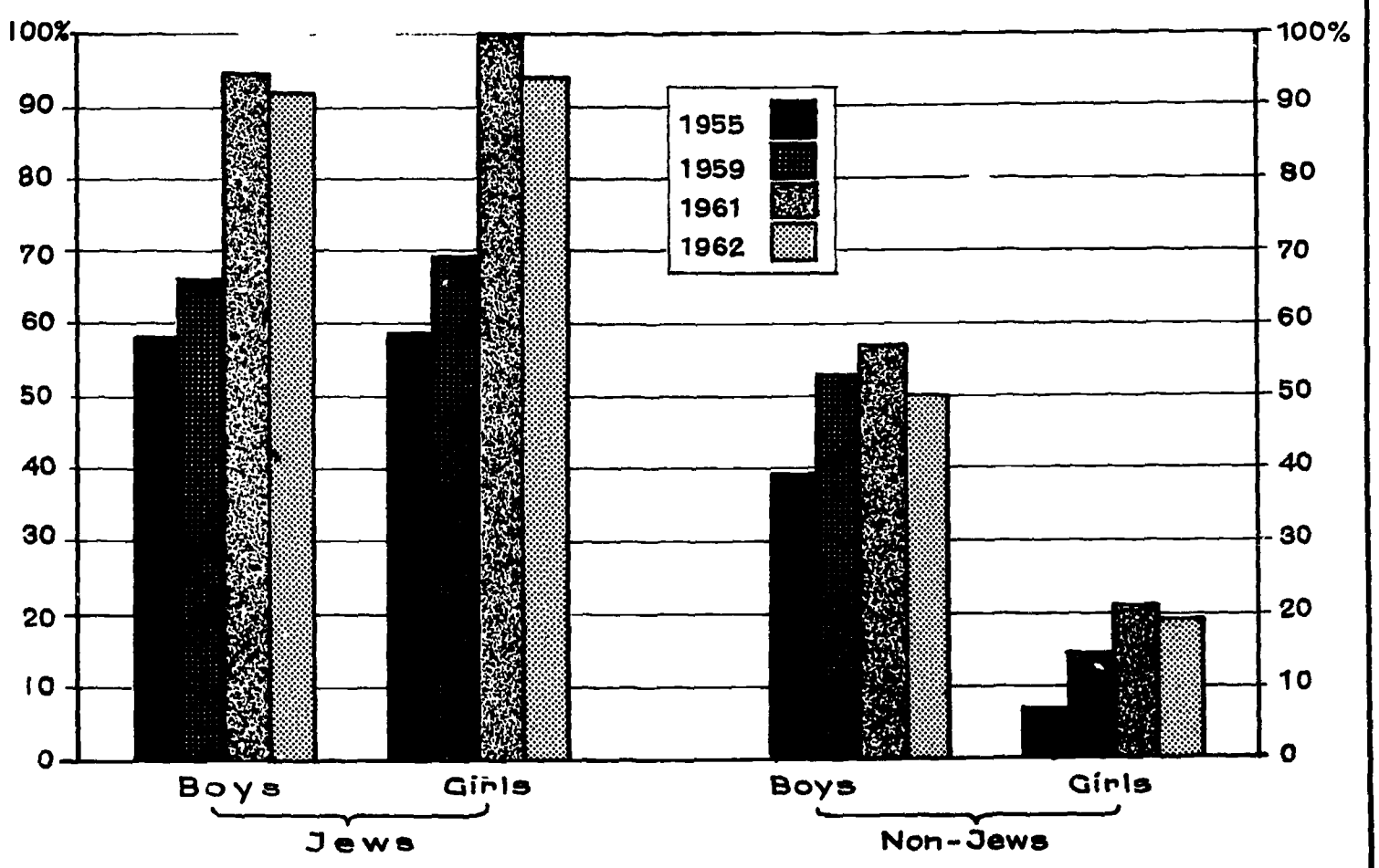
[1] Data of the Central Bureau of Statistics - "Information from Educational Statistics."

PERCENTAGE OF GIRLS AND BOYS IN THE NINTH GRADE (SECONDARY SCHOOLS)* IN 1963-1964



*Excluding vocational schools

THOSE OF THE 13 YEAR OLD AGE GROUP CONCLUDING ELEMENTARY SCHOOL, BY SEX AND RACE (Percentages)



It can be seen from Table D.3 that the percentage of girls embarking on post-elementary education among all those concluding elementary school, is lower than the equivalent figure for boys, both among Jews and the minorities. This phenomenon is in contra-distinction to the higher percentage of Jewish girls completing elementary education. As a consequence of the lower rates of continuation of girls, their relative part in the post-elementary educational network is smaller. It should be noted that prior to 1954 [1], the proportion of girls receiving post-elementary education was higher than that of boys, and this can apparently be attributed to the increasing proportion of those sections of the population having a different outlook as to the place of woman in society. The difference in the percentage of continuation between Jewish boys and girls is relatively small, while the equivalent difference in the Arab population is very much greater.

The fact that only a small number of Arab girls succeed in completing elementary school means that the proportion of those continuing to study is negligible. In order to emphasize the problem of the continuation of study among Arab girls, we will present the problem by means of absolute figures for the year 1962 - 1963 school year.

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1 See "Educational Networks in Israel" - C. Merchavi

In 1962 - 1963, some 15,000 girls continued studies in one post-elementary educational network or another. By comparison, only 128 girls of the minorities continued studies in the same year.

Continuation of study rates are extremely high among the Jewish population; however there is cause for refraining from over-optimism on two principal grounds:

a. A certain proportion of those in the 13 year-old age group are not included in the educational network because of dropout during elementary education. This clearly accounts for a drop in the percentage of those continuing their studies as presented in the above data.

b. Data presented in Table D.3 reveal a drop in the continuation of rates. However, this phenomenon should not yet be regarded as indicating a clear trend, although the data should be treated as a warning signal.

An investigation carried out by the Szold Foundation [1] underlines the large differences prevailing among girls embarking

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1. "A follow-up of the Continuation of Studies among children of the Eighth Grade Sitting for the "Seker" examination in 1956 - 1957" by L. Or.

upon post-elementary education, according to their countries of origin. Of those sitting for the "Seker" examination, 1.7% of those born in Europe and America dropped-out in the transfer from elementary to post-elementary school; the equivalent rate for the same year among those born in Asia and Africa was 19.3%. An important factor in this large disparity is the difference of competence shown by the girls in the "Seker" examination.

However, the rate of those registering at post-elementary schools among those born in Asia and Africa are, at each level, lower than among those born in Europe and America.

How are boys and girls directed to post-elementary educational networks after leaving elementary school ? In the large towns and in certain other centres, special vocational guidance centres advise as to the continuation of studies and the choice of profession. Pupils of the eighth grade are examined individually and in certain cases are invited for an additional interview. The desires of the pupil himself concerning his choice of study carry a certain weight in the decision of the vocational guidance centre and represent a positive but non-obligatory trend of thought. The various post-elementary educational networks have different prestige ratings; at the top of the scale are the secondary schools (morning), which, in point of fact, are not, under present circumstances able to cope with the volume of applicants. Selection in the schools is based on an interview, the results of the "Seker" examination, and the grades achieved in the Elementary School Leaving Certificate.

Those pupils whose grades in the examination are above a certain "Norm A" are eligible for acceptance to secondary schools according to a graded scale of school fees. Pupils who are either immigrants or the children of parents originating from Asia or Africa are judged according to "Norm B" which, taking into account their special situation, is somewhat lower than "Norm A".

Figures concerning the wishes of pupils graduating from elementary schools in Tel Aviv in the years 1951-1953 [1] indicate that "approximately half of the boys chose secondary schools of different types, while among girls, some two thirds or more chose secondary schools." It may be assumed that this tendency has become more pronounced since 1952-1953. It may also be assumed that decisions arrived at by counsellors in the vocational guidance centres are consideribly influenced by the attitude to vocational education, a factor which has led to a disparity between the wishes of the pupils and the recommendations of these centres. In Tel Aviv in 1952 - 1953, only 32% of boys and 47% of girls were directed to secondary education. It is interesting to note that, despite the fact that girls are generally less successful than boys in the "Seker" examination [2], the rate of girls applying and being directed to secondary education is higher.[3]

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1 See H. Merchavia,"Educational Networks in Israel" Chapter 29.

2 "A Follow-up of the Continuation of Studies among those sitting the "Seker Examination in 1956-1957" - Leah Or, Szold Foundation.

3 H. Merchavia,"Educational Networks in Israel"

The disparity between the recommendations of the Vocational Guidance Centres and the wishes of the pupils has already been noted. However, as the recommendation of the vocational guidance centres is not binding and its influence is only partial, the actual applications of pupils to the various educational networks cannot actually be compared neither on the basis of expressed wishes, nor on the guidance of the centres.

The following is a distribution of pupils by various types of post-elementary schools over a period of three years:

Table D.4 Distribution of those Continuing their Studies by Type of School and Sex [1]

Types of School	1959 Boys	1959 Girls	1961 Boys	1961 Girls	1962 Boys	1962 Girls
Total continuing studies	100.0	100.0	100.0	100.0	100.0	100.0
Secondary Schools [2]	60.0	82.8	63.2	84.3	54.8	76.1
Vocational Schools	29.0	10.3	26.9	9.3	34.2	15.6
Agricultural Schools	11.0	6.9	9.9	6.4	11.0	8.3

1 Statistics of Schools and Kindergartens. (data refer to pupils of Jewish schools only.)

2 Including seminaries, evening schools and continuation classes.

The high rate of girls undertaking secondary education is particularly evident from the above data. The proportion of girls in secondary schools is, throughout the period, higher than that of boys; on the other hand, the proportion of boys is higher in both vocational and agricultural education. Differences are particularly marked in vocational education. The proportion of boys undertaking vocational education is some 30% as opposed to only 10% of girls. Within secondary education which is, per se a large part of the whole, the proportion of girls is greater than that of boys, but this does not apply to each of the individual networks. The distribution in continuation classes, for example, is similar to that of the population in kibbutzim. In regular secondary schools, the proportion of girls reaches 60% of the total number of pupils, while in evening schools, the proportion of boys is higher than that of girls.

It can be assumed that this is a consequence of the higher percentage of boys commencing work, especially during the first years of post-elementary education.

In a breakdown of girls continuing post-elementary studies, considerable differences occur between girls from different countries of origin. Out of every 1000 girls born in Europe and America, 845 enter some secondary educational framework, [1] while the equivalent rate

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[1] Secondary networks include: morning and evening secondary schools, teacher-training seminaries, and continuation classes.

among those born in Asia and Africa is only 666. In addition, while in the former group, 587 enter morning secondary schools, among the latter the figure is only 243. [2]

Table D.5 Percentage of Girls and Boys in Secondary Networks in 1963 - 1964 [3]

	Ninth Grade		Twelfth Grade	
	Boys	Girls	Boys	Girls
Secondary schools (morning)	40.0	60.0	45.1	54.9
Secondary schools (evening)	69.7	30.3	65.5	34.9
Continuation classes	50.4	49.6	47.6	52.4
Seminaries	12.1	97.9	17.1	82.9

The phenomenon of "feminization" in the teaching profession is already evident in classes of secondary school level in teacher training seminaries in which the percentage of girls is the highest of all post-elementary networks. Throughout the whole period, from ninth to twelfth grade, the percentage of girls among the total number of pupils is more than 80%, while in the first year of studies (ninth grade) it is approximately 90%.

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2 Source: Szold Foundation, "A Follow-up of the Continuation of Studies among Children of the Eighth Grade sitting for the "Seker" Examination in 1956-1957", Tables - page 16.

3 Source: Statistics on Schools and Kindergartens - Central Bureau of Statistics.

The quantitative dominance of girls is less during the years of secondary school studies, and the factor accounting for this is the higher dropout rate of girls. Table D.6 indicates dropout rates from secondary schools (morning) only but it may be utilized as a yardstick for an examination of differences in the dropout rates between the sexes.

Table D.6 Dropout Rates from Secondary Schools (Morning)[1]

	1954-55		1956-57		1958-59		1960-61	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Dropout rates from 9-10 grades	11.7	13.7	11.3	12.3	16.8	18.2	13.4	14.4
Dropout rates from 10-11 grades	10.9	27.8	16.9	26.2	18.3	26.5	14.0	24.0
Dropout rates from 11-12 grades	15.6	25.9	21.8	28.4	18.7	21.2	19.1	18.4

[1] Calculated from monthly bulletins of the Central Bureau of Statistics, "Information from Educational Statistics."

Table D.6 shows the droput rate of girls over the years, and emphasises differences occurring as the result of this rate. Part of the dropout rate of girls may be explained by the fact that a certain percentage of the female population prefers practical studies and transfers to professional educational networks, e.g. nursing, the care of children, private commercial schools, bookkeeping, etc., subsequent

to the first stages of secondary education.

The Census of Population and Housing shows that the rate of girls studying falls directly in proportion to their rise in age by comparison with boys:

	% Studying in 1961	
Age	Girls	Boys
14 - 17	65.4	65.8
14	83.4	83.2
16	56.8	58.7

A survey carried out by the Szold Foundation highlights the considerable disparity existing in the dropout rates of girls according to continent of origin. Of every 100 girls continuing post-elementary education 33 of those of European or American origin dropped out, while the equivalent rate among those born in Asia or Africa was 57.

The percentage of girls sitting for the matriculation examination is always lower than that of boys. Among those sitting for the "Seker" examination in 1956-1957, 35% subsequently sat for the matriculation examination. The likelihood of pupils of the ninth grade sitting for the examination is only 52% - 56% among boys and 49% among girls. Among pupils of the twelfth grade (at secondary schools), 80% of girls sat for the examination as opposed to 96% of boys.

The picture relating to girls again highlights differences occurring among those of different countries of origin: Of every 100 girls undertaking secondary education, 55 of those born in Europe and America sit for the matriculation examination as opposed to only 28

those born in Asia and Africa. Of each 100 girls born in western countries studying in the twelfth grade of secondary schools, 83 sit for the examination, but only 66 of those born in Asia and Africa.

Although the above data refers to 1960-1961, there are no grounds for supposing that any significant changes have occurred.

4. Vocational Education

Examination of the types of occupation of working women shows that the highest concentration is found in the group of occupations known as the "free professions", both administrative and clerical. Girls entering these professions require mainly a general training over and above that provided by the elementary school, in order to prepare themselves with a suitable economic - professional grounding. Sometimes girls undergo secondary education, as a transitional stage to specific professional studies (nursing, teaching, etc.), and sometimes even continue to higher education. However, the aspirations of girls as far as secondary education is concerned, are adequate to meet the demands of the labour market at the period of their commencing work. The result is that the number of girls in the vocational educational network is lower, and their proportion very much smaller than that of boys.

An additional reason contributing to the smaller number of girls in vocational education, is that their prospects are generally better in occupations demanding more general abilities and not specific training; another reason is the paucity and lack of variety of trades studied in girls' vocational schools.

Table D.7 Distribution of Studies of Girl Pupils in Vocational Schools in 1962 - 1963 [1]

	Commercial art	Fashion designing Dressmaking	Sewing Weaving Knitting	Home Economics Nursemaids Hotels	Laboratory assistants	Clerks	Draughtsmanship	Chemistry	Various [2]
Two-year Schools	-	-	363	138	-	510	97	-	471
Three-four- and five-year schools	231	1,053	34	494	289	742	14	61	130

1 Source: "Vocational Training in 1962-1963" - publication of the Department of Vocational Training of the Ministry of Education. (1976 pupils were studying in the first grade (general) or the trend of the studies was not known.)

2 "various" includes: photography, electricity, telephone operating, hairdressing, etc. (only a few pupils study these trades).

It is evident that the highest percentage of pupils are concentrated in sewing, dressmaking and associated trades. The next group in importance consists of various varieties of clerical work, and the third, home economics (domestic economy). Other subjects account for only a small number of girls.

The dropout rates from vocational and agricultural schools are considerably higher than those for secondary schools. Between 1953 - 1957, the dropout rates in vocational schools for girls reached 49.0%. "The general average of dropout over a period of one year is 49.0%, i.e. out of each two girls entering vocational school, only one completed the course - (usually three-year - but sometimes 4-year courses.)" [1]

For girls entering the post-elementary network in 1957-1958, the dropout rate from vocational schools was 44% and from agricultural schools - 70% [2], even when the term "graduates" was interpreted as those girls having completed a three-year course of studies. While the dropout from vocational networks was 42% among those born in Europe and America, it was 49% among those born in Asia and Africa. There is no reason to suppose that droput rates from three- and four-year schools have changed to any considerable extent during the last few years, nevertheless, two-year schools have been created

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[1] "The Social Aspect of the Educational Structure of Israel" by Dr. Moshe Smilansky.

[2] See footnote No.2 on page 35.

which have perhaps had an influence on the contraction of overall dropout rates in vocational education of girls. But it is doubtful whether girls studying in such schools will be able to master the general training necessary to enter the labour market in such a short space of time.

The two principal areas of vulnerability in the vocational educational network for girls are:

a. Lack of variety in the scope of trades taught. New skills have not yet been incorporated in the syllabus, e.g. office mechanization, the various branches of public relations, product improvement, etc. The inclusion of such trades demands a broad framework of training aimed at developing general, theoretical and aesthetic abilities.

b. "High dropout rates due to misconceptions concerning opportunities resulting from training."[2]

5. Post-Secondary Educational Institutions

A. Seminaries for Teachers and Kindergarten Teachers

Seminaries for teachers and kindergarten teachers, whose function is to train staff for the basic educational networks, (kindergartens and elementary schools), are organized at two levels:

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[2] The Social Aspect of the Educational Structure of Israel"
- Dr. Moshe Smilansky.

a. "Preparatory" - at a secondary level, selecting potential staff for teachers' seminaries.

b. Post-secondary classes - generally training graduates of the twelfth grade for the teaching profession.

Pupils in teachers' seminaries come from the regular municipal secondary networks, from continuation classes in the kibbutzim and from preparatory seminaries themselves. Pupils of certain professional trends in the seminaries may first conclude studies in girls' vocational schools in specific occupations, i.e. home economics.

The conclusion arrived at by various educationalists, - a conclusion supported by an analysis of statistical data - is that those attending teachers' seminaries and thereafter becoming teachers in elementary schools, are to a certain extent, those pupils who are unable to become satisfactorily absorbed in other secondary frameworks. Pupils whose success in secondary educational networks was limited, find a place in preparatory teachers' seminaries, or after completion of secondary school, in seminaries themselves.[1]

This phenomenon results quantitively speaking, in an "inverted pyramid" in preparatory teachers seminaries. In the regular secondary school, the number of pupils in the ninth grade is larger as a result of dropout rates than the number of pupils in the

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[1] See Prof. Myozem "The Supply of Professional Manpower from Israel's Educational System" Falk Institution, Jerusalem, March 1959, Chapter 4, Section 5.

higher classes. Conversely, the number of pupils in the eleventh and twelfth grades of preparatory teachers seminaries is greater than in the ninth and tenth grades. If the secondary school rejects pupils through selection, the preparatory teachers' seminaries absorb pupils as they move from one grade to the next.

TABLE D.8 Pupils in Secondary and Preparatory Classes of Teachers' Seminaries in 1961 - 1964 [1]

School year	1961-1962		1962-1963		1963-1964	
Grade	Secondary classes	Preparatory	Secondary classes	Preparatory	Secondary classes	Preparatory
Ninth	14,558	929	13,519	810	13,469	957
Tenth	10,776	753	13,033	849	11,833	840
Eleventh	6,798	823	8,685	874	10,147	1,090
Twelfth	4,406	881	5,431	1,274	6,847	1,497

[1] Source: Central Bureau of Statistics, "Information from Educational Statistics"

An important problem in teachers' and kindergarten teachers' seminaries is that of geographical location. The training of teachers predominantly takes place in the three principal cities. As far as preparatory teachers seminaries are concerned, the majority are concentrated in Jerusalem and Tel Aviv. 75% of the pupils of teachers' seminaries and preparatory teachers' seminaries study in the region of Jerusalem, Tel Aviv and Haifa, the remaining 25% are concentrated in the central region. The number of pupils in the northern and southern regions combined is small - only 200 [1] out of approximately 8,000 seminary pupils. It may be assumed that this factor is related to the difficulty of allocation of teaching strength, which is evident from the serious lack of teaching personnel in development towns and remote border settlements, and in the surplus supply in cities and the centre of the country.

A phenomenon typical of all developing countries is the dominance of women in the teaching profession, particularly in elementary education. The percentage of men teachers in the total teaching strength of elementary schools is constantly declining, while the trained reserves in teachers' seminaries are minimal. This results in a pronounced "feminization" of both the network of seminaries and the teaching profession itself, which brings in its wake

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[1] Ministry of Education and Culture, the Department of Teacher Training, Statistical Report on the Position as on 31st December, 1963.

all the attendant social considerations resulting from the education of the younger generation entirely by women. In order to correct this inbalance and to attract greater numbers of men to the teaching profession, various efforts have, and are, being made in order to raise the status of the teacher. The Ministry of Education, together with the Hebrew University of Jerusalem, have attempted to extend the period of studies in the seminaries to three years in order to award graduates an academic degree in education. Holders of this degree would be entitled to continue their studies in pedogogical and associated professions, and even in certain cases, to undertake research. It is still premature to judge the results of this system, but it should be regarded as a constructive and interesting experiment.

The teaching profession is universally regarded as a means of climbing the ladder of social status. Those on the lower rungs enter the profession, which then acts as a springboard to higher rungs on the social ladder. In Israel this phenomenon exhibits some unique features.

It might be assumed that in the light of the social structure of Israel the proportion of those born in Asia and Africa would be decisive in the population of seminary students; however the data do not confirm this assumption. The percentage of students born in Europe and America studying at seminaries is higher than that of those born in Asia and Africa, and the teaching profession acts, particularly for those of European origin, as a springboard for the lower levels of the population. [1]

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[1] See: Leah Adar - "Follow-up of Graduates of Teacher and Kindergarten Seminaries" - Szold Foundation, Jerusalem, 1962 p.6.

B. Nursing Schools

The nursing profession is divided into two principal types of qualification: qualified nurses, and practical nurses. The nurses' training network provides the economy with some 250 qualified nurses and some 200 practical nurses per annum. [2]

During the last few years the nursing profession which is almost entirely female in composition has presented a particular problem because of high dropout rates. A series of investigations concerning supply and demand in the nursing profession, carried out by the Manpower Planning Authority is now in the final stages of planning. This survey will, when completed, provide more reliable information concerning this profession.

6. Higher Education

The rapid development of the State since its establishment has resulted in a certain change of attitudes and approach to higher education. Prior to the establishment of the State, emphasis was placed on education leading to manual labour, but the vital necessity of improving the educational level of the working population has now been recognized. This change is common to all nations developing at a rapid pace. The qualitative change that has occurred in the character

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[2] Manpower Planning Authority, "Estimated Supply of Women for the years 1964 - 1969", p. 38.

of employment - from industrial and agricultural manual labour to mechanised labour and the services - demands a broader and a higher level of training. The percentage of professionals of a high educational level, and the percentage of pupils in the total population serve as criteria for the development of a modern nation. The Manpower Planning Authority, within the framework of its projections, has also dealt with manpower at the academic level. An analysis of data concerning supply and demand reveals that there will be a lack of some 2,000 academicians by 1969 [1]. The actual deficiency is even greater than this because of three principal factors:

a. Present plans for the acceleration of research and development have not been taken into account. Such plans call primarily for an appreciable increase in the number of academically trained scientists and research workers.

b. The development of new marketing methods and the modernization of industry will require both senior administrative personnel and highly qualified workers in the commercial services.

c. The proposed inclusion of post-elementary networks within the framework of compulsory education will increase the demand for academically qualified teachers. This

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[1] Manpower Planning Authority: "Projection of Supply, Demand and its Balance from 1964 to 1969", page 13.

expansion has also not been taken into account because, at the time of writing, the time for putting this into effect has not yet been set.

All these factors demand expansion of the higher educational networks - an expansion which necessitates careful planning, both of the networks themselves, and also of the post-elementary educational networks which represent potential university material.

Table D.9 Graduates of Higher Educational Networks by Sex and Faculty in 1963 - 1964 [1]

Faculty:	Engineering	Humanities	Social Sciences	Mathematics Science Agriculture	Law	Medicine	Architecture	Total
Total	317	333	192	349	62	92	28	1,373
Men	310	174	154	239	52	76	23	1,028
Women	7	159	38	110	10	16	5	345

[1] Source: Statistical Yearbook - Central Bureau of Statistics.

Table D.9 presents information concerning graduates of the higher educational networks according to faculty and sex. It is evident that only a quarter of the graduates of the academic institutions of Israel are women. This percentage is very much smaller than that of girls in post-elementary educational networks. A partial explanation of this is the "feminization" of teachers' seminaries which provide an alternative to higher education. This should however be considered together with the constant fall in the proportion of girls in progressively higher classes in the post-elementary educational network.

The proportion of women among graduates varies from one institution to another according to its particular character. There are few women at the Technion [1] in Haifa, and relatively many at the Hebrew University of Jerusalem. Faculties of humanities at the universities, schools of social work and certain branches of natural science, have a considerable female element, while in engineering, social sciences, medicine and law, the number of women is minimal.

The percentage of women in the engineering professions is some 3%, while in the humanities it approaches 50%. 20% of graduates in the social sciences are women. The majority of women graduates in the social sciences are concentrated in branches such as sociology and the social services, in which female dominance is pronounced. In branches such as economics or statistics the number of women is minimal.

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1 Translator's note: Israel Institute of Technology, Haifa.

The concentration of women in these professions is again an expression of the same healthy phenomenon which has been noted in connection with the post-elementary educational networks. The demands of the market result in woman qualifying in those professions which have become characteristically female (social work, nursing and teaching), or in channels which provide a broad general training which equips them for high-level occupations in many and varied fields.

CHAPTER FIVE

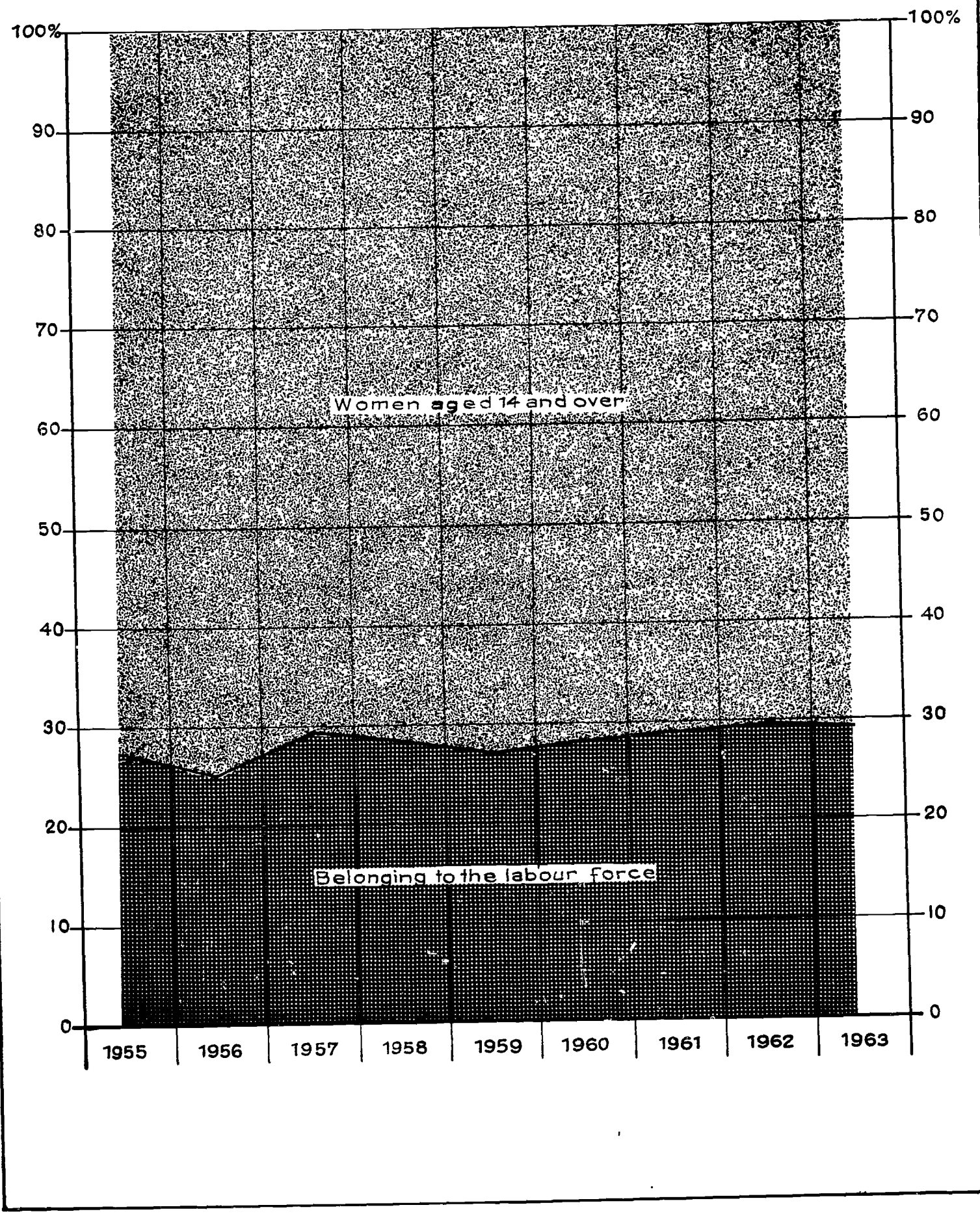
WOMEN IN THE LABOUR FORCE

1. The Total Labour Force

The number of women in the labour force has risen constantly - from 155,000 in 1955 to 226,000 in 1963. Not only has the absolute number increased, but the proportion of women in the labour force of the total number of working age has also steadily increased. While in 1955, 265 out of every 1000 women belonged to the labour force, the number had grown to 286 by 1963 (women aged 14 and over).

The comparative rate of increase in participation of men was lower, and consequently the proportion of women in the total labour force of Israel, rose from 24.6% to 26.8% between 1955 and 1963.

PROPORTION OF WOMEN BELONGING TO THE LABOUR FORCE OF THE TOTAL NUMBER OF WOMEN AGED 14 AND OVER
(yearly development)



2. Participation by Ethnic Group

In 1963 Jewish women contributed more than 28% of the Jewish labour force: the equivalent rate for non-Jewish women was only 12.5% of the total non-Jewish labour force.

a. Non-Jews

The above fact is explained by the minimal participation rate of women from the minorities in the labour force. Only 12% of the total number of non-Jewish women over the age of 14 belonged to the labour force in 1963, as opposed to more than 30% among the equivalent Jewish population of the same age group.

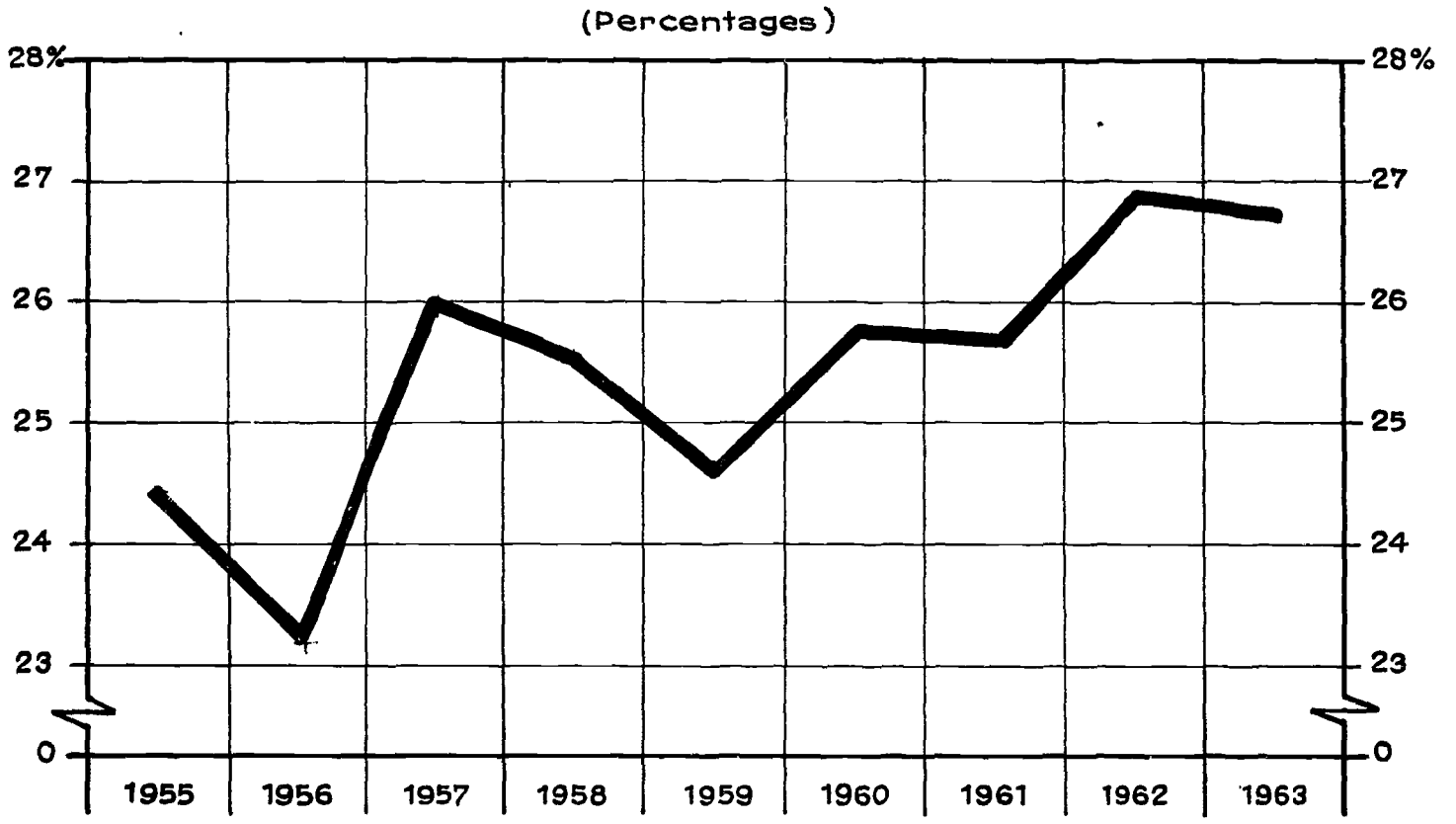
In advanced countries, there is no equivalent to the low participation rates of women of the minorities in Israel. This is, in actuality, a side effect of the low educational level, the traditional objection to the woman working outside the home, and the size of the non-Jewish family, etc. Two other partial explanations are: the difficulties encountered in interviewing such women; and the absence of clearly defined boundaries between housework and agricultural work in the family smallholding.

b. Jews

Similarly, there are considerable differences in the degree of participation among women of the different ethnic groups; while 38 per 100 Israel women belong to the labour force, the equivalent rate for women born in Asia and Africa is only 24, and for those born in Europe and America it is 33 per 100.

Nevertheless, the increase in the participation rates of women born in Asia and Africa, an increase which was most marked in recent years, should not be overlooked. In 1955, only 20.2% of the total number in this group belonged to the labour force, but by 1963 their participation rate had reached 2' %.

PROPORTION OF WOMEN IN THE LABOUR FORCE-YEARLY DEVELOPMENT,
1955-1963
(Percentages)



PROPORTION OF WOMEN IN THE LABOUR FORCE-ACCORDING TO RACE AND ETHNIC GROUP,
1963
(Percentages)

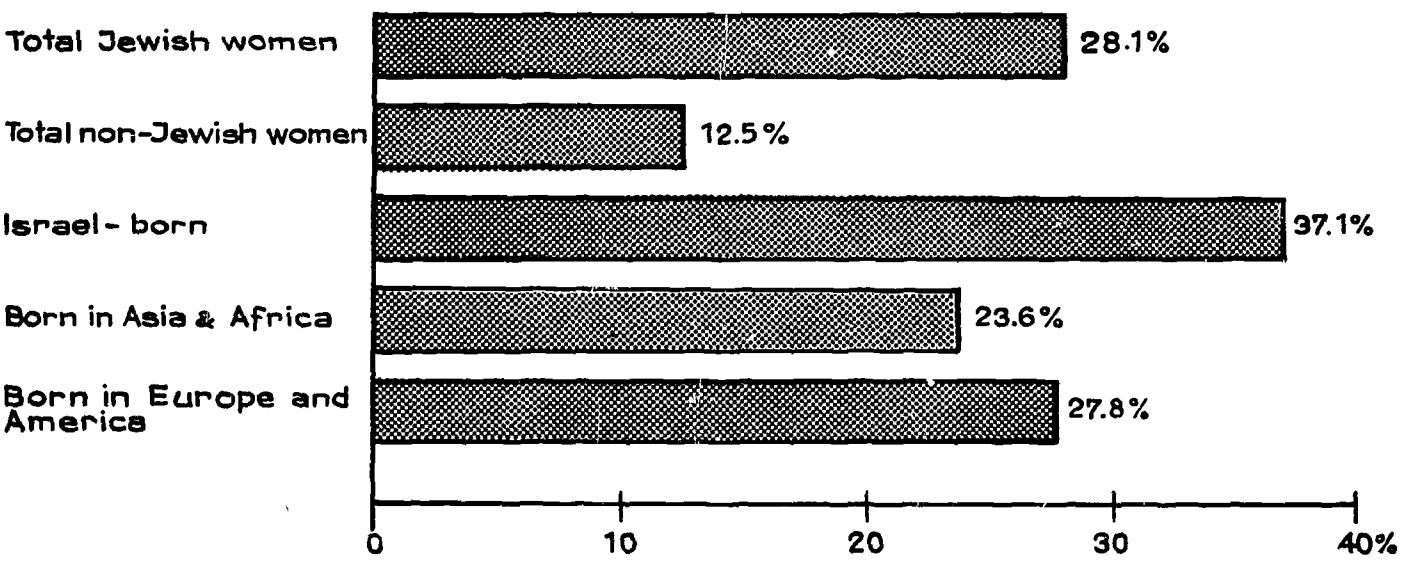


Table E.1 Participation Rates of Women in the Labour Force According to Race and Continent of Origin.[1]

	1955	1959	1963
Total women	26.5	26.1	28.6
Jewish women	27.9	28.0	30.3
Israel-born	37.4	37.8	38.0
Born in Asia and Africa	20.2	20.1	24.0
Born in Europe and America	29.8	31.1	31.7
Non-Jewish women	11.8	7.7	11.9

1
Source: Manpower Surveys, Central Bureau of Statistics.

3. Participation According to Educational Level

As previously stated, her educational level plays a very important part in determining the willingness of the woman to work. Because of lack of data, it is not possible to investigate the educational level of girls from the minorities belonging to the labour force; nevertheless, the correlation between their educational level, which is the lowest of all women in Israel, and their participation rate in the labour force, which is also the lowest, is evident.

Data concerning Jewish women is more readily available, and from it, the close correlation between educational level and participation rates in the labour force, is clear.

Participation rates increase in direct relation to the number of years' schooling of the woman. Of those without any formal education, 14.2% belong to the labour force, as compared to some 58.0% of those with higher education (13 years' study or more). This positive correlation between participation rates and number of years' study, is common to all ethnic groups of the Jewish population.

Although the participation rate of those born in Asia and Africa is lowest, in comparison with that of other groups the difference is very slight; in fact, at the lower educational levels the participation rates are even higher than among the other groups. However, as the percentage of those with no formal education is highest for those born in Asia and Africa, and as the percentage of women at work without education is extremely small, the participation rates of this group are minimal.

Israel-born women have the highest degree of formal education, and they were found to have the highest participation rates of all groups.

Table E.2 Percentage of Jewish Women Belonging to the Labour Force, According to Continent of Origin and Number of Years' Schooling (1963) [1]

Continent of birth	Total	NIL	No. of Years' Schooling 1-4	5-8	9-12	13+
Total Jewish women	30.2	14.2	19.8	27.6	37.1	57.9
Israel-born	38.0	X (2)	X (2)	30.2	31.9	62.0
Asia and Africa	24.0	15.5	(22.6)(3)	28.4	35.4	X (2)
Europe and America	31.9	(7.5)(3)	(17.3)(3)	26.1	36.4	66.9

(1) Source: Central Bureau of Statistics - Manpower Surveys, April - June 1963.

(2) The percentage cannot be calculated as the absolute figures are too small.

(3) Estimated.

The above table indicates clearly the overriding importance of education, and its resultant effect on participation rates of women in the labour force, almost regardless of different ethnic origin. It is obvious that the more education is emphasised in the nation's economy, both quantitively, and most certainly qualitatively, in the long run the result will be broadened scope of the labour force, and an improvement in its standard and contribution to the economy.

4. Participation by Age

It is generally considered that the participation rates of women are low during the period of study (ages 14 - 17), rise until

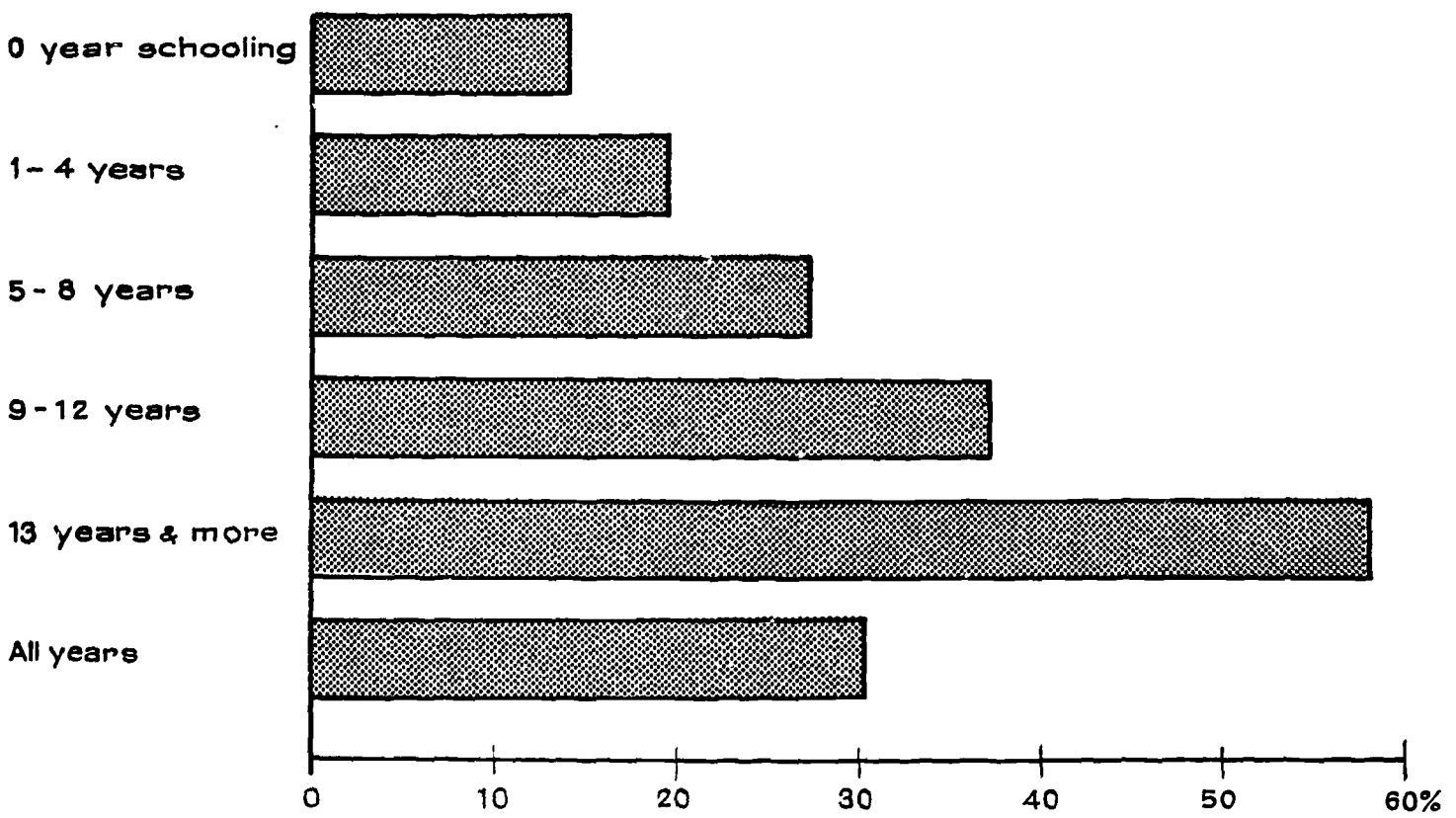
the age of 25; commence to fall during the years of bearing and raising children; rise once again until the age of 45, almost to the previous high level, and thereafter fall as a consequence of retirement, etc.

For women born in Asia and Africa the position is completely different. The highest participation rate is noted among girls aged 14-17, (approximately 35.0% of all girls of this age), and from this age there is a constant decline, (only some 3.0% of women over the age of 65). In addition, the participation rates of girls in this category are higher than the equivalent rates of both Israel-born girls, and those born in Europe and America. This is a consequence of the lower percentage of those studying among girls born in Asia and Africa. The highest participation rates among both those born in Israel, and in Europe and America, are concentrated within the age groups 18 to 34, reaching respectively 48.0% and 44.0% of all women in this age group. The participation rate in the age group 35 to 54 in both these ethnic groups is lower than that in the 18 - 34 group, but higher than that of the equivalent age group among those born in Asia and Africa.

As previously noted, participation of women in the labour force has been constantly increasing during the last few years. This increase has not been of equal importance in all age groups; indeed, the degree of participation of girls, regardless of country of origin, has constantly decreased. The most marked increase was concentrated in the age group 18 to 34, while among other age groups it was extremely modest. The major decline in the rate of girls entering work occurred among

those born in Asia and Africa (from 41.3% in 1956 to approximately 35.0% in 1962). Both within this group, and that born in Europe and America, the major increase in participation rates occurred among those aged 18 to 34. The greatest increase in participation of women aged 35 to 54 occurred among the Israel-born; for those aged 55 and over, it occurred among those born in Europe and America.

PERCENTAGE OF JEWISH WOMEN BELONGING TO THE LABOUR FORCE, BY EDUCATIONAL LEVEL (1963)



PERCENTAGE OF WOMEN BELONGING TO THE LABOUR FORCE BY AGE GROUP
(Yearly development)

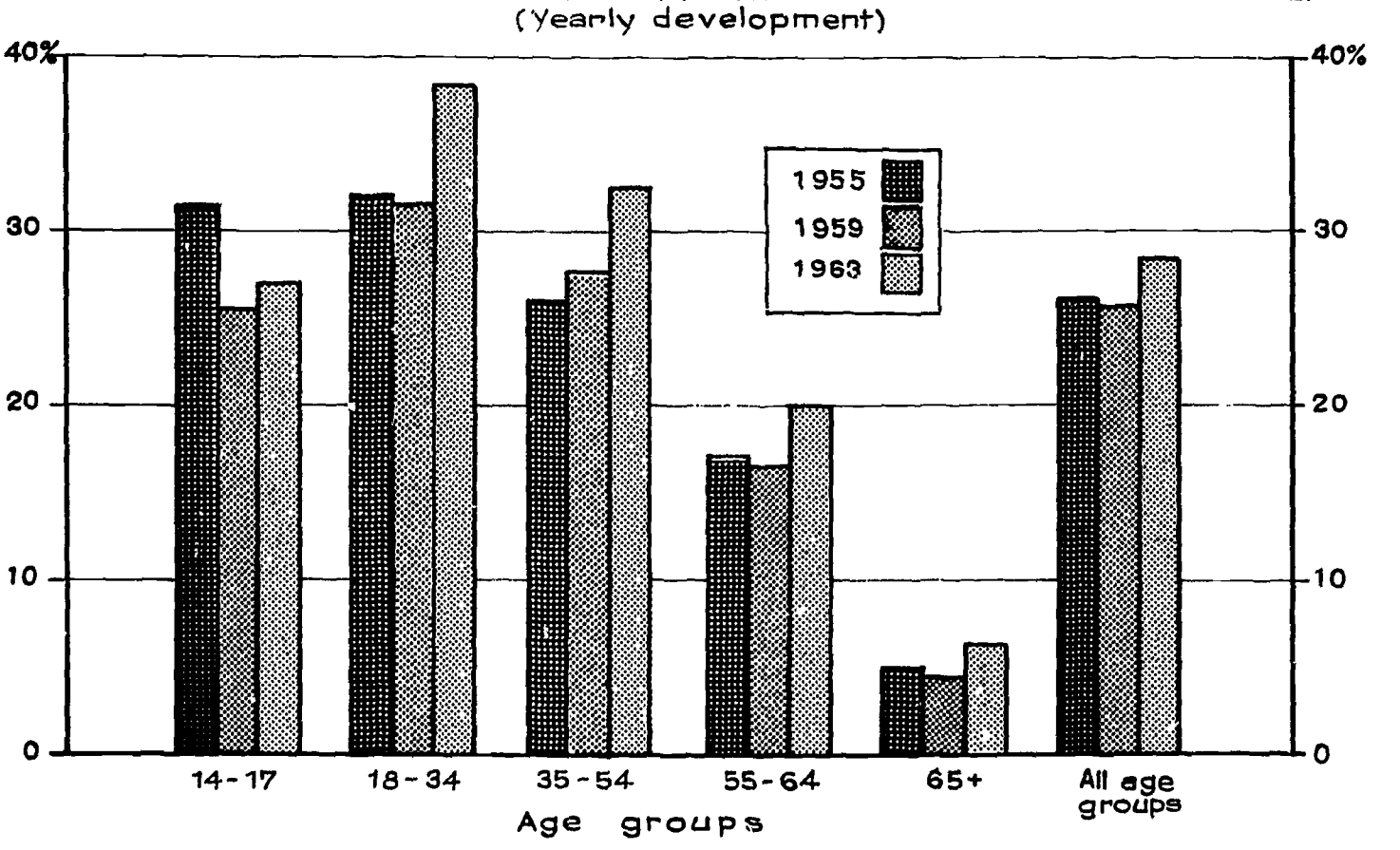


Table E.3 Percentage of Women Belonging to the Labour Force by Race, Continent of Origin and Age Group (1963)[1]

Continent of Origin	Total	Age Group 14-17	18-34	35-54	55-64	65+
Total Women	28.6	26.6	35.5	31.0	19.3	(6.0)
Jewish women	30.3	27.6	38.5	32.4	20.2	6.4
Israel-born	38.0	24.2	49.2	37.0	X	X
Asia and Africa	24.0	36.1	30.7	20.8	(6.5)	(1.4)
Europe and America	31.9	(20.0)	(40.2)	37.3	(26.8)	(9.1)
Non-Jewish Women	12.2	17.2	14.0	11.5	6.5	0.9

[1] Source: Central Bureau of Statistics, Manpower Surveys, 1963.

5. Participation by Family Status

Both the degree of willingness and the ability of married women to work are more restricted than among single women; consequently their participation rates are lower. 42.0% of all unmarried men participate in the labour force as compared with 24.9% of married women.

At the same time, it should be noted that the participation of married women has with certain fluctuations, constantly increased since 1955. These fluctuations are much more marked than those among single women, and apparently are a result of differences in the

number of girls aged 14 to 17 entering the labour market.

The degree of participation of non-Jewish women, both married and unmarried, is considerably lower than for Jewish women. In 1962, 44% of unmarried Jewish women belonged to the labour force as opposed to 33% of unmarried non-Jewish women; and 27% of married Jewish women as opposed to only 12% of their counterparts among the minorities.[1]

These facts establish that the participation rates of non-Jewish women are the lowest, while the lowest rates among Jewish women are found in those born in Asia and Africa. This picture is identical with that revealed in the educational distribution of Israel women.

In addition, it appears that women with larger families are less able to work. It also appears that family size bears an inverse ratio to educational level, and thus represents an additional handicap both to girls of the minorities, and to Jewish women born in Asia and Africa, who want to work outside the home.

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1 Based on data from Manpower Surveys, 1963.

The previous chapter dealt with the extent of women and their participation rates in the labour force, but not all those entering the labour market are satisfactorily absorbed in it.

The absorption of a women depends on both her abilities and demands, and on the type of employment available in her neighbourhood, the conditions, etc. Women who are unsuccessful at being satisfactorily absorbed at work of any description, but who continue to seek employment, are defined as "unemployed."

Concomittant with the economic improvement since the middle 1950's, the employment situation has also improved, i.e. the proportion of unemployed among the total labour force has constantly fallen. In other words, the proportion of both men and women actually employed in the total labour force has risen.

Nevertheless, the level of employment of women remains lower than that of men. It is possible that the reasons for this are the lower educational level of women, and the labour laws and problems bound up with the employment of women which tend to discourage the prospective employer. In 1963, the proportion of women employed was 95.0% of all those in the labour force, while it was 97.0% among men.

1. Ethnic Composition of Working Women

The employment rate of Jewish women has risen to 95.0%, despite sharp differences between the different ethnic groups. More than 94.0% of those born in Europe and America were employed, while the rate among Israel-born reached 95.5%, and only approximately

91.0% among those born in Eastern countries.

Another interesting fact is that the employment rate among those women who have been a long time in the country (those settling in Israel before the establishment of the State), is considerably greater than that of new arrivals, both from Eastern and Western countries. But the difference between the number of employed in each group according to length of residence in Israel is constantly contracting with the improved employment situation.

Table 5.1 Percentage of Working Jewish Women in the Total Labour Force, by Continent of Birth and Length of Time in Israel [1]

	1955	1959	1963
Total Jewish Women	91.9	93.6	95.2
Israel - born	89.0	93.6	95.5
Born in Asia and Africa	88.0	88.5	91.2
Immigrated before 1947	93.9	94.4	94.1
Immigrated after 1948	86.6	87.7	90.9
Born in Europe and America	94.4	96.0	94.3
Immigrated before 1947	96.8	98.6	98.5
Immigrated after 1948	91.7	93.8	96.4

1

Source: Manpower Surveys, Central Bureau of Statistics.

2. Working Women by Educational Level

The probability of the satisfactory absorption of a woman in work depends on the level of her skills. This is common for all educational levels excepting that of the lowest - those lacking all formal education, in whom the employment rate is, in fact, the highest of all. The rate of those in this category commencing work is the lowest; however, those who do eventually seek work are, apparently, prepared to accept employment of any description.

For the higher educational levels it appears that, the greater the number of years study, the higher are the rates of satisfactory absorption in the labour market.

3. Working Women by Age Group

The rate of unemployment is particularly high among girls aged up to 17. This is common for all girls, but is especially marked among those born in Asia and Africa; this means that the likelihood of girls in this age group being satisfactorily absorbed in the labour market is less than for those with a higher educational level.

The employment rate of girls in the 14 - 17 age group ranges from 79.5% (for those born in Asia and Africa) to 86.8% (among Israel-born). For the other age groups, the employment rate of all women in the labour force fluctuates around 97.0% excepting for the 18 to 34 age group born in Asia and Africa.

4. Occupations of Working Women

What work do employed women undertake ? Here also there is no consistent picture. Jewish women are mainly concentrated in the free professions, administration, and the services (21.5%, 18.3% and 24.3% of all working women, respectively). By contrast, some two-thirds of non-Jewish women are employed in agricultural occupations. 15% of Jewish working women are employed in industry as compared to some 8.0% of non-Jewish women.

Table F.2 Distribution of Working Women by Occupation, Race and Continent of Origin, 1963 [1]

(percentages)

	Total working women (thousands)	Free trades	Administration and clerical	Trades and commerce	Agricultural work	Transport crafts and building	Industry	Services
Total women	215.3	21.4	17.6	8.7	13.0	0.8	14.5	23.6
Jewish women	206.9	21.5	18.3	9.0	11.0	0.9	14.8	24.3
Non-Jewish women	8.4	17.9	2.4	2.4	64.3	-	8.3	6.0

[1] Source: Manpower Surveys, 1963, Central Bureau of Statistics.

The occupational distribution of women constantly fluctuates and apart from a decline in the number of those employed in trades and commerce, there is virtually no clear trend.

Among Jewish women, the number engaged in administrative work has increased and since 1958, less women are engaged in agricultural trades and commerce.

The results of a study of the occupational division of Jewish women by country of origin is of primary interest. The Israel-born are concentrated in the free trades and in administrative work (although this represents only some 23.0% of the total number of working women, their proportion in the above trades reaches 36.0%).

Conversely, women born in Asia and Africa are concentrated in less complex occupations, e.g. the services and agriculture. This group constitutes more than 45.0% of all women employed in agriculture and almost 39.0% of those employed in the services, although they represent only 24.0% of the total number of Jewish working women.

Women with a relatively low educational level, represent only some 10% of all those working in the free trades and some 13.0% of those engaged in administrative work.

Characteristic of working women of Western origin is their heavy concentration in trades and commerce.

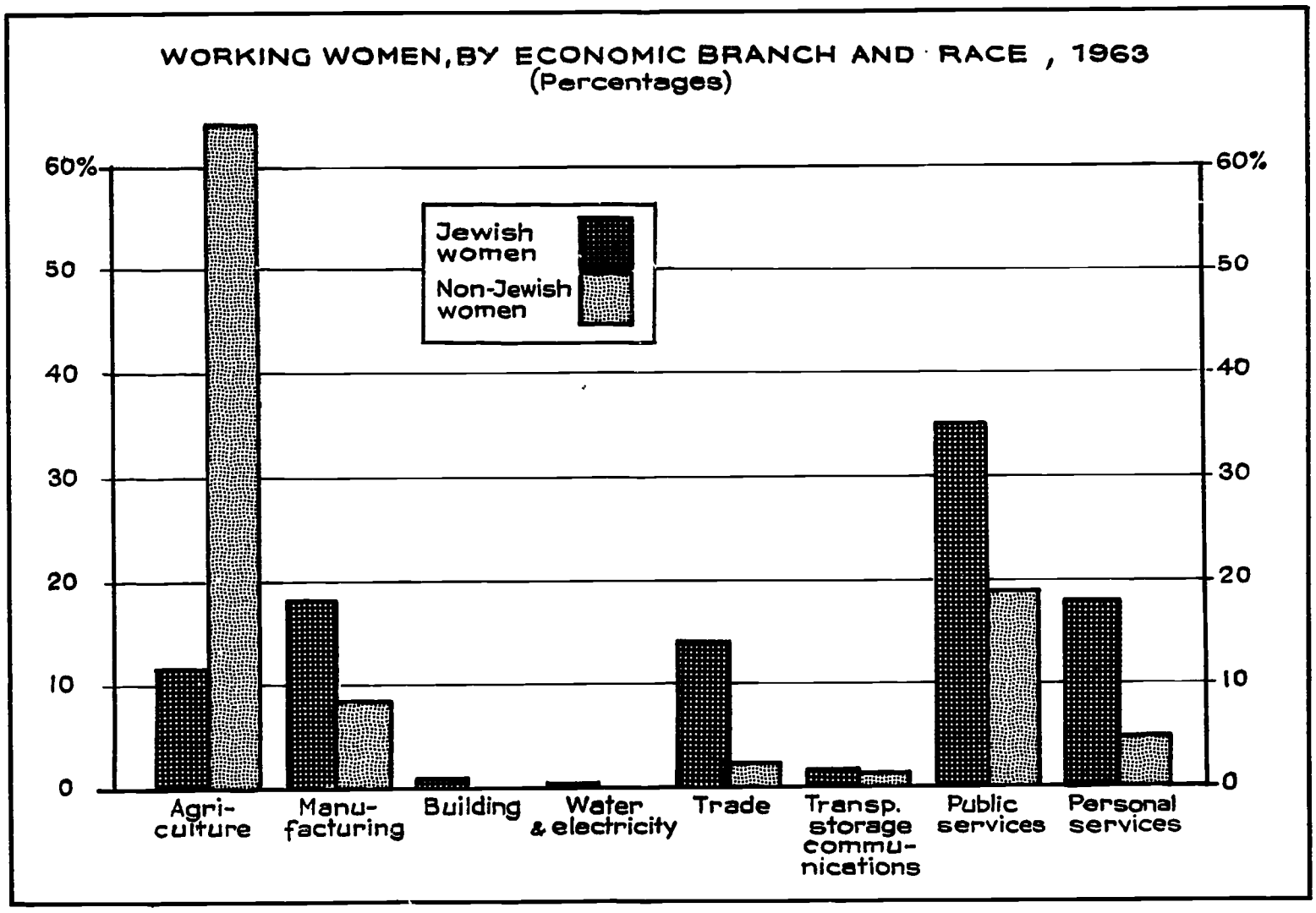
Table F.3 Distribution of Working Jewish Women, by Occupation and Continent of Origin (1961) [1]

Continent of origin	Total working women	Occupation: Free trades	Administration and Clerical	Trades and commerce	Agricultural work	Transport handicrafts and building	Services
	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	23.4	35.9	35.6	8.5	16.6	15.2	16.0
	27.0	10.4	13.0	18.1	45.3	41.6	38.7
	49.6	53.6	51.4	73.4	38.1	43.2	45.3

1 Source: Census of Population and Housing - 1961

5. Distribution of Working Women by Economic Branch

As far as it is possible to delineate the occupational distribution of women, it appears that the majority (some 52.0%) are employed in the services, predominantly in the public services, with the remainder in personal services. But when occupational distribution according to race is examined the picture is entirely different. Almost two-thirds of working non-Jewish women are concentrated in agriculture. The second largest concentration of Jewish women is in manufacturing (18%), and of non-Jewish women, in the services (23.8%)


WORKING WOMEN, BY ECONOMIC BRANCH AND RACE , 1963
(Percentages)
60%
50
40
30
20
10
0
Jewish women
Non-Jewish women
Agri-culture
Manu-facturing
Building
Water & electricity
Trade
Transp. storage commu-nications
Public services
Personal services

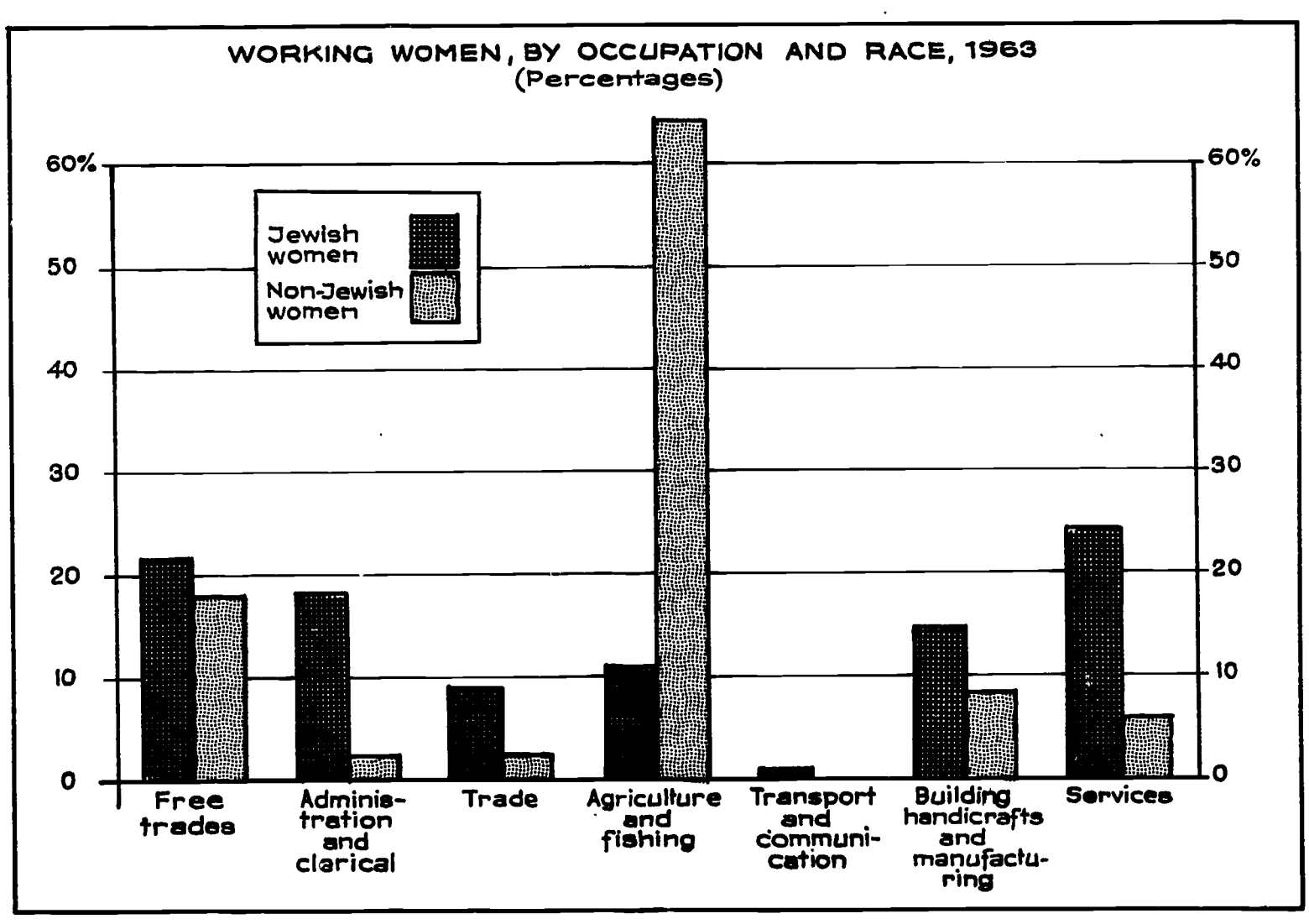

WORKING WOMEN, BY OCCUPATION AND RACE, 1963
(Percentages)
60%
50
40
30
20
10
0
Jewish women
Non-Jewish women
Free trades
Adminis-tration and clarical
Trade
Agriculture and fishing
Transport and communi-cation
Building handicrafts and manufactu-ring
Services

Table F.4 Distribution of Working Women by Economical Branch and Race 1963 [1] (percentages)

	Total Working Women	Jewish Women	Non-Jewish Women
Total working women (thousands)	215.3	206.9	8.4
Total (percentage)	100.0	100.0	100.0
Agriculture	13.6	11.5	64.3
Manufacturing	17.8	18.1	8.3
Building	0.7	0.8	-
Water, electricity, Sanitation	0.4	0.4	-
Trade	13.8	14.3	2.4
Transport, storage, communications	1.6	1.6	1.2
Total services	52.1	53.3	23.8
public services	34.7	35.3	19.0
personal services	17.4	18.0	4.8

1 Source: Manpower Surveys, 1963, Central Bureau of Statistics.

6. The Nature of Employment

The contribution of women to the labour force is measured not only by rates of participation, but also by the degree of successful absorption. A factor of primary importance is the rate of employment of women who wish to work. Furthermore, the employment rate

of those women already satisfactorily absorbed, must also be taken into account. An additional factor is now evident - that of the value of the remuneration received by the working woman.

Because free time is more limited among women, particularly married women, they are more inclined to work on a part-time basis.

Only one-tenth of men work part-time; the equivalent rate for women is almost one-third.

The largest proportion of women engaged in full-time employment is in the age group 18-34 (76.3%), while the largest proportion of those working part-time is among those over the age of 55 (45.7%).

Therefore any discussion of an increase of participation rates of women must take into account the part-time element.

7. Absenteeism

Absentee rates are higher for women than men. This is probably related to the need to care for children during illness, etc. Not only is the absentee rate for illness higher among women than among men, but the number of days absence from work is also higher. While women absent themselves from work to a greater extent than men, each period of absence is actually shorter.

Table F.5 Absenteeism due to Illness, by Sex [1]

	Percentage of workers absent	Average annual days' absence	Average duration of absence	Rate of frequency of absence
Total workers	68.0	14.0	4.8	2.9
Men	67.5	13.7	4.9	2.8
Women	75.5	15.3	4.3	3.6

1
Source: "Causes of Absenteeism and Methods for its Reduction" Israel Management Centre, April 1963, page 12.

Even where absenteeism resulting from reasons other than those mentioned are concerned, the rate among women is higher than among men - (55.0% as opposed to 42.0%). Similarly, the rate of frequency of absence is also higher among women (5.3) than among men (3.6) [1]

Absenteeism as a result of childbirth has not been included in the above data, although it undoubtedly accounts for a rise in absentee rates. This provides a partial explanation for the reluctance of employers to employ women which is reflected in the higher unemployment rates of women.

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[1] See reference to Table F.5 (page 19).

CHAPTER SEVEN

WOMEN AND UNEMPLOYMENT [1]

1. Proportion of Unemployed Women in the Total Labour Force

The group of women designated as "unemployed" includes those who have entered the labour market but, for various reasons, have not been satisfactorily absorbed. It has already been noted that the proportion of unemployed in the total labour force is higher among women than among men. (In 1963 4.7% of women; 3.1% of men). Women represent approximately 27.0% of the labour force but 36.0% [2] of the total number of unemployed. The proportion of the total number of unemployed actually registered at Employment Bureaus is higher, and in 1963 reached 44.3% [3]. The proportion of unemployed women is increasing - 18.8% in 1955, 42.0% in 1962, and 44.3% in 1963. This parallels the rise in the proportion of women among the total seeking work registered at Employment Bureaus - from 33.0% in 1960 to 38.0% in 1963.

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1 This chapter is based on publications of the Employment Service.

2 Based on data of the Manpower Survey, 1963 - Central Bureau of Statistics.

3 "The Employment Service in Figures", 1963 Pamphlet No.5 1964.

Table G.1 Percentage of Women of the Total Registered and Unemployed at Employment Bureaus (adults)

Year	Women among total registered [1]	Women among total daily average unemployed [2]
1955	33.1	30.4
1961	35.9	39.0
1962	36.7	42.1
1963	37.9	44.3

1 Based on data of the Manpower Survey, 1963 - Central Bureau of Statistics.

2 "The Employment Service in Figures" 1963, Pamphlet 5, 1964.

The above table shows that the proportion of women among the unemployed is larger than among the total registered at the Employment Bureaus, i.e., the probability of more rapid absorption at work is greater for men than women.

2. Depth of Unemployment among Women

The depth of unemployment is greater for women than men - while 25.4% of men seeking work were never unemployed, the equivalent rate for women was only 16.0%. The average number of days of unemployment was 4.1 for men and 5.2 for women.

3. Distribution by Age and Ethnic Group

The age composition of women seeking work (adults over the age of 18) is different from that of the female labour force as a whole. While women aged 18 to 34 account for only some 47.0%, of the female labour force, they represent 63.0% of those registering at Employment Bureaus.

Similarly, the ethnic composition of the unemployed is entirely different to that of the female labour force itself. The most pronounced difference is that among women born in Asia and Africa who constitute only 28.1% of the labour force, but 58.0% of all those registered at Employment Bureaus.

Table G.2 Distribution of Jewish Women in the Labour Force and Registered at Employment Bureaus by Continent of Origin, 1963 [1]

Continent of Origin	Labour Force	Registered at Employment Bureaus
Total Jewish women	100.0	100.0
Israel-born	23.3	17.2
Asia and Africa	28.1	58.0
Europe and America	48.6	24.8

1 Source: See Table G.1

The above table again shows that unemployment rates are highest among women born in Asia and Africa.

Another important characteristic of those registered at Employment Bureaus is the small number of long-time residents of Israel. They constitute 30.8% of the labour force but only 7.7% of those registered at the bureaus, i.e., the longer the length of residence in Israel, the smaller the proportion of those requiring assistance from the Bureaus; and conversely, the shorter the length of residence, the greater the demand for the Employment Bureaus.

Table G.3 Distribution of Jewish Women in the Labour Force and Registered at Employment Bureaus by Continent of Origin and Length of Residence in Israel [1]

	Labour force	Registered at employment bureaus
Total Jewish women born abroad	100.0	100.0
Immigrated before 1947	30.8	7.7
Immigrated after 1948	69.2	92.3
Born in Asia and Africa	100.0	100.0
Immigrated before 1947	8.3	3.5
Immigrated after 1948	91.7	96.5
Born in Europe and America	100.0	100.0
Immigrated before 1947	43.8	16.5
Immigrated after 1948	56.2	83.5

[1] Source: See Table G.1

The majority of those seeking work through Employment Bureaus are unskilled - a situation which reinforces the need for expansion of education and training. Here too, the highest percentage of unskilled is among those born in Asia and Africa.

4. The Professional Structure of the Unemployed

Among all those seeking work, the proportion of unskilled is 52.6% for the Israel-born, but reaches 72.6% for those born in Asia and Africa. The proportion of unskilled women increases steadily parallel with a rise in age. Among those aged 18 to 34, the proportion of unskilled reaches almost 62.0%, while in the age group 55 to 64 the proportion is more than 82.0%. The proportion drops slightly among women over the age of 65, reaching 77.5%.

Similarly, the proportion of unskilled among those seeking work is inversely correlated with the length of residence in Israel:-

Year of entry into Israel	% Unskilled
Before 1947	42
- 1958	54
- 1963	80+

Finally the unemployed female population is, to a large extent, composed of unskilled women who are younger than the average of the total female labour force. The high proportion of those without education and training is particularly marked among those born in Asia and Africa, and in general among new immigrants.

CHAPTER EIGHT

PROJECTION OF SUPPLY AND DEMAND IN THE LABOUR FORCE UP TO 1969

1. General

A projection of the probably required labour force provides an index to its size, level, and professional composition in the period projected. Furthermore, projection of supply provides information concerning the extent of manpower, according to the same criteria, which will be available to the economy during this period.

Comparison of supply with demand, therefore provides an indication of overall deficiency or surplus of labour and the deficiency or surplus of workers of a certain level or in a specific occupation. In the light of these preliminary conclusions, more adequate methods of achieving a balance between supply and demand in the labour force can be determined, so that the consequences of deficiency or surplus can be avoided, either by improving the exploitation of the labour force, by raising its level, or by increasing the degree of participation of the population in it, etc.

2. Limitations of the Projections

One of the limitations of the method used, is that it does not permit specific projections of supply and demand for women *per se* in the labour force. This can be done, however, for specific occupations which are preponderantly "female" in nature, and which demand special preliminary training, within specific educational and training networks, e.g. nursing.

It is nevertheless possible to reach some conclusions concerning the growth rate of women in the labour force, by means of annual data but any such conclusion is dependent on a series of factors, the inaccuracy of any one of which will tend to alter the whole picture. These factors do not concern the labour force only, but mainly the development of the entire economy, its social aims, etc.

It is possible to arrive at an estimate of the number of women who will participate in the labour force, and an estimate of supply and demand in specific occupations. For the rest, only the most general conclusions concerning the professional level likely to be achieved by women can be deduced.

However, as specific data has not been obtained, it is not possible to establish exactly in which professions women will find employment. As far as demand is concerned, the position is also complex: the likely demand for each level and in each occupation can be determined, but it is not possible to determine whether the demand will be for female or male workers.

The result of these limitations is that it is not possible to determine whether there will be a shortage of women in the labour force, or that a deficiency or surplus, (excluding specifically "female" professions), refers to men or women.

The Manpower Planning Authority has recently completed projections of supply, demand and the balance between them, up to the year 1969. Projections of supply have been based on past development, and the emphasis has been placed on economic development programmes during the years projected.

3. **Methods of Establishing the Projections**

Participation rates have been projected for each age group of each ethnic group. These rates have been determined after taking into account the following factors:

a. The participation rate for the first year projected has been established from the average rates for the years 1960 to 1962. Development has been projected on the basis of the rate of development in the last few years.

b. In the determination of participation rates, external factors exerting an influence have been taken into consideration, e.g. reduction in the period of military service for girls, and expansion of educational and vocational training networks.

c. In groups where data is not available, it has been assumed that participation rates have remained constant throughout the period under consideration.

d. As far as women are concerned, the projection has been aided by additional data of an external nature. On the basis of development of participation rates of women in the U.S.A. an attempt has been made to draw a comparison with the development in Israel. The present participation rates of women in the labour force of Israel are similar to those in the U.S.A. at the beginning of the 1950's.

On the basis of these assumptions, the following conclusions have been arrived at:

4. Projection of Participation Rates of Women in the Labour Force

a. Participation rates of women, particularly Jewish women, will rise steadily. This increase in the participation of Jewish women in the labour force will occur in all ethnic groups, but not in each age group. The participation of girls up to the age of 17 is likely to drop, (from 26.8% in 1962 to 24.9% by 1969), as a consequence of the increase in the rate of those studying. The most marked rise will occur in the age group 18 to 34, (from 38.9% to 43.3%), and then, among women up to the age of 64. Conversely, the increase in participation of women over the age of 65 will be smaller (from 7.3% in 1962 to 8.2% by 1969).

b. In the light of these projected rates, the number of women in the labour force will reach 308,300 by 1969. As the growth of the participation rates of men is likely to be smaller, the relative proportion of women in the labour force will continue to rise, and will reach 27.8% in 1969, compared with 26.8% in 1963.

c. A number of changes are foreseen in the ethnic structure of women in the labour force; on the one hand changes resulting from differences in the ethnic and age structure of the total female population, and on the other, anticipated changes in specific participation rates.

Table H.1 Projection of the Participation Rates of Women in the Labour Force, according to Race, for the Years 1965 to 1969 [1]

	1965	1966	1967	1968	1969
Total women	28.8	29.2	29.6	30.0	30.4
14 - 17	25.2	25.0	24.9	24.6	24.4
18 - 34	36.8	37.8	38.7	39.5	40.3
35 - 54	30.9	31.3	31.7	32.0	32.3
55 - 64	19.8	20.4	20.9	21.4	21.6
65+	7.6	7.7	7.7	7.7	7.8
Jewish women	30.4	30.8	31.2	31.6	31.9
14 - 17	26.0	25.7	25.6	25.2	24.9
18 - 34	39.8	40.9	41.7	42.6	43.3
35 - 54	32.3	32.6	33.0	33.4	33.7
55 - 64	20.7	21.3	21.9	22.3	22.6
65+	8.0	8.1	8.2	8.2	8.2
Non-Jewish women	12.9	13.3	13.5	14.0	14.6
14 - 17	17.7	18.4	19.1	19.8	20.5
18 - 34	14.8	15.1	15.4	15.7	16.0
35 - 54	12.5	13.0	13.5	14.0	14.5
55 - 64	6.0	6.0	6.0	6.0	6.0
65+	2.5	2.5	2.5	2.5	2.5

[1] Source: Manpower Planning Authority, Projection of Supply, pages 20, 21, 25.

The relative proportion of non-Jewish women is likely to rise (from 3.7% in 1963 to 4.2% by 1969). Concomitantly, changes will also occur in the ethnic structure of Jewish women in the labour force. The proportion of those born abroad, and in particular, those born in Europe and America, will drop, while there will be a rise in the proportion of those born in Israel (from 23.3% to 29.9%). Nevertheless, those born in Western countries will still represent the majority of women in the labour force (some 44.0%).

5. Distribution of Total Supply of Manpower According to Professional level

5.3% of the total supply will be academic, 9.0% technical, 28.6% skilled, and more than half - 57.1% - will be on a semi - and unskilled level.

There will be a demand for 1,081,100 workers by 1969, i.e. there will be a surplus of 30,000 workers. However, the whole or even more of this surplus, will be concentrated in the lower levels of the labour force, while among the higher levels, there will actually be a deficiency. Nevertheless, the projected surplus reveals that there is no call for special efforts in order to introduce new groups into the labour force, except for those in specific levels or occupations.

Table H.2 Projections of Supply, Demand and Balance of the Labour Force according to Professional Level, 1969 [1]

	Surplus	Demand	Balance [2]
Total	1,111,000	1,081,100	(+) 29,900
Academic	58,900	60,900	(-) 2,000
Technical	99,800	105,900	(-) 6,100
Skilled	317,400	313,500	(+) 4,100
Semi-and unskilled	634,900	600,800	(+) 33,900

[1] Source: "Manpower: Its Supply and Demand and Proposals for their Balance", Ministry of Labour, Manpower Planning Authority.

[2] - Deficiency of workers + Surplus of workers

The balance reveals a deficiency of workers at the academic and technical levels; i.e. in 1969, the economy will lack workers with post-secondary and academic training. Furthermore, at the technical level, the over-supply apparently represents manpower without specific training, and there will actually be a deficiency of teachers and nurses. This deficiency has special implications for the training of women, as all nurses, and the majority of teachers are women.

In view of the short period of time confronting the economy, it is not known whether it will be possible to regulate the labour force by means of the educational and vocational networks during the

period projected. But there is no doubt that the emphasis must be placed on raising the education level of the population in general, and that of women in particular.

APPENDIX: WORKING WOMEN - INTERNATIONAL COMPARISONS

The degree of participation of women in the labour force of Israel is, despite its upward trend, lower than that of women in advanced nations, e.g. U.S.A., Canada, France and Denmark (see Table 1 below). The roots of this phenomenon lie in the low educational level of Jewish women born in Asia and Africa, and women of the minorities. The low participation rates of these two groups reduce the overall rates for Israel women.

Table 1 Participation of Women in the Labour Force - International Comparisons[1]

Country	Year	Percentage of women in the labour force	Participation rates by age group 14-19	20-64	65+
Canada	1962	32.0	34.2	32.6	6.7
USA	1962	32.8	28.7	42.9	9.5
Chile	1960	22.0	28.4	28.6	13.2
Denmark	1962	30.7	66.7	37.9	7.4
France	1958	33.4	49.4	43.0	12.4
Italy	1962	28.1	41.3	30.9	5.6
Israel-total[2]	1963	26.8	26.6(1)	31.3	6.0
Jewish women	1963	28.0	27.6(1)	33.1	6.4
Minorities	1963	12.4	17.3(1)	12.2	(1.7) (3)

1 Source: (excluding Israel) ILO Yearbook of Labour Statistics, 1963.

2 Participation rates of women in the age groups 14-17, 18-64, 65+ .

3 Estimated Rate.

Although one should, for reasons to be explained, refrain from comparisons of this nature, it is possible to reach a general impression of the function of women in the labour force of Israel compared to that of other countries.

Reservations concerning these comparisons arise from the fact that the proportion of women in the labour force (see column 2 in Table 2 below) is considered as a proportion of both the total population of working age, and of the participation rates of men and women in the labour force. The ratio between men and women is not equal in all countries, and thus this will be a source of error in these comparisons.

Nevertheless, it should be noted that the percentage of women belonging to the labour force of Israel has increased almost constantly. This growth is common to both Jewish and non-Jewish women, but is particularly marked for Jewish women.

In order to arrive at a definition of those belonging to the labour force, in both Israel and the USA, a comparison of participation rates will be drawn between women in these two countries.

Table 2 Participation Rates of Women in the Labour Force of Israel and the USA, By Age Group [1] (1962)

		I S R A E L				
		J e w i s h				
1	2	3	4	5 Born in Asia and Africa	6 Born in Europe and America	7
	USA	Total	Total	Israel			Non-Jewish women
Total women	36.7	29.2	30.3	37.7	24.3	32.4	12.0
14-17	19.2	26.6	26.8	21.9	(35.2)(2)	22.3	12.9
18-34	35.8	36.4	38.9	48.8	30.2	44.0	12.6
35-54	46.6	31.4	31.9	32.5	(19.9)(2)	37.3	12.0
55-64	38.7	18.7	19.6	x	(6.3)(2)	25.2	11.7
65+	9.9	6.8	7.3	x	(2.9)(2)	9.7	7.4

1
Source: Column 1: UN Department of Labour, Manpower Report of the President, March, 1963.

Columns 2 to 6: Manpower Surveys, 1962, Central Bureau of Statistics.

Column 7: Census of Population and Housing, 1961.

2
Estimated Rate.

Table 2 underlines the considerable difference that existed in 1962, in the participation rates of Israel women in the labour force and those of their American counterparts. While in Israel, some 29 out of every 100 women aged 14 and over belonged to the labour force, the rate in the USA reached almost 37 per 100 women.

It appears that the differences are concentrated among women aged over 35. While in the USA, it is customary for women aged 35 and over to commence, or to return, to work, in Israel this category leaves work at a rate which increases with age. It is conceivable that the disparity in participation rates of women aged 35 and over in the two countries may be explained by the large differences in the educational level of women, that of women in the USA over the age of 25 being considerably higher than that of their Israel counterparts. While the median number of years study of American women aged 25 and over reached approximately 11 years in 1960, the equivalent median among Israel women was only some 6.3 years.

Nonetheless, the degree of participation of Israel women under 35 years is higher than that of American women, the major difference is, largely, the result of the lower rates of study of Israel girls.

Columns 3 - 7 show that part of the differential may be explained by differences between the various ethnic groups of Israel.

The participation rates of women of the minorities in Israel are extremely low by comparison with Jewish women, and even lower when compared to American women. However, the participation in the labour force of Jewish women born in Israel

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[1] Source: Statistical Abstracts of the U.S.A., 1963.

[2] Source: Central Bureau of Statistics, "Information from Educational Statistics", November, 1963.

is higher than that of American women, but in this case too, the participation rate drops after the age of 35.

The degree of participation of those born in Western countries is not appreciably less than that of American women, while the overall participation rate of those born in Asia and Africa is only some two-thirds of that of American women.

It is interesting to note that the degree of participation of girls born in Africa and Asia is almost double that of American girls, while that of girls born in Israel and Western countries is virtually no higher than that of their American counterparts. This phenomenon is, as has been noted, closely connected with the rates of study - the rate for girls aged 14 to 17 born in Asia and Africa is the lowest and their participation rate is the highest.

PUBLICATIONS OF THE MANPOWER PLANNING AUTHORITY

1. Manpower in Israel, "Annual Report" - May 1964.

2. Manpower Research, "Doctors" - May 1964

3. Projection of Manpower, "Supply in the Years 1964 to 1969" - September 1964

4. Projection of Manpower, "Demand in the years 1964 to 1969" - September 1964

5. Projection of Manpower, "Supply, Demand, and Recommendations for their Balance for the years 1964 to 1969" - September 1964.

6. Manpower in Development Towns - December 1964

VT 008 819
Work Experience in Puerto Rico: Calendar Year 1968. Special Labor Force Report Number 57.

Puerto Rico Dept. of Labor, San Juan. Labor Force Statistics Div.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 13p.

*LABOR FORCE; *WORK EXPERIENCE; *INDUSTRY; *OCCUPATIONS; *TABLES (DATA); WORKING WOMEN; MALES
PUERTO RICO

Information on the work experience of Puerto Rico's labor force is presented for the calendar years 1967 and 1968. Information is reported in tabular form for the civilian non-institutional population for 14-year-olds and over, concerning the number of weeks worked during the year, the average number of hours worked per week, main occupation, and industry. Of the estimated total of 584,000 males who worked in 1968, 67.7 percent worked steadily, while among the 267,000 women who worked, 60.1 percent worked steadily. The industry group with the highest portion of steady workers was public administration, while agriculture had the lowest proportion of steady workers. Among males the occupational groups with the highest proportions of persons working steadily were those of proprietors, managers, and officials. Among women the job steadiness was highest for the group of professional and semi-professional workers. In general the work experience for the labor force during 1968 was similar to that registered in 1967. (CH)

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Estado Libre Asociado de Puerto Rico - The Commonwealth of Puerto Rico
DEPARTAMENTO DEL TRABAJO - DEPARTMENT OF LABOR
Julia Rivera de Vincenti - Secretaria - Secretary

REGULARIDAD DE TRABAJO EN PUERTO RICO: AÑO NATURAL 1968
WORK EXPERIENCE IN PUERTO RICO: CALENDAR YEAR 1968

Informe Especial Número 57 Sobre el Grupo Trabajador

Special Labor Force Report Number 57

NEGOCIADO DE ESTADISTICAS DEL TRABAJO - BUREAU OF LABOR STATISTICS
Rubén A. Vilches - Director
DIVISION DE ESTADISTICAS SOBRE EL GRUPO TRABAJADOR - LABOR FORCE STATISTICS DIVISION
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Regularidad de Trabajo en Puerto Rico
Año Natural 1968

Introducción

Este informe presenta datos sobre regularidad de trabajo para los años naturales 1968 y 1967. La información sobre regularidad de trabajo se obtiene conjuntamente con la encuesta sobre el grupo trabajador realizada en enero, inmediatamente después de la terminación del año natural bajo estudio.

Se obtiene información sobre el número de semanas trabajadas durante el año, el promedio de horas trabajadas cada semana, ocupación principal e industria. A base de la información obtenida, todas las personas que trabajaron durante el año se dividen en dos grupos:

a. aquellos que trabajaron <u>regularmente</u>, esto es, 40 semanas o más durante el año y 30 horas o más a la semana.

b. aquellos que trabajaron <u>ocasionalmente</u>, esto es, menos de 40 semanas durante el año y/o menos de 30 horas a la semana.

El estudio sobre regularidad de trabajo de la población civil no institucional de 14 años y más incluye trabajo en y fuera de Puerto Rico. Por otro lado, excluye aquellas personas que trabajaron en Puerto Rico, pero que estaban ausentes al momento de la enumeración.

Por lo tanto, esta información describe la regularidad de trabajo de la población civil no institucional de 14 años y más residiendo en Puerto Rico a la fecha de la enumeración.

Work Experience in Puerto Rico
Calendar Year 1968

Introduction

This report presents data on work experience for calendar years 1968 and 1967. Information on work experience is obtained jointly with the January labor force survey, undertaken immediately after the end of the calendar year under study.

Information is obtained on the number of weeks worked during the year, the average number of hours worked per week, main occupation and industry. On the basis of the data obtained, all persons who had worked during the year are divided into two groups:

a. those who worked <u>steadily</u>, i. e., 40 weeks or more during the year and 30 hours or more per week.

b. those who worked <u>intermittently</u>, i. e., under 40 weeks during the year and/or under 30 hours per week.

The study of work experience of the civilian noninstitutional population 14 years old and over, includes work in and outside of Puerto Rico. On the other hand, it excludes those persons who worked in Puerto Rico, but were absent at the time of the enumeration.

Thus this data describes the work experience of the civilian noninstitutional population 14 years old and over residing in Puerto Rico at the time of the enumeration.

Resumen de la Regularidad de Trabajo

Por sexo y edad

Del total estimado de 584,000 varones que trabajaron en 1968, el 67.7 por ciento trabajó regularmente, mientras que en las 267,000 mujeres que trabajaron, el 60.1 por ciento trabajó en forma regular.

Los grupos de edad que mayor regularidad de trabajo demostraron fueron el de 35 a 44 años para los varones (80.8 por ciento) y para las mujeres el de 25 a 34 y 35 a 44 años (66.6 por ciento).

El grupo de edad de 14 a 19 años registró la regularidad de trabajo más baja. Sólo el 23.3 por ciento de los varones y el 23.5 por ciento de las mujeres trabajaron regularmente en este grupo.

Por industria y clase de trabajador

Entre los asalariados, el grupo industrial que tuvo mayor proporción de personas trabajando regularmente fue el de Administración Pública (83.1 por ciento para los varones y 72.4 por ciento para las mujeres).

La agricultura es la industria con la menor proporción de personas trabajando regularmente. Sólo el 35.7 por ciento de los asalariados agrícolas varones trabajó regularmente durante el año 1968.

Por ocupación

Entre los varones, los grupos ocupacionales con mayor proporción de personas trabajando regularmente en 1968 fueron los de propietarios, administradores y oficiales, excepto de fincas (92.2 por ciento); profesionales y semi-profesionales (85.8 por ciento); traba-

Summary of the Work Experience

By sex and age

Out of an estimated total of 584,000 males who worked in 1968, 67.7 percent worked steadily, while among the 267,000 women who worked, 60.1 percent worked steadily.

The age groups that showed the highest job steadiness during the year were from 35 to 44 years for males (80.8 percent) and from 25 to 34 and 35 to 44 years (66.6 percent) for females.

The 14 to 19 years of age group registered the lowest job steadiness. Only 23.3 percent of the male and 23.5 percent of the females in this age group worked steadily.

By industry and class of worker

Among wage and salary workers, the industry group with the highest proportion of steady workers was Public Administration (83.1 percent for males and 72.4 percent for females).

Agriculture is the industry with the lowest proportion of steady workers. Only 35.7 percent of the male wage and salary workers in agriculture worked steadily in 1968.

By occupation

Among males the occupational groups with the highest proportions of persons working steadily in 1968 were those of proprietors, managers and officials, except farms (92.2 percent); professional and semi-professional workers (85.8 percent); protective service workers

jadores en servicio protectivo (79.1 por ciento) y oficinistas, vendedores y trabajadores análogos (75.4 por ciento). El grupo de obreros y mayordomos de fincas registró la menor proporción de trabajadores regulares (34.2 por ciento).

Entre las mujeres, la regularidad de trabajo fue mayor en el grupo de profesionales y semi-profesionales (81.0 por ciento); seguido por los grupos de propietarios, administradores y oficiales, excepto de fincas (67.9 por ciento) y oficinistas, vendedores y trabajadores análogos (67.7 por ciento). La menor regularidad de trabajo se registró en el grupo de trabajadores de servicio doméstico (43.4 por ciento).

En general, la regularidad de trabajo de la fuerza trabajadora durante el 1968 fue muy similar a la registrada durante el 1967.

12 de mayo de 1969.

(79.1 percent) and clerical, sales, and kindred workers (75.4 percent). Farm laborers and foremen registered the lowest proportion of steady workers (34.2 percent).

Among women, job steadiness was highest for the group of professional and semi-professional workers (81.0 percent); followed by the groups of proprietors, managers and officials, except farms (67.9 percent); and clerical, sales, and kindred workers (67.7 percent). The lowest job steadiness was registered among private household workers (43.4 percent).

In general, the work experience of the labor force during 1968 was very similar to that registered in 1967.

May 12, 1969.

Tabla 1 - REGULARIDAD DE TRABAJO EN PUERTO RICO: AÑOS NATURALES 1968 Y 1967
(Miles de personas de 14 años y más)

Table 1 - WORK EXPERIENCE IN PUERTO RICO: CALENDAR YEARS 1968 AND 1967
(Thousands of persons 14 years of age and over)

	1968			1967			
	Total	Varones Male	Hembras Female	Total	Varones Male	Hembras Female	
Población civil no institucional	1732 a/	839	893	1707 b/	828	879	Civilian noninstitutional population
Trabajaron durante el año	851	584	267	837	584	253	Worked during the year
Trabajaron regularmente	556	396	160	543	391	152	Worked steadily
Por ciento que trabajó regularmente	65.3	67.7	60.1	64.9	66.9	60.1	Percentage who worked steadily
Trabajaron ocasionalmente	295	189	106	294	193	101	Worked intermittently
Por ciento que trabajó ocasionalmente	34.7	32.3	39.9	35.1	33.1	39.9	Percentage who worked intermittently
No trabajaron durante el año	881	254	627	870	243	626	Did not work during the year

a/ Población estimada en enero de 1969. - Estimated population in January 1969.

b/ Población estimada en enero de 1968. - Estimated population in January 1968.

Tabla 2A - RESUMEN DE LA REGULARIDAD DE TRABAJO DE LA POBLACION CIVIL NO INSTITUCIONAL, POR GRUPO DE EDAD Y SEXO: AÑO NATURAL 1968
(Miles de personas de 14 años y más)

Table 2A - SUMMARY OF THE WORK EXPERIENCE OF THE CIVILIAN NONINSTITUTIONAL POPULATION, BY AGE AND SEX: CALENDAR Year 1968
(Thousands of persons 14 years of age and over)

Edad y Sexo	Población 1/ Population	Personas que trabajaron durante el año Persons who worked during the year				Personas que no trabajaron durante el año Persons who did not work during the year		Age and Sex
		Total	Regularmente - Steadily		Ocasionalmente Intermittently	Número Number	Por ciento de la población Percent of the population	
			Número Number	Por ciento del total Percent of the total	Número Number			
AMBOS SEXOS	1752	851	556	65.3	295	881	50.9	BOTH SEXES
14 - 19 años	357	66	15	23.4	50	291	81.6	14 - 19 years
20 - 24 años	254	159	90	56.7	69	95	37.4	20 - 24 years
25 - 34 años	331	223	163	73.0	60	108	32.7	25 - 34 years
35 - 44 años	257	161	122	75.9	39	95	37.1	35 - 44 years
45 - 54 años	220	131	98	74.9	33	89	40.6	45 - 54 years
55 - 64 años	156	79	51	65.5	27	77	49.5	55 - 64 years
65 años y más	157	32	15	47.7	17	124	79.4	65 years and over
VARONES	839	583	396	67.7	189	254	30.3	MALE
14 - 19 años	182	48	11	23.3	37	134	73.6	14 - 19 years
20 - 24 años	126	101	57	56.4	44	25	19.8	20 - 24 years
25 - 34 años	150	139	107	76.8	32	11	7.2	25 - 34 years
35 - 44 años	117	106	86	80.8	20	11	9.7	35 - 44 years
45 - 54 años	107	97	76	78.9	20	10	9.7	45 - 54 years
55 - 64 años	80	64	44	68.5	20	15	19.3	55 - 64 years
65 años y más	77	29	14	49.5	15	48	62.3	65 years and over
HEMBRAS	893	267	160	60.1	106	627	70.1	FEMALE
14 - 19 años	176	18	4	23.5	14	158	89.8	14 - 19 years
20 - 24 años	128	58	33	57.3	25	70	54.7	20 - 24 years
25 - 34 años	181	83	55	66.6	28	97	54.0	25 - 34 years
35 - 44 años	139	56	37	66.6	19	84	60.2	35 - 44 years
45 - 54 años	113	34	22	63.6	12	79	69.7	45 - 54 years
55 - 64 años	76	14	7	51.7	7	62	81.3	55 - 64 years
65 años y más	80	3	a/	a/	2	77	95.7	65 years and over

1/ Población estimada en enero de 1969. - Estimated population in January 1969.

a/ Muy pocos casos en la muestra para un estimado confiable. - Not enough cases in the sample for a reliable estimate.

Tabla 2B - RESUMEN DE LA REGULARIDAD DE TRABAJO DE LA POBLACION CIVIL NO INSTITUCIONAL, POR GRUPO DE EDAD Y SEXO: AÑO NATURAL 1967
(Miles de personas de 14 años y más)

Table 2B - SUMMARY OF THE WORK EXPERIENCE OF THE CIVILIAN NONINSTITUTIONAL POPULATION, BY AGE AND SEX: CALENDAR YEAR 1967
(Thousands of persons 14 years of age and over)

Edad y Sexo	Población 1/ Population	Personas que trabajaron durante el año Persons who worked during the year				Personas que no trabajaron durante el año Persons who did not work during the year		Age and Sex
		Total	Regularmente - Steadily		Ocasionalmente Intermittently	Número Number	Por ciento de la población Percent of the population	
			Número Number	Por ciento del total Percent of the total	Número Number			
AMBOS SEXOS	1707	837	543	64.9	294	870	51.0	BOTH SEXES
14 - 19 años	362	73	18	24.4	55	290	80.0	14 - 19 years
20 - 24 años	246	155	89	57.2	66	91	37.0	20 - 24 years
25 - 34 años	321	210	156	74.2	54	111	34.5	25 - 34 years
35 - 44 años	258	162	121	74.6	41	96	37.3	35 - 44 years
45 - 54 años	216	129	94	72.3	36	87	40.2	45 - 54 years
55 - 64 años	149	77	51	67.0	25	73	48.7	55 - 64 years
65 años y más	154	32	15	47.9	17	122	79.4	65 years and over
VARONES	828	584	391	66.9	193	243	29.4	MALE
14 - 19 años	183	54	13	23.9	41	130	70.7	14 - 19 years
20 - 24 años	123	100	56	56.1	44	23	18.4	20 - 24 years
25 - 34 años	145	134	105	78.9	28	12	8.1	25 - 34 years
35 - 44 años	118	109	86	78.6	23	9	7.9	35 - 44 years
45 - 54 años	106	96	73	75.6	24	9	8.9	45 - 54 years
55 - 64 años	77	63	44	69.9	19	14	18.0	55 - 64 years
65 años y más	75	29	14	49.5	14	47	62.0	65 years and over
HEMBRAS	879	253	152	60.1	101	626	71.2	FEMALE
14 - 19 años	179	19	5	26.0	14	160	89.5	14 - 19 years
20 - 24 años	124	55	32	59.2	22	69	55.6	20 - 24 years
25 - 34 años	176	77	51	66.2	26	99	56.4	25 - 34 years
35 - 44 años	139	53	35	66.2	18	87	62.2	35 - 44 years
45 - 54 años	110	33	21	62.8	12	78	70.2	45 - 54 years
55 - 64 años	72	14	7	53.6	6	59	81.2	55 - 64 years
65 años y más	79	3	a/	a/	2	76	96.0	65 years and over

1/ Población estimada en enero de 1968. - Estimated population in January 1968.

a/ Muy pocos casos en la muestra para un estimado confiable. - Not enough cases in the sample for a reliable estimate.

Tabla 3 - REGULARIDAD DE TRABAJO POR GRUPO INDUSTRIAL PRINCIPAL[1] Y SEXO: AÑOS NATURALES 1968 Y 1967
(Miles de personas de 14 años y más)

Table 3 - WORK EXPERIENCE BY MAJOR INDUSTRY GROUP[1] AND SEX: CALENDAR YEARS 1968 AND 1967
(Thousands of persons 14 years of age and over)

Grupo Industrial Principal y Sexo	Personas que trabajaron durante 1968 Persons who worked during 1968				Personas que trabajaron durante 1967 Persons who worked during 1967				Major Industry Group and Sex
	Total	Regularmente Steadily		Ocasionalmente Intermittently	Total	Regularmente Steadily		Ocasionalmente Intermittently	
		Número Number	Por ciento del total Percent of total	Número Number		Número Number	Por ciento del total Percent of total	Número Number	
VARONES, TOTAL	584	396	67.7	189	584	391	66.9	193	MALE, TOTAL
Agricultura, total	116	54	47.1	61	128	62	48.2	66	Agriculture, total
Asalariados	72	26	35.7	47	82	29	35.4	53	Wage and salary workers
Patronos y por su cuenta[2]	43	29	66.2	15	46	33	70.9	13	Self-employed [2]
No Agrícola, total	469	341	72.8	128	456	329	72.2	127	Nonagriculture, total
Asalariados [3]	388	277	71.2	112	374	266	71.2	107	Wage and salary workers [3]
Construcción	77	44	57.6	32	76	45	59.4	31	Construction
Manufactura, excluyendo aguja a domicilio	91	65	71.8	26	90	64	70.5	27	Manufacturing, excluding home needlework
Comercio	68	48	70.9	20	60	42	69.7	18	Trade
Transportación, comunicación y utilidades públicas	35	27	76.2	8	35	26	76.1	8	Transportation, communication, and public utilities
Servicios	46	33	70.8	13	43	32	73.8	11	Service industries
Administración Pública	63	52	83.1	11	61	50	82.2	11	Public Administration
Patronos y por su cuenta[2]	80	64	80.2	16	82	63	76.4	19	Self-employed [2]
HEMBRAS, TOTAL	267	160	60.1	106	253	152	60.1	101	FEMALE, TOTAL
Agricultura, total	12	[a]	[a]	11	15	[a]	[a]	14	Agriculture, total
No Agrícola, total	255	160	62.7	95	238	151	63.4	87	Nonagriculture, total
Asalariados [3]	225	147	65.3	78	207	137	66.2	70	Wage and salary workers [3]
Manufactura, excluyendo aguja a domicilio	82	52	62.8	31	76	50	65.5	26	Manufacturing, excluding home needlework
Aguja a domicilio	[a]	[a]	[a]	[a]	2	[a]	[a]	2	Home needlework
Comercio	24	14	60.4	9	21	13	63.8	8	Trade
Servicios	53	33	61.1	21	50	32	64.1	18	Service industries
Administración Pública	53	39	72.4	15	48	35	71.3	14	Public Administration
Patronos y por su cuenta[2]	30	13	42.5	17	30	13	44.2	17	Self-employed [2]

[1] Se refiere a aquel sector de la economía en el cual la persona trabajó más tiempo durante el año.
Refers to that sector of the economy in which the person worked most of the time during the year.

[2] Incluye familiares sin paga. - Includes unpaid family workers.

[3] El total incluye industrias que tienen pocos trabajadores y que no aparecen desglosados.
Total includes industries having few workers and not separately shown.

[a] Muy pocos casos en la muestra para un estimado confiable. - Not enough cases in the sample for a reliable estimate.

Tabla 4 - REGULARIDAD DE TRABAJO POR GRUPO OCUPACIONAL PRINCIPAL 1/ Y SEXO: AÑOS NATURALES 1968 Y 1967
(Miles de personas de 14 años y más)

Table 4 - WORK EXPERIENCE BY MAJOR OCCUPATION GROUP 1/ AND SEX: CALENDAR YEARS 1968 AND 1967
(Thousands of persons 14 years of age and over)

Grupo Ocupacional Principal y Sexo	Personas que trabajaron durante 1968 Persons who worked during 1968				Personas que trabajaron durante 1967 Persons who worked during 1967				Major Occupation Group and Sex
	Total	Regularmente Steadily		Ocasionalmente Intermittently	Total	Regularmente Steadily		Ocasionalmente Intermittently	
		Número Number	Por ciento del total Percent of total	Número Number		Número Number	Por ciento del total Percent of total	Número Number	
VARONES, TOTAL 2/	584	396	67.7	189	584	391	66.9	193	MALE, TOTAL 2/
Agricultores y administradores de fincas	35	26	74.2	9	38	29	75.9	9	Farmers and farm managers
Obreros y mayordomos de fincas	74	25	34.2	49	85	29	34.8	55	Farm laborers and foremen
Profesionales y semi-profesionales	35	30	85.8	5	31	28	89.0	3	Professional and semi-professional
Propietarios, administradores y oficiales, excepto de fincas	63	58	92.2	5	62	55	89.0	7	Proprietors, managers and officials, except farm
Oficinistas, vendedores y trabajadores análogos	69	52	75.4	17	66	47	71.7	19	Clerical, sales, and kindred workers
Artesanos, capataces y trabajadores análogos	95	66	69.7	29	95	69	72.1	27	Craftsmen, foremen and kindred workers
Operarios, excluyendo trabajadores de aguja a domicilio	100	70	69.6	31	98	70	70.9	29	Operatives and kindred workers, except home needleworks
Trabajadores en servicio protectivo	14	11	79.1	3	14	12	82.6	3	Protective service workers
Otros servicios (personales, comerciales, de mantenimiento, etc.)	31	23	73.7	8	31	22	71.8	9	Other services (personal, commercial, maintenance, etc.)
Obreros, excepto de fincas	67	34	50.8	33	62	29	47.2	33	Laborers, except farms
HEMBRAS, TOTAL 2/	267	160	60.1	106	253	152	60.1	101	FEMALE, TOTAL 2/
Ocupaciones agrícolas 3/	12	a/	a/	11	14	a/	a/	13	Agricultural occupations 3/
Profesionales y semi-profesionales	31	25	81.0	6	28	22	79.6	6	Professional and semi-professional workers
Propietarios, administradores y oficiales, excepto de fincas	13	9	67.9	4	11	8	71.7	3	Proprietors, managers and officials, except farms

Tabla 4 - REGULARIDAD DE TRABAJO POR GRUPO OCUPACIONAL PRINCIPAL 1/ Y SEXO: AÑOS NATURALES 1968 Y 1967
(Miles de personas de 14 años y más)

(Continuación)

Table 4 - WORK EXPERIENCE BY MAJOR OCCUPATION GROUP 1/ AND SEX: CALENDAR YEARS 1968 AND 1967
(Thousands of persons 14 years of age and over)

(Continued)

Grupo Ocupacional Principal y Sexo	Personas que trabajaron durante 1968 Persons who worked during 1968				Personas que trabajaron durante 1967 Persons who worked during 1967				Major Occupation Group and Sex
	Total	Regularmente Steadily		Ocasionalmente Intermittently	Total	Regularmente Steadily		Ocasionalmente Intermittently	
		Número Number	Por ciento del total Percent of total	Número Number		Número Number	Por ciento del total Percent of total	Número Number	
HEMBRAS (Cont.)									FEMALE (Cont.)
Oficinistas, vendedores y trabajadores análogos	69	47	67.7	22	62	41	66.6	21	Clerical, sales, and kindred workers
Operarias, excluyendo trabajadoras de aguja a domicilio	77	46	60.6	30	72	46	64.1	26	Operatives and kindred workers, except home needlework
Trabajadoras de aguja a domicilio	6	a/	a/	5	7	a/	a/	6	Home needlework
Trabajadoras de servicio doméstico	17	8	43.4	10	17	9	51.6	8	Private household workers
Otros servicios (personales, comerciales, de mantenimiento, etc.)	38	20	54.1	17	35	19	53.6	16	Other services (personal, commercial, maintenance etc.)

1/ Se refiere al trabajo específico que la persona desempeñó más tiempo durante el año.
Refers to the specific job which the person performed most of the time during the year.

2/ El total incluye ocupaciones que tienen pocos trabajadores y que no aparecen desglosados.
Total includes occupations having few workers and not separately shown.

3/ Muy pocos casos para presentar separadamente "agricultores y administradores de fincas" y "obreros y mayordomos de fincas".
Not enough cases to present separately "farmers and farm managers" and "farm laborers and foremen".

a/ Muy pocos casos en la muestra para un estimado confiable. - Not enough cases in the sample for a reliable estimate.

NOTAS ACLARATORIAS

La información que se presenta en este informe se basa en una encuesta realizada por el Negociado de Estadísticas del Trabajo en una muestra de viviendas representativas de la población de Puerto Rico. La encuesta se realiza mensualmente en una muestra de alrededor de 8,000 viviendas.

En cada vivienda entrevistada, se hacen varias preguntas acerca de cada uno de los miembros de 14 años y más de edad, con el fin de determinar si están empleados, desempleados o fuera del grupo trabajador; así como preguntas relacionadas con la ocupación, industria, horas trabajadas y otras características de estas personas.

En cada encuesta desde enero de 1953 se han hecho preguntas adicionales relacionadas con la regularidad de trabajo realizado durante el año anterior. Se pregunta el número de semanas trabajadas durante el año, el número de horas trabajadas a la semana, la ocupación principal y la industria en la cual trabajó.

Las preguntas sobre regularidad de trabajo se hicieron a todas las personas civiles de 14 años y más (excluyendo las recluídas en instituciones) que estaban viviendo en Puerto Rico en cada enero desde 1953.

Debido a que sólo se estudia una muestra de todas las viviendas de Puerto Rico, es necesario inflar las cifras obtenidas en la

EXPLANATORY NOTES

The information presented in this report is based on a survey carried out by the Bureau of Labor Statistics in a sample of households representing a cross-section of the population of Puerto Rico. The survey is carried out on a monthly basis in a sample of around 8,000 households.

In each interviewed household, a number of questions are asked concerning each household member 14 years old and over, in order to ascertain if they are employed, unemployed, or not in the labor force; as well as questions related to occupation, industry, hours worked and other characteristics regarding these persons.

In each survey since January 1953, additional questions have been asked in relation to the regularity of work carried out during the previous year. The number of weeks worked during the year, the number of weekly hours worked, the principal occupation and the industry in which the person worked, are the questions asked.

The questions of work experience were made to all civilians, 14 years old and over (excluding those in institutions), that lived in Puerto Rico in each January since 1953.

Due to the fact that only a sample of all households of Puerto Rico is studied, it is necessary to inflate the figures obtained in the

encuesta para así obtener estimados de empleo y desempleo para toda la población. Por lo tanto, la información obtenida de la muestra se infla a estimados de la población civil no institucional de 14 años y más por grupo de edad y sexo, preparados por la División de Registro Demográfico y Estadísticas del Departamento de Salud de Puerto Rico. Estos estimados están basados en la distribución por edad y sexo de la población de Puerto Rico en abril de 1960, según lo determinó el Censo de Población de los Estados Unidos. Desde esa fecha en adelante, se han tomado en consideración los cambios registrados en la población debido a: personas que cumplen 14 años, defunciones, inmigración y emigración y reclutamiento neto de las Fuerzas Armadas.

Los estimados que se presentan en este informe están afectados por la variabilidad de la muestra utilizada. En términos generales, mientras mayor es la cifra informada, mayor es la confiabilidad del estimado. Debido a esa variabilidad, no debe darse mucho énfasis a pequeñas diferencias.

Las cifras publicadas no siempre suman a los totales debido a que han sido redondeadas al millar más cercano.

Definición de términos

Empleados que trabajaron regularmente - aquéllas que informaron haber trabajado 30 horas o más a la semana durante 40 semanas o más.

survey, in order to obtain estimates on employment and unemployment for the whole population. Therefore, the information obtained from the sample is inflated to estimates of the civilian noninstitutional population 14 years old and over, by age and sex groups, prepared by the División of Demographic Registry and Statistics of the Department of Health of Puerto Rico. These estimates are based on the age and sex distribution of the population of Puerto Rico in April 1960, as determined by the United States Census of Population. Since that date, account has been taken of the changes which have occurred due to: persons becoming 14 years old, deaths, inmigration and emigration, and net enrollment in the Armed Forces.

The estimates presented here are affected by the chance variation of the sample used. In general, the larger the figure reported, the greater the reliability of the estimates. Because of this variability, too much emphasis should not be placed on small differences.

The figures published do not always add to the totals due to rounding to the nearest thousand.

Definition of Terms

Steadily employed workers - those that informed working 30 hours or more a week during 40 or more weeks.

Empleados que trabajaron ocasionalmente - aquéllos que trabajaron menos de 40 semanas durante el año y/o menos de 30 horas semanales.

Industria - se refiere a aquel sector de la economía en el cual la persona trabajó más tiempo durante el año.

Ocupación - se refiere al trabajo específico que la persona desempeñó más tiempo durante el año.

Intermittently employed workers - those that worked less than 40 weeks during the year and/or less than 30 hours a week.

Industry - refers to that sector of the economy in which the person worked most of the time during the year.

Occupation - refers to the specific job which the person performed most of the time during the year.

VT 008 825
Report by Advisory Committee on a Pilot Scheme for the Exchange of Nurse Teachers.

Northern Ireland-Canada-United States of America Nurse Teacher Exchange
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*HEALTH OCCUPATIONS EDUCATION; *NURSING; COMPARATIVE ANALYSIS; *TEACHER EXCHANGE PROGRAMS
*NORTHERN IRELAND; *CANADA

Over a 2-year period beginning November 1960, six nurse teachers were exchanged by: (1) Atkinson School of Nursing, Toronto Western Hospital, Toronto, (2) School of Nursing, Massachusetts General Hospital, Boston, and (3) School of Nursing of Royal Victoria Hospital, Belfast. Each year one nurse teacher from each school had an experience which involved each of the other schools. Information regarding the exchange experience was collected from the nurse teachers, the directories of nursing, and student nurses taught by the nurse teachers. Nurse teachers prepared reports on: (1) the orientation period, (2) the remaining 8 months in the first school, (3) the 2 months in the second school, (4) the total program, and (5) experience on return home (written as a follow-up some months after return to a position at home). The document analyzes information in terms of the nurse teacher's usefulness in the exchange situation, problems of adjustment, and differences among the schools. It was concluded that the project had been worthwhile and that it yielded information which would be of value in planning similar programs. (JK)

VT 008 825

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NICUSANE
(Northern Ireland - Canada - United States of America
Nurse Teacher Exchange)
1960–1962

Report
by Advisory Committee on a Pilot Scheme for the Exchange of Nurse Teachers

Sponsored by the
Northern Ireland Hospitals Authority
and the Schools of Nursing of
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Massachusetts General Hospital, Boston,
and
Royal Victoria Hospital, Belfast,
with the aid of a Grant made by the
Rockefeller Foundation

1963

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or

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399 Bathurst Street, Toronto 2B, Ontario, Canada

NICUSANE

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*Miss Broe retired from her post of Director of the Education Division of the International Council of Nurses on 1st September, 1962, and was succeeded by Miss Ingrid Hamelin who then took Miss Broe's place on the Advisory Committee.

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NORTHERN IRELAND HOSPITALS AUTHORITY
and
THE SCHOOLS OF NURSING OF
TORONTO WESTERN HOSPITAL, TORONTO, CANADA,
MASSACHUSETTS GENERAL HOSPITAL, BOSTON, U.S.A.
and
ROYAL VICTORIA HOSPITAL, BELFAST, NORTHERN IRELAND

Nurse Teacher Exchange Scheme
Report by Advisory Committee

CHAPTER I

The Scheme and its background

INTRODUCTION

THE object of the Scheme was to provide for an exchange of nurse teachers by the Atkinson School of Nursing at Toronto Western Hospital, Toronto, the School of Nursing of Massachusetts General Hospital, Boston, and the School of Nursing of Royal Victoria Hospital, Belfast, and for an evaluation of the experience of the nurse teachers.

THE GENESIS OF THE SCHEME

In 1958, Miss A. M. W. White, who then was the Northern Ireland Hospitals Authority's Nursing Officer, had the aid of a British Commonwealth and Empire Nurses War Memorial Fund Scholarship and studied some of the nurse education programmes in North America. The units in which she spent the greater part of her time were the School of Nursing of the Massachusetts General Hospital, Boston and the Atkinson School of Nursing of the Toronto Western Hospital. Miss White found these units of particular interest and while the nursing education programmes had the same fundamental philosophy, the approaches to the preparation of the nurse had several interesting variations and both differed from the system followed in Northern Ireland.

Miss White had consultations with the Directors of the Schools of Nursing at Toronto Western Hospital and Massachusetts General Hospital as to the possibility of advancing the education of nurses by means of a pilot scheme under which there would be an exchange of teaching staff by the Schools of Nursing of three hospitals, namely—

The Toronto Western Hospital, Toronto,
The Massachusetts General Hospital, Boston,
The Royal Victoria Hospital, Belfast.

Miss White then discussed the subject with Miss Virginia Arnold, Assistant Director for Medical Education and Public Health at the Rockefeller

Foundation, who agreed that it would be appropriate to submit a considered memorandum to the Rockefeller Foundation.

A formal approach was made to the Governing Bodies of the Toronto Western Hospital, the Massachusetts General Hospital and the Royal Victoria Hospital, Belfast, asking if their Schools of Nursing would be prepared to join in the proposed scheme. The three Governing Bodies indicated their willingness to do so, subject to their being satisfied that the details of it were such that it would be possible for them to participate.

Miss Virginia Arnold and Miss Ruth Sleeper of Massachusetts General Hospital were in the United Kingdom in February, 1959, and in Belfast there was a preliminary discussion of the proposed scheme.

A little later, grants were made by the Rockefeller Foundation to Miss F. E. Elliott, Matron of the Royal Victoria Hospital, Belfast, and Mr. E. H. Jones, Secretary of the Northern Ireland Hospitals Authority, to enable them to examine the programmes of nursing education in Toronto and Boston and other centres in the United States of America. Miss Elliott and Mr. Jones visited Canada and the United States of America in May, 1959, and discussed the proposed scheme with representatives of the Toronto Western Hospital, Toronto, and the Massachusetts General Hospital, Boston. The Governing Bodies of the two hospitals agreed that their Schools of Nursing would be able to participate. Later, the Belfast Hospital Management Committee agreed that the School of Nursing of the Royal Victoria Hospital also would participate.

A further meeting of representatives of the Northern Ireland Hospitals Authority, the three Schools of Nursing and other interested persons took place in Belfast in October, 1959. Following that meeting and correspondence on the subject a Scheme was prepared and agreed by the participating bodies. This Scheme was submitted for the consideration of the Rockefeller Foundation.

In the first instance a scheme was evolved which provided for the appointment of a Director of Research and the embodiment of a substantial research element in the operation of the arrangements. This Scheme is set out in Appendix I. On further consideration of the matter and after consultation with Miss Arnold it was decided, however, to modify these proposals and to omit the research element and the appointment of a director. The revised Scheme as finally approved is set out in Appendix II.

In July, 1960, the Rockefeller Foundation generously agreed to provide a sum of $18,000 towards the support of a Nurse Teacher Exchange Programme.

THE SCHEME

As already stated, the intention was that there should be an exchange of nurse teachers between the Schools of Nursing of two hospitals in North America and between each of them and the School of Nursing of the Royal Victoria Hospital, Belfast. In addition, the experiences of the teachers in undertaking duties in a strange environment were to be evaluated by an advisory committee. This advisory committee whose membership is prefaced to this Report was empowered to seek any advice and assistance it required for the purpose of evaluating the experience of the teachers.

The framework of the Scheme as put into operation was:

Programme of the exchange arrangements

The exchange of teachers was in two cycles each of twelve months' duration and the detailed working of the system was as follows:

in the first year:
an exchange teacher from Belfast spent
9 months in Boston
2 months in Toronto
1 month on holiday
an exchange teacher from Toronto spent
9 months in Belfast
2 months in Boston
1 month on holiday
an exchange teacher from Boston spent
9 months in Toronto
2 months in Belfast
1 month on holiday
in the second year—in which three other teachers participated:
the exchange teacher from Belfast spent
9 months in Toronto
2 months in Boston
1 month on holiday
the exchange teacher from Toronto spent
9 months in Boston
2 months in Belfast
1 month on holiday
the exchange teacher from Boston spent
9 months in Belfast
2 months in Toronto
1 month on holiday

Content of exchange teachers' programmes

Programme for the teacher during the period of nine months of observation and participation in the work of a School of Nursing.

This period was divided into two parts, namely a short period of orientation and, secondly, a planned programme of participation in the work of the school. The arrangements were:

PRELIMINARY ORIENTATION

The teacher sought to obtain an appreciation of the administrative arrangements and organisation of the hospital with which the School of Nursing is associated; to assess the place of nursing within the hospital organisation; to become acquainted with the organisation of nursing services and the nursing education programme; and to obtain a picture of the relationship and co-ordination of nursing education and nursing service.

PROGRAMME OF PARTICIPATION IN THE TEACHING ARRANGEMENTS— ABOUT EIGHT MONTHS

The programme was planned to give the Exchange Teacher a comprehensive picture of the preparation of the student nurse up to the time of registration. The programme included periods of observation and periods of active participation in the teaching of students at different stages of their basic preparation.

The Exchange Teacher also participated in some of the special programmes and projects associated with the School of Nursing or services in the hospital which were in progress during her attachment to the School.

Content of the programme for the Exchange Teacher during the period of two months' observation in the second School to which she was attached.

This programme was planned to give the Exchange Teacher an overall picture of the school and included periods of observation of selected sections of the work, attendance at conferences, etc.

Criteria for the selection of exchange teachers

The teachers were selected by the Directors of Nursing and in making their choice they had regard to the following considerations:

Genuine interest in the project

The teacher should be willing to undertake teaching duties at the school to which she is attached for nine months and take an active part in the obtaining of information and impressions. While it was impossible to attach to the arrangements a requirement that the teacher should return to her parent school, it was inherent in the project that she should do so unless there were an important change in her personal circumstances.

Personality

The teacher should be open-minded with a well integrated personality, have ability to adjust herself to a new situation and have attributes required for good human relations.

Health

The teacher should be required to have a medical examination and to submit a certificate showing that she has good physical health and a satisfactory emotional balance.

Professional Qualifications

The teacher should have the necessary qualifications, through education and experience, to meet the requirements for teaching in her parent School of Nursing. In making the choice it was necessary to assess that the teacher would be likely to be able to undertake the duties of a unit of teaching staff in the School to which she would be attached for a period of nine months.

Age

The teacher should not be over forty years of age, but preferably younger.

Responsibility of the Exchange Teacher

The Exchange Teacher was responsible in respect of her teaching duties to the Director of the School of Nursing to which she was attached.

Study and evaluation of the exchange arrangements

For the purpose of studying and evaluating the exchange arrangements the Advisory Committee made with the Exchange Teachers such arrangements as they considered appropriate and made other enquiries as they thought necessary before preparing this report.

THE SCHEME IN OPERATION

The Scheme commenced on 1st September, 1960, and in the first year of its operation the following nurse teachers participated in the exchange arrangements:

Miss Adele J. Sowa, B.SC.N., REG.N. (now Mrs. Walter Quaiattini)	Atkinson School of Nursing, Toronto Western Hospital, Toronto
Miss Irene Norton, R.N., B.S.N.Ed., M.Ed.	School of Nursing of Massachusetts General Hospital, Boston
Miss Phyllis A. Irvine, S.R.N., S.C.M., Cert. Nursing Studies (Edin.)	School of Nursing of Royal Victoria Hospital, Belfast

In the second year, which commenced in September, 1961, the nurse teachers were:

Miss Ruth J. Radford, R.N., DIP.N.Ed. (University of Toronto)	Atkinson School of Nursing, Toronto Western Hospital, Toronto
Miss Constance A. Holleran, R.N., B.S.	School of Nursing of Massachusetts General Hospital, Boston
Miss Anna Phyllis Isobel Logan, S.R.N., S.C.M., S.T.C.(EDIN.)	School of Nursing of Royal Victoria Hospital, Belfast.

Each of these nurse teachers followed the pre-determined plan of the programme of exchange which is set out above.

It was inherent in the Scheme, although not specifically stated in the memorandum embodying it, that during her periods of attachment to other Schools of Nursing, each teacher would have the opportunity to attend some conferences on nursing subjects, visit some hospitals not participating in the Scheme and acquire general knowledge of the life of the area of visit. Appendix III to this report summarises the related activities of each teacher.

Administrative arrangements for the regulation of the Exchange of Teachers

Registration—Visa

Exchange Teachers were assisted in clearing with the authorities, questions relating to (*a*) registration or recognition as a teacher and (*b*) visa required.

Health Services

Appropriate arrangements were made, by insurance or otherwise, to provide that the Exchange Teachers would have necessary health services when on exchange duty. It was arranged that salary would be paid in full throughout periods of sickness during an exchange attachment. (There were no periods of sickness.)

Suitable insurance arrangements were made to cover sickness or accidents occurring when travelling.

Superannuation

Periods of attachment continued to count as periods of full employment for the purpose of the superannuation scheme to which the teacher was a contributor.

Salaries

The salary of the Exchange Teacher continued to be paid by her parent school.

Taxation

As salary was received from one country only, there was no question of taxation in either of the other countries. Each Exchange Teacher was required to clear this question with the revenue and immigration authorities.

Grant to cover additional expenses

Each Exchange Teacher from Northern Ireland received a fellowship grant to cover additional expenses which she had to meet when in North America. A similar grant was not required by North American teachers during their periods in Northern Ireland.

THE PARTICIPATING BODIES

(1) Northern Ireland and the Northern Ireland Hospitals Authority.
(2) The School of Nursing of the Royal Victoria Hospital, Belfast.
(3) The Atkinson School of Nursing of Toronto Western Hospital.
(4) The School of Nursing of the Massachusetts General Hospital, Boston.

(1) Northern Ireland and the Northern Ireland Hospitals Authority

Northern Ireland, unlike Canada which has a population of 16–17 millions and the United States of America which has a population of 175 millions, is a small country. Its area is 5,238 square miles and the population 1,425,000, of whom a little more than one-half are resident in cities and towns and slightly less than one-half in villages and other rural dwellings. The principal occupation is agriculture, but there are substantial industries including shipbuilding, the building of aircraft, engineering, the making of linen and other textiles, distilling, rope-making, etc. About one-sixth of the working population are engaged in agriculture. The capital is Belfast, which has a population of about 430,000.

Although an integral part of the United Kingdom of Great Britain and Northern Ireland and sending 12 members to the United Kingdom Parliament in London, Northern Ireland also has its own Parliament which is fully responsible for certain services including education, health, housing, etc.

It has been the policy of the Government of Northern Ireland to maintain its social services at parity with those of Great Britain, and following the introduction of the National Health Service in England and Scotland there was similar legislation in Northern Ireland to provide a comprehensive service.

Northern Ireland therefore mirrors in miniature the health services pattern of Great Britain, but there are some differences of administrative detail, the most important of which is that the Northern Ireland legislation set up a statutory body—The Northern Ireland Hospitals Authority—to be responsible for the hospital and specialist services whereas in England the prime responsibility falls directly on the Minister of Health.

The Northern Ireland Hospitals Authority, a body corporate, consists of twenty-four members, appointed by Northern Ireland's Minister of Health and Local Government, and all of them serve in an entirely voluntary and unpaid capacity.

The Hospitals Authority are responsible for the provision of hospitals and specialist services throughout Northern Ireland and have 76 hospitals with 17,000 beds, including 7,300 beds for persons with mental disorders. The Authority are assisted by thirty Hospital Management Committees whom they appoint and who attend to the day to day administration of individual hospitals or groups of hospitals. The Authority's annual revenue expenditure now exceeds seventeen million pounds sterling.

The Hospitals Authority's staff totals 16,000 persons, including 870 specialists and other doctors and 7,650 nurses.

The Hospitals Authority work in close association with the Queen's University of Belfast and the Authority's Royal Victoria Hospital, Belfast, is the principal clinical teaching centre of the University's Medical School.

(2) The School of Nursing of the Royal Victoria Hospital, Belfast.

The Royal Victoria Hospital was founded in 1792. At present it has 870 beds including 79 in the associated convalescent unit known as the Throne Hospital. The hospital long has held its reputation as the principal centre in Northern Ireland for the treatment of acute illnesses.

Associated with it in the same management group there are a maternity hospital with 109 beds and a hospital for sick children which has 225 beds including a convalescent unit of 70 beds. These hospitals have their own Schools for pupil midwives and sick children's nurses respectively and these are operated separately from the School of Nursing of the Royal Victoria Hospital. Students of the Royal Victoria Hospital School of Nursing spend a short time in the wards of the Royal Belfast Hospital for Sick Children but as yet do not obtain any part of their initial experience in the Midwifery School of the Royal Maternity Hospital. Many of the students after qualification as State Registered Nurses do, however, enter the Royal Maternity Hospital as pupil midwives for a one year course of training.

The Royal Victoria Hospital School of Nursing provides a three year course leading to examination by the Joint Nursing and Midwives Council for Northern Ireland for admission to the State Register of General Nurses. The annual intake of student nurses is about 130 persons.

As a result of the exchange experience it has been thought desirable to define clearly what always has been the philosophy of the School. In the past this was gradually conveyed to students in the course of their training. It is thought there would be advantage in having this philosophy committed to writing so that it can be given to newcomers in the early stages of their association with the School; it reads as follows:

> The skilful practice of nursing is an art which is based upon scientific principles and an understanding of the needs of individuals in health and illness. The primary responsibility of the nurse is to care for those who are sick, and good nursing care includes consideration of the patient as a whole, including his mental and emotional problems. The student nurse who enters the profession requires a sincere desire to care for the sick and participate in the prevention of illness; an inherent quality of character which will allow her to develop attitudes of service; a sense of responsibility; and an ability to accept disciplines which are essential to her personal and professional growth.
>
> The aims of the School are:
>
> (*a*) To provide through a carefully constructed programme of experience the opportunities to acquire attitudes, knowledge and skills essential to the care of the sick.
>
> (*b*) To help students understand and give nursing care to people as individuals who have physical, emotional, spiritual, intellectual and social needs.
>
> (*c*) To help the student understand herself, the community in which she has to live, and the community which the hospital serves.

(*d*) To help the student understand the need to work co-operatively with all who are engaged in serving the patient.

(*e*) To guide learning so that the student may acquire the ability to apply her knowledge and skill in any situation involving patients.

(*f*) To prepare the student to function effectively as a State Registered Nurse.

(*g*) To equip the student with a good foundation for future growth in the profession.

The School of Nursing is an integral part of the hospital and the Belfast Hospital Management Committee has responsibility for its proper functioning. This responsibility largely is delegated to the Royal Victoria Hospital Committee and the Matron of the hospital who are assisted by a Nursing Advisory Committee. A note on the committee structure is included in Appendix IV.

The finances of the School of Nursing are not separated from the overall financial budget for the hospital and the precise cost of the School cannot be stated.

Students are not required to pay any tuition fees and have to meet only small expenditure in the course of their three year study period. Items for which they personally are responsible are:

Uniform—the provision of white shoes and stockings and corridor cape.

Text Books—each student is required to purchase a stated series of text books. A limited amount of reading and reference material is available in the library.

Examination Fees—

For Preliminary State Examination . .	£2 12 6 ($7·35)
For Final State Examination . . .	£4 4 0 ($11.76)
Student Nurse Association Membership, for the three year study period	£1 10 0 ($4.20)

Student nurses receive training allowances in each of their three years of study. The allowances are as follows:

First Year	
Gross Training Allowance	£321 0 0 ($898.80)
Charges to Student:	
For board, residence, uniforms and laundry	£128 0 0 ($358.40)
„ National Insurance	£22 10 8 ($63.09)
„ Superannuation	6% of gross pay (employing body pays 9½%)
Second Year	
Gross Training Allowance	£339 0 0 ($949.20)
Charges to Student:	
For board, residence, uniform and laundry	£128 0 0 ($358.40)
„ National Insurance	£22 10 8 ($63.09)
„ Superannuation	6% of gross pay (employing body pays 9½%)
Third Year	
Gross Training Allowance	£361 0 0 ($1010.80)
Charges to student	
For board, residence, uniform and laundry	£128 0 0 ($358.40)
„ National Insurance	£22 10 8 ($63.09)
„ Superannuation	6% of gross pay (employing body pays 9½%)

It will be appreciated that the students follow their course of study on the student apprenticeship system which is traditional in the United Kingdom and they are regarded as part of the working staff of the hospital although not treated in calculating establishments as the equivalent of units of fully qualified staff.

(3) The Atkinson School of Nursing of Toronto Western Hospital

The Toronto Western Hospital which was founded in 1896 is one of the leading public general hospitals in Canada and has 924 beds. It is fully accredited by the Canadian Council of Hospital Accreditation and is a teaching hospital for the Faculty of Medicine of the University of Toronto.

The School of Nursing has been in existence since 1896 when it initiated a two year programme and graduated five students in 1898. In 1950 the school was renamed the Atkinson School of Nursing and a new pattern of education was established. Theory and concurrent experience in the clinical services are covered in two years. The third or interneship year provides an opportunity for the student to practise nursing in a controlled clinical situation under the close supervision and direction of the nursing service staff. A comprehensive curriculum, closely correlated with practice, is the responsibility of the Associate Director of Nursing Education and twenty qualified instructors.

At the end of the third year, the nurse enters for the Registration Examination conducted by the Registered Nurses' Association of Ontario.

The intake of students is over 90 each year.

A note on the committee structure is included in Appendix IV.

The philosophy of the School is expressed in the following terms:

Education, Then Service:

Adequate preparation for nursing can be achieved only through a sound educational programme. The School curriculum places emphasis on the worth of the individual patient as a member of a family and of society, an appreciation of his physical, social and spiritual needs and his right to optimum nursing care. Such care requires not only a broad background of knowledge and the development of competent nursing skill, but an understanding of his behaviour and the ability to establish good inter-personal relationships. Nursing education must, therefore, aim to assist the student towards her own highest potential personally and professionally, both for her own satisfaction and for what she as a person may bring to her patient. The aims of the School are:

(1) To maintain and fortify the position of a school of nursing with financial and administrative independence as an educational entity of a hospital, thus assuring complete control of the students' activities.

(2) To continue to demonstrate the manifestation of a two year curriculum in replacing that of the established three-year programme.

(3) To attract more young women into nursing and equip them to serve and to meet the increasing needs of a changing society.

The School of Nursing has a separate budget for direct expenses only. It does not cover indirect items such as heating, electricity, water, housekeeping, maintenance etc. It therefore is not possible to state the precise cost of the School.

Students do not receive any remuneration in the first two years of their three years course of study, but as nurse internes in the third year they receive

the equivalent of $200 (£71 8 6) per month—that is, $140 in cash and room and board valued at $60.

Students pay fees and other charges for their tuition etc. on the following basis:

First year fees	$78.00 (£27 17 0)
Second year fees	$50.00 (£17 17 0)
Total fees	$128.00 (£45 14 0)
Other expenses (approximate):	
Books and stationery supplies	$65.00 (£23 4 0)
Transportation, community visits, affiliations, etc.	$45.00 (£16 1 0)
Uniform accessories	$55.00 (£19 13 0)
(Uniforms are supplied by the hospital)	

Certain bursaries are available to students to assist in the paying of their fees. In other instances loans from a special student loan fund may be obtained.

(4) The School of Nursing of the Massachusetts General Hospital, Boston

The Massachusetts General Hospital which is the third oldest private hospital in the United States of America and the oldest in New England, received its charter of incorporation in 1811. The first patient was admitted in 1821 and since then the hospital has maintained a standard of service which has enabled it to hold a place among the leading hospitals of the world. The Massachusetts General Hospital is a medical teaching hospital of almost 1,000 beds and an important research centre.

The School of Nursing which opened in 1873 provides a three year basic programme; the first twenty-four months are an educational period including classes and correlated clinical practice and the last twelve months an interneship with nursing practice and instruction selected to develop skills and orient to graduate nursing practice. Students obtain registration through passing examinations conducted by the Board of Registration in Nursing in Massachusetts.

The annual intake of students is about 130 persons.

A note on the committee structure is included in Appendix IV.

The philosophy of the School of Nursing is defined by the following statement made by the General Faculty:

> We believe that Nursing which has its roots in basic human needs is both an art and a science of inter-personal service to individuals and families in sickness and in health. As such, nursing utilizes understanding, insight and skill and, therefore, strengthens a spirit of devotion, as well as individual responsibility and judgment.
>
> We believe that Nursing involves the ability to assess situations, to arrive at decisions, and to give physical and emotional care by supplementing, complementing and integrating the care given by physicians and other members of the health team. This course of action should contribute to prevention of illness and promotion of health, encourage maximum utilization of capabilities, or prepare for terminal care and death.
>
> We believe that the student selected should have a sound educational background, academic potential, interest in nursing as a career, and personal readiness to grow within the school's philosophy and program. Within this program, learning experiences can be designed to provide opportunity for

continuous development of attitudes and abilities for personal and professional growth necessary to function without undue strain in an ever-changing nursing situation.

We believe that the best environment in which learning takes place results from the dynamic interaction of faculty and students within an atmosphere which can be created and maintained in the hospital school of nursing. Instruction and experience in patient care can be correlated to assist the student to understand the healthy person and the needs of sick people. Courses in the biological, physical and social sciences as well as in principles of nursing prepare the student, through graduated learning opportunities, to give competent nursing care. The ultimate goal of this program is to educate students in nursing to give individualized nursing care and to develop a foundation of nursing knowledge which can be transferred from one situation to another. Students should be stimulated to seek learning opportunities to improve their own competency and their effectiveness. Nurses who are mindful of the problems in nursing are better able to fulfil their responsibility by making a maximal contribution to the care of patients.

We believe that faculty members should be interested in students as young women, well-informed with concentrated knowledge in their own fields and continually utilizing new concepts and devices in education and nursing. The teachers' efforts should be directed towards stimulating student nurses to enhance their own learning and experience, and to develop effective communication skills and good inter-personal relations. In addition, the faculty should help the student to establish and maintain good standards and practices of healthful living for herself, essential before she can help others towards the same goal.

We believe the faculty has the responsibility for the direction of the learning experiences throughout the entire program, and in fulfilling this responsibility works with the members of the Nursing Service to use most effectively the resources provided.

We believe the diploma program can prepare nurses to give comprehensive patient care within the potential of the hospital setting. This program can provide a sound foundation in nursing upon which graduates with ability and interest may progress to further education for nursing and to positions requiring beginning skills in leadership.

The aims of the School are as follows:

1. To select and admit young women of ability and aptitude who can mature within the philosophy of the school.
2. To provide a stimulating and progressive curriculum.
3. To provide the motivation for the student to constantly improve her quality of nursing.
4. To help the student attain a working knowledge of the basic scientific principles and their application to nursing.
5. To provide opportunities for the student to acquire those skills and attitudes necessary for giving effective nursing care.
6. To help the student develop judgmental skills.
7. To help the student make the most of opportunities to promote health and to control preventable conditions and diseases.
8. To help the student establish good habits for continuous personal and professional growth.

9. To help the nurse develop to the highest possible potential as an individual so that society may benefit.
10. To design a curriculum that will provide for progression of learning experiences which promote the integration of theoretical content with clinical experience.
11. To assist the student to recognize and evaluate her own abilities and progress.
12. To help the student gain personal and professional satisfaction by encouraging expression of individuality and creativity.
13. To help the student recognize and accept her position as a member of the health team and her responsibility as an individual in the immediate and broad communities in which she will function.
14. To provide for continuous re-evaluation of the curriculum in terms of the changing needs of nursing and the student nurse.
15. To help the student as she advances in the school to assume an increased amount of responsibility for her own learning.
16. To foster an understanding between nursing service and nursing education which will promote an educational environment for the student in a clinical situation.
17. To develop the school's program through participation of faculty, administrators, and students.
18. To provide a continuous exchange of ideas between faculty and students.
19. To provide facilities to maintain and promote good student health, welfare, and guidance.
20. To help the student develop skills in communication.

In general the School follows the budget policy set forth by the National League for Nursing in the "Criteria for Diploma Schools of Nursing".

The Director of the School, with consultation from the faculty, estimates the total cost of operating the School. The finished budget is presented to the Hospital Comptroller and Budget Committee in August. This estimate is completely separate from the estimate for Nursing Service. Monthly reports of expenditure are received and reviewed. Action is taken if necessary to control expenditures not consistent with the planned budget. Revision is made through the Comptroller if necessary.

Students do not receive any remuneration in either of the first two years of their course. In the twelve months interneship of the third year the students receive a total stipend of $360 (£128 11 6). Throughout the three years course the student is maintained by the hospital without expense for board, room and laundry.*

* From September, 1963, the student will pay $480.00 for board and room in the first six months of the freshman year.

The fees and charges payable by students for the three year programme are as set out in the following table:

	1st Year	*2nd Year*	*3rd Year*	*Total*	
	$	$	$	$	
Tuition . .	550.00	350.00	200.00	1100.00	(£392 17 0)
Books . .	52.60	35.00		87.60	(£31 6 0)
Uniforms . .	105.15			105.15	(£37 11 0)
Application fee .	10.00			10.00	(£3 11 6)
Pre-entrance tests .	12.00			12.00	(£4 6 0)
Library . .	5.00	5.00	5.00	15.00	(£5 7 0)
Laboratory . .	10.00	10.00		20.00	(£7 3 0)
Health . .	25.00	5.00	5.00	35.00	(£12 10 0)
Tests . .	5.00	5.00		10.00	(£3 11 6)
Student Activity .	10.00	10.00	10.00	30.00†	(£10 14 0)
Graduation .			25.00	25.00	(£8 18 6)
				$1449.75	(£517 15 6)

Certain bursaries are available to students to assist in the paying of their fees. In other instances loans from a special student loan fund may be obtained.

† Paid directly to Student Nurses' Co-operative Association.

CHAPTER II

Form of Diaries, Records and Reports

THE Nurse Teacher Exchange Scheme stated that 'for the purpose of studying and evaluating the exchange arrangements the Advisory Committee will make with the Exchange Teachers such arrangements as are considered appropriate and may make such other enquiries as are deemed necessary for a report on the subject'. Information was collected from three sources:

The Exchange Nurse Teachers.

The Directors of Nursing of the three participating Schools.

A number of the student nurses (by random sample) who had been taught by the nurse teacher during her nine months period of exchange.

The Exchange Nurse Teachers accepted the responsibility of taking an active part in the obtaining of information and impressions. It was felt that it would make it easier for them and more useful for those concerned with the evaluation if the information and impressions were presented in a systematic form. Nurse teachers, therefore, were asked to prepare the following reports during and after their exchange visits:

Report on the period of orientation (the first month of the nine months period of exchange). This (in questionnaire form) consisted of a brief factual description of what had been done and seen during the period of one month's orientation. It contained a note on first impressions and reactions. It was prepared at the conclusion of the first month. The layout of the Report is shown in Form A in this Chapter.

A Diary kept during the remaining eight months of the nine months exchange. This consisted of brief entries made each day (with the exception of fifteen days on which more detailed information was required). The Instructions for the writing of the Diary are given in Form B in this Chapter.

Report on period of two months' observation in the second School. This was similar to the report for the period of orientation (a specimen is given in Form C).

Final Report at the end of the year's exchange programme. The report was in three sections—one relating to the nine months period of attachment, one to the two months period of attachment and one to the whole year of exchange (see Form D in this Chapter).

Follow-up Report. This report was prepared by each of the first three teachers six months after her return to her parent school. For the nurse teachers in the second year of the programme the report will not be prepared until three months after their return and is not taken into account in this Report.

Each nurse teacher was asked to write a short report indicating her reactions to teaching in a known environment following the experience of teaching in other countries. It was suggested that it should be a general report but, in particular, indications were to be given of any changes in administration or teaching methods which had been introduced following return from the year of exchange.

The Directors of Nursing prepared reports concerning each Exchange Nurse Teacher who had been temporarily attached to their School of Nursing.

In the report the Director of the School stated how she considered the Nurse Teacher adapted herself, etc. In addition, in respect of each of the Nurse Teachers attached to her School of Nursing for a nine months period, the Director of the School completed a questionnaire (a specimen is given in Form E in this Chapter).

It was considered that it would be interesting and helpful to know something of the reactions of student nurses who had been taught by the Exchange Nurse Teachers. A simple form with two questions was devised. These forms were given by the Director of the School to fifteen student nurses by random selection. No names were recorded on the forms which after completion were forwarded to Miss Woodward. (Form F in this Chapter is a copy).

Form A

REPORT ON PERIOD OF ORIENTATION

Name of exchange nurse teacher.....

School of Nursing to which report refers

.....

SECTION I

Give a brief factual description of what you have done during the last month, indicating the items which to you have seemed particularly interesting or useful.

(*a*) Inside the School of Nursing.
(*b*) Inside the Hospital.
(*c*) In outside organisations and institutions.

SECTION II

(1) Do you now feel you have a clear picture of

(*a*) the administrative framework in which the School of Nursing operates and its relationship with the hospital
1. Yes, completely.
2. Yes, although I still feel confused and uncertain about a few points.
3. No. I have found it difficult to get a clear picture.

(*b*) the organisation of nursing services and the nursing education programme
1. Yes, completely.
2. Yes, although I still feel confused and uncertain about a few points.
3. No. I have found it difficult to get a clear picture.

(*c*) the general background of the educational system of the country concerned
1. Yes, completely.
2. Yes, although I still feel confused and uncertain about a few points.
3. No. I have found it difficult to get a clear picture.

(2) What do you consider to be the most striking difference in the above respects between this School of Nursing and your parent School?

SECTION III

(1) Do you now have a clear picture of exactly what you will be required to do in the next eight months
1. Very clear.
2. Fairly clear.
3. Not yet very clear.

(2) What problems do you think you will be likely to encounter while participating in the teaching arrangements?

SECTION IV

(1) Have you formed any particular friendships inside the School during this period? If so, how was this contact initially established. For example, was the person with whom you have become most intimate given any special responsibility for showing you round and looking after you?

(2) Have you had any particularly heated arguments either with individuals or in group discussion? If other than of a personal nature what did they concern.

SECTION V

(1) Have you enjoyed this month?
1. Yes, completely.
2. Yes on the whole, but have felt anxious and nervous at times.
3. No. I have found it difficult to settle down.

(2) Have your mood and reactions changed during the month? If so, would you describe briefly the various stages through which you have gone.

Date..... Signed.....

Form B

DIARY TO BE KEPT DURING THE EIGHT MONTHS PERIOD OF ATTACHMENT TO SCHOOL OF NURSING (i.e. AFTER COMPLETION OF PERIOD OF ORIENTATION)

This diary should cover the period of approximately eight months participation in the teaching arrangements.

Daily entries should consist of a brief factual account of what the exchange teacher has done, e.g., the amount of time spent in preparing, giving or listening to lectures, the places visited while on duty or the contacts made with the Director of the School of Nursing or other teaching staff.

The emphasis is on brevity and it is expected that these daily entries will not take more than ten minutes to complete.

In addition to these daily entries a more detailed report is required on each of the fifteen days listed below:

October	11th and 28th
November	10th and 21st
December	10th and 19th
January	3rd and 16th
February	1st and 24th
March	9th and 20th
April	5th and 27th
May	2nd

On these days we would like you first to give a brief resume of the period since the last detailed entry was made indicating which of the things you have done have seemed to be the most interesting and useful, and what problems have arisen and how they have been resolved. Secondly, we would like you to describe in detail what has happened on the day in question. If, for example, you have taken a class then indicate how successful you feel it was, say how the students reacted to you and indicate the questions they asked. Any discussions that you had on that day should be recorded and we would like to know with which people from the School of Nursing or the Hospital you had been in contact either formally or informally. For example, with whom you sat at meals.

It may be that one or more of the dates chosen will coincide with an off-duty period. We do not wish you to give details of how you spent your free time, but we would be interested to know if you have been with any of the people with whom you are working or whom you have met through your work.

As you are required to write only brief entries on most days and the occasional longer one we suggest that you should purchase a plain note book other than a diary and enter the dates as you go along.

Form C

REPORT ON TWO MONTHS PERIOD OF OBSERVATION IN THE SECOND SCHOOL

Name of Exchange Nurse Teacher.....

School of Nursing to which report refers

.....

SECTION I

Give a brief factual description of what you have done during the last two months, indicating the items which to you have seemed particularly interesting or useful.

(*a*) Inside the School of Nursing
(*b*) Inside the Hospital
(*c*) In outside organisations and institutions

SECTION II

(1) Do you now feel that you have a clear picture of

(*a*) the administrative framework in which the School of Nursing operates and its relationship with the hospital.
1. Yes, completely.
2. Yes, although I still feel confused and uncertain about a few points.
3. No. I have found it difficult to get a clear picture.

(*b*) the organisation of nursing services and the nursing education programme.
1. Yes, completely.
2. Yes, although I still feel confused and uncertain about a few points.
3. No. I have found it difficult to get a clear picture.

(*c*) the general background of the educational system of the country concerned.
1. Yes, completely.
2. Yes, although I still feel confused and uncertain about a few points.
3. No. I have found it difficult to get a clear picture.

(2) What do you consider to be the most striking differences in the above respects between this School of Nursing and the first exchange School of Nursing?*

SECTION III

(1) If you were going on to participate in the teaching arrangements do you think you would be likely to encounter problems other than those encountered in the first School to which you were attached?

(2) Do you think that a longer period in this School would have been more useful than the longer period in the first School? If so, why?

SECTION IV

(1) Have you formed any particular friendships inside the School of Nursing during this period? If so, how was this contact initially established? For example, was the person with whom you have become most intimate given any special responsibility for showing you round and looking after you?

(2) Have you had any particularly heated arguments either with individuals or in group discussions? If other than of a personal nature what did they concern?

SECTION V

(1) Have you enjoyed these two months?
1. Yes, completely.
2. Yes, on the whole, but have felt anxious and nervous at times.
3. No. I have found it difficult to settle down.

(2) Have your mood and reactions changed during the two months? If so, would you describe briefly the various stages through which you have gone.

Date..... Signed.....

* See footnote on page 26.

Form D

FINAL REPORT

This Report will be in three sections. Each section should bear the name of the exchange nurse teacher and the School or Schools of Nursing to which the section refers. Within each section the questions should be numbered as on the attached outline. The Report may be written or typed on ordinary paper. The Report should be sent to Miss Woodward at the completion of the *whole* exchange period.

SECTION I

(for the nine months period of attachment)

Name of exchange nurse teacher ..... School of Nursing to which Report refers .....

PART 1

1. You will be submitting with this report the diary you have been keeping. Would you comment briefly on this diary, indicating which incidents recorded in it were the most significant and which activities were the most useful and interesting.

2. Which of the things you have been asked to do during this exchange period have you found most difficult?

3. Which of the things you have been asked to do during this period of the exchange have presented the least difficulty?

PART 2.

1. In your report on the period of orientation you were asked to say what you considered to be the most striking differences between this School of Nursing and your Parent School in respect of:

(*a*) The administrative framework and the relationship with the hospital.
(*b*) The organisation of nursing services and the nursing education programme.
(*c*) The general background of the educational system.

Without reference back to what you said in your report on the period of orientation, would you re-state what you now feel to be the most important differences in these respects, listing them in order of significance under the headings above (*a*), (*b*) and (*c*).

PART 3.

1. What do you consider to be (*a*) the particular strengths and (*b*) the weaknesses of this School of Nursing in comparison with your parent School.

2. What changes would you like to see in your parent School as a result of your experiences. List, firstly, those which you think there would be a practical possibility of effecting, and secondly, those which you think are desirable but impracticable.

PART 4.

(Write down the expression of opinion nearest to your own)

1. Have you enjoyed this exchange period?
   (i) Yes, I have enjoyed every minute of it.
   (ii) Yes, I have enjoyed it on the whole, as much as I expected to.
   (iii) Some, but not all of it.
   (iv) I have not enjoyed it as much as I expected to.
   (v) I have not enjoyed it at all.
2. Do you think this is about the right length of time to spend in one School of Nursing?
   (i) No, the period should be twice as long.
   (ii) No, I would like a little longer.
   (iii) Yes.
   (iv) No, six months would have been long enough.
   (v) No, it would have been better to have had three month periods in more places.
3. Do you feel confident that you have been able to make a contribution yourself and have done what was required of you?
   (i) I am sure I have.
   (ii) I think I have.
   (iii) I do not know.
   (iv) I do not think I have.
   (v) I am sure I have not.

PART 5.

1. Have you established friendships during the exchange period that you think will lead to permanent contacts in the future? If so, are they with people you have met inside the School of Nursing, or Hospital, or outside?

2. Have you found it easy to maintain friendly relationships with your colleagues? In what ways, if any, do their attitudes and opinions appear to differ from those of your colleagues in your parent School?

SECTION II

(for the two months period of attachment)

Name of exchange nurse teacher ..... School of Nursing to which Report refers .....

PART 1.

1. Would you comment briefly on this period, indicating which incidents in it were the most significant and which activities were the most useful and interesting.

2. Which of the things you have been asked to do during this period have you found most difficult?

3. Which of the things you have been asked to do during the period presented least difficulty?

PART 2.

1. In your report on this period you were asked to say what you considered to be the most striking differences between this School of Nursing and your parent School in respect of:*

(*a*) The administrative framework and the relationship with the hospital:
(*b*) The organisation of nursing services and the nursing education programme:
(*c*) The general background of the educational system.

Without reference to what you said in your earlier report, would you re-state what you now feel to be the most important differences in these respects, listing them in order of significance under the headings above (*a*), (*b*) and (*c*).

PART 3.

1. What do you consider to be (*a*) the particular strengths and (*b*) the weaknesses of this School of Nursing in comparison with your parent School?

2. What changes would you like to see in your parent School as a result of your experiences. List, firstly, those which you think there would be a practical possibility of effecting, and secondly, those which you think are desirable but impracticable.

PART 4

(Write down the expression of opinion nearest to your own)

1. Have you enjoyed this exchange period?
(i) Yes, I have enjoyed every minute of it.
(ii) Yes, I have enjoyed it on the whole, as much as I expected to.
(iii) Some, but not all of it.
(iv) I have not enjoyed it as much as I expected to.
(v) I have not enjoyed it at all.

2. Do you think this is about the right time for a period of observation?
(i) No, the period should be twice as long.
(ii) No, I would like a little longer.
(iii) Yes.
(iv) No, six months would have been better.

3. Do you feel confident that you have been able to make a contribution yourself and have done what was required of you.
(i) I am sure I have.
(ii) I think I have.
(iii) I do not know.
(iv) I do not think I have.
(v) I am sure I have not.

*NOTE: This, in fact, was not the question asked in Form C, Section II, Question (2) (see page 24).

PART 5.

1. Have you established friendships during this period that you think will lead to permanent contacts in the future. If so, are they with people you have met inside the School of Nursing, or Hospital, or outside?

2. Have you found it easy to maintain friendly relationships with your colleagues. In what ways, if any, do their attitudes and opinions appear to differ from those of your colleagues in your parent School?

SECTION III

(for the whole year of exchange)

Name of exchange nurse teacher ..... Schools of Nursing.....

.....

PART 1.

1. Comment freely on your year's experience.

PART 2.

1. What comments or criticisms have you to make about the exchange arrangements.

2. What advice would you give to nurse teachers doing this in future?

Form E

QUESTIONS TO BE ANSWERED BY THE DIRECTORS OF NURSING (in addition to their short report on general adaptability, etc.) in connection with the nurse teacher attached to their hospital for the nine months period

NAME OF EXCHANGE NURSE TEACHER .....

HOSPITAL TO WHICH ATTACHED FOR NINE MONTHS .....

1. Was the visiting nurse teacher supernumerary to the normal teaching staff of the School of Nursing?
2. Irrespective of this, do you consider she could have covered the complete duties of a full member of the teaching staff:
   (*a*) after three months
   (*b*) after six months
   (*c*) at the end of the 9 months period, had she been staying longer
   (*d*) not at all
3. If (*c*) or (*d*) is the case, would you say that this was because of:
   (i) Personal characteristics: e.g. lack of maturity, inability to adapt, etc.
   (ii) insufficient experience to meet the needs of your School of Nursing.
   (iii) any other reason.
4. Did the Assistant Director of Nursing Education/Principal Tutor in your School feel that a great deal of time had to be given to guiding and supervising the exchange teacher?
5. If the teacher actively participated in the School curriculum, do you feel that she:
   (*a*) speeded up
   (*b*) retarded
   (*c*) had no effect upon the progress of the students.

Form F

(QUESTIONS TO BE ANSWERED BY STUDENT NURSES)

1. Do you think it is a good idea to have a nurse teacher from overseas?
2. Give reasons for your answer.

CHAPTER III

Evaluation of the Written Material

WRITTEN material was collected—as described in Chapter II—throughout the period of the exchange scheme, from the Exchange Teachers themselves, from those responsible for their work and from some of the students whom they taught.

The Advisory Committee decided that the several written reports, questionnaires and diaries should be read and evaluated by only one member of the Committee who should be a person not having a direct or indirect association with any of the Schools of Nursing or the hospitals at which they are situated.

At the request of the Committee, Miss Joan Woodward undertook the task of evaluating the written material. It was sent directly to her on a confidential basis by each writer. On occasions during the two exchange years, Miss Woodward was able to meet some of the Exchange Teachers and at the beginning of the final conference of the Advisory Committee she met the six teachers and was able to discuss their written material with them.

The remainder of this Chapter and the whole of Chapter IV consist of Miss Woodward's evaluation of the written material sent to her and her comments on certain matters which could not be the subject of evaluation but which appeared to call for specific mention in a report on the operation of the Scheme.

COMMENTS BY MISS WOODWARD

As the various reports and diaries reached me it became clear that, quite apart from the usefulness of the information they provided about the hospitals and the operation of the Scheme, their preparation by the teachers and other persons concerned, as the exchange proceeded, was helping to develop a critical approach. The regular and systematic submission of reports was in itself likely to enable those concerned to make a useful contribution to the final evaluation. It was also useful in enabling comparison to be made of impressions formed at the time with impressions in retrospect.

It was important for me to bear continuously in mind, however, that the written material had to be evaluated not as research material but as an aid to the Advisory Committee in making an appraisal of the Scheme and in reaching conclusions and recommendations. The reports were entirely subjective, for obviously the people participating in the Scheme could not be expected to assume a dual role; they could not be both guinea-pig and experimenter or study their own experience objectively.

The various documents used in connection with the Scheme (see Chapter II) had been prepared with this limitation in mind. It will be noted that as far as the questionnaires were concerned, many of the questions were open-ended, the emphasis being on general and descriptive information rather than on precise and quantifiable data. The proposal for a questionnaire to be filled in by each Director of Nursing was not made until the exchange was under way and in some cases Directors had already completed reports on Exchange Teachers in narrative form. Hence these questionnaires were not used as a basis for quantifiable comparison either, and descriptive summaries of the Directors' opinions were made instead.

Instructions about the diaries were also deliberately left vague; the idea being that the Exchange Teachers should decide for themselves what should

and should not be recorded. As the data could not be objective, it was felt important to encourage the nurse teachers to be subjective. This vagueness obviously worried the teachers; requests were made for more information and, as the following comments from two of the final reports show, some anxiety about the diaries persisted throughout the exchange period:

> "I did not particularly enjoy keeping the diary, for I was unsure both of how to interpret the phrase, 'a brief, factual account' and of what specific use was to be made of my notations";
>
> and
>
> "Some method might have been devised for evaluating the early portion of the diary to determine whether information was recorded in a satisfactory fashion".

But even though the reports and diaries were not research data in the strict sense of the term, it was possible to collate, analyse and evaluate the information contained in them to provide a basis for discussion at the final conference of the Committee. The evaluation would in the last resort have to be based on opinion in that no objective study of the progress of the Scheme could be made. The information provided did ensure, however, that the opinion was informed.

The material was broken down under four headings:

1. The evaluation of the nurse teacher's usefulness in the exchange situation.
2. Problems of adjustment for the individual nurse teacher assuming a role in a new environment.
3. The differences between the three Schools of Nursing and their implications.
4. Suggestions for changes in the parent hospital emerging from the exchange period.

This material, with minor modifications arising from the Final Reports by the teachers and discussions with them at the final conference is presented in Chapter IV.

Reports and diaries provided complementary information; there was no conflict between the pictures they presented. As might have been expected the diaries were the more revealing,* partly because the fact that a particular incident was recorded was in itself significant and partly because the descriptive detail contributed to the understanding of the situation. For example, it will be seen in Section I of Chapter IV that in their Final Reports the Exchange Teachers said that they thought they themselves had been able to make a contribution to the work of the departments to which they were attached; incidents recorded in the diaries showed how this contribution was made.

In spite, therefore, of their anxiety, it was generally true to say that they put into their diaries the kind of information we had hoped for. The diaries also fulfilled other functions which were appreciated by the teachers at the end of their visits. The resumés asked for encouraged frequent evaluations of their experiences by the Exchange Teachers and helped them both to consolidate what they had learnt and to redefine their aims periodically. Furthermore, a diary, because of its personal nature, can be used as a safety valve. Matters and incidents that are difficult to discuss with other people can be confided to the diary. The possibility that exposure to a new environment would create emotional problems for the Exchange Teacher was foreseen, and it was hoped

*Unfortunately one diary was lost in transit between the teacher and Miss Woodward. This loss has been remedied to some extent by the teacher, who supplied material based on her date book and memory.

that they would use their diaries in this way if it helped them. This did in fact happen in some cases.

Where possible in Chapter IV simple tables of comparison have been drawn up. It was not possible to go very far in this direction because of the smallness of the number of people involved and the problem of avoiding identification of the particular writer.

Not only was there no conflict between individual reports and diaries, but also consistent pictures emerged of each School of Nursing from the reports of the visiting Exchange Teachers (each School was visited by four people for long or short periods). One of the most interesting things about these reports was the way one thing tied up with another. For example, it appears that as far as the student-teacher relationship was concerned, the situation was most authoritarian in Belfast and most permissive in Boston. The degree of permissiveness in Toronto came midway between the other two. The opinion was expressed that Toronto struck just about the right balance from the point of view of student development. Evidence supporting this opinion was obtained from the reports sent in by the students. The Toronto students were able to express themselves better and seemed more mature than either the Belfast or the Boston students.

While it was not relevant to the Advisory Committee's Report as now published or to the discussions at the Committee's final conference, it would be possible to collate the information relating to each School of Nursing and submit individual reports to the Directors. Because of the consistency already referred to this can be done without embarrassment or even without reference to individuals. There is a lot of constructive comment in the written material which it would be wasteful not to feed back to the Schools concerned. For example, the Exchange Teachers gave their views on what they thought were the particular strengths and weaknesses of the Schools they visited. The Directors of the three Schools of Nursing at the final conference asked that this should be done, and the Exchange Teachers stated that they would not have any objections. It is hoped in time to meet these requests.

The written material gave an interesting insight into the three Schools of Nursing and the evaluation of it made a useful contribution to the appraisal of the Scheme. It would be more difficult to draw conclusions from the material about the possible outcome of similar schemes of exchange. For example, no one seemed very happy about the two months period of attachment to a School. This was found to be too long a time to be an observer and too short a time to become a participant.

It would, however, be dangerous to generalise from the written material about such matters as the Exchange Teachers' usefulness or the problems of adjustment for individuals in a new environment. In the first place the number of cases was small and although in theory it is possible to generalise from two cases, in practice it is very unwise to do so. Moreover, many variables have to be taken into account. The individual personality not only of the Exchange Teachers themselves but also of all the people with whom they formed relationships influenced the course of events. Attitudes towards the Scheme also varied from hospital to hospital; opinions about its chances of success seemed to have been formed to some extent at least, in advance.

Unfortunately, too, the period of operation of the Scheme coincided with a time of unsatisfactory teaching-staff relationships in the Belfast School. Attachment to the Belfast School in this situation was a difficult experience for all the

Exchange Teachers concerned and the problem of adjusting to the exchange situation was overshadowed by the problems of adjusting to a disturbed group. Thus there is more than the usual doubt about the typicalness of the experience in Belfast; indeed, it is reasonable to assume it was a-typical. Had the exchange taken place at another time the experience and the results probably would have been different. The suggestion that emerged from the written material that the Exchange Teachers' usefulness was less in Northern Ireland than in Canada or the United States could not be taken at its face value. It accordingly seemed safer to base conclusions on what happened in Boston and Toronto where there were no special or abnormal circumstances.

CHAPTER IV*

Reports and Diaries: Extracts and Comments

SECTION 1

EVALUATION FROM WRITTEN MATERIAL OF THE NURSE TEACHER'S USEFULNESS IN THE EXCHANGE SITUATION

MATERIAL USED: Exchange Teachers' reports and diaries,
Reports of Directors of Nursing;
Student nurses' reports.

A. The Exchange Teachers' own opinions

At the end of the first month of her exchange, each teacher was asked whether she had a clear conception of what was expected of her in the following months. The answers in Table 1 show that four of them were not completely sure.

TABLE 1

End of first month

Do you now have a clear picture of exactly what you will be required to do in the next 8 months?

	Number of answers
1. Very clear	2
2. Fairly clear	2
3. Not yet very clear	2
TOTAL	6

In their Final Reports the Exchange Teachers were asked to indicate on a scale their own assessment of their activities in the visited hospitals. The answers are given in Tables 2 and 3.

TABLE 2

Nine months period

Do you feel confident that you have been able to make a contribution yourself and have done what was required of you?

	Number of answers
1. I am sure I have	1
2. I think I have	5
3. I do not know	—
4. I do not think I have	—
5. I am sure I have not	—
TOTAL	6

*Prepared for the Advisory Committee by Miss Joan Woodward.

TABLE 3

Two months period

Do you feel confident that you have been able to make a contribution yourself and have done what was required of you?

	Number of answers
1. I am sure I have	—
2. I think I have	3
3. I do not know	3
4. I do not think I have	—
5. I am sure I have not	—
TOTAL	6

The hesitancy shown in these replies could have been caused by the lack of certainty as to what was required (indicated by Table 1) and one teacher explicitly states this as her reason for giving the answer "I think I have".

For several reasons, no very clear picture could be expected from direct questions to the Exchange Teachers about their own usefulness. First, the exchange being experimental, the confusion of the teachers over what was required of them was understandable. Secondly, natural modesty probably led them to underestimate the extent and worth of the part they played in the exchange situation. Thirdly, the nature of their impact on others would not be known to them in full. The following prècis of, and extracts from, diary entries add considerably to the picture and do indicate that the Exchange Teacher did really feel useful at times.

USEFULNESS AS SEEN IN DIARY ENTRIES

Diary No. 1

This teacher felt useful to students, teachers and patients in the visited hospital. As an "extra" on the wards, she gave additional help to the students, e.g. "felt very essential to the students who were needing help and reassurance when the busy, regular instructors were occupied, or absent for some reason, e.g. sick, on holiday or lecturing". "This I found very satisfying", i.e. to be of real help. Further assistance was given to colleagues when they requested it, e.g. to a new instructor glad of advice, or to another instructor "about some problems she wanted help with". She notes that "the instructors like the idea of the exchange and hope they will continue in future". Also helped personally by her presence were the patients: "the exchange programme is often of interest to patients. Many patients are glad of an opportunity to talk about their problems".

She felt useful when giving lectures and found this satisfying and interesting. "Enjoyed lecturing . . . a very stimulating period, class alert and interested and asked numerous questions" are typical comments. Because of this experience she was able to "give some suggestions that I think will be of value to the instructor teaching this unit next year". Also as a result of her observations, she was able to make general comments on the organisation and content of the educational programme to those responsible for them. Specific lectures were given to groups of students on "details about the various treatments carried out at home that differ from those here", thus informing the students about different nursing procedures and she also drew attention to the nursing journals from her own country, available in the library but seldom used.

The visits made to various other hospitals and nursing conferences together with the time spent in reading relevant material, enabled her to develop a wider understanding of the visited country's nursing pattern. Also in these wider contacts she was frequently asked about nursing in her own country and the exchange project itself, in which much interest was expressed. She mentions learning about the procedures for nurses from her own country coming to work in the visited country and says "I know the information I received will be very valuable in the future".

Diary No. 2

The keynote of this teacher's activities obviously lay in the use she was able to make of discussion, both formal, e.g. on committees and informal, e.g. with colleagues and students. She was made a member of some committees and often contributed her views and ideas. In discussion with other teachers, many arguments "without acrimony" occurred and differences of opinion were expressed; some examples noted are "discussion on how to deal with the students' attitudes to the teacher", "discussion with two teachers about the use of role-playing as a teaching tool". She was able to help teachers with problems and specifically mentions helping a new teacher who was unsure of some point. She held many "fact-finding" private interviews with teachers to learn about their courses and other nursing personnel to fill in the picture of nursing in that country. Obviously, "working closely and freely exchanging ideas" with others was a valuable aspect of her visit.

In her teaching she found the situation straightforward, "teaching situation normal—as at home" and she experienced little difficulty in giving instruction. She particularly enjoyed contact with the students and noted that "questions were asked about nursing in my country" while she worked with them. She also "spent considerable time helping with advice and criticism". Her mediating influence between staff and students is also revealed. The students were informed by her in lectures about the exchange project and conditions in her own country. She was able to listen to a good number of other teachers giving their lectures—an opportunity to observe others' techniques.

A large proportion of her time was occupied reading material relevant to the teaching situation and the whole of nursing in the visited country as well as having interviews to learn more with various nursing personnel outside the assigned hospital.

Diary No. 3

This teacher did a great deal of teaching, often requiring considerable preparatory work, and very much enjoyed the experience. "I am glad of the teaching opportunity in spite of all the work". In some instances, teaching material she did not normally deal with at home, enabled her to learn more.

She spent a considerable amount of time on various wards, observing and working alongside nurses. Here, too, discussion played a valuable part and variations in methods and ideas were challenged and defended with fervour and interest. For example, the diary notes time spent with colleagues discussing "curriculum of my parent school of nursing" and "we had an interesting and provocative discussion about hospital construction, hospital administration and methods of teaching student nurses".

Relationships with the student nurses were found to be worthwhile; "I find them quite stimulating" and she often gave extra individual tutoring to students, e.g. if been away ill and missed lectures. In addition, she gave lectures to the students about nursing in her own country.

Giving lectures on her own country to a variety of nursing organisations and making visits to various types of hospital over a large area were the means of imparting and obtaining information and exchanging ideas.

Diary No. 4

This teacher also emphasises the value of the relationships established with other teachers and students in the visited hospital. When working alongside other teachers, though, e.g. on the wards, she sometimes felt a little superfluous and was happier in situations with some responsibility, such as when acting as a "locum" for a teacher on holiday. Then she was "solely responsible for the students' learning experience" and gained satisfaction this way—"I feel I have achieved something with the students". This little lecturing that she did was an enjoyable contribution—"went quite well and the time went by too quickly".

She often talked with the students, and particularly mentions encouraging them when they were depressed or unsure. "Visited students on the wards, discussed work with them, ready to give practical assistance where necessary". Other discussions took place informally, for instance at meal-times, when she heard about their homes, families and customs; "I find these occasions profitable; I learn about their way of life at first hand", and in return answered their questions about her parent hospital and home life. She comments on the freedom with which the students approached her and says, "They are now uninhibited with me as they know I am 'a bird of passage'." Contact and discussions with other teachers were also fruitful. Discussions, differences of opinion, "good exchange of ideas", are mentioned on a variety of topics including comparison of methods, nursing techniques, progress of students and how to assess this. Mentioning an evening spent with other hospital personnel she writes, "I always enjoy their company and get a good insight into ways of thinking of people of my own age group".

Disseminating information about nursing in her own country was a frequent occurrence. She gave talks to various groups and had informal discussions with hospital personnel both in the exchange hospital and other hospitals visited. She found that many questions were asked and she mentions trying to clarify mistaken ideas about how subjects were dealt with at home. Her understanding of the visited country's ideas and procedures developed from considerable reading of material pertaining to the course and structure of the exchange hospital and a programme of visits to outside institutions and meetings. "I have gained a broader view of the concept of nursing".

She herself explicitly summed up the contribution she felt she had made in these words: "I feel that I have contributed to a better understanding of our system, ideas, etc. Although I have done little in the way of formal class room teaching, I feel that my main contribution has been with small groups—students, fellow instructors or supervisors at informal gatherings, perhaps at coffee, meals, etc.".

Diary No. 5

A considerable amount of teaching was done by this teacher, who experienced a variety of reactions to her teaching. After her first lecture her feeling was "it went well, they seemed interested. Probably newness of me to them, accent, etc.". Later she occasionally experienced feelings of dissatisfaction with her class response "class not too satisfactory—feel I didn't arouse real enthusiasm and girls had not studied", but also had times of achievement "very responsive . . . hour went too quickly", "feel I've accomplished something with them".

She had to do a good deal of preparatory work for her lectures but she notes she felt "better as an active participant".

Talks and discussions with doctors, nurses and students are noted in the diary. Sometimes these concerned differences in views, e.g. over nursing routines and procedures, and other times they were the means of exchanging ideas, e.g. over factors leading to job satisfaction or the desirable qualities of a good teacher.

She often dealt with enquiries about nursing in her home situation and found this sometimes meant correcting wrong impressions. The students were particularly interested and she gave information both by formal talks to student organisations and through informal conversations. "They asked me to tell them about my hospital—size, work of nurses, etc.". "Money—cost of education and salaries of great interest". Also, in the contacts she made through her programme of visits, she found personnel interested in techniques at her parent school—"asked many questions about nursing".

A range of visits, together with reading, gave her a good picture of nursing in the country visited. She was often impressed by new ideas and experiments and the differences arising from different needs and resources. "My understanding of nursing here is much better".

Diary No. 6

A contribution was made by this teacher through her contacts with staff and students. "The instructors have individually sought me out to ask me about specific problems they are having in relation to classwork or clinical supervision". She specifically mentions helping new, apprehensive teachers with their difficulties. "Whether their conversations with me are a result of the fact that I am not a permanent member of staff or a 'convenient listener' I do not know." She found assisting and encouraging the students stimulating and satisfying; "the response of the students has been very gratifying—they seem delighted to have me available to help them". One or two students sought her advice in relation to personal problems, perhaps also because of her "outsider" role.

In lecturing, which she enjoyed, she usually felt achievement—"the students seemed interested during the classes and several questions were raised" but also had some difficulty with an inattentive group—"I felt that I had not been able to stimulate them during the classes." It was stimulating to be able to audit lectures and observe other teachers and their methods and she points out "I've never before had time to concentrate on instructors' performance rather than students' performance."

Discussions with other teachers and nursing staff frequently occurred on a large number of topics connected with teaching and nursing, e.g. supervision of students, approach to teaching, problems of teaching 1st year students, relationship between a clinical instructor and a head nurse. A diary entry notes "we often talk about differences in our nursing programmes", and it was "stimulating to hear the different points of view". She participated in staff meetings, e.g. dealing with curriculum planning and discussing the philosophy of nursing, and offered suggestions there: "some of these were accepted readily" though she sometimes found her points were not relevant because they related more to the outlook motivating her parent hospital than the visited one.

She explained the exchange to nursing personnel met informally and also

gave talks to groups about her parent hospital and stimulated interest; "there was a lively discussion about some of the points I brought out". She learnt about nursing education in the visited country through reading, visits and conversations.

She felt that the most valuable aspect of the exchange was "participating as an instructor in a different school" rather than learning new ideas about curriculum or methodology.

Reactions of the Directors of Nursing

Owing to the incompleteness of the questionnaires answered by the Directors already referred to in Chapter III, and perhaps for other reasons too, the opinion of the Directors on two important points did not emerge with the clarity anticipated. These were the extent to which each nurse teacher actually participated in the teaching programme and how far she was capable of undertaking the work of a normal member of staff, and secondly, within what period of time it was estimated she was or would be fully able to do this.

The reports showed only a general feeling that the Exchange Teachers were able to fit into the pattern of teaching in a new school. The interchange did not seem to reveal any serious discrepancies in standards, although usually the teachers had to learn some new techniques and phraseology and do extra preparation. Comments were made such as "in teaching responsibilities she fitted into the programme with unusual ease" and "she seemed well prepared in methods of teaching". After having a teacher for nine months, the view was sometimes expressed that the teacher would be welcomed as a normal member of staff—"when the time came for her to leave us there was quite a general feeling that we should like to have her remain with us as a full-time member of our teaching staff" and "in other circumstances I would welcome her as a member of teaching staff".

The keenness with which the Exchange Teachers sought to acquaint themselves with the hospital situation and all relevant background material was noted with approval, e.g., one comment notes the teacher felt "a very real responsibility to gain as many facts and details about the programme as possible and she was interested in our reasons for planning and implementing the curriculum as we did". The wide and alert reading done by the teachers on material about the schools and general background together with their intelligent approach to and interest in the programme of visits they made to other hospitals and nursing bodies were frequently mentioned in the reports: "she spoke with knowledge and appreciation of the variety of meetings arranged for her outside the hospital" is a typical comment in tone.

As a complement to this acquiring of knowledge, there was a recognition by the Directors of the contribution made by the Exchange Teachers both through their general observations and suggestions and personal relationships. "Her suggestions for improving our programme were astute and her points well taken"; "shrewd in her observations which were at the same time constructive and pertinent". They all agree that students and staff enjoyed contact with an exchange teacher and there are many comments on these lines: "the students seemed to enjoy her and some members of the teaching staff in particular appreciated her interest, assistance and sharing of ideas". The other teachers "sought her advice" especially the "less experienced staff members". "Students approached her in a way which indicated they felt sure of sound assistance . . . relationships with colleagues were excellent".

Student Nurses' Views

Student nurses in each of the three participating hospitals who had been taught by an Exchange Teacher were asked whether they thought it was a good idea to have a nurse teacher from overseas and to give reasons for their answer. The replies were made anonymously and a count of these is set out in Table 4.

TABLE 4

Do you think it is a good idea to have a nurse teacher from overseas?

	Answers			*Total No. of Answers*
	Yes	*Yes with reservations*	*No*	
Belfast	14	8	1	23
Boston	16	2	1	19
Toronto	24	6	—	30
TOTALS	54	16	2	72

Reasons: Stressed most often was the opportunity of hearing and learning at first-hand about the differences in nursing procedures in another country, leading to a higher standard being striven for all round: "having someone from overseas with the same problems but with a new way to solve them—provides an opportunity to compare and contrast, to get an international view of the hospital situation and the ways in which we can best help our patients". Toronto replies specifically emphasised learning differences in principles as well as procedures. Also mentioned several times was that the Exchange Teacher caused the realisation that other methods of teaching and nursing procedures existed besides one's own and this taught them "to look at (their) nursing methods from an objective point of view". A broadening of minds and outlooks resulted and led to greater tolerance. Sometimes students claimed they found the visitor's methods or explanations more helpful than those of their own teachers. (50 answers).

The experience of having an Exchange Teacher seems to have led to a feeling of rivalry and an increased determination among the students to give of their best and eight replies contribute comments on this. Noting the high standard of nursing in another country "gives us an even greater desire to keep the standard of nursing in our own country as high as we can", and we "should do our very best to uphold our hospital so that good reports may be carried away". Another student felt the exchange scheme was "an incentive to the nurse . . . to prove the hospital and her own worth" while another opinion of its outcome was expressed as "you gain a certain pride in your own hospital and its technique". In addition, a further twenty replies suggested that the Exchange Teacher could suggest improvements to the visited hospital's educational programme ("it is good to have exchange of ideas and candid opinions from objective observers") as well as gain beneficial ideas to take back to her own hospital. Perhaps this was also the meaning behind one student's feeling that the other instructors in her school of nursing benefited more from the Exchange Teacher's visit than the student nurses did. (28 answers).

Many replies expressed the view that such an exchange promoted international understanding, friendship and goodwill. Nursing in a world-wide

setting became more vivid. The students felt they had gained an appreciation of the high standard of nursing in the visitor's own country together with an insight into any difficulties there. A valuable example of international co-operation was given by the Exchange Teacher working well with the staff of the visited hospital. (23 answers).

A few replies (10) mentioned that having an Exchange Teacher was helpful for those who were thinking of going abroad to nurse, not only in giving them an idea of conditions, salary, etc., in another country, but in actually encouraging them to go abroad. Remarks such as "may play a part in persuading our nurses to go abroad" and "may decide where we want to go and what we want to do in the future" indicate that the visiting teacher may be performing a recruiting function. Other students who do not mention going abroad to work with such directness, were still obviously interested to learn about student nurses' conditions in the visitor's country, e.g., type of training, uniforms worn, student government, and found the Exchange Teacher's account "much better than reading about it". It was felt to be both interesting and educational to learn of the visiting teacher's own hospital situation. (19 answers).

Considerable emphasis was given to the personality of the Exchange Teacher, showing the importance personality played in the students' assessment of a visiting teacher. Several replies spoke of the personal qualities of the visitor and the interest she took in them, one student expressing the opinion that the presence of "an outsider" was extremely helpful because "we were able to consult her regarding our problems more readily, as her ideas would be less biased than our own instructors". Other replies spoke of the added interest given to lectures through the freshness of an overseas lecturer with a new face and a different accent, new ideas and methods of approach resulting in easy attentiveness during the lectures. One reply emphasised the need for the Exchange Teacher to be a good lecturer, otherwise "I think feeling would run strongly against any further nurse teacher exchange from anywhere". (12 answers).

Only two people definitely answered "no" to the question, but most of their reasons were endorsed by others, who gave a "yes with reservations" answer. The main reason for objecting to an Exchange Teacher was that she was a distraction to concentration in classes; for example, that time for set studies was limited and these tended to be neglected in hearing about the visitor's own country. (4 answers). Another objection was that the Exchange Teacher hindered students, especially those at the beginning of the course, by suggesting new methods to them when they were in the learning stages and before they had fully grasped the ones taught and practised in their own country. This gave rise to confusion and doubt (1 answer). So, too, it was claimed, did the Exchange Teacher's intermittent uncertainty in ward teaching, stemming from lack of familiarity with the visited hospital's policies (1 answer). Also, the idea was expressed that a visiting teacher was concentrating on accumulating "news and views" and therefore did not give of her best in her lectures (1 answer). In contrast with these views were those of students who felt they received excellent teaching from an Exchange Teacher simply because she was "hand-picked" for the exchange and two students felt "it would be a good idea if (the Exchange Teacher) had a more active part in the actual teaching" than actually occurred (4 answers).

Other comments were in favour of an Exchange Teacher with the following reservations: "so long as she has warm, friendly personality" (2); "if able to speak our language fluently" (6); "for short periods" (1); "if from a school of

nursing similar in size and available facilities" (1); "if letters sent to us by our own Exchange Teacher about the Nursing School where she is staying are read to us" (1).

Summary

It is obvious that, apart from the diaries, the most informative material for assessing the teachers' effect in the exchange situation was to be found in the student nurses' reports. As already mentioned, there were difficulties in trying to obtain a clear picture from the Exchange Teacher's own subjective assessments or the more general reports of the Directors of Nursing.

SECTION 2

PROBLEMS OF ADJUSTMENT FOR INDIVIDUAL NURSE TEACHER ASSUMING A ROLE IN A NEW ENVIRONMENT

MATERIAL USED: Exchange Teachers' reports and diaries;
Reports of Directors of Nursing.

A. Problem of learning about a new situation

Each Exchange Teacher faced the problem of assimilating a great deal of background material about the visited school of nursing and its relationship with the hospital, as well as understanding the general system of education in the country concerned. It will be seen in Chapter II (page 22) that the Exchange Teachers were asked to say how far they felt they had managed this by the end of the one month orientation period. Their replies are summarised in Table 5.

TABLE 5

One month orientation period report

	Answers			*Total No. of answers*
	Yes	*Yes with reservations*	*No*	
Do you feel you have a clear picture of:				
(*a*) the administrative framework in which the School of Nursing operates and its relationship with the hospital?	5	1	—	6
(*b*) the organisation of nursing services and the nursing education programme?	3	3	—	6
(*c*) the general background of the educational system of the country concerned?	2	3	1	6

This Table indicates that the general background of the country's educational system was the most difficult aspect to grasp.

Entries in the diaries show that the teachers all spent time in reading and reviewing material throughout the exchange period, and also the programme of visits to hospitals and organisations helped to fill in the picture. Signs of

strain over this are sometimes evident, though on the whole they are slight: e.g. "I have heard so much in a comparatively short time that I haven't got the material quite sorted and arranged" was one comment at the end of the first month. Another said one of the difficulties lay in "the mental work of assessing, of understanding, of remembering minutiae". Generally speaking, visits to outside organisations were made in the later months of the exchange and this seems to have been a good policy since it allowed time for assimilation of the one new hospital situation first; e.g., one diary notes, "I was glad to have had some basic experience . . . and the people who spoke to me said they felt that because of this I was able to absorb and retain what they told me and ask pertinent questions, in contrast to visitors who were only here for a short time and travelled rapidly from place to place and consequently became confused". However, there was also the opinion stressed that having the visits to outside organisations in "concentrated periods" instead of their being "spread throughout the nine month period" gave rise to some exhaustions and mental indigestion.

The table compiled from similar questions asked after the two months period of observation does not indicate any increased facility in absorbing such information (Table 6).

TABLE 6

Two months observation in second School report

	Answers			*Total No. of answers*
	Yes	*Yes with reservations*	*No*	
Do you feel you have a clear picture of:				
(*a*) the administrative framework in which the School of Nursing operates and its relationship with the hospital?	6	—	—	6
(*b*) the organisation of nursing services and the nursing education programme?	3	2	1	6
(*c*) the general background of the educational system of the country concerned?	—	5	1	6

However, comments reveal that the Exchange Teachers were feeling tired, confused and saturated with information by this stage:

"I was weary at this point";

"I found it generally difficult to settle down and assimilate material presented to me";

"I found difficulty at this stage and when asked to make comparison between American, Canadian and British nursing . . . I couldn't sort out my ideas on the subject".

In their reports the Directors of Nursing comment on the Exchange Teachers' ability to grasp a new situation and the eagerness with which every Exchange Teacher approached this problem is noted. According to the reports, Exchange Teachers arranged some pertinent activities themselves, took initiative in getting to know the background of the visited country, were competent in seeking and extracting relevant information and felt a real responsibility to gain as many facts and details as possible.

B. Problems in the teaching situation

In their orientation period reports, the teachers were asked, "What problems do you think you will be likely to encounter while participating in the teaching arrangements?" Only one person did not anticipate any problems. Replies show general agreement on the main areas of difficulty envisaged and later reports and diary entries show how these problems did in fact materialize.

(i) TEACHING MATERIAL FOR CLASSES

Three mentioned this as a possible difficulty in the orientation report:

"knowing how much factual material to give the students as syllabus different here";

"in preparing the formal lectures I may experience some difficulty as to the amount of detail required";

"I may have difficulty in making material for the class last the time allowed".

The difference in approach of the three participating hospitals was responsible for these fears. The North American teachers, used to coping with one subject, found the strain of extra preparation necessary to cover a wider theoretical field in Northern Ireland. On the other hand, Northern Ireland teachers found difficulty in spreading material out in lessons because they were not used to dealing with only one subject or aspect, e.g. "I sometimes had difficulty in spreading class material over the allotted time". This also entailed extra preparation work. In all cases of exchange between the two continents, diary entries of how time was spent indicate considerable periods of study and preparation for lectures.

(ii) DIFFERENCES IN TECHNIQUES

There were three mentions of this as an envisaged difficulty in the orientation reports:

"I may have some difficulties because of differences in ward administration and basic techniques";

"I will have to keep checking as I go along to be sure I am teaching according to the way things are done here";

"I may have difficulty working with different equipment . . . techniques will be different and I'll have to concentrate on teaching techniques accepted here, otherwise if I lapse to own methods I may confuse the students".

Indications are that learning the differences in techniques and expressions was not difficult but it did take time. The need for teaching the students according to the practice of the visited hospital and not confusing them was readily appreciated by all the teachers who usually observed on wards and in the classroom for some time before lecturing themselves. In several cases, lecturing was not done until several months had elapsed. In a case where lecturing was done sooner, the difficulties of doing this without being fully conversant with practice in the visited hospitals are mentioned: "I would strongly recommend that a later exchange of tutors should entail a short, intensive period of observation and participation in ward nursing in *one* ward unit, to get the real feel of the work to be done and to see better what you must prepare the nurses to do". Phrases illustrating the difficulties met are as follows:

"at first I found it awkward to demonstrate certain procedures by myself in instances where two persons would be used at home";

"many medical terms said differently here";

"have to become familiar with a new nomenclature for many articles in everyday use in hospitals";

"there are differences in terminology, in principles of training and one needs to become familiar with these".

The teacher who had not anticipated any problems in her orientation report did point out in her final report that "adjusting initially" was one of her difficulties and that she found assisting with teaching straightforward only "after becoming familiar with specific nursing methods at this hospital".

One Director of Nursing mentions this problem in her reports and points out that understanding the differences in the use of language—words and medical terms—took some time to achieve.

(iii) DEFINITION OF ROLE

One orientation report mentions as an anticipated difficulty "defining and performing my role as I assist" another teacher. Many of the diaries, referring to all the hospitals, show that there was uneasiness at times between the Exchange Teachers and other teachers at the hospital, particularly with those to whom they were assigned to help at various periods. These came from uncertainties and misunderstandings of the role and functions of the Exchange Teacher. In no case were these sufficient to disrupt harmonious relationships seriously and perhaps were never obvious other than to the individuals concerned, but they did lead to some discomfort at times.

This difficulty touches on the one aspect that emerged as the chief problem for the Exchange Teachers, although no one envisaged it fully at the end of the orientation period, namely how to cope with being an "extra", observers without the real responsibilities of their usual jobs. The problem reflects a difficulty inherent in the purposes of the exchange scheme—that the teacher should be a participant and an observer. The teacher requires responsibility and active participation for her personal satisfaction—at the same time, in order to learn about the whole situation, she must be sufficiently free from duties to enable her to move around the hospital, meet various personnel and visit outside organisations.

At Belfast, the Exchange Teachers carried a heavier load of classroom teaching responsibilities than those in Toronto and Boston. Reference has already been made in Section 1 of this chapter to the evidence that these teachers felt this more satisfactory, despite the extra work involved, than those who were additional to the normal teaching staff and sometimes felt superfluous. Relevant comments include: "actual participation in the teaching programme, although initially burdensome, gave me the feeling of functioning as one of the members of staff", and "feel better as an active participant". Three of the four teachers who spent nine months at Boston or Toronto expressed either in diaries or reports the difficulties of their supernumerary position and welcomed the few opportunities for responsible participation, e.g., in substituting for another instructor or in giving lectures (see Section 1). Two teachers gave under the heading of things they found most difficult—

"redefining my role and activities during the year due to the fact that I was an additional person on the teaching staff" and "finding the best role as a temporary faculty member with no specific teaching appointment and behaving within this role".

Further extracts from diaries emphasise this point:

"I still at times feel superfluous when on the wards" and "it is good to feel that I now have some responsibility and that we aren't duplicating work or making work where there really isn't any to be done".

It is perhaps significant that the fourth teacher, who did not state this as a difficulty, did emphatically express her satisfaction when she had some responsibility or lectured.

The problem is also referred to in the reports of the Directors of Nursing. On the one hand, there is a reference to the width of observation and visits made by an Exchange Teacher because she "at no time carried the responsibility for a teaching load", but other comments show that the uneasiness of the teachers was realised, e.g., "she enjoyed her contacts with students and was happier when teaching than observing" and "to be an observer, to participate without having full knowledge and near or full responsibility has not been easy for her. She has felt that her contributions were insufficient even though she was busy with planned activities and the preparations which went with those activities". The lack of clear directives and having to organise their own programme of observation and visits to varying extents clearly worried many of the teachers. It is interesting to note that one teacher who impressed two Directors with her ability to organise her own programme to meet her own needs and obtain relevant information, expressed considerable doubts in her written material about accepting and coping with this freedom.

The following quotation sums up this problem: "there were times during the year when I wondered if the values gained from the experience would compensate for the loss of satisfactions associated with responsibilities in my own school".

C. Problems in personal relationships

In general, the Exchange Teachers easily established friendly relationships with the staff and students in the schools they visited. In Belfast, however, teaching staff problems unconnected with the exchange scheme caused difficulty for the Exchange Teachers in establishing such relationships; but all the teachers commented on the friendliness with which they were met, especially socially, and friendships were established with educational and nursing staff which, in many cases, they felt would be permanent.

In two of their reports, the teachers were asked whether they had formed any particular friendship inside the school of nursing and if so, how the first contact was made. An analysis of these replies in Tables 7 and 8 shows the means by which acquaintance and then friendship were developed.

TABLE 7

One month orientation period

Have you formed any particular friendship inside the school during this period? If so, how was this contact initially established?

Exchange Teachers		*Method of contact*
1	Yes, several	(*a*) Much contact in work + common interests (*b*) Responsible for part of orientation (*c*) Common interests (*d*) Met before — another exchange teacher
2	Yes, several	(*a*) Much contact in work (*b*) Residential contact
3	Not in particular Generally everyone very friendly	—
4	Yes, mainly one	(*a*) Much contact in work + common interests
5	Yes, especially two	(*a*) Office contact (*b*) New here too
6	Not in particular except (*a*) Generally warm and easy relationships	(*a*) Met before — another exchange teacher

TABLE 8

Two months period

Have you formed any particular friendship inside the school during this period? If so, how was this contact initially established?

Exchange Teachers		*Method of contact*
1	Not in particular except (*a*) Staff on holidays	(*a*) Met before — another exchange teacher
2	Yes, several	(*a*) Residential contact + responsible for part of orientation (*b*) New here too
3	Not in particular Too short a time	—
4	Yes, mainly one	(*a*) Office contact and another exchange teacher
5	Not in particular Too short a time	—
6	Generally very warm, two in particular	(*a*) Met before — another exchange teacher (*b*) Responsible for part of orientation

It is notable that permanent friendships did not develop during the two months period, except with another Exchange Teacher, who had either already been met or would be met again in the course of the operation of the Scheme.

In spite of the general easiness of personal relationships, however, problems did arise which were all related to the necessity for the Exchange Teachers to remain impartial and objective over a long period of time.

(i) OBJECTIVITY—SOCIALLY

There was the difficulty of trying to be impartially friendly to all in spite of individual preferences. "Trying to treat all staff members equally irrespective of my feelings about them as individuals" was listed as a difficulty. This caused strain sometimes, e.g., tiredness because there was a feeling that all offers of hospitality should be accepted. "Too many kind invitations out and not sufficient days" as one diary entry reads.

(ii) OBJECTIVITY—IN OFFICIAL ACTIVITIES

There was the difficulty of participating in activities of the school, e.g. meetings and discussions as one of the family, which they were usually encouraged to do, and yet at the same time remembering they were guests, with the obligation of being careful and tactful in what they said. There are many comments about this problem:

"participating in group meetings without being too critical of individual staff members and waiting for people to seek my opinion before offering personal ideas and opinions";

"there were many times when I had to force myself to be polite";

"endeavouring to be one's best at all times produced some strain";

"I found it difficult on many occasions to sit through some of the numerous meetings and give my full attention to the point at stake";

trying to "refrain from dogmatising, from drawing swift conclusions; from destructive criticism".

(iii) OBJECTIVITY—AS AN "AMBASSADOR"

There is evidence in the data to show that being a representative of her hospital and also of her country caused tension for the Exchange Teacher from time to time. The problem had two aspects, for the Exchange Teachers not only roused opposition and criticism at times, but also had to face it. This is seen clearly in answers to the question as to whether any heated arguments had occurred. No one felt that the epithet "heated" was applicable, but some mentioned keen discussions taking place, and in all but one case these referred to differences of opinion along nationalist lines (Table 9).

TABLE 9

Have you had any particularly heated arguments either with individuals or in group discussion? If other than of a personal nature, what did they concern?

Exchange Teachers	*No. of arguments*	*Theme*
1	None	—
2	None	BUT—Defended nursing in home country in discussion
3	None	BUT—Animated discussion on differences in outlook between own country and visited one
4	None, though restraint necessary at times	BUT—Felt "on the spot" because had to defend affairs of own country
5	None	—
6	Perhaps one	Personal grievance of other person

Also a diary entry reads, "I was questioned about international affairs . . . at this point I'm beginning to feel like an ambassador rather than an exchange teacher". Furthermore, the fact that the Exchange Teachers were forced to defend their hospitals and life in general in their countries is clearly seen by the answers to the question, "What advice would you give to nurse teachers doing this in the future?" All the follow-up reports so far received (i.e., three from the first year's exchange)* mention this point:

"One of the primary considerations for a person undertaking this responsibility to recognise is that she is a representative of her country as well as her school of nursing. . . . Instinctively an individual tends to defend her parent programme in response to questioning about its characteristics."

"When away from home there is a tendency to look at things in retrospect through rose-tinted spectacles."

Need to be "familiar with the nursing pattern in their country as a whole as well as with national aspects of their country".

The Exchange Teachers were undoubtedly enthusiastic ambassadors themselves, as evidenced by the fact that four of the six say that talking about nursing education in their own country was among the things that gave them least difficulty. Some of them may have been a little over-zealous in doing this, as indicated by the reports of the Directors of Nursing. While the Directors often have praise for the tactfulness of the Exchange Teachers and their ability to compare and evaluate their experiences sensibly, they felt that the teachers did not always achieve the right balance:

"inclined to be critical and compare us with her own situation rather than try to understand our methods";

"tendency to be a little difficult in her probing";

she was "aware that she was an ambassador" for her parent school of nursing.

*Three follow-up reports were received from the second year's exchange, but as these were written after the Conference and were obviously influenced by it, the material has not been used in this Report.

D. **Problems of emotional adjustment**

All the Exchange Teachers said they felt some apprehension at the beginning of the exchange period, as Table 10 indicates, including the one who answered "Yes, completely".

TABLE 10

One month orientation period

Have you enjoyed this month?	
	Number of answers
1. Yes, completely	1
2. Yes, on the whole but have felt anxious and nervous at times	5
3. No, I have found it difficult to settle down	—
TOTAL	6

Anxiety, confusion and nostalgia were also mentioned, together with "a certain amount of tension with meeting so many new people" and "a sense of uprootedness", but everyone had settled down by the end of the first month. The final verdict on the nine months period is that it was enjoyable on the whole, as Table 11 shows.

TABLE 11

Nine months period final report

Have you enjoyed this exchange period?	
	Number of answers
1. Yes, I have enjoyed every minute of it	—
2. Yes, I have enjoyed it on the whole, as much as I expected to	4
3. Some, but not all of it	1
4. I have not enjoyed it as much as I expected to	1
5. I have not enjoyed it at all	—
TOTAL	6

Only once or twice are references made in the diaries to times of depression and these are fleeting.

The contrast in the answers to the same questions relating to the two months period is very marked and all comments show that the Exchange Teachers were tired and anxious to return home.

TABLE 12

Two months period

Have you enjoyed these two months?	
	Number of answers
1. Yes, completely	1*
2. Yes, on the whole but have felt anxious and nervous at times . . .	2
3. No, I have found it difficult to settle down	3†
TOTAL . . .	6

*qualified by "there were times when I was weary of being shown round hospitals, the details of whose construction and planning is a great jumble in my memory".

†one of these said her answer was really "Yes, on the whole, but have found it difficult to settle down".

All six experienced similar feelings of weariness and difficulties in settling down, as the following comments illustrate:

"I experienced great feelings of regret at leaving" the first exchange hospital and "I did not look forward to the necessity of meeting many new people in (the second country) after having met so many individuals during the nine month period".

"I arrived feeling disorganised, somewhat disgruntled and mentally weary. From the start I was anxious to finish. I also felt saturated with nursing ideas and occasionally found it exhausting to meet more people and ask more questions."

"I found it difficult to settle down . . . I felt pangs of nostalgia for (the first hospital) and on the other hand I was anxious to return home again."

"I really felt that the best part of the exchange was over and would have been happy to come home at that time. I felt that the two months would be an anti-climax."

It is obvious that the period was not enjoyed nearly as much as the nine months one.

TABLE 13

Final report on two months period

(i.e., retrospective view)

Have you enjoyed this exchange period?	
	Number of answers
1. Yes, I have enjoyed every minute of it	—
2. Yes, I have enjoyed it on the whole, as much as I expected to . . .	3
3. Some, but not all of it	3
4. I have not enjoyed it as much as I expected to	—
5. I have not enjoyed it at all	—
TOTAL	6

The unsatisfactory feelings about this part of the exchange revealed by the answers summarised in Table 13 correspond with the comments made under heading A about absorbing material and those under heading C about personal relationships. This raises the question of the arrangements and timing of the whole exchange project and the difficulties associated with organising an exchange among three hospitals in one year. Both the Exchange Teachers and the Directors of Nursing were made acutely aware of the difficulties involved and there is considerable comment on the length of the two periods, particularly that the nine months period was not long enough to see the complete academic year through in Canada and the United States, and that the two months period was not successful.

Tables 14 and 15 show the answers to the questions put to the Exchange Teachers on this point.

TABLE 14

Nine months period final report

Do you think this is about the right length of time to spend in one School of Nursing?

	Number of answers
1. No, the period should be twice as long	—
2. No, I would like a little longer	3
3. Yes	3
4. No, 6 months would have been long enough	—
5. No, it would have been better to have had 3 month periods in more places	—
TOTAL	6

TABLE 15

Two months period final report

Do you think this is about the right time for a period of observation?

	Number of answers
1. No, the period should be twice as long	—
2. No, I would like a little longer	2*
3. Yes	4†
4. No, six months would have been better	—
TOTAL	6

*qualified by "or six weeks" in two answers
†qualified by "when School in action"

Reasons for the failure of the second part of the exchange to be wholly satisfactory were plentifully supplied. Two months were felt to be too long for observation only (four—six weeks was suggested as adequate) and not long

enough for participation. In any case, participation was hindered by the fact that July and August were not good months for an exchange, as staff were coming and going on holiday and classes were not in full swing. There was not enough time to become familiar with the school or the personnel. The visit seemed to be an anti-climax after the previous period and it was difficult to absorb new details with clarity and exhausting to meet another set of new people.

Alternative suggestions for timing were made as follows:

(*a*) have one year in only one school "with an assigned teaching load";
(*b*) have six months in each of two schools;
(*c*) have ten months in one school with one month's observation in the second.

The Directors of Nursing also comment on the exchange arrangements. Their remarks relate to two factors; that the orientation period could profitably have been longer (two mention this) and that the two months period was too short a time to get to know the teacher, who sometimes appeared tired, e.g. "I wish we could have had her a little longer" and "she seemed exhausted on completion of her visit and I wondered to what extent this was caused by a tightly packed visit to a strange new country immediately following nine months participating experience in a sphere different from her 'home' school". One of the Directors suggested that a six months period for each teacher would have been preferable.

E. **Problems of re-adjustment**

The follow-up reports from the first year's Exchange Teachers indicate two interesting factors:

(i) None of the teachers returned to the same situation she had left; one, because of changes in the school and two, because on their return they assumed new positions where formal teaching was minimal. Therefore, they have had little chance to see how their ideas on teaching have changed or to implement new ideas in their own teaching:
"there have not been any changes in administration or teaching methods following my return"
"I have not made any specific recommendations on the basis of my experience as an exchange teacher for changes in the school."

(ii) It took a certain amount of time for the Exchange Teachers to adjust to the parent school again, e.g. "during the first few weeks I did feel somewhat anxious and confused" and "it has taken me almost a six month period to feel 'at home' in my own school". How far this was due to being away for a year in itself and how far to the changed situation and duties undertaken on return is difficult to estimate.

Positive benefits which the teachers felt they had gained from participating in the exchange included speaking and writing about their exchange experiences to other nurses and organisations on their return home; increased objectivity in viewing their own programme of nursing education and increased interest in the programmes of other countries; a growth in personal confidence, for example in coping with new tasks or public speaking; and a greater skill in obtaining pertinent information, e.g., in conversation with individuals or in visiting other hospitals.

Also mentioned several times is the fact that the teachers continued to feel "involved" in the exchange scheme through relationships with the second year's Exchange Teachers.

SECTION 3

DIFFERENCES BETWEEN THE THREE SCHOOLS OF NURSING AND THEIR IMPLICATIONS

MATERIAL USED: Exchange Teachers' reports and diaries

The Exchange Teachers were not asked for specific comments about particular aspects of the structure, administration and method of operation at the Hospitals and Schools they visited. They merely were asked to comment on what seemed to them to be the main differences between these and their parent Schools. This section does not, therefore, pretend to give a precise or complete account of each School. The material used to compile it is impressionistic. There are gaps; in some cases, comparable information was not available. Moreover, in the case of the more complex and involved aspects of administration it was not always easy for the Exchange Teachers to obtain a complete understanding of the situation. This has led to over-simplification in places. It is important to look at this section, therefore, against a background of factual description of the Schools.*

The general picture emerging from the reports and diaries was that, although the Massachusetts General Hospital and the Toronto Western Hospital had more in common with each other than either had with the Royal Victoria Hospital, there were important differences. In many characteristics, the Royal Victoria Hospital and the Massachusetts General Hospital were at the extremes of a scale with the Toronto Western Hospital somewhere between them. Taking student status, for example, we find that in Belfast students are relied upon for a considerable part of the staffing of the hospital while in Toronto they are relied upon to an appreciable extent only in the third year; in Boston the position was similar to Toronto but the reliance in the third year was less extensive.

Administration

As far as administrative differences were concerned, the reports and diaries referred to the relationship between the Hospital and the School of Nursing, the role of the Matron or Director of Nursing in relation to the School and to finance. Reference was made both to the way in which the School was financed and to the cost of Nursing Education to the student nurse. The School and the Nursing Service were most closely integrated in Belfast, there being no very clear cut distinction between them administratively and financially.

It would appear that in the North American hospitals, the financial independence of a School is regarded as of considerable significance. The fact that the School in Boston is governed by the Board of the Hospital and administers a separate budget was referred to by all the exchange teachers who visited it. Thus, this either impressed them or was impressed upon them and was regarded as symbolic of the independence of the School. Mention was also made of the fact that the North American Schools are financed to some degree by student fees. This, however, probably has more significance in relation to student status than in relation to hospital finance and will therefore be referred to again later in this section under that heading.

The greater integration of the School and Nursing Service in Belfast is also reflected in the respective roles of the Matron and the Director of Nursing on the one hand and of the Principal Tutor (Belfast), the Associate Director of

*Given in Chapter I

Nursing Education (Toronto) and the Assistant Director of the School of Nursing (Boston). In general it was felt that the Matron of the Royal Victoria Hospital functioned in a more directly authoritative way in relation to the School than the Directors of Nursing and Nursing Education in the other two hospitals and was much more involved in detailed decisions about the teaching programme and administration of the School. The Exchange Teachers felt that the Principal Tutor has less authority and responsibility than her counterparts in the North American hospitals.

The Organisation of Nursing Services and Clinical Instruction

In their systematic reports the Nurse Teachers were not required to comment on ward organisation as such. A fair amount of comment about ward organisation was made, however, in relation to clinical instruction. The part played in this by the Ward Sister or Head Nurse had to be considered in relation to her other duties. In particular, mention was made of the organisation of nursing care and of the ancillary duties undertaken by those responsible for nursing.

In general it was felt that the most effective use was made of the team nursing plan in Toronto. In Boston it was less broadly applied because of shortage and transient ward staff from day to day. In Belfast the organisation of nursing care was mainly of the functional assignment kind. The teachers all of whom had a chance to compare this with team assignment, seemed to feel that the latter had advantages. Certainly at the time the project began the Ward Sisters in Belfast seemed to be more loaded with ancillary duties, both those associated with patient care and those associated with ward administration, than their counterparts in North America.

As might have been expected, considerable interest was shown in the differences in the way that responsibility for clinical instruction was assigned. In general, the Ward Sister has the responsibility in Belfast, while in the North American hospitals the staff of the School are responsible during the first two years of the student's training, while the Head Nurse is responsible during the third year.

All the Exchange Teachers seemed impressed by the greater degree of stability in the ward situation in the Royal Victoria Hospital than in the other two hospitals. One of the factors contributing to this is that the Ward Sister usually remains in the post for a long period and has wider responsibilities than the Head Nurse in the North American hospitals. It was felt, however, that the fact that the Ward Sister was responsible for all the clinical teaching of student nurses had both advantages and disadvantages. The opinion was expressed that the integration of responsibility for patient care with responsibility for clinical instruction is ideal; in practice, staff shortages mean that some students get very little guidance. Everything depends upon the Ward Sister's interest in teaching and her ability and time available to teach. There is also the danger of a lack of integration between theoretical and clinical instruction. There seemed to be a feeling that there was not enough specific clinical instruction in the Royal Victoria Hospital combined with a repetition of routine tasks by the student nurses far beyond the experience required to perform them effectively.

Student Status

A number of points were made about differences in student status and in order to show up the comparisons and contrasts, an attempt has been made to

present the data, and also that relating to methods of teaching and the staff-student relationship, in tabular form.

TABLE 16

Student Status

	Royal Victoria Hospital	*Toronto Western Hospital*	*Massachusetts General Hospital*
Education qualifications	Prefers Senior Grammar School Certificate standard but allows other applicants who take internal qualifying examination.	Senior Matriculation Certificate or equivalent, i.e. university entrance standard.	College Entrance Board examinations (1 year less general education than required in Toronto Western Hospital).
Intake of Students	Four groups admitted annually	One group admitted annually	One group admitted annually
Nursing qualifications	Preliminary State at end of first year. Final State at end of three year programme	Examination of Registered Nurses of Ontario at end of "2 and 1" programme	State examination at end of three year programme
Curriculum	Preliminary training School then Block system with 4–6 weeks class-room teaching a year	Theory and clinical experience presented concurrently in first and second year. Third year provides opportunity to practice nursing in controlled situation	Theory and clinical experience presented concurrently throughout three year period. Clinical experience in third year aims to develop judgmental and technical skills
Status	Student nurses are apprentices in that they are relied upon for part of the staffing of the hospital and paid a training allowance throughout	Complete student status for two years. Relied upon to help staff hospital in third year—educational programme planned in some respects round nursing service demands	Complete student status throughout
Cost of education to students	No tuition fees paid by students. Examination fees paid by students	Fees for tuition and examinations, but tuition fees are much less than at Boston and meet only a small part of the cost	Fees for tuition and examinations. Tuition fees are higher than at Toronto but do not meet the whole cost
Payments to students	Training allowance paid to student nurse during three years of training	Monthly stipend in third year	Monthly stipend in third year

TABLE 17

Methods of Teaching and Staff-Student Relationships

	Royal Victoria Hospital	*Toronto Western Hospital*	*Massachusetts General Hospital*
Teachers' responsibilities	Theoretical instruction only	Clinical instruction shared by almost all members of teaching staff	Programme is divided into areas. Instructors responsible for own speciality theoretically and clinically
Staff-Student relationship	Authoritarian—formal	Less authoritarian and less formal than Royal Victoria Hospital. Not as informal as Massachusetts General Hospital	More informal than either of the other two hospitals
Student counselling	No formal student counselling scheme	Student counselling not as highly developed as in Massachusetts General Hospital	Extensive use of student counselling
Communications	Main channel of communication is the lines of command. Few committees either in the School or of teaching and nursing service staff. Tutors not involved in curriculum assessment	Instructors have a part in running the School through membership of various committees. Also involved in curriculum assessment	Efficient and productive committee functioning. Effectiveness of committee work increased by publication of minutes. Curriculum assessment and revision is the responsibility of curriculum committee and approved by executive committee of Faculty
Examinations	Oral as well as written examinations in both School and State Registration	Written examinations only	Written examinations only
Pace of Teaching	Fast	Slower than in Belfast	Slower than in Toronto
Method of Teaching	Mainly formal lectures. Relatively little use made of discussion techniques or library facilities	More informal classes than in Belfast. Use made of library facilities. Less use of discussion method than in Boston	Encouragement given to students to read and discover for themselves and also to reason rather than accept facts as presented
Teaching Staff-Student ratio	Lowest teaching staff-student ratio even when allowance has been made for the fact that ward staff are responsible for clinical teaching	Teaching staff-student ratio between that of other two hospitals	Highest teacher staff-student ratio

TABLE 17—*Continued*

	Royal Victoria Hospital	*Toronto Western Hospital*	*Massachusetts General Hospital*
Qualifications of teaching staff	Older people with practical experience—tendency to remain in post for reasonably long periods	Considerable turnover among instructors. Majority of staff have relatively little teaching experience with usually less practical experience than Belfast staff	Faculty members are on the whole younger than in Belfast. Less emphasis laid on practical experience and more on educational qualifications
Social Science content of curriculum	Very little	Social Sciences taught but less application of this knowledge to patient care than in Massachusetts General Hospital	Emphasis laid on sociological background studies and on "teaching the patient"

Notes and Comments on Tables 16 and 17

The central theme emerging from these tables is the implications of the difference between what can be called "apprenticeship status" and "complete student status" in the first two years of the North American training period.

The advantages of apprenticeship status were felt to be the provision made for students to give direct patient care early in the programme and to assume greater responsibility. The main disadvantage was felt to be the possible conflict between what was "best" for the student and what was "best" from the hospital staffing point of view. Student status enables the programme to be planned so that students know in advance exactly what they will be doing in one or two years' time. The nursing student day follows the normal pattern of student life generally; that is, a fixed period of work is followed by a fixed period of leisure. Work, apart from private reading and study, is not carried over into off duty times and students seem to have time and inclination to participate in many diverse activities. On the other hand, under the apprenticeship system as it generally operates, the student nurses' periods of work and leisure vary. This must make it difficult for her to take a part in extra-mural activities that have a fixed programme for specified days or hours.

The different approach may result in different attitudes both to work and to learning. Reference was made to the greater sense of vocation among the students in the Royal Victoria Hospital. Apprenticeship in every field results in an absorption of the social skills and attitudes associated with the job, involvement and identification coming through exposure. Student nurses with apprenticeship status are more likely to accept and imitate the attitudes and opinions of the trained staff with whom they are in contact; student status develops a more independent or sometimes an aggressive or questioning attitude.

It was also interesting to find that the students in the Royal Victoria Hospital displayed greater anxiety about examinations. There may be a parallel here in attitudes to external examinations of professional bodies and universities. The part-time student displays more anxiety than the full-time student when taking examinations.

Many of the items covered in Table 17 also reflect the difference in status of

the students. Student counselling, for example, plays no part in an apprenticeship system; it is assumed that counselling will be done informally by superiors encountered in the course of the job, and obviously the Ward Sister under the Belfast system will do a fair amount of counselling. Qualifications of staff are another case in point. Experience of the job is more important in training apprentices; teaching and academic qualifications more important in teaching students.

It would be very useful to pursue these differences further and a research project that might well emerge from this Exchange Scheme would be to examine the relative advantages and disadvantages of apprenticeship and student status in the training of a nurse.

SECTION 4

CONSIDERATION OF SUGGESTIONS FOR CHANGES IN THE PARENT HOSPITAL EMERGING FROM THE EXCHANGE PERIOD

MATERIAL USED: Exchange Teachers' final reports

In their final reports, the Exchange Teachers were asked to list the changes they would like to see in their parent hospitals as a result of their experience. These were given under two headings: (*a*) those which it would be practicable to effect; (*b*) those which were desirable, but impracticable.

Suggestions for changes in the Royal Victoria Hospital, Belfast

(*a*) PRACTICABLE:

1. Closer association of the School and the wards, with more supervision and teaching of students in the wards by the ward sister or a clinical instructor acting with the guidance of the staff of the School of Nursing.

2. Teachers should specialise in a range of subjects in the curriculum. This would enable them to acquire a deeper knowledge of the chosen field; but it would be desirable to have rotations in specialisation so that over a period every teacher would be engaged in teaching all the material included in the curriculum.

3. Responsibility and its consequences should be more evenly distributed among the teaching staff and all the staff should have opportunities to contribute to the planning of the curriculum.

4. The rotations of students on the wards should be planned by the School of Nursing and the Nursing Services staff so as to relate as closely as may be practicable the students' progress in theory and practice.

5. The students should follow a regime akin to that of students in other careers. They should have responsibility placed on them for such things as the completion of examination entrance forms, and the looking up of material for themselves. Students should be encouraged to read more and use the library.

6. The course of training should be extended to include Obstetrics, Paediatrics and Psychiatry so that nurses are equipped for service in these specialties.

(*b*) DESIRABLE:

1. There should be one fixed time each year for the entry of students to the School.

2. There should be a larger library with a librarian and a greater variety of books.

3. During study block periods there should be more community visits.

Suggestions for changes in the Massachusetts General Hospital, Boston

(*a*) PRACTICABLE:

1. The courses in the Fundamentals of Nursing and Medical-Surgical Nursing should be revised.

2. The methods for evaluating nursing skills in the classrooms and wards should be reviewed.

3. Medical staff should be encouraged to take a more active interest in teaching student nurses.

4. The head nurse should play a greater part in the planning and direction of learning experience for nurse internes. There should be a more clearly defined plan for the interne in assuming team nursing leadership responsibility and in learning the techniques of ward administration.

5. Students should have opportunities to attain greater proficiency in the physical care of patients during the first and second years; make provision for direct patient care by first year students earlier than is the custom.

6. The policy of the School should be to try to secure that every faculty member appointed has had certain graduate nurse experience, so that she may have a better understanding of ward problems and nursing service organisation than is the case where her only pre-teaching experience has been as a student nurse.

7. A closer relationship between teachers responsible for classroom instruction and clinical instruction is desirable.

8. Even inexperienced teachers should have the opportunity to contribute to curriculum assessment.

9. Greater use of oral testing in classroom and clinical practice area is desirable.

10. It may be desirable to consider discontinuing planned evening study hours for freshman students and generally to encourage the students to assume responsibility for independent learning.

11. The aim should be to have a more professional relationship between instructors and students, without discontinuing freedom of communication between the two groups.

(*b*) DESIRABLE:

1. Review the theory and practice in Operating Room Nursing and seek to make it a more educational experience—possibly by placing it early in the programme.

2. Combine biological and physical sciences in a single course.

3. There should be planned experience in a public health agency for all students.

4. Combine the in-service programmes for nursing service and nursing education personnel.

5. Have more frequent meetings of total educational staff for discussion of current business and evaluation of total nursing education programme.

Suggestions for changes in the Toronto Western Hospital, Toronto

(*a*) PRACTICABLE:

1. Strengthen the arrangements for teaching of social science—perhaps by appointing an additional faculty member who is prepared in the social and behavioural sciences.

2. Greater continuity of teaching in medical-surgical nursing is desirable.

3. The philosophy of the school should be explained to new members of all levels of hospital staff in their period of orientation.

4. There should be improved and more frequent testing and evaluation of students' academic and clinical performance.

5. Review the functioning of committees.

6. A revised counselling programme under sound leadership should be devised.

7. Student government should be given broader responsibilities for group discipline, with more education and opportunity in group leadership.

(*b*) DESIRABLE:

1. Incorporate the principles of administration in the in-service education programme for the benefit of the nurse interne as well as other levels of nursing staff.

2. Seek to provide financial assistance for instructors desiring to go on to higher education in nursing.

CHAPTER V

An Appraisal of the Scheme and of the material contained in Chapters I-IV

THE Advisory Committee met in London on Saturday, 29th September, 1962, and devoted five days to considering the material arising from the exchange. The information contained in Chapters I—IV had been circulated previously to members of the Committee and the Exchange Teachers; and Miss Woodward held individual interviews with all the Exchange Teachers to ensure that no serious misinterpretations of their written material had been made.

The Committee discussed the material with the teachers before proceeding to an appraisal of the Scheme by formulating a series of questions which appeared to arise out of the accumulated written and spoken evidence. The remainder of this chapter sets out these questions and summarises the Committee's answers.

ASSESSMENT OF THE SCHEME

(*a*) General framework

1. Was the Scheme as first conceived (see Appendix I) sound and practicable?
2. Did the subsequent modifications reduce the value of the project? Did they make the intentions impossible of realisation?
3. Did the Scheme represent a worthwhile piece of work?
4. Was the written Scheme clear and unambiguous or did difficulty arise in deciding what to do?
5. Were the guide lines (see Chapter II) useful and adequate?
6. Was the proposed content of the exchange programme right?
7. Were the periods of exchange right?
8. Was the composition of the Advisory Committee right?
9. Was the financial basis of the Scheme satisfactory?

In the light of two years' exchange experience, the Committee still felt the Scheme as first conceived would have been sound and practicable, though the forecast of the results likely to be achieved by it was probably unduly wide and optimistic. The Scheme as put into operation was a modification of the original draft, and it was felt that the value of the project was thereby reduced, although the changes did not make it impossible to obtain a good deal of valuable information. The Committee certainly felt the Scheme had been worthwhile.

Certain facets of the revised Scheme did appear to have had a detractive effect, particularly the absence of a Director and infrequent meetings of the Advisory Committee. The latter was seen as the cause of several shortcomings—the initial lack of a clear statement of objectives for the nurse teachers, the failure to provide a common interpretation of the Scheme for the Directors of Nursing and the imprecision of the guidance provided for the nurse teachers during the exchange period.

Originally it had been intended that there should be a Director for the Scheme. When that proposal was dropped, the revised Scheme was not supplemented by detail which had been properly omitted from the first version on the grounds that it would be the Director's duty to supply it. The Scheme was left vague and ambiguous in certain respects and the Exchange Teachers had

some difficulty as a result of this. Also, the Directors of Nursing did not provide all the material which could have been made available to help the nurse teachers in their understanding of the Scheme. The instructions to the Directors of Nursing were drawn up after the first meeting of the Advisory Committee and were dealt with by correspondence. The Committee considered that if it had been possible to hold a further meeting before the Scheme began, some of the difficulties experienced would have been obviated. Other difficulties arose from the content of the exchange programme; different conclusions were reached in interpreting how far the Exchange Teacher should be used as the equivalent of a unit of teaching staff in the visited hospital and at the same time given an over-all picture of the nursing situation throughout the hospital and country concerned.

It would seem advisable that in any future exchange scheme, the directions to the Exchange Teachers and to the Directors of Nursing should be clearly and precisely given. In particular, care should be taken in wording to try and avoid misinterpretation by any of the persons participating in the scheme. The objectives should be clearly set down and the content of the programme scrutinised carefully for inconsistencies.

The division of each teacher's exchange period into nine months and two months attachments was shown to be unsatisfactory. Consideration should have been given to relating the period of attachment to the teaching programme of the School, so that the School could use the visiting teacher more fully as a unit of teaching, and that the Exchange Teacher herself could have the satisfaction of seeing the completion of the section of studies in which she had participated. The two months period was felt to be too long for an observation visit and too short to allow the visiting teacher to participate in the work of the School.

It was considered that if only one year is available a more beneficial use of the total visiting time would be for the Exchange Teacher, before commencing teaching duties, to work for a period as a staff nurse in the hospital in which she is to teach; and to follow her period of teaching by a study tour of observation including one month in another hospital School of Nursing participating in the Scheme.

The composition of the Advisory Committee was considered to have been satisfactory, but members felt that for any similar scheme there should be a working sub-committee; possibly one composed of the Directors of Education or Principal Teachers of the three Schools. By such means the senior persons directly concerned with the teaching programmes in the Schools of Nursing would be more closely involved in the project and could remove some of the difficulties experienced by the Exchange Teachers. It would, of course, be necessary for this sub-committee to meet at intervals during the progress of the Scheme and if the Scheme provided for a Director he should be a member of the sub-committee.

The financial basis of the Scheme was satisfactory, the amount of money available being sufficient to meet the expressed needs of the Scheme. The Committee records its gratitude to the Rockefeller Foundation for the generous grant. Expenses in connection with study tours were not allowed for, though individual Schools made additional grants to enable the Exchange Teachers to undertake study tours to supplement the experience gained directly from the Scheme. All teachers made study tours and all were unanimous in endorsing the value of these tours. Experience showed also that in an exchange it is necessary that the teachers are fully informed of the financial arrangements.

(*b*) The Schools of Nursing

1. Was it wise to attempt an exchange involving three Schools of Nursing?
2. Were the three Schools suitable to participate?
3. What action should precede a School's deciding to participate in a Scheme of this kind?

Participation in the Scheme undoubtedly was of considerable benefit to all three Schools, but the organising of a three-way exchange within a twelve months period raised many problems. Other methods of administering the exchange might have worked better: for example, the Scheme could have run for a period of three years, with only one pair of Schools actually participating in the exchange programme in any one year and the third School merely receiving visits of observation in that year.

In any future exchange scheme, if more than three Schools are taking part, it should be possible for exchanges in pairs of Schools to run concurrently. The number of pairs would, of course, be linked to the number a Director or an Advisory Committee could supervise; and it would not be feasible for each Exchange Teacher to pay visits to all the Schools other than the one in which she has taught.

Exchanges among the Schools who participated in this Scheme were felt to be successful because the hospitals to which the Schools are attached have similar aims; but it should be pointed out that while these three Schools were suitable for an experiment, there are other matters which would require consideration in the selection of Schools to participate in any future Scheme. For example, it appears to be necessary to select Schools which are as alike as possible in every respect except that which is the subject of inquiry and appraisal through the operation of the Scheme; and the project should be so framed as to ensure the full co-operation of participating Schools. Hence the preliminary need for a full discussion of all the implications of an exchange scheme by the persons who will be involved with it in each School. If there is not overwhelming support for the proposal, it seems to be wiser for a School not to participate in the Scheme unless modifications can be made to remove the misgivings.

(*c*) The Exchange Teachers

1. Were the criteria for selection of teachers right?
2. Was a good choice of teachers made?
3. Did the failure to permit the teachers to take full responsibility as a unit of staff weaken or invalidate the operation of the Scheme?
4. Were the visits of Exchange Teachers to other centres and organisations, conferences, etc. (see Appendix III) worthwhile? What did they yield?

The criteria used for the selection of nurse teachers for an exchange will vary according to the purposes of the exchange. Nevertheless, it seems clear that, in any exchange between Schools, teachers who are as nearly alike as possible in preparation and experience should be selected. In this case, the Directors of Nursing were concerned to select people who would be able to teach over a wide area (e.g. teach basic medical or surgical nursing) and the choice of teachers made was excellent. The Advisory Committee would like to pay tribute to the teachers for the effort they made and the valuable contribution they put forward, both through their written material and at the final conference discussions.

The Exchange Teachers were not given the responsibility of a full unit of teaching staff in any of the Schools. This did not reduce the value of the Scheme, but rather, changed the emphasis. It would have been interesting to have had the information that would have been obtained if they had acted as full units of teaching staff, but the Committee appreciated that this would of necessity have substantially reduced the inquiries and visits of observation actually made by the teachers.

The Exchange Teachers when in the countries visited took the opportunity to go to many centres and organisations associated with nursing and attended conferences and meetings. Such visits, although necessarily short, helped to place in perspective the hospital and School at which the teacher worked and the Committee considered that it would be a mistake to confine experience to only one centre in the exchange area.

(*d*) Impact of the Exchange

1. What, if any, was the impact of the Exchange Teacher on the School to which she had her major attachment? If there was an effect, was it purely temporary or could it be regarded as lasting or permanent?
2. What can be said as to the response or reaction of the students to the Scheme?

There is not sufficient evidence to enable a definite statement to be made as to whether the Exchange Teacher's impact on the School to which she had her major attachment could be regarded as purely temporary or lasting and permanent. The main benefit to the staffs of the Schools seems to have been through the exchange of ideas and the stimulation to thinking brought about by the presence of the visiting teacher. Instances were quoted—not only in the nursing education field but also in the nursing service area—of suggestions made by the Exchange Teachers being responsible for the consideration and often the adoption of new ideas.

It appears from the information available that the great majority of the student nurses taught by an Exchange Teacher found the experience valuable and stimulating; particularly from the point of view of learning about the nursing procedures in another country. It also is apparent that the exchanges did not jeopardize in any way the examination prospects of the students.

(*e*) Methods of obtaining data

1. Were the methods used to obtain information during the exchange adequate?
2. Was the diary system good?
3. Were the reports helpful?

On the whole, the reports and diaries produced the kind of information hoped for, and the information extracted from them certainly was invaluable to the Advisory Committee in preparing this report. The diary system was not ideal, but did provide a daily means of recording, which gave an immediacy and an authenticity to the information that might have been lost by relying only on reports written at a much later date. The Exchange Teachers also wrote very full and instructive reports, although some of the questions asked proved to be ambiguous and others too rigid. The interviews with the teachers at the final conference showed that a very accurate impression of their experiences had, in fact, been communicated through their written material.

The Committee felt that if any similar project were to be undertaken it would be desirable in preparing the questions to be asked and in giving instructions for the writing of reports and diaries to devote special attention to the wording of questions and directions. It seems also that it would be desirable to attempt to cover a wider field in the investigations, for example, by obtaining views on the exchange from the staff as well as the student nurses of each School.

OBSERVATIONS ARISING FROM THE SCHEME

Although the primary purpose of the final conference was the appraisal of the Scheme itself, the written material and the discussions between the Committee and the Exchange Teachers covered other matters relating to nursing education in the three hospitals. The following were among the other matters considered:

(*a*) the administrative and financial differences in the three Schools;
(*b*) the delegation of responsibility by the heads of the Schools;
(*c*) the scope of the curriculum for student nurses;
(*d*) integration of classroom and practical teaching;
(*e*) the number of student intakes each year;
(*f*) the relative merits of the "student status" and "apprenticeship" systems;
(*g*) the ratio of students to teaching staff;
(*h*) staff-student relationships;
(*i*) student counselling;
(*j*) communications;
(*k*) examinations.

(*a*) There is a fundamental difference in the administrative and financial arrangements between the two Schools in North America and the School in Northern Ireland. A considerable impression was made on the visiting teachers by the greater degree of administrative and financial autonomy of the North American Schools, but it is impossible to gauge whether this difference had any appreciable effect on the quality of either the nursing service or the nurse teaching.

(*b*) The information collected by the nurse teachers refers to the existence of distinct patterns in the delegation of authority. In particular, the Exchange Teachers from North America who, in their parent Schools, were accustomed to a considerable degree of delegation and the committee system of policy making and progress assessment, found difficulty in understanding the Northern Ireland system which tends to restrict authority and participation in committee work to the most senior staff of the School. All teachers indicated that the committee system is one which gives the individual greater satisfaction in her own job. On the whole, it was felt there were advantages in the faculty or committee system and in a substantial measure of delegation by the head of the School.

(*c*) In general, a broad curriculum including Paediatrics, Obstetrics, Psychiatry and the Social Sciences is favoured. In fact all three of the participating Schools are trying to extend their teaching programmes even where these subjects already are covered.

(*d*) The general view is that it is desirable to integrate clinical teaching and experience with the classroom programme.

(*e*) From an educational point of view it seems better to have one rather than several intakes of students each year. The quality of teaching deteriorates with repetition. It was suggested that the Belfast School might wish to reduce its annual number of intakes (at present, four). A change of this kind would, however, involve a substantial reorganisation. The Exchange Teachers favoured subject specialisation, as this allows greater depth of knowledge to be acquired in one subject. It was felt, however, that the classroom teaching of a special subject or group of subjects should not be unduly prolonged and that periodical changes to clinical situations are desirable.

(*f*) The evidence available does not make it possible to assess the relative merits of the student status and apprenticeship systems. It is suggested that it would be valuable to pursue this question as a research project or special study. It involves among many considerations the determination of the sort of nurse each School attempts to produce and the best ways of fulfilling this objective.

(*g*) In the Massachusetts General Hospital School where all teaching is undertaken by the staff attached to the School of Nursing the ratio of students to staff is 6 : 1 in the first year, 6 : 1 in the second year and 22 : 1 in the third year (in that year ward staff participate in clinical instruction). In the Toronto Western Hospital School of Nursing the ratio of students to staff in the first two years is 10 : 1 and in the third or interne year the students are supervised by ward staff. The system in the Royal Victoria Hospital School of Nursing differs from both that in Boston and in Toronto, theoretical instruction is given by the staff of the School of Nursing and for this the ratio of students to teachers is 40 : 1. Clinical teaching is undertaken throughout the three years by some of the ward sisters, but only a part of each ward sister's time is devoted to this.

The Belfast School would like to see an increase in the number of its teaching staff but the difficulties in the recruitment of teachers are even greater than in other countries. In the North American Schools, considerable staff turnover often results in the recruitment of less experienced teachers than the Schools would like to have.

(*h*) It was felt that of the three Schools under consideration Toronto strikes the right balance between the formality that is necessary in any School and the informality that is appropriate in relations between staff and young adults. The Belfast School appears to be too formal in its relationships and Boston possibly too permissive, e.g. in allowing students considerable self-disciplinary powers. The reason for the variations noted in comparing the Schools is possibly cultural.

(*i*) Student counselling was regarded as a wise feature of a School, but the necessity for a trained person to do the counselling and to advise the teachers on how to counsel, was emphasised. A service of this kind has not been part of the Belfast School, although help is given to students by the Matron and other senior staff when such assistance is sought.

(*j*) Some doubt was expressed as to the effectiveness of communication between staff and students in all the Schools. The problem of communications is one of the most difficult in all administrative arrangements, and only by a careful study of the views of everyone in the situation is it possible to detect and try to overcome weaknesses.

(*k*) It was felt that there is value in oral tests as well as in written examinations. The two North American Schools, which do not use oral tests, intend to consider making an experiment in this field.

CHAPTER VI

Conclusions

(1) We are satisfied that the Nurse Teacher Exchange Scheme on which we are reporting was worthwhile. The knowledge gained has not been as extensive and important as had been hoped when the first draft of the Scheme was prepared. It has, however, been established that the exchange of nurse teachers was feasible and was of value to the participating schools, hospitals and teaching staffs. The experiment also has yielded information which should be of great value in planning and carrying into effect any similar scheme involving an exchange of staff between Schools of Nursing in different countries.

In the following paragraphs we comment on particular aspects of the Scheme.

(2) The exchange was directly beneficial in the following ways:

(*a*) An exchange teacher added to her breadth of experience and personal maturity;

(*b*) An exchange teacher stimulated the School she visited, especially by influencing the staff to think afresh about the School's work and problems;

(*c*) Participating Schools benefited from the re-appraisal necessitated by the exchange teacher's comments and suggestions;

(*d*) All participants were able to benefit from face to face discussion at the final conference to clarify impressions; and

(*e*) Student nurses benefited by learning about nursing procedures in other countries and the operation of this Scheme did not hamper their normal progress.

(3) We feel that the exchange would have been of greater value if it had incorporated a research project or more than one such project—further reference is made to this below.

(4) The Scheme showed that exchanges are possible between Canada, the United States of America and the United Kingdom. For other countries who might wish to have such exchanges, we would stress the importance of the following points:

(*a*) Great attention must be paid to language differences to avoid difficulties in communication.

(*b*) The qualifications of exchange teachers should be the highest that a participating country requires. The final choice from those who are suitably qualified will depend upon the objectives of the Scheme.

(5) The objectives of the Scheme should be clearly defined in terms which do not permit of different interpretation by participating countries which have different usages of a common language.

(6) It is especially important to make it clear from the outset whether the exchange teacher is to be the equivalent of a full unit of teaching staff in a visited School. As such she would also be an observer but observation should be a minor and incidental function.

(7) Clear guide lines for the participating Schools and exchange teachers should be written so that each person concerned may be fully informed of the purpose of the scheme and its objectives.

(8) Exchanges by three Schools in the same year are not recommended. Our view is that it would be preferable to have a straight exchange between two Schools with due provision for the exchange teachers to undertake study tours of observation.

(9) The choice of Schools to participate depends on the objectives. It is essential that a School should not participate unless there is full support for the Scheme.

(10) It is important to have an Advisory Committee to direct the Scheme. We feel that the Committee should meet at intervals during the exchange and especially at the end to assess results. It seems desirable that the Committee have as a working sub-committee those senior members of each School who will be most involved in the running of the Scheme.

(11) The length of the exchange depends on the objectives but it is necessary to relate the period of exchange to the teaching programme. Visits of observation which are not intended to involve any teaching duties may be desirable to supplement the main experience, but these visits should be short.

(12) Before an exchange scheme commences the type of information it is wished to obtain should be determined and the sources of information carefully selected. All persons who have to furnish reports during the operation of the scheme or at the end of it must be given clear instructions as to the content of the reports they are to submit.

(13) Teachers before going on exchange should have suitable preparation. The preparation might include:

(*a*) A personal interview with a member of the Advisory Committee or the Director of the research project;

(*b*) The obtaining of background knowledge of the country to be visited; and

(*c*) Working as a staff nurse for a period of about one month in the visited hospital before undertaking teaching duties.

(14) The parent hospital should continue to pay the exchange teacher's salary during her visits to other hospitals. Where necessary supplementary payments by way of allowances for additional expenses should be made from the funds set aside for the operation of the scheme.

(15) The experience gained during the operation of the Scheme suggests to us that research into a number of nurse teaching problems would be desirable. The following are the subjects we noted in the course of our deliberations:

(*a*) The student status and apprenticeship systems of training the nurse should be studied and compared;

(*b*) A study might be made as to whether differences in the systems of teaching lead to differences in the ability of the qualified nurse to undertake wide ranges of nursing duties.

(*c*) It would be desirable to study the effect that clinical instruction has on the organisation of and the nursing duties in the wards and the effect that essential arrangements for the nursing and wellbeing of the patient have on teaching;

(*d*) It might be advantageous to study and compare staff/student relationships and communications in several Schools of Nursing and their associated hospitals.

CHAPTER VII

Postscript by Chairman of the Advisory Committee

On behalf of the Advisory Committee I record appreciation of the valuable help given by many organisations and persons during the operation of the Nurse Teacher Exchange Scheme and, in particular, wish to express gratitude to the following:

The Northern Ireland Hospitals Authority, the Belfast Hospital Management Committee, the Governing Body of the Massachusetts General Hospital, Boston and the Governing Body of the Toronto Western Hospital, Toronto and many members of the staffs engaged in the services of these organisations.

The Nurse Teachers whose ability and deep interest made it possible for the committee to carry the Scheme through to completion.

The International Council of Nurses who readily agreed that Miss Ellen Broe and later Miss Ingrid Hamelin should be associated with the organisation and running of the scheme.

The Royal College of Nursing for its interest in the project and for the use of the College Headquarters for the final meeting of the Committee.

Miss Joan Woodward to whom a special tribute is due. She not only was a member of the Advisory Committee but also undertook many duties which would have fallen to a Director of the Scheme if one had been appointed—without Miss Woodward's help the Committee would have had an almost insuperable task. Associated with this message of thanks is one of appreciation for the assistance given by Miss A. H. Barton.

Miss M. G. Hanna who in addition to being a member of the Committee, acted as Secretary and as such was responsible for all the correspondence and the drafting of memoranda and reports.

The Accountant and the Accounts Department of the Northern Ireland Hospitals Authority who efficiently managed the Committee's financial affairs.

The Rockefeller Foundation and Miss Virginia Arnold, Assistant Director of Medical Services for generously providing the moneys for the Exchange Scheme. At all times the Committee has had the most helpful consideration of the problems submitted to the Foundation and is happy to have had the privilege of carrying out the experiment.

(*Signed*) Ruth Sleeper
(*Chairman of Advisory Committee*)

APPENDIX I

Original Scheme for the Nurse Teacher Exchange Programme

Northern Ireland Hospitals Authority
27 Adelaide Street, Belfast
Northern Ireland

A SCHEME TO PROMOTE NURSING EDUCATION AND TO ADVANCE PATIENT CARE

A. Introduction

1. There is general agreement that since the end of the war of 1939-45 there has been a greater advance in the promotion of health services than in any previous short period. International efforts of much merit, especially those resulting from the work of the World Health Organization, find their parallel in the progress made by many nations in providing for the well-being of their own people.

2. The progress is world-wide and a particularly encouraging feature has been the readiness of less developed countries to seek the help and follow the example of those nations which long have realized the importance of health and health services and which have done so much to contribute to the well-being of mankind.

3. The part played by western civilization in the advances towards health has been gratifying and there is no doubt that in the future, as in the past, the world will continue to look to the West for guidance and leadership in matters affecting the health and well-being of the human race.

4. In all fields of human endeavour there always is need for re-assessment of the means to be employed to achieve a desired end and the health services are not an exception to this general rule. In fact, the health services, representing as they do the union of old arts and new and advancing sciences, demand to a marked degree the preservation of the open mind, a willingness to test new ideas and a readiness to exchange old lamps for new and better means of illumination.

5. It accordingly is the privilege and duty of the Western world to try to make further progress in its health services, not only for the benefit of its own people but also for the assistance of other areas. Much of the desired improvement will, no doubt, flow from efforts made separately by individual states and individual units within states, but it will be well from every point of view if some of the endeavours represent co-operative efforts by two or more nations which have much in common but which also have certain differences in their approaches to particular problems.

6. The purpose of this memorandum is to suggest to the Rockefeller Foundation that support might be given to an international co-operative effort designed to promote the better education of nurses so that patients may have even better care than they have at present.

7. It is not thought necessary to state at length the importance of the nurse in any health service. Not only are nurses the most numerous of the many persons who to-day have a part in the complex organization of hospital and public health services, but they also are most closely associated day by day with the care, comfort and well-being of the sick and injured. It is, therefore, not unreasonable to claim that nothing can contribute more to the efficiency of a health service than adequate numbers of well educated nurses who are inspired with a sound philosophy and have the technical and scientific knowledge and experience necessary for the discharge of their professional duties.

8. The principle outlined in the last paragraph is one which, it is thought, readily will be accepted in the United States, Canada and Northern Ireland, and in all these areas the task of providing the necessary numbers of suitable nurses is one which has engaged the attention of health and education authorities for many years. While each area has a

record of much success in the difficult undertaking, it is admitted that in none has a final or ideal answer been found; indeed, it may be conceded that there remains much doubt as to what the best answer should be and could be.

B. A Short note on Northern Ireland and the genesis of the Scheme

9. Northern Ireland, unlike Canada and the United States of America, is a small country. Its area is 5,238 square miles and the population 1,400,000, of whom a little more than one-half are resident in cities and towns and slightly less than one-half in villages and other rural dwellings. The principal occupation is agriculture, but there are substantial industries including ship-building, the building of aircraft, engineering, the making of linen and other textiles, distilling, rope-making, etc. About one-sixth of the working population are engaged in agriculture. The capital is Belfast, which has a population of about 450,000.

10. Although an integral part of the United Kingdom of Great Britain and Northern Ireland and sending 12 members to the United Kingdom Parliament in London, Northern Ireland also has its own Parliament which is fully responsible for certain services including education, health, housing, etc.

11. It has been the policy of the Government of Northern Ireland to maintain its social services at parity with those of Great Britain, and following the introduction of the National Health Services in England and Scotland there was similar legislation in Northern Ireland to provide a comprehensive service.

12. Northern Ireland therefore mirrors in miniature the health services pattern of Great Britain, but there are some differences of administrative detail, the most important of which is that the Northern Ireland legislation set up a statutory body—The Northern Ireland Hospitals Authority—to be responsible for the hospital and specialist services whereas in England the prime responsibility falls directly on the Minister of Health.

13. The Northern Ireland Hospitals Authority, a body corporate, consists of twenty-four members, appointed by Northern Ireland's Minister of Health and Local Government, and all of them serve in an entirely voluntary and unpaid capacity. The Secretary and Chief Administrative Officer of the Authority is Mr. Eric Harrison Jones, O.B.E., and the Authority's principal Nursing Officer is Miss Anne M. W. White, State Registered Nurse, State Certified Midwife and Registered Fever Nurse, who formerly was the Registrar of the Joint Nursing and Midwives Council for Northern Ireland.

14. The Hospitals Authority are responsible for the provision of hospital and specialist services throughout Northern Ireland and have 76 hospitals with 17,275 beds, including 7,153 beds for persons with mental disorders. The Authority are assisted by thirty-three Hospital Management Committees whom they appoint and who attend to the day to day administration of individual hospitals or groups of hospitals. The Authority's annual expenditure now exceeds fourteen million pounds sterling.

15. The Hospitals Authority's staff totals 13,200 persons, including 793 specialists and other doctors and 6,287 nurses.

16. The Hospitals Authority work in close association with the Queen's University of Belfast and the Authority's Royal Victoria Hospital, Belfast, is the principal clinical teaching centre of the University's Medical School.

17. The Hospitals Authority, confronted with meeting the demand for expanded hospital facilities, have for the last two years been studying, through a special nursing committee—with Eric H. Jones and Anne M. W. White as principal advisers—the provision of adequate nursing services and in this connexion many aspects of the problem have been brought under review, including the general and professional education of the student nurse, the means of obtaining suitable students and the promotion of better patient care. The final report of the Authority's Committee has just been completed, and it suggests that a new approach to basic and advanced nursing education will be necessary to provide adequately for meeting the needs in the future of the people of Northern Ireland.

18. The Authority's Nursing Officer (Anne M. W. White) has, under the auspices of a British Commonwealth and Empire Nurses War Memorial Fund Scholarship, been able to study at closer range the results of some of the basic nurse education programmes in North America. The units in which she spent the greater part of her time were the School of Nursing of the Massachusetts General Hospital, Boston—under the guidance of Miss Ruth Sleeper, Director of Nursing—and the Atkinson School of Nursing of Toronto Western Hospital—then under the guidance of Miss Gladys Sharpe, Director of Nursing. Miss White found these units of particular interest and while the nursing education programmes had the same fundamental philosophy, the approaches to basic preparation of the nurse had several interesting variations, and both differed from the traditional system followed in Northern Ireland.

19. At this stage, bearing in mind the work of the Northern Ireland Hospitals Authority's Nursing Committee and the information gained through her visits to the United States of America and Canada, Miss White had consultations with Miss Sleeper and Miss Sharpe as to the possibility of advancing nursing education by means of an experimental scheme under which there would be exchange of teaching staff by the following three hospitals:

Massachusetts General Hospital, Boston.
The Toronto Western Hospital, Toronto.
The Royal Victoria Hospital, Belfast, Northern Ireland.

Following her talks with Miss Sleeper and Miss Sharpe, Miss White discussed the suggestion with Miss Virginia Arnold, Assistant Director for Medical Education and Public Health, Rockefeller Foundation, who agreed that it would be appropriate to submit a considered memorandum on the subject to the Rockefeller Foundation and an application for a Grant to finance the scheme.

20. On Miss White's return to Northern Ireland, she submitted a report and suggestions to the Secretary of the Northern Ireland Hospitals Authority and at a meeting held on 29th August, 1958, the Hospitals Authority recorded their warm approbation of the proposed experimental exchange scheme and promised that they would give it their full support. It was agreed by the Authority that a draft scheme should be submitted to the Rockefeller Foundation and they authorised their Secretary and Nursing Officer to act for them in this matter.

21. A formal approach then was made to the Governing Bodies of the Toronto Western Hospital and Massachusetts General Hospital asking if they would be prepared to join in the proposed scheme. Both the Governing Bodies indicated their willingness to do so, subject to their being satisfied that the details of it were such that it would be possible for them to participate.

At this point information was available to the Northern Ireland Hospitals Authority that Miss Virginia Arnold of the Rockefeller Foundation and Miss Ruth Sleeper of the Massachusetts General Hospital would be in the United Kingdom in February, 1959 and it was decided to make use of the opportunity so presented of having a preliminary discussion of the details of a draft scheme.

A little later, grants were made by the Rockefeller Foundation to Miss F. E. Elliott, Matron of the Royal Victoria Hospital, Belfast, and Mr. E. H. Jones, Secretary of the Northern Ireland Hospitals Authority to enable them to examine the programmes of nursing education in Toronto and Boston and other centres in the United States of America. Miss Elliott and Mr. Jones visited Canada and the U.S.A. in May, 1959, and in the course of their visit had the opportunity of having discussions with representatives of the Toronto Western Hospital, Toronto, and the Massachusetts General Hospital, Boston, on the proposed research programme. It was agreed that the Toronto Western Hospital and the Massachusetts General Hospital would be able to participate in it and it was decided to proceed with the final drafting of the scheme at a meeting to be held in Belfast, Northern Ireland in October, 1959.

At a meeting of the representatives of the participants in the proposed scheme held in October, 1959, the following details were agreed (see—The Scheme in Outline).

C. The Scheme in Outline

("NICUSANE")

22. TITLE OF THE SCHEME—The Scheme shall be known as "The Northern Ireland, Canada and United States of America Nursing Education Research Scheme" ("NICUSANE").

23. OBJECT OF THE SCHEME—The object of the Scheme is to try to provide the Health Services of North America and Northern Ireland with better nursing care for patients, with the hope that other countries also may benefit.

The intention is to try to achieve the object by providing better arrangements than at present for the basic education of the nurse.

The expectation is that the achievement of the object will make nursing an even more interesting, attractive and rewarding profession than it now is.

24. PARTICIPATION IN THE SCHEME—The principal participants in the Scheme shall be:

The Massachusetts General Hospital, Boston
The Toronto Western Hospital, Toronto, Canada
and
The Northern Ireland Hospitals Authority, acting with the help of the Royal Victoria Hospital, Belfast and other hospitals in Northern Ireland;

and the principal participants shall arrange for the full co-operation in the Scheme of the several departments for the education of nurses which are in their care or are financed by them. Arrangements may be made, if it should appear desirable for the furtherance of the Scheme, for the participation of other bodies and organizations engaged in the education of nurses or in the employment of registered nurses.

25. CONTROL AND MANAGEMENT—The operation of the Scheme shall be controlled and managed, on behalf of the principal participants, by a Committee, afterwards referred to as the Steering Committee, which shall consist of the following nine persons:

(1) Miss Ruth Sleeper, R.N., B.S., M.A., L.H.D., D.SC., Director of Nursing, Massachusetts General Hospital;

(2) Miss Amy E. Griffin, R.N., B.A., M.SC., Director of Education, Atkinson School of Nursing, Toronto Western Hospital, Toronto;

(3) Miss Florence E. Elliott, O.B.E., S.R.N., S.C.M., M.T.D., Matron of the Royal Victoria Hospital, Belfast;

(4) Miss Anne M. W. White, S.R.N., S.C.M., R.F.N., Nursing Officer of the Northern Ireland Hospitals Authority, Belfast;

(5) Professor John Henry Biggart, C.B.E., M.D., D.SC., F.R.C.P., Dean of the Faculty of Medicine of the Queen's University of Belfast;

(6) Mr. Eric Harrison Jones, O.B.E., Secretary of the Northern Ireland Hospitals Authority, Belfast;

(7) Miss Ellen Broe, R.N. (DENMARK), Director, Florence Nightingale Education Division of the International Council of Nurses;

(8) Miss Joan Woodward, M.A., D.P.S.A., Lecturer in Sociology at the Oxford University Department of Social Administration and at the Imperial College of Science, London;

(9) A Director of the Scheme, to be appointed by the other members of the Steering Committee, with the approval of the Rockefeller Foundation.

The Steering Committee may act notwithstanding the absence or withdrawal of a member or members, provided that at least six members remain in office.

Any vacancy occurring may be filled by the remaining members of the Steering Committee. The Steering Committee may invite a suitable person or persons to act as Honorary Secretary of the Committee.

The Steering Committee may delegate any of its powers or duties to any three or more of its members, and it is contemplated that full use shall be made of this provision so that it shall not be necessary to have full meetings of the Steering Committee more

frequently than once in each calendar year during which the Scheme continues to operate.

Where a member of the Steering Committee is unable to attend a full meeting of the Committee, his views in writing shall be sought on matters listed for discussion at that meeting.

26. REPORTS TO ROCKEFELLER FOUNDATION—The Steering Committee shall present estimates of expenditure, reports, accounts and vouchers covering their transactions to the Rockefeller Foundation at such times and in such form as the Foundation shall direct, and shall permit the Foundation to investigate any action by the Steering Committee if the Foundation so requires.

27. THE SCOPE OF THE SCHEME.

(1) To study and compare the arrangements for the education of nurses at selected centres in North America and Northern Ireland (and possibly in other countries) and to assess the merits of and the results obtained by the several arrangements;

The study, comparison and assessment referred to at (1) necessarily will involve the ascertainment of the following facts:

(*a*) the duties that a patient-side nurse is expected to perform on the completion of her basic nursing education;

(*b*) the standard of general education which experience has shown to be necessary to enable a person to become a good nurse;

(*c*) the curriculum devised and the measures taken to educate the student so that, on the termination of her basic nursing education, she may be fit to act as a patient-side nurse;

(*d*) the reasons for the inclusion of each item in the curriculum and the reasons for excluding certain aspects of total nursing care from the basic programme of education;

(*e*) the considerations which determine the length of time devoted to each aspect of the curriculum;

(*f*) the methods used in teaching;

(*g*) the examination system employed to test the progress and achievements of the student;

(*h*) the results achieved by the several schemes of basic education;

(*i*) the reasons for International variations in the several arrangements;

(*j*) the advantages and disadvantages of International variations;

(2) To consider the possibility of devising a standard basic nursing education programme which, being followed in several countries, would facilitate transfers of nurses from one country to another and help in promoting international good will;

(3) In the course of the foregoing study, comparison, assessment and consideration, it is anticipated that facts will emerge which will give useful information on such subjects as:

(i) the causes of withdrawals from the nursing profession during the student period;

(ii) the methods employed to attract entrants to the profession and the measure of success attending those methods;

(iii) the action taken to secure that nursing education changes as may be necessary to meet the developments of medicine;

(iv) the arrangements to maintain nursing as an honourable and learned profession and to exclude the unfit from its practice.

28. THE SCHEME IN OPERATION—All steps shall be taken which appear likely to facilitate the carrying out of the investigations and assessments contemplated in the object and scope of the Scheme. The following arrangements are proposed:

1/4

(1) The work to be undertaken will be shared by the Steering Committee, the Director, and the members of the teaching staff of Massachusetts General Hospital, Toronto Western Hospital and the Royal Victoria Hospital who will take part in the interchange arrangements referred to below.

(*a*) the members of the Steering Committee will bring to their task the sum of their experience over many years and will be expected to suggest lines along which the Director will prosecute enquiries. In addition, they themselves may be asked to collect assessments and views from leaders of the nursing profession in their own countries and elsewhere.

(*b*) The Director will undertake the duties specified in the next paragraph of the Scheme.

(*c*) There will be interchanges of nurse teaching staff between the two North American hospitals and between each of them and the Royal Victoria Hospital, Belfast. Details of the proposals are set out hereunder:

(i) The teaching staff taking part in the interchange arrangements will proceed continuously with the ascertainment of facts during their exchange spells of duty. They will act with the guidance of the Director of the Scheme and will be expected to prepare considered memoranda, reciting and contrasting facts and opinions they have gained in the course of their work in North America and Northern Ireland.

(ii) The teachers when on exchange duty will be treated as supernumerary to the establishments of the Schools to which they are temporarily attached, but they will undertake the full work of a unit of teaching staff for the greater part, say, three quarters of the time, they are absent from their own teaching departments. As they will be supernumerary they can be given adequate guidance and help when engaged on teaching duties and they readily can be released for special visits and enquiries.

(iii) The exchange teachers will be given an opportunity of seeing something of the teaching arrangements in North America and the United Kingdom outside the Schools taking part in the exchange arrangements. A brief examination of the arrangements in a country on the continent of Europe might with advantage be included in some of the programmes.

(iv) The exchange of teacher arrangements will be in two cycles each of twelve months duration as follows (figures show periods of stay in months);

First Cycle

	Belfast	*Boston*	*Toronto*	*Travelling*	*Vacation*
R.V.H. teacher	—	9	1	1	1
M.G.H. teacher	2	—	9	—	1*
T.W.H. teacher	9	1	—	1	1*

*This could be spent in Northern Ireland or Europe if desired.

Second Cycle

	Belfast	*Boston*	*Toronto*	*Travelling*	*Vacation*
R.V.H. teacher	—	1	9	1	1
M.G.H. teacher	9	—	1	1	1
T.W.H. teacher	2	9	—	—	1

29. Appointment and duties of Director

(1) A Director shall be appointed, as already provided, to superintend and operate the Scheme within its general principles and subject to decisions from time to time by the Steering Committee, of which he shall be a member;

(2) The Director during his term of office shall devote to the work arising from the Scheme such time as shall be specified in his contract of service and shall receive such remuneration as the Steering Committee may determine. It is contemplated that the Director shall work on a part-time basis during the first two years of the operation of the Scheme and thereafter may work for a short period on a part-time basis and, finally, on a whole time basis, possibly for twelve months.

(3) The Director shall make all necessary arrangements for the proposed interchanges of teaching staffs and shall advise and guide the teachers as may be appropriate so as to ensure that the maximum benefit is derived from their studies and experiences while participating in the Scheme. He may be required to spend a part of each year in each of the three countries and shall arrange for the collection, analysis, summarising and provisional assessment of all data arising from the operation of the Scheme. He shall draft such Reports as the Steering Committee may require him to prepare and, if so directed shall arrange for the printing and publication of Reports;

(4) The Director shall discharge such other duties as the Steering Committee may assign to him.

(5) The Director shall hold office during the pleasure of the Committee but not for a period exceeding three years and six months.

30. Commencement of the Scheme—The Scheme shall commence on 1st April, 1960 and the first exchanges of teachers shall operate as from 1st September, 1960. The Director shall take up duty not later than 1st June, 1960.

31. Duration of the Scheme—The Steering Committee shall have its final Report completed and published not later than 30th September, 1963, and the Scheme then shall come to an end. Any further action to be taken after that date shall be based entirely new arrangements and shall not form part of the Scheme.

32. Standing orders—The Steering Committee shall, subject to the general provisions of the Scheme, prepare Standing Orders regulating their procedure and setting out the conditions to be complied with by participants and by teachers taking part in the exchange arrangements, so as to ensure the efficient operation of the Scheme and the safe-guarding of all funds made available for its operation. The general purpose of the Scheme shall not be altered without the express approval of the Rockefeller Foundation

D. **The Financial Basis of the Scheme**

33. The principal participants in the Scheme, that is to say, the Massachusetts General Hospital, the Toronto Western Hospital and the Northern Ireland Hospitals Authority, agree that an application be made on their behalf by the Secretary of the Northern Ireland Hospitals Authority to the Rockefeller Foundation for a Grant to meet the expenses arising from the Scheme.

34. The application to the Rockefeller Foundation shall be for a total sum of seventy-two thousand dollars, payable in the United States of America, and to be issued in instalments of such amount and at such times as the Rockefeller Foundation may think proper to meet expenditure as it arises.

35. It shall be decided by the Rockefeller Foundation whether Grants or instalments shall be issued direct to the Steering Committee's principal Banking Account in the United States of America or whether the sums shall be payable to the Massachusetts General Hospital and released by that Hospital on the Steering Committee's authorising expenditure which properly may be incurred under the Scheme. In this matter the principal participants in the Scheme will be happy to regulate their arrangements so as to comply with the general policy of the Rockefeller Foundation.

If funds are held by the Steering Committee, they shall arrange to deposit them in a recognised bank or banks and shall provide that withdrawals for the purposes of financing the operation of the Scheme shall be made as and when required by means of cheques drafts or orders signed by not fewer than two persons authorised by the Steering Committee so to act.

Proper financial records shall be maintained by the Steering Committee who shall authorise two or more of their number to act on their behalf as Joint Honorary Treasurers. The Honorary Treasurers shall present to the Committee accounts of receipts and payments with appropriate vouchers to support the accounts.

36. The total sum required for the operation of the Scheme, as set out in paragraph 34 above, is arrived at on the basis of the following estimates:

	$	$
SALARY OF DIRECTOR:		
(*a*) On part-time basis—		
@ $30 per day:		
1st year—150 days	4,500	
2nd year, 3rd year—180 days	5,400	
(*b*) On whole-time basis—		
Final twelve months	10,000	
	$19,900	
say		20,000
TRAVELLING EXPENSES OF DIRECTOR:		
Two visits each year to North America;		
Travelling in United Kingdom;		
Travelling in Europe:		
say, 3 years @ $2,000		6,000
SUBSISTENCE ALLOWANCES TO DIRECTOR WHEN ABSENT FROM HOME:		
In North America:		
1st year, 2nd year—50 days each year—100 days @ $20	2,000	
3rd year—70 days @ $20	1,400	
In United Kingdom:		
1st year—70 days @ $7	490	
2nd year—90 days @ $7	630	
3rd year—150 days @ $7	1,050	
In Europe	430	
		6,000
TRAVELLING EXPENSES OF OTHER MEMBERS OF STEERING COMMITTEE AND HON. SECRETARY:		
(*a*) Miss Elliott—		
Two visits to North America @ $750	1,500	
(*b*) Miss Griffin—		
Two visits to N. Ireland	1,500	
Four visits to Boston	200	
(*c*) Miss Sleeper—		
Two visits to N. Ireland	1,500	
Four visits to Toronto	200	
(*d*) Miss Woodward—		
One visit to N. America	750	
Four visits to N. Ireland	200	
(*e*) Miss Broe—		
One visit to N. America	750	
Four visits to N. Ireland	200	

(*f*) Miss White—		
Two visits to N. America	1,500	
(*g*) Professor Biggart—		
One visit to N. America	750	
(*h*) Mr. Jones—		
One visit to N. America	750	
(*i*) Honorary Secretary—		
One visit to N. America	750	
	——	10,550
SUBSISTENCE ALLOWANCES TO OTHER MEMBERS OF STEERING COMMITTEE AND HON. SECRETARY:		
(*a*) Miss Flliott—		
15 days in N. America @ $20	300	
(*b*) Miss Griffin—		
12 days in N. Ireland @ $15	180	
11 days in Boston @ $20	220	
(*c*) Miss Sleeper—		
12 days in N. Ireland @ $15	180	
11 days in Toronto @ $20	220	
(*d*) Miss Woodward—		
15 days in N. America @ $20	300	
15 days in N. Ireland @ $10	150	
(*e*) Miss Broe—		
10 days in N. America @ $20	200	
15 days in N. Ireland @ $10	150	
(*f*) Miss White—		
15 days in N. America @ $20	300	
(*g*) Professor Biggart—		
8 days in N. America @ $20	160	
(*h*) Mr. Jones—		
7 days in N. America @ $20	140	
(*i*) Honorary Secretary—		
10 days in N. America @ $20	200	
	——	2,700
TRAVELLING EXPENSES OF EXCHANGE TEACHERS		
2 from N. Ireland to N. America		
2 from Toronto to Boston and N. Ireland		
2 from Boston to Toronto and N. Ireland		
6 @ $750 = ...	4,500	
N. Ireland Teachers travelling in N. America		
2 @ $200 = ...	400	
N. American Teachers travelling in U.K.		
4 @ $200 = ...	800	
N. American Teachers travelling in Europe		
4 @ $200 = ...	800	
	——	6,500
ALLOWANCES TO TEACHERS FOR PERIODS OF ABSENCE FROM OWN HEADQUARTERS:		
6 @ $2,100 = ...		12,600
Printing of Report: less receipts from sales		2,000
Clerical assistance, except in Northern Ireland where it will be provided free of charge by Northern Ireland Hospitals Authority		2,000
Incidental Expenses and Contingencies, say—		3,650
TOTAL		$72,000

Appendix

Appointment of Director

The success of the Scheme largely will depend upon the efficiency with which it is directed and it is of paramount importance to choose a Director who has the qualities required for an enterprise and research experiment of this kind.

It is believed that the most suitable person for appointment would be one who combines the following qualities and experience:

(1) a University Graduate, preferably in the Faculty of Arts, whose outlook is based on a wide knowledge and appreciation of the humanities;

(2) experience in teaching, research and the investigation of problems of organisation and management;

(3) ability to mix freely and to co-operate with other people and wide human sympathy;

(4) integrity and courage;

(5) ability to speak well in public and write clear, simple English;

(6) power to analyse and assess facts and to weigh and adjudicate upon opinions.

December, 1959.

APPENDIX II

Scheme for the Nurses Teacher Exchange programme as finally approved

Northern Ireland Hospitals Authority
in association with
Toronto Western Hospital, Toronto, Canada
Massachusetts General Hospital, Boston, U.S.A.
Royal Victoria Hospital, Belfast, Northern Ireland

NURSE TEACHER EXCHANGE SCHEME

THE SCHEME

To provide for an exchange of nurse teachers by Toronto Western Hospital, Toronto, the Massachusetts General Hospital, Boston, and the Royal Victoria Hospital, Belfast, and for an evaluation of the experience of the nurse teachers.

The genesis of the Scheme

1. In 1958, the Northern Ireland Hospitals Authority's Nursing Officer (Anne M. W. White) with the aid of a British Commonwealth and Empire Nurses War Memorial Fund Scholarship studied some of the nurse education programmes in North America. The units in which she spent the greater part of her time were the School of Nursing of the Massachusetts General Hospital, Boston—under the guidance of Miss Ruth Sleeper, Director of the School of Nursing and Nursing Service—and the Atkinson School of Nursing of the Toronto Western Hospital—then under the guidance of Miss Gladys Sharpe, Director of Nursing. Miss White found these units of particular interest and while the nursing education programmes had the same fundamental philosophy, the approaches to the preparation of the nurse had several interesting variations and both differed from the system followed in Northern Ireland.

2. Miss White had consultations with Miss Sleeper and Miss Sharpe as to the possibility of advancing nursing education by means of a pilot scheme under which there would be an exchange of teaching staff by the Schools of Nursing of three hospitals, namely—

The Toronto Western Hospital, Toronto
The Massachusetts General Hospital, Boston
The Royal Victoria Hospital, Belfast.

3. Miss White then discussed the subject with Miss Virginia Arnold, Assistant Director for Medical Education and Public Health at the Rockefeller Foundation who agreed that it would be appropriate to submit a considered memorandum to the Rockefeller Foundation.

4. A formal approach was made to the Governing Bodies of the Toronto Western Hospital, the Massachusetts General Hospital and the Royal Victoria Hospital, Belfast, asking if they would be prepared to join in the proposed scheme. The three Governing Bodies indicated their willingness to do so, subject to their being satisfied that the details of it were such that it would be possible for them to participate.

5. At this point information was available to the Northern Ireland Hospitals Authority that Miss Virginia Arnold and Miss Ruth Sleeper would be in the United Kingdom in February, 1959, and it was decided to make use of the opportunity so presented to have a preliminary discussion of the subject.

6. A little later, grants were made by the Rockefeller Foundation to Miss F. E. Elliott, Matron of the Royal Victoria Hospital, Belfast, and Mr. E. H. Jones, Secretary of the Northern Ireland Hospitals Authority to enable them to examine the programmes of

nursing education in Toronto and Boston and other centres in the United States of America. Miss Elliott and Mr. Jones visited Canada and the United States of America in May, 1959, and in the course of their visit had the opportunity of having discussions on the proposed scheme with representatives of the Toronto Western Hospital, Toronto, and the Massachusetts General Hospital, Boston. It was agreed that the Toronto Western Hospital and the Massachusetts General Hospital would be able to participate.

A further meeting of representatives of the Northern Ireland Hospitals Authority, the three Schools of Nursing and other interested persons took place in Belfast in October, 1959. Following that meeting and as a result of correspondence on the subject, a Scheme was prepared and agreed by the participating bodies.

The details of the Scheme are set out in the subsequent sections of this memorandum.

The Scheme

7. The Scheme is as follows:

"There shall be an exchange of nurse teachers by the Toronto Western Hospital, Toronto, the Massachusetts General Hospital, Boston, and the Royal Victoria Hospital, Belfast; and an evaluation of the experience of the nurse teachers."

The intention is that will be an exchange of nurse teachers between the two hospitals in North America and between each of them and the Royal Victoria Hospital, Belfast. The experience of the teachers in undertaking duties in a strange environment will be evaluated by an advisory committee referred to below.

8. The advisory committee shall consist of:

(1) Miss Ruth Sleeper, R.N., B S., M.A., L.H.D., D.SC., Director of the School of Nursing and Nursing Service, Massachusetts General Hospital, Boston;

(2) Miss Grace Paterson, Director of Nursing, Atkinson School of Nursing, Toronto Western Hospital, Toronto;

(3) Miss Florence E. Elliott, O.B.E., S.R.N., S.C.M., M.T.D., Matron of the Royal Victoria Hospital, Belfast;

(4) Miss Anne M. W. White, S.R.N., S.C.M., R.F.N., Nursing Officer of the Northern Ireland Hospitals Authority, Belfast;

(5) Professor John Henry Biggart, C.B.E., M.D., D.SC., F.R.C.P., Dean of the Faculty of Medicine of the Queen's University of Belfast, and a member of the Northern Ireland Hospitals Authority;

(6) Mr. Eric Harrison Jones, O.B.E., Secretary of the Northern Ireland Hospital Authority, Belfast;

(7) Miss Mary G. Hanna, B.SC.(ECON.), Principal Administrative Assistant, Northern Ireland Hospitals Authority;

(8) Miss Ellen Bjoe, R.N.(DENMARK), Director, Florence Nightingale Education Division of the International Council of Nurses;

(9) Miss Joan Woodward, M.A., D.P.S.A., Lecturer in Sociology at the Oxford University Department of Social Administration and at the Imperial College of Science, London;

The advisory committee may seek any advice and assistance they may require for the purpose of evaluating the experience of the teachers.

The exchange of Nurse Teachers

9. I. *Time of commencement of Exchange Teachers' programmes*

It is hoped that it will be possible for the exchange of teachers to commence on 1st September, 1960.

10. II. *Programme of the Exchange arrangements*

The exchange of teacher arrangements will be in two cycles each of twelve months duration and the detailed working of the system will be as follows:

IN THE FIRST YEAR

1. The exchange teacher from Belfast:
   9 months in Boston
   2 months in Toronto
   1 month holiday.
2. The exchange teacher from Toronto:
   9 months in Belfast
   2 months in Boston
   1 month holiday.
3. The exchange teacher from Boston:
   9 months in Toronto
   2 months in Belfast
   1 month holiday.

IN THE SECOND YEAR—IN WHICH THREE OTHER TEACHERS WILL PARTICIPATE

1. The exchange teacher from Belfast:
   9 months in Toronto
   2 months in Boston
   1 month holiday.
2. The exchange teacher from Toronto:
   9 months in Boston
   2 months in Belfast
   1 month holiday.
3. The exchange teacher from Boston
   9 months in Belfast
   2 months in Toronto
   1 month holiday.

11. **III.** *Content of Exchange Teachers' programme*

Before leaving her parent School the exchange teacher will be given an opportunity of studying available literature relating to the School to which she will be attached and in this and other ways will endeavour to obtain a certain amount of useful preliminary knowledge.

12. At the meeting held in Belfast in October, 1959, guide lines were agreed for the assistance of teachers who may take part in the exchange arrangements.

13. It also was agreed that the programmes of the exchange teachers should be on the following lines:

A. CONTENT OF THE PROGRAMME FOR THE TEACHER DURING THE PERIOD OF NINE MONTHS OF OBSERVATION AND PARTICIPATION IN THE WORK OF A SCHOOL OF NURSING.

This period will be divided into two parts, namely a short period of orientation and secondly, a planned programme of participation in the work of the school. The arrangements would be:

(1) PERIOD OF ORIENTATION—POSSIBLY ABOUT FOUR WEEKS

The teacher will:

obtain an appreciation of the administrative arrangements and organisation of the hospital with which the School of Nursing is associated;
assess the place of nursing within the hospital organisation;
become acquainted with the organisation of nursing services and the nursing education programme;
endeavour to obtain a picture of the relationship and co-ordination of nursing education and nursing service.

(2) PLANNED PROGRAMME OF PARTICIPATION IN THE TEACHING ARRANGEMENTS—ABOUT EIGHT MONTHS

The programme will be planned so as to give the exchange teacher a comprehensive picture of the preparation of the student nurse up to the time of registration. The programme will include periods of observation and periods of active

participation in the teaching of students at different stages of their basic preparation.

The exchange teacher also will participate in some of the special programmes and projects associated with the School of Nursing or services in the hospital which are in progress during the time of her attachment to the School.

B. CONTENT OF THE PROGRAMME FOR THE EXCHANGE TEACHER DURING THE PERIOD OF TWO MONTHS OBSERVATION IN THE SECOND SCHOOL TO WHICH SHE WILL BE ATTACHED.

This programme will be planned to give the exchange teacher an overall picture of the School and will include periods of observation of selected sections of the work, attendance at conferences, etc.

14. IV. *Criteria for selection of Exchange Teachers*

It is proposed that teachers should be selected by the Directors of Nursing and in making their choice they will have regard to the following considerations:

GENUINE INTEREST IN THE PROJECT

It is essential that each exchange teacher should be willing to undertake teaching duties at the School to which she is attached for nine months and also an active part in the obtaining of information and impressions. While it is impossible to attach to the arrangements a requirement that the teacher shall return to her parent school it is inherent in the project that she will do so unless there is an important change in her personal circumstances.

PERSONALITY

The teacher should be open-minded with a well integrated personality, have ability to adjust herself to a new situation and have attributes required for good human relations.

HEALTH

Each teacher should be required to have a medical examination and to submit a certificate showing that she has good physical health and a satisfactory emotional balance.

PROFESSIONAL QUALIFICATIONS

The persons from whom the selection will be made will be those who have the necessary qualifications through education and experience to meet the requirements for teaching in their parent Schools of Nursing. In choosing from them it will be necessary to assess that they are likely to be able to undertake the duties of a unit of teaching staff in the School to which they will be attached for a period of nine months.

AGE

The exchange teacher should not be over forty years of age, but preferably younger.

15. V. *Responsibility of the Exchange Teachers*

The exchange teacher is responsible in respect of her teaching duties to the Director of the School of Nursing to which she is attached.

16. VI. *Study and evaluation of the Exchange arrangements*

For the purpose of studying and evaluating the exchange arrangements the Advisory Committee will make with the exchange teachers such arrangements as are considered appropriate and may make such other enquiries as are deemed necessary for a report on the subject.

The administrative arrangements required for the regulation of the exchange programme are set out in Appendix B.

VII. *Management and control of the Scheme*

DURATION OF THE SCHEME

17. It is expected that the work arising from the Scheme will be completed and that a Report on it will be prepared within a period of two and a half years from its commencement.

RETURNS TO ROCKEFELLER FOUNDATION

18. Estimates of expenditure, reports, accounts and vouchers covering the transactions under the Scheme will be submitted to the Rockefeller Foundation at such times and in such form as the Foundation shall direct, and the Foundation may investigate any matter where this appears to be desirable.

VIII. *Financial basis of the Scheme*

19. The Northern Ireland Hospitals Authority on behalf of the participants in the Scheme hereby make application to the Rockefeller Foundation for a grant to meet the expenses arising from the Scheme.

20. The application to the Rockefeller Foundation is for a total sum of seventeen thousand five hundred dollars, payable in the United States of America, and to be issued in instalments of such amount and at such times as the Rockefeller Foundation may think proper to meet expenditure as it arises.

21. It is proposed that, if acceptable to the Rockefeller Foundation, grants or instalments should be lodged directly to the credit of a banking account in the United States of America. In this matter the participants in the Scheme will be happy to regulate their arrangements so as to comply with the general policy of the Rockefeller Foundation.

22. Any funds held for the purposes of the Scheme shall be deposited in a recognised bank or banks and the general arrangements shall provide that withdrawals for the purpose of financing the operation of the Scheme shall be made as and when required by means of cheques, drafts or orders signed by not fewer than two persons authorised so to act.

23. Proper financial records shall be maintained on behalf of the participants in the Scheme.

24. The total sum required for the operation of the Scheme (seventeen thousand five hundred dollars) is arrived at on the basis of the following estimates:

EXPENSES OF EXCHANGE TEACHERS:	
2 from N. Ireland to N. America	
2 from Toronto to Boston and N. Ireland	
2 from Boston to Toronto and N. Ireland	
Travelling and incidental expenses	$
6 @ $1,100 = ...	6,600
TRAVELLING FELLOWSHIP TO NORTHERN IRELAND TEACHERS WHILE IN N. AMERICA	
2 @ $2,500 = ...	5,000
EXPENSES OF FINAL CONFERENCE OF DIRECTORS AND EXCHANGE TEACHERS	
(To be held in Belfast)	
Director, Boston	
Director, Toronto	
3 Teachers from North America	
5 @ $1,100 = ...	5,500
Incidental Expenses	400
	$17,500

Appendix A

A NOTE ON THE PARTICIPATING BODIES

(1) Northern Ireland and the Northern Ireland Hospitals Authority.

(2) The School of Nursing of the Royal Victoria Hospital, Belfast.

(3) The Atkinson School of Nursing of Toronto Western Hospital.

(4) The School of Nursing of the Massachusetts General Hospital, Boston.

(1) *Northern Ireland and the Northern Ireland Hospitals Authority*

Northern Ireland, unlike Canada which has a population of 16–17 millions and the United States of America which has a population of 175 millions, is a small country. Its area is 5,238 square miles and the population 1,400,000, of whom a little more than one-half are resident in cities and towns and slightly less than one-half in villages and other rural dwellings. The principal occupation is agriculture, but there are substantial industries including shipbuilding, the building of aircraft, engineering, the making of linen and other textiles, distilling, rope-making, etc. About one-sixth of the working population are engaged in agriculture. The capital is Belfast, which has a population of about 450,000.

Although an integral part of the United Kingdom of Great Britain and Northern Ireland and sending 12 members to the United Kingdom Parliament in London, Northern Ireland also has its own Parliament which is fully responsible for certain services including education, health, housing, etc.

It has been the policy of the Government of Northern Ireland to maintain its social services at parity with those of Great Britain, and following the introduction of the National Health Service in England and Scotland there was similar legislation in Northern Ireland to provide a comprehensive service.

Northern Ireland therefore mirrors in miniature the health services pattern of Great Britain, but there are some differences of administrative detail, the most important of which is that the Northern Ireland legislation set up a statutory body—The Northern Ireland Hospitals Authority—to be responsible for the hospital and specialist services whereas in England the prime responsibility falls directly on the Minister of Health.

The Northern Ireland Hospitals Authority, a body corporate, consists of twenty-four members, appointed by Northern Ireland's Minister of Health and Local Government, and all of them serve in an entirely voluntary and unpaid capacity. The Secretary and Chief Administrative Officer of the Authority is Mr. Eric Harrison Jones, O.B.E., and the Authority's principal Nursing Officer is Miss Anne M. W. White, State Registered Nurse, State Certified Midwife and Registered Fever Nurse, who formerly was the Registrar of the Joint Nursing and Midwives Council for Northern Ireland.

The Hospitals Authority are responsible for the provision of hospitals and specialist services throughout Northern Ireland and have 76 hospitals with 17,275 beds, including 7,153 beds for persons with mental disorders. The Authority are assisted by thirty-three Hospital Management Committees whom they appoint and who attend to the day to day administration of individual hospitals or groups of hospitals. The Authority's annual expenditure now exceeds fourteen million pounds sterling.

The Hospitals Authority's staff totals 13,200 persons, including 793 specialists and other doctors and 6,287 nurses.

The Hospitals Authority work in close association with the Queen's University of Belfast and the Authority's Royal Victoria Hospital, Belfast, is the principal clinical teaching centre of the University's Medical School.

(2) *The School of Nursing of the Royal Victoria Hospital, Belfast.*

The Royal Victoria Hospital was founded in 1792. At present it has 879 beds including 79 in the associated convalescent unit known as the Throne Hospital. The hospital long has held its reputation as the principal centre in Northern Ireland for the treatment of acute illnesses.

Associated with it in the same management group there are a maternity hospital with 109 beds and a hospital for sick children which has 211 beds including a convalescent unit of 70 beds.

The Royal Victoria Hospital School of Nursing provides a three year course leading to examination by the Joint Nursing and Midwives Council for Northern Ireland for admission to the State Register of General Nurses. The annual intake of student nurses is about 130 persons.

(3) *The Atkinson School of Nursing of Toronto Western Hospital.*

The Toronto Western Hospital which was founded in 1896 is one of the leading public

general hospitals in Canada and has 750 beds. It is a teaching hospital for the Faculty of Medicine of the University of Toronto and has had a School of Nursing—now known as the Atkinson School of Nursing—since 1898.

A new pattern of nurse education was established in 1950 which provides that the student nurse undertakes her academic studies and gains concurrent experience in the clinical services, in the first two years of her three year period as a student. The third—or internship—year provides an opportunity for the student to practise nursing in a controlled clinical situation under close supervision. At the end of the third year the nurse studies for the Registration Examination conducted by the Registered Nurses' Association of Ontario.

The annual intake of students is about 80—90 persons.

(4) *The School of Nursing of the Massachusetts General Hospital, Boston.*

The Massachusetts General Hospital which is the third oldest private hospital in the United States of America and the oldest in New England, received its charter of incorporation in 1811. The first patient was admitted in 1821 and ever since then the hospital has maintained a standard of service which has enabled it to hold a place among the leading hospitals of the world. The Massachusetts General Hospital is a medical teaching hospital of 900 beds and an important research centre.

The School of Nursing provides a three year basic programme: the first twenty-four months are an educational period including classes and correlated clinical practice and the last twelve months an internship with nursing practice and instruction selected to develop skills and orient to graduate nursing practice. Students obtain registration through passing examinations conducted by the Board of Registration of Nurses in Massachusetts and New York.

The annual intake of students is about 130 persons.

Appendix B

Administrative arrangements for the regulation of the exchange of teachers

A. *Registration—Visa.*

Exchange teachers will be assisted in clearing with the authorities questions relating to (*a*) registration as a teacher and (*b*) visa required.

B. *Health services.*

Appropriate arrangements will be made by insurance or otherwise to provide that the exchange teachers will have necessary health services when on exchange duty. Salary will continue to be paid in full throughout periods of sickness during an exchange attachment.

Suitable insurance arrangements will be made to cover sickness or accidents occurring when travelling.

C. *Superannuation.*

Arrangements will be made to ensure that periods of attachment will continue to count as periods of full employment for the purpose of the superannuation scheme to which the teacher is a contributor.

D. *Salaries.*

The salary of the exchange teacher will be continued by the parent school.

E. *Taxation.*

As salary will be received from one country only, there should be no question of taxation in either of the other countries. Each exchange teacher should clear this question with the revenue and immigration authorities.

F. *Grant to cover additional expenses.*

Each exchange teacher from Northern Ireland will require a fellowship grant to cover additional expenses which she will have to meet when in North America. It is expected that a similar grant will not be required by North American teachers during their periods in Northern Ireland.

G. *Housing arrangements.*

Toronto Western Hospital: Residential accommodation will be offered. It is possible that the arrangements will be on a temporary basis and for the bulk of the period of attachment residence outside the School may be necessary.

Massachusetts General Hospital and Royal Victoria Hospital, Belfast: Accommodation will be offered on the terms applicable to the School's own staff.

The exchange teacher will be free to live outside the School of Nursing if she so desires.

H. *Uniform*

The exchange teacher may wear the uniform of her choice.

LAUNDRY OF UNIFORM

Toronto Western Hospital:	Laundry service is free of charge.
Massachusetts General Hospital:	A small charge will be made.
Royal Victoria Hospital:	Laundry is included in full accommodation.

I. *Work schedule for the exchange teachers.*

Hours of work will follow the overall plan prepared by the School of Nursing to which the exchange teacher is attached. The programme will allow time for preparation, observation and activities such as committee work which would enrich the programme.

APPENDIX III

Visits to Hospitals and Centres other than those to which the Exchange Teachers were attached

VISITS MADE BY MISS P. A. IRVINE, SCHOOL OF NURSING, ROYAL VICTORIA HOSPITAL, BELFAST. EXCHANGE TEACHER IN 1960/61

Visits made in the United States of America

"Social Background" visits made with students in and around Boston.
A recruitment visit with two instructors to Martha's Vineyard Regional High School.
New England Deaconess Hospital, Boston. (3 year Diploma Course.)
New England Baptist Hospital, Boston. (3 year Diploma Course.)
Boston University, Newton Junior College } 2 year programme in nursing.
Simmon's College. 5 year programme in nursing.
Visit with Dietetic Student to meat market.
Boston Lying-In Hospital. (2 days)
McLean Psychiatric Hospital, Boston. (2 days)
Lahey Clinic (mainly for diagnosis and is unique).
Johns Hopkins Hospital, Baltimore (3 days). 3 year Diploma programme.
Cleveland, Ohio (Nursing Convention—1 week).
A day with the Visiting Nurses' Association.
Joslin Clinic (Diabetic Clinic).
Student Nurses' Conference in Springfield, Mass. (1 day).
Visit to a High School in New Jersey with teacher.

Visits made in Canada

Hospital for Sick Children, Toronto.
Department of Health for Ontario.
Headquarters of Registered Nurses' Association of Ontario.
Ontario Hospitals' Service Commission.
Nightingale School of Nursing, Toronto. 2 year programme.
Canadian Nurses' Association Headquarters, Ottawa.

VISITS MADE BY MISS IRENE NORTON, SCHOOL OF NURSING, MASSACHUSETTS GENERAL HOSPITAL, BOSTON. EXCHANGE TEACHER IN 1960/61

Visits made in Canada

NURSING AND/OR RELATED AGENCIES:

Registered Nurses' Association of Ontario—visits with Executive Secretary and Consultant on Nursing Education and Nursing Service.
Nursing Branch, Ontario Department of Health.
Nursing Assistant Branch, Ontario Department of Health.
Senior Nursing Consultant, Ontario Hospital Services Commission.
Director of Public Health Nursing, Ontario Department of Health.
Canadian Nurses' Association—Executive Secretary and others.
Indian and Northern Health Services—Eastern Regional Nursing Officer.
Victorian Order for Nurses in Ottawa—Educational Director.

OTHER AGENCIES:
Ontario Department of Education.
HOSPITALS AND SCHOOLS OF NURSING (Ontario):
Ottawa Civic Hospital.
Hamilton General Hospital.
Toronto Psychiatric Hospital.

Hospital for Sick Children, Toronto.
Toronto General Hospital (Nurse interne programme).
University of Toronto School of Nursing.
Nightingale School of Nursing, Toronto.

HEALTH AND WELFARE AGENCIES visited with a group of first-year student nurses as part of the planned educational programme for the students:

Canadian National Institute for the Blind.
Canadian Red Cross (Toronto Chapter).
Weston Sanitorium for Tuberculosis.
Salvation Army Home for the Aged.
Lambert Lodge for the Aged.
University Settlement House.
Children's Aid Society.
Gage Institute (Tuberculosis detection).
Toronto Rehabilitation Center.
Connaught Medical Research Laboratories.

SPECIAL CONFERENCES:

Workshop in "Group Dynamics" sponsored by the Registered Nurses' Association of Ontario.
Annual meeting of the Registered Nurses' Association of Ontario.
Annual meeting of the Ontario Hospital Association.

Visits made in Northern Ireland

NURSING AND/OR RELATED AGENCIES:

Ministry of Health and Local Government—Nursing Officer and Medical Officers.
Northern Ireland Hospitals Authority—Secretary and Nursing Officer.
Joint Nursing and Midwives Council for Northern Ireland—Registrar.
Northern Ireland Committee of the Royal College of Nursing—Secretary.
Central Preliminary Training School for Enrolled Nurses—Tutor.
Muckamore Abbey—residential centre for mentally sub-normal persons.
Royal Maternity Hospital, Belfast.
Royal Belfast Hospital for Sick Children.
Holywell Hospital, Antrim—psychiatric hospital.
Belfast City Hospital—Psychiatric and Geriatric units.

VISITS MADE BY MISS A. J. SOWA (MRS. W. QUAIATTINI), SCHOOL OF NURSING, TORONTO WESTERN HOSPITAL, TORONTO. EXCHANGE TEACHER IN 1960/61

Visits made in Northern Ireland

Northern Ireland Hospitals Authority—discussion with Secretary and Nursing Officer.
Royal Maternity Hospital, Belfast—Training School for Midwifery.
Royal Belfast Hospital for Sick Children—Training School for Children's Nursing.
Belfast City Hospital—Training School for General Nursing.
Mater Infirmorum Hospital—Training School for General Nursing. (Voluntary hospital but not under Health Services Act).
Altnagelvin Hospital, Londonderry—Training School for General Nursing
Lagan Valley Hospital, Lisburn.
Armagh City Hospital, Armagh.
Holywell Hospital—Training School for Mental Nursing.
Musgrave Park Hospital, Belfast—Training School for General Nursing and Orthopaedic Nursing.
Montgomery House—Radiotherapy unit.
Clifton House—Home for the Aged.
Ministry of Health and Local Government—discussion with the Nursing Officer.
Royal College of Nursing, including meetings of the Sister Tutors' Section.

Joint Nursing and Midwives Council for Northern Ireland.
In the district for one day with Health Visitor.
Girls' Grammar School.
Northern Ireland Health Services Conference on Mental Health.

Visits made in England

LONDON:
St. Thomas' Hospital—Training School for General Nursing.
St. George's Hospital—Training School for General Nursing.
Middlesex Hospital—Training School for General Nursing.
Maudsley Hospital—Training School for Mental Nursing.

MANCHESTER:
Manchester Royal Infirmary—Training School for General Nursing.
Manchester University Department of Social & Preventive Medicine } to discuss the programme for Diploma in Community Nursing.

CONFERENCES:
Annual meeting of the Royal College of Nursing, Portsmouth, England.

Visits made in Scotland

GLASGOW:
Royal Infirmary—Training School where the experimental scheme of the Alternative Course of Nurse Education was in existence.

EDINBURGH:
University—Nursing Studies Unit—to discuss research scheme in nursing as well as the courses offered at the Unit.
Western General Hospital—Training School for General Nursing.
Sister Tutors' Reunion.

Visits made in the United States of America

McLean Psychiatric Hospital—Psychiatric affiliating hospital for students from Massachusetts General Hospital.
Boston Lying-In Hospital—Obstetric affiliating hospital for students from Massachusetts General Hospital.
New England Deaconess Hospital—School of Nursing with 3 year comprehensive programme.
Newton Junior College—2 year comprehensive programme.
Boston University School of Nursing—4 year College programme.
Massachusetts League for Nursing—discussion with Secretary.
Massachusetts Nurses' Association—discussion with President and other Executive Staff.

VISITS MADE BY MISS C. A. HOLLERAN, SCHOOL OF NURSING, MASSACHUSETTS GENERAL HOSPITAL, BOSTON. EXCHANGE TEACHER IN 1961/62

Visits made in Northern Ireland

Carolan Grammar School.
Musgrave Park Hospital—Central Sterile Supply Department (part of a sister tutors' meeting).
Royal Belfast Hospital for Sick Children—tour of facilities with the Matron
Royal Maternity Hospital, Belfast—tour of facilities and discussion of syllabus for midwifery training.
Altnagelvin Hospital, Londonderry—short tour of facilities.
Royal College of Nursing—discussion of its functions and the special courses taught there.
Ministry of Health and Local Government—discussion with Nursing Officer.
School of Nursing at Mater Infirmorum Hospital (voluntary hospital not operating under Health Services Act)
Clifton House—home for the aged.
Northern Ireland Hospitals Authority—discussion with Secretary.

Health Visitor—accompanied her on her rounds for one day.
Joint Nursing and Midwives Council for Northern Ireland.
Belfast City Hospital—visit to geriatric unit.
Lagan Valley Hospital, Lisburn.

Visits made in Canada

Registered Nurses' Association of Ontario, Toronto, Ontario.
Nursing Branch, Department of Health, Toronto, Ontario.
Canadian Nurses' Association, Ottawa.
Victoria Order of Nurses, Toronto, Ontario.

VISITS MADE BY MISS A. P. I. LOGAN, SCHOOL OF NURSING, ROYAL VICTORIA HOSPITAL, BELFAST. EXCHANGE TEACHER IN 1961/62

Visits made in Canada

Hamilton General Hospital, Hamilton, Ontario. 3 year programme.
Montreal General Hospital, Montreal. 3 year programme.
Queen Elizabeth Hospital, Montreal. 3 year programme.
Hospital for Sick Children, Toronto. 3 year programme.
Nightingale School of Nursing, Toronto. 2 year independent school.
University School of Nursing, Toronto.
McGill University School for Graduate Nurses, Montreal.
Registered Nurses' Association of Ontario.
Nursing Branch Department of Health, Toronto.
Canadian Nurses' Association, Ottawa.
Ontario Health Services Commission, Toronto.
Certified Nursing Assistant School, Ontario Department of Health.

SPECIAL CONFERENCES:
Registered Nurses' Association of Ontario Conference at Delaware on "Personal Growth and Group Achievement".
Annual Meeting of the Registered Nurses' Association of Ontario.
Registered Nurses' Association of Ontario Conference for Head Nurses and Instructors at St. Michael's Hospital.

Visits made in the United States of America

Massachusetts Nurses' Association.
Massachusetts Department of Public Health Nursing.
Boston Lying-In Hospital, Boston.
McLean Psychiatric Hospital, Boston.
Newton Willesley Hospital, Massachusetts. Community hospital—3 year programme.
Kennedy Memorial Hospital for Children, Boston.

VISITS MADE BY MISS R. RADFORD, SCHOOL OF NURSING, TORONTO WESTERN HOSPITAL. EXCHANGE TEACHER IN 1961/62

Visits made in the United States of America

American Nurses' Association—National Headquarters, New York City.
National League for Nursing Headquarters, New York City.
Editors of American Journal of Nursing Company, New York City ("Nursing Outlook", "Nursing Research", "American Journal of Nursing").
New England Hospitals Association Convention, held at Boston.
Holy Cross Rehabilitation Hospital in Boston.
McLean Psychiatric Hospital, near Boston (Massachusetts General Hospital Students' Affiliating Hospital).
Boston Lying-In Hospital (Massachusetts General Hospital Students' Affiliating Hospital).
Newton Junior College School of Nursing in Boston.

Boston University Post-Basic School of Nursing.
Simmons' College School of Nursing in Boston (Baccalaureate Program).
Massachusetts Nurses' Association Headquarters—interview with Secretary.
Secretary's Office, Massachusetts Section of National League for Nursing.
Council of Member Agencies Meeting, National League for Nursing, held in a smaller city near Boston.
Office of Secretary, Nursing Council of Boston.
"Careers Night" at a Roman Catholic High School in New Longon, Connecticut.

Visits made in Northern Ireland

Carolan Grammar School, Belfast.
Royal College of Nursing Committee for Northern Ireland.
Visit to Nursing Officer, Ministry of Health and Local Government and visit to Parliament in Session.
Royal Maternity Hospital, Belfast.
Royal Belfast Hospital for Sick Children, Belfast.
Lagan Valley Hospital, Lisburn.
Ulster Hospital, Dundonald, Belfast.
Joint Nursing and Midwives Council for Northern Ireland.
Belfast City Hospital.
Altnagelvin Hospital, Londonderry.

Visits made in Great Britain

Manchester Royal Eye Hospital.
Manchester Royal Infirmary.
Visit to Miss E. L. Wilkie, Department of Preventive and Social Medicine, University of Manchester.
Visit to Tutors of Leicester Royal Infirmary.
Nursing Studies Unit, University of Edinburgh.
Western General Hospital, Edinburgh.

In addition, the teachers from North America visited certain hospital centres in countries on the continent of Europe and studied nurse teaching programmes and certain hospital services. The teachers from Northern Ireland while in Canada and the United States of America made private visits to centres in other parts of these countries. The cost of the private visits was defrayed by the teacher's parent hospital and not out of the Rockefeller Foundation grant for the Nurse Teacher Exchange programme.

APPENDIX IV

Committee Organization

SCHOOL OF NURSING, MASSACHUSETTS GENERAL HOSPITAL, BOSTON, U.S.A.

Name of Committee	*Composition of Committee*	*Purpose of Committee*
Executive Faculty Committee	Director, School of Nursing 2 Assistant Directors 3 Co-ordinators 1 Instructor elected by faculty at large	1. To be concerned with and involved in the long range planning and goals of the school. 2. To consider policies and relationships pertaining to the School of Nursing and Nursing Service as they affect the education of students. 3. To recommend to and receive from General Faculty policies and other matters for consideration. 4. [illegible]eceive and approve reports of standing and special committees and to [illegible] overall responsibility for the School's program. 5. To recommend policies for consideration by the Faculty and to receive from the Faculty recommendations and other matters pertaining to the program and progressive development of the School, and to the Trustees Committee on the School of Nursing, and to the Trustees. 6. To review appointments of standing committees. 7. To approve appointments to the Teaching Staff. 8. To assist in the preparation of the budget and to review the total budget items approved. 9. To evaluate programs of schools with which this school affiliates to determine their suitability. 10. To serve as a medium for exchange of information within the group and with the faculty at large.

Committee Organisation—Massachusetts General Hospital, Boston—*contd.*

Name of Committee	*Composition of Committee*	*Purpose of Committee*
		11. To provide frequent meetings of the school administrators to carry on the general business of the school.
Committee on Curriculum	Assistant Director of Program Chairmen of Teaching Units Faculty appointed to represent areas or skills Student nurses appointed by the Executive Committee; 4 seniors, 4 juniors, 4 freshmen Representative from schools with which this school affiliates	1. To review current learning experiences and to plan for and recommend learning experiences desirable for students. 2. To consider and suggest appropriate teaching methods and tools to promote student responsibility for and participation in learning activities. 3. To maintain a continuing plan for curriculum review and development.
Sub-Committee on Records	1 Co-ordinator—first year 1 Co-ordinator—alternate program 1 Faculty member—interneship Administrative Assistant of School Recording Secretary Secretary in interneship program	1. To review and revise student record forms.
Committee on Audio-Visual Aids	9 Instructors 2 Student nurses	1. To maintain an inventory of audio-visual aids available for use by the instructors, and keep a file of all films used or previewed. 2. To promote continuing investigation of aids to be considered for use by the Faculty. 3. To provide for the maintenance and periodical overhaul of audio-visual equipment. 4. To approve loans of audio-visual equipment owned by the Massachusetts General Hospital School of Nursing.

Committee Organisation—Massachusetts General Hospital, Boston—*contd.*

Name of Committee	*Composition of Committee*	*Purpose of Committee*
		5. To review the records of money used for rental, purchase and repair of audio-visual aids.
Committee on The Library	1 Assistant Director 6 Instructors Librarian 5 Student nurses appointed by Executive Committee	1. To help the Faculty become better acquainted with the facilities and the opportunities provided by the library. 2*a* To consider recommendations from Faculty and students for the library and its services. 2*b* To have each Faculty member and student on the Committee on the Library responsible for conveying regularly to her respective group the information gained about the library and the work of the Committee on the Library. 3. To act in an advisory capacity on expenditures for the library on the basis of income and its distribution. 4. To make the final selection of books, pamphlets and periodicals for addition to the library collection. 5. To make recommendations concerning repairs and rebinding or discarding of books and selection of periodicals to be bound for the permanent collection.
Committee on Admissions	7 Instructors Health Supervisor Counselor 9 Student nurses appointed by Executive Committee	1. To set up criteria and procedures for selecting and admitting students (subject to the approval of the Executive Faculty Committee), so that those chosen may best meet the objectives of the School. 2. To assess entrance standards of the School in relation to requirements pertinent to nursing. 3. To examine the credentials of individual applicants and accept for admission those who best meet the requirements of the School.

Committee Organisation—Massachusetts General Hospital, Boston—*contd.*

Name of Committee	*Composition of Committee*	*Purpose of Committee*
		4. To refer to the executive Committee the records of those promising applicants whose credentials deviate from the accepted criteria. 5. To devise the forms used for the admission of students to the School and to evaluate and revise them as necessary. 6. To co-operate with local, state and national agencies in presenting occupational information to young women interested in nursing. 7. To prepare the School bulletin and other recruitment materials for publicity for the School of Nursing. 8. To arrange and carry out either a semi-annual or annual Open House on Nursing and the Massachusetts General Hospital program in nursing.
Committee on Residences	Counselor 2 Instructors (diploma program) 1 Instructor assigned to affiliating L.P.N.* students 4 Residence Heads (dormitories) 1 Assistant Director of Hospital	1. To consider and determine the policies guiding the management of the residences. 2. To review relationships and responsibility of residence head and residence staff to individual students and the Student Nurses Co-operative Association. 3. To consider over-all responsibilities and plans of the Residence Heads in developing house programs which best provide for happy and constructive dormitory living.
Committee on Student Health Services	Health Supervisor Counselor 3 Instructors School Physician	1. To consider health needs and determine policies to guide the School health program for: (*a*) the basic services of health promotion and health protection, (*b*) care of illness and correction of remediable defects,

* Licensed practical nurse

Committee Organisation—Massachusetts General Hospital, Boston—*contd.*

Name of Committee	*Composition of Committee*	*Purpose of Committee*
	Chief MGH Staff Clinic Psychiatrist Representative from Surgical Service Representative from Medical Service 1 Assistant Director of Hospital	(*c*) the development of student responsibility for the management of her own health problems, the improvement of her own health and the protection of others.
Committee on Financial Aid	Director, School of Nursing Assistant Director, School of Nursing Co-ordinator of First Year Program Counselor 2 Instructors	1. To prepare forms on which enrolled student nurses or applicants to the School shall state need for financial aid. 2. To review requests for aid and to determine allocation of grants.
Committee on Guidance	7 Instructors Counselor 3 Student nurses appointed by Executive Faculty	1. To further identify and strengthen those areas of guidance which need interpretation and development.
Committee on Evaluation	8 Instructors representing all areas	1. To establish and implement the use of more effective standards and criteria for evaluation. 2. To discuss problems that arise within the Evaluation Committees. 3. To co-ordinate the functions of the three committees. 4. To interpret the evaluating process to all concerned with the writing of nursing progress reports. Objectives of the Sub-Committee for the First, Second, and Third Year Evaluations shall be: 1. To evaluate student progress from written reports of the students' abilities and personal characteristics at the end of each year.

Committee Organisation—Massachusetts General Hospital, Boston—*contd.*

Name of Committee	*Composition of Committee*	*Purpose of Committee*
		2. To recommend student classification under the following headings: Excellent, Very Good, Acceptable, Limited, Poor.
		3. To evaluate again in six months those students who have been placed in a Limited or Poor category.
		4. To meet at designated intervals to evaluate the students.
Committee on Student—Faculty Relationships	Counselor 5 Instructors 12 Student Nurses appointed by Executive Faculty Committee	1. To strengthen relationships between Faculty and students.
		2. To furnish a means of communication between the students and the Faculty.
		3. To provide periodic meetings when students and Faculty work together on areas of common interest.
		4. To make recommendations to the Executive Faculty Committee and/or Student Council for consideration or action.
Committee on Social Activities	5 Instructors	1. To set with Faculty approval and to collect social activity fees from each member annually.
		2. To be responsible for all Faculty social functions and to co-opt, whenever necessary, additional Faculty members for specified periods of time.
Committee on Bye-Laws	1 Co-ordinator 3 Instructors	1. To review annually and to recommend any necessary changes in the Bye-Laws of the Faculty of the Massachusetts General Hospital School of Nursing.
		2. To circulate recommended changes to the Faculty one month prior to the date of voting.

SCHOOL OF NURSING, ROYAL VICTORIA HOSPITAL, BELFAST, NORTHERN IRELAND

Name of Committee	*Composition of Committee*	*Purpose of Committee*
Nursing Committee	Representative from Belfast Hospital Management Committee Representatives from Royal Victoria Hospital Committee Representatives from Medical Staff Ladies appointed because of their personal interest and ability Matron and Principal Tutor	1. To consider admission of student nurses. 2. To advise the Royal Victoria Hospital Committee on matters related to the School of Nursing.
Two (duplicate) Sisters' Committees N.B. Necessary to have two groups to avoid over-depleting the units	Two (duplicate) groups, each augmented by the Principal Tutor and Theatre Superintendent	1. To discuss and agree on action in all matters impinging on the practical aspects of nurse training. 2. To accept and approve or seek further investigation or adjustment of all nursing techniques and procedures. 3. To submit to the Procedure Committee such relevant problems as require solution, and receive advice from the Procedure Committee.
Procedure Committee	The composition of this Committee is altered from time to time according to the subject under review, but the Principal Tutor always attends	To review Nursing Procedures.
Theatre Sisters' Committee	All Theatre Sisters (Operating Room) and Theatre Superintendent	To discuss all matters relating to theatre (operating room) work and agree on alterations as required by changing circumstances.
Staff Nurses' Meeting	All Staff Nurses and Representatives from nursing administrative staff	1. To provide opportunity for keeping Staff Nurses fully informed on all relevant matters. 2. To provide opportunity for suggestions and discussion.

Committee Organisation—Royal Victoria Hospital, Belfast—*contd.*

Name of Committee	*Composition of Committee*	*Purpose of Committee*
Royal Victoria Hospital Unit of the Student Nurses' Association	The executive committee of the Unit is formed by representatives from each year of training, elected by the members	To provide a channel for discussing with Matron any matters pertaining to training, living conditions, and extra-mural activities.
Cross-Infection Committee	Wide representation from the medical staff Pharmacy staff (one representative) Purchasing Officer Central Sterile Supply Department Superintendent Theatre Superintendent Principal Tutor Matron Administrative Staff (lay)	To consider all matters related to the control of cross-infection.
Nurse Tutors' Meeting (since March, 1963)	All Nurse Tutors Matron	To discuss all matters relevant to the teaching of student nurses.

N.B. A summary of the information from each meeting (except the Student Nurses' Association Unit) is made available to all Sister Tutors, Sisters, and Staff Nurses.

THE ATKINSON SCHOOL OF NURSING, TORONTO WESTERN HOSPITAL, TORONTO, ONTARIO

Name of Committee (standing)	*Composition of Committee*	*Purpose of Committee*
School of Nursing Advisory Committee	The superintendent The director of nursing The director of the school One member named by the board One member named by the medical staff One member named by the Alumnae Association One member named by the Women's Auxiliary One member from the field of general Education Two members from welfare, religious or charitable organizations in the community	1. To make recommendations to the Board on matters concerning the school. 2. To make recommendations upon matters referred to it by the Board.
Nurses' Reference Library Committee	Assistant director of nursing education Librarian One member named by nursing service Three instructors to represent 1st and 2nd years	1. To maintain and repair all books and journals in the Nurses' Reference Library. 2. To formulate and review library policy and procedure to be presented to staff annually. 3. To maintain such records as would make an assessment of the effectiveness of the library as a service unit possible at any period.
Admissions Committee	Director of nursing education Assistant director of nursing education Three instructors—to represent 1st and 2nd years	To determine appropriate action in relation to recruitment, admission and promotion of students, and the selection of deserving students for graduation awards.

Committee Organisation The Atkinson School of Nursing, Toronto Western Hospital, Toronto—*contd.*

Name of Committee	*Composition of Committee*	*Purpose of Committee*
Curriculum Committee	Curriculum co-ordinator Five instructors to represent 1st and 2nd years	To co-ordinate activities involved in the appraisal, development and experimentation throughout the curriculum, toward fulfilment of the philosophy of the school.
Faculty (weekly meeting)	Entire faculty—Director of Nursing Education, Chairman	1. To disseminate information. 2. To receive reports and recommendations from standing committees and to take action regarding them. 3. To discuss current problems of concern to entire faculty and to make appropriate decisions and recommendations.
Sub-Committees and Working parties to meet specific needs		
e.g. (1) In-Service Committee	4 Instructors to represent first and second years, librarian ex-officio Appointed yearly	To plan a series of education meetings for the school year in terms of the needs and interests of the faculty.
e.g. (2) Pharmacy Committee	Members of Curriculum Committee—appointed by them	To plan and recommend content in revised pharmacology course.
e.g. (3) Working Parties	Faculty members	To revise the philosophy and objectives of the school.

APPENDIX V

Report by Miss Woodward on a Supplementary Study of the Three Schools of Nursing for the purpose of making a comparison between the student and apprenticeship systems of training the Nurse

Introduction

The Advisory Committee, meeting in London in October, 1962, to evaluate the exchange arrangements and to consider the written material submitted under the Scheme, came to the conclusion that a number of interesting points arising from the reports would justify further study and research. In particular, it was felt it might be useful to make an assessment of the relative merits of what have been referred to in the main report as the "student" and the "apprentice" systems of nurse training.

The reports of the Exchange Teachers suggested that status given to the student nurse was the most significant difference between the North American and the British approaches, and underlay many of the other differences in the three Schools of Nursing involved in the Scheme. The word "status" is used here in the rather special sense in which it is used by the social anthropologist. It does not imply a relative position in a stratified society; it is not suggested, for example, that the nurse in training in the North American hospitals is given more prestige or thought more highly of than her British counterpart. It implies any position to which recognised and describable norms of behaviour apply. The relationships, attitudes and expectations of a student primarily concerned with educating himself are different from those of the apprentice from whom a substantial contribution to the work being done is demanded during the learning period.

Following the discussions at the final conference, the Committee invited me to undertake a study and comparison of the two systems in the hospitals that had participated in the Nurse Teacher Exchange Scheme. Was the difference as significant as it seemed from the reports, and, if so, how did the end products, i.e. the trained nurses produced by each system, compare? The time and resources available for this study were limited and it was only possible for me to spend about ten days in each hospital. The Massachusetts General Hospital was visited from 4th April to 13th April, 1963, the Toronto Western Hospital from 15th April to 25th April, 1963, and the Royal Victoria Hospital, Belfast, from 1st July to 10th July, 1963. Because of the shortness of the stay in each hospital, this study cannot be regarded as a research project in any real sense. Observations and impressions were recorded but not validated, and it was therefore impossible to arrive at anything but tentative conclusions, that could be used as hypotheses for intensive research.

Moreover, it was found impossible to keep within the terms of reference laid down by the Advisory Committee. Three years association with the Exchange Scheme and the reading of the Exchange Teachers' reports had given me a knowledge and understanding of the characteristics and problems of the three hospitals and, as was inevitable, part of the time was taken in a discussion of wider and more general issues. This was particularly true in the case of the Royal Victoria Hospital. Changes had taken place, the difficulties referred to in the main report had been eased, and positive steps were being taken to put into effect many of the suggestions made in Chapter IV, Section 4 A. The opportunity was also taken during the visits to discuss with the Directors of each School of Nursing the information collected from the Exchange Teachers' reports relating to the strengths and weaknesses of their own School; that this should be done had been agreed at the final conference.

In spite of the limitations of the study, a great deal of information was collected, probably far more than could reasonably have been expected in the time available. There were two reasons for this; first, the familiarity with the background and the relationship previously established with both the Directors of the Schools of Nursing and the

Exchange Teachers made it relatively easy to know what questions were likely to produce significant answers. To this extent the study was not a pilot investigation. Secondly, a considerable amount of interest was shown in the study by all who participated and co-operation was extremely good. The questions asked were answered in a frank and friendly way; no time was wasted and very little had to be done to lead the respondents on or to pave the way gently. As a result, the ten days of intensive interviewing and discussion in each hospital produced data that took considerably longer to analyse and evaluate.

In each hospital those interviewed included, in addition to the Directors themselves, the staff responsible both for Nursing Service Administration and for Nursing Education, the staff of the school, about a dozen student nurses at various stages of their training, a few newly qualified nurses, and representatives of hospital administration. Wards were visited, and ward routines and records discussed. A number of committees were attended and, in Boston and Toronto, end-of-day conferences between student nurses and instructors on the wards were included in the programme. Opportunities were also provided for less formal contact with the students and, in Boston, for observing the activities of the student government. Before going to the Massachusetts General Hospital, about two weeks were spent in American and Canadian universities, and some schools were also visited. This was a useful preliminary to the study as it enabled some of the problems of nursing education encountered in the North American hospitals to be looked at against the wider cultural and educational background of the countries concerned.

The significance of student status

The first question to be considered was whether the status difference between nurses in training under the British and North American systems was as significant in terms of attitudes and behaviour as the reports and diaries of the Exchange Teachers had seemed to suggest.

The observation in the wards and the interviews and discussions with student nurses indicated that as far as job content was concerned the status difference did not have as great a significance as might have been expected. In the North American hospitals the student nurse spent less time on the wards than did her counterpart in Belfast, but when there she did much the same things. In Boston and Toronto the limitations set by the lack of experience of the junior nurses, and their involvement in the dynamics of a busy ward situation result in repetition of routine tasks beyond the point required to learn them. The involvement in routine is not confined to the Belfast situation. Asked to describe a day on the ward, the account given by the student nurse in Belfast was not very different from that given by the student nurse in Boston and Toronto. Moreover, many of the questions raised in the student nurses consultative committee attended in Boston—an example being a complaint about being kept late on the ward to wash syringes—made it clear that student nurses in the North American hospitals are certainly not involved in a learning process all the time they are on the wards. If there are differences in the end products of the two systems, they would not appear to be the result of differences in actual work experience during the training period.

But though the job content seems much the same, there is no doubt that there are significant differences in the context in which the training is given. From an organisation point of view, the formal basis of the difference in status is the extent to which the student nurse contributes to the cost of her training. In this connection, the Table given in Chapter IV, Section 3 presents an over-simplified picture in that it suggests that the main difference here is between Belfast on the one hand, where no tuition fees are paid, and the North American hospitals on the other. In fact, although tuition fees are paid in both Boston and Toronto, there is as much difference between these two hospitals as there is between either of them and the Royal Victoria Hospital, Belfast. The contribution made to the cost of training by the student nurse in Toronto is nominal. In Boston, although the fees do not cover the whole or even the greater part of the cost, they are substantial enough to be of significance to the student nurses themselves. Moreover, as far as fees are concerned, the Boston trend is upwards: at about the same time as this

study was made, a decision was taken to charge the student nurse board and lodging fees for the first six months of her training.

In neither Belfast nor Toronto would a girl be unable to enter the School because she could not afford the training. In Boston, too, this would be unlikely to happen, but only because a fairly comprehensive system of grant aid was being developed to help in such cases. Nevertheless, the fact that a student nurse has to apply for and receive help of some kind, and then pay her fees, brings her more into line with students of other educational institutions. Moreover, only in Boston was anything said by the student nurses suggesting that training was regarded as "being paid for". There was also more criticism of the intellectual level of the training and a definite feeling that the student nurse had "rights" as well as "responsibilities" in this respect. The training was evaluated as an educational process, and comparisons were made with university courses and other schemes of advanced education. For example, some student nurses said that they were at a disadvantage in comparison with other students as their education was not sufficiently liberal to give them an appreciation of the main political and social issues of the present day, both national and international. One girl said she was at a disadvantage in talking to many of the patients because she had no time for serious reading and therefore would be regarded as "uneducated". This attitude was not, of course, entirely dependent on the fact that students paid fees. This gave starting point to the discussions, but what was said fitted into the general attitudes of students in the United States of America towards education. In the universities visited, a lot was said about "the right to education" that everyone has in the United States and "the right to fulfil oneself and develop one's personality".

In neither Belfast nor Toronto was the right to be educated mentioned by any of the student nurses. Those interviewed in Toronto recognised that their fees were only nominal, and they regarded them more as a token of good faith in embarking on the training than as a payment for it. In both Toronto and Belfast the students gave the impression that they regarded their training as a return for their services and accepted what they were given almost without question. It will be remembered that during the period of the Exchange there had been staffing difficulties in the Belfast School resulting in a shortage of teachers and large classes over a long period. None of the student nurses interviewed who had been in teaching blocks during this period felt that they had a cause for complaint. The impression was obtained that if a similar situation developed in Boston there would be complaints from the student nurses.

Thus in the student nurses' own conception of their role, the biggest difference was between Boston and the other two hospitals. As far as their own responses and behaviour were concerned, the student nurses in the Toronto Western Hospital as well as in the Royal Victoria Hospital, Belfast, indicated that there was an apprenticeship element in their role.

Attitudes towards the student nurses

Turning from the nurses' own conception of their role to how other people in the hospital saw it, the balance changes. Here Toronto and Boston were closely identified. This was particularly true as far as the staff of the two Schools were concerned; there was as great a commitment in Toronto as in Boston to the idea that the student nurses were in the hospital to learn rather than to serve. By and large this was also true of other individuals and groups in the hospital, both within the nursing area and without. Outside the School, however, there were more reservations and differences of opinion about the students' role in Toronto than in Boston. This was particularly true of the third year nurse. Even so, the greatest difference in this respect was between the North American hospitals and the Royal Victoria Hospital. There was no doubt in anyone's mind either inside the School or outside that in Belfast the major commitment of the student nurses was to do a job. They were by far the greater part of the nursing complement and the hospital could not have functioned without even the first year nurses. Even more significant, however, was the lack of importance attached by the student nurses to the theoretical training except as a way of qualifying and the implication that learning by doing was the only worthwhile kind of training, and that knowledge was acquired only through

experience. This attitude, too, is a reflection of a culture pattern. The idea that practical training is vastly superior to theoretical training is dying hard in Great Britain.

The Belfast School is regarded very much as something apart, remote and not concerned with the crucial activities of the hospital. The student nurses felt that what they were taught in the School was interesting, but regarded the time spent there as an escape or relaxation from their primary and more exacting responsibilities. Those responsible for ward administration although well-disposed towards the School, obviously regarded its demands as rather tiresome distractions from the main objectives of the hospital. There were a number of small but significant indications of the general attitude. For example, the handbook prepared for the use of patients referred to the fact that the hospital had a responsibility for training doctors, but made no reference to the training of nurses. Several of the student nurses interviewed mentioned their relationship with the patients. They felt that the patients did not realise they were undergoing training and as a result expected them to be more knowledgeable and experienced than they could possibly be. In contrast, the patients in the North American hospitals were certainly aware of the student status of the nurse in training. In the first place, the student nurse herself, who talked to the patients more freely and more frequently than her counterpart in Northern Ireland, made the position clear. Then, too, the presence of the Instructor on the ward would have a significance for the patients. It would be interesting to make a detailed study of the role of the Instructor in her relationship to the patient. Probably the reassurance of her presence makes it possible for the patient to accept the student nurse and even to enjoy being involved in the teaching process. A number of Instructors were observed in their contacts with patients and it seemed that their approach always contained an element of reassurance.

Another indication of the attitude in Belfast is that the emphasis is always on service even while the nurse is in a teaching block. For example, she has to spend an hour either before or after classes on the wards. This is said to be necessary because of the pressure of work in the early mornings and late afternoons, but opinion differs as to whether this contribution is worthwhile. Certainly the effect of this extra duty on the student nurse's ability to make the most of her learning period has not been considered seriously. Moreover no instruction in the special problems of patients in medical departments is taught until the student is in her third year of training. This suggests that the teaching when it comes has been directed more towards getting her through the State Examination rather than towards equipping her to nurse patients adequately.

An interesting discussion took place at an Evaluation Committee meeting I attended during my visit to the Massachusetts General Hospital. It was suggested that in the rating plan points should be given for the student's readiness to get on with the work that had to be done when she went on to the ward in the morning. The taking round of breakfast was specially mentioned. About half the members of the committee were opposed to this however, on the grounds that it would be unfair as this was something the student nurse should not be expected to do. There were differences of opinion in the Boston School on such issues as this, but it is significant that such a discussion could take place at all. This certainly would not have been the case in Belfast.

Summing up, therefore, there are significant differences between the three hospitals in the status afforded by other people to the nurse in training. In Boston both the nurses themselves and all with whom they were associated in the hospital, patients and staff, regarded the nurse in training as a student. In Toronto the nurse puts herself into an apprenticeship role, but the patients, the staff of the School and the majority of Nursing Service and Administration personnel regard her as a student. In Belfast, both the nurse and everyone with whom she comes into contact regard her as an apprentice whose main responsibility is towards the ward and the patient.

The significance of the difference in attitudes

Before considering the relative merits and demerits of the two systems and trying to decide where the balance of advantage lies, it is interesting to consider the main effects of the difference in attitude.

First, the student status system undoubtedly leads to lesser demands being made on the nurse in training, both physically and psychologically. As soon as their preliminary training period is over, the student nurses in Belfast are made aware through personal experience that a hospital is an institution that functions on a twenty-four hour, seven day week basis. It becomes almost impossible for them to participate in the normal social life of their own age group and they are thrown back upon the hospital for companionship. Very close ties develop between the members of a particular Preliminary Training School group. One of the reasons why the teaching block periods are eagerly awaited is that the student nurses are then back with the members of their own Preliminary Training School. One girl, asked why she set such store on being with her P.T.S. group, said spontaneously, "Oh, it's the equality".

In Boston and Toronto, on the other hand, the student nurse follows much the same pattern of life as other students; day work followed by a period of leisure and then sleep. This pattern continues for at least the first two years of training and in this period friendships, particularly with members of the opposite sex, become established on a footing that is usually permanent enough to survive the upheaval of extended day or night duty when it eventually comes. The trend in the North American hospitals seems to be progressively to reduce the demands made on the student nurse. In Toronto plans are in hand to institute a five day week, Monday to Friday, for the first year of training.

Moreover, much more is done in the North American hospitals to protect the student nurse from the trauma of exposure to the ward situation and to help her to become reconciled to death and suffering. The Boston School has a student counsellor, but helping the student nurses in this way is not her main function; she tends to be more involved in the students' group and organisational activities. In both Boston and Toronto it is the Instructor who provides the support, a useful mechanism being the end-of-day or team conferences held on the wards. At one end-of-day conference that took place during my visit, a death that had occurred during the day was discussed and at another a student nurse told the Instructor of a problem she had encountered of rejecting the advances of a male patient. In both cases the student nurses concerned were obviously relieved by talking about these unpleasant experiences and were able to get them out of their systems before going off duty.

Nothing of this kind is done in Belfast; it is generally assumed that if a girl has a problem of this kind she will talk to the ward sister about it. Very few student nurses do in fact do this, indeed the only people the student nurses say they talk to about these problems are the other members of their own Preliminary Training School. At each hospital, those interviewed were asked what had been their worst experience since coming to the hospital. The Belfast students, with one exception—a girl who through not taking sufficient care had let a patient fall out of bed—referred to deaths and in several cases some resentment was associated with the memory, aroused by the impression given that senior staff did not always appreciate the psychologically traumatic effect of first experience of death. Such incidents were not remembered with anything like the same intensity by the student nurses interviewed in either Boston or Toronto.

One indication of the difference in the demands made on the student nurses was that the third year and graduate nurses interviewed in Boston and Toronto talked about their experience at the beginning of their third year in the same way that the Belfast student nurses talked about going on to the wards at the end of the three months in the Preliminary Training School. The North American students seem to have similar feelings of insecurity, of fear of taking responsibility and of being at a loss.

Another effect is a difference in attitude towards academic qualifications. In North America the equation of nursing education with other forms of higher education and the fact that it is becoming increasingly common for the nurse who has completed her training to go on to further study in the universities means that the initial qualifications required to enter a training school are approximate to those required to enter a university and that higher qualifications are subsequently available after the training is completed. The Royal Victoria Hospital is fortunate in that, partly because of its reputation in Northern Ireland and partly because jobs for young people are harder to come by there

than in Great Britain generally, it has a wide choice of applicants. Nevertheless, relatively few of the student nurses interviewed had academic qualifications that would have enabled them to compete realistically for the limited number of university places available. This difference has wide implications; in Great Britain there is still a conviction among many teachers and parents that the intellectual girl is unlikely to become a good nurse. The cliche that one nurses with one's heart and not one's head is still heard a lot in Great Britain. The difference in level of qualification does not necessarily mean that the Belfast student nurses are less intelligent or less adequate than their counterparts in North America, merely that they do not look upon themselves as potential university students, and have no academic aspirations. Some, indeed, enter nursing because it offers them an attractive alternative to the further prolonged or serious study of a University course.

Closely linked with this difference in intellectual aspiration is the difference in the patterns of thought and behaviour between student and apprentice groups. The apprenticeship system as originally developed in Great Britain during the Middle Ages was a social mechanism through which the attitudes, beliefs and skills associated with particular crafts were perpetuated. Learning through doing appeared to result not only in the acquiring of a craft but also in the adoption of the behaviour and thought patterns of the craftsman. Apprentices tend therefore to be conservative and conformist in their attitudes and behaviour. The student, on the other hand, is a questioner. He develops a challenging and sometimes hostile attitude to authority, gets involved in protests and marches, and rarely accepts the traditions and beliefs of the profession for which he is preparing himself until the training period is ended, and he begins to practise.

The responses of the student nurses interviewed in Boston and Belfast respectively fitted neatly into the pattern. In Boston only the first year nurses talked about a vocation or of wanting to help others. The more senior students seemed to be acutely aware of the confusion and conflict surrounding the role of the professional nurse and were more realistic in recognising that the functions assumed in actual work situations were far removed from the "image" of nursing with which they had started their training. As one girl said, "We hear too much about Florence Nightingale; she's dead, let her rest in peace".

This "image" seems to remain with the Belfast nurse right through the training period. Anything other than bedside care was looked upon by the majority of those interviewed as not being "real nursing". The perpetuation of this image means that the other nursing functions, involving technical, administrative, teaching, supervisory and social responsibilities were regarded as relatively unimportant and unlikely to provide satisfaction.

In Toronto there was ambiguity. This might have been expected as there was ambiguity about the role of the student nurse herself. There was a reluctance to abandon the "image", based as it is on the attraction of ministering to a completely dependent person. One girl interviewed said that she had found that she did not much care for basic nursing except when the patient was unconscious. One reaction in Toronto to the lack of satisfaction obtained from basic nursing was a desire to substitute psychological for physical dependence; several nurses mentioned that the best thing about their work was helping patients to solve their problems. The process of questioning had also begun. In particular, there were more grumbles about the rules and regulations in the Residence than there were in the other two hospitals. As conditions were in fact not very different, the possible explanation may be that it was easier to question in peripheral areas than tackle some of the more sensitive issues.

The impression was obtained that in Boston, and to a lesser extent in Toronto, the significance of giving student rather than apprenticeship status to the group being taught was not entirely recognised by the staff of the School. Tensions were discernible among the staff of the Boston School and these seemed to be created by a difference of view on the kind of behaviour and reactions to be expected of the students. Interestingly enough, it tended to be those who were most insistent that the nurse in training must be treated

as a student and most committed to the educational objectives of the School who also seemed to find it most difficult to accept the independence that characterises a student's reactions.

The strengths and weaknesses of the two systems

While the study undoubtedly showed that the difference between student status and apprenticeship status was significant and had wide implications, it was extremely difficult in the limited time available to come to any firm conclusions as to where the balance of advantage between the two systems lay. Each system had definite strengths and weaknesses, and as far as the Nurse Teacher Exchange Scheme was concerned it was perhaps unfortunate that the staff difficulties in the School during the period of the exchange tended to obscure some of the merits of the Belfast system. There was more to be said in its favour than would appear from the main body of the report.

The great strength of the Belfast system is that it leads to no confusion of objectives. A hospital's principal function is to cure and care for the sick. It does not exist in order to train nurses or doctors or even to extend medical knowledge and expertise. It fulfils these functions, but they must always be regarded either as subsidiary objectives or as means to an end. Within the hospital framework, the purpose of nursing training is to increase effectiveness in curing and caring for the sick. Moreover, if a conflict of interest develops between caring for the patient and training the nurse, caring for the patient must always have priority. Under the Belfast system this is taken for granted and few conflicts of interest arise.

In Boston and Toronto the issues are not so clear-cut. Some of the people with whom discussions were held undoubtedly saw nursing education as an end in itself, and there is little doubt that training claims do make life more difficult for those responsible for nursing service and their work more complicated. There is also a tendency to confuse education and training. Training is a process that is primarily directed towards equipping a person to do a job or carry out a profession effectively. Education is a process primarily directed towards enriching the personality and giving the individual a greater chance of a full and satisfying life. This does not mean of course that training cannot be educative, but the hospital is not an educational institution. If the preparation of the nurse is considered to be primarily an educational rather than a training process the best place for it is an educational institution; the role of the hospital being limited to the provisions of practical training facilities as it is in the case of medical students.

Here again the confusion is a reflection of the broader culture pattern. The great enthusiasm for education in the North American countries has led to an identification of training with education in a number of fields. Education has become a status symbol—the word status being used here in its general rather than its anthropological sense. There seems no doubt that one reason for the expansion of university connected Schools of Nursing and the multiplication of graduate courses has been the desire to raise the status of nurses, to bring them more on a level with doctors, and to create a nursing profession in the fullest sense of the word. These objectives may be admirable in themselves providing that in their pursuit the needs of the sick person are not overlooked. It must also be recognised that the bringing of the hospital School of Nursing into comparison and competition with educational institutions generally creates a number of problems for those responsible for their direction.

The Belfast School is fortunate in that it is not involved in this comparison and competition. It was felt, however, that even within the framework of training in Belfast there was considerable room for improvement. Reference has already been made to the fact that no medical nursing theory is taught until the third year. Moreover from what the student nurses said, it seems that although they get instruction from Senior Staff on more complicated procedures, they rely to a considerable extent on student nurses only three months their senior for their teaching in basic nursing routines on the wards. This leaves far too much to chance and malpractices are likely to become established. In a sense Belfast has more to gain from the Exchange Scheme than the North American hospitals in that such techniques of training as ward instruction and integrated theoretical and

practical teaching programmes could be applied with benefit in the School. The problems of the North American Schools are much more ideological in character and in the area of ideologies it is almost impossible to learn from other people's experience.

Perhaps the greatest weakness of the apprenticeship system is that the perpetuation of attitudes and behaviour intrinsic to it makes change and progress particularly difficult, and the image of nursing it sustains tends to be unrealistic and out of line with modern developments in technique and administration. Thus, whereas the more intellectual and student centred approach results in a failure to produce an adequate supply of bedside nurses, the apprenticeship system because of its emphasis on the importance of bedside nursing fails to interest enough people in administration and teaching. To the student nurses in Belfast the people employed in these fields were not considered to be doing "real" nursing.

As far as the difference in the demands made upon the nurse in training are concerned and the protection she is given, it was particularly difficult to see where the balance of advantage lies. The demands made in Belfast appear to be unreasonable in that they deprive her of adequate opportunities to participate in social and domestic life outside the hospital. On the other hand, the pattern of life established in the North American hospitals during the first two years of training may make it more difficult for the nurse to adjust later to the rather special demands of the hospital situation. Several of the girls interviewed in Boston and Toronto said that their choice of work after graduation would be influenced by their desire for day work and for free weekends.

The impression was that the Belfast student also had to accept too much responsibility in the early stages of training while the North American student was probably under-exposed. In Boston the lack of responsibility on the job was compensated for, to a considerable extent, by student government activities. These were most impressive in that real responsibility was taken by the students for the organisation and regulation of their own affairs. Probably the situation of the Toronto students was the least satisfactory in this respect. They had less responsibility in the work situation than their counterparts in Belfast and less responsibility for ordering their own affairs than the students in Boston. It had appeared from the Exchange reports that the Toronto students were the most mature of the three groups; on closer examination, however, this did not seem to be the case. The Toronto students seem to accept and adopt adult patterns of behaviour earlier; this gives an impression of maturity which could be misleading.

It will be remembered that the impression was given in the reports of the Exchange Teachers and confirmed by this follow-up study that the Toronto Western Hospital was in a number of respects in a half way position between the Massachusetts General Hospital and the Royal Victoria Hospital. In particular, it seemed to have obtained a satisfactory balance between the needs of nursing service and the needs of nursing education. It was found, however, that this was not the result of any rational thinking through the problems. It depended on the ambiguity referred to already and on the fact that the exceptionally good inter-personal relations in the hospital had resulted in a willingness to compromise. As a result few people really felt satisfied with the position that had been reached. Paradoxically enough the conflict of views on what should be the framework of nursing education was obvious here more than in the other two hospitals. It was felt that the greatest weakness of the Toronto system was that its strength was not recognised. People were conscious of the fact that the situation was a compromise, and therefore tended to feel uneasy about it, not recognising that in this half-way position they probably had the best of both worlds.

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CORRECTIONAL BRIEFINGS

This is one of a series of reports summarizing information gathered by the Joint Commission through original research, consultants' papers and seminar discussions. The Joint Commission is studying problems affecting recruitment, training and education of personnel in the field of correctional rehabilitation.

Number Eight

Research in Correctional Rehabilitation

If corrections is to become more effective, most practitioners in the field agree, it must know more about the offenders it has under supervision, what it wants to do with them, and how the desired results can be obtained. General objectives must be based on policies which reflect the will of the society, as expressed by the legislative and executive decision-makers. But informed decisions as to what should be programmed for specific offenders in order to reach these objectives must be based on information which is now available in bits and pieces, if at all. To collect such information and find out what has happened to similar offenders in the past are functions of correctional research.

Corrections' needs and its leaders' desire for research prompted the Joint Commission on Correctional Manpower and Training to co-sponsor a seminar to investigate the nature and methods of the research required. The other sponsor was the Rehabilitation Services Administration in the U.S. Department of Health, Education, and Welfare, which has funded projects for research in vocational rehabilitation of offenders. Several such projects were described at the seminar by their heads. Other participants were correctional administrators and researchers in the correctional field.

Basic to effective research in corrections is the development of information systems which adequately describe the characteristics of the offender population, such as age; education; ethnic or racial background; health; economic status; work skills and history. Many correctional systems have some or all of this information, but it is apt to be filed away in case records. A few systems have brought together information on some needs—psychological needs, for example—of a group of offenders. But an information system must be devised to bring together accurate data on the mass of adults and youth who come under supervision each year.

Basic Data On Offenders Is Lacking

"If we are going to increase effectiveness, we must . . . recognize all the needs of the offender instead of just some of them," said John P. Conrad, research chief of the U.S. Bureau of Prisons. An adequate information system will tell us much about the range of needs.

Classification methods are badly needed to provide a logical basis for differential programming of offenders, said Rudy Sanfilippo and Jo Wallach, Joint Commission staff members. "For example, screening mechanisms must be developed to identify those offenders who could benefit from special medical-surgical, work training, or remedial education programs."

Once classification is achieved and a program is developed to meet an identified need, or group of needs, the question then becomes: Does this program work? What criteria should be used to evaluate it? Recidivism, or lack of it, on the part of the program "graduates" is not enough.

Procedures For Screening Needed

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Some of the steps in evaluating success or failure include: detailed analysis of kinds of behavioral change that are desired; development of procedure to measure such change; careful long-term follow-up of offenders who have gone through the program.

Exchange Of Research Results Is Important

To make the research results available to corrections as a whole, "clearing house mechanisms should be provided through public and private sources," suggested Mr. Sanfilippo and Mrs. Wallach. Don M. Gottfredson, who directs the research center of the National Council on Crime and Delinquency at Davis, California, suggested that one solution to the problem might be the development of a model similar to the Uniform Parole Reporting System of the National Parole Institutes. Through this system parole boards in about 30 states voluntarily report the number of violations of parole each year, length of time between parole and violation, some details about the institution, the parolee, the offense for which he was committed and the new offense.

"This is a very simple information system. It includes a definition of parole violation. It includes information on new offenses for which parolees have been convicted. A little information is included about the parolees involved, such as age, offense, prior record, and use of drugs or alcohol . . . This program demonstrated that parole administrators can work together, that they can collect uniform information on a regular schedule and send it to a central source."

Some additional information could be obtained about the institutional programs, he said, so that it would be possible to evaluate them and see what happened to the parolee while he was in prison. The system could also be expanded into youth institutions and probation.

There must also be more effective utilization of knowledge gathered through evaluative research. Mr. Gottfredson commented that, "We spend a lot of money and effort in collecting information, and certainly we spend a lot of money and effort making decisions. But we spend very little of either in studying any relationship between the information we have to work with and the goals we would like to attain."

In many cases, of course, necessary evaluative research has not been attempted at all. This is especially true of some of the newer rehabilitative programs, including those correctional programs that stress making the most of community resources. While it seems such programs are the latest trend, and while the Joint Commission survey of attitudes of correctional personnel indicated that this trend is most favorably viewed by those working in corrections, only evaluative research can show which programs are most effective, why they are effective, how they can be improved, and if they are warranted in the first place. The consequences of the continued overuse of trial and error are a matter of deep concern. Overuse is likely to persist if trial is not evaluated and if error is not challenged.

Better Communication Between Campus And Corrections Urged

One of the basic reasons for the lack of research in correctional rehabilitation is the lack of manpower and funds. As a result, the university is frequently asked to perform the research with varying results. The problems may stem from differences between academic researchers and correctional administrators, resulting in: disagreement as to the goals of a program; confusion regarding the program's basic hypothesis; sudden changes in program entrance requirements, without notification of the researchers; and distorted observation of the program due to lack of communication between researchers and the program staff who must make many of the observations. On the other hand, "when research is an in-house operation, it can suffer from 'program mystique' . . . the belief that their program had a positive effect despite existence of overwhelmingly negative data," said

Kenneth Polk, associate professor of sociology at the University of Oregon.

The answer to better collaborative ventures between universities and correctional agencies lies in better communication.

"The correctional administrator and the academic researcher will have to become more attuned to each other's values, needs, language, and political and organizational imperatives. This means that correctional administrators should be more informed about research design, research tools, and ways to interpret and utilize research findings. Conversely, academic researchers need to become more informed about and sensitive to the practical realities of the correctional scene," said Mr. Sanfilippo and Mrs. Wallach. They also predicted that, "agency-staffed research departments will probably prove to be feasible only for the larger and better-financed correctional systems."

E. Preston Sharp, general secretary of the American Correctional Association, noted that: "involvement in research should start with the top administrative level and should carry down through all staff. Unless you involve staff, they scuttle or skew the results, so that the validity of your findings is zero. On the other hand, the administrator should be wise enough to make it clear that he doesn't want staff to turn out merely what they think he wants . . . If corrections is to get more research done, we are going to have to rely heavily on our own personnel."

Traditionally, Ph.D.'s are hired to perform research. As there is a serious lack of research personnel trained at the Ph.D. level, it might be wise to consider hiring them as research trainers and consultants who could train many staff members to carry on adequate research. The enormous amount of research that must be done demands that corrections break with traditional hiring patterns.

Seek Help From Industry And Other Sources

To facilitate such training and research, as much as possible, it would be desirable to create research models, which could be "plugged into" by less than highly trained researchers. Corrections could turn to industry and non-profit organizations for aid, as well as to universities. The needs are such that many people are willing to help, but it is still up to the agency to seek the help.

In the rush to act, however, corrections must exercise caution, especially in regard to the ethical problems implicit in human research. In fact, the ethics dispute among those who work in correctional research often poses operational obstacles that must be overcome. Gilbert Geis, professor of sociology at California State College at Los Angeles, explained:

"Adherents who press for experimentation in the face of hesitation by others are apt to proclaim proudly that they are 'scientists' and that their antagonists are 'anti-intellectual' and 'fuzzy intuitionists.' Their opponents often find the experimenters lacking in compassion and human feeling, without sound comprehension of the legal elements basic to a democratic society . . . The difficulty involved in attempts to gain consensus on working principles for correctional experimentation with offender populations stems in part from the fact that both major competing values have almost total support. Few persons are opposed to verified, accurate information; and few persons are opposed to the idea of human decency and justice."

Naturally, one of the solutions to experimentation is to obtain the consent of the affected offender. This, however, can inject bias into the research design and thus negate the value of the research.

New York Experience Is Cited

It would appear, however, that as methods of detecting the needs of the volunteer and the goals of a specific program improve, all those who could be included in a program would be included, simply because groups could be made small, yet inclusive. A somewhat similar situation actually did occur during a New York City experiment in rehabilitation through plastic

surgery to remove disfigurements, a project funded by the Rehabilitation Services Administration. The one element that hurt the research was volunteering, in this instance a necessity. Inmates of New York City's jails were asked to indicate willingness to have surgery. Of those who did volunteer, 65 percent were screened out for medical or psychological reasons. Unfortunately, 25 percent of those who did volunteer later refused to go to the hospital for surgery. Yet, with "monumental effort," surgery was performed for those who cooperated and the social services they needed were obtained for them. At the end of a year, 49 percent of the surgery group has recidivated, as compared with 66 percent of the control group.

In summary, there are many questions yet to be answered, and still more yet to be asked. But organized, carefully directed research work must be started and the means of information exchange and research evaluation must be created if correctional rehabilitation is to improve its effectiveness.

Mr. Gottfredson looked into the effects of adequate research on effectiveness in corrections.

"It must be said [about our correctional agencies] that at best we have been inefficient, at worst we have been inhumane, and at all times we have been confused. We need to lessen the confusion by being more specific about our objectives and agreeing upon them. If we then can build some information bases that will provide a start toward evaluation of programs in terms of these objectives, we can only become more efficient. If we then can identify specific kinds of treatment which are helpful to certain kinds of offenders, with respect to specified outcomes, our programs can be made more effective, more helpful to offenders and to the general public, and hence more humane."

The full text of the seminar report on which this "Briefing" is based is available from the Joint Commission at a cost of $1.00 per copy.

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CORRECTIONAL BRIEFINGS

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Number One

Differences That Make the Difference

Cultural Factors Affect Rehabilitation Efforts

Correctional rehabilitation programs that ignore cultural and environmental differences among minority group offenders are doomed to fail, a panel of experts has warned.

The rising number of criminal offenders from minority groups in the population stems largely from the fact that offenders have not adopted the standards and values of the dominant white middle-class society, the panel agreed.

Studies of criminal offenders from the predominant minority groups in this country reveal striking similarities of experience in the formative years. Because public education is geared to the values and attitudes of the white middle-class, many of the standards and values of minority groups are challenged or ignored in the schoolroom.

Many minority group members survive this "clash of cultures" and become productive members of society.

Those who fail to do so become dropouts from both school and society, embittered, hostile and semi-literate. Criminal offenders from this group seldom respond to correctional rehabilitation programs for the same reasons that brought about the original conflict: such programs are geared to the white middle-class culture and its values.

Basic Reforms Needed In Correctional System

Correctional rehabilitation programs for minority group offenders will continue to fail unless dramatic changes are initiated, the panel of experts agreed. The kinds of change they say are needed include:

* Greater use of minority group members at professional and sub-professional levels in corrections programs.

* Re-training of existing personnel to create understanding on their part of the unique problems that minority group offenders must overcome in order to succeed. Where possible this re-training should be conducted in areas where ethnic and racial minorities actually live, in order to dramatize the environmental and cultural factors at work.

* Use of minority group representatives to assist in formal academic programs for those preparing to enter the corrections field. This "cultural shock" method is seen as a means of bridging the gap between traditional academic training and the real world of minorities.

* Use of minority group ex-offenders who have been successfully rehabilitated to serve as "indigenous workers" in correctional rehabilitation programs. This will open employment opportunities for ex-

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offenders and will provide a new "linking mechanism" between those currently in the rehabilitation program and professional staff.

* Decentralizing of correctional agency offices and personnel to place the correctional program in the neighborhoods and communities where large numbers of public offenders come from and are returned under parole or probation status.

* Universities and colleges preparing students for careers in the corrections field should provide courses dealing with differences in attitudes and values of ethnic and racial minorities.

These and other recommended changes in correctional programs are being reviewed by the Joint Commission on Correctional Manpower and Training, Inc. The Joint Commission, composed of 96 private organizations and public agencies, is in the final year of a 3-year study. Its work is funded under the 1965 Correctional Rehabilitation Study Act and through grants from private foundations, organizations and individuals. A report to the Congress, with recommendations for action, is to be completed early next year.

Minority groups and their cultural differences are of special interest to the Joint Commission because they are over-represented in the offender population.

Panelists Were Drawn From Minority Groups

The knowledge and experience of experts long engaged in correctional and allied fields among minority groups were brought to bear on the problem in a two day conference held in Washington, D. C., last year by the Joint Commission. Panelists included Philip Montez, Executive Director of the Foundation for Mexican-American studies; Clark S. Knowlton, Sociology Professor at the University of Texas at El Paso; Robert L. Bennett, Commissioner of Indian Affairs, U. S. Department of Interior; Harry L. Kitano, Associate Professor in the School of Social Welfare, University of California at Los Angeles; Wesley Ted Cobb, Associate Director for Community Resources, National Urban League and Joseph Monserrat, Director of the Migration Division, Puerto Rico Labor Department.

Mexican-Americans, Mr. Montez said, are subjected to a form of cultural schizophrenia because of having to live in a world with opposing cultural values. An example of this, he added, is the concept of time.

"The Mexican-American feels that time is something to be enjoyed, and consequently he has little or no guilt about wasting it. But time is vital in the highly industrialized Anglo-urban society . . . Time is money, and we can't afford to waste it. In this kind of system there is a built-in penalty for people who waste," Mr. Montez explained.

"My own experience," he added, "was one of having to become Anglo-urban in order to succeed in the system. Obviously there was a price to be paid, and I'm sure a lot of people refuse to pay that price because it can have its psychological shock."

Professor Knowlton, long a student of the Spanish speaking cultures of the American Southwest, also cited this factor as a major problem for Mexican-Americans in the acculturation process.

"Because of the different attitudes towards time," he said, "Mexican-Americans are believed by Anglos to be lazy, indifferent, and undependable. In turn, Mexican-Americans characterize Anglos as being chained to a time machine, unable to relax or to enjoy life."

The two cultures also clash on their views of work, Professor Knowlton said.

"A man's job is his most important function among Anglo-Americans. His

social status, his standard of living and his prestige all depend on his job," he explained.

While few people work as hard as Mexican-Americans, "it is only one among other equally important values, such as family, friends, enjoyment of life and cultivation of personal interests. All of these confer social status in the Mexican-American culture." But these characteristics have no value in the Anglo-American culture where the Mexican-American must spend a great deal of his time and energy.

Dominant Society Seen As Cold Materialistic

Competitiveness and individualism are other factors which distinguish the attitudes of the opposing cultures, Professor Knowlton added. While competitiveness and individuality are cherished values of the white-Anglo culture, instilled during the formative years and constantly reinforced through life, the Mexican-Americans view these as cold and materialistic values. They cherish intimate friendships, family relationships, responsibilities to dependents and cultivation of an enjoyable life more than a successful career.

Frequently, he added, Mexican-Americans who gain higher social, educational or economic status than their neighbors, friends or families will incur hostility rather than admiration.

American Indians experience many of the same culture-clash problems as Mexican-Americans, Mr. Bennett reported to the panel.

"In most Indian languages there is no word for time," he explained. "Time, of course, is all-important to our system, and it's very difficult to explain to Indian people about getting to work on time and coming in every day at the same hour," things that are basic to the functioning of the dominant society.

He pointed out that Indian societies are "consumer-oriented" rather than "production-oriented" with no profit-motivating factor among the tribal members. This makes it difficult to acquaint Indians with industries and what can be accomplished by development of the reservation lands.

"Indians work," he explained, "when there is work to be done, either to protect or provide for their society. When there is no work to be done for those reasons, or no necessity for it, they don't work."

Correctional workers who do not have an understanding of these other cultural values of the Indian will fail in their efforts to motivate and rehabilitate offenders from this minority group, Bennett warned.

Environmental Factors Affect Negro Attitudes

Criminal offenders from the American Negro minority group are less the products of cultural differences than of environmental influences, Mr. Cobb believes. Values and attitudes of Negroes as a group have been shaped primarily by the white society through the institutions of slavery and segregation, systems designed to "fix a generally subordinate socio-economic position for the Negro," he pointed out.

"Social relationships were segregated by widespread and fairly uniform policies and practices which covered everything from country clubs to churches," he said. The consequences have been documented in terms of unemployment, bad housing, high mortality rates, high delinquency and school drop out rates, and higher rates of family disorganization and dependency than for the white society, Mr. Cobb added.

For correctional workers to succeed in working with Negro offenders, he said, they must bring a sympathetic understanding of the important part that environmental factors have played in shaping the offenders' views and attitudes. The rehabilitation effort fails, he said, when the correctional officer views his task as "that of custodian and guardian of white supremacy, appointed to hold and punish the Negro for his offense against society."

The impact of environmental factors in shaping Negro attitudes toward the dominant society was forcefully demonstrated by Mr. Cobb by paraphrasing a candid statement made to him by the late Malcolm X. The former leader of the "Black Muslim" group told Mr. Cobb that:

> *"When you meet and talk with these good people, black or white, say to them that I am a Negro who signifies a new breed. I am a black man not born in the South. Although I am a product of the South's history, I did not come out of Mississippi or Alabama or Georgia. I came out of Michigan and Illinois. Say to these people—these good people—that I was one of those kids that nobody wanted to bother with. I was a nappy-headed nigger who smelled bad, who talked bad, and acted bad, who had bad grades in school. But despite all of this badness I knew that I had some ability. I told myself that, and because I could tell myself that, I reached out for some help.*
>
> *I reached out to the good people in every town I lived in for some help. They said no. They couldn't see past my smell. They couldn't see past my language. They couldn't see past my raggedy clothes. They couldn't see me for looking and smelling and running.*
>
> *The people who helped me were the wrong people, from the point of view of the moral society, from the point of view of the democratic society. The people who helped me, whose hands reached out to mine, whose hearts and heads touched mine, were the pimps, the prostitutes and hustlers, the thieves, and the murderers. The people who helped me through the high school of adolescence were the kids up in the reformatory. The people who helped me through the college of life were the people up in the prisons. And the people who helped me to get graduate training in the university of common sense were the people out on the streets, in the ghettos that were infested with crime and delinquency.*
>
> *Say this to them, because man there are a whole lot of kids on this street just like me. They smell bad, they act bad, they talk bad, and their report card says they're dumb. But you know something? These kids are smart. These kids are beautiful. These kids are great. They need to be seen and helped."*

"Malcolm X is dead, but the conditions under which he developed are still here," Mr. Cobb said. "The correctional systems of our society have perhaps one of the most strategic opportunities to insure that the Negro offender is not only seen and understood but helped."

Puerto Ricans' Bi-Racialism Poses Unique Problem

Puerto Ricans migrating to the mainland face a unique problem not experienced by other minority groups, Mr. Monserrat reported, because as an ethnic group they are racially mixed yet are not understood by either the American Negro group or the white group.

"They're in a position in which they cannot accept the value systems around color of either group, because to do so would bring racism into their own family in a way in which it has never existed," he explained. The reaction of Puerto Ricans "is not against being considered a color but being considered a Negro, non-white in the sense in which that reflects negative status in the United States," he added.

Aside from the question of color classification, Puerto Ricans face the same hurdles that other minority groups have faced when coming to this country in large numbers.

"America has never resolved the problems of the first-generation newcomer," he declared. "The problems that Puerto Ricans are facing today are the same basic problems that every other new generation or group has faced throughout the history of the United States."

Such newcomers usually begin "at the bottom of the economic totem pole . . . working for the lowest wages (and) wind up in the poorer areas of

cities, in the older areas, the slums," Mr. Monserrat explained. These are areas which have the older and poorer schools and have had "the highest criminal rates and highest juvenile delinquency rates, regardless of the group populating them."

The environmental factors of inferior education, housing, health standards and job prospects were viewed by Mr. Monserrat as far more important than cultural differences (with the exception of language) in creating conditions that breed anti-social and criminal behavior.

Rehabilitating such offenders cannot be achieved under the present philosophy of "quarantine" and "punishment" which typifies the American correctional system, Mr. Monserrat argued.

"I have hopes that Puerto Ricans will fight not primarily for a recognition by correctional institutions of their cultural differences, but for a system which emphasizes successful re-entry into a productive society," he declared.

"I think that the correctional system in this country is going to be under close scrutiny by community groups. These groups will want to know what constructive use the inmates have made of their time. They will want to know about job training, about development of skills . . . how prisoners are prepared for re-entry into society," he said.

Japanese Excel In Americanization Process

Japanese-Americans were seen as the most successful of the minority groups studied in achieving the goal of Americanization. Paradoxically, the rise in crime and delinquency among this minority group has come as a result of its success in bridging the culture gap, Professor Kitano said.

"What's happening," he explained, "is that as the Japanese acculturate they take on both the positives and negatives of the American culture."

"Marginality," a sort of limbo between the two cultures, may be the reason for the higher incidence of crime he said.

"Our delinquent samples indicate that many individuals appear neither Japanese, nor American. They don't belong to either of the communities; their values do not fit; their families do not fit; even their personalities reflect the marginal position," Professor Kitano explained.

Early Japanese immigrants to this country set the pattern for success by developing a parallel culture structure alongside the dominant white-Anglo structure, he said. This enabled successive generations to "validate the values" of their own culture within their ethnic group while gradually making the transition to more Americanized behavior and attitudes.

Figures compiled in the 1960 census indicate the success of the Japanese-Americans as a group in achieving status, he said. The figures placed this group ahead of all others in income per wage-earner at $3,200 per year, as compared to $3,000 for whites, $2,500 for Puerto Ricans, $2,400 for Mexican-Americans, $1,500 for Negroes and $1,300 for Indians. Educational achievement for 20-to-24-year-olds showed similar success with Japanese-Americans recording an average of 12.8 years of schooling, as compared to 12.3 for whites, 11.1 for Negroes, 10.0 for Indians, 9.5 for Puerto Ricans, and 9.4 for Mexican-Americans.

The relative affluence and educational success demonstrated by these statistics are reflected in substantially lower arrest rates for Japanese-Americans as compared to all other ethnic groups. In 1960, Professor Kitano said, the arrest rate for Japanese-American Juveniles was 450 per 100,000 of population, as compared to 1,491 per 100,000 for non-Japanese groups.

Professor Kitano predicted that the newer, younger group of Japanese immigrants to this country will present bigger problems for law enforcement and correctional workers than earlier groups.

". . . one can readily spot the new Japanese," he explained. "He is dressed

more in 'mod' fashion than the Japanese who were born here. He has come to the United States with a distorted exposure to American values. He does not fit into the local ethnic system, nor does he belong to the larger American system.

"The Japanese community has reacted either with neutrality or with hostility towards these newcomers . . . I predict a rise of crime and delinquency in this group," he said.

Staff Summary Brings Views Into Focus

The views of the panelists and other participants in the two-day seminar were summarized by Rudy Sanfilippo, Director and Mrs. Jo Wallach, Assistant Director, of the Joint Commission's Task Force on Prospects and Perspectives for Corrections. The following excerpts from their summary, which led up to the concrete suggestions for changes which were stated earlier, help to put the entire discussion in focus.

"While it is true that every minority group in America today encounters the same dominant society and must make certain adjustments to that society's standards and expectations, the unique character of each group dictates how it will adjust, and perhaps how successfully. Furthermore, the very fact that such differences exist requires the dominant society to make different responses, each geared to the group concerned.

"A simple and obvious example of the necessity for individualized attention is the fact that minorities often use language systems which are different from English . . . While many individuals within these groups speak or at least understand English, many do so imperfectly or not at all . . .

"Most, if not all, of our institutions—schools, welfare, employment, law enforcement, corrections—are predominantly middle-class in orientation. Most of the staff have backgrounds and educational experiences which reflect the dominant American society. That society, is essentially white, Anglo-Saxon, and based upon the Protestant ethic, with its emphasis on work for work's sake, thrift, education, and competition in almost every phase of life.

"Conversely, many public offenders are oriented to lower-class values and oftentimes have habits which may appear 'peculiar' to the middle-class person . . .

"Historically, American society has sought to absorb minority groups and to shape them as rapidly as possible into the American mold. The 'melting pot' is thus not a mere figure of speech. Differences have seldom been tolerated for long. Rather than building upon the strengths of different cultures, the American way has led to culture conflicts before assimilation."

The full text of the seminar report on which this "Briefing" is based is available from the Joint Commission at a cost of $1.00 per copy.

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JOINT COMMISSION ON CORRECTIONAL MANPOWER AND TRAINING

This paper is presented in three major parts. "Some General Considerations" explores problems in collaboration from the standpoint of the university and the agency, reviews the pressures for relevancy of the university, and describes the present educational structure of the university. "Some Models for Collaborative Education and Training" describes undergraduate and specialty training programs with significance for the corrections field such as: (1) the Antioch College cooperative program, (2) the San Diego State College undergraduate social welfare program, (3) the University of Oregon School for Community Service and Public Affairs, (4) the University of Southern California Delinquency Control Institute, and (5) the Office of Juvenile Delinquency and Youth Development training centers. "Directions for Cooperative Development of Corrections and Education" presents a wide range of feasible model programs. A comprehensive model would be a public university school of human service including: graduate and undergraduate programs, an external unit for programs of inservice and preservice training and community education, a New Careers program, and a research unit. A summary of this report is available as VT 008 853 (also in this issue). (JK)

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THE UNIVERSITY AND CORRECTIONS

POTENTIAL FOR COLLABORATIVE RELATIONSHIPS

Kenneth Polk,
Associate Professor of Sociology
University of Oregon

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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A consultant's paper prepared for the

Joint Commission on Correctional Manpower and Training

1522 K Street N.W. Washington, D. C. 20005

January 1969

The Joint Commission on Correctional Manpower and Training, incorporated in the District of Columbia, consists of nearly a hundred national, international, and regional organizations and public agencies which have joined together to attack one of the serious social problems of our day: How to secure enough trained men and women to bring about the rehabilitation of offenders through our correctional systems and thus prevent further delinquency and crime.

Recognizing the importance of this problem, the Congress in 1965 passed the Correctional Rehabilitation Study Act, which authorized grants through the Social and Rehabilitation Service for a broad study of correctional manpower and training. The Joint Commission is funded under this Act and through grants from private foundations, organizations, and individuals.

Commission publications available:

Differences That Make the Difference, papers of a seminar on implications of cultural differences for corrections. August 1967. 64 pp.

Targets for In-Service Training, papers of a seminar on in-service training. October 1967. 68 pp.

Research in Correctional Rehabilitation, report of a seminar on research in correctional rehabilitation. December 1967. 70 pp.

The Public Looks at Crime and Corrections, report of a public opinion survey. February 1968. 28 pp.

The Future of the Juvenile Court: Implications for Correctional Manpower and Training, consultants' paper. June 1968. 67 pp.

Offenders as a Correctional Manpower Resource, papers of a seminar on the use of offenders in corrections. July 1968. 103 pp.

Criminology and Corrections Programs: A Study of the Issues, report of a seminar. July 1968. 101 pp.

Corrections 1968: A Climate for Change, report of an attitude survey. August 1968. 45 pp.

The University and Corrections: Potential for Collaborative Relationships, consultant's paper. January 1969. 78 pp.

FOREWORD

This is the second of three consultant's papers prepared for the Joint Commission by experts outside its staff. The first in the series was written by Judge Ted Rubin and Referee Jack Smith of the Denver Juvenile Court and was entitled *The Future of the Juvenile Court: Implications for Correctional Manpower and Training.* The present paper will be followed by an analysis of legal changes and their implications for corrections, by Professor Fred Cohen of the University of Texas Law School.

All three of these papers have been commissioned for the purpose of exploring issues and trends in areas which are viewed by the Joint Commission as significant for those working in or with correctional agencies. All three represent the positions of the consultants and are not necessarily those of the Joint Commission. They are being distributed to share with interested persons the perceptions of experts in these areas and to elicit feedback which may be useful to the Joint Commission in the formulation of its final recommendations.

In the paper here presented, Kenneth Polk, associate professor of sociology at the University of Oregon, has prepared what we feel is a provocative exploration of the areas wherein collaborative relationships between higher education and corrections can be established and maintained. In this day of ever-increasing technology and the "knowledge explosion," it is essential that more satisfactory means of working together be developed.

The Joint Commission acknowledges with thanks permission granted by various publishers to quote at some length from the following books and journals: Doubleday and Company, *The Berkeley Student Revolt,* edited by Seymour Lipset and Sheldon S. Wolin; Grove Press, Inc., *Berkeley: The New Student Revolt,* by Hal Draper; Harper and Row, *The College and the Community,* by Baker Brownell; Harrison-Blaine of New Jersey, Inc., "A New Breed of B.A.'s," by Christopher Jencks, *The New Republic,* Oct. 23, 1965; Harvard University Press, *Higher Education in Twentieth-Century America,* by William Clyde DeVane, and *The Uses of the University,* by Clark Kerr; Mediaeval Academy of America, *Scholarly Privileges in the Middle Ages,* by Pearl Kibre.

The preface of this paper has been prepared by Dr. Delyte Morris, president of Southern Illinois University. Dr. Morris also represents the National Association of State Universities and Land-Grant Colleges in the membership of the Joint Commission. The manuscript was edited by Roma K. McNickle. Other staff members who worked with the author in the preparation of the paper were Rudy Sanfilippo and Jo Wallach.

GARRETT HEYNS
Executive Director
Joint Commission on Correctional Manpower
and Training

PREFACE

The Joint Commission on Correctional Manpower and Training has in the past two and a half years undertaken a very difficult task. Not only has it endeavored to stimulate personnel recruitment for a field in which professionalism only now is emerging, but it has sought public support to influence a field which is not readily apparent to public view.

The correctional field does not have the advocacy of clients' families in many walks of life as, for example, do campaigns for mental health. The Joint Commission is positively seeking to suggest better ways to recruit, educate, and professionalize a field of work which handles "enemies of society" and has been historically concealed from the public.

But times and attitudes change. A more enlightened public now seeks reintegration of offenders into society and seems willing to pay properly for qualified professionals to guide its correctional programs. The new climate makes possible the consideration of the role of universities in such an effort.

Dr. Kenneth Polk sets forth here the salient issues that the university and the field of corrections face in developing curricular paths for an emerging profession. The involvement of the university in training, research, and innovative demonstration on behalf of the needs of the correctional system appears to be crucial. Equally important is the university's task of reshaping curriculum to meet the needs. The tradition of service and public responsibility of state-supported universities sets the stage for ready acceptance of this responsibility.

Curricular models are reviewed and recapitulated in the following paper. A final preference is not made and does not seem possible at this time. Indeed, a general model for university training at any level may not be desirable. However, the need of an emerging profession for a multi-disciplinary curriculum generic to the criminal justice function is well documented by the author.

The problems analyzed in this paper must also be viewed against the backdrop of the total demand for large numbers of professionally trained workers to provide a vast array of human services. While the universities must consider their roles in the larger perspective of present and future public needs, it appears to be certain that the involvement of the university for an education adequate to the task of corrections is vital to success.

DELYTE W. MORRIS

Carbondale, Illinois
January 14, 1969

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Part I: Some General Considerations

Chapter 1. INTRODUCTION

Controversy is part of the tradition of higher education in the United States. Angry comment on the shortcomings of the university is hardly new. In fact, some observations many decades old have a surprisingly contemporary ring.

As long ago as 1923, Flexner was saying:

> The problem of obtaining quality in a larger portion of our collegiate output has been rendered the more urgent by the unprecedented quantitative expansion in the field of secondary and collegiate education during the last twenty years. Students have multiplied enormously in numbers. Buildings have increased in size and elaborateness, and funds previously undreamed of have been procured for endowment and upkeep. By no human possibility could there have been a simultaneous and equal development on the qualitative side, for teachers could not have been trained in advance, and aims and ideals have to be worked out of the existing social situation. The mere fact that college education is, therefore, except for earnest and industrious students who shift for themselves, so often superficial and aimless, leaving huge numbers of college graduates untrained, immature, and — in a serious sense — uneducated, is not under the circumstances itself so disquieting. Disquiet arises rather from disinclination to face, avow, and experiment with the facts.[1]

In the same year, Upton Sinclair was asking the American people:

> What is the so-called "higher education" of these United States? You have taken it, for the most part, on faith. It is something which has come to be; it is big and impressive, and you are impressed. Every year you pay a hundred million dollars of public funds to help maintain it, and half that amount in tuition fees for your sons and daughters. You take it for granted that this money is honestly and wisely used; that the students are getting the best, the "highest" education the money can buy.
>
> Suppose I were to tell you that this education machine has been stolen? That a bandit crew have got hold of it and have set it to work, not for your benefit, nor the benefit of your sons and daughters, but for ends very far from these? That our six hundred thousand young people are being taught, deliberately and of set purpose, not wisdom but folly, not justice but greed, not freedom but slavery, not love but hate?[2]

Today, these words of Sinclair and of Flexner carry a new sense of urgency. Folly, greed, and hate are tearing universities apart. In 1968, even more than in 1923, it is imperative that our universities become more willing to "face, avow, and experiment with the facts."

---

[1] Abraham Flexner, *A Modern College and a Modern School* (Garden City, N. Y.: Doubleday Page, 1923), pp. 52-53.

[2] Upton Sinclair, *The Goose-Step: A Study of American Education* (Pasadena, Calif.: The Author, 1923), p. ix.

The field of corrections faces a different, but equally fundamental, challenge. In part, the challenge comes from some well-documented gaps. Given accepted standards of service, for example, it has been established that at the present time there is a great shortage of professionally trained personnel.[3] It is expected that this shortage will become increasingly critical over the next few years. Furthermore, the methods of corrections are under attack. The most recent Uniform Crime Reports contains a detailed investigation of criminal careers, in which the high level of recidivism has given the Federal Bureau of Investigation powerful evidence which can be used to raise serious questions about the effectiveness of rehabilitation.[4]

The university must loom large in any scheme to deal with these challenges to corrections. Shortages of personnel raise obvious questions about the past education and training efforts of higher education. The university will be a potential source of support and innovation as the cry for "law and order" places increased pressure on corrections. Both as a center for experimentation and as a source of manpower and ideas for service and experimentation, the university must play the role of ally as corrections comes to grips with these challenges.

From the university's point of view, these crises in corrections come at a time when higher education is seeking for definitions of new and better ways of serving its own functions. It must be recognized at the outset that to deal with the topic of higher education is to enter a well-patrolled logical thicket, one that has attracted some of the most vigorous and able minds of the nation. Furthermore, to call for more effective links between the correctional system and higher education is to argue for a brand of vocationalism that is at odds with many of the more outspoken critics of American higher education.

Granted that one must avoid the ever-present dangers of "overspecialization" and "vocationalism," it seems plausible that training programs which combine university and correctional experiences might add to the educational growth of students beyond what is available to them on the campus. Undergraduate students who have had experience with the clientele of correctional agencies are in an advantageous position when it comes to making sense out of their course work in criminology, delinquency, deviance, maladjustment, or psychopathology. Their experience within the organizational structure gives them a base of experience for courses dealing with organizational structure, the sociology of work, or industrial sociology.

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[3] President's Commission on Law Enforcement and Administration of Justice, *Task Force Report: Corrections* (Washington: U.S. Government Printing Office, 1967), pp. 95-99.

[4] Federal Bureau of Investigation, *Crime in the United States: Uniform Crime Reports — 1967* (Washington: U.S. Government Printing Office, 1968), pp. 34-44.

The principle of involvement in the outside world has been recognized for many years as a fundamental aspect of graduate professional training, as illustrated in the period of internship in education and medicine and the field work program in social work. The instances where such involvement is a basic part of undergraduate education, some of which are reviewed in later sections, suggest that much is to be gained by the student through this process.

A fundamental issue raised by procedures which push the university into the external world has to do with the definition of appropriate "teaching" and "learning" processes within the university. Generally, universities have adopted a conservative position as to what education is all about. The basic methods of university education, such as seminars and lectures, are adaptations of British and German university traditions. While the knowledge revolution has affected dramatically *what* is taught, it has had little impact on *how* things are taught in universities. Even when new technological features are brought into the teaching process, they are most often adapted to old teaching techniques. When closed-circuit television is employed, for example, it is apt to be most frequently used to disseminate lectures to a wider audience, although both in the agencies and on the peripheries of universities television is being used in more innovative ways such as monitoring the actual performance of individuals "on site."

The training units of social service agencies and private industry have developed elaborate and successful techniques, which range from dealing with the most concrete, perhaps even trivial, situations to the most abstract. This has developed to such an extent that it is fair to say that the university is very far from "cornering" the knowledge market. The universities, in other words, could profit by learning about learning if more effective collaborative ventures are developed.

The current separation of university and correctional agencies does have one casualty: knowledge. University scholars are often prone to complain that correctional institutions are indifferent, if not hostile, to their attempts to gain access for research purposes. Correctional administrators, just as frequently, are heard to complain of the difficulty in obtaining any useful collaboration or consultation from university personnel. While much of this problem certainly has its roots in different goals and intellectual orientations, some part of it might be alleviated by providing systematic contact between universities and agencies based on training programs. Thus knowledge about corrections might be increased by: (a) university people who are brought into the correctional environment, increasing, for example, the probability of both educational and research involvement; (b) students who add to the general knowledge their experiences in the correctional setting; and (c) involvement of correctional personnel in educational and research ventures which heretofore have been defined as outside their normal work roles.

Chapter 2. PROBLEMS IN COLLABORATION

However logical and sensible the joining of university and correctional resources might seem, several things make the task a difficult one. In the history of both universities and correctional agencies we find a set of factors at work which serve to create barriers to protect them from outside interference.

Resistance of the University

As a much older institution than corrections, the university has had a longer time in which to build resistance to collaborative efforts. Some elements in this resistance are noted below.

Traditional Insulation from the Outside World

The university and its surrounding world resemble a pair of constantly quarreling lovers who cannot live apart yet cannot live together in peace. The university receives from the world the financial and manpower resources needed to perform its tasks and yields up in return an educated elite to govern and direct society, as well as much of the knowledge needed to accomplish such diverse tasks as planting grapes, fishing the seas, and sending rockets to the moon.

Despite this intense state of interdependence, perhaps even because of it, there has been a long history of conflict between the university and its surrounding world. The trauma that occurs when "outside" pressures mount, as in the McCarthy era in the United States in the early 1950's, has resulted both in a mistrust of "outside" influences and in the creation of a number of bureaucratic devices which make it most difficult for "outsiders" to have an impact on the internal affairs of the university. Any attempt to bring about collaboration between correctional institutions and universities is bound to encounter: (1) generalized intellectual mistrust directed at outside influences, and (2) a specific set of organizational mechanisms (such as curriculum committees which take years to make any decision, let alone a favorable one) which make change difficult. Indeed, the meetings of such bodies as university faculties or academic senates make it seem that they are created in such a way so as to assure that no concrete decision will ever be reached.

The Strangling Curriculum

The contemporary university curriculum has undergone many basic changes in its evolution. A cynic might feel, with some justification, that the evolutionary process has produced mostly vestige. Yet there has definitely been some modification of the medieval *septivium* or seven liberal arts. Over time, the initial vocationalism of the university (training in law, medicine, theology) gave way to the rise of the "liberal arts" tradition. In turn, the liberal arts tradition was challenged in the latter part of the nineteenth century in the United States with the importation of the ideas and methods of German universities which merged with the emphasis on the practical orientation that produced the Land Grant College Act of 1862.

Despite all the changes, it is still questionable whether the present curriculum meshes with the needs of the contemporary society. As a student noted once in a meeting in the West:

> Well, you must remember that I was taught in a liberal arts college under religious sponsorship. I studied epistemology, the medieval church, ethics, the teaching of St. Thomas Aquinas, to name a few. I can only say that my education prepared me well for any problem I might have encountered in the thirteenth century.

What has been carried into the present time is a rather medieval concept of the Educated Man and, at best, a nineteenth century definition of the process appropriate to producing such a man. We have maintained in our universities the bachelor's, master's, and doctor's degrees and certainly can observe the clear remnants of the *septivium* in the present curriculum.

The process of education at the university level does not start with an explicit conception of the educational and training requirements of the outside world, then work its way backward into the educational world, defining educational processes by virtue of their "fit" to such outside requirements. Instead, the educational institutions attempt to maintain a timeless concept of an Educated Man and specifically reject the notion that education – especially, but not only, university education – should fit, say, public service or occupational requirements of modern society. The curriculum of the universities reflects such views, and any attempt to alter the curriculum must contend with this process of defining what is "appropriate" university education.

Antivocationalism among Academics

A closely related resistance factor flows out of the antivocational tradition of university academics. Few have been as effective in criticizing vocationally relevant education as Robert M. Hutchins, who believes that vocationalism deprives the university of its only excuse for existence, which is "to provide a haven where search for truth may go on unhampered by utility or pressure for results." [1] He complains that:

> Our erroneous notion of progress has thrown the classics and the liberal arts out of the curriculum, overemphasized the empirical sciences, and made education the servant of any contemporary movements in society.[2]

In sum, Hutchins is convinced that a vocational orientation will destroy the university.

> If you set out to prepare a boy for a trade there are and can be no limits to the triviality to which you will descend except those imposed by the limitations on the time at your disposal. You can justify almost anything on the ground that it may be helpful to the young man in his profession. And if you take the view that

[1] Robert Maynard Hutchins, *The Higher Learning in America,* (rev. ed., New Haven: Yale University Press, 1952), p. 43.

[2] *Ibid.,* p. 65.

> a university may properly prepare boys for trades, there is no limit to the number of trades you can train them for except those imposed by the limitations on your resources. Since you can usually make a school pay if you make it vocational enough, there are really no limits at all. Any occupation that wishes to be dignified will say that it is a profession and suggest that the university cooperate by offering a curriculum preparing young people for it. This is a free country, which in my business means that anybody is free to make suggestions to a university and demand that they be carried out.[3]

The conflict on the issue of vocationalism runs deep in the history and traditions of American higher education. As long as fifty years ago Thorstein Veblen was complaining that:

> In this latter day academic enterprise, that looks so shrewdly to practical expediency, "vocational training" has, quite as a matter of course, become a conspicuous feature. "Vocational training" is training for proficiency in some gainful occupation, and it has no connection with the higher learning, beyond that juxtaposition given it by inclusion of vocational schools in the same corporation with the university.[4]

The intellectual vigor and skill of such thinkers is formidable. When one realizes that this kind of thought is most sympathetically received by those in bureaucratic control of the university, he begins to understand the slow progress made in bringing occupationally relevant innovations into the structure of the American universities.

Backward-Directed Innovation

Anyone who wishes to work with universities in developing educational programs must be on guard for one fundamental and virtually reflexive response by higher education. Ask university professors to develop an "innovative" model of education, and there is a fair probability they will build you an Oxford. To be precise, what many will do is to reach backward in time and attempt to resurrect the "true" principles of university education, including the emphasis on "general" education (rather than specialist training), perhaps building a curriculum around metaphysics or recreating the small college atmosphere.[5]

Academic Specialization and Departmental Structure

An additional problem to be faced in the development of correctional programs arises because of the poor "fit" of the field into the

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[3] *Ibid.*, pp. 39-40.

[4] Thorstein Veblen, *The Higher Learning in America, A Memorandum on the Conduct of Universities by Business Men* (rev. ed., New York: Augustus M. Kelley, 1965), p. 191.

[5] See the descriptions of such "new" college experiences as the University of South Florida, Monteith College of Wayne State University, or the new college of Hofstra in Lewis B. Mayhew, "The New Colleges" in Samuel Baskin, ed., *Higher Education: Some Newer Developments* (New York: McGraw-Hill, 1965), pp. 1-26. An additional factor often involved is the reduction of course offerings, consistent with the ideal of a liberal arts core; see Earl J. McGrath and L. Richard Meeth, "Organizing for Teaching and Learning" in the same volume.

departmental organization of the contemporary university. As a bureaucracy, the structure of the university is relatively frozen into an organization of semi-autonomous departments. As a consequence, budget decisions, personnel matters, and much of the routine administration take place within specialized departments. This kind of organization mitigates against collaborative training ventures involving corrections in a number of ways.

1. Since corrections is a generic area of interest, involving many disciplines, it becomes defined as outside the realm of any one department, so that individuals may find it difficult to involve either the department, or themselves, in the task of assuming responsibility for training programs.

2. Since corrections is, in addition to being multidisciplinary, an "outside" influence representing the "applied" or "practical" world, any one department may feel that its reputation will become tainted by too close an involvement with corrections.

3. Since educational resources are scarce, the departments will give priority to those activities closest to the specialty interests, excluding from priority such programs as training for the field of corrections.

Dedication of the Scholar to a Specialized Quest for Knowledge

A closely related impediment to collaborative training is that it demands a commitment to the very thing that few university scholars care much about, i.e., teaching. The scholar of today is likely to be heavily oriented to his discipline and to see his role as defined basically by how much he is able to contribute, through research and publication, to that discipline. This has enormous effects on the nature of the teaching role generally, as DeVane has observed.

> If the distinguished scientist or scholar can find time at all from his life of research to teach undergraduates he is likely to consider them as future scholars in his own field. If he is teaching freshmen, the course will probably be taught as if it were the first course on the long journey towards the doctor's degree in that discipline. The young teacher just out of graduate school, still hypnotized by the intense specialization demanded by that experience, is likely to be even narrower and more professional than his master. As Robert Hutchins wryly commented, "It is hardly an exaggeration to say that university departments exist to train people to teach in university departments."[6]

The problem posed by correctional programs is that they do not fit easily into the pattern of commitments of the scholar. He may not see correctional training as a fitting field for his talents as a researcher, and what little time he has for teaching will be given to graduate instruction. What is left over might be devoted to the teaching of undergraduates. Given the low priority of teaching generally, in other words, and given the priorities for investment of time utilized for teaching, correctional

[6] William Clyde DeVane, *Higher Education in Twentieth Century America* (Cambridge: Harvard University Press, 1965), pp. 148-149.

training programs will find it difficult to obtain commitments from the present-day university professor.

Academic Prestige and Reward Structure

It follows from the above points that a general problem in obtaining university cooperation in correctional training is that it deals with something relatively unimportant in academic reward structures: education. Academics like to talk about education, but their actual performance is another matter altogether. A low level of concern for teaching is in no small way affected by the fact that few rewards are given for teaching excellence. As one university administrator put the matter to the author, "Teaching is like breathing. You are not rewarded for breathing." Thus, academics today have come to look elsewhere – to research, to publication, to consultation – both for financial and prestige rewards. Correctional training thus comes to suffer from a double problem: it is concerned with an *undesirable subject matter* given the organization of the university in subject-matter departments, and it is an *undesirable activity* (education), since the rewards and prestige of academia flow to essentially noneducational activities.

Focus on the Academic Elite

Universities have long accustomed themselves to their role of training elites. While certainly in the eighteenth and nineteenth centuries this meant the economic and political elites, the emergence of the concept of intellectual elite in the twentieth century has not altered the vocabulary of elitism so central to university philosophy. The university assumes that the universe can be divided into the "able" and "unable." Its mission, of course, is to train the able. Simultaneously, the university must protect itself from the unable, and the lowering of "standards" that would occur if the unable were admitted. The danger here to correctional training programs is that most of both clients and staff lie in the unsafe range.

Universities appear to be possessed by what we might call naive contagion theories of stupidity. First, there is assumed a psychologically naive unidimensional definition of intellectual "ability." Second, the contagion theory assumes further that "bright" people are placed in great peril if they come into contact with "dull" people, as if somehow "dullness" were contagious. The result is that in theory and practice the university has created innumerable barriers to insulate itself from the "dull" elements of society.

To the extent that large percentages of the personnel to be trained in correctional programs are by definition in the "dull" group, collaborative training efforts will feel the full force of these barriers.

Resistance of the Agencies

Up to this point we have dealt with problems of collaboration which arise from the orientation of the universities. But it is obvious that correctional agencies, as well, have their own problematic characteristics.

Differential Conception of Training and Education

Among the many things that hinder university-agency cooperation is the fundamental difference in the meaning each gives to the term "training." Agencies typically are concerned with training as the teaching of specific techniques within a concrete setting, in contrast with the general education typical of the university. This may lead the agency to undervalue the importance of training in the general skills often deemed as prerequisite to professional qualification. In turn, this may restrict the scope of training programs undertaken and so may have adverse effects both for the agency and for the individual trainees. The different definition of the educational "product" is what is at issue here.

The Problem of Language

Related to the conception problem is the problem of organizational language. Agency personnel are likely to find the theoretical vocabulary of the university strange and inappropriate. The vocabulary of the agency, as it evolves out of the specific and concrete experiences of the agency, may be quite divergent from the abstract language of the university and may create a condition of mutual incomprehensibility.

Insulation of Social Agencies

Like universities, correctional agencies are characterized by their insulation. In part, the isolation of agencies is a product of the laws which create them to perform distinctive tasks with unique jurisdiction. Furthermore, correctional agencies have evolved elaborate mechanisms to protect them from "interference" from outside persons. However valuable these mechanisms might be in protecting the stability of the organization, they are often the same mechanisms that render difficult the task of bringing about any meaningful change among agency personnel through a training program. University trainers may not only be seen as "not understanding the real problems" of the agencies; the changes they desire may be viewed as downright dangerous.

Lack of Accountability and "Program Mystique"

Social agencies, including correctional agencies, are not held accountable by hard criteria of success. Correctional institutions, for example, are not judged by their ability to prevent further recidivism, which means that the component programs are unable to examine in an empirically meaningful way the success, or failure, of their programs. Lacking these hard factual indicators, a "program mystique" develops whereby the involvement of the professionals in the program, combined with their good intentions, generates a presumption of the success of the program (a presumption which often runs counter to facts in those rare occasions where empirical criteria of success are applied).

Program mystique interferes with training in a number of ways. Most fundamentally, the assumption of success, while more comfortable than looking at "the facts," robs any training program of a hard, empirical criterion of improved correctional service which must be the ultimate justification for any training program. Secondly, when an agency

shies away from the hard facts of success, it is by direct implication difficult to draw upon data to expose the gaps of knowledge and technique which need to be filled by a training program of one sort or another.

Chapter 3. IMPETUS FOR CHANGE

The everyday frustrations of trying to bring change to the university often generate a feeling of hopelessness. The university is so vast and complex, its organizational structure so overwhelming, that any innovation seems impossible.

Yet dramatic changes have taken place in higher education. One need not be a student of history to realize that the Berkeley of today is very different from the Oxford or Paris of the fourteenth century. Consider, for example, Kerr's description of the far-flung activities of the University of California.

> The University of California last year had operating expenditures from all sources of nearly half a billion dollars, with almost another 100 million for construction, a total employment of over 40,000 people, more than IBM and in a far greater variety of endeavours; operations in over a hundred locations, counting campuses, experiment stations, agricultural and urban extension centers, and projects abroad involving more than fifty countries; nearly 10,000 courses in its catalogues; some form of contact with nearly every person in its region. Vast amounts of expensive equipment were serviced and maintained. Over 4,000 babies were born in its hospitals. It is the world's largest purveyor of white mice. It will soon have also 100,000 students — 30,000 of them at the graduate level; yet much less than one third of its expenditures are directly related to teaching. It already has nearly 200,000 students in extension courses — including one out of every three lawyers and one out of every six doctors in the state.[1]

A number of factors have brought about this rather dramatic alteration in the organization of higher education in the United States. Anyone who intends to bring about a further movement of the university into the "outside" world is well advised to study: (a) the factors which have served to move the university from the cloister to a central position in contemporary life; and (b) the set of pressures which work to "pull" the university in a conservative direction, i.e., back to the cloister. Higher education, in other words, is not a simple, relatively stable system but one constantly buffeted and pulled simultaneously in many directions. Side by side on the campus today one finds a bizarre set of new programs. Some, like those which involve the university in research and training for national defense and poverty programs, place it in the very center of national events. Others, like the honors college, attempt to re-create an earlier day in the university.

Pressures for Relevancy

Both long-term and recent developments are today exerting pressure on the university to be relevant to the society of which it is a part.

Changes in American Society

The university in America has changed because America itself has undergone dramatic transformation. For well over a century after its

[1] Clark Kerr, *The Uses of the University* (Cambridge: Harvard University Press, 1963), pp. 7-8.

founding, the nation remained fundamentally agrarian. It is now highly urbanized and technologically oriented. Where 3 percent of the population lived in cities at the close of the eighteenth century, 60 percent now do so.

This change has, of course, been accompanied by shifts in the labor force. One obvious trend has been the decline in the need for farm workers. In the past fifty years, the proportion of farm workers in the work force has dropped from over 30 to less than 6 percent, and it continues to drop. This has been accompanied by a reduction of the blue-collar occupations, and a concomitant expansion in the white-collar sector. In 1910 only about one in five was a white-collar worker, while today white-collar workers outnumber blue-collar workers. This trend is accelerating, with the greatest expansion occurring in the professional, clerical, and sales ranks. There has been created a particular need for professional and subprofessional workers in the public sector of the economy, especially in the human service areas such as health, education, recreation, and welfare. Concerning this trend, Pearl has observed:

> Today, there are no more people working for private employers than there were five years ago, but there are far more persons working for public employers now than there were five years ago. Most of these increases in employment have taken place in health, education, and welfare fields. These fields are going to increase more in the next ten years. We can reach this conclusion simply by looking at the population projections. For instance, by 1975 there are going to be about one and a half times the number of people of school age than was the case in 1960. Obviously then, we are going to need many more teachers. By 1970 there are going to be one third more people over the age of 65 than there were in 1960. These people have severe health needs *now*. We are going to have an even greater need for persons to work in health services in the future. Similar conditions will prevail in welfare, recreation, and conservation.[2]

These occupational changes have created a new set of educational requirements for the society. At a purely quantitative level, one result has been that more youth are enrolled in school for longer periods of time. For example, the proportion of children aged 14 to 17 who are enrolled in school has risen from 11.4 percent in 1900 to 92.8 in 1965.

Higher education has been heavily affected. The percentage of college-age young people 18 to 21 years of age who go to college has risen from 4 in 1900 to 38 in 1964. A particularly significant trend is taking place at the graduate level, the growth in graduate level education being four times larger than the growth in undergraduate education. Looking at the actual output, the number of bachelor's degrees has increased from 27,410 in 1900 to 394,889 in 1960; master's degrees (or the equivalent) from 1,583 to 74,497; and doctor's degrees (or the equivalent) from 382 to 9,829.

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[2] Arthur Pearl, "New Careers as a Solution to Poverty" in *Poverty: Four Approaches, Four Solutions* (Eugene, Ore.: Associated Students of the University of Oregon, 1966), p. 14.

What has happened in America, then, is that, as the nation has come under the influence of modernization and technology, it has looked to and expanded its educational institutions, especially higher education, in order to keep pace. There has emerged, thus, an ethic of vocational legitimacy that influences (but has come nowhere near to capturing) higher education. Unlike European universities, where expansion has been much slower, American universities have moved not simply to increase the quantity of students enrolled but the quality of higher education as well. American higher education has been relatively quick to develop occupationally specific professional schools (such as in social work, education, or recreation, to give examples in the human services) and to place these schools not only inside the university but within the academic degree structure as well.

In Great Britain, by way of contrast, special teacher training institutions, with prestige well below that of the universities, have evolved which give as the professional credential a certificate but not a degree. Some British teachers do go to the university first to obtain a degree, which they follow with the brief training required to obtain the teaching credential.

Within the American higher education system, then, we have elaborated the idea that occupational training may have a place within the university. In fact, once given a place, it has been afforded a position which makes it compatible with more academically oriented programs. This trend has not been without its critics, of course, for some see vocationalism as the basic enemy of a "real" university education. Even its critics will grant, however, that American higher education is distinctive in its openness to the influences of vocationalism. Some critics argue that, instead of being a virtue, this above all else is destroying the universities of the nation.

The Tradition of Public Service In American Universities

One significant source of pressure for the type of collaborative efforts to be proposed here derives from the ideal of public service which has developed in the American university. While this emphasis on service is a distinctively American attribute, its roots can be found both in the historical development of higher education in this country and in the ideas it has borrowed from other countries. The original colleges established in the United States reflected the English origins of the colonists in the goals, procedures, and methods of higher education. Stress was placed on textbook recitation with a fixed curriculum that could be traced directly to the medieval idea of the "seven liberal arts" or *septivium,* made up of the *trivium* (grammar, dialectic, and rhetoric) and the *quadrivium* (geometry, arithmetic, astronomy, and music).[3] However altered it has become, this tradition persists in the "liberal arts" focus of most contemporary university undergraduate programs.

[3] Music was omitted at institutions such as Harvard.

Pressures for change in the orientation of universities began to mount with the development of science during the Enlightenment. It is important to note that many of the major discoveries in science in the seventeenth and eighteenth centuries took place outside the universities. With the coming of the nineteenth century, however, the situation changed. The German universities early in the century underwent a transformation in which an emphasis on research in the physical sciences began to over-shadow the traditional interest in speculative philosophy. With the accompanying development of specialty departments and an ethic of student freedom, the German university became similar to the present-day American graduate or professional school, and the earlier conception of "college" (as maintained in England) virtually disappeared.

The interest of American intellectuals in the emergence of science led them to shift their allegiance from the British to the new German universities, and this, in turn, influenced the development of American universities. Much in the contemporary university can be traced to the German influence, such as the development of departmental specializations and the use of lecture and demonstration techniques in the classroom. The idea of the elective system is consistent with the principle of student self-reliance and the individual responsibility for learning contained in the German expression *Lernfreiheit.*

The development of scientific knowledge, especially applicable knowledge, coupled with the emergent needs of American society, was an important ingredient in the creation of the orientation toward service of the universities in the United States. Rudolph has commented on how the dramatic changes of the nineteenth century created new learning needs.

> By the 1850's the industrial potential of the United States was as apparent as its agrarian past, and there emerged a growing awareness that a new age required new training and new preparation. What were lacking, however, were any certain institutional foundations upon which to erect programs of agricultural and mechanical training as well as any deeply held respect for expertness. The ordinary farmer and the ordinary mechanic neither sensed the changing nature of their world nor felt any need for training beyond the job itself, but there did exist among local and regional agricultural societies and among educational reformers a belief that changing times required a new look at the competence of the American farmer and the American mechanic.[4]

A major step in the direction of a service orientation was taken with the passage of the Land Grant College Act of 1862. This legislation was explicitly concerned with the "liberal and practical education of the industrial classes in the several pursuits and professions in life." The intent of the Act was to help support at least one college in each state "where the leading object shall be, without excluding other scien-

[4] Frederick Rudolph, *The American College and University: A History* (New York: Knopf, 1962), p. 248.

tific or classical studies and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts."

It is understandable that this formulation was most warmly received in public and western universities. One place where it took root most vigorously was at the University of Wisconsin in the first years of the twentieth century. The "Wisconsin Idea," as Butts has remarked,

> . . . led the way for the country in realizing how socially useful the university could be. The university professors engaged actively in aiding farmers to solve their pressing agricultural problems; university economists aided in devising tax structures and in solving urgent labor and industrial problems; and university political scientists gave direct aid to the state legislature in effecting needed political reforms which helped to make of Wisconsin one of the leading political and social laboratories for the nation. Direct service to the commonwealth became the watchword for a university that would become the watchtower for the state.[5]

The president of the University of Wisconsin during these formative years, Charles R. Van Hise, gave a statement of the ideal of service in the public university which, although written over fifty years ago, has some strikingly contemporary implications.

> These new conditions of the new century confront our nation with a new crisis. We must pass from the period of individualism which was the characteristic of the nineteenth century, to the period of social responsibility which will be characteristic of the twentieth century. This will be as great a readjustment of ideals as has ever been demanded by seer or prophet of any people at any time. This is the reason why the wise, constructive leadership of men of thought is so necessary at this time. Therefore the universities, while confessedly the very centers of unrest, the sources of disturbance, contain the possible leaders who may point the way to the inevitable readjustment without disaster.[6]

Another spokesman for this point of view was the former president of the University of Minnesota who, in 1932, said of the state universities that there was "no intellectual service too undignified for them to perform."[7] Coffman's commitment to education and service was well thought out.

> In other words, the great responsibility resting on our institutions of higher education is that of assisting the American people to understand the shifting currents of the times and to organize an educational program which will best serve humanity, both young and old, in the light of these changes. The gravest responsibility of higher education is not that of determining how much a building costs, how many years of training a teacher needs, or how rapidly the children should

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[5] R. Freeman Butts, *The College Charts Its Course: Historical Conceptions and Current Proposals* (New York: McGraw-Hill, 1939), p. 339.

[6] "An Address by Charles R. Van Hise" in Merle Curti and Vernon Carstensen, eds., *The University of Wisconsin: A History* (Madison: University of Wisconsin Press, 1949) II, pp. 622-23.

[7] Lotus D. Coffman, *The State University, Its Work and Problems* (Minneapolis: University of Minnesota Press, 1934), p. 205.

progress; it is understanding life, and in the light of that understanding, organizing a curriculum which will orient the students into that life and train them to be citizens as well as workers in a republic.[8]

Brownell has stated his concern with the isolation of American colleges, what he terms the "principle of the social vacuum."

> The college is set up on the assumption that the student should be abstracted from his home and work community, placed in a special environment called the campus, and segregated so far as the process of education is concerned from normal relationships within his community. His community, both past and future, his occupational milieu, and his mature patterns of political and social behavior are largly ignored. In the irresponsible freedom and emptiness of a vacuum he is taught the easy doctrines of a philosophy that has no continuing contact with the operationally real. He becomes cosmopolitan, for this is inherent in educational abstractionism, and he leaves his living, concrete community, if he has one, never to return.[9]

It is his feeling that we pay an expensive price for this isolation.

> The university has lost its moral confidence because it has lost contact with the communities of men in which moral behavior is initiated and confirmed. It neither knows these primary groups or serves them. Its educational effect in general is to help drain youth and wealth and opportunity away from them. This leads to disaster to the university and to our way of life.[10]

One thing that Brownell has made explicit is that there are pedagogical grounds for the service orientation of the university, *i.e.*, as the university involves itself in the world, the quality of education is improved.

> College education . . . should take place within the occupational context of the student. This does not mean that it should be a trade school; on the other hand, it should not be removed from the normal productive life and its ideology. The conventional cleavage between culture and work; between the humanities and technology, between the practical and ideal, has no rightful place in enlightened education. How to work out this living unity in terms of educational procedures is a problem that will require labor and experimentation. To carry on educational activity within the students' total significant experience, not in some selected fragment of it, is the essential matter. For the student should live as a completely functional being, economic, social, biologic, intellectual, or as completely so as is permitted of man. He should, in other words, be mature. His education should be within the processes of normal community life and occupation. College should be a part and quality of his total behavior.[11]

Unrest in the University

While many of the pressures for change are generated in the environment external to the university, potent forces are at work inside it as

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[8] *Ibid.*, pp. 78-79.

[9] Baker Brownell, *The College and the Community: A Critical Study of Higher Education* (New York: Harper, 1952), p. 36.

[10] *Ibid.*, p. 148.

[11] *Ibid.*, pp. 14-15.

well. Student discontent has become open and dramatic in recent years, and we have seen militant student protest spread from Berkeley not only throughout the United States but to Berlin, London, Paris, Prague, and many other university cities throughout the world.

Student protest itself is nothing new. Kibre gives an account of an incident in Paris in the fourteenth century. The provost of the city, one Pierre Jumel, disregarding one of the long-established privileges of students at the university, that of immunity from trial before a civil magistrate, had tried and hanged a scholar clerk in spite of repeated requests to surrender him to the proper ecclesiastical judges. The provost was denounced by both the university and the clergy of the city. The clergy then

> . . . congregated in front of the provost's residence and fulminated orally the ban of excommunication and of anathema against him. They threw stones at his house, while they chanted aloud: "Depart, depart, evil Satan, take cognizance of the iniquity which you have committed against the honor of the Holy Mother Church; and of the manner in which you have so greatly dishonored yourself, and in which you have struck at its liberties. Otherwise, you shall share the lot of Dathan and Abiram whom the earth swallowed up alive."[12]

The effect in Paris was staggering in comparison to the limited impact of contemporary student protest. The result of the Paris protest was that

> . . . specific penalties were imposed upon the provost. He was dismissed from his office by the king. And, in compliance with the university's demand that he be made to show his recognition of the enormity of his guilt, he was obliged to take down the body of the scholar from the gallows and to kiss it. He was then required to make the journey to the papal curia to obtain absolution from the ban of excommunication. Moreover, as a perpetual penance, to be shared by future provosts of the city, Pierre Jumel was to be obliged to set up two chapels and to provide them with an income of twenty Parisian pounds each. The university was to name the chaplains.[13]

It is obvious that the violence accompanying student protest today has still to reach the heights achieved in the medieval universities. Schachner has described one incident at Oxford early in the thirteenth century. The citizens of Oxford at this time were resentful of the injustices that obtained as a result of the fact that students, defined as members of the clergy, could not be held accountable to either civil or criminal law as we now use these terms. The simmering resentment finally spilled over when an incident involving a shopkeeper and a small group of students grew into mob violence. Within a day, the affair had grown from a confrontation involving a handful, to virtual battles in the streets. Schachner recounts what happened on the second day.

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[12] Pearl Kibre, *Scholarly Privileges in the Middle Ages* (Cambridge: Medieval Academy of America, 1962), p. 134.

[13] *Ibid.*, p. 134-35.

All night the citizens from surrounding towns and villages poured into Oxford, thirsting to crush the hated clerics once and for all. The students naturally received no access of reinforcements. The next day the battle was resumed, the townsmen again being the aggressors. They caught "certain scholars walking after dinner in Beaumont," killing one and wounding others. Then on into the University quarter itself, where the scholars defended themselves desperately, fighting from street to street, pouring their bolts and arrows from the windows of beleaguered houses. But the army of townsmen was not to be denied. The students were overwhelmed; their ranks broke, and the fight developed into a total rout. Whoever could, fled the town; others attempted a last stand in their houses, and still others sought sanctuary in the churches and monasteries of the quarter.

For two days the mob rioted and pillaged and slew. There was no glutting their bloodlust and their hatred of all clergy. The poor scholars were dragged out of their hiding-places and ruthlessly butchered; the houses were literally torn down and the schools wrecked. Even the churches provided no sanctuary, nor did the appeals of the monks avail, even though the secular Regulars were held in far greater respect than the secular clergy. Trembling clerics were torn from the altars, and there is testimony to the effect that two chaplains were flayed alive, the mob having suddenly reverted to the practices of their barbarous ancestors. When the pillage was over, the University had vanished, seemingly never to return.[14]

Some idea of the power of the medieval university can be seen in the response of the King when news of the outrage reached his ears:

Henceforth, said the royal decree, the University was to have full jurisdiction over the town in so far as the following matters were concerned: the regulation of all food supplies, marketplaces, weights and measures; cleansing and paving of streets; authority to fix rents for schools and halls housing scholars; punishment of all citizens caught bearing arms contrary to law; and power to decree forfeiture of unwholesome or "incompetent" victuals, which, it was decreed, were to be turned over to the Hospital of St. John! Which last astounding provision speaks volumes for the care given to the sick of the time. No longer was Oxford a royal town; it became a hostage to the University whose Chancellor possessed more power than its own Mayor and Council.[15]

It is true, of course, that the student unrest of today is different in many specific ways. The university of today does not possess the power of the medieval university (or, if it does, it is unwilling to exercise it). Certainly the issues that concern the students are very different. Today a major dimension of students' protest concerns their educational experience at the university or, more precisely, what is seen as a lack of genuinely educational experience. One of the student documents produced during the events at Berkeley in 1964 expressed the problem as follows:

The best way to identify the parts of our Multiversity machinery is simply to observe it "stripped down" to the bare essentials. In the context of a dazzling

[14]Nathan Schachner, *The Mediaeval Universities* (New York: Frederick A. Stokes, 1938), pp. 204-205.

[15] *Ibid.*, p. 205.

circus of "bait," which obscures our vision of the machinery, we get a four-year-long series of sharp staccatos: eight semesters, forty courses, one hundred twenty or more "units," ten to fifteen impersonal lectures *per week,* one to three oversized discussion meetings per week led by poorly paid graduate student "teachers." Over a period of four years the student-cog receives close to forty bibliographies; evaluation amounts to little more than pushing the test button, which results in over one hundred regurgitations in four years; and the writing of twenty to thirty-five "papers" in four years in this context means that they are of necessity technically and substantially poor due to a lack of time for thought. The course-grade-unit structure, resting on the foundation of departmentalization, produces knowledge for the student-cog which has been exploded into thousands of bits and is force-fed, by the coercion of grades. We all know what happens when we really get "turned on" by a great idea, a great man, or a great book: we pursue that interest at the risk of flunking out. The pursuit of thought, a painful but highly exhilarating process, requires, above all, the element of time.

Human nerves and flesh are transmuted under the pressure and stress of the university routine. It is as though we have become raw material in the strictly inorganic sense.[16]

Some idea of what the students want can be found in the list of demands prepared by another participant in the Berkeley troubles.

1. Immediate commitment of the university to the total elimination of the course/grade/unit system of undergraduate learning in the social sciences and humanities.

2. Immediate disbanding of all university dorm and living group rules which prescribe hours and which provide for a system of student-imposed discipline, thereby dividing students against themselves.

3. Immediate negotiations on the establishment of a permanent student voice which is effective (that is, independent) in running university affairs.

4. Immediate efforts to begin recruitment of an undergraduate teaching faculty to handle undergraduate learning in social sciences and humanities.

5. Immediate negotiations regarding two methods of undergraduate learning which provide for the basic freedom required in learning:

   a. A terminal examination system which will be voluntary and an option with "b."

   b. Immediate creation of undergraduate programs of a wide variety in which the student will be given careful, but minimal guidance, without courses, grades, and units.

   c. Immediate establishment of a university committee to deal with these demands on the Berkeley campus.[17]

The potency of these ideas lies not so much in their innovativeness (they are, in fact, educationally conservative), but in the militancy which accompanies them. We now have more than discontented students; we have discontented and active students.

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[16] Hal Draper, *Berkeley: The New Student Revolt* (New York: Grove Press, 1965), pp. 191-192.

[17] Bradford Cleveland, "A Letter to Undergraduates" in Seymour Lipset and Sheldon S. Wolin, eds., *The Berkeley Student Revolt: Facts and Interpretations* (Garden City, N. Y.: Doubleday, 1965), p. 80.

Since 1964 the techniques of student protest have become progressively more refined and sophisticated. The sit-in, for example, has a long history in protest movements. Observing its effectiveness in civil rights issues, the students employed it at Berkeley, establishing a dramatic impact in a way visible to the rest of the world. Since then the sit-in has been modified and sharpened in its use at such places as Columbia and the Hornsey College of Art in London. The Hornsey College experience must represent some high water mark in student protest, for there, for a period of several weeks, the students literally occupied the building of the college maintaining not only such facilities and services as the cafeteria, switchboard, and routine maintenance, but even arranging for academic experiences which they found meaningful.

Armed with an array of protest techniques, increasingly aware of the important targets of their protest, students clearly are going to emerge as a key element in changing the contemporary American (and European) university. A note of caution does need to be added. These changes are not likely to be as extensive or come as fast as students hope. Even though the 1964 disturbances at Berkeley led to the so-called Muscatine Report ("Education at Berkeley: Report of the Select Committee on Education," University of California, Berkeley, Faculty Senate, March 1966), it is questionable that much has changed for the typical undergraduate at Berkeley. This is due in no small amount to the inconsistency, if not ignorance, in the thinking about higher education on the part of the students. For example, one finds students simultaneously admiring the conservative educational views of persons such as Robert Hutchins and arguing for a "wide variety" of undergraduate programs, within a minimum of guidance. Nonetheless, as a basic component of the university, present-day students are discontented and militant, and their unrest is sure to be a factor in the next transformation of the university.

Increased Federal Involvement in the University

The rapid transformation of the contemporary university has many aspects difficult to distill in descriptive or quantitative terms. It is obvious that, since growth in the numbers of students has by far outpaced the founding of new institutions, the present university, especially the public university, is teeming with students.

But other factors are at work which have additional and distinctive effects on the quality of the university life. One is the increased involvement of the federal government in higher education. There is, of course, nothing new in the fact that the national government is participating in the affairs of higher education, or even exerting influence on its shape and structure. To pick two earlier examples, both the Land Grant Act of 1862 and the "GI Bill" after World War II have had enduring effects on higher education.

One distinguishing characteristic of the present situation is the high level of federal involvement in financial support of higher education.

The figures are impressive. In the brief period between the 1957-58 and 1966-67 academic years, the federal share of expenditures for higher education rose sharply, from 13.6 to 23.1 percent. Simple projection of this trend suggests that in 1968-69 roughly one dollar in four spent for higher education is coming from the federal government. This has required a great increase in the volume of support for higher education. In the period from 1963 to 1966 alone, the total federal obligations to institutions of higher education more than doubled, rising from $1.4 to $3.0 billion.[18]

This heavy investment has produced a number of effects on the campus. One effect has been to alter the role of the faculty member as a teacher and a researcher. Without question, the traditional "balance" of the teaching and research roles has been upset. With an increased emphasis being placed upon research involvement, the result has been a lowering of teaching loads. When we add to this the fact that the academic rewards flow to research, rather than to teaching, we come to the present situation with the scholars retreating from the classroom.

However, not all the federal funds have been for research in scientific fields. In fact, in the most recent years the rate of increase in federal obligations for nonscientific activities has outdistanced the growth of funds for scientific activities, although a great majority of governmental funds in higher education still is provided for the support of academic science.[19] At the peripheries of many campuses today, the results of such expenditures can be seen in the signs directing us to VISTA, Upward Bound, HEP, Headstart, or Centers for Aging, Mental Retardation, Juvenile Delinquency, Vocational Education, or Higher Education.

It is clear that the explicit role given to the university for both research and educational activities in the rapid proliferation of legislation relating to poverty, juvenile delinquency, manpower development, vocational education, elementary and secondary education, mental retardation, and aging (to mention some of the major legislative actions) is bringing about an additional transformation of higher education. In their own way, these are forging a new sense of service in the universities, service dependent upon federal support.

The "Law and Order" Crisis

The field of corrections is coming under increasing stress with the emergence of the present day "law and order" crisis. To be sure, for some the problem is one of political convenience, a campaign issue which can be used to mobilize citizen interest and support. Regardless

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[18] National Science Foundation, *Federal Support for Academic Science and Other Educational Activities in Universities and Colleges, Fiscal Years 1963-66,* NSF 67-14 (Washington: U.S. Government Printing Office, 1967), pp. 5-6.

[19] *Ibid.* Federal support for nonscience activities in universities and colleges rose from 6 percent of total federal support in 1963 to 28 percent in 1966.

of politics, however, crime will remain as an issue for our society for some time to come.

Two major facts will account for this continued concern with criminal deviance. One, there is marked public concern with the continued increase in crime rates. Although population growth is one of the significant contributing factors in the total amount of crime, studies show that the number of offenses, crimes of violence, crimes against property, have been increasing and increasing faster than population growth. This is especially true of crimes against property, as larceny of $50 and over is up more than 550 percent over 1933, and burglary rates have nearly doubled. The upward trend for 1960-65 has been faster than the long-term trend; that is, it is up 25 percent for violent crimes and 36 percent for property crimes.[20]

A second factor contributing to the present stress on the correctional system is the growing evidence of the inability of corrections to correct. Most studies show that there is a direct, rather than inverse, relationship between correctional system involvement and recidivism, *i.e.*, the greater the contact with corrections, the higher the probability of recidivism. Illustrative of the attack on corrections is the 1967 Uniform Crime Reports, which finds a 60 percent recidivism rate among a group of offenders being followed over time in an investigation of criminal careers, using the finding to launch an attack on the questionable effectiveness of rehabilitation.

It seems inevitable at this point that the correctional system must change in order to respond to this challenge. These changes will require new definition of tasks to be accomplished, which by direct implication calls for new educational and training programs. In short, as pressures for change are exerted on corrections, these pressures are in turn passed on into training efforts and thus ultimately to the universities.

[20] President's Commission on Law Enforcement and Administration of Justice, *Task Force Report: Crime and Its Impact — An Assessment* (Washington: U.S. Government Printing Office, 1967), p. 20.

Chapter 4. THE PRESENT EDUCATIONAL STRUCTURE

Up to this point, we have considered factors both at the university and in the correctional field that promote or hinder growth of collaborative efforts between higher education and corrections. Before we look at the models available for cooperative growth, it is important to obtain a firm fix on the diverse nature of the present structure of higher education. The university of today has responded to a number of different forces and thus represents a conglomeration of traditions and a correspondingly complex organization.

Structure of the University

No brief description can adequately portray the diversity of university structures. Since public higher education has been the major educational resource for corrections, the following descriptions will focus mainly on public institutions. The public universities themselves are diverse; they vary in size, entrance requirements, student fees, emphasis on graduate instruction, and provision of professional schools, among other things. However, there is a relatively standard form of organization, in which many component units provide a variety of undergraduate and graduate instruction. For purposes of illustration, we shall examine here one of the larger public universities, the University of Michigan. As is true of most public universities, one is easily overwhelmed by the variety of educational experiences offered. Instruction at Michigan is offered in the following kinds of units.

I. COLLEGE OF LITERATURE, SCIENCE, AND THE ARTS

Purpose: To increase the student's awareness of man and his surroundings and provide him with the tools to process his experiences, such as an ability to discriminate, compare, contrast, analyze, classify, criticize, evaluate, and choose intelligently from varied experiences.

Organization: Courses consist of: (1) content and methodology of the major divisions of learning; (2) depth study of a single subject; and (3) elective courses chosen by the student to further his own interests. Each area has equal weight.

Major divisions include these departments:

Social science — Anthropology, Asian studies, economics, geography, history, journalism, political science, psychology, sociology

Natural science — Astronomy, chemistry, geology, botany, microbiology, mineralogy, natural resources, physics, physiology, zoology

Humanities — Literature, languages, fine arts, philosophy

Degrees conferred: Bachelor of Arts, Bachelor of Science

II. SCHOOL OF GRADUATE STUDIES

Organization: The Graduate School administers overall program and controls admission policies, curriculum approval, and requirements for graduate degrees.

Degrees conferred: Master's and doctor's degrees in 91 special programs

III. PROFESSIONAL SCHOOLS OFFERING UNDERGRADUATE AND GRADUATE PROGRAMS

1. *School of Business Administration*

Purpose: To provide a rich program of professional education for future leaders in business organizations and academic institutions, through six programs. Each program has these concerns: (1) to study basic aspects of business; (2) to provide training in analysis of business problems; (3) to provide specialized and technical preparation in specific areas.

Degrees conferred: Bachelor of Business Administration

2. *School of Education*

Purpose: To prepare the student for public school positions; to promote educational research; to relate Michigan public schools more closely to university.

Degrees conferred: Teaching certificate (elementary, secondary); Master of Arts, Master of Science, Doctor of Philosophy, Doctor of Education, Doctor of Philosophy in Education and Psychology, Doctor of Philosophy in English and Education

3. *School of Music*

Purpose: To provide an opportunity for students to continue the serious study of music and acquire a liberal arts background at the same time. The courses emphasize preparation for public performance, teaching private students, or teaching in schools and colleges.

Degrees conferred: Bachelor of Music, Master of Music, Doctor of Musical Arts

4. *School of Natural Resources*

Purpose: To emphasize man's relation to his environment and management of that environment through a specialty like forestry, wildlife management, conservation, fisheries, forest recreation.

Degrees conferred: Bachelor of Science, Bachelor of Science in Forestry, Master in School of Natural Resources, Master of Science, Doctor of Philosophy

5. *College of Pharmacy*

Purpose: To prepare students for pharmaceutical positions in areas such as community practice, hospital pharmacy, manufacturing pharmacy, and government agencies.

Organization: A five-year program accredited by the American Council of Pharmaceutical Education.

Degrees conferred: Bachelor of Science in Pharmacy, Doctor of Pharmacy

6. *College of Architecture and Design*

Purpose: To prepare for successful practice in architecture, with liberal arts background. School also includes departments of art and landscape architecture.

Organization: A five-year program approved by Accrediting Board.

Degrees conferred: Bachelor of Architecture, Master of Architecture, Master of City Planning, Bachelor of Science in Design, Master of Arts, Master of Fine Arts, Bachelor of Landscape Architecture, Master and Doctor of Philosophy in Landscape Architecture.

7. *School of Nursing*

Purpose: To provide students with nursing skills and with knowledge of basic biological, physical, and social sciences.

Organization: Courses offered in: (1) prevention of disease; (2) promotion of health; (3) formulation of nursing care plan and provision for nursing therapy.

Degrees conferred: Bachelor of Science in Nursing.

8. *College of Engineering*

Purpose: To prepare students to take positions of leadership commensurate with their ability in a world where science, engineering, and human relations are of basic importance.

Organization: Nineteen special programs offer these degrees: Bachelor of Science in Engineering, Master of Science in Engineering, Master of Science, with professional degrees in 13 special areas.

9. *School of Dentistry* — Dental Hygiene Program

Purpose: To train hygienists.

Organization: Two-year and four-year programs.

Degrees conferred: Certificate in dental hygiene; joint degree with College of Literature, Science, and the Arts.

10. *School of Public Health*

Purpose: To provide professional education and training in public health; disseminate knowledge of hygiene, public health, and preventive medicine through general and special courses of instruction; perform research.

Organization: Training in six major programs accredited by the American Public Health Association; two-year program for undergraduates.

Degrees conferred: Bachelor of Science in Public Health Nursing; Master and Doctor of Public Health in 14 special programs.

IV. PROFESSIONAL SCHOOLS OFFERING GRADUATE PROGRAMS ONLY

1. *Institute of Public Administration*

Purpose: To prepare students for public service through specialized training courses; provide resources to public agencies through in-service training and research by the Bureau of Government Research; provide technical advice and assistance on problems of local, state, and national government.

Organization: Administered as an institute. Offers courses on interdisciplinary basis.

Degrees conferred: Master of Public Administration, Doctor of Philosophy

2. *School of Social Work*

Purpose: To prepare qualified social work professionals through two-year graduate program covering (1) social services and social policy; (2) human growth and behavior; (3) social work practice.

Degrees conferred: Master of Social Work.

3. *Graduate School of Business Administration*

Purpose: Advanced studies in business that emphasize research on fundamental business problems, provide special programs such as quantitative methods, behavioral sciences, and international business.

Degrees conferred: Master of Business Administration, Master of Actuarial Science, Master of Hospital Administration, Doctor of Philosophy.

4. *School of Law*

Purpose: Broad training for practice of law in enlightened manner, and the training of law teachers, scholars, writers. Instruction on all aspects of law.

Degrees conferred: Bachelor of Laws, Master of Laws, Master of Comparative Law, Doctor of the Science of Law.

5. *W. K. Kellogg Foundation Institute of Graduate and Postgraduate Dentistry*

Purpose: To train dentists and offer advanced training.

Degrees conferred: Doctor of Dental Surgery, Master of Science, Doctor of Philosophy.

6. *School of Medicine*
Purpose: To train medical doctors.
Organization: First two years emphasize basic science as the foundation of clinical medicine. Third and fourth years are clinical in orientation.
Degrees conferred: Doctor of Medicine.

The Liberal Arts College

Amidst the diversity and complexity of this kind of university structure, there are two particularly significant units that need to be considered for their implications for the field of corrections. First, the liberal arts unit and second, the professional school of social work. The liberal arts unit is important since it is the avenue of entrance into corrections either directly (for most of those who enter the field with only the bachelor's degree), or indirectly (for those who first obtain a liberal arts degree and then move into a professional school).

The primary goal of a liberal arts program is described by the University of Michigan catalogue in the following terms.

> The college aims at expanding the intellectual frontiers of each student by providing him with knowledge, not in the narrow sense of facts alone, but in the broadest sense of new awarenesses about man and his surroundings. In addition, the College strives to give a student the ability to compare, contrast, analyze, classify, discriminate, criticize, evaluate, and choose intelligently from among the myriad experiences and ideas which confront him . . .[1]

At the University of Michigan the student's time is divided into three large blocks. One-third of his time — the major part of his first two years — is spent in exploring the "major divisions of learning": his own language, a foreign language, social science, natural science, and humanities. The second block of time is spent studying one subject in depth. In the third block he may pursue his special interests.

The following is an outline of the program of the College of Literature, Science, and the Arts, for the student desiring a Bachelor of Arts and a Bachelor of Science degree. He must take courses totaling 120 semester hours and make a grade average of at least C.

The first two years are occupied primarily with courses required of all students.

Physical Education, 3 hours
English, 3 hours
Foreign Language, two years or equivalent
Social Science, 12 hours
At least one course in two of the following departments:

Anthropology	Journalism
Economics	Political Science
Geography	Psychology
History	Sociology

[1] University of Michigan, College of Literature, Science and the Arts, *Announcement 1966-67*, pt. 13, pp. 6-7.

Science, 12 hours

At least one course in each of these groups, and a two-term sequence in a single group.

I. Astronomy	II. Anthropology	III. Physiology
Chemistry	Botany	Psychology
Geology	Geology	Zoology
Physics	Microbiology	
	Mineralogy	
	Natural Resources	

Humanities, 12 hours

At least one course in two groups and a two-term sequence in one group.

I. Literature	III. Fine Arts
II. Languages	IV. Philosophy

After these courses, the student concentrates in any of the area programs of the departments or chooses an interdepartmental program. The content of his program is approved by his adviser. Only 40 hours may be taken in a single department. At the University of Michigan the student may choose to study from any one of nearly thirty departments:

Anthropology, Astronomy, Botany, Chemistry, Classical Studies, Communication Sciences, Economics, English Language and Literature, Far Eastern Language and Literature, History, History of Art, Journalism, Library Science, Linguistics, Mathematics, Music, Near Eastern Language and Literature, Philosophy, Physics, Political Science, Psychology, Romance Language and Literature, Slavic Language and Literature, Sociology, Speech, Zoology.

The situation tends to be similar elsewhere. A large state university, Wisconsin, has 41 departments, while Hunter College in New York City has 23. However varied the number of subject areas are at the various colleges, they all fall loosely within the four areas of: humanities, social science, science, and the creative arts.

Significance for Corrections

No program of cooperative development affecting corrections and higher education can ignore the liberal arts model of education. Not only does it provide the terminal degree held by many persons now working in corrections, but it also has a heavy influence on all thinking about developments in higher education.

Nonetheless, the liberal arts college presents several difficulties when considered as a potential for correctional programs.

1. The liberal arts program is specifically nonvocational. The liberal arts college is interested in the broad education of the student, and the departments are interested in acquiring and transmitting knowledge of their field.

2. The liberal arts college experience is fragmented. Unless the student has a great deal of ingenuity, there is little opportunity to go

beyond a cafeteria style of education. Courses are taken virtually in random order, with little concern for the coherence of the individual student's experience.

3. There may be very little in the existing course offerings which deals with the topic of corrections. Look at the sociology department for example; of the 40 hours the student might take in sociology at Michigan, only six relate directly to the field of corrections. The other 34 hours the student might take in sociology touch the surface of the whole discipline.

4. Courses are not skill-oriented. So there is no immediate way to test the ideas of the classroom or develop relevant skills.

5. The student is insulated from the ideas and thought of those who are working in the field. His exposure is limited almost exclusively to those who have academic credentials. There are few social workers, group workers, prison wardens or guards, practicing psychiatrists, parole officers, applied researchers on university campuses. If there are, they are virtually certain not to be teaching in a liberal arts program.

The Professional School of Social Work

A different concept of education has emerged in the universities through the professional schools, of which the school of social work is perhaps of the greatest relevance for corrections. Schools of social work grew out of the community charity and social science movements of the nineteenth century. They represented an awareness of the plight of the poor, who had not fared well in America's period of industrialization. As concerned middle-class individuals and groups organized, they became aware of the complexities of solving the problems of the poor and also aware of the need for systematic approaches to these problems. Consequently, they developed institutes and training courses, replaced their volunteer "friendly visitors" with salaried workers, and exchanged the apprenticeship system of the older professions of medicine and law for a more formal type of vocational education.

The first institutes, which dated from 1889, were sponsored by organized charities. Another channel of development was through university extension work. When the Institute of Social Science, an early experiment in extension work at the University of Chicago, became the Chicago School of Civics and Philanthropy in 1907, the first real sponsorship of a school of social work by a university was achieved.[2]

Not all leaders in the social work field thought it advantageous for the institutes to relate themselves to universities, which were thought to be too theoretical and not sufficiently practical. The Chicago School, for example, retained a good deal of independence, establishing a cur-

[2] This section draws mainly upon Ernest V. Hollis and Alice L. Taylor, *Social Work Education in the United States* (New York: Columbia University Press, 1951), pp. 5-10.

riculum based on a generic or all-inclusive approach and drawing upon the behavioral sciences, law, and medicine. Moreover, the curriculum drew on many sources outside the university. Other schools of social work used the same approach.

For example, the development of curriculum and field practice in psychiatric social work grew largely out of the experience of social workers in hospitals and in family and children's agencies who worked with troubled people. Another curriculum area – group work – developed out of the experiences of leisure-time agencies such as the Young Men's and Young Women's Christian Associations, the Boy Scouts, and the Girl Scouts, as well as the first efforts to use the discussion group as a creative instrument. Yet another part of the curriculum – community organization – has drawn heavily upon the experience of the Community Chests and similar groups, whose national organization has provided leadership in setting up standards and developing methods of community organization and social planning.

Hollis and Taylor point out that by the 1920's the professional social work philosophy and a distinctive method of practice had emerged and that

> . . . many of the characteristics of American social work education as we see it today were apparent. It was rooted more in pratice than in the academic setting; it was developing from specializations toward a common base; it was showing strength in delineating and teaching of process, particularly in casework, but was weak in preparing for administration, community organization, group work, research, and supervision; it was lacking in clarity about philosophic foundations; but it was already making a significant contribution to education through field work training in which emphasis was on knowledge becoming a part of the "doer" instead of merely adding to intellectual understanding.[3]

Today the schools show little change from their initial philosophy; rather changes in emphasis. An examination of the program at Michigan and other schools such as the New York School of Social Work at Columbia shows that most schools of social work expect their students to acquire competency in the following areas:

1. Social services: A study of the evolvement of goals, programs, organizations and administrations in relation to a changing society and a changing social welfare policy.
2. Behavioral theory: Normal and pathological aspects of human growth and development from the point of view of dynamic psychiatry, sociocultural concepts relating to family structure, social stratification, ethnic systems, values and social role, and group development and behavior.
3. Scientific methods and research: The nature of the scientific method, goals, content, and methods of social work research.
4. Methods of social work practice: Concepts and principles under-

[3] *Ibid.*, p. 21.

lying the practice of social casework, social group work, community organization, and application of these in a practical setting.[4]

Each student will be required to take courses in these areas, and to choose one social work method for concentration, typically casework, group work, or community development. Also required during both years of the two-year program are field courses. In order to progress in the field placement from the first year to the second, the student must demonstrate an ability to undertake assignments and activities requiring greater knowledge and skill. Unlike other kinds of academic graduate programs, the school of social work provides a place for actual work experience as part of the educational process.

Significance for Corrections

The social work school model has much to recommend it as an alternative to the liberal arts college model. As is typical of other professional schools, the educational experience is designed around a set of vocational goals, i.e., to produce trained and qualified professionals. Rather than the fragmented virtually random choice of the elective undergraduate system in most schools, a core set of courses is required in order to assure the assimilation of a basic set of skills. Furthermore, it is required that much of the training take place "in the field," exposing the student to not only the theoretical principles laid down in academia but to the knowledge (and ignorance) of the practicing professionals as well.

Whatever its virtues, the school of social work does have some major limitations as a model for innovations in correctional training. One fundamental problem is the fact that social work schools are limited to graduate students. Given the large number of correctional positions which are filled by persons with less than graduate training, educational programs are required which can be directed at undergraduate and lower-level students. A second problem is that the limited supply of graduate social workers, spread over a number of human service occupations, can never meet the personnel needs of corrections. A final factor is that, given the demands for products of the social work schools, the correctional field does not have very high priority either in developing curriculum or in occupational choices of graduate social workers.

[4] See Columbia University, New York School of Social Work, *Catalog for 1967-68;* University of Michigan, School of Social Work, *Announcement 1967-68.*

Part II: Some Models for Collaborative Education and Training

Chapter 5. MODELS WHICH MODIFY THE UNDERGRADUATE CURRICULUM

However powerful the conservative tendencies of higher education, the university has been unable to ignore the pressures for innovation. The net result of the many forces within and without the university has been change, sometimes a painful groping to recreate a mythical past. In the following sections we will review a number of the models of education and training that have been tried in recent years, focusing first on attempts to modify the undergraduate curriculum to make it vocationally relevant in directions of significance for corrections. Later sections will deal with attempts to introduce special methods of training which fall outside the traditional undergraduate and graduate structure of the university.

Antioch College Cooperative Program

One of the initial attempts to modify the liberal arts tradition by introducing vocational experiences into undergraduate education took place at Antioch College. A private college of liberal arts and sciences located in Yellow Springs, Ohio, Antioch in 1921, under the leadership of its president, Arthur Morgan, reorganized its program to include the cooperative or study-plus-work plan. This plan involves an alternating schedule whereby students study one term and then work the next term throughout their entire college program of four to five years. The catalog description makes explicit the linkage assumed between education and other sectors of life.

> The purpose of the cooperative program is to expose students to situations that are educationally, socially, culturally, and geographically different from either the life of the campus or the environment from which they come.[1]

When a student enters Antioch, he takes examinations that will help him and his advisers to identify his abilities, achievements, interests, and needs. Together they begin planning his courses and accompanying schedule. All students start with general education courses (66 to 71 of the 160 required academic credits) in three areas — the humanities, the physical sciences, and the social sciences. The student's program includes courses in each of the three areas, courses in his major field, cooperative jobs, and community activities. As far as possible, the cooperative program is an avenue for learning those particular skills, facts, methods, and applications he will need for employment immediately after graduation.

[1] Antioch College, *Catalog, 1964-65*, p. 21.

Securing jobs and supervising the placement of the students in the cooperative program is the responsibility of the extramural faculty. Many positions have been continuously filled by Antioch students for years. These jobs are in settings of many kinds: business offices, industrial plants, research laboratories, social agencies, government bureaus, newspapers, schools, hospitals, museums, department stores. The student may select placement in one of these positions; he may secure a job of his own with the advice of the extramural adviser; or he may arrange an independent study project for one of his work periods. A fourth alternative is to spend a year on a foreign campus or a semester in Mexico.

Once the student is on the job, he is expected to perform like any other employee. He receives a regular salary, from which he must pay expenses. The employer may discharge the student if he performs poorly. At the conclusion of the work period, the employer rates the student's performance; satisfactory work gives the student cooperative credit toward his degree.

Once each term the extramural adviser visits the work setting to talk with the student and make arrangements for the student's successor. When the student returns to campus, he sits down with his academic and extramural advisers to evaluate his progress in light of his off-campus experience. Added to this evaluation are comments and formal performance ratings from employers, extramural staff comments during field visits, and the student's own report of his experiences. It is the purpose of the Antioch program "to send students back and forth between theory and practice, thought and action, learning and living."

Significance for Corrections

The program at Antioch is an attempt to make the student's college experience a *total* educational experience by broadening the world view of the students.

> When they come to Antioch, students report that their goals in college are chiefly to get a basic general education, to develop knowledge of community and world problems, and to develop an ability to get along with different kinds of people. By the time they are seniors they report that a wide range of changes has occurred in their world view, personal philosophy, personality, intellect, academic interest, social development, and career plans.[2]

The chance to use, and test, knowledge acquired in the classroom while still in academic status is a vast improvement on the liberal arts approach for the vocationally oriented student. If he is interested in a career in the corrections field, it is possible that the student can plan to be exposed to several aspects of the field through his various work periods, or he may become involved in a single program and choose consecutive placements in it, bringing more ideas with him each time and taking back a higher level of skill in the work. It is through the work program that many Antioch students obtain their first jobs.

[2] *Ibid.*, pp. 8-9.

The model is a good one, yet it has inherent problems as a general scheme for the correctional field.

1. The work-study, on-off model is in its own way a fragmented educational experience. The work program does not necessarily relate to the student's courses, and the burden of integrating the varied experiences is on the student. The liberal arts program itself is set; and, except for independent study, there is no way for the student to learn special skills or gain special knowledge that might relate directly to his work. Also, the interrupted school year makes it more difficult for the student to build relationships with other students and with faculty members.

2. The cooperative work experience is cooperative only for the student. The education is a one-way process for the student's benefit. Nothing is built in to enable professors to learn from the field staff or employers. Nothing is provided to help employers take advantage of the resources of the college.

As a model, then, the Antioch program has pioneered in the recognition that work can play an important role in the educational process. Its major limitation has been failure to integrate the work and the academic experiences into a unified educational program.

The "Sandwich" Model, Enfield College of Technology

Examination of models for cooperative ventures in education need not be restricted to programs in the United States. Great Britain has been experiencing a rapid growth in higher education in the past few years. Much of the growth has gone into the development of new universities — new, that is, in terms of their existence and buildings but not necessarily in their ideas of higher education.

Although many British universities are firmly geared to the Oxford and Cambridge tradition, even to the actual building of cloisters, rapid growth of British higher education has given some institutions freedom and encouragement to develop new models of education, as illustrated by the social science course offered at Enfield College of Technology located in Enfield, Middlesex. The program at Enfield is built around the "sandwich" idea, where the vocational experience is sandwiched between two sets of academic experiences. One of the distinctive aspects of the program at Enfield is its conception of the necessity of building a vocational component into the course.

> It is the policy of the College that the courses it offers should explicitly consider the student's relation to his career intention, or, more broadly, the problems he will encounter in the world beyond his period of study. It is not adequate to regard this as an issue dependent on the inspiration of the individual student, to which no explicit consideration need be given. Nor is it adequate to embrace a crude conception of vocationalism in which a student is armed solely with techniques related to his expected career. In whatever technical way we equip the student, he will find himself in a changing world in which ideas and tech-

> niques rapidly become obsolescent. Our aim is to concentrate on the process in which the student is involved and by this means to foster the capacity to accept change as an integral part of his environment.[3]

One major concern of the planners of the Enfield program has been flexibility. They recognized the need to build into the course certain arbitrary decisions, but at the same time tried to create a set of experiences whereby students would not be required to make early choices which would restrict severely their later development.

The first-year course is broadly conceived and common to all students. From this common base the choice is gradually broadened. In the second year a limited choice – which even at this stage may be deferred by an appropriate selection of options – is made between two areas. The degree of the student's commitment does not necessarily prejudice selections in the third and fourth years. In these final years the student has considerable choice in the degree of specialization. The vocational specification is concentrated in the final two years of the course when, it is felt, the student should be in a position to select with confidence the broad area in which the ideas developed previously will be finally located.

At the same time the course is designed to maximize the integration of vocational experiences in the real world with the academic content of work at the college. The last two years are treated as a unity, the students satisfying the requirements of 10 equivalent units during that time. At least five and not more than seven of these units must be in the form of examined papers; the remainder is in the form of written work based on some kind of "sandwich" experience. Within limits the student selects the degree to which his work will take the form of orthodox examination papers or of supervised industrial contact; he adapts the length and nature of the industrial period to the particular needs of his specialization.

Units of a "sandwich" vocational nature are equivalent to units derived from in-college periods. But –

> It is only possible to guarantee this requirement if the sandwich period is very closely supervised and work is produced as a result. These constraints on the sandwich period mean that the college controls the periods spent outside the college, providing an empirical base to a project to be set, controlled and evaluated by college staff.[4]

Among the many kinds of fields and specializations that are available for use in the "sandwich" element of the program are these.

> In Economics: the research department of UNCTAD (United Nations Conference on Trade and Development), Regional Development Councils, National Economic Development Council, as well as nationalized and private industries.

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[3] Enfield College of Technology, *A Proposal for a Social Science Course, submitted to the Council on National Academic Awards,* 1967, p. 3.

[4] *Ibid.*

In Sociology: the research establishments of the Civil Service, BOAC, market research for such firms as Proctor and Gamble, personnel work, and operational research in industry.

In Developing Countries: such agencies as the Ministry of Overseas Development, the Institute of Overseas Development, or various UN organizations.

In Social Work: work as child care officers or probation officers.

In Regional and Urban Planning: the Ministry of Housing and Local Government, the Town Planning Institute, Greater London Council Planning Department, and others.

Significance for Corrections

A number of aspects of this program merit close attention as models of agency-university collaboration in education and training. Strong points of the program include:

1. An explicit recognition of the vocational relevance of higher education which leads to the inclusion of work experiences as part of the educational process. Such a program is seen as benefiting students by enabling them to integr academic and vocational experiences in a way that strengthens the t educational process. This course yields benefits to agencies both in the creation of better-trained recruits and in the development of a liaison with higher education which over time could expand so that additional collaborative training could be developed.

2. A recognition of the need for a flexible system of the work-experience aspect of an academic program.

3. An approach which is multidisciplinary, which gives the students some additional flexibility in the evolving choice of an ultimate professional career.

4. A recognition of the importance of close links between the college and the work experience, in order to assure that the work is integrated into a total academic process.

Without detracting in any way from the strong merits of the Enfield program, one can say that there would be several problems in using it as a model for collaborative efforts in the field of corrections.

1. The course is by its very nature limited to college-level work. This carries with it a number of immediate implications. At one level, only "qualified" students can be admitted, whereas many of the individuals that corrections might wish to have trained may not possess the minimum qualifications for entrance into a college or university. Perhaps more important, by its very nature this is a degree-oriented program. However important it is to create new and exciting ways of educating undergraduates, we must also look to nondegree models if

we are to satisfy the wide range of training needs in the field of corrections.

2. This kind of program hardly satisfies the minimum condition of the term "collaborative training." The focus is not on meeting emergent training needs of the staff of an agency or institution, but on providing students with an education appropriate for a bachelor's degree. A whole range of agency-relevant training experience will not, and cannot, be considered within this model.

3. By adding an extra year to the first degree (the undergraduate degree is earned in three years in British universities), the students are asked to pay a large price for the inclusion of the vocational experience. It would be hoped that in the United States, where we have a different approach to such things as courses and units of credits, that vocational experiences would be developed which could be included as part of the present four-year undergraduate program.

San Diego State College
Undergraduate Social Welfare Program

One of the most potent of the professional orientations in the field of corrections is that of social work. Indeed, for many service and administrative positions in the field, the professional credential, Master of Social Work, is a prerequisite, even though the supply of graduates from schools of social work clearly cannot satisfy the demand. One possible response to this situation is for schools of social work to provide some type of professional training at the undergraduate level.

Such a program was being initiated at San Diego State College in the Fall of 1968. Plans for the program were described by two faculty members in an issue of the *Helping Services Forum*.[5] This program is seen as one which provides a continuum of educational experiences linking undergraduate and graduate study which yields three things: a liberal arts education; preparation of those providing social welfare services with a bachelor's degree; and preparation for admission to graduate study in social work.

This undergraduate welfare major is located in the liberal arts division of college. Virtually no changes were made in the lower-division requirements expected of any other liberal arts student. Depending upon language deficiencies, the liberal arts and science requirements are between 51 and 63 of the 124 units needed for the B.A. degree.

Six of these units (Introductory Sociology and three units of Introductory Economics) are also prerequisites for the social welfare major, thus making it possible for the student to fulfill liberal arts

[5] Donald Pilcher and Irving Tebor, "A New Undergraduate Program for Social Welfare Majors," *Helping Services Forum*, I (June 30, 1968), 1-4, 7. The *Forum* is published by the Western Interstate Commission for Higher Education in Boulder, Colorado.

requirements and prerequisites to the major at the same time. Additional prerequisites for the social welfare major are:

Cultural Anthropology	3
Contemporary Social Problems	3
Statistics	3
Advanced General Psychology	3
Principles of Economics	3

Courses recommended but not required are biology and physiology.

It is in the upper division that the social welfare program begins to make demands on the students. In the wider liberal arts unit, they are required to take three units each in social psychology, psychology, and sociology, each of their own choosing. The distinctive social welfare emphasis comes in the specific offerings of the School of Social Work. In the final two years, the following are required:

Junior Year	*Units*
Man in Society	6
Social Welfare as a Social Institution	6
Senior Year	
Social Work as a Profession	3
Field Experience in Social Welfare	6

In the senior year a course in research entitled "Current Developments in Social Work," will be offered to those desiring to continue graduate work. This is not a requirement of the major but is strongly recommended for those interested in going beyond the baccalaureate degree.

It is useful here to consider the authors' description of some of these course experiences:

> The course entitled Man in Society is concerned with the knowledge and theories of man's physical, psychological, and social growth and behavior. This is new course content for the undergraduate program at San Diego State College and is equivalent to the material on human behavior taught in most graduate schools of social work. Such a course is not often part of the undergraduate curriculum in colleges and universities in the United States. It would be open to anyone with the necessary prerequisites, and it is anticipated that majors in other departments will be interested in it. Man in Society is a two-semester sequence which will attempt to integrate concepts, knowledge, and theory from such areas as psychology, sociology, economics, and anthropology, in order to provide the student with a comprehensive and useful background in human behavior.
>
> Social Welfare as a Social Institution is taught in most undergraduate social welfare programs. This six-unit course will deal with the concepts of social welfare as a social institution in society. It is equivalent to the course material taught in most graduate schools entitled Social Welfare Policy and Services.
>
> In the senior year students in the first semester will be taking two courses which will be taught in the field. Social Work as a Profession will be offered continuously with Field Experience in Social Welfare. The first will cover theoretical

material and the latter will provide an integrating seminar and a laboratory experience for each student. The integrating seminar is designed to enable the student to apply the theoretical aspects of practice to actual situations encountered in field experience. Approximately eight hours of field experience each week will be required of the student. . . . The field experience course in both semesters will include an integrating seminar. These two courses are the precursors of practice and field instruction in the graduate school.[6]

This program is seen as being innovative in four ways.[7]

1. It is seen as emphasizing the professional preparation, yet reinforcing the importance of the idea of a liberal education.

It is envisioned that this program will provide a liberal education through its content and its emphasis on conceptual rather than informational teaching, and that it will provide better preparation for those students entering practice immediately following the baccalaureate degree. . . .

In providing the breadth of courses in human behavior as a background, it is necessary to sacrifice on electives. Students will have courses in economics (6 units), political science (6), psychology (9), social psychology (3), sociology (9), and anthropology (3). Nevertheless the course requirements for the major were reduced from 36 to 30 units and the prerequisites remained essentially the same. The 36 units listed above are acquired as part of the major as prerequisites, or as liberal arts requirements. The number of electives, while not allowing the student too much choice, was increased from 9 to 15 units in the upper division and, depending upon the language background for each student, may enable the student to take an additional 10 units of electives either at the lower or upper division. Thus, in the opinion of the faculty the liberal education focus of the program has not only been retained but actually strengthened.

2. The program offers a new kind of course experience at the introductory undergraduate level.

Such a three-unit course will now be offered to provide lower division students with an opportunity to test their interest in social welfare as a possible career. This is not a required course in the major. It will provide two hours of class and three hours of field experience each week as a means of providing an orientation to the field of social welfare through readings, class discussions, and observation of social welfare activities in the community.

3. The program is organized to take into account special interests of students through an honors course.

An honors course offered in the senior year will provide an opportunity to superior students to use and develop their talents in a

[6] *Ibid.*, pp. 3-4.

[7] *Ibid.*, p. 4

variety of ways through a flexible seminar-type class catering to special interests of the students. In addition, a course entitled Special Study and another entitled Investigation and Report provide students with still another avenue for pursuing special interests.

4. It is also argued that the program will provide a continuum of undergraduate education with graduate education making it possible either to shorten the length of the graduate program or to augment its present offerings. As noted above, the undergraduate program has been developed in concert with the five major sequences in the graduate program at San Diego State College.

Significance for Corrections

There is much to commend in, at least, the intent of the program. The attempt to combine a kind of terminal social work professional training along with preparation for graduate school, all within a liberal arts framework, would appear commendable. It may be, however, that this particular combination contributes very little to any of these goals.

Most important for the purposes of this paper, the terminal B.A. component of the program, *i.e.,* the B.A.-level professional training, would appear to be accorded no real importance. The description does not detail what unique skills a B.A.-level person might or should have or how the program is designed to provide such skills. Inasmuch as the *field* of social work gives scant recognition to the idea that professional skills and values can be taught at the B.A. level, the emphasis of this program is not surprising. The program would appear to be "innovative" in that the graduate school of social work has provided a watered-down series of graduate-level courses for undergraduates, without providing either the occupational relevance or the professional rewards that are an inherent part of the graduate program. A program which cannot justify the meshing of educational and skill level (*i.e.,* cannot rationalize why the training is seen as appropriate at the given level), and cannot provide a reward for undertaking the program, will have difficulty in persuading students that it is worthwhile.

Second, when the graduates of this program enter a graduate school of social work (and it is clear from the description that a major purpose is to recruit graduate students in social work), they will find that this preparation will be given scant recognition by the graduate school of social work. The set of interlocking requirements in such schools is relatively rigid and fixed and is designed with little provision for opportunities to bypass them when prior comparable training has been given. What appears likely to happen, in other words, is that the traditional two-year M.S.W. program will be extended to four years.

Third, the program is certainly not innovative in its approach to liberal arts education. It takes as given the academic approach of liberal arts instruction and ignores the possibility that the life experiences inherent in the problems of social work might contribute to a liberalizing

educational experience. This is not surprising, since the nature of academic politics is such that a new program cannot raise too many questions about the legitimacy of the current and controlling liberal arts tradition.

The San Diego State College program does at least point out that undergraduate education can be modified to include some emphasis on human service training, and that actual field work not only may be a legitimate educational experience but can be linked into a wider service preparation. Nonetheless, the program is hardly radical educationally. It challenges two assumptions about training, held either by liberal arts colleges or professional schools of social work.

Because the unit does not possess legitimate credentials in the academic departments, the student is exposed to the danger of being labeled as a second-rate social science major within the confines of academia. Just as surely the failure of the unit to provide a graduate degree of the basic professional qualification that is normally a prerequisite to employment in a professional job means that the student is at best a second-rate professional. In view of the urgency of the need for human service training, we must ask if second-rate programs are what we need.

School for Community Service and Public Affairs University of Oregon

One potentially fruitful example of university-developed programs is the School for Community Service at the University of Oregon. Among the factors responsible for the development of this program, most had their origins in the action concerns of individual faculty members in such departments as education, psychology, recreation, and sociology. As the university became increasingly involved in training for the Peace Corps, VISTA, Job Corps, Upward Bound, juvenile delinquency control, and similar enterprises, it became clear that existing educational programs, however adequate for traditional needs, were not adequate to serve either the trainees or the new agencies being created. Because of this concern a new unit was created.[8]

The program is unique in its explicit conceptualization of its product – the graduate. A graduate of the School for Community Service and Public Affairs should have certain important personal characteristics:

> . . . self-awareness or self-knowledge sufficient to allow him to listen and observe attentively, to focus on the needs of others, and to take action based on an objective evaluation of goals, possibilities, and barriers
>
> . . . commitment to a social ethic which includes the rights and responsibilities of individuals and of the society; toughness and an ability to withstand stress

[8] The information in this section is drawn principally from unpublished materials compiled by the School of Community Service.

... autonomy, the ability to make independent decisions and take action on these decisions with a willingness to accept responsibility for the consequences
... empathy, the ability to feel with others and to correctly perceive the attitudes, values, feelings and life situations of others rather than projecting his own attitudes, etc.
... creativity and flexibility in assuming social roles and in working out new ways of approaching problem situations.

Core Competencies To Be Acquired

One core competency is the ability to approach tasks with a problem-solving orientation which includes the definition of the problem, the formulation of goals, the planning and taking of action, and the evaluation of the outcome of the action.

The ability to do a number of different things is necessary to carry out such a problem-solving process. To talk comfortably with a wide variety of people; to ask probing questions and wait for the answers; to organize, relate, and clearly and logically express ideas; and to participate comfortably in group situations — all these skills can be learned, in the main, through other than the traditional classroom experiences.

All students in the School should have some familiarity with action methods or specific strategies of intervention. Students should know that they exist, know how to learn more about them, and where to refer clients if necessary. A number of intervention strategies are too specialized or too highly technical for the undergraduate. Although the student would not have the ability to perform such strategies, he should have information about physical and psychological therapies and techniques, medical treatment, psychotherapy, and behavior modification; the use of computers in administration and research; and program budgeting, systems analysis, or cost-benefit analysis.

Field Work

Another unique aspect of the Oregon program is the explicit framework laid down for field work as an integral part of the training program. The concept that "student learning is generally enhanced through direct involvement and participation in activities which are significantly related to both occupational interests and academic orientation" is the rationale for the program.

On the premise that "field experience is of infinitely greater value to students and cooperating agencies and institutions alike when undertaken within the context of a total educational process," the field study course has been established.

Generally stated, the ultimate goal of field study is to provide well-organized, supervised, and coordinated field experience as part of an educational process by which students can more adequately prepare for the community and public service occupations. It is intended to complement, rather than substitute for, formal academic instruction and to

enhance educational development through direct contact and involvement with representative administrative and service agencies.

More specifically, it is intended that field study will:

- . . . provide for more effective integration of academic content relating to current and projected programs and activities in the community and public service field.
- . . . enable students to develop an awareness and understanding of the basic organization and administration of public and community agencies.
- . . . make students aware of particular characteristics of individual and community needs being met through the services and programs of community and public agencies.
- . . . enable students to evaluate their attitudes, values, and intellectual and emotional commitment to activities related to their career interests.
- . . . demonstrate to students the need for skill development by allowing them to observe the ways in which skills are utilized in actual work situations, and to enhance and test skill development through involvement.

Field study is offered and/or required on a graduated and progressive continuum ranging from short-term limited involvement with a service agency or observational experiences to "block placements" requiring full-time commitment for at least one academic term. As presently conceived, the observational experiences would be most likely to occur in relation to such courses as Career Analysis, Social Welfare Institutions, Criminology, and Delinquency.

Placements cover a wide range of activities and vary from as little as 4 hours per week over one term to as much as 20 hours per week over two, or perhaps even three, terms. Field study assignments may be made either following or prior to certain required course work; they may be undertaken concurrently with course work; or they may include on-site instructional sessions.

When placed for field study, the students are assigned roles or tasks which, insofar as possible, are consistent with the educational objectives of the university as well as the program objectives of the agency.

The responsibility of selection is shared by the university and the agency, with the needs and limitations of both being recognized. Adequate and accurate information regarding students to be placed is compiled and made available to those who make the judgments and decisions for selection. The university and the agency also share the responsibility for supervision of the student, with the university's representative assuming the primary responsibility for determining educational objectives. Consistent and fairly frequent contact between the student, a university representative, and a designated agency representative is necessary in order to ensure progress toward those objectives.

Provision is made for regular and systematic feedback, not only on

individual student effort but also with respect to general university program objectives. Final written evaluation of the individual student's performance is a university responsibility, although the judgment and impressions of those within the agency who are in the best position to observe and assess the performance are reflected. All the parties involved understand the criteria for evaluation at the outset of the placement. Program evaluation meetings are held at the end of extended placement periods and include appropriate administrative staff as well as those directly involved in supervision of students.

Significance for Corrections

The establishment of this unit at the University of Oregon provides a useful case history of how new models of higher education evolve. Outside pressures on the university stemmed from its involvement in a variety of federal programs. Equally important were the efforts of established faculty members inside the departments and schools of anthropology, education, law, political science, psychology, recreation, and sociology. The program is oriented toward undergraduates and provides a course of study leading to a degree.

Supporters have been able to overcome, at least in a power sense, any questions of academic respectability by creating a program which accomplishes their innovative goals yet at the same time draws upon a large amount of course work in existing departments. Concerns about assuring a liberal education are met by requiring students to take course work of the same kind and caliber that assure the liberal education of liberal arts graduates, while concerns about the watering down of psychology or sociology that might come if such courses were offered within the school are dealt with by insisting that such courses should be taken within the existing departments.

Problems remain — at least, if this program is to be a model for collaborative ventures between universities and agencies. A type of university bias exists despite the emphasis on at least some of the learning taking place "in the field." The bias is illustrated by the fact that the education is exclusively degree-oriented at the present time. This means that a number of training tasks defined by the needs of the agencies, such as pre-service or in-service training, have not yet been built into the structure of the school. However practical this might be, given the realities of the present political scene of the university, the training program appears to be somewhat one-way because the effort and energies expended benefit the university directly and the agency only indirectly.

Furthermore, only tentative steps have been taken to obtain a fit between external job entrance requirements and the undergraduate training. Unless such linkages are developed, the program will be spuriously vocational and will become ultimately as irrelevant and alienating as a traditional liberal arts program.

A related problem is that the innovations of the school are basically student-centered; they have as their purpose the creation of a new kind of student. Equally important may be faculty-centered innovations which serve the function of creating a new kind of university faculty member, one whose research and training orientations are changed to focus on interests outside the university.

Further, the program is aimed exclusively at undergraduates. Ultimately an adequate program of professional education in the human services generally, and corrections specifically, must provide for a complete flow of educational experiences, from the bottom to the top rungs of the professional positions in the field. This will require an integration of undergraduate and graduate education experiences, from the bottom (*i.e.,* below college level) to the top (*i.e.,* graduate level) rungs of the professional positions in the field.

The WICHE Summer Work-Study Program

A number of programs have evolved which make use of the students' summer vacations. One such is the Summer Work-Study Program of the Western Interstate Commission for Higher Education (WICHE). This program is designed to provide college students with an opportunity to spend 10 weeks gaining both academic and practical experience in the field of mental health. The program is offered at a dozen colleges and universities in the western states in cooperation with state mental health institutions and agencies.

Participating students spend their first and last weeks on the campus. The intervening eight weeks, which include continued academic assignments, are spent in one of the participating mental health agencies under the supervision of both academic faculty and agency professionals. The purpose of the program is described in a WICHE brochure as follows:

> The Summer Work-Study Program is designed to familiarize college students with careers in mental health. . . . Whether they eventually enter the field or not, program students will gain a greater understanding of the efforts and accomplishments being made on behalf of the increasingly large segment of our population who need help.
>
> The ultimate goal of the program is to help college students to make career decisions through observation of professional role models, study, and participation in agency programs. Preliminary evaluation of past Work-Study Programs indicates a large number of students have now become employed in the field.

Students are eligible for this program, generally, if they are attending a college or university in the West and meet other requirements laid down by the participating university. Application is made directly by the student to the college or university of his choice. If selected, the student receives a stipend which is paid by the agency having responsibility for the state's mental health program. (The faculty and institu-

tional instructional staff are paid by either the participating university or agency.)

There are a number of advantages to students who participate in such a program. The WICHE program permits a student to orient his formal education to a practical work situation. It provides him with an opportunity to investigate a particular field — through both work and study — without commitment to a full curriculum of studies.

In addition to academic credit, the student is paid for his summer's work, and he is under no obligation to follow the program with additional courses. Nor are unusual prerequisites required.

The participating universities and colleges also gain from the program. Through it, schools obtain first-hand knowledge of problems in the field which helps them to plan more adequate academic courses.

Significance for Corrections

The WICHE program cannot be evaluated solely on the basis of its many pedagogical merits. It has indeed influenced the thinking of many university educators in the West, and it has affected the evolution of the Oregon, USC, and VISTA programs described elsewhere in this report. The WICHE program can stand on its more direct merits, however.

1. It has served as an effective mechanism for recruiting talent into mental health fields. By attracting students fairly early in their academic career and by providing an experience in the "real" world, it enables students to develop and test ideas of the suitability of a mental health career. Very few programs offer any kind of similar opportunity for vocational experience. The absence of alternatives to the WICHE kind of experience gives the mental health field a rare edge in the increasingly competitive search for academic talents.

2. Unlike some other kinds of experience-oriented programs, the WICHE experience is organized in such a way that there is virtually no disruption of ongoing academic program. The student is not required to withdraw from his ordinary university program, as he is in VISTA or Peace Corps training. Furthermore, by utilizing the academic "free time" of the summer, the student is not asked to pay for his vocational experience by an extension of his education beyond the four years expected of the rest of the undergraduate population.

3. The WICHE program is educationally efficient in that it:

- ...extends the recruitment of students over a great number of colleges and universities. Thus, students from smaller institutions, which could not develop relatively specialized courses in areas relevant to mental health, have a chance to obtain an academic experience otherwise not available to them.
- ...provides a mechanism for pooling the always limited resources of the various colleges and universities of the region. Course work and experiences can be offered that are beyond the capabilities of the individual institutions. A useful byproduct of this process

has been the beginning of cross-institutional discussions concerning more effective ways of training manpower.

4. The WICHE program is organized so that it meshes with the network of degree requirements of the individual, in that academic credit is given for course work taken.

If there are limitations to the WICHE program, most are the result of options and decisions made to strengthen the program in one direction, while weakening it in another. For example, although the summer experience meshes with the formal degree requirements of most colleges by providing academic credit, it is not meshed with the content of an overall academic program. For the student, the WICHE experience is academically separate and encapsulated. It is not organized in such a way that the summer work flows neatly out of earlier academic work and is an important prior condition to something that happens later on the campus. On the other hand, provision of this kind of meshing would require enormous financial and political resources, since it would require coordination across a number of universities, agencies, and even state governments.

Chapter 6. SPECIALTY TRAINING MODELS

This chapter deals with training methods designed to meet the special needs of personnel going into programs which call for understanding and skills that are infrequently learned in the normal course of education. Work in the various antipoverty programs calls for such understanding and skills in abundance. So does work with juvenile delinquents.

VISTA Training Programs

On the total spectrum of antipoverty programs, VISTA (Volunteers in Service to America) occupies a rather inconspicuous place. Yet the need to train workers for VISTA has produced some of the most stimulating models of university education.

After initial selection, the Volunteers are assigned to a university for six weeks of training prior to work in one of the poverty programs. The nature of the work demands made on the Volunteers has forced the university trainers to create programs that prepare them for the kinds of situations they will encounter in assignment to a rural area, a small city, an urban ghetto, an Indian reservation, or a migrant labor camp.

Here is a clear statement of the purpose of one of these programs.

> The primary purpose of VISTA preparation is to provide highly qualified Volunteers to work in selected agencies and/or projects intended to assist low-income people, wherever they may be, in moving out of poverty into the mainstream of the socio-economic aspects of the community. Assumptions leading to this general purpose and essential to the subsequent development of the preparation program are these:
>
> 1. The attitudes and understandings of Volunteers toward self, people in poverty, and agencies involved in poverty programs will have to be and can be altered.
> 2. Basic to the foregoing is an understanding of the problem of human alienation wherein people in poverty have not participated in the socio-economic mainstream of the community in ways which society rewards, and further, they are not likely to succeed in their present situation by any acceptable standards.
> 3. Volunteers can develop, in operational terms, the belief that there is a place in the mainstream for the individuals with whom they will be working and that the vast majority of these individuals can learn and will want to perform remunerative work skills, enabling them to make a contribution to themselves and to society.
> 4. Volunteers can, through working with the poor, realize tremendous personal satisfactions.[1]

One distinctive aspect of VISTA training is the description of the desired end product. The Volunteer is actively and directly involved in working with the poor. He is assigned to a sponsoring agency, and it is his task to function within the structure of that sponsor. He should

[1] The material quoted here and summarized in the following paragraphs is drawn from unpublished mimeographed material produced by the VISTA Training Center at the University of Oregon, Eugene, Ore., 1967.

know, and use if needed, the various means of appeal and/or reconsideration available to him. He acts on behalf of the poor with thought, planning, consideration, empathy, and encouragement. He lives among the poor. He helps them meet their needs as seen by them; and, without imposing his desires, he points out new or different ways of doing things.

At the University of Oregon the schedule calls for two weeks at the Training Center and four weeks at a project site. Variations occur from time to time, depending on the complexity of the project assignment and the progress of the trainee.

The instruction schedule at Oregon operates Monday through Saturday, 9:00 to 12:00 and 1:30 to 5:00, and on Sundays depending on what seems appropriate at the time. In reality, the daily schedule operates from dawn till dark. An hour between breakfast and scheduled activities may be used for reading or other preparation for the day's activities. Similarly, if the schedule ends at 4:00, advantage is taken of this opportunity to do unscheduled tasks. And evening seminars are scheduled both at the Training Center and on the job.

As might be expected, the VISTA training programs have used a number of different kinds of training devices. In addition to the traditional lecture format, the program at the University of Oregon uses on-the-job training and small seminars. After two weeks of a campus-based program, those trainees who are ready for on-the-job training are assigned to projects to which they may ultimately be sent as VISTA Volunteers. There a field training officer, a project sponsor, and a regional program officer develop a series of training experiences for the Volunteers. Normally, the on-the-job program lasts from two to four weeks.

University of Oregon seminars were based on the following rationale, which was adapted from the guide prepared by the University of Maryland.

> Seminars are intended to integrate learning experiences, both formal and informal. To accomplish this, they are concerned with:
>
> 1. Providing for free discussion of the content presentations of the training cycle.
> 2. Providing opportunity to discuss, question, and formulate data and opinions about areas not covered in content presentations but deemed relevant to work with the poor and the problems of poverty.
> 3. Stimulating the trainee in the consideration of issues and their implications, including an understanding of the significance of the issue in relation to poverty, and the development of a personal position regarding the issue.
> 4. Providing the trainee an opportunity to engage in discussion so that he will develop ability to present his point of view regardless of acceptance or rejection, and willingness to listen to the opinions of others in the seminar and to discuss different views.
> 5. Encouraging readiness to:
>   a. Look at himself and the attitudes he has; to clarify these attitudes; and how these attitudes will support or make more difficult his work with the poor.
>   b. Talk about facts and feelings which are generally considered as not very comfortable, or not polite, and those which are usually considered of such delicacy as not to be raised.

c. Look at the functioning and behavior of self and of peers and to look in a critical and constructive manner without becoming destructive or hostile.

6. Generally setting out to talk of specifics in the training experience and to help the trainees learn generic principles which can guide work.
7. Discussing the role of the VISTA Volunteer, including: the problems of a Volunteer in a new role of acceptance by the poor, by agencies, and their staffs; the expectations of sponsors and the national poverty program; the discretion required in personal and public life.
8. Developing clarity about the concept of living among the poor, dealing in principles as well as specifics with the opportunities created by this. Much of the training deals with functioning in existing social structures whereas many opportunities for the Volunteer may exist in the so-called "off hours," living in the neighborhood.

Significance for Corrections

Perhaps one of the greatest contributions of the VISTA training lies in its organization around a special and specific training need. This introduces something unusual into the educational scene: a criterion by which the success of the program can be gauged. The traditional goal of creating a "liberally educated man" is so vague in behavioral terms that it is virtually impossible to demonstrate that one or another kind of curriculum produces a better education. In the VISTA program there has been a constant need to re-assess the nature of the training and adapt it to prepare the Volunteers more adequately. The focus of the program on the actual performance of students in the field introduces a whole new set of mechanisms for preparing and evaluating an educational program. In this case, the educator does not need to rely solely on some rational and idealized conception of what the trainee perhaps should look like.

The special training focus has been coupled with a number of new kinds of training procedures. The University of Oregon has experimented with the use of closed-circuit television and video tapes to provide feedback to trainee and discussion groups of actual performance in such roles as counselor or teacher. The University of Colorado has built its program "in the field." Virtually all of the training, even the academic components, is centered in a small and isolated community, much like those where the Volunteers will work with migrants, many miles from the university.[2]

The particular focus of the VISTA program creates an unusually successful setting for multidisciplinary cooperation. The problems of rural poverty to be encountered by many of the Volunteers demand knowledge from such fields as education, sociology, psychology, social work, anthropology, political science, and economics, among others.

There are, to be sure, some limits to VISTA as a general model of training. For many other kinds of training, VISTA's allotted six weeks

[2] See Howard Higman, Robert Hunter, and W. T. Adams, *The Monte Vista Story*, Institute of Behavioral Science, Bureau of Sociological Research (Boulder, Colo.: University of Colorado, 1965).

is too short a time. Furthermore, the VISTA training units within the various universities have been, quite deliberately, set up outside the academic structure of the institution. This means that the program itself does not fit into the degree-granting structure or the all-important academic departments. Most important, perhaps, is that, having been placed outside the rest of the university, the training unit itself vanishes when the federal grant ceases. While this is a sensible step if it can be presumed that at the same time the VISTA program itself will cease, nonetheless it would be regrettable if the expertise and methods developed in VISTA training were not transferred in some way to other kinds of educational and training programs.

Youth Opportunity Center Specialist Training Program University of Southern California

A distinctive training model which has emerged from the anti-poverty program was an institute developed at the University of Southern California to train workers for the Youth Opportunity Centers supported by the U.S. Department of Labor. Building upon the type of program developed earlier at the University of Colorado,[3] this unit developed a set of basic assumptions that mark the program as clearly different from the concept of education typical of the university degree-granting programs.

These assumptions are:

1. Training of anti-poverty workers should take place in a poverty area.
2. Faculty for anti-poverty training programs should include poverty specialists as well as those schooled in the basic social sciences.
3. Residents of poverty areas should be included on the faculty of such training programs as "co-teachers" or "basic instructors."
4. The format for the training should be informal and flexible so as to facilitate the maximum involvement of the trainees with the faculty and the representatives of poverty areas.
5. The training should induce "cultural shock"; that is, professional workers should undergo an emotional experience which would sensitize them to the problems, frustrations, fears, apprehensions, and aspirations of persons who may come from different social strata than their own.

The trainees in the program were managers, supervisors, and counselors from the State Department of Employment. Since it was believed that the most effective training occurs when all levels of an organization go through the same kind of training when new roles and tasks are being defined by the organization, the trainee group contained a mixture of individuals representing administrative and service levels of the organization.

The actual program lasted only two weeks. Its objectives were an exchange of information about the relationship of minority group status,

[3] See Howard Higman, "Colorado Training Programs" in *Targets for In-Service Training* (Washington: Joint Commission on Correctional Manpower and Training, 1968), pp. 29-35.

of inadequate education, and of delinquent background to poverty and youth unemployment.

Much was made in this program of the need for the trainees to examine the nature of the professional-client relationship and to ask themselves not so much what could be done *for* the client, but what could be done *with* the counselee. This gave great emphasis to the development of feedback cycles.

> There was continuous stress on the need for professionals working with the poor to evolve immediate feedback cycles so that two important things might be quickly ascertained. The first relates to feedback in order to find out if that which the professional is communicating is being "received" by the counselee in the same form as it was intended. The second deals with the need to obtain feedback at regular intervals so that the counselor can learn if his actions are perceived by the counselee as having any particular relevance in his life as he understands it to be.
>
> The evolvement of these feedback cycles between the professional and the person being helped is imperative if there is to be made any real headway in the improvement of services and relationships with low-income groups. The life experiences of the middle-class professional and the lower-class client are generally so disparate that there is little or no basis for truly effective communication between the two. Serious errors have been made and will continue to be made by well-intentioned professionals working with the poor simply because they do not fully understand the importance of the differences between these life experiences. All too often the middle-class professional attempts to apply middle-class sanctions or hold out middle-class carrots when these have no real meaning to the poor at all.[4]

Consistent with the assumption that the program should be located in a poverty area, the Watts area of Los Angeles was selected as the site. Watts, which is a demographic area within the city of Los Angeles, is characterized by: a predominantly Negro population and extremely high population density; high unemployment; higher than city-wide averages for crime, delinquency, and drug addiction; and depressed physical surroundings. The youth of the area reflect characteristically high drop-out tendencies and the generally low employment potential usually found in such areas. In general, the Watts community is representative of current plight of unemployed, undereducated, and poverty-stricken Negroes living within a metropolitan complex.

Selection of such a site gave training experience that would not be possible in more routine university training programs.

> The trainees were urged to make as many informal contacts in the neighborhood as possible, and time was allowed for this purpose. In small groups, the trainees were able to examine the community and talk with residents and merchants about what the Youth Opportunity Centers hope to accomplish. It was arranged for the trainees to eat lunch each day in the restaurants in the Watts area.

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[4] Rudy Sanfilippo and Robert Schasre, *Target: Youth Opportunity Center Specialists* (Los Angeles: University of Southern California Center for Training and Career Development, 1966), p. 9.

> Insofar as was practicable, every effort was made to see that the trainees "lived" the training experience. The constant exposure to those conditions which foster poverty, it was hoped, would cause the trainees to view the products of ghetto areas of the city in a different perspective when they came to the YOC's desperately seeking help.
>
> It was assumed that an increased understanding of the poor would assist the counselors in endeavoring to see that the way in which they respond to the poor might very well be evoking the defensiveness, defeatism, and the hostility which they commonly see in their offices.[5]

A more pungent statement of the possibilities of training on the scene is found elsewhere in the report of the program.

> The institute was designed in such a way so as to induce "cultural shock." That is, to expose the trainees to the realities of poverty in as vivid a fashion as possible. It was felt that a "gut-level" reaction to the problems, attributes, sensitivities, feelings, and aspirations of the poor was a basic prerequisite to ever being able to help them. The realities of poverty, it was felt, can only begin to be appreciated when trainees are exposed to "live" situations and concrete illustrations rather than academic abstractions.[6]

Another unique aspect of this program was its differentiation of a number of different kinds of faculty. These were:

1. Organizational representatives, drawn from community, government, and private organizations, who described new programs relevant to poverty programs in such wide-ranging areas as health, welfare, education, corrections, and community action. This material was included to familiarize trainees with other community service activities directed toward improving the conditions of the poor.

2. Counseling specialists, whose presentations dealt with the individual and group counseling techniques likely to be needed in working with disadvantaged youth. This material was included because counseling is the central technique used by the Department of Employment in assessing the needs of unemployed youth.

3. Social problems specialists, who provided information on the kinds of research being undertaken in various social problem fields, including intergroup relations, educational improvement attempts, youth training programs, and impediments to employment.

4. Poverty specialists, who were experts in the culture of poverty (and not merely familiar with the individual manifestations of the conditions which produce poverty). To be considered a poverty specialist, the individual had to have been involved in sustained firsthand personal relationships with the culture of poverty. The inclusion of such individuals provided both insight into the realities of poverty and an opportunity for trainees to realize how many of the pressing needs of the poor are not being met by existing agencies.

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[5] *Ibid.*, p. 11.

[6] *Ibid.*, p. 9.

5. "Basic instructors," who were drawn from the population of the poor and included mothers receiving Aid to Needy Children, adult unemployed men, young unwed mothers, male and female school dropouts, male and female high school graduates who could not find work, and male and female youths with delinquent histories. The function of these instructors (who were paid members of the staff) was to participate in interviews conducted by selected members of the professional faculty. These interviews were aimed at personalizing the implications of poverty.

Significance for Corrections

Several aspects of this institute merit close attention in an examination of various methods of bringing about effective university-agency collaboration in the field of corrections. The concept of training in a poverty area — *i.e.*, within the cultural setting of the client population — opens up a host of possibilities for new and different kinds of training experiences. The concept could be extended to much of what is considered academic activity, such as courses in criminology, social stratification, abnormal psychology, to mention but a few. Certainly there are academic precedents for such an extension; for example, archeological field work and field study in zoology or ornithology.

The functional differentiation of faculty leads to the use of individuals who would arbitrarily be excluded from most university training programs. Thus, many of the organizational representatives and the poverty specialists, who have much to contribute to this kind of training, might be rejected as not possessing the major academic credentials.

The specific inclusion of residents of the poverty area contributes greatly to the substance of the training program. It also raises the possibility of using such training slots as the entry point of an occupational training program for them in a human service area which would provide a way out of the poverty role.

In the evaluation of the institute, the trainees felt that they had learned much from the program. Many felt that they had gained an understanding of poverty which could never have been obtained from books or routine lectures.

However, there are some problems with this program as a model. The institute was placed in an ambiguous position, being neither part of the employment agency nor a permanent part of the university. Since it was not an ongoing part of the agency, there is concern, even among institute staff, about the long-range impact of the training program.

> The trainees were urged to constantly push upward their ideas so that top-level administration would have the best available information for policy formulation regarding the operation of the YOC's. All too often in formal organizations there is a tendency for information to flow mainly downward. A recurring theme of the institute was that all of the trainees, irrespective of their positions in the Departmental hierarchy, have a responsibility for pushing their ideas and concerns upward.[7]

[7] *Ibid.*, p. 33.

Continually pushing ideas upward would stand a better chance if the training program could be designed on a long-range and continuing basis so that it followed the trainee into the work experience.

The nature of the program was such that it could have only limited impact on the structure of the university. In part this comes about because of an explicit concern with a different kind of a learning process than one finds in degree programs of universities. Staff observed that:

> The methodology for this institute was much more interactional than that ordinarily found in academic programs. We feel there is a real distinction between traditional educational programs and training. The former has as its main objective the long-range preparation of the student through general conceptual means. Training, conversely, is concerned with the more immediate use to which information is to be put. To the degree that training, as we use the term, is designed to assist the practitioner to perform his immediate job more effectively, there is more concern on motivational forces as instruments of learning. All of our professional faculty and basic instructors were oriented toward assisting the trainees to become more effective practitioners right now.[8]

This distinction is obviously an important one, and universities must certainly alter their methods if they are to train people to function in roles such as employment counselor in a Youth Opportunity Center. One question can be raised, however: Why is not this concept of training included within the many kinds of learning experiences provided by the university?

Perhaps it can be put in another way: How can this kind of a program be carried out in such a way that it becomes standard fare for the university? The institute staff at the University of Southern California was concerned with satisfying an immediate training need. To do so, an organizational model was selected which gave them the freedom needed to get the job done but also isolated the program from the university to some degree.

In attempts to follow their lead, perhaps consideration should be given to ways in which to achieve the objectives of this institute and at the same time secure more of an impact on the university itself. One aspect of this will be an extension of the time period of the training, in order that more experience might be obtained. Another aspect would be to provide a direct link between this initial training program and the professional credential-granting courses. This would serve the dual function of improving the professional status of the trainee and of strengthening the bargaining position of the institute within the university.

Delinquency Control Institute
University of Southern California

The Delinquency Control Institute at the University of Southern California, as first conceptualized in a committee report in 1945, was the response of a group of academicians and practitioners to an increased

[8] *Ibid.*

awareness and concern about youth crime in the Los Angeles area. The result of their work was a training program for juvenile police officers and a few probation and parole officers that would prepare them for dealing effectively with problems of delinquent youth. The Institute has provided educational opportunities to approximately 40 juvenile officers a year in the theories and techniques of juvenile delinquency control.

One of the distinctive aspects of the program is that much of its financial support over the years has come from private sources. These have included: the Automobile Club of Southern California, the Hollywood Turf Club Associated Charities, the Farmers Insurance Group, and the Sears-Roebuck Foundation.[9]

The Institute's program has always focused on the police officer and his understanding of the variety of roles he must fill in the society. Beginning 20 years ago with study of the individual offender and his problems, the program has come to consider the total community context in which both the juvenile and the police officer live and work. The Institute therefore is concerned with the ways in which the police and delinquency control in general relate to the other institutions in the community system.

The Institute has accepted responsibility for communicating theory and techniques to law enforcement personnel. In the light of this commitment, it has set up these goals:

...To enhance communication among persons concerned with delinquency
...To improve administrative, training, and communication skills
...To build knowledge through research
...To disseminate knowledge on the causes, prevention and control of delinquency more effectively
...To clarify within the mind of the individual his understanding of his professional role
...To develop understanding of intra-agency relationships
...To provide information and consultation to the community[10]

The 12-week training course involves the students totally, since they spend 40 hours of classroom time each week together. Students have varied academic backgrounds. In the spring of 1966, 19 members of the class were high school graduates. Ten had had some college work; of these, five had bachelor's degrees and two had had some graduate work.[11]

The first two weeks of the program consists of an introduction to the studies. The next three weeks' work concentrates on delinquency in a changing society; the next three weeks on delinquency control (problem-solving aspects); and the last three on prevention and action. Each area is investigated from several perspectives, such as police functions, police-community relations, analysis and survey techniques, investigation and

[9] Jo Wallach, *Proposal for Expanded Delinquency Control Institute* (Los Angeles: University of Southern California, 1966), p. 14.

[10] *Ibid.*, p. 4.

[11] Jo Wallach, *Summary Report on the 42nd Class of the Delinquency Control Institute* (Los Angeles: University of Southern California, 1966), p. 10.

interrogation, psychiatric interpretation, and communications workshops. Both theoretical and practical aspects are considered, as well as the tasks of the individual and the group. Teaching techniques include formal lectures, workshops, group discussions, field trips, and individual projects. The aim of the Institute is to achieve a balance among these methods.

The formal curriculum has its base in the School of Public Administration. Specialized lectures are designed to add to the knowledge of a juvenile officer as he functions in all phases of his job. Field trips illustrate the operation of the court system, juvenile rehabilitation institutions, and community resources for juveniles. Each student is required to complete an individual project; for example, the formulation of a proposal for dealing with one aspect of juvenile problems in the student's own community, including the design and plan for implementation of the proposal.

A training technique which is highly valued by the students is the use of "basic instructors." These teenagers, who have been involved in police, probation, and/or parole agencies, are interviewed by a faculty member skilled in interviewing techniques. From listening to their comments, the students come much closer to understanding the image of police held by troublesome youth.

Faculty for the Institute are drawn from various academic departments and from non-university personnel from a variety of backgrounds who have expertise in the police field and/or ability to identify the special problems of the juvenile officer. Guest lecturers come from social agencies and from community programs dealing with juveniles.

Significance for Corrections

The Institute has several aspects of special significance for collaborative efforts by universities and the correctional field. For one thing, it demonstrates the possibility of using local funds, rather than federal grants, to develop at least some of the needed training programs. Operation of this program over a period of more than 20 years probably would not have been possible under federal sponsorship, in view of the relatively temporary, if not capricious, quality of federal support for training.

Second, the program demonstrates the possibility that law enforcement training (and presumably training for corrections) can be a legitimate part of university functioning. However, in common with other institutes, this program faces the problem of remaining at the periphery of the university and not providing any linking mechanism which enables an interested trainee to move from the institute to the central university program.

The New Careers Model

Out of the wider poverty program has emerged another model for training of great significance for correctional training — the New Careers program. As an anti-poverty measure, the New Careers concept is premised on the observation that the present-day poor face a situation unlike

that encountered by previous generations. The labor force of the United States has taken on a new shape. Declining demand for unskilled and semiskilled workers has resulted in a change in the position of the poor. Instead of receiving low pay for their labor, as was true earlier, many poor workers today are unable to find *any* employment. The young, particularly the black young, have been especially hard hit. Recent data suggest that in many ghetto areas, only 40 percent of the out-of-school youth in the 16-19 age group are employed.

The declining demand for unskilled work has been accompanied by a simultaneous increase in the employment of professional and technical workers, especially in the human services. One answer to the problem of poverty is to shift individuals from the sector of low demand (unskilled work) to a sector of high demand (professional work, including human services). However, entrance to most professional employment is only possible after long periods of formal education which include not only the four-year bachelor's degree but additional professional training at a university as well. And one of the important correlates of poverty is the absence of educational qualifications.

There is a choice of ways for "lifting" the poor into higher levels of education. One method is to try to expand the avenues for persons to move through the existing system. This is the basic purpose of programs to give poor children a "head start" in their entrance to school, programs to "enrich" the elementary school in poverty areas, programs to heighten the horizons of secondary experiences, and even a variety of methods to improve the chances for poor children to enter college.

But these attempts share one fault – each will take years to have any impact on a problem pressing on us *now*. Further, procedures aimed only at children cannot benefit immediately a very large population of adult poor.

Another method is to create new educational pathways, pathways which are linked to work roles: the New Careers proposal.[12] This proposal calls for a new set of steps whereby individuals can attain professional status. The educational steps are built by a sequence of work roles in which people start from relatively unskilled jobs in some human service field and progress by increasing the level of professional skill until full professional status is reached. Thus, a person may start as teacher aide and, with appropriate experience, training, and education, move up such steps as educational assistant, teacher apprentice (or intern), and finally to a certified teacher. Similar kinds of "ladders" have been proposed for such fields as social work, medicine, research, and corrections.

This model raises two issues of importance to the present discussion of correctional training. First, it calls for a radical change in the structure of higher education. Professional training traditionally has taken

[12] The rationale for the New Careers idea was stated by A. Pearl and F. Riessman in *New Careers for the Poor* (New York: Free Press, 1965) and more recently by Reissman and H. I. Popper in *Up from Poverty: New Career Ladders for Nonprofessionals* (New York: Harper, 1968).

place predominantly within some type of cloister. The New Careers program requires that the trainers leave the cloister and come to the actual work scene to provide the necessary training experience. Second, the New Careers program requires a restructuring of agency work roles. Completely new work roles have to be created, and a shift is necessary in the distribution of work within the agency and the profession.

Given the enormous changes required, it is not surprising that no full New Careers program has yet been implemented. As a general model, however, it merits further study by the correctional specialist. It may provide a general organizational umbrella under which fruitful kinds of joint university-agency training can be carried out. A New Careers center at a university could have many of the things which have been noted as essential. First of all, it would be linked to a set of degree-granting sequences, which will be necessary to provide the upward mobility implied in the New Careers concept. Moreover, it would be forced to break from the tradition of campus training to train within agency work settings. Finally, it would provide a graduated and integrated set of training experiences, later experiences building upon earlier ones, so that the student would achieve a sense of "going somewhere."

One of the first tests of the New Careers idea was carried out at the Center for Youth and Community Studies at Howard University in Washington, D. C. The goals of this program, which focused on a group of highly alienated youth, were:

> ...developing in socially deprived youth the necessary motivation, identity, values, and capabilities for maximal utilization of training for both holding down a job and beginning a potential career line in human and community service
>
> ...enabling these youth to learn the basic interpersonal skills, attitudes, and knowledge common to all human service occupations, so that they might work effectively in these areas
>
> ...developing flexibility of attitude, role, and viewpoint in these youth, so that they would not be artificially confined to a specific job but, with additional specialized training, could transfer easily from one type of human service position to another
>
> ...teaching specialized skills essential to at least one kind of human service
>
> ...developing meaningful jobs and career lines that are a permanent part of community institutions
>
> ...training and orienting professionals to work effectively with the aides.[13]

The program itself built in some additional considerations about the nature of alienated young people in contemporary society. Those young people who have grown up in the slums, particularly those who have failed repeatedly both at school and in the employment market, rarely perceive any possibility for ever succeeding in doing work which carries society's respect and in which they themselves can take pride. Their

[13] *Training for New Careers: The Community Apprentice Program* developed by the Center for Youth and Community Studies, Howard University, Washington, D. C., for the President's Committee on Juvenile Delinquency and Youth Crime, June, 1965.

experiences offer them little reason to feel that they have any control over their own lives, or a voice in the decisions made about them. In almost any kind of training program they will find it hard to believe that they can, or should, take on responsibility, that ". . . they, rather than authorities, should make decisions; and that they, rather than luck, can influence their success or failure." [14] They are more easily discouraged by small failures than most other people because very few of the problems in their lives have alternative solutions if, indeed, they are capable of being solved at all.

Therefore, it was felt that a primary emphasis of the training program should be to provide a mechanism for changing values and attitudes. A sense of belonging to a group with common problems, interests, and expectations; a sense of competence gained from meaningful work which is recognized and valued by both peers and supervisors; a feeling of making a useful contribution to the community, society, and one's personal future; gaining control over one's behavior through the mutual regulation and support of others; and the exercise of responsibility to people with and for whom one works — all these were values and attitudes to strive for.

Ability to make contact, to be concerned, and to be at ease with other people is essential for anyone who hopes to work successfully in human service. To know how to observe what is going on in human interrelationships and to understand the meaning of behavior within a particular context are other basic skills. In teaching these specific skills, enough theoretical background must be included so that the youth can both perform satisfactorily on the job and have a sound basis on which to advance professionally.

From the foregoing thoughts, the actual project was derived.

> . . . The Center for Youth and Community Studies of Howard University proposed that an exploratory demonstration project be attempted with the aim of developing training in the following three areas of human services: child care, recreation, and social research. This initial program attempted to focus on: (1) the receptivity of the community for such a program, (2) the orientation, training, and supervisory needs of such a program, (3) the ability of disadvantaged and deprived youth to be trained and function in these new careers, and (4) the potential of such a program for the selection and development of leadership indigenous to the deprived community.
>
> It was proposed that ten young people between the ages of 16 and 21 who resided in the Second Police Precinct of Washington, D. C., (an area consistently high on various indices of social disorganization) would be recruited for training. The program itself was to be based at the Baker's Dozen Community Health Center of Howard University's Center for Youth and Community Studies. Four of the youth would be trained to function in the recreation program of Baker's Dozen. They were to provide leadership to small groups of neighborhood school-age youngsters, organizing sports, supervising trips to local points of interest, and

[14] *Ibid.*, p. 5.

guiding other recreational-educational activities. Additionally, they were to have the responsibility for scheduling, record-keeping, and otherwise maintaining control over a group program.[15]

Significance for Corrections

The New Careers strategy is of fundamental importance to manpower planning in the field of corrections. It provides a basic model around which a comprehensive scheme of training, involving both campus and field experiences might be developed. Such a model would:

- Produce through career "ladders" or "routes," a set of procedures for linking education at precollege, undergraduate, and graduate levels into one overall program.
- Commit this education firmly to the task of preparation of human service manpower; that is, a program oriented to the training for New Careers is by definition vocational in nature.
- Become a mechanism for training of both the staff and the clientele of the corrections system, providing new avenues of upward mobility for both.
- Provide more flexibility for lateral movement into corrections from other human service occupations.
- Commit the corrections system to the solution of a wider set of problems, such as poverty and racism, which impinge on the lives of correctional clientele.

A New Careers program is not easy to create. Some of the difficulties include:

. . . committing the higher education system to the task of educating individuals at the lower career levels who do not meet current academic standards for university entrance.

. . . developing an explicit statement of differential occupational skill levels around which the notion of academic "ladders" or "routes" can be developed.

. . . obtaining the support of agencies in the creation of career ladders. One of the problems of many so-called New Careers programs is that they create only the entrance level positions, such as social work aides, but are not able to develop the step-by-step career ladders upon which the idea of New Careers is based.

. . . obtaining the sanction of the relevant professional groups for the lower-level positions of the career ladders. Many professional groups resist the creation of what appear to be "substandard" professionals.

. . . building up a new set of credentialing mechanisms which link a given level of career performance with a parallel level of academic experience.

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[15] *Ibid.*, p. 73. Further information on the operation of the New Careers programs at Howard University is given in the following section. For a related development within corrections, see *Offenders as a Correctional Manpower Resource* (Washington: Joint Commission on Correctional Manpower and Training, 1968).

Training Centers of the Office of Juvenile Delinquency and Youth Development

The importance of university involvement in training for correctional agencies has not been ignored in the spectrum of correctional activities sponsored by the federal government. Of the many attempts to stimulate greater university involvement, the Training Center concept developed by the Office of Juvenile Delinquency and Youth Development (in the U.S. Department of Health, Education, and Welfare) stands out, both because of its altogether splendid vision of what universities might offer and because the program has been a spectacular failure.

The birth of these training centers came with the quite revolutionary thinking that followed the establishment of the Office with the enactment of the Juvenile Delinquency Control Act of 1961. There were two major divisions in the organizational structure: one charged with the development of large scale "comprehensive" demonstration programs, the other responsible for developing training programs. Since much of the thinking of what should go into the training units was, in fact, influenced by the activities of the demonstration unit, the content of the demonstration programs must be reviewed briefly.

The original "comprehensive" community demonstration program was an attempt to encourage a bold and innovative approach to delinquency and related youth problems. The program was premised on the assumptions that: (a) many of these problems are a direct outgrowth of a way of life, especially in the cities (as evidenced by the high incidence of misbehavior in ghettos, for example), and (b) institutions and agencies within the cities are not organized effectively to deal with such problems. The demonstration programs undertook both to change the perception of what delinquency is and to organize new methods for counteracting or preventing it.

Immediately this created a great need for training programs, with the result that the training centers came to occupy a central position in the overall strategy of the Office. Not only did the universities possess the intellectual and training resources needed for traditional programs, but in this case they also contained the individuals most receptive and sympathetic to the essentially radical ideas of the Office. In turn, it was an explicit hope of the agency to create a greater involvement of the university in the pressing problems of communities.

Accordingly, in late 1961 and early 1962 the Office approached a number of universities with a request for plans for the establishment of training centers which it might fund. The centers were to be interdisciplinary in nature and were to provide a variety of short-term training programs. In order to assure the maximum possibility of carry-over of the Center after the lifetime of the federal grant, full support for the program had to be assured by university administrators. It was the explicit intent of the granting agency that the Center become an autonomous entity within the university structure, independent of established departments or professional schools.

The Office of Juvenile Delinquency founded 13 centers in all. Although their programs were diverse, the following abstracts of the activities of three centers, based on summary reports prepared for the Office, give some idea of the scope of training involvements undertaken.

Training Program of the Howard University Center for Youth and Community Studies

The purpose of this program was to develop further an interdisciplinary training center program for personnel working with problems of youth and juvenile delinquency. Specific emphasis was placed on the experimental training of disadvantaged youth for nonprofessional roles in human services and the development of curriculum for these programs, in line with the New Careers concept.

Out-of-school, out-of-work youth were trained as aides in a number of areas, including recreation, child care, social research, health, and education. Following a core program of general training and specialized training in the service area, the youth were permanently placed in various public and private organizations and agencies in Washington, D. C. Orientation to the use of aides was provided to many administrators and supervisors.

As an example of the aide program, 50 youth were trained to serve as school aides in elementary school classrooms in the Washington public school system. This represents not only the first aide program in the school system which utilized youth between the ages of 17 and 21 but also the only program with a systematic training component which guaranteed the aides at least one year's employment in the school system. In another program, 30 disadvantaged young people — half of them between the ages of 17 and 21 and the other half betwen 21 and 30 — were trained to become eligible for positions as counselors in the various institutions for dependent and delinquent children maintained by the District of Columbia Department of Public Welfare. A conference on "New Careers: Ways out of Poverty for Disadvantaged Youth" was held in April 1964, for the purpose of exchanging information and stimulating pertinent questions for further exploration and program development in the use of nonprofessional aides.

Other activities of the Center included a series of programs focusing on group counseling in a variety of settings: schools, community mental health, courts and correctional agencies, and probation. These programs were designed to familiarize the trainees with theoretical principles related to conduct of counseling groups and the establishment of group programs, and to test and develop training materials.

During the final project year, the Center conducted an intensive evaluation of the aide population already trained. An assessment was made of the social, employment, and educational history of each aide since training, with emphasis being placed on his income, promotions, level of employment, job content, attitude toward employment, educational and vocational aspirations, and social conduct in the community.

Additionally, a set of interdisciplinary curriculum materials was

developed for training lawyers and related professionals in the juvenile court process. Some of the main topics to be covered in these materials were: the youthful offender; police and the apprehension of youthful offenders; and the history, origins, and philosophy of the juvenile court.

Among the manuals and reports from the data collected in the training programs were: *Training for Community Mental Health Aides; Manual of Training of Neighborhood Workers; Report on Seminar for Youth Decision-Makers; Readings in Group Counseling with Adolescents;* and *Group Counseling Manual.*

University of Hawaii Training Center in Juvenile Delinquency and Youth Development

The purposes of the Hawaii Center were: to identify training needs in the state; to explore the feasibility of developing programs, projects, and curricula to meet these needs; and to effect a liaison between the Center and all public and private agencies in the state that render services to youth.

Activities of the Center included:

1. Assistance to the Committee on Institutions and Social Services of the State House of Representatives in an assessment of the existing youth correctional program in Hawaii and in the formulation of a well-articulated system to remedy existing defects in both program and organization. A reevaluation of the correctional program was conducted during the final grant year of the Center, and an institute and a series of short-term programs were held for correctional and related personnel.

2. A statewide work conference on "Juvenile Delinquency: Manpower, Training and Research Needs," with assistance provided to the participants in implementing the recommendations.

3. Regular meetings with agency administrators and supervisors to assist them in program development, implementation, and evaluation.

4. Help to the university in developing a study committee on the relations of interdisciplinary centers to the various university departments and cooperation with faculty members in developing new courses in delinquency and in laying the groundwork for a community college.

5. Development of curriculum materials both for agency personnel and for nonprofessional workers in youth service agencies and corrections. Police training programs were planned and a follow-up study of manpower needs developed for introduction into regular university departments.

University of Minnesota Training Center for Delinquency Prevention and Control

The purposes of the Minnesota Center were: to focus attention within the university on the needs of the city; to serve as a channel through which various resources of the university could be made available to the community in the various kinds of intervention required; to feed back to the appropriate university departments curriculum materials and insights that could contribute to the control of delinquency and related social problems; to serve as the center for information for correc-

tions and related social programs in the Upper Midwest; and to pioneer new training programs for key correctional personnel in the region.

Approximately 1,900 persons enrolled in the various training programs conducted by the Center, including teachers, correctional personnel, students, school counselors, and administrators of juvenile institutions. These training programs included:

1. Three new courses for undergraduates interested in the field of delinquency control in conjunction with the Sociology Department: Law and the Legal System for Correction and Social Workers; Institutional Treatment of Juvenile Delinquents – Problems and Practices; and Proseminar in Delinquency Control and Treatment.

2. An institute for teachers of Indian children. Designed to present information concerning Indian culture, the program was based on the assumption that knowing more about the Indian – his attitudes, values, problems, and strengths – would enable teachers to educate their Indian pupils more effectively.

3. A workshop for human service workers from the public and private social institutions involved in the city antipoverty program. The workshop was designed to give the workers an opportunity to get together to review the range of new opportunities available under the recently established program, and to provide a forum for exchanging ideas and observations on the impact, direction, and consequences of the antipoverty effort.

4. A curriculum demonstration project during the summer of 1964 for students randomly nominated by the school faculty, ranging from pre-kindergarten to fourth grade. The objectives of the project ranged from increasing vocabulary and raising the level of concept development to improving self-concept and extending and broadening interests. The objectives for curriculum development were to adjust the curriculum and procedures to meet the needs, levels, and characteristics of the learners in line with success experiences and maximum growth for each child and to experiment with less generally used procedures.

5. A seminar for residents of the target and buffer areas of the Minneapolis Youth Development Project hired to serve as the community development staff. The seminar was established for the purpose of orienting both these residents and the existing agency staff to the newly created subprofessional role and its implications for community organization.

Curriculum materials developed by the project included: *Indians in Literature—A Selected Annotated Bibliography for Children; Education and the Disadvantaged Child—A Book of Readings;* and *Curriculum Development Demonstration Project—Hall Elementary School.* In addition, ten tapes were produced for use in training teachers who work in slum schools.

Significance of the Centers for Corrections

Despite the good intentions of the Office of Juvenile Delinquency

and the extensive federal funding, the concept of the Training Center was not successful. With the closing off of the grant from the Office, virtually all the centers ceased to function. A number of factors contributed to this failure.

Most fundamental, perhaps, was a strategic error built into the legislation itself, that the training program of the Center was by definition precluded from degree-granting activities. The core set of educational activities undertaken by universities is oriented to satisfying requirements leading toward bachelor's, master's, and doctor's degrees. Writing a program which did not permit *any* degree training (however modified or innovative) resulted in a basic structural weakness of the centers. They became stepchildren in the harsh and competitive political world of the university that leaves little hope for the weak and unprotected. Clearly suspect because of their nondegree function, the centers were vulnerable to charges of "lowering standards" or performing tasks "inappropriate for the university," to which no suitable reply could be given. The error was a fatal one. Without a degree-granting function, there were few acceptable grounds on which the centers might have negotiated their continued existence.

The kinds of activities of the Center, both in social action and in training, were diametrically opposed to existing expectations of research and teaching which govern the flow of academic rewards. Whatever personal stimulation and satisfaction the individual faculty member might find in either the action or the training role, he would not be rewarded by the university. A training program which does not provide outlets whereby its staff can engage in "appropriate" university activities cannot survive.

The university as an institution felt threatened by the action and training activities of the centers. Heated reactions to social action laid bare the essentially conservative nature of the university. Moreover, the centers' involvement in such activities as housing or unemployment tended to upset existing systems of power in the ghettos, bringing an inevitable, and at times quite emotional, reaction from established elites.

The timid response of the universities to such pressures provides a valuable lesson. However stoutly the university may resist attempts by outside agents to alter basic functions of the institution, it is apparently willing to cave in to such pressures when the issue concerns an alien element like the Training Center which has been imposed on the university by another outside agent, the federal government.

The idea of interdisciplinary efforts might appear reasonable and sensible to those outside the university, but the notion is hazardous. Established departments are not likely to favor interdisciplinary work, especially if it involves social action; to them this represents a watering down of the principles laid down by the discipline, if not a blatant misuse of knowledge. More importantly, the basic organizational unit of the university is the subject-centered department. However much innovation may require moving outside existing departments, to do so none-

theless both removes the program from the organizational units which possess the basic power in university decision-making and makes it defenseless against retaliatory measures by the departments. Given the organizational structure of the university, an alternative procedure might be to locate such a program within an existing unit which is actually or potentially interdisciplinary in nature, such as a school of education or social work. One must quickly add that such schools also tend to resist innovation, but they may provide the necessary bureaucratic protection for interdisciplinary efforts, if such are desired.

WICHE Off-Campus Faculty Placement Programs

Three kinds of ideas were fused in the creation of the off-campus placement programs implemented by the Western Interstate Commission for Higher Education (WICHE). These ideas were:

1. Many of the pressing training needs are such that they can be dealt with only at the work site, not on the university campus.
2. Correctional institutions in geographically remote areas pose special problems for the planning of training programs.
3. Many of the smaller and more isolated states might be able to carry out more effective training by cooperation with other states in the West.

One answer to these problems, it was believed, was to bring the university to the correctional institution. Three methods were used.[16]

The Faculty Traveling Team

For those areas in the West which are geographically isolated and have few educational and correctional facilities, the traveling team was used. A small group of experts in various disciplines moved through the state, conducting seminars, providing consultation, stimulating continuing education, and developing local leadership for future programs. The demonstration team visited Alaska in the summer of 1964.

Summer Placement for Faculty

Because geographically isolated correctional institutions in the West had not generally established effective liaison with colleges and universities, little or no sharing of resources had developed. If the situation were to persist, these institutions would continue to experience chronic problems of understaffing, limited research, and ineffective communications.

To help solve these problems, WICHE planned an eight-week summer work-study program for faculty members. At isolated correctional institutions the university personnel performed research, assisted in staff development, and provided consultation. Through this exposure of faculty to the practice field, university curriculum content was also enhanced.

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[16] See William T. Adams and Frank Dell'Apa, *Demonstration Programs in Education for Work in Juvenile Corrections* (Boulder, Colo.: Western Insterstate Commission for Higher Education, 1966).

Faculty placements were made in the summer of 1964 at the Nevada Girls Training Center and the Wyoming Industrial Institute for Boys. In the summer of 1965, faculty members were placed at the Alaska Youth Conservation Camp, the Colorado Youth Services Division (State Department of Institutions), the Montana State Vocational School for Girls, the New Mexico Boys' School, and the Wyoming Girls' School.

Continuing Education Seminar

One major problem for specialized manpower is to keep abreast of the current knowledge and skills of the field. Through continuation education seminars for men and women employed in corrections, several goals were attained: (1) presentation of teaching materials for those currently employed; (2) stimulation of faculty through exposure to practitioners in clinical settings; (3) production of curricula for future use by other groups in the region; and (4) recruitment of students.

Seminars were held at the University of New Mexico, the University of Nevada, Oregon College of Education, Southern Colorado State College, the University of Utah, and the University of Wyoming. The content was interdisciplinary in nature, drawing mainly from the behavioral sciences. Appropriate use was made of nearby correctional institutions, probation and parole agencies, courts, and community delinquency prevention centers.

Significance for Corrections

Perhaps the major contribution of the WICHE off-campus faculty placement programs consists of its examination of the following principles.

1. Effective training in the field of corrections will result only if the universities recognize the need to diversify their training and education so that some of the training is organized at the work site. A number of strong pedagogical arguments can be developed to support such a position. For one, the constant exposure of the instructor to the reality of the world of his students permits him to select educational materials and experiences which fit the situation of the student. From the viewpoint of the student, the possibility of learning by doing resolves immediately the problem of the relevance of the training experience (not always in the desired direction, however).

2. Geographically remote institutions can be provided with on-site training programs at relatively low cost. It was not difficult to recruit instructional staff to participate in these programs (small wonder, considering the potential delights of the wilds of Alaska or the beaches of Hawaii).

3. The cooperative pooling of talent in a region increases the quality of program in any one state. Many of the smaller states, especially, have relatively limited training resources, since their higher education institutions are few in number and small in size. Moreover in such situations, the available faculty members are in danger of being "overexposed" after repeated appearances in training and conference sessions.

Part III: Directions for Cooperative Development of Corrections and Education

Chapter 7. TACTICAL AND STRATEGIC CONSIDERATIONS

Neither higher education nor corrections is a static enterprise. Each has felt — and has attempted, however feebly, to respond to — the variety of stresses imposed on it by contemporary life. Earlier chapters have sketched a number of attempts to alter the nature of higher education, usually in ways that would make the university more open or relevant to appropriate preparation for human service careers in general and the field of corrections in particular. These attempts provide some lessons about the tactics of bringing change to the university.

1. At the onset, concern must be given to the problem of academic respectability. Efforts to involve the university in social action training programs will almost certainly raise concerns as to whether the program "falls outside the purposes of the university," "lowers academic standards," or "dilutes educational content." While some of the earlier models demonstrate that problems of respectability can be solved, nonetheless the permanence of any program may depend on its ability to overcome such criticism. Ultimately, the strongest argument to be advanced in support of such efforts is pedagogical; that is, earning respect within the university may depend on demonstrating that the program does a better job of educating students.

2. Close attention must be given to the core activities of the university, and an attempt must be made to tie the training to such activities. Two of the most important are degree-related teaching and research. By and large, the major bureaucratic structures within the university will be built around these two functions. The danger of many innovative training programs, such as the training centers of the Office of Juvenile Delinquency or VISTA, is that they have been organized to fall almost entirely outside either the degree instruction or research sphere. Thus they have no permanent place and the departure of the grant monies means that the program vanishes from the campus. While the "outside" kinds of activities, such as short-term training, may be an integral part of the total program, consideration should be given to that kind of a plan which includes both research and degree-related instruction as well.

3. Some consideration similarly should be given to the core structures of the university, such as the departments and schools, in program planning. Power is the issue here, power in the sense of control over budgets, staff, and even courses.

The new school created at the University of Oregon, for example, represents one model whereby innovation is rendered more feasible by creating an autonomous unit within the university. While this unit can and does draw upon course offerings and staff from the more traditional

liberal arts departments, it can also create its own courses manned by its own personnel where necessary.

An alternative, of course, is to locate an innovative program within an existing structure. In some instances, there are important advantages in having the program placed inside an already established unit. Schools of education, for example, can ease the pathway both into education programs at the elementary, secondary, and junior college levels and also into the credentialing system for the field of education. If training programs are being constructed around the New Careers concept, where new kinds of credentials must be developed, these pathways can become of fundamental importance.

4. In the strategy of creating change, some consideration needs to be given to balancing the influence of both "outside" and "inside" influences. Many have observed that much of the initial impetus for change comes from external influences, as illustrated by the comments of Kerr.

> Changes initiated from the outside, as in the development of the federal grant university . . . are especially easy to accomplish. The individual faculty member seeking something new has, in turn, often found his greatest encouragement and leverage coming from the outside; the individual scholar is the inventor, the outside agency the force for innovation.[1]

Kerr notes the importance of selecting the right kind of structure inside the university whereby the outside influence will have its greatest impact.

> Much change also takes place largely outside collective faculty purview, outside the "veto groups" of the academic community — in the new department or institute, the new project, the new campus. The institute, in particular, has been as much the vehicle of innovation in recent years as the department has been the vault of tradition. Change comes more through spawning the new than reforming the old.[2]

Jencks has been extremely pointed in his view of the limitations of internal mechanisms of change.

> . . . On virtually every major university campus in America, there are professors who want to develop an interdisciplinary science program for non-scientists, start a small residential college where undergraduates will have a common curriculum and a chance to get to know a small group of faculty, or whatever. These ideas rarely get off the ground. Often they are vetoed by the rest of the faculty, or by one or another faculty committee. Even if an idea is accepted in principle, departments are not willing to release "their" members from conventional teaching duties to try something different. So the only way to break the lockstep is to get outside money to "pay off" the departments and allow them to hire temporary substitutes for those who are doing the unorthodox. Such money is extremely hard to get, especially when the majority of the faculty is unenthusiastic.

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[1] Clark Kerr, *The Uses of the University* (Cambridge: Harvard University Press, 1963), p. 101.

[2] *Ibid.*, p. 102.

> The inadequacies of the curriculum are, I think, a direct reflection of this paralysis of faculty government. At most universities, the faculty is too big to do anything efficiently and too conservative to let individual faculty members decide things for themselves. The Byzantine irrelevance of faculty politics cannot help but be mirrored in the curriculum. Men cling to lectures, examinations, credit hours, prerequisites, and the like not because they are good for the students but because they provide an excellent framework for adjudicating the competing interests of individual professors and departments. What usually passes for curriculum "reform" usually serves a political rather than a pedagogic purpose.[3]

To this last comment, especially, we need to add a brief note of caution. While innovation may require outside pressure, it cannot endure without inside sponsorship. Academic politics is a treacherous and tangled maze, with a wide range of traps laid for outsiders who try to intervene in university affairs. Negotiation of innovation is unthinkable without sponsorship of inside academics who possess both the prestige and organizational skills necessary to move any program. However "Byzantine" faculty politics may be, Jencks is wrong to call it irrelevant. On most campuses, no change can or will take place to any significant degree without a successful negotiation through some faculty political process.

Some Considerations of Strategy

Cooperative efforts between corrections and higher education require more than an analysis of the tactics of bringing change to the university. It is essential that close attention be given the explication of the set of goals within which a strategy of cooperation can evolve. Some of these goals might be:

More effective academic preparation of professionals, i.e., the development of university degree programs which produce individuals who fit into human service careers generally and into corrections specifically.

At the undergraduate level, this will require:

1. An elaboration of the present limited career lines within correctional and other human service agencies so that there can be a fit between an undergraduate program and the career structure. Jobs must exist for persons at the B.A. level which mesh with the training and qualifications they have attained. In this development, changes within the agency structure are a clear prerequisite for cooperative educational development. The hiring organizations must face the issue that, for education to develop and become relevant, occupational reference points which do not now exist must be developed.
2. The development of vocationally oriented undergraduate programs which link up with the developed occupational structure. This will require not only the specification of the job reference

[3] Christopher Jencks, "A New Breed of B.A.'s: Some Alternatives to Boredom and Unrest," *The New Republic,* CLIII (Oct. 23, 1965), 18-19.

points by the outside agencies, but also efforts by the university to analyze the skill requirements of the jobs and determine how training for these skills is to be provided by the university program.

At the graduate level, it will require a willingness on the part of the agencies to elaborate professional roles outside the social work model, since clearly the evidence is indicating that the graduate schools of social work cannot – and, more importantly, will not – satisfy the demand for graduate professionals. Once again, this change will require not simply the development of alternative programs within the universities in such areas as vocational rehabilitation or educational counseling but action on the part of the human service agencies which give these alternative programs full professional status. To be specific, a number of bureaucratic rules which give preference to the M.S.W. will have to be amended. This should be easy to do, since often there is little relationship between the training of the M.S.W. and the administrative roles where the preferential treatment exerts its most damaging effect.

Development of an elaborate New Careers program, which would provide occupational ladders (with a number of specific jobs arrayed in a linked and ascending order of skills and qualifications) which are explicitly linked to requisite educational and certification procedures inside the higher education establishment. Once again, collaboration is essential, since development of the occupational positions must be undertaken by the agencies, while higher education will of necessity at some point assume responsibility for the educational component.

Introduction of corrections material into supportive professional training. Most large public universities contain a number of professional schools to train individuals in areas that bear some actual or potential service relationship to corrections: education, law, criminology, recreation, business administration, medicine, and so on. One goal of cooperative development should be to provide corrections-relevant material and experiences in these professional training programs.

Improvement of current corrections and human service offerings to undergraduates in liberal arts programs. It is inconceivable that in the near future there will be a rejection of the typical liberal arts model of education for the undergraduate in the United States. Consequently, one goal of educational development is to provide, within the framework of student electives, an opportunity for undergraduates to study the correctional field, including actual field work experience.

Provision of mechanisms for involving higher education in pre-service and in-service training. A fundamental idea of any cooperative program is that higher education must take on a more external orientation – accepting the legitimacy of the idea that work and education can, and should, be linked together. In concrete terms this means that the higher education establishment must involve itself in the on-site

pre-service and in-service training of staff within the agency setting. On the part of the agency, this will require a specification of those aspects of the work experience which are appropriate for a training program integrated into a higher education format. On the part of higher education, where perhaps this kind of program will cause greater trauma, there will have to evolve:

1. A commitment to training "on the scene," with a consistent break with the cloistered model of education, and
2. A development of whole new methods and procedures of education, since the lecture-unit-examination system within which campus education is carried out no longer will be appropriate.

Provision of joint agency and educational mechanisms for the recruitment of talent into the correctional field. Given the structure and orientation of the present undergraduate and graduate curricula, there are very few opportunities for students to examine tentatively and explore correctional or other human service careers. One desirable outcome of any evolving cooperative effort between corrections and the academic world would be the establishment of academic and field experiences for those individuals who are at an exploratory stage of professional development. Linked to the New Careers idea, the potential targets for recruitment would include not only undergraduate and graduate students currently enrolled in the university (although it should appeal to them, certainly), but also individuals outside the academic structure, such as unemployed black adolescents, prison inmates, or middle-aged housewives.

Development of mechanisms for producing citizenry that is educated regarding correctional issues. One of the inherent problems of corrections today is that the corrections process has become isolated from other kinds of community processes. In part, this is a natural product of the occupational and institutional specialization that occurs in a society undergoing rapid technological growth. It stems also from some inherent assumptions of the criminal law and correctional process, assumptions which serve to isolate the offender from the rest of society. One of the tasks of a program of cooperative educational growth is to contribute toward the creation of a citizenry which has some knowledge and understanding of the corrections process. This may take the form of adding material to present undergraduate and graduate curricula. It also might include community education programs in which personnel from education and correctional agencies share the tasks of preparation and execution.

Chapter 8. A RANGE OF FEASIBLE MODELS

In considering models that might best enable corrections and higher education to reach the goals set forth in the previous chapter, we should start with the model which appears likely to achieve the widest range of goals and then go on to other models which would cover a narrower range.

The Comprehensive Model: A School for Human Service

The widest range of goals could be met by the creation of a school for human service within a public university. The comprehensive program would include five basic components.

1. Undergraduate programs consisting of:
   - ... a degree course in human service careers.
   - ... courses of instruction based on field work experience.
   - ... courses of instruction designed to serve the function of educating students about corrections and of recruiting students into correctional careers.
2. Graduate programs which would prepare individuals for careers in corrections-relevant professions or would provide corrections-relevant materials in supportive professional training programs.
3. An external training unit, which would carry out:
   - ... in-service and pre-service training within human service agencies.
   - ... community education programs in such human service areas as corrections.
4. A New Careers program which would serve as a guide for the integration of the external training and the university-centered educational experiences.
5. A research unit, which would provide:
   - ... an organization within which the research interests of the faculty of the school could be carried out and encouraged. Given the orientation of the university to scholarship and research, the strength of this unit may be critical in the maintenance of academic respectability for the school.
   - ... constant assessment and evaluation of the training programs of the school.

A number of practical problems arise with regard to the implementation of this model. For one, it calls for the establishment of new courses within the structure of course offerings of the university. Most universities have established a complex set of interlocking department and university curriculum committees which have erected formidable barriers for any rapid change in the curriculum. It is not uncommon for the process of introducing a new course to take two years *after* the

details of the course have been written, in order to work through the various committees and to be published in the university bulletin or catalogue. Since it would obviously take some time to prepare a course purpose outline and syllabus, it can be seen that rapid introduction of new courses within the existing rules may be virtually impossible. Most universities have some mechanisms for more rapid movement which are available to those "inside" sponsorship.

A second problem arises from the even more complex decision process involved in establishing new degree programs. The process is analogous to that of introducing new courses, but the difficulties are intensified. In this instance it will be necessary to deal with an interlocking set of faculty and administrative committees, since the creation of a new degree usually requires the creation of a new administrative unit – explicitly so in the case of the proposed School for Human Service. Thus, the university not only must deal with the substantive issue of the development of some kind of educational content in the human service fields but also with the set of issues that arise with respect to administration and power when a new unit is being created. In particular, a School for Human Service would have to justify and clarify its domain of activity as separate (and legitimately separate) from, say, a school of social work or of education. When the proposed school is explicitly concerned with graduate education, the separateness may be hard to defend.

Once again the complexity of tasks involved in the initiation of a new school can be emphasized. For example, it may be that a set of steps which requires two or three years may have to be undertaken in order to create the new school, *at which time* – that is, once the school is authorized to give degrees – the staff of the school may approach the curriculum committees with specific proposals for course offerings within the school.

Into all these problems we must stir the obvious academic unpopularity of human service and vocationally oriented programs. The defenders of the liberal arts tradition – and they constitute a strong segment of any university community – will not hesitate to attack such proposals directly and will be expert in the use of committees to obstruct what they regard as dangerous ideas. It must be remembered too that the tenure, committee, and academic office structure operates to give greatest political power to older academics who have the greatest stake in the liberal arts tradition.

Alternatives to the Comprehensive Model

It can be assumed from the onset, then, that the creation of a School for Human Service (or something analogous) is not a real possibility in the immediate future for most universities. The question then becomes: What are the alternatives? What kinds of other models might be considered which permit the creation of an academic beachhead within

the university, from which it is possible to move to more enduring changes? We can suggest here four such alternative models.

A New Careers Training Center

Given the weight of a growing body of federal legislation and developments within many universities, one alternative is to create a center around the New Careers concept. As a beachhead model, such a center offers a number of advantages of which two are paramount in the strategy of university change. First, the New Careers approach is inherently vocational, so that educational experiences are linked to work. Within the set of assumptions of New Careers is a set of ideas which require the gearing of learning to the work situation, ideas which are of equal potency for education at the undergraduate and graduate level and for the entry-level aide position. As such, this conception provides a mechanism for altering the current insulated method of academic education.

Second, the notion of occupational "ladders" or steps would compel a New Careers center to be concerned with education at the graduate, undergraduate, and lower levels. The educational comprehensiveness of the idea, if properly implemented, would lead to a comprehensive program of education and training.

The center itself could be organized in several different ways, depending on the present structure of the university and some assumptions about where it might be able to move in the future. Wherever it is located — within a department or a professional school, as a new interdisciplinary entity, or in a continuing education division — the program must have access to mechanisms for gaining academic credit, both at the undergraduate and graduate level, for its training programs.

If the center is created with federal funds, some attention must be given at the start to the question of continuation beyond the grant period. Thus the staff may elect initially to be located within a professional school rather than in a new interdisciplinary center, perhaps even with joint appointments (and shared funding of positions) in order to ease the later transition from "soft" (grant) to "hard" funding.

A Corrections Training Center

Another alternative is to create a center within the university devoted explicitly to the task of training persons in the correctional field. Such a center could be developed to provide: (1) short-term training, both in the field and on campus; and (2) degree-related training, at both graduate and undergraduate levels.

In this case, an interdisciplinary framework would be appropriate in order to permit the coordination of training across a wide number of fields. The short-term training of parole officers, for example, might deal with such topics as legal rights regarding revocation, educational needs of parolees, group counseling techniques in field settings, or other kinds of experiences which require movement across such disciplines as

law, education, social work, sociology, psychology, or vocational rehabilitation, to name but a few.

From everything that has been said before, it should be clear that we are making much of the ability of any program to involve itself in degree programs. In this case, the enduring impact of the unit will depend on its ability to integrate itself into degree-oriented programs. This might be done within a two-step strategy:

1. As a start, provide funds and staff to expand course and field work offerings within the existing departmental and course structures.
2. Later, move into more direct involvement by expanding graduate and undergraduate degree programs, perhaps by creating a new administrative unit (such as a School for Human Service), with the corrections center providing funds and staff for the necessary planning and development.

Research should be part of any such corrections center. This will provide the opportunity for research activity necessary for the maintenance of academic reputations. In addition, careful research done on the impact of the training program can serve as a guide for further development.

Special Training Projects

Within an overall program of correctional training and development, room must be provided for various kinds of special training projects which do not necessarily contain the strategic plans of the programs discussed up to this point. A federal agency concerned with the expansion of correctional training and manpower might want to consider some of the following kinds of training.

In degree-connected areas:

1. Fellowships in existing social work, counseling, vocational rehabilitation, or other corrections-relevant professional programs to enable students to specialize in corrections.
2. Sponsorship of attempts to develop a new major or interdisciplinary specialization in corrections at either the undergraduate or the graduate level.
3. Support for work-study programs in the summer or during the regular academic year, especially programs which would make consistent attempts to integrate the off-campus activity with on-campus academic experiences.
4. Experiments which would bring the corrections system into more direct contact with campus experiences; for example, a course constructed around the use of various individuals from correctional agencies (including inmates) as "basic instructors" to expand the traditional classroom teaching of criminology or corrections.
5. Short-term summer seminars inside correctional agencies for

graduate students in established academic disciplines, especially their research aspects.

In non-degree areas:

1. Short-term pre-service training of individuals to move into entry-level aide positions in correctional agencies. Modeled on the VISTA and "basic instructor" plan, programs might be devised, for example, for parole officers (or parole officer aides in a New Careers program) to orient trainees to their jobs, the clientele, and the communities within which they will work.
2. A short-term seminar to introduce correctional administrators to the New Careers concept.
3. Joint on-campus and on-site seminars in the methods and procedures of evaluating and assessing the impact of programs.

Curriculum Development and Research

A final component of any manpower training and development program should provide for curriculum development and research. Within the wide range of training and educational endeavors outlined here, enormous needs for both curriculum materials and research become obvious. New graduate and undergraduate programs and the use of basic instructors require the development of a range of curriculum materials as well as curriculum decisions. Even without this, the rapid change within the correctional clientele (as these groups come to reflect the issues of blackness and youth, for example, that are causing such concern throughout the country) would require extensive curriculum development. Research will obviously be a necessary component of such curricular planning, so that these activities must be seen as complementary. One specific area where there perhaps should fold-over on one another is curriculum development in evaluation research, where concrete illustrations of assessment programs could be built into a program of research training.

Education for a More Effective Corrections

We have argued in these pages that much is at stake for the future of corrections in the evolution occurring in higher education. From what has been said, it is apparent that much of the important action takes place at the fringe of academia. As a consequence, many of the programs described here, and the proposals derived from them, have an appearance of academic nonrespectability. It is without a doubt true that the respectability problem is one of many factors that gives many university training programs a short lifetime.

Yet the issues raised at the fringes of academia are important. Corrections shares a stake in the problems that lie in the development of new training and credentialing mechanisms within higher education. In a world of rapid technological advance, a man's work is an increasing determinant of his identity. A consequent fact of modern

life is that stable and meaningful work roles require movement through some educational track and process.

Existing educational models, especially the liberal arts model, cannot satisfy the requirements for trained and educated manpower for society generally and the field of corrections specifically. However important a liberal arts experience may be, and the importance is granted, the techniques of education derived from this model must be modified if we are to meet the complex demands of human service agencies, demands which span wide levels of competence and specificity of training tasks.

Two implications follow from this. One, alternative training and educational models must be developed; and two, we must carry out systematic experiments which carefully evaluate these alternatives. It would be sheer folly to continue the present practice of nonaccountable education, where virtually no systematic attempt is made to assess the extent to which an educational program reaches an explicit set of learning goals.

While it would be a mistake to fix too early on any one solution, it has been urged here that we not avoid the issue of vocationalism in higher education. Latent in these pages is a pedagogical theory, with extensive roots in the philosophy of education, that people learn best by doing. The motto of "work first, training later" should not be seen as applying only to the entry-level aides of a New Careers program. It is an idea deserving much closer attention at all levels of the academic enterprise.

For corrections, the result should be an expansion of new (as well as some old) training and education programs to move people into slots at all levels of correctional activity. If we can couple these changes with some needed changes in the practice and theory of corrections, perhaps we might begin to develop systems which do in fact correct, to replace our present programs that are designed, it seems, to produce social cripples.

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"The University and Corrections: Potential for Collaborative Relationships" is summarized. See abstract of VT 008 852 (also in this issue) which is the complete study. (JK)

VT 008 853

JOINT COMMISSION ON CORRECTIONAL MANPOWER & TRAINING
1522 K STREET, N. W. / WASHINGTON, D. C. 20005 / (202) 223-2450

CORRECTIONAL BRIEFINGS

This is one of a series of reports summarizing information gathered by the Joint Commission through original research, consultants' papers and seminar discussions. The Joint Commission is studying problems affecting recruitment, training and education of personnel in the field of correctional rehabilitation.

ED 042060

Number 10 *January, 1969*

The University and Corrections:
Potential for Collaborative Relationships

For many years, correctional leaders have complained that: too few universities are interested in offering courses which would prepare students for work in corrections; they are even less interested in supplying short-term training to update the skills of persons already employed in corrections; and the research which universities are willing to sponsor often is not very helpful to correctional operations.

Critics of corrections, on the other hand, maintain that the field has not been willing to set forth in very clear terms just what it is that the universities should be providing in the way of courses and in-service training. Nor has corrections set up its job structure in such a way that a student enrolled in a university course designed to prepare for corrections can have much idea of what opportunities for employment and promotion will be available to him on graduation.

The problem now becomes: How can corrections and the university develop collaborative relationships which will be of benefit to both? Some answers are suggested by Kenneth Polk, associate professor of sociology at the University of Oregon, in a consultant's paper prepared for the Joint Commission on Correctional Manpower and Training.

Nearly 50 colleges and universities have developed programs in criminology which are designed to prepare students for work in the field. But, as a previous publication of the Joint Commission has shown, a good many of these programs have had hard sledding on their own campuses.* Polk believes that the liberal arts tradition, which insists that the major responsibility of higher education is to produce the Educated Man and not to prepare students for specific vocations, is responsible in part for opposition to programs which it regards as "vocational" and thus "not appropriate for the university."

VT008853

Polk feels that factors now evident in the university — and in corrections too — will make it somewhat easier to develop collaboration between academia and the world of work. Among these factors are current student demands for "relevance" in the college curriculum, higher proportions of young people attending colleges and universities, and the strong tradition of public service in the public universities to which most of these youth are bound.

*Criminology and Corrections Programs: A Study of the Issues (Washington: Joint Commission on Correctional Manpower and Training, 1968).

Climate Improving For Collaborative Efforts By Universities - Corrections

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Demand For "Relevance" In Education Seen Spurring Cooperation

Dr. Polk examines a number of programs which have already been set up in universities and colleges to provide closer links between higher education and work to see what clues they offer for ways in which corrections and the university can collaborate.

Among the programs analyzed are the Antioch College cooperative program, where students work one term and study the next; the Enfield College of Technology (England) "sandwich" program, in which a year or more of employment is "sandwiched" between years of study on campus; and the undergraduate social welfare program of San Diego State College which uses the final two years of undergraduate study to develop a social work program that includes considerable field work. Each of these programs is directed toward a degree and not toward manpower needs of outside agencies.

Oregon Program Reduces Conflict Between School and Agency

The University of Oregon's School for Community Service and Public Affairs considers agency needs in student field work, since "the responsibility of selection is shared by the university and the agency, with the needs and limitations of both being recognized," Professor Polk says. In other respects, too, there are built-in features which minimize conflict between academic and "vocational" camps on campus.

Also examined by Professor Polk are the Western Interstate Commission for Higher Education (WICHE) Summer Work-Study Program which provides students with eight weeks of summer work experience in the field of mental health, and the various special purpose programs which have been developed by universities to train counselors in youth opportunity centers, police juvenile officers, teachers of minority group children and VISTA volunteers. Both types of programs, while having strong points, have drawbacks which are discussed in the paper.

The "New Careers" programs, which train youth for work as case aides and the like and then offer them progressively advanced training and work experience, also offer clues for collaboration between universities and corrections, Polk believes.

Close analysis of these and other programs suggests development of certain tactical and strategic considerations necessary to bring about change within the university.

First, any new program must provide academic respectability. "Ultimately," says Polk, "the strongest argument to be advanced in support of such efforts is pedagogical; that is, earning respect within the university may depend on demonstrating that the program does a better job of educating students."

Secondly, the new program must give close attention to the core activities of the university, such as degree-related teaching, and research.

Consideration also must be given to the core structure of the university — the various departments and schools. In these structures lies power in the sense of control over budgets, staff and courses. A decision must be made whether to locate within an existing department or school or outside it.

Goals Must Be Clearly Stated If Cooperation Is To Be Achieved

"Cooperative efforts between corrections and higher education require more than an analysis of the tactics of bringing change to the university. It is essential that close attention be given to the explication of the set of goals within which a strategy of cooperation can evolve," Professor Polk declares.

Some of these goals are:

- More effective academic preparation of professionals. On the undergraduate level this will require "an elaboration of the present limited career lines" within corrections and "the development of vocationally oriented undergraduate programs which link up with the developed occupational structure." On the graduate level, corrections will have to "elaborate professional roles outside the social work model," as graduate schools of social work cannot hope to meet the educational needs of all the human service fields.
- Development of an elaborate New Careers program. This would "provide occupational ladders (with a number of specific jobs arrayed in an ascending order of skills and qualifications) which are explicitly linked to requisite educational and certification procedures inside the higher education establishment."
  (See Joint Commission publication "Offenders as a Correctional Manpower Resource.")
- Introduction of corrections material into training for professions whose members are involved in corrections. This would entail cooperation with schools of law, medicine, education, criminology, recreation, public administration, etc.
- Improvement of current corrections and human service offerings to undergraduates in liberal arts courses.
- Provision of mechanisms for involving higher education in pre-service and in-service training. The university must work with corrections to develop relevant programs such as "on the scene" training and, if necessary, whole new methods of delivering these programs.
- Provision of joint agency and educational mechanisms for the recruitment of talent into the correctional field.
- Development of ways to educate the citizenry regarding correctional issues.

Consultant Offers Comprehensive Model

With these considerations in mind, Dr. Polk creates a "comprehensive model: a school for human service."

The model would contain: undergraduate programs consisting of a degree course in human service careers, courses in instruction based on field experience, and courses designed to educate students about and recruit them into corrections; graduate programs to prepare students for careers in corrections, or at least to educate them about corrections; an external training unit to carry out pre-service and in-service training within human service agencies; a New Careers orientation to serve as a guide to integrating on-site training with the university experience; and a research unit to study the field of corrections and assess the effectiveness of the university's offerings in that field.

As full adoption of the comprehensive model is unlikely in the near future, Polk puts forth several alternatives. One alternative is a New Careers Training Center, especially feasible when considering recently enacted federal legislation and its effects upon the university. Since the New Careers rationale is inherently vocational, such a center would link education and work experience, as well as varying levels of education implicit in the occupational ladders approach.

Another alternative would be a Corrections Training Center developed for short-term training of persons already employed in corrections, as well as

undergraduate and graduate degree-oriented training for students. However, cautions Dr. Polk, "the enduring impact of the unit will depend on its ability to integrate itself into degree-oriented programs." Such a center should provide "the outlet for research activity necessary for the maintenance of academic reputations," he adds.

Other Alternatives Include Special Training Programs

Other alternatives include special training programs, which would be of prime importance to federal agencies concerned with the expansion of correctional training and better utilization of manpower. Such programs could include: fellowships in existing social work, counseling, vocational rehabilitation, and other corrections-relevant programs; sponsorship of attempts to develop a new major or interdisciplinary specialization in corrections; support for work-study programs which would link field experience to campus experience; experiments in bringing corrections to the campus, such as using offenders and ex-offenders as "basic instructors" and short-term summer seminars inside correctional agencies for graduate students in established academic disciplines.

Existing educational models, Polk sums up, cannot satisfy the requirements for trained and educated manpower for society in general and corrections in particular. Human services, including corrections, require skills which span wide levels of competence, which cannot be produced in sufficient quantity through present training programs.

Hence alternative training and educational models must be developed and systematic experiments must be conducted to evaluate the effectiveness of these alternatives. "It would be sheer folly," Polk states "to continue the present practice of nonaccountable education, where virtually no systematic attempt is made to assess the extent to which an educational program reaches an explicit set of learning goals."

Polk urges renewed attention to established pedagogical theory that people learn best by doing. "The motto of 'work first, training later' should not be seen as applying only to the entry-level aides of a New Careers program. It is an idea deserving much closer attention at all levels of the academic enterprise." For corrections, this should result in training and educational programs which "move people into slots at all levels of correctional activity. If we can couple these changes with some needed changes in the practice and theory of corrections, perhaps we might begin to develop systems which do in fact correct."

The consultant's paper represents the views of the author and not necessarily those of the Joint Commission.
The full text of the paper on which this "Briefing" is based is available from the Joint Commission at a cost of $1.00 per copy.

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Offenders as a Correctional Manpower Resource. Summary. Correctional Briefings Number Four.

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"Offenders As a Correctional Manpower Resource" is summarized. See abstract of ED 029 100 or VT 007 770 (also in this issue) which is the complete study. (JK)

VT 008 867

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CORRECTIONAL BRIEFINGS

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Number Four

Offenders as a Correctional Manpower Resource

New Careers Training

Some rehabilitated offenders can be used effectively to prevent others from starting on or continuing a life of crime, according to a panel of experts. The idea is to use the product of the problem to help others with the same problem (as in Alcoholics Anonymous).

The concept obviously is not new. "Each one teach one" was a cornerstone of the method developed by Dr. Frank Laubach to help reduce illiteracy. A related concept is that of developing new kinds of permanent jobs—new careers—for the poor.

The New Careers program in corrections is "to provide a new career for a person who usually has had no designed career other than one in crime."

Since 1963 the idea has been used successfully by several of the nation's correctional institutions. Recently the Joint Commission on Correctional Manpower and Training, Inc., convened a seminar to discuss the potential of this program in the correctional rehabilitation field.

Personnel for the program in corrections itself is drawn from the ranks of offenders and ex-offenders (anyone who has been previously discharged, paroled, or placed on probation and is now free from legal supervision).

Initial training takes place in many areas of corrections—from bed-checks to interviewing and advising. While novices learn correctional procedures, they also are learning basic scientific techniques—research, report writing, statistics—enabling them to apply their new skills to areas other than correctional rehabilitation.

Three Inherent Problems

Assuming that New Careers in corrections eventually will become effective, and accepted, there will be three basic inherent problems that must be overcome.

First, there will be an attempt to isolate New Careers from the general correctional routine. If the program is to succeed, it must involve everyone. Isolation must lead to defeat. It is a program of total involvement and dedication.

Second, there will be sloppy and inadequate preparation for the program. The chosen members of the new staff, if selected by administration, will be comprised of the glibbest individuals, and those most resembling the professionals themselves. This, too, will lead to failure, and the cry of "I told you it wouldn't work."

Third, and most important, when the idea really catches on, pressure will be brought to bear to accept the whole package at once, so some other community doesn't get there first.

The program will be pitched as a cure-all by those who see it without actually working with it.

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VT008087

Demonstrated Uses For The New Careerist

There are many present and potential uses of the New Careerist in corrections.

Expediting and Development Functions, including:

* Training workshops for judges, probation officers, parole agents, parole board members, and attorneys.
* Preparation of resource material for in-service training programs, (San Quentin inmates produced a training film for California's forestry camp correctional programs).
* Staffing openings in the field of research and innovation.
* Staffing data-processing and computer-programming components of information systems.
* As research assistants. At the New York State Division for Youth, offenders are used to interview other youths.
* As liaisons between police and family, peer group, and community.
* Working to establish community action programs such as the Neighborhood Youth Corps projects. It has been shown that ex-offenders work exceptionally well at the grassroots level.

Program Operating Functions, including:

* Work supervision, custodial duties, reporting, data-gathering—all done jointly by inmates and staff.
* Parole agents and parolee work together. In one instance, they helped move parolee residents of a half-way house into the community.
* Many kinds of staff responsibilities are being assumed by ex-offenders in camp and urban facilities of the rehabilitation programs of the New York State Division for Youth. Says its director, Milton Luger: "We want them part of our rehabilitation program efforts mainly because we need them and not because we feel sorry for them or want to help them."

Effects Of The New Careers Program

New Careers attacks the two-sided nature of crime. As LaMar T. Empey, chairman of the Department of Sociology and Anthropology, University of Southern California, explains:

"On one hand it proposes to make the offender the target of change, by placing him in the role of reformer . . . If an offender is serious in his attempts to reform others, he must automatically accept the common purpose of the reformation process and grant prestige to those who succeed in it . . . On the other hand, the New Careers movement implies an attack upon those characteristics in correctional organizations which have made rehabilitation so difficult by forcing inmates and staff into separate castes so that the task of having them develop and share common values, norms, and points of view has been made virtually impossible."

Dr. Empey described how the program attacks stigmatization.

"Removing the offender (from society) for purposes of 'treatment' has the same social function as removing him for the purposes of punishment . . . Even though we might define the offender as 'sick' rather than 'wicked,' we may do little to discourage the notion that he is permanently disabled, whether in his mind, in the minds of correctional personnel, or in the minds of society," he said.

"Rather than being a source of degradation and shame, the offender's knowledge about crime and its problems would now, through New Careers, become a valuable source of information and a means of achieving dignity as a resource person," Dr. Empey explained.

American corrections is based on two conflicting theories. One advocates that all persons who violate a specific law should receive identical punishments, regardless of any specific factors, such as age, sanity, etc. The motive is deterrence. The more recent theory is that the entire set of circumstances of the offcnse, and the entire character of the offender are to

be taken into account before punishment, if any, is meted out. As Dr. Donald R. Cressey, professor of sociology, University of California, Santa Barbara pointed out:

"Correctional workers are called upon to play a game they cannot win. They are to ensure that punishments are uniformly imposed on those who violate the law . . . but they also are to adjust the punishments to individual cases . . . In correctional work change has been slow and sporadic despite conflicting principles which seem to make anything possible. Ambivalence and conflict in social values and penal theories have produced correctional organizations inadvertantly designed to resist change."

Even top management's demands for change do not necessarily produce change. In corrections, management itself is the end, not a means to an end. Even the lowest "line" employee is a manager over inmates. As a result, change can only come about through persuasion.

This problem was faced by both Mr. Luger in New York and Mr. J. Douglas Grant, president of the New Careers Development Organization, Oakland California. In both instances staff interest and concern in the project increased as more staff, on every level, were brought into the decision-making/discussion process.

The minority group offender's understanding of other minority group members' life styles and his ability to communicate with them in a positive, helping fashion were viewed as vital ingredients with which to 'seed' a staff that was all too often comprised of individuals with predominantly middle-class orientation and values, Mr. Luger explained.

Inmate Resistance To Innovation

Because imprisonment is punishment, offenders see treatment as punishment in a different guise. The fact that the "helpers" are subordinate to the officials who maintain "law and order" further enforces this misconception. The New Careers program, changes this attitude. Many youngsters in the New York camps felt that using offenders on staff was a tangible indication of trust in them, and that opportunity for one of their number was evidence of administration's sincerity and belief in rehabilitation.

Prisoners regard treatment as a threat. Due to the dehumanization/impersonalization process of incarceration, the only thing left for the inmate is "self." For the offender, rehabilitation may mean brainwashing—an attempt to take away the inmate's last vestige of being. While inmates might appear to go along with present rehabilitation efforts, too often they do so only to impress the parole board. The New Careers program attempts to change this. By using the offender-participant to communicate with the inmates, the inmates can see and hear that the personality does remain intact. Only the outlook has changed.

"I remember hearing one older parolee tell a young tough, 'Look, don't tell me you're going to push everyone around here because you got a rough deal. I wrote that script myself,' And it had meaning to the youth," Mr. Luger commented.

Offenders scoff at a system that seems to proffer self-correction as a life-long career. In addition, the reformer is regarded as a dull and boring "sissy." Actual contact with the New Careerist dispels the latter problem. Then the offender is invited to participate in the program. There he comes into contact with a new world: People he esteems listen to his ideas. He enjoys new status among the staff, among inmates, at home, and in the community. He is making money. This feeling is then funneled back to the rest of the inmates, and the benefits of the program repeat.

For inmates, there exists an "inmate sub-culture," whose members relate to one another as "real men" or "right guys." For a member of the sub-culture to go over to staff means that the offender is a traitor and must be treated as such. This, in fact, is one of the touchiest problems faced by the New Careers program. Mr. Grant has achieved success by having prospective New Careerists selected by the offenders via anonymous vote.

Public Information Problem

The task of reaching the public with constructive ideas and programs is of paramount importance if change is to occur.

In New York, Mr. Luger demonstrated the effectiveness of New Careerists in winning public support, using young trainees, post-discharge, and adult New Careerists.

"To learn that a young man on staff had been a youth in the program had a positive effect on them (the community). They could see concrete evidence of the staff's confidence in their own product. 'Rehabilitation' took the form of productive youth rather than a verbalized abstraction. They were impressed, and it raised their esteem and hopes for the program."

Public acceptance of the older "post-discharge group" was even more encouraging. Since they had been "at large" for a period of time, they had already re-established many of their old connections in the community, and had "made it." This confidence in themselves, plus the confidence obtained from the responsibility of New Careers gained them great respect, and respect for the program. Former employees asked if their "boys" could be given specialized training so they could fit into responsible openings. Probation officers called to find employment for their charges.

The older group, however, met with different public reaction. People were more hesitant to accept them because they had been to the "big house." But, Mr. Luger believes, their devotion to New Careers must eventually impress the people as much as the devotion of the youths.

Nonetheless, alternatives must be found for this ex post facto type of acceptance. Prevalent attitudes must be changed. Ronald R. Korn, assistant professor of criminology, University of California, Berkeley, sees it this way:

"Two contradictory attitudes characterize the usual state of public opinion about crime and corrections. Citizens are 'tough on criminals' but 'soft on prisoners,' hard on young hoodlums, but soft on kids in jail."

This public confusion has led to legal roadblocks to New Careers. Almost forty states have either statutory or administrative prohibitions against the employment of probationers or parolees by the state agencies. In 33 states there are restrictions on state employment of an ex-offender who is completely free from legal supervision. Of 223 juvenile detention facilities surveyed, only 41 are legally able to hire ex-offenders. Of 422 local probation agencies, only 70 are legally able to hire ex-offenders.

Some Minor Inherent Problems

Both Mr. Luger and Mr. Grant emphasized the need for placing the new careerist in the job that fits him best and will maximize interest and ability to perform.

"Too often we run roughshod over his commitment to the idea of service to others in his new role. Because we literally seduce him into the new position, he is psychologically ill-prepared to withstand the rejection and rebuffs heaped upon him by his old friends," Mr. Luger said.

To insure that the New Careerist is helped at every stage, supportive roles must be played by members of staff on all levels. This includes money matters, career problems, etc. The supporters, however, must be careful not to imprint their own way of life on the new careerist. Mr. Luger's experience shows that there is a tendency for the new careerist to over-identify. Several showed up for work wearing business suits and striped ties, and carrying attache cases. Their one biggest asset—naturalness—was being destroyed.

Finally, everyone associated with the New Careers program, and the public, must be prepared for some boys not to work out. If New Careers is to succeed—if any innovations are to succeed—there must be, along with an attitude of innovation, the spirit of tolerance, upon which the nation was founded.

The full text of the seminar report on which this "Briefing" is based is available from the Joint Commission at a cost of $1.00 per copy

VT 008 873
The Challenge of Change; The Role of Occupational Education in Oregon.

Oregon State Advisory Council for Vocational Education
MF AVAILABLE IN VT-ERIC SET.
Division of Community Colleges and Vocational Education, State Department of Education, 305 Public Service Building, Salem, Oregon 97310.
Pub Date - May68 18p.

EDUCATIONAL CHANGE; *VOCATIONAL EDUCATION; SOCIAL FACTORS; TECHNOLOGICAL ADVANCEMENT; ECONOMIC FACTORS; *EDUCATIONAL OBJECTIVES; *STATE PROGRAMS; PROGRAM PLANNING; PROGRAM DEVELOPMENT; *EDUCATIONAL PHILOSOPHY; SCHOOL ROLE
*OREGON STATE ADVISORY COUNCIL FOR VOCATIONAL EDUCATION

A series of leadership seminars involving representatives of local school districts, community colleges, the System of Higher Education, the Department of Education, labor, and industry provided much of the content of this position paper. The enduring mission of occupational education is to educate youth and adults to achieve a productive and purposeful relationship to the world of work that is personally satisfying and in keeping with democratic values. Goals which the document defines in detail encompass: (1) education that is socially and economically relevant to the needs of individuals and manpower requirements, (2) occupational education for youth entering the labor force and adults seeking to improve their competencies or learn new skills, (3) a broad scope of occupational education for all students in all grades and in a variety of educational settings, (4) quality instructional programs suited to the occupational goals of people and to occupational requirements, (5) comprehensive curriculums relating both general and occupational education to the occupational objectives of students, (6) maximum utilization of all personnel--administrative, supervisory, teacher education, research, and guidance--in the achievement of occupational education objectives, (7) systematic evaluation of occupational education to assure its relevance to a dynamic world of work, and (8) continuous guidance of students to assure proper placement. A detailed discussion of changing social and economic patterns precedes the statement of mission and goals. (JK)

VT 008 873

ED042060

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The CHALLENGE OF CHANGE;

The ROLE OF OCCUPATIONAL EDUCATION IN OREGON

STATE ADVISORY COUNCIL

for

VOCATIONAL EDUCATION

1968

VT008873

FOREWORD

The following statement by the State Advisory Council for Vocational Education has been developed as a policy guide for the occupational preparation of Oregon youth and adults. The focus of the Council's statement is upon the quality of our State's human resource—that is, the education, capacities, skills, competence and creativeness of its people. The Council seeks to promote through this statement an assurance that all Oregon residents will have ready access to occupational education which is of high quality, which is suited to their needs, interests and abilities, which is effectively and efficiently operated, and which meets the demanding requirements of our changing times.

It is not possible to give adequate recognition to all who have unselfishly given of their time and efforts in the development of this statement. The Council members have spent untold hours debating the concepts in this paper, reviewing preliminary drafts, and suggesting needed revisions.

A series of Vocational Education Leadership Seminars participated in by selected leaders in education, representing local school districts, community colleges, the State System of Higher Education and the State Department of Education, as well as leaders from labor and industry, provided much of the content for this statement.

On behalf of the State Board of Education, I wish to take this opportunity to express appreciation to the members of the Council for bringing this message to the attention of the citizens of the State. I trust this effort will result in the improvement and expansion of vocational education in Oregon.

Ray C Swanson

RAY C. SWANSON, Chairman
State Board of Education

May 1968

Additional copies of this statement can be obtained from the Division of Community Colleges and Vocational Education, State Department of Education, 305 Public Service Building, Salem, Oregon 97310.

VOCATIONAL EDUCATION

The CHALLENGE of CHANGE

and the

ROLE of OCCUPATIONAL EDUCATION

In today's changing social and economic patterns, work still remains the major factor determining an individual's role in society. The increasing complexity of work, brought about by the application of technology to the work process, now makes it imperative that all men be occupationally prepared for their work life.

Meanwhile, our schools continue to stress the preparation of students for a four-year college experience. The majority who still must rely upon a high school education, or less, are not adequately prepared for entry into and advancement in available employment. There has not been effective coordination between high school and post-high school occupational education, or between high school, job entry and continuing education.

The challenge of social and economic change demands a massive response on the part of the American education system . . . a response that will effectively meet the needs of those individuals it must serve. The most critical and urgent need is to prepare youth and adults for effective work roles in society.

THE SETTING

The setting for the position outlined in this paper can be briefly stated as follows:

- The American society is undergoing such dramatic changes that we have a new environment in which we must live and work.

- The accelerating rate of social and technological change challenges the effectiveness of our traditional social arrangements and institutions, including—if not in particular—our system of public education.

- Education and work are now directly related for virtually all individuals, not just those who seek higher education and careers in the professions.

- Manpower training needs in a technological society can be met only through education.

- If education is to be made relevant to the lives of all it claims to serve, occupational education must become an integral part of total education.

- In such a setting, the American education system must provide:

  * education that is socially and economically relevant to the needs of the individual and to the manpower requirements of the nation;

  * occupational education for youth who will be entering the labor force, and for adults who seek to improve their occupational competencies or learn new skills;

  * a broad scope of occupational education accessible to all students in all grades and in a variety of educational settings;

  * quality instructional programs which are suited to the occupational goals of people, and to occupational requirements;

* comprehensive curriculums which relate both general and occupational education to the occupational objectives of students;

* maximum utilization of all personnel—administrative, supervisory, teacher education, research, and guidance—in the achievement of occupational education objectives;

* systematic and continuing evaluation of occupational education to assure its relevance to a dynamic and changing world of work;

* continuous guidance of students to provide for proper placement in occupational education programs.

A WORLD OF CHANGE—AND REALITIES UNFORESEEN

The need for expanded and effective occupational education is but one indication of the immense changes that have been and are being generated throughout our social and economic structure by the "knowledge explosion" and a racing technology. It is in the context of the dramatic changes that such terms as "technological revolution" and "knowledge explosion" describe that the present educational challenge must be seen if it is to be understood and effectively met.

One of the difficulties in coping with change is that of recognition and measurement; not only of its dimensions, but also its rate of change before it becomes too complex to comprehend or too accelerated to overtake. Unfortunately, the beginnings of change in a society are, like the beginnings of small streams, difficult to detect. Too frequently they go unnoticed, or at least unattended, until they swell to major proportions and engulf us in recurring crises and conflicting demand. We then react or overreact to points of immediate, visible danger and resort to improvisations that deal with symptoms rather than causes. Society may well misdirect vital resources in order to dam off one flood of problems —only to find that intolerable pressures are building in many other places.

It seems clear that something like this has happened to American society on its way to the last third of the twentieth century. This does not mean that we have been unaccustomed to change or unable to recognize it when it occurred. But the fact remains that **an enormous and generally unanticipated and unplanned-for change has taken place** in our social and economic structure during the last three decades.

During this time we lived with, adjusted to, and took pride in a growing technological-industrial base that provided unequalled productive capacity. The changes produced by the application of technology seemed generally manageable and rewarding. In such an atmosphere, our social institutions, including our system of education, seemed reasonably attuned to the dynamics of our technological-industrial base.

However, few will now question that we have undergone such an application of knowledge and

science to all aspects of the society that we have in fact a new environment to live and work in. Moreover, few would contend that the tempo and magnitude of change have been anticipated or understood by any significant segment of the society. We seem to have arrived at some point in a continuously accelerating pattern of change without quite knowing where we were going or the speed at which we were traveling.

Americans continue to take pride in a technological-industrial base of unequalled—in fact, undreamed of—production capability, and to be apprehensive of downturns in the performance of the economy. However, the pride in the productive capability is now infiltrated by a nagging fear—a fear of the sheer magnitude of its potential productive capacity and the fear of the prosperity-depression cycle is now blended with a fear of unemployment of a sort far different from the mass unemployment of earlier depression years—an unemployment that is selective and computer-caused. In either case, overproduction or automation, the threat is made sharper by the fact that it is not goods that will be missing from the equation, but men in jobs; and neither man nor society is ready for **that.**

The challenge thrown up by the massive application of knowledge and technology confronts all of our society's major institutions—its politics, the economy, the family, religion, recreation, and education. None escapes its impact, and perhaps none is more involved in it than is education.

The presence of unrest, unwanted contrast and contradiction clearly indicate the pressures and ferment of change. The contrasts and contradictions now present in our society exceed any we have known. For instance:

* In a society that is or shortly will be reaching for an annual productivity of one trillion dollars, over one-third of its people live in or on the margin of poverty.
* In a society where there are persistent unfilled demands for highly skilled employees, more than three million unemployed individuals are unable to match their work skills to meaningful employment.
* In a society where the scientific establishment is literally reaching for the moon, less than one-

half of the adults over twenty-five years of age have completed a high school education.

* In a society where education is increasingly the basic link between youth and the world of work, some twenty percent of its young people become high school dropouts.
* In a society where over one-half of the student population does not enroll in post-high school education, less than fifteen percent of its students are currently being enrolled in secondary programs of occupational education.
* In a society where preparation for work is required for virtually all people in all jobs, the prevailing educational structure is primarily designed to serve the twenty percent or less who will eventually complete a four-year college degree.
* In a society where education is expected—among other expectations—to help young people learn to make a living, there is an illogical and perplexing division between academic and occupational education.
* In a society which emphasizes careers and success above all other attainments, education directed to occupational preparation is considered inferior to education directed to other ends and is artificially set apart from them.

The listing is by no means complete. But the implications for education—particularly occupational education—are clear. If we have in our arsenal an institution that is charged more directly than any other with the responsibility for coping with change, surely that one is education.

The challenge of change, if not the precise scope of it, is clear; and it requires a massive response on the part of our system of public education. It must move quickly and positively to prepare men and women for meaningful involvement in the changed and changing world of work.

THE ROLE OF OCCUPATIONAL EDUCATION

If the full potential of occupational education is to be brought to bear on the complex of problems our scciety faces, it is imperative that—

- The role, responsibilities, and position of occupational education be clearly delineated and included in the total education structure; and that
- The mission and goals of occupational education be stated clearly, and that they be fully integrated with the other goals of the education system at all levels.

Until these requirements are met, the potential contribution of occupational education cannot be realized.

It is equally essential that there be continuous redefinition of the goals of vocational education, the conditions sought in each, and the resources required. Such redefinition must necessarily be related to changes in economic and social conditions and achievements of occupational education itself.

MISSION AND GOALS

The enduring mission of occupational education may be simply stated:

- To educate youth and adults to achieve a productive and purposeful relationship to the world of work that is personally satisfying and in keeping with democratic values.

Goals to assure accomplishment of the established mission are more detailed in their content and more difficult to hold constant. They arise not only out of the defined mission, but must be related to the prevailing status and student achievement level. For occupational education as it currently stands in our society and in Oregon, the goals outlined below are deemed pertinent, necessary, and reasonably enduring.

TO PROVIDE EDUCATION THAT IS SOCIALLY AND ECONOMICALLY RELEVANT TO THE NEEDS OF THE INDIVIDUAL AND TO THE MANPOWER REQUIREMENTS OF THE NATION:

For the individual in today's society, **work remains the central means for achieving and maintaining identity in a world of enormous complexity.** Despite change that has and will continue to occur, work remains a vital necessity for virtually all people.

Educational preparation for work has become the crucial factor governing the movement of young people into responsible adult roles in our society. It is no longer realistic to speak of a right to work as a right with which our society endows a person. A person must actually earn the right to work. He must earn it through education and effort. The right to work becomes valid only through exercise of the right to an adequate education. For these reasons it is increasingly important that the education system provide education attuned to the world of work.

As the preceding suggests, **it is imperative that occupational education serve both individual needs and the requirements of the labor market.** Statewide systems for gathering data regarding human resources and employment market needs are essential for effective occupational education program planning.

TO PROVIDE OCCUPATIONAL EDUCATION FOR YOUTH WHO WILL BE ENTERING THE LABOR FORCE AND FOR ADULTS WHO SEEK TO IMPROVE THEIR OCCUPATIONAL COMPETENCIES OR LEARN NEW SKILLS:

To bring adequate educational resources to bear on the problems of society, it is clear that occupational preparation **must be made available to all who desire and can profit from it at various levels within the educational structure,** and that **training be provided for all jobs in which there exist** current and anticipated **manpower requirements.** There must be occupational education paths available that provide reasonable alternatives for all youth and adults.

At present, less than one-half of our secondary students enter post-secondary education. An adequate effort to prepare young people for the world of work would enroll **at least sixty percent of all eleventh and twelfth grade students.** Preparation at this level must provide knowledge and skills required for entry level employment, as well as equip the student to pursue specialized post-high school occupational education. The education provided must be broad based and yet of sufficient depth to offer entry level training in the area of the student's interest. At the same time it must avoid restricting him to a narrow work specialty.

The application of technology to the work process has increased the complexity of work skills required in many occupations. To provide adequate preparation in the skilled and technical occupations, one or two years beyond high school is normally required. **Post-secondary preparation must be available to all who desire and can profit from such preparation and at the same time coordinated between institutions to avoid unnecessary duplication and expense.** Preparation at this level must assure the student of the degree of specialization required by the job market for which he is being prepared.

However, below the technical occupations lie many employment opportunities for which preparation is needed. There are many people whose aspirations and abilities logically lead them toward employment of a semi-skilled nature. Many of these individuals, both in and out of schools,

have mental, cultural or physical disadvantages. **Programs suited to the special needs of the disadvantaged are essential** if this human resource is to be utilized. Occupational education must be designed and provided to cover an increased range of human abilities and a broadened scale of employment opportunities.

TO PROVIDE A BROAD SCOPE OF OCCUPATIONAL EDUCATION ACCESSIBLE TO ALL STUDENTS IN ALL GRADES AND IN A VARIETY OF EDUCATIONAL SETTINGS:

Much that has preceded is applicable here. However, emphasis must be given to accessibility within the vertical structure of the education system and geographical accessibility above the junior high school level.

Teaching of **traditional basic skills** in the elementary schools needs to be **oriented to the world of work and realistic life situations.**

Exploration of the occupational world and employment opportunities should be undertaken by **all** students by the time they reach the late elementary and junior high school years.

Preparation for entry employment in occupational areas or clusters* of occupational families needs to be undertaken at the secondary level. The training offered must be attuned to actual requirements for employment in the occupational area, as well as designed to provide for entry into more advanced and specialized training in post-high school settings. This may require the additional use of competent lay instructors from the occupational fields.

A continuing and intensive effort needs to be made to assure the availability of occupational education to all students in the state. Where population and distance factors make it advisable and possible, **cooperative efforts among educational agencies are needed to place effective occupational education in facilities that are within the reach of all students who need it. Appropriate**

* The occupational cluster concept simply holds that occupations may be classified into logically related groups on the basis of authentic identical or similar elements or characteristics. Hence, as used in this paper, an occupational cluster is composed of recognized occupations which are logically related because they include identical or similar teachable skill and knowledge requirements.

methods to support area facilities by taxation of districts served must be implemented.

A close and continuous articulation of occupational education at each level needs to be maintained. Broad-based preparation at the **secondary level should flow evenly into the more specialized offerings of the community colleges.** Offerings both at the secondary and community college levels need to be **articulated directly with the requirements of employers.** These articulation requirements are needed whether the student terminates his formal education with high school or goes on to the community college or, for that matter, the traditional four-year higher education institution.

TO PROVIDE QUALITY INSTRUCTIONAL PROGRAMS WHICH ARE SUITED TO THE OCCUPATIONAL GOALS OF PEOPLE AND TO OCCUPATIONAL REQUIREMENTS:

Educational agencies must build into their instructional systems **resources and capabilities which will assure the quality and variety of services needed** by the diverse students to be served. The experiences related by those who have not been well served by the educational establishment, the difficulties many students have in finding a job, and high school dropout figures all indicate that many young people do not find school attractive. Often they have not been able to cope with personal and social problems of which the school was unaware—or about which it lacked the ability to do much, even if it were aware.

Practices which bring about **close student-teacher relations** and a relatively **high degree of individualized instruction** must be developed. Teachers need time to achieve an awareness of student problems, to build rapport, to react on a person-to-person basis, to counsel, and to make available non-classroom resources. All of these significantly enhance the teaching-learning process; they can best be accomplished when class size is small, when blocks of time are long, and when paraprofessional help is available.

Increased use of **individualized course programming** to achieve greater flexibility in meeting individual needs must be utilized.

Facilities and equipment related to occupational education and its supporting services **must be as attractive and complete as those for other programs and services.**

TO PROVIDE COMPREHENSIVE CURRICULUMS WHICH RELATE BOTH GENERAL AND OCCUPATIONAL EDUCATION TO THE OCCUPATIONAL OBJECTIVES OF STUDENTS:

While recognizing the critical need to prepare individuals occupationally, care must be used to **protect and strengthen each student's general education.** Our commitment to occupational preparation for all does not mean that attention to other basic educational purposes should be lessened. Schools must help young people prepare for their adult roles as members of families, as citizens, and as participants in cultural and recreational activities. Preparation for each role is interrelated. Sound general education is essential to vocational preparation; and occupational education, in turn, has much to contribute to other aspects of life.

The division between general and occupational education certainly need not be as great as it has been. **Each can be designed to reinforce the other.** The general education of all students should have orientation toward the world of work and direct involvement with materials and processes as one basis of problem solving. Occupational programs should be based upon and deliberately designed to correlate with basic academic work.

TO PROVIDE FOR MAXIMUM UTILIZATION OF ALL PERSONNEL—ADMINISTRATIVE, SUPERVISORY, TEACHER EDUCATION, RESEARCH, AND GUIDANCE —IN THE ACHIEVEMENT OF OCCUPATIONAL EDUCATION OBJECTIVES:

The **functions and responsibilities of the various agencies concerned with occupational education must be firmly established. Effective coordination** of these agencies **and articulation** from one educational level to the next must be provided for by consolidation of administrative authority within one state agency, by a statewide coordinating committee, and/or by well-defined guidelines of agency operation. The delineation of these func-

tions and responsibilities must be in harmony with the defined role of occupational education and must be borne out in patterns of staffing, financing, and operation.

Services related to occupational education—**counseling, guidance, and placement**—may be as important as the occupational preparation itself. Employability and occupational success are highly dependent upon factors such as health, grooming, the ability to work with others, and wholesome attitudes toward authority. Many students need extensive individual and group counseling on these matters.

Activities and programs for attracting and **developing capable instructors** to work in occupational education must be greatly expanded, improved, and coordinated. Included must be the preservice education required for increasing numbers of teachers and para-professional personnel, along with a con· ·ing and improved program of inservice deve· ·ent for teachers already in the field.

Existing programs and opportunities designed to provide for the **development of leadership** to serve vocational-technical education are woefully inadequate in number and capacity. They must be expanded in a number of program settings and levels if the field is to receive the direction required to serve its defined mission adequately.

TO PROVIDE SYSTEMATIC EVALUATION OF OCCUPATIONAL EDUCATION TO ASSURE ITS RELEVANCE TO A DYNAMIC AND CHANGING WORLD OF WORK:

It is of extreme importance that occupational education programs be relevant to and of a quality to meet social and economic needs. The continuously changing patterns of these needs make **careful and continuous evaluation of occupational education essential.**

Occupational education must develop and maintain **functional relationships with agriculture, business, industry, and government.** Programs and program content must be developed in close liaison with these groups, and they must reflect their needs. The programs implemented must be continually evaluated in terms of how well they correlate with and satisfy these needs.

Offerings in occupational education must continuously be validated by data concerning enrollment, employment opportunities, placement of students, occupational success of students placed, and student needs and satisfactions. Obviously, curriculums, courses, facilities, equipment, instructional quality and placement capability all become factors in the effectiveness of continuing evaluation. Consistent and continuous evaluation may best be provided through **self-evaluation by program personnel.** Assistance in the development of appropriate criteria, provision of pertinent data, and assistance in evaluation procedures, including on-site evaluation and program review, should be provided through state agency leadership and cooperation.

TO PROVIDE FOR CONTINUOUS GUIDANCE OF STUDENTS TO ASSURE PROPER PLACEMENT IN OCCUPATIONAL EDUCATION PROGRAMS:

Identification, recruitment and selection of students for occupational education programs are critical in the providing of appropriate educational choice. **Every student should have the opportunity to experience relevant occupational preparation.** Tremendous effort must be expended to provide an improved image of occupational preparation so that all students may feel personal pride in the educational patterns which they choose.

There must be continuous identification of individual desires and student needs leading to appropriate placement in secondary and post-secondary occupational education programs. This must be followed by job placement and student and employer follow-up. The opportunity must be provided for individuals to move into occupational education programs, receive as much preparation in their chosen field as they can benefit from, leave the formal education process and then return at any time their abilities, needs, and/or desires dictate.

Composition of the

OREGON STATE ADVISORY COUNCIL FOR VOCATIONAL EDUCATION

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- Jerry E. Butler, Personnel Manager, Stayton Canning Company Coop., Stayton

Employers in Industry
- Kenneth L. Lewis, Controller, Al Peirce Company, Coos Bay
- Wilfred Jordan, Mgr., Development & Trg., Electronic Specialties, Gre ›am

Labor in Industry
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- Herman R. Teeple, Jr., Business Manager, Electrical Workers #48, Portland

Labor in Business and Commerce
- Clifford C. Evanson, Secretary, Teamster Local Union #809, Portland
- Mrs. Mary Pease, Business Representative, Retail Clerks Union Local #201, Eugene

State Board of Education
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- Francis I. Smith, Attorney, Portland

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- Jerold E. Herburger, Mgr., Northwest Livestock Prod. Credit Assn., Portland
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Consultants

Oregon Association, School Administrators
- Orville R. Bailey, Superintendent of Schools, Scappoose

Oregon Association, Secondary School Principals
- Marvin Rasmussen, Principal, Benson Poly High, Portland

State Department of Employment
- Eldon Cone, Director, State Employment Service

State Department of Education
- Al Ringo, Supervisor, Vocational Program Development

OREGON STATE ADVISORY COUNCIL FOR VOCATIONAL EDUCATION

Council members, left to right: Robert G. Kennedy, Clifford C. Evanson, Jack E. Brookins, Wilfred Jordan, Al Ringo, Kenneth L. Lewis, Mary Pease, Wallace W. McCrae, Wm. G. Loomis, Jerry E. Butler, Marvin Rasmussen and David J. Calvert.
Members not present: Chas. W. Wentworth, Jr., Herman R. Teeple, Jr., Clarey Adamson, Ray C. Swanson, Francis I. Smith, Jerold E. Herburger.

The State Advisory Council for Vocational Education in Oregon has been established in accordance with the Oregon State Plan for Vocational Education. The Council is appointed by the State Board of Education for the purpose of consulting and advising the Board in its efforts to carry out the State Plan for Vocational Education. Membership of the Council is designed to be representative of agriculture, employers, labor, education and apprenticeship.

State Department of Education
Division of Community Colleges
and Vocational Education
Salem, Oregon

VT 008 898
The Legal Challenge to Corrections: Implications for Manpower and Training. Summary. Correctional Briefings Number 11.

Joint Commission on Correctional Manpower and Training, Washington, D.C.
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Mar69 4p.

*CORRECTIONAL REHABILITATION; *CIVIL RIGHTS; PROBATIONARY PERIOD; COURT LITIGATION; *PRISONERS
JOINT COMMISSION ON CORRECTIONAL MANPOWER AND TRAINING

"The Legal Challenge to Corrections: Implications for Manpower and Training" is summarized. See abstract of ED 032 409 or VT 008 897 (also in this issue) which is the complete study. (JK)

VT 008 898

ED042060

JOINT COMMISSION ON CORRECTIONAL MANPOWER & TRAINING

1522 K STREET, N. W. / WASHINGTON, D. C. 20005 / (202) 223-2450

CORRECTIONAL BRIEFINGS

This is one of a series of reports summarizing information gathered by the Joint Commission through original research, consultants' papers and seminar discussions. The Joint Commission is studying problems affecting recruitment, training and education of personnel in the field of correctional rehabilitation.

Number 11

March, 1969

THE LEGAL CHALLENGE TO CORRECTIONS

Implications for Manpower and Training

Courts Increasingly Willing To Safeguard Rights Of Offenders

Corrections, with its predilection for mass processing, its outworn arbitrary methods, and its great discretionary power, has seemed to many observers to change very slowly in these respects, if at all. What will happen when corrections faces up to the fact that the courts are insisting on more legal protections for offenders, from sentencing through probation or imprisonment, parole or revocation of it?This is the subject of The Legal Challenge to Corrections, a paper prepared by Professor Fred Cohen, of the University of Texas Law School, for the Joint Commission on Correctional Manpower and Training.

As James V. Bennett, former director of the U.S. Bureau of Prisons and now president of the Joint Commission, points out in a foreword, "It will come as a shock to many if not most probation officers, prison keepers, and parole officials that they are not endowed by law and the accouterments of their office with unfettered power to make decisions concerning their charges . . . To make this fact of life abundantly clear and stake out the boundaries of the legal prerogatives of their clientele" the Joint Commission asked Professor Cohen to prepare this consultant's paper.

The publication documents the changes that have already been brought about in public welfare, juvenile justice, commitment of the mentally ill, and student rights as a result of legal challenges. The author draws a parallel between these fields and corrections and predicts a corresponding challenge to corrections.

He reminds us of the many warnings given by courts to law enforcement agencies in the late 1950's and early 1960's, the disregard of those warnings, and the consequences of that disregard. Corrections, he feels, is now in a position similar to that of law enforcement before 1961. Should corrections also choose to stand pat, increased judicial intervention is likely.

VT008898

Corrections Must Observe "Due Process" Norms

However, he believes corrections can avoid such increased intervention if it will give proper attention to constitutional limitations on governmental agencies. "How corrections properly might react now — and therefore guide its own future — depends largely on an understanding of the requirements of the due process clause of the Fourteenth Amendment, which constitutes the template against which changes in the correctional process must be measured," he declares.

The most fundamental aspect of due process, Professor Cohen says, is that no person shall be deprived of life, liberty, or property without an oppor-

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tunity to know and be heard. In other words, due process norms assume that there are and must be limits on the power of government. Requirements of notice and a hearing do indeed impair efficiency and effectiveness on the part of public agencies. The fact that this is precisely what they are intended to do creates potential tension between courts and correctional decision-makers.

When spokesmen for corrections assert that reformation and rehabilitation are important goals for corrections, they tend to overlook the facts that these goals are seldom achieved and that they are not necessarily primary or exclusive. The theory that probation and parole are benevolent in their purpose fosters the continued acceptance of the vast discretionary powers of the decision-makers by disarming persons who are otherwise zealous guardians of due process.

Rehabilitation Is Not Sole Purpose Of Parole, Probation

Probation and parole do not, in fact, operate solely for the purpose of reforming and rehabilitating offenders. Among the other goals are: surveillance, economy, and direct assistance to the other agencies of criminal justice. But the point is not to discredit probation and parole but "to demonstrate the fallacy — engendered by the benevolent purpose doctrine — of drawing conclusions about the legal safeguards in corrections from a conceptually inaccurate description of the goals of corrections and from a factually inaccurate description of their accomplishments."

The right to a fair consideration for probation is probably now a reality since the Supreme Court determined in Mempa vs. Rhay that a state probationer was constitutionally entitled to counsel whether the proceeding was labeled a revocation of probation or a deferred sentencing. The issue of procedural safeguards in the process of granting or denying parole is best symbolized by the issues of legal counsel and the right to a fair hearing. Here lawyers already have begun to seek a logical extension of Mempa.

Cohen insists that parole boards and sentencing judges engage in identical functions and that therefore a judicially imposed procedural framework is a necessity. He suggests also that attorneys be used in a limited number of jurisdictions as part of an experimental program to provide a full range of legal services to inmates.

He discusses the conditions which may be attached to the granting of probation or parole and argues that only those deprivations that are consistent with valid correctional objectives should be imposed or tolerated.

"How do we achieve some balance between the obvious need to maintain prison discipline and the not-so-obvious need to provide a 'rule of law' for prisoners?", asks Professor Cohen. The basic hurdle is the concept of a prisoner as a non-person and the jailer as an absolute monarch.

Access To Courts Seen As Basic Right Of Prisoners

The courts generally have held that prison authorities must keep their prisoners free from harm and provide the basic necessities of life: food, medical care, clothing, and shelter. In addition it is now generally acknowledged that prisoners must be guaranteed reasonable access to the courts. The problem here, says Cohen — as with any "right" possessed by prisoners — is not with the principle but with the implementation.

Access to (and communication with) legal counsel, access to legal materials, and reasonable opportunity to prepare and file legal papers are increasingly demanded by prisoners. The majority of courts are not solicitous of claims by prisoners and are reluctant to invite "more business." They do not feel called upon, and have no desire, to lay down detailed codes for the conduct

of penal institutions. But some feel they have a duty to act when men are exposed to the capricious imposition of added punishments.

Cohen suggests that "prisoners should have every opportunity to comply with rules that are announced in advance and are capable of being complied with. Rules should be enforced within a procedural framework that is known, operates fairly, and gives the appearance of operating fairly."

"The assumption underlying these suggestions is that the rule of law and legal process are part of the free community's way of life, and every consideration should be given to the inculcation of community values while in prison."

A number of civil disabilities are automatically imposed by laws upon a convicted felon without his being very much aware of the imposition. These disabilities may be described as numerous, often anachronistic, and bewildering, because they vary from state to state. They include, in the various states, loss of the right to vote, to hold public office after release, or to enter certain occupations. That the states have the power to impose some disabilities — or that disabilities have a limited utility — is not questioned. What is under attack is the indiscriminate — and often irrational and self-defeating — use of the power.

Rights' Loss Should Be Related To The Nature Of The Offense

The various legislatures might improve the situation by following the principle that "no civil or political right is to be lost unless the right is reasonably related to the nature of the offense and the function to be performed, or is required in the execution of the sentence."

"If the approach to the loss of civil and political rights were more rational, we might proportionately reduce our concern about restoration [of civil rights]and expungement procedures. In the present state of the law, it is understandable that there exists more concern for regaining rights . . . yet it is obvious that any reform that does not begin at the point of the loss is self-defeating."

The area of juvenile justice is covered in a chapter written by Cohen's colleague, Professor Robert Dawson.* Profound change is taking place in this area because of successful legal challenges. The 1967 decision of the Supreme Court in the Gault case required that, in delinquency proceedings that may result in incarceration, constitutional protections of the right to counsel, the right to notice of charges, the right to confrontation of witnesses, and the privilege against self-incrimination must be observed.

While the Court in the Gault decision limited itself to the adjudication stage of the juvenile process, Dawson believes that further litigation will result in rulings extending the same constitutional safeguards to juveniles as now are accorded in the adult criminal process. These include protection before and after trial as well as at the time of trial. Thus the right to counsel at sentencing and revocation of probation hearings, the right to access to courts, and the limitations on correctional authorities imposed by the First Amendment probably will be extended to the juvenile correctional process through further enlargement of the principles stated in the Gault case, he feels.

Cohen Says Change To Due Process Is Inevitable

The paper as a whole documents the fact that, after he is pronounced guilty, the offender enters "a procedural no man's land." Statutes are vague, and courts have in the past been reluctant to interfere. Hence sentencing and correctional authorities have been left free to fashion their own notions of

***See also the Joint Commission's publication, The Future of the Juvenile Court, by Judge Ted Rubin and Referee Jack Smith, of the Denver juvenile court.**

justice. However, says Cohen in a concluding chapter, "the call for a due process approach to corrections is being heard, and there are clear signs that change is inevitable."

Model Law Is Key To Legislative Solution Of Problem

Cohen prefers the legislative to the judicial solution. Those who have been associated with law reform have learned that improved legislation is more easily secured when a model law has been developed. No Model Code of Correctional Procedure now exists, though codes developed for other purposes by the American Law Institute, the American Bar Association, and the National Council on Crime and Delinquency, cover in one section or another most of the items which should go into a correctional procedure code.

"The difficult task of preparing a Model Code cannot by itself be viewed as a panacea," Cohen warns. "Obviously the pragmatic problems of underfinancing, undertraining, and understaffing of corrections remain, as well as the conceptual problems of inadequate theory and confusion of objectives."

Notwithstanding these difficulties, he believes, "a joint effort by lawyers and persons expert in corrections to draft a Model Code already is overdue. The time to mobilize resources for the effort is now."

The consultant's paper represents the views of the author and not necessarily those of the Joint Commission.
The full text of the paper on which this "Briefing" is based is available from the Joint Commission at a cost of $1.00 per copy.

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*COLORADO SPRINGS; COLORADO

A questionnaire consisting of 55 statements of competencies to be ranked by degree of importance was completed by 48 ninth grade girls, 49 twelfth grade girls, and 42 young homemakers in order to assess the opinions of competencies at different maturity levels. Twelfth grade girls and young homemakers agreed on the following rank order of categories: (1) family and child rearing, (2) food preparation, nutrition, and meal planning, (3) management and consumer skills, (4) housing, furnishings, and equipment, and (5) clothing selection, care, and construction. Ninth grade girls differed by placing clothing skills ahead of the third and fourth categories above. Lower socioeconomic subjects ranked clothing competencies above housing, furnishings, and equipment competencies. While high school graduates and non-graduates ranked family and child rearing first and clothing skills last, they disagreed on other rankings. Graduates ranked management and consumer skills second, food knowledge and skills third, and housing, furnishings and equipment fourth. Non-graduates placed food knowledge and skills second, housing, furnishings, and equipment third, and management and consumer skills fourth. (JK)

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COLORADO SPRINGS SCHOOL DISTRICT ELEVEN
Thomas B. Doherty, Superintendent
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Division of Secondary Education
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OPINIONS OF NINTH AND TWELFTH GRADE GIRLS AND YOUNG HOMEMAKERS AS TO KNOWLEDGE AND COMPETENCIES NEEDED FOR ROLES AS HOMEMAKERS

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VT008903

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P. A. M.
A. C. G.

PURPOSE OF THE STUDY

Teachers of home economics are constantly concerned about the lack of interest on the part of teenage girls in realistically viewing their prospective roles as homemakers. The variety of competencies demanded by today's complex living patterns, especially in areas of decision making, resource management and child guidance, is also a concern related to content, degree of emphasis and scope and sequence of the home economics curriculum.

The purpose of this study was to explore differing opinions of competencies needed by young homemakers as a basis for curriculum planning. A questionnaire was administered to 48 ninth grade students, 49 twelfth grade students and 42 young homemakers to assess the opinions of competencies at various maturity levels. Other variables investigated included differences between subjects from higher and lower socio-economic levels and differences between opinions of young homemakers who were high school graduates and those who were non-graduates.

PROCEDURE

After reviewing the curriculum structure used in the past five years in Colorado Springs District Eleven Schools, studying a variety of curriculum guides from other schools and interviewing young homemakers regarding their needs, five categories of competencies were identified: (1) Family and Child Rearing, (2) Management and Consumer Skills, (3) Housing, Furnishings and Equipment, (4) Food Preparation, Nutrition and Meal Planning and (5) Clothing Selection, Care and Construction.

Many questions were developed in each category based on objectives found in a sampling of curriculum guides and consultation with young

homemakers. These were evaluated and edited for comprehensiveness within categories, variability in interpretation and clarity of content. The members of the Colorado Springs District Eleven Research Department assisted in this evaluation. The resulting instrument consisted of 55 statements of competencies and knowledge to be ranked according to degree of importance by checking in one of three columns which were marked: Extremely Important, Important, and Not Very Important. There were ten statements in all categories except the combined area of Family and Child Rearing which included fifteen statements.

Pretests were administered to ten individuals in each of the three age groups of junior high, senior high, and young homemakers. These participants were asked to rate competencies and to identify the two most important items in each category. Additional comments about the clarity of content and procedures were solicited from both participants and teachers administering the pre-test. As a result of this pilot field testing, slight revision was made in wording and arrangement of competencies. Vocabulary was edited to insure that all words were comprehensible for ninth grade students.

In selecting the sample population, consideration was given to age levels, socio-economic levels, educational levels and marital status. The schools were selected through discussions with the Colorado Springs Research Department. In each school, all of the students enrolled in the appropriate class selected were given the questionnaires. The young homemakers were located through contact with the high school counselors' lists of drop-outs and graduates who had been married in the past five years. A random sample of these homemakers were selected for the study.

The following groups were included:

(1) Junior High School Students

(a) 25 girls from a target area school * to comprise the lower socio-economic sample.

(b) 23 girls from a predominantly middle class school to comprise the higher socio-economic sample.

(2) Senior High School Students

(a) 23 girls from a target area school to comprise the lower socio-economic sample.

(b) 26 girls from a predominantly middle class school to comprise the higher socio-economic sample.

(3) Young Homemakers

(a) 17 girls from lower socio-economic areas who were high school drop-outs.

(b) 25 girls from higher socio-economic areas who were high school graduates.

The questionnaire was administered in ninth and twelfth grade home economics classes. These were elective classes, thereby constituting a possible bias. However the purpose was directed toward curriculum needs so any possible bias would be favorable. Fifty-five young homemakers, under 23 years of age, received the questionnaire by mail or personal delivery and 42 returned it in the same manner. Tabulation of the data received from the schools was done by computer since answer sheets were used. Tabulation of data received from young homemakers was done by

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* Target Area schools are defined by the Title I guideline of the Elementary and Secondary Education Act. For a school to qualify as a Target Area school 40% of the students must come from families with incomes under $3,000 annually.

hand, since the mechanics of computerized answer sheets (no folding, special pencil, etc.) does not lend itself to mailing.

FINDINGS

The following tables show means and rank order of responses according to maturity levels, socio-economic classes, and marital status. In computing the means, the category of Very Important was assigned a weight of three points; Important was assigned two points; and Not Very Important was assigned one point. Each question was scored for each category of person responding to the questionnaire and total means for the five areas of knowledge and competencies were also obtained. Table I depicts the means for Junior High School girls.

TABLE I

MEANS AND RANK ORDER OF RESPONSES
FROM JUNIOR HIGH GIRLS

Category	High Socio-Economic (N = 23)	Category	Low Socio-Economic (N = 25)
Family and Child Rearing	2.46	Food Preparation, Nutrition and Meal Planning	2.55
Clothing Selection, Care and Construction	2.24	Family and Child Rearing	2.47
Food Preparation, Nutrition and Meal Planning	2.22	Clothing Selection, Care and Construction	2.47
Management and Consumer Skills	2.13	Management and Consumer Skills	2.38
Housing, Furniture and Equipment	2.08	Housing, Furniture and Equipment	2.37

There was a tendency for the low socio-economic group of junior high students to rank all categories higher than the students from the higher socio-economic group. There was agreement on the top three choices; however the order differed from one class to another. High socio-economic students assigned priorities to Family and Child Rearing; Clothing Selection, Care and Construction; and Food Preparation, Nutrition and Meal Planning; while low socio-economic students assessed priorities of Food Preparation, Nutrition and Meal Planning; Family and Child Rearing;and Clothing Selection, Care and Construction. Both groups felt that Management and Consumer Skills; and Housing, Furnishings, and Equipment were less important.

TABLE II

MEANS AND RANK ORDER OF RESPONSES
FROM SENIOR HIGH GIRLS

Category	High Socio-Economic (N = 26)	Category	Low Socio-Economic (N = 23)
Family and Child Rearing	2.45	Family and Child Rearing	2.65
Food Preparation, Nutrition and Meal Planning	2.34	Food Preparation, Nutrition and Meal Planning	2.53
Management and Consumer Skills	2.30	Management and Consumer Skills	2.39
Housing, Furniture and Equipment	2.24	Clothing Selection, Care, and Construction	2.32
Clothing Selection, Care, and Construction	2.16	Housing, Furniture, and Equipment	2.26

There was a tendency among the senior high students of low socio-economic classes to rank all categories higher than the high socio-economic classes. Both socio-economic groups were in agreement as to the top three choices, assessing priorities as Family and Child Rearing; Food, Nutrition, and Meal Planning; and Management and Consumer Skills. The two lowest categories were ranked by the higher socio-economic group as Housing, Furnishings, and Equipment followed by Clothing Selection, Care, and Construction. This ranking was reversed by the lower socio-economic group.

TABLE III

MEAN AND RANK ORDER OF RESPONSES
FROM YOUNG HOMEMAKERS

Category	High Socio-Economic (N = 25)	Category	Low Socio-Economic (N = 17)
Family and Child Rearing	2.46	Family and Child Rearing	2.62
Management and Consumer Skills	2.34	Food Preparation, Nutrition and Meal Planning	2.47
Food Preparation, Nutrition and Meal Planning	2.30	Housing, Furnishing, and Equipment	2.38
Housing, Furnishings, and Equipment	2.19	Management and Consumer Skills	2.35
Clothing Selection, Care, and Construction	2.03	Clothing Selection, Care, and Construction	2.26

Low socio-economic levels continued to rank all categories higher than the high socio-economic levels. Family and Child Rearing ranked considerably above the second ranking category by both groups. The ordering of categories in second, third and fourth rankings differed, but both high and low socio-economic groups ranked Clothing Selection, Care, and Construction last and considerably lower than the preceding category. The higher socio-economic group assessed second priority to Management, and Consumer Skills while the lower socio-economic group ranked it fourth. Food Preparation, Nutrition, and Meal Planning was ranked second by low socio-economic groups but given third priority by the higher socio-economic group.

TABLE IV

MEANS AND RANK ORDER OF RESPONSES
FROM THREE AGE GROUPS

Junior High (N = 48)	Mean Score	Senior High (N = 49)	Mean Score	Young Homemakers (N = 42)	Mean Score
Family and Child Rearing	2.46	Family and Child Rearing	2.54	Family and Child Rearing	2.52
Food Preparation, Nutrition, and Meal Planning	2.39	Food Preparation, Nutrition, and Meal Planning	2.43	Food Preparation, Nutrition, and Meal Planning	2.37
Clothing Selection, Care, and Construction	2.36	Management and Consumer Skills	2.34	Management and Consumer Skills	2.35
Management and Consumer Skills	2.26	Housing, Furnishings, and Equipment	2.25	Housing, Furnishings, and Equipment	2.27
Housing, Furnishings, and Equipment	2.23	Clothing Selection, Care and Construction	2.24	Clothing Selection, Care and Construction	2.12

The senior high and young homemaker groups were in agreement as to the priority assessment of all five categories but the junior high students agreed only on the top two priorities. Family and Child Rearing was ranked number one by all age groups and Food, Nutrition, and Meal Preparation as second by all groups. The junior high group gave much greater emphasis to Clothing Selection, Care and Construction than older groups.

TABLE V

MEANS AND RANK ORDER OF RESPONSES OF TOTAL GROUP FROM HIGH AND LOW SOCIO-ECONOMIC CLASSES

Category	High Socio-Economic (N = 74)	Category	Low Socio-Economic (N = 65)
Family and Child Rearing	2.45	Family and Child Rearing	2.57
Food Preparation, Nutrition, and Meal Planning	2.29	Food Preparation, Nutrition, and Meal Planning	2.52
Management and Consumer Skills	2.27	Management and Consumer Skills	2.37
Housing, Furnishings, and Equipment	2.17	Cothing Selection, Care and Construction	2.36
Clothing Selection, Care and Construc-tion	2.14	Housing, Furnishings, and Equipment	2.33

All respondents from the lower socio-economic levels taken as a group rated all categories higher than those from high socio-economic levels. The greatest difference in ratings between high and low socio-economic levels was in the areas of Foods, Nutrition, and Meal Planning, and Clothing Selection, Care, and Construction. The least difference was in Management and Consumer Skills.

In comparing the needed competencies as ranked by lower and higher socio-economic levels there was agreement on the top three as (1) Family and Child Rearing (2) Food, Nutrition and Meal Planning, and (3) Managememt and Consumer Skills.

Housing, Equipment, and Furnishings was ranked above Clothing Selection, Care, and Construction by the higher socio-economic level and the reverse was indicated for these two by the lower socio-economic level.

TABLE VI

AGE AS A FACTOR IN RANKING NEEDED COMPETENCIES OF YOUNG HOMEMAKERS

Category	Total Junior High (N = 48)	Total Senior High (N = 49)	Difference Junior and Senior High	Total Young Homemakers (N = 42)	Difference Senior High and Young Homemakers
Family and Child Rearing	2.46	2.54	+ .08	2.52	- .02
Management and Consumer Skills	2.26	2.34	+ .08	2.35	+ .01
Housing, Furnishings, and Equipment	2.23	2.25	+ .02	2.27	+ .02
Food Preparation, Nutrition, and Meal Planning	2.39	2.43	+ .04	2.37	- .06
Clothing Selection, Care, and Construction	2.36	2.24	- .12	2.12	- .12

In the categories of Family and Child Rearing and of Management and Consumer Skills there was considerable difference between junior and senior high groups, but only slight difference between senior high and young homemakers. Differences among the groups were slight for Housing, Furnishings and Equipment and for Food Preparation, Nutrition and Meal Planning, although senior high students ranked Food Preparation, Nutrition and Meal Planning highest. In the ranking of Clothing Selection, Care and Construction there was a definite age related factor operating with a consistent decline from the junior high level.

The next five tables show individual statements in which the mean was 2.50 or higher from each of the categories of Junior High School, Senior High School, Young Homemaker Graduate, and Young Homemaker Non-Graduate. In addition, the competency which was rated lowest by each category is identified.

On the questionnaire directions, respondents were asked to circle the two statements which they felt were most important in each of the five homemaking areas. Since the statements circled turned out to be the same statements with the highest mean rankings, this data will not be repeated in the study.

TABLE VII

RANKING OF SPECIFIC COMPETENCIES WITH MEAN RATINGS OF 2.50 OR HIGHER BY ALL JUNIOR HIGH, SENIOR HIGH, GRADUATE AND NON-GRADUATE HOMEMAKERS IN THE CATEGORY OF FAMILY AND CHILD REARING

	Junior High Girls	Senior High Girls	Graduate Homemakers	Non-Graduate Homemakers
1. To know about the physical and emotional growth of children at various stages.		(3) 2.76	2.52	2.53
2. To be able to care for a family member who is sick.	(2) 2.71	2.59		2.65
3. To understand individual differences among children.			2.52	2.53
4. To understand myself and why I act as I do.	2.56	2.63	(2) 2.72	2.65
5. To be able to care for a baby with ease.	2.67	(1) 2.79	2.56	(3) 2.76
6. To understand people of other races, religions, background and ages.				
7. To better understand the many responsibilities of being a parent.	2.63	(2) 2.77	(3) 2.64	(1) 2.88
8. To be able to talk over ideas, feelings, and concerns within the family.	2.65	2.65	(1) 2.76	(2) 2.82
9. To help family members learn to "give and take" in settling family arguments.		2.51	2.52	(2) 2.82
10. To be able to get along with my "in-laws".		Low		
11. To understand the viewpoints of both husband and wife as to sexual adjustment in marriage.	2.56	2.75	(2) 2.72	(1) 2.88
12. To understand the many ways of disciplining children.				(1) 2.88
13. To know how to help family members have happy feelings toward each other.	(1) 2.75	2.59		
14. To be able to talk to children about how life begins.	(3) 2.75	2.71	2.56	2.65
15. To know how to use health and guidance services for children and families such as family counseling, family planning,etc.	Low		Low	Low
Percentage of statements ranked 2.50 or higher = 63.3%				

There was no agreement among the four groups as to the top three rankings, but three of the group gave lowest rank to statement 15, "to know how to use health and guidance services for children and families such as family counseling, family planning, etc."

Six of the 15 statements (4, 5, 7, 8, 11, and 14) were ranked 2.50 or higher by all four groups. Forty-two out of sixty possible choices or 63.3% were ranked 2.50 or higher.

Statements marked most frequently in the top three rankings were: (7) "to better understand the many responsibilities of being a parent," (8) "to be able to talk over ideas, feelings and concerns within the family," (5) "to be able to care for a baby with ease," and (11) "to understand viewpoints of both husband and wife as to sexual adjustment in marriage."

The junior high students' major concerns related to "happy feelings in the family," "caring for the sick," and "being able to talk to children about how life begins."

The senior high students' concerns shifted to "caring for a baby with ease," "understanding parental responsibilities," and "knowing the physical and emotional growth of children at various stages."

Graduate homemakers" greatest concerns were "ability to communicate within the family," "understanding self and why I act as I do," and the "responsibilities of parenthood."

The homemakers who were not high school graduates evidence a greater number of high ranking concerns. They assigned number one rank to the "many responsibilities of parents," "understanding the viewpoints

of both husband and wife in sexual adjustment," and "understanding disciplining of children." Their second ranking competencies with the same ratings were "communicating in the family," and "learning to give and take in family arguments," while their third ranking concern was "caring for a baby with ease."

TABLE VIII

RANKING OF SPECIFIC COMPETENCIES WITH MEAN RATINGS OF 2.50 OR HIGHER BY ALL JUNIOR HIGH, SENIOR HIGH, GRADUATE AND NON-GRADUATE HOMEMAKERS IN THE CATEGORY OF MANAGEMENT AND CONSUMER SKILLS

	Junior High Girls	Senior High Girls	Graduate Homemakers	Non-Graduate Homemakers
16. To know how to plan a year ahead for family spending.		Low	Low	Low
17. To be able to plan shopping that will save time and discourage spending too much.		(3)		(3)
18. To be able to manage housework so there is time for recreation, volunteer work or a job outside the home.	(3)			
19. To be able to choose the best kind of savings plan for our family.				
20. To know how credit and installment buying works and when to use it.	Low			(2) 2.53
21. To be able to choose insurance suitable for your family needs.			(3)	
22. To know how to judge quality and cost of products in relation to my intended use.				
23. To be able to schedule housework to avoid exhaustion and tension.				
24. To know how to choose professional services (doctors, lawyers, druggists).	(2) 2.50	(2) 2.53	(2) 2.60	
25. To be able to talk over and plan with my husband about money matters.	(1) 2.54	(1) 2.70	(1) 2.92	(1) 2.82
Percentage of statement ranked 2.50 or higher = 20%				

The ranking of specific statements was very consistent in this category. All four groups ranked the same question as number one; (25) "to be able to talk over and plan with my husband about money matters," All but one group gave second rank to the same questions; (24) "to know how to choose professional services (doctors, lawyers, druggists)," All but one group also ranked the same question lowest and that was (16) "to know how to plan a year ahead for family spending." The third ranking statements showed more variability, but (17) "to be able to plan shopping that will save time and discourage spending too much," was listed by two groups.

Only one statement was marked 2.50 or higher by all four groups. Eight out of forty or 20% of the possible choices were rated 2.50 or higher.

The junior high school girls were the only groups concerned with "managing housework so there is time for recreation, volunteer work or a job outside the home." They ranked knowledge of credit and of installment buying lowest. The senior high and non-graduate homemakers were concerned about planned shopping to save time and discourage spending too much. Graduate homemakers comprised the only group concerned about insurance and the non-graduate homemakers comprised the only groups concerned about knowledge of credit and installment buying.

TABLE IX

RANKING OF SPECIFIC COMPETENCIES WITH MEAN RATINGS OF 2.50 OR HIGHER BY ALL JUNIOR HIGH, SENIOR HIGH, GRADUATE AND NON-GRADUATE HOMEMAKERS IN THE CATEGORY OF HOUSING, FURNISHING, AND EQUIPMENT

	Junior High Girls	Senior High Girls	Graduate Homemakers	Non-Graduate Homemakers
26. To be able to select and care for appliances such as toasters, irons, vacuum cleaners, ranges, washers, and the like.				(2) 2.65
27. To be able to make slip covers and draperies.	Low	Low	Low	Low
28. To know how to make my first home attractive.	(1) 2.52			(3) 2.59
29. To know how to care for floors, walls, and furniture.				(2) 2.65
30. To know how to make simple household repairs.				2.53
31. To know how to choose rugs, furniture, draperies, and dishes suitable to family needs and income.	(3)	(2) 2.53		
32. To make decisions as to buying or renting in relation to family needs.		(3) 2.51	(2) 2.56	(1) 2.71
33. To be able to plan for costs of household insurance, taxes, repairs, and yard care.			(3)	
34. To know how to make the best use of storage space in closets and kitchen cabinets.				
35. To be able to recognize desirable and undesirable features in selecting a home for my family.	(2) 2.50	(1) 2.55	(1) 2.68	(3) 2.59
Per-centage of statement ranked 2.50 or higher = 32.5%				

There was complete agreement by all four groups as to the lowest ranking competency, (27) "to be able to make slip covers and draperies," The only statement consistently marked above 2.50 and in the top three rankings by all four groups was (35) "to be able to recognize desirable and undesirable features in selecting a home for my family." The next statement most frequently ranked in the top three was (32) "to make decisions as to buying or renting in relation to family needs."

Thirteen out of forty possible choices or 32.5 were ranked 2.50 or higher.

The junior high students' greatest interest was in (28) "knowing how to make my first home attractive." The senior high and graduate homemakers' greatest concern was for (35) "recognizing desirable and undesirable features in selecting a home," and the non-graduate homemakers' greatest concern was in (32) "making decisions as to buying or renting in relation to family needs."

TABLE X

RANKING OF SPECIFIC COMPETENCIES WITH MEAN RATINGS OF 2.50 OR HIGHER BY ALL JUNIOR HIGH, SENIOR HIGH, GRADUATE AND NON-GRADUATE HOMEMAKERS IN THE CATEGORY OF FOOD PREPARATION, NUTRITION, AND MEAL PLANNING

	Junior High Girls	Senior High Girls	Graduate Homemakers	Non-Graduate Homemakers
36. To understand the relationship of food to health and appearance.	(3) 2.52	(3) 2.55	(2) 2.56	(3) 2.59
37. To know how to plan meals for my family.	(2) 2.54	(2) 2.61	(3) 2.52	(1) 2.76
38. To know how to cut down the cost of food.		(1) 2.66	(1) 2.64	2.53
39. To be able to prepare attractive family meals including left-overs.				
40. To be able to save time and energy in preparing family meals.		Low	Low	Low
41. To be able to plan special diets for sick family members, weight watchers and pregnancy.				(2) 2.65
42. To choose cuts of meat.	Low			2.53
43. To be able to judge the qualities of fruits and vegetables.				(3) 2.59
44. To know how to prepare many kinds of meats, vegetables, desserts, and baked products.				
45. To be able to plan and enjoy entertaining and serving food to guests.	(1) 2.56			
Per-centage of statements ranked 2.50 or higher = '37.5%				

Three of the four groups agreed as to the lowest ranking statement (40) "to be able to save time and energy in preparing family meals."

The three top rankings clustered about the three statements (36) "to understand the relationship of food to health and appearance"; (37) "to know how to plan meals for my family"; and (38) "to know how to cut down the cost of food."

Only two of the ten statements were marked 2.50 or higher by all four groups. Fifteen out of forty choices or 37.5% were marked 2.50 or higher.

The junior high students were the only ones concerned with (45) "entertaining and serving food to guests." The senior high and graduate homemakers again agreed on the top ranking importance of (38) "cutting costs of food," while the non-graduate homemakers gave top ranking to (37) "planning meals."

TABLE XI

RANKING OF SPECIFIC COMPETENCIES WITH MEAN RATINGS OF 2.50 OR HIGHER BY ALL JUNIOR HIGH, SENIOR HIGH, GRADUATE AND NON-GRADUATE HOMEMAKERS IN THE CATEGORY OF CLOTHING SELECTION, CARE AND CONSTRUCTION

	Junior High Girls	Senior High Girls	Graduate Homemakers	Non-Graduate Homemakers
46. To be able to wash and iron clothes properly.	(3) 2.54	2.53	(3)	(2) 2.53
47. To be able to buy clothes for my family and myself that fit and hold up well.	(1) 2.60	2.53	(2)	(1) 2.76
48. To understand fabric names used on lables as they influence their use and care.				(3)

TABLE XI (CONTINUED)

	Junior High Girls	Senior High Girls	Graduate Homemakers	Non-Graduate Homemakers
49. To be able to mend clothes for good appearance.	(2) 2.56		(3)	
50. To be able to read and understand pattern instructions.				
51. To be able to make simple garments such as shifts, blouses and childrens' clothing.				
52. To be able to sew simple household articles such as kitchen curtains or pillow covers.				
53. To be able to do more difficult sewing using wool, synthetic and knitted fabrics.				
54. To be able to tailor suits and coats.	Low	Low	Low	Low
55. To know how to choose clothes and accessories for a well-dressed appearance.	(2) 2.56	(1) 2.53	(1) .2.52	(2) 2.53
Per-centage of statements ranked 2.50 or higher = 27.5%				

There was complete agreement by all groups that statement (54) "to be able to tailor suits and coats" was the lowest ranking competency needed by young homemakers. Three of the four groups were in agreement as to the top ranking competency of (47) "to be able to buy clothes for my family and myself that fit and hold up well." The statement (55) "to know how to choose clothes and accessories for a well-dressed appearance" was ranked first by two of the groups. Statement 47 and 55 were similar in that they relate to clothing selection but 47 stressed fit and durability while 55 stressed appearance and included accessories. Only 55

was ranked 2.50 or higher by all four groups. Eleven out of the forty possible choices or 27.5% were ranked 2.50 or higher.

In this category competencies related to selection and care of clothing were of greater concern to all groups than any statements related to construction of clothing. Of the four statements related to sewing skills of various kinds (51, 52, 53, and 54), none were rated 2.50 or higher but making simple garments was rated higher by all groups except the non-graduate homemakers who rated (52) "sewing simple household articles such as kitchen curtains or pillow covers" slightly higher. The senior high students assigned a number one ranking to (46) "to be able to wash and iron clothes properly," (47) "to be able to buy clothes for my family and myself that fit and hold up well," and (55) "to know how to choose clothes and accessories for a well-dressed appearance."

SUMMARY OF FINDINGS

The maturity factor as an influence on competencies needed by young homemakers was operative only for the junior high level. Senior high girls and young homemakers agreed on the rank order of categories as follows: (1) Family and Child Rearing, (2) Food, Preparation, Nutrition, and Meal Planning, (3) Management and Consumer Skills, (4) Housing, Furnishings and Equipment, (5) Clothing Selection, Care and Construction. The junior high girls agreed with other age groups as to the top two ranking categories, but they ranked Clothing Selection, Care and Construction in third place followed by (4) Management and Consumer Skills and (5) Housing, Furnishings and Equipment.

Differentiation by socio-economic levels did not effect the first three rankings of categories related to family, food and management. Throughout the categories, lower socio-economic subjects gave higher mean ratings than the higher socio-economic subjects gave. The higher socio-economic subjects ranked Housing, Furnishings and Equipment above Clothing Selection, Care and Construction, while the lower socio-economic subjects reversed this order.

Completion or non-completion of high school appeared to influence mean ratings in the five categories to a much higher degree than the variable of maturity and to some degree more than the socio-economic variable. Non-graduates specified considerably higher mean in all categories. Graduates ranked the five categories in the following order: (1) Family and Child Rearing, (2) Management and Consumer Skills, (3) Food Preparation, Nutrition and Meal Planning, (4) Housing, Furnishings and Equipment and (5) Clothing Selection, Care and Construction. Non-graduates ranked the five categories as follows: (1) Family and Child Rearing, (2) Food Preparation, Nutrition, and Meal Planning, (3) Housing, Furnishings and Equipment, (4) Management and Consumer Skills and (5) Clothing Selection, Care and Construction.

Specific needs within the five categories which were ranked as number one provide further clues to more concise needs identified by the various groups.

The category of Family and Child Rearing received a greater number of statements worth a number one rating than other categories. The ratings of specific statements as number one are as follows:

Junior High: "To know how to help family members have happy feelings toward each other."

Senior High: "To be able to care for a baby with ease."

Graduate Homemakers: "To be able to talk over ideas, feelings, and concerns within the family."

Nongraduate Homemakers: "To better understand responsibilities of being a parent."
"To understand viewpoints of both husband and wife as to sexual adjustment in marriage."
"To understand ways of disciplining children."

In the category of Food Preparation, Nutrition and Meal Planning the statements given number one ratings were:

Junior High: "To be able to plan and enjoy entertaining and serving food to guests."

Senior High: "To know how to cut down the cost of food."

Graduate Homemakers and Non-graduate Homemakers: "To know how to plan meals for my family."

All groups ranked the same statement as number one in the Management and Consumer skills category. It was "To be able to talk over and plan with my husband about money matters."

Statements ranked number one in the Housing, Furnishings, and Equipment category were as follows:

Junior High:	"To know how to make my first home attractive."
Senior High and Graduate Homemakers	"To be able to recognize desirable and undesirable features when selecting a home for my family."
Non-graduate Homemakers	"To make decisions as to buying or renting in relation to family needs."

In the category of Clothing Selection, Care and Construction the Statement ranked number one were:

Junior High, Graduate and Non-graduate Homemakers:	"To be able to buy clothes for my family that fit and hold up well."
Senior High:	"To be able to wash and iron clothes properly."
	"To be able to buy clothes for my family that fit and hold up well."
	"To know how to choose clothes and accessories for a well-dressed appearance."

CONCLUSIONS AND RECOMMENDATIONS

The instructional foci which this study appears to support are as follows:

At junior high level, self understanding relative to present family and relationships with others should be emphasized. The clothing area which this group ranked third should relate to improved personal appearance and self confidence. Their high ranking of entertaining guests exhibits an interest in acceptable modes of socialization. The many specific competencies ranked similarly to high school students and young homemakers would indicate a practical realization of their needs. Since Home Economics is required in District Eleven for only two semesters at seventh and eighth grade levels, the importance of well defined quality and quantity standards for instruction related to basic needs cannot be overemphasized. Motivation of interest in continuing with electives which contribute to acquiring a variety of needed competencies would be a prime objective for junior high school teachers.

At senior high level, the large number of statements with high ratings in the Family and Child Rearing area would point to major stress of parental responsibilities especially related to child development,

communication within the family especially as it related to decision making. A meal management approach with attention to costs versus segmented items of food preparation would be favored.

In target area schools the need for a strong emphasis on interpersonal relationships and the family's role in developing these skills is indicated by the high ranking of such a large number of statements in the area of Family and Child Rearing and the attention given to statements including words such as discipline, family arguments and understanding viewpoints. Interpretation and application of concepts should be within their frame of reference to provide economic and cultural relevance. The high ranking of a much greater portion of the specific competencies in all areas may indicate that the non-graduates who were predominantly lower socio-economic level, realize their lack of training. A more comprehensive presentation of homemaking competencies at ninth grade level would seem desirable in target area schools.

For schools with a larger proportion of higher socio-economic students the greater number of highly rated competencies in the category of Family and Child Rearing substantiated increased emphasis in this area with projection toward parental roles and responsibilities. Increased involvement in activities that demand decision making, resource management and personal interaction would seem to appeal to this group.

The high incidence of duplication in the ranking of specific competencies at 2.50 or higher among all groups would indicate similar emphasis at all levels. The use of a variety of motivation techniques, methodology, and comprehensive content at each level would seem to be

indicated. This would very strongly support a well planned succession of interrelated concepts.

Attempts to assess the rationale for some of these findings and to relate them to the need for further research, leads to the exploratory thoughts which follow.

Affluence has perhaps diminished the family concern for producing basic needs of food, clothing and shelter and the released time and energy is directed toward other less tangible but basic needs.

The high rating of Family and Child Rearing by all groups might reflect concern that increasing density of urban living, mobility and mass communication, demands improved personal relationships and that the family is the basic unit for learning interaction skills. One might assume this could reflect dissatisfaction or insecurity of these young people in their present family relationships.

It was surprising to note the low rank given the statement, "To understand people of other races, religions, backgrounds and ages", in light of the current emphasis in all media of understanding cultural differences. It is espcially surprising since Colorado Springs has a highly mobile population and a large portion of the sample included minority groups.

The expression of a need for communication within the family appears in the highly ranked specific competencies of several categories and would indicate the desirability of more co-ed classes.

The ranking of Food Preparation, Nutrition and Meal Planning second, no doubt relates to the constancy of the demand for food, its economic and health related importance and its significance as a mode

of socialization.

The low ranking of Clothing Selection, Care and Construction and the little attention given construction skills as specific needs could reflect the current informality of dress, the increasing diversity of status symbols such as cars, recreational equipment, travel and the dominant use of mass-produced clothing. It is difficult, however, to equate this low ranking with prevalent high enrollment in clothing classes in district eleven, but this no doubt is influenced by tradition, the pleasure experienced in producing concrete expression of achievement, less experience and training of instructional staff in other areas such as consumer skills, management, housing, equipment and furnishings. Clothing is tangible, more easily and quickly produced and at nominal cost. Individual satisfaction lies in its comparative immediacy, creativeness and personal enhancement.

The mid-ranking of Management and Consumer Skills, Housing, Furnishings and Equipment may relate to lack of exposure in the current curriculum, to erroneous concepts of management being restrictive and unpleasant, i.e. budgets and schedules, or the traditional male role of money manager. One would question a relationship between the low ranking Management and Consumer Skills by the lower socio-economic groups as a partial reason for their socio-economic status.

Three of the four groups ranked saving time and energy in meal preparation very low. This might also be related to lack of exposure to management techniques, but could result from the traditional teaching of food preparation principles in terms of food groups rather than with a meal management approach. The high degree of youthful energy and continuing dependency on adult direction as to use of time are also probable factors in the low ranking or this competency.

SUGGESTIONS FOR FURTHER RESEARCH

Three questions arising from this study might provide impetus for further research:

1) What effect have existing family-oriented curricula had on marriage readiness and success in relating meaningfully within the family?

2) How do motivational techniques vary in effectiveness in developing greater concern for homemaking competencies?

3) What are some instructional methods which will make management and consumer skills more relevant and attractive to the students?

APPENDIX A

QUESTION MEANS FOR EACH JUNIOR HIGH, SENIOR HIGH, HOMEMAKER, AND SOCIAL CLASS FAMILY AND CHILD REARING SECTION

Question	Junior High			Senior High			Homemakers			Soc. Class	
	N=23	N=25	N=48	N=26	N=23	N=49	N=25	N=17	N=42	N=74	N=65
	H	L	Tot.	H	L	Tot.	H	L	Tot.	H	L
1.	2.43	2.36	2.39	2.69	2.83	2.76	2.52	2.53	2.52	2.55	2.57
2.	2.78	2.64	2.71	2.38	2.83	2.59	2.24	2.65	2.41	2.38	2.71
3.	2.22	2.10	2.16	2.46	2.48	2.47	2.52	2.53	2.52	2.41	2.35
4.	2.52	2.60	2.56	2.46	2.83	2.63	2.72	2.65	2.69	2.57	2.69
5.	2.65	2.68	2.67	2.84	2.74	2.79	2.56	2.76	2.64	2.69	2.72
6.	2.26	2.12	2.19	2.03	2.35	2.18	2.44	2.24	2.36	2.24	2.23
7.	2.57	2.68	2.63	2.65	2.91	2.77	2.64	2.88	2.74	2.62	2.81
8.	2.70	2.60	2.65	2.46	2.87	2.65	2.76	2.82	2.78	2.64	2.75
9.	2.26	2.40	2.33	2.53	2.48	2.51	2.52	2.82	2.64	2.44	2.54
10.	2.26	2.20	2.23	1.96	2.26	2.10	2.16	2.41	2.26	2.12	2.28
11.	2.48	2.64	2.56	2.56	2.96	2.75	2.72	2.88	2.78	2.59	2.82
12.	2.17	2.36	2.27	2.23	2.70	2.45	2.24	2.88	2.50	2.21	2.62
13.	2.87	2.64	2.75	2.73	2.43	2.59	2.36	2.36	2.36	2.65	2.49
14.	2.70	2.80	2.75	2.65	2.78	2.71	2.56	2.65	2.60	2.64	2.75
15.	1.96	2.16	2.06	2.11	2.22	2.16	1.92	2.24	2.05	2.00	2.20
Total	2.46	2.47	2.46	2.45	2.65	2.54	2.46	2.62	2.52	2.45	2.57

MANAGEMENT AND CONSUMER SKILLS

Question	Junior High			Senior High			Homemakers			Soc. Class	
	N=23	N=25	N=48	N=26	N=23	N=49	N=25	N=17	N=42	N=74	N=65
	H	L	Tot.	H	L	Tot.	H	L	Tot.	H	L
16.	2.09	2.12	2.11	1.88	1.96	1.92	1.72	1.88	1.78	1.89	2.00
17.	2.13	2.32	2.23	2.42	2.48	2.45	2.44	2.47	2.45	2.34	2.41
18.	2.22	2.44	2.33	2.27	2.30	2.28	2.16	2.18	2.17	2.22	2.32
19.	2.00	2.52	2.27	2.35	2.43	2.39	2.24	2.41	2.31	2.20	2.46
20.	1.87	2.04	1.96	2.23	2.09	2.16	2.28	2.53	2.38	2.14	2.19
21.	2.13	2.32	2.23	2.27	2.61	2.43	2.48	2.41	2.45	2.30	2.45
22.	2.13	2.28	2.21	2.23	2.30	2.26	2.36	2.41	2.38	2.24	2.32
23.	2.00	2.44	2.23	2.31	2.13	2.23	2.24	1.94	2.12	2.19	2.20
24.	2.26	2.72	2.50	2.46	2.61	2.53	2.60	2.41	2.52	2.45	2.60
25.	2.48	2.60	2.54	2.62	2.78	2.70	2.92	2.82	2.88	2.68	2.72
Total	2.13	2.38	2.26	2.30	2.39	2.34	2.34	2.35	2.35	2.27	2.37

HOUSING, FURNISHINGS, AND EQUIPMENT

Question	Junior High			Senior High			Homemakers			Soc.	Class
	N=23	N=25	N=48	N=26	N=23	N=49	N=25	N=17	N=42	N=74	N=65
	H	L	Tot.	H	L	Tot.	H	L	Tot.	H	L
26.	2.04	2.20	2.12	2.12	2.00	2.06	2.12	2.65	2.33	2.10	2.25
27.	1.61	1.60	1.60	1.73	1.65	1.69	1.28	1.47	1.36	1.54	1.58
28.	2.26	2.76	2.52	2.27	2.35	2.31	2.32	2.59	2.43	2.28	2.57
29.	2.13	2.48	2.31	2.38	2.17	2.28	2.32	2.65	2.45	2.28	2.41
30.	2.17	2.28	2.23	2.12	2.17	2.14	2.04	2.53	2.24	2.11	2.31
31.	2.09	2.72	2.42	2.58	2.48	2.53	2.36	2.41	2.39	2.35	2.55
32.	2.17	2.56	2.37	2.42	2.61	2.51	2.56	2.71	2.62	2.39	2.62
33.	2.04	2.56	2.31	2.08	2.48	2.27	2.40	2.29	2.36	2.18	2.46
34.	1.96	1.88	1.92	2.04	2.09	2.06	1.80	1.94	1.86	1.93	1.97
35.	2.35	2.64	2.50	2.62	2.61	2.55	2.68	2.59	2.64	2.56	2.62
Total	2.08	2.37	2.23	2.24	2.26	2.25	2.19	2.38	2.27	2.17	2.33

FOOD PREPARATION, NUTIRTION, AND MEAL PLANNING

Question	Junior High			Senior High			Homemakers			Soc. Class	
	N=23	N=25	N=48	N=26	N=23	N=49	N=25	N=17	N=42	N=74	N=65
36.	2.39	2.64	2.52	2.38	2.74	2.55	2.56	2.59	2.57	2.44	2.66
37.	2.39	2.68	2.54	2.42	2.83	2.61	2.52	2.76	2.62	2.44	2.75
38.	2.04	2.60	2.33	2.58	2.74	2.66	2.64	2.53	2.60	2.43	2.63
39.	2.17	2.36	2.27	2.35	2.52	2.43	2.16	2.41	2.26	2.23	2.43
40.	2.13	2.40	2.27	2.08	2.35	2.21	1.92	2.06	1.98	2.04	2.30
41.	2.13	2.60	2.38	2.15	2.70	2.41	2.04	2.65	2.29	2.11	2.65
42.	2.13	2.32	2.23	2.31	2.26	2.29	2.40	2.53	2.45	2.28	2.35
43.	2.26	2.48	2.38	2.42	2.30	2.37	2.32	2.59	2.43	2.34	2.45
44.	2.17	2.72	2.46	2.42	2.48	2.45	2.40	2.29	2.36	2.34	2.52
45.	2.43	2.68	2.56	2.27	2.39	2.33	2.08	2.29	2.17	2.26	2.48
Total	2.22	2.55	2.39	2.34	2.53	2.43	2.30	2.47	2.37	2.29	2.52

CLOTHING SELECTION, CARE, AND CONSTRUCTION

Question	Junior High			Senior High			Homemakers			Soc. Class	
	N=23	N=25	N=48	N=26	N=23	N=49	N=25	N=17	N=42	N=74	N=65
	H	L	Tot.	H	L	Tot.	H	L	Tot.	H	L
46.	2.35	2.72	2.54	2.35	2.74	2.53	2.20	2.53	2.33	2.30	2.68
47.	2.39	2.80	2.60	2.42	2.65	2.53	2.40	2.76	2.55	2.40	2.74
48.	2.04	2.36	2.21	2.04	2.30	2.16	2.28	2.41	2.33	2.12	2.35
49.	2.43	2.68	2.56	2.38	2.61	2.49	2.20	2.29	2.24	2.33	2.55
50.	2.26	2.40	2.33	2.19	2.43	2.31	1.92	2.24	2.07	2.12	2.37
51.	2.22	2.44	2.33	2.15	2.17	2.16	2.08	2.24	2.14	2.15	2.29
52.	2.26	2.10	2.19	2.04	2.22	2.12	1.80	2.29	2.00	2.03	2.19
53.	2.13	2.40	2.27	1.88	1.83	1.86	1.60	1.76	1.67	1.86	2.03
54.	1.96	2.08	2.02	1.73	1.65	1.69	1.28	1.53	1.38	1.65	1.78
55.	2.39	2.72	2.56	2.46	2.61	2.53	2.52	2.53	2.52	2.46	2.63
Total	2.24	2.47	2.36	2.16	2.32	2.24	2.03	2.26	2.12	2.14	2.36

APPENDIX B

HOME ECONOMICS RESEARCH PROJECT

This survey is part of a research project being conducted by the District 11 Department of Research in cooperation with certain members of the Home Economics staff.

There are no right or wrong answers. We are interested in how you feel about the following 55 statements. Please be completely frank in your answers. The score will have no effect on your grade. The papers will be sent directly to the research department to be mechanically scored.

Use the separate answer sheet for spaces 1 through 55.

Mark "A" if you think the stated knowledge or skill would be extremely important to a young homemaker; Mark "B" if it would be of some importance and Mark "C" if you think it would not be very important. Ignore spaces "D" and "E"; they will not be used for this survey.

Knowledge or Skills of

Young Homemaker Related to:

THE FAMILY AND CHILD REARING

1. To know about the physical and emotional growth of children at various stages.
2. To be able to care for a family member who is sick.
3. To realize the importance of individual differences among children.
4. To understand myself and why I act as I do.
5. To be able to care for a baby with ease.
6. To understand people of other races, religions, background and ages.
7. To better understand the many responsibilities of being a parent.
8. To be able to talk over ideas, feelings, and concerns within the family.
9. To help family members learn to "give and take" in settling family arguments.
10. To plan enjoyable leisure time activity with family members.
11. To understand viewpoints of both husband and wife as to sexual adjustments in marriage.
12. To understand the many ways of disciplining children.
13. To know how to help family members have happy feelings toward each other.
14. To be able to talk to my children about how life begins.
15. To know how to locate and use health and guidance services for children and the family.

On the answer sheet circle the number of the two items between one and 15 that you think would be of greatest value to a young homemaker.

MANAGEMENT AND CONSUMER SKILLS

16. To know how to plan a year ahead for family spending.
17. To be able to plan shopping that will save time and discourage spending too much.
18. To be able to manage housework so there will be time for hobbies or a job outside of the home.
19. To be able to choose the best kind of savings plan for our family.
20. To know how credit and installment buying works and when to use it.
21. To be able to choose insurance suitable for our family needs.
22. To know how to judge quality and cost of products in relation to my intended use.
23. To be able to schedule housework to avoid exhaustion and tension.
24. To know how to choose professional services (doctors, lawyers, druggists).
25. To know how to find sources of information about new products.

On the answer sheet circle the numbers of the two items between 16 and 26 that you think would be of greatest value to a young homemaker.

HOUSING, FURNISHING, AND EQUIPMENT

26. To be able to select and care for appliances such as toasters, irons, vacuum cleaners, ranges, washers and the like.
27. To be able to make slip covers and draperies.
28. To know how to furnish and decorate my first home.
29. To know how to care for floors, walls, and furniture.
30. To know how to make simple household repairs.
31. To know how to choose rugs, furniture, draperies, and dishes suitable to family needs and income.

HOUSING, FURNISHING, AND EQUIPMENT (Continued)

32. To make decisions as to buying or renting in relation to family needs.
33. To be able to plan for costs of household insurance, taxes, repairs, and yard care.
34. To know how to make the best use of storage space in closets and kitchen cabinets.
35. To be able to recognize desirable and undesirable features in selecting a home for my family.

On the answer sheet circle the numbers of the two items between 26 and 36 that you think would be of greatest value to a young homemaker.

FOOD PREPARATION, NUTRITION, AND MEAL PLANNING

36. To understand how food contributes to health and appearance.
37. To know how to plan meals for my family.
38. To know how to cut down the cost of food.
39. To be able to prepare and serve attractive meals for company.
40. To be able to save time and energy in preparing family meals.
41. To be able to plan special diets for sick family members, weight watchers and pregnancy.
42. To choose cuts of meat.
43. To be able to judge the qualities of fruits and vegetables.
44. To know how to prepare many kinds of meats, vegetables, desserts and baked products.
45. To be able to serve left overs in attractive ways.

On the answer sheet circle the numbers of the two items between 36 and 46 that you think would be of greatest value to a young homemaker.

CLOTHING SELECTION, CARE AND CONSTRUCTION

46. To be able to wash and iron clothes properly.
47. To be able to buy clothes for my family and myself that fit and hold up well.
48. To understand fabric names used on labels as they influence their use and care.
49. To be able to mend clothes for good appearance.
50. To be able to read and interpret pattern instructions.
51. To be able to make simple garments such as shifts, blouses and children's clothing.
52. To be able to sew simple household articles such as kitchen curtains or pillow covers.
53. To be able to do more difficult sewing using wool, synthetic and knitted fabrics.
54. To be able to tailor suits and coats.
55. To know how to choose clothes and accessories for a well dressed appearance.

On the answer sheet circle the numbers of the two items between 46 and 56 that you think would be of greatest value to a young homemaker.

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Association members conducted interviews with aviation and education officials in the 50 states. Arizona, California, Iowa, Illinois, Montana, Nebraska, Ohio, Tennessee, Wisconsin, and Wyoming appeared advanced in aviation education; however, comprehensive statewide programs at even a single educational level were the exception. At the secondary level, programs are in operation in at least one school in the majority of the states. Hawaii and Tennessee have rather complete programs; Wisconsin has a statewide program for high school seniors; Nebraska has a program operating in 35 schools and co-sponsored by the State Departments of Aeronautics and Education and the State University. There has been little activity in technical schools although New Jersey has had a program for 15 years. Activity in colleges and universities has been considerable. California has courses in 60 schools and 10 other states offer courses in three or more schools. All Ohio branch colleges offer elementary courses while the state universities have extensive programs and The Ohio State University an aeronautical engineering curriculum. Miami University of Ohio offers a Master's Degree in aviation education. Recommendations for industry activities include: (1) sponsoring teacher workshops, (2) developing a comprehensive program at each educational level, and (3) meeting with state aeronautics and education officials to encourage program development. (JK)

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AVIATION DISTRIBUTORS AND MANUFACTURERS' ASSOCIATION,
1900 ARCH STREET, PHILADELPHIA, PA. 19103 / Area Code 215 Locust 4-3484

REPORT OF STATES' AVIATION EDUCATION PROGRAMS

BASED UPON A SURVEY CONDUCTED BY THE

AVIATION EDUCATION COMMITTEE

AVIATION DISTRIBUTORS AND MANUFACTURERS ASSOCIATION

JUNE, 1967

This report is based upon interviews with state aviation and education officials in 50 states, conducted by Members of the Aviation Distributors and Manufacturers Association.

The purpose of the survey was to determine: (1) the present extent of each state's aviation education program at various public educational levels; (2) the major deficiencies, and principal reasons therefore, in each program; and (3) what might be done which would lead to the creation of programs, or development of better programs.

The report deals specifically with four educational levels:

Primary School

Secondary School

Technical School

College or Jr. College

The report is divided into three sections, each taking into consideration these four educational levels:

(I) Specific reasons various states do not have aviation education programs at certain educational levels.

(II) Scope of existing state programs.

(III) Aviation Education Material Sources.

(IV) What might be done to assist the states in developing programs.

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I. REASONS FOR LACK OF AVIATION EDUCATION PROGRAMS

The principal reason offered by officials whose states do not have comprehensive programs at various levels was a lack of interest in aviation education by the State Board of Education; it should be noted, however, that most of those interviewed were connected with State Departments of Aeronautics, and in only a few cases were individuals from the educational field contacted. A lack of cooperation and coordination between the Departments of Education and Aeronautics in a number of states was repeatedly emphasized, however, and undoubtedly exists.

Other frequently-cited reasons included:

A. Lack of funds.

B. Lack of interest by school administrators and/or teachers.

C. Overcrowded curriculums.

D. Lack of qualified teachers.

E. Public apathy towards aviation education.

F. Lack of a good aviation education program package, with related material and visual aids, both to stimulate the interest of school administrators and teachers, and to offer the students.

Obviously, the above are often inter-related. For instance, public interest would stimulate administrator and teacher interest, as well as encourage the State Board of Education and/or State Legislature to provide funds--which in turn would mean more teachers and added courses.

II. SCOPE OF STATE PROGRAMS

A number of states already are doing an excellent job in aviation education, and some have very detailed programs developed. Among those states appearing to be most advanced are Arizona, California, Iowa, Illinois, Montana, Nebraska, Ohio, Tennessee, Wisconsin and Wyoming.

It would appear that no state, however, has a complete, comprehensive program of aviation education from the primary grades through the college level. Furthermore, although individual schools or school districts in many states have aviation courses for primary, secondary or technical schools, comprehensive statewide programs at even a single educational level are the exception. Autonomy in the selection of courses granted individual schools, school districts and particularly state-supported colleges often results in state-approved aviation education curriculums not being widely utilized.

In most cases the interest of those officials interviewed appears considerable, and there is definite evidence of progress already being made by a number of the states at this time. When a complete lack of interest in a program at a school level was indicated, it was often for the primary grades, and reflected the feeling of individuals that students at this level were too young to obtain anything meaningful from such a program. State officials concerned may be interested in exploring the successful primary school aviation education programs operating in other states, which are referred to below.

Although many states (or individual schools) do not have a formal aviation program per se, featuring specific courses, aviation is incorporated into subjects such as science, economics, and reading. It was pointed out by some officials, in fact, that it

might be a mistake to try to promote specific aviation courses, which would meet resistance from educators, and that more success might be attained by the Industry's offering aviation education materials for utilization in regular courses.

ELEMENTARY SCHOOL PROGRAMS

A number of states are active in varying degrees, with Tennessee among the leaders. Arizona, California, Montana, Ohio and Oklahoma all use aviation education material from various sources (see Section III) for elementary school programs. Colorado, Illinois, Iowa, Michigan, Mississippi and Tennessee also have material available for primary school teachers. Field trips for students are utilized in Illinois and Wisconsin, and CAP Workshops have been used in Colorado and Kansas.

The feeling has been expressed--by officials representing other than the above states--that there is a lack of good current, organized aviation material for use by the elementary teacher; this is now being corrected by NAEC and several Industry manufacturers.

Another problem is that most elementary school teachers have not been "exposed" to aerospace education in either their teacher's college, by taking post-graduate courses or participating in workshops.

Aviation education, and its incorporation into a school's reading or science program, is often left to the discretion of the individual elementary school teacher.

SECONDARY SCHOOL PROGRAMS

Aviation education programs are in effect in at least one secondary school in the large majority of the states. Many states have much wider representation--between 5 and 8 high schools in Colorado, Indiana, Iowa, Kansas, Montana, Wyoming and Virginia offer some form of aviation education, and in several states additional schools will undoubtedly have programs for the 1967-1968 year. Four complete school systems in Oklahoma have programs at the secondary school level. Hawaii and Tennessee have rather complete programs, and Wisconsin has a state-wide program for high school seniors. Nebraska's program, co-sponsored by the State Departments of Aeronautics and Education and the State University, operates at 35 schools.

Several states, including California, Ohio and Wisconsin have placed emphasis on "Career Days" or other career-oriented programs for secondary school students.

An example of a particularly fine state program is Ohio's. In central Ohio the Division of Aviation has sponsored 24 "Career Day" programs for high school students. Over 30 students in each of 51 secondary schools visited the Ohio State University Airport and Aeronautical School this past spring, where they had the opportunity not only to inspect facilities, but also to receive rides in all types of aircraft, attend lectures and view films. The state also reports 100,000 high school students have viewed motion pictures from the Division of Aviation's film library.

Individual schools have outstanding programs such as Chanute, Kansas, High School and the Libertyville-Highland Jr. High School of Illinois; the Aurora High School System in Colorado is also highly regarded for its aviation education.

Student interest has generally been found to be high in aviation education, while teachers who initiate such programs at the local level are often former pilots or other educators familiar with aviation.

One State Aviation Director suggested the Industry prepare an audio-visual "careers package" to facilitate the sponsorship of "Career Days"; the utilization of such material by guidance counselors would supplement other phases of secondary school aviation education.

TECHNICAL SCHOOL PROGRAMS

There appears to be surprisingly little aviation education activity at the technical school level. Many states have no such program in any school, while a number of others report a program is under way in a single institution.

Among those states having programs in one or more technical schools are Alaska, California, Florida, Georgia, Oklahoma, Pennsylvania and Washington. Tennessee is attempting to develop some programs along these lines, while Minnesota officials indicate two schools have such programs at present, and they are interested in developing more to meet student demand.

New Jersey has had a vocational school program in operation for 15 years, and reports 80% of the full time and evening students who have taken the FAA test passed.

In addition to the usual problems of already-overcrowded curriculums, and lack of funds to establish new courses, there is a feeling among some officials that a high percentage of low-IQ students in vocational schools might not qualify for aviation-oriented technical subjects.

COLLEGE AND JR. COLLEGE PROGRAMS--TEACHER WORKSHOPS

A great deal of aviation education work is being accomplished at the college level, both in the providing of courses for students, and in teacher training.

At least 11 states offer courses in three or more undergraduate schools. California leads with participation at 60 schools, and the others include Colorado, Florida, Illinois, Michigan, Nebraska, Ohio, Oklahoma, Oregon, Tennessee and Texas. Many other states have a formal year-long program, or at least a summer program, in one or more colleges.

One Committee member who interviewed several state officials, and has been close to the aviation education scene for some time, pointed out, "There is great interest among the people who are responsible for planning, developing, and administering junior colleges in both pilot training and A&P training curriculums. The vocational guidance people that I have talked to are quite open in their expressions of their 'need for help from industry' in getting vocational type courses (especially the A&P courses) into their school curriculums. Their first need is help in 'justifying' the expense of installing the equipment and hiring the personnel to conduct an A&P course based on the demand for graduates from the aviation industry within the respective states."

Ohio's program, for which the Governor recently received an Award from the International Exposition of Flight for his State's having the "best aviation program of any state in the United States," is worth noting. An elementary course in aviation is offered at all branch colleges, while the State Universities have an extensive aviation program in addition to Ohio State's aeronautical engineering curriculum. Ohio State University has 25 airplanes, while Ohio University, Miami University and Kent State have 10, 10 and 8 respectively. The number of students enrolled for a quarter term in each of these four school's courses ranges from 90 to 40 students. Miami University is the only one in the country offering a Masters Degree in aviation education, it is understood.

TEACHER WORKSHOPS

Teacher workshops or summer courses in aviation education are being offered to primary and secondary school teachers in many states. Enrollment and general interest appear to be much better in those states offering credits and financial assistance, such as Iowa and South Carolina, than those where teachers must pay their own way and/or often receive no credits, such as Alabama and Mississippi.

Other states offering workshops include Illinois, Montana, New York, Ohio, Oregon, South Dakota, Texas, Virginia, Wisconsin, Wyoming, Tennessee and Washington. 1967 summer workshops in the latter two states have been supplied with complimentary ADMA material upon request.

Iowa, where the enrollment at workshops has been approximately 75% elementary and 25% secondary teachers at the four schools where it is offered, has indicated interest in a full time Aviation Education Administrator operating at the college level.

Tennessee's workshop program appears to be one of the best. That state offers a four-week aviation education workshop for teachers at all school levels each summer, and is open to teachers from other states. Tennessee's Aeronautics Commission offers 100 paid scholarships to the workshop.

III. AVIATION EDUCATION MATERIAL SOURCES

Some states have particularly fine aviation education material including text books, films and literature of all types.

Illinois has a "Feasibility Study of Aviation Courses in High School and Jr. Colleges," while the Iowa Aeronautics Commission has an extensive library of pamphlets and films for the utilization of aviation-minded educators. Tennessee has an excellent "Curriculum Guide for Aviation Education," while the Nebraska Department of Aeronautics has a recently-revised description of their Aerospace Education Program. Mississippi and Montana have fine text books for various teaching levels. There are numerous other sources of appropriate material, including the National Aerospace Education Council, the Federal Aviation Agency, individual manufacturers, and the Aeronautics Commissions (or their equivalents) in the various states. Four states--South Carolina, California, Florida and Massachusetts--specifically indicated that NAEC material is used, while California, Oklahoma and Oregon reported using manufacturers' literature and material. Undoubtedly this is used on a much more widespread basis, at least at the local level.

Educators at one or more educational levels use material supplied by their State Department of Aeronautics in Arizona, Illinois, Iowa, Mississippi, Montana, Nebraska, Oklahoma and Tennessee.

It is felt more states' Aeronautics Commissions have film and/or literature libraries than was revealed in the interviews; their efforts at publicizing the availability of such material, or the effective distribution of it, however, apparently could stand improvement in many instances.

IV. SUGGESTED INDUSTRY PROJECTS TO FURTHER THE DEVELOPMENT OF STATE AVIATION EDUCATION PROGRAMS

Most officials interviewed had some definite ideas as to what our Industry might do to promote aviation education. Among the most frequent suggestions was that three separate films be produced and made available:

1. For secondary and technical school and college students--to illustrate career opportunities in aviation.

2. For primary and/or secondary school students--a "general interest" film to stress aviation's importance, and to stimulate students' interest in it.

3. For utilization at teacher workshcps--to interest teachers in aviation and its importance, stress overall benefits of aviation education, and serve as a teaching aid.

It was also frequently suggested that appropriate literature be made available for the same three audiences.

The following were offered as additional prospective Industry activities designed to foster improved state aviation education programs:

A. Sponsor teacher workshops.

B. Develop a comprehensive aviation education program for each education level.

C. Meet with State Aeronautics and Education officials to point out the necessity of aviation education programs, and offer assistance to them.

D. Lobby at the state level to convince legislators of the importance of aviation education, and thereby the need for funds.

E. Establish a Speakers Bureau for teacher workshops.

F. Establish Joint Aviation Education Committee among all interested Industry Associations.

Several state officials and members of ADMA's Committee suggested all states be provided with information on existing aviation education literature, films and related material available. A national film library, or at least a film and literature catalog, was a recommended project in this regard.

A major obstacle to teachers' interest in attending aviation education workshops or other courses conducted by the various states is that in many cases they receive no professional credit, and must even pay their own tuition and expenses. Many officials interviewed emphasized that, if state legislators and the State Boards of Education could in some manner be convinced of the importance of aviation education, thereby influencing them to provide funds and/or credits to teachers enrolled in such programs, there would be a dramatic increase in teachers' interest.

R. FRANKLIN BROWN, JR.

Executive Secretary, ADMA

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Erickson, Eva H.
Report of the Study of Staff Nurse Position Responsibilities in Iowa General Hospital.

Iowa Hospital Association, Inc., Des Moines. Interorganizational Committee
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MANPOWER NEEDS; *MANPOWER UTILIZATION; NURSING; *NURSES; OCCUPATIONAL INFORMATION; *STATE SURVEYS; *HOSPITALS; QUESTIONNAIRES
IOWA

Undertaken in the belief that nurse utilization is an essential element in meeting the nursing care needs of patients, this study investigated certain activities performed by staff nurses on medical surgical units. Seventy-eight activities in the categories of giving nursing care, managing others giving nursing care, and maintaining hospital operational systems, were selected and included in questionnaires distributed to all 125 Iowa hospitals for completion by registered nurses on three shifts. Findings from questionnaires returned by 110 hospitals and completed by 330 nurses, included: (1) Over two-thirds of the day and evening nurses made rounds with doctors, took blood pressures, assisted doctors with treatments, passed all medicines, reported patients' conditions to doctors, adjusted intravenous infusions, answered patients' questions, and checked patients for voiding, (2) More than two-thirds of all the nurses routinely or often made work lists for nursing staff, checked assignments of staff, explained assignments to staff, and helped staff give care. Between one-third and three-fourths of the nurses carried out each of the following activities: made out laboratory and x-ray requisitions, started patient charts, made drug charges, ordered stock drugs, returned equipment to storage area, carried meal trays, ordered supplies, and picked up drugs. (JK)

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Iowa League for Nursing - Iowa Hospital Association

Inter-organizational Committee

REPORT OF THE STUDY OF STAFF NURSE POSITION RESPONSIBILITIES IN IOWA GENERAL HOSPITAL

Prepared By

Miss Eva H. Erickson

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Published By

THE IOWA HOSPITAL ASSOCIATION, INC.

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P R E F A C E

This study was done under the auspices of the Iowa League for Nursing - Iowa Hospital Association Inter-organizational Committee, as a part of the Committee's investigation of utilization of registered nurse power in Iowa General Hospitals.

The membership of the Inter-organizational Committee is:

Representing the Iowa Hospital Association-

Mr. Ralph Enos, Chairman - Administrator, Schoitz Memorial Hospital, Waterloo, Iowa.

Miss Nellie Osterlund, Director of Nursing, Iowa Lutheran Hospital, Des Moines, Iowa.

Mrs. Louise Dieterichs, Director of Nursing Service, Mitchell County Hospital, Osage, Iowa.

Mrs. Mildred Hipwood (ex-officio), Director of the Department of Hospital Nursing, The Iowa Hospital Association.

Representing the Iowa League for Nursing-

Sister Mary Gervase, Secretary - Director, School of Nursing, Mercy Hospital, Des Moines, Iowa.

Mrs. Marguerite Thomas, Director of Nursing, Klein Memorial Hospital, Burlington, Iowa.

Miss Eva H. Erickson, Associate Professor, College of Nursing, The University of Iowa, Iowa City, Iowa.

Sister Mary Timothea (ex-officio), President, The Iowa League for Nursing.

Appreciation is expressed to the Directors of Nursing and the staff nurses who responded to the questionnaire.

The study proposal was prepared by Miss Eva H. Erickson, who also prepared this report.

Chapter 1

INTRODUCTION AND STATEMENT OF PROBLEM

The Iowa League for Nursing and the Iowa Hospital Association are both concerned with meeting the nursing care needs of patients who come to Iowa Hospitals for care. To meet these needs, adequate nursing care manpower hours must be available. To provide adequate manpower hours, not only are certain numbers of persons required, but also, the time of these persons must be fully utilized for nursing care and for managing those who give nursing care. The services of registered nurses are essential. What registered nurses do with their time when they serve in staff nurse positions in hospitals depends on how the positions they hold have been identified. One method of identifying how positions have been identified is to ask staff nurses how often they carry out certain activities. This is what this study has undertaken to do.

The position of a staff nurse on a medical-surgical unit in a general hospital is seen to consist of three major components -- nursing care, management of personnel, giving nursing care and operation of hospital service and communications systems. To establish what activities are included in each of these components was the first activity of the study. The identification of activities nurses are involved in was obtained from a study done under the auspices of the Inter-organizational Committee in the spring of 1967. Sister Mary Gervase, a member of the Committee, obtained at her requests, diaries from staff nurses in three different hospitals. These activities, listed in the diaries, were categorized into three component groups by the Inter-organizational Committee.

Nursing care activities are seen to be those tasks, duties, actions and activities which are concerned with performing procedures needed by patients

to meet their personal hygiene, rest, sleep, nutrition, fluids, positioning, exercise and elimination needs; with carrying out doctors orders for medications, treatments and diagnostic procedures; with observation, interviewing and inter-action with patients to identify needs for nursing care; with ascertaining signs and symptoms essential to diagnosis and evaluation of patients' progress and condition; with protecting the patient from injury, infection and complications, with teaching patients new health habits and healthful ways of living; with helping patients meet their emotional needs and needs for services of other health and paramedical personnel, and with recording, reporting and conferring with other health personnel regarding care of patients. Using these general criteria, activities identified in Sister Mary Gervase's study, which are used in this study as representing nursing care activities of the staff nurse, are as follows: [1]

1. Give p.r.n. medication for pain or sleep.
5. Made rounds with some doctors for some patients.
8. Started I.V.'s.
10. Took Blood-pressures of patients.
11. Made rounds of patients.
14. Gave a patient a bed bath.
15. Took temperature of patients.
16. Did some kind of irrigation.
20. Assisted a doctor with a treatment.
21. Passed drinking water to patients.
22. Catheterized a patient.
24. Added drugs to I.V.'s.
30. Connected Blood to I.V.'s.
31. Ambulated a patient.
32. Gave patient a bed pan or urinal.
34. Gave tracheostomy care.

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1. These are numbered in the order and sequence as they appeared in the questionnaire and as they are reported in the various tables summarizing the findings.

to meet their personal hygiene, rest, sleep, nutrition, fluids, positioning, exercise and elimination needs; with carrying out doctors orders for medications, treatments and diagnostic procedures; with observation, interviewing and inter-action with patients to identify needs for nursing care; with ascertaining signs and symptoms essential to diagnosis and evaluation of patients' progress and condition; with protecting the patient from injury, infection and complications, with teaching patients new health habits and healthful ways of living; with helping patients meet their emotional needs and needs for services of other health and paramedical personnel, and with recording, reporting and conferring with other health personnel regarding care of patients. Using these general criteria, activities identified in Sister Mary Gervase's study, which are used in this study as representing nursing care activities of the staff nurse, are as follows: [1]

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37. Completed all Admission routine for new patient to nursing unit.
38. Adjust flow of I.V.'s.
39. Answered patients call lights.
43. Talked with family about patient's condition.
44. Explained to the patient what was going to happen to him.
47. Made an occupied bed of a patient.
49. Got a patient out of bed.
50. Gave patient an enema.
51. Obtained specimen for laboratory examination.
52. Passed all routine, stat and p.r.n. medications.
57. Answered patients questions about condition, treatment and progress.
58. Checked patient for voiding.
61. Reported patient's symptoms and condition to a doctor.
62. Restrained a patient.
63. Fed patient.
68. Talked with patient to find out how he felt about hospitalization or impending surgery or complications of condition.
69. Established nursing care objectives for a patient and a plan of care in a group meeting.
75. Taught patients self-care or new health habits.
77. Helped patient plan for care after discharge from hospital.

The second component of activities which make up the position of a staff nurse are those that are concerned with supervising personnel who are giving nursing care to patients. Ever since the introduction of subsidiary and auxiliary nursing personnel into the organizational structure of the hospital, the supervision of these persons has been the key to patient comfort and the measure of much of the success of nursing care. This management of others giving nursing care is defined to include those tasks, duties, activities and actions which are concerned with assigning nursing care to personnel with competence to perform tasks needed, with explaining intent and method of care to be given; with anticipating for personnel difficulties which might arise in giving care; with identifying observations and reports expected of personnel; with teaching personnel how to perform procedures unknown to them; with correcting personnel if care is inadequately given; with ascertaining

what progress personnel is making in finishing work assignments; with adjusting assignments; with assisting personnel in situations they are unable to handle alone; with holding conferences and discussions to obtain group identification of nursing care objections and group participation in developing nursing care plans and evaluating nursing care given; with motivating personnel to obtain from them the performance needed to reach nursing care goals.

The activities included in this study which are seen to be related to the component of the staff nurse position, which has to do with management of others giving nursing care to patients, are:

2. Make work list for nursing staff.
6. Check a blood pressure reported to you by an L.P.N. [2]
9. Explained to staff their patient care assignment.
18. Demonstrated and taught a nursing procedure to the staff.
19. Checked to see how staff was getting along with assignments.
23. Assigned nursing care for patients to nursing staff.
25. Conducted a discussion with staff to plan nursing care of patients.
26. Helped staff give care to patients (as turn, position, get out of bed)
40. Helped staff do procedures not familiar to them.
45. Corrected staff for way procedure was performed.
56. Discussed behavior or reactions of individual patient with staff member.
59. Checked with staff regarding how they were getting along with assignment.
64. Explained to staff how to approach a specific patient.
67. Anticipated for the staff the difficulties they might have in giving care to patients.
70. Sought help from a supervisory person because of difficulties in giving good care to patients.
73. Adjusted staff assignment because of change in patient condition.
76. Talked with staff about the kind of care they were giving to patients and how to improve that care.
78. Told staff what reports about the patients were to be made to you.

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2. This item should have not used "L.P.N." since a number of nurses responding indicated L.P.N.'s were not employed in their hospitals. The item would have been better if the word "staff" had been used instead of "L.P.N.".

The third major component of the staff nurse position, as seen in this study; that which was labeled - "maintaining the hospital's operational systems". Much of the rationale for identifying an activity as falling into this classification is related to the fact that the patient, in the process of seeking care for his ills or ailments, had to be housed in the hospital and some of the services rendered him at his, or his doctor's request, are not usually the responsibility of the nursing department. But the area of the hospital in which patients are housed is traditionally called a nursing unit. So that the hospital can provide the services which the patient's doctor wishes, the hospital sets up many communications and service systems which traditionally have been operated by nurses.

The Committee, in setting up this study, defined the responsibility of maintaining the hospital's operational systems to include those activities, tasks, duties and actions that are concerned with the routines for communicating doctor's orders for diagnostic and therapeutic services, provided by other than nursing department members, to those departments; transporting patients to those departments for services; receiving and recording on patients' records reports of those services; with obtaining supplies, drugs, foods, equipment and personnel needed in giving nursing care to patients; with charging patients for hospital services given; with maintaining the hospital building and facilities in working order and clean condition; with protecting the patient's property from loss and the patient from injury and harm from unsafe conditions; with controlling casual visitors; with providing security for the patients' record of hospitalization; with maintaining inter-departmental communications, not directly related to nursing care and with collecting various and sundry statistics required to meet hospitals' legal and accreditation demands.

In the list of activities used in this study, the following actions are deemed to be related to operating the hospital systems:

3. Added blank sheets to patients' charts.

4. Started charts for new patients (heading all sheets).

7. Got blood from laboratory for a patient.

12. Transcribed doctor's orders.

13. Ordered stock drugs for the floor.

17. Prepared solutions for irrigations.

27. Carried meal trays to patients.

28. Put away newly received supplies.

29. Made Drug charge slips.

33. Counted narcotics.

35. Made out Lab, X-ray or other requisitions for services from other departments.

36. Set up trays for procedures to be done by doctors (like lumbar punctures, thoracentesis, etc.)

41. Accompanied patient to surgery. [3]

42. Ordered needed nursing supplies.

46. Went to pharmacy to get drugs for patients.

48. Cleaned up a unit after patient's discharge and made it up (non-isolated patient).

53. Completed certification or re-certification sheets for Medi-care patients.

54. Looked for needed equipment or supplies on several nursing units.

55. Set up meal trays.

60. Passed linen to patient's rooms.

65. Called engineer for "repairs".

66. Received doctor's orders by phone.

71. Returned equipment used on the unit to storage area.

72. Warmed up and served a late food tray to patient.

74. Cleaned supply closets.

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3. This could well be nursing care if condition of patient was critical.

To determine the extent to which the total of 78 activities are part of the staff nurse position, a questionnaire was developed. It listed all of the activities designated in the above lists. Nurses who held day, evening or staff nurse positions were asked to indicate whether, in recent months, they had performed the listed activities routinely, often, sometimes or never. These words were defined as follows:

#1 -- Routinely -- if, in recent months, when you have been assigned to the above checked position (day, evening or night nurse), you performed this activity each day you were on duty.

#2 -- Often -- if, in recent months, when you were assigned to the above checked position (day, evening or night nurse), you performed this activity several times a week.

#3 -- Sometimes -- if, in recent months, when you were assigned to the above checked position (day, evening or night nurse), you performed this activity only several times within a month.

#4 -- Never -- if, in recent months, when you were assigned to the above checked position (day, evening or night nurse), you did not perform this activity at all.

The staff nurse title was defined to include the position of team leader on days, and the charge nurse position on evenings and nights.

Three copies of the questionnaire, with an additional questionnaire asking the Director of Nursing to provide certain information about the hospital, were sent to all Iowa general hospitals. Each hospital was asked to have a day, evening and night staff nurse answer the questionnaire, and to have these returned as promptly as possible.

TABLE 1

The summary of the number of questionnaires sent and returned:

Size of Hospital	Number of General Hospitals in Iowa	Number of Questionnaires Returned in this Group	Percentage Returns
Under 50 Beds	53	44	83%
51 - 100 Beds	30	30	100%
101 - 200 Beds	31	19	90%
201 - 300 Beds	9	9	100%
301 - 400 Beds	8	5	62%
Over 400 Beds	4	3	75%
TOTALS	125	110	88%

Although questionnaires were returned from hospitals, as summarized above, not all hospitals returned a full number of evening, day and night nurse responses. Also, some staff nurse questionnaires failed to identify the size of the hospital and, as a consequence, the questionnaire could not be tabulated in the returns. A number of nurses failed to check each item, but these returns are included in the summaries. This accounts for the fact that some groups of hospitals have tabulations for various nurse activities that are below the total number of questionnaires returned.

The returns from the various hospitals are presented by hospital size, giving the general information obtained about the hospital, followed by the table summaries of the returns from the staff nurses.

Chapter 2

FINDINGS FOR HOSPITALS OVER 400 BEDS

Iowa has four general hospitals with more than 400 beds. Returns were received from three of these four hospitals.

All three hospitals report using ward clerks and all hospitals instituted the use of ward clerks before 1955. The ward clerks are not used in Intensive Care Units (2), Recovery Room (2), Emergency Room (1), Minimal Care Unit (1); Pediatrics (1), Psychiatry (1), Obstetrics. One hospital reported ward clerks were used 8 hours on evening, 7 days a week; one hospital reported evening use to be 4 hours, 7 days a week; one hospital has ward clerks 8 hours each evening shift on five days a week and 4 hours on one day. No hospitals reported use of ward clerks during night shift. All three report using ward clerks during day shift, 8 hours a day, seven days a week.

All three hospitals assign charting of temperature, ordering clerical supplies, answering visitors inquiries to ward clerks. Only two hospitals have ward clerks write requisitions for laboratory and X-ray services, one hospital indicating these are done by the doctors. Two hospitals have ward clerks transcribe doctors' orders and the third hospital indicates some doctors' orders are transcribed by the clerk. But two out of three evening nurses, and three out of three night nurses, routinely make out laboratory, X-ray, and other service requisitions.

In all three hospitals, the ward clerk is accountable to a member of the nursing staff (Head Nurse or Supervisor or Assistant Director of Nursing).

In three of the hospitals, nursing personnel are responsible for making out requisitions for plumbing, heating or lighting facilities repairs, for controlling visitors and enforcing visiting hours. In two hospitals, nursing

department personnel are responsible for carrying meal trays back to the kitchen (or tray carrier), for making out drug charge slips for drugs used by patients, for making up some empty units after discharge of non-isolated patients, for carrying meal trays to patients and for attending to admission of patients.

All three hospitals have intensive care units, with two hospitals having two such units and the other having one unit. The units have the following number of beds -- 13, 8, 8, 6 and 4. Care is given to post-surgical, cardiac, seriously ill, medical and accident patients. One hospital adds burn patients to this list.

All three hospitals have Recovery Rooms. One hospital keeps this unit open 16 hours a day, seven days a week; one has the unit open 8 hours a day, seven days a week, and one unit is open 6 days a week for 8 hours. All three hospitals use their Intensive Care Units for post-anesthesia recovery when the Recovery Room is not open.

All three hospitals have a Central Service and two have central service supplies delivered to nursing units to fill an established standard of quantity. The other hospital indicates this is a practice for many supplies, but some must be obtained by requisition.

All three hospitals have Licensed Practical Nurses giving medicines. Limitations imposed are as follows -- L.P.N.'s must first have special instructions, only select L.P.N.'s may give medicines and L.P.N.'s are not permitted to give I.V. medicines, skin tests or fractional doses.

All three hospitals have Pharmacies with pharmacists in charge. In one hospital the pharmacy is open 6 hours, five evenings a week, and in another hospital the open hours for pharmacy are 5 hours, seven evenings a week. No hospital has pharmacist service available at night except that pharmacists are on call

for consultation. Drugs are obtained and provided to units by nursing supervisors when the pharmacy is closed. One hospital provides pre-packaged drugs for night use which are kept in Nursing Service Office.

In summary, one might point out that though the three of the four general hospitals in Iowa responding to the study report having used ward clerk since before 1955, none has established a unit manager system. All use L.P.N.'s to give medications. In one hospital, nursing personnel are still making out charge slips for drugs used by patients. And in all hospitals nursing supervisory personnel are still involved in providing nursing units with drugs for patient use.

TABLE 2-A

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN THREE HOSPITALS OVER 400 BEDS BY NUMBER OF RESPONSES

A. ACTIVITIES CONCERNED WITH NURSING CARE OF PATIENTS

Activity Number	N - 3 Day Nurses				N - 3 Evening Nurses				N - 3 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
1	1	2			1	2			3			
5	1	1	1		1		2		1		1	1
8	1		1	1	1	1	1				2	1
10			1	2	3				3			
11	3				3				3			
14				3				3			1	2
15	1	1	1		2		1		2		1	
16		1	2			2	1		1	1	1	
20		2	1			3					1	2
21		1	2				3		1			2
22		3			1	2			1		2	
30		1	2		2	1				1	2	
31	1	2				2	1		1		2	
32	3				1	2			3			
34			2	1	1			2		1	2	
37		2	1		1	1		1		1	2	
38	2	1			3				2	1		
39	2	1			2	1			3			
43	1		2		3						2	
44		2	1		2	1				1	2	
47		3			1		2			2	1	
49	1	2					1	2	2	1		
50		2	1			2	1		1		1	1
51		2	1			1	2		1	2		
52	1	2			1	1	1		3			
57	2		1		1	1	1		2	1		
58	2		1		2	1			3			
61	1	1	1		2	1				3		
62		21				2	1				3	
63			3				3					2
68	1	1	1			2	1		1	1	1	
69	1	1	1				2	1			1	2
75		1	2				3				2	1

NOTE: #1 - Routinely; #2 - Frequently; #3 - Sometimes; #4 - Never

Of nursing care activities, day nurses routinely make rounds of patients (11), give patients bed pans or urinals (32), and never give a patient a bed bath (14). Evening nurses routinely take blood pressures of patients (10), make rounds of patients (11), adjust flows of I.V.'s (38), talk with the family about patient's condition (43), and never give a patient a bed bath (14). Night nurses routinely give patients p.r.n. medications for pain (1), take blood pressures of patients (10), make rounds of patients (11), give patients a bed pan or urinal (32), answer patient's lights (39), pass all routine and stat medications (52), and check patients for voiding.

It must be remembered that only one registered nurse for each day, evening and night shift were asked to respond to the questionnaire for each hospital. Each nurse was to have been working on a medical-surgical unit.

TABLE 2-B

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN THREE HOSPITALS OVER 400 BEDS BY NUMBER OF RESPONSES.

B. ACTIVITIES CONCERNED WITH MANAGEMENT OF PERSONNEL GIVING NURSING CARE

Activity Number	N - 3 Day Nurses				N - 3 Evening Nurses				N - 3 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
2	1	1		1	3				2			1
6		1	2				2	1			1	2
9	1	1	1		1	2			2			1
18			2	1		1	2		1	1		1
19	3				3				2			1
23	1	1	1		3				2			1
25		1	1	1			3			1	1	1
26	1	1	1		1	2			3			
40		2	1		3				2		1	
45		1	2		1		2			1	2	
56	1	1	1		1	1	1		1	1	1	
59	3				3				2		1	
64	1	1				3				2		
67	1	1	1			3			2		1	
70		1	1	1		2	1				3	
73		2	1			1	1	1			2	1
76	1	1	1			2	1			1	2	
78	2		1		2	1			2		1	

Of the day nurses, all routinely(19) check to see how staff was getting along with assignments, and checked staff regarding how they were getting along with assignment(59). All of the evening nurses made work lists for nursing staff(2), checked to see how staff was getting along with assignments(19), assigned nurse care for patients to nursing staff, helped staff do procedures not familiar to them(40), checked staff regarding how they were getting along with assignment(59). Only the night nurses routinely helped staff give care to patients. It would seem that evening nurses were, more than day and night nurses, routinely concerned with management of personnel giving nursing care to patients on basis of responses of three evening, day and night nurses in hospitals over 400 beds.

TABLE 2-C

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN THREE HOSPITALS OVER 400 BEDS BY NUMBER OF RESPONSES

C. ACTIVITIES CONCERNED WITH MAINTAINING HOSPITAL'S OPERATIONAL SYSTEMS

Activity Number	N - 3 Day Nurses				N - 3 Evening Nurses				N - 3 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
3	1		2			2	2		2	1		
4		1	2				2	1		2	1	
7			2	1		1	1	1			1	2
12	2	1			3				1	1	1	
13			1	2		1	1	1	1	1	1	
17		1	1	1		1		2	1		1	1
27	1	1	1			1		1				3
28		1	1	1			3			1	1	1
29	1	1		1		1		2	3			
33	1	2				1	1		3			
35			2	1	2		1		2	1		
36			1	2		1		2			1	2
41				3				3			1	2
42			1	2			2	1	1		1	1
46			1	2			1	2			1	2
48				3			1	2			1	2
53				3				3				3
54			2	1			2	1			1	2
55			1	2				2				3
60	2		1					3			1	2
65			2	1		1	2			2		
66	1	1			2	1				2	1	
71	1		1	1			1	2		1	2	
72			1	2				3				3
74				3				3		1	2	

From response of one representative nurse for each shift, in the three hospitals over 400 beds, day nurses never accompanied patient to surgery(41), cleaned a unit after patient discharge and made it up(48), never completed certification or re-certification for Medi-care patients(53), or cleaned supply closets(74). Evening nurses routinely transcribed doctor's orders(12), but never accompanied a patient to surgery(41), completed certification or re-certification for Medi-care patients(53), passed linen to patients' rooms(60), or warmed up and served a late

tray to a patient. Night nurses routinely made drug charge slips, counted narcotics(33), and never carried meal trays to patients(27), completed certification or re-certification for Medi-care patients(53), set up meal trays(55), or warmed up and served a late meal tray to patients(72).

In addition to indicating how frequently each of the 78 activities were performed, the nurses were asked to give information about time spent in giving medicines, nursing care given during passing medicines, and time spent in answering phones and nature of telephone action.

Day staff nurses indicated they spent one hour, two hours, and five hours of eight hour shifts giving medications and each indicated they would stop to give nursing care to the patients while passing medicines. Only 10-20 minutes was indicated as being spent in answering the telephone, with the main in-coming calls being related to calls from relatives about patient conditions and calls from other departments asking for patients to be brought to that department. Out-going calls related mainly to calling doctors or calling other hospital departments.

Of the evening staff nurses, two indicated from 6-7 hours were spent in passing medicine and one staff nurse said this amounted to 1-1½ hours. One gave no nursing care to patients, one gave some, and the third indicated this was as needed. Time spent in answering the phone depended on whether a ward clerk was available. In-coming calls were from families about patient conditions, new orders from doctors, inquiries about patient and orders from other departments and calls from admission department.

Night nurses indicated time spent in giving medications varied from 30-40% of time, to 1-2 hours to 1 hour. Each of the three night nurses indicated they routinely gave care to patients while passing medicines. Most spent very little time answering the phone and calls were mainly operator looking for supervisor or someone else, or supervisor answering page. Out-going calls were to doctors for orders, central service for supplies, to supervisor for help or information.

Chapter 3

FINDINGS FOR HOSPITALS OF 301 - 400 BEDS

Iowa has eight general hospitals of 301-400 beds in size. Returns were received from five of these hospitals, or 62% of them (the lowest percentage of returns from the various groupings by size).

Of these five hospitals, all used ward clerks. The years for instituting use of ward clerks were 1954, 1959, 1960 and two in 1963. The only units on which ward clerks were listed as not being used were intensive care unit and isolation unit. One hospital had no ward clerks on evenings; one indicated clerks were available to 8 P.M., five days a week; two reported there was part-time coverage seven days a week in the evening and one did not provide the information. One hospital reported use of ward clerks from 11:00 P.M. to 7:00 A.M., seven days a week, but the other five indicated no night shift coverage. Three hospitals had seven day a week day shift coverage, and two covered five days a week.

Ward clerks in all five hospitals charted temperatures, made requisitions out for laboratory and X-ray services, ordered clerical supplies and answered visitor inquiries. In three hospitals ward clerks transcribed doctor's orders; in one they transcribed some orders and in the fifth hospital they did not transcribe orders. Yet all five evening nurses, and all five night nurses, report they routinely make out laboratory and X-ray requisitions.

In all five hospitals the ward clerk was responsible to the head nurse.

Nursing department personnel are responsible, in all five hospitals, for carrying meal trays to patients, for requesting repairs for plumbing, heating or electrical facilities, for controlling visitors and answering their questions. In four hospitals nursing personnel are also responsible for returning meal trays to kitchen or tray carrier and admitting patients to hospital. Three hospitals indicate nursing personnel are not responsible for making up discharge units of patients and one indicates they are sometimes and one reports this is always

a nursing department responsibility. Personnel of three hospital nursing departments are responsible for making out charge slips for drugs used by patients and in two this is not required.

Four of the five hospitals have one intensive care unit and the size of the units are from eight to eleven beds. All four admit post-surgicals, cardiac, seriously ill medical and accident patients to Intensive Care Units. One also admits burn patients.

All five hospitals have Post-Anesthesia Recovery Rooms which are open about eight hours a day. When Recovery Room is closed, post-anesthesia patients go to Intensive Care Unit, in four hospitals, and to their own rooms in one.

Four of the five hospitals have Central Service Departments, with two departments delivering supplies to a standard and two requiring requisitions for all supplies.

In four of the five hospitals, of 201-300 beds, L.P.N.'s give medicines. Limitations on L.P.N.'s medicine-giving include no I.V.'s, no anti-coagulants, no experimental drugs, no potent drugs, no insulin; but all of these limitations are not mentioned by all hospitals. Three hospitals specifically indicate the L.P.N. must have special training.

All five hospitals report they have a pharmacist in charge with the pharmacy, which is open eight hours during day shift, seven days a week, never open during night shift. During the evening, the pharmacy is open to 9:00 P.M., seven evenings a week, in two hospitals and to 7:00 P.M., five evenings a week, in two hospitals. The nursing supervisor is responsible for obtaining drugs for the nursing units in all five hospitals when the pharmacist is not present. Two out of three day nurses reported making frequent visits to the pharmacy for drugs for the patient, and three out of three day nurses, three out of five evening nurses, and three out of five night nurses routinely, or

frequently, made out drug charge slips.

Responses were obtained from the five hospitals from three day nurses, five evening nurses and five night nurses. Several returns which did not indicate size of hospital may have come from additional day nurses, but could not be used in the summary.

TABLE 3-A

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN FIVE HOSPITALS OF 301-400 BEDS BY NUMBER OF RESPONSES

A. ACTIVITIES CONCERNED WITH NURSING CARE OF PATIENTS

Activity Number	N - 3 Day Nurses				N - 5 Evening Nurses				N - 5 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
1		3			2	3			4	1		
5	1	2			1	1	3				4	1
8		2		1	1	3	1		1	2	2	
10	1	2			3	1	1		3	1	1	
11	1	2			4	1			5			
14	1		2				2	3			1	4
15	1		2				4	1	1	3	1	
16	1	1	1			1	4		2	1	2	
20	1		2		1	2	2				4	1
21	1		2				3	2	1	3	1	
22		2	1		1	3	1			2	3	
24		2	1		3	1	1		2	2	1	
30			1	2	2		2	1			5	
31	1	1	1			1	4			2	3	
32	2	1			2	3			3	1	1	
34			2	1	1	2		2			4	1
37	2	1			2	2	1			3	2	
38	2	1			2	3			3		2	
39	2	1			4	1			3	1		
43		2	1		3	2			1	2	2	
44			3		3		2			2	3	
47	1	2					5		1	3		1
49	1	2				2	3			2	3	
50		2	1				3	2		1	3	1
51		3				3	2		3		2	
52	1	1	1		3	2			3	1	1	
57			2	1	2	2	1		1	1	3	
58	1	2			2	2	1		4	1		
61	1	1	1		4	1				2	3	
62			3			1	4			4		1
63		2	1				5		1		2	2
68	1	1	1		3	2				2	3	
69		1	2			2		3	1		1	3
75		1	1			1	4			1	3	1
77		1	2			1	4				2	3

Four of the five night nurses routinely gave p.r.n. medicines for pain(1), checked the patient for voiding(58), sometimes made rounds with some doctors(5), and sometimes assisted a doctor with a treatment(20), and gave tracheostomy care(34). The only unanimous response in relation to nursing care of patients is that all night nurses routinely made rounds of the patients(11), and sometimes connected blood to I.V.'s(30).

Of the three day nurses, three indicate they sometimes explain to patients what was going to happen to him(44), and sometimes restrained a patient(44). They often obtained a specimen for laboratory examinations(51), and gave p.r.n. medications for pain or sleep(1).

The evening nurses all fed a patient--sometimes(47). Four of the five nurses routinely made rounds of the patients(11), adjusted the flow of I.V.'s(38), reported patients' symptoms and condition to a doctor(61). Four of the evening nurses sometimes took a patient's temperature(15), did some kind of irrigation(16), ambulated a patient(31), restrained a patient(62), and taught a patient self-care or new health habits(75).

TABLE 3-B

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN FIVE HOSPITALS OF 301-400 BEDS BY NUMBER OF RESPONSES

B. ACTIVITIES RELATED TO MANAGEMENT OF PERSONNEL GIVING NURSING CARE

Activity Number	N - 3 Day Nurses				N - 5 Evening Nurses				N - 5 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
2		3			2	3			3		1	1
6			3			1	3	1		1	3	1
9	1	2			3	2			3		1	1
18			1	2		2	3				3	2
19	1	2			2	3			4		1	
23	1	1	1		3	1	1		2			3
25	1	2			1	2	1		3			2
27	1	1	1		2	3			3	1	1	
40	1	1	1		3	2			2	2		1
45	1		1	1	2	2	1				2	3
56	1	2			2	3			2	1	2	
59	1	2			3	2			4		1	
64			3		1	4			1	1	3	
67	1		2		3	2				3	2	
70		1	2		1	2	2			1	3	1
73		1	2			3	2		1		3	1
76			3		3		2		1		3	1
78	1	1	1		2	3			3		1	

TABLE 3-C

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN FIVE HOSPITALS OF 301-400 BEDS BY NUMBER OF RESPONSES

C. ACTIVITIES INVOLVED WITH MAINTAINING HOSPITAL'S OPERATIONAL SYSTEMS

Activity Number	N - 3 Day Nurses				N - 5 Evening Nurses				N - 5 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
3	1		1	1	2		3		1	4		
4	1		2		1	2	1	1	1	2	2	
7		1	1	1		1	2	2			2	3
12	1	1	1		2	3				2	3	
13	1		2		2	1	1	1	2	1	1	
17			2	1		2	1	2			2	3
27	2	1			3	1	1				1	4
28		1	1	1	2		1	2		1	3	1
29	1	2			2	1	2		2	1	1	1
33	1	2			3	1	1		4		1	
35	1	1		1	2	3				1	4	
36	1			2	1	1	1	2			1	4
41				3				5			1	4
42	1	1	1		2	1	1	1	2		2	1
46		2	1			2	3		1		2	2
48			1	2			3	2			1	4
53				3				5				5
54			2	1	1	1		3		2	2	1
55	1		1				1	4				5
60	1		2				1	4				5
65	1		1	1		3	2				2	3
66	1		2		5					2	3	
71		1	1	1			2	3		1	2	2
72		1		2			2	3				5
74			2	1			3	2			1	4

None of the staff nurses of 301-400 bed hospitals are involved with certification or re-certification of Medi-care patients(53), nor with setting up meal trays(55), or passing linen to patients' rooms(60), or warming up and serving meal trays. All evening nurses report receiving doctors' orders by phone, but to what extent these orders are related to providing non-nursing care services to patients can not be identified.

Day nurses indicate from 1-1½ hours to 6/8 - 7/8 of time available is spent in giving medicines. Some nurses ask patients to call others to give care, and other day nurses indicate that they give the necessary care. Time spent in answering the phone depends on whether there is a ward clerk on duty. If one is on duty, only one half to 3/4 of an hour is spent in answering the phone. Calls coming in are mainly in regard to patients' conditions, doctor's orders, and pharmacy inquiries regarding the patient. Outgoing calls are to obtain doctors' orders, report to doctors on patients' conditions, report a patient's admission to his doctor, and to obtain reports from the laboratory or other departments.

Evening nurses report spending from two hours, to almost all the time, on giving available medicine. Three indicate that they give care, during passing medicines, at the patient's request, one reports she often gives care and one says "seldom". If no ward clerk is on duty, answering of the phone occurs every few minutes and takes up to several hours. If a ward clerk is on duty, the task of answering the phone takes very little time. Incoming calls are from doctors giving orders, families calling about a patient, and the admitting office. Outgoing calls are made for doctors' orders primarily.

Night nurses spend from one to three hours giving medicines, and all give care to patients while passing medicines. Very little time is spent in answering the phone. Incoming calls are from families asking about a patient's condition, personnel reporting "off sick", from the operator looking for a supervisor, and from doctors regarding patients' conditions. Outgoing calls are made for doctors' orders primarily, and for calling the night supervisor.

Chapter 4

FINDINGS FOR HOSPITALS OF 201 - 300 BEDS

Iowa has nine general hospitals with 201-300 beds, and responses were received from all hospitals of this size.

All nine hospitals use ward clerks. Two hospitals started using them between 1963-1966. Seven hospitals started their use of ward clerks before 1963. Four hospitals do not use ward clerks on obstetrical units, two omit their use in Intensive Care Units, and one each indicate they are not used in the emergency room, pediatrics or psychiatry. Three hospitals provide ward clerk coverage seven days a week for eight hours during the evening shift; one hospital covers for five evenings for eight hours; and one provides four hour evening shift coverage for seven days. Four hospitals indicate that no evening shift coverage of ward clerks is provided. None of the nine hospitals provide coverage during the night shift. For the day shift, seven hospitals provide eight hour coverage eight days a week, and two extend this only to five days.

Of the nine hospitals, seven indicate that ward clerks transcribe doctors' orders. In all nine hospitals, ward clerks chart temperatures, make out requisitions for laboratory and X-ray services, order clerical supplies and answer visitors' inquiries. But, 8 out of 9 day nurses, 8 out of 8 evening nurses, and 7 out of 9 night nurses indicate they routinely, or frequently, make out lab, X-ray, and other service requisitions.

In eight of the hospitals the ward clerk is accountable to the head nurse, and in one, to a unit manager.

Looking at the responsibilities assigned to nursing service personnel, we find in eight hospitals that this includes requesting repairs for plumbing, heating or lighting facilities; in seven hospitals it includes carrying meal trays to

the patient; and in six hospitals nursing personnel are responsible for making up empty units after discharge of non-isolated patients, for making out charge slips for drugs used by patients, for tending to the admission of the patient to the hospital. In only two of the nine hospitals do nursing personnel need to return meal trays to the kitchen.

Only five of the nine hospitals have Intensive Care Units, and each has only one such unit. Three are six-beds units, one is a nine-bed unit, and one a seven-bed unit. All five units admit post surgicals, cardiacs, seriously ill medical patients, and accident patients, and two indicate they give care to neuro-surgical patients.

All nine hospitals have post-anesthesia recovery rooms. Eight are open eight hours daily, and one is open 24 hours daily. If four hospitals, post-anesthesia patients are cared for in Intensive Care Units; in four hospitals, in their rooms when the Recovery Room is not normally open. In one hospital the Recovery Room is opened on call.

All nine hospitals have a Central Service Department, and in six hospitals, Central Service delivers supplies to nursing units to fill a unit standard. In three hospitals supplies are delivered by requisition only.

In six of the nine hospitals L.P.N.'s give medicines, and in three they do not. The following limitations to medicine-giving by L.P.N.'s were listed: no divided dopes, I.V.'s, narcotics, insulin, anti-coagulants, experimental drugs. Other limitations included oral medications only, and limiting the giving of medicines in the Extended Care Unit only.

All nine hospitals report having a pharmacist in charge of the pharmacy. No pharmacis are open during the night shift. In two hospitals, the pharmacy is open four hours, for seven evenings a week; in two hospitals, for seven hours, six evenings a week; and in one hospital, the pharmacy is open five and a half

hours, seven evenings a week. Three hospitals extend pharmacy coverage for eight hours, seven days a week during the day shift. Two hospitals extend this coverage to six days, and four hospitals offer coverage for only five days.

In all nine hospitals, the nursing supervisor is responsible for obtaining drugs for the nursing units when the pharmacy is not open. But, 3 out of 9 day nurses, 2 out of 8 evening nurses, and 1 out of 9 night nurses indicated that they routinely, or frequently, went to the pharmacy for drugs for patients; and 5 out of 9 day nurses, 5 out of 8 evening nurses, and 5 out of 9 night nurses indicated that they routinely, or frequently, made out drug charge slips.

Nine day staff nurses and nine night staff nurses returned questionnaires for this group of hospitals. Eight were returned from staff nurses in the evening positions.

TABLE 4-A

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN NINE HOSPITALS OF 201-300 BEDS BY NUMBER OF RESPONSES

A. ACTIVITIES CONCERNED WITH NURSING CARE OF PATIENTS

Activity Number	N - 9 Day Nurses				N - 8 Evening Nurses				N - 9 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
1	8	1			8				7	2		
5	6	3			4	2	2			1	5	3
8	2	2	3	2	1	3	1	3		3	3	3
10	6	1	1		5	1	1		8	1	1	
11	6	1	1		8				9			
14	1		7				1	7			5	4
15	1	3	5		1	4	2	1	2	2	5	
16	2	5	3		2	4	2		2	3	4	
20	4	5			2	4	2				9	
21	2	2	3	2		1	7		4	1	4	
22	1	4	4		1	3	3	1	1	8		
24	2	3	3	1	2	3	3			5	3	1
30	1	1	7		1	2	4	1		1	6	2
31	1	6	2		2	4	2		5	1	3	
32	6	3			5	1	2		6	2	1	
34		3	5	1			4	2			3	6
37	2	3	3	1	2	4	1	1	3	6		
38	5	4			4	4			4	4	1	
39	7	2			7	1			8		1	
43	3	4	2		2	3	3			3	6	
44	4	4	1		2	4	2		1	5	3	
47	1		8			3	4	1	3	3	3	
49	2	5	2		4	3	1		3	5	1	
50	2	3	3	1	1	3	3	1	1	4	3	1
51	2	2	5		2	4	2		4	3	2	
52	5	3		1	7	1			8	1		
57	4	3	1	1	4	3			2	3	4	
58	8	1			5	3			4	4	1	
61	6	2	1		4	2	2		1	3	5	
62		3	5		1	3	4			5	4	
63	1	1	6	1		3	4	1				8
68	2	3	4		1	5	2		1	4	4	
69		1	4	4		1	2	5	1		2	5
75	1	4	4		1	2	4	1	1	1	4	2
77	1	1	7			1	5	2			3	6

TABLE 4-B

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN NINE HOSPITALS OF 201-300 BEDS BY NUMBER OF RESPONSES

B. ACTIVITIES CONCERNED WITH MANAGING PERSONNEL GIVING NURSING CARE

Activity Number	N - 9 Day Nurses				N - 8 Evening Nurses				N - 9 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
2	3	3	2	1	4	3			3	2	1	2
6	1		6	1			6	2		2	8	1
9	3	2	2	1	4	2	2		4	3	1	
18	1	1	5	2	1		6	1	1		6	2
19	3	4	2		8				7	2		
23	2	4	2	1	4	2	2		3		2	4
25		3	2	4		3	5			1	6	1
26	5	4			4	4			8	1		
40	4	5			3	2	3		2	2	4	1
45		3	5	1	2	1	5			2	6	1
56		6	1	1	1	3	4		5	2	2	
59	5	3			5	3			7	2		
64	1	4	4		1	3	4		1	1	5	2
67	1	5	3		1	3	3		1	3	4	1
70	2	2	4	1	1	2	5		1	1	7	
73		2	5	2		3	5			2	4	2
76			4	5	2	4	3		1	2	3	3
78	3				3	5			3	4		2

TABLE 4-C

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN NINE HOSPITALS OF 201-300 BEDS BY NUMBER OF RESPONSES

C. ACTIVITIES INVOLVED WITH MAINTAINING HOSPITAL'S OPERATIONAL SYSTEMS

Activity Number	N - 9 Day Nurses				N - 8 Evening Nurses				N - 9 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
3	1	3	5		1	2	5		3	2	1	2
4	2	2	5		4	3	1		4	1	4	
7			7	1	1		6	1	1	1	4	3
12	6	1	1		7	1			1	4	4	
13	2	4	3		3	1	3	1		1	5	3
17		2	3	3		3	4	1		2	3	3
27	2	3	4		3	4	1				2	7
28		4	3	2	4	1	3				5	4
29	3	2	3	1	5		2	1	3	2	1	3
33	6	3			7		1		9			
35	7	1	1		6	2			6	1	2	
36		2	3	4	1		5	2			1	8
41		2	2	5			1	7			1	8
42		4	3	1		2	5			3	6	
46		3	5	1	2		2	4		1	4	4
48			3	6		2	1	5			5	4
53		1	3	5				8				9
54			4	5		3	5			1	8	
55		1	1	7		3	2	3				9
60	1		3	5		2	2	4	1	1	3	4
65		2	6	1	1	4	3			2	5	2
66	5	3	1		4	4			1	4	4	
71	1	2	4	2	1	1	5	1		2	5	2
72			3	6		1	4	2				9
74			5	4			2	6			3	6

In reporting the time spent in giving medicines during the day shift, three nurses indicated four hours were so spent, three indicated this took 1/3 to ½-hour, and two reported this took an hour. Only one person qualified giving of care to patients during giving of medicines by saying, "Yes, if they need assistance and no one is near, I give care requested."

Answering the phone takes up time amounting from "very little--to two hours--to too much". Only three nurses indicate this amounts to 15 minutes. Incoming calls are from friends and relatives seeking information, doctors phoning in orders or inquiring about patient, and calls from other departments. Outgoing calls are to doctors about patients, for orders for patients, and to other hospital departments.

Evening nurses report spending from one quarters of an hour to 2-3 hours giving medicines. Two nurses indicated they occasionally give patients care, requested, while passing medicines, and one said that she gave very little care at this time. Answering the phone varies from very little time to 25% of the total shift. Calls are mainly received from doctors and relatives. Outgoing calls are primarily made to doctors requesting orders.

Night nurses spend from one half of an hour to 1/3 of the total time on duty giving medicines. One indicates that she returns to give care after she has passed medicines, and one reports she gives very little care during the time of passing medicines.

Incoming calls to night nurses are from personnel not coming to work, from doctors giving orders for patients, from doctors and families inquiring about a patient, the operator looking for doctors or supervisors, and inquiries from the admissions department. Outgoing calls are to supervisors to report unusual conditions, calls to doctors and/or families after death of a patient, reporting changes in condition of patients, and calling other hospital departments to relay changes of orders (diet kitchen).

Chapter 5

COMPARATIVE SUMMARY OF NURSE RESPONSES FOR ALL HOSPITALS OVER 200 BEDS

Iowa has twenty-one general hospitals, over 200 beds in size. Responses were received from seventeen of these twenty-one hospitals. Fifteen day nurses, sixteen evening nurses and seventeen night nurses returned questionnaires. Several additional questionnaires were also received, but could not be used--either because the questionnaire did not indicate the size of the hospital, or because the respondent had marked the questionnaire for two shifts and had not differentiated between the shifts. The returns have been tabulated to show the total responses from all the nurses, from the seventeen hospitals, by day, evening and night nurse positions.

TABLE 5-A

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN SEVENTEEN GENERAL HOSPITALS OF OVER 200 BEDS BY NUMBER OF RESPONSES

A. ACTIVITIES CONCERNED WITH GIVING NURSING CARE

Specific Activity	N - 15 Day Nurses				N - 16 Evening Nurses				N - 17 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
Give prn med. for pain or sleep	9	6			11	5			14	3		
Made rounds with doctors for pts.	8	6	1		6	3	7		1	1	10	5
Started I.V.'s	3	4	4	4	3	7	3	3	1	5	7	4
Took B.P. of pts.	7	4	3		11	2	2		14	2	2	
Made rounds of patients	10	3	1		15	1			17			
Took temp. of pt.	3	4	8		3	4	7	2	5	5	7	
Did some kind of irrigation	3	7	6		2	6	7		5	5	7	
Assisted doctor with treatment	5	7	3		3	9	4				14	3
Passed drinking water to patient	3	3	7	2			7	9	6	4	5	2
Catheterized pt.	1	6	8		3	8	4	1	1	10	3	
Added drugs to I.V.'s	3	6	5	1	7	5	4		3	7	6	1
Connected blood to I.V.'s	1	2	10	2	5	3	6	2	2	1	12	2
Ambulated a pt.	3	9	3		2	7	7		6	3	8	
Gave pt. bedpan or urinal	11	4			8	6	2		10	3	4	
Gave tracheostomy care		3	9	3	2	2	4	6		1	9	7

Table #5-A. ACTIVITIES CONCERNED WITH GIVING NURSING CARE (Continued)

Specific Activity	N - 15 Day Nurses				N - 16 Evening Nurses				N - 17 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
Completed routine Admission for new pt. to nrsg. unit	4	6	3	1	5	7	2	2	3	10	4	
Adjust I.V. flow	9	6			9	7			9	5	3	
Answered patient's call lights	11	4			13	3			14	1	1	
Talked with family about pt's. cond.	4	6	5		8	5	3		1	5	10	
Explain to patient what was to happen	4	9	2		7	5	4		1	8	8	
Made occupied bed of patient	2	3	10		1	3	11	1	4	8	5	
Got pt. out of bed	4	9	2		4	5	5	2	5	8	4	
Gave pt. an enema	2	7	5	1	1	5	7	3	2	5	7	3
Obtained specimen for lab. exam.	2	9	6		2	8	6		8	5	4	
Passed all routine stat & prn meds.	7	6	1	1	11	4	1		14	2	1	
Answered pts. ques. about cond., treatment, progress	6	5	3	1	7	6	2		5	5	7	
Checked pt. for voiding	11	3	1		9	6	1		11	5	1	
Reported pts. symptoms & cond. to doctor	8	4	3		10	4	2		1	8	8	
Restrained pt.		5	9		1	6	9			12	4	1
Fed patient	1	3	10	1		3	12	1	1		2	12
Talked with pt. as to his feeling about hospitalization, impending surgery or complications of cond.	4	5	6		4	9	3		2	7	4	
Established nrsg. care objectives for pt. & plan of care in group mtg.		3	7	5		3	4	9	2		3	8
Taught pts. self-care & new health habits	1	6	7		1	4	10	1	1	1	8	6
Helped pt. plan for care after discharge from hospital	1	3	11			2	12	2			7	10

TABLE 5-B

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN SEVENTEEN GENERAL HOSPITALS OF OVER 200 BEDS BY NUMBER OF RESPONSES

B. ACTIVITIES CONCERNED WITH MANAGING PERSONNEL GIVING NURSING CARE

Specific Activity	N - 15 Day Nurses				N - 16 Evening Nurses				N - 17 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
Make worklist for nursing staff	4	6	2	2	8	6			8	3	2	4
Check a BP -- reported by an LPN to you	1	1	11	1		1	11	4		2	12	3
Explained to staff their pt. care assignment	5	5	3	1	8	6	2		9	3	2	2
Dem. & taught a nrsg. procedure to the staff	1	1	8	5	1	3	11	1	2	1	9	5
Checked to see how staff was getting along w/assignment	7	6	2		13	3			13	2	1	1
Assigned nrsg. care for pts. to nursing staff	4	6	4	1	10	3	3		7		2	8
Conducted disc. w/staff to plan nrsg. care of pts.	1	6	3	5	1	8	6		3	1	6	3
Helped staff give care to pts.	7	6	2		7	9			14	2	1	
Helped staff do procedures not familiar to them	5	8	2		9	4	3		6	4	5	2
Corrected staff for way procedure was performed		4	8	2	5	3	8			3	10	4
Discussed behavior or reactions of individual pt. w/ staff member	2	9	2	1	4	7	5		8	4	5	
Explained to staff how to approach a specific patient	2	5	7		2	10	4		2	4	8	2
Anticipated for staff difficulties they may have in giving care to pts.	3	6	6		4	8	3		3	6	7	1
Sought help from a supr. person because of difficulties in giving good care to patients	2	4	7	2	2	6	8		1	2	13	1

Table #5-B. ACTIVITIES CONCERNED WITH MANAGING PERSONNEL GIVING NURSING CARE (Cont.)

Specific Activity	N - 15 Day Nurses				N - 16 Evening Nurses				N - 17 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
Adjusted staff assignment because of change in pt. condition		5	8	2		7	8	1	1	2	9	4
Talked with staff about kind of care they were giving to pts. & how to improve that care	1	1	8	5	5	5	6		2	3	8	4
Told staff what reports about pts. were to be made to you	6	5	2		7	9			8	4	2	2

TABLE 5-C

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN SEVENTEEN GENERAL HOSPITALS OF OVER 200 BEDS BY NUMBER OF RESPONSES

C. ACTIVITIES CONCERNED WITH MAINTAINING HOSPITAL'S OPERATIONAL SYSTEMS

Specific Activity	N - 15 Day Nurses				N - 16 Evening Nurses				N - 17 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
Added blank sheets to patients' charts	3	3	8	1	3	3	10		6	7	1	2
Started charts for new pts.-Head charts	3	4	9		5	7	2	2	5	5	7	
Got blood from lab. for a patient		1	10	3	1	2	9	4	1	1	7	8
Transcribed doctors orders	9	3	2		12	4			2	8	7	
Ordered stock drugs for the floor	3	4	5	1	6	3	5	3	3	3	7	3
Prepared solutions for irrigations		4	6	5		6	5	5	1	2	6	7
Carried meal trays to patients	5	5	5		6	6	3				3	14
Put away newly received supplies		7	5	3	6	1	7	2		2	9	6
Made drug charge slips	5	6	3	2	7	2	4	3	8	3	2	4
Counted narcotics	8	7			10	2	3		16		1	
Made out lab, X-ray &/or other reqs. for services from other departments	8	2	3	2	10	5	1		8	3	6	
Set up trays for procedures to be done by doctors	1	2	4	8	2	2	6	6			3	14

Table #5-C. ACTIVITIES CONCERNED WITH MAINTAINING HOSPITAL'S OPERATIONAL SYSTEMS (Cont.)

Specific Activity	N - 15 Day Nurses				N - 16 Evening Nurses				N - 17 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
Accompanied pt. to surgery		2	2	11	3		1	12			3	14
Ordered needed nursing supplies	1	5	6	3	2	3	5	2	3	3	8	2
Went to pharmacy to get drugs for patients		5	7	3	2	2	6	6	1	1	7	8
Cleaned up unit after pt's. discharge & made it up(non-isolated pt)			4	11			6	8			7	10
Completed cert. or re-cert. sheets for Medi-care patients		1	3	11				16				17
Looked for needed equip. or supplies on several nrsg. units			8	7	1	4	7	4		3	11	3
Set up meal trays	1	1	3	9		3	3	9				17
Passed linen to patients' rooms	4		6	5		2	3	11	1	1	4	11
Called engineer for "repairs"	1	2	9	3	1	7	6	2		4	7	5
Received doctor's orders by phone	7	6	1		11	5			1	8	8	
Returned equip. used on the unit to storage area	2	3	6	4	2	2	6	6		4	9	4
Warmed up and served late food tray to patient		1	5	8		1	6	8				17
Cleaned up supply closets			7	8			5	11		1	6	10

Chapter 6

FINDINGS FOR HOSPITALS OF 101 - 200 BEDS

Iowa has 21 general hospitals of 101-200 beds in size. Responses were received from 19, or 90% of this group.

89% of the group use ward clerks, and two of the nineteen do not. 30% have instituted the use of ward clerks since January 1, 1966 (two since June 1967). Four (23%) started using ward clerks in 1964 or 1965, and five date the beginning of ward clerk usage to before 1960. Three gave no dates for the inception of this service. The earliest recorded date was 1956. Ten report that ward clerks are not used in Obstetrics, and five report they are not used in Pediatrics. One hospital each reported that ward clerks were not used in geriatrics, emergency room, psychiatry, extended care units, Intensive Care Units, surgery or medical units. One hospital reported having only one ward clerk.

Of the ten hospitals who use ward clerks on the evening shift, six provide coverage for eight hours, seven evenings a week. Two provide coverage until 8:00 p.m., and one until 9:00 p.m., seven evenings a week. One hospital covers until 9:00 p.m., six evenings a week. Of the total number of hospitals with ward clerks, 59% provide evening coverage to some extent. None of the hospitals provide ward clerk coverage at night. Fourteen provide eight hour, seven day per week coverage during the day shift, and three limit this to five days a week.

All ward clerks in the seventeen hospitals order clerical supplies. In sixteen of the hospitals, they chart temperatures, make out requisitions for laboratory and X-ray services, and answer visitors' inquiries. In eleven hospitals, ward clerks transcribe doctor's orders, and in two, they transcribe some orders. In four hospitals, transcription of doctor's orders is not a ward clerk responsibility.

In three hospitals, the ward clerks are accountable to a Unit Manager, in eleven to a head nurse, and in three hospitals, to a supervisor.

The tabulation of nursing department personnel responsibilities for certain activities of the 19 hospitals is as follows:

	YES		NO		SOMETIMES
	Number	Percent	Number	Percent	
Make up empty units after discharge of non-isolated patients	12	63%	7	37%	
Carry meal trays to patients	17	89%	2	11%	
After meals, return trays to kitchen	12	63%	7	37%	
Make out charge slips for drugs used by patients	9	47%	10	53%	
Request repairs for plumbing, heating or lighting facilities	12	63%	5		2
Tend to admission of patients to hospital	11	58%	7	37%	1
Control visitors and enforce visiting hours	13	69%	5		1

Of the nineteen hospitals of 101-200 beds, nine (47%) have Intensive Care Units and ten (53%) do not. Eight report having only one unit and bed size of units varies from three beds (3), to 4 beds (2 hospitals) to five beds (3 hospitals). All use the unit for care of post-surgicals, seriously ill and accident patients. One does not list using unit for Cardiac patients.

Eighteen (94%) report having a post-anesthesia recovery room and one reports not having such a unit. In sixteen of the hospitals, the unit is generally open to late afternoon but one hospital keeps it open 24 hours per day, and another to 11 P.M. In nine hospitals, patients are cared for in their own rooms post-anestethically, and in five hospitals, this is done in the Intensive Care Unit when the Recovery Room is closed.

Seventeen hospitals (17 hospitals) report having a Central Service, but in only eight of these hospitals are supplies delivered to nursing units to maintain an established standard of supplies. In eight hospitals all supplies are obtained by requisition, and in two hospitals, by a combination of requisition and standard delivery. But, 13 out of 23 day nurses, 13 out of 16 evening nurses, and 15 out of 17 night nurses routinely, or frequently, made out laboratory, X-ray or other service requisitions.

Seventeen hospitals (89%) report that Licensed Practical Nurses gave medications. The limitations imposed on this activity are summarized as follows:

No I.V.'s - 7
No Additives to I.V.'s - 2
No Complicated Computations - 4
No Narcotics - 2
No research drugs - 2
No Dangerous drugs - 1
No Heparin - 1
No Insulin - 1
No Deep I.M.'s - 1
No Adrenalin - 1
No Stimulants - 1
No allergy drugs - 1
No sedatives - 1
No first dose penicillin - 1
No anti-coagulants - 1

Three hospitals further indicate that special training is required and that all activity under registered nurse supervision is listed by nine hospitals.

Fifteen hospitals indicate full-time pharmacist coverage of pharmacy, and four report part-time coverage. In four hospitals, the pharmacy is open in the evening hours (1 hospital to 7 P.M., one to 8 P.M., and two to 9 P.M.) During the day shift hours, in three hospitals the pharmacy is open seven days a week, eight hours, and in one hospital the seven day a week coverage is only for one hour. Seven hospitals have pharmacists' coverage for five days a week for eight hours, and for several hours the additional two days. One has six day coverage for three hours, three have three day coverage for two hours, and one has eight hour coverage for five days each week. In two hospitals, the pharmacist is on call when the pharmacy is closed.

In eleven hospitals, drugs are obtained by a supervisor, and in five hospitals, by the Director of Nursing when the pharmacist is not present and drugs are needed.

But, 12 out of 23 day nurses, 4 out of 16 evening nurses, and 2 out of 17 night nurses report they routinely, or frequently, went to the pharmacy to obtain drugs for patients. And 9 out of 23 day nurses, 2 out of 16 evening nurses, and 12 out of 17 night nurses routinely, or frequently, made out drug charge slips.

TABLE 6-A

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN NINETEEN GENERAL HOSPITALS OF 101-200 BEDS BY NUMBER OF RESPONSES

A. ACTIVITIES CONCERNED WITH GIVING NURSING CARE TO PATIENTS

Activity Number	N - 23 Day Nurses				N - 16 Evening Nurses				N - 17 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
1	14	7	2		11	4			14	2	1	
5	13	8	1	1	11		5		4	4	6	3
8	9	10	2	3	5	5	3	2	3	2	5	7
10	4	12	7		9	7			10	4	2	
11	17	4	2		16				16		1	
14		1	4	8			2	12			4	13
15		3	11	9	1	5	8	1	4	3	10	
16	3	9	11		7	4	5		5	2	9	1
20	9	11	3		2	8	6		4	2	9	1
21	1	5	12	5	1	2	6	6	3	4	4	6
22	1	9	12	1	2	6	8		4	4	7	2
24	7	13	3		2	10	4		4		9	4
30	3	11	5	3		3	10	2	4		9	4
31	1	11	10	1	3	4	8		2	3	12	
32	4	10	9		7	2	6		6	4	7	
34	1	1	12	8			6	8	3		7	6
37	5	9	8	1	9	4	3		7	5	3	2
38	13	8	2		8	8			10	6	1	
39	8	9	6		2	5	8		6	5	6	
43	5	15	2		2	7	7		2	3	10	2
44	9	8	6		3	12			1	4	12	
47		6	14	3	1	4	8	2	4	3	8	2
49	2	9	10	1	3	4	9		4	3	9	1
50		5	15	2		3	10	3	3	4	7	3
51	1	12	9	1		5	8	1	6	4	6	1
52	7	8	5	2	9	4	2		12	2	3	
57	14	7	2		4	8	3		3	3	9	1
58	10	6	6	1	9	6	1		12	3	2	
61	17	6			9	6	1		5	5	7	1
62		4	17	1	1	2	11	2	1	2	13	1
63		2	15	6		3	8	4			9	8
68	6	10	7		2	5	9		1	2	9	5
69	4	3	10	5	1	1	7	5		1	5	10
75	1	3	18	1	3	2	10	1	1	1	10	4
77		7	15	1		1	11	3		1	6	10

TABLE 6-B

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN NINETEEN GENERAL HOSPITALS OF 101-200 BEDS BY NUMBER OF RESPONSES

B. ACTIVITIES RELATED TO MANAGING PERSONNEL GIVING NURSING CARE TO PATIENTS

Activity Number	N - 23 Day Nurses				N - 16 Evening Nurses				N - 17 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
2	17	3	2		12	1	1	2	8	2	2	4
6	3	2	15	3	2	6	6	1	2	4	9	2
9	16	2	5		9	6			9	1	5	2
18	2	4	14	3	1	3	9	2	1	1	7	8
23	14	4	3	2	7	3	6		8	1	4	4
25	7	7	6	3	2	3	7	3	5	1	5	6
26	9	10	4		4	8	4		10	5	2	
40	5	10	8		2	6	7	1	6	4	8	
45	5	7	9	2		2	12	1	3	2	12	
56	12	8	2		4	6	3		5	2	9	1
59	13	7		3	12	1	3		9	4	3	
64	6	7	9		2	5	8		3	4	7	3
67	10	6	5	1	4	5	6		3	5	9	
70	2	6	13	1	3	3	8	1	4	2	6	5
73	3	8	9	3	2	1	12	1	3	1	13	
76	5	11	7		1	7	6	1	4	1	10	2
78	13	7	3		7	5	2	1	10	2	4	1

TABLE 6-C

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN NINETEEN GENERAL HOSPITALS OF 101-200 BEDS BY NUMBER OF RESPONSES

C. ACTIVITIES CONCERNED WITH MAINTAINING HOSPITAL'S OPERATIONAL SYSTEMS

Activity Number	N - 23 Day Nurses				N - 16 Evening Nurses				N - 17 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
3	1	10	7	4	2	5	6	2	10	2	4	1
4	3	7	8	5	4	3	6	2	10	2	5	
7	1	6	9	7	1	2	7	6	1		4	12
12	14	4	3	2	11	2	2		8	3	6	
13	10	4	6	3	1	4	4	6	2	2	6	7
17	1	3	7	12	1	10		4	1	2	6	8
27	4	4	11	4	4	2	9	1			1	16
28	1	4	10	8	1		8	6	1	1	6	9
29	7	2	7	6	2		7	7	10	2	1	4
33	10	7	4	2	8	5	2		14	1	2	
35	9	4	4	5	8	5	1	2	8	6	1	2
36	3	4	7	9	2		2	9		1	4	12
41			5	18			3	12			3	14
42	2	5	10	6		1	6	7	2	2	9	4
46	4	8	5	6	2	2	6	6	2		5	10
48		1	9	13		3	4	8	12	2	3	
53	1	2		18		1	1	13	12	2	3	
54	1	3	5	14			6	9		1	10	6
55	4	4	2	13	1	2	2	11			1	16

Table
#6-C. ACTIVITIES CONCERNED WITH MAINTAINING HOSPITAL'S OPERATIONAL SYSTEMS (Cont.)

Activity Number	N - 23 Day Nurses				N - 16 Evening Nurses				N - 17 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
60	1	1	3	18			1	14		1	4	11
65	1	7	9	6		3	9	4		1	11	5
66	13	7	3		7	8			7	3	7	
71	1	6	8	8	2		5	8	3	1	5	8
72		1	7	15	1	1	5	8			2	15
74			6	17			3	12			3	14

In reporting time spent in giving medicines, day staff nurses give the following hours: entire 8 hours, most of morning, 7 hours, 80% of time, 50% of time, 4 hours, 3 hours, 2-3 hours, 1½ hours, 1½ hours, 1½ hours, 1 hour, and none. One nurse reports that she occasionally gives care requested by patients while passing medicines. One indicates that she gives no care and all others report that they do provide the requested care.

Day staff nurses report that very little time is spent in answering the phone, although one indicated that 50% of her time is spent answering the telephone. Incoming and outgoing calls do not vary from those reported in other hospitals.

Four evening staff nurses report that most of their time on duty is spent in passing medicines. Others report that this takes from 1½-4 hours of their time. Although all report that they give the requested care while passing medicines, several indicate that this relates to only small tasks. Time spent in answering the phone seems to amount to about one hour, but this varies if a ward clerk is available. Calls, both incoming and outgoing, are similar to those previously reported.

Up to three hours is required by some night staff nurses for passing medicines. Not all nurses give care to patients while passing medicines. The largest number of hours related to telephone usage is listed at 2 hours. Generally, however, this seems to amount to 15-30 minutes, as reported by most night nurses. The reasons for calls, both incoming and outgoing, do not vary from those reported by other night nurses.

Chapter 7

FINDINGS FOR HOSPITALS OF 51 - 100 BEDS

Iowa has 30 general hospitals of 51-100 beds in size and questionnaires were received from 100%, or 30 of the hospitals.

Twenty-one (70%) of these hospitals report having ward clerks, and nine (30%) do not use them. Of those using ward clerks, seven (35%) have instituted their use since January 1, 1967; three (15%) in 1966; four (20%) in 1965; and six (30%) in 1964, or before that time. In fifteen hospitals, ward clerks are not used in Obstetrics. Three omit their use in pediatrics, four do not use them is surgery, one does employ ward clerks on the psychiatric ward, and two report one medical-surgical use wherein clerks are not used.

Nine of the hospitals (43%), with ward clerks, use them during the evening shift up to 11 P.M., seven evenings a week, and two (10%) cover to 11 P.M. five evenings a week. Five hospitals (24%) do not have ward clerks during the evening hours. In four hospitals, the evening coverage extends to four hours for six evenings. Nineteen hospitals do not provide ward clerk coverage at night, but two hospitals reported night coverage, seven nights a week. Sixteen hospitals (76%) provide day ward clerks 8 hours a week, and four (19%) cover for eight hours during five days a week. One provides ward clerks two hours a day for five days a week.

Eleven of the hospitals (50%) report that ward clerks transcribe doctors' orders, although five indicate that these transcriptions are checked by registered nurses. Twenty-one (100%) have ward clerks chart temperatures, nineteen (90%) have ward clerks make out requisitions for laboratory and X-ray services and order clerical supplies. Seventeen hospitals (81%) have ward clerks answer visitors' inquiries, but two hospitals indicate that this happens only sometimes.

In sixteen hospitals (80%) the ward clerk is accountable to the head nurse; in five, she is accountable to a supervisor.

The tabulation of certain activities assigned to nursing service personnel, for these thirty hospitals, is as follows:

	YES		NO		SOMETIMES
	Number	Percent	Number	Percent	
Make up empty units after discharge of non-isolated patients	22	75%	5	25%	2
Carry meal trays to patients	28	93%	2	7%	
After meals, return trays to kitchen	22	75%	7	25%	
Make out charge slips for drugs used by patients	16	70%	10	30%	
Request repairs for plumbing, heating or lighting facilities	21	75%	7	25%	
Tend to admission of patients to hospital	21	75%	8	28%	

72% of the hospitals also indicate that nursing personnel are responsible for controlling visitors and enforcing visiting hours. Five hospitals indicate that this is a "sometimes" responsibility, and three hospitals suggest that nursing personnel should not have the responsibility of this task.

Only two of the thirty hospitals report having Intensive Care Units, and both of these units were four beds in size. They are used for post-surgical, cardiac, seriously-ill and accident patients.

Twelve (45%) of the hospitals have post-anesthesia recovery rooms and 17 do not. Ten hospitals keep the recovery room open from 7-3, and two keep it open during surgery. In eight hospitals, patients are given post-anesthesia care in their rooms when the recovery room is closed, and in four hospitals, the patients remain in the surgical suite until recovery.

Twenty-three (83%) of the hospitals report having Central Service units and five (17%) do not. In fifteen hospitals (75%) supplies are delivered to nursing units to a standard, and in fourteen hospitals supplies must be requisitioned individually.

In twenty-one (70%) of the hospitals, L.P.N.'s give medications, and in nine (30%) they do not. The limitations imposed on L.P.N.'s giving medicines are:

No. of Hospitals	Limitations
1	Only if R.N. is not available
8	Only under R.N. supervision
1	No Hypodermics
1	No P.R.N. orders
5	No Narcotics
6	No I.V.'s
2	No Blood starting
1	No fractional doses
1	No Oxytoxics
2	No Insulin
3	Only some I.M.'s
5	Oral doses only
2	No I.M.'s

Nine (30%) of the thirty hospitals report that they do not have a pharmacy with a pharmacist in charge. In these hospitals, drugs are issued to the nursing units by:

The Director of Nursing
Part-time pharmacist comes one night a week
Sister anesthetist during the day, Evening supervisor during the evenings, and an R.N. at night
R.N., under direction of consulting pharmacist
Nursing supervisor, with narcotics dispensed by pharmacist daily
Central Service Supervisor
Administrator or Operating Room Supervisor

In twenty hospitals, the reports indicate that pharmacist service is available, but the extent of this coverage varies widely:

7 - 8 AM seven days a week -- 1	7 - 9 seven days a week -- 1
8 -10 AM six days a week -- 1	10 -11 AM six days a week - 1
11 -12 AM six days a week -- 1	11 -12 AM five days a week- 1
8:30-11 six days a week -- 1	8:45-9:30 six days a week - 1
9:00-5 five days a week -- 1	8 - 5 six days a week -- 1
12:30-2:30 two days a week -- 1	8 - 5 five days a week -- 1
8 -11 six days a week -- 1	7:30-8 and 6-6:30 six days
8-6 five days, 8-2 two days -- 1	

But, 18 out of 32 day nurses, 8 out of 27 evening nurses, and 11 out of 26 night nurses make out drug charge slips routinely or frequently. 22 out of 32 day nurses, 20 out of 27 evening nurses, and 21 out of 26 night nurses routinely make out laboratory, X-ray and other service requisitions.

TABLE 7-A

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN THIRTY GENERAL HOSPITALS OF 51-100 BEDS BY NUMBER OF RESPONSES

A. ACTIVITIES CONCERNED WITH GIVING NURSING CARE TO PATIENTS

Activity Number	N - 32 Day Nurses				N - 27 Evening Nurses				N - 26 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
1	26	4	1		22	4	1		19	6		
5	22	6	4		16	7	4		2	3	18	3
8	7	7	8	10	5	12	5	5		5	18	3
10	15	8	8		12	10	5		13	8	5	
11	27	4	1		27				24	2		
14	2	4	12	14			9	18			7	19
15	2	5	20	5	4	5	15	3	9	5	10	2
16	6	15	10	1	2	9	12	3	3	8	13	2
20	20	11	1		11	12	4		2	9	14	1
21	5	6	13	8	1	7	11	8	8	4	9	5
22	4	16	12		1	10	13	3	4	8	14	
24	12	10	10		4	11	11	1		6	18	2
30	5	9	17	1	1	7	17	2	6	6	16	4
31	5	10	17		7	6	12	1	3	9	9	4
32	9	13	10		12	8	6		9	9	8	
34	3	2	9	18	2	1	7	16			9	17
37	14	5	10	3	7	10	5	4	11	12	2	1
38	17	13	2		13	9	5		9	11	4	2
39	14	10	8		8	8	11		11	8	6	
43	6	17	8		6	15	5	1	3	3	20	
44	10	12	9	1	7	16	2	2	3	6	16	1
47	2	4	21	5		8	13	6		7	14	5
49	7	7	17	1	5	10	9	3	6	9	9	1
50	2	4	20	3	1	4	17	5	2		17	6
51	4	10	16	2	2	4	18	3	6	2	18	
52	20	5	4	3	17	2	6	2	20	1	4	1
57	10	16	6		10	13	4		3	10	10	3
58	20	10	2		16	9	2		15	8	3	
61	21	10	1		19	8			6	8	11	
62	2	12	18		2	7	18		3	6	15	2
63	1	5	21	5	1	3	18	5	1		6	18
68	8	11	12	1	2	13	9	2		10	13	3
69	3	6	13	10		3	9	15			7	17
75	3	8	19	2	1	2	18	6		1	17	8

TABLE 7-B

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN THIRTY GENERAL HOSPITALS OF 51-100 BEDS BY NUMBER OF RESPONSES

B. ACTIVITIES RELATED TO MANAGING PERSONNEL GIVING NURSING CARE TO PATIENTS

Activity Number	N - 32 Day Nurses				N - 27 Evening Nurses				N - 26 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
2	18	5	5	3	18	2	4	3	16	2	5	2
6	1	3	21	7	1	4	16	5	3	3	12	8
9	17	9	5		17	9		1	15	7	2	2
18	2	8	18	4		2	20	3	1	3	16	6
19	22	8	2		15	5	7		16	6	2	1
23	17	6	8	2	18	3	4	1	14	4	4	4
25	8	8	12	4	3	3	14	7	5	4	11	6
26	13	13	6		7	15	5		11	10	5	
40	12	12	7		4	11	11	1	6	14	6	
45	3	6	21	2	2	5	19	1	1	5	18	2
56	7	15	10		3	14	8	2	5	11	9	1
59	19	11	2		16	7	4		18	3	5	
64	8	10	14		2	10	14	1	3	5	17	1
67	10	14	8		1	14	12		5	9	12	
70	5	6	18	3	1	5	18	3	1	2	18	5
73	5	8	18	1		2	20	5	1	5	13	7
76	5	10	16	1	2	8	14	3	2	4	19	1
78	13	17	2		12	9	5	1	16	6	4	

TABLE 7-C

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN THIRTY GENERAL HOSPITALS OF 51-100 BEDS BY NUMBER OF RESPONSES

C. ACTIVITIES CONCERNED WITH MAINTAINING HOSPITAL'S OPERATIONAL SYSTEMS

Activity Number	N - 32 Day Nurses				N - 27 Evening Nurses				N - 26 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
3	5	8	11	4	7	8	10	2	20		6	
4	8	7	9	7	12	8	5	2	12	8	6	
7	2	5	22	7	3	3	12	9	1	1	15	9
12	21	8	3		22	4	1		18	3	5	
13	17	6	8			5	18	3	5	5	9	7
17	2	11	12	7	1	4	14	8	1	2	16	7
27	9	5	17	1	8	4	9	4	1	2	4	19
28	7	8	15	2	1	3	11	12	1		8	17
29	13	5	4	10	4	4	8	10	12	3	7	4
33	22	5	5		18	5	2	1	22	2	1	1
35	15	7	10		12	8	5	2	14	7	1	4
36	2	3	11	16	3	4	10	10			8	18
41	1	3	5	23		3	8	16			9	17

Table
#7-C. ACTIVITIES CONCERNED WITH MAINTAINING HOSPITAL'S OPERATIONAL SYSTEMS (Cont.)

Activity Number	N - 32 Day Nurses				N - 27 Evening Nurses				N - 26 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
42	7	7	15	3	1	4	12	10	4	3	9	9
46	4	6	14	8	3	5	12	7	2	3	16	5
48	1	1	10	20	1	1	7	18			11	15
53	2	2	3	25	17	2	6	2	1		1	24
54	4	6	18	4	2	1	17	7	1	4	15	6
55	3	2	3	24	1	3	3	20			3	23
60	1	1	4	27			3	24		1	7	18
65	6	8	16	2		7	16	4		2	16	8
66	17	14	1		15	12			8	13	5	
71	5	5	17	5	1	4	15	7		3	17	6
72	1		6	25		3	8	15			4	22
74	1	3	16	12			3	24		1	7	18

The twenty-seven evening nurses responding to the question on time spent in giving medicines gave the following figures:

1 spent all the time.

1 spent 6-7 hours.

5 spent 5 hours.

6 spent 3-4 hours.

6 spent 2½-3 hours.

4 spent 1-1½ hours.

1 spent 1 hour.

All but one indicated she stopped to give nursing care to patients.

Time spent answering the phone varied from very little to two to three hours.

Night nurses spent much less time giving medicines, although one nurse reported she usually spent five hours, two reported three hours, and three reported two hours usually spent.

Chapter 8

FINDINGS FOR HOSPITALS UNDER 50 BEDS IN SIZE

There are fifty-three general hospitals in Iowa under 50 beds in size. Questionnaires were returned from 44 of these hospitals, or from 83% of this group.

Of the 44 hospitals, 32 (73%) report that they are not using ward clerks. Eleven (27%) do use ward clerks. Seven of the hospitals in this group of eleven have instituted the use of ward clerks since January 1, 1967. Two started their use in 1966, one in 1965 and one in 1963. One hospital used ward clerks for four months, but because of finances, discontinued their use. In six of the eleven hospitals ward clerks are used on all wards. Three hospitals do not use them in Obstetrics, and one each of the hospitals, in each category, do not use them in nursery or out-patient departments.

Of the eleven hospitals, none use ward clerks on the night shift, three provide seven day, eight hour coverage on evenings, and one provides this coverage for five evenings a week. On days, six of the eleven hospitals have seven day, eight hour day coverage, three provide five day, eight hour coverage, and two have five and a half day coverage, eight hours a day.

The duties carried by ward clerks in the ten hospitals answering this question are as follows:

Activity	Provided by Ward Clerk	Not Provided
Transcribe doctors' orders	7	3
Chart temperatures	9	1
Make out requisitions for x-ray, and for laboratory	9 10	1
Order clerical supplies	9	1
Answer visitor's inquiry	10	

The ward clerk is accountable to the charge nurse in two hospitals, to the head nurse in five hospitals, to a staff nurse in two hospitals, to a supervisor in one hospital, and to the hospital administrator in one hospital.

Summary of the responsibilities assigned in the 44 hospitals under fifty beds in the Nursing Department are as follows:

	YES		NO		SOMETIMES
	Number	Percent	Number	Percent	
Make up empty units after discharge of non-isolated patients	35	81%	7	16%	1
Carry meal trays to patients	39	90%	4	9%	1
After meals, return trays to kitchen	32	80%	9	20%	
Make out charge slips for drugs used by patients	28	65%	15	35%	
Request repairs for plumbing, heating or lighting facilities	35	80%	7	19%	2
Tend to admission of patients to hospital	25	64%	9	23%	5
Control visitors and enforce visiting hours	30	70%	10	23%	4

Only two of the 44 hospitals under fifty beds have Intensive Care Units. One hospital's unit is two beds and the other hospital has a one bed unit. Both report that the unit is used for cardiac patients.

Fourteen of these 44 hospitals report having a post-anesthesia recovery room. In six, the unit is open whenever it is needed following surgery. Four hospitals keep the unit open eight hours a day and two make it available twenty-four hours a day. When the recovery room is not open, in four of the hospitals, post-anesthesia care is given in the patient's room. Other hospitals did not indicate where this care was given.

Thirty-four of the 44 hospitals under fifty beds have a Central Service Unit. In 22 of them, supplies are delivered to a standard on the nursing units. In fourteen hospitals supplies are requisitioned.

L.P.N.'s give medicines in 27 of the hospitals. Five hospitals report that they do not have L.P.N.'s on the staff, and in twelve hospitals L.P.N.'s do not give medicines. The limitations imposed on L.P.N.'s passing medicines are listed on the following page.

The limitations imposed on L.P.N.'s giving medicines are:

No. of Hospitals	Limitations
7	No I.V.'s
2	No Narcotics
1	No Insulin
1	No eye drops
1	No Heparin
1	No danger drugs
1	Orals only
1	Routine medications only
1	Narcotic giving checked
9	Under R.N. supervision
4	Only if trained & supervised

Only six of the 44 hospitals report that they have a pharmacy with a pharmacist in charge, and all six have the pharmacy open daily, six days a week for about two hours a day. In those hospitals without a pharmacist, drug issue is taken care of by the Director of Nursing in thirteen hospitals, by a registered nurse in eleven hospitals, and by a head nurse in one hospital. A consulting pharmacist provides some service in twelve of the hospitals, and a local drug store assists four hospitals. The information on pharmacist services is not too clear in the answers provided in the questionnaires. This area of services provided by hospitals - particularly small hospitals - could well be investigated further to determine the extent to which registered nurses are carrying out pharmacist duties.

21 of the 46 day nurses, 19 of the 45 evening nurses, and 22 of the 40 night nurses routinely, or frequently, made out drug charge slips. 11 of the 46 day nurses, 20 of the 45 evening nurses, and 11 of the 40 night nurses routinely, or frequently, go to the pharmacy to get drugs for patients. 37 of the 46 day nurses, 40 of the 45 evening nurses, and 31 of the 40 night nurses routinely, or often, make out laboratory, X-ray and other service requisitions.

TABLE 8-A

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN FORTY-FOUR GENERAL HOSPITALS UNDER 50 BEDS BY NUMBER OF RESPONSES

A. ACTIVITIES CONCERNED WITH GIVING NURSING CARE TO PATIENTS

Activity Number	N - 46 Day Nurses				N - 45 Evening Nurses				N - 40 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
1	32	10	3		37	5	2		32	2	1	
5	38	4	3		32	8	3	2	6	6	27	1
8	13	11	17	4	9	11	18	5	5	9	24	2
10	21	16	8		23	11	11		24	11	5	
11	41	2	1		43	1			39	1		
14	5	9	7	19			19	24			10	29
15	6	7	27	5	9	7	22	5	18	10	11	1
16	5	17	21	2	10	13	20	3	9	9	20	2
20	25	14	6		19	12	13		11	22	10	1
21	7	6	24	9	4	7	18	14	17	7	14	2
22	14	19	11		9	13	21		10	11	19	
24	12	16	16	1	13	14	18		9	10	20	1
30	14	12	17	3	12	10	10	5	3	6	24	7
31	10	13	21	1	15	7	22		8	12	17	3
32	16	18	10	1	15	18	11		23	9	7	1
34	5	1	14	25	3	1	17	24	3		22	15
37	23	11	8	2	22	15	4	3	19	11	8	2
38	29	12	4		26	14	4		22	15	3	
39	21	12	12		21	19	5		26	9	4	1
43	12	20	11	3	10	16	18	1	2	12	23	2
44	17	20	9		12	20	12		9	13	17	2
47	5	5	26	9	5	7	26	6	9	7	18	6
49	9	12	22	3	13	12	18	2	13	15	11	1
50	6	8	29	6	5	10	24	6	4	13	18	5
51	5	7	33	1	7	10	24	4	20	6	13	1
52	29	7	2	5	34	7	2	2	37	2	1	
57	21	18	5		15	16	11	2	9	14	15	2
58	30	11	3		33	8	5		32	4	3	1
61	32	7	7		27	15	3		21	12	5	
62	3	10	30	1	2	11	29	3	2	15	21	2
63	2	5	31	8	2	13	26	3		1	11	27
68	11	13	13	4	9	13	21	2	7	10	18	5
69	8	9	14	13	4	1	14	26	3	1	8	28
75	6	7	29	3	4	4	33	4	2	3	24	10

TABLE 8-B

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN FORTY-FOUR GENERAL HOSPITALS UNDER 50 BEDS BY NUMBER OF RESPONSES

B. ACTIVITIES RELATED TO MANAGING PERSONNEL GIVING NURSING CARE

Activity Number	N - 46 Day Nurses				N - 45 Evening Nurses				N - 40 Night Nurses			
	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
2	29	6	10	1	27	5	7	6	18	2	4	15
6	3	4	24	15	4	1	22	17	6	3	18	12
9	30	8	8		25	9	9	2	20	8	8	4
18		4	32	10	2	4	28	9	3	5	15	17
19	31	10	5		30	8	5		27	5	3	
23	28	6	11		25	4	13	3	16	5	7	12
25	11	14	14	6	82	62	18	12	6	5	16	13
26	15	21	9		21	16	6	3	26	8	6	
40	11	29	5		17	17	11		17	11	11	
45	5	14	25	1	5	17	28		1	7	27	4
56	11	20	12	3	6	21	16	1	14	13	14	
59	29	14	3		27	9	8		23	7	8	2
64	12	16	16	2	9	11	23	2	4	9	26	
67	18	13	15		8	19	14	4	9	12	17	2
70	6	14	21	3	3	3	28	11	1	3	26	9
73	11	11	23	1	4	5	28	6	2	4	27	7
76	6	22	17	1	2	14	26	2	5	6	24	4
78	27	15	3	1	17	14	11	3	16	11	11	1

TABLE 8-C

SUMMARY OF RESPONSES OF REGISTERED NURSES IN STAFF NURSE POSITIONS IN FORTY-FOUR GENERAL HOSPITALS UNDER 50 BEDS BY NUMBER OF RESPONSES

C. ACTIVITIES CONCERNED WITH MAINTAINING HOSPITAL'S OPERATIONAL SYSTEMS

Activity	N - 46 Day Nurses				N - 45 Evening Nurses				N - 40 Night Nurses			
Number	#1	#2	#3	#4	#1	#2	#3	#4	#1	#2	#3	#4
3	19	8	15	3	11	11	20	2	30	3	5	1
4	27	10	4	9	23	16	4	2	23	11	6	
7	5	7	23	10	7	3	26	9	1	3	19	16
12	36	5	4		41	3			26	7	5	2
13	19	9	11	5	11	2	15	17	7	3	15	15
17	2	7	24	12	4	5	24	12	5	4	10	21
27	9	14	18	8	17	7	19	1		1	10	29
28	10	9	18	8	9	7	18	9	2	3	13	23
29	15	6	7	15	13	6	11	15	20	2	8	10
33	28	7	7	2	32	5	8		33	1	5	
35	33	4	4	5	32	8	3	2	24	7	4	4
36	5	7	15	17	4	1	14	25	1	2	13	23
41	5	7	20	14	3	4	21	7	2	1	17	19
42	19	7	13	7	5	9	12	17	7	4	12	15
46	14	7	11	13	9	11	6	19	7	4	13	16
48	4	2	23	17	1	2	20	22	2	2	11	25
53	4	3	5	32	1	1	2	41			1	39
54	5	8	17	13	2	4	23	15	5	6	18	10
55	1	3	7	30	1	1	5	38				39
60	4	1	9	32	2		6	34		1	11	28
65	4	16	22	3	8	4	28	5	1	2	29	8
66	28	14	4		19	19	5	2	16	8	6	
71	9	11	20	6	4	6	27	7	10	7	20	3
72	1	2	17	25	1	2	19	23	1		8	31
74	6	7	29	3	2	1	17	25		1	14	25

Chapter 9

COMPARISON OF FINDINGS FOR STAFF NURSE ACTIVITY IN HOSPITALS OF 51-100 BEDS & HOSPITALS UNDER 50 BEDS BY PERCENT OF NURSES' RESPONSES

Table 9

Activity Number	Hospitals of 51-100 Beds N - 30						Hospitals Under 50 Beds N - 44					
	Nurses Responding						Nurses Responding					
	Days N-32		Evenings N-27		Nights N-26		Days N-46		Evenings N-45		Nights N-40	
	% 1&2 *	3&4 **	% 1&2 *	3&4 **	% 1&2 *	3&4 **	% 1&2 *	3&4 **	% 1&2 *	3&4 **	% 1&2 *	3&4 **
5	87	13	85	15	19	81	91	7	89	11	3	
9	84	16	96	4	85	15	83	17	75	25	70	30
13	72	25	19	74	38	62	61	35	29	71	25	75
14	30	57		100		100	30	57		95		98
22	62	38	40	60	46	54	72	24	49	47	53	47
23	71	29	78	19	69	31	74	24	64	36	53	47
26	81	19	81	19	81	19	78	20	80	20	85	15
28	46	54	15	85	4	96	41	57	36	60	13	87
29	46	48	42	58	55	45	80	20	89	11	78	20
35	68	32	74	26	81	19	80	20	89	11	78	20
39	75	25	60	40	73	23	72	26	89	11	87	13
40	75	25	55	45	77	23	87	11	75	25	70	28
43	72	27	78	22	23	77	70	30	58	42	35	63
44	68	32	85	15	35	65	80	20	71	26	55	45
45	28	72	26	74	23	77	41	57	49	51	20	78
46	32	68	30	70	19	81	46	52	44	56	28	72
48	7	93	7	93		100	13	87	6	94	10	90
49	44	56	55	45	57	38	46	54	56	44	45	55
54	32	68	11	89	19	81	28	65	13	84	28	70
57	81	19	85	15	50	50	85	11	67	29	58	42
64	56	44	45	55	31	69	61	39	44	40	53	47
68	59	41	55	41	38	62	52	37	49	51	43	57
69	28	72	11	89		92	37	59	11	89	10	90
71	32	68	18	82	12	88	43	57	22	75	43	57
75	34	66	11	89	4	96	28	70	18	82	13	85
78	43	7	78	22	85	15	91	9	68	31	68	30

-- Note --

1 & 2
* -- refers to routine or frequent performance

3 & 4
** -- refers to sometime or never performance

Chapter 10

IOWA LEAGUE FOR NURSING -- IOWA HOSPITAL ASSOCIATION INTER-ORGANIZATIONAL COMMITTEE

SUMMARY AND HIGHLIGHTS OF THE STUDY OF STAFF NURSE POSITIONS IN IOWA GENERAL HOSPITALS

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I N T R O D U C T I O N

The following is a duplication of Chapter 10 of the Iowa League for Nursing--Iowa Hospital Association Inter-organizational Committee's STUDY OF STAFF NURSE POSITIONS IN IOWA GENERAL HOSPITALS. It constitutes the summary and discussion of the findings of what activities are performed by registered nurses in day, evening and night nurse positions in Iowa general hospitals. The full report may be obtained from the Iowa Hospital Association.

Iowa League for Nursing--Iowa Hospital Association
Inter-Organizational Committee

January 1968

SUMMARY & HIGHLIGHTS OF THE STUDY OF STAFF NURSE POSITIONS IN IOWA GENERAL HOSPITALS

This study, conducted by the Iowa League for Nursing--Iowa Hospital Association Inter-Organizational Committee, concerns itself with what constitutes the medical-surgical staff nurse position on days, evenings and nights in Iowa general hospitals, as manifested by what registered nurses, holding these positions, report is the frequency with which they perform certain activities. The activities were first identified from diary listings kept by staff nurses in three Iowa hospitals. These activities were tabulated and classified into three categories: (1) of those concerned with giving nursing care to patients; (2) those concerned with managing others giving nursing care; and (3) those related to maintaining the hospitals' operational systems. From these listings, the Committee selected 78 activities to be included in the questionnaire. Registered nurses in medical-surgical staff nurse positions were asked to indicate the frequency with which they performed the activities. They were asked to check whether they performed the activities routinely (each day on duty), often (several times a week), sometimes (several times a month), or never (not at all).

The questionnaires, along with a covering letter, were distributed to all Iowa general hospitals by the Iowa Hospital Association, asking that a registered nurse in a day, evening and night staff nurse position be asked to complete the questionnaire. Also distributed was a request for information about the hospital to be completed by the Director of Nursing. Questionnaires were sent to, and returned from, Iowa hospitals as summarized below:

Hospital Size	Number in Iowa	Questionnaires Returned	Percent Returned
Under 50 beds	53	44	83%
51 - 100 beds	30	30	100%
101 - 200 beds	21	19	90%
201 - 300 beds	9	9	100%
301 - 400 beds	8	5	62%
Over 400 beds	4	3	75%
	125	110	88%

For the purposes of this summary, the registered nurses' responses have been put into three groups. The returns from these hospitals for the registered nurses is as follows:

	Hospitals In Study				
	Under 50 Beds	51-100 Beds	101-300 Beds	Over 300 Beds	Total
Number of Hospitals	44	30	28	8	110
Number of Nurses Responding:					
Days	46	32	32	6	116
Evenings	45	27	24	8	114
Nights	40	26	26	8	100
	131	85	82	22	330

Repeatedly, the one suggestion which has been made to meet the "shortage of nurses" has been to study the use of available nurse manpower hours to see if these are being expended in activities which actually required the knowledge, skill and ability which a nurse acquires in her basic education. What the nurse does with her time is seen by the Inter-organizational Committee to be much more decided by her employer (including the hospital) than by what she is taught in her basic education. That staff nurse positions vary greatly not only between hospitals; but between shifts, in the same hospital, can be ascertained from scrutiny of the findings of this study.

Staff nurse positions in hospitals are influenced by the services offered by the hospital away from the nursing units. Specialization of nursing care activities are shown in the extent to which hospitals establish Intensive Care Units and post-anesthesia Recovery Rooms. There was a time when most of the care of the post-anesthesized patients always took place in the patient's room. Today, judging from data collected, this care is provided less and less in the patient's room in the larger hospitals. But in smaller hospitals this is not true. Only 1/3 of the 83 Iowa hospitals under 100 beds in size have post-anesthesia Recovery Rooms. The use of Intensive Care Units also declines as hospitals are smaller in size. Only four hospitals under 100 beds in size report having Intensive Care Units, and these seem to be hardly more than two-bed rooms in which special duty nursing is provided by the hospital. Nursing care skills of all staff nurses may well improve and stay at a high level if nurses continue to give post-anesthesia care and care to patients generally assigned to Intensive Care Units. But certainly the care cannot be of the level needed by the patient if the nurse must repeatedly leave the patient's side to attend to activities which can be done by those with lesser skills.

Whenever the members of the nursing staff have been assigned an activity, it can be assumed that sometime or other the registered nurse will have to get involved in that activity. The tasks may be assigned to auxiliary personnel. But when this personnel does not come to work, when they are not able to do the work, when circumstances result in their unavailability, then the nurses are expected, or just do, step in to take over the chores. In all the hospitals represented in this study, 2/3 still assign the make-up of empty units after discharge of non-isolated patients to nursing personnel and an even greater number require of them the carrying of meal trays to patients. And actually, more nurses in this study report carrying meal trays to patients than report feeding patients who cannot feed themselves.

Nurses have been vocal about the time they must spend in doing paper work. Is this a justified protest? Fifty percent, and over, of the hospitals require nursing personnel (which means nurses) to make out drug charge slips. Although the greater majority of hospitals over 100 beds, and 75% of the hospitals with less than 100 beds, report having a Central Service Department, fifty percent of the hospitals under 200 beds deliver supplies needed in giving nursing care and doctor's ordered treatments by requisition only. Other hospitals have adopted the practice of delivering supplies to the nursing units to meet an established standard.

100% of the hospitals over 200 beds have ward clerks, but only 70% of this group provide ward clerk services during the evening shift. All but one of the 16 hospitals over 200 beds with ward clerks indicate that the ward clerks make out requisitions for laboratory, x-ray and other services. Yet 10 of the 12 day nurses, 13 of the 13 evening nurses and 15 of the 15 night nurses report they routinely, or frequently, make out these requisitions in these hospitals. And

56 of all the 116 day nurses, 36 of all of the 114 evening nurses and 63 of the 100 night nurses returning questionnaires in this study report making out drug charge slips routinely--which means every day that they are on duty.

The time staff nurses report they spend in giving medicines is as much as eight hours during the shift. One move which has been made to free the nurse from the time consuming mechanics of medicine preparation and distribution is to assign the giving of medicines to L.P.N.'s. Over 67% (78 hospitals) report that L.P.N.'s give medicines. A number of restrictions or limitations are imposed.

TABLE 9

COMPARISON OF IOWA GENERAL HOSPITALS
BY SIZE AND SERVICES AND CERTAIN ACTIVITIES

Hospital Size by Beds	Over 400		301-400		201-300		101-200		51 - 100		Under 50	
Item	N - 3		N - 5		N - 9		N-19		N-30		N-44	
	#	%	#	%	#	%	#	%	#	%	#	%
Use Ward Clerks	3	100	5	100	9	100	17	89	21	70	11	25
Ward Clerks on Evenings	3	100	4	80	5	55	10	52	16	53	4	9
Have Unit Managers	0		0		1	11	3	16	0		0	
Nursing Personnel Carry Meal Trays	2	66	5	100	8	88	17	89	28	93	39	88
Make up Empty Units	2	66	1	20	6	66	12	63	22	73	35	79
Make out Drug Charge Slips	2	66	3	60	6	66	9	47	16	53	28	63
Has Intensive Care Unit	3	100	4	80	5	55	9	47	2	6	2	4
Has Post-anesthesia Recovery Room	3	100	5	100	9	100	18	94	12	40	14	31
Has Central Service	3	100	4	80	9	100	17	89	23	76	34	77
Central Service Delivers To a Standard	2	66	2	40	6	66	8	42	15	50	22	50
L.P.N.'s give Medicines	3	100	4	80	6	66	17	89	21	70	27	61
Has Pharmacy with Full-Time Pharmacist	3	100	5	100	9	100	15	76	20	66	6	13

The responses received from the nurses have been summarized by the number of responses received for each activity. Because only one nurse on days, evenings and nights was asked to provide information for each hospital, the returns cannot be reduced to percentages, or statistically analyzed. However, the number of nurses responding in a certain way can be summarized by reporting the frequency of responses. To provide this summary, the frequency with which nurses reported doing certain activities has been combined to show the "routine" and "often" as one occurrence and the "sometimes" and "never" as a second response. Those responses related to the giving of nursing care are summarized first.

In all hospitals responding, 2/3, and over, of the day and evening nurses reported doing the following activities routinely or often:

Making rounds with doctors of some patients,
Taking blood pressures of patients,
Assisting doctors with treatments,
Passing all routine, p.r.n. and stat medicines,
Reporting patient's condition and symptoms to doctors,
Adjusting flow of I.V.'s,
Answering patients' questions about conditions, treatments and progress,
Checking patients for voiding.

But more than 2/3 of all the day and evening nurses never or sometimes:

Took patient's temperature,
Passed drinking water to patients,
Made occupied beds,
Gave patient an enema.

It may be conjectured that with the focus on need for the patient to be as active as he can, and the emphasis on early ambulation, that not many bed baths are given in hospitals. But when patients are seriously or critically ill, it should be assumed that bed baths are needed and that registered nurses often should give the baths. Yet 83 of the 116 day nurses, 110 of the 114 evening nurses and 99 of the 100 night nurses reported that they never or sometimes gave a patient a bed bath.

Of the 116 day nurses, 19 indicated they routinely, or often, fed a patient, but 45 of them reported that they routinely, or often, carried meal trays to patients. Of the 114 evening nurses, 25 routinely, or often, fed a patient, but 64 of them indicated they routinely, or often, carried meal trays to patients.

Written nursing care procedures generally start with a first step which asks the nurse to "explain the procedure to the patient." But 30 of the 116 day nurses, 20 of the 114 evening nurses and 58 of the 100 night nurses indicate they never, or sometimes, explained what was going to happen to the patient.

Talking with the patient to find out how he feels about his hospitalization, his impending surgery, or complications of his condition is recognized as an essential part of assessing patient needs for nursing care. Yet only 68 of the 116 day nurses, 57 of the 114 evening nurses and 39 of the 100 night nurses routinely, or often, reported doing such talking with the patient. 76 of the 116 day nurses, 89 of the 114 evening nurses and 89 of the 100 night nurses identify that they never, or only sometimes, established nursing care objectives for a patient or a plan of nursing care in a group conference.

Teaching patients self-care was a concern of nurses routinely, or often, with only 35 of the 116 day nurses, 20 of the 114 evening nurses and 11 of the 100 night nurses. Answering a patient's call light was a "never", or "sometimes" activity of 29 of the 116 day nurses, 35 of the 114 evening nurses and 67 of the 100 night nurses.

The second essential component of the staff nurse position in hospitals is the management of personnel giving nursing care to patients. Eighteen different activities were included in this study, which are considered to be concerned with, and essential in, this management of personnel.

A registered nurse in a staff nurse position is expected to identify, for her staff, what kind of reports she wants about the patient and to use her judgment to determine whether reports submitted should be checked. Seventy of the total of 330 nurses reported they routinely, or often, checked a blood pressure reported to them by an L.P.N. Since some hospitals indicated they did not employ L.P.N.'s, this response may have very little actual significance.

More than 2/3 of the staff nurses reported they routinely, or often:

Made work lists for nursing staff,
Checked to see how staff was getting along with assignment,
Explained patient care assignment to staff,
Helped staff give nursing care to a specific patient,
Helped staff do procedures unfamiliar to them,
Anticipated for staff difficulties they might have in giving patient care,
Told staff what reports to make about patients.

One might question why the above activities were not done routinely by all the nurses reporting.

Responses were received from 116 day nurses, 114 evening nurses and 100 night nurses. Of this group, 62 day nurses, 31 evening nurses and 32 night nurses routinely, or often, conducted discussions with staff to plan nursing care; 45 day nurses, 43 evening nurses and 22 night nurses routinely, or often, corrected staff for the way procedures were done; and 61 day nurses, 35 evening nurses and 27 night nurses talked with staff about the kind of care they were giving and how to improve this care. Again, it might be asked, why was there not a 100% response to these activities received from all the nurses.

In studying the diaries provided by the nurses in three hospitals a third component of the staff nurse position was identified to be that concerned with operating the various systems established by the hospital to communicate doctors' orders to other departments, to obtain supplies needed, to obtain service charges for patient's bills, to maintain the hospital's physical plant, to deliver food to patients, and to protect and store supplies. Traditionally, maintaining these hospital operational systems have fallen to the nursing department. But proper utilization of available nurse manpower hours requires questioning the wisdom of continuance of such activity. To what extent are registered nurses involved in maintaining hospital's operational systems?

	Of the 116 Day Nurses	Of the 114 Evening Nurses	Of the 100 Night Nurses
The number who report routine (daily), or often, performance of the following activities:			
Starting patient charts	68	76	88
Ordering stock drugs	72	51	30
Carrying meal trays	45	64	4
Putting away supplies	45	28	10
Making drug charges	58	38	60
Making out lab, x-ray requisitions	82	88	77
Ordering nursing supplies	53	25	28
Went to pharmacy for drugs	48	36	20
Looked for supplies on several nursing units	27	14	20
Returned nursing equipment to storage area	42	19	28
Cleaned supply closets	17	3	3

The summary of all nurse responses by day, evening and night nurse positions, and by hospitals grouped by size, is given in the chart which follows. A study of the chart will show to what extent the 330 nurses who responded indicate how they are routinely, often, sometimes or never involved in performance of 78 various activities which have taken place in Iowa General Hospitals. To what extent performance of these activities constitutes proper utilization of nurse manpower, proper management of personnel giving nursing care and necessary and essential involvement of registered nurses for nursing care of patients, can only be conjectured from information provided. But each hospital can, by using the techniques and methodology of this study, investigate what the actual circumstances are in the hospital by obtaining responses from all nurses employed in the staff nurse, or even head nurse and supervisor, positions.

The study does point up that there is continued reason to question whether available nurse manpower is being used appropriately in Iowa General Hospitals, and whether nursing care of patients could not be much improved if registered nurses in staff nurse positions spent more time in giving nursing care, and managing personnel giving nursing care, and a great deal less time spent in maintaining hospital's operational systems.

SUMMARY AND COMPARISON OF RESPONSES OF REGISTERED NURSES HOLDING STAFF NURSE POSITIONS IN IOWA GENERAL HOSPITALS BY NUMBER OF RESPONSES

A - Routinely or Often
B - Sometimes or Never

A. Activities concerned with nursing care of patients

ACTIVITIES	Hospitals Under 50 Beds N - 44						Hospitals 51 - 100 Beds N - 30						Hospitals 101 - 300 Beds N - 28						Hospitals Over 300 Beds N - 8					
	Days N-46		Evenings N-45		Nights N-40		Days N-32		Evenings N-27		Nights N-26		Days N-32		Evenings N-24		Nights N-26		Days N-6		Evenings N-8		Nights N-8	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
1. Give prn meds for pain or sleep	42	3	42	2	34	1	30	1	26	1	25		30	2	23		24	1	6		8		8	
5. Make rounds with doctors-some pts.	42	3	40	5	12	28	28	4	23	4	5	21	30	2	17	7	9	17	5	1	3	5	1	7
8. Started I.V.'s	24	21	20	23	14	26	14	18	17	10	5	21	23	9	14	9	8	18	3	3	6	2	3	5
10. Took B/P to pts.	37	8	34	11	35	5	23	8	22	5	21	5	23	8	22	1	23	3	3	3	6	2	6	1
11. Made rounds of patients	43	1	44		39	1	31	1	27		26		23	3	24		25	1	6		8		8	
14. Gave pt. bed bath	14	26		43		39	6	26		27		26	4	26		22		26	1	5		8		8
15. Took temp. of pt.	13	32	13	27	28	12	7	25	9	18	14	12	7	25	11	12	11	15	3	3	2	6	6	2
16. Did irrigation	22	23	23	23	18	22	21	11	11	15	11	15	18	14	17	7	12	14	3	3	3	5	5	3
20. Assisted M.D. c treatment	39	6	31	13	32	11	31	1	23	4	11	15	29	3	16	8	6	19	3	3	6	2		8
21. Passed drinking water to pts.	13	33	11	32	24	16	11	21	8	19	12	14	10	22	4	19	12	14	2	4		8	5	3
22. Catheterized pt.	33	11	22	21	21	19	20	12	11	16	12	14	15	17	12	12	17	9	5	1	7	1	3	5
24. Added drugs to I.V.	28	17	27	18	19	21	22	10	15	12	6	20	25	7	17	7	9	17	4	2	7	1	7	2
30. Connected Blood to I.V.'s	26	20	22	15	9	31	14	18	8	19	6	20	16	15	6	17	5	21	1	5	5	3	1	7
31. Ambulated Pt.	23	22	22	22	20	20	15	17	13	13	12	13	19	13	13	10	11	15	5	1	3	5	3	5
32. Gave pt. bed pan or urinal	34	11	33	11	32	8	22	10	20	6	18	7	23	9	15	8	18	8	6		8		7	1
34. Gave tracheostomy care	6	39	4	41	3	37	5	27	3	23		26	5	26		22	3	22		6	4	4	1	7
37. Completed admission of pt. to unit	34	10	37	7	30	10	19	13	17	9	23	3	19	13	19	5	21	5	5	1	6	2	4	4
38. Adjusted flow of I.V.'s	41	4	40	4	37	3	30	2	22	5	20	6	30	2	24		24	2	6		8		6	2
39. Answered pts.' call lights	33	12	40	5	35	5	24	8	6	21	19	6	26	6	15	8	19	7	6		8		8	

A. (CON'T) -- Activities concerned with nursing care of patients

ACTIVITIES	Hospitals Under 50 Beds N - 44						Hospitals 51 - 100 Beds N - 30						Hospitals 101 - 300 Beds N - 28						Hospitals Over 300 Beds N - 8					
	Days N-46		Evenings N-45		Nights N-40		Days N-32		Evenings N-27		Nights N-26		Days N-32		Evenings N-24		Nights N-26		Days N-6		Evenings N-8		Nights N-8	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
43. Talked c family re: pt. condition	32	14	26	19	14	25	23	8	31	6	6	20	27	4	14	10	8	18	3	3	5		3	4
44. Explained to pt. what was happning	37	9	32	12	22	19	22	10	23	4	9	19	25	7	21	2	11	15	2	4	6	2	3	5
47. Made occupied bed	10	35	12	32	16	24	6	26	8	19	7	19	7	25	8	15	13	13	6		1	7	6	2
49. Got pt. out of bed	21	25	25	20	28	12	14	18	15	12	15	10	18	13	14	10	15	11	6		2	6	5	3
50. Gave pt. enema	14	35	15	30	17	23	6	23	5	22	2	23	10	21	7	17	12	14	4	2	2	6	2	6
51. Obtained specimen for lab. exam.	12	34	17	28	26	14	14	18	6	21	8	18	17	15	11	12	17	9	5	1	4	4	6	2
52. Passed all meds.	36	7	41	4	39	1	25	7	19	8	21	5	23	8	21	2	23	3	5	1	7	1	7	1
57. Answered pt. questions about condition, treatment, progress	39	5	31	13	23	17	26	6	23	4	13	13	28	4	19	3	11	14	2	4	6	2	5	3
58. Checked pt. for voiding	41	3	41	5	36	4	30	2	25	2	23	3	25	7	23	1	23	2	5	1	7	1	8	
61. Reported pt. symptoms to doctor	39	7	42	3	35	5	31	1	27		14	11	31	1	21	4	14	12	4	2	8		5	3
62. Restrained pt.	13	31	13	32	17	23	6	26	9	18	9	17	7	23	7	17	8	18	2	4	3	5	4	4
63. Fed patient	7	39	15	29	1	38	6	26	4	23	1	24	4	28	6	17		25	2	4		8	1	6
68. Talked with pt. to find out his feelings re: hospitalization, surgery, and conditions	24	17	22	23	17	23	19	13	15	11	10	14	21	11	13	17	8	18	4	2	7	1	4	4
69. Established nrsg. care objectives	17	27	5	40	4	36	9	23	3	24		24	8	23	3	19	2	22	3	3	2	6	1	7
75. Taught pt. self-care	13	32	8	37	5	34	11	21	3	24	1	25	9	23	8	16	4	20	2	3	1	7	1	7
77. Helped pt. plan for care after discharge from hospital	11	35	6	39	5	35	5	27	2	24		26	9	23	2	21	1	25	2	3	1	7		8

SUMMARY AND COMPARISON OF RESPONSES OF REGISTERED NURSES HOLDING STAFF NURSE POSITIONS IN IOWA GENERAL HOSPITALS BY NUMBER OF RESPONSES

A - Routinely or Often
B - Sometimes or Never

B. Activities concerned with managing personnel giving nursing care

ACTIVITIES	Hospitals Under 50 Beds N - 44						Hospitals 51 - 100 Beds N - 30						Hospitals 101 - 300 Beds N - 28						Hospitals Over 300 Beds N - 8					
	Days N-46		Evenings N-45		Nights N-40		Days N-32		Evenings N-27		Nights N-26		Days N-32		Evenings N-24		Nights N-26		Days N-6		Evenings N-8		Nights N-8	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
2. Made work list for nursing staff	35	11	32	13	20	19	23	8	20	7	18	7	26	5	20	3	15	7	5	1	8		5	2
6. Checked B/P taken by L.P.N.	7	39	5	39	9	30	4	28	5	21	3	20	6	25	8	15	6	20	1	5	1	7	1	7
9. Explained patient care assignment to staff	38	8	34	11	28	12	28	5	26	1	22	4	23	8	21	2	17	8	5	1	8		5	3
18. Demonstrated & taught nursing procedure to staff	4	42	6	37	8	32	10	22	2	23	4	22	8	24	4	18	3	23		6	3	5	2	6
19. Checked how staff was getting along with assignment	41	5	38	5	32	3	30	2	20	7	22	3	28	3	21	3	22	3	6		8		6	2
23. Assigned nursing care to staff	34	11	29	16	21	19	23	10	21	5	18	8	24	8	16	8	12	14	4	2	6	2	4	4
25. Conducted discussion c staff to plan nrsg. care	25	20	14	30	11	29	16	16	6	21	9	17	17	15	8	15	7	18	4	2	3	4	5	2
26. Helped staff give care to patients	36	9	36	9	34	6	26	6	22	5	21	5	28	4	20	4	24	2	4	2	5	3	6	2
40. Helped staff do procedures unfamiliar to them	40	5	34	11	26	11	24	7	15	12	20	6	24	8	13	11	14	12	4	2	8		6	2
45. Corrected staff for way procedure was done	19	26	22	28	8	31	9	23	7	20	6	20	15	17	5	18	7	19	2	4	7	1	1	7
56. Discussed pt. behavior or reaction c staff	31	15	27	17	27	14	22	10	17	10	16	10	27	4	14	7	14	12	5	1	6	2	5	3
59. Check c staff re: how getting along with assignment	43	3	36	8	30	10	30	2	23	4	21	5	28	3	21	3	22	3	6		7	1	6	2

B. (CON'T) -- Activities concerned with managing personnel giving nursing care

ACTIVITIES	Hospitals Under 50 Beds N - 44						Hospitals 51 - 100 Beds N - 30						Hospitals 101 - 300 Beds N - 28						Hospitals Over 300 Beds N - 8					
	Days N-46		Evenings N-45		Nights N-40		Days N-32		Evenings N-27		Nights N-26		Days N-32		Evenings N-24		Nights N-26		Days N-6		Evenings N-8		Nights N-8	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
64. Explained to staff how to approach patient	28	28	20	25	13	26	18	14	12	15	8	18	18	13	11	12	19	17	2	3	8		4	3
67. Anticipated for staff difficulties might have in giving pt. care	31	15	27	18	21	19	24	8	15	12	14	12	22	9	13	9	12	14	3	3	8		5	3
70. Sought help from supervisor re: patient care	20	24	6	39	4	35	11	21	6	21	3	23	12	19	9	14	8	18	2	4	5	3	1	7
73. Adjust staff assignment because of change in pt. condition	22	24	9	34	6	34	13	19	2	25	6	20	13	19	3	21	6	19	3	3	5	3	1	7
76. Talked c staff re: kind of care given & how to improve it	28	18	16	28	11	28	15	17	10	17	6	20	16	16	14	10	8	18	2	4	5	3	2	6
78. Told staff what reports re: pt. to be made	42	4	31	14	27	12	30	2	21	6	22	4	27	3	15	8	19	7	3	3	8		5	2

SUMMARY AND COMPARISON OF RESPONSES OF REGISTERED NURSES HOLDING STAFF NURSE POSITIONS

IN IOWA GENERAL HOSPITALS BY NUMBER OF RESPONSES

A - Routinely or Often
B - Sometimes or Never

C. Activities concerned with maintaining hospital operational systems

ACTIVITIES	Hospitals Under 50 Beds N - 44						Hospitals 51 - 100 Beds N - 30						Hospitals 101 - 300 Beds N - 28						Hospitals Over 300 Beds N - 8					
	Days N-46		Evenings N-45		Nights N-40		Days N-32		Evenings N-27		Nights N-26		Days N-32		Evenings N-24		Nights N-26		Days N-6		Evenings N-8		Nights N-8	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
3. Added blank sheets to pt. chart	27	18	22	22	33	6	13	15	15	12	20	6	15	16	10	13	17	8	2	4	4	6	8	
4. Started chart for new patient	37	13	39	6	44	6	15	16	20	7	20	6	14	18	14	19	17	9	2	4	3	5	5	3
7. Got blood from lab for patient	12	33	10	35	4	35	7	29	6	21	2	24	7	24	20	3	3	23	1	5	2	6		8
12. Transcribed M.D.'s orders	41	4	44		33	7	29	3	26	1	21	5	25	6	21	2	16	10	2	1	8		4	4
13. Ordered stock drugs for unit	28	16	13	32	10	30	23	8	5	21	10	16	20	12	9	14	5	21	1	5	4	4	5	2
17. Prepared solution for irrigation	9	36	9	36	9	31	13	19	5	22	3	23	6	25	14	9	5	20	1	5	3	5	1	7
27. Carried meal tray to patients	13	26	34	20	1	39	14	18	12	13	3	23	13	19	13	11		26	5	1	5	2		8
28. Put away supplies	19	26	16	27	5	35	15	17	4	22	1	25	9	23	6	17	2	24	2	4	2	6	2	6
29. Made drug charge slips	21	12	19	26	22	18	18	14	8	18	15	11	14	17	7	17	17	4	5	1	4	4	6	2
33. Counted narcotics	35	9	37	8	34	5	27	5	23	3	24	2	17	15	23	3	24	2	6		5	2	7	1
35. Made out lab, x-ray & service requisitions	37	9	40	5	31	8	22	10	20	7	21	5	21	10	21	3	21	5	2	4	7	1	4	4
36. Set up trays for M.D. procedure	12	32	5	39	3	26	5	27	7	20		26	9	23	3	18	1	25	1	5	3	5		8
41. Accompanied pt. to surgery	12	34	7	29	3	36	4	28	3	24		26	2	30		23		26		6		8		8
42. Ordered nursing supplies	26	20	14	29	11	27	14	18	5	22	7	18	11	21	3	13	7	19	2	4	3	5	3	5
46. Went to pharmacy to get drugs for pts.	21	24	20	25	11	29	10	32	8	19	5	21	15	17	6	18	3	23	2	4	2	5	1	7

C. (CON'T) -- Activities concerned with maintaining hospital operational systems

ACTIVITIES	Hospitals Under 50 Beds N - 44						Hospitals 51 - 100 Beds N - 30						Hospitals 101 - 300 Beds N - 28						Hospitals Over 300 Beds N - 8					
	Days N-46		Evenings N-45		Nights N-40		Days N-32		Evenings N-27		Nights N-26		Days N-32		Evenings N-24		Nights N-26		Days N-6		Evenings N-8		Nights N-8	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
48. Cleaned up unit after pt. discharge	6	40	3	42	4	36	2	30	2	25		26	1	31	5	18	14	12		6	3	5		8
53. Complete certification or re-cert for Medi-care pts	7	37	2	43		40	4	28	19	8	1	25	4	26	1	22	14	12		6		8		8
54. Looked for equip. or supplies on several nrsg. units	13	30	6	38	11	28	10	22	3	24	5	21	4	28	3	20	2	24		6	2	6	2	6
55. Set up meal trays	4	37	2	43		38	5	27	4	23		26	9	23	6	18		26	1	4		7		8
60. Passed linen to pt. rooms	5	39	2	40	1	39	2	31		27	1	23	3	29	2	21	3	22	3	3		8		8
65. Called engineer for repairs	20	23	12	33	3	37	14	18	7	20	2	26	10	22	8	16	3	23	1	5	4	4	2	5
66. Received doctor's orders by phone	42	4	38	7	34	6	31	1	27		21	5	28	4	23		15	11	3	2	8		4	4
71. Returned equip. used on unit to storage area	20	26	10	34	17	23	10	22	5	22	3	23	10	22	4	19	6	20	2	4		8	2	6
72. Warmed up & served late food tray to patient	3	42	3	42	1	39	1	31	3	23		26	1	31	2	20		2	1	5		8		8
74. Cleaned supply closets	13	32	3	42	1	39	4	28		27	1	25		32		24		26		6		8	1	7

A P P E N D I X

A. Covering Letter to Hospital Administrator

B. Covering Letter to Director of Nursing

C. Questionnaire to be Answered by Director of Nursing

D. Covering Letter to Staff Nurse

E. Questionnaire to be Answered by Staff Nurse

Affiliated with the American Hospital Association

The Iowa Hospital Association, Inc.

LLOYD W. COE / *Executive Director*

620 Liberty Bldg., Des Moines, Iowa 50309 Telephone (515) 288-0105

September 25, 1967

Dear Administrator:

The Iowa Hospital Association and the Iowa League for Nursing, in their concerns for meeting the nursing care needs of patients who come to Iowa general Hospitals for care, are interested at this time to determine just what the responsibilities are of registered nurses in staff nurse positions. The Inter-Organizational Committee of these two organizations has undertaken to study this problem and asks your help.

Please request your Director of Nursing to follow through on the enclosed four questionnaires. One of these questionnaires relates to services provided by your hospital and should be filled out by your nursing Director. The other three questionnaires should be filled out by your staff nurses.

In order to make this study meaningful, please encourage your nursing staff to complete these questionnaires as quickly as possible and return them to the office of the Iowa Hospital Association.

Sincerely yours,

Lloyd W. Coe
Executive Vice-President

LWC:jo
9/25/67

IOWA LEAGUE FOR NURSING-IOWA HOSPITAL ASSOCIATION
INTER-ORGANIZATIONAL COMMITTEE

September 25, 1967

Dear Director of Nursing:

The Iowa Hospital Association and the Iowa League for Nursing, in their concerns for meeting the nursing care needs of patients who come to Iowa general Hospitals for care, are interested at this time to determine just what the responsibilities are of registered nurses in staff nurse positions. The Inter-Organizational Committee of these two organizations has undertaken to study this problem and asks your help.

Enclosed you will find four questionnaires. One of these relating to services provided by your hospital, we ask you to complete, if you will, please. The three other questionnaires should be filled out by staff nurses. Would you please ask a staff nurse who has recently been on evenings to fill out the Evening Nurse copy; a staff nurse who has recently been on days to fill out the Day Nurse copy; and a staff nurse who has recently been on nights to fill out the Night Nurse copy. We have used the title Staff Nurse even though we realize staff nurses on evenings and nights are often called charge nurses and staff nurses on days may be Team Leaders. You are free to choose the nurses, but we hope those chosen will have worked long enough in your hospital that they know what is expected of registered nurses in these positions.

It would be very helpful to our Committee if these questionnaires were returned within a week in the enclosed envelope.

All the general hospitals in Iowa have been asked to take part in this study. The Committee will tabulate the returns by hospital size and a copy of the report will be sent to you.

The Committee appreciates that questionnaires tend to be nuisances, but we hope that in anticipation of receiving a copy of the report, which we feel you would want to be as close as possible to representing all Iowa general Hospitals, you will provide us with this requested information for your hospital.

Thank you for your help.

Sincerely yours,

Roland B. Enos, Chairman
ILN-IHA Inter-Organizational
Committee.

Enclosures: 4 questionnaires
1 return envelope

9/25/67

DIRECTOR OF NURSING QUESTIONNAIRE

ILN-IHA Inter-Organizational Committee Study of Responsibilities Assigned to Staff Nurse Positions in Iowa General Hospitals

Questionnaire to be answered by the Director of Nursing and returned with Questionnaires answered by Day, Evening and Night Staff Nurse to Iowa Hospital Association, 620 Liberty Building, Des Moines, Iowa 50309.

1. Check appropriate space to indicate size of your hospital (beds plus bassinets):

_____ Under 50 beds	_____ 201 - 300 beds
_____ 51 - 100 beds	_____ 301 - 400 beds
_____ 101 - 200 beds	_____ Over 400 beds

2. Does your hospital use ward clerks? Yes_____ No_____.

If yes.....

2.1 About when was the ward clerk position established?_____

2.2 Are ward clerks used on all nursing units? Yes_____ No_____
(If No, please indicate the units on which they are not used)

_____

2.3 Indicate the hours when ward clerks are on duty on med-surgical nursing units:

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Sat.
Evenings							
Nights							
Days							

2.4 Please check those of the following duties which are assigned to ward clerks:

	No	Yes	Comment?
Transcribe doctors orders			
Chart temperatures			
Make out requisitions for X-ray services			
Make out requisitions for laboratory services			
Order clerical supplies			
Answer Visitor inquiries			

2.5 Who is the immediate superior of the ward clerk, (to whom is she accountable)?_____

3. Is the Nursing Department Personnel responsible for:

	Yes	No
3.1 Making up empty units after discharge of non-isolated patient		
3.2 Carrying meal trays to patients		
3.3 After meals, returning meal trays to kitchen		
3.4 Making out charge slips for drugs used by patients		
3.5 Requesting repairs for plumbing, heating or lighting facilities		
3.6 Tending to admission of patients to hospital		
3.7 Controlling visitors and enforcing visiting hours		

4. Does your hospital have an intensive care unit? Yes_____ No_____

If yes.....

4.1 How many different intensive care units do you have?_____

4.2 What size is (are) the intensive care unit(s)?_____

_____

4.3 For what patients is the intensive care unit used? (Check all that apply):

Post-surgical patients_____ Cardiac patients_____

Seriously ill medical patients_____ Accident patients_____

Others (please indicate)_____

_____

5. Does your hospital have a post-anesthesia recovery unit? Yes____ No_____

If yes.....

5.1 What hours is the recovery room open?_____

5.2 During hours that recovery room is not open, where do patients "recover" from anesthesia in event of emergency surgery?_____

_____

6. Does your hospital have a Central Service? Yes_____ No_____

If yes.....

6.1 Are supplies delivered to nursing unit to maintain as established quantity? Yes_____ No_____; or

6.2 Are all supplies obtained only by requisition? Yes_____ No_____

7. Are Licensed Practical Nurses permitted to give routine medications?

Yes_____ No_____

If yes.....what limitations or restrictions are imposed?_____

_____

_____

8. Does your hospital have a pharmacy with a pharmacist in charge?

Yes_____ No_____

If no.....who issues drugs to the nursing units?_____

_____

If yes.....what hours is the pharmacy open with a pharmacist on duty?

8.1 Indicate the hours when pharmacist is on duty in the pharmacy:

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Sat.
Everings							
Nights							
Days							

8.2 How are drugs obtained, and by whom, when the pharmacist is not present and drugs are needed on nursing units?_____

_____

_____

Please feel free to comment on questionnaire or react to it or explain any answers -- use reverse side of this page:

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IOWA LEAGUE FOR NURSING-IOWA HOSPITAL ASSOCIATION
INTER-ORGANIZATIONAL COMMITTEE

September 25, 1967

Dear Staff Nurse:

The Iowa League for Nursing-Iowa Hospital Association Inter-Organizational Committee is studying the responsibilities which are assigned to the medical-surgical staff nurse positions in Iowa general Hospitals. It is the feeling of the Committee that excellence in nursing in hospitals is as much dependent on what registered nurses in staff nurse positions are required or permitted to do as it is on the knowledge and abilities of nurses. We ask your help in this study so that we can have an up-to-date picture of staff nurse position responsibilities.

Your Director of Nursing has given you a questionnaire which is marked Day Staff Nurse, Evening Staff Nurse or Night Staff Nurse. Our Committee has used the Staff Nurse title even though we know many hospitals call the evening and night nurse on medical-surgical units charge nurses and often the staff nurse on days is a Team Leader.

Our Committee asks you to complete the questionnaire on the basis of your most recent assignment to days, evenings or nights (whichever applies to the questionnaire given you) and your experiences in the past several months.

All replies will be anonymous and you do not need to reveal your identity. The report of the findings for all hospitals will be made available to your hospital.

You are free to add any comments or observations to the questionnaire.

Thank you for your help.

Sincerely yours,

Roland B. Enos, Chairman
ILN-IHA Inter-Organizational
Committee.

9/25/67

STAFF NURSE QUESTIONNAIRE

ILN-IHA Inter-Organizational Committee Study of Responsibilities Assigned to Staff Nurse Positions in Iowa General Hospitals

Please check for which Medical-Surgical Staff Nurse Position the answers apply:

DAY STAFF NURSE_____EVENING NURSE_____NIGHT NURSE_____

Directions:

Read each item listed on the left and then check:

Column #1 - Routinely-if in recent months when you have been assigned to the above checked position you performed this activity each day that you were on duty,

Column #2 - Often-if in recent months when you were assigned to the above checked position you performed this activity several times in a week,

Column #3 - Sometimes-if in recent months when you were assigned to the above checked position you performed this activity only several times in a months time,

Column #4 - Never-if in recent months when you were assigned to the above checked position you did not perform this activity at all.

Please complete the questionnaire and return promptly to your Director of Nursing so that it can be returned to the Committee.

Feel free to make any comments or observations about the questionnaire on the reverse side of this sheet.

Please tell us about how many weeks in the past 6 months have you been assigned to this hospital to:

_____day staff nurse duties, _____evening staff nurse duties, _____night staff nurse duties.

Check appropriate space to indicate size of your hospital (beds plus bassinets)

_____ under 50 beds

_____ 51 - 100 beds

_____ 101 - 200 beds

_____ 201 - 300 beds

_____ 301 - 400 beds

_____ over 400 beds

ILN-IHA Inter-Organizational Committee Study of Responsibilities Assigned to Staff Nurse Positions in Iowa General Hospitals

(Please check one)

Staff Nurse Questionnaire for Days_____, Evenings_____, or Nights_____.

ACTIVITY	In recent months, while on duty in the position checked above, how often have you performed this activity: Routinely #1	Often #2	Sometimes #3	Never #4
1. Give pr.n. medication for pain or sleep				
2. Made work lists for nursing staff				
3. Added blank sheets to patients chart				
4. Started charts for new patients (heading all sheets)				
5. Made rounds with some doctors for some patients				
6. Checked a blood pressure reported to you by an LPN				
7. Got blood from the laboratory for a patient				
8. Started I.V.'s				
9. Explained to staff their patient care assignment				
10. Took blood-pressures of patients				
11. Made rounds of patients				
12. Transcribed doctors orders				
13. Ordered stock drugs for the floor				
14. Gave a patient a bed bath				
15. Took temperatures of patients				
16. Did some kind of irrigation				
17. Prepared solutions for irrigations				
18. Demonstrated and taught a nursing procedure to the staff				

ACTIVITY	In recent months, while on duty in the position checked above, how often have you performed this activity: Routinely #1	Often #2	Sometimes #3	Never #4
19. Checked to see how staff was getting along with assignments				
20. Assisted a doctor with a treatment				
21. Passed drinking water to patients				
22. Catherized a patient				
23. Assigned nurse care for patients to nursing staff				
24. Added drugs to I.V.'s				
25. Conducted a discussion with staff to plan nursing care of patients				
26. Helped staff give care to patients (as turn, position, get out of bed)				
27. Carried meal trays to patients				
28. Put away newly received supplies				
29. Made drug charges slips				
30. Connected Blood to I.V.'s				
31. Ambulated patient				
32. Gave patient a bed pan or urinal				
33. Counted narcotics				
34. Gave tracheostomy care				
35. Made out Lab, X-ray or other requisitions for services from other hospital departments				
36. Set up trays completely for procedures to be done by doctors (like lumbar punctures, thoracentesis, etc)				
37. Completed all Admission routine for new patients admitted to nursing unit				
38. Adjust flow of I.V.'s				

ACTIVITY	In recent months, while on duty in the position checked above, how often have you performed this activity: Routinely #1	Often #2	Sometimes #3	Never #4
39. Answered patients lights				
40. Helped staff do procedures not familiar to them				
41. Accompanied patient to surgery				
42. Ordered needed nursing unit supplies				
43. Talked with family about patient's condition				
44. Explained to the patient what was going to happen during hospitalizatior				
45. Corrected staff for way procedure was performed				
46. Went to pharmacy to get drugs for a patient				
47. Made an occupied bed of a patient				
48. Cleaned up a unit after patient discharge and made it up (non-isolated patient)				
49. Got patient out of bed				
50. Gave patient an enema				
51. Obtain specimen for laboratory examination				
52. Passed all routine, stat and prn medications				
53. Complete certification or re-certification sheets for Medicare patients				
54. Looked for needed equipment or supplies on several nursing units				
55. Set up meal trays				
56. Discussed behavior or reactions of individual patient with staff member				
57. Answered patients questions about condition, treatment and progress				
58. Checked patient for voiding				

ACTIVITY	In recent months, while on duty in the position checked above, how often have you performed this activity: Routinely #1	Often #2	Sometimes #3	Never #4
59. Checked staff regarding how they were getting along with assignment				
60. Passed linen to patient rooms				
61. Reported patient's symptoms and condition to a doctor				
62. Restrained patient				
63. Fed patient				
64. Explain to staff how to approach specific patient				
65. Called engineer for "repairs"				
66. Received doctors orders by phone				
67. Anticipated for staff the difficulties they might have in giving care to patients				
68. Talked with a patient to find out how he felt about hospitalization or impending surgery or complications of condition				
69. Established nursing care objectives for a patient and a plan of care in a group meeting				
70. Sought help from a supervisory person because of difficulties in giving good care to patients				
71. Returned equipment used on the unit to a storage area				
72. Warmed up and served a late food tray to patient				
73. Adjusted staff assignment because of change in patient condition				
74. Cleaned supply closets				
75. Taught patients self-care or new health habits				

ACTIVITY	In recent months, while on duty in the position checked above, how often have you performed this activity: Routinely #1	Often #2	Sometimes #3	Never #4
76. Talked with staff about the kind of care they were giving to patients and how to improve it				
77. Helped patient plan for care after discharge from hospital				
78. Told staff what reports about the patients were to be made to you				

If you are assigned to be a medicine nurse - how much of your time goes into giving medicine?_____

_____.

When passing medicines, do you stop to give care of any kind to the patient?_____

_____.

In the course of an eight hour assignment on duty, how much of your time generally goes to answering the telephone?_____

_____.

What is the nature of the greater number of incoming calls?_____

_____.

What is the nature of the major number of your outgoing calls?_____

_____.

Thank you for your help. Please return the completed questionnaire to the Director of Nursing PROMPTLY!

jo
9/25/67

VT 008 997
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Wyoming Research Coordinating Unit in Vocational-Technical Education, Cheyenne
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*SPEECHES; *VOCATIONAL EDUCATION; RESEARCH COORDINATING UNITS; *WORKSHOPS; FEDERAL LAWS; *EDUCATIONAL RESEARCH; RESEARCH PROPOSALS; RESEARCH CRITERIA; *RESEARCH NEEDS; FINANCIAL SUPPORT; FINANCIAL NEEDS; STATE PROGRAMS
*PUBLIC LAW 90-576; RESEARCH WORKSHOP FOR TEACHERS AND ADMINISTRATORS IN VOCATIONAL EDUCATION, BOZEMAN, MONTANA, JULY 22, 1969; VOCATIONAL EDUCATION AMENDMENTS OF 1968

"Priorities for Occupational Education Research--Implementations of the 1968 Amendments--Authorization vs. Appropriation," provides a frame of reference for occupational education research reflecting priorities cutting across local, state and regional boundaries and discusses the implications of the conflict between authorization and potential appropriations. Areas of concern include: (1) The act dichotomizes education, (2) It provides for a generous authorization but not equal appropriation, (3) Funds and programs are supplanted and not supplemented, (4) Categorization of funds may not provide for maximum levels of program maintenance, and (5) Some parts of this type of legislation in the past have never traditionally been appropriated by Congress. A list of vocational education research needs by state and a summarized list of vocational education research activities by state is appended. "An Introduction to Design and Writing of Research and Exemplary Program Proposals" communicates the necessity and importance of following procedure and format when writing and submitting a proposal. (DM)

VT 008 997

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Papers Presented At The Research Workshop for Teachers and Administrators in Vocational Education

Montana State University
Bozeman, Montana

by

Bruce C. Perryman, Director
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State Department of Education
Capitol Building
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VT008997

July 1969

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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PRIORITIES FOR OCCUPATIONAL EDUCATION RESEARCH -- IMPLICATIONS OF THE 1968 AMENDMENTS --- AUTHORIZATION VS. APPROPRIATION

BY: BRUCE C. PERRYMAN

I. INTRODUCTION

IT IS A PRIVILEGE FOR ME TO MEET WITH THIS SELECT GROUP TO DISCUSS WITH YOU "PRIORITIES FOR OCCUPATIONAL EDUCATION RESEARCH -- IMPLICATIONS OF THE 1968 AMENDMENTS." MIGHT I ALSO ADD MY "OR" AUTHORIZATION VS. APPROPRIATION.

IT IS OBVIOUS THAT OUR SOCIETY HAS ALREADY CONFRONTED TREMENDOUS TRANSITIONS OF A VAST, DYNAMIC CONTEMPORARY ENVIRONMENT. THE WORD "CHANGE" ITSELF HAS BECOME AN OVERWORKED CLICHE -- NO LONGER EVEN A COMMON GROUND FOR EXCHANGE OF CONVERSATION BETWEEN THE SO-CALLED "SOPHISTICATED EXPERT" AND THE PARTIALLY INFORMED LAYMAN. HOW CAN BOYS AND GIRLS AND YOUNG MEN AND WOMEN NOW IN OUR ROCKY MOUNTAIN SCHOOLS BEST BE PREPARED TO COPE WITH THE PROBLEMS THEY WILL FACE TWENTY YEARS FROM NOW -- OR EVEN FIVE OR TEN YEARS FROM NOW? WE ARE NOW INTER-PLANETARY SPACE TRAVELERS!

A paper presented by Bruce C. Perryman, Director, Wyoming Research Coordinating Unit, Research and Development Section, State Department of Education, Capitol Building, Cheyenne, Wyoming, at the Research Workshop for Teachers and Administrators in Vocational Education, Montana State University, Bozeman, July 22, 1969.

I NATURALLY AM SOFT-PEDALING "WE." HOWEVER, THE POINT IS NO LONGER ONE OF SCIENCE FICTION, A DAY DREAM, A CRACK-POT SCHEME, OR THE FRIVOLOUS IMAGINATION OF A YOUNG PERSON. WE NEED ONLY TO REFLECT UPON THE CHANGES THAT HAVE TAKEN PLACE IN THE PAST TWENTY YEARS TO REALIZE THAT WE HAVE DEVELOPED A SOCIETY THAT SIMPLY CANNOT REMAIN STATIC. DYAMISM IN THE FUTURE WILL MAGNIFY TECHNOLOGICAL AND INDUSTRIAL CHANGES, SOCIAL CHANGES, CHANGES IN INTERNATIONAL RELATIONS, AND CHANGES IN EDUCATIONAL METHODS AND ORGANIZATION. THE IMPACT OF TECHNOLOGICAL CHANGE HAS BEEN SO GREAT ALREADY THAT IT IS NOT FULLY UNDERSTOOD AS YET. HOWEVER, THERE STILL ARE THOSE PEOPLE WHO BELIEVE THAT WE CAN MANEUVER ALONG THE SAME OLD PATH WITHOUT CHANGING OUR PLAN OR APPROACH. ONLY THE NAIVE BELIEVE THIS. I AM TEMPTED AT THIS POINT, HOWEVER, TO CLASSIFY MOST EDUCATORS AND POLITICIANS NAIVE (I.E., THE ESTABLISHMENT OR THE SYSTEM).

LIP SERVICE AND "AUTHORIZATION" HAVE BY PRACTICE OF THESE ABOVE GROUPS MADE FOUNDATIONAL PROGRESS IMPERVIOUS TO POSITIVE ACTION. THIS LEADS ME INTO OUR TOPIC FOR THIS AFTERNOON.

II. PRIORITIES OF OCCUPATIONAL EDUCATION RESEARCH -- IMPLICATIONS

IN "VOC. ED." CIRCLES THE AMENDMENTS OF 1968 HAVE BEEN PERPETRATED BY BOTH THE POLITICIANS, THEIR LEGAL COUNSEL AND VOCATIONAL EDUCATORS ALIKE, AS

THE PANACEA FOR ALL ILLS, OR TO PARAPHRASE ONE OF THE POLITICAL LEGAL COUNSEL COMMENTS -- THE '68 AMENDMENTS PROVIDE THE FRAMEWORK FOR A TREMENDOUS CHALLENGE TO VOCATIONAL EDUCATORS: YOU NOW HAVE THE BALL, DON'T DROP IT OR THE BALL GAME WILL BE OVER! UNFORTUNATELY HE FAILED AT THE TIME TO RELATE SPECIFIC IMPLICATIONS OF THE ACT AND AUTHORIZATION VS. APPROPRIATION. A SECOND ITEM UNDISCUSSED AT THE TIME WAS THE INTERPRETATION OF THE ACT, BOTH LEGALLY AND BY VOCATIONAL EDUCATORS IN THE COUNTRY. PURELY AND VERY SIMPLY THE FUTURE <u>IMPLICATIONS</u> OF RESEARCH PRIORITIES AND VOCATIONAL EDUCATION AS PER THE '68 AMENDMENTS NATURALLY WILL BE INFLUENCED BY THE FEDERAL AND STATE APPROPRIATIONS. I GRANT YOU THE STATEMENT BY THAT SELECT GROUP OF PEOPLE WHO ACTUALLY BELIEVE IT -- "MONEY WILL NOT SOLVE ALL THE PROBLEMS." HOWEVER, I KNOW OF ONLY ONE OR TWO INDIVIDUALS WHO HAVE EVER BEEN ABLE TO "WALK ON WATER" OR "PART THE RED SEA" WITHOUT USING COINS (I.E., MONEY) TO DO IT.

PERHAPS THE "BALL" HAS ALREADY BEEN DROPPED!

III. <u>THE ACT --- AUTHORIZATION (P.L. 90-576) OR "THE TREMENDOUS CHALLENGE"</u>

PERHAPS AS WE EDUCATORS AND MANAGERS (ADMINISTRATORS) LIKE TO PERUSE -- "COMMUNICATION" IS OUR REAL PROBLEM. THIS OBVIOUSLY IS A TIRED OLE EXCUSE TO SUPPORT OUR LACK OF INITIATIVE. PERHAPS THE PUBLIC, THE EDUCATORS, AND

THE POLITICIANS ARE NOT EFFECTIVELY COMMUNICATING. LET ME REASURE YOU -- THEY CERTAINLY ARE NOT! LANGUAGE AGAIN PROVIDES THE BARRIER -- OR DOES IT? I THINK PERHAPS NOT, REALLY IT IS THE PEDISTAL THAT EACH OF THE THREE GROUPS PLACE THEMSELVES UPON. IN EFFECT WE HAVE CREATED ANOTHER UNCONSCIOUS SOCIAL STRUCTURE WHERE ONE GROUP IS OBVIOUSLY TOO RICH, TOO POOR, TOO BRIGHT, OR TOO DULL, ETC., TO LOWER OR RAISE ITSELF TO CONVERSE WITH THE OTHER. WHAT DOES THIS ALL HAVE TO DO WITH OUR DISCUSSION OF THE 1968 AMENDMENTS, THEIR "AUTHORIZATION" AND RESEARCH IMPLICATIONS FOR TOMORROW? WELL, BASICALLY THIS "COMMUNICATION" GAP HAS PROVIDED US WITH A PIECE OF LEGISLATION WHICH IN MOST CASES HAS BEEN MIS-INTERPRETED AND AS OF YET NOT ALLOWED FOR SUFFICIENT APPROPRIATION AND THIS IS NOT TO MENTION THE "REQUESTS FOR APPROPRIATION" WHICH HAVE BEEN MADE BY TWO ADMINISTRATIONS IN POWER OR THE "RED TAPE" REQUIRED (AS PER THE SO-CALLED STATE PLANS) TO APPLY FOR THESE YET-UNAPPROPRIATED, HEAVILY CATEGORIZED, FEDERAL (YOUR PUBLIC TAX DOLLARS) FUNDS. I WONDER SOMETIMES IF THE HEW AND USOE BUREAUCRATIC STRUCTURE -- AS PER THE POLITICAL WHIMS OF THE INCUMBENT ADMINISTRATION DOES NOT EPITOMIZE THE "PETER PRINCIPLE."

I HAVE BEEN TOLD OVER AND OVER BY MANY WELL THOUGHT OF INDIVIDUALS IN THE FIELD OF EDUCATION, "VOC. ED." AND RESEARCH THAT THE 1968 AMENDMENTS

ARE ONE OF THE GREATEST ACHIEVEMENTS OF THE LAST 50 YEARS. I AM NATURALLY INCLINED TO AGREE WITH THEM -- AT LEAST TO SOME EXTENT -- EVEN IF I DON'T SOUND LIKE IT.

LET ME BRIEFLY OUTLINE MY CONCERN AND THEN WE WILL PURSUE THESE AREAS IN DEPTH.

(1) THE ACT DICHOTOMIZES EDUCATION AND IT SHOULDN'T!

(2) IT PROVIDES FOR A GENEROUS AUTHORIZATION BUT DOES NOT PROVIDE FOR EQUAL APPROPRIATION.

(3) UNFORTUNATELY, IT CONTINUES TO PERPETRATE A SUPPLANTING OF FUNDS AND PROGRAMS AND DOES NOT SUPPLEMENT THEM.

(4) IT CATEGORIZES SO MUCH OF THE PRETENDED REQUEST FOR APPROPRIATION THAT MINIMUM LEVELS OF PROGRAM MAINTENANCE QUITE POSSIBLY WILL NOT BE RETAINED. COUPLE THIS WITH THE PROPOSED REQUEST FOR APPROPRIATION AND THE BALL NOT ONLY STANDS A GOOD CHANCE OF BEING DROPPED, BUT COMPLETELY DEFLATED BY THE TIME IT IS DROPPED.

(5) CERTAIN PARTS OF THIS TYPE OF LEGISLATION IN THE PAST TRADITIONALLY HAVE NEVER BEEN APPROPRIATED BY CONGRESS.

THE ABOVE CONCERNS ONLY TEND TO POINT UP THE LACK OF COMMUNICATION AND THE REASONS WHY FUTURISTIC PREDICTIONS OF OCCUPATIONAL EDUCATION RESEARCH

PRIORITIES AND THE IMPLICATIONS OF THE '68 AMENDMENTS SEEM SO ANTI-POSITIVE. THIS CONSEQUENCY OBVIOUSLY BRINGS US TO THE QUESTION, "HOW GOOD IS GOOD?" OR IS THIS REALLY A "TREMENDOUS CHANGE." THIS REMINDS ME OF SUCH A DILEMA WHICH WAS SEEN IN THE FOLLOWING CLASSIFIED AD:

"WANTED -- COLORADO STATE UNIVERSITY GRADUATE OR EQUIVALENT, FOR POSITION WITH CORPORATION."

SOMEONE ASKED A UNIVERSITY OF WYOMING GRADUATE WHAT WAS MEANT BY THE WORDS "OR EQUIVALENT."

HIS ANSWER, "THE EQUIVALENT WOULD BE TWO MONTANA STATE UNIVERSITY MEN OR ONE UNIVERSITY OF WYOMING MAN PART-TIME."

THIS THEN BRINGS US DIRECTLY IN THIS PRESENTATION TO THE "GOOD" AUTHORIZATION OF P.L. 90-576. PERHAPS THIS WAS EVEN THE INTENTION OF CONGRESS AT THE TIME THEY APPROVED OF THE "AUTHORIZATIONS."

AT THE TIME OF THIS WRITING FEDERAL OFFICIALS ARE STILL TRYING TO COMPREHEND THE STAGGERING JOB OF SPELLING OUT THE IMPLICATIONS AND LAUNCHING IMPLEMENTATION OF P.L. 90-576, (AS ONE PERSON PUTS IT)., "A LEGISLATIVE MILESTONE WHICH PROMISES TO TAKE ON ALL THE LASTING IMPORTANCE OF AN ORIGINAL PLANK IN THE BILL OF RIGHTS." P.L. 90-576 HAS BEEN TAGGED AS THE '68 AMENDMENTS, VEA '68, AND MANY OTHER MORE DEROGATORY TERMS BECAUSE OF THE

THEORETICAL SHADOW OF OBSOLESCENCE IT CASTS ON THE ONCE-MONUMENTAL VEA '63.

FORMER SECRETARY OF HEW, WILBUR J. COHEN, IN HIS LAST BUDGET DID NO CERTAIN FAVOR APPARENTLY FOR VOCATIONAL EDUCATION, DESPITE AGAIN THE BUREAUCRATIC VERBAGE THAT HE STATED ON OCCASION. NO ADDITIONAL FUNDS WERE REQUESTED FOR THE CURRENT FISCAL YEAR, ALTHOUGH THESE WERE AUTHORIZED BY P.L. 90-576. FOR THE 1970 FISCAL YEAR THAT STARTED JULY 1, 1969, THE PREVIOUS ADMINISTRATION'S LAST BUDGET REQUESTS $234 MILLION FOR VOCATIONAL EDUCATION GRANTS TO STATES. AUTHORIZED BY P.L. 90-576 IS $565 MILLION.

DRASTIC CHANGES (PARTICULARLY IN AN AREA WHICH I AM PRIMARILY CONCERNED ABOUT, RESEARCH) IN PRESENT LOCAL PROGRAMS ARE IN PROSPECT UNLESS CONGRESS PROVIDES ADDITIONAL FUNDS. TWO-FIFTHS OF THE AMOUNT PROPOSED FOR GRANTS TO STATES IS REQUIRED BY P.L. 90-576 TO BE USED FOR SPECIAL PROGRAMS FOR STUDENTS FROM LOW-INCOME FAMILIES, THE PHYSICALLY AND MENTALLY HANDICAPPED, AND POST-SECONDARY PROGRAMS. ALTHOUGH $40 MILLION IS AUTHORIZED FOR PROGRAMS FOR DISADVANTAGED STUDENTS, NO FUNDS WERE REQUESTED FOR THIS NEW PROGRAM, AUTHORITY FOR WHICH EXPIRES AT THE END OF THE 1970 FISCAL YEAR.

FOR WORK-STUDY PROGRAMS, P.L. 90-576 AUTHORIZES $35 MILLION THIS YEAR, BUT NO FUNDS WERE REQUESTED IN THE BUDGET. THE ADMINISTRATION EXPLAINED THAT THE

NEED WAS BEING MET BY THE NEIGHBORHOOD YOUTH CORPS AND THE $14 MILLION REQUESTED FOR COOPERATIVE VOCATIONAL EDUCATION PROGRAMS. THIS AMOUNT IS $4 MILLION MORE THAN THE WORK-STUDY PROGRAM RECEIVED THIS YEAR, BUT IT IS $21 MILLION LESS THAN WAS AUTHORIZED BY P.L. 90-576. THE BUDGET ESTIMATES THAT THE FUNDS REQUESTED WILL PERMIT MORE THAN 97,000 STUDENTS TO BE ENROLLED IN COOPERATIVE PROGRAMS.

FOR EXEMPLARY AND INNOVATIVE PROGRAMS, P.L. 90-576 AUTHORIZES $57.5 MILLION THIS YEAR. THE BUDGET, HOWEVER, ASKS FOR ONLY $13 MILLION, AND HALF THAT IS FOR USE IN THE 1971 FISCAL YEAR. IN 1970, THE BUDGET SEES SUPPORT FOR 106 PROJECTS. FOR CURRICULUM DEVELOPMENT THE BUDGET ASKS ONLY A FIFTH AS MUCH AS P.L. 90-576 AUTHORIZES, OR $2 MILLION.

AN NO FUNDS WERE REQUESTED FOR THE RESIDENTIAL SCHOOLS OR DORMITORY CONSTRUCTION PROGRAMS AUTHORIZED BY P.L. 90-576. FOR PROFESSIONAL DEVELOPMENT, P.L. 90-576 AUTHORIZES $35 MILLION IN FISCAL YEAR 1970, BUT NO SPECIFIC FUNDS WERE REQUESTED. TRUE, THE REQUEST FOR THE EDUCATION PROFESSIONS DEVELOPMENT ACT TOTALS $105 MILLION, BUT THE BUDGET GIVES NO CLUES AS TO HOW MUCH, IF ANY, WILL GO TO VOCATIONAL EDUCATION.

RESEARCH EFFORTS OF THE PAST SEEM TO BE "OUT THE WINDOW". ONLY A MEAGER AMOUNT OF $1.1 MILLION (½ OF 1%, INSTEAD OF 10%) TO THE STATES IS BUDGETED.

THE BUDGET DOES NOT EVEN CONFORM TO P.L. 90-576 WHICH CALLS FOR AN AMOUNT OF 10% OF FUNDS APPROPRIATED UNDER PART B OF THE ACT. THE 10% PROVISION HAS BEEN VIOLATED EACH YEAR SINCE 1966 BY LISTING RESEARCH AS A LINE ITEM AT REDUCED LEVELS IN THE ANNUAL APPROPRIATIONS FOR VOCATIONAL EDUCATION.

THE IMPLICATIONS OF THE ABOVE BUDGET REQUEST -- SHOULD ABOVE AMOUNTS BE APPROPRIATED ALL THAT PROGRAM LEVELS WILL DROP -- EVEN PRESENT LEVELS WILL NOT BE MAINTAINED.

SHOULD, HOWEVER, CONGRESS APPROPRIATE MORE FOR RESEARCH THAN HAS BEEN REQUESTED THE IMPLICATIONS OF SUCH AN APPROPRIATION COULD FOLLOW ALONG THESE LINES: (BASIC ASSUMPTION: -- WITHOUT RESEARCH, IT IS VIRTUALLY CERTAIN THAT OBJECTIVES OF THE 1963 AND 1968 LEGISLATION CANNOT BE ACHIEVED.) OBJECTIVES DEPENDENT ON RESEARCH: THE 1968 LEGISLATION ESPECIALLY CALLS FOR EXTENSIVE CHANGES IN THE STRUCTURE, CURRICULA, AND PURPOSES FOR VOCATIONAL EDUCATION REQUIRED TO MEET THE NEEDS OF A CHANGING TECHNOLOGICAL SOCIETY. VERY LITTLE ACTUAL EXPERIENCE IS AVAILABLE ON WHICH TO BASE THESE CHANGES.

SYSTEMATIC RESEARCH IN MANPOWER REQUIREMENTS RELATED TO EDUCATIONAL PROGRAMS WAS ALMOST NON-EXISTENT BEFORE THE EFFECTS OF THE 1963 ACT BEGAN TO BE FELT. FIRST-STAGE CURRICULUM RESEARCH IN SUCH AREAS AS AVIATION MECHANICS, ELECTRONICS AND THE HEALTH OCCUPATIONS HAS ACHIEVED REMARKABLE RESULTS IN

THE PAST TWO YEARS AND TO DROP IT NOW IS UNTHINKABLE.

THE FIRST RESULTS OF USING COMPUTERS IN CAREER COUNSELING SUGGEST A BREAKTHROUGH IN ONE OF THE BIGGEST PROBLEMS FACED BY THE AMERICAN EDUCATIONAL SYSTEM IN THIS CENTURY. IT IS DIFFICULT TO CONCEIVE OF THE WASTE IN FUNDS AND HUMAN EFFORT WHICH WOULD RESULT IN CUTTING OFF THIS RESEARCH.

THE LIST OF URGENTLY NEEDED VOCATIONAL RESEARCH INCLUDES PROGRAM EVALUATION, COST-EFFECTIVENESS ANALYSIS, IDENTIFICATION OF EMERGING OCCUPATIONS, SOCIO-ECONOMIC PROBLEMS, AND MANY OTHERS. SIGNIFICANT BEGINNINGS HAVE BEEN MADE, BUT MUCH OF THE RESEARCH IS YET TO BE COMPLETED.

SEVERAL OF THESE EFFORTS HAVE BEEN SHARPLY CURTAILED IN THE PAST TWO YEARS BECAUSE OF REDUCTIONS IN RESEARCH APPROPRIATIONS. IF THEY ARE FURTHER REDUCED THIS YEAR, ALMOST TO THE POINT OF ELIMINATION, THERE IS NO CONCEIVABLE WAY TO CONTINUE THESE EFFORTS OR EVEN TO SALVAGE MUCH OF WHAT HAS BEEN ACCOMPLISHED UP TO NOW.

PART C AUTHORIZES THE FOLLOWING "USES OF FEDERAL FUNDS" (RE: P. 16 OF ACT): "SEC. 132. THE FUNDS AVAILABLE FOR GRANTS AND CONTRACTS UNDER SECTION 131 (A) MAY BE USED FOR --

"(1) RESEARCH IN VOCATIONAL EDUCATION;

"(2) TRAINING PROGRAMS DESIGNED TO FAMILIARIZE PERSONS INVOLVED

IN VOCATIONAL EDUCATION WITH RESEARCH FINDINGS AND SUCCESSFUL PILOT AND DEMONSTRATION PROJECTS IN VOCATIONAL EDUCATION;

"(3) EXPERIMENTAL, DEVELOPMENTAL, AND PILOT PROGRAMS AND PROJECTS DESIGNED TO TEST THE EFFECTIVENESS OF RESEARCH FINDINGS;

"(4) DEMONSTRATION AND DISSEMINATION PROJECTS;

"(5) THE DEVELOPMENT OF NEW VOCATIONAL EDUCATION CURRICULA;

AND

"(6) PROJECTS IN THE DEVELOPMENT OF NEW CAREERS AND OCCUPATIONS, SUCH AS --

"(A) RESEARCH AND EXPERIMENTAL PROJECTS DESIGNED TO IDENTIFY NEW CAREERS IN SUCH FIELDS AS MENTAL AND PHYSICAL HEALTH, CRIME PREVENTION AND CORRECTION, WELFARE, EDUCATION, MUNICIPAL SERVICES, CHILD CARE, AND RECREATION REQUIRING LESS TRAINING THAN PROFESSIONAL POSITIONS AND TO DELINEATE WITHIN SUCH CAREERS ROLES WITH THE POTENTIAL FOR ADVANCEMENT FROM ONE LEVEL TO ANOTHER;

"(B) TRAINING AND DEVELOPMENT PROJECTS DESIGNED TO DEMONSTRATE IMPROVED METHODS OF SECURING THE INVOLVEMENT, COOPERATION, AND COMMITMENT OF BOTH THE PUBLIC AND PRIVATE SECTORS TOWARD THE

END OF ACHIEVING GREATER COORDINATION AND MORE EFFECTIVE IMPLEMENTATION OF PROGRAMS FOR THE EMPLOYMENT OF PERSONS IN THE FIELDS DESCRIBED IN SUBPARAGRAPH (A), INCLUDING PROGRAMS TO PREPARE PROFESSIONALS (INCLUDING ADMINISTRATORS) TO WORK EFFECTIVELY WITH AIDES; AND

"(C) PROJECTS TO EVALUATE THE OPERATION OF PROGRAMS FOR THE TRAINING, DEVELOPMENT, AND UTILIZATION OF PUBLIC SERVICE AIDES, PARTICULARLY THEIR EFFECTIVENESS IN PROVIDING SATISFACTORY WORK EXPERIENCES AND IN MEETING PUBLIC NEEDS."

ANOTHER EXCITING PART OF THE ACT, PART D -- EXEMPLARY PROGRAMS AND PROJECTS, WOULD ALSO PROVIDE FUNDS FOR A DIVERSITY OF USES IF APPROPRIATIONS NECESSARILY REACH AUTHORIZATION LEVELS. PART D OF THE ACT AUTHORIZES "USES OF FUNDS FOR THE FOLLOWING PURPOSES (RE: P. 18 OF THE ACT, SEC. 143):

"TO PAY ALL OR PART OF THE COST OF --

"(1) PLANNING AND DEVELOPING EXEMPLARY PROGRAMS OR PROJECTS SUCH AS THOSE DESCRIBED IN PARAGRAPH (2), OR

"(2) ESTABLISHING, OPERATING, OR EVALUATING EXEMPLARY PROGRAMS OR PROJECTS DESIGNED TO CARRY OUT THE PURPOSES SET FORTH IN SECTION 141, AND TO BROADEN OCCUPATIONAL ASPIRATIONS AND OPPORTUNITIES FOR YOUTHS,

WITH SPECIAL EMPHASIS GIVEN TO YOUTHS WHO HAVE ACADEMIC, SOCIO-ECONOMIC, OR OTHER HANDICAPS, WHICH PROGRAMS OR PROJECTS MAY, AMONG OTHERS, INCLUDE --

"(A) THOSE DESIGNED TO FAMILIARIZE ELEMENTARY AND SECONDARY SCHOOL STUDENTS WITH THE BROAD RANGE OF OCCUPATIONS FOR WHICH SPECIAL SKILLS ARE REQUIRED AND THE REQUISITES FOR CAREERS IN SUCH OCCUPATIONS;

"(B) PROGRAMS OR PROJECTS FOR STUDENTS PROVIDING EDUCATIONAL EXPERIENCES THROUGH WORK DURING THE SCHOOL YEAR OR IN THE SUMMER;

"(C) PROGRAMS OR PROJECTS FOR INTENSIVE OCCUPATIONAL GUIDANCE AND COUNSELING DURING THE LAST YEARS OF SCHOOL AND FOR INITIAL JOB PLACEMENT;

"(D) PROGRAMS OR PROJECTS DESIGNED TO BROADEN OR IMPROVE VOCATIONAL EDUCATION CURRICULUMS;

"(E) EXCHANGES OF PERSONNEL BETWEEN SCHOOLS AND OTHER AGENCIES, INSTITUTIONS, OR ORGANIZATIONS PARTICIPATING IN ACTIVITIES TO ACHIEVE THE PURPOSES OF THIS PART, INCLUDING MANPOWER AGENCIES AND INDUSTRY;

"(F) PROGRAMS OR PROJECTS FOR YOUNG WORKERS RELEASED FROM THEIR JOBS ON A PART-TIME BASIS FOR THE PURPOSE OF INCREASING THEIR EDUCATIONAL ATTAINMENT; AND

"(G) PROGRAMS OR PROJECTS AT THE SECONDARY LEVEL TO MOTIVATE AND PROVIDE PREPROFESSIONAL PREPARATION FOR POTENTIAL TEACHERS FOR VOCATIONAL EDUCATION."

OBVIOUSLY MUCH OF OUR DISCUSSION ABOVE HINGES SOLELY ON APPROPRIATIONS. THE IMPLICATIONS OF THE AUTHORIZATION IS TO SAY THE LEAST TREMENDOUS. HOWEVER, LET'S TAKE A REALISTIC LOOK AT POTENTIAL APPROPRIATIONS.

IV. APPROPRIATION - THE REALITY -- THE LACK OF CHALLENGE OR POLITICIANS "UBERALLES"

THE BUDGET REQUEST OF $286 MILLION IS INADEQUATE. SO WHAT ABOUT VOCATIONAL RESEARCH? IN TESTIMONY PRESENTED RECENTLY TO THE SUBCOMMITTEE ON APPROPRIATIONS FOR HEW & LABOR BY DR.'S JOHN K. COSTER, ART M. LEE, OF THE AMERICAN VOCATIONAL EDUCATION RESEARCH ASSOCIATION, THE FOLLOWING QUOTE NECESSARILY EMPHASIZES THE POLITICAL MIS-FIRE WHICH HAS BECOME APPARENT.

"WEHN CONGRESS PASSED THE VOCATIONAL EDUCATION ACT OF 1963, AND THE VOCATIONAL EDUCATION AMENDMENTS OF 1968, IT WAS TO HELP SCHOOLS CHANGE A SYSTEM UNDER WHICH 80% OF THEIR PROGRAM IS DESIGNED FOR 20% OF THEIR STUDENTS.

I REFER TO THE FACT THAT 80% OF THE STUDENTS GRADUATING FROM HIGH SCHOOL TODAY DO NOT GRADUATE FROM COLLEGE; YET THE CURRICULUM IN MOST HIGH SCHOOLS IS AIMED ALMOST EXCLUSIVELY AT COLLEGE PREPARATION. THIS IS STILL TRUE AT A TIME WHEN MODERN TECHNOLOGY REQUIRES GREATLY INCREASING NUMBERS OF SKILLED PERSONNEL; AND THE EMPLOYMENT DEMAND FOR UNSKILLED LABOR IS RAPIDLY DECLINING. HIGH RATES OF UNEMPLOYMENT AMONG UNSKILLED YOUTHS IN URBAN GHETTOS AND RURAL POVERTY AREAS -- MANY WITH HIGH SCHOOL DIPLOMAS -- TESTIFY TO THE SERIOUSNESS OF HALF THE PROBLEM. THE OTHER HALF IS EVIDENT IN PAGE AFTER PAGE OF NEWSPAPER ADVERTISEMENTS FOR SKILLED EMPLOYEES, AND THE WIDESPREAD PRACTICE BY EMPLOYERS ALL OVER THE UNITED STATES OF PIRATING SKILLED PERSONNEL FROM EACH OTHER.

"THE LEGISLATION CONGRESS PASSED LAST YEAR MAY GO FAR TO CHANGE THIS SITUATION IF IT IS FULLY IMPLEMENTED. THIS DOES NOT MEAN SIMPLY APPROPRIATING MORE MONEY. IT MEANS RESEARCH, EXPERIMENTATION, EVALUATION, REDESIGN AND FOLLOW-UP IN THE CLASSROOMS, IN THE SCHOOL DISTRICTS, IN THE STATES AND THROUGHOUT THE NATION. PUT YOURSELF IN THE POSITION OF ANY SUPERINTENDENT OF A SCHOOL DISTRICT IN THE COUNTRY -- IN AN URBAN GHETTO OR A MIDDLE CLASS SUBURB OR A SMALL TOWN OR RURAL AREA. HE MAY WANT TO RESTRUCTURE HIS EDUCATIONAL PROGRAM TO GIVE ALL OF HIS STUDENTS THE OPPORTUNITIES THEY NEED IN LIFE.

BUT 90% OF HIS FACULTY HAVE BEEN TRAINED ONLY FOR COLLEGE PREPARATORY PROGRAMS. HE HAS A CURRICULUM DESIGNED FOR COLLEGE PREPARATION. HIS SPACE AND EQUIPMENT WERE PLANNED FOR COLLEGE PREPARATORY PROGRAMS. AND HE HAS NO MONEY TO SPEND ON RE-DESIGNING THE CURRICULUM, RETRAINING THE FACULTY, AND RE-PLANNING HIS FACILITIES EVEN IF HE KNEW HOW TO DO THESE THINGS--WHICH IN MOST CASES HE DOESN'T, BECAUSE HE WAS TRAINED FOR A COLLEGE PREPARATORY PROGRAM ALSO.

"THE SUPERINTENDENT AND HIS FACULTY MAY WANT TO CHANGE THEIR PROGRAM, BUT IN REALITY THEY CAN DO VERY LITTLE EXCEPT COME TO SCHOOL EACH MORNING AND CONTINUE WITH THE ONLY THING THEY KNOW HOW TO DO. IN ORDER TO DO ANYTHING ELSE THEY MUST HAVE INFORMATION: WHAT SKILLS ARE NEEDED AND HOW ARE THEY ACQUIRED? WHAT COMBINATIONS OF GENERAL EDUCATION AND CAREER EDUCATION SHOULD STUDENTS HAVE? WHAT HAS BEEN TRIED AND WHAT HASN'T? WHAT WORKS AND WHAT DOESN'T? HOW CAN STUDENTS BE MOTIVATED AND GUIDED TOWARD CAREERS IN WHICH THEY CAN MAKE THE MOST OF THEIR INDIVIDUAL TALENTS? WHAT ARE THE CAREERS OF TOMORROW AND HOW CAN THE STUDENTS IN SCHOOL TODAY BE PREPARED FOR THEM? WHAT SKILLS AND CAREERS TODAY WILL BE OBSOLETE IN TEN YEARS OR LESS? THE ANSWERS TO THESE QUESTIONS ARE ALREADY BEGINNING TO REACH SCHOOL SUPERINTENDENTS

AND THEIR FACULTIES FROM A NATIONAL RESEARCH EFFORT ESTABLISHED UNDER THE VOCATIONAL EDUCATION ACT OF 1963.

"IT IS THE CONTINUATION OF THAT NATIONAL EFFORT, COORDINATED AT ALL LEVELS -- FEDERAL, STATE AND LOCAL -- WHICH EDUCATORS MUST DEPEND ON TO CARRY OUT THE PURPOSES OF THE NEW LEGISLATION PASSED LAST YEAR. THIS BRINGS US TO THE APPROPRIATION FOR VOCATIONAL RESEARCH IN FISCAL 1970."

BASED ON ESTIMATES SOLICITED FROM THE STATES WHICH HAVE ESTABLISHED R.C.U.'S THE TOTAL NEED FOR FEDERAL FUNDS FOR VOCATIONAL RESEARCH THUS IDENTIFIED IN THE STATES FOR FISCAL 1970 IS $17,125,320. THE DIVISION OF COMPREHENSIVE VOCATIONAL RESEARCH IN THE USOE ESTIMATES THEIR NEED FOR FEDERAL FUNDS FOR LARGE SCALE PROJECTS, SUCH AS MANPOWER AND OCCUPATIONAL EDUCATION ANALYSIS, NATIONAL CENTERS FOR VOCATIONAL RESEARCH AND LEADERSHIP, AND CAREER GUIDANCE DEVELOPMENT, UNDER SECTION 131 (A) OF THE ACT AT ABOUT $18,939,000. THEREFORE, THE TOTAL APPROPRIATION NEEDED FOR SECTION C, INCLUDING BOTH STATE FUNDS FOR RESEARCH AND FUNDS RESERVED TO THE COMMISSIONER FOR RESEARCH IS $36,064,320. (SEE APPENDIX FOR ADDITIONAL AND MORE SPECIFIC DATA.)

IT SEEMS THAT THE ONE BIG PROBLEM AND IT IS A LEGITIMATE ONE -- IS THAT THE FANTASTIC RESEARCH THAT HAS BEEN DONE AND THE AMOUNT OF RESEARCH

THAT IS PLANNED LACKS OR HAS LACKED AN IMPLEMENTATION PHASE -- THE UTMOST IMPORTANT ASPECT OF PROGRAM DEVELOPMENT AND RESEARCH. WITHOUT FUTURE EMPHASIS IN THIS IMPLEMENTATION AREA I WONDER IF WE CAN REALLY EXPECT CONGRESS TO APPROPRIATE ADDITIONAL AMOUNTS OF FUNDS.

PERHAPS THE REAL PROBLEM IS ONE OF COMPLETE MISUNDERSTANDING.

V. THE NECESSITY FOR "OCCUPATIONAL" EDUCATION AND ITS RELATIONSHIP TO RESEARCH -- NO DICHOTOMY PLEASE!

A. THE IDEA OF "OCCUPATIONAL" EDUCATION (I.E. CAREER EDUCATION) IS PROGRESSIVE. ALL EDUCATION IS CAREER OR OCCUPATION ORIENTED AND DESTINED. WE AS VOCATIONAL EDUCATION ARE DICHOTOMIZING OURSELVES INTO OBLIVION. CONGRESS IS EVEN PERPETRATING THIS DICHOTOMY IN THE FORM OF "VOC. ED." LEGISLATION. VOCATIONAL EDUCATORS ARE PERPETRATING THIS DICHOTOMY WHEN THEY TALK OF "AREA VOCATIONAL-TECHNICAL" SCHOOLS -- A THIRD SYSTEM/INSTITUTIONAL APPROACH. JUNIOR COLLEGE EDUCATORS TALK OF A SCHOOL WITHIN A SCHOOL. WE DON'T NEED OR WANT THIS TYPE OF APPROACH -- I DON'T. WE UNDERMINE OUR OWN ERSTWHILE INTENTION BY DICHOTOMIZING. WE NEED "A ONENESS", "A UNITY", "A WHOLENESS", A COMPREHENSIVENESS IN ORDER TO ACCOMPLISH OUR MISSION. WE CAN ILL AFFORD ECONOMICALLY OR OTHERWISE TO CONTINUE

THIS TRADITIONAL APPROACH TO OCCUPATIONAL EDUCATION. OUR TALK, AS IN THE PAST, OVERSHADOWS OUR ACTIONS IN THIS PERSPECTIVE.

B. CHANGE VS. PROGRESS -- THE NECESSITY OF RESEARCH (OR FEDERAL AID AVAILABILITY AND THE NEED)

THE TIME IS PASSED IF WE ARE ALL TO DO EFFECTIVE PROGRAMMING AND RESEARCH WHEN WE RELY SOLEY ON THE AVAILABILITY OF GOVERNMENT DOLLARS TO DICTATE PROGRAMS. WHAT I MEAN IS THAT NO LONGER IS IT LOGICAL, IT NEVER HAS BEEN FOR THAT MATTER, THAT WE IMPLEMENT ONE OF THE TRADITIONAL VOCATIONAL PROGRAMS IN OUR SCHOOLS JUST BECAUSE THE MONEY IS THERE. TYPICALLY MANY OF US HAVE. WE MUST ESTABLISH NEED IN THE FUTURE PRIOR TO EFFECTIVE PROGRAMMING. RESEARCH NECESSARILY CAN AND SHOULD PROVIDE THE NEEDS.

C. BRIEF DEFINITION OF RESEARCH

RESEARCH IS NOT NECESSARILY COMPLEX, DIFFICULT OR MYSTERIOUS AS ATTITUDE CAN MAKE IT SEEM. RESEARCH IS "THE ORDERLY TREATMENT OF DATA TO ANSWER QUESTIONS." VERY SIMPLY STATED, RESEARCH IS SEEKING THE ANSWER TO CRUCIAL PROBLEMS, SOMETHING ALL OF US NECESSARILY LIVE WITH PRETTY MUCH ON A DAY TO DAY BASIS.

D. METHODS OF RESEARCH

1. UNIVERSITY LEVEL R & D GENERALLY - OR - THE ART OF SHELFISM

TYPICALLY THIS GRADUATE STUDENT TYPE OF RESEARCH OR THE VERY OFT THOUGHT OF SOPHISTICATED AND HIGH LEVEL EXPERIMENTAL RESEARCH IS TAKEN BY USER GROUPS AND CONGRESSMEN AS BEING IMPRACTICAL, PURELY THEORETICAL, NON-VALUABLE, AND TRADITIONALLY SITTING ON A SHELF -- NEVER BEING TRIED OR FURTHER FOLLOWED-UP. THIS MAY BE THE VERY THING COSTING VOCATIONAL RESEARCH ITS JOB. WE NEED AGAIN THE IMPLEMENTATION PHASE.

2. ACTION ORIENTED (LOCAL) RESEARCH -- THE REAL NECESSITY OR "HAVE AND IDEA!"

THERE IS NO REASON FOR TEACHERS TO ISOLATE THEMSELVES FROM RESEARCH.

THE BENEFITS OF RESEARCH FINDINGS, PARTICULARLY TO THE INDIVIDUAL TEACHER ARE ALSO EMPHASIZED BECAUSE CERTAIN KINDS OF DATA, VITAL TO THE TEACHER, ARE AVAILABLE ONLY FROM THE LOCAL COMMUNITY. THESE DATA ARE QUITE OFTEN NOT AVAILABLE FOR EDUCATIONAL PURPOSES UNLESS GATHERED LOCALLY.

WHY NOT HIRE A "PROPOSAL WRITER" AT THE LOCAL LEVEL? LETS

DEVELOP EXPERTISE AT THE LOCAL LEVEL THROUGH EXPERIENCE, THROUGH IN-SERVICE EDUCATION, AND RELEASE TIME FOR THE TEACHERS.

THE CLASSROOM TEACHER IS TOO INVOLVED WITH NORMAL TEACHING DUTIES, GENERALLY UNQUALIFIED, AND LACKS THE UNDERSTANDING TO BECOME ENGAGED IN LONG RANGE, SOPHISTICATED, FORMALIZED RESEARCH. THE RESEARCH, I SUGGEST IS THE IMMEDIATE, SHORT RANGE, QUICK-ANSWER TYPE OF RESEARCH, GENERALLY REFERRED TO AS "ACTION RESEARCH." HOWEVER, HERE IS WHERE WE NEED THE ACTION.

THE END DOES NOT NECESSARILY JUSTIFY THE MEANS IN THIS RELATIONSHIP BETWEEN ACTION RESEARCH AND UNIVERSITY LEVEL OR SOPHISTICATED RESEARCH. ENDS, GOALS, AIMS ARE BUT HOPED-FOR THINGS TO COME -- IN A WORD, ASPIRATIONS. THEY ARE NOT PART OF REALITY -- NOT YET, AT LEAST -- FROM WHICH MAY SAFELY BE TAKEN THE STANDARDS FOR RIGHT CONDUCT. MANY OF THE MOST MONSTROUS DEEDS IN HUMAN HISTORY HAVE BEEN PERPETRATED IN THE NAME OF DOING GOOD -- IN PURSUIT OF SOME "NOBLE" GOAL.

E. IMPLEMENTATION - EVALUATION - FOLLOW-UP

ISOLATED RESEARCH FINDINGS, REGARDLESS OF SIGNIFICANCE AND AUTHENTICITY, SERVE NO ONE UNTIL THEY ARE INCORPORATED INTO EDUCATIONAL PROCESS.

EDUCATORS HAVE CONSISTENTLY ENDORSED THE NEED FOR EVALUATION IN EDUCATION, AND HAVE SUPPORTED WIDESPREAD USE OF FOLLOW-UP STUDIES, ACCREDITATION SYSTEMS, AND OTHER METHODS OF PROGRAM ASSESSMENT. BUT THE AMOUNT OF RESEARCH THAT HAS BEEN GENERATED SO FAR IN THIS AREA HAS BEEN LIMITED.

INVOLVEMENT IN RESEARCH MUST COME TO BE CONSIDERED AS AN ACCEPTED AND NECESSARY PART OF A PROFESSIONAL'S CAREER AND ESSENTIAL TO OCCUPATIONAL EDUCATION IF THIS EDUCATION IS TO DO THE JOB WITH WHICH IT HAS BEEN CHARGED.

F. JEEN DICKSUM LOOKS AT "OCCUPATIONAL EDUCATION RESEARCH IN 1976 - A PREDICTION"

1. MORE MONEY WILL BE SPENT ON R & D -- FINALLY EDUCATION FOLLOWS MORE CLOSELY THE FOOTSTEPS OF BUSINESS AND INDUSTRY.

2. COMPREHENSIVE EDUCATIONAL OPPORTUNITY WILL BE AVAILABLE FOR ALL.

3. EXTENDED PREPARATION FOR LIFE AND WORK WILL BE COMMUNITY ACCEPTED.

4. WE WILL HAVE "CAREER" EDUCATION INSTEAD OF "DICHOTOMIZED" EDUCATION.

5. THERE WILL BE A SWITCH IN THE SECONDARY EDUCATION APPROACH IN THAT 80% OF THOSE ENROLLED WHO DO NOT GRADUATE FROM COLLEGE WILL BE CATERED TO.

6. INSTRUCTION IN SCHOOLS WILL BE CENTERED MORE ON SPECIFIC LEARNING OBJECTIVES AND PERFORMANCE SKILLS.

7. ADVANCED TECHNOLOGY WILL INDIVIDUALIZE INSTRUCTION.

8. GREATER ATTENTION WILL BE FOCUSED ON ATTITUDES, MOTIVATION, PERCEPTIONS, ETC.

9. A SYSTEMS APPROACH TO EDUCATION WILL BE DEVELOPED AND IMPLEMENTED.

10. EVALUATION WILL BECOME AND INTEGRAL PART OF THE CURRICULUM.

11. GREATER ACCOUNTABILITY FOR DOLLARS SPENT AND RESULTS PRODUCED.

12. REGIONAL AND NATIONAL APPROACHES TO EDUCATIONAL PROBLEMS MAY INCREASE.

13. THE USE OF PRIVATE ENTERPRISE AS A VIABLE PARTNER IN EDUCATION IS GOING TO GREATLY ALTER OLD CONCEPTS OF FINANCING AND ADMINISTERING EDUCATION.

VI. RESEARCH PRIORITIES - GENERAL

A. NATIONAL

1. COMMUNICATION
2. A GENERAL UPGRADING OF SKILLS
3. ADAPTABILITY

B. REGIONAL

1. IMPLEMENTATION OF RESEARCH FINDINGS
2. DISSEMINATION OF USEABLE RESEARCH FINDINGS
3. IMPROVEMENT OF RESEARCH IN OCCUPATIONAL EDUCATION
4. MORE STATE AND LOCAL RESPONSIBILITY TOWARD THE SUPPORT AND CONTINUANCE OF THE RESEARCH FUNCTION

C. STATEWIDE

1. MORE ACTION ORIENTED RESEARCH
2. IN-SERVICE PREPARATION OF RESEARCH
3. NEEDS ASSESSMENT
4. RESEARCH STIMULATION
5. EXEMPLARY PROGRAM DEVELOPMENT

VII. SPECIFIC RESEARCH PRIORITY AREAS

PRIMARY EMPHASIS

- A. APPLICATION OF MANPOWER DATA TO OCCUPATIONAL EDUCATION
- B. THE STUDENT AND HIS ENVIRONMENT
- C. INSTRUCTIONAL SYSTEMS DEVELOPMENT
- D. CAREER DEVELOPMENT GUIDANCE, PLACEMENT AND FOLLOW-UP
- E. ORGANIZATION AND ADMINISTRATION

INTEGRATION OF

- DISADVANTAGED, HANDICAPPED
- HEALTH OCCUPATIONS
- "CLUSTER CONCEPT" IN OCCUPATIONAL EDUCATION
- COMMUNITY COLLEGES AND TECHNICAL INSTITUTES
- EVALUATION
- CURRICULUM DEVELOPMENT

VIII. THE RCU IN THE RESEARCH PROCESS - BRIEFLY

A. THREE BROAD ASPECTS

1. INPUT - A. COMPETENT RESEARCHERS, B. PRIORITY IDEAS,

   C. MONEY TO BUY TIME

2. OUTPUT - RESEARCH FINDINGS - IMPLEMENTATION

3. FUNCTIONING OF THE SYSTEM

   A. COMMUNICATION - CREAT AN ATTITUDE TOWARD RESEARCH

   B. COORDINATION

   C. CONTRIBUTION VS. REWARD

   D. STIMULATION

   E. DISSEMINATION

   F. RESOURCE ALLOCATION

B. RESEARCH FINDINGS ARE DEFINED AS TESTED KNOWLEDGE FROM WHICH WE MAY GENERALIZE.

C. ONE CAN PRESUPPOSE THAT WE DO NOT ROUTINELY HAVE THE TECHNIQUES TO UTILIZE EFFECTIVELY WHAT WE ALREADY KNOW. IF WE DID WE WOULD BE IMPLEMENTING.

IX. SUMMARY

I HAVE PROVIDED A FRAME OF REFERENCE FOR OCCUPATIONAL EDUCATION RESEARCH

WHICH REFLECTS PRIORITIES CUTTING ACROSS LOCAL, STATE AND REGIONAL BOUNDARIES. I HAVE DISCUSSED THE IMPLICATIONS OF THE ACT AUTHORIZATIONS AND POTENTIAL APPROPRIATIONS. PHILOSOPHY HAS BEEN STRICKEN SOMEWHAT. THE FUTURE HAS BEEN PROJECTED TO A DEGREE.

NOW, AS EMERSON OBSERVED, "THE END PRE-EXISTS IN THE MEANS." LET'S TRY TO CHECK IT OUT IN RESEARCH AND IMPLEMENTATION.

APPENDIX

TABLE I

List of Vocational Education Research Needs
For Fiscal 1970
Section C, PL90-576

131(a) Funds Reserved to the Commissioner	$18,939,000
131(b) Funds Allocated to the States	$17,125,320
Total Section C (research) funds needed	$36,064,320

State	Purpose	Amount Needed
Alabama	Research Coordinating Unit	$100,935
	State and local research	$428,500
Alaska	Research Coordinating Unit	$44,000
Arizona	Research Coordinating Unit	$101,475
	State and local research	$206,000
Arkansas	Research Coordinating Unit	$67,363
	State and local research	
California	Research Coordinating Unit	$97,500
	State and local research	$3,080,000
Colorado	Research Coordinating Unit	$60,000
	State and local research	$170,000
Connecticut	Research Coordinating Unit	$91,500
	State and local research	$50,000
Delaware	Research Coordinating Unit	$54,000
	State and local research	$22,000
Florida	Research Coordinating Unit	$346,000
	State and local research	$514,580
Georgia	Research Coordinating Unit	$111,000
	State and local research	$250,000
Hawaii	Research Coordinating Unit	$66,375
	State and local research	$20,810
Idaho	Research Coordinating Unit	$80,000
	State and local research	$120,000
Illinois	Research Coordinating Unit	$76,500
	State and local research	$1,350,000
Indiana	Research Coordinating Unit (estimated)	$50,000
	State and local research	$100,000

State	Purpose	Amount Needed
Iowa	Research Coordinating Unit	$92,500
	State and local research	$200,000
Kansas	Research Coordinating Unit	$43,000
	State and local research	$300,000
Kentucky	Research Coordinating Unit	$94,753
	State and local research	$450,000
Louisiana	Research Coordinating Unit	$32,373
	State and local research	$90,000
Maine	Research Coordinating Unit (estimated)	$50,000
	State and local research	$50,000
Maryland	Research Coordinating Unit	$68,400
	State and local research	$22,800
Massachusetts	Research Coordinating Unit (estimated)	$100,000
	State and local research	$500,000
Michigan	Research Coordinating Unit	$52,500
	State and local research	$325,000
Minnesota	Research Coordinating Unit	$143,363
	State and local research	$195,864
Mississippi	Research Coordinating Unit	$49,756
	State and local research	$158,441
Missouri	Research Coordinating Unit	$100,000
	State and local research	$544,654
Montana	Research Coordinating Unit	$53,434
	State and local research	
Nebraska	Research Coordinating Unit (estimated)	$75,000
	State and local research	$100,000
Nevada	Research Coordinating Unit	$62,000
	State and local research	
New Hampshire	Research Coordinating Unit	$24,000
	State and local research	$162,000
New Jersey	Research Coordinating Unit	$132,100
	State and local research	$225,000
New Mexico	Research Coordinating Unit	$15,000
	State and local research	$50,000
New York	Research Coordinating Unit	$491,750
	State and local research	$200,000

State	Purpose	Amount Needed
North Carolina	Research Coordinating Unit	$95,252
	State and local research	$365,000
North Dakota	Research Coordinating Unit	$39,750
	State and local research	$113,569
Ohio	Research Coordinating Unit	$55,000
	State and local research	
Oklahoma	Research Coordinating Unit	$81,570
	State and local research	$20,000
Oregon	Research Coordinating Unit (estimated)	$150,000
	State and local research	$300,000
Pennsylvania	Research Coordinating Unit	$1,200,000
	State and local research	
Rhode Island	Research Coordinating Unit	$80,000
	State and local research	$160,000
South Carolina	Research Coordinating Unit	$94,323
	State and local research	$187,000
South Dakota	Research Coordinating Unit (estimated)	$50,000
	State and local research	$50,000
Tennessee	Research Coordinating Unit	$97,955
	State and local research	$123,420
Texas	Research Coordinating Unit	$55,000
	State and local research	$94,005
Utah	Research Coordinating Unit	$65,700
	State and local research	$75,550
Washington	Research Coordinating Unit	$75,000
	State and local research	$75,000
West Virginia	Research Coordinating Unit	$75,000
	State and local research	$175,000
Wisconsin	Research Coordinating Unit	$75,000
	State and local research	$35,000
Wyoming	Research Coordinating Unit	$60,000
	State and local research	$90,000

TABLE II

Summarized List of Vocational Education Research Activities
For Fiscal 1970
Section C, 131(b), PL90-576

Alabama

Research Coordinating Unit: Develop; coordinate; disseminate; train researchers; support.

State and local research: Initiate curriculum research; disadvantaged research and development; administrative pilot programs; evaluation; manpower needs studies; occupational information and counseling.

Alaska

Research Coordinating Unit: Development; coordination; dissemination; and research support.

Arizona

Research Coordinating Unit: Research development; data development; dissemination; coordination; and research support.

State and local research: data systems for program planning and evaluation; pre-vocational experimental research; integration of general and vocational education; motivation of disadvantaged; career selection; cost effectiveness analysis; vocational counseling; surveys; curriculum and manpower needs.

Arkansas

California

Research Coordinating Unit: Development; coordination; dissemination; and research support.

State and local research: PPBS development; work experience research; employment data development; regional data dissemination center development; disadvantaged programs; modular voc guidance system; cost-benefits research; implementation of Project ERVEC (Environmentally Responsive Voc Ed Curriculum); basic processes research; curriculum research; emerging occupations; basic skills teaching through films; computerized assisted instructional programs; computerized task analysis; PPBS systems evaluation training; training in systems program planning for LEA (local education agencies); research design training for LEA.

Colorado

Research Coordinating Unit: Research development; stimulation; coordination; dissemination; training; and research support.

State and local research: Voc ed student follow-up; occupational information systems development; student placement data development pilot projects for urban and rural special needs students; pilot projects in elementary pre-vocational education; comprehensive area voc school feasibility studies; manpower information system development.

Connecticut

Research Coordinating Unit: Research development; stimulation; coordination; dissemination; training; and research support.

State and local research: Needs of the disadvantaged; coordination of research priorities with program priorities; program and facilities planning and expansion; manpower needs analysis; teacher and student characteristics; and local finance systems development.

Delaware

Research Coordinating Unit: Development; coordination; dissemination; and research support.

State and local research: Dropout data analysis; manpower needs and utilization; research training;experimental programs; work study for underachievers; teaching retarded through typewriters.

Florida

Research Coordinating Unit: Development; coordination; dissemination; and research support.

State and local research: Evaluation of program effectiveness; curriculum research; surveys; development of special needs programs for urban and rural disadvantaged; occupation information systems; occupation orientation for junior high and elementary school students; and solicited basic research from universities.

Georgia

Research Coordinating Unit: Development; coordiantion; dissemination; support; evaluation of pilot programs; vocational education master plan.

State and local research: Manpower needs study. Pilot program evaluation.

Hawaii

Research Coordinating Unit: Development; coordination; dissemination; research support; assistance to teachers and administrators on local projects; professional research support.

State and local research: Vocational information services system; vocational data processing system.

Idaho

Research Coordinating Unit: Development; coordination; dissemination; research support; data gathering; vocational student follow-up; selection and placement.

Illinois

Research Coordinating Unit: Coordination; development; dissemination; training; support of research.

State and local research: Curriculum redesign and development; innovative program development; occupational needs study; computerized guidance methodology for training disadvantaged; coordinate interagency programs; improved teacher education.

Indiana

Mississippi

Research Coordinating Unit: Stimulate research; consultation services; coordination; conduct priority research; dissemination.

State and local research: Evaluation systems; disadvantaged program evaluation; disadvantaged students and teachers; handicapped program evaluation; post-secondary program evaluation.

Missouri

Research Coordinating Unit: Development; coordination; dissemination; and research support.

State and local research: Manpower data development, research priorities; dissemination system development; upgrading voc research procedures.

Montana

Research Coordinating Unit: Planning; development; coordination; dissemination; data gathering; vocational student followup; and general support in research for vocational education.

Nebraska

Nevada

Research Coordinating Unit: Follow-up system; development; consultation; coordination; dissemination; problem identification; research support; and special studies.

New Hampshire

Research Coordinating Unit: Development; coordination; dissemination; and research support.

State and local research: Advancement of teacher education; needs study of law enforcement and consumer ed programs; follow-up studies; child day care pilot study; emerging occupations; curriculum development for disadvantaged and handicapped; labor market needs; and dissemination improvement.

New Jersey

Research Coordinating Unit: Research development; training; dissemination; evaluation; and support.

State and local research: Investigate voc ed programs; curriculum development and evaluation; occupational needs and changes; occupational guidance and counseling in elementary, middle, and high schools.

New Mexico

Research Coordinating Unit: Coordination; development; stimulation; disseminations; and research support.

State and local research: Experimental, developmental, and pilot programs.

Iowa

Research Coordinating Unit: Planning; development; collection; dissemination; coordination; and research support.

State and Local Research: Manpower needs and opportunities; voc ed student follow-up; program evaluation; disadvantaged and handicapped needs study; dropout study; data systems development for program planning and evaluation; and curriculum research.

Kansas

Research Coordinating Unit: Planning; development; collection; dissemination; coordination and research support.

State and local research: Follow-up model design; teacher education development; planning and program development; curriculum research; and systems design.

Kentucky

Research Coordinating Unit: Operational research; consultation services; dissemination; development; coordination.

State and local research: not listed

Louisiana

Research Coordinating Unit Development; coordination; dissemination; and research support.

State and local research: Manpower needs and availability; voc ed for prison inmates; vocational student follow-up; program evaluation; dropout research.

Maine

Maryland

Research Coordinating Unit: Information and data systems; evaluation emerging occupations; community planning; dissemination; coordination; develop and carry out research

State and local research: Occupational needs; vocational student

Massachusetts

Michigan

Minnesota

Research Coordinating Unit: Stimulation and coordination of research dissemination; research training;consultation services; research support.

State and local research: Occupational clusters; teacher education; management information system; applied and basic research.

New York

North Carolina

Research Coordinating Unit: Research needs and priorities; stimulation and development; research training; review and process proposals; consultation; dissemination; research support.

State and local research: Vocational student follow-up; action research by local schools; research training workshops; State Board staff research; graduate research; program evaluation; and contract research.

North Dakota

Research Coordinating Unit: Manpower needs assessment; local planning dissemination; teacher morale study.

South Dakota

Tennessee

Texas

Research Coordinating Unit: Development; coordination; dissemination; and research support.

State and local research: Manpower needs analysis; curriculum development and experimentation.

Utah

Research Coordinating Unit: Develop; coordinate; disseminate and support research; manpower needs and trends; exemplary programs; evaluation of state voc ed program.

State and local research: Increase vocational comprehensiveness; develop new techniques and methods; develop cluster programs; improve counseling; enrich State Industrial School program; coordinate general and vocational education; improve voc ed follow-up; improve dissemination.

Washington

Research Coordinating Unit: Develop; coordinate; disseminate and support research.

State and local research: Analysis of curriculum vs. manpower needs; pilot programs for potential drop-outs, disadvantaged and handicapped; co-op programs for special needs students; correlation of voc ed in non-urban

Washington (cont'd)
schools; establishment of state information center for voc ed personnel; evaluation of middle school programs; vocational orientation in elementary schools; teacher counselor workshops; and voc ed follow-up.

West Virginia
Research Coordinating Unit: Develop; coordination; dissemination; and research support.
State and local research: Feasibility studies; training; experimental; developmental; pilot programs; local research support.

Ohio
Research Coordinating Unit: Data collection and development; dissemination; manpower needs survey; develop and consolidate vocational school districts; develop, support, and disseminate research.
State and local research: Experimental, developmental and pilot programs for special needs; disadvantaged and handicapped youth; research and training programs; dissemination.

Oklahoma
Research Coordinating Unit: Coordination; identify problems; research support; research development; dissemination; curriculum development; research training.
State and local research: Evaluation; area school development; voc ed in small rural high schools.

Oregon

Pennsylvania
Research Coordinating Unit: Research administration and coordination; design; stimulation; coordination; dissemination; plan and conduct research; consultation; publish research materials, State Voc Ed Study; manpower supply-demand computer model development.

Rhode Island
Research Coordinating Unit: Coordination; dissemination; research support; stimulation; consultation; research design.
State and Local Research: State-wide information system; voc-ed needs study; program planning; follow-up studies; cost effectiveness; evaluation; and vocational guidance research.

South Carolina
Research Coordinating Unit: Dissemination; coordination; operational research; research support; consultation; design; planning and evaluation.
State and local research: Evaluation; teaching effectiveness; hardware effectiveness; disadvantaged and handicapped program development; occupational information systems; dropout studies.

Wisconsin

Research Coordinating Unit: Develop: coordinate; disseminate; and support research: manpower needs study; 4-Quarter System study; curriculum evaluation; voc ed follow-up; research training.

State and local research: Multi-media approaches to instruction; pilot learning resource center; teacher evaluation; curriculum development; new careers and occupations research; development and dissemination; public service aides evalation; special needs and handicapped programs.

Wyoming

Research Coordinating Unit: Research Development; stimulation; coordination; dissemination; training; and research support.

State and local research: Vocational education student follow-up; occupational information systems development; state vocational education Master Plan development; cost-benefit study of Wyoming vocational education; needs assessment of Wyoming socio-economic, physical, cultural, mental and disadvantaged and other handicapped persons; vocational aspirations of the disadvantaged and handicapped; elementary student vocational attitude curriculum development.

* Testimony present to the Subcommittee on Appropriations for HEW and Labor

American Vocational Education Research Association, Dr. Aurther M. Lee, Chairman, Committee on Legislative Information, John K. Coster, President

AN INTRODUCTION TO THE DESIGN & WRITING OF RESEARCH AND EXEMPLARY PROGRAM PROPOSALS

BY: B. C. PERRYMAN

I. INTRODUCTION

MY MAIN PURPOSE TODAY WILL BE TO COMMUNICATE TO YOU THE NECESSITY AND IMPORTANCE OF FOLLOWING PROCEDURE AND FORMAT WHEN WRITING AND SUBMITTING A PROPOSAL. THE DISCUSSION PRIMARILY WILL SEEK TO DEVELOP A SYSTEMATIC APPROACH TO THE PREPARATION, SUBMISSION AND APPROVAL OF RESEARCH ACTIVITIES.

THE RCU'S SERVE AS THE SPECIFIC PROGRAM ENTITY FOR RESEARCH IN OCCUPATIONAL EDUCATION FOR THOSE STATES THAT HAVE ESTABLISHED THEM, THEY ALSO ACT AS A HYPOTHETICAL ARM OF THE BUREAU OF VOCATIONAL, TECHNICAL AND ADULT EDUCATION. GENERALLY EACH RCU HAS AS ITS OBJECTIVES THE STIMULATION, COORDINATION AND DISSEMINATION OF RESEARCH AND RESEARCH FINDINGS WITHIN EACH STATE. THESE UNITS IN THE FUTURE MORE LIKELY THAN NOT WILL ALSO ASSUME THE FUNCTION OF ADMINISTERING AND PROCESSING EXEMPLARY PROGRAMS IN OCCUPATIONAL EDUCATION.

A paper presented by Bruce C. Perryman, Director, Wyoming Research Coordinating Unit, Research and Development Section, State Department of Education, Capitol Building, Cheyenne, Wyoming at the Research Workshop for Teachers and Administrators in Vocational Education, Montana State University, Bozeman, July, 1969.

RCU'S TYPICALLY ARE PREPARED TO ASSIST ANY AGENCY, OR PERSON, WITH THE PREPARATION AND SUBMISSION OF PROPOSALS FOR FUNDING UNDER P.L. 88-210, SEC. 4(C) (AS AMENDED) AND OTHER LAWS, ACTS OR REGULATIONS WHICH PROVIDE FUNDS FOR OCCUPATIONAL EDUCATION ORIENTED RESEARCH. THERE ARE, IN ADDITION TO THE FEDERAL GOVERNMENT, A NUMBER OF PRIVATE AGENCIES WHICH ALLOCATE FUNDS FOR RESEARCH IN THE AREA OF OCCUPATIONAL EDUCATION.

SINCE THERE IS CONSIDERABLE COMPETITION FOR AVAILABLE FUNDS, IT IS IMPORTANT THAT THE APPLICANT AGENCY BE COGNIZANT OF THE VARIOUS AGENCIES AND TYPE OF PROJECTS EACH WILL FUND.

LET US FIRST REVIEW SOME TYPICAL WEAKNESSES OF PROPOSALS WHICH ORDINARILY WOULD NOT BE FUNDED.

II. WEAKNESSES IN PROPOSALS - NORMALLY NOT FUNDED

A. THE PROBLEM IS OF INSUFFICIENT IMPORTANCE OR IS UNLIKELY TO PRODUCE ANY NEW OR USEFUL INFORMATION.

B. THE PROPOSED RESEARCH IS BASED ON A HYPOTHESIS THAT RESTS ON INSUFFICIENT EVIDENCE, EVIDENCE THAT IS DOUBTFUL OR UNSOUND.

C. THE PROBLEM IS MORE COMPLEX THAN THE INVESTIGATOR APPEARS TO REALIZE. BEWARE: AS SHAKESPEARE SAYS "THE PLAY'S THE THING,"

DON'T LET YOUR SKILL AS A FUND-RAISER GET YOU INTO A GAME YOU CAN'T PLAY.

D. THE PROBLEM HAS ONLY LOCAL SIGNIFICANCE OR IS ONE OF PRODUCTION OR CONTROL OR OTHERWISE FAILS TO FOLLOW SUFFICIENTLY CLEAR WITHIN THE GENERAL AREA OF OCCUPATIONAL RELATED RESEARCH.

E. THE PROBLEM IS SCIENTIFICALLY PREMATURE AND AT MOST IS ONLY A PILOT STUDY.

F. THE PROPOSED TESTS OR METHODS OR SCIENTIFIC PROCEDURES ARE UNSUITED TO THE STATED OBJECTIVES.

G. THE DESCRIPTION OF THE APPROACH IS TOO NEBULOUS, DIFFUSED, AND LACKING CLARITY FOR ADEQUATE EVALUATION.

H. THE OVERALL DESIGN OF THE STUDY HAS NOT BEEN CAREFULLY THOUGHT OUT.

I. THE STATISTICAL ASPECTS OF THE APPROACH HAVE NOT BEEN GIVEN SUFFICIENT CONSIDERATION.

J. THE INVESTIGATOR DOES NOT HAVE ADEQUATE EXPERIENCE OR TRAINING OR BOTH FOR THIS RESEARCH.

NATURALLY, BEFORE ANY PROPOSED RESEARCH ENDEAVOR CAN BE INITIATED, ASSUMING THE PROPOSAL IS ACCEPTABLE, THERE MUST BE A SOURCE OF FUNDS TO SUPPORT THE NECESSARY ACTIVITIES INVOLVED.

III. SOURCES OF FUNDS

A. U.S.O.E.

1. BUREAU OF RESEARCH

A. PROJECT SUPPORT

B. SMALL PROJECT SUPPORT - $10,000 OR LESS, 18 MO. COMPLETION

(1) DIRECTOR, EDUCATIONAL RESEARCH

REGION VIII

U.S.O.E.

FEDERAL OFFICE BUILDING

19TH AND STOUT ST.

DENVER, COLORADO 80202

2. PROGRAM SUPPORT

U.S.O.E. SUPPORT OF PROGRAMS OVER AN EXTENDED PERIOD OF TIME.

B. TITLE III, E.S.E.A. -- DESIGNED TO NARROW GAP BETWEEN RESEARCH AND IMPLEMENTATION

1. PLANNING GRANTS

2. OPERATIONAL GRANTS

C. U.S. DEPT. OF LABOR - OFFICE OF MANPOWER POLICY, EVALUATION AND RESEARCH (OMPER) - DEALS WITH NATIONAL MANPOWER PROBLEMS

1. FOUR PROGRAMS

A. CONTRACT RESEARCH - EXTENSIVE ACTION

B. RESEARCH GRANT - $10,000 TO SCHOLARS

C. DOCTORAL CANDIDATE GRANTS - $10,000

D. MANPOWER RESEARCH INSTITUTIONAL GRANTS - LONG TERM

SUPPORT TO COLLEGES AND UNIVERSITIES (AT LEAST 3 YEARS)

NOT MORE THAN $75,000.

D. STATE RESEARCH FUNDS

1. SDE - LIMITED BASIS

2. RCU - DEPENDING ON STRUCTURE

E. PRIVATE AND NON-PROFIT ORGANIZATIONS

THOSE WHO PROVIDE FUNDS FOR RESEARCH IN OCCUPATIONAL EDUCATION.

EXAMPLE - THE FORD FOUNDATION, ETC. CONTACT YOUR RCU.

IV. PROCEDURE FOR SUBMISSION OF RESEARCH PROPOSALS AND EXEMPLARY PROJECTS

A. WRITE A PRELIMINARY ABSTRACT OF IDEA AND FORWARD TO RCU.

B. IF ENCOURAGED, WRITE A MORE FORMAL AND DETAILED PROPOSAL WHICH WILL BE REVIEWED BY A RESEAPCH COMMITTEE.

C. RCU SERVICES SHOULD BE AVAILABLE AT THIS POINT TO ASSIST YOU IN THE PREPARATION OF A FORMAL PROPOSAL FOR SUBMISSION.

D. THE PORPOSAL SHOULD BE CONCISE BUT SUFFICIENTLY COMPLETE TO PROVIDE INFORMATION FOR SOUND EVALUATION. THE PROPOSAL SHOULD BE TYPED ON WHITE PAPER SIZE 8½" X 11", ON ONE SIDE ONLY. X NUMBER OF COPIES (ACCORDING TO YOUR STATE'S NEEDS) OF THE COMPLETED PROPOSAL WOULD NORMALLY BE REQUIRED. IF POSSIBLE, PRIOR TO FINAL SUBMISSION TRY TO SUBMIT A DRAFT COPY TO THE RCU FOR REVIEW. RCU STAFF SHOULD NORMALLY BE AVAILABLE FOR CONSULTATION DURING ANY STAGE OF THE APPLICATION.

V. TYPES OF PROPOSALS

A. THREE TYPES BASICALLY

1. RESEARCH
2. TRAINING
3. EXPERIMENTAL, DEVELOPMENTAL OR PILOT

NOW ADD THE 4TH - EXEMPLARY - A. PLANNING GRANTS; B. OPERATIONAL GRANTS.

VI. REVIEW PROCEDURE FOR PROPOSALS

FINAL APPROVAL AND AUTHORIZATION OF FUNDS TO SUPPORT PROPOSED PROJECTS RESTS NORMALLY WITH ONE OF THREE SDE OFFICIALS: (1) ST. SUPT. OF PUBLIC INSTRUCTION, (2) STATE DIRECTOR OF VOCATIONAL EDUCATION, AND (3) RCU DIRECTOR.

HOWEVER, THE PROCEDURE FOR REVIEW WILL NORMALLY BE AS FOLLOWS:

1. SUBMIT PRELIMINARY ABSTRACT TO RESEARCH AGENCY
2. REVIEW PRELIMINARY ABSTRACT AND APPROVE FOR PROPOSAL WRITING
3. SUBMIT A DRAFT COPY OF THE PROPOSAL TO THE RCU
4. SUBMIT THE FINAL COPY OF THE PROPOSAL TO THE RCU IN 25-35 COPIES
5. REVIEW OF THE PROPOSAL AND FORWARDING BY THE RESEARCH COMMITTEE TO APPROPRIATE OFFICIAL FOR APPROVAL
6. FORWARD PROPOSAL IF NECESSARY TO APPROPRIATE AGENCY
7. PROJECT APPROVAL OR DISAPPROVAL (FUNDING) (TIME ELEMENT IMMEDIATE - 1 WEEK TO 1 YEAR)
8. CONDUCT OF THE RESEARCH PROJECT
9. PUBLICATION OF FINDINGS
10. DISSEMINATION OF FINDINGS
11. IMPLEMENTATION/UTILIZATION OF FINDINGS

VII. THE PROPOSAL DOCUMENT

APPLICATION FOR SUPPORT IS MADE BY SUBMITTING A PROPERLY EXECUTED STANDARD APPLICATION FORM (AVAILABLE FROM THE BUREAU OF RESEARCH REGIONAL OFFICES OR RCUO AND THE APPROPRIATE NUMBER OF COPIES OF A FORMAL PROPOSAL WHICH DESCRIBES THE ACTIVITY OR ACTIVITIES, EXPLAINS THEIR SIGNIFICANCE,

IDENTIFIES KEY PERSONNEL, AND ESTIMATES COSTS.

A UNIFORM PROPOSAL FORMAT SUCH AS THE ONE WE WILL COVER VIA THE OVERHEAD PROJECTOR AND TRANSPARENCIES IS GENERALLY USED TO ACCOMODATE ALL RESEARCH PROJECTS, REGARDLESS OF THE AUTHORIZATIONS UNDER WHICH THEY ARE FUNDED. USE OF A SINGLE FORMAT GIVES THE APPLICANT FREEDOM TO CONCENTRATE ON THE PARTICULAR ACTIVITY TO BE UNDERTAKEN WITHOUT HAVING TO CHOOSE AMONG APPLICATION PATTERNS. SEE YOUR RCU FOR SPECIFIC FORMAT DESIGN FOR YOUR PROPOSALS.

ALL PROPOSALS MUST INCLUDE THE STANDARD COVER PAGE, A ONE PAGE ABSTRACT, THE BODY SECTION, AND PERSONNEL AND BUDGET ITEMS. WITHIN THIS FRAMEWORK, EACH APPLICANT STATES THE CASE FOR HIS EFFORTS.

(NECESSARY INTERIM REPORTS AS REQUIRED BY THE FUNDING AGENCY WILL BE CITED IN A SCHEDULE OR A CONTRACT WHICHEVER APPEARS DESIRABLE FOR BOTH PARTIES. NORMALLY THESE REPORTS ARE MADE TO THE FUNDING AGENCY. A SPECIFIED NUMBER OF COPIES OF THE FINAL REPORT WILL BE REQUIRED UPON COMPLETION OF THE PROJECT. THE RCU WILL REQUIRE AT LEAST 3 COPIES OF ALL FINAL REPORTS REGARDLESS OF FUNDING AGENCY.

VIII. CRITERIA FOR EVALUATION OF PROPOSALS

PROPOSALS ARE GENERALLY EVALUATED AND RECOMMENDED FOR APPROVAL ACCORDING TO THESE CRITERIA:

A. EDUCATIONAL SIGNIFICANCE

B. SOUNDNESS OF DESIGN, PROCEDURE, OR PLAN

1. PROBLEM CLEARLY DEFINED AND APPROPRIATED DELIMINATED
2. REFLECTS AN ADEQUATE KNOWLEDGE OF OTHER RESEARCH RELATED TO THE PROBLEM
3. OBJECTIVES, QUESTIONS, HYPOTHESES ARE WELL FORMULATED AND CLEARLY STATED.
4. RELATIONSHIP BETWEEN THE PROBLEM, OBJECTIVES, AND PROCEDURES ARE CLEAR

C. ADEQUACY OF PERSONNEL AND FACILITIES

D. ECONOMIC EFFICIENCY

E. OTHER SPECIFIC CRITERIA AS APPROPRIATE

IX. REVIEW OF POTENTIAL RESEARCH PRIORITY AREAS FOR 1969-70

A. PROGRAM EVALUATION - EFFECTIVENESS OF MEETING NEEDS

B. CURRICULUM DEVELOPMENT - SKILL PERFORMANCE FOR INCREASED NUMBERS; MUST BE ADAPTIVE; UP-TO-DATE, RELATED TO EXISTING A FUTURE JOB REQUIREMENTS.

C. RESOURCES DEVELOPMENT - NUMBERS, QUALIFICATIONS, AND SOURCES OF PERSONS REQUIRED TO STAFF CURRENT AND PROJECTED PROGRAMS; AND HOW AND WHAT TEACHERS SHOULD BE TAUGHT.

D. GUIDANCE AND CAREER CHOICE PROCESSES - HOW CONCEPTS OF WORK ARE FORMED; HOW ARE INDIVIDUALS MOTIVATED; HOW INDIVIDUAL SATISFACTIONS ARE ACHIEVED

E. ADULT AND CONTINUING EDUCATION - ASSESSMENT OF THE CONTENT, QUALITY AND EXTENT OF ON-GOING PROGRAMS.

ADDITIONAL AREAS YOU MAY RECALL WE DISCUSSED PREVIOUSLY.

X. SUMMARY

IN FORMULATING A PROPOSAL, THE SERVICES OF THE RCU ARE AVAILABLE FOR ADVICE PRIOR TO AND DURING THE WRITING OF THE PROPOSAL. NORMALLY EACH RCU STAFF FUNCTIONS UNDER SPECIFIC POLICIES WHICH ALLOW OR WILL NOT ALLOW THEM TO UNDERTAKE TO WRITE A PROPOSAL APPLICABLE FOR A SCHOOL, COUNTY, COLLEGE OR OTHER AGENCY. HOWEVER, IT IS A RCU FUNCTION TO COORDINATE, STIMULATE AND ENCOURAGE RESEARCH IN THE AREA OF OCCUPATIONAL EDUCATION IN PUBLIC SCHOOLS, COLLEGES, AND UNIVERSITIES OF THE STATE.

SOURCES OF ADDITIONAL INFORMATION ON PROPOSAL WRITING

HOW TO PREPARE A RESEARCH PROPOSAL BY DAVID R. KRATHWOHL
SYRACUSE, NEW YORK: SCHOOL OF EDUCATION
SYRACUSE UNIVERSITY, 1966. PG. 50 (AVAILABLE AT ONE DOLLAR PER COPY FROM THE SYRACUSE UNIVERSITY BOOKSTORE, 303 UNIVERSITY PLACE, SYRACUSE, N.Y. 13210

PRINCIPLES OF TECHNICAL WRITING BY ROBERT HAYS
SOUTHERN TECHNICAL INSTITUTE
ADDISON-WESLEY PUBLISHING CO.
READING, MASS.

PROPOSAL AND INQUIRY WRITING BY SIGFRIED MANDEL AND DAVID L. CALDWELL
MACMILLAN PUBLISHING COMPANY
NEW YORK, N.Y.

VT 009 018
A Study of the Educational and Training Content of Occupations, 1966. Manpower Studies No. 7.

Federal Ministry of Economic Development, Lagos (Nigeria). National Manpower Board
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 68 39p.

*OCCUPATIONAL SURVEYS; *FOREIGN COUNTRIES; *EMPLOYMENT QUALIFICATIONS; *POLICY FORMATION; *TABLES (DATA); EDUCATIONAL BACKGROUND; JOB TRAINING; WORK EXPERIENCE
*NIGERIA

This survey was an initial step in translating Nigerian manpower requirements into demand for appropriate levels of education, training, and experience, and examining the role which each element plays in total job preparation. Data were collected by means of questionnaire and personal interview. The sample consisted of 124 firms stratified on the basis of sector of economic activity and size of establishment. Information was obtained on 126 different occupations (2,750 questionnaires were completed) representing nearly 65,000 employees. Findings and policy implications are reported for professionals, administrators, junior administrators, and technicians as well as skilled, semi-skilled, and unskilled workers. Survey data were converted into tabular form for a detailed presentation of the findings. (CH)

VT 009 018

Manpower Studies No. 7

A STUDY OF THE EDUCATIONAL AND TRAINING CONTENT OF OCCUPATIONS, 1966.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY

VT009018

NATIONAL MANPOWER BOARD.
LAGOS, 1968

A STUDY OF EDUCATIONAL AND TRAINING CONTENTS OF OCCUPATIONS. 1966

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CHAPTER 1

INTRODUCTION

Public establishments have laid down policies and pratices, to some extent, well documented, in regard to the pattern of educational qualifications, training and experience for a variety of jobs. In the private sector and, to a limited extent in public corporations, the position is not so clear-cut. Accordingly, in 1966, the National Manpower Board in collaboration with the Education and World Affairs of New York, U.S.A as a first step to translating manpower requirements into demand for appropriate levels of education, training and experience and examining the role that each of these important elements plays in total job preparation, undertook a sample survey to study the relationships as they exist in the private sector.

The National Manpower Board acknowledges here its debt of gratitude to the Education and World Affairs, New York and to Messrs. Brumbery and Uphoff of that organization who personally undertook the major tasks of supervising the planning and conduct of the survey and who produced the preliminary study on which this report is based.

CHAPTER II

PLANNING AND COVERAGE

In order to collect data on the education and training requirements of occupations in the modern sector of Nigeria's economy, employers were interviewed from a cross-section of private and quasi-government establishments employing 10 or more workers.(1)

Information on each occupation represented in a given establishment, was collected by means of a precoded questionnaire. The data collected was then processed by computer

A) The Sample: In order to study the entire range of occupations within the private and quasi-government sectors, a stratified sample of establishments was constructed. The original contained 147 establishments of which it was possible to survey 124.

Stratification was on the basis of sector of economic activity and size of establishment.(2)

The number selected from the different economic sectors was based on the diversity of occupations within the sector The number selected from a particular economic activity within an economic sector depended on the relative

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(1) Establishments in the sample were confined to the private and quasi-government sectors (public corporations). Government service, health services and education were excluded. Education and training requirements for occupations in the government and education sectors are defined by statute or government regulations, so there was no need to include them in our study Health services were excluded since the National Manpower Board is presently conducting a detailed survey in this area.

(2) Economic activity was classified according to the U.N. International Standard Classification of All Economic Activities.

importance of the activity in providing employment and the diversity of occupations and establishments within the economic grouping. (3)

COMPOSITION OF SAMPLE BY SECTOR AND SIZE

SECTOR	Size & Number of Establishments			Total
	Small (10 - 99)	Medium (100-499)	Large (500+)	
Agriculture	-	1	1	2
Mining	2	1	5	8
Manufacturing	24	24	6	54
Construction	2	3	4	9
Utilities	-	-	1	1
Commerce	12	7	5	24
Trans. and Com.	6	12	5	23
Services	-	3	-	3
TOTAL	46	51	27	124

No attempt was made to obtain comprehensive coverage of two sectors, agriculture and services Because of the relative homogeneity of occupations in agriculture and the difficulty of access to such establishments, the coverage was confined to only two modern agriculturally-based establishments. Since the bulk of the private service sector is composed of firms with less than 10 employees and government and other public services were purposely excluded, only 3 service establishments were included. All other sectors tend to be comprehensively covered.

(3) For the manufacturing sector an analysis was made of the 1963 Industrial Survey to determine the most important manufacturing activities in terms of value of output, number of employees and number of establishments. The 25 most important, according to an index which was compiled, were included in the sample, and the 12 most important were represented by two or more establishments.

Where possible, the sample was further stratified within each sector by size of establishment; small (10 - 99 employees), medium (100 - 499), and large (500+). There was no stratification with respect to location of establishments.

Where establishments of comparable economic activity and size were to be found in or near Lagos and in the regions, the establishment in Lagos was chosen in order to facilitate speed of enumeration and maintenance of supervision of the enumerators. It was decided that the resulting bias towards larger and more modern establishments was compensated for by the fact that information could be gathered more completely and accurately, and in less time. When a major activity was found only in the regions, as in the cases of mining and agriculture, enumerators were sent to the regions.

GEOGRAPHICAL DISTRIBUTION

REGION	NO. OF FIRMS
Lagos	109
North	6
East	4
West	2
Midwest	3
	124

Interviews with the establishments yielded information on 126 different occupations (2,750 questionnaires completed on occupations), representing nearly 65,000 employees. This represents a significant percentage of estimated total employment in Nigerian establishments with 10 or more employees (exclusive of government service, health and education).

It is difficult to apply statistical tests of reliability to the data, since there is no reliable way of knowing the size of the universe from which the different samples have been drawn (e.g., of electrical engineers, carpenters, watchmen, etc). It is felt, however, that the absolute size of the sample and subsamples justifies the claim that it is representative.

B) Interviews: For this survey the National Manpower Board employed twenty-five university students as enumerators and trained them in interview techniques and informed them on the problems which the survey was proposed to study. Throughout the survey they were under daily supervision, receiving assignments for interviews, having their coding of responses checked for accuracy and consistency and having all questions concerning procedure and definitions answered immediately and consistently.

Enumerators interviewed the persons in each establishment who did the hiring or set personnel policy, first to determine all of the occupational categories in the establishments and the number in each, and then to describe the education and training requirements for each as set by the employer. By comparing responses among establishments, consistent norms were maintained in evaluating and coding responses.

C) Questionnaire: A pre-coded questionnaire - Annex 4 - was administered to sample establishments by the enumerators. Questionnaires were completed for each job in each establishment and it was possible through interviews to gather information on certain aspects of the study not spelt out in the questionnaire.

Job titles and descriptions given by the establishments were classified according to the International Standard Classification of Occupations of the International Labour Organisation. Training, in the context of the questionnaire, was defined as any form of instruction given by employing establishments outside the normal stream of formal education. This includes apprenticeship on-the-job and in-service training. Apprenticeship is distinguished from the two last forms of training by the existence of a formal agreement between employer and employee obliging the former to provide training and the latter to serve as apprentice for a stipulated time period.

On-the-job training involves working under supervision, learning by doing within the establishment. In-service training is distinguished from the apprenticeship and on-the-job training in that it requires the employee to leave his place of work to attend lectures, seminars or demonstrations or to be attached to another establishment other than his employer's in order to receive instruction connected with his job.

At interviews establishments were requested to provide information on the modal level of education and training of present employees and to indicate what levels of these factors were expected from new entrants on the jobs. It was thus possible in some cases to compare the educational and training level of present employees with the expected educational and training content of specific jobs.

CHAPTER III

Job Preparation For Senior Category Manpower

An analysis of employers' responses demostrates that the primary route to jobs in the Senior Category is through higher education, that is, post-secondary education including the University type - See Annex I. As indicated in Table I, about 91% of employees in this Category were thus qualified, made up of 70% University graduates and 20.8% with professional and sub-university qualifications. Most employers required specialized forms of university education in the field of Engineering, Business and Science while a relatively small number of places were for people with a liberal education.

Education alone, however, is not sufficient to meet employer requirements. Table 2 indicates that most senior level jobs covered require some form of training; 4.4% in apprenticeship; 21.5 on the job, and 30.9 in-service - a total of more than 56%. Training requirements vary from sector to sector ranging from 94.5% of Senior Category jobs in Mining industries to 38.2% in Transport and Communications.

The survey further indicates that 59.5% of senior level jobs also require work experience, (Table 3); and it is logical that experience on the job is accepted, to some extent, by employers as a substitute for special training. Generally, experience, however, does not seem to relax on educational requirements except in rare cases when much experience is required for the efficient performance of a job. As Table 4 shows, 56% of jobs which require three or more years of experience also require university education which is a basic requirement for 70% of all jobs in the Senior Category.

The high significance employers place on experience can be judged by the fact for 43.4 of senior jobs, work experience can substitute for a part of education and training requirements (Table 3). It should be noted however, that even though an employer indicates a willingness to accept experience as a substitute for one or both of the other variables, he does not necessarily do so in practice. His decision would seem to depend on the availability of applicants with required qualifications.

The contribution of each of these variables to total job preparation does not follow a rigid pattern and employers' weighting on formal education non-formal training and experience vary from one group of jobs to the other. For instance, for 95.5% of engineering positions a post-secondary education is desired (Table 5) while for administrative positions reasonable experience is more readily accepted as a substitute for part of the educational or training requirements - 9.7% of education. And typically, among the professions, Engineering positions, record 47% in-service training as against 25% for ''Other Professionals,'' and 24% for Senior Administrative jobs. For the latter group the larger part of training is on-the-job - 35.5%. Although apprenticeship is grouped with on-the-job training, the former actually contributes only marginally to total job preparation. The total training index for Engineers and Senior Administrative jobs are of the same order - about 60%; for ''Other Professionals'' the figure is 48% shared out almost equally between on-the-job (22%) and in-service training - (26%). Inspite of the readiness of employers to substitute reasonable experience for other requirements the educational qualifications of present employees in the groups of Engineers. Other Professionals, and the Senior Administrative group are all high - 88 - 95% having post-secondary to University level education.

CHAPTER IV

Job Preparation For Intermediate Level Positions

The pattern of education and training requirements for intermediate level occupations is less clear than for those in the Senior Level. As on Table I, employers indicate a requirement of post-primary education (or higher) for about 85% of intermediate level jobs; 23% of occupations at this level require post-secondary education while 2.1% require some university education. Training seems to play the most significant role in job preparation at this level; according to employer responses, 76.1% of intermediate level jobs require training - a higher proportion than at any other occupational level. In contrast, for previous work experience, (Table 3) - the position is as at the Senior Level - 60% of jobs requiring at least a year's experience.

Two non-exclusive sub-groups, namely: junior administrative and superviosry: and technical, could be isolated at the intermediate level to indicate clearer sub-group characteristics than are found when considering the intermediate category as a whole. Table 5 shows that only 15% of junior administrative/supervisory positions require more than a post-primary to secondary level education while nearly 40% within the sub-group categorised as 'technical' need post-secondary or university education. Formal education, it is shown, plays a more important role for technical jobs than for the junior administrative/supervisory positions where emphasis is on the side of experience - 70%, and employer training - 89%. The corresponding figures for technical positions are 35% for experience and 59% employer training - see Table below. Also important, as the Table below shows is that about 40% of "technical" positions and only about 11% of junior administrative/supervisory jobs are held by personnel without employer training after a

formal secondary education. (Several intermediate jobs mentioned in Annex 2 require as ''educational qualification'' one to two years of post-secondary course referred to as ''specialized training'' in the definition for the intermediate category in Manpower Studies No. 2 ''Nigeria's High-Level Manpower 1963-70: National Manpower Board 1964.) A considerable number of administrative/supervisory jobs, as the Table shows, are achieved through experience and on the job training. For types of training, technical positions indicate a bias towards in-service schemes (31.6%) while a large part of the training reported for junior administrative/supervisory jobs (44.4%) is on-the-job. For both, training through apprenticeship constitute only a marginal contribution to total job preparation.

SUPERVISORY AND TECHNICAL OCCUPATIONAL SUB GROUPS

TRAINING AND EXPERIENCE POSITION IN PERCENTAGE

JUNIOR ADMINISTRATIVE/SUPERVISORY & TECHNICAL GROUPS

	Training Duration						Type			Experience Duration				
	No Training	0-12 Months	1-2 Yrs	2-3 Yrs	More than 3 Yrs	Total Training	Apprentice	On-the job	In-Service	None	0-12 Months	1-2 Yrs	2-5 Yrs	More than 5 Yrs
Junior Administrative Supervisory	10.6	35.6	14.9	14.6	24.0	89.4	12.2	44.4	33.9	30.6	2.1	12.3	29.4	25.3
Technical	40.6	12.3	3.5	5.4	24.8	59.4	6.5	25.5	31.6	64.9	0.4	3.5	17.9	13.1

CHAPTER V

Job Preparation For Skilled & Semi-Skilled Positions

This category has the largest number of jobs in the work force and this makes it the most heterogeneous as regards occupational composition. It also presents a wide variety of avenues of job preparation. It would, however, be more useful to look at the category as a whole in order to contrast it with the higher levels of manpower.

As expected, employers indicate that the absolute amount of education required for jobs in this category is the lowest for all the levels. Amost half of the jobs in this group - 47% - require no post-primary education (Table I).

Employers' responses on training requirements show that 68% of the jobs at this level require some kind of employer training, See Table 2, but the requirement pattern differs from those at higher occupational levels. In contrast with the higher categories, there is much more apprenticeship training at this level (16.7%), less in-service training (13.5%), but a higher requirement of on-the-job formation 37.8%. Previous work experience tends to be less important and employers indicate 69% of positions in this category are held by people with no previous experience (Table 3). Only for the occupational groups of drivers and telephone operators and for jobs in the building trades does previous experience seem to be expected by employers - 52.3% of drivers and telephone operators and 54% of employees in the Building Trades have come to their present positions with previous work experience. For other groups of jobs the figures are lower - 16% in Transport and Communications, 32% in Metal and Mechanical Jobs.

Requirements for Skilled/Semi-Skilled jobs very significantly by sector of economic activity, the type of job preparation being related to the type of work to be performed.

This point is brought out clearly by comparing the positions at this level in Construction and in large commercial establishments both to each other and to the global position. (See Table below):

	Skilled/Semi-Skilled Occupations: Education & Training Position						
	No Education	Primary Education	Post-Primary Education	Post Secondary.	Training (App*O-J)	In-Service	Experience
All Sectors	7.8	38.3	51.7	1.6	67.9	13.4	29.3
Construction	46.1	31.3	22.3	-	80.6	3.5	70.3
Comm. (Large-Establishment)	1.7	7.6	78.4	12.0	50.2	35.0	31.4

* (Apprenticeship and on-the-job).

While in the Construction Sector education plays a relatively minor role in job preparation at the Skilled/Semi-Skilled level, skills having to be acquired through training, in Commerce, on the other hand, education tends to be the most important component in job preparation; training, especially in-service, coming next in importance. In the Construction Sector the most important groups in the category as identified by the Study of the Manpower Content of Capital Projects 1966 - Manpower Studies No. 6 - would be Turners, Masons, Carpenters and Mechanics.

Most of the skilled/semi-skilled jobs fall into the following seven groups: (1) Clerical (2) Sales (3) Drivers & Telephone Operators (4) Transport & Communication Workers other than Drivers & Operators (5) Building Tradesmen (6)Metal and Mechanical Tradesmen and (7) Other Production Workers. With such a heteregenous composition, the avenues of job preparation in the category would vary considerably from group to group. By far the largest proportion of positions at this level requiring post-primary education or more is to be found in the clerical & sales groups (both over 60% - Table 5). Over 30% of those holding sales jobs have a post-secondary education,

conceivably they are fall-outs of the post-secondary education system. The survey, on the other hand, indicates that this group also contains the largest proportion of those at present employed with qualifications below those considered desirable by employers.

The components of apprenticeship, on-the-job training, and in-service training in total job preparation vary considerably from job group to group. It will be observed from Table 5 that in the building trades, metal and mechanical works and ''other production'' jobs, a more than 80% total training index is recorded. This is in contrast to the situation in Sales where the generally low modal education qualification mentioned earlier should have called for more training but which only records 53.7% total training. The nature of jobs necessarily calls for varying preferences as to type of training. The following Table on the components in the different job - groups brings out the weight given by employers to different forms of training. The Metal and Mechanical trades have a clear bias towards training through apprenticeship (43.3%) while the Building Trades would seem to prefer training on-the-job (54.3%). For Transport and Communications there is a leverage towards apprenticeship (32.5%) but this is not as pronounced as in the other cases. In the Service trades only about ¼ of the jobs fall within the Skilled/Semi-Skilled Category and this may account for the low percentage of training - 11.2 made up of 9.7 total for apprenticeship and on-the-job training and 1.5 for in-service.

Skilled/Semi-Skilled: Training Components (in %)

Major Occupational Group	Apprenticeship	On-the-job	In-Service
Drivers/Telephone Operators	20.8	42.4	2.8
Transport & Communication	32.5	23.6	27.9
Building Trades	18.4	54.3	9.5
Metal & Mechanical	43.3	27.6	11.8
Other Production	11.3	67.2	2.9
Service	2.0	7.7	1.5

CHAPTER VI

Unskilled Level Positions

The occupational groups in the unskilled category are farmers, most miners, labourers and about three-fourth of workers in the Services category. Employers' responses indicate that about 55.9% of unskilled jobs require no educational qualifications and hardly any require any more than a primary education. Training is negligible - 1% - and, where it is required, for only 1.7% of jobs. While almost all mining and farming jobs - 88% - demand no educational qualifications, it is observed that over half of the positions, for labourers call for some form of primary education. There is no immediate explanation for this except that employers have a near-perfect knowledge that the labour market can provide them an ample supply of primary school leavers for this type of job at existing wages.

CHAPTER VII

Policy Implications

The survey conclusively shows that a very high percentage of senior level jobs require higher education usually of University and higher professional level - Annex I. As mentioned earlier, employers place more reliance on formal education for professional jobs than for administrative positions naturally because of the specific and specialized demands of the former.

The survey attempted to identify employer-difficulties with regard to recruitment for jobs - The Table following summarises the situation.

DIFFICULTIES IN RECRUITMENT

Reasons for Difficulties

Due to lack of:

	Education	Training	Experience	Salary	Other
Senior	72.5	15.0	41.0	17.0	6.5
Intermediate	51.6	30.4	84.1	22.8	22.5
Skilled/Semi-Sk.	33.5	39.4	63.5	14.4	6.8

In the Senior category, the difficulties have largely been the lack of suitable educational qualifications for professional positions and lack of experience for administrative jobs. In the public sector (where Government is the employer), a model of what an employer's training policy should be in the face of such recuitment difficulties has been shown. Government training efforts range from in-service training programmes to awards of University Scholarships. This can be emulated by the private sector, within the limits which the resources of the establishments concerned would permit.

It is therefore, desirable that where, as in the case of professional jobs, there are difficulties of recruitment due to lack of appropriately qualified persons, employers should sponsor in universities or other institutions of higher education students who are working towards the type of educational qualifications desired, with a view to employing them on completion of the relevant courses. A few employers do this in a limited way. More should be encouraged to adopt this policy particularly where the cost of sponsoring Nigerian students in these institutions and employing them later would ultimately be less than the cost of bearing for an indefinite period the high rates of emoluments claimed by expatriate staff. There are also implications for the scholarship policies of both Government and non-Government agencies; it is desirable that these should concentrate more awards in such professional fields as are revealed to be in short supply. The Universities and higher colleges should be encouraged to expand their facilities for technological and professional education and to shift the bias away from the Arts and Humanities to Sciences and Technology. This study, in a way, endorses the consideration of the National Manpower Board at its Eighth Meeting held in Lagos in July 1965 when it was recommended that student enrolment in the Universities be built up to ensure an ultimate 75% enrolment in the Sciences, Mathematics and Technology.

For administrative positions where lack of experience is the main cause of recruitment difficulty, employers should endeavour to make up for this deficiency by articulated in-service training programmes for their staff. Several courses in Management are organised and run in the country attracting varying patronages. It is in the interest of employers that these various courses are co-ordinated to eliminate wasteful duplication and ensure that courses reflect the needs of user/employers and employee-trainees.

This recommendation was made by the Ninth Meeting of the National Manpower Board held at Enugu in October 1965 and has led to the recent inauguration of a National Council for Management Education and Training comprising employer interests and the suppliers of training.

Consideration of the policy implications of preparation for intermediate level positions will treat junior administrative positions and technical jobs separately in view of their differing requirements as revealed by the study. For junior administrative/supervisory positions training and experience are as essential as formal education is crucial in the case of technicians. In-service training as recommended for the senior administrative positions would be appropriate to fill the gaps of experience in administrative/supervisory positions.

The important role of formal education for technicians has been mentioned and it was underlined that 40% of this group of workers were reported having a formal post-secondary or university education of a type that may be classified as ''specialized training.'' This could account for the high proportion of technical positions 40% - reported held by persons with no employer training. The important role of technicians in the economy as the supporting cohorts for the professional groups cannot be over-emphasized and great attention should be paid to the provision of this category of manpower to the economy. A recent unpublished study of the employment of professionals undertaken by the National Manpower Board indicated a high preponderance of expatriate personnel as far down as the ''technician'' level against a background of inadequate supply of indigeneous manpower of this category. This situation has to be reversed by relating the supply of technical skill, in terms of quantity and quality, to the needs of the economy in general and individual industries in particular. For the secondary school system of education the basic implication is greater emphasis on the teaching of Science and Mathematics in an effort to engage the interest of students in things ''technical'' as a first step in job-preparation.

For Industry, which employs a large proportion of this category of manpower, a greater involvement and increased participation in this area of training and development is called for if its direct and special needs are to get adequate consideration in the curricula and development programmes of Government Technical Institutes. It is most desirable that private employers be brought as close as possible within the planning machinery for the development of these institutions and their curricula. This could be done in various ways: by employers' representation on the Management and curriculum development bodies of Technical Institutes, by the ready co-operation of Industry in providing facilities for sandwich courses and by increased financial support by the private sector for the development of training programmes. A parallel relationship between Industry and technical training Institutions could lead to the latter getting out of touch with employers' requirements and may be partly responsible for the occasional difficulty faced by employers in putting fresh ''technicians'' into immediate productive employment. Besides Technical Institutes some Government Departments, Public Corporations and a rather few private establishments provide facilities and sponsor training programmes to meet the specialized requirements of their individual operations. In such a crucial area of manpower training and development where the nation's supply falls far short of demand it is desirable that the private sector should contribute more than at present towards providing training facilities and that training programmes and the use of training facilities in both sectors of the economy are co-ordinated in the interest of economy and efficient utilization.

The nation's supply of tradesmen comes from Government Trade Centres, Trade Schools run by Public Corporations like the Electricity Corporation of Nigeria and the Nigerian Railway Corporation; trade schools run by private agencies and apprenticeship systems in large industries and street-corner workshops. Employers' preference is clear that skills should be imparted to trainees under working conditions through apprenticeship and on-the-job. Trade Schools run by Public Corporations and training programmes in large industries and street corner workshops, more or less, meet these requirements. So much cannot be said for Government Trade Centres and trade schools run by private agencies removed as they are from actual working conditions. It may be that the role of these two types of institutions in skill-imparting may have to reviewed.

TABLE 1

EDUCATIONAL QUALIFICATION BY SECTORS: POSITION

Sectors	Total Number	Post Primary No.	Post Primary %	Post Secondary No:	Post Secondary %	University No:	University %
Senior							
Agriculture	45	10	22.1	2	4.4	33	73.2
Mining	435	2	0.4	73	16.7	356	81.9
Manufactures	391	30	7.6	107	27.3	242	62.0
Construction	130	-	-	36	27.6	94	72.2
Utilities	174	8	4.5	41	23.5	125	71.7
Commerce	223	19	8.5	99	44.3	105	47.0
Transport	765	89	11.6	122	15.9	552	72.3
Service	79	4	5.0	12	15.1	61	77.2
Total Senior	2,242	162	7.2	492	20.8	1,568	70.0
Intermediate							
Agriculture	229	170	74.2	51	22.1	8	3.4
Mining	1,043	835	80.1	120	11.5	-	-
Manufactures	940	472	50.2	197	20.9	20	2.1
Construction	300	170	56.6	139	46.2	1	0.3
Utilities	107	40	37.3	67	62.6	-	-
Commerce	602	311	51.7	218	36.2	60	9.9
Transport	1,868	1,046	55.9	382	20.5	5	0.3
Service	67	26	38.7	7	10.3	16	23.8
Total Intermediate	5,156	3,070	59.5	1,181	22.9	109	2.1
Skilled/Semi-Sk							
Agriculture	1,199	639	53.3	-	-	-	-
Mining	2,781	834	30.0	-	-	-	-
Manufactures	6,853	2,847	41.5	61	0.9	-	-
Construction	4,171	930	22.3	-	-	-	-
Utilities	962	935	97.2	27	2.8	-	-
Commerce	4,731	3,771	79.7	418	8.9	-	-
Transport	12,504	7,336	58.7	26	0.2	-	-
Service	818	301	36.8	-	-	-	-
Total Sk/Semi-Sk.	34,019	17,594	51.7	531	1.6	-	-

TABLE 2

TYPE OF TRAINING BY SECTORS

Sectors	Total Number (1)	None (2)		Apprenticeship (3)		On the Job Work (4)		Apprenticeship On-the-job Inservice (5)		Total In-Service (6)		Total Training (7)	
Senior		No.	%	No.	%	No.	%	No	%	No.	%	No.	%
Agriculture	45	4	8.8	-	-	11	24.5	18	40.0	30	66.6	41	91.2
Mining	435	24	5.5	-	-	175	40.2	225	51.7	236	54,2	411	94.5
Manufacturing	391	137	34.9	23	5.8	121	31.0	32	8.3	110	28.1	255	65.1
Construction	130	72	55.3	-	-	29	22.0	27	20.7	29	22.3	58	44.7
Utilities	174	102	58.6	-	-	-	-	-	-	72	41.4	72	41.4
Commerce	223	78	35.0	1	0.4	99	44.2	25	11.2	46	20.6	145	65.0
Transport & Com.	765	473	61.8	76	9.9	44	5.8	125	16.6	172	22.5	292	38.2
Service	79	77	97.5	-	-	2	2.5	-	-	-	-	2	2.5
Total Senior	2,242	966	43.1	100	4.4	481	21.5	454	20.2	695	30.9	1,276	56.9
Intermediate													
Agriculture	299	4	1.3	23	7.8	206	69.0	43	14.4	65	21.8	295	98.7
Mining	1,043	101	9.7	-	-	418	40.1	400	38.3	523	50.1	942	90.3
Manufacturing	940	169	17.9	107	11.38	432	45.95	197	20.95	227	24.1	771	82.0
Construction	300	124	41.3	2	0.6	152	50.6	22	7.3	22	7.3	176	58.7
Utilities	107	42	39.3	-	-	2	1.8	16	14.9	63	58.8	65	60.7
Commerce	602	195	32.3	4	0.6	217	36.0	129	21.4	186	30.9	408	67.7
Transport & Com.	1,868	549	29.4	311	16.65	368	19.70	70	3.75	658	35.2	1,319	70.6
Service	67	50	74.6	7	10.4	4	5.9	-	-	6	8.9	17	25.4
Total Intermediate	5,156	1,234	23.4	453	8.8	1,799	34.9	876	16.9	1,750	33.9	3,992	76.4
Skilled/Semi-Sk													
Agriculture	1,191	291	24.4	173	14.5	663	55.7	36	3.0	62	5.2	900	75.6
Mining	2,781	234	8.4	998	35.9	1,518	54.6	25	0.9	25	0,9	2,547	91.6
Manufacturing	6,353	1,706	24.9	619	9.0	4,013	58.6	386	5.6	513	7.5	5,147	75.1
Construction	4,171	851	20.4	229	5.5	2,986	71.6	4	0.1	146	3.5	3,362	80.6
Utilities	962	429	44.6	-	-	182	18.9	351	36.5	351	36.5	533	55.4
Commerce	4,731	2,029	42.9	193	4.1	962	20.3	1,405	29.7	1,547	32.7	2,702	57.1
Transport & Com.	12,504	4,839	38.7	3,382	27.1	2,401	19.2	275	2.2	1,882	15.1	7,665	61.3
Service	818	542	66.2	79	9.6	133	16.2	-	-	65	7.9	277	33.8
Total Sk/Semi-Sk.	34,011	10,919	32.1	5,673	26.7	12,858	37.8	2,482	6.3	4,591	13.5	23,134	68.0

TABLE 3

LENGTH OF EXPERIENCE REQUIRED BY SECTORS

Sectors	Total	None		Less than 6 Months		6 - 12 Months		1 - 2 Years		2 - 3 Years		3 - 5 Years		More than 5 Years		Experience Substitute: Education, Training Qualification	
Senior		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Agriculture	45	6	13.3	-	-	-	-	-	-	2	4.4	21	46.6	16	35.5	3	6.6
Mining	435	397	91.2	-	-	-	-	2	0.4	-	-	11	2.5	25	5.7	417	95.8
Manufacturing	391	97	24.8	7	1.7	2	0.5	61	15.6	48	12.2	60	15.3	120	29.6	178	45.5
Construction	130	13	10.0	-	-	1	0.7	15	11.5	15	11.5	20	15.3	66	50.7	77	59.3
Utilities	174	123	70.6	-	-	-	-	-	-	-	-	6	3.4	45	25.8	51	29.3
Commerce,	223	60	26.9	-	-	-	-	7	3.1	15	6.7	32	14.3	108	48.8	147	66.0
Transport	765	213	27.8	-	-	18	2.3	67	8.7	118	15.4	83	10.9	265	34.6	96	12.6
Service	79	-	-	-	-	-	-	28	35.4	22	27.8	18	22.7	11	13.8	3	3.8
Total Senior	2,242	908	40.5	7	0.3	21	0.9	179	7.9	219	9.8	251	11.2	656	29.3	972	43.4
Intermediate																	
Agriculture	229	141	61.5	-	-	2	0.8	18	7.8	-	-	57	24.8	11	4.8	6	2.7
Mining	1,043	333	31.9	-	-	-	-	216	20.7	6	0.6	21	2.0	465	44.6	994	95.3
Manufacturing	940	427	45.4	4	0.4	15	1.6	89	9.5	49	5.2	231	24.6	123	13.1	246	26.2
Construction	300	110	36.6	1	0.3	1	0.3	73	24.3	12	4.0	39	13.0	64	21.3	114	38.0
Utilities	107	26	24.2	-	-	-	-	-	-	20	18.6	37	34.5	24	22.4	81	75.8
Commerce	602	181	30.0	2	0.3	49	8.1	64	10.6	11	1.9	145	24.0	149	24.7	315	52.3
Transport	1,868	850	45.5	-	-	4	0.2	14	0.8	62	3.3	615	32.9	318	17.0	360	19.3
Service	67	6	8.9	-	-	-	-	2	2.9	8	11.9	19	28.3	32	47.7	6	9.0
Total Intermediate	5,156	2,072	40.2	7	0.1	69	1.3	475	9.2	241	4.0	1,163	22.6	1,185	22.9	2,122	41.2
Skilled/Semi-sk.																	
Agriculture	1,199	706	58.9	-	-	-	-	-	-	37	3.1	446	37.2	6	0.5	30	2.5
Mining	2,781	2,142	95.0	3	0.1	-	-	6	0.2	83	3.0	45	1.6	-	-	2,687	96.6
Manufacturing	6,853	4,614	67.3	104	1.5	340	4.9	895	13.1	481	7.0	214	3.1	178	2.6	2,185	31.9
Construction	4,171	1,239	29.7	659	15.8	58	1.4	1,247	29.9	196	4.7	142	3.4	609	14.6	2,063	49.5
Utilities	962	853	88.7	-	-	-	-	-	-	96	10.0	12	1.2	-	-	108	11.2
Commerce	4,731	3,272	69.2	279	5.9	55	1.2	306	6.5	176	3.7	625	13.2	4	0.8	2,393	50.6
Transport	12,504	10,458	83.6	1	0.0	37	0.3	767	6.1	205	1.6	969	7.7	63	0.5	923	7.4
Service	818	259	31.7	-	-	95	11.6	1	0.1	190	23.2	55	6.7	217	26.5	286	35.0
Total Sk/Semi-Sk.	34,919	23,543	69.2	1,046	3.1	585	1.7	3,222	9.5	1,464	4.3	2,508	7.4	1,077	3.2	10,677	31.4

TABLE 4

LENGTH OF EXPERIENCE AND LEVEL OF EDUCATION BY MANPOWER CATEGORIES.

Length of Experience	Total Number	Some University Education		Full University		Post Graduate		Total University	
		No.	%	No.	%	No.	%	No.	%
A. Senior Category									
No Experience	909	4	0.4	656	72.2	33	3.6	697	76.7
0 - 12 months	28	-	-	24	85.7	-	-	24	85.7
1 - 3 years	400	-	-	326	81.5	5	1.2	331	82.7
Not less than 3 years	905	15	1.7	488	53.9	4	0.4	507	56.0
Total Senior	2,242	19	0.8	1,494	66.6	41	1.8	1,559	69.5
Intermediate Category									
No Experience	2,074	2	0.1	15	0.7	-	-	17	0.8
0 - 12 months	79	14	17.7	33	41.7	-	-	47	59.4
1 - 3 years	650	-	-	16	2.4	-	-	16	2.4
Not less than 3 years	2,353	-	-	31	1.3	-	-	31	1.3
Total Intermediate	5,156	16	0.3	94	1.8	-	-	110	2.1

TABLE 5.

EDUCATION AND TRAINING PATTERN BY OCCUPATIONS

OCCUPATIONAL GROUPS	TOTAL NUMBER	Post Primary Up To Secondary Level		Post Secondary & University		Training on the Job & Apprenticeship		In Service		Total Training	
		No.	%	No.	%	NO.	%	No.	%	No.	%
Engineers	472	18	3.9	450	95.5	61	12.9	223	47.3	285	60.3
Other Professionals	610	51	8.4	539	88.4	124	21.8	156	25.6	293	48.1
Junior Ad./Supervisors	2,924	1,942	66.4	436	14.9	1,655	56.6	991	33.9	2,614	89.4
Technical	1,480	722	48.8	589	39.8	474	32.0	468	31.6	879	59.4
Administration	849	82	9.7	743	87.5	301	35.5	202	23.8	504	59.4
Clerical	11,208	9,796	87.4	493	4.4	3,138	28.0	1,883	16.8	5,021	44.8
Salesmen	1,316	819	62.2	404	30.7	342	26.0	358	27.2	707	53.7
Farmers	209	5	2.3	10	4.7	9	4.3	15	7.0	24	11.5
Miners	4,215	93	2.2	-	-	493	11.7	-	-	497	11.8
Drivers, Tel. Operators	3,123	831	26.6	-	-	1,974	63.2	87	2.8	872	65.9
Transport/Communications	4,297	1,379	32.1	116	2.7	2,411	56.1	1,199	27.9	3,627	84.4
Building Trades	6,279	2,543	40.5	-	-	4,565	72.7	597	9.5	5,161	82.2
Metal/Mechanical	4,343	1,503	34.6	-	-	3,079	70.9	513	11.8	3,587	82.6
Other Production	3,354	795	23.7	-	-	2,633	78.5	97	2.9	2,747	81.9
Services	3,234	17	0.5	3	0.1	314	9.7	49	1.5	365	11.3
Labourer	14,901	89	0.6	-	-	89	0.6	-	-	89	0.6

TABLE 6

EMPLOYMENT PATTERN BY SIZE OF EMPLOYING ESTABLISHMENT

Occupational Level	Total Number in Sample	Small (10-99 Employees)		Medium (100-499 Employees)		Large (Not less than 500 Employees)	
Senior		No.	%	No	%	No	%
Agriculture	45	-	-	4	8.8	23	91.2
Mining	435	4	0.8	3	0.6	429	98.6
Manufacturing	391	40	10.3	234	59.8	116	29.7
Construction	130	7	5.3	16	12.2	107	82.4
Utilities	174	-	-	-	-	174	100.0
Commerce	223	26	11.5	107	47.9	77	34.5
Transport& Com.	765	31	4.1	38	5.0	694	90.7
Service	79	-	-	79	100.0	-	-
Total Senior	2.242	108	4.8	481	21.5	1,620	72.3
Intermediate							
Agriculture	229	-	-	14	6.1	215	93.8
Mining	1,040	7	0.7	29	1.8	1,011	97.2
Manufacturing	940	78	8 3	419	44.6	443	47.1
Construction	300	15	5.0	46	15.3	239	79.6
Utilities	107	-	-	-	-	107	100.0
Commerce	602	79	13.1	87	14.4	434	72.1
Transport & Com.	1,868	50	2.7	93	5.0	1,724	92.3
Service	67	-	-	67	100.0	-	-
Total Inter.	5.153	229	4.4	745	14.5	4,172	80.9
Skilled/Semi-Skd.							
Agriculture	1,199	-	-	26	2.2	1,173	97.8
Mining	2.781	25	0.9	78	2.8	2,681	96.4
Manufacturing	6,853	644	9.4	3,262	47.6	2,954	43.1
Construction	4,171	54	1.3	167	4.0	3,942	94.5
Utilities	962	-	-	-	-	962	100.0
Transport & Com.	12,504	138	1.1	1,000	8.0	11,366	90.9
Commerce	4,731	435	9.2	937	19.8	3,364	71.1
Service	818	-	-	818	100.0	-	-
Total Sk./Se.-Skd.	34,019	1,296	3.8	6,288	18.5	26,442	77.7

ANNEX 1

SURVEY OF EDUCATIONAL AND TRAINING CONTENT OF OCCUPATIONS (1966) - PRIVATE SECTOR SENIOR CATEGORY

OCCUPATION	EDUCATIONAL QUALIFICATION MOST COMMONLY REQD.	SPECIAL TRAINING COMMONLY REQD. BESIDES FORMAL EDUCATION Type of Training and Duration	EXPERIENCE QUAL. FOR EFFICIENT PERFORMANCE OF THE JOB
Architects and Town Planners	University Degree in Architecture	No training reqd.	Experience of 5 yrs or more required.
ENGINEERS:			
Civil	University Degree in Civil Engineering	No training reqd.	No experience reqd.
Electrical	University Degree in Electrical Engineering	A full time in-service training at Managerial Level for a period of 3 years (Conditions reqd. by the largest employer)	No experience reqd.
Mechanical	University Degree in Mechanical Engineering	A full time in-service training at Managerial level for a period of 2-3 years (Conditions reqd. by the largest Employer)	In some cases no experience is reqd. while in others between 2-5 yrs. experience is reqd.
Mining	University Degree in Mining Engineering	In-service training (full time) at supervisory level for about 3 years	No experience reqd.
Production	University Degree in Production Engineering	A full time in-service training at Managerial level for a period of 1-2 yrs for those not holding a degree in Production Engineering. No training is reqd. for those with a degree in Production Engineering	Duration of experience ranges from 1-5 yrs, depending on the basic educational qualification
Others:	University Degree in Engineering	No training reqd.	Duration of Experience varies from 2-3 yrs and 3-5 yrs respectively.
Surveyors	University Degree or Post-Sec. Cert.	Those with a degree require no training while the others reqd. in-service training for not less than 3 years duration.	Experience of 1-2 yrs reqd. for those with no University Degree.
Chemists	University Degree in Science	In-service training at full time for a period of 3-6 months, and on-the-job training from 1-2 yrs.	Generally no experience is reqd. and where necessary it is not more than 6 months.
Pyhsical Scientists (N.E.C.)	University Degree in Science	In-service training (full time) at supervisory level for 1-2 years	No experience reqd.
Agronomists, Silvicultural and Horticultural Scientists	Post-Sec. Cert. and Diploma or Short Course	No training reqd.	No experience reqd.

SURVEY OF EDUCATIONAL AND TRAINING CONTENT OF OCCUPATIONS (1966) - PRIVATE SECTOR SENIOR CATEGORY

OCCUPATION	EDUCATIONAL QUALIFICATION MOST COMMONLY REQD.	SPECIAL TRAINING COMMONLY REQD. BESIDES FORMAL EDUCATION Type of Training and Duration	EXPERIENCE QUAL. FOR EFFICIENT PERFORMANCE OF THE JOB
Physicians, Surgeous and Dentists	University Degree or Post-graduate Degree in Medicine or Dentistry	No training reqd.	No experience reqd.
Professional Medical Workers	Post-Sec. Cert. and a Diploma or Short course	No training reqd.	No experience reqd.
Jurists	University Degree in Law	No training reqd.	No experience reqd.
Writers, Authors, Editors, Journalists	University Degree in Arts or Science	No training reqd.	Experience ranging from 1-5 yrs.
Accountants & Auditors	University Degree in Business or Econs. (b) Post-Sec. Education (Comm) Specialised Course or Diploma Course in Accountancy	No training reqd.	Experience ranging from 1-5 yrs reqd. in a large number of cases while a few others req. no experience.
Librarian & Archivists	A University Degree or Post-Sec. Cert. and a Diploma or Short Course	Less than 3 months training reqd. and in some cases no training is reqd.	No experience reqd.
Social Workers	Post-Sec. Cert. and Diploma or Short Course	3-6 months training	No experience reqd.
Mathematicians, Actuaries and Statisticians	University Degree in Arts or Science	Training from 3-12 months, and with in-service training at Managerial level (full time)	No experience reqd.
Technical Officers	University Degree in Science	Majority need in-service training at supervisory level (full time from 1-2 yrs.	Generally no experience is reqd.
Air-Craft Pilots	A University Degree preferably in Science	In-service training at full time 2-3 years	Experience ranging from 1-5 yrs is reqd.
DIRECTORS, MANAGERS, WORKING PROPRIETORS: Mining & Quarrying	Either a University Degree or Post-Sec. Cert.	A full time Managerial in-service training for a period of 3 yrs or over	Experience of 2-5 yrs duration is reqd.
Manufacturing	A University Degree Preferably in Business or Economics	Either no training or a short in-service training for about 3-6 months	Experience of between 3-5 yrs or more is reqd.
Construction	University Degree in Engineering	No training is reqd. but some employers req. 6-12 months full time in-service training at Managerial level	Experience of 2-3 yrs and sometimes up to 5 years is reqd.
Electricity, Gas, Water and Sanitary Services	University Degree in Engineering	No training reqd.	Experience of up to 5 yrs is reqd.
Banks & other Financial Institutions Insurance and Real Estate	A University Degree in Business and Economics or Post-Sec. Cert. (Commercial)	In-service training at Managerial level (full time) for a period ranging from 6-12 months	Experience of up to 5 yrs is read.
Wholesale & Retail Trade	A University Degree or Post-Sec. Cert. (Commercial)	In-Service training (full time) for those with a lower qualification and for the others no training is reqd.	Experience ranging from 3-5 yrs or over is reqd.
Transport, Storage and Communication	Degree in Business and Economics	A large number of employers req no training while the others need in-service training at Managerial level (full time) for 2-3 yrs.	Experience of 5 yrs or more reqd.
Service Industries	University Degree in Business Econs. & Technology, Post-Sec. Education (Commercial)	No training reqd.	Experience of 3-5 yrs or over is reqd.
Others	A University Degree	A great number reqs. less than 3 months training, while a few others need in-service training (full time) for about 6-12 months	Experience of up to 5 yrs is reqd.

ANNEX 2

SURVEY OF EDUCATIONAL AND TRAINING CONTENT OF OCCUPATIONS (1966) - PRIVATE SECTOR INTERMEDIATE CATEGORY

OCCUPATION	EDUCATIONAL QUALIFICATION MOST COMMONLY REQD.	SPECIAL TRAINING COMMONLY REQD. BESIDES FORMAL EDUCATION Type of Training and Duration	EXPERIENCE QUAL. FOR EFFICIENT PERFORMANCE OF THE JOB
Junior Management and Administrative Staff	(a) Post-Sec. Education (Commercial) (b) Sec. Grammar Education & (c) University Degree in Business or Economics	In-Service training at Supervisory level (full time) from 3 to 6 months	Generally, experience ranging from 3-5 yrs or over is reqd.
Nurses and Midwives	Secondary Grammar Education	Usually training in Nursing and Midwifery takes about 3-4 yrs before being appointed as Nurses and Midwives.	Experience from 2-3 years is reqd.
Painters, Artists	(a) Post-Sec. Education (Tech) (b) Secondary Grammar Education	In-Service training at skilled level (full time) for 3 yrs and above	Experience from 3-5 years reqd.
Draughtsmen	Post-Secondary Education (Tech)	In-Service training at skilled level (full time) from 1-2 years	No experience reqd.
Actors, Musicians, Directors, Radio and Television Announcers	Post-Secondary Education (Diploma)	No Training required	Experience from 3-5 years reqd.
Book-Keepers, Accounting and Audit Assistants	Post Primary Certificate (Commercial)	In-service training at skilled level (full time) ranging from 6-12 months	Generally, experience ranging from 2-5 yrs or over is reqd.
Book-keeping Clerk	(a) Sec. Grammar Education (b) Sec. Commercial Education	In-service training at skilled level (part-time) reqd. for 3 months or less	Generally, no experience is reqd. but in some cases experience varying from 6 months to 5 yrs is reqd.
Secretary-Stenographer	Post-Sec. Cert. (Commercial)	3-6 months training	No experience reqd.
Stenographer-Typist	Post-Secondary Education (Sixth Form)	3-6 months training	No experience reqd.
Typist	Post-Primary Cert. (Business or Commercial Education)	No training reqd.	No experience reqd.
Work Supervisors and Foremen	(a) Post-Prim. Education (Trade Centre) (b) Primary School Certificate	(a) In-service training at supervisory level (full time) for 3 yrs and above (b) In-service training at skilled level (full time) for 1-3 years	Experience of 3-5 yrs is reqd.
Engineering Assistants	Post-Sec. Education (Tech. Institute).	No training reqd.	No experience reqd.
Technical Assistants	Secondary Education (Tech)	Generally, no training is reqd. but in some cases in-service training at skilled level (full time) 6-12 months is reqd.	No experience reqd.

SURVEY OF EDUCATIONAL AND TRAINING CONTENT OF OCCUPATIONS (1966) - PRIVATE SECTOR INTERMEDIATE CATEGORY

OCCUPATION	EDUCATIONAL QUALIFICATION MOST COMMONLY REQD.	SPECIAL TRAINING COMMONLY REQD. BESIDES FORMAL EDUCATION Type of Training and Duration	EXPERIENCE QUAL. FOR EFFICIENT PERFORMANCE OF THE JOB
Statistical Assistants	Post-Sec. Cert. (Commercial)	6-12 months in-service training at skilled level (full time)	Generally, 3-5 yrs experience is reqd.
Other Intermediate Staff	Sec. Sch. Cert. (Commercial)	Less than 3 months in-service training at supervisory level (full time)	Experience of 3-5 yrs. or more is required.
Salesmen of Insurance, Rent Estate, etc.	(a) Sec. Cert. (Commercial) (b) Post-Sec. Cert. (Commercial)	No training reqd.	Experience reqd. ranges from 1 to 5 yrs.
Salesmen	(a) Sec. Cert. (Commercial) (b) Post-Primary (Business and Commercial Education	(a) Apprenticeship and In-service training for over 3 yrs. (b) 3-6 months on-the-job training (non-apprenticeship)	Generally, no experience is reqd.
Forest Assistants	Secondary Certificate	2-3 yrs. in-service training at supervisory level (part-time)	No experience reqd.
Transport Inspectors	Post-Prim. Certificate (Business and Commercial)	6-12 months in-service training at skilled level (full time)	Experience is reqd. from 3-5 yrs. or more

ANNEX 3

SURVEY OF EDUCATIONAL AND TRAINING CONTENT OF OCCUPATIONS (1966) - PRIVATE SECTOR SKILLED CATEGORY

OCCUPATION	EDUCATIONAL QUALIFICATION MOST COMMONLY REQUIRED	SPECIAL TRAINING COMMONLY REQD. BESIDES FORMAL EDUCATION Type of Training and Duration	EXPERIENCE QUAL. FOR EFFICIENT PERFORMANCE OF THE JOB
Clerical Workers (Not elsewhere classified)	Secondary Grammar Certificate	Generally no training is required	No experience reqd.
Bank Tellers	Secondary Grammar School Cert.	In-service training at skilled level (part-time) from 3-12 months reqd.	Generally no experience is reqd., but a few employers demand experience of 3-5 years.
Office Machine Operators	Some require Primary School	They req. 3-12 months in-service training at skilled level (full-time)	No experience reqd.
Commercial Travellers & Manufacturers' Agents	Less than Std. VI or Primary VI Certificate	No training reqd.	No experience reqd.
Store Clerks	Post-Sec. Commercial Educat. (no cert.)	No training reqd.	No experience reqd.
Well-drillers & Related Workers	Primary School Cert.	3-6 months on-the-job training (Non-apprenticeship)	No experience reqd.
Ship Crew and Boatmen	Secondary Grammar School Certificate	6-12 months in-service training at skilled level (full time)	No experience reqd.
Railway-engine Drivers & Firemen	Primary School Certificate	Over 3 yrs apprenticeship training	(a) Some req. 3-5 yrs experience (b) Others req. no experience
Motor-vehicle Drivers/ Salesmanship	Prim. or Std. VI Cert. A few have Post-Prim. Educat. in Commerce but no Certificate	Some req. 3-6 months training and others need less than 3 months in-service training at skilled level (full time) while a few reqs. no training.	No experience reqd.
Telephone and Telegraph Operators	Generally Sec. Sch. Cert. (Technical) is reqd.	3-6 months in-service training at skilled level (full-time)	No experience reqd.
Radio-Communication Operators	Sec. Sch. Cert. (Technical)	6-12 months in-service training at skilled level (full-time)	No experience reqd.
Road-Transport Conductors	Prim. VI or Std. VI Certificate	Less than 3 months on-the-job training (non-apprenticeship)	1-2 yrs of experience
Spinners, Weavers, Knitters, Dyers and Related Workers	Some req. Prim. VI or Std. VI Cert.	3-6 months on-the-job training (non-apprenticeship)	

SURVEY OF EDUCATIONAL AND TRAINING CONTENT OF OCCUPATIONS (1966) - PRIVATE SECTOR SKILLED CATEGORY

OCCUPATION	EDUCATIONAL QUALIFICATION MOST COMMONLY REQD.	SPECIAL TRAINING COMMONLY REQD BESIDES FORMAL EDUCATION Type of Training and Duration	EXPERIENCE QUAL. FOR EFFICIENT PERFORMANCE OF THE JOB
Workers in Transport and Communication	Prim. VI or Std. VI Cert.	Over 3 apprenticeship training	No experience reqd.
Tailors, Cutters and Related Workers	Some req. Prim. VI or Std. VI Cert. while others req. no cert.	Normally apprenticeship training is reqd for about 2-3 yrs to qualify as a tailor	Some reqd. 3-5 yrs. experience, Others req. no experience
Leather Workers	Prim VI or Std. VI Cert.	Less than 3 months on-the-job training (Non-apprenticeship)	No experience reqd.
Metal Workers	Prim. VI or Std. VI Cert.	Generally 2-3 yrs. apprenticeship training is reqd	No experience reqd.
Precision Instrument Makers, Clock-Makers and Repairmen	(a) Some req. Sec. (Gramm) Cert. or education with no cert. (b) Others req. Prim. Sch. Cert.	Most of them req. over 3 yrs, in-service training at skilled level (full-time)	Most of them req. 3-5 yrs. experience.
Tool-makers, Die-Makers, Fitter-Machinist & Machine-toolsetters	Post-Prim. Cert. (technical) and Prim. VI or Std. VI Cert.	Many req. over 3 yrs, while those with technical education need 3-6 months in-service training at skikked level (full-time,	No experience reqd.
Mechanics	Some req. some Post-Prim. education (Trade Centre), Others only Prim. VI or Std. VI Cert.	In-service training at skilled level (full-time) from 2-3 yrs and over	Some req. 3-5 yrs experience
Sheet-metal Workers	Prim. VI or Std. VI Cert.	2-3 yrs. apprenticeship training	No experience reqd.
Plumbers & Pipe Fitters	(a) Post-Prim. Cert. (Trade Centre) (b) Post-Prim. education (no cert.)	Generally over 3 yrs. training is req. but some also req. 6-12 months in service training at skilled level (full-time)	Some req. 3-5 yrs. experience, others no experience
Welders & Flame Cutters	Some req. Post-Prim. cert. (tec.) others Prim. VI or Std. VI cert.	They req. 1-3 yrs. apprenticeship training	Some req. 5 yrs. experience, others none
Metal Plate & Strc. Workers	Prim. VI or Std. VI cert.	Over 3 yrs apprenticeship training	2-3 yrs. experience
Electrician, Elect. Repairmen & related workers	Post-Prim. Cert. (Trade Centre)	Generally they req. 3 yrs on-the-job training (non-app), while some req. 6-12 months apprt training, and others, none	No experience reqd.
Metal Workers	Few req. Sec. Cert. (Tec.) others Prim. Sch cert.	In-service training at skilled level (part-time) for 3-6 months & 1-3 yrs for those with no technical training.	No experience reqd.
Radio & Tele. Mechanics and Repairmen	Some req. Sec. cert. (Comm. or Business), others, Prim. VI or Std. VI	Generally 2-3 yrs apprenticeship training is reqd	Some req. 3-5 yrs. experience, others, none.
Telephone & Telegraph Installers & Repairmen	Sec. Cert. (Commercial or Business)	No training reqd.	Less than 6 months experience
Electrical Workers (N.E.C.)	Sec. (Grammar) cert.	1-2 yrs. in-service training at skilled level (full-time)	No experience reqd.
Carpenters & Joiners	Few req. Prim VI or Std. VI cert. others, none	Generally over 3 yrs, but in few 6-12 months in-service training at skilled level (full-time), others none	Most of them req. 1-2 years experience
Cabinet Makers	Post-Prim. cert. (Trade Centre)	Generally over 3 yrs in-service training (none-apprenticeship) is reqd	No experience required

SURVEY OF EDUCATIONAL AND TRAINING CONTENT OF OCCUPATIONS (1966) - PRIVATE SECTOR: SKILLED CATEGORY

OCCUPATION	EDUCATIONAL QUALIFICATION MOST COMMONLY REQUIRED	SPECIAL TRAINING COMMONLY REQUIRED BESIDES FORMAL EDUCATION Type of Training and Duration	EXPERIENCE QUAL. FOR EFFICIENT PERFORMANCE OF THE JOB
Sawyers & Operators	Prim. VI or Std. VI cert.	6-12 months on-the-job training (non-apprenticeship)	3-5 yrs. experience
Wood-workers	Prim. VI or Std. VI cert.	Some require over 3 yrs. apprenticeship training, others, 1-2 yrs. on-the-job (non-appren.)	Some req. 3-5 yrs. experience, others none.
Printers & Paper-hangers	Some Post-Prim. (Trade Centre) education; Others no education	On-the-job training (non-appren.) for over 3 yrs; apprenticeship training for 6-12 months.	Generally over 5 yrs. experience is req.
Bricklayers, Stonemasons, Tile-setters,	Prim. VI or Std. VI education (no certificate)	On-the-job training (Non-apprenticeship) for 3-6 months and sometimes up to 3 years	No experience required
Plasterers	Some req. Post-Prim. (T/Centre) education - no cert., others req. no education	On-the-job training (non-apprenticeship) for 6-12 months and sometimes for 3 yrs. or over	Less than 6 months experience
Cement Workers	No education reqd.	On-the-job training (non-apprenticeship) for 3 years	Less than 6 months experience
Insulation Appliers	Prim. VI or Std. VI Cert.	On-the-job training (non-apprenticeship) for 3 yrs or over	Less than 6 months experience
Construction Workers	No education reqd.	Some req. on-the-job training (non-apprenticeship) for 3 yrs or over and others req. no training.	Experience from 1-2 yrs.
Typesetters & Compositors	Sec. (Grammar) Cert.	On-the-job training (non-apprenticeship from 2-3 years	No experience reqd.
Printing Pressman	Sec. (Grammar) Cert.	In-service training at skilled level (part-time) from 2 to over 3 years	No experience reqd.
Engravers	Prim. VI or Std. VI Cert.	Apprenticeship training for over 3 yrs	No experience reqd.
Photo-Engravers	Sec. (Grammar) Cert.	No training reqd.	Experience from 2-3 yrs.
Print Workers	Prim. VI or Std. VI Cert.	On-the-job training (non-apprenticeship) for 3 yrs. or over.	No experience reqd.
Millers	Prim. Sch. Education (no cert.)	Generally 6-12 months on-the-job training (non-apprenticeship) is reqd. but some req. 3-6 months apprenticeship training.	Some req. experience from 6-12 months, others req. no experience
Bakers and Pastry-cooks	Some req. Prim. VI or Std. VI Cert. others req. Prim. Sch. education (no cert.)	On-the-job training (non-apprenticeship from 6 months to 2 yrs	Experience reqd. from 6-12 months
Brewers	Prim. VI or Std. VI education (no cert.)	No training reqd.	No experience reqd.

SURVEY OF EDUCATIONAL AND TRAINING CONTENT OF OCCUPATIONS (1966) - PRIVATE SECTOR: SKILLED CATEGORY

OCCUPATION	EDUCATIONAL QUALIFICATION MOST COMMONLY REQD.	SPECIAL TRAINING COMMONLY REQD. BESIDES FORMAL EDUCATION	EXPERIENCE QUAL. FOR EFFICIENT PERFORMANCE OF THE JOB
		Type of Training and Duration	
Butchers and Meat-cutters	No education	Apprenticeship training from 6-12 mons.	No experience reqd.
Dairy Workers	Prim. VI or Std. VI education (no certificate	On-the-job training (non-apprenticeship) from 3-6 months	No experience reqd.
Food Processors	Some req. Prim. VI/Std. VI education (no cert.) others req. no education	Some req. in-service training at a skilled level (full-time) from 3-6 months others req. no training.	No experience reqd.
Chemical and Related Process Workers	Prim. VI or Std. VI Cert.	In-service training at supervisory level (full-time) from 3-6 months	No experience reqd.
Chemical Workers	Post-Prim. Cert. (Trade Centre)	On-the-job training (non-apprenticeship) from 6 months to 2 yrs.	No experience reqd.
Tobacco Preparers and Tobacco Product Makers	Prim. VI or Std. VI Cert.	No training reqd.	Experience reqd. from 2-3 yrs
Tyre Builders, Vulcanisers, Related Rubber Product Makers	Prim. VI or Std. VI Cert.	Some req. 2-3 yrs on-the-job training (non-apprenticeship) others req. no training	No experience reqd.
Photographic Darkroom Workers	Some req. Sec. (Gramm) Cert. others need Prim. VI or Std. VI Cert.	In-service training at supervisory level (full-time) from 6-12 months	Some req. experience from 6-12 months, others req. no experience
Paper-product Makers	Some req. Post-Prim. (technical) Cert. others req. Prim. VI or Std. VI Cert.	On-the-job training plus in-service training from 6-12 months, and on-the-job training (non-apprenticeship) from 3-6 months	No experience reqd.
Miscellaneous Craftsmen; (Broom-maker, Candle-maker, match-maker, Coil-maker etc.)	Post-Prim. Cert. (Trade Centre)	Generally apprenticeship training from 3-6 months is reqd. but few req. on-the-job training (non-apprenticeship) from 1-2 yrs.	No experience reqd.
Operators of Stationary Engines, Cranes and Hoists, etc.	Prim. VI or Std. VI Cert.	Apprenticeship training from 1-2 yrs is reqd. by some of them while the others req. on-the-job training (non-apprenticeship) from 6-12 months	No experience reqd.
House-Keepers, Stewards, Matrons	Prim. VI or Std. VI Cert.	No training reqd.	1-2 yrs of experience
Cooks	Prim. VI or Std. VI Cert.	Some req. on-the-job training from 3-6 months, others req. no training	Generally 2-3 yrs experience, but few req. no experience
Maids, Valets	Prim. VI or Std. VI Cert.	Few req. 3-6 months, in-service training at skilled level (full-time), others req. no training.	Experience reqd. from 3-5 yrs
Barbers, Hairdressers, Beauticians	Generally Post-Prim. education (no Cert.) is reqd., but some also req. Prim. VI or Std. VI Cert.	Few req. 3-6 months in-service training at skilled level (full-time), others req. no training.	Experience reqd. from 6 months to 2 yrs.

SURVEY OF EDUCATIONAL AND TRAINING CONTENT OF OCCUPATIONS (1966)

PRIVATE SECTOR UNSKILLED CATEGORY

OCCUPATION	EDUCATIONAL QUALIFICATION MOST COMMONLY REQD.	SPECIAL TRAINING COMMONLY REQD. BESIDES FORMAL EDUCATION Type of Training and Duration	EXPERIENCE QUALIFICATION FOR EFFICIENT PERFORMANCE OF THE JOB.
Farm Workers	No Education reqd.	No training reqd.	No experience reqd.
Miners & Quarrymen	No Education reqd.	No training reqd.	No experience reqd.
Railway Conductors & Breakmen	Primary School Certificate	No training reqd.	No experience reqd.
Labourers	(a) Prim. Cert. (b) No Education reqd.	No training reqd.	No experience reqd.
Packers & Labellers	(a) Prim. Cert. (b) Less than Prim. VI or Std. VI Cert. and (c) No Education reqd.	Generally, no training is reqd. but in a few cases less than 3 months training on-the-job is reqd.	No experience reqd.
Longshoremen & Freight Handlers	No Education reqd.	No training reqd.	No experience reqd.
Guards & Watchmen	No education reqd.	No training reqd.	No experience reqd.
Building Caretakers, Cleaners	Primary Cert.	No training reqd.	No experience reqd.
Waiters, Bartenders	Primary Cert.	No training reqd.	No experience reqd.
Launderers Dry-cleaners, Pressers	No Education reqd.	No training reqd.	No experience reqd.

ANNEX 4

National Manpower Board

1966 Survey of Educational and Training Content of Occupations

Establishment .....

Occupation .....

1. **Specific functions required to be performed on the job:**

2. **Educational qualification required for efficient performance of the job:**

3. **Special training, if any, required for efficient performance of the job:**

4. **Experience of same or similar type of work require for efficient performance of the job:**

5. **Difficulties, if any, experienced in recruiting persons with requisite qualification as in 2.3, and 4:**

6. **The general level of educational qualification, training and experience of persons at present on the job:**

   (a) **Educational:**

   (b) **Training:**

   (c) **Experience:**

7. **Salary range for this occupation (per day/month/year):**

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Guide to Recruitment and Selection for Manual Jobs.

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*MANUALS; *RECRUITMENT; *SELECTION; *PLACEMENT; *INDUSTRIAL PERSONNEL; EMPLOYMENT INTERVIEWS; EMPLOYMENT SERVICES; TESTS; JOB ANALYSIS; RECORDS (FORMS); QUESTIONNAIRES

Information on recruitment, selection, and placement of workers in manual jobs is provided in order that companies may have an idea of what procedures they should aim for. Since the essence of a recruitment and selection procedure is the detailed analysis of the job and its requirements, the physical and social environment of jobs and conditions of employment are discussed, incorporating the compilation and use of job specifications. Recruitment procedures, designing a selection procedure, the use of selection tests, and employment interviewing are followed by an example of an actual job selection scheme. Pertinent forms, questionnaires, sample job specifications and a list of available tests and their sources are appended. (CH)

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CARPET INDUSTRY TRAINING BOARD

GUIDE TO RECRUITMENT AND SELECTION FOR MANUAL JOBS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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SECTION ONE INTRODUCTION

During past years, an increased amount of attention has been given by companies in the carpet industry to the subject of operative training. Progress has been made in developing training schemes in companies covering a wide range of operative work. Training manuals describing how the training is given have been circulated to the companies involved.

In seeking to assess the economic benefits which better training has produced, it is necessary to consider to what extent companies are succeeding in attracting the right kind of people, particularly young people, in the first place. Better training pays; but only if it is accompanied by systematic provision for the recruitment and selection of the trainees. Bad selection is a costly business, because it often leads to an unnecessarily high labour turnover, particularly in the early weeks or months of a person's employment, together with excessive material wastage and low output in the case of many of those who stay. Good training may help to diminish these effects but only up to a point.

At present only a limited number of firms go any further in selecting applicants than a short interview by the departmental foreman who may be too busy to give this task much of his attention. No selection procedure will ever be 100% successful but it is likely that more systematic selection could yield highly profitable results for most companies when it is remembered that:

(a) The young boys engaged now will become the skilled operatives of the 1970s and 1980s on whom the reputation of the industry will so much depend.

(b) The young girls engaged now are in many cases going to get married and leave during the next 5/10 years, and there is not much time to recoup the costs of training them over this period, for companies to be able to afford to select them badly.

This manual is based partly on experience gained in introducing training schemes in various parts of the country. It must be emphasised that, where such things as selection tests are recommended, these proposals must not be regarded as authoritative. What works for one company may not help another whose requirements are slightly different. Enough information is, however, provided in this manual to give companies an idea of the kind of selection procedure they ought to be aiming for. It will still be necessary for each firm, by experiment to find out exactly which tests and which procedure meets its requirements best.

In this Introduction, it may be as well to provide brief definitions of the main terms to be used:

Recruitment

The activity whereby a reasonable number of people are induced to apply for jobs with a company.

Selection

The activity whereby a decision is made as to which of the applicants shall be made offers of employment by the firm.

Placement

The activity whereby a decision is made as to which job each applicant shall be allocated.

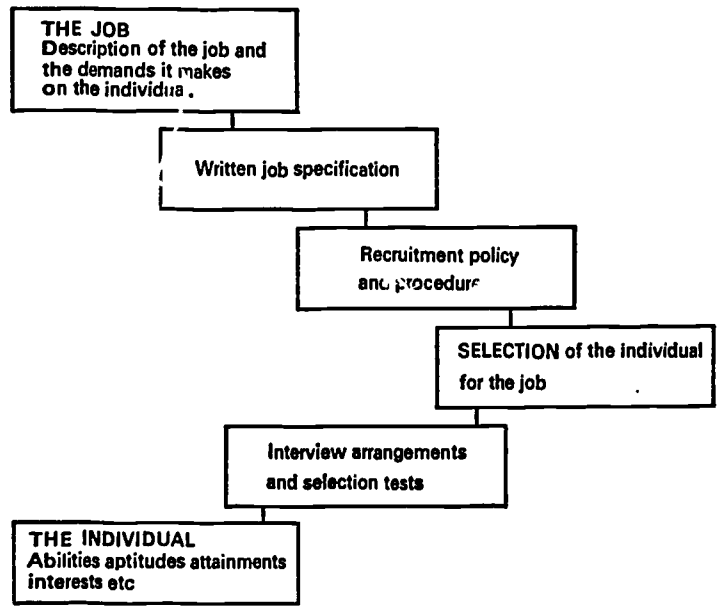
Obviously selection and placement may often be combined but not in every case.

Companies which feel that they require help and guidance in applying the general proposals in this manual to their own special requirements should contact the Carpet Industry Training Board.

SECTION TWO

GENERAL PRINCIPLES

The objective of any recruitment and selection procedure is to predict, for each job, which of the applicants are likely to be permanently satisfactory. As selection involves matching individuals to jobs, we need to have some general means of classifying and describing jobs to produce job specifications and some general means of summarising the abilities and aptitudes of individuals (ie an interviewing and testing procedure). Linking these two, to ensure that our selection methods are used economically, we need recruitment policies and procedures which will attract applicants for any job who include a reasonably high proportion of suitable people.
Diagramatically, this can be shown as follows:



The essential basis of a recruitment and selection procedure is the detailed analysis of the job and its requirements, expressed in terms of the demands the job will make on the individual: *the job specification*. It might be called an 'identi-kit' picture of the type of person likely to be successful. The specification enables us to advise the external agencies through whom applicants are found on the kind of person sought. It is also a guide to the selection methods we shall need to use in judging applicants to see how closely they fit our specification.

If the job is one which makes limited physical and mental demands on the individual, the chances of any applicant being able to fill the vacancy are obviously quite good. Here the problem is to ensure that the job is not so far below the individual's potential that it causes frustration and early leaving. For more difficult jobs, the chances of successful selection may be much less. Modern selection methods are intended to improve the chance of our being right and, at least, to ensure that we are never completely wrong.

This is done by eliminating personal judgment wherever possible and replacing it by objective tests. The selection procedure is also organised in such a way that no important factor is overlooked. At the same time, the procedure must be as simple, quick and economical as possible.
To summarise, a good selection procedure must meet as many as possible of the following criteria:

(1) Must be based on job analysis.

(2) Must at least identify those wholly unsuited to the job.

(3) Must, wherever possible, employ objective tests rather than subjective judgments.

(4) Must cover all important aspects of the job.

(5) Must be quick to administer.

(6) Must be simple to understand.

(7) Must be economical.

It is sometimes argued that anything elaborate or expensive in the way of selection methods is unnecessary and, indeed, wasteful in conditions of acute labour shortage. Since the 1939–45 war many firms have argued that selection of staff is really impossible since labour of all kinds is so scarce that one has to 'take what one can get'. The following points are worth making in this connection:

(1) If we are going to lower our selection standards when labour is scarce, we ought to know *exactly* what we are doing, ie how *far* we are lowering them. The supply/demand situation for labour in any one area tends to vary over time and standards of admission must be adjusted accordingly. We can only do this if we have systematic selection based on job analysis.

(2) Although we may find it difficult to attract a sufficient number of people to fill all our vacancies, we still have to decide in which particular jobs people should be placed. If there are 12 vacancies for girls as follows:

3 winding

5 machine operators

4 rectifiers

and we have only 8 applicants, we need to know how to assess the 8 in order to make the best use of their services. When labour is a scarce resource, *we have more not less need of good selection.*

(3) Most employers would admit that the system of indiscriminate acceptance of all applicants, unless they are obviously physically or mentally unsuitable, can lead to dismissals later on. Individuals may be engaged who prove to be accident-prone, or unable to absorb the minimum knowledge needed to do the work. This can lead to higher accident rates, higher costs of training, higher labour turnover, poor quality of work and dissatisfaction amongst other employees who, in team jobs, have to 'carry' the misfits. If only as a means of identifying potential misfits, systematic selection can pay for itself twice over.

SECTION THREE

JOB SPECIFICATIONS

(a) the use of job specifications

The main point of having detailed written job specifications is to substitute for traditional and often vague assumptions about job requirements, as many *facts* as possible about the actual job as it is done today. When these facts have been recorded, the job specification can be used:

(i) To guide youth employment officers, school headmasters and careers masters, local employment exchange managers and others on the employment opportunities available in the firm.

(ii) As a basis for press advertising of vacancies.

(iii) As a basis for selection, since the specification indicates which facts about the applicant have to be known before a choice can be made.

If specifications are prepared, they should be kept up to date, as the job itself changes.

(b) compiling a job specification

The information needed to prepare a job specification can be divided into four main groups:

(1) **Physical Environment of the Job and General Characteristics** (factory or office, standing or sitting, heavy or light work, noise, humidity, dust, fluff).

(2) **Social Environment of Job and Conditions of Employment** (working alone or in a group, on time work or piecework—any chances for promotion, nightwork or daywork).

(3) **Job Methods**—the skills and knowledge of the job as recorded for training purposes.
(4) **Existing Employees**—which type of people have been most successful in this job in the past —older or younger, married or single, male or female etc.

Where this information is not already available in the firm's records, it should be assembled under the above headings. It is then possible to state the requirements of the job under the following seven headings, which make up the 7 Point Plan for selection:

Physical
Attainments
General ability
Special aptitudes
Interests
Disposition
Circumstances

Physical

Under this heading should be recorded the physical requirements of the job (including such things as age, sex and appearance). Some (not all) of the following will be dealt with in any specification.

Age Upper and lower limits will be set for most jobs—it may be found, for example, that the upper limit can be higher in the case of winders than setters. It may be found for example that a critical level of mobility is required (eg where an operative has to move rapidly between spindles, round the loom, or to top layers of multi layer creels), which would exclude some older people.

Sex Here it may be necessary to specify which jobs will only be filled by men (or boys), those which will only be filled by women (or girls) and those which can be done by either.

Height Upper and/or lower limits may be set in the case of some jobs—eg in the case of winding on certain types of frame, either a very tall person (because of the bending required) or a very small person (because of the reaching involved) may be unsuitable.

Weight and Build Jobs requiring considerable agility may not easily be done by excessively fat people.

Eyesight Standards Visual acuity is very important in some jobs (eg mending and rectifying). Normal colour vision is required for most jobs. Colour vision defects are far more common in males than females.

Hearing It is important that potential weavers or tuners should have good hearing because of the extent to which the weaver or the tuner has to learn what is wrong with the loom by *listening* to it.

Absence of specific physical defects eg Hernia in the case of jobs involving lifting.

Attainments

Most jobs will require some attainments or previous experience, however little. This could range from the minimum requirement of being able to read and write for modern school leavers seeking employment in simple semi-skilled jobs, to the requirement of high academic or technical qualifications for responsible managerial posts.

General Ability

Some assessment must be made of the level of general ability demanded by the job. This will be influenced by the extent to which the job involves acquiring knowledge as opposed to repetitive manual skills, and the extent to which judgment and problem-solving is involved as opposed to routine work observing simple procedures.

Contrast for example, the following jobs:
hank winder and weaver
stores foreman and machine setter

Special Aptitudes

In addition to the general level of ability which the job demands, most jobs require one or more special aptitudes which will help a trainee to learn more quickly. These aptitudes might include:

manual dexterity hand/eye co-ordination fast reactions	for operative jobs, such as winding or weaving
verbal fluency verbal ability	for clerical or supervisory jobs

Interests

The interests which influence behaviour in both work and leisure activities can be classified into four groups:

physical/outdoor	social
practical/constructive	intellectual

Some jobs will demand that one or two of these interests should be a strong feature in the personality of the individual if he is likely to be good at the work and like doing it. For example, we would look for evidence of practical/constructive interests in the case of an engineering apprentice or a creeler who we hope may become a weaver.

Disposition

By disposition we mean the overall personality which we would expect to fit in best with this type of work. Does it require exceptional patience (is it routine?). To what extent does it involve working with other people and getting their co-operation?
Does it matter if the person selected is inclined to be short-tempered—or inclined to 'fluster' when things go wrong?

Circumstances

By circumstances we mean the aspects of the job which govern its place in the production system as a whole, its status in the group and the social demands it makes on the individual. Does it, for example, require a person who is more of a leader than a follower? Are the promotion prospects good? In the case of shift work, we must look for people who live within reasonable travelling distance of the mill. For each main job category in the factory we need a Job Specification set out under the above seven headings. We must be careful to distinguish between things which are essential and those which are desirable. The list of essential features sets the minimum standard which all applicants must meet. The list of desirable qualities helps us when we are considering several people for one vacancy, all of whom meet the minimum requirements or where we are considering several people for several different types of jobs (eg recruiting girls when there are existing vacancies for hank winders, setters and menders).
Job Specifications should be set out under the following three headings :

job requirements	**essential**	**desirable**
physical		
attainments		
etc		

In some cases, (eg creeling) where the job being filled is normally regarded as a first step towards some more difficult job to be done later (eg weaving, machine operating or tuning), the job specification

for the first job should take this into account. In the case of creeling this can be done by including the characteristics required of the potential weaver under the heading 'Desirable'. See appendix A. It must obviously be a matter for the firm to decide if it is prepared to accept any juveniles as creelers who do not meet the additional requirements for weavers. (A possible solution is to insist that all juveniles must meet the higher standard but to engage adults from time to time to fill vacancies as creelers on the understanding that this is their permanent job).
In Appendix A we give a model job specification for creeling, with the additional requirements for weaving, together with some comments on how this specification was prepared. In other cases, the problem is more straightforward, eg a specification for mending or hank winding may not need to go into the same amount of detail, in the sense that this is the job in which the individual is likely to work throughout her period of employment with the company.

SECTION FOUR

ESTABLISHING A RECRUITMENT AND SELECTION POLICY

(a) recruitment and manpower planning

The training policy of a company provides guidance to management on the amount of training to be done (ie the number of jobs for which formal training is to be given, and the number of people to be trained each year) and on the standards to which training shall be given in each job category.
If training policy is to be effective, the company must also have a carefully thought out policy on recruitment and selection which is consistent with its views on training.
Taking into account conditions in the local and and national labour market, and the company's own facilities for training, the recruitment policy of the company may involve sub-dividing all jobs into three main categories:

(a) *Entry Grades* Jobs for which *no* previous experience is required and where normally juveniles will be engaged and trained (eg creelers, hank winders, setters, apprentice tuners). In this category would come management trainees engaged directly from universities or full time attendance at Technical Colleges.

(b) *Jobs to be filled by Internal Promotion* These are jobs for which experience of the industry and the firm is needed but for which additional training is required (eg weavers, production supervisors and office supervisors).

(c) Jobs to be filled by engaging partly trained or fully trained persons from outside the company, eg
Work Study Officer
Canteen Manageress
Computer Programmer
Shorthand Typist

It is important that a company should determine into which of the above three categories each job in the company should be placed (note—in some cases there may be overlapping: management trainees may be direct graduate entrants or promoted from apprentices or supervisors).
Recruitment policy should also provide guidance on all the following matters:

(1) Allocation of responsibility for initiating recruitment action (eg centralised or departmental recruitment).
(2) Use of recruitment sources (eg policy on employment of relations of existing employees).
(3) Use of internal advertising for promotional vacancies.

Having established

(a) The requirements for each job (a job specification).
(b) A set of guiding principles which indicate broadly the sources from which people to fill vacancies will be found.

It is necessary in the case of vacancies which will have to be filled from outside the company, that the company should carry out a regular (annual) review of its manpower requirements. The results of this, revised on a monthly basis, might be set out under the following headings:

Operatives (weavers, machine operators, winders, rectifyers etc)
Craftsmen (ie apprentice intake)
Tuners
Mechanics
Office staff
Technical staff
Management trainees.

In Appendix B, more detailed information is provided on the subject of forecasting manpower requirements. The example used is that of recruiting weavers in a small company.

page twelve

(b) selection policy

Some of the most important matters to be covered by any short statement of the company's selection policy are:

(a) Who shall do the selecting? (eg the respective responsibilities of personnel officers and line managers).
(b) Who shall be responsible for determining *how* selection is carried out ie the methods to be used?
(c) What arrangements will be made to ensure that selection methods are valid and reliable and that they are revised when necessary? (see Section 7 and Appendix F).

Selection policy relates, it will be seen, mainly to the *determination of responsibility* for carrying out the tasks involved in fitting people to jobs. The procedures for performing these duties are dealt with in Sections 6 to 8.

SECTION FIVE

RECRUITMENT PROCEDURE

(a) requisitions for labour

Companies may choose to recruit centrally (eg through a Personnel department) or departmentally, through the line managers or supervisors.
There are considerable practical advantages in centralised recruitment, particularly in the case of hourly-paid staff. These are:

(i) Centralisation means specialisation and therefore more *efficiency* in recruitment.
(ii) Departmental managements can rarely give this activity sufficient time or attention.
(iii) The cost of recruitment can be minimised by forward planning (eg less frequent but more effective press advertising).

If recruiting is to be centralised it is necessary to have an agreed procedure for notifying vacancies. This would involve departments preparing

(1) General forecasts of anticipated labour requirements on a monthly basis.
(2) Weekly labour requisitions specifying exact requirements by job categories.

This type of system can be controlled by insisting that a weekly requisition for labour must be counter-signed at a given level of authority (eg Production Manager). A better system would be to leave it to the departments to refer requisitions to higher management for approval only when they involve exceeding the monthly forecast of requirements.
Small companies which do not have separate personnel departments can still have centralised recruitment by allocating this responsibility to, say, the commercial or production manager as part of his duties.
The arrangements described above may seem slightly complicated compared with what more usually happens. Against this must be counted the

considerable, if hidden, costs which are incurred through dealing unsystematically with recruitment.

(b) sources of recruitment of young entrants to the industry. Where and how shall we find the youngster we want?

There are four readily available and well-known sources:

Youth Employment Officers
Youth Employment Officers provide a most valuable service. In most areas they visit all secondary modern schools each year and interview all school leavers during their last two terms, and they are becoming increasingly aware of the special needs of companies and local industries. It is well worthwhile to invite the local Youth Employment Officer to visit your company so that he can become familiar with its atmosphere and problems and judge your needs at first hand. When later on you ask him for his help in finding young people, it pays to be as specific as you can about the abilities, aptitudes and educational levels you are looking for, so that pre-selection is properly directed. (A copy of each job specification should go to the Youth Employment Officer and he should be advised of vacancies well in advance).

Local Schools
Some companies also make direct contact with local headmasters and careers masters. They find it particularly valuable to invite parties of boys and girls to see round the factory during their last years at school.

In dealing with both Youth Employment Officers and headmasters, it is as well to remember that besides being helpful to companies they have a clear duty to young people, to help them find work which is likely to be permanently satisfactory, and thus which will neither over-tax or under-employ their abilities. They wish to place young people in progressive employment in which good training facilities exist.

Relatives of Existing Employees
Particularly in areas where jobs are difficult to find, existing employees welcome the opportunity that an internal advertisement will give them, to find openings for their sons and daughters. This can be a particularly fruitful source of recruitment which will bring in youngsters who already have some knowledge of the company and its atmosphere and who are likely to be well-disposed towards it.

Advertising
As a source of young recruits, advertising ought properly to come last. It often produces a large number of replies but rarely are they the ones the company was hoping for. Perhaps this is because it is difficult in a short advertisement to say enough to discourage the clearly unsuitable candidate from applying. Certainly when jobs are plentiful, young people tend to be chaperoned straight from school into work via the Youth Employment Officer or some other adult, but even when they are not, parents prefer the first job to be with a company they know something about, even if only at second hand. It may be useful to remember to:

(1) Make the advertisement as large and attractive as you can and choose the phrasing carefully.
(2) Be quite specific about your requirements in terms of age, education, etc.

(3) Arrange for the advertisement to appear at a time when the people you want to attract will be looking for jobs, eg some weeks before a school leaving date.

It is important to recognise that the work of recruitment falls into two main categories:

(1) General development of the local labour market to promote knowledge of the company's work and interest in it.

(2) Specific actions to fill particular vacancies at given points in time.

All firms have to use one or more of the sources of recruitment when vacancies occur. What is often omitted is the longer term action which is equally necessary. If a firm only calls in the Youth Employment Officer, or sends representatives to schools once a year when its press advertisements have yielded a poor response, it is not surprising if it finds that it has to take second place to companies which work in continuous close co-operation with the local school and as already suggested give the Youth Employment Officer plenty of advance warning of their requirements.

SECTION SIX

DESIGNING A SELECTION PROCEDURE

In discussing the way in which a selection procedure may be designed, we start with the assumptions that:

The *Job* for which we are selecting has been studied to yield a *Job Specification*

Recruitment has been effectively carried out, so that the company has a reasonable field of applicants from which to make its choice.

These requirements having been met the selection procedure, particularly for manual jobs, should normally include:

(a) An application form—on which the main facts about the applicant can be concisely recorded.

(b) Some arrangement for securing information from previous employers or, in the case of school leavers, from the school.

(c) A medical test for
  (i) General physical fitness.
  (ii) Specific job requirements (eg eyesight).

(d) Objective tests of ability or aptitude—appropriate to the job.

(e) An interview using a carefully designed interview rating form.

In this section of the manual it is proposed to describe the whole selection procedure, the relationship between the various stages and the weight to be attached to each aspect of selection. In Sections 7 and 8 testing and interviewing are dealt with in greater detail, and in Appendices C–L more detail still is provided on particular aspects of these two subjects. This should enable readers to pick out the 'bare bones' of the subject if that is all they want, but provides detail separately for those who need it.

(a) the application form

A good application form provides a sound basis for any selection procedure; in many small companies, the introduction of a well-designed form for collecting information about applicants could by itself do a great deal to improve the effectiveness of selection. The application form is provided to record *facts* about the applicant which can be provided directly by the individual, before any interviewing or testing takes place. In certain circumstances, rejection may be indicated at this stage, which saves both time and money (eg inability to read and understand the instructions for completing the form, due to illiteracy).

The basic facts for which space must normally be provided on any application form are:

full name
address
date of birth *and* age (as a double check on the possibility of 'white lies' from female applicants!)
marital status
number of children
school and other educational institutions attended (including part time studies)
examinations passed
last/present employment (name of employer, job and dates)
previous employment (covering at least 5 years in case of adult applicants)
particulars of war service
any physical disabilities

(See Appendix C for specimen application form.)

It is recommended that applicants should be asked to complete the application-form themselves rather than answer questions which will enable the interviewer to complete it. Suitable facilities should be provided for this (ie desk or table and writing materials) and someone should be available to deal with queries arising.

(b) obtaining information about previous employment from previous employers or schools

In the case of school leavers, steps should automatically be taken to obtain details of the applicant's school record. This may take the form of a prepared questionnaire addressed to the headmaster or headmistress rather than a general enquiry about the applicant's character. The questions asked should be phrased in such a way as to elicit the type of information which will be of practical value to the interviewer.

(See Appendix D for specimen questionnaire.)

Where adult applicants for manual jobs are being considered, some companies do not as a matter of course obtain written references from previous employers. It often proves helpful to have at least one reference of this kind, but if one is to be obtained in writing it should take the form of answers to specific questions as in the case of the school reports. Often telephone enquiries will provide the information needed.

(See Appendix E for specimen enquiry form.)

(c) medical test

A considerable number of companies do not arrange for a complete medical examination of all applicants for employment, except for the examination of applicants under 18 by the appointed factory doctor. This is, in any case, a statutory requirement and does not involve a comparison of the applicant against the medical standards prescribed for the job. The medical examination would assess applicants in terms of:

(a) General physical fitness (eg asthmatics may not be suitable for work in some departments of a mill; ability to do heavy lifting may be a requirement for all general labouring jobs).

(b) Specific job requirements, eg eyesight standards.

At the very least, there must be tests for colour blindness in most cases and visual acuity in others. These can be conducted by any intelligent person trained in their use:

(i) Ishihara—Test for Colour Blindness.

(ii) Stereometer—Test of Visual Acuity.

See Section 7 for further details.

(d) selection tests

Objective tests of one kind or another can play an important part in the selection procedure for applicants for manual jobs. These tests are complementary to the employment interview rather than a substitute for it, and they are an important means of establishing the facts in the case of those aspects of the individual which need to be known accurately, if possible.

Because selection tests are playing an increasingly important part in Selection, a separate section of this manual has been devoted to this subject (Section 7) together with appendices.

In the designing of the overall selection procedure it is important to recognise that there are many different types of selection tests, but that apart from eyesight tests, the only ones likely to be of special concern to those concerned with the selection of staff for manual jobs are:

Attainment Tests
Tests which measure a person's level of achievement in a given area, eg arithmetic tests.

Tests of General Ability
Tests which measure 'problem solving ability', ie intelligence tests.

Aptitude Tests
Tests which measure *special* aptitudes eg manual dexterity or hand/eye co-ordination.

It is important that any selection tests used should be proved to be *relevant* to the job, ie they should measure qualities which have been shown to have a significant bearing on job performance, and they should be *economical* to use. If they meet these criteria, tests play a necessary part in selection, mainly by helping us to identify those people *unlikely to succeed* in the job.

The role of tests in selection is dealt with in more detail in Section 7 and in Appendices F to J with some information on actual tests used by firms in the industry.

(e) interviewing

This subject is considered sufficiently important to justify a separate section of the manual (see Section 8). The employment interview is the final stage in the selection procedure. It has three main functions in relation to any applicant.

(i) To review the information collected by means of application forms, references and tests, and to obtain any additional facts which are needed.

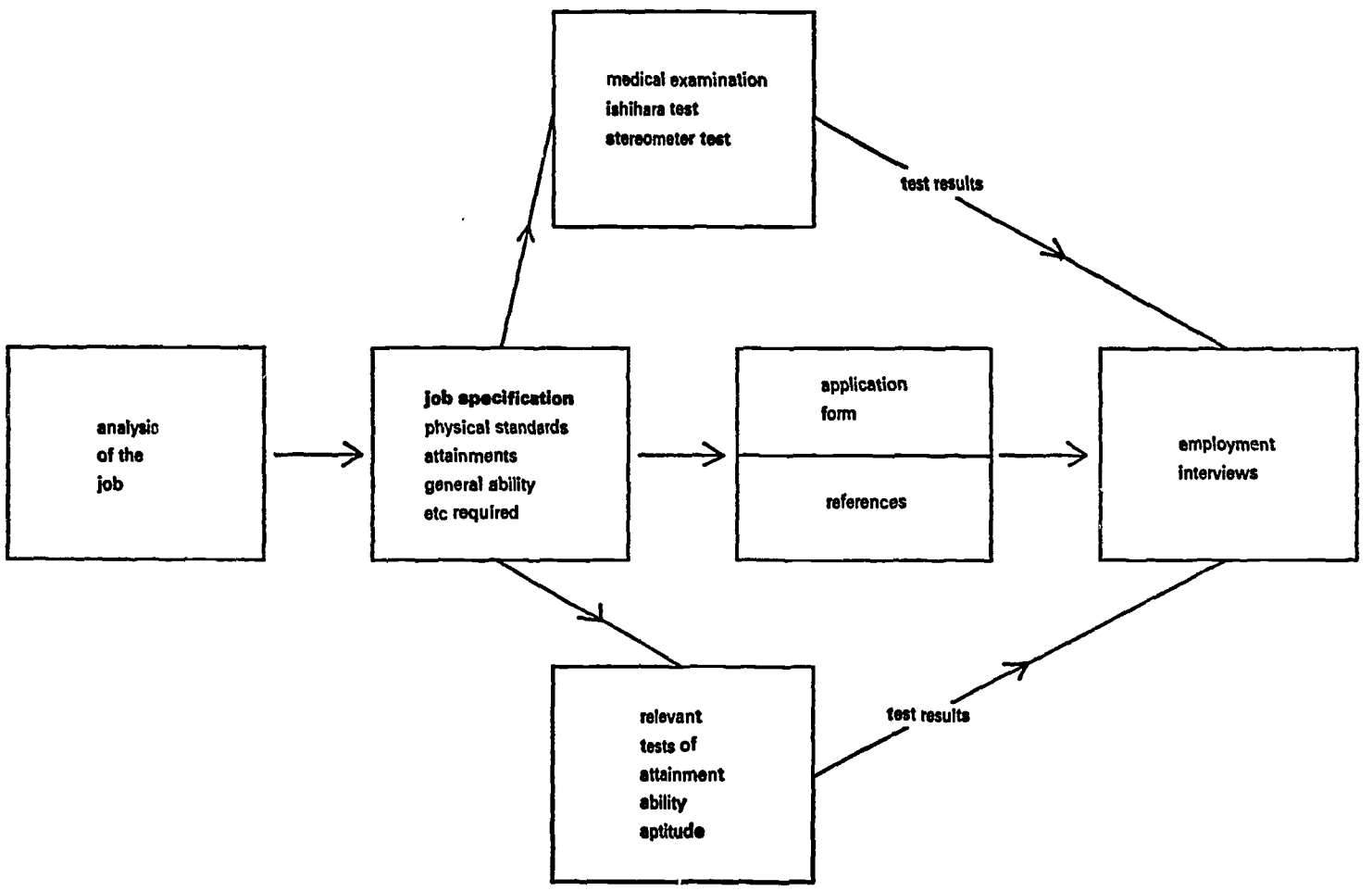
(ii) To assess the applicant's general suitability for employment in the job and with the company, and enable the interviewer to reach a final decision.

(iii) To give information about the job to the applicant.

Although interviewing must always be a subjective process, done systematically it can yield information about an applicant obtainable by the company in no other way.

The general description of the selection process given in this section is set out overleaf in the form of a simple diagram which indicates clearly the relationships between the various stages:

selection process



This shows the various selection tests as part of a screen through which pass those applicants who meet the basic requirements set out in the job specification. No one part of the process is more important than any other.

SECTION SEVEN

THE USE OF SELECTION TESTS

(a) scope and limitations

Modern selection methods are intended to help improve significantly on the chances of successful selection by ruling out the almost certain failures (eg the girl whose eyesight is so poor that, even with spectacles, she will never be able to see well enough to work as a mender). Selection tests are of particular value in helping us to identify the likely failure.

It is important that tests should measure qualities or abilities which are known to play an important part in the successful performance of the job. Thus, with manual jobs, the extent to which the work also involves the exercising of judgment and complex fault diagnosing might indicate to what extent a test of general ability would be of value.

It is suggested above that selection tests play an important part in helping us to identify people who are almost certain to fail in the job. Their positive role in selection in helping us to identify those people who are highly likely to succeed must not, however, be under-estimated. Although any one test by itself will rarely predict future job success accurately, the results of several tests interpreted in the light of a well-planned interview can often give us a clear indication of how well the individual is likely to do and in exactly in which directions. Where the right tests are used, they can introduce a degree of objectivity into selection which other methods fail to supply. When the wrong tests are chosen, a company's expectations are not realised and testing procedures in general are discredited.

It is the intention of this manual to describe a limited number of tests which have been found in practice helpful in the selection of employees for

jobs in carpet factories, and to indicate the circumstances in which they ought to be used.

(b) different types of selection tests

In Section 3 we have already suggested that the 7 point plan is a useful way of summarising the various aspects of a job. It is equally useful as a means of summing up an individual. For convenience we can think of the seven points being grouped in the following way:

physical standards	Measured by a medical examination including eyesight tests.
attainments	Checked from examination certificates or employment record or measured by an attainment test.
general ability	Deduced from educational performance or measured by an intelligence test.
special aptitude	Measured by an aptitude test.
interests **disposition** **circumstances**	Assessed at an interview.

(Note: Some tests have been devised for measuring the 'strength' of interests and the nature of a person's disposition—ie 'personality tests.
These are not considered relevant in the selection of people for manual jobs and are regarded by many as highly dubious aids in other forms of selection.)
This suggests that we may wish to use one of four types of selection test:

eyesight tests	attainment tests
intelligence tests	aptitude tests

(i) Eyesight Tests

Ishihara Test for Colour Blindness is in book form—obtainable from the publishers, Messrs H K Lewis & Co Ltd, 136 Gower Street, London WC1, cost 4 gns.

The test is simple to administer and takes only about 30 seconds. Each page of the book is shown in turn to the candidate, being held about a yard away from the eyes in light sufficiently bright for reading in comfort. The number the candidate sees in each diagram is compared with the number given in the instructions. From this it can be stated with certainty whether he or she has normal colour vision, has red/green deficiency or is completely colour blind.

Stereometer—Test of Visual Acuity

The candidate is asked to sit and look through the the eye piece of the stereometer using both eyes. If glasses are normally worn they should be worn throughout the test. If special glasses are worn for reading or close work only, they should be worn for tests 7–9 and not the others (9 tests in all).
The tester places test card No. 1 in a holder and aks the questions listed in the instruction booklet, making a note of each answer by means of a cross or tick on the form provided. When all nine tests have been completed, the form will indicate what defects there are in the candidate's eyesight and how bad these are. The whole series takes about five minutes to administer.

If, on any test, the candidate has a cross on the left hand side of the form (divided into left and right by a vertical red line), this means that sight is below

normal in that particular respect. The procedure in these cases is to provide the candidates with a duplicate copy of the test form which they can take to their opticians and have their vision corrected by spectacles (if they have been tested within, say, 18 months, and are wearing the spectacles then prescribed, not much improvement can be expected and it may not be in the best interests of the individual or the firm to engage them for employment).

note
Eyesight standards will obviously vary from job to job according to the specification and the test results must be interpreted accordingly, eg the standard for menders will be 'tighter' than for creelers/weavers.

This test can be obtained from the manufacturers, Stereosette Ltd, Apollo Works, Charlton King's Road, London NW5, complete with instruction booklet and block of record forms at £25.

(ii) **Attainment Tests**

Examples of these are

tests of arithmetic or English for Secondary Modern School leavers who have not taken any formal examinations in these subjects.

direct tests of ability to do the actual job for which the person is being considered—eg a girl who claims to be an experienced winder instead of being given an aptitude test may simply be asked to work on a winding frame for half an hour.

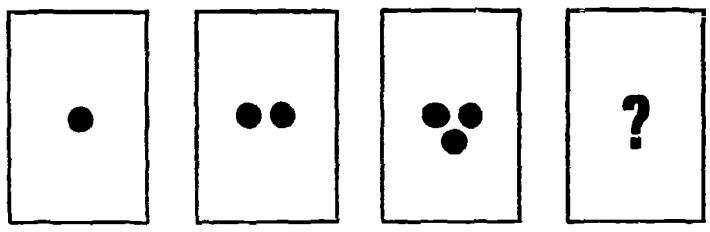
The advantage of the attainment test is that it is a *direct* measure of ability to perform some actual part of the job, or of the possession of knowledge needed in the job. It is easy to arrange, and its results can be followed up without too much trouble. It does not apply where the company is considering someone for employment in a job for which the applicant's previous experience has no apparent relevance. On these occasions we need to use tests of general ability or special aptitude.

(iii) **Tests of General Ability**

The attainment tests measure some standard which has been already achieved. In the case of other selection tests, we are seeking to predict something about the individual. General ability or intelligence has been defined as the ability to 'solve problems', which is an adequate working definition for the purpose of this manual.

A test of general ability may be verbal or non-verbal. The trouble with verbal tests of ability is that results are sure to be influenced by the individual's verbal ability, which is a special aptitude. *Non verbal* tests, involving the use of, say, simple diagrams, attempt to get round this difficulty, and these are the kind which are recommended for use in the case of selection of manual workers for factory jobs. In practice these have been found to be extremely useful as a means of establishing that a person has the minimum intelligence required to master a given job and 'norms' or standard scores have been established for this purpose. A simple example of a

non-verbal test of this kind would be to ask the applicant to complete the following sequence:



Ravens Matrices are a typical example of a non-verbal test of general ability. These are obtained from the publishers, H K Lewis & Co Ltd, 136 Gower Street, London WC1. at 10 gns per 25 copies which is the minimum number they supply. Messrs H K Lewis also publish the necessary manual of instructions, the marking key and expendable answer sheets.

(iv) **Aptitude Tests**

These may be of many kinds, dependent on the specific aptitude which is relevant to the job for which selection is being made, eg

tests of hand/eye co-ordination—for winders
tests of manual dexterity —for menders

A number of simple tests of this kind have been tried out and found useful in carpet factories, and examples are provided in Appendices G & H.

Note: it will usually be necessary for the individual company to discover by experiment what norms should be applied in their case but some general guidance is provided on these.

In the case of aptitude tests it is usual to employ some device which reproduces, in simple form, a type of activity which is an important feature of the job. It is not necessary that the device be like the job, only that it should measure the aptitude relevant to the key parts of the job. Thus, if it is decided that good hand/eye co-ordination is an aptitude likely to be helpful in tending a winding frame, a device which involves dropping a ball-bearing through a metal tube with one hand and catching it with the other may be used (see Appendix H). In the case of jobs requiring nimble fingers (eg mending) a simple pin board test may be used (see Appendix G).

Where fine work is not involved, a less vigorous test of finger dexterity may be used using wooden pegs instead of metal pins.

In both these cases the test is not a part of the real job but it measures aptitude to acquire the skills of the job in such a way that comparison is possible and standards can be built up. As with tests of general ability, these tests help us *to identify those unlikely to succeed* and also provide positive guidance on the jobs in which the individual is likely to do well.

If special aptitudes of an unusual kind have been established as of particular importance in any job, the design of a suitable test is a job for an expert, and should not be attempted without seeking advice. Companies which encounter such a problem should first consult the Board Training Staff or the Industrial Training Service or it could be taken direct to the National Institute of Industrial Psychology, 14 Welbeck Street, London W1, who can, if required, design a complete set or 'battery' of tests for any job or groups of jobs.

Summary on Testing

(1) There are four types of test—medical (eg eyesight), attainment, intelligence and aptitude.
(2) The first type measures a physical ability, the second measures achievement, the third and fourth measure potential.
(3) The kind of tests already used in the carpet industry include Ravens Matrices, the pinboard and the ball-dropping device.
(4) Norms or standard scores must be established for each test by experience.
(5) Test design is a job for experts and companies are strongly urged to seek advice before trying to introduce tests including those described in this manual.

In Appendix F some additional notes on the use of selection tests are provided. These deal in particular with the subject of 'norms' and the concepts of 'validity' and 'reliability' in assessing the usefulness of tests.
In Appendix I a list of available tests is provided.

SECTION EIGHT

EMPLOYMENT INTERVIEWING

(a) the purpose of the interview

The Interview is the final stage in selection, when an attempt is made to decide if the applicant has the personal qualities which will enable him or her to fit in to the working group and get on reasonably well with other people. An assessment is made of those personal qualities not capable of measurement by means of tests—the qualities usually listed under such headings as 'personality' or 'character'. It may also be necessary to obtain facts from the interview which are obtainable in no other way.
The functions of the interview may be summarised as follows:

(a) To give information about the job.
(b) To obtain any basic facts about the candidate not clear from the application form.
(c) To permit observation of outward appearance and manner.
(d) To test orally where appropriate the capacities relevant to the job.
(e) To enable an assessment to be made of personality (eg emotion, disposition).
(f) To influence a candidate to take the job (where appropriate) or to reconcile him to the fact that his application will fail.

The important thing to note about the interview is that it is necessarily a *subjective* method of selection, liable to be influenced by the prejudices of the interviewer, but that people can be *trained* to become skilful interviewers and to control their prejudices by systematic planning. If the interview is based on a clearly defined job specification, this in itself helps the interviewer to be more objective in his approach.

(b) planning the interview

All available information about the candidate and the job should be collected and assimilated in advance of the interview. Headmasters' and YEO's reports where appropriate, information from former employers and from the application form should all be carefully studied. From this and a thorough understanding of the knowledge and skills required for the job, a planned outline for the interview can be prepared. With young people who have no industrial experience, information has to be sought and impressions formed on such subjects as:

Education and attitudes to school life.

Activities and interests outside school.

Mental ability and the capacity to learn.

Home life and environment generally.

Ambitions and plans.

Attitudes to authority in various forms: parents, teachers, police, etc.

Willingness to co-operate and apply himself.

Sufficient time should be set aside (at least 30 mins) and freedom from interruption or distraction ensured. The various headings under which assessments are to be made at the interview provide the basis for an *interview rating form* which can be a valuable aid to the interviewer (See Appendix K and sub-section (d) below for details of the use of this form in 'summing up' the results of the interview). The rating-form can provide space for summarising the results of any selection tests which may have been used.

(c) conducting the interview

If the interviewer has planned for the interview, his objectives will have been clearly defined and he will know exactly what information he is going to try to get. The secrets of good interviewing are:

(i) To have a planned approach which is flexible.

(ii) To start the interview in such a way as to put the applicant at ease.

(iii) To ask questions during the interview in such a way as to encourage the applicant to talk freely about himself/herself.

(iv) To let the applicant do most of the talking.

It is important that the interview should be conducted, if possible, in a room specially set aside for this purpose (it may of course be used for other purposes when not required for interviewing). The basic requirements for such a room are:

(a) No telephone

(b) An uncluttered desk

(c) Comfortable but not luxurious seating arrangements

For more detailed notes on interviewing, for those managers who are responsible for conducting employment interviews see *Appendix L*.

(d) summing up the results of the interview

Throughout the interview, the interviewer should be forming and adjusting his opinion of the applicant as he gets to know more about him, and tries to

imagine him in the job. Comparison with other applicants will also take place.
In the last resort, the interviewer is forced to make a personal judgment which is recorded on the rating form. The question to which an answer is wanted is not "Do I 'like' this person?" but "Is this applicant a satisfactory prospect for the job, taking into account the facts that we know about his past, test results and the interview impression?" It is helpful for the interviewer, particularly in borderline cases, to write down his impressions in detail on the rating form, so that this can be compared with the company's experience in employing the individual.
If a systematic attempt is made to follow-up individual cases and check interviewers' judgments (and test results) against actual job performance, we have some check on the interviewer's skill and can do something about improving it when necessary.
Arrangements can be made with the National Institute of Industrial Psychology for selected managers to attend their courses in interviewing techniques. These courses are of a very practical nature and well worth investigating.

(e) who should interview?

Where a company employs a full time personnel officer, it should be assumed that this individual is a skilled interviewer (if not, training should be given). It does not, however, follow that all employment interviewing should be done in the Personnel Office. It is recommended that a *final* interview should be given in all cases by a senior member of the department in which the applicant will work.

Where, in larger companies, juveniles are being engaged for general training before allocation to a department, production management can still be associated with the selection procedure by participating in final interviews. This means that all companies must have at least one person in each main department who is reasonably skilled in interviewing.
If a sufficient demand were to arise, it is possible that special arrangements could be made for short courses on interviewing techniques to be arranged for the carpet industry.

SECTION NINE

CONCLUSION—AN ACTUAL SELECTION SCHEME

It should be evident from the foregoing that there are seven main aspects of recruitment and selection to which a company should give attention in planning its procedures for obtaining staff:

(a) The need for a carefully thought-out policy on recruitment and selection.

(b) Job Specifications are needed for each main category of work—and these should be based on job analysis.

(c) Recruitment should preferably be controlled centrally and should be planned on a long term basis as far as possible.

(d) Selection procedures should be designed to suit the requirements of each job according to its specification.

(e) The main components in each procedure will be:
application form
medical examination
selection tests
interview
All these are necessary in most cases, although their relative importance will vary from job to job.

(f) Selection tests can be used to eliminate the unsuitable but should also give valuable guidance on how best to employ the individuals selected.

(g) Interviewing is still the key element in most selection procedures, but interviewers must acquire skill in the technique.

Having considered all this, it may be useful for companies in the industry to consider the following brief summary of an actual selection scheme for female operatives in one organisation:

(a) All recruitment, for a group of factories in the same area, is controlled through one central employment office, to which requisitions for labour are sent.
(b) An application form is completed at the Employment Office.
(c) A short preliminary interview is then held.
(d) Any applicant considered suitable material is given a stereometer (eyesight) test.

At this stage, the procedure varies according to the factory:

(e) Final Interview at the factory by the Factory Employment Officer, with the appropriate departmental staff (application form returned to central office for filing).

or

The following tests are administered centrally:
pinboard
form board (a practical test of intelligence)
a test of perception

(f) Final interview at the factory by the Factory Employment Officer, with application form and test results available.

APPENDICES

Appendix A

job specification—creeling and axminster jacquard weaving (woven carpets)

When going into the details of the job analysis on which these findings are based it may be useful to outline some of the standards of abilities and characteristics that a young creeler ought to have. First of all perhaps it is not sufficiently remembered that under present arrangements when we choose a school leaver for creeling, although he may at first be used as an alterer, bobbin boy or labourer in the winding section, if he lasts above a year or two he is likely to be a weaver eventually. Whilst his knowledge and experience of the job will grow, however, his attitudes towards it will change (the rate at which this happens will of course depend on how systematic his training is) his inherent abilities will not change much, they will tend to deteriorate gradually with age. Thus if we select on standards appropriate to altering, we will find limitations later on which may well produce unsatisfactory weavers. On the other hand, if we ignore the special requirements of altering and creeling, we may find that a potentially successful weaver gives up or is given up because he is less well-suited to the work he is required to do during adolescence. To be successful under the existing system a boy has to be a good alterer and/or a good creeler and to remain keen and interested enough to learn weaving and be competent at it when his time comes.

What abilities and knowledge must a weaver have over and above those required for creeling?

(a) Alertness, concentration, resistance to boredom and perceptual skill in a higher degree because on this partly depends the quality of the carpet when it leaves the loom.
(b) A greater sense of responsibility, particularly as regards quality control, reduction of waste in raw material, usage and reduction of loom stopped time.
(c) The ability to organise himself, his creeler and any alterers who may be loaned to him, as an effective team.
(d) A more detailed knowledge of how a loom works, carpet design and the processes in carpet manufacture other than his own.

These attributes (some of which are also sought in foremen and instructors) can be developed in part by training, by good example and good employer/employee relations, but they should also exist in embryo in the majority of the youngest alterers recruited. They will be extremely difficult to detect at that age. It may be worthwhile to set down the two specifications side by side.

	essential for creeling	**additionally desirable for weaving**
physical	Average agility—obesity could disqualify and so would physical defects affecting a limb. At least average manual dexterity. Good eyesight and freedom from colour blindness. Good health, no allergy to dust or fairly high noise level. Poor hearing would disqualify because of danger from machinery.	Average height—being very tall or short would be a disadvantage. ditto. Neat and tidy.
attainments	No special educational qualifications required. Sec Mod B stream.	Ability to communicate well both verbally and occasionally on paper. Evidence of being able to develop a craft type of skill. A stream?

intelligence	Average (C grade) for general population. He must understand and not be put off by the complexity of the machines he will be working on. He must be able to grasp the principles of 'planting', the relationship between the position of bobbins and the 'end' in the loom and the relationship between the carpet pattern and the relative rates of consumption from bobbins.	C+ or B grade for the general population. He has to understand and to accept the need for good quality, elimination of waste and reduction of loom stopped time and implement these himself and impress them on others. Upper cut off at 75th percentile since earnings are considerable although opportunities for promotion are scarce. If a young man of high intelligence still wants to be a weaver after 5 years as a creeler, he is unlikely to want to leave later on.
disposition	Patient, careful, dependable yet quick to react to small signals. Resistance to boredom. Co-operative and quick working when necessary. Good record of punctuality.	Ability to take charge of a small team and get the best out of them. A sense of responsibility widened by being put in charge at school, scouts, youth clubs or accepted leader of some informal group.
interests	Practical rather than verbal or social. Highly developed interests in open air activities might disqualify.	Mechanical, practical /artistic.
special abilities	Visual perception—at least average.	Ability to concentrate for long periods on an inspection function without diminution in standard of attention and without strain.
circumstances	From skilled artisan family background where long period of apprenticeship customary and creeling /weaving are a readily acceptable way of life.	Relatives in the industry so that he comes with a certain amount of knowledge about the trade.

Appendix B

forecasting manpower requirements

The most common way of dealing with recruitment is to leave it until someone leaves and then look for a replacement. There are at least three good reasons for thinking that this is unsatisfactory:

(1) It may seem to solve the immediate problem, but does not cater in advance for the company's longer term requirements.

(2) It tends to replace one employee, whatever work he was doing with another who happens to be available at the time, and who will almost certainly be less skilled and possibly less able as well.
In between two school leaving dates (soon to be reduced to one), only the less able or less eager youngsters are likely to be available, and in any case it takes time to train them to acceptable standards.

(3) It is uneconomical in time because the recruiting and selection procedure has to be carried out too often.

Recruiting, like any other business activity, should be planned. It should be carried out at the time most advantageous to the company, say twice a year at school leaving dates.

The number of employees required in a department each year can be worked out on the basis of annual labour turnover, ie,

$$\frac{\text{Number of employees leaving the department during the previous year}}{\text{the average number employed in the department during the year}} \times 100$$

There is no doubt that recruiting on this basis will mean that at times the company will have slightly too few young employees and at other times slightly too many, but the benefits of planned recruiting far outweigh these minor and temporary disadvantages.

To illustrate how to calculate the number required, we can take the example of a small woven carpet manufacturing company:

Number of weavers	23
Average annual labour turnover	5%
Multiply turnover figure by the average number of required years employment as a creeler, eg 5, to give the ratio of young creelers to weavers (for replacement purposes only)	25%
Number of creelers required	25% of 23 (or about 6)
Divide by the number of required years as a creeler to give the annual recruiting figure	1 1/5th
or, per year, over five years	2, 1, 1, 1, 1

This simple calculation is, of course, based on the assumption that the total number of weavers required remains unchanged and the labour turnover stays steady. There are however a number of other factors which may well affect the situation and have therefore to be taken into account.

Age Structure

If we have a look at the number of machine operatives in each 5 year age group, we may, for example, find that an unusually large number of them are nearing retirement age, in which case the recruitment figures have to be adjusted in advance to allow for the hidden increase in labour turnover.

Expansion

It may be that the company's business is increasing and that the board has decided to buy more machines. Other things being equal, this will also have a direct effect on recruiting figures.

New Techniques

If different and perhaps more complicated kinds of machines are being brought into production or different operating methods are introduced, this will almost certainly affect the kind of employee we need, but it may also affect the total numbers required in the future for the company's intake.

Appendix C

specimen application form

application for employment XYZ CO LTD **confidential**

full names..... age.....

(surname first in BLOCK CAPITALS) date of birth .....

address ..... married/single .....

..... no. of children .....

education

schools/colleges attended	dates from /to	examinations passed

last or present employment

employer	job	dates from/to	reason for leaving

previous employment (covering last 15 years if possible)

employer	job	dates from/to	reason for leaving

war service:

branch of forces	rank held	dates

any physical disabilities .....

.....

any additional information .....

.....

.....

signed..... date.....

At the foot or on the reverse side of the application form, space may be provided for interviewer's comments; decision to employ or reject, department to which allocated if selected, clock number allocated, starting date, etc. The form may also be combined with a rating scale for interviewing and with spaces for entering test results where appropriate (see sections 7 and 8).

Appendix D

specimen questionnaire for schools — school leaver applicants

to Headmaster/Headmistress (send in duplicate) **Confidential**

Dear Sir/Madam,

(Name) .....has applied for employment with this company as .....

We should be grateful if you would answer the following questions about him/her, as your views on his/her ability and general character will be most helpful to us in considering his/her application:

1. In which class was he/she last term at school?
2. Irrespective of examinations passed, how would you rate his/her general intellectual ability in relation to the average of his/her fellows?
   well above average above average average below average well below average
3. What are his/her best subjects?
4. At what subjects did he/she definitely not excel?
5. What standard did he/she achieve in
   English grammar? mathematics? handicrafts?
6. Did he/she hold any position of responsibility at school (prefect, monitor, captain of any team, etc)?
7. How did he/she get on with
   (a) the staff?
   (b) other children?
8. How hard did he/she work?
9. Did he/she excel at any school games? If so, which?
10. Would you please give us any general comments you wish to make about this applicant which you think might be helpful to us in considering him/her for employment. Your remarks will be treated in the strictest confidence.

Yours faithfully

note A spare copy of this questionnaire is enclosed, so that you may conveniently keep a record of any information provided.

Appendix E

specimen enquiry form to previous employers

to.....

Confidential

Dear Sirs,

(Name of applicant)

The above-named person has applied to this company for employment as.....

We should be most grateful if you would provide us, in strictest confidence, with answers to the following questions:

1. In what capacity was he/she employed by you?
2. From.....to.....
3. What were his/her reasons for leaving?
4. How would you rate him/her under the following headings, in relation to the average employee on this kind of work?

   timekeeping.....

   quality.....

   output.....

5. If he/she re-applied to you for employment, would you re-engage him/her?.....

A copy of this enquiry form is provided so that you may complete it and return it to us, retaining the original for your files.

Your co-operation will be much appreciated.

Yours faithfully

Appendix F

general notes on the use of selection tests

It is important that tests used by companies to assist in the selection of employees should themselves be carefully tested to ensure that they are effective. The following notes for guidance may be of use to firms which are considering the use of tests for the first time:

(a) Norms or Standards

For each test used there must be agreed standards (often referred to as norms) for the various jobs to be filled. Provisional standards are provided in Appendix 'J' but companies should not just accept these. They should be used as a starting point and modified as necessary in the light of experience.

(b) Reliability

To be reliable, a test must produce accurate and consistent results. It should give approximately the same score when given a second time or when an alternative form of the test is administered to the same employee.

(c) Validity

A test is valid if it measures what it is supposed to measure. In the case of selection testing for employment a test should measure some characteristic of the individual which is likely to affect an important aspect of job performance. Test validity is the relationship between test scores and measures of job performance.

There are two main ways of establishing this relationship:

(i) The present-employee method
The test can be administered to existing employees and test results compared with known job performance.

(ii) The follow-up method
New employees are tested and, after a reasonable period of time, job performance is compared with test results.

If job performance correlates well with test results the test may be said to be valid, ie people who do well on the test, do well on the job, people who do badly on the test, do badly on the job.

note: Statistically, the relationships implied by the terms reliability and validity are measured by the calculation of correlation co-efficients relating test results to job performance. A reliability co-efficent of at least 0.85 is required, but in the case of validity a co-efficient of 0.30 or better will usually be acceptable.

(d) Objectivity

The correctness of test responses must be easily determined by reference to some key so that scoring is a clerical task rather than a case of interpretation.

(e) Economy

Cost of test materials and time required to administer and score a test should not be excessive in proportion to the benefits expected.

Appendix G
notes on the use of the pin board test

1. General
The pin board tests the ability to do fine work with the fingers, rapidly and neatly. It shows whether the sensitivity is in the finger tips or the elbow.

2. Apparatus Required
Pin board and pins (see specification at 6 below).
Timing clock.

3. Layout and Setting
Seat the candidate close to the table. When testing the right hand place board in line with subject's right shoulder about 1 foot from the edge of the table. The tray containing pins should be to the right of the board. When testing the left hand, reverse these positions; the board should then be opposite the subject's left shoulder and the tray to the left of the board.

4. Rules
The pin board may be administered individually.
A brief practice period is allowed, as indicated in the following instructions.
Note that when using the right hand the subject moves across the board from left to right (as in letter writing), and vice versa for the left hand.

5. Instructions to subject
"In each of these holes (*pointing*), there is room for 3 of these metal pins (*pointing to tray*). I want you to see how quickly you can fill up the holes using only your right hand".
"Please pick up 3 pins at a time, like this (*demonstrating*), and put them into the holes like this (*demonstrating with first two holes*)".
"Start with this hole here (*top left hand*), and work across the board in this direction (*pointing*)".

6. Specification
The pin board consists of a hardwood base 6" x 6" x 1". On this surface there is screwed a brass plate $\frac{1}{8}$" in thickness. 100 holes of 0.196" diam x $\frac{3}{4}$" depth are drilled (with no 9 drill), through the plate at $\frac{1}{2}$" distances in rows of 10. A $\frac{3}{4}$" border is left between the holes and the edges of the plate.
300 mild steel pins, Zinc or Cadmium finished, are required. The dimensions of these pins are 1" x $\frac{1}{16}$". The pins are contained in a shallow metal tray 4" x 4" with 1" sides. This tray is lined with felt and the sides slope outwards at an angle of 60 degrees.

7. Grading for Aptitude Test
$1\frac{1}{2}$ minutes with each hand

total number of holes	*grade*
over 40	A
38–40	B+
32–37	B
29–31	B–
1–28	C

Appendix H

notes on the ball dropping test

1. Equipment.
¾" diameter tube on stand.
Open box containing 60 bronze balls, ½" diameter and covered box with 1" diameter hole in lid.

2. Layout and Setting
Set the tube stand on the table in good light with the tube 6" from the near edge. Place the open box 1 ft to the right of the tube and the closed box 1 ft. to the left.
The subject stands to perform the test.

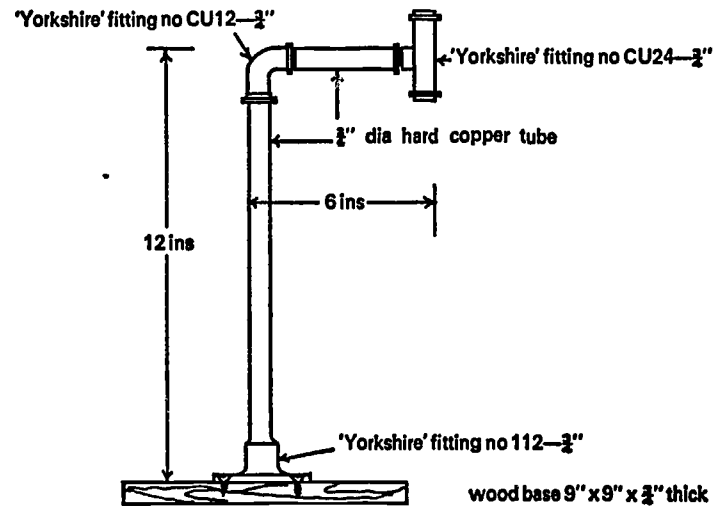
3. Rules
This is an individual test, but it can be administered to more than one person at a time if further sets of apparatus are available.
Practice in dropping five balls is given, following a single demonstration of the task by the Administrator.
Average administration time is about 5 minutes.

4. Instruction to Subjects
"First of all I am going to show you what you have to do. (*The Administrator takes the subject's place and suits his actions to the words*). I want you to pick up one ball at a time from this box here, drop it through the tube, catch it and place it through the hole in this box. (*Moves aside and continues*). Now will you please do the same thing with five balls". (*Transfer practice balls to the open box*).
"Now I want you to see how quickly you can transfer all the balls in that box through the tube and into the other box. Don't pick up more than one ball at a time. Are you ready? Begin please."
(*At the end reverse the boxes and transfer the lid*).
"Now I want you to do exactly the same thing only the other way round. Pick up each ball with your left hand and put it in this box (*pointing*) with your right hand. Begin please".

5. General Precautions
"If a ball drops on the floor say "leave it" and add five seconds to the score at the end.
Check the number of balls frequently to make sure that there are exactly 60 before starting the test.

6. Marking
Record this time in seconds taken to transfer 60 balls on each half of the test. Add together to obtain total score.

total time in seconds	grade
0–180	A
181–200	B
201–235	C
236–270	D
271+	E



Appendix I

tests

The following is a list of some of the many tests available and their sources. In the case of tests of mental ability or aptitude, the suppliers will normally wish to satisfy themselves of the competence of somebody in the company to administer the tests before making them available.

title & contents of complete test	compiled by	published by
STANDARD PROGRESSIVE MATRICES Sets A, B, C, D & E a non-verbal test of a person's present capacity for exercising intellectual ability Set contains–1 guide book, 1 test book, 1 answer form, 1 key	J C Raven	H K Lewis & Co Ltd 136 Gower Street London WC1
SHAPES TEST A mental test providing a measure of 'spatial ability' Set contains–1 manual, 2 scoring keys 'rights' & 'wrongs', 1 test book and 1 answer sheet	J R Morrisby	Nat Found for Educational Research in England & Wales 79 Wimpole St W1
SPEED TEST Containing 6 different tests Set contains–1 manual, 1 scoring key, 1 test book.	J R Morrisby	as above
MECHANICAL ABILITY TEST Set contains–1 manual, 1 scoring key, 1 test book, 1 answer sheet	J R Morrisby	as above
GENERAL ABILITY TESTS—VERBAL, NUMERICAL & PERCEPTUAL Intelligence tests. Set contains–1 manual for all three (1), 1 test book for each (3), 3 scoring keys for each (9)	J R Morrisby	as above
COMPOUND SERIES TEST Intelligence test. Set contains–1 manual, 1 test book, 1 scoring key, 1 answer sheet	J R Morrisby	as above
A H 4 Intelligence Test Set contains–1 manual, 1 scoring key, 1 test book, 1 answer sheet	A W Heim	as above
COLOUR BLINDNESS TEST 24 plates 38 plates	Ishihara	H K Lewis
KOHS BLOCKS Sets of 12 and 16 blocks Manual and coloured cards	Kohs	N F E R
STEREOMETER Eyesight testing equipment 'to effect a rapid sorting out of those likely to benefit from a detailed eye examination'.		Stereosette Ltd Apollo Works, Charlton King's Road, London, NW 5

Appendix J

provisional selection test standards

job	Raven's matrices (number correct)	pin board test (total holes) l & r hands 3 minutes	perception test	ball drop (time for 60 balls)	peg board (time for 60 pegs)	stereo-sette (eyesight)	ishihara colour vision	mechanical aptitude
tuners & fitters	40 to 50	not appli-able	pass (tuners only)	181–235 secs (or better)	n/a	pass	pass (tuners only)	good pass
weavers (male) & creelers	30 to 50	32–37	pass	ditto	160–194 secs (or better)	pass	pass	n/a
beamers (male)	30 to 40	32–37	n/a	ditto	ditto	pass	pass if required to work with coloured yarns	n/a
finishing room machine minders	30 to 40	29–31	pass only if required to inspect carpet	ditto	n/a	pass	pass only if required to inspect carpet	n/a
general labourers	20 to 30	n/a	n/a	201–270 secs	n/a	pass	only if required to discriminate between colours	n/a

card stampers	40 to 50	32–37	pass well	180–200 secs (or better)	159–169 secs (or better)	pass	pass	n/a
spool weavers (female)	30 to 50	32–37	pass	ditto	160–194 secs (or better)	pass	pass	n/a
spool setters	40 to 50	32–37	pass well	180–200 secs (or better)	159–169 secs (or better)	pass	pass	n/a
pickers	30 to 50	38–40	ditto	ditto	ditto	pass	pass	n/a
winders	30 to 40	32–37	n/a	ditto	ditto	pass	pass	n/a
sewing machinists	30 to 40	32–37	n/a	ditto	ditto	pass	only if colour matching required	n/a

Appendix K

interview rating form and test summary

name age					
rate on five point scale	C v poor	B — poor	B average	B + good	A v good
physique appearance					
attainment					
disposition co-operation keenness stability					
circumstances					
overall rating					
tests			**score**		
Raven's matrices pin board ball dropping					
interviewer's comments			signed.....		

Appendix L
notes on the conduct of the interview

The first task of the interviewer is to set the applicant at ease.

The basic rule here is that the first topics chosen should not make too great a demand on the applicant's conversational ability,
eg should concern matters of fact rather than opinion. The topic should not be likely to embarrass the applicant. When a skilled interviewer is observed by learners, the latter often marvel at his skill in establishing confidence from the outset. Often his secret is no more than having the ability to choose his first topic wisely.

In asking questions during the interview the interviewer is following a plan which lists the information to be obtained. It is, however, important that the right *kind* of questions be asked. Those to be avoided are the direct questions which demand a 'yes' or 'no' answer, since these inhibit discussion instead of encouraging it. Leading questions are also taboo since they 'feed' the applicant with the answers he ought to give.

The best questions to use are the 'open-ended' type to which the answer must be descriptive. Thus a good question to ask a young person might be "Tell me a little about the things you liked best at school and the things you didn't like".

Avoid like the plague such questions as 'Were you good at arithmetic' etc, since these, presented one after another can develop into a barrage and the interview becomes an interrogation. If you ask such a question as 'I suppose, if you want to be an apprentice tuner, you must have mechanical hobbies in your spare time', you will get the answer your question hinted at, but it may not tell you what you want to know.

What the interviewer is aiming to do, in as short a time as possible, is to get the applicant to talk freely about himself in an atmosphere as much like an ordinary conversation as possible. Indeed the good conversationalist (and this does *not* necessarily mean the good talker) often makes the best interviewer.

A judicial atmosphere is something to be avoided as far as possible (although it is often difficult in the popular 'board interviews' when several people interview together).

Criticism of any kind of the applicant during the interview whether implied or open will introduce constraint and inhibit a free exchange of views.
It may be useful to list what seem to be the desired qualities in a good interviewer. These are:

1. Interest in people and respect for individual personality.
2. The gift of conversational dexterity (ability to keep the ball rolling—unobtrusively).
3. Wide range of personal interests.
4. Thorough knowledge of the job for which the applicant has applied.

VT 009 163
Franke, Walter
The Shortage of Skilled and Technical Workers. Summary.

Manpower Administration (DOL), Washington, D.C. Manpower Research Study Summary
MF AVAILABLE IN VT-ERIC SET.
Pub Date - Mar69 4p.

*MANPOWER NEEDS; *LABOR SUPPLY; *PARAMEDICAL OCCUPATIONS; ENGINEERING TECHNICIANS; *OCCUPATIONAL SURVEYS; LABOR CONDITIONS
*MANPOWER DEVELOPMENT AND TRAINING ACT; MDTA

"The Shortage of Skilled and Technical Workers" is summarized. See abstract of ED 026 499 (VT 007 171, in APM Spring 1970). (GR)

VT 009 163

ED 042061

MANPOWER RESEARCH STUDY SUMMARY
U. S. DEPARTMENT OF LABOR / Manpower Administration

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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MARCH 1969

THE SHORTAGE OF SKILLED AND TECHNICAL WORKERS

"Indeed occupational shortages can exist and do for considerable periods of time in a general situation of moderate labor surplus," concludes a study of the effectiveness of job market processes and institutions recently completed for the Manpower Administration of the Department of Labor.[1]

The picture was mixed for the six occupatio. studied in St. Louis and Chicago in 1963-1966. Serious, but not critical, shortages of licensed practical nurses and medical technologists did exist and had persisted for a long time, although Chicago hospitals, with more adequate training of licensed practical nurses, fared better than the St. Louis ones. Despite "some apparently conclusive national trend data and almost universal belief–particularly verbalized by employers" that serious shortages prevailed in the four industrial occupations–tool and die maker, tool and die designer, engineering technician-electronics, and engineering technician-metalworking–no such situation was found in the metalworking and electrical machinery industries studied. The study described the situation as tight (i.e., causing a moderate degree of inconvenience to some employers, manifested by the time necessary to fill vacancies and to deliver orders).

To test the extent to which shortages really existed in the areas studied, the authors studied the effects on job market adjustment of factors affecting occupational choice, qualifications for entry into training, content and length of training, financing of training, the organization of training, job market information, and employer hiring and use practices, as well as wage trends. The results should be of interest to educators, students of the job market, and personnel specialists alike.

Highlights of the authors' findings follow:

Job Choice and Recruitment

Previous work experience was very important to occupational choice in the six occupations. For example, licensed practical nurses and medical technologists frequently had worked in hospitals before entering these occupations. For industrial technicians, the most frequent route was upgrading from lower level jobs. Since this was true, the authors suggest that interest in the occupations might be stimulated if employers would develop part-time and summer employment and work with schools in filling their positions with youngsters who have exhibited appropriate interest or skills.

Formal restrictions on entry such as age or sex did not seem to explain the tightness of the job market, but more effective dissemination of occupational information to employers, workers, the unemployed, vocational and other educational planners, and others was needed. Improved and intensified guidance and counseling would also have been helpful. This was particularly important in the health occupations, which were both new and expanding and about which potential candidates had to be informed by ways other than "natural" familiarity of family and friends.

Undoubtedly some persons tied down by family responsibilities could have been recruited for part-time work in the health occupations if hospitals had offered appropriate schedules. As was already the case for licensed practical nurses, older women could have been recruited. The study found very little evidence that employers had changed their recruiting policies in recent years.

Since most of the training schools operated below capacity, harder recruitment was desirable. However, the authors found that lagging wages in the medical occupations adversely affected recruitment, of whites at least, into training schools. In addition, the shortage of practical nurses seemed to be tied in with a desire to maintain some balance of white versus Negro nurses.

---

[1] The original report on the research contract (MDTA 5-64), *The Shortage of Skilled and Technical Workers: An Inquiry Into Selected Occupations in Short Supply*, by Walter Franke of the University of Illinois and Irvin Sobel of Florida State University was completed in 1968. It may be ordered from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151. Specify accession No. PB 180367 and send $3 for a paper copy or 65 cents for a microfiche copy.

VT009163

Training

According to the study, broad options as to the type of educational preparation and training required permitted an easier adjustment of the job market to shortages. The need for employees was most severe in the occupations for which entry routes were most prescribed and narrow—licensed practical nurse, licensed medical technologist, and tool and die maker. On the other hand, in the engineering technician occupations upgrading was the common route of entry, and the possibilities for building on a variety of education, training, and on-the-job experience gave valuable flexibility and increased the speed of adjustment.

Finding that, with the partial exception of the demand for medical technologists, job markets were local in the six occupations studied, the authors underline the MDTA directive that manpower and educational programs be tailored to specific occupational shortages and localities. But they argue that MDTA training is no panacea. For most of the occupations studied, training costs were moderate and did not seem to deter trainees, although the many dropouts who found other avenues into the field might be evidence to the contrary. The occupation for which training costs were highest for the trainees and were a barrier to an adequate supply—medical technologist—was not one in which it was likely that the supply could be increased by subsidizing the training costs of the unemployed. The authors consider the MDTA approach ideal for stimulating the training of persons for occupations such as licensed practical nurse and suggest that it should be useful for preapprenticeship training for tool and die makers.

The authors' most general solution to training costs is the public junior or community college. With the possible exception of the tool and die maker, the junior college could train for all the occupations studied. A particularly helpful change would be to end the present costly and awkward splitting of university and specialized training for medical technologists by bringing them together at the community college.

Junior college or university was already the formal entry route for the tool and die designer. The on-the-job portion of training posed difficulties because most firms had few designers, who therefore could not be spared for extensive training duties. The authors suggest that direct subsidy of instruction could be undertaken.

Nearly all of the training of the tool and die maker has to be on the job. The authors conclude that MDTA preapprenticeship training is helpful. If it covers some of the training ordinarily borne by the employer in the regular apprenticeship program, it could, by reducing his costs, stimulate apprenticeship programs. Another useful approach is the employer cooperative program of the Chicago Tool and Die Institute, through which adequate training programs are assured and some of the costs of training are shared by the employer members.

Training for each occupation seemed to have some specific characteristic that had an effect on supply. Licensed practical nurses' training was not coordinated or integrated with the training for other nursing occupations, and consequently practical nurse was a dead-end occupation. To some extent, training of tool and die workers was hindered by apprentice-journeyman ratios.

Minority group members have in the past been excluded from all the industrial occupations studied, but the technician occupations posed a particular problem in offering more opportunities for minorities. Technicians frequently must climb an occupational ladder, and potentially qualified Negroes may be blocked at lower rungs. The authors make the point that, since the supply of whites was generally adequate and they had higher qualifications, special efforts by employers, unions, training institutions, and government were required to bring minorities into these occupations.

Placement and Retention

Most of those who completed training quickly obtained work for which they were trained. For all of the occupations there was a close training-employment relationship. Frequently, the trainee stayed where he received his on-the-job training. In many other instances, he was already employed during training.

Completion of training gave clear advantages. Compared with the dropouts, those who finished had lower unemployment rates, higher labor force participation rates, speedier job-finding success, and employment more relevant to their training.

Occupational attachments to the six occupations were very strong. Nearly all of those surveyed expressed an intent to remain in their present work. Most of those who said they would not had their eyes on higher level jobs, and many of the remainder said they were going back to school.

Turnover was very high in the medical occupations, however. For example, turnover of licensed practical nurses was nearly 40 percent a year. Movement out of the labor force by members of the medical occupations, with their high proportions of women, diverted much of the new supply to replacement, and to the extent that either improved working conditions or better pay or fringe benefits would prevent such movement, these personnel practices could influence the supply. But the

evidence indicated that, except for working conditions such as heavy workloads resulting from understaffing, the influence of personnel practices was marginal, and most departures were for general personal reasons. Undoubtedly, prevailing personnel practices affected the number of *new* entrants, but the incurring of higher costs to keep the *present* personnel does not seem to the authors to be warranted. This leaves for further research the whole area of retention and attraction of trained persons back into the labor force.

Manpower Use

Job redesign had earlier been important in the occupations studied. The work of the licensed practical nurse and the engineering technician had been largely cut out of what formerly had been the duties of nurses and of engineers. For engineering technicians, use patterns appeared to offer little opportunity for further extensive adjustment of functions to help alleviate shortages. However, large differences among hospitals in the relative numbers of nurse aides, practical nurses, and registered nurses suggested that additional personnel could be provided through further reorganizing functions in some hospitals.

Technological change, which made possible the substitution of capital for labor, for the most part came about independently of job market conditions. In none of the six occupations did labor supply factors appear to result in the development and introduction of new capital equipment, although the timing of introducing equipment in general use might to some extent have been affected by labor shortages. In some cases, significant technological changes are yet to be felt.

The quality of services offered by the industrial employers was not seriously affected by lack of employees. An increase in the time required to fill orders was the main consequence, and this was a factor in only a small minority of cases. In the hospitals, however, the shortage of qualified personnel did lower the quality of service. In both sets of occupations, the employers' most common adjustment seems to have been to fill in with whatever applicants were available.

On the basis of this study, the authors conclude that, in general: (1) Employers have preferred to live with the shortages rather than act aggressively to alleviate them; (2) tight supply of labor has not reduced the production of goods and services; (3) little change has occurred in traditional methods of recruitment, training, upgrading, and use of workers; (4) information on shortage occupations available to institutions, agencies, and the public is inadequate; (5) long-range plans developed on an area basis to meet established occupational needs are virtually nonexistent; and (6) job redesign efforts have been minimal for a variety of reasons.

AVAILABILITY OF THE FULL REPORT

The full report is on file at certain libraries under the Documents Expediting Project of the Library of Congress. For a list of these libraries write to the Manpower Administration, U.S. Department of Labor, Washington, D. C. 20210. The full report may also be consulted at the offices of the Regional Manpower Administrators at the addresses listed below.

Location	States Served
John F. Kennedy Fed. Bldg. Boston, Mass. 02203 Area Code 617, 223-6726	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
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1111 20th Street, NW. Washington, D. C. 20210 Area Code 202, 386-6016	Delaware, Dist. of Col., Maryland, No. Carolina, Pennsylvania, Virginia, West Virginia
1371 Peachtree Street, NE. Atlanta, Ga. 30309 Area Code 404, 526-3267	Alabama, Florida, Georgia, Mississippi, So. Carolina, Tennessee
219 South Dearborn Street Chicago, Ill. 60604 Area Code 312, 353-4258	Illinois, Indiana, Kentucky, Michigan, Minnesota, Ohio, Wisconsin
911 Walnut Street Kansas City, Mo. 64106 Area Code 816, 374-3796	Colorado, Iowa, Kansas, Missouri, Montana, Nebraska, No. Dakota, So. Dakota, Utah, Wyoming
411 North Akard Street Dallas, Tex. 75201 Area Code 214, 749-3671	Arkansas, Louisiana, New Mexico, Oklahoma, Texas
450 Golden Gate Avenue San Francisco, Calif. 94102 Area Code 415, 556-7414	Alaska, Arizona, California, Hawaii, Idaho, Nevada, Oregon, Washington

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VT 009 169
Fuller, Richard, And Others
Directory of Courses Offered in Area Vocational-Technical Schools.

Minnesota State Dept. of Education, St. Paul
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 69 435p.

*AREA VOCATIONAL SCHOOLS; *COURSE DESCRIPTIONS; *DIRECTORIES; *VOCATIONAL COUNSELING; ADMISSION (SCHOOL); STUDENT COSTS
MINNESOTA

Current information on more than 500 courses offered in 26 area vocational-technical schools in Minnesota is provided for use by students, parents, and counselors. Two alphabetical listings of the content increase the directory's utility: a short listing by school, of course offerings, and a long listing by course title, including a course description. Information given for each course includes course title, name, address and telephone number of school, admission dates, nature of work, job opportunities, course description, length of course, helpful high school courses, personal qualities, personal equipment needed, and expenses. Periodic updating of the information is planned. (CH)

VT 009 169

ED042060

Code: XXXIII-A-21

Directory of Courses Offered in Area Vocational-Technical Schools

Compiled
by
Richard Fuller
Julius H. Kerlan
G. Dean Miller

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
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Prepared with funds made available under the provisions of the National Defense Education Act of 1958, Title V-A, Public Law 565 as amended and Vocational Act of 1963.

VT009169

Developed in Cooperation
with
Division of Vocational Education
Division of Vocational Rehabilitation
and
Pupil Personnel Services Section
MINNESOTA DEPARTMENT OF EDUCATION
St. Paul, Minnesota 55101

1969

INTRODUCTION

This directory is being made available to provide students, parents, counselors and others with current information on the more than 500 courses offered in the twenty-six area vocational-technical schools in Minnesota.

Courses change from time to time in their content, length, fees, and schedule. If one is seriously considering a course, he is encouraged to contact in person, by phone, or in writing, the school for further clarifying information (see Counselors' list on page iv for names, addresses and telephone numbers).

There are two alphabetical listings of the contents which should make the directory more functional. One is a listing of courses **by course title** beginning on page xi and another is a listing **by school** on page xxiii. The course descriptions appear in the directory in alphabetical order **by course.**

It is our plan to revise the directory periodically so that school, rehabilitation and employment personnel can provide students with up-to-date information.

Pupil Personnel Services Section

ACKNOWLEDGMENT

We wish to express our appreciation to all personnel associated with the Area Vocational-Technical Schools who cooperated in supplying the basic data published in this publication. Special thanks goes to the Directors and Counselors who provided much of the information.

Pupil Personnel Services Section

AREA VOCATIONAL-TECHNICAL SCHOOL COUNSELORS

ALEXANDRIA
Alexandria 56308
(612) 763-3196
Lowell Doebbert
Orin Lundberg

ANOKA
Anoka 56303
(612) 427-1880
Herb Murphy
Milton Jacobson
John Heidgerken

AUSTIN
Austin 55912
(507) 433-7301

BEMIDJI
Bemidji 56601
(218) 751-4137

BRAINERD
300 Quince Street
Brainerd 56401
(218) 829-2814
Scotty Gustafson
Ed Fox

CANBY
Canby 56220
(507) 223-7252
Cliff Clausen

DETROIT LAKES
Detroit Lakes 56501
(218) 847-9261
Bob Dobrenski

DULUTH
Trinity Road
Duluth 55802
(218) 722-2801
Curtis Miller

EVELETH
402 Roosevelt Avenue
Eveleth 55734
(218) 749-2285

FARIBAULT
Faribault 55021
(507) 334-3965
Lawrence Thompson

GRANITE FALLS
15th Street & 11th Avenue
Granite Falls 56241
(612) 564-3411
John Hendricks

HIBBING
505 East 16th Street
Hibbing 55746
(218) 262-3824
Tom Myszkowshi

JACKSON
Jackson 56143
(507) 847-3320
Wayne Broeker

MANKATO
1920 Lee Boulevard
Mankato 56001
(507) 378-3441
Robert Singelstad

MINNEAPOLIS
1101 Third Avenue South
Minneapolis 55404
(612) 332-0381
Carol Hauger
Irene Dwyer
Dick Fuller
Reuben Schafer
Joseph Zetah

MOORHEAD
Box 100
Moorhead 56561
(218) 233-5494

PINE CITY
Pine City 56063
(612) 629-3844
Howard Olson

PIPESTONE
Pipestone 56164
(507) 825-5555

ROCHESTER
Rochester 55901
(507) 282-9411

ST. CLOUD
1601 North 9th Avenue
St. Cloud 56301
(612) 252-0101
Nick Hasselfeldt

ST. PAUL
235 Marshall
St. Paul 55102
(612) 227-9121
Gerhard Nelson
June Brahms
Tom Curtis
Bill Gerdts
Don Mackin

STAPLES
Staples 56479
(218) 894-2711
Morris Lundgren

THIEF RIVER FALLS
Thief River Falls 56701
(218) 681-5424
Bob Reeves

WADENA
405 Southwest Colfax Avenue
Wadena 56482
(218) 631-3342
Bernard Nelson

WILLMAR
Willmar 56201
(612) 235-5114
Roger Rasmussen
Jon Griepentrog

WINONA
1250 Homer Road
Winona 55987
(507) 8-3671
Leland Larson

GENERAL INFORMATION ABOUT THE SCHOOLS

The area vocational-technical schools were established as a part of the Minnesota system of public education in 1945 to equalize educational opportunities for the people of the state.

The area vocational schools provide education in trades, industrial and technical occupations, distributive occupations, health occupations, office training, agriculture, and home making.

The courses listed in this brochure are not a complete listing. Special programs are under such acts as, the Manpower Development and Training, Vocational Rehabilitation, and Veteran's Training. These programs change frequently and inquiry should be made of the appropriate agency involved.

As of now, twenty six area schools have been designated by the State Board of Vocational Education. These schools are located throughout the state. See page x for locations.

Who May Attend an Area Vocational Technical School?

Any Person 16 Years of Age or Older: Any person 16 years of age or older may be considered for attendance. Entrance requirements are based on aptitudes, interest, and ability of the student to profit by the instruction offered in the course or courses.

High School Graduates Under 21: Any qualified Minnesota high school graduate may attend any of the area schools without payment of tuition.

High School Non-Graduates: Any qualified person who is not a high school graduate who has been out of school at least a year and reached the age of 18 but who has not attained his 21st birthday may attend an area vocational school without payment of tuition.

High School Residents: A qualified high school student who is a resident of the area school district or a district not maintaining a high school may attend without payment of tuition.

High School Non-Residents: A qualified high school student who is a resident of a district which maintains a high school may attend if he secures permission from his local school board. The local board then agrees to pay tuition based on costs to the area school.

Adults over 21: All qualified adults over 21 may attend and are expected to pay a tuition based on the per pupil costs of the school.

Out of State Residents: All qualified persons residing outside the State of Minnesota may attend an area vocational-technical school and expected to pay a tuition based on the per pupil costs of the school. Contact any director of an area vocational-technical school for additional information.

What Does it Cost?

Tuition: Individuals under the age of 21 who are high school graduates may attend tuition free if they are legal residents of the state. Students who are not high school graduates, who have been out of school at least a year and reached the age of 18 and who have not reached their 21st birthday may attend an area school tuition free.

Students 21 years of age or older may enroll on a tuition basis. The tuition varies with the vocational program and the school.

Fees and Supplies: There may be incidental fees required for some courses. Some schools require the student to purchase hand tools and or reference books which are common to the occupation. See separate course listings for more information.

STUDENT HOUSING: Students will be assisted in finding rooms in the community. The board and room costs will vary from community to community. For information contact the Counselor or Director of the area vocational-technical school for the school you plan to attend.

How Should You Apply?

All prospective students should apply to the Area Vocational-Technical School of his choice. Application blanks may be obtained from any high school counselor, principal, or from the administration office of the Area Vocational School. Personal information on the application form is to be filled in by the prospective student. He or she then takes it to the principal or counselor who will then attach the student's high school transcripts to the application form and mail it to the Area Vocational-Technical School.

What Kinds of Financial Help are Available?

Part Time Employment: There may be opportunities for part-time employment in the various communities. Students may receive help to find part-time jobs by contacting the area school director.

Work-Study: The work-study program provides employment up to 12 hours a week for full-time qualified students in vocational education who are under 21. Contact any director of a vocational-technical school or a school counselor for additional information.

Student Loans: Loan insurance is provided for vocational students in the amount of $1,000 for each academic year. Maximum loan insurance extends a total of $2,000. The loans may be obtained from a local bank at the interest rate of six percent. Three percent of the interest is repayable by the student and three percent is borne by the government. Repayments of loans will start nine months after graduation from the vocational school.

G. I. Education Act: The G. I. Bill also covers training in the area of vocational-technical schools. Minnesota veterans may attend an area vocational school tuition free if they went into service before their 21st birthday and apply for admission to such school within two years after honorable discharge or before their 29th birthday whichever is earliest.

Do the Area Schools Issue Diplomas and Certificates?

Post high school diplomas or certificates are granted to those who successfully complete the full requirements of the course and are considered to be occupationally competent.

A high school student may meet the requirements for high school graduation while attending an area vocational-technical school. Students who wish to earn a high school diploma through an area school should contact the director of the area school or the high school counselor.

Are Credits Transferrable to College?

Training in area vocational-technical schools is not designed for the purpose of obtaining collegiate credit. However, some colleges may give recognition for the vocational courses completed in the area vocational-technical schools.

Are Evening Classes Available?

Yes! These classes are designed to upgrade or retain persons presently employed or temporarily unemployed. Many evening programs are not intended to serve as a preparation for employment in an occupation. Thus, not all evening classes are open for enrollment to all persons. Persons interested in this type of training should contact the area school for a listing of the classes offered during the evening.

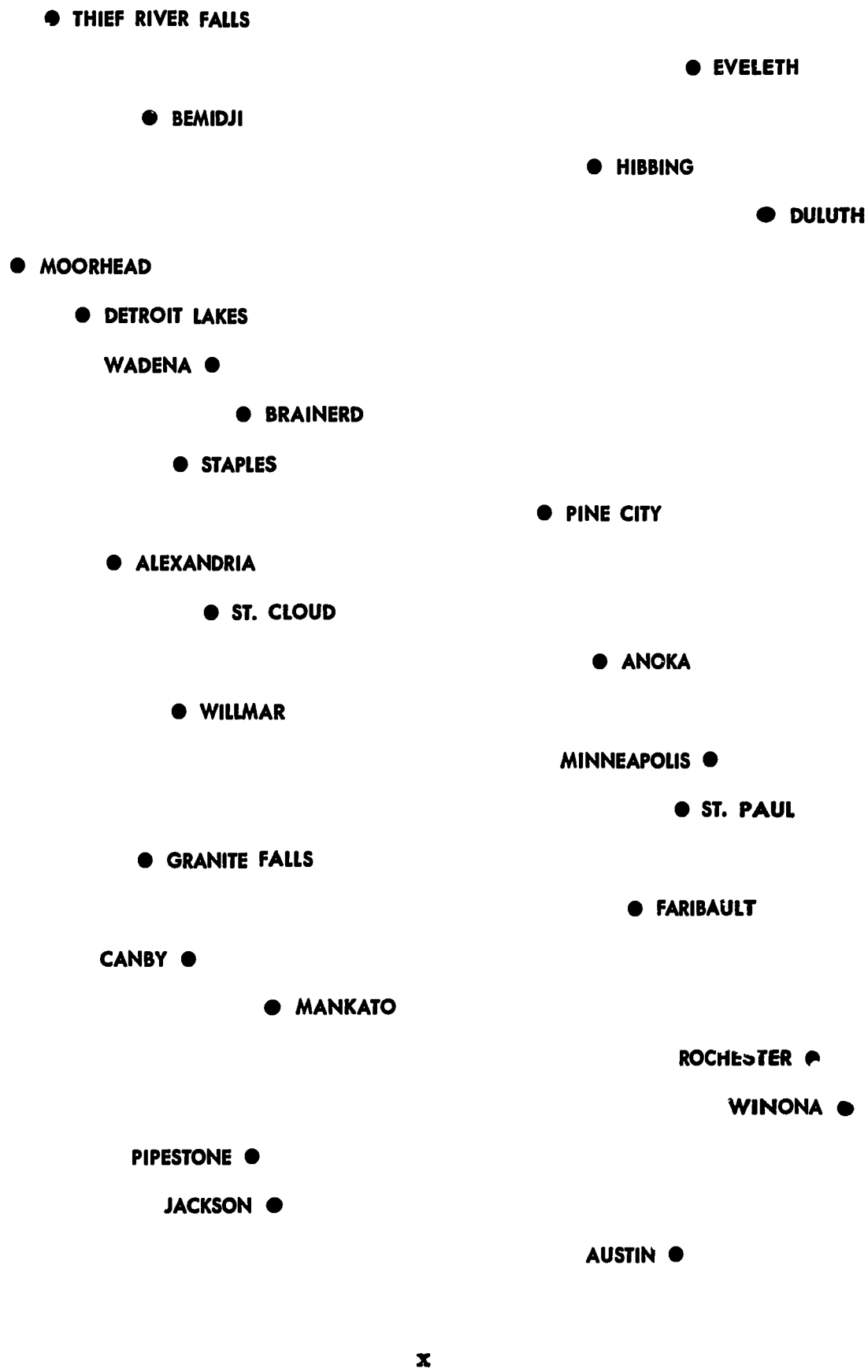
Does the School Help You in Finding a Job?

Yes! The area school will assist persons in securing employment upon acquiring employable skills. Schools maintain close contacts with industry and the Minnesota State Employment Services. Every effort is made to inform students of work opportunities which will make best use of the students' capabilities. In the past, over 94 percent of the students available for employment have been placed on jobs.

Where Can a Person Get Further Help with Vocational Planning and Counseling?

Area schools have services available to assist in career planning. For help, contact the area vocational-technical school counselor who will provide assistance to those who wish such services. See page iv for list of counselors.

LOCATION OF SCHOOLS



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Course Title: ACCOUNTING, FIRST AND SECOND YEAR

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: Day after Labor Day.

Nature of Work: The accountant's work may range from day-to-day record keeping in a small company to preparing special reports and executive counsel in a large corporation. Auditing, cost accounting and tax accounting may be part of the job.

Job Opportunities: Accountants work for banks, insurance companies, in state and Federal Civil Service, for the Federal Bureau of Investigation, the Internal Revenue Service, in all businesses, large and small, and for agencies providing special services in auditing, cost accounting or tax accounting.

Course Description:

*Fundamentals of accounting

*Requirements for attaining professional status

This course uses materials compiled by recognized experts in the accounting field; the course provides the students with the knowledge fundamentals to the accounting expert.

Length of Course:

20 months (Diploma sequence)

11 months (Certificate of attendance may be earned)

Helpful High School Courses:

Bookkeeping (recommended)

Business courses

Mathematics

Personal Qualities:

Above average mathematical ability

Neat and careful work habits

Ability to concentrate on details

Interest in business as a career

Personal Equipment Needed: None

Expenses: Acceptance Fee—$25

Book fee—$10

Tuition for students over 21—$40 per month plus above expense.

Course Title: ACCOUNTING, FIRST YEAR

Name of School:	Address:	Telephone:
Bemidji Area Vocational-Technical School	Bemidji, Minn. 56601	(218) 751-4137

Admission Dates: Day after Labor Day (Individual appraisal may permit admission at other times).

Nature of Work: Junior accountants at the beginner level usually do fairly routine work such as verifying cash balances or inspecting vouchers. Most work under close supervision and have an opportunity to become more acquainted with specific procedures on the job. There are opportunities for advancement through continued study.

Job Opportunities: This basic background in accounting leads to employment in public accounting firms, government agencies and private industry.

Course Description:

Quarter I

*Business mathematics
*Business communications
*Accounting I
*Office machines I
*Typing I

Quarter II

*Business letters
*Business psychology & grooming
*Accounting II
*Income tax accounting
*Office machines II
*Typing II
*Introduction to data processing

Quarter III

*Business law
*Office policies and procedures
*Accounting III
*Cost accounting
*Office machines

Length of Course: 9 months

Helpful High School Courses:

Bookkeeping
Business courses
Mathematics

Personal Qualities:

Mathematical ability
Interest and desire to learn accounting
Ability to concentrate on detail work

Personal Equipment Needed: Books—$25 per quarter

Expenses: Enrollment fee—$10
Tuition for students over 21—$50 per four week period

Course Title: ACCOUNTING, FIRST YEAR

Name of School:	Address:	Telephone:
Brainerd Area Vocational-Technical School	300 Quince St. Brainerd, Minn. 56401	(218) 829-2814

Admission Dates: September

Nature of Work: Junior accountants at the beginner level usually do fairly routine work such as analyzing balance sheets, verifying cash balances and inspecting vouchers. Most work under close supervision and have an opportunity to become acquainted with specific procedures on the job. There are opportunities for advancement with experience and continued study.

Job Opportunities: This basic background in accounting leads to entry-level employment in public accounting firms, government agencies and private business.

Course Description:

- *Typing
- *Business machines
- *Office procedures
- *Bookkeeping, accounting
- *Single proprietorship
- *Partnership
- *Income tax
- *Business law
- *Business mathematics
- *Human relations and communications skills
- *IBM Data processing equipment

Length of Course: 10½ months

Helpful High School Courses:

- Bookkeeping
- Office subjects
- English
- Communications

Personal Qualities:

- High school diploma or equivalent
- Good physical and mental health
- Good moral character
- Mathematical ability
- Interest and desire to learn accounting

Personal Equipment Needed: Students purchase their own books and supplies

Expenses: Tuition for students over 21—$40 per month

Course Title: ACCOUNTING, FIRST YEAR

Name of School:	Address:	Telephone:
Canby Area Vocational-Technical School	Canby, Minn. 56220	(507) 223-7252

Admission Dates: September

Nature of Work: Junior accountants at the beginner level usually do fairly routine work such as analyzing balance sheets, verifying cash balances and inspecting vouchers. Most work under close supervision and have an opportunity to become acquainted with specific procedures on the job. There are opportunities for advancement with experience and continued study.

Job Opportunities: This basic background in accounting leads to entry-level employment in public accounting firms, government agencies and private industry.

Course Description:

*Sole proprietorship
*Partnership
*Corporation, income tax, payroll and cost accounting.
*Data processing
*Business machines
*Business mathematics
*Business English
*Business psychology
*Business law
*Business management
*Typing

Lenght of Course: 11 months

Helpful High School Courses:

Business subjects
English
Bookkeeping
Mathematics (including Algebra)

Personal Qualities:

Mathematical ability
Ability to concentrate on detailed procedures
Interest and desire to learn accounting

Personal Equipment Needed: None

Expenses:

Reference books—no more than $10 per quarter
Tuition for students over 21—$40 per month for Minnesota resident
$60 per month for non-resident

Course Title: ACCOUNTING

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: The duties of an accountant are varied and range from day-to-day record keeping to the preparation of special reports or executive counsel. There are many areas of specialization such as auditing, cost accounting, tax accounting, state or Federal government accounting.

Job Opportunities: There are good opportunities in almost every form of business from manufacturing to merchandising. Accountants are a very necessary part of such businesses as insurance, banking, engineering and research.

Course Description:

- *Principles of accounting
- *Intermediate and advanced accounting
- *Accounting systems
- *Income tax accounting
- *Auditing and cost accounting
- *Human relations
- *Business law
- *Communications
- *Mathematics
- *Office procedures and administration
- *Principles of management
- *Introduction to data processing
- *Business machines
- *Economics

Length of Course: 18 months

Helpful High School Courses:

- Bookkeeping
- Mathematics
- Office subjects

Personal Qualities:

- Neatness and accuracy in work habits
- Ability to concentrate on details
- Mathematical aptitude
- Ability to get along well with others

Personal Equipment Needed: None

Expenses: Workbooks and supplies—$30 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: ACCOUNTING, FIRST YEAR

Name of School:	Address:	Telephone:
Eveleth Area Vocational-Technical School	402 Roosevelt Ave. Eveleth, Minn. 55734	(218) 749-2285

Admission Dates: September only

Nature of Work: Junior accountants usually do fairly routine work such as analyzing balance sheets, verifying cash balances and inspecting vouchers. Most work under close supervision and have an opportunity to become acquainted with specific procedures on the job. Advancement is possible with experience and continued study in accounting.

Job Opportunities: This basic background in accounting leads to entry-level employment in public accounting firms, government agencies and private business. Assistant bookkeeper, cashier, time-keeper, junior payroll clerk, junior cost clerk and junior accounting clerk are some positions graduates fill.

Course Description:

- *Business English and speech
- *Business communications and spelling
- *Business mathematics
- *Business principles and organization
- *Business law
- *Human relations
- *Economics and accounting
- *Automation office practice
- *Filing

Length of Course: 9 months

Helpful High School Courses:

- Bookkeeping
- Business subjects
- Mathematics

Personal Qualities:

- Aptitude for working with numbers
- Ability to concentrate on details
- Neat and accurate work habits
- Interest in business

Personal Equipment Needed: Books

Expenses: Tuition for students over 21—$65 per month
(Next year will be $150 per quarter for Minnesota residents; $195 per quarter for non-residents)

Course Title: ACCOUNTING, FIRST YEAR

Name of School:	Address:	Telephone:
Faribault Area Vocational-Technical School	Faribault, Minn. 55021	(507) 334-3965

Admission Dates: September, with later enrollments as vacancies occur.

Nature of Work: Junior accountants usually do fairly routine work. They may analyze balance sheets, verify addition, check audits, post records and vouchers, and prepare statements under supervision. Advancement is possible with experience in specific procedures learned on the job and with advanced study.

Job Opportunities: This basic background in accounting and bookkeeping leads to entry-level employment in public accounting firms, government agencies and private industry; assistant bookkeeper, cashier, time-keeper, junior payroll clerk, junior cost clerk and junior accounting clerk are some positions graduates fill.

Course Description:

*Principles of accounting
*Business communications
*Business mathematics
*Cost accounting
*Income tax accounting
*Introduction to business
*Typing
*Business filing and records management
*Business law
*Economics
*Business machines
*Introduction to data processing
*Data processing operation
*Personal development and human relations

Length of Course: 9 months

Helpful High School Courses:

Bookkeeping
Mathematics
Business subjects

Personal Qualities:

Aptitude for working with numbers
Ability to concentrate on details
Neat and accurate work habits
Good reading comprehension
Interest in business procedures

Personal Equipment Needed: None

Expenses: Enrollment fee—$5
Personal materials—$15 per quarter (maximum)
Tuition for students over 21—
$40 per 4-week period for Minnesota Residents
$55 per month for non-residents

Course Title: ACCOUNTING, FIRST YEAR

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	15th St. & 11th Ave. Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: September

Nature of Work: Junior accountants usually do fairly routine work in the area of financial records. They may analyze balance sheets, verify addition, check audits, post records and vouchers, prepare statements. Work is done under close supervision with opportunity to learn specific procedures on-the-job. Advancement comes with experience, and, in some cases, advanced study.

Job Opportunities: This basic background in accounting and bookkeeping leads to entry-level employment in public accounting firms, government agencies and private industry; assistant bookkeeper, cashier, time-keeper, junior payroll clerk, junior cost clerk and junior accounting clerk are some positions graduates fill.

Course Description:

- *Accounting
- *Machine & data processing procedures
- *Sole proprietorships
- *Partnerships
- *Corporations
- *Business English
- *Business law
- *Economics
- *Business mathematics
- *Office machines

Length of Course: 11 months

Helpful High School Courses:

- Bookkeeping
- Office subjects
- Mathematics

Personal Qualities:

- High school diploma or equivalent
- Aptitude for working with numbers
- Ability to concentrate on details
- Neat and accurate work habits

Personal Equipment Needed: Workbooks

Expenses: Registration fee $20
Tuition for students over 21—$40 per month

Course Title: ACCOUNTING, FIRST YEAR

Name of School:	Address:	Telephone:
Southwest Minn. Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: September

Nature of Work: Junior accountants usually do fairly routine work in the area of financial records. They may analyze balance sheets, verify addition, check audits, post records and vouchers, and prepare statements. Work is done under supervision with opportunity to learn specific procedures on the job. Advancement comes with experience, and in some cases, advanced study.

Job Opportunities: This basic background in accounting and bookkeeping leads to entry-level employment in public accounting firms, government agencies and private industries. Some positions graduates may fill are assistant bookkeeper, cashier, time-keeper, junior payroll clerk, junior cost clerk and junior accounting clerk in banks, insurance agencies, and financial departments.

Course Description:

- *Principles of accounting
- *Cost accounting
- *Income tax procedures
- *Business machines
- *Business mathematics
- *Typing
- *Business communications & spelling
- *Economics
- *Principles of management
- *Business law
- *Office procedures
- *Business ettiquette and human relations
- *Introduction to data processing

Length of Course: 11 months

Helpful High School Courses:

- Bookkeeping
- Office subjects
- Mathematics

Personal Qualities:

- High school diploma or equivalent
- Aptitude for working with numbers
- Ability to concentrate for long periods
- Good vocabulary and verbal expression
- Organizational ability
- Memory for detail
- Neat and accurate work habits

Personal Equipment Needed: None

Expenses: Textbooks—$15, approximately
Tuition for students over 21—$30 per month

Course Title: ACCOUNTING I AND ACCOUNTING II

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall of Each Year

Nature of Work: The accounting course is designed to offer functional education that is necessary for students for entry positions in public accounting firms, private industry, and local, state or Federal government service. The work involves instruction in principles of accounting, cost accounting, tax accounting, budgeting, payroll accounting, financial statement analysis and related training to give the student a firm business knowledge for employment. The curriculum has been developed with two goals in mind: (1) to satisfy the employment requirements of a one year accounting student, (2) to provide additional training for advanced work for the two year accounting student.

Job Opportunities: The demand for good accountants is greater than the supply. Banks, insurance companies, tax service firms, every type of private business and all industries need accountants.

Course Description:

First Year
*Principles of Accounting I, II, III
*Cost accounting
*Business mathematics
*Typing (I or II), III
*Business communication I, II, III
*Introduction for business
*Records management
*Economics (Macro)
*Economics (Micro)
*Introduction to data processing
*Electives

Second Year
*Payroll accounting
*Accounting for Data Processing
*Business organization & Management
*Tax accounting
*Business law II
*Purchasing procedures
*Credit and collections
*Financial statement analysis & budgeting
*Business statistics
*Investments
*Marketing
*Public and Internal auditing
*Personnel management
*Human and occupational relations
*Electives

Length of Course:
Accounting I—10½ months
Accounting II—21 months

Helpful High School Courses:
Bookkeeping
Mathematics

Personal Qualities:
Average general ability
Ability to analyze problems and work with detailed facts and figures
Desire to meet and work with the general public

Personal Equipment Needed: None

Expenses: Textbooks and working papers—$10 (approximately)
Tuition for students over 21—$32 per month

Course Title: ACCOUNTING

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. S. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Accounting includes the assembly, analysis and interpretation of essential information about the operations of an organization. Some accountants specialize in a particular phase such as tax work or auditing.

Job Opportunities: This basic background in accounting and bookkeeping leads to entry-level employment in public accounting firms, government agencies and private industries. Graduates will find excellent opportunities in cost accounting, tax accounting, internal auditing, as systems analyst, public accountant, budget analyst or other financial and records management specialties. Advancement potential is very good with experience and continued study. Accountants may become qualified as Certified Public Accountants.

Course Description:

Introductory Unit (18 weeks)
*Accounting principles
*Office machines
*Business communications
*Business mathematics
*Business law
Intermediate Unit (18 weeks)
*Accounting principles
*Typing
*Business communications
*Business law
*Marketing
Advanced Unit (8 weeks)
*Tax accounting
*Cost accounting
Credit is given for equivalent courses taken at other schools.

Length of Course: 21 months (12 month course is also available)

Helpful High School Courses:

Business courses
Bookkeeping

Personal Qualities:

High school diploma or equivalent
Strong interest in problem solving
Above average achievement in mathematics
Keen analytical ability
Neat and accurate work habits

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: ACCOUNTING, FIRST YEAR

Name of School:	Address:	Telephone:
Moorhead Area Vocational-Technical School	Box 100 Moorhead, Minn. 56561	(218) 233-5494

Admission Dates: September

Nature of Work: Junior accountants usually do fairly routine work in the area of financial records. They may analyze balance sheets, verify addition, check audits, post records and vouchers and prepare statements. Work is done under supervision with opportunity to learn specific procedures on the job.

Job Opportunities: This basic background in accounting and bookkeeping leads to entry-level employment in public and private accounting firms, government agencies and industry. Some positions graduates may fill include assistant bookkeeper, cashier, time-keeper, junior payroll clerk, junior cost clerk, and junior accounting clerk in banks, insurance agencies and financial departments of various businesses.

Course Description:

*Basic accounting theory and principles
*Income tax
*Cost accounting
*Business mathematics
*Business communications
*Personnel management
*Office machines
*Introduction to data processing
*Business law
*Human relations
*Statistics

Length of Course: 11 months or 20 months available

Helpful High School Courses:

Bookkeeping
Mathematics
Office subjects

Personal Qualities:

Aptitude as shown by testing
Ability to concentrate
Neat and accurate work habits

Personal Equipment Needed: Books—Approximate cost $50

Expenses: Student activity fee—$10
Supply fee—$5
Tuition for students over 21—$40 per month plus above costs

Course Title: ACCOUNTING, FIRST YEAR

Name of School:	Address:	Telephone:
Pine City Area Vocational-Technical School	Pine City, Minn. 55063	(612) 629-3844

Admission Dates: September

Nature of Work: Junior accountants usually do fairly routine work under close supervision. They may analyze balance sheets, verify addition, check audits, post records and vouchers and prepare statements. Most have an opportunity to learn specific procedures on the job.

Job Opportunities: This basic background in accounting and bookkeeping leads to entry-level employment in public accounting firms, government agencies and private industries. Some positions graduates may fill include assistant bookkeeper, cashier, time-keeper, junior payroll clerk, junior cost clerk and junior accounting clerk in banks, insurance agencies and financial departments of other businesses.

Course Description:

- *Principles of accounting
- *Principles of cost accounting
- *Income taxes and payroll
- *Data processing
- *Business mathematics
- *Business law
- *Business English
- *Economics
- *Typing
- *Business machines

Length of Course: 11 months

Helpful High School Courses:

- Bookkeeping
- Office subjects
- Mathematics

Personal Qualities:

- High school diploma or equivalent
- Aptitude for working with numbers
- Ability to concentrate for long periods
- Neat and accurate work habits

Personal Equipment Needed: None

Expenses: Registration fee—$10
Tuition for students over 21—$35 per month
Tuition for out-of-state students—$50 per month

Course Title: ACCOUNTING, FIRST AND SECOND YEAR

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September

Nature of Work: Junior accountants usually do fairly routine work in the area of financial records. They may analyze balance sheets, verify addition, check audits, post records and vouchers, prepare statements. Beginners usually work under close supervision, with added responsibility after training.

Job Opportunities: This course leads to employment in business, government and industry; graduates of the complete course (18 months) will enter the labor force at a higher level in terms of responsibility and salary.

Those who complete the shorter (9 months) course, will find jobs as clerks, bookkeepers or accounting clerks. Those with the broader background may expect more rapid advancement and a wider choice of jobs.

Course Description:

*Accounting theory and practice
*Partnership and corporation procedures
*Business machines in accounting
*Typewriting
*Business English
*Business mathematics
*Business law
*Business correspondence
*Personality
*Proper work attitudes
*Office procedures

Length of Course: 21 months

Helpful High School Courses:

Bookkeeping
Office subjects
Mathematics

Personal Qualities:

Aptitude for work as indicated by testing
Ability to concentrate on details
Neat and accurate work habits
Interest in business and accounting

Personal Equipment Needed: Books:

First year, $75
Second year, $75

Expenses: Service fee—$7

Tuition for students over 21—$40 per month plus above fee.

Course Title: ACCOUNTING, FIRST YEAR

Name of School:	Address:	Telephone:
St. Paul Area Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Junior accountants usually do fairly routine work in the area of financial records. They may analyze balance sheets, verify addition, check audits, post records and vouchers and prepare statements. Work is done under close supervision with opportunity to learn specific procedures on the job. Advancement comes with experience and, in some cases, advanced training.

Job Opportunities: This basic background in accounting and bookkeeping leads to entry-level employment in public accounting firms, government agencies and private industry. Assistant bookkeeper, cashier, time-keeper, junior payroll clerk, junior cost clerk and junior accounting clerk are some positions open to graduates.

Course Description:

1st Quarter
*Business principles and management
*Business machines
*Typing I
*Basic accounting
*Accounting
*Accounting laboratory

2nd Quarter
*Basic economics
*Business machines and filing
*Typing II
*Accounting II
*Accounting laboratory

3rd Quarter
*Business law
*Business English and correspondence
*Speech
*Human relations
*Clerical office procedures
*Accounting III and laboratory
*Plus electives

Length of Course: 12 months

Helpful High School Courses:

Bookkeeping
Office subjects
Mathematics

Personal Qualities:

Aptitude for working with numbers
Ability to concentrate on details
Neat and accurate work habits

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: ACCOUNTING, FIRST YEAR

Name of School:	Address:	Telephone:
Thief River Falls Area Vocational-Technical School	Thief River Falls, Minn. 56701	(218) 681-5424

Admission Dates: September, December, March, June

Nature of Work: Graduates of this course usually become junior accountants. Their duties may include checking audits, analyzing accounts, preparing statements and vouchers, posting and other financial record keeping under supervision. Other types of work are bookkeeping, accounting clerk, timekeeper, cashier, credit clerk or machine bookkeeper. Most jobs include some on-the-job training.

Job Opportunities: Insurance companies, banks, the Federal and state Civil Service, retail and wholesale merchandisers, in fact, every business, large or small, needs accountants.

Course Description:

*Principles of accounting
*Sole proprietorship
*Partnership
*Corporations
*Business English
*Mathematics
*Office procedures
*Business machines
*Office machines

Course includes at least two hours of accounting per day.

Length of Course: 11 months

Helpful High School Courses:

General business subjects
Bookkeeping
Mathematics

Personal Qualities:

Above average mathematical ability
Neat and careful work habits
Ability to concentrate on details
Interest in business

Personal Equipment Needed:

Books as required—cost is included in course fee

Expenses: Registration fee—$10
Course fee—$90
Tuition for students over 21—$45 per four week period plus course fee.

Course Title: ACCOUNTING, FIRST YEAR

Name of School:	Address:	Telephone:
Wadena Area Vocational-Technical School	405 SW Colfax Ave. Wadena, Minn. 56482	(218) 631-3342

Admission Dates: Fall only

Nature of Work: Graduates of this course usually become junior accountants; their duties may include checking audits, analyzing accounts, preparing statements and vouchers, posting and other financial record keeping under supervision. Graduates may find employment as bookkeepers, timekeepers, accounting clerks, credit clerks or machine bookkeepers.

Job Opportunities: Insurance companies, banks, the Federal and state Civil Services, retail and wholesale merchandisers, in fact, all businesses, large and small, employ accountants.

Course Description:

*Basic accounting
*Payroll accounting
*Elementary cost accounting
*Typing
*Business machines
*Bookkeeping machines
*Filing
*Office management

Length of Course: 9 months

Helpful High School Courses:

Bookkeeping
Typing
Mathematics

Personal Qualities:

Above average mathematical ability
Neat and careful work habits
Ability to concentrate for long periods
Interest in business

Personal Equipment Needed: Workbooks and other supplies as required

Expenses: Application fee—$10
Workbooks and supplies—$30 per year (approximately)
Tuition for students over 21—$40 per month plus above costs

Course Title: ACCOUNTING, FIRST AND SECOND YEAR

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: Fall quarter of each school year

Nature of Work: Accounting is concerned with designing of financial records systems, preparing financial reports based on records and the interpreting of financial reports. The size, type and the accounting specialties germane to the particular business affect the accountant's duties. Some accountants direct and review the work of bookkeepers and on the entry-level, some do bookkeeping tasks.

Job Opportunities: The need for competent accountants has increased as the gross national product has increased. Students with good school records will find work in financial institutions, tax or other business service firms, industries and large businesses, retail firms, hospitals, railroads, indeed almost every type of business needs accountants.

Course Description:
Contact the school for a bulletin giving complete details

Length of Course:
Accounting I—10½ months
Accounting II—10½ months plus 3 months of on-the-job training

Helpful High School Courses:
Bookkeeping
Business subjects
Mathematics

Personal Qualities:
Above average aptitude for working with numbers
Above average reading skills and comprehension
Neat and accurate work habits
Ability to concentrate on details

Personal Equipment Needed: None

Expenses: Books—Approximately $80 per year
Tuition for students over 21—$40 per month

Course Title: ACCOUNTING, FIRST AND SECOND YEAR

Name of School:	Address:	Telephone:
Winona Area Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-3671

Admission Dates: First Tuesday after Labor Day or beginning of any quarter.

Nature of Work: Beginning accounting workers usually start out recording transactions by hand or machine and advance to more varied and responsible assignments, for example, preparing summary reports, checking audits, posting, analyzing reports and preparing statements under supervision.

Job Opportunities: Students may expect to be employed as a junior accountant, bookkeeper, bookkeeping machine operator, key punch operator, tabulating technician or business machine operator in public accounting firms, private industry or government service.

Course Description:

- *Basic accounting
- *Payroll accounting
- *Individual proprietorship, partnership and corporation accounting
- *Data processing
- *Business English
- *Business law
- *Economics
- *Business mathematics

Students are urged to follow the two-year sequence for a more complete basic background and higher advancement potential as well as entry-level responsibility and salary.

Length of Course: 18 months

Helpful High School Courses:

- Business subjects
- Mathematics
- English

Personal Qualities:

- Minimum score as recommended by General Aptitude Test Battery.
- High school graduate or 18 years of age
- Figure aptitude
- Ability to concentrate on details

Personal Equipment Needed: Cost will be $25 to $35.

Expenses: Tuition for students over 21—$30 per month

Course Title: AGRI-BUSINESS (OFFICE)

Name of School:	Address:	Telephone:
Detroit Lakes Area Vocational-Technical School	Hwy. 34 East Detroit Lakes, Minn. 56501	(218) 847-9261

Admission Dates: September

Nature of Work: This background provides general office skills and familiarity with business machines, accounting and management procedures to be used in the offices of agriculture-related manufacturing, sales and service firms.

Job Opportunities: Approximately 40 per cent of business is related to agriculture. It is the agriculture-related businesses which employ graduates of this program as office managers, clerks, salesmen.

Course Description:

- *Typing
- *Business machines
- *Accounting procedures
- *Shorthand (for women)
- *Business management (for men)
- *Economics
- *Communications
- *Data processing
- *Personality development
- *Human relations

Length of Course: 9 months

Helpful High School Courses:

- Business subjects
- Psychology
- English
- Mathematics

Personal Qualities:

- 16 years or older
- Ability of student to benefit from training

Personal Equipment Needed: Books, tools and uniforms as required by the various departments.

Expenses: Tuition for students over 21—$40 per month

Course Title: AGRI-BUSINESS — MATERIALS HANDLING

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall of each year

Nature of Work: Materials handling is a new program developed to meet the ever increasing need for trained men in the area of mechanized agriculture. Specifically, it will prepare the student to install, maintain, and develop workable mechanical equipment for the purpose of better utilization of time and labor for production agriculture.

Job Opportunities: Technical training in the area of materials handling offers the student unlimited opportunities in the ever expanding area of mechanized agriculture. Employers might be manufacturers, sales agencies, service companies dealing with agricultural products.

Course Description: The materials handling course is designed with the intention of training students for the proper operation, installation, maintenance, and repair of modern agriculture equipment and structures.

Length of Course: 16 months of classroom instruction
3½ months of supervised work experience

Helpful High School Courses:
It is preferred but not required that the student has completed four years of high school vocational agriculture

Personal Qualities:
Interest in mechanized agriculture Mechanical aptitude

Personal Equipment Needed: None

Expenses: Technical books, workbooks, notebooks and basic shop supplies (Approximately $75 per year)
Tuition for student over 21—$32 per month plus above costs

Course Title: AGRI-BUSINESS — SALES AND MANAGEMENT

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall of each year

Nature of Work: Agriculture is one of the nation's largest and most vital industries. Changes in agriculture have led to many related off-the-farm jobs that are an integral part of agriculture. (Services provided to the farmer by agricultural business firms are increasing, and the technology needed by these employers must meet their needs.) Agri-business sales and management is designed to provide the student with these specific skills and knowledge necessary for agricultural related jobs in the sales and management field.

Job Opportunities: Agri-business is a growing industry offering unlimited opportunities for the technically trained individuals. Graduates of this program should have no difficulty in finding jobs in agricultural firms as sales personnel and in developing into management positions.

Course Description:

- *Agronomy and soil
- *Animal and poultry science
- *Mechanized agriculture
- *Agri-business management
- *Human and occupational relations
- *Marketing and merchandising
- *Salesmanship
- *Bookkeeping and accounting
- *Occupational work experience

Length of Course: 16 months in classroom instruction
3½ months of supervised work experience

Helpful High School Courses:
Vocational agriculture
Farm background preferred

Personal Qualities:

- Basic interest in the agricultural sciences
- Ability to acquire detailed knowledge
- Belief in farming

Personal Equipment Needed: None

Expenses: Incidentals (books, workbooks, notebooks and other supplies) $75 approximately
Tuition for students over 21—$32 per month plus incidentals

Course Title: AGRICULTURAL BANKING

Name of School:	Address:	Telephone:
Pipestone Area Vocational-Technical School	Pipestone, Minn. 56164	(507) 825-5555

Admission Dates: September

Nature of Work: Agricultural bankers assist farmers and farm-oriented businesses to use practical credit to their best financial advantage. All phases of bank operation and farm management methods may be part of the bankers job.

Job Opportunities: Banks, P.C.A., the Federal Land Bank, and F.H.A. offices employ agricultural banking specialists.

Course Description: Provides training in all phases of the operation of a bank from bookkeeper to loan officer. Considerable time is spent acquainting students with modern techniques of farm management and production farming.

Length of Course: 22 months

Helpful High School Courses:
Vocational agriculture (recommended)

Personal Qualities:
Farm background
Ability to relate and communicate well with others
4-H Club work

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$45 per month

Course Title: AGRICULTURAL CHEMICALS—FERTILIZERS SERVICES AND SALES

Name of School:	Address:	Telephone:
Canby Area Vocational-Technical School	Canby, Minn. 56220	(507) 223-7252

Admission Dates: September

Nature of Work: Soil and fertilizer technicians may perform testing and research functions, may be salesmen using their knowledge of soils, plants and organisms to merchandise chemicals and fertilizers, or they may be involved in production of the products used in agriculture.

Job Opportunities: Fertilizer plants, blending plants, sales work for fertilizer processors, chemical companies and others dealing with agricultural supplies employ the graduates of this course.

Course Description: The course content covered provides a technical background in soils, plant and organisms and their reactions to chemicals and fertilizers.

Length of Course: 11 months (includes 6 weeks on-the-job training)

Helpful High School Courses:

Vocational agriculture
Chemistry

Personal Qualities:

Scientific interest
Agricultural interest
Ability to communicate effectively

Personal Equipment Needed: None

Expenses: Reference books—not to exceed $10 average per quarter
Tuition for students over 21—$40 (residents of Minnesota)
$60 (out of state residents)

Course Title: AGRICULTURAL FERTILIZER, CHEMICAL AND FEED SALES

Name of School:	Address:	Telephone:
Southwest Minn. Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: September 1

Nature of Work: Specialists in this field must know the technical skills and practical application involved in handling fertilizers, agricultural chemicals and feeds. Salesmen may be in wholesale or retail trade; each requires the ability to get along well with people and to assimilate new ideas and details quickly.

Job Opportunities: Graduates may find employment in farm stores, as servicemen or plant operators in feed and fertilizer plants, fieldmen for canning or food processing plants, P.C.A. fieldmen, farm managers and operators, soil conservationists, state agronomy service inspectors, Bank Farm Credit representatives, soil laboratory technicians, hail insurance adjustors, representatives of feed, fertilizer or agricultural chemical companies, and many have served in the Peace Corps.

Course Description:

*General agricultural science—soils, testing, crops, weeds and insects

*Fertilizer and chemicals—properties, manufacture, laws and regulations, safety

*Feed—basic nutrition, feed analysis, testing for nitrogen, laws, safety

*Salesmanship—selling, techniques, advertising, merchandising, display

*Business—management, accounting, records, inventories, time-motion, agri-business

*Farm management—basic knowledge of farm records and their analysis

*Communications—grammar, spelling, speech, writing, job hunting procedures

*On-the-job training—3 weeks of working at one or more fertilizer, chemical or feed stores.

Length of Course: 11 months

Helpful High School Courses:

Vocational agriculture
Sciences, particularly chemistry
Mathematics
Business subjects, particularly bookkeeping or accounting

Personal Qualities:

Interest in Agri-business
Liking for rural America

Personal Equipment Needed: Books and handbooks purchased as needed

Expenses: Tuition for students over 21—$30 per month

Course Title: AGRICULTURAL SALES TECHNICIAN

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: Sales technicians advise customers of new products and their uses, help customers plan grain, feed or chemical needs, keep records of transactions and perform other sales functions.

Job Opportunities: Graduates work for grain elevators, feed companies, farm retail stores, chemical fertilizer plants on both wholesale and retail levels. Industry indicates a shortage of trained people in these areas.

Course Description:

*Business principles
*Animal and plant science
*Marketing
*Agricultural economics
*Agricultural engineering
*Agricultural salesmanship
*Accounting
*Typing
*Office management

Length of Course: 18 months

Helpful High School Courses:

Vocational agriculture
Typing
Bookkeeping

Personal Qualities:

Definite interest in agriculture
Ability to meet people
Farm background is desirable but not absolutely necessary

Personal Equipment Needed: None

Expenses: Acceptance Fee $25
Book fee—$10
Tuition for students over 21—$40 per month

Course Title: AGRICULTURAL SUPPLIES TECHNOLOGY

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: July, September, January and March

Nature of Work: Work activities include selling products, either wholesale or retail, operating equipment and machinery, buying products, meeting people, making out financial reports, and managing. Graduates work toward management positions such as manager, assistant manager, plant manager, department manager, and sales manager.

Job Opportunities: Graduates work in grain elevators, feed stores, fertilizer plants, agricultural chemical stores, and farm supply stores.

Course Description:

*Technical agriculture
*Agricultural business
*Business procedures
*Distributive education
*Agricultural mechanics
*Supervised occupational experience (usually spring quarter)

Classroom instruction, field trips, and resource personnel from industry are utilized.

Length of Course: 21 months

Helpful High School Courses:

Vocational agriculture
Biology and other sciences
Business subjects

Personal Qualities:

Farm background
Upper two-thirds of high school class
Ability to meet people
Aptitude in agriculture, biology and bookkeeping

Personal Equipment Needed: Books

Expenses: Activity fee—$15
Tuition for students over 21—$40 per month

Course Title: APPAREL ARTS

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Girls employed in the apparel arts trade are a part of the fashion and home furnishings industries. They produce both garments reflecting each season's trends as well as the textile merchandise used in home decorating. Sewers in custom work cut and complete the clothing or furnishings ordered by an individual customer. Sewers in mass production perform one or more operations of those needed to complete an article. Altering ready-made garments, power machine operation and hand sewing may be included in this trade.

Job Opportunities: Beginning employment in the needle arts depends on the individual skills. Alteration departments of women's specialty shops, department stores, custom dressmaking shops, firms making dresses, coats, sportswear, children's clothing, decorating studios, monogramming and embroidery shops. Experienced sewers may develop into inspectors, fitters, patternmakers and designers. Wages are good, depending on quantity and quality of the work done.

Course Description:

Semester I
- *Use and care of single power machine
- *Hand sewing-specialized stitches
- *Construction techniques for custom sewing
- *Construction techniques for commercial sewing
- *Alteration of ready-made garments
- *Production of garment for self

Semester II
- *Dressmaking
- *Custom sewing
- *Production sewing from sample
- *Alteration of customer's garment
- *Women's coats and suits
- *Handsewing techniques for industry
- *Power machine techniques for industry
- *Custom sewing of outerwear
- *Alteration of customer's coats and suits
- *Production sewing from sample

Length of Course: 9 months

Helpful High School Courses:
Sewing
Art

Personal Qualities:
Good manual and finger dexterity
Normal eyesight (with or without glasses)
Ability to do painstaking work rapidly and to follow instructions.
Appreciation and interest in fashion and home decorating.

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: APPAREL ART

Name of School:	Address:	Telephone:
St. Paul Area Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Four out of five employees in the apparel industry are women. Designing, planning, cutting, assembling garments or other items, inspecting and finishing are all important parts of apparel manufacture. Most women's work is sewing and designing jobs; men are usually employed as cutters, markers and pressers. Individuals should know as much as possible about various processes, machinery and possess the basic skills, proficiency and speed in the various operation.

Job Opportunities: Manufacturing firms, custom and tailoring concerns, alteration departments in retail stores, interior decorating, upholstery, curtain and drapery companies need workers skilled in the apparel arts. People with good skills can rise from beginning jobs to foreman, section head or sample maker which command excellent salaries.

Course Description:

*Trade units
*Trade information
*Power machines—single needle and special
*Fabrics and seams
*Patterns
*Special machines
*Garment construction
*Assembling
*Alterations
*Finishing
*Tailoring processing
*Simple machine repair
*Standards and quality of work

Related subjects
*Business mathematics
*Communications
*Industrial relations

Length of Course: 12 months

Helpful High School Courses: Sewing

Personal Qualities:

Good eyesight
Good eye-hand coordination
Manual dexterity
Interest and desire to sew
Ability to work quickly, do routine work rapidly.

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: APPLIANCE AND REFRIGERATION SERVICE

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: September

Nature of Work: Appliance and refrigeration repairmen install and service the many gas and electrical appliances found in most homes today. Refrigerators, freezers, air conditioners, ranges, laundry equipment and home cleaning equipment are included in their services. They must be skilled in diagnosing problems and trouble shooting faulty operations, as well as understanding the principles of gas and electric-powered equipment. Advising homemakers on the use and care of appliances may be part of the job.

Job Opportunities: Most repairmen work for utilities, parts supply houses, sales firms, franchised dealers of home appliances, retail stores and repair services. There are good opportunities in most areas for the man who wishes to be self-employed.

Course Description:

- Basic electricity
- Refrigeration
- Appliances
- Service management
- Appliance and refrigeration laboratory

Length of Course: 11 months

Helpful High School Courses:

- Mathematics
- Electricity
- Industrial arts
- Physics
- Business courses

Personal Qualities:

- Interest in mechanics
- Good manual and mechanical aptitudes
- Ability to get along well with others

Personal Equipment Needed: Students are encouraged to develop a personal tool kit during the course.

Expenses: Acceptance fee—$25
Book fee—$15
Tuition for students over 21—$40 per month

Course Title: APPLIANCE REPAIR AND REFRIGERATION

Name of School:	Address:	Telephone:
Southwest Minnesota Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: August

Nature of Work: Servicemen install and repair household appliances including refrigerators, freezers, air conditioners, ranges, laundry equipment and home cleaning equipment. They must be skilled in diagnosing and trouble-shooting problems, in the principles of gas and electric appliances and should be able to advise on use and care of home appliances.

Job Opportunities: Most servicemen work for utilities, parts supply houses, sales firms, franchised dealers of home appliances, retail stores or repair services. There is good opportunity in most areas for owning your own business.

Course Description:

Basic Electricity
*Circuits
*Symbols
*Schematics
*Transformers
*Relays
*Solenoids
*Motors
*Circuit testing
*Related mathematics

Refrigeration
*Compressors
*Condensors
*Controls
*Trouble diagnosis
*Evaporators
*Metering devices
*Tubing connection

Appliances
*Design and operation
*Controls
*Installation
*Wiring
*Rebuilding
*Gas appliances

Service Management
*Customer relations
*Record keeping
*Inventory and parts ordering and control
*Service orders
*Service charges

A limited time will be spent on servicing small gasoline engines.

Length of Course: 11 months

Helpful High School Courses:
Industrial arts
Algebra
Physics

Personal Qualities:
Good mechanical ability
Satisfactory score under State Employment Service testing program
Ability to work well with others
Aptitude for problem-solving

Personal Equipment Needed: Hand tools

Expenses: Tools—$40
Tuition for students over 21 and out-of-state residents of any age—$30 per month

Course Title: ART, COMMERCIAL

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: September

Nature of Work: Commercial artists create the artwork used in newspaper and magazine ads, on billboards, in brochures, catalogs and in television commercials. Some help prepare slides, filmstrips and other visual aids. Some specialize in fashion illustrating, greeting cards, drawings for books or in technical drawing for industry.

Job Opportunities: Commercial artists work in advertising agencies and production art studios, for display companies, sign shops, magazines, newspapers and television stations. Some companies employ commercial artists in their advertising or display departments. Many work for retail stores; others work as freelance artists, selling their artwork to many of the above types of businesses.

Course Description:

*Illustrating for magazines and televison
*Photography
*Cartoons
*Maps
*Lettering
*Label designs
*Greeting cards

Emphasis in this course is on the many areas of advertising design with particular attention to the development of individual creativity and practical skills.

Length of Course: 18 months

Helpful High School Courses:

Art
Drawing

Personal Qualities:

Creative, artistic ability
Ability to function in competitive work
Ability to sell one's self and one's ideas

Personal Equipment Needed: None

Expenses: Acceptance fee—$25
Book fee—$15 per year
Tuition for students over 21—$40 per month plus above fees

Course Title: ART, COMMERCIAL

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall and at the Beginning of Each Quarter

Nature of Work: Commercial artists prepare art for advertising layout, make posters and window displays; illustrations for newspapers, magazines, and other printed matter, designs for clothing, household and commercial equipment, furnishings and other products. Commercial art also includes advertising design, interior design, industrial design and fashion design.

Job Opportunities: The commercial art field is expanding and competitive. The artist today is limited only by his own knowledge and competence. Department stores, advertising agencies, newspapers, magazines, printing companies, television stations, industries and businesses employ people with commercial art background.

Course Description:

*Use of art media such as pencil, drafting instruments, crayon, pen and ink, brush and ink, wash, tone and color
*Study of fundamentals such as perspective, form, design, color harmony, color theories and composition
*Advertising design and layout
*Graphic design
*Drawing from life
*Animal drawing
*Cartooning
*Illustration
*Technical drawing
*Typography
*Lettering
*Fashion drawing
*Studio procedures
*Photographic application

Length of Course: 10½ months

Helpful High School Courses:

Art
Industrial arts

Personal Qualities:

Artistic aptitudes
Creativity
Interest in art as a career
Patience and neatness

Personal Equipment Needed: None

Expenses: The cost of this course is approximately $50 for the year
Tuition for students over 21—$32 per month plus above expenses

Course Title: ART, COMMERCIAL

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1103 3rd Ave. S. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Commercial artists create the artwork used in newspaper and magazines, billboard posters, brochures, catalogues and television commercials. Some develop artwork for greeting cards and other booklets, folders and display pieces. Still others specialize in making slides, film strips and other visual materials. Most artwork begins with a layout, showing the kind of piece that is needed; the next step is developing the rough sketch or idea, usually in black and white; from this, the final artwork is made including the drawing, lettering or other materials to be used in the finished printed or filmed product.

Job Opportunities: Graduates of this course work for advertising agencies; display companies, retail stores, printers, publishers, art studios, manufacturers, television stations, display companies and producers of film strips and other visual art for advertising or educational purposes.

Course Description:

First Year
Summer Session
*Introduction to drawing and painting
Introduction to design
*Introduction to lettering
Semester I
*Advanced drawing and painting
*Basic photography
*Technical drawing
*Cold type processes
Semester II
*Print making
*Two dimensional design
*Technical drawing
*Cold type processes

Second Year
Summer Session
*Production techniques in the offset shop
Semester I
*Three dimensional design (sculpture)
*Advertising photography
*Advertising design and mechanics
Semester II
*Advertising illustration
*Three dimensional design (display)
*Advertising design and mechanics

Length of Course: 24 months

Helpful High School Course: Art

Personal Qualities:

Good general ability
Artistic aptitude
Desire to succeed and meet competition

Samples are helpful

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: ART, PRODUCTION

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates:

Nature of Work: Production artists work in graphic arts preparing various elements to be printed. They may do lettering, line ruling, paste-ups, retouch photographs or in other ways insure that the material to be reproduced will be of the best possible quality. Key-line art and cold type pasteup and sign painting may be part of this job.

Job Opportunities: Production artists work for print shops, advertising agencies, in the advertising and promotion departments of various businesses including retail stores. Newspapers, magazines and publishing houses also employ production artists.

Course Description:

*Preparatory art techniques
*Color and design
*Lettering
*Rending techniques
*Printing processes
*Graphic photography
*Paste-up and keyline
*Communications
*Industrial relations
*Printers' mathematics

Length of Course: 18 months

Helpful High School Courses:

Art
Mathematics

Personal Qualities:

Strong art interest and background
Habits of neatness and accuracy in work
Good judgment
Personal poise and ability to accept criticism
Creativity and imagination

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: ARTIFICIAL BREEDING AND HERDSMAN TECHNICIAN

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Graduates of this course are capable of performing the duties of an artificial insemination technician for a breed association, herdsman and technician for a large beef or dairy operation or to operate their own beef or dairy breed business.

Job Opportunities: Technicians are employed by beef and dairy association, breeding farms, state or Federal agricultural services, cooperative farms or as farm managers. Many are self-employed with their own farm or beef or dairy herd business.

Course Description:

- *Artificial breeding
- *Anatomy and reproduction
- *Livestock feeding, including studies of balanced ration with the economics of production
- *Livestock diseases and their prevention
- *Milking techniques
- *Field trips augment class and laboratory instructions.

Length of Course: 9 months

Helpful High School Courses:

- Vocational agriculture
- Science courses

Personal Qualities:

- Farm background is helpful
- Interest in farming and better breeding techniques
- Ability to work well with animals and people

Personal Equipment Needed: Coveralls, books, insemination kit

Expenses: Supplies—including coveralls, kit—$50 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: AUTO BODY

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: An auto body repairman works on damaged automobiles and light trucks. He examines vehicles, estimates repairs, removes upholstery, accessories, electrical and hydraulic window-and-seat operating equipment and trim to gain access to body and fenders. He removes dents, fills depressions with solder or other material, removes excessively damaged fenders, panels and grills using wrenches and cutting torches, attaches replecements. He straightens bent frames; files, grinds and sands surfaces and refinishes them.

Job Opportunities: Auto body repairmen work for garages, car dealers and truck dealers, for organizations which maintain their own fleet of trucks and cars such as Federal, state and local governments, large business concerns and buslines. There are good opportunities for owning your own business as well as a good outlook for employment by others.

Course Description:

*Estimating repair costs
*Body repairs
*Refinishing damaged areas and entire vehicle
*Frame straightening
*Electrical chassis wiring
*Removal and installation of glass
*Use of fiber-glass and other fillers
*Use and care of auto body repair tools

Length of Course: 12 months

Helpful High School Courses:

Mathematics
Business
Welding
Metal shop

Personal Qualities:

Interest in automobiles
Liking for work with various tools
Good eye-hand coordination

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: AUTO BODY AND FENDER REPAIR

Name of School:	Address:	Telephone:
Southwest Minn. Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: April and September

Nature of Work: An auto body and fender repairmen works on damaged automobiles and light trucks. He examines vehicles, estimates repairs, removes upholstery, accessories, electric and hydraulic window-and-seat operating equipment and trim to gain access to body and fenders. He removes dents, fills depressions with solder or other materials, removes excessively damaged fenders, panels and grills using wrenches, cutting torches or other tools, and attaches replacements. He straightens bent frames, files, grinds and sands surfaces and refinishes repaired areas or entire vehicle.

Job Opportunities: Body and fender repairmen work for garages, car dealers or truck dealers, for organizations which maintain their own fleet of trucks and cars such as Federal, state and local governments, large business concerns and buslines. There are good opportunities for owning your own business as well as excellent pay and benefits in working for others.

Course Description:

*Care and use of equipment	*Wheel alignment
*Metal theory	*Frame straightening
*Metal finishing	*Wheel balancing
*Welding and brazing	*Glass replacement
*Soldering	*Upholstery
*Paint preparation and application	*Customer relations
*Shop management	*Estimating

This course is based on shop practice; industry representatives lecture and demonstrate in appropriate areas and field trip augment class and shop studies.

Length of Course: 18 months

Helpful High School Courses:

Mathematics	Industrial arts—especially metals and welding
Business subjects	

Personal Qualities:

Interest in automobiles	Good eye-hand coordination
Desire to work with metals and tools	Successful completion of the required aptitude test battery

Personal Equipment Needed: Set of tools as required for class work and in the industry.

Expenses: Tuition for students over 21—$30 per month
Tuition for students not residents of Minnesota—$30 per month

Course Title: AUTO BODY REBUILDING

Name of School:	Address:	Telephone:
Austin Area Vocational-Technical School	Austin, Minn. 55912	(507) 433-7301

Admission Dates: Fall

Nature of Work: An auto body repairman works on damaged automobiles and light trucks. He examines vehicles, estimates repairs, removes upholstery, accessories and electric or hydraulic window-and-seat operating equipment and trim to gain access to body and fenders. He removes dents, fills depressions with solder or other materials, removes excessively damaged fenders, panels and grills with wrenches, cutting torches or other tools and attaches replacements. He straightens bent frames; files, grinds and sands surfaces; and refinishes repaired areas or the entire vehicle.

Job Opportunities: Repairmen work for garages, car dealers or truck dealers, for organizations whicl. maintain their own fleet of trucks and cars (the Federal, state or local government, for example), large businesses and buslines. There are good opportunities for owning your own business as well as excellent pay and benefits in the employ of others.

Course Description:

*Welding and brazing	*Wheel alignment and frame work
*Metal theory	*Shop management
*Metal repair and analysis	*Leading, soldering and plastics
*Metal straightening	*Rust repair
*Painting and preparation	*Panel replacement

Instruction is practical and is based on actual jobs covering all phases of body and fender repair.

Length of Course: 18 months

Helpful High School Courses:

Industrial arts—especially metals and welding	Mathematics
	Business subjects

Personal Qualities:

Interest in automobiles	Good eye-hand coordination
Desire to work with metals and tools	

Personal Equipment Needed: Hand tools—$50 approximate cost

Expenses: Tuition for students over 21—$32 per month

Course Title: AUTO BODY REBUILDING

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 751-4137

Admission Dates: September

Nature of Work: An auto body repairman works on damaged automobiles and light trucks. He examines vehicles, estimates repairs, removes upholstery, accessories, electrical and hydraulic window-and-seat operating equipment and trim to gain access to body and fenders. He removes dents, fills depressions with solder or other materials, removes excessively damaged fenders, panels and grills using wrenches and cutting torches and attached replacements. He straightens bent frames, grinds, files and sands surfaces and refinishes part or the complete vehicle.

Job Opportunities: Auto body repairmen work for garages, car dealers and truck dealers, for organizations which maintain their own fleet of trucks and cars such as Federal, state and local governments, large business concerns and buslines. There are good opportunities for owning your own business as well as a good outlook for employment by others.

Course Description:

- *Body Work
- *Shaping and refinishing sheet metal in damaged body and fenders
- *Frame straightening
- *Welding
- *Replacement of glass
- *Painting
- *Repair and replacement of upholstery
- *Front end alignment
- *Wheel balancing

Length of Course: 18 months

Helpful High School Courses:

Industrial arts

Personal Qualities:

- Mechanical aptitude
- Good physical health and strength
- Interest in working with metals and tools

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$802.50 per year

Course Title: AUTO-BODY REPAIR

Name of School:	Address:	Telephone:
Detroit Lakes Area Vocational-Technical School	Detroit Lakes, Minn. 56501	(218) 847-9261

Admission Dates: September

Nature of Work: The auto body repairman works on damaged automobiles and light trucks. He examines vehicles, estimates repairs, removes upholstery, accessories and electric or hydraulic window-and-seat operating equipment and trim to gain access to body and fenders. He removes dents, fills depressions with solder or other materials, removes excessively damaged fenders, panels and grills with wrenches, cutting torches or other tools and attaches replacement parts. He straightens bent frames; files, grinds and sands surfaces; and refinishes repaired areas or the entire vehicle.

Job Opportunities: Repairmen work for garages, car and truck dealers, for organizations which maintain their own fleet of trucks and cars (the Federal, state or local government, for example) and other large business concerns and buslines. There are good opportunities for owning your own business as well as excellent pay and benefits in the employ of others.

Course Description:

*Tools	*Panel repair
*Oxy-acetylene welding	*Metal preparation
*Arc welding	*Painting
*Leading and plastics	*Glass and upholstery
*Basic metal repair	*Estimating

Instruction is practical and is based on actual jobs covering all phases of body and fender repair; industry representatives, demonstrations and field trips augment course content.

Length of Course: 11 months

Helpful High School Courses:

Industrial arts—especially metals and welding	Mathematics
	Business subjects

Personal Qualities:

Interest in automobiles	Good eye-hand coordination
Desire to work with metals and tools	

Personal Equipment Needed: Hand tools, books and uniforms as required by various departments

Expenses: Tuition for students over 21—$40 per month

Course Title: AUTO BODY REPAIRMAN

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical School	1920 Lee Boulevard No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: First Monday of any month except July or August

Nature of Work: The auto body repairman works on damaged automobiles and light trucks. He examines vehicles, estimates repairs, removes upholstery, accessories and electric or hydraulic window-and-seat operating equipment and trim to gain access to body and fenders. He removes dents, fills depressions with solder or other materials, removes excessively damaged fenders, panels and grills using wrenches, cutting torches or other tools and attaches replacement parts. He straightens bent frames; files and sands and grinds surfaces and refinishes repaired area or the entire vehicle.

Job Opportunities: Repairmen work for garages, car and truck dealers, for organizations which maintain their own fleet of trucks and cars, (the Federal, state or local government, for example) and other large business concerns and buslines. There are good opportunities for owning your own business as well as excellent pay and benefits in the employ of others.

Course Description:

*Use and maintenance of equipment	*Re-upholstery
*Welding	*Alignment
*Soldering	*Painting
*Metal work	*Shop management
*Glass removal and installation	*Theory
	*Shop work

Class and shop training is augmented by industry representatives, field trips, demonstrations and journeymen instruction.

Length of Course: 21 months

Helpful High School Courses:

Industrial arts especially shop and welding metals	Mathematics
	Business subjects

Personal Qualities:

Interest in automobiles	Good eye-hand coordination
Desire to work with metals and tools	Satisfactory score on aptitude test given at the School

Personal Equipment Needed: Personal hand tools

Expenses: Tuition for students over 21—$32 per month

Course Title: AUTO BODY REPAIR

Name of School:	Address:	Telephone:
St. Paul Area Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: The auto body repairman works on damaged automobiles and light trucks. He examines vehicles, estimates repairs, removes upholstery, accessories and electric or hydraulic window-and-seat operating equipment and trim to gain access to body and fenders. He removes dents, fills depressions with solder or other materials, removes excessively damaged fenders, panels and grills using wrenches, cutting torches or other tools and attaches replacement parts. He straightens bent frames, files and sands and grinds surfaces and refinishes repaired area or entire vehicle.

Job Opportunities: Repairmen work for garages, car and truck dealers, for organizations which maintain their own fleet of trucks and cars, (the Federal, state or local government, for example) and other large business concerns and buslines. There are good opportunities for owning your own business as well as excellent pay and benefits in the employ of others.

Course Description:

*Orientation and basic metal joining
*Tools and basic body repair
*Intermediate body repair
*Basic body replacement
*Intermediate body replacement
*Advanced body replacement
*Related mathematics
*Related welding
*Industrial relations
*Communications
*Related machine shop

Length of Course: 10 months

Helpful High School Courses:

Industrial arts—especially metals shop and welding
Mathematics
Business subjects

Personal Qualities:

Interest in automobiles
Desire to work with metals and tools
Good color visualization, spatial visualization and physical strength
Willingness to work

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: AUTO BODY REPAIR

Name of School:	Address:	Telephone:
Thief River Falls Area Vocational-Technical School	Thief River Falls, Minn. 56701	(218) 681-5424

Admission Dates: First Monday of each month except July

Nature of Work: The auto body repairman works on damaged automobiles and light trucks. He examines vehicles, estimates repairs, removes upholstery, accessories and electric or hydraulic window-and-seat operating equipment and trim to gain access to body and fenders. He removes dents, fills depressions with solder or other materials, removes excessively damaged fenders, panels and grills using wrenches, cutting torches or other tools and attaches replacement parts. He straightens bent frames, files and sand and grinds surfaces and refinishes repaired area or entire vehicle.

Job Opportunities: Repairmen work for garages, car and truck dealers, for organizations which maintain their own fleet of trucks and cars, (the Federal, state or local government, for example) and other large business concerns and buslines. There are good opportunities for owning your own business as well as excellent pay and benefits in the employ of others.

Course Description:

- *Straightening
- *Welding
- *Leading
- *Replacement of panels
- *Painting
- *Frame straightening
- *Glass installation
- *Upholstery
- *Estimating
- *Related information

Length of Course: 18 months

Helpful High School Courses:

- Industrial arts—especially metal shop and welding
- Mathematics
- Business subjects

Personal Qualities:

- Interest in automobiles
- Desire to work with metals and tools
- Good eye-hand coordination

Personal Equipment Needed: Auto body repairman's kit (cost included in course fee)

Expenses: Registration fee — $10
Course fee—$73
Tuition for students over 21—$45 per month plus course fee

Course Title: AUTO BODY REPAIR

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-3671

Admission Dates: First Tuesday after Labor Day or beginning of any quarter

Nature of Work: The auto body repairman works on damaged automobiles and light trucks. He examines vehicles, estimates repairs, removes upholstery, accessories and electric or hydraulic window-and-seat operating equipment and trim to gain access to body and fenders. He removes dents, fills depressions with solder or other materials, removes excessively damaged fenders, panels and grills using wrenches, cutting torches or other tools and attaches replacement parts. He straightens bent frames, files and sands and grinds surfaces and refinishes repaired area or entire vehicle.

Job Opportunities: Repairmen work for garages, car and truck dealers, for organizations which maintain their own fleet of trucks and cars, (the Federal, state or local government, for example) and other large business concerns and buslines. There are good opportunities for owning your own business as well as excellent pay and benefits in the employ of others.

Course Description:

*Welding and brazing	*Body filling
*Straightening	*Parts replacement
*Reforming and refinishing metal	*Upholstery

Length of Course: 11½ months

Helpful High School Courses:

Industrial arts—especially metals shop and welding	Mathematics Business subjects

Personal Qualities:

Interest in automobiles	High school graduate or equivalent
Desire to work with metals and tools	Satisfactory score on General Aptitude Test Battery given at the school.
Good eye-hand coordination	

Personal Equipment Needed: Tools (approximate cost—$25-$50)

Expenses: Tuition for students over 21—$30 per month

Course Title: AUTO DIAGNOSTIC TECHNICIAN

Name of School:	Address:	Telephone:
Pipestone Area Vocational-Technical School	Pipestone, Minn. 56164	(507)825-5555

Admission Dates: September

Nature of Work: The Auto Diagnostic Technician must be familiar with all systems of the automobile and with the various testing devices and tools used to determine their condition and proper functioning. The technician may use individual testing equipment or may be involved in the complex diagnostic lane type of operation where a car's mechanical systems functions are determined and an electronic print-out analysis provided which is then read by the technicians to determine possible tuning and repairing.

Job Opportunities: Diagnostic technicians work as general mechanics, systems specialists, diagonstician, parts men, salesmen and many own their own repair shops or diagnostic lanes. Garages, dealers, fleet operators and businesses which own and repair fleets of cars, trucks and busses may employ diagnosticians.

Course Description:

*Training prepares the student for complete understanding of the diagnostic approach with a working knowledge of the automobile and detailed repair procedures of all its systems and components.

Length of Course: 11 months

Helpful High School Courses:

Industrial arts	Business
Mathematics	Communications

Personal Qualities:

Mechanical interest and aptitude	Concern for people
Good understanding of mathematics	Ability to communicate well with others

Personal Equipment Needed:

Auto shop uniform	Basic tool kit

Expenses: Tuition for students over 21—$45 per month

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: The auto mechanic repairs and overhauls automobiles, buses, trucks and other vehicles, discusses needed repairs with the customer service manager or foreman. He plans the work and makes the repairs; he removes the faulty unit (engine, transmission or other part), dissassembles it, inspects part for wear, using micrometers, calipers and thickness gauges. He overhauls or replaces carburetors, generators, distributors and starters; rebuilds parts, using lathes, shapers, drill presses and welding equipment; rewires ignition systems, relines and adjusts brakes, aligns front end, repairs or replaces shock absorbers, solders radiators. He will install and repair radios, heaters, mirrors and windshield wipers. A mechanic may specialize in one or more of these areas.

Job Opportunities: Auto mechanics are in demand in service shops, dealerships, by fleet operators and business concerns which maintain fleets of trucks and cars and by buslines. There are excellent opportunities for owning your own business.

Course Description:

*Automotive electrical systems
*Engine overhaul
*Automatic and standard transmission overhaul
*Differential repair

This course is open to those who complete the automotive specialists course and provides a comprehensive working knowledge of all automotive systems.

Length of Course: 18 months—10 months is the Automotive Service Specialist course, 8 months training in Auto Mechanics.

Helpful High School Courses:

- Mathematics
- Business
- Physics
- Mechanics
- Metal Shop
- Welding

Personal Qualities:

- Mechanical aptitude
- Mathematical ability
- Interest in working with automobiles
- Ability to get along well with others

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
Austin Area Vocational-Technical School	Austin, Minn. 55912	(507) 433-7301

Admission Dates: Fall term

Nature of Work: The auto mechanic repairs and overhauls automobiles, buses, trucks and other vehicles, discusses needed repairs with the customer service manager or foreman. He plans the work and makes the repairs; he removes the faulty unit (engine, transmission or other part) disassembles it, inspects part for wear, using micrometers, calipers and thickness gauges. He overhauls or replaces carburetors, generators, distributors and starters; rebuilds parts, using lathes, shapers, drill presses and welding equipment; rewires ignition systems, relines and adjusts brakes, aligns front end, repairs or replaces shock absorbers, solders radiators. He will install and repair radios, heaters, mirrors and windshield wipers. A mechanic may specialize in one or more of these areas.

Job Opportunities: Auto mechanics are in demand in service shops, dealerships, by fleet owners and business concerns which maintain fleets of trucks and cars and by buslines. There are excellent opportunities for owning your own business.

Course Description:

*Mathematics	Carburetor
*Science	*Trouble shooting
*Tools	*Diagnosis
*Chassis	*Estimating
*Engines	*Customer relations

Length of Course: 18 months

Helpful High School Courses:

Mathematics	Indusrtial arts
Business	

Personal Qualities:

Interest in working with automobiles	Mechanical and general ability
	Good eye-hand coordination

Personal Equipment Needed: Hand tools—approximate cost $50

Expenses: Tuition for students over 21—$32 per month

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
Bemidji Area Vocational-Technical School	Bemidji, Minn. 56601	(218) 751-4137

Admission Dates: Day after Labor Day (Individual appraisal may permit entry anytime)

Nature of Work: The auto mechanic repairs and overhauls automobiles, buses, trucks and other vehicles, discusses needed repairs with the customer service manager or foreman. He plans the work and makes the repairs; he removes the faulty unit (engine, transmission or other part) disassembles it, inspects part for wear, using micrometers, calipers and thickness gauges. He overhauls or replaces carburetors, generators, distributors and starters; rebuilds parts, using lathes, shapers, drill presses and welding equipment; rewires ignition systems, relines and adjusts brakes, aligns front end, repairs or replaces shock absorbers, solders radiators. He will install and repair radios, heaters, mirrors and windshield wipers. A mechanic may specialize in one or more of these areas.

Job Opportunities: Auto mechanics are in demand in service shops, dealerships, by fleet owners and business concerns which maintain fleets of trucks and cars and by buslines. There are excellent opportunities for owning your own business.

Course Description:

Auto Mechnics I—Classroom theory and training on component units

Auto Mechanics II—Shop experience on customer units applying knowledge acquired in the classroom.

Length of Course: 18 months

Helpful High Shool Courses:

- Industrial arts
- Mathematics
- Physics
- English

Personal Qualities:

- High school diploma or equivalent
- Mathematical, mechanical and general ability
- Desire to work with automobiles
- Ability to work well with others
- Personal neatness and good grooming

Personal Equipment Needed: Books—$35

Tools—$135 (complete personal tools as required by the industry)

Work clothing—$8-$9

Expenses: Enrollment fee—$10 upon acceptance

Tuition for students over 21—$50 per month

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
Canby Area Vocational-Technical School	Hwy. 68 Canby, Minn. 56220	(507) 223-7252

Admission Dates: September

Nature of Work: The automotive service specialist performs minor repair and tune-up of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plug electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, for car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business after acquiring experience and on-the-job development.

Course Description:

- *Auto electricity and tuning
- *Brakes
- *Carburetion
- *Steering and brakes
- *Transmissions
- *Engine and engine repair
- *Theory and laboratory
- *Disassembly and assembly
- *Tune-up and adjustment
- *Lubrication
- *Cooling systems
- *Use of tools—hand and power
- *Customer relations
- *Shop management
- *Mathematics
- *Mechanical physics
- *Parts manual orientation
- *Blueprint reading

Length of Course: 18 months

Helpful High School Courses:

- Industrial arts
- Mathematics
- Sciences
- Business subjects

Personal Qualities:

- Interest in working with automobiles
- Mechanical aptitude
- Good eye-hand coordination
- Ability to work well with others

Personal Equipment Needed: Handtools, coveralls, reference books

Expenses: Books—$10 or less per quarter
Tuition for students over 21—$40 per month, if Minnesota resident
$60 per month, if out-of-state resident

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: The automotive service specialist performs minor repair and tune-up of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plugs electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, for car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business after acquiring experience and on-the-job development.

Course Description:

- *Automotive engines and chassis
- *Wheel alignment
- *Brakes and shocks
- *Fuel and electrical systems
- *Cooling systems
- *Transmissions
- *Carburetors
- *Diagnostic techniques
- *Safety in shops
- *Precision techniques
- *Public relations—employee-employer relations, employee-customer relations.

Length of Course: 18 months

Helpful High School Courses:

- Industrial arts
- Mathematics
- Sciences
- Business subjects

Personal Qualities:

- Interest in working with automobiles
- Mechanical aptitude
- Good eye-hand coordination
- Ability to work well with others

Personal Equipment Needed: Handtools necessary for entering the industry

Expenses: Tuition for students over 21—$802.50 per year

Course Title: AUTO MECHANICS—GENERAL
AUTO MECHANICS—TECHNICIANS

Name of School:	Address:	Telephone:
Hibbing Area Technical Institute	505 E. 16th St. Hibbing, Minn. 55746	(218) 262-3824

Admission Dates: September-August. Classes start late August or early September

Nature of Work: The automotive service specialist performs minor repair and tune-up of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plug electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, for car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business after acquiring experience and on-the-job development.

Course Description:

- *Engine theory
- *Chassis
  - Brakes, wheel alignment, drive bore, wheel balancing, conventional transmission
- *Auto mathematics
- *Auto laboratory
- *Engine test and tune-up
- *Instruments and accessories
- *Carburetor
- *Diagnostic procedures
- *Advanced electrical
- *Technician laboratory
- *Customer relations
- *Auto shop
- *Automatic transmission
- *Service management
- *Service management laboratory

Length of Course: 18 months

Helpful High School Courses:

- Industrial arts
- Mathematics
- Sciences
- Business subjects

Personal Qualities:

- Interest in working with automobiles
- Mechanical aptitude
- General ability to perform the intricate tasks of this job
- Good eye-hand coordination

Personal Equipment Needed: Basic tools must be purchased during second year of classes

Expenses: Books and supply fee—$40
Tuition for students over 21—$30 per month for Minnesota residents
$100 per month for non-residents

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
Southwest Minn. Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: April and September

Nature of Work: The automotive service specialist performs minor repair and tuneup of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plug electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank of vehicles with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, for car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business after acquiring experience and on-the-job development.

Course Description: Students are prepared to enter the field as general auto mechanics. All necessary shop training and theory are provided with emphasis on training and the use of electrical testing equipment.

Length of Course: 18 months

Helpful High School Courses:

- Industrial arts
- Methematics
- Sciences
- Business subjects

Personal Qualities:

- Interest in working with autos
- Mechanical ability
- Good eye-hand coordination
- Good general ability and scholastic background

Personal Equipment Needed: Hand tools

Expenses: Tuition for students over 21—$30 per month
Tuition for out-of-state residents—$30 per month

Course Title: AUTO MECHANIC

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical School	1920 Lee Boulevard No. Mankato, Minn. 56001	(507) 387-7918

Admission Dates: First Monday of every month except July and August

Nature of Work: The automotive service specialist performs minor repair and tune-up of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plug electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank of vehicles with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, for car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business after acquiring experience and one-the-job development.

Course Description:

*Shop and classroom training in all phases of repair, service and maintenance of internal combustion vehicles.

*Students work with modern machines, tools and test equipment used in industry, in the factory or repair shop.

*Shop training is correlated with theory and related demonstrations and industry methods.

Length of Course: 21 months

Helpful High School Courses:

Industrial arts	Sciences
Mathematics	Business subjects

Personal Qualities:

Interest in working with automobiles	Good eye-hand coordination
Mechanical ability	Good general ability

Personal Equipment Needed: Personal hand tools

Expenses: Tuition for students over 21—$32 per month

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: The auto mechanic repairs and overhauls automobiles, buses, trucks and other vehicles, discusses needed repairs with the customer service manager or foreman. He plans the work and makes the repairs; he removes the faulty unit (engine, transmission or other part, disassembles it, inspects parts for wear, using micrometers, calipers and thickness gauges. He overhauls or replaces carburetors, generators, distributors and starters; rebuilds parts, using lathes, shapers, drill presses and welding equipment; rewires ignition systems, relines and adjust brakes, align front end, repairs or replaces shock absorbers, solders radiators. He will install and repair radios, heaters, mirrors and windshield wipers. A mechanic may specialize in one or more of these areas.

Job Opportunities: Auto mechanics are in demand in service shops, dealerships, by fleet operators and business concerns which maintain fleets of trucks and cars and buslines. There are excellent opportunities for owning your own business. Some graduates of this course work in offices or in sales positions where a complete knowledge of cars is useful; others teach in vocational or technical schools.

Course Description:

Summer Session
*Brake welding
*Gas welding
*Engine assembly
*Use and care of precision tools and equipment

1st Semester
*Generators and regulators
*Ignition and starters
*Fuel and carburetors
*Engine repair
*Gen'l chassis repair
*Garage customer service

2nd Semester
*Power equipment and accessories
*Complete brake overhaul
*Steering and alignment
*Transmission repair
*Clutches and axles
*Engine rebuilding and replacing
*Garage customer service

Related Courses
*Shop safety
*Parts and references
*Tools and parts supply
*Shop-office management
*Foreman training

Length of Course: 12 months

Helpful High School Courses:
Industrial arts
Mathematics
Sciencies
Business subjects

Personal Qualities:
Average or better general ability
Good general health
Interest in working on cars and with hand and machine tools
Interest in working with electricity and electrical testing equipment
Good eye-hand coordination and motor ability

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
Moorhead Area Vocational-Technical School	Box 100 Moorhead, Minn. 56561	(218) 233-5494

Admission Dates: September, unless openings occur during the year

Nature of Work: The automotive service specialist performs minor repair and tune-up of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plug electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank of vehicles with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, for car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business, after acquiring experience and on-the-job development.

Course Description:

*Auto electricity
*Engine tune-up
*Automatic transmissions
*Brakes
*Front end alignment
*Engine overhaul
*Rear axles

Students begin shop work and the use of test equipment soon after course begins; every phase of automotive work is covered thoroughly with theory and shop practice.

Length of Course: 20 months

Helpful High School Courses:

Mathematics
Science
English
Bookkeeping and other business subjects

Personal Qualities:

Interest and aptitude for working on automobiles
Aptitude as tested at the school
Good eye-hand coordination
Average or above general ability

Personal Equipment Needed: Tools and uniforms—$135 (approximately)
Books—$15 (approximately)

Expenses: Student activity fee—$10
Tuition for students over 21—$40

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
Pine City Area Vocational-Technical School	Pine City, Minn. 55063	(612) 629-3844

Admission Dates: September

Nature of Work: The automotive service specialist performs minor repair and tune-up of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plug electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank of vehicles with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, for car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business after acquiring experience and on-the-job development.

Course Description:

*Engine rebuilding
*Electrical systems
*Transmissions
*Carburetion
*Brakes and front end alignment
*Individual specialization in one area such as transmissions.

Length of Course: 20 months

Helpful High School Courses:

Industrial arts
Sciences
Mathematics
Business subjects

Personal Qualities:

Good general ability
Interest in mechanics
Good eye-hand coordination

Personal Equipment Needed: Basic hand tools must be purchased for the second year of training

Expenses: Registration fee—$10
Tuition for students over 21—$35 per month
Tuition for out of state students—$50 per month

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September

Nature of Work: The automotive service specialist performs minor repair and tune-up of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plug electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank of vehicles with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, for car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business after acquiring experience and on-the-job development.

Course Description:

*Automotive mechanical repair
*Machinery, tools and test equipment
*Theory and classroom instruction are correlated with work on automobiles in shop-like conditions.

Length of Course: 18 months

Helpful High School Courses:

Industrial arts
Sciences
Mathematics
Business

Personal Qualities:

Interest and aptitude for mechanics
Good eye-hand coordination
Average or above general ability

Personal Equipment Needed: Books, hand tools

Expenses: Service fee—$7
Books—$15 per year
Tools—$80 (approximately)
Tuition for students over 21—$40 per month

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: The automotive service specialist performs minor repair and tune-up of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plug electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank of vehicles with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, for car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business after acquiring experience and on-the-job development.

Course Description:

Laboratory Shop Course
- *Chassis repair and wheel alignment
- *Motor repair—Automotive machine shop
- *Electrical systems—tune-up and use of analyzers
- *Welding
- *Repair appraisal

Related Subjects
- *Mathematics
- *Communications
- *Drawing—blueprint reading
- *Science
- *Industrial relations

Length of Course: 2 years

Helpful High School Courses:

Industrial arts
Sciences
Mathematics

Personal Qualities:

Mechanical ability
Good eye-hand coordination
Good hearing and eyesight
Reasonable strength and ability to move about the car sometimes assuming off-balance positions.

Personal Equipment Needed:

Expenses: Tuition for students over 21—$65 per month

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
Thief River Falls Area Vocational-Technical School	Thief River Falls, Minn. 56701	(218) 681-5424

Admission Dates: September

Nature of Work: The auto mechanic repairs and overhauls automobiles, buses, trucks and other vehicles, discusses needed repairs with the customer service manager or foreman. He plans the work and makes the repairs; he removes the faulty unit (engine, transmission or other part) disassembles it, inspects parts for wear, using micrometers, calipers and thickness gauges. He overhauls or replaces carburetors, generators, distributors and starters; rebuilds parts, using lathes, shapers, drill presses and welding equipment; rewires ignition systems, relines and adjusts brakes, aligns front end, repairs or replaces shock absorbers, solders radiators. He will install and repair radios, heaters, mirrors and windshield wipers. A mechanic may specialize in one or more of these areas.

Job Opportunities: Auto mechanics are in demand in service shops, dealerships, by fleet operators and business concerns which maintain fleets of trucks and cars and by buslines. There are excellent opportunities for owning your own business.

Course Description:

*Repairing and overhauling of engines
*Electrical systems
*Fuel systems
*Brakes
*Steering gears
*Power trains and automatic transmissions
*Wheel alignment and balancing
*Shop safety and work habits

Classroom studies in theory plus manipulative skills learned in shop instruction and practices give students a complete automotive background.

Length of Course: 18 months

Helpful High School Courses:

Industrial arts
Mathematics
Sciences
English

Personal Qualities:

Good physical and emotional health
Good grooming and physical appearance
Ability to communicate and get along well with others
Satisfactory score on School entrance examination
Good eye-hand coordination

Personal Equipment Needed: Books (cost is covered in course fee)
Tools—must be purchased by the student $70 (approximately)

Expenses: Registration fee—$10
Course fee—$30
Tuition for students over 21—$45 per month plus course fee

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
Wadena Area Vocational-Technical School	405 SW Colfax Ave. Wadena, Minn. 56482	(218) 631-3342

Admission Dates: Fall Only

Nature of Work: The automotive service specialist performs minor repair and tune-up of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plug electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank of vehicles with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, for car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business, after acquiring experience and on-the-job development.

Course Description: This course combines theoretical and practical training with appropriate classroom studies augmented by shop skills learned under the direction of skilled craftsmen in a well-equipped service-shop laboratory.

Length of Course: 18 months

Helpful High School Courses:

- Industrial arts
- Mathematics
- Science
- English

Personal Qualities:

- Mechanical aptitude and interest in mechanics
- Ability to read and understand technical material
- Ability to communicate and get along well with others

Personal Equipment Needed:

- Coveralls—three sets
- Personal tools
- Sturdy tool box

Expenses: Application fee—$10
Supplies fees—$8 first year, $8 second year, approximately
Tuition for students over 21—$40 per month

Course Title: AUTO MECHANICS

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: September, January, March

Nature of Work: The automotive service specialist performs minor repair and tune-up of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plug electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank of vehicles with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, for car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business, after acquiring experience and on-the-job development.

Course Description:

*Automotive diagnosis	*Repair procedures
*Repair of all automotive components	*Parts
	*Service management

Length of Course: 18 months

Helpful High School Courses:

Industrial arts	Sciences
Mathematics	English

Personal Qualities:

High School diploma or equivalent	Good eye-hand coordination
Good physical and emotional health	Mechanical aptitude and interest

Personal Equipment Needed: Coveralls—4 sets
Tools—$100 (approximately)
Books—$50 (approximately)

Expenses: Tuition for students over 21—$40 per month

Course Title AUTO MECHANICS

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-3671

Admission Dates: First Tuesday after Labor Day or beginning of any quarter

Nature of Work: The automotive service specialist performs minor repair and tune-up of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plug electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank of vehicles with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business, after acquiring experience and on-the-job development.

Course Description: Basic automotive course combining classroom and shop practices with emphasis on service, repair and diagnostic problems.

Length of Course: 18 months

Helpful High School Courses:

Mathematics	Sciences
Industrial arts	

Personal Qualities:

Good physical and emotional health	Mechanical aptitude and interest
	Good eye-hand coordination

Personal Equipment Needed: Books and tools—Approximate cost—$25-$35

Expenses: Tuition for students over 21—$30 per month

Course Title: AUTOMOTIVE PARTS COUNTERMAN

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: The automotive parts counterman purchases, stores and issues spare parts for automotive and industrial equipment. He obtains purchase order numbers from the purchasing department and assigns identifying numbers; he reads shop manuals to determine type and specifications for parts; he orders parts from suppliers by telephone or in person and he may drive to the supplier and pick up parts such as distributors, carburetors, fuel pumps, chains, gears and sprockets. He issues the parts requested and keeps records of the parts received and issued and those on hand.

Job Opportunities: This course prepares graduates for jobs as parts countermen in service shops and industry, in retail and wholesale merchandising; graduates are also employed as salesmen in automotive accessory stores and as auto parts salesmen.

Course Description:

*Inventory control
*Customer relations
*Sales
*Invoicing
*Shipping
*Receiving
*Weatherly Index System of cataloguing
*Mechanical background to understand repair problems.

Length of Course: 6 months

Helpful High School Courses:

Mathematics
Speech
Business, including bookkeeping
Industrial arts

Personal Qualities:

Mechanical interest
Desire to work with people
Mathematical aptitude
Physical stamina

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: AUTOMOTIVE SERVICES

Name of School:	Address:	Telephone:
Eveleth Area Vocational-Technical School	402 Roosevelt Ave. Eveleth, Minn. 55734	(218) 749-2285

Admission Dates: September

Nature of Work: The automotive service specialist performs minor repair and tune-up of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plug electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank of vehicles with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, for car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business, after acquiring experience and on-the-job development.

Course Description:

*Automotive component parts	*Use and care of tools
*Modern test equipment	

Length of Course: 9 months

Helpful High School Courses:

Mathematics	English
General Science	Industrial arts

Personal Qualities:

Should be high school graduate	Good eye-hand coordination
Interest in mechanics	Good physical health

Personal Equipment Needed: Books and basic tools

Expenses: Enrollment fee—$20
Tuition for students over 21—$65 per month
(Next year will be $150 per quarter for Minnesota residents; $195 per quarter for non-residents)

Course Title: AUTOMOTIVE SERVICE SPECIALIST

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: The automotive service specialist performs minor repair and tune-up of motor vehicles. He replaces and adjusts systems components such as distributor breaker points or generator brushes. He cleans spark plug electrodes, sets spark plug gap, replaces defective chassis parts, including shock absorbers, tie-rod ends, ball joint suspension, brakeshoes and wheel bearings. He does front end alignment and installs accessories such as oil and air filters, windshield wiper blades, fan belts and batteries. He may fill fuel tank of vehicles with gasoline or diesel fuel, add oil to crankcase or drain crankcase and refill.

Job Opportunities: Service specialists work for garages, large service stations, for car, truck and bus dealers and concerns which own and operate their own fleet of cars and trucks. Some servicemen are employed in one phase of service; for example, they may work only on chassis parts or on front end alignment. There are good opportunities for advancement and for owning one's own business, after acquiring experience and on-the-job development.

Course Description:

*Suspension tune-up
*Diagnoses
*Carburetion
*Front end alignment
*Electrical and starting systems
*Exhaust emission control
*Lubrication
*Brakes
*Cooling systems

Length of Course: 10 months

Helpful High School Courses:

Mathematics
Industrial arts—especially metals, welding and mechanics
Business subjects

Personal Qualities:

Mechanical interest and aptitude
Good grooming and neatness
Ability to work well with others

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: AUTOMOTIVE SERVICE MECHANIC

Name of School:	Address:	Telephone:
Detroit Lakes Area Vocational-Technical School	Hwy. 34 East Detroit Lakes, Minn. 56501	(218) 847-9261

Admission Dates: September

Nature of Work: Graduates of this course are ready for employment as light automotive repair men. Most of this repair would deal with improving the efficiency of the automobile by fine adjustments and tuning as well as replacing faulty parts, rather than with major repair.

Job Opportunities: Service mechanics work in service stations, used car dealer shops, automotive parts departments, and with fleet operators.

Course Description:

*Classroom instruction and theory
*Laboratory training in customer-type projects equivalent to the repair work the graduate will be doing.

Length of Course: 9 months

Helpful High School Courses:

Machine shop	Welding
Small engine repair	Mechanical drafting
Electricity	Physics
Electronics	Business subjects

Personal Qualities:

Mechanical interest and aptitude	No allergies to internal combustion odors, grease, or dirt
Good hearing	
Communications skills	Congenial attitude
Good coordination and mobility	

Personal Equipment Needed: Basic mechanics tool kit (Snap-On, Model No. 5110f-GSB) and other special small tools determined after experience; these are to be purchased by the student before he has completed his course.

Expenses: Tuition for students over 21—$40 per month

Course Title: AUTO TUNE-UP MECHANICS

Name of School:	Address:	Telephone:
Brainerd Area Vocational-Technical School	300 Quince St. Brainerd, Minn. 56401	(218) 829-2814

Admission Dates: September

Nature of Work: Automobile tune-up specialists perform light mechanical tasks including inspecting vehicles to determine causes of faulty operation, repairing or replacing defective parts and restoring automobiles or light trucks to proper operating condition.

Job Opportunities: Automobile tune-up men work for garages, large service stations, car, bus and truck dealers and concerns which operate their own fleet of cars and trucks. Some servicemen specialize in a certain area, brakes, for example. Beginners usually do a variety of things from lubrication and tire repair to making adjustments and replacing parts.

Course Description:

*Automotive electricity
*Tune-up and carburetion
*Brakes systems
*Front end alignment
*Lubrication
*Auto service management

Length of Course: 11 months

Helpful High School Courses:

Mathematics
Industrial arts
Business subjects

Personal Qualities:

Mechanical interest and aptitude
Good grooming and personal neatness
Ability to work well with others

Personal Equipment Needed: Books, shop coats and basic tools

Expenses: Tuition for students over 21—$40 per month

Course Title: AVIONICS (AVIATION ELECTRONICS)

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: September

Nature of Work: This is a new specialty requiring facility in all phases of electronics with special training in the assembly, installation, maintenance, repair and testing of electronics equipment used in aircraft.

Job Opportunities: Graduates work with all types of electrical and electronics equipment used in private and commercial aircraft and will find work with commercial airlines and firms which repair and maintain aircraft, as well as those which research, develop and build them.

Course Description:

*Electronics fundamentals
*Radio Communications systems
*Radio and Radar navigation systems
*Instrument systems
*Electrical systems

Related materials are also included throughout the course and actual experience on aircraft equipment is provided.

Length of Course: 18 months

Helpful High School Courses:

Advanced Algebra (required)
Physics
Mathematics

Personal Qualities:

Persistence
Good eyesight and manual dexterity
Ability to cope with challenging details

Personal Equipment Needed: Slide rule

Expenses: Acceptance fee—$25
Books—$20
Tuition for students over 21—$40 per month

Course Title: AVIATION MECHANICS

Name of School:	Address:	Telephone:
Minneapolis Vocational-Technical School	1101 3rd Ave. S. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Aviation mechanics diagnose and locate trouble anywhere on an aircraft and make necessary repairs in an approved, permanent and fully dependable manner. They must understand the construction and operation of all types of aircraft, power plants, air frames, landing gear and hydraulic systems, electrical systems and other component units. They must know and carry out repair procedures for all units as prescribed by the manufacturer and the federal Aviation Agency. Mechanics carefully inspect and sign out every repair he or his crew makes. The care and use of special test equipment, including generator and regulator and regulator test stand, carburetor, flow bench, voltmeters, ammeters, ohmeters, hydraulic test bench and others must be known and understood by the mechanics, and they must be skilled in the care and use of hand and power tools.

Job Opportunities: Mechanics are employed by major scheduled airlines, independent repair shops, certified supplemental airlines, aerial application and air taxi firms and businesses that use their own planes to transport cargo or employees. Some mechanics work in aircraft manufacturing plants. Most graduates enter the field as mechanics; there are excellent opportunities for those with leadership ability to advance to key jobs as foremen or lead mechanics, inspectors or even supervisory or executive positions.

Course Description:

Air Frame
*Rigging and assembly
*Wood, fabric and doping
*Sheet metal and welding
*Hydraulics
*Electricity
Power Plants
*Theory and maintenance
*Mechanical drafting and blueprints
*Machine shop
*Lubrication and oiling systems
*Carburetors and carburetion
*Magnetos and ignition systems
*Electrical systems and components
*Propellers

(Graduates may qualify for the "A" and "P" license; this course is under the supervision of the Gov. Federal Aviation Agency and operates under the Air Agency Certificate No. 3370.)

Length of Course: 20 months

Helpful High School Courses:

Mathematics
Physics
Chemistry
Industrial arts

Personal Qualities:

Average or above general learning ability, and interest in aviation.
Average or better ability to solve mathematical problems
Liking for working with hand tools and electrical work
Willing to work and to submit to the discipline of almost daily examination and deadlines on required shop work.
Good general health and motor control.

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: AVIATION MECHANICS

Name of School:	Address:	Telephone:
Thief River Falls Area Vocational-Technical School	Thief River Falls, Minn. 56701	(218) 681-5424

Admission Dates: September

Nature of Work: Aviation mechanics are responsible for keeping airplanes operating safely and efficiently. They overhaul, repair and maintain airplanes, using testing equipment, hand and power tools to work on propellers, landing gear, hydraulic equipment, airborne electronic communications and control equipment, instruments and metal sections. They frequently take apart complex components, replace worn or damaged parts and reassemble the system then test it to make sure it is operating perfectly.

Job Opportunities: Mechanics are employed by major scheduled airlines, independent repair shops, certified supplemental airlines, aerial application and air taxi firms and businesses that use their own planes to transport cargo or employees. Some mechanics work in aircraft manufacturing plants. Most graduates enter the field as mechanics; there are excellent opportunities for those with leadership ability to advance to key jobs as foremen, lead mechanics, inspectors or even supervisory or executive positions.

Course Description:

*Civil air regulations	*Engine operation and testing
*Engines	*Drafting
*Welding	*Woodworking
*Aircraft electricity	*Hydraulics
*Airplane structure	*Related mathematics
*Instruments and radio	*Physics

Length of Course: 18 months

Helpful High School Courses:

Mathematics	Chemistry
Physics	Industrial arts

Personal Qualities:

Average or better high school record	Liking for working with tools and electricity
Interest in aviation	Good general health and motor control

Personal Equipment Needed: None

Expenses: Registration fee—$10
Course fee—$130
Tuition for students over 21——$45 per month

Course Title: BAKING

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Rd. Duluth, Minn. 55801	(218) 722-2801

Admission Dates: September

Nature of Work: Bakers mix and bake ingredients according to recipes to produce breads, pastries, and other baked goods. Many bakers specialize in one type of product such as bread, cakes, pies, rolls, etc.

Job Opportunities: Excellent job prospects exist as technological changes, new ingredients, new processes, decline in home baking and population growth bring about new jobs in bake shops, large wholesale and retail bakeries, in research and test kitchens.

Course Description:

Shop Work	Class Work
*Selecting and measuring ingredients	*Materials and composition
*Machine and hand mixing	*Baking technology
*Proofing, baking and finishing	*Cost finding
	*Formula balancing

Length of Course: 9 months

Helpful High School Courses:

Business	Distributive education

Personal Qualities:

16 years or older (Preference given to high school graduate)	Aptitude Physical stamina

Personal Equipment Needed: Bake shop clothing, aprons.

Expenses: Tuition for students over 21—$802.50 per year

Course Title: BAKING — BREADS, ROLLS, CAKES, AND PASTRIES*

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical School	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall of each year

Nature of Work: Baking operations include receiving and storing raw materials, maintaining and repairing machinery and wrapping and packing products along with performing the actual baking of goods.

Job Opportunities: This industry provides steady, year-around employment for several hundred thousand workers throughout the country. There is a shortage of qualified bakers in the Upper Midwest at the present time.

Course Description:

Breads and Rolls
- *Sanitation, safety and cleanliness
- *Baking fundamentals and procedures
- *Environmental factors
- *Schedules, records and reports
- *Ingredients (kinds, care, procurement)
- *Enzymes and diastatic action
- *Formulas
- *Doughs
- *Baking equipment (use and maintenance)

Cakes and Patries
- *Baking and finishing of sweet foods
- *Shortening and spices
- *Types of sweet foods
- *Mixing procedures
- *Use of equipment
- *Decorating techniques
- *Production and merchandising

Length of Course 11 months

Helpful High School Courses:
- Bookkeeping
- Typing

Personal Qualities:
- Good health (Most states require a health certificate indicating that worker is free of communicable diseases)
- Interest in baking

Personal Equipment Needed: None

Expenses: Textbooks and uniforms will not exceed $75 for the course
Tuition for students over 21—$32 per month

*To be offered for first time in school year 1969-70.

Course Title: BARBERING

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. S. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: The art of barbering consists of cutting hair, shaving, massaging, shampooing and applying beautifying cosmetics. In Minnesota, barber schools and barbering are governed by a State Board of Barbering. Upon completion of 1500 hours of training, the student may take the Minn. State Barber Examination. A satisfactory rating results in an apprentice license, allowing him to work under a registered journeyman barber after which he may qualify as a licensed barber and shop owner.

Job Opportunities: Graduates of this course work in barber shops under journeyman barbers. After completing his apprenticeship, a barber is licensed and may open his own shop.

Course Description:

Related Science
*Hygiene
*Practical study of hair, skin, muscles nerves.
*Structure of the head, face and neck
*Elementary sterilization and antiseptics
*Diseases of the skin, hair and glands
*Public health and psychology
*How to conduct a small business
*Regulations and laws of barbering

Shop Practice
*Hair cutting — men, women and children
*Shaving
*Shampooing and tonics
*Massage — all phases of massage used in barber shops, especially scalp and facial massage.

Length of Course: 9 months — 1500 hours of training must be completed

Helpful High School Courses:

Sciences — chemistry, biology, health
English
Business subjects

Personal Qualities:

Interest in barbering
Good health as certified by physical examination and chest x-ray
Desire to work with and talk to people
Good hearing
Average or better general ability
Free from any nervousness, speech defect or physical handicap

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: BUSINESS AND MARKETING TECHNOLOGY

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-3671

Admission Dates: First Tuesday after Labor Day, or beginning of any quarter

Nature of Work: Marketing work varies widely depending on the product, and whether the person is involved in retail or wholesale business. Working conditions are pleasant and contact with many people adds variety. Some paper work is necessary in most sales work and the individual may use his ingenuity in planning and promoting the various articles.

Job Opportunities: Inside or outside salesmen, managers, buyers and shop owners are in demand by all kinds of business. The employment outlook for workers skilled in salesmanship and well informed about merchandising and marketing techniques is very good.

Course Description:

*Sales psychology
*Marketing techniques
*Sales methods
*Related courses
*On-the-job training

Length of Course: 9 months

Helpful High School Courses:

Personal Qualities:

High school graduate or 18 years of age with minimum score as recommended by General Aptitude Test Battery.

Ability to work with people, initiative, and self-confidence, imagination and Enthusiasm

Personal Equipment Needed: Miscellaneous—$25-$30

Expenses: Tuition for students over 21—$30 per month

Course Title: CABINETMAKING

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. S. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Cabinetmakers perform hand and machine operations in cutting, shaping and assembling high grade furniture, store fixtures, office equipment, kitchen cabinets, church furniture and other articles made of wood or wood substitute. Cabinetmakers operate circle saws, planers, jointers, mortisers, bandsaws, tenoners. moulders, shapers, routers, drill presses, sanders and others. Working to exact dimensions and specifications is part of this job, as is installing hardware and details. Working with fractions, decimals and simple algebraic formulas, reading blueprints and understanding of layouts and design are part of the cabinetmaker's skills.

Job Opportunities: Cabinetmakers work for millwork shops, sash and door companies, furniture manufacturers, fixture manufacturers, plastic industries, furniture repair shops, housing contractors, cabinet shops, wooden box companies, maintenance shops and crating companies. Some own their own businesses or shops.

Course Description:

Shop Practice and Instruction
- *Hand tools, power tools, machines
- *Jigs, fixtures, joinery, knife layout
- *Cabinet construction and installation
- *Bench work, general furniture
- *Store and office fixtures
- *Laminated plastics and wood finishing

Related Science
- *Apprenticeship and trade information
- *Wood technology, lumber and lumber substitutes
- *Molding and trim, veneer and plywood
- *Adhesives and clamping operations
- *Abrasives, metal fasteners, and trims
- *General hardware, glass, millwork including stair layout, design and construction

Related Mathematics
- *General mathematics with introduction to geometric and algebraic functions
- *Cost estimating

Related Drawing
- *Blueprint reading
- *Rod and panel layout
- *Pictorial and freehand sketching

Length of Course: 16 months

Helpful High School Courses:
- Industrial arts—especially wood shop
- Basic mathematics

Personal Qualities:

Minimum general learning ability
Desire to work with wood and woodworking tools
Ability to do general math up through decimals and square root, to calculate perimeter, lengths, areas, volume, board measure and the feeds and speeds of machines.

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: CABINETMAKING

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Cabinetmakers perform hand and machine operations in cutting, shaping and assembling high grade furniture, store fixtures, office equipment, kitchen cabinets, church furniture and other articles made of wood or wood substitute. Cabinetmakers operate circle saws, planers, jointers, mortisers, bandsaws, tenoners, moulders, shapers, routers, drill presses, sanders and others. Working to exact dimension and specifications is part of this job, as is installing hardware and details. Working with fractions, decimals and simple algebraic formulas, reading blueprints and understanding of layout and design are part of the cabinetmakers skills.

Job Opportunities: Cabinetmakers work for millwork shops, sash and door companies, furniture manufacturers, fixture manufacturers, plastic industries, furniture repair shops, housing contractors, cabinet shops, wooden box companies, maintenance shops and crating companies. Some own their own businesses or shops.

Course Description:

Laboratory Shop Course

*Elementary joinery, simple construction, care and use of tools and safety
*Table and open case construction
*Chair, case door and door panels, chest and drawer construction
*Power tools, their use and care
*Veneering and wood technology
*Finishing, refinishing and design

Related Subjects

*Mathematics
*Communications
*Drawing—blueprint reading
*Science
*Industrial relations

Length of Course: 18 months

Helpful High School Courses:

Wood and metal shop
Mathematics
Drawing or art courses

Personal Qualities:

Good eyesight
Steady hands and manual dexterity
Good general health and no allergy to wood, dust or material used in wood finishing

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: CARPENTRY

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: Carpenters erect the wood framework in buildings including subflooring, sheathing, partitions, floor joists, studding and rafters. When the building is ready for trimming, they install molding, wood paneling, cabinets, window sash, doorframes, doors and hardware, and build stairs and lay floors. They also install timbers used in constructing docks, railroad trestles and other structures. They build forms used in concrete construction and erect scaffolds and temporary buildings.

Job Opportunities: Carpenters are the largest number of building trades workers; they work for builders, wood-working shops, maintenance shops, sash and door companies and for furniture manufacturers. Most specialize in one area such as rough carpentry or trim and finishing. Graduates may enter the building trades under apprenticeship training programs.

Course Description:

*Basic carpentry
*Rough carpentry
*Finish carpentry
*Basic cabinetmaking
*Cement form making
*Stair building
*Estimating construction costs
*Blueprint reading and sketching
*Architectural drafting
*Reading the square
*Shop mathematics
*Safety practices
*Communications
*Personality development

Length of Course: 18 months

Helpful High School Courses:

Industrial arts—particularly woodworking
Mathematics—at least one senior high course is recommended
Mechanical drawing or drafting

Personal Qualities:

Good general ability
Manual dexterity
Interest in working with wood and tools
Good health and physical stamina

Personal Equipment Needed: Students are urged to start assembling personal basic carpentry tool kits before graduation.

Expenses: Acceptance Fee—$25
Books—$15
Tuition for students over 21—$40 per month plus acceptance fee and book fee.

Course Title: CARPENTRY

Name of School:	Address:	Telephone:
Austin Area Vocational-Technical School	Austin, Minn. 55912	(507) 433-7301

Admission Dates: Fall Term

Nature of Work: Carpenters erect the wood framework in building including subflooring, sheathing, partitions, floor joists, studding and rafters. When the building is ready for trimming, they install molding, wood paneling, cabinets, window sash, doorframes, doors and hardware, and build stairs and lay floors. They also install timbers used in constructing docks, railroad trestles and other structures. They build forms used in concrete construction and erect scaffolds and temporary buildings.

Job Opportunities: Carpenters are the largest number of building trades workers; they work for builders, wood-working shops, maintenance shops, sash and door companies and for furniture manufacturers. Most specialize in one area such as rough carpentry or trim and finishing. Graduates may enter the building trades under apprenticeship training programs.

Course Description:

*Tool and machine care
*Footings and foundations
*Rough framing
*Roof framing
*Exterior finishing
*Interior finishing
*Stairways
*Cabinets and cupboards
*Construction problems
*Blueprint reading
*Safety
*Related mathematics
*Human relations

Length of Course: 18 months

Helpful High School Courses:

Industrial arts—particularly wood-working
Mathematics
Mechanical drawing or drafting

Personal Qualities:

Interest in working with wood and tools
Manual dexterity
Good general ability
Good health and physical stamina

Personal Equipment Needed: Hand tools ($50 approximate cost)

Expenses: Tuition for students over 21 — $32 per month

Course Title: CARPENTRY

Name of School:	Address:	Telephone:
Bemidji Area Vocational-Technical School	Bemidji, Minn. 56601	(218) 751-4137

Admission Dates: Day after Labor Day (Individual appraisel may permit entry any time)

Nature of Work: Carpenters erect the wood framework in building including subflooring, sheathing, partitions, floor joists, studding and rafters. When the building is ready for trimming, they install molding, wood paneling, cabinets, window sash, doorframes, doors and hardware, and build stairs and lay floors. They also install timbers used in constructing docks, railroad trestles and other structures. They build forms used in concrete construction and erect scaffolds and temporary buildings.

Job Opportunities: Carpenters are the largest number of building trades workers; they work for builders, wood-working shops, maintenance shops, sash and door companies and for furniture manufacturers. Most specialize in one area such as rough carpentry or trim and finishing. Graduates may enter the building trades under apprenticeship training programs.

Course Description:

*Basic and advanced techniques of the trade
*Architectural drafting
*Estimating
*Related mathematics
*Blueprint reading
*Steel square
*Construction methods
*Vocational communications

Length of Course: 18 months

Helpful High School Courses:

Industrial arts—particularly wood and metals
Drawing
Mathematics
Sciences

Personal Qualities:

Desire to work with wood and tools
Good sense of balance and ability to work in high places
Good health and stamina to endure extremes of outdoor working conditions.
Pride of workmanship and creativity

Personal Equipment Needed: Books — $30
Tools — $100 (Basic tools needed in the industry)
Work clothing — $8-$9

Expenses: Enrollment fee — $10 upon acceptance
Tuition for students over 21 — $50 per month plus enrollment fee and other personal expenses.

Course Title: CARPENTRY

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Carpenters erect the wood framework in buildings including subflooring, sheathing, partitions, floor joists, studding and rafters. When the building is ready for trimming, they install molding, wood paneling, cabinets, window sash, doorframes, doors and hardware, and build stairs and lay floors. They also install timbers used in constructing docks, railroad trestles and other structures. They build forms used in concrete construction and erect scaffolds and temporary buildings.

Job Opportunities: Carpenters are the largest number of building trades workers; they work for builders, wood-working shops, maintenance shops, sash and door companies and for furniture manufacturers. Most specialize in one area such as rough carpentry or trim and finishing. Graduates may enter the building trades under apprenticeship training programs.

Course Description:

- *Theory, method and procedures in domestic and commercial construction
- *Wood science
- *Specialized terminology
- *Mathematics
- *Related sciences
- *Shop and field projects

Length of Course: 18 months

Helpful High School Courses:

- Industrial arts—particularly wood-working
- Drawing or drafting
- Mathematics
- Science

Personal Qualities:

- Interest in working with wood and tools
- Manual dexterity
- Good physical health and stamina

Personal Equipment Needed: Carpenter's overalls, proper shoes

Expenses: Tuition for students over 21 — $802.50 per year

Course Title: CARPENTRY-CABINETMAKING

Name of School:	Address:	Telephone:
Faribault Area Vocational-Technical School	Faribault, Minn. 55021	(507) 334-3965

Admission Dates: September, with later enrollments as vacancies occur

Nature of Work: Carpenters erect the wood framework in building including subflooring, sheathing, partitions, floor joists, studding and rafters. When the building is ready for trimming, they install molding, wood paneling, cabinets, window sash, doorframes, doors and hardware, and build stairs and lay floors. They also install timbers used in constructing docks, railroad trestles and other structures. They build forms used in concrete construction and erect scaffolds and temporary buildings.

Job Opportunities: Carpenters are the largest number of building trades workers; they work for builders, wood-working shops, maintenance shops, sash and door companies and for furniture manufacturers. Most specialize in one area such as rough carpentry or trim and finishing. Graduates may enter the building trades under apprenticeship training programs.

Course Description:

First Year	Second Year
*Hand and power tool use and maintenance	*Advanced exterior finishing
*Exterior construction	*Advanced interior finishing
*Interior finishing	*Communications
*Practical welding	*Related technical information
*Construction safety	*Construction of permanent-type buildings in the Faribault community.

Length of Course: 19 months

Helpful High School Courses:

Industrial arts—particularly wood and metals	Drafting or drawing
	Mathematics

Personal Qualities:

Interest in woodworking and tools	Good health and physical stamina to endure working outdoors in all weather conditions.
Good manual dexterity	
Ability to climb scaffolding and work in high places	

Personal Equipment Needed: Students must have basic tool kit by the beginning of the second year. Must also purchase hard hats and liners and coveralls.

Expenses: Enrollment fee — $5 upon acceptance
Books, workbooks and supplies—$35 for first year
$25 for second year
Tuition for students over 21 — $40 per 4-week period
Tuition for non-residents of Minnesota — $55 per month

Course Title: CARPENTRY

Name of School:	Address:	Telephone:
Southwest Minn. Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: August and April

Nature of Work: Carpenters erect the wood framework in buildings including subflooring, sheathing, partitions, floor joists, studding and rafters. When the building is ready for trimming, they install molding, wood paneling, cabinets, window sash, doorframes, docrs and hardware, and build stairs and lay floors. They also install timbers used in constructing docks, railroad trestles and other structures. They build forms used in concrete construction and erect scaffolds and temporary buildings.

Job Opportunities: Carpenters are the largest number of building trades workers; they work for builders, wood-working shops, maintenance shops, sash and door companies and for furniture manufacturers. Most specialize in one area such as rough carpentry or trim and finishing. Graduates may enter the building trades under apprenticeship training programs.

Course Description: All phases of carpentry in theory and practice are covered; practical work includes using the tools and methods of modern construction in building houses, farm buildings and other construction projects. Good work habits and getting along with one's fellow workers is part of this course.

Length of Course: 18 months

Helpful High School Courses:

- Industrial arts—particularly wood and metals
- Drafting or drawing
- Mathematics

Personal Qualities:

- Interest in woodworking and tools
- Good manual dexterity
- Ability to climb scaffolding and work in high places
- Good health and physical stamina to endure working outdoors in all weather conditions.

Personal Equipment Needed: Personal tools including the following: rule, hammer (curved claw), hand ax or hatchet, crosscut saw (8-point), pinch bar, try square, roughing chisel, cold chisel, framing square, screw driver, framing chisel, level and jack plane.

Expenses: Tuition for students over 21 — $30 per month

Course Title: CARPENTRY

Name of School:	Address:	Telephone:
Moorhead Area Vocational-Technical School	Box 100 Moorhead, Minn. 56561	(218) 236-6277

Admission Dates: September, or as openings occur during the year

Nature of Work: Carpenters erect the wood framework in buildings including subflooring, sheathing, partitions, floor joists, studding and rafters. When the building is ready for trimming, they install molding, wood paneling, cabinets, window sash, doorframes, doors and hardware, and build stairs and lay floors. They also install timbers used in constructing docks, railroad trestles and other structures. They build forms used in concrete construction and erect scaffolds and temporary buildings.

Job Opportunities: Carpenters are the largest number of building trades workers; they work for builders, wood-working shops, maintenance shops, sash and door companies and for furniture manufacturers. Most specialize in one area such as rough carpentry or trim and finishing. Graduates may enter the building trades under apprenticeship training programs.

Course Description:

*Basic carpentry
*Concrete form work
*Rough carpentry
*Finish carpentry
*Basic cabinet skills
*Drafting
*Blueprint reading
*Surveying
*Applied mathematics
*Related subjects
*Students design, draw plans, estimate materials and costs and build a home near the school.

Length of Course: 20 months

Helpful High School Courses:

Industrial arts
Mathematics
English

Personal Qualities:

Average dexterity
Interest in working with wood and tools
Good sense of balance
Good physical health and stamina
Satisfactory score on aptitude tests given at school.

Personal Equipment Needed: The student should purchase his own set of carpenter's tools by the time he graduates. These can be accumulated over the months of the course. Estimated cost for tools is $125. Clothing and books — $50 Approx. for course.

Expenses: Student activity fee — $10
Tuition for students over 21 — $40 per month plus activity fee.

Course Title: CARPENTRY

Name of School:	Address:	Telephone:
Pipestone Area Vocational-Technical School	Pipestone, Minn. 56164	(507) 825-5471

Admission Dates: September

Nature of Work: Carpenters erect the wood framework in buildings including subflooring, sheathing, partitions, floor joists, studding and rafters. When the building is ready for trimming, they install molding, wood paneling, cabinets, window sash, doorframes, doors and hardware, and build stairs and lay floors. They also install timbers used in constructing docks, railroad trestles and other structures. They build forms used in concrete construction and erect scaffolds and temporary buildings.

Job Opportunities: Carpenters are the largest number of building trades workers; they work for buildings, wood-working shops, maintenance shops, sash and door companies and for furniture manufacturers. Most specialize in one area such as rough carpentry or trim and finishing. Graduates may enter the building trades under apprenticeship training programs.

Course Description:

*Construction procedures of houses, farm structures and commercial buildings
*Specification writing
*Code study
*Blueprint reading
*Buildings design
*Architectural technique
*Construction estimates
*Construction materials
*Construction business records

Length of Course: 22 months

Helpful High School Courses:

Mathematics
Industrial arts
Science
Drawing or drafting

Personal Qualities:

Manual dexterity
Drawing ability
Interest in working with wood and tools
Good physical health and stamina

Personal Equipment Needed: Shop uniform is required; tool kit may be purchased

Expenses: Tuition for students over 21 — $45 per month

Course Title: CARPENTRY

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September

Nature of Work: Carpenters erect the wood framework in buildings including subflooring, sheathing, partitions, floor joists, studding and rafters. When the building is ready for trimming, they install molding, wood paneling, cabinets, window sash, doorframes, doors and hardware, and build stairs and lay floors. They also install timbers used in constructing docks, railroad trestles and other structures. They build forms used in concrete construction and erect scaffolds and temporary buildings.

Job Opportunities: Carpenters are the largest number of building trades workers; they work for builders, wood-working shops, maintenance shops, sash and door companies and for furniture manufacturers. Most specialize in one area such as rough carpentry or trim and finishing. Graduates may enter the building trades under apprenticeship training program.

Course Description: A special agreement with the local unions and contractors enables students to build an actual house valued at $20,000 or more each year. Related instruction includes:

*Use of tools and equipment
*Architectural drafting and sketching
*Estimating
*Trade mathematics
*Trade science
*Communications

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Industrial arts
Science
Drawing or drafting

Personal Qualities:

Manual dexterity
Interest in working with wood and tools
Good physical health and stamina
Good general ability

Personal Equipment Needed: Work clothes, drawing equipment, basic hand tool kit.

Expenses: Service fee — $7 (all students)
Books — $40 (First year)
$15 (Second year)
Tools — $150 (First year)
$75 (Second year)
Tuition for students over 21 — $40 per month

Course Title: CARPENTRY

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Carpenters erect the wood framework in buildings including the subflooring, sheathing, partitions, floor joists, studding and rafters. When the building is ready for trimming, they install molding, wood paneling, cabinets, window sash, doorframes, doors and hardware, and build stairs and lay floors. They also install timbers used in constructing docks, railroad trestles and other structures. They build forms used in concrete construction and erect scaffolds and temporary buildings.

Job Opportunities: Carpenters are the largest number of building trade workers; they work for builders, wood-working shops, maintenance shops, sash and door companies and for furniture manufacturers. Most specialize in one area such as rough carpentry or trim and finishing. Graduates may enter the building trades under apprenticeship training programs.

Course Description:

*Laboratory shop course
*Use and care of hand and power tools
*House framing
*Exterior finishing and preparing for plaster
*Concrete form work
*Interior finishing
*Roof framing and use of steel square
*Welding and millroom practice

Related Subjects
*Mathematics
*Communications
*Drawing-blueprint reading
*Science
*Industrial relations

Length of Course: 18 months

Helpful High School Courses:

Drawing
Mathematics
Industrial arts — wood and metals
Science

Personal Qualities:

Manual dexterity and sense of balance
Interest and aptitude for working with wood and hand and power tools
Ability to read and interpret blueprints
Ability to visualize the completed project

Personal Equipment Needed: None

Expenses: Tuition for students over 21 — $65 per month

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Course Title: CARPENTRY

Name of School:	Address:	Telephone:
Thief River Falls Area Vocational-Technical School	Thief River Falls, Minn. 56701	(218) 681-5424

Admission Dates: September

Nature of Work: Carpenters erect the wood framework in buildings including subflooring, sheathing, partitions, floor joists, studding and rafters. When the building is ready for trimming, they install molding, wood paneling, cabinets, window sash, doorframes, doors and hardware, and build stairs and lay floors. They also install timbers used in constructing docks, railroad trestles and other structures. They build forms used in concrete construction and erect scaffolds and temporary buildings.

Job Opportunities: Carpenters are the largest number of building trades workers; they work for builders, wood-working shops, maintenance shops, sash and door companies and for furniture manufacturers. Most specialize in one area such as rough carpentry or trim and finishing. Graduates may enter the building trades under apprenticeship training programs.

Course Description:

*Use of hand and machine tools
*Basic carpentry practices
*Framing of buildings
*Interior and exterior finishing
*Sketching and drawing
*Form building
*Cabinetry
*Building materials
*Estimating
*Related subjects

Length of Course: 20 months

Helpful High School Courses:

Industrial arts—particularly wood and metal shop
Mathematics
Science
Drawing

Personal Qualities:

Mechanical aptitude
Average or above mathematical ability
Good physical health and stamina

Personal Equipment Needed: Carpentry tools — cost included in course fee

Expenses: Registration fee — $10
Course fee — $175
Tuition for students over 21 — $45 per month plus course fee

Course Title: CHEF'S MANAGEMENT & FOOD SERVICE

Name of School:	Address:	Telephone:
Hibbing Area Technical Institute	505 E. 16th St. Hibbing, Minn. 55746	(218) 262-2256

Admission Dates: Classes start late August or early September

Nature of Work: Chefs plan and participate in cooking and other duties necessary to food preparation: duties may include estimating and purchasing needed foodstuffs, checking supplies for quality and quantity, selecting and developing recipes, planning menus, readying food for serving. Supervisory work may include hiring and training other workers, keeping time and payroll records.

Job Opportunities: Fry cooks, dinner cooks, salad chefs and other specialists in the culinary arts all in demand for work in restaurants, hotels, institutions such as hospitals, schools and other public and private food services. Constant employment, comfortable working conditions and salaries and advancement based on personal abilities are benefits of this work.

Course Description:

*Principles of food preparation
*Sanitation and hygiene
*Short order cooking
*Mathematic fundamentals
*Baking
*Communications
*Menu planning and nutrition
*Food service industry
*Food purchasing and marketing
*Dining room service
*Gourmet cooking
*Accounting
*Specialty food requirements

Length of Course: 18 months

Helpful High School Courses:

Personal Qualities:

Good mental and physical health
Even disposition
Physical stamina
Desire for responsibility

Personal Equipment Needed: None

Expenses: Supply and book fee — $40
Tuition for students over 21 — $30 per month for Minnesota residents
$100 per month for non-residents

Course Title: CHEF TRAINING

Name of School:	Address:	Telephone:
Moorhead Area Vocational-Technical School	Box 100 Moorhead, Minn. 56561	(218) 233-5494

Admission Dates: September — unless openings occur during the year

Nature of Work: Chefs plan and participate in cooking and other duties necessary to food preparation; duties may include estimating and purchasing needed foodstuffs, checking supplies for quantity and quality, selecting and developing recipes, planning menus and readying food for serving. Supervisory work may include hiring and training other workers and keeping time and payroll records.

Job Opportunities: Employment may be found in hotels, restaurants, institutions; hospitals, schools, stores, railroads, resorts, ship lines, and private clubs are employing more and more food workers as population and leisure time increase. Cooks, assistant cooks, butchers, bakers, broilermen, pantrymen, kitchen stewards, food salesmen, head waiters, storeroom supervisors and assistant club managers. Workers may expect, with experience, to advance to supervisory and management positions.

Course Description:

*Basic cooking skills
*Meats, poultry, seafood
*Broiler work
*Baking
*Beverages
*Breakfast cookery
*Farinaceous foods
*Stock and soups
*Salads and dressings
*Sauces and gravies
*Purchasing techniques
*Health and sanitation
*Safety
*Appetizers

Length of Course: 11 months

Helpful High School Courses:

Mathematics
Bookkeeping
Typing

Personal Qualities:

Good physical health (medical examination required)
Aptitude (test required)
Even disposition
Desire for responsibility

Personal Equipment Needed: Uniforms and tools — $25
Books — $20

Expenses: Student Activity fee — $10
Tuition for students over 21 — $40 per month

Course Title: CHEF'S TRAINING (FOOD MANAGEMENT)

Name of School:	Address:	Telephone:
St. Paul Area Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55101	(612) 227-9121

Admission Dates: September

Nature of Work: Chefs plan and participate in cooking and other duties necessary to food preparation; duties may include estimating and purchasing needed foodstuffs, checking supplies for quantity and quality, selecting and developing recipes, planning menus and readying food for serving. Supervisory work may include hiring and training other workers and keeping time and payroll records.

Job Opportunities: Employment may be found in hotels, restaurants, institutions; hospitals, schools, stores, railroads, resorts, ship lines, and private clubs are employing more and more food workers as population and leisure time increase. Cooks, assistant cooks, butchers, bakers, broilermen, pantrymen, kitchen stewards, food salesmen, head waiters, storeroom supervisors and assistant club managers. Workers may expect, with experience, to advance to supervisory and management positions.

Course Description:

Laboratory kitchen courses
*Sanitation
*Short order cooking
*Fry and broiler cooking
*Salad and vegetable preparation
*Dinner cooking
*Cold meat preparation
*Baking
*Butchering
*Menu and recipe construction
*Food service

Related subjects
*Business mathematics
*Communications
*Industrial relations

Length of Course: 20 months

Helpful High School Courses:

Mathematics
Business courses
Science (at least one high school science course is recommended)

Personal Qualities:

Excellent health (certificates required)
Good grooming
Good reading ability

Personal Equipment Needed: None

Expenses: Tuition for students over 21 — $65 per month

Course Title: CHEMICAL TECHNICIAN (LABORATORY ASSISTANT)

Name of School:	Address:	Telephone:
St. Paul Area Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55101	(612) 227-9121

Admission Dates: September

Nature of Work: Chemical technicians work under the direction of biochemists, organic or inorganic chemists to conduct tests, make quantitative or qualitative analysis of materials in the development of new products, materials or processing methods. Technicians set up equipment, conduct or observe tests, record data, prepare solutions according to formulas, and perform other duties planned by chief chemists.

Job Opportunities: The chemical manufacturing industry is the 5th largest in the U.S. Research and production of petroleum, adhesives, cosmetics, foods, plastics, batteries, rugs, dyes, paints, vegetable oils, formula feeds, ammonia, gas, fertilizers, glass, explosives, steel, electroplating and metal finishing, alcohol, materials and processes in service to the scientific instruments, graphic arts, pharmaceuticals and scientific specialties.

Course Description:

*Inorganic chemistry	*Mathematics
*Basic principles of chemistry	*Electronics
*Theory of chemistry	*Communications
Calculations	*Drawing
*Qualitative analysis	*Industrial relations
*Instrumental techniques	

This course provides a complete laboratory experience leading to an extensive knowledge of chemical apparatus, equipment, procedures and techniques.

Length of Course: Chemical Technician — 20 months
Laboratory Assistant — 1 year

Helpful High School Courses:

Chemistry	Mathematics
Physics	

Personal Qualities:

High school diploma or equivalent	Imaginative, resourceful and persistent personality
Habits of accuracy and neatness	

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: CIVIL ENGINEERING TECHNOLOGY

Name of School:	Address:	Telephone:
Wadena Area Vocational-Technical School	405 S.W. Colfax Ave. Wadena, Minn. 56482	(218) 631-3342

Admission Dates: First week in July

Nature of Work: Technicians assist civil engineers in the planning and construction of highways, streets, bridges, viaducts, dams and other structures. They may help in planning, estimating cost, preparing material specifications. Some technicians participate in scheduling construction and inspecting the land, making surveys and plans.

Job Opportunities: Graduates are employed by state highway departments, county engineering firms and city engineering departments.

Course Description:

*Surveying
*Drafting
*Soil testing
*Applied mathematics
*Applied sciences

Field work includes surveying and taking field notes from which drawings or maps will be made. Construction surveyings and staking will be done from these detailed plans.

Length of Course: 11 months

Helpful High School Courses:

Mathematics and plane geometry (required)
Drafting
Drawing

Personal Qualities:

Physical stamina

Personal Equipment Needed: Drafting kit and other personal instruments — $25

Expenses: Application fee — $10
Tuition for students over 21 — $40 per month

Course Title: CIVIL ENGINEERING TECHNOLOGY

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-3671

Admission Dates: First Monday in July

Nature of Work: Technicians assist civil engineers in the planning and construction of highways, streets, bridges, viaducts, dams and other structures. They may help in planning, estimating costs, preparing materials and specifications. Some participate in scheduling, construction and inspecting the land, making surveys and plats.

Job Opportunities: Civil engineering technicians work for state highway departments, county engineers, civil engineering firms and city engineering departments.

Course Description:

*Mathematics
*Basic plane geometry
*Basic Alegbra
*Basic Trigonometry
*Application of the slide rule
*Planimeter
*Calculator
*Application, care and adjustment of the transit, level and other measuring instruments
*Note keeping
*Inspection on construction
*Soil sampling and testing
*Concrete proportioning and testing
*Drafting and designing
*Map making
*Staking construction jobs
*Land surveying
*Construction materials

Length of Course: 11½ months

Helpful High School Courses:

Mathematics
Drafting
Drawing

Personal Qualities: Minimum score recommended by General Aptitude Test Battery.

Personal Equipment Needed: Drafting kit and other instruments — $25-$35
Tuition for students over 21 — $30 per month

Expenses: Tuition for students over 21 — $30 per month

Course Title: CIVIL TECHNOLOGY (HIGHWAY TECHNICIANS)

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall of each year

Nature of Work: Civil and highway technicians help perform many of the planning and design tasks necessary in the construction of highways, railroads, bridges, viaducts, dams, buildings, and other structures required by our dynamic society. Special areas of employment include draftsman, surveyor, inspector and assistant engineer. Some technicians eventually follow up their initial training and become registered professional engineers.

Job Opportunities: At the present time, there is a need for 1 or 2 technicians for every engineer. This present ratio is expected to rise rapidly within a few years, increasing to 3 to 4 for each engineer employed. The Minn. State Highway Department alone has a current annual need in excess of 300 technicians. Highway construction contractors also employ technicians.

Course Description:

*Surveying
*Sampling and testing
*Engineering drafting
*Basic mathematics
*Algebra
*Geometry
*Trigonometry
*Written communications
*Use of calculating machines and devices
Attitude development

Length of Course: 10½ months

Helpful High School Courses:

Algebra
Drafting
Geometry
Physics

Personal Qualities:

Reliability
Ability to work well with others
Liking for outdoor work which is not routine

Personal Equipment Needed: None

Expenses: Textbooks and drawing equipment (approximately $40 for the course)
Tuition for students over 21 — $32 per month plus above expense

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Bemidji Area Vocational-Technical School	Bemidji, Minn. 56601	(218) 751-4137

Admission Dates: Day after Labor Day
(Individual appraisal may permit admission)

Nature of Work: General office workers usually do a wide variety of things; they are required to type, to file, to answer telephones and use some business machines in most offices. Some work on one procedure such as filing most of the time.

Job Opportunities: This course is specifically for those students who do not wish the specialization required of the students enrolling in the accounting, secretarial or tabulating machines operator courses. Salary is dependent upon area and position acquired. Graduates may expect to work in offices as clerks.

Course Description:

*Office procedures
*Machine operation
*Business mathematics
*Records management and filing
*Typewriting and use of business forms
*Business mathematics
*Business communications
*Clerical accounting and record-keeping
*Typing
*Business letterwriting
*Charm
*Civil service
*Data processing
*Business law
*Office policies and procedures

Length of Course: 9 months

Helpful High School Courses:

Typing (required)
Bookkeeping
Business machines

Personal Qualities:

Ability to learn and follow routine clerical procedures
Verbal ability and clerical aptitude
Skill in operating business machines and typing
Temperament for repetitive and close detail work

Personal Equipment Needed: $10 — per quarter for books

EXPENSES: Enrollment fee — $10 upon acceptance
Tuition for students over 21 — $50 per four week period

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Brainerd Area Vocational-Technical School	300 Quince St. Brainerd, Minn. 56401	(218) 829-2814

Admission Dates: September

Nature of Work: General office workers usually do a wide variety of things; they are required to type, to file, to answer telephones and use some business machines in most offices. Some work on one procedure, such as filing, most of the time.

Job Opportunities: This course is designed primarily for students who do not desire to specialize in shorthand or accounting. The individual completing the clerical training course can expect to find employment in positions such as typist, receptionist, receiving clerk, file clerk, key punch operator, payroll clerk and other office positions. The quality of positions open is directly related to the degree of skill attained. Employers are quick to recognize above average proficiency and will pay accordingly. Clerical workers are in constant demand in both large and small businesses. In fact, the number of persons employed as clerical workers in the field of business far exceeds that of any other business occupation category, and this increase is due to the demand for clerical workers skilled in data processing.

Course Description:

*Basic bookkeeping
*Typing
*Filing
*Business machines
*Data processing
*English
*Human relations

Length of Course: 9 months

Helpful High School Courses:

Typing
Bookkeeping
Business machines

Personal Qualities:

High school diploma or equivalent
Good physical and emotional health
Good moral character

Personal Equipment needed: Students are expected to furnish their own books.

Expenses: Tuition for students over 21 — $40 per month

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Canby Area Vocational-Technical School	Canby, Minn. 56220	(507) 223-7252

Admission Dates: September

Nature of Work: General office workers usually do a wide variety of things; they are required to type, to file, to answer telephones and use some business machines in most offices. Some work on one procedure such as filing most of the time.

Job Opportunities: This clerical sequence is designed to train students for employment as typists, machine operators, file clerks, receptionists and general office workers.

Course Description:

Operation of the following business machines:
- *Printing calculators
- *Dial calculators
- *Full keyboard and 10-key adding machines
- *Posting machines
- *Spirit duplicators
- *Mimeograph machines
- *Data processing and equipment

Length of Course: 9 months

Helpful High School Courses:

Typing

High school business subjects are desirable but not required.

Personal Qualities:

Good personality and grooming
Desire to work with others
Interest in office work

Personal Equipment Needed: None

Expenses: $10 — reference books per quarters
$40 — Tuition for Minnesota residents over 21
$60 — Tuition for non-residents over 21

Course Title: CLERICAL

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: General clerical workers may be responsible for typing, transcribing, general office work, credit or shipping clerk duties, billing machine operation, duplicating by machine, messenger duties, and coding operations. In most large offices, a clerical worker would be responsible for a few of these things; in a small office she might do some of each of these things.

Job Opportunities: Large and small businesses, banks, insurance companies, wholesale and retail merchandisers, service, health and welfare agencies and departments of the state, local or Federal governments employ large numbers of clerical workers.

Course Description:

*Typing
*Mathematics
*Office machines
*Data processing
*Records management
*Accounting
*Communications
*Office procedures
*Principles of business
*Business law
*Human relations

Length of Course: 9 months

Helpful High School Courses:

Business subjects
English

Personal Qualities:

Ability to work well with others
Aptitude for working with figures
Liking for variety and detail work

Personal Equipment Needed: None

Expenses: Workbooks, supplies — $40 (approximately)
Tuition for students over 21 — $802.50 per year

Course Title: CLERICAL-GENERAL

Name of School:	Address:	Telephone:
Eveleth Area Vocational-Technical School	402 Roosevelt Eveleth, Minn. 55734	(218) 749-2285

Admission Dates: September

Nature of Work: General office workers do a wide variety of things; they are required to type, to file, to answer telephones and use some business machines in most offices. Some work on one procedure such as filing most of the time.

Job Opportunities: Graduates find job opportunities as general office workers, file clerks, clerk-typists, receptionists, typists, cashiers, switchboard operators, and keypunch operators.

Course Description:

*Typing
*Office procedures
*Filing
*Business machines
*Automation office practice
*Business English
*Business law
*Accounting
*Business organization
*Economics
*Spelling

Class work is supplemented through field trips, resource speakers and outside work assignments.

Length of Course: 9 months

Helpful High School Courses:

High school graduate
Business courses

Personal Qualities:

Ability to learn and follow routine clerical procedures
Verbal ability and clerical aptitude
Skill in operating business machines and typing
Temperament for repetitive and close detail work

Personal Equipment Needed: Books

Expenses: Enrollment fee — $20
Tuition for students over 21 — $65 per month
(Next year will be $150 per quarter for Minnesota residents; $195 per quarter for non-residents)

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Faribault Area Vocational-Technical School	Faribault, Minn. 55021	(507) 334-3965

Admission Dates: September — with late enrollments as vacancies occur.

Nature of Work: General office workers usually do a wide variety of things; they are required to type, to file, to answer telephones and use some business machines in most offices. Some work on one procedure such as filing most of the time.

Job Opportunities: The general clerical office worker performs the more routine tasks required in a modern office. This worker is skilled in the use of the typewriter and understands the operation of simple calculators, mimeograph and other reproducing machines. The demand for good clerk-typists and general office workers continues to grow. Opportunities for employment are available in wholesale, retail insurance, other service businesses, manufacturing concerns and governmental agencies.

Course Description:

- *Typing
- *Office procedures
- *Introduction to data processing
- *Business communications
- *Principles of accounting
- *Business machines
- *Business mathematics
- *Filing and records management
- *Business law
- *Personal development
- *Human relations

Length of Course: 9½ months

Helpful High School Courses:

- Typing
- Bookkeeping
- Business machines

Personal Qualities:

- Interest in clerical tasks
- Ability to work with numbers
- Ability to communicate orally and in writing
- Good work habits, punctuality and dependability
- Good grooming
- Dexterity

Personal Equipment Needed: None

Expenses: $5 enrollment fee
$15 each quarter ($45 total) for personal class materials and supplies
Tuition for students over 21 — Minn. residents — $40 per 4-week period
Tuition for non-residents — $55 per month

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	15th St. & 11th Ave. Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: September

Nature of Work: Clerks are responsible for typing, filing, duplicating, operating some business machines, keeping office records and some correspondence. Some work as receptionists file clerks and other specialized clerks.

Job Opportunities: Banks, insurance agencies, all business and industrial firms, service organizations, branches of local, state or Federal government employ clerks. Graduates of this course are competent to pass employment tests given by private businesses and the state or Federal Civil Service.

Course Description:

*Office machines
*Data processing equipment
*Adding machines
*Calculators
*Duplicators
*Business mathematics
*Business law
*Business economics
*Business English
*Accounting

Length of Course: 9 months

Helpful High School Courses:

High school business courses
English
Mathematics

Personal Qualities:

Aptitude for figures
Ability to do detailed work
Good personality

Personal Equipment Needed: Workbooks

Expenses: Registration fee — $20
Tuition for students over 21 — $40 per month

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Southwest Minn. Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: September

Nature of Work: General office workers usually do a wide variety of things; they are required to type, to file, to answer telephones and use some business machines in most offices. Some work on one procedure such as filing most of the time.

Job Opportunities: Graduates work as receptionists, file clerks and general clerks; they are qualified to take private industry or civil service tests. Clerical workers are needed in both small and large businesses, in banks, insurance companies, service agencies, in fact, in all types of business and industry.

Course Description:

*Business and office machines
*Typing I, II, III, IV
*Statistical typing
*Business mathematics
*Economics
*Business communications
*Clerical office procedures
*Principles of accounting
*Business law
*Personal grooming and human relations
*Introduction to data processing

Length of Course: 11 months

Helpful High School Courses:

Typing (required)
Bookkeeping
Business machines

Personal Qualities:

Ability to learn and follow routine clerical procedures
Verbal ability and clerical aptitude
Skill in operating business machines and typing
Temperament for repetitive and close detail work

Personal Equipment Needed: None

Expenses: Textbooks—$5
Tuition for students over 21—$30 per month

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall of Each Year

Nature of Work: The general clerical course curriculum is designed to educate students who plan to be employed in business offices as receptionists, clerk typists, transcribing machine operators, credit clerks, billing machine operators, records management clerks, coding clerks or duplicating machine operators. Some businessmen may even classify these jobs as secretarial. The curriculum endeavors to help students acquire knowledge about and to operate commonly used business machines and then apply this knowledge to practical business office jobs and procedures.

Job Opportunities: Potential job opportunities exist in banks, business offices in all types of companies, government offices, and with state and federal civil service.

Course Description:

- Business machines I, II, III
- *Typewriting I, II, III
- *Clerical Office procedures
- *Clerical accounting
- *Business mathematics
- *Business communications I, II
- *Clerical records management
- *Principles of business
- *Charm and occupational relations
- *Introduction to data processing

Length of Course: 9 months

Helpful High School Courses:

- Typewriting
- General business courses

Personal Qualities:

- Sense of responsibility
- Dependability
- Industriousness

Personal Equipment Needed: None

Expenses: Textbooks—$90 (approximately) for the course
Tuition for students over 21—$32 per month plus books

Course: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. S. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: General office workers are usually responsible for a wide variety of duties. They may file, type, answer telephones, keep records, do billing, use business machines or act as receptionist. A few do only one of these things, if the office is very large and the detailed duties divided among the workers. In most small offices, however, the general clerical worker is a "Jill-of-all-trades" rather than a specialist.

Job Opportunities: Graduates of this course work as typists, statistical clerks, receptionists, file clerks and office machines clerks. Government agencies, retail and wholesale trade, insurance and utility companies have the greatest demand for this type of worker. Graduates are qualified to take state or Federal Civil Service tests.

Course Description:

Beginning Program — for those without previous office training or skills

- *Typing 1, 2
- *Bookkeeping 1, 2
- *Office machines 1, 2
- *Filing
- *Accounting machines 1, 2
- *Personal development and introduction to employment
- *Business correspondence

Intermediate Program — for those with training or skills

- *Typing 3
- *Accounting 1, 2
- *Accounting machines 1, 2
- *Office training and personal development
- *Filing
- *Business correspondence
- *Business organization

Length of Course: 9½ months

Helpful High School Courses:

- Typing
- Bookkeeping
- English
- Office machines

Personal Qualities:

- Understanding and interest in working with figures
- Good grooming and personal poise
- Manual and finger dexterity
- Ability to adjust to a variety of situations

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Moorhead Area Vocational-Technical School	Box 100 Moorhead, Minn. 56561	(218) 236-6277

Admission Dates: September

Nature of Work: General office workers usually are required to type, to file, to answer telephones and to use some business machines. In a very large office, clerical worker may do only one of these things, but most are responsible for a wide variety of duties.

Job Opportunities: Graduates of this course work as receptionists, file clerks and general clerks; they are qualified to take employment tests given by business and industry and Civil Service agencies.

Course Description:

*Record keeping
*Office practices
*ABC note-taking shorthand
*Communications
*Business mathematics
*Typing
*Office machines
*Business law
*Human relations, including: charm, good grooming, manners, office behavior

Length of Course: 9 months

Helpful High School Courses:

Typing
Bookkeeping
English

Personal Qualities:

Pleasant personality
Ability to follow directions
Evidence of aptitude as shown by tests given at the School

Personal Equipment Needed: Books—$50 (approximately)

Expenses: Student activity fee—$10
Supply fee—$5
Tuition for students over 21—$40 per month plus above fees

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Pine City Area Vocational-Technical School	Pine City, Minn. 55063	(612) 629-3844

Admission Dates: August

Nature of Work: General office workers do a wide variety of things on the job. Most are required to type, to file, to answer phones and use some business machines. In larger offices, some clerical workers may work on one procedure or machine most of the time.

Job Opportunities: Graduates may work as general office clerks, typists, receptionists, file clerks, machine operators, keypunch operators, and other general office positions. Many work for insurance companies, banks, in private industry and for state and federal government. The need for clerical workers is increasing with economic expansion.

Course Description:

- *Business machines
- *Office procedures
- *Business mathematics
- *Record keeping
- *Filing
- *Typing

Length of Course: 9 months

Helpful High School Courses:

- Typing
- Business subjects
- Arithmetic
- English

Personal Qualities:

- Pleasant personality
- Ability to learn and follow detailed procedures

Personal Equipment Needed: None

Expenses: Registration fee—$10
Tuition for students over 21—$35 per month plus registration fee
Tuition for out of state students—$50 per month

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 N. 9th Ave. St. Cloud, Minn. 56301	252-0101

Admission Dates: September

Nature of Work: General office workers usually do a wide variety of things; they are required to type, to file, to answer telephones and use some business machines in most offices. Some work on one procedure such as filing, most of the time.

Job Opportunities: Students are qualified for general office work and receptionist duties with governmental agencies, banks, insurance companies and other similar work settings.

Course Description:

*Typing
*Business machines
*Accounting
*Filing
*Business English
*Business mathematics
*Business law
*Business correspondence
*Receptionist training
*Bank services
*Personality development
*Business office procedures
*Proper work attitudes

Length of Course: 9 months

Helpful High School Courses:

Typing
Bookkeeping
Business machines

Personal Qualities:

Ability to learn and follow routine clerical procedures
Verbal ability and clerical aptitude
Skill in operating business machines and typing
Temperament for repetitive and close detail work

Personal Equipment Needed: Books and supplies will be about $100.00

Expenses: Service fee—$7
Tuition for students over 21—$40

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Thief River Falls Area Vocational-Technical School	Thief River Falls, Minn. 56701	(218) 681-5424

Admission Dates: September, December, March, June

Nature of Work: General office workers usually do a wide variety of things; they are required to type, to file, to answer telephones and use some business machines in most offices. Some work on one procedure such as filing most of the time.

Job Opportunities: Graduates work as a file clerk, typist, receptionist, payroll clerk, bookkeeping machine operator, key punch operator, and do general office work in a small office. Employment opportunities are excellent with civil service, FBI, insurance companies, banks, hospitals, and retail business offices.

Course Description:

*Filing
*Statistical typing
*Civil service training
*Payroll accounting
*Clerical office practice
*Typing
*Office machines
*There are 2 hours of related lecture courses in the 6 hour school day.

Length of Course: 9 months

Helpful High School Courses:

Typing (required)
Bookkeeping
Business mathematics

Personal Qualities:

Ability to learn and follow routine clerical procedures
Verbal ability and clerical aptitude
Skill in operating business machines and typing
Temperament for repetitive and close detail work

Personal Equipment Needed: None

Expenses: Registration fee—$10
Supply and course fee—$75
Tuition for students over 21—$45 per four week period plus course fee.

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Wadena Area Vocational-Technical School	405 SW Colfax Ave. Wadena, Minn. 56482	(218) 631-3342

Admission Dates: Fall only

Nature of Work: General office workers do a wide variety of things on the job; they are required to type, to file, to answer phones and use some business machines in most offices. In large offices, some may work on one procedure.

Job Opportunities: Employment in clerical occupations is expected to rise rapidly with the expanding economy. Graduates may find work as receptionists, file clerks, general clerks, machine operators in small and large business firms, insurance companies, banks, service agencies, in fact, in all types of business and industry.

Course Description:

- *Business and office machines
- *Typing
- *Business mathematics
- *Clerical procedures
- *Communications
- *Personal grooming and human relations
- *Economics

Length of Course: 10½ months

Helpful High School Courses:

- Typing
- Bookkeeping
- Arithmetic
- English

Personal Qualities:

- Pleasant personality
- Ability to learn and follow clerical procedures
- Liking for detail

Personal Equipment Needed: None

Expenses: Application fee—$10
Workbooks and other supplies—$30
Tuition for students over 21—$40 per month

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: September, January, March

Nature of Work: General office workers do a wide variety of things on the job. Most are required to type, to file, to answer telephones and use some business machines. In large offices, some clerical workers may work on one procedure, filing, for example, most of the time.

Job Opportunities: Graduates may work as general office clerks, file clerks, typists, telephone switchboard operators, business machine operators, receptionist or record clerks in private industry, insurance companies, banks, service institutions or for state and federal government. The need for trained clerical workers is increasing with economic expansion.

Course Description:

*Office and business machines
*Business forms
*Office procedures
*Business mathematics
*Record keeping
*Filing
*Typing

Length of Course: 9 months

Helpful High School Courses:

Typing
Bookkeeping
Arithmetic
English

Personal Qualities:

Pleasant personality
Ability to learn and follow clerical procedures
Liking for detail

Personal Equipment Needed: Books

Expenses: Supply fee—$5
Tuition for students over 21—$40 per month plus supply fee

Course Title: CLERICAL, GENERAL

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-3671

Admission Dates: First Tuesday after Labor Day or beginning of any quarter

Nature of Work: Clerks are responsible for typing, filing, duplicating, operating business machines, keeping office records and some correspondence. Some clerks work as file clerks or in other special areas such as machine operating.

Job Opportunities: Banks, insurance agencies, all business and industrial firms, service organizations, branches of the local, state and Federal government employ clerks. Graduates of this course are competent to pass employment tests given by business and by the state and Federal Civil Service.

Course Description:

*Typing
*Basic mathematics
*Business mathematics
*Business English
*Human relations
*Communications
*Machines operation
*Data processing
*Principles of accounting

Length of Course: 9 months

Helpful High School Courses:

Business subjects, especially typing
English
Mathematics

Personal Qualities:

Minimum scores on General Aptitude Test Battery
High school graduate or equivalent
Good grooming and personality
Ability to concentrate on details

Personal Equipment Needed: Workbooks and supplies—$25-$35 for course

Expenses: Books—see above
Tuition for students over 21—$30 per month

Course Title: CLERICAL TRAINING AND KEY PUNCH

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: General office workers usually do a wide variety of things; they are required to type, to file, to answer telephones and use some business machines in most offices. Some work on one procedure, such as filing, most of the time.

Job Opportunities: Graduates work as receptionists, file clerks and general clerks; they are qualified to take private industry or civil service tests. Clerical workers are needed in both small and large businesses, in banks, insurance companies, service agencies, in fact, in all types of business and industry.

Course Description:

*Basic accounting
*Payroll accounting
*Typing
*Business machines
*Filing and data processing machines
*Key punch
*Business English
*Business mathematics
*Business law
*Business correspondence
*Receptionist training
*Bank service
*Personality development
*Business office procedures

Length of Course: 9 months

Helpful High School Courses:

Typing (required)
Office machines
Mathematics

Personal Qualities:

Ability to learn and follow routine clerical procedures
Verbal ability and clerical aptitude
Skill in operating business machines and typing
Temperament for repetitive and close detail work

Personal Equipment Needed: None

Expenses: Acceptance Fee $25
Book fee—$10
Tuition for students over 21—$40 per month

Course Title: CLOTHING SPECIALIST

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: Designing, planning, cutting, assembling, inspecting, finishing, are part of apparel manufacturing; graduates of this program are qualified in the various aspects of manufacture. The employment level is usually between the production sewer and designer in a clothing firm.

Job Opportunities: Careers in the clothing industry are open to men and women with this training. Supervisory or production work in clothing firms, planning, cutting, assembling, inspecting, finishing is available as well as sales opportunities for persons with knowledge of clothing design and construction.

Course Description:

- *Making and grading patterns
- *Making sample garments
- *Pricing and economics of production
- *Knowledge of fibers and fabrics
- *Garment specifications and lay out
- *Use of production machines
- *Grading and testing
- *Simple design sketching

Length of Course: 10 months

Helpful High School Courses:

- Home Economics
- Art
- Mathematics
- Speech
- Business subjects

Personal Qualities:

- Interest in fashion
- Artistic ability

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: COMMERCIAL COOKING AND BAKING

Name of School:	Address:	Telephone:
Detroit Lakes Area Vocational-Technical School	Hwy. 34 East Detroit Lakes, Minn. 56501	(218) 847-9261

Admission Dates: September

Nature of Work: Planning and preparation of foods, estimating and purchasing needed foodstuffs, checking supplies for quantity and quality as well as particular responsibility as vegetable, short order, frycook, head cook, or chef may be part of a worker's job. Dining room employment might be as maitre d', food checker or hostess. Working conditions are pleasant and most food workers receive meals and uniforms.

Job Opportunities: Hotels, clubs, restaurants, resorts, tea rooms, hospitals and institutions are a few places employing commercial food graduates.

Course Description:

*Menu planning
*Food service control
*Beverages
*Fry cookery
*Salads
*Cold meats
*Vegetables
*Grill and roast cooking
*Sauces
*Pastry
*Butchering

Length of Course: 11 months

Helpful High School Courses:

Business
Home Economics

Personal Qualities:

16 years or older

Personal Equipment Needed: Books, tools, uniforms as needed in various courses

Expenses: Tuition for students over 21—$40 per month

Course Title: COMMERCIAL FOODS

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. S. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Planning and preparation of foods, estimating and purchasing needed foodstuffs, checking supplies for quantity and quality as well as particular responsibility as vegetable, short order, fry cook, head cook, or chef may be part of a worker's job. Dining room employment might be as maitre d', food checker or hostess. Working conditions are pleasant and most food workers receive meals and uniforms.

Job Opportunities: Hotels, clubs, restaurants, resorts, tea rooms, hospitals and institutions are a few places employing commercial food graduates.

Course Description:

Emphasis placed on French cuisine, ala carte and gourmet foods served in a cafeteria dining room open to the public.

*Buffet set up
*Vegetables
*Salads
*Bake shop
*Candy making
*Ice cream making
*Range work
*Broiling
*Saute roasting
*Soup, sauces
*Eggs
*Deep fat frying
*Sandwiches

Store Room:
*Food purchasing
*Inventory control
*Cost accounting

Length of Course: 12 months

Helpful High School Courses:

Home Economics
Business subjects

Personal Qualities:

Average learning ability
Physical stamina
Good health
Cheerful manner
Honesty, reliability

Personal Equipment Needed: Uniforms
Aprons and cap may be bought at school store

Expenses: Book and locker fee—$2
Tuition for students over 21—$70 per month

Course Title: COMMERCIAL AND RESIDENTIAL WIRING

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Most graduates of this course become apprentices with electricians, construction companies, electrical installation shops or motor-winding shops. Electricians must be able to install, maintain, repair and care for home and commercial power from an outside source; they must be able to plan and install according to building codes.

Job Opportunities: Pre-apprenticeship training enables graduates to find good positions in construction, electrical shops and industry with regular advancement to journeyman.

Course Description:

*Home and commercial building wiring
*Wiring layouts
*Winding and hook-up of motors and controls, AC and DC
*Transformers; their use and construction in single and three phase work
*National Electrical Code, its requirements and use in the trade

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Electricity
Physics

Personal Qualities:

Manual and mechanical dexterity
Mathematical aptitude
Physical strength and stamina to work under all weather conditions.

Personal Equipment Needed: Basic hand tools as required in the industry

Expenses: Tools, supplies—$35 (approximately)
Tuition for students over 21—$802.50

Course Title: COMPUTER PROGRAMMER (EDP)

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall of each year

Nature of Work: The work involves flow charting and writing instructions in numerous source languages for the computer to solve a particular system application.

Job Opportunities: The job opportunities will include programming and computer operator jobs in banks, insurance companies, utilities, industry and business, for health, welfare and service agencies and the Federal and state government.

Course Description:

First Year	Second Year
*Unit record I and II	*Introduction to systems
*Introduction to computers	*Data processing application
*Machine language programming	*Cobol
*Symbolic language I and II	*Monitor systems and supervisory programs
*Accounting	*Field project
*Mathematics	*Cost accounting
*Communications	*Accounting systems
*Fortran	*Business organization
*electives	*Accounting
	*Statistics

Length of Course: 21 months

Helpful High School Courses:

Bookkeeping	Mathematics

Personal Qualities:

Aptitude for logical thinking	Ingenuity
Patience	Imagination
Persistence	

Personal Equipment Needed: None

Expenses: Textbooks—$25-$30 per year
Tuition for students over 21—$32 per month plus books

Course Title: CONCRETE TECHNICIAN

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: Concrete technicians work with the development, application and maintenance of quality standards in the processing of aggregates, portland cement and additives used in the concrete mixture. The technician samples, inspects, tests and evaluates concrete components, such as concrete in the plastic and hardened stages. A technician may specialize in one of the many areas of concrete production such as producing aggregates, batching and dispatching of ready-mixed concrete, inspection and testing, production and concrete products, paving or building construction and product research.

Job Opportunities: There are job openings in supervision, sales and management for paving contractors, suppliers of aggregates and other concrete components, highway and maintenance departments of state, Federal and city government and in product research.

Course Description:

- *Design, control and testing concrete mixtures
- *Transportation, placing and finishing concrete
- *Concrete reinforcement
- *Production techniques
- *Drafting
- *Blueprint reading
- *Estimating
- *Applied mathematics
- *Sales and advertising
- *Industrial psychology
- *Equipment operation and maintenance
- *Soils and foundations
- *Highway building construction

Length of Course: 10 months

Helpful High School Courses:

- Mathematics, including algebra and trigonometry
- Industrial arts
- Drafting
- Agriculture

Personal Qualities:

- Good general learning ability
- Aptitude for working with others
- Aptitude for mathematics

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: CONSTRUCTION WORKER I AND II

Name of School:	Address:	Telephone:
Detroit Lakes Area Vocational-Technical School	Detroit Lakes, Minn. 56501	(218) 847-9261

Admission Dates: September

Nature of Work: Construction workers do a wide variety of things on the construction site or project; they move from task to task and need a broad background and experience to work without supervision on necessary jobs including measuring from grade stakes, driving stakes, positioning and clearing forms, dismantling old form, sorting and stacking lumber and other materials, leveling earth, mixing concrete, directing other workers, aligning and moving equipment or any other specific task delegated by the employer or for a particular project.

Job Opportunities: Construction workers are employed by building contractors, construction companies and builders. Some work for lumber yards or equipment dealers.

Course Description:

*Excavation
*Grade work
*Basic carpentry
*Masonry
*Cabinet work
*Estimating
*Lumber sales
*Mathematics
*Record-keeping

Length of Course: 18 months

Helpful High School Courses:

Industrial arts
Mathematics
Business subjects

Personal Qualities:

Manual dexterity
Interest in construction
Liking for variety on the job
Initiative and self-discipline
Good physical health and stamina

Personal Equipment Needed: Books, tools, uniforms as required

Expenses: Tuition for students over 21—$40 per month

Course Title: COOKING FOOD PRODUCTION

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 844-2711

Admission Dates: September

Nature of Work: Planning and preparation of foods, estimating and purchasing needed foodstuffs, checking supplies for quantity and quality as well as particular responsibility as vegetable, short order, frycook, head cook, or chef may be part of a worker's job. Dining room employment might be as maitre d', food checker or hostess. Working conditions are pleasant and most food workers receive meals and uniforms.

Job Opportunities: Hotels, clubs, restaurants, resorts, tea rooms, hospitals and institutions are a few places employing commercial food graduates.

Course Description:

*Meal planning and preparation
*Food handling
*Sanitation

Length of Course: 9 or 18 months

Helpful High School Courses:

Personal Qualities: None

Personal Equipment Needed: None

Expenses: Registration fee—$5
Tuition for students over 21—$60 per month
G. I. Students—½ tuition

Course Title: COOKING AND FOOD MANAGEMENT, INSTITUTIONAL

Name of School:	Address:	Telephone:
Faribault Area Vocational-Technical School	Faribault, Minn. 55021	(507) 334-3965

Admission Dates: September (later enrollments as vacancies occur)

Nature of Work: A cook's job depends partly on where he works. In a small restaurant one cook may prepare everything served; in a larger place each staff member may have a special assignment and title.

Job Opportunities: The food industry, the nation's third largest, provides good opportunity for well-trained industrious men and women. Work is varied and advancement is open to able workers in restaurants, hotels, industry and specialty establishments, colleges and hospitals.

Course Description:

*Meats
*Vegetables
*Salads
*Desserts and bakery
*Soups and sauces
*Buffet and store room
*Related technical information

Modern commercial kitchen with latest electrical and gas equipment is used for training.

Length of Course: About 9 months (student may finish course in minimum 1140 hours)

Helpful High School Courses:

Home Economics
Business mathematics

Personal Qualities:

Keen sense of smell and taste
Ability and desire to follow directions
Ability to work under pressure
Health certificate — including negative Tubercular X-ray
Physical stamina

Personal Equipment Needed: Uniforms (2 at about $7.50 each)

Expenses: Supply fee—$2/week payable at beginning of each quarter. This includes supplies and noon meal.
Basic reference books—$12
Tuition for students over 21—Minn. residents: $40 per each 4 week period
Non-residents: $55 per month

Course: COSMETOLOGY

Name of School:	Address:	Telephone:
Austin Area Vocational-Technical School	Austin, Minn. 55912	(507) 433-7301

Admission Dates: June, September, January

Nature of Work: Cosmetologists give permanent waves, shampoos, haircuts, sets and style, straighten, bleach and tint hair. They may also give manicures, scalp and facial treatments, provide make-up analysis, shape eyebrows and cut, clean, syle and set wigs and other hair pieces.

Job Opportunities: Cosmetologists are needed everywhere, in large and small salons. There are excellent opportunities for self-employment and ownership of a shop or salon.

Course Description:

*Sanitation and sterilization
*Trichology
*Nails
*Anatomy of bones
*Muscles and nerves
*Facial treatments
*Eyebrow arching
*Manicuring
*Shampoo and rinses
*Hair coloring
*Hair bleaching
*Eyelash and eyebrow tinting
*Hair cutting and wigs
*Permanent waving
*Business management
Minnesota Hairdressing and Beauty Culture Laws

Length of Course: 1500 Clock Hours—Time needed to qualify for the state licensing examination

Helpful High School Courses:

Good high school record and attendance
Business subjects — particularly if interested in owning a salon

Personal Qualities:

Creative ability
Finger dexterity
Physical stamina and general good health; for example, individuals should be free from any allergies
Pleasing personality and interest in working with people

Personal Equipment Needed: Personal hairdressing equipment—$50, approximately

Expenses: Tuition for students over 21—$425 for the course

Course Title: COSMETOLOGY

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. S. Minneapolis, Minn. 55404	(507) 332-0381

Admission Dates: September

Nature of Work: Cosmetologists are concerned with the care and beautification of the hair, skin and nails and includes shaping, styling, permanent waving and coloring of hair, scalp and hair treatments, facials, make-up and manicuring. Experienced cosmetologists may specialize in a certain area such as styling, coloring or make-up.

Job Opportunities: Cosmetologists are needed everywhere in large and small shops and salons. Some work for manufacturers of cosmetics and hair products; many own their own shops or salons.

Course Description:

*Sanitation and sterilization
*Dermatology
*Trichology
*Electricity
*Light Ray
*Anatomy
*Facial treatments
*Eyebrow arching
*Manicuring
*Shampoos and rinses
*Scalp treatments
*Hair coloring
*Hair bleaching
*Lash and brow tinting
*Hair cutting
*Hair styling
*Care and styling of wigs
*Permanent waving
*Chemical hair relaxing
*Business management
*Minnesota Hairdressing and Beauty Culture Laws

Length of Course: 1500 hours—approximately 10 months. Students must complete 1500 hours before taking a written and a practical examination given by the Minnesota state board of Hairdressing and Beauty Culture leading to licensing

Helpful High School Courses:
Good general high school record

Personal Qualities:

Finger dexterity
Creative ability
Physical stamina and general good health (applicants should free of allergies)
Pleasing personality and desire to work with people

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: COSMETOLOGY

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Cosmetologists are concerned with the care and beautification of the hair, skin and scalp. Cosmetologists shape, style, permanent wave and color hair; give scalp and hair treatments, facials and other conditioning treatments; and work with make-up and manicuring. Experienced cosmetologists may specialize in a certain area such as styling, hair-coloring or make-up.

Job Opportunities: Cosmetologists are needed in small shop and large and in salons in every size town or city. Some work for manufacturers of cosmetics and hair products. Many own their own shops or salons.

Course Description:

Major Units
*Sanitation and sterilization
*Dermatology
*Manicuring
*Permanent waving
*Hair styling
*Hair cutting
*Shampoo and rinses
*Treatment of the scalp
*Facials
*Tinting and bleaching
*Make-up
*Basic electricity and light therapy
*Business management
*Cosmetic chemistry
*Cosmetology laws and code
*Trichology

Related Subjects
*Science
*Communications
*Industrial relations

Length of Course: 1500 hours—students are required to pass the State Board of Hairdressing and Beauty Culture examinations to qualify as licensed operators

Helpful High School Courses:

Sciences, including biology and chemistry
Business courses — particularly if one wishes to own or manage a shop

Personal Qualities:

Artistic sense and creative flair
Good grooming and personality
Interest in giving personal service
Willingness to work with others
Good finger dexterity
Good health and physical stamina, no allergies

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: COSMETOLOGY

Name of School:	Address:	Telephone:
Thief River Falls Area Vocational-Technical School	Thief River Falls, Minn. 56701	(218) 681-5424

Admission Dates: Fall

Nature of Work: Cosmetologists give permanent waves, shampoo, cut, style and set hair; they straighten, bleach and tint hair; and they may give manicures, scalp and facial treatments, provide make-up analysis, shape eyebrows and cut, clean, style and set wigs or other hair pieces.

Job Opportunities: Cosmetologists work in shops or salons. There are excellent opportunities in every city or town and one may become a shop owner or manager. Some cosmetologists work for manufacturers of beauty products or hair goods.

*Hygiene and sanitation
*Anatomy
*Skin and skin disorders
*Facials
*Nails
*Manicures
*Hair and scalp care
*Shampooing
*Hair shaping
*Hair styling
*Wig care
*Permanent waving
*Hair coloring
*Business management

Length of Course: 1500 hours—approximately 11 or 12 months; upon completion of the required number of hours, students take the licensing examinations given by the State Board of Hairdressing and Beauty Culture

Helpful High School Courses:

Average or better general high school record

Personal Qualities:

Ability to coordinate eyes, hands, fingers
Creative ability
Pleasant personality
Desire to serve and work with others

Personal Equipment Needed: Books and beautician's kit (cost included in the course fee)

Expenses: Registration fee—$10
Course fee—$30
Tuition for students over 21—$45 per month plus course fee

Course Title: COSMETOLOGY

Name of School:	Address:	Telephone:
Wadena Area Vocational-Technical School	405 SW Colfax Ave. Wadena, Minn. 56482	(218) 631-3342

Admission Dates: Fall, January, June

Nature of Work: Cosmetologists give permanent waves, shampoo, cut, set and style hair. They also straighten, bleach and tint hair, and they may give manicures, scalp and facial treatments, provide make-up analysis, shape eyebrows and cut, clean, style and set wigs or other hair pieces.

Job Opportunities: Cosmetologists are needed in every type of shop and salon. They may become self-employed and own a shop or salon. Some cosmetologists work for manufacturers of hair or beauty products.

Course Description: Theoretical and practical knowledge in all phases of hair, facial and nail care is provided. The cosmetology department is operated in compliance with regulations set forth by the Minnesota State Board of Hairdressing and Beauty Culture.

Length of Course: 1500 hours—Approximately 11 or 12 months. Upon completion of the required number of hours, students take the State Board of Hairdressing and Beauty Culture licensing examinations.

Helpful High School Course:
Good general high school record and attendance

Personal Qualities:
Creative ability
Good finger dexterity
Pleasant personality
Desire to serve and work with others

Personal Equipment Needed: White uniforms and shoes
Instrument kit—$30 (approximately)

Expenses: Application fee—$10
Tuition for students over 21—$40 per month

Course Title: COSMETOLOGY

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: June, September

Nature of Work: Cosmetologists give permanent waves, shampoos, haircuts, sets and styles. They straighten, bleach and tint hair, and they may also give manicures, scalp and facial treatments, provide make-up analysis, shape eyebrows and cut, clean, style and set wigs or other hair pieces.

Job Opportunities: Cosmetologists are needed in every type of shop and salon. There are excellent opportunities for self-employment and for owning a good-sized shop or salon. Some cosmetologists work for manufacturers of beauty products.

Course Description:

Practical Training
*Hair styling
*Shampooing
*Permanent waving
*Wiggery
*Hair coloring
*Scalp treatments
*Hair shaping
*Facial massage and make-up
*Hair straightening
*Hair bleaching
*Manicuring

Theory
*Sanitation and sterilization
*Anatomy
*Dermatology
*Trichology
*Nails
*Electricity
*Safety
*Chemistry
*Shop management

Length of Course: 1500 hours—Approximately 11 months; upon completion of the required number of hours, students take the examination for licensing given by the State Board of Hairdressing and Beauty Culture

Helpful High School Courses:
Good general high school record and attendance

Personal Qualifications: DAT test scores—Minimum Space Relations: 50th percentile
Verbal and Numerical Reasoning: 30th percentile
Good health and physical stamina—must file forms furnished by the State Board
Interest in working with others
Pleasant personality and good grooming

Personal Equipment Needed: Textbook and workbook
Kit of supplies—Hairdressing and manicuring tools and hair goods including rollers, combs, brushes, clips, capes, etc.

Expenses: Activity fee—$15
Tools—$30
Tuition for students over 21—$40 per month

Course Title: COSMETOLOGY

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-3671

Admission Dates: First Tuesday after Labor Day or beginning of any quarter

Nature of Work: Cosmetologists are concerned with the care and beautification of the hair, skin and scalp. Cosmetology includes shaping, styling, permanent waving and coloring of hair; scalp and hair conditioning treatments, facials, make-up and manicuring. Experienced cosmetologists may specialize in a certain area such as styling, hair-coloring or make-up.

Job Opportunities: Cosmetologists are needed in small shops and salons. Some work for manufacturers of cosmetics and hair products. Many own their own shops or salons.

Course Description: Curriculum followed is prescribed by the Minnesota State Board of Hairdressing and Beauty Culture and prepares students for licensing by the Board.

Length of Course: 1500 hours (approximately 12 months)
Upon completion of the 1500 hours, students take an examination administered by the State Board of Hairdressing and Beauty Culture and are granted licenses.

Helpful High School Courses:

- Good general high school record and attendance
- Business subjects, particularly if interested in owning a shop or salon.

Personal Qualities:

- Minimum score as recommended by the General Aptitude Test Battery given at the school
- Pleasant personality and desire to work with others
- Good physical health and stamina

Personal Equipment Needed: Hairdressing supplies and books—$25-$35 (approximately)

Expenses: Tuition for students over 21—$30 per month plus above costs

Course Title: CREDIT MANAGEMENT

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Credit work includes credit investigation, decision-making in setting financial and loan limits, approving transactions involving credit, selling credit services and credit collections.

Job Opportunities: Finance institutions, credit and loan agencies, banks, insurance companies, retail merchandisers, departments of the state and Federal government need workers trained in credit management. There are excellent opportunities for advancement with experience.

Course Description:

- *Credit principles and procedures
- *Accounting
- *Business law
- *Economics
- *Financial institutions
- *Management principles
- *Communications
- *Mathematics
- *Human relations
- *Office procedures and administration
- *Business organization
- *Supervision
- *Data processing

Length of Course: 18 months

Helpful High School Courses:

- Mathematics
- Business subjects
- English

Personal Qualities:

- Good grooming and personality
- Ability to get along well with others
- Aptitude for working with figures
- Interest in business

Personal Equipment Needed: None

Expenses: Workbooks and supplies—$30 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: CUSTODIAL SERVICE WORKER

Name of School:	Address:	Telephone:
Faribault Area Vocational-Technical School	1225 S.W. 3rd St. Faribault, Minn. 55021	(507) 334-3965

Admission Dates: September

Nature of Work: Workers perform under supervision the many custodial duties required in both large and small industrial establishments. Operating and maintaining, cleaning equipment such as scrubbers, polishers, vacuums, window cleaners and others used in cleanliness and sanitation at his place of employment is part of the custodial worker's job.

Job Opportunities: 1968 Department of Employment figures of Nov. 1968 indicates 790 unfilled positions for this type of service in the Twin City area. May work for cleaning services, in office and public buildings, homes, stores and other public places. There are good opportunities for self-employment.

Course Description:

*Operation and care of equipment
*Cleaning and preparing rooms
*Cleaning and preparing corridors and stairs
*Cleaning and readying lavatories & bathrooms
*Developing physical skills; washing, waxing and polishing
*Washing windows
*Arithmetic
*Spelling
*Personal grooming
*Language skills
*How to handle money
*How to apply for and hold a job

Length of Course: 6 months

Helpful High School Courses:
No special requirements

Personal Qualities:
Willing to work with hands
Physical strength sufficient for lifting, moving and climbing

Personal Equipment Needed: Uniforms and shoes

Expenses: Personal supplies—$15 (estimated)
Tuition for students over 21—$40 per 4-week period for Minnesota residents
$55 per month for non-residents

Course Title: DATA PROCESSING AND COMPUTER OPERATOR

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: The data processing and tabulating technician operates machines which process information and records. Technicians are responsible for key punching which puts the necessary data on cards, operating machines which complete the process, wiring and installing control panels or inserting pre-wired panels into sorting or printing machines, positioning cards and tending the machine for proper operation. Technicians sort, reproduce, verify, interpret and collate the punched record cards.

Job Opportunities: Graduates of this course may be employed as key punch operators, accounting machine technicians as well as operators of sorters, collators, reproducers, interpreters and verifiers. Almost every business uses some form of electronic data processing; among probable employers are banks, industries, retail and wholesale merchandisers, insurance companies, health, welfare and service agencies and Federal, state or local government offices.

Course Description:

*Key punching
*Sorting
*Collating
*Reproducing
*Interpreting
*Verifying
*Accounting machines
*Input-Output theory on accounting machines
*Board wiring on the accounting machine

This course provides a complete background in unit records using data processing systems. Actual experience plus theory in practice are stressed.

Length of Course: 9 months

Helpful High School Courses:

Mathematics
Office subjects

Personal Qualities:

Above average ability in mathematics
High school diploma or equivalent
Satisfactory score on entrance examination given at the area school

Personal Equipment Needed: None

Expenses: Acceptance Fee—$25
Book fee—$10
Tuition for students over 21—$40 per month plus acceptance and book fees

Course Title: DATA PROCESSING, TAB TECHNICIAN

Name of School:	Address:	Telephone:
Austin Area Vocational-Technical School	Austin, Minn. 55912	(507) 433-7301

Admission Dates: Fall term

Nature of Work: Data processing and tabulating technicians operate machines which process information and records. Technicians are responsible for key punching which records necessary data on cards, operating machines which complete the process, wiring and installing control panels or inserting pre-wired panels into sorting, printing, interpreting, verifying or collating machines.

Job Opportunities: Graduates of this course may be employed as key punch operators, accounting machine technicians as well as operators of sorters, collators, reproducers, interpreters and verifiers. Almost every business uses some form of electronic data processing; among possible employers are banks, industries, retail and wholesale merchandisers, insurance companies, health, welfare and service agencies and the Federal, state and local governments.

Course Description:

*Wiring tabulating machine control panels

*Machine operation including: keypunch verifier, collator, sorter, interpreter and accounting machines.

*Course provides complete background in data processing from tabulating cards to printing records.

Length of Course: 11 months

Helpful High School Courses:

Good mathematical and numerical ability

Average or better finger dexterity

Mathematics

Business subjects

Personal Qualities:

Satisfactory score on Area School Testing Program

Satisfactory score on special data processing aptitude test

Ability to concentrate on details

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$32 per month

Course Title: DATA PROCESSING TECHNICIAN

Name of School:	Address:	Telephone:
Bemidji Area Vocational-Technical School	Bemidji, Minn. 56601	(218) 751-4137

Admission Dates: Day after Labor Day (Individual appraisal may permit entrance permit)

Nature of Work: The data processing and tabulating technician's work consists of operating machines which process information and records. Technicians are responsible for key punching which puts necessary data on cards, operating machines which complete the process, wiring and installing control panels or inserting pre-wired panels into sorting, printing, interpreting, verifying or collating machines.

Job Opportunities: Graduates of this course may work as key punch operators, accounting machine technicians as well as operators of sorters, collators, reproducers, interpreters and verifiers. Almost every business uses some form of electronic data processing; possible employers include banks, industries, retail and wholesale merchandisers, insurance companies, health, welfare and service agencies with the Federal, state or local governments.

Course Description:

*Unit record equipment from key punch to printing machines	*Letter-writing
*Board wiring	*Business psychology and grooming
*Practice in machine operating	*Typing
*Business mathematics	*Business law
*Business communications	*Office policies and procedures
*Accounting	*Computers
*Tabulating machines and wiring	*Computer mathematics

Length of Course: 9 months

Helpful High School Courses:

Algebra	Business courses
Advanced mathematics	

Personal Qualities:

Mathematical ability	Analytic mind
Aptitude for finances	Ability to concentrate on details

Personal Equipment Needed: Books (approximate cost—$25 per quarter)

Expenses: Enrollment fee—$10
Tuition for students over 21—$50 per four-week period

Course Title: DATA PROCESSING AND COMPUTER PROGRAMMING

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Computer programmers and data processors work with all phases of machine or electronic record keeping. Usually this involves wiring or installing a pre-wired panel which instructs the machine, operating the machine while the work is done and translating the finished work into words and numbers that must be collated or annotated so it can be used. The operator must know all the processes from keypunching (putting data on punched cards) to sorting, to processing and must understand computer "language."

Job Opportunities: Almost every business now uses some form of machine or electronic data processing as part of its record keeping systems. Insurance companies, banks, health, welfare and government service agencies, retail and wholesale merchandisers, factories and manufacturing industries all use data processing equipment. Small firms often rent time on a computer from a service center. As these become more popular, they will also offer increased opportunities.

Course Description:

*Data Processing	*Communications
*Programming	*Mathematics
*Unit record keeping	*Business law
*Machine language	*Symbolic language
*Introduction to systems	*Human relations
*Data processing applications	*Statistics and economics
*FORTRAN, COBOL machines	

Length of Course: 18 months

Helpful High School Courses:

Business and office subjects	Mathematics
English	

Personal Qualities:

Average or above intelligence	Ability to work well with others
Good health	Mathematical aptitude

Personal Equipment Needed: None

Expenses: Workbooks, supplies—$50 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: DATA PROCESSING, TAB TECHNICIAN

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	15th St. and 11th Ave. Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: September

Nature of Work: Data processing and tabulating technicians operate machines which process information and records. Technicians are responsible for key punching (recording data) cards and operating machines which complete the desired procedures. Work may include wiring and installing control panels or inserting pre-wired panels into sorting, printing, interpreting, verifying or collating machines.

Job Opportunities: Graduates of this course may be employed as key punch operators, accounting machine technicians as well as operators of sorters, collators, reproducers, interpreters and verifiers. Almost every business uses some form of electronic data processing; among possible employers are banks, industries, retail and wholesale merchandisers, insurance companies, health, welfare and service agencies and the Federal, state and local governments.

Course Description:

*IBM unit records installation gives students complete familiarity with data processing as used in a typical office situation.
*Office procedures
*Office management
*Accounting
*Mathematics
*Communications

Length of Course: 10 months

Helpful High School Courses:

Mathematics
Business subjects

Personal Qualities:

Mathematical ability
Analytic mind
Ability to concentrate on details
High school diploma or equivalent

Personal Equipment Needed: Workbooks

Expenses: Registration fee—$20
Tuition for students over 21—$40 per month

Course Title: DATA PROCESSING, TAB TECHNICIAN

Name of School:	Address:	Telephone:
Moorhead Area Vocational-Technical School	Box 100 Moorhead, Minn. 56561	(218) 236-6277

Admission Dates: September

Nature of Work: Data processing and tabulating technicians operate machines which process information from forms, reports, billing, inventories and accounting records or other data. Technicians are responsible for key punching (putting data on cards) operating various machines which complete the desired procedures. Work may include wiring and installing control panels or inserting pre-wired panels into sorting, printing, interpreting, verifying or collating machines.

Job Opportunities: Graduates of this course may be employed as key punch operators, accounting machine technicians and may operate sorters, collators, reproducers, interpreters and verifiers. Almost every business uses some form of electronic data processing; specific entry level jobs depend on the students individual competence. Possible employers are banks, insurance companies, industries, wholesale and retail merchandisers, utilities, health, welfare and service agencies and departments of the Federal, state and local governments.

Course Description:

*Basic wiring principles
*Actual board wiring on machines including reproducer, collator and electronic accounting machine
*Keypunch
*Accounting principles
*Filing
*Verifying
*Sorting
*Systems design and application
*Human relations
*Communications
*Business machines

Length of Course: 11 months

Helpful High School Courses:

Mathematics (Algebra required)
English
Business subjects

Personal Qualities:

Mathematical ability and interest in working with numbers
Manual dexterity
Habits of neatness and accuracy in work
Satisfactory score on aptitude tests given at the school

Personal Equipment Needed: Books—$50 (approximate cost)

Expenses: Incidental fee—$15
Tuition for students over 21 or non-residents—$40 per month plus incidental fee

Course Title: DATA PROCESSING, TAB TECHNICIAN

Name of School:	Address:	Telephone:
Wadena Area Vocational-Technical School	405 S.W. Colfax Ave. Wadena, Minn. 56482	(218) 631-3342

Admission Dates: Fall only

Nature of Work: Data processing and tabulating technicians operate machines which process information from forms, reports, billings, inventories and accounting records or other data. Technicians are responsible for key punching (putting data on cards) and operating various machines which comprise the records system. Work may include wiring and installing control panels or inserting pre-wired panels into sorting, printing verifying, interpreting and collating machines.

Job Opportunities: Graduates of this course may be employed as key punch operators, accounting machine technicians and may operate sorters, collators, reproducers, interpreters or verifying machines. Almost every business uses some form of electronic data processing. Entry level jobs depend on the individuals competence. Possible employers are banks, insurance companies, industries, wholesale and retail merchandisers, utilities, health and welfare agencies and departments of Federal, local or state government.

Course Description:

- *Business machines including keypunch, card sorter, collator, reproducer and the electric accounting machine.
- *Control panel wiring
- *Diagramming for IBM machines
- *Unit records systems applications and analysis
- *Complete basic background in business

Length of Course: 10½ months

Helpful High School Courses:

Business subjects (typing, bookkeeping, accounting, mathematics)

Personal Qualities:

- Finger dexterity
- Eye-hand coordination
- Good vision
- Mathematical ability
- Mechanical aptitude
- High school diploma or equivalent

Personal Equipment Needed:

Expenses: Application fee—$10
Supplies and workbooks—$30 (approximate cost per year)
Tuition for students over 21—$40 per month

Course Title: DATA PROCESSING, TAB TECHNICIAN

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: September

Nature of Work: Data processing and tab technicians operate machines which process information from forms, reports, billings, inventories and accounting or other records. Technicians are responsible for key punching (putting information on cards) and for operating the various machines which complete the records systems. Work may include wiring and installing control panels or installing pre-wired panels into sorting, printing, verifying, interpreting and collating machines.

Job Opportunities: Graduates of this course may be employed as key-punch operators, accounting machine technicians and may operate the other data processing machines as well. Almost every business uses some form of electronic data processing; entry jobs depend on individual competence. Possible employers include banks, insurance companies, industries, wholesale and retail merchandisers, utilities, health, welfare and service agencies and government, Federal, state or local departments.

Course Description:

*Wiring and diagramming for machines
*Systems analysis
*Accounting
*Business mathematics
*Communications
*Introduction to business

Lecture-laboratory situation is provided to give students the maximum opportunity to investigate Unit Records equipment and its application in business.

Length of Course: 10½ months

Helpful High School Courses:

Business subjects
Mathematics
English

Personal Qualities:

C average or better from high school
Satisfactory score on IBM Punch Card Machine Operator Aptitude test given at the school.
Manual dexterity

Personal Equipment Needed: None

Expenses: Supply fee—$5
Tuition for students over 21—$40 per month

Course Title: DENTAL ASSISTING

Name of School:	Address:	Telephone:
Brainerd Area Vocational-Technical School	Brainerd, Minn. 56401	(218) 829-2814

Admission Dates: September

Nature of Work: By maintaining a friendly and efficient atmosphere, good office management and accurate record keeping, the dental assistant helps establish the practice. She aids the dentist in taking health histories, keeps instruments and materials ready, develops x-rays, and may perform basic laboratory operations.

Job Opportunities: Dental offices and clinics provide good opportunities for graduates, especially those who take certification exams.

Course Description:

*Dental terminology
*Dental office management
*Dental anatomy
*Radiology procedures
*Oral hygiene
*Dental laboratory procedures
*Bookkeeping
*Typing
*Human relations
*Dental pathology
*Pharmacology
*Nutrition
*On-the-job training

Length of Course: 9 months

Helpful High School Courses:

Science
Business subjects, including typing

Personal Qualities:

Good physical and emotional health
Good moral character
Must like people and be able to communicate with others

Personal Equipment Needed: Books and uniforms

Expenses: Course fee—$80
Tuition for students over 21—$40 per month

Course Title: DENTAL ASSISTING

Name of School:	Address:	Telephone:
Canby Area Vocational-Technical School	Hwy. 68 West Canby, Minn. 56220	(507) 223-7252

Admission Dates: September

Nature of Work: Dental assistants perform chairside work in the dental office. An assistant may perform routine clerical tasks, make appointments, greet patients, take care of records, do some laboratory work, clean and care for instruments and relieve the dentist of other routine tasks.

Job Opportunities: Dental assistants are in demand in private practice, in clinics, in government public health clinics and other practice. Many more are in demand than are now currently completing training.

Course Description:

*Chair side assisting
*Laboratory work
*Psychology
*English
*Business subjects

This course provides a complete background for those interested in dental assisting.

Length of Course: 11 months

Helpful High School Courses:

Science
Basic mathematics
Business subjects
English
Health
Home economics

Personal Qualities:

Friendliness and tact
Reliability
Aptitude for health occupation
Above average personal appearance

Personal Equipment Needed: Reference books and uniforms

Expenses: Enrollment fee—$10 upon acceptance
Reference books—$10-$25
Housing per day—$1.50
Meals per day—$2-$4
Tuition for students over 21—$40 per month plus above expenses
$60 per month if out-of-state residents

Course Title: DENTAL ASSISTING

Name of School:	Address:	Telephone:
Hibbing Area Technical Institute	505 E. 16th St. Hibbing, Minn. 55746	(218) 262-2256

Admission Dates: Late August or early September

Nature of Work: By maintaining a friendly and efficient atmosphere, good office management and accurate record keeping the dental assistant helps establish the practice. She aids the dentist in taking health histories, keeps instruments and materials ready, develops X-rays, and may perform basic laboratory operations.

Job Opportunities: Dental offices and clinics provide good opportunities for the graduates, especially those who take certification examinations.

Course Description:

- *Office management
- *Chairside assisting
- *Communications
- *Dental laboratory procedures
- *Dental science
- *Dental anatomy physiology
- *Dental X-ray
- *Dental specialty fields
- *Clinical practice

Length of Course: 9 months

Helpful High School Courses:

- Typing (required)
- Bookkeeping and office procedures
- Average or better high school record

Personal Qualities:

- Good physical and dental health
- Physical and emotional stamina
- Must like people and be able to communicate with others
- Good moral character

Personal Equipment Needed: Students provide white uniforms, hose and shoes.

Expenses: Supply and book fee—$40
Tuition for students over 21—$30 per month for Minnesota residents
$100 per month for non-residents

Course Title: DESIGN TECHNOLOGY

Name of School:	Address:	Telephone
St. Paul Area Technical-Vocational Institute	235 Marshall St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Design technicians aid in research, design, production problems and sales. The technician applies mathematics in solving problems of force and strength, performs experiments, records data and prepares layouts. When a particular device is ready for production, the technician assists the draftsman in final details and the production shop in manufacturing problems.

Job Opportunities: Designing and drafting precede the manufacture or construction of every type of product. Manufacturing industries employing design technicians include aeronautical, air-conditioning, refrigeration, electrical, mechanical and metal working firms. Engineering firms, federal, state, and local government agencies, need technicians. Responsible jobs are also available in research, design, production and sales with good opportunities for advancement.

Course Description:

Laboratory Shop Courses
- *Mathematics review
- *Fundamentals of drafting
- *Machine elements
- *Tool design
- *Pictorial drawings
- *Theory application
- *Strength of material
- *Dynamics and heat engines
- *Electrical mathematics
- *Machine shop practice

Related subjects
- *Mathematics
- *Communications
- *Science
- *Industrial relations

Length of Course: 20 months

Helpful High School Courses:
- Mathematics
- Physics
- Mechanical drawing
- Metal
- Electric shop

Personal Qualities:
- Aptitude for visualizing objects in two and three dimensions.
- Patience for detail, mechanical, graphic and mechanical computation.
- Good eyesight
- Stamina to sit or stand at the drawing board for long periods.

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: DRAFTING, ARCHITECTURAL

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 56303	(612) 427-1880

Admission Dates: September

Nature of Work: The architectural draftsman prepares clear, complete and accurate working plans and detail drawings from rough sketches or specifications for construction purposes. He must use manual skills and such instruments as triangles, T-square and other drafting tools to do exact and accurate work. He may trace drawings in ink and draw charts for presentation of statistical data. He may make engineering computations involving the strength of materials, beams and trusses. Estimating quantities needed for a project and the possible costs, sketching the proposed structure and planning details according to materials may also be part of his duties.

Job Opportunities: Architectural draftsmen work for design, construction, sales, estimating and management departments of construction industries or for architects.

Course Description:

*Drafting
*Specification writing
*Code study
*Blueprint reading
*Building design
*Architectural techniques
*Construction estimating
*Construction materials

The second phase of this course includes designing, building and model and detailing a complete architectural project such as a home or small commercial building.

Length of Course: 18 months

Helpful High School Courses:

Mathematics, including algebra and geometry
Physics
Industrial arts

Personal Qualities:

Good eyesight, coordination and eye-hand movement
Ability to visualize
Neatness and accuracy in work habits

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: DRAFTING, ARCHITECTURAL

Name of School:	Address:	Telephone:
Canby Area Vocation-Technical School	Hwy. 68 Canby, Minn. 56220	(507) 223-7252

Admission Dates: September

Nature of Work: The architectural draftsman prepares clear, complete and accurate working plans and detail drawing from rough sketches or specifications. He must use manual skill as well as instruments including triangles, T-square and other drafting tools. He may trace drawings in ink and draw charts presenting statistical data. He may make engineering computations involving strength of materials, beams and trusses. Estimating quantities of materials needed and costs as well as free-hand sketching the proposed structure and planning details according to materials may also be part of the draftsman's duties.

Job Opportunities: Architectural draftsmen work for design, construction, sales, estimating and managerial departments of construction industries or for architects. Some are employed by building materials firms.

Course Description:

- *Drafting, including basic engineering drawing, projections and auxiliary views
- *Simple wood construction to masonry, structural steel and reinforced concrete
- *Orientation and adaptation to millwork and cabinet detailing
- *Mathematics
- *Strength of materials
- *Structural design
- *Communications
- *Personal relations

Length of Course: 18 months

Helpful High School Courses:

- Preparatory drawing or engineering drafting
- Mathematics, including Algebra, geometry
- Sciences, including physics

Personal Qualities:

- Good eyesight, eye-hand coordination
- Ability to visualize
- Neatness and accuracy in work habits

Personal Equipment Needed: Drawing instruments, slide rule and reference materials

Expenses: Books—$10 or less per quarter
Tuition for student over 21—$40 per month (Minnesota resident)
$60 per month (out-of-state resident)

Course Title: DRAFTING, ARCHITECTURAL

Name of School:	Address:	Telephone:
Detroit Lakes Area Vocational-Technical School	Detroit Lakes, Minn. 56501	(218) 847-9261

Admission Dates: September

Nature of Work: The architectural draftsman prepares drawings from rough sketches and specifications. He uses manual skills as well as drafting instruments to make the working plans for construction projects as well as detail construction according to materials needed. Tracing drawings in ink, drawing charts presenting statistical data, making engineering computations involving strength of materials, beams and trusses, estimating quantities and costs of materials and freehand sketching of the proposed structure may also be part of his job.

Job Opportunities: Entry level jobs include detailer, draftsman and estimator or junior draftsman for architects, lumber yards, engineers, contractors, and manufacturing suppliers.

Course Description:

*Architectural symbols
*Technical vocabulary
*Methods of building from basement to roof
*Stress, force vector, sheat and moment, bending theory and load calculations
*Completion of entire sets of plans for residential and commercial construction.

Length of Course: 20 months

Helpful High School Courses:

Drawing or drafting
Mathematics
Sciences, including physics

Personal Qualities:

Good eyesight, and eye-hand coordination
Ability to visualize
Neatness and accuracy in work habits

Personal Equipment Needed: Books
Tools
Uniforms

Expenses: Tuition for students over 21—$40 per month

Course Title: DRAFTING, ARCHITECTURAL

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Graduates of Architectural Drafting I work for other draftsmen; they perform routine functions under supervision, trace drawings and make charts. Some check specifications and computation. Students are encouraged to take Architectural Drafting II for a higher level of employment and greater opportunity.

Job Opportunities: Junior draftsmen work for architects, engineers, drafting services, in industry, for construction companies and building contractors.

Course Description:

*Drafting techniques
*Orthographic presentation
*Descriptive geometry
*Architectural presentation
*Working drawings
*Mathematics through trigonometry
*Building construction
*Building materials
*Estimating

Length of Course: 18 months

Helpful High School Courses:

Drawing or drafting
Shop courses
Sciences, including physics
Mathematics

Personal Qualities:

Interest in building and architecture
Ability to visualize in three dimensions
Good sense of spatial relations

Personal Equipment Needed: Furnished by the school

Expenses: Tuition for students over 21—$802.50 per year

Course Title: DRAFTING, ARCHITECTURAL

Name of School:	Address:	Telephone:
Southwest Minn. Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: August and April

Nature of Work: Architectural draftsmen develop drawings used to guide workmen in the construction of every type of building from home to skyscrapers. To prepare these complete and accurate detailed drawings, the draftsman uses drafting instruments such as triangles, T-square and other tools; he may also trace drawings in ink and draw charts presenting statistical data about proposed structures. Making engineering computations involving strength of material, beams and trusses as well as planning details according to materials are also part of this job.

Job Opportunities: Architectural draftsmen work for architects, engineering and construction firms, in industrial design and in design, construction, sales, estimating and managerial departments of other construction-related industries.

Course Description:

*Drafting tools, equipment and materials
*Lettering
*Structural systems — wood, steel and concrete
*Floor plans, elevations and building details
*Designing and drafting
*Trade terminology

Length of Course: 18 months

Helpful High School Courses:

Mathematics, including algebra, geometry and advanced algebra
Sciences, including physics
Drawing and industrial drafting

Personal Qualities:

Above average general ability
Aptitude for mathematics
Neat and careful work habits
Ability to visualize in three dimensions

Personal Equipment Needed: None

Expenses: Tuition for out-of-state residents—$30 per month
Tuition for students over 21—$30 per month

Course Title: DRAFTING, ARCHITECTURAL

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Beginning of Each Quarter

Nature of Work: Some of the duties that a draftsman may perform are: (1) making simple changes on existing drawings, (2) designing new products or structures, (3) making and interpreting plans for entire structures and for each of its component parts, (4) using drawings to do "take-off" work in order to estimate costs, (5) checking drawings of others for errors and changes, (6) calculating strength of structural materials.

Job Opportunities: Employment opportunities in drafting are very good and are expected to increase. Graduates from the course are employed by architects and mechanical or structural engineers. They are also employed by contractors as estimators and by highway departments.

Course Description:

*Basic drawing principles — lines, lettering, dimensioning
*Drawing buildings
*Including sheet metal, piping, electrical requirements in drawing
*Topographic and perspective drawing
*Building scale model of house frame
*Cost estimating
*Structural design
*Technical mathematics
*Work on specifications

Length of Course: 21 months

Helpful High School Courses:

Communications skills
Mathematics (geometry, algebra, trigonometry)
Science
Drawing

Personal Qualities:

Like to draw
Ability to visualize objects
Curious about construction and operation of things
Mechanical ability
Neat and systematic
Willing to pay attention to detail

Personal Equipment Needed: None

Expenses: Drafting instruments, textbooks and other equipment—$30-$50 for course
Tuition for students over 21—$32 per month plus above expenses

Course Title: DRAFTING, ARCHITECTURAL

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. S. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Architectural draftsmen make drawings to show the appearance of a proposed structure or its particular details; do research on materials, equipment or codes and regulations; figure material costs and strengths of materials; do sketches noting the necessary information to be used in preparing bids; surveying and estimating structures to be remodeled; compute stresses in members of a steel frame or other structure.

Job Opportunities: Graduate draftsmen work for contractors, building materials distributors, sash and door plans, manufacturers of building products, retail stores, industrial plants or architectural firms.

Course Description:

First Year Semester I

*Introduction to architectural drawing
*Descriptive geometry
*Materials and construction methods as applied to houses
*Blueprint reading
*Nomenclature
*Freehand drawing (orthographic)

Second Year Semester II

*Materials and construction methods as applied to commercial structures
*Use of building codes
*Commercial design and details
*Pictorial drawings (perspective, isometric, rendering)
*House planning including framing details
*Architectural history
*Mechanical equipment
*Freehand drawing (pictorial and shading)
*Estimating building costs
*Strength of material (wood, concrete, steel)
*Specifications and contracts
*Steel detailing

Summer Session—Test laboratory and building techniques

Length of Course: 21 consecutive months

Helpful High School Courses:

Algebra, geometry, advanced algebra, trigonometry
Sciences including physics
Drawing or industrial arts drafting

Personal Qualities:

Average or above intelligence
Mathematical and scientific ability
Good reading comprehension

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for student over 21—$70 per month

Course Title: DRAFTING, ARCHITECTURAL

Name of School:	Address:	Telephone:
Thief River Falls Area Vocational-Technical School	Thief River Falls, Minn. 56701	(218) 681-5424

Admission Dates: First Monday of each month except July

Nature of Work: Architectural draftsmen make drawings to show the appearance of a proposed structure and its particular details; do research on materials, equipment or codes and regulations; figure material costs and strengths of materials; sketch details to show information necessary to preparing bids; survey and estimate structures to be remodeled; compute stresses in members of a steel frame or other structure.

Job Opportunities: Architectural draftsmen work for architects, manufacturers and distributors of building supplies, for architectural service firms, consulting engineers and for Federal, state, local governments and in the design, sales, estimating and managerial departments of construction industries.

Course Description:

*Residential drafting
Lettering, detailing all parts of houses, including footings, wall sections, stairs, framing, doors and windows.

Detailing including all parts of buildings from footing to wall sections, stairs, framing, doors, and windows as applied to commercial structures.

*Commercial drafting

Length of Course: 18 months

Helpful High School Courses:

Algebra, geometry, trigonometry
Physics
Industrial arts drafting

Personal Qualities:

Average or above general ability
Neatness and accuracy in work
habits
Ability to visualize

Personal Equipment Needed: Drafting instruments—list furnished on request. These may be purchased at the school or wherever student wishes.

Expenses: Registration fee—$10
Course fee—$60
Tuition for students over 21—$45 per month plus course fee

Course Title: DRAFTING AND DESIGN, ARCHITECTURAL

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September (second year continuation of Architectural Drafting I)

Nature of Work: The architectural draftsman prepares clear, complete and accurate working plans and detail drawings from rough sketches or specifications. He must use manual skill as well as instruments including triangles, T-square, and other drafting tools. He may trace drawings in ink and draw charts presenting statistical data. He may make engineering computations involving strength of materials, beams and trusses. Estimating quantities of materials needed and costs as well as free-hand sketching of the proposed construction and planning details according to materials may also be part of this job.

Job Opportunities: Architectural draftsmen work for design, construction, sales, estimating and managerial departments of construction industries, for architects, for building materials firms and lumber yards.

Course Description:

*Architectural drawing—working drawings, preliminary drawing and sketching.
*Estimating
*Heat loss
*Building products
*Building technology
*Reference materials
*Job orientation
*Mathematics including algebra, geometry, trigonometry and strength of materials.

Length of Course: 18 months

Helpful High School Courses: This is a continuation of Architectural Drafting which must be satisfactorily completed in order to enroll in Drafting II

Personal Qualities:

Good eyesight and eye-hand co-ordination
Ability to visualize in three dimensions
Neatness and accuracy in work habits

Personal Equipment Needed: Furnished by the school

Expenses: Tuition for students over 21—$802.50 per year

Course Title: DRAFTING, CONSTRUCTION

Name of School:	Address:	Telephone:
St. Paul Area Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Draftsmen in construction work detail structures, including highways, rivers, harbor improvements and other civil engineering construction projects. They may gather information, plot charts and maps showing topography, profiles and cross sections, build scale models and coordinate the installation of equipment. Some construction draftsmen specialize in structures in civil engineering while others may deal with structural parts used in buildings or auxiliary equipment.

Job Opportunities: Construction draftsmen work for companies specializing in the manufacture of structural parts for building, manufacture of equipment used in construction and for the state, Federal or local government. Some employers might include city planning agencies, highway contractors, building contractors dealing with large scale structures or improvements.

Course Description:

- *Drafting techniques and conventions
- *Preparation of working drawings
- *Principles of planning
- *Shop drawing techniques: cabinet, metal and concrete
- *Industrial relations
- *Strength of materials: shear and moment, truss design
- *Estimating
- *Mathematics
- *Science
- *Communications

Length of Course: 18 months

Helpful High School Courses:

- Mathematics — four years recommended.
- Physics
- Architectural or mechanical drawing
- Industrial arts

Personal Qualities:

- Good eyesight and finer dexterity
- Ability to get along well with others
- Ability to communicate verbally and in writing
- Technical aptitude

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: DRAFTING AND DESIGN TECHNOLOGY

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September 1st

Nature of Work: A technician with drafting and design background will often assist engineers or designers with both project and tool design, the design and development of new products and the modernizing of present eqiupment. He will be required to apply mathematics in the solution of problems concerning strength, quality and cost of materials. He uses engineering references, standards and handbooks for computation. After all data is gathered and a design approved for production, he will prepare a representative working drawing complete with all necessary specifications and dimensions for production.

Job Opportunities: Draftsmen work in machinery, electrical equipment, fabricated metal products and transportation industries. Engineering, architectural, construction firms and public utilities also need draftsmen as do state and Federal government agencies.

Course Description:

First Year	Second Year
*Freehand sketching	*Tool design
*Industrial drafting	*Geometric dimensioning and tolerancing II
*Geometric dimension and tolerancing I	*Machine and product design
*Machine operations	*Related problems
*Technical mathematics	*Manufacturing processes II
*Manufacturing processes I	*Machinery's handbook II
*Slide rule	*Strength of materials
*Machinery's handbook I	*Technical writing and oral reports
*Basic electricity	*Materials and manufacturing
*Basic welding and fabrication	*Process lab

Length of Course: 18 months

Helpful High School Courses:

Mathematics	Science
Mechanical drawing	Shop classes

Personal Qualities: Ability to perform arithmetic operations quickly and accurately

Ability to think visually of geometric forms and to comprehend the two dimensional representation of three dimensional objects.

Personal Equipment Needed: The student will be expected to purchase a minimum set of drafting instruments.

Expenses: Books and supplies—First year $95, Second year—$45

Tuition for students over 21—$40 per month

Course Title: DRAFTING AND DESIGN TECHNOLOGY

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: September

Nature of Work: Draftsmen and design technicians work with engineers and designers to translate ideas, rough sketches, specification and calculations into the working plans used by skilled craftsmen in making a product.

Job Opportunities: Design and drafting precede the manufacture or construction of every type of product. Aeronautical, air conditioning, refrigeration, electrical, mechanical and metal working firms as well as agencies of Federal, state and local government, and engineering firms need technicians. Responsible jobs are available in research, design, production and sales with good opportunities for advancement.

Course Description:

Length of Course: 18 months

Helpful High School Courses:
Mathematics

Personal Qualities:
Mathematics (4 years)
Drafting (4 years or as much as possible)

Personal Equipment Needed:
Drafting instrument set
12" scale
Triangles

Expenses: Paper fees
Tuition for students over 21—$40 per month

Course Title: DRAFTING AND DESIGN TECHNOLOGY

Name of School:	Address:	Telephone:
Winona Area Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-3671

Admission Dates: First Tuesday after Labor Day or beginning of any quarter

Nature of Work: Draftsmen translate the ideas, rough sketches, specifications and calculations of engineers, architects and designers into working plans used in making a product. Calculating the strength, reliability and cost of materials, describing materials and processes in their drawings and solving technical problems may be part of this job. Some draftsmen specialize in a certain area such as detailing in mechanical, electrical, electronic, aeronautical, structural or architectural drafting.

Job Opportunities: Draftsmen usually begin employment as junior draftsmen working closely with senior or layout draftsmen. Some become design draftsmen, production draftsmen, cost estimators, sales technicians or engineering assistants. Architectural and design firms, private industry and some of the specialized fields such as electricity, electronics and aeronautics employ draftsmen.

Course Description:

*Technical drafting
*Technical report-writing
*Computation aids
*Industrial processes
*Materials

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Drawing
Industrial arts

Personal Qualities:

Ability to visualize objects in three dimensions
Free-hand sketching ability
Neatness and accuracy in work habits

Personal Equipment Needed: Some books, drawing tools, supplies (approximate cost—$25-$35)

Expenses: Tuition for students over 21--$30 per month

Course Title: DRAFTING, DETAIL

Name of School:	Address:	Telephone:
St. Paul Vocational-Technical Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: Beginning of Fall (September), Spring (March), Summer (June) quarters

Nature of Work: Detail draftsmen work under the supervision of a layout draftsman. They make minor corrections and prepare drawings for reproduction by tracing them on transparent cloth, paper or plastic film.

Job Opportunities: Entry-level jobs for detail draftsmen usually begin as tracers; they may work in mechanical, electrical, electronic, aeronautical, structural or architectural drafting. As they gain skill and experience they may advance to higher positions as checkers, detailers or supervisors.

Course Description:

*Principles of projection
*View arrangements
*Dimensioning
*Practice of machine parts used in mechanical drawing

Length of Course: 6 to 9 months (Depends on the ability of the student)

Helpful High School Courses:

Physics
Algebra
Geometry
Trigonometry

Personal Qualities:

Good eyesight
Neat, clean, thorough work habits
Ability to follow directions

Personal Equipment Needed: Drafting tools and textbooks

Expenses: Incidental fees—$60 approximately
Tuition for students over 21—$65 per month

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Course Title: DRAFTING, ENGINEERING

Name of School:	Address:	Telephone:
Faribault Area Vocational-Technical School	Faribault, Minn. 55021	(507) 334-3965

Admission Dates: September and as vacancies occur

Nature of Work: Draftsmen translate the ideas, rough sketches, specifications and calculations of engineers, architects and designers into the working plans used in making a product. They may calculate the strength reliability and cost of materials to be used on the job. Draftsmen may specialize in a certain type of work, machine design or electrical drafting, for example.

Job Opportunities: Draftsmen are needed by manufacturing firms, engineering companies, plastics, machinery, electrical equipment, fabricated metal products, and transportation equipment industries. Many are employed by construction companies, public utilities and state and local governments.

Course Description:

1st Year	2nd Year
*Engineering drafting	*Technical drafting
*Applied mathematics	*Machine design
*Technical report writing	*Electrical and electronic drafting
*Pattern development	*Metallurgy and manufacturing methods
*Sheet metal drafting	
*Welding procedures	*Structural drafting
*Technical drafting	*Production drafting and design
*Machine shop procedures	*Tool and die design
*Physics	*Production illustration
*Industrial relations	*Pipe drafting
*Hydraulics	
*Pneumatics	

Length of Course: 19 months

Helpful High School Courses:

Mathematics (Algebra and Plane Geometry recommended)	Sciences
	Drafting

Personal Qualities:

Interest in designing and creative activities	Understanding of mathematics, science, and drafting principles
Average academic ability	Mechanical and space relations aptitude

Personal Equipment Needed: Books, workbooks, slide rule, consumable materials—1st Year—about $25
2nd Year—about $10

Expenses: Enrollment fee—$5 plus above costs
Tuition for students over 21—Minn. residents—$40 for each 4 week period
Non-residents—$55 for each month

Course Title: DRAFTING, ENGINEERING

Name of School:	Address:	Telephone:
St. Paul Vocational-Technical School	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Draftsmen draw the detailed plans needed to give the exact dimensions and specifications for a particular project. They translate the ideas, rough sketches and calculations of engineers, architects and designers into working plans. To prepare drawings, draftsmen use compasses, protractors, triangles, dividers as well as machines which combine several functions. Many draftsmen specialize in mechanical, electrical, electronic, aeronautical, structural or architectural drafting.

Job Opportunities: Graduates of this course usually begin as junior draftsmen. They work with senior draftsmen and with design technicians, engineers. There are good opportunities for advancement to senior draftsmen in industrial firms, architecture, aeronautics and electronics firms and by the Navy, Army, Air Force and by state, local and Federal governments.

Course Description:

Laboratory Shop Courses
- *Mathematics review
- *Fundamentals of drafting
- *Machine elements
- *Tool design
- *Pictorial drawings
- *Theory applications
- *Strength of materials
- *Dynamics and heat engines
- *Electrical mathematics
- *Machine shop practice

Related Subjects
- *Mathematics
- *Communications
- *Science
- *Industrial relations

Length of Course: 18 months

Helpful High School Courses:
- Mathematics (four years)
- Physics
- Industrial arts, particularly metals and electricity
- Mechanical drawing

Personal Qualities:
- Aptitude in visualization of two and three dimensional objects
- Patience for details
- Mechanical comprehension

Personal Equipment Needed:

Expenses: Tuition for students over 21—$65 per month

Course Title: DRAFTING, INDUSTRIAL

Name of School:	Address:	Telephone:
Alexandria Area Technical School	Alexandria, Minn.	(218) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: Draftsmen draw the detailed plans needed to give the exact dimensions and specifications for a particular project, translating the ideas, rough sketches and calculations of engineers, architects and designers into working plans. To prepare drawings, draftsmen use compasses, protractors, dividers, and triangles as well as machines which combine several functions. Many draftsmen specialize in a certain area such as mechanical, electrical, electronic, aeronautical, structural and architectural drafting.

Job Opportunities: Draftsmen are employed by machinery, electrical equipment, fabricated metal products and transportation equipment industries; in engineering and architectural firms, construction companies and public utilities. Many work for the Army, Navy and Air Force and for Federal, state and local governments. Graduates of this course might expect to begin as junior draftsmen in any of these industries or firms.

Course Description:

*Industrial drafting
*Technical mathematics
*Industrial communications
*Industrial materials
*Metallurgy
*Mechanics
*Basic shop practices
*Industrial relations
*Machinery and equipment layout
*Production costs
*Quality control
*Plant layout

Length of Course: 18 months

Helpful High School Courses:

Mathematics through geometry (required)
Industrial arts metal shop
High school drawing

Personal Qualities:

Interest in mathematics and science
Ability to concentrate on details
Ability to work accurately for long periods of time

Personal Equipment Needed: Drawing kits are provided, but students should obtain their own kits before graduation. Safety glasses (furnished by student) are required for work in the machine shop.

Expenses: Acceptance Fee—$25
Book fee—$10
Tuition for students over 21—$40 per month plus above fees

Course Title: DRAFTING, INDUSTRIAL

Name of School:	Address:	Telephone:
Bemidji Area Vocational-Technical School	Bemidji, Minn. 56601	(218) 751-4137

Admission Dates: Day after Labor Day or through individual appraisal anytime.

Nature of Work: Draftsmen draw the detailed plans needed to give the exact dimensions and specifications for a particular project, translating the ideas, rough sketches and calculations of engineers, architects and designers into working plans. To prepare drawings, draftsmen use compasses, protractors, dividers and triangles as well as machines which combine several functions. Many draftsmen specialize in a certain area such as mechanical, electrical, electronic, aeronautical, structural and architectural drafting.

Job Opportunities: Draftsmen are employed by machinery, electrical equipment, fabricated metal products, transportation equipment industries; in engineering and architectural firms, construction companies and public utilities. Many work for the Army, Navy or Air Force and for Federal, state and local governments. Graduates of this course might begin as junior draftsmen in any of these industries or organizations.

Course Description:

*Industrial drafting	*Metallurgy
*Technical mathematics	*Shop practices
*Machine design	*Related subjects

Each area of study combines theory with practical application in problem solving.

Length of Course: 18 months

Helpful High School Courses:

Mathematics	Drawing
Sciences	Industrial arts

Personal Qualities:

Ability to draw and to visualize	Aptitude to problem solving
Neatness and accuracy in work	

Personal Equipment Needed: Books and supplies—$30
Tools—$30

Expenses: Enrollment fee—$10
Tuition for students over 21—$50 per four week period plus enrollment fee.

Course Title: DRAFTING, INDUSTRIAL

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Beginning of Each Quarter

Nature of Work: A draftsman is expected to interpret and to make drawings which are used for manufacturing purposes. He develops finished drawings from rough sketches and notes which he received from an engineer. He must do considerable research and consult references before this can be done. He is expected to handle effectively the drafting instruments, be capable of freehand drawing and be proficient in the art of freehand lettering. His work may range from simple drawing changes to designing new products.

Job Opportunities: Technical training in the area of industrial drafting offers the student unlimited opportunities in the field of manufacturing and engineering. The need for good draftsmen is rapidly increasing.

Course Description:

Instruction for this course will center around the general industrial drafting area; all phases of which the student may be called upon to use in future employment will be covered in this course such as:

*Lettering and sketching	*Piping drawing
*Geometric construction	*Electrical drawing
*Orthographic projection	*Welding drawing
*Dimensions and notes	*Screw threads and fasteners
*Sections and conventions	*Precision and limit dimensions
*Auxiliary views	*Working drawings
*Pictorial drawing	*Gear, cam and tool drawing
*Sheet metal drawing	*Patent drawing

Length of Course: 21 months

Helpful High School Courses:

Algebra	Geometry

Personal Qualities:

Average intelligence	High ability in spatial, numerical abstract and mechanical aptitudes

Personal Equipment Needed: None

Expenses: Incidental expenses—not more than $50 for the course
Tuition for students over 21—$32 per month

Course Title: DRAFTING, INDUSTRIAL

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn.	(612) 252-0101

Admission Dates: September

Nature of Work: Draftsmen draw the detailed plans needed to give the exact dimensions and specifications for a particular project, translating the ideas, rough sketches and calculations of engineers, architects and designers into working plans. To prepare drawings, draftsmen use compasses, protractors, dividers, and triangles as well as machines which combine several functions. Many specialize in certain areas such as mechanical, electrical, electronic, aeronautical, structural and architectural drafting.

Job Opportunities: This course prepares students as detail draftsmen with opportunities to advance in an engineering department to layout draftsman, lab technician, engineering aid or designer. Such draftsmen are employed in industrial fields, in architecture, aeronautics, and architectural firms, by the Army, Navy and Air Force and by state, local and Federal governments.

Course Description:

*Mechanical drafting
*Mathematics
*Machine design
*Metallurgy
*Manufacturing processes

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Sciences
Drawing
Industrial arts

Personal Qualities:

Interest in mathematics
Ability to draw and visualize
Neatness and accuracy in work
Aptitude for problem solving

Personal Equipment Needed: Books—$35 (first year), $20 (second year)
Tools—$60 (first year), $25 (second year)

Expenses: Service fee—$7
Tuition for students over 21—$40 per month

Course Title: DRAFTING I, INDUSTRIAL

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: September

Nature of Work: Draftsmen draw the detailed plans needed to give the exact dimensions and specifications for a particular project, translating the ideas, rough sketches and calculations of engineers, architects and designers into working plans.

Job Opportunities: Draftsmen are employed by machinery, electrical equipment, fabricated metal products and transportation equipment industries; in engineering and architectural firms, construction companies and public utilities. Many work for Army, Navy and Air Force and for Federal, state and local governments. Graduates of this course might expect to begin as junior draftsmen in any of these industries or firms.

Course Description:

*Principles of mechanical drafting
*Techniques in the use of instruments
*Industrial lettering
Orthographic projections
*Freehand machine sketching
*Conventional fasteners

This course prepares students with little or no drafting experience to go into the second year of the course, a complete background in Industrial Drafting.

Length of Course: 9 months

Helpful High School Courses:

Mathematics through algebra
Sciences
Industrial arts
Drawing

Personal Qualities:

Interest in mathematics
Ability to draw and visualize
Neatness and accuracy in work

Personal Equipment Needed: None

Expenses: Registration fee—$5
Tuition for students over 21—$60 per month
G.I. students—½ tuition

Course Title: DRAFTING II, INDUSTRIAL

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: September

Nature of Work: Draftsmen draw the detailed plans needed to give the exact dimensions and specifications for a particular project, translating the ideas, rough sketches and calculations of engineers, architects and designers into working plans. To prepare the drawings, draftsmen use compasses, protractors, triangles and dividers as well as machines which combine several functions. Many draftsmen specialize in a particular area such as mechanical, electrical or structural drafting.

Job Opportunities: This course prepares students as detail draftsmen with opportunities to advance in an engineering department. Industrial fields, metal fabricators, architecture, aeronautics and architectural firms, the Army, Navy and Air Force and the state and Federal governments employ industrial draftsmen.

Course Description:

*Auxiliary views
*Oblique and isometric drawings
*Sectional tolerances and limits
*Machine fits
*Intersections
*Developments to revolutions
*Detail drawings
*Complete assembly and detail drawings of machines and parts are made in the drafting room.

This course follows Industrial Drafting I. It provides the complete background in theory and practical experience to qualify as a junior draftsman in industry.

Length of Course: 9 months

Helpful High School Courses:

Mathematics
Science
Industrial arts
Drawing

Personal Qualities:

Interest in mathematics
Ability to draw and visualize
Neatness and accuracy in work

Students must have successfully completed Industrial Drafting I.

Personal Equipment Needed: None

Expenses: Registration fee—$5
Tuition for students over 21—$60 per month
G.I. students—½ tuition

Course Title: DRAFTING, MACHINE

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: The machine draftsman makes drawings including scaled working drawings, on tracing paper. He works from other drawings, sketches, assembly drawings from shop drawings; he may make pictorial drawings for catalogs, or exploded view drawings. He may make electrical wiring diagrams or schematic drawings which require knowledge of electronics. Making minor design changes in a manufactured product, altering shop drawings accordingly, and designing tools, jibs, fixtures used in a machine shop or assembly line could be part of his work. Hydraulics and structural detailing are other fields where machine draftsmen are working.

Job Opportunities: Graduates of this course are working as junior draftsmen, senior draftsmen, lead men in drafting rooms, structural draftsmen, sheet mteal draftsmen, electrical design draftsmen, jig and fixture draftsmen, sales engineer or engineering technicians. Many work closely with one or more graduate engineers. Every industry needs skilled draftsmen.

Course Description:

Semester I
*Fundamentals
*Basic drawing processes
*Dimensions and notes
*Screw threads and fasteners
*Assemblies

Semester II
*Redesign of assemblies and parts
*Gears and cams
*Electronic drawings
*Structural drawings
*Welding drawings
*Pictorial drawings
*Inking exercises

Semester III
*Jig and fixture design
*Die design
*General review

Length of Course: 18 months

Helpful High School Courses:

Industrial arts
Solid geometry
Advanced algebra
Physics

Personal Qualities:

Average or better learning ability
Inventiveness and creativity
Interest in designing things and problem solving
Mathematical aptitude

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: DRAFTING, MECHANICAL

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	15th St. and 11th Ave. So. Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: September

Nature of Work: Mechanical draftsmen are draftsmen who have specialized in this field; they translate the rough sketches or layout or written specifications of the engineer or designer into a representative drawing showing the complete details and specifications for production. Draftsmen use drawing instruments and drafting machines to complete their drawings and use engineering tables and handbooks to assist in solving technical problems.

Job Opportunities: Mechanical draftsmen are needed in manufacturing firms, especially electrical equipment, machinery, fabricated metal products and transportation equipment. Many are employed by engineering and design firms, construction companies and public utilities; some work for state and Federal highway departments and for the Army, Navy and Air Force.

Course Description:

*Mechanical drafting	*Mathematics
*Machine design	*Manufacturing processes
*Tool design	*Basic electricity
*Design problems	*Metallurgy

Length of Course: 9 months

Helpful High School Courses:

Mathematics	Industrial arts
Mechanical drawing or drafting	

Personal Qualities:

Ability to visualize in three dimensions	Ability to concentrate on details for long periods of time
Neatness and accuracy in work habits	

Personal Equipment Needed: Workbooks

Expenses: Registration fee—$20
Tuition for students over 21—$40 per month

Course Title: DRAFTING, MECHANICAL

Name of School:	Address:	Telephone:
Pine City Area Vocational-Technical School	Pine City, Minn. 55063	(612) 629-3844

Admission Dates: September

Nature of Work: Mechanical draftsmen are draftsmen who have specialized in this field; they translate the rough sketches or layout or written specifications of the engineer or designer into a representative drawing showing the complete details and specifications for production. Draftsmen use drawing instruments and drafting machines to complete their drawings and use engineering tables and handbooks to assist in solving technical problems.

Job Opportunities: Mechanical draftsmen are needed in manufacturing firms, especially electrical equipment, machinery, fabricated metal products and transportation equipment. Many are employed by engineering and design firms, construction companies and public utilities; some work for state and Federal highway departments and for the Army, Navy and Air Force.

Course Description:

- *Engineering drawing
- *Technical mathematics
- *Manufacturing processes and materials
- *Machine design
- *Blueprint reading
- *Lettering
- *Production illustration
- *Technical drafting
- *Strength of material

Length of Course: 11 months

Helpful High School Courses:

- Mathematics
- Shop courses
- Mechanical drawing or drafting

Personal Qualities:

- Good eyesight with or without glasses
- Mechanical aptitude
- Mathematical aptitude
- Neatness and accuracy in work habits
- Ability to concentrate on details for long periods of time

Personal Equipment Needed: None

Expenses: Registration fee—$10
Tuition for students over 21—$35 per month
Tuition for out of state students—$50 per month

Course Title: DRAFTING AND DESIGN, TECHNICAL

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Technical draftsmen are needed to translate the rough sketches and specifications of engineers, architects and senior designers into working plans from which a particular item or construction can be made. They work with various measuring and drawing instruments and use tables and engineering data to make their drawings and calculate design changes, production costs, strength requirements and other necessary information.

Job Opportunities: Manufacturing companies, consulting engineers, drafting firms and agencies of the state and federal government employ technical draftsmen. Most enter the field as junior draftsmen and there are excellent opportunities to advance to senior draftsmen and designers.

Course Description:

- *Design drafting from original concept to finished product
- *Design drawings
- *Working drawings
- *Material selections
- *Strength consideration
- *Manufacturing methods
- *Cost estimating

Length of Course: 18 months

Helpful High School Courses:

- Mathematics through trigonometry
- Science
- Industrial arts
- Mechanical drawing or drafting

Personal Qualities:

- Mathematical aptitude
- Habits of neatness and accuracy in work
- Ability to concentrate on details for long periods of time

Personal Equipment Needed: Drawing instruments—needed before entering the field

Expenses: Drawing kit—$25 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: DRAFTING TECHNOLOGY, INDUSTRIAL

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: Draftsmen draw the detailed plans for a project. They may calculate strength, reliability and cost of materials, then translate the rough sketches of the engineers, designers and architects into working plans. To prepare drawings, draftsmen use compasses, protractors, dividers and triangles as well as machines which combine several functions. Some draftsmen specialize in a particular field such as mechanical, electrical, or structural drafting.

Job Opportunities: Draftsmen are employed by machinery, electrical equipment, fabricated metal products and transportation equipment industries; in engineering and architectural firms, construction companies and public utilities. Many work for Army, Navy and Air Force projects and for Federal, state and local government agencies. Graduates of this course would enter the job market as junior draftsmen.

Course Description:

*Detail and layout drafting
*Mechanical drafting
*Electronic, piping and structural drafting
*Technical mathematics
*Physics
*Machines
*Machine design
*Strength of materials
*Statics
*Metallurgy
*Technical writing
*Electricity

In the second phase of this program, students become involved in the designing, detailing and checking of various machines and tools.

Length of Course: 18 months

Helpful High School Courses:

Mathematics (including algebra and geometry)
Physics
Metal shop
Machine shop

Personal Qualities:

Interest in mathematics and science
Ability to work accurately for long periods of time

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: EDUCATIONAL AIDE

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Educational aides work in elementary and high schools relieving the teachers and other staff members of many routine and clerical duties to allow them to serve their students more effectively. Some teacher aides help in the classroom; some serve in halls, work with visiting teachers or school nurses and social workers. Some help with monitoring study halls, halls, lunchrooms or cafeterias. Many do clerical or office work, posting grades, keeping up comprehensive records, transcribing teacher or staff notes.

Job Opportunities: School districts, especially those with federal projects to augment the usual classroom studies, will employ increasing numbers of teacher aides. Good opportunities exist in urban and suburban systems and in certain towns or parts of the country.

Course Description:

*Typing
*Office machines
*Modern educational concepts
*School systems and procedures
*Internship — actual on-the-job training provided in representative schools

Length of Course: 9 months (including internship)

Helpful High School Courses:

Business subjects
English

Personal Qualities:

Average or above intelligence
Ability to communicate well with others
Desire to work with children
Interest in education

Personal Equipment Needed: None

Expenses: Workbooks—$40 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: EDUCATIONAL TECHNICIAN

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: The educational technician performs clerical duties associated with the teaching process. Technicians also assist in presenting materials to students, in research, student control and library help. The educational technician works directly under the supervision of a certified teacher and must have skills and knowledge of clerical procedures, education psychology, child development, individual instruction, group processes, school law, school organizations, tests and measurements, instructional media.

Job Opportunities: Educational technicians could be employed in urban or suburban school systems, especially those with federal projects augmenting the usual instructional means. This is a new and rapidly growing area of education.

Course Description:

*Educational clerical procedures
*Educational psychology
*Child development
*Group processes
*Professional ethics
*Individualized instruction
*School law
*School organization
*Tests and measurements
*Library science
*Instructional media
*Internship — on-the-job training in a selected school

Length of Course: 9 months (students must first complete the Educational Aide course)

Helpful High School Courses:

Business subjects
English

Personal Qualities:

Ability to work well with others
Interest in children
Interest in education

Personal Equipment Needed: None

Expenses: Workbooks, supplies—$40 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: ELECTRICAL

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 North 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September

Nature of Work: Graduates of this course may become journeyman electricians. Their work consists of wiring, repairing and maintaining installations for electric light, heat, power, ventilating and cooling in residential and commercial buildings.

Job Opportunities: Electricians work for contractors, builders and construction companies engaged in remodeling. They may find employment in industrial plants, motor shops, appliance maintenance and repair and in power and utility companies. Many are self-employed.

Course Description:

*AC and DC theory
*Electrical generators
*Electrical motors
*Electrical code
*Electrical calculations
*Electrical controls
*Basic industrial electronics

Graduates of this course may write the state examination for a journeyman electrician's license. This qualifies him to wire, repair and maintain all types of electrical installations.

Length of Course: 18 months

Helpful High School Courses:

Industrial arts—particularly electricity
Mathematics
Physics

Personal Qualities:

Interest in electricity
Aptitude as tested by the School
Physical strength and stamina to work outdoors in all weather conditions

Personal Equipment: Books—$41 first year, $30 second year
Tools—$35 first year, $35 second year

Expenses: Service fee—$7 per year
Tuition for students over 21—$40 per month plus Service Fee

Course Title: ELECTRICAL DRAFTING (ARCHITECTURAL)

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: Design and preparation of electrical plans for architects, consulting engineers and industrial firms is the specialty of the design draftsman. The work may include preparing specifications outlines and cost estimating.

Job Opportunities: Electrical design draftsmen work for firms which manufacture, build, install and maintain electrical or electronic components, equipment or systems. There are numerous openings in private and governmental agencies.

Course Description:

*Building construction methods
*Electrical systems and material
*National Electric Code
*Electrical circuiting and load calculation
*Lighting calculations
*Electrical heating design

Length of Course: 18 months

Helpful High School Courses:

Mathematics (including Algebra and Geometry)
Physics
Electrical shop
Drafting
Wood shop

Personal Qualities:

Physical stamina
Good eyesight
Ability to concentrate on details
Neatness and accuracy in work

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: ELECTRICAL MAINTENANCE TECHNICIAN

Name of School:	Address:	Telephone:
Hibbing Area Vocational-Technical School	505 E. 16th St. Hibbing, Minn. 55746	(218) 262-2256

Admission Dates: Late August or early September

Nature of Work: Maintenance electricians diagnose and repair all types of electrical controls, instruments, motors, machines and panels. They install wiring in buildings, including the hook-up or electrical power from an outside source. Planning and advertising the use of power may be part of this job.

Job Opportunities: Maintenance electricians work for large industrial firms, mining companies, manufacturing plants, particularly those concerned with transportation equipment, electrical and non-electrical machinery, chemicals, metal products and paper. Apprenticeship training will qualify graduates for work in the building trades.

Course Description:

*Basic electricity
*Alternating current
*Direct current
*Electronics—basic and advanced
*Automatic controls
*Residential wiring
*Industrial wiring
*Motors and transformers
*Mathematics
*Communications

Graduates may pursue the electrical apprenticeship programs offered through the International Electrical Brotherhood and become building trades electricians

Length of Course: 18 months

Helpful High School Courses:

Mathematics — including algebra and trigonometry
Physics
Industrial arts

Personal Qualities:

Good physical health and stamina for climbing and working outdoors in all weather
Interest in electricity and electronics
Mechanical aptitude

Personal Equipment: Basic hand tools are needed for the second year of training

Expenses: Supply and book fee—$40
Tuition for students over 21—$30 per month for Minnesota residents $100 per month for non-residents

Course Title: ELECTRICAL TECHNOLOGY, INDUSTRIAL

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: Fall

Nature of Work: Maintenance electricians are responsible for all types of electrical service including preventative maintenance, repair, replacement of faulty or broken parts and repair and adjustment of controls, transformers, electrical machinery, lighting, heating and cooling systems. They use testing ices and various tools and must be able to work from blueprints, ng diagrams and written specifications.

Job Opportunities: Skilled maintenance workers are needed in the manufacturing industries, including transportation equipment, metal products, electrical and non-electrical machinery, chemicals and paper products; in transportation communications, public utilities; wholesale and retail trade and mining.

Course Description:
Maintenance of electrical controls of industrial machine and equipment.

Length of Course: 18 months

Helpful High School Courses:
Industrial arts — electricity and electronics
Mathematics
Drafting

Personal Qualities:
Desire to work with machines
Ability to trouble-shoot

Personal Equipment Needed: None

Expenses: Registration fee—$20
Tuition for students over 21—$40 per month

Course Title: ELECTRICIAN, CONSTRUCTION

Name of School:	Address:	Telephone:
Canby Area Vocational-Technical School	Hwy. 68 West Canby, Minn. 56220	(507) 223-7252

Admission Dates: September

Nature of Work: Construction electricians assemble, install and test electrical wiring and fixtures used in electrical systems. Such systems are used to provide heat, light, power and air conditioning in residences, commercial buildings, and farm buildings.

Job Opportunities: Good job opportunities exist with home builders, industrial construction contractors, in private enterprise, for firms engaged in remodeling plant or office facilities and making electrical repairs for homeowners or business firms.

Course Description:

*Applied mathematics
*Applied science
*Fundamentals of electricity
*Wiring
*Blueprint reading
*Automatic controls

Laboratory Experience in:

*Interior wiring
*Exterior wiring
*Automatics controls

Length of Course: 11 months

Helpful High School Courses:

Basic mathematics
Agriculture mechanics and/or industrial arts courses in drafting or electricity

Personal Qualities:

Friendliness
Reliability
Ability to remember electrical codes
Mechanical aptitude

Personal Equipment Needed: Some books, uniforms and hand tools

Expenses: Enrollment fee—$10 upon acceptance
Reference books—$10-$25
Tools—$25-$50
Uniforms—$25
Room and board per day—$3-$4
Tuition for students over 21—$40 per month
$60 if out-of-state resident

Course Title: ELECTRICIAN, CONSTRUCTION

Name of School:	Address:	Telephone:
Southwest Minnesota Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: April and September

Nature of Work: Most electricians install wiring in buildings. The electrician must split the incoming service into the number of circuits needed to supply the proper amount of energy to various areas of the building or residence. He must determine the proper materials and methods of wiring according to the needs, working from blueprints, diagrams and specifications. He selects materials such as wire, conduit, circuit breakers, switches and motor controls according to the National Electrical Code.

Job Opportunities: Most electricians work for electrical contractors. Usually they work for many different employers in any one time span due to changing needs of the contractor. Some electricians are self-employed and many work for businesses or industrial firms which do their own construction electrical work.

Course Description:

*Direct current theory
*Alternating current theory
*Magnetism
*Wire calculations
*Direct current motors and generators
*Conductance and capacitance, DC and AC
*Single phase power
*Three phase power
*Basic electronics
*National, state and local electrical codes
*Applied mathematics I and II
*Blueprint reading and drawing, residential and commercial
*Job adjustment
*Principles of efficient lighting
*Heating and ventilation
*Air conditioning
*Job and shop safety
*Entrance requirements and installation service

Length of Course: 18 months

Helpful High School Courses:

Industrial arts
Mathematics

Personal Qualities:

High school graduate
Manual dexterity and proficiency with tools
Physical health and stamina to endure working in all weather conditions
Mathematical ability

Personal Equipment Needed: Pencils, notebooks, drawing equipment used for the course; basic small tools needed in the industry (approximate cost, $40 or $50)

Expenses: Tuition for students over 21 or out-of-state residents—$30 per month

Course Title: ELECTRICIAN, CONSTRUCTION

Name of School:	Address:	Telephone:
Wadena Area Vocational-Technical School	405 S.W. Colfax Wadena, Minn. 56482	(218) 631-3342

Admission Dates: September

Nature of Work: Construction electricians lay out, assemble, install and test electrical fixtures, apparatus and wiring used in electrical systems on construction projects. These systems are used to provide heat, light, power, air conditioning and refrigeration in residences, office buildings, factories, hospitals, schools and other structures.

Job Opportunities: Construction electricians work for electrical contractors or are self-employed. A few work for government agencies or businesses that do their own construction electrical work. A construction electrician can expect to work for a great many different employers during their work life because needs of individual contractors change.

Course Description:

*Layout
*Assembly
*Testing
*Apparatus
*Wiring

This course gives both practical and theoretical experience. Graduates are eligible for apprenticeship programs.

Length of Course: 11 months

Helpful High School Courses:

Mathematics
Basic electricity

Personal Qualities:

Good mechanical aptitude
Good physical health

Personal Equipment Needed: Hand tools—$50, approximate cost

Expenses: Application fee $10
Tuition for students over 21—$40 per month

Course Title: ELECTRICIAN, LINEMAN

Name of School:	Address:	Telephone:
Southwest Minnesota Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: September

Nature of Work: Lineman electricians work for light and power companies installing and maintaining power lines and poles. They may erect wood or light-duty metal towers and other equipment, adjust wires and check for proper function. They install other equipment such as transformers and electrical accessories and adjust these according to necessary use. In some companies, one crew works on installation of new equipment while another takes care of repair and maintenance.

Job Opportunities: Linemen are employed by investor or consumer-owned power companies, municipal electric heat and power companies and by electrical contractors. Apprenticeship programs offer excellent opportunities to learn the work literally from the ground up and qualify for advancement.

Course Description:

- *Applied mathematics I and II
- *Fundamentals of Electricity I and II
- *Electrical distribution theory I, II, III
- *Related fundamentals I, II, III

Length of Course: 11 months

Helpful High School Courses:

- Algebra
- Physics
- Trigonometry

Personal Qualities:

- Good physical strength and stamina for climbing, working outdoors in all types of weather
- Mechanical aptitude

Personal Equipment Needed:

- Lineman's tool belt, safety strap
- Climbers
- Leather gloves
- Hard hat
- Small hand tools

Expenses: Tuition for students over 21 or out-of-state residents of any age—$30 per month

Course Title: ELECTRICIAN, LINEMAN

Name of School:	Address:	Telephone:
Wadena Area Vocational-Technical School	405 SW Colfax Ave. Wadena, Minn. 56482	(218) 631-3342

Admission Dates: Fall Only

Nature of Work: Linemen construct and maintain the network of power-lines which carry electricity from generating plants to the consumer. Linemen install, replace equipment, repair equipment and lines, and do routine maintenance work.

Job Opportunities: Linemen electricians are employed by electric companies, private or cooperatively owned, utilities companies, municipalities and construction companies.

Course Description:

*Power line construction
*Power line maintenance

Classroom and laboratory as well as outdoor instruction phases attempt to duplicate the conditions and facilities of on-the-job problems.

Length of Course: 11 months

Helpful High School Courses:

Mathematics through trigonometry
Sciences—particularly physics
Industrial arts

Personal Qualities:

Good physical and mental health
Steady nerves and good balance
Mechanical aptitude

Personal Equipment Needed: Hand tools, climbers, tool belt (approximate cost—$100)

Expenses: Application fee—$10
Books and supplies—$40
Tuition for students over 21—$40 per month

Course Title: ELECTRICITY

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. S. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Electricians make, operate, repair and install electrical devices. They install wiring in buildings and hook-ups of power from an outside source. Planning and advising on the use of power may be part of this job.

In the Twin Cities, individuals must have a trade or technical school background in order to qualify for apprenticeship, necessary to work in the building trades.

Job Opportunities: Graduates work for large industrial firms, mining companies, manufacturing plants, particularly those concerned with transportation equipment, electrical and non-electrical machinery, chemicals, metal products and paper goods. Apprenticeship training will qualify graduates for work in the building trades.

Course Description:

Semester I
*Theory—Basic electricity
*Laboratory — Associated experiments
Semester II
*Theory—DC and AC current
*Vacuum tubes
*Associated experiments
Summer Session
*Transmitter and receiver analysis
*Preparation for FCC license
Semester III
*Theory — transistors, high frequency radar and microwave
*Associated laboratory experiments
Semester IV
*Theory—Industrial circuits and computer logic
*Associated laboratory experiments
Related subject matter
*Mathematics
*Schematic drawing
*Technical writing

Graduates are eligible for credit of one year's qualifying time toward a journeyman Wireman Examination or two years' time toward a Master Electrician Examination

Length of Course: 21 months

Helpful High School Courses:

Mathematics
Industrial arts
Physics

Personal Qualities:

Mathematical ability
Mechanical aptitude
Good health and stamina for climbing and working outside in all weather

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course: ELECTRICITY

Name of School:	Address:	Telephone:
St. Paul Area Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Electricians make, operate, repair and install electrical devices. They install wiring in buildings and hook up power from outside source. Planning and advising on the use of power may be part of this job.

In the Twin Cities and other areas, individuals must have a trade or technical school background in order to qualify for apprenticeship programs necessary to become part of the building trades.

Job Opportunities: Graduates of this course work for large industrial firms, mining companies, manufacturing plants, particularly those concerned with transportation equipment, electrical and non-electrical manufactured machinery, chemicals, metal products and paper goods. Apprenticeship programs provide entry jobs for many with this background.

Course Description:

Laboratory Shop Course
*Direct current theory
*Wire calculations
*Magnetism
*DC motors and generators
*Alternating current theory
*Inductance and capacitance
*Single phase power
*Three phase power
*National and local electrical codes
*Job and shop safety

Related subjects
*Mathematics
*Communications
*Drawing—blueprint reading
*Science
*Industrial relations

Length of Course: 18 months

Helpful High School Courses:

Science
Industrial arts
Mathematics

Personal Qualities:

Good eyesight with perfect color vision
Good physical strength and stamina for working in all kinds of weather
Proficience in use of tools and in soldering and welding
Interest and aptitude for science and mathematics

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course: ELECTRO-MECHANICAL TECHNOLOGY

Name of School:	Address:	Telephone:
St. Paul Area Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: The electro-mechanical technician installs, trouble shoots, services and repairs domestic and industrial machines. He must understand the theory and functioning of electrical, electronic, mechanical, hydraulic and pneumatic devices and controls. Diagnosing and repairing malfunctions requires extensive knowledge of machinery as well as electrical theory.

Job Opportunities: Electro-mechanical technicians work as appliance servicemen, laboratory technicians, maintenance and installation mechanics and instrument technicians in industry, private business and research.

Course Description:

First Year	Second Year
*Mechanical analysis	*Refrigeration, gas and pressure systems
*Applied mathematics and instrumentation	*Circuit diagnosis and repairs
*General circuit analysis	*Specialized circuitry
*Mathematics	*Applied science
*Applied science	*Related electronics
*Technical communications	*Related machines
*Customer relations	*Industrial relations

Length of Course: 18 months

Helpful High School Courses:

Industrial arts	Science
Mathematics	

Personal Qualities:

Interest in electricity	Mechanical aptitude
Good eyesight and eye-hand co-ordination	Good physical health and stamina to work outdoors in all weather
Mathematical aptitude	

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: ELECTRONICS DATA PROCESSING (COMPUTER PROGRAMMING)

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(218) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: Computer programmer trainees work under the direction of an experienced programmer. They select symbols from particular coding systems and apply them to successive steps of program for conversion to machine processing; and read and interpret symbols for translation into machine language. Additional work may include converting flow charts and diagrams of the simple problem from the rough to finished form and making minor changes in established programs to adapt them to new requirements.

Job Opportunities: Nearly every business, government or manufacturing process uses electronic data processing at some point. Health and welfare, social agencies and other public service groups also depend on such equipment. Individuals who can program, operate and interpret processing machines are in demand for customer billing, sales analysis, forecasting trends and future needs, statistical research and storage of facts about a particular group or product.

Course Description:

*Customer billing	*Sales analysis
*Inventory control	*Forecasting
*Production control	*Statistical research
*Payroll	

Course includes use of punch card machine and electronic computers in solving business problems in these areas.

Length of Course: 20 months

Helpful High School Courses:

Mathematics (Higher alegebra required; must have grade of C or better)	Business subjects

Personal Qualities:

High school graduate or equivalent	Entrance examination
Rank in upper 50% of graduating class	

Personal Equipment Needed:

Expenses: Acceptance fee—$25
Books—$20
Tuition for students over 21—$40 per month plus book and acceptance fees

Course Title: ELECTRONIC DATA PROCESSING

Name of School:	Address:	Telephone:
Hibbing Area Technical Institute	505 E. 16th St. Hibbing, Minn. 55746	(218) 262-2256

Admission Dates: September through August. Classes start late August or early September.

Nature of Work: Computer programmer trainees work under the direction of an experienced programmer. They select symbols from particular coding systems and apply them to successive steps of the program for conversion to machine processing and read and interpret symbols for translation into machine language. Additional work may include converting flow charts and diagrams of the simple problem from the rough to finished form and making minor changes in established programs to adapt them to new requirements.

Job Opportunities: Nearly every business, government or manufacturing problem uses electronic processing at some point. Health and welfare, social agencies and other public service groups also depend on such equipment. Individuals who can program, operate and interpret processing machines are in demand for customer billing, sales analysis, forecasting trends and future needs, statistical research and storage of facts about a particular group, product or idea.

Course Description:

*Human relations
*Introduction to computers
*Unit record equipment
*Principles of accounting
*Cost accounting
*Data processing mathematics
*Communications
*Business statistics
*1620 machine language
*1620 symbolic language
*Introduction to systems
*Data processing applications
*Business organization
*Fortran programming
*Cobal programming
*Data processing field project

Length of Course: 18 months

Helpful High School Courses:

Higher algebra (or equivalent)
Mathematics
Business courses

Personal Qualities:

Average or better aptitude

Personal Equipment Needed:

Expenses: Supply and book fee—$40
Tuition for students over 21—$30 per month for Minnesota residents
$100 per month for non-residents

Course Title: ELECTRONIC DATA PROCESSING

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Electronic data processors are responsible for translating instructions and information into a coded language the computer understands. Processors may be involved in one or more phases of processing from tape libraries to programmer, combination jobs including systems analysis, console operating, key punching or other related tasks.

Job Opportunities: Beginning employment depends on the data processing technician's level of competence. Most employers offer advancement opportunities with increasing skills. Possible employers include banks, insurance companies, industries, retail and wholesale merchandisers, utilites, health, welfare and service agencies and the Federal, state, and local governments.

Course Description:

*Basic computing machines
*Unit record equipment
*Accounting
*Communications skills
*Data processing applications
*Introduction to programming systems
*Computer programming
*Computer programming case problems
*Social sciences
*Statistics
*Business organizations
*Cost accounting
*Systems development and design
*Advanced computing and programming
*Data processing mathematics

Students successfully completing this course may attain the competence necessary to become programmers without further training courses.

Length of Course: 21 months

Helpful High School Courses:

Mathematics
Business courses
English

Personal Qualities:

High school disploma or equivalent
Satisfactory score on a programmer's aptitude test given at the school
Analytical mind and liking for problem-solving

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: ELECTRONIC DATA PROCESSING

Name of School:	Address:	Telephone:
St. Paul Vocational-Technical Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Electronic data processors are responsible for translating instructions and information into a coded language the computer understands. Processors may be involved in one or more phases of processing from tape libraries to programmer, combination jobs including systems analysis, console operating, key punching or other related tasks.

Job Opportunities: Insurance companies, utility and the public service companies, health, welfare and social agencies, transportation firms, in fact, almost every business, government or manufacturing problem uses electronic data processing equipment at some point. Individuals who can program, operate and interpret processing machines are in demand for customer billing, sales analysis, forecasting trends and future needs, statistical research, and storage of facts about a particular group, product or idea.

Course Description:

1st quarter
*Unit record equipment
*Introduction to computers
*Principles of accounting I
*Mathematics I
*English I (vocabulary, grammar)

2nd quarter
*Unit record equipment
*IBM 1620 machine language
*Principles of Accounting II
*Mathematics II
*English II (oral communications and public speaking)

3rd quarter
*IBM 1620 symbolic language
*Principles of accounting III
*English III (written communications)

4th quarter
*Introduction to systems
*Data processing applications
*Cost accounting I
*Business organization

5th quarter
*Data processing application II
*IBM 1401 symbolic programming
*IBM 1620 fortran programming
*Cost accounting II
*Business statistics

6th quarter
*IBM 1440 autocoder programming
*IBM 360 cobal and assembly language
*Human relations
*Data processing field project

Length of Course: 18 months

Helpful High School Courses:

Higher Algebra (required)
Business subjects

Mathematics

Personal Qualities:

Special aptitude determined by testing

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: ELECTRONICS

Name of School:	Address:	Telephone:
Austin Area Vocational-Technical School	Austin, Minn. 55912	(507) 433-7301

Admission Dates: Fall term

Nature of Work: Electronics applies electronic theory, principles of electrical circuits, electrical testing, engineering mathematics, physics and related subjects to building, testing, repairing and modifying electronic equipment such as computers, missile-control instrumentation and machine-tool numerical controls. Many workers have a specialty or particular area such as instruments, computers, testing or quality control.

Job Opportunities: The employment outlook is excellent; advancement and opportunities are very good. Automation, customer service, computers, aero-space research and development, guided missiles, technical drafting and technical writing are some jobs filled by electronics technicians.

Course Description:

First Year
- *Alternating and direct current
- *Magnetism and measuring instruments
- *Power supplies
- *Sound amplification
- *Vacuum tubes and crystal detectors
- *AM/FM receiver principles
- *Care and use of test equipment

Second Year
- *Industrial electronics students pursue computer maintenance
- *Communications students study television and telecasting

Length of Course: 18 months

Helpful High School Courses:
- Mathematics
- Electricity
- Physics
- Sciences

Personal Qualities:
- High school graduate
- Aptitude in mathematics
- Willingness to continue study as needs and equipment change

Personal Equipment Needed: Hand tools and books—$50

Expenses: Tuition for students over 21—$32 per month

Course Title: ELECTRONICS, GENERAL

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September

Nature of Work: Electronics applies electronic theory, principles of electrical circuits, electrical testing, engineering mathematics, physics and related subjects to building, testing, repairing and modifying electronic equipment such as computers, missile-control instrumentation and machine-tool numerical controls. Many workers have a specialty or particular area such as instruments, computers, testing or quality control.

Job Opportunities: Graduates may work as technical writers, customer engineers, engineering technicians, engineering aide, laboratory technicians, detail assembler, instrument technician, field service technician, test technician, quality control or computer technician. Work may be found in government, private business, engineering firms, missiles, and other special electronics areas.

Course Description:

*Basic electricity
*Alternating current concepts
*Direct current concepts
*Electronic principles
*Advanced mathematics
*Technical drafting
*Technical writing
*Industrial design
*Electronics precision measurement
*Instrumentation
*Environmental testing
*Basic industrial economics
*Human relations

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Electricity
Electronics

Personal Qualities:

Aptitude for training
Physical stamina
Good eyesight
Ability to concentrate and do detail work

Personal Equipment Needed: Tools—$18 per 9 months academic year
Books—$62.50 per 9 month academic year

Expenses: Service fee—$7
Tuition for students over 21—$40 per month

Course Title: ELECTRONICS

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Electronics applies electronic theory, principles of electric circuits, testing, engineering mathematics, physics and related subjects to building, testing, repairing and modifying electronic equipment such as computers, missile control instrumentation and machine-tool numerical controls. Many workers have a specialty or particular area such as instruments, computers, testing or quality control.

Job Opportunities: Manufacturers of electronic equipment, computers, automatic controls and guidance systems for missiles and aircraft employ many electronic technicians. Research departments within industry and firms that offer research services to others also need technicians. Transportation and communications employ many technicians. Opportunity for advancement is good and many employers offer in-service education or extension programs.

Course Description:

Unit I
*Theory of electricity
*Magnetism
*Electric and Electronic circuits
*Inductance
*Capacitance
*Resonance
Unit II
*Circuit analysis
*Vacuum tubes and amplifiers
*Oscillators
*Power supplies
Unit III
*Pulse circuitry
*Carrier transmission
*High frequency amplifiers
*Pulse separation
*Nonsinusoidal oscillaros
*Wide band reactance-amplifiers
*Transmission lines
Unit IV
*Transistor design and application
*Computer design and programming
*Industrial circuits
*Federal communications
Other Subjects
*Mathematics
*Communications
*Electronic drafting
*Industrial relations
*Science

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Physics
Mechanical drawing
Metals
Electricity

Personal Qualities:

Good finger and hand dexterity
Alertness, accuracy and capacity for minute detail
Excellent eyesight (perfect color vision)
Ability to communicate precisely

Personal Equipment Needed:

Expenses: Tuition for students over 21—$65 per month

Course Title: ELECTRONICS

Name of School:	Address:	Telephone:
Thief River Falls Area Vocational-Technical School	Thief River Falls, Minn. 56701	(218) 681-5424

Admission Dates: September

Nature of Work: Electronics applies electronic theory, principles of electrical circuits, electrical testing, engineering mathematics, physics, and related subjects to building, testing, repairing and modifying electronic equipment such as computers, missile-control instrumentation and machine-tool numerical controls. Many workers have a specialty or particular area such as instruments, computers, testing or quality control.

Job Opportunities: Graduates may work as technical writers, customer engineers, engineering technicians, engineering aide, laboratory technicians, detail assembler, instrument technician, field service technician, test technician, quality control or computer technician. Work may be found in government, private business, engineering firms, missiles, and other special electronics areas.

Course Description:

*Fundamental and basic principles of circuit
*Instruments
*Vacuum tubes
*Components
*Amplifiers
*Power supplies
*Test equipment
*Related equipment
*Television
*Industrial electronics

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Sciences

Personal Qualities:

Aptitude in science and mathematics
Ability to express one's own ideas
Good eyesight
Physical stamina

Personal Equipment Needed:

Expenses: Registration fee—$10
Course fee—$75 (includes tools and books)
Tuition for students over 21—$45 per 4 week period plus $75 course fee

Course Title: ELECTRONICS (COMMUNICATIONS)

Name of School:	Address:	Telephone:
Austin Area Vocational-Technical School	Austin, Minn. 55912	(507) 433-7301

Admission Dates: Fall term

Nature of Work: Technicians use hand tools and a variety of test equipment to repair, service and maintain radios, television, stereo sound systems, radio and television broadcasting equipment and other electronic gear used in business and industry.

Job Opportunities: Smaller shops specializing in the repair and maintenance of radios, television sets, stereo systems and other gear employ electronic technicians. A growing area of employment is in radio and television broadcasting where qualified people are needed to maintain and repair broadcasting equipment.

Course Description:

*Radio and television transmitters
*Television cameras
*Sound amplification systems
*Test equipment
*Use of hand tools

Students receive shop and classroom training and study for their First Class FCC license.

Length of Course: 18 months

Helpful High School Courses:

English
Mathematics
Physics

Personal Qualities:

Aptitude for work
Interest in learning necessary skills
Ability to use skills learned

Personal Equipment Needed: Tools and books—$85 approximate cost
Tuition for students over 21—$32 per month

Expenses: Tuition for students over 21—$32 per month

Course Title: ELECTRONICS — COMMUNICATIONS

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical School	1920 Lee Boulevard North Mankato, Minn. 56001	(507) 387-3441

Admission Dates: First Monday every month except July and August

Nature of Work: Electronics applies electronic theory, principles of electrical circuits, electrical testing, engineering mathematics, physics, and related subjects to building, testing, repairing and modifying electronic equipment such as computers, missile-control instrumentation and machine-tool numerical controls. Many workers have a specialty or particular area such as instruments, computers, testing or quality control.

Job Opportunities: This field includes radio, radar, sonar, telemetering, telephony and other forms of communications; industrial and medical measuring, recording, indicating and controlling devices; navigational equipment, missile and spacecraft guidance and control instruments; and other types of equipment using vacuum tubes and semiconductor circuits. Technicians work with engineers and scientists doing complex technical work. Most specialize in one particular area such as automation or ultrasonics.

Course Description:

Students build, test, adjust and operate
- *Power supplies
- *Radios
- *TV chassis
- *Amplifiers
- *Servo-mechanisms
- *Electric motors
- *Transmitters and receivers
- *Industrial test panels
- *Analog and digital computers

Students specializing in communications receive intensive instruction in:
- *Antennas
- *Transmission lines
- *Special radio controlled devices.
- *Citizens radio
- *Mobile radio
- *Commercial radio systems
- *Preparation for obtaining ICC licenses

Length of Course: 21 months

Helpful High School Courses:

Mathematics
Physics
Chemistry

Personal Qualities:

Ability as shown by testing and counseling
Willingness to continue study as needs and equipment change

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$32 per month

Course Title: ELECTRONICS (COMMUNICATIONS)

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September 1

Nature of Work: The communications technician is responsible for servicing and maintaining communication equipment such as sound systems, public address and amplifying systems, radio and television equipment, two-way radios and radio-telephone systems.

Job Opportunities: Shops which sell, install, maintain and service communications equipment employ technicians. This field offers good potential for self-employment.

Course Description:

First Year
DC Circuit analysis
*A.C. circuit analysis
*Vacuum tube characteristics
*Vacuum tube applications
*Transistor characteristics
*Transistor applications
AM communications I and II
Mathematics
*Technical writing I
*Technical drafting I

Second Year
*Audio systems
*A.M. transmitters and receivers
*F.M. transmitters and receivers
*Antenna and antenna distribution systems
*Television transmitters and receivers (black, white and color)
*Radar systems
*Micro-wave communication
a. multiplex with single side band
b. time multiplex
*Sonar systems
*Telemetry and facsimile
*Related mathematics
*FCC radio telephone—list class license with radar endorsement
*Technical writing
*Technical drawing
*All areas of study include classroom instruction and laboratory practice.

Length of Course: 18 months

Helpful High School Courses:

Science
Mathematics
Shop courses

Personal Qualities:

Above average learning ability
Scientific curiosity about electrical apparatus and equipment

Personal Equipment Needed: The communications technician will be expected to purchase a limited number of books, manuals and tools.

Expenses: Books and supplies—1st year—$125.00 2nd year—$35.00
Tuition for students over 21—$40 per month

Course Title: ELECTRONICS—COMPUTER SERVICE AND MAINTENANCE

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical School	1920 Lee Boulevard North Mankato, Minn. 56001	(507) 387-3441

Admission Dates: First Monday every month except July and August

Nature of Work: Service men are needed to repair and service computers; work includes testing and trouble-shooting systems for defects, faulty operation or malfunction. Servicemen work with components, input-output devices, storage and conversion systems and computer logic. They also must understand and program computers.

Job Opportunities: Servicemen are employed by large computer manufacturing plants or in the field as service or customer engineers. Some work for industrial and military installations and in aircraft and missiles. Some are specialists in one particular area or in a certain type of equipment.

Course Description:

*Students build, test, adjust and operate power supplies, radios, TV chassis, amplifiers, servo-mechanisms, electric motors, transmitters, receivers, industrial test panels and boards, and analog and digital computers.

*Types and kinds of computers
*Computer language
*Computer programming and operation
*Computer service and repair

Length of Course: 21 months

Helpful High School Courses:

Mathematics
Sciences

Personal Qualities:

Ability as shown by testing and counseling
Willingness to continue study as equipment and needs change

Personal Equipment Needed: Some hand tools

Expenses: Cost of personal hand tools
Tuition for students over 21—$32 per month

Course Title: ELECTRONICS (INDUSTRIAL)

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September 1

Nature of Work: Technicians work with engineers and scientists maintaining and servicing computers and other equipment using vacuum tubes, transistors, semi-conductors and printed circuit. Many particular areas exist where technicians must be specialists in one type of computer or piece of equipment. Some technicians work as salesmen and some are in research and development.

Job Opportunitis: Private industries, manufacturing, scientific and other business firms and the state and Federal governments employ technicians with electronic backgrounds. Universities, research institutes and various welfare organizations also employ electronics technicians.

Course Description:

First Year	Second Year
*D.C. circuit analysis	*Digital computers
*A.C. circuit analysis	*Instrumentation
*Vacuum tube characteristics	*Analog computers
*Vacuum tube applications	*Industrial electronics
*Transistor characteristics	*Circuit design
*Transistor applications	*Related mathematics
*AM communications I and II	*Technical drafting
*Mathematical writing I	*Technical writing
*Technical drafting I	*Nonsinusoidal waveforms and waveshaping circuits

Length of Course: 18 months

Helpful High School Courses:

Science	Shop courses
Mathematics	

Personal Qualities:

Above average learning ability	Scientific curiosity about electrical apparatus and equipment

Personal Equipment Needed: The electronics technician student will be expected to purchase a limited number of books, manuals and tools.

Expenses: Books and supplies—1st Year $125.00 2nd Year $35.00
Tuition free to Minnesota residents under 21
Tuition for students over 21—$40 per month

Course Title: ELECTRONICS TECHNICIAN (INDUSTRIAL)

Name of School:	Address:	Telephone:
Austin Area Vocational-Technical School	Austin, Minn. 55912	(507) 433-7301

Admission Dates: Fall term

Nature of Work: Electronics technicians deal with abstract problem solving and use hand tools and some test equipment in diagnosing and correcting problems in equipment and its function. Technicians deal with complicated circuitry and need to work quickly and accurately since time is an important factor in this work.

Job Opportunities: Graduates of this course become technical writers, customer engineers, engineering technicians, engineering assistants, laboratory technicians, instrument technicians, test technicians, computer technicians and sales service technicians. Many work in quality control in a wide variety of industrial firms and some are employed in research and development.

Course Description:

*Computers	*Radar circuits
*Computer theory	*Transistors
*Synchro- and servo-Mechanisms	*Tunnel diodes
*Pulse circuitry	*Solid state devices

Theoretical and practical experience are provided in the classroom and laboratory.

Length of Course: 18 months

Helpful High School Courses:

Mathematics	Science courses

Personal Qualities:

Aptitude for work	Interest in the course
Manual dexterity	

Personal Equipment Needed: Tools and books—$85, approximate cost

Expenses: Tuition for students over 21—$32 per month

Course Title: ELECTRONICS TECHNICIAN (RADIO AND TV)

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 724-8507

Nature of Work: Electronics technicians apply electronic principles and theory to solving particular problems. Tasks include inspecting and testing electronic devices or working as part of an electronics engineering team. Some technicians are involved in research in radio and television-based electronic equipment.

Job Opportunities: Employment is varied and depends on individual ability and interests. Some technicians work in industry. Some are engaged in research in product development for industry and consumer products and many work in repair shops or departments servicing electronic equipment used in radio and television broadcasting or radio and television based systems for missiles, defense and aircraft.

Course Description:

*Electronic circuits and systems
*Test equipment
*Evaluating and recording tests
*Trouble shooting and diagnosis on live equipment
*Communications
*Mathematics
*Physics
*Human relations

The training approach involves lectures, demonstrations, seminars, discussions, laboratory experiences and evaluation plus trouble shooting experience.

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Science
Industrial arts
Electricity

Personal Qualities:

Mechanical and mathematical aptitude
Good eye-hand coordination
Interest in problem-solving

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$802.50 per year

Course Title: ELECTRONICS TECHNICIAN

Name of School:	Address:	Telephone:
Minneapolis Area Vocational- Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Electronics applies electronic theory, principles of electrical circuits, electrical testing, engineering mathematics, physics and related subjects to building, testing, repairing and modifying electronic equipment such computers, missile-control instrumentation and machine-tool numerical controls. Many workers have a specialty or particular area such as instruments, computers, testing or quality control.

Job Opportunities: Graduates have been employed as field service technicians, testing technicians, installation technicians, maintenance technicians, in electronics manufacturing.

Course Description:

Semester I
*Basic electricity
*Associated experiments

Semester II
*D.C. and A.C. current
*Vacuum tubes
*Associate laboratory experiments

Semester III
*Transistors, high frequency, radar, microwave
*Associated experiments

Semester IV
*Industrial circuits and computer logic
*Associated experiments

Related Studies
*Science
*Mathematics
*Schematic drawing
*Technical writing

Length of Course: 21 months

Helpful High School Courses:
Mathematics
Science

Personal Qualities:
Above average intelligence
High ability in special, numerical, abstract and mechanical aptitudes
Individual qualifications indicating successful training

Personal Equipment Needed:

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: ELECTRONICS TECHNICIAN

Name of School:	Address:	Telephone:
Moorhead Area Vocational-Technical School	Box 100 Moorhead, Minn. 56561	(218) 233-5494

Admission Dates: September or as openings occur

Nature of Work: Electronics applies electronic theory, principles of electrical circuits, electrical testing, engineering mathematics, physics and related subjects to building, testing, repairing and modifying electronic equipment such as computers, missile-control instrumentation and machine-tool numerical controls. Many workers have a specialty or particular area such as instruments, computers, testing or quality control.

Job Opportunities: Electronics technicians are employed in radio-TV broadcasting, telephone companies, industrial electronics, measuring devices, computers, instrumentation, in service, research and development of electronics systems.

Course Description:

*Complete study of basic electronics

*Understanding of complex circuiting

*On-the-job training provides opportunity for specialized training in a particular branch of electronics

Length of Course: 20 months

Helpful High School Courses:

Algebra (required)
Higher mathematics
Physics
Chemistry

Personal Qualities:

Aptitude as tested

Ability and willingness to continue learning as equipment and needs change.

Personal Equipment Needed: Books—$75 (estimated)
Tools—$25 (estimated)

Expenses: Student activity fee—$10
Tuition for students over 21—$40 per month

Course Title: ELECTRONICS TECHNOLOGY

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: The electronics technician applies electronic theory, principles of electronic theory, principles of electrical circuits, electrical testing, engineering mathematics, physics and related subjects to building, testing, repairing and modifying electronic equipment such as computers, missile-control instrumentation and machine-tool numerical controls. Many workers develop a specialty or particular area: instruments, computers testing or quality control.

Job Opportunities: Graduates may work as customer engineers, engineering technicians, engineering aides, laboratory technicians, detail assemblers, instrument technicians, field service technicians, test technicians, quality control or computer technician. Work may be found in government, private business, engineering firms, missiles and other special electronics areas.

Course Description:

*Electricity
*Basic electronics
*Communications
*Wave shaping
*Computers
*Microwave
*Control systems

Length of Course: 18 months

Helpful High School Courses:

Mathematics (including Algebra and Geometry)
Physics
Electricity
Electronics

Personal Qualities:

Ability in this area as determined by testing and counseling.
Willingness to adapt to changing needs and equipment.

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: ELECTRONICS TECHNOLOGY

Name of School:	Address:	Telephone:
Wadena Area Vocation-Technical School	405 S.W. Colfax Ave. Wadena, Minn. 56482	(507) 631-3342

Admission Dates: September only

Nature of Work: Electronics applies electronic theory, principles of electrical circuits, electrical testing, engineering mathematics, physics and related subjects to building, testing, repairing and modifying electronic equipment such as computers, missile-control instrumentation and machine-tool numerical controls. Many workers have a specialty or particular area such as instruments, computers, testing or quality control.

Job Opportunities: Graduates work as technicians in field services, research and development, testing, maintenance, quality control or computers. Technicians work with engineers and may be employed in government, private business, engineering, missiles and other electronics areas.

Course Description:

*Basic electricity
*Basic electronics
*Transistor fundamentals
*Pulse and digital circuits
*Digital computer fundamentals
*Industrial and microwave technology
*Laboratory practice in electronic equipment

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Sciences
Shop courses

Personal Qualities:

Above average grades
Abstract and mechanical aptitude

Personal Equipment Needed: Tool box and tools—$35 (approximately)

Expenses: Application fee—$10
Course fee—$10 (1st year)
Course fee— $5 (2nd year)
Tuition for students over 21—$40 per month

Course Title: ELECTRONICS TECHNOLOGY

Name of School:	Address:	Telephone:
Willmar Area Vocation-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: September

Nature of Work: Electronics applies electronic theory, principles of electrical circuits, electrical testing, engineering mathematics, physics and related subjects to building, testing, repairing and modifying electronic equipment such as computers, missile-control instrumentation and machine-tool numerical controls. Many workers have a specialty or particular area such as instruments, computers, testing or quality control.

Job Opportunities: Graduates may work as technical writers, customer engineers, engineering technicians, engineering aide, laboratory technicians, detail assembler, instrument technician, field service technician, test technician, quality control or computer technician. Work may be found in government, private business, engineering firms, missiles, and other special electronics areas.

Course Description:

*Develops competency in field

*Qualifies graduates to work directly with a design, test, development, repair or research group of any industrial electronics complex.

*Provides background skills for entry level positions

Length of Course: 18 months

Helpful High School Courses:

Physical sciences
Mathematics
Electricity
Electronics

Personal Qualities:

High school graduate
No color blindness
Strong science and math background

Personal Equipment Needed: Textbooks, slide rule, drawing template, paper and pencils

Expenses: General fee—$15 annually
Tuition for students over 21—$40 per month

Course Title: ELECTRONIC TECHNOLOGY I

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-3671

Admission Dates: First Tuesday after Labor Day
Beginning of any quarter

Nature of Work: Television repairmen repair and adjust radios and television sets using handtools and electronic testing instruments. He tunes receivers on all channels or stations, adjusts controls, examines chassis for defects, tests voltage and resistances, and tests and changes tubes.

Job Opportunities: Radio TV repairmen are needed in industry as home service repairmen and in sales, research and technology.

Course Description:

This course is considered a job training course or a prerequisite of Technology II.

- *Electricity
- *Electronics
- *Radio
- *Television
- *Solid-state circuitry
- *Drafting
- *Auxiliary courses related to electronics

Length of Course: 11½ months

Helpful High School Courses:

- Mathematics
- Physics
- Electricity
- Electronics

Personal Qualities:

- Minimum score on General Aptitude test battery
- High school graduate or 18 years of age or older
- Good eyesight
- Good hand and eye coordination

Personal Equipment Needed: Special tools, books—$25-$35

Expenses: Tuition for students over 21—$30 per month

Course Title: ELECTRONICS TECHNOLOGY II

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-3671

Admission Dates: First Tuesday after Labor Day or beginning of any quarter

Nature of Work: Repairs, tests, adjusts, installs or operates communications equipment, computers, industrial controls, radar, telemetering, missile systems or other electronic systems. Many workers are classified according to a special type of equipment they repair or operate. Business firms, research organizations, government agencies and other companies dealing with such equipment employ many trained technicians.

Job Opportunities: Graduates are employed as computer technicians, communications technicians, and home entertainment systems technicians.

Course Description:

*Advanced course applying electronics principles to computers, communications and home entertainment systems.

*Electronic circuit and systems

*Applied mathematics

*Trouble analysis

*Applied physics

*Other related courses

Length of Course: 11½ months

Helpful High School Courses:

Mathematics

Physics

Electricity

Electronics

Personal Qualities:

Minimum score on General Aptitude Test Battery

High school graduate or 18 yrs. of age or older

Good hand-eye coordination

Prerequisite:
Electronics Technology I (or equivalent)

Personal Equipment Needed: Special tools, books—$25-$35

Expenses: Tuition for students over 21—$30 per month

Course: FARM EQUIPMENT MECHANICS

School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: Farm equipment mechanics maintain the electrical, mechanical and hydraulic systems in farm equipment such as tractors, combines, pickup balers, corn pickers, crop dryers, field harvesters, elevators and conveyors. They may assemble new implements and machinery and repair dented or torn bodies. The mechanic may travel to the farm or do his work at a repair shop. Preventative maintenance and tuneups or overhauls are an important aspect of this job.

Job Opportunities: Farm equipment mechanics work for dealers of farm equipment in independent repair shops and service of farm equipment manufacturers. Most work in the agricultural centers of the country.

Course Description:

*Repairing farm equipment
*Use of shop tools
*Safety
*Welding
*Small gas engines
*Basic electricity
*Hydraulics
*Gasoline tractor engines
*Diesel tractor engines
*Power trains
*Transmissions
*Trouble-shooting techniques

Four summer months between the two academic years are spent in an internship program with a selected farm equipment dealer.

Length of Course: 20 months

Helpful High School Courses:

Vocational agriculture and agriculture shop work
Industrial arts

Personal Qualities:

Basic mechanical aptitude
Farm background

Personal Equipment Needed: Students should begin assembling a basic tool kit during the first year

Expenses: Acceptance Fee $25 Book fee—$10
Tuition for students over 21—$40 per month plus other fees as indicated

Course Title: FARM EQUIPMENT SERVICE AND SALES

Name of School:	Address:	Telephone:
Canby Area Vocational-Technical School	Hwy. 68 Canby, Minn. 56220	(507) 223-7252

Admission Dates: September

Nature of Work: Farm equipment service and salesmen may maintain, service and repair electrical, mechanical and hydraulic systems in farm machinery, or may apply this technical knowledge to selling such equipment. Testing, adjusting and replacing or repairing worn or broken parts as well as making complete overhauls or major reconditioning of such implements as tractors, combines, pickup balers, corn pickers, drop dryers, field harvesters and elevators and conveyors may be part of this job. Some jobs combine sales with routine service, adjusting and maintenance.

Job Opportunities: Farm equipment service and salesmen work for service departments of equipment dealers, in independent service or repair shops, on large farms and in the service and sales departments of dalers and equipment manufacturers. Some are in research, some work as partsmen, some combine two or more of these functions.

Course Description:

- *Farm equipment set up and theory
- *Machine adjustment
- *Machinery trouble shooting
- *Welding
- *Farm power mechanics (small engines, diesel engines, electrical and hydraulic power systems)
- *Farmer-dealer relations
- *Shop management
- *Sales and service
- *Mathematics and part manual orientation

This course includes two months of on-the-job training between the two academic years.

Length of Course: 20 months (including on-the-job training)

Helpful High School Courses:

- Vocational agriculture
- Industrial arts
- Mechanics shop
- Mathematics

Personal Qualities:

- Good mechanical aptitude
- Farm background
- Interest in meeting and working with the public
- Interest in working with tools and machinery

Personal Equipment Needed:

- Set of hand tools
- Reference books
- Shop uniform

Expenses: Reference books—not more than $10 per quarter
Tuition for students over 21—$40 per month if Minnesota resident
$60 per month if from out of state

Course Title: FARM MANAGEMENT (COOPERATIVE)

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: Fall—dates are announced annually

Nature of Work: Running the family farm as an enjoyable and profitable venture using the efficiency of modern methods in business and farming effecting the best standards of operation is the goal of the farm manager.

Job Opportunities: This course is designed for those engaged in farming as a business.

Course Description: Each farmer keeps a complete record of his farm business. At the end of the year, the records are analyzed by the University of Minnesota. The instructor works with individuals to assist them in using the analysis to improve their farm operations.

Length of Course: 36 months

Helpful High School Courses:

Vocational agriculture	Sciences
Mathematics	Business subjects

Personal Qualities: Sincere interest in improving the farm business

Personal Equipment Needed: None

Expenses: Acceptance Fee $25
Tuition for students over 21—$40 per month

Course Title: FARM MANAGEMENT

Name of School:	Address:	Telephone:
Southwest Minnesota Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: Beginning of any month

Nature of Work: Running the family farm as an enjoyable and profitable venture using the efficiency of modern methods in business and farming, effecting better standards of operation is the goal of farm management.

Job Opportunities: This course helps graduates provide a more satisfying farm family living.

Course Description:

*Farm record keeping and accounting
*Income tax
*Management
*Interpreting farm business analysis
*Farm business reorganization

Length of Course: Indefinite—course runs 12 months continuously

Helpful High School Courses:

Vocational agriculture
Home economics
Accounting or bookkeeping

Personal Qualities: Farm families interested in developing a more profitable farm business.

Personal Equipment Needed: None

Expenses: Cost of processing the farm account book
Tuition for students over 21—$30 per month

Course Title: FARRIER

Name of School:	Address:	Telephone:
Anoka Hennepin Area Vocational Technical School	Box 191 Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: Farriers shoe horses. The farrier is responsible for selecting metals, building proper forge fires, making horse shoes, nailing and finishing shoes and recognizing common errors in shoeing. Preparing the hoof, trimming and readying the hoof for shoeing and handling the horse are part of this trade.

Job Opportunities: A farrier may work for one or more stables; he may set up his own business and shoe horses brought to him on a fee basis; or he may travel to various farms and stables shoeing horses for a certain fee. There is a good demand for farriers in all parts of the country due to the increased popularity of riding. There are a large number of riding clubs and stables in Minnesota and this is the only course offered in this work; the course is one of three offered in the nation by a state-supported school.

Course Description:

- *Forge instruction and practice
- *Metal study and temperatures
- *Use of tools
- *Anatomy of a horse's foot, pastern and leg
- *Preparing hoof for shoe
- *Practice in fitting, nailing and finishing
- *Making various kinds and sizes of shoes
- *Corrective shoeing
- *Communications
- *Horse nutrition

Length of Course: 10 months

Helpful High School Courses:

Industrial arts

Sciences

Personal Qualities:

- Must like and be unafraid of horses
- Must have good physical health and stamina and enjoy physical labor
- Should like to work outdoors and be able to adjust to various temperatures

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$40 per month

Course Title: FASHION MERCHANDISING

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: September

Nature of Work: Fashion merchandising involves all phases of selling from promotion of styles, colors, fabrics, to the actual retail transaction. Fashion merchandisers may be responsible for displays, style shows, inventories planning of new merchandise, stocking and selling.

Job Opportunities: Graduates find work as fashion coordinators, fashion buyers and assistant buyers, fashion consultants, central fashion buyers and in the wholesale and retail promotion of clothing.

Course Description:

*Fashion apparel, including line, color, design, style, fabrics and clothing
*Buying
*Management
*Advertising
*Display
*Fashion sketching and design
*Human relations
*Accounting
*Internship — on-the-job training

Length of Course: 18 months

Helpful High School Courses:

Business courses
Distributive education

Personal Qualities:

Interest in fashion
Aptitude for sales
Good personality
Desire to work with people

Personal Equipment Needed:

Expenses: Acceptance fee—$25 Books—$10
Tuition for students over 21—$40 per month

Course Title: FASHION MERCHANDISING

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates:

Nature of Work: Fashion merchandising includes the buying of fashion merchandise including clothing, shoes and accessories for resale, selling, advertising and promotion. The fashion merchandiser may be responsible for managing a department within a store or may manage a smaller store. Duties would include record-keeping and inventory, preparing displays, planning advertising and promotion and managing style or fashion shows.

Job Opportunities: Shops and retail stores of all sizes need people trained in fashion merchandising. Good opportunities exist in wholesale trade as well, with jobs available in every type of sales. There are good retail positions open in small towns and cities as well as in larger urban areas.

Course Description:

*Sales and sales promotion of fashion goods
*Fashion buying
*Fashion modeling and speech
*Textiles
*Non-Textiles
*Visual merchandising
*Communications
*Mathematics
*Business organization and management
*Accounting
*Business law
*Social sciences
*Human relations

Length of Course: 18 months

Helpful High School Courses:

Business subjects
Home economics
Distributive education

Personal Qualities:

Good personality and ability to work well with others
Good grooming and physical poise
Interest in selling and fashion

Personal Equipment Needed: None

Expenses: Workbooks, etc.—$40 (approximately)
Tuition for students over 21—$802.50 per year

Course Title:—FASHION MERCHANDISING

Name of School:	Address:	Telephone:
Pipestone Area Vocational-Technical School	Pipestone, Minn. 56164	(507) 825-5555

Admission Dates: September (Section I) February (Section II)

Nature of Work: The retail clothing business is fast moving and fascinating. The rapid turnover of merchandise, the public contact and the wide variety of fashion-related jobs including fashion shows, displays, make it appealing to both men and women. Working conditions are pleasant and personal benefits are good.

Job Opportunities: Men and women are needed as sales people, buyers, department managers, in display, advertising, and promotion. Advancement opportunities are good; retail expansion, especially in shopping centers and satellite stores, will continue as population grows. This field is highly competitive but trained individuals will find a good choice of employment.

Course Description:

Practical study of the retail clothing business including:

*Fashion
*Textiles
*Salesmanship
*Display
*Human relations
*Business management and data processing
*Fashion buying
*Store management

Length of Course: 24 months

Helpful High School Courses:

Home economics
Speech
Art
Industrial arts
Basic mathematics

Personal Qualities:

Pleasant personality
Neat appearance
Interest in fashion and textiles
Physical stamina
Ability to communicate ideas

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$45 per month

Course Title: FLUID POWER TECHNOLOGY

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: Fluid power technologists use hand and machine tools in the testing, repairing and maintaining of hydraulic power systems. Careful workmanship, close attention to details in testing functions are necessary to the technologist's success. Evaluation and determination of proper adjustments or repairs and installing new systems are part of the technologist's job.

Job Opportunities: Graduates of this course can expect to find employment in automation, materials handling and processing, heavy motor vehicles, industrial equipment, plant distributors systems, and in specialty shops repairing and maintaining fluid power components and systems.

Course Description:

*Hydraulics and pneumatics
*Fluid power theory
*Basic hydraulic and pneumatic systems components
*Power transmission and controls

Students receive laboratory experience in each area congruent with theoretical instruction.

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Physics
Industrial arts electricity

Personal Qualities:

High school diploma or equivalent
Average or above average mathematical and mechanical reasoning ability
Satisfactory score in entrance examination given by school
Interest in mechanics and precision work

Personal Equipment Needed: Special shop uniforms as specified by the instructor

Expenses: Acceptance fee—$25 Book fee—$10
Tuition for students over 21—$40 per month plus Acceptance and book fee.

Course Title: FLUID POWER TECHNOLOGY

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	15th St. & 11th Ave. Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: September

Nature of Work: Engineering Technicians are part of the team that designs, operates, installs and maintains fluid power systems. Technicians test functions, evaluate operation and determine proper adjustments and repairs using machine and hand tools.

Job Opportunities: Graduates receive a Certificate in Fluid Power Technology which qualifies them as Engineering Technicians. Technicians find work with private industries in automation, materials handling and processing, heavy motor vehicles, heavy equipment, and plant distributors systems; in government and research institutions; and in specialty shops repairing and maintaining components and systems.

Course Description:

*Fluid power circuits
*Testing components
*Fluid power design
*Mathematics
*Strength of materials
*Applied Science
*Electricity
*Drafting
*Industrial relations

Classroom and laboratory experience is provided as each area is studied.

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Physics
Industrial arts electricity

Personal Qualities:

High school diploma or equivalent
Average or above average mathematical and mechanical reasoning ability
Interest in mechanics and precision work

Personal Equipment Needed: Workbooks and shop coat

Expenses: Registration fee—$20
Tuition for students over 21—$40 per month

Course Title: FLUID POWER TECHNOLOGY

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall of Each Year

Nature of Work: Work in this field can cover the spectrum from agricultural implement mechanic, through manufacturing in-plant assembly, plant maintenance, research lab duties of experimental components and testing, and on through systems analysis, troubleshooting, design, installation, maintenance, or sales and may ultimately evolve into a combination of any two or more of these areas which would provide new experiences and opportunity for personal growth.

Job Opportunities: Opportunities for gainful employment exist in almost every segment of our society across the nation, from the smallest farming community to the largest industrial city, and from full-time mechanic working with and without constant immediate supervision to engineering assistants in design and prototype work. The development of fluidics has triggered a sizable switch of machine tools from electrical to fluidic control.

Course Description:

- *Studies and problem solving in mathematics
- *Physics (pertaining to fluids and mechanics)
- *Basic metallurgy (concerning materials used in manufacturing components)
- *Manufacturing machines, tools and procedures
- *Electric and gas welding and brazing
- *Fluid power applications in industry
- *Drafting practices in fluid power schematics using USASI symbols
- *Assembly of systems
- *Disassembly and reassembly of components
- *Instrumentation and testing
- *Building and evaluating circuitry

Length of Course: 21 months

Helpful High School Courses:

- Mathematics
- Science
- Industrial arts

Personal Qualities:

- Dynamic personality
- Inquiring mind
- Ability to solve practical problems as well as theoretical ones
- Self-starting and energetic work habits
- Enjoyment in working with hands and mind simultaneously

Personal Equipment Needed: None

Expenses: Toolbox & tools—$220 (approximately). Personal tools of same type may be substituted rather than purchased
Uniforms, minimum of 3 sets—$25 (approximately)
Texts and technical publication and reference—$25 (approximately) for course
Tuition for students over 21—$32 per month plus above expenses

Course Title: FOOD MERCHANDISING

Name of School:	Address:	Telephone:
Pipestone Area Vocational-Technical School	Pipestone, Minn. 56164	(507) 825-5555

Admission Dates: September, February

Nature of Work: Purchasing groceries, caring for produce, meat, frozen foods, pricing and selling and displaying foods, personnel management and care of the grocery store are part of food merchandising. Working conditions are generally pleasant and the work varied. Public contact is heavy and occasionally long hours or shifts are required.

Job Opportunities: Retail and wholesale food marketing is becoming more highly specialized. Trained workers are needed for in-store management training as well as in other food marketing specialties such as advertising and warehousing.

Course Description: Study of all facets of supermarket operation from duties of carry-out boy to store manager.

Length of Course: 24 months

Helpful High School Courses:

- Home economics
- Agriculture
- Basic mathematics

Personal Qualities:

- Interest in selling
- Good grooming and personal neatness
- Desire to work with people

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$45 per month

Course Title: FOOD PREPARATION (COOK/CHEF)

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Beginning of each quarter

Nature of Work: The food service industry offers you a chance to progress almost as fast as you like. Employers are eagerly searching for young people who are interested in the field. Cooks and chefs perform a variety of duties including menu planning, food preparation, supervising and coordinating of personnel. Purchasing, budgeting and establishing and maintaining a control inventory of food supplies are a part of this occupation.

Job Opportunities: Good positions are available all over the country. The food service industry ranks fourth in size among all industries of the nation. The majority of cooks and chefs are employed in hotels, restaurants, hospitals, schools, resorts and private clubs. There is a definite demand for trained personnel.

Course Description:

- *Use and care of equipment
- *Sanitation principles
- *Food purchasing, storage and handling
- *Menu planning and pricing (culinary language)
- *Quantity and quality cookery
- *Meal preparation
- *Soup and sauce preparation
- *Broiler, fry and grill cooking
- *Salads, and sandwich preparation
- *Meat cutting, cooking and carving
- *Dessert preparation
- *Dining room service
- *Classroom demonstrations
- *Smorgasbord and buffet preparation
- *Study of continental cuisine

Length of Course: 10½ months

Helpful High School Courses:

- Science
- Business courses

Personal Qualities:

- Desire for preparing and serving food
- Keen sense of taste and smell
- Cleanliness and good grooming
- Ability to work with others
- Ability to work under pressure
- Physical stamina

Personal Equipment Needed: None

Expenses: Rented uniforms—$25 for the course
Textbooks—$12.50 (approximately)
Tuition for students over 21—$32 per month

Course Title: FOOD SERVICE ASSISTANT

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: September

Nature of Work: Assist with administrative procedures in food service, supervise preparation and service of foods and beverages, schedule personnel work and hours, maintain standards of sanitation and safety, keep records, and follow through on daily purchasing. In small institutions (25 beds or less) may be cook-manager in charge of actual food preparation.

Job Opportunities: Good outlook for employment in hospitals, nursing homes, institutions.

Course Description:

- *Orientation to food service
- *Principles of nutrition
- *Food preparation and service
- *Principles of sanitation and safety
- *Methods of planning
- *Supervising work of others
- *Practical experience in quantity cooking

Length of Course: 15 months

Helpful High School Courses:

- Home economics
- Science
- Business

Personal Qualities:

- Interest in health, and in food and food service.
- Good physical and mental health

Personal Equipment Needed:

- Laboratory jacket or white uniform
- Hair net
- Notebook and pencils

Expenses: Book fee—$10
Tuition for students over 21—$40 per month
Acceptance Fee—$25

Course Title: FOOD SERVICE MANAGEMENT

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55801	(218) 722-2801

Admission Dates: September

Nature of Work: Restaurant or food service work is often exacting and physically tiring; workers must be on their feet for long hours. Working conditions are usually pleasant and there may be quite a bit of public contact.

Job Opportunities: Hotels, restaurants, schools and other institutions and industrial cafeterias employ many food service workers. Many do a wide variety of things from planning menus and ordering food supplies to serving the food. In some food services, workers may specialize in one thing such as baking or frying. Graduates are qualified to fill any of these positions at the beginner level. Demand for good workers is expected to increase as new restaurants and facilities are developed to meet our growing population.

Course Description:

*Preparation in serving balanced meals	*Roasting
*Cost estimating	*Baking
*Quantity cookery	*Frying
*Meat cutting	*Broiling
*Food preparation	*Braising
	*Sauteing

Length of Course: 18 months

Helpful High School Courses:

Arithmetic	Business and/or home economics
Science	

Personal Qualities:

Good physical health	Ability to work well with people
Physical stamina	

Personal Equipment Needed: White uniforms and aprons

Expenses: Tuition for students over 21—$802.50 per year

Course Title: FOOD SERVICE SUPERVISOR

Name of School:	Address:	Telephone:
Alexandria Area Technical School	Alexandria, Minn.	(218) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: Assisting professional dieticians in supervising food preparation and food service personnel in hospitals, nursing homes, or other institutions, working as a cook manager, catering manager or quantity cooking supervisor is pleasant work with good professional potential. The food service supervisor might also plan menus, including special diets, take care of time and work procedures and bookkeeping.

Job Opportunities: Good job opportunities await the graduate in hospital, nursing homes, schools and other institutions.

Course Description:

*Nutrition
*Principles of food administration
*Principles of sanitation
*Safety and personal hygiene
*Supervising and job training
*Cafeteria service and management
*Practical experience in laboratory kitchen and nursing homes, hospitals and institutions.
*Ordering
*Record keeping
*Business management
*Communications
*Business mathematics
*Human relations

Length of Course: 15 months

Helpful High School Courses:

Home Economics
Business courses

Personal Qualities:

Good physical health (Examination required)

Personal Equipment Needed: Uniforms to be worn in the laboratory kitchen

Expenses: Acceptance Fee—$25
Books—$10
Tuition for students over 21—$40 per month plus above fees

Course Title: GENERAL OFFICE PRACTICE

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: Beginning of June and December Quarter

Nature of Work: General office workers type, file, operate calculating machines, do clerical tasks, answer phones, greet visitors, act as receptionists and provide the office with a kind of Jill-of-all trades. Some general office workers have one main responsibility such as typing, and fill in where needed in other areas.

Job Opportunities: Manufacturing firms, banks, insurance companies, hospitals, education institutions, retail merchants, various service agencies and non-manufacturing businesses employ general office workers.

Course Description:

First Quarter	Second Quarter
*Typing	*Typing
*Business machines/mathematics	*Filing and personal dynamics
*Business English	*Business machines
*Office practice	*Clerical work experience

Length of Course: 6 months

Helpful High School Courses:

Typing (at least one unit is recommended)	English
	Mathematics

Personal Qualities:

Neatness	Ability to get along well with others
Accuracy	

Personal Equipment Needed: Books and other materials as required by course

Expenses: Incidental fee—$40 (approximately)
Tuition for students over 21—$65 per month

Course Title: GRAIN AND FEED TECHNOLOGY

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: Grain and feed technologists combine basic scientific knowledge with a broad background in business practices. Most specific jobs, grain inspectors, for example, require on-the-job training and advancement comes rapidly with experience and development.

Job Opportunities: Graduates of this course work in grain elevators, for feed and farm suppliers and processors. Many technicians work in research, in inspection and regulation of feed and grains in private industry and for the state and Federal governments.

Course Description:

*Basic sciences in crop production and animal nutrition
*Grain grading
*Fertilizers
*Feeds
*Communications
*Business practices
*3 months of supervised occupational experience in the industry.

Length of Course: 18 months (includes 3 months of supervised experience)

Helpful High School Courses:

Speech
Mathematics
Biology
Bookkeeping
Vocational agriculture

Personal Qualities:

Scientific interest
Interest in working with people

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: GRAPHIC ARTS I (LETTERPRESS)

Name of School:	Address:	Telephone:
Eveleth Area Vocational-Technical School	402 Roosevelt Ave. Eveleth, Minn. 55734	(218) 749-2285

Admission Dates: First week in September

Nature of Work: Graphic arts includes all the printing processes and techniques. Usually a graduate of this course would work as a pressman or assistant pressman. His job would be to make ready type forms and plates for final printing and tend the presses. Work differs slightly, depending on the equipment in the shop or plant and the number of people employed. Workers, however, are expected to possess a wide knowledge of the field in general.

Job Opportunities: Most graduates of this course work for newspapers, job printing shops, in-plant printing in industry and business and companies which print calendars, labels, cartons and other needs of industry and marketing.

Course Description:

*Elementary and advanced composition
*Linotype operation and maintenance
*Imposition covering lockup of forms for platen and cylinder presses
*Hand platen operation
*Automatic platen and automatic cylinder operation
*Stereotype casting
*Bindery operation
*Related technical information
*Silkscreen printing
*Layout and design

Length of Course: 9 months

Helpful High School Courses:

Industrial arts
English
Chemistry
Basic mathematics

Personal Qualities:

Neat appearance
Mechanical aptitude
Ability to visualize color
Physical strength and endurance

Personal Equipment Needed:

Notebooks
Textbooks
Printer's apron

Expenses: Incidentals—$44 (includes books, supplies, uniforms which become property of the student)
Tuition for student over 21—$65 per month
(Next year will be $150 per quarter for Minnesota residents; $195 per quarter for non-residents)

Course Title: GRAPHIC ARTS II (PHOTOLITHOGRAPHY)

Name of School:	Address:	Telephone:
Eveleth Area Vocational-Technical School	402 Roosevelt Ave. Eveleth, Minn. 55734	(218) 749-2285

Admission Dates: First week in September

Nature of Work: Graphic arts includes all the printing processes and techniques necessary to offset printing. Several operations are involved: camera work, stripping negatives into layout sheets or flats, platemaking, tending the offset presses and ther auxiliary operations. Usually a worker specializes in one of these, but in smaller shops may have something to do with several.

Job Opportunities: This advanced course in printing prepares students for jobs in offset printing. They may also become apprentices with this background. Opportunities for both union and non-union workers are plentiful in job shops, with newspapers and in large printing plants which make labels, cartons, signs and other printed matter for industry.

Course Description:

*Mathematics
*Science
*English
*Drawing
*Paper chemistry
*Photography and equipment
*Copy preparation
*Pasteups
*Lithographic and press cameras
*Photographic films and paper
*Darkroom processing
*Stripping
*Platemaking
*Exposing
*Presswork
*Color process printing
*Advanced silkscreen
*Vari-type
*Layouts and design

Length of Course: 9 months

Helpful High School Courses:

Chemistry
English
Drawing
Mathematics
Photography
Journalism

Personal Qualities:

Desire to succeed
Ability to work well with others
Neat appearance
Mechanical aptitude
Ability to visualize
Physical strength and stamina

Personal Equipment Needed:

Notebooks
Textbooks
Shopcoats

Expenses: Incidental fee—$30 (includes supplies, books, uniforms and tools which become property of the student)
Tuition for students over 21—$65 per month
(Next year will be $150 per quarter for Minnesota residents; $195 per quarter for non-residents)

Course Title: GRAPHIC ARTS

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September

Nature of Work: Graphic arts offset or letterpress printers are responsible for preparing materials for reproduction by the offset lithography method or by letterpress. Offset lithography skills include photography (plates are made by photographing the copy), art and lettering (for making corrections of negatives), stripping (making layouts on paper, glass or film to show the correct placement and make-up of all elements to be printed, platemaking, running the presses. Letterpressmen prepare typeforms and plates for printing and run the presses. Materials printed by either method include books, calendars, maps, posters, labels, office forms, catalogs, cartons, newspapers and magazines.

Job Opportunities: Letterpress and offset printers are needed in all types of printing shops, for in-plant printing departments maintained by some large business concerns, for printers engaged in making calendars, boxes and other paper products and for newspapers.

Course Description:

Letterpress
- *Composition
- *Lockup
- *Presswork
- *Bindery

Offset
- *Hot and cold composition
- *Pasteups
- *Camera work
- *Stripping
- *Platemaking
- *Offset presswork

Advanced Courses
- *Markup methods
- *Scaling
- *Estimating costs
- *Advanced pasteups
- *Camera work

Length of Course: 18 months

Helpful High School Courses:
- Industrial arts — print shop
- Art
- Mathematics

Personal Qualities:
- Interest in printing
- Neatness and accuracy in work habits
- Ability to concentrate on details

Personal Equipment Needed: Books, supply—approximate cost, $15 for first year, $10, second year

Expenses: Service fee—$7
Tuition for students over 21—$40 per month plus service fee

Course Title: GRAPHIC ARTS

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Graphic arts offset or letterpress printers are responsible for preparing materials for reproduction by the offset lithography method or by letterpress. Offset lithography skills include photography (plates are made by photographing the materials to be reproduced), art and lettering (making corrections on negatives), stripping (making exact layouts on paper, glass or film to show correct placement and makeup of all elements) platemaking and running the presses. Materials printed by either method include books, calendars, maps, posters, labels, office forms, catalogs, cartons, newspapers and magazines.

Job Opportunities: The Twin Cities' area has the third largest graphic arts industry in the United States in terms of numbers of people employed. Letterpress and offset printers are needed in all types of printing shops, for printers engaged in making specific industrial products such as cartons and labels and for in-plant printing departments maintained by large business concerns. Newspapers also employ a great number of printers skilled in this area. Most people enter the field as apprentices in hand composition, casterman, proofreader, markup man, layout man, press feeder, pressman, electrotyper, stockcutter and binderyman and other area.

Course Description:

- Laboratory shop course
- *Hand composition
- *Layout and design
- *Display composition
- *Stonework — lock and imposition
- *Platen and cylinder letterpress work
- *Bindery work
- *Introduction to linotype

Related Subjects

- *Mathematics
- *Communications
- *Drawing — blueprint reading
- *Science
- *Industrial relations

Length of Course: 18 months

Helpful High School Courses:

- Mathematics
- Sciences, including chemistry and physics
- Art

Personal Qualities:

- Manual dexterity and perfect color vision
- Good eyesight
- Neatness and accuracy in work habits
- Pride in producing a high-quality product

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: GRAPHIC ARTS

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: September

Nature of Work: The graphic arts industry includes a wide range of jobs from sales to highly technical areas of the printing process itself. The graduates of this course usually find work with weekly newspapers. Most are involved in some selling plus some layout, press work or other duties necessary to making ready the newspaper or other jobs the shop might print.

Job Opportunities: Over 135 related employment opportunities from equipment repair to sales, advertising and printing management might be open to the graduate of this course. Jobs on weekly newspapers provide excellent opportunities and experience and may be considered as adjunct to advanced training in the field.

Course Description:

- *Art
- *Layout
- *Composition
- *Camera and dark room
- *Stripping
- *Platemaking
- *Presswork
- *Binding
- *Other related subjects

Length of Course: 9 months

Helpful High School Courses:

- Industrial arts — print shop
- Art
- English
- Science
- Mathematics

Personal Qualities:

- Interest in printing, art, writing and photography
- Neatness and accuracy in work habits
- Ability to concentrate on details

Personal Equipment Needed: None

Expenses: Registration fee—$5
Tuition for students over 21—$60 per month plus registration fee
G.I. Students—½ tuition

Course Title: HEAVY EQUIPMENT OPERATION AND MAINTENANCE

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: June

Nature of Work: Heavy equipment operators and maintenance men work with heavy construction equipment such as cranes, power shovels, scrapers, paving machines, motor graders, rock crushers, trench-digging machines, conveyors and bulldozers. Graduates of this course are skilled in analyzing malfunctions of such machines and keeping them in running order as well as in the operation of the machines.

Job Opportunities: Graduates of this course work for highway departments, construction contractors, utility companies, large-scale builders involved in construction of dams, airports, bridges and the development of raw land and by distributors of building materials.

Course Description:

*Crawler tractors and bulldozers	*Backhoes
*Motor graders	*Draglines
*Motor scrapers	*Cranes
*Power shovels	*Other equipment

Length of Course: 21 months

Helpful High School Courses: Industrial arts

Personal Qualities:

Physical capabilities for the work Mechanical aptitude

Personal Equipment Needed: None

Expenses: Registration fee—$5
Tuition for students over 21—$100 per month
G.I. Students—½ tuition

Course Title: HIGHWAY TECHNICIAN (CIVIL TECHNOLOGY)

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Civil Technicians assist civil engineers in the planning and construction of highways, dams, bridges and other structures. This is an area of rapid expansion, especially as roads and freeway systems grow.

Job Opportunities: Highway departments, engineering firms, construction architects and construction companies employ civil technicians.

Course Description:

*Drafting
*Surveying
*Structural design
*Inspection
*Preparing specifications
*Cost estimating
*Materials testing and selection

Length of Course: 18 months

Helpful High School Courses:

Mathematics through trigonometry
Physics
Drafting

Personal Qualities:

Ability to work well with others
Liking for both inside and outside work
Ability to concentrate on details

Personal Equipment Needed: Basic drawing instruments (needed in the field)

Expenses: Instruments, etc.—$25 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: HIGHWAY TECHNICIAN

Name of School:	Address:	Telephone:
St. Paul Vocational-Technical Institute	235 Marshall Ave. St. Paul, Minn. 55404	(612) 227-9121

Admission Dates:

Nature of Work: The technician's work includes outdoor work on construction sites or indoor specialties in the areas of materials, research and planning. Technicians may act as surveyor, rodman or chairman, inspector on construction projects. He may be involved in testing of bituminous, concrete, soil-base, lab testing, research, and planning.

Job Opportunities: Highway technicians are employed at the beginning level by the state highway department, municipalities or private contractors.

Course Description:

Laboratory
Unit I Technical applied mathematics
Unit II Surveying
Unit III Testing soil-base, materials
Related Instruction

*Mathematics
*Highway drafting, plan reading and mapping
*Physics for highway technicians
*Industrial relations
*Communications and technical writing

Length of Course: 10 months

Helpful High School Courses:

Mathematics
Physics
Basic sciences

Personal Qualities:

Good mathematics background
Liking for outdoor work
Interest in highway engineering
Good driving record

Personal Equipment Needed:

Expenses: Tuition for students over 21 is set by St. Paul Board of Education.

Course Title: INDUSTRIAL CHEMISTRY

Name of School:	Address:	Telephone:
St. Paul Area Vocational-Technical Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Chemical technicians work with chemists and chemical engineers in the plant or laboratory. He may be in charge of routine analysis of the supplies and products of a chemical plant. Some run experiments and procedures for a chemist engaged in research. The chemical technician must understand chemical practice, be careful and accurate, and be able to report clearly what he observes.

Job Opportunities: Chemical technicians in this area are employed by petroleum industries, adhesives, cosmetics, metallurgical firms, in the food industries and many others. The job outlook is good with a continued demand in sight.

Course Description:

First Year	Second Year
*Inorganic chemistry	*Organic chemistry
*Analytic chemistry	*Atomic bond theory
*Technical mathematics	*Industrial practice and unit operations
*Technical science	*Instrumentation laboratory
*Technical communications	*Related electronics
*Related drawing	*Industrial relations

High school courses in mathematics and sciences will be available for those without this background.

Length of Course: 20 months

Helpful High School Courses:

Algebra	Chemistry
Geometry	Physics

Personal Qualities:

Aptitude for science and mathematics	Patience and accuracy in work habits
Ability to concentrate	Ability to express ideas

Personal Equipment Needed:

Expenses: Tuition for students over 21—$65 per month

Course Title: INSURANCE OFFICE PROCEDURES

Name of School:	Address:	Telephone:
Canby Area Vocational-Technical School	Hwy. 68 Canby, Minn. 56220	(507) 223-7252

Admission Dates: September

Nature of Work: Insurance office workers must be skilled in all areas of office procedures such as typing, using transcribers, duplicators, adding machines and data processing machines. They must also be able to process insurance forms, understand principles of insurance planning and other details related to insurance.

Job Opportunities: Graduates of this course will find employment as office managers, salesmen, receptionists, typists and general office workers in insurance company offices, agency offices, and working for banks, mortgage and finance institutions, health, welfare and service agencies dealing with insurance.

Course Description:

*Insurance	*Accounting
*Clerical work	*English
*Office procedures	*Mathematics
*Typing	*Psychology
*Statistical typing	*Human relations

Length of Course: 11 months

Helpful High School Courses:

Business subjects	Mathematics
English	

Personal Qualities:

Interest in insurance	Like typing and using business machines
Initiative and willingness to learn	
Average or better general ability	

Personal Equipment Needed:

Reference books	Personal supplies

Expenses: Enrollment fee—$10
Supplies—$10-$15 per year
Living expenses—$1.25-$1.50 per day for room
Tuition for students over 21—$40 per month (Minnesota resident)
$60 per month (out-of-state resident)

Course Title: INSTRUMENT MAINTENANCE AND REPAIR

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Skilled instrumentation workers are needed to assemble, install, repair, maintain and adjust indicating, recording and controlling instruments. These delicate and intricate mechanism are used to measure and control such variables as pressure, flow, temperature, motion, force and chemical composition or other specific condition. The technician uses hand tools and precision instruments in his work and must be a careful and accurate worker.

Job Opportunities: Modern industry depends on instrumentation; from spacecraft to food storage, every type of fabricated and processed product depends at some time on the accurate and specific instrument. Industry, research, science, merchandising, transportation all need instrumentation experts.

Course Description:

*Mathematics
*Electricity
*Basic electronics
*Fluid mechanics
*Measurement
*Control devices
*Principles of operation
*Construction and installation
*Automatic controls
*Blueprint reading
*Mechanisms

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Science
Electricity or electronics

Personal Qualities:

Ability to work well with small or precise parts
Mathematical aptitude
Good manual and finger dexterity
Interest and ability in problem solving

Personal Equipment Needed:

Hand tools
Workbooks

Expenses: Tools, books—$20 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: INTERIOR DESIGN AND SALES ASSISTANT

Name of School:	Address:	Telephone:
Alexandria Area Technical School	Alexandria, Minn.	763-3196

Admission Dates: Day after Labor Day

Nature of Work: Designers plan the arrangement of home or office furnishings and coordinate the fabrics, floor covering and accessories. Most department and furniture stores have designer-salespeople to help customers select home furnishings. Planning and selling, usually within a certain budget and with the customers' ideas and budget in mind make this a creative and challenging field.

Job Opportunities: Department and furniture stores are expecting to employ more designer-salespeople. More people realize today the help a designer can provide in home or office planning and many feel the designers professional skills help them avoid costly errors.

Course Description:

*Interior design
*Graphics
*Structural design and mechanical equipment
*Furniture design
*History and theory of art
*Design principles
*Selling
*Human relations
*Business management
*Communications

Length of Course: 18 months

Helpful High School Courses:

Home economics
Business subjects
Art

Personal Qualities:

Artistic ability
Interest and desire to work with people

Personal Equipment Needed: None

Expenses: Acceptance Fee—$25
Book fee—$10
Tuition for students over 21—$40 per month plus above fee

Course Title: INTERNATIONAL DOCUMENTS SPECIALIST

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: The International Documents Specialist performs duties in rating cargo according to tariff rates; reviews ratings prepared by other workers to insure that cargo has been classified according to tariff rates; verifies code assigned shipper with bills of lading; assigns codes to new accounts; examines bills of lading on cargo consigned for more than one port or ship for accuracy of destination, name of ship and tariff charges; reviews tariff charges included in tariff due to harbor department, and gives instructions to workers for correcting documents, if necessary.

Job Opportunities: International Documents Specialists work for businesses engaged in international trade; for example, manufacturers, wholesalers or other merchandisers engaged in foreign trade.

Course Description:

- *Foreign trade
- *International documents
- *Banking terms and documents
- *Transportation terms and documents
- *U.S. government rules and regulations
- *U.S. and foreign government documents
- *Insurance terms and documents
- *Freight rates
- *International correspondence
- *Shipping terms
- *Quotations, invoices, customs
- *Credit and collections
- *Internship in a business engaged in foreign trade

Length of Course: 11 months

Helpful High School Courses:

- Typing and bookkeeping
- Office practices
- Business law
- Speech
- Economic geography

Personal Qualities:

- Aptitude for details
- Ability to work well with others
- Interest in work

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: LAW ENFORCEMENT

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: September

Nature of Work: Graduates will work with various types of police work, detective work, guard work and other positions or jobs which are part of law enforcement.

Job Opportunities: There are excellent employment opportunities in police departments, sheriff departments, the highway patrol and other law enforcement agencies.

Course Description: *First year is spent in the classroom and laboratory
*Second year includes advanced classroom instruction and practical law enforcement.

Length of Course: 18 months

Helpful High School Courses:

- Physical education
- Business courses
- Mathematics
- Psychology

Personal Qualities:

- Emotional stability
- Personal alertness
- Good physical and mental health
- Ability to work well with people
- Ability to react quickly and properly in emergencies.

Personal Equipment Needed: Clothing, books

Expenses: Acceptance fee—$25
Clothing—$50
Books—$35
Tuition for students over 21—$40 per month

Course Title: MACHINE OPERATOR

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: The machine operator sets up and operates lathes, milling machines, boring machines, multiple spindle drill presses, screw machines and others. Usually a machine operator is trained to operate only one or two of these machines. He performs specific operations on various raw materials, castings and forgings according to specific instructions provided on blueprints. He applies his knowledge of basic mathematics, blueprint reading and shop processes in making his various products.

Job Opportunities: Machine tool operators usually work for the following industries; fabricated metal products, transportation equipment, machinery, and others. They may work in the production department, maintenance department, toolroom and job shops in these industries.

Course Description:

*Operating machine tools, including lathes,
*Boring machines, milling machines, screw machines and others. Proficiency will be developed on no more than two of these.
*Blueprint reading
*Shop mathematics
*Drafting
*Shop processes

Length of Course: 9 months

Helpful High School Courses:

Shop or industrial arts
Mathematics

Personal Qualities:

Interest in working with metals and machinery
Good mechanical and mathematical aptitude

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: MACHINE OPERATOR (MACHINE SHOP)

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Skilled machine tools operators usually work with one or two types of machines and do little or no hand fitting or assembly. He adjusts speeds, feeds and controls for a machined sequence and selects the proper cutting tools. He checks his work with micrometers, gauges and other precise measuring tools to see whether it meets specifications.

Job Opportunities: Machinists are the largest group of workers in the metal working industry. There is a demand for skilled workers in machine shops of all sizes and there is a good opportunity to go into business for ones' self.

Course Description:

Students specialize in one or two of the following machines: engine lathe, milling machine, drill press, shaper and others

*Mathematics
*Blueprint reading
*Related science
*Bench work
*Mass production methods

Length of Course: 9 months

Helpful High School Courses:

Industrial arts

Mathematics

Personal Qualities:

Interest in working with metals and machines

Ability to do neat and accurate work

Mechanical aptitude

Personal Equipment Needed: Machinists' hand tools—needed for the industry

Expenses: Tools, etc—$50 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: MACHINE OPERATOR

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: September

Nature of Work: The machine operator sets up and operates lathes, milling machines, boring machines, multiple spindle drill presses, screw machines and others. Usually a machine operator is trained to operate only one or two of these machines. He performs specific operations on various raw materials, castings and forgings according to specific instructions provided on blueprints. He applies his knowledge of basic mathematics, blueprint reading and shop processes in making his various products.

Job Opportunities: Machinists work in the following industries—fabricated metal products, transportation equipment, machinery and others. They may be employed in the production department, maintenance department, toolroom or job shop in these industries.

Course Description:

*Operating machine tools, including lathes, boring machines, milling machines, screw machines and others. Proficiency will be developed on no more than two of these.

*Blueprint reading
*Shop mathematics
*Drafting
*Shop processes

Length of Course: 9 months—some complete the course in less time, depending upon entering qualifications and experience and personal ability to learn.

Helpful High School Courses:

Industrial arts — machine shop
Mathematics

Personal Qualities:

Good mechanical and manual dexterity

Personal Equipment Needed: None

Expenses: Registration fee—$5
Course fee—$60
Tuition for students over 21—$60 per month
G.I. Students—½ tuition

Course Title: MACHINE OPERATOR

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-4606

Admission Dates: First Tuesday after Labor Day

Nature of Work: A machinists work is varied and requires a wide knowledge of shop practices, materials and machine tools. He must plan and carry through all operations from blueprints or written specifications to the finished product. He makes computations, uses precision measuring devices, sets up the machines and may hand finish and assemble the product once the machine operations are finished.

Job Opportunities: Graduates of this course are general machinists or machine operators in the following industries: machinery, transportation, fabricated metal or plastic products, primary metals, electrical railroad, chemical, food processing and textiles.

Course Description:

*Properties of metals and plastics
*Operation of lathes, grinders, shapers and mills
*Hand shaping and finishing metals
*Reading and interpreting blueprints
*Using mathematics in layout work
*Planning and executing sample set-ups

Length of Course: 9 months

Helpful High School Courses:

Mathematics
Machine shop

Personal Qualities:

Accuracy in work
Manual dexterity
Patience
Ability to think logically in problem solving

Personal Equipment Needed: Basic hand tools

Expenses: Tools and miscellaneous—$35-$50
Tuition for students over 21—$30 per month

Course Title: MACHINE OPERATING, PRODUCTION

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: Beginning of each quarter (September, December and June)

Nature of Work: Production machinists specialize in two of the following machines; lathe, shaper, drill press, surface grinder, milling machine, turret lathe, punch press or power saw. Duties include planning and carrying through all operations connected with the particular machines. A machinist may switch frequently from operations on one to operations on another.

Job Opportunities: Production departments of most industries which produce metal parts on a production or assembly line employ machine operators. Machinery, electrical, transportation equipment, fabricated metal products and primary metals industries employ large numbers of machinists; others work in the railroad, chemical, food processing, textile industries. Federal government installations also employ all-round machinists.

Course Description:

*Bench tools
*Mathematics
*Drawing
*Communications
*Industrial relations
*Operation of at least two machines to develop high degree of competence

Length of Course: 10 months

Helpful High School Courses:

Industrial arts
Shop courses
Technical mathematics
Physical sciences

Personal Qualities:

Good physical health
Ability to do moderate lifting
Good eyesight with or without glasses

Personal Equipment Needed: Textbooks, safety glasses, Allen wrenches

Expenses: Incidental fees—$25 approximately
Tuition for students over 21—$65 per month

Course Title: MACHINE SHOP

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: Machinists are skilled in the principles of setting up and operating machinery or machine tools. Work in a machine shop usually includes all cold metal work involved in shaping a piece of metal into a precision part using machine and hand tools. A highly skilled machinist might specialize in tool and die making. All machinists must be able to work from shop drawings and blueprints as well as written specifications and must use measuring tools and mathematical formulas in calculating operations necessary to machine a certain product.

Job Opportunities: Machinists are needed in production shops, machine shops, tool and die shops, in the automotive industry, for work in fabricated metal products, primary metals, for railroads, chemical and food industries, textiles and for the Federal government. Employment at the beginning level may be as bench hands, inspectors, layout men, machine operators, maintenance men, tool and cutter grinders or others. Many graduates enter apprenticeship training.

Course Description:

*Micrometer
*Vernier calipers
*Layout
*Engine lathe
*Sensitive drill press
*Radial drill press
*Milling machine
*Horizontal and vertical spindle surface grinder
*Band saws
*Drill grinders
*Shapers
*Heat treatment
*Heat safety

Length of Course: 19 months

Helpful High School Courses:

Mathematics
Physics
Industrial arts metal classes

Personal Qualities:

Good general learning ability
Mechanical and mathematical aptitude
Interest in working with metals and tools

Personal Equipment Needed:

Safety glasses
Shop aprons and uniforms
Hand tools — students in second part of course are encouraged to begin their own collection of hand tools needed in the industry

Expenses: Acceptance Fee—$25
Books—$10
Tuition for students over 21—$40 per month plus above fees

Course Title: MACHINE SHOP

Name of School:	Address:	Telephone:
Austin Area Vocational-Technical School	Austin, Minn. 55912	(507) 433-7301

Admission Dates: Fall

Nature of Work: Machinists are skilled in the principles of setting up and operating machinery or machine tools. Work in a machine shop usually includes all cold metal work involved in shaping a piece of metal into a precision part using machine and hand tools. A highly skilled machinist might specialize in tool and die making. All machinists must be able to work from shop drawings and blueprints as well as written specifications and must use measuring tools and mathematical formulas in calculating operations necessary to machine a certain product.

Job Opportunities: Machinists are needed in production shops, machine shops, tool and die shops, in the automotive industry, for work in fabricated metal products, primary metals, for railroads, chemical and food industries, textiles and for the Federal government. Employment at the beginning level may be as bench hands, inspectors, layout men, machine operators, maintenance men, tool and cutter grinders or others. Many graduates enter apprenticeship training.

Course Description:

*Mathematics	*Milling machines
*Blueprint reading	*Surface grinders
*Metallurgy	*Die theory
*Speeds and feeds	*Molds
*Lathes	*Dies
*Drill presses	*Jigs
*Fixtures	

Length of Course: 18 months

Helpful High School Courses:

Mathematics	Physics
Industrial arts	

Personal Qualities:

Good general ability	Interest in working with metals and tools
Mechanical and mathematical aptitude	

Personal Equipment Needed: Hand tools and books—$50 (approximately)

Expenses: Tuition for students over 21—$32 per month, plus above costs

Course Title: MACHINE SHOP (MACHINE TECHNOLOGY)

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Machinists must be able to set-up, operate and finish metal parts using such machine tools as lathes, drill presses, boring machines, grinding machines, milling machines and automatic screw machines. Machinists work from blueprints, drawings, mathematical formulas and written specifications. They must be able to apply metallurgical concepts and understand particular use and skill needed to make metal parts.

Job Opportunities: Good employment opportunities exist in general machine shops, tool and die shops, automotive machine shops, the transportation industries including aircraft and spacecraft and in machine shop departments of fabricated metal industries.

Course Description:

*Operation of shop machines including lathe turning and numerical control machines
*Micrometer
*Vernier caliper
*Heat treatment
*Layout
*Optical comparator
*Blueprint reading
*Mathematics
*Drafting
*Measurement
*Hand tools

Length of Course: 18 months

Helpful High School Courses:

Mathematics through trigonometry
Industrial arts — machine shop
Sciences

Personal Qualities:

Good physical health and stamina
Mechanical aptitude and manual dexterity
Habits of neatness and accuracy in work, and desire to make quality products.

Personal Equipment Needed: Machinists hand tools—helpful during course and a necessity on the job

Expenses: Tools, etc.—$50
Tuition for students over 21—$802.50 per year

Course Title: MACHINE SHOP—TOOL AND DIE MAKING

Name of School:	Address:	Telephone:
Faribault Area Vocational-Technical School	Faribault, Minn. 55021	(507) 334-3965

Admission Dates: September with later enrollments as vacancies occur

Nature of Work: Machinists form metal parts for machines or equipment from precise specifications using blueprints or written specifications. All the skills needed to turn a block of metal into a precise part must be at the machinists command. Tool and die makers have specialized skills used in producing the jigs and fixtures required to hold metal while it is stamped, shaved or drilled and the metal forms or dies used in diecasting or molding metals and plastics. Precise and accurate work is required of machinists and tool and die makers.

Job Opportunities: Graduates of this course usually enter the field through apprenticeship. There is a good demand for workers at all times in industry, tool and die departments of specific metals industries, in plastics forming, and in tool and die or specialty machine shops.

Course Description:

*Engine and turret lathes
*Drill presses
*Shapers
*Milling machines
*Grinders
*Jig borers
*Presses
*Saws
*Numerically controlled machines
*Mathematics
*Shop drawings
*Print reading
*Metallurgy
*Tool grinding
*Jigs and fixtures
*Job information

Length of Course: 19 months

Helpful High School Courses:

Mathematics
Industrial arts—metal shop
Mechanical drawing or drafting

Personal Qualities:

Ability to solve algebraic formulas
Aptitude for working with precision measurements
Manual and finger dexterity
Good vision
Ability to concentrate on work
Interest in metals and metal working tools and equipment

Personal Equipment Needed:

Safety glasses
Tool bits
Notebooks

Expenses: Enrollment fee—$5
Reference books and supplies—first year, $18, second year, $26
Tuition for students over 21—$40 per 4-week period
Tuition for out-of-state residents—$55 per month

Course Title: MACHINE SHOP

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	15th St. and 11th Ave. Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: September

Nature of Work: Machinists are skilled in the principles of setting up and operating machinery or machines tools. Work in a machine shop usually includes all cold metal work involved in shaping a piece of metal into a precision part using machine and hand tools. A highly skilled machinist might specialize in tool and die making. All machinists must be able to work from shop drawings and blueprints as well as written specifications and must use measuring tools and mathematical formulas in calculating operations necessary to machine a certain product.

Job Opportunities: Machinists are needed in production shops, machine shops, tool and die shops, in the automotive industry, for work in fabricated metal products, primary metals, for railroads, chemical and food industries, textiles and for the Federal government. Employment at the beginning level may be as bench hands, inspectors, layout men, machine operators, maintenance men, tool and cutter grinders or others. Many graduates enter apprenticeship training.

Course Description:

- *Use of hand tools
- *Measuring devices
- *Set up and operation of lathes, drill presses, shapers, grinders, milling machines, turret lathes, saws and presses.
- *Mathematics
- *Blueprint reading
- *Shop theory
- *Heat treating

Length of Course: 9 months

Helpful High School Courses:

- Mathematics
- Industrial arts —machine shop

Personal Qualities:

- High school diploma or equivalent
- Mechanical and mathematical aptitude
- Interest in metals and machine tools

Personal Equipment Needed: Shop coat, workbooks

Expenses: Registration fee—$20
Tuition for students over 21—$40 per month

Course Title: MACHINE SHOP

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September

Nature of Work: Machinists are skilled in the principles of setting up and operating machinery or machine tools. Work in a machine shop usually includes all cold metal work involved in shaping a piece of metal into a precision part using machine and hand tools. A highly skilled machinist might specialize in tool and die making. All machinists must be able to work from shop drawings and blueprints as well as written specifications and must use measuring tools and mathematical formulas in calculating operations necessary to machine a certain product.

Job Opportunities: Machinists are needed in production shops, machine shops, tool and die shops, in the automotive industry, for work in fabricated metal products, primary metals for railroads, chemical and food industries, textiles and for the Federal government. Employment at the beginning level may be as bench hands, inspectors, layout men, machine operators, maintenance men, tool and cutter grinders or others. Many graduates enter apprenticeship training.

Course Description:

First Year	Second Year
*Basic skills	*Basic diemaking
*Shop safety	*Advanced layout
*Basic machine tool operations	*Advanced machining and grinding
*Layout	*Use of inspection equipment including optical comparators, vernier calipers, gauge blocks and indicators.
*Heat treating	
*Project inspection	

Length of Course: 18 months

Helpful High School Courses:

Industrial arts — metal and machine shops	Mathematics

Personal Qualities:

High school diploma or equivalents	Interest in metals and machine tools
Mechanical and mathematical aptitude	

Personal Equipment Needed: Books—$25, first year; $10, second year
Tools—$65, first year; $150, second year (students purchase basic hand tools needed when they enter the industry)

Expenses: Service fee—$7 upon acceptance
Tuition for students over 21—$40 per month

Course Title: MACHINE SHOP

Name of School:	Address:	Telephone:
St. Paul Techical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Machinists are skilled in the principles of setting up and operating machinery or machine tools. Work in a machine shop usually includes all cold metal work involved in shaping a piece of metal into a precision part with hand and machine tools. A highly skilled machinist might specialize in tool and die making. All machinists must be able to work from shop drawings and blueprints as well as written specifications and must use measuring tools and mathematical formulas in calculating operations necessary to machine a certain product.

Job Opportunities: Employment may be found in the following industries: railroads, textiles, automotive, steel, printing, food processing, fabricated and primary metals, and chemicals. Machinists are employed in production shops, job shops, machine shops, tool and die shops and maintenance shops within these industries.

Course Description:

Laboratory and Shop Courses
- *Bench work with hand tools
- *Cutting tools
- *Lathe
- *Machine tool operation,
  - drill press
  - shaper
  - lathe
  - planer
  - face grinder
  - cylindrical grinder
  - tool and cutter grinder
  - milling machines
- *Making fixtures
- *Maintenance work
- *Welding

Related Courses
- *Mathematics
- *Communications
- *Drawing, blueprint reading
- *Science
- *Industrial relations

Length of Course: 18 months

Helpful High School Courses:
- Mathematics
- Physics
- Mechanical drawing
- Industrial arts — metal shop

Personal Qualities:
- Good eyesight
- Good physical strength
- Manual and physical dexterity

Personal Equipment Needed: Safety glasses

Expenses: Tuition for students over 21—$65 per month

Course Title: MACHINE SHOP I

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: September

Nature of Work: Machinists are skilled in the principles of setting up and operating machinery or machines tools. Work in a machine shop usually includes all cold metal work involved in shaping a piece of metal into a precision part using machine and hand tools. A highly skilled machinist might specialize in tool and die making. All machinists must be able to work from shop drawings and blueprints as well as written specifications and must use measuring tools and mathematical formulas in calculating operations necessary to machine a certain product.

Job Opportunities: Machinists are needed in production shops, machine shops, tool and die shops, in the automotive industry, for work in fabricated metal products, primary metals, for railroads, chemical and food industries, textiles and for the Federal government. Employment at the beginning level may be as bench hands, inspectors, layout men, machine operators, maintenance men, tool and cutter grinders or others. Many graduates enter apprenticeship training.

Course Description:

*Construction of metal parts
*Tools and projects
*Understanding use of blueprints and written specifications
*Use of hand tools
*Measuring instruments

Length of Course: 9 months

Helpful High School Courses:

Mathematics through algebra
Industrial arts

Personal Qualities:

Good eyesight
Good physical strength
Manual dexterity

Personal Equipment Needed:

Shop aprons—$1 each
Safety glasses—$3.50 per pair

Expenses: Registration fee—$5
Tuition for students over 21—$60 per month
G.I. Students—½ tuition

Course Title: MACHINE SHOP II

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: September

Nature of Work: Machinists are skilled in the principles of setting up and operating machinery or machine tools. Work in a machine shop usually includes all cold metal work involved in shaping a piece of metal into a precision part using machine and hand tools. A highly skilled machinist might specialize in tool and die making. All machinists must be able to work from shop drawings and blueprints as well as written specifications and must use measuring tools and mathematical formulas in calculating operations necessary to machine a certain product.

Job Opportunities: Machinists are needed in production shops, machine shops, tool and die shops, in the automotive industry, for work in fabricated metal products, primary metals, for railroads, chemical and food industries, textiles and for the Federal government. Employment at the beginning level may be as bench hands, inspectors, layout men, machine operators, maintenance men, tool and cutter grinders or others. Many graduates enter apprenticeship training.

Course Description: Advanced course in Machine Shop—Continues instruction begun in Machine Shop I. Methods, related subjects and safety are stressed in practical situations.

Length of Course: 9 months

Helpful High School Courses:
Industrial arts
Mathematics

Personal Qualities: Must have achieved satisfactory record in Machine Shop I

Personal Equipment Needed: None

Expenses: Registration fee—$5
Tuition for students over 21—$60 per month
G.I. Students—½ tuition

Course Title: MACHINE SHOP

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: Beginning of Fall Quarter

Nature of Work: Machinists are skilled metal workers who make metal parts with machine tools. They must be able to set up and operate most machine tools, understand the properties of various metals and know how to translate blueprints and written specifications into the metal parts necessary to mass production and automation. Tool makers specialize in producing jigs, fixtures, gauges and measuring devices used in manufacturing precision metal parts. Die makers construct metal forms used in shaping metal by stamping or forging. They also make metal molds used in diecasting and making plastics.

Job Opportunities: Machinists and tool and die makers work in manufacturing, construction, farm machinery and equipment plants; some are in the automobile, aircraft and other transportation-related industries; many work in small tool and die jobbing shops, where tool dies and machine tool accessories are made for metalworking factories. Other non-metal industries also employ tool and die makers. Outlook for the future is excellent, as these skills form the basis for mass production.

Course Description: Contact the school for a bulletin giving complete details

Length of Course: 18 months

Helpful High School Courses:

- Industrial arts
- Mechanics
- Mathematics
- English

Personal Qualities:

- Good audio-visual perceptions
- Steady nerves
- Good judgment
- Mechanical aptitude
- Ability to do highly accurate work for concentrated periods of time
- Ability to visualize objects in one or more dimension
- Manual dexterity

Personal Equipment Needed: Tool kit—$20

Expenses: Books and uniforms—$70
Tuition for students over 21—$40 per month

Course Title: MACHINE TOOL AND DIE

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-4606

Admission Dates: First Tuesday after Labor Day or beginning of any quarter

Nature of Work: Machinists form metal parts for machines or equipment from precise specifications using blueprints or written specifications. All the skills needed to turn a block of metal into a precise part must be at the machinists command. Tool and die makers have specialized skills used in producing the jigs and fixtures required to hold metal while it is stamped, shaved or drilled and the metal forms or dies used in diecasting or molding metals and plastics. Precise and accurate work is required of machinists and tool and die makers.

Job Opportunities: Graduates of this course usually enter the field through apprenticeship. There is a good demand for workers at all times in industry, tool and die departments of specific metals industries, in plastic forming, and in tool and die or specialty machine shops.

Course Description:

*Applied mathematics
*Blueprints
*Layout
*Hand tools
*Setup and machine operating

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Physics
Industrial arts
Mechanical drawing or drafting

Personal Qualities:

Mechanical aptitude
Interest in machine tool and die making
Mathematics
Ability to concentrate on details and do painstaking work

Personal Equipment Needed: Books, tools, etc. (approximate cost, $25)

Expenses: Tuition for students over 21—$30 per month

Course Title: MACHINE TOOL OPERATOR

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical Institute	Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: Late August

Nature of Work: Skilled machine tool operators usually work with one or two types of machines and do little or no hand fitting or assembly. The operator adjusts speeds, feeds and controls a machined sequence and selects the proper cutting tools. He checks his work with micrometers, gauges and other precision measuring devices to see whether it meets specifications.

Job Opportunities: Machinists are the largest group of workers in the metal-working industry. There is a demand for skilled workers in machine shops of all sizes and there is a good opportunity to go into business for one's self doing specialty work.

Course Description:

*Machinists hand tools
*Precision measuring instruments
*Operation and set-up of machine tools
*Shop mathematics
*Mechanical drawing and blueprint reading
*Material specifications
*General shop theory
*Communications

Length of Course: 9 months

Helpful High School Courses:

Mathematics
Industrial arts

Personal Qualities:

Manual dexterity
Ability to understand basic mathematics
Mechanical aptitude
Ability to work for accuracy and precision

Personal Equipment Needed:

Safety glasses
Micrometer pocket scriber
6" steel rule
Workbooks

Expenses: Books and supplies—$50 per year (approximately)
Living expenses—$800-$900 per year
Tuition for students over 21—$40 per month

Course Title: MACHINE TOOL TECHNOLOGY

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	15th St. and 11th Ave. Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: September

Nature of Work: Machine tool operators shape metal to precise dimensions with machine tools. The machinist plans and sets up correct operations for machines; they create the tools, dies and special guiding and holding devices needed in mass producing metal products. Machine operations, shop practices, mathematics, blueprint reading, precise handwork, and close tolerance machine and handwork are part of this job.

Job Opportunities: Automotive manufacturing, farm equipment manufacturing, appliance manufacturing, aircraft and aerospace industries and research and development in fabricated metal products are some fields which employ machine tool technologists in tool and die making and to operate numerically controlled machines.

Course Description:

*Use, care and operation of machines
*Use, care and operation of tools
*Precision measuring devices
*Mathematics
*Drafting
*Tool design
*Strength of materials
*Industrial relations
*Modern manufacturing

Graduates receive a Certificate in Machine Tool Technology.

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Sciences
Shop courses
Mechanical drawing

Personal Qualities:

High school diploma or equivalent
Mathematics ability
Aptitude for science
Manual dexterity
Ability to do accurate, precise work.

Personal Equipment Needed: Workbooks, shopcoats

Expenses: Registration fee—$20
Tuition for students over 21—$40 per month

Course Title: MACHINIST

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: The machinist is a skilled metal worker who shapes metal parts using machine and hand tools. He must plan and carry out all operations needed to make a machined product, switching from machine to hand tools and from one kind of product to another. He selects the tools and materials for each job, plans the cutting and finishing in proper order according to a blueprint or written specifications. He makes shop computations relating to dimensions, tooling feeds and speeds of machining. He uses precision instruments including micrometers and gauges to measure accuracy to thousands of an inch. He must be able to set up and operate most machines and know the composition of metals . . . indeed, every facet of skill needed to turn a block of metal into an intricate, precise part must be his.

Job Opportunities: Most machinists work in machinery, including electrical, industries; in transportation equipment, fabricated metal products, primary metals, in the railroad, chemical, textile and food processing industries; and for the Federal government.

Course Description:

- *Use, care and operation of hand and machine tools
- *Measuring instruments
- *Heat treating equipment
- *Shop mathematics
- *Drafting
- *Blueprint reading
- *Manufacturing processes
- *Machine tools studies include: lathe, drill press, milling machine, surface grinder, tool and cutter grinder, job borer and shaper
- *Other machine tools

Length of Course: 18 months

Helpful High School Courses:

- Mathematics
- Science
- Drafting
- Machine shop

Personal Qualities:

- Good manual and mechanical aptitude
- Good eye-hand coordination
- Interest in working with machine and hand tools
- Inventiveness and creativity in problem-solving

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: MACHINIST I
MACHINIST II

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical School	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: September

Nature of Work: Machinists are skilled metal workers who shape metal parts with machine and hand tools. A machinist can set up and operate most types of machine tools. An all-around machinist selects the tools and materials required for each job and plans the cutting and finishing operations in order to complete the finished work according to blueprint or written specifications.

Job Opportunities: Most machinists work in the following industries: machinery, including electrical, transportation equipment, fabricated metal products, primary metals, railroad, chemical and food processing industries, textiles, and for the Federal government.

Course Description:

*Use of machinists' tools
*Precision measuring instruments
*Machine tools
*Specialized equipment, including lathes, milling machines, planers, shapers, grinders, band saws, turret lathes and metal heating equipment.
*Theory
*Classroom work
*Shop training

Length of Course: 21 months (Machinist I, 10½ months) (Machinist II, 10½ months)

Helpful High School Courses:

Physics
Mathematics
Drafting or mechanical drawing

Personal Qualities:

Good mechanical aptitude
Good eye-hand coordination
Interest in working with machine and hand tools

Personal Equipment Needed: None

Expenses: Hand tools—
Tuition for students over 21—$32 per month

Course Title: MACHINIST

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: A machinist is skilled in the principles of setting up and operating machinery or machine tools. Work in a machine shop usually includes all cold metal work involved in shaping a piece of metal into a precision part using machine and hand tools. Most machine shops are job shops or production shops; a machinist may become a specialist in one machine and its operation. A highly skilled machinist may specialize in tool and die making. All machinists must be able to read shop drawings and blueprints and work from written specifications using measuring tools and mathematical formulas.

Job Opportunities: Machinists are needed in the following industries—machinery, electrical, transportation, fabricated metal products, primary metals, railroads, chemical and food processing, textiles, and for the Federal government. Most graduates of this course enter the field as apprentice machinists, tool and die makers or machine operators. Experience opens the way to becoming foremen, shop superintendent, tool designers, tool and die makers or, with advanced study, an engineer.

Course Description:

Semester I
*Safety instruction
*Machine shop orientation
*Fundamentals of measurement
*Precision measurement procedures
*Introduction to the lathe
*Drill press, milling machines and shaper

Semester II
*Cutting tools and their materials
*Cutting screw threads
*Grinding —surface and cylindrical
*Milling — vertical and horizontal

Semester III
*Jig and fixture
*Inspection procedures
*Special machine attachments
*Advanced machine tooling

Summer Session
*Jig and fixture design
*Lathe spinning
*Advanced use of all machines
*Related subjects:
Mathematics
Hydraulics
Metallurgy and measurement
Blueprint reading
Technical English
Dimensional metrology

Length of Course: 18 months

Helpful High School Courses: Mathematics, including algebra and trigonometry
Drafting or mechanical drawing
Physics

Personal Qualities: Interest in working with metals and machinery
Average or better general ability
High ability in spacial, abstract, reasoning
High numerical and mechanical aptitude

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: MARKETING, WHOLESALE

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: Sales and service to customers and accountants, including selling and promoting merchandise. Work includes catalogs, quoting prices, arranging credit, preparing sales contracts and repertory transactions.

Job Opportunities: Graduate may choose from a wide variety of wholesale areas from fashion to food products to heavy industrial equipment. Good chance for advancement to management or supervisory position.

Course Description:

*Salesmanship
*Wholesale management
*Accounting
*Communications
*Advertising and promotion
*Product and service technology
*Traffic, transportation and distribution
*Marketing research
*Application of electronic data processing
*Business law
*Business mathematics
*Supervisory techniques
*Credit and collections
*Field experience in a wholesale merchandising business.

Length of Course: 18 months

Helpful High School Courses:

Distributive education
Business courses (office machines, bookkeeping, typing, economics)
Speech

Personal Qualities:

Good personality and grooming
Interest in working with people

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: MEAT CUTTING AND MERCHANDISING

Name of School:	Address:	Telephone:
Pipestone Area Vocational-Technical School	Pipestone, Minn. 56164	(507) 825-5555

Admission Dates: September

Nature of Work: Meat cutters and merchandisers buy, cut, price, process, display and sell meat, poultry and fish. Meat commonly merchandised for the retail market includes beef, veal, pork, lamb and variety meats. Workers must be skilled in cutting, trimming, processing and readying for the customer each of these plus poultry and fish. He must also be skilled in sales and display and know how to meet and deal with people successfully.

Job Opportunities: Retail stores, butcher shops and meat markets need highly skilled cutters who understand merchandise. There are good opportunities for advancement to management positions and good possibilities for owning one's own business.

Course Description:

*Grading meats
*Buying meats
*Cutting and curing
*Processing for retail trade
*Office records
*Accounting
*Management practices

Length of Course: 11 months

Helpful High School Courses:

Agriculture
Sciences
Manual dexterity
Business

Personal Qualities:

Good health
Habits of neatness and good personal cleanliness
Interest in people and desire to serve

Personal Equipment Needed: Shop uniform (mandatory)
Hand tools, if desired

Expenses: Tuition for students over 21—$45 per month

Course Title: MECHANICS, DIESEL

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: First Monday in August

Nature of Work: Diesel machanics repair and maintain diesel engines used in heavy trucks and buses, ships and boats, locomotives and other railroad equipment, construction machinery, farm equipment and other engines used for generators, compressors, pumps and oil-well drilling rigs. Inspecting, testing and diagnosing trouble, repairing and replacing work parts and adjusting mechanisms for the best possible operation is part of this job. Some diesel mechanics specialize in one area, rebuilding engines, repairing fuel injection systems or turbo-chargers, for example.

Job Opportunities: Diesel mechanics work for service departments of distributors and dealers who sell diesel engines, farm and construction equipment and trucks. Some companies and government agencies repair and maintain their own diesel-powered equipment. Some mechanics work for independent repair shops and manufacturers of diesel engines.

Course Description:

*Diesel engines	*Diesel pumps and injectors
*Electrical systems	*Arc and gas welding
*Engine overhaul	*Power tools and hand tools
*Hydraulics	*Service shop management
*Trouble shooting	*Parts systems
*Precision instruments	*Shop safety
*Measuring tools	*Personal development

Length of Course: 20 months

Helpful High School Courses:

Industrial arts	Mathematics
Science	Vocational agriculture

Personal Qualities:

Mechanical aptitude	Good physical health and stamina to lift heavy parts

Personal Equipment Needed: Students should start their own tool kits before graduation

Expenses: Acceptance Fee—$25
Books—$10
Tuition for students over 21—$40 per month, plus above costs

Course Title: MECHANICS, DIESEL

Name of School:	Address:	Telephone:
Hibbing Area Vocational-Technical School	505 East 16th St. Hibbing, Minn. 55746	(218) 262-2256

Admission Dates: Classes begin in late August or early September

Nature of Work: Diesel mechanics repair and maintain diesel engines used in heavy trucks and buses, ships and boats, locomotives and other railroad equipment, construction machinery, farm equipment and other engines used in generators, compressors, pumps and oil well drilling rigs. Inspecting, testing and diagnosing trouble, repairing and replacing worn parts and adjusting mechanisms for efficient operation are part of this job. Mechanics may specialize in a certain area such as rebuilding engines or repairing fuel injection systems or turbochargers, for example.

Job Opportunities: Diesel mechanics work for service departments of distributors and dealers who sell diesel engines, farm and construction equipment and trucks. Some companies and government agencies repair and maintain their own diesel-powered equipment. Some work for independent repair shops and for manufacturers of diesel engines.

Course Description:

*General principles and orientation
*Fuel injection
*Fuel pumps
*Governors
*Cylinders
*Accessories
*Lubrication and cooling
*Operation and performance
*Record-keeping
*Trade mathematics

Length of Course: 18 months

Helpful High School Courses:

Industrial arts—automotive shop, welding, small engine repair
Trade mathematics
Physics or hydraulics

Personal Qualities:

Interest in working on diesel engines
Interest in using hand and power tools
Mechanical aptitude
Good physical health and stamina

Personal Equipment Needed: Students are encouraged to begin accumulating basic tool kit as needed in the industry

Expenses: Supply and book fee—$40 per year
Tuition for students over 21—$30 per month for Minnesota residents
$100 per month for non-residents

Course Title: MECHANICS, DIESEL

Name of School:	Address:	Telephone:
Moorhead Area Vocational-Technical School	Box 100 Moorhead, Minn. 56561	(218) 236-6277

Admission Dates: September, unless openings occur during the year

Nature of Work: Diesel mechanics repair and maintain diesel engines used in heavy trucks and buses, ships and boats, locomotives and other railroad equipment, construction machinery, farm equipment and other engines for generators, compressors, pumps and oil-well drilling rigs. Inspecting, testing and diagnosing trouble, repairing and replacing worn parts and adjusting mechanisms for the best operation is part of this job. Some diesel mechanics specialize in rebuilding engines or repairing fuel injection systems or turbo-chargers, for example.

Job Opportunities: Diesel mechanics work for service departments of distributors and dealers who sell diesel engines, farm and construction equipment and trucks. Some companies and government agencies repair and maintain their own diesel-powered equipment. Some work for independent repair shops and manufacturers of diesel-operated engines.

Course Description:

*Diesel Engines
*Operation, repair, maintenance
*Fuel injection
*Applied mathematics
*Electricity
Power Shift Transmissions
*Operation, maintenance and repair
*Control valves
*Clutch packs
*Bearings/tolerances
*Gears/running clearances
*Seals, oil flow and pressure
*Filtering systems
Hydraulics
*Pumps and repair
*Valves and pressure
*Rams and seals
*Oil flow and pressure
*Oil Seals
*Filtering systems

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Industrial arts
Sciences

Personal Qualities:

Aptitude as tested at the School
Interest in working on diesel engines
Good physical health and stamina

Personal Equipment Needed: Books, coveralls—$25 (approximately)
Tools—school approved—$125 (approximately)

Expenses: Student Activity Fee—$10
Tuition for students over 21—$40 per month plus above fees and expenses

Course Title: MECHANICS I, DIESEL

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: September

Nature of Work: Diesel mechanics repair and maintain diesel engines used in heavy trucks and buses, ships and boats, locomotives and other railroad equipment, construction machinery, farm equipment and other engines for generators, compressors, pumps and oil-well drilling rigs. Inspecting, testing and diagnosing trouble, repairing and replacing worn parts and adjusting mechanisms for the best operation are part of this job. Some diesel mechanics specialize in rebuilding engines or repairing fuel injection systems or turbo-chargers, for example.

Job Opportunities: Diesel mechanics work for service departments of distributors and dealers who sell diesel engines, farm and construction equipment and trucks. Some companies or government agencies repair and maintain their own diesel-powered equipment and need skilled mechanics at all times. Other mechanics work for independent repair shops or manufacturers of diesel-operated engines.

Course Description:

*Testing and maintaining diesel engines
*Fuel injection systems
*Injectors
*Nozzles
*Pumps
*Testing and calibrating equipment
*Preventive maintenance and trouble-shooting

Students who satisfactorily complete this course are eligible for further study in Diesel Mechanics II

Length of Course: 9 months

Helpful High School Courses:

Industrial arts
Vocational agriculture

Personal Qualities:

Mechanical aptitude
Good physical health and stamina

Personal Equipment Needed: None

Expenses: Registration fee—$5
Tuition for students over 21—$60 per month plus registration fee
G. I. Students—½ tuition

Course Title: MECHANICS II, DIESEL

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: September

Nature of Work: Diesel mechanics repair and maintain diesel engines used in heavy trucks and buses, ships and boats, locomotives and other railroad equipment and other engines for generators, compressors, pumps and oil-well drilling rigs. Inspecting, testing and diagnosing trouble, repairing and replacing worn parts and adjusting mechanisms for efficient operation are part of this job. Some diesel mechanics specialize in rebuilding engines or repairing fuel injection systems, for example.

Job Opportunities: Diesel mechanics work for service departments of distributors and dealers who sell diesel engines, farm and construction equipment and trucks. Some companies and government agencies hire mechanics to maintain their diesel powered equipment. Mechanics also are employed by independent repair shops and manufacturers of diesel engines.

Cours Description:

*Review of Diesel Mechanics I
*Advanced study of diesel engines
*Advanced study of fuel injection systems
*Fuels and lubricants

Length of Course: 9 months

Helpful High School Courses:

Industrial arts
Vocational agriculture

Personal Qualities

Good physical health
Mechanical aptitude

Personal Equipment Needed: None

Expenses: Registration fee—$5
Tuition for students over 21—$60 per month plus registration fee
G. I. Students—½ tuition

Course Title: MECHANICS, DIESEL

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: Beginning of Fall Quarter

Nature of Work: Diesel mechanics may repair and maintain truck fleets, mining and construction equipment and farm implements. Dealer-servicemen also check and service equipment preparing it for the many years of service expected of such heavy-duty diesel equipment. Some mechanics specialize in a certain area such as fuel injection, engine rebuilding, turbo chargers or transmissions.

Job Opportunities: Diesel mechanics work for industrial firms, for trucking companies, fleet operators, implement dealers and service companies, for mining, construction and heavy equipment operating companies. State, county and city governments employ such service people to maintain highway and street equipment as well as other industrial equipment powered by diesel engines.

Course Description:
Contact the school for a bulletin giving complete details

Length of Course: 18 months

Helpful High School Courses:

Auto mechanics	Physics
Industrial arts (especially welding)	Mathematics

Personal Qualities:

Average learning ability	Good mechanical aptitude

Personal Equipment Needed: Tool kit (approximate cost, $125)

Expenses: Books and uniforms—$55
Tuition for students over 21—$40 per month

Course Title: MECHANICS I, FARM EQUIPMENT

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: September

Nature of Work: Farm equipment mechanics maintain, service and repair electrical, mechanical and hydraulic systems used in farm machinery such as tractors, combines, pickup balers, corn pickers, drop dryers, field harvesters and elevators and conveyers. Some assemble new implements and machinery and some repair dented or damaged bodies of such equipment. Sometimes, especially during seasons of peak work, a mechanic may go to the farm to help repair equipment, but usually work is done in a shop. Testing, adjusting and overhauling equipment is part of this job and requires a thorough knowledge of all mechanical systems including engines and mechanic must know detail of assembly on a wide variety of manufacturers' product.

Job Opportunities: Farm equipment mechanics work in service departments of equipment dealers, in independent service or repair shops, on large farms and in service departments of equipment manufacturers.

Course Description:

*Repair of tillage, planting, hay harvesting and corn and grain harvesting equipment.	*Small engine overhaul
*Fundamentals of the gasoline engine	*Basic electricity
	*Ignition timing
	*Tractor brakes
	*Tractor clutches

Length of Course: 9 months (Most students continue training with Farm Mechanics II)

Helpful High School Courses:

Vocational agriculture and mechanics	Industrial arts or shop courses

Personal Qualities:

Farm background is helpful	Desire to work with tools
Good mechanics aptitude	

Personal Equipment Needed: None

Expenses: Registration fee—$5
Tuition for students over 21—$60 per month
G. I. Students—½ tuition

Course Title: MECHANICS II, FARM EQUIPMENT

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: September

Nature of Work: Farm equipment mechanics maintain, service and repair electrical, mechanical and hydraulic systems used in farm machinery such as tractors, combines, pickup balers, corn pickers, drop dryers, field harvesters and elevators and conveyors. Some assemble new implements and machinery and some repair dented bodies of such equipment. Sometimes, especially during seasons of peak work, a mechanic may go to the farm to repair or adjust equipment, but usually work is done in a shop. Testing, adjusting and overhauling equipment is part of this job. It requires a thorough knowledge of all mechanical systems including engines and the mechanic must know detail of assembly on a wide variety of manufacturer's products.

Job Opportunities: Farm equipment mechanics work in service departments of equipment dealers, in independent service and repair shops, on large farms and in service departments of farm equipment manufacturers.

Course Description:

- *Review of Farm Equipment Mechanics I
- *Testing and troubleshooting
- *Electrical systems
- *Principles of diesel engines
- *Hydraulic and power steering systems
- *Recondition tractors and used machines
- *Shop supervision
- *Personal development
- *Demonstrating equipment
- *Display and selling

Length of Course: 9 months

Helpful High School Courses:
Student must have achieved a satisfactory level of success in Farm Equipment Mechanics I

Personal Qualities:

Personal Equipment Needed: None

Expenses: Registration fee—$5
Tuition for students over 21—$60 per month
G. I. Students—½ tuition

Course Title: MECHANICS, FLUID POWER

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	15th St. and 11th Ave. Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: September

Nature of Work: Fluid power mechanics service, repair, adjust and test hydraulic and pneumatic systems used in cars, trucks, farm equipment and other machinery. They must be familiar with different types of systems and their use and with the particular systems designed by various manufacturers of such equipment.

Job Opportunities: Fluid power mechanics work in service departments and shops of new and used car, truck and bus dealers, for repair departments of companies which manufacture such equipment, for large bus or truck companies which maintain their own fleet shops and other industries which use and maintain hydraulic or pneumatic equipment.

Course Description:

*Basic hydraulics
*Hydraulic fluids
*Circuitry
*Maintenance
*Repair
*Components and flow
*Mathematics
*Drafting
*Basic electricity

Length of Course: 9 months

Helpful High School Courses:

Industrial arts
Mechanical drawing or drafting
Electricity

Personal Qualities:

Good mechanical and mathematical abilities
High school graduate or equivalent
Interest in working with equipment and tools

Personal Equipment Needed:

Workbooks
Shop coat

Expenses: Registration fee—$20
Tuition for students over 21—$40 per month

Course Title: MECHANIC, MARINE AND SMALL ENGINE

Name of School:	Address:	Telephone:
Faribault Area Vocational-Technical School	Faribault, Minn. 55021	(507) 334-3965

Admission Dates: September, with later enrollments as vacancies occur

Nature of Work: The marine and small engines mechanic maintains, tests and repairs all styles of marine engines and many types of small two and four cycle engines. They do preventative maintenance, diagnose breakdowns, and make repairs. They also work with outboard motors for watercraft.

Job Opportunities: Marine and small engines mechanics are needed in shops as mechanics, salesmen and factory representatives. Some work for major manufacturers as mechanics, technicians, salesmen and trouble-shooters. Many are in business for themselves.

Course Description:

- Basic engine systems and theory of operators
- *Winter storage procedures
- *Major overhaul including marine engines, chain saws, snowmobiles, motorcycles, lawn mowers, snow blowers
- *Tune-up and troubleshooting
- *Parts management
- *Use of service manual
- *Shop management and business
- *Merchandising
- *Customer relations

Length of Course: 9½ months

Helpful High School Courses:

- Industrial arts
- Mathematics
- Business

Personal Qualities:

- Above average learning ability
- Ability to solve arithmetical problems
- Good health
- Manual dexterity
- Interest in working with engines, electrical circuits and test equipment

Personal Equipment Needed: Students will build a basic set of hand tools valued at $180 by the time the course is completed.

Expenses: Enrollment fee—$5
Uniforms—$20 if purchased, $14 per quarter if rented
Tuition for students over 21—$40 per 4-week period
Tuition for non-residents of Minnesota—$55 per month

Course Title: MECHANICS, TRUCK

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Truck mechanics keep buses and over-the-road trucks in good running condition. Some mechanics work on large inter-city trucks and buses while others work on medium or smaller equipment. Mechanics use testing equipment and tools to diagnose problems, maintain equipment and overhaul, repair or replace faulty mechanical systems. Some mechanics in larger service shops may specialize in a certain area such as transmissions. In smaller towns or shops, mechics would work on all or a variety of mechanical systems.

Job Opportunities: Jobs are in good supply for trained truck mechanics, especially in the Twin Cities' area, a trucking center. Each company maintains a service department. There are also truck service shops maintained by dealers in new and used trucks. Some own their own service shops.

Course Description:

*Gas engines
*Basic diesel
*Basic electricity
*Brakes
*Fuel systems
*Chassis
*Machine shop
*Related drawing
*Technical mathematics
*Advanced diesel
*Electrical systems
*Transmission and clutches
*Drive lines
*Rear ends
*Welding
*Technical science
*Technical communications
*Industrial relations

Length of Course: 18 months

Helpful High School Courses:

Industrial arts
Mechanics

Personal Qualities:

Average or better general learning ability
Liking for work with mechanical equipment
Mechanical aptitude
Good physical health
Average motor control

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: MECHANICAL DRAFTING AND DESIGN TECHNOLOGY

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	15th St. & 11th Ave. Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: September

Nature of Work: Draftsmen draw the detailed plans for a project. They may calculate strength, reliability, and cost of materials, then translate the rough sketches of the engineers, designers and architects into working plans. To prepare drawings, draftsmen use compasses, protractors, dividers, triangles, and machines which combine several functions. Some draftsmen specialize in a field such as mechanical, electrical or structural drafting.

Job Opportunities: Draftsmen are employed by machinery, electrical equipment, fabricated metal products and transportation equipment industries; in engineering and architectural firms, construction companies and public utilities. Many work for Army, Navy and Air Force agencies and the state or Federal government. Graduates of this course would enter the job market as junior draftsmen with good potential for advancement.

Course Description:

- *Detail and assembly drawing of structures, tools and machines
- *Layout drawing from specifications or sketches
- *Mathematics
- *Applied science
- *Descriptive geometry
- *Electrical drafting

Graduates receive a Certificate in Industrial Drafting Technology

Length of Course: 18 months

Helpful High School Courses:

- Mathematics (required)
- Sciences
- Metal shop
- Machine shop
- Drafting or drawing

Personal Qualities:

- High school diploma or equivalent
- Interest in mathematics and science
- Ability to work accurately for long periods of time.

Personal Equipment Needed: Workbooks

Expenses: Registration fee—$20
Tuition for students over 21—$40 per month

Course Title: MEDICAL LABORATORY ASSISTANT

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: July 1 — January 1

Nature of Work: Medical laboratory assistants do routine work under the supervision of medical technologists, pathologists or physicians. They analyze body fluids to detect disease, prepare tissue samples, take blood samples, prepare slides for microscopic examination. They may store and label plasma, clean and sterilize equipment, prepare solution and keep records.

Job Opportunities: Good opportunities exist in hospitals, public and private clinics, doctors' offices, public health agencies and industrial and pharmaceutical laboratories. Chance for advancement varies with type of laboratory, its size and the degree of responsibility.

Course Description:

1st 6 months

*Laboratory training including:

- Basic techniques in clinical chemistry
- Basal metabolic and electrocardiograph tests
- Elementary hematology and urinalysis
- Elementary bacteriology
- Blood bank techniques
- Elementary human anatomy and orientation to hospital training.

2nd 6 months

*Students work in a hospital to gain clinical experience

*Students practice selected laboratory diagnostic procedures.

Length of Course: 12 months

Helpful High School Courses:

- Sciences (chemistry required)
- Mathematics (including at least one year of Algebra)

Personal Qualities:

- Good personal references
- Good health
- C or better grade in high school chemistry
- Graduated in upper one-half of high school class

Personal Equipment Needed: White uniforms and shoes as recommended by staff members

Students receive meals when assigned to hospitals or clinics during second half of course.

Expenses: Enrollment fee—$45 (includes reference books plus special supplies)

Tuition for students over 21—$40 per month plus enrollment fee

Acceptance Fee—$25

Course Title: MEDICAL LABORATORY ASSISTANT

Name of School:	Address:	Telephone:
Hibbing Area Technical Institute	505 E. 16th St. Hibbing, Minn. 55746	(218) 262-2256

Admission Dates: January and July

Nature of Work: Medical laboratory assistants do routine laboratory work under the supervision of medical technologists, pathologists or physicians. They analyze body fluids to detect disease, prepare tissue samples, take blood samples, prepare slides for microscopic examination. They may also store and label plasma, clean and sterilize equipment, prepare solutions and keep records.

Job Opportunities: Good opportunities exist in hospitals, public and private clinics, doctors' offices, public health agencies and industrial and pharmaceutical laboratories. Chance for advancement varies with type of laboratory, its size and the degree of responsibility.

Course Description:

1st 6 months

*Laboratory training including:

- Basic techniques in clinical chemistry
- Basal metabolic and electrocardiograph tests
- Elementary hematology and urinalysis
- Elementary bacteriology
- Blood bank techniques
- Elementary human anatomy and orientation to hospital training

2nd 6 months

- *Students work in a hospital to gain clinical experience
- *Students practice selected laboratory diagnostic procedures.

Length of Course: 12 months

Helpful High School Courses:

- Sciences
- Mathematics (including at least one year of Algebra)

Personal Qualities:

- C or better grade in high school chemistry
- Graduated in upper one half of high school class

Personal Equipment Needed: White uniforms and shoes as recommended by staff members

Expenses: Supply and book fee—$40

Tuition for students over 21—$30 per month for Minnesota residents

$100 per month for non-residents

Course Title: MEDICAL LABORATORY ASSISTANT

Name of School:	Address:	Telephone:
St. Paul Vocational-Technical Institute	325 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: June and December

Nature of Work: Working under the direct supervision of a registered medical technologist and a pathologist or other qualified medical personnel, the medical laboratory assistant performs procedures in chemistry, hematology, urinalysis, blood banking and bacteriology. Laboratory assistants use many complicated instruments such as centrifuges, colorimeters, microscopes, analytical balances, auto-analyzers and a wide variety of volumetric glassware.

Job Opportunities: Laboratory assistants work in hospital laboratories, doctors' offices, clinics, public health agencies, pharmaceutical laboratories and medical research laboratories.

Course Description:
Students are given theory plus practical experience in the procedures studies. Six months of the course is spent in clinical training at a affiliated hospital working in selected phases of diagnostic laboratory procedures.

Length of Course: 12 months

Helpful High School Courses:
Algebra
Chemistry

Personal Qualities:
Ability to work well with others
Devotion to precision and details
Integrity, honesty and patience under stress
Manual dexterity

Personal Equipment Needed: White uniforms and shoes (three uniforms and one pair of shoes are recommended)

Expenses: Uniforms and shoes—$45 (approximately)
Books and supplies—$60 (approximately)
Tuition for students over 21—$65 per month

Course Title: MEDICAL OFFICE ASSISTANT

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: September

Nature of Work: Medical office assistants use clerical skills to take care of record keeping, billing and bookkeeping as well as special skills such as care of supplies and equipment and preparing patients for examination and treatment. Working conditions are usually pleasant with attractive surroundings.

Job Opportunities: Medical office assistants work in doctors' offices, either in the clinical or business area, or in both if office is small. Mental health centers, in some hospital departments as receptionists, typists or office workers.

Course Description:

- *Business office skills
- *Medical terminology and transcription
- *Secretarial accounting
- *Clinical skills
- *Clinical internship

Length of Course: 11 months (including 8 week internship)

Helpful High School Courses:

- Typing
- Shorthand

Personal Qualities:

- Ability to get along well with people
- Good personal appearance and poise
- Discretion, good judgment and initiative

Personal Equipment Needed:

- Textbooks
- 3 white uniforms
- White shoes
- Watch (with sweep second hand)

Expenses: Books—$30
Tuition for students over 21—$40 per month plus $30 book fee

Course Title: MERCHANDISING AND MARKETING

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Pleasant work, requiring considerable walking and standing and a great deal of contact with people, selling and helping customers with choices, responsibility for stock, marking and record keeping.

Job Opportunities: Graduates are qualified for entry jobs in retail and wholesale trade, business and personal services, communications and credit agencies, leading to mid-management jobs. Selling is the foundation for this career.

Course Description:

Semester I	Semester II
*Introduction to retailing	*Salesmanship in action
*A selling career	*Succeeding in your selling career
*Responsibility of the retailer	*Marking merchandise
*Preparation for selling	*Store organization
*Stocking the retail store	*Non-textiles
*Record keeping in retail stores	*Major advertising media
*Applied store practices in the 'Corner Cove' Vocational's retail store.	Auditorium fashion show

Length of Course: 18 months

Helpful High School Courses:

Distributive education	Speech
Business subjects	English

Personal Qualities:

Desire to sell, interest in people, ability to communicate ideas.	Good personal appearance
	Physical stamina

Personal Equipment Needed: Available through school

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: METAL ARTS

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Metal Arts is a specialized area of the art field. It is mainly concerned with making jewelry and silversmithing. Craftsmen must be able to work with metals, including sawing, filing and hard soldering. Jewelers usually specialize in one area such as making articles of gold, silver, platinum or other metals. These may be set with precious or synthetic stones. Part of this job is repairing, including the change of ring sizes, soldering broken parts or resetting gems.

Job Opportunities: Graduates are employed in jewelry shops, by jewelry manufacturers, decorative metal and iron works, casting companies, furnishing and gift shops, hearing aid companies, hobby shops, metal refiners, metal spinning companies, surgical and dental tool companies, polishing and plating companies, camera repair shops, artificial limb companies and optical companies.

Course Description:

Semester I	Semester II
*Processes—Introduction to benchwork, sawing, filing, soldering and tool making	*Processes—benchwork, spinning and stone setting
*Projects — men's and women's jewelry, boxes, plaques and small holloware	*Projects — Holloware and jewelry using various decorative methods
	*Design

Length of Course: 12 months

Helpful High School Courses:

Industrial arts	Science
Mathematics	Art

Personal Qualities:

Manual dexterity	Basic artistic aptitude
Mechanical ability	Patience and ability to concentrate

Personal Equipment Needed: None

Expenses: Books and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: MOBILE RADIO COMMUNICATION TECHNOLOGY

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: Beginning of Fall Quarter

Nature of Work: Mobile radio technicians work in the area of two-way communications using two-way radios, solid state electronics and all the means of communicating with mobile installations. Duties include maintaining, troubleshooting, aligning, calibrating and certifying all types of equipment from speech, pulsed-type data transmitters or keyed tones for remote control of electronic devices.

Job Opportunities: Technicians work for service shops or for the manufacturers of two-way equipment; they may work in the plant with service centers. Many technicians are employed by private businesses or with shops dealing with marine radio-telephone equipment; other technicians work for police departments, Federal government agencies including the FBI.

Course Description: Contact the school for a bulletin giving complete details

Length of Course: 18 months

Helpful High School Courses:

Mathematics	Physical sciences

Personal Qualities:

Good color vision	Good judgment and discretion
Neatness and accuracy in work habits	Interest in learning electronics

Personal Equipment Needed: None

Expenses: Books—$60 for the course
Tuition for students over 21—$40 per month

Course Title: NATURAL RESOURCE TECHNICIAN

Name of School:	Address:	Telephone:
Brainerd Area Vocational-Technical School	300 Quince St. Brainerd, Minn. 56401	(218) 829-2814

Admission Dates: First week in September

Nature of Work: This training leads to a wide variety of specific occupations; in general, the area of work would include tasks in botany, tree and plant study, forest pathology and entomology, forest mensuration, fire prevention and control, forest management, fish and game management, soil and water conservation and pollution control. Analyzing and testing, research and problem-solving related to each area might be part of a resource technicians work.

Job Opportunities: State and national forests, conservation and game departments, parks, forest preserves and private industry dependent upon national natural reserves employ natural resource technicians. Typical jobs include forestry aids, forest rangers, park rangers, conservation officers, surveying aids, fisheries aids and assistant game managers.

Course Description: This course prepares students for entry level jobs in the areas mentioned above. Most of the course work is conducted out-of-doors and approximates the work graduates perform on the job. Selected training locations also provide related on-the-job training.

Length of Course: 21 months

Helpful High School Courses:

- Vocational agriculture
- Biology
- Chemistry

Personal Qualities:

- High school graduate of average or above ability
- Motivation toward this work
- Good physical health as certified by medical doctor
- Good driving records with no fish and game violations

Minimum height of 5'10" and minimum weight of 150 lbs. is required to qualify as conservation officer (not required for other jobs listed)

Personal Equipment Needed: Books and minor hand tools

Expenses: Cost of books and hand tools
Tuition for students over 21—$40 per month

Course Title: NUMERICAL CONTROL TECHNOLOGY

Name of School:	Address:	Telephone:
Vocational-Technical School Granite Falls Area	Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: Fall

Nature of Work: A student learns to operate machines by numbers. The skilled numerical control technician will work with large industrial plants that use automated machine tools.

Job Opportunities: A new field of employment in automated machines. Students will be employed as parts programmers and numerical control tool operators in manufacturing and industrial plants.

Course Description:

*Program and code automated machine tools
*Machine shop laboratory
*Mathematics
*Drafting
*Materials
*Processes
Related classes

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Industrial arts
Vocational agriculture

Personal Qualities:

Manual dexterity
Mechanical aptitude
Ability in mathematics and science

Personal Equipment Needed: None

Expenses: Registration fee—$20
Tuition for students over 21—$40 per month

Course: NURSERY AND LANDSCAPE TECHNOLOGY

Name of School:	Address:	Telephone:
Brainerd Area Vocational-Technical School	300 Quince St. Brainerd, Minn. 56401	(218) 829-2814

Admission Dates: September

Nature of Work: Nursery and landscape technologists select and care for appropriate trees, plants, shrubs and flowers for particular uses around houses, commercial buildings, on streets, roadsides, for parks, institutions and other public areas.

Job Opportunities: Landscape technologists are employed by cities, state and Federal governments, in parks, arboretums, orchards, cemetaries, golf courses, private estates, institutions or industrial grounds. Some work for nurseries, some own their own nursery and landscape businesses.

Course Description:

- *Botany
- *Plant identification
- *Nursery propagation genetur and breeding
- *Landscape design
- *Greenhouse practice
- *Nursery management
- *Lawn and turn maintenance
- *Soil science
- *Plant diseases and insects
- *Weed control
- *Pruning

On-the-job training in qualified nurseries is an important part of this program.

Length of Course: 18 months—including on-the-job training

Helpful High School Courses:

- Botany
- Biology
- Chemistry
- Business subjects

Personal Qualities:

- Interest in nursery and landscape work
- Desire to work outdoors
- Good general health
- Manual dexterity

Personal Equipment Needed:

- Books
- Basic tools

Expenses: Tuition for students over 21—$40.00 per month

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(218) 763-3196

Admission Dates: Day after Labor Day (Applications should be submitted the winter before)

Nature of Work: The licensed Practical Nurse gives the skilled nursing care to convalescents and the chronically ill. She assists the registered nurse in a team relationship under the direction of a registered nurse or physician.

Job Opportunities: Excellent opportunities in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, the aging and the mentally ill. Clinical experience is gained in local hospitals. Affiliation with Abbot Hospital, Minneapolis, provides the experience in the nursing of children and affiliation with Fergus Falls State Hospital gives training in nursing the mentally ill. Training qualifies the graduate for licensure as Practical Nurse.

Length of Course: 12 months

Helpful High School Courses:

Prerequisites:	Pre-entrance test
High school graduates aged 17-21 (individuals 21-40 are accepted on individual basis)	Personal interview

Personal Qualities: Good physical and emotional health

Personal Equipment Needed:

Uniforms	Incidental supplies

Expenses: Reference books, uniforms, supplies and graduation expense —$75
Tuition for students over 21—$40 per month plus $75 fee
Acceptance Fee—$25

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Anoka Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1621

Admission Dates: September

Nature of Work: The licensed Practical Nurse gives skilled nursing care to convalescents and the chronically ill. She assists the registered nurse in a team relationship under the direction of a registered nurse or physician.

Job Opportunities: Excellent opportunities in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, the aging and mentally ill. Clinical experience is gained at Mercy Hospital, Anoka State Hospital and Anoka Nursing Home. Training qualifies the graduate for license as Practical Nurse.

Length of Course: 11 months

Helpful High School Courses:

Pre-entrance test	Physical examination
Personal interview	

Personal Qualities:

Good physical and mental health	Interest in people and health care
Sound moral character	

Personal Equipment Needed:

White uniforms, shoes and hose.	Scissors and incidentals
Watch (with sweep second hand)	

Expenses: Incidental fee—$125
Tuition for students over 21—$64 per month plus $125 fee

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Austin Area Vocational-Technical School	Austin, Minn. 55912	(507) 433-7301

Admission Dates: Day after Labor Day

Nature of Work: The Licensed Practical Nurse gives skilled nursing care to convalescents and the chronically ill. She assists the Registered Nurse in a team relationship under the direction of a Registered Nurse or physician.

Job Opportunities: Excellent opportunities in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, the aging and mentally ill. Clinical experience is received at St. Olaf's Hospital, Austin, or Mt. Sinai Hospital, Minneapolis for the nursing of children, and St. Peter State Hospital for the care of the mentally ill. Training qualifies the graduate for the licensure as Practical Nurse.

Length of Course: 12 months

Helpful High School Courses:

Sciences	Communication

Personal Qualities:

Age 17½-55	Physical and dental examination
Good mental and physical health	

Personal Equipment Needed:

Uniforms	Books
Watch	

Expenses: Course fee—$150
Tuition for students over 21—$345

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Bemidji Area Vocational-Technical School	Bemidji, Minn. 56601	(218) 751-4137

Admission Dates: September

Nature of Work: The licensed Practical Nurse gives skilled nursing care to convalescents and the chronically ill. She assists the registered nurse in a team relationship under the direction of a registered nurse or physician.

Job Opportunities: Excellent opportunities exist in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, the aging and mentally ill. Clinical experience in general nursing received at Bemidji Hospital and Northwestern Hospital, Minneapolis.

Length of Course: 12 months

Helpful High School Courses:

Prerequisites:
High school graduate if under 21 (desirable for over 21 but individual consideration is given applicant)

Personal Qualities:

Personal Equipment Needed:

Books
Uniforms
Incidentals

Expenses: Uniforms—$24
Books and supplies—$60
Name pin, scissors, locker fee—$4.25
Activity fee—$10
Tuition for students over 21—$50 per month

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Brainerd Area Vocational-Technical School	300 Quince St. Brainerd, Minn. 56401	(218) 829-2814

Admission Dates: September

Nature of Work: The licensed Practical Nurse gives skilled nursing care to convalescents and the chronically ill. She assists the registered nurse in a team relationship under the direction of a registered nurse or physician.

Job Opportunities: Excellent opportunities in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, the aging and mentally ill. Clinical experience is received through affiliation with St. Joseph Hospital, Brainerd, and Moose Lake State Hospital for the mentally ill.

Length of Course: 12 months

Helpful High School Courses:

High school graduate	Age 18-40 (exceptions are made)

Personal Qualities:

Desirable personal traits	Good moral character
Good physical and mental health	

Personal Equipment Needed:

Books	Uniforms

Expenses: Books, uniform and miscellaneous supplies—$100
Tuition for students over 21—$40 per month plus $100 fee

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Detroit Lakes Area Vocational-Technical School	Hwy. 34 East Detroit Lakes, Minn. 56501	(218) 847-9261

Admission Dates: August

Nature of Work: The Licensed Practical Nurse gives skilled nursing care to convalescents and the chronically ill. She assists the registered nurse in a team relationship under the direction of a registered nurse or physician.

Job Opportunities: Excellent opportunities exist in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, the aging and mentally ill. Clinical experience in general nursing received at St. Mary's Hospital, Detroit Lakes, and for the mentally ill at Fergus Falls State Hospital.

Length of Course: 11 months

Helpful High School Courses:

Prerequisites:
Practical nursing aptitude test
Physical and dental examinations

Personal Qualities:
Good physical and mental health
Desirable personal traits
Good moral character

Personal Equipment Needed:
Books
Uniforms

Expenses: Enrollment fee (including uniforms, caps and books)—$75
Tuition for students over 21—$40 per month plus enrollment fee

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55801	(218) 722-2801

Admission Dates: September

Nature of Work: The Licensed Practical Nurse gives skilled nursing care to convalescents and the chronically ill. She assists the Registered Nurse in a team relationship under the direction of a Registered Nurse or physician.

Job Opportunities: Excellent opportunities exist in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, the aging and mentally ill. Clinical experience is received at Miller Hospital, St. Luke's Hospital and St. Mary's Hospital, Duluth, and Moose Lake State Hospital for the mentally ill.

Length of Course: 12 months

Helpful High School Courses:

High school diploma or equivalency certificate	Age 17-40 have preference Practical nursing aptitude test

Personal Qualities:

Good physical and mental health	Good moral character
Desirable personal traits	

Personal Equipment Needed: Bandage, scissors, student uniforms, white shoes, hose, watch (with sweep second hand), books as needed

Expenses: Health service—$25
Uniforms—$40
Incidentals—$35
Tuition for students over 21—$802.50 per year plus above $100 fees.

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Faribault Area Vocational-Technical School	Faribault, Minn. 55021	(507) 334-3965

Admission Dates: First Mondays of February and August

Nature of Work: The licensed Practical Nurse gives skilled nursing care to convalescents and the chronically ill. She assists the registered nurse in a team relationship under the direction of a registered nurse or physician.

Job Opportunities: Excellent opportunities in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, the aging and mentally ill. Clinical experience is provided in Rice County District #1 Hospital, St. Lucase Convalescent and Geriatric home, Faribault; Regina Memorial Hospital and Hastings State Hospital, Hastings.

Length of Course: 12 months

Helpful High School Courses:

Personal Equipment Needed:
Uniforms—$20 Books

Expenses: Enrollment fee—$5
Service fee—$36
Other fees include travel to affiliated hospitals and medical insurance, graduation uniforms and announcements.
Tuition for Minnesota residents over 21—$40 per 4-week period
Tuition for non-residents—$55 per month

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall of Each Year

Nature of Work: Practical nurses give direct patient care, working under the supervision of a registered nurse or physician, and in a close working relationship, they assist registered nurses in giving nursing care to children, adults, infants and aged patients in more complex situations.

Job Opportunities: Licensed practical nurses are employed in a variety of settings, such as hospitals, nursing homes, public health agencies, doctors' offices, industry or in private practice in homes or in hospitals. Opportunities for employment are now being offered with the Army Medical Service and in Civil Service positions.

Course Description: Students' educational experiences center on direct bedside care and on learning to nurse patients in carefully selected situations. Basic concepts in the biological and behavioral sciences and in nursing are related to the care of selected patients of all age groups with common deviations from health. Experience in patient care is provided in an affiliated hospital.

Length of Course: 10½ months

Helpful High School Courses:

- Biology
- Math
- Basic Sciences

Personal Qualities:

- Scholastic ability
- Good physical condition
- Good mental and moral character
- Sincere desire to become a practical nurse
- Friendly personality

Personal Equipment Needed: None

Expenses: The cost of uniforms, books, etc. will be a financial obligation for which the students should prepare. Students will be advised of the requirements at the time of enrollment.

Tuition for students over 21—$32 per month plus costs noted above

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: The Licensed Practical Nurse gives skilled nursing care to convalescents and the chronically ill. She assists the registered nurse in a team relationship under the direction of a registered nurse or physician.

Job Opportunities: Excellent opportunities exist in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, and the aging and mentally ill. Clinical experience is gained in area hospitals. Training qualifies the graduate for license as Practical Nurse.

Length of Course: 12 months

Helpful High School Courses:

High school diploma	ACT (recommended)
Pre-entrance test	

Personal Qualities:

Good physical and mental health	Interest in nursing
Desirable personal traits	Desire to work with people
Good moral character	

Personal Equipment Needed: Uniforms, books, miscellaneous

Expenses: Tuition for non-residents of Minn.—$70 per month
Tuition for students over 21 if Minn. resident—$3 per week

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Rochester Area Vocational-Technical School	Colonial Bldg. Rochester Methodist Hospital Rochester, Minn. 55901	(507) 282-9411 ext. 355

Admission Dates: September

Nature of Work: Licensed practical nurses assist in caring for medical and surgical patients, convalescents, handicapped people and others who are mentally or physically ill. They provide technical nursing care under the direction of physicians and registered nurses as part of the medical team.

Job Opportunities: Licensed practical nurses work in hospitals, clinics, nursing homes, doctors' offices, industrial and public health and welfare agencies. Many are in private practice caring for the ill in private homes.

Course Description: Class and practical experience is provided in the bedside nursing care of patients in medical and surgical techniques, the care of mothers and newborn infants; pediatrics and geriatrics, and psychiatric nursing.

Length of Course: 11½ months

Helpful High School Courses:

Home economics
Biology
Mathematics

Personal Qualities:

Good physical and mental health
Good moral character and emotional maturity
Desire to help others
Pleasant personality

Personal Equipment Needed: Uniforms and white shoes and hose.

Expenses: Registration fee—$5 upon acceptance
Books—$35 (approximately)
Uniforms—$30 (approximately)
Tuition for students over 21 or those from out-of-state $35 per month ($275 total) plus fees as indicated above.

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn.	(612) 252-0101

Admission Dates: September

Nature of Work: The licensed Practical Nurse gives skilled nursing care to convalescents and the chronically ill. She assists the registered nurse in a team relationship under the direction of a registered nurse or physician.

Job Opportunities: Excellent opportunities in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, the aging and mentally ill. One half of students time is spent working under supervision in the St. Cloud Hospital or the St. Cloud Veteran's Administration Hospital.

Length of Course: 12 months

Helpful High School Courses:

Personal Qualities:

Age 17 or older
Aptitude
Physical Health

Personal Equipment Needed: Uniforms—$35 (plus shoes, hose, scissors, watch)
Books—$5-$40

Expenses: Service fee—$7
Tuition for students over 21—$40 per month plus $7 service fee

Course Title: NURSE, PRACTICAL

Name of School:	Address	Telephone:
St. Paul Vocational-Technical School	235 Marshall Ave. St. Paul, Minn. 55104	(612) 227-9121

Admission Dates: September

Nature of Work: The licensed Practical Nurse gives skilled nursing care to convalescents and the chronically ill. She assists the registered nurse in a team relationship under the direction of a registered nurse or physician.

Job Opportunities: Excellent opportunities in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, the aging and mentally ill. Clinical experience is received at Charles T. Miller, Childrens' Hospital, Family Nursing Service or St. Paul Medical Center.

Length of Course: 12 months

Personal Qualities: Age 18-35

Personal Equipment Needed:

Books Uniforms

Expenses: Course fee—$315

Tuition for students over 21 is set by the St. Paul Board of Education

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Thief River Falls Area Vocational-Technical School	Thief River Falls, Minn.	(218) 681-5424

Admission Dates: September

Nature of Work: The Licensed Practical Nurse gives skilled nursing care to convalescents and the chronically ill. She assists the Registered Nurse in a team relationship under the direction of a Registered Nurse or physician.

Job Opportunities: Excellent opportunities exist in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, the aging and mentally ill. Clinical experience is provided at Northwestern Hospital (general nursing) and Fergus Falls State Hospital (for the care of the mentally ill)

Length of Course: 12 months

Helpful High School Courses:

Chemistry
Biology

Better than average high school record

Personal Qualities:

Reliability
Common Sense
Sympathy
Good manners, morals

Personal Equipment Needed: Books, uniforms, laundry, health service and graduation fee included in course fee.

Expenses: Registration fee—$10
Course fee—$140
Tuition for students over 21—$300 plus $140 course fee

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Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: September

Nature of Work: The licensed Practical Nurse gives skilled nursing care to convalescents and the chronically ill. She assists the registered nurse in a team relationship under the direction of a registered nurse or physician.

Job Opportunities: Excellent opportunities in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, the aging and mentally ill. Clinical experience is provided at Rice Memorial Hospital, Willmar; Methodist Hospital, St. Louis Park, and Willmar State Hospital for the care of the mentally ill.

Length of Course: 12 months

Helpful High School Courses:

Rank in upper two-thirds of high school class	DAT Test scores

Personal Qualities: Good emotional, mental and physical health

Personal Equipment Needed: Uniforms, scissors, books

Expenses: Course fee—$116
Tuition for students over 21—$40 per month plus $116 course fee

Course Title: NURSING, PRACTICAL

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(570) 8-3671

Admission Dates: First Tuesday after Labor Day

Nature of Work: The licensed Practical Nurse gives skilled nursing care to convalescents and the chronically ill. She assists the registered nurse in a team relationship under the direction of a registered nurse or physician.

Job Opportunities: Excellent opportunities in hospitals, nursing homes, public health agencies and in private practice.

Course Description: Theory and practical experience in care of medical and surgical patients, mothers and newborn infants, ill children, the aging and mentally ill. Clinical experience is provided at Community Memorial Hospital, Winona and St. Joseph's Hospital, St. Paul, for the care of children and the mentally ill.

Length of Course: 12 months

Helpful High School Courses:

High school graduate, or 18 years or older	Minimum score as recommended by General Aptitude Test Battery
Physical examination	

Personal Equipment Needed:

Books	Uniforms

Expenses: Course fee—$92
Tuition for students over 21—$30 per month plus course fee

Course Title: OFFICE MACHINES SERVICEMEN

Name of School:	Address:	Telephone:
Faribault Area Vocational-Technical School	1225 S.W. 3rd St. Faribault, Minn. 55021	(507) 334-3965

Admission Dates: September, each year

Nature of Work: Servicemen work on office machines, specifically manual and electric typewriters and adding machines, on a regular scheduled basis. Servicing includes inspection, cleaning, oiling, adjusting and repairing as required. Major repairs are generally done in the shop, other work is usually done in the office. Business records and management may also be part of this job.

Job Opportunities: Advisory Committees and Bureau of Labor Statistics, 1965, report that nearly 31,000 job opportunities exist nationally and as of 1960 Census, 694 exist in Minnesota, in the area of typewriter and adding machine repair.

Course Description:

- *Manual typewriter theory and service
- *Electric typewriter (typebar) theory and service
- *Electric typewriter (single element) theory and service
- *Adding machine theory and service
- *Customer relations and sales
- *Business and shop management
- *Basic electricity — electronics I and II
- *Related science and mathematics
- *Mechanical service techniques

Length of Course: 9½ months

Helpful High School Courses:

- Electricity — electronics
- Metal work
- Typewriting and business courses

Personal Qualities:

- Average or above mechanical and mathematical ability
- Excellent motor coordination and finger dexterity
- Able to meet public well

Personal Equipment Needed: None except students shall wear white or light colored shirts, ties and neat trousers. Females may enroll, but are not now frequently found in the occupation.

Expenses: Tools—none required

Books—approximately $15 per quarter

Tuition for student over 21—$40 per 4-week period for Minnesota residents

$55 per month for non-residents

Course Title: OPTICAL TECHNOLOGY

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: Optical technicians set up and operate machines to grind eyeglass lenses to prescription specifications and assemble lenses in frames. Job includes reading lens and frame specifications from prescriptions, selecting lens blanks, operating such machines as a generator, polisher, edger or hardener and power determining and optical centering instruments.

Job Opportunities: Most optical technicians work for retail optical shops; some work in private shops, for department stores, or are employed by eye physicians or optometrists who sell eyeglasses directly to their patients. Many are found in wholesale optical laboratories and some in hospitals, government agencies, construction firms and mining companies.

Course Description:

*Surfacing and finishing layout
*Sphere, cylinder and prism grinding
*Special lens and surface grinding and polishing
*Lens cutting, cribbing, edging insertions and mountings
*Soldering, trim work and frame repair
*Hardening of lenses
*Machine maintenance
*Theory and application of ophthalmic lenses
*Frame and lens measurement
*Basic dispensing procedures
*Anatomy of the human eye
*Stock maintenance and control

Length of Course: 10 months

Helpful High School Courses:

Mathematics, including algebra and geometry
Shop courses

Personal Qualities:

Mathematical interest
Manual dexterity

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: OPTICAL TECHNOLOGY

Name of School:	Address:	Telephone:
Eveleth Area Vocational-Technical School	402 Roosevelt Ave. Eveleth, Minn. 55734	(218) 749-2285

Admission Dates: September

Nature of Work: Opticians make, fit and adjust prescription eyeglasses. Optical technicians grind and polish lenses according to prescriptions and assemble lenses in frames. Some make contact lenses which are worn directly over the eyes. Technicians must understand prescriptions and lens theory, must know how to determine optical requirements and be able to adjust finished glasses and frames to wearer's needs.

Job Opportunities: Optical technicians work in retail shops, optical departments of retail stores, for eye physicians or optometrists who sell directly to their patients, and for prescription shops in ophthalmic goods factories, in hospitals, government agencies, wholesale optical laboratories and in businesses such as construction firms and mining companies requiring safety or protective lenses. Some technicians work as dispensing opticians in retail stores.

Course Description:

*Ophthalmic theory
*Manual technical practice, including laboratory practice and assignments in making prescription eyeglasses
*Related information

Length of Course: 9 months

Helpful High School Courses:

Mathematics, including algebra and geometry
Sciences, including physics

Personal Qualities:

High school graduate with C or better grade average
Manual dexterity
Accurate work habits
Ability to concentrate on details

Personal Equipment Needed:

Books
Small tools

Expenses: Enrollment fee—$20
Tuition for students over 21—$65 per month
(Next year will be $150 per quarter for Minnesota residents; $195 per quarter for non-residents)

Course Title: PARTSMAN TRAINING

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: September

Nature of Work: Partsmen work in retail and wholesale trade in automotive and farm implement and equipment. They must know how to determine correct parts for certain vehicle or implement according to year, model and serial number and must be able to determine customer needs, often according to very sketchy information. Keeping inventories up to date, ordering parts, maintaining sales records and storing purchased parts are part of this job. In some jobs the partsman makes some repairs and installs and tests parts.

Job Opportunities: Partsmen work for farm implement dealers, new and used car dealers and in purchasing departments of related equipment lines. The major farm equipment and automotive dealers employ traveling partsmen to assist their retail dealers. There are good opportunities for advancement and many jobs available in large and small firms, parts warehouses and manufacturing firms.

Course Description:

- *Interpretation of parts books
- *Assembly and disassembly of farm equipment
- *Automotive engines, transmission and other parts
- *Salesmanship
- *Inventory control
- *Basic accounting and clerical training
- *Typing
- *Cash register
- *Business correspondence
- *Merchandise display
- *Personal development
- *Management techniques

Length of Course: 10 months

Helpful High School Courses:

- Industrial arts or vocational agriculture
- Business subjects

Personal Qualities:

- Interest in meeting and working with people
- Mechanical aptitude

Personal Equipment Needed: Matching green shirts and trousers

Expenses: Acceptance Fee—$25
Book fee—$10
Tuition for students over 21—$40 per month

Course Title: PARTSMAN TRAINING

Name of School:	Address:	Telephone:
Canby Area Vocational-Technical School	Hwy 68 Canby, Minn. 56220	(507) 223-7252

Admission Dates: August 25th

Nature of Work: A partsman purchases, stores and issues spare parts for automotive, industrial and farm equipment. He must ascertain type and specifications of parts, order parts from suppliers, store parts and issue them upon request. Partsmen do managerial and service tasks with some related selling in either wholesale or retail jobs.

Job Opportunities: Partsmen are needed in every part of the state. They may be employed by wholesale firms, retail businesses or by manufacturing and service companies.

Course Description:

*Introduction to engines and related parts
*Farm machinery
*Business machines
*Typing
*Filing
*Card file indexing system
Parts book work
*Sales
*Marketing

Length of Course: 11 months

Helpful High School Courses:

Basic mathematics
English grammar and speech
Typing
Bookkeeping
Distributive education

Personal Qualities:

Honest, forthright and forceful personality
Enjoyment of working with people
Desire to serve

Personal Equipment Needed:

Small set of hand tools
Clothing as required
Reference books

Expenses: Enrollment fee—$10 upon acceptance
Clothing—$27
Tools—$40 or more
Reference books—$15
Tuition for students over 21—$40 per month (Minnesota residents)
$60 out-of-state resident

Course Title: PATTERNMAKING

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-1381

Admission Dates: September

Nature of Work: Patternmakers are highly skilled workers in metal castings. Patternmakers must be expert in the use and care of all woodworking hand and machine tools in order to make the models or patterns used in producing most cast metal objects. The patterns are made of wood, metal, plaster or plastics. In order to produce a pattern, the craftsman selects the material needed, lay out the specifications, marks the design for each section and shapes the rough pieces into final form, using whatever machine or hand tools are appropriate. Patternmakers must be highly creative with a flare for problem-solving and ability to work closely with designers and engineers.

Job Opportunities: Patternmakers work in shops specializing in making models needed by industry, in pattern shops within a certain industry or metals casting company and in shops or industries specializing in plastic molding.. Entry employment is usually at the apprentice level.

Course Description:

Semester I
*Layout and making of simple pattern and core boxes
*Hand and machine tools
*Pattern design and finishing

Semester II
*Advanced patterns and core boxes
*Molds, cores and castings

Summer Session
*Machine shop and welding
*Advanced metal and wood patterns

Semester III
*Built-up and split patterns
*Core boxes, core box design
*Jigs and machine setups

Semester IV
*Built up patterns and core boxes having loose pieces
*Core boxes with multiple cores

Related Subjects
*Physics, drawing, mathematics, communication
*Metallurgy and measurement

Length of Course: 21 months

Helpful High School Courses:

Mathematics
Physics
Industrial arts

Personal Qualities:

Desire to work with wood, metals and tools
Average or above intelligence
Above average spacial, abstract, numerical and mechanical aptitudes
Ability to make detailed dimensions with accuracy
Ability to visualize objects from detailed drawings

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$70 per month

Course Title: PIPEFITTER-STEAMFITTER

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September—Beginning of Fall quarter

Nature of Work: Pipefitters apply technical knowledge and skill in welding, brazing, soldering, bending and threading in installing and maintaining piping systems. Pipefitters-steamfitters install, dismantle, repair and recondition heating systems, power plant installations, air conditioning systems, refrigeration units and process piping.

Job Opportunities: Graduates of this course are qualified to enter pipefitting apprenticeship programs. This consists of five years of on-the-job training and 164 hours of night school during each of the five years. At the end of this training, apprentices become journeymen with a pipefitter-steamfitter license and will be paid the full journeyman's wage plus fringe benefits.

Course Description:

*Mathematics
*Science
*Steam theory
*Hydronic heating
*Air conditioning
*Refrigeration
*Industrial relations
*Communications
*Pipefitter drawing and blueprint reading
*Gas and electric welding
*Pipe shop

Length of Course: 10 months

Helpful High School Courses:

Mathematics
Science (especially physics)
Mechanical drawing
Metal shop

Personal Qualities:

Willingness and ability to do strenuous physical labor in all kinds of weather
Enjoy working with hands as well as mind
Ability to visualize systems and layouts

Personal Equipment Needed: Steamfitter-Pipefitter Apprentice Manual ($18.50)
Miscellaneous tools and supplies

Expenses: Incidental fees—$40 approximately
Tuition for students over 21—$65 per month

Course Title: PLASTIC TECHNOLOGY

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: September

Nature of Work: Mold making is highly skilled work, requiring creative ability plus complete knowledge of plastics and molding techniques. Workers mold and assemble plastic tools such as gauges, jigs, templates and fixtures following blueprints. Measures and makes tools, assembles tools, verifies aline and dimensions and uses carpentry to frame and support complex tools needed for injection.

Job Opportunities: Graduates of this course are engaged in the design and manufacture of molds used in plastic injection machines. They may be called mold makers or tool makers and are needed in plastic industries ranging from toys and leisure time products to industries like automotive, aerospace and a variety of instruments control companies.

Course Description:

*Design, manufacture and operation of the mold and its use in the molding machine.

*Mold processes
*Materials
*Mathematics

This course provides advanced training in a specialized field. Students must have successfully completed Machine Shop II or an equivalent.

Length of Course: 9 months

Helpful High School Courses:

Industrial arts
Mathematics
Science

Personal Qualities:

Aptitude in mathematics and science
Good manual skills
Ability to do precise work

Personal Equipment Needed: Textbooks are furnished by the school

Expenses: Registration fee—$5
Tuition for students over 21—$60 per month
G.I. Students—½ tuition

Course Title: PLUMBING

Name of School:	Address:	Telephone:
Southwest Minn. Area Vocational-Technical School	401 West St. Jackson, Minn. 56143	(507) 847-3320

Admission Dates: August 31

Nature of Work: Plumbers install and repair pipe systems which carry water, steam, air or other liquids and gases needed for sanitation and industrial production. Most plumbers specialize in either residential or commercial installations. They must use a variety of hand and machine tool skills and develop systems according to local codes and specifications.

Job Opportunities: Most plumbers enter the field as apprentices; there are good opportunities to earn journeyman status in home or commercial work for large and small shops and plumbing firms. Once a plumber is a qualified journeyman, he may own his own shop or business.

Course Description:

- *Mathematics
- *Blueprint reading and sketching
- *Pipe and fittings
- *Water supply and sanitation
- *Fixtures
- *Mechanical equipment
- *Heating
- *Welding
- *Codes
- *Business records
- *Communications

Length of Course: 11 months

Helpful High School Courses:

- Mathematics including algebra and geometry
- Physics
- Mechanical drawing
- Industrial arts, particularly metal shop

Personal Qualities:

- Good manual dexterity
- Mathematical ability
- Interest in working with people

Personal Equipment Needed: Level, rule
Books—$6, approximately

Expenses: Tuition for students over 21—$30 per month

Course Title: PLUMBING

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September

Nature of Work: Plumbers install and repair pipe systems which carry water, steam, air or other liquids and gasses needed for sanitation and industrial production. Most plumbers specialize in either residential or commercial installations. They must use a variety of hand and machine tool skills and develop systems according to local codes and specifications.

Job Opportunities: Most plumbers enter the field as apprentices; there are good opportunities to earn journeyman status in home or commercial work for large and small shops and plumbing firms. After a plumber is qualified as a journeyman he may own his own shop or business.

Course Description:

*Installation of fixtures
*Pipe threading
*Hot and cold water supply
*Drainage systems
*Fabrication of glass pipe
*Lead work
*Blueprint reading
*Plumbers mathematics
*Minnesota state code
*Trade knowledge

Length of Course: 18 months

Helpful High School Courses:

Mathematics
Physics
Mechanical drawing
Industrial arts

Personal Qualities:

Good manual dexterity
Mathematical ability
Interest in working with people

Personal Equipment Needed: Books—$25 first year, $15 second year
Service fee—$7

Expenses: Tuition for students over 21—$40 per month plus other fees

Course Title: PLUMBING

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Plumbers make, install and maintain pipe systems which carry water, steam, air or other liquids and gases for sanitation and industrial production. Most plumbers specialize in either residential or commercial installation, either in new construction or modernization of existing structures. They must use a variety of hand and machine tools and develop systems according to local codes and specifications.

Job Opportunities: Most plumbers enter the field as apprentices; there are good opportunities to earn journeyman status in residential or commercial work for large and small shops and plumbing firms. After a plumber is qualified as a journeyman, he may own his own shop or business.

Course Description:

Laboratory and shop course
- *Care and use of hand and power tools
- *Job and shop safety
- *Pipefitting identification:
  - galvanized
  - cast iron
  - black malleable
  - soil pipe
- *Pipe shop work
- *Oxyacetylene welding
- *Soldering and lead work
- *Use of transit

Related subjects
- *Mathematics
- *Communications
- *Drawing — blueprint reading
- *Science

Length of Course: 10 months

Helpful High School Courses:
- Mathematics
- Science
- Mechanical drawing
- Metal shop

Personal Qualities:
- Physical strength and stamina to perform physical labor in all weather
- Ability to work in deep ditches and high places
- Ability to visualize in small area

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: PRINTING (NEWSPAPER OFFSET)

Name of School:	Address:	Telephone:
Canby Area Vocational-Technical School	Hwy. 68 Canby, Minn. 56220	(507) 223-7252

Admission Dates: September

Nature of Work: Offset printing involves several operations. Usually a worker specializes in one of these, but should know the basis of each process and the steps necessary for its success. Camera work, stripping negatives into layout sheets or flats from which the plates are made, platemaking, tending the offset presses may be part of the offset printer's job.

Job Opportunities: Graduates of this course usually find employment with newspapers since the emphasis is on newspaper printing. As new processes and ways of using offset printing are developed, these skilled workers will be in ever greater demand in newspaper plants, job shops and in-plant printing for business and industrial firms.

Course Description:

*Newspaper page layout
*Design
*Paste-up camera work
*Stripping
*Plate making
*Public relations
*Mathematics
*Typing
*Operation of particular machines used in offset printing

Length of Course: 11 months

Helpful High School Courses:

Science
Art
Journalism

Personal Qualities:

Friendly personality
Reliability
Mechanical aptitude
Interest in photography and art
Interest in newspaper work or printing

Personal Equipment Needed: Books and uniforms

Expenses: Enrollment fee—$10 upon acceptance
Reference books—$10-$20
Uniforms—$25
Room and Board—$3-$6 per day
Tuition for students over 21—$40 per month (Minnesota resident)
$60 if out-of-state resident

Course Title: PRINTING, OFFSET

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Photo-offset lithographers must know all phases of offset printing from copy preparation, photography, negative stripping, platemaking, presswork and finishing. Craftsmen in large shops usually specialize in one area, but must be familiar with all other processes necessary to turning out finished jobs. Offset printing is used in most large print shops.

Job Opportunities: Graduates of this course are qualified for an entry level job leading to advancement in a specialized area such as litho-artist, stripper, platemaker, litho-pressman, bindery man, salesman, estimator and others. Employers include commercial print shops, in-plant printing departments, newspapers, book or magazine publishers, letter service or trade shops.

Course Description:

Summer

*Shop introduction to offset printing

*Copy preparation, stripping, plate-making, press work and finishing

Semester I

*Shop work — letterpress and offset

*Chemistry of lithography

*Typing, copy fitting, copy reading

*Layout and copy preparation

Semester II

*Shop work — offset printing

*Chemistry of lithography

*Copy preparation

*Estimating

6 Months Additional

*Advanced printing techniques

*Imposition, 3 and 4 color process work

Length of Course: 18 months

Helpful High School Courses:

Industrial arts print shop

Science

Mathematics

English

Personal Qualities:

Good reading ability and comprehension

Mathematical aptitude

Mechanical and reasoning abilities

Patience and emotional stability

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: PRODUCTION AGRICULTURE

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: October

Nature of Work: Production agriculture involves every phase of farm operation: keeping farm records on crops, feed and livestock; participation in all farm activities including marketing, buying, planting, harvesting, and obtaining credit; continued study to keep abreast of new methods, processes, products.

Job Opportunities: Students are trained in the skills necessary to be a better farm owner, operator or manager.

Course Description:

*Livestock production
*Crop production
*Agricultural policy
*Agricultural chemicals
*Fertilizers
*Soils
*Farm structures
*Farm mechanics
*Farm management

Length of Course: 18 months

Helpful High School Courses:

Vocational agriculture
Mathematics
Sciences
Business courses

Personal Qualities:

Must have farm background
Should desire to continue career in farming
Should have opportunity for entering field

Personal Equipment Needed: Books

Expenses: Acceptance fee—$25
Books—$10
Tuition for students over 21—$40 per month

Course Title: PRODUCTION AGRICULTURE

Name of School:	Address:	Telephone:
Southwest Minn. Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: January 1st

Nature of Work: Production agriculture involves every phase of farm operation: keeping farm records on crops, feed and livestock; participating in all farm activities, including marketing, buying, planting, harvesting, obtaining credit; attending monthly meeting for progress and problem reports.

Job Opportunities: Individuals interested in being farm operators, farm foremen or farm managers can make use of this background.

Course Description:

*Agriculture mechanics—welding, power, machinery, building, soil and water management
*Animal science—beef, sheep, dairy, swine, poultry and other stock, testing rations
*Communications—written, oral, reference and spelling
*Farm management—accounting, record analysis, reorganization, tax management, investment
*Plant science—biology, crop production
*Soil science—structure, fertility and soil testing

Length of Course: 18 months

Helpful High School Courses:

Vocational agriculture	English
Science, particularly chemistry	Business courses
Mathematics	

Personal Qualities:

Interest in agriculture	Desire to perpetuate rural life
Love of nature	Should live on farm

Personal Equipment Needed: Books and handbooks which become student's property

Expenses: Tuition for students over 21—$30 per month

Course Title: PRODUCTION AGRICULTURE

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical School	1920 Lee Blvd. North Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall of each year

Nature of Work: The operation and management of a farm business including crop and livestock production management.

Job Opportunities: According to local research project conducted in 1964-65 by the Mankato School District #77, 1.8% of the farms in the surrounding area are available for new operators annually. In the three-county service area surrounding Mankato, there were 4,583 farms in 1966 according to the Minn. Agricultural Statistics publication. This would indicate that approximately 82 farming opportunities per year are within those three counties.

Course Description: Instruction for this course will center around the operation and management of a farm business with emphasis on all the production phases of a farm business. Emphasis will be on optimum use of land, labor and capital. The student will be taught the decision making process by utilizing alternative courses of action to be carried out in the organizational changes and planning of a farm business. The student will be required to keep a complete farm record for analysis and interpretation.

Length of Course: 2 years (48 weeks of classroom instruction) 30 weeks of supervised on-the-farm instruction. Two evening meetings per month will be held during the on-the-farm instruction period.

Helpful High School Courses: Vocational agriculture

Personal Qualities: Desire to become a farmer or a farm manager

Ownership in a farm business with some managerial control of the business or a work experience arrangement may be developed upon the request of the student.

Personal Equipment Needed: None

Expenses: The student will need to purchase notebooks, workbooks, technical books, publications and other personal items costing approximately $75 per year.

Tuition for student over 21—$32 per month

Course Title: PRODUCTION, AGRICULTURAL

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: Beginning of Fall and Winter quarters

Nature of Work: Graduates of this course usually are independent farmers or farm managers. Understanding of animal science and nutrition, soil science and fertilizers, plant science and agricultural chemicals, automation in crop and livestock production, grain and livestock marketing and other technological aids to farming form the broad basis for his increased efficiency and profit in farm management.

Job Opportunities: Graduates may be self-employed on a purchased or rented farm, or as a farming partner. Some work as commercial farm managers, herdsmen, specialty foremen, feedlot supervisors or production fieldmen.

Course Description: Contact the school for a bulletin giving complete details

Length of Course: 14 months — two 7-month terms in two school years plus 6 months of occupational experience. (Student returns to farm for Spring and Fall work)

Helpful High School Courses:

Vocational agriculture	Industrial arts
Biology	Business subjects
Bookkeeping	Sciences

Personal Qualities: Interest in farming and belief in the future of farming or farm management as a way of life

Personal Equipment Needed: None

Expenses: Books—$80 during course
Tuition for students over 21—$40 per month

Course Title: QUANTITY FOOD PREPARATION

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Food preparation specialists are needed to help plan, prepare and serve foods in large quantities. Duties may include menu planning, cost estimating, ordering and storing of foods and inventory control. Those who advance to managerial positions may also be responsible for some bookkeeping and personnel duties.

Job Opportunities: Cafeterias, restaurants, hotels, schools, hospitals, institutions and catering establishments need people skilled in quantity cookery. In very large places, an individual may be hired for one particular duty such as meats or salads.

Course Description:

- *Serving balanced meals
- *Estimating costs
- *Serving food in quantity
- *Meat cutting
- *Menu planning
- *Diets and nutrition
- *Roasting
- *Baking
- *Frying
- *Broiling
- *Braising
- *Sauteing

Length of Course: 9 months

Helpful High School Courses:

- Home economics
- Science
- Mathematics

Personal Qualities:

- Good mental and physical health
- Even temperament and ability to work well with others
- Interest in foods and food service

Personal Equipment Needed: Cook's uniforms, aprons

Expenses: Uniforms, laundry, miscellaneous—$25 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: RADIO-TELEVISION REPAIR

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Repairing radio and television sets is a relatively new field, and a highly interesting one. Repairmen work on all types of home and consumer radios, car radios, black and white and color television sets. Some are employed in repairing equipment such as automation controls, tele-metering equipment, radar and other types of equipment used in commercial or industrial installations.

Job Opportunities: Graduates of this course find work in radio and television service and repair shops, in wholesale and retail sales, as electronics assemblers, in research and as technicians in industries producing electronic equipment. Some work in the area of public address or other audio equipment. There are excellent opportunities for advancement and also for being self-employed.

Course Description:

Semester I
*OHMS law
*DC circuits
*AC circuits
*Meters
*Oscilloscope
*Test equipment

Semester II
*Vacuum tubes
*Amplifier circuits
*Oscillator circuits
*Transistor theory and circuitry

Summer Session
*Preparation for FCC first and second class radio phone license
*Basic television theory
*Television laboratory

Semester III
*History and development of radio
*Tuned radio frequency receivers
*Super-heterodyne receivers
*Receiver trouble shooting and service
*High fidelity and stereo amplifiers

Semester IV
*Advanced television theory
*Circuit analysis
*Trouble shooting and service techniques
*Color television theory
*Color television "setup" and service
*Customer relations

Length of Course: 21 months

Helpful High School Courses:

Mathematics
Physics
Industrial arts

Personal Qualities:

Average or above general intelligence
Manual dexterity
Patience
Interest in problem solving and research

Personal Equipment Needed: None

Expenses: Books and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: RADIO AND TELEVISION REPAIR

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-4606

Admission Dates: August 1st

Nature of Work: Television and radio service technicians install and repair electronic products including home, automobile, two-way mobile radios, phonographs, hi-fidelity and stereophonic sound equipment, intercommunication systems, tape recorders and public address systems. Some specialize in a particular area; for example, many technicians work only with color television sets. Most of the work is done in the shop after diagnosing problems, testing components and determining part to be replaced and adjustments to be made.

Job Opportunities: Service shops, stores that sell televisions, radios, sound systems and other electronic products employ most of the service technicians; another large group is employed by manufacturers who operate their own service branches, and many work for the federal or state government maintaining equipment.

Course Description:

*Basic theory in electronics
*Radio-TV circuitry
*Solid state circuitry
*Audio amplifiers
*Oscillaros and direct circuits
*Laboratory experience using test equipment to repair radio and TV sets

Length of Course: 9½ months

Helpful High School Courses:

Algebra
Electricity
Electronics

Personal Qualities:

Ability to visualize
Ability to think logically
Ability to work independently
Good personality for dealing with people

Personal Equipment Needed: Hand tools

Expenses: Miscellaneous personal needs—$35-$50
Tuition for students over 21—$30 per month

Course Title: REFRIGERATION AND AIR CONDITIONING

Name of School:	Address:	Telephone:
Moorhead Area Vocational-Technical School	Box 100 Moorhead, Minn. 56561	(218) 236-6277

Admission Dates: September or as openings occur during the year

Nature of Work: Refrigeration and air conditioning workers are responsible for installing, repairing and maintaining the systems which cool, heat, humidify, filter and ventilate our homes, schools, churches, factories and hotels as well as with refrigeration systems in homes, industries, food services and foods industry. Work may involve a single window air conditioner or a huge system which performs many functions in a large building or complex of buildings. Workers use a variety of tools and testing devices and must be skilled in diagnosing causes of breakdown or faulty operation.

Job Opportunities: Most refrigerating and air conditioning specialists work for engineering firms, repair services, contractors or dealers, either wholesale or retail, who supply refrigeration and air conditioning equipment. Skilled workers are in great demand as the industry continues to expand.

Course Description:

- *Drafting
- *Layout
- *Estimating
- *Sales engineering
- *Installation and repair
- *Refrigeration principles
- *Electricity
- *Welding
- *Applied physics
- *Home appliance repair
- *Basic home wiring
- *Wiring of motors
- *Sheet metal duct work
- *Plumbing
- *Basic business

Length of Course: 20 months

Helpful High School Courses:

- Mathematics
- Industrial arts
- Physics
- Business subjects

Personal Qualities:

- Average or above general intelligence
- Mathematical aptitude
- Scientific and technical aptitude
- Satisfactory score on tests given at the school

Personal Equipment Needed: Clothing and tools—$50 (Approximate cost)
Books—$50 (Approximate cost)

Expenses: Student activity fee—$10
Tuition for students over 21—$40 per month

Course Title: REFRIGERATION, HEATING, AIR CONDITIONING AND APPLIANCE REPAIR

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical School	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: First Monday of every month except July and August

Nature of Work: People skilled in the repair and installation of heating, refrigeration and air conditioning equipment are in demand. They must be able to work from blueprints in making large-scale installations in building, factories, food stores, restaurants and other commercial establishments, and they should be able to develop their own working diagrams and layouts for smaller jobs such as residential installations. Repair and service of gas and electric appliances is also part of this job.

Job Opportunities: Most refrigeration, heating and air conditioning repair men are employed by small repair and service shops, by contractors, in manufacturing plants and service departments of manufacturers as well as in independent small businesses. There are excellent opportunities for self employment in large and small communities.

Course Description:

*Appliance repair and service
*Electric motor repair and reconditioning
*Heating — oil, gas, electric
*Air conditioning
*Refrigeration

Length of Course: 21 months

Helpful High School Courses:

Mathematics
Science
Industrial arts — especially electricity

Personal Qualities:

Interest in field
Desire to work with people

Personal Equipment Needed: None

Expenses: Hand tools, if issued
Tuition for students over 21—$32 per month

Course Title: RETAIL FLORISTRY

Name of School:	Address:	Telephone:
Brainerd Area Vocational-Technical School	300 Quince St. Brainerd, Minn. 56401	(218) 829-2814

Admission Dates: September

Nature of Work: A retail florist is both a business man and an artist. He needs talent, skill and knowledge in flower arranging and handling and business training. Much of a florist's work is designing floral decorations. The florist must be able to create new arrangements and handle flowers skillfully as well as advise customers about the use of flowers.

Job Opportunities: Florists are employed by retail and wholesale firms and many own their own businesses. Ability, imagination and sound skills let an individual develop his own business as a very profitable venture.

Course Description:

*Floral design
*Flower shop management
*Merchandising
*Botany
*Greenhouse practices
*English
*Human relations
*Bookkeeping
*Sales training

Length of Course: 9 months

Helpful High School Courses:

Art
Business subjects

Personal Qualities:

High School Graduate
Good physical and emotional health
Artistic ability and creativity
Interest in business and selling
Interest in working with people

Personal Equipment Needed: Books

Expenses: Tuition for students over 21—$40 per month

Course Title: RETAIL MANAGEMENT

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Retail merchandising includes selling, store management, buying for resale, advertising, sales promotion, record-keeping and personnel. Management duties vary depending on the size of the store or shop and the type of merchandise, a retail manager might be in charge of the entire operation; in a large department store, he might be in charge of one department or one area such as buying or sales promotion.

Job Opportunities: Retail management is an expanding business, particularly as large stores have developed satellite operations in various communities as town and cities have extended their limits. More and larger stores plus a larger number of specialty shops have also resulted in a need for more trained management people.

Course Description:

*Retail store management
*Buying for resale
*Advertising
*Sales promotion
*Salesmanship
*Communications
*Accounting
*Law
*Human relations
*Mathematics
*Marketing laboratory

Case methods are used in all phases of instructions to give students practical experience in problem solving.

Length of Course: 18 months

Helpful High School Courses:

Distributive education
Business subjects
Mathematics

Personal Qualities:

Good physical and mental health
Interest in working with people
Good grooming

Personal Equipment Needed: None

Expenses: Workbooks and supplies—$30 during the course
Tuition for students over 21—$802.50 per year

Course Title: SALES ASSOCIATE

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: September

Nature of Work: Sales associates work in various areas within retail selling. Work includes: retail selling, assisting in merchandise buying, advertising, marketing research, service representative, public relations, promotion, inventory control and other aspects of retail business. There is good opportunity for advancement with on-the-job training to learn the details of the particular business and its products.

Job Opportunities: Sales associates are employed by retail, wholesale and service firms dealing in a wide variety of consumer goods from soft lines (clothing, for example) to hardware, furniture, appliances or heavy equipment.

Course Description:

*Salesmanship	*Applied sales
*Layout and lettering	*Retail procedures
*Merchandise display	*Advertising
*Business English	*Oral persuasion
*Mathematics	*Retailing principles
*Accounting	*Fabrics
*Business communications	*Human relations

Projects in the product and sales laboratory and two months of supervised on-the-job training are part of this course.

Length of Course: 11 months

Helpful High School Courses:

Distributive educations	Speech
Business subjects	Art
Mathematics	

Personal Qualities:

Interest in retail sales work	Desire to work with people
Good personality	

Personal Equipment Needed: None

Expenses: Acceptance fee—$25
Book fee—$15
Tuition for students over 21—$40 per month

Course Title: SALES MANAGEMENT

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn.	(612) 252-0101

Admission Dates: September

Nature of Work: In wholesale or retail trade, sales management is an attractive field because of good working conditions, chance for advancement and opportunity to develop personal abilities, whatever the product or service involved.

Job Opportunities: Graduates of this course qualify for almost all jobs in the field of distribution. These include individuals interested in sales, supervisory, managerial, purchasing and marketing positions. Most beginning jobs have excellent possibilities for advancement.

Course Description:

*Marketing
*Sales techniques
*Management
*Speech
*Human relations
*Business English

Length of Course: 18 months

Helpful High School Courses:

Distributive education
Business subjects (typing, bookkeeping)
Speech

Personal Qualities:

Enjoy working with people
Desire challenge and responsibility
Want to develop personal skills and abilities

Personal Equipment Needed: First Year books—$40
Second year books—$35

Expenses: Service fee—$7
Tuition for students over 21—$40 per month

Course Title: SALES AND MARKETING

Name of School:	Address:	Telephone:
Alexandria Area Technical School	Alexandria, Minn.	(612) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: Sales and marketing specialists usually work closely with a wide variety of individuals including customers and fellow employees. Such a worker may spend part of his day planning and doing paper work connected with travel or time spent away from the office or store.

Job Opportunities: Careers might be found in retail, wholesale and service business firms. Some career possibilities are: retail sales, department head, merchandise buyer, manager; fashion merchandiser, wholesale representative, credit counselor or manager, public relations and promotion; manufacturer's sales representative, inventory control specialist, home furnishings specialist, display, marketing research, agricultural sales, sales in radio, newspaper, and television.

Course Description:

1st 6 months

*Sales — retail management
*Principles of salesmanship
*Human relations
*Layout and lettering
*Communications
*Display and design
*Accounting

2nd 6 months

*On the job training with a sponsoring business firm.

3rd 6 months

*Analysis of experience and advanced training in business law, economics, advanced sales techniques, advertising, purchasing, wholesaling, product and occupational research.
*Mathematics and statistics

Length of Course: 18 months

Helpful High School Courses:

Business subjects (bookkeeping, typing, distributive education)
Speech
Advanced mathematics
Art

Personal Qualities:

Preference for working with people.
Desire for challenging work
Ability to accept responsibility
High degree of personal initiative

Personal Equipment Needed: None

Expenses: Acceptance fee—$25 plus $10 book fee.
Tuition for students over 21—$40 per month plus the above.

Course Title: SALES AND MARKETING (COOPERATIVE PART-TIME TRAINING)

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall of Each Year

Nature of Work: Manufacturers, wholesalers and retailers alike are seeking young men and women with specialized training in selling, merchandising and human relations skills. The distribution of goods and services now exceeds manufacturing in terms of employed workers. The demand for trained workers in distributive occupations is increasing at a tremendous rate. Marketing and merchandising positions offer challenge, an opportunity to base earnings on individual performance, and excellent opportunities for advancement.

Job Opportunities: Graduates of this program would obtain jobs such as: retail department head; retail store manager/owner; merchandise buyers; manufacturers' and wholesalers' sales representatives; radio, newspaper, T.V. sales representatives; specialty sales representatives; purchasing agents; advertising specialists and market research specialists. These are only a few of the occupations that are open to graduates of this sales and marketing program.

Course Description:

First Year	Second Year
*Principles of marketing	*Credit and collections
*Introduction to business	*Visual merchandising
*Psychology of human relations	*Merchandise accounting
*Salesmanship	*Marketing problems
*Business communications	*Principles of management
*Basic accounting	*Merchandise buying
*Business math	*Occupation and market study
*Advertising and sales promotion	*Introduction to Data Processing
*Economics	*Business statistics

Length of Course: 78 weeks

Helpful High School Courses:

Salesmanship	Marketing
Speech	Merchandising

Personal Qualities: The student preparing for a career in sales and marketing must have the ability to meet and deal with different kinds of people. This program features on-the-job supervised work experience as part of the training plan. Students in this program attend school in the morning and work at training stations in the afternoon. The program coordinator will place each student in a merchandising position at the start of the first year of the program. This work experience should provide a practical background of experience for each student.

Personal Equipment Needed: None

Expenses: Books and material—$35 per year
Tuition for students over 21—$32 per month plus above fees

Course Title: SALES AND MARKETING

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: September

Nature of Work: Sales and marketing specialists might be considered human relations specialists, as well. They must, of course, be well acquainted with the product they sell but this work mainly consists of explaining to the potential purchaser the products offered and the benefit they provide. Usually some record keeping and reporting is part of this job.

Job Opportunities: Manufacturers, wholesalers and retailers offer good career opportunities to young men and women with specialized training and human relations skills. Most concerns want marketing trainees to possess the basic understanding of principles of business and selling before on-the-job training. Individuals with this background enter the job market at a higher level than those wtihout it.

Course Description:

First 9 months (3 quarters)
- *Retailing
- *Selling
- *Human relations
- *General business

Internship (6 months)
- *Actual on the job experience with a sponsoring firm.

Final 2 Quarters:
- *Advanced courses in selling and business subject.

Length of Course: 21 months including internship

Helpful High School Courses:
- Distributive education
- Business skills (typing, bookkeeping)
- Mathematics

Personal Qualities:
- Good personality
- Good grooming
- Ability to get along with people

Personal Equipment Needed: None. Any special books or other items are available through the school.

Expenses: Tuition for students over 21—$40 per month

Course Title: SECRETARIAL, EDUCATIONAL

Name of School:	Address:	Telephone:
Southwest Minn. Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: September

Nature of Work: The school secretary is the principal's right arm; she conserves the administrator's time and energy by taking care of many details in running a school. She might handle finances, keep attendance records, requisition supplies, register new students. Contact with teachers, school staff, students and parents can make the job especially pleasant and rewarding. The job calls for patience and a sense of humor as well as secretarial skills.

Job Opportunities: As schools expand in size and number the demand for educational secretaries increases. Capable, well-trained school secretaries in larger school districts may be advanced to more responsible, better paying positions in the various departments of the district office.

Course Description:

*Shorthand I, II, III and Transcription
*Accounting
*Office machines
*Typing I, II, III
*Public school orientation
*School forms, reports, testing
*Public school office procedures
*Communications and spelling
*Introduction to data processing
*Personal grooming
*Human relations

Length of Course: 11 months

Helpful High School Courses:

Typing (required)
Shorthand

Personal Qualities:

Good hearing
Discretion
Good judgment and initiative
Knowledge of spelling, punctuation, grammar and vocabulary

Personal Equipment Needed: None

Expenses: Textbooks—$10
Tuition for students over 21—$30 per month

Course Title: SECRETARIAL, FINANCE (CREDIT CLERK)

Name of School:	Address:	Telephone:
Pipestone Area Vocational-Technical School	Pipestone, Minn. 56164	(507) 825-5471

Admission Dates: September

Nature of Work: Graduates may work as bank bookkeepers, tellers, secretaries to loan officers, production credit secretaries, for finance companies, retail firms and large department stores. This work has a good future with opportunity for advancement and personal development.

Job Opportunities: Every business must have up-to-date records of its financial affairs. Financial secretaries work with office machines, record day to day transactions, handle legal documents, in some jobs, and take care of some accounting procedures.

Course Description:

*Business machines
*Accounting
*Records management
*Credit and collections
*Legal documents
*Communications
*Personality development

Length of Course: 9 months

Helpful High School Courses:

Business and office subjects including typing and bookkeeping
English

Personal Qualities:

Ability to work well with people
Liking for details
Good personality and grooming

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$45 per month

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(218) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: Secretarial work is varied and may have certain special tasks as expected by a certain business or employer, but in general, the secretary takes dictation, transcribes letters, keeps office records, schedules appointments, does filing, answers phones, takes care of minor administrative duties and relieves her employer of routine tasks.

Job Opportunities: Every type of business, manufacturing, industry, health and welfare agency or other professional or business group needs capable secretaries. The well-trained secretary is an indispensable asset in any business.

Course Description:

*Shorthand
*Typing
*Machine transcription
*Filing
*Business machines
*Business English
*Business mathematics
*Business law
*Correspondence
*Receptionist training
*Basic bookkeeping
*Personality development
*Bank service
*Proper work attitudes
*Business office procedures
*Business machines used will include electric typewriter, duplicators, Thermo-Fax, 10-key and full key adders, calculators and bookkeeping machines.

Length of Course: 9 months

Helpful High School Courses:

Typing (required)
Shorthand (required)
English

A special section will be available for those who have not had shorthand or typing

Personal Qualities:

Above average ability in spelling, grammar and punctuation
Good grooming
Ability to get along well with others

Personal Equipment Needed: None

Expenses: Acceptance fee—$25
Book fee—$10
Tuition for students over 21—$40 per month in addition to above expenses

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Austin Area Vocational-Technical School	Austin, Minn.	(507) 433-7301

Admission Dates: Fall

Nature of Work: Secretaries do a variety of things; in general, they are responsible for taking dictation, transcribing letters, keeping office records, filing, answering phones, setting up appointments, greeting visitors, taking care of minor administrative duties and relieving the employer of routine tasks. There may be some particular duties expected by the employer or a certain area of business, as well.

Job Opportunities: Every type of business, manufacturing concern, industry, health or welfare agency or other business or professional group needs capable secretaries. The well-trained secretary is an indispensible asset in any business.

Course Description:

- *Shorthand
- *Typing
- *Office machines
- *Business communications
- *Business mathematics
- *Business law

Emphasis is placed on developing complete secretarial skills.

Length of Course: 9 months

Helpful High School Courses:

- Typing
- Shorthand
- English

Personal Qualities:

- Good grooming
- Ability to get along well with others
- Above average ability in spelling, grammar and punctuation
- Interest in business

Personal Equipment Needed: None

Expenses: Supply fee—nominal amount to cover supplies used in courses
Tuition for students over 21—$32 per month

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Bemidji Area Vocational-Technical School	Bemidji, Minn. 56601	(218) 751-4137

Admission Dates: Day after Labor Day (Individual appraisal may permit entry at other times)

Nature of Work: Secretaries do a variety of things; in general, they are responsible for taking dictation, transcribing letters, keeping office records, filing, answering phones, setting up appointments, greeting visitors, taking care of minor administrative details and relieving the employer of routine tasks. There may be some particular duties expected by the employer or a certain area of business as well. For example, some secretaries act as travel or social secretaries.

Job Opportunities: Every type of business, manufacturing concern, industry, health and welfare agency or other business or professional group needs capable secretaries. The well-trained secretary is an indispensable asset in any business office.

Course Description:

Quarter I
*Business mathematics
*Business communications
*Secretarial accounting
*Gregg Shorthand I
*Typing I
*Office machines I

Quarter II
*Business letters
*Charm
*Shorthand transcription
*Typing II
*Office machines II
*Introduction to data processing

Quarter III
*Business law
*Office policies and procedure
*Gregg shorthand III
*Shorthand transcription
*Secretarial procedures
*Typing III
*Office machines III

Length of Course: 9 months

Helpful High School Courses:

Typing
Shorthand
English
Mathematics

Personal Qualities:

Good grooming
Ability to get along well with others
Above average ability in spelling, grammar and punctuation
Interest in business

Personal Equipment Needed: Books—$25 per quarter

Expenses: Enrollment fee—$10
Tuition for students over 21—$50 per four week period

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Brainerd Area Vocational-Technical School	300 Quince St. Brainerd, Minn. 56401	(218) 829-2814

Admission Dates: September

Nature of Work: Secretaries do a variety of things; in general, they are responsible for taking dictation, transcribing letters, keeping office records, filing, answering phones, setting up appointments, greeting visitors, taking care of minor administrative details and relieving the employer of routine tasks. They may also be responsible for certain special tasks as demanded by the employer or his particular business. For example, some secretaries act as travel or social secretaries.

Job Opportunities: Every type of business, manufacturing concern, industry, health and welfare agency or other business or professional group needs capable secretaries. The well-trained secretary is an indispensible asset in any office.

Course Description:

*Shorthand
*Typing
*Business English
*Filing
*Record keeping
*Common office machines
*Human relations

Length of Course: 9 months

Helpful High School Courses:

Secretarial subjects or equivalent recommended
English
Average or above ability as shown by high school record

Personal Qualities:

Good physical and mental health
Discretion and good moral character
Ability to get along well with others

Personal Equipment Needed: Textbooks

Expenses: Tuition for students over 21—$40 per month

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Canby Area Vocational-Technical School	Hwy. 68 Canby, Minn. 56220	(507) 223-7252

Admission Dates: August

Nature of Work: Secretaries do a variety of things; in general, they are responsible for taking dictation, transcribing letters, keeping office records, filing, answering phones, setting up appointments, greeting visitors, taking care of minor administrative details and relieving the employer of routine tasks. They may also be responsible for certain special tasks as needed by the employer or his particular business; for example, some secretaries act as travel or social secretaries in addition to other duties.

Job Opportunities: Every type of business, manufacturing concern, industry, health and welfare agency or other business or professional group needs capable secretaries. The well-trained secretary is an indispensable asset in any office.

Course Description:

*Typing
*Shorthand
*Modern business machines
*Electronic data processing
*Business mathematics
*Business accounting
*Business economics
*Business psychology
*Business law
*Business English
*Filing
*Correspondence
*Special practice for improvement of shorthand speeds and proficiency

Length of Course: 9 months

Helpful High School Courses:

High school typing (required)
Shorthand (required)
English
Mathematics

Personal Qualities:

Good physical and mental health
Good grooming
Ability to get along well with others

Personal Equipment Needed:

Expenses: Reference books—$10 per quarter (or less)
Tuition for students over 21—$40 per month (Minnesota resident)
$60 per month (out-of-state resident)

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Detroit Lakes Area Vocational-Technical School	Hwy. 34 East Detroit Lakes, Minn. 56501	(218) 847-9261

Admission Dates: September

Nature of Work: Secretaries are responsible for taking dictation or using dictating machines, transcribing letters and reports. Most perform many clerical duties, take care of numerous office details and in general relieve their employer of routine tasks. Duties vary, depending on the size of the office, the type of business and the individual skills and initiative of the secretary.

Job Opportunities: Secretaries are employed in every kind of business, by state, local and Federal government agencies, in all professions. The employment outlook is excellent with large numbers of skilled secretaries needed for business expansion and replacement.

Course Description:

*Shorthand I, II, III
*Advanced transcription
*Business law
*Business communications I, II
*Typing I, II, III
*Business machines I, II
*Merchandising, salesmanship
*Advertising
*Secretarial office procedures
*Records management
*Human relations
*Business principles and management
*Business mathematics
*Secretarial accounting
*Charm
*Introduction to data processing

Length of Course: 9 months

Helpful High School Courses:

Secretarial science
Stenography
Typing
Bookkeeping
Business machines

Personal Qualities:

Good grooming
Dependability
Integrity
Interest in self-improvement

Personal Equipment Needed: None

Expenses: Course fee—$30
Activity fee—$5
Tuition for students over 21—$40 per month

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Secretaries perform many duties including the taking and transcribing of notes into business communications, bookkeeping, filing, use of business machines, making appointments, greeting and introducing visitors, and in general relieving her employer of routine or tedious details. She is responsible for the tone and atmosphere of the office and does much to insure the success of her employer's business.

Job Opportunities: Secretaries work in large and small offices, in state or Federal Civil Service, for technical, legal or medical services offices, in schools, institutions, banks, insurance companies and manufacturing concerns.

Course Description:

*Typing
*Transcription
*Shorthand
*Office machines
*Secretarial procedures
*Records management
*Office management
*Communications
*Mathematics
*Human relations
*Business law
*Business organization
*Introduction to data processing

Length of Course: 9 months

Helpful High School Courses:

Mathematics
Business subjects
English

Personal Qualities:

Good general ability
Good grooming and personal poise
Ability to work well with others
Interest in business and office work

Personal Equipment Needed: None

Expenses: Workbooks and supplies—$40 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Eveleth Area Vocational-Technical School	402 Roosevelt Ave. Eveleth, Minn. 55734	(218) 749-2285

Admission Dates: September only

Nature of Work: Secretaries, in general, are responsible for taking dictation, transcribing letters, keeping office records, filing, answering phones, meeting and setting up appointments, greeting visitors, taking care of minor administrative details and relieving the employer of routine tasks. They may also take care of special tasks such as travel or social arrangements. Some secretaries work as legal or medical secretaries or as court reporters.

Job Opportunities: Graduates of this course may become clerk stenographers, court reporters, private secretaries, typists, receptionist-stenographers in a wide variety of business offices, for health and welfare agencies, manufacturing and industrial concerns and for professional or service groups.

Course Description:

*Dictation
*Transcriptions
*Letter composition
*Business communications
*Secretarial and office practices
*Advanced shorthand
*Business machine operations

Length of Course: 9 months

Helpful High School Courses:

Business education with shorthand and typing
English
Mathematics

Personal Qualities:

Good high school record
Good moral and personal character
Ability to work well with others

Personal Equipment Needed: Books

Expenses: Enrollment fee—$20
Tuition for students over 21—$65 per month
(Next year will be $150 per quarter for Minnesota residents; $195 per quarter for non-residents)

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Faribault Area Vocational-Technical School	Faribault, Minn. 55021	(507) 334-3965

Admission Dates: September, with later enrollments as vacancies occur

Nature of Work: Secretaries are usually responsible for taking dictation, transcribing letters, keeping office records, filing, answering telephones, setting up appointments, greeting visitors, taking care of minor administrative details and relieving the employer of routine tasks. They may have some particular duties as required by their employer or the type of business; for example, some legal secretaries must help research and prepare briefs, while other secretaries make travel arrangements or act as social secretaries to their employers.

Job Opportunities: Every type of business, manufacturing concern, industry, health and welfare agency or other business or professional group needs capable secretaries. The well-skilled secretary is an indispensable asset in any business office.

Course Description:

- *Shorthand
- *Transcription
- *Business cmmunications
- *Typing
- *Business mathematics
- *Introduction to business
- *Business filing and records management
- *Principles of accounting
- *Business law
- *Economics
- *Business machines
- *Introduction to data processing
- *Office procedures laboratory
- *Personal and human relations

Length of Course: 9½ months

Helpful High School Courses:

- Typing
- Shorthand
- English
- Mathematics

Personal Qualities:

- Average or better general learning ability
- Ability to communicate orally and in writing
- Desire for self-improvement
- Willingness to work with others

Personal Equipment Needed: None

Expenses: Enrollment fee—$5 upon acceptance

Personal supplies—$15 per quarter

Tuition for students over 21—$40 per 4-week period if Minnesota resident

$55 per month if out-of-state resident

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	15th St. & 11th Ave. Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: September

Nature of Work: Secretaries usually are responsible for taking dictation, transcribing letters, keeping office records, filing, answering telephones, setting up appointments, greeting visitors, taking care of minor administrative details and relieving the employer of routine task. There may be some particular duties expected by the employer or in a certain area of business; for example, some secretaries make travel arrangements while others also act as social secretaries.

Job Opportunities: Every type of business, manufacturing concern, industry, health and welfare agency or other business or professional group needs capable secretaries. The well-skilled secretary is an indispensable asset in every office.

Course Description:

*Secretarial skills
*Business law
*Business mathematics
*Business English
*Economics
*Office machines

Students may specialize in general, legal or medical secretarial studies.

Length of Course: 9 months

Helpful High School Courses:

Typing
Shorthand (recommended)
English

Personal Qualities:

Good grooming and personal poise
Ability to get along well with others

Personal Equipment Needed: Workbooks

Expenses: Registration fee—$20
Tuition for students over 21—$40 per month

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Southwest Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3320

Admission Dates: September

Nature of Work: Secretaries are usually responsible for taking dictation, transcribing letters and other business communications, keeping office records, filing, answering telephones, setting up appointments, greeting visitors, taking care of minor administrative details and relieving the employer of routine tasks. There are also particular things delegated to the secretary by her employer such as making travel arrangements or acting as social secretary.

Job Opportunities: Every type of business, manufacturing concern, industry, health and welfare agency, or other business or professional group needs capable secretaries. The well-trained secretary is an indispensable asset in any office.

Course Description:

*Gregg shorthand I, II, III
*Shorthand transcription
*Typing I, II, III
*Statistical typing
*Secretarial office procedures
*Business communications and spelling
*Office machines
*Business law
*Business mathematics
*Principles of accounting I
*Personal grooming and human relations
*Introduction to Data Processing

Length of Course: 11 months

Helpful High School Courses:

High school typing and shorthand (required). If students have not had an opportunity to take these courses, they will be accepted, however.
English
Business and office subjects

Personal Qualities:

Ability to understand the meaning and relationships of words and sentences
Finger dexterity and eye-hand coordination necessary to taking dictation or typing
Form perception to recognize shorthand symbols
Adaptability to routine, repetitive and uninvolved tasks
Attention to detail in dictated or typed materials to avoid errors
Willingness to work according to instructions
Ability to work with specialized terminology
Successful performance on clerical aptitude and achievement tests

Personal Equipment Needed: None

Expenses: Textbooks—$10
Tuition for students over 21—$30 per month

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical Institute	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall of Each Year

Nature of Work: The secretary works with the administration in planning and carrying out hundreds of different transactions that affect both customers and employees. She must be extremely versatile. She must be prepared to perform countless activities that will free her employer to make more efficient use of his time.

Job Opportunities: Secretaries work in every type of business: banks, insurance companies, publishing offices, manufacturing enterprises, advertising agencies, radio and television, schools, and government offices, just to mention a few.

Course Description:

*Business mathematics
*Typewriting I, II, III, and statistical
*Shorthand I or II, III and transcription
*Secretarial accounting
*Business communication I, II
*Business machines I, II
*Secretarial office procedures
*Introduction to business
*Secretarial Records management
*Economics
*Business law
*Introduction to Data Processing
*Secretarial office management
*Charm and personal development
*Electives

Length of Course: 10½ months

Helpful High School Courses:

English
Typewriting
Bookkeeping
General mathematics
Social studies
Shorthand

Personal Qualities:

Initiative
Dependability
Cooperation
Courtesy
Neatness

Personal Equipment Needed: Stenographer's notebook and miscellaneous office supplies

Expenses: Textbooks—$22 per quarter
Tuition for students over 21—$32 per month plus above expenses

Course: SECRETARIAL, GENERAL

School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. S. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Secretaries do a variety of things; in general, they are responsible for taking dictation, transcribing letters, keeping office records, filing, answering phones, setting up appointments, greeting visitors, taking care of minor administrative details and relieving the employer of routine tasks. There may be some particular duties expected by the employer or a certain area of business; for example, some secretaries make travel arrangements or act as social secretaries.

Job Opportunities: Every type of business, manufacturing concern, industry, health and welfare agency or other service or professional group needs capable secretaries. The well-trained secretary is an indispensable asset in any office.

Course Description:

Semester I	Semester II
*Stenography	*Advanced stenography
*Typing	*Advanced typing
*Office machines	*Advanced Accounting machines
*Accounting machines	*Advanced bookkeeping
*Bookkeeping	*Business organization or business law
*Filing	*Office training
*Personal development	

Length of Course: 9½ months

Helpful High School Courses:

Typing	Shorthand
Bookkeeping	English

Personal Qualities:

Ability to work well with others	Good attendance records and personal adjustment
Good grooming and personal poise	
Ability to communicate effectively	

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Moorhead Area Vocational-Technical School	Box 100 Moorhead, Minn. 56561	(218) 236-6277

Admission Dates: September

Nature of Work: Secretaries do a variety of things; in general, they are responsible for taking dictation, transcribing letters, keeping office records, filing, answering phones, setting up appointments, greeting visitors, taking care of minor administrative details and relieving their employer of routine tasks. There may be some particular duties expected by the employer or a certain area of business as well. For example, some secretaries make travel or social arrangements.

Job Opportunities: Every type of business, manufacturing concern, industry, health and welfare agency or other business or professional group needs capable secretaries. The well-trained secretary is an indispensable asset in any business office.

Course Description:

*Dictation
*Transcription
*Office procedure
*Business law
*Business mathematics
*Office machines
*Typing
*Business communications
*Human relations

Every phase of instruction will stress speed and accuracy in office-type situations.

Length of Course: 9 months

Helpful High School Courses:

Shorthand (required)
Typing (required)
English

Personal Qualities:

Evidence of aptitude as shown by tests given at the School
Good grooming
Ability to get along well with others

Personal Equipment Needed: Books—$50 (approximately)

Expenses: Student Activity Fee—$10 Supply Fee—$5
Tuition for students over 21—$40 per month plus above expenses

Course Title: SECRETARIAL, GENERAL

School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 North 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September

Nature of Work: Secretaries usually are responsible for taking dictation, transcribing letters and other business communications, keeping office records, filing, answering telephones, setting up appointments, greeting visitors, taking care of minor administrative details and relieving the employer of routine tasks. There are also particular duties delegated to the secretary by her employer such as making travel arrangements or acting as social secretary, for example.

Job Opportunities: Every type of business, manufacturing concern, industry, health and welfare agency, or other business or professional group needs capable secretaries. The well-trained secretary is an indispensable asset in any office.

Course Description:

*Shorthand
*Typing
*Machine transcription
*Filing
*Business machines
*Business English
*Business mathematics
*Business law
*Business correspondence
*Basic bookkeeping
*Personality development
*Business office procedures
*Proper work attitudes

Length of Course: 9 months

Helpful High School Courses:

Business subjects
English
Mathematics

Personal Qualities:

Interest in business
Good grooming, poise and personality
Ability to work well with others

Personal Equipment Needed: Books and supplies—$100 (approximate cost)

Expenses: Service fee—$7
Tuition for students over 21—$40 per month plus other costs indicated above

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Secretaries are usually responsible for taking dictation, transcribing letters and other business communications, keeping office records, filing, answering telephones, setting up appointments, greeting visitors, taking care of minor administrative details and relieving the employer of routine tasks. There are also particular things delegated to the secretary by her employer such as making travel arrangements or acting as social secretary.

Job Opportunities: Every type of business, manufacturing concern, industry, health and welfare agency, or other business or professional group needs capable secretaries. The well-trained secretary is an indispensable asset in any office.

Course Description:

First Quarter

*Business principles and management
*Business English and correspondence
*Business machines
*Typing I
*Shorthand I and clerical office procedures

Second Quarter

*Basic economics
*Business mathematics
*Business machines
*Typing II
*Transcription I and secretarial office procedures

Third Quarter

*Business law
*Human relations
*Business machines
*Typing III
*Advanced transcription
*Accounting

Electives

*Recreation
*Accounting
*Speech
*Fundamentals of data processing
*Efficient reading

Length of Course: 10 months

Helpful High School Courses:

Business and office subjects
English
Mathematics

Personal Qualities:

Manual dexterity
Good judgment
Good grooming, personal poise
Ability to get along well with others

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Thief River Falls Area Vocational-Technical School	Thief River Falls, Minn. 56701	(218) 681-5424

Admission Dates: September, December, March, June

Nature of Work: Secretaries are usually responsible for taking dictation, transcribing letters and other business communications, keeping office records, filing, answering telephones, setting up appointments, greeting visitors, taking care of minor administrative detail and relieving the employer of routine tasks. There are certain other duties peculiar to the type of business such as making travel arrangements, doing research or other tasks delegated by the employer.

Job Opportunities: Every type of business, manufacturing concern, industry, health and welfare agency or other business or professional group needs capable secretaries. The well-trained secretary is an indispensable asset in any office.

Course Description:

*Shorthand
*Transcription
*Business English
*Automation
*Business mathematics
*Human relations
*Office machines
*Typing

Length of Course: 9 months

Helpful High School Courses:

Typing (at least one year is required)
Other business subjects
English
Shorthand (at least one year is required)

Personal Qualities:

Average or better intelligence
Desire to work in an office
Good grooming, poise and pleasant personality
Ability to get along well with others

Personal Equipment Needed: Books (cost included in course fee)

Expenses: Registration fee—$10
Course fee—$75
Tuition for students over 21—$45 per month plus course fee

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: September, January, March

Nature of Work: Secretaries are usually responsible for taking dictation, transcribing letters and other business communications, keeping office records, filing, answering telephones, setting up appointments, greeting visitors, taking care of minor administrative details and relieving the employer of routine tasks. There may be some particular duties expected by an employer or a certain area of business; for example, a legal secretary may help research and prepare briefs, while another secretary may be responsible for making her employer's travel arrangements.

Job Opportunities: Every type of business, manufacturing concern, industry, health and welfare agency, or other business or professional group needs capable secretaries. The well-skilled secretary is an indispensable asset in any office.

Course Description:

*Shorthand
*Typing
*Business machines
*Office procedures
*Enriching subjects designed for the personal development of the student

Length of Course: 9 months

Helpful High School Courses:

Typing
Business machines
Shorthand
English

Personal Qualities:

Above average general learning ability
Good grooming and personal poise
Ability to get along well with others

Personal Equipment Needed: Books

Expenses: Supply fee—$5
Tuition for students over 21—$40 per month

Course Title: SECRETARIAL, GENERAL

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-3671

Admission Dates: First Tuesday after Labor Day or beginning of any quarter

Nature of Work: Secretaries are usually responsible for taking dictation, transcribing letters, keeping office records, filing, answering phones, setting up appointments, greeting visitors, taking care of minor administrative details and relieving the employer of routine tasks. There may also be some particular duties expected by an employer or in a certain area of business; for example, some secretaries set up social appointments or make travel arrangements.

Job Opportunities: Every type of business, manufacturing concern, industry, health and welfare agency or other business or professional group needs capable secretaries. The well-trained secretary is an indispensable asset in any office.

Course Description:

*Secretarial skills

*Business subjects

Length of Course: 9 months

Helpful High School Courses:

Typing
Shorthand
English
Mathematics

Personal Qualities:

Good grooming and personal poise
Ability to get along well with others
Average or better general learning ability as indicated by General Aptitude Test Battery given at the School

Personal Equipment Needed: Books, workbooks—$25-35 (approximately)

Expenses: Tuition for students over 21—$30 per month plus above expenses

Course Title: SECRETARIAL, LEGAL

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: The legal secretary takes care of the office procedures as do other secretaries, but she also has some very specialized duties related to the law and legal work. She may relieve her employer of some research tasks, she may help screen clients and spend time on particular duties such as deeds, documents or other specialized information.

Job Opportunities: Most legal secretaries are employed by attorneys; many work in the legal departments of banks, insurance companies, business firms, social service agencies and in state, local or Federal government offices.

Course Description:

*Business English
*Business machines
*Business mathematics
*Business correspondence
*Business law
*Receptionist training
*Basic bookkeeping
*Personal development
*Bank services
*Work attitudes
*Office procedures
*Contracts, deeds, insurance and negotiable instruments

Length of Course: 10 months

Helpful High School Courses:

Office and secretarial training
Typing—(required) must type 45 words per minute
Shorthand—(required) must take dictation at 80 words per minute for 5 minutes

Personal Qualities:

Good hearing
Personal poise and good grooming
Discretion, good judgment and initiative
Attractive personality

Personal Equipment Needed: None

Expenses: Acceptance Fee—$25
Books—$10
Tuition for students over 21—$40 per month plus registration and book fees.

Course Title: SECRETARIAL, LEGAL

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Secretaries perform many duties including the taking and transcribing of notes into business communications, bookkeeping, filing, use of business machines, making appointments, greeting and introducing visitors, and in general relieving her employer of routine or tedious details. She is responsible for the tone and atmosphere of the office and does much to insure the success of her employer's business. Specialized legal vocabulary and transcription skills are needed for this work.

Job Opportunities: Legal secretaries work for attorneys, in banks, insurance companies, for legal departments of large companies and in health, welfare and social service agencies as well as for the state or Federal Civil Service.

Course Description:

*Typing
*Transcription
*Shorthand
*Office machines
*Secretarial procedures
*Records management
*Office management
*Communications
*Mathematics
*Human relations
*Business law
*Business organization
*Introduction to data processing
*Legal terminology and transcription

Length of Course: 10½ months

Helpful High School Courses:

Mathematics
Business subjects
English

Personal Qualities:

Good general ability
Good grooming and personal poise
Ability to work well with others
Interest in business and office work

Personal Equipment Needed: None

Expenses: Workbooks and supplies--$40 (approximately)
Tuition for students over 21—$802.50

Course Title: SECRETARIAL, LEGAL

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: Fall

Nature of Work: Secretaries perform many duties including the taking and transcribing of notes into business communications, bookkeeping, filing, use of business machines, making appointments, greeting and introducing visitors, and in general relieving her employer of routine and tedious details. She is responsible for the tone and atmosphere of the office and does much to insure the success of her employer's business. Specialized legal vocabulary and transcription skills are needed for this work.

Job Opportunities: Legal secretaries work for attorneys, in banks, insurance companies, for legal departments of large companies and in health, welfare and social service agencies as well as for the state or Federal Civil Service.

Course Description:

- *Shorthand
- *Transcription
- *Typing
- *Office machines
- *Office practice
- Related material

Length of Course: 9 months

Helpful High School Courses:

- English
- Shorthand
- Business subjects

Personal Qualities:

- Enjoy working with people
- Good command of the English language
- Accuracy in skill subjects

Personal Equipment Needed: None

Expenses: Registration fee—$20
Tuition for students over 21—$40 per month

Course Title: SECRETARIAL, LEGAL

Name of School:	Address:	Telephone:
Pipestone Area Vocational-Technical School	Pipestone, Minn. 56164	(507) 825-5555

Admission Dates: September

Nature of Work: The legal secretary takes care of office procedures as do other secretaries, but she has some very specialized duties related to the law and legal work. She may relieve her employer of some research tasks, she may help screen clients and may spend time on particular duties related to deeds, documents and other specialized information.

Job Opportunities: Most legal secretaries are employed by attorneys; however, many work in legal departments of banks, insurance companies, business firms, social service agencies, and in state, local and Federal government offices.

Course Description:

*Typing
*Shorthand
*Business machines
*English
*Business mathematics
*Records management
*Economics
*Legal procedures
*Communications arts
*Data processing
*Personality development

Length of Course: 11 months or 4 quarters

Helpful High School Courses:

Office and secretarial courses, particularly typing and shorthand
English

Personal Qualities:

Good hearing
Personal poise and good grooming
Discretion, good judgment and initiative
Attractive personality

Personal Equipment Needed: None—Stenotype is optional

Expenses: Tuition for students over 21—$45 per month

Course Title: SECRETARIAL, LEGAL

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September (Beginning of Fall Quarter)
Applications must be made by previous March

Nature of Work: Secretaries are responsible for taking dictation, transcribing letters, keeping office records, filing, answering phones, setting up appointments, greeting visitors and taking care of minor administrative details to relieve the employer of routine tasks. Legal secretaries must be particularly capable in meeting and dealing with people, since she is usually the first person a prospective client meets by telephone and in person. She must have unusually high standards of moral and ethical judgment and integrity.

Job Opportunities: Legal secretaries work in the private law office, in banks, insurance companies, governmental offices and for law enforcement agencies.

Course Description:

*Typing
*Shorthand
*Dictaphone
*Legal terminology

Ample experience is given students in the specific areas needed by legal secretaries in simulated on-the-job situations: five weeks of the third quarter, two or three hours per day are spent in a legal office.

Length of Course: 10 months

Helpful High School Courses:

Business subjects — at least one unit in typing and one in shorthand is required
English

Personal Qualities:

High school diploma
Good physical and emotional health
Discretion, good judgment and integrity

Personal Equipment Needed: None

Expenses: Books and other materials will total approximately $100
Tuition for students over 21—$16.25 per week

Course Title: SECRETARIAL, MEDICAL

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: The medical secretary performs all the routine secretarial duties such as typing, shorthand, receptionist, and record keeping, plus some particular duties unique to medical work. She may need a specialized vocabulary, help take medical histories for patients, make appointments, set up hospital or laboratory schedules and relieve the doctor of the tedious details of keeping the office running smoothly.

Job Opportunities: Graduates work in doctor's offices, clinics, hospitals or in social service or welfare agencies.

Course Description:

*Business English
*Business machines
*Business mathematics
*Business correspondence
*Receptionist training
*Basic bookkeeping
*Personality development
*Bank services
*Medical terminology
*Proper work attitudes and office procedure
*First aid
*Structure and functions of the body
*Vocational relationships

Length of Course: 11 months

Helpful High School Courses:

Office and secretarial courses
Shorthand—(required) Must take dictation at 80 words per minute for 5 minutes
Typing — must type 45 words per minute

Personal Qualities:

Good hearing
Personal poise and good grooming
Discretion, good judgment and initiative
Attractive personality
Ability to get along well with others

Personal Equipment Needed: None

Expenses: Acceptance fee—$25 Book fee—$10
Tuition for students over 21—$40 per month plus acceptance and book fees.

Course Title: SECRETARIAL, MEDICAL

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Secretaries perform many duties including the taking and transcribing of notes into business communications, bookkeeping, filing, use of business machines, making appointments, greeting and introducing visitors, and in general relieving her employer of routine or tedious details. She is responsible for the tone and atmosphere of the office and does much to insure the success of her employer's business.

Job Opportunities: Medical secretaries work in doctor's offices, clinics, health, welfare and service organizations including hospitals and in state or Federal Civil Service.

Course Description:

*Typing
*Transcription
*Shorthand
*Office machines
*Secretarial procedures
*Records management
*Office management
*Communications
*Mathematics
*Human relations
*Business law
*Business organization
*Introduction to data processing
*Medical terminology and transcription

Length of Course: 10½ months

Helpful High School Courses:

Mathematics
Business subjects
English

Personal Qualities:

Good general ability
Good grooming and personal poise
Ability to work well with others
Interest in business and office work

Personal Equipment Needed: None

Expenses: Workbooks and supplies—$40 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: SECRETARIAL, MEDICAL

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: Fall

Nature of Work: Secretaries perform many duties including the taking and transcribing of notes into business communications, bookkeeping, filing, use of business machines, making appointments, greeting and introducing visitors, and in general relieving her employer of routine or tedious details. She is responsible for the tone and atmosphere of the office and does much to insure the success of her employer's business.

Job Opportunities: Medical secretaries work in doctor's offices, clinics, health, welfare and service organizations including hospitals and in state or Federal Civil Service.

Course Description:

*Shorthand
*Transcription
*Typing
*Office machines
*Office practice
*Related material

Length of Course: 9 months

Helpful High School Courses:

English
Shorthand
Business subjects

Personal Qualities:

Enjoy working with people
Good command of the English language
Accuracy in skill subjects

Personal Equipment Needed: None

Expenses: Registration fee—$20
Tuition for students over 21—$40 per month

Course Title: SECRETARIAL, MEDICAL

Name of School:	Address:	Telephone:
Southwest Minn. Area Vocational-Technical School	Jackson, Minn. 56143	(507) 847-3824

Admission Dates: September

Nature of Work: The medical secretary performs the usual secretarial duties such as using business machines, taking dictation, receptionist duties and other routine office tasks, but she is also responsible for keeping the office running smoothly, saving the doctor's time by attending to routine details, helping take appointments and histories, setting up hospital or laboratory schedules.

Job Opportunities: Graduates may work in doctor's offices, clinics, hospitals or in social service and welfare work.

Course Description:

*Typing
*Medical shorthand
*Accounting
*Office machines
*Form typing
*Medical office procedures
*Anatomy
*Medical terminology
*Medical law
*Personal grooming
*Human relations
*Communications and spelling
*Introduction to data processing

Length of Course: 11 months

Helpful High School Courses:

Typing and shorthand
English
Communications

Those who have not had the opportunity to take shorthand in high school will be accepted through personal evaluation.

Personal Qualities:

Ability to understand the meaning and relationships of words and sentences.
Finger dexterity and eye-hand coordination
Attention to detail
Successful performance on clerical aptitude and achievement tests.
Willingness to take direction

Personal Equipment Needed: None

Expenses: Textbooks—$10
Tuition for students over 21—$30 per month

Course Title: SECRETARIAL, MEDICAL

Name of School:	Address:	Telephone:
Moorhead Area Vocational-Technical School	Box 100 Moorhead, Minn. 56561	(218) 236-6277

Admission Dates: September

Nature of Work: Medical secretaries perform all the routine secretarial tasks, but also must understand medical terminology and basic sciences in order to work with medical or scientific records and histories.

Job Opportunities: Graduates may be employed in doctor's offices, hospitals, clinics, research laboratories and in welfare and social service agencies. Since qualifications are high and the need for health care services is expanding rapidly, there is greater demand than supply in this secretarial field.

Course Description:

*Anatomy
*Physiology
*Medical terminology
*Medical ethics
*Business communications
*Business law
*Human relations
*Typing
*Business mathematics
*Office machines
*Business letterwriting
*Voice transcribing machines
*Shorthand (optional)

Length of Course: 11 months

Helpful High School Courses:

Typing
English
Biology
Chemistry

Personal Qualities:

Personal poise and good grooming
Ability to get along well with others
Scientific interest
Discretion, good judgment and initiative
Aptitude as tested
Good hearing

Personal Equipment Needed: Books—estimated cost $75

Expenses: Student activity fee—$10
Supply fee—$5
Tuition for students over 21—$40 per month

Course Title: SECRETARIAL, MEDICAL

Name of School:	Address:	Telephone:
St. Paul Area Vocational-Technical Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Medical secretaries perform all routine secretarial tasks, but must also understand medical terminology and basic sciences in order to work with medical or scientific records and histories.

Job Opportunities: Medical secretaries are employed in doctor's offices, hospitals, clinics, research laboratories and in welfare and social service agencies. Since qualifications are high and the needs for health care services are expanding rapidly, there are more positions available than there are qualified persons to fill them.

Course Description:

First Quarter
- *Business principles and management
- *Typing
- *Office machines
- *Business English and correspondence
- *Shorthand
- *Medical record keeping

Second Quarter
- *Basic economics
- *Typing
- *Office machines
- *Business mathematics
- *Shorthand
- *Medical terminology
- *Business law
- *Medical dictation and transcription
- *Medical typing
- *Office procedures
- *First aid
- *Disease condition
- *Laboratory terminology and procedures
- *Body structure and function

Length of Course: 10 months

Helpful High School Courses:
- Typing (required)
- Shorthand (required)
- Sciences
- English

Personal Qualities:
- Good physical and emotional health
- Personal poise
- Ability to get along well with others
- Discretion, good judgment and initiative

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: SECRETARY, HOSPITAL STATION

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Work with head nurse and team leader on nursing station; relay telephone and written messages, assists in record keeping; may transcribe records and doctor's orders. Pleasant working conditions.

Job Opportunities: Hospital station secretaries are part of the medical team assigned to patient care on a ward or unit.

Course Description:

*Hospital organization
*Function of hospital department
*Hospital personnel
*Receptionist and Hostess duties
*Clerical responsibilities, record keeping and charting.
*Communications
*Medical terminology
*Standard laboratory and X-ray exam
*Ordering supplies and equipment
*Staffing the nursing unit
*Transcription of doctor's orders
*Social and welfare hospitalization
*Job applications and interviews

Length of Course: 18 weeks

Helpful High School Courses:

Personal Qualities:

Good physical and mental health
Sympathy for patients' needs
Ability to work well with others

Applicants are accepted on basis of aptitude, achievement and interest.

Personal Equipment Needed:

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: SECRETARY, TECHNICAL

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical Institute	Granite Falls, Minn. 56241	(612) 564-4311

Admission Dates: Late August

Nature of Work: Secretaries perform many duties including the taking and transcribing of notes into business communications, bookkeeping, filing, using business machines, making appointments, greeting and introducing visitors and in general relieving her employer of routine or tedious details. She is responsible for the tone and atmosphere of the office and does much to insure the success of her employer's business. Technical secretaries have a more detailed knowledge and broader vocabulary to handle the duties found in light and heavy industry, research departments and in the space industries.

Job Opportunities: Technical secretaries are employed by the Federal and state government, by scientific and research organizations, industries which deal with manufacturing and development of new products, by educational institutions which deal with technical and research grants and other industries.

Course Description:

- *Shorthand and transcription
- *Typing
- *Business machines
- *Business mathematics
- *Business English
- *Secretarial office practices
- *Business law
- *Secretarial accounting
- *Technical secretarial procedures

Length of Course: 9 months

Helpful High School Courses:

- Mathematics
- Business subjects (At least one year of shorthand is required)
- English

Personal Qualities:

- Good general learning ability with above average English skills
- Good grooming and personal poise
- Ability to work well with others
- Interest in technology and office work

Personal Equipment Needed: None

Expenses: Books and supplies—$50 per year (approximately)
Living Expenses—$800-$900 per year
Tuition for students over 21—$40 per month

Course Title: SEED—GRAIN TECHNOLOGY

Name of School:	Address:	Telephone:
Detroit Lakes Area Vocational-Technical School	Hwy. 34 East Detroit Lakes, Minn. 56501	(218) 847-9261

Admission Dates: September

Nature of Work: Seed and grain technologists combine basic scientific knowledge with a broad background in business practices. Most specific jobs, grain inspectors, for example, require on-the-job training and advancement comes rapidly with experience and development.

Job Opportunities: Graduates may work as seed salesmen—wholesale or retail; government or private inspection of marketing seed; field inspectors for certified seed; production of seed and grain (farming); seed analyst; operate seed cleaning and packaging equipment; or operate seed treating equipment.

Course Description:

*Production
*Marketing
*Processing
*Packaging seed or grain
*Laws governing sale and marketing of seed and grain
*Business principles
*Business machines operations

Length of Course: 11 months

Helpful High School Courses:
Vocational agriculture

Personal Qualities:
Farm background is helpful
Interest, aptitude and ability of the student to benefit from the training

Personal Equipment Needed: Students will be expected to purchase books, tools and uniforms as required by the various departments.

Expenses: Tuition for students over 21—$40 per month

Course Title: SHEET METAL FABRICATION AND LAYOUT

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Sheet metal workers are involved in fabricating, installing and repairing systems such as heating, air conditioning or other air or liquids-handling systems. Many sheet metal workers install pre-fabricated systems; others are responsible for designing, making and installing a custom system. Sheet metal workers use machine and hand tools, blueprints, drawings, written specifications and building codes in making and installing their products.

Job Opportunities: Most graduates of this course enter apprenticeship programs. They may work for installers, plumbing and heating companies, construction firms or other aspects of the building industry or in custom fabrication shops. Many work in planning and design of systems or for equipment supply firms in design or sales.

Course Description:

*Selection of materials
*Measuring devices
*Layout techniques
*Hand tool and machine forming
*Soldering
*Welding
*Mathematics
*Blueprint reading
*Architectural metal work
*Estimating
*Related information

Length of Course: 18 months

Helpful High School Courses:

Industrial arts
Mathematics
Science

Personal Qualities:

Good physical health and stamina
Interest in working with metals and hand machine tools
Good mechanical and mathematical ability
Manual dexterity

Personal Equipment Needed: Hand tools

Expenses: Tools and miscellaneous—$25 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: SHEET METAL

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: There are two general groups of sheet metal workers: one group manufactures and installs pre-fabricated products; the other makes and installs custom-designed products. Other specialties are skilled workers, layout men, set-up men and machine operators. The all-around journeyman worker must be able to read blueprints, use and care for power and hand tools, use systems of layout and triangulations, and be able to weld sheet metal installations.

Job Opportunities: Graduates of this course work as apprentices in the sheet metal industry, sheet metal draftsmen, salesmen and estimators. They are employed by firms that make and install heating, refrigeration and air-conditioning equipment and by contractors engaged in residential work. Many are self-employed or work for small shops that custom design equipment.

Course Description:

Semester I

*Sheet metal orientation-apprenticeship

*Sheet metal drawing

*Sheet metal shop-hand tools and bench machines, safety practices, metals and their properties, seams and edges

Summer Session

*Welding — gas, arc, inert gas

Semester II

*Sheet metal drafting — parallel, radial line development, general layout

*Joining and fastening metals

*General metal work

*Gutters and flashing

*Cone, pyramids

Semester III

*Triangulations

*Ducts and fittings—heating, cooling and air conditioning

*Press brake, pneumatic and electric equipment

Semester IV

*Precision layout

*Fabrication and metal finishing

*Special outside jobs

Length of Course: 21 months

Helpful High School Courses:

Industrial arts

Physics

Mathematics

Personal Qualities:

Average or above general learning ability

Interest in shop work

Pride in good workmanship

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester

Tuition for students over 21—$70 per month

Course Title: SHEET METAL

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55101	(612) 227-9121

Admission Dates: September

Nature of Work: There are two general groups of sheet metal workers: one group manufactures and installs pre-fabricated products such as furnaces; the other makes and installs custom-designed products such as kitchen equipment for restaurants. Other specialties are skilled workers, layout men, set-up men and machine operators. The all-around journeyman worker must be able to read blueprints, use and care for power and hand tools, use systems of layout and triangulation and be able to weld sheet metal installations.

Job Opportunities: Graduates of this course become apprentices in the sheet metal industry, sheet metal draftsmen, salesmen and estimators. They are employed by firms that make and install heating, refrigeration and air conditioning equipment and by contractors engaged in residential work. Many are self-employed or work for small shops that custom design equipment.

Course Description:

*Nomenclature of tools and shop orientation
*Pattern drafting
*Seams and allowances
*Cutting and notching
*Forming
*Assembly
*Soldering and welding
*Technical information
*Safety
*Mathematics
*Communications
*Science
*Drawing — blueprint reading
*Industrial relations

Length of Course: 18 months

Helpful High School Courses:

Mathematics including algebra and geometry
Mechanical drawing
Metal shop

Personal Qualities:

Ability to perform in awkward or relatively inaccessible places
Physical strength and stamina to work outdoors in all kinds of weather
Acute spatial visualization
Mechanical dexterity and aptitude

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: SHOE REPAIR

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-1381

Admission Dates: September

Nature of Work: Shoe repair includes hand and machine work in the repair of different types of shoes. Workers should know a great deal about the different types of shoes and the material used in them, how to get along well with others, and how to manage a shop. Many individuals with slight physical handicaps find this an interesting line of work since no heavy physical labor is required.

Job Opportunities: Most shoe repairmen work for repair shops or repair departments in shoe or other retail stores. Six months to a year after completing training, the worker may be able to handle a shop of his own.

Course Description:

Unit I
*Hand sewing
*Sewing machine instruction
*Seam stitching
*Upper patching
*Upper part replacing
*Lining repair

Unit II
*Men's heel work
*Women's heel work
*Rebuilding split wood heels
*Replacing broken heels
*Recovering wood heels
*Heel braces

Unit III
*Women's sole work: hand nailed, stapled, Autosolar, cement and McKay process
*Men's half sole work: McKay, Goodyear welt, cement, stitch down process
*General full soling

Unit IV
*Polishing
*Cleaning
*Dyeing
*Bottom finishing

Unit V
*General finishing: edge trimming, sanding, inking and burnishing, edge setting

Length of Course: 12 months

Helpful High School Courses:
Industrial arts
Business

Personal Qualities:
Minimum of ninth grade education recommended
Interest in trade
Good color vision

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: SMALL ENGINE REPAIR

Name of School:	Address:	Telephone:
Detroit Lakes Vocational-Technical School	Detroit Lakes, Minn. 56501	(218) 847-9261

Admission Dates: September

Nature of Work: Small engine repairmen work on fractional-horsepower gasoline engines used in boats, lawnmowers, garden tractors, brushsaws, snowmobiles, small farm engines and snowblowers. Repair involves locating cause of trouble, dismantling engines and inspecting parts for wear or damage, repairing or replacing worn or faulty parts, cleaning and adjusting carburetors and magnetos and performance testing.

Job Opportunities: Graduates of this course may work as mechanic technicians, sales and servicemen, owners of small sales and repair shops and in industry and research. Leisure equipment such as boats and snowmobiles have created new opportunities for skilled repairmen.

Course Description:

*Two and four cycle engines
*Repairing and testing
*Use of engine manuals
*Shop management
*Merchandising
*Service techniques
*Customer relations
*Work on specific engines

Length of Course: 9 months

Helpful High School Courses:

Industrial arts
Mathematics
Business

Personal Qualities:

Mechanical and manual dexterity
Interest in working with small engines
Desire to work with people

Personal Equipment Needed: Books, tools and uniforms as required

Expenses: Tuition for students over 21—$40 per month

Course Title: SOIL CONSERVATION TECHNICIAN

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 8-4606

Admission Dates: First Tuesday after Labor Day or beginning of any quarter

Nature of Work: Soil Conservation technicians assist farmers and ranchers in developing needed land improvements. Planning, applying, maintaining measures and structural improvements for soil and water conservation in individual holdings, groups of holdings or watersheds.

Job Opportunities: Graduates may work for land improvement contractors, soil conservation districts and/or the U.S. Soil Conservation Service. The bureau of Indian Affairs and the Department of the Interior, colleges, state and local governments and some banks and public utilities also employ soil conservationists.

Course Description:

- *Soil and water conservation practices
- *Structures applicable to improved use of land and water resources
- *Safe use and maintenance of instruments and equipment to lay out and construct conservation structures
- *Computations and selection of sites
- *Job estimates and bidding
- *Records
- *Reports
- *Inter-agency cooperation

Length of Course: 11½ months

Helpful High School Courses:

- Vocational agriculture
- Science courses

Personal Qualities:

- High school graduate or 18 years of age
- Farm background
- Enjoyment of working with people

Personal Equipment Needed: Tools, books, equipment—$25-$35

Expenses: Tuition for students over 21—$30 per month

Course Title: STENOGRAPHY

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: The stenographer is responsible for taking dictation, usually shorthand; transcribing notes, letters, memos and other material; typewriting and some clerical details. Usually she has less responsibility than a secretary as far as making decisions and administrative duties. Stenographers may work for many individuals in a large office or concern and with experience, may work into secretarial positions.

Job Opportunities: Stenographers are in demand in all types of large firms; opportunity for advancement and on-the-job training is particularly good with insurance companies, banks, industrial concerns, government offices at the state, Federal and local level, educational institutions and health, welfare and service agencies.

Course Description:

*Shorthand
*Transcription
*Typewriting
*Communications
*Mathematics
*Business law
*Office procedures
*Human relations
*Office machines
*Business organization
*Data processing

Length of Course: 9 months

Helpful High School Courses:

Business and office subjects
Mathematics
English

Personal Qualities:

Interest in business
High school graduate or equivalent

Personal Equipment Needed: Workbooks and supplies

Expenses: Books, supplies—$40 approximately for duration of course
Tuition for students over 21—$802.50 per year

Course Title: TABULATING MACHINE TECHNICIANS

Name of School:	Address:	Telephone:
Brainerd Area Vocational-Technical School	300 Quince St. Brainerd, Minn. 56401	(218) 829-2814

Admission Dates: First week in September

Nature of Work: The tabulating technician assists in supervising a group of workers in operating IBM tabulating equipment. He prepares statistical reports, plans and wires control panels. For complex operations, he assists in planning the presentation of reports and in developing departmental procedures.

Job Opportunities: Tab technicians are employed as accounting machine technicians, operators of key punch, sorters, collators, reproducers, interpreters, verifiers and calculators. Banks, insurance companies, industries, wholesale and retail merchandisers, utilities, state, local and Federal government departments, health, welfare and service agencies all employ technicians in their electronic data processing systems.

Course Description:

- *Flow charting and system design
- *System development and evaluation
- *Board wiring
- *Principles of accounting
- *Mathematics
- *English
- *Principles of management
- *Introduction to computers

Length of Course: 10½ months

Helpful High School Courses:

- Bookkeeping
- Mathematics

Personal Qualities:

- Interest in problem solving
- Average or above general ability
- Good mathematical ability
- Manual dexterity

Personal Equipment Needed: Books and supplies

Expenses: Books and supplies—$60 approximate cost for entire course
Tuition for students over 21—$40 per month

Course Title: TABULATOR TECHNICIAN—TABULATOR OPERATOR

Name of School:	Address:	Telephone:
Faribault Area Vocational-Technical School	Faribault, Minn. 55021	(507) 334-3965

Admission Dates: September, with later enrollments as vacancies occur

Nature of Work: Tabulator technician operators run machines designed to sort and count large quantities of accounting and statistical information and to print the results on accounting records and other business forms. They wire tabulating machines, positioning the stacks of cards to be tabulating, operate the machines, observe them for malfunction and route the cards to the next station.

Job Opportunities: Tabulator operators are needed in government agencies, insurance companies, banks, utilities, transportation and manufacturing firms.

Course Description:

*Operating and wiring of IBM keypunch, verifier, sorter, accounting machine reproducer, collator and interpreter.
*Principles of accounting
*Business mathematics
*Systems application
*Introduction to business
*Business law
*Business machines
*Typing
*Keypunch

Length of Course: 9½ months

Helpful High School Courses:

Business courses
Mathematics

Personal Qualities:

Average learning ability
Numerical ability
Finger dexterity
Interest in business
Ability to concentrate on detail

Personal Equipment Needed: None

Expenses: Enrollment fee—$5
Personal class materials and supplies—$45
Tuition for students over 21—$40 per four week period if Minnesota resident
$55 per month if non-resident

Course Title: TABULATING MACHINE TECHNICIAN (DP)

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical School	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: Fall of each year

Nature of Work: The tabulating machine technician learns the basic unit record system of data processing using the punched card concept, various panel boards and wiring necessary to program a variety of machines necessary to prepare accounting and statistical data. He assists in the development of wiring diagram for complex machine operations, wires and tests boards for all operations in connection with the preparation of accounting and statistical data. He corrects program errors and determines the causes of program stoppage during processing.

Job Opportunities: Jobs are available in any type of company that has a unit record or tabulating machine installation. Roughly one-third of all tab technicians work for manufacturing companies; others work for banks, insurance companies, government agencies, wholesale and retail firms.

Course Description:

*Unit records Data Processing systems
*Keypunch and verifier
*Sorter and sorting procedures
*Basic wiring principles
*Interpreters
*Reproducers
*Summary punch
*Collators
*Business machines (Calculators, etc.)
*System applications
*Introduction to computers
*Accounting principles
*Business mathematics
*Business communications
*Business organization and management
*Electives

Length of Course: 10½ months

Helpful High School Courses:

Bookkeeping
Typewriting
Basic electricity
Mathematics

Personal Qualities:

Ability to reason logically
Good mechanical aptitude
Willingness to solve problems
Good eye and hand movement, vision and finger dexterity
Clerical perception for detecting errors in printing and format

Personal Equipment Needed: None

Expenses: Textbooks and machine manuals—$25 per quarter (approximately)
Tuition for students over 21—$32 per month plus above expenses

Course Title: TABULATING MACHINE TECHNICIAN

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September 1

Nature of Work: The tabulating machine technician is responsible for establishment and operation of unit record keeping systems. He utilizes punch card equipment such as the collator, reproducer, sorter, interpreter and the 402 accounting machine.

Job Opportunities: The field is new and the potential is tremendous. A qualified graduate is prepared to enter the field at the trainee level or transfer to a Computer Programmer Trainee program. Manufacturing companies, banks, insurance agencies and wholesale and retail businesses employ tabulating technicians.

Course Description:

*Accounting principles
*Business machines (adding and calculators)
*Business mathematics
*Business communications
*Business organization and management
Electives including:
*Typing
*Personal management
*Personality and human relations
*Business machines
*Business mathematics
*Business communications
*Data processing using tabulating equipment
*Unit records date processing systems
*Keypunch and verifier (program card)
*Sorter and sorting procedures
*Basic wiring principles
*Interpreters
*Reproducers
*Summary punch
*Collators
*Calculators
*Accounting machine 402 or 407
*System applications
*Introduction to computers

Length of Course: 10½ months

Helpful High School Courses:

Math
Bookkeeping

Personal Qualities:

Above average mental ability
Ability to work with problems requiring analytical and logical thinking.

Personal Equipment Needed: The student will be expected to purchase his own books and materials.

Expenses: The student will be expected to purchase his own books and materials.
Books and supplies—$75
Tuition for students over 21—$40 per month

Course Title: TAILORING

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-1381

Admission Dates: September

Nature of Work: Men and women in the tailoring and manufacturing of clothing of the hand and machine sewing, pressing, busheling, cutting, finishing and pattern-making of suits, coats, topcoats, jackets, slacks, shirts, skirts and sports apparel made for retail and custom shops. Most people in the garment industry are production workers who do a certain task in the assembly of a ready-made article. Alterations, pressing after dry-cleaning and fur repairing are also part of this trade.

Job Opportunities: Beginning employment and advancement depend on the level of skill developed by the student during training. Graduates may select jobs in alterations and repair in tailoring shops and department stores; machine sewer or presser in manufacturing and clearing firms, fitter in department stores or retail shops, cutter and pattern-maker in garment industry; and as manager or owner of an altering and tailoring shop. Earnings usually depend on the quality and quantity of work done.

Course Description:

Semester I
- Hand sewing techniques
- *Care and use of equipment:
  - Power machine
  - Hand iron
  - Steam iron
  - Presser
- *Construction techniques for tailoring
- *Basic repairs and alterations on men's and women's wear
- *Construction techniques for tailoring

Semester II
- *New construction:
  - Pants, skirts, jackets
- *Fitting, marking, major alterations and repairs
- *Power machine upholstery techniques (optional)

Related Courses
- *Textiles
- *Patternmaking

Length of Course: 9 months

Helpful High School Courses:
- Home economics — sewing for women
- Good high school record

Personal Qualities:
- Normal eyesight with or without glasses
- Ability to work at a steady fast pace
- Manual and finger dexterity
- Strong interest in garment construction

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: TECHNICAL SECRETARY

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Secretaries perform many duties including the taking and transcribing of notes into business communications, bookkeeping, filing, use of business machines, making appointments, greeting and introducing visitors, and in general relieving her employer of routine and tedious details. She is responsible for the tone and atmosphere of the office and does much to insure the success of her employer's business.

Job Opportunities: Technical secretaries work in engineering, drafting and architectural offices. Some are employed by highway departments and in state and Federal Civil Service.

Course Description:

- *Typing
- *Transcription
- *Shorthand
- *Office machines
- *Secretarial procedures
- *Records management
- *Office management
- *Communications
- *Mathematics
- *Human relations
- *Business law
- *Business organization
- *Introduction to data processing
- *Technical terminology and transcription

Length of Course: 10½ months

Helpful High School Courses:

- Mathematics
- Business subjects
- English

Personal Qualities:

- Good general ability
- Good grooming and personal poise
- Ability to work well with others
- Interest in business and office work

Personal Equipment Needed: None

Expenses: Workbooks and supplies—$40 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: TELEPHONE COMMUNICATIONS TECHNICIAN

Name of School:	Address:	Telephone:
Southwest Minn. Area Vocational-Technical School	401 West St. Jackson, Minn. 56143	(507) 847-3320

Admission Dates: September 1st

Nature of Work: Telephone workers inspect telephone plant equipment, including poles, wires, cables, terminal and central office apparatus to determine whether they have been installed and maintained according to prescribed practices. Operating tests on circuits and relay, installation of new equipment and adding to or bringing existing equipment up to date may be part of this job.

Job Opportunities: Telephone companies, both in the Bell system and under private ownership, needs trained technicians. Most workers start as combination men and may work into managerial positions. The better an individuals background, the higher his entry employment level and beginning salary.

Course Description:

*Introduction to telephone communications
*Basic telephone science
*Applied mathematics
*Electricity
*Basic electronics
*Circuiting
*Advanced telephone service
*Switching systems — traffic-transmission systems.
*Applied telephone
*Wire, cable, telephone instruments and instrument installation
*Business records
*Public relations

Length of Course: 11 months

Helpful High School Courses:

Mathematics
Natural sciences
Industrial arts

Personal Qualities:

High school diploma or equivalent
Aptitude and interest in the work
Good personality
Ability to get along well with others

Personal Equipment Needed: Hand tools needed for the trade must be purchased by the student; books and equipment for the course are furnished by the school.

Expenses: Tuition for students over 21—$30 per month

Course Title: TELEPHONE COMMUNICATIONS TECHNICIAN

Name of School:	Address:	Telephone:
Wadena Area Vocational-Technical School	405 S.W. Colfax Wadena, Minn. 56482	(218) 631-3342

Admission Dates: September

Nature of Work: Telephone communications technicians work as installers of new equipment both inside and outside the telephone plant, check lines, circuits and equipment for trouble, maintain and up-date equipment and test equipment for proper function.

Job Opportunities: Telephone technicians are employed by the Bell system and the many private telephone companies, as well as manufacturers of telephone or related equipment. Opportunities are very good for advancement with on-the-job training, particularly for those with technical training at the level offered by this course.

Course Description:

*Basic telephone science
*Basic electricity
*Basic electronics
*Applied mathematics
*Circuits analysis
*Phone installation
*Trouble shooting
*Switching systems
*Telephone traffic
*Use of electronic test equipment
*Key systems
*PBV and PBX installation and service
*Schematic print reading
*Wire and cable plant
*Telephone instruments
*Cable maintenance

Job skills are taught in shop, laboratory, field and classroom study

Length of Course: 11 months

Helpful High School Courses:

Mathematics
Basic electricity
Physics

Personal Qualities:

Good mechanical aptitude
Good physical health
Ability to work well with other people

Personal Equipment Needed: Hand tools—$50 approximate cost

Expenses: Application fee—$10
Tuition for students over 21—$40 per month

Course Title: TOOL DESIGN

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: September

Nature of Work: The tool designer designs tools and devices for the mass production of manufactured articles. He originates and prepares sketches of the designs for cutting tools, jigs, dies, special fixtures and other attachments used in machine operations. Designers may redesign tools to improve their efficiency.

Job Opportunities: Tool designers are employed in industrial plants, in research and development, by engineering and architectural firms, and by state and Federal governments. They may also work in sales and related work.

Course Description: This is a laboratory course; students design holding and portioning devices, gauges and tools. Included is the analytic study of the product requiring tooling; the production processes which will be performed and the actual design of machine tools to suit the required needs.

Machine Shop I or Mechanical Drafting or their equivalent are needed before taking this advanced course.

Length of Course: 10 months

Helpful High School Courses:

Mathematics	Industrial Arts
Science	Drafting

Personal Qualities:

Mathematics and science aptitude	Ability to visualize
Manual dexterity	Creative ability
Mechanical skills	

Personal Equipment Needed: None

Expenses: Registration fee—$5
Tuition for students over 21—$60 per month
G.I. Students—½ tuition

Course Title: TOOL, DIE AND MOLD MAKING

Name of School:	Address:	Telephone:
Alexandria Area Technical School	Alexandria, Minn. 56308	(612) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: Tool and die makers are highly creative workers whose products—tools, dies and special guiding and holding devices—are the basis for mass production in the metalworking and plastics industries. Toolmakers produce jigs and fixtures needed to hold metal while it is shaved, stamped or drilled; they also make gauges and other measuring devices used in making precision parts. Die makers construct metal forms used in stamping and forging and metal molds needed in die-casting and in molding plastic. Tool and die makers need to have a broad knowledge of machining operations, mathematics and blueprint reading and must be able to work to close tolerance and do precise handwork. They must also be familiar with all metals.

Job Opportunities: Graduates of this course usually enter employment at the apprentice level. This highly skilled and needed trade usually is set apart from the general machine shop and excellent opportunities for advancement exist in the plastics industries, cast metals, small tool and die shops and large industrial firms. Some tool and die makers become designers; many advance to supervisory and administrative positions; others open their own tool and die shops.

Course Description:

*Machining the molds
*Die casting
*Plastic injection
*Compression molding
*Mathematics
*Drawing and blueprint reading
*Metals
*Communications
*Human relations

Length of Course: 20 months—Students must be in upper 50% of class in Machine Shop to qualify

Helpful High School Courses:

Industrial arts
Mathematics
Mechanical drawing and drafting

Personal Qualities:

Average or better general learning ability
Mathematical aptitude
Work habits of neatness, accuracy and pride in craftsmanship
Manual dexterity and mechanical aptitude

Personal Equipment Needed: Tool box and tools must be purchased by the second year

Expenses: Acceptance Fee—$25
Book fee—$10
Tuition for students over 21—$40 per month plus above expenses

Course Title: TOOL, DIE AND MOLD MAKING

Name of School:	Address:	Telephone:
Granite Falls Area Vocational-Technical School	Granite Falls, Minn. 56241	(612) 564-3411

Admission Dates: Fall

Nature of Work: Machinists form metal parts for machines or equipment from precise specifications using blueprints or written specifications. All the skills needed to turn a block of metal into a precise part must be at the machinist's command. Tool and die makers have specialized skills used in producing the jigs and fixtures required to hold metal while it is stamped, shaved or drilled and the metal forms or dies used in diecasting or molding metals and plastics. Precise and accurate work is required of machinists and tool and die makers.

Job Opportunities: Graduates of this course usually enter the field through apprenticeship. There is a good demand for workers at all times in industry, tool and die departments of specific metals industries, in plastics forming and in tool and die or specialty machine shops.

Course Description:

*Tool, die and mold making lab
*Materials and processes
*Related information

Length of Course: 9 months

Prerequisite—Machine Shop I

Helpful High School Courses:

Industrial Arts

Personal Qualities:

Mathematical aptitude
Mechanical and manual aptitude
*Finger dexterity
*Liking for painstaking work

Personal Equipment Needed:

Micrometer
Scale
Scriber

Expenses: Registration fee—$20
Tuition for students over 21—$40 per month

Course Title: TOOL AND DIE MAKER

Name of School:	Address:	Telephone:
Mankato Area Vocational-Technical School	1920 Lee Blvd. No. Mankato, Minn. 56001	(507) 387-3441

Admission Dates: First Monday of every month except July and August

Nature of Work: Machinists form metal parts for machines or equipment from precise specifications using blueprints or written specifications. All the skills needed to turn a block of metal into a precise part must be at the machinist's command. Tool and die makers have specialized skills used in producing the jigs and fixtures required to hold metal while it is stamped, shaved or drilled and the metal forms or dies used in diecasting or molding metals and plastics. Precise and accurate work is required of machinists and tool and die makers.

Job Opportunities: Graduates of this course usually enter the field through apprenticeship. There is a good demand for workers at all times in industry, tool and die departments of specific metals industries, in plastics forming, and in tool and die or specialty machine shop.

Course Description:

*Fabrication of gauges
*Tool blocks
*Jigs and fixtures and dies
*Machine skills
*Related technical knowledge

Students must have completed the machinist's training course or have its equivalent in trade experience or other training.

Length of Course: 21 months (including machinist's training)

Helpful High School Courses:

Mathematics
Industrial arts
Sciences

Personal Qualities:

Mathematical aptitude
Mechanical and manual aptitude
Finger dexterity
Liking for painstaking work

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$32 per month

Course Title: TOOL, DIE AND MOLD MAKING

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(512) 227-9121

Admission Dates: September

Nature of Work: Machinists form metal parts for machines or equipment from precise specifications using blueprints or written specifications. All the skills needed to turn a block of metal into a precise part must be at the machinist's command. Tool and die makers have specialized skills used in producing the jigs and fixtures required to hold metal while it is stamped, shaved or drilled and the metal forms or dies used in diecasting or molding metals and plastics. Precise and accurate work is required of machinists and tool and die makers.

Job Opportunities: Graduates of this course usually enter the field through apprenticeship. There is a good demand for workers at all times in industry, tool and die departments of specific metals industries, in plastics forming, and in tool and die or specialty shops.

Course Description:

- *Machining project for orientation and evaluation
- *Temporary die making
- *Progressive and compound dies
- *Templates and layout
- *Tool die and mold design
- *Plastic mold making — injection and compression
- *Heat treatment
- *Technical related shop mathematics
- *Mathematics
- *Communications
- *Drawing — blueprints reading
- *Science
- *Industrial relations
- *Use of "Machinery's Handbook"

Length of Course: 18 months

Helpful High School Courses:

- Mathematics
- Industrial arts
- Physics
- Mechanical drawing or drafting

Personal Qualities:

- Demonstrate proficiency in machine skills, blueprint reading and specifications
- Good eyesight
- Physical strength and stamina
- Ability to do precise and accurate work

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: TOOL AND DIE MAKING

Name of School:	Address:	Telephone:
Staples Area Vocational-Technical School	Staples, Minn. 56479	(218) 894-2711

Admission Dates: September each year

Nature of Work: Machinists form metal parts for machines or equipment from precise specifications using blueprints or written specifications. All the skills needed to turn a block of metal into a precise part must be at the machinist's command. Tool and die makers have specialized skills used in producing the jigs and fixtures required to hold metal while it is stamped, shaved or drilled and the metal forms or dies used in diecasting or molding metals and plastics. Precise and accurate work is required of machinists and tool and die makers.

Job Opportunities: Graduates of this course usually enter the field through apprenticeship. There is a good demand for workers at all times in industry, tool and die departments of specific metals industries, in plastic forming, and in tool and die or specialty machine shops.

Course Description:

- *Constructing, maintaining and repairing shop tools, jigs, fixtures and instruments
- *Calibrating tools, jigs, fixtures and instruments to specifications
- *Calibrating dies used for forging, punching, stamping or other metal forming
- *Material specifications
- *Classes of fits, tolerances, allowances
- *Blanking and forming dies
- *Design of bolts, dowels and screws used in jigs and fixtures
- *Drawing dies
- *Machine tools
- *Die materials
- *Alignment of die parts
- *Heat treatment
- *Die tolerances

Length of Course: 9 months—students must have completed Machine Shop II or had equivalent training or trade experience

Helpful High School Courses:

- Mathematics
- Industrial arts
- Physics
- Drafting or mechanical drawing

Personal Qualities:

- Ability to solve algebraic formulas
- Aptitude for working with precision measurements
- Manual and finger dexterity
- Good vision
- Ability to concentrate on work
- Interest in metals and metal working tools and equipment

Personal Equipment Needed: None

Expenses: Registration fee—$5
Tuition for students over 21—$60 per month plus other expenses
G.I. Students—½ tuition

Course Title: TOTAL ENERGY MAINTENANCE TECHNICIAN (POWER PLANT OPERATOR)

Name of School:	Address:	Telephone:
Detroit Lakes Area Vocational-Technical School	Hwy. 34 East Detroit Lakes, Minn. 56501	(218) 847-9261

Admission Dates: September

Nature of Work: Total Energy Maintenance is a new field. It includes all the systems provided in large buildings or complexes for the heating, cooling, ventilating, lighting requirements. The technician must be familiar with the operation and maintenance of the systems and their components, and with the particular power source.

Job Opportunities: Graduates of this course work in total energy power plants as operators and maintenance technicians in shopping centers, institutions, schools, factories, apartment complexes, hotels, public buildings and office buildings.

Course Description:

*Heating
*Cooling
*Electricity
*Power Sources

This course prepares technicians for all phases of total energy maintenance with systems using power from a single source, gas or oil fired.

Length of Course: 9 months

Helpful High School Courses:

Mathematics
Industrial arts

Personal Qualities:

16 years of age or older
Interest, aptitude and ability to benefit from this course

Personal Equipment Needed: Books, tools, uniforms as required

Expenses: Tuition for students over 21—$40 per month

Course Title: TRAFFIC TRANSPORTATION TRAINEE

Name of School:	Address:	Telephone:
St. Paul Area Vocational-Technical Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Traffic transportation workers usually plan and expedite shipping and transportation, taking care of records, costs, rates and billing. Usually work includes use of various business machines such as calculators and adding machines as well as the typewriter. If employed by a travel agent or private freight agency, work may include a good deal of public contact.

Job Opportunities: Graduates of this course enter the transportation industry at the trainee level. They may be employed by airlines, freight and transport companies, railroads or private firms. There are excellent opportunities for advancement.

Course Description:

First Quarter
*Business principles and management
*Business English
*Typing I
*Accounting I
*Traffic I

Second Quarter
*Basic economics
*Business mathematics
*Business machines
*Production typing
*Accounting II
*Traffic I and II

Third Quarter
*Business law
*Fundamentals of data processing
*Speech
*Business machines
*Accounting III
*Traffic III
*Business correspondence

Length of Course: 10 months

Helpful High School Courses:
Typing
Bookkeeping
Communications

Personal Qualities:
Ability to concentrate on details
Aptitude for figure work
Good personality and poise

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$65 per month

Course Title: UPHOLSTERING

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Upholsterers work in four main areas; retail, custom and repair; wholesale and automotive. Some work in related areas such as bedding, caskets, canvas, display work and others. All must know the methods of springing, seat, arm and back construction as well as the proper treatment of distinct furniture styles and particular fashions.

Job Opportunities: Upholsterers work as strippers, webbers, springers, cutters, sewers, upholsterers or decorator assistants in furniture factories, custom shops, upholstery repair shops, interior decorator studios and auto body service shops. Some work in bedding, casket-making, canvas products and other related areas. There is good opportunity for opening a shop of one's own.

Course Description:

Unit I
*Operation of industrial sewing machines
*Fabric layout
*Upholstery of small arm chairs
*Wood finishing and refinishing
Unit II
Upholstery of solid seat, barrel and tub chairs
*Roll and pleat auto and truck seats
*Double stuff traditional chairs
*Canvas and tarp work
Unit III
*Upholstery of lounge-type chairs
*Restyle to customer's specifications
*Upholstery of loose cushion sofas
*Layout, construct framework and upholstery of one sofa
*Layout and Upholstery in diamond and biscuit design
*History of furniture
*Tools, supplies and equipment
*Techniques of furniture finishing
*Apprenticeship orientation
*Study of fabrics and applications
*Study of latex and synthetic foam
*Furniture frames and dimensions
*Auto trim techniques
*Creative design
*Cost estimating
*Color coordination
*Customer relations and business practices

Length of Course: 18 months

Helpful High School Courses:

Industrial arts
Arithmetic and general mathematics

Personal Qualities:

Manual dexterity
Mechanical aptitude
Neatness and patience
Artistic and creative ability

Personal Equipment Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: WATCH REPAIR

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Watch repairmen repair, adjust and regulate watches, clocks, chronometers, electro-mechanical and other timepieces. They must be able to diagnose trouble and work with tiny precision parts with delicacy and care. He may use a manifying glass called a "loupe" to aid in his work and may use timing machines, cleaning machines, handtools including tiny pliers, tweezers and screwdrivers, as well as electrical meters in repairing electrical or electro-mechanical watches or timepieces.

Job Opportunities: Most graduates become apprentices, working under a licensed watch repairman. They may work in repair shops, small jewelry shops, retail stores, in trade shops, wholesale and manufacturing plants that make watches, clocks, timing instruments or other electronic equipment. Some become instrument makers, repairmen or assemblers; others specialize in microminiaturization in research, development and engineering laboratories. This work offers a good opportunity for the handicapped or disabled. This field offers good possibilities for self-employment.

Course Description:

- *Development of basic and advanced tool skills
- *Disassembly and assembly practice
- *Lathe work
- *Repair and adjustment of balance wheels, escapements and jewels.
- *Hairspring work
- *Repair and cleaning watches, including 11½ ligne, automatics and women's watches
- *Introduction of special movements and jewelry repair (if time permits)
- *Mathematics
- *Communications
- *Industrial relations

Length of Course: 10 months

Helpful High School Courses:

Mathematics

Business subjects

Personal Qualities:

Interest, understanding and patience to work with miniature mechanisms

Good eyesight

Finger dexterity, sensative touch, steady hands

Apprentices must serve 4,000 hours with a licensed watch repairman and pass a final exam given by the Minn. State Board of Examiners for Watchmaking.

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$70 per month

Course Title: WELDING

Name of School:	Address:	Telephone:
Alexandria Area Vocational-Technical School	Alexandria, Minn. 56308	(218) 763-3196

Admission Dates: Day after Labor Day

Nature of Work: Welders join metal parts using heat, pressure or both, with or without a filler metal, to make a permanent bond. There are more than 40 processes but most come under three basic categories: arc, gas and resistance welding. A welder uses both gas and arc welding and other processes, working according to layouts, blueprints or written work orders. He may also perform related tasks such as flame cutting and grinding, repair broken or cracked parts, fill holes and increase the size of metal parts. He must also position and clamp components of fabricated metal products prior to welding, but usually does no layout, fitting or aligning.

Job Opportunities: Welders work in all metals manufacture, maintenance and repair. Many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding; structural metals such as construction of bridges, building, storage tanks and other structures use welding to join metals. An increase in the number of welding jobs is expected as the use of steel structures expands.

Course Description:

- *Oxygen, acetylene, electric arc and inert gas (heliarc) welding
- *Position welding (flat, horizontal, vertical, overhead)
- *Brazing
- *Soldering
- *Silver soldering
- *Cast iron welding
- *Pipe welding
- *Metals shop mathematics
- *Layout, blueprint reading and sketching
- *Communications
- *Estimating and trade information

Length of Course: 11 months

Helpful High School Courses:

- Mathematics
- Industrial arts
- Physics

Personal Qualities:

- Good health and physical stamina
- No allergies to gases
- Good eyesight with or without glasses

Personal Equipment Needed: Aprons, gloves and coveralls as required by the instructor

Expenses: Acceptance Fee—$25
Book fee—$10
Tuition for students over 21—$40 per month plus above fees

Course Title: WELDING

Name of School:	Address:	Telephone:
Anoka Area Vocational-Technical Center	Anoka, Minn. 55303	(612) 427-1880

Admission Dates: September

Nature of Work: Welders join metal parts using heat, pressure or both, with or without a filler metal, to make a permanent bond. There are more than 40 processes but most come under three basic categories; arc, gas and resistance welding. A welder uses both gas and arc welding and other processes, working according to layouts, blueprints or written work orders. He may also perform related tasks such as flame cutting and grinding, repair broken or cracked parts, fill holes and increase the size of metal parts. He must also position and clamp components of fabricated metal products prior to welding, but usually does no layout, fitting or aligning.

Job Opportunities: Welders work in all metals manufacture, maintenance and repair. Many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding; structural metals such as construction of bridges, buildings, storage tanks and other structures use welding to join metals. An increase in the number of welding jobs is expected as the use of steel construction expands.

Course Description:

- *Gas welding
- *Arc welding
- *Welding symbol interpretation
- *Inert gas welding
- *Semi-automatic welding
- *Metallurgy
- *Shop mathematics
- *Related skills

Length of Course: 9 months

Helpful High School Courses:

- Mathematics
- Industrial art
- Mechanical drawing or drafting
- Physics

Personal Qualities:

- Manual dexterity and steady hands
- Good eyesight and eye-hand co-ordination
- Mathematical and mechanical aptitude

Personal Equipment Needed: None

Expenses: Tuition for students over 21—$64 per month

Course Title: WELDING

Name of School:	Address:	Telephone:
Austin Area Vocational-Technical School	Austin, Minn. 55912	(507) 433-7301

Admission Dates: Fall Term (applications accepted throughout the year)

Nature of Work: Welders join metal parts using heat, pressure or both, with or without a filler metal, to make a permanent bond. There are more than 40 processes but most come under three basic categories: arc, gas and resistance welding. A welder uses both gas and arc welding and other processes, working according to layouts, blueprints or written work orders. He may also perform related tasks such as flame cutting and grinding, repair broken or cracked parts, fill holes and increase the size of metal parts. He must also position and clamp components of fabricated metal products prior to welding, but usually does no layout, fitting or alining.

Job Opportunities: Welders work in all metals manufacture, maintenance and repair. Many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding; structural metals such as construction of bridges, buildings, storage tanks and other structures use welding to join metals. An increase in the number of welding jobs is expected as the use of steel construction expands.

Course Description:

*Gas welding	*Metallurgy
*Arc welding	*Shop mathematics
*Welding symbol interpretation	*Related skills
*Inert gas welding	*Rod selection
*Semi-automatic welding	*Heliarc and wire feed

Class and shop practices are integrated throughout the course in the above major units of study.

Length of Course: 18 months

Helpful High School Courses:

Mathematics	Physics
Industrial arts	

Personal Qualities:

Good health	Manual dexterity and mechanical aptitude
Good eyesight and eye-hand coordination	

Personal Equipment Needed: Hand tools—$50 (approximately)

Expenses: Tuition for students over 21—$32 per month

Course Title: WELDING

Name of School:	Address:	Telephone:
Canby Area Vocational-Technical School	Canby, Minn. 56220	(507) 223-7252

Admission Dates: September

Nature of Work: Welders join metal parts using heat, pressure or both, with or without a filler metal, to make a permanent bond. There are more than 40 processes but most come under three basic categories; arc, gas and resistance welding. A welder uses both gas and arc welding and other processes, working according to layouts, blueprints or written work orders. He may also perform related tasks such as flame cutting and grinding, repair broken or cracked parts, fill holes and increase the size of metal parts. He must also position and clamp components of fabricated metal products prior to welding, but usually does no layout, fitting or aligning.

Job Opportunities: Welders work in all metals manufacture, maintenance and repair. Many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding; structural metals such as construction of bridges, buildings, storage tanks and other structures use welding to join metals. An increase in the number of welding jobs is expected as the use of steel construction expands.

Course Description:

*Welding light to heavy materials
*Position welding, including flat horizontal, vertical up and down, overhead.
*Tungsten inert gas welding
*Automatic wire feed welding
*Arc welding
*Oxyacetylene
*Mathematics
*Related sciences
*Employer-employee relations
*Metallurgy
*Shop layout
*Blueprint reading

Length of Course: 9 months

Helpful High School Courses:

Industrial arts
Physics
Mathematics

Personal Qualities:

Mechanical aptitude and manual dexterity
Good eyesight and eye-hand coordination
Physical health and stamina

Personal Equipment Needed: Helmet, gloves, goggles and reference books

Expenses: Reference books—No more than $10 per quarter
Tuition for students over 21—$40 per month plus above fees
Tuition for out-of-state residents—$60 per month plus above fees

Course Title: WELDING

Name of School:	Address:	Telephone:
Detroit Lakes Area Vocational-Technical School	Detroit Lakes, Minn. 56501	(218) 847-9261

Admission Dates: September

Nature of Work: Welders join metal parts using heat, pressure or both, with or without filler metal, to make a permanent bond. There are more than 40 processes but most come under three basic categories; arc, gas and resistance welding. A welder uses both gas and arc welding and other processes, working according to layouts, blueprints or written work orders. He may also perform related tasks such as flame cutting and grinding, repair broken or cracked parts, fill holes and increase the size of metal parts. He must also position and clamp components of fabricated metal products prior to welding, but usually does no layout, fitting or aligning.

Job Opportunities: Welders work in all metals manufacture, maintenance and repair. Many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding; structural metals such as construction of bridges, buildings, storage tanks and other structures use welding to join metals. An increase in the number of welding jobs is expected as the use of steel construction expands.

Course Description:

- *Gas welding
- *Arc welding
- *Oxy-acetylene welding
- *Blueprint reading
- *Pipe layout
- *Metal fabrication
- *Jigs
- *Expansion and contraction problems
- *Metal identification
- *Management
- *Estimating

Length of Course: 9 months

Helpful High School Courses:

- Industrial arts
- Physics
- Mathematics

Personal Qualities:

- Mechanical aptitude and manual dexterity
- Good eyesight and eye-hand coordination
- Physical health and stamina

Personal Equipment Needed: Books, tools and uniforms as required by instructors

Expenses: Tuition for students over 21—$40 per month

Course Title: WELDING

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Trinity Road Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Welders join metal parts using heat, pressure or both with or without a filler metal to make a permanent bond. There are more than 40 processes but most come under three basic categories: arc, gas and resistance welding. A welder uses both gas and arc welding and other processes, working according to layouts, blueprints, or written work orders. He may perform related tasks such as flame cutting, grinding, repair broken or cracked parts, fill holes and increase the size of metal parts.

Job Opportunities: Welders work in all metals manufacture, maintenance and repair; many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding. Structural metals used in construction of bridges, building storage tanks and other structures use welding. An increase is expected as more structures use steel as an integral material.

Course Description:

*Metallurgy
*Blueprint interpretation
*Welding gases
*Cylinders
*Types of equipment
*Tungsten inert gas (heliarc) welding
*Semi-autmatic welding
*Cutting
*Brazing
*Testing procedures
*Welding processes
*Fabrication methods
*Code requirements

Length of Course: 9 months

Helpful High School Courses:

Industrial arts
Mathematics
Science — including physics

Personal Qualities:

Physical health and stamina to work outside in all types of weather
Mechanical and mathematical aptitude
Interest in working with metals

Personal Equipment Needed: Welder's cape, gloves

Expenses: Safety equipment—$25 (approximately)
Tuition for students over 21—$802.50 per year

Course Title: WELDING

Name of School:	Address:	Telephone:
Eveleth Area Vocational-Technical School	402 Roosevelt Ave. Eveleth, Minn. 55734	(218) 749-2285

Admission Dates: September only

Nature of Work: Welders join metal parts using heat, pressure or both, with or without a filled metal, to make a permanent bond. There are more than 40 processes but most come under three basic categories; arc, gas and resistance welding. A welder uses both gas and arc welding and other processes, working according to layouts, blueprints or written work orders. He may also perform related tasks such as flame cutting and grinding, repair broken or cracked parts, fill holes and increase the size of metal parts. He must also position and clamp components of fabricated metal products prior to welding, but usually does no layout, fitting or aligning.

Job Opportunities: Welders work in all metals manufacture, maintenance and repair. Many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding; structural metals such as construction of bridges, buildings, storage tanks and other structures use welding to join metals. An increase in the number of welding jobs is expected as the use of steel construction expands.

Course Description.

- *Arc welding
- *Metallic welding
- *Semi-automatic welding
- *Position welding
- *Fabrication
- *Gas welding and cutting
- *Oxy-acetylene welding
- *Oxy-propane welding
- *Blueprint reading
- *Mathematics
- *Metallurgy

Length of Course: 9 months

Helpful High School Courses:

- Industrial arts — machine shop, sheet metal and drafting
- Mathematics
- Physics

Personal Qualities:

- Mechanical aptitude and manual dexterity
- Good eyesight and eye-hand coordination
- Physical health and stamina

Personal Equipment Needed: Books, safety glasses, helmet, gloves

Expenses: Enrollment fee—$20
Tuition for students over 21—$65 per month
(Next year will be $150 per quarter for Minnesota residents; $195 per quarter for non-residents)

Course Title: WELDING

Name of School:	Address:	Telephone:
Faribault Area Vocational-Technical School	Faribault, Minn. 55021	(507) 334-3965

Admission Dates: September, with later enrollments as vacancies occur

Nature of Work: Welders join metal parts using heat, pressure or both, with or without a filler metal, to make a permanent bond. There are more than 40 processes but most come under three basic categories; arc, gas and resistance welding. Welders use both gas and arc welding and other processes, working according to layouts, blueprints or written work orders. He may also perform related tasks such as flame cutting and grinding, repair broken or cracked parts, fill holes and increase the size of metal parts. He must also position and clamp components of fabricated metal products prior to welding, but usually does no layout, fitting or aligning.

Job Opportunities: Welders work in all metal manufacture, maintenance and repair. Many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding; structural metals such as construction of bridges, buildings, storage tanks and other structures use welding to join metals. An increase in the number of welding jobs is expected as the use of steel construction expands.

Course Description:

*Technical information—Safety procedures, mathematics, drawing print reading, shop management

*Arc welding practices—Coated rod, metallic inert gas, tungsten, inert gas, heliarc, spot welding, submerged arc welding

*Gas welding—cutting and brazing

*Care and use of welding equipment

Length of Course: 9½ months

Helpful High School Courses:

Mathematics
Physics
Industrial arts

Personal Qualities:

Mechanical aptitude and manual dexterity
Good eyesight and eye-hand coordination
Physical health and stamina

Personal Equipment Needed: Reference books— approximate cost, $20

Expenses: Enrollment fee—$5
Personal materials—$10 per quarter
Tuition for students over 21—$40 per 4-week period
Tuition for out-of-state residents—$55 per month

Course Title: WELDING

Name of School:	Address:	Telephone:
Minneapolis Area Vocational-Technical School	1101 3rd Ave. So. Minneapolis, Minn. 55404	(612) 332-0381

Admission Dates: September

Nature of Work: Welders join metal parts using heat, pressure or both, with or without a filler metal, to make a permanent bond. There are more than 40 processes but most come under three basic categories; arc, gas and resistance welding. Welders use both gas and arc welding and other processes, working according to layouts, blueprints or written work orders. He may also perform related tasks such as flame cutting and grinding, repair broken or cracked parts, fill holes and increase the size of metal parts. He must also position and clamp components of fabricated metal products prior to welding, but usually does no layout, fitting or aligning.

Job Opportunities: Welders work in all metals manufacture, maintenance and repair. Many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding; structural metals such as construction of bridges, buildings, storage tanks and other structures use welding to join metals. An increase in the number of welding jobs is expected as the use of steel construction expands.

Course Description:

*Gas welding—
- Oxy-acetylene cutting
- Fusion welding
- Brazing (bronze and silver)
- Pipe welding
- Fabrication and repair

*Arc welding—
- Bead welds (all positions)
- Advanced oxy-acetylene cutting
- Fabrication and repair

*Study of oxygen and acetylene gases
*Equipment for oxy-acetylene process
*Safety precautions
*Study of iron alloys
*Principles of oxy-acetylene cutting
*Metallurgy
*Machine accessories — electrodes
*Study of current control
*Arc blow
*Blueprint reading, symbols, testing information
*M.I.G. and T.I.G. processes
*Assignment and progression according the students ability
*Three prosiont multiple pass test on ⅜" plate (A.W.S. equivalent)
*Government test equivalents—pipe welding in all positions
*Micro-wire inert gas welding; tungsten gas welding and project fabrication

Length of Course: 12 months

Helpful High School Courses:
- Industrial arts
- Physics
- Mathematics

Personal Qualities:
- Good physical health (no allergies to gases)
- Good eyesight and eye-hand coordination
- Good mechanical aptitude and manual dexterity
- Interest in becoming a welder

Personal Equipmnt Needed: None

Expenses: Book and locker fee—$2 per semester
Tuition for students over 21—$70 per month

Course Title: WELDING

Name of School:	Address:	Telephone:
Moorhead Area Vocational-Technical School	Box 100 Moorhead, Minn. 56561	(218) 236-6277

Admission Dates:

Nature of Work: Welders join metal parts using heat, pressure or both, with or without a filler metal, to make a permanent bond. There are more than 40 processes but most come under three basic categories; arc, gas and resistance welding. Welders use both gas and arc welding and other processes, working according to layouts, blueprints or written work orders. He may also perform related tasks such as flame cutting and grinding, repair broken or cracked parts, fill holes and increase the size of metal parts. He must also position and clamp components of fabricated metal products prior to welding, but usually does no layout, fitting or aligning.

Job Opportunities: Welders work in all metals manufacture, maintenance and repair. Many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding; structural metals such as construction of bridges, buildings, storage tanks and other structures use welding to join metals. An increase in the number of welding jobs is expected as the use of steel construction expands.

Course Description:

- *Care and repair of welding equipment
- *Preparation and layout of various welding joints
- *Expansion, construction and stressing of alloy steels and nonferrous metals
- *Shop mathematics
- *Oxygen-acetylene, electric arc and heliarc welding
- *Welding metallurgy
- *Blueprint reading
- *Layout problems

Length of Course: 11 months

Helpful High School Courses:

- Physics
- Mathematics
- Industrial arts

Personal Qualities:

- Satisfactory score on aptitude tests given at the school
- Good physical health, no allergies to gases
- Good eyesight and eye-hand coordination
- Good manual skills and mechanical aptitude

Personal Equipment Needed: Books—approximately $15
Clothing and tools—$50

Expenses: Student activity fee—$10
Tuition for students over 21—$40 per month plus costs noted above

Course Title: WELDING

Name of School:	Address:	Telephone:
Pine City Area Vocational-Technical School	Pine City, Minn. 55063	(612) 629-3145

Admission Dates: September

Nature of Work: Welders join metal parts using heat, pressure or both, with or without a filler metal, to make a permanent bond. There are more than 40 processes but most come under three basic categories; arc, gas and resistance welding. Welders use both gas and arc welding and other processes, working according to layouts, blueprints or written work orders. He may also perform related tasks such as flame cutting and grinding, repair broken or cracked parts, fill holes and increase the size of metal parts. He must also position and clamp components of fabricated metal products prior to welding, but usually does no layout, fitting or aligning.

Job Opportunities: Welders work in all metals manufacture, maintenance and repair. Many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding; structural metals such as construction of bridges, buildings, storage tanks and other structures use welding to join metals. An increase in the number of welding jobs is expected as the use of steel construction expands.

Course Description:

*Welding in all positions
*Arc welding
*Gas welding
*Heliarc welding
*Semi-automatic wire feed welding

Length of Course: 11 months

Helpful High School Courses:

Industrial arts
Physics
Mathematics

Personal Qualities:

Good physical health
Manual dexterity and mechanical aptitude
Good eyesight and eye-hand coordination

Personal Equipment Needed: Protective leather clothing

Expenses: Registration fee—$10
Tuition for students over 21—$35 per month
Tution for out-of-state students—$50 per month

Course Title: WELDING

Name of School:	Address:	Telephone:
St. Cloud Area Vocational-Technical School	1601 No. 9th Ave. St. Cloud, Minn. 56301	(612) 252-0101

Admission Dates: September

Nature of Work: Welders join metal parts using heat, pressure or both, with or without a filler metal, to make a permanent bond. There are more than 40 processes but most come under three basic categories; arc, gas and resistance welding. A welder uses both gas and arc welding and other processes, working according to layouts, blueprints or written work orders. He may also perform related tasks such as flame cutting and grinding, repair broken or cracked parts, fill holes and increase the size of metal parts. He must also position and clamp components of fabricated metal products prior to welding, but usually does no layout, fitting or aligning.

Job Opportunities: Welders work in all metals manufacture, maintenance and repair. Many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding; structural metals such as construction of bridges, buildings, storage tanks and other structures use welding to join metals. An increase in the number of welding jobs is expected as the use of steel construction expands.

Course Description:

- *All types of welding on all types of weldable materials
- *Modern oxy-acetylene and electric arc welding equipment
- *Theory of welding
- *Metallurgy
- *Shop mathematics
- *Layout
- *Blueprint reading

Length of Course: 9 months

Helpful High School Courses:

- Mathematics
- Industrial arts
- Physics

Personal Qualities:

- Good physical strength
- Mechanical aptitude and manual dexterity
- Good eyesight and eye-hand coordination

Personal Equipment Needed: Books—$22 Tools—$48

Expenses: Service fee—$7
Tuition for students over 21—$40 per month plus above expenses

Course Title: WELDING

Name of School:	Address:	Telephone:
St. Paul Technical-Vocational Institute	235 Marshall Ave. St. Paul, Minn. 55102	(612) 227-9121

Admission Dates: September

Nature of Work: Welders join metal parts using heat, pressure or both, with or without a filler metal, to make a permanent bond. There are more than 40 processes but most come under three basic categories; arc, gas and resistance welding. A welder uses both gas and arc welding and other processes, working according to layouts, blueprints or written work orders. He may also perform related tasks such as flame cutting and grinding, repair broken or cracked parts, fill holes and increase the size of metal parts. He must also position and clamp components of fabricated metal products prior to welding, but usually does no layout, fitting or aligning.

Job Opportunities: Welders work in all metals manufacture, maintenance and repair. Many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding; structural metals such as construction of bridges, buildings, storage tanks and other structures use welding to join metals. An increase in the number of welding jobs is expected as the use of steel construction expands.

Course Description:

- *Oxygen-acetylene welding in all positions
  - Steel — ⅛ to $\frac{5}{16}$
  - Bronze welding
  - Aluminum welding white metal repair
  - Brazing
  - Hard surfacing
  - Silver brazing
- *Metallic arc welding — AC and DC, all position
- *Alloys welding — Hardsurfacing, low alloy
- *Steels, cast iron, aluminum and heliarc
- *Semiautomatic "Tig" and "Mig" machines
- *Mathematics
- *Communications
- *Drawing — blueprint reading
- *Science
- *Industrial relations

Length of Course: 18 months

Helpful High School Courses:

- Industrial arts
- Mathematics
- Science — physics
- Mechanical drawing or drafting

Personal Qualities:

- Good physical health, no allergies to gases
- Good eyesight and eye-hand coordination
- Manual dexterity and mechanical aptitude

Personal Equipment Needed: None

Expenses: Tuition for students ovr 21—$65 per month

Course Title: WELDING

Name of School:	Address:	Telephone:
Thief River Falls Area Vocational-Technical School	Thief River Falls, Minn. 56701	(218) 681-5424

Admission Dates: First Monday of each month except July

Nature of Work: Welders join metal parts using heat, pressure or both, with or without a filler metal, to make a permanent bond. There are more than 40 processes but most come under three basic categories; arc, gas and resistance welding. Welders use both gas and arc welding and other processes, working according to layouts, blueprints or written work orders. He may also perform related tasks such as flame cutting and grinding, repair broken or cracked parts, fill holes and increase the size of metal parts. He must also position and clamp components of fabricated metal products prior to welding, but usually does no layout, fitting or aligning.

Job Opportunities: Welders work in all metals manufacture, maintenance and repair. Many of the parts used in household appliances, automobiles, missiles and spacecraft, airplanes and other products rely on welding; structural metals such as construction of bridges, buildings, storage tanks and other structures use welding to join metals. An increase in the number of welding jobs is expected as the use of steel construction expands.

Course Description:

- *Oxy-acetylene, electric arc, inert gas arc and resistance welding
- *Expansion, contraction, stressing of metals
- *Shop safety
- *Mechanical drawing
- *Making sketches and templates
- *Blueprint reading and shop mathematics

Length of Course: 13 months

Helpful High School Courses:

- Industrial arts
- Mathematics
- Physics
- Mechanical drawing or drafting

Personal Qualities:

- Good physical health and stamina, no allergies to gases
- Good eyesight and eye-hand coordination
- Manual dexterity and mechanical aptitude

Personal Equipment Needed: Books, tools and equipment covered in course fee

Expenses: Registration fee—$10 Course fee—$60
Tuition for students over 21—$45 per month

Course Title: WELDING

Name of School:	Address:	Telephone:
Winona Area Vocational-Technical School	1250 Homer Road Winona, Minn. 55987	(507) 4606

Admission Dates: First Tuesday after Labor Day or beginning of any quarter

Nature of Work: This course prepares graduates for work in production welding, automatic machine welding, pipe welding, maintenance welding and general metal repair. Manufacturers of automobiles, missiles and spacecraft, airplanes, household goods and thousands of other products employ skilled welders.

Job Opportunities: Welders join metal parts by applying heat, pressure or both, with or without filler metal, to produce a permanent bond. There are more than 40 different welding processes in the categories of arc, gas and resistance welding performed manually or by machine. Skilled welders are familiar with all of these and must know how to adjust his equipment, should understand various metal, and usually is responsible for planning and laying out work from blueprints and other written specifications.

Course Description:

*Electric arc welding
*Oxy-acetylene welding and cutting
*Blueprint reading
*Related mathematics
*Properties of metals
*Joining metals
*Tungsten inert gas welding
*Metal inert gas welding

Theory and practical experience are provided in manual and machine welding.

Length of Course: 9 months

Helpful High School Courses:

Industrial arts
Mathematics

Personal Qualities:

Manual dexterity
Good eyesight and eye-hand coordination
Steady hands

Minimum score as recommended by General Aptitude Test Battery

Personal Equipment Needed: Tools—$25-$35

Expenses: Tuition for students over 21—$30 per month

Course Title: WELDING, INDUSTRIAL

Name of School:	Address:	Telephone:
Willmar Area Vocational-Technical School	Willmar, Minn. 56201	(612) 235-5114

Admission Dates: September

Nature of Work: Welding is one of the most common and durable methods of joining metal parts. Welding is used in manufacturing, in construction and to repair broken metal parts. There are more than 40 different processes, but most fall under the categories of arc, gas and resistance welding. Welders who have this background are skilled in all manual techniques and are able to plan and lay out work from blueprints, drawings or written specifications. He also knows and understands the property of metals and their particular problems and uses in welding.

Job Opportunities: Welders are employed in almost every industry. There are many jobs where welding skills are used, but the skilled welder is in particular demand in the manufacture of motor vehicles, aircraft and missiles and the production of railroad cars. Maintenance and repair work in the metalworking industries and in the technical fields including atomic energy, scientific engineering and research where highly developed skills are needed to make extremely accurate and reliable welds. Graduate may become apprentices.

Course Description:

Fall Quarter
- *Basic oxygen-acetylene welding
- *Basic arc welding
- *Oxygen-acetylene shop
- *Arc welding shop

Winter Quarter
- *Ferrous metallurgy
- *Non-ferrous metallurgy
- *Advanced gas shop
- *Advanced arc shop

Spring Quarter
- *Welding symbols
- *Shop mathematics
- *Tig, Mig welding machines
- Projects and testing

Length of Course: 9 months

Helpful High School Courses:
- Industrial arts
- Mathematics
- Science

Personal Qualities:
- High school graduate or 12 grade norms on DAT
- Mechanical aptitude
- Neat and accurate work habits

Personal Equipment Needed:
- Books
- 12" rule
- Leather protective clothing
- Gloves
- Pliers

Expenses: Books, tools, supplies—$75 approximately
Tuition for students over 21—$40 per month

Course Title: WHOLESALE MANAGEMENT

Name of School:	Address:	Telephone:
Duluth Area Institute of Technology	Duluth, Minn. 55802	(218) 722-2801

Admission Dates: September

Nature of Work: Wholesale merchandising includes selling, advertising, sales promotion, warehousing, materials handling and traffic management. Work may involve estimating the needs of the firm in buying merchandise and directing the redistribution of it to individuals or industrial consumers.

Job Opportunities: Wholesale management workers are needed in all types of trade; importers, exporters, distributors of every kind of product from heavy machinery to novelties, from consumer food to clothing needs people trained in this competitive area.

Course Description:

*Salesmanship
*Advertising
*Sales promotion
*Materials handling
*Law
*Human relations
*Accounting
*Mathematics
*Case studies and projects

This course is based on problem solving and decision making through the case method approach. Visits to major wholesaling concerns and outside resources personnel broadens the student's understanding of merchandising.

Length of Course: 18 months

Helpful High School Courses:

Distributive education
Business and office subjects
Mathematics

Personal Qualities:

Ability to get along well with others
Interest in business and related areas
Good physical and mental health

Personal Equipment Needed: Workbooks, miscellaneous supplies

Expenses: Workbook and supply fee—$30 approximate cost during course
Tuition for students over 21—$802.50 per year

VT 009 231
Education for Nursing--the Diploma Way.

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Updated by a supplement for December 1968, the document lists by state over 500 programs approved by the National League for Nursing as of April 1968. Information for each entry includes: (1) address of school, (2) name and title of the head of the school, (3) acceptance policies with regard to married and transfer students, (4) program length, (5) arrangements for courses given outside the school, (6) living arrangements, and (7) approximate cost for each year. An introduction discusses the characteristics of diploma school education and the meaning of the terms state approval and specialized accreditation. (JK)

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NATIONAL LEAGUE FOR NURSING

PREVIOUS EDITION

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INTRODUCTION

Today, educational preparation for practice as a registered nurse (R.N.) is available in a variety of settings for several fundamental and urgent reasons, the most important of which are:

- To enable nursing to fulfill its commitment to serve humanity by providing the best possible nursing care to patients and their families.
- To attract into nursing a maximum number of men and women with different interests, abilities, goals, and educational preferences.
- To meet the nation's extensive and constantly increasing nursing needs.

One of the settings for preparation is the school that offers a diploma program in nursing. This type of school, usually under the control of a hospital but in some instances independently incorporated, occupies a significant position in preparing registered nurses to meet the current and the future needs of society. The diploma program in nursing serves the interests and the goals of qualified high school graduates who want to receive their education in a program centered in a community institution identified with the care of patients, who want an early and continuing opportunity of being with patients and with personnel who provide health services, and who want to prepare for beginning nursing positions in hospitals and similar institutions.

This pamphlet gives general information about diploma education for nursing, explains the importance of selecting a school that offers an accredited program, and lists the diploma programs accredited by the National League for Nursing (NLN). The information will be of particular interest to high school students and high school graduates of all ages who wish to prepare for a career as an R.N.

DIPLOMA EDUCATION FOR NURSING

Only through exploration of the distinctive characteristics of this type of program can you, the prospective student in nursing, determine if it is the one best suited to your interest and goals in nursing. A number of characteristics typify the education provided in an NLN-accredited diploma program in nursing.

- The diploma program of study is offered by a single-purpose school—a school that focuses all of its attention and activities on developing the potentials of individual students as persons, citizens, and competent practitioners of nursing.
- The school of nursing may enter into cooperative relations with collegiate or other institutions in order to provide certain courses of study needed to meet the requirements for graduation from the diploma program.
- The faculty of the school have the academic preparation and the experience in nursing and nursing education that ensure quality education.
- Students are selected by the faculty and admitted directly to the diploma program in nursing.
- Admission requirements include graduation from an approved or accredited high school, satisfactory general academic achievement, and successful completion of certain prerequisite subjects. Personal characteristics and health qualifications are also assessed.
- The faculty develops, implements, and controls the program of study within the framework of the policies of the governing body of the school.
- The program of study includes courses in the theory and the practice of nursing and courses in the biological, physical, and behavioral sciences and may include offerings in the humanities.
- All courses offered as part of the program are planned to meet the personal needs of the student and to develop the skills required of the registered nurse practitioner.
- The faculty of the school has responsibility for all courses planned for students.
- The nursing courses offered throughout the program of study build upon preceding and concurrent learning in the required basic sciences.
- The content of nursing courses combines theory with practice and reinforces learning through the application of scientific, health, and nursing principles to the care of medical and surgical patients, mothers, children, and the mentally ill.
- The primary focus of the nursing courses is on learning to provide nursing care to patients in hospitals and similar community institutions.

- Graduates of accredited diploma programs in nursing (1) know basic scientific principles and utilize them in planning and giving quality nursing care to people; (2) recognize the indication of diseases and disabilities and the psychological, social, and physical needs of patients; (3) have the understanding and the skills necessary to organize and implement a plan of nursing care that will meet the needs of groups of patients and promote the restoration of health; (4) are qualified to plan for the care of patients with other members of the health team and to direct other members of the nursing team; (5) are qualified for general duty nurse positions in the medical, surgical, obstetric, pediatric, and psychiatric nursing areas of hospitals and similar community institutions; (6) need to be oriented to new work situations as beginning practitioners and to be given time and opportunity to become increasingly effective in the practice of nursing.

Plan Early to Reach Your Target in Nursing

Will you qualify for admission to an NLN-accredited diploma program? The answer will be yes only if you inform yourself of the specific admission requirements of several programs and plan early in your high school career to meet those requirements. Select a number of schools from the list on the following pages and write to them for their catalogues or bulletins. Study the requirements carefully and then enroll in the high school courses that are listed as prerequisite for admission. Strive to achieve the stipulated grade average and rank in the graduating class.

Other considerations in choosing "the" school for you are curriculum offerings and tuition and fees. In addition to talking over your plans with your parents and counselors, it would be well to visit the programs you are considering and talk with nursing faculty members and students. If you will need financial assistance, seek information about scholarships and loans from the school you finally choose. Also, ask your high school counselor to help you explore sources of help on the local, state, and national levels.

Why an Accredited Diploma Program?

NLN-accredited diploma programs in nursing have demonstrated their ability to attract, retain, and graduate the largest number of students, to recruit and retain qualified faculty, and to provide educational programs of good quality. The phrase "NLN-accredited" identifies for you, the prospective

student, the schools that offer programs that have received recognition through a process of "specialized" accreditation. What you should know about the significance of specialized accreditation and how it differs from state approval is the following:

1. *State Approval.*—The practice of nursing is regulated in each state by law, just as is the practice of medicine. Each state and territory appoints an authority—usually a board of nursing or of nurse examiners —to administer its particular nurse practice act. Approval by such an authority means that the program in nursing meets the minimum legal requirements set by the state for the preparation of nurses for licensure. Only graduates of a school offering a program approved by a state board are eligible to take the state examination for licensure to practice nursing as a registered nurse.
2. *Specialized Accreditation.*—In the United States, institutions that offer educational programs in nursing and other professions are not regulated by a federal authority. Instead, an organization or an agency that is national in scope and represents the educational institutions and the profession is designated as the body responsible for conducting a program of voluntary national accreditation. The purpose of such a program is to ensure that education for the particular profession will continue to improve and that quality programs will be offered to students. This type of accreditation program serves as the means whereby the educational institutions themselves voluntarily formulate and apply criteria of excellence in education for the profession. The procedure for accreditation usually includes four steps: formulation of criteria; evaluation of the institution and the program of studies by competent educators; publication of a list of institutions meeting the criteria; and periodic reevaluations to determine whether or not institutions and programs continue to meet the criteria.

The National League for Nursing is recognized by the U. S. Office of Education, by the American Hospital Association, and by the nursing profession itself as the national accrediting agency for diploma programs.

The NLN-accredited programs described in this pamphlet are approved by individual state boards of nursing and, in addition, have met national criteria of excellence that exceed the legal standards set by state boards in each of the 50 states, the District of Columbia, and the Commonwealth of Puerto Rico.

Diploma Programs in Nursing Accredited by The National League for Nursing

The following pages present specific information about the schools that offer diploma programs in nursing accredited by the National League for Nursing. The information given was supplied by the schools in response to questionnaires distributed during April, 1968. As in all publications of this type, the information is subject to change. As additional diploma programs apply for and are granted NLN accreditation, they will be added to this pamphlet.

For further information about any school and its nursing program, write to the head of the school for a catalogue or bulletin.

The meanings of the symbols and letters that appear in the list are:

Columns 3-7: X means *Yes.*
A blank space means *No* or *None.*
# indicates that the information is available from the school.

Column 5: All diploma programs include required courses in the biological, physical, and behavioral sciences and in nursing, but the arrangements made for giving these courses vary.

(a) Some schools arrange the diploma program of studies in such a way that *all* required courses are given in the school and its own or adjacent clinical resources. *Both sections of column 5 are blank in this instance.*

(b) Some schools arrange the program in such a way that *certain of the required basic science courses* are given in cooperation with a nearby college or university. *An X appears in the first section of column 5 in this instance.*

(c) Some schools arrange the program in such a way that *certain of the required nursing courses* are given in cooperation with institutions *located in other cities or in other states.* The number of weeks planned for the nursing course(s) is indicated in the second section of column 5 in this instance. *In all instances, see school bulletin for details.*

Column 6: The letters signify the living arrangements for students:
R means that all students are required to live in the school residence facilities.
P means that off-campus living is permitted.

Column 7: * indicates that the cost may include some or all of the cost of room and board, uniforms, books, et cetera.

(1) School of Nursing and Address (Information in parentheses designates the legal control of the school; the year in which the school was established; whether the school is coeducational or for women only; and educational prerequisite for admission in addition to graduation from high school, if any.)	(2) Head of School and Title	(3) School Accepts: Married students	(3) School Accepts: Transfer students	(4) Length of program in weeks, excluding vacations	(5) Arrangements for Certain Courses: Some courses given at a college or university	(5) Arrangements for Certain Courses: Weeks away from school for some nursing courses	(6) Living Arrangements	(7) Approximate cost (in dollars) of required tuition and fees. (Does not include cost of room and board, transportation, or supplies unless followed by an asterisk, in which case see school bulletin for details.): 1st Year	2d Year	3d Year
ALABAMA										
Ida V. Moffett School –Birmingham Baptist Hospitals 1128 S. 22d St. Birmingham, Ala. 35205 (Hosp.; 1915; coed)	Elizabeth Calhoun Director School of Nursing	X	X	96	X		P	952	431	
Carraway Methodist Hospital 1619 N. 25th St. Birmingham, Ala. 35234 (Hosp.; 1917; coed)	Ann Sorge Director Nursing Service & Nursing Education	X	#	96	X		P	425	238	
St. Vincent's Hospital 2701 Ninth Court St. Birmingham, Ala. 35205 (Hosp.; 1900; women only)	Mary Catherine King Director School of Nursing	X	X	116		8	P	585*	495*	475*
Holy Name of Jesus Hospital Moragne Park Gadsden, Ala. 35902 (Hosp.; 1926; coed)	Sister Joan Marie Director School of Nursing	X	#	144	X	12	P	#	#	#
Mastin School–Mobile General Hospital 2451 Fillingim St. Mobile, Ala. 36617 (Hosp.; 1907; coed)	Inez A. Perry Director School of Nursing	X	X	134	X	10	P	854*	534*	462*
Mobile Infirmary P.O. Box 4097 Mobile, Ala. 36604 (Hosp.; 1910; women only)	Hilda F. Reynolds Director School of Nursing	X	X	96	X	12	P	722*	700*	
Providence School of Nursing 156 N. Catherine St. Mobile, Ala. 36604 (Hosp.; 1902; coed)	Sister Anita Doyle Director School of Nursing	X	X	108	X		P	618	455	425
St. Margaret's Hospital 834 Adams Ave. Montgomery, Ala. 36104 (Hosp.; 1903; women only)	Sister Marilynn Director School of Nursing	X	X	116		8	P	799	773	620
Sylacauga Hospital W. Hickory St. Sylacauga, Ala. 35150 (Hosp.; 1951; women only)	Lou C. Spradley Director School of Nursing	X	#	120	X	12	P	840	240	260
Druid City Hospital 809 University Blvd. Tuscaloosa, Ala. 35401 (Hosp.; 1923; coed)	Maxine Walker Director School of Nursing	X	X	120			P	550*	170*	160*
ARIZONA										
Good Samaritan Hospital 1033 E. McDowell Rd. Phoenix, Ariz. 85006 (Hosp.; 1919; coed)	Vurlyne E. Boan Director School of Nursing	X	X	108	X		P	457	326	357
ARKANSAS										
St. Edward Mercy Hospital 1411 Rogers Ave. Fort Smith, Ark. 72901 (Hosp.; 1905; coed)	Sister Mary Euphrasia Director School of Nursing	X	X	105	X	15	#	700*	525*	340*
CALIFORNIA										
California Hospital 1414 S. Hope St. Los Angeles, Calif. 90015 (Hosp.; 1898; women only)	Barbara Jury Director School of Nursing	X	X	108	X		P	230	215	240
Los Angeles County Medical Ctr. 1200 N. State St. Los Angeles, Calif. 90033 (Hosp.; 1895; coed)	Mary O. Martinetti Director School of Nursing	X		114	X		P	440*	240*	150*

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CALIFORNIA—Continued										
Queen of Angels School of Nursing 626 N. Coronado Terr. Los Angeles, Calif. 90026 (Ind.; 1927; coed; 30 sem. coll. units)	Eva Stockonis Director School of Nursing	X	#	110	X	8 #	P	135	418	438
St. Vincent's College of Nursing 262 S. Lake St. Los Angeles, Calif. 90057 (Hosp.; 1899; women only)	Julia E. Shaughnessy Director College of Nursing	X	X	96	X		P	405	310	310
Highland School of Nursing 2701 14th Ave. Oakland, Calif. 94606 (Hosp.; 1915; coed)	Marie Ames Director Nursing & Educational Services	X		115	X	#	R	320	320	320
Kaiser Foundation School of Nursing 3451 Piedmont Ave. Oakland, Calif. 94611 (Ind.; 1947; coed)	Josephine M. Coppedge Director School of Nursing	X	X	124	X		P	1445*	1155*	900*
Providence College of Nursing 390 Central Ave. Oakland, Calif. 94609 (Ind.; 1904; women only; 1 yr. jr. coll.)	Sister Elizabeth Ann Director College of Nursing	X	X	120	X	11	P	750	350	350
Samuel Merritt Hospital 370 Hawthorne Ave. Oakland, Calif. 94609 (Hosp.; 1909; women only)	Jean Ruxton Acting Director of Nursing Education	X	X	134	X	22	P	2450*	1550*	1100*
St. Francis Memorial Hospital 900 Hyde St. San Francisco, Calif. 94109 (Hosp.; 1905; women only)	Gladys H. Neafus Director of Nursing Education	X		119	X		P	470	470	520
St. Luke's Hospital 555 San Jose Ave. San Francisco, Calif. 94110 (Hosp.; 1889; women only)	Donnelle N. Rodack Director School of Nursing	X	X	132	X		P	600*	600*	600*
San Jose Hospital 675 E. Santa Clara St. San Jose, Calif. 95114 (Hosp.; 1923; women only)	Barbara J. Schmidt Director of Education	X	X	114	X		P	#	#	#
COLORADO										
Beth-El School—Memorial Hospital 1400 E. Boulder St. Colorado Springs, Colo. (Hosp.; 1904; coed)	Gloria Haughton Director School of Nursing	X	X	108	X	9	P	571	590	590
Seton School—Penrose Hospital Colorado Springs, Colo. 80907 (Hosp.; 1959; coed)	Sister Mary Angus Director School of Nursing	X	X	108	X		P	510	464	470
Mercy Hospital 1630 Fillmore St. Denver, Colo. 80206 (Hosp.; 1902; coed)	Sister Maura Director School of Nursing	X	X	108	X	8	P	1535	555	585
Presbyterian Medical Ctr. 2025 High St. Denver, Colo. 80205 (Hosp.; 1962; coed)	Rachel Elrod Director School of Nursing	X		108		11	P	415	415	445
St. Joseph Hospital 1895 Franklin St. Denver, Colo. 80218 (Ind.; 1900; coed)	Sally Mossoni Director School of Nursing	X	X	108	X		P	1200	1200	1200

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COLORADO—Continued										
St. Luke's Hospital 601 E. 19th Ave. Denver, Colo. 80203 (Hosp.; 1892; women only)	Lillian DeYoung Director School of Nursing	X	X	106	X		P	400	470	439
CONNECTICUT										
Bridgeport Hospital 267 Grant St. Bridgeport, Conn. 06602 (Hosp.; 1884; coed)	Margaret T. Maddon Director of Nursing	X	X	134	X	12	P	878	427	352
St. Vincent's Hospital 2820 Main St. Bridgeport, Conn. 06606 (Hosp.; 1905; coed)	Sister Cecilia Director School of Nursing	X	X	120	X	13	P	545	355	540
Greenwich Hospital Perry Ridge Rd. Greenwich, Conn. 06830 (Hosp.; 1906; coed)	Catherine Mulcahy Director of Nursing	X	X	126	X	12	P	800	500	500
Hartford Hospital 80 Seymour St. Hartford, Conn. 06115 (Hosp.; 1877; coed)	Ethel A. Brooks Director School of Nursing & Nursing Service	X	X	135	X	12	P	700*	600*	600*
St. Francis Hospital 338 Asylum St. Hartford, Conn. 06103 (Hosp.; 1899; coed)	Sister Dennis Marie Director School of Nursing	X	#	120	X	12	P	640	225	225
New Britain General Hospital 100 Grand St. New Britain, Conn. 06050 (Hosp.; 1907; coed)	Eleanor Melledy Director School of Nursing	X		129	X	12	P	563	383	343
Grace-New Haven School of Nursing 25 Park St. New Haven, Conn. 06519 (Hosp.; 1895; coed)	Anna E. Ryle Director of Nursing	X	X	127		12	P	#	#	#
Hospital of St. Raphael 1450 Chapel St. New Haven, Conn. 06511 (Hosp.; 1908; coed)	Margaret King Director School of Nursing	X	X	117	X	12	P	360	360	375
Joseph Lawrence School—Lawrence & Memorial Hospitals New London, Conn. 06320 (Hosp.; 1913; coed)	Mary C. Mulvany Director of Nursing	X		130	X	8	P	607	310	310
Norwalk Hospital 24 Stevens St. Norwalk, Conn. 06852 (Hosp.; 1905; women only)	Emily M. Mugford Director School of Nursing	#	#	108	X	8	P	1215	310	175
William W. Backus Hospital 326 Washington St. Norwich, Conn. 06360 (Hosp.; 1893; women only)	Gladys M. Swaenepoel Director of Nursing	X	X	135		16	P	685*	385*	355*
Stamford Hospital Shelburne at W. Broad St. Stamford, Conn. 06902 (Hosp.; 1901; coed)	Beatrice Stanley Director Nursing Service & School of Nursing	X	X	130	X	12	P	570*	250*	250*
St. Mary's Hospital 56 Franklin St. Waterbury, Conn. 06702 (Hosp.; 1909; coed)	Sister St. Catherine Director of Nursing		X	128	X	12	R	1309*	364*	344*
Waterbury Hospital 64 Robbins St. Waterbury, Conn. 06720 (Hosp.; 1904; coed)	Charlotte C. Wright Director School of Nursing	X	X	126	X		P	775*	700*	745*

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DELAWARE										
St. Francis Hospital Clayton & 8th Sts. Wilmington, Del. 19805 (Hosp.; 1924; coed)	Sister Mary Rosa Director School of Nursing	X		108		26	P	457*	495*	250*
DISTRICT OF COLUMBIA										
Capital City School— District of Columbia General Hospital 19th & Massachusetts Ave. S.E. Washington, D. C. 20003 (Hosp.; 1877; coed)	Fredrick H. Wescoe Director of Nursing	X	X	132	X		P	748*	85*	163*
Freedmen's Hospital 6th & Bryant Sts. N.W. Washington, D. C. 20001 (Hosp.; 1894; coed)	Anna B. Coles Director of Nursing	X		124	X	17	P	825	339	105
Washington Hospital Center 100 Irving St. N.W. Washington, D. C. 20010 (Hosp.; 1889; coed)	Nan Dunn Director School of Nursing	X	X	116	X	13	P	1250*	650*	600*
FLORIDA										
St. Vincent's Hospital Barrs St. & St. Johns Ave. Jacksonville, Fla. 32203 (Hosp.; 1916; coed)	Sister Annina Director School of Nursing	X	X	114	X		R	615	401	452
Jackson Memorial Hospital 1700 N.W. 10th Ave. Miami, Fla. 33136 (Hosp.; 1920; coed)	Mary Alice Gilhofer Director School of Nursing	X	X	136	X		P	#	#	#
Orange Memorial Hospital 1416 S. Orange Ave. Orlando, Fla. 32806 (Hosp.; 1917; women only)	Virginia Albaugh Director of Nursing	X	X	124	X		P	380	150	100
Gordon Keller School— Tampa General Hospital 39 Columbia Dr. Tampa, Fla. 33606 (Hosp.; 1910; coed)	Olive Galloway Director School of Nursing	X		128	X		P	167	167	167
GEORGIA										
Crawford W. Long Memorial Hospital 543 W. Peachtree St. N.E. Atlanta, Ga. 30308 (Hosp.; 1908; women only)	Evangeline B. Lane Director Nursing Education	X		132	X		P	473	368	368
Georgia Baptist Hospital 300 Blvd. N.E. Atlanta, Ga. 30312 (Hosp.; 1901; women only)	Kathryn Ransbotham Director School of Nursing	X		144	X	12	P	750*	600*	600*
Grady Memorial Hospital 80 Butler St., S.E. Atlanta, Ga. 30303 (Hosp.; 1898; coed)	Bernice K. Dixon Director School of Nursing	X	X	144	X		P	775*	625*	325*
Piedmont Hospital 1968 Peachtree Rd. N.W. Atlanta, Ga. 30309 (Hosp.; 1905; women only)	Sarah Helen Killgore Director School of Nursing	X	X	144	X	12	P	900*	450*	450*
St. Joseph's Infirmary 265 Ivy St. N.E. Atlanta, Ga. 30303 (Hosp.; 1900; women only)	Sister Mary Kristen Director School of Nursing	X	X	128	X	25	P	817*	713*	391*
University Hospital University Pl. Augusta, Ga. 30902 (Hosp.; 1895; coed)	Shirley Mushet Acting Director School of Nursing	X	X	144	X		P	Res.: 525 Nonres.: #	375 #	330 #

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ILLINOIS										
St. Joseph's School of Nursing of Alton 915 E. 5th St. Alton, Ill. 62002 (Hosp.; 1901; coed)	Sister Virginia Director School of Nursing	X	X	108	X	8	P	475	475	490
Copley Memorial Hospital 310 Seminary Ave. Aurora, Ill. 60507 (Hosp.; 1893; coed)	Gertrude M. Bonaszak Director School of Nursing & Nursing Service	X	X	138	X	1	P	1180	450	450
Mennonite Hospital 804 N. East St. Bloomington, Ill. 61701 (Hosp.; 1919; coed)	Jacquelyn S. Kinder Director School of Nursing	X	X	120	X	16	P	352	552	253
Augustana Hospital 411 Dickens Ave. Chicago, Ill. 60614 (Hosp.; 1894; coed)	Bertha E. Klauser Director of Nursing	X	X	96	X	16	P	750*	750*	
Chicago Wesley Memorial Hospital 250 E. Superior St. Chicago, Ill. 60611 (Hosp.; 1889; coed)	Vera E. Thompson Director of Nursing	X	X	118	X		R #	711	490	444
Cook County School of Nursing 1900 W. Polk St. Chicago, Ill. 60612 (Ind.; 1929; coed)	Frances L. A. Powell Director Nursing Services & Nursing Education	X	X	144	X		R	360	360	360
Illinois Masonic Medical Ctr. 836 Wellington Ave. Chicago, Ill. 60657 (Hosp.; 1921; coed)	Trudy Klienke Director of Nursing Education	X	X	108	X	8	P	1000	600	500
James Ward Thorne School —Passavant Memorial Hospital 244 E. Pearson St. Chicago, Ill. 60611 (Hosp.; 1949; women only)	Evelyn E. Nicholson Director School of Nursing	X	X	119	X	16	P	388	635*	430
Michael Reese Hospital & Medical Center 2816 S. Ellis Ave. Chicago, Ill. 60616 (Hosp.; 1881; women only)	Carol M. Eady Director Nursing Education	X	X	123			P	485	235	280
Mt. Sinai Medical Center 2730 W. 15th Pl. Chicago, Ill. 60608 (Hosp.; 1920; coed)	Mabel Blanchard Associate Director School of Nursing	X		120			P	390	255	215
Ravenswood Hospital Medical Ctr. 1931 W. Wilson Ave. Chicago, Ill. 60640 (Hosp.; 1907; women only)	Florence A. Walewski Director of Nursing	X		120		10	P	880	475	375
St. Anne's Hospital 4950 W. Thomas St. Chicago, Ill. 60621 (Hosp.; 1913; women only)	Teresa McDermott Director Nursing Education	X	X	120	X		P	505	455	464
St. Elizabeth's Hospital of Chicago, Inc. 1431 N. Claremont Ave. Chicago, Ill. 60622 (Hosp.; 1914; coed)	Marie J. Rosch Director of Nursing	X	X	120	X	10	P	495	480	475
St. Mary of Nazareth Hospital 1127 N. Oakley Blvd. Chicago, Ill. 60622 (Hosp.; 1900; coed)	Sister M. Antonia Director School of Nursing	X		96	X		P	828*	770*	

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ILLINOIS—Continued										
South Chicago Community Hospital 2320 E. 93d St. Chicago, Ill. 60617 (Hosp.; 1900; coed)	Josephine Chan Director of Nursing		X	120	X		P	400	400	400
Decatur & Macon County Hospital 2300 N. Edward St. Decatur, Ill. 62526 (Hosp.; 1916; coed)	M. Patricia McMillan Director of Nursing Education	X	X	106	X	8	P	1022	645	320
Evanston Hospital 2650 Ridge Ave. Evanston, Ill. 60201 (Hosp.; 1898; coed)	Dorothy A. Johnson Chairman Dept. of Nursing	X		120			P	740	740	658
St. Francis Hospital 319 Ridge Ave. Evanston, Ill. 60202 (Hosp.; 1919; coed)	Sister M. Irene Director of Nursing Education	X	X	86		8	P	736	690	
Little Company of Mary Hospital 2800 W. 95th St. Evergreen Park, Ill. 60642 (Hosp.; 1930; women only)	Sister M. Michael Director School of Nursing	X	X	125	X		P	400	450	225
Galesburg Cottage Hospital 674 N. Seminary St. Galesburg, Ill. 61401 (Hosp.; 1895; coed)	Irene B. Donaldson Director School of Nursing	X	#	120	X	16	P	647*	702*	252*
Passavant Memorial Area Hospital 1600 W. Walnut St. Jacksonville, Ill. 62650 (Hosp.; 1902; women only)	Gertrude O. Hohmann Director of Nursing Education	X	X	129	X	12	P	700	400	320
St. Joseph Hospital 333 N. Madison St. Joliet, Ill. 60435 (Hosp.; 1920; coed)	Margaret Brophy Director School of Nursing	X		132	X	8		735	520	545
Lutheran Hospital 555 6th St. Moline, Ill. 61265 (Hosp.; 1916; coed)	Harriet S. Olson Director of Nursing Education	X	X	98	X	8	P	1010	1025	
Moline Public Hospital 635 10th Ave. Moline, Ill. 61265 (Hosp.; 1898; women only)	Elizabeth H. Wright Director of Nursing Education		X	128	X	8	P	800*	500*	400*
Evangelical School–Christ Community Hospital 4440 W. 95th St. Oak Lawn, Ill. 60453 (Ind.; 1911; coed)	Rachel A. Christie Director School of Nursing	X	X	120	X	8	P	900*	700*	500*
Oak Park Hospital 500 S. Maple Ave. Oak Park, Ill. 60304 (Hosp.; 1906; coed)	Sister St. Giselle Director School of Nursing	X	X	123	X	16	P	755	555	635
West Suburban Hospital 518 N. Austin Blvd. Oak Park, Ill. 60302 (Hosp.; 1914; women only)	Sharon E. Bolin Director School of Nursing	X	X	120	#		R #	1350*	675*	675*
St. Francis Hospital 211 Greenleaf St. Peoria, Ill. 61603 (Hosp.; 1915; coed)	Sister M. Benedict Director School of Nursing	X	X	120	X		P	242	242	281
Blessing Hospital 1005 Broadway Quincy, Ill. 62301 (Hosp.; 1891; coed)	Lauretta M. Eno Director of Nursing	X	X	120	X	12	P	626	214	213

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ILLINOIS—Continued										
St. Anthony's Hospital 767 30th St. Rock Island, Ill. 61201 (Hosp.; 1899; coed)	Sister M. Jude Director School of Nursing	X	X	93	X	8	P	620	660	
Rockford Memorial School of Nursing 2400 Rockton Ave. Rockford, Ill. 61103 (Hosp.; 1887; coed)	Gilda Bevilacqua Director Nursing Education	X	X	#	X	20	P	1025	489	409
Memorial Hospital 200 W. Dodge St. Springfield, Ill. 62701 (Hosp.; 1897; coed)	Evelyn Smith Director School of Nursing	X	X	132	X	24	P	1040*	505*	500*
St. John's Hospital 821 E. Mason St. Springfield, Ill. 62701 (Hosp.; 1886; coed)	Sister M. Francis Director School of Nursing	X		138	X		P	815	525	550
INDIANA										
Deaconess Hospital 600 Edgar St. Evansville, Ind. 47710 (Hosp.; 1896; coed)	Irma M. Bolte Director School of Nursing	X	X	128	X	12	P	624	287	188
Lutheran Hospital 535 Home Ave. Fort Wayne, Ind. 46807 (Hosp.; 1904; coed)	Virginia Williamson Director School of Nursing	X	X	132	X	9	#	795	260	250
Parkview-Methodist School of Nursing 2200 Randalia Dr. Fort Wayne, Ind. 46805 (Hosp.; 1902; coed)	Dorothy Craig Director of Nursing Education	X	X	108	X	12	P	530	230	140
St. Joseph's Hospital 735 W. Berry St. Fort Wayne, Ind. 46804 (Hosp.; 1918; coed)	Sister M. Theodorita Director School of Nursing	X	X	120		12	P	647	197	199
Marion County General Hospital 960 Locke St. Indianapolis, Ind. 46207 (Hosp.; 1883; coed)	Thelma L. Richardson Director of Nursing Service & Education	X		133	X		P	614	200	200
St. Elizabeth School of Nursing 1508 Tippecanoe St. Lafayette, Ind. 47904 (Hosp.; 1897; coed)	Sister M. Florianne Director School of Nursing	X	X	133	X	12	P	563	150	185
Holy Cross School of Nursing 410 N. Notre Dame Ave. South Bend, Ind. 46622 (Hosp.; 1950; coed)	Sister Bartholomew Director School of Nursing	X		130	X	8	R	785	500	500
Memorial Hospital of South Bend 615 N. Michigan South Bend, Ind. 46601 (Hosp.; 1894; coed)	Florence G. Young Director School of Nursing & Nursing Service	X	X	133	X	13	P #	900*	350*	250*
St. Anthony Hospital 1021 S. 6th St. Terre Haute, Ind. 47807 (Hosp.; 1918; coed)	Sister M. Alvera Director School of Nursing	X	X	133	X	12	P	715	414	323
IOWA										
Burlington Hospital 602 N. 3d St. Burlington, Iowa 52601 (Hosp.; 1897; coed)	Mona Jackson Director of Nursing	X	X	120	X	10	P	977*	560*	585*

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IOWA—Continued										
Mercy Hospital 610 8th St. S.E. Cedar Rapids, Iowa 52401 (Hosp.; 1904; women only)	Sister James Marie Director School of Nursing	X		118	X	5	P	552	302	332
St. Luke's Methodist Hosp. 1026 A Ave. N.E. Cedar Rapids, Iowa 52402 (Hosp.; 1890; women only)	Director School of Nursing		X	133	X		R	2075*	297*	292*
Jennie Edmundson Memorial Hospital Oak & Pierce Sts. Council Bluffs, Iowa 51501 (Hosp.; 1887; coed)	Margaret H. Wheeler Director of Nursing Education	X	X	96	X		P	1404*	848*	858*
St. Luke's Hospital 1227 E. Rusholme St. Davenport, Iowa 52803 (Hosp.; 1895; coed)	Mary E. Meehan Director School of Nursing	X	X	97	X	8	#	1180	675	
Broadlawns Polk County Hospital 18th & Hickman Rd. Des Moines, Iowa 50314 (Hosp.; 1921; coed)	Lorraine Piering Director of Nursing Education	X	X	116	X	8	P	827	212	217
Iowa Lutheran Hospital 716 Parnell Ave. Des Moines, Iowa 50316 (Hosp.; 1914; coed)	Nellie Osterlund Director of Nursing	X	X	140	X		P	1384*	464*	466*
Iowa Methodist School of Nursing 1117 Pleasant St. Des Moines, Iowa 50309 (Hosp.; 1902; coed)	Edwin A. Smith Director of Nursing Education	X	X	132	X	12	P	2153	350	335
Mercy Hospital 1165 5th Ave. Des Moines, Iowa 50314 (Hosp.; 1899; coed)	Sister Mary Gervase Director School of Nursing	X	X	108	X	11	P	670	555	470
Finley Hospital 1480 Allison Pl. Dubuque, Iowa 52001 (Hosp.: 1897; coed)	Marian L. Herring Director School of Nursing	X	X	129	X	20	#	1430*	365*	386*
Mercy Medical Center 190 James St. Dubuque, Iowa 52001 (Hosp.; 1900; coed)	Sister Mary Bernice Director School of Nursing	X	#	108	X		P	1070	400	400
Mercy Hospital 214 N. Van Buren Iowa City, Iowa 52240 (Hosp.: 1914; coed)	Sister M. Ramon Director School of Nursing	X		117		8		#	#	#
Evangelical Hospital 3 S. 4th Ave. Marshalltown, Iowa 50158 (Hosp.; 1914; coed)	Meridean Maas Director of Nursing	X	X	120	X	8	P	652	386	422
St. Joseph Mercy School of Nursing 2217 Court St. Sioux City, Iowa 51104 (Ind.; 1900; coed)	Sister M. Maurice Sheehy Director Nursing Education	X	X	116	X	8	P	964	753	577
St. Vincent Hospital 621 Jennings St. Sioux City, Iowa 51105 (Hosp.; 1910; coed)	Rev. John McCluhan Director of Nursing	X	X	120	X	10	P	1104	405	450
Lutheran School—Allen Memorial Hospital 1825 Logan Ave. Waterloo, Iowa 50703 (Hosp.; 1942; coed)	Virginia C. Turner Director Nursing Education	X	X	120	X	8	P	602	240	240

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KANSAS										
Newman Hospital W. 12th Ave. Emporia, Kans. 66801 (Hosp.; 1922; coed)	Marguerite Coleman Director of Nursing Education	X	X	140	X	10	R	397	190	180
Mercy School of Nursing 810 Burke St. Fort Scott, Kans. 66701 (Ind.; 1915; coed)	Sister M. Julita Director School of Nursing	X	X	121	X	24	#	585	305	210
Grace Hospital 815 N. Walnut St. Hutchinson, Kans. 67501 (Hosp.; 1915; coed)	Maybelle Ruse Director School of Nursing	X	X	80	X		R	378	370	
Bethany Hospital 51 N. 12th St. Kansas City, Kans. 66102 (Hosp.; 1892; coed)	Ruby M. Harris Director of Nursing	X	X	118	X	10	P	#	291	291
St. Margaret Hospital 759 Vermont Ave. Kansas City, Kans. 66101 (Hosp.; 1929; coed)	Sister M. Philomene Director School of Nursing	X	X	115	X	12	P	370	170	185
Sisters of Charity School of Nursing at Providence Hospital 20th & Tauromee Kansas City, Kans. 66102 (Hosp.; 1920; women only)	Sister Gabriella Director of Nursing		X	108	X	24	R	460	185	252
Bethel Deaconess Hospital 411 S.E. 2d St. Newton, Kans. 67114 (Hosp.; 1908; women only)	Ruth Specht Director of Nursing			120	X	24	R	960	975	300
Mt. Carmel Hospital 30th & Mt. Carmel Rd. Pittsburg, Kans. 66762 (Hosp.; 1906; coed)	Cecilia G. Waggoner Director School of Nursing	X	X	118	X	23	P	#	265	335
Asbury Hospital 400 S. Santa Fe Salina, Kans. 67401 (Hosp.; 1921; women only)	Esther P. Aspelin Director School of Nursing	X	X	132	X	24	P	1275*	687*	357*
Stormont-Vail School of Nursing 10th & Washburn Sts. Topeka, Kans. 66606 (Hosp.; 1949; coed)	Sarah W. Belcher Director School of Nursing	X	X	117	X	10	P	500	200	200
St. Francis Hospital 512 E. 9th St. Wichita, Kans. 67214 (Hosp.; 1917; coed)	Sister M. Basilla Director School of Nursing	X	X	124	X		P	#	205	235
Wesley Medical Center 550 Hillside Ave. Wichita, Kans. 67214 (Hosp.; 1912; coed; 1 yr. coll.)	Ilse C. Steg Director School of Nursing	X	X	90	#		P	674*	683*	
Wichita-St. Joseph School of Nursing 1121 S. Clifton Wichita, Kans. 67218 (Hosp.; 1896; coed)	Sister M. Valeria Klenke Director School of Nursing	X	X	123	X		P	#	140*	140*
William Newton Memorial Hospital 1435 Lynn St. Winfield, Kans. 67156 (Hosp.; 1928; coed; 1 yr. coll.)	Madeline Kingerski Director School of Nursing	X	X	90	X	24	P	1070*	628*	

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KENTUCKY										
King's Daughters' Hospital 2201 Lexington Ave. Ashland, Ky. 41101 (Hosp.; 1953; women only)	Bonnie Douglas Director School of Nursing	X		88	X	9	P	1500*	1500*	
Good Samaritan Hospital 310 S. Limestone St. Lexington, Ky. 40508 (Hosp.; 1889; coed)	Nancy P. Blakeman Director of Nursing	X	X	126	X		P	1201*	345*	436*
Kentucky Baptist Hospital 810 Barret Ave. Louisville, Ky. 40204 (Hosp.; 1924; coed)	Doris Zeillmann Director of Nursing	X	X	130	X		P	1212*	900*	685*
Norton Memorial Infirmary 231 W. Oak St. Louisville, Ky. 40203 (Hosp.; 1886; women only)	Mildred C. Metz Director School of Nursing	X		82	X		P	930	680	
St. Joseph Infirmary 735 Eastern Parkway Louisville, Ky. 40217 (Hosp.; 1919; coed)	Sister Cecilia Ann Director School of Nursing	X		92	X		P	900	600	
LOUISIANA										
Our Lady of the Loke Hospital 1600 N. 3rd St. Baton Rouge, Lo. 70802 (Hosp.; 1923; women only)	Bertha Mae Anders Director School of Nursing	X	X	108	X		P	197	140	165
Charity Hospital 450 S. Claiborne Ave. New Orleans, La. 70112 (Hosp.; 1894; coed)	Sister Blanche McDonnell Director School of Nursing	X	X	120			P	Res.: 74 Nonres.: 274 #	56 156 #	57 157 #
Hotel Dieu School of Nursing P.O. Box 61262 New Orleans, La. 70160 (Ind.; 1899; women only)	Sister Mary Agnes Tehan Director School of Nursing	X		96	X		P	800	600	450
Mather School-Southern Baptist Hospital 2700 Napoleon Ave. New Orleans, La. 70115 (Hosp.: 1925; coed)	Shirley Morrison Director School of Nursing	X		118	X	9	P	945*	250*	450*
Touro Infirmary 1400 Foucher St. New Orleans, La. 70115 (Hosp.; 1896; coed)	Sue Michalik Director Nursing Education	X	X	128	X		P	385	370	130
MAINE										
Eastern Maine General Hospital 489 State St. Bangor, Maine 04401 (Hosp.; 1892; coed)	Irene Shannon Director School of Nursing	X	X	121	X	22	P	610*	687*	335*
Central Maine General Hospital 300 Main St. Lewiston, Maine 04240 (Hosp.; 1891; coed)	Mary Ann Burn Director of Nursing	X	X	132		10	P	435	313	229
St. Mary's General Hospital 45 Golder St. Lewiston, Maine 04240 (Hosp.; 1908; coed)	Sister Laurette Berube Director School of Nursing	X	X	132		22	P	793*	675*	407*
Mercy Hospital 144 State St. Portland, Maine 04101 (Hosp.; 1920; coed)	Sister Mary Consuela Director of Nursing	X	X	139	X	13	P	1085*	795*	440*

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MARYLAND										
Church Home and Hospital Broadway & Fairmount Ave. Baltimore, Md. 21231 (Hosp.; 1894; coed)	George W. Mason Director of Nursing	X	X	130	X	13	P	660*	450*	450*
Helene Fuld School of Nursing of Provident Hospital 1514 Division St. Baltimore, Md. 21217 (Hosp.; 1895; coed)	Doris H. Reese Director Nursing Service & Nursing Education	X	X	116	X	26	P	111	172	117
Johns Hopkins Hospital 601 N. Broadway Baltimore, Md. 21205 (Hosp.; 1889; coed)	Mary S. Price Director School of Nursing & Nursing Service	X		130	X		P	1050	400	300
Lutheran Hospital of Maryland 730 Ashburton St. Baltimore, Md. 21216 (Hosp.; 1923; coed)	Thomas James Daley Director School of Nursing	X		112	X	14	P	250	250	250
Maryland General Hospital 827 Linden Ave. Baltimore, Md. 21201 (Hosp.; 1891; women only)	Sally Jane Niedhammer Director School of Nursing & Nursing Service		X	133	X	24	#	440*	310*	155*
Mercy Hospital 301 St. Paul Pl. Baltimore, Md. 21202 (Hosp.; 1899; women only)	Sister Mary Naomi Zerhusen Director of Nursing	#	#	135	X	16	P	505	347	322
St. Agnes Hospital Caton & Wilkens Aves. Baltimore, Md. 21229 (Hosp.; 1895; women only)	Sister Margaret Ann Director School of Nursing	X		84	X		P	455	290	
Sinai Hospital of Baltimore, Inc. Belvedere Ave. at Greenspring Baltimore, Md. 21215 (Hosp.; 1906; coed)	Carol L. Cook Director School of Nursing	X	X	134	X		P	995*	250*	250*
Union Memorial Hospital 33d & Calvert Sts. Baltimore, Md. 21218 (Hosp.; 1890; coed)	Frances D. Tompkins Director of Nursing	X	X	133	X	13	P	475	475	475
Memorial Hospital South Washington St. Easton, Md. 21601 (Hosp.; 1907; coed)	Margaret M. Hooke Director School of Nursing & Nursing Service	X		130		12	P	545	530	565
Peninsula General Hospital West Locust St. Salisbury, Md. 21801 (Hosp.; 1905; coed)	Ruth E. Hyde Director School of Nursing	X	X	90	X	12	P	700	700	
St. Joseph Hospital 7260 York Rd. Towson, Md. 21204 (Hosp.: 1901; coed)	Sister Mary Ethel Director School of Nursing	X	X	135		24	P	450	304	276
MASSACHUSETTS										
Beverly Hospital Herrick & Heather Sts. Beverly, Mass. 01915 (Hosp.; 1893; coed)	Alice W. Schindel Director School of Nursing	X	X	130		24	P	400	525	395
Boston City Hospital School of Nursing, Dept. of Health and Hospitals 818 Harrison Ave. Boston, Mass. 02118 (City; 1878; coed)	Margaret B. Welch Director School of Nursing	X		144		12	P	440*	30*	30*

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MASSACHUSETTS—Continued										
Catherine Labouré School of Nursing 2100 Dorchester Ave. Boston, Mass. 02124 (Ind.; 1951; coed)	Sister Angelica Ahl Director School of Nursing	X	X	122		13	P	525	505	580
Children's Hospital School of Nursing, Children's Medical Center 300 Longwood Ave. Boston, Mass. 02115 (Hosp ; 1889; women only)	Muriel B. Vesey Director School of Nursing & Nursing Service	X	X	143	X	24	P	1225	450	480
Faulkner Hospital 1153 Centre St. Boston, Mass. 02130 (Hosp ; 1900; coed)	Margarita Farrington Director School of Nursing & Nursing Service	X	X	129		36	R	1520*	510*	250*
Massachusetts General Hospital Fruit St. Boston, Mass. 02114 (Hosp.; 1873; coed)	Natalie Petzold Director School of Nursing	X	X	131 ‡			P	630	610	275
New England Baptist Hospital 91 Parker Hill Ave. Boston, Mass. 02120 (Hosp.; 1896, women only)	Elizabeth H. Gould Director School of Nursing	X	X	144		36	P	790	607	526
New England Deaconess Hospital 185 Pilgrim Rd. Boston, Mass. 02215 (Hosp.; 1896, women only)	Ellen D. Howland Director of Nursing	X	X	144	X	36	P	1050*	1000*	775*
Peter Bent Brigham Hospital 721 Huntington Ave. Boston, Mass. 02115 (Hosp.; 1913; coed)	Marion L. Metcalf Director School of Nursing	X	X	115		36	P	703	528	463
St. Elizabeth's Hospital 235 Washington St. Brighton, Mass. 02135 (Hosp., 1895; coed)	Anne E. McCarthy Director School of Nursing			125		12	P	455	320	300
Brockton Hospital 680 Centre St. Brockton, Mass. 02402 (Hosp.; 1897; coed)	Elsie M. Burgeson Director of Nursing	X	X	132		24	R	800*	700*	500*
Mt. Auburn Hospital 330 Mt. Auburn St. Cambridge, Mass. 02138 (Hosp ; 1908; ‡)	Mary Ellen Thompson Director of Nursing	X	X	125		12	P	900	430	230
Whidden Memorial Hospital 103 Garland St. Everett, Mass. 02149 (Hosp.; 1896; women only)	Mary M. Kennedy Director School of Nursing	X	X	133		12	P	680	555	480
St. Anne's Hospital 243 Forest St. Fall River, Mass. 02721 (Hosp.; 1927; women only)	Sister Madeleine Clemence Director School of Nursing			142	X	12	P	190	55	55
Union Hospital Highland Ave. at New Boston Rd Fall River, Mass. 02720 (Hosp.; 1900; coed)	Eleanor E. Presbrey Director Nursing & School of Nursing	X	X	131	X	12	P #	210	110	110
Burbank Hospital Nichols Rd. Fitchburg, Mass. 01420 (Hosp.; 1894; coed)	Arline M. Webster Director School of Nursing	X	X	114	X	10	P	722	377	367

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MASSACHUSETTS—Continued										
Framingham Union Hospital 25 Evergreen St. Framingham, Mass. 01701 (Hosp.; 1893; coed)	Eileen R. White Director School of Nursing	X	X	142		24	P	840*	815*	690*
Holyoke Hospital 575 Beech St. Holyoke, Mass. 01040 (Hosp ; 1893; women only)	Marjorie Heywood Director School of Nursing	X	X	120		12	P	750*	750*	750*
Lawrence General Hospital 1 Garden St. Lawrence, Mass. 01842 (Hosp.; 1882; coed)	Mary G. Lebreck Director School of Nursing	X	X	120	X	10	P	500	500	500
Leominster Hospital Hospital Rd. Leominster, Mass. 01453 (Hosp.; 1912; coed)	Jean M. Grady Director School of Nursing	X	X	138	X	24	#	245	240	365
Lowell General Hospital Varnum Ave. Lowell, Mass. 01854 (Hosp.; 1895; women only)	Sarah Thompson Acting Director School of Nursing	X		130	X	24	#	420	380	165
Lynn Hospital 212 Boston St. Lynn, Mass. 01904 (Hosp.; 1883; coed)	Rita C. Coll Director Dept. of Nursing			144		12	#	850	425	425
Malden Hospital Hospital Rd. Malden, Mass. 02148 (Hosp.; 1892; women only)	Ellen Kennedy Director School of Nursing	X	X	131		12	P	565*	435*	415*
Lawrence Memorial Hospital of Medford 170 Governors Ave. Medford, Mass. 02155 (Hosp ; 1924; coed)	Mary D. Brown Director Nursing Education	X	X	136		12	P	970*	600*	530*
Melrose-Wakefield Hospital 585 Lebanon St. Melrose, Mass. 02176 (Hosp.; 1894; women only)	Jane M. Bain Director School of Nursing	X	X	131		24	P	800*	700*	575*
St. Luke's Hospital 101 Page St. New Bedford, Mass. 02740 (Hosp.; 1884; coed)	Livia R. Duhaime Director School of Nursing	X	X	133	X	12	P	205	100	120
Newton-Wellesley Hospital 2014 Washington St. Newton Lower Falls, Mass. (Hosp.; 1888; women only)	Myrtice L. Fuller Director of Nursing	X	X	135		24	P	535*	570*	428*
St. Luke's School of Nursing of Berkshire Medical Ctr. 333 East St. Pittsfield, Mass. 01201 (Hosp.; 1916; coed)	Sister Mary Angelorum Director School of Nursing	X	X	135	X	24	P	1050	405	350
Quincy City Hospital 114 Whitwell St. Quincy, Mass. 02169 (Hosp.; 1890; coed)	Frances LaMontagne Director of Nursing	X	X	134	X	12	P	530*	378*	340*
Salem Hospital 81 Highland Ave. Salem, Mass. 01970 (Hosp.; 1879; women only)	Margaret E. LeTourneau Director of Nursing	X	X	130	X		P	465	425	475
Mercy Hospital 233 Carew St. Springfield, Mass. 01104 (Hosp.; 1900; women only)	Sister Mary Vinceriti Director School of Nursing		X	136		12	R	725	272	303
Springfield Hospital 759 Chestnut St. Springfield, Mass. 01107 (Hosp.; 1892; coed)	Jeanne S. Murphy Assistant Executive Director Division of Nursing	✓	X	128	X	12	P	682	375	270

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MASSACHUSETTS—Continued										
Memorial Hospital 119 Belmont St. Worcester, Mass. 01605 (Hosp.; 1889; women only)	Phyllis A. Olson Director of Nursing	X	X	126	X	10	P	885*	100	100
St. Vincent Hospital 25 Winthrop St. Worcester, Mass. 01604 (Hosp.; 1900; coed)	Sister Mary Justin Associate Director School of Nursing		X	135	X	12	‡	920*	245*	175*
Worcester City Hospital 26 Queen St. Worcester, Mass. 01610 (Hosp.; 1883; coed)	Phyllis A. Migliozzi Director School of Nursing	X	X	108		12	#	250	150	100
Worcester Hahnemann Hospital 281 Lincoln St. Worcester, Mass. 01605 (Hosp.; 1900; women only)	Mary L. Lovering Director School of Nursing	X	X	136		24	P	275*	250*	125*
MICHIGAN										
Grace Hospital 4160 John R St. Detroit, Mich. 48201 (Hosp.; 1888; coed)	LaVaughn Sharp Director School of Nursing	X	X	136	X	24	P	1000*	150*	150*
Harper Hospital 3825 Brush St. Detroit, Mich. 48201 (Hosp.; 1883; women only)	Muriel F. Pearse Director Depts. of Nursing & Nursing Ed.	X	X	96		8	P	650*	650*	
Henry Ford Hospital 2799 W. Grand Blvd. Detroit, Mich. 48202 (Hosp.; 1925; women only)	Cleo I. Stewart Assistant Director School of Nursing	X		124		8	P	450	350	350
Mercy School of Nursing of Detroit 2242 E. Grand Blvd. Detroit, Mich. 48211 (Ind.; 1934; coed)	Mildred Lesinski Executive Director School of Nursing	X		88		8	P	525	485	
Hurley Hospital 701 W. 8th Ave. Flint, Mich. 48502 (Hosp.; 1909; coed)	Lois Horning Assistant Director School of Nursing	X	X	126	X		R	459*	145*	145*
St. Joseph School of Nursing 202 Kensington Flint, Mich. 48502 (Hosp.; 1950; women only)	Sister Frances Marie Director School of Nursing	X	X	112	X	10	P	490	364	426
Butterworth Hospital 100 Michigan N.E. Grand Rapids, Mich. 49503 (Hosp.; 1890; coed)	Betty June Kiley Director School of Nursing	X	X	120	X		P	589	340	340
Mercy Central School of Nursing 220 Cherry St. S.E. Grand Rapids, Mich. 49503 (Ind.; 1935; coed)	Gertrude E. Nathe Director School of Nursing	X	#	94	X	8	P	805	715	
St. Joseph's Hospital 200-212 Michigan Ave. Hancock, Mich. 49930 (Hosp.; 1920; women only)	Sister John Kenneth Director School of Nursing	X		108	X	24	P	427	399	245
Borgess Hospital 1521 Gull Rd. Kalamazoo, Mich. 49001 (Hosp.; 1897; women only)	Sister M. Carolita Director School of Nursing	X	X	108	X	9	P	700	200	200
Bronson Methodist Hospital 252 E. Lovell St. Kalamazoo, Mich. 49006 (Hosp.; 1904; women only)	Helen E. Weber Director School of Nursing	X		126	X		R #	1100*	360*	300*

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MICHIGAN—Continued										
St. Luke's Hospital 515 W. College Ave. Marquette, Mich. 49855 (Hosp.; 1898; coed)	Jane F. Mahowald Director School of Nursing	X	X	130	X	20	P	650	650	650
Hackley Hospital 1700 Clinton St. Muskegon, Mich. 49443 (Hosp.; 1905; coed)	Elizabeth Bohn Director of Nursing Education	X	X	#	X		P	#	#	#
St. Mary's Hospital 830 S. Jefferson Ave. Saginaw, Mich. 48601 (Hosp.; 1890; coed)	Adelaide Fitak Director School of Nursing	X	X	85			P	435	435	
Providence Hospital 16001 Nine Mile Rd. Southfield, Mich. 48075 (Hosp.; 1910; coed)	Sister Catherine Director School of Nursing	X	X	80			P	500	500	
MINNESOTA										
St. Luke's Hospital 915 E. 1st St. Duluth, Minn. 55805 (Hosp.; 1889; coed)	Mary E. Blair Director of Nursing	X	X	126	X	12	#	1180*	720*	620*
Abbott Hospital 110 E. 18th St. Minneapolis, Minn. 55403 (Hosp.; 1902; coed)	Martha Schelling Director School of Nursing	X	X	108			P	750	450	450
Fairview Hospital 2312 S. 6th St. Minneapolis, Minn. 55406 (Hosp.; 1916; women only)	Harriet R. Bestul Director School of Nursing	X	X	105	X		#	995*	665*	650*
Hennepin County General Hospital 5th & Portland, S. Minneapolis, Minn. 55415 (Hosp.; 1947; coed)	Emelie Maadanz Director of Nursing Education	X	X	103	X		P	611	363	429
Lutheran Deaconess Hospital 2315 14th Ave. S. Minneapolis, Minn. 55404 (Hosp.; 1916; women only)	Clara Johanson Director School of Nursing	X	X	105	X	12	#	795	600	635
Methodist Hospital 6500 Excelsior Blvd. Minneapolis, Minn. 55426 (Hosp.; 1961; coed)	H. Joan Barber Director School of Nursing	X	X	111	X	12	P	730*	530	540
Northwestern Hospital 810 E. 27th St. Minneapolis, Minn. 55407 (Hosp.; 1883; women only)	Virginia M. Paulson Director of Nursing	X	X	136		8	P	980	600	495
St. Barnabas Hospital 620 10th Ave. S. Minneapolis, Minn. 55415 (Hosp.; 1894; coed)	Ruth D. Wese Director School of Nursing	X	X	129		10	P	760	440	330
Swedish Hospital 914 S. 8th St. Minneapolis, Minn. 55404 (Hosp.; 1899; women only)	Elsie Norman Director School of Nursing	X		122	X	10	P	1300	300	238
St. Cloud School of Nursing 13th St. & 6th Ave. N. St. Cloud, Minn. 56301 (Hosp.; 1908; coed)	Sister Mary Jude Director School of Nursing	X	X	108		12	R	895	660	680
Arthur B. Ancker Memorial School–St. Paul–Ramsey Hospital 640 Jackson St. St. Paul, Minn. 55101 (Hosp.; 1891; coed)	Minna Moehring Director of Nursing	X	X	#		5	R	1100*	450*	450*

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MINNESOTA—Continued										
Mounds-Midway School of Nursing 1700 University Ave. St. Paul, Minn. 55104 (Hosp.; 1907; women only)	Jean Miller Director School of Nursing	X	X	108		6	P	520	520	520
MISSISSIPPI										
St. Dominic—Jackson Memorial Hospital 969 Lakeland Dr. Jackson, Miss. 39216 (Hosp.; 1949; coed)	Sister Maura Director School of Nursing	X	X	132	#	12	P	305*	215*	215*
MISSOURI										
Research Hospital ond Medical Center Meyer Blvd. & Prospect Ave. Kansas City, Mo. 64132 (Hosp.; 1905; coed)	Teresa Mitchell Director School of Nursing	X	X	132	X	12	P	Res.: 375 Nonres.: 875	400	350
St. Luke's Hospitol 4426 Wornall Rd. Kansos City, Mo. 64111 (Hosp.; 1903; coed)	Peggy J. Windes Director of Nursing Educotion	X	X	144			P	640	340	340
St. Mary's Hospital 2840 Baltimore Ave. Kansas City, Mo. 64108 (Hosp.; 1916; coed)	Sister M. Angeline Director School of Nursing	X	X	141	X		P	611*	260*	225*
Trinity Lutheran Hospital 31st & Wyandotte Sts. Kansas City, Mo. 64108 (Hosp.; 1906; coed)	Mary Lou Taylor Director School of Nursing	X	X	118	X	16	P	City Res.: 200 State Res.: 589 Nonres.: 950	149	115
Methodist Hospital ond Medical Center 8th & Faraon Sts. St. Joseph, Mo. 64501 (Hosp.; 1890; women only)	Verena H. Edmunds Director of Nursing			144	X		P	495	219	216
Barnes Hospital 416 S. Kingshighway St. Louis, Mo. 63110 (Hosp.; 1955; coed)	Helen M. McMurtry Associate Director Nursing Education	X	X	133	X		P	770*	500*	500*
Deaconess Hospital 6150 Oakland Ave. St. Louis, Mo. 63139 (Hosp.; 1889; coed)	Sister Olivia Drusch Director of Nursing	X		142	X	12	P	700*	450*	350*
DePaul Hospital 5050 Highland Ave. St. Louis, Mo. 63113 (Hosp.; 1894; women only)	Clotilde J. Pottebaum Director School of Nursing	X	X	108	X		P	500	500	500
Jewish Hospital 306 S. Kingshighway St. Louis, Mo. 63110 (Hosp.; 1902; coed)	Margaret Loh Director of Nursing	X	X	108	X		P	800	400	200
Lutheran Hospital 2639 Miami St. St. Louis, Mo. 63118 (Hosp.; 1898; coed)	Grace Lieberstein Director of Nursing	X	X	144	X	12	#	930*	280*	280*
Missouri Baptist Hospital 3015 N. Ballas Rd. St. Louis, Mo. 63131 (Hosp.; 1895; coed)	Ferne Boehmer Director School of Nursing	X	X	108	X		P	700	400	430
St. Luke's Hospital 5535 Delmar Blvd. St. Louis, Mo. 63112 (Hosp.; 1889; women only)	Ruth L. Lanfersieck Director of Nursing	X	X	141	X	12	#	520	330	330

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MISSOURI—Continued										
St. John's Hospital 1930 S. National Ave. Springfield, Mo. 65804 (Hosp.; 1907; coed)	Sister M. Sharon Schmitz Director School of Nursing	X	X	128	X		P	500	500*	300*
MONTANA										
St. Vincent's School of Nursing Marillac Hall Billings, Mont. 59101 (Ind.; 1962; coed)	Sister Mary Vianney Director School of Nursing	X	X	104	X	12	#	690	690	690
St. James Community School of Nursing Butte, Mont. 59701 (Ind.; 1962; coed)	Sister Mary Jerome Director School of Nursing	X		104	X	12	#	1610	512	620
St. Patrick School of Nursing 500 W. Pine St. Missoula, Mont. 59801 (Hosp.; 1906; coed)	Phyllis M. McDonald Director School of Nursing	X	X	130	X	10	P	594	435	351
NEBRASKA										
St. Francis School of Nursing 1405 W. Koenig St. Grand Island, Nebr. 68801 (Hosp.; 1920; women only)	Sister M. Martha Director of Nursing	X	X	130	X	10	P	485	665	482
Mary Lanning Memorial Hospital 715 N. St. Joseph Ave. Hastings, Nebr. 68901 (Hosp.; 1915; coed)	Daphne Weston Director of Nursing Education	X	X	144	X	26		1414	717	160
Bryan Memorial Hospital 4848 Sumner St. Lincoln, Nebr. 68506 (Hosp.; 1926; coed)	Margaret Pavelka Director of Nursing	X	X	144	X	26	P	1925*	700*	350*
Lincoln General Hospital 2440 St. Mary's Ave. Lincoln, Nebr. 68502 (Hosp.; 1925; coed)	Phyllis T. Adkisson Director of Nursing Education	X		144	X	25		1600*	750*	550*
St. Elizabeth School of Nursing 2205 S. 11th St. Lincoln, Nebr. 68502 (Hosp.; 1918; coed)	Sister M. Gerharda Director School of Nursing	X	X	144	X	10	R #	750	550	450
Creighton Memorial—St. Joseph's Hospital 921 Dorcas St. Omaha, Nebr. 68108 (Hosp.; 1897; coed)	Sister M. Louis Director School of Nursing	X	X	124	X		P	714	482	371
Immanuel Hospital 3483 Larimore Omaha, Nebr. 68111 (Ind.; 1922; women only)	Kathleen Cheney Director of Nursing Education	X		144	X	13	P	600	375	300
Nebraska Methodist Hospital 8303 Dodge St. Omaha, Nebr. 68114 (Hosp.; 1891; coed)	Edna A. Fagan Assistant Administrator & Director of Nursing	X	X	133	X		P	1594*	660*	680*
West Nebraska General Hospital 1801 Broadway Scottsbluff, Nebr. 69361 (Hosp.; 1925; coed)	Virginia Miller Director of Nursing Education	X	X	144	X	25	P	605	330	460
NEW HAMPSHIRE										
Concord Hospital 250 Pleasant St. Concord, N. H. 03301 (Hosp.; 1946; coed)	Kathleen C. Yeaple Director School of Nursing	X	X	136		24	P	595	560	440

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NEW HAMPSHIRE—Continued										
Mary Hitchcock Memorial Hospital 2 Maynard St. Hanover, N. H. 03755 (Hosp.; 1893; coed)	Marion E. McGrath Acting Director Nursing Education	X	X	120		12	P	600	600	600
Elliot Community Hospital 305 Main St. Keene, N. H. 03431 (Hosp.; 1893; coed)	Marcella McCarty Director School of Nursing	X	X	116	X	30	P	695	685	470
NEW JERSEY										
Clara Maass Memorial Hospital 1A Franklin Ave. Belleville, N. J. 07109 (Hosp.; 1895; women only)	Evelyn H. Hamilton Director School of Nursing	X	X	122	X	10	#	1805*	710*	#
Helene Fuld School of Nursing at West Jersey Hospital Camden, N. J. 08104 (Hosp.; 1894; coed)	Jane Born Director Nursing Education & Service	X		134	X	16	P	#	#	#
Our Lady of Lourdes School 1565 Vesper Blvd. Camden, N. J. 08103 (Ind.; 1961; coed)	Sister M. John Francis Director School of Nursing	X	X	128	X		P	150	165	175
East Orange General Hospital 300 Central Ave. East Orange, N. J. 07019 (Hosp.; 1903; coed)	Mary A. Kunst Director of Nursing Education	X	X	135	X	20	P	1003	388	255
Englewood Hospital 350 Engle St. Englewood, N. J. 07631 (Hosp.; 1896; women only)	Gladys B. Loew Assistant Administrator in Nursing	X		104	X		P	900	900	
Hackensack Hospital 22 Hospital Pl. Hackensack, N. J. 07601 (Hosp.; 1890; coed)	Charlotte K. Walker Assistant Administrator	X	X	#	X		P	750	750	750
Christ Hospital 176 Palisade Ave. Jersey City, N. J. 07306 (Hosp.; 1890; coed)	Phyllis L. Gray Assistant Administrator Division of Nursing	X	X	133	X	10	P	775*	400*	400*
St. Francis Hospital 1 E. Hamilton Pl. Jersey City, N. J. 07302 (Hosp.; 1923; coed)	Sister M. Anita Director School of Nursing	X		120	X		P	600	500	500
Monmouth Medical Center 127 Bath Ave. Long Branch, N. J. 07701 (Hosp.; 1896; coed)	Arlene Sherman Director School of Nursing	X	X	96	X		#	765	750	
Mountainside Hospital Montclair, N. J. 07042 (Hosp.; 1894; coed)	Sarah L. Sherlock Director School of Nursing	X	X	144	X	10		605*	567*	523*
All Souls Hospital 95 Mt. Kemble Ave. Morristown, N. J. 07960 (Hosp.; 1908; coed)	Mary A. Bobeck Director School of Nursing	X	X	134		22	P	400*	325*	325*
Martland Hospital Unit of the New Jersey College of Medicine & Dentistry 65 Bergen St. Newark, N. J. 07107 (Hosp.; 1883; coed)	Bernice Lippe Director of Nursing	X	X	120		10	P	355	310	310
St. Peter's General Hospital 260 Easton Ave. New Brunswick, N. J. 08903 (Hosp.; 1910; women only)	Sister Eileen Otting Director School of Nursing	X	X	121			P	575	575	475

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NEW JERSEY—Continued										
Orange Memorial Hospital School—Hospital Center at Orange 188 S. Essex Ave. Orange, N. J. 07050 (Hosp.; 1882; coed)	Grace Marie Howard Director School of Nursing	X	X	131	X	10	P	579*	405*	320*
St. Joseph's Hospital 703 Main St. Paterson, N. J. 07503 (Hosp.; 1894; women only)	Sister Mary Esther Director School of Nursing	X	X	121	X		P	578	467	415
Charles E. Gregory School—Perth Amboy General Hospital 530 New Brunswick Ave. Perth Amboy, N. J. 08861 (Hosp.; 1903; women only)	Katherine MacFadyen Director of Nursing	X		120	X		#	1300*	450*	450*
Muhlenberg Hospital Park Ave. & Randolph Rd. Plainfield, N. J. 07061 (Hosp.; 1894; coed)	Ruth Mitchell Director Nursing Service & Nursing Ed.	X	X	130		12	P	700	600	400
Holy Name Hospital 690 Teaneck Rd. Teaneck, N. J. 07666 (Hosp.; 1925; women only)	Sister M. Edmund Director of Nursing Education & Nursing Service	X		120	X		P	500	500	500
Helene Fuld School of Nursing of New Jersey at Helene Fuld Hospital 750 Brunswick Ave. Trenton, N. J. 08638 (Hosp.; 1890; coed)	Anne M. De Mille Director of Nursing	X	X	93	X		P	#	#	#
Mercer Hospital 446 Bellevue Ave. Trenton, N. J. 08607 (Hosp.; 1895; coed)	Sarah Harrison Director of Nursing	X		134	X	10	P	#	#	#
St. Francis Hospital 601 Hamilton Ave. Trenton, N. J. 08629 (Hosp.; 1908; women only)	Sister Marian Therese Director School of Nursing			96			#	408	393	
NEW YORK										
St. Mary's Hospital 427 Guy Park Ave. Amsterdam, N. Y. 12010 (Ind.; 1920; coed)	Sister M. Kevin Director School of Nursing	X	X	136		22	P	400	400	400
Auburn Memorial Hospital 19 Lansing St. Auburn, N. Y. 13021 (Hosp.; 1887; coed)	Anne F. Falvey Director of Nursing			144	X	12	R	470	150	150
Binghamton General Hospital Mitchell Ave. Binghamton, N. Y. 13903 (Hosp.; 1896; women only)	Mary K. Thomas Director of Nursing		#	134	X	12	#	610*	108*	124*
Misericordia Hospital 4141 Carpenter Ave. Bronx, N. Y. 10466 (Hosp.; 1911; coed)	Grace O. Lukas Director School of Nursing	X	X	96			P	800	800	
Jewish Hospital and Medical Center of Brooklyn 567 Prospect Pl. Brooklyn, N. Y. 11238 (Hosp.; 1906; coed)	Esther Gurian Charnes Director Nursing Education	X		132		12	P	400	365	365
Kings County Hospital Center 451 Clarkson Ave. Brooklyn, N. Y. 11203 (Hosp.; 1897; coed)	Mary E. Mullen Director School of Nursing & Nursing Service	X	X	120			P	300*		

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NEW YORK—Continued										
Methodist Hospital of Brooklyn 506 6th St. Brooklyn, N. Y. 11215 (Hosp.; 1889; women only)	Edith Roberts Director of Nursing	X	X	96		12	P	1100*	900*	
St. John's Episcopal Hospital 480 Herkimer St. Brooklyn, N. Y. 11213 (Hosp.; 1896; women only)	Ellen C. Stark Director School of Nursing	X		120		12	R	780*	410*	205*
St. Mary's Hospital 1260 St. Marks Ave. Brooklyn, N. Y. 11213 (Hosp.; 1889; women only)	Sister M. Benjamin Director of Nursing Education		X	132		12	P	615	200	230
Buffalo General Hospital 100 High St. Buffalo, N. Y. 14203 (Hosp.; 1877; coed)	Aileen L. Carroll Director of Nursing	X	X	125	X	11	P	771	55	73
Deaconess Hospital 1001 Humboldt Parkway Buffalo, N. Y. 14208 (Hosp.; 1908; coed)	Ida M. Pell Director of Nursing Education	X		96	X	8	P	625	525	
Edward J. Meyer Memorial Hospital 462 Grider St. Buffalo, N. Y. 14215 (Hosp.; 1918; coed)	Kathleen M. Marshall Director School of Nursing & Nursing Service	X	X	126	X		P	704*	60	60
Millard Fillmore Hospital 3 Gates Cir. Buffalo, N. Y. 14209 (Hosp.; 1887; coed)	Myrtle J. Rathmann Director School of Nursing	X		130	X	18	P	555	105	175
Sisters of Charity Hospital of Buffalo 2157 Main St. Buffalo, N. Y. 14214 (Hosp.; 1889; women only)	Sister M. Arthur Director School of Nursing			113	X	13	P	1100	575	300
Arnot-Ogden Memorial Hospital Roe Ave. Elmira, N. Y. 14901 (Hosp.; 1889; coed)	Olga I. Krazinski Director of Nursing	X	X	123	X	20	P	#	#	#
St. Joseph's Hospital 555 E. Market St. Elmira, N. Y. 14901 (Hosp.; 1908; coed)	Sister Remigia Director of Nursing Education	X	#	132	X	14	P	750	240	85
Flushing Hospital and Medical Center Parsons Blvd. & 45th Ave. Flushing, N. Y. 11355 (Hosp.; 1888; coed)	Mary Gamer Director of Nursing	X	X	120		14	P	315	215	115
St. James Mercy Hospital 411 Canisteo St. Hornell, N. Y. 14843 (Hosp.; 1912; coed)	Sister M. Thomas Director School of Nursing	X	X	132		8	P	440	385	296
Columbia Memorial Hospital 71 Prospect Ave. Hudson, N. Y. 12534 (Hosp.; 1900; coed)	Joan Tompkins Director of Nursing Education	X	#	118		20	#	500*	500*	250*
Mary Immaculate Hospital 152-11 89th Ave. Jamaica, N. Y. 11432 (Hosp.; 1906; women only)	Sister M. de Lellis Director School of Nursing	X	X	133		20	P	500	500	250
Queens Hospital Center 82-68 164th St. Jamaica, N. Y. 11432 (Hosp.; 1956; coed)	Vera D. Cole Director School of Nursing	X		120		12	P	300*	40	20

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NEW YORK—Continued										
Charles S. Wilson Memorial Hospital 33 Harrison St. Johnson City, N. Y. 13790 (Hosp.; 1912; women only)	Rowena Dutcher Director of Nursing	X		132	X	12	P	375	375	375
St. John's Queens Hospital 23-18 44th Dr. Long Island City, N. Y. 11101 (Hosp.; 1900; women only)	Sister M. St. Magdalen Director School of Nursing		X	114	X	12	P	310	300	335
New Rochelle Hospital 16 Guion Pl. New Rochelle, N. Y. 10802 (Hosp.: 1908; women only)	Georgia B. Hudson Director of Nursing	X	X	105	X		P	530*	325*	350*
Beth Israel Medical Center 317 E. 17th St. New York, N. Y. 10003 (Hosp.: 1904; women only)	Rose Muscatine Hauer Director of Nursing	X		124	X	12	#	#	#	#
Lenox Hill Hospital 100 E. 77th St. New York, N. Y. 10021 (Hosp.; 1887; coed)	Joan Jennings Director School of Nursing	X	X	130		12	P	668	544	440
Mt. Sinai Hospital 5 E. 98th St. New York, N. Y. 10029 (Hosp.; 1881; coed)	Cynthia R. Kinsella Director of Nursing	X	X	129	X		R	750	750	750
Roosevelt Hospital 428 W. 59th St. New York, N. Y. 10019 (Hosp.; 1896; coed)	Eileen O. Scott Director School of Nursing	X	X	96			P	627*	445*	
St. Clare's Hospital 426 W. 52d St. New York, N. Y. 10019 (Hosp.; 1951; coed)	Sister Maureen Marie Director School of Nursing	X		96		12	P	575	595	
St. Luke's Hospital 114th St. & Amsterdam Ave. New York, N. Y. 10025 (Hosp.; 1888; women only)	Frances C. Avella Director School of Nursing	X		128		12	#	400	300	300
St. Vincent's Hospital 158 W. 12th St. New York, N. Y. 10011 (Hosp.; 1892; coed)	Sister Mary Robert Director School of Nursing	X	X	130	X		P	725	695	535
United Hospital 406 Boston Post Rd. Port Chester, N. Y. 10574 (Hosp.; 1963; coed)	Jane E. Rowlands Director School of Nursing	X	X	96		12	P	717*	660*	
St. Francis Hospital North Rd. Poughkeepsie, N. Y. 12601 (Hosp.; 1914; coed)	Sister M. Camilla Director School of Nursing	X		96	X	8	P	660	665	
Vassar Brothers Hospital Reade Pl. Poughkeepsie, N. Y. 12601 (Hosp.; 1888; coed)	C. Marie Andrew Director of Education	X	X	96	X		P	682	300	
Genesee Hospital 224 Alexander St. Rochester, N. Y. 14607 (Ind.; 1889; coed)	Jeanette Moore Principal School of Nursing	X	X	113	X	12	P	553	330	350
Highland Hospital South Ave. & Bellevue Dr. Rochester, N. Y. 14620 (Hosp.; 1891; coed)	Hazel Wheeler Director of Nursing	X	X	122	X		P	785	300	300
St. Mary's Hospital 89 Genesee St. Rochester, N. Y. 14611 (Hosp.; 1892; women only)	Sister Victoria Director School of Nursing	X	X	102	X	13	P	570	970	745

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NEW YORK—Continued										
Ellis Hospital 116 Rosa Rd. Schenectady, N. Y. 12308 (Hosp.; 1903; coed)	Ellen G. Scott Director of Nursing Education	X	X	132		12	P	330*	330*	365*
St. Vincent's Medical Center of Richmond 355 Bard Ave. Staten Island, N. Y. 10310 (Hosp.; 1961; coed)	Sister Maureen John Director Nursing and School of Nursing	X	X	96	X	12	P	567	485	
St. Joseph's Hospital 206 Prospect Ave. Syracuse, N. Y. 13203 (Hosp.; 1898; women only)	Sister Mary Sheila Director of Nursing Education			133	X	8	P	1042	294	165
Samoritan Hospital Burdett and Peoples Ave. Troy, N. Y. 12180 (Hosp.; 1899; women only)	Marline M. Lander Director of Nursing			138	X	12	R	878	150	118
St. Elizabeth Hospital 2209 Genesee St. Utica, N. Y. 13501 (Hosp.; 1904; coed)	Sister M. Amata Director of Nursing	X		133	X	16	P	645	407	195
Westchester School—Grasslands Hospital Valhalla, N. Y. 10595 (Hosp.; 1927; coed)	Anne B. Staus Associate Director Nursing Educotion	X	X	120	X	16	P	325		
Cochran School—St. John's Riverside Hospital 967 N. Broadway Yonkers, N. Y. 10701 (Hosp.; 1894; coed)	Vera M. Unger Director of Nursing	X		92	X	12	P	886*	914*	
NORTH CAROLINA										
Mercy School of Nursing 1921 Vail Ave. Charlotte, N. C. 28207 (Hosp.; 1906; coed)	Sister Jeanne Margaret Director of Nursing Education	X	X	132	X	13	P	410	375	450
Presbyterian Hospital P.O. Box 10157 Charlotte, N. C. 28201 (Hosp.; 1903; women only)	Anne Pleasants White Director Nursing Education	X	#	144	X	12	P	700*	650*	650*
Caborrus Memorial Hospital Concord-Kannapolis Highway Concord, N. C. 28025 (Hosp.; 1942; women only)	Martha M. Adams Director of Nursing Education	X	X	132		12	P	428*	278*	221*
Watts Hospital Club Blvd. & Broad St. Durham, N. C. 27705 (Hosp.; 1895; coed)	Bessie Perry Burgess Director of Nursing	X		144	X	12	P	500*	500*	500*
Gaston Memorial Hospital 611 N. Highland St. Gastonia, N. C. 28052 (Hosp.; 1947; coed)	Margaret Cudd Director of Nursing	X	X	140	X	12	P	475*	325*	325*
Rex Hospitol 1311 St. Mary's St. Raleigh, N. C. 27603 (Hosp.; 1896; coed)	Joan M. Reid Director of Nursing Education	X	X	146	X	12	P	535	181	100
North Carolina Baptist Hospital 300 S. Hawthorne Rd. Winston-Salem, N. C. 27103 (Hosp.; 1923; coed)	Alfred Broadhead Director School of Nursing	X		144		12	P	330	170	125

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		Married students	Transfer students		Some courses given at a college or university	Weeks away from school for some nursing courses		1st Year	2d Year	3d Year
NORTH DAKOTA										
St. Andrew's School of Nursing 316 Ohmer St. Bottineau, N. Dak. 58318 (Hosp.; 1928; coed)	Mildred C. Galvin Director of Nursing Education	X	X	117	X	20	P	550	480	390
St. Luke's Hospital 736 Broadway Fargo, N. Dak. 58102 (Hosp.; 1908; coed)	Angeline A. Gruneich Associate Director School of Nursing	X		96	X		P	Res.: 570 Nonres.: 720	335	
Sisters of St. Joseph School of Nursing of North Dakota 501 Columbia Rd. Grand Forks, N. Dak. 58201 (Ind.; 1947; coed)	Sister Ann Frederick Director School of Nursing	X	X	108	X	12	#	630	600	500
Sisters of St. Francis School of Nursing 307 5th Ave. S.E. Minot, N. Dak. 58701 (Ind.; 1912; coed)	Sister M. Aloysius Meng Director School of Nursing	X	X	108	X	11	P	860	600	432
Trinity Hospital 404 1st St. S.W. Minot, N. Dak. 58701 (Hosp.; 1925; coed)	Betty J. Halvorson Director of Nursing Education	X		116	X	12	#	375	375	375
OHIO										
Akron City Hospital 525 E. Market St. Akron, Ohio 44309 (Hosp.; 1895; coed)	Ella Mae Murdie Director Nursing Education	X	X	123	X	22	P	917*	700*	247*
Akron General Hospital 400 Wabash Ave. Akron, Ohio 44307 (Hosp.; 1915; coed)	Marjorie L. Grandon Dean School of Nursing	X	X	131	X	22	P	State Res.: 719 Nonres.: #	327 #	189
St. Thomas Hospital 444 N. Main St. Akron, Ohio 44310 (Hosp.; 1928; coed)	Bernadette G. Griggy Director of Nursing Education	X	X	119	X	14	P	846	358	269
Aultman Hospital 2614 6th St. S. W. Canton, Ohio 44710 (Hosp.; 1892; coed)	Barbara A. Donaho Director Department of Nursing	X		130	X		#	773	220	260
Mercy Hospital 806 Cleveland Ave. N.W. Canton, Ohio 44702 (Hosp.; 1908; women only)	Katherine Rankin Acting Director of Nursing			126	X	10	R	1075	365	350
Bethesda Hospital Reading Rd. & Oak St. Cincinnati, Ohio 45206 (Hosp.; 1915; coed)	Geneva Rubins Director School of Nursing	X	X	121		12	P	468	428	348
Christ Hospital 2125 Eleanor Pl. Cincinnati, Ohio 45219 (Hosp.; 1903; coed)	Helen M. Williamson Director of Nursing			133	X	12	P	City Res.: 547 State Res.: 763 Nonres.: 1033	300	220
Deaconess Hospital 415 Straight St. Cincinnati, Ohio 45219 (Hosp.; 1888; coed)	Lina L. Drake Director School of Nursing	X	X	132	X	12	P	525	470	385
Good Samaritan Hospital Clifton Ave. & Dixmyth Cincinnati, Ohio 45220 (Hosp.; 1897; coed)	Sister Andrew Hanlon Director Nursing Education		X	137			P	425	300	320

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OHIO—Continued										
Jewish Hospital of Cincinnati 3161 Harvey Ave. Cincinnati, Ohio 45229 (Hosp.; 1891; coed)	Helen J. Rigdon Director School of Nursing	X		85			P	707	458	
Cuyahoga County School—Cleveland Metropolitan General Hospital 3395 Scranton Rd. Cleveland, Ohio 44109 (Hosp.: 1896; coed)	Florence Apltauer Director School of Nursing	X	X	128	X		#	1600*	270*	270*
Fairview General Hospital 18101 Lorain Ave. Cleveland, Ohio 44111 (Hosp.; 1892; coed)	Phyllis Blenkhorn Director of Nursing Education	X	X	99	X	10	P	545	102	117
Huron Road Hospital 13951 Terrace Rd. Cleveland, Ohio 44112 (Hosp.; 1884; women only)	Mary Margaret Miller Director School of Nursing	X		132	X		P	540	250	250
Lutheran Hospital 2609 Franklin Blvd. Cleveland, Ohio 44113 (Hosp.; 1898; women only)	Martha Skarabotta Director of Nursing Education	X		133	X	10	P	850	320	270
St. Alexis Hospital 5303 McBride Ave. Cleveland, Ohio 44127 (Hosp.; 1918; women only)	Sister M. Wilberta Director of Nursing	X	X	138	X		P	950	410*	395*
St. John's Hospital 7800 Franklin Blvd. Cleveland, Ohio 44102 (Hosp.; 1916; women only)	Domicelle Langdon Director School of Nursing		X	116	X		P	1067	340	355
St. Luke's Hospital 11311 Shaker Blvd. Cleveland, Ohio 44104 (Hosp.; 1894; coed)	Carol E. Randall Director of Nursing	X	X	116	X		#	537	120	90
St. Vincent Charity Hospital 2320 E. 24th St. Cleveland, Ohio 44115 (Hosp.; 1898; women only)	Sister M. Maurice Director School of Nursing	X	X	125	X	12	P	459	215	190
Grant Hospital 309 E. State St. Columbus, Ohio 43215 (Hosp.; 1900; women only)	Edith M. Chamberlain Director School of Nursing	X	X	128	X	12	P	853	627	647
Mt. Carmel School of Nursing 127 S. Davis Ave. Columbus, Ohio 43222 (Hosp.; 1903; women only)	Eleanor S. Wilson Director School of Nursing	X	X	120	X	12	P	1200	680	718
Riverside-White Cross School at Riverside Methodist Hospital 3535 Olentangy River Rd. Columbus, Ohio 43214 (Hosp.; 1891; coed)	Hazel Hurlburt Director of Nursing Education	X		132	X	24	P	1758*	1246*	377*
St. Francis School—St. Anthony Hospital 1441 Clifton Ave, Columbus, Ohio 43203 (Hosp.; 1928; coed)	Sister M. Lucy Director School of Nursing	X	X	121	X	24	P	1398	852	425
Good Samaritan Hospital 1425 W. Fairview Ave. Dayton, Ohio 45406 (Hosp.; 1932; coed)	Sister Ann Seton Director School of Nursing	X	X	138		10	P	650	210	210
Miami Valley Hospital 122 E. Apple St. Dayton, Ohio 45409 (Hosp.; 1899; coed)	Mary E. Edwards Director School of Nursing	X	X	136	X	12	P	850	485	350

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OHIO—Continued										
St. Elizabeth Hospital 128 Hopeland St. Dayton, Ohio 45408 (Hosp.: 1915; coed)	Sister Mary Anthony Director School of Nursing	X	X	131	X	12	P	460	165	140
East Liverpool City Hospital 425 W. Fifth St. East Liverpool, Ohio 43920 (Hosp.; 1908; women only)	Janet Colaizzi Educational Director School of Nursing	X	X	150	X	20	P	500	300	200
M. B. Johnson School—Elyria Memorial Hospital 630 E. River St. Elyria, Ohio 44035 (Hosp.; 1908; coed)	Margaret Krapp Director of Nursing	X	X	132	X		P	1380*	640*	480*
Massillon City Hospital 876 Amherst Rd. N.E. Massillon, Ohio 44646 (Hosp.; 1910; coed)	Barbara C. Mertes Director School of Nursing	X	X	125	X	28	P	978*	240	140
Providence School of Nursing 1912 Hayes Ave. Sandusky, Ohio 44871 (Hosp.; 1905; coed)	Sister M. Brigid Ann Director School of Nursing	X	X	122		24	P	477	371	297
Community Hospital of Springfield & Clark County 2615 E. High St. Springfield, Ohio 45501 (Hosp.: 1904; coed)	Louise D. Carroll Director School of Nursing	X	X	130		22	P	755	230	255
Ohio Valley Hospital 380 Summit Ave. Steubenville, Ohio 43952 (Hosp.; 1912; coed)	Garnette Thorne Director School of Nursing	X	X	140	X	12	R	364	254	254
Flower Hospital 3350 Collingwood Blvd. Toledo, Ohio 43610 (Hosp.; 1909; coed)	Dorcas Crossman Administrative Assistant	X	X	134	X	24	P	800	500	350
Mercy School of Nursing 2238 Jefferson Ave. Toledo, Ohio 43624 (Hosp.; 1918; coed)	Sister M. Sylvia Director School of Nursing	X	X	126	X	13	P	570	170	75
Riverside Hospital 1609 Summit St. Toledo, Ohio 43604 (Hosp.: 1921; coed)	E. Wanda Quay Director School of Nursing	X	#	134		20	P	600	300	375
St. Vincent Hospital 2201 Cherry St. Toledo, Ohio 43608 (Hosp.; 1896; coed)	Eleanor Walsh Acting Director School of Nursing		X	135	X	12	#	635	340	290
Toledo Hospital 2142 N. Cove Blvd. Toledo, Ohio 43606 (Hosp.; 1893; coed)	Edna E. Sharritt Director of Nursing			144	X	26	R	878*	230*	236*
Trumbull Memorial Hospital 1350 E. Market St. Warren, Ohio 44482 (Hosp.: 1907; coed)	Helen Ludwig Director School of Nursing	X	X	131	X	26	P	800*	500*	400*
St. Elizabeth Hospital 1044 Belmont Ave. Youngstown, Ohio 44505 (Hosp.: 1911; women only)	Sister Dorothy Zwick Director School of Nursing	X	X	136		14	P	575	425	470
Good Samaritan Hospital 730 Laurel Ave. Zanesville, Ohio 43705 (Hosp.: 1905; women only)	Sister Mary Lawrence Director School of Nursing			135	X	10	P	646	220	213

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OKLAHOMA										
St. Mary's Hospital 305 S. Fifth Enid, Okla. 73701 (Hosp.; 1961; coed)	Marguerite E. Lambert Director of Nursing Education	X	#	117	X	8	P	900	275	200
St. Anthony Hospital O'Donoghue Hall 1117 N. Shartel St. Oklahoma City, Okla. 73103 (Hosp.; 1908; coed)	Sister Mary Damien Director School of Nursing	X	X	112	X		P	980	500	645
Hillcrest Medical Center 1120 S. Utica Tulsa, Okla. 74104 (Hosp.; 1918; coed)	Bernice Joy Regaldo Director Nursing Education	X	X	120	X		P	1055	290	330
St. John's Hospital 1802 E. 19th St. Tulsa, Okla. 74104 (Hosp.; 1926; coed)	M. Virginia Andersen Director School of Nursing	X	X	120	X		P	970	281	334
OREGON										
Emanuel Hospital 2801 N. Gantenbein Ave. Portland, Oreg. 97227 (Hosp.; 1912; coed)	Esther A. Jacobson Dire tor of Nursing	X	X	130	X	10	P	1600*	542	420
Good Samaritan Hospital & Medical Ctr. 1015 N.W. 22d Ave. Portland, Oreg. 97210 (Hosp.; 1890; coed)	Lloydena Grimes Director School of Nursing	X	X	144	X	10	#	1900*	700*	700*
PENNSYLVANIA										
Abington Memorial Hospital 1200 York Rd. Abington, Pa. 19001 (Hosp.; 1914; coed)	Margaret Kohler Director School of Nursing		X	138	X	9	#	#	#	#
Allentown Hospital 17th & Chew Sts. Allentown, Pa. 18102 (Hosp.; 1899; coed)	Laura E. Baughn Director of Nursing	X	X	#	X		P	350	150	100
Sacred Heart Hospital 421 Chew St. Allentown, Pa. 18102 (Hosp.; 1916; coed)	Sister M. Eileen Director School of Nursing	X	X	142		13	P	350*	140*	220*
Altoona Hospital 7th St. & Howard Ave. Altoona, Pa. 16603 (Hosp.; 1904; coed)	Margaret A. Greiner Director of Nursing	X	X	124	X	8	P	365	165	165
Mercy Hospital 2601 8th Ave. Altoona, Pa. 16603 (Hosp.; 1910; coed)	Sister M. Noemi Director School of Nursing	X	X	144	X	8	P	290	239	272
St. Luke's Hospital 801 Ostrum St. Bethlehem, Pa. 18015 (Hosp.; 1884; women only)	Julia S. Ritter Director of Nursing			131			R	505*	305*	205*
Braddock General Hospital 423 Braddock Ave. Braddock, Pa. 15104 (Hosp.; 1907; women only)	Sister Mary Jean Director School of Nursing	X		120	X	11	P	200	200	100
Bryn Mawr Hospital Bryn Mawr Ave. Bryn Mawr, Pa. 19010 (Hosp.; 1905; coed)	Edna W. Scott Director of Nursing	X	X	144		12	P	550*	250*	250*

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PENNSYLVANIA—Continued										
Butler County Memorial Hospital E. Brady St. Extension Butler, Pa. 16001 (Hosp.; 1901; coed)	Sara Jean Clark Director of Nursing	X		144	X	36	P	1100*	300*	300*
St. Joseph's Hospital Salem Ave. Carbondale, Pa. 18407 (Hosp.; 1926; women only)	Sister M. de Lourdes Director School of Nursing		X	144	X	23	R	850	500	200
Coatesville Hospital 300 Strode Ave. Coatesville, Pa. 19320 (Hosp.; 1917; coed)	Doris K. Cumber Director of Nursing	X	X	144	X	26	P	750	350	200
Geisinger Medical Center Poplar St. Danville, Pa. 17821 (Hosp.; 1915; coed)	Emma Jean Knapper Director of Nursing	X		144		13	P	Pre-entrance 235* First year 435*	385*	385*
Fitzgerald Mercy Hospital Lansdowne Ave. & Baily Rd. Darby, Pa. 19023 (Hosp.; 1942; coed)	Sister M. Rita Dolores Director of Nursing	X		144	X	12	P	665	430	335
Easton Hospital 21st & Lehigh Sts. Easton, Pa. 18042 (Hosp.; 1900; coed)	Mildred Stuebe Director of Nursing	X		144	X	13	P	475	150	161*
St. Vincent Hospital 241 W. 24th St. Erie, Pa. 16502 (Hosp.; 1901; coed)	Sister Rose Evelyn Director of Nursing Education	X		117		10	#	450	225	225
Westmoreland Hospital 532 W. Pittsburgh St. Greensburg, Pa. 15601 (Hosp.; 1895; coed)	Ruth S. Woodward Director of Nursing	X	X	117	X	12	P	800*	460*	240*
Harrisburg Hospital South Front St. Harrisburg, Pa. 17101 (Hosp.; 1905; coed)	E. Jean Deeter Director of Nursing	X	X	144	X		#	325	200	100
Harrisburg Polyclinic Hospital Third & Radnor Sts. Harrisburg, Pa. 17105 (Hosp.; 1909; coed)	Jane U. Arnold Director School of Nursing	X		144	X		P	600	100	100
Hazleton State General Hospital E. Broad St. Hazleton, Pa. 18201 (Hosp.; 1894; women only)	Nancy D. Super Director of Nursing			144	X	13	R	250	125	125
Indiana Hospital Indiana, Pa. 15701 (Hosp.; 1915; coed)	Ruby B. Dobson Director of Nursing Education	X	X	144	X	23	#	540*	360*	230*
Conemaugh Valley Memorial Hospital 1086 Franklin St. Johnstown, Pa. 15905 (Hosp.; 1896; coed)	Movene Ponas Director of Nursing	X		135	X	11	P	455	130	115
Mercy Hospital 1020 Franklin St. Johnstown, Pa. 15905 (Hosp.; 1911; coed)	Sister M. Concilia Director of Nursing	#	#	132		8	P	578*	479*	433*

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PENNSYLVANIA—Continued										
Nesbitt Memorial Hospital 562 Wyoming Ave. Kingston, Pa. 18704 (Hosp.; 1912; coed)	Thelma DeWitt Director of Nursing		#	144	X	13	#	320*	320*	320*
St. Joseph Hospital 250 College Ave. Lancaster, Pa. 17604 (Hosp.; 1902; coed)	Sister M. Henry Kathryn Director School of Nursing	X	X	144			P	439	231	297
Ohio Valley General Hospital Heckel Rd. McKees Rocks, Pa. 15136 (Hosp.; 1901; coed)	Josephine Roseta Director of Nursing			120	X	24	#	660*	336*	204*
McKeesport Hospital 1500 5th Ave. McKeesport, Pa. 15132 (Hosp.; 1895; coed)	Lucie S. Young Asst. Administrator for Nursing	X	X	120	X	11	P	633*	178*	174*
Meadville City Hospital 751 Liberty St. Meadville, Pa. 16335 (Hosp.; 1888; coed)	Mary Bluxome Director of Nursing	X		96		8	P	520	425	
Spencer Hospital 1034 Grove St. Meadville, Pa. 16335 (Hosp.; 1902; coed)	Sister Helen Claire Director School of Nursing	X		131		25	P	695	595	520
Allegheny Valley Hospital 1300 Carlisle St. Natrona Heights, Pa. 15065 (Hosp.; 1910; women only)	Margaret Greulich Director of Nursing	X	X	139	X	28	R	415	415	415
Jameson Memorial Hospital West Leasure Ave. New Castle, Pa. 16101 (Hosp.; 1895; coed)	Donna V. Stewart Director of Nursing Education	X	X	126	X	8	P	700*	400*	400*
St. Francis Hospital of New Castle 1100 S. Mercer St. New Castle, Pa. 16101 (Hosp.; 1919; coed)	Sister Virginia Mary Director of Nursing	X	X	120	X	13	P	302	260	285
Citizens General Hospital 651 4th Ave. New Kensington, Pa. 15068 (Hosp.; 1913; coed)	Marjorie J. Montanari Director School of Nursing	X	X	144	X	11	P	342*	310*	335*
Montgomery Hospital Powell & Wood Sts. Norristown, Pa. 19401 (Hosp.; 1893; coed)	Violet A. Breckbill Director School of Nursing	X		144		25	#	450*	375*	375*
Albert Einstein Medical Center York & Tabor Rds. Philadelphia, Pa. 19141 (Hosp.; 1952; coed)	Ella W. Allison Director of Nursing	X	X	96		4	P	765*	600*	
Chestnut Hill Hospital 8835 Germantown Ave. Philadelphia, Pa. 19118 (Hosp.; 1908; coed)	Laura May Beery Director of Nursing	X	X	142	X	26	P	615	515	415
Episcopal Hospital Front St. & Lehigh Ave. Philadelphia, Pa. 19125 (Hosp.; 1888; coed)	Gilberta M. Trani Director of Nursing Education	X	X	144	X	12	#	495	245	275
Germantown Dispensary and Hospital E. Penn & E. Wister Sts. Philadelphia, Pa. 19144 (Hosp.; 1892; coed)	Margaret Buell Director Nursing Service & Nursing Education	X	X	144	X	13	P	150	150	100

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PENNSYLVANIA—Continued										
Hahnemann Medical College and Hospital 230 N. Broad St. Philadelphia, Pa. 19102 (Hosp.; 1890; women only)	Edythe G. Kistler Director School of Nursing	X		142	X		R	225	225	250
Hospital of the University of Pennsylvania 320 S. 34th St. Philadelphia, Pa. 19104 (Hosp.; 1886; coed)	Iris Ann Machlan Director School of Nursing	X		134	X	12	R	605	205	210
Hospital of the Women's Medical College of Pennsylvania 3300 Henry Ave. Philadelphia, Pa. 19129 (Hosp.; 1908; women only)	Lyda Sue Cunningham Director of Nursing	X	X	136	X		P	325	250	250
Jefferson Medical College & Medical Ctr. 11th & Walnut Sts. Philadelphia, Pa. 19107 (Hosp.; 1891; women only)	Doris E. Bowman Director School of Nursing			144	X	9	R	500*	600*	500*
Lankenau Hospital Lancaster & City Line Ave. Philadelphia, Pa. 19151 (Hosp.; 1899; women only)	J. Margaret Ada Mutch Director of Nursing	X	X	144		12	R	400*	250*	250*
Methodist Hospital 2301 S. Broad St. Philadelphia, Pa. 19148 (Hosp.; 1892; women only)	Miriam Lundgren Director of Nursing Education & Service	X		144	X	9	P	440	240	265
Misericordia Hospital 54th St. & Cedar Ave. Philadelphia, Pa. 19143 (Hosp.; 1918; coed)	Sister M. Leona Director School of Nursing	X	X	120		13	P	700*	200*	200*
Pennsylvania Hospital 8th & Spruce Sts. Philadelphia, Pa. 19107 (Hosp.; 1895; coed)	Sandy F. Mannino Director School of Nursing	X	X	144	X	26	P	625*	300*	350*
Philadelphia General Hospital 34th St. & Civic Ctr. Blvd. Philadelphia, Pa. 19104 (Hosp.; 1885; coed)	Regina B. Matela Associate Director Nursing Education	X	X	144			#	395*	95*	110*
Presbyterian School—University of Pennsylvania Medical Center 51 N. 39th St. Philadelphia, Pa. 19104 (Hosp.; 1889; women only)	Dorothy M. Richards Director School of Nursing	X		144	X	13	P	675*	400*	400*
St. Agnes Hospital Broad & McKean Sts. Philadelphia, Pa. 19145 (Hosp.; 1894; coed)	Sister M. Casimira Director School of Nursing	X	X	136		12	P	267	140	156
St. Joseph's Hospital 16th St. & Girard Ave. Philadelphia, Pa. 19130 (Hosp.; 1894; women only)	Sister Mary Catherine Director School of Nursing	X	X	144	X	26	P	625	200	200
Liliane S. Kaufmann School—Montefiore Hospital 3471 5th Ave. Pittsburgh, Pa. 15213 (Hosp.; 1908; coed)	Anna Marie Keenan Director of Nursing			144		13	P	660	205	185
Louise Suydam McClintic School—St. Margaret Memorial Hospital 265 46th St. Pittsburgh, Pa. 15201 (Hosp.; 1910; coed)	Grace A. Devitt Director School of Nursing	X	X	130 #	X	13	P	895	250	255

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PENNSYLVANIA—Continued										
Mercy Hospital 1401 Blvd. of the Allies Pittsburgh, Pa. 15219 (Hosp.; 1893; coed)	Sister M. Vincent Laitta Director School of Nursing	X	X	96			P	500	500	
Pittsburgh Hospital 500 Finley St. Pittsburgh, Pa. 15206 (Hosp.; 1905; coed)	Sister Miriam Francis Director of Nursing	X		124	X		P	750	375	350
Presbyterian-University Hospital 230 Lothrop St. Pittsburgh, Pa. 15213 (Hosp.; 1895; coed)	Carolyn S. House Director School of Nursing	X	X	126	X		#	738	115	145
St. Francis General Hospital 45th & Calvin Sts. Pittsburgh, Pa. 15201 (Hosp.; 1901; coed)	Sister Mary Bertin Director of Nursing	X		80			#	500	365	
St. John's General Hospital 3339 McClure Ave. Pittsburgh, Pa. 15212 (Hosp.; 1902; coed)	Lucy M. Cramer Director of Nursing	X	X	119		11	P	552*	277*	237*
Shadyside Hospital 5230 Centre Ave. Pittsburgh, Pa. 15232 (Hosp.; 1884; coed)	Margaret R. Dietz Director School of Nursing	X	X	123	X	21	P	1000*	500*	300*
South Side Hospital S. 20th & Jane Sts. Pittsburgh, Pa. 15203 (Hosp.; 1895; coed)	James F. Repella Assistant Administrator, Nursing	X		144	X	24	P	590	330	300
Western Pennsylvania Hospital 4800 Friendship Ave. Pittsburgh, Pa. 15224 (Hosp.; 1892; coed)	Norrine Gallagher Director of Nursing	X	X	120		21	R	890	530	380
Reading Hospital Reading, Pa. 19602 (Hosp.; 1889; coed)	Olivia L. Barres Director of Nursing	X		144		12	P	400*	100*	
St. Joseph's Hospital 215 Birch St. Reading, Pa. 19603 (Hosp.; 1903; coed)	Sister William Mary Director School of Nursing	X	X	135		13	P	217	200	275
Robert Packer Hospital S. Wilbur Ave. Sayre, Pa. 18840 (Hosp.; 1901; coed)	Helen R. Saunders Director of Nursing	X		144		26	P	400	400	400
Mercy Hospital 746 Jefferson Ave. Scranton, Pa. 18501 (Hosp.; 1917; coed)	Sister M. Jane Frances Director of Nursing	X		144	X		#	625	325	350
Sewickley Valley Hospital Blackburn Rd. Sewickley, Pa. 15143 (Hosp.; 1916; coed)	Patricia A. Roche Director School of Nursing	X	#	132		11	R	497*	336*	396*
Sharon General Hospital 740 E. State St. Sharon, Pa. 16146 (Hosp.; 1889; women only)	Dorothy Kennedy Director of Nursing Education	X		144	X	8	P	800*	600*	600*
Uniontown Hospital 500 W. Berkeley St. Uniontown, Pa. 15401 (Hosp.; 1904; coed)	Thelma C. Sandy Director of Nursing		#	144	X	11	R	935*	775*	650*
Washington Hospital 155 Wilson Ave. Washington, Pa. 15301 (Hosp.; 1897; coed)	Mary Deegan Director of Nursing	X	X	96			P	842	622	

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PENNSYLVANIA—Continued										
Chester County Hospital 500 E. Marshall St. West Chester, Pa. 19380 (Hosp.; 1894; coed)	Jean M. Reidnour Director of Nursing		X	144	X	26	R	425	363	363
Mercy Hospital 8-16 Church St. Wilkes-Barre, Pa. 18702 (Hosp.; 1898; coed)	Sister M. Rebecca Director of Nursing	X	X	144	X	13	#	693	463	473
Wilkes-Barre General Hospital N. River & Auburn Sts. Wilkes-Barre, Pa. 18702 (Hosp.; 1887; coed)	Lois E. Knaub Director of Nursing Education	X	X	144	X	13	P	325*	325*	325*
York Hospital 1001 S. George St. York, Pa. 17403 (Hosp.; 1894; coed)	Beulah L. Langman Director School of Nursing	X	X	133	X	12	P	1030*	460*	310*
PUERTO RICO										
Puerto Rico Medical Center Apartado 10306 Caparra Heights Station San Juan, P. R. 00935 (Ind.; 1963; coed)	Ana L. Falcon Director School of Nursing	X	X	120	X	4	P	127	127	127
RHODE ISLAND										
Newport Hospital Friendship St. Newport, R. I. 02842 (Hosp.; 1886; women only)	Agnes V. Hudder Director of Nursing	X	X	132		24	#	570*	270*	285*
Rhode Island Hospital 593 Eddy St. Providence, R. I. 02903 (Hosp.; 1882; coed)	Mildred E. Schwier Director of Nursing	X	X	135	X	24	P	680	590	610
Roger Williams General Hospital 825 Chalkstone Ave. Providence, R. I. 02908 (Hosp.; 1904; coed)	Olive N. Reynolds Director of Nursing	X		132		18	#	569	283	246
St. Joseph's Hospital 21 Peace St. Providence, R. I. 02907 (Hosp.; 1899; coed)	Grayce R. Felmann Director School of Nursing		#	128		18	R	515*	340*	300*
SOUTH CAROLINA										
Greenville General Hospital 100 Mallard St. Greenville, S. C. 29601 (Hosp.; 1912; coed)	Marie R. Harris Director of Nursing Operations	X	X	144	X	16	P	650	225	150
SOUTH DAKOTA										
St. John's Hospital 4th & Kansas S.E. Huron, S. Dak. 57350 (Hosp.; 1947; women only)	Sister Mary Natalie Director School of Nursing	X	X	110		20	P	575	292	320
St. John's McNamara Hospital 1018 11th St. Rapid City, S. Dak. 57701 (Hosp.; 1927; coed)	Sister Margaret Mary Keogh Director School of Nursing	X	X	144	X	12	P	550	465	465
Sioux Valley Hospital 1123 S. Euclid Sioux Falls, S. Dak. 57105 (Hosp.; 1899; coed)	Ruth Organ Director of Nursing	X	X	133	X	12	P	700	500	500

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TENNESSEE										
Baroness Erlanger Hospital 261 Wiehl St. Chattanooga, Tenn. 37403 (Hosp.; 1899; coed)	Betty L. Potter Director of Nursing Education	X	X	120	X		P	670	370	370
East Tennessee Baptist Hospital Blount Ave. Knoxville, Tenn. 37901 (Hosp.; 1948; coed)	Modena Beasley Director Nursing Education	X		128	X		P	680	300	220
Fort Sanders Presbyterian Hospital 1915 White Ave. Knoxville, Tenn. 37916 (Hosp.; 1920; coed)	Thelma M. Dickerson Director of Nursing Education	X	X	130	X		#	690	500	300
St. Mary's Memorial Hospital Oak Hill Ave. Knoxville, Tenn. 37917 (Hosp.; 1930; coed)	Margaret Heins Director School of Nursing	X	X	120	X		P	500*	370*	330*
University of Tennessee Memorial Research Center and Hospital Alcoa Highway Knoxville, Tenn, 37920 (Hosp.; 1957; coed)	Dorothy Lynn Brown Director of Nursing Educatian	X		144	X		#	400	200	200
Baptist Memorial Hospital 899 Madison Ave. Memphis, Tenn. 38105 (Hosp.; 1912; women only)	Nina M. Basham Director af Nursing		X	119	X		R	500*	300*	250*
Methodist Hospital 1265 Union Ave. Memphis, Tenn. 38104 (Hosp.; 1921; coed)	Joy Lynn Douglas Director Nursing Education	X	X	99	X		P	810*	455*	455*
St. Joseph Hospital 204 Overton Ave. Memphis, Tenn. 38105 (Hosp.; 1918; coed)	Sister M. Rolandina Director Nursing Education	X		105	X	12	P	500	225	225
Metropolitan General Hospital Hermitage Ave. Nashville, Tenn. 37210 (Hosp.; 1892; coed)	Alma S. Manning Director of Nursing	X		135	X		P	1275*	700*	300*
TEXAS										
Northwest Texas Hospital Box 1110 Amarillo, Tex. 79106 (Hosp.; 1924; coed)	Eunice M. King Director of Nursing	X	X	120	X		P	400	325*	210*
St. Paul School of Nursing 5909 Harry Hines Blvd. Dallas, Tex. 75235 (Ind.; 1900; women only)	Sister Pauline Director School of Nursing	X	X	108	X	8	P	1016	370	250
Hotel Dieu School of Nursing 1101 N. Campbell St. El Paso, Tex. 79902 (Ind.; 1898; coed)	Sister Aloysius Williams Director School of Nursing	X	X	108	X	9	P	300	300*	300*
John Peter Smith Hospital 1500 S. Main St. Fort Worth, Tex. 76104 (Hosp.; 1906; coed; 1 yr. college)	Maurine Bridwell Nurse Administrator	X	X	88			P	260	110	
St. Joseph School of Nursing 1551 S. Main St. Fort Worth, Tex. 76104 (Hosp.; 1906; coed; 1 yr. college)	Sister Teresa Stanley Director School of Nursing	X	X	88			P	517	517	

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TEXAS—Continued										
Methodist Hospital 3615 19th St. Lubbock, Tex. 79410 (Hosp.; 1918; coed; 1 yr. college)	Irene Wilson Director School of Nursing	X		88			#	684	684	
Baptist Memorial Hospital 111 Dallas St. San Antonio, Tex. 78205 (Hosp.; 1903; coed; 1 yr. college)	Margie Crawford Director Nursing Education	X	X	88		9	P	251	171	
Robert B. Green School of Nursing P. O. Box 7190 San Antonio, Tex. 78207 Hosp.; 1958; coed; 1 yr. college)	Helen R. Barsch Nurse Administrator	X	X	88	X	9		245	110	
UTAH										
Holy Cross Hospital 1002 East South Temple Salt Lake City, Utah 84102 (Hosp.; 1875; coed)	Sister M. Raphael Director School of Nursing	X	X	108			P	680	624	627
St. Mark's Hospital 346 W. Seventh N. Salt Lake City, Utah 84103 (Hosp.; 1894; coed)	Lottie P. Felkner Director Nursing Education	X		108	X	16	P	850	250	250
VIRGINIA										
Alexandria Hospital Alexandria, Va. 22314 (Hosp.; 1894; coed)	Edith Harper Director of Nursing Education	X		117		23	P	250	250	250
Rockingham Memorial Hospital 738 S. Mason St. Harrisonburg, Va. 22801 (Hosp.; 1912; coed)	Marian C. Jameson Director of Nursing Education	X		140	X	25	P	Res.: 675 Nonres.: 905	185	250
Riverside Hospital J. Clyde Morris Blvd. Newport News, Va. 23606 (Hosp.; 1916; coed)	Stella R. Whitehead Director School of Nursing	X	X	138	X	27	P	1274*	526*	375*
De Paul Hospital Granby St. & Kingsley Lane Norfolk, Va. 23505 (Hosp.; 1893; women only)	Sister Mary Louis Director School of Nursing	X	X	118	X	13	P	484	230	410
Norfolk General Hospital 600 Gresham Dr. Norfolk, Va. 23507 (Hosp.; 1892; coed)	Florence Bogush Director School of Nursing	X	#	138	X		#	658	189	214
Maryview Hospital 3636 High St. Portsmouth, Va. 23707 (Hosp.; 1945; women only)	Sister Mary of the Purification Director of Nursing	X	X	125	X	13	P	395	385	165
Portsmouth General Hospital 1020 Leckie St. Portsmouth, Va. 23704 (Hosp.; 1904; coed)	Lois S. Daniel Director School of Nursing	X	X	131	X	12	P	859	270	265
Community Hospital of Roanoke Valley Roanoke, Va. 24006 (Hosp.; 1965; coed)	Educational Director	X	X	132	X	2	P	315	315	315
Roanoke Memorial Hospital Belleview & Lake Aves. S.E. Roanoke, Va. 24014 (Hosp.; 1900; coed)	Sarah S. Luster Director Nursing Service & Nursing Education	X	X	130	X	12	#	930	605	575

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VIRGINIA—Continued										
Louise Obici School of Nursing Suffolk, Va. 23434 (Hosp.; 1951; coed)	Mary E. Martin Director School of Nursing	X	X	135	X	22	R #	675	250	250
WASHINGTON										
Deaconess Hospital 422 S. Wall St. Spokane, Wash. 99210 (Hosp.; 1898; coed)	Frances L. Wise Director School of Nursing	X	X	124	X	11	P	360	315	375
Sacred Heart Hospital West 20 9th Ave. Spokane, Wash. 99204 (Hosp.; 1898; coed)	Betty J. Harrington Director School of Nursing	X	X	130	X	11	P	560	464	364
St. Joseph Hospital 1815 S. Jay St. Tacoma, Wash. 98401 (Hosp.; 1900; coed)	Sister Martha Joseph Director of Nursing	X	X	108	X		P	553 #	510	464
Tacoma General Hospital 314 S. K St. Tacoma, Wash. 98405 (Hosp.; 1895; women only)	Bess M. Piggott Director of Nursing	X	X	114	X	12	#	1570	420	305
Central Washington Deaconess Hospital 325 Okanogan St. Wenatchee, Wash. 98801 (Hosp.; 1916; coed)	Frances O'Farrell Director School of Nursing	X	X	124	X	12	P	475	462	382
St. Elizabeth School of Nursing 110 S. 9th Ave. Yakima, Wash. 98902 (Hosp.; 1907; coed)	Margaret Fromherz Director of Nursing	X	X	110	X	11	P	487	490	250
WEST VIRGINIA										
St. Mary's Hospital 2900 1st Ave. Huntington, W. Va. 25701 (Hosp.; 1926; coed)	Sister M. Celeste Director of Nursing	X	X	112	X	8	P	Res.: 469 Nonres.: 775	Res.: 280 Nonres.: 428	Res.: 370 Nonres.: 444
Ohio Valley General Hospital 2000 Eoff St. Wheeling, W. Va. 26003 (Hosp.; 1892; women only)	Ruth S. Dunfee Director School of Nursing & Nursing Service			132			R	550	230	250
Wheeling Hospital 203 Main St. Wheeling, W. Va. 26003 (Hosp.; 1900; coed)	Sister Mary Byrne Director School of Nursing			132		24	#	306	406	206
WISCONSIN										
Bellin Memorial Hospital 702 S. Webster Ave. Green Bay, Wis. 54301 (Hosp.; 1909; coed)	Florence R. Durkee Director School of Nursing	X		117	X	8	#	1020	1020	1020
Mercy Hospital 570 N. Washington St. Janesville, Wis. 53545 (Hosp.; 1911; coed)	Sister Theresa Mary Director School of Nursing	X	X	121	X	24	P	1097*	680*	600*
Madison General Hospital 1010 Mound St. Madison, Wis. 53715 (Hosp.; 1902; coed)	Alice D. Schmitt Director of Nursing Education	X	X	132	X	12	P	#	240	300

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WISCONSIN—Continued										
Methodist Hospital 309 W. Washington Ave. Madison, Wis. 53703 (Hosp.; 1922; women only)	Anne Geyer Director of Nursing	X	X	127	X	36	P	1470*	833*	802*
St. Mary's School of Nursing 1100 Delaplaine Court Madison, Wis. 53715 (Hosp.; 1923; coed)	Sister M. Juanita Miller Director School of Nursing	X	X	130	X	12	P	1150	322	160
Holy Family School of Nursing 607 S. 24th St. Manitowoc, Wis. 54220 (Hosp.; 1920; coed)	Lorraine Regenfuss Director School of Nursing	X		132	X	12	P	637	435	434
St. Joseph's Hospital 509 St. Joseph Ave. Marshfield, Wis. 54449 (Hosp.; 1914; coed)	Helen L. Brunclik Educational Administrator	X	X	131	X	12	P	504	409	379
Columbia Hospital 3321 N. Maryland Ave. Milwaukee, Wis. 53211 (Hosp.; 1909; coed)	Merle McFeters Director School of Nursing	X		146	X	24	P	381	100	200
Deaconess Hospital 620 N. 19th St. Milwaukee, Wis. 53233 (Hosp.; 1917; coed)	Evelyn B. Rouse Director of Nursing Education	X	X	132	X	12	R	1055*	680*	595*
Lutheran Hospital of Milwaukee, Inc. 2200 W. Kilbourn Ave. Milwaukee, Wis. 53233 (Hosp.; 1903; coed)	Wealthy Lawton Director of Nursing	X	X	123	X	12	P	1065*	590*	600*
Milwaukee County General Hospital 8700 W. Wisconsin Ave. Milwaukee, Wis. 53226 (Hosp.; 1888; coed)	Margaret Bahr Director School of Nursing	X	X	132			P	300*	150*	150*
Mt. Sinai Hospital 948 N. 12th St. Milwaukee, Wis. 53233 (Hosp.; 1914; coed)	Augusta H. Simon Director School of Nursing	X	X	132	X	12	P	975*	680*	600*
Mercy Medical Ctr. 660 Oak St. Oshkosh, Wis. 54901 (Hosp.; 1906; coed)	Margaret A. Coleman Educational Administrator	X	X	134	X	24	P	533	300	250
St. Luke's Hospital 1320 Wisconsin Ave. Racine, Wis. 53403 (Hosp.; 1906; coed)	Marian B. Bower Director of Nursing Education	X	X	120	X		P	443	575	600

ADDITIONS TO THE LIST OF NLN-ACCREDITED DIPLOMA PROGRAMS IN NURSING

A Supplement to the 1968 Edition of *Education for Nursing --The Diploma Way*

The institutions listed below offer programs that were approved for NLN accreditation in December, 1968. For explanation of the symbols and letters that appear in the list, see page 5 of pamphlet.

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Graham Hospital 210 W. Walnut Canton, Ill. 61520 (Hosp.; 1910; coed)	Betty Jane Stockov Director School of Nursing	X	X	134	X	23	P	560	560	560
Truesdale Hospital 1820 Highland Ave. Fall River, Mass. 02720 (Hosp.; 1912; coed)	Anne M. Marin Director School of Nursing & Nursing Service	X	X	132	X	12	P	560*	20*	20*
Somerville Hospital 125 Lowell St. Somerville, Mass. 02143 (Hosp.; 1891; women only)	Mary B. Conceison Director School of Nursing	X	X	128		24	P	439*	403*	403*
Holzer Hospital 514 First Ave. Gallipolis, Ohio 45631 (Hosp.; 1920; coed)	Berenice D. Skehan Director of Nursing Education	X	X	130	X	10	P	1279*	926*	485*
Mansfield General Hospital 335 Glessner Ave. Mansfield, Ohio 44903 (Hosp.; 1919; coed)	Virginia B. Uhl Acting Director School of Nursing	X	X	132		10	P	322	219	177
Maumee Valley Hospital 2025 Arlington Ave. Toledo, Ohio 43609 (Hosp.; 1905; coed)	Helen L. Thompson Director School of Nursing	X	X	144	X	12	P	930*	300*	300*
Texas Eastern School of Nursing 801 Clinic Dr. Tyler, Tex. 75701 (Ind.; 1951; coed)	Larue J. Hardee Nurse Administrator	X	X	144	X	9	P	363	398	245

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NATIONAL LEAGUE FOR NURSING

Updated by a supplement for January 1969, the document lists by state 163 programs accredited by the National League for Nursing. Information for each entry includes: (1) address of the college or university, (2) name and title of the head of the program, (3) classification of students for whom program was accredited (students with no previous preparation in nursing and/or graduates of diploma and associate degree programs), (4) minimum educational entrance requirement, (5) program length, (6) residence requirements, (7) policies regarding acceptance of college graduates, married students, and men, (8) policies regarding part-time study, (9) living arrangements, and (10) the costs for each year. An introduction describes collegiate education for professional nursing, and explains state approval, general (regional) accreditation, and professional (national) accreditation. Suggestions are presented regarding collegiate education for: (1) high school students and graduates, (2) college graduates and individuals who have had some college work, and (3) students in and graduates of diploma and associate degree programs. Sources of further information are suggested. (JK)

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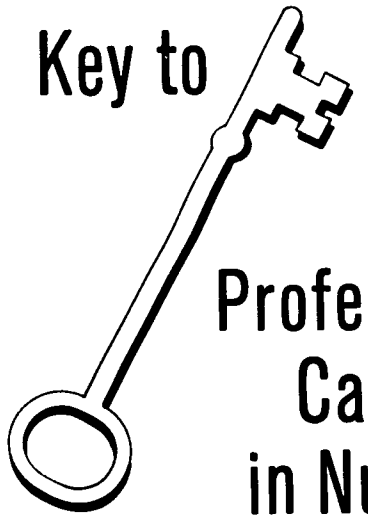
College Education: Key to a Professional Career in Nursing



With a List of NLN-Accredited Senior College and University Programs in Nursing

NATIONAL LEAGUE FOR NURSING

Department of Baccalaureate and Higher Degree Programs

10 Columbus Circle, New York, New York 10019

1968

Code Number 15-1311

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INTRODUCTION

In nursing today, as in many fields, the demand for the services of well-qualified men and women is greater than the supply. The need for more and better nursing care for all people and for more professional nurses to give such care is urgent. More nurses must be educated in colleges and universities if we are to meet our nation's nursing needs.

This pamphlet gives general information about collegiate education for nursing, explains the importance of selecting an accredited school, and lists senior college and university programs accredited by the National League for Nursing. The information will be of particular interest to

- high school students or high school graduates who wish to enter nursing.
- college graduates, college students, or persons with some college work who wish to enter nursing.
- registered nurses or students about to graduate from diploma or associate degree programs who wish to go to college.

A special section of general information for each group appears on pages 3 and 4.

Volumes have been written about the opportunities, the challenges, and the rewards of careers in nursing. It is a fact that modern nursing offers a greater range of job opportunities than most occupational fields. Professional nurses are at work wherever the prevention and cure of illness and the promotion of health are of concern. They are valued members of today's health team, working with people from many fields and all walks of life. Helping people is their business, whether as staff nurses giving direct care to patients and their families, as supervisors and administrators directing and coordinating nursing care, as teachers of nursing, as clinical specialists, as nursing researchers, or as nurses in other positions.

The financial rewards in nursing, as in all occupations, vary with education and experience. The personal rewards—the intangibles that make nursing a plus profession—come through helping people.

More and better nursing care for all people depends on the availability of more well-qualified nurses. We hope this pamphlet will encourage you to seek collegiate education in nursing.

Department of Baccalaureate and Higher Degree Programs
National League for Nursing

others majoring in nursing or in other fields. Some institutions give advanced standing by transfer of credit; some award credit for or exemption from specific courses by examination. Because of these variations, the amount of credit or advanced standing granted to you, if any, will depend entirely on the policies of the college or university you elect to attend.

Focus on educational planning to reach your career goal.

Plan wisely, keeping in mind that the reward of today's education is tomorrow's success in the career of your choice.

Send for the catalogues or bulletins of several NLN-accredited programs admitting graduates of diploma and associate degree programs. Baccalaureate programs accredited to admit graduates of diploma and associate degree programs are indicated in column three of the school list that appears in this pamphlet. These are the schools from which you will wish to seek further, more specific information. Compare the purposes, admission requirements, curriculums, costs, and length of the various programs.

Visit schools, if possible, to discuss your plans and your questions with nursing faculty members. Decide on the program best for you and make application at the time suggested by the school.

References for Information About Financial Assistance

I. Available from the National League for Nursing, 10 Columbus Circle, New York, N.Y. 10019:

SCHOLARSHIPS AND LOANS—BEGINNING EDUCATION IN NURSING. 1967. Scholarship information for students who are beginning an education for nursing. (Code #41-410; 10 cents.)

SCHOLARSHIPS, FELLOWSHIPS, EDUCATIONAL GRANTS, AND LOANS FOR REGISTERED NURSES. 1967. Scholarship information for registered nurses who wish to work toward baccalaureate, masters, or doctoral degrees. (Code #41-408; 10 cents.)

II. Available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402:

BORROWING FOR COLLEGE—A GUIDE FOR STUDENTS AND PARENTS. 20 cents.

FINANCING AN UNDERGRADUATE EDUCATION. 1965. 15 cents.

FINANCIAL ASSISTANCE FOR COLLEGE STUDENTS. McKee. 1965. 50 cents.

STUDENT ASSISTANCE HANDBOOK. 1964. 50 cents.

III. Available from other sources:

HOW ABOUT COLLEGE FINANCING? American Personnel and Guidance Association, 1605 New Hampshire Avenue, N.W., Washington, D.C. 20009. 1964. 30 cents.

NEED A LIFT? The American Legion, Department S, Box 1055, Indianapolis, Ind. 46206. Revised annually. 25 cents.

Senior College and University Nursing Programs Accredited by The National League for Nursing

Listed on the following pages are senior college and university nursing programs accredited by the Department of Baccalaureate and Higher Degree Programs of the National League for Nursing. These programs prepare students for the initial practice of professional nursing; *all programs listed include preparation in public health nursing.*

The information that is given in the school list was supplied by the nursing programs in response to questionnaires. As in any publication of this type, the information is subject to change. As additional programs apply and are granted NLN accreditation, they are added to the list.

A complete and up-to-date list of NLN-accredited baccalaureate and higher degree programs appears annually in the June issue of *Nursing Outlook;* a supplementary list is published annually in the January or February issue. (*Nursing Outlook* is the official magazine of the National League for Nursing.)

For further information about any program listed, write to the nursing dean, director, or chairman for a catalogue or bulletin.

The meanings of the symbols that appear in the list are as follows:

**(Column 4)—Entrance requirement of one or more years of college may be met in another institution. In all cases, applicants must meet the school's prerequisites for the major in nursing. See school bulletin for details.

*(Column 9)—Exceptions are made if student meets one or more of the following conditions: is married, is over 21 years of age (in some schools, over 23), is a local resident, is a sophomore or upper classman, can live with parents or close relatives, has parents' approval. In some schools, dormitories are available but dormitory living is optional. See school bulletin for details.

(1) College or University and Address (Information in parentheses designates the legal control of the college or university and whether the institution is co-educational, for women only, or for men only. The coeducational status of the nursing program is given in column 7.)	(2) Head of Nursing Program and Title	(3) Nursing Program Accredited by NLN: For students with no previous preparation in nursing	(3) Nursing Program Accredited by NLN: For graduates of diploma and associate degree programs	(4) Minimum educational requirement for entering nursing program	(5) Usual Length of Program (Abbreviations: sem.-semesters; qtrs.-quarters; tri.-trimesters; s.s.-summer sessions)	(6) Divided Campus: Change of residence usually required for clinical experience	(6) Divided Campus: Length of time away from main campus	(7) Nursing Program Accepts: College graduates	(7) Nursing Program Accepts: Married students	(7) Nursing Program Accepts: Men (is coeducational)	(8) Some Part-Time Study Possible: For students with no previous preparation in nursing	(8) Some Part-Time Study Possible: For graduates of diploma and associate degree programs	(9) Living Arrangements: Dormitory residence required	(9) Living Arrangements: Individual arrangements with school approval	(9) Living Arrangements: Student's responsibility	(10) Approximate cost (in dollars) of required tuition and fees to a full-time student. Costs for resident and nonresident students are given for publicly controlled institutions. (Does not include cost of room and board, uniforms, books, transportation or supplies. See school bulletin for details.) 1st yr.	2d yr.	3d yr.	4th yr.	5th yr.
ALABAMA																					
Tuskegee Institute Tuskegee Institute, Ala. 36088 (Private; coed)	Lillian H. Harvey Dean School of Nursing	X	X	H.S. grad.	8 sem.; 2 s.s.	Yes	9-12 mos.	Yes	Yes	Yes	No	Yes	X*	X		Res.: 375 Nonres.: 750	425 880	425 880	375 750	
University of Alabama Box 1 1919 Seventh Ave. South Birmingham, Ala. 35233 (State; coed)	Florence A. Hixson Dean School of Nursing	X	X	H.S. grad.	12 qtrs.; 1 s.qtr.	No		Yes	Yes	Yes	No	Yes	X*			Res.: 450 Nonres.: 875	450 875	550 1164	450 875	
ARIZONA																					
Arizona State University Tempe, Ariz. 85281 (State; coed)	Loretta Hanner Dean College of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes	Yes	X*			Res.: 286 Nonres.: 1111	286 1101	286 1101	296 1111	
University of Arizona Tucson, Ariz. 85721 (State; coed)	Gladys Sorensen Dean College of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s.	No		Yes	Yes	Yes	Yes	Yes		X		Res.: 493 Nonres.: 1308	324 1139	324 1139	324 1139	
ARKANSAS																					
University of Arkansas Little Rock, Ark. 72201 (State; coed)	Elois R. Field Dean School of Nursing	X	X	H.S. grad. Two years prescribed liberal arts courses required for full admission to prof. nursing major.**	8 sem.; 2 s.s.	No		Yes	Yes	Yes	Fresh. and soph. liberal arts courses only.			X		Res.: 250 Nonres.: 650	250 650	325 725	325 725	
CALIFORNIA																					
California State College at Long Beach Long Beach, Calif. 90804 (State; coed)	Dorothy L. Walsh Chairman Department of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes	Yes		X*		Res.: 101 Nonres.: 701	101 701	101 701	101 701	
California State College at Los Angeles 5151 State College Drive Los Angeles, Calif. 90032 (State; coed)	Evelyn Malkin Chairman Department of Nursing	X	X	H.S. grad.	12 qtrs.	No		Yes	Yes	Yes	Yes	Yes			X	Res. (per quarter†): 37 Nonres. (per quarter†): 240	37 240	37 240	37 240	
†NOTE: Fees per qtr. are given since students may attend all 4 qtrs., and all courses are offered every qtr. If a student has the ability, the program can be completed in 3 calendar yrs.																					
Chico State College First & Normal Sts. Chico, Calif. 95926 (State; coed)	Louise M. Siegrist Chairman Division of Nursing	X	X	H.S. grad.	8 sem.	Yes	2-3 sem.	Yes	Yes	Yes	Yes	Yes		X*		Res.: 154 Nonres.: 874	154 874	154 874	154 874	
Fresno State College Cedar & Shaw Aves. Fresno, Calif. 93726 (State; coed)	Fannie L. Gardner Chairman Department of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes	Yes		X		Res.: 128 Nonres.: 848	100 700	100 700	100 700	
Humboldt State College Arcata, Calif. 95521 (State; coed)	Helen L. Allen Chairman Department of Nursing	X	X	H.S. grad.	12 qtrs.	No		Yes	Yes	Yes	Yes	Yes		X		Res.: 90 Nonres.: 810	90 810	90 810	90 810	
Loma Linda University Loma Linda, Calif. 92354 (Seventh-day Adventist; coed)	Maxine Atteberry Dean School of Nursing	X	X	1 yr. college**	6 sem.	No		Yes	Yes	Yes	No	Yes	X*				1350	1350	1350	
Mount St. Mary's College 12001 Chalon Road Los Angeles, Calif. 90049 (Roman Catholic; women)	Sister Rebecca Chairman Department of Nursing	X		H.S. grad.	12 qtrs.	No		Yes	Yes	No	Yes			X		1080	1080	1080	1080	
Sacramento State College 6000 J Street Sacramento, Calif. 95819 (State; coed)	Anna M. Steffen Chairman Division of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes	Yes		X		Res.: 118 Nonres.: 718	118 718	118 718	118 718	

(1) College or University and Address (Information in parentheses designates the legal control of the college or university and whether the institution is co-educational, for women only, or for men only. The coeducational status of the nursing program is given in column 7.)	(2) Head of Nursing Program and Title	(3) Nursing Program Accredited by NLN: For students with no previous preparation in nursing	(3) Nursing Program Accredited by NLN: For graduates of diploma and associate degree programs	(4) Minimum educational requirement for entering nursing program	(5) Usual Length of Program (Abbreviations: sem.-semesters; qtrs.-quarters; tri.-trimesters; s.s.-summer sessions)	(6) Divided Campus: Change of residence usually required for clinical experience	(6) Divided Campus: Length of time away from main campus	(7) Nursing Program Accepts: College graduates	(7) Nursing Program Accepts: Married students	(7) Nursing Program Accepts: Men (Is coeducational)	(8) Some Part-Time Study Possible: For students with no previous preparation in nursing	(8) Some Part-Time Study Possible: For graduates of diploma and associate degree programs	(9) Living Arrangements: Dormitory residence required	(9) Living Arrangements: Individual arrangements with school approval	(9) Living Arrangements: Student's responsibility	(10) Approximate cost (in dollars) of required tuition and fees to a full-time student. Costs for resident and nonresident students are given for publicly controlled institutions. (Does not include cost of room and board, uniforms, books, transportation or supplies. See school bulletin for details.)				
																	1st yr.	2d yr.	3d yr.	4th yr.	5th yr.
CALIFORNIA—Continued																					
San Diego State College 5402 College Avenue San Diego, Calif. 92115 (State; coed)	Neva E. Nye Coordinator Department of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes	Yes	X*				Res.: 130 Nonres.: 730	120 720	120 720	120 720	
San Francisco State College 1600 Holloway Avenue San Francisco, Calif. 94132 (State; coed)	Naomi Nmercole Acting Chairman Department of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes	Yes			X		Res.: 96 Nonres.: 596	96 596	96 596	96 596	
San Jose State College 125 So. Seventh St. San Jose, Calif. 95114 (State; coed)	Carol Keefe Chairman Nursing Department	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes	Yes			X		Res.: 100 Nonres.: 300	100 300	100 300	100 300	
Stanford University 300 Pasteur Drive Palo Alto, Calif. 94304 (Private; coed)	Grace E. Ringressy Director School of Nursing	X		2 yrs. college**	9 qtrs.	No		Yes	Yes	Yes	No		X*				Varies	Varies	1920	1920	1920
University of California Center for the Health Sciences 10833 Le Conte Avenue Los Angeles, Calif. 90024 (State; coed)	Lulu W. Hassenplug Dean School of Nursing	X	X	2 yrs. college**	7 qtrs.	No		Yes	Yes	Yes	Yes	Yes			X		Res.: 242 Nonres.: 1223	242 1223	242 1223	242 1223	242 1223
University of California Arguello & Parnassus Aves. San Francisco, Calif. 94122 (State; coed)	Helen Nahm Dean School of Nursing	X	X	2 yrs. college**	9 qtrs.	No		Yes	Yes	Yes	No	Yes			X		Res.: 245 Nonres.: 1045	245 1045	245 1045	245 1045	245 1045
University of San Francisco Golden Gate and Parker Avenues San Francisco, Calif. 94117 (Roman Catholic; coed)	Sister Mary Beata Dean School of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	No	Yes	X*				1291	1358	1281	1262	
COLORADO																					
Colorado State College 10th Avenue and 16th Street Greeley, Colo. 80631 (State; coed)	L. Elaine McMinn Dean School of Nursing	X		H.S. grad.	13 qtrs.	Yes	1 qtr.	Yes	Yes	Yes	No		X*				Res.: 345 Nonres.: 795	345 795	345 795	345 795	
Loretto Heights College 3001 South Federal Blvd. Denver, Colo. 80236 (Sisters of Loretto; women)	Margaret E. Metzger Director Division of Nursing	X	X	H.S. grad.	8 sem.; 8-wk. s.s.	No		Yes	Yes	Yes (For nsg.)	Yes	Yes	X*				1725	1700 s.s. 300	1700	1725	
University of Colorado 4200 East 9th Avenue Denver, Colo. 80220 (Regents of the University of Colorado; coed)	Kathryn M. Smith Dean School of Nursing	X	X	2 yrs. college**	10 sem.	Yes	6 sem.	Yes	Yes	Yes	No	Yes	X*				Res.: 413 s.s. 141 Nonres.: 1367 s.s. 359	413 141 1367 359	397 132 1351 350	397 132 1351 350	397 132 1351 350
CONNECTICUT																					
University of Bridgeport 75 Linden Ave. Bridgeport, Conn. 06602 (Private; coed)	Mary Topalis Dean College of Nursing	X	X	H.S. grad.	8 sem.; 10-wk. s.s.; 5-wk. s.s.	No		Yes	Yes	Yes	Yes	Yes	X*				1415	1650	1560	1350	
University of Connecticut Storrs, Conn. 06268 (State; coed)	Eleanor K. Gill Dean School of Nursing	X		H.S. grad.	8 sem.; 2 s.s.	Yes	3 sem.	Yes	Yes	Yes	Yes		X*				Res.: 250 Nonres.: 450	250 450	200 200	320 520	
DELAWARE																					
University of Delaware Newark, Del. 19711 (State; coed)	Mary K. Carl Dean College of Nursing	X		H.S. grad.	8 sem.; 2 s.s.	No		Yes	Yes	Yes	No			X			Res.: 350 Nonres.: 820	350 s.s. 90 820 s.s. 210	350 90 820 210	350 820	

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DISTRICT OF COLUMBIA																					
Catholic University of America Washington, D.C. 20017 (Roman Catholic; coed)	Mary F. Liston Dean School of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s.	No		Yes	Yes	Yes	No	Yes	X*			1746 s.s. 275	1746	1746	1771	
Georgetown University 3700 Reservoir Road N.W. Washington, D.C. 20007 (Roman Catholic; men, women)	Sister Rita Maria Bergeron Dean School of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s.	No		Yes	Yes	No	No	Yes	X*			2000 s.s. 377	2000	2000	2000	
FLORIDA																					
Barry College 11300 N.E. Second Ave. Miami, Fla. 33161 (Roman Catholic; women)	Sister Loretta Michael Director Department of Nursing	X		H.S. grad.	8 sem.; 1 s.s.	No		No	No	No	No		X*			Res.: 2100 s.s. 430 Nonres.: 1000 s.s. 270	2100 1000	2100 1000	2100 1000	
Florida State University 219 CBA Tallahassee, Fla. 32306 (State; coed)	Vivian M. Duxbury Dean School of Nursing	X	X	H.S. grad.	12 qtrs.	No		Yes	Yes	Yes	Yes	Yes		X		Res.: 375 Nonres.: 975	375 975	375 975	375 975	
University of Florida Gainesville, Fla. 32601 (State; coed)	Dorothy M. Smith Dean College of Nursing	X	X	2 yrs. college	7 qtrs. beginning Mar. or June qtr.	No		Yes	Yes	Yes	Yes	Yes		X		Res.: 300 Nonres.: 750	300 750	400 1000	300 750	
GEORGIA																					
Emory University Atlanta, Ga. 30322 (Methodist; coed)	Ada Fort Dean Nell Hodgson Woodruff School of Nursing	X	X	2 yrs. college**	9 qtrs.	No		Yes	Yes	Yes	No	No		X				1200	1200	1200	
Medical College of Georgia Augusta, Ga. 30902 (State; coed)	E. Louise Grant Dean School of Nursing	X	X	H.S. grad.	12 qtrs.	No		Yes	Yes	Yes	Yes	Yes	X*			Res.: 285 Nonres.: 705	285 705	285 705	292 712	
HAWAII																					
University of Hawaii 2528 The Mall Honolulu, Hawaii 96822 (State; coed)	Marjorie S. Dunlap Dean School of Nursing	X	X	H.S. grad.	9 sem.	No		Yes	Yes	Yes	Yes	Yes			X	Res.: 215 Nonres.: 225	215 225	215 225	215 225	110 120
IDAHO																					
Idaho State University Pocatello, Idaho 83201 (State; coed)	Helen V. Beckley Chairman Department of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s.	No		Yes	Yes	Yes	Yes	Yes			X	Res. (per sem.): 160 s.s. 85 Nonres. (per sem.): 250 s.s. 100	160 250	160 250	160 250	
ILLINOIS																					
De Paul University 25 East Jackson Boulevard Chicago, Ill. 60604 (Roman Catholic; coed)	Florence Finette Chairman Department of Nursing		X	Diploma and A.D. grad.	9 qtrs.	No			Yes	Yes		Yes		X		1200	1200	1200		
Illinois Wesleyan University Bloomington, Ill. 61701 (Private; coed)	Mary D. Shanks Director Brokaw Collegiate School of Nursing	X		H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes		X*			1295	1395	1495	1595	
Lovola University 6525 N. Sheridan Rd. Chicago, Ill. 60626 (Jesuit Fathers; coed)	Mary P. Lodge Dean School of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	No	Yes	X*			1410	1420	1370	1401	
Northern Illinois University 255 Normal Rd. De Kalb, Ill. 60115 (State; coed)	Annette S. Lefkowitz Director School of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes	Yes		X		Res.: 260 Nonres.: 423	260 423	260 423	260 423	

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ILLINOIS—Continued																					
St. Xavier College 103 Street and Central Park Avenue Chicago, Ill. 60655 (Roman Catholic; women)	Frank J. Shea Director School of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s.	No		Yes	Yes	Yes	No	No		X		1200	1200	1200 s.s. 264	1200	
University of Illinois 808 South Wood Street Chicago, Ill. 60612 (State; coed)	Mary Kelly Mullane Dean College of Nursing	X	X	1 yr. college**	9-11 qtrs.	No		Yes	Yes	Yes	Yes	Yes		X		Res.: 300 ea. s.s. 75 Nonres.: 870 ea. s.s. 220	300 885	300 885	300 885	
INDIANA																					
De Pauw University Greencastle, Ind. 46135 (Private (Methodist); coed)	Catherine M. Friddle Director School of Nursing	X		H.S. grad.	8 sem.; 1 s.s.	Yes	2 yrs. +s.s.	Yes	Yes	Yes	No		X* (Sr. yr.)			1900	1900 s.s. 200	800	800	
Goshen College 1700 S. Main St. Goshen, Ind. 46526 (Private (Mennonite); coed)	Orpah B. Mosemann Director Division of Nursing	X	X	H.S. grad.	10¾ tri.	No	14 wks.	Yes	Yes	Yes	Yes	Yes	X*			1570	1690	1690	1210	
Indiana University Medical Center Campus 1100 West Michigan St. Indianapolis, Ind. 46202 (State; coed)	Emily Holmquist Dean School of Nursing	X	X	1 yr. college**	6 sem.; 3 s.s.	No		Yes	Yes	Yes	Yes	Yes				Res.: 480 Nonres.: 1259	480 1259	480 1254	390 1050	
University of Evansville P.O. Box 329 Evansville, Ind. 47704 (Private (Methodist); coed)	Helen C. Smith Dean School of Nursing	X	X	H.S. grad.	12 qtrs.; 2 4-wk. s.s.	No		Yes	Yes	Yes	Yes	Yes		X		930 s.s. 20	930 s.s. 20	930	930	
IOWA																					
University of Iowa Iowa City, Iowa 52240 (State; coed)	Laura C. Dustan Dean College of Nursing	X	X	1 yr. college**	8 sem.	No		Yes	Yes	Yes	No	Yes		X*		Res.: 370 Nonres.: 1000	370 1000	370 1000	370 1000	
KANSAS																					
Marymount College East Iron Ave. & Marymount Rd. Salina, Kans. 67401 (Sisters of St. Joseph; coed)	Sister Mary Leon Pirotte Chairman Department of Nursing	X		H.S. grad.	12 qtrs.	Yes	11 wks.	Yes	Yes	Yes	No			X		900	900	900	900	
University of Kansas 39th and Rainbow Boulevard Kansas City, Kans. 66103 (State; coed)	Martha Pitel Chairman Department of Nursing Education	X	X	2 yrs. college**	10 sem.	No		Yes	Yes	Yes	Yes	Yes		X		Res.: 290 Nonres.: 750	290 750	268 728	268 728	268 728
KENTUCKY																					
Berea College 2290 College Station Berea, Ky. 40403 (Private; coed)	Chairman Department of Nursing	X		H.S. grad.	8 sem.; 1 s.s.	No			Yes	Yes	Yes		X*			135	100	100	105	
Catherine Spalding College 851 South 4th Street Louisville, Ky. 40203 (Sisters of Charity of Nazareth Kentucky; women)	Sister Kathleen Mary Bohan Chairman Department of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s.	No		Yes	Yes	Yes	Yes	Yes	X*			1000	1000	1000	1000	
University of Kentucky Lexington, Ky. 40506 (State; coed)	Marcia A. Dake Dean College of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes			X		Res.: 280 Nonres.: 980	280 980	280 980	280 980	
LOUISIANA																					
Dillard University 2601 Gentilly Blvd. New Orleans, La. 70122 (Private; coed)	Rita E. Miller Chairman Division of Nursing	X		1 yr. college	6 sem.; 3 s.s.	No		Yes	Yes	No	No		X*			Res.: 1680 Nonres.: 980	1680 980	1680 980	1500 800	

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LOUISIANA—Continued																					
Louisiana State University 1542 Tulane Avenue New Orleans, La. 70112 (State; coed)	Veronica Majchrzak Acting Head Department of Nursing	X	X	1 yr. college**	6 sem.; 1 s.s.	No		Yes	Yes	Yes	No	No	X*			Res.: 213 Nonres.: 563	135 435	135 435	151 451	
Northeast Louisiana State College 4001 DeSiard Street Monroe, La. 71201 (State; coed)	Jeanne A. Short Acting Head Department of Nursing	X		H.S. grad.	8 sem.; 1 s.s.	Yes	9 wks.	Yes	Yes	Yes	Yes		X*			Res.: 148 Nonres.: 548	148 548	148 s.s. 39 548 s.s. 239	159 559	
Northwestern State College of Louisiana Natchitoches, La. 71457 (State; coed)	Etta Anne Hincker Dean School of Nursing	X		H.S. grad.	8 sem.; 3 s.s.	Yes	2 yrs.	Yes	Yes	Yes	No		X*			Res.: 215 Nonres.: 965	215 965	215 965	150 750	
University of Southwestern Louisiana Lafayette, La. 70501 (State; coed)	Helen A. Meyer Dean College of Nursing	X		H.S. grad.	8 sem.; 1 s.s.	No	8 wks.	Yes	Yes	Yes	No		X*			Res.: 173 Nonres.: 573	173 573	173 573	173 573	
MARYLAND																					
Columbia Union College Carroll and Flower Aves. Takoma Park, Md. 20012 (Seventh-day Adventist; coed)	Alice E. Smith Chairman Department of Nursing	X	X	H.S. grad.	10 tri.	No		Yes	Yes	Yes	Yes	Yes	X	X		1940 3 tri.	1296 2 tri.	1940 3 tri.	1296 2 tri.	
St. Joseph College Emmitsburg, Md. 21727 (Roman Catholic; women)	Sister M. Aloysia Head Department of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s.	Yes	3 sem. 1 s.s.	No (R.N.s yes)	No	No	Yes		X*			1400	1760	1400	1400	
University of Maryland 624 West Lombard St. Baltimore, Md. 21201 (State; coed)	Marion I. Murphy Dean School of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s.	Yes		Yes	Yes	Yes	Yes	Yes				Res.: 404 Nonres.: 854	404 854	367 417	367 417	
MASSACHUSETTS																					
Boston College Chestnut Hill, Mass. 02167 (Jesuit; coed)	Margaret M. Foley Dean School of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s.	No		Yes	Yes	Yes	No	Yes		X		1750	1690	1650	1650	
Boston University 635 Commonwealth Ave. Boston, Mass. 02215 (Private; coed)	Irene S. Palmer Dean School of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes	Yes		X		1829	1829	1829	1829	
Simmons College 300 The Fenway Boston, Mass. 02115 (Private; women)	Margaret Plymire Chairman Department of Nursing	X	X	1 yr. college**	8 sem.	No		No	Yes	No	No	Yes	X*			1680	1680	1680	1680	
State College at Fitchburg 160 Pearl St. Fitchburg, Mass. 01420 (State; coed)	N. Katherine Sehl Chairman Department of Nursing	X		H.S. grad.	8 sem.	No			Yes	Yes	No			X		Res.: 255 Nonres.: 655	255 655	255 655	320 720	
University of Massachusetts Western Mass. Health Center Amherst, Mass. 01003 (State; coed)	Mary A. Maher Dean School of Nursing	X		H.S. grad. (upper 25% of class)	8 sem.	No		No	Yes	Yes	No		X*			TUITION—Res.: 200 TUITION—Nonres.: 600 FEES—Res. and Nonres.: 130	200 600 161	200 600 126	200 600 172	
MICHIGAN																					
Mercy College of Detroit 8200 West Outer Drive Detroit, Mich. 48219 (Roman Catholic; coed)	Sister Elizabeth Mary Chairman Department of Nursing	X		H.S. grad.	8 sem.	No		Yes	Yes	Yes	No			X		920	940	960	960	
Michigan State University 17 Morrill Hall East Lansing, Mich. 48823 (State; coed)	Gwendoline MacDonald Director School of Nursing	X	X	2 yrs. college (1 yr.**)	12 qtrs.; 1½ s.s.	Yes	1 qtr.	Yes	Yes	Yes	Yes	Yes	X*			Res.†: 357-506 Nonres.: 1205	357-506 1205	476-674 1606	357-506 1205	

†Range for in-state students is based on family income.

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																	1st yr.	2d yr.	3d yr.	4th yr.	5th yr.
MICHIGAN—Continued																					
University of Michigan 1355 Catherine Street Ann Arbor, Mich. 48104 (State; coed)	Rhoda R. Russell Dean School of Nursing	X		H.S. grad.	10 sem.; 1 s.s.	No		Yes	Yes	Yes	Yes			X			Res.: 420 Nonres.: 1300	525 1625	165 360	165 360	
Wayne State University 5557 Cass Detroit, Mich. 48202 (State; coed)	Margaret L. Shetland Dean College of Nursing	X	X	H.S. grad.	13 qtrs. (1st yr. 4 qtrs.)	No		Yes	Yes	Yes	Yes	Yes	X*			Res.: 563 Nonres.: 1415	411 1050	411 1050	411 1050	
MINNESOTA																					
College of St. Catherine 2004 Randolph Avenue St. Paul, Minn. 55116 (Sisters of St. Joseph; women)	Sister Mary Jane Chairman Department of Nursing	X		H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes			X			1200	1200	1200	1200	
College of St. Scholastica Duluth, Minn. 55811 (Roman Catholic; coed)	Eileen C. Hofbauer Chairman Department of Nursing	X		H.S. grad.	12 qtrs.; 1 s.s.	No		Yes	Yes	Yes	No		X*			1052	1029	1020	1085	
College of St. Teresa Winona, Minn. 55987 (Roman Catholic; women)	Sister M. Ancina Chairman Department of Nursing	X		1 yr. college	8 sem.; 2 s.s.	Yes	3-4 sem.	No	No	No	No		X*			1100	1075	1050	1075	
Gustavus Adolphus College St. Peter, Minn. 56082 (Lutheran; coed)	Doris Yokie Acting Chairman Department of Nursing	X		H.S. grad.	8 15-wk. sem.; 2 4-wk. s.s. 4 4-wk. winter terms	Yes	2 acad. yrs. + 4-wk. s.s.	Yes	Yes	Yes	Yes		X*			2400 (Comprehensive fee includes board and room)	2400	2400	2400	
St. Olaf College Northfield, Minn. 55057 (Lutheran; coed)	Elizabeth Olsen Chairman Department of Nursing	X		H.S. grad.	8 sem.	Yes	3 sem.	No	Yes	Yes	Yes			X			2600 (Comprehensive fee includes board and room)	2600	2600	2600	
University of Minnesota 125 Owre Hall Minneapolis, Minn. 55455 (State; coed)	Edna L. Fritz Director School of Nursing	X	X	1 yr. college**	10 qtrs.	No		Yes	Yes	Yes	No			X			Res.: 385 Nonres.: 870	385 870	385 870	560 1045	
MISSISSIPPI																					
University of Mississippi 2500 North State Street Jackson, Miss. 39216 (State; coed)	Christine L. Oglevee Dean School of Nursing	X	X	H.S. grad.	13 qtrs.	No		Yes	Yes	Yes	No	Yes		X			Res.: 330 Nonres.: 930	330 930	330 930	330 930	
MISSOURI																					
Avila College 11901 Wornall Road Kansas City, Mo. 64145 (Sisters of St. Joseph of Carondelet; women)	Norma Lee Lewis Chairman Department of Nursing	X		H.S. grad.	8 sem.	No		No	Yes	No	No		X*				900	900	900	900	
Marillac College 7804 Natural Bridge St. Louis, Mo. 63121 (Roman Catholic; women)	Sister Henrietta Guyot Chairman Department of Nursing	X	X	INFORMATION AVAILABLE FROM SCHOOL (ADMITS ONLY SISTERS OF RELIGIOUS COMMUNITIES)																	
St. Louis University 1401 South Grand Boulevard St. Louis, Mo. 63104 (Jesuit; coed)	Sister Mary Stephen Dean School of Nursing and Health Services	X	X	H.S. grad.	8 sem.; 2 s.s.	No		Yes	Yes	Yes	No	Yes	X*				2024	2024	1600	1600	
University of Missouri Columbia, Mo. 65201 (State; coed)	Ruby Potter, Assoc. Dean School of Medicine In Charge, School of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes	Yes	X*			Res.: 350 Nonres.: 850	350 850	350 850	350 850	
Washington University 416 South Kingshighway St. Louis, Mo. 63110 (Private; coed)	Martha M. Brown Dean School of Nursing	X	X	2 yrs. college	124 sem. hrs.	No		Yes	Yes	Yes	Yes	Yes		X	X		950 per semester				
MONTANA																					
Montana State University Bozeman, Mont. 59715 (State; coed)	Laura Walker Director School of Nursing	X	X	H.S. grad.	12 qtrs.	Yes	6 qtrs.	Yes	Yes	Yes	Yes	Yes	X*				Res.: 377 Nonres.: 608	381 608	390 608	390 608	

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NEBRASKA																					
Creighton University 2500 California St. Omaha, Nebr. 68131 (Roman Catholic; coed)	Dorothy Vossen Chairman Department of Nursing	X		H.S. grad.	8 sem.; 2 s.s.	No		Yes	Yes	Yes	Yes			X			1230	1458	1572	1230	
Union College Lincoln, Nebr. 68506 (Seventh-day Adventist; coed)	Ruth I. Haller Chairman Department of Nursing	X		H.S. grad.	8 sem.; 2 s.s. (2 12-wk. s.s.)	Yes	2 yrs.	Yes	Yes	Yes	Yes		X*				1225	1225	1300	1300	
University of Nebraska 42d and Dewey Avenues Omaha, Nebr. 68105 (State; coed)	Rena E. Boyle Professor, Associate Dean for Nursing School of Nursing	X	X	1 yr. college**	8 sem.; 2 s.s.	No		Yes	Yes	Yes	No	Yes	X*				Res.: 433 Nonres.: 933	290 355	290 355	230 280	
NEVADA																					
University of Nevada Reno, Nev. 89507 (State; coed)	Marjorie Elmore Dean Orvis School of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes	Yes			X		Res.: 350 Nonres.: 950	350 950	350 950	350 950	
NEW HAMPSHIRE																					
St. Anselm's College St. Anselm's Dr. Manchester, N.H. 03102 (Roman Catholic; men)	Ruth E. Bagley Director Department of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	No	Yes	X				1755	1665	1650	1675	
NEW JERSEY																					
Rutgers, The State University 87 Halsey St. Newark, N.J. 07102 (State; coed)	Bernice Chapman Dean College of Nursing	X	X	H.S. grad.	8 sem.; 1 4-wk. inter-session	No		Yes	Yes	Yes	No	Yes	X*	X*			Res.: 481 Nonres.: 717	540 776	471 707	481 717	
Seton Hall University So. Orange, N.J. 07079 (Archdiocese of Newark; coed)	Catherine Denning Acting Dean School of Nursing	X	X	H.S. grad.	8 sem.	No			Yes	Yes	No	Yes			X		1320	1340	1348	1329	
NEW MEXICO																					
University of New Mexico Albuquerque, N. Mex. 87106 (State; coed)	Reina F. Hall Dean College of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes				X			Res.: 350 Nonres.: 800	350 800	350 800	350 800	
NEW YORK																					
Adelphi University Garden City, N.Y. 11530 (Private; coed)	Eileen M. Jacobi Dean School of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes	Yes		X*			1600	1600	1600	1600	
Columbia University Faculty of Medicine 622 West 168 Street New York, N.Y. 10032 (Private; coed)	Mary I. Crawford Associate Dean Department of Nursing	X	X	2 yrs. college** or coll. grad.	4 sem.; 2 s.s. 4 sem.; 1 s.s.	No		Yes Spec. curric.	Yes	Yes	Yes	No	Yes	X*					1675	1675	
Columbia University Teachers College 525 West 120 St. New York, N.Y. 10027 (Private; coed)	Eleanor C. Lambertsen Director Division of Nursing Education		X	.....	EFFECTIVE JUNE 1, 1965, NO NEW STUDENTS ADMITTED TO THE BACHELOR OF SCIENCE DEGREE PROGRAM AT TEACHERS COLLEGE																.....
Cornell University— New York Hospital 1320 York Avenue New York, N.Y. 10021 (Private; coed)	Muriel R. Carbery Dean School of Nursing	X		2 yrs. college**	6 sem.	No		Yes	Yes	Yes	No			X					850	850	850
D'Youville College 320 Porter Avenue Buffalo, N.Y. 14201 (Grey Nuns of the Sacred Heart; women)	Virginia K. Ego Dean School of Nursing	X	X	H.S. grad.	8 sem.	No		No	Yes	No	No	Yes	X*				1400	1400	1400	1400	
Hartwick College Oneonta, N.Y. 13820 (Private (Lutheran); coed)	Mary C. Sees Acting Chairman Department of Nursing	X		H.S. grad.	8 10-wk. sessions; 4 Dec. terms	Yes	10 wks.	No	Yes	Yes	Yes		X*				1500	1500	1500	1500	

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NEW YORK—Continued																					
Hunter College of the City University of New York 695 Park Avenue New York, N.Y. 10021 (City; coed)	Marguerite C. Holmes Chairman Department of Nursing Education	X	X	H.S. grad.	8 sem.	No		No	Yes	Yes	No	No		X		Res.: 60 (No tuition)	60	60	60	
Keuka College Keuka Park, N.Y. 14478 (Private; women)	Beatrice Dorbacker Chairman Department of Nursing	X		H.S. grad.	12 qtrs.	No		Yes	Yes	No	Yes		X			1760	1730	1730	1740	
Long Island University Zeckendorf Campus Brooklyn, N.Y. 11201 (Private; coed)	Sue A. Sabia Chairman Department of Nursing	X	X	H.S. grad.	8 sem. Generic Program 7+ s.s. Grad. Nurse Program	No			Yes	Yes	Yes	Yes			X	1676	1676	1676	1676	
New York Medical College 106th Street & 5th Avenue New York, N.Y. 10029 (Private; coed)	Frances Reiter Dean Graduate School of Nursing	X		College grad.** (Any major)	4 sem. 1 s.s.	No		Yes[1] Spec. curric.	Yes	Yes	No				X	1550	1560			
[1] Program leads to masters degree for college graduates with no previous nursing preparation.																				
New York University School of Education New York, N.Y. 10003 (Private; coed)	Martha E. Rogers Head Division of Nurse Education		X	..... INFORMATION AVAILABLE FROM SCHOOL																
Niagara University Niagara University, N.Y. 14109 (Vincentian Fathers; coed)	Sister Bernadette Armiger Dean College of Nursing	X		H.S. grad.	8 sem.	No		No	Yes	Yes	Yes		X*			1535	1535	1535	1535	
Russell Sage College Troy, N.Y. 12180 (Private; women)	Olga Andruskiw Chairman Department of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	No-begin. (Yes-RNs)	No	Yes	X*	X (RNs)		1500	1500	1500	1500	
Skidmore College Saratoga Springs, N.Y. 12866 (Private; women)	Jean Campbell Chairman Irene Ward McClellan Department of Nursing	X		H.S. grad.	8-13½ wk. terms 4-4 wk. interterms (Jan.) 1-6 wk. s.s. 1-7 wk. s.s.	Yes	4 sem. 2 8-wk. s.s.	No	Yes	No	No		X			2175	2175	2175	2205	
State University of New York at Buffalo 3435 Main St. Health Sciences Building Buffalo, N.Y. 14214 (State; coed)	Ruth T. McGrorey Dean School of Nursing	X	X	H.S. grad.	8 sem.	No		Some	Yes	Yes	No	Yes	X*			Res.: 400 Nonres.: 600	400 600	400 600	400 600	
Syracuse University 103 Waverly Avenue Syracuse, N.Y. 13210 (Private; coed)	Gladys Van Benschoten Dean School of Nursing	X	X	H.S. grad.	8 sem. +1 s.s. or 9 sem.	No		No	Yes	Yes	Yes	Yes	X*			2100	2100 Optional s.s. 768 or 9th sem. 1050	1400	1400	
University of Rochester 260 Crittenden Boulevard Rochester, N.Y. 14620 (Private; coed)	Eleanor Hall Chairman Department of Nursing	X	X	2 yrs. college**	4 sem.; 1 s.s.	No		Yes	Yes	Yes	Yes	Yes	X*			Varies	Varies	1820 incl. s.s.	1565	
Wagner College 631 Howard Ave. Staten Island, N.Y. 10301 (Lutheran Church in America; coed)	Daphne A. Rolfe Dean School of Nursing	X		H.S. grad.	8 sem.; 1 4-wk. s.s.	No		Some	Yes	Yes	Yes		X*			1750	1750	1800	1500	
NORTH CAROLINA																				
Duke University Hanes House Durham, N.C. 27706 (Private; coed)	Myrtle Irene Brown Dean School of Nursing	X	X	H.S. grad.	8 sem.; 3-6 wk. s.s.	No		Yes	Yes	Yes	No	Yes	X*			1818	1818	1818	1818	
East Carolina University P.O. Box 2753 Greenville, N.C. 27834 (State; coed)	Eva W. Warren Dean School of Nursing	X	X	H.S. grad.	12 qtrs. 2-6 wk. s.s.	Yes	1 qtr. 1 s.s.	Yes	Yes	Yes	No	Yes	X*			Res.: 282 Nonres.: 534	329 623	329 623	282 534	

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NORTH CAROLINA—Continued																					
North Carolina College at Durham Fayetteville Street Durham, N.C. 27707 (State; coed)	Helen S. Miller Chairman Department of Nursing		X	H.S. grad. plus R.N.	6 sem.; 1 s.s.	No		Yes	Yes	Yes		Yes		X		Res.: 299 Nonres.: 749	299 749	374 824		
University of North Carolina P.O. Box 389 Chapel Hill, N.C 27514 (State; coed)	Lucy H. Conant Dean School of Nursing	X	X	H.S. grad. or 2 yrs. college**	8 sem.; 1 s.s.[1] 4 sem.; 1 s.s.[1]	No		Yes	Yes	Yes	No	No	X*			Res.[2]: 327 Nonres[2]: 852	327 852	339 864	339 864	
					[1] one s.s. includes 2 6-wk. terms.											[2] Subject to change without notice.				
NORTH DAKOTA																					
University of North Dakota Grand Forks, N.Dak. 58201 (State; coed)	Margaret F. Heyse Dean College of Nursing	X		1 yr. college**	8 sem.	Yes	½-1 sem.	Yes	Yes	Yes	Yes		X*			Res.: 372 Nonres.: 876	372 876	372 876	372 876	
OHIO																					
Capital University 2199 E. Main St. Columbus, Ohio 43209 (American Lutheran Church; coed)	Evelyn R. Barritt Dean School of Nursing	X		1 yr. college** Pre-nursing	6 sem.; 1 s.s. Nursing	No		Yes	Yes	Yes	Yes		X*	X		1650	1900 + 2 courses in s.s.	1900	1900	
Case Western Reserve University 2063 Adelbert Road Cleveland, Ohio 44106 (Private; coed)	Rozella M. Schlotfeldt Dean Frances Payne Bolton School of Nursing	X	X	4 sem.** (60 credits)	6 sem.	No		Yes	Yes	Yes	Yes	Yes		X		Varies	Varies	1600	1600	1600
College of Mt. St. Joseph on the Ohio Mt. St. Joseph, Ohio 45051 (Catholic (Sisters of Charity); women)	Sister De Chantal Director Department of Nursing	X		H.S. grad.	8 sem.; 1 s.s.	No		Yes	No	No	No			X		980	980	1130 incl. s.s.	1130	
Ohio State University 410 W. 10th Ave. Columbus, Ohio 43210 (State; coed)	Imogene King (after 8/1/68) Director School of Nursing	X	X	1 yr. college**	12 qtrs.	No		Yes	Yes	Yes	No	No	X*			Res.: 495 Nonres.: 1095	660 1460	660 1460	660 1460	
St. John College of Cleveland Cathedral Square Cleveland, Ohio 44114 (Cleveland Catholic Diocese; women)	Sister M. Edith Dean Division of Nursing	X		H.S. grad.	8 sem.; 3-6 wk. s.s.	No		Yes	No	No	No			X		1153	1123	1113 incl. s.s.	958	
University of Cincinnati 3110 Vine St. Cincinnati, Ohio 45219 (City; coed)	Ruth Dalrymple Dean College of Nursing and Health	X	X	H.S. grad.	12 qtrs.; 2 s. qtrs.	No		Yes	Yes	Yes	No	Yes		X		City Res.: 510 Ohio Res.: 645 Nonres.: 1215	680 860 1620	680 860 1620	510 645 1215	
OKLAHOMA																					
Oklahoma Baptist University Shawnee, Okla. 74801 (Private (Baptist); coed)	Hope O. Pritchard Chairman Department of Nursing	X		H.S. grad.	8 sem.	Yes	4 sem.	Yes	Yes	Yes	No			X*		600	600	600	600	
University of Oklahoma 800 N.E. 13th Street Oklahoma City, Okla. 73104 (State; coed)	Helen E. Patterson Dean School of Nursing	X	X	1 yr. college**	8 sem.; 1 s.s.	No		Yes	Yes	Yes	No	No	X*			Res.: 360 Nonres.: 900	372 s.s. 96 930 s.s. 240	360 900	372 930	
OREGON																					
University of Oregon 3181 S.W. Sam Jackson Park Rd. Portland, Oreg. 97201 (State; coed)	Jean E. Boyle Director School of Nursing	X	X	1 yr. college**	12 qtrs.; 1 s.s.	Yes	6 mos.	Yes	Yes	Yes	No	Yes	X*			Res.: 369 Nonres.: 999	508 948	381 711	381 711	
University of Portland 5000 N. Willamette Boulevard Portland, Oreg. 97203 (Holy Cross Fathers; coed)	Vernia Jane Huffman Dean School of Nursing	X		H.S. grad. or 2 yrs. college**	8 sem.; 2 s.s.	No		Yes	Yes	Yes	Yes			X		1250	1250	1250 s.s. 315	1250 s.s. 332	

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PENNSYLVANIA																					
Duquesne University 600 Forbes Avenue Pittsburgh, Pa. 15219 (Congregation of Holy Ghost Fathers; coed)	Regina Fusan Dean School of Nursing	X	X	H.S. grad.	8 sem.	No		No	Yes	Yes	Yes	Yes		X		1440	1450	1400	1430	
Mount Mercy College 3333 Fifth Avenue Pittsburgh, Pa. 15213 (Catholic (Sisters of Mercy); women)	Sister Mary Louise Chairman Department of Nursing	X		H.S. grad.	8 sem.; 1 s.s.	No		Yes	Yes	No	Yes		X*	X		1500	1500	1860 s.s. incl.	1500	
University of Pennsylvania 205 South 34th Street Philadelphia, Pa. 19104 (Private; coed)	Dorothy A. Mereness Dean School of Nursing		X	H.S. grad. + R.N.	6 sem.	No		Yes	Yes	Yes		Yes			X		1100	1100	1100	
		X		H.S. grad.	8 sem.; 2-6 wk. s.s.	No		Yes	Yes	Yes	Yes		X*			2150	2150	2150	2150	
University of Pittsburgh 3550 Terrace Street Pittsburgh, Pa. 15213 (State related; coed)	Marquerite J. Schaefer Dean School of Nursing	X	X	H.S. grad.	4 acad. yrs.; 1 s.s.	No		Yes	Yes	Yes	Yes	Yes		X		Res.: 563 Nonres.: 1750	563 1750	672 2100	450 1400	
Villa Maria College 2551 West Lake Road Erie, Pa. 16505 (Roman Catholic; women)	Dorothy Dobrushin Novello Chairman Division of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	No	Yes	Yes	X*			950	950 (Tuition and general fees only)	950	950	
Villanova University 824 Lancaster Ave. Villanova, Pa. 19085 (Catholic; men, women)	Dorothy R. Marlow Dean College of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s.	No		Yes	Yes	Yes	No	Yes	X*			1720	1670	1670	1695	
PUERTO RICO																					
Catholic University of Puerto Rico Ponce, P.R. 00731 (Roman Catholic; coed)	Sister Altagracia, D.C. Chairman Department of Nursing	X	X	H.S. grad.	8 sem.; 3 s.s.	Yes	8 wks.	Yes	Yes	Yes	No	Yes		X		745	710	585	445	
University of Puerto Rico Medical Sciences Campus San Juan, P.R. 00905 (State; coed)	Lydia Lopez Lopez Director Department of Preventive Medicine and Public Health Nursing Section		X	R.N.s	6 sem.	No		No	Yes	Yes		Yes			X	Res.: 124 Nonres.: (usually enroll 1 yr. only)	157	204 554		
RHODE ISLAND																					
Salve Regina College 1 Ochre Point Ave. Newport, R.I. 02840 (Sisters of Mercy of the Union; women)	Sister Kathleen O'Connell Director Division of Nursing	X		H.S. grad.	8 sem.	Yes	2 sem.	Yes	Yes	No	No			X		1000	1000	1000	1000	
University of Rhode Island Kingston, R.I. 02881 (State; coed)	Martha O. Sayles Dean College of Nursing	X		H.S. grad.	8 sem.; 1 s.s.	No	4 sem.	No	Yes	Yes	Yes			X	X	Res.: 350 Nonres.: 950	350 900	350 900	350 950	
SOUTH CAROLINA																					
University of South Carolina Columbia, S.C. 29208 (State; coed)	Amy E. Viglione Dean School of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s. (6 wks.)	No		Yes	Yes	Yes	Yes	Yes	X*			Res.: 546 Nonres.: 1125	450 1005	450 1005	450 1005	
SOUTH DAKOTA																					
South Dakota State University Solberg Hall University Station Brookings, S.Dak. 57006 (State; coed)	Genevieve Johnson Dean College of Nursing	X	X	H.S. grad.	8 sem.	Yes	2 sem.	Yes	Yes	Yes	Yes	Yes	X*			Res.: 387 Nonres.: 916	387 916	387 916	387 916	
TENNESSEE																					
Southern Missionary College Collegedale, Tenn. 37315 (Seventh-day Adventist; coed)	Catherine Glatho Acting Chairman Division of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s. (4 wks.)	Yes	2 sem.	Yes	Yes	Yes	Yes	Yes	X*	X For RN's		1090	1020	1090	1020	

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TENNESSEE—Continued																					
University of Tennessee 879 Madison Avenue Memphis, Tenn. 38103 (State; coed)	Ruth Neil Murry Dean College of Nursing	X	X	1 yr. college**	11 qtrs.	No		Yes	Yes	Yes	No	No		X		479	410	410		
Vanderbilt University Twenty-First Avenue South Nashville, Tenn. 37203 (Private; coed)	Luther Christman Dean School of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	No	Yes	X*			1660	1660	1660	1660	
TEXAS																				
Baylor University 3616 Worth St. Dallas, Tex. 75246 (Baptist; coed)	Geddes McLaughlin Dean School of Nursing	X		H.S. grad.	8 sem.; 1 s.s. (9 wks.)	Yes	4 sem. 1 s.s.	Yes	Yes	Yes	No		X*			850	875	900	750	
Incarnate Word College 4301 Broadway San Antonio, Tex. 78209 (Catholic-Sisters of Charity of the Incarnate Word)	Sister M. Lucilla Chairman Department of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s. (6 wks.)	No		Yes	Yes	Yes only in nursing	Yes	Yes	X For H.S. grads	X For RN's		840	825	825	850	
Sacred Heart Dominican Coll. 2401 East Holcombe Blvd. Houston, Tex. 77021 (Catholic; women)	Helen Pittman Chairman St. Joseph's Department of Nursing	X		H.S. grad.	8 sem.; 1s.s. (6 wks.)	No		Yes	Yes	No	No			X		1158 incl. s.s.	926	906	944	
Texas Christian University Box 29670A T.C.U. Station Fort Worth, Tex. 76129 (Disciples of Christ (Christian); coed)	Virginia R. Jarratt Dean Harris College of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s. (6 wks.)	No		Yes	Yes	Yes	Yes	Yes	X*			1230	1450	1150	1150	
Texas Woman's University Box 3026, TWU Station Denton, Tex. 76204 (State; women)	Faye Pannell Dean College of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s. (12 wks.)	Yes	5 sem. 1 s.s.	Yes	Yes	No	s	Yes	X*	X		Res.: 258 Nonres.: 708	189 489	189 489	189 489	
University of Texas Austin, Tex. 78712 (State; coed)	Marilyn D. Willman Dean School of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s.	Yes	4 sem.	Yes	Yes	Yes	No	Yes		X		Res.: 150 Nonres.: 450	150 s.s. 55 450 s.s. 125	150 450	150 450	
UTAH																				
Brigham Young University 2240 SFLC Provo, Utah 84601 (Church of Jesus Christ of Latter-Day Saints; coed)	Elaine Murphy Acting Dean College of Nursing	X		H.S. grad.	8 sem.; 1 s.s.	Yes	1-2 sem.	Yes	Yes	Yes	Yes				X	Church Members: 430 Non-Members: 700	430 700	430 700	430 700	
University of Utah 50 North Medical Dr. Salt Lake City, Utah 84112 (State; coed)	Mildred D. Quinn Dean College of Nursing	X	X	H.S. grad.	13 qtrs. or 15 qtrs.	No		Yes	Yes	Yes	No	Yes		X		Res.: 420 Nonres.: 939	420 939	420 939	420 939	
VERMONT																				
University of Vermont Division of Health Sciences Burlington, Vt. 05401 (State; coed)	Norma Woodruff Director School of Nursing	X		H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes		X*			Res.: 677 Nonres.: 1877	677 1877	677 1877	677 1877	
VIRGINIA																				
Hampton Institute Hampton, Va. 23368 (Private; coed)	Fostine G. Riddick Director Division of Nursing	X	X	H.S. grad.	8 sem.; 2 s.s.	No		No	Yes	Yes	Yes			X		860	860 2 s.s. approx. 500	860	860	
Medical College of Virginia 12th and Broad Sts. Richmond, Va. 23219 (State; coed)	Doris B. Yingling Dean School of Nursing	X	X	H.S. grad.	12 qtrs.; 2 s. qtrs.	No		Yes	Yes	No	No	Yes	X*			Res.: 355 Nonres.: 785	355 785	355 785	355 785	
University of Virginia McKim Hall Charlottesville, Va. 22903 (State; coed)	Mary Lohr Dean School of Nursing	X	X	2 yrs. college**	4 sem.; 1 s.s.	Yes	2 yrs.	Yes	Yes	Yes	No	Yes		X		Res.: 607 Nonres.: 1257	718 s.s. incl. 1368 s.s. incl.	515 1100	515 1100	

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WASHINGTON																					
Pacific Lutheran University Tacoma, Wash. 98447 (Lutheran; coed)	Doris G. Stucke Director School of Nursing	X	X	1 yr. college**	6 sem.	No		Yes	Yes	Yes	Yes	Yes		X		1150	1150	1150	1150	
Seattle University 900 Broadway Seattle, Wash. 98122 (Roman Catholic; coed)	Sister Mary Ruth Dean School of Nursing	X	X	H.S. grad.	12 qtrs.; 1 s.qtr.	No		Yes	Yes	Yes	No	No	X*	X		1000	1000	1350	1000	
University of Washington Health Sciences Bldg. Seattle, Wash. 98105 (State; coed)	Mary S. Tschudin Dean School of Nursing	X	X	H.S. grad.	12 qtrs.; 1 s. qtr.	No		Yes	Yes	Yes	Yes	Yes			X	Res.: 345 Nonres.: 825	345 825	460 s.s. incl. 940 s.s. incl.	345 825	
Walla Walla College College Place, Wash. 99324 (Seventh-day Adventist; coed)	Wilma Leazer Dean School of Nursing	X	X	4 qtrs. college**	12 qtrs.	Yes	5 qtrs.	Yes	Yes	Yes	Yes	Yes	X*			1200	1200	1200	1200	
WEST VIRGINIA																					
West Virginia University Medical Center Morgantown, W.Va. 26506 (State; coed)	Lorita D. Jenab Dean School of Nursing	X	X	1 yr. college	6 sem.; 1 s.s.	No		Yes	Yes	Yes	No	Yes		X		Res.: 300 Nonres.: 940	300 s.s. 75 940 s.s. 220	300 940	300 940	
WISCONSIN																					
Alverno College 3401 S. 39th Street Milwaukee, Wis. 53215 (Private (Roman Catholic); women)	Sister Regina Marie Maibusch Acting Chairman Department of Nursing	X		H.S. grad.	8 sem.; 2 s.s.	No		No	Yes	No	Yes			X		700 (Bd. 840	700 840	700 2 s.s.; 180 ea. 840	700 840)	
Marquette University 3029 North 49th St. Milwaukee, Wis. 53210 (Society of Jesus; coed)	Sister M. Thomas Dean College of Nursing	X	X	H.S. grad.	8 sem.; 2 s.s.	No		Yes	Yes	Yes	Yes	Yes	X*			1250	1250	1250	1250	
University of Wisconsin 1402 University Avenue Madison, Wis. 53706 (State; coed)	Helen L. Bunge Dean School of Nursing	X	X	H.S. grad.	8 sem.; 2 s.s.	No		Yes	Yes	Yes	Yes	Yes		X		Res.: 350 Nonres.: 1150	350 2 s.s. 170 1150 2 s.s. 570	350 1150	350 1150	
WYOMING																					
University of Wyoming Box 3065 University Station Laramie, Wyo. 82071 (State; coed)	Amelia Leino Dean College of Nursing	X	X	H.S. grad.	8 sem.; 1 s.s.	Yes	3 sem.	Yes	Yes	Yes	Yes	Yes	X*			Res.: 345 Nonres.: 961	345 961	345 961	345 961	

ADDITIONS TO THE LIST OF NLN-ACCREDITED BACCALAUREATE PROGRAMS IN NURSING—JANUARY 1969

A Supplement to the 1968 Edition of *College Education: Key to a Professional Career in Nursing*

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FLORIDA																					
University of Miami Box 875 Biscayne Annex Miami, Fla. 33152 (Private; coed)	Barbara B. Buchanan Acting Dean School of Nursing	X	X	H.S. grad.	8 sem.	No		Yes	Yes	Yes	Yes	Yes	X*	X		1794	1764	1754	1754	
INDIANA																					
Ball State University 2000 University Ave. Muncie, Ind. 47306 (State; coed)	Helen J. Berry Head Department of Nursing	X	X	H.S. grad.	13 qtrs.	No		Yes	Yes	Yes	Yes	Yes		X		Res.: 390 Nonres.: 720	390 720	476 862	390 720	
IOWA																					
Marycrest College 1607 W. 12th St. Davenport, Iowa 52804 (Sisters of Humility of Mary; women)	Sister Mary Brigid Chairman Department of Nursing	X	X	1 yr. college	8 sem. (includes the 1 yr. of college as prereq-uisite); 1 s.s.	No		Yes	Yes	Yes	No	No	X	X		1020 s.s. 240	1020	1000	1000	
WASHINGTON																					
Seattle Pacific College 3d West at Nickerson Seattle, Wash. 98119 (Auspices of Free Methodist Church—Interdenomina-tional; coed)	Lydia F. Green Director School of Nursing	X		1 yr. college	13 qtrs.	No		No	Yes	Yes	No		X	X		1160	1160	1160	1160	
WISCONSIN																					
Marian College of Fond du Lac 45 S. National Blvd. Fond du Lac, Wis. 54935 (Roman Catholic Sisterhood; women)	Sister Mary Agreda Touchett Chairman Division of Nursing	X		H.S. grad.	8 sem.; 1 s.s.	No			Yes	No	No			X		600	750	600	600	

January, 1969

Publication Number 15-1311S

ADDRESSES OF STATE BOARDS OF NURSING

Write the following if you wish specific information about licensure requirements within individual states:

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ARIZONA, 543 E. McDowell Rd., Phoenix 85004
ARKANSAS, 314 W. Markham, Little Rock 72205
CALIFORNIA, 1021 O St., Rm. A290, Sacramento 95814
COLORADO, 1525 Sherman St., Rm. 115, Denver 80203
CONNECTICUT, 79 Elm St., Rm. 101, Hartford 06115
DELAWARE, 1300 Market St., Wilmington 19801
DISTRICT OF COLUMBIA, 1145 19th St., N.W., Washington 20036
FLORIDA, 4415 Beach Blvd., Jacksonville 32207
GEORGIA, Mitchell-Pryor Bldg., 166 Pryor St., S.W., Atlanta 30334
HAWAII, Box 3469, Honolulu 96801
IDAHO, 509 N. 5th St., Boise 83702
ILLINOIS, 160 N. LaSalle St., Rm. 201, Chicago 60601
INDIANA, 100 N. Senate Ave., Rm. 1018, Indianapolis 46204
IOWA, Valley Bank Bldg., 4th & Walnut, Des Moines 50319
KANSAS, 1154 W. State Office Bldg., Topeka 66612
KENTUCKY, 600 W. Cedar St., Suite 201, Louisville 40203
LOUISIANA, 407 Louisiana State Office Bldg., 325 Loyola Ave., New Orleans 70112
MAINE, 559 Forest Ave., Portland 04101
MARYLAND, 603 State Office Bldg., 301 W. Preston St., Baltimore 21201
MASSACHUSETTS, State Office Bldg., Rm. 1509, 100 Cambridge St., Boston 02202
MICHIGAN, 1033 S. Washington Ave., Lansing 48910
MINNESOTA, Central Medical Bldg., 393 N. Dunlap, St. Paul 55104
MISSISSIPPI, 135 Bounds St., Suite 101, Jackson 39206
MISSOURI, 223½ E. High St., Jefferson City 65101
MONTANA, Suite 201, Wheat Bldg., Helena 59601
NEBRASKA, Box 4703, State House Station, Lincoln 68509
NEVADA, 644 S. Center St., Reno 89501
NEW HAMPSHIRE, Stickney Ave., Concord 03301
NEW JERSEY, 1100 Raymond Blvd., Rm. 104, Newark 07102
NEW MEXICO, 505 Marquette Ave., N.W., Albuquerque 87101
NEW YORK, State Education Dept., Division of Professional Education, Albany 12224
NORTH CAROLINA, Box 2129, Raleigh 27600
NORTH DAKOTA, State Office Bldg., 900 E. Blvd., Bismarck 58501
OHIO, 21 W. Broad St., Rm. 705, Columbus 43215
OKLAHOMA, 513 Sequoyah Memorial Office Bldg., Oklahoma City 73105
OREGON, 1400 S.W. Fifth Ave., Rm. 778, Portland 97201
PENNSYLVANIA, Box 2649, Harrisburg 17120
PUERTO RICO, P.O. Box 3271, San Juan 00903
RHODE ISLAND, State Office Bldg., Rm. 302, Providence 02903
SOUTH CAROLINA, 909 The Columbia Bldg., 1203 Gervais St., Columbia 29201
SOUTH DAKOTA, 301 Western Bldg., Mitchell 57301
TENNESSEE, 213-217 Capitol Towers, Nashville 37219
TEXAS, 6225 U. S. Highway 290 East, Austin 78723
UTAH, 330 E. 4th South, Salt Lake City 84114
VERMONT, 130 State St., Montpelier 05602
VIRGINIA, 1205 Central National Bank Bldg., Richmond 23219
VIRGIN ISLANDS, Board of Nursing Registration and Nursing Education, Charlotte Amalie, St. Thomas 00801
WASHINGTON, P.O. Box 649, Olympia 98501
WEST VIRGINIA, 408 Davidson Bldg., 910 Quarrier St., Charleston 25301
WISCONSIN, 2 E. Gilman St., Madison 53703
WYOMING, 1902 Thomes Ave., Rm. 214, Cheyenne 82001

ARTICLES ABOUT COLLEGIATE EDUCATION FOR THE REGISTERED NURSE

BOYLE, RENA, and PETERSON, FRANCES. "The Registered Nurse Seeks a College." *Nursing Outlook* 10:652-654, October 1962.

ERICKSON, EVA H. "Why Nurses Need a College Education." *The Modern Hospital* 100:89-90, February 1963.

ERNE, SISTER MARY JULIE. "Implications of Trends in Nursing Education." *Nursing Outlook* 14:36-38, September 1966.

HASSENPLUG, LULU WOLF. "Going on for a Bachelor's Degree." *American Journal of Nursing* 66:83-85, January 1966.

MACDONALD, GWENDOLINE. "Baccalaureate Education for Graduates of Diploma and Associate Degree Programs." *Nursing Outlook* 12:52-56, June 1964.

SWAFFORD, ELIZABETH HITT. "A Diploma Program Graduate Goes to College." *Nursing Outlook* 13:55-56, January 1965.

REFERENCES FOR FURTHER INFORMATION

MASTERS EDUCATION: ROUTE TO OPPORTUNITIES IN MODERN NURSING. This pamphlet, a companion piece to the one you are reading, gives general information about masters education and includes an annotated list of colleges and universities offering NLN-accredited masters programs. (Revised annually.) 1-9 copies, 25 cents ea.; 20% discount on orders for 10 or more copies. Available from National League for Nursing, 10 Columbus Circle, New York, N. Y. 10019. (Code: 15-1312.)

AVENUES FOR CONTINUED LEARNING. This booklet provides general information about continuing education for registered nurses. 1967. Available from American Nurses' Association, 10 Columbus Circle, New York, N. Y. 10019. (Code: G-95; price: 50 cents.)

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*INDUSTRIAL EDUCATION; DIRECTORIES; TRADE AND INDUSTRIAL TEACHERS; *EMPLOYMENT OPPORTUNITIES; *OVERSEAS EMPLOYMENT; *PROFESSIONAL PERSONNEL; ADMINISTRATIVE PERSONNEL

This guide includes the names and addresses of 17 organizations, plus brief descriptions of their personnel needs for industrial educators in overseas assignments. Pertinent information is included on recruitment channels used, lead time requirements and suggestions for making application, geographical locations, types of schools, job responsibilities, and past and future teacher quantity needs. A list of additional organizations which did not respond to the questionnaire but are known to be relatively active in overseas teacher placement are included, along with a roster of organizations who indicated they had no need for industrial education personnel. (GR)

VT 009 277

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A GUIDE TO OVERSEAS PROFESSIONAL OPPORTUNITIES FOR INDUSTRIAL EDUCATION PERSONNEL

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American Industrial Arts Association
International Relations Committee
Donald E. Perry, Ed.D., Committee Chairman

August 1969

VT009277

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A Guide to Overseas Professional Opportunities For Industrial Education Personnel

Have you ever sought an overseas teaching post and in the process become bogged-down while attempting to discover which organizations seek industrial education personnel? In the past industrial education teachers and supervisors have had little to guide them in their efforts to locate appropriate opportunities. The development of this Guide, sponsored by the International Relations Committee of the American Industrial Arts Association, will hopefully open channels of communication between individual teachers and sponsoring organizations.

Approximately seventy organizations involved in locating and recruiting overseas education personnel of all kinds were identified in the process of preparing this Guide. Seventeen organizations directly indicated need for industrial education personnel. This Guide includes names and addresses of these seventeen organizations plus brief descriptions of their personnel needs.

Of importance to those looking for suitable overseas assignments are the kinds of jobs and numbers of opportunities handled by these organizations. This Guide furnishes pertinent information not only on recruitment channels used, lead time requirements and suggestions for making application, but also geographical locations, type of schools, job responsibilities, and past and future teacher quantity needs.

While the shortage of industrial educators is world-wide it is particularly acute in the developing nations of Asia, Africa, and Latin America. Demand for experienced, qualified teachers in these regions is high and the supply of indigenous teachers is low, thus creating a sharp gap which can be alleviated only by employing foreign teachers. Unfortunately, the salaries and conditions of service provided by most foreign overseas employers (government and private) are often too low to attract

and hold expartiate teachers. There are abundant opportunities, however, for those willing to accept indigenous salaries and conditions of service, albeit this usually results in lower living standards for most North Americans. Many other employers especially the United States government, United States private firms and organizations, and international agencies offer salaries and conditions of service which are quite attrative. At the time of this writing, however, United States government funds for sponsoring foreign assistance projects in education have been sharply reduced, thus curtailing but not eliminating the quantity of better-paying opportunities.

Overseas teaching offers many benefits, in addition to satisfying the desire to render significant professional service in foreign lands. Principal among these is the opportunity to understand other people--their cultures, values, governments, and economies--through first-hand experience. Travel and study in host countries provide fascinating contacts and insights which are irreplacable. Financial rewards may be modest, but foreign assignments can be exceptionally rewarding in terms of personal satisfaction and new concepts acquired.

Most foreign teaching opportunities range in length from periods of a few months to two and three-year contracts. Although this represents the duration of involvement by most persons, some industrial educators have made careers in international education. Such career opportunities are not numerous but they do exist. Service with foreign governments, especially the developing countries, should be regarded as being relatively temporary since their policies usually call for localization of their education cadre as rapidly as possible. Some of the developing countries may achieve this objective within the next decade.

Special mention is made of annual exchange teacher opportunities coordinated

by the Teacher Exchange Section of the U.S. Office of Education and the Committee on International Exchange of Persons.

Location of Opportunities

Inspection of the Table which follows reveals that most industrial education opportunities are located in the three regions of developing countries, namely Africa, Asia, and Latin America. Fewer opportunities for American industrial educators exist in Europe and other economically developed regions such as Japan and Oceana. Teacher Exchange programs and schools for American dependents, such as Department of Defense Overseas Dependents Schools, afford attractive opportunities for persons interested in the developed areas.

Job Descriptions

Responding to the question on job description a large proportion of the organizations reported teaching, supervision, and curriculum development responsibilities. Advising and research were not noted as frequently. Most positions include various combinations of these duties. Duty at a specific school is the usual assignment of the expartiate industrial educator. A few may be attached to universities, govenment departments of education, other governmental units, and private organizations where they function as administrators, advisors, teachers, and curriculum development personnel.

Kinds of Schools

Industrial education personnel are usually sought for positions in secondary schools, technical institutes, and institutions of higher education. Most opportunities exist in government operated institutions but there are some placements in the training programs of private companies. Community development schemes, apprenticeship programs, and industrial development operations utilize a few industrial educators.

Making Contacts

The twin problems of identifying and contacting appropriate organizations arise once an educator has a clear desire for an overseas assignment. The organizations included in the Table are directly engaged in recruiting industrial education personnel for their operations and/or they serve as clearinghouses or agents for various organizations in the field.

United States government agencies, such as the Peace Corps, Department of Defense Overseas Dependents Schools, Trust Territory of the Pacific, and United States Agency for International Development (USAID) are good sources for information on teaching positions. In regard to USAID inquiries, the headquarters in Washington, D.C. is directly involved with recruiting personnel for its own field operations. For information on opportunities in USAID programs under the direction of universities holding USAID contracts, the institutions themselves must be contacted.

Private and public organizations are also suggested as contacts, although these organizations as a whole recruit few industrial educators. For example, religious and service groups, institutes, and foundations do limited direct placement and some function only as clearing houses for overseas personnel requests. Industrial firms engaged in overseas operations sometimes operate schools for the dependents of their employees, but these schools are usually of the elementary or K through 8 level and consequently offer limited opportunity for industrial educators. Some firms do, however, employ industrial educators in their employee industrial training programs.

Other avenues for securing information include international agencies, such as UNESCO and the International Labor Organization. These agencies need personnel for a variety of assignments around the world. In addition, individuals may

contact government departments of education in specific foreign countries. Their embassies in Washington may be contacted for general information.

As noted in the Table, the agencies and organizations discussed above use many channels for the recruitment of personnel. Inasmuch as one may miss or overlook a placement bureau or professional journal announcement, the best means of contact may prove to be a direct letter of inquiry to an organization and getting on its active file and mailing list.

In the letter of inquiry it is recommended that a brief resume of professional experience and educational qualifications be included. A detailed record of professional experience, educational qualifications, personal data, and references is sometimes appropriate but is usually better suited as a response to a request for applicants. Along with a request for application forms, an inquiry should be made as to minimum educational and professsional qualifications (usually two years teaching experience and sometimes a master's degree) and foreign language requirements, if any.

Inquiries for information should be made well in advance of the time one might expect to assume an overseas position. It is not uncommon for applications to be made nine to twelve months prior to securing a position.

Once initial contacts have been undertaken and a favorable exchange of correspondence has taken place, a more specific detailed inquiry into the nature of the position can be requested. The information desired primarily relates to the conditions of service, namely:

a, Contract terms - duration of tour, leaves and vacations, retirement schemes.

b. Monetary terms - salary and taxes, allowances for housing, medical care. car and travel, shipment of personal and professional goods, dependent's schooling.

c. Living conditions - housing, location of medical facilities, cost of living, climatic conditions, social amenities.

d. Working conditions - teaching facilities and materials, job responsibilities and expectations.

The Table which follows is a compilation of information collected from the seventeen organizations which indicated need for industrial education personnel. Additional organizations who did not respond to the questionnaire but who are known to be relatively active in overseas teacher placement are included as a second portion of the Table. Following the Table is a list of official addresses which should be useful for making contacts. Finally, a roster of organizations who responded as not needing industrial education personnel is included.

TABLE - A GUIDE TO OVERSEAS PROFESSIONAL OPPORTUNITIES FOR INDUSTRIAL EDUCATION PERSONNEL

ORGANIZATIONS NEEDING INDUSTRIAL EDUCATION PERSONNEL	TYPE OF ORGANIZATION							SCHOOL LEVEL & TYPE								TYPE OF POSITION			
	Governmental	Non-Profit	Public	Private	Foundation	Religious	Professional	Secondary - General Educ	Secondary - Pre-vocational	Secondary - Voc-technical	Post Secondary	Higher Ed - General Educ	Higher Ed - Technical	Higher Ed - Teacher Educ	Other	Teaching	Supervision-Administration	Program Development	Research
International Schoools Services		●						●								●			
International Voluntary Services		●							●							●		●	
NEA Committee on International Relations		●					●			●						●			
Agency for International Development (USAID)	●	●	●					●	●	●	●	●	●	●		●	●	●	●
Teacher Exchange Section-U.S.O.E. (Fulbright Act)	●	●	●					●	●	●	●					●			
Laymen's Overseas Service		●				●									●	●	●	●	
British Council for Technical Educ. & Training	●	●	●						●	●	●		●	●		●	●	●	
British Voluntary Service Overseas		●		●	●					●	●		●		2 ●	●	●		
Canadian University Services Overseas		●							●	●	●	●	●	●		●			
Teachers for West Africa Program		●		●						●	●					●			
Tools for Freedom		●		●	●			●	●	●	●		●		3 ●	●	●	●	
Arabian American Oil Company				●											4 ●	●	●	●	
Mobil Oil Corporation				●											5 ●	●			
Department of Education - Guam	●	●	●					●	●	●						●	●	●	
Antillies Consolidated Schools - Puerto Rico	●	●	●					●								●			
Department of Education - Puerto Rico	●	●	●						●	●	●		●			●	●	●	
Department of the Interior - Saipan	●	●	●					●	●	●	●					●	●		

The following organizations are known to be active in teacher placement overseas. Since they d. not respond directly to the questionnaire, their published bulletins are used as the source of information entered below.

International Exchange of Persons (Fulbright Act)	●	●	●									●	●	●		●			●
UNESCO		●	●					●	●	●	●	●		●		●	●	●	●
International Labor Organization		●		●							●				6 ●	●	●	●	●
NEA Search (National Education Association)		●					●	●	●	●						●	●		
American Friends of the Middle East		●		●		●		●				●				●			
Teacher Education in East Africa		●	●											●	7 ●	●	●	●	
Department of Defense - Dependents Schools	●	●	●					●	●							●	●		
Peace Corps Volunteers	●	●	●					●	●	●	●	●	●	●		●	●	●	
Department of Education - American Samoa	●	●	●					●	●	●						●	●		

TYPE OF POSITIONS					GENERAL LOCATION									PAST PLACEMENTS				FUTURE NEEDS				RECRUITMENT MEANS						APPLICATION LEAD TIME			
Teaching	Supervision-Administration	Program Development	Research	Advising	Europe	Middle East	East Asia	West Africa	East Africa	Latin America	Pacific Territories	Worldwide		Zero	One to Five	Five to Ten	Over Ten	Zero	One to Five	Five to Ten	Over Ten	College Placement Bureaus	Private Placement Agencies	Professional Journals	Professional Contacts	Mailing Lists	Other	Two to Three Months	Four to Six Months	Seven to Nine Months	More than Nine Months
●				●			●								●				●			●				●					●
●	●					●	●								●				●			●							●		
●	●	●								●						●			●					●	◆				●		
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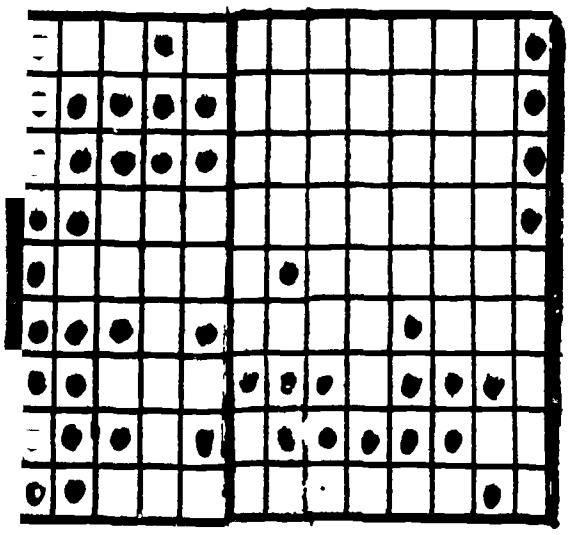

Footnotes:

1. Various levels
2. Trade school
3. Artisanship training
4. Company vocational training
5. K - 8 grades
6. Apprentice, trade, technician, foreman training
7. Teacher training colleges at less than universit, level.
8. N.A. - Not Available
9. College newspaper

ORGANIZATIONS INDICATING NEED FOR INDUSTRIAL

EDUCATION PERSONNEL

International Schools Services
392 Fifth Avenue
New York, New York 10018

International Voluntary Service, Inc.
1555 Connecticut Avenue, N.W.
Washington, D.C. 20036

NEA Committee on International Relations
National Education Association
1201 Sixteenth Street, N.W.
Washington, D.C. 20036

Chief Professional Talent Search
Office of Personnel & Manpower
Agency for International Development
Department of State
Washington, D.C. 20523

Teacher Exchange Section
Division of International Exchange
and Training
U.S. Office of Education, Dept. H.E.W.
Washington, D.C. 20202

Layman's Overseas Service, Inc.
P. O. Box 5031
Jackson, Mississippi 39216

Council for Technical Education
& Training for Overseas Countries
29, Bressenden Place
London, S.W. 1,
ENGLAND

Volunteer Services Overseas
3 Hanover Street
London, W.1.
ENGLAND

Canadian Universities Services Overseas
151 Slater Street
Ottawa 4, Ontario
CANADA

Teachers for West Africa
Elizabethtown College
Elizabethtown, Pennsylvania 17022

Tools for Freedom
Pan American Development Foundation
19th and Constitution Avenue, N.W.
Washington, D.C. 20006

Arabian American Oil Co.
505 Park Avenue
New York, New York 10022

Mobile Oil Corporation
150 E. 42nd Street
New York, New York 10017

Assistant Superintendent-Personnel
Department of Education
P. O. Box DE
Agana, Guam 96910

Superintendent
Antilles Consolidated Schools
Fort Buchanen, Puerto Rico 00934

Department of Education
Box 818
Hato Rey, Puerto Rico 00919

Department of the Interior
Office of the High Commissioner
Trust Territory of the Pacific Islands
Saipan, Mariana Islands 96950

ORGANIZATIONS KNOWN TO BE ACTIVE IN

OVERSEAS TEACHER PLACEMENT

(Did not respond to questionnaire)

Committee on International Exchange
of Persons
Conference Board of Associated
Research Council
2101 Constitution Avenue, N.W.
Washington, D.C. 20418

UNESCO
International Organizations Recruitment
Institute of International Studies
Department of Health, Education and
Welfare
Washington, D.C. 20202

International Labor Organization
Washington Branch
917 Fifteenth Street, N.W.
Washington, D.C. 20005

NEA Search
National Educational Association
1201 Sixteenth Street, N.W.
Washington, D.C. 20036

American Friends of the Middle East, Inc.
Middle East House
1605 New Hampshire Avenue, N.W.
Washington, D.C. 20009

Teacher Education in East Africa
Teachers College
Columbia University
New York, New York 10027

Department of Defense
Overseas Dependents Schools
Recruitment Center
Washington, D.C. 20301

Director of Recruitment
Peace Corps Volunteers
806 Connecticut Avenue, N.W.
Washington, D.C. 20525

Director of Education
Department of Education
Government of American Samoa
Pago Pago, American Samoa 96920

ORGANIZATIONS REPORTING NO CALL FOR

INDUSTRIAL EDUCATION PERSONNEL

British Information Services
845 Third Avenue
New York, New York 10022

Cerro de Pasco Corporation
300 Park Avenue
New York, New York 10022

Department of the Army
Office of the Deputy Chief of Staff
of Personnel
Overseas Recruitment Center
Washington, D.C. 20315

Esso Standard Eastern, Inc.
15 West 51st Street
New York, New York 10019

The Ford Foundation
320 E. 43rd Street
New York, New York 10017

Institute of International Education
809 United Nations Plaza
New York, New York 10017

International Development Association
1818 H. Street
Washington, D.C. 20433

Near East College Association
548 Fifth Avenue
New York, New York 10036

Office of Overseas Schools
Department of State
2201 C Street, N.W. State Annex 11
Washington, D.C. 20520

Orinoco Mining Co.
525 William Penn Place
Pittsburgh. Pennsylvania 15230

Overseas Appointments Bureau
38 King Street
London, W.C. 2,
ENGLAND

Overseas Development Institute
160 Piccadilly
London, W.1,
England

Overseas Educational Service
522 Fifth Avenue
New York, New York 10036

Rockefeller Foundation
111 W. 50th Street
New York, New York 10020

Standard Oil Company of New Jersey
30 Rockefeller Plaza
New York, New York 10020

U.S. Department of Commerce
Bureau of International Commerce
Washington, D.C. 20230

United States Information Agency
Washington, D.C. 20547

VT 009 530
Hoffman, Paul R.
Work Evaluation.

Stout State Univ., Menomonie, Wis. Inst. for Vocational Rehabilitation
MF AVAILABLE IN VT-ERIC SET.
Pub Date - 27Feb69 31p.; Speech Presented at Rehabilitation Conference (Houston, Texas, Feb. 27, 1969).

*VOCATIONAL REHABILITATION; *VOCATIONAL EVALUATION; VOCATIONAL ADJUSTMENT; SHELTERED WORKSHOPS; HANDICAPPED; JOB ANALYSIS; PSYCHOLOGICAL TESTING; WORK ENVIRONMENT; MODELS; BEHAVIOR THEORIES; REHABILITATION COUNSELING; *EVALUATION METHODS

Work evaluation may be defined as a specialized technology utilizing aspects of work to evaluate the vocational strength and weakness of persons, and it is this characteristics which separates it from other evaluation techniques. Various theories underlie work evaluation but performance may be reduced to a mathematical formula, such as "Behavior is a function of the person plus his environment." The methodologies of work evaluation include: (1) job analysis, (2) psychometric testing, (3) work samples, (4) the situational approach, (5) work stations, and (6) job tryout. A model for evaluation might include psychometric testing, work samples, sheltered work, job tryout, and (if available in the facility) work stations. A model concept of work evaluation should encompass work tasks, work situations, and work environments. (JK)

VT 009 530

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WORK EVALUATION

Paul R. Hoffman, Ed.D.

Presented at:

Rehabilitation Conference Sponsored by the Texas Division of Vocational Rehabilitation - February 27, 1969 at Houston, Texas

VT009530

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WORK EVALUATION

By

Paul R. Hoffman, Ed.D., Director
Institute for Vocational Rehabilitation
Stout State University, Menomonie, Wisconsin

Speech Presented Rehabilitation Conference Sponsored by the
Texas Division of Vocational Rehabilitation
February 27, 1969 - Houston, Texas

INTRODUCTION

Work evaluation is a complicated process. It requires extensive knowledge, training, and professional skill. It is as complicated as the job of the counselor or psychologist. But what do we mean by work evaluation?

There is no common definition of work evaluation. Definitions tend to be based upon facility settings. That is, a rehabilitation facility conducting work evaluation writes a definition based upon its particular approach. You find definitions based upon work evaluation as approached in vocationally oriented rehabilitation centers, medically oriented rehabilitation centers, sheltered workshops, and other settings. Medical personnel in chronic disease hospitals speak of work evaluation. They use the same terms as persons in vocational rehabilitation facilities, but the meanings are different.

Let me provide you with a few vocationally oriented definitions of work evaluation collected at Stout State University:

1. A process of exposing a handicapped person to certain aspects of work in order that a valid finding may be obtained of his vocational potential to secure a reliable determination as to his work habits, skill, dexterity, and his aptitude.
2. A process of measuring realistically an individual's present skills, abilities, aptitudes, interests, and physical and mental capacities performed successfully in an occupation.
3. A structural process, utilizing actual standardized job samples, to determine individual quantitive and qualitative work performance; potential for growth and related behavior. The objective is to determine area and

LEVEL OF VOCATIONAL CAPACITY AND DEFINE LIMITATIONS - SOCIAL, PSYCHOLOGICAL, AND PHYSICAL - THAT MAY IMPOSE UPON REALIZATION OF VOCATIONAL POTENTIAL.

I PREFER TO THINK OF WORK EVALUATION AS A SPECIALIZED TECHNOLOGY THAT UTILIZES ASPECTS OF WORK TO EVALUATE THE VOCATIONAL STRENGTH AND WEAKNESS OF PERSONS. THE WORK EVALUATOR USES WORK TASKS, WORK SITUATIONS, AND WORK ENVIRONMENTS AS THE MEANS OF EVALUATION. THE WORK EVALUATOR UTILIZES WORK AS THE MEDIUM TOOL TO RENDER A VOCATIONAL DIAGNOSIS AS TO SUCH FACTORS AS WORK TOLERANCE, APTITUDES, DEXTERITIES, WORK SKILLS, WORK HABITS, MOTIVATION, PERSONALITY FACTORS, AND SOCIAL CHARACTERISTICS. BASED UPON HIS ASSESSMENTS, THE WORK EVALUATOR GOES FROM A VOCATIONAL DIAGNOSIS TO A RECOMMENDATION, OR TO BORROW A MEDICAL CONCEPT A PRESCRIPTION. THE PRESCRIPTION OR RECOMMENDATION MAY BE FOR VOCATIONAL SCHOOL TRAINING, ON-THE-JOB TRAINING, FURTHER EVALUATION OVER A LONG PERIOD OF TIME, WORK ADJUSTMENT TRAINING, OR NEED FOR BASIC EDUCATION - TO NAME A FEW.

THAT WHICH SEPARATES WORK EVALUATION FROM OTHER TECHNIQUES OF EVALUATION, SUCH AS PSYCHOMETRICS, IS THE UTILIZATION OF VARIOUS ASPECTS OF WORK AS THE TOOL OF EVALUATION. WORK EVALUATORS MAY UTILIZE SOME PSYCHOLOGICAL TEST, ESPECIALLY IN SMALL REHABILITATION FACILITIES THAT DO NOT HAVE PSYCHOLOGISTS. HE MAY USE SOME HISTORY GATHERING TECHNIQUES OF THE SOCIAL WORKERS, ESPECIALLY AGAIN IN THE SMALLER FACILITIES, BUT THE MAIN DIFFERENCE OF WORK EVALUATING IS THAT IT EVALUATES THROUGH THE UTILIZATION OF WORK ITSELF.

ABOVE I STATED THAT THE WORK EVALUATOR UTILIZES WORK TASKS, WORK SITUATIONS, AND WORK ENVIRONMENTS AS HIS TOOLS OF EVALUATION. THESE CONCEPTS NEED EXPLANATION. WORK TASKS ARE SPECIFIC WORK ASSIGNMENTS OR WORK SAMPLES. IT MIGHT BE A WORK SAMPLE IN A WORK EVALUATION SHOP, A SPECIFIC WORK ASSIGNMENT IN A SHELTERED WORKSHOP, OR A JOB IN A FACTORY. THE WORK SITUATION IS THE THINGS AND PERSONS INVOLVED IN THE IMMEDIATE TASK AT HAND. THIS WOULD INCLUDE SUCH FACTORS AS THE WORKING CONDITIONS SURROUNDING THE WORK STATION, THE THINGS IN THIS IMMEDIATE ENVIRONMENT, AND THE PERSONS INVOLVED IN THE IMMEDIATE ENVIRONMENT. THE WORK ENVIRONMENT IS THE TOTAL ENVIRONMENT OF THE WORK EVALUATION SETTING WHETHER A REHABILITATION CENTER, SHELTERED WORKSHOP, HOSPITAL, OR INDUSTRY. MORE WILL BE SAID ABOUT THIS LATER.

THEORETICAL FOUNDATIONS

AS YET WORK EVALUATION HAS NOT DEVELOPED CLEAR CUT THEORETICAL FOUNDATIONS. THERE MAY BE THOSE WHO FEEL THAT WORK EVALUATION TECHNOLOGIES SHOULD BE DEVELOPED FROM SOLID THEORETICAL FOUNDATIONS. POSSIBLY THERE ARE THOSE WHO BELIEVE THAT THIS IS THE WAY SCIENCES SUCH AS PSYCHOLOGY OR PHYSICS HAVE DEVELOPED. ACTUALLY, SCIENCES DEVELOP BY OBSERVATION AND BY TRIAL AND ERROR. THEORETICAL FOUNDATIONS FOLLOW, ONCE ENOUGH DATA HAS BEEN GATHERED. AFTER BASIC DATA IS GATHERED AND BASIC THEORIES DEVELOPED, IT IS POSSIBLE TO REASON ADVANCED THEORIES WHICH, IN TURN, LEAD TO THE OBSERVATION OF NEW DATA. HOWEVER, IN THE EARLY STAGES OF DEVELOPMENT, THEORETICAL FOUNDATIONS ARE DEVELOPED AD HOC TO OBSERVATION OF BASIC DATA. WORK EVALUATION IS IN THE AD HOC STAGE OF DEVELOPMENT.

WORK EVALUATION IS BORROWING FROM OTHER FIELDS TO DEVELOP ITS THEORETICAL FOUNDATIONS. THIS, IN ITSELF, IS NOT UNCOMMON. PSYCHOLOGY, FOR EXAMPLE, HAS BORROWED FROM MANY FIELDS FOR ITS THEORETICAL FOUNDATIONS. WE ARE BORROWING FROM PSYCHOLOGY, SOCIOLOGY, TECHNOLOGY, AND OTHER FIELDS FOR OUR THEORETICAL FOUNDATIONS.

A PSYCHOLOGIST BY THE NAME OF KURT LEWIN HAS DEVELOPED A THEORY TO EXPLAIN HUMAN BEHAVIOR KNOWN AS "FIELD THEORY." FOR LEWIN, BEHAVIOR IS A FUNCTION OF THE PERSON PLUS HIS ENVIRONMENT.[5] MATHEMATICALLY, THIS FORMULA WOULD READ: B=F (P+E). THIS FORMULA IS EXTREMELY IMPORTANT IN WORK EVALUATION. THE WORK EVALUATOR IS CONCERNED WITH THE PERSON, BUT TO ADEQUATELY UNDERSTAND AND EVALUATE HIM, THE WORK EVALUATOR MUST CONSIDER THE PERSON'S ENVIRONMENT.

FRISKE, IN AN ARTICLE A YEAR OR TWO AGO, INDICATED THAT PERFORMANCE ON ANY TASK, OR MORE BROADLY VIEWED, SUCCESS IN ANY COPING ACTIVITY IS A COMPLEX FUNCTION OF THE CAPACITY TO CARRY OUT THE TASK, THE EFFORT PUT INTO IT, AND THE APPROPRIATENESS OF THE EFFORT. ALTHOUGH FRISKE DID NOT PUT THIS INTO A MATHEMATICAL FORMULA, IT WOULD READ AS FOLLOWS: P = F (C + E + AE). UNFORTUNATELY, THE SPEAKER HAS MISPLACED THIS REFERENCE.

HENRY MURRAY[6] DEVELOPED A THEORY OF PERSONALITY, ALSO FOCUSING UPON THE COMPLEXITY OF AN INDIVIDUAL AND HIS ENVIRONMENT. MURRAY, IN HIS THEORY FOR EXPLAINING BEHAVIOR, SPEAKS OF "NEEDS" OF A PERSON AND "PRESSES" FROM HIS ENVIRONMENT AS AFFECTING BEHAVIOR.

THESE THEORETICAL POSTULATES HAVE MEANING TO THE FIELD OF WORK EVALUATION. WORK EVALUATION IS PRIMARILY CONCERNED WITH THE PERFORMANCE OR POTENTIAL PERFORMANCE OF HANDICAPPED PERSONS IN RELATION TO THE SPHERE OF ACTIVITY ENTITLED WORK. CAPACITIES, EFFORT, AND APPROPRIATENESS OF EFFORT ARE FACTORS THE WORK EVALUATOR MUST EVALUATE AND CONSIDER. IN ORDER TO ADEQUATELY UNDERSTAND AND EVALUATE PERFORMANCE AND POTENTIAL PERFORMANCE, THE WORK EVALUATOR MUST TAKE INTO ACCOUNT ENVIRONMENTAL FACTORS AFFECTING A PERSON'S BEHAVIOR IN THIS SPHERE. FOR THE SAKE OF EXPLANATION, THIS CAN BE VISUALLY PRESENTED IN A MATHEMATICAL LIKE FORMULA.

$$P = F\ (C + E + AE) + EV$$

P = PERFORMANCE
C = CAPACITIES
E = EFFORT
AE = APPROPRIATENESS OF EFFORT
EV = ENVIRONMENT
F = FUNCTION OF

UNDER "CAPACITIES" WE ARE CONCERNED IN WORK EVALUATION WITH A PERSON'S ABILITIES, SKILLS, KNOWLEDGE, INTELLIGENCE, PERSONALITY, PHYSICAL CAPACITIES, ETC. CAN HE HEAR? CAN HE READ, WRITE, AND/OR DO BASIC ARITHMETIC? CAN HE ABSTRACT? CAN HE SIT OR STAND THE LENGTH OF TIME REQUIRED FOR A PARTICULAR JOB? HAS HE THE NECESSARY DEXTERITY? THESE ARE EXAMPLES OF QUESTIONS INVOLVED IN EVALUATING FOR CAPACITIES.

IN RELATION TO EFFORT, THE CONCERN IS WITH THE EFFORT ITSELF AND THE APPROPRIATENESS OF THE EFFORT. UNDER "EFFORT" WE ARE CONCERNED WITH THE FOLLOWING TYPES OF QUESTIONS. DOES THE CLIENT WANT TO WORK? IS THE CLIENT MOTIVATED TO TRY? IS HE MOTIVATED TO FAIL? WHAT DEGREE OF EFFORT DOES HE PUT FORTH? HOWEVER, EFFORT ALONE IS NOT ENOUGH. THE THIRD VARIABLE IN THE EQUATION IS THAT OF "APPROPRIATENESS OF EFFORT." IS THE CLIENT'S EFFORT IN A DIRECTION ANTAGONISTIC TO HIS PHYSICAL LIMITATIONS? IS HIS EFFORT IN A DIRECTION APPROPRIATE FOR HIS APTITUDES? IS IT IN THE DIRECTION OF HIS INTERESTS? IS EFFORT NEGATED BY OTHER FACTORS. FOR EXAMPLE, A COMPULSIVE PERSON MAY WORK HARD AND MAY DESIRE TO SUCCEED BUT SPEND SO MUCH TIME ON DETAILS AS TO REDUCE HIS EFFECTIVENESS AS A WORKER. ON THE OTHER HAND, A HARD WORKER BUT IMPULSIVE PERSON MAY NOT SPEND ENOUGH TIME ON DETAILS. A VERY DEPENDENT PERSON MAY STRIVE SO HARD TO PLEASE A SUPERIOR THAT HE BECOMES ANNOYING TO THE SUPERIOR.

THE FINAL VARIABLE IN THE ABOVE EQUATION RELATES TO THE FACTORS IN THE ENVIRONMENT THAT HAVE AN AFFECT UPON THE PERSON. IN THE ABOVE EQUATION THESE WOULD BE ENVIRONMENTAL FACTORS THAT "PRESS" UPON A PERSON'S CAPACITIES, EFFORT, AND APPROPRIATENESS OF EFFORT. THEY WOULD, THEREFORE, AFFECT PERFORMANCE. FOLLOWING ARE EXAMPLES OF QUESTIONS TO BE CONSIDERED HERE. WHAT ROLE DOES PEER GROUP OPINION PLAY WITH THE CLIENT? WHAT AFFECT DOES PAST FAILURE HAVE ON CURRENT EFFORT? WHAT ROLE DOES A DOMINATING MOTHER FIGURE PLAY? WHAT HAS BEEN THE INFLUENCE OF CULTURAL BACKGROUND? WHAT CONSIDERATION MUST BE GIVEN TO THE CLIENT'S IMMEDIATE NEEDS OF FEEDING AND CLOTHING FIVE CHILDREN?

A WORD OF CAUTION IS REQUIRED. THE ABOVE FORMULA MAY GIVE THE IMPRESSION OF PRECISION IN ABILITY TO EVALUATE PERFORMANCE. THIS IS NOT YET THE CASE. OF THE FOUR FACTORS WE CAN BE MOST PRECISE IN MEASURING CAPACITIES. WE HAVE STANDARDIZED PSYCHOLOGICAL TESTS FOR MEASURING APTITUDE, ACHIEVEMENT, PERSONALITY, INTEREST, AND INTELLIGENCE. WE ALSO HAVE WORK SAMPLES AND OTHER WORK EVALUATION TECHNIQUES. FOR THE OTHER THREE FACTORS IN THE FORMULA, WE ARE LESS PRECISE AND MUST RELY MORE ON OBSERVATION AND JUDGMENT. HOWEVER, TO SAY THAT WE ARE LESS PRECISE DOES NOT MEAN WE ARE INADEQUATE IN EVALUATION. THE OBSERVATIONS AND JUDGMENTS OF A PROFESSIONALLY TRAINED AND EXPERIENCED WORK EVALUATOR CAN BE MOST RELIABLE. IN FACT, THE METHODOLOGIES OF WORK EVALUATION ESTABLISH SITUATIONS FOR OBSERVING EFFORT, APPROPRIATENESS OF EFFORT, AND AFFECT OF ENVIRONMENT.

DR. WILLIAM GELLMAN, IN A RECENT ARTICLE IN THE REHABILITATION LITERATURE[3] ATTEMPTED TO SET FORTH SOME OF THE THEORETICAL CONSTRUCTS OF VOCATIONAL EVALUATION. TO DIGRESS FOR A MINUTE, WE SHOULD NOTE THAT OFTEN THE TERMS OF VOCATIONAL EVALUATION AND WORK EVALUATION ARE USED INTERCHANGEABLY. THEY ARE NOT EXACTLY THE SAME. VOCATIONAL EVALUATION IS THE TOTAL PROCESS INVOLVING PSYCHOLOGIST, SOCIAL WORKER, WORK EVALUATORS, AND OTHERS. WORK EVALUATION IS A PART OF THE TOTAL VOCATIONAL EVALUATION PROCESS. DR. GELLMAN IS ADDRESSING HIMSELF TO THE TOTAL PROCESS, BUT THE THEORETICAL CONSTRUCTS APPLY DIRECTLY TO WORK EVALUATION, AS I AM SURE THEY WERE MEANT TO DO.

DR. GELLMAN STATES THAT VOCATIONAL EVALUATION IS A METHOD OF ACQUIRING INFORMATION ABOUT THE BEHAVIOR DESIGNATED AS THE PRODUCTIVE SECTOR OF AN INDIVIDUAL'S LIFE. THE PRODUCTIVE SECTOR IS RELATED TO THE SOCIAL ECONOMIC GOALS OF A MAN. EMPIRICALLY, DR. GELLMAN POINTS OUT THAT VOCATIONAL EVALUATION DEFINES THE DATA TO BE OBSERVED, DEFINES THE WORK SITUATION COMPLEX, AND THE METHODOLOGIES FOR ASSESSING RELEVANT CAPACITIES, POTENTIALS, ATTITUDES, VALUES, AND BEHAVIOR USED IN ACTIVITIES THAT CONTRIBUTE TO MATERIAL WELFARE.

DR. GELLMAN, IN HIS ARTICLE, SETS FORTH CORRELATES BETWEEN THE THEORETICAL AND EMPIRICAL ASPECTS OF VOCATIONAL EVALUATION. THE FIRST CORRELATE LISTED IS THAT LABELED AS THE "WORK SECTOR." THIS IS THE FIELD IN WHICH PRODUCTIVITY OF WORK TAKES PLACE. IT IS DISTINGUISHED BY PERSONS IN AN INDUSTRIAL SOCIETY AS AN ASPECT DIFFERENT FROM OTHER SPECIALIZED AREAS SUCH AS HOME, SCHOOL, AND RECREATION. IT IS CHARACTERIZED BY ACHIEVEMENT ORIENTED BEHAVIOR USING ACQUIRED BEHAVIORAL PATTERNS AND SKILLS TO OBTAIN AN ECONOMIC OBJECTIVE. I WOULD ADD HERE THAT THE WORK EVALUATOR CAN AND NEEDS TO UNDERSTAND THE WORK SECTOR. THE DEMANDS OF THE WORK SECTOR FROM WHICH A CLIENT HAS COME OR IS BEING CONSIDERED FOR CAN BE KNOWN, AND THE CLIENT'S BEHAVIOR AND SKILLS EVALUATED AS TO CHANCES FOR ECONOMIC SUCCESS.

A SECOND CORRELATE GIVEN IS THAT OF THE WORK PERSONALITY. WHAT IS THE WORK PERSONALITY? IS IT SOMETHING DIFFERENT FROM THE PERSONALITY OF THE INDIVIDUAL? THE ANSWER IS NO. ONE DEFINITION THAT HAS BEEN PUT FORTH IS AS FOLLOWS: WORK PERSONALITY IS "THOSE MANIFESTATIONS BY THE INDIVIDUAL WHICH ARE NOT NECESSARILY ESSENTIAL TO THE PERFORMANCE OF A SPECIFIC TASK, BUT WHICH ARE ESSENTIAL IN TERMS OF PEER GROUP ACCEPTANCE OF THE INDIVIDUAL."[1] THESE ARE SUCH FACTORS AS ATTENDANCE, PUNCTUALITY, NEATNESS, GROOMING, INTERPERSONAL INTERACTION SKILLS AND REACTIONS TO SUPERVISORS. THESE ARE FACTORS WHICH CAN BE MEASURED BY THE TRAINED WORK EVALUATOR.

DR. GELLMAN ALSO TALKS ABOUT THE WORK PERSONALITY AS DEVELOPMENTAL. THIS MAY BE SOMETHING YOU HAVE NOT THOUGHT ABOUT. YOU KNOW FROM PSYCHOLOGY THAT PERSONALITY IS DEVELOPMENTAL. ALL OF YOU, I AM SURE, HAVE HEARD OF FREUD'S THEORY INVOLVING THE ORAL, ANAL, PHALLIC, AND GENITAL STAGES OF DEVELOPMENT - WHETHER YOU ACCEPT THIS

OR NOT IS NOT IMPORTANT. PROBABLY, WHAT YOU DO ACCEPT IS THAT THERE ARE DEVELOPMENTAL LEVELS AS A PERSON GROWS. DR. GELLMAN POINTS OUT, WISELY, THAT THE WORK PERSONALITY ALSO GOES THROUGH DEVELOPMENTAL STAGES. WE LEARN OUR ATTITUDES TOWARD WORK AS WE ARE GROWING UP. IF WE GROW UP TO SHUN WORK AND TO GO ON WELFARE, IT IS BECAUSE IT IS LEARNED.

THE FOURTH CORRELATE LINKING THE THEORETICAL TO THE EMPIRICAL IN VOCATIONAL EVALUATION, LISTED BY DR. GELLMAN, IS THAT OF CULTURE. DR. GELLMAN NOTES THAT EACH CULTURE USES CERTAIN TYPES OF WORK PERSONALITIES AS EGO MODELS FOR TRAINING, SELECTING, AND REWARDING PEOPLE WHO ARE OR WILL BECOME PRODUCTIVE. THE WORK EVALUATOR MUST UNDERSTAND THE CULTURE OR SUB-CULTURAL OF HIS PARTICULAR CLIENTS. I AM REMINDED OF THE SITUATION INVOLVING AN INDIAN WHO HAD BEEN TRAINED AND PLACED UPON A JOB. WHEN AN INDIAN HOLIDAY CAME THIS INDIVIDUAL REMAINED HOME FOR THE HOLIDAY PERIOD. THE EMPLOYER WAS READY TO FIRE THE INDIVIDUAL FOR THIS "NON-PRODUCTIVE" BEHAVIOR BASED ON HIS OWN CULTURE. FORTUNATELY, IN THIS PARTICULAR SITUATION, A SOLUTION WAS REACHED BETWEEN EMPLOYER AND EMPLOYEE AFTER CULTURAL FACTORS WERE CONSIDERED AND APPROPRIATE ARRANGEMENTS MADE.

WORK EVALUATION DEPARTMENTS MUST BE COGNIZANT OF CULTURES AND SUB-CULTURES. IN TEXAS THE SPANISH-AMERICAN IS A MAJOR CULTURAL GROUP TO UNDERSTAND. ALSO IMPORTANT ARE SUB-CULTURES SUCH AS THE SUB-CULTURE OF TEENAGE GANGS.

THE FINAL CORRELATE DISCUSSED BY DR. GELLMAN WAS THAT OF ASSESSING A CLIENT'S WORK PERSONALITY TO DETERMINE DEVELOPMENTAL LEVEL, CHARACTERISTIC PERFORMANCE PATTERNS, AND APPROPRIATENESS OF BEHAVIOR IN A WORK SITUATION. IT WILL BE NOTED THAT THIS AGREES CLOSELY WITH THE FORMULA DEVELOPED EARLIER. IN THE FORMULA, WE INCLUDED THE VARIABLES OF CAPACITIES, EFFORT, AND APPROPRIATENESS OF EFFORT. THE "CAPACITIES" OF OUR FORMULA RELATES CLOSELY TO "CHARACTERISTIC PERFORMANCE PATTERNS" WHILE "APPROPRIATENESS OF EFFORT" RELATES TO "APPROPRIATENESS OF BEHAVIOR IN A WORK SITUATION." "DEVELOPMENTAL" LEVEL AND "EFFORT" APPEAR TO BE DIFFERENT, BUT PERHAPS NOT AS MUCH AS IT MAY FIRST APPEAR. IF DEVELOPMENTAL LEVEL IS HIGH, EFFORT SHOULD BE HIGH AND IF DEVELOPMENTAL LEVEL IS ARRESTED, EFFORT WOULD BE POOR.

IT IS NOT POSSIBLE TO DISCUSS THE ENTIRE ARTICLE BY DR. GELLMAN. HOWEVER, IT WOULD BE DESIRABLE TO REVIEW THE GOALS OF VOCATIONAL EVALUATION AS GIVEN BY HIM. (1) VOCATIONAL EVALUATION IS PROGNOSTIC: IT ANSWERS SUCH QUESTIONS AS TO WHETHER OR NOT A CLIENT WILL BE ABLE TO WORK, WHAT KIND OF WORK HE WILL BE ABLE TO DO, WHAT TYPES OF TRAINING ARE NECESSARY TO ENABLE HIM TO WORK, ETC. (2) QUESTIONS OF WORK EVALUATION ARE FUTURE ORIENTED: VOCATIONAL EVALUATION IS AHISTORICAL. QUESTIONS DEAL WITH THE PAST EVENTS ONLY IN SO FAR AS THESE AFFECT FUTURE WORK ROLES OR ACTIVITIES. (3) VOCATIONAL EVALUATION SERVES AS A BASIS FOR DIFFERENTIAL PREDICTIONS. (4) INSTRUMENTALLY, VOCATIONAL EVALUATION IS DESIGNED TO DEVELOP A TREATMENT PLAN THAT WILL PREDICT AND PATTERN A CLIENT'S FUTURE BEHAVIOR. ACCURATE PREDICTIONS REFLECT KNOWLEDGE OF THE INDIVIDUAL'S WORK PERSONALITY, AN ESTIMATE OF THE IMPACT OF THE LOSS OR INJURY RESULTING IN THE CLIENT'S NEED FOR REHABILITATION, DEVELOPMENTAL LEVEL OF THE WORK PERSONALITY, POTENTIAL FOR CHANGE, TRAINING CAPACITY, AND THE CLIENT'S FUTURE LEVELS OF TYPE OF WORK ACTIVITIES.

GORDON KRANTZ, IN A PAPER ENTITLED "THEORY UNDERLYING VOCATIONAL EVALUATION,"[4] EXAMINES TWO MODELS CURRENTLY BEING UTILIZED AS BASIS FOR WORK EVALUATION PROGRAMS AND FINDS THEM LACKING. HE RECOMMENDS A MODEL BASED UPON A THEORY OF EMPLOYABILITY. MR. KRANTZ NOTES THAT SOME WORK EVALUATION PROGRAMS ARE BUILT UPON A CLINICAL PSYCHOLOGY MODEL AND, AS A RESULT, ARE MAINLY CONCERNED WITH SUCH FACTORS AS DEFENSIVE MECHANISMS, IMPULSE CONTROL, AND GRATIFICATION OF NEEDS. A SECOND MODEL DISCUSSED BY MR. KRANTZ IS ONE HE LABELED "HOMESPUN-ECLECTRIC THEORY." HE NOTES THAT HERE SUCH FACTORS AS MECHANICAL APTITUDE, GROOMING, AND RELATION TO SUPERVISOR ARE THE BASIS FOR THE WORK EVALUATION PROGRAM. HE FEELS THAT SOME OF THE EMPLOYABILITY FACTORS, SUCH AS MECHANICAL APTITUDE, ARE TRAITS WHICH ARE INDISTINGUISHABLE FROM THE WORKER TRAITS WHICH HAVE ROOTS INTO THE EMPLOYMENT STABILIZATION RESEARCH OF THE 1930'S.

MR. KRANTZ PREFERS TO UTILIZE A MODEL BASED UPON A THEORY OF EMPLOYABILITY. HE SUGGESTS USING THE METHODOLOGY OF CRITICAL INCIDENT TECHNIQUE TO OBSERVE THE KIND OF EMPLOYMENT PROBLEMS COMMONLY EXPERIENCED BY THE POPULATION FOR WHICH THE PROGRAM IS DESIGNED. HAVING DEFINED THESE PROBLEMS, THEY ARE THEN TO BE DESCRIBED

IN TERMS OF CLIENT BEHAVIOR. DESCRIPTION IN POSITIVE TERMS, SUCH AS SEEKING WORK WITH SPECIFIC MINIMUM FREQUENCY, APPROPRIATE INTERVIEW BEHAVIORS, RATE OF PRODUCTION APPROPRIATE TO THE JOB SETTING, OR ADEQUATELY TRAVELING IN THE COMMUNITY, IS SUGGESTED. ASSESSMENT THEN CONSISTS OF LOOKING FOR THESE SPECIFIC BEHAVIORS OR LACK OF THESE SPECIFIC BEHAVIORS. THIS IS A MODEL RESEARCHED AND UTILIZED AT THE MINNEAPOLIS REHABILITATION CENTER.

ALL OF THE ABOVE ARE IMPORTANT IN PROVIDING THEORETICAL FOUNDATIONS FOR WORK EVALUATION. MOREOVER, THERE ARE OTHER CONCEPTS WHICH CAN BE BORROWED AND DEVELOPED. THIS IS NOT MEANT TO BE COMPLETE, NOR MEANT TO DEVELOP A COMPOSITE FOUNDATION AT THIS TIME. ALL THAT HAS BEEN ATTEMPTED HERE IS TO INDICATE SOME OF THE THEORETICAL CONCEPTS BEING BORROWED AND DEVELOPED FOR THE FIELD OF WORK EVALUATION.

METHODOLOGIES OF WORK EVALUATION

1. JOB ANALYSIS: DR. WALTER NEFF, WRITING IN THE AMERICAN PERSONNEL & GUIDANCE JOURNAL[7] A NUMBER OF YEARS AGO, LISTED JOB ANALYSIS AS ONE OF THE METHODOLOGIES OF WORK EVALUATION. FOR THOSE NOT FAMILIAR WITH THIS CONCEPT, JOB ANALYSIS IS A PROCESS OF DEFINING THE SIGNIFICANT WORKER ACTIVITIES AND REQUIREMENTS AND THE TECHNICAL AND ENVIRONMENTAL FACTS OF A SPECIFIC JOB BY UTILIZATION OF OBSERVATIONS, INTERVIEWS, QUESTIONNAIRES, WORK DIARIES, FILMS, AND RESOURCE MATERIAL.

JOB ANALYSIS IS AN IMPORTANT TECHNIQUE FOR THE WORK EVALUATOR TO KNOW. IT CAN ASSIST HIM TO (1) IDENTIFY JOB REQUIREMENTS AND SPECIFIC QUALITIES REQUIRED OF WORKERS FOR VARIOUS JOBS, (2) DEVELOP WORK SAMPLES, AND (3) DO CLIENT EVALUATION. THE JOB ANALYSIS FORMULA OF MEASURING WHAT THE WORKER DOES, HOW HE DOES IT, WHY HE DOES IT, AND THE SKILL INVOLVED IN DOING IT LENDS ITSELF READILY TO EVALUATING THE QUALIFICATIONS AND ABILITIES OF A CLIENT PLACED ON A JOB. HOWEVER, IT IS RARE THAT JOB ANALYSIS, WHEN USED, IS USED MORE AS AN ADJUNCT TECHNIQUE TO LEARN ABOUT THE REQUIREMENTS OF A JOB SO AS TO HELP SELECT CLIENTS WHO HAVE THE QUALIFICATIONS TO SUCCEED ON THE JOB OR TO LAY THE FOUNDATION FOR BUILDING A WORK SAMPLE.

2. Psychometric Testing: The origin of psychometric testing goes back to before the turn of the century, but the work of Binet and Spearman at the turn of the century was extremely important to its movement. World War I and World War II were factors important to the growth of psychometric testing as the result of the need to screen and place large members of men.

Psychometric testing is of value to work evaluation. Psychometric testing is quick, relatively inexpensive, and objective. The range of psychometric testing is broad. There are tests for measuring intelligence, interests, aptitudes, dexterities, academic abilities, and personality. There are tests pertaining to the field of clerical work, mechanical work, electronics, drafting, computer programming, and business, as well as many others. There are tests to utilize with people who have good intelligence and education and tests for persons with poor education and intelligence. However, psychometric tests tend to be more effective with the first group.

Properly used psychometric tests do have a place in work evaluation. Their utilization by work evaluation programs may depend upon the staffing pattern of a rehabilitation facility. Some facilities have a psychologist and some a psychology department. When this is true, often times such tests will be given by the psychologist. However, in some situations the psychologist may limit his activities more to tests which require a trained psychologist, leaving to the work evaluation department administering of tests such as dexterity tests. A test such as the Bennett Hand-Tool Test can be of benefit to a work evaluation department. This is an instrument with two sides that has three rows of holes on each side. Each row has a different size hole. One side of the board has bolts and nuts in the holes. The object is to utilize wrenches and a screwdriver to move the bolts and nuts to the other side. It is a measure of hand-tool dexterity.

THERE ARE SEVERE LIMITATIONS TO PSYCHOMETRIC TESTING IN RELATION TO THE TYPE OF CLIENTELE SEEN IN VOCATIONAL REHABILITATION FACILITIES. THESE LIMITATIONS WERE THE PRIME MOVING FACTOR IN THE DEVELOPMENT OF THE TECHNIQUE OF WORK EVALUATION. THESE WILL BE DISCUSSED SHORTLY.

BEFORE DISCUSSING THE LIMITATIONS OF PSYCHOMETRIC TESTS, I WOULD LIKE TO SAY A WORD ABOUT THE QUALIFICATIONS REQUIRED OF PERSONS WHO DESIRE TO UTILIZE PSYCHOMETRIC TESTS. THE AMERICAN PSYCHOLOGICAL ASSOCIATION HAS STANDARDS OF TRAINING FOR UTILIZATION OF VARIOUS LEVELS OF TESTS. I SHALL NOT REVIEW THEM HERE, BUT ANYONE PLANNING TO USE PSYCHOMETRIC TESTS SHOULD SEEK ADVICE ON TESTING PRIOR TO UNDERTAKING IT IF THEY DO NOT HAVE APPROPRIATE TRAINING. I ONCE VISITED A FACILITY WHERE THE EVALUATOR TOLD ME THAT HE HAD A MENTALLY RETARDED BOY IN THE SHOP WITH AN INTELLIGENCE OF 50.2 PERCENT. THIS TOOK ME BACK BECAUSE IF A PERSON RANKED AT THE FIFTIETH PERCENTILE, ON A TEST OF INTELLIGENCE, HE WOULD BE AVERAGE. IT TURNED OUT THAT THE BOY WAS RETARDED AND THAT THE SCORE THE EVALUATOR WAS REFERRING TO WAS AN I.Q. SCORE, NOT PERCENTILE. THE EVALUATOR THEN BEGAN TO REFER TO THE 50.2 I.Q. UNTIL IT WAS POINTED OUT THAT NO INTELLIGENCE TEST IS ACCURATE ENOUGH TO MEASURE INTELLIGENCE IN TENTHS. BEING SOMEWHAT SUSPICIOUS, BY THIS TIME, OF THE EVALUATOR'S COMPETENCY TO ADMINISTER INTELLIGENCE TESTS, (THIS PARTICULAR ONE IS ADVERTISED AS BEING CAPABLE OF ADMINISTRATION BY NON-PSYCHOLOGISTS), I CHECKED THE TEST ITSELF. JUST GLANCING AT THE SCORING OF ITEMS, I DOUBTED IF IT WAS CORRECTLY SCORED. THE POINT OF ALL THIS IS THAT PSYCHOMETRIC TESTS HAVE THEIR USE IN WORK EVALUATION AND MANY CAN BE ADMINISTERED BY THE NON-PSYCHOLOGIST. HOWEVER, THEY ARE NOT TO BE USED WITHOUT PROPER STUDY AND EVALUATORS SHOULD NOT USE TESTS FOR WHICH THEY HAVE NO KNOWLEDGE OF THE PRINCIPLES INVOLVED.

THERE ARE A NUMBER OF LIMITATIONS TO PSYCHOMETRIC TESTS. PSYCHOMETRIC TESTS ARE OFTEN TIMES WEIGHTED HEAVILY WITH A VERBAL FACTOR AND ARE BETTER SUITED FOR PERSONS WITH AT LEAST AVERAGE INTELLIGENCE AND A HIGH SCHOOL EDUCATION. PERSONS WITH NEGATIVE SCHOOL EXPERIENCE, CULTURAL BACKGROUND OF A MINORITY GROUP, AND SOME DISABILITIES DO NOT DO WELL ON THESE TESTS. TOO OFTEN PSYCHOMETRIC TESTS FAIL TO SHED ANY LIGHT ON INDIVIDUALS WHO ARE NOT MULTI-POTENTIAL IN APTITUDES, ABILITIES, AND OTHER FACTORS.

ANOTHER LIMITATION OF PSYCHOMETRIC TESTING IS THAT THE CONDITIONS OF TESTING ARE NOT WHAT YOU FIND IN NATURAL WORK SITUATIONS; THAT IS, DISTRACTIONS ARE ELIMINATED. WE SET UP CONDITIONS TO REDUCE ANXIETY THAT IS NOT REAL. THERE ARE TESTS AND CONDITIONS FOR WHICH THIS IS DESIRABLE. HOWEVER, THERE IS ALSO CONSIDERABLE BENEFIT IN ASSESSING PEOPLE UNDER CONDITIONS THAT MORE CLOSELY RESEMBLE A WORK SITUATION.

PSYCHOMETRIC TESTS ARE ALSO STANDARDIZED ON A LABOR FORCE AT THE TIME THE TEST WAS DEVELOPED. WITH OUR RAPIDLY CHANGING LABOR FORCE, THESE NORMS DO NOT REMAIN VALID BUT THEY ARE UTILIZED AS IF VALID.

PSYCHOMETRIC TESTS HAVE THEIR USE IN WORK EVALUATION BUT SHOULD NOT BE THE MAIN TECHNIQUE OF ASSESSMENT. IF THEY ARE, THE WORK EVALUATION DEPARTMENT IS A PSYCHOLOGICAL DEPARTMENT AND SHOULD BE STAFFED BY PSYCHOLOGISTS.

3. <u>WORK SAMPLES</u>: A WORK SAMPLE IS A TEST THAT IS AN ACTUAL JOB OR A SIMULATED JOB. THEORETICALLY, THIS APPROACH COMBINES THE ELEMENTS FROM PSYCHOMETRIC TESTING AND JOB ANALYSIS. THE CONCEPT OF STANDARDIZATION IN DEVELOPMENT AND ADMINISTRATION IS TAKEN OVER FROM PSYCHOMETRIC TESTING. FROM JOB ANALYSIS IS BORROWED THE CONCEPT OF ANALYZING A JOB INTO ITS COMPONENT PARTS IN ORDER TO DEVELOP EFFECTIVE WORK SAMPLES. A WORK SAMPLE MAY BE AN ACTUAL JOB ADMINISTERED AND OBSERVED UNDER STANDARD CONDITIONS. IT MAY BE A MOCK UP OF A COMPONENT OF A JOB. IT MAY BE A JOB MADE UP BY THE EVALUATOR TO RESEMBLE AN ACTUAL JOB IN INDUSTRY OR BUSINESS AND TO MEASURE TRAITS IMPORTANT TO SUCCESSFUL EMPLOYMENT.

THERE ARE A NUMBER OF APPROACHES THAT A WORK EVALUATION DEPARTMENT MAY TAKE TO ESTABLISH WORK SAMPLES. A WORK EVALUATOR MAY GO INTO INDUSTRY AND/OR BUSINESS TO CONDUCT JOB ANALYSIS OF JOBS. WORK SAMPLES MAY THEN BE BUILT IN TWO DIFFERENT WAYS. THE FIRST WOULD BE TO BUILD WORK SAMPLES TO MEASURE EACH OF THE ISOLATED TRAITS OR ABILITIES REQUIRED TO SUCCESSFULLY DO THE JOB. THE SECOND WOULD BE TO BUILD A WORK SAMPLE THAT COMBINES ALL OF THE TRAITS INTO A TEST, OR PERHAPS UTILIZE A COUPLE OF TESTS MEASURING TWO OR MORE TRAITS EACH.

FOR THE SAKE OF EXPLANATION, LET US SET UP A SIMPLIFIED EXAMPLE. LET US ASSUME A PARTICULAR JOB REQUIRES (A) GROSS ARM MOVEMENT CONTROL, (B) FINE FINGER

DEXTERITY, AND (C) COLOR DISCRIMINATION. IT WOULD BE POSSIBLE TO MEASURE EACH OF THESE TRAITS AND TO ESTABLISH PERFORMANCE LEVELS WHICH WOULD ENABLE PREDICTION FOR SUCCESS ON THE JOB. GROSS ARM MOVEMENT CONTROL MIGHT BE MEASURED BY BUILDING A TEST WHERE THE EXAMINEE IS REQUIRED TO REACH FOR BLOCKS OR VALVES AND PLACE THEM ON A RACK THAT HAS A SEPARATE SPOT FOR EACH. FINE FINGER DEXTERITY MIGHT BE MEASURED BY PLACING THIN PINS IN ROWS OF SMALL HOLES ON A METAL PLATE. COLOR DISCRIMINATION COULD BE MEASURED BY AN IDENTIFICATION TEST INVOLVING COLORS AS THE BASIS OF IDENTIFICATION. ON THE OTHER HAND, A SINGLE WORK SAMPLE MIGHT BE BUILT THAT REQUIRED THE EXAMINEE TO REACH A MODERATE DISTANCE TO A VARIETY OF BINS TO SELECT COLORED PINS TO BE PLACED IN CORRESPONDING ROWS ON A METAL PLATE OF THE SAME COLOR AS THE PIN. THE REACHING A MODERATE DISTANCE TO THE BINS AND RETURN TO THE METAL PLATE WOULD INVOLVE GROSS ARM MOVEMENT CONTROL. PICKING UP AND PLACING THE PINS WOULD REQUIRE FINE FINGER DEXTERITY WHILE MATCHING COLORED PINS TO COLORED ROWS WOULD INVOLVE COLOR DISCRIMINATION.

WORK SAMPLES EMPHASIZING A SINGLE TRAIT TEND TO RESEMBLE SOME STANDARD PSYCHOMETRIC TESTS AND SHARE SOME OF THE DISADVANTAGES. HOWEVER, THEY ALSO HAVE AN ADVANTAGE TO A WORK EVALUATION DEPARTMENT. A WORK SAMPLE MEASURING A PARTICULAR TRAIT MAY BE USED FOR NUMEROUS JOBS IN WHICH THAT TRAIT IS INVOLVED. FOR EXAMPLE, LET US ASSUME THAT JOB I REQUIRES TRAITS A, B, C, AND D. JOB II IS FOUND TO REQUIRE TRAITS A, B, G, & F. FOR JOB II THE EVALUATOR DOESN'T HAVE TO BUILD A TEST FOR A AND B, ONLY G AND F. HE WILL HAVE TO DETERMINE WHAT LEVEL OF PERFORMANCE ON A AND B IS REQUIRED FOR JOB II AS OPPOSED TO JOB I, BUT THE SAME TESTS MAY BE USED. OF COURSE, THE SAME IS TRUE OF A WORK SAMPLE MEASURING ALL THE TRAITS OF A JOB IF A SECOND JOB UTILIZES THE SAME TRAITS AND NO OTHERS.

A SECOND PROCEDURE FOR ESTABLISHING WORK SAMPLES IS TO ESTABLISH THE ACTUAL JOB IN THE WORK EVALUATION PROGRAM. FOR EXAMPLE, IF THE JOB IS THAT OF CARBURETOR REPAIRING, THEN THE WORK EVALUATOR OBTAINS A CARBURETOR OR CARBURETORS AND THE REQUIRED TOOLS. THE WORK SAMPLE INVOLVES WORKING ON THE CARBURETOR UNDER STANDARD INSTRUCTIONS. IF THE JOB INVOLVES WORKING A MACHINE, THE MACHINE MAY BE SET UP AND

A PROCEDURE ESTABLISHED FOR EVALUATING WHILE THE EXAMINEE WORKS ON THE MACHINE DOING THE SAME JOB AS INVOLVED IN THE INDUSTRY OR BUSINESS.

THE ABOVE TWO APPROACHES TO BUILDING WORK SAMPLES INVOLVES STUDY OF SPECIFIC JOBS IN INDUSTRY OR BUSINESS PRIOR TO BUILDING A WORK SAMPLE. THIS IS MOST IDEAL AND SHOULD BE FOLLOWED AS MUCH AS POSSIBLE. HOWEVER, THE PRESS OF SERVING CLIENTS AND SHORTAGE OF STAFF DOES NOT ALWAYS PERMIT APPROACHING DEVELOPMENT OF WORK SAMPLES THIS WAY. UNFORTUNATELY, IT DOESN'T PERMIT IT MORE THAN IT DOES PERMIT IT. WORK SAMPLES MAY BE ESTABLISHED BY ARM CHAIR ANALYSIS. THE EVALUATOR, BASED UPON HIS KNOWLEDGE, MAY ESTABLISH EFFECTIVE WORK SAMPLES WITHOUT THE FORMAL STEPS ABOVE. FOR EXAMPLE, A BOLT SORTING TEST MAY BE ESTABLISHED TO MEASURE DISCRIMINATION ABILITY.

REGARDLESS OF THE METHOD USED TO DEVELOP WORK SAMPLES, THEY SHOULD BE TESTED FOR RELIABILITY AND VALIDITY AND THEY SHOULD BE NORMED. TIME TODAY DOES NOT PERMIT DISCUSSION OF THIS ASPECT OF WORK SAMPLE DEVELOPMENT.

THERE ARE A NUMBER OF ADVANTAGES TO THE WORK SAMPLE METHOD OF EVALUATION. ONE OF THE MAIN ADVANTAGES IS THAT THEY TEND TO LOOK MORE LIKE WORK AND OFTEN HOLD THE INTEREST OF THE CLIENTS OF VOCATIONAL REHABILITATION FACILITIES AS OPPOSED TO PAPER PENCIL PSYCHOLOGICAL TESTS. EVEN THE WORK EVALUATION DEPARTMENT MORE CLOSELY RESEMBLES WORKING CONDITIONS THAN A PSYCHOLOGY DEPARTMENT. THE EXAMINEE CAN OBJECTIVELY SEE HOW WELL HE IS OR IS NOT PERFORMING, AND THE TEST OFTEN HOLDS MORE MEANING TO HIM BECAUSE OF THIS FACTOR. THE WORK SAMPLE OFFERS THE EVALUATOR THE OPPORTUNITY TO OBSERVE ACTUAL WORK BEHAVIOR. LANGUAGE INADEQUACIES, READING DISABILITIES, AND SPEECH IMPAIRMENTS ARE NOT THE BLOCKS TO SUCCESSFUL EVALUATION AS THEY ARE WITH STANDARD PSYCHOLOGICAL TESTS. FACTORS SUCH AS EDUCATIONAL DEPRIVATION, INSUFFICIENT MOTIVATION, EXCESSIVE ANXIETY AND CULTURAL DIFFERENCES OFTEN ARE LESS INFLUENTIAL ON WORK SAMPLE EVALUATION THAN EVALUATION BY MEANS OF PSYCHOLOGICAL TESTS. ONE EXCELLENT ADVANTAGE FOR THE WORK EVALUATION PROGRAM THAT HAS A VARIETY OF WORK SAMPLES, IS THE POTENTIAL OF MEASURING A VARIETY OF FACTORS WITH EACH CLIENT. SUCH A PROGRAM MAY EVALUATE FOR A BROAD CATEGORY OF JOBS, TRAITS, INTERESTS, AND OTHER FACTORS. IT WILL NOT USE EVERY WORK SAMPLE WITH ALL CLIENTS, OR SHOULD NOT, BUT WILL HAVE A BROAD BATTERY FOR MEETING THE NEEDS OF VARIOUS CLIENTS.

ANOTHER ADVANTAGE OF THE WORK SAMPLE METHOD FOR THE TRAINED EVALUATOR IS THE POTENTIAL FOR INNOVATION TO MEET THE NEEDS OF A PARTICULAR CLIENT. PATON B. CROUSE, IN AN ARTICLE ON WORK SAMPLING,[2] TELLS OF AN EXPERIENCE WITH A CLIENT AT THE FORMER MORRISON CENTER IN SAN FRANCISCO. IT INVOLVED A CLIENT WHO HAD BEEN A BUTCHER AND IT WAS THOUGHT THAT HE MIGHT BE PLACED IN SELECTIVE EMPLOYMENT IN THIS AREA. PUTTING THEIR HEADS TOGETHER, THE STAFF CAME UP WITH SOME TESTS TO MEASURE HIS POTENTIAL FOR SELECTIVE EMPLOYMENT AS A BUTCHER. THEY USED HAMMERING NAILS TO SIMULATE THE USE OF THE CLEAVER, A WIRE CUTTER AND A BIG LUMP OF MODELING CLAY TO SIMULATE CUTTING CHOPS, AND A BAND SAW AND SUCH TASKS AS WRAPPING, WALKING, AND CARRYING TO ROUND OUT THE REQUIREMENTS OF THE PROPOSED PLACEMENT. THE TASKS PROVED EFFECTIVE IN ASSESSING HIS POTENTIAL. THEY PREDICTED SUCCESS FOR SELECTED PLACEMENT IN BUTCHERING. THIS PREDICTION WAS LATER VERIFIED BY THE CLIENT'S SUCCESS.

THERE ARE DISADVANTAGES TO THE WORK SAMPLE METHOD. IT IS EXPENSIVE. EXPENSE IS INVOLVED IN THE TIME AND MATERIALS IT TAKES TO BUILD, MAINTAIN, AND ADMINISTER WORK SAMPLES. A WORK SAMPLE BUILT BY CONDUCTING A JOB ANALYSIS AND ONE THAT IS ADEQUATELY STANDARDIZED REQUIRES CONSIDERABLE TIME ON THE PART OF THE EVALUATOR. SOME WORK SAMPLES SUCH AS LETTER SORTING CAN BE MADE INEXPENSIVELY BUT ONE INVOLVING WELDING EQUIPMENT OR A PRINTING PRESS COSTS MONEY. EXPENSE IS ALSO INVOLVED IN REPLACEMENT OF PARTS OR IN SUPPLIES, SUCH AS INK FOR A SILK SCREENING WORK SAMPLE.

WORK SAMPLES ARE ALSO TIME CONSUMING ON THE PART OF THE EVALUATOR. USUALLY, THEY REQUIRE ONLY A RELATIVELY SHORT TIME TO ADMINISTER, AS OPPOSED TO ALL DAY ON A SHELTERED WORKSHOP PRODUCTION LINE. THEY ALSO OFTEN REQUIRE THE EXAMINER TO BE PRESENT FOR TIMING OF PERFORMANCE. THIS IS TIME CONSUMING, LIMITS THE NUMBER OF CLIENTS WHICH ONE EVALUATOR CAN SERVE, AND IS IN TURN, EXPENSIVE. ALTHOUGH, IT MAY BE NOTED THAT THE VARIETY OF TASKS AVAILABLE BY THE WORK SAMPLE METHOD ENABLES THE ASSESSMENT OF SOME ASPECTS OF A CLIENT QUICKER THAN BY PLACING HIM ON JOBS IN A SHELTERED WORKSHOP.

WORK SAMPLES REQUIRE THAT THE WORK EVALUATOR BE INVOLVED IN A CONTINUOUS PROCESS OF RECONSTRUCTION OF WORK SAMPLES. THIS MAY INVOLVE THE RESETTING OF THE TASKS AFTER A CLIENT HAS COMPLETED IT, THE REBUILDING, AND THE RESTOCKING OF SUPPLIES.

THE PROBLEMS OF STANDARDIZING WORK SAMPLES AS TO RELIABILITY AND VALIDITY AND OF NORMING ARE IMMENSE, AND CREATE ANOTHER DISADVANTAGE. WORK SAMPLES SHOULD BE RESEARCHED AS TO RELIABILITY AND VALIDITY AND THEY SHOULD BE NORMED, BUT THIS IS A DIFFICULT TASK, AND THERE ARE SOME UNRESOLVED PROBLEMS INVOLVED.

4. <u>SITUATIONAL APPROACH</u>: EVALUATING AN INDIVIDUAL WHILE PLACED ON A JOB OR JOBS WITHIN A SHELTERED WORKSHOP HAS BEEN REFERRED TO AS THE SITUATIONAL METHOD OF EVALUATION BY SOME WRITERS. OTHERS HAVE REFERRED TO IT AS THE SIMULATED APPROACH IN THAT IT ATTEMPTS TO SIMULATE ACTUAL WORK CONDITIONS.

THE SHELTERED WORKSHOP MOVEMENT DURING ITS EARLY HISTORY WAS MORE FOR THE PURPOSE OF PROVIDING EMPLOYMENT FOR THE HANDICAPPED. LITTLE THOUGHT WAS GIVEN TO ANY FORMALIZED EVALUATION PROGRAM. TERMINAL EMPLOYMENT WAS AN ACCEPTED TERM AND A LARGE PERCENTAGE OF PEOPLE WERE PLACED IN SHELTERED WORKSHOPS FOR THAT PURPOSE. TODAY THE CONCEPT OF TERMINAL EMPLOYMENT IS AN UNACCEPTABLE CONCEPT AND THE TERM IN DISFAVOR. IF ANYONE IS IN A WORKSHOP OR PLACED THERE FOR A LONG PERIOD OF TIME, THE FAVORED TERM IS "LONGTERM EMPLOYMENT." EVALUATION HAS BECOME AN ACTIVE PROGRAM OF SHELTERED WORKSHOPS. THE PROGRAM OF EVALUATION HAS UP TO THIS TIME, BEEN MAINLY BASED UPON PLACEMENT ON JOBS WITHIN THE WORKSHOPS AND EVALUATION RENDERED WHILE THE CLIENTS WERE EMPLOYED ON THESE JOBS.

OVER THE PAST YEARS, CONSIDERABLE ARGUMENT HAS BEEN STAGED BETWEEN FACILITIES THAT ARE WORK SAMPLE ORIENTED AND SHELTERED WORKSHOPS ORIENTED TOWARDS PRODUCTION. THE SHELTERED WORKSHOP HAS TENDED TO MAKE A VIRTUE OUT OF THE FACT THAT THE WORKSHOP RESEMBLED REAL WORK AND AS A RESULT WAS MORE VALID. ALTHOUGH SHELTERED WORKSHOPS ARE CLOSER ON A CONTINUUM TO RESEMBLING REAL WORK FROM THAT OF WORK SAMPLES ORIENTED FACILITIES, THEY ARE NOT THE SAME AS INDUSTRY OR BUSINESS. WORKSHOPS ARE

OFTEN LOCATED IN OLD SCHOOLS OR OTHER NON-INDUSTRIAL BUILDINGS, WORKING CONDITIONS ARE MORE TOLERANT, AND THE CLIENTELE ARE COGNIZANT OF THE FACT THAT THERE ARE CONSIDERABLE DIFFERENCES. SHELTERED WORKSHOPS ALSO OFTENTIMES HAVE MADE THE STATEMENT THAT WORK SAMPLES APPEAR TO BE EITHER LIKE TESTS OR MICKEY MOUSE ACTIVITIES TO CLIENTS AND, THEREFORE, DO NOT BRING OUT THE BEST PERFORMANCE OF CLIENTS. HOWEVER, THE WORK OF SHELTERED WORKSHOPS IS OFTEN OF A LOW GRADE KIND AND NOT PARTICULARLY ATTRACTIVE. WORK SAMPLE ORIENTED FACILITIES HAVE, ON THE OTHER HAND, STRESSED THE SPECIFICITY OF WORK SAMPLES AND THE ABILITY TO ASSESS PARTICULAR ASPECTS OF THE HANDICAPPED, SUCH AS DEXTERITIES, APTITUDES, AND INTERESTS. YET THE MAJORITY OF WORK SAMPLES USED HAVE NOT BEEN SCIENTIFICALLY VALIDATED. WORK SAMPLE ORIENTED FACILITIES HAVE POINTED TO THE FACT OF THE LIMITATIONS FOR EVALUATION BY SHELTERED WORKSHOPS BASED UPON THE LIMITED TYPES OF WORK CONTRACTS AND/OR OFTEN CHANGE IN WORK CONTRACTS. AT THE SAME TIME, MANY WORK SAMPLE ORIENTED FACILITIES HAVE HAD A VERY LIMITED RANGE OF WORK SAMPLES AND HAVE HAD MANY MORE WORK SAMPLES PERTINENT TO MEN THAN WOMEN.

IT IS TIME TO STOP THE ARGUMENTATION NOW EXISTING BETWEEN WORK SAMPLE ORIENTED FACILITIES AND SHELTERED WORKSHOPS. IT MIGHT BE ONE THING IF THESE ARGUMENTS RESULTED FROM A THEORETICAL BASIS THAT IN TURN RESULTED IN THE TYPE OF FACILITY THAT WAS BUILT. HOWEVER, THE ARGUMENTS HAVE SPRUNG UP FROM A POSITION OF DEFENSE THAT REHABILITATION PERSONNEL HAVE TAKEN BECAUSE OF THE TYPE OF FACILITY THEY WERE IN. THESE FACILITIES HAVE BEEN DEVELOPED DUE TO A VARIETY OF REASONS, BUT THEORETICAL FACTORS NOT BEING ONE OF THE REASONS. BOTH MODELS HAVE ADVANTAGES. ENDING OF THE ARGUMENT DOES NOT MEAN THAT WE SHOULD END THE QUESTIONING AND RESEARCHING OF THE VALIDITY OF EACH METHODOLOGY. ENDING OF THE ARGUMENT, AS I AM PROPOSING, MEANS ENDING THE ARGUMENT BASED UPON DEFENSIVENESS OF REHABILITATION PERSONNEL AND BASING INVESTIGATION OF THE TECHNIQUES ON MORE SCIENTIFIC BASIS.

LET ME NOW RETURN TO THE SITUATIONAL APPROACH AS A MEANS OF EVALUATION. SOME OF THE ADVANTAGES ARE THAT IT OFFERS WORK SITUATIONS SIMULATING WORK IN WHICH TO CONDUCT EVALUATIONS. WAGES ARE PAID, WORK IS PERFORMED ON ACTUAL COMMODITIES DES-

TINED FOR SALE, FOREMEN ARE PRESENT WHO SET STANDARDS FOR QUANTITY AND QUALITY OF WORK, REGULAR WORKING HOURS ARE MAINTAINED, INTERPERSONAL RELATIONSHIP SITUATIONS SIMILAR TO INTERPERSONAL RELATIONSHIP SITUATIONS OF INDUSTRY OR BUSINESS ARE PRESENT, AND, IN GENERAL, THE OVERALL SITUATION MORE CLOSELY RESEMBLES THE SITUATION OF INDUSTRY OR BUSINESS. THE SHELTERED WORKSHOP ALSO PROVIDES SITUATIONS AT WHICH CLIENTS CAN BE PLACED FOR HOURS, DAYS, AND WEEKS. THE WORKSHOP DOES NOT REQUIRE THE RELATIVELY CONSTANT PRESENCE OF AN EVALUATOR, AS WITH WORK SAMPLES. USUALLY ONE EVALUATOR CAN MANAGE MORE CLIENTS IN A SHELTERED WORKSHOP THAN IN A WORK SAMPLE ORIENTED FACILITY. ALSO LACKING IS THE EXPENSE OF MAINTENANCE OF WORK SAMPLES.

THERE ARE LIMITATIONS TO THE SHELTERED WORKSHOPS AS A PROCEDURE OF WORK EVALUATION. SHELTERED WORKSHOPS ARE LIMITED BY THE WORK CONTRACTS THEY HAVE. IT IS IMPOSSIBLE TO REPRODUCE WITHIN THE CONFINES OF A WORKSHOP THE VAST VARIETY OF TYPES OF EMPLOYMENT. FURTHER, IT IS IMPOSSIBLE TO MEASURE FOR THE MANY TYPES OF BASIC SKILLS THAT GO INTO DIFFERENT JOBS. AN EXAMPLE OF THIS IS THE MEASUREMENT OF MOTOR-MANIPULATIVE ABILITY. THERE ARE SHELTERED WORKSHOPS WHICH BELIEVE THEY ADEQUATELY MEASURE MOTOR-MANIPULATION OF CLIENTS BY PLACEMENT ON A PRODUCTION LINE. IT IS TRUE THAT THEY MAY BE ABLE TO ASSESS ONE OR TWO ASPECTS, BUT MOTOR-MANIPULATION ABILITY IS NOT A SINGULAR CONCEPT. THERE IS FINE FINGER DEXTERITY, HAND-TOOL DEXTERITY FOR BOTH LARGE TOOLS AND SMALL TOOLS, HAND-EYE-FOOT COORDINATION, GROSS ARM MOVEMENT, AND SO FORTH. SHELTERED WORKSHOPS ALSO, TOO OFTEN, HAVE THE SIMPLEST KIND OF WORK, SUCH AS UNSKILLED, ASSEMBLY, PACKAGING, AND ELEMENTARY CLERICAL, WHICH IS A LIMITATION FOR EVALUATION POTENTIAL. A FINAL LIMITATION IS RELATED TO ONE OF THE ADVANTAGES. THE COMPLEXITY OF THE SITUATION OF A WORK LIKE SETTING MAKES IT DIFFICULT TO SEPARATE THE VARIABLES THAT ARE PRODUCING THE EFFECT.

5. <u>WORK STATION OF AN INSTITUTION</u>: WORK STATIONS WITHIN INSTITUTIONS SUCH AS HOSPITALS FOR THE MENTALLY ILL OR THE RETARDED, MAY BE USED AS AN EVALUATION METHOD. THEY HAVE AN ADVANTAGE OF OFFERING AN ACTUAL WORK SITUATION FOR EVALUATING THE CLIENT, BUT SHARE WITH THE PRODUCTION LINE OF SHELTERED WORKSHOPS THE FACT THAT THEY STILL ARE NOT COMPLETELY THE REAL THING. IT DOES OFFER THE EVALUATION IN SUCH A FACILITY THE ADVANTAGES OF ANSWERING SUCH QUESTIONS AS HOW DOES THE CLIENT RELATE TO A

SUPERVISOR, HOW DOES HE INTER-RELATE AND COOPERATE WITH OTHER WORKERS, AND CAN HE STAY AT A TASK FOR LONG PERIODS OF TIME. THE LIMITATION TO SUCH AN EVALUATIVE PROCEDURE IS THAT ONLY GENERAL QUESTIONS CAN USUALLY BE ANSWERED. ALSO, CAREFUL GROUNDWORK HAS TO BE LAID IN ORDER TO OBTAIN THE FULL COOPERATION OF SUPERVISORS OF THESE WORK STATIONS, SUCH AS THE FOOD SERVICE, LAUNDRY, GROUNDS, AND TRANSPORTATION DEPARTMENTS. TOO OFTEN THESE SUPERVISORS ARE ONLY SEEKING HELP, AND DO NOT WISH TO BE BOTHERED ABOUT MAKING OUT REPORTS TO ASSIST IN EVALUATIONS OR TO TOLERATE UNACCEPTABLE BEHAVIOR DURING AN EVALUATION PERIOD. INCIDENTALLY, WORK STATIONS SUCH AS FOOD SERVICE MAY BE ALSO USED IN SHELTERED WORKSHOPS.

6. <u>JOB TRYOUT</u>: A JOB TRYOUT IS THE PLACEMENT OF AN INDIVIDUAL OR AN ACTUAL JOB IN INDUSTRY OR BUSINESS. USUALLY, THE JOB TRYOUT IS THE FINAL PHASE OF A PROGRAM WHEN THE CLIENT HAS BEEN MOVED TO A POINT OF READINESS FOR SUCH A PLACEMENT.

THERE ARE BASICALLY TWO DIFFERENT TECHNIQUES FOR JOB TRYOUT. THE FIRST IS TO ARRANGE FOR A SPECIFIC JOB TRYOUT FOR EACH CLIENT. THIS INVOLVES OBTAINING A POSITION WITH AN EMPLOYER FOR A PARTICULAR CLIENT AND USUALLY INVOLVES THE HIRING OF THE CLIENT BY THE EMPLOYER IF HE OR SHE PROVES TO BE EFFECTIVE. THE SECOND PROCEDURE IS TO OBTAIN ONE OR MORE OPEN JOB TRYOUT STATIONS WITH INDUSTRY OR BUSINESS. THESE POSITIONS ARE LEFT OPEN FOR REHABILITATION CLIENTELE AND SUCH CLIENTELE ARE PLACED THERE FOR A SET PERIOD FOR EVALUATION. THIS, OF COURSE, REQUIRES THAT THE POSITION BE KEPT FILLED IN ORDER NOT TO INTERRUPT THE BUSINESS OF THE COOPERATING EMPLOYER.

THE ADVANTAGE IS THE ABILITY TO DETERMINE WHETHER OR NOT A CLIENT CAN HOLD DOWN A JOB IN AN ACTUAL WORK SETTING. IT OFFERS THE OPPORTUNITY TO PROVIDE THE CLIENT WITH COUNSELING WHILE ON THE JOB AND PERHAPS ASSIST HIM TO MAKE ANY NECESSARY ADJUSTMENT. THE DISADVANTAGES STEM FROM THE DIFFICULTY IN OBTAINING EMPLOYER COOPERATION, THE TIME REQUIRED TO CONSTANTLY SEEK SUCH POSITIONS IF THE POSITION IS NOT AN OPEN WORK STATION, THE NECESSITY OF KEEPING ~~OPEN WORK~~ STATIONS FILLED - EVEN IF A STAFF MEMBER HAS TO FILL IT FOR A TIME, AND ARRANGING FOR DVR TO CONTINUE THE CASE WHILE THE CLIENT IS ON THIS STATUS. HOWEVER, THIS TECHNIQUE HAS MUCH TO OFFER AND NEEDS FURTHER RESEARCH AND TRYOUT. IT IS THE CLOSEST OF THE VARIOUS METHODOLOGIES OF EVALUATION TO THE REALITY OF WORK, ALTHOUGH IT IS STILL ONE STEP AWAY.

WHILE ON THIS TECHNIQUE, I WOULD LIKE TO INTERJECT HERE SOME PROCEDURES FOR AIDING IN THE ESTABLISHING OF JOB TRYOUT STATIONS. FIRST CONTACT THE POTENTIAL EMPLOYER IN PERSON. MAKE AN APPOINTMENT TO SEE THE POTENTIAL EMPLOYER IN PERSON AND DO NOT TRY TO ARRANGE THE SETUP BY TELEPHONE. REMEMBER THAT THE EMPLOYER IS IN BUSINESS TO MAKE A PROFIT. YOU HAVE TO SELL HIM YOUR IDEA. MOST EMPLOYERS WILL DISCUSS AVAILABLE JOBS IF CORRECTLY APPROACHED. HOWEVER, THEY TEND TO BE CAUTIOUS ABOUT WHO RECEIVES THIS TYPE OF INFORMATION, AND IT WILL BE NECESSARY FOR YOU TO CLEARLY STATE YOUR INTEREST. THE EVALUATOR MUST THEN SELL HIS PRODUCT. HE MUST SHOW THE ADVANTAGES TO THE EMPLOYER WHICH MAY BE (1) SOURCE OF RELIABLE AND EFFECTIVE HELP, AND (2) GOOD PUBLIC RELATIONS. IT WILL ALSO BE NECESSARY TO SELL THE IMMEDIATE SUPERVISOR. IT WILL USUALLY PROVE TO BE AN EASIER TASK SELLING MANAGEMENT THAN THE IMMEDIATE SUPERVISOR. HOWEVER, HAVING MANAGEMENT'S COOPERATION BUT NOT THAT OF THE IMMEDIATE SUPERVISOR'S CAN NEGATE THE PROGRAM. TAKE TIME TO ANSWER QUESTIONS OF EMPLOYERS AND SUPERVISORS AND TRY TO ELICIT QUESTIONS WHEN NON-VERBAL CLUES INDICATE RESISTANCE OR POSSIBLE UNSPOKEN QUESTIONS. PROVIDE EMPLOYERS WITH ALL NECESSARY INFORMATION THEY DESIRE, EXCEPT CONFIDENTIAL INFORMATION. WHEN PROVIDING INFORMATION USE LAYMAN'S LANGUAGE. EMPLOYERS WILL AT LEAST NEED NAME, AGE, EDUCATION, RACE, SEX, AND DESCRIPTION OF DISABILITY. THE CLIENT MUST BE GIVEN A THOROUGH BRIEFING AND PREPARED FOR THE JOB AS TO DUTIES, EXPECTATIONS, AND POSSIBLE EVENTUALITIES. THE CLIENT NEEDS TO BE SUPERVISED PERIODICALLY BY THE EVALUATOR WHICH INCLUDES SEEING THE CLIENT AND THE SUPERVISOR. REPORTS FROM THE EMPLOYER AS TO PUNCTUALITY, ATTITUDES, BEHAVIOR, WORK HABITS, AND SKILLS ARE DESIRABLE.

MODELS FOR EVALUATION

AS NOTED EARLIER, THERE HAS EXISTED AN ARGUMENT BETWEEN WORK SAMPLE ORIENTED FACILITIES AND SHELTERED WORKSHOPS AS TO WHICH WAS THE MOST EFFECTIVE MEANS OF EVALUATION. THE BASIS FOR A WORK EVALUATION PROGRAM SHOULD REST UPON THE TYPE OF QUESTION IT SEEKS TO ANSWER. A WORK SAMPLE ORIENTED PROGRAM CAN BEST ANSWER SUCH QUESTIONS AS: WHAT APTITUDES DOES HE HAVE? CAN HE RETURN TO HIS OLD JOB? WHAT

TRANSFERABLE SKILLS DOES HE HAVE? WHAT IS HIS ACADEMIC LEVEL OF FUNCTIONING? WHICH OF A NUMBER OF JOBS IS HE BEST ADAPTED TO? HAS HE AT LEAST ONE POTENTIAL WHICH CAN BE CAPITALIZED UPON? A SHELTERED WORKSHOP CAN BEST ANSWER SUCH QUESTIONS AS: CAN HE CONFORM TO THE WORK RULES TO BE FOUND IN INDUSTRY AND BUSINESS? CAN HE GET ALONG WITH CO-WORKERS? CAN HE FUNCTION AS PART OF A PRODUCTION LINE CREW? CAN HE PUT IN AN ORDINARY DAY AT A WORK STATION? CAN HE RELATE ADEQUATELY TO A SUPERVISOR CONCERNED WITH QUANTITY AND QUALITY? SOME TYPE OF ANSWER CAN BE OBTAINED TO ALL OF THESE QUESTIONS IN BOTH A WORK SAMPLE ORIENTED FACILITY AND A SHELTERED WORKSHOP. HOWEVER, EACH OF THESE FACILITIES OFFER ADVANTAGES TO THE QUESTIONS INDICATED ABOVE. THE OTHER METHODOLOGIES LISTED IN THE ABOVE SECTION ALSO HAVE ADVANTAGES AND DISADVANTAGES IN RELATION TO THE BASIC QUESTIONS.

FOR THE MOST PART, VOCATIONAL REHABILITATION FACILITIES SERVE CLIENTS WHERE ALL OF THE ABOVE QUESTIONS COME UP ONE TIME OR ANOTHER. I MAINTAIN THAT THE MOST SUITABLE MODEL IS TO HAVE A FACILITY WHICH ENCOMPASSES PSYCHOLOGICAL TESTING, WORK SAMPLES, SHELTERED WORK, AND JOB TRYOUT. IF A FACILITY HAS WORK STATIONS, SUCH AS FOOD SERVICE, THESE SHOULD ALSO BE INCLUDED IN THE MODEL.

THE ADVANTAGE TO THE ABOVE MODEL IS THAT THE FACILITY HAS AVAILABLE A MULTIPLICITY OF METHODS TO ANSWER THE VARIOUS QUESTIONS IT SEEKS TO ANSWER WITH ITS CLIENT LOAD. IT ALSO OFFERS FLEXIBILITY IN MEETING CLIENTS NEEDS AND SERVING CLIENTS. A CLIENT MAY BE EVALUATED SOLELY BY PSYCHOLOGICAL TESTS AND REFERRED DIRECTLY TO A PLACEMENT OF SOME TYPE, SUCH AS VOCATIONAL SCHOOL, ON-THE-JOB TRAINING PROGRAM, OR A JOB. THE NEXT CLIENT MIGHT BE REFERRED FROM PSYCHOLOGICAL TESTING TO WORK SAMPLE EVALUATION TO OBTAIN INFORMATION NOT OBTAINED BY PSYCHOLOGICAL TESTING OR TO SEE IF IN ACTUALITY THE CLIENT MAY HAVE SOME POTENTIAL WHERE PSYCHOLOGICAL TESTS HAVE INDICATED HE DOES NOT. A DIFFERENT CLIENT MIGHT BE INITIATED ON WORK SAMPLES BECAUSE HE HAS HAD PRIOR PSYCHOLOGICAL TESTING OR BECAUSE HE IS THE TYPE OF CLIENT THAT NEEDS TO BE INITIATED ON WORK SAMPLES. THIS COULD BE DUE TO SUCH FACTORS AS EDUCATIONAL DEPRIVATION, CULTURAL ENVIRONMENT, POOR WORK RECORD, OR PSYCHOLOGICAL PROBLEMS. THIS CLIENT MAY THEN BE REFERRED NEXT TO THE WORKSHOP FOR FURTHER EVALUATION OR FOR WORK ADJUSTMENT; HE MAY BE REFERRED NEXT TO

JOB TRYOUT OR ACTUAL PLACEMENT; OR THEN GIVEN PSYCHOLOGICAL TESTS PRIOR TO ANY OF THE NEXT STEPS JUST LISTED. SOME CLIENTS MAY NEED A PERIOD FOR A CHANCE TO ADJUST TO THE FACILITY AND ITS PROFESSIONAL STAFF PRIOR TO ANY FORMAL EVALUATION. A FACILITY WITH A WORKSHOP CAN EASILY ACCOMMODATE THIS NEED. HAVING ONCE BEEN PLACED IN THE WORKSHOP ONE CLIENT MAY BE ADEQUATELY EVALUATED THERE AND BE PLACED DIRECTLY, OR HE MAY BE ROUTED TO ANY OF THE OTHER EVALUATION METHODOLOGIES LISTED.

AS CAN BE READILY VISUALIZED, THE ABOVE MODEL WILL PERMIT ANY TYPE OF INTEGRATION OF TECHNIQUES. FOR EXAMPLE, A CLIENT MAY BE ENTERED FIRST INTO THE WORK SAMPLE EVALUATION AND REFERRED TO THE WORKSHOP FOR WORK ADJUSTMENT. ONCE WORK ADJUSTMENT HAS BEEN RENDERED, THE CLIENT MIGHT BE REFERRED BACK TO THE WORK SAMPLE EVALUATION DEPARTMENT FOR A RE-EVALUATION. IT IS POSSIBLE, FOR EXAMPLE, THAT PREVIOUS ATTITUDES INFERRED WITH OBTAINING ASSESSMENTS REFLECTING THE CLIENTS TRUE POTENTIAL.

THE ABOVE IS A MODEL FOR THE ESTABLISHMENT OF A WORK EVALUATION PROGRAM. IN ITS TOTALITY IT IS BEST ADAPTED TO VOCATIONAL ORIENTED REHABILITATION FACILITIES. EVALUATION PROGRAMS IN MENTAL HOSPITALS, INSTITUTIONS FOR THE RETARDED, AND PENAL INSTITUTIONS MAY BE LIMITED AS TO SOME ASPECTS OF THE MODEL. SOME STATE HOSPITALS ARE PROHIBITED FROM SHELTERED WORKSHOPS OPERATIONS DUE TO STATE LAWS. INSTITUTIONS FOR THE PENAL OFFENDER MAY HAVE THE SAME DIFFICULTY, ALTHOUGH MANY OFTEN HAVE PRISON INDUSTRY THAT CAN BE USED. THEY MAY NOT BE ABLE TO UTILIZE OUTSIDE JOB TRYOUT STATIONS. HOWEVER, SOME INSTITUTIONS HAVE DEVELOPED WORKOUT PROGRAMS WHERE THE INDIVIDUALS WORK OUT IN THE COMMUNITY DURING THE DAY AND RETURN TO THE INSTITUTION AFTER WORK.

EARLY IN THIS PRESENTATION I STATED THAT THE WORK EVALUATOR UTILIZES WORK TASKS, WORK SITUATIONS, AND WORK ENVIRONMENTS AS THE MEANS OF EVALUATION. AT THIS TIME, I WOULD LIKE TO ELABORATE MORE ON THIS AS IT IS A SECOND TYPE OF MODEL CONCEPT. BY WORK TASKS I AM REFERRING TO THE SPECIFIC TASKS REQUIRED DURING THE CLIENT'S EVALUATION PROGRAMS. IN PSYCHOLOGICAL TESTING THESE WOULD BE DEXTERITY TASKS, ACADEMIC TESTS, APTITUDE TESTS, AND THE LIKE. IN WORK SAMPLES IT WOULD BE TASKS ON BUSINESS MACHINES, POWER DRILLS, ASSEMBLY TESTS, AND THE LIKE. IN A SHELTERED WORK-

SHOP, IN A WORK STATION OF AN INSTITUTION, OR A JOB TRYOUT IT WOULD BE THE SPECIFIC WORK ASSIGNMENT.

THE EVALUATION IN RELATION TO WORK SAMPLES (INCLUDING PERTINENT PSYCHOLOGICAL TESTS) WOULD SEEK ANSWERS TO THE FOLLOWING TYPES OF QUESTIONS: WHAT ARE HIS SKILLS? WHAT DEGREE OF FINGER DEXTERITY DOES HE HAVE? DOES HE HAVE SPATIAL RELATIONS ABILITY? CAN HE READ AT A CERTAIN LEVEL? HAS HE POTENTIAL FOR WELDING? DOES HE MANIFEST AN INTEREST IN BUSINESS? HAS HE THE TOLERANCE TO WORK AT A ROUTINE ASSEMBLY JOB? CAN HE WORK STANDING AT A BENCH?

SIMILAR QUESTIONS MAY BE ASKED AS PART OF THE TASK EVALUATION IN A SHELTERED WORKSHOP; HOWEVER, SPECIFIC ANSWERS TO MANY OF THE ABOVE ARE BETTER OBTAINED FROM WORK SAMPLES AND PSYCHOLOGICAL TESTS. QUESTIONS IN RELATION TO TASKS OF A SHELTERED WORKSHOP INCLUDE THESE TYPE: CAN HE WORK AT A ROUTINE ASSEMBLY TASK FOR PROLONGED PERIODS? DOES HE HAVE THE PHYSICAL STAMINA FOR A JOB REQUIRING MODERATE LIFTING? DOES HE HAVE THE BODY COORDINATION REQUIRED FOR A PRODUCTION LINE? IN RELATION TO A JOB TRYOUT THE MAIN QUESTION TO BE ANSWERED ABOUT THE TASKS INVOLVED IS WHETHER OR NOT THE CLIENT CAN DO THE SPECIFIC JOB.

THE WORK SITUATION INCLUDES THE TASK INVOLVED AND THE CONDITIONS PLACED UPON THE INDIVIDUAL FOR SUCCESS ON THE TASK. THESE CONDITIONS INCLUDE PERFORMING UNDER TIME LIMITATIONS, PERFORMING UNDER PRODUCTION REQUIREMENTS, AND THE INTERPERSONAL RELATIONS INVOLVED IN RELATING TO SUPERVISORS AND OTHER CLIENTS OR CO-WORKERS IN THE IMMEDIATE ENVIRONMENT (SUCH AS THE NEXT WORKER ON A PRODUCTION LINE OR OTHER PEOPLE IN HIS EVALUATION UNIT). THE TYPE OF QUESTIONS HERE ARE AS FOLLOWS: CAN HE PERFORM UNDER TIME PRESSURE? HOW DOES HE RELATE TO A MALE SUPERVISOR, A FEMALE SUPERVISOR, A DEMANDING SUPERVISOR, OR AN EASY GOING SUPERVISOR? HOW WELL DOES HE TAKE ORDERS? IS HE RESPONSIBLE? DOES HE HAVE SELF INITIATIVE? HOW DOES HE TREAT OTHER PEOPLE'S PROPERTY? IS HE DISTRACTABLE?

THE WORK ENVIRONMENT CONSISTS OF THE ENTIRE ENVIRONMENT OF THE VOCATIONAL REHABILITATION FACILITY OR JOB LOCATION. THE EVALUATION HERE IS CONCERNED WITH SUCH FACTORS AS THE FOLLOWING: DOES THE CLIENT COME TO WORK ON TIME? DOES HE STAY AT HIS WORK STATION UNTIL PROPERLY RELIEVED? DOES HE DRESS APPROPRIATELY FOR THE TYPE OF JOB? HOW DOES HE RELATE TO FELLOW CLIENTS OR WORKERS ON COFFEE

BREAKS OR AT LUNCH TIME? WHAT ARE HIS OVERALL ATTITUDES TO THE ENVIRONMENT?

THE QUESTIONS ASKED IN THE WORK TASK SITUATION TEND TO SEEK INFORMATION ABOUT SKILLS, DEXTERITIES, INTEREST, ACADEMIC ABILITY, INTELLIGENCE, AND, IN GENERAL, POTENTIALS. THE QUESTIONS ASKED IN RELATION T THE WORK SITUATION AND THE WORK ENVIRONMENT TEND TO BECOME MORE GENERAL AND CONCERNED WITH PERSONALITY, WORK HABITS, ETC.

UTILIZATION OF WORK EVALUATION

THE TECHNIQUES OF WORK EVALUATION CAN AND SHOULD REVEAL MORE ABOUT A CLIENT THAN JUST SKILLS AND THINGS HE CAN DO. THE TECHNIQUE OF WORK EVALUATION CAN PROVIDE INFORMATION AS TO APTITUDES, DEXTERITIES, SKILLS, INTELLECTUAL LEVEL OF FUNCTIONING, INTERESTS, WORK HABITS, AND PERSONALITY FACTORS. THE AMOUNT OF INFORMATION FOR THE DIFFERENT CATEGORIES WILL VARY FROM CLIENT TO CLIENT. FOR ONE CLIENT, CONSIDERABLE INFORMATION AS TO PERSONALITY FACTORS WILL BE OBTAINED WHILE FOR THE SECOND VERY LITTLE. HOWEVER, TO THE TRAINED EVALUATOR, WORK EVALUATION CAN PRODUCE A WEALTH OF INFORMATION.

THE PERFORMANCE OF A CLIENT ON A WORK SAMPLE FOR BUSINESS SKILLS, HAND-TOOL MANIPULATIVE ABILITY, POWER TOOLS, ASSEMBLY TOOLS, AND THE LIKE, WILL, OF COURSE, REVEAL INFORMATION AS TO THE CLIENTS SKILLS, APTITUDES, AND DEXTERITIES. SIMILAR INFORMATION CAN BE OBTAINED BY OBSERVING HIM ON VARIOUS JOBS IN THE SHELTERED WORKSHOP. HOWEVER, AS NOTED EARLIER, THIS KIND OF INFORMATION COMES BEST FROM WORK SAMPLES.

INTELLECTUAL LEVEL OF FUNCTIONING CAN BE OBTAINED BY ADMINISTRATION OF INTELLIGENCE TESTS, ACADEMIC ACHIEVEMENT TESTS (SUCH AS THE WIDE RANGE ACHIEVEMENT TEST), AND BY CAREFUL OBSERVATION OF HIS BEHAVIOR DURING THE EVALUATION PROGRAM. A CLIENT WHO CAN DO A TASK FROM WRITTEN INSTRUCTIONS HAS A HIGHER LEVEL OF ACADEMIC VERBAL ABILITY THAN A CLIENT WHO REQUIRES THAT THE INSTRUCTIONS BE READ. HOWEVER, THE LATTER INDIVIDUAL HAS A HIGHER LEVEL OF ABILITY THAN THE CLIENT FOR WHOM THE INSTRUCTIONS MUST BE DEMONSTRATED. TWO CLIENTS MAY MEASURE APPROXIMATELY THE SAME ON INTELLIGENCE TESTS BUT ONE MAY REVEAL A HIGHER DEGREE FUNCTIONING FROM THE STANDPOINT OF LEARNING ABILITY. THIS CAN BE OBSERVED IN A WORK EVALUATION PROGRAM

AS THE CLIENTS PROGRESS THROUGH WORK SAMPLES AND BY THE RATE AT WHICH THEY LEARN. WORK SAMPLES CAN BE BUILT WITH VARYING DEGREES OF COMPLEXITY. IT CAN ALSO BE OBSERVED BY THE RATE OF LEARNING IN A WORKSHOP. IN ADDITION, THE WAY A CLIENT APPROACHES A TASK CAN REVEAL THE MANNER IN WHICH HE TACKLES PROBLEMS, THAT IS, TRIAL AND ERROR, CONCRETE, ABSTRACTS, COMMON ELEMENTS, WITH PLAN AND FORTHOUGHT, IMPULSIVITY, ETC.

THE WORK EVALUATION PROGRAM CAN ALSO REVEAL INFORMATION AS TO A CLIENT'S INTERESTS, ESPECIALLY IN A WORK SAMPLE DEPARTMENT WITH A WIDE RANGE OF WORK EVALUATION TASKS. ONE TECHNIQUE FOR MEASURING INTEREST IS TO OBTAIN THE CLIENT'S PREFERENCES AND NON-PREFERENCES FOR THE VARIOUS TASKS HE UNDERTOOK, AND THE REASONS WHY HE LIKES AND DISLIKES VARIOUS TASKS. A SECOND PROCEDURE IS TO OBSERVE CAREFULLY HIS VERBAL AND NON-VERBAL REACTIONS. EXAMPLES OF THE LATTER WOULD BE HIS FACIAL EXPRESSIONS TO THE VARIOUS TASKS OR HIS PERFORMING WELL BELOW THE EXPECTED LEVEL ON A PARTICULAR TASK.

IT IS TO BE EXPECTED THAT SOME CLIENTS WILL DISLIKE ALL OF THE TASKS OF THE EVALUATION PROGRAM. THIS MAY BE DUE TO A NUMBER OF REASONS INCLUDING THE FOLLOWING. THE VARIETY OF TASKS MAY BE TOO LIMITED TO PRESENT THE CLIENT WITH AN AREA HE LIKES. THIS WOULD BE ESPECIALLY TRUE IN A SHELTERED WORKSHOP WITH ONLY A LIMITED NUMBER OF CONTRACTS. IT MIGHT BE DUE TO THE FACT THAT THE CLIENT IS UNABLE TO CORRELATE SOME OR ALL OF THE TASKS WITH SPECIFIC JOBS AND THIS MUST BE EXPLAINED. THE CLIENT MAY NOT BE MOTIVATED TOWARDS WORKING, BUT MAY BE SEEKING OTHER GAINS, SUCH AS SUPPORT BY SOCIETY.

OBTAINING A CLIENT'S REACTION TO THE VARIOUS TASKS CAN REVEAL INFORMATION OTHER THAN INTERESTS. IT CAN ALSO REVEAL A DESCREPANCY BETWEEN INTERESTS AND ABILITY. A CLIENT MAY INDICATE THAT THE TASK OR TASKS WHICH APPEAL TO HIM MOST ARE THOSE ABOVE HIS ABILITY LEVEL. IT MAY ALSO BE THE REVERSE. THOSE WHICH APPEAL THE MOST MAY BE ONES BELOW HIS LEVEL OF ABILITY. THE RESULTS OF THE WORK EVALUATION CAN, AT THAT TIME, BECOME A VALUABLE TOOL IN COUNSELING AND WORKING WITH THE CLIENT.

WORK EVALUATION OFFERS THE OPPORTUNITY TO OBSERVE THE CLIENT UNDER A VARIETY OF CONDITIONS, AND OVER A PERIOD OF TIME. AS SUCH, IT OFFERS EXCELLENT OPPORTUNITY FOR THE OBSERVATION AND EVALUATION OF HIS PERSONALITY. HOW DOES HE REACT TO AUTHORITY FIGURES, TO MALE AUTHORITY FIGURES AS OPPOSED TO FEMALE AUTHORITY FIGURES; TO HIS SUCCESSES AND TO HIS FAILURES; TO OLDER PERSONS; TO PERSONS HIS AGE; TO YOUNGER PERSONS; TO FRUSTRATING SITUATIONS; TO DIFFICULT TASKS; TO THE UNEXPECTED; TO PRESSURES CREATED BY TIME LIMITATIONS; ETC? IS HE DEPENDENT OR INDEPENDENT, OR DOES HE MANIFEST A MIXTURE OF DEPENDENCY AND INDEPENDENCY, DEPENDENT UPON THE SITUATION? IS HE AGGRESSIVE, PASSIVE, OR PASSIVE-AGGRESSIVE? IS HE A LONER OR GREGARIOUS?

WORK EVALUATION, ESPECIALLY IN THE SHELTERED WORKSHOP SITUATION, LENDS ITSELF TO THE OBSERVATION OF WORK HABITS. DOES HE REPORT ON TIME? DOES HE WASTE TIME DURING ASSIGNMENTS? IS HE DEPENDABLE? IS HE RESPONSIBLE? IS HIS GROOMING APPROPRIATE? DOES HE TAKE CARE OF EQUIPMENT HE IS USING?

NOT EVERY INDIVIDUAL SERVED BY THE VOCATIONAL REHABILITATION PROCESS REQUIRES WORK EVALUATION. A CLIENT WITH AT LEAST AVERAGE INTELLIGENCE, AT LEAST A GRADE SCHOOL EDUCATION, AND WITH SOME APPROPRIATE MOTIVATION CAN USUALLY BE EVALUATED FASTER, MORE ECONOMICALLY, AND JUST AS EFFECTIVELY (POSSIBLY BETTER), BY STANDARD PROCEDURES. HOWEVER, THERE ARE MANY CLIENTS FOR WHOM WORK EVALUATION SHOULD BE USED AS AN ADJUNCT TO STANDARD PROCEDURES OR AS THE PREFERRED METHODOLOGY. SOME GUIDELINES FOR SUCH CLIENTS ARE AS FOLLOWS: (1) LOW INTELLIGENCE; (2) POOR EDUCATION; (3) CULTURAL BACKGROUND DIFFERENT FROM THAT UPON WHICH MOST PSYCHOLOGICAL TESTS ARE STANDARDIZED UPON; (4) SUB-CULTURAL BACKGROUNDS THAT CREATE NEGATIVE ATTITUDES TO STANDARDIZED TESTING - SUCH AS YOUTH GANGS; (5) EMOTIONAL OR BEHAVIORAL PROBLEMS THAT INTERFERE WITH STANDARD ASSESSMENT; (6) IMMATURITY; (7) LACK OF ADEQUATE WORK EXPERIENCES; (8) HISTORY OF MANY LOW LEVEL JOBS; (9) ASPIRATIONS EXCEED OR ARE BELOW ABILITY LEVEL; (10) HANDICAPPING CONDITIONS THAT PREVENT ADEQUATE ASSESSMENT BY STANDARD PROCEDURES; AND (11) BASIC QUESTIONS HAVE NOT BEEN ANSWERED BY OTHER PROCEDURES.

THE WORK EVALUATION PROCESS MAY NOW BE UTILIZED TO DETERMINE ELIGIBILITY FOR REHABILITATION SERVICE. PUBLIC LAW 89-833 AUTHORIZED REHABILITATION COUNSELORS TO UTILIZE WORK EVALUATION TO ASSIST THEM IN MAKING THE DETERMINATION AS TO "REASONABLE EXPECTATION FOR SUCCESS" THAT IS REQUIRED BEFORE RENDERING REHABILITATION SERVICES. FROM THE ABOVE DESCRIPTION OF THE WORK EVALUATION PROCESS THE POTENTIAL OF WORK EVALUATION FOR AIDING THE COUNSELOR IN THIS DECISION SHOULD BE OBVIOUS. THE CHANCE TO OBSERVE A CLIENT UNDER THE CONDITIONS OF WORK EVALUATION AND FOR AN EXTENDED PERIOD OF TIME WILL RESULT IN INFORMATION ABOUT A CLIENT NOT AVAILABLE THROUGH MEDICAL EXAMINATION AND STANDARD PSYCHOLOGICAL TESTING. WHEN SHOULD A COUNSELOR USE WORK EVALUATION FOR ASSISTING IN THIS DECISION? HE SHOULD USE IT WHEN THERE IS A QUESTIONABLE DOUBT IN HIS MIND FROM OTHER ASSESSMENT TECHNIQUES (INTERVIEW, REVIEW OF HISTORY, MEDICAL EXAMINATION, AND PSYCHOLOGICAL EXAMINATION), AS TO THE DECISION OF "REASONABLE EXPECTATION FOR SUCCESS."

THE REHABILITATION COUNSELOR HAS SOME DEFINITE RESPONSIBILITIES TOWARDS THE WORK EVALUATION PROCESS. NO COUNSELOR SHOULD SEND A CLIENT TO A FACILITY WITH A SIMPLE STATEMENT OF "PLEASE EVALUATE." THE COUNSELOR SHOULD CAREFULLY STATE THE SPECIFIC QUESTIONS HE HAS IN RELATION TO THE CLIENT. THIS WILL NOT PROHIBIT THE WORK EVALUATION DEPARTMENT OF A FACILITY FROM EVALUATING BEYOND THESE QUESTIONS, IF SUCH EVALUATION IS CALLED FOR AND AGREED ON BY THE COUNSELOR, BUT IT WILL ASSIST THE WORK EVALUATION DEPARTMENT IN MEETING THE NEEDS OF THE COUNSELOR. THE COUNSELOR SHOULD ALSO PREPARE THE CLIENT FOR THE PROCESS AND NOT HAVE HIM ENTER WORK EVALUATION WITH FALSE CONCEPTIONS AND UNANSWERED QUESTIONS. THE COUNSELOR SHOULD PROVIDE THE WORK EVALUATION PROGRAM WITH INFORMATION ON THE CLIENT. THIS WILL INCLUDE PERTINENT INFORMATION ON MEDICAL AND PSYCHIATRIC DATA, PSYCHOLOGICAL TESTS, FAMILY HISTORY, WORK RECORD, AND EDUCATIONAL ATTAINMENT. WORK EVALUATION IS NOT A PASSIVE PROCESS THAT SIMPLY MEASURES OBJECTIVE FACTORS. WORK EVALUATION TAKES ON MEANING DEPENDENT UPON BACKGROUND OF THE CLIENT. AS INDICATED UNDER THEORETICAL FOUNDATIONS,

WORK EVALUATION IS AHISTORICAL AND CONCERNED WITH THE FUTURE. HOWEVER, AN EVALUATOR WITH THE KNOWLEDGE THAT A CLIENT HAS A THIRD GRADE EDUCATION, OR WAS A COMMON LABORER ALL HIS LIFE, OR ONCE HELD A HIGH LEVEL JOB, CAN RENDER MORE EFFECTIVE EVALUATION AND INTERPRETATIONS. HE ALSO NEEDS TO KNOW IF THE CLIENT HAS A HISTORY OF PSYCHIATRIC PROBLEMS AND THE PROBLEMS OF THE CLIENT. WHEN THIS INFORMATION IS NOT SUPPLIED BY THE COUNSELOR THE EVALUATOR USUALLY HAS TO SPEND TIME INTERVIEWING THE CLIENT.

THE COUNSELOR SHOULD BECOME FAMILIAR WITH THE WORK EVALUATION PROGRAMS HE USES AND VISIT AS OFTEN AS TIME PERMITS, IF THEY ARE NOT TOO FAR AWAY. VISITATION TO WORK EVALUATION PROGRAMS WILL FAMILIARIZE THE COUNSELOR WITH THE PROCESS, ENABLE HIM TO DETERMINE WHICH PROGRAM IS BEST SUITED FOR A PARTICULAR CLIENT, AND TO ESTABLISH EFFECTIVE COMMUNICATION BETWEEN THE COUNSELOR AND PERSONNEL OF THE WORK EVALUATION PROGRAMS.

THE WORK EVALUATOR ALSO HAS DEFINITE RESPONSIBILITIES. IF A CLIENT IS REFERRED FOR A SPECIFIC PURPOSE THE EVALUATOR SHOULD CONTACT THE COUNSELOR TO PURSUE A DIFFERENT TRACK, IF THAT SEEMS DESIRABLE, UNLESS ARRANGEMENTS ARE MADE AHEAD OF TIME TO DO SO. THE EVALUATOR SHOULD KEEP THE COUNSELOR ABREAST OF DEVELOPMENTS FOR CLIENTS IN EVALUATION FOR LONG PERIODS OF TIME. THE EVALUATOR SHOULD WRITE REPORTS IN CLEAR AND CONCISE LANGUAGE WITHOUT A LOT OF PROFESSIONAL JARGON. THE EVALUATOR SHOULD DO MORE THAN JUST REPORT FACTS. A SERIES OF FACTS ABOUT A CLIENT MAY COVER THE ESSENTIAL FINDINGS BUT LACK ANY TYPE OF DYNAMIC UNDERSTANDING OF THE MEANING OF THESE FACTS. FACTS NEED TO BE INTEGRATED TO RENDER EFFECTIVE INTERPRETATION. THE WORK EVALUATION REPORT SHOULD BE SURE TO ANSWER THE SPECIFIC QUESTIONS ASKED BY A COUNSELOR OR INDICATE WHY THE EVALUATOR IS UNABLE TO ANSWER THE QUESTION. THE EVALUATOR MUST REMEMBER THAT IT IS THE COUNSELOR WHO IS BUYING THE SERVICES. AT TIMES, EVALUATORS TEND TO ACT AS IF THEY WERE THE ONES MAINLY INVOLVED WITH THE CLIENT AND CAN DO AS THEY PLEASE. WHEN EFFECTIVE COMMUNICATION IS WORKED OUT BETWEEN COUNSELOR AND EVALUATOR THERE WILL BE FEW PROBLEMS.

CONCLUDING REMARKS

THIS HAS BEEN A SURVEY OF SOME OF THE FEATURES OF WORK EVALUATION. IT HAS NOT ATTEMPTED TO BE COMPLETE IN THE TIME AVAILABLE. WORK EVALUATION IS A VALUABLE TOOL IN THE PROCESS OF VOCATIONAL REHABILITATION. IT IS NOT THE ANSWER TO ALL OUR PROBLEMS. IT SHOULD NOT BE APPLIED TO CLIENTS INDISCRIMINATELY. HOWEVER, PROPERLY USED IT CAN BE A MOST EFFECTIVE MEANS OF ASSESSMENT. REMEMBER ALSO THAT IN THE PROCESS OF WORK EVALUATION, THE MOST EFFECTIVE TOOL OF EVALUATION IS THE EVALUATOR HIMSELF.

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Work Evaluation and Work Adjustment.

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*VOCATIONAL REHABILITATION; *VOCATIONAL EVALUATION; *VOCATIONAL ADJUSTMENT; SHELTERED WORKSHOPS; BEHAVIOR CHANGE; PERSONNEL SELECTION; JOB ANALYSIS; PSYCHOLOGICAL TESTING; WORK ENVIRONMENT; MODELS; HANDICAPPED

The process of work evaluation is a part of the total vocational evaluation process, and the two processes are differentiated by their respective objectives and techniques. Work evaluation is an assessment technique and work adjustment is a treatment technique. Work evaluation involves work samples, situational work setting, job analysis, and psychometric testing. Work adjustment involves the work setting, instructional classes, group therapeutic sessions, and formulized behavior modification. Giving time and consideration to each of these factors, as well as to work environment, can help a program focus on the total individual. Staffing for evaluation and adjustment requires specific knowledges and there is potential for individuals with backgrounds in industrial arts education, psychology and counseling, occupational therapy, and industry. Finally, to be truly effective, evaluation and adjustment services must be related to other services and communicate freely with them. (JK)

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WORK EVALUATION & WORK ADJUSTMENT

Paul R. Hoffman, Ed.D.

Presented at:

Short Term Training Institute
Region I by the Massachusetts and
Connecticut Chapter of the National
Association of Sheltered Workshops
and Homebound Programs - 4/24/69 at
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WORK EVALUATION & WORK ADJUSTMENT

PRESENTED AT THE SHORT TERM TRAINING INSTITUTE
REGION I BY THE MASSACHUSETTS AND CONNECTICUT CHAPTER
OF THE NATIONAL ASSOCIATION OF SHELTERED WORKSHOP AND HOME BOUND PROGRAM

APRIL 24, 1969 - HYANNIS, MASS.

BY PAUL R. HOFFMAN, ED.D., DIRECTOR
INSTITUTE FOR VOCATIONAL REHABILITATION
STOUT STATE UNIVERSITY
MENOMONIE, WISCONSIN

WHEN CONTACTED TO SPEAK AT THIS CONFERENCE, IT WAS REQUESTED THAT I ADDRESS MYSELF TO PRESENTING A MODEL OF VOCATIONAL EVALUATION AND WORK ADJUSTMENT SERVICES WHICH WORKSHOP DIRECTORS MIGHT UTILIZE IN DEVELOPING EFFECTIVE PROGRAMS WITHIN THEIR OWN WORKSHOPS. BEFORE PROCEEDING, THERE ARE TWO ISSUES RAISED BY THIS REQUEST THAT I WOULD LIKE TO DISCUSS.

THE FIRST ISSUE INVOLVES THE CONCEPT OF VOCATIONAL EVALUATION. THERE HAS BEEN SOME TENDENCY, OF WHICH STOUT STATE UNIVERSITY IS PARTIALLY GUILTY, TO EQUATE VOCATIONAL EVALUATION AND WORK EVALUATION. DR. PAUL LUSTIG, COORDINATOR, TRAINING PROGRAM FOR WORKSHOP PERSONNEL AT THE UNIVERSITY OF WISCONSIN, HAS STATED IN A CONVERSATION WITH MYSELF THAT HE TENDS TO VIEW THE TWO AS NON-EQUIVALENT TERMS. HE INDICATED THAT HE CONSIDERED VOCATIONAL EVALUATION AS A COMPREHENSIVE PROCESS INVOLVING EVALUATION FOR MEDICAL FACTORS, PSYCHOLOGICAL FACTORS, VOCATIONAL FACTORS, AS WELL AS OTHER COMPONENTS. WORK EVALUATION WAS A PROCESS WHICH HE SAW AS PART OF THE TOTAL VOCATIONAL EVALUATION PROCESS. CURRENTLY IT IS MY PREFERENCE TO AGREE WITH HIM AND TO VIEW VOCATIONAL EVALUATION AS A COMPREHENSIVE PROCESS CONCERNED WITH MEDICAL, PSYCHOLOGICAL, VOCATIONAL, EDUCATIONAL, SOCIAL, AND ENVIRONMENTAL FACTORS PERTINENT TO EVALUATION OF THE POTENTIAL OF AN INDIVIDUAL OBTAINING HIS OR HER MAXIMUM DEGREE OF VOCATIONAL ATTAINMENT. IN RELATION TO THIS "MAXIMUM DEGREE," I'M CONCERNED NOT ONLY WITH FINANCIAL OBTAINMENT BUT WITH SUCH FACTORS AS OBTAINING EMPLOYMENT TO MATCH INTERESTS AND ABILITIES AND EMPLOYMENT WHICH RESULTS IN SATISFACTION OTHER THAN JUST FINANCIAL. THIS MAXIMUM DEGREE WITH SOME OF YOUR CLIENTELE WILL BE EXTENDED EMPLOYMENT IN A SHELTERED WORKSHOP. FOR SOME, SUCH AS WITH OLD

AGE SURVIVORS DISABILITY INSURANCE PROGRAM, VOCATIONAL ENDEAVORS MAY HAVE TO BE TERMINATED. CONCEPTUALIZING VOCATIONAL EVALUATION IN THIS MANNER IS IN AGREEMENT WITH THE DEFINITION IN THE NEW FEDERAL LEGISLATION FOR REHABILITATION. WORK EVALUATION THEN BECOMES ONE OF THE PROCESSES CONTRIBUTING TO A VOCATIONAL EVALUATION.

WORK EVALUATION WILL BOTH REQUIRE AND UTILIZE MUCH OF THE INFORMATION OBTAINED IN THE TOTAL VOCATIONAL EVALUATION PROCESS BUT THAT WHICH SEPARATES IT FROM OTHER PROCESSES WITHIN THE VOCATIONAL EVALUATION TOTALITY IS THE PARTICULAR TOOLS AND TECHNIQUES AND COMBINATION OF KNOWLEDGE REQUIRED TO CONDUCT AN EVALUATION. I WOULD STATE THAT THERE IS SUCH A PERSONS AS A WORK EVALUATOR BUT NOT A VOCATIONAL EVALUATOR. WITH VOCATIONAL EVALUATION INVOLVING THE EVALUATION FOR MEDICAL, PSYCHOLOGICAL, VOCATIONAL, EDUCATIONAL, CULTURAL, SOCIAL FACTORS, AND ENVIRONMENTAL FACTORS, A VARIETY OF PROFESSIONAL PERSONS ARE INVOLVED. IT WOULD BE DIFFICULT FOR ANY ONE PERSON TO BE ABLE TO PERFORM ADEQUATELY IN ALL AREAS OR TO HAVE THE TIME AND INTEREST TO DO SO. A VOCATIONAL EVALUATION WOULD, THEREFORE, BE CONDUCTED EITHER IN ONE COMPREHENSIVE FACILITY UNDER THE TEAM APPROACH OR THROUGH REFERRALS TO SEPARATE FACILITIES, AGENCIES, AND/OR INDIVIDUAL, PROFESSIONAL PERSONNEL. IT WOULD BE SOME INDIVIDUAL, SUCH AS A REHABILITATION COUNSELOR, WHO WAS A COORDINATOR OF THE TOTAL PROCESS. THERE IS, HOWEVER, AN INDIVIDUAL WHO CAN BE IDENTIFIED AS A WORK EVALUATOR. THE WORK EVALUATOR IS THE INDIVIDUAL WHO UTILIZES SUCH METHODS AS WORK SAMPLES, SITUATIONAL WORK SETTINGS, JOB TRY-OUTS, AND EVALUATES CLIENTELE IN A WORK-LIKE SETTING.

I AM SURE THAT THERE ARE THOSE OF YOU AT THIS MEETING WHO WOULD BOTH AGREE AND DISAGREE WITH THIS CONCEPT. I WOULD LIKE TO GIVE IT FURTHER THOUGHT AND CONSIDERATION AND TO EXPLORE ALL THAT IS IMPLIED BY SEPARATION OF THE TWO TERMS, VOCATIONAL EVALUATION AND WORK EVALUATION. HOWEVER, I DO NOT WISH TO PURSUE THIS FURTHER BECAUSE OF THE LIMITED TIME THAT WE HAVE TODAY. WHETHER WE DECIDED THAT THE TERMS WERE EQUIVALENT OR NOT EQUIVALENT, BOTH ANSWERS WOULD LEAD TO THE NEXT ISSUE WHICH I FEEL IS MOST BASIC TO OUR DISCUSSION.

TO AVOID THE POSSIBLE CONFLICT BETWEEN THE TERMS VOCATIONAL EVALUATION AND WORK EVALUATION, I THINK THAT WE CAN AGREE THAT WHAT WAS MEANT IN THE REQUEST FOR THIS SPEECH IS THAT A MODEL BE SET FOR ASSESSMENT OF WORK POTENTIAL AND ADJUSTMENT FOR WORK POTENTIAL. THE FORMER IS OFTEN REFERRED TO AS VOCATIONAL EVALUATION OR WORK EVALUATION AND THE LATTER AS WORK ADJUSTMENT. THE ISSUE INVOLVED IS THE TENDENCY BY MANY INDIVIDUALS TO EQUATE WORK EVALUATION AND WORK ADJUSTMENT. TWO YEARS AGO IN NEW ORLEANS I INDICATED TO A GROUP OF WORKSHOP PEOPLE THAT THE TWO PROCESSES WERE NOT EQUIVALENT. I RECEIVED CONSIDERABLE ARGUMENT FROM PARTICIPANTS IN THE MEETING BASED ON THE STANDPOINT THAT WORK EVALUATION AND WORK ADJUSTMENT WENT ON AT THE SAME TIME. I WOULD AGREE THAT IN MANY OF THE SITUATIONS WORK EVALUATION AND WORK ADJUSTMENT DOES GO ON CONCOMITANTLY. I WOULD ALSO NOTE THAT THE SAME TOOLS AND SETTINGS, SUCH AS THE PRODUCTION UNIT IN A SHELTERED WORKSHOP OR A WELDING UNIT IN A WORK SAMPLE ORIENTED FACILITY, MAY BE UTILIZED TO CONDUCT BOTH. HOWEVER, THIS DOES NOT NEGATE THE FACTOR THAT BOTH ARE SEPARATE PROCESSES WITH SEPARATE GOALS.

IF FOR THE MOMENT, AND TO AVOID ARGUMENT ON THE FIRST ISSUE MENTIONED ABOVE, WE REFER TO WORK EVALUATION AND WORK ADJUSTMENT AS THE PROCESSES WE ARE CONCERNED WITH, THEN WORK EVALUATION IS AN ASSESSMENT TECHNIQUE AND WORK ADJUSTMENT IS A TREATMENT TECHNIQUE. WORK EVALUATION HAS AS ITS OBJECTIVES THE ASSESSMENT OF VOCATIONAL STRENGTHS AND WEAKNESSES AND THE DEVELOPMENT OF A RECOMMENDED PLAN TO ASSIST THE INDIVIDUAL. ASSESSMENT IS CONCERNED WITH EVALUATION OF SUCH FACTORS AS SKILLS, ATTITUDES, DEXTERITY, INTERESTS, PERSONALITY FACTORS, INTELLECTUAL LEVEL OF FUNCTIONING, WORK HABITS, AND THE LIKE. AFTER EVALUATING AN INDIVIDUAL'S VOCATIONAL STRENGTHS AND WEAKNESSES A PLAN IS WRITTEN THAT MAY INCLUDE RECOMMENDATIONS FOR SCHOOLING, ON-THE-JOB TRAINING, PERSONAL-SOCIAL ADJUSTMENT, DEVELOPMENT OF WORK HABITS, OR A COMBINATION OF THE ABOVE. WORK ADJUSTMENT IS CONCERNED WITH A LIMITED ASPECT OF THE PRECEDING; THAT IS, IT IS CONCERNED WITH TREATMENT RELATED TO FOUND VOCATIONAL WEAKNESSES AND EVEN HERE TO A LIMITED ASPECT OF THESE FACTORS. IT

IS CONCERNED WITH TREATMENT FOR PERSONALITY FACTORS, ATTITUDES, WORK HABITS, AND THE LIKE. IF IT IS A MATTER OF TRAINING FOR A PARTICULAR SKILL, THEN THE CONCEPT IS WORK TRAINING. IF IT IS A MATTER OF BASIC ACADEMIC SKILL IMPROVEMENT, THEN THE CONCEPT IS ADULT BASIC EDUCATION.

CONSIDERABLE CONFUSION EXISTS IN THE FIELD BETWEEN THE TERMS WORK EVALUATION AND WORK ADJUSTMENT. THE RECENT FEDERAL LEGISLATION EQUATES THE TWO IN PARAGRAPH 4 UNDER SECTION 15 WHERE IT IMPLIES THAT WORK EVALUATION AND WORK ADJUSTMENT ARE APPRAISAL METHODS. I FORMERLY OBJECTED TO THIS AT THE TIME THE LEGISLATION WAS BEING WRITTEN AND I STILL OBJECT TO IT. I MAINTAIN THAT IF OUR CONCEPT OF EVALUATION AND ADJUSTMENT IS COMPLETELY INTEGRATED WITH NO THOUGHT AS TO WHAT WE ARE DOING THEN IT IS NOT NECESSARY TO HAVE TWO TERMS. I WILL CONFESS THAT I DO NOT HAVE, AT THIS PARTICULAR MOMENT, WELL DELINEATED DIFFERENTIATIONS AT AN OPERATIONAL LEVEL BETWEEN EVALUATION AND ADJUSTMENT SO THAT WE CAN TELL AT ANY MOMENT WHICH IS GOING ON. I DO FEEL THAT THESE FACTORS ARE BEGINNING TO IMMERGE AND THAT AS MORE AND MORE KNOWLEDGE, EXPERIENCE, AND EVIDENCE ARE ACCUMULATED THAT WE ARE COMING TO THE POINT WHERE WE WILL BE ABLE TO DELINEATE. I FEEL THAT IT IS IMPORTANT FOR US TO DO SO IF WE ARE TO MOVE BEYOND THE PLATEAU WHICH WE HAVE REACHED IN THIS AREA OF VOCATIONAL REHABILITATION. PLEASE NOTE, I AM NOT ADVOCATING THAT WORK EVALUATION AND WORK ADJUSTMENT MUST IN ACTUAL PROCESS OR IN WORKING WITH THE CLIENT BE DELINEATED INTO NEAT LITTLE BOXES OF TIME SEQUENCES. IN FACT, IT IS IMPOSSIBLE TO CONDUCT A THOROUGH EVALUATION FOR WORK POTENTIAL WITHOUT SOME ADJUSTMENT TAKING PLACE, EITHER POSITIVE OR NEGATIVE, AND WHILE WE ARE ENGAGED IN WORK ADJUSTMENT WE SHOULD BE CONTINUALLY EVALUATING.

I COULD DIVERT AT THIS POINT AND INDICATE THAT THE EVALUATION CONDUCTED DURING WORK ADJUSTMENT WILL, IN MANY ASPECTS, HAVE DIFFERENT GOALS THAN THAT OF THE TOTAL WORK EVALUATION PROCESS. FOR EXAMPLE, LET US ASSUME THAT A WORK EVALUATION WAS CONDUCTED PRIOR TO A WORK ADJUSTMENT PROGRAM. LET US FURTHER ASSUME THAT FROM THE WORK EVALUATION IT WAS RECOMMENDED THAT A WORK ADJUSTMENT PROGRAM BE UNDERTAKEN TO IMPROVE THE INDIVIDUAL'S WORK HABITS. WHILE THE WORK ADJUSTMENT PROGRAM FOR IMPROVED WORK HABITS WAS TAKING PLACE, THERE WOULD BE A CONTINUED EVALUATION TO DETERMINE THE

PROGRESS BEING MADE BY THE CLIENT IN THIS PROGRAM OF WORK ADJUSTMENT. HERE THE GOAL OF EVALUATION WOULD BE SPECIFIC TO DETERMINE THE CLIENT'S PROGRESS IN ORDER TO DETERMINE WHETHER OR NOT THE PROGRAM IS BEING SUCCESSFUL, WHETHER OR NOT A NEW PROGRAM IS NEEDED, AND WHEN THE INDIVIDUAL WAS READY TO ENTER THE NEXT STEP OF HIS VOCATIONAL REHABILITATION PROCESS. FURTHER, I WOULD STATE THAT SOME FORM OF EVALUATION MUST PRECEDE WORK ADJUSTMENT. WHAT WOULD WE BE ADJUSTING OR TEACHING?

I AM SURE THERE ARE MANY OF YOU LISTENING TO ME AT THIS MOMENT WHO ARE BEGINNING TO TAKE CONSIDERABLE OPPOSITION TO WHAT I AM STATING, AND MAY BE SAYING THAT WHAT I AM DOING IS KNIT PICKING. I HOPE THERE IS OPPOSITION AND I HOPE IT WILL CAUSE YOU TO DISCUSS AND RECONSIDER THE ISSUES INVOLVED. I STATE THIS BECAUSE I FIRMLY BELIEVE WE HAVE COME A LONG WAY IN EVALUATING AND IN ASSISTING HANDICAPPED AND DISADVANTAGED PERSONS WITH OUR SPECIALIZED TOOLS AND TECHNIQUES. HOWEVER, IF WE ARE TO ADVANCE TO THE NEXT LEVEL, IT IS ONLY BECAUSE WE SINCERELY EXAMINE THE FOUNDATIONS ON WHICH OUR PROGRAMS AND ASSUMPTIONS REST AND WE DEVELOP MORE FULLY DELINEATED FOUNDATIONS AND HYPOTHESES UPON WHICH TO ADVANCE TO THE NEXT LEVEL. SHOULD THE NECESSITY TO DO THIS BOTHER YOU AND SHOULD IT BOTHER YOU THAT POSSIBLY WE ARE NOT RESTING ON FIRM FOUNDATIONS WITH OUR HYPOTHESES, ASSUMPTIONS, AND THEORIES, I CAN ONLY POINT TO OTHER FIELDS. IF YOU WILL REMEMBER NOT TOO MANY YEARS AGO IN THE FIELD OF CHEMICAL SCIENCE, THE ATOM WAS CONSIDERED THE SMALLEST PARTICLE. HAD SCIENCE BEEN WILLING TO ACCEPT THIS THEN IT WOULD NOT HAVE ADVANCED BEYOND THE LEVEL WHICH EXISTED AT THAT TIME. HOWEVER, IT WAS WILLING TO EXAMINE THE FOUNDATIONS UPON WHICH IT RESTED AND TO DISCARD THE INADEQUACIES IN ORDER TO ADVANCE TO THE NEXT LEVEL. IT IS MY BELIEF THAT WORK EVALUATION AND WORK ADJUSTMENT ARE NOT EQUIVALENT PROCESSES AND THAT IT IS NECESSARY FOR US TO GIVE CONSIDERABLE THOUGHT IN OUR PROGRAMS AS TO THE GOALS AND OBJECTIVES OF EACH ONE. THE DIFFICULTY STEMS FROM THE FACT THAT IN MANY SITUATIONS THEY DO GO ON CONCOMITANTLY. THEY ARE LIKE TWO CLOSELY WOVEN STRINGS. WHILE IT IS NOT NECESSARY AND

PROBABLY NOT ALWAYS POSSIBLE TO CONDUCT ONLY WORK EVALUATION AND THEN ONLY WORK ADJUSTMENT, IT SHOULD BE POSSIBLE FOR US TO UNWIND THESE STRINGS AND DETERMINE WHICH ONE IS GOING ON AT ANY PARTICULAR MOMENT.

IN ACTUALITY, IT MIGHT HAVE BEEN BETTER NOT TO RAISE THIS ISSUE TODAY BECAUSE IT REALLY DESERVES FULL EXPLORATION AT THE TIME THE ISSUE IS RAISED. HOWEVER, TO DO SO WOULD NOT PERMIT TIME TO BRING TO YOU SOME OTHER INFORMATION WHICH WAS REQUESTED. THEREFORE, I WILL LEAVE THE TOPIC AT THIS TIME WITH THE HOPES THAT IT WILL CAUSE YOU TO GIVE IT FURTHER THOUGHT ON YOUR OWN.

PERHAPS SOME WEIGHT WILL BE GIVEN TO MY ARGUMENT OF THE DIFFERENTIATION BETWEEN WORK EVALUATION AND WORK ADJUSTMENT WHEN WE TAKE A LOOK AT TECHNIQUES FOR BOTH AND THE NEED FOR STAFFING. THE TOTALITY OF WORK EVALUATION HAS A NUMBER OF TECHNIQUES IN ITS ARMAMENT. EACH ONE HAS PARTICULAR ADVANTAGES AND DISADVANTAGES. THE TWO MOST EXTENSIVELY USED TECHNIQUES ARE WORK SAMPLES AND THE SITUATIONAL WORK SETTING. A WORK SAMPLE MAY BE AN ACTUAL JOB SET UP IN THE WORK SAMPLE DEPARTMENT OR A SIMULATED JOB. THE LATTER IS A TASK SET UP TO SIMULATE A JOB, SUCH AS THE SORTING OF NUTS AND BOLTS. IT MAY BE A JOB MADE UP BY THE EVALUATOR TO RESEMBLE AN ACTUAL JOB IN INDUSTRY OR BUSINESS OR IT MAY BE A WORK SAMPLE DESIGNED TO MEASURE A PARTICULAR TRAIT IMPORTANT TO SUCCESSFUL EMPLOYMENT. THERE ARE A NUMBER OF ADVANTAGES AND DISADVANTAGES TO THE WORK SAMPLE METHODS WHICH I DO NOT HAVE TIME TO ENUMERATE. ONE OF THE ADVANTAGES OF WORK SAMPLES OVER THE SITUATIONAL WORK SETTING IS THAT IT PERMITS THE DEVELOPMENT OF A WIDE ARRAY OF TASKS FOR MEASURING POTENTIALS, INTERESTS, AND ABILITIES. THROUGH WORK SAMPLES A GREATER VARIETY OF MEASURING INSTRUMENTS IS AVAILABLE THAN IN THE LIMITATIONS PLACED BY DEPENDENCIES UPON CONTRACTS IN A WORKSHOP. THERE ARE DISADVANTAGES TO THE WORK SAMPLE METHOD. ONE DISADVANTAGE IS THAT IT IS EXPENSIVE AND CAN REQUIRE RATHER CONSTANT REVISION.

EVALUATION OF INDIVIDUALS BY PLACEMENT ON A WORK STATION IN A WORKSHOP IS A METHOD REFERRED TO BY MOST INDIVIDUALS AS THE SITUATIONAL APPROACH TO WORK EVALUATION. THERE ARE ADVANTAGES TO THIS TECHNIQUE IN THAT THE CONDITIONS MORE CLOSELY SIMULATE THE WORKING CONDITIONS OF INDUSTRY AND/OR BUSINESS (BUT FAR FROM COMPLETELY), WAGES ARE PAID, WORK IS PERFORMED ON ACTUAL COMMODITIES DESTINED FOR SALE, AND FOREMEN ARE PRESENT WHO SET STANDARDS FOR QUALITY AND QUANTITY OF WORK. THERE ARE LIMITATIONS TO THE SHELTERED WORKSHOP METHOD OF EVALUATION, SHELTERED WORKSHOPS ARE LIMITED BY THE WORK CONTRACTS THEY HAVE AND OFTEN TIMES THESE ARE OF THE MOST SIMPLIFIED TYPE OF WORK. THIS SIMPLIFIED TYPE OF WORK MAY BE SUFFICIENT FOR MANY OF THE LIMITED CLIENTELE SEEN BUT IT DOES LIMIT THE POSSIBILITY OF FINDING POTENTIALS OF A HIGHER NATURE THAN IS REQUIRED BY THIS TYPE OF WORK. IT LIMITS THE POSSIBILITY OF MEASURING INTEREST IN AREAS NOT REPRESENTED AND IT CAN BE VERY UNAPPEALING TO INDIVIDUALS WITH A HANDICAP BUT WHO HAVE CONSIDERABLE POTENTIAL, SUCH AS SOME NARCOTIC ADDICTS, THE ALCOHOLICS, OR EMOTIONALLY DISTURBED INDIVIDUALS.

THERE ARE OTHER TECHNIQUES OF WORK EVALUATION. ONE OF THESE IS BEING PRESENTED TO YOU BY ONE OF THE PRESENTERS HERE AT THIS CONFERENCE. THIS IS THE JOB TRYOUT IN ACTUAL INDUSTRY OR BUSINESS. I SHALL NOT, THEREFORE, GO INTO THIS PROCESS. JOB ANALYSIS IS ANOTHER TECHNIQUE WHICH HAS BEEN CONSIDERED A METHODOLOGY OF WORK EVALUATION. JOB ANALYSIS IS AN IMPORTANT TECHNIQUE FOR THE WORK EVALUATOR TO KNOW IN THAT IT CAN ASSIST HIM TO: (1) IDENTIFY JOB REQUIREMENTS AND SPECIFIC QUALITIES REQUIRED OF WORKERS FOR VARIOUS JOBS, (2) DEVELOP WORK SAMPLES, AND (3) CONDUCT CLIENT EVALUATIONS. THE JOB ANALYSIS FORMULA OF MEASURING WHAT A WORKER DOES, HOW HE DOES IT, WHY HE DOES IT, AND THE SKILL INVOLVED IN DOING IT LENDS ITSELF TO EVALUATING THE QUALIFICATIONS AND ABILITIES OF A CLIENT PLACED ON A JOB. HOWEVER, THE CONCEPT OF JOB ANALYSIS IS MORE FOR ANALYZING A JOB INTO ITS COMPONENT PARTS THAN ORIENTED TO THE WORKER FOR INTEREST IN THE WORKER AS AN INDIVIDUAL. JOB ANALYSIS IS AN IMPORTANT ADJUNCT TO WORK EVALUATION AND TECHNIQUE OF JOB ANALYSIS CAN BE UTILIZED IN MATCHING THE TRAITS OF CLIENTS WITH THAT OF JOB REQUIREMENTS.

STILL ANOTHER TECHNIQUE UTILIZED BY WORK EVALUATION PROGRAMS IS THAT OF PSYCHOMETRIC TESTING. UTILIZATION OF PSYCHOMETRIC TESTS WILL DEPEND UPON THE STAFFING PATTERNS OF A VOCATIONAL REHABILITATION FACILITY. THE EXTENT OF PSYCHOLOGISTS ON THE STAFF AND THE ROLE OF THE PSYCHOLOGISTS SEE THEMSELVES AS PLAYING IN THE PROCESS HELPS TO DETERMINE THE DEGREE OF PSYCHOMETRIC TESTING CONDUCTED BY WORK EVALUATION DEPARTMENTS. THERE ARE A NUMBER OS PSYCHOLOGICAL TESTS WHICH ARE VERY PERTINENT TO WORK EVALUATION SUCH AS THE MINNESOTA RATE OF MANIPULATION, THE BENNETT HAND-TOOL DEXTERITY TEST, THE PURDUE PEGBOARD, PENNSYLVANIA BI-MANUAL WORK SAMPLE TEST, AND OTHERS. THERE ARE A NUMBER OF LIMITATIONS TO PSYCHOMETRIC TESTS AND IT IS THESE LIMITATIONS WHICH LED TO THE DEVELOPMENT OF OTHER TECHNIQUES SUCH AS WORK SAMPLE AND SITUATIONAL WORK EVALUATION. PSYCHOMETRIC TESTS ARE OFTEN TIMES WEIGHTED HEAVILY WITH VERBAL FACTORS AND ARE BETTER SUITED FOR PERSONS WITH AT LEAST AVERAGE INTELLIGENCE AND A HIGH SCHOOL EDUCATION. PERSONS WITH NEGATIVE SCHOOL EXPERIENCE, CULTURAL BACKGROUND OF A MINORITY GROUP, AND SOME DISABILITIES DO NOT DO WELL ON THESE TESTS. TOO OFTEN PSYCHOMETRIC TESTS FAIL TO SHED ANY LIGHT ON INDIVIDUALS WHO ARE NOT MULTIPLE POTENTIALS IN APTITUDES, ABILITIES, AND OTHER FACTORS.

IT WOULD BE DESIRABLE TO CONSIDER IN MORE DETAIL THE STRENGTHS AND WEAKNESSES OF EACH OF THESE SEPARATE TECHNIQUES. HOWEVER, TIME DOES NOT PERMIT IT. FOR THOSE WHO WOULD LIKE TO EXPLORE THIS MATTER FURTHER, I WOULD REFER YOU TO AN ARTICLE BY DR. WALTER NEFF IN THE MARCH 1966 EDITION OF THE AMERICAN PERSONNEL AND GUIDANCE JOURNAL [2] AND TO A RECENT AND MOST EXCELLENT BOOK BY DR. WALTER NEFF ENTITLED WORK IN HUMAN BEHAVIOR [3] OR TO WRITE TO ME FOR A PAPER ENTITLED "WORK EVALUATION" [1] THAT WAS PRESENTED THIS YEAR TO THE TEXAS DIVISION OF VOCATIONAL REHABILITATION. I WOULD BE HAPPY TO SEND COPIES OF THIS PAPER AS LONG AS THE SUPPLY LASTS.

WORK ADJUSTMENT ALSO HAS IN ITS ARMAMENT SEVERAL TECHNIQUES. NOT LEAST AMONG THESE TECHNIQUES IS THAT DEVELOPED BY SHELTERED WORKSHOPS OF UTILIZING THE WORK SETTING OF THESE FACILITIES TO ASSIST INDIVIDUALS TO MAKE ADJUSTMENTS, WHETHER THIS

BE IN WORK HABITS, ATTITUDES, PERSONALITY, FRUSTRATION LEVEL, OR WORK TOLERANCE. THE ATTEMPT IS MADE TO MODIFY BEHAVIOR THROUGH THE UTILIZATION OF A WORK SETTING. HERE WE BRING TOGETHER TECHNIQUES OF PSYCHOLOGY AND COUNSELING WITH THE DEMANDS OF A WORK SETTING IN ORDER TO AFFECT BEHAVIOR. COMBINED INTO THIS PROCESS IS THE KNOWLEDGE OF THE PSYCHOLOGICALLY ORIENTED INDIVIDUAL AND THE INDUSTRIALLY ORIENTED INDIVIDUAL. UNFORTUNATELY, WE HAVE YET TO DELINEATE CLEARLY WHAT IT IS WE ARE DOING IN ORDER TO KNOW WHEN TO APPLY WHAT. WE HAVE, IN FACT, DELINEATED MORE CLEARLY THE WORK EVALUATION TECHNIQUE THAN WE HAVE THE WORK ADJUSTMENT TECHNIQUE. IN ADDITION TO UTILIZING A WORK SETTING WE HAVE THE TECHNIQUE OF TEACHING. SMALL CLASSES ARE HELD TO ASSIST INDIVIDUALS WITH GROOMING AND LEARNING JOB SEEKING TECHNIQUES AS WELL AS MANY OTHER COMPONENTS WHICH LEAD TO SUCCESSFUL EMPLOYMENT. THE TOTAL WORK ADJUSTMENT PROCESS ALSO INCLUDES SMALL GROUP THERAPEUTIC SESSIONS. THIS MAY INCLUDE STANDARDIZED TECHNIQUES OF GROUP THERAPY OR MAY INCLUDE SPECIALIZED TECHNIQUES SUCH AS THAT LABELED "POUNCE" DEVELOPED BY MR. ROBERT WALKER[5] AT THE MINNEAPOLIS REHABILITATION CENTER.

OF IMPORTANCE TODAY TO WORK ADJUSTMENT IS THE BEGINNING APPLICATION OF THE FORMULIZED TECHNIQUES OF BEHAVIOR MODIFICATION IN THE SHELTERED WORKSHOPS. YOU WILL NOTE THAT I HAVE SAID FORMULIZED APPLICATION. IN ACTUALITY, MUCH OF THE WORK WHICH THE SHELTERED WORKSHOPS HAVE BEEN DOING HAS BEEN, IN ESSENCE, BEHAVIOR MODIFICATION. EARLIER I REFERRED TO MODIFYING BEHAVIOR. FOR CONVENIENCE I DIFFERENTIATE BETWEEN THIS TERM AND THE TERM BEHAVIOR MODIFICATION. I RESERVE THE TERM BEHAVIOR MODIFICATION FOR THE SPECIALIZED TECHNIQUE WHICH HAS DEVELOPED WITH SCIENTIFIC PRINCIPLES OF APPLICATION. THEREFORE, AS WITH WORK EVALUATION, WORK ADJUSTMENT IS NOT A SINGLE PROCESS. EACH OF THE PROCESSES WHICH I HAVE JUST MENTIONED UNDER WORK ADJUSTMENT HAS SOMETHING TO RECOMMEND IT AS BEING INCLUDED IN THE TOTAL PROCESS. AS WITH WORK EVALUATION, TIME DOES NOT PERMIT TO DISCUSS

EACH OF THESE TECHNIQUES IN LENGTH. HOWEVER, POSSIBLY THE POINT THAT I MADE OF THE DIFFERENTIATION BETWEEN WORK EVALUATION AND WORK ADJUSTMENT WILL BE MORE APPARENT.

NOW LET ME TURN MY ATTENTION TO A CONCEPTUALIZATION WHICH I BELIEVE HAS PERTINENCE TO BOTH WORK EVALUATION AND WORK ADJUSTMENT. THIS IS A CONSIDERATION OF A MODEL INCLUDING WORK TASK, WORK SITUATION, AND WORK ENVIRONMENTS. I CONCEIVE OF THESE AS THREE CONCENTRIC RINGS WITH WORK TASKS BEING IN THE MIDDLE AND SURROUNDED BY A RING ENTITLED WORK SITUATIONS WHICH IS SURROUNDED BY A RING ENTITLED WORK ENVIRONMENTS. THERE IS NOTHING REALLY STARTLING ABOUT THIS CONCEPT. THE ADVANTAGE OF EXPOUNDING ON IT IS TO OFFER SOME GUIDELINES FOR DELINEATING PROGRAMS. IT IS A CONCEPT WHICH I HAVE PUT FORTH FOR WORK EVALUATION. HOWEVER, IT HAS APPLICATION TO WORK ADJUSTMENT.

BY WORK TASK, I REFER TO THE SPECIFIC TASK REQUIRED DURING A CLIENT'S EVALUATION OR WORK ADJUSTMENT. IN EVALUATION THIS MIGHT BE A SPECIFIC PSYCHOLOGICAL TEST, SUCH AS A BENNETT HAND-TOOL DEXTERITY TEST, AN ACADEMIC TEST, AN APTITUDE TEST, OR AN INTEREST TEST. IN WORK SAMPLES IT COULD BE AN EVALUATION TASK ON A BUSINESS MACHINE, POWER TOOL, AN ASSEMBLY TEST, AND THE LIKE. IT MIGHT BE NOTED THAT THESE TASKS MIGHT ALSO BE UTILIZED IN WORK ADJUSTMENT. FOR EXAMPLE, AN INDIVIDUAL WHO SHOWS A DISRESPECT FOR TOOLS CAN BE GIVEN ASSISTANCE IN LEARNING TO ASSUME RESPONSIBILITY AND RESPECT FOR PROPERTY OF OTHERS BY A PROFESSIONAL WORKING WITH HIM WHEN HE IS ASSIGNED WORK SAMPLE TASKS. IN A SHELTERED WORKSHOP THE WORK TASK WOULD INCLUDE THE SPECIFIC TASK INVOLVED IN A PRODUCTION JOB OR A WORK STATION WITHIN THE SHELTERED WORKSHOP. THAT IS, THE WORK TASK WOULD BE THE PLACEMENT OF A VIAL WITHIN A CONTAINER ON A PRODUCTION LINE, THE ASSEMBLYING OF A PRODUCT, THE WORKING OF A HEAT SEALING MACHINE, OR THE UNDERTAKING OF CLERICAL TASKS IN THE BUSINESS OFFICE. AS IS OBVIOUS THESE TASKS ARE EXCELLENTLY SUITED BOTH FOR EVALUATION AND FOR WORK ADJUSTMENT. IN A JOB TRYOUT IN AN INDUSTRY OR BUSINESS THE WORK TASK WOULD ALSO BE THE SPECIFIC WORK ASSIGNMENT INVOLVED; FOR EXAMPLE, THE OPERATION OF A DRILL PRESS, A POWER SEWING MACHINE, OR A BUSINESS MACHINE. HERE THE INDIVIDUAL MAY BE EVALUATED AS TO THE POTENTIAL

FOR DOING THE JOB UNDER THE ACTUAL WORK CONDITIONS AND MAY BE RENDERED ASSISTANCE IN ADJUSTING TO THE DEMANDS OF THE JOB IN AN ACTUAL WORK SETTING.

IN RELATION TO EVALUATION AND WORK ADJUSTMENT IN THE WORK TASK, WE ARE CONCERNED WITH SUCH FACTORS AS RESPONSE TO INSTRUCTIONS AND DIRECTIONS. THE INDIVIDUAL THAT CAN FOLLOW WRITTEN INSTRUCTIONS HAS A GREATER POTENTIAL THAN THE INDIVIDUAL THAT REQUIRES VERBAL INSTRUCTIONS WHEREAS THE LATTER INDIVIDUAL HAS A GREATER POTENTIAL THAN THE ONE THAT REQUIRES A PHYSICAL DEMONSTRATION. WORK ADJUSTMENT MAY TAKE PLACE AT THIS LEVEL BY GIVING ASSISTANCE IN HELPING THE INDIVIDUAL LEARN THE IMPORTANCE OF ATTENDING TO INSTRUCTIONS WHILE THEY ARE GIVEN. A BEHAVIOR MODIFICATION PROGRAM BUILT AROUND A WORK SAMPLE COULD HELP TO INCREASE CONCENTRATION TO DIRECTIONS. ORGANIZATION OF WORK IS ANOTHER FACTOR WHICH MAY BE EVALUATED AT THE WORK TASK LEVEL. THAT IS, DOES THE INDIVIDUAL UTILIZE GOOD JUDGMENT AND INITIATIVE IN SOLVING BOTH THE COMPLEX AND SIMPLE PROBLEMS, DOES HE ORGANIZE HIS WORK ADEQUATELY, DOES HE REQUIRE ASSISTANCE IN ORGANIZING WORK OR CAN HE ORGANIZE ON HIS OWN? INDIVIDUALS WHO THROUGH EVALUATION ARE SHOWN TO HAVE POOR ABILITY FOR ORGANIZING WORK CAN BE RENDERED ASSISTANCE THROUGH UTILIZING WORK SAMPLES OR ASSIGNMENTS IN A SHELTERED WORKSHOP. THROUGH TECHNIQUES OF TEACHING, COUNSELING, AND BEHAVIOR MODIFICATION THEY CAN LEARN THE IMPORTANCE OF ORGANIZING THEIR WORK BEFORE UNDERTAKING IT AND INCREASE THEIR EFFICIENCY. WORK TASKS MAY ALSO BE UTILIZED TO EVALUATE SUCH FACTORS AS WORK PRODUCTION RATE, QUALITY OF WORK, AND PHYSICAL TOLERANCE AND ENDURANCE, TO NAME A FEW.

IN RELATION TO THE WORK TASK, THE EVALUATION ON WORK SAMPLES TENDS TO BE CONCERNED MORE WITH WHAT ARE THE SKILLS, WHAT DEGREE OF FINGER DEXTERITY DOES HE HAVE, DOES THE INDIVIDUAL HAVE SPATIAL RELATIONSHIPS ABILITY, CAN HE READ AT A CERTAIN LEVEL, HAS HE POTENTIAL FOR WELDING, DOES HE MANIFEST AN INTEREST IN BUSINESS, HAS HE THE TOLERANCE

TO WORK AT A ROUTINE ASSEMBLY JOB, CAN HE WORK STANDING AT A BENCH, AND SIMILAR SUCH QUESTIONS. WORK ADJUSTMENT MAY UTILIZE THESE TASKS BY HELPING TO OVERCOME DEFICIENCIES SUCH AS INCREASING THE LENGTH OF TIME THE INDIVIDUAL IS ABLE TO WORK STANDING AT A BENCH OR INCREASING FRUSTRATION TOLERANCE IN WORKING WITH PARTICULAR ITEMS. SIMILAR QUESTIONS MAY BE ASKED AS PART OF THE TASK EVALUATION IN A SHELTERED WORKSHOP. HOWEVER, SPECIFIC ANSWERS TO MANY OF THE ABOVE ARE BETTER OBTAINED FROM WORK SAMPLES AND PSYCHOLOGICAL TESTS. QUESTIONS IN RELATION TO THE TASKS OF A SHELTERED WORKSHOP AND WHICH ARE OFTEN TIMES BETTER ANSWERED IN A WORKSHOP SETTING ARE THE FOLLOWING: CAN HE WORK AT A ROUTINE ASSEMBLY TASK FOR LONG PERIODS? DOES HE HAVE THE BODY COORDINATION REQUIRED FOR WORKING ON A PRODUCTION LINE? DOES HE HAVE THE INTEREST IN A PARTICULAR TYPE OF ACTUAL WORK? HERE TOO, THE ACTUAL TASKS INVOLVED CAN BE UTILIZED FOR WORK ADJUSTMENT. FOR EXAMPLE, THROUGH A PLANNED PROGRAM OF BEHAVIOR MODIFICATION THE INDIVIDUAL MAY BE TAUGHT TO INCREASE HIS RATE OF PRODUCTION ON A PARTICULAR JOB WHICH CAN THEN GENERALIZE TO OTHER JOBS. IN RELATION TO A JOB TRYOUT, THE MAIN QUESTION TO BE ASKED ABOUT THE TASK INVOLVED IS WHETHER OR NOT THE CLIENT CAN DO THE SPECIFIC JOB FOR WHICH HE IS PLACED ON IN AN INDUSTRY OR BUSINESS.

NEXT I WOULD LIKE TO TURN MY ATTENTION TO THE CONSIDERATION OF THE WORK SITUATION FOR BOTH EVALUATION AND ADJUSTMENT. BEFORE I DO, I SHOULD NOTE THAT I DO NOT CLAIM THAT THERE IS A CLEAR DELINEATION BETWEEN THE WORK SITUATION AND THE WORK ENVIRONMENT OR FOR THAT MATTER, BETWEEN A WORK TASK AND A WORK SITUATION. MY PURPOSE IS TO CONSIDER THE THREE SOMEWHAT SEPARATELY FOR THE SAKE OF FOCUSING ATTENTION. THE WORK SITUATION, AS I AM REFERRING TO IT, INCLUDES THE TASKS INVOLVED AND THE CONDITIONS, BOTH PHYSICAL AND PERSONAL-SOCIAL, PLACED UPON THE INDIVIDUAL FOR SUCCESS ON THE TASK. THESE CONDITIONS INCLUDE PERFORMING UNDER TIME LIMITATIONS, PERFORMING UNDER PRODUCTION REQUIREMENTS, PERFORMING UNDER THE FACTORS OF HEAT, LIGHT, NOISE, AND INTERPERSONAL

RELATIONSHIPS INVOLVED RELATING TO SUPERVISORS AND OTHER CLIENTS OR CO-WORKERS IN THE IMMEDIATE ENVIRONMENT (SUCH AS THE NEXT WORKER ON A PRODUCTION LINE OR TWO OR MORE PEOPLE REQUIRED TO PERFORM A WORK SAMPLE). THE FOLLOWING ARE TYPES OF QUESTIONS TO BE CONSIDERED HERE: CAN HE PERFORM UNDER TIME PRESSURES? HOW DOES HE RELATE TO A MALE SUPERVISOR, A FEMALE SUPERVISOR, A DEMANDING SUPERVISOR, OR AN EASY-GOING SUPERVISOR? HOW WELL DOES HE TAKE ORDERS? IS HE RESPONSIBLE? DOES HE HAVE SELF INITIATIVE? HOW DOES HE TREAT OTHER PEOPLE'S PROPERTY? IS HE DISTRACTABLE? THESE QUESTIONS CAN BE FURTHER BROKEN DOWN. FOR EXAMPLE, IN RELATION TO COOPERATION WITH HIS SUPERVISOR, WE MIGHT CONSIDER THE FOLLOWING FACTORS: IS HE USUALLY HELPFUL AND MEETS DEMANDS OF THE SHOP OR THE WORK EVALUATION PROGRAM? IS HE SOMETIMES DIFFICULT TO WORK WITH, BUT GENERALLY COOPERATIVE? IS HE FREQUENTLY DIFFICULT TO WORK WITH BUT GIVES LIMITED COOPERATION? DOES HE NOT HELP AT ALL AND OFTEN REFUSES TO COMPLY WITH THE RULES? DOES HE MAKE TROUBLE AND IS CLASSIFIED AS AN OBSTRUCTIONIST? UNDER CONSIDERATION OF HIS REACTION TO SUPERVISORY PRESSURE WE WOULD BE EVALUATING FOR THE FOLLOWING TYPE OF CHARACTERISTICS: HE WORKS BEST WITH LITTLE OR NO SUPERVISION; HE WORKS BEST WITH PERMISSIVE OR SUPPORTIVE SUPERVISION; HE WORKS WITH FIRM AND AUTHORITATIVE SUPERVISION; HE RESISTS SUPERVISION. THE QUESTIONS WHICH I HAVE JUST ENUMERATED AND WHICH MAY BE EVALUATED BY ATTENTION TO THE WORK SITUATION COME UNDER THE JURISDICTION OF WORK ADJUSTMENT WHEN THE INDIVIDUAL IS FOUND TO BE NEEDING IMPROVEMENT IN ANY OR MORE OF THE ABOVE AREAS. THE WORK ADJUSTMENT PROGRAM MAY THEN UTILIZE THE WORK SITUATION ITSELF IN HELPING TO BRING ABOUT WORK ADJUSTMENT. HOWEVER, INDIVIDUAL COUNSELING AND GROUP COUNSELING TECHNIQUES MAY ALSO BE UTILIZED. WITH TIME RUNNING SHORT, EVALUATION AND ADJUSTMENT USING THE WORK TASK WILL NOT BE EXPLORED WITH A JOB SETTING IN AN INSTITUTION OF BUSINESS, AS IT IS BELIEVED THAT THE PRINCIPLES ENUMERATED ARE EASILY EXTENDED TO OTHER SITUATIONS.

THE WORK ENVIRONMENT CONSISTS, IN THIS CONCEPTUALIZATION, OF THE ENTIRE ENVIRONMENT OF THE VOCATIONAL REHABILITATION FACILITY OR JOB LOCATION. TO BE REDUNDANT, I MUST REPEAT HERE THAT THERE IS NO CLEAR DELINEATION BETWEEN THE WORK SITUATION AND THE WORK ENVIRONMENT. THE VALUE OF PRESENTING SUCH A CONCEPTUALIZATION IS PURELY TO HELP PROVIDE A MENTAL FRAME OF REFERENCE IN EVALUATION AND ADJUSTMENT WITH INDIVIDUALS. HAVING SAID THIS, I WOULD GO ON TO STATE THAT WITH THE WORK ENVIRONMENT I AM CONCERNED WITH SUCH FACTORS AS ATTENDANCE, PUNCTUALITY, APPEARANCE, GROOMING, RELATION TO CLIENTS AND WORKERS ON COFFEE BREAKS OR LUNCH TIME, AND OVERALL ATTITUDES TOWARD THE TOTAL WORK ENVIRONMENT. THIS IS TO STATE THAT THE EVALUATION OF AN INDIVIDUAL TAKES PLACE THROUGH THE ENTIRE FACILITY AND THAT THE WORK ADJUSTMENT PROGRAM MAY INVOLVE THE ENTIRE FACILITY. FOR EXAMPLE, EVALUATING THE WAY AN INDIVIDUAL ACTS DURING A COFFEE BREAK AND HELPING HIM LEARN TO RESPOND APPROPRIATELY DURING THIS TIME CAN BE EXTREMELY BENEFICIAL TO HIS SUCCESSFUL EMPLOYMENT.

AS I STATED EARLIER, THERE IS NOTHING STARTLING AND NEW IN THIS CONCEPT. WHAT IS IMPORTANT IS THAT THE FACTORS INVOLVED BE SET CLEARLY IN A MENTAL FRAME OF REFERENCE. IT IS SURPRISING WHAT A LITTLE TIME AND THOUGHT GIVEN TO CONSIDERATION OF THESE FACTORS AND DELINEATING THEM IN ONE'S OWN MIND CAN DO FOR RENDERING A TOTAL, COMPREHENSIVE REPORT. GIVING TIME AND CONSIDERATION TO THEM CAN HELP BOTH AN EVALUATION AND A WORK ADJUSTMENT PROGRAM TO GIVING CONSIDERATION TO THE TOTAL INDIVIDUAL.

IT WAS ALSO REQUESTED THAT I DISCUSS STAFFING PATTERNS FOR EVALUATION AND ADJUSTMENT SERVICES. IT SHOULD BE OBVIOUS BY THIS TIME THAT THIS IS A COMPLEX QUESTION. THERE IS NO ONE INDIVIDUAL WHICH CAN FULFILL ALL THE ROLES IN EVALUATION AND ADJUSTMENT. IN WORK ADJUSTMENT ALONE WE SPOKE OF CLASSES FOR SUCH FACTORS AS GROOMING AND DEVELOPING JOB SEEKING SKILLS, WE SPOKE OF GROUP TECHNIQUES FOR COUNSELING, AND WE SPOKE OF MODIFIED BEHAVIOR WHILE ON A WORK SETTING. TO ADEQUATELY CONDUCT ANY GROUP TECHNIQUE WORK, THE INDIVIDUAL NEEDS TRAINING AND BACKGROUND IN PSYCHOLOGY. TO UNDERTAKE ADJUSTMENT PROGRAMS THROUGH PLACEMENT ON PRODUCTION LINES IN WORKSHOPS, THE INDIVIDUAL NEEDS TO UNDERSTAND BOTH THE PRODUCTION PROCESS AS WELL AS THE DYNAMICS OF HUMAN BEHAVIOR,

THE BASIS UPON WHICH BEHAVIORS CHANGE, AND A KNOWLEDGE OF THE HANDICAPPED AND DISADVANTAGED. IN THE AREA OF WORK EVALUATION WHEN UTILIZING A WORK SAMPLE, INDIVIDUALS ARE NEEDED WHO HAVE A KNOWLEDGE OF SPECIFIC SKILLS SUCH AS BUSINESS, ELECTRONICS, AND WOODWORKING AND A KNOWLEDGE OF SUCH FACTORS AS JOB ANALYSIS TECHNIQUES, PRINCIPLES OF TESTING, OCCUPATIONAL INFORMATION, DYNAMICS OF HUMAN BEHAVIOR, KNOWLEDGE OF HANDICAPPED AND DISADVANTAGED AND MANY OTHER FACTORS. IT IS OBVIOUS THAT NO ONE PERSON FROM OUR PRESENT TRAINING PROGRAMS, INCLUDING THE VARIOUS VOCATIONAL REHABILITATION PROGRAMS, OR FROM OTHER FIELDS OF ENDEAVOR CAN MEET ALL THE NEEDS IN EVALUATION AND WORK ADJUSTMENT. IT IS, THEREFORE, NECESSARY AT LEAST AT THIS PRESENT TIME, FOR REHABILITATION FACILITIES TO TURN TO A VARIETY OF PERSONNEL TO FULFILL THEIR NEEDS. TO THIS EXTENT WE CAN EXAMINE BRIEFLY SOME OF THE TYPES OF INDIVIDUALS WHICH ARE BEING UTILIZED. INCIDENTALLY, SOME OF THE IDEAS I AM PUTTING FORTH WERE FIRST EXPRESSED BY HENRY REDKEY IN AN ARTICLE TWO YEARS AGO[4].

INDIVIDUALS WITH INDUSTRIAL ARTS BACKGROUND ARE UTILIZED TO A GOOD DEGREE IN VOCATIONAL REHABILITATION FACILITIES. THESE INDIVIDUALS ARE HIGHLY BENEFICIAL IN THAT THEY HAVE KNOWLEDGE OF SKILLS WHICH ARE DIRECTLY APPLICABLE IN WORK EVALUATION AND WORK ADJUSTMENT PROGRAMS. THEY ARE ALSO HIGHLY BENEFICIAL IN VOCATIONAL TRAINING PROGRAMS. DEPENDING ON THEIR PARTICULAR PROGRAM, THEY HAVE KNOWLEDGE AND SKILLS IN SUCH AREAS AS ELECTRONICS, WOODWORKING, DRAFTING, WELDING, AND THE LIKE. THEY OFFER THE ADVANTAGE THAT THEY ENJOY WORKING WITH THEIR HANDS AND THAT THEY FIND THEMSELVES AT HOME IN THE WORK-LIKE SETTINGS OF A WORK EVALUATION DEPARTMENT AND IN SHELTERED WORKSHOPS. THEY FIND AN ELEMENT OF PRESTIGE IN WORKING IN POSITIONS IN THESE PROGRAMS. HOWEVER, FOR THE MOST PART THEY ARE SINGLY LACKING IN THE KNOWLEDGE OF HANDICAPPED AND DISADVANTAGED PERSONS. FURTHER, THEY TEND TO BE SOMEWHAT CONCRETE AND PRACTICAL ORIENTED. THIS IS BENEFICIAL IN HELPING TO ASSIST MANY OF THE HANDICAPPED AND DISADVANTAGED PERSONS WHO ARE THEMSELVES VERY CONCRETE ORIENTED, BUT HAS SOME DISADVANTAGES WHEN ATTEMPTING TO WRITE A COMPREHENSIVE EVALUATION REPORT WHICH REQUIRES THE FACTORING OUT OF COMMON ELEMENTS OF SITUATIONS. ALSO, THEY ARE LACKING EXPERIENCE IN WORKING

WITH SUCH INDIVIDUALS AS THE MENTALLY RETARDED OR THE EMOTIONALLY DISTURBED, AND THEY USUALLY LACKED A FRAME OF REFERENCE IN THEIR TRAINING PROGRAMS FOR WORKING IN CLOSE RELATION TO THESE GROUPS. THIS SOMETIMES CREATES DIFFICULTY IN INITIALLY WORKING WITH THESE GROUPS. MY ADVICE IN SELECTING PEOPLE WITH INDUSTRIAL ARTS BACKGROUNDS IS TO SELECT INDIVIDUALS WHO HAVE THE SKILLS AND KNOWLEDGE AND WHO REVEAL AN INTEREST IN UNDERSTANDING HUMAN BEHAVIOR. THIS CAN BE JUDGED BY COURSES THEY HAVE TAKEN, BY EXPRESSED INTERESTS, AND BY A MANIFEST DESIRE TO WORK IN THIS AREA AS OPPOSED TO TEACHING THIRTY OR FORTY STUDENTS IN A CLASSROOM.

INDIVIDUALS WITH A PSYCHOLOGY OR REHABILITATION COUNSELING BACKGROUND ALSO FIND THEIR WAY INTO WORK EVALUATION AND WORK ADJUSTMENT PROGRAMS. THESE INDIVIDUALS, OR COURSE, HAVE STUDIED HUMAN BEHAVIOR, HAVE AN INTEREST IN WORKING WITH PEOPLE, AND HAVE CONSIDERABLE KNOWLEDGE AND SKILLS TO CONTRIBUTE TO THE PROCESS. HOWEVER, QUITE OFTEN THESE ARE VERBALLY ORIENTED INDIVIDUALS WHO PREFER TO WORK WITH PEOPLE ON A ONE-TO-ONE RELATIONSHIP BEHIND A CLOSED DOOR AND WHO FIND THE WORK ORIENTED SETTINGS OF WORK EVALUATION DEPARTMENTS AND SHELTERED WORKSHOPS AS NOT MEETING THEIR SELF-IMAGE. THAT IS, THEY ARE NOT COMFORTABLE WEARING WHAT I REFER TO AS THE "GRAY COAT" OF THE EVALUATOR OR THE SHOP FOREMEN. MY ADVICE IN SELECTING THIS TYPE OF INDIVIDUAL, AND THEY CAN BE HIGHLY BENEFICIAL TO YOUR PROGRAMS, IS TO SELECT THOSE WHO SHOW AN INTEREST IN WORKING WITH THEIR HANDS AND IN THE PHYSICAL WORK SETTINGS OF YOUR TYPE OF PROGRAMS. THIS CAN BE DETERMINED BY SELECTING INDIVIDUALS WHO HAVE A STRONG INTEREST IN BUILDING THINGS THEMSELVES, SUCH AS IN A WORKSHOP IN THEIR BASEMENT, AND BY SELECTING INDIVIDUALS WHO VISIT YOUR FACILITY AND EXPRESS A MANIFEST INTEREST TO APPLY THE TOOLS OF THEIR TRADE IN THIS TYPE OF SETTING.

OCCUPATIONAL THERAPISTS ALSO HAVE BEEN UTILIZED, ESPECIALLY IN THE WORK EVALUATION PROCESS. THE OCCUPATIONAL THERAPIST HAS EXCELLENT KNOWLEDGE OF MEDICAL AND PSYCHIATRIC PROBLEMS INVOLVED WITH MANY OF THE CLIENTELE. OCCUPATIONAL THERAPISTS HAVE DEVELOPED MANY SKILLS, DEPENDENT UPON THEIR PARTICULAR PROGRAM, WHICH ARE APPLICABLE AND LEND THEMSELVES FOR READY LEARNING OF THE SKILLS INVOLVED IN THE WORK

EVALUATION PROCESS. HOWEVER, TO WORK IN WORK EVALUATION AND WORK ADJUSTMENT IN A VOCATIONAL REHABILITATION SETTING, OCCUPATIONAL THERAPISTS HAVE TO LEARN TO DIVORCE THEMSELVES FROM EXTREMELY CLOSE ORIENTATION TO MEDICAL DOCTORS AND THE NECESSITY TO HAVE A MEDICAL PRESCRIPTION FOR EVERYTHING THEY DO, THEY MUST LEARN TO WORK WITHOUT A WHITE UNIFORM AS THIS DOES NOT FIT INTO THE WORK ORIENTED PROGRAMS OF A VOCATIONAL REHABILITATION FACILITY, THEY MUST BE WILLING TO LEARN ABOUT THE WORLD OF WORK, AND THEY MUST EXPRESS A MANIFEST INTEREST IN APPLYING THEIR SKILLS IN THE WORK ORIENTED PROGRAMS OF THESE FACILITIES.

SHELTERED WORKSHOPS HAVE OBTAINED MANY PERSONNEL FOR THEIR PROGRAMS WHO HAVE BEEN FOREMEN IN INDUSTRY. THIS IS UNDER THE BELIEF THAT SUCH AN INDIVIDUAL NEEDS EXPERIENCE IN ACTUAL PRODUCTION IN ORDER TO WORK WITH THE HANDICAPPED IN PRODUCTION IN SHELTERED WORKSHOPS. ALTHOUGH THIS INDIVIDUAL MAY HAVE HAD SUPERVISORY EXPERIENCE IN INDUSTRIAL PRODUCTION, IT DOES NOT MEAN THAT HE HAS AN OVERALL KNOWLEDGE OF PRODUCTION TECHNIQUES APPLICABLE TO A SETTING OTHER THAN THE ONE IN WHICH HE HAS HAD EXPERIENCE. FURTHER, SUCH AN INDIVIDUAL RARELY HAS AN UNDERSTANDING OF HUMAN BEHAVIOR AND THE ABILITY TO AFFECT BEHAVIOR THROUGH THE UTILIZATION OF WORK. IN ORDER TO BE TRULY EFFECTIVE IN A SHELTERED WORKSHOP, SUCH AN INDIVIDUAL NEEDS TO KNOW NOT ONLY PRODUCTION TECHNIQUES AND HOW TO SUPERVISE PEOPLE, BUT NEEDS TO HAVE AN UNDERSTANDING OF HUMAN BEHAVIOR, THE LIMITATIONS OF THE HANDICAPPED AND DISADVANTAGED, AND HOW TO POSITIVELY AFFECT THE BEHAVIOR OF THESE PERSONS. IT WILL BE RARE, OF COURSE, WHEN SUCH AN INDIVIDUAL CAN BE FOUND IN INDUSTRY. FOR THE PARTICULAR JOB IN A SHELTERED WORKSHOP, AN INDIVIDUAL IS NEEDED WHO IS NOT ONLY ORIENTED TO PRODUCTION NEEDS BUT WHO HAS EMPATHY WITH THE CLIENTELE SEEN IN THESE FACILITIES. PLEASE NOTE THAT I SAID EMPATHY AND NOT SYMPATHY. THE EMPATHETIC FOREMAN WILL BE AN INDIVIDUAL WHO WILL MAKE THE ADJUSTMENTS NECESSARY TO ASSIST THE CLIENTELE IN IMPROVEMENT BUT WHO WILL NOT MODIFY THE PROGRAM BASED PURELY ON SYMPATHY FOR THE CLIENT'S CONDITION. IT GOES WITHOUT SAYING THAT FINDING SUCH AN INDIVIDUAL FROM INDUSTRY WOULD BE EXTREMELY DIFFICULT. THEREFORE, MY RECOMMENDATION IN SELECTING

THESE TYPE OF INDIVIDUALS IS TO LOOK FOR PERSONS WHO EXPRESSED AN INTEREST IN THE INDIVIDUAL AS A PERSON, WHO APPEARS TO HAVE EMPATHY FOR THE PEOPLE AND THEIR PROBLEMS, WHO IS INTERESTED IN APPLYING HIS SKILLS IN THE SETTING OF THE VOCATIONAL REHABILITATION FACILITY, AND WHO WOULD FIND IT A CHALLENGE TO WORK IN COOPERATION WITH PROFESSIONAL INDIVIDUALS SUCH AS COUNSELORS. TO ASSIST THIS INDIVIDUAL THE VOCATIONAL REHABILITATION FACILITY SHOULD PROVIDE ADEQUATE IN-SERVICE TRAINING PROGRAMS.

THE FINAL SUBJECT AREA THAT I WISH TO SAY A WORD OR TWO ABOUT RELATES TO THE RELATION OF EVALUATION AND ADJUSTMENT SERVICES TO OTHER SERVICES OF FACILITIES. THE WORK EVALUATION AND WORK ADJUSTMENT PROGRAMS OF A FACILITY, IF THEY ARE TO BE EFFECTIVE, NEED TO HAVE STATUS IN THE FACILITY AND BE SET UP SO AS TO PROMOTE COMMUNICATION WITH OTHER UNITS, SUCH AS PRODUCTION AND PLACEMENT. ONE WAY TO HANDLE IT IS TO HAVE A REHABILITATION SERVICES DEPARTMENT WHICH INCLUDES INTAKE, EVALUATION, ADJUSTMENT, PLACEMENT, AND ANY RELATED SERVICES. THIS SHOULD BE COORDINATED BY AN INDIVIDUAL COGNIZANT OF THE GOALS AND PROCESSES OF EACH OF THE UNITS. THIS COORDINATOR NEEDS TO HAVE STATUS EQUIVALENT TO THE OVERALL PRODUCTION SUPERVISOR. HOWEVER, CAUTION NEEDS TO BE TAKEN TO PREVENT RIVALRY BETWEEN THE TWO. SUCH A DEPARTMENT WITH A PROGRAM TO FOSTER COMMUNICATION CAN DO A LOT TO ELIMINATE SUCH THINGS AS PLACEMENT PERSONNEL NOT USING THE FINDINGS OF EVALUATION AND IN AIDING EVALUATION AND ADJUSTMENT WORKING CLOSELY TOGETHER. THIS IS NOT THE ONLY MODEL FOR PROGRAMMING. IN SMALL FACILITIES IT WOULD NOT EVEN BE POSSIBLE. THE IMPORTANT THING IS TO INTEGRATE EVALUATION AND ADJUSTMENT INTO THE TOTAL PROGRAM AND TO ARRANGE FOR THEM TO HAVE THE NECESSARY STATUS TO EFFECTIVELY OBTAIN COOPERATION FROM OTHER UNITS AND TO WORK EFFECTIVELY WITH THEM.

CERTAINLY THE FOREGOING DOES NOT EXHAUST THE SUBJECT ASSIGNED TO ME; HOWEVER, I HOPE I HAVE BEEN ABLE TO BRING TO YOU SOME FACTORS FOR SERIOUS CONSIDERATION.

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Program management techniques were adopted from business and industry in order to provide an efficient and effective program of occupational training. The techniques include: (1) loss of tools or damage reports, (2) check-in system for instructors, (3) trainee attendance control, (4) use of facilities, (5) organizational structure, (6) instructor evaluation, (7) production requests, (8) curricular standards, (9) cost effectiveness, (10) advisory committees, and (11) accreditation. (CH)

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EVALUATION OF VOCATIONAL-TECHNICAL EDUCATION PROGRAM EFFECTIVENESS

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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University of California, Los Angeles
Division of Vocational Education
Rieber Hall

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P. W. Seagren, Director
Lindsey Hopkins Education Center
Panelist, 9:00 a.m. August 19, 1969

It is my understanding that there will be other panels dealing with student evaluation and curriculum evaluation so I will confine my remarks to program effectiveness and how we evaluate the overall vocational program.

Before getting into the subject proper, I feel that a little background information is necessary with reference to our vocational and technical programs in Miami and Dade County.

The school system in Dade County is a county system headed by a superintendent and seven district superintendents. My responsibility in the vocational-adult division is on a countywide basis. At present we have the main Lindsey Hopkins Center, which is a fifteen-story building located in the downtown area, and there is a new seven-story building near completion which adjoins Lindsey Hopkins Center and will be devoted entirely to health occupational training. In addition to this main complex we have twelve branch centers, nine of which are operating in comprehensive high schools during the afternoon and evening. The other centers are separate from high schools such as our aviation school at the airport, our traffic school and our special English Center for Cuban refugees.

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I joined the Dade County School System in September, 1929. I resigned as Dean of Boys in 1937 from one of the three high schools in Dade County at that time to head the new trade school. Other than my practical experience in the construction field before entering the school system, my philosophy on vocational education was rather limited. I was fortunate in being able to attend summer school several summers with men like Doctors Allen, Prosser and Wright which was most helpful.

In June of 1940 I was called back from summer school to establish national defense training and I soon realized that I had a problem which had to do with dual use of facilities. The day shop instructors thought they owned the shops and they were not too happy about these intruders. This situation, however, was a blessing in disguise because I realized immediately that we needed good shop organization and control, a realistic tool check system, and that we needed to place direct responsibility for the loss of tools. I required every shop instructor to submit a loss-of tools or damage report fifteen minutes after the shift got underway. There was a checklist for these instructors and if a report failed to show, the supervisor was in the shop to find out why.

This type of control and quick system of checking is not only imperative in large facilities, but I think it plays an important part in program effectiveness. If instruction is going to be presented effectively to the trainees, it should be in an operation comparable to that of business and industry.

Another item that leads to program effectiveness is the check-in system for instructors. In our case we have twelve branch centers that involve over 800 full-time and part-time instructors and as in the Lindsey Hopkins Center there is thirty minutes between shifts.

In order to have an accurate and a rapid check-in and check-out system a time clock was installed in all centers. This was not easy and the instructors felt it was beneath their dignity but I reminded them that this was the procedure in industry and that to work efficiently it was necessary that this be incorporated in our operation. Payrolls for full-time and part-time instructors, as well as office personnel, are made up from time cards.

I feel another area that is important for an effective vocational program is trainee control. In evaluating this particular area, a committee would want to see if there is a written policy which covers the trainees not only as to attendance but as to personal appearance, absenteeism and many other factors. For example, our roll books are large tablets and the attendance of a trainee is recorded by the hour. If he is 15 minutes late, he is docked one-half an hour; 30 minutes late, an hour. These trainees soon learn what will be required of them in industry and their attendance is excellent. This, in my opinion, also plays an important part in the effectiveness of a program.

In evaluating the overall program for vocational-technical education, the effective use of facilities should be a factor. The registration department for the adult division is located at the Lindsey Hopkins Center and has class assignment control for all of the branch centers. There is a special form for the opening of each class in the adult division. I have one of these forms with me. It supplies all the information needed by registration, internal accounting, the department head, and it has the approval of the director. Opening and closing of the short unit courses centrally controlled also provides for program effectiveness.

Like 408 - coord open courses County wide - no central control - no course outline

New courses now need 1st approval all to need by Adult Coor. followed by Curric. Com.

Another area to be reviewed and evaluated for program effectiveness is the organizational chart of the vocational and technical program. This chart should be checked to see if it has an industrial or a realistic approach to the operation of the program. The committee should ask to see job descriptions for the administrative and supervisory staff. I have a sample of our job descriptions which I think are important effective. These jobs should be reviewed from time to time by the administrative staff so that they can be updated.

I would like to touch briefly on evaluation of instructors. We have a countywide system of evaluation of instructors which is satisfactory from an academic point of view but it is inadequate as far as evaluating the business and industrial approach to the operation of a vocational program. ~~If there is time I might be able to~~ Show Transparencies show a few transparencies at the conclusion of my remarks dealing with evaluating vocational instructors.

I recall that when I was principal of Tech High which was from 1937 to 1947 I evaluated my instructors twice each semester. I would sit down and have a personal interview. I think with our system being as large as it is, we have become a bit relaxed in this area. Samples

The method used to hire replacements of administrative and supervisory personnel is important. We have adopted a system where the job specifications are duplicated and sent around to the entire county. Applicants are reviewed by a committee of six. The committee then reduces the number to three candidates and these are submitted to the director who is going to employ this particular coordinator or supervisor.

In occupational training most shops are involved in production work and in evaluating program effectiveness in this area, again, it should be reviewed to see if it compares favorably with procedures used in industry.

We found that it was important to have production requests; for example, in auto mechanics the request was identical with what you would find in a regular commercial shop. I learned the hard way and was involved with replacing some damage to equipment on a production request, so our school board attorney approved a statement which is printed on the back of the production request. This request is signed by the person bringing in the car, radio, or TV to the shop for repair. Production work, of course, is confined to trainees and school board employees. We maintain such an active control on these production requests that the shop instructors have to come to the downtown office and sign for them. They are prenumbered. With this kind of control, the shop instructors make a special effort to see that production work comes up to high standards which again leads to program effectiveness. I have a sample of the production request with me.

After World War II the only phase of adult education that existed in our county was confined to what was then known as a general continuation school which was basically business education. As War Production Training closed down we immediately opened up separate shifts for veterans' training on a tuition basis. In the early fifties adults became interested and vocational education started to expand. In 1953 we outgrew our Lindsey Hopkins Center and established our first branch center. I realized that with no tax funds for equipment, as far as the adult division was concerned, we would need to establish a fee system. Every adult entering a course pays a $2 registration fee. Forty cents of this goes into the department where the trainee enrolls and is used for office supplies and $1.60 goes into the program fund which pays for salaries of clerical workers in our registration department. This also takes care of the development and printing of our instructional materials for the entire system. It even

pays for some of the salaries in our instructional materials department. Each course that involves supplies and use of equipment has a nominal monthly fee which is accredited to the specific course or shop. In this way we can tell if a course is paying for itself. If not, we raise the fee. If there is an accumulation, we reduce the fee. For example, in our office occupations area we have a $3 machines fee. It is not uncommon to buy $25,000 worth of electric typewriters at a time, as well as to update equipment and posting machines in data processing. Our internal accounting department compiles a detailed report each month, a copy of which I have with me and here again, I think this is an important factor in program effectiveness. We need up-to-date equipment to do a proper job of teaching with the ultimate goal of placement. Our fees collected for the fiscal year 1968-69 exceeded $1,300,000.

In the early fifties I realized that as our adult program expanded we needed to be concerned with standards. We also needed to establish a guidance department for adults. At this time salaries were not available and we used fees to a large extent to pay for salaries. Over a period of years we developed prerequisites for each occupational area. Auto mechanics had a certain level of math, English and science. Naturally, electronics had a much higher level. These norms were determined over a period of time. When a person fails in one subject such as math, we do not reject him, we place him in the shop of his choice and he is sent to our program learning laboratory for special assistance. If there are two or more subjects in which a student is deficient, he is referred to our adult high school. As soon as the instructor feels he is up to the acceptable level, he is tested again and then transferred to the occupational program. These trainees pay a $1 examination fee which

takes care of the tests and the salaries of the persons who administer the tests. Formerly, there was a wait of five to ten days after examinations were given before they were graded and recorded. Now, with our new system of machine testing, these grades are in the registration office within five minutes. I also have a sample of our prerequisites for all the occupational areas and I would say to the team evaluating a program that this is an important area to examine from the standpoint of effectiveness. Our percentage of placement in these occupational areas runs close to 90 percent.

I have alluded to cost as an important factor in evaluating vocational-technical program. We are in the process of developing a cost control system which we refer to as cost centers. For example, in the Lindsey Hopkins Center we have a cost control number for our T & I shops in the day division and another cost control number for the T & I evening division. The same is true for business education, day and evening, as well as all departments. Our internal accounting system also has cost center numbers. At the end of any one month we have printouts from data processing and we can actually get it down to an hourly cost per student, per course, per center. If a course at Lindsey Hopkins is operating for 48 cents an hour and at a Coral Gables Center, we find that it is operating for 64 cents, then it is time to check to see what is wrong. Here again, we are attempting to operate this as we would in industry. We are inventoring equipment, determining its present value, and then writing off the cost per year on a realistic figure comparable to industry. This will eliminate operating with obsolete equipment both in the vocational program and later when it is established in the general education program.

Another important item, in my opinion, is the use of advisory craft committees and the roll they play in the overall program effectiveness. Now, when I refer to advisory committees, I don't mean on paper only. I am afraid we have too many of these around the country. I have a list of advisory committees here. There is a printed policy for the members of a committee, a sample of the format for the minutes of meetings, and a list of members of the administrative staff who are assigned a certain number of committees. They must meet with these committees a minimum of three times a year. Copies of these committee meeting minutes are sent to the entire administrative and supervisory staff so that they know what is going on in the entire system. These advisory craft committees do not meet in the executive suite but rather in one of the shops. An auto mechanics committee, for example, will meet in one branch center this month and the next meeting will be scheduled in another branch center, and eventually they get around to all of the auto shops. They are there during the time trainees are present so they can observe the instructors, the condition of the facilities and the maintenance of equipment. These committees are most helpful in assisting us in keeping our equipment up to date. They also check on placement reports and follow up with them on the job.

I think that in evaluating programs across the country, the committee needs to take a close look at the functioning of these advisory craft committees, check the minutes, and determine if they are active or not. I also feel that an evaluation team coming from outside the school district should interview some of these committee members to determine if they operate in name only. It is through their interest and support that the effectiveness of a vocational program is properly related to the community and since faculty members are involved, we also get good faculty support.

Example of Support - M.A.L. - Engine 20H 006
Lincoln

I would be remiss if I didn't report a problem that concerns our vocational staff in Dade County. It has to do primarily with maintaining proper standards in the occupational training areas. These areas should be evaluated at specific intervals by our own vocational staff. It is, however, rather difficult to make this evaluation because of the way our administrative staff at the branch centers is structured.

At our aviation complex which serves the high school youth during the day, these youth are transported from their home school for a half a day at the aviation school. In this way they can maintain identity with their school in their own community and graduate from the high school of their choice. Fortunately, at the aviation school, however, we are not required to have a principal who is academically certified. We have a supervisor who came up through the ranks, first from industry and then as an instructor. Now, as a supervisor, he is taking a very realistic look at the quality of the operation both day and evening. By virtue of his background he is able to evaluate all facets of the program. High quality is maintained as a result of this structure.

Such is not the case in a great many of our comprehensive high schools in Dade County since they are under the direct control of an academic principal and in many instances, the assistant principal for vocational education is not too close to the quality control of occupational training. The same is true in many of the branch centers offering vocational education to adults in these comprehensive high schools during afternoon and evening hours. Here again, the principal has come up through the ranks of general adult education and without the practical experience in an occupation he can hardly be expected to know what to look for in an automotive or machine shop. Our coordinators who are qualified in occupational areas attempt to assist the shop instructors in these branch centers and

when they discover situations affecting the quality of the training, it is referred to the principal since these coordinators have staff relationship rather than line relationship. The follow-thru in the majority of cases is very conspicuous by its absence. We made one attempt early last year to set up an evaluation team consisting of vocational staff members but we never were able to find the time to make these visitations along with our regular duties. This is a situation that must be corrected and I think that evaluation teams coming into a district would be of real assistance. I, for one, stand ready to point out this problem. We have evaluation Teams in Fla H & H also fails Campus Def Criteria

There is another area which in my opinion is affecting a realistic approach to vocational and technical education and especially is this true in the adult division. I refer to accreditation as it concerns the area vocational schools and our branch centers. Several years ago I served on an accreditation committee in our state capitol and it was quite obvious that persons in general adult education were setting up accreditation standards for the adult high school programs and then were attempting to make the same standards apply to occupational training.

Persons from local level working with the accreditation committee at state level involved adult general education, agriculture, distributive education, health education, homemaking, industrial education, and office occupations. We thought we had a realistic approach to accrediting the occupational programs when we had a certification policy that recognized work experience in lieu of college training for shop instructors and also a realistic policy on part-time vocational instructors. Much to my surprise, however, a few years later several of our branch centers were placed on probation by the accreditation committee because a few of our part-time trade instructors had not taken one of the general adult education courses required for general adult instructors. If these courses involved

basic philosophy of vocational education, teaching methods, and use of individualized instruction and development of instructional materials, I would have no objection.

To me it seems rather ridiculous that a part-time instructor, who is working as a plumber during the day and teaching apprentices one night a week, has to take this academic course to make him acceptable. By the same token, we have an insurance executive who is probably making $50,000 a year and is accommodating us by teaching a class two nights a week in the area of insurance and he is required to take this academic course. Obviously, people are not going to be teaching for us very long if we have to continue with this far-fetched and unrealistic policy.

We are now back to the state department asking that this be rescinded for our part-time occupational instructors.

I am closing, however, with a word of encouragement. A few years ago I was invited to attend a special conference called by Dr. Felix Robb, Director of the Southern Association of Colleges and Schools. Not too many local directors were present, which wasn't too important, but there were a number of executives from business and industry and college presidents in attendance. I will be ever grateful to Dr. Robb for setting the tone of this meeting to a very down-to-earth, realistic basis. As they were reviewing plans for establishing accreditation on high school and post high school vocational programs, it was encouraging to hear men from industry stress the point that it was more important to have a vocational teacher certified on the basis of practical work experience, supplemented by in-service teacher training, thereby accrediting the vocational program as far as a category of certification was concerned. Presidents of some prominent colleges and universities in the southern region concurred with these men from industry. I am confident that

Under the guidance and leadership of Dr. Robb before long we will have a realistic and down-to-earth approach to accreditation of vocational-technical programs, both on the high school and post high school level.